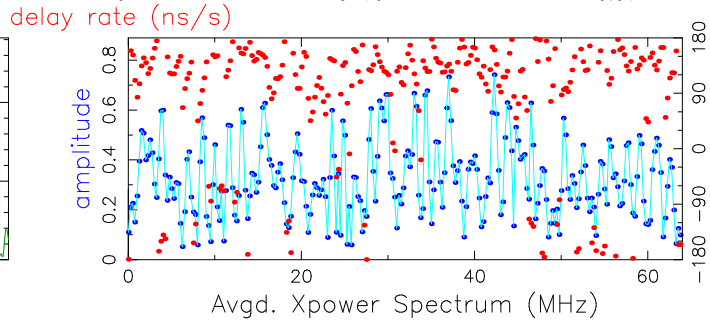
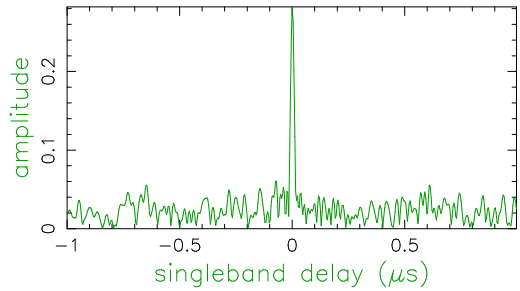


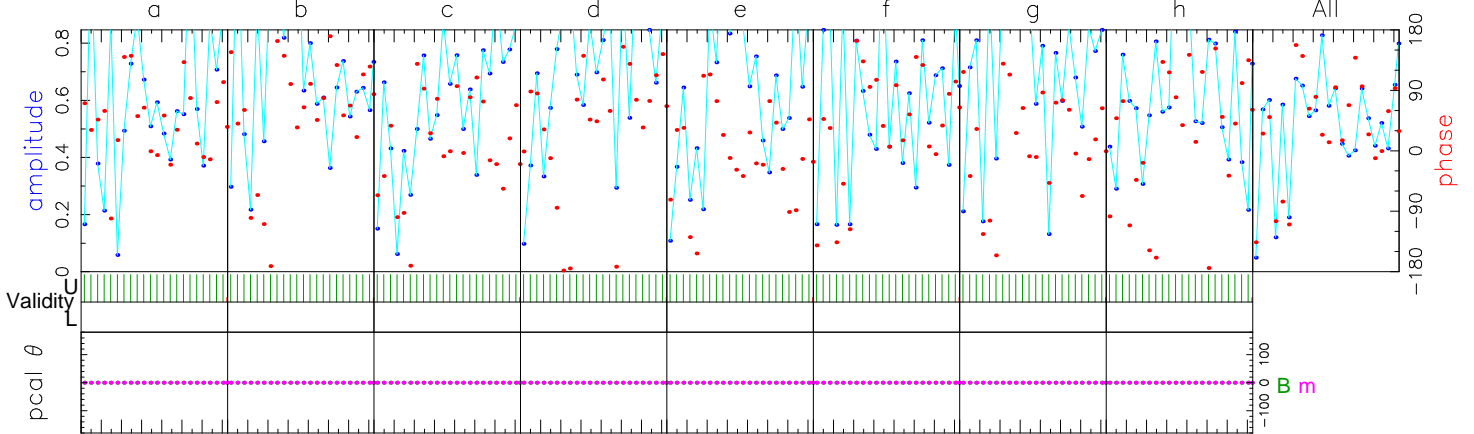
Fringe quality 8

SNR 15.8  
Int time 419.675  
Amp 0.282  
Phase 57.5  
PFD 0.0e+00  
Delays (us)  
SBD 0.000633  
MBD 0.007522  
Fringe rate (Hz)  
-0.016070  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171554  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



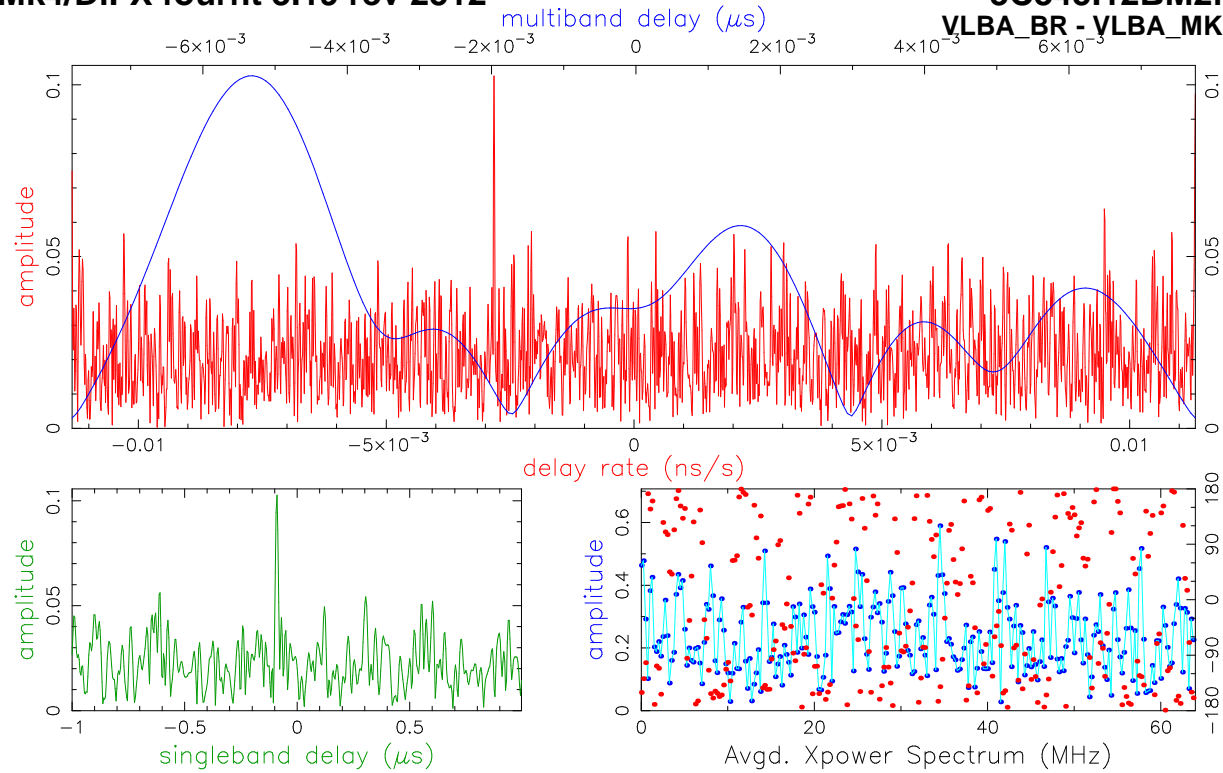
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	7.15509026341E+03	Apriori delay (usec)	7.15508274173E+03	Resid mbdelay (usec)	7.52168E-03	+/-	6.9E-05
Sband delay (usec)	7.15508337523E+03	Apriori clock (usec)	1.4273647E-01	Resid sbdelay (usec)	6.33500E-04	+/-	5.4E-04
Phase delay (usec)	7.15508274358E+03	Apriori clockrate (us/s)	-1.9130770E-07	Resid phdelay (usec)	1.85566E-06	+/-	2.3E-07
Delay rate (us/s)	-1.85864947302E+00	Apriori rate (us/s)	-1.85864928647E+00	Resid rate (us/s)	-1.86557E-07	+/-	9.6E-10
Total phase (deg)	191.6	Apriori accel (us/s/s)	-6.73614306400E-06	Resid phase (deg)	57.5	+/-	7.2

ph/seg (deg)	80.3	Theor.	17.4	Amplitude	0.282 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	102.8		30.3	Search (2048X32)	0.272	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	38.3		10.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	25.8		17.9	Inc. seg. avg.	0.485	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.328	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 289.3 el 37.9 pa 51.5 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 13844.684 2337.380 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Bm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Bm.W.11.12BM2R

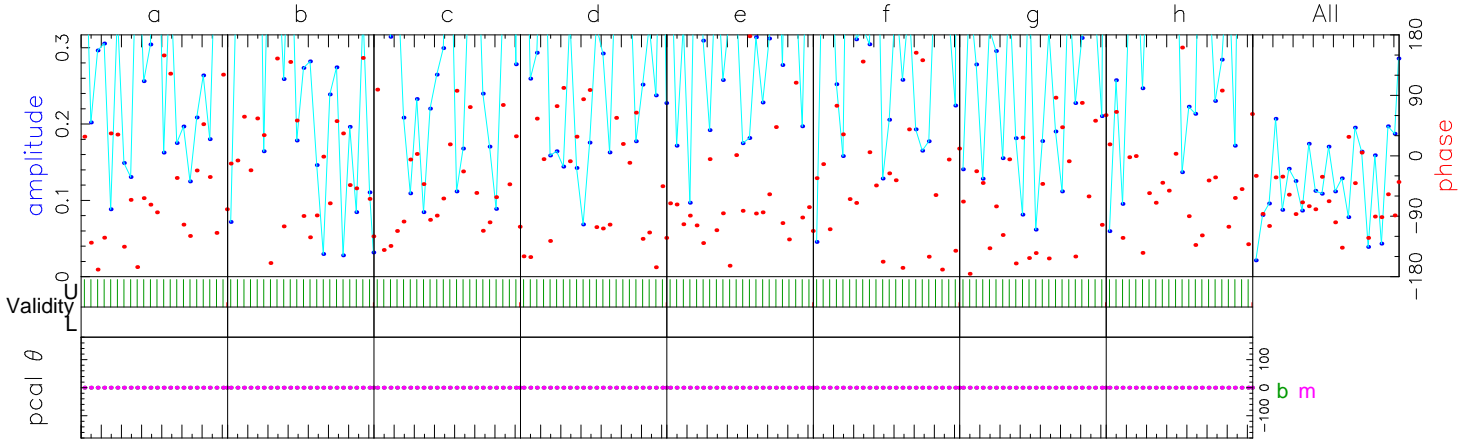


Fringe quality 0

SNR 5.8  
Int time 419.683  
Amp 0.106  
Phase -64.5  
PFD 8.6e-01  
Delays (us)  
SBD -0.090518  
MBD -0.005360  
Fringe rate (Hz)  
-0.243391  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171555  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-95.0	16.9	-48.3	-40.6	-91.4	-51.8	-76.3	-57.7	Phase	-64.5
	0.1	0.0	0.1	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
	353.3	504.2	119.0	79.2	233.9	288.2	488.2	233.8	Sbd box	233.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

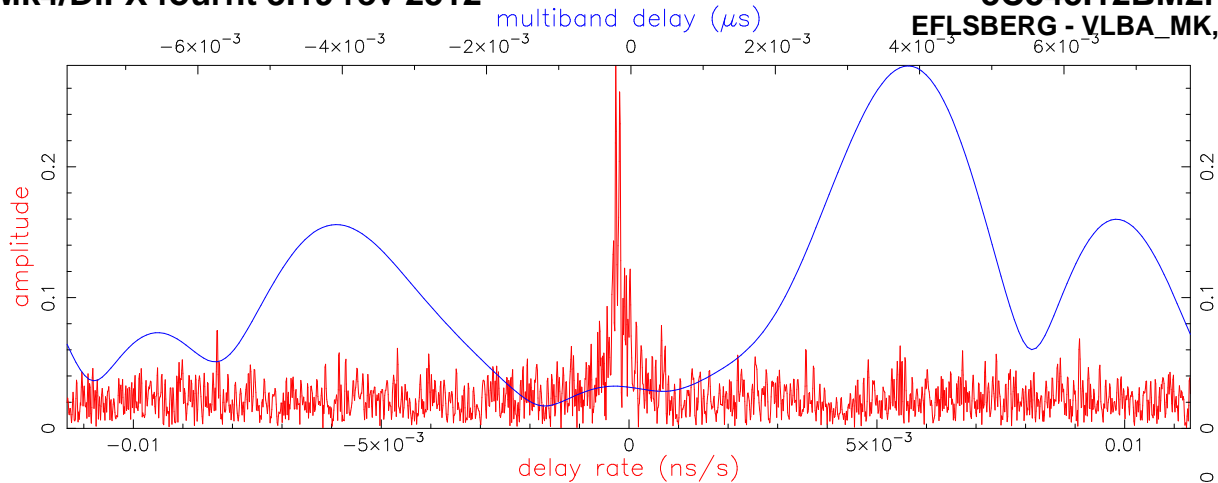
Group delay (usec)(sbd) 1.13877706205E+04 Apriori delay (usec) 1.13878541051E+04 Resid mbdelay (usec) -5.35964E-03 +/- 1.9E-04  
 Sband delay (usec) 1.13877635871E+04 Apriori clock (usec) -3.1784182E+00 Resid sbdelay (usec) -9.05180E-02 +/- 1.5E-03  
 Phase delay (usec) 1.13878541030E+04 Apriori clockrate (us/s) -2.3370279E-07 Resid phdelay (usec) -2.07987E-06 +/- 6.4E-07  
 Delay rate (us/s) -5.09372903037E-01 Apriori rate (us/s) -5.09370077513E-01 Resid rate (us/s) -2.82552E-06 +/- 2.6E-09  
 Total phase (deg) 156.6 Apriori accel (us/s/s) -3.13068843373E-05 Resid phase (deg) -64.5 +/- 19.9

RMS Theor. Amplitude 0.106 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 38.7 47.6 Search (2048X32) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 56.9 83.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 39.7 28.1 Inc. seg. avg. 0.095 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 62.2 49.0 Inc. frq. avg. 0.103 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

b: az 83.7 el 53.2 pa -59.7 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3748.328 667.274 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/bm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/bm.W.18.12BM2R

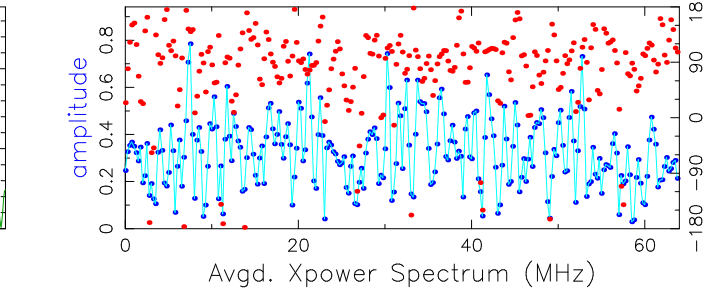
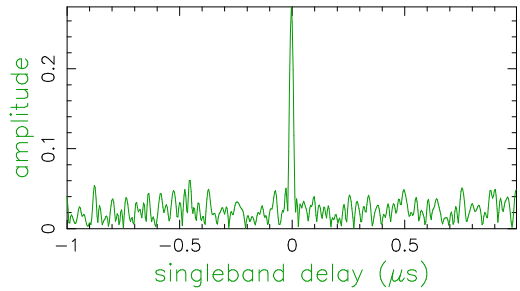
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, Bm  
EFLSBERG - VLBA\_MK, fgroup W, pol RR



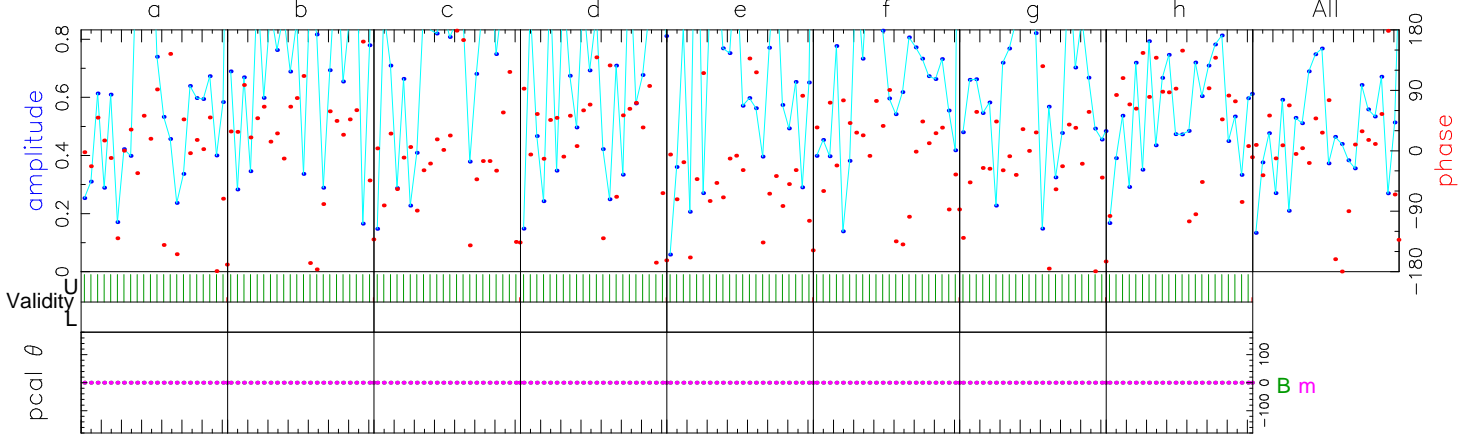
Fringe quality 8

SNR 15.5  
Int time 419.681  
Amp 0.278  
Phase 14.1  
PFD 1.4e-45  
Delays (us)  
SBD -0.003456  
MBD 0.003853  
Fringe rate (Hz)  
-0.022803  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171559  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

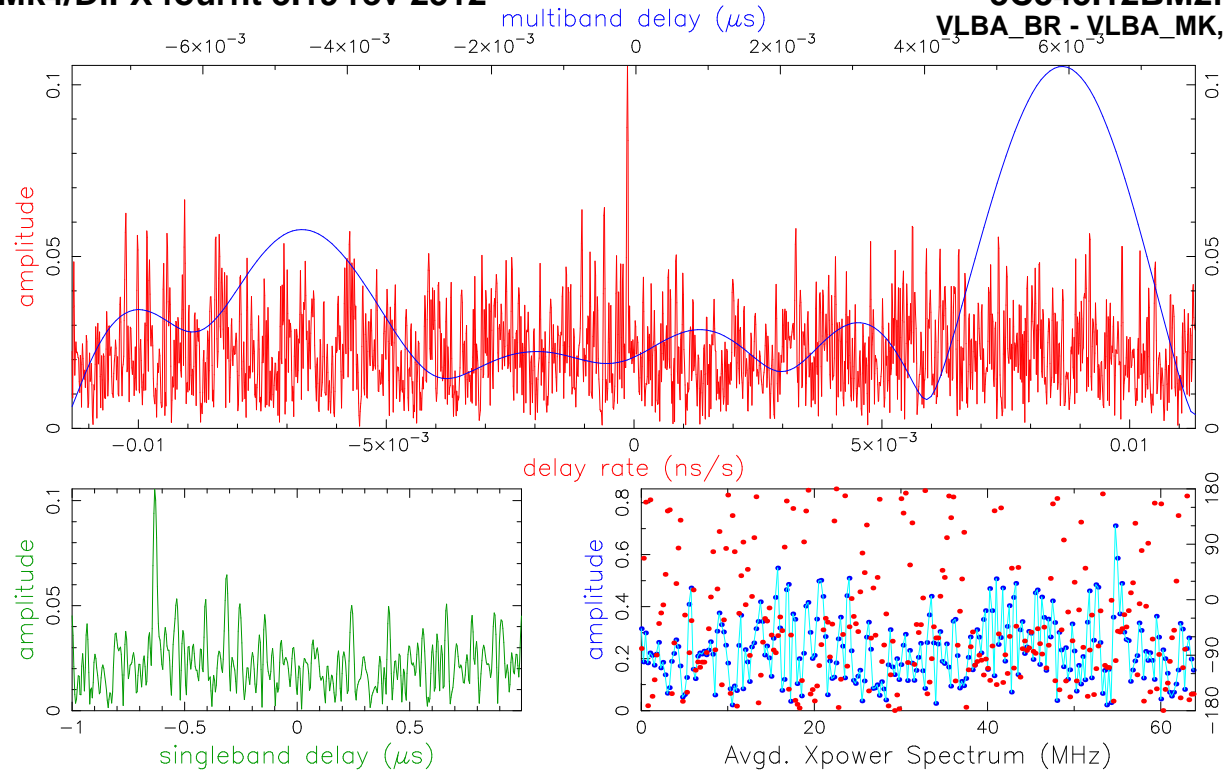


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	7.15508659487E+03	Apriori delay (usec)	7.15508274173E+03	Resid mbdelay (usec)	3.85314E-03	+/-	7.0E-05
Sband delay (usec)	7.15507928548E+03	Apriori clock (usec)	1.4273647E+01	Resid sbdelay (usec)	-3.45625E-03	+/-	5.5E-04
Phase delay (usec)	7.15508274218E+03	Apriori clockrate (us/s)	-1.9130770E-07	Resid phdelay (usec)	4.55658E-07	+/-	2.4E-07
Delay rate (us/s)	-1.85864955119E+00	Apriori rate (us/s)	-1.85864928647E+00	Resid rate (us/s)	-2.64721E-07	+/-	9.8E-10
Total phase (deg)	148.2	Apriori accel (us/s/s)	-6.73614306400E-06	Resid phase (deg)	14.1	+/-	7.4

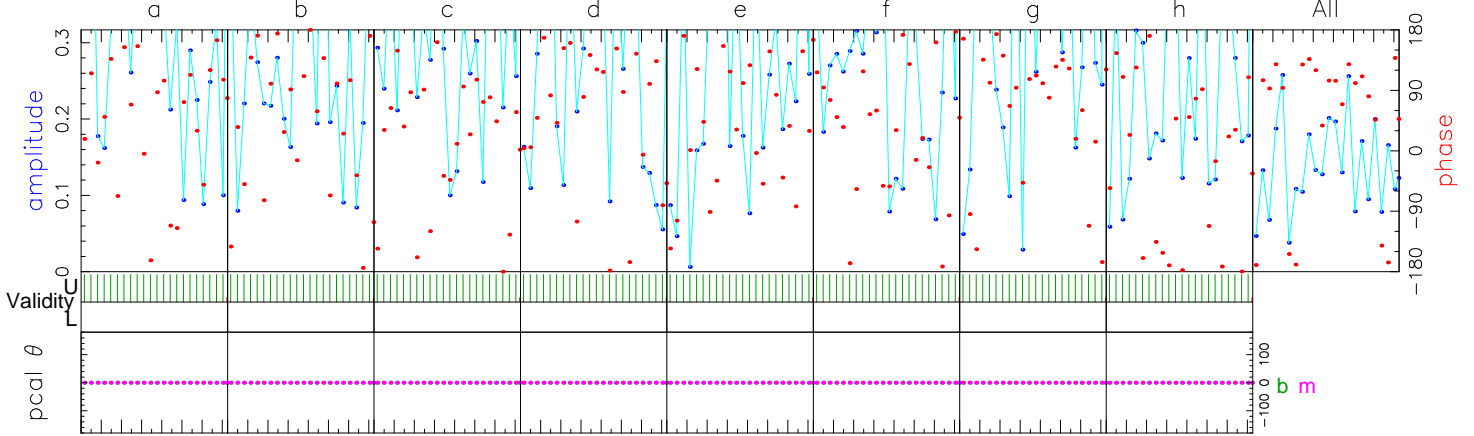
ph/seg (deg)	RMS 74.2	Theor. 17.7	Amplitude Search (2048X32)	0.278 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	96.1	30.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	44.7	10.4	Inc. seg. avg.	0.460	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	32.4	18.2	Inc. frq. avg.	0.343	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 289.3 el 37.9 pa 51.5      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 13844.684 2337.380      simultaneous interpolator  
Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0009/Bm..12BM2R    Output file: /Exps/c192a/v1\_PV/1234/No0009/Bm.W.33.12BM2R



Fringe quality 0  
SNR 5.9  
Int time 419.689  
Amp 0.106  
Phase 113.8  
PFD 5.7e-01  
Delays (us)  
SBD -0.632079  
MBD 0.005913  
Fringe rate (Hz)  
-0.011491  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Yr:day # 16383  
2020:072:153215  
2020:086:171600  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

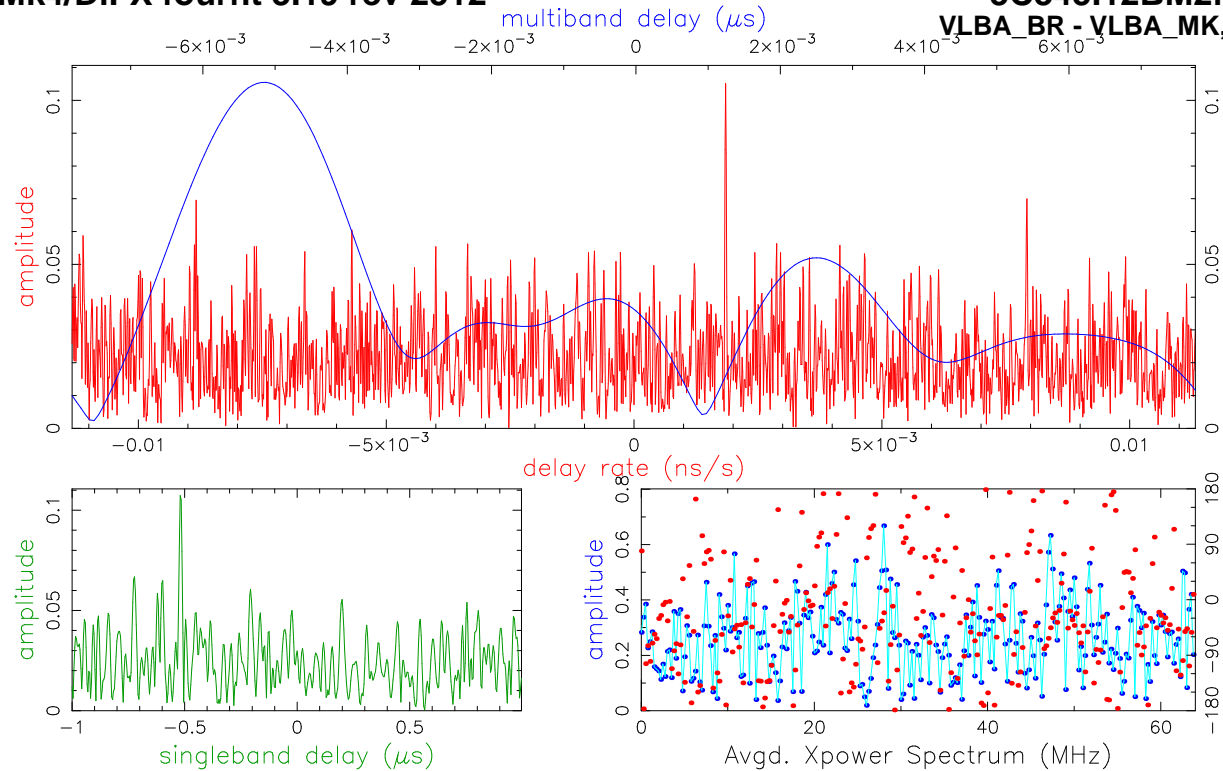


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	112.4	145.0	80.9	127.9	105.1	56.9	119.4	122.4	Phase	113.8
	0.1	0.1	0.1	0.2	0.0	0.1	0.2	0.1	Ampl.	0.1
	400.7	111.9	243.9	93.4	118.3	68.6	95.7	368.1	Sbd box	95.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.13872193926E+04		Apriori delay (usec)		1.13878541051E+04		Resid mbdelay (usec)		5.91251E-03	+/- 1.8E-04
Sband delay (usec)	1.13872220261E+04		Apriori clock (usec)		-3.1784182E+00		Resid sbdelay (usec)		-6.32079E-01	+/- 1.5E-03
Phase delay (usec)	1.13878541088E+04		Apriori clockrate (us/s)		-2.3370279E-07		Resid phdelay (usec)		3.66925E-06	+/- 6.2E-07
Delay rate (us/s)	-5.09370210915E-01		Apriori rate (us/s)		-5.09370077513E-01		Resid rate (us/s)		-1.33402E-07	+/- 2.6E-09
Total phase (deg)	334.9		Apriori accel (us/s/s)		-3.13068843373E-05		Resid phase (deg)		113.8	+/- 19.4

ph/seg (deg) 49.8 46.4 Search (2048X32) 0.105 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 65.5 81.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 30.8 27.4 Inc. seg. avg. 0.105 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 48.0 47.8 Inc. frq. avg. 0.102 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
b: az 83.7 el 53.2 pa -59.7 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3748.328 667.274 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/bm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/bm.W.39.12BM2R

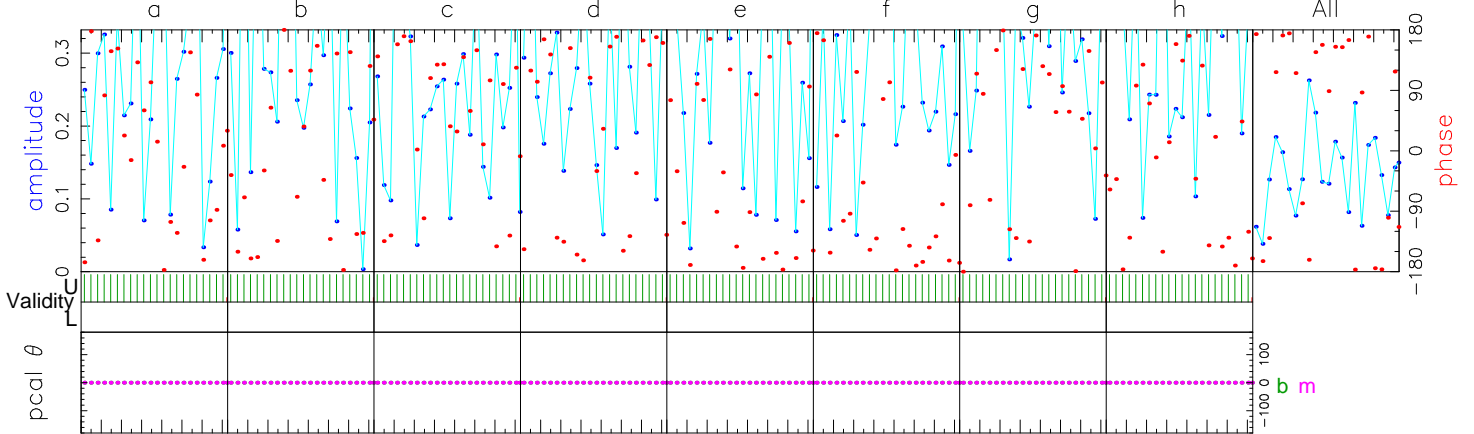
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, bm  
VLBA\_BR - VLBA\_MK, fgroup W, pol LR



Fringe quality 0  
SNR 6.1  
Int time 419.689  
Amp 0.111  
Phase 167.6  
PFD 2.0e-01  
Delays (us)  
SBD -0.517906  
MBD -0.005249  
Fringe rate (Hz)  
0.159558  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171604  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

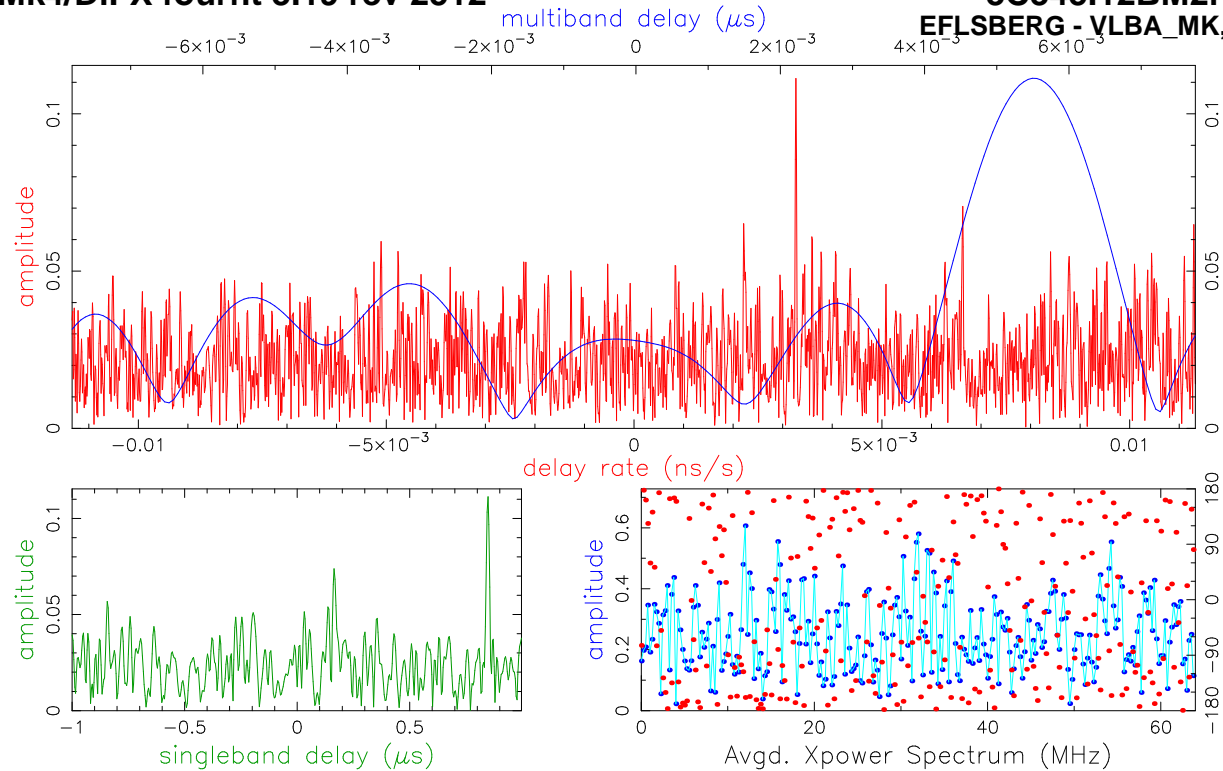


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	122.8	-167.5	146.3	172.8	-179.9	-147.8	122.7	-160.0	Phase	167.6
	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	Ampl.	0.1
	311.1	56.7	280.8	124.9	329.9	406.6	193.1	62.7	Sbd box	124.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 1.13873332313E+04 Apriori delay (usec) 1.13878541051E+04 Resid mbdelay (usec) -5.24883E-03 +/- 1.8E-04  
Sband delay (usec) 1.13873361994E+04 Apriori clock (usec) -3.1784182E+00 Resid sbdelay (usec) -5.17906E-01 +/- 1.4E-03  
Phase delay (usec) 1.13878541105E+04 Apriori clockrate (us/s) -2.3370279E-07 Resid phdelay (usec) 5.40588E-06 +/- 6.0E-07  
Delay rate (us/s) -5.09368225204E-01 Apriori rate (us/s) -5.09370077513E-01 Resid rate (us/s) 1.85231E-06 +/- 2.5E-09  
Total phase (deg) 28.7 Apriori accel (us/s/s) -3.13068843373E-05 Resid phase (deg) 167.6 +/- 18.7

RMS Theor. Amplitude 0.111 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 47.8 44.8 Search (2048X32) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
amp/seg (%) 58.5 78.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
ph/frq (deg) 37.2 26.4 Inc. seg. avg. 0.107 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011  
amp/frq (%) 42.6 46.1 Inc. frq. avg. 0.112 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

b: az 83.7 el 53.2 pa -59.7 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3748.328 667.274 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/bm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/bm.W.57.12BM2R

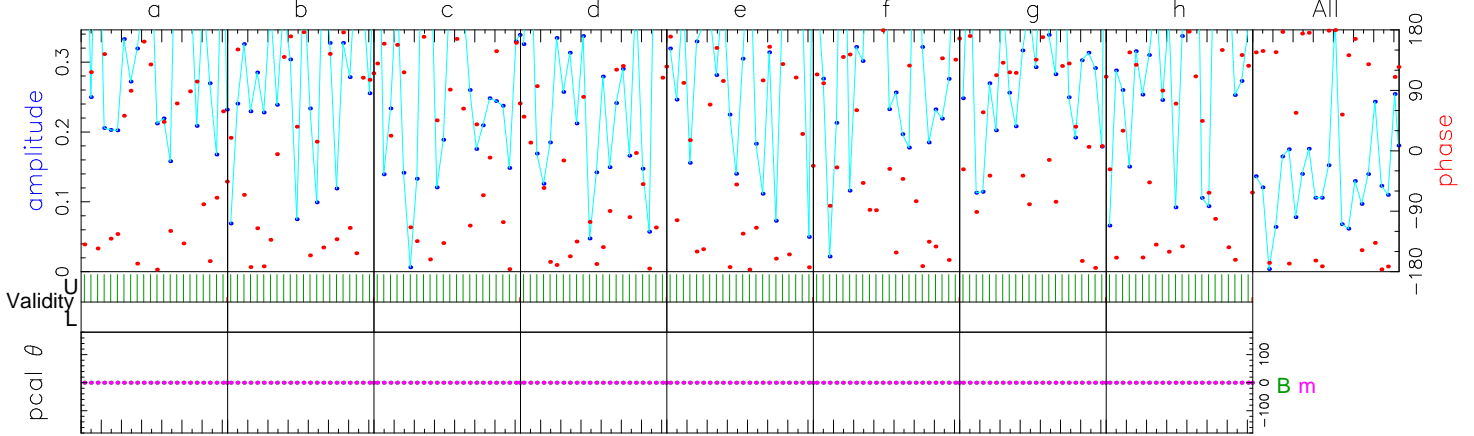


Fringe quality 0

SNR 6.2  
Int time 419.681  
Amp 0.115  
Phase 169.5  
PFD 1.1e-01  
Delays (us)  
SBD 0.847099  
MBD 0.005487  
Fringe rate (Hz) 0.281600  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171605  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



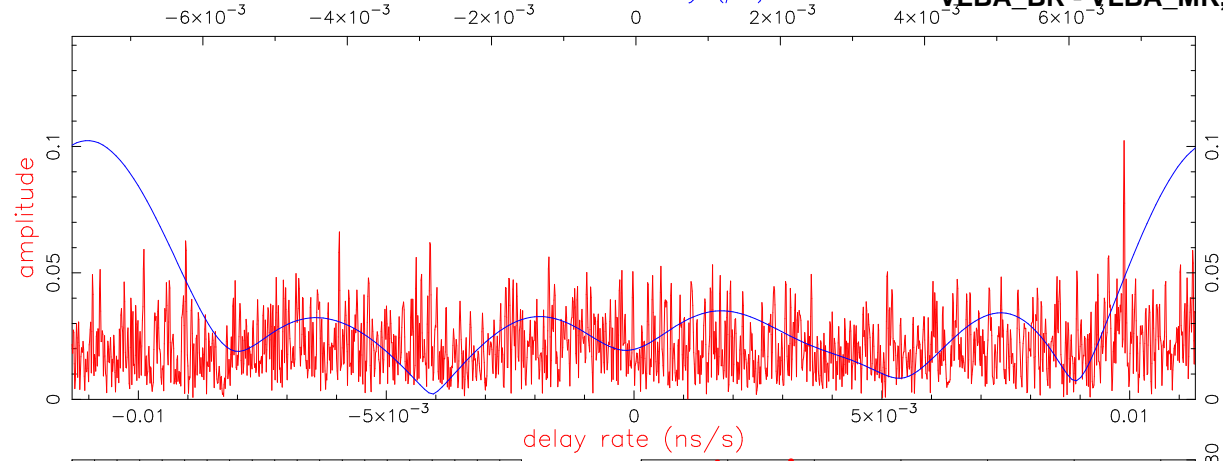
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		7.15593197910E+03				7.15508274173E+03			Resid mbdelay (usec)	5.48737E-03 +/- 1.7E-04
Sband delay (usec)		7.15592984098E+03				1.4273647E+01			Resid sbdelay (usec)	8.47099E-01 +/- 1.4E-03
Phase delay (usec)		7.15508274719E+03				-1.9130770E-07			Resid phdelay (usec)	5.46498E-06 +/- 5.9E-07
Delay rate (us/s)		-1.85864601737E+00				-1.85864928647E+00			Resid rate (us/s)	3.26909E-06 +/- 2.4E-09
Total phase (deg)			303.5			-6.73614306400E-06			Resid phase (deg)	169.5 +/- 18.3

ph/seg (deg) 43.3 44.0 Search (2048X32) 0.108 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 70.9 76.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 19.7 25.9 Inc. seg. avg. 0.110 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 41.7 45.3 Inc. frq. avg. 0.109 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 B: az 289.3 el 37.9 pa 51.5 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 13844.684 2337.380 ion window (TEC) 0.00 0.00

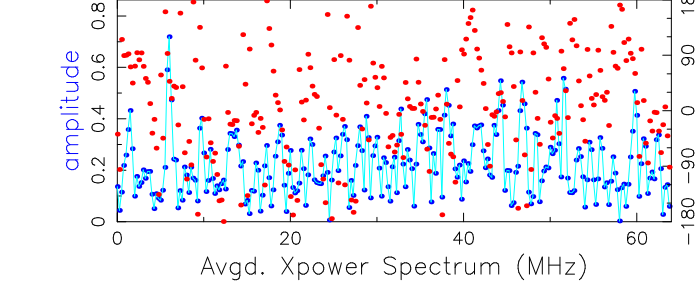
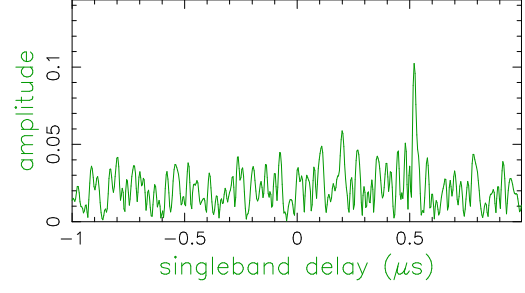
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, bm  
VLBA\_BR - VLBA\_MK, fgroup W, pol RL

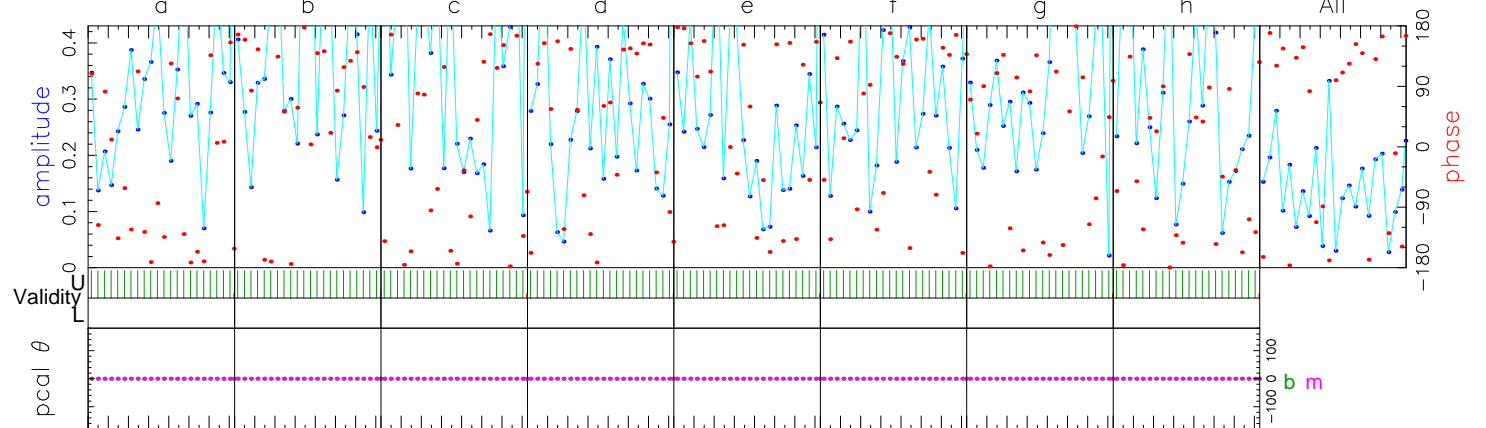
multiband delay ( $\mu\text{s}$ )



Fringe quality 0  
SNR 5.7  
Int time 419.683  
Amp 0.143  
Phase 161.7  
PFD 9.0e-01  
Delays (us)  
SBD 0.520162  
MBD 0.008050  
Fringe rate (Hz) 0.852697  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171608  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

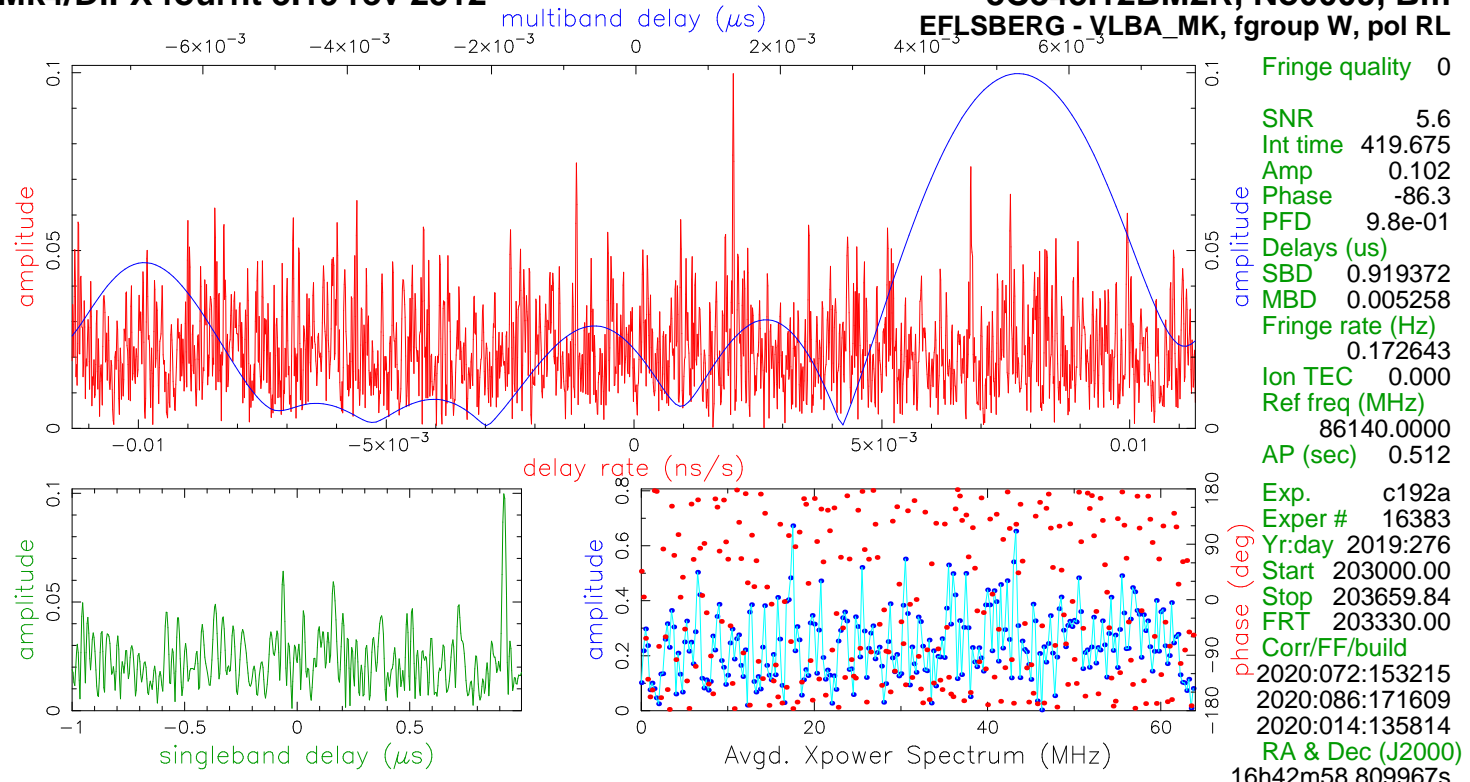


Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

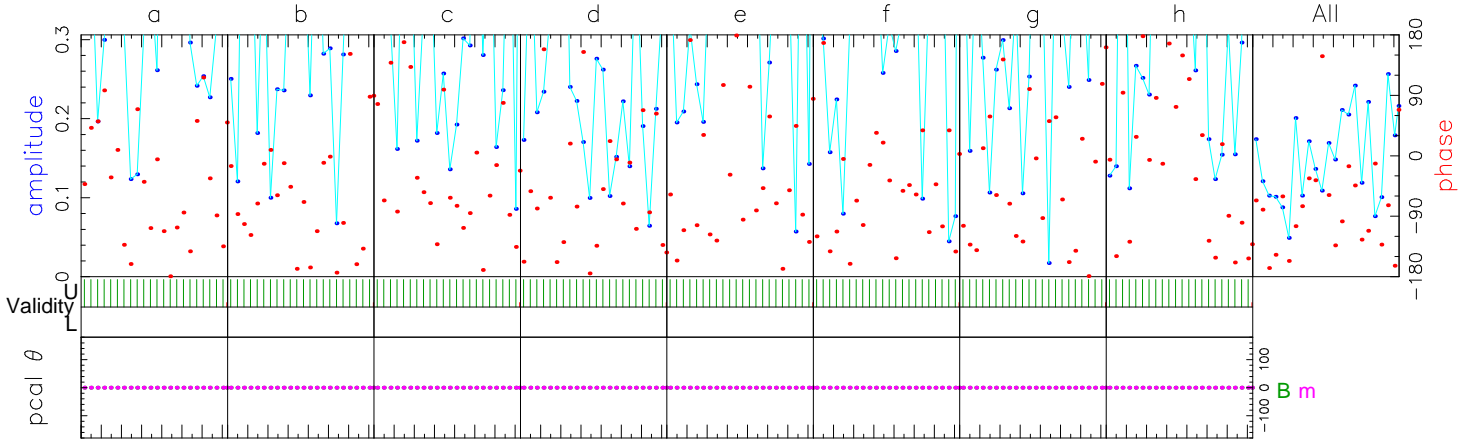


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-154.5	124.2	176.2	156.2	-175.5	175.9	137.2	165.7	Phase	161.7
	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	347.6	390.5	372.7	319.8	220.6	266.4	379.7	240.2	Sbd box	390.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.13883777804E+04		Apriori delay (usec)		1.13878541051E+04		Resid mbdelay (usec)		8.05031E-03	+/- 1.9E-04
Sband delay (usec)	1.13883742666E+04		Apriori clock (usec)		-3.1784182E+00		Resid sbdelay (usec)		5.20162E-01	+/- 1.5E-03
Phase delay (usec)	1.13878541103E+04		Apriori clockrate (us/s)		-2.3370279E-07		Resid phdelay (usec)		5.21474E-06	+/- 6.4E-07
Delay rate (us/s)	-5.09360178542E-01		Apriori rate (us/s)		-5.09370077513E-01		Resid rate (us/s)		9.89897E-06	+/- 2.7E-09
Total phase (deg)	22.8		Apriori accel (us/s/s)		-3.13068843373E-05		Resid phase (deg)		161.7	+/- 19.9

ph/seg (deg) 59.5 47.8 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 83.2 83.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 28.6 28.2 Inc. seg. avg. 0.149 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 32.4 49.2 Inc. frq. avg. 0.141 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
b: az 83.7 el 53.2 pa -59.7 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3748.328 667.274 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/bm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/bm.W.74.12BM2R



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-78.5	-90.4	-77.8	-105.0	-99.7	-70.5	-73.7	102.1	Phase	-86.3
	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	300.3	357.7	440.9	326.9	307.3	491.6	296.7	233.7	Sbd box	492.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

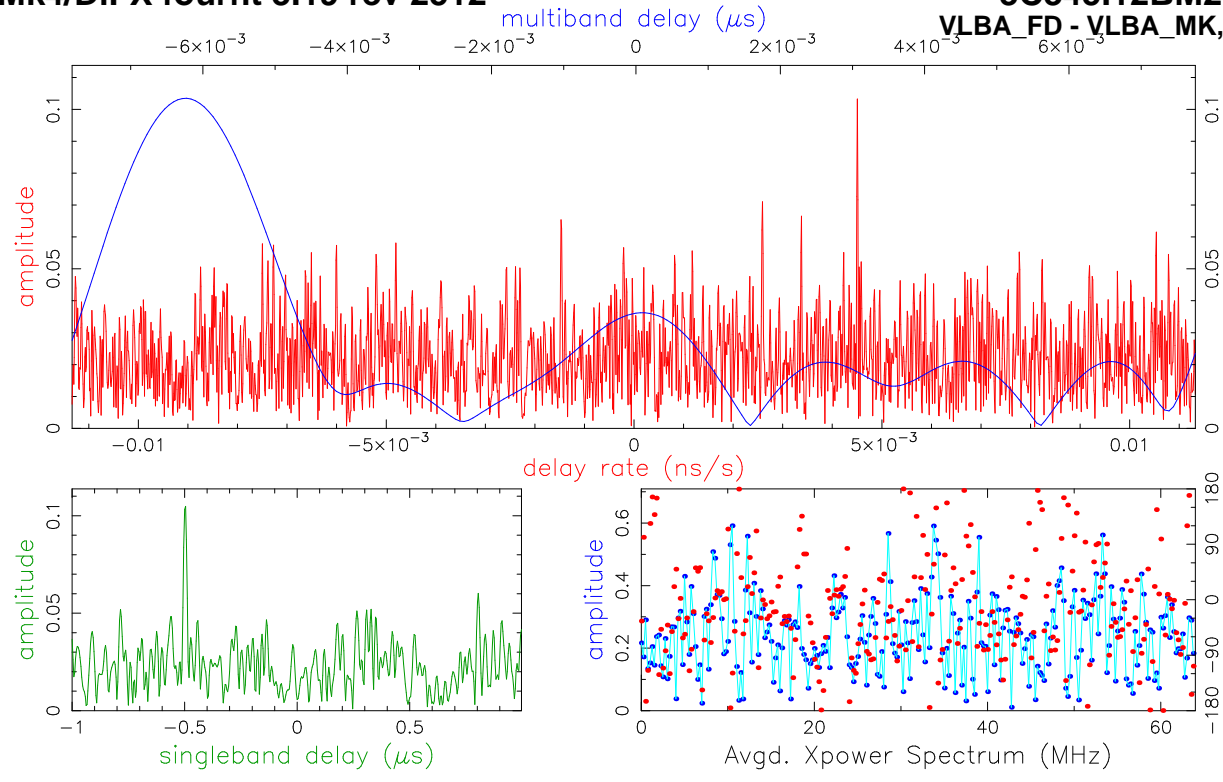
Group delay (usec)(sbd)	7.15600987491E+03	Apriori delay (usec)	7.15508274173E+03	Resid mbdelay (usec)	5.25818E-03	+/-	1.9E-04
Sband delay (usec)	7.15600211423E+03	Apriori clock (usec)	1.4273647E+01	Resid sbdelay (usec)	9.19372E-01	+/-	1.5E-03
Phase delay (usec)	7.15508273894E+03	Apriori clockrate (us/s)	-1.9130770E-07	Resid phdelay (usec)	-2.78300E-06	+/-	6.5E-07
Delay rate (us/s)	-1.85864728225E+00	Apriori rate (us/s)	-1.85864928647E+00	Resid rate (us/s)	2.00421E-06	+/-	2.7E-09
Total phase (deg)	47.8	Apriori accel (us/s/s)	-6.73614306400E-06	Resid phase (deg)	-86.3	+/-	20.3

ph/seg (deg)	55.2	Theor.	48.7	Amplitude	0.102 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	73.9		85.0	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	71.3		28.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.6		50.1	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.106	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

B: az 289.3 el 37.9 pa 51.5      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 13844.684 2337.380      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c192a/v1\_PV/1234/No0009/Bm..12BM2R      Output file: /Exps/c192a/v1\_PV/1234/No0009/Bm.W.76.12BM2R



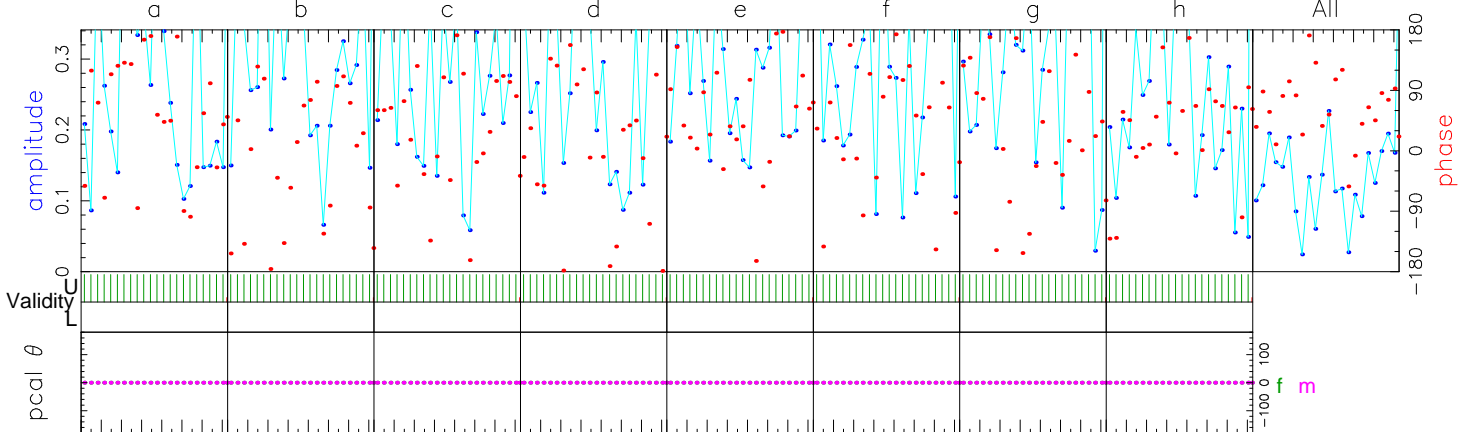


Fringe quality 0

SNR 6.0  
Int time 419.688  
Amp 0.114  
Phase 69.7  
PFD 4.6e-01  
Delays (us)  
SBD -0.497729  
MBD -0.006170  
Fringe rate (Hz) 0.388722  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Yr:day 16383  
Exp# 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171621  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

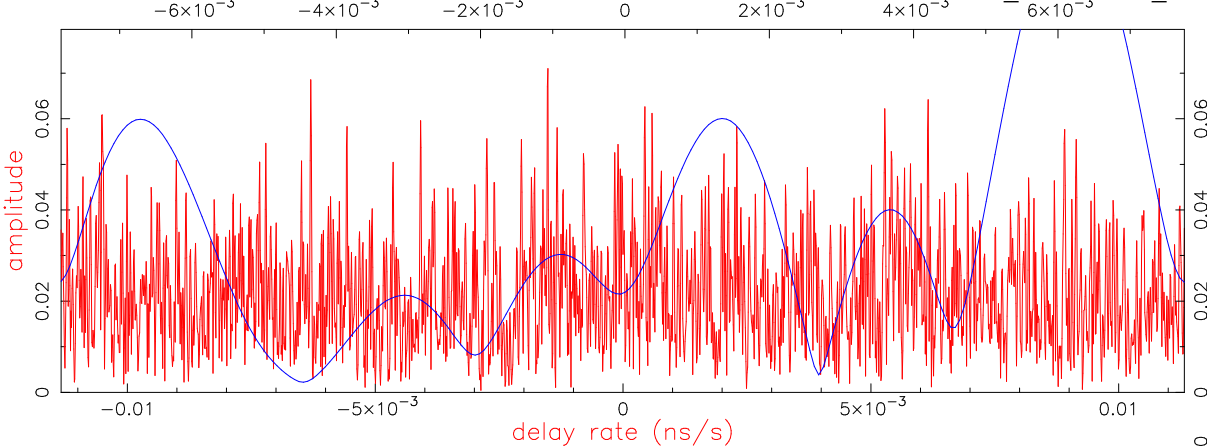
Group delay (usec)(sbd)	1.28100142427E+04	Apriori delay (usec)		1.28105047872E+04	Resid mbdelay (usec)		-6.16954E-03	+/-	1.8E-04
Sband delay (usec)	1.28100070584E+04	Apriori clock (usec)		-2.1098497E+00	Resid sbdelay (usec)		-4.97729E-01	+/-	1.4E-03
Phase delay (usec)	1.28105047894E+04	Apriori clockrate (us/s)		-8.2257206E-08	Resid phdelay (usec)		2.24720E-06	+/-	6.2E-07
Delay rate (us/s)	-5.42156323110E-01	Apriori rate (us/s)		-5.42160835792E-01	Resid rate (us/s)		4.51268E-06	+/-	2.6E-09
Total phase (deg)	202.6	Apriori accel (us/s/s)		-5.58310971689E-05	Resid phase (deg)		69.7	+/-	19.2

ph/seg (deg)	48.3	Theor.	46.0	Amplitude	0.114 +/- 0.019	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	59.5	46.0	Search (2048X32)	0.097	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
ph/frq (deg)	17.3	80.4	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	27.8	27.2	Inc. seg. avg.	0.106	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
		47.4	Inc. frq. avg.	0.102	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 62.5 el 60.1 pa -96.3      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 3946.883 -2539.438      simultaneous interpolator

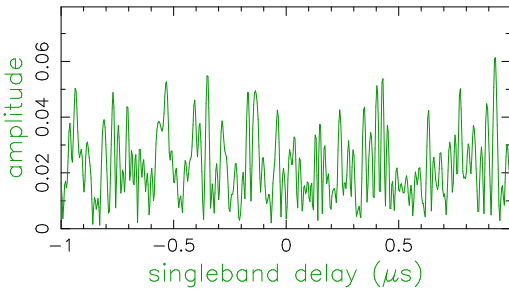
Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0009/fm..12BM2R    Output file: /Exps/c192a/v1\_PV/1234/No0009/fm.W.117.12BM2R

multiband delay ( $\mu$ s)

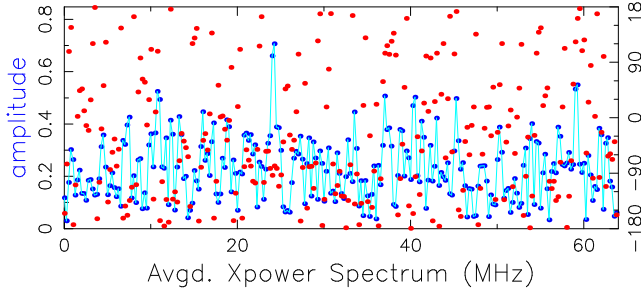


Fringe quality 0

SNR 2.9  
Int time 419.688  
Amp 0.080  
Phase -10.3  
PFD 1.0e+00  
Delays (us)  
SBD -0.531250  
MBD -0.008301  
Fringe rate (Hz)  
-0.939688  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

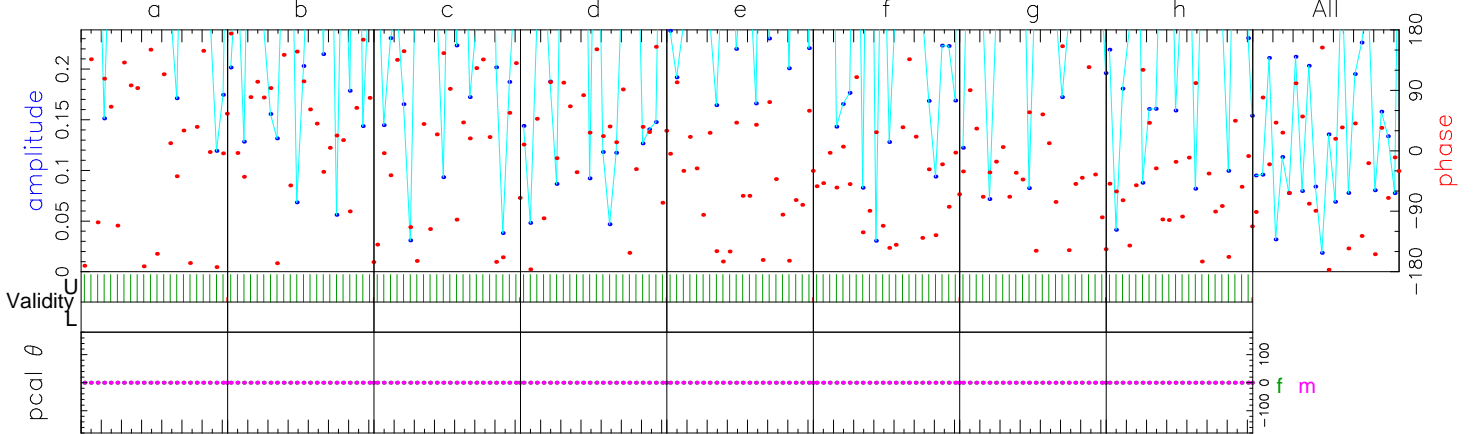


delay rate (ns/s)



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171625  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

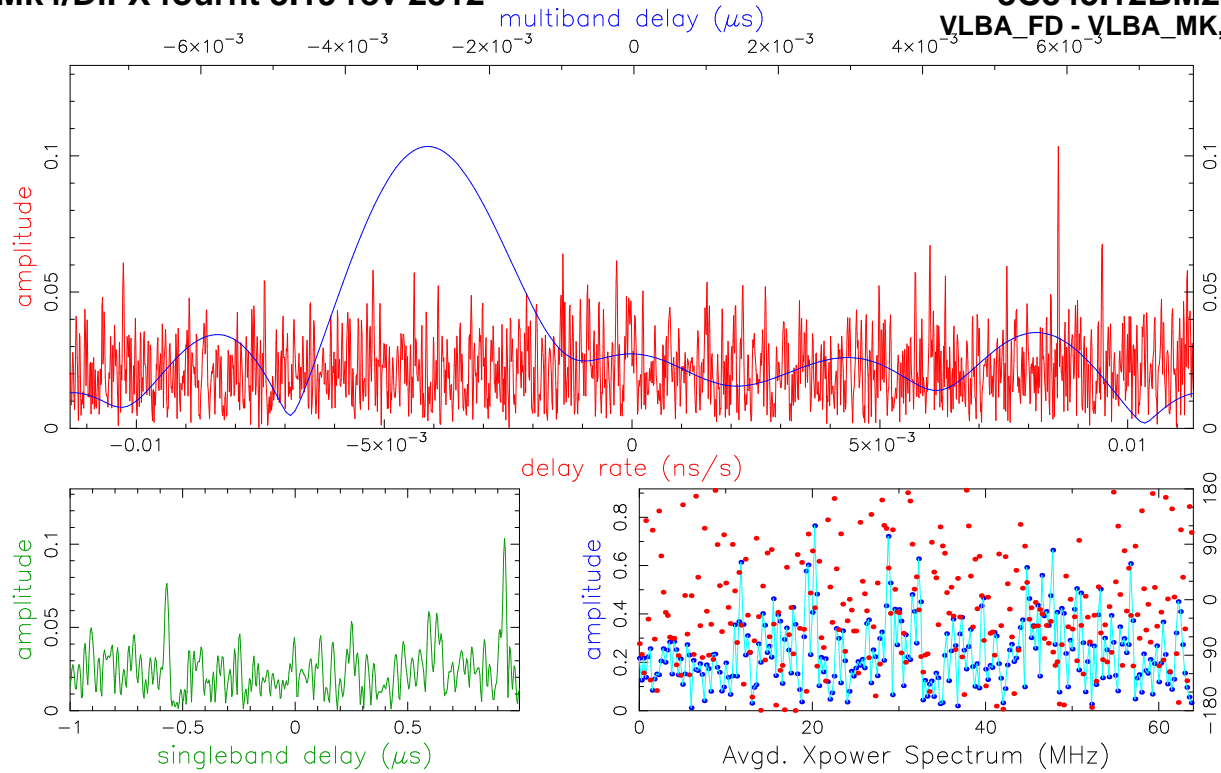


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.28099808614E+04	Apriori delay (usec)	1.28105047872E+04	Resid mbdelay (usec)	-8.30078E-03	+/-	3.7E-04
Sband delay (usec)	1.28099735372E+04	Apriori clock (usec)	-2.1098497E+00	Resid sbdelay (usec)	-5.31250E-01	+/-	2.9E-03
Phase delay (usec)	1.28105047869E+04	Apriori clockrate (us/s)	-8.2257206E-08	Resid phdelay (usec)	-3.31211E-07	+/-	1.3E-06
Delay rate (us/s)	-5.42171744641E-01	Apriori rate (us/s)	-5.42160835792E-01	Resid rate (us/s)	-1.09088E-05	+/-	5.2E-09
Total phase (deg)	122.7	Apriori accel (us/s/s)	-5.58310971689E-05	Resid phase (deg)	-10.3	+/-	38.9

ph/seg (deg)	RMS 86.7	Theor. 93.3	Amplitude Search (2048X32)	0.109	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	217.4	162.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	85.9	55.0	Inc. seg. avg.	0.088	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	148.7	96.0	Inc. frq. avg.	0.127	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 62.5 el 60.1 pa -96.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3946.883 -2539.438 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/fm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/fm.W.137.12BM2R

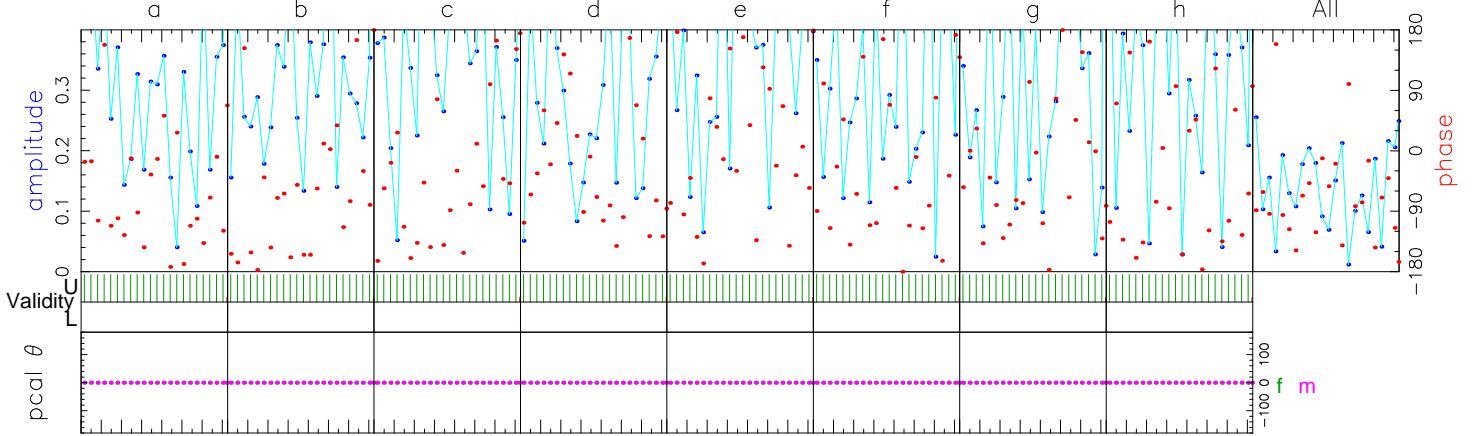


Fringe quality 0

SNR 5.8  
Int time 419.682  
Amp 0.133  
Phase -88.1  
PFD 7.8e-01  
Delays (us)  
SBD 0.930389  
MBD -0.002845  
Fringe rate (Hz) 0.741851  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

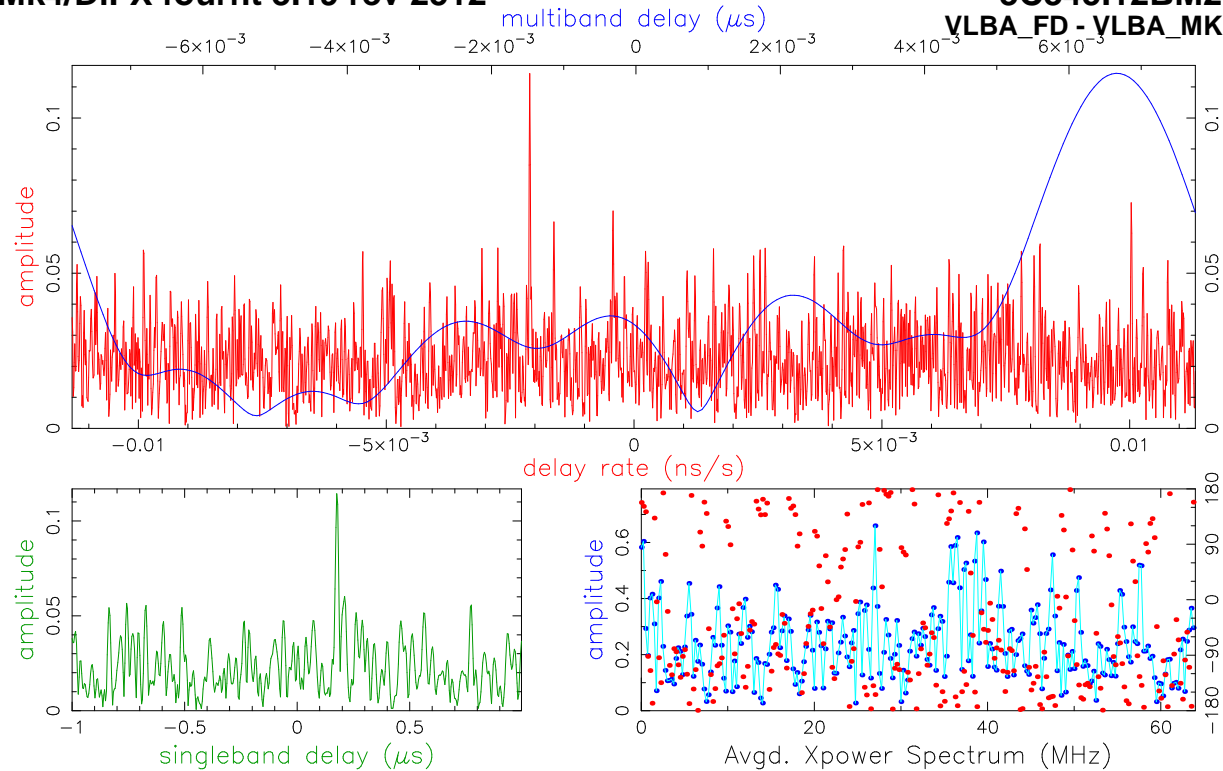
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171629  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



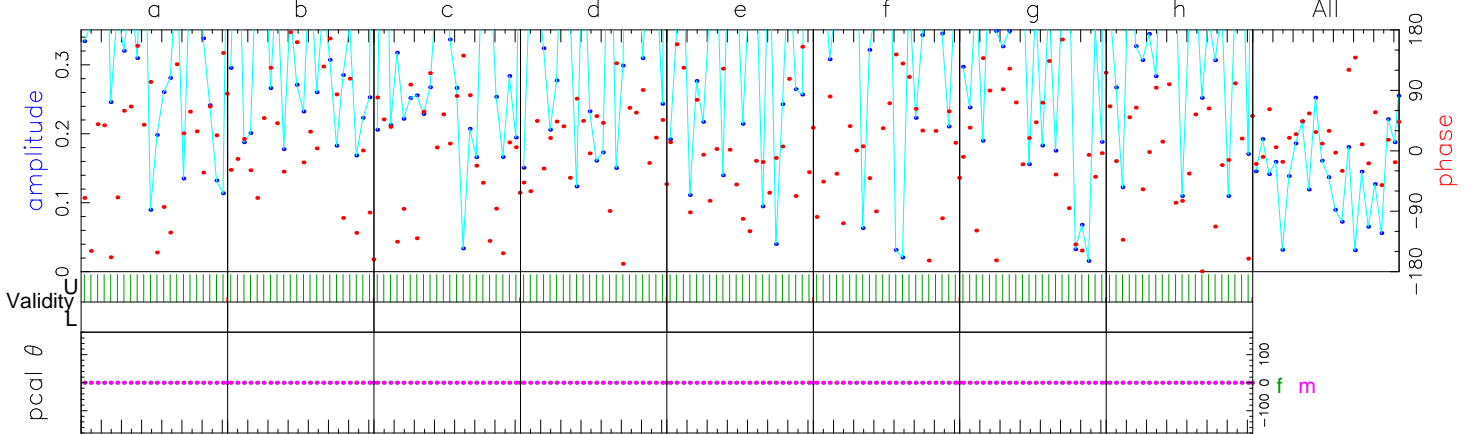
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-83.0	-105.8	-91.9	-77.9	-35.9	-112.4	-62.1	-123.7	Phase	-88.1
	0.2	0.2	0.2	0.2	0.1	0.2	0.1	0.1	Ampl.	0.1
	119.6	25.8	194.6	33.8	410.2	56.4	221.1	54.9	Sbd box	495.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.28114394419E+04		Apriori delay (usec)		1.28105047872E+04		Resid mbdelay (usec)		-2.84533E-03	+/- 1.9E-04
Sband delay (usec)	1.28114351759E+04		Apriori clock (usec)		-2.1098497E+00		Resid sbdelay (usec)		9.30389E-01	+/- 1.5E-03
Phase delay (usec)	1.28105047844E+04		Apriori clockrate (us/s)		-8.2257206E-08		Resid phdelay (usec)		-2.84246E-06	+/- 6.4E-07
Delay rate (us/s)	-5.42152223632E-01		Apriori rate (us/s)		-5.42160835792E-01		Resid rate (us/s)		8.61216E-06	+/- 2.6E-09
Total phase (deg)	44.8		Apriori accel (us/s/s)		-5.58310971689E-05		Resid phase (deg)		-88.1	+/- 19.7

ph/seg (deg) 59.6 47.3 Search (2048X32) 0.100 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 71.8 82.5 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 30.9 27.9 Inc. seg. avg. 0.132 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 25.3 48.6 Inc. frq. avg. 0.130 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 f: az 62.5 el 60.1 pa -96.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3946.883 -2539.438 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/fm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/fm.W.154.12BM2R



Fringe quality 0  
SNR 6.5  
Int time 419.682  
Amp 0.117  
Phase 20.3  
PFD 2.9e-02  
Delays (us)  
SBD 0.176858  
MBD 0.006692  
Fringe rate (Hz)  
-0.181284  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171616  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	43.7	17.2	26.1	21.0	-20.5	4.1	68.4	30.9	Phase	20.3
	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1
	304.2	328.7	193.6	301.1	303.5	400.8	343.6	230.2	Sbd box	302.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

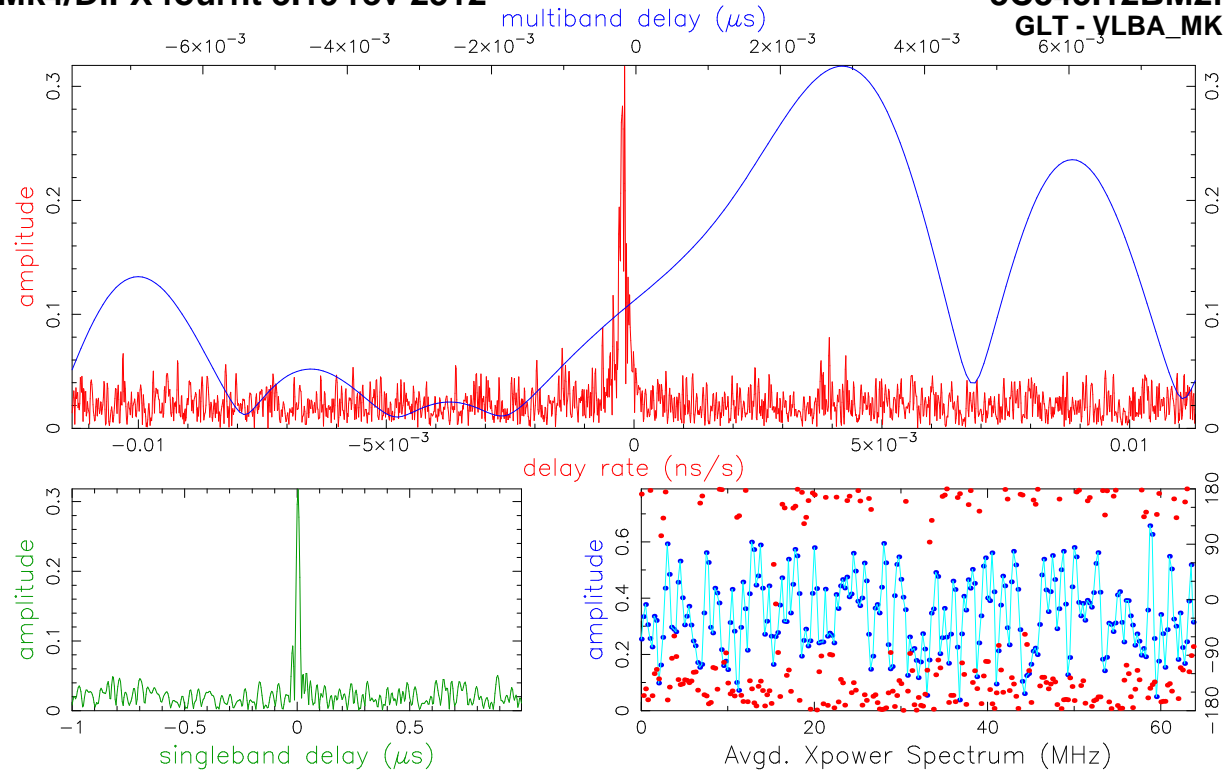
Group delay (usec)(sbd)	1.28106833543E+04	Apriori delay (usec)	1.28105047872E+04	Resid mbdelay (usec)	6.69214E-03	+/-	1.7E-04
Sband delay (usec)	1.28106816454E+04	Apriori clock (usec)	-2.1098497E+00	Resid sbdelay (usec)	1.76858E-01	+/-	1.3E-03
Phase delay (usec)	1.28105047879E+04	Apriori clockrate (us/s)	-8.2257206E-08	Resid phdelay (usec)	6.56220E-07	+/-	5.7E-07
Delay rate (us/s)	-5.42162940320E-01	Apriori rate (us/s)	-5.42160835792E-01	Resid rate (us/s)	-2.10453E-06	+/-	2.4E-09
Total phase (deg)	153.3	Apriori accel (us/s/s)	-5.58310971689E-05	Resid phase (deg)	20.3	+/-	17.7

ph/seg (deg)	44.8	RMS	42.5	Theor.	42.5	Amplitude	0.117 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	56.6		74.2		74.2	Search (2048X32)	0.111	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	28.7		25.1		25.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.9		43.8		43.8	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Inc. frq. avg.	0.114	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 62.5 el 60.1 pa -96.3      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 3946.883 -2539.438      simultaneous interpolator  
Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0009/fm..12BM2R    Output file: /Exps/c192a/v1\_PV/1234/No0009/fm.W.96.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, gm  
GLT - VLBA\_MK, fgroup W, pol LL

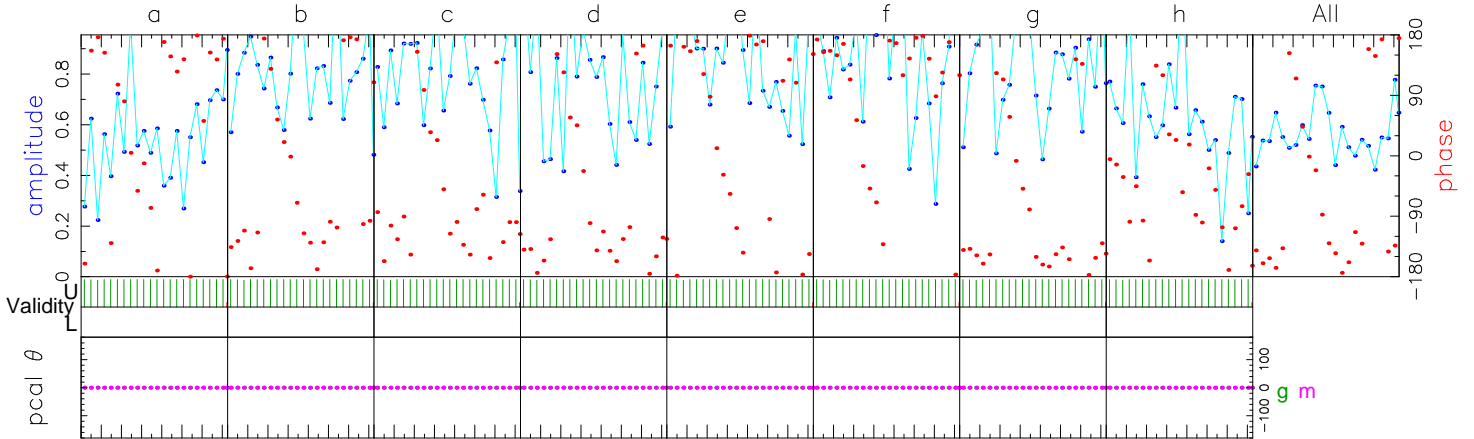


Fringe quality 7

SNR 17.8  
Int time 418.716  
Amp 0.318  
Phase -151.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.003298  
MBD 0.002813  
Fringe rate (Hz)  
-0.015948  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171632  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.12784630205E+04	Apriori delay (usec)	1.12784602072E+04	Resid mbdelay (usec)	2.81334E-03	+/-	6.1E-05
Sband delay (usec)	1.12784635049E+04	Apriori clock (usec)	-1.2673144E+00	Resid sbdelay (usec)	3.29775E-03	+/-	4.8E-04
Phase delay (usec)	1.12784602023E+04	Apriori clockrate (us/s)	8.3692290E-08	Resid phdelay (usec)	-4.87119E-06	+/-	2.1E-07
Delay rate (us/s)	-1.12479991260E+00	Apriori rate (us/s)	-1.12479972746E+00	Resid rate (us/s)	-1.85145E-07	+/-	8.6E-10
Total phase (deg)	-62.1	Apriori accel (us/s/s)	-1.42117597820E-05	Resid phase (deg)	-151.1	+/-	6.4

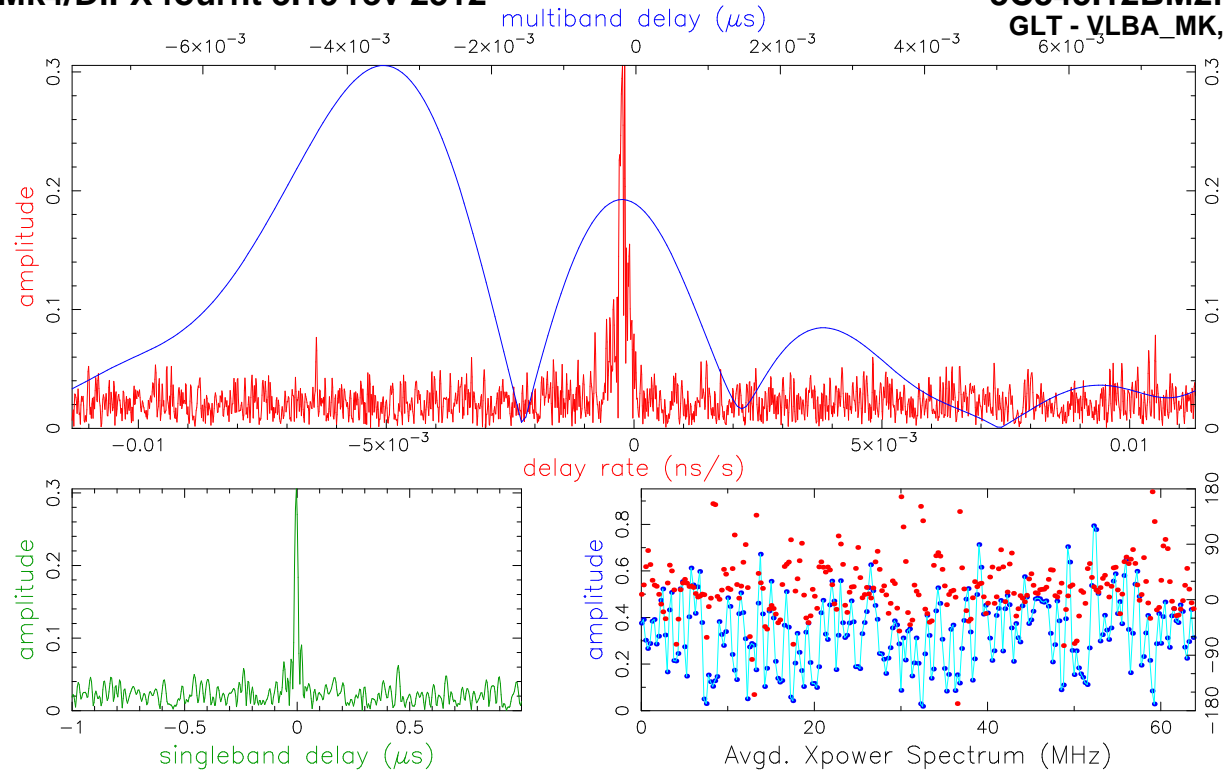
ph/seg (deg)	65.2	Theor.	15.4	Search (2048X32)	0.306	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	83.1		26.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	53.6		9.1	Inc. seg. avg.	0.545	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	42.1		15.9	Inc. frq. avg.	0.413	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

g: az 180.2 el 53.2 pa -0.0 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 8367.012 3285.977 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/gm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/gm.W.161.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, gm  
GLT - VLBA\_MK, fgroup W, pol RR

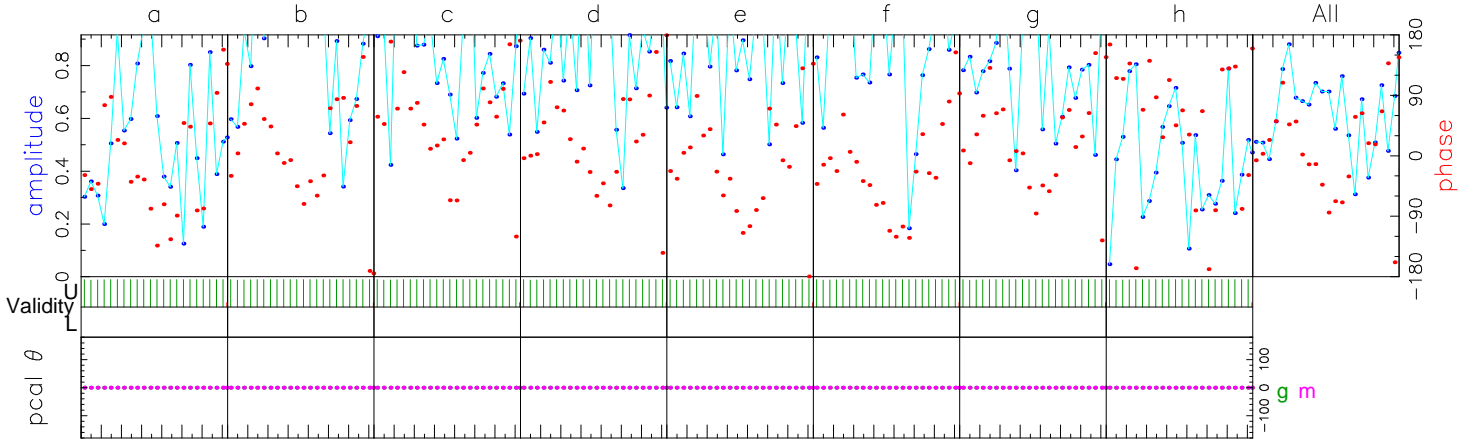


Fringe quality 7

SNR 17.1  
Int time 418.641  
Amp 0.306  
Phase 12.9  
PFD 0.0e+00  
Delays (us)  
SBD -0.004149  
MBD -0.003510  
Fringe rate (Hz)  
-0.019731  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

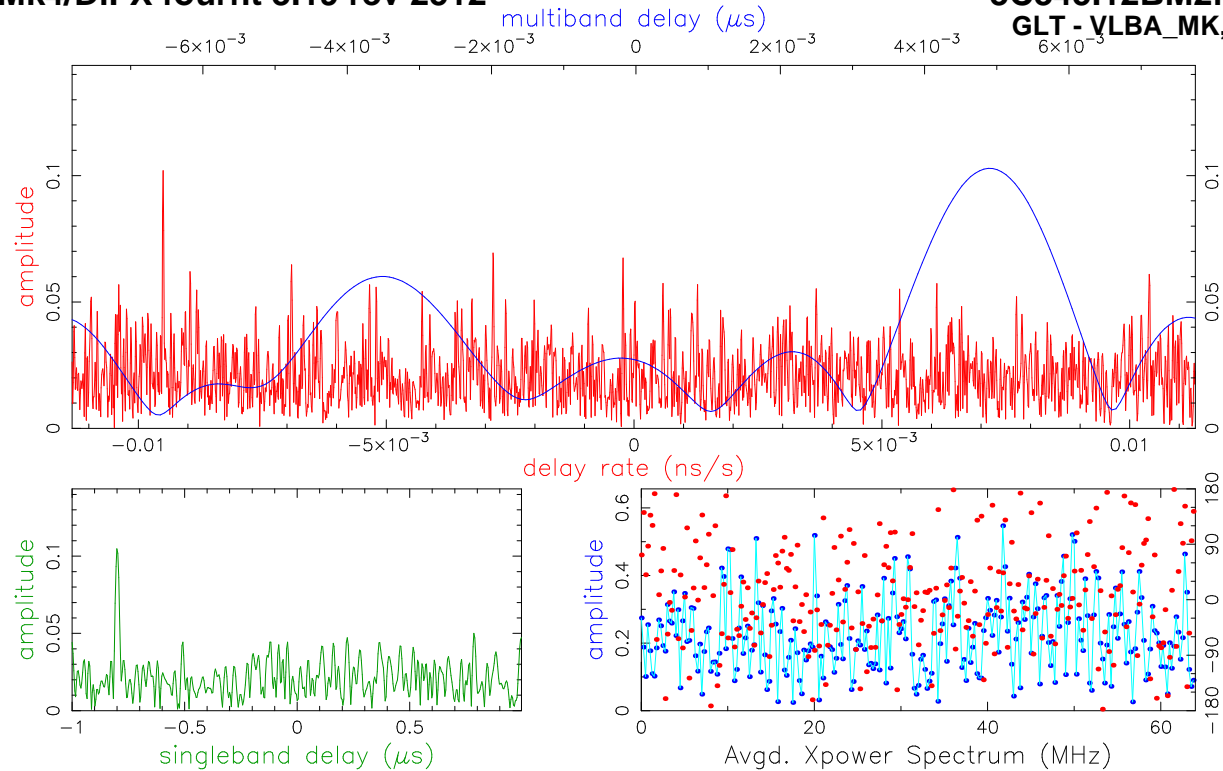
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171638  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-23.5	16.2	53.7	19.8	-12.0	-26.8	15.4	110.6	Phase	12.9
	0.2	0.4	0.5	0.4	0.4	0.5	0.4	0.2	Ampl.	0.4
	258.3	255.9	256.0	255.6	255.5	256.1	256.9	259.1	Sbd box	255.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.12784566974E+04		Apriori delay (usec)		1.12784602072E+04		Resid mbdelay (usec)		-3.50983E-03	+/- 6.3E-05
Sband delay (usec)	1.12784560577E+04		Apriori clock (usec)		-1.2673144E+00		Resid sbdelay (usec)		-4.14950E-03	+/- 5.0E-04
Phase delay (usec)	1.12784602076E+04		Apriori clockrate (us/s)		8.3692290E-08		Resid phdelay (usec)		4.14458E-07	+/- 2.2E-07
Delay rate (us/s)	-1.12479995652E+00		Apriori rate (us/s)		-1.12479972746E+00		Resid rate (us/s)		-2.29058E-07	+/- 8.9E-10
Total phase (deg)	101.8		Apriori accel (us/s/s)		-1.42117597820E-05		Resid phase (deg)		12.9	+/- 6.7

ph/seg (deg) 66.6 16.1 Search (2048X32) 0.303 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 110.8 28.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 49.7 9.5 Inc. seg. avg. 0.591 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 40.0 16.5 Inc. frq. avg. 0.365 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 180.2 el 53.2 pa -0.0 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 8367.012 3285.977 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/gm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/gm.W.179.12BM2R

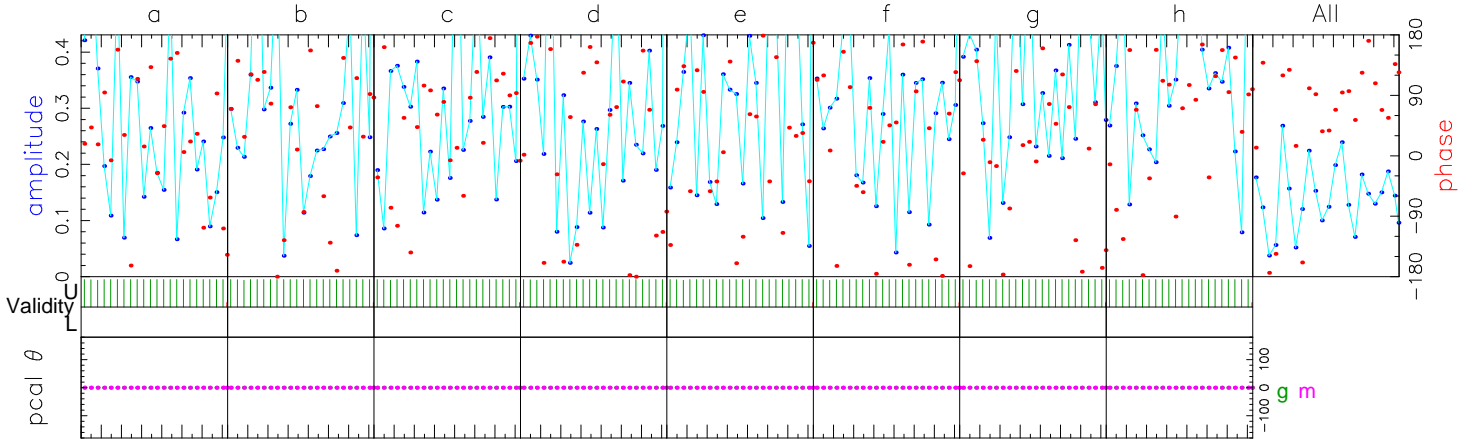


Fringe quality 0

SNR 5.9  
Int time 418.721  
Amp 0.144  
Phase 98.0  
PFD 6.0e-01  
Delays (us)  
SBD -0.799615  
MBD 0.004764  
Fringe rate (Hz)  
-0.819738  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171643  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

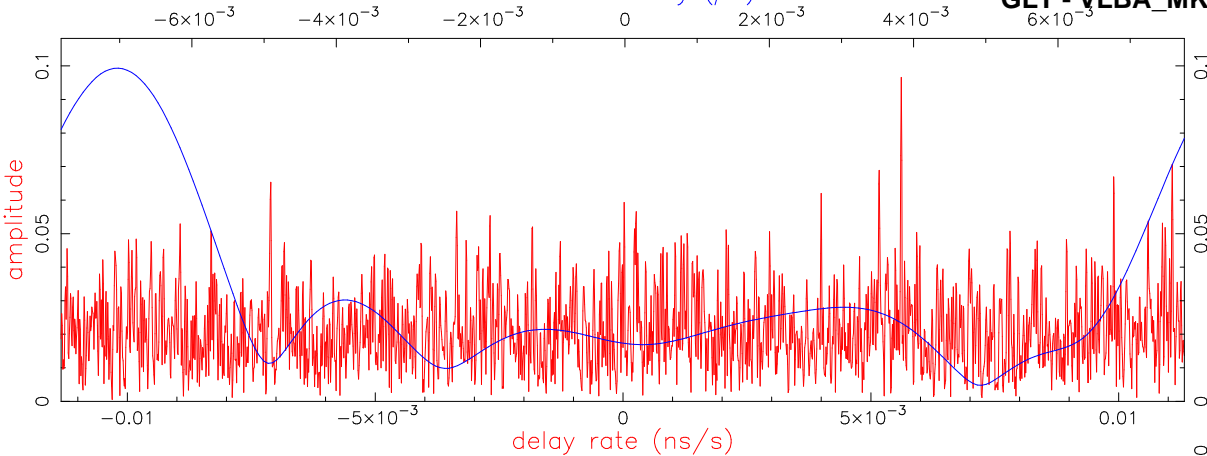
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	66.9	99.2	64.4	152.2	56.0	118.7	77.3	109.1	Phase	98.0
	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	Ampl.	0.1
	12.1	183.4	163.9	336.0	234.6	324.7	216.5	51.3	Sbd box	52.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)		1.12776680966E+04		Apriori delay (usec)	1.12784602072E+04		Resid mbdelay (usec)	4.76438E-03	+/-	1.8E-04
Sband delay (usec)		1.12776605919E+04		Apriori clock (usec)	-1.2673144E+00		Resid sbdelay (usec)	-7.99615E-01	+/-	1.5E-03
Phase delay (usec)		1.12784602103E+04		Apriori clockrate (us/s)	8.3692290E-08		Resid phdelay (usec)	3.16071E-06	+/-	6.3E-07
Delay rate (us/s)		-1.12480924380E+00		Apriori rate (us/s)	-1.12479972746E+00		Resid rate (us/s)	-9.51635E-06	+/-	2.6E-09
Total phase (deg)		186.9		Apriori accel (us/s/s)	-1.42117597820E-05		Resid phase (deg)	98.0	+/-	19.4

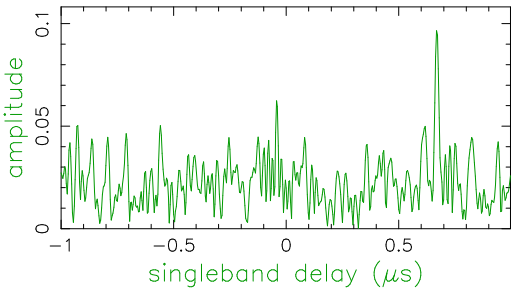
ph/seg (deg) 56.1 46.6 Search (2048X32) 0.100 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 66.4 81.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 36.0 27.5 Inc. seg. avg. 0.148 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 32.3 47.9 Inc. frq. avg. 0.143 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 180.2 el 53.2 pa -0.0 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 8367.012 3285.977 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/gm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/gm.W.204.12BM2R

multiband delay ( $\mu$ s)

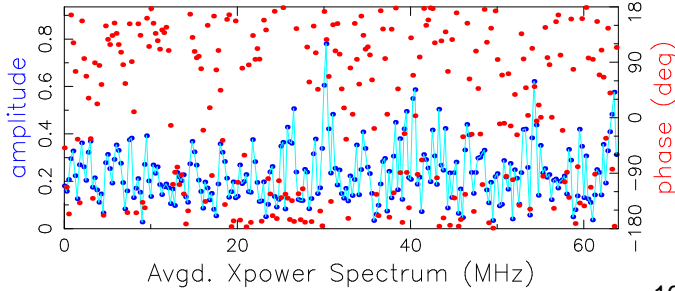


Fringe quality 0

SNR 5.5  
Int time 418.636  
Amp 0.108  
Phase -157.4  
PFD 1.0e+00  
Delays (us)  
SBD 0.669377  
MBD 0.008301  
Fringe rate (Hz)  
0.484301  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

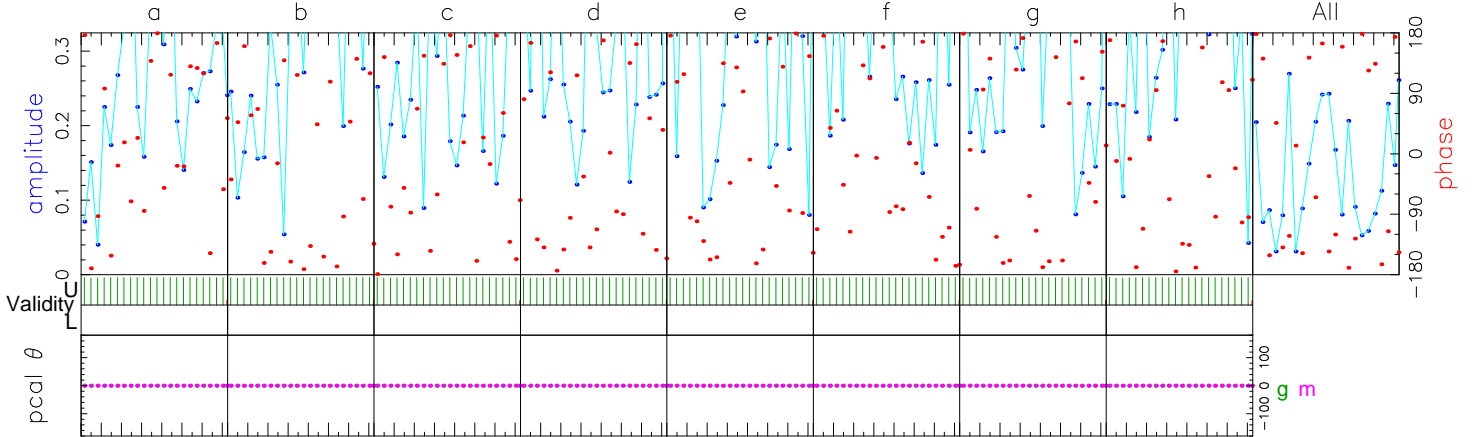


delay rate (ns/s)



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171647  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



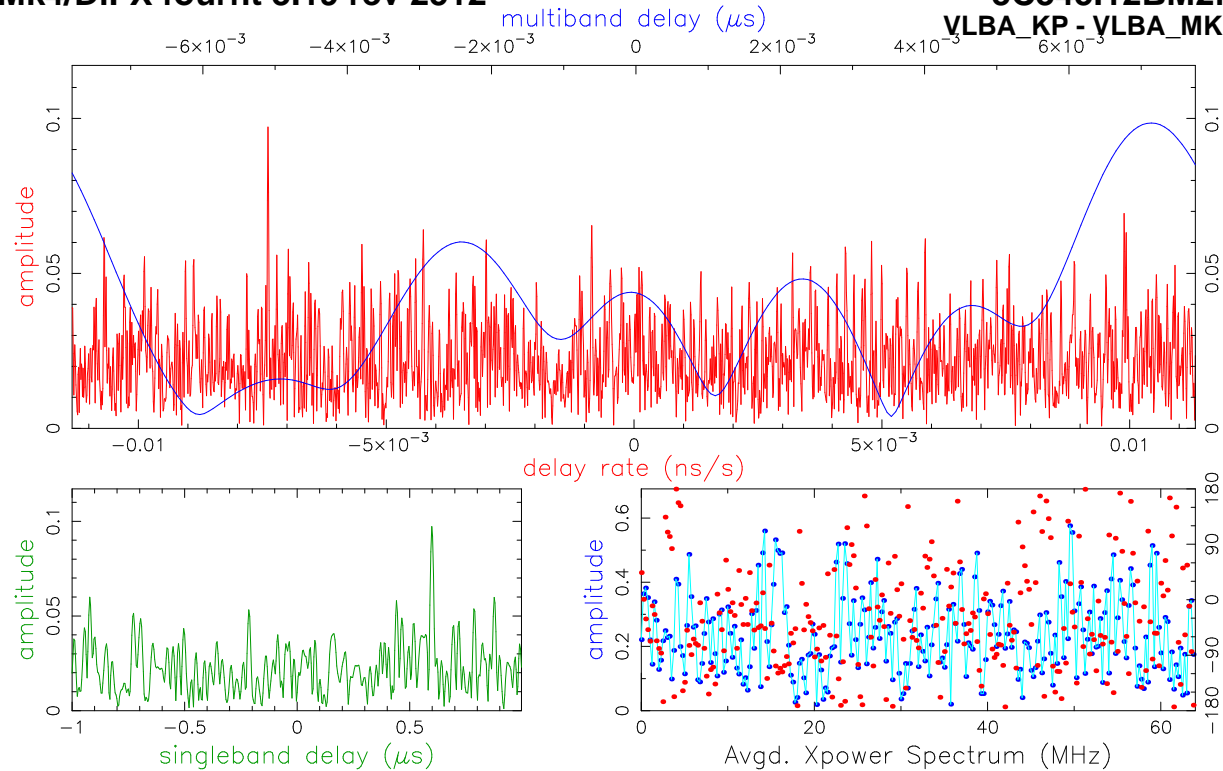
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	162.4	155.0	-158.0	-142.4	-166.0	-118.1	-168.9	-135.6	Phase	-157.4
	0.0	0.1	0.1	0.2	0.1	0.1	0.2	0.1	Ampl.	0.1
	179.1	416.2	349.9	428.9	216.0	217.7	429.3	276.9	Sbd box	428.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.12791247580E+04	Apriori delay (usec)	1.12784602072E+04	Resid mbdelay (usec)	8.30078E-03	+/-	2.0E-04
Sband delay (usec)	1.12791295844E+04	Apriori clock (usec)	-1.2673144E+00	Resid sbdelay (usec)	6.69377E-01	+/-	1.6E-03
Phase delay (usec)	1.12784602021E+04	Apriori clockrate (us/s)	8.3692290E-08	Resid phdelay (usec)	-5.07544E-06	+/-	6.8E-07
Delay rate (us/s)	-1.12479410520E+00	Apriori rate (us/s)	-1.12479972746E+00	Resid rate (us/s)	5.62226E-06	+/-	2.8E-09
Total phase (deg)	-68.5	Apriori accel (us/s/s)	-1.42117597820E-05	Resid phase (deg)	-157.4	+/-	21.0

ph/seg (deg)	64.3	Theor.	50.3	Amplitude	0.108 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	85.1		87.8	Search (2048X32)	0.098	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	32.5		29.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	39.9		51.8	Inc. seg. avg.	0.107	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.104	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

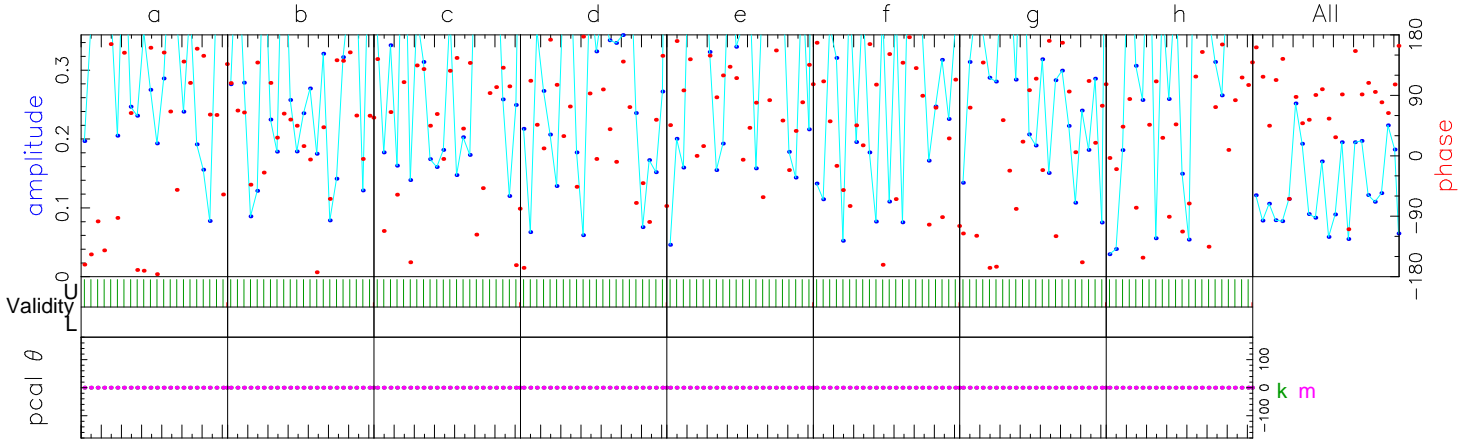
g: az 180.2 el 53.2 pa -0.0 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 8367.012 3285.977 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/gm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/gm.W.221.12BM2R





Fringe quality 0  
SNR 5.5  
Int time 419.539  
Amp 0.117  
Phase 91.0  
PFD 1.0e+00  
Delays (us)  
SBD 0.598520  
MBD -0.008301  
Fringe rate (Hz)  
-0.637056  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171635  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



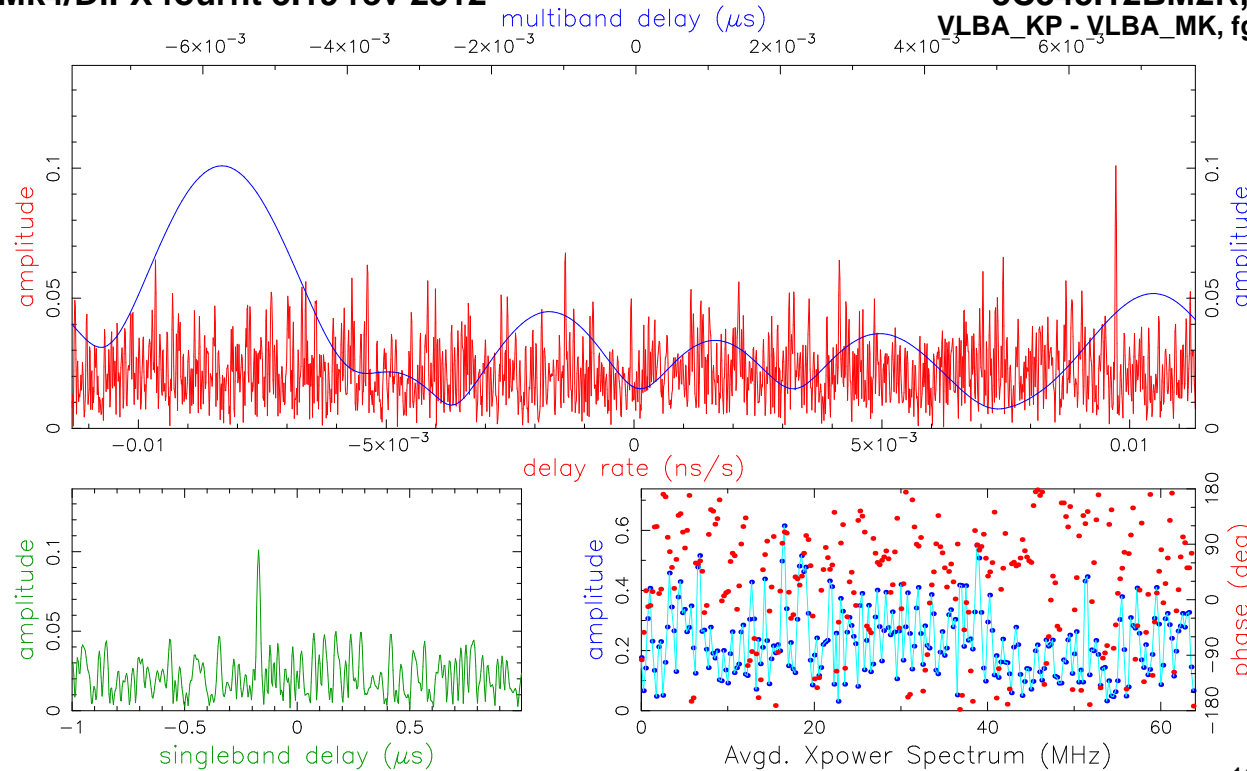
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.17720616923E+04	Apriori delay (usec)	1.17714606181E+04	Resid mbdelay (usec)	-8.30078E-03	+/-	2.0E-04
Sband delay (usec)	1.17720591376E+04	Apriori clock (usec)	-2.9672976E+00	Resid sbdelay (usec)	5.98520E-01	+/-	1.6E-03
Phase delay (usec)	1.17714606211E+04	Apriori clockrate (us/s)	-1.8588669E-07	Resid phdelay (usec)	2.93413E-06	+/-	6.8E-07
Delay rate (us/s)	-4.43495990387E-01	Apriori rate (us/s)	-4.43488594799E-01	Resid rate (us/s)	-7.39559E-06	+/-	2.8E-09
Total phase (deg)	323.1	Apriori accel (us/s/s)	-4.88877839268E-05	Resid phase (deg)	91.0	+/-	20.9

ph/seg (deg)	58.5	Theor.	50.2	Search (2048X32)	0.098	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	67.3		87.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	39.7		29.6	Inc. seg. avg.	0.114	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	58.1		51.7	Inc. frq. avg.	0.124	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 64.9 el 54.8 pa -89.3      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 3223.857 -1942.322      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c192a/v1\_PV/1234/No0009/km..12BM2R      Output file: /Exps/c192a/v1\_PV/1234/No0009/km.W.170.12BM2R

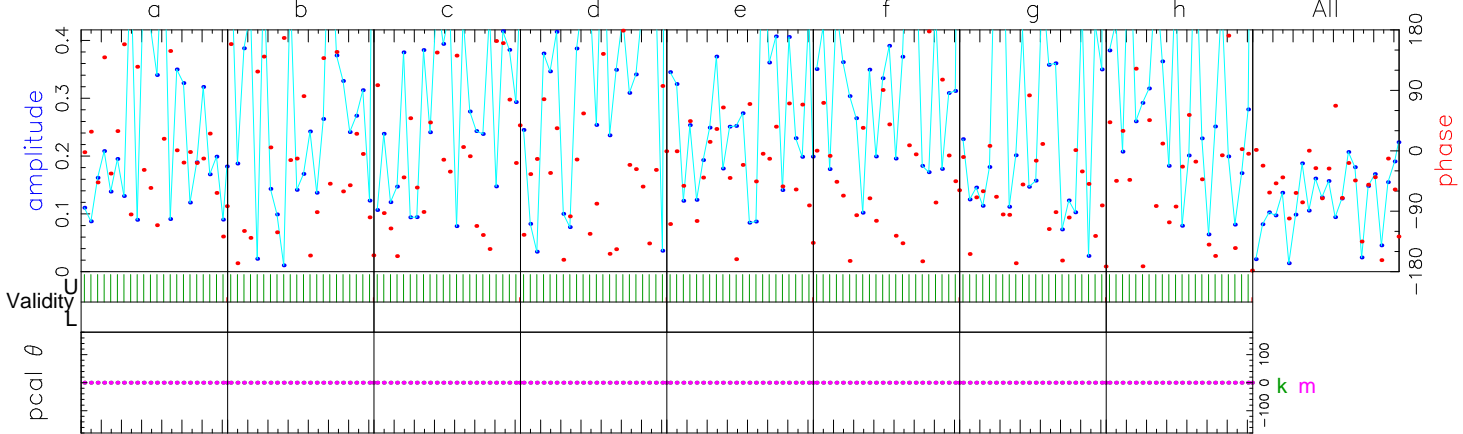


Fringe quality 0

SNR 5.7  
Int time 419.545  
Amp 0.139  
Phase -42.9  
PFD 9.8e-01  
Delays (us)  
SBD -0.171674  
MBD -0.005735  
Fringe rate (Hz) 0.838299  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171639  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-27.8	-112.6	-53.8	-64.6	-8.6	-32.9	-72.1	-30.3	Phase	-42.9
	0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1
	361.0	469.7	300.3	252.2	287.8	114.0	213.2	287.3	Sbd box	213.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

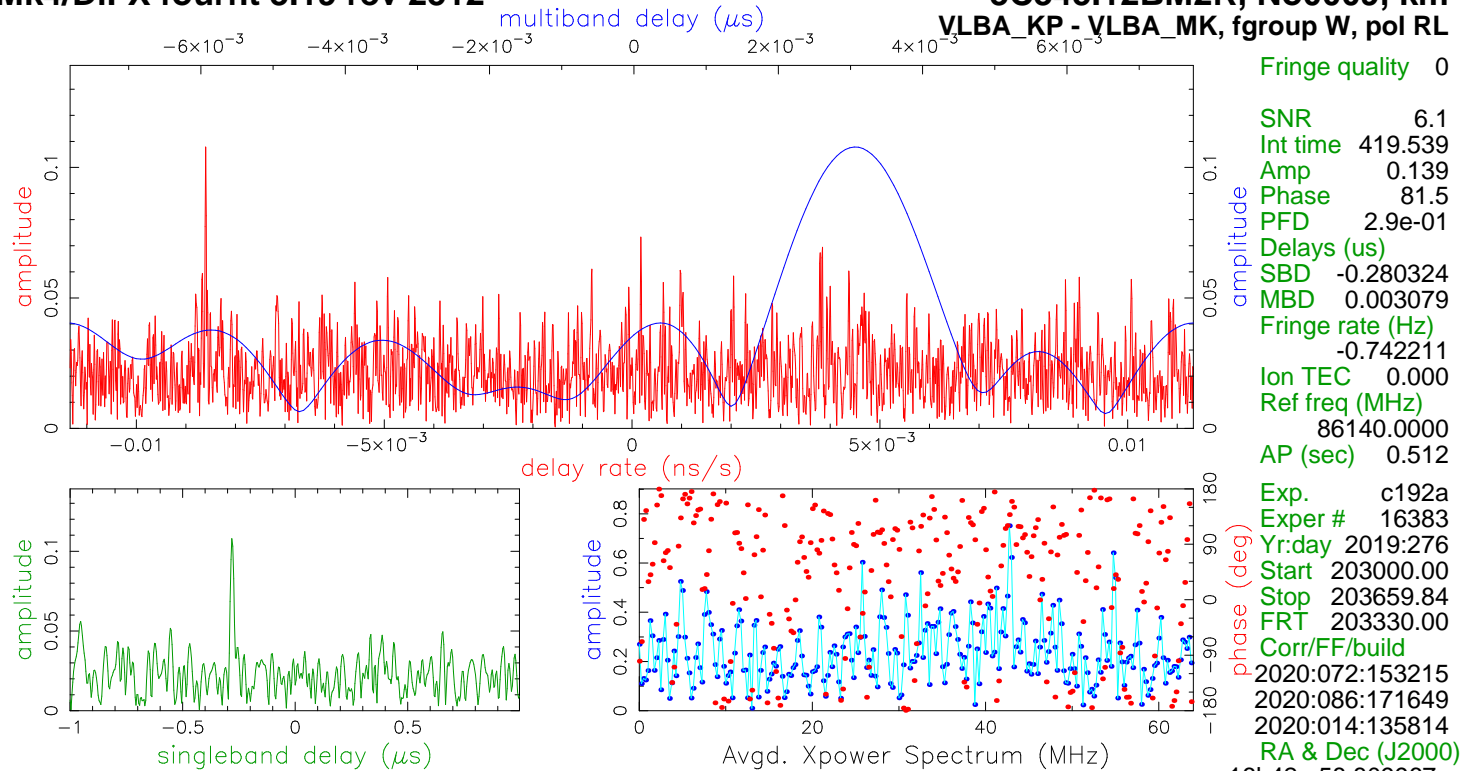
Group delay (usec)(sbd)	1.17712830078E+04	Apriori delay (usec)	1.17714606181E+04	Resid mbdelay (usec)	-5.73536E-03	+/-	1.9E-04
Sband delay (usec)	1.17712889446E+04	Apriori clock (usec)	-2.9672976E+00	Resid sbdelay (usec)	-1.71674E-01	+/-	1.5E-03
Phase delay (usec)	1.17714606167E+04	Apriori clockrate (us/s)	-1.8588669E-07	Resid phdelay (usec)	-1.38220E-06	+/-	6.5E-07
Delay rate (us/s)	-4.43478862974E-01	Apriori rate (us/s)	-4.43488594799E-01	Resid rate (us/s)	9.73183E-06	+/-	2.7E-09
Total phase (deg)	189.3	Apriori accel (us/s/s)	-4.88877839268E-05	Resid phase (deg)	-42.9	+/-	20.3

ph/seg (deg)	RMS 47.3	Theor. 48.6	Amplitude Search (2048X32)	0.139 +/- 0.025	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	58.8	84.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	36.5	28.7	Inc. seg. avg.	0.123	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	45.4	50.1	Inc. frq. avg.	0.139	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

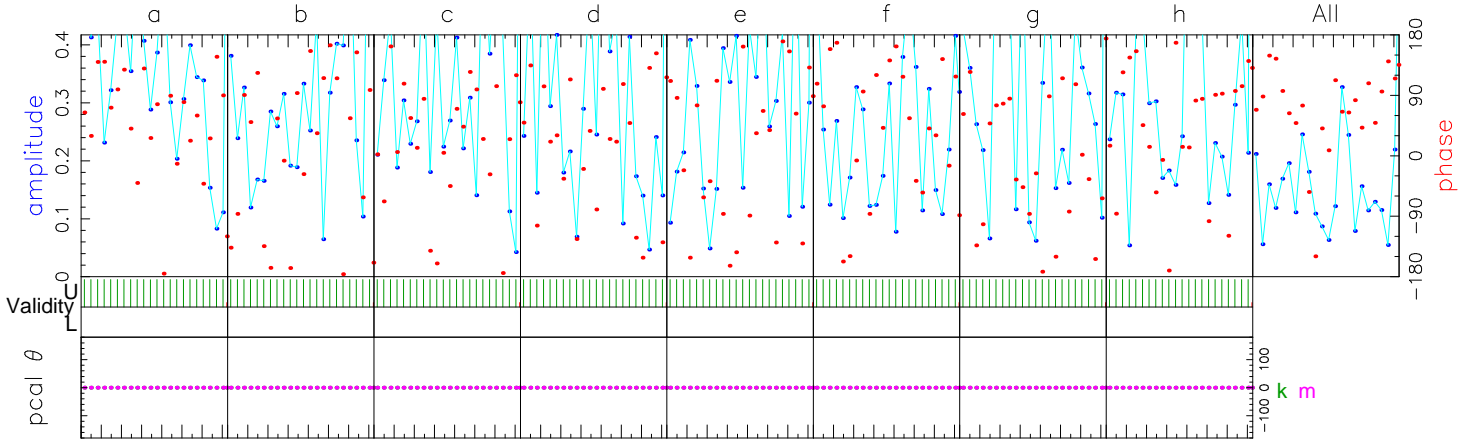
k: az 64.9 el 54.8 pa -89.3      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 3223.857 -1942.322      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c192a/v1\_PV/1234/No0009/km..12BM2R      Output file: /Exps/c192a/v1\_PV/1234/No0009/km.W.186.12BM2R





Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



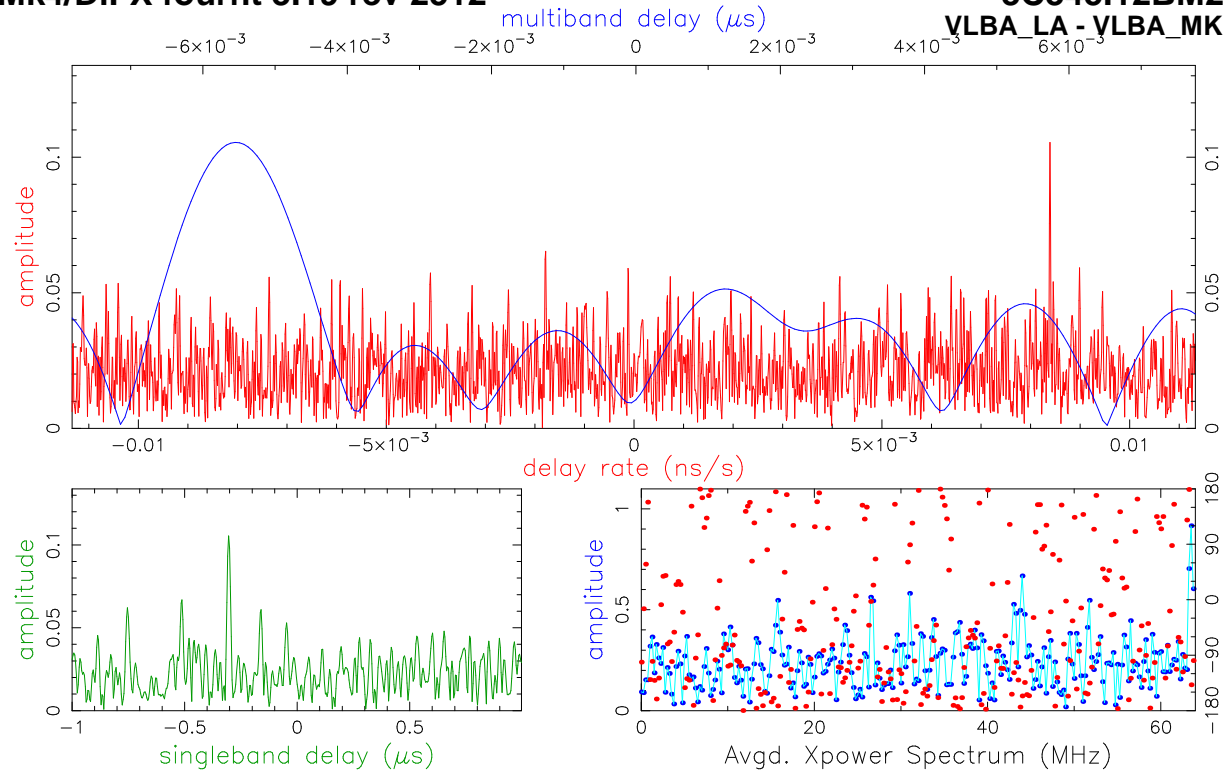
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
73.8	110.9	69.0	66.2	131.7	87.7	80.7	72.7	72.7	Phase	81.5
0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
114.2	298.8	473.2	196.7	469.5	144.5	220.6	15.4	15.4	Sbd box	185.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.17711824475E+04	Apriori delay (usec)	1.17714606181E+04	Resid mbdelay (usec)	3.07939E-03	+/-	1.8E-04
Sband delay (usec)	1.17711802936E+04	Apriori clock (usec)	-2.9672976E+00	Resid sbdelay (usec)	-2.80324E-01	+/-	1.4E-03
Phase delay (usec)	1.17714606207E+04	Apriori clockrate (us/s)	-1.8588669E-07	Resid phdelay (usec)	2.62798E-06	+/-	6.1E-07
Delay rate (us/s)	-4.43497211134E-01	Apriori rate (us/s)	-4.43488594799E-01	Resid rate (us/s)	-8.61634E-06	+/-	2.5E-09
Total phase (deg)	313.6	Apriori accel (us/s/s)	-4.88877839268E-05	Resid phase (deg)	81.5	+/-	18.9

ph/seg (deg)	53.1	Theor.	45.3	Amplitude	0.139 +/- 0.023	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	81.0		79.0	Search (2048X32)	0.105	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	25.6		26.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	34.3		46.6	Inc. seg. avg.	0.148	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.131	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

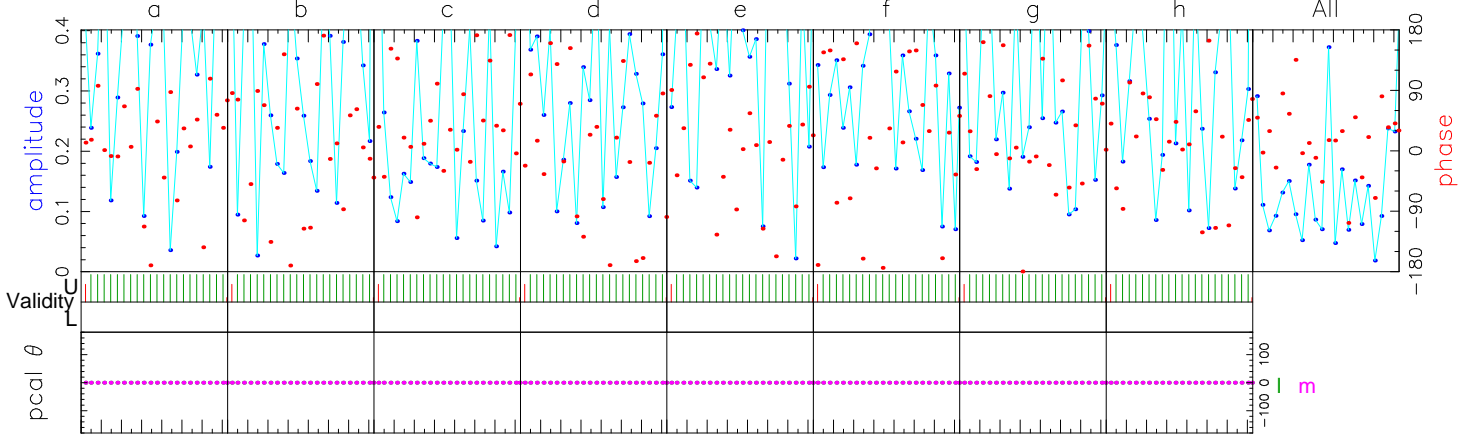
k: az 64.9 el 54.8 pa -89.3      m: az 52.6 el 15.0 pa -76.4      u,v (fr/asec) 3223.857 -1942.322      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0009/km..12BM2R    Output file: /Exps/c192a/v1\_PV/1234/No0009/km.W.229.12BM2R



Fringe quality 0  
SNR 5.9  
Int time 412.918  
Amp 0.134  
Phase 27.5  
PFD 6.7e-01  
Delays (us)  
SBD -0.304231  
MBD -0.005530  
Fringe rate (Hz) 0.723680  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171651  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

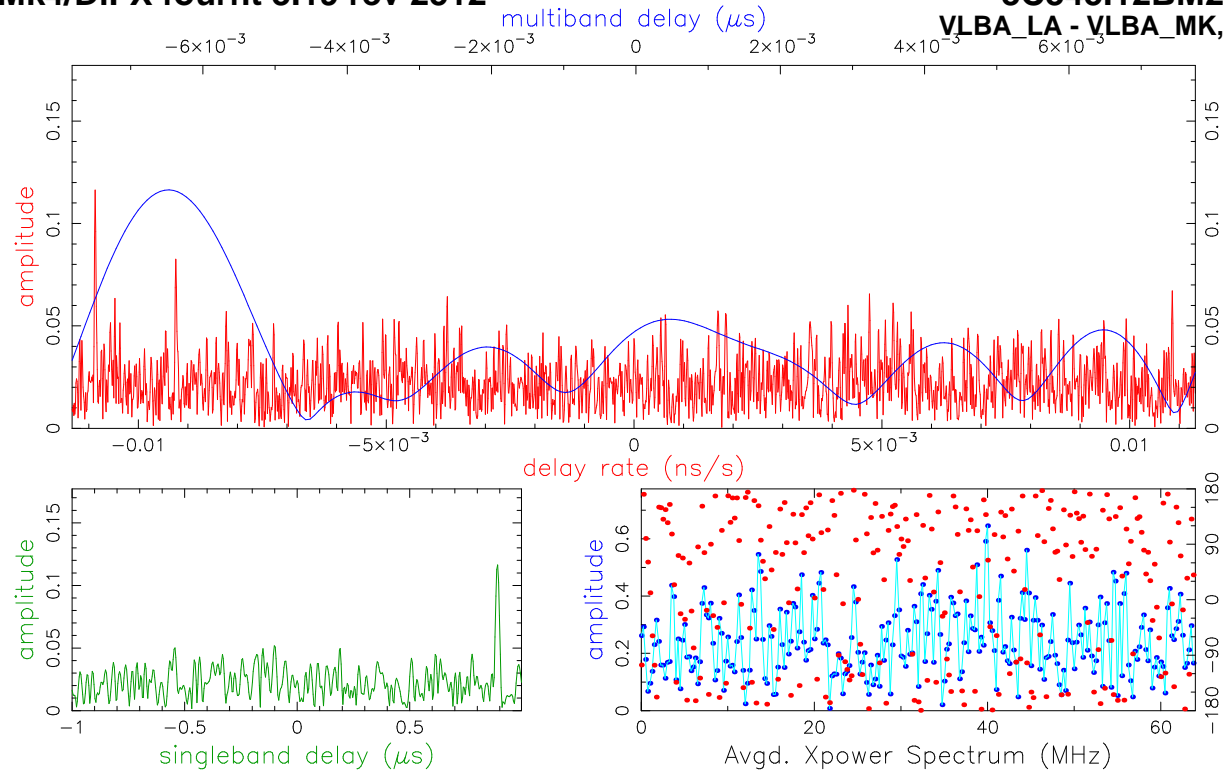


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.28575198224E+04	Apriori delay (usec)	1.28578222271E+04	Resid mbdelay (usec)	-5.52970E-03	+/-	1.8E-04
Sband delay (usec)	1.28575179966E+04	Apriori clock (usec)	-3.3067610E+00	Resid sbdelay (usec)	-3.04231E-01	+/-	1.5E-03
Phase delay (usec)	1.28578222280E+04	Apriori clockrate (us/s)	-3.4277971E-07	Resid phdelay (usec)	8.87003E-07	+/-	6.3E-07
Delay rate (us/s)	-5.43224337300E-01	Apriori rate (us/s)	-5.43232738512E-01	Resid rate (us/s)	8.40121E-06	+/-	2.6E-09
Total phase (deg)	258.5	Apriori accel (us/s/s)	-5.06737882748E-05	Resid phase (deg)	27.5	+/-	19.5

ph/seg (deg)	54.1	RMS	46.7	Theor.	46.7	Amplitude	0.134 +/- 0.023	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	85.2	Search (2048X32)	0.103	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	24.1	Inc. seg. avg.	0.127	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
amp/frq (%)	54.7	Inc. frq. avg.	0.124										

l: az 70.8 el 60.4 pa -86.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3964.906 -1691.519 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/lm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/lm.W.237.12BM2R

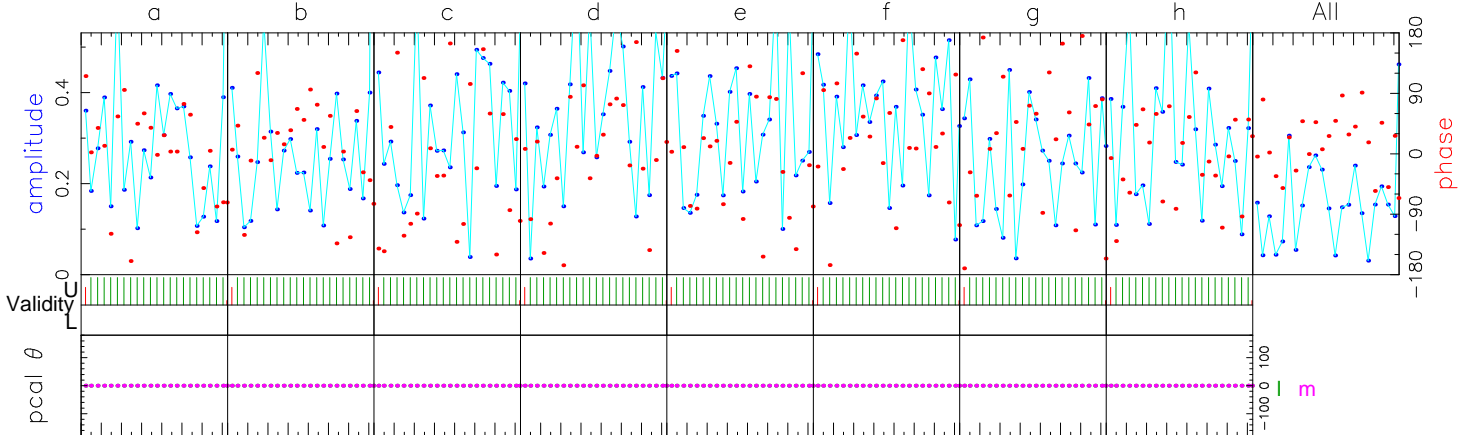


Fringe quality 0

SNR 6.5  
Int time 412.924  
Amp 0.177  
Phase 20.7  
PFD 2.1e-02  
Delays (us)  
SBD 0.889432  
MBD -0.006514  
Fringe rate (Hz)  
-0.938092  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171655  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

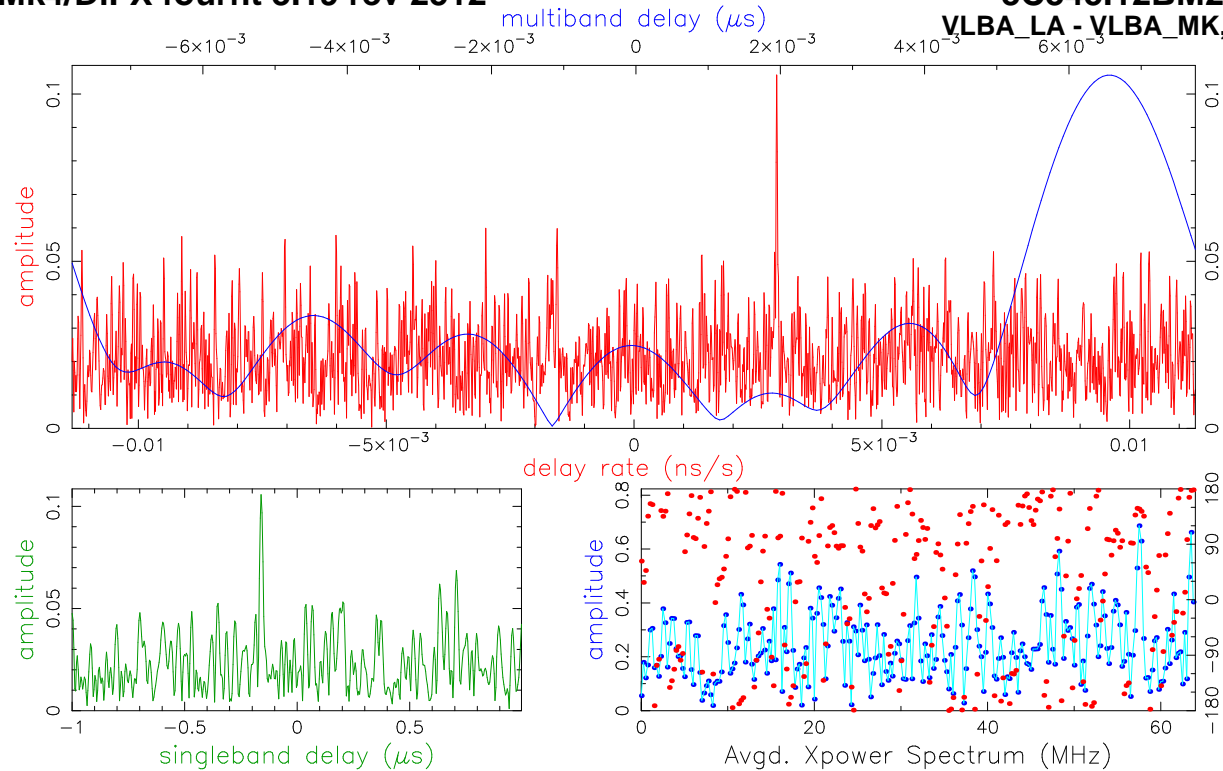
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	815/0	815/0	815/0	815/0	816/0	816/0	816/0	816/0			
l	1000	1000	1000	1000	1000	1000	1000	1000			
m	1000	1000	1000	1000	1000	1000	1000	1000			
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
l	1000	1000	1000	1000	1000	1000	1000	1000			
m	1000	1000	1000	1000	1000	1000	1000	1000			
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		1.28587063385E+04			1.28578222271E+04				Resid mbdelay (usec)	-6.51362E-03	+/- 1.7E-04
Sband delay (usec)		1.28587116593E+04			-3.3067610E+00				Resid sbdelay (usec)	8.89432E-01	+/- 1.3E-03
Phase delay (usec)		1.28578222278E+04			-3.4277971E-07				Resid phdelay (usec)	6.67048E-07	+/- 5.7E-07
Delay rate (us/s)		-5.43243628834E-01			-5.43232738512E-01				Resid rate (us/s)	-1.08903E-05	+/- 2.4E-09
Total phase (deg)			251.7		-5.06737882748E-05				Resid phase (deg)	20.7	+/- 17.6
RMS	42.7	42.1			0.110				PCal mode: MANUAL, MANUAL		
ph/seg (deg)	42.7	42.1			0.110				PCal rate: 0.000E+00, 0.000E+00 (us/s)		
amp/seg (%)	73.6	73.5			0.000				sb window (us)	-1.000	1.000
ph/frq (deg)	43.2	24.9			0.176				Bits/sample: 2x2		
amp/frq (%)	39.0	43.4			0.176				SampCntNorm: enabled		
									Sample rate(MSamp/s): 128		
									Data rate(Mb/s): 2048		
									nlags: 256		
									t_cohere infinite		
									ion window (TEC)	0.00	0.00

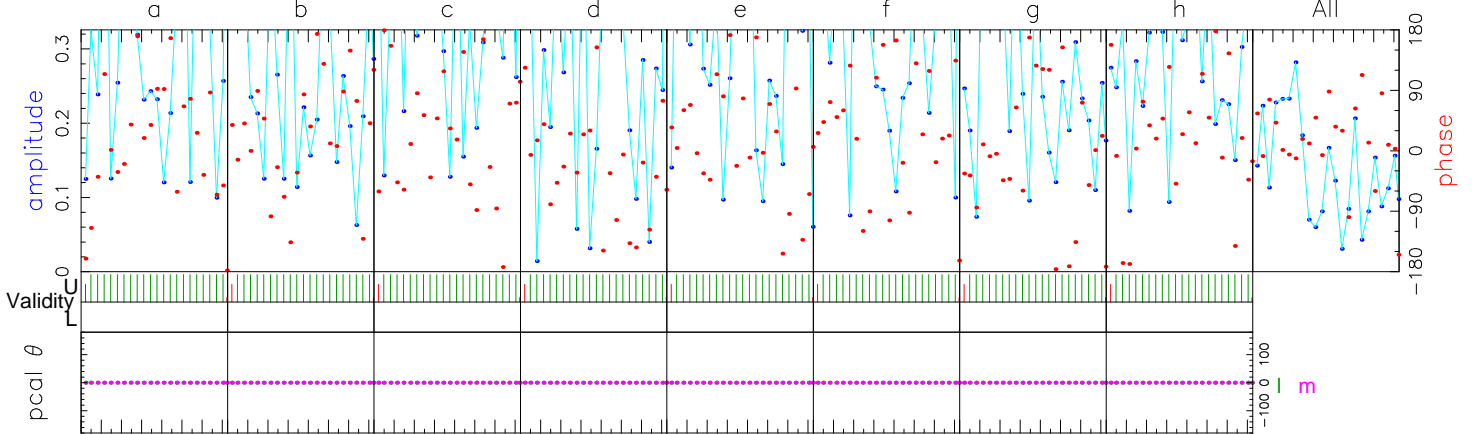
l: az 70.8 el 60.4 pa -86.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3964.906 -1691.519 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Im..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Im.W.249.12BM2R



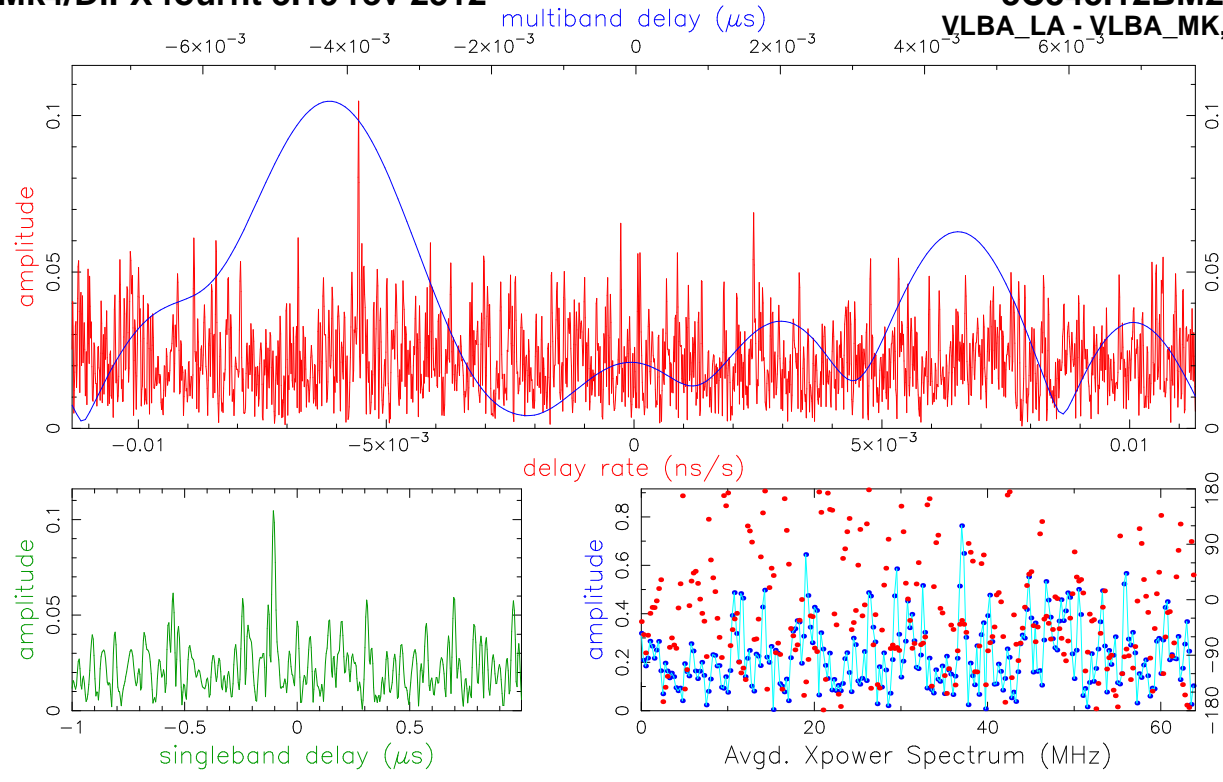
Fringe quality 0  
SNR 5.9  
Int time 412.924  
Amp 0.109  
Phase 18.3  
PFD 6.6e-01  
Delays (us)  
SBD -0.159966  
MBD 0.006569  
Fringe rate (Hz) 0.248088  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171659  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



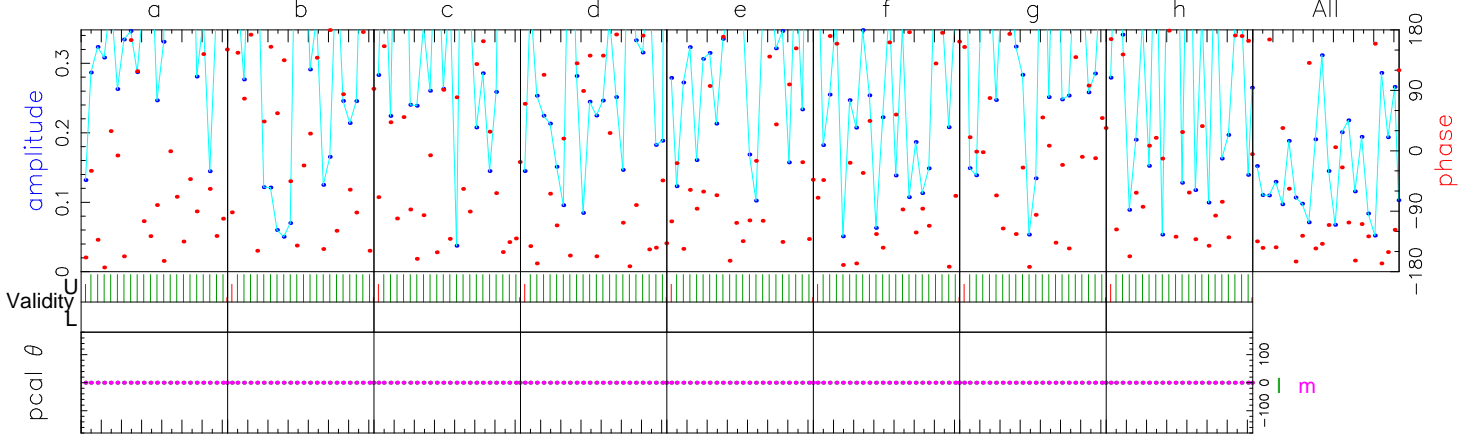
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)		1.28576569206E+04				1.28578222271E+04			Resid mbdelay (usec)	6.56853E-03 +/- 1.8E-04
Sband delay (usec)		1.28576622613E+04				-3.3067610E+00			Resid sbdelay (usec)	-1.59966E-01 +/- 1.5E-03
Phase delay (usec)		1.28578222277E+04				-3.4277971E-07			Resid phdelay (usec)	5.91110E-07 +/- 6.3E-07
Delay rate (us/s)		-5.43229858461E-01				-5.43232738512E-01			Resid rate (us/s)	2.88005E-06 +/- 2.6E-09
Total phase (deg)			249.4			-5.06737882748E-05			Resid phase (deg)	18.3 +/- 19.5

ph/seg (deg) 50.0 46.6 Search (2048X32) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 73.9 81.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 19.3 27.6 Inc. seg. avg. 0.108 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 20.5 48.1 Inc. frq. avg. 0.101 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
l: az 70.8 el 60.4 pa -86.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3964.906 -1691.519 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Im..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Im.W.263.12BM2R simultaneous interpolator



Fringe quality 0  
SNR 5.8  
Int time 412.919  
Amp 0.116  
Phase -131.1  
PFD 7.6e-01  
Delays (us)  
SBD -0.104821  
MBD -0.004233  
Fringe rate (Hz)  
-0.479677  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171704  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



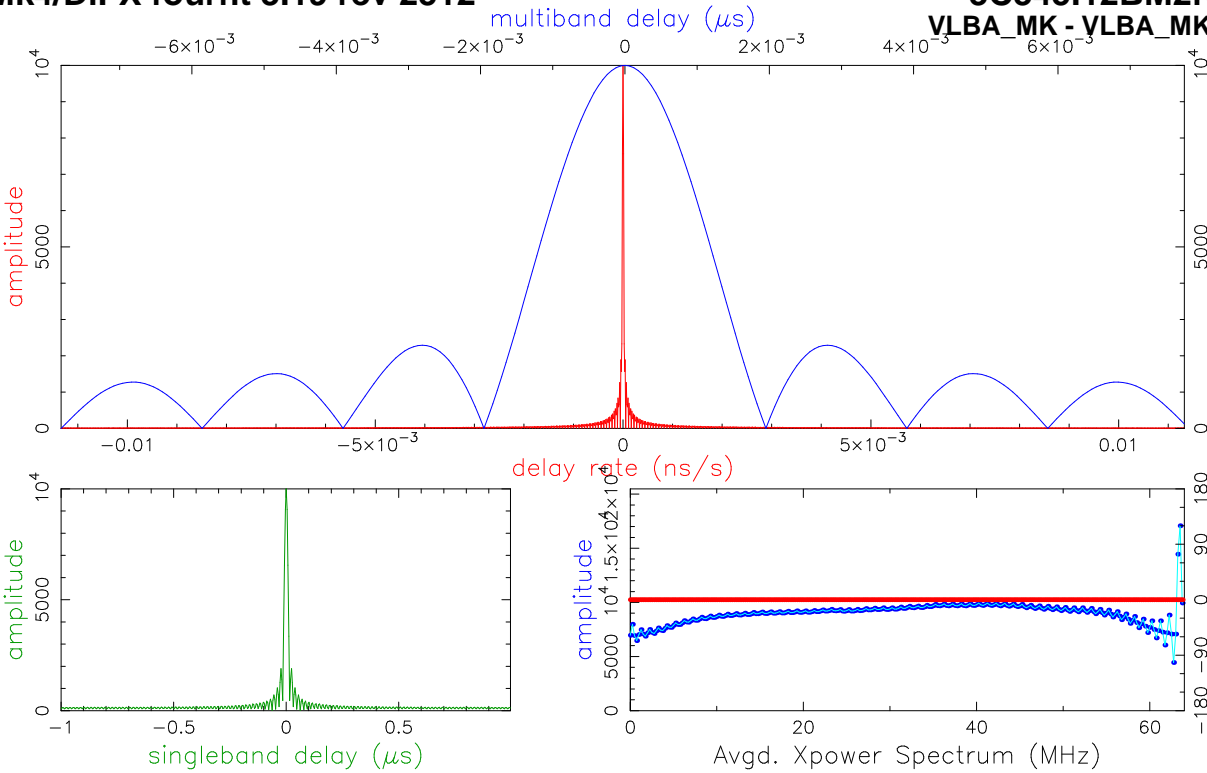
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-100.7	-166.3	-120.2	-163.2	-125.6	-145.3	15.8	-120.7	Phase	-131.1
	0.2	0.1	0.2	0.2	0.2	0.1	0.0	0.1	Ampl.	0.1
	479.3	319.0	193.0	164.4	335.0	55.0	395.7	65.0	Sbd box	230.2
U/L	815/0	815/0	815/0	815/0	816/0	816/0	816/0	816/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.28577242440E+04		Apriori delay (usec)	1.28578222271E+04	Resid mbdelay (usec)	-4.23306E-03	+/-	1.9E-04		
Sband delay (usec)	1.28577174063E+04		Apriori clock (usec)	-3.3067610E+00	Resid sbdelay (usec)	-1.04821E-01	+/-	1.5E-03		
Phase delay (usec)	1.28578222229E+04		Apriori clockrate (us/s)	-3.4277971E-07	Resid phdelay (usec)	-4.22702E-06	+/-	6.3E-07		
Delay rate (us/s)	-5.43238307086E-01		Apriori rate (us/s)	-5.43232738512E-01	Resid rate (us/s)	-5.56857E-06	+/-	2.6E-09		
Total phase (deg)		99.9	Apriori accel (us/s/s)	-5.06737882748E-05	Resid phase (deg)	-131.1	+/-	19.7		

ph/seg (deg) 64.0 47.0 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.5 82.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 64.8 27.8 Inc. seg. avg. 0.127 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 42.8 48.5 Inc. frq. avg. 0.121 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 l: az 70.8 el 60.4 pa -86.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3964.906 -1691.519 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Im..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Im.W.284.12BM2R



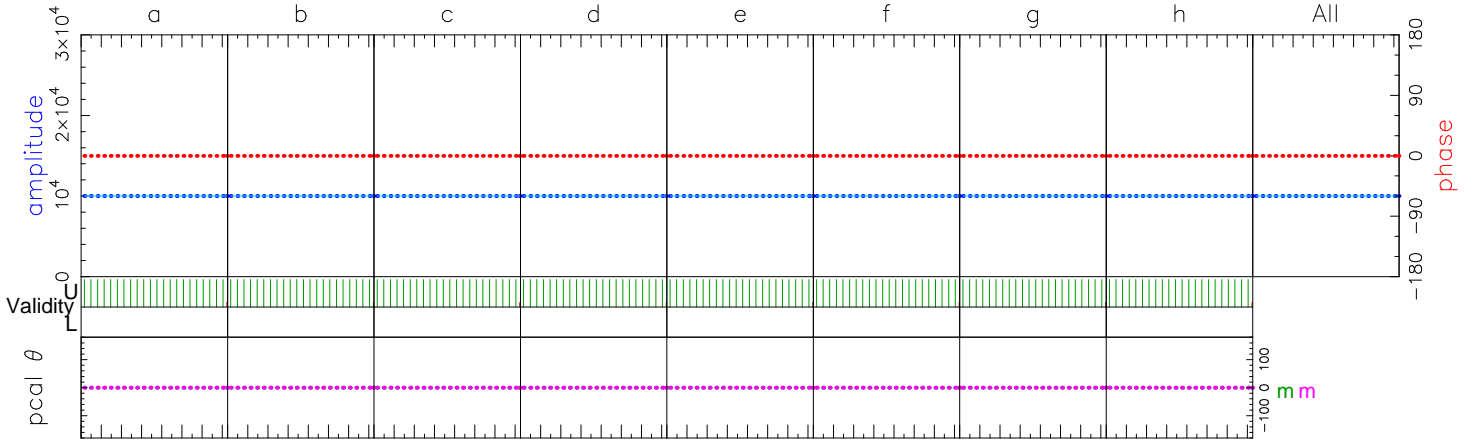
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mm  
VLBA\_MK - VLBA\_MK, fgroup W, pol LL



Fringe quality 9  
SNR 560225.8  
Int time 419.692  
Amp 10000.001  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz)  
0.000000  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171657  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

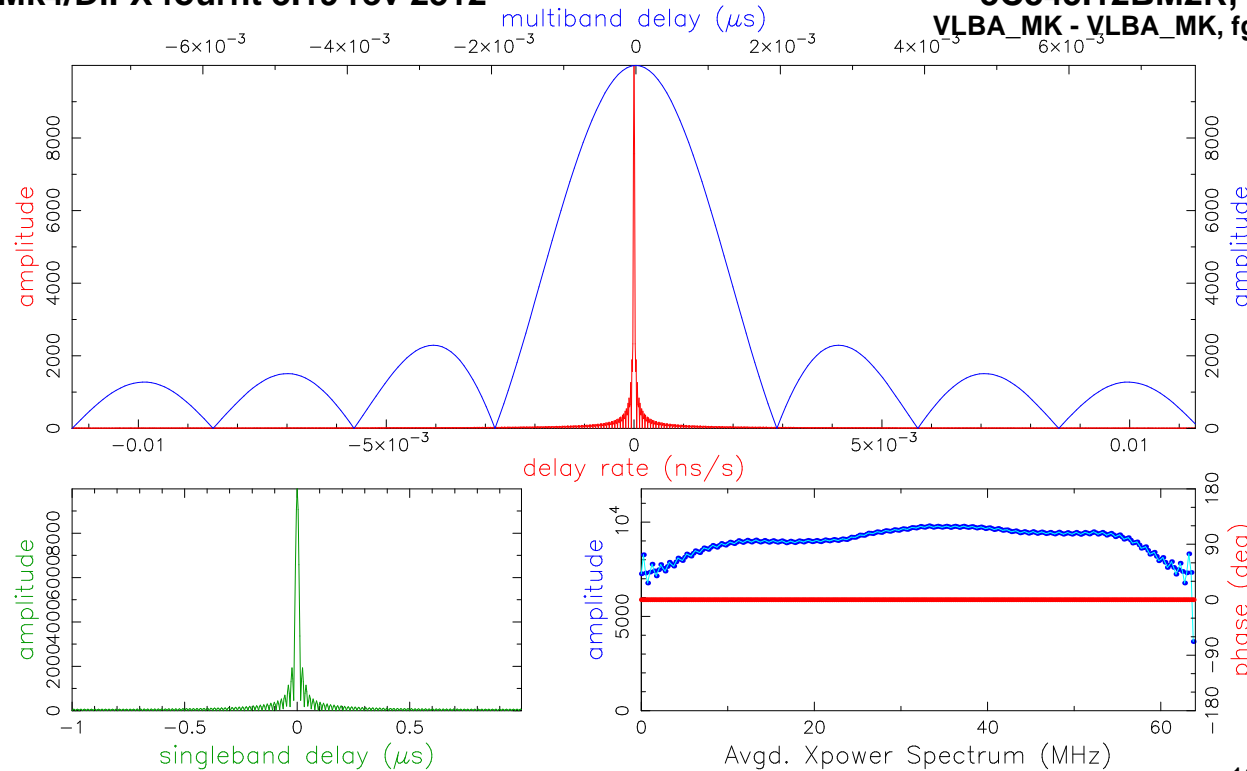


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-0.0	-0.0	0.0	0.0	0.0	0.0	0.0	-0.0	Phase	0.0
	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	Sbd box	257.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 1.9E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.5E-08  
 Phase delay (usec) 7.97808485394E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 7.97808E-20 +/- 6.6E-12  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 10000.001 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X32) 10000.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.001 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

m: az 52.6 el 15.0 pa -76.4 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mm.W.252.12BM2R

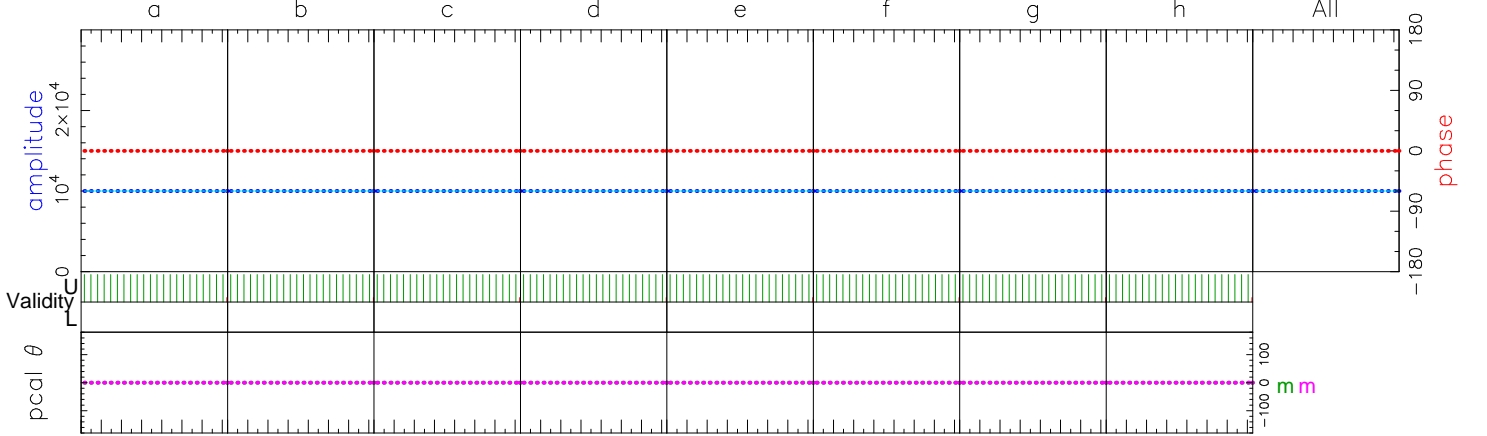


Fringe quality 9

SNR 560229.2  
Int time 419.698  
Amp 9999.997  
Phase -0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Yr:day 16383  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171701  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	Ampl.	10000.0
m	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00 +/- 1.9E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid sbdelay (usec)	0.00000E+00 +/- 1.5E-08
Phase delay (usec)	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	-2.26150301232E-20	Resid phdelay (usec)	-2.26150E-20 +/- 6.6E-12
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	Resid rate (us/s)	0.00000E+00 +/- 2.7E-14
Total phase (deg)			-0.0						Resid phase (deg)	-0.0 +/- 0.0

ph/seg (deg) 0.0 0.0  
amp/seg (%) 0.0 0.0  
ph/frq (deg) 0.0 0.0  
amp/frq (%) 0.0 0.0

m: az 52.6 el 15.0 pa -76.4  
Control file: cf\_1234\_gmva

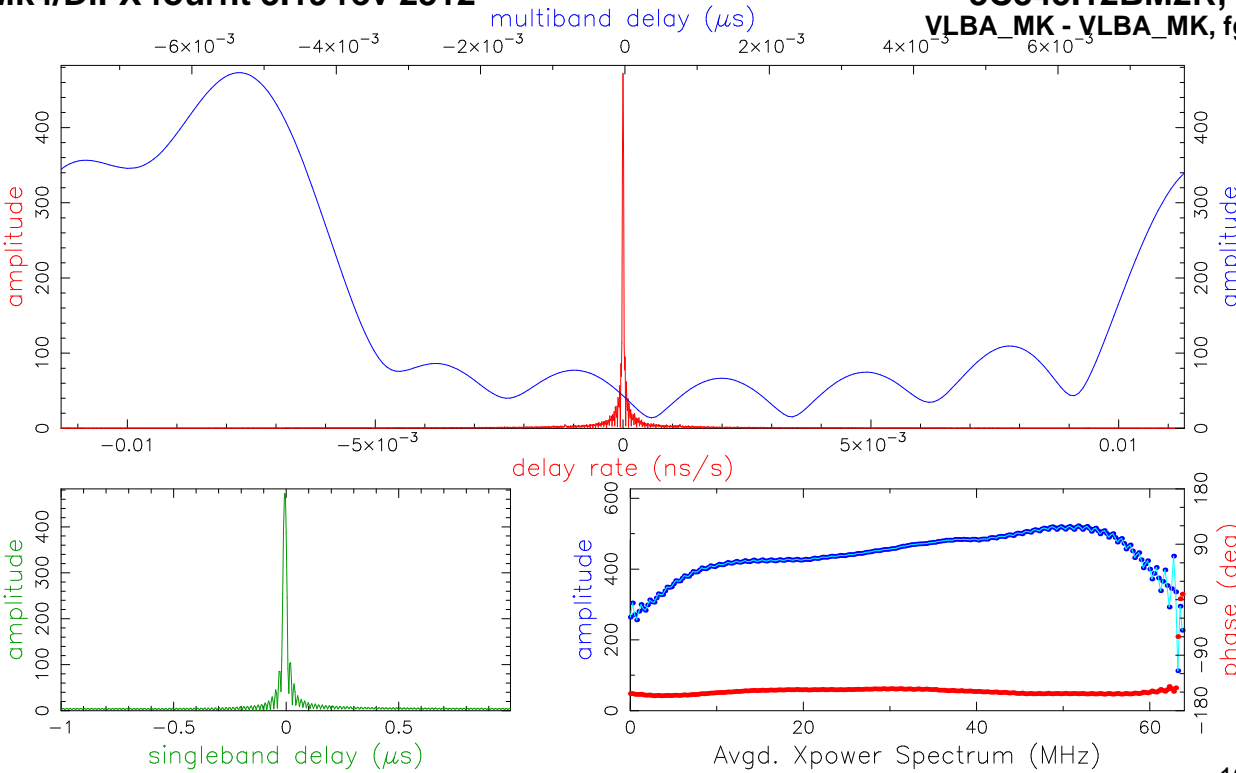
m: az 52.6 el 15.0 pa -76.4  
Input file: /Exps/c192a/v1\_PV/1234/No0009/mm..12BM2R

u, v (fr/asec) 0.000 0.000  
Output file: /Exps/c192a/v1\_PV/1234/No0009/mm.W.271.12BM2R

simultaneous interpolator

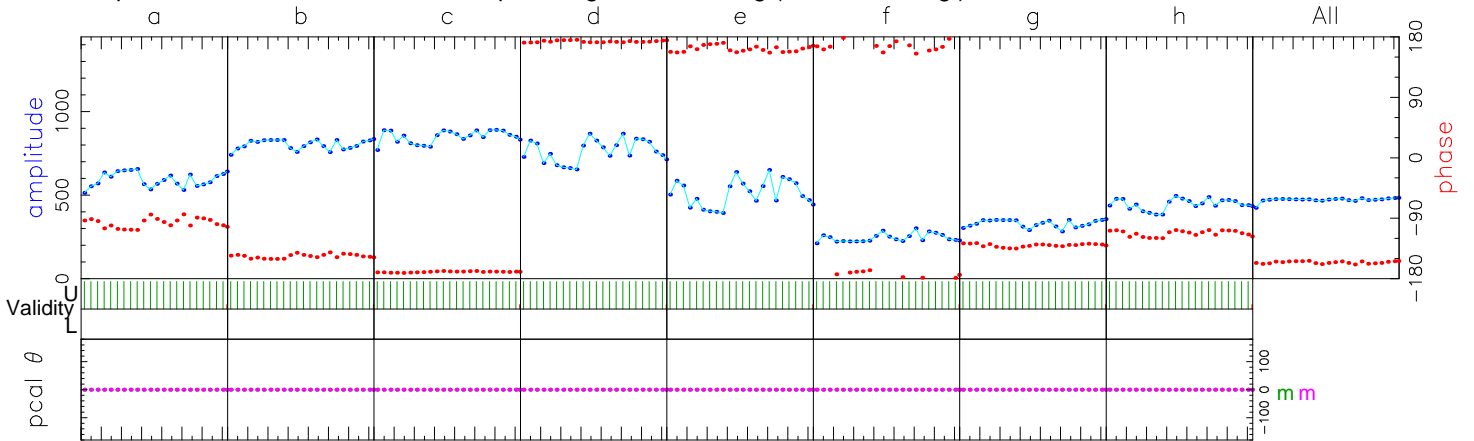
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mm VLBA\_MK - VLBA\_MK, fgroup W, pol LR



Fringe quality 5  
 SNR 27041.5  
 Int time 419.692  
 Amp 482.689  
 Phase -155.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005888  
 MBD -0.005263  
 Fringe rate (Hz)  
 -0.000008  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192a  
 Exper # 16383  
 Yr:day 2019:276  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:072:153215  
 2020:086:171706  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

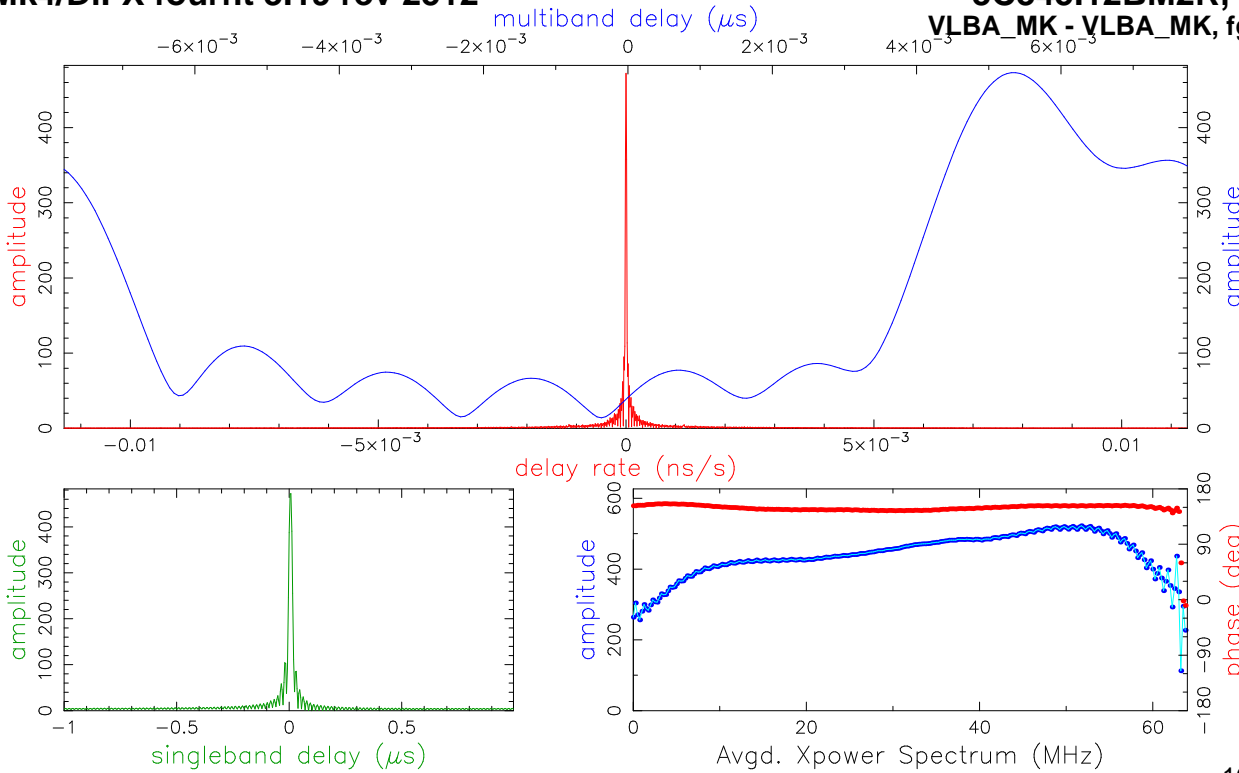


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-97.1	-146.4	-169.8	173.0	161.3	172.5	-130.3	-112.0	Phase	-155.7
	588.0	801.3	850.7	767.0	513.2	240.3	329.8	445.4	Ampl.	567.0
	255.0	254.9	255.3	255.6	255.4	256.4	256.0	256.3	Sbd box	255.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.26300000000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-5.26300E-03	+/- 4.0E-08
Sband delay (usec)	-5.88850000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-5.88850E-03	+/- 3.2E-07
Phase delay (usec)	-5.02177564143E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.02178E-06	+/- 1.4E-10
Delay rate (us/s)	-9.35296057851E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-9.35296E-11	+/- 5.6E-13
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-155.7	+/- 0.0

ph/seg (deg) 1.6 0.0 Search (2048X32) 472.998 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 3.2 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.1 0.0 Inc. seg. avg. 472.265 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.1 0.0 Inc. frq. avg. 566.975 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mm.W.290.12BM2R

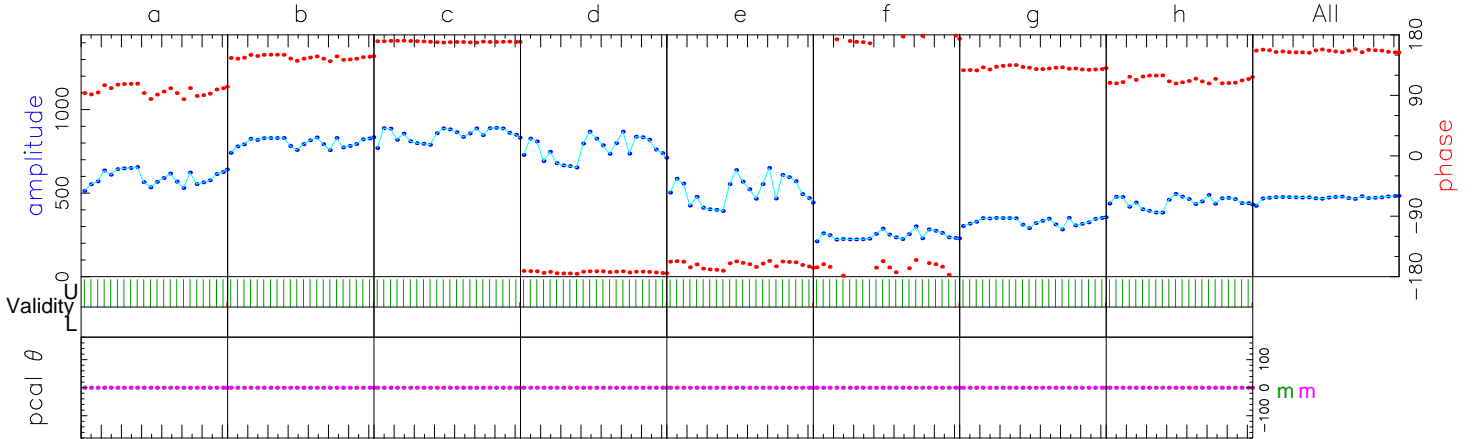
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mm  
VLBA\_MK - VLBA\_MK, fgroup W, pol RL



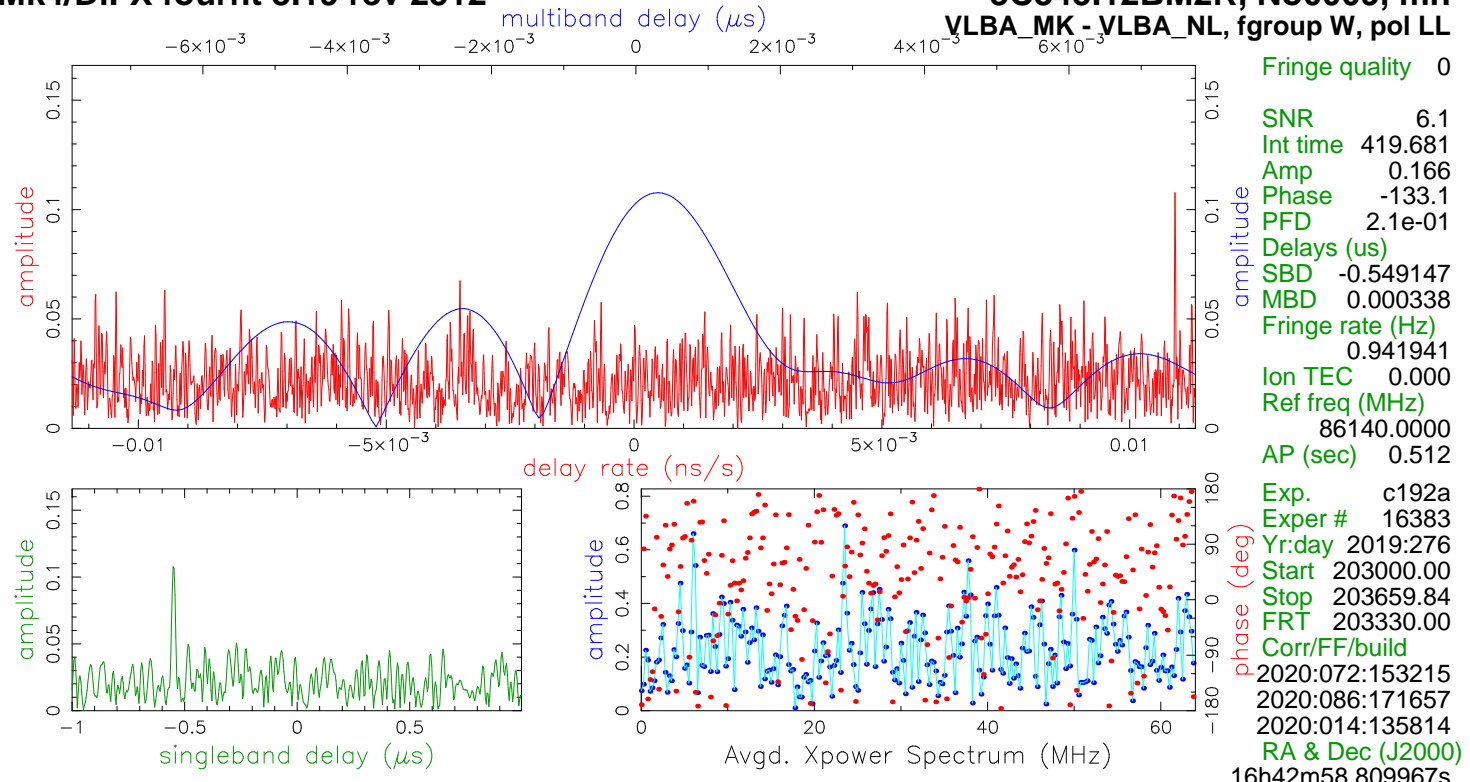
Fringe quality 5  
SNR 27041.3  
Int time 419.698  
Amp 482.683  
Phase 155.7  
PFD 0.0e+00  
Delays (us)  
SBD 0.005888  
MBD 0.005263  
Fringe rate (Hz) 0.000008  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171710  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

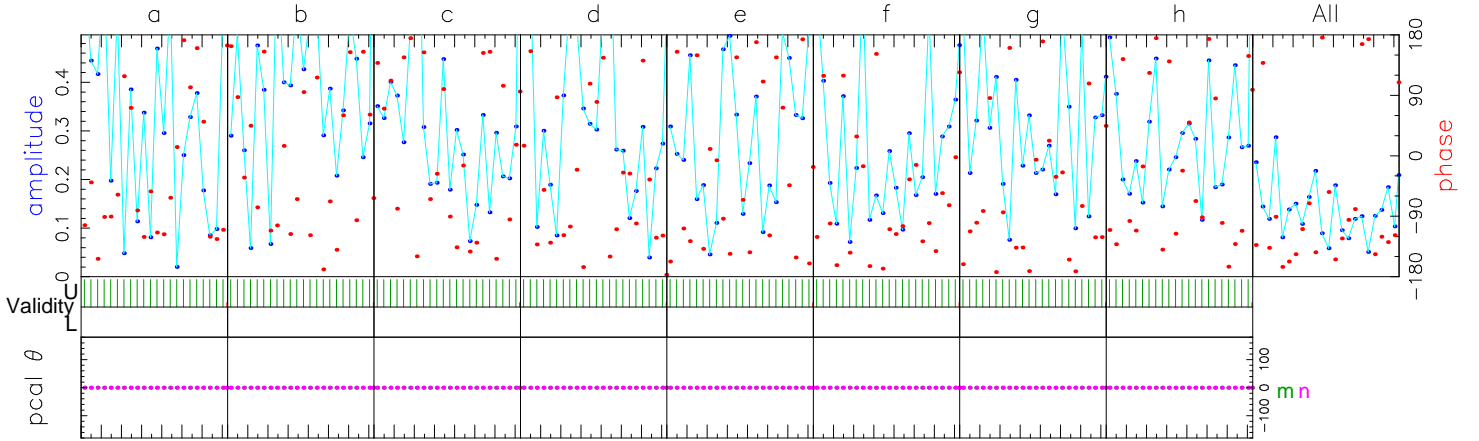


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	97.1	146.4	169.8	-173.0	-161.3	-172.5	130.3	112.0	Phase	155.7
	588.0	801.3	850.7	767.0	513.2	240.3	329.8	445.4	Ampl.	567.0
	259.0	259.1	258.7	258.4	258.6	257.6	258.0	257.7	Sbd box	258.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.26300000000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		5.26300E-03	+/- 4.0E-08
Sband delay (usec)	5.88850000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		5.88850E-03	+/- 3.2E-07
Phase delay (usec)	5.02177564156E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		5.02178E-06	+/- 1.4E-10
Delay rate (us/s)	9.35296057851E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		9.35296E-11	+/- 5.6E-13
Total phase (deg)	155.7		Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		155.7	+/- 0.0

ph/seg (deg) 1.6 0.0 RMS Theor. Amplitude 482.683 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 3.2 0.0 Search (2048X32) 472.992 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 47.1 0.0 Inc. seg. avg. 472.259 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 0.000 0.000 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mm.W.309.12BM2R simultaneous interpolator



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



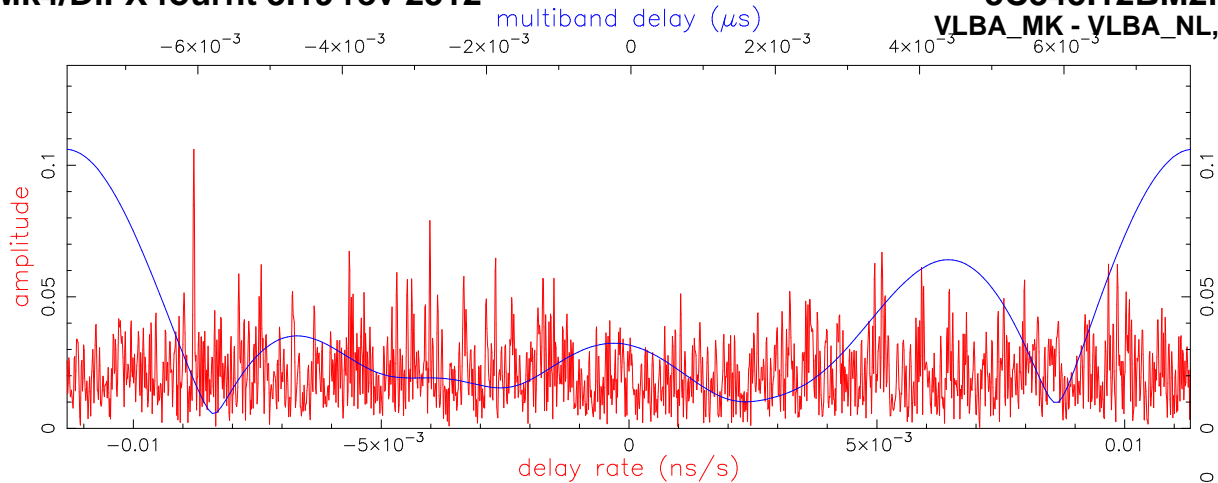
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-104.7	-136.8	174.2	-138.1	-152.1	-91.3	-117.8	-147.4	Phase	-133.1
	0.3	0.1	0.2	0.1	0.2	0.1	0.2	0.2	Ampl.	0.2
	117.5	238.1	45.1	422.5	151.2	394.4	324.1	186.4	Sbd box	116.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.46501241871E+04	Apriori delay (usec)	-1.46495776500E+04	Resid mbdelay (usec)	3.37849E-04	+/-	1.8E-04
Sband delay (usec)	-1.46501267967E+04	Apriori clock (usec)	-2.3912329E+01	Resid sbdelay (usec)	-5.49147E-01	+/-	1.4E-03
Phase delay (usec)	-1.46495776543E+04	Apriori clockrate (us/s)	-1.4291580E-07	Resid phdelay (usec)	-4.29095E-06	+/-	6.0E-07
Delay rate (us/s)	7.88301718986E-01	Apriori rate (us/s)	7.88290783983E-01	Resid rate (us/s)	1.09350E-05	+/-	2.5E-09
Total phase (deg)	-50.2	Apriori accel (us/s/s)	5.41810625334E-05	Resid phase (deg)	-133.1	+/-	18.7

ph/seg (deg)	42.0	Theor.	44.9	Amplitude	0.166 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	58.0		78.3	Search (2048X32)	0.104	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	32.1		26.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.6		46.2	Inc. seg. avg.	0.159	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.166	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

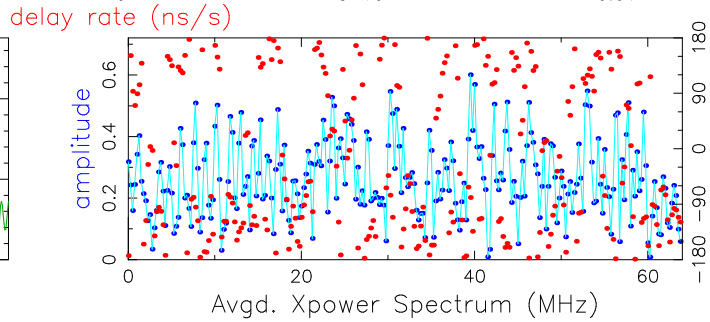
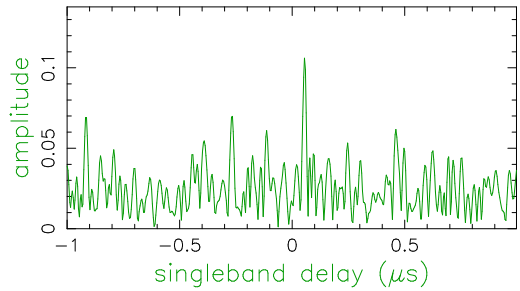
m: az 52.6 el 15.0 pa -76.4 n: az 89.0 el 72.7 pa -76.1 u,v (fr/asec) -5786.205 1388.785 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mn..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mn.W.254.12BM2R



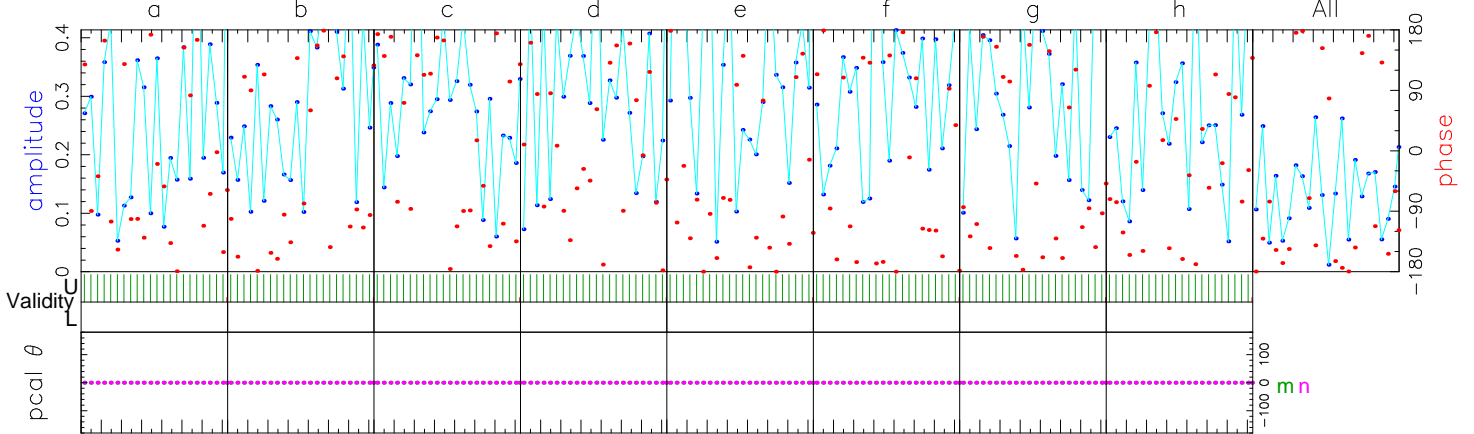
Fringe quality 0

SNR 6.0  
Int time 419.686  
Amp 0.138  
Phase -155.9  
PFD 4.9e-01  
Delays (us)  
SBD 0.055258  
MBD -0.007815  
Fringe rate (Hz)  
-0.757240  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171702  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



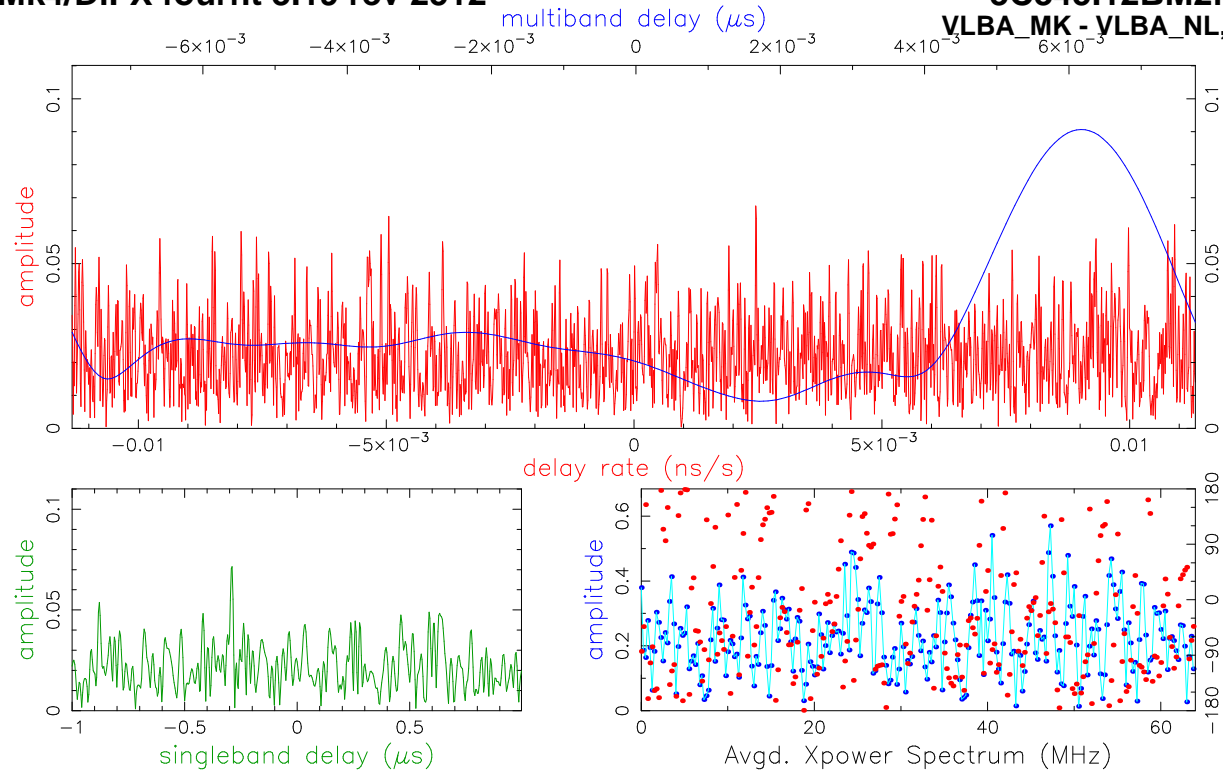
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-135.2	-167.9	-175.6	-101.8	-126.3	-177.9	-159.0	-64.3	Phase	-155.9
	0.1	0.2	0.2	0.0	0.2	0.2	0.2	0.0	Ampl.	0.1
	386.6	404.6	275.5	142.2	270.6	269.8	440.8	228.0	Sbd box	271.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-1.46495229652E+04	Apriori delay (usec)	-1.46495776500E+04	Resid mbdelay (usec)	-7.81520E-03	+/-	1.8E-04
Sband delay (usec)	-1.46495223920E+04	Apriori clock (usec)	-2.3912329E+01	Resid sbdelay (usec)	5.52580E-02	+/-	1.4E-03
Phase delay (usec)	-1.46495776550E+04	Apriori clockrate (us/s)	-1.4291580E-07	Resid phdelay (usec)	-5.02810E-06	+/-	6.2E-07
Delay rate (us/s)	7.88281993181E-01	Apriori rate (us/s)	7.88290783983E-01	Resid rate (us/s)	-8.79080E-06	+/-	2.6E-09
Total phase (deg)	-73.0	Apriori accel (us/s/s)	5.41810625334E-05	Resid phase (deg)	-155.9	+/-	19.3

ph/seg (deg)	51.1	Theor.	46.2	Amplitude	0.138 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	70.2		80.6	Search (2048X32)	0.104	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	47.7		27.2	Inc. seg. avg.	0.133	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	57.6		47.5	Inc. frq. avg.	0.134	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

m: az 52.6 el 15.0 pa -76.4 n: az 89.0 el 72.7 pa -76.1 u,v (fr/asec) -5786.205 1388.785 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mn..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mn.W.275.12BM2R

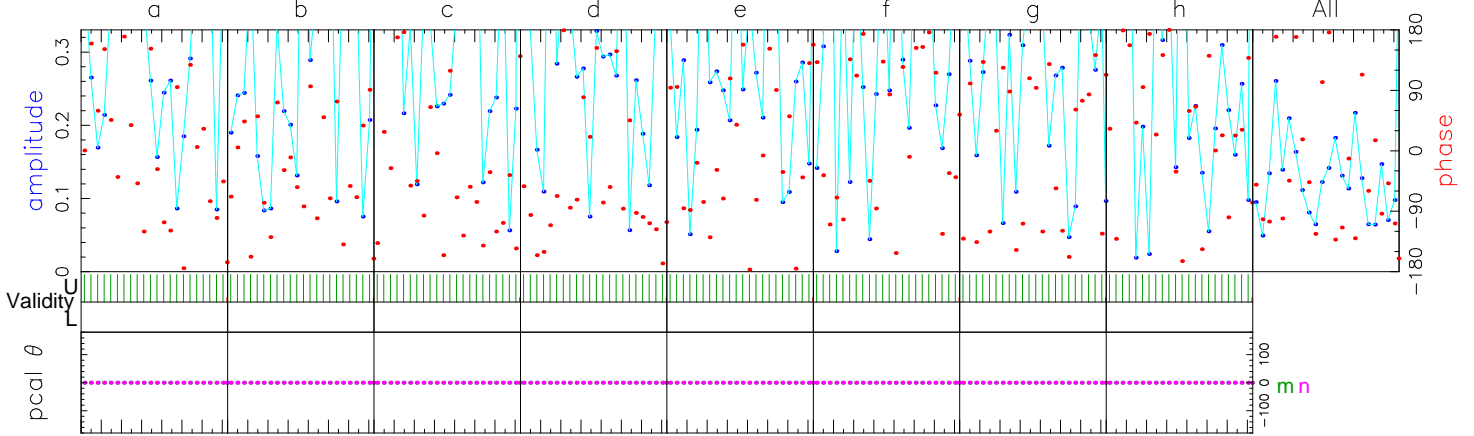


Fringe quality 0

SNR 3.9  
Int time 419.681  
Amp 0.110  
Phase -116.3  
PFD 1.0e+00  
Delays (us)  
SBD -0.292969  
MBD -0.008301  
Fringe rate (Hz)  
-0.971908  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

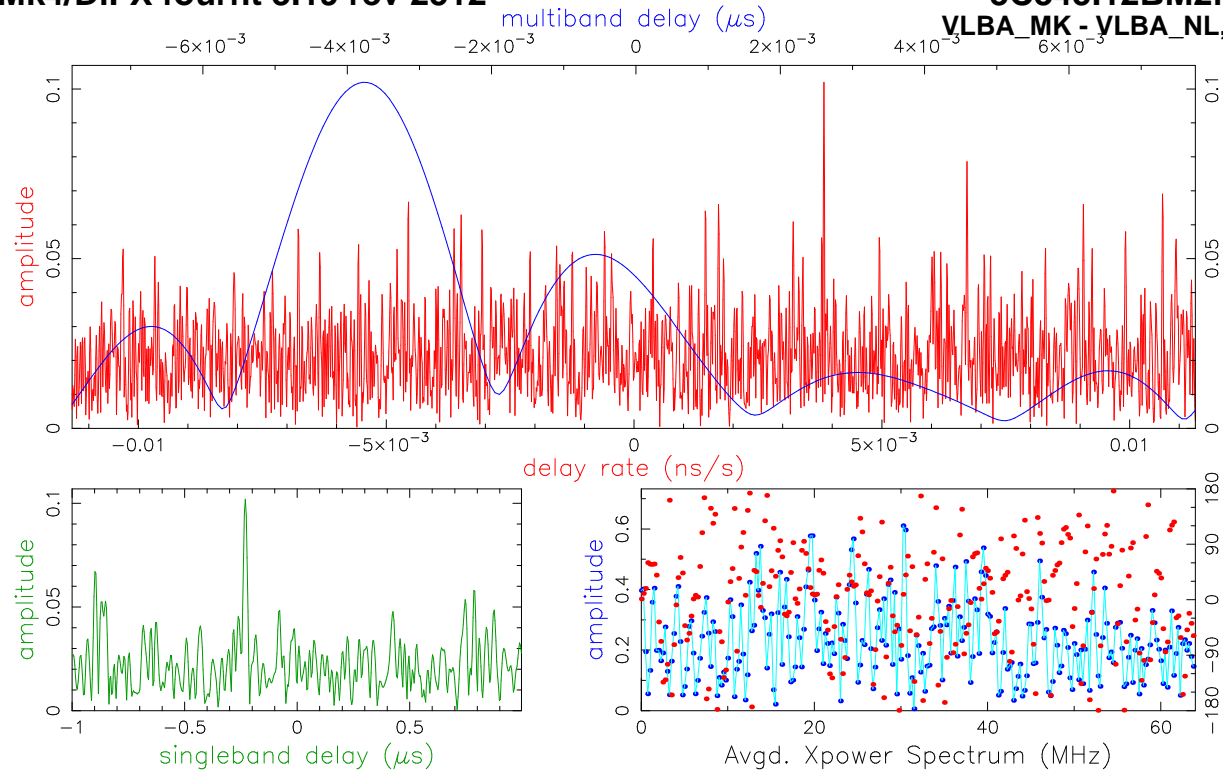
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171707  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-33.2	-54.3	-99.2	-104.4	144.9	-171.3	150.3	161.0	Phase	-116.3
	0.1	0.2	0.2	0.3	0.0	0.2	0.1	0.1	Ampl.	0.1
	300.0	421.6	22.6	181.6	472.6	484.1	314.9	175.3	Sbd box	182.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.46498672008E+04		Apriori delay (usec)		-1.46495776500E+04		Resid mbdelay (usec)		-8.30078E-03	+/- 2.7E-04
Sband delay (usec)	-1.46498706187E+04		Apriori clock (usec)		-2.3912329E+01		Resid sbdelay (usec)		-2.92969E-01	+/- 2.2E-03
Phase delay (usec)	-1.46495776537E+04		Apriori clockrate (us/s)		-1.4291580E-07		Resid phdelay (usec)		-3.74964E-06	+/- 9.4E-07
Delay rate (us/s)	7.88279501093E-01		Apriori rate (us/s)		7.88290783983E-01		Resid rate (us/s)		-1.12829E-05	+/- 3.9E-09
Total phase (deg)			Apriori accel (us/s/s)		5.41810625334E-05		Resid phase (deg)		-116.3	+/- 29.0

ph/seg (deg) RMS Theor. Amplitude 0.110 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 74.5 69.6 Search (2048X32) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 118.2 121.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 81.2 41.1 Inc. seg. avg. 0.116 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 n: az 89.0 el 72.7 pa -76.1 u,v (fr/asec) -5786.205 1388.785 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mn..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mn.W.296.12BM2R

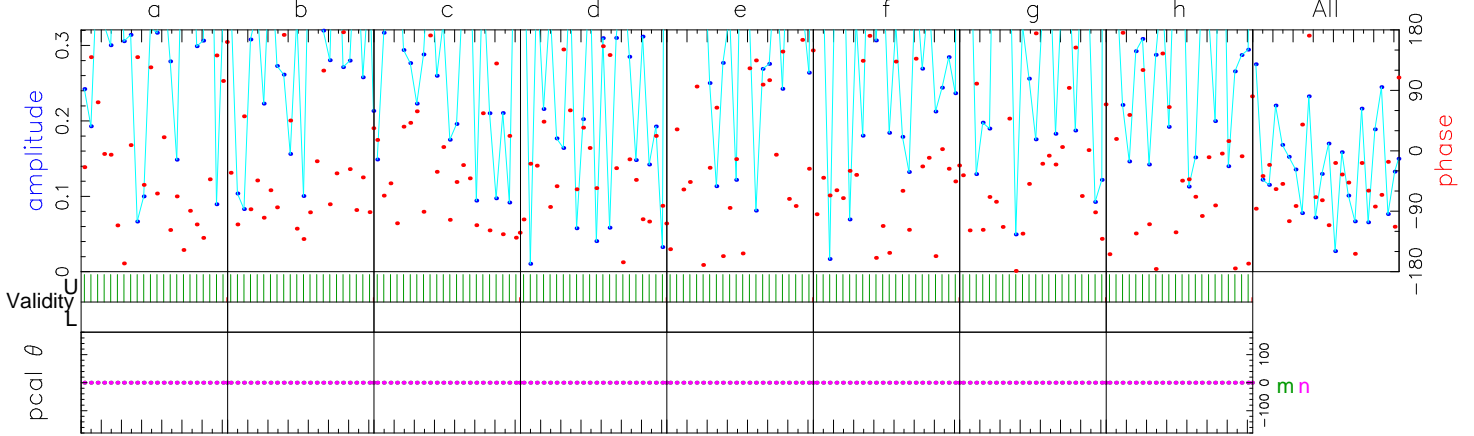


Fringe quality 0

SNR 5.7  
Int time 419.686  
Amp 0.107  
Phase -69.0  
PFD 9.4e-01  
Delays (us)  
SBD -0.230646  
MBD -0.003767  
Fringe rate (Hz) 0.330663  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171711  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.46498157921E+04	-1.46498082957E+04	-1.46495776522E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04		
Sband delay (usec)	-1.46498082957E+04	-1.46498082957E+04	-1.46495776522E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04	-1.46495776500E+04		
Phase delay (usec)	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04	-1.46495776522E+04		
Delay rate (us/s)	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01	7.88294622653E-01		
Total phase (deg)			-346.2							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL	MANUAL		
Pcal rate:	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00		
Bits/sample:	2x2	2x2	2x2	2x2	2x2	2x2	2x2	2x2		
Sample rate (MSamp/s):	128	128	128	128	128	128	128	128		
Data rate (Mb/s):	2048	2048	2048	2048	2048	2048	2048	2048		
nlags:	256	256	256	256	256	256	256	256		
t_cohere:	infinite	infinite	infinite	infinite	infinite	infinite	infinite	infinite		
sb window (us)	-1.000	1.000	-1.000	1.000	-1.000	1.000	-1.000	1.000		
mb window (us)	-0.008	0.008	-0.008	0.008	-0.008	0.008	-0.008	0.008		
dr window (ns/s)	-0.011	0.011	-0.011	0.011	-0.011	0.011	-0.011	0.011		
ion window (TEC)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		

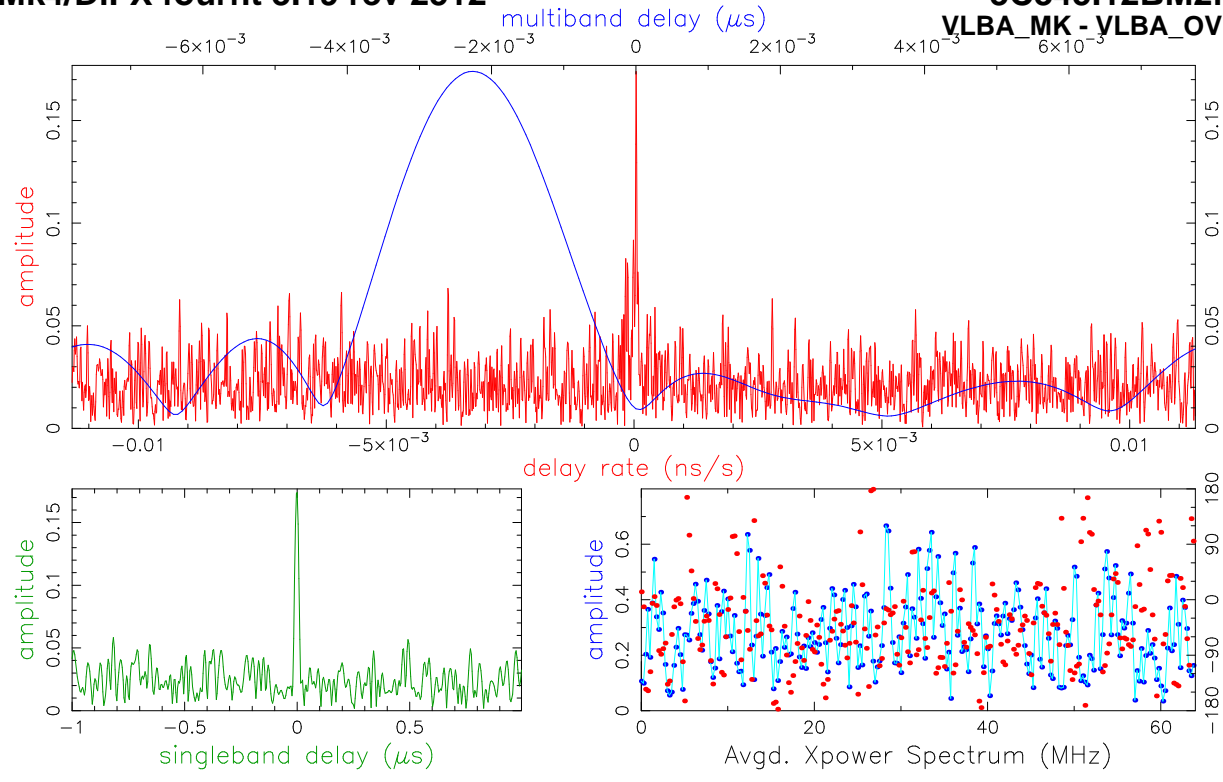
m: az 52.6 el 15.0 pa -76.4 n: az 89.0 el 72.7 pa -76.1 u,v (fr/asec) -5786.205 1388.785 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mn..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mn.W.311.12BM2R



Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mo  
VLBA\_MK - VLBA\_OV, fgroup W, pol LL

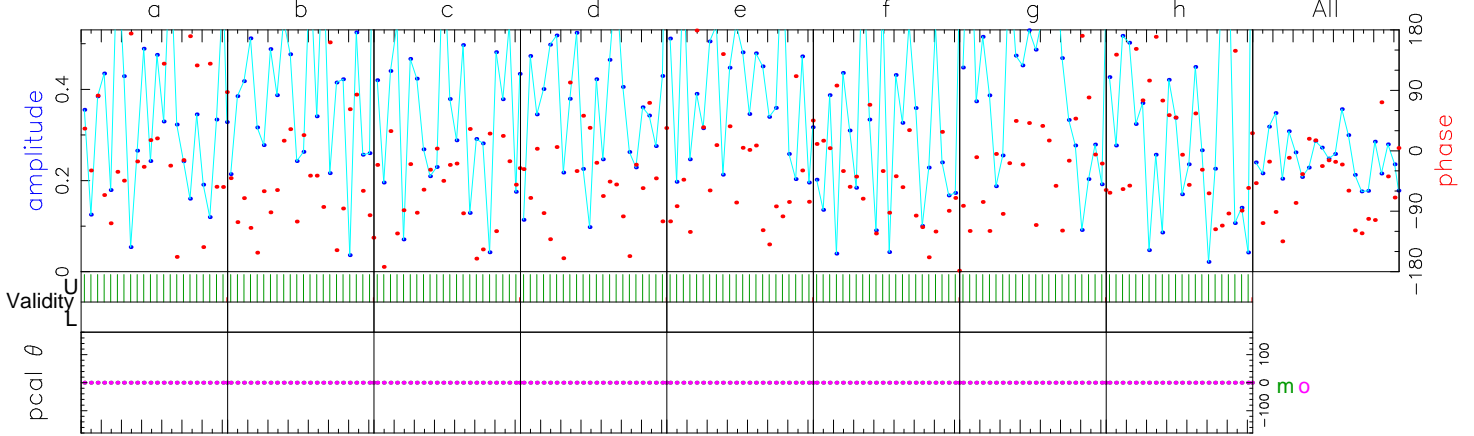


Fringe quality 9

SNR 9.9  
Int time 419.684  
Amp 0.177  
Phase -47.5  
PFD 1.6e-14  
Delays (us)  
SBD -0.001828  
MBD -0.002296  
Fringe rate (Hz) 0.004285  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171658  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

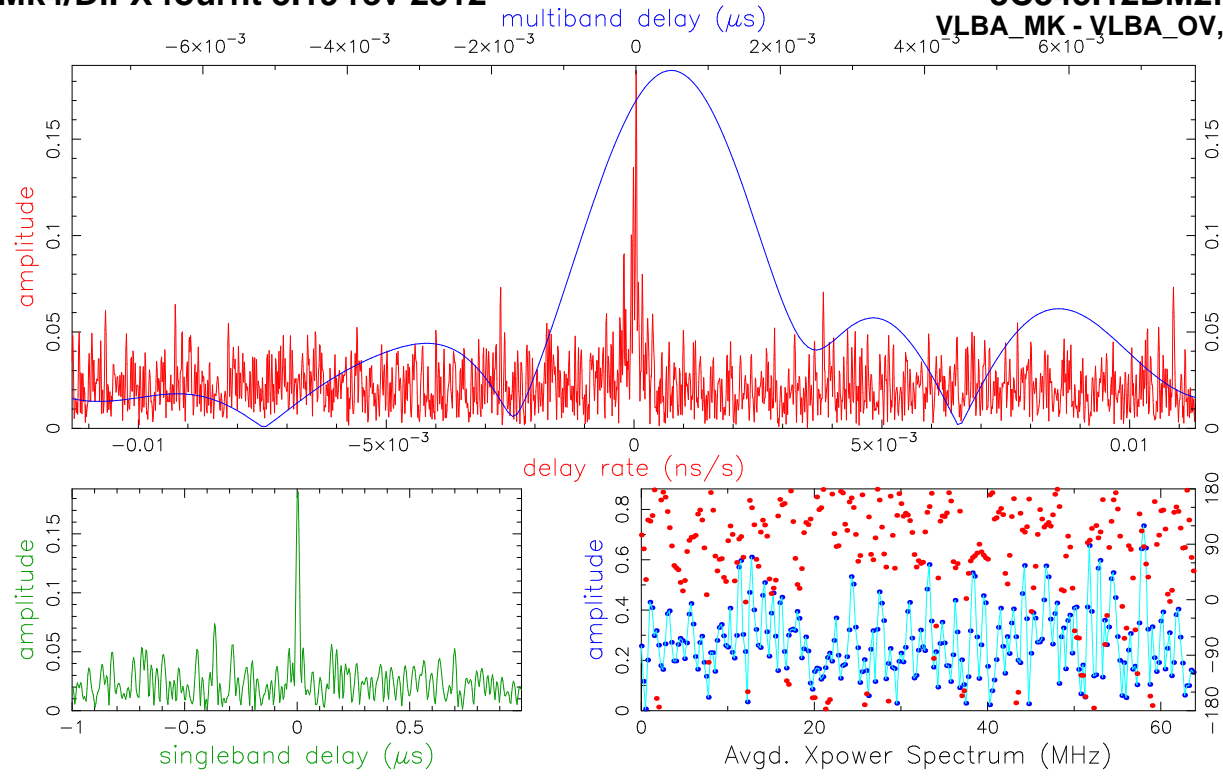


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-23.8	-69.3	-49.9	-48.3	-55.9	-43.5	-36.1	-48.9	Phase	-47.5
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	68.2	255.9	257.1	257.1	257.0	256.6	256.5	199.0	Sbd box	256.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.11048017877E+04		Apriori delay (usec)		-1.11047994914E+04		Resid mbdelay (usec)		-2.29634E-03	+/- 1.1E-04
Sband delay (usec)	-1.11048013196E+04		Apriori clock (usec)		-1.4065811E+01		Resid sbdelay (usec)		-1.82825E-03	+/- 8.7E-04
Phase delay (usec)	-1.11047994929E+04		Apriori clockrate (us/s)		-9.6732924E-09		Resid phdelay (usec)		-1.53183E-06	+/- 3.7E-07
Delay rate (us/s)	4.07185263333E-01		Apriori rate (us/s)		4.07185213590E-01		Resid rate (us/s)		4.97429E-08	+/- 1.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.97901369329E-05		Resid phase (deg)		-47.5	+/- 11.6

ph/seg (deg) 52.2 27.7 Search (2048X32) 0.163 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 52.6 48.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 14.5 16.4 Inc. seg. avg. 0.229 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 23.4 28.5 Inc. frq. avg. 0.171 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mo..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mo.W.258.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mo  
VLBA\_MK - VLBA\_OV, fgroup W, pol RR

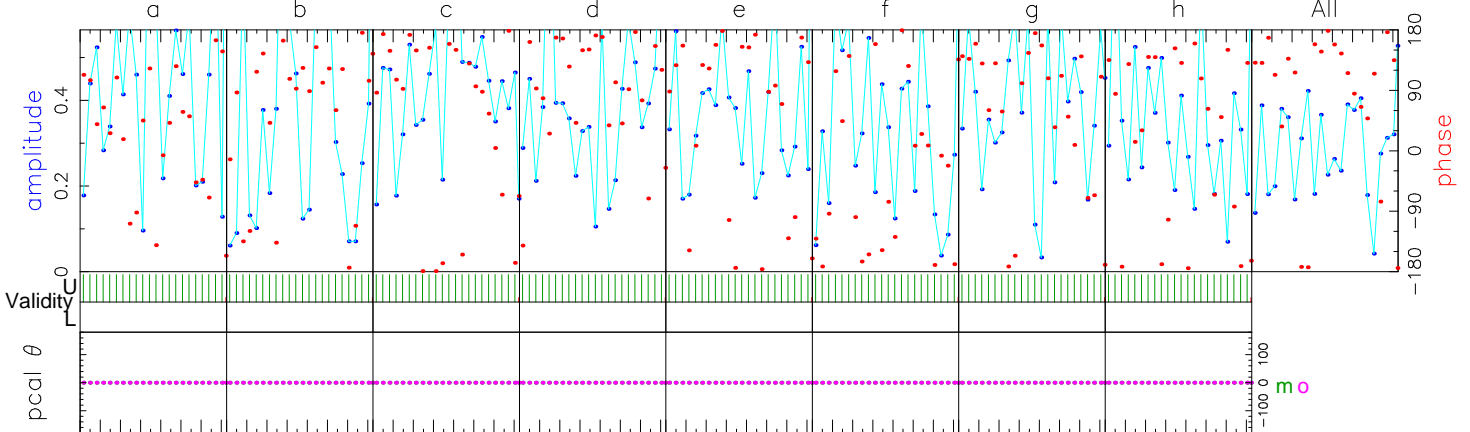


Fringe quality 9

SNR 10.5  
Int time 419.689  
Amp 0.188  
Phase 135.2  
PFD 2.4e-17  
Delays (us)  
SBD 0.002444  
MBD 0.000453  
Fringe rate (Hz) 0.004220  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171702  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	93.4	136.9	150.9	121.4	148.2	165.0	123.3	131.1	Phase	135.2
	0.1	0.2	0.3	0.2	0.2	0.1	0.2	0.2	Ampl.	0.2
	109.8	257.1	258.4	256.9	257.5	479.8	258.1	239.3	Sbd box	257.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

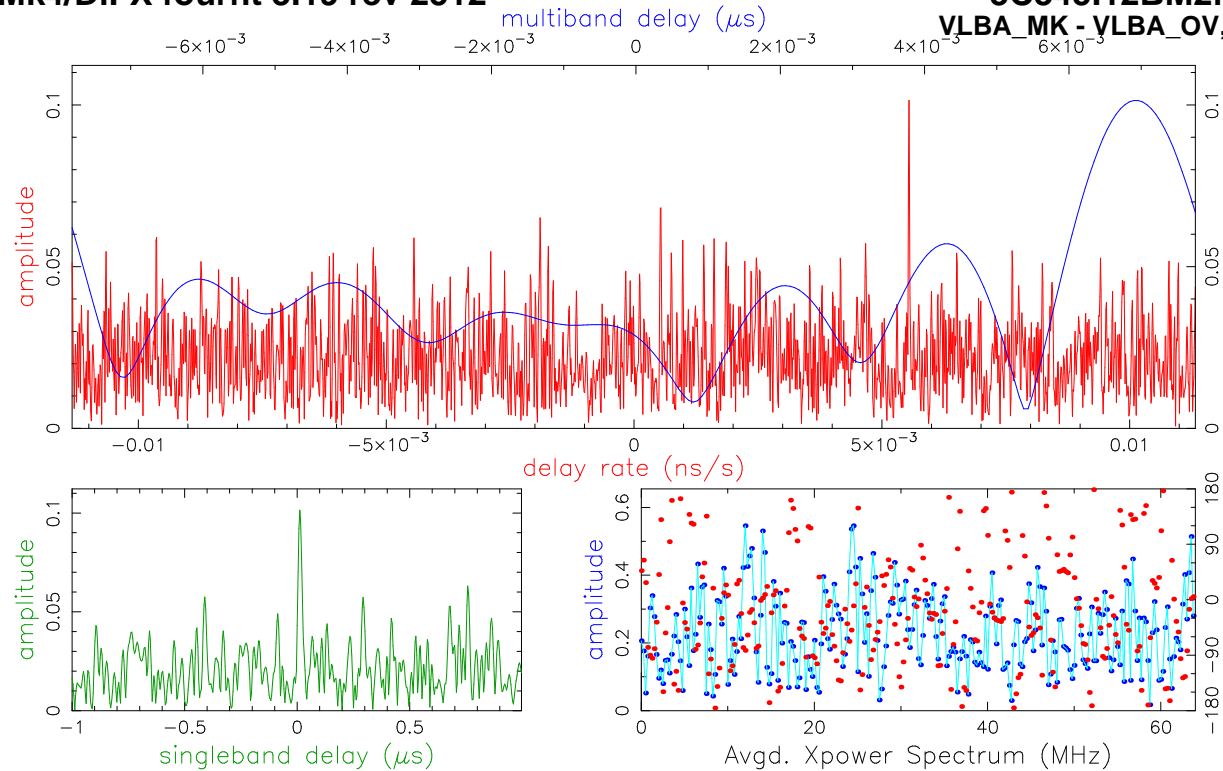
Group delay (usec)(sbd) -1.11047990387E+04 Apriori delay (usec) -1.11047994914E+04 Resid mbdelay (usec) 4.52663E-04 +/- 1.0E-04  
 Sband delay (usec) -1.11047970474E+04 Apriori clock (usec) -1.4065811E+01 Resid sbdelay (usec) 2.44400E-03 +/- 8.2E-04  
 Phase delay (usec) -1.11047994870E+04 Apriori clockrate (us/s) -9.6732924E-09 Resid phdelay (usec) 4.35989E-06 +/- 3.5E-07  
 Delay rate (us/s) 4.07185262582E-01 Apriori rate (us/s) 4.07185213590E-01 Resid rate (us/s) 4.89918E-08 +/- 1.4E-09  
 Total phase (deg) 67.2 Apriori accel (us/s/s) 3.97901369329E-05 Resid phase (deg) 135.2 +/- 10.9

RMS Theor. Amplitude 0.188 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 52.2 26.1 Search (2048X32) 0.177 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 73.6 45.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 23.8 15.4 Inc. seg. avg. 0.254 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 32.8 26.8 Inc. frq. avg. 0.188 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mo..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mo.W.274.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mo  
VLBA\_MK - VLBA\_OV, fgroup W, pol LR

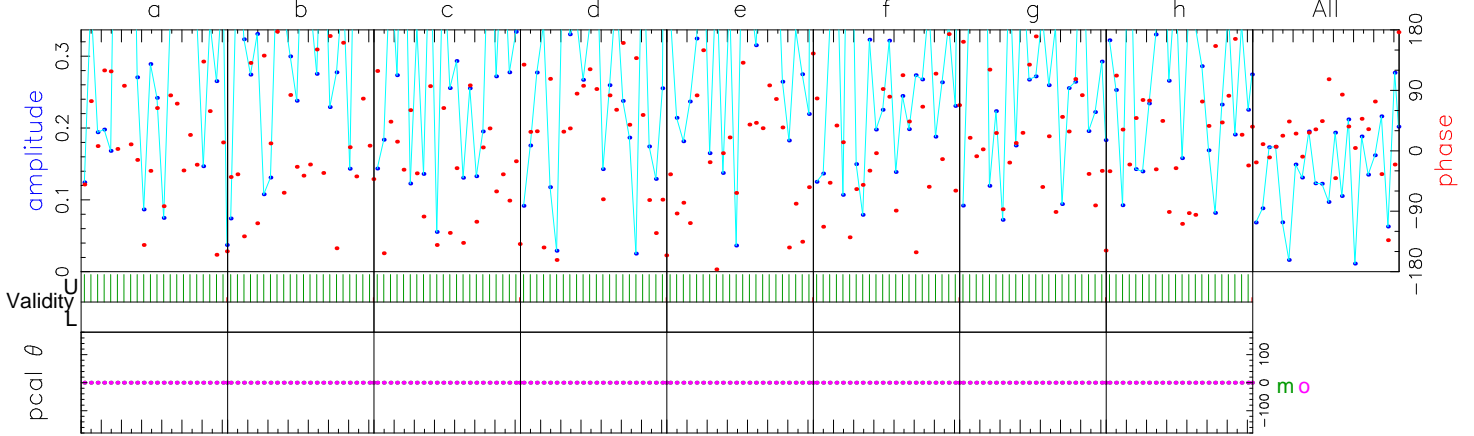


Fringe quality 0

SNR 5.7  
Int time 419.684  
Amp 0.112  
Phase 15.6  
PFD 9.6e-01  
Delays (us)  
SBD 0.012077  
MBD 0.006937  
Fringe rate (Hz)  
0.478618  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171707  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



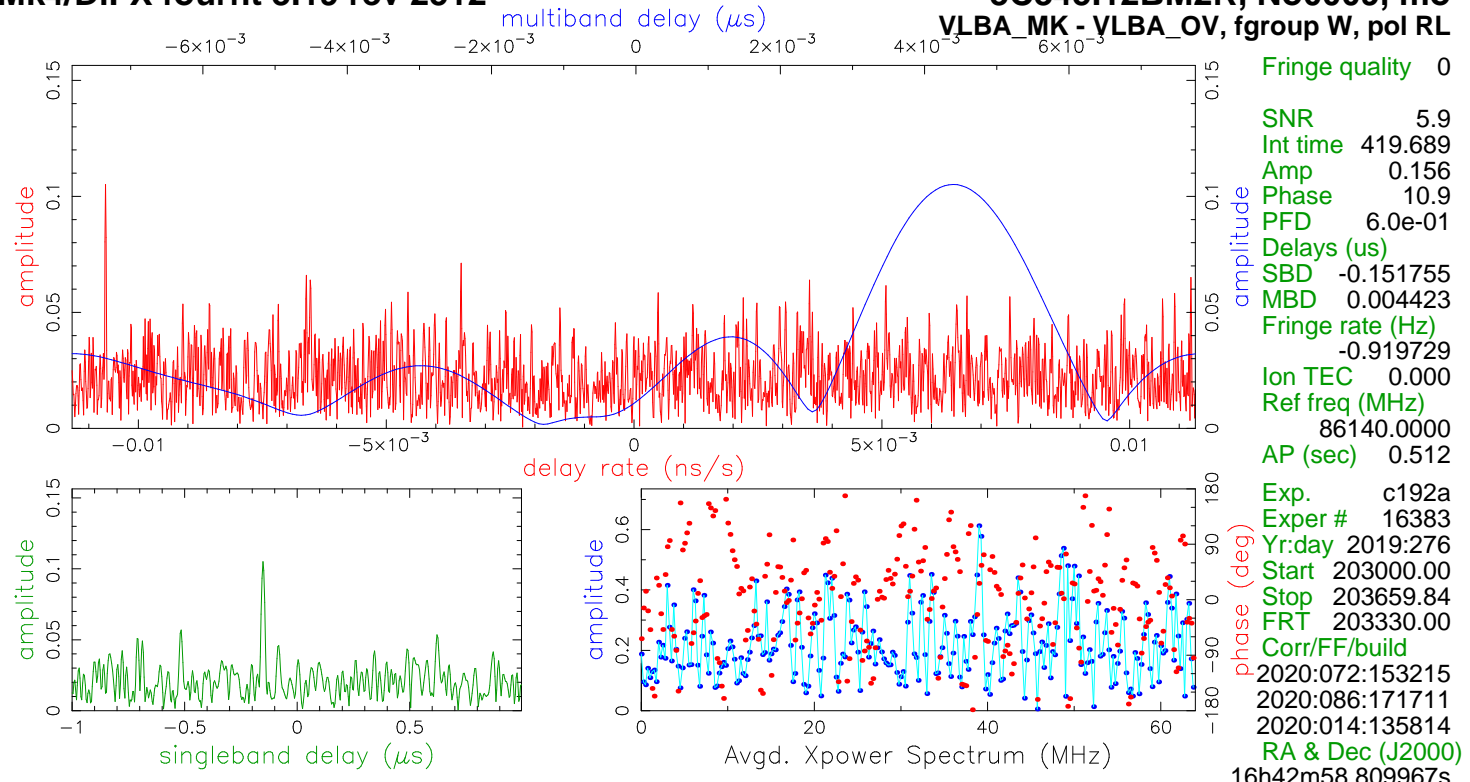
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-1.11047925544E+04	Apriori delay (usec)	-1.11047994914E+04	Resid mbdelay (usec)	6.93695E-03	+/-	1.9E-04
Sband delay (usec)	-1.11047874146E+04	Apriori clock (usec)	-1.4065811E+01	Resid sbdelay (usec)	1.20768E-02	+/-	1.5E-03
Phase delay (usec)	-1.11047994909E+04	Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	5.01938E-07	+/-	6.5E-07
Delay rate (us/s)	4.07190769866E-01	Apriori rate (us/s)	4.07185213590E-01	Resid rate (us/s)	5.55628E-06	+/-	2.7E-09
Total phase (deg)	-52.4	Apriori accel (us/s/s)	3.97901369329E-05	Resid phase (deg)	15.6	+/-	20.2

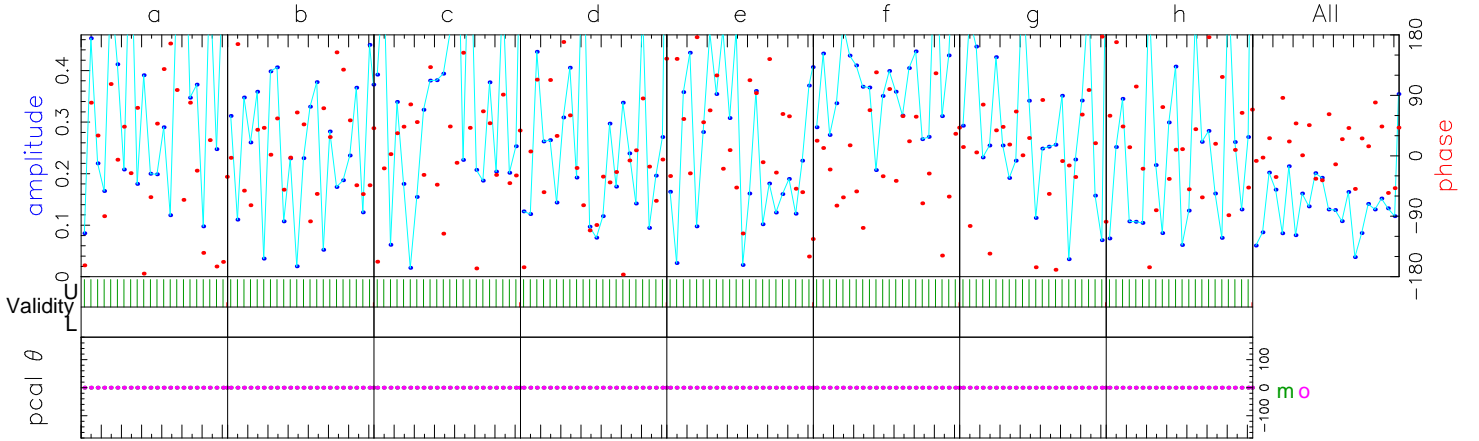
ph/seg (deg)	50.3	RMS	50.3	Theor.	48.3	Amplitude	0.112 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.9	Search (2048X32)	0.100	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008		
ph/frq (deg)	39.8	Inc. seg. avg.	0.111	Inc. frq. avg.	0.115	Bits/sample:	2x2	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011		
amp/frq (%)	51.2	Inc. frq. avg.	0.115			Data rate (Mb/s):	2048	nlags:	256	t_cohere	infinite	ion window (TEC)	0.00	0.00

m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mo..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mo.W.294.12BM2R



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



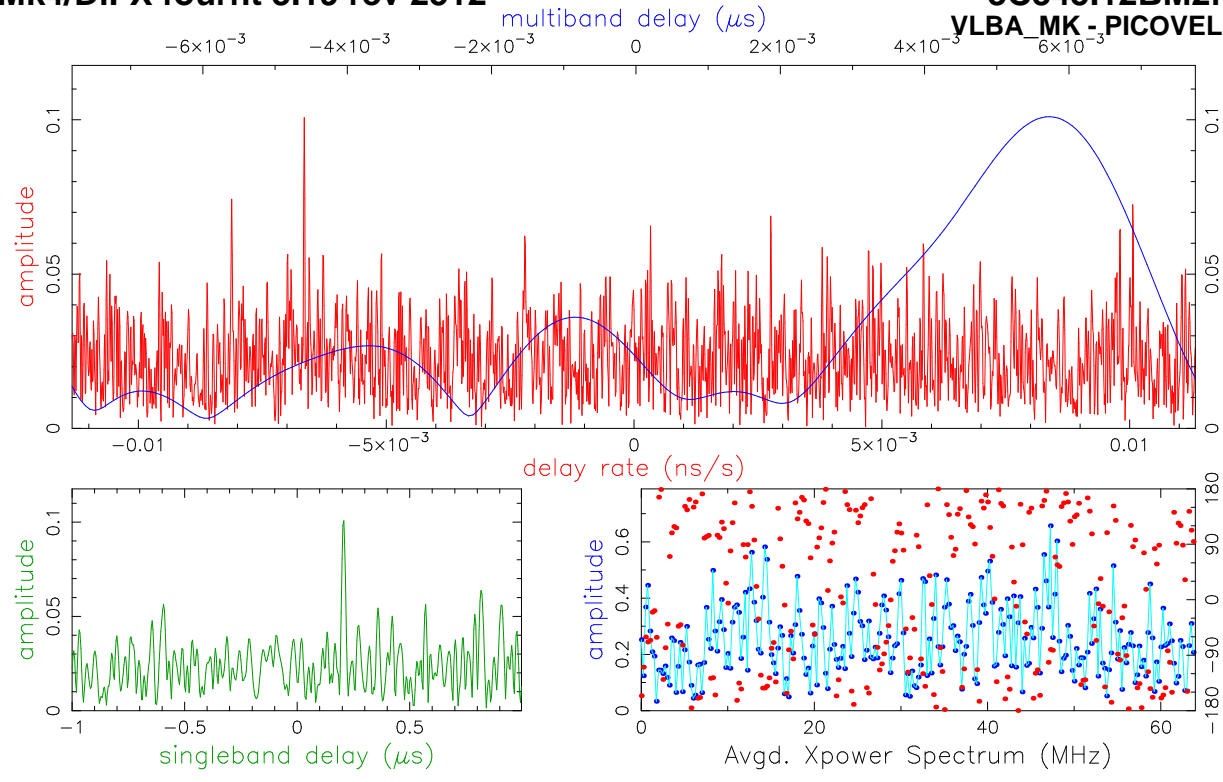
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	34.9	-10.0	18.7	1.8	24.2	4.5	23.0	-9.6	Phase	10.9
	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.1	Ampl.	0.1
	381.4	425.8	279.3	124.7	176.7	218.1	393.8	149.4	Sbd box	218.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.11049513186E+04	Apriori delay (usec)	-1.11047994914E+04	Resid mbdelay (usec)	4.42276E-03	+/-	1.8E-04
Sband delay (usec)	-1.11049512464E+04	Apriori clock (usec)	-1.4065811E+01	Resid sbdelay (usec)	-1.51755E-01	+/-	1.5E-03
Phase delay (usec)	-1.11047994910E+04	Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	3.51953E-07	+/-	6.3E-07
Delay rate (us/s)	4.07174536443E-01	Apriori rate (us/s)	4.07185213590E-01	Resid rate (us/s)	-1.06771E-05	+/-	2.6E-09
Total phase (deg)	-57.1	Apriori accel (us/s/s)	3.97901369329E-05	Resid phase (deg)	10.9	+/-	19.4

ph/seg (deg)	41.0	Theor.	46.6	Amplitude	0.156 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	55.0	Search (2048X32)	0.099	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	18.0	Inc. seg. avg.	0.150	Inc. frq. avg.	0.145	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.4	Inc. frq. avg.	0.145			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mo..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mo.W.313.12BM2R

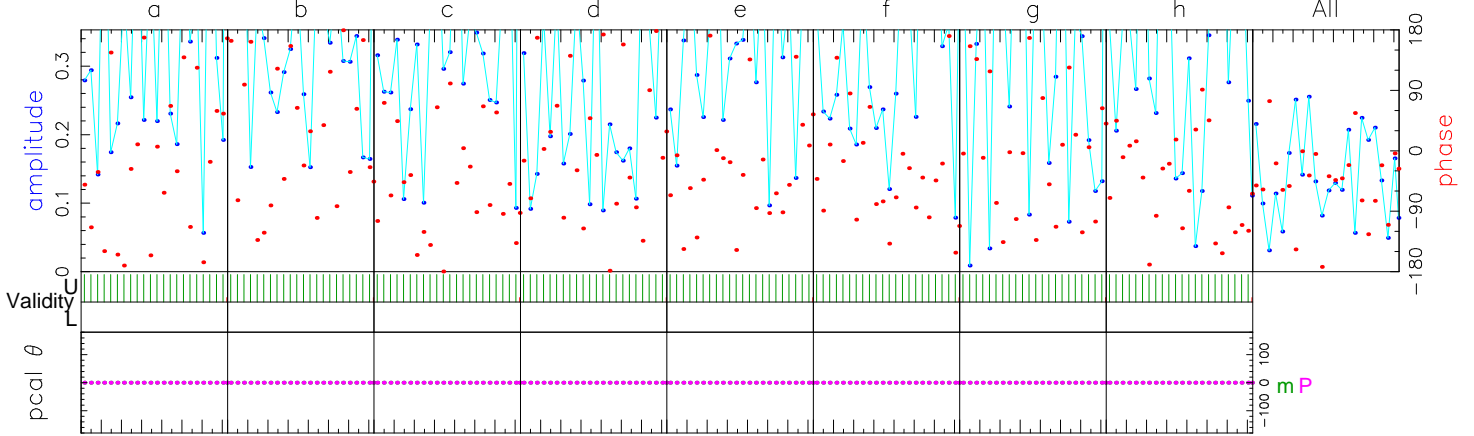


Fringe quality 0

SNR 5.7  
Int time 419.252  
Amp 0.118  
Phase -50.4  
PFD 9.6e-01  
Delays (us)  
SBD 0.205667  
MBD 0.005620  
Fringe rate (Hz)  
-0.573966  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171657  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-107.0	-114.5	-50.1	-23.5	-41.4	-46.9	-34.9	-64.5	Phase	-50.4
	0.0	0.0	0.1	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
	158.1	402.8	239.7	125.5	403.8	325.9	446.6	308.8	Sbd box	309.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-7.6764553722E+03	Apriori delay (usec)	-7.67666408196E+03	Resid mbdelay (usec)	5.61974E-03	+/-	1.9E-04
Sband delay (usec)	-7.67645841446E+03	Apriori clock (usec)	2.6564860E+00	Resid sbdelay (usec)	2.05667E-01	+/-	1.5E-03
Phase delay (usec)	-7.67666408359E+03	Apriori clockrate (us/s)	3.4430770E-07	Resid phdelay (usec)	-1.62382E-06	+/-	6.5E-07
Delay rate (us/s)	1.99254389198E+00	Apriori rate (us/s)	1.99255055516E+00	Resid rate (us/s)	-6.66317E-06	+/-	2.7E-09
Total phase (deg)	-57.7	Apriori accel (us/s/s)	2.18045818411E-05	Resid phase (deg)	-50.4	+/-	20.1

ph/seg (deg)	56.7	Theor.	48.3	Amplitude	0.118 +/- 0.021	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	75.8		84.3	Search (2048X32)	0.098	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	37.8		28.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	56.8		49.7	Inc. seg. avg.	0.122	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.110	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

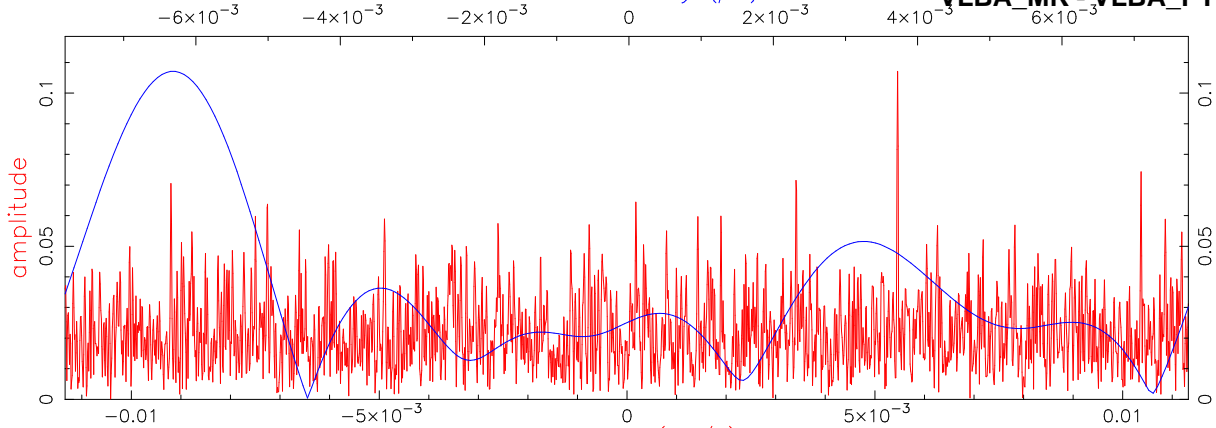
m: az 52.6 el 15.0 pa -76.4 P: az 294.5 el 39.8 pa 71.4 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mP..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mP.W.253.12BM2R

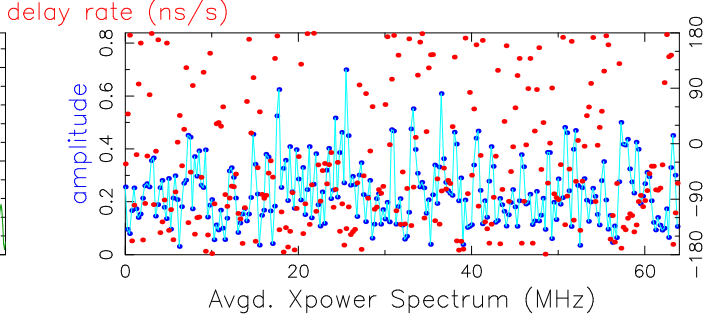
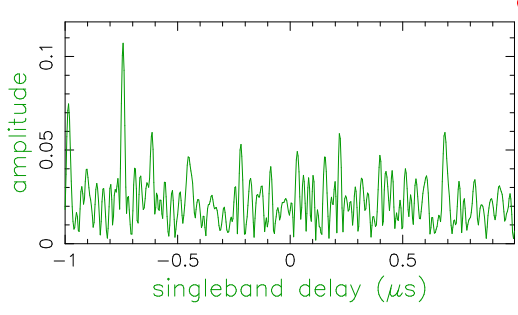
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mp  
VLBA\_MK - VLBA\_PT, fgroup W, pol LL

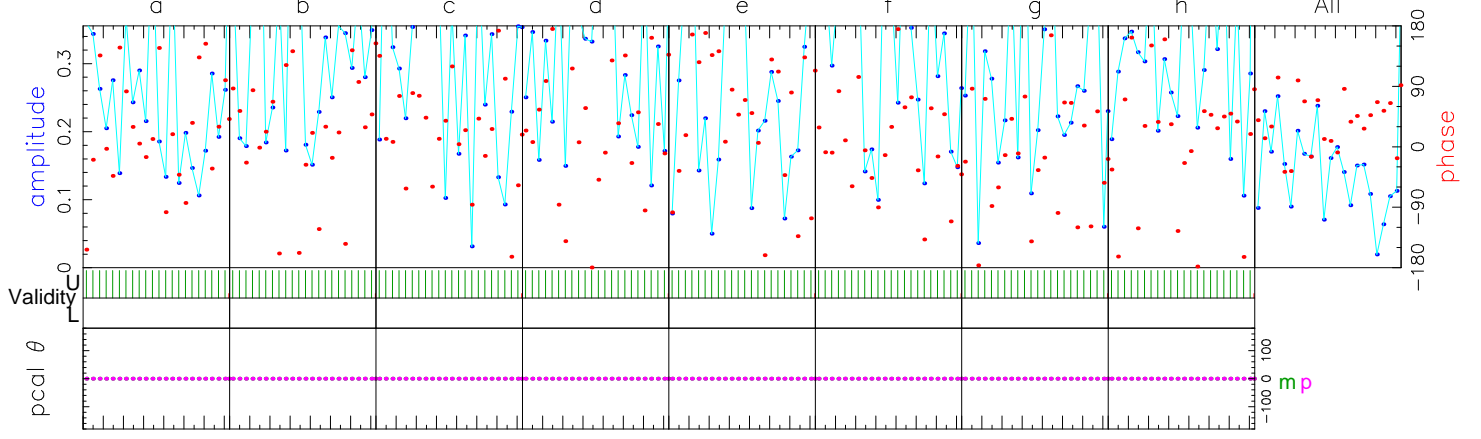
multiband delay ( $\mu$ s)



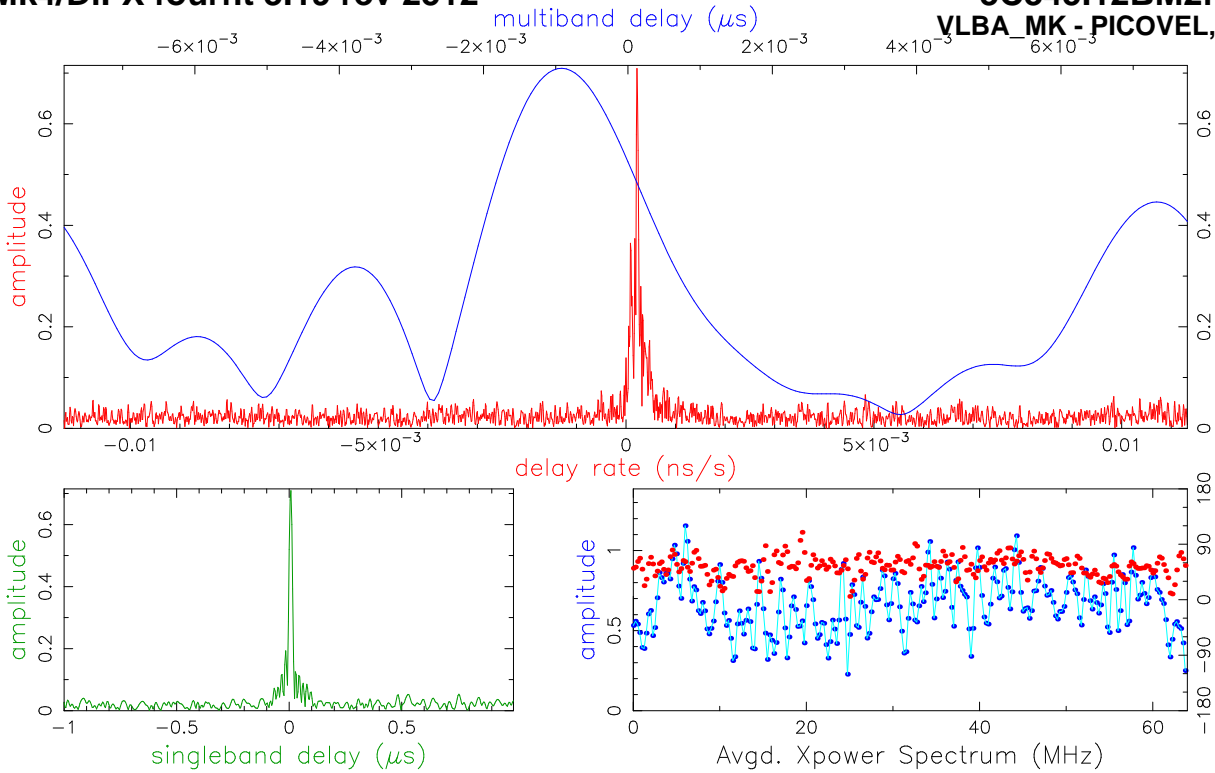
Fringe quality 0  
SNR 6.0  
Int time 419.682  
Amp 0.119  
Phase 38.8  
PFD 3.6e-01  
Delays (us)  
SBD -0.742948  
MBD -0.006333  
Fringe rate (Hz) 0.470637  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171658  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

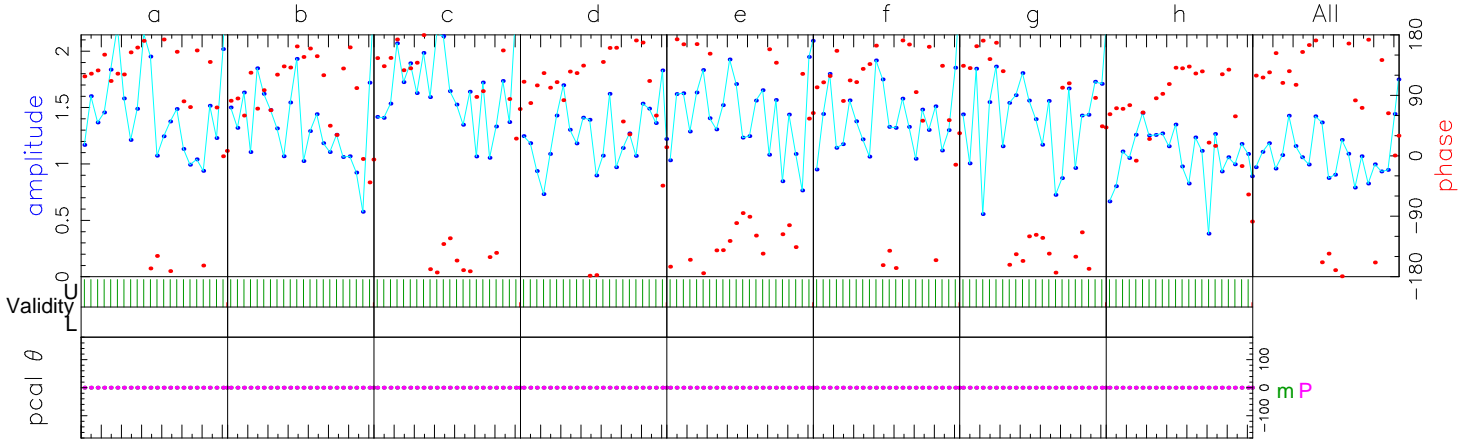


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-1.25109945795E+04					-1.25102538715E+04			Resid mbdelay (usec)	-6.33301E-03 +/- 1.8E-04
Sband delay (usec)	-1.25109968197E+04					-9.3433962E+00			Resid sbdelay (usec)	-7.42948E-01 +/- 1.4E-03
Phase delay (usec)	-1.25102538702E+04					-2.1257888E-07			Resid phdelay (usec)	1.25272E-06 +/- 6.1E-07
Delay rate (us/s)	5.07151115954E-01					5.07145652329E-01			Resid rate (us/s)	5.46363E-06 +/- 2.5E-09
Total phase (deg)			-137.4			5.02758199747E-05			Resid phase (deg)	38.8 +/- 19.0
ph/seg (deg)	40.4	45.6		Amplitude 0.119 +/- 0.020					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	66.4	79.6		Search (2048X32) 0.099					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	29.7	26.9		Interp. 0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%)	37.7	47.0		Inc. seg. avg. 0.120					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
				Inc. frq. avg. 0.117					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
m: az 52.6 el 15.0 pa -76.4		p: az 68.3 el 58.4 pa -88.0		u,v (fr/asec) -3696.360 1805.374						simultaneous interpolator



Fringe quality 4  
SNR 40.0  
Int time 419.258  
Amp 0.715  
Phase 142.1  
PFD 0.0e+00  
Delays (us)  
SBD 0.006673  
MBD -0.000955  
Fringe rate (Hz) 0.018746  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171703  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

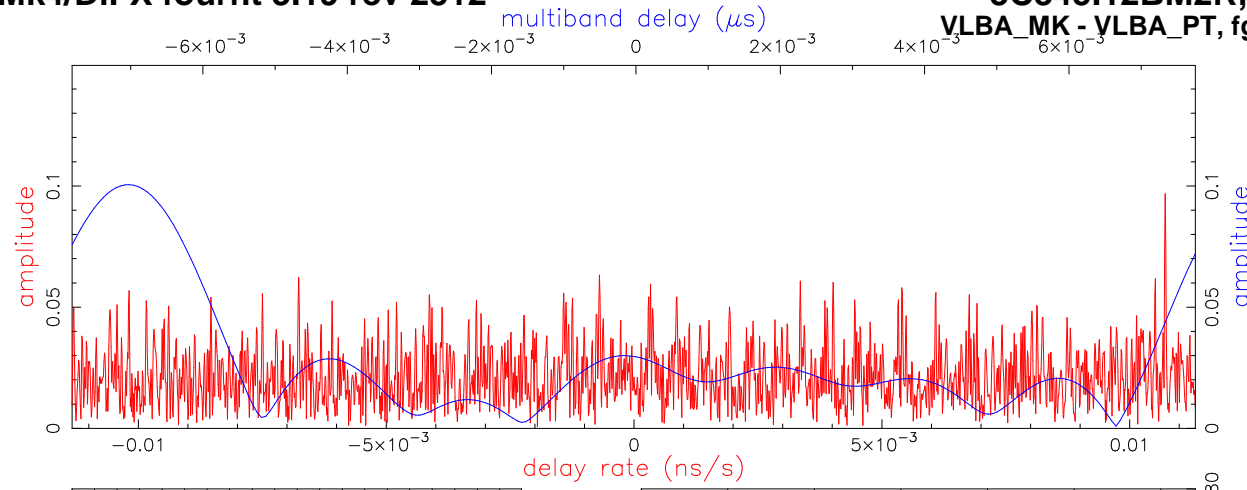


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	139.8	103.2	162.2	117.8	-156.4	135.8	175.2	77.5	Phase	142.1
m	1.0	0.9	1.1	0.8	0.9	0.8	0.8	0.7	Ampl.	0.9
P	258.2	258.3	258.1	257.6	257.9	257.9	257.4	256.1	Sbd box	258.7
m:P	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m:P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

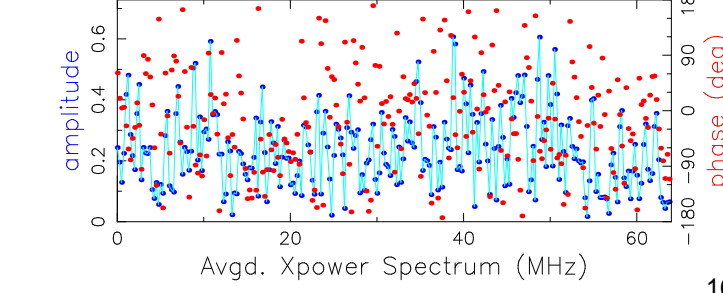
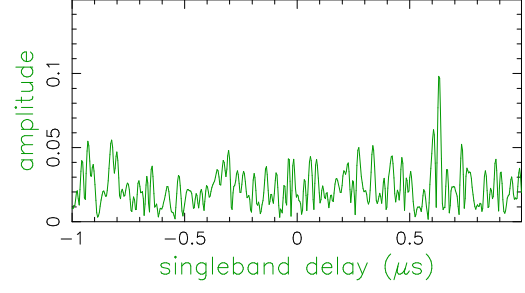
Group delay (usec)(sbd) -7.67666503724E+03 Apriori delay (usec) -7.67666408196E+03 Resid mbdelay (usec) -9.55276E-04 +/- 2.7E-05  
Sband delay (usec) -7.67665740871E+03 Apriori clock (usec) 2.6564860E+07 Resid sbdelay (usec) 6.67325E-03 +/- 2.2E-04  
Phase delay (usec) -7.67666407738E+03 Apriori clockrate (us/s) 3.4430770E-07 Resid phdelay (usec) 4.58128E-06 +/- 9.2E-08  
Delay rate (us/s) 1.99255077277E+00 Apriori rate (us/s) 1.99255055516E+00 Resid rate (us/s) 2.17617E-07 +/- 3.8E-10  
Total phase (deg) 134.7 Apriori accel (us/s/s) 2.18045818411E-05 Resid phase (deg) 142.1 +/- 2.9

RMS Theor. Amplitude 0.715 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 52.2 6.9 Search (2048X32) 0.698 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
amp/seg (%) 59.0 12.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
ph/frq (deg) 44.0 4.0 Inc. seg. avg. 1.080 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
amp/frq (%) 27.6 7.1 Inc. frq. avg. 0.873 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

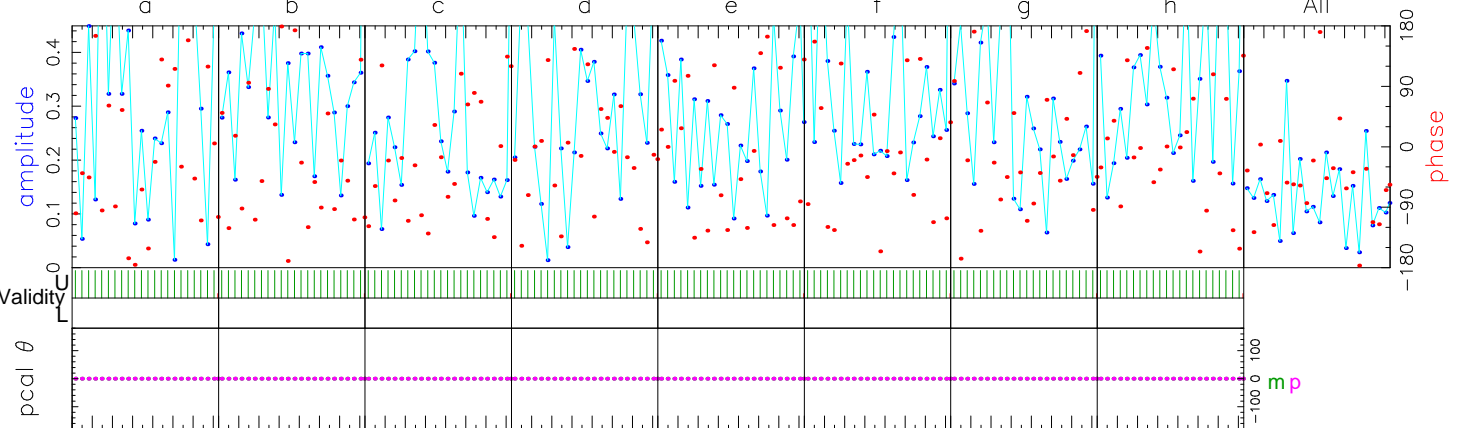
m: az 52.6 el 15.0 pa -76.4 P: az 294.5 el 39.8 pa 71.4 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mP..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mP.W.277.12BM2R



Fringe quality 0  
SNR 5.6  
Int time 419.688  
Amp 0.150  
Phase -52.0  
PFD 9.9e-01  
Delays (us)  
SBD 0.630624  
MBD 0.008301  
Fringe rate (Hz) 0.924371  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171703  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"



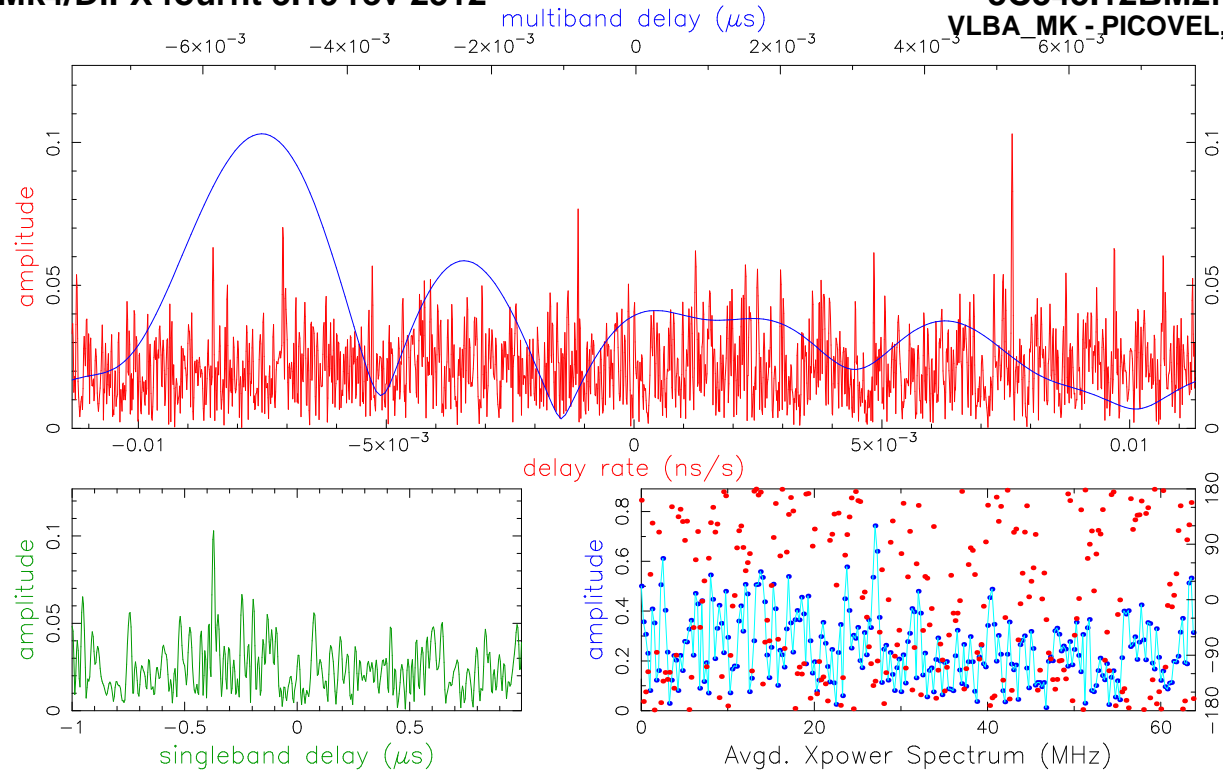
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-69.8	-79.3	-62.0	-40.8	-80.1	-35.3	-52.6	-17.0	Phase	-52.0
	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	Ampl.	0.1
	365.0	360.5	320.2	499.2	179.4	410.4	50.5	424.0	Sbd box	418.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.25096205707E+04		Apriori delay (usec)		-1.25102538715E+04		Resid mbdelay (usec)		8.30078E-03	+/- 1.9E-04
Sband delay (usec)	-1.25096232477E+04		Apriori clock (usec)		-9.3433962E+00		Resid sbdelay (usec)		6.30624E-01	+/- 1.5E-03
Phase delay (usec)	-1.25102538732E+04		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		-1.67600E-06	+/- 6.6E-07
Delay rate (us/s)	5.07156383361E-01		Apriori rate (us/s)		5.07145652329E-01		Resid rate (us/s)		1.07310E-05	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		5.02758199747E-05		Resid phase (deg)		-52.0	+/- 20.4

ph/seg (deg) 56.7 48.9 Search (2048X32) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 79.6 85.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 24.4 28.8 Inc. seg. avg. 0.147 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 21.1 50.3 Inc. frq. avg. 0.137 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
m: az 52.6 el 15.0 pa -76.4 p: az 68.3 el 58.4 pa -88.0 u,v (fr/asec) -3696.360 1805.374 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mp..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mp.W.279.12BM2R



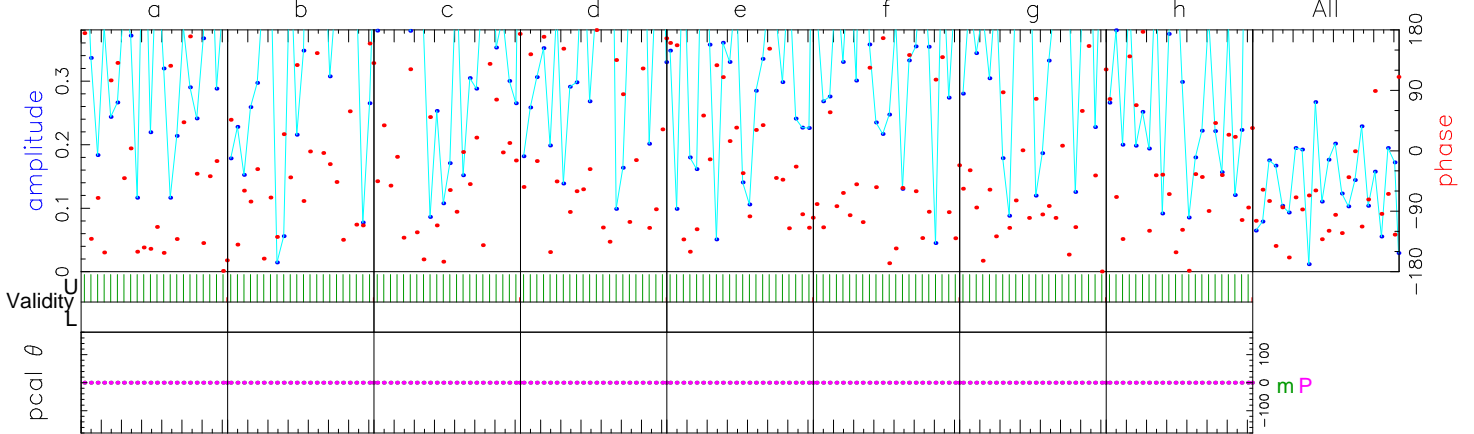


Fringe quality 0

SNR 5.9  
Int time 419.252  
Amp 0.127  
Phase -90.2  
PFD 7.1e-01  
Delays (us)  
SBD -0.372373  
MBD -0.005218  
Fringe rate (Hz) 0.658322  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171707  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



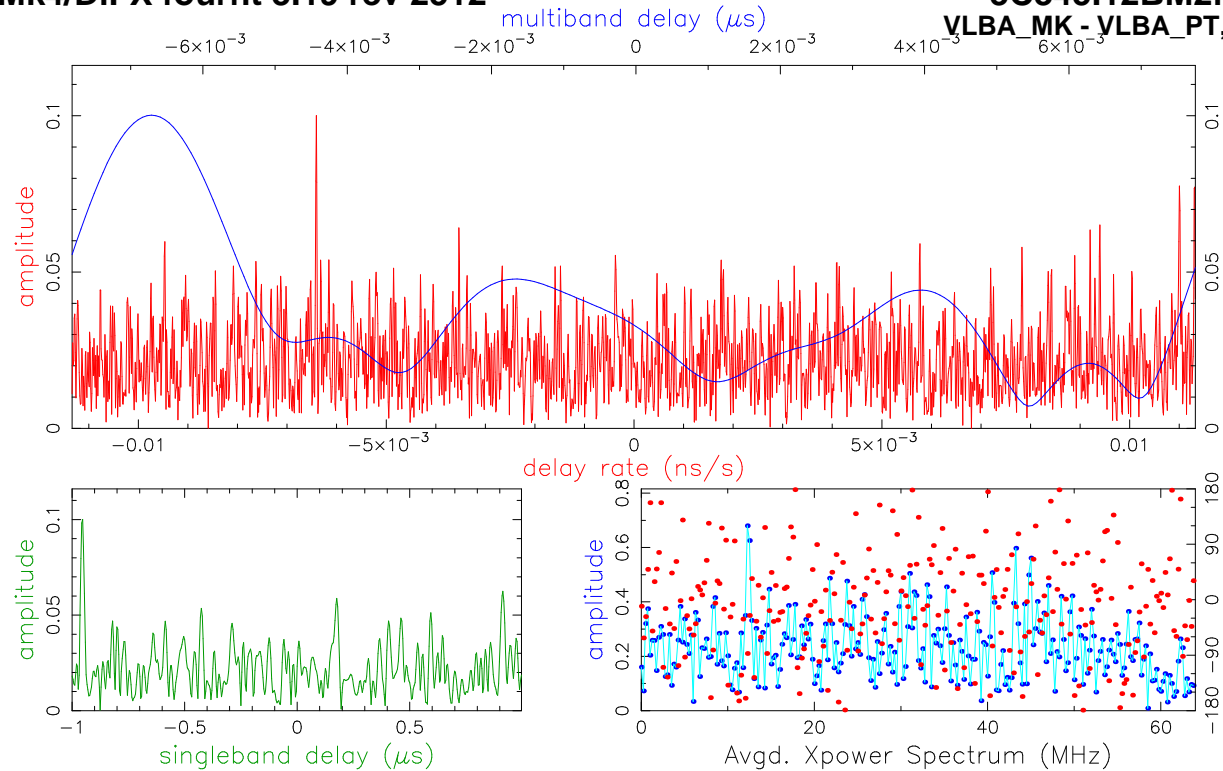
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-7.67702867504E+03	Apriori delay (usec)	-7.67666408196E+03	Resid mbdelay (usec)	-5.21808E-03	+/-	1.9E-04
Sband delay (usec)	-7.67703645446E+03	Apriori clock (usec)	2.6564860E-07	Resid sbdelay (usec)	-3.72373E-01	+/-	1.5E-03
Phase delay (usec)	-7.67666408487E+03	Apriori clockrate (us/s)	3.4430770E-07	Resid phdelay (usec)	-2.90780E-06	+/-	6.3E-07
Delay rate (us/s)	1.99255819762E+00	Apriori rate (us/s)	1.9925505516E+00	Resid rate (us/s)	7.64246E-06	+/-	2.6E-09
Total phase (deg)	-97.5	Apriori accel (us/s/s)	2.18045818411E-05	Resid phase (deg)	-90.2	+/-	19.6

ph/seg (deg)	53.8	Theor.	47.0	Amplitude	0.127 +/- 0.022	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	68.3		82.0	Search (2048X32)	0.100	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	40.2		27.7	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	42.1		48.3	Inc. seg. avg.	0.128	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.128	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
						nlags:	256	t_cohere	infinite	

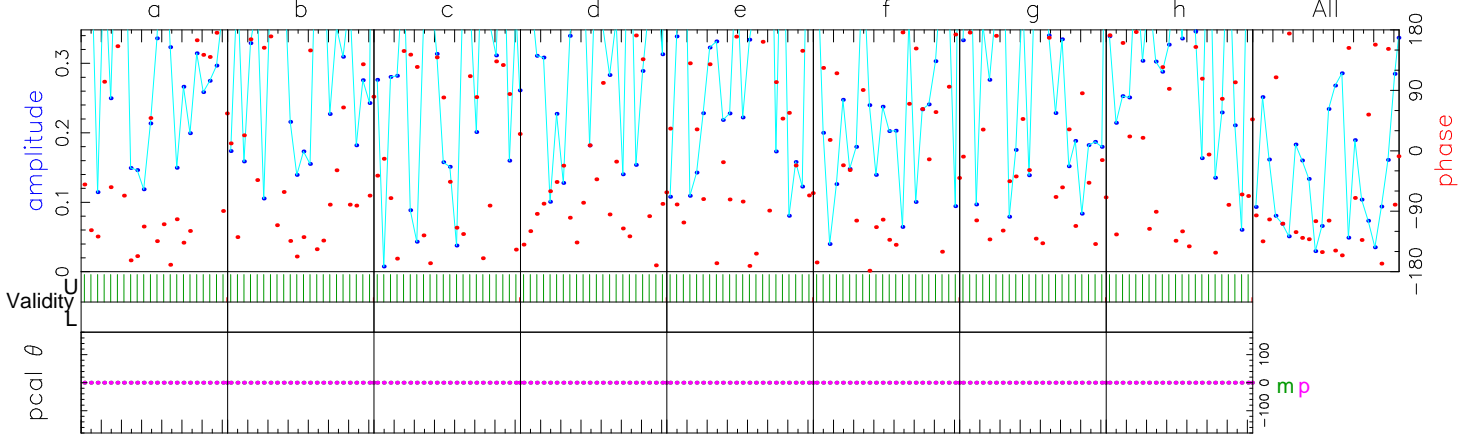
m: az 52.6 el 15.0 pa -76.4 P: az 294.5 el 39.8 pa 71.4 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mP..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mP.W.293.12BM2R



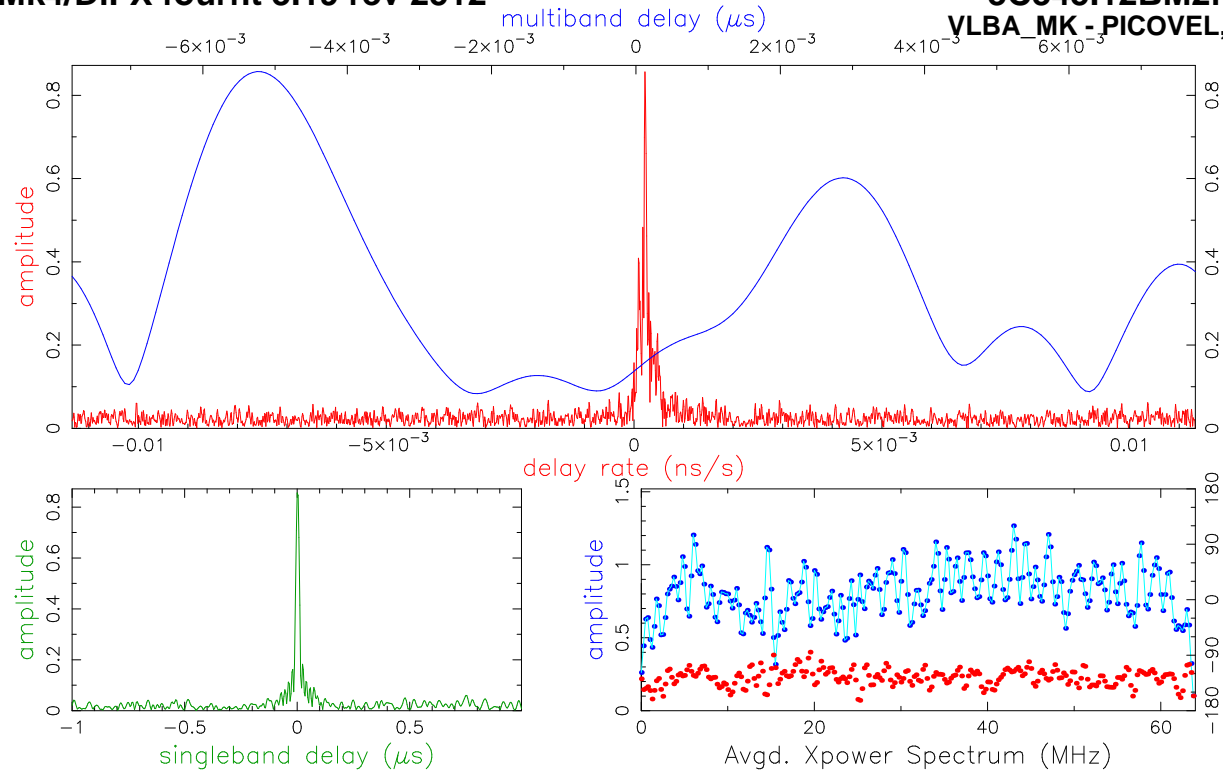
Fringe quality 0  
SNR 5.7  
Int time 419.682  
Amp 0.116  
Phase -128.6  
PFD 9.6e-01  
Delays (us)  
SBD -0.954657  
MBD -0.006769  
Fringe rate (Hz)  
-0.553228  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171708  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-139.5	-114.9	-179.0	-100.6	-110.2	147.1	-109.5	-138.7	Phase	-128.6
	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	14.4	301.7	142.2	461.2	435.2	240.8	483.5	267.6	Sbd box	12.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.25112137652E+04		Apriori delay (usec)		-1.25102538715E+04		Resid mbdelay (usec)		-6.76867E-03	+/- 1.9E-04
Sband delay (usec)	-1.25112085282E+04		Apriori clock (usec)		-9.3433962E+00		Resid sbdelay (usec)		-9.54657E-01	+/- 1.5E-03
Phase delay (usec)	-1.25102538756E+04		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		-4.14833E-06	+/- 6.5E-07
Delay rate (us/s)	5.07139229897E-01		Apriori rate (us/s)		5.07145652329E-01		Resid rate (us/s)		-6.42243E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		5.02758199747E-05		Resid phase (deg)		-128.6	+/- 20.2

ph/seg (deg) 60.9 48.4 Search (2048X32) 0.099 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 91.2 84.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 43.9 28.5 Inc. seg. avg. 0.119 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 42.5 49.8 Inc. frq. avg. 0.118 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
m: az 52.6 el 15.0 pa -76.4 p: az 68.3 el 58.4 pa -88.0 u,v (fr/asec) -3696.360 1805.374 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mp..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mp.W.299.12BM2R

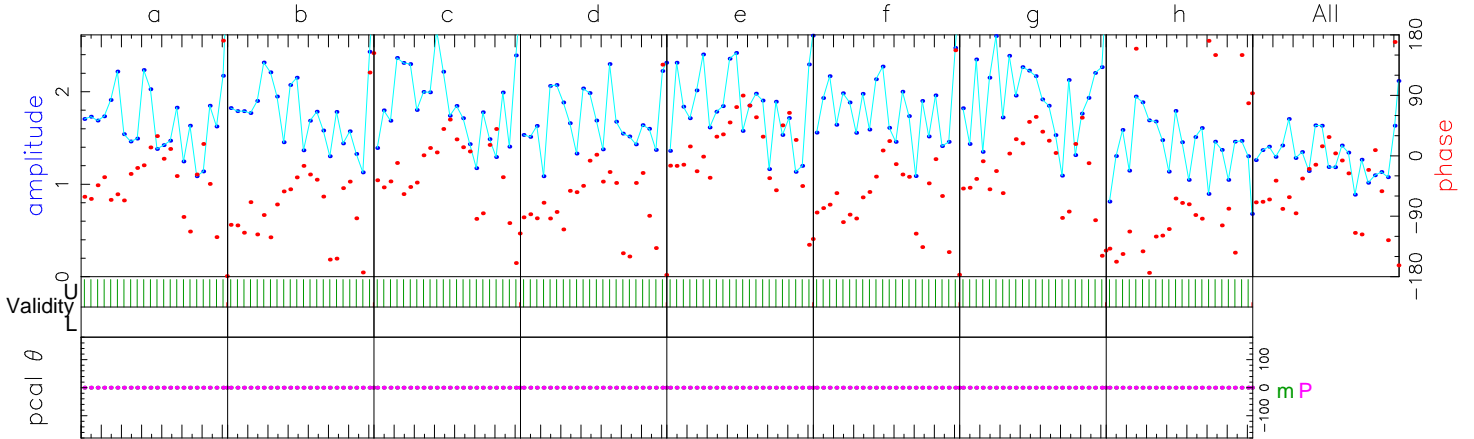


Fringe quality 2

SNR 48.8  
Int time 419.258  
Amp 0.872  
Phase -45.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.001719  
MBD -0.005172  
Fringe rate (Hz)  
0.018773  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

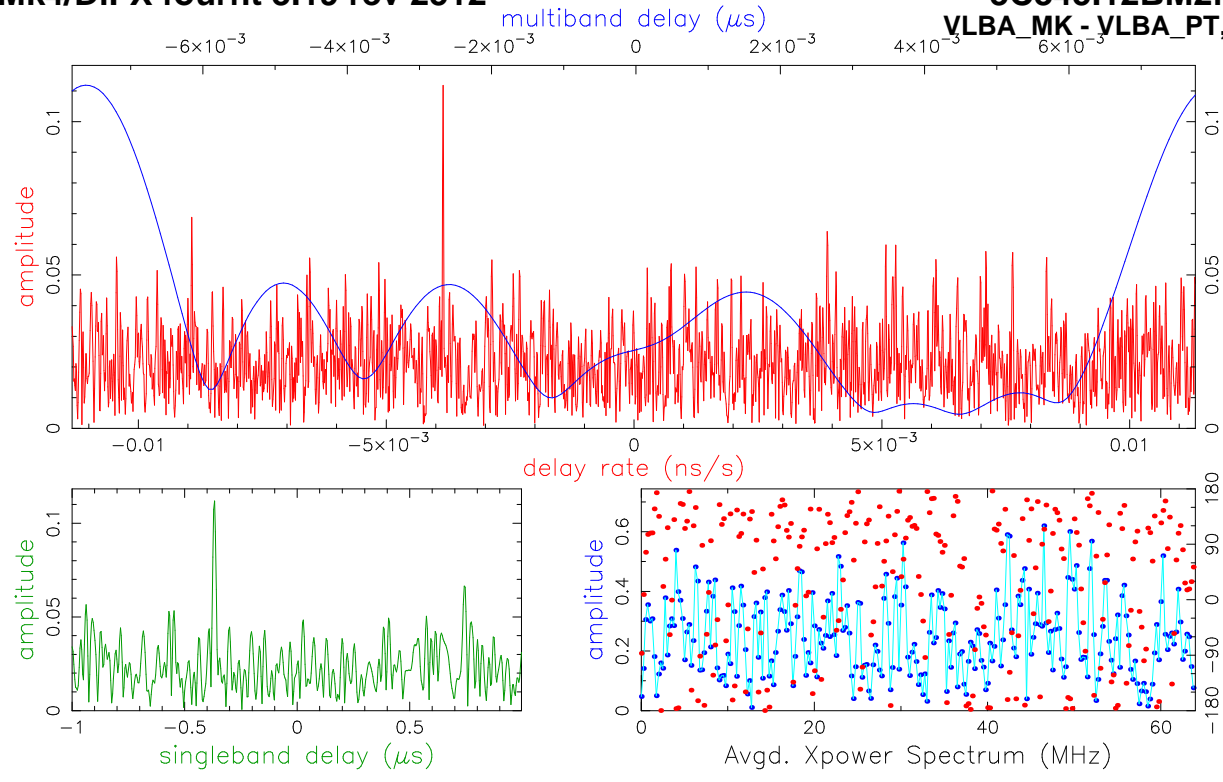
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171711  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



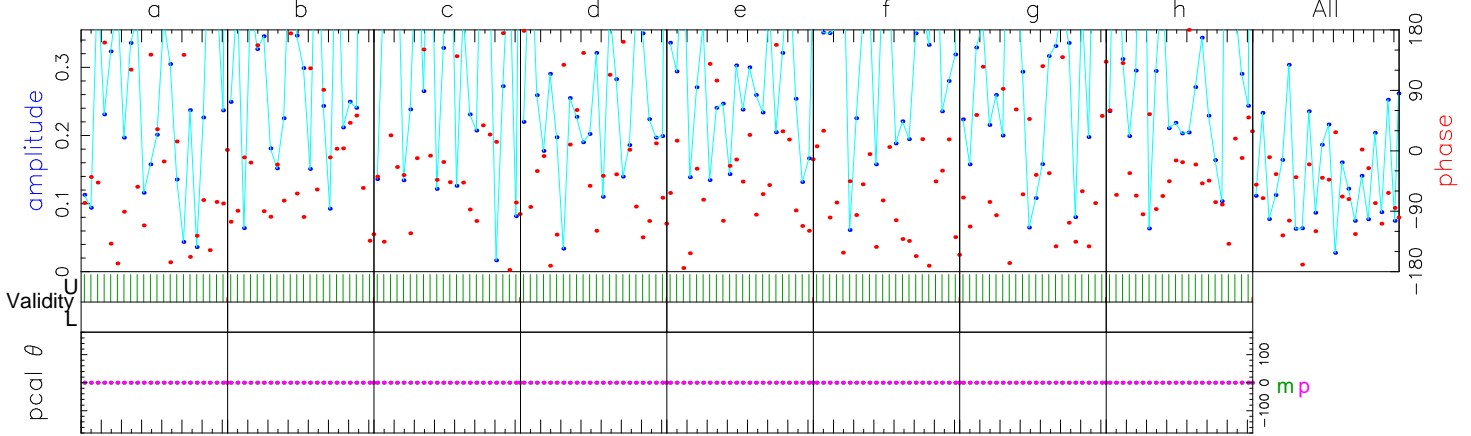
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-41.8	-82.5	-19.2	-70.2	16.0	-61.7	-13.6	-132.2	Phase	-45.9
	1.1	1.1	1.2	1.1	1.2	1.1	1.2	0.9	Ampl.	1.1
	256.8	257.5	257.2	256.7	256.8	257.0	256.6	255.1	Sbd box	257.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-7.67666925412E+03		Apriori delay (usec)		-7.67666408196E+03		Resid mbdelay (usec)		-5.17215E-03	+/- 2.2E-05
Sband delay (usec)	-7.67666236346E+03		Apriori clock (usec)		2.6564860E+07		Resid sbdelay (usec)		1.71850E-03	+/- 1.8E-04
Phase delay (usec)	-7.67666408345E+03		Apriori clockrate (us/s)		3.4430770E-07		Resid phdelay (usec)		-1.48117E-06	+/- 7.6E-08
Delay rate (us/s)	1.99255077309E+00		Apriori rate (us/s)		1.9925505516E+00		Resid rate (us/s)		2.17934E-07	+/- 3.1E-10
Total phase (deg)			Apriori accel (us/s/s)		2.18045818411E-05		Resid phase (deg)		-45.9	+/- 2.3

ph/seg (deg) 53.2 5.6 Search (2048X32) 0.842 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.5 9.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.4 3.3 Inc. seg. avg. 1.306 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 31.0 5.8 Inc. frq. avg. 1.123 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 P: az 294.5 el 39.8 pa 71.4 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mP..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mP.W.315.12BM2R



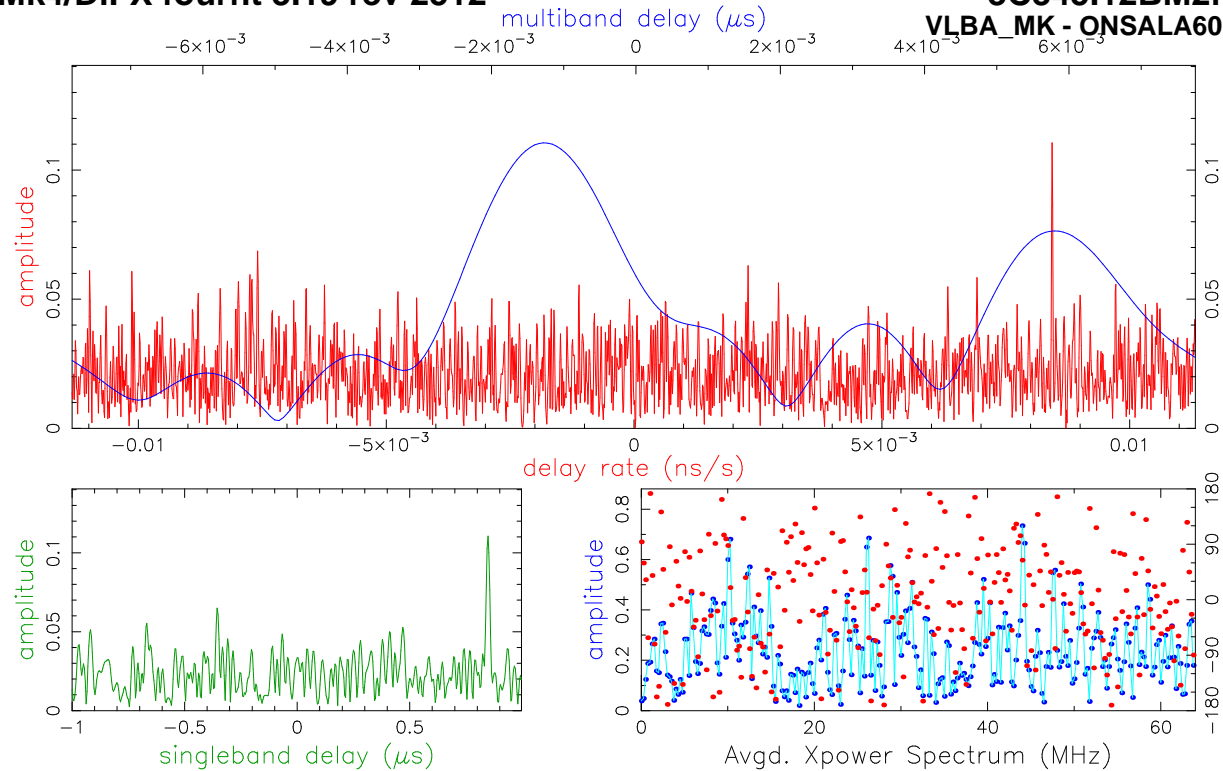
Fringe quality 0  
SNR 6.3  
Int time 419.688  
Amp 0.118  
Phase -65.3  
PFD 6.9e-02  
Delays (us)  
SBD -0.368333  
MBD -0.007651  
Fringe rate (Hz)  
-0.331948  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171712  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



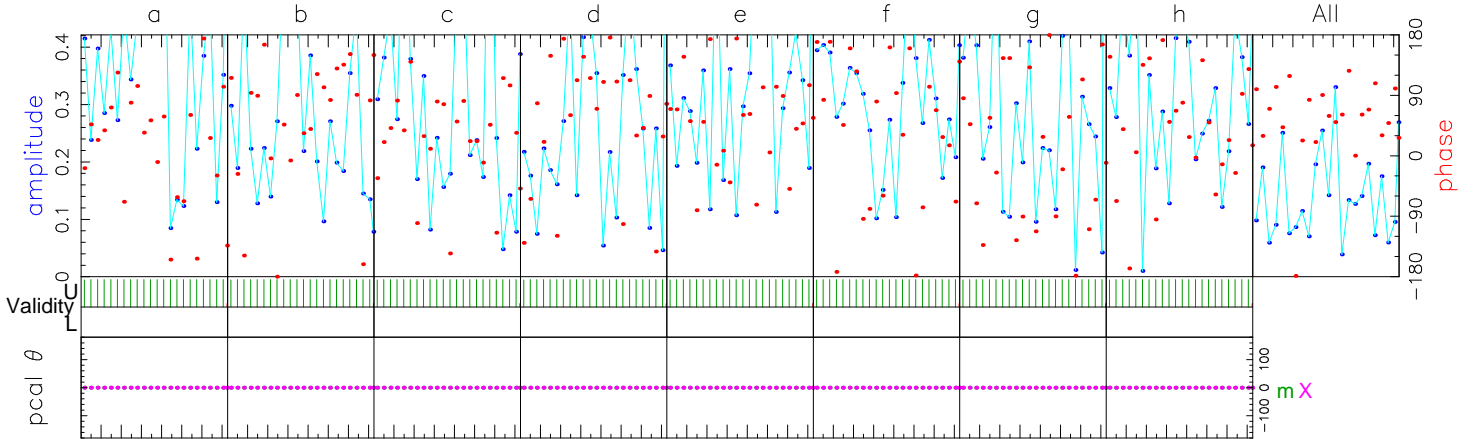
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-105.7	-63.8	-28.6	-83.9	-47.9	-69.2	-105.4	-61.6	Phase	-65.3
	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	Ampl.	0.1
	277.2	160.8	511.1	335.3	24.1	161.6	267.2	163.3	Sbd box	162.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.25106208970E+04		Apriori delay (usec)		-1.25102538715E+04		Resid mbdelay (usec)		-7.65054E-03	+/- 1.7E-04
Sband delay (usec)	-1.25106222050E+04		Apriori clock (usec)		-9.3433962E+00		Resid sbdelay (usec)		-3.68333E-01	+/- 1.4E-03
Phase delay (usec)	-1.25102538736E+04		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		-2.10630E-06	+/- 5.8E-07
Delay rate (us/s)	5.07141798737E-01		Apriori rate (us/s)		5.07145652329E-01		Resid rate (us/s)		-3.85359E-06	+/- 2.4E-09
Total phase (deg)			Apriori accel (us/s/s)		5.02758199747E-05		Resid phase (deg)		-65.3	+/- 18.1

ph/seg (deg) 46.5 43.5 Search (2048X32) 0.111 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 70.0 75.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 29.6 25.6 Inc. seg. avg. 0.115 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 34.9 44.8 Inc. frq. avg. 0.116 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
m: az 52.6 el 15.0 pa -76.4 p: az 68.3 el 58.4 pa -88.0 u,v (fr/asec) -3696.360 1805.374 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mp..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mp.W.318.12BM2R



Fringe quality 0  
SNR 6.2  
Int time 418.683  
Amp 0.140  
Phase 61.1  
PFD 1.5e-01  
Delays (us)  
SBD 0.847351  
MBD -0.001280  
Fringe rate (Hz) 0.727377  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.52  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171658  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

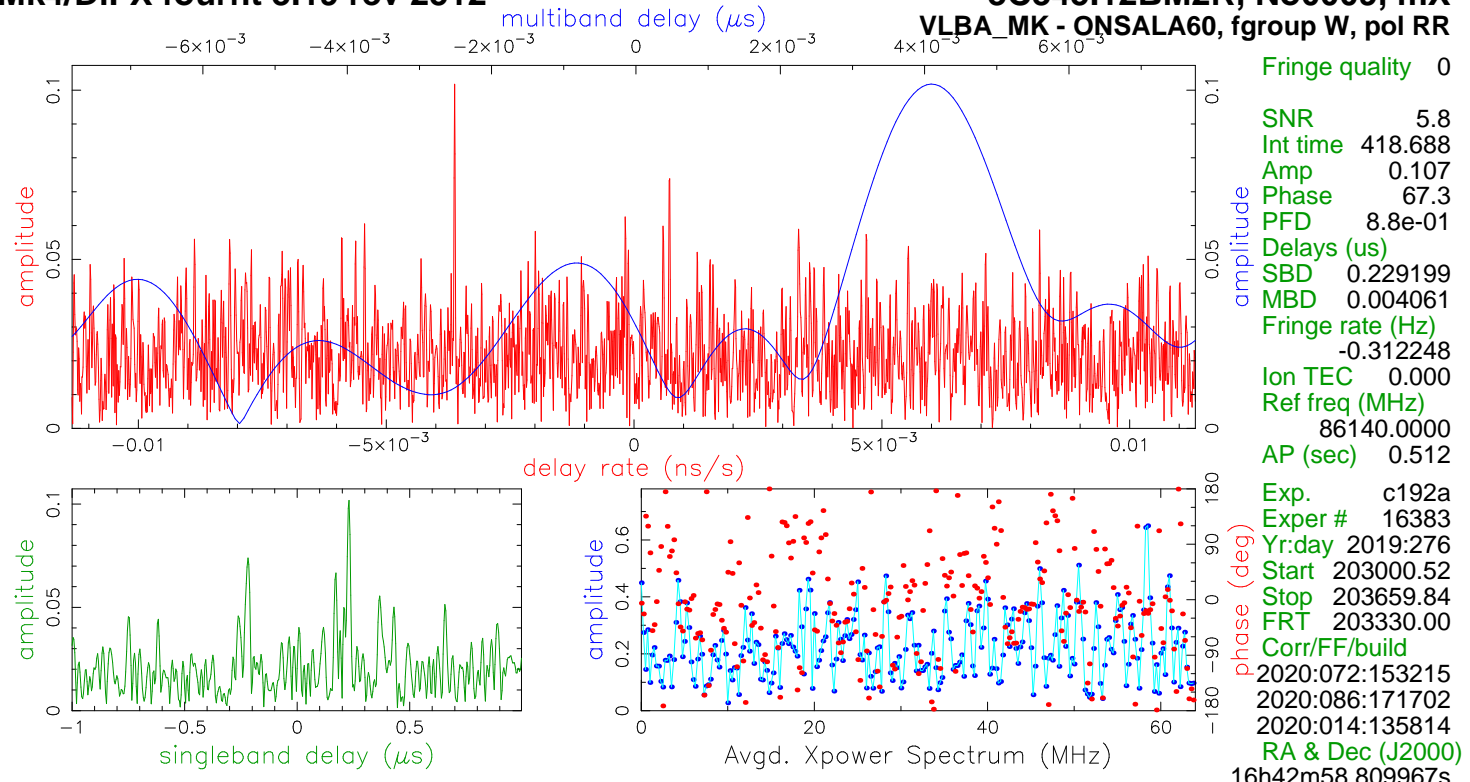


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	46.0	87.7	46.3	109.9	34.9	135.9	4.6	52.5	Phase	61.1
	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.1	Ampl.	0.2
	473.9	342.4	474.7	313.3	473.9	420.8	430.5	205.3	Sbd box	473.9
U/L	819/0	819/0	819/0	819/0	819/0	819/0	819/0	819/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

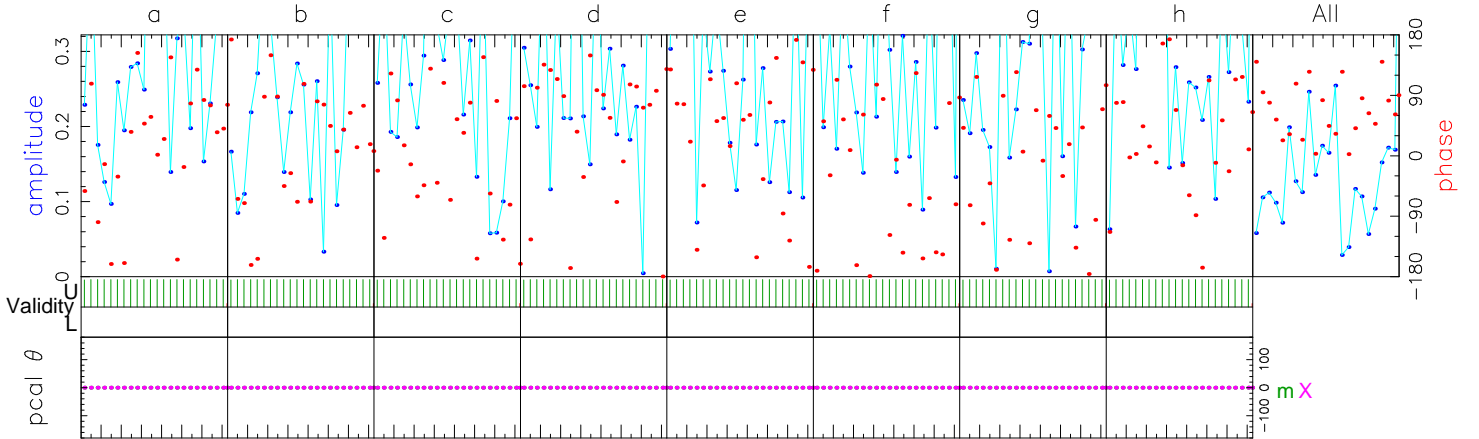
Group delay (usec)(sbd)	-6.99868956059E+03	Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	-1.27980E-03	+/-	1.8E-04
Sband delay (usec)	-6.99868467980E+03	Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	8.47351E-01	+/-	1.4E-03
Phase delay (usec)	-6.99953202882E+03	Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	1.97155E-06	+/-	6.0E-07
Delay rate (us/s)	1.75691379659E+00	Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	8.44413E-06	+/-	2.5E-09
Total phase (deg)	13.3	Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	61.1	+/-	18.5

ph/seg (deg)	42.5	Theor.	44.4	Search (2048X32)	0.106	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	70.9		77.5	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	46.7		26.2	Inc. seg. avg.	0.134	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	49.6		45.7	Inc. frq. avg.	0.152	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

m: az 52.6 el 15.0 pa -76.4 X: az 287.6 el 37.3 pa 42.0 u,v (fr/asec) -13097.996 -3220.628 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mX..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mX.W.257.12BM2R



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



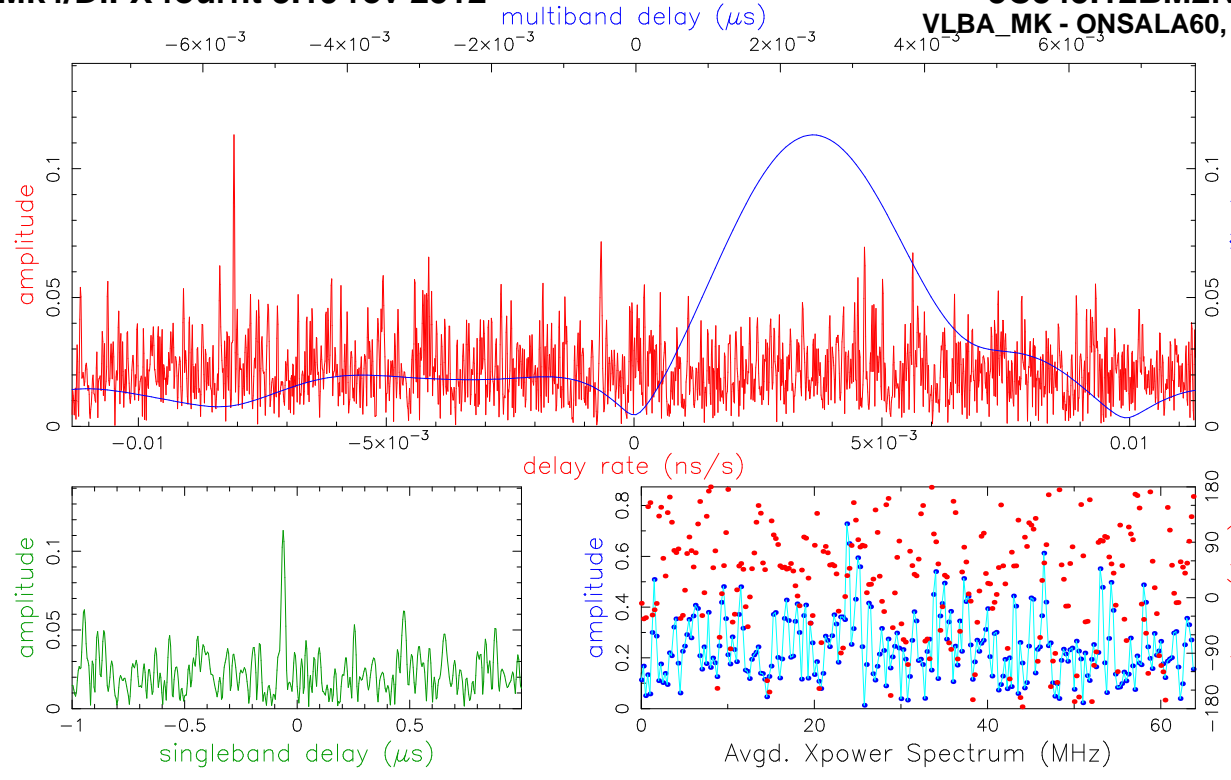
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
53.3	51.9	42.3	94.9	76.6	154.6	45.0	54.0	54.0	Phase	67.3
0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
313.3	201.4	177.8	316.3	195.6	495.0	98.5	199.7	199.7	Sbd box	315.7
U/L 819/0	819/0	819/0	819/0	819/0	819/0	819/0	819/0	819/0	APs used	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-6.99930922028E+03	Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	4.06052E-03	+/-	1.9E-04
Sband delay (usec)	-6.99930283155E+03	Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	2.29199E-01	+/-	1.5E-03
Phase delay (usec)	-6.99953202863E+03	Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	2.17024E-06	+/-	6.4E-07
Delay rate (us/s)	1.75690172757E+00	Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	-3.62489E-06	+/-	2.7E-09
Total phase (deg)	19.5	Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	67.3	+/-	19.9

ph/seg (deg)	40.9	Theor.	47.7	Amplitude	0.107 +/- 0.019	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	69.1		83.3	Search (2048X32)	0.099	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	41.2		28.1	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	40.0		49.1	Inc. seg. avg.	0.100	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.106	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

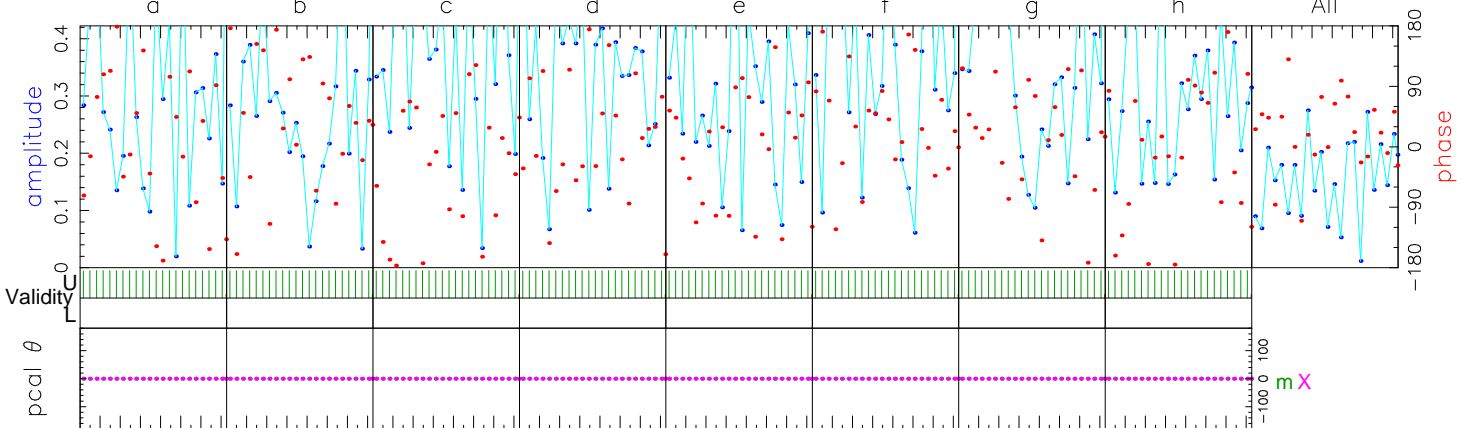
m: az 52.6 el 15.0 pa -76.4 X: az 287.6 el 37.3 pa 42.0 u,v (fr/asec) -13097.996 -3220.628 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mX..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mX.W.276.12BM2R



Fringe quality 0  
SNR 6.3  
Int time 418.683  
Amp 0.141  
Phase 28.4  
PFD 6.2e-02  
Delays (us)  
SBD -0.062077  
MBD 0.002461  
Fringe rate (Hz)  
-0.696312  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.52  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171707  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



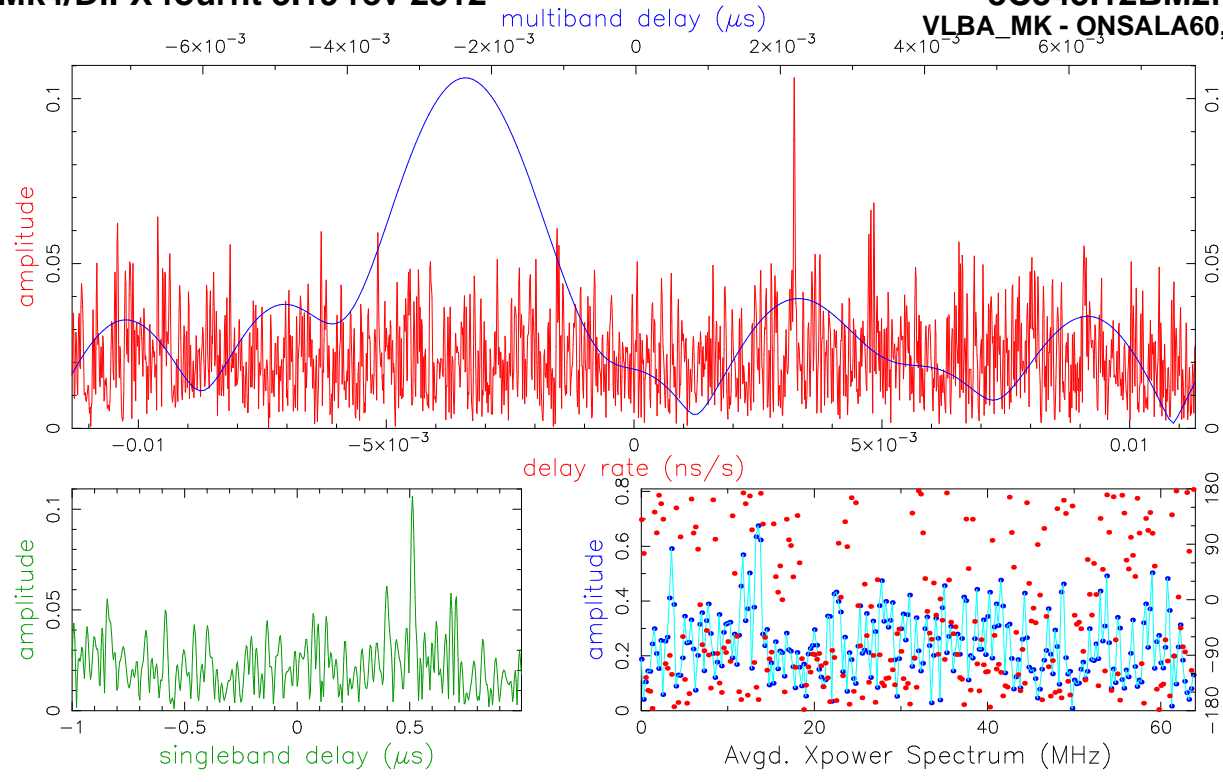
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	819/0	819/0	819/0	819/0	819/0	819/0	819/0	819/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-6.99959206965E+03	Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	2.46115E-03	+/-	1.7E-04
Sband delay (usec)	-6.99959410830E+03	Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	-6.20775E-02	+/-	1.4E-03
Phase delay (usec)	-6.99953202988E+03	Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	9.15234E-07	+/-	5.8E-07
Delay rate (us/s)	1.75689726897E+00	Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	-8.08350E-06	+/-	2.4E-09
Total phase (deg)	-19.4	Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	28.4	+/-	18.1

ph/seg (deg)	54.3	Theor.	43.4	Search (2048X32)	0.110	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.6		75.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	14.7		25.6	Inc. seg. avg.	0.150	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.5		44.6	Inc. frq. avg.	0.131	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

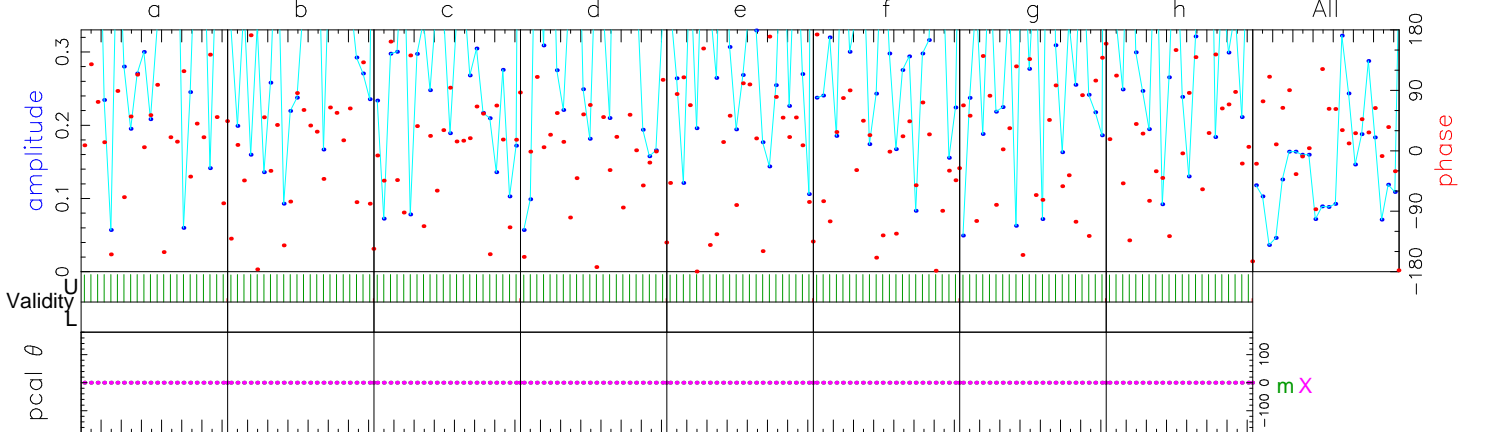
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mX  
VLBA\_MK - ONSALA60, fgroup W, pol RL



Fringe quality 0  
SNR 6.0  
Int time 418.688  
Amp 0.110  
Phase 29.3  
PFD 4.9e-01  
Delays (us)  
SBD 0.512134  
MBD -0.002353  
Fringe rate (Hz)  
0.279295  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Yr:day 16383  
Exp# 2019:276  
Start 203000.52  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171712  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



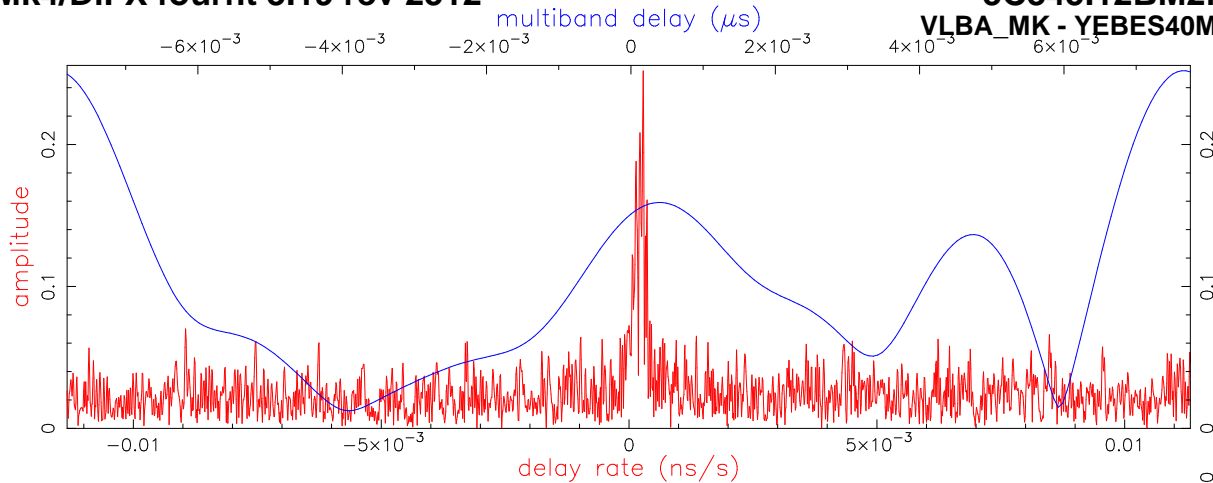
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	819/0	819/0	819/0	819/0	819/0	819/0	819/0	819/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-6.99901875892E+03	Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	-2.35312E-03	+/-	1.8E-04
Sband delay (usec)	-6.99901989655E+03	Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	5.12134E-01	+/-	1.4E-03
Phase delay (usec)	-6.99953202985E+03	Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	9.43330E-07	+/-	6.2E-07
Delay rate (us/s)	1.75690859481E+00	Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	3.24234E-06	+/-	2.6E-09
Total phase (deg)	-18.5	Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	29.3	+/-	19.2

ph/seg (deg)	50.4	Theor.	46.1	Amplitude	0.110 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	76.2	Search (2048X32)	0.104	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	26.2	Inc. seg. avg.	0.111	Inc. frq. avg.	0.104	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	42.1	Inc. frq. avg.	0.104	Sample rate (MSamp/s): 128		Data rate (Mb/s): 2048	mb window (us) -0.008 0.008
				nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

m: az 52.6 el 15.0 pa -76.4 X: az 287.6 el 37.3 pa 42.0 u,v (fr/asec) -13097.996 -3220.628 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mX..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mX.W.317.12BM2R

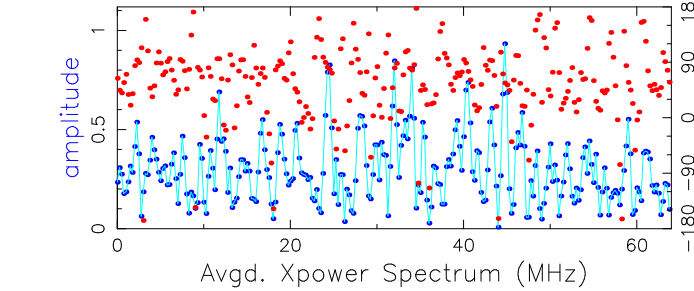
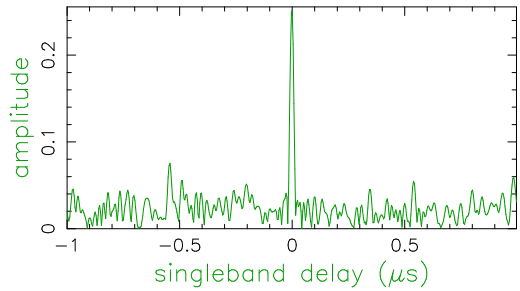




Fringe quality 9

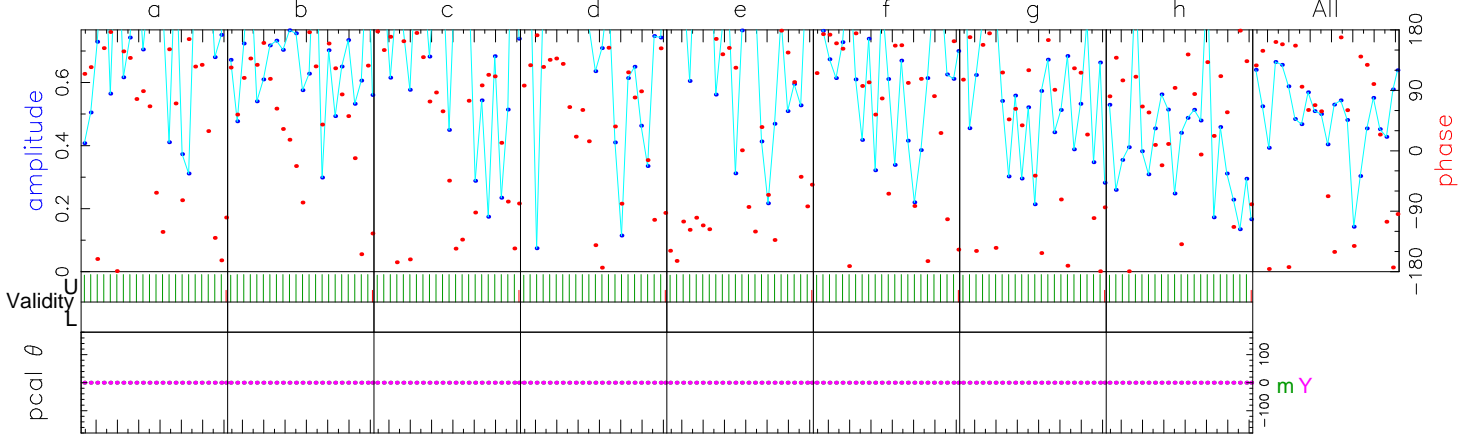
SNR 14.0  
Int time 401.068  
Amp 0.256  
Phase 141.5  
PFD 8.9e-36  
Delays (us)  
SBD -0.001590  
MBD -0.008004  
Fringe rate (Hz) 0.024544  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171658  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

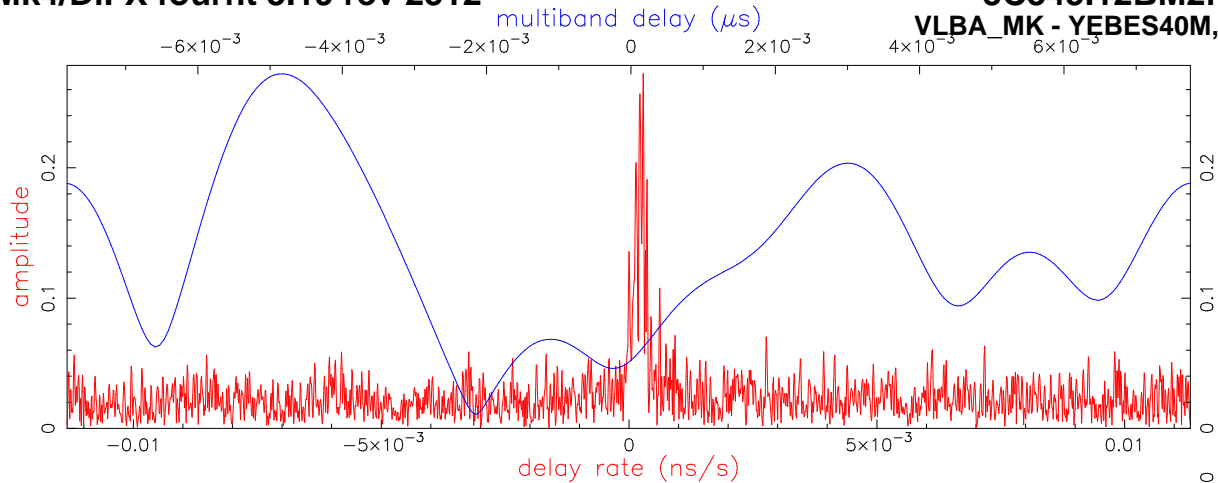
Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	142.3	104.7	163.7	108.9	-128.1	141.1	151.9	92.7	Phase	141.5
m	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.2	Ampl.	0.3
Y	256.7	255.7	256.8	256.5	256.3	256.1	255.5	254.0	Sbd box	256.6
m	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

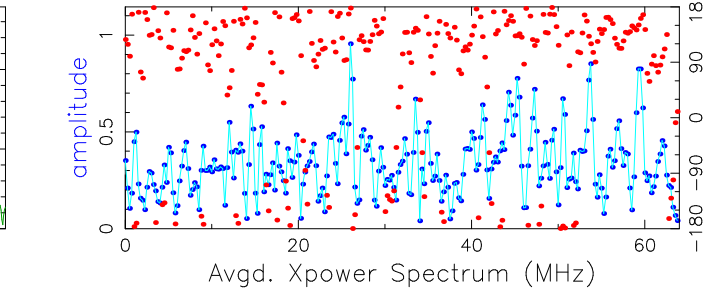
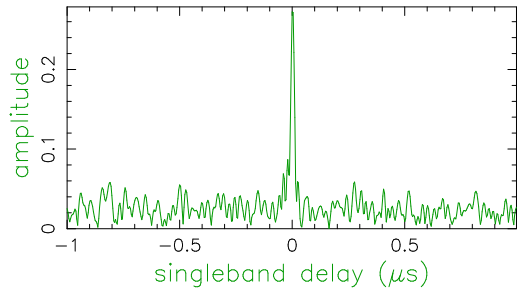
Group delay (usec)(sbd)	-8.01252867880E+03	Apriori delay (usec)	-8.01252067530E+03	Resid mbdelay (usec)	-8.00350E-03	+/-	7.8E-05
Sband delay (usec)	-8.01252226530E+03	Apriori clock (usec)	-7.0895882E+00	Resid sbdelay (usec)	-1.59000E-03	+/-	6.2E-04
Phase delay (usec)	-8.01252067074E+03	Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	4.56155E-06	+/-	2.6E-07
Delay rate (us/s)	1.95303488888E+00	Apriori rate (us/s)	1.95303460395E+00	Resid rate (us/s)	2.84932E-07	+/-	1.1E-09
Total phase (deg)	-207.8	Apriori accel (us/s/s)	2.01558556878E-05	Resid phase (deg)	141.5	+/-	8.2

ph/seg (deg)	68.0	RMS	19.6	Theor.	0.256 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	104.6	Search (2048X32)	0.244	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	47.6	Inc. seg. avg.	0.469	Inc. frq. avg.	0.321	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	35.0	Inc. frq. avg.	0.321	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011
m: az 52.6 el 15.0 pa -76.4	Y: az 291.9 el 41.0 pa 66.4	u, v (fr/asec)	-14523.031 -619.242	ion window (TEC)	0.00 0.00	simultaneous interpolator					



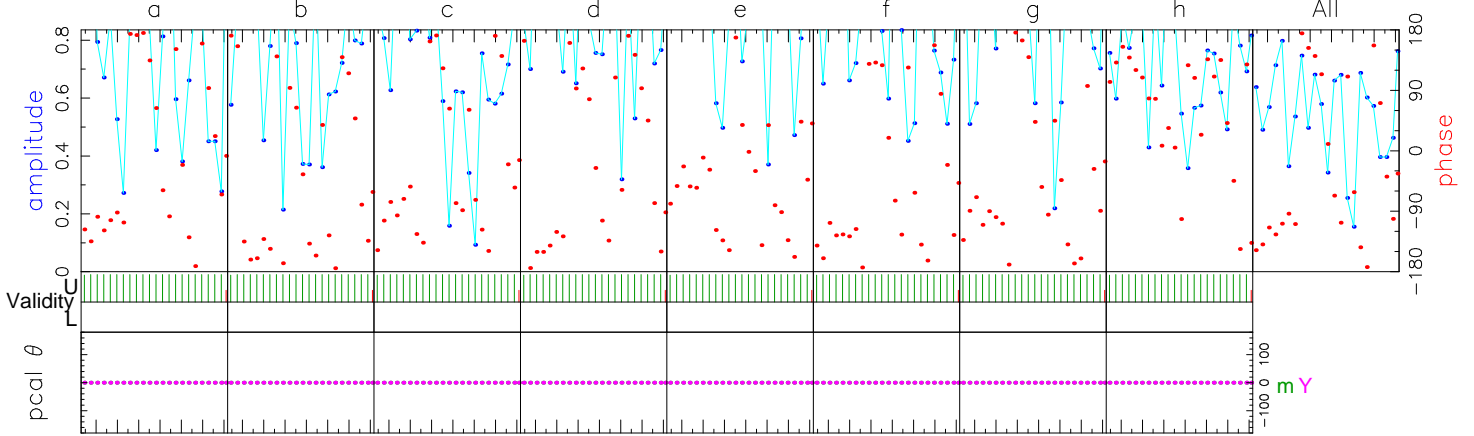
Fringe quality 7

SNR 15.3  
Int time 401.073  
Amp 0.279  
Phase -139.1  
PFD 9.5e-44  
Delays (us)  
SBD 0.001892  
MBD -0.004829  
Fringe rate (Hz)  
0.024595  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171702  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

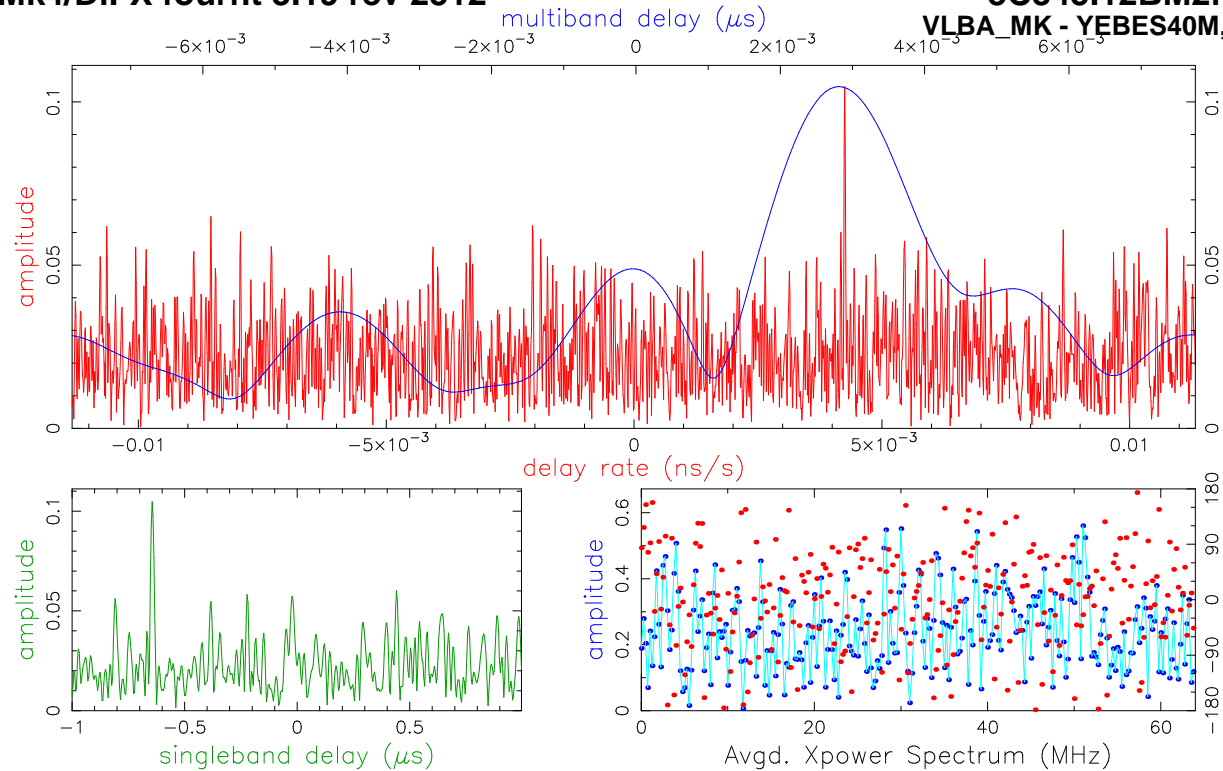
Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-8.01252550402E+03	-8.01251878330E+03	-8.01252067978E+03	-8.01252067530E+03	-8.01252067530E+03	-8.01252067530E+03	-8.01252067530E+03	-8.01252067530E+03		
Sband delay (usec)	-141.1	-177.9	-110.9	-177.4	-60.4	-142.6	-121.1	100.4		
Phase delay (usec)	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.3		
Delay rate (us/s)	256.9	256.7	257.3	257.3	257.1	257.4	256.8	256.1		
Total phase (deg)			-128.4							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
Validity										
pcal θ										
m Y										
RMS	73.3	18.0								
Theor.	31.4									
Amplitude										
Search (2048X32)										
Interp.										
Inc. seg. avg.										
Inc. frq. avg.										
ph/seg (deg)	64.3	10.6								
amp/seg (%)	53.0	18.5								
ph/frq (deg)										
amp/frq (%)										
m: az 52.6 el 15.0 pa -76.4										
Y: az 291.9 el 41.0 pa 66.4										
u, v (fr/asec) -14523.031 -619.242										
Control file: cf_1234_gmva										
Input file: /Exps/c192a/v1_PV/1234/No0009/mY..12BM2R										
Output file: /Exps/c192a/v1_PV/1234/No0009/mY.W.273.12BM2R										

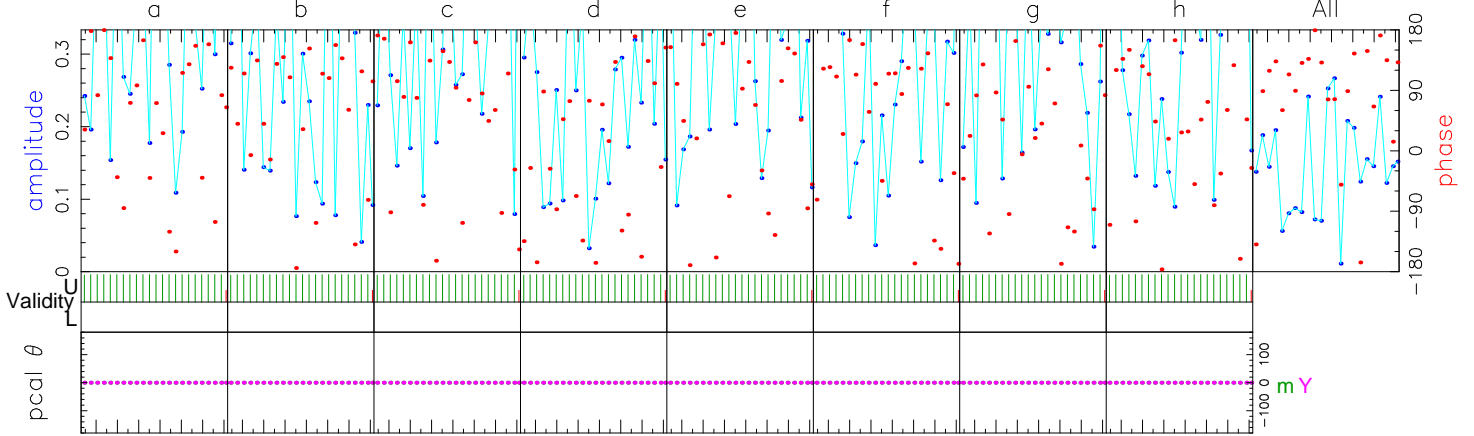
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, mY  
VLBA\_MK - YEBS40M, fgroup W, pol LR



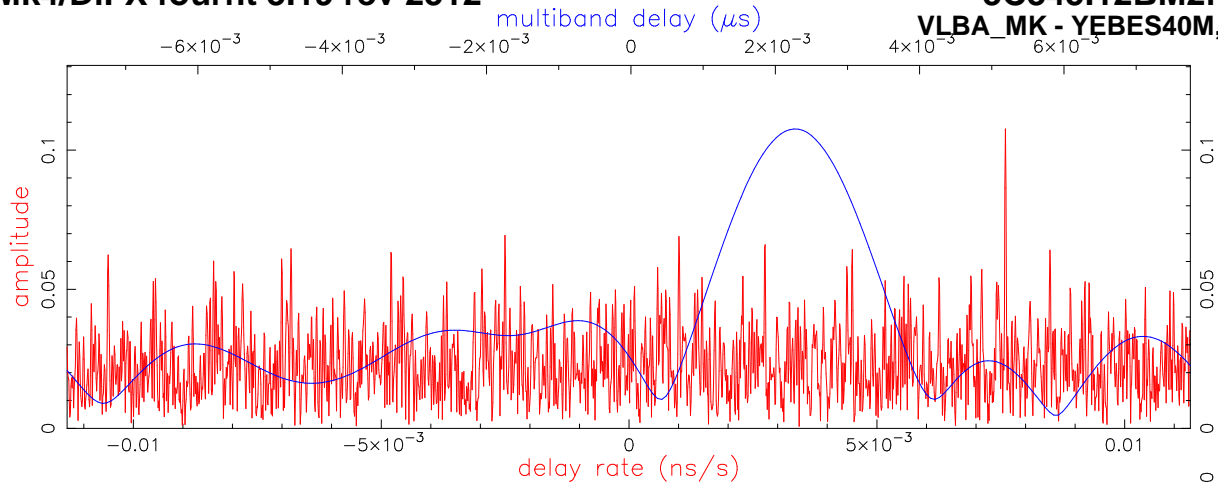
Fringe quality 0  
SNR 5.7  
Int time 401.068  
Amp 0.111  
Phase 118.1  
PFD 9.0e-01  
Delays (us)  
SBD -0.644015  
MBD 0.002838  
Fringe rate (Hz)  
0.367106  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:072:153215  
2020:086:171705  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	104.1	100.1	130.2	-167.2	150.6	123.3	104.9	82.7	Phase	118.1
	0.1	0.2	0.2	0.0	0.2	0.1	0.1	0.1	Ampl.	0.1
	258.1	93.5	91.0	101.9	296.1	245.7	188.4	436.9	Sbd box	92.1
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.01315846195E+03		Apriori delay (usec)		-8.01252067530E+03		Resid mbdelay (usec)		2.83835E-03	+/- 1.9E-04
Sband delay (usec)	-8.01316469055E+03		Apriori clock (usec)		-7.0895882E+00		Resid sbdelay (usec)		-6.44015E-01	+/- 1.5E-03
Phase delay (usec)	-8.01252067149E+03		Apriori clockrate (us/s)		-2.2869228E-07		Resid phdelay (usec)		3.80779E-06	+/- 6.4E-07
Delay rate (us/s)	1.95303886568E+00		Apriori rate (us/s)		1.95303460395E+00		Resid rate (us/s)		4.26173E-06	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		2.01558556878E-05		Resid phase (deg)		118.1	+/- 20.0

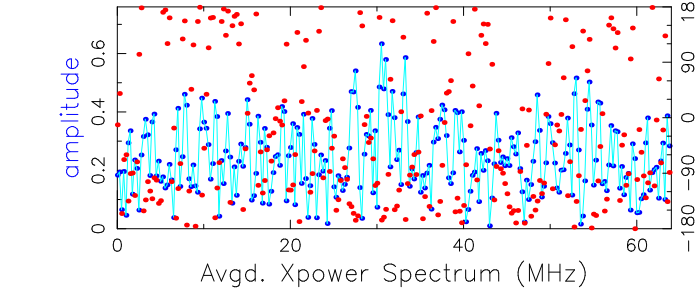
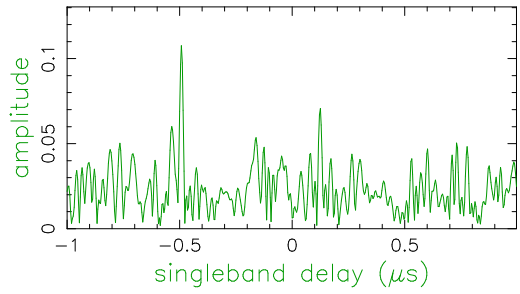
ph/seg (deg) 58.6 47.9 Search (2048X32) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 76.7 83.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 38.2 28.2 Inc. seg. avg. 0.115 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 41.3 49.3 Inc. frq. avg. 0.109 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
m: az 52.6 el 15.0 pa -76.4 Y: az 291.9 el 41.0 pa 66.4 u,v (fr/asec) -14523.031 -619.242 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mY..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mY.W.289.12BM2R



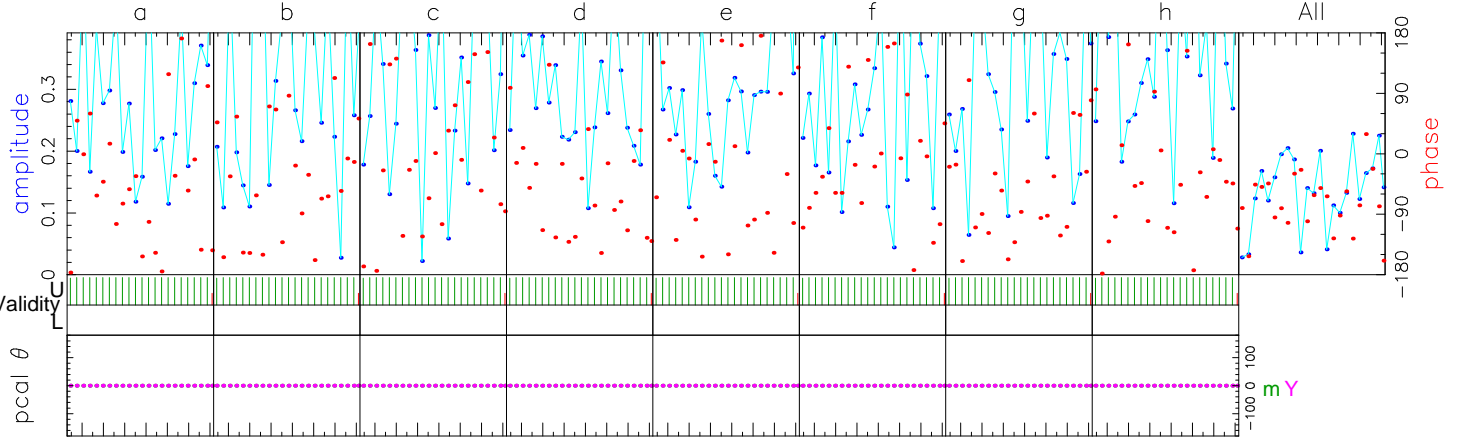
Fringe quality 0

SNR 5.9  
Int time 401.073  
Amp 0.130  
Phase -70.7  
PFD 6.1e-01  
Delays (us)  
SBD -0.492093  
MBD 0.002276  
Fringe rate (Hz) 0.654833  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171710  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

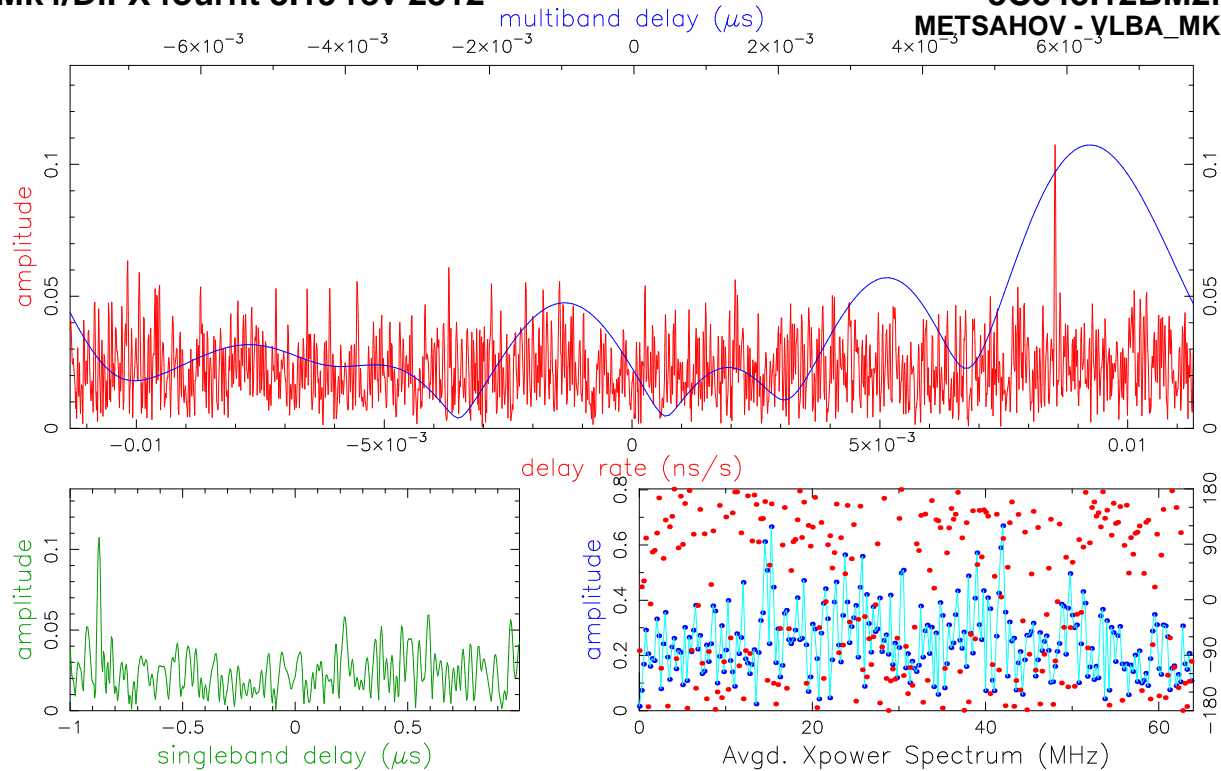


Amp. and Phase vs. time for each freq., 23 segs, 35 APs / seg (17.92 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-82.2	-46.2	-85.2	-74.5	-106.7	-32.9	-77.8	-74.7	Phase	-70.7
	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1
	214.3	458.9	329.5	131.9	275.8	511.6	224.3	207.1	Sbd box	131.0
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.01301839921E+03		Apriori delay (usec)		-8.01252067530E+03		Resid mbdelay (usec)		2.27609E-03	+/- 1.8E-04
Sband delay (usec)	-8.01301276855E+03		Apriori clock (usec)		-7.0895882E+00		Resid sbdelay (usec)		-4.92093E-01	+/- 1.5E-03
Phase delay (usec)	-8.01252067758E+03		Apriori clockrate (us/s)		-2.2869228E-07		Resid phdelay (usec)		-2.27879E-06	+/- 6.3E-07
Delay rate (us/s)	1.95304220592E+00		Apriori rate (us/s)		1.95303460395E+00		Resid rate (us/s)		7.60197E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		2.01558556878E-05		Resid phase (deg)		-70.7	+/- 19.4

ph/seg (deg) 41.2 46.6 Search (2048X32) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.6 81.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 25.0 27.5 Inc. seg. avg. 0.125 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 36.4 48.0 Inc. frq. avg. 0.124 Data rate (Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 m: az 52.6 el 15.0 pa -76.4 Y: az 291.9 el 41.0 pa 66.4 u,v (fr/asec) -14523.031 -619.242 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/mY..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/mY.W.306.12BM2R

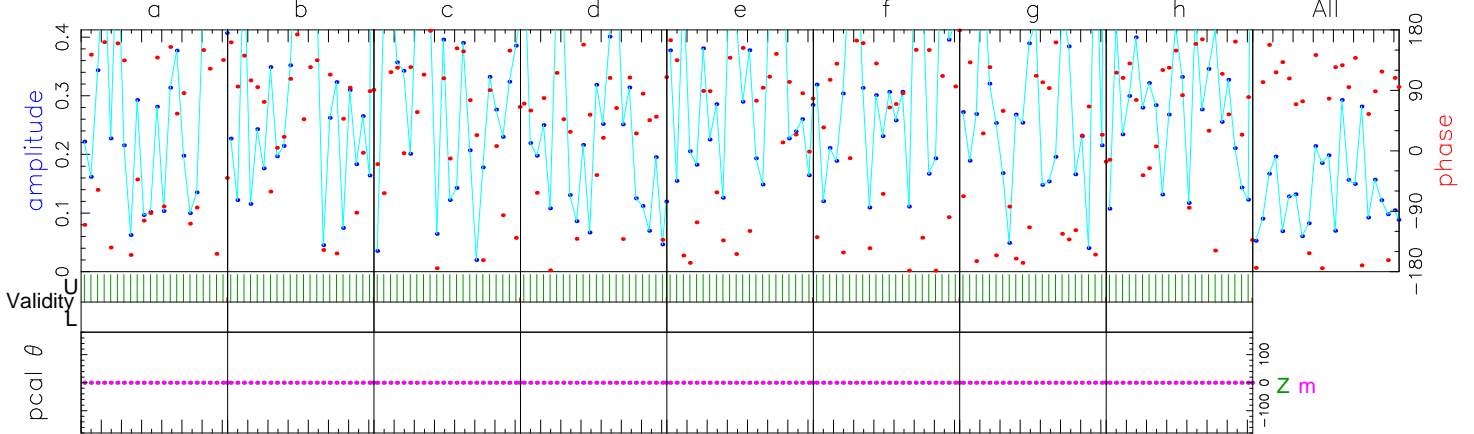


Fringe quality 0

SNR 6.0  
 Int time 418.889  
 Amp 0.137  
 Phase 128.1  
 PFD 3.7e-01  
 Delays (us)  
 SBD -0.871627  
 MBD 0.006298  
 Fringe rate (Hz)  
 0.736093  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192a  
 Yr:day 16383  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:072:153215  
 2020:086:171721  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	163.5	110.7	118.4	72.2	137.3	148.9	-168.4	107.3	Phase	128.1
	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	Ampl.	0.1
	137.5	160.1	22.5	272.6	3.8	31.9	507.2	150.1	Sbd box	33.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

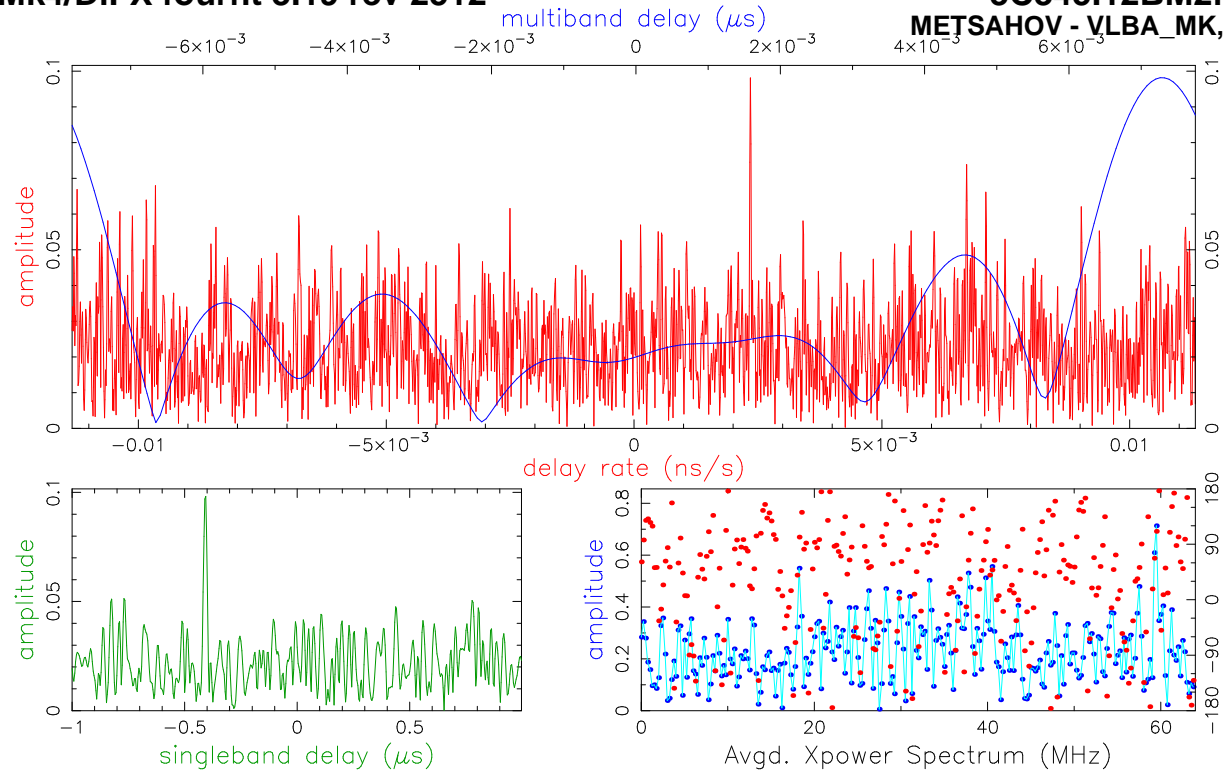
Group delay (usec)(sbd) 5.44703567154E+03 Apriori delay (usec) 5.44790437380E+03 Resid mbdelay (usec) 6.29774E-03 +/- 1.8E-04  
 Sband delay (usec) 5.44703274705E+03 Apriori clock (usec) -2.3816485E+00 Resid sbdelay (usec) -8.71627E-01 +/- 1.4E-03  
 Phase delay (usec) 5.44790437793E+03 Apriori clockrate (us/s) 2.4985100E-08 Resid phdelay (usec) 4.13066E-06 +/- 6.1E-07  
 Delay rate (us/s) -1.71193525815E+00 Apriori rate (us/s) -1.71194380346E+00 Resid rate (us/s) 8.54531E-06 +/- 2.5E-09  
 Total phase (deg) 41.4 Apriori accel (us/s/s) 9.20117244546E-06 Resid phase (deg) 128.1 +/- 19.0

RMS Theor. Amplitude 0.137 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 43.3 45.7 Search (2048X32) 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 68.2 79.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 40.3 26.9 Inc. seg. avg. 0.137 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 26.3 47.0 Inc. frq. avg. 0.146 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

Z: az 294.9 el 32.3 pa 36.1 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 12780.384 4048.077 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Zm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Zm.W.347.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, Zm  
 METSAHOV - VLBA\_MK, fgroup W, pol RR

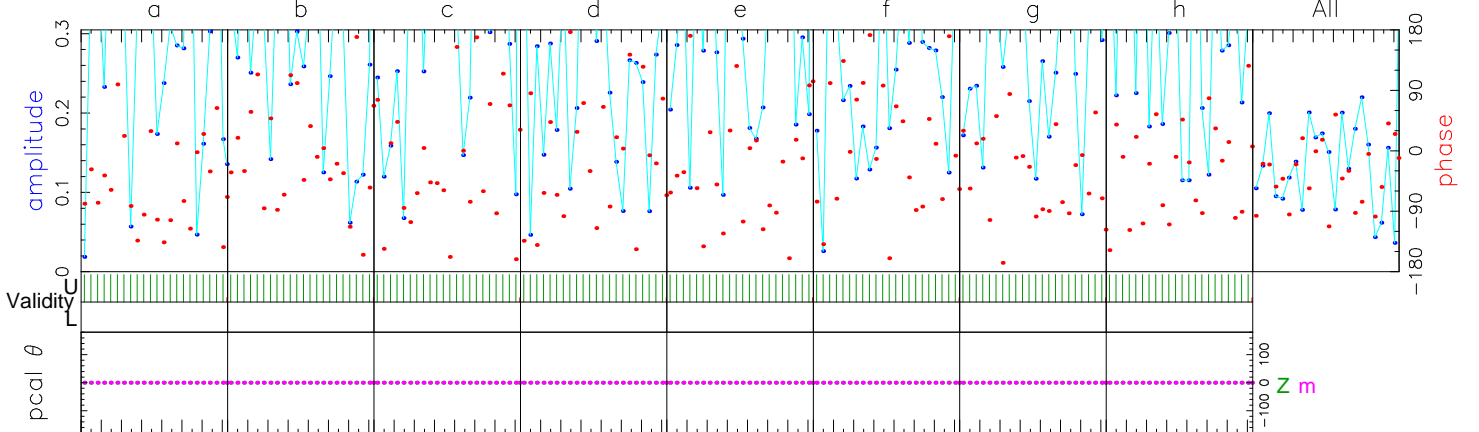


Fringe quality 0

SNR 5.6  
 Int time 418.895  
 Amp 0.102  
 Phase -36.0  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.407921  
 MBD 0.007263  
 Fringe rate (Hz)  
 0.202860  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c192a  
 Exper # 16383  
 Yr:day 2019:276  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:072:153215  
 2020:086:171726  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-51.8	-20.4	-60.9	-34.1	-40.2	8.4	-32.8	-47.2		-36.0
	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	Ampl.	0.1
	268.1	424.6	463.4	434.0	421.5	355.9	194.5	463.0	Sbd box	152.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

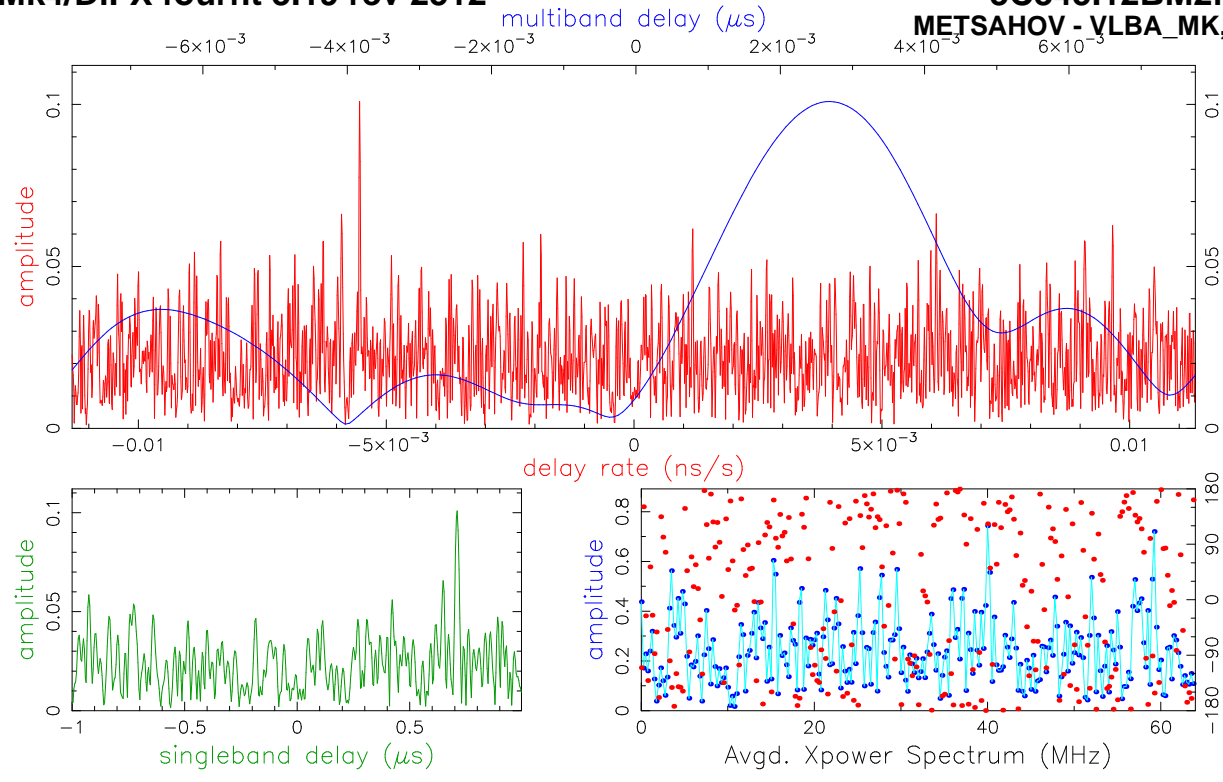
Group delay (usec)(sbd) 5.44748976160E+03 Apriori delay (usec) 5.44790437380E+03 Resid mbdelay (usec) 7.26280E-03 +/- 1.9E-04  
 Sband delay (usec) 5.44749645280E+03 Apriori clock (usec) -2.3816485E+00 Resid sbdelay (usec) -4.07921E-01 +/- 1.5E-03  
 Phase delay (usec) 5.44790437264E+03 Apriori clockrate (us/s) 2.4985100E-08 Resid phdelay (usec) -1.16147E-06 +/- 6.6E-07  
 Delay rate (us/s) -1.71194144846E+00 Apriori rate (us/s) -1.71194380346E+00 Resid rate (us/s) 2.35501E-06 +/- 2.7E-09  
 Total phase (deg) 237.3 Apriori accel (us/s/s) 9.20117244546E-06 Resid phase (deg) -36.0 +/- 20.5

RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 47.2 49.2 Search (2048X32) 0.096 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 64.7 85.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 23.2 29.0 Inc. seg. avg. 0.100 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 38.7 50.6 Inc. frq. avg. 0.093 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

Z: az 294.9 el 32.3 pa 36.1 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 12780.384 4048.077 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Zm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Zm.W.368.12BM2R

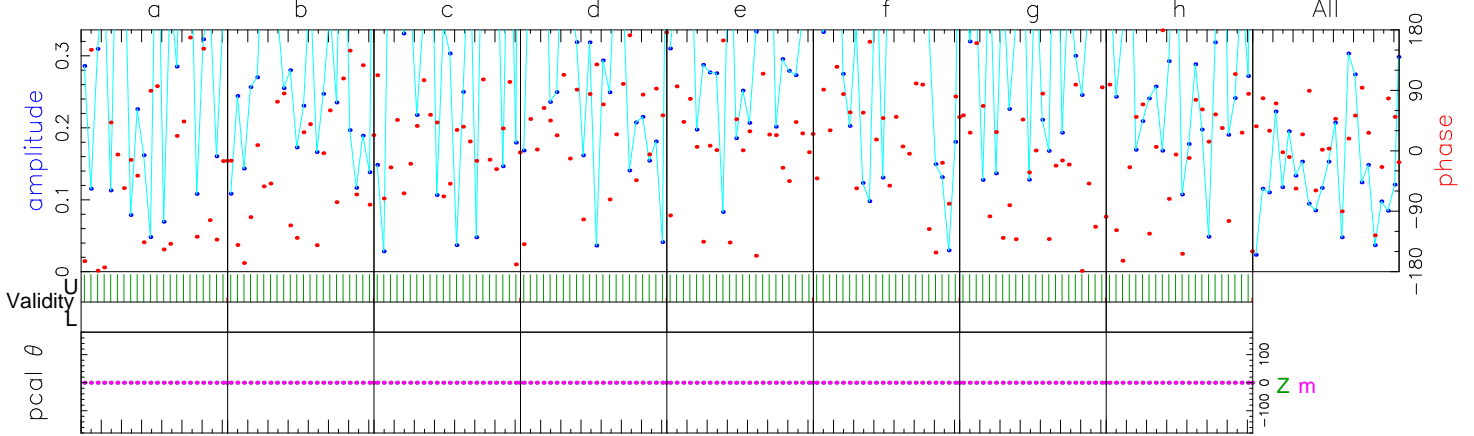
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, Zm  
 METSAHOV - VLBA\_MK, fgroup W, pol LR



Fringe quality 0  
 SNR 5.7  
 Int time 418.895  
 Amp 0.112  
 Phase 27.8  
 PFD 9.7e-01  
 Delays (us)  
 SBD 0.709936  
 MBD 0.002703  
 Fringe rate (Hz)  
 -0.477658  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192a  
 Exper # 16383  
 Yr:day 2019:276  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:072:153215  
 2020:086:171730  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

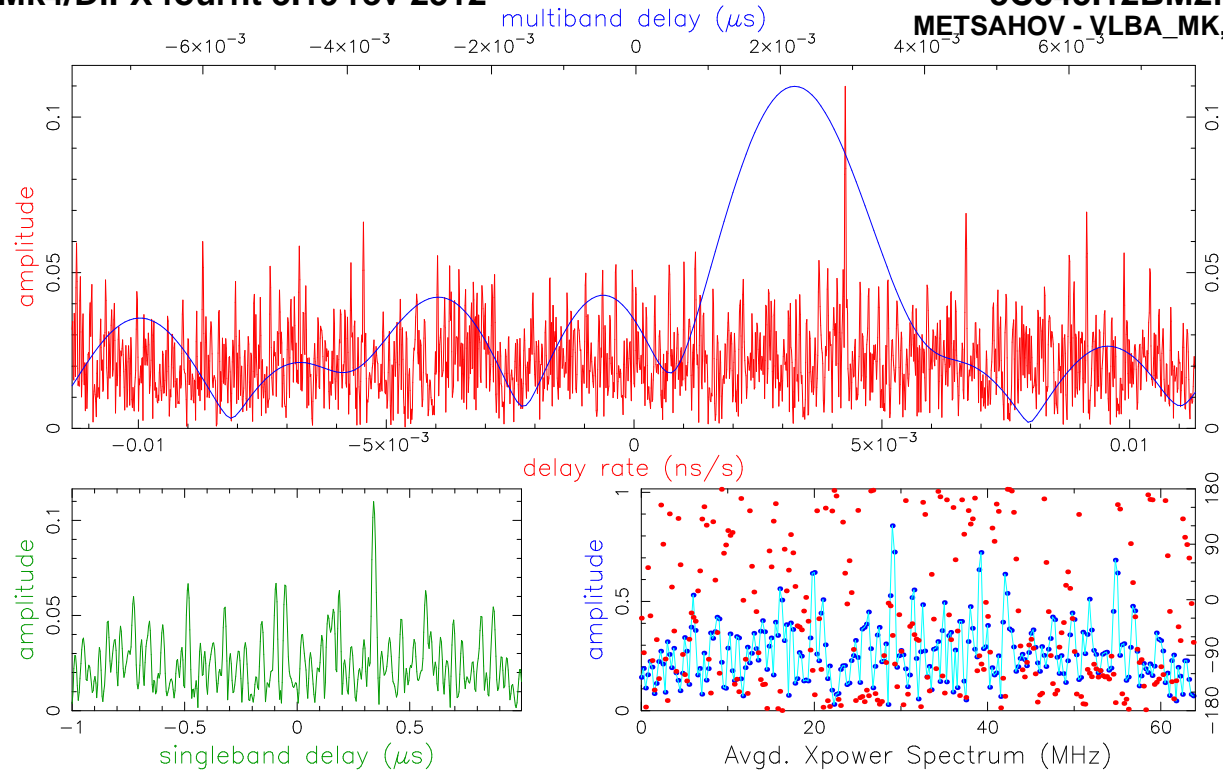
Group delay (usec)(sbd)	5.44861020170E+03	Apriori delay (usec)		5.44790437380E+03	Resid mbdelay (usec)		2.70290E-03	+/-	1.9E-04
Sband delay (usec)	5.44861431005E+03	Apriori clock (usec)		-2.3816485E+00	Resid sbdelay (usec)		7.09936E-01	+/-	1.5E-03
Phase delay (usec)	5.44790437470E+03	Apriori clockrate (us/s)		2.4985100E-08	Resid phdelay (usec)		8.95909E-07	+/-	6.5E-07
Delay rate (us/s)	-1.71194934860E+00	Apriori rate (us/s)		-1.71194380346E+00	Resid rate (us/s)		-5.54513E-06	+/-	2.7E-09
Total phase (deg)	301.1	Apriori accel (us/s/s)		9.20117244546E-06	Resid phase (deg)		27.8	+/-	20.2

ph/seg (deg)	58.3	Theor.	48.4	Amplitude	0.112 +/- 0.020	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	77.1	58.3	48.4	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	73.7	77.1	84.5	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	56.6	73.7	28.6	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
		56.6	49.9	Inc. frq. avg.	0.110	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 294.9 el 32.3 pa 36.1 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 12780.384 4048.077 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Zm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Zm.W.383.12BM2R

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BM2R, No0009, Zm  
METSAROV - VLBA\_MK, fgroup W, pol RL

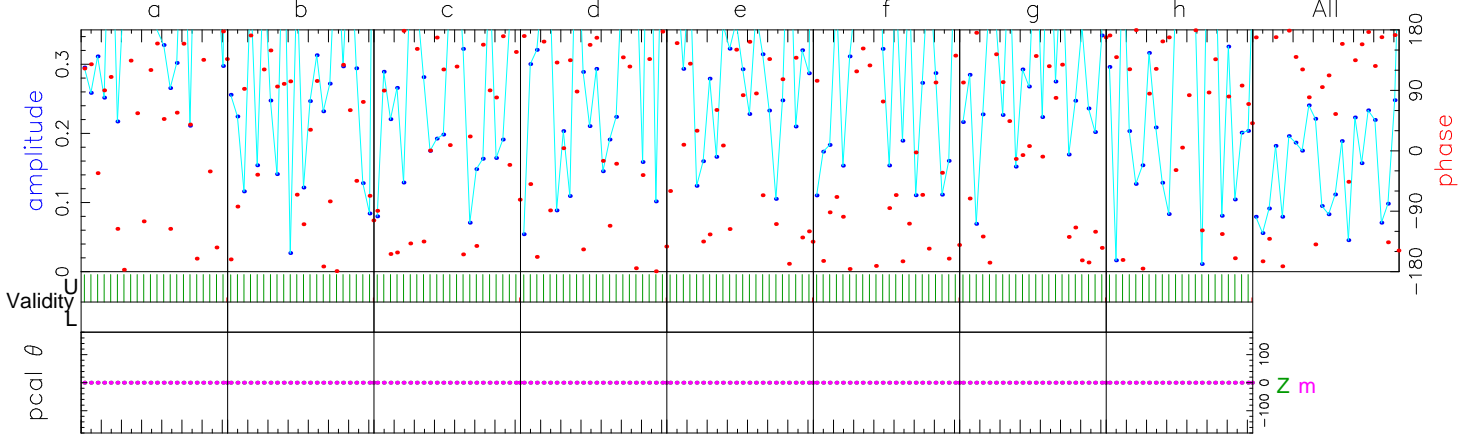


Fringe quality 0

SNR 6.2  
Int time 418.889  
Amp 0.117  
Phase 156.5  
PFD 1.9e-01  
Delays (us)  
SBD 0.340034  
MBD 0.002208  
Fringe rate (Hz) 0.368149  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:072:153215  
2020:086:171733  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.44825033139E+03	Apriori delay (usec)	5.44790437380E+03	Resid mbdelay (usec)	2.20759E-03	+/-	1.8E-04
Sband delay (usec)	5.44824440805E+03	Apriori clock (usec)	-2.3816485E+00	Resid sbdelay (usec)	3.40034E-01	+/-	1.4E-03
Phase delay (usec)	5.44790437885E+03	Apriori clockrate (us/s)	2.4985100E-08	Resid phdelay (usec)	5.04711E-06	+/-	6.0E-07
Delay rate (us/s)	-1.71193952962E+00	Apriori rate (us/s)	-1.71194380346E+00	Resid rate (us/s)	4.27384E-06	+/-	2.5E-09
Total phase (deg)	69.8	Apriori accel (us/s/s)	9.20117244546E-06	Resid phase (deg)	156.5	+/-	18.6

ph/seg (deg)	55.5	Theor.	44.7	Amplitude	0.117 +/- 0.019	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	74.8	Search (2048X32)	0.107	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	23.3	Inc. seg. avg.	0.123	Inc. frq. avg.	0.112	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	31.4	Inc. frq. avg.	0.112			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
Z: az 294.9 el 32.3 pa 36.1		m: az 52.6 el 15.0 pa -76.4		u,v (fr/asec)	12780.384 4048.077	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0009/Zm..12BM2R Output file: /Exps/c192a/v1\_PV/1234/No0009/Zm.W.399.12BM2R

simultaneous interpolator