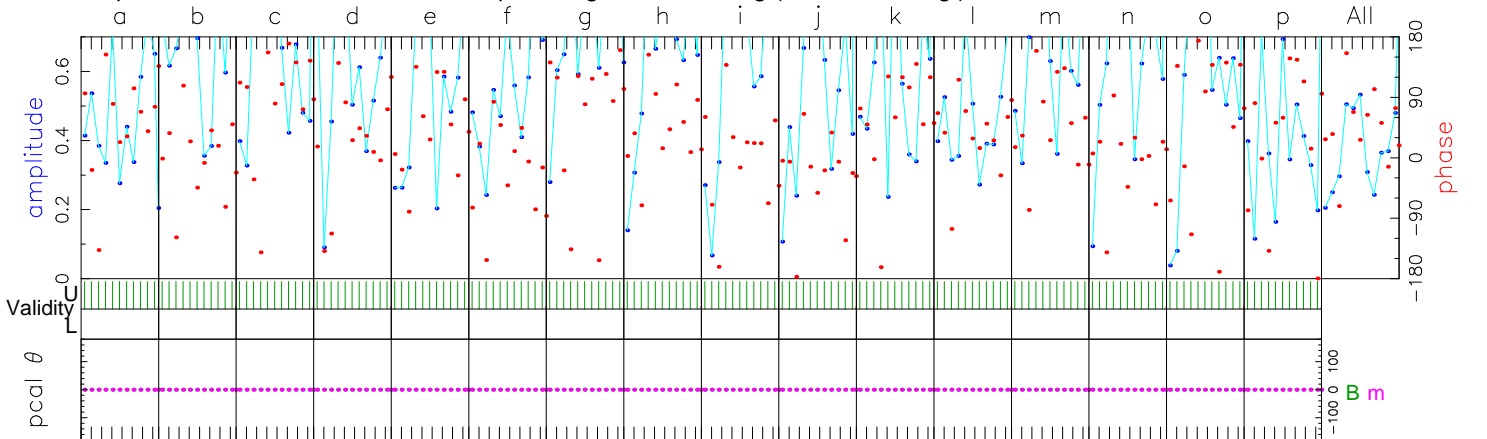


Fringe quality 9

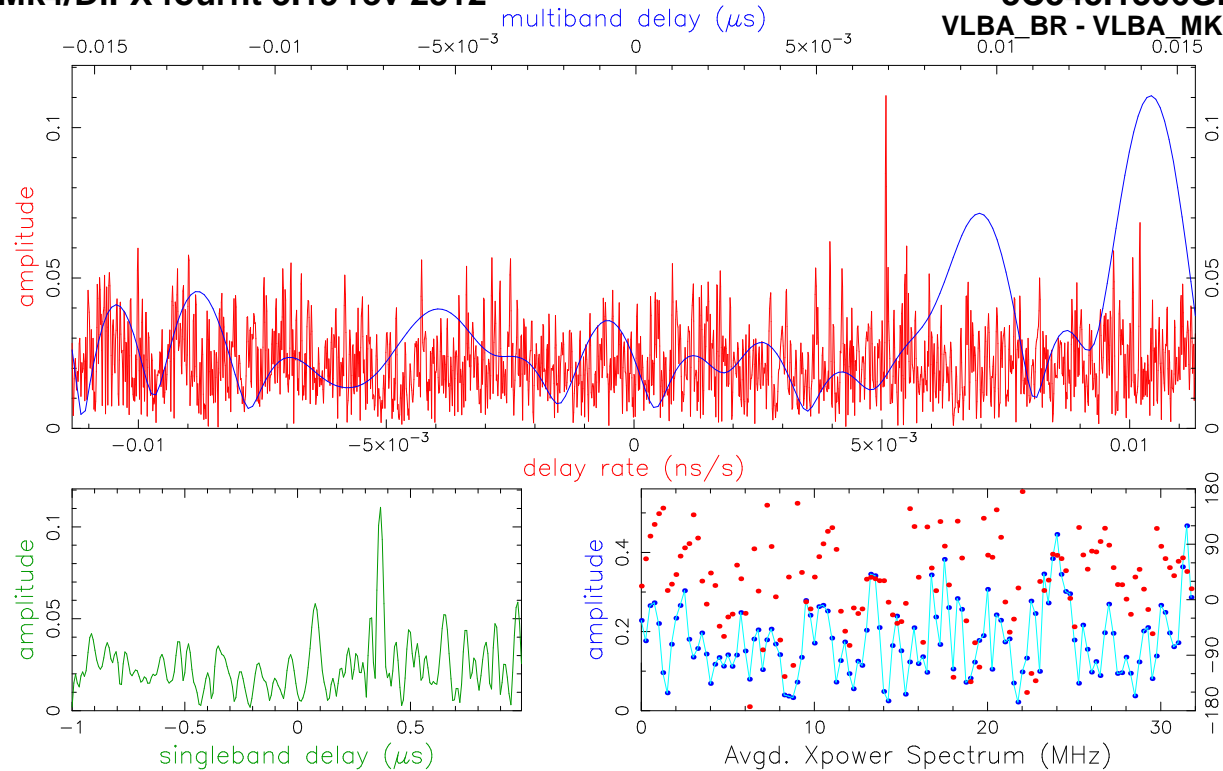
SNR 13.1  
Int time 419.676  
Amp 0.233  
Phase 53.2  
PFD 2.7e-30  
Delays (us)  
SBD 0.001178  
MBD 0.007509  
Fringe rate (Hz) -0.015928  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:044924  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

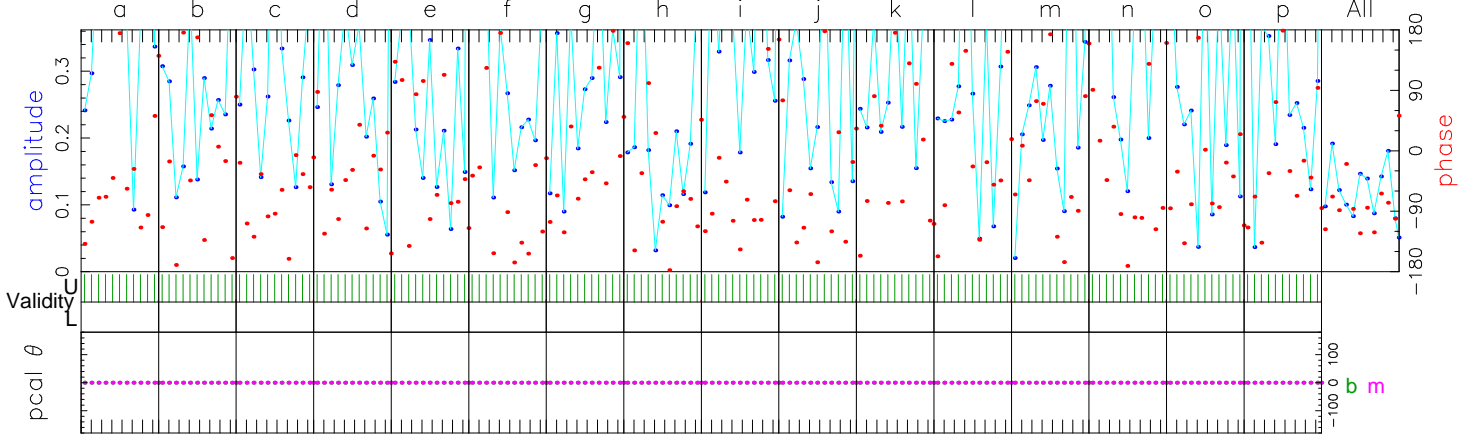


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	0:0	0:0	0:0	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	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL				Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL				Tracks
																				Tracks
Group delay (usec)(sbd)	7.15509025050E+03			Apriori delay (usec)			7.15508274173E+03			Resid mbdelay (usec)			7.50877E-03			+/- 8.3E-05				
Sband delay (usec)	7.15508391973E+03			Apriori clock (usec)			1.4273647E+01			Resid sbdelay (usec)			1.17800E-03			+/- 1.3E-03				
Phase delay (usec)	7.15508274344E+03			Apriori clockrate (us/s)			-1.9130770E-07			Resid phdelay (usec)			1.71637E-06			+/- 2.8E-07				
Delay rate (us/s)	-1.85864947138E+00			Apriori rate (us/s)			-1.85864928647E+00			Resid rate (us/s)			-1.84910E-07			+/- 1.2E-09				
Total phase (deg)	187.3			Apriori accel (us/s/s)			-6.73614306400E-06			Resid phase (deg)			53.2			+/- 8.8				
ph/seg (deg)	RMS	Theor.	Amplitude			0.233 +/- 0.018			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5								
amp/seg (%)	56.5	15.2	Search (2048X64)			0.223			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000					
ph/frq (deg)	78.1	26.5	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016			
amp/frq (%)	50.5	17.5	Inc. seg. avg.			0.359			Sample rate(MISamp/s): 64			dr window (ns/s)			-0.011 0.011					
	53.5	30.6	Inc. frq. avg.			0.321			Data rate(Mb/s): 2048			nlags: 128 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/v2/1234/No0009/Bm...1306GF			Output file: /Exps/c192a/v2/1234/No0009/Bm.W.11.1306GF														



Fringe quality 0  
SNR 6.2  
Int time 419.684  
Amp 0.121  
Phase -84.9  
PFD 1.3e-01  
Delays (us)  
SBD 0.365965  
MBD 0.014245  
Fringe rate (Hz)  
0.438229  
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  
2020:083:025951  
2020:093:044924  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



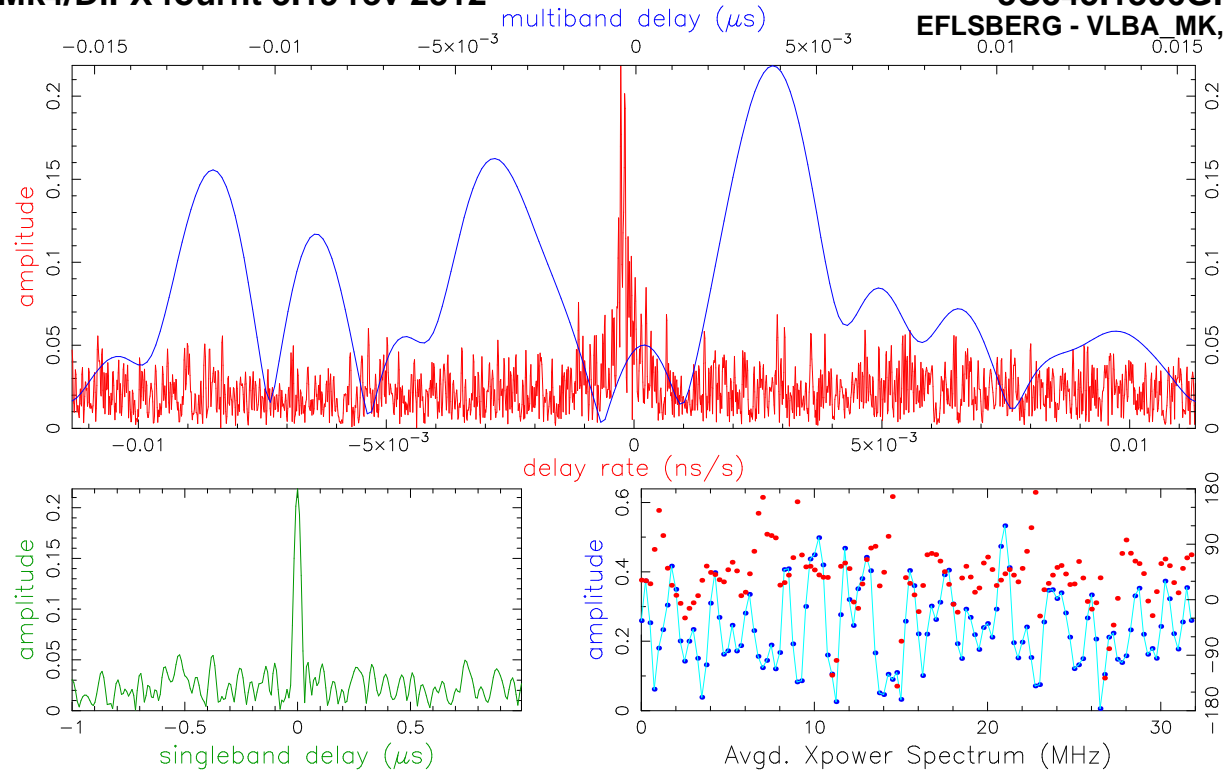
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-84.1	-92.2	-78.2	-55.4	-161.4	-103.4	-31.7	-84.7	-89.9	-128.9	-168.0	137.6	-45.3	-73.1	-57.0	-98.0	Phase	-84.9
0.3	0.1	0.3	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.0	0.0	0.1	0.2	0.2	0.1	Ampl.	0.1
176.1	169.8	175.7	174.0	71.3	85.7	98.0	126.8	176.7	154.4	62.9	226.0	212.8	145.2	19.9	91.5	Sbd box	175.8
U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:m 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b:m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 1.13882121001E+04 Apriori delay (usec) 1.13878541051E+04 Resid mbdelay (usec) 1.42450E-02 +/- 1.7E-04  
 Sband delay (usec) 1.13882200701E+04 Apriori clock (usec) -3.1784182E+00 Resid sbdelay (usec) 3.65965E-01 +/- 2.8E-03  
 Phase delay (usec) 1.13878541024E+04 Apriori clockrate (us/s) -2.3370279E-07 Resid phdelay (usec) -2.73889E-06 +/- 5.9E-07  
 Delay rate (us/s) -5.09364990110E-01 Apriori rate (us/s) -5.09370077513E-01 Resid rate (us/s) 5.08740E-06 +/- 2.5E-09  
 Total phase (deg) 136.1 Apriori accel (us/s/s) -3.13068843373E-05 Resid phase (deg) -84.9 +/- 18.4

ph/seg (deg) RMS Theor. Amplitude 0.121 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 31.0 31.9 Search (2048X64) 0.103 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 53.7 36.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 71.5 64.4 Inc. seg. avg. 0.117 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/bm..1306GF Output file: /Exps/c192a/v2/1234/No0009/bm.W.12.1306GF

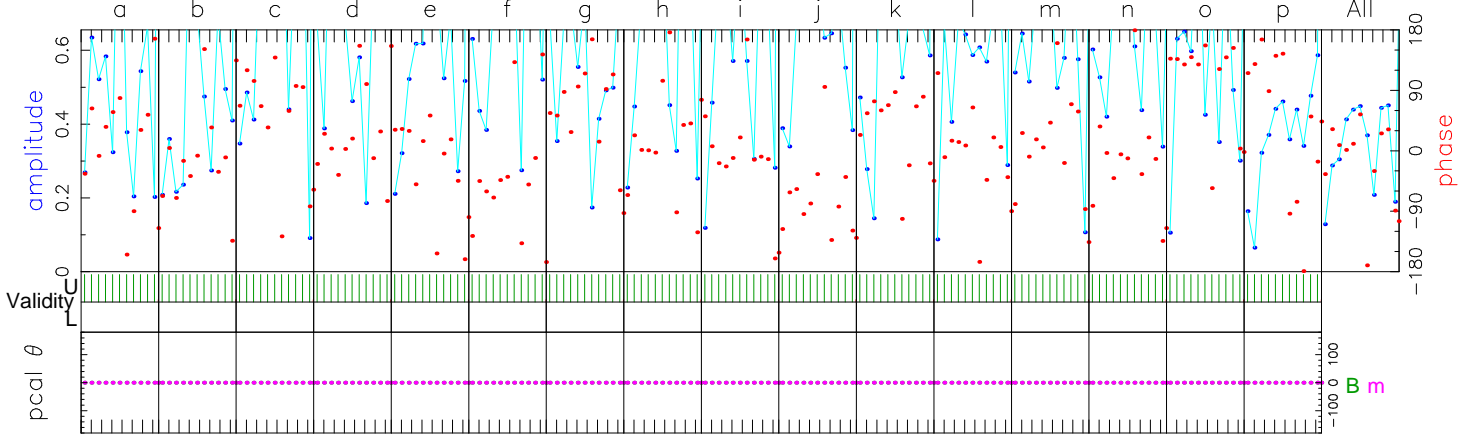


Fringe quality 9

SNR 12.2  
Int time 419.681  
Amp 0.219  
Phase 14.2  
PFD 9.8e-26  
Delays (us)  
SBD -0.000776  
MBD 0.003791  
Fringe rate (Hz)  
-0.022888  
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  
2020:083:025951  
2020:093:044929  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

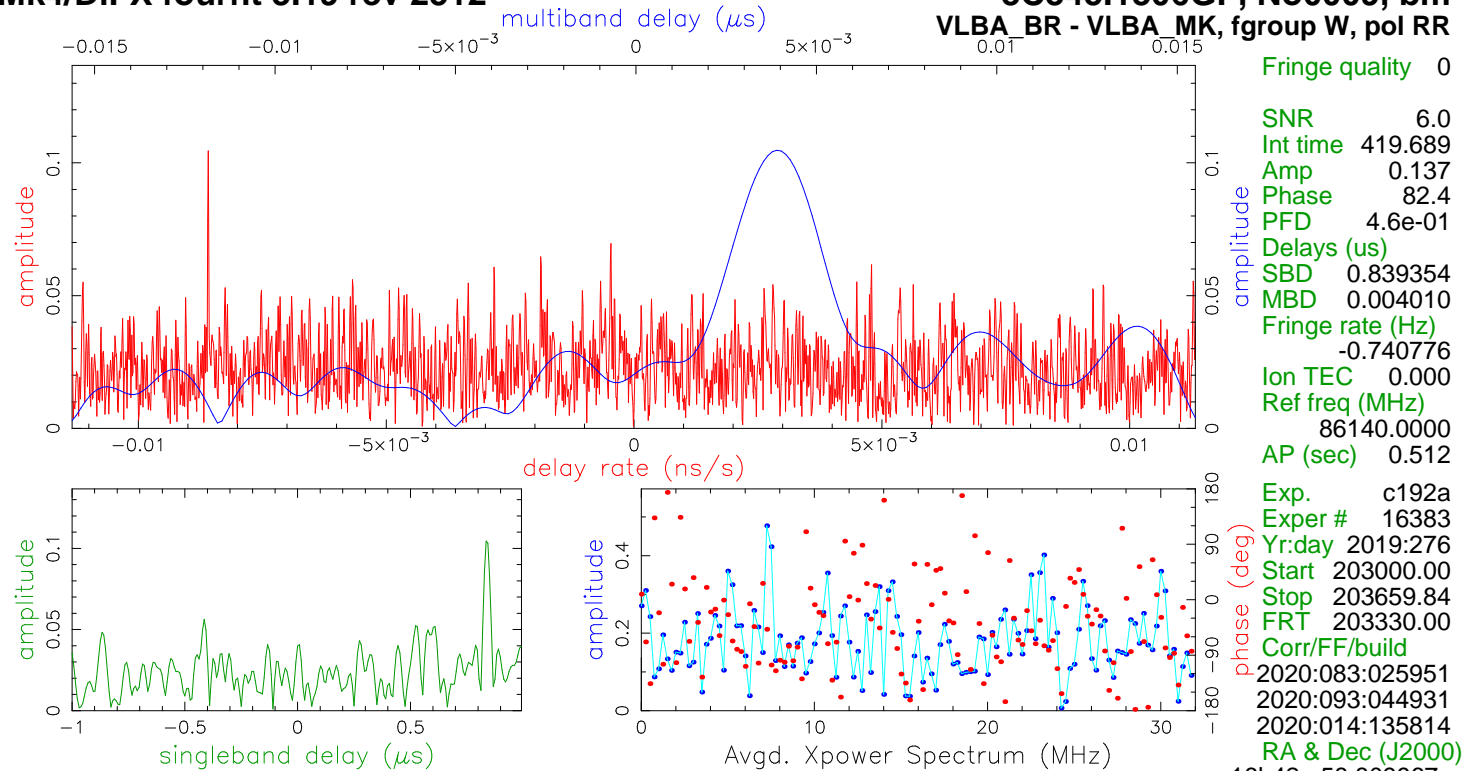
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	129.0	128.9	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.3	0.3	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	129.0	128.9	
B:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
Group delay (usec)(sbd)		7.15508653287E+03				Apriori delay (usec)				7.15508274173E+03				Resid mbdelay (usec)				3.79114E-03 +/- 8.8E-05	
Sband delay (usec)		7.15508196623E+03				Apriori clock (usec)				1.4273647E+01				Resid sbdelay (usec)				-7.75500E-04 +/- 1.4E-03	
Phase delay (usec)		7.15508274219E+03				Apriori clockrate (us/s)				-1.9130770E-07				Resid phdelay (usec)				4.59124E-07 +/- 3.0E-07	
Delay rate (us/s)		-1.85864955218E+00				Apriori rate (us/s)				-1.85864928647E+00				Resid rate (us/s)				-2.65711E-07 +/- 1.2E-09	
Total phase (deg)		148.3				Apriori accel (us/s/s)				-6.73614306400E-06				Resid phase (deg)				14.2 +/- 9.4	
RMS		Theor.		Amplitude		0.219 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000			
ph/seg (deg)		66.8		16.2		Search (2048X64)		0.217		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016 0.016			
amp/seg (%)		76.6		28.3		Interp.		0.000		Sample rate(MSamp/s): 64		dr window (ns/s)		-0.011 0.011					
ph/frq (deg)		63.0		18.7		Inc. seg. avg.		0.325		Data rate(Mb/s): 2048		nlags: 128 t_cohere infinite		ion window (TEC)		0.00 0.00			
amp/frq (%)		74.7		32.7		Inc. frq. avg.		0.336											

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/v2/1234/No0009/Bm...1306GF Output file: /Exps/c192a/v2/1234/No0009/Bm.W.30.1306GF



Fringe quality 0

SNR 6.0

Int time 419.689

Amp 0.137

Phase 82.4

PFD 4.6e-01

Delays (us)

SBD 0.839354

MBD 0.004010

Fringe rate (Hz)

-0.740776

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

2020:083:025951

2020:093:044931

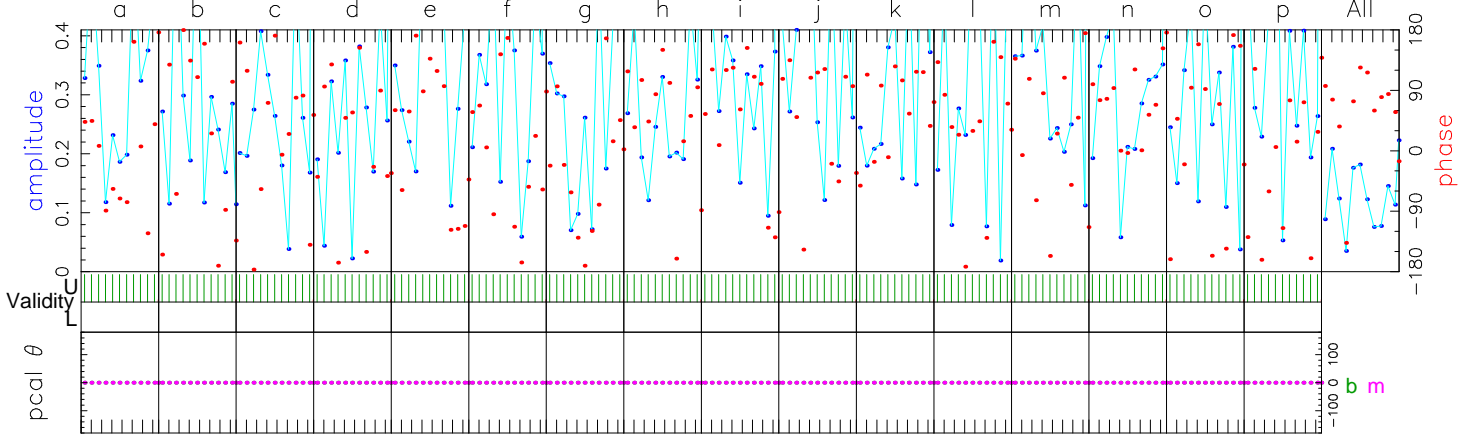
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	10.1	155.3	100.3	103.6	115.2	-33.7	2.3	83.5	109.6	96.5	74.3	75.4	74.6	78.4	113.8	29.0	Phase	82.4
	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.3	0.1	0.1	Ampl.	0.1
	132.5	110.6	84.6	126.0	198.5	45.3	40.4	234.4	29.2	196.8	32.8	237.9	111.2	237.5	15.9	243.6	Sbd box	236.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 1.13887018654E+04 Apriori delay (usec) 1.13878541051E+04 Resid mbdelay (usec) 4.01028E-03 +/- 1.8E-04

Sband delay (usec) 1.13886934591E+04 Apriori clock (usec) -3.1784182E+00 Resid sbdelay (usec) 8.39354E-01 +/- 2.9E-03

Phase delay (usec) 1.13878541078E+04 Apriori clockrate (us/s) -2.3370279E-07 Resid phdelay (usec) 2.65718E-06 +/- 6.2E-07

Delay rate (us/s) -5.09378677188E-01 Apriori rate (us/s) -5.09370077513E-01 Resid rate (us/s) -8.59968E-06 +/- 2.6E-09

Total phase (deg) 303.5 Apriori accel (us/s/s) -3.13068843373E-05 Resid phase (deg) 82.4 +/- 19.2

RMS Theor. Amplitude 0.137 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 49.4 33.2 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

amp/seg (%) 49.8 58.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 51.6 38.4 Inc. seg. avg. 0.136 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

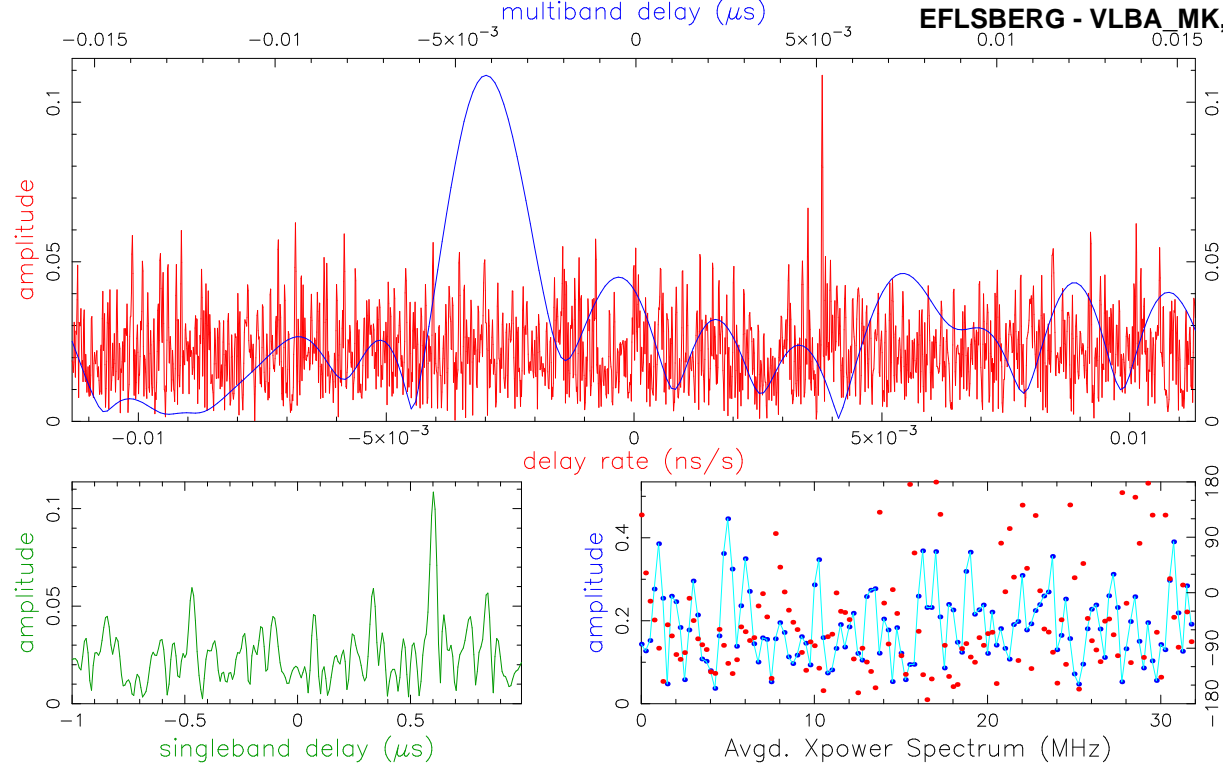
amp/frq (%) 52.6 67.0 Inc. frq. avg. 0.135 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

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/v2/1234/No0009/bm..1306GF Output file: /Exps/c192a/v2/1234/No0009/bm.W.35.1306GF

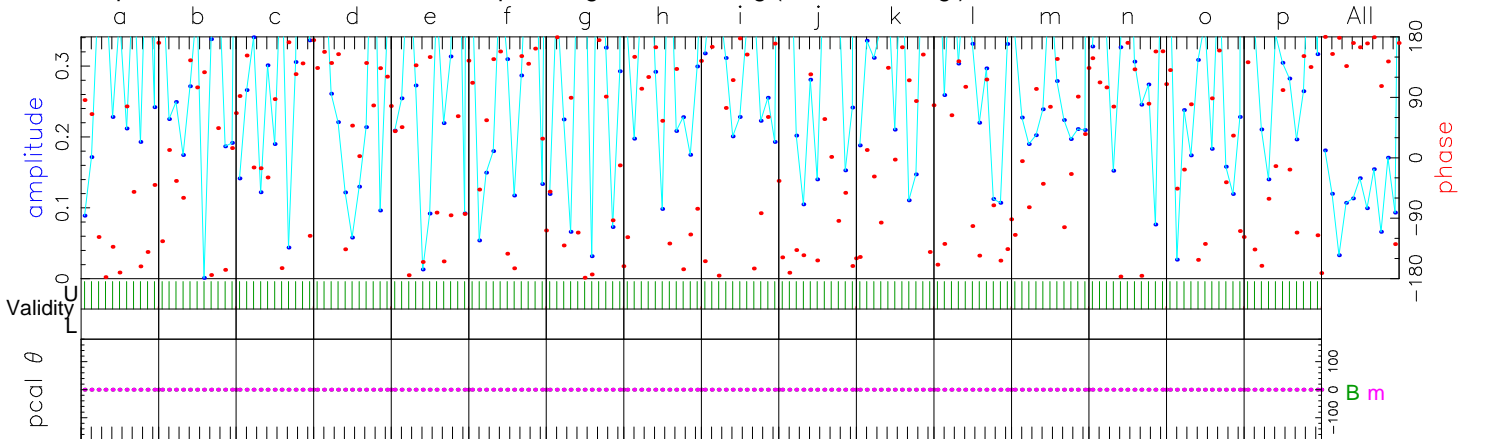
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, Bm  
EFLSBERG - VLBA\_MK, fgroup W, pol LR



Fringe quality 0  
SNR 6.1  
Int time 419.681  
Amp 0.114  
Phase 165.4  
PFD 2.7e-01  
Delays (us)  
SBD 0.602355  
MBD -0.004148  
Fringe rate (Hz)  
0.327506  
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  
2020:083:025951  
2020:093:044933  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-141.5	95.9	152.8	123.0	143.6	150.1	-165.5	178.0	166.6	-149.2	163.0	178.3	29.5	141.3	-171.3	-176.4	Phase	165.4
	0.2	0.0	0.1	0.2	0.0	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.3	0.1	0.1	Ampl.	0.1
	10.4	116.2	152.1	206.0	118.9	221.6	169.6	73.9	55.7	190.1	46.5	212.9	49.8	204.6	25.1	221.8	Sbd box	206.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) 7.15567234400E+03 Apriori delay (usec) 7.15508274173E+03 Resid mbdelay (usec) -4.14773E-03 +/- 1.8E-04  
 Sband delay (usec) 7.15568509723E+03 Apriori clock (usec) 1.4273647E+01 Resid sbdelay (usec) 6.02355E-01 +/- 2.8E-03  
 Phase delay (usec) 7.15508274706E+03 Apriori clockrate (us/s) -1.9130770E-07 Resid phdelay (usec) 5.33465E-06 +/- 6.1E-07  
 Delay rate (us/s) -1.85864548445E+00 Apriori rate (us/s) -1.85864928647E+00 Resid rate (us/s) 3.80202E-06 +/- 2.5E-09  
 Total phase (deg) 299.5 Apriori accel (us/s/s) -6.73614306400E-06 Resid phase (deg) 165.4 +/- 18.8

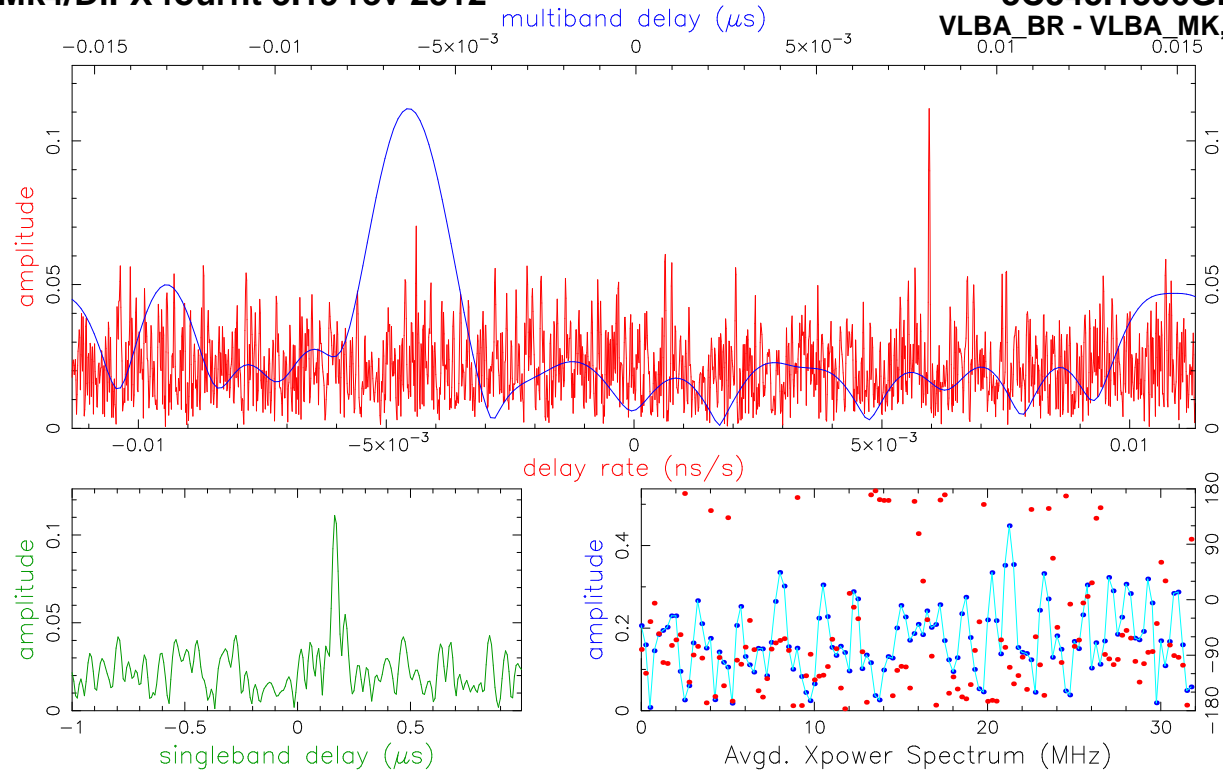
RMS Theor. Amplitude 0.114 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.9 32.6 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 55.7 57.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 48.9 37.7 Inc. seg. avg. 0.108 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 64.8 65.8 Inc. frq. avg. 0.110 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/Bm...1306GF Output file: /Exps/c192a/v2/1234/No0009/Bm.W.48.1306GF



Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, bm  
VLBA\_BR - VLBA\_MK, fgroup W, pol LR

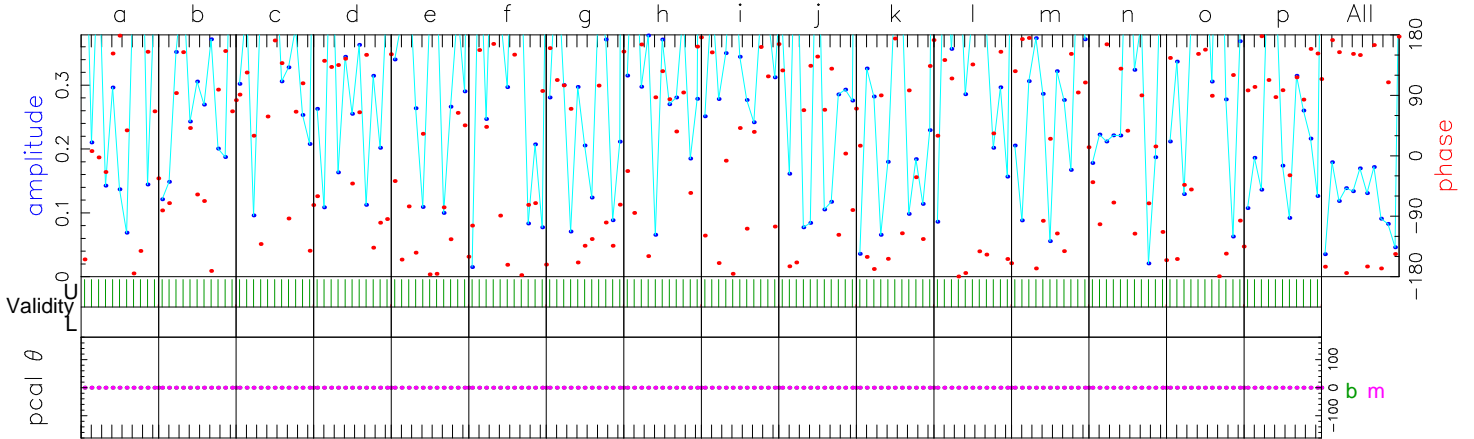


Fringe quality 0

SNR 6.3  
Int time 419.689  
Amp 0.126  
Phase 168.4  
PFD 7.9e-02  
Delays (us)  
SBD 0.166468  
MBD -0.006261  
Fringe rate (Hz) 0.513414  
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 2020:083:025951  
2020:093:044937  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

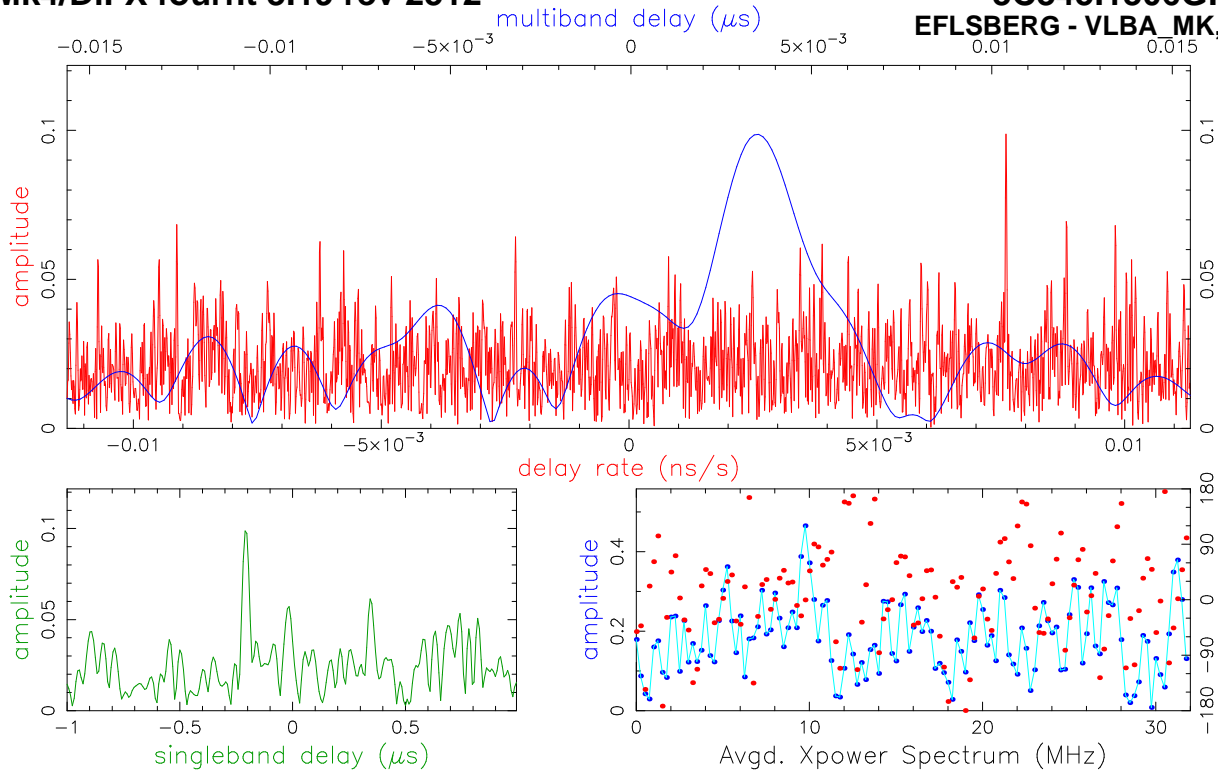
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-169.6	106.0	131.0	179.5	-134.4	177.2	162.1	148.5	175.9	168.8	-161.4	170.9	165.6	-93.3	-173.1	109.9	Phase	168.4
	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.0	0.2	0.2	Ampl.	0.1
	115.8	44.0	247.8	61.9	189.7	187.4	174.5	162.0	9.7	178.2	216.7	150.1	73.1	245.6	225.3	9.0	Sbd box	150.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	1.13880353438E+04			Apriori delay (usec)			1.13878541051E+04			Resid mbdelay (usec)			-6.26129E-03			+/- 1.7E-04		
Sband delay (usec)	1.13880205726E+04			Apriori clock (usec)			-3.1784182E+00			Resid sbdelay (usec)			1.66468E-01			+/- 2.7E-03		
Phase delay (usec)	1.13878541105E+04			Apriori clockrate (us/s)			-2.3370279E-07			Resid phdelay (usec)			5.43113E-06			+/- 5.9E-07		
Delay rate (us/s)	-5.09364117280E-01			Apriori rate (us/s)			-5.09370077513E-01			Resid rate (us/s)			5.96023E-06			+/- 2.4E-09		
Total phase (deg)	29.5			Apriori accel (us/s/s)			-3.13068843373E-05			Resid phase (deg)			168.4			+/- 18.2		

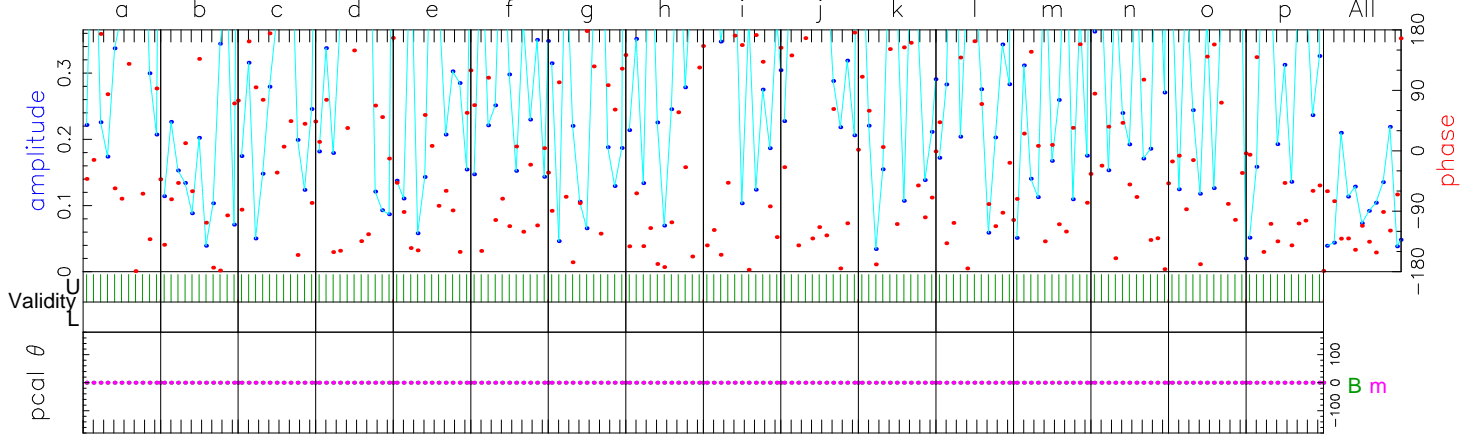
ph/seg (deg) 28.0 31.5 Amplitude 0.126 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.5 55.0 Search (2048X64) 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.5 36.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 53.8 63.5 Inc. seg. avg. 0.118 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.121 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/bm..1306GF Output file: /Exps/c192a/v2/1234/No0009/bm.W.61.1306GF

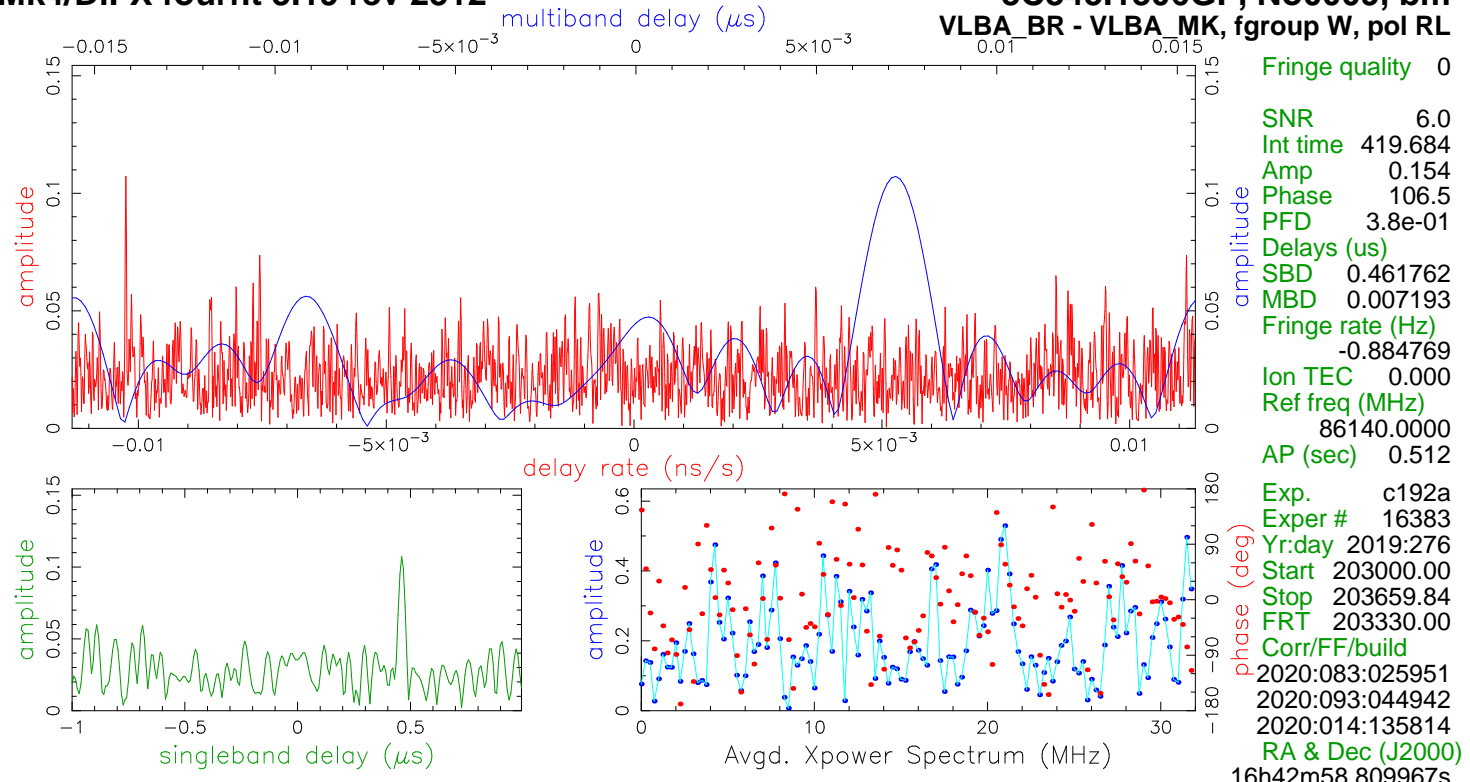


Fringe quality 0  
SNR 5.6  
Int time 419.676  
Amp 0.122  
Phase -121.2  
PFD 9.9e-01  
Delays (us)  
SBD -0.207623  
MBD 0.003521  
Fringe rate (Hz) 0.655973  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:083:025951  
2020:093:044938  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)		7.15486751253E+03																
Sband delay (usec)		7.15487511873E+03																
Phase delay (usec)		7.15508273782E+03																
Delay rate (us/s)		-1.85864167127E+00																
Total phase (deg)				12.8														
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): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
pcal mode: MANUAL, MANUAL																		
PC period (AP's) 5, 5																		
Search (2048X64)																		
Interp.																		
Inc. seg. avg.																		
Inc. frq. avg.																		
Amplitude																		
Search (2048X64)																		
Interp.																		
Inc. seg. avg.																		
Inc. frq. avg.																		
0.122 +/- 0.022																		
0.098																		
0.000																		
0.110																		
0.120																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
SampCntNorm: enabled																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
-1.000 1.000																		
-0.016 0.016																		
-0.011 0.011																		
0.00 0.00																		



Fringe quality 0

SNR 6.0

Int time 419.684

Amp 0.154

Phase 106.5

PFD 3.8e-01

Delays (us)

SBD 0.461762

MBD 0.007193

Fringe rate (Hz)

-0.884769

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

2020:083:025951

2020:093:044942

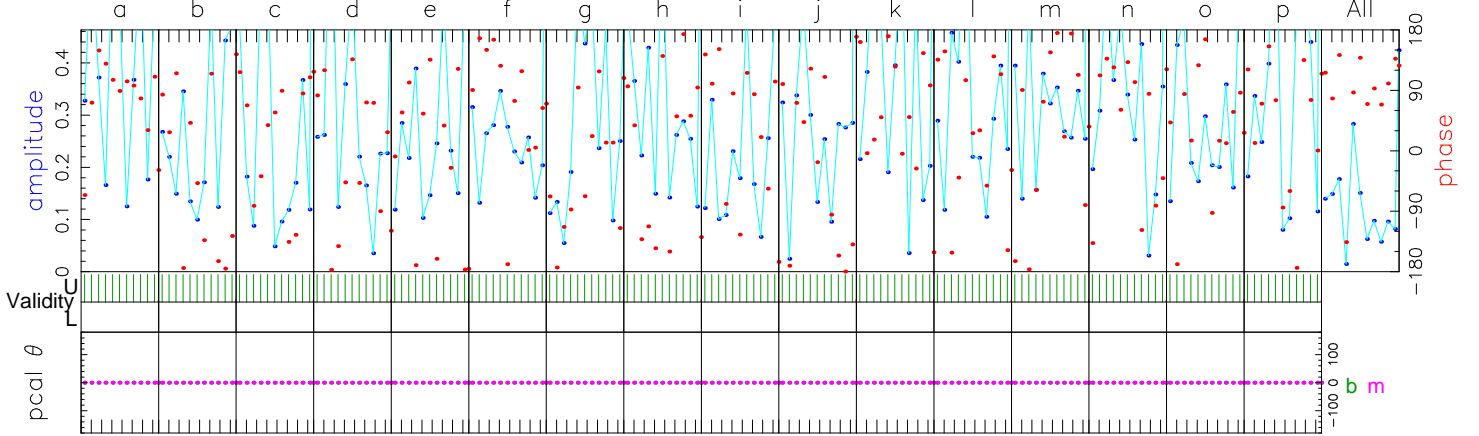
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	91.8	160.3	61.8	156.5	123.9	113.5	8.1	132.6	112.9	120.2	30.2	122.8	149.4	128.0	79.1	103.4	Phase	106.5
	0.4	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	Ampl.	0.2
	188.4	253.1	12.1	62.0	122.0	70.2	241.4	180.6	204.8	20.7	11.3	176.5	73.9	186.1	14.4	36.9	Sbd box	188.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 1.13883300486E+04 Apriori delay (usec) 1.13878541051E+04 Resid mbdelay (usec) 7.19348E-03 +/- 1.8E-04

Sband delay (usec) 1.13883158676E+04 Apriori clock (usec) -3.1784182E+00 Resid sbdelay (usec) 4.61762E-01 +/- 2.9E-03

Phase delay (usec) 1.13878541085E+04 Apriori clockrate (us/s) -2.3370279E-07 Resid phdelay (usec) 3.43525E-06 +/- 6.1E-07

Delay rate (us/s) -5.09380348798E-01 Apriori rate (us/s) -5.09370077513E-01 Resid rate (us/s) -1.02713E-05 +/- 2.5E-09

Total phase (deg) 327.6 Apriori accel (us/s/s) -3.13068843373E-05 Resid phase (deg) 106.5 +/- 19.1

ph/seg (deg) 44.0 RMS 33.0 Theor. Amplitude 0.154 +/- 0.026 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 70.0 57.6 Search (2048X64) 0.104 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 44.5 38.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 54.7 66.5 Inc. seg. avg. 0.150 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

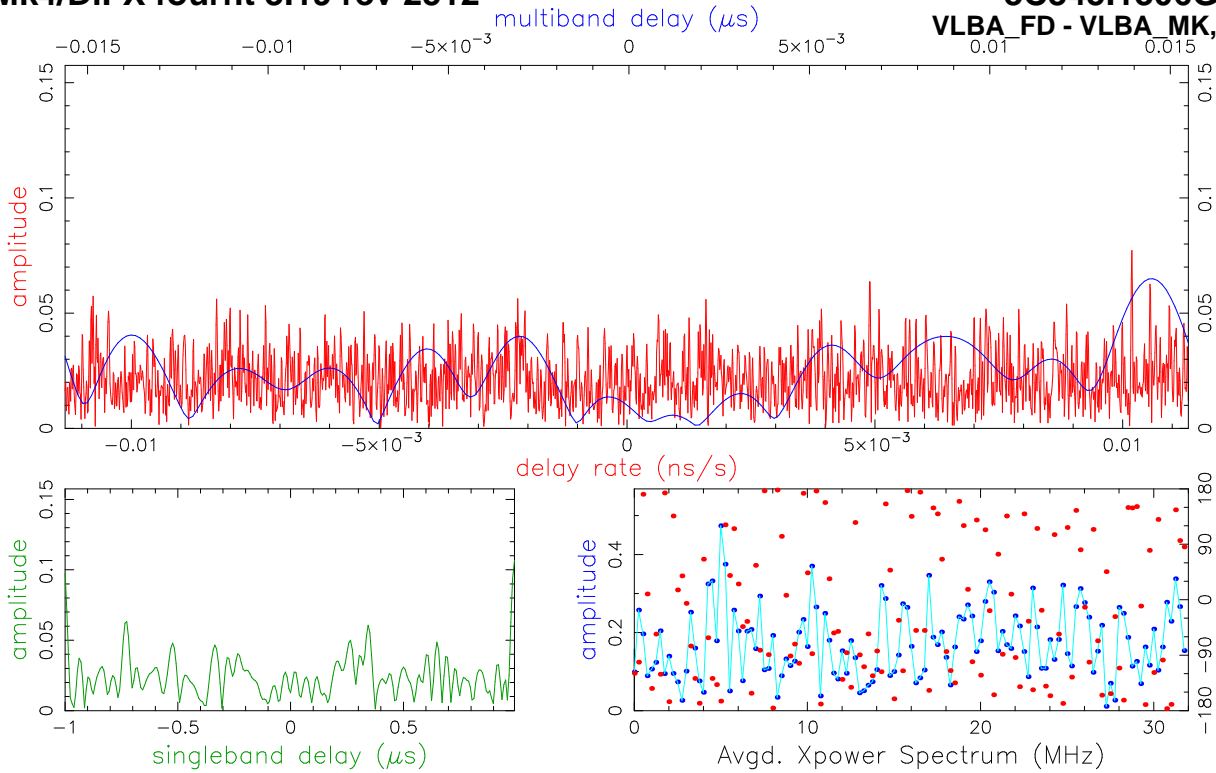
b: az 83.7 el 53.2 pa -59.7 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3748.328 667.274 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/bm..1306GF Output file: /Exps/c192a/v2/1234/No0009/bm.W.77.1306GF simultaneous interpolator



Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, fm  
VLBA\_FD - VLBA\_MK, fgroup W, pol RR

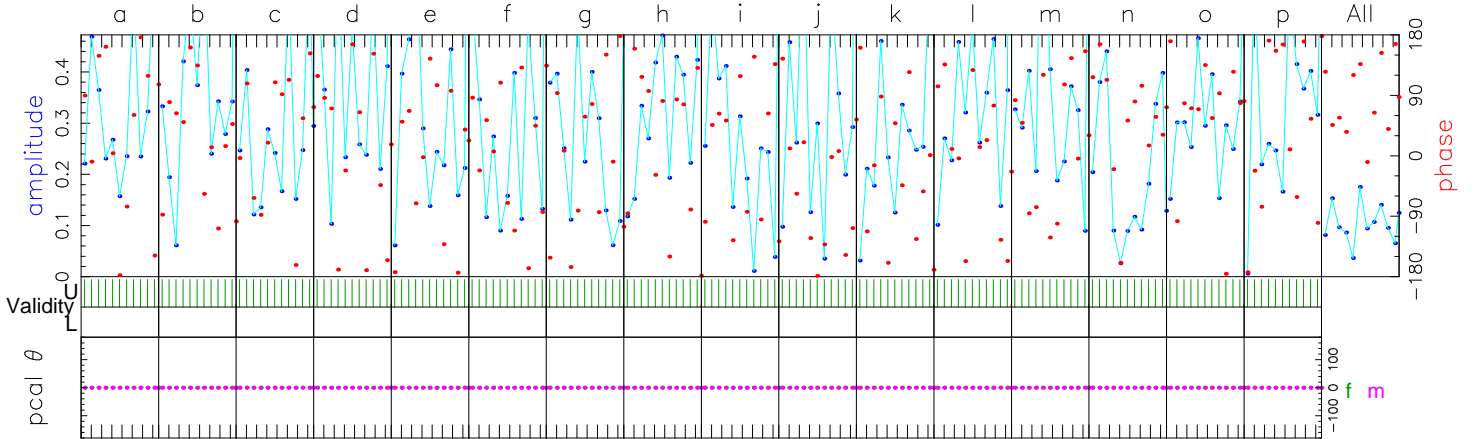


Fringe quality 0

SNR 6.0  
Int time 419.688  
Amp 0.158  
Phase 84.9  
PFD 4.1e-01  
Delays (us)  
SBD 0.993164  
MBD 0.014764  
Fringe rate (Hz)  
0.909799  
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  
2020:083:025951  
2020:093:044953  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	128.7	11.2	104.4	150.4	52.8	50.0	-175.4	99.0	51.7	-10.2	-18.1	72.2	123.7	83.1	96.9	-43.5	Phase	84.9
f	0.1	0.1	0.2	0.3	0.1	0.0	0.0	0.2	0.1	0.2	0.1	0.1	0.1	0.2	0.3	0.1	Ampl.	0.1
m	110.4	198.0	85.2	255.6	23.0	195.9	211.0	229.2	14.3	46.4	98.9	158.3	226.9	23.0	255.6	74.2	Sbd box	256.1
f	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

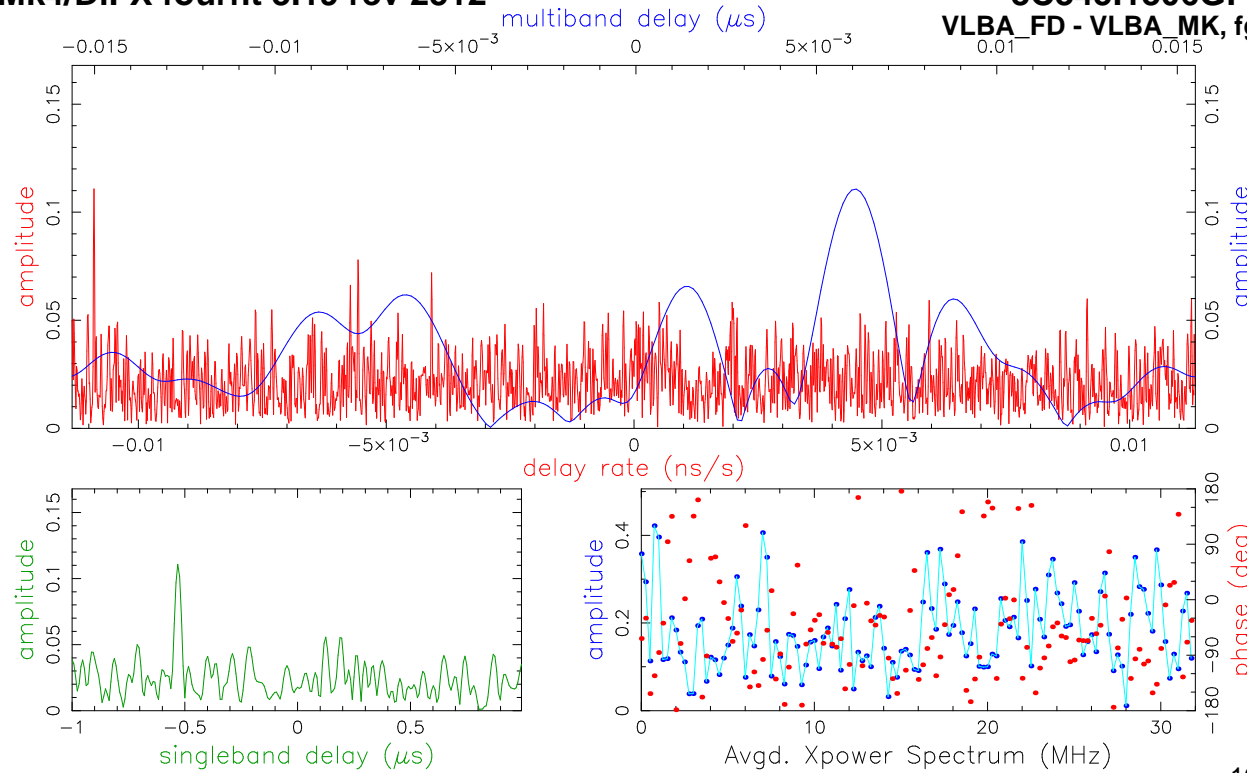
Group delay (usec)(sbd) 1.28114883012E+04 Apriori delay (usec) 1.28105047872E+04 Resid mbdelay (usec) 1.47640E-02 +/- 1.8E-04  
 Sband delay (usec) 1.28114979509E+04 Apriori clock (usec) -2.1098497E+00 Resid sbdelay (usec) 9.93164E-01 +/- 2.9E-03  
 Phase delay (usec) 1.28105047899E+04 Apriori clockrate (us/s) -8.2257206E-08 Resid phdelay (usec) 2.73638E-06 +/- 6.2E-07  
 Delay rate (us/s) -5.42150273928E-01 Apriori rate (us/s) -5.42160835792E-01 Resid rate (us/s) 1.05619E-05 +/- 2.5E-09  
 Total phase (deg) 217.8 Apriori accel (us/s/s) -5.58310971689E-05 Resid phase (deg) 84.9 +/- 19.1

RMS Theor. Amplitude 0.158 +/- 0.026 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 54.5 33.1 Search (2048X64) 0.104 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 35.6 57.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 67.3 38.2 Inc. seg. avg. 0.130 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 49.7 66.7 Inc. frq. avg. 0.117 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/fm..1306GF Output file: /Exps/c192a/v2/1234/No0009/fm.W.113.1306GF

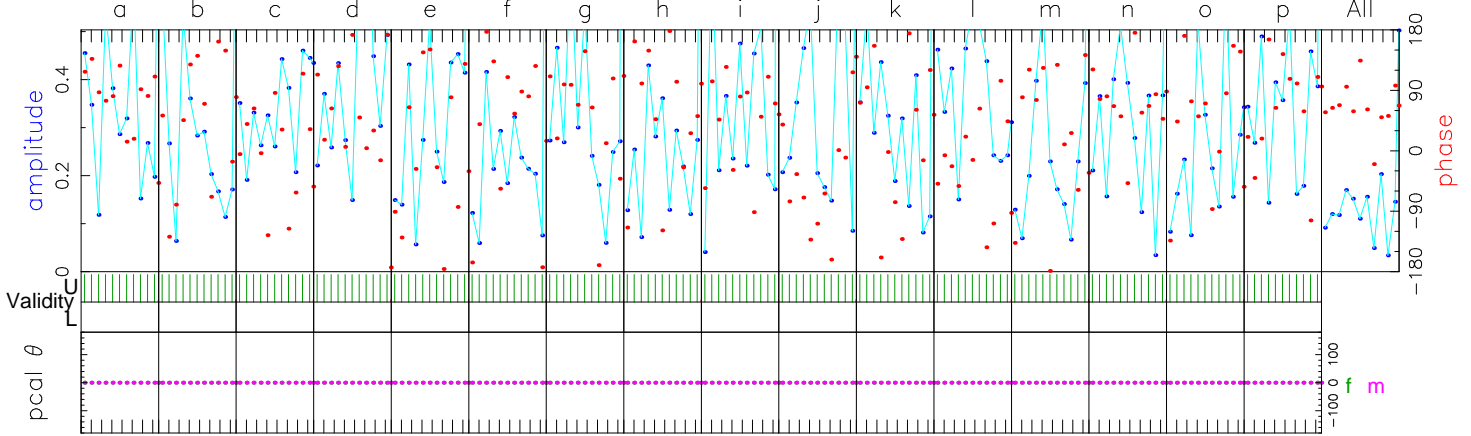
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, fm  
VLBA\_FD - VLBA\_MK, fgroup W, pol LR



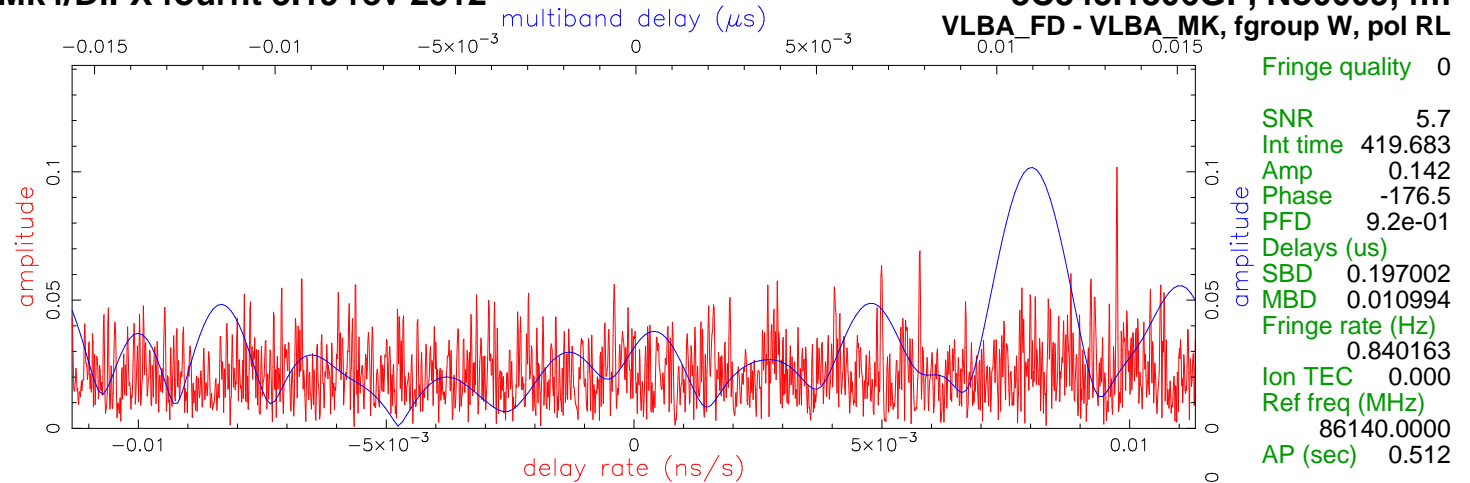
Fringe quality 0  
SNR 6.2  
Int time 419.688  
Amp 0.168  
Phase 70.7  
PFD 1.3e-01  
Delays (us)  
SBD -0.530418  
MBD 0.006089  
Fringe rate (Hz)  
-0.939976  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:044958  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

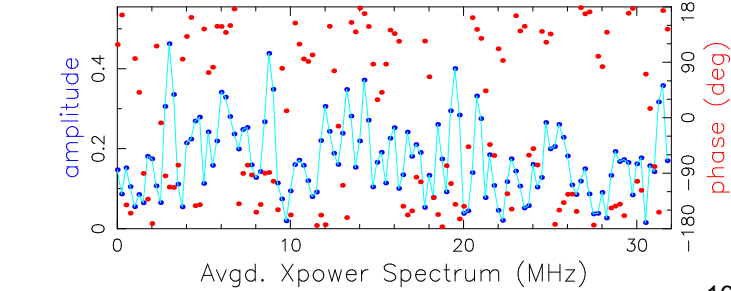
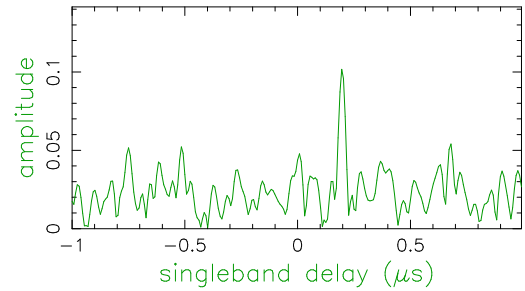


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
f:m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)		1.28099796260E+04								1.28105047872E+04						6.08883E-03	+/-	1.7E-04
Sband delay (usec)		1.28099743697E+04								-2.1098497E+00						-5.30418E-01	+/-	2.8E-03
Phase delay (usec)		1.28105047895E+04								-8.2257206E-08						2.28074E-06	+/-	5.9E-07
Delay rate (us/s)		-5.42171747986E-01								-5.42160835792E-01						-1.09122E-05	+/-	2.5E-09
Total phase (deg)					203.7											70.7	+/-	18.5

ph/seg (deg) 36.5 32.0 Amplitude 0.168 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 53.9 55.8 Interp. 0.105 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.6 36.9 Inc. seg. avg. 0.165 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 60.1 64.4 Inc. frq. avg. 0.190 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/fm..1306GF Output file: /Exps/c192a/v2/1234/No0009/fm.W.128.1306GF

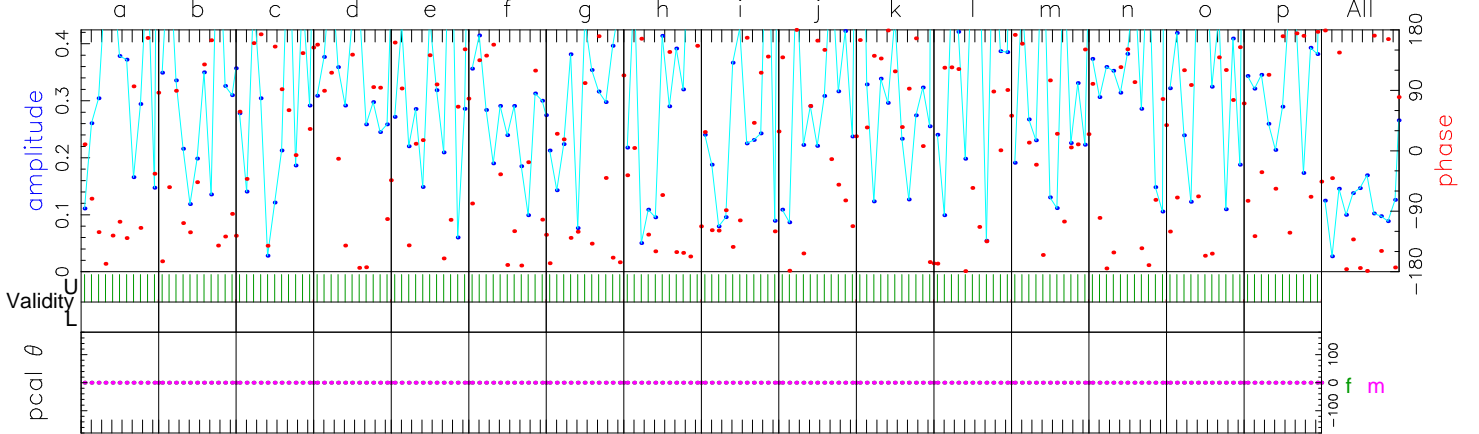


Fringe quality 0  
SNR 5.7  
Int time 419.683  
Amp 0.142  
Phase -176.5  
PFD 9.2e-01  
Delays (us)  
SBD 0.197002  
MBD 0.010994  
Fringe rate (Hz)  
0.840163  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045003  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-135.4	-128.4	102.1	142.8	152.1	-161.3	-165.1	-145.0	-178.2	-131.1	141.6	120.8	-149.2	164.1	-165.6	-129.1	Phase	-176.5
	0.3	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.3	0.1	0.1	0.3	0.2	0.2	Ampl.	0.1
	155.3	34.5	100.9	55.4	228.5	181.4	173.9	136.6	225.2	110.2	153.0	168.6	126.6	42.9	175.5	170.7	Sbd box	154.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

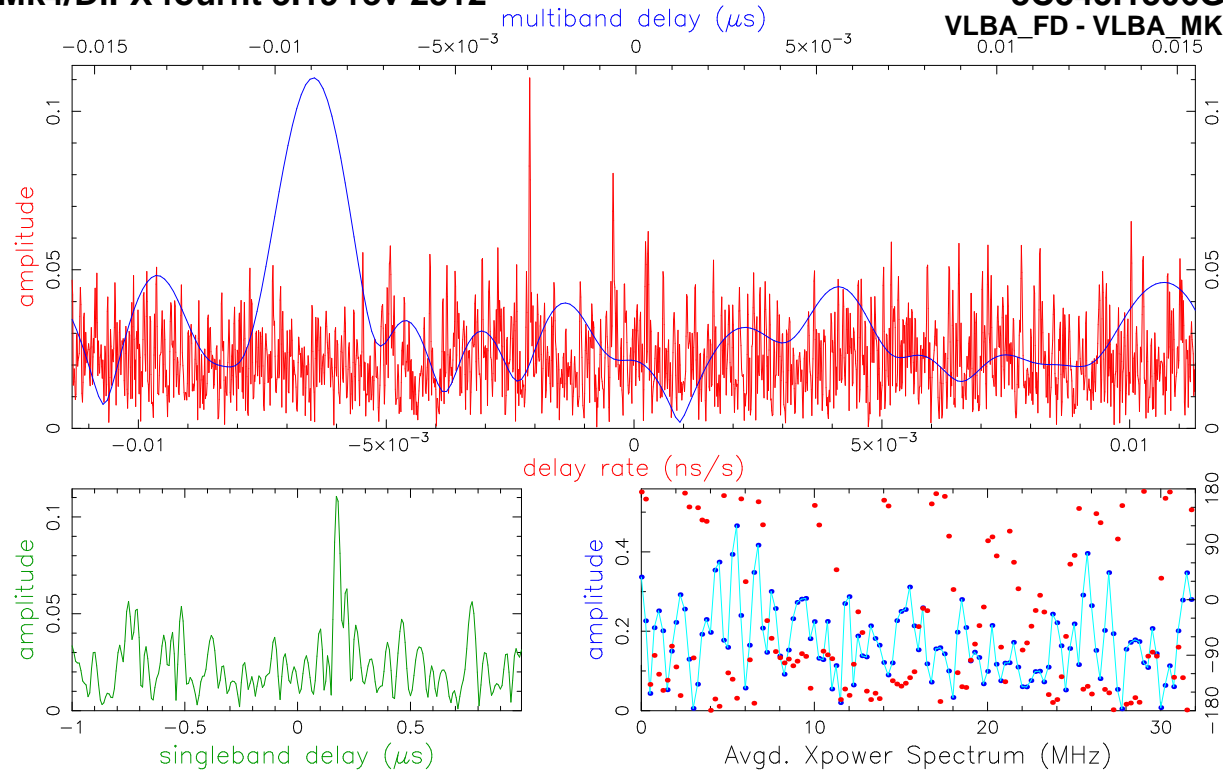
Group delay (usec)(sbd) 1.28107032811E+04 Apriori delay (usec) 1.28105047872E+04 Resid mbdelay (usec) 1.09939E-02 +/- 1.9E-04  
 Sband delay (usec) 1.28107017887E+04 Apriori clock (usec) -2.1098497E+00 Resid sbdelay (usec) 1.97002E-01 +/- 3.0E-03  
 Phase delay (usec) 1.28105047815E+04 Apriori clockrate (us/s) -8.2257206E-08 Resid phdelay (usec) -5.69282E-06 +/- 6.5E-07  
 Delay rate (us/s) -5.42151082332E-01 Apriori rate (us/s) -5.42160835792E-01 Resid rate (us/s) 9.75346E-06 +/- 2.7E-09  
 Total phase (deg) -43.6 Apriori accel (us/s/s) -5.58310971689E-05 Resid phase (deg) -176.5 +/- 20.0

RMS Theor. Amplitude 0.142 +/- 0.025 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 46.5 34.7 Search (2048X64) 0.100 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 40.3 60.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 43.0 40.0 Inc. seg. avg. 0.136 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 56.2 69.9 Inc. frq. avg. 0.148 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/fm..1306GF Output file: /Exps/c192a/v2/1234/No0009/fm.W.148.1306GF

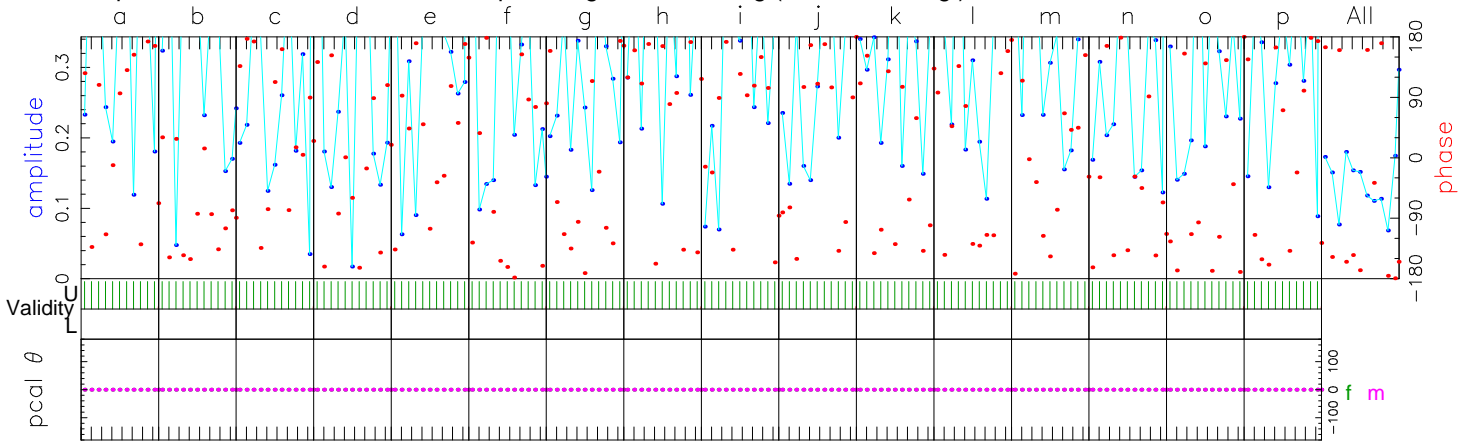
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, fm  
VLBA\_FD - VLBA\_MK, fgroup W, pol LL



Fringe quality 0  
SNR 6.3  
Int time 419.683  
Amp 0.114  
Phase -169.0  
PFD 6.7e-02  
Delays (us)  
SBD 0.175071  
MBD -0.008925  
Fringe rate (Hz)  
-0.181263  
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  
2020:083:025951  
2020:093:044948  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

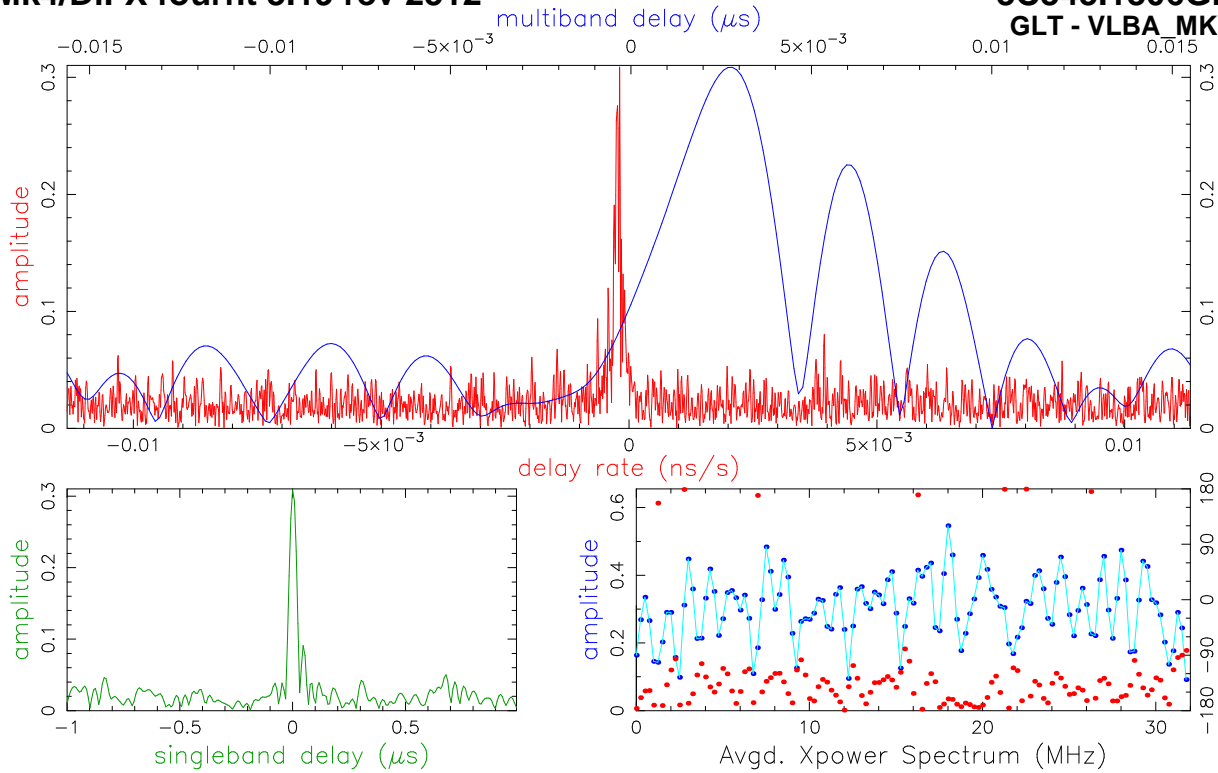


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

Group delay (usec)(sbd)	1.28106833627E+04	Apriori delay (usec)	1.28105047872E+04	Resid mbdelay (usec)	-8.92455E-03	+/-	1.7E-04
Sband delay (usec)	1.28106798587E+04	Apriori clock (usec)	-2.1098497E+00	Resid sbdelay (usec)	1.75071E-01	+/-	2.7E-03
Phase delay (usec)	1.28105047817E+04	Apriori clockrate (us/s)	-8.2257206E-08	Resid phdelay (usec)	-5.44981E-06	+/-	5.8E-07
Delay rate (us/s)	-5.42162940080E-01	Apriori rate (us/s)	-5.42160835792E-01	Resid rate (us/s)	-2.10429E-06	+/-	2.4E-09
Total phase (deg)	-36.1	Apriori accel (us/s/s)	-5.58310971689E-05	Resid phase (deg)	-169.0	+/-	18.1

ph/seg (deg)	44.4	Theor.	31.4	Amplitude	0.114 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	40.0	Search (2048X64)	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)	66.0	Inc. seg. avg.	0.119	Inc. frq. avg.	0.115	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	64.1	Inc. frq. avg.	0.115	Sample rate(MISamp/s): 64		Data rate(Mb/s): 2048	nlags: 128 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	ion window (TEC)	0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/fm..1306GF Output file: /Exps/c192a/v2/1234/No0009/fm.W.94.1306GF simultaneous interpolator

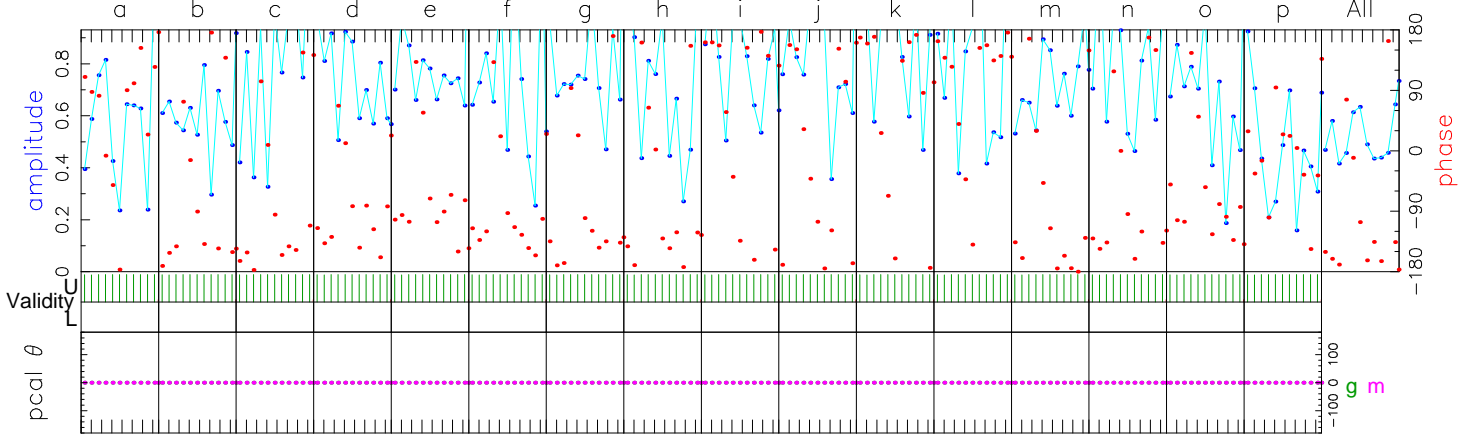


Fringe quality 7

SNR 17.4  
Int time 418.720  
Amp 0.310  
Phase -150.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.001735  
MBD 0.002788  
Fringe rate (Hz)  
-0.015939  
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  
2020:083:025951  
2020:093:045007  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



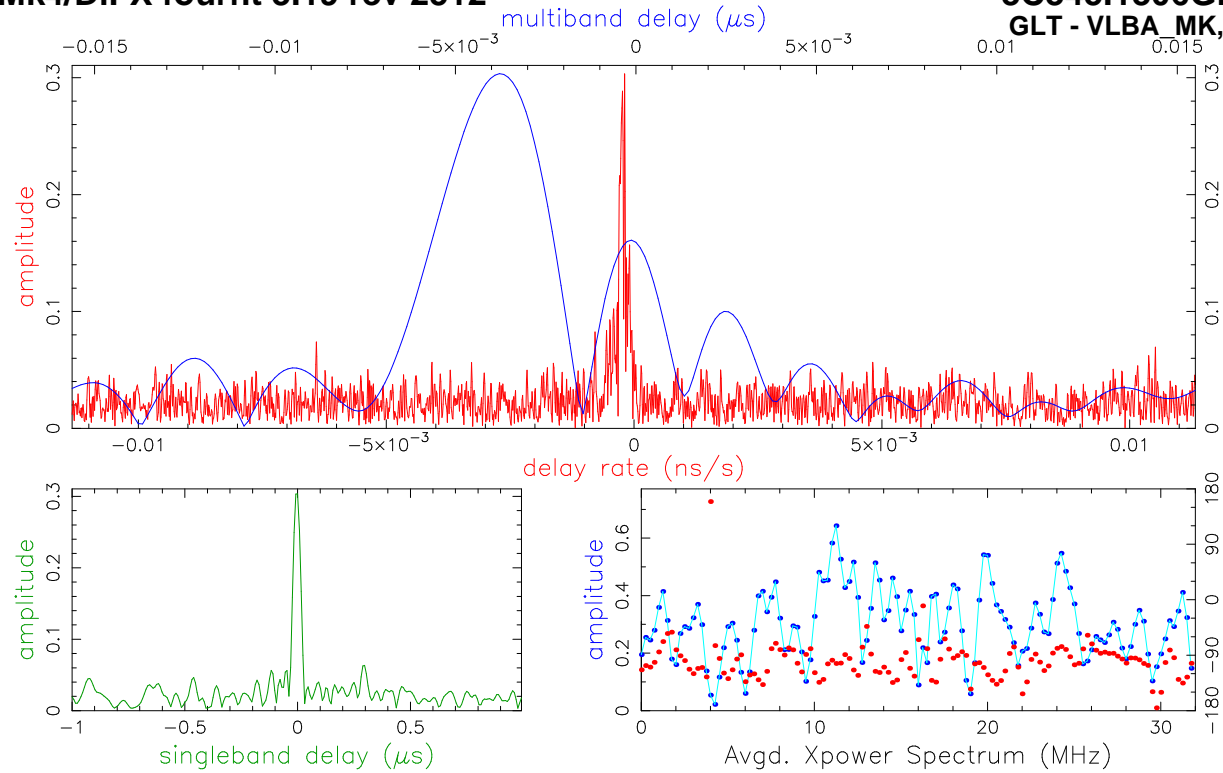
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
95.8	-152.2	-150.3	-108.6	-97.5	-116.1	-148.1	-147.6	176.6	-177.9	170.2	157.5	-147.4	-151.6	-91.7	-2.8		Phase	-150.8	
0.4	0.3	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.3	0.5	0.6	0.5	0.5	0.4	0.3		Ampl.	0.4	
131.3	130.1	129.6	129.2	129.1	129.5	128.8	129.6	129.6	129.7	129.3	129.6	129.8	129.7	130.4	131.1		Sbd box	129.2	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	0	0	0	0	0	0	0	0		PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) 1.12784629955E+04 Apriori delay (usec) 1.12784602072E+04 Resid mbdelay (usec) 2.78827E-03 +/- 6.2E-05  
 Sband delay (usec) 1.12784619417E+04 Apriori clock (usec) -1.2673144E+00 Resid sbdelay (usec) 1.73450E-03 +/- 9.9E-04  
 Phase delay (usec) 1.12784602023E+04 Apriori clockrate (us/s) 8.3692290E-08 Resid phdelay (usec) -4.86309E-06 +/- 2.1E-07  
 Delay rate (us/s) -1.12479991249E+00 Apriori rate (us/s) -1.12479972746E+00 Resid rate (us/s) -1.85031E-07 +/- 8.8E-10  
 Total phase (deg) -61.9 Apriori accel (us/s/s) -1.42117597820E-05 Resid phase (deg) -150.8 +/- 6.6

RMS Theor. Amplitude 0.310 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 62.1 11.4 Search (2048X64) 0.295 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 71.2 20.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 59.8 13.2 Inc. seg. avg. 0.504 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 47.4 23.0 Inc. frq. avg. 0.426 Data rate(Mb/s): 2048 nlags: 128 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



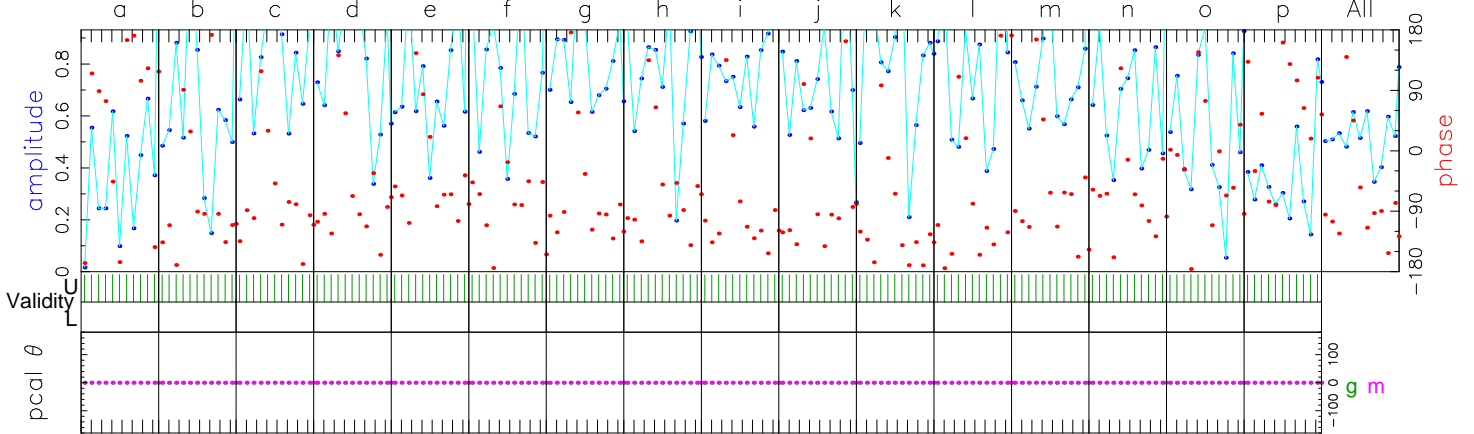


Fringe quality 7

SNR 17.4  
Int time 418.646  
Amp 0.311  
Phase -104.2  
PFD 0.0e+00  
Delays (us)  
SBD -0.003892  
MBD -0.003722  
Fringe rate (Hz)  
-0.015949  
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  
2020:083:025951  
2020:093:045011  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.80967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



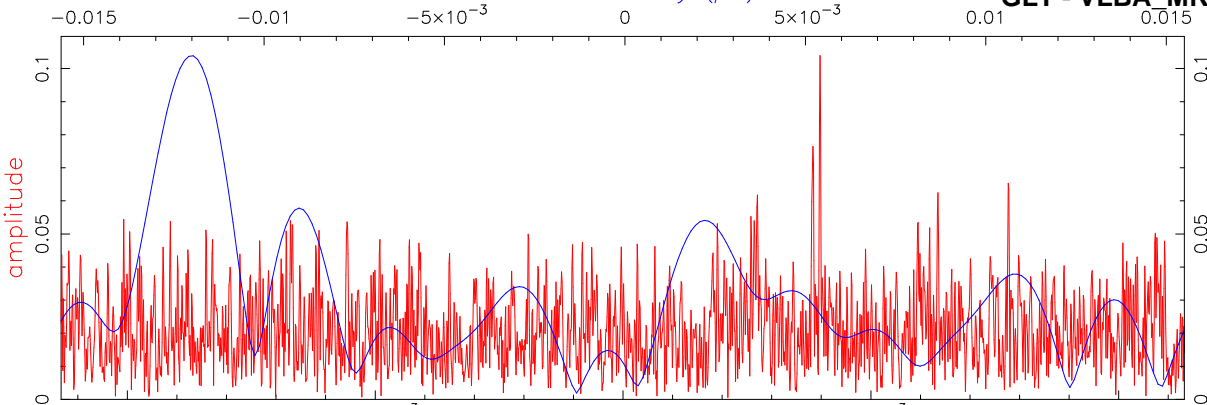
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
130.8	-113.7	-91.2	-101.0	-75.6	-77.3	-95.6	-97.3	-118.4	-128.5	-135.7	-148.2	-86.6	-74.1	5.5	96.1	96.1	Phase	-104.2
0.2	0.3	0.5	0.4	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.5	0.4	0.4	0.4	0.2	0.2	Ampl.	0.4
130.4	129.3	128.6	128.3	128.7	128.9	128.2	128.0	127.9	128.9	128.1	128.9	128.8	128.9	130.1	131.3	131.3	Sbd box	128.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	0	0	0	0	0	0	0	0	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) 1.12784564856E+04 Apriori delay (usec) 1.12784602072E+04 Resid mbdelay (usec) -3.72154E-03 +/- 6.2E-05  
 Sband delay (usec) 1.12784563152E+04 Apriori clock (usec) -1.2673144E+00 Resid sbdelay (usec) -3.89200E-03 +/- 9.9E-04  
 Phase delay (usec) 1.12784602038E+04 Apriori clockrate (us/s) 8.3692290E-08 Resid phdelay (usec) -3.35986E-06 +/- 2.1E-07  
 Delay rate (us/s) -1.12479991261E+00 Apriori rate (us/s) -1.12479972746E+00 Resid rate (us/s) -1.85150E-07 +/- 8.8E-10  
 Total phase (deg) -15.3 Apriori accel (us/s/s) -1.42117597820E-05 Resid phase (deg) -104.2 +/- 6.6

RMS Theor. Amplitude 0.311 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 61.7 11.4 Search (2048X64) 0.292 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 71.1 19.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 65.5 13.2 Inc. seg. avg. 0.505 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 44.3 23.0 Inc. frq. avg. 0.374 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

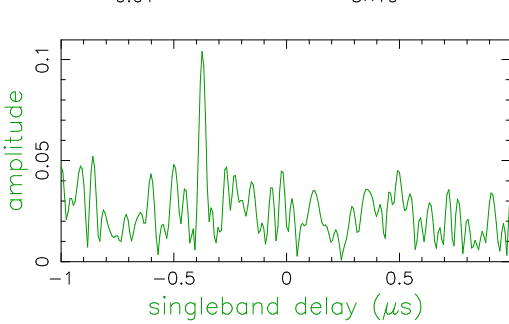
g: az 180.2 el 53.2 pa -0.0 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 8367.012 3285.977 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/gm..1306GF Output file: /Exps/c192a/v2/1234/No0009/gm.W.173.1306GF

multiband delay ( $\mu$ s)

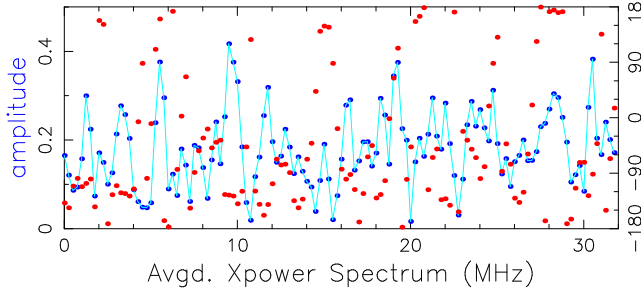


Fringe quality 0

SNR 5.8  
Int time 418.726  
Amp 0.110  
Phase -45.5  
PFD 7.5e-01  
Delays (us)  
SBD -0.373664  
MBD -0.012015  
Fringe rate (Hz)  
0.342753  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

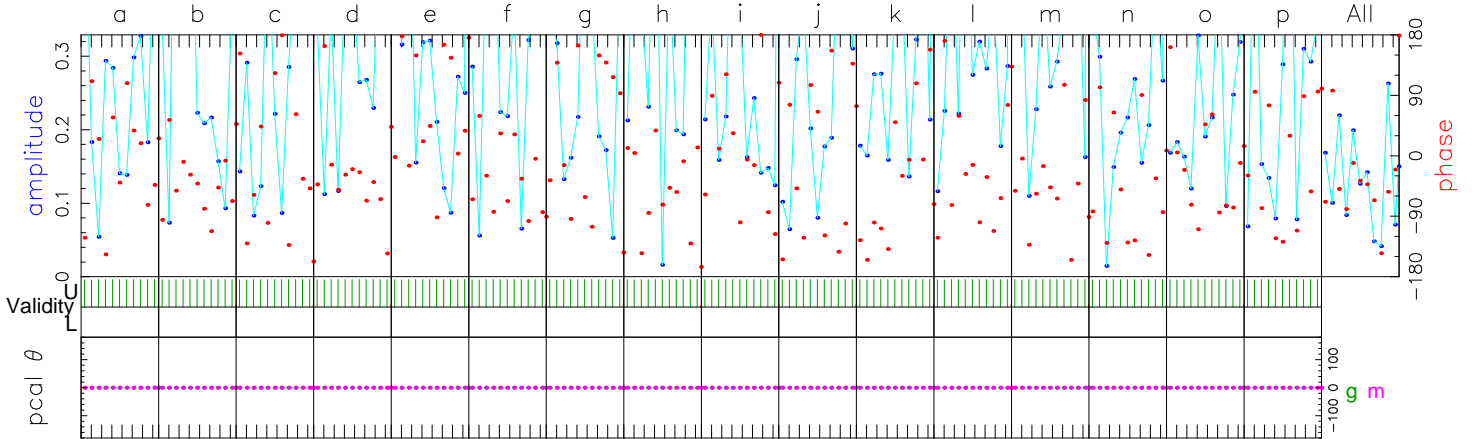


delay rate (ns/s)



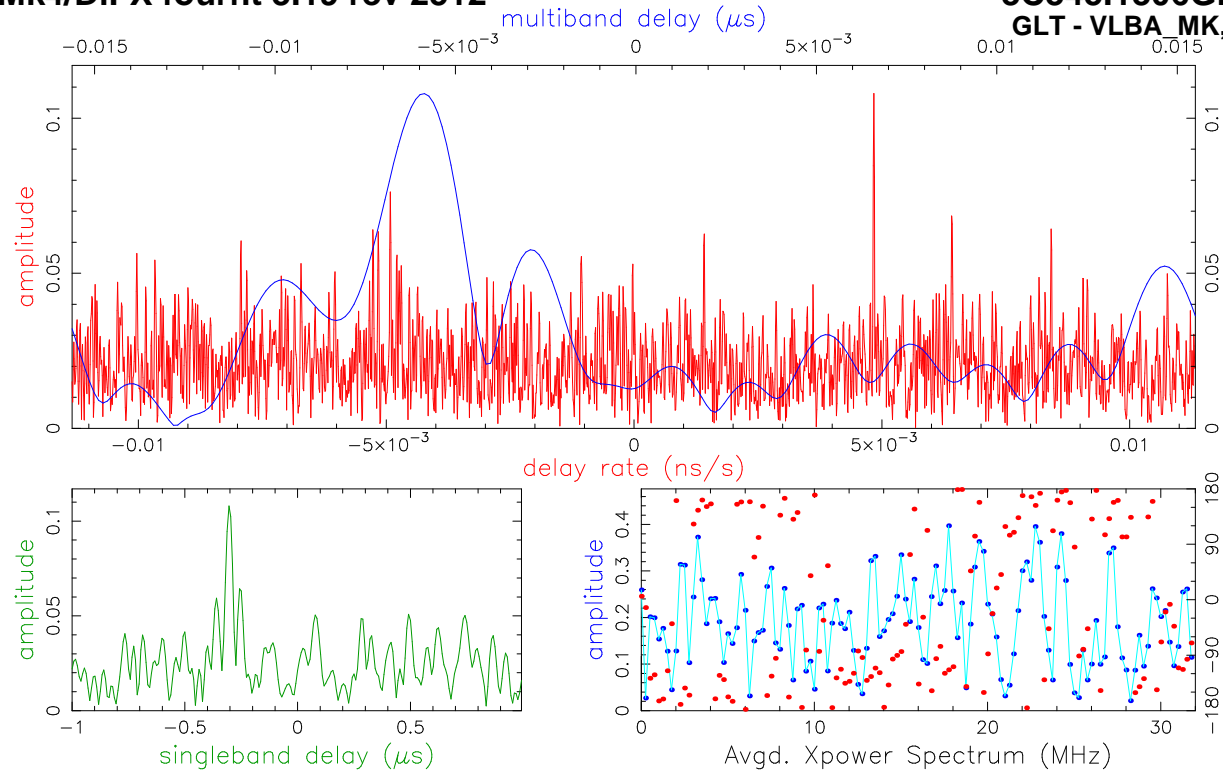
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045016  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-24.4	-48.6	-76.5	-45.5	12.8	-46.5	-127.8	-36.5	6.2	-140.5	-46.7	-54.5	-42.5	-82.1	-48.8	60.3	Phase	-45.5	
	0.1	0.3	0.1	0.2	0.1	0.2	0.0	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	Ampl.	0.1	
	20.8	82.2	110.1	80.1	139.2	130.6	90.5	219.7	64.2	198.0	65.4	162.7	19.7	245.5	189.1	89.2	Sbd box	81.2	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	0	0	0	0	0	0	0	0	PC freqs		
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)		1.12780731919E+04								1.12784602072E+04							Resid mbdelay (usec)	-1.20153E-02	+/- 1.8E-04
Sband delay (usec)		1.12780865437E+04								-1.2673144E+00							Resid sbdelay (usec)	-3.73664E-01	+/- 3.0E-03
Phase delay (usec)		1.12784602057E+04								8.3692290E-08							Resid phdelay (usec)	-1.46650E-06	+/- 6.3E-07
Delay rate (us/s)		-1.12479574844E+00								-1.12479972746E+00							Resid rate (us/s)	3.97902E-06	+/- 2.6E-09
Total phase (deg)				43.4						-1.42117597820E-05							Resid phase (deg)	-45.5	+/- 19.6

ph/seg (deg) 56.6 34.0 Theor. Amplitude 0.110 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.0 59.4 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.7 39.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 66.2 68.6 Inc. seg. avg. 0.119 Sample rate(MISamp/s): 64 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 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator

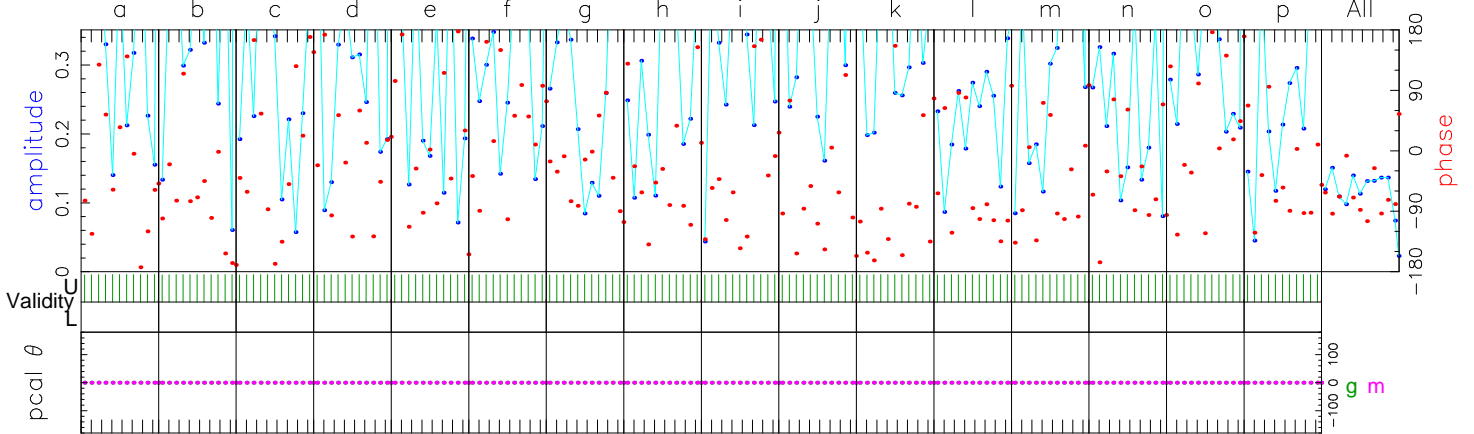


Fringe quality 0

SNR 6.1  
Int time 418.639  
Amp 0.117  
Phase -72.0  
PFD 2.9e-01  
Delays (us)  
SBD -0.302969  
MBD -0.005869  
Fringe rate (Hz)  
0.417205  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

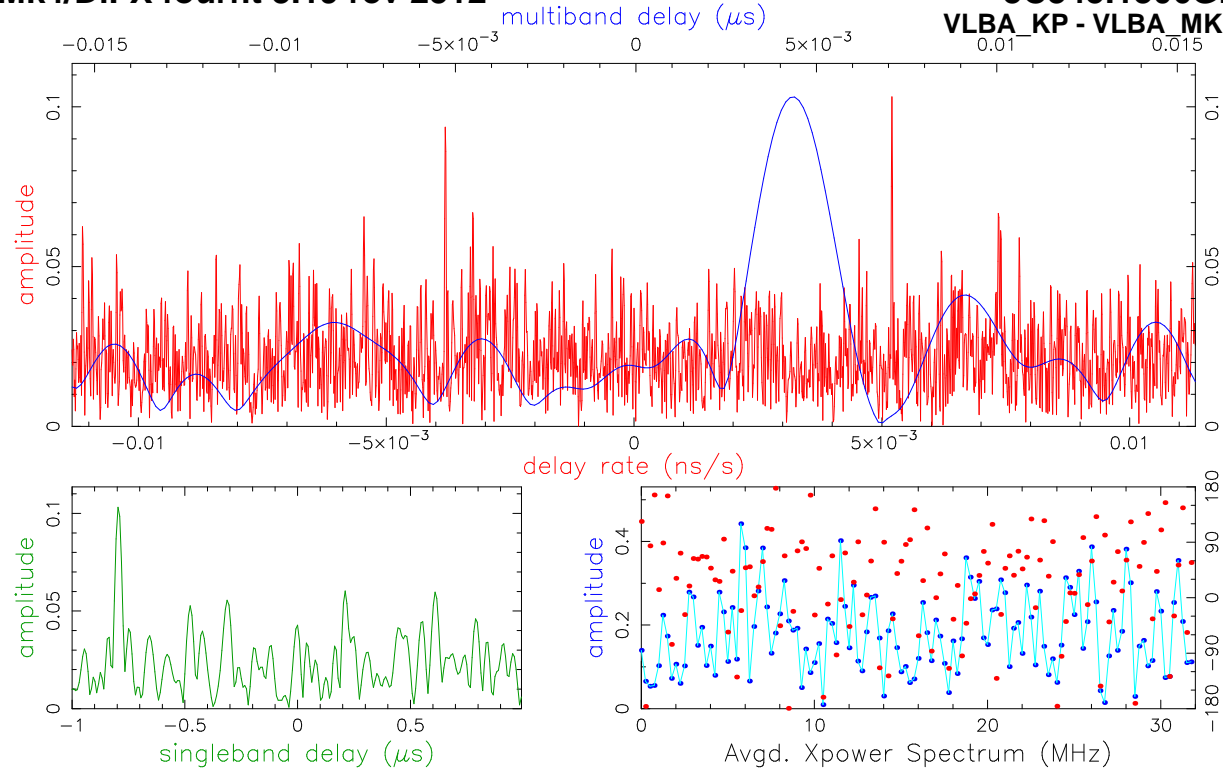
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045021  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



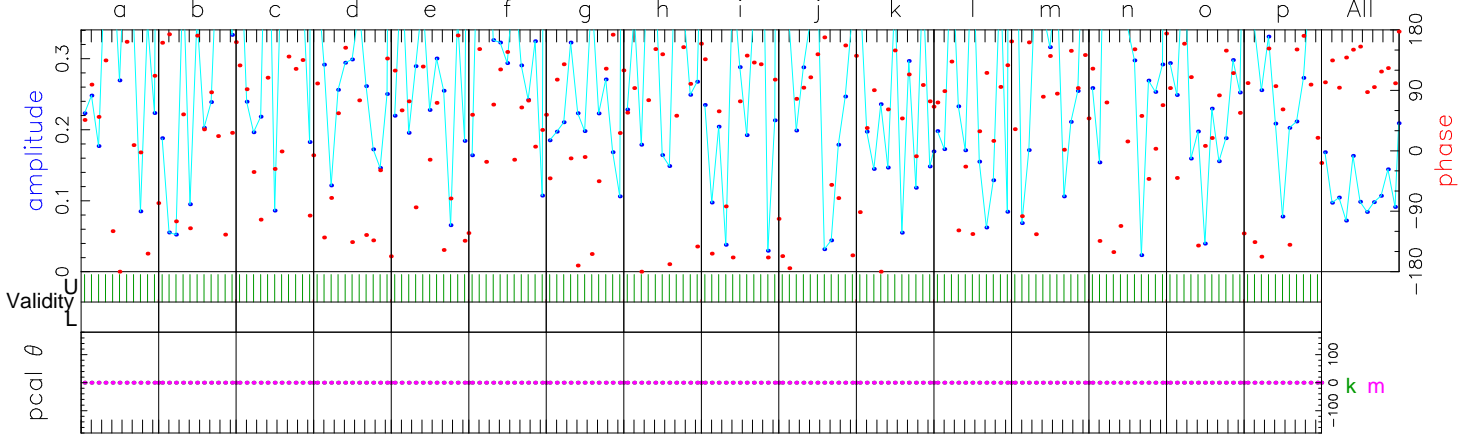
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-121.5	-83.1	-101.9	-29.5	-44.9	51.8	-42.1	-56.5	-93.1	-84.0	-118.9	-94.8	-68.7	-66.4	7.4	-41.1	Phase	-72.0	
	0.1	0.2	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.2	0.1	0.2	0.1	0.0	0.2	Ampl.	0.1	
	212.1	89.3	163.8	150.8	99.3	224.7	75.1	181.8	91.6	153.5	91.0	224.6	140.5	60.7	234.9	47.5	Sbd box	90.2	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	0	0	0	0	0	0	0	0	PC freqs		
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp		
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			1.12781418378E+04								1.12784602072E+04						Resid mbdelay (usec)	-5.86939E-03	+/- 1.8E-04
Sband delay (usec)			1.12781572387E+04								-1.2673144E+00						Resid sbdelay (usec)	-3.02969E-01	+/- 2.8E-03
Phase delay (usec)			1.12784602049E+04								8.3692290E-08						Resid phdelay (usec)	-2.32059E-06	+/- 6.1E-07
Delay rate (us/s)			-1.12479488412E+00								-1.12479972746E+00						Resid rate (us/s)	4.84334E-06	+/- 2.5E-09
Total phase (deg)					17.0						-1.42117597820E-05						Resid phase (deg)	-72.0	+/- 18.9

ph/seg (deg) RMS Theor. Amplitude 0.117 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 23.9 32.7 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.6 37.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 67.7 65.9 Inc. seg. avg. 0.113 Sample rate(MISamp/s): 64 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 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/gm..1306GF Output file: /Exps/c192a/v2/1234/No0009/gm.W.208.1306GF simultaneous interpolator



Fringe quality 0  
SNR 5.8  
Int time 419.540  
Amp 0.114  
Phase 119.4  
PFD 7.6e-01  
Delays (us)  
SBD -0.794685  
MBD 0.004325  
Fringe rate (Hz) 0.448889  
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 2020:083:025951  
2020:093:045015  
2020:014:135814  
RA & Dec (J2000) 16h42m58.80967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

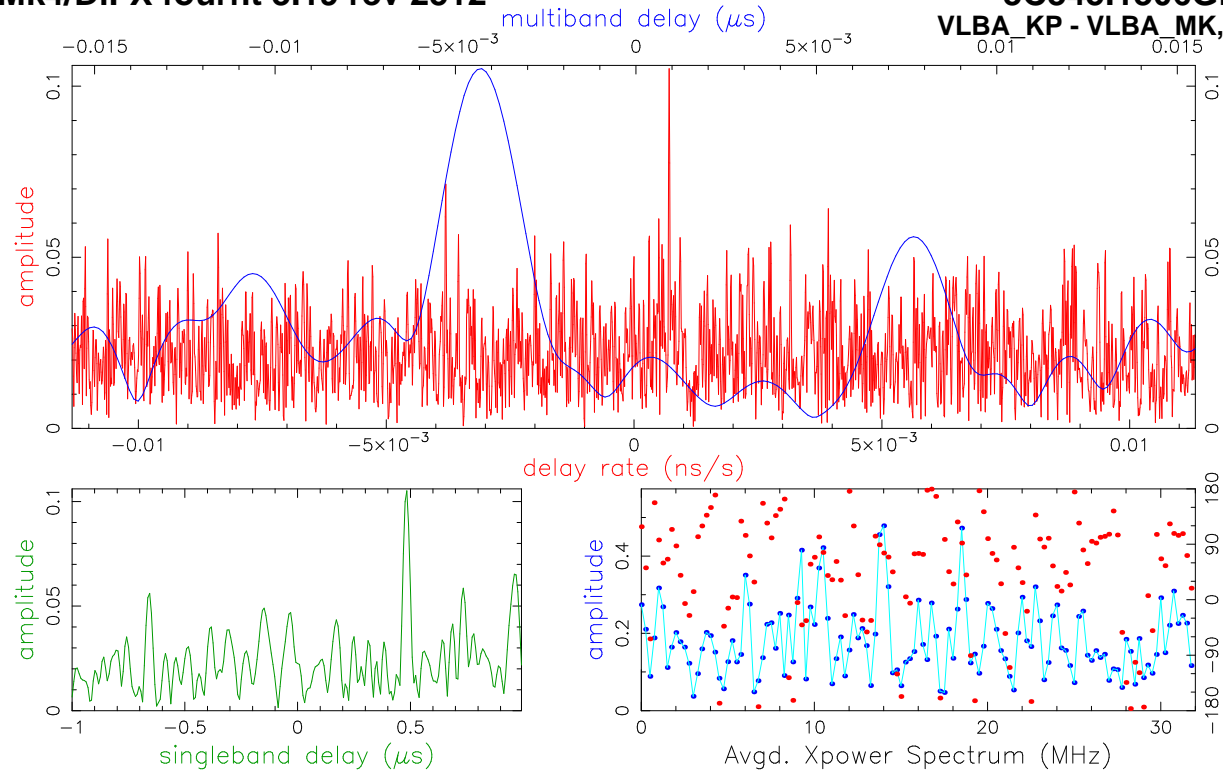


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	119.4
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	27.3
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	1000	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)		1.17706524434E+04								1.17714606181E+04							4.32525E-03	+/- 1.9E-04
Sband delay (usec)		1.17706659326E+04								-2.9672976E+00							-7.94685E-01	+/- 3.0E-03
Phase delay (usec)		1.17714606220E+04								-1.8588669E-07							3.85042E-06	+/- 6.3E-07
Delay rate (us/s)		-4.43483383644E-01								-4.43488594799E-01							5.21115E-06	+/- 2.6E-09
Total phase (deg)					351.5					-4.88877839268E-05							119.4	+/- 19.7

ph/seg (deg) 23.4 34.1  
amp/seg (%) 31.5 59.5  
ph/frq (deg) 29.8 39.3  
amp/frq (%) 52.2 68.7  
RMS Theor. Amplitude 0.114 +/- 0.020  
Search (2048X64) 0.098  
Interp. 0.000  
Inc. seg. avg. 0.104  
Inc. frq. avg. 0.103  
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MSamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite  
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
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/v2/1234/No0009/km..1306GF Output file: /Exps/c192a/v2/1234/No0009/km.W.188.1306GF

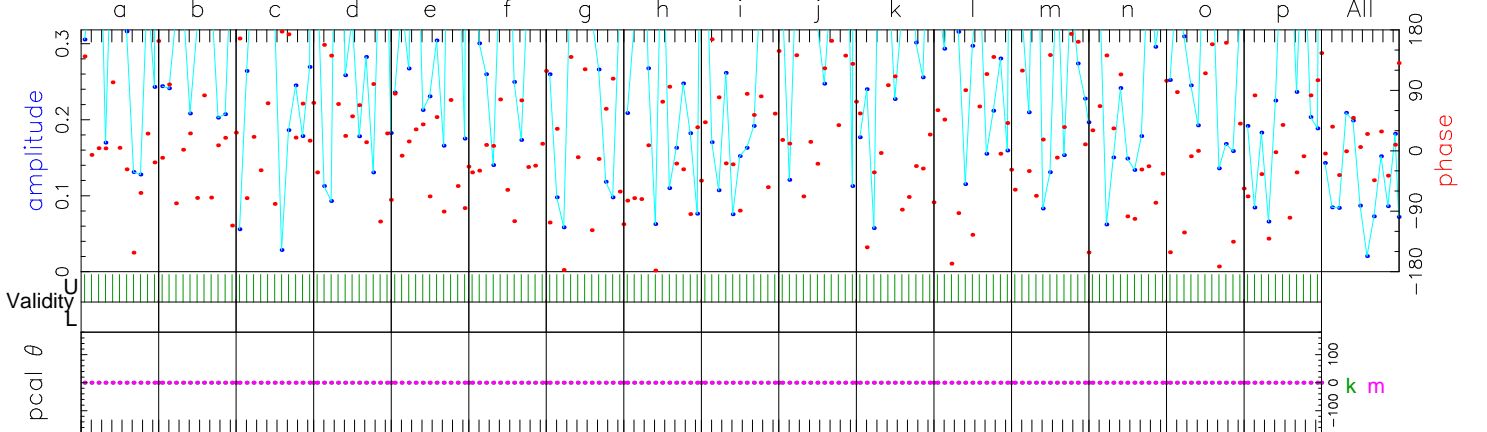
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, km  
VLBA\_KP - VLBA\_MK, fgroup W, pol RR



Fringe quality 0  
SNR 5.9  
Int time 419.546  
Amp 0.106  
Phase 7.8  
PFD 5.3e-01  
Delays (us)  
SBD 0.482302  
MBD -0.004339  
Fringe rate (Hz)  
0.060787  
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  
2020:083:025951  
2020:093:045021  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



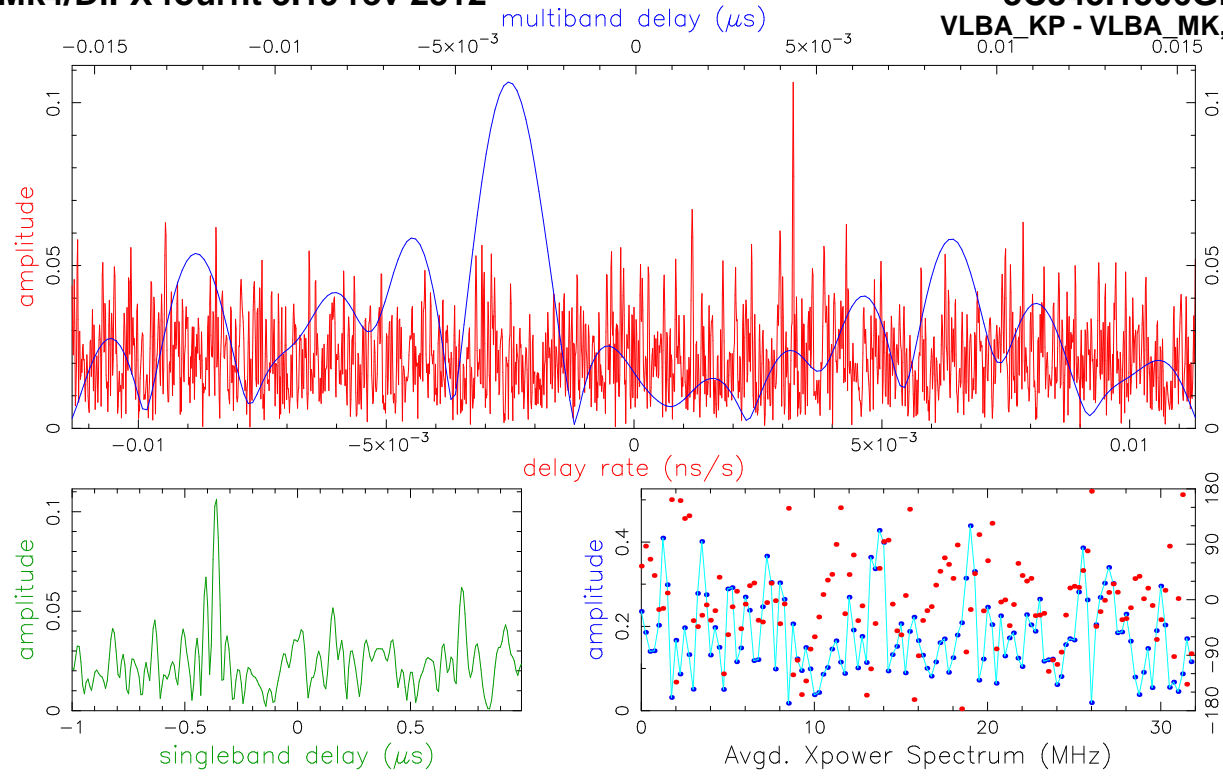
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All							
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0									
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000									
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000									
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000									
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids							
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks							
Group delay (usec)(sbd)		1.17719562786E+04									1.17714606181E+04							Resid mbdelay (usec)	-4.33948E-03	+/-	1.8E-04				
Sband delay (usec)		1.17719429201E+04									-2.9672976E+00							Resid sbdelay (usec)	4.82302E-01	+/-	2.9E-03				
Phase delay (usec)		1.17714606184E+04									-1.8588669E-07							Resid phdelay (usec)	2.52849E-07	+/-	6.2E-07				
Delay rate (us/s)		-4.43487889122E-01									-4.43488594799E-01							Resid rate (us/s)	7.05677E-07	+/-	2.6E-09				
Total phase (deg)					240.0						-4.88877839268E-05							Resid phase (deg)	7.8	+/-	19.3				
ph/seg (deg)	RMS	Theor.																Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5				
amp/seg (%)	31.9	33.5																Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000	1.000		
ph/frq (deg)	55.7	58.4																Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	54.2	38.6																Sample rate(MSamp/s): 64				dr window (ns/s)	-0.011	0.011	
	57.4	67.4																Data rate(Mb/s): 2048				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																									
Control file: cf_1234_gmva																									
Input file: /Exps/c192a/v2/1234/No0009/km..1306GF																									
Output file: /Exps/c192a/v2/1234/No0009/km.W.206.1306GF																									

simultaneous interpolator



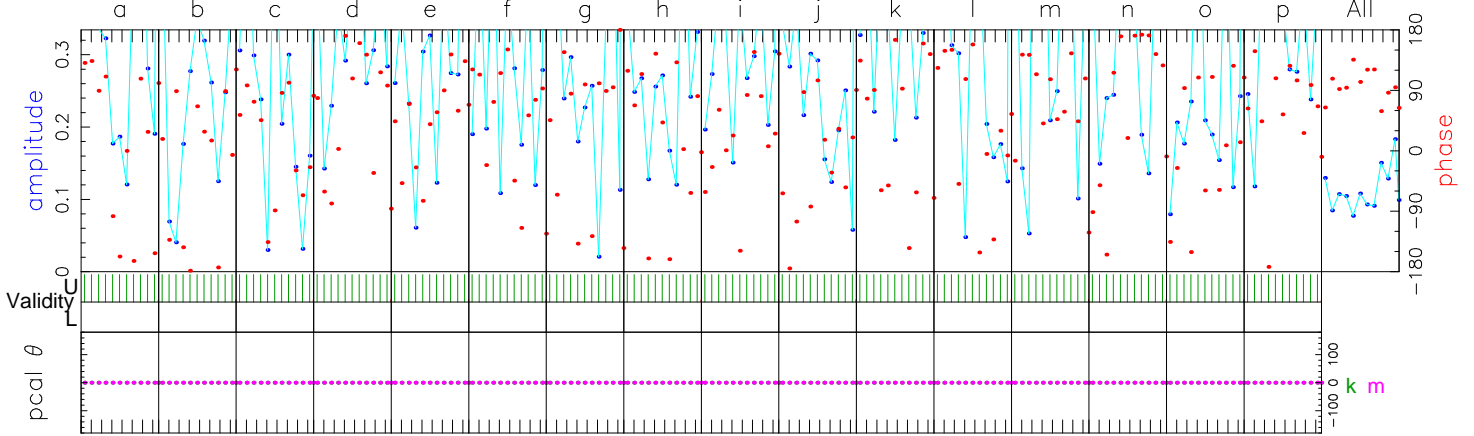
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, km  
VLBA\_KP - VLBA\_MK, fgroup W, pol LR



Fringe quality 0  
SNR 6.0  
Int time 419.546  
Amp 0.111  
Phase 93.8  
PFD 3.3e-01  
Delays (us)  
SBD -0.362190  
MBD -0.003564  
Fringe rate (Hz) 0.277176  
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 2020:083:025951  
2020:093:045026  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

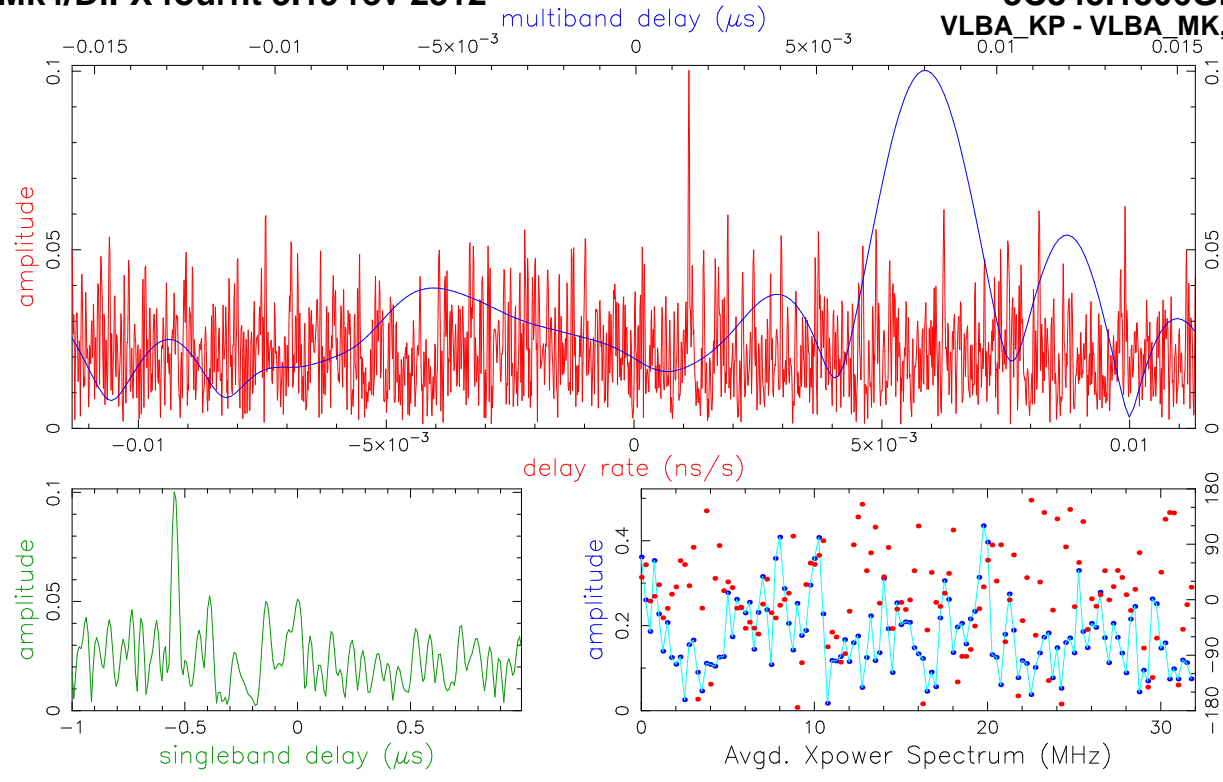


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
128.2	43.3	60.7	110.6	75.7	91.2	110.5	75.6	44.6	-54.1	142.3	153.5	81.9	157.7	56.5	86.5	86.5	Phase	93.8
0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.2	0.2	Ampl.	0.1
146.8	66.2	96.0	141.7	31.8	182.2	27.4	136.9	90.2	45.0	43.5	70.3	82.5	196.1	5.7	83.8	83.8	Sbd box	82.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	1.17711133037E+04			Apriori delay (usec)			1.17714606181E+04			Resid mbdelay (usec)			-3.56445E-03			+/- 1.8E-04		
Sband delay (usec)	1.17710984281E+04			Apriori clock (usec)			-2.9672976E+00			Resid sbdelay (usec)			-3.62190E-01			+/- 2.9E-03		
Phase delay (usec)	1.17714606211E+04			Apriori clockrate (us/s)			-1.8588669E-07			Resid phdelay (usec)			3.02422E-06			+/- 6.1E-07		
Delay rate (us/s)	-4.43485377066E-01			Apriori rate (us/s)			-4.43488594799E-01			Resid rate (us/s)			3.21773E-06			+/- 2.5E-09		
Total phase (deg)	325.9			Apriori accel (us/s/s)			-4.88877839268E-05			Resid phase (deg)			93.8			+/- 19.0		

RMS Theor. Amplitude 0.111 +/- 0.018 Pcd mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 22.6 32.9 Search (2048X64) 0.100 Pcd rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 28.4 57.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 54.7 38.0 Inc. seg. avg. 0.101 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 57.3 66.2 Inc. frq. avg. 0.115 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/km..1306GF Output file: /Exps/c192a/v2/1234/No0009/km.W.226.1306GF

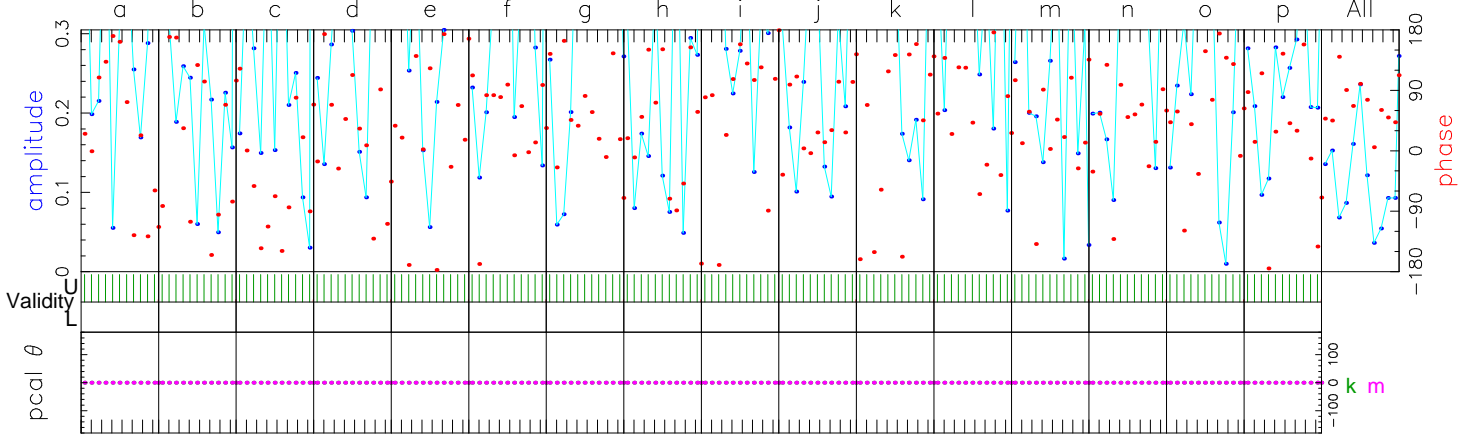
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, km  
VLBA\_KP - VLBA\_MK, fgroup W, pol RL



Fringe quality 0  
SNR 5.7  
Int time 419.540  
Amp 0.102  
Phase 69.7  
PFD 9.7e-01  
Delays (us)  
SBD -0.544402  
MBD 0.008025  
Fringe rate (Hz) 0.095393  
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 2020:083:025951  
2020:093:045032  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	77.7	-177.8	-90.6	21.1	59.3	64.4	55.2	58.0	122.8	43.8	146.1	50.7	44.7	59.2	64.3	75.1		Phase	69.7
	0.0	0.0	0.1	0.0	0.1	0.2	0.2	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1		Ampl.	0.1
	106.2	99.1	141.9	124.8	131.6	59.4	58.8	80.3	59.9	196.0	59.8	12.4	107.9	149.2	35.1	111.7		Sbd box	59.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

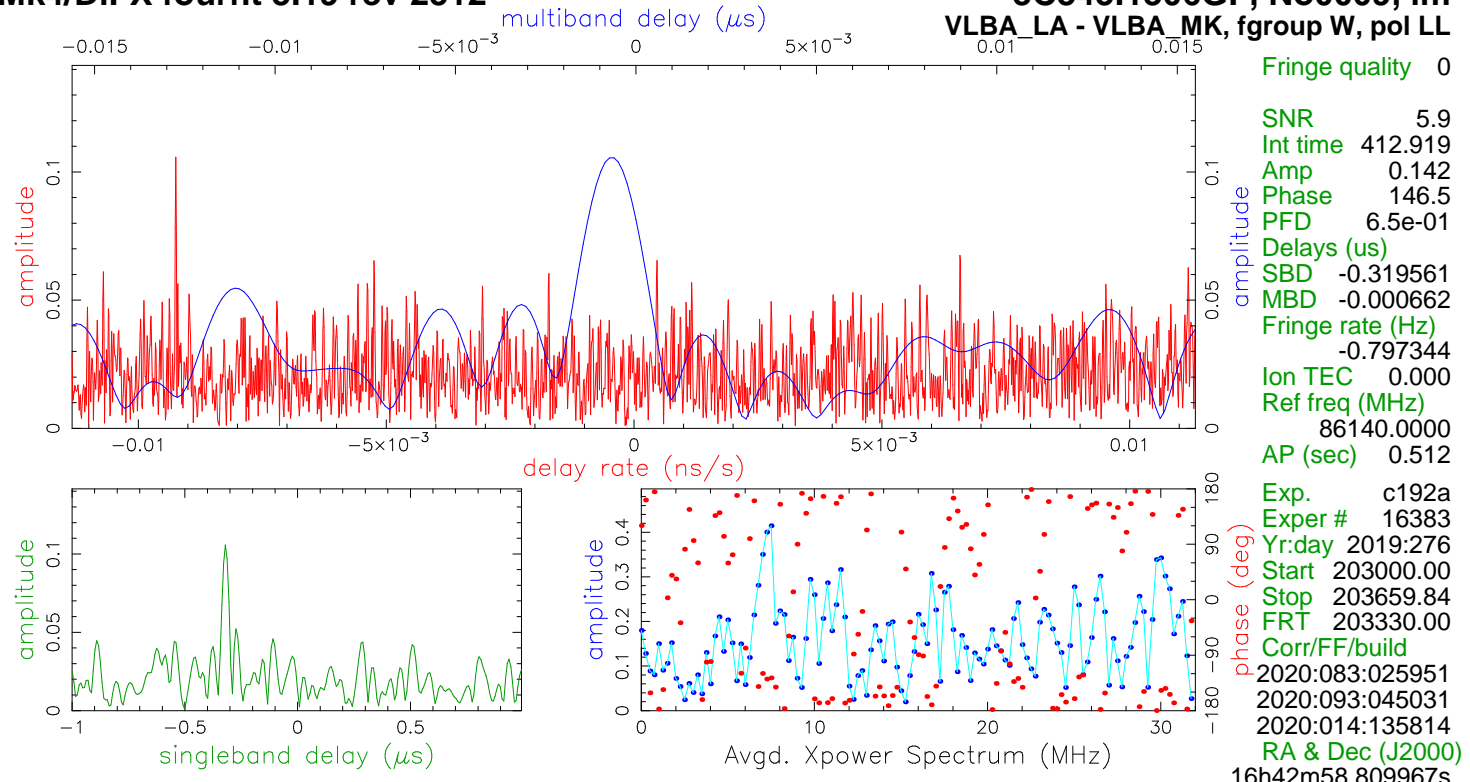
Group delay (usec)(sbd) 1.17709061432E+04 Apriori delay (usec) 1.17714606181E+04 Resid mbdelay (usec) 8.02512E-03 +/- 1.9E-04  
 Sband delay (usec) 1.17709162156E+04 Apriori clock (usec) -2.9672976E+00 Resid sbdelay (usec) -5.44402E-01 +/- 3.0E-03  
 Phase delay (usec) 1.17714606204E+04 Apriori clockrate (us/s) -1.8588669E-07 Resid phdelay (usec) 2.24844E-06 +/- 6.5E-07  
 Delay rate (us/s) -4.43487487385E-01 Apriori rate (us/s) -4.43488594799E-01 Resid rate (us/s) 1.10741E-06 +/- 2.7E-09  
 Total phase (deg) 301.8 Apriori accel (us/s/s) -4.88877839268E-05 Resid phase (deg) 69.7 +/- 20.2

RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 34.1 35.0 Search (2048X64) 0.099 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 56.4 61.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 60.8 40.4 Inc. seg. avg. 0.096 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 75.5 70.5 Inc. frq. avg. 0.106 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/km..1306GF Output file: /Exps/c192a/v2/1234/No0009/km.W.243.1306GF

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol LL



Fringe quality 0

SNR 5.9

Int time 412.919

Amp 0.142

Phase 146.5

PFD 6.5e-01

Delays (us)

SBD -0.319561

MBD -0.000662

Fringe rate (Hz)

-0.797344

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

2020:083:025951

2020:093:045031

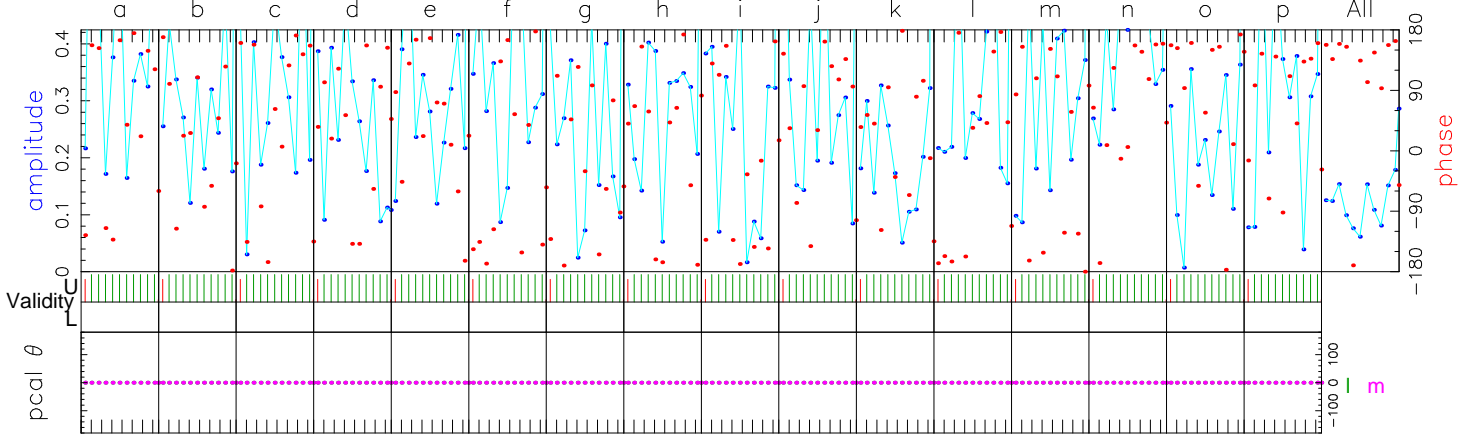
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
158.3	103.3	142.4	63.6	66.9	-157.6	129.4	89.7	-175.6	141.2	28.7	148.7	178.6	111.9	157.5	137.3	Phase	146.5	
0.4	0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	Ampl.	0.1	
88.9	10.4	89.9	229.0	220.7	74.8	5.1	37.6	251.6	49.8	66.4	89.7	167.5	120.4	181.9	100.7	Sbd box	88.1	
UL	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) 1.28575090653E+04 Apriori delay (usec) 1.28578222271E+04 Resid mbdelay (usec) -6.61824E-04 +/- 1.8E-04

Sband delay (usec) 1.28575026661E+04 Apriori clock (usec) -3.3067610E+00 Resid sbdelay (usec) -3.19561E-01 +/- 2.9E-03

Phase delay (usec) 1.28578222318E+04 Apriori clockrate (us/s) -3.4277971E-07 Resid phdelay (usec) 4.72273E-06 +/- 6.3E-07

Delay rate (us/s) -5.43241994890E-01 Apriori rate (us/s) -5.43232738512E-01 Resid rate (us/s) -9.25638E-06 +/- 2.6E-09

Total phase (deg) 17.5 Apriori accel (us/s/s) -5.06737882748E-05 Resid phase (deg) 146.5 +/- 19.5

ph/seg (deg) RMS Theor. Amplitude 0.142 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 39.3 33.7 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 53.2 39.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

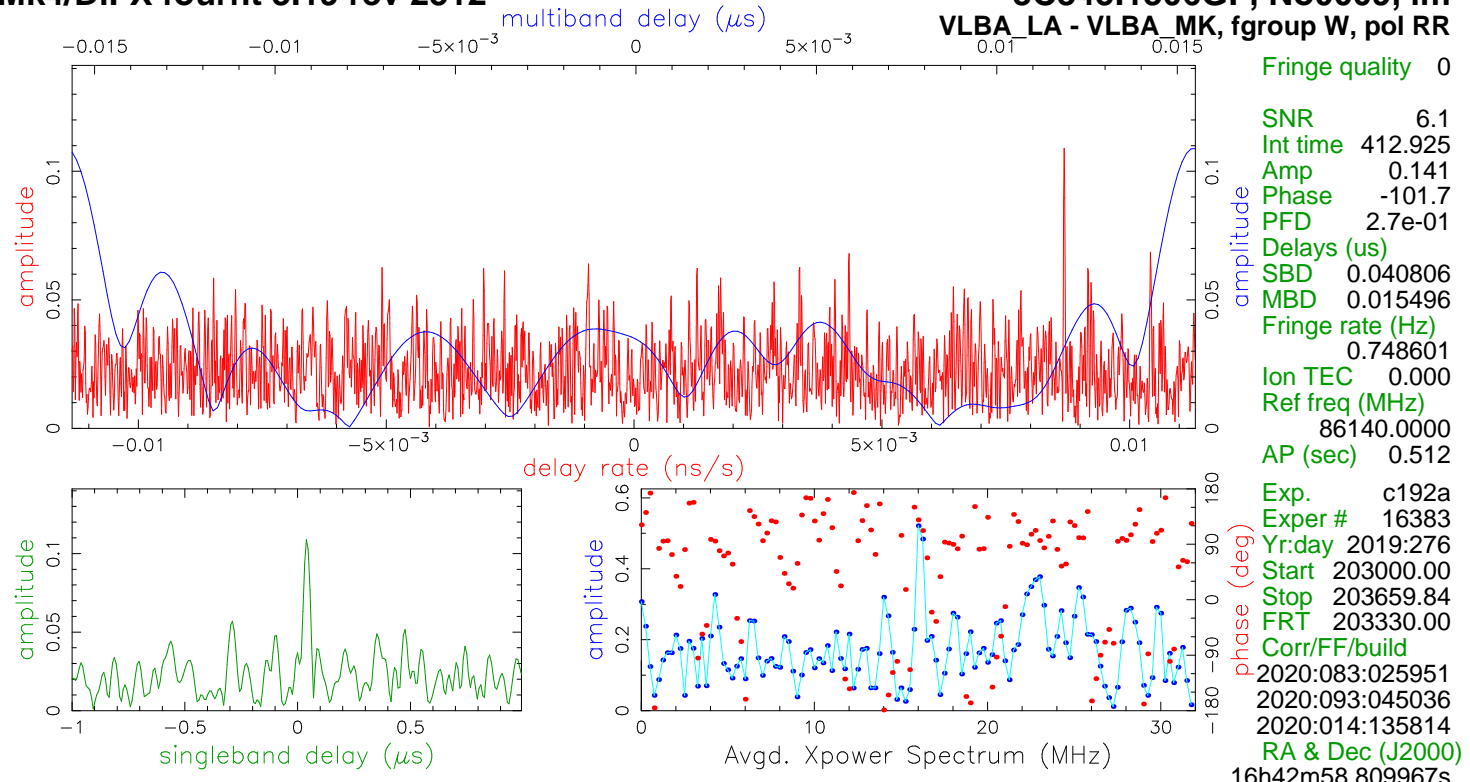
amp/frq (%) 65.3 68.0 Inc. seg. avg. 0.138 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

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 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

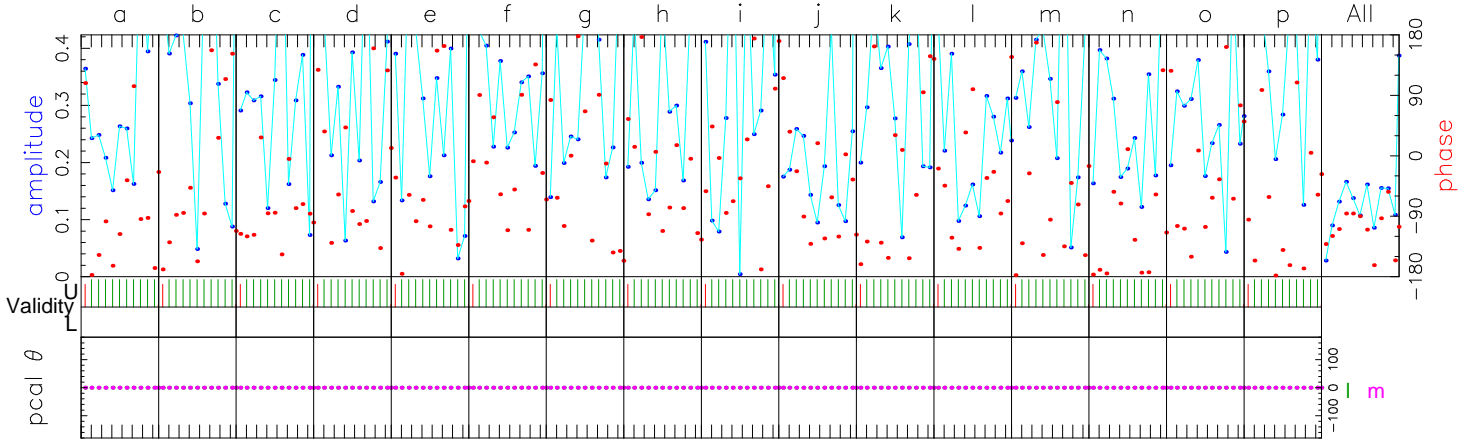
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/lm..1306GF Output file: /Exps/c192a/v2/1234/No0009/lm.W.240.1306GF simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol RR

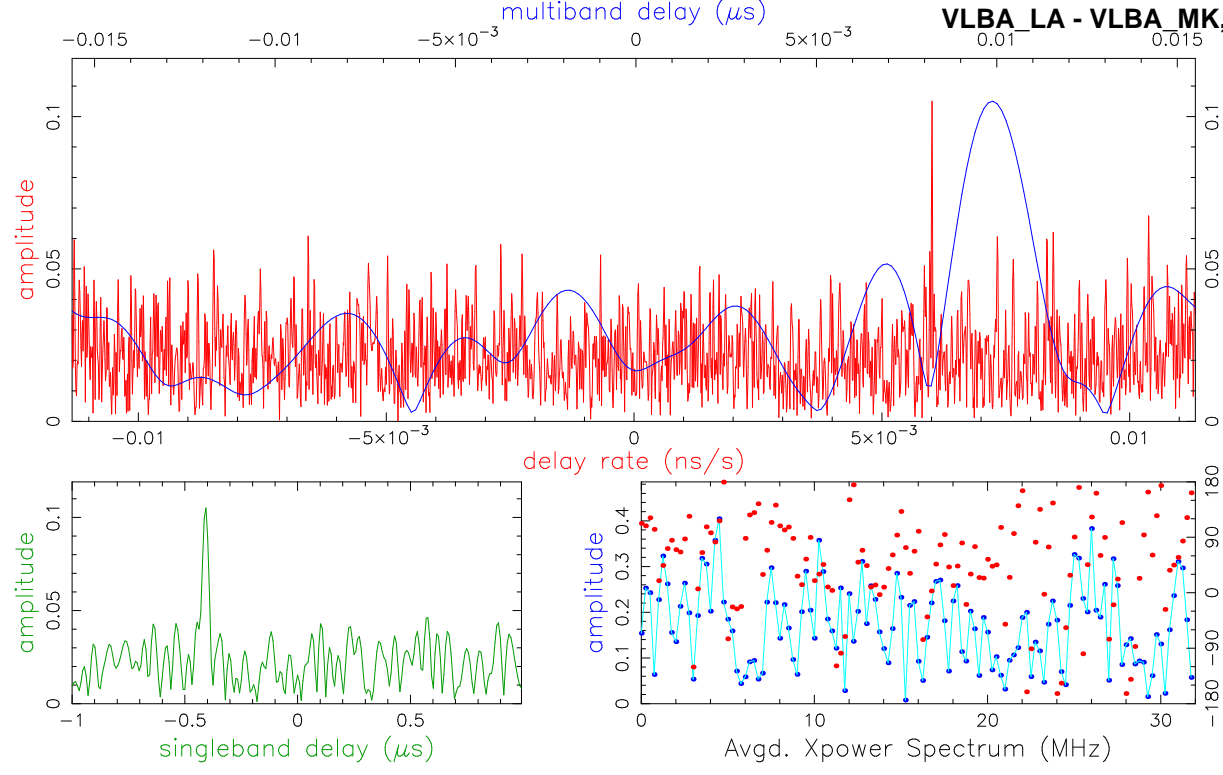


Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-128.7	-121.5	-98.8	-120.7	-95.3	-13.3	-128.4	-52.1	-50.6	-59.9	-150.0	-56.0	-136.7	-160.6	-74.0	-131.9	Phase	-101.7	
	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.1	Ampl.	0.1	
	137.2	52.4	134.8	175.2	129.9	198.9	205.1	48.9	223.9	26.3	90.6	66.0	135.0	62.5	204.0	197.8	Sbd box	134.2	
U/L	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0	APs used		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			1.28578689734E+04								1.28578222271E+04						Resid mbdelay (usec)	1.54963E-02	+/- 1.8E-04
Sband delay (usec)			1.28578630336E+04								-3.3067610E+00						Resid sbdelay (usec)	4.08065E-02	+/- 2.8E-03
Phase delay (usec)			1.28578222238E+04								-3.4277971E-07						Resid phdelay (usec)	-3.27819E-02	+/- 6.1E-07
Delay rate (us/s)			-5.43224048000E-01								-5.43232738512E-01						Resid rate (us/s)	8.69051E-06	+/- 2.5E-09
Total phase (deg)				129.4							-5.06737882748E-05						Resid phase (deg)	-101.7	+/- 18.8

ph/seg (deg) 31.5 32.5 Search (2048X64) 0.108 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 42.8 56.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.5 37.7 Inc. seg. avg. 0.138 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 49.1 65.8 Inc. frq. avg. 0.150 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/lm..1306GF Output file: /Exps/c192a/v2/1234/No0009/lm.W.255.1306GF

