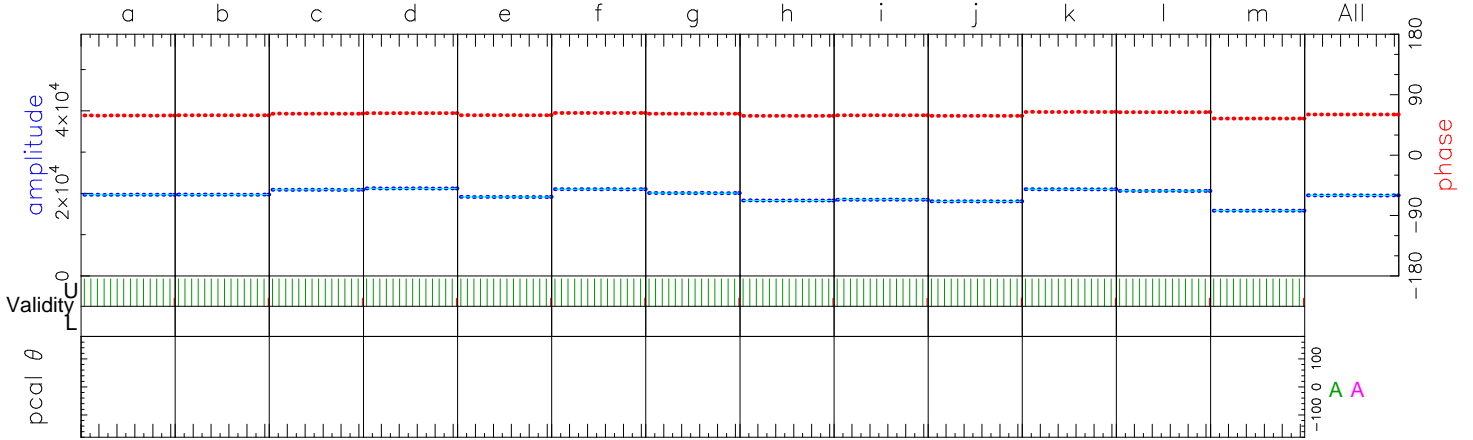


Fringe quality 9  
 SNR 833681.6  
 Int time 299.987  
 Amp 19527.172  
 Phase 60.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000056  
 MBD -0.000026  
 Fringe rate (Hz)  
 -0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143629  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 15 segs, 41 APs / seg (20.99 sec / seg.), time ticks 30 sec



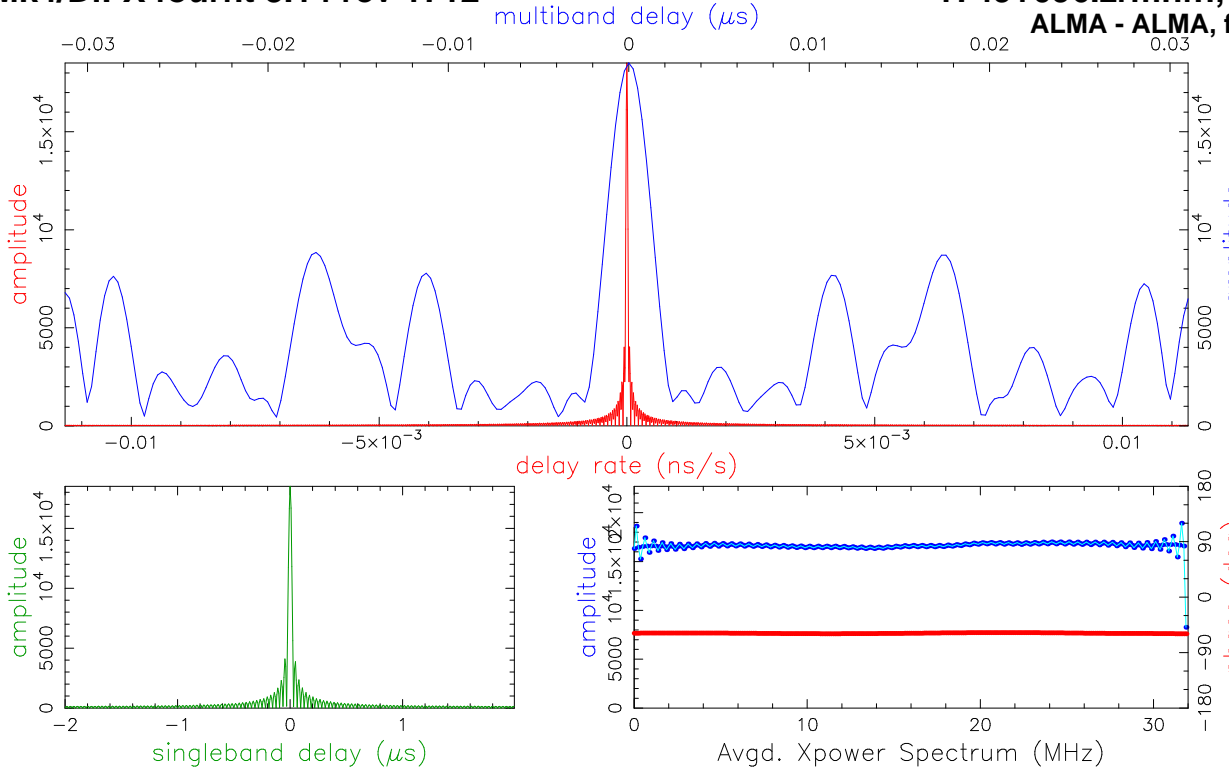
	86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	58.9	59.2	61.7	62.3	59.4	62.6	61.5	58.4	59.2	58.5	64.3	64.0	54.4	Phase	60.5
	19689.9	19713.6	20887.2	21220.2	19152.3	21023.0	20095.3	18298.9	18483.0	18088.9	21004.4	20615.1	15830.0	Ampl.	19546.3
	257.0	257.0	257.0	257.0	257.0	257.1	256.9	257.0	257.0	257.0	256.9	257.0	256.9	Sbd box	257.0
UL	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
A	0	0	0	0	0	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	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	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
A	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	Tracks	

Group delay (usec)(sbd) -2.59375000000E-05 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -2.59375E-05 +/- 1.5E-09  
 Sband delay (usec) -5.55000000000E-05 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -5.55000E-05 +/- 2.1E-08  
 Phase delay (usec) 1.95178075157E-06 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 1.95178E-06 +/- 4.4E-12  
 Delay rate (us/s) -2.83423047834E-12 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -2.83423E-12 +/- 2.6E-14  
 Total phase (deg) 60.5 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 60.5 +/- 0.0

RMS Theor. Amplitude 19527.172 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X128) 19522.810 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 0.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 2.8 0.0 Inc. seg. avg. 19527.078 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 7.7 0.0 Inc. frq. avg. 19546.295 Data rate(Mb/s): 1664 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

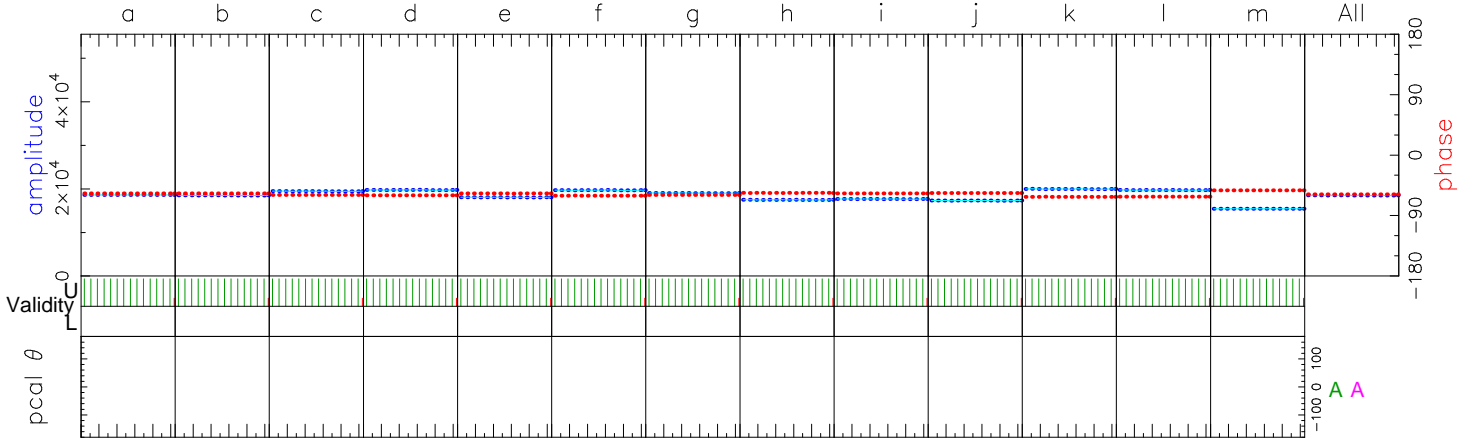
A: az 49.3 el 43.3 pa -134.9 A: az 49.3 el 43.3 pa -134.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.W.1.zrmnfh



Fringe quality 9  
 SNR 790099.2  
 Int time 299.987  
 Amp 18506.351  
 Phase -58.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000051  
 MBD 0.000020  
 Fringe rate (Hz)  
 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143637  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 15 segs, 41 APs / seg (20.99 sec / seg.), time ticks 30 sec



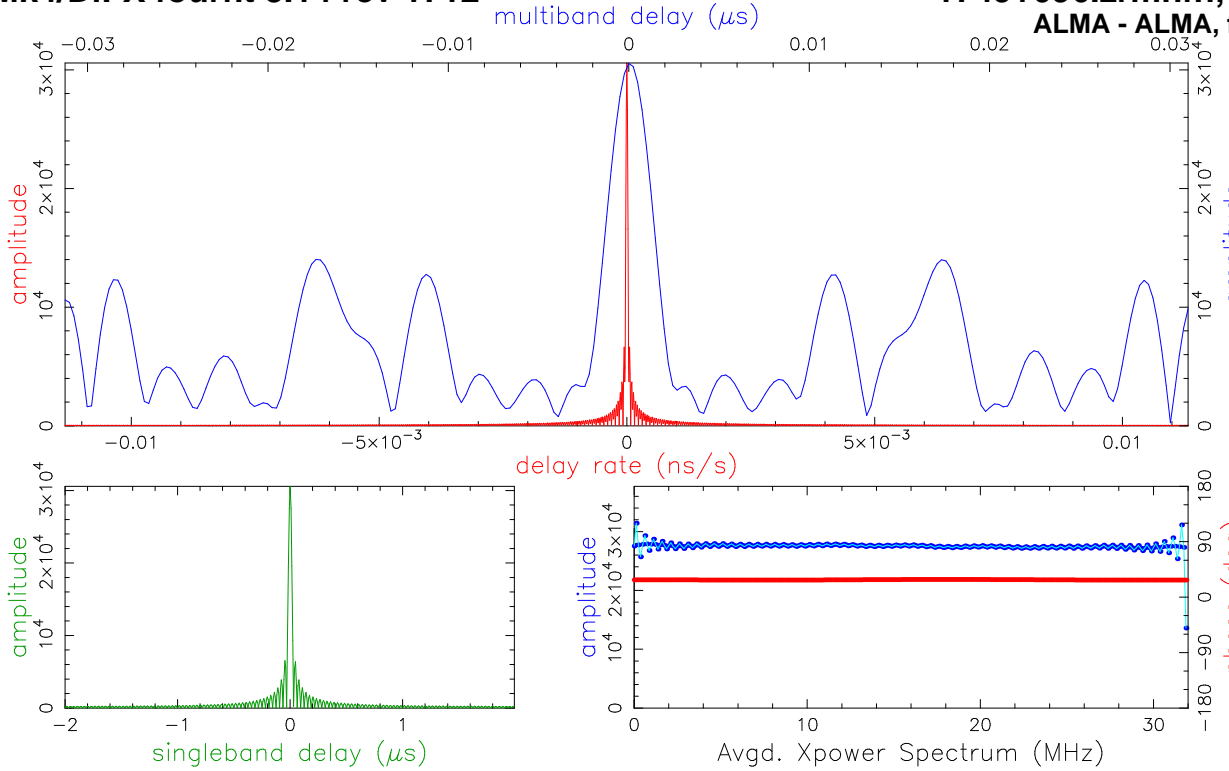
86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
-57.0	-57.1	-59.3	-59.9	-57.1	-60.3	-59.4	-56.3	-57.0	-56.4	-62.0	-61.9	-52.4	Phase	-58.3
18610.3	18506.5	19480.0	19754.4	18074.8	19711.9	19037.4	17487.9	17673.2	17326.5	19735.0	19735.0	15434.8	Ampl.	18523.8
257.0	257.0	257.0	257.0	257.0	256.9	257.1	257.0	257.0	257.0	257.1	257.0	257.1	Sbd box	257.0
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
A 0	0	0	0	0	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	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	0:0	0:0	0:0	0:0	0:0	Manl PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	Chan ids	
A W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	Tracks	
Group delay (usec)(sbd)		2.00937500000E-05		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		2.00938E-05		+/- 1.6E-09		
Sband delay (usec)		5.15000000000E-05		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		5.15000E-05		+/- 2.2E-08		
Phase delay (usec)		-1.88105402536E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.88105E-06		+/- 4.7E-12		
Delay rate (us/s)		4.25134571751E-12		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		4.25135E-12		+/- 2.7E-14		
Total phase (deg)				Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-58.3		+/- 0.0		

ph/seg (deg) 0.0 0.0  
 amp/seg (%) 0.1 0.0  
 ph/frq (deg) 2.8 0.0  
 amp/frq (%) 6.8 0.0

RMS Theor. Amplitude 18506.350 +/- 0.023  
 Search (2048X128) 18503.837  
 Interp. 0.000  
 Inc. seg. avg. 18506.273  
 Inc. frq. avg. 18523.758

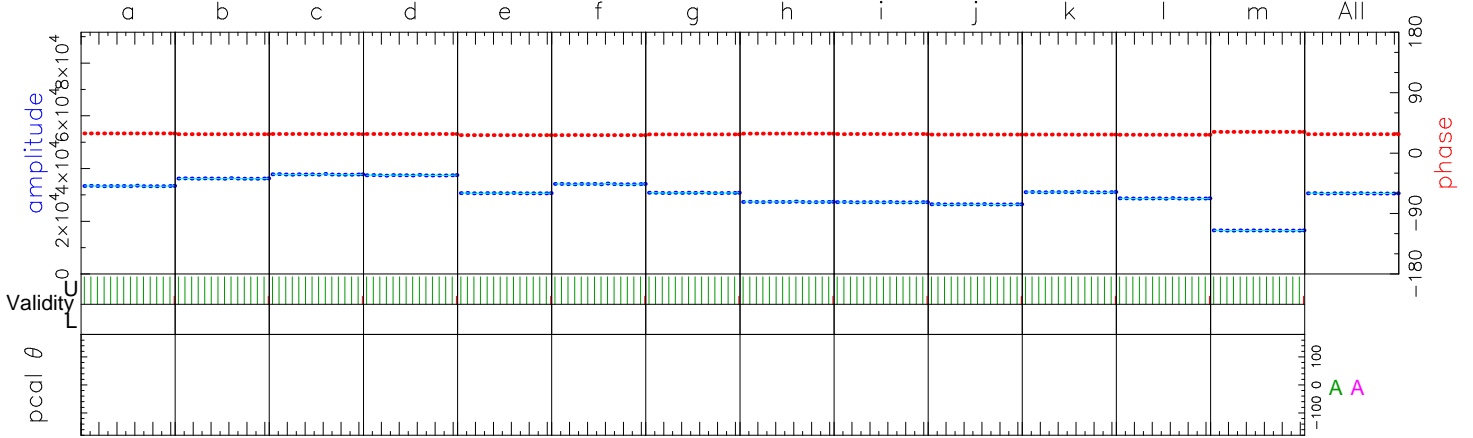
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
 Bits/sample: 2x2 SampCntNorm: enabled  
 Sample rate(MSamp/s): 64  
 Data rate(Mb/s): 1664 nlags: 256 t\_cohere infinite

sb window (us) -2.000 2.000  
 mb window (us) -0.031 0.031  
 dr window (ns/s) -0.011 0.011  
 ion window (TEC) 0.00 0.00



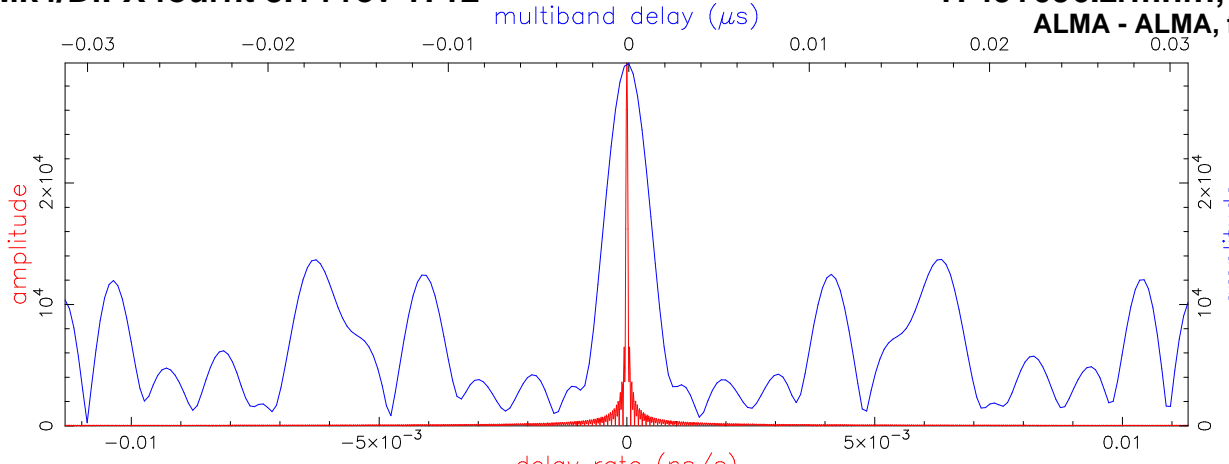
Fringe quality 9  
 SNR 1305435.1  
 Int time 299.987  
 Amp 30576.966  
 Phase 28.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000067  
 MBD 0.000070  
 Fringe rate (Hz) 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build 2017:237:115312  
 2017:243:143646  
 2017:170:130423  
 RA & Dec (J2000) 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 15 segs, 41 APs / seg (20.99 sec / seg.), time ticks 30 sec

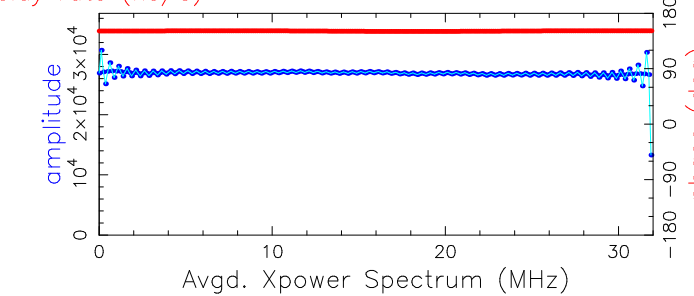
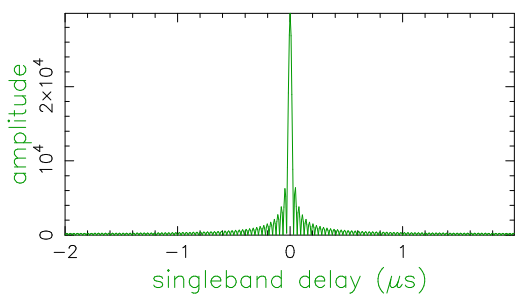


	86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	29.3	28.1	28.3	28.3	26.7	26.8	27.9	28.9	28.3	27.5	27.5	27.3	31.6	Phase	28.1
	33357.7	36213.0	37760.2	37437.1	30653.5	34121.9	30776.6	27342.7	27241.6	26437.4	31049.3	28655.6	16516.8	Ampl.	30581.8
	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	Sbd box	257.0
UL	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
A	0	0	0	0	0	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	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	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
A	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	Tracks	
														Tracks	
Group delay (usec)(sbd)		6.97187500000E-05			Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		6.97187E-05		+/-	9.4E-10	
Sband delay (usec)		6.75000000000E-05			Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		6.75000E-05		+/-	1.3E-08	
Phase delay (usec)		9.05631374940E-07			Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		9.05631E-07		+/-	2.8E-12	
Delay rate (us/s)		2.83423047834E-12			Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		2.83423E-12		+/-	1.6E-14	
Total phase (deg)				28.1	Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		28.1		+/-	0.0	

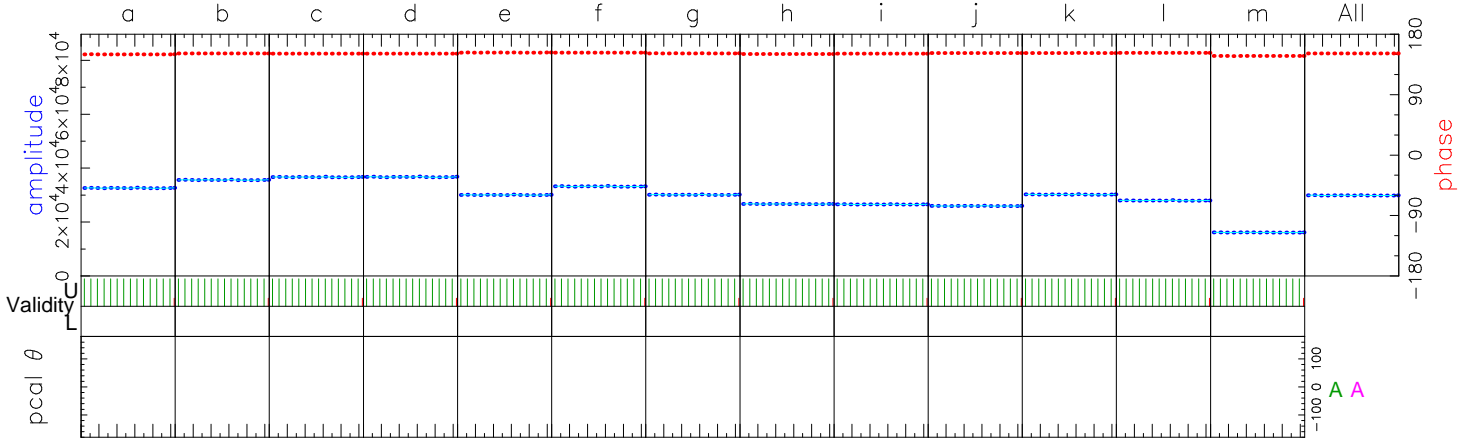
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 30576.965 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.2 0.0 Search (2048X128) 30531.246 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 1.3 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 17.9 0.0 Inc. seg. avg. 30576.756 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1664 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 A: az 49.3 el 43.3 pa -134.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.zrmnh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.W.3.zrmnh



Fringe quality 9  
 SNR 1276215.5  
 Int time 299.987  
 Amp 29892.561  
 Phase 151.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000070  
 MBD -0.000071  
 Fringe rate (Hz)  
 -0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143655  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"



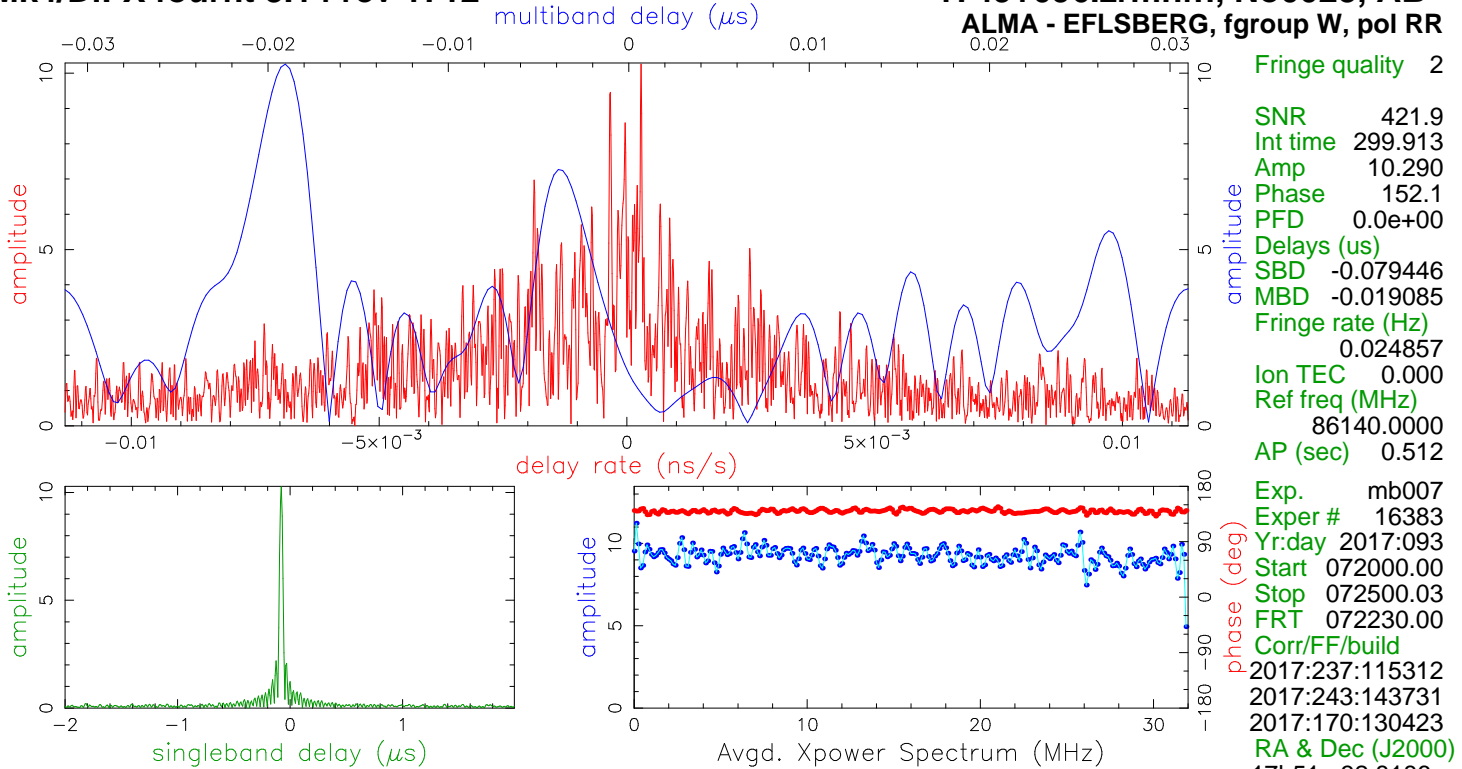
Amp. and Phase vs. time for each freq., 15 segs, 41 APs / seg (20.99 sec / seg.), time ticks 30 sec



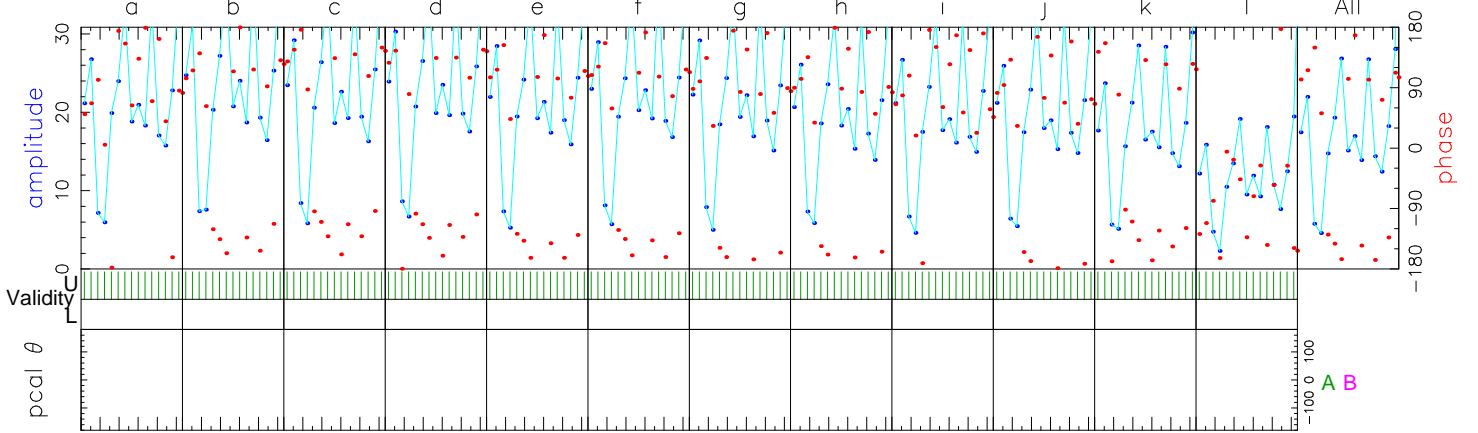
	86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	150.0	151.3	151.0	151.0	152.6	152.5	151.4	150.4	151.0	151.8	151.9	152.1	147.5	Phase	151.2
	32629.5	35612.3	36677.4	36729.3	30064.6	33237.2	30124.6	26700.9	26569.7	25972.0	30217.1	27980.0	16154.6	Ampl.	29897.6
	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	256.9	257.0	257.0	Sbd box	257.0
UL	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
A	0	0	0	0	0	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	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	0:0	0:0	0:0	0:0	0:0	Manl PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	Chan ids	
A	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	Tracks	
														Tracks	
Group delay (usec)(sbd)			-7.10625000000E-05				Apriori delay (usec)		0.00000000000E+00				Resid mbdelay (usec)	-7.10625E-05	+/- 9.6E-10
Sband delay (usec)			-7.05000000000E-05				Apriori clock (usec)		0.0000000E+00				Resid sbdelay (usec)	-7.05000E-05	+/- 1.4E-08
Phase delay (usec)			4.87707027978E-06				Apriori clockrate (us/s)		0.0000000E+00				Resid phdelay (usec)	4.87707E-06	+/- 2.9E-12
Delay rate (us/s)			-3.54278809792E-12				Apriori rate (us/s)		0.00000000000E+00				Resid rate (us/s)	-3.54279E-12	+/- 1.7E-14
Total phase (deg)			151.2				Apriori accel (us/s/s)		0.00000000000E+00				Resid phase (deg)	151.2	+/- 0.0

RMS Theor. Amplitude 29892.561 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X128) 29846.138 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 0.2 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 1.4 0.0 Inc. seg. avg. 29892.336 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 17.9 0.0 Inc. frq. avg. 29897.639 Data rate(Mb/s): 1664 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 A: az 49.3 el 43.3 pa -134.9 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AA.W.4.zrmnfh



Amp. and Phase vs. time for each freq., 16 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

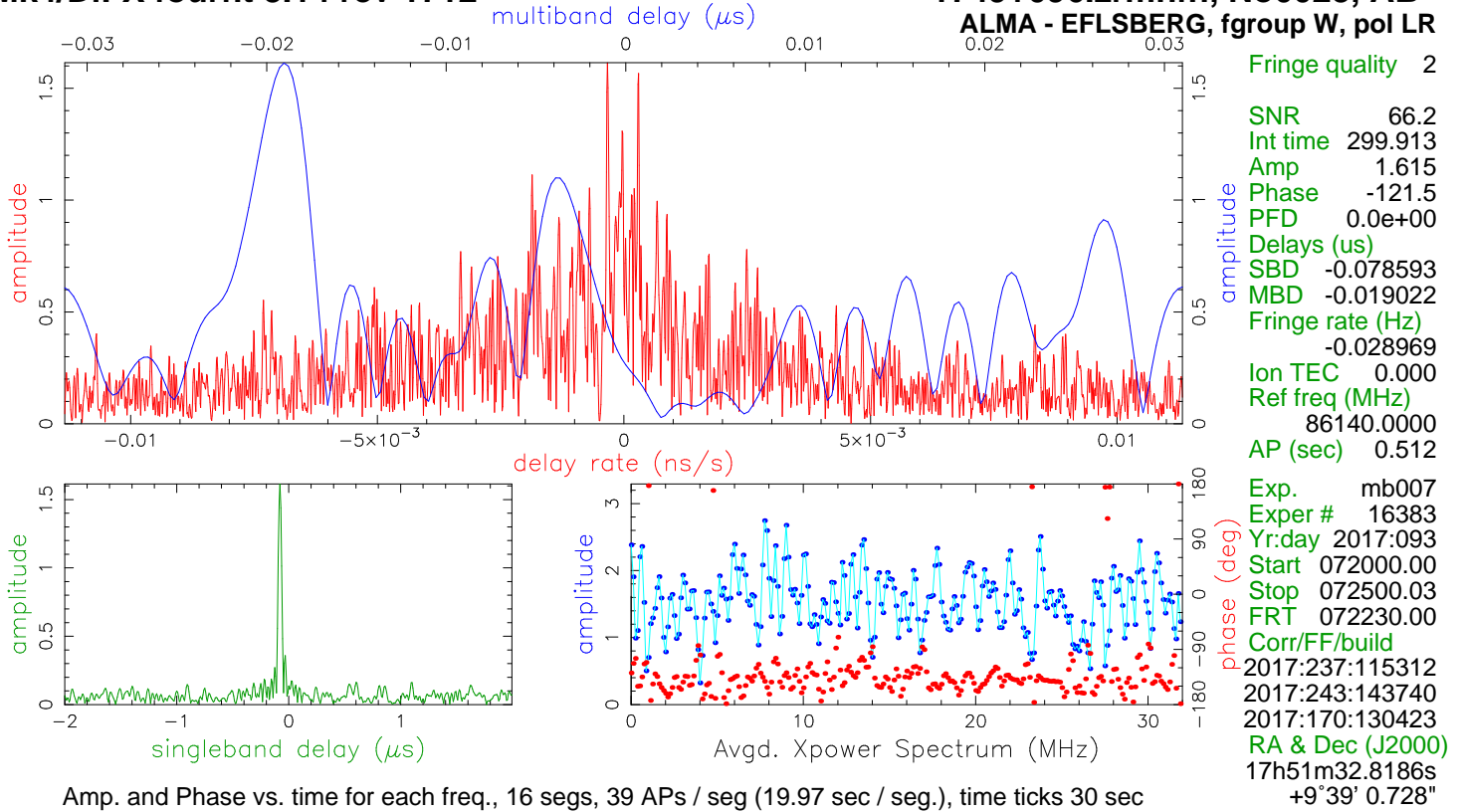


86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	Freq (MHz)	All
115.1	161.9	-172.9	-175.9	155.1	157.6	132.3	135.2	107.3	122.0	179.2	-87.1	Phase	152.1
12.7	14.0	13.7	14.0	13.0	13.6	13.4	12.4	12.3	12.1	10.7	7.1	Ampl.	12.4
247.9	247.3	246.5	246.6	246.6	246.6	246.6	246.7	246.8	247.0	247.6	248.7	Sbd box	246.8
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
B	0	0	0	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	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	0:0	0:0	0:0	ManI PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	Chan ids
B	W00UR	W01UR	W03UR	W04UR	W07UR	W08UR	W09UR	W10UR	W13UR	W14UR	W16UR	W17UR	Tracks
													Tracks
Group delay (usec)(sbd)		-1.72921615306E+02		Apriori delay (usec)		-1.72840029847E+02		Resid mbdelay (usec)		-1.90855E-02	+/-	3.3E-06	
Sband delay (usec)		-1.72919475847E+02		Apriori clock (usec)		-2.1349082E+03		Resid sbdelay (usec)		-7.94460E-02	+/-	4.1E-05	
Phase delay (usec)		-1.72840024942E+02		Apriori clockrate (us/s)		1.7578703E-06		Resid phdelay (usec)		4.90493E-06	+/-	8.8E-09	
Delay rate (us/s)		1.41816480336E+00		Apriori rate (us/s)		1.41816451479E+00		Resid rate (us/s)		2.88564E-07	+/-	5.1E-11	
Total phase (deg)			90.5	Apriori accel (us/s/s)		-3.23728829425E-05		Resid phase (deg)		152.1	+/-	0.3	

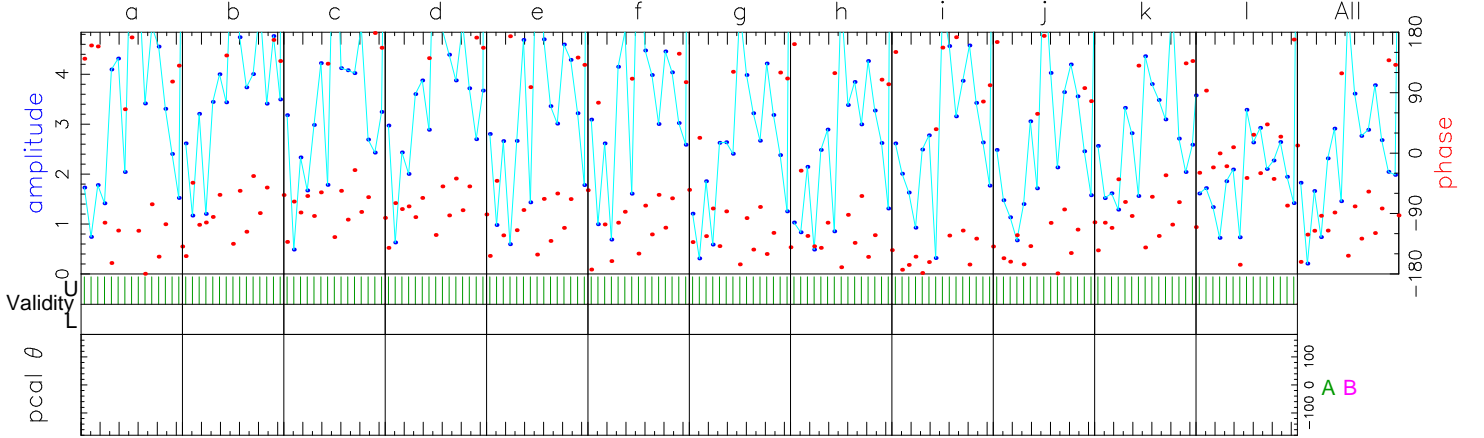
ph/seg (deg) 58.2 0.5 Theor. Amplitude 10.290 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 94.4 0.9 Search (2048X128) 10.208 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 47.6 0.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 27.4 0.8 Inc. seg. avg. 17.173 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1536 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 12.413 ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 B: az 233.7 el 37.2 pa 31.6 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB..zrmnh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB.W.10.zrmnh



Amp. and Phase vs. time for each freq., 16 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec

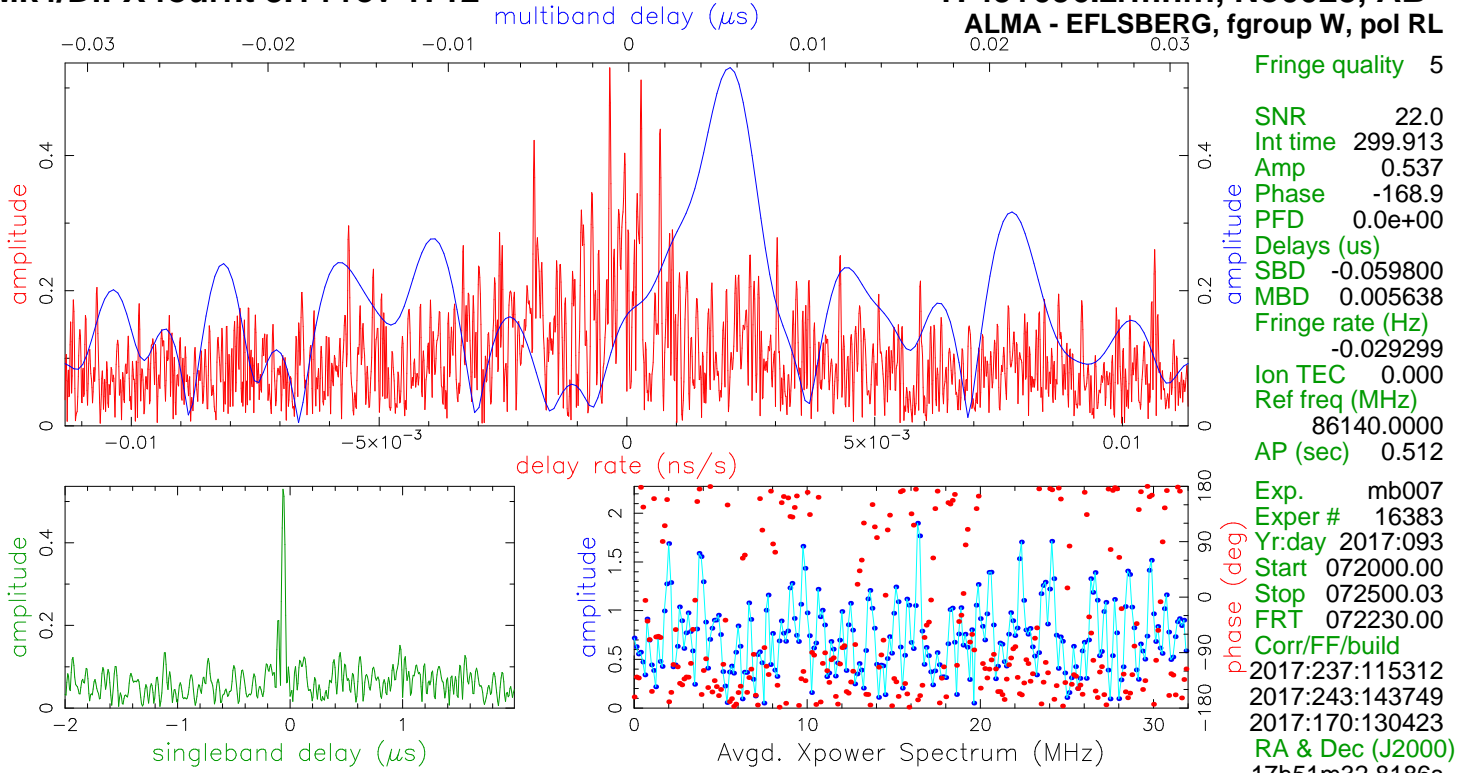


86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	Freq (MHz)	All
-153.9	-107.1	-96.5	-96.5	-115.6	-117.9	-138.9	-138.3	-170.6	-154.7	-106.1	-8.3	Phase	-121.5
2.1	2.2	2.3	2.4	2.1	2.1	1.7	1.7	2.0	1.6	1.8	1.3	Ampl.	1.9
247.8	247.5	246.5	246.6	246.7	246.4	246.4	246.9	247.0	246.7	247.4	248.5	Sbd box	246.9
UL 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
B 0	0	0	0	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	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	0:0	0:0	0:0	0:0	ManI PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	Chan ids	
												Tracks	
B W00UR	W01UR	W03UR	W04UR	W07UR	W08UR	W09UR	W10UR	W13UR	W14UR	W16UR	W17UR	Chan ids	
												Tracks	
Group delay (usec)(sbd)	-1.72921551426E+02			Apriori delay (usec)	-1.72840029847E+02			Resid mbdelay (usec)	-1.90216E-02			+/-	2.1E-05
Sband delay (usec)	-1.72918622847E+02			Apriori clock (usec)	-2.1349082E+03			Resid sbdelay (usec)	-7.85930E-02			+/-	2.6E-04
Phase delay (usec)	-1.72840033766E+02			Apriori clockrate (us/s)	1.7578703E-06			Resid phdelay (usec)	-3.91938E-06			+/-	5.6E-08
Delay rate (us/s)	1.41816417849E+00			Apriori rate (us/s)	1.41816451479E+00			Resid rate (us/s)	-3.36298E-07			+/-	3.2E-10
Total phase (deg)	-183.1			Apriori accel (us/s/s)	-3.23728829425E-05			Resid phase (deg)	-121.5			+/-	1.7

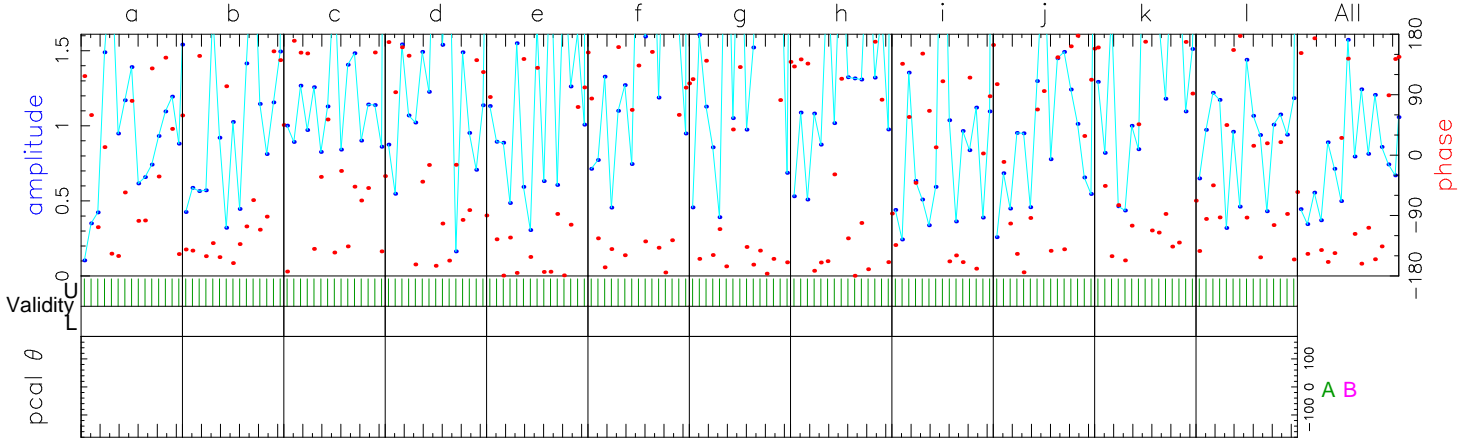
ph/seg (deg)	RMS	Theor.	Amplitude	1.615 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	56.5	3.5	Search (2048X128)	1.590	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-2.000 2.000	
ph/frq (deg)	91.7	6.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.031 0.031
amp/frq (%)	27.5	5.2	Inc. seg. avg.	2.420	Sample rate(MSamp/s):	64	ion window (TEC)	0.00 0.00	
			Inc. frq. avg.	1.928	Data rate(Mb/s):	1536	nlags: 256 t_cohere infinite		

A: az 49.3 el 43.3 pa -134.9    B: az 233.7 el 37.2 pa 31.6    u,v (fr/asec) -8282.905 -10540.366    simultaneous interpolator

Control file: cf\_1234    Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB..zrmnfh    Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB.W.11.zrmnfh

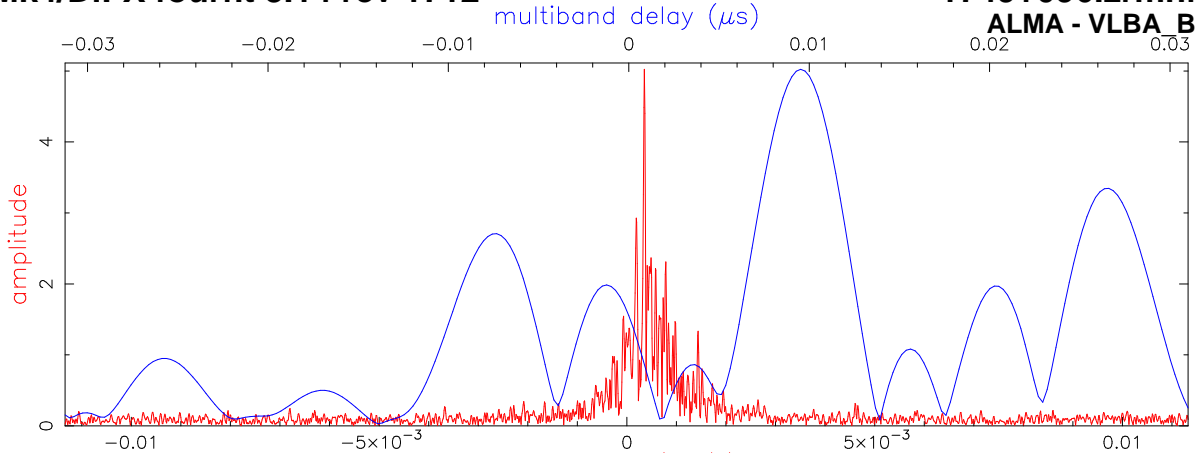


Amp. and Phase vs. time for each freq., 16 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



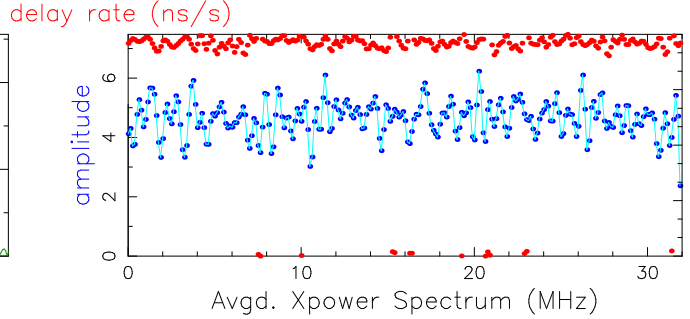
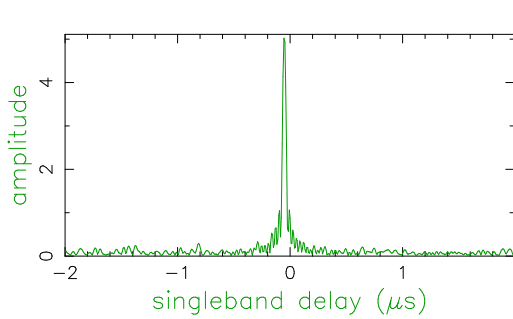
86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	Freq (MHz)	All
-123.9	-137.1	-136.3	-153.4	169.8	174.0	179.5	177.1	124.0	154.8	-144.0	-95.2	Phase	-168.9
0.1	0.6	0.4	0.6	0.7	0.9	1.1	0.8	0.4	0.4	0.9	0.4	Ampl.	0.6
382.8	250.1	216.1	242.7	248.5	250.5	249.8	249.9	266.7	388.6	250.3	252.0	Sbd box	249.3
UL 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
B 0	0	0	0	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	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	0:0	0:0	0:0	0:0	ManI PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	Chan ids	
												Tracks	
B W00UL	W01UL	W03UL	W04UL	W07UL	W08UL	W09UL	W10UL	W13UL	W14UL	W16UL	W17UL	Chan ids	
												Tracks	
Group delay (usec)(sbd)	-1.72896892022E+02			Apriori delay (usec)	-1.72840029847E+02			Resid mbdelay (usec)	5.63783E-03			+/-	6.3E-05
Sband delay (usec)	-1.72899829847E+02			Apriori clock (usec)	-2.1349082E+03			Resid sbdelay (usec)	-5.98000E-02			+/-	7.8E-04
Phase delay (usec)	-1.72840035292E+02			Apriori clockrate (us/s)	1.7578703E-06			Resid phdelay (usec)	-5.44501E-06			+/-	1.7E-07
Delay rate (us/s)	1.41816417466E+00			Apriori rate (us/s)	1.41816451479E+00			Resid rate (us/s)	-3.40129E-07			+/-	9.7E-10
Total phase (deg)	-230.4			Apriori accel (us/s/s)	-3.23728829425E-05			Resid phase (deg)	-168.9			+/-	5.2

ph/seg (deg)	59.9	10.4	RMS	59.9	Theor.	10.4	Amplitude	0.537 +/- 0.024	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	77.0	18.2	Search (2048X128)	0.520	Apriori clock (usec)	-2.1349082E+03	Resid sbdelay (usec)	-5.98000E-02	+/-	7.8E-04	sb window (us)	-2.000 2.000
ph/frq (deg)	41.6	9.0	Interp.	0.000	Apriori clockrate (us/s)	1.7578703E-06	Resid phdelay (usec)	-5.44501E-06	+/-	1.7E-07	mb window (us)	-0.031 0.031
amp/frq (%)	52.0	15.7	Inc. seg. avg.	0.770	Apriori rate (us/s)	1.41816451479E+00	Resid rate (us/s)	-3.40129E-07	+/-	9.7E-10	dr window (ns/s)	-0.011 0.011
			Inc. frq. avg.	0.612	Apriori accel (us/s/s)	-3.23728829425E-05	Resid phase (deg)	-168.9	+/-	5.2	ion window (TEC)	0.00 0.00
A: az 49.3 el 43.3 pa -134.9	B: az 233.7 el 37.2 pa 31.6		u,v (fr/asec)		-8282.905 -10540.366		simultaneous interpolator					
Control file: cf_1234	Input file: /Exps/mb007/gmva_32_pc1/1234/No0023/AB..zrmfh		Output file: /Exps/mb007/gmva_32_pc1/1234/No0023/AB.W.12.zrmfh									



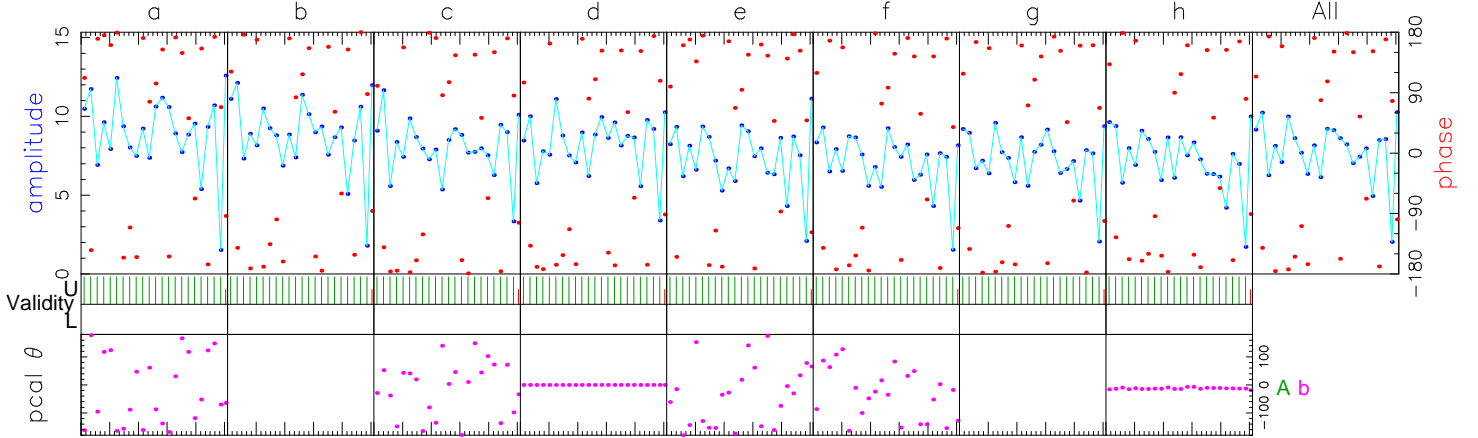
Fringe quality 5

SNR 171.1  
 Int time 299.660  
 Amp 5.113  
 Phase 175.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.051454  
 MBD 0.009538  
 Fringe rate (Hz)  
 0.030689  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512



Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143700  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

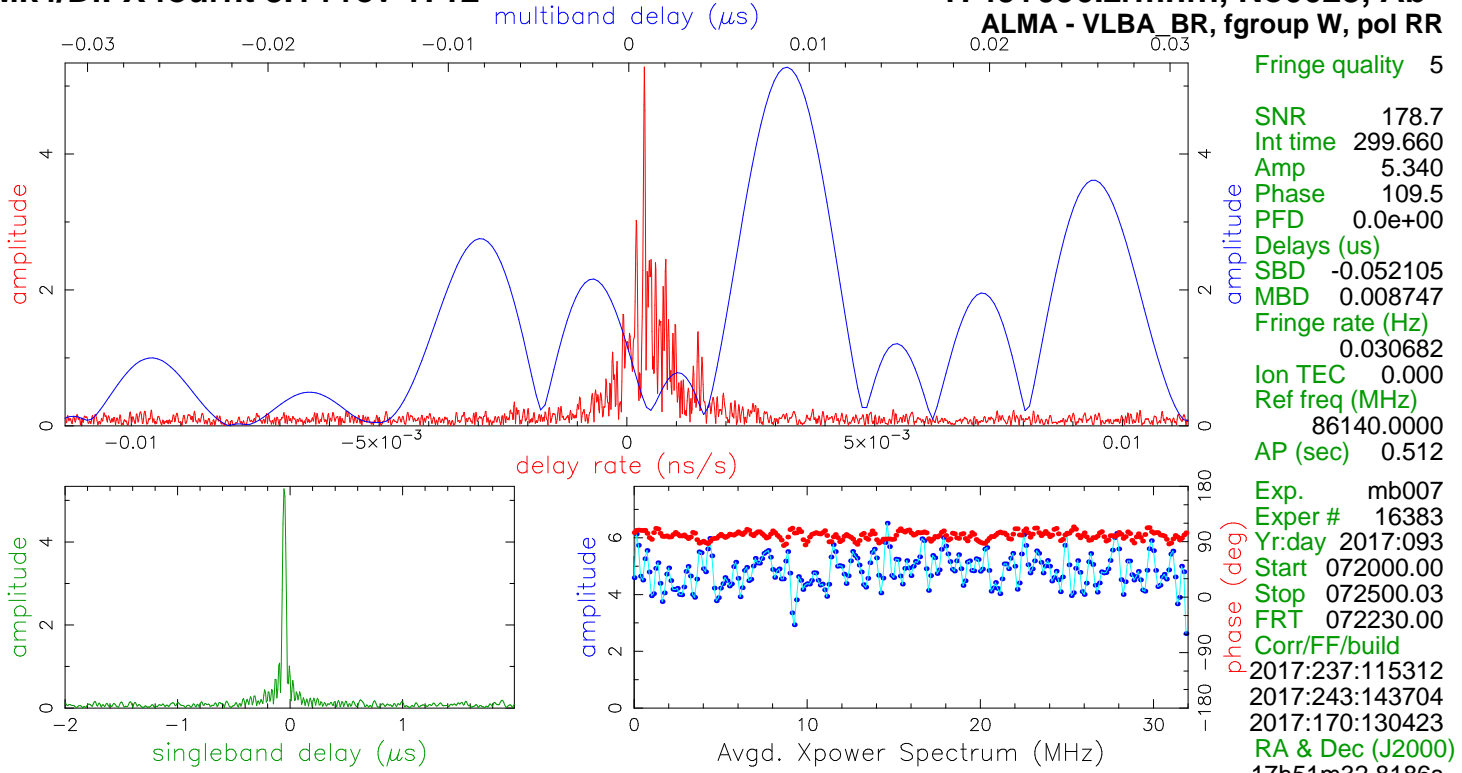


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
174.9	-178.8	172.5	178.8	164.1	174.5	171.5	-175.0	Phase	175.4
5.7	5.5	5.3	5.3	4.7	4.5	4.8	4.6	Ampl.	5.1
250.3	250.5	250.4	250.4	250.3	250.5	250.5	250.5	Sbd box	250.4
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
b 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
b W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.86360734509E+03	Apriori delay (usec)	8.86366030748E+03	Resid mbdelay (usec)	9.53761E-03	+/-	1.4E-05		
Sband delay (usec)	8.86360885398E+03	Apriori clock (usec)	-2.1011909E+03	Resid sbdelay (usec)	-5.14535E-02	+/-	1.0E-04		
Phase delay (usec)	8.86366031314E+03	Apriori clockrate (us/s)	1.7493731E-06	Resid phdelay (usec)	5.65617E-06	+/-	2.2E-08		
Delay rate (us/s)	-2.43488792917E-01	Apriori rate (us/s)	-2.43489149187E-01	Resid rate (us/s)	3.56270E-07	+/-	1.2E-10		
Total phase (deg)	134.5	Apriori accel (us/s/s)	-7.97239788177E-05	Resid phase (deg)	175.4	+/-	0.7		

RMS Theor. Amplitude 5.113 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 56.5 1.6 Search (2048X64) 4.954 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 62.6 2.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 6.9 0.9 Inc. seg. avg. 7.766 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 8.2 1.7 Inc. frq. avg. 5.051 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

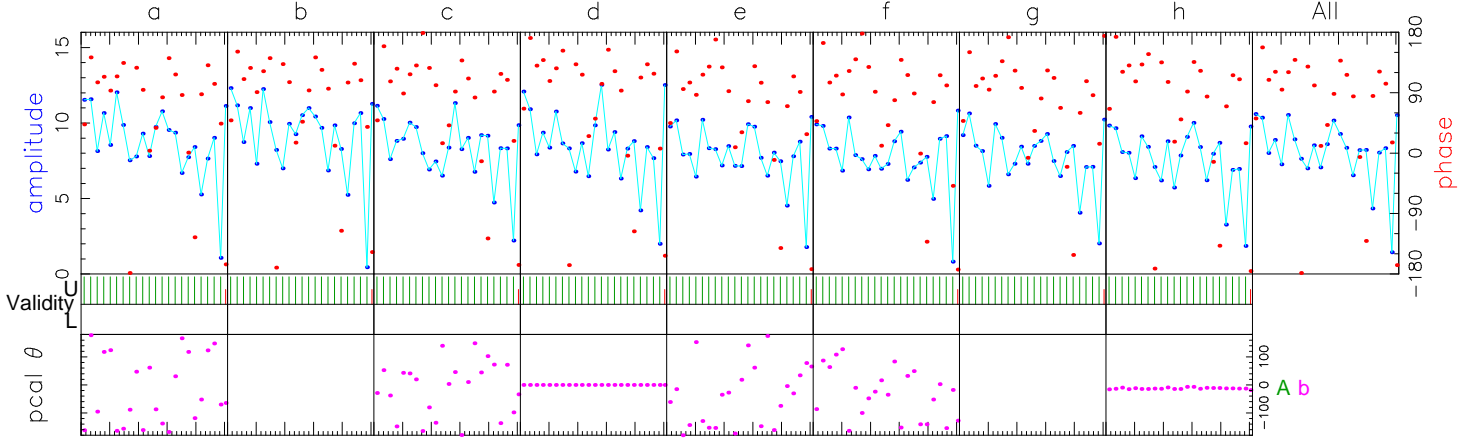
A: az 49.3 el 43.3 pa -134.9 b: az 86.5 el 9.9 pa -42.5 u,v (fr/asec) 1326.652 -10968.006 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab.W.5.zrmnfh





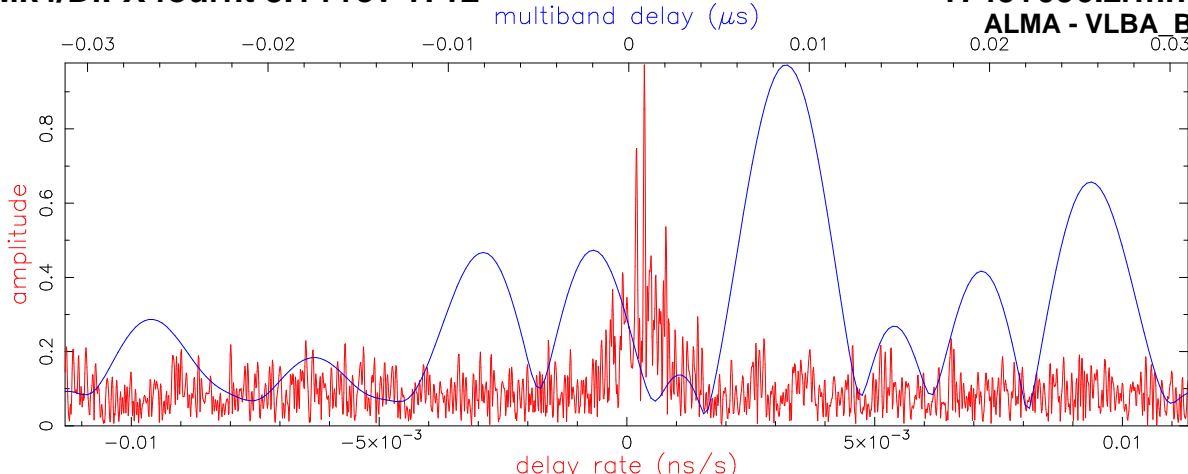
Fringe quality 5  
 SNR 178.7  
 Int time 299.660  
 Amp 5.340  
 Phase 109.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.052105  
 MBD 0.008747  
 Fringe rate (Hz) 0.030682  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143704  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
105.9	111.8	107.7	122.3	100.7	107.8	101.7	117.5	Phase	109.5
5.8	6.0	5.3	5.4	5.2	5.0	5.0	4.9	Ampl.	5.3
250.1	250.3	250.5	250.4	250.2	250.4	250.4	250.5	Sbd box	250.3
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
b 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
b W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.86360655497E+03		Apriori delay (usec)	8.86366030748E+03		Resid mbdelay (usec)	8.74749E-03		+/- 1.4E-05
Sband delay (usec)	8.86360820248E+03		Apriori clock (usec)	-2.1011909E+03		Resid sbdelay (usec)	-5.21050E-02		+/- 9.6E-05
Phase delay (usec)	8.86366031101E+03		Apriori clockrate (us/s)	1.7493731E-06		Resid phdelay (usec)	3.53022E-06		+/- 2.1E-08
Delay rate (us/s)	-2.43488792995E-01		Apriori rate (us/s)	-2.43489149187E-01		Resid rate (us/s)	3.56192E-07		+/- 1.2E-10
Total phase (deg)		68.5	Apriori accel (us/s/s)	-7.97239788177E-05		Resid phase (deg)	109.5		+/- 0.6

RMS Theor. Amplitude 5.340 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 55.7 1.5 Search (2048X64) 5.240 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 63.7 2.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 8.1 0.9 Inc. seg. avg. 8.076 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 6.8 1.6 Inc. frq. avg. 5.320 simultaneous interpolator



Fringe quality 6

SNR 32.7

Int time 299.660

Amp 0.978

Phase 30.0

PFD 0.0e+00

Delays (us)

SBD -0.052958

MBD 0.008694

Fringe rate (Hz) 0.030656

Ion TEC 0.000

Ref freq (MHz) 86140.000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

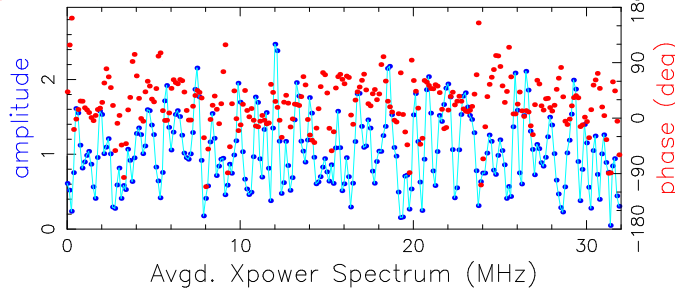
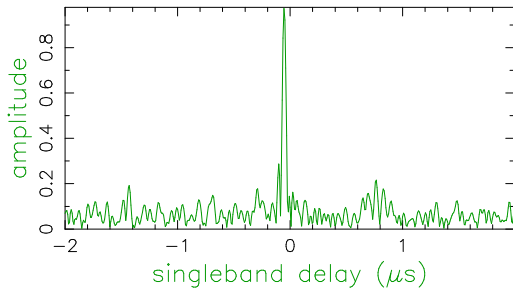
FRT 072230.00

Corr/FF/build 2017:237:115312

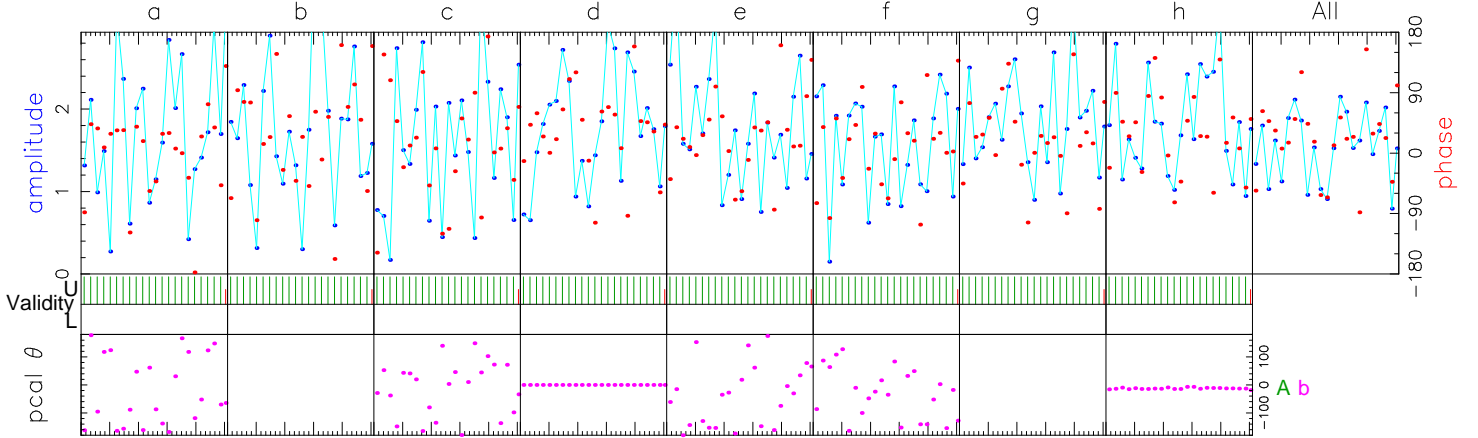
2017:243:143709

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
22.3	44.6	16.1	45.4	23.5	17.6	30.0	38.7	Phase	30.0
1.2	0.9	0.6	1.0	1.2	1.0	1.0	1.0	Ampl.	1.0
249.8	250.6	251.2	250.3	249.9	250.0	250.1	250.4	Sbd box	250.2
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
b 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
b W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.86360650134E+03	Apriori delay (usec)	8.86366030748E+03	Resid mbdelay (usec)	8.69386E-03	+/-	7.5E-05		
Sband delay (usec)	8.86360734998E+03	Apriori clock (usec)	-2.1011909E+03	Resid sbdelay (usec)	-5.29575E-02	+/-	5.3E-04		
Phase delay (usec)	8.86366030845E+03	Apriori clockrate (us/s)	1.7493731E-06	Resid phdelay (usec)	9.68071E-07	+/-	1.1E-07		
Delay rate (us/s)	-2.43488793302E-01	Apriori rate (us/s)	-2.43489149187E-01	Resid rate (us/s)	3.55885E-07	+/-	6.5E-10		
Total phase (deg)	349.1	Apriori accel (us/s/s)	-7.97239788177E-05	Resid phase (deg)	30.0	+/-	3.5		

ph/seg (deg) 57.7 8.4 Search (2048X64) 0.965 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

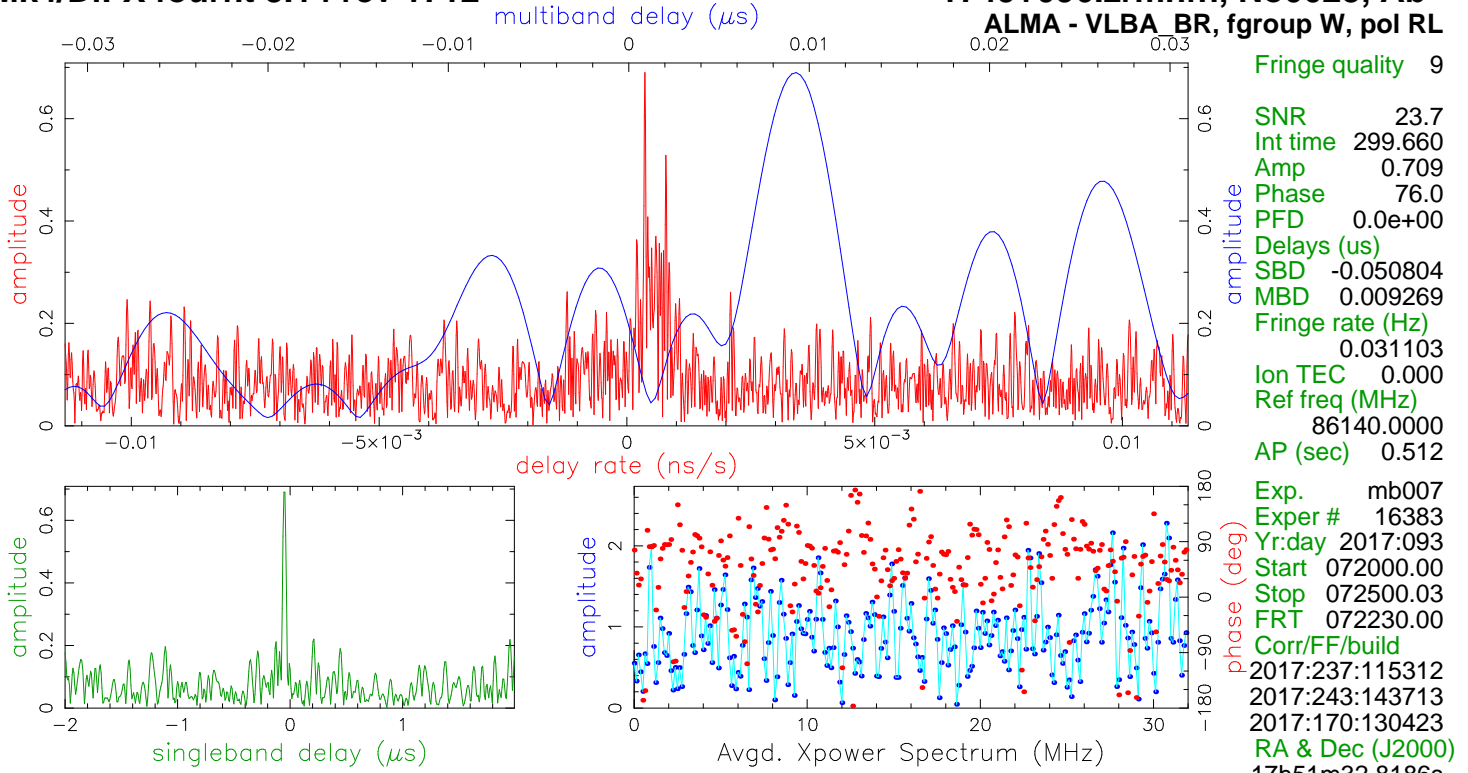
amp/seg (%) 71.9 14.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

ph/frq (deg) 12.7 5.0 Inc. seg. avg. 1.533 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

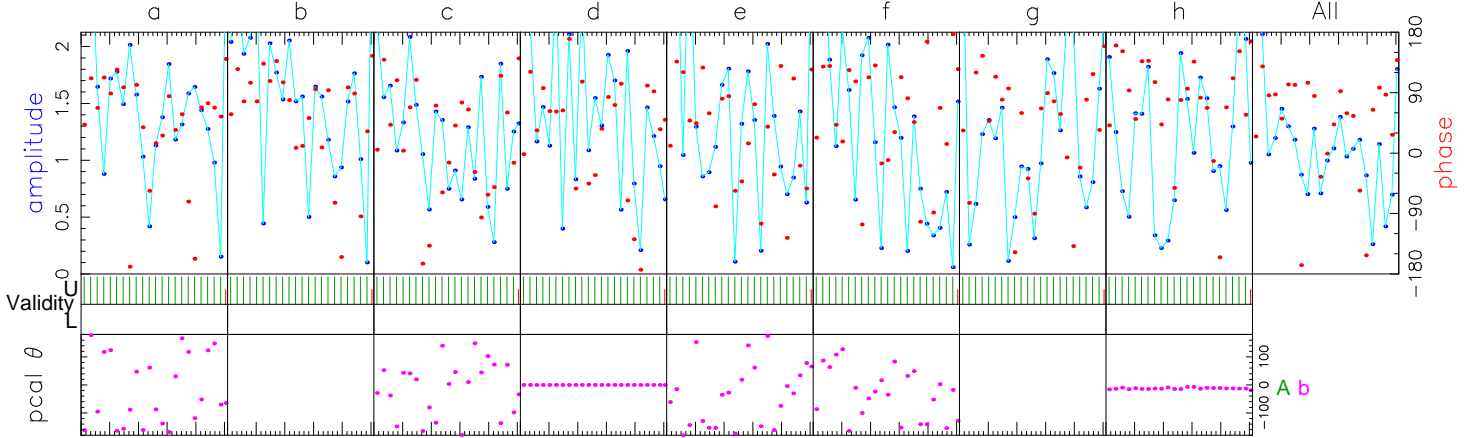
amp/frq (%) 19.0 8.6 Inc. frq. avg. 0.986 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

A: az 49.3 el 43.3 pa -134.9 b: az 86.5 el 9.9 pa -42.5 u,v (fr/asec) 1326.652 -10968.006 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab.W.7.zrmnfh



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

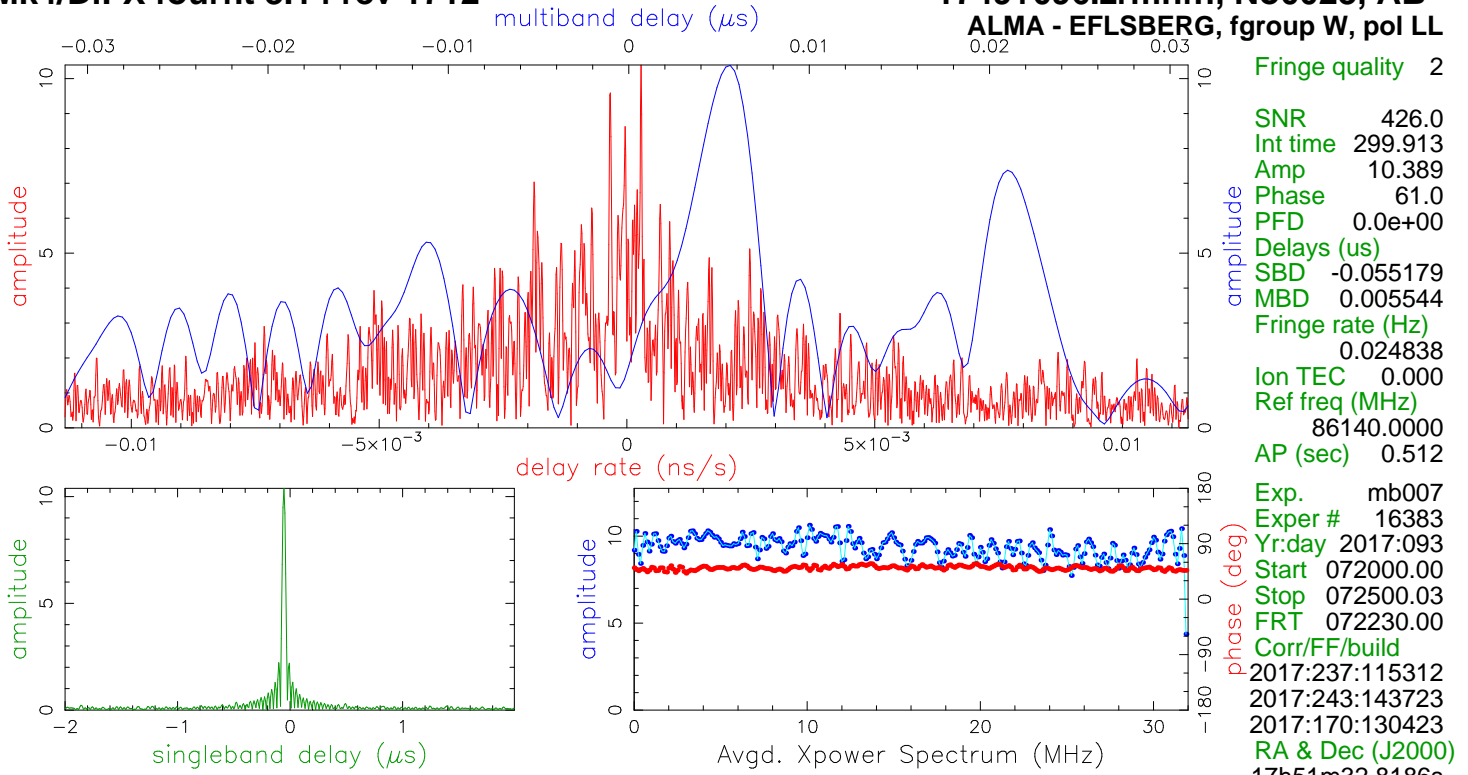


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
84.5	89.1	50.5	65.6	54.5	78.1	65.4	99.1	Phase	76.0
0.9	1.0	0.5	0.7	0.7	0.6	0.6	0.8	Ampl.	0.7
250.7	250.2	490.1	249.9	250.1	251.3	250.9	251.0	Sbd box	250.5
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
b 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
b W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.86360707688E+03		Apriori delay (usec)	8.86366030748E+03		Resid mbdelay (usec)	9.26940E-03	+/-	1.0E-04
Sband delay (usec)	8.86360950348E+03		Apriori clock (usec)	-2.1011909E+03		Resid sbdelay (usec)	-5.08040E-02	+/-	7.3E-04
Phase delay (usec)	8.86366030993E+03		Apriori clockrate (us/s)	1.7493731E-06		Resid phdelay (usec)	2.44999E-06	+/-	1.6E-07
Delay rate (us/s)	-2.43488788113E-01		Apriori rate (us/s)	-2.43489149187E-01		Resid rate (us/s)	3.61074E-07	+/-	9.0E-10
Total phase (deg)		35.0	Apriori accel (us/s/s)	-7.97239788177E-05		Resid phase (deg)	76.0	+/-	4.8

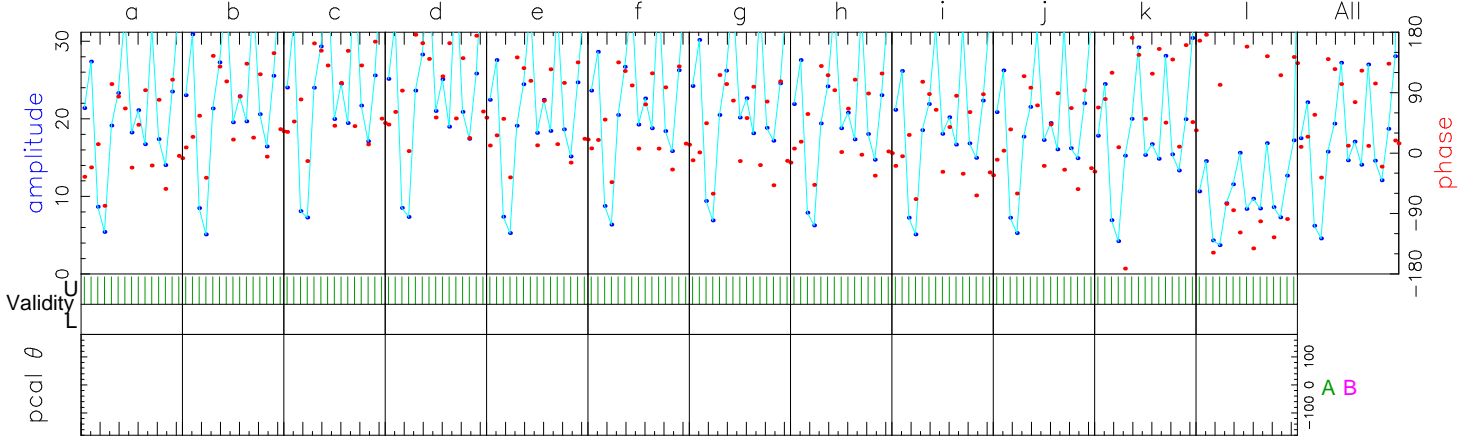
ph/seg (deg)	60.5	11.6	Amplitude	0.709 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-2.000	2.000
amp/seg (%)	89.6	20.2	Search (2048X64)	0.667	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.031	0.031
ph/frq (deg)	18.8	6.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	24.4	11.9	Inc. seg. avg.	1.107	Sample rate(MSamp/s): 64		ion window (TEC)	0.00	0.00
			Inc. frq. avg.	0.712	Data rate(Mb/s): 1024	nlags: 256 t_cohere infinite			

A: az 49.3 el 43.3 pa -134.9    b: az 86.5 el 9.9 pa -42.5    u,v (fr/asec) 1326.652 -10968.006    simultaneous interpolator

Control file: cf\_1234    Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab..zrmnfh    Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ab.W.8.zrmnfh



Amp. and Phase vs. time for each freq., 16 segs, 39 APs / seg (19.97 sec / seg.), time ticks 30 sec



86060.00	86092.00	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86412.00	86444.00	Freq (MHz)	All		
27.4	69.8	89.0	99.1	63.6	57.0	35.3	50.1	22.0	28.4	102.4	-159.7	Phase	61.0		
12.5	14.2	14.9	15.2	13.2	13.8	13.6	13.0	12.3	12.2	10.8	6.3	Ampl.	12.7		
250.9	250.4	250.0	249.9	249.6	249.6	250.1	250.0	249.8	249.9	250.7	252.1	Sbd box	249.9		
UL 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used			
A 0	0	0	0	0	0	0	0	0	0	0	0	PC freqs			
B 0	0	0	0	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	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	0:0	0:0	0:0	0:0	ManI PC			
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
B 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
A W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	Chan ids			
B W00UL	W01UL	W03UL	W04UL	W07UL	W08UL	W09UL	W10UL	W13UL	W14UL	W16UL	W17UL	Tracks			
												Resid mbdelay (usec)	5.54401E-03	+/- 3.2E-06	
												Resid sbdelay (usec)	-5.51795E-02	+/- 4.0E-05	
												Resid phdelay (usec)	1.96612E-06	+/- 8.7E-09	
												Resid rate (us/s)	2.88339E-07	+/- 5.0E-11	
												Resid phase (deg)	61.0	+/- 0.3	
												Apriori delay (usec)	-1.72840029847E+02		
												Apriori clock (usec)	-2.1349082E+03		
												Apriori clockrate (us/s)	1.7578703E-06		
												Apriori rate (us/s)	1.41816451479E+00		
												Apriori accel (us/s/s)	-3.23728829425E-05		
												PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
												PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-2.000 2.000
												Bits/sample:	2x2	SampCntNorm:	enabled
												Sample rate:	(MSamp/s): 64	mb window (us)	-0.031 0.031
												Data rate:	(Mb/s): 1536	dr window (ns/s)	-0.011 0.011
												nlags:	256	ion window (TEC)	0.00 0.00
												t_cohere:	infinite		

Group delay (usec)(sbd) -1.72896985837E+02 Apriori delay (usec) -1.72840029847E+02 Resid mbdelay (usec) 5.54401E-03 +/- 3.2E-06

Sband delay (usec) -1.72895209347E+02 Apriori clock (usec) -2.1349082E+03 Resid sbdelay (usec) -5.51795E-02 +/- 4.0E-05

Phase delay (usec) -1.72840027881E+02 Apriori clockrate (us/s) 1.7578703E-06 Resid phdelay (usec) 1.96612E-06 +/- 8.7E-09

Delay rate (us/s) 1.41816480313E+00 Apriori rate (us/s) 1.41816451479E+00 Resid rate (us/s) 2.88339E-07 +/- 5.0E-11

Total phase (deg) -0.6 Apriori accel (us/s/s) -3.23728829425E-05 Resid phase (deg) 61.0 +/- 0.3

ph/seg (deg) 57.7 0.5 Theor. Amplitude 10.389 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 94.0 0.9 Search (2048X128) 10.313 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

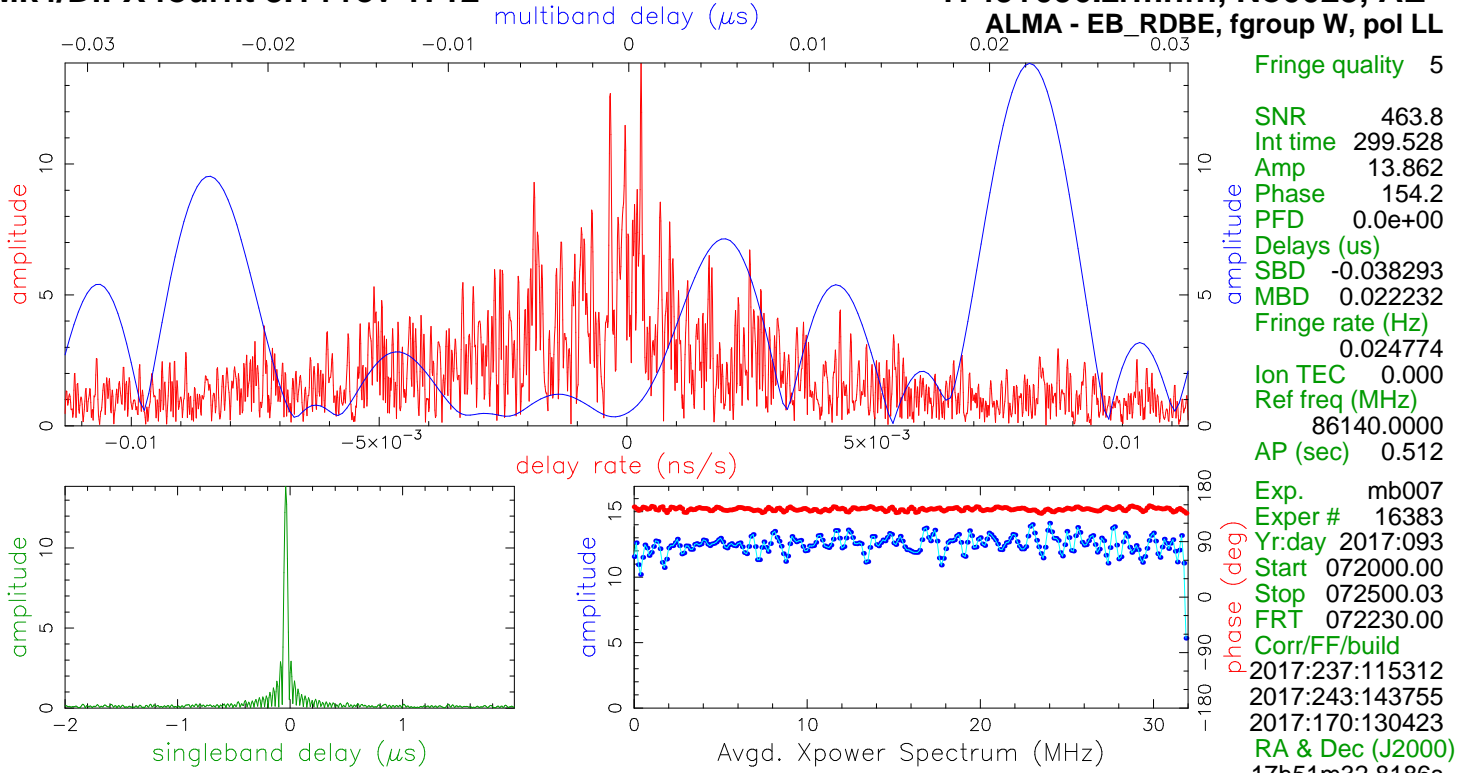
ph/frq (deg) 52.9 0.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

amp/frq (%) 30.8 0.8 Inc. seg. avg. 17.332 Sample rate (MSamp/s): 64 Data rate (Mb/s): 1536 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

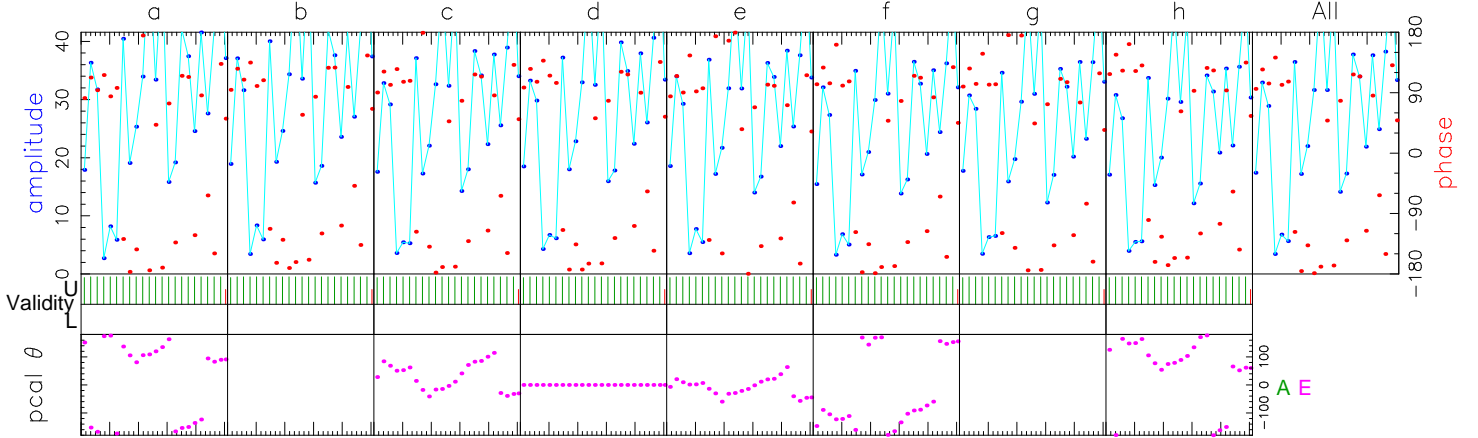
amp/frq (%) 30.8 0.8 Inc. frq. avg. 12.657 Data rate (Mb/s): 1536 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 B: az 233.7 el 37.2 pa 31.6 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB..zrmfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AB.W.9.zrmfh



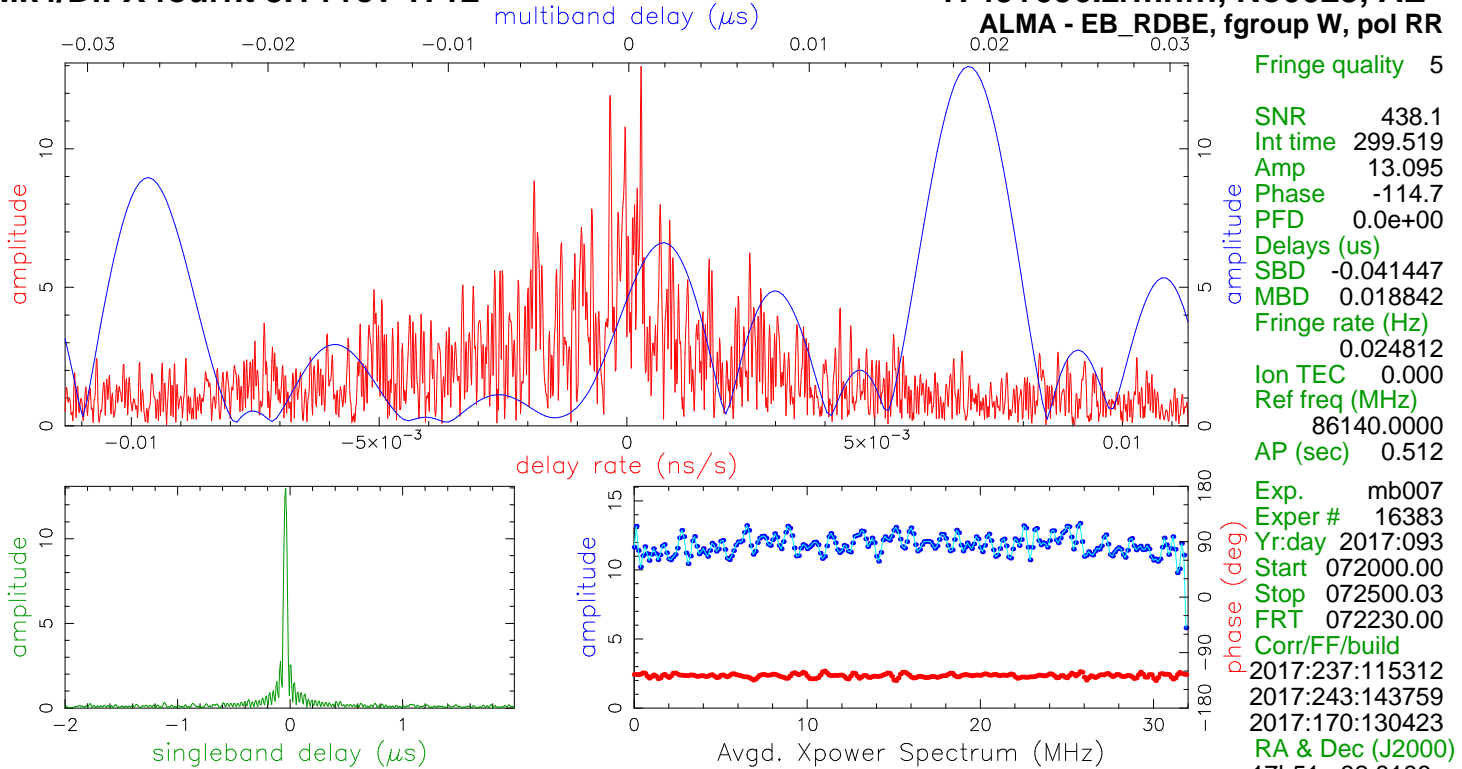
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



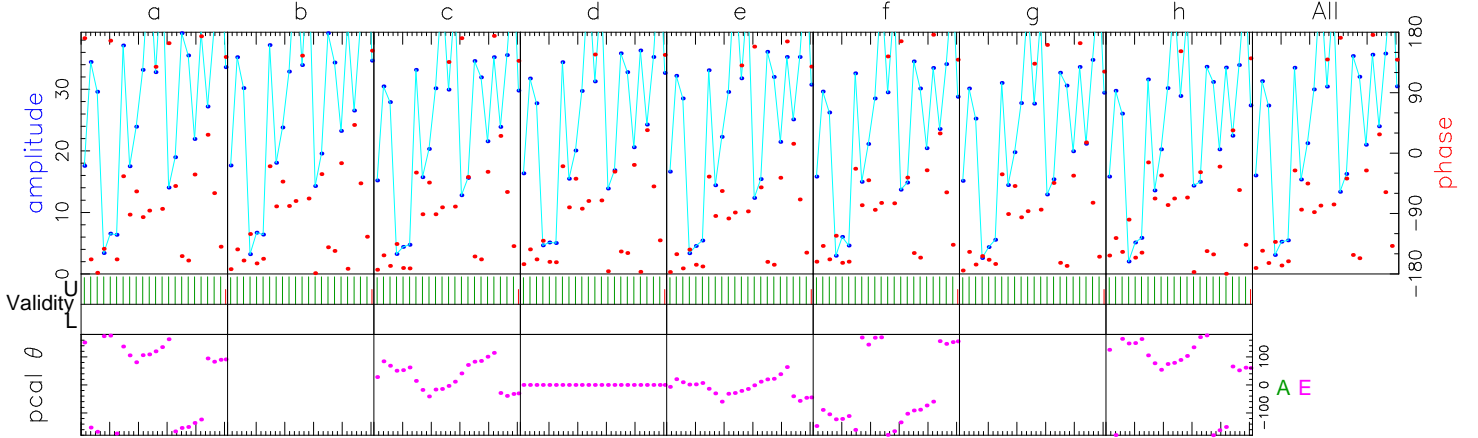
	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	150.5	162.5	153.8	157.6	140.8	153.6	147.6	166.5	Phase	154.2
	15.2	15.3	13.9	14.3	13.6	13.3	13.3	12.9	Ampl.	14.0
	252.1	252.1	251.9	252.0	252.1	252.1	252.1	252.4	Sbd box	252.1
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
E	4000	0	5000	4000	2000	1000	0	2000	PC freqs	
A:E	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:E	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	
E	1000	1000	1000	1000	1000	1000	1000	1000		
A	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
E	W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.72380298306E+02		Apriori delay (usec)		-1.72340029847E+02		Resid mbdelay (usec)		2.22315E-02	+/- 5.3E-06
Sband delay (usec)	-1.72378322847E+02		Apriori clock (usec)		-2.1344082E+03		Resid sbdelay (usec)		-3.82930E-02	+/- 3.7E-05
Phase delay (usec)	-1.72340024876E+02		Apriori clockrate (us/s)		1.7578703E-06		Resid phdelay (usec)		4.97158E-06	+/- 8.0E-09
Delay rate (us/s)	1.41816480239E+00		Apriori rate (us/s)		1.41816451479E+00		Resid rate (us/s)		2.87600E-07	+/- 4.6E-11
Total phase (deg)	92.6		Apriori accel (us/s/s)		-3.23728829425E-05		Resid phase (deg)		154.2	+/- 0.2

RMS Theor. Amplitude 13.862 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 65.9 0.6 Search (2048X64) 13.708 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 141.5 1.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 8.8 0.3 Inc. seg. avg. 27.958 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 6.1 0.6 Inc. frq. avg. 13.970 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 E: az 233.7 el 37.2 pa 31.4 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.W.13.zrmnfh

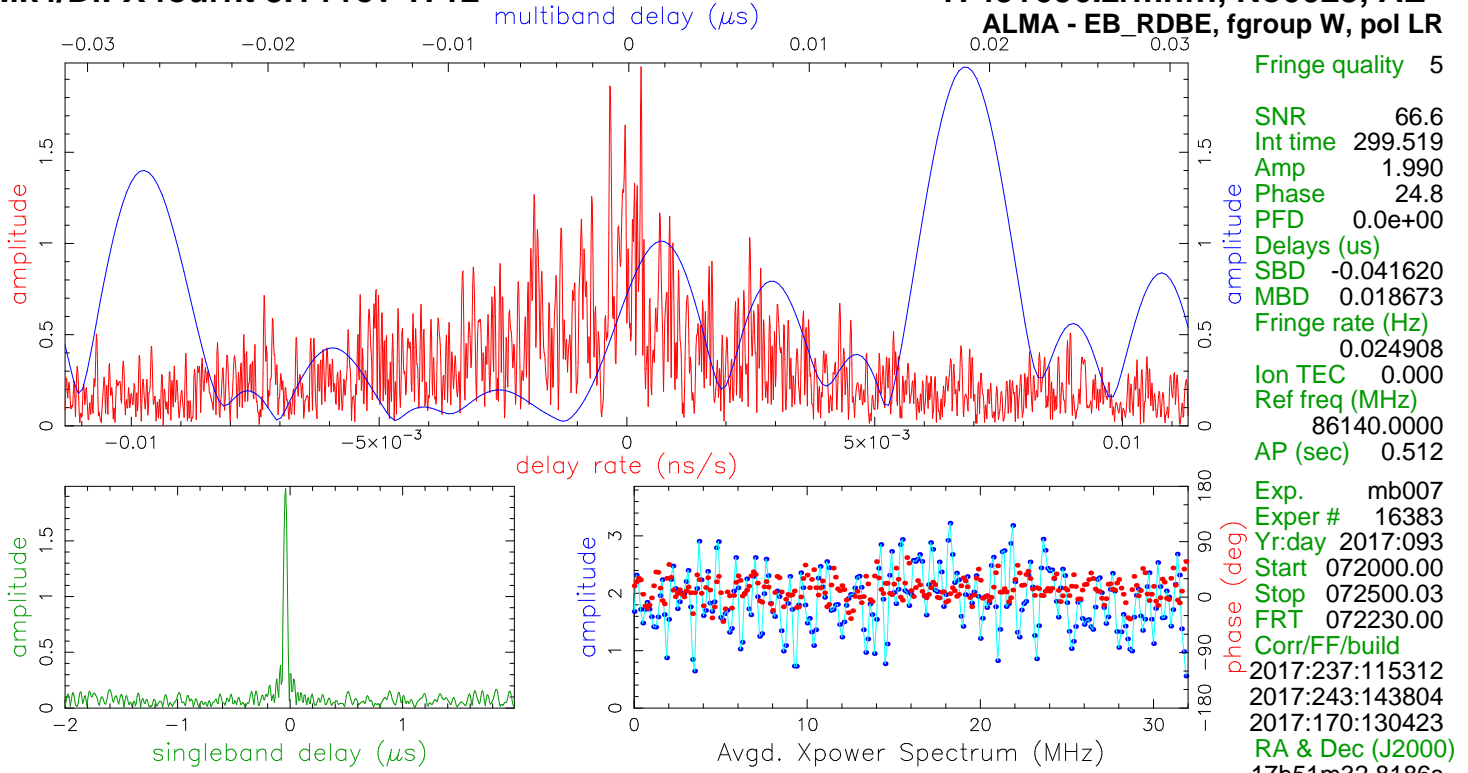


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

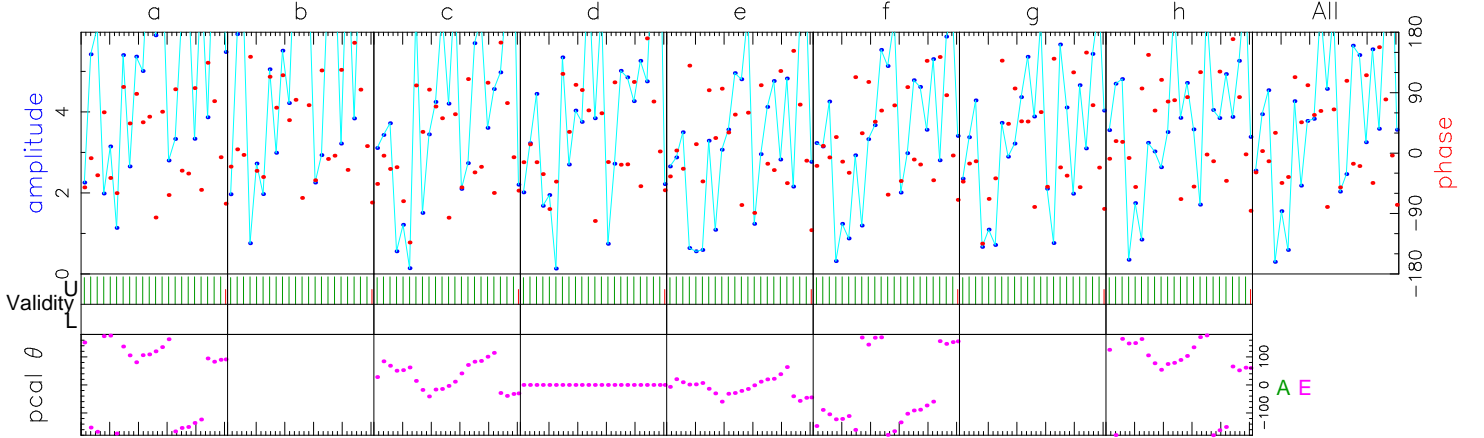


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-121.0	-106.2	-116.9	-109.4	-124.0	-111.1	-123.8	-105.3	Phase	-114.7
14.3	14.4	12.6	13.1	13.3	12.5	12.0	12.4	Ampl.	13.1
251.7	251.8	251.5	251.6	251.7	251.7	251.7	252.0	Sbd box	251.7
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
E 4000	0	5000	4000	2000	1000	0	2000	PC freqs	
A:E 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:E 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	
E 1000	1000	1000	1000	1000	1000	1000	1000		
A W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
E W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	-1.72383687618E+02	Apriori delay (usec)	-1.72340029847E+02	Resid mbdelay (usec)	1.88422E-02	+/-	5.6E-06		
Sband delay (usec)	-1.72381476847E+02	Apriori clock (usec)	-2.1344082E+03	Resid sbdelay (usec)	-4.14470E-02	+/-	3.9E-05		
Phase delay (usec)	-1.72340033545E+02	Apriori clockrate (us/s)	1.7578703E-06	Resid phdelay (usec)	-3.69804E-06	+/-	8.4E-09		
Delay rate (us/s)	1.41816480283E+00	Apriori rate (us/s)	1.41816451479E+00	Resid rate (us/s)	2.88037E-07	+/-	4.9E-11		
Total phase (deg)	-176.2	Apriori accel (us/s/s)	-3.23728829425E-05	Resid phase (deg)	-114.7	+/-	0.3		

RMS Theor. Amplitude 13.095 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 65.8 0.6 Search (2048X64) 12.855 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 141.0 1.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 8.3 0.4 Inc. seg. avg. 26.283 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 6.3 0.6 Inc. frq. avg. 13.076 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 A: az 49.3 el 43.3 pa -134.9 E: az 233.7 el 37.2 pa 31.4 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.W.14.zrmnfh



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
15.8	30.4	25.6	37.6	20.4	25.4	9.4	32.5	Phase	24.8
2.6	2.6	1.8	1.9	1.7	1.9	1.6	1.8	Ampl.	2.0
251.6	251.8	251.9	251.4	251.2	251.6	252.0	252.0	Sbd box	251.7
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
E 4000	0	5000	4000	2000	1000	0	2000	PC freqs	
A:E 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:E 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	
E 1000	1000	1000	1000	1000	1000	1000	1000		
A W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
E W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	-1.72383856993E+02		Apriori delay (usec)	-1.72340029847E+02		Resid mbdelay (usec)	1.86729E-02	+/-	3.7E-05
Sband delay (usec)	-1.72381649847E+02		Apriori clock (usec)	-2.1344082E+03		Resid sbdelay (usec)	-4.16200E-02	+/-	2.6E-04
Phase delay (usec)	-1.72340029047E+02		Apriori clockrate (us/s)	1.7578703E-06		Resid phdelay (usec)	8.00205E-07	+/-	5.6E-08
Delay rate (us/s)	1.41816480395E+00		Apriori rate (us/s)	1.41816451479E+00		Resid rate (us/s)	2.89154E-07	+/-	3.2E-10
Total phase (deg)		-36.8	Apriori accel (us/s/s)	-3.23728829425E-05		Resid phase (deg)	24.8	+/-	1.7

RMS Theor. Amplitude 1.990 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 66.2 4.1 Search (2048X64) 1.956 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

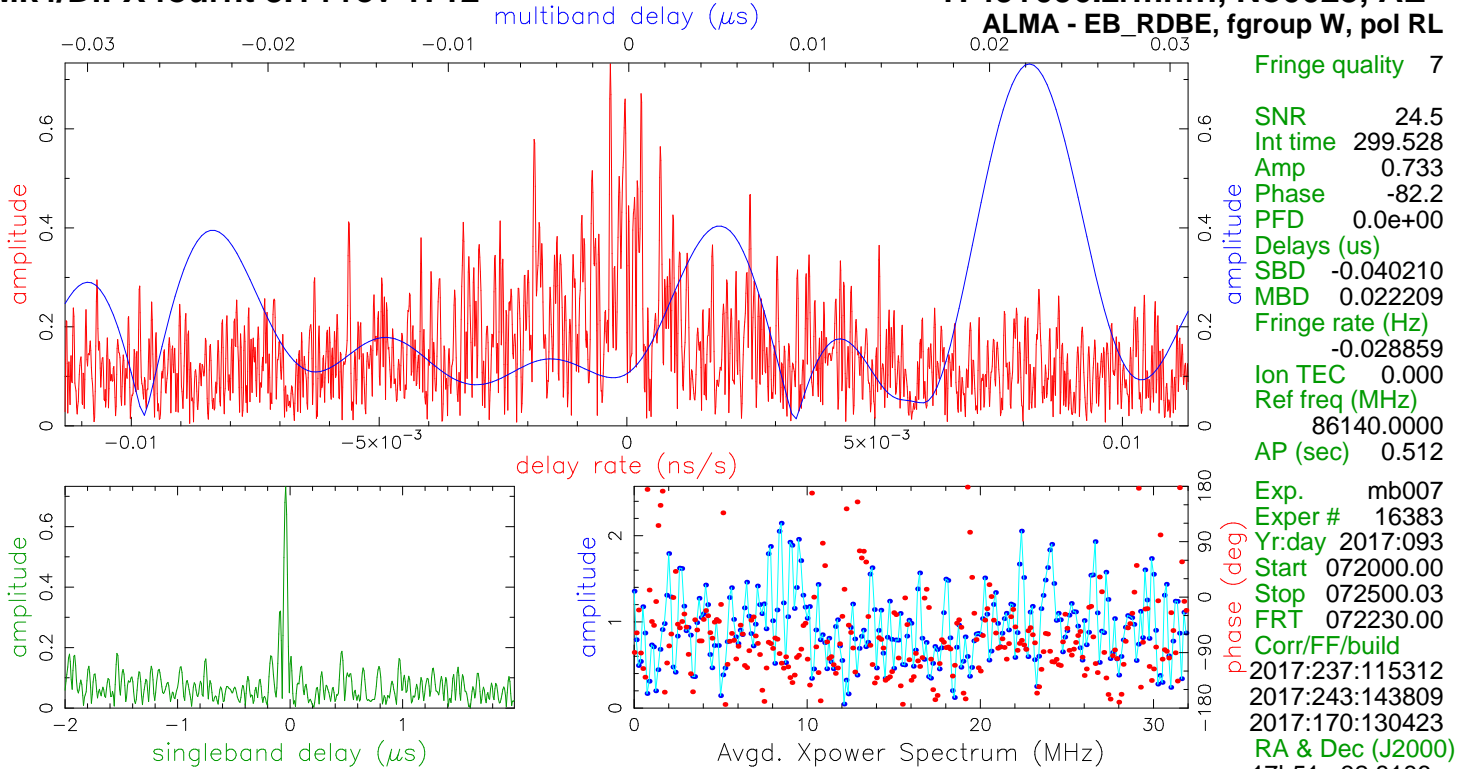
amp/seg (%) 142.1 7.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

ph/frq (deg) 9.9 2.4 Inc. seg. avg. 3.985 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

amp/frq (%) 19.0 4.2 Inc. frq. avg. 1.989 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 E: az 233.7 el 37.2 pa 31.4 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.W.15.zrmnfh



Fringe quality 7

SNR 24.5

Int time 299.528

Amp 0.733

Phase -82.2

PFD 0.0e+00

Delays (us)

SBD -0.040210

MBD 0.022209

Fringe rate (Hz)

-0.028859

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

FRT 072230.00

Corr/FF/build

2017:237:115312

2017:243:143809

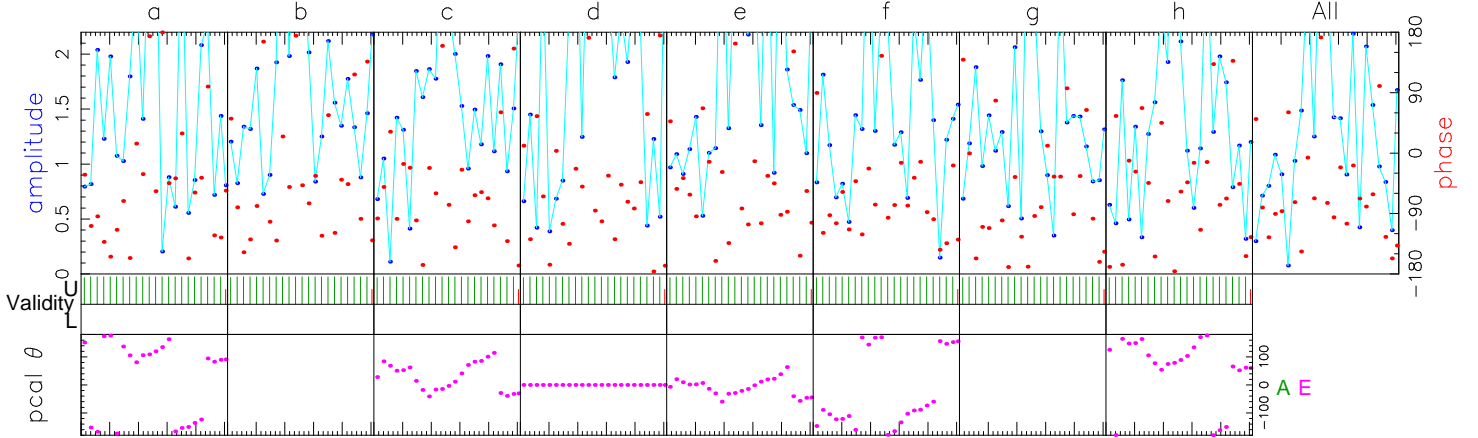
2017:170:130423

RA & Dec (J2000)

17h51m32.8186s

+9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-78.0	-83.9	-92.3	-85.0	-76.2	-73.2	-94.8	-80.8	Phase	-82.2
0.5	0.5	0.7	1.1	1.1	0.9	0.5	0.5	Ampl.	0.7
244.6	245.2	250.9	252.9	251.8	252.0	252.5	390.7	Sbd box	251.9
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
E 4000	0	5000	4000	2000	1000	0	2000	PC freqs	
A:E 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
A:E 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	
E 1000	1000	1000	1000	1000	1000	1000	1000		
A W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
E W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	-1.72380321083E+02		Apriori delay (usec)	-1.72340029847E+02		Resid mbdelay (usec)	2.22088E-02	+/-	1.0E-04
Sband delay (usec)	-1.72380239847E+02		Apriori clock (usec)	-2.1344082E+03		Resid sbdelay (usec)	-4.02100E-02	+/-	7.0E-04
Phase delay (usec)	-1.72340032499E+02		Apriori clockrate (us/s)	1.7578703E-06		Resid phdelay (usec)	-2.65161E-06	+/-	1.5E-07
Delay rate (us/s)	1.41816417977E+00		Apriori rate (us/s)	1.41816451479E+00		Resid rate (us/s)	-3.35026E-07	+/-	8.7E-10
Total phase (deg)		-143.8	Apriori accel (us/s/s)	-3.23728829425E-05		Resid phase (deg)	-82.2	+/-	4.7

ph/seg (deg) 70.1 11.2 Search (2048X64) 0.720 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 138.5 19.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

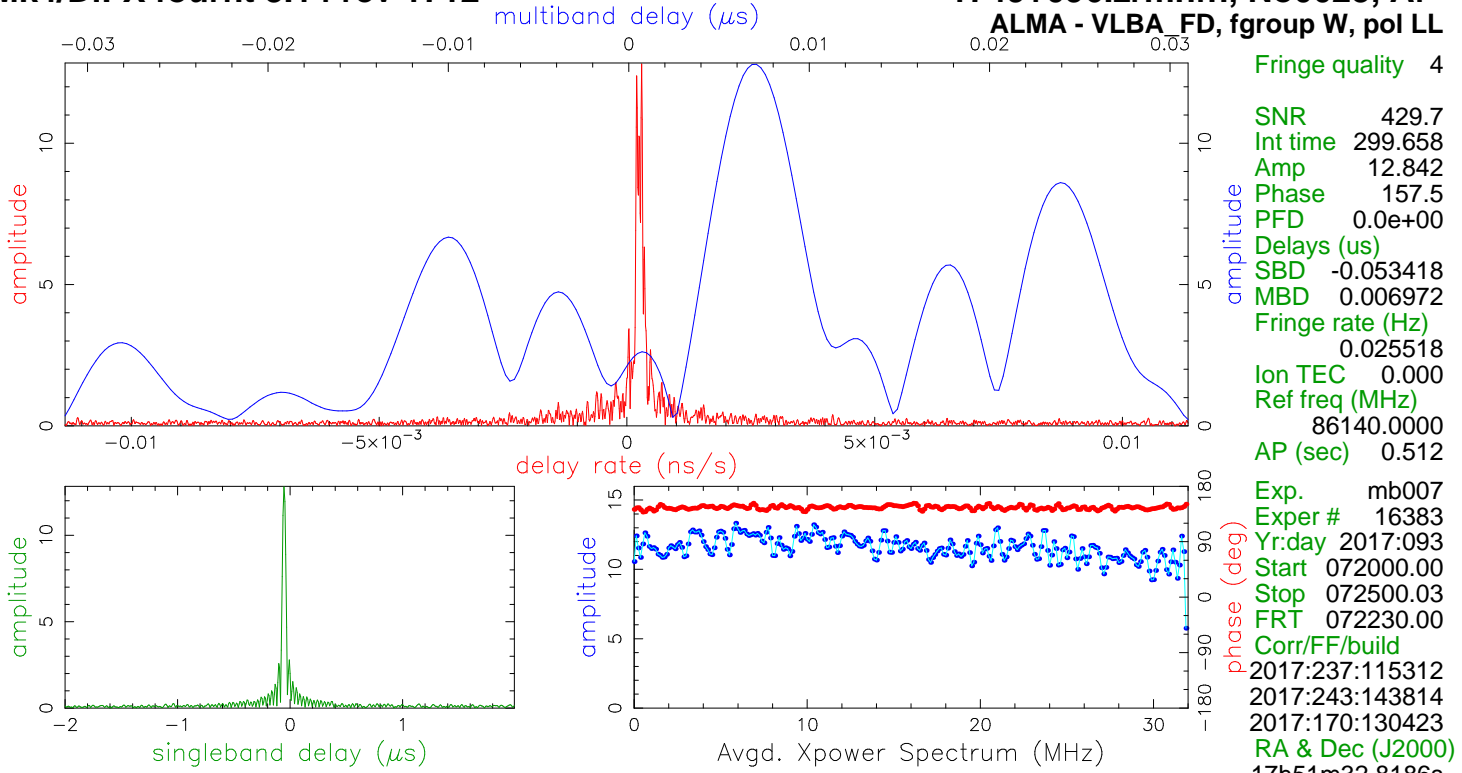
ph/frq (deg) 8.2 6.6 Inc. seg. avg. 1.292 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

amp/frq (%) 33.3 11.5 Inc. frq. avg. 0.732 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

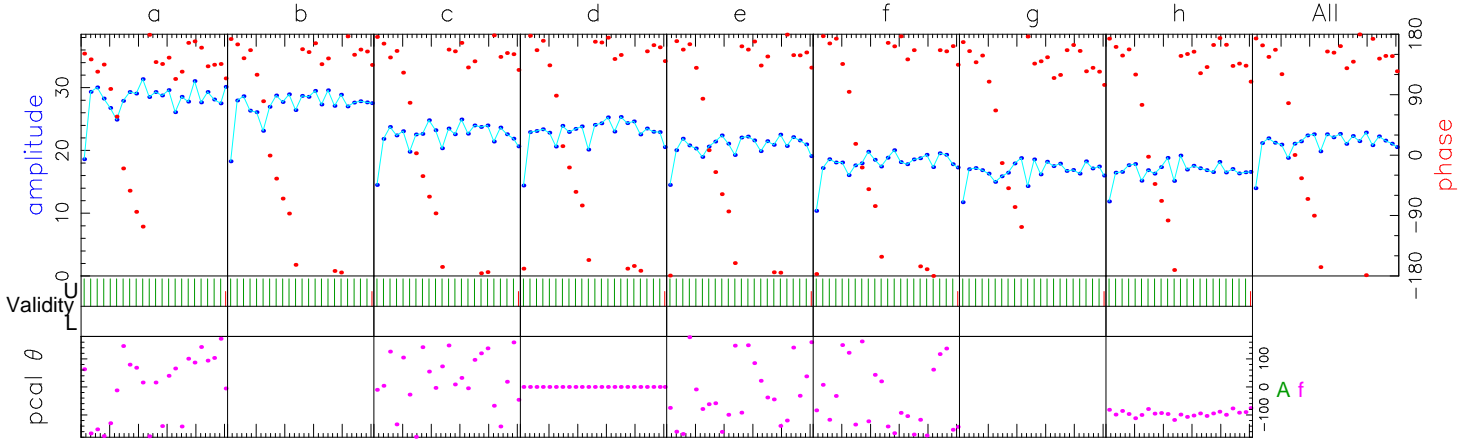
A: az 49.3 el 43.3 pa -134.9 E: az 233.7 el 37.2 pa 31.4 u,v (fr/asec) -8282.905 -10540.366 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AE.W.16.zrmnfh





Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

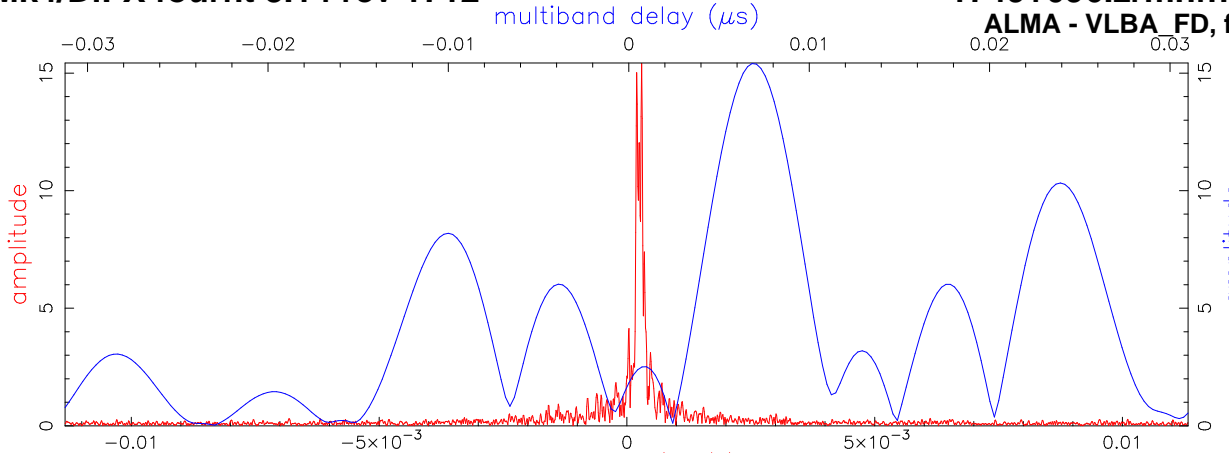


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
142.6	162.1	159.6	170.1	163.3	169.8	141.4	150.6	Phase	157.5
16.7	16.5	13.4	13.8	12.5	10.9	10.2	10.1	Ampl.	13.0
250.3	250.4	250.0	250.3	250.0	250.0	250.1	250.2	Sbd box	250.2
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
f 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
f W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	4.53704189151E+03		Apriori delay (usec)	4.53709741913E+03		Resid mbdelay (usec)	6.97239E-03	+/-	5.7E-06
Sband delay (usec)	4.53704400063E+03		Apriori clock (usec)	-2.1048481E+03		Resid sbdelay (usec)	-5.34185E-02	+/-	4.0E-05
Phase delay (usec)	4.53709742421E+03		Apriori clockrate (us/s)	2.1828075E-06		Resid phdelay (usec)	5.07948E-06	+/-	8.6E-09
Delay rate (us/s)	-4.58902980436E-01		Apriori rate (us/s)	-4.58903276675E-01		Resid rate (us/s)	2.96239E-07	+/-	5.0E-11
Total phase (deg)		43.6	Apriori accel (us/s/s)	-5.22988436856E-05		Resid phase (deg)	157.5	+/-	0.3

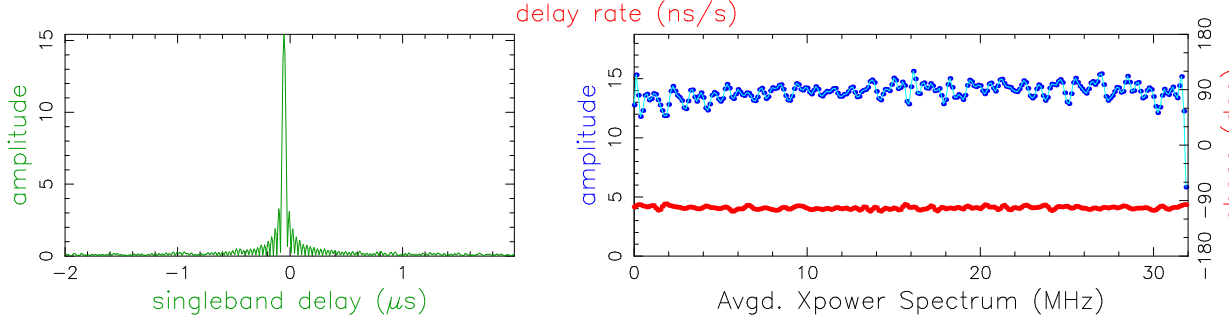
ph/seg (deg)	65.7	0.6	Search (2048X64)	12.615	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-2.000	2.000
amp/seg (%)	66.5	1.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	12.2	0.4	Inc. seg. avg.	21.183	Bits/sample: 2x2	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.011	0.011
amp/frq (%)	19.1	0.7	Inc. frq. avg.	13.026	Data rate(Mb/s): 1024	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 49.3 el 43.3 pa -134.9 f: az 91.6 el 21.9 pa -60.7 u,v (fr/asec) 2605.737 -8553.510 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/Af..zrmnfh Output file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/Af.W.17.zrmnfh

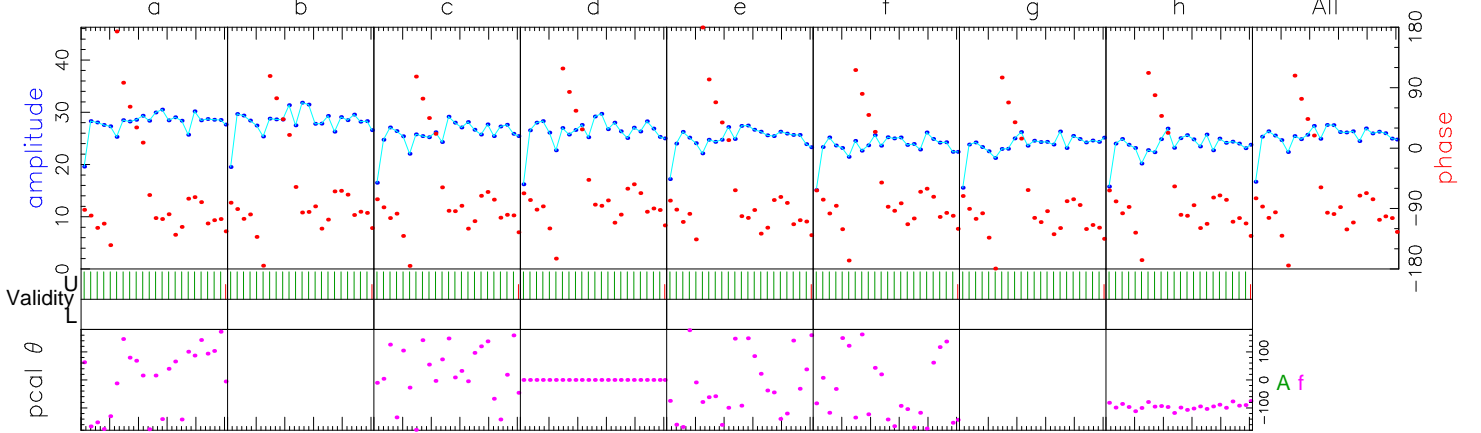


Fringe quality 5  
 SNR 516.4  
 Int time 299.658  
 Amp 15.430  
 Phase -92.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.053960  
 MBD 0.006920  
 Fringe rate (Hz)  
 0.025514  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



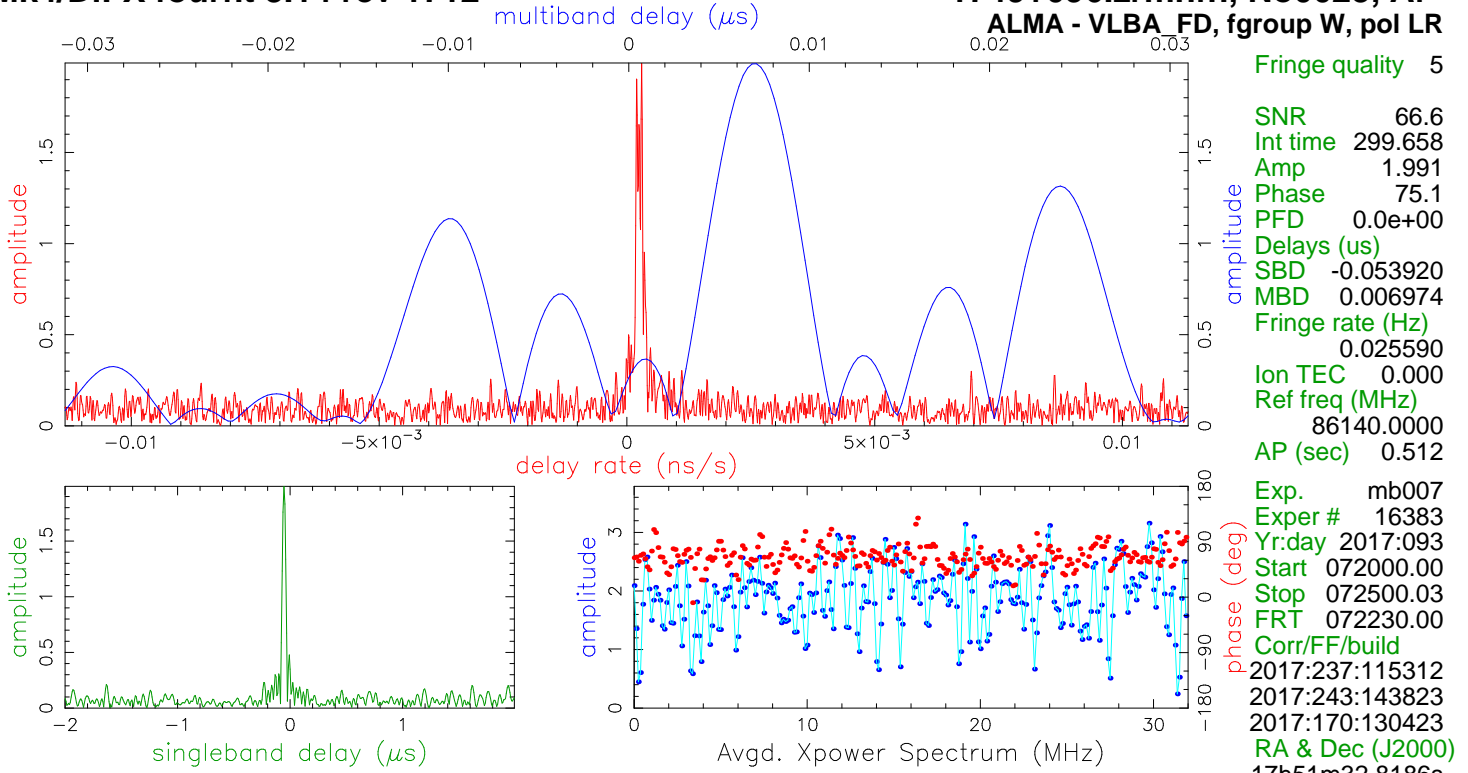
Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143818  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

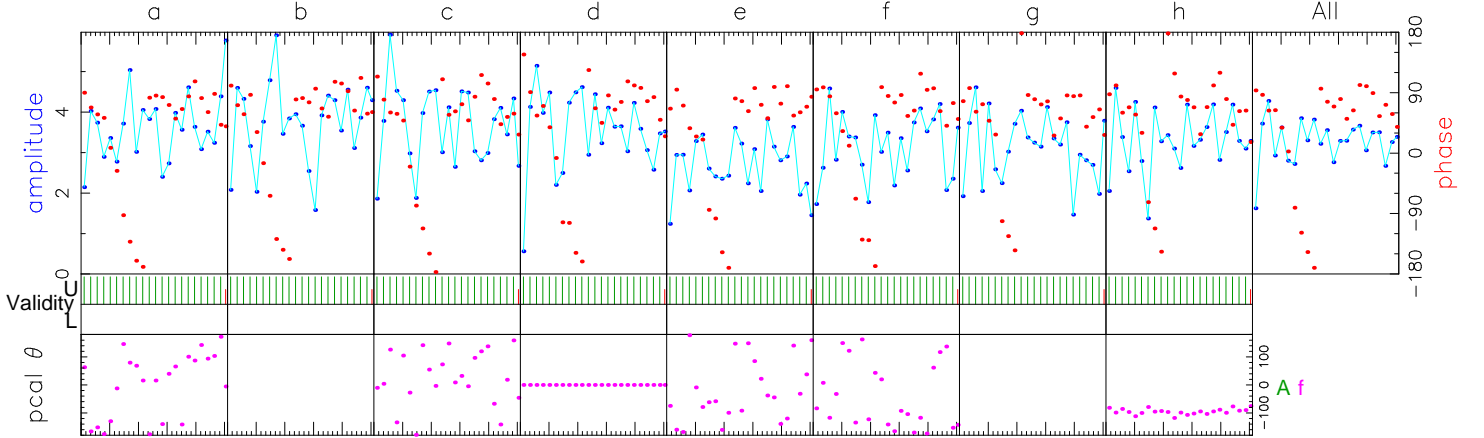


	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	-100.6	-89.8	-91.7	-81.8	-97.5	-85.7	-100.2	-92.3	Phase	-92.4
	17.0	17.0	15.9	16.0	15.3	14.4	14.3	14.3	Ampl.	15.5
	250.1	250.2	250.1	250.1	250.1	250.2	250.0	250.1	Sbd box	250.1
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
f	4000	0	5000	4000	2000	1000	0	2000	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	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
f	W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	4.53704183926E+03		Apriori delay (usec)		4.53709741913E+03		Resid mbdelay (usec)		6.92014E-03	+/- 4.7E-06
Sband delay (usec)	4.53704345863E+03		Apriori clock (usec)		-2.1048481E+03		Resid sbdelay (usec)		-5.39605E-02	+/- 3.3E-05
Phase delay (usec)	4.53709741614E+03		Apriori clockrate (us/s)		2.1828075E-06		Resid phdelay (usec)		-2.98076E-06	+/- 7.2E-09
Delay rate (us/s)	-4.58902980478E-01		Apriori rate (us/s)		-4.58903276675E-01		Resid rate (us/s)		2.96198E-07	+/- 4.1E-11
Total phase (deg)	153.6		Apriori accel (us/s/s)		-5.22988436856E-05		Resid phase (deg)		-92.4	+/- 0.2

ph/seg (deg) 65.6 0.5 Theor. Amplitude 15.430 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 65.8 0.9 Search (2048X64) 15.185 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 7.3 0.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 6.9 0.5 Inc. seg. avg. 25.344 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 15.511 simultaneous interpolator ion window (TEC) 0.00 0.00  
 A: az 49.3 el 43.3 pa -134.9 f: az 91.6 el 21.9 pa -60.7 u,v (fr/asec) 2605.737 -8553.510  
 Control file: cf\_1234 Input file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/Af.zrmnfh Output file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/Af.W.18.zrmnfh

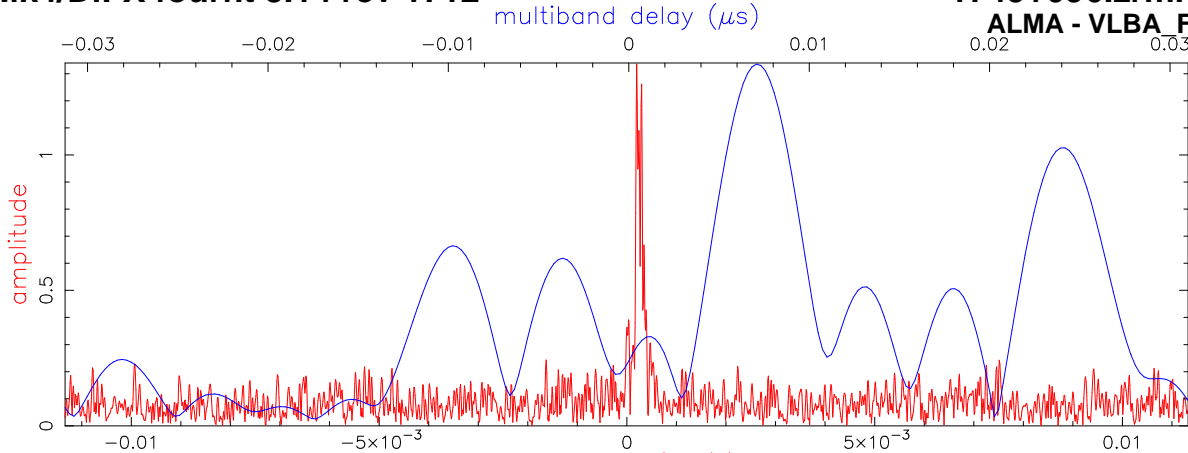


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

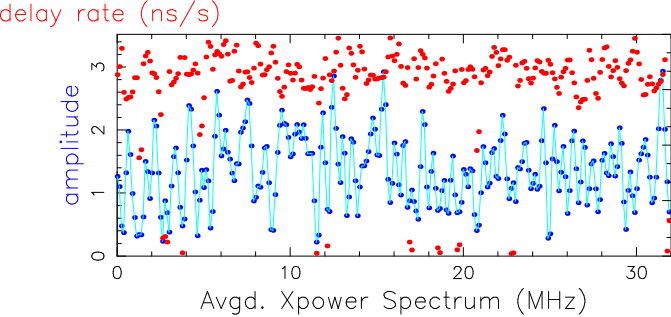
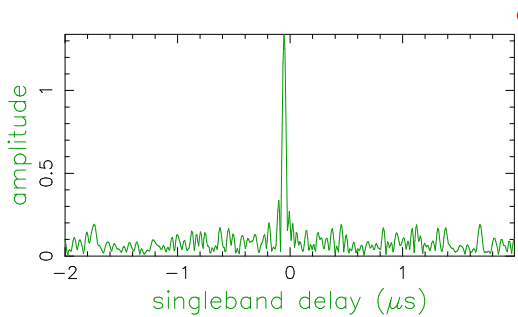


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
72.0	79.4	71.6	80.1	70.2	78.1	72.1	77.3	Phase	75.1
2.0	2.0	2.2	2.0	1.7	2.0	1.9	2.1	Ampl.	2.0
250.1	250.0	250.2	250.2	250.0	250.2	250.1	250.1	Sbd box	250.1
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
f 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
f W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	4.53704189270E+03		Apriori delay (usec)	4.53709741913E+03		Resid mbdelay (usec)	6.97357E-03	+/-	3.7E-05
Sband delay (usec)	4.53704349913E+03		Apriori clock (usec)	-2.1048481E+03		Resid sbdelay (usec)	-5.39200E-02	+/-	2.6E-04
Phase delay (usec)	4.53709742155E+03		Apriori clockrate (us/s)	2.1828075E-06		Resid phdelay (usec)	2.42321E-06	+/-	5.5E-08
Delay rate (us/s)	-4.58902979603E-01		Apriori rate (us/s)	-4.58903276675E-01		Resid rate (us/s)	2.97073E-07	+/-	3.2E-10
Total phase (deg)		321.2	Apriori accel (us/s/s)	-5.22988436856E-05		Resid phase (deg)	75.1	+/-	1.7

ph/seg (deg)	65.1	4.1	Search (2048X64)	1.968	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-2.000	2.000
amp/seg (%)	69.8	7.2	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	4.3	2.4	Inc. seg. avg.	3.267	Bits/sample: 2x2	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.011	0.011
amp/frq (%)	6.2	4.2	Inc. frq. avg.	1.992	Data rate(Mb/s): 1024	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

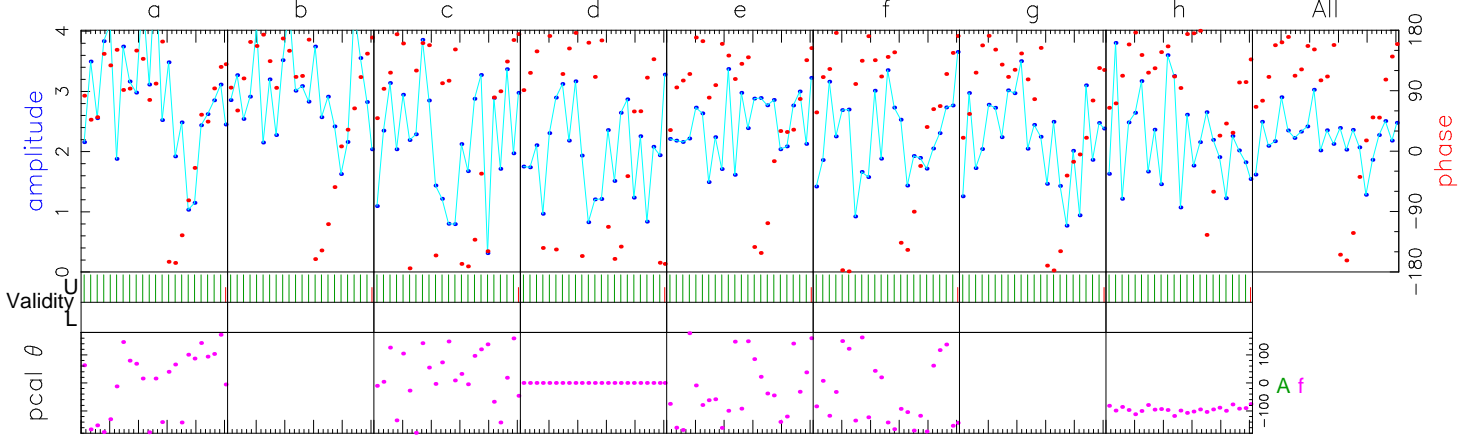


Fringe quality 6  
 SNR 44.8  
 Int time 299.658  
 Amp 1.340  
 Phase 132.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.053294  
 MBD 0.007114  
 Fringe rate (Hz)  
 0.017238  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512



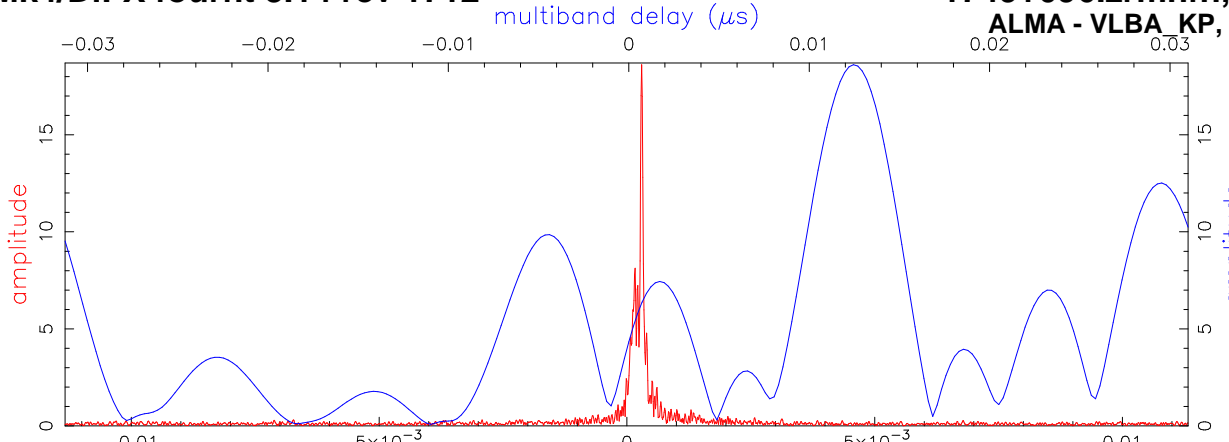
Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143827  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All	
	113.2	134.1	148.6	166.3	119.7	139.8	119.3	128.2	Phase	132.3	
	1.9	1.7	1.4	1.1	1.2	1.3	1.3	1.3	Ampl.	1.4	
	250.3	250.7	250.2	249.6	250.6	250.0	250.3	249.7	Sbd box	250.2	
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used		
A	0	0	0	0	0	0	0	0	PC freqs		
f	4000	0	5000	4000	2000	1000	0	2000	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	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids		
f	W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	4.53704203334E+03		Apriori delay (usec)		4.53709741913E+03		Resid mbdelay (usec)		7.11422E-03	+/- 5.5E-05	
Sband delay (usec)	4.53704412513E+03		Apriori clock (usec)		-2.1048481E+03		Resid sbdelay (usec)		-5.32940E-02	+/- 3.8E-04	
Phase delay (usec)	4.53709742339E+03		Apriori clockrate (us/s)		2.1828075E-06		Resid phdelay (usec)		4.26490E-06	+/- 8.2E-08	
Delay rate (us/s)	-4.58903076564E-01		Apriori rate (us/s)		-4.58903276675E-01		Resid rate (us/s)		2.00112E-07	+/- 4.8E-10	
Total phase (deg)			Apriori accel (us/s/s)		-5.22988436856E-05		Resid phase (deg)		132.3	+/- 2.6	
	RMS	Theor.	Amplitude	1.340 +/- 0.030		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	64.1	6.1	Search (2048X64)	1.324		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-2.000	2.000	
amp/seg (%)	72.4	10.7	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	19.1	3.6	Inc. seg. avg.	2.226		Sample rate(MSamp/s): 64		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	19.1	6.3	Inc. frq. avg.	1.386		Data rate(Mb/s): 1024		ion window (TEC)	0.00	0.00	
		A: az 49.3 el 43.3 pa -134.9		f: az 91.6 el 21.9 pa -60.7		u,v (fr/asec) 2605.737 -8553.510		simultaneous interpolator			
		Control file: cf_1234		Input file: /Exps/mb007/gmva_32_pc1/1234/No0023/Af..zrmnfh		Output file: /Exps/mb007/gmva_32_pc1/1234/No0023/Af.W.20.zrmnfh					

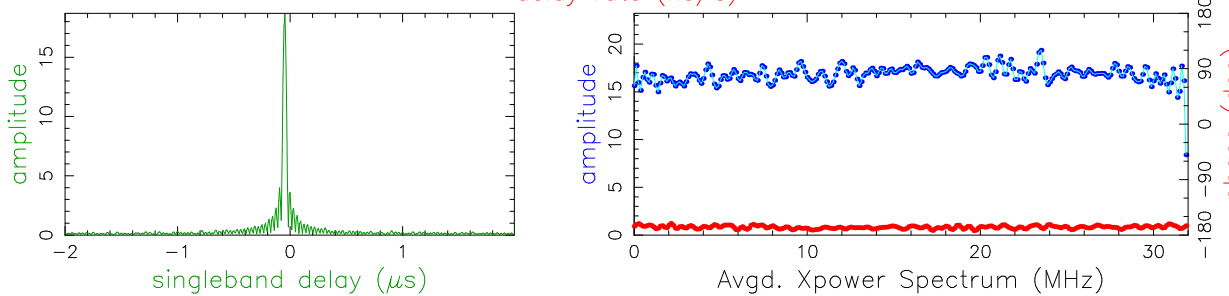
Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Af..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Af.W.20.zrmnfh



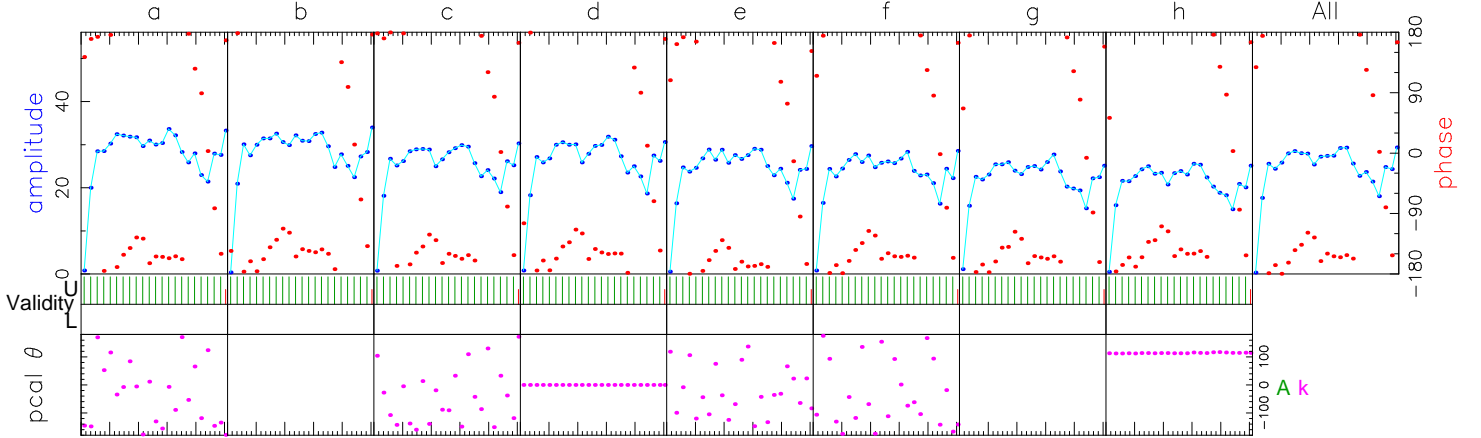
Fringe quality 5

SNR 626.0  
Int time 299.660  
Amp 18.706  
Phase -158.5  
PFD 0.0e+00  
Delays (us)  
SBD -0.048510  
MBD 0.012473  
Fringe rate (Hz) 0.026106  
Ion TEC 0.000  
Ref freq (MHz) 86140.000  
AP (sec) 0.512

Exp. mb007  
Exper # 16383  
Yr:day 2017:093  
Start 072000.00  
Stop 072500.03  
FRT 072230.00  
Corr/FF/build  
2017:237:115312  
2017:243:143832  
2017:170:130423  
RA & Dec (J2000)  
17h51m32.8186s  
+9°39' 0.728"

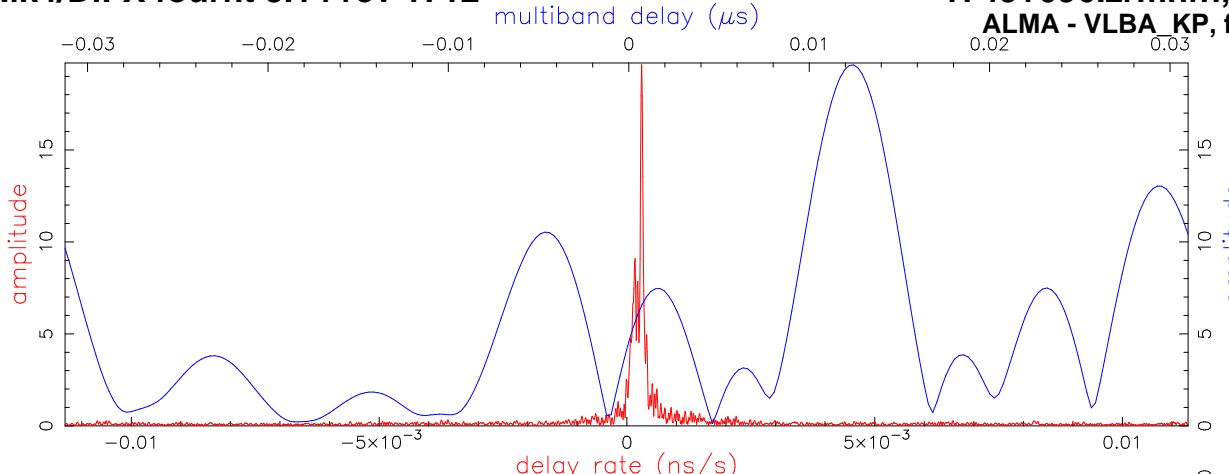


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-162.2	-152.1	-160.3	-153.0	-171.2	-157.8	-159.7	-151.6	Phase	-158.5
21.3	21.2	18.9	19.7	18.3	17.6	16.8	16.0	Ampl.	18.7
250.8	250.9	250.8	250.7	250.8	250.9	250.8	250.8	Sbd box	250.8
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
k 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
k W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	6.83986593947E+03	Apriori delay (usec)	6.83991596696E+03	Resid mbdelay (usec)	1.24725E-02	+/-	3.9E-06		
Sband delay (usec)	6.83986745646E+03	Apriori clock (usec)	-2.1026323E+03	Resid sbdelay (usec)	-4.85105E-02	+/-	2.8E-05		
Phase delay (usec)	6.83991596184E+03	Apriori clockrate (us/s)	1.7640192E-06	Resid phdelay (usec)	-5.11117E-06	+/-	5.9E-09		
Delay rate (us/s)	-4.91422031689E-01	Apriori rate (us/s)	-4.91422334748E-01	Resid rate (us/s)	3.03059E-07	+/-	3.4E-11		
Total phase (deg)		Apriori accel (us/s/s)	-6.49035357682E-05	Resid phase (deg)	-158.5	+/-	0.2		

ph/seg (deg) 52.9 0.4 Search (2048X64) 18.230 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 44.3 0.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 7.1 0.3 Inc. seg. avg. 24.363 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 9.6 0.5 Inc. frq. avg. 18.729 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 k: az 88.1 el 15.3 pa -59.3 u,v (fr/asec) 2783.097 -8894.602 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak.W.21.zrmnfh



Fringe quality 5

SNR 660.2

Int time 299.660

Amp 19.728

Phase -46.8

PFD 0.0e+00

Delays (us)

SBD -0.048540

MBD 0.012372

Fringe rate (Hz) 0.026119

Ion TEC 0.000

Ref freq (MHz) 86140.000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

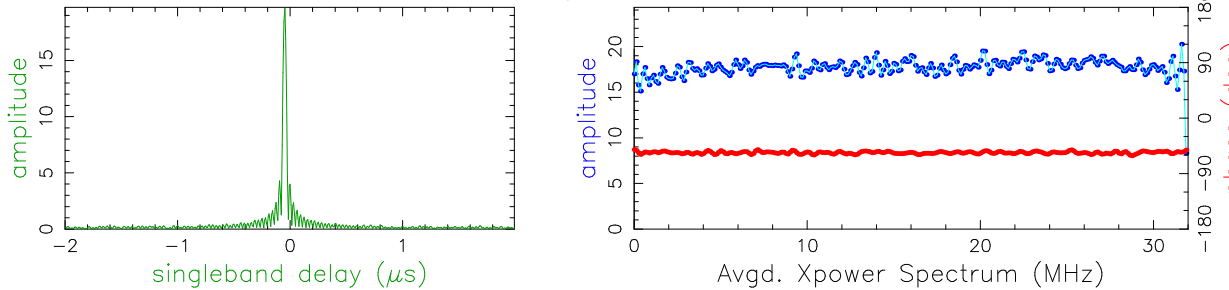
FRT 072230.00

Corr/FF/build 2017:237:115312

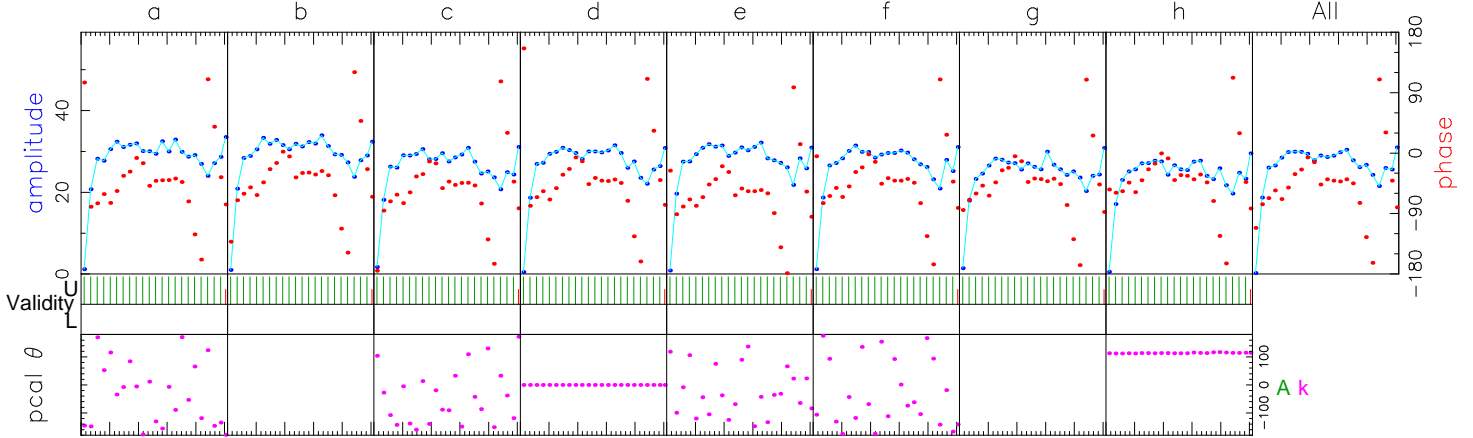
2017:243:143837

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-48.4	-37.4	-51.5	-46.3	-61.0	-44.6	-44.9	-39.9	Phase	-46.8
20.8	21.4	19.3	20.1	20.6	20.0	18.2	17.8	Ampl.	19.8
250.8	250.9	250.7	250.7	250.9	251.0	250.7	250.7	Sbd box	250.8
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
k 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
k W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	6.83986583922E+03		Apriori delay (usec)	6.83991596696E+03		Resid mbdelay (usec)	1.23723E-02	+/-	3.7E-06
Sband delay (usec)	6.83986742646E+03		Apriori clock (usec)	-2.1026323E+03		Resid sbdelay (usec)	-4.85405E-02	+/-	2.6E-05
Phase delay (usec)	6.83991596545E+03		Apriori clockrate (us/s)	1.7640192E-06		Resid phdelay (usec)	-1.50896E-06	+/-	5.6E-09
Delay rate (us/s)	-4.91422031534E-01		Apriori rate (us/s)	-4.91422334748E-01		Resid rate (us/s)	3.03214E-07	+/-	3.2E-11
Total phase (deg)		94.9	Apriori accel (us/s/s)	-6.49035357682E-05		Resid phase (deg)	-46.8	+/-	0.2

ph/seg (deg) 52.1 0.4 Theor. Amplitude 19.728 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

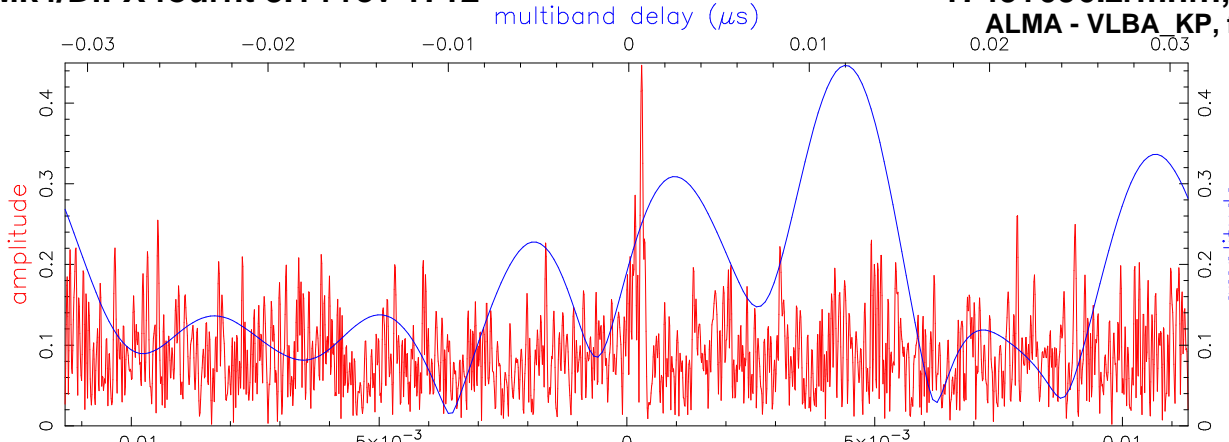
amp/seg (%) 45.3 0.7 Search (2048X64) 19.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

ph/frq (deg) 7.9 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

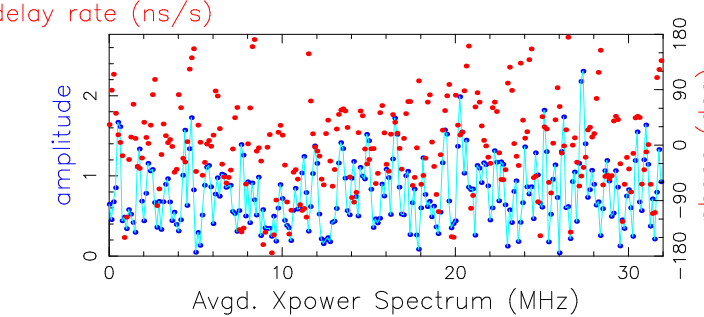
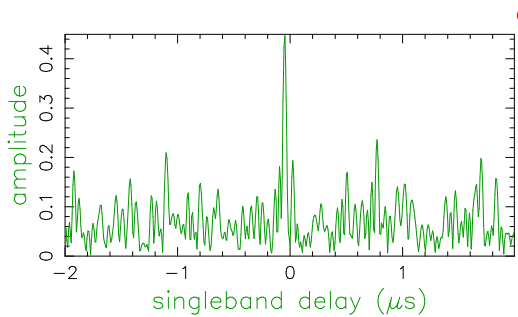
amp/frq (%) 6.0 0.4 Inc. seg. avg. 26.119 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

A: az 49.3 el 43.3 pa -134.9 k: az 88.1 el 15.3 pa -59.3 u,v (fr/asec) 2783.097 -8894.602 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak.W.22.zrmnfh

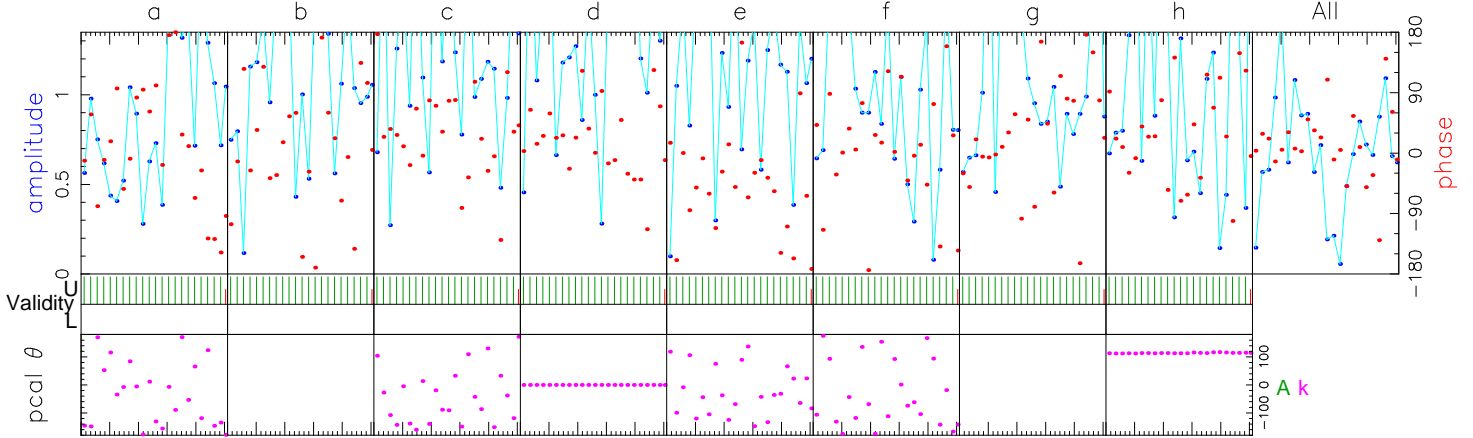


Fringe quality 7  
 SNR 15.0  
 Int time 299.660  
 Amp 0.450  
 Phase 13.0  
 PFD 4.5e-42  
 Delays (us)  
 SBD -0.048800  
 MBD 0.011993  
 Fringe rate (Hz) 0.025657  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512



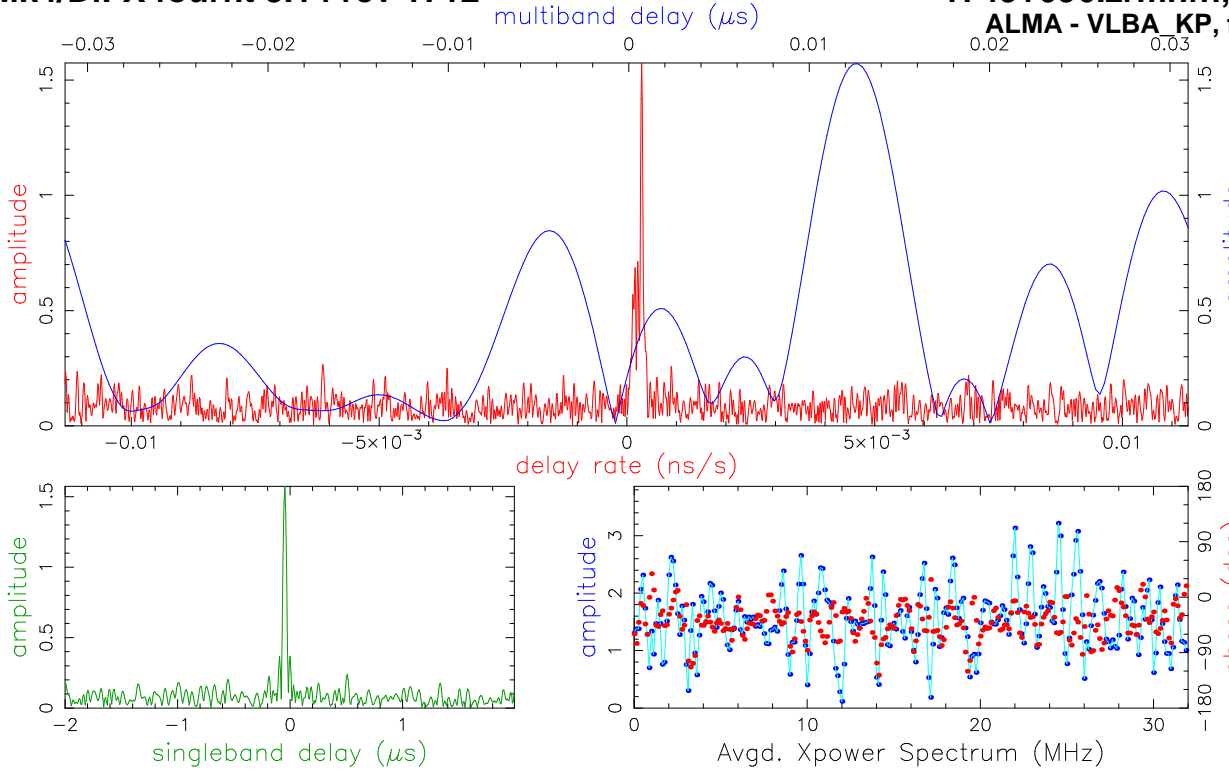
Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143842  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



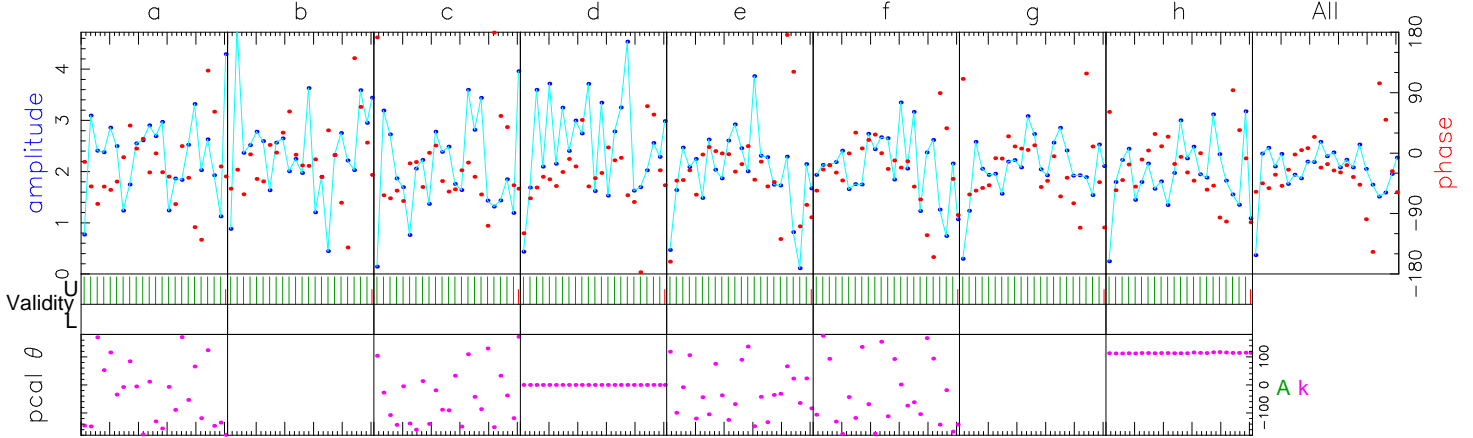
86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-17.7	20.5	34.2	17.1	-52.6	32.5	31.7	14.4	Phase	13.0
0.2	0.2	0.8	0.9	0.7	0.4	0.4	0.5	Ampl.	0.5
299.1	77.3	250.8	249.2	251.8	104.6	250.0	250.1	Sbd box	250.8
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
k 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
k W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	6.83986546016E+03		Apriori delay (usec)	6.83991596696E+03		Resid mbdelay (usec)	1.19932E-02	+/-	1.6E-04
Sband delay (usec)	6.83986716696E+03		Apriori clock (usec)	-2.1026323E+03		Resid sbdelay (usec)	-4.88000E-02	+/-	1.1E-03
Phase delay (usec)	6.83991596738E+03		Apriori clockrate (us/s)	1.7640192E-06		Resid phdelay (usec)	4.19691E-07	+/-	2.5E-07
Delay rate (us/s)	-4.91422036899E-01		Apriori rate (us/s)	-4.91422334748E-01		Resid rate (us/s)	2.97849E-07	+/-	1.4E-09
Total phase (deg)		154.7	Apriori accel (us/s/s)	-6.49035357682E-05		Resid phase (deg)	13.0	+/-	7.6

ph/seg (deg) 53.5 18.3 Search (2048X64) 0.444 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.0 31.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 32.9 10.8 Inc. seg. avg. 0.648 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 57.0 18.8 Inc. frq. avg. 0.502 Data rate (Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 k: az 88.1 el 15.3 pa -59.3 u,v (fr/asec) 2783.097 -8894.602 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak.W.23.zrmnfh



Fringe quality 5  
 SNR 52.7  
 Int time 299.660  
 Amp 1.574  
 Phase -26.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.047683  
 MBD 0.012596  
 Fringe rate (Hz) 0.026138  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build 2017:237:115312  
 2017:243:143847  
 2017:170:130423  
 RA & Dec (J2000) 17h51m32.8186s  
 +9°39' 0.728"

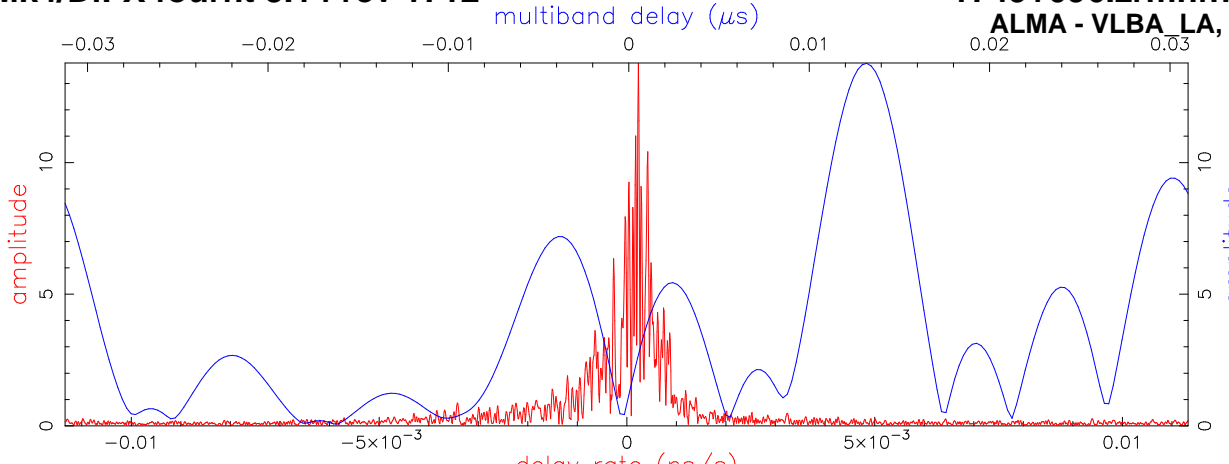
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	-31.0	-11.8	-39.8	-28.1	-30.8	-21.8	-27.4	-22.6	Phase	-26.6
	1.5	1.6	1.6	1.9	1.4	1.5	1.5	1.5	Ampl.	1.6
	250.5	251.3	250.5	251.3	250.7	251.1	250.6	251.1	Sbd box	250.9
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
k	4000	0	5000	4000	2000	1000	0	2000	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	ManI PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
A	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
k	W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	6.83986606309E+03		Apriori delay (usec)		6.83991596696E+03		Resid mbdelay (usec)		1.25961E-02	+/- 4.6E-05
Sband delay (usec)	6.83986828346E+03		Apriori clock (usec)		-2.1026323E+03		Resid sbdelay (usec)		-4.76835E-02	+/- 3.3E-04
Phase delay (usec)	6.83991596610E+03		Apriori clockrate (us/s)		1.7640192E-06		Resid phdelay (usec)		-8.59078E-07	+/- 7.0E-08
Delay rate (us/s)	-4.91422031311E-01		Apriori rate (us/s)		-4.91422334748E-01		Resid rate (us/s)		3.03438E-07	+/- 4.0E-10
Total phase (deg)			Apriori accel (us/s/s)		-6.49035357682E-05		Resid phase (deg)		-26.6	+/- 2.2

RMS Theor. Amplitude 1.574 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 47.8 5.2 Search (2048X64) 1.540 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 41.1 9.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 8.9 3.1 Inc. seg. avg. 2.026 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 9.6 5.4 Inc. frq. avg. 1.585 ion window (TEC) 0.00 0.00  
 A: az 49.3 el 43.3 pa -134.9 k: az 88.1 el 15.3 pa -59.3 u,v (fr/asec) 2783.097 -8894.602 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ak.W.24.zrmnfh





Fringe quality 5

SNR 461.3

Int time 299.661

Amp 13.783

Phase 25.2

PFD 0.0e+00

Delays (us)

SBD -0.047644

MBD 0.013145

Fringe rate (Hz) 0.020319

Ion TEC 0.000

Ref freq (MHz) 86140.000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

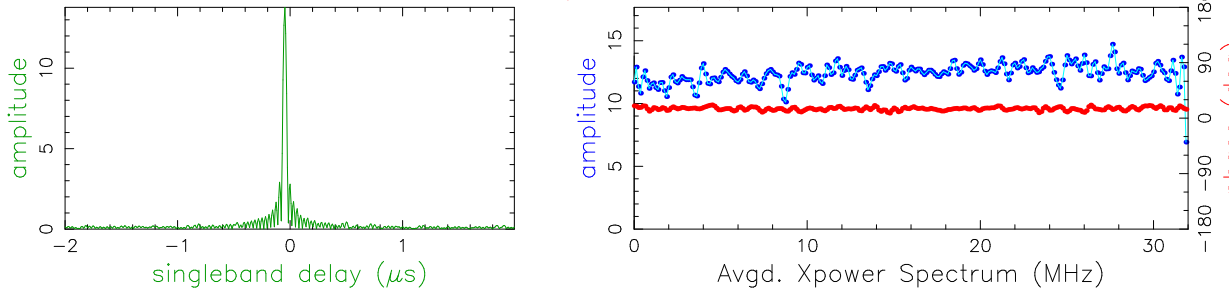
FRT 072230.00

Corr/FF/build 2017:237:115312

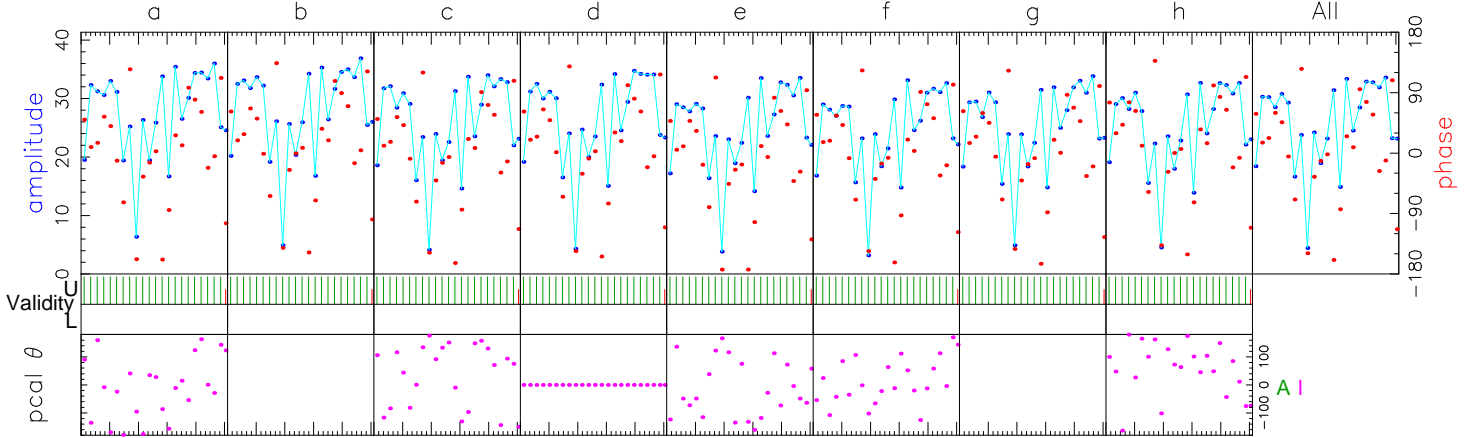
2017:243:143852

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	23.4	33.6	21.3	30.4	12.6	20.6	21.5	37.5	Phase	25.2
	14.6	14.8	14.1	14.3	13.3	13.2	13.5	13.3	Ampl.	13.9
	250.8	251.0	250.8	250.9	250.8	251.0	251.0	251.1	Sbd box	250.9
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
I	4000	0	5000	4000	2000	1000	0	2000	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	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
I	W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.27750199076E+03		Apriori delay (usec)		5.27755134539E+03		Resid mbdelay (usec)		1.31454E-02	+/- 5.3E-06
Sband delay (usec)	5.27750370089E+03		Apriori clock (usec)		-2.1013499E+03		Resid sbdelay (usec)		-4.76445E-02	+/- 3.7E-05
Phase delay (usec)	5.27755134620E+03		Apriori clockrate (us/s)		1.8626131E-06		Resid phdelay (usec)		8.13200E-07	+/- 8.0E-09
Delay rate (us/s)	-4.05266967606E-01		Apriori rate (us/s)		-4.05267203488E-01		Resid rate (us/s)		2.35882E-07	+/- 4.6E-11
Total phase (deg)	346.2		Apriori accel (us/s/s)		-5.76356043139E-05		Resid phase (deg)		25.2	+/- 0.2

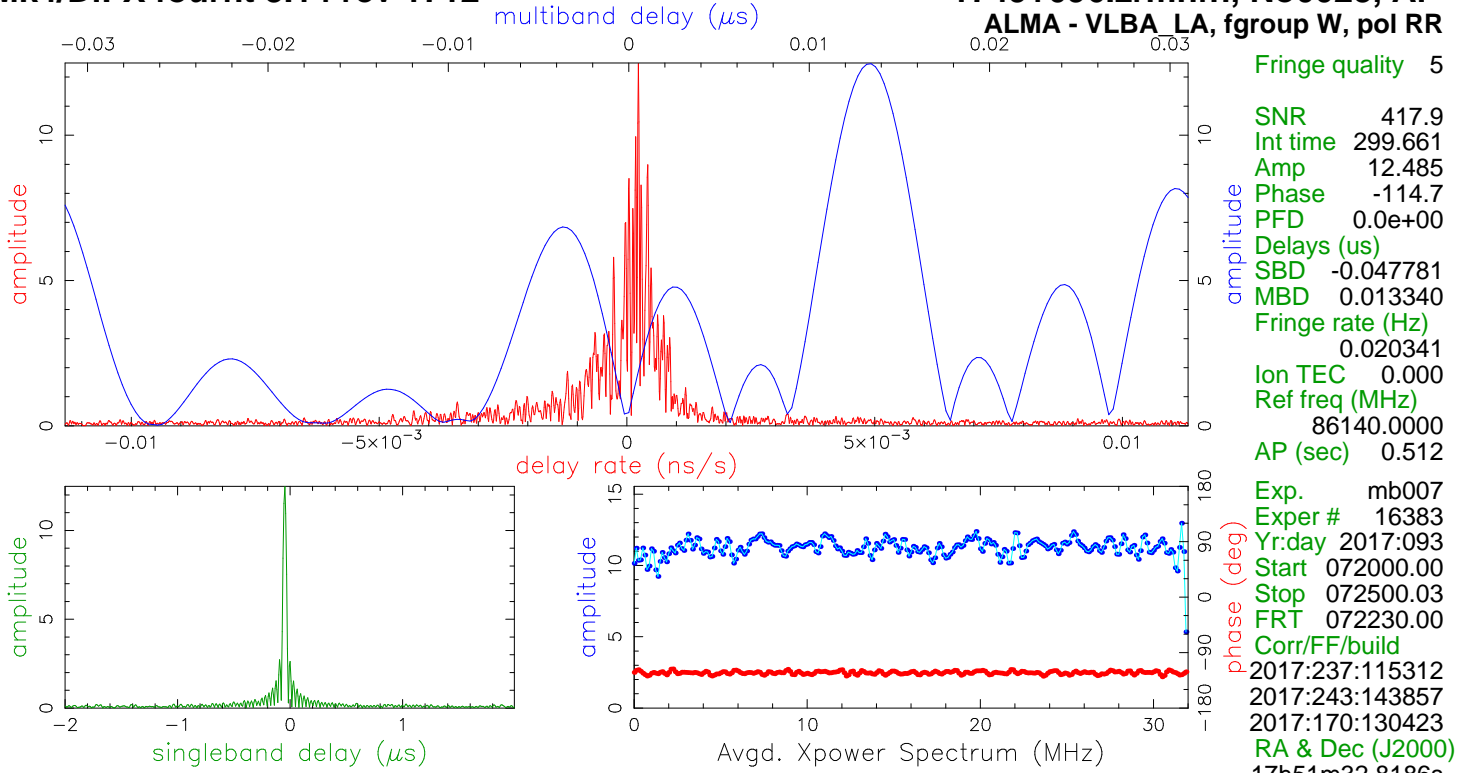
ph/seg (deg) 76.3 0.6 Theor. Amplitude 13.783 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 100.7 1.0 Search (2048X64) 13.316 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

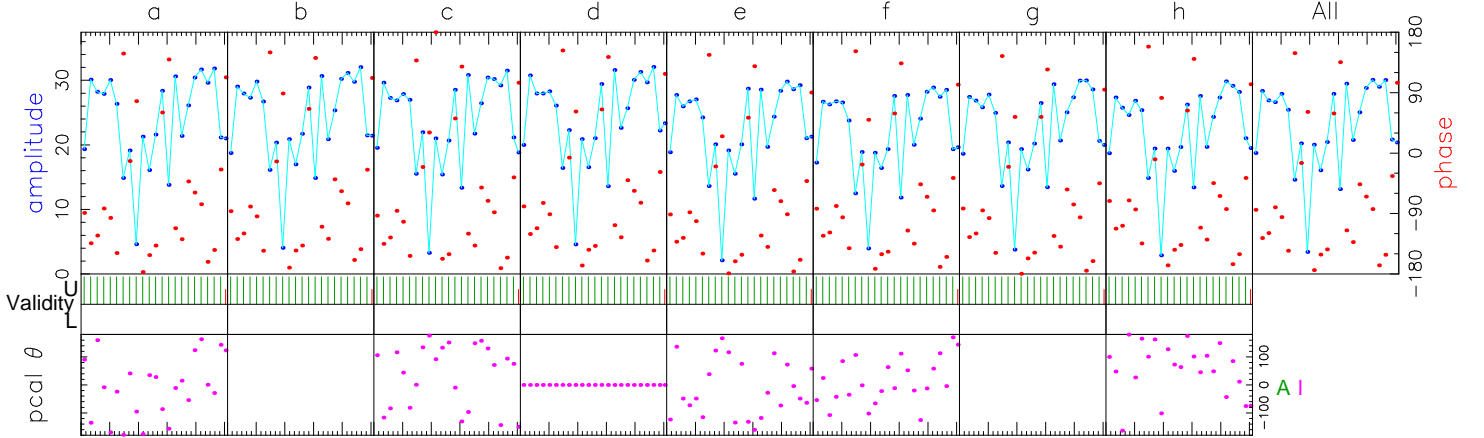
ph/frq (deg) 8.8 0.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

amp/frq (%) 4.4 0.6 Inc. seg. avg. 25.665 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

amp/frq (%) 4.4 0.6 Inc. frq. avg. 13.888 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

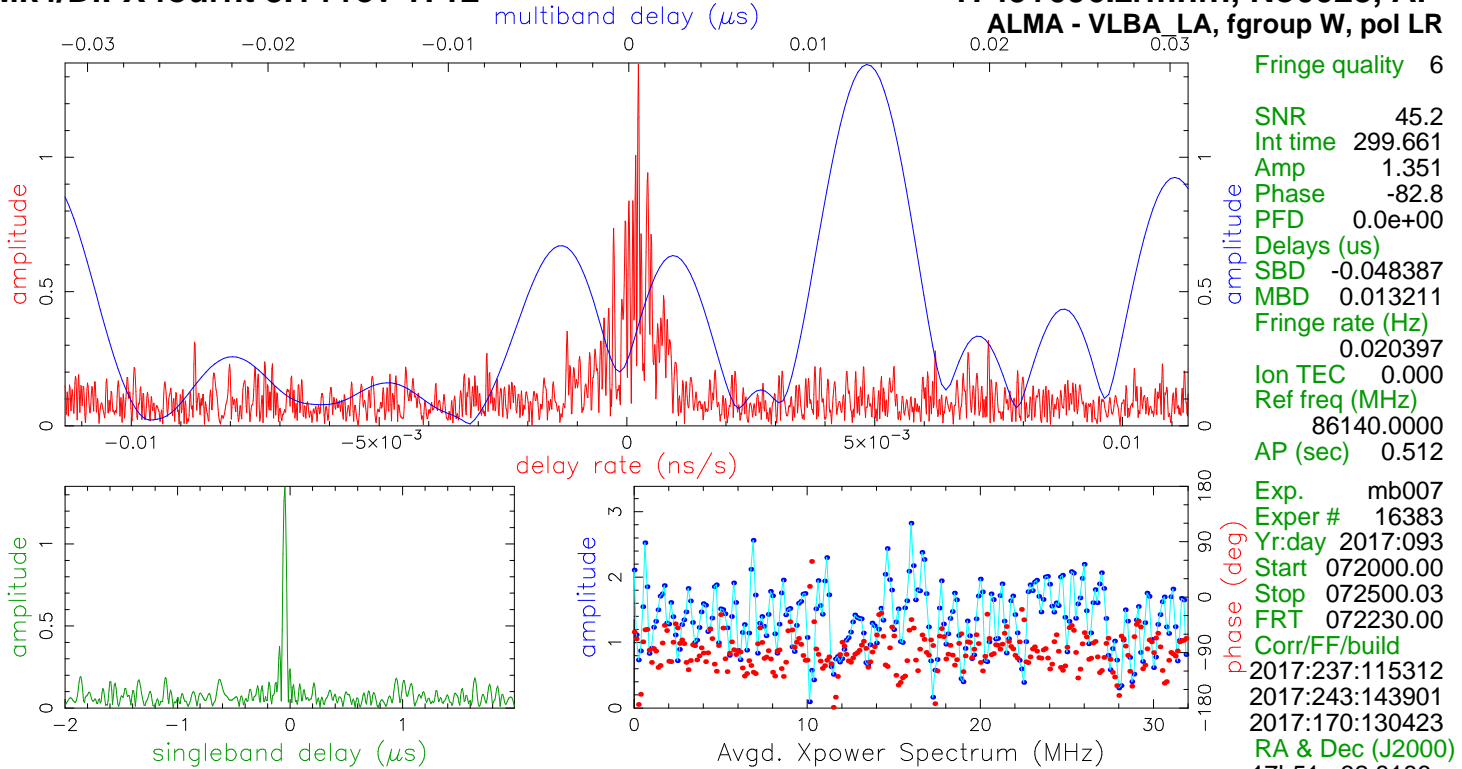


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

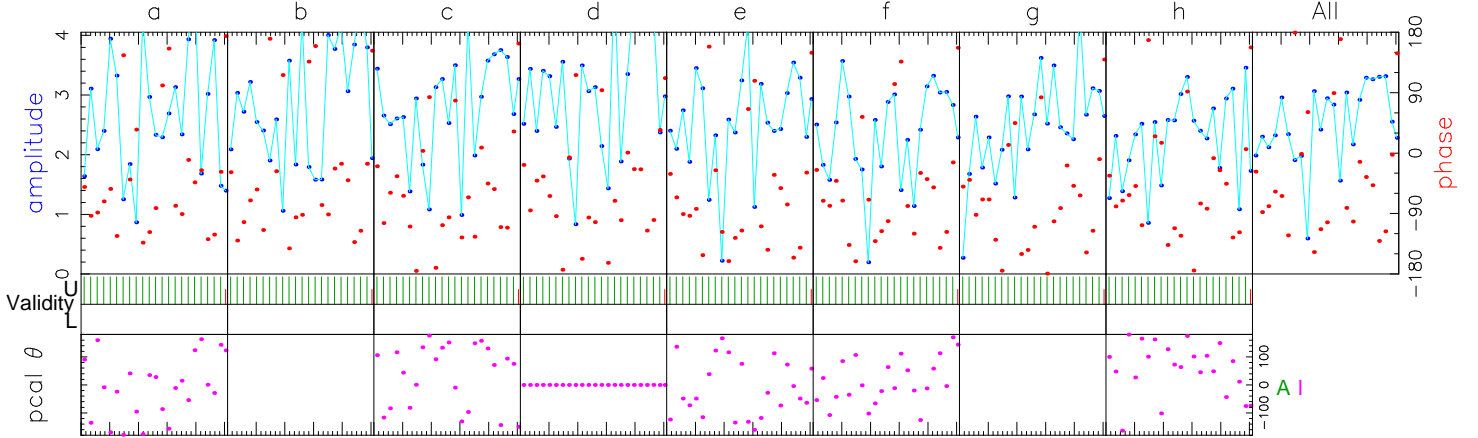


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-114.5	-112.5	-120.2	-108.2	-120.6	-113.8	-119.8	-108.2	Phase	-114.7
12.8	12.8	12.8	12.9	12.9	11.9	12.4	12.2	Ampl.	12.5
250.8	250.8	251.0	251.0	250.9	250.9	250.9	251.0	Sbd box	250.9
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
I 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
I W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	5.27750218495E+03	Apriori delay (usec)	5.27755134539E+03	Resid mbdelay (usec)	1.33396E-02	+/-	5.9E-06		
Sband delay (usec)	5.27750356439E+03	Apriori clock (usec)	-2.1013499E+03	Resid sbdelay (usec)	-4.77810E-02	+/-	4.1E-05		
Phase delay (usec)	5.27755134169E+03	Apriori clockrate (us/s)	1.8626131E-06	Resid phdelay (usec)	-3.69861E-06	+/-	8.8E-09		
Delay rate (us/s)	-4.05266967351E-01	Apriori rate (us/s)	-4.05267203488E-01	Resid rate (us/s)	2.36137E-07	+/-	5.1E-11		
Total phase (deg)	206.3	Apriori accel (us/s/s)	-5.76356043139E-05	Resid phase (deg)	-114.7	+/-	0.3		

ph/seg (deg) 76.3 0.7 Search (2048X64) 12.485 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 98.4 1.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 5.5 0.4 Inc. seg. avg. 22.850 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 2.9 0.7 Inc. frq. avg. 12.511 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 I: az 92.3 el 19.8 pa -55.3 u,v (fr/asec) 2288.352 -9278.898 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI.W.26.zrmnfh



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-85.8	-85.1	-75.0	-69.2	-102.8	-83.6	-89.7	-73.0	Phase	-82.8
1.6	1.7	1.3	1.6	1.3	1.2	1.1	1.1	Ampl.	1.4
250.8	250.7	250.7	250.6	250.7	251.2	250.6	251.4	Sbd box	250.8
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
I 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
I W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	5.27750205670E+03		Apriori delay (usec)	5.27755134539E+03		Resid mbdelay (usec)	1.32113E-02	+/-	5.4E-05
Sband delay (usec)	5.27750295839E+03		Apriori clock (usec)	-2.1013499E+03		Resid sbdelay (usec)	-4.83870E-02	+/-	3.8E-04
Phase delay (usec)	5.27755134272E+03		Apriori clockrate (us/s)	1.8626131E-06		Resid phdelay (usec)	-2.67002E-06	+/-	8.2E-08
Delay rate (us/s)	-4.05266966701E-01		Apriori rate (us/s)	-4.05267203488E-01		Resid rate (us/s)	2.36786E-07	+/-	4.7E-10
Total phase (deg)		238.2	Apriori accel (us/s/s)	-5.76356043139E-05		Resid phase (deg)	-82.8	+/-	2.5

RMS Theor. Amplitude 1.351 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 72.0 6.1 Search (2048X64) 1.287 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

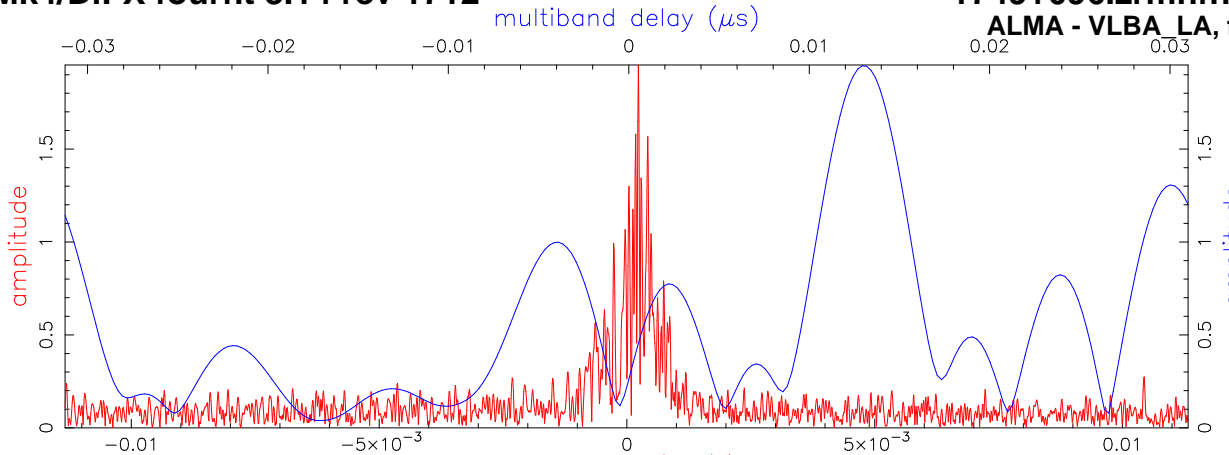
amp/seg (%) 98.1 10.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

ph/frq (deg) 11.6 3.6 Inc. seg. avg. 2.492 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

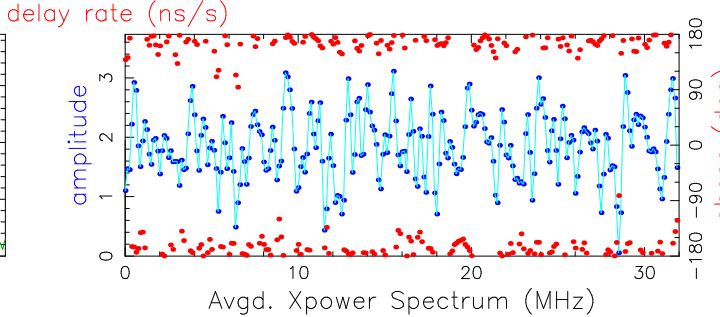
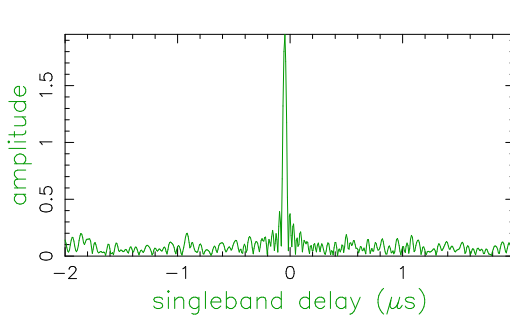
amp/frq (%) 16.7 6.3 Inc. frq. avg. 1.364 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 I: az 92.3 el 19.8 pa -55.3 u,v (fr/asec) 2288.352 -9278.898 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI.W.27.zrmnfh

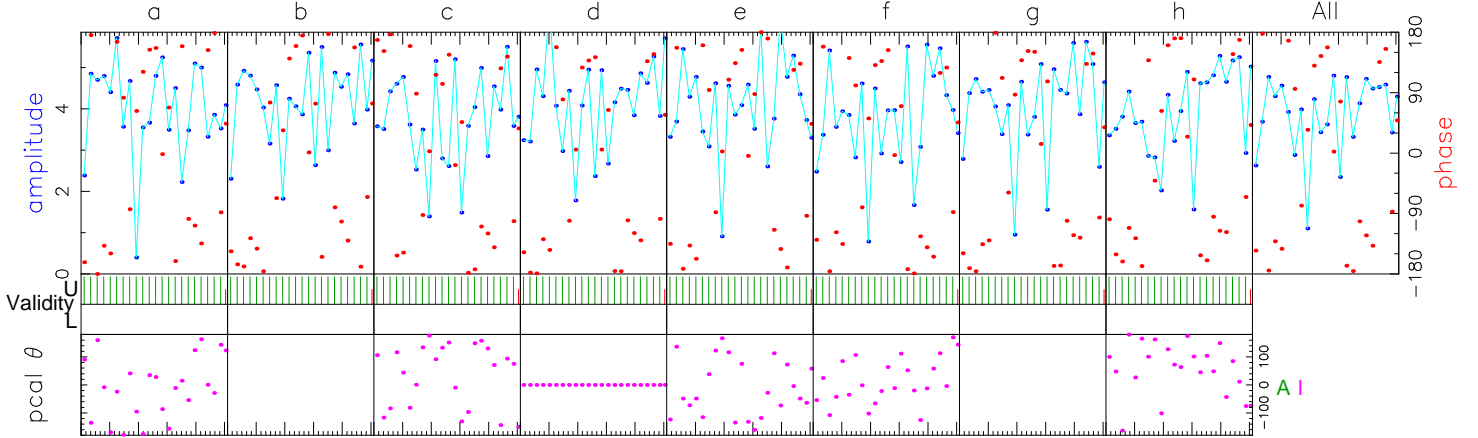


Fringe quality 4  
 SNR 65.3  
 Int time 299.661  
 Amp 1.952  
 Phase -170.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.047784  
 MBD 0.013030  
 Fringe rate (Hz)  
 0.020344  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512



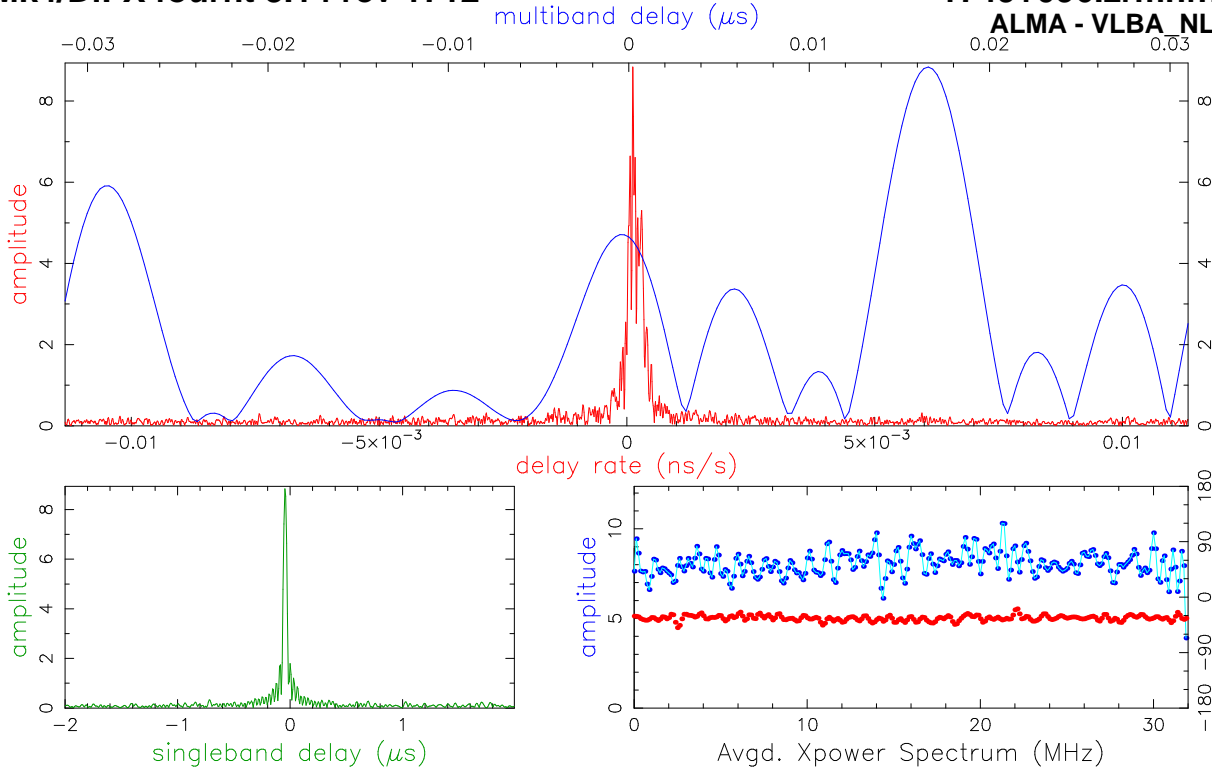
Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143906  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-169.0	-154.4	179.9	-173.1	176.6	179.6	-171.1	-153.0	Phase	-170.6
2.0	2.0	1.8	2.0	2.2	1.9	2.1	2.0	Ampl.	2.0
251.0	250.8	251.0	251.0	250.7	250.6	251.2	250.9	Sbd box	250.9
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
I 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
I W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	5.27750187489E+03	Apriori delay (usec)	5.27755134539E+03	Resid mbdelay (usec)	1.30295E-02	+/-	3.7E-05		
Sband delay (usec)	5.27750356139E+03	Apriori clock (usec)	-2.1013499E+03	Resid sbdelay (usec)	-4.77840E-02	+/-	2.6E-04		
Phase delay (usec)	5.27755133989E+03	Apriori clockrate (us/s)	1.8626131E-06	Resid phdelay (usec)	-5.50007E-06	+/-	5.7E-08		
Delay rate (us/s)	-4.05266967311E-01	Apriori rate (us/s)	-4.05267203488E-01	Resid rate (us/s)	2.36176E-07	+/-	3.3E-10		
Total phase (deg)	150.4	Apriori accel (us/s/s)	-5.76356043139E-05	Resid phase (deg)	-170.6	+/-	1.8		

ph/seg (deg) 74.1 4.2 Theor. Amplitude 1.952 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 107.6 7.3 Search (2048X64) 1.893 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 12.5 2.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 6.3 4.3 Inc. seg. avg. 3.833 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 I: az 92.3 el 19.8 pa -55.3 u,v (fr/asec) 2288.352 -9278.898 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AI.W.28.zrmnfh

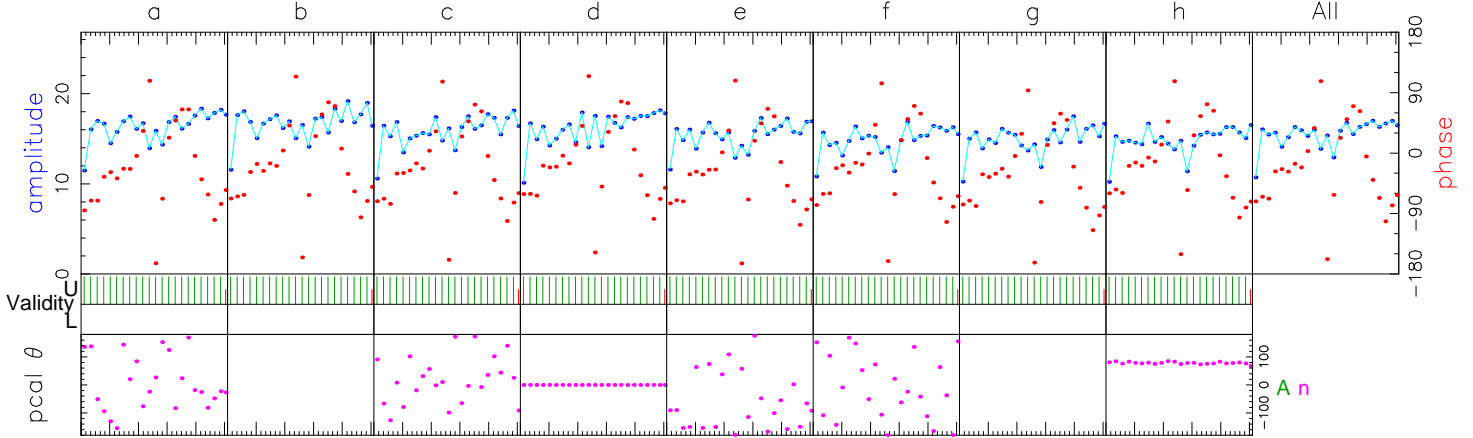


Fringe quality 5

SNR 299.2  
Int time 299.658  
Amp 8.938  
Phase -24.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.044271  
MBD 0.016600  
Fringe rate (Hz) 0.010636  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. mb007  
Exper # 16383  
Yr:day 2017:093  
Start 072000.00  
Stop 072500.03  
FRT 072230.00  
Corr/FF/build  
2017:237:115312  
2017:243:143911  
2017:170:130423  
RA & Dec (J2000)  
17h51m32.8186s  
+9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



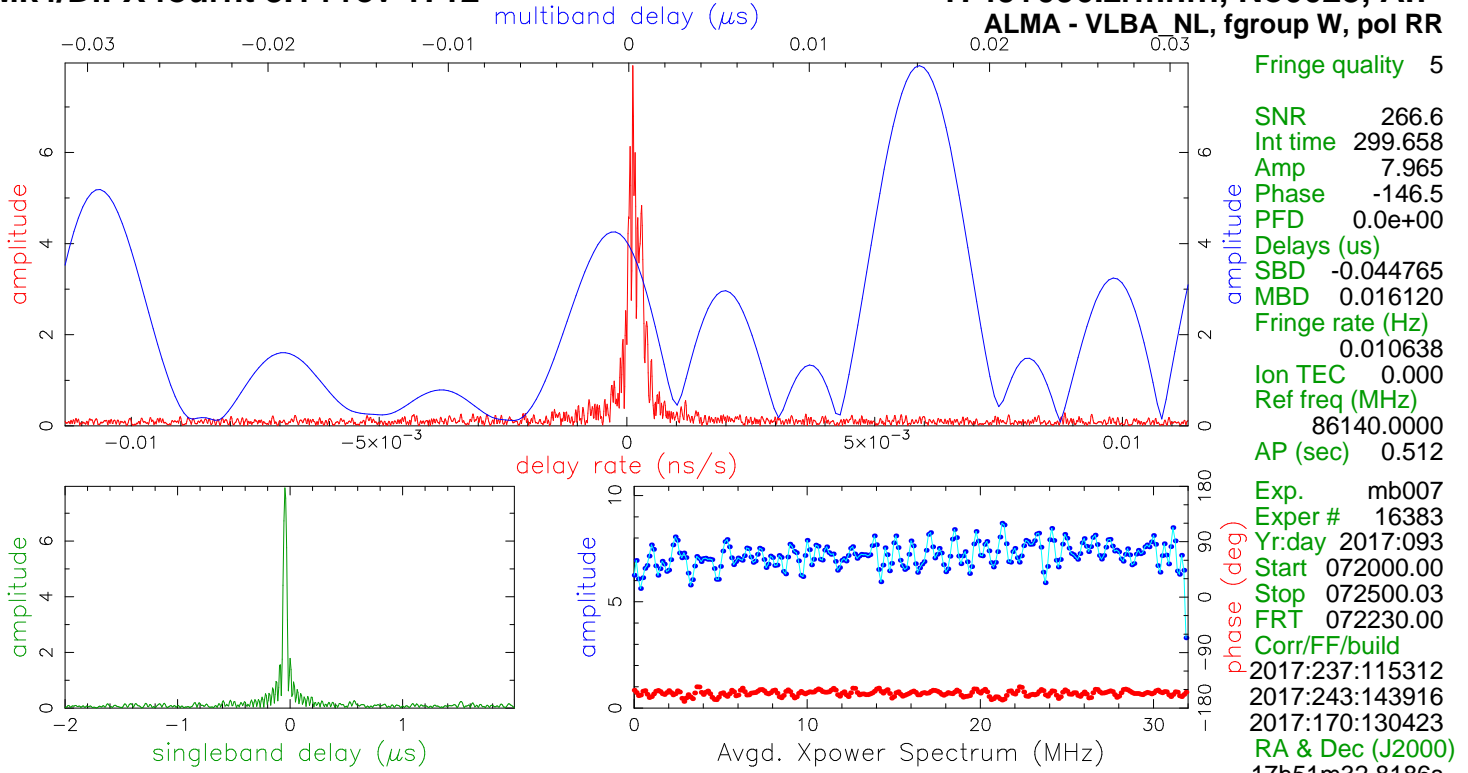
86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-28.4	-20.8	-24.8	-17.3	-29.9	-23.3	-34.5	-17.7	Phase	-24.6
9.4	9.5	8.9	9.0	8.9	8.5	8.5	8.4	Ampl.	8.9
251.2	251.4	251.2	251.4	251.3	251.2	251.6	251.5	Sbd box	251.3
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
n 4000	0	5000	4000	2000	1000	0	2000	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	ManI PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000	1000	1000	1000	1000		
A W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
n W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	1.79305312423E+03		Apriori delay (usec)	1.79309902424E+03		Resid mbdelay (usec)	1.66000E-02	+/-	8.2E-06
Sband delay (usec)	1.79305475324E+03		Apriori clock (usec)	-2.1111025E+03		Resid sbdelay (usec)	-4.42710E-02	+/-	5.8E-05
Phase delay (usec)	1.79309902345E+03		Apriori clockrate (us/s)	1.4650534E-06		Resid phdelay (usec)	-7.92132E-07	+/-	1.2E-08
Delay rate (us/s)	-1.84630497064E-01		Apriori rate (us/s)	-1.84630620539E-01		Resid rate (us/s)	1.23475E-07	+/-	7.1E-11
Total phase (deg)		316.8	Apriori accel (us/s/s)	-4.06983301920E-05		Resid phase (deg)	-24.6	+/-	0.4

ph/seg (deg) 60.7 0.9  
amp/seg (%) 75.4 1.6  
ph/frq (deg) 6.5 0.5  
amp/frq (%) 4.3 0.9

RMS Theor. Amplitude 8.938 +/- 0.030  
Search (2048X64) 8.790  
Interp. 0.000  
Inc. seg. avg. 15.521  
Inc. frq. avg. 8.881

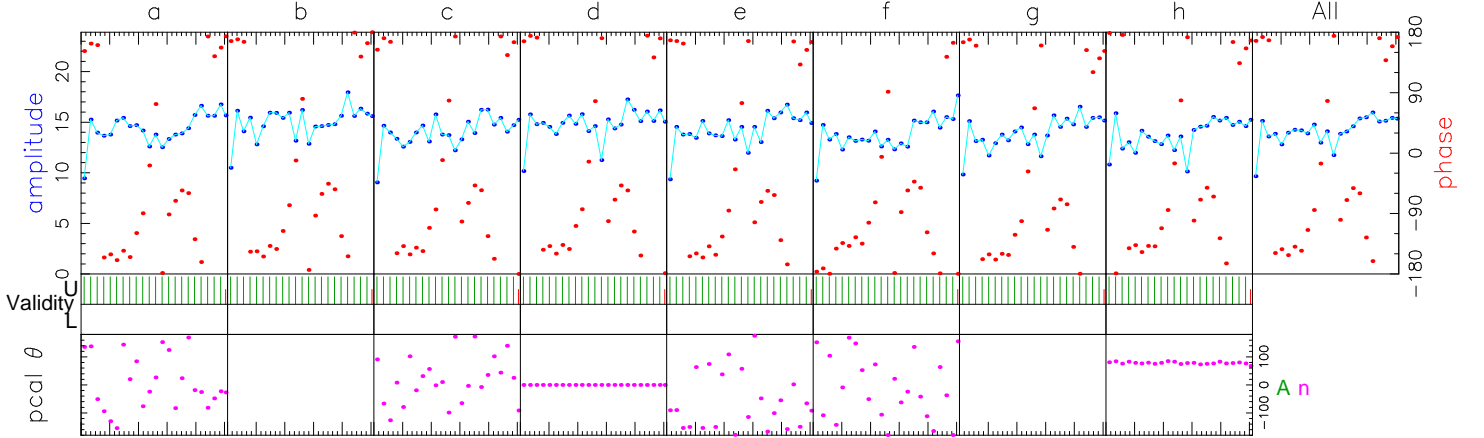
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MSamp/s): 64  
Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite

sb window (us) -2.000 2.000  
mb window (us) -0.031 0.031  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

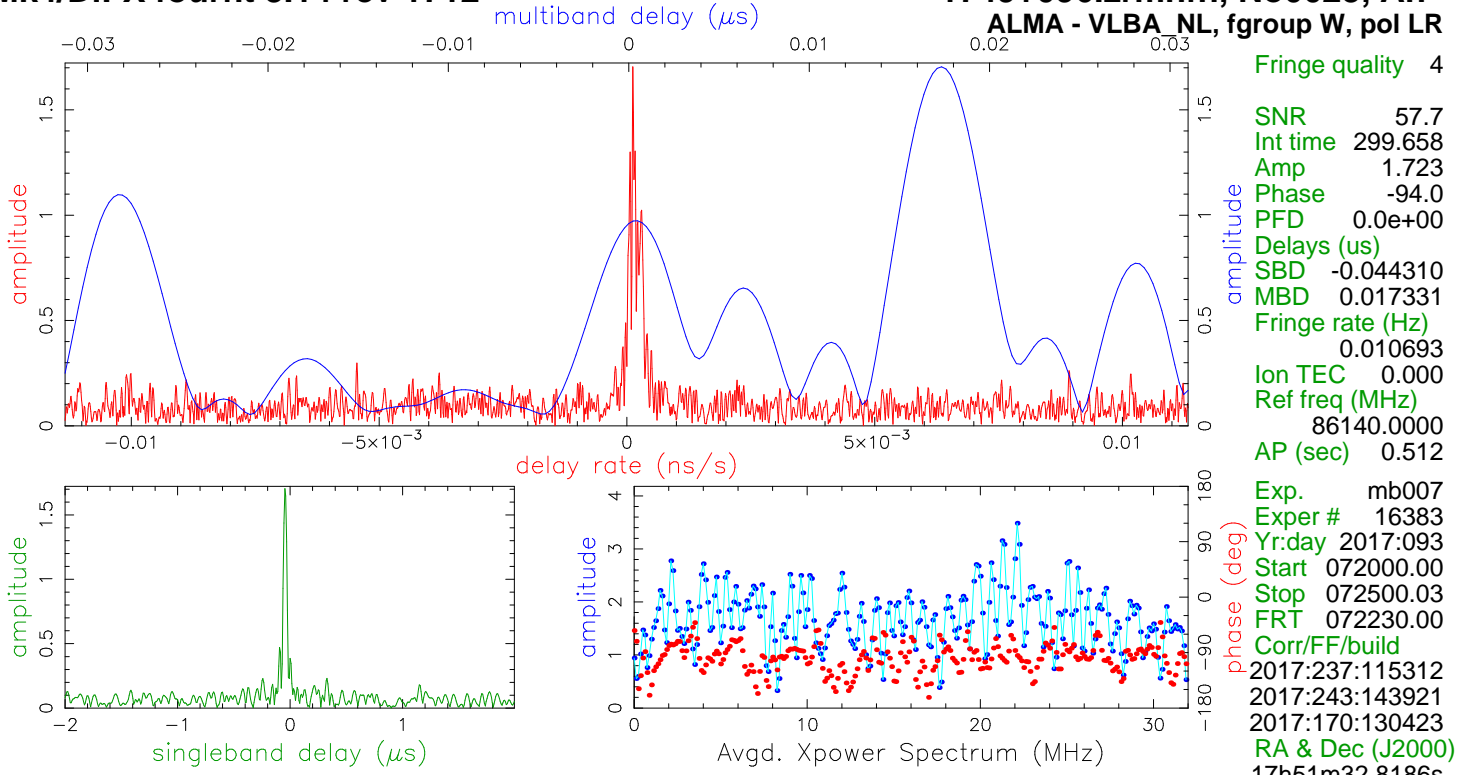


Fringe quality 5  
 SNR 266.6  
 Int time 299.658  
 Amp 7.965  
 Phase -146.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.044765  
 MBD 0.016120  
 Fringe rate (Hz) 0.010638  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build 2017:237:115312  
 2017:243:143916  
 2017:170:130423  
 RA & Dec (J2000) 17h51m32.8186s  
 +9°39' 0.728"

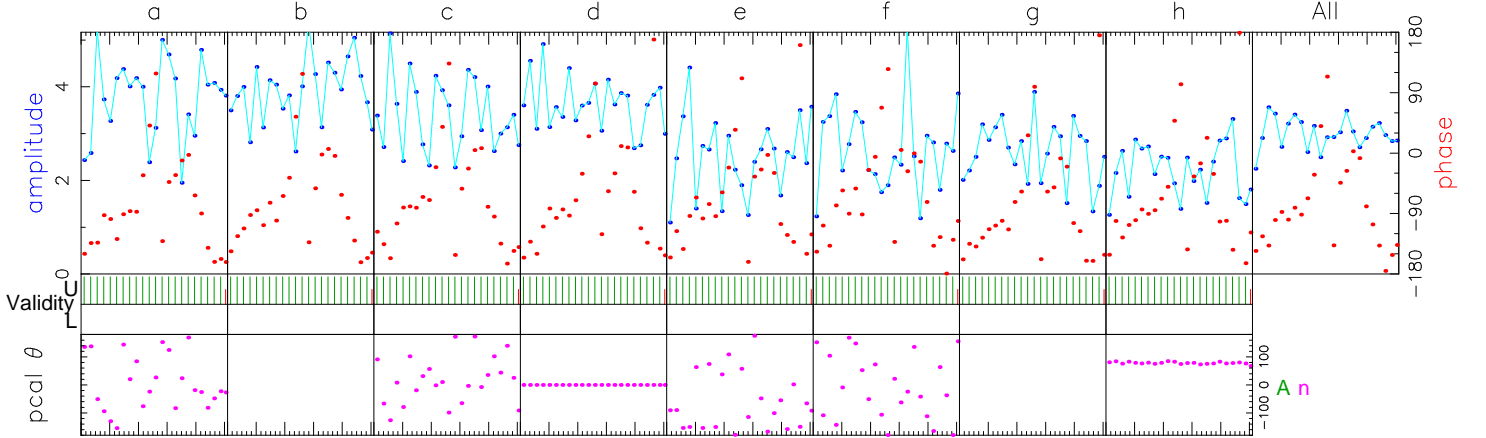
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All	
	-151.9	-145.1	-144.5	-141.2	-150.8	-137.1	-157.5	-144.0	Phase	-146.5	
	8.2	8.3	7.8	8.4	7.9	7.7	7.8	7.7	Ampl.	8.0	
	251.0	251.4	251.2	251.1	251.4	251.4	251.3	251.4	Sbd box	251.3	
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used		
A	0	0	0	0	0	0	0	0	PC freqs		
n	4000	0	5000	4000	2000	1000	0	2000	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	ManI PC		
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
n	1000	1000	1000	1000	1000	1000	1000	1000			
A	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids		
n	W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	1.79305264473E+03		Apriori delay (usec)		1.79309902424E+03		Resid mbdelay (usec)		1.61205E-02	+/- 9.2E-06	
Sband delay (usec)	1.79305425874E+03		Apriori clock (usec)		-2.1111025E+03		Resid sbdelay (usec)		-4.47655E-02	+/- 6.5E-05	
Phase delay (usec)	1.79309901952E+03		Apriori clockrate (us/s)		1.4650534E-06		Resid phdelay (usec)		-4.72397E-06	+/- 1.4E-08	
Delay rate (us/s)	-1.84630497041E-01		Apriori rate (us/s)		-1.84630620539E-01		Resid rate (us/s)		1.23499E-07	+/- 8.0E-11	
Total phase (deg)	194.9		Apriori accel (us/s/s)		-4.06983301920E-05		Resid phase (deg)		-146.5	+/- 0.4	
	RMS	Theor.	Amplitude	7.965 +/- 0.030		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	61.2	1.0	Search (2048X64)	7.725		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-2.000	2.000	
amp/seg (%)	79.1	1.8	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	7.0	0.6	Inc. seg. avg.	14.113		Sample rate(MSamp/s): 64		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	3.3	1.1	Inc. frq. avg.	7.950		Data rate(Mb/s): 1024		nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00
A: az 49.3 el 43.3 pa -134.9 n: az 105.1 el 30.2 pa -46.8 u,v (fr/asec) 1020.714 -9759.239 simultaneous interpolator											
Control file: cf_1234 Input file: /Exps/mb007/gmva_32_pc1/1234/No0023/An..zrmnfh Output file: /Exps/mb007/gmva_32_pc1/1234/No0023/An.W.30.zrmnfh											

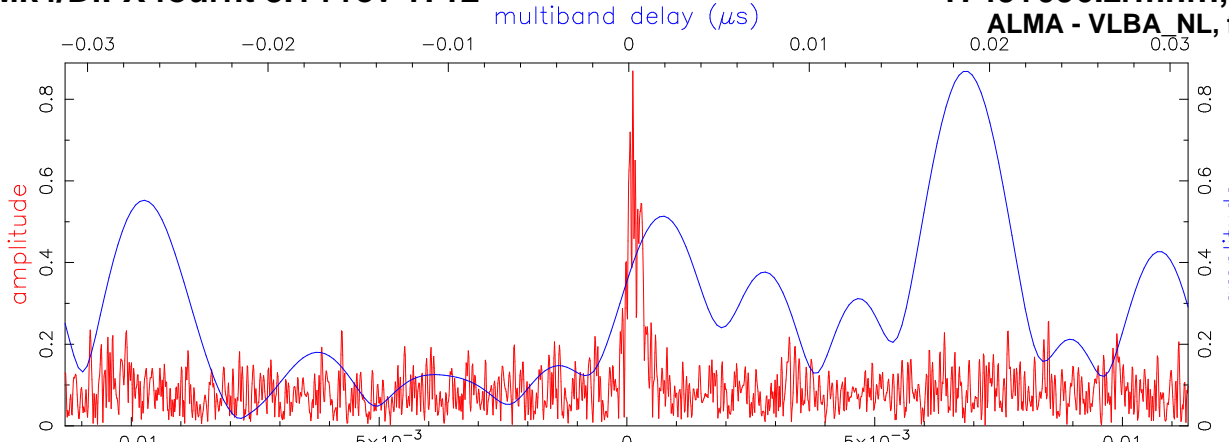


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

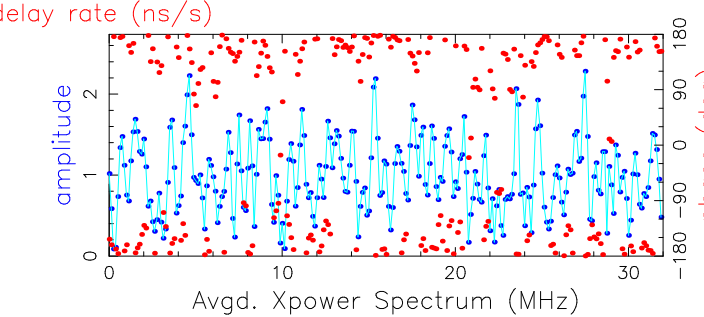
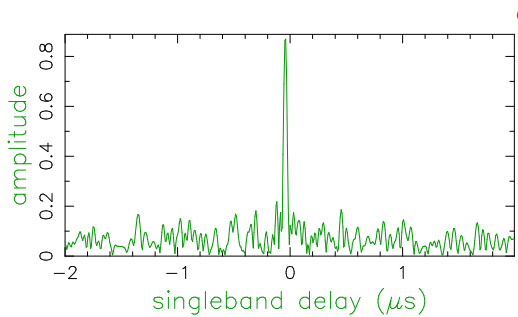


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-99.9	-92.7	-87.6	-93.9	-92.0	-81.1	-108.7	-93.9	Phase	-94.0
2.3	2.2	1.7	1.8	1.3	1.5	1.5	1.4	Ampl.	1.7
251.2	251.4	250.7	251.3	251.7	251.0	251.7	251.5	Sbd box	251.3
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
n 4000	0	5000	4000	2000	1000	0	2000	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	ManI PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n 1000	1000	1000	1000	1000	1000	1000	1000		
A W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
n W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	1.79305385535E+03	Apriori delay (usec)	1.79309902424E+03	Resid mbdelay (usec)	1.73311E-02	+/-	4.2E-05		
Sband delay (usec)	1.79305471374E+03	Apriori clock (usec)	-2.1111025E+03	Resid sbdelay (usec)	-4.43105E-02	+/-	3.0E-04		
Phase delay (usec)	1.79309902121E+03	Apriori clockrate (us/s)	1.4650534E-06	Resid phdelay (usec)	-3.03029E-06	+/-	6.4E-08		
Delay rate (us/s)	-1.84630496409E-01	Apriori rate (us/s)	-1.84630620539E-01	Resid rate (us/s)	1.24131E-07	+/-	3.7E-10		
Total phase (deg)	247.4	Apriori accel (us/s/s)	-4.06983301920E-05	Resid phase (deg)	-94.0	+/-	2.0		

ph/seg (deg) 63.3 4.8 Search (2048X64) 1.678 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 76.8 8.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 8.8 2.8 Inc. seg. avg. 2.996 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 20.0 4.9 Inc. frq. avg. 1.717 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 n: az 105.1 el 30.2 pa -46.8 u,v (fr/asec) 1020.714 -9759.239 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/An..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/An.W.31.zrmnfh

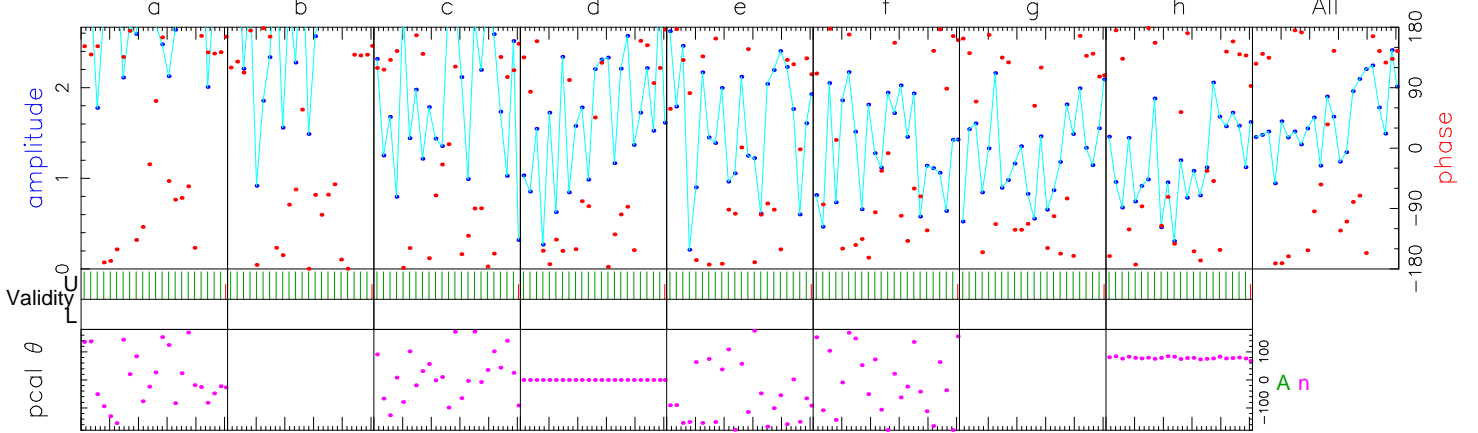


Fringe quality 5  
 SNR 29.8  
 Int time 299.658  
 Amp 0.889  
 Phase -178.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.042738  
 MBD 0.018663  
 Fringe rate (Hz)  
 0.010556  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512



Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143925  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

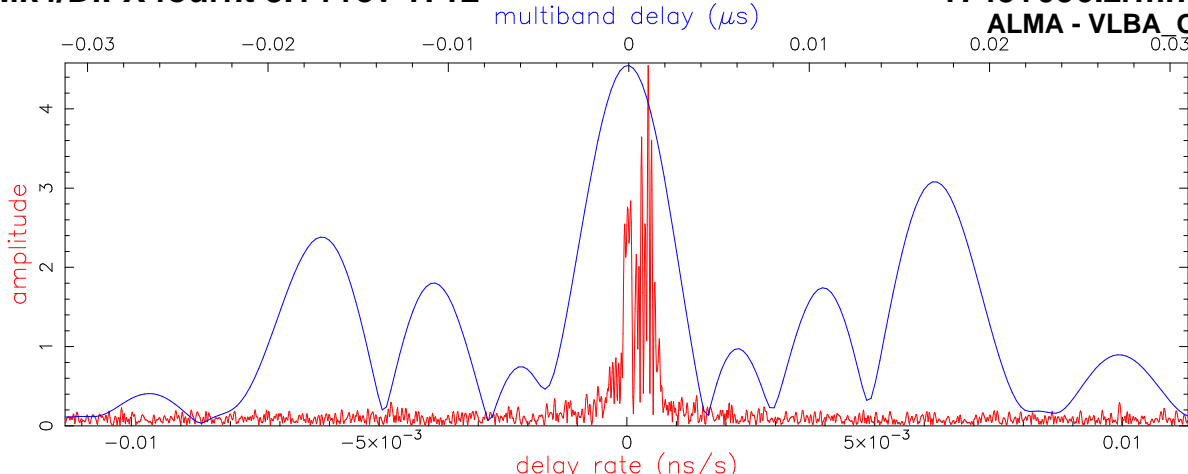


	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	-173.1	177.1	172.9	178.5	167.1	-148.9	174.0	-174.6	Phase	-178.7
	1.5	1.3	0.9	0.8	0.7	0.7	0.6	0.6	Ampl.	0.9
	251.0	251.4	252.0	251.7	252.6	251.6	251.9	251.2	Sbd box	251.5
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
n	4000	0	5000	4000	2000	1000	0	2000	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	ManI PC	
A	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
A	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
n	W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.79305518729E+03		Apriori delay (usec)		1.79309902424E+03		Resid mbdelay (usec)		1.86630E-02	+/- 8.2E-05
Sband delay (usec)	1.79305628624E+03		Apriori clock (usec)		-2.1111025E+03		Resid sbdelay (usec)		-4.27380E-02	+/- 5.8E-04
Phase delay (usec)	1.79309901848E+03		Apriori clockrate (us/s)		1.4650534E-06		Resid phdelay (usec)		-5.76274E-06	+/- 1.2E-07
Delay rate (us/s)	-1.84630497999E-01		Apriori rate (us/s)		-1.84630620539E-01		Resid rate (us/s)		1.22540E-07	+/- 7.2E-10
Total phase (deg)	162.7		Apriori accel (us/s/s)		-4.06983301920E-05		Resid phase (deg)		-178.7	+/- 3.9

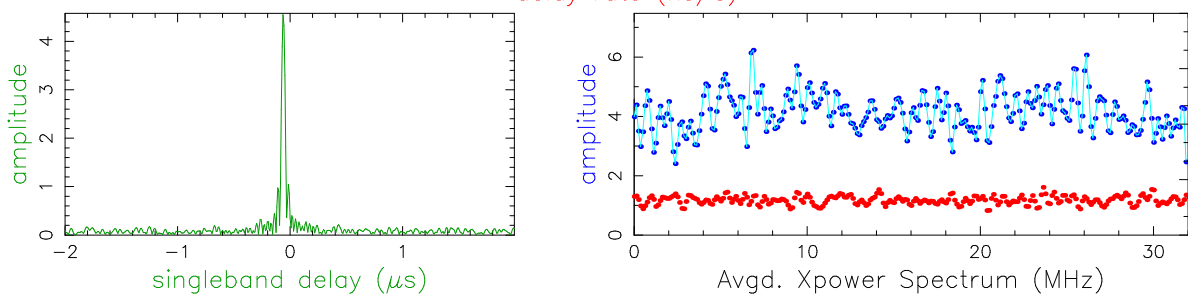
RMS Theor. Amplitude 0.889 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 63.5 9.2 Search (2048X64) 0.866 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 94.5 16.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 14.6 5.4 Inc. seg. avg. 1.623 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 36.2 9.5 Inc. frq. avg. 0.882 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 n: az 105.1 el 30.2 pa -46.8 u,v (fr/asec) 1020.714 -9759.239 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/An...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/An.W.32.zrmnfh

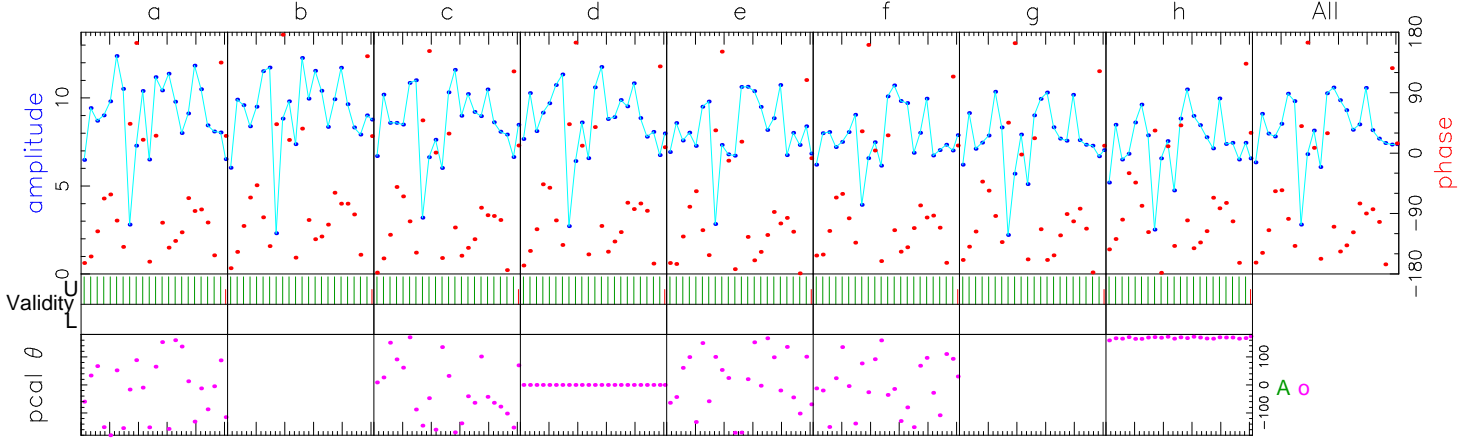




Fringe quality 5  
 SNR 153.2  
 Int time 299.658  
 Amp 4.580  
 Phase -112.0  
 PFD 0.0e+00  
 Delays ( $\mu s$ )  
 SBD -0.060562  
 MBD -0.000046  
 Fringe rate (Hz) 0.036967  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143930  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

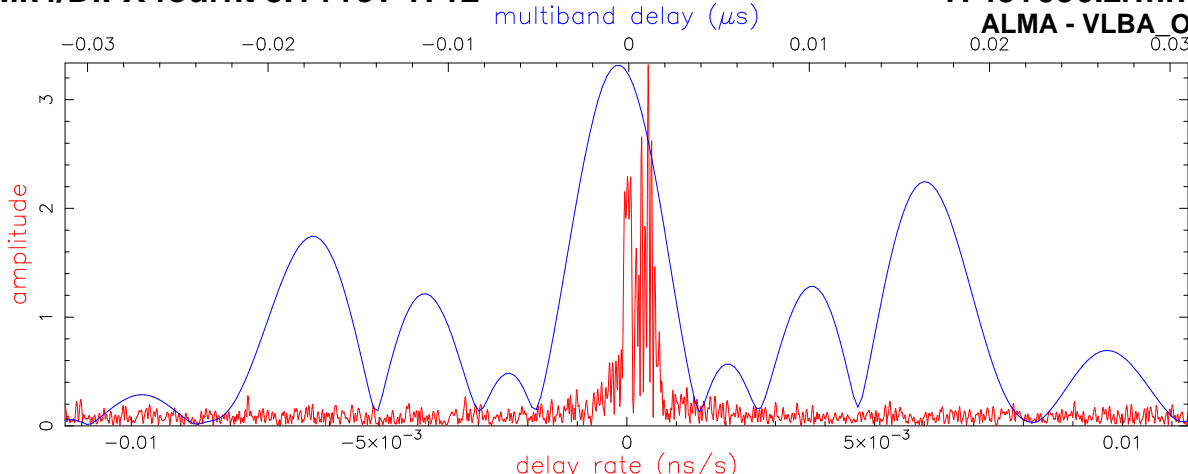


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-110.3	-104.8	-117.9	-107.7	-126.9	-114.1	-115.0	-99.6	Phase	-112.0
5.1	5.0	4.7	4.8	4.5	4.3	4.3	4.1	Ampl.	4.6
249.3	249.0	249.0	249.3	249.4	249.3	249.4	249.4	Sbd box	249.2
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
o 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
o W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.72497761822E+03	Apriori delay (usec)	8.72504016456E+03	Resid mbdelay (usec)	-4.63439E-05	+/-	1.6E-05		
Sband delay (usec)	8.72497960206E+03	Apriori clock (usec)	-2.1079048E+03	Resid sbdelay (usec)	-6.05625E-02	+/-	1.1E-04		
Phase delay (usec)	8.72504016095E+03	Apriori clockrate (us/s)	1.5021560E-06	Resid phdelay (usec)	-3.61207E-06	+/-	2.4E-08		
Delay rate (us/s)	-4.36764407398E-01	Apriori rate (us/s)	-4.36764836544E-01	Resid rate (us/s)	4.29146E-07	+/-	1.4E-10		
Total phase (deg)	167.2	Apriori accel (us/s/s)	-7.63820698805E-05	Resid phase (deg)	-112.0	+/-	0.7		

ph/seg (deg) 69.4 1.8 Theor. Amplitude 4.580 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 88.6 3.1 Search (2048X64) 4.492 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 9.1 1.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 7.2 1.8 Inc. seg. avg. 8.238 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 4.593 ion window (TEC) 0.00 0.00  
 A: az 49.3 el 43.3 pa -134.9 o: az 85.5 el 10.1 pa -53.7 u,v (fr/asec) 2454.271 -9707.673 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.W.33.zrmnfh



Fringe quality 5

SNR 111.7

Int time 299.658

Amp 3.338

Phase -141.4

PFD 0.0e+00

Delays (us)

SBD -0.060757

MBD -0.000582

Fringe rate (Hz) 0.037021

Ion TEC 0.000

Ref freq (MHz) 86140.000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

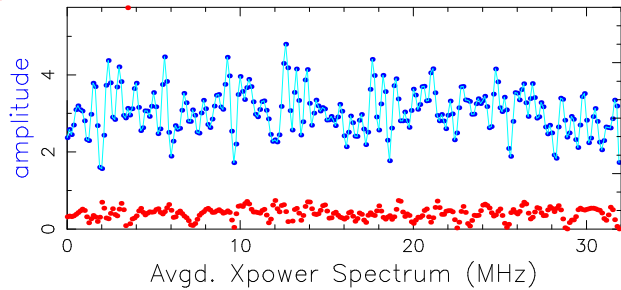
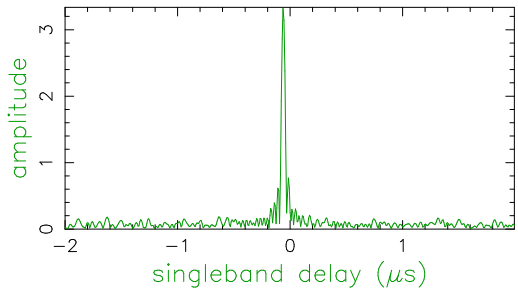
FRT 072230.00

Corr/FF/build 2017:237:115312

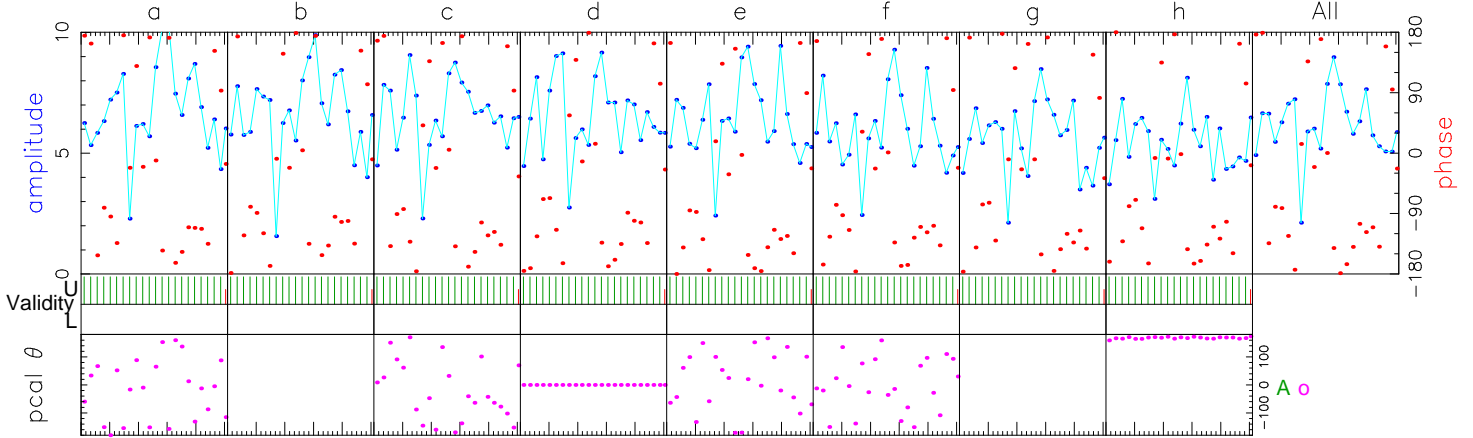
2017:243:143935

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	86332.00	86348.00	Freq (MHz)	All
-145.6	-135.1	-147.1	-133.1	-148.8	-137.6	-147.6	-136.3	-147.6	-136.3	Phase	-141.4
3.7	3.6	3.5	3.4	3.5	3.2	2.9	2.9	3.2	2.9	Ampl.	3.3
249.2	249.1	249.3	249.2	249.3	249.2	249.3	249.2	249.3	249.2	Sbd box	249.2
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	0	PC freqs	
o 4000	0	5000	4000	2000	1000	0	2000	0	0	PC freqs	
A:o 0:0	0:0	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	0:0	0:0	Manl PC	
A 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W08UR	W09UR	Chan ids	
o W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	W08UR	W09UR	Tracks	
										Chan ids	
										Tracks	
Group delay (usec)(sbd)	8.72497708272E+03		Apriori delay (usec)	8.72504016456E+03		Resid mbdelay (usec)	-5.81844E-04		+/-	2.2E-05	
Sband delay (usec)	8.72497940756E+03		Apriori clock (usec)	-2.1079048E+03		Resid sbdelay (usec)	-6.07570E-02		+/-	1.5E-04	
Phase delay (usec)	8.72504016000E+03		Apriori clockrate (us/s)	1.5021560E-06		Resid phdelay (usec)	-4.56132E-06		+/-	3.3E-08	
Delay rate (us/s)	-4.36764406769E-01		Apriori rate (us/s)	-4.36764836544E-01		Resid rate (us/s)	4.29775E-07		+/-	1.9E-10	
Total phase (deg)		137.8	Apriori accel (us/s/s)	-7.63820698805E-05		Resid phase (deg)	-141.4		+/-	1.0	

ph/seg (deg) 70.2 2.5 Theor. Amplitude 3.338 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

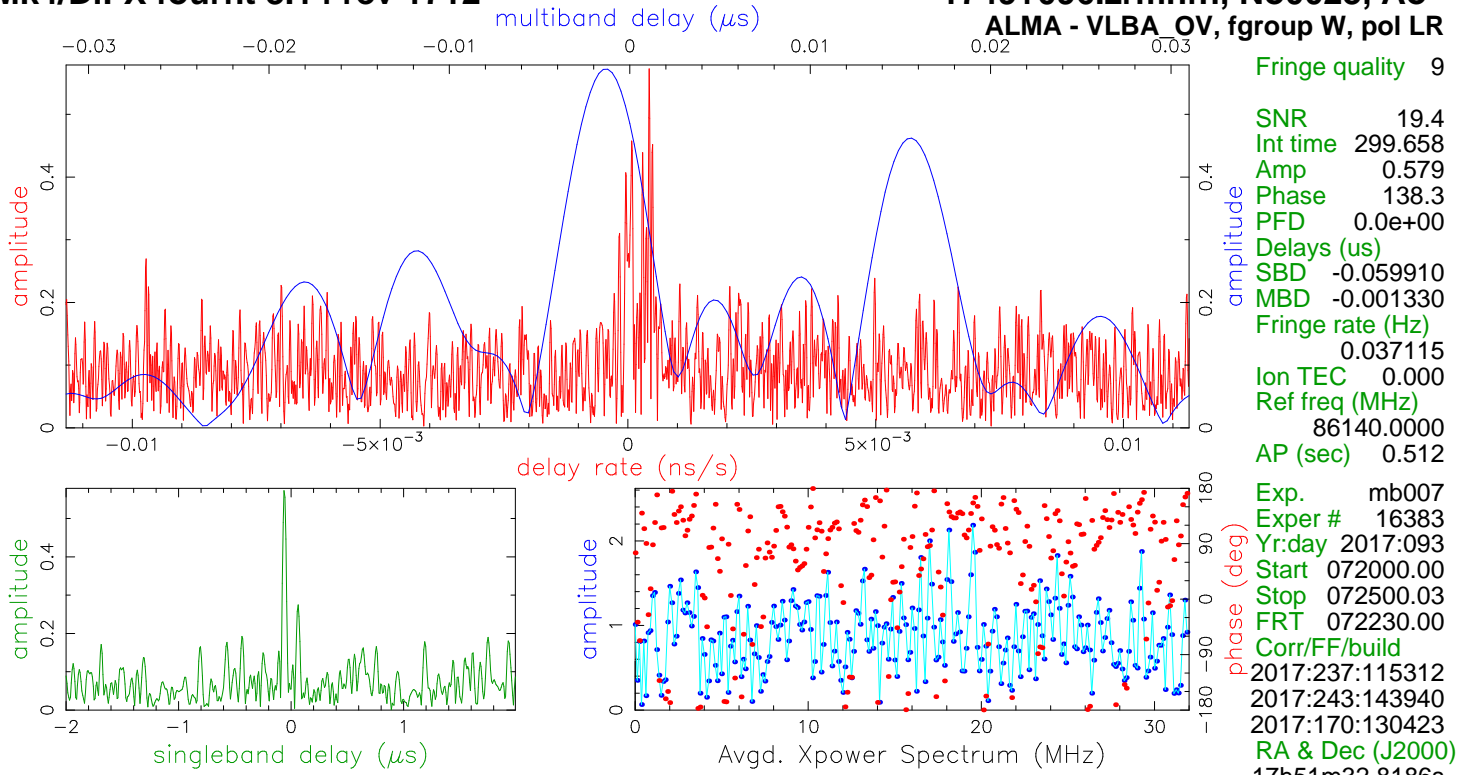
amp/seg (%) 94.2 4.3 Search (2048X64) 3.262 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

ph/frq (deg) 7.0 1.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031

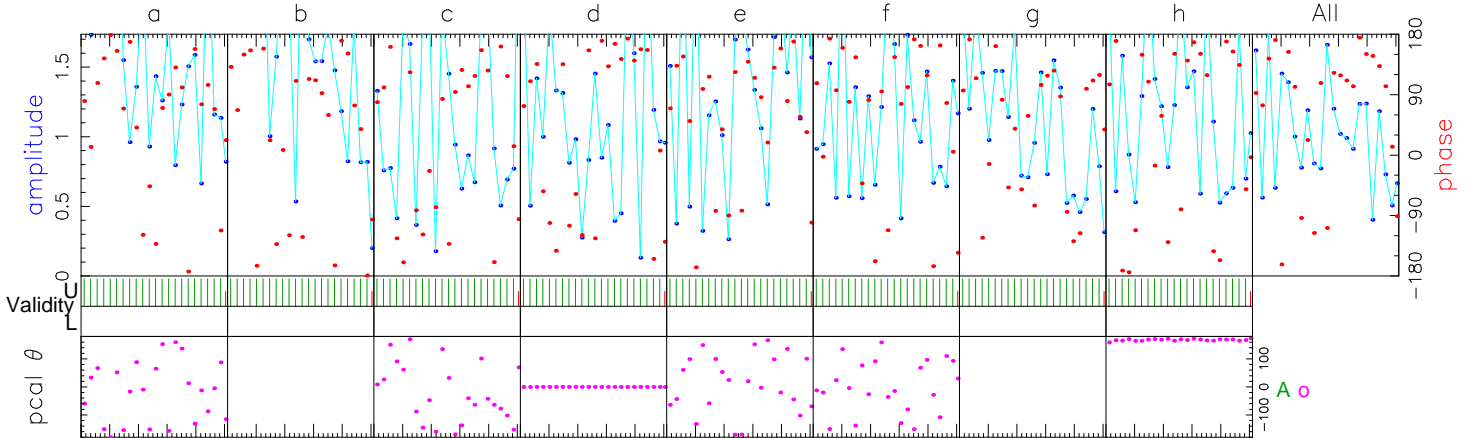
amp/frq (%) 9.0 2.5 Inc. seg. avg. 6.167 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

A: az 49.3 el 43.3 pa -134.9 o: az 85.5 el 10.1 pa -53.7 u,v (fr/asec) 2454.271 -9707.673 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.W.34.zrmnfh



Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

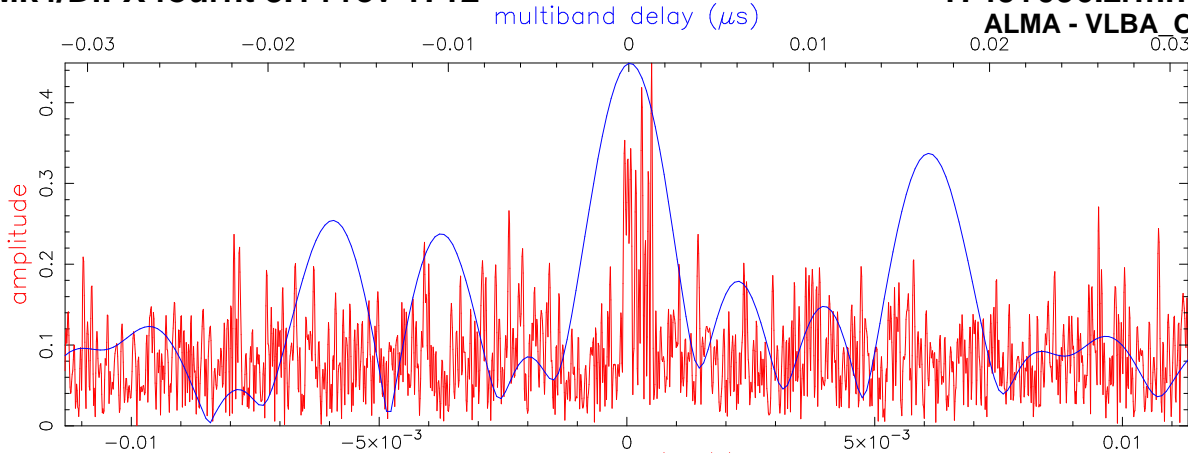


	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
124.0	141.7	147.5	174.5	124.2	138.5	106.7	152.0	152.0	Phase	138.3
0.8	0.8	0.4	0.6	0.6	0.6	0.4	0	0.6	Ampl.	0.6
248.9	249.0	224.7	249.2	248.9	204.6	154.9	249.7	249.7	Sbd box	249.3
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
o	4000	0	5000	4000	2000	1000	0	2000	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	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
o	W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	8.72497633472E+03		Apriori delay (usec)	8.72504016456E+03	Resid mbdelay (usec)	-1.32984E-03	+/-	1.3E-04		
Sband delay (usec)	8.72498025506E+03		Apriori clock (usec)	-2.1079048E+03	Resid sbdelay (usec)	-5.99095E-02	+/-	8.9E-04		
Phase delay (usec)	8.72504016903E+03		Apriori clockrate (us/s)	1.5021560E-06	Resid phdelay (usec)	4.46137E-06	+/-	1.9E-07		
Delay rate (us/s)	-4.36764405673E-01		Apriori rate (us/s)	-4.36764836544E-01	Resid rate (us/s)	4.30870E-07	+/-	1.1E-09		
Total phase (deg)		57.6	Apriori accel (us/s/s)	-7.63820698805E-05	Resid phase (deg)	138.3	+/-	5.9		

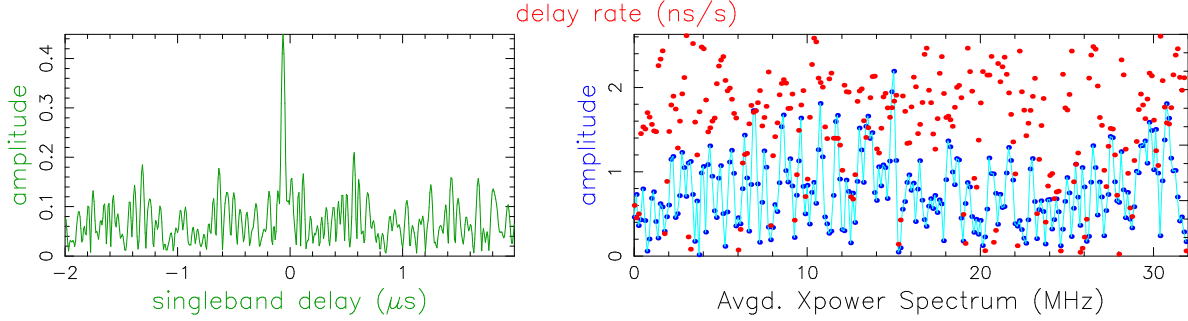
ph/seg (deg)	RMS 65.9	Theor. 14.2	Amplitude Search (2048X64)	0.579 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-2.000	2.000
amp/seg (%)	102.5	24.8	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	22.3	8.4	Inc. seg. avg.	1.008	Bits/sample: 2x2	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.011	0.011
amp/frq (%)	22.8	14.6	Inc. frq. avg.	0.597	Data rate(Mb/s): 1024	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

A: az 49.3 el 43.3 pa -134.9 o: az 85.5 el 10.1 pa -53.7 u,v (fr/asec) 2454.271 -9707.673 simultaneous interpolator

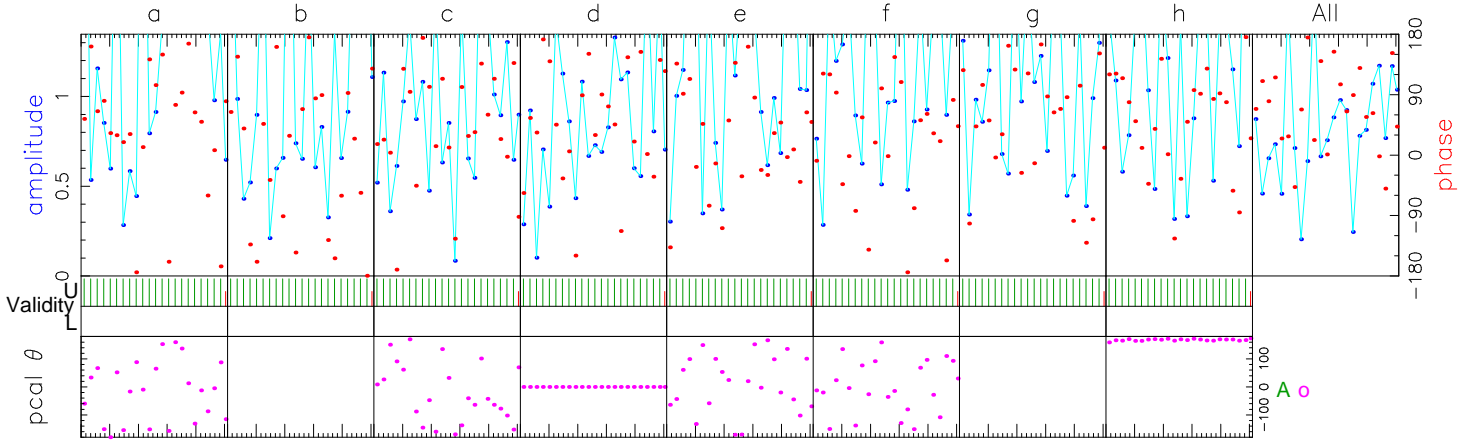
Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.W.35.zrmnfh



Fringe quality 9  
 SNR 15.0  
 Int time 299.658  
 Amp 0.449  
 Phase 65.4  
 PFD 6.7e-42  
 Delays (us)  
 SBD -0.062573  
 MBD 0.000067  
 Fringe rate (Hz)  
 0.042638  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143944  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

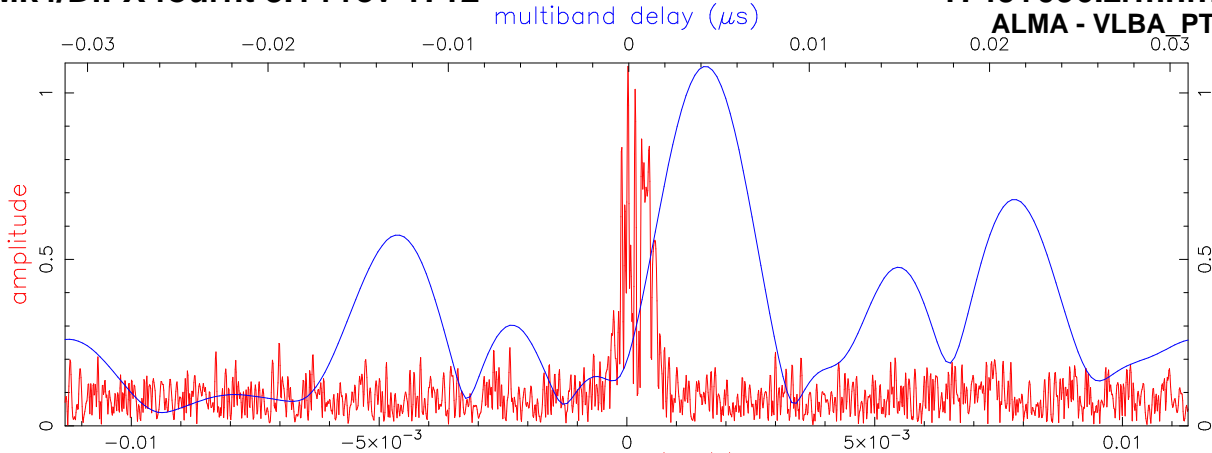


Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

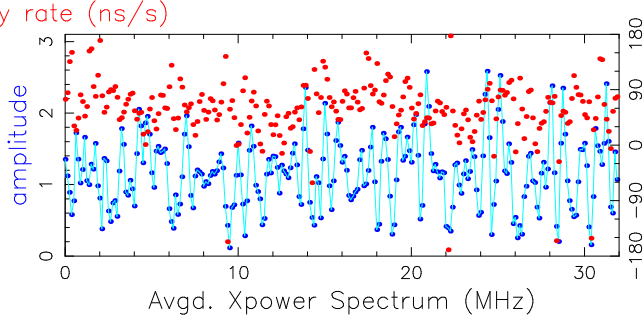
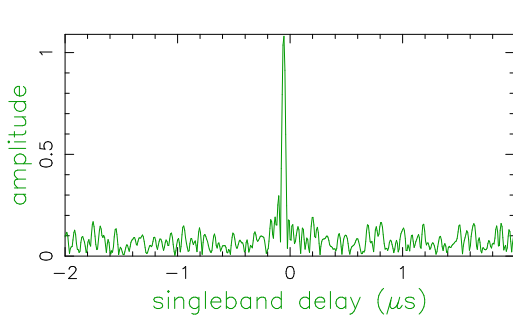


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
67.9	88.3	71.2	64.0	30.7	54.4	78.2	79.1	Phase	65.4
0.8	0.2	0.5	0.3	0.5	0.4	0.5	0.5	Ampl.	0.5
248.6	74.0	250.0	22.1	249.2	132.0	91.1	258.6	Sbd box	249.0
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
o 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
o W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	8.72497773154E+03	Apriori delay (usec)	8.72504016456E+03	Resid mbdelay (usec)	6.69781E-05	+/-	1.6E-04		
Sband delay (usec)	8.72497759206E+03	Apriori clock (usec)	-2.1079048E+03	Resid sbdelay (usec)	-6.25725E-02	+/-	1.1E-03		
Phase delay (usec)	8.72504016667E+03	Apriori clockrate (us/s)	1.5021560E-06	Resid phdelay (usec)	2.10766E-06	+/-	2.5E-07		
Delay rate (us/s)	-4.36764341556E-01	Apriori rate (us/s)	-4.36764836544E-01	Resid rate (us/s)	4.94988E-07	+/-	1.4E-09		
Total phase (deg)	344.6	Apriori accel (us/s/s)	-7.63820698805E-05	Resid phase (deg)	65.4	+/-	7.6		

ph/seg (deg) 61.0 18.3 Search (2048X64) 0.441 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 113.5 31.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 19.3 10.8 Inc. seg. avg. 0.789 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 32.0 18.8 Inc. frq. avg. 0.460 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 o: az 85.5 el 10.1 pa -53.7 u,v (fr/asec) 2454.271 -9707.673 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ao.W.36.zrmnfh

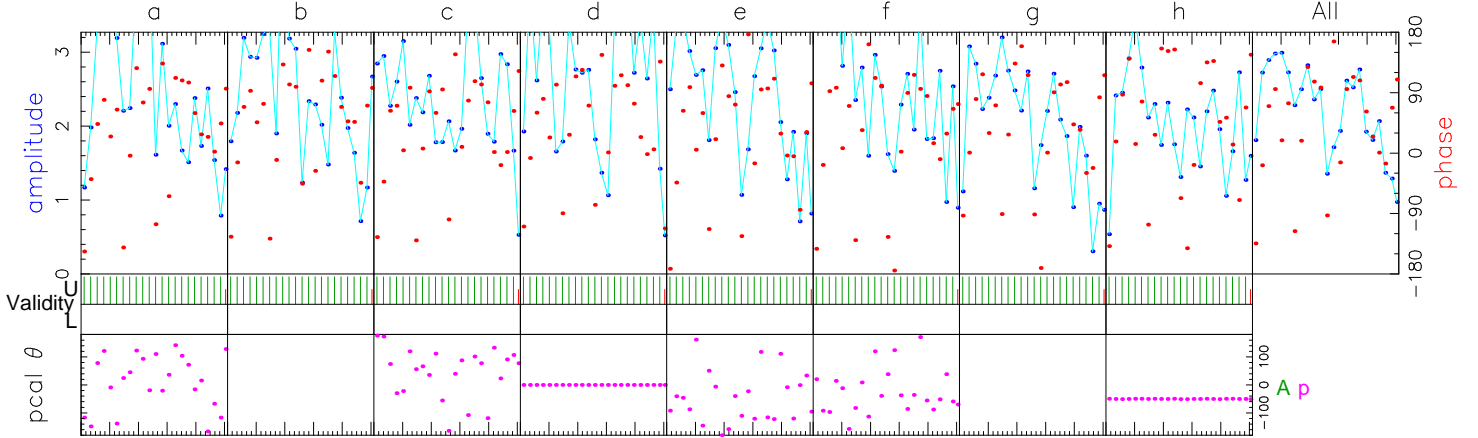


Fringe quality 5  
 SNR 36.5  
 Int time 299.657  
 Amp 1.090  
 Phase 69.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.057040  
 MBD 0.004224  
 Fringe rate (Hz)  
 0.002376  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143950  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

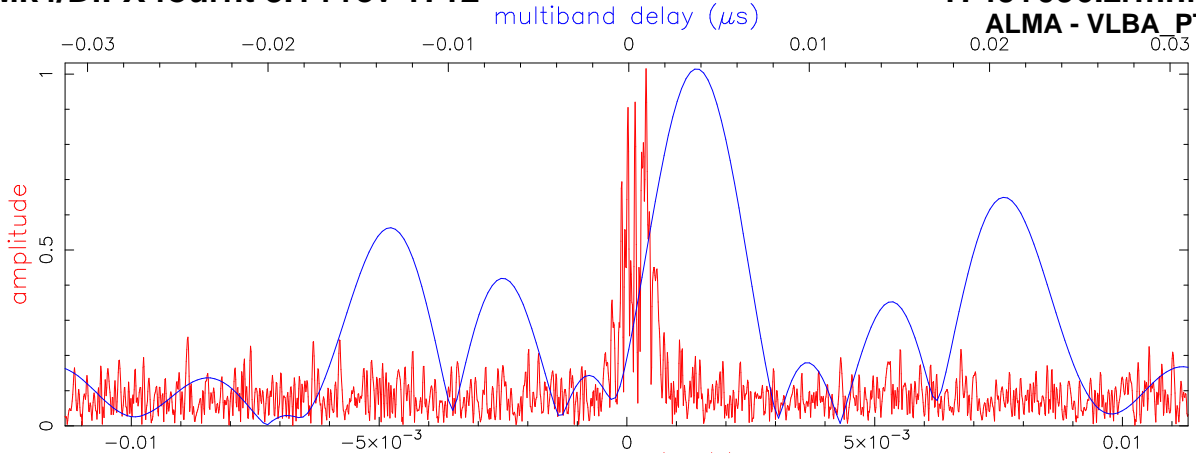


86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
68.4	85.7	51.9	62.4	63.7	75.2	70.9	83.7	Phase	69.4
1.3	1.2	1.0	1.5	1.1	1.2	0.8	0.6	Ampl.	1.1
249.4	249.6	250.3	249.5	249.7	250.1	250.4	248.8	Sbd box	249.7
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
p 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
p W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Tracks	

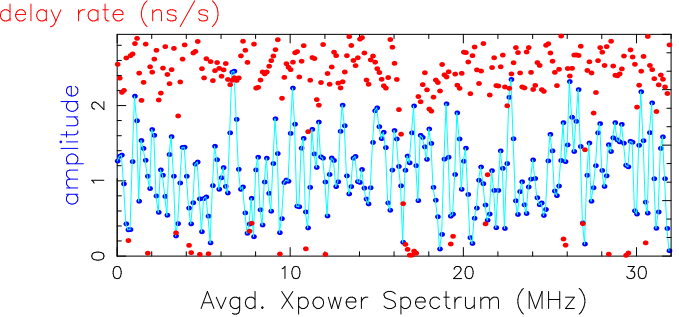
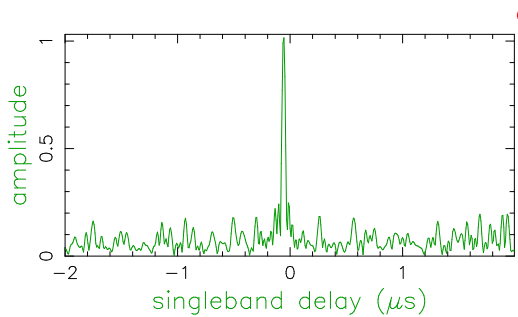
Group delay (usec)(sbd)	5.79123788970E+03	Apriori delay (usec)	5.79129616539E+03	Resid mbdelay (usec)	4.22432E-03	+/-	6.7E-05
Sband delay (usec)	5.79123912539E+03	Apriori clock (usec)	-2.1080889E+03	Resid sbdelay (usec)	-5.70400E-02	+/-	4.7E-04
Phase delay (usec)	5.79129616763E+03	Apriori clockrate (us/s)	1.4954652E-06	Resid phdelay (usec)	2.23897E-06	+/-	1.0E-07
Delay rate (us/s)	-4.38964656895E-01	Apriori rate (us/s)	-4.38964684479E-01	Resid rate (us/s)	2.75841E-08	+/-	5.8E-10
Total phase (deg)	316.5	Apriori accel (us/s/s)	-6.00056557088E-05	Resid phase (deg)	69.4	+/-	3.1

ph/seg (deg)	RMS 77.5	Theor. 7.5	Amplitude Search (2048X64)	1.090 +/- 0.030	1.044	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-2.000	2.000
amp/seg (%)	117.5	13.1	Interp.	0.000	0.000E+00	0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.031	0.031
ph/frq (deg)	12.2	4.4	Inc. seg. avg.	2.221	64	1024	nlags: 256	t_cohere infinite	-0.011	0.011
amp/frq (%)	23.8	7.8	Inc. frq. avg.	1.094	1024	infinite	ion window (TEC)	0.00	0.00	0.00

A: az 49.3 el 43.3 pa -134.9 p: az 90.7 el 18.3 pa -56.9 u,v (fr/asec) 2482.272 -9127.611 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.W.37.zrmnfh

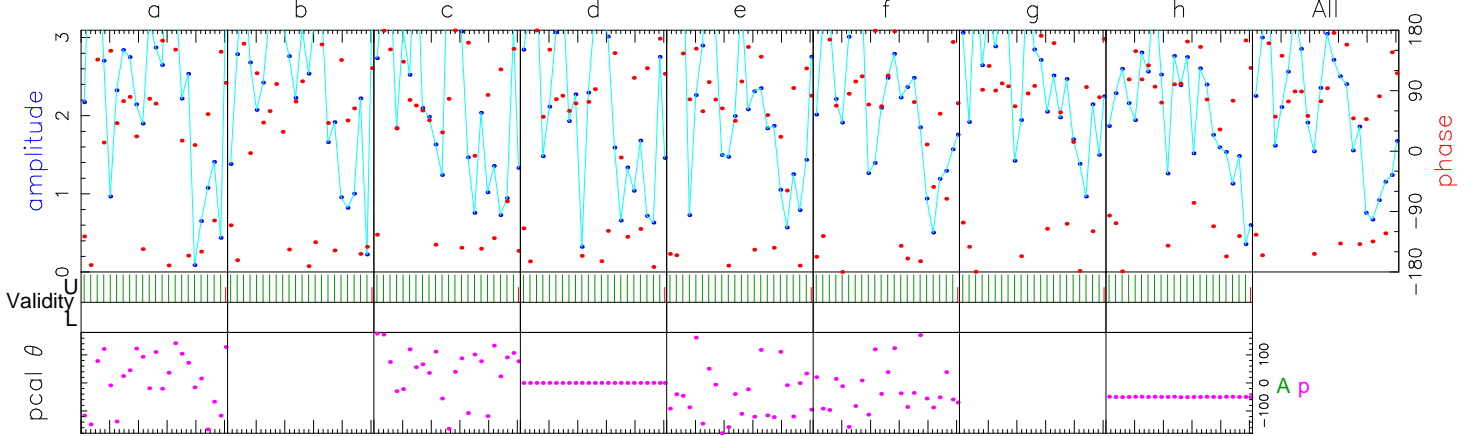


Fringe quality 7  
 SNR 34.5  
 Int time 299.657  
 Amp 1.032  
 Phase 134.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.057703  
 MBD 0.003718  
 Fringe rate (Hz)  
 0.033804  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



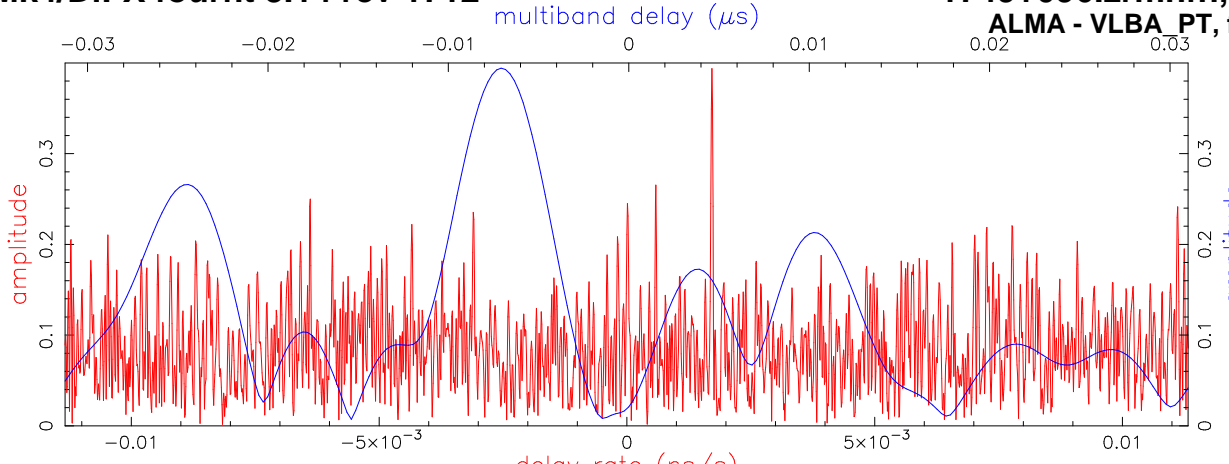
Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:143955  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec

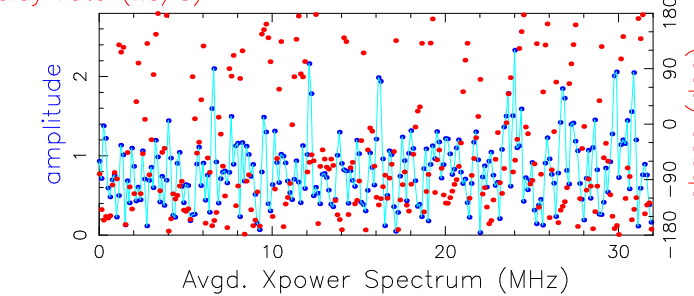
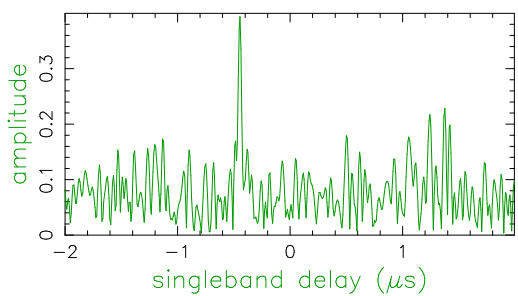


	86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
	129.0	131.5	137.2	145.1	127.9	138.8	135.2	134.5	Phase	134.7
	1.0	0.9	1.0	0.9	1.2	1.0	1.1	1.0	Ampl.	1.0
	249.9	249.2	249.8	249.4	250.1	249.3	249.6	249.4	Sbd box	249.6
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	PC freqs	
p	4000	0	5000	4000	2000	1000	0	2000	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	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
p	W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.79123738335E+03		Apriori delay (usec)		5.79129616539E+03		Resid mbdelay (usec)		3.71796E-03	+/- 7.1E-05
Sband delay (usec)	5.79123846289E+03		Apriori clock (usec)		-2.1080889E+03		Resid sbdelay (usec)		-5.77025E-02	+/- 5.0E-04
Phase delay (usec)	5.79129616973E+03		Apriori clockrate (us/s)		1.4954652E-06		Resid phdelay (usec)		4.34393E-06	+/- 1.1E-07
Delay rate (us/s)	-4.38964292053E-01		Apriori rate (us/s)		-4.38964684479E-01		Resid rate (us/s)		3.92426E-07	+/- 6.2E-10
Total phase (deg)	21.8		Apriori accel (us/s/s)		-6.00056557088E-05		Resid phase (deg)		134.7	+/- 3.3

ph/seg (deg) 67.4 8.0 Search (2048X64) 0.989 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 129.4 13.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 6.1 4.7 Inc. seg. avg. 2.065 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 10.2 8.2 Inc. frq. avg. 1.016 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 p: az 90.7 el 18.3 pa -56.9 u,v (fr/asec) 2482.272 -9127.611 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.W.38.zrmnfh

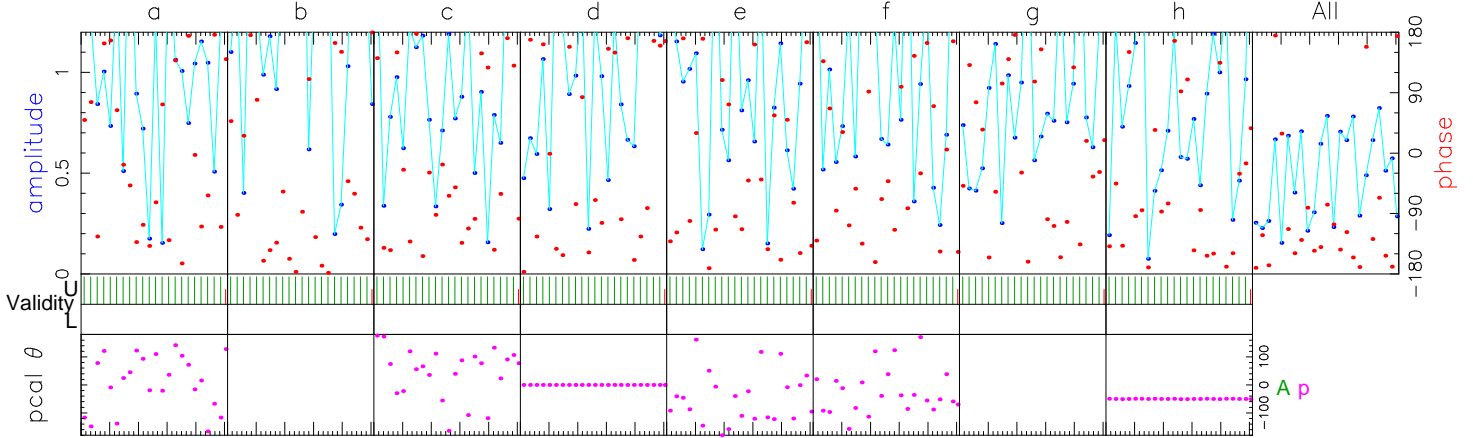


Fringe quality 9  
 SNR 13.3  
 Int time 299.657  
 Amp 0.400  
 Phase -136.1  
 PFD 4.3e-31  
 Delays (us)  
 SBD -0.447149  
 MBD -0.007163  
 Fringe rate (Hz)  
 0.147496  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.000  
 AP (sec) 0.512



Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:144000  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

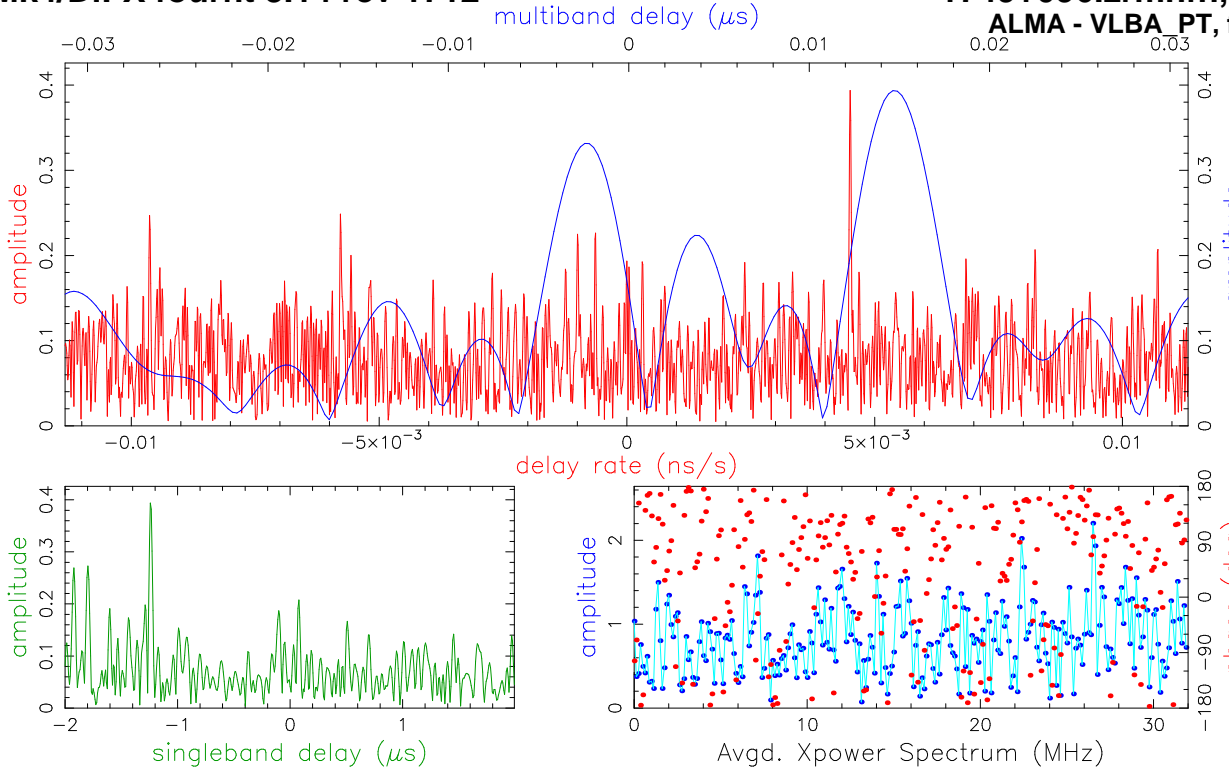
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
-129.6	-132.0	-143.6	-154.3	-125.2	-134.9	-125.6	-127.4	Phase	-136.1
0.2	0.7	0.4	0.6	0.4	0.6	0.2	0.3	Ampl.	0.4
2.5	199.7	424.2	200.9	98.9	207.6	10.8	129.6	Sbd box	199.8
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
p 4000	0	5000	4000	2000	1000	0	2000	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 W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	Chan ids	
p W01UR	W02UR	W05UR	W06UR	W07UR	W08UR	W11UR	W12UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	5.79085150279E+03		Apriori delay (usec)	5.79129616539E+03		Resid mbdelay (usec)	-7.16260E-03	+/-	1.8E-04
Sband delay (usec)	5.79084901689E+03		Apriori clock (usec)	-2.1080889E+03		Resid sbdelay (usec)	-4.47149E-01	+/-	1.3E-03
Phase delay (usec)	5.79129616100E+03		Apriori clockrate (us/s)	1.4954652E-06		Resid phdelay (usec)	-4.39013E-06	+/-	2.8E-07
Delay rate (us/s)	-4.38962972201E-01		Apriori rate (us/s)	-4.38964684479E-01		Resid rate (us/s)	1.71228E-06	+/-	1.6E-09
Total phase (deg)		111.0	Apriori accel (us/s/s)	-6.00056557088E-05		Resid phase (deg)	-136.1	+/-	8.6

RMS Theor. Amplitude 0.400 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 49.0 20.7 Search (2048X64) 0.386 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 60.7 36.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 ph/frq (deg) 11.2 12.2 Inc. seg. avg. 0.471 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 40.2 21.3 Inc. frq. avg. 0.395 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 p: az 90.7 el 18.3 pa -56.9 u,v (fr/asec) 2482.272 -9127.611 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.W.39.zrmnfh

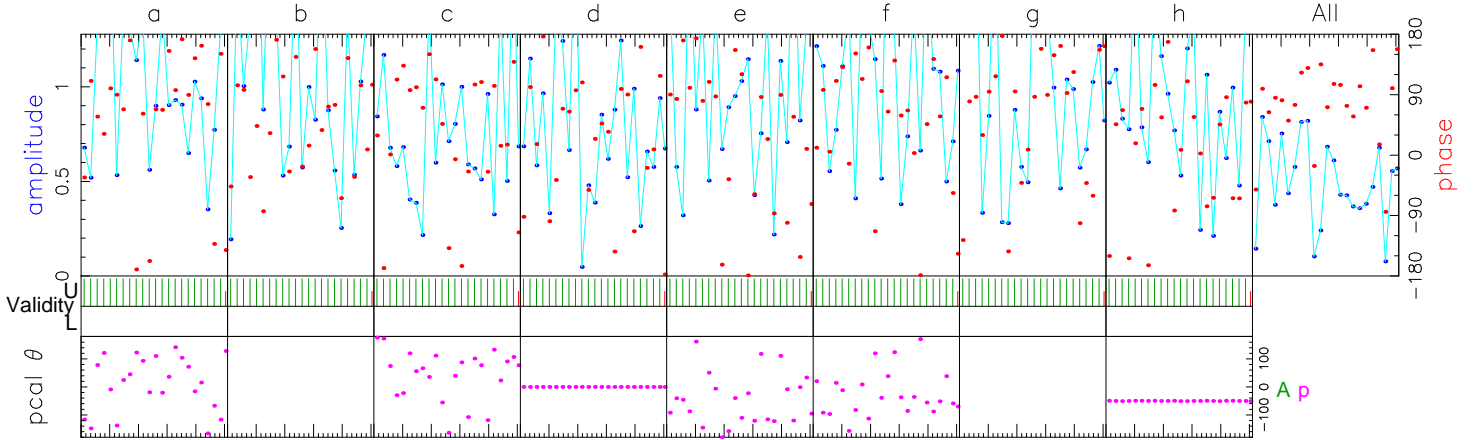


Fringe quality 9

SNR 13.4  
 Int time 299.657  
 Amp 0.426  
 Phase 90.1  
 PFD 1.3e-31  
 Delays ( $\mu s$ )  
 SBD -1.239445  
 MBD 0.014762  
 Fringe rate (Hz) 0.388093  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512

Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:144004  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

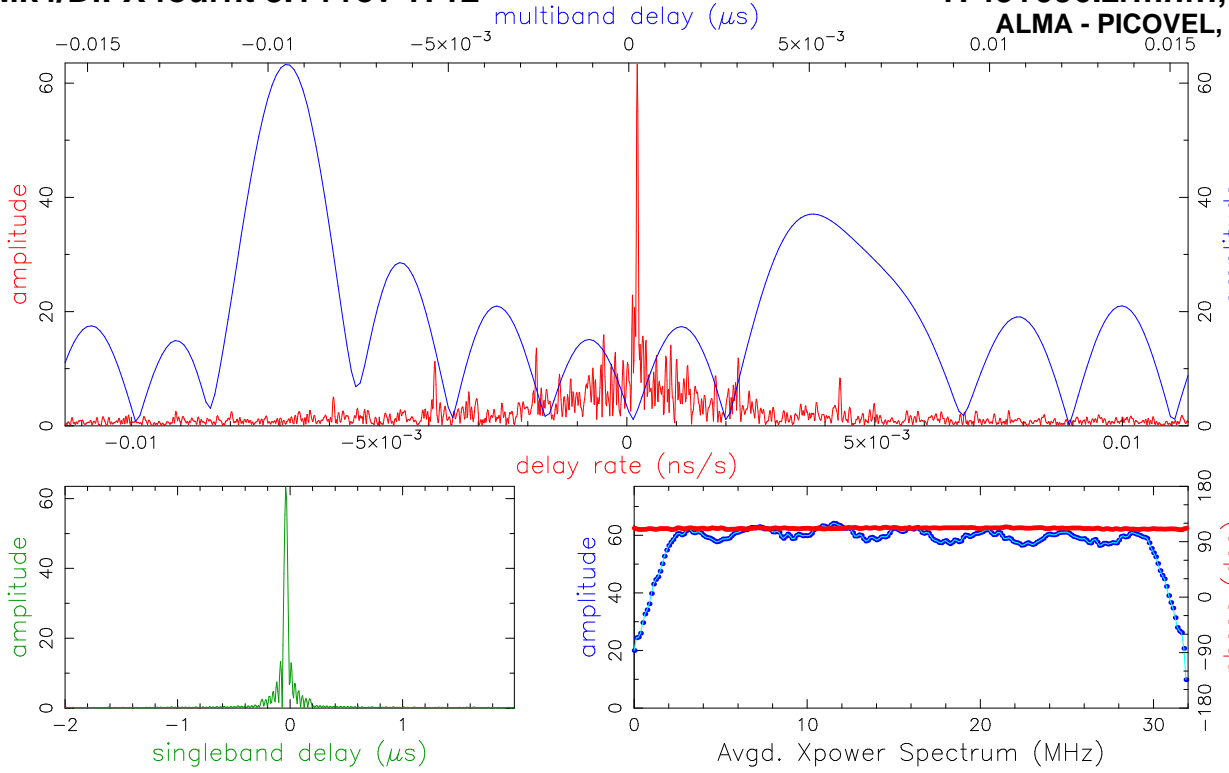
Amp. and Phase vs. time for each freq., 23 segs, 26 APs / seg (13.31 sec / seg.), time ticks 10 sec



86156.00	86172.00	86220.00	86236.00	86268.00	86284.00	86332.00	86348.00	Freq (MHz)	All
112.8	67.6	95.6	73.3	92.4	84.4	116.2	64.4	Phase	90.1
0.6	0.6	0.3	0.3	0.5	0.5	0.5	0.4	Ampl.	0.4
97.5	61.0	10.8	142.3	128.6	487.6	98.1	11.8	Sbd box	98.4
U/L 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	PC freqs	
p 4000	0	5000	4000	2000	1000	0	2000	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 W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	Chan ids	
								Tracks	
p W01UL	W02UL	W05UL	W06UL	W07UL	W08UL	W11UL	W12UL	Chan ids	
								Tracks	
Group delay (usec)(sbd)	5.79006092788E+03	Apriori delay (usec)	5.79129616539E+03	Resid mbdelay (usec)	1.47625E-02	+/-	1.8E-04		
Sband delay (usec)	5.79005672039E+03	Apriori clock (usec)	-2.1080889E+03	Resid sbdelay (usec)	-1.23944E+00	+/-	1.3E-03		
Phase delay (usec)	5.79129616829E+03	Apriori clockrate (us/s)	1.4954652E-06	Resid phdelay (usec)	2.90628E-06	+/-	2.8E-07		
Delay rate (us/s)	-4.38960179109E-01	Apriori rate (us/s)	-4.38964684479E-01	Resid rate (us/s)	4.50537E-06	+/-	1.6E-09		
Total phase (deg)	337.2	Apriori accel (us/s/s)	-6.00056557088E-05	Resid phase (deg)	90.1	+/-	8.6		

ph/seg (deg) 61.1 20.6 Search (2048X64) 0.386 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.0 35.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 21.3 12.1 Inc. seg. avg. 0.497 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.031 0.031  
 amp/frq (%) 29.4 21.2 Inc. frq. avg. 0.435 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1024 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 p: az 90.7 el 18.3 pa -56.9 u,v (fr/asec) 2482.272 -9127.611 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/Ap.W.40.zrmnfh



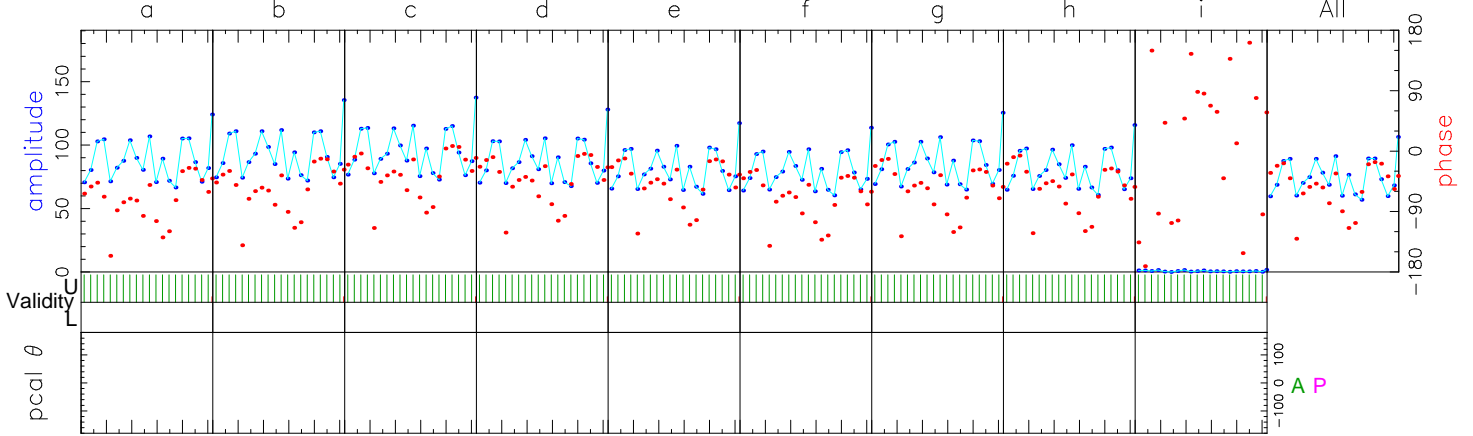


Fringe quality 3

SNR 2256.2  
 Int time 299.983  
 Amp 63.523  
 Phase -230.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.037561  
 MBD -0.009476  
 Fringe rate (Hz) 0.017755  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build 2017:237:115312  
 2017:243:144010  
 2017:170:130423  
 RA & Dec (J2000) 17h51m32.8186s  
 +9°39' 0.728"

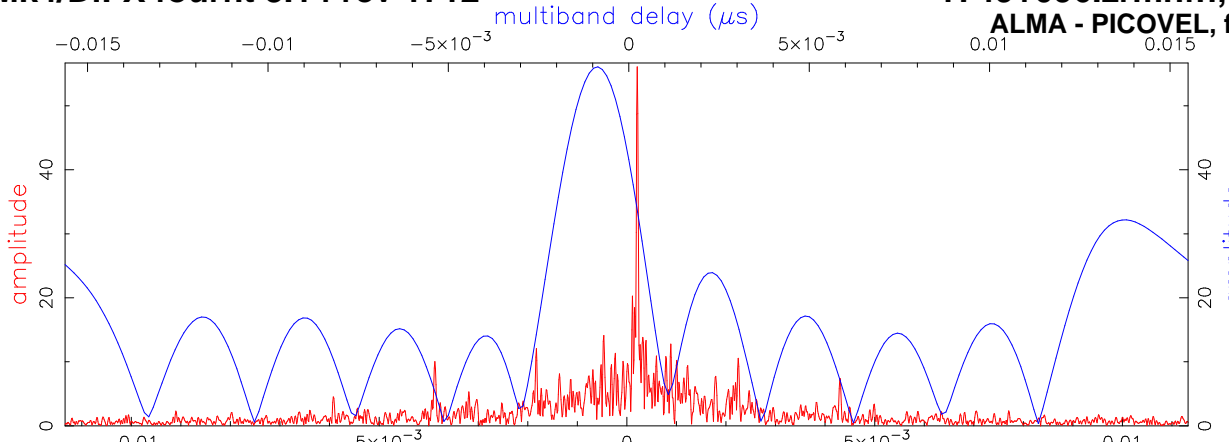
Amp. and Phase vs. time for each freq., 21 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



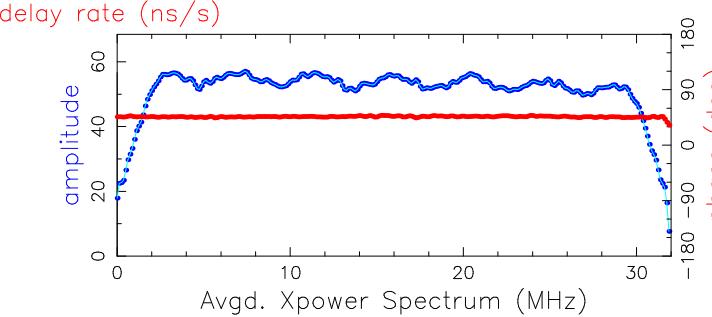
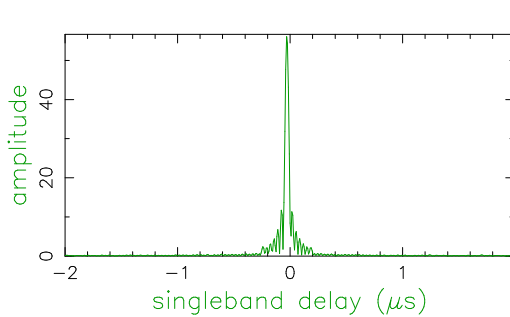
86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
-68.1	-52.8	-30.3	-39.3	-44.6	-65.8	-52.6	-50.6	118.3	Phase	-50.2
73.6	78.1	80.6	73.8	68.8	67.3	72.4	67.9	0.1	Ampl.	64.7
252.7	252.3	252.0	252.0	252.0	252.1	252.3	252.2	370.2	Sbd box	252.2
UL 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	PC freqs	
P 0	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	0:0	PC phase	
A:P 0:0	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	1000	PC amp	
P 1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UL	W01UL	W02UL	W04UL	W07UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
P W00UL	W01UL	W02UL	W04UL	W05UL	W07UL	W08UL	W09UL	W10UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.87128159718E+03		Apriori delay (usec)	-3.87124087114E+03	Resid mbdelay (usec)	-9.47603E-03	+/-	4.7E-07		
Sband delay (usec)	-3.87127843264E+03		Apriori clock (usec)	-2.1065928E+03	Resid sbdelay (usec)	-3.75615E-02	+/-	7.6E-06		
Phase delay (usec)	-3.87124087276E+03		Apriori clockrate (us/s)	1.2400000E-06	Resid phdelay (usec)	-1.61722E-06	+/-	1.6E-09		
Delay rate (us/s)	1.40479569722E+00		Apriori rate (us/s)	1.40479549110E+00	Resid rate (us/s)	2.06119E-07	+/-	9.5E-12		
Total phase (deg)	-460.6		Apriori accel (us/s/s)	-9.35995540181E-06	Resid phase (deg)	-230.2	+/-	0.1		

RMS 33.1 Theor. 0.1 Amplitude 63.523 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 33.1 0.1 Search (2048X64) 60.584 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 25.3 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 64.9 0.1 Inc. seg. avg. 73.975 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 36.6 0.1 Inc. frq. avg. 64.745 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

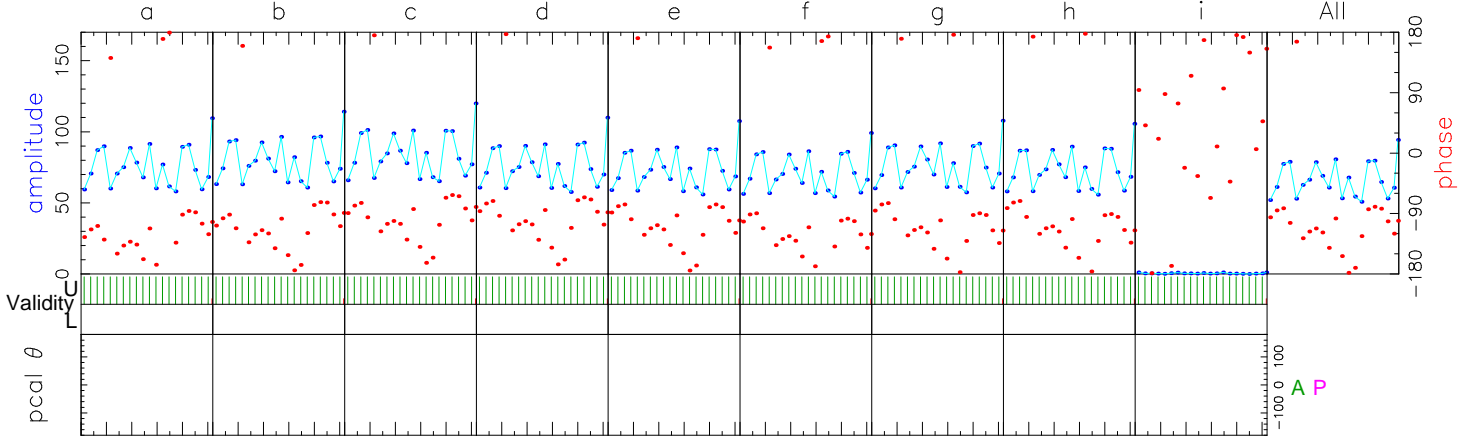
A: az 49.3 el 43.3 pa -134.9 P: az 232.7 el 51.3 pa 39.9 u,v (fr/asec) -8182.306 -8756.669 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP.W.41.zrmnfh



Fringe quality 3  
 SNR 2013.4  
 Int time 299.983  
 Amp 56.686  
 Phase -293.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.028611  
 MBD -0.000868  
 Fringe rate (Hz) 0.017803  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072000.00  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build 2017:237:115312  
 2017:243:144014  
 2017:170:130423  
 RA & Dec (J2000) 17h51m32.8186s  
 +9°39' 0.728"

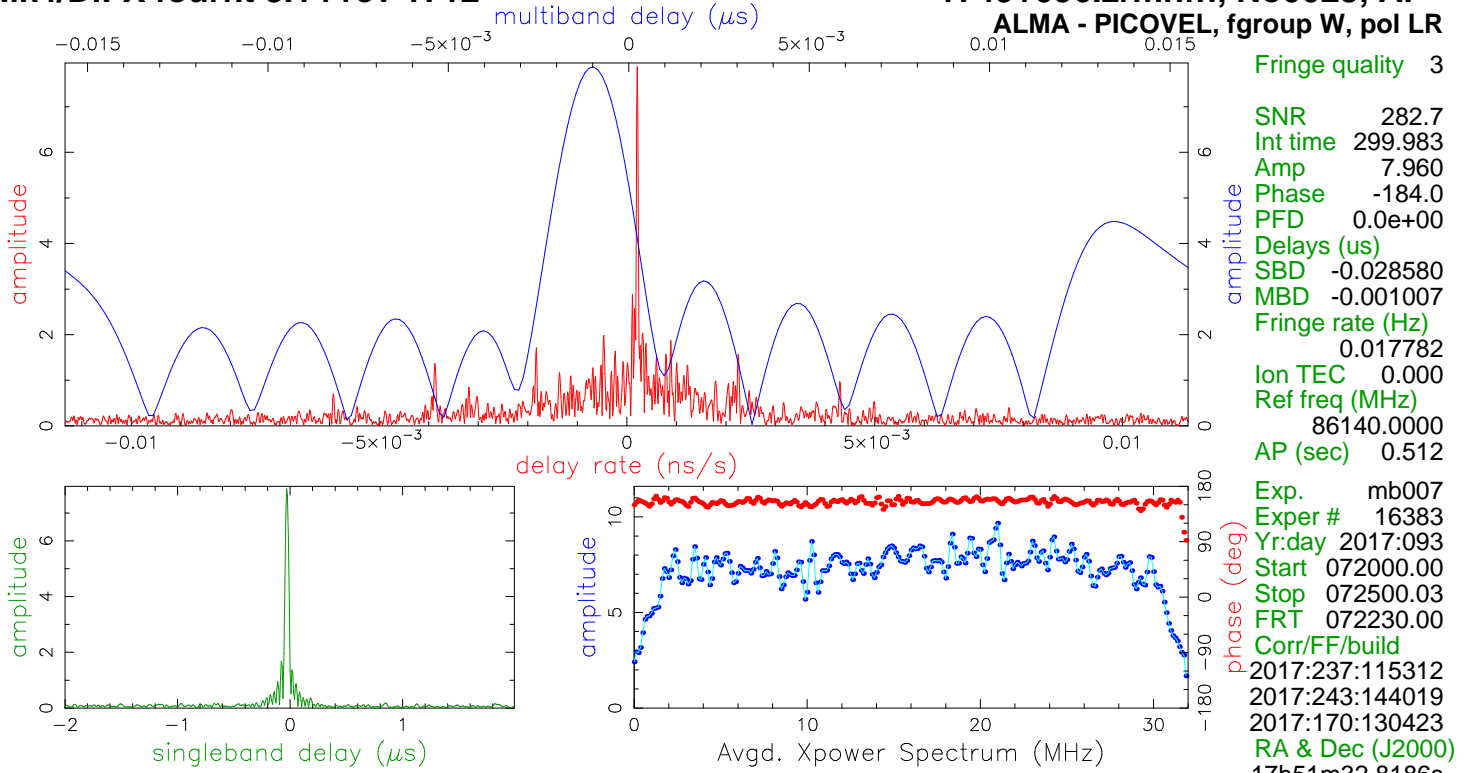


Amp. and Phase vs. time for each freq., 21 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec

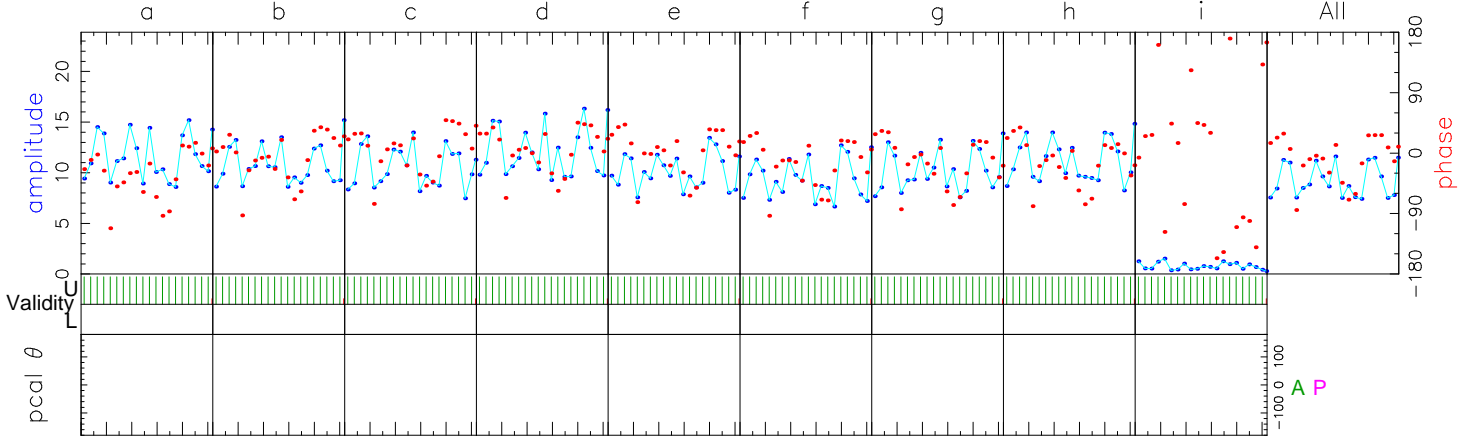


	86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	-129.5	-114.0	-100.5	-101.7	-109.7	-126.9	-115.9	-114.5	91.1		Phase -113.8
	62.8	67.1	70.9	64.2	62.0	60.0	63.7	61.7	0.2		Ampl. 57.0
	253.8	253.4	253.2	253.1	253.2	253.3	253.5	253.3	361.7		Sbd box 253.3
U/L	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0		APs used
A	0	0	0	0	0	0	0	0	0		PC freqs
P	0	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	0:0		PC phase
A:P	0:0	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	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UR	W01UR	W02UR	W04UR	W07UR	W09UR	W10UR	W11UR	W12UR		Chan ids
P	W00UR	W01UR	W02UR	W04UR	W05UR	W07UR	W08UR	W09UR	W10UR		Tracks
											Chan ids
											Tracks
Group delay (usec)(sbd)	-3.87127298930E+03		Apriori delay (usec)		-3.87124087114E+03		Resid mbdelay (usec)		-8.68157E-04		+/- 5.3E-07
Sband delay (usec)	-3.87126948264E+03		Apriori clock (usec)		-2.1065928E+03		Resid sbdelay (usec)		-2.86115E-02		+/- 8.6E-06
Phase delay (usec)	-3.87124087481E+03		Apriori clockrate (us/s)		1.2400000E-06		Resid phdelay (usec)		-3.66879E-06		+/- 1.8E-09
Delay rate (us/s)	1.40479569778E+00		Apriori rate (us/s)		1.40479549110E+00		Resid rate (us/s)		2.06675E-07		+/- 1.1E-11
Total phase (deg)			Apriori accel (us/s/s)		-9.35995540181E-06		Resid phase (deg)		-293.8		+/- 0.1

RMS 33.2 Theor. 0.1 Amplitude 56.686 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 33.2 0.1 Search (2048X64) 54.952 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 amp/seg (%) 24.6 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 59.6 0.1 Inc. seg. avg. 65.537 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 amp/frq (%) 35.8 0.1 Inc. frq. avg. 56.957 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 A: az 49.3 el 43.3 pa -134.9 P: az 232.7 el 51.3 pa 39.9 u,v (fr/asec) -8182.306 -8756.669 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP.W.42.zrmnfh

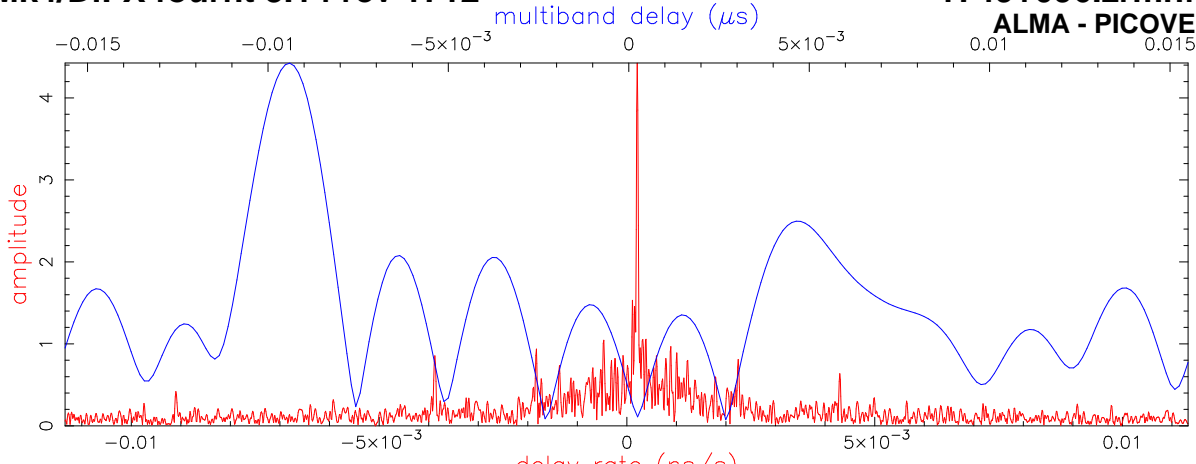


Amp. and Phase vs. time for each freq., 21 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
-27.3	-1.8	9.1	10.0	6.8	-9.0	-9.4	-10.2	-115.1	Phase	-4.0
9.7	9.0	9.0	10.3	8.7	7.9	8.5	9.4	0.2	Ampl.	8.1
253.8	253.6	253.3	253.0	253.3	253.2	253.6	253.2	300.6	Sbd box	253.3
UL 586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A 0	0	0	0	0	0	0	0	0	PC freqs	
P 0	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	0:0	PC phase	
A:P 0:0	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	1000	PC amp	
P 1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UL	W01UL	W02UL	W04UL	W07UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
P W00UR	W01UR	W02UR	W04UR	W05UR	W07UR	W08UR	W09UR	W10UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-3.87127312783E+03	Apriori delay (usec)	-3.87124087114E+03	Resid mbdelay (usec)	-1.00669E-03	+/-	3.7E-06			
Sband delay (usec)	-3.87126945114E+03	Apriori clock (usec)	-2.1065928E+03	Resid sbdelay (usec)	-2.85800E-02	+/-	6.1E-05			
Phase delay (usec)	-3.87124087127E+03	Apriori clockrate (us/s)	1.2400000E-06	Resid phdelay (usec)	-1.28844E-07	+/-	1.3E-08			
Delay rate (us/s)	1.40479569753E+00	Apriori rate (us/s)	1.40479549110E+00	Resid rate (us/s)	2.06433E-07	+/-	7.5E-11			
Total phase (deg)	-414.5	Apriori accel (us/s/s)	-9.35995540181E-06	Resid phase (deg)	-184.0	+/-	0.4			

ph/seg (deg) 33.2 0.9 Search (2048X64) 7.701 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 24.9 1.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 ph/frq (deg) 43.8 0.6 Inc. seg. avg. 9.185 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 36.2 1.1 Inc. frq. avg. 8.079 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 A: az 49.3 el 43.3 pa -134.9 P: az 232.7 el 51.3 pa 39.9 u,v (fr/asec) -8182.306 -8756.669 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP.W.43.zrmnfh



Fringe quality 3

SNR 157.2

Int time 299.983

Amp 4.427

Phase -60.9

PFD 0.0e+00

Delays (us)

SBD -0.039604

MBD -0.009421

Fringe rate (Hz) 0.017769

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072000.00

Stop 072500.03

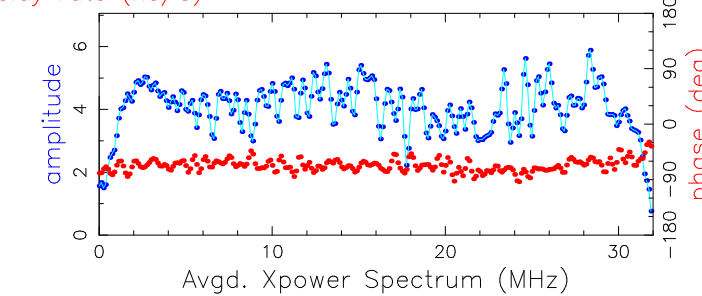
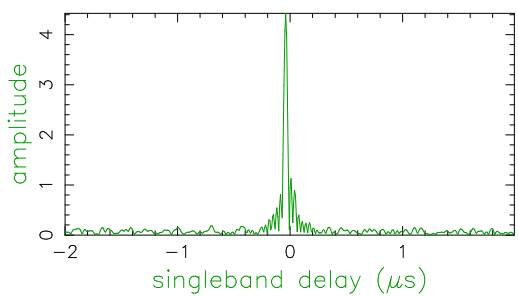
FRT 072230.00

Corr/FF/build 2017:237:115312

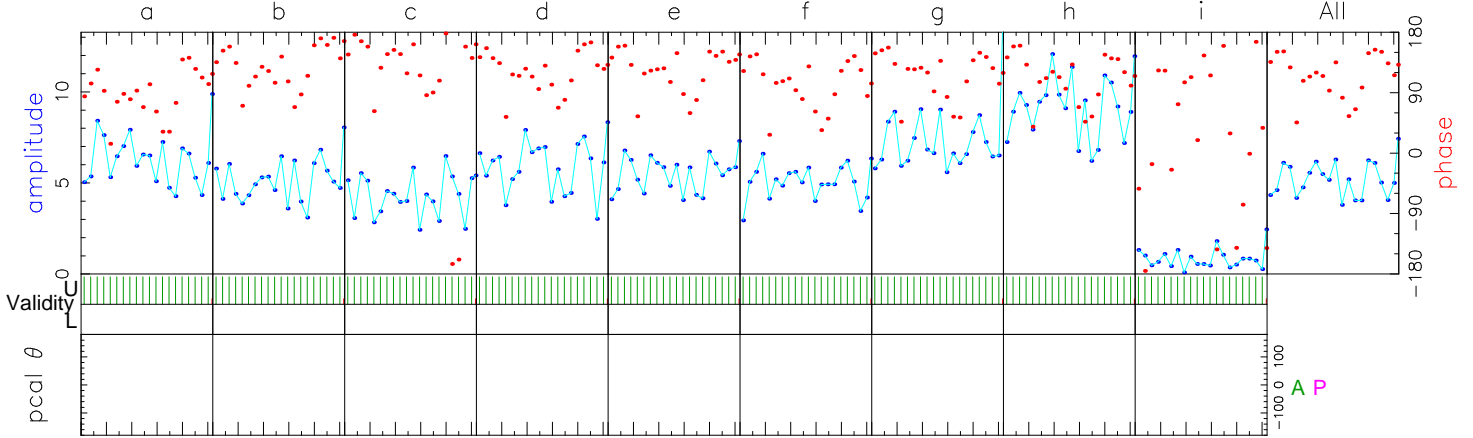
2017:243:144024

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 21 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



	86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	90.3	131.6	148.1	124.9	126.2	105.1	120.6	115.3	152.1		119.1
	5.2	4.4	3.6	5.2	4.8	4.2	6.2	7.6	0.2	Ampl.	4.6
	252.9	252.2	251.5	251.9	251.8	251.8	251.3	252.1	353.4	Sbd box	251.9
UL	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	586/0	APs used	
A	0	0	0	0	0	0	0	0	0	PC freqs	
P	0	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	0:0	PC phase	
A:P	0:0	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	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UR	W01UR	W02UR	W04UR	W07UR	W09UR	W10UR	W11UR	W12UR	Chan ids	
P	W00UL	W01UL	W02UL	W04UL	W05UL	W07UL	W08UL	W09UL	W10UL	Tracks	
										Chan ids	
										Tracks	

Group delay (usec)(sbd) -3.87128154255E+03 Apriori delay (usec) -3.87124087114E+03 Resid mbdelay (usec) -9.42141E-03 +/- 6.7E-06

Sband delay (usec) -3.87128047564E+03 Apriori clock (usec) -2.1065928E+03 Resid sbdelay (usec) -3.96045E-02 +/- 1.1E-04

Phase delay (usec) -3.87124086730E+03 Apriori clockrate (us/s) 1.2400000E-06 Resid phdelay (usec) 3.84176E-06 +/- 2.4E-08

Delay rate (us/s) 1.40479569738E+00 Apriori rate (us/s) 1.40479549110E+00 Resid rate (us/s) 2.06280E-07 +/- 1.4E-10

Total phase (deg) -291.4 Apriori accel (us/s/s) -9.35995540181E-06 Resid phase (deg) -60.9 +/- 0.7

RMS Theor. Amplitude 4.427 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 32.3 1.7 Search (2048X64) 4.274 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

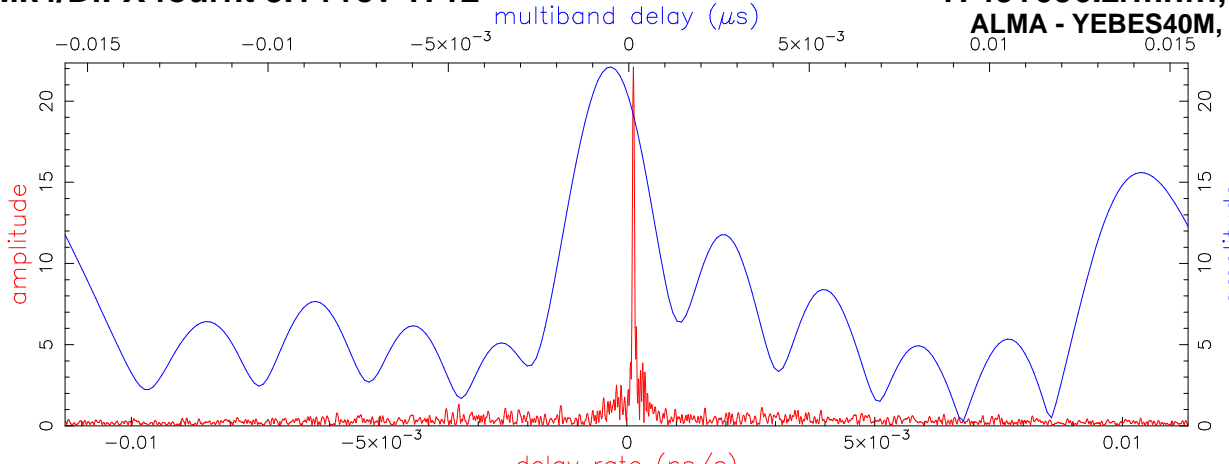
amp/seg (%) 25.0 2.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 21.4 1.1 Inc. seg. avg. 5.126 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

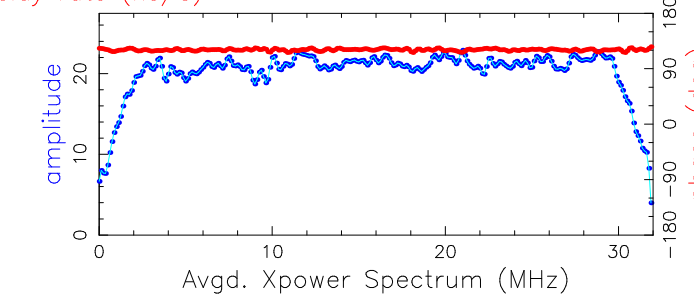
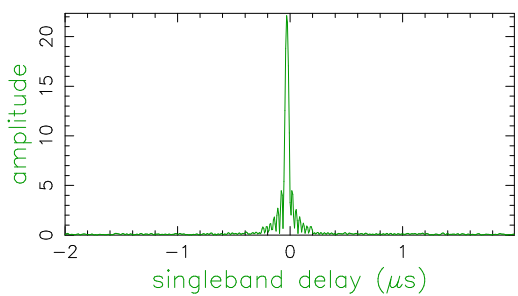
amp/frq (%) 43.5 1.9 Inc. frq. avg. 4.583 ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 P: az 232.7 el 51.3 pa 39.9 u,v (fr/asec) -8182.306 -8756.669 simultaneous interpolator

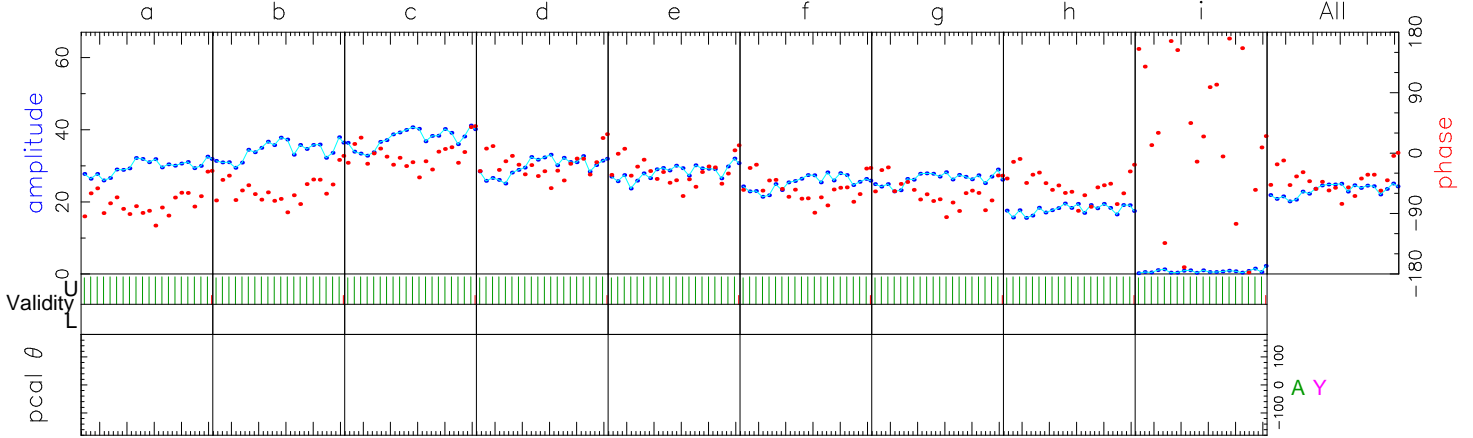
Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP..zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AP.W.44.zrmnfh



Fringe quality 4  
SNR 767.5  
Int time 280.369  
Amp 22.349  
Phase -220.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.028580  
MBD -0.000503  
Fringe rate (Hz)  
0.011357  
Ion TEC 0.000  
Ref freq (MHz)  
86140.000  
AP (sec) 0.512  
Exp. mb007  
Exper # 16383  
Yr:day 2017:093  
Start 072018.94  
Stop 072500.03  
FRT 072230.00  
Corr/FF/build  
2017:237:115312  
2017:243:144030  
2017:170:130423  
RA & Dec (J2000)  
17h51m32.8186s  
+9°39' 0.728"



Amp. and Phase vs. time for each freq., 21 segs, 27 APs / seg (13.82 sec / seg.), time ticks 10 sec

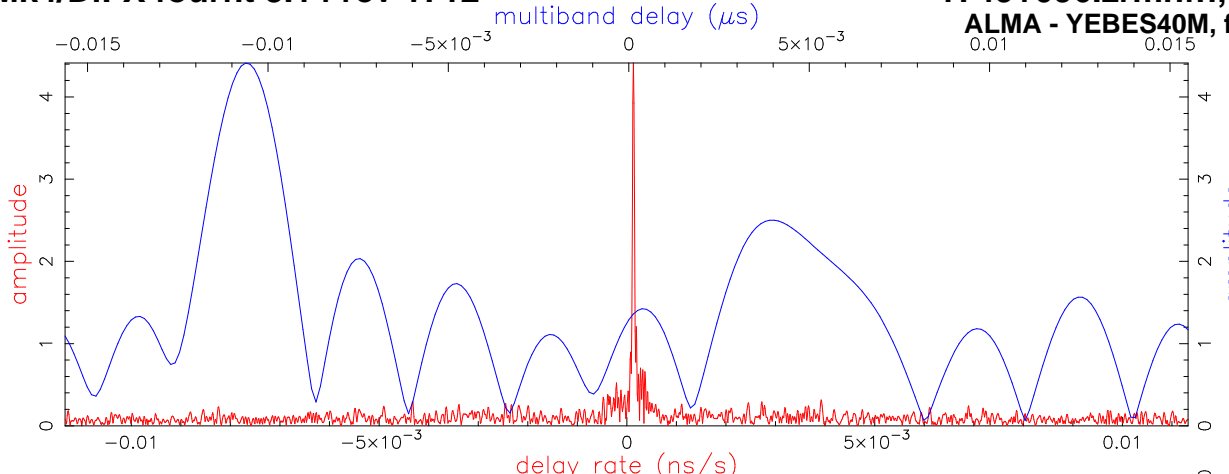


	86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	-74.4	-55.0	-3.6	-17.5	-27.6	-54.5	-59.7	-48.3	64.5		-40.9
	28.0	32.4	35.8	28.3	26.8	24.0	24.9	16.8	0.1	Ampl.	24.1
	253.6	253.7	253.3	253.0	253.2	253.0	253.5	253.7	149.9	Sbd box	253.3
UL	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	APs used	
A	0	0	0	0	0	0	0	0	0	PC freqs	
Y	0	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	0:0	PC phase	
A:Y	0:0	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	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UL	W01UL	W02UL	W04UL	W07UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
Y	W00UL	W01UL	W02UL	W04UL	W05UL	W07UL	W08UL	W09UL	W10UL	Tracks	

Group delay (usec)(sbd) -3.31463984790E+03 Apriori delay (usec) -3.31460809528E+03 Resid mbdelay (usec) -5.02623E-04 +/- 1.4E-06  
Sband delay (usec) -3.31463667578E+03 Apriori clock (usec) -2.1100789E+03 Resid sbdelay (usec) -2.85805E-02 +/- 2.2E-05  
Phase delay (usec) -3.31460809660E+03 Apriori clockrate (us/s) 1.2999999E-06 Resid phdelay (usec) -1.31983E-06 +/- 4.8E-09  
Delay rate (us/s) 1.38024866055E+00 Apriori rate (us/s) 1.38024852871E+00 Resid rate (us/s) 1.31843E-07 +/- 3.0E-11  
Total phase (deg) -338.7 Apriori accel (us/s/s) -1.32242855186E-05 Resid phase (deg) -220.9 +/- 0.1

RMS Theor. Amplitude 22.349 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 17.7 0.3 Search (2048X64) 22.030 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
amp/seg (%) 7.9 0.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
ph/frq (deg) 46.5 0.2 Inc. seg. avg. 23.213 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
amp/frq (%) 44.9 0.4 Inc. frq. avg. 24.134 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 Y: az 229.9 el 48.9 pa 36.6 u,v (fr/asec) -8043.855 -9218.069 simultaneous interpolator  
Control file: cf\_1234 Input file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/AY.zrmnfh Output file: /Exps/mb007/gvma\_32\_pc1/1234/No0023/AY.W.45.zrmnfh



Fringe quality 6

SNR 151.6

Int time 280.369

Amp 4.414

Phase -55.0

PFD 0.0e+00

Delays (us)

SBD -0.039067

MBD -0.010589

Fringe rate (Hz) 0.011336

Ion TEC 0.000

Ref freq (MHz) 86140.000

AP (sec) 0.512

Exp. mb007

Exper # 16383

Yr:day 2017:093

Start 072018.94

Stop 072500.03

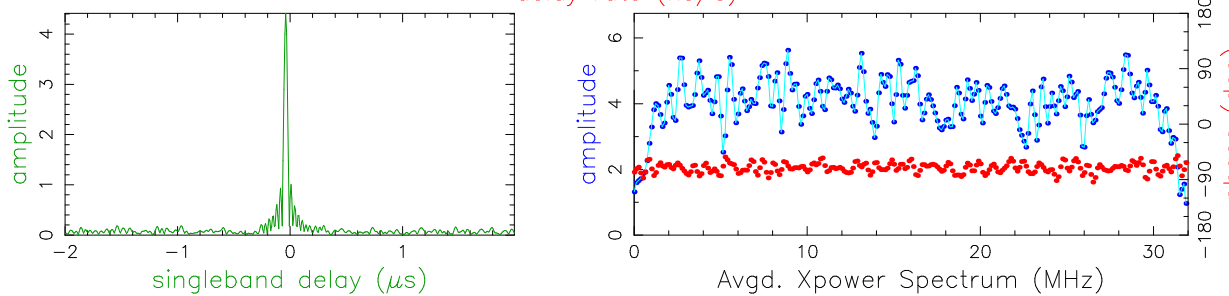
FRT 072230.00

Corr/FF/build 2017:237:115312

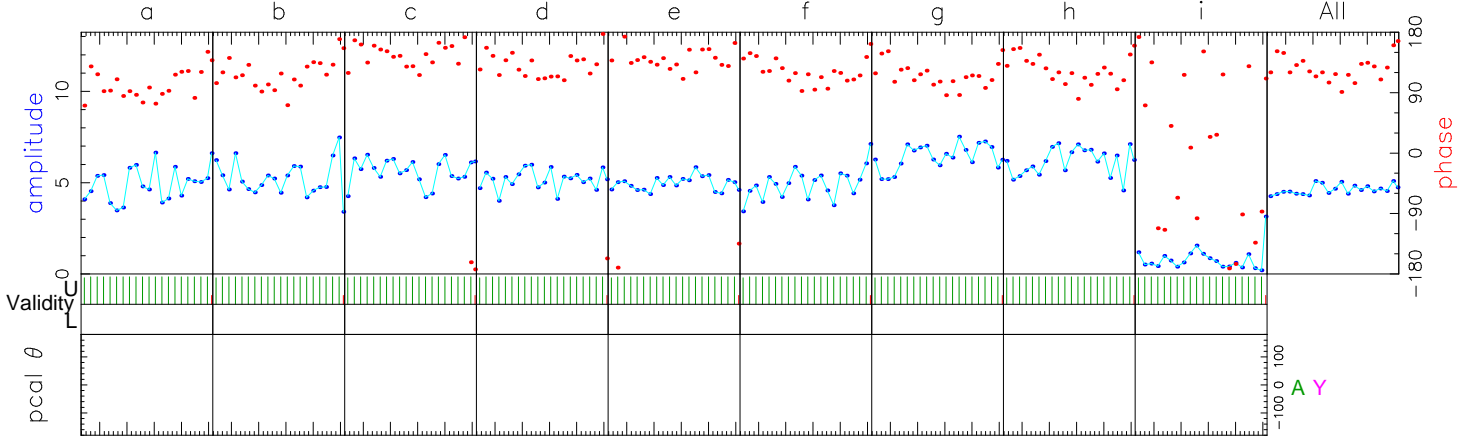
2017:243:144034

2017:170:130423

RA & Dec (J2000) 17h51m32.8186s +9°39' 0.728"



Amp. and Phase vs. time for each freq., 21 segs, 27 APs / seg (13.82 sec / seg.), time ticks 10 sec



86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
101.6	117.2	150.2	132.0	142.7	120.6	114.2	121.9	152.5	Phase	125.0
4.5	4.9	5.3	4.9	4.7	6.2	5.8	6.2	0.1	Ampl.	4.6
252.5	252.1	252.0	251.7	252.0	251.5	251.9	252.2	280.1	Sbd box	252.0
U/L 549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	APs used	
A 0	0	0	0	0	0	0	0	0	PC freqs	
Y 0	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	0:0	PC phase	
A:Y 0:0	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	1000	PC amp	
Y 1000	1000	1000	1000	1000	1000	1000	1000	1000		
A W00UR	W01UR	W02UR	W04UR	W07UR	W09UR	W10UR	W11UR	W12UR	Chan ids	
Y W00UR	W01UR	W02UR	W04UR	W05UR	W07UR	W08UR	W09UR	W10UR	Tracks	
									Tracks	

Group delay (usec)(sbd) -3.31464993418E+03 Apriori delay (usec) -3.31460809528E+03 Resid mbdelay (usec) -1.05889E-02 +/- 7.0E-06

Sband delay (usec) -3.31464716278E+03 Apriori clock (usec) -2.1100789E+03 Resid sbdelay (usec) -3.90675E-02 +/- 1.1E-04

Phase delay (usec) -3.31460809124E+03 Apriori clockrate (us/s) 1.2999999E-06 Resid phdelay (usec) 4.03250E-06 +/- 2.4E-08

Delay rate (us/s) 1.38024866030E+00 Apriori rate (us/s) 1.38024852871E+00 Resid rate (us/s) 1.31595E-07 +/- 1.5E-10

Total phase (deg) -172.7 Apriori accel (us/s/s) -1.32242855186E-05 Resid phase (deg) -55.0 +/- 0.8

RMS Theor. Amplitude 4.414 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 17.2 1.7 Search (2048X64) 4.367 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000

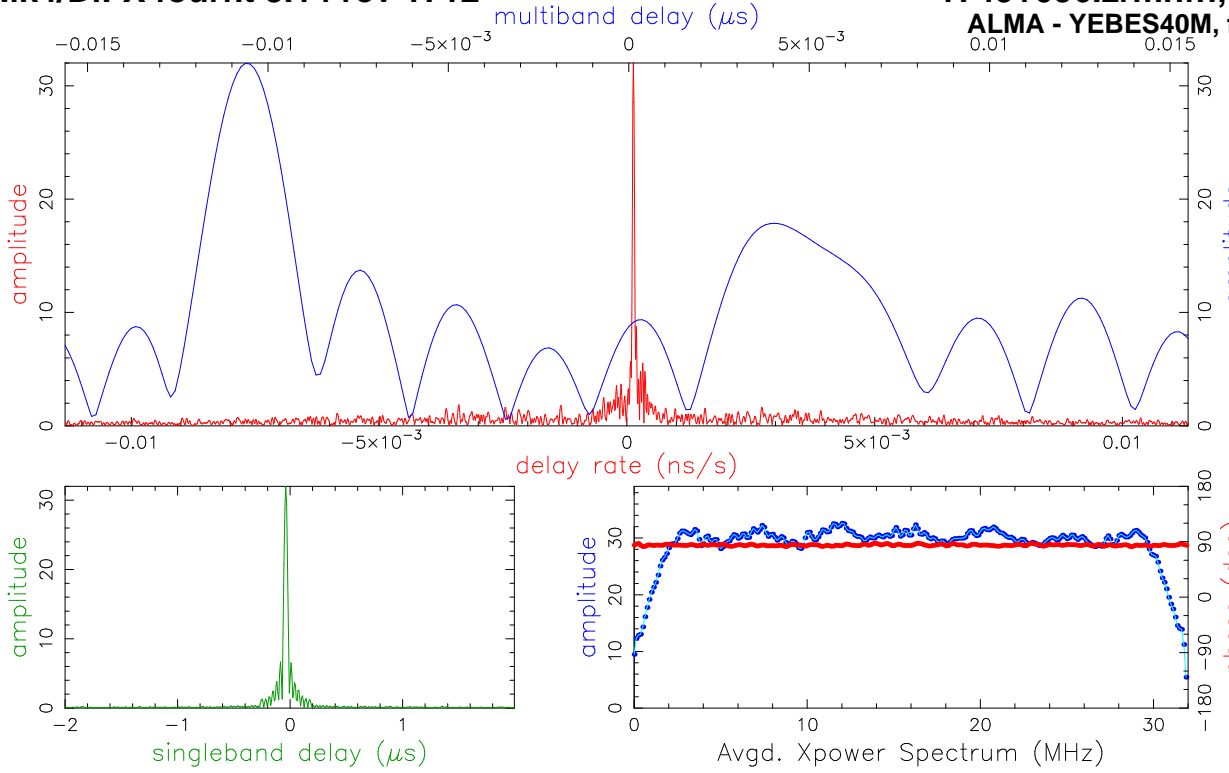
amp/seg (%) 7.6 3.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 18.9 1.1 Inc. seg. avg. 4.622 Sample rate(MSamp/s): 64 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

amp/frq (%) 37.5 2.0 Inc. frq. avg. 4.561 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

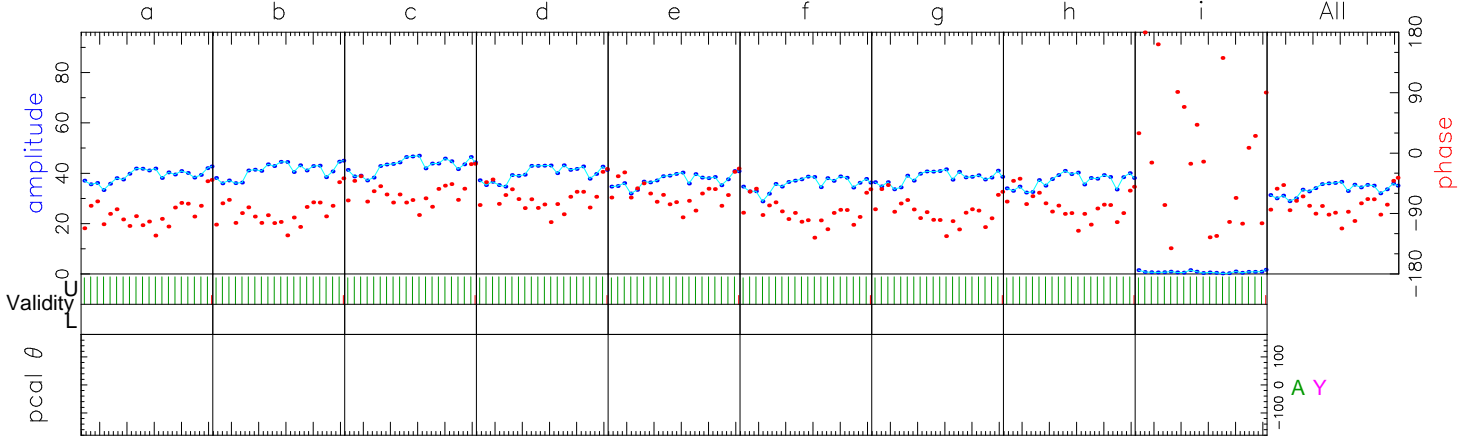
A: az 49.3 el 43.3 pa -134.9 Y: az 229.9 el 48.9 pa 36.6 u,v (fr/asec) -8043.855 -9218.069 simultaneous interpolator

Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY.W.46.zrmnfh



Fringe quality 5  
 SNR 1099.2  
 Int time 280.369  
 Amp 32.009  
 Phase -257.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.038700  
 MBD -0.010576  
 Fringe rate (Hz)  
 0.011336  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. mb007  
 Exper # 16383  
 Yr:day 2017:093  
 Start 072018.94  
 Stop 072500.03  
 FRT 072230.00  
 Corr/FF/build  
 2017:237:115312  
 2017:243:144039  
 2017:170:130423  
 RA & Dec (J2000)  
 17h51m32.8186s  
 +9°39' 0.728"

Amp. and Phase vs. time for each freq., 21 segs, 27 APs / seg (13.82 sec / seg.), time ticks 10 sec



	86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	-90.7	-89.0	-59.1	-67.3	-60.8	-88.8	-87.6	-78.5	-23.2		-77.5
	36.8	38.7	41.0	37.9	35.4	34.0	36.3	34.9	0.2	Ampl.	32.8
	252.4	252.1	252.0	251.8	252.0	251.8	252.2	252.3	79.9	Sbd box	252.0
U/L	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	APs used	
A	0	0	0	0	0	0	0	0	0	PC freqs	
Y	0	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	0:0	PC phase	
A:Y	0:0	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	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UL	W01UL	W02UL	W04UL	W07UL	W09UL	W10UL	W11UL	W12UL	Chan ids	
Y	W00UR	W01UR	W02UR	W04UR	W05UR	W07UR	W08UR	W09UR	W10UR	Tracks	
										Chan ids	
										Tracks	
Group delay (usec)(sbd)	-3.31464992134E+03		Apriori delay (usec)		-3.31460809528E+03		Resid mbdelay (usec)		-1.05761E-02		+/- 9.6E-07
Sband delay (usec)	-3.31464679528E+03		Apriori clock (usec)		-2.1100789E+03		Resid sbdelay (usec)		-3.87000E-02		+/- 1.6E-05
Phase delay (usec)	-3.31460809777E+03		Apriori clockrate (us/s)		1.2999999E-06		Resid phdelay (usec)		-2.49823E-06		+/- 3.4E-09
Delay rate (us/s)	1.38024866030E+00		Apriori rate (us/s)		1.38024852871E+00		Resid rate (us/s)		1.31595E-07		+/- 2.1E-11
Total phase (deg)	-375.2		Apriori accel (us/s/s)		-1.32242855186E-05		Resid phase (deg)		-257.5		+/- 0.1

ph/seg (deg) 17.7 0.2  
 amp/seg (%) 8.6 0.4  
 ph/frq (deg) 24.5 0.2  
 amp/frq (%) 36.7 0.3

RMS Theor. Amplitude 32.009 +/- 0.029  
 17.7 0.2 Search (2048X64) 31.638  
 8.6 0.4 Interp. 0.000  
 24.5 0.2 Inc. seg. avg. 33.598  
 36.7 0.3 Inc. frq. avg. 32.808

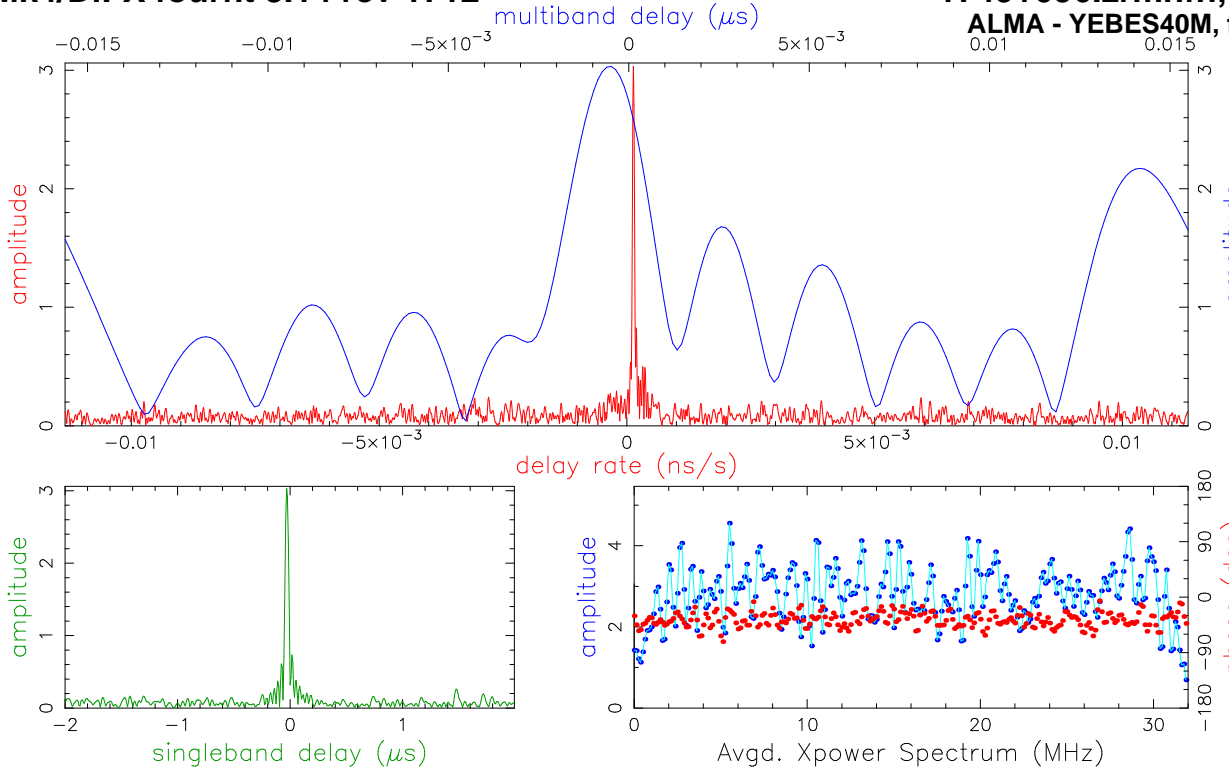
Group delay (usec)(sbd) -3.31464992134E+03  
 Sband delay (usec) -3.31464679528E+03  
 Phase delay (usec) -3.31460809777E+03  
 Delay rate (us/s) 1.38024866030E+00  
 Total phase (deg) -375.2

Apriori delay (usec) -3.31460809528E+03  
 Apriori clock (usec) -2.1100789E+03  
 Apriori clockrate (us/s) 1.2999999E-06  
 Apriori rate (us/s) 1.38024852871E+00  
 Apriori accel (us/s/s) -1.32242855186E-05

Resid mbdelay (usec) -1.05761E-02  
 Resid sbdelay (usec) -3.87000E-02  
 Resid phdelay (usec) -2.49823E-06  
 Resid rate (us/s) 1.31595E-07  
 Resid phase (deg) -257.5

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 Y: az 229.9 el 48.9 pa 36.6 u,v (fr/asec) -8043.855 -9218.069 simultaneous interpolator  
 Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY.zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY.W.47.zrmnfh

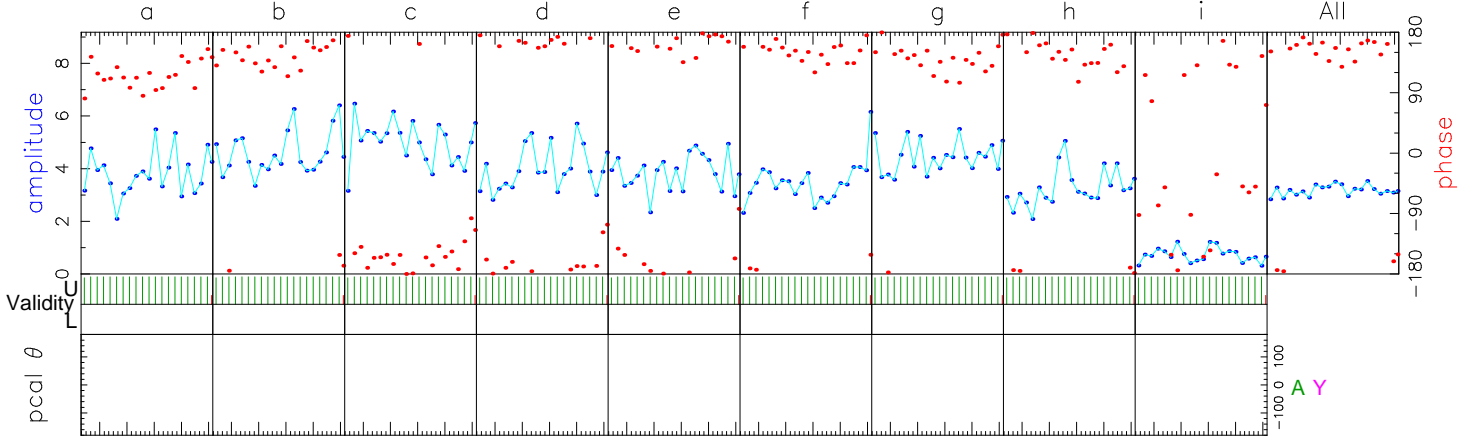


Fringe quality 4

SNR 105.1  
Int time 280.369  
Amp 3.061  
Phase -19.5  
PFD 0.0e+00  
Delays (us)  
SBD -0.028824  
MBD -0.000508  
Fringe rate (Hz) 0.011300  
Ion TEC 0.000  
Ref freq (MHz) 86140.000  
AP (sec) 0.512

Exp. mb007  
Exper # 16383  
Yr:day 2017:093  
Start 072018.94  
Stop 072500.03  
FRT 072230.00  
Corr/FF/build  
2017:237:115312  
2017:243:144043  
2017:170:130423  
RA & Dec (J2000)  
17h51m32.8186s  
+9°39' 0.728"

Amp. and Phase vs. time for each freq., 21 segs, 27 APs / seg (13.82 sec / seg.), time ticks 10 sec



	86060.00	86092.00	86156.00	86220.00	86284.00	86348.00	86412.00	86444.00	86508.00	Freq (MHz)	All
	116.5	150.3	-156.2	-178.6	174.1	155.2	140.1	151.2	-158.7		160.5
	3.6	4.2	4.6	3.7	3.5	3.2	4.2	3.0	0.2	Ampl.	3.4
	253.8	253.5	253.5	252.9	253.3	252.9	253.2	253.7	9.1	Sbd box	253.3
UL	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	549/0	APs used	
A	0	0	0	0	0	0	0	0	0	PC freqs	
Y	0	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	0:0	PC phase	
A:Y	0:0	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	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000		
A	W00UR	W01UR	W02UR	W04UR	W07UR	W09UR	W10UR	W11UR	W12UR	Chan ids	
Y	W00UL	W01UL	W02UL	W04UL	W05UL	W07UL	W08UL	W09UL	W10UL	Tracks	
										Chan ids	
										Tracks	
Group delay (usec)(sbd)		-3.31463985359E+03		Apriori delay (usec)		-3.31460809528E+03		Resid mbdelay (usec)		-5.08310E-04	+/- 1.0E-05
Sband delay (usec)		-3.31463691928E+03		Apriori clock (usec)		-2.1100789E+03		Resid sbdelay (usec)		-2.88240E-02	+/- 1.6E-04
Phase delay (usec)		-3.31460809010E+03		Apriori clockrate (us/s)		1.2999999E-06		Resid phdelay (usec)		5.17566E-06	+/- 3.5E-08
Delay rate (us/s)		1.38024865989E+00		Apriori rate (us/s)		1.38024852871E+00		Resid rate (us/s)		1.31184E-07	+/- 2.2E-10
Total phase (deg)			-137.2	Apriori accel (us/s/s)		-1.32242855186E-05		Resid phase (deg)		-19.5	+/- 1.1

ph/seg (deg) 17.7 2.5  
amp/seg (%) 7.5 4.4  
ph/frq (deg) 31.0 1.6  
amp/frq (%) 41.2 2.9

RMS Theor. Amplitude 3.061 +/- 0.029  
Search (2048X64) 3.017  
Interp. 0.000  
Inc. seg. avg. 3.179  
Inc. frq. avg. 3.369

Group delay (usec)(sbd) -3.31463985359E+03  
Sband delay (usec) -3.31463691928E+03  
Phase delay (usec) -3.31460809010E+03  
Delay rate (us/s) 1.38024865989E+00  
Total phase (deg) -137.2

Apriori delay (usec) -3.31460809528E+03  
Apriori clock (usec) -2.1100789E+03  
Apriori clockrate (us/s) 1.2999999E-06  
Apriori rate (us/s) 1.38024852871E+00  
Apriori accel (us/s/s) -1.32242855186E-05

Resid mbdelay (usec) -5.08310E-04 +/- 1.0E-05  
Resid sbdelay (usec) -2.88240E-02 +/- 1.6E-04  
Resid phdelay (usec) 5.17566E-06 +/- 3.5E-08  
Resid rate (us/s) 1.31184E-07 +/- 2.2E-10  
Resid phase (deg) -19.5 +/- 1.1

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -2.000 2.000  
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
Data rate(Mb/s): 1152 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

A: az 49.3 el 43.3 pa -134.9 Y: az 229.9 el 48.9 pa 36.6 u,v (fr/asec) -8043.855 -9218.069 simultaneous interpolator  
Control file: cf\_1234 Input file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY...zrmnfh Output file: /Exps/mb007/gmva\_32\_pc1/1234/No0023/AY.W.48.zrmnfh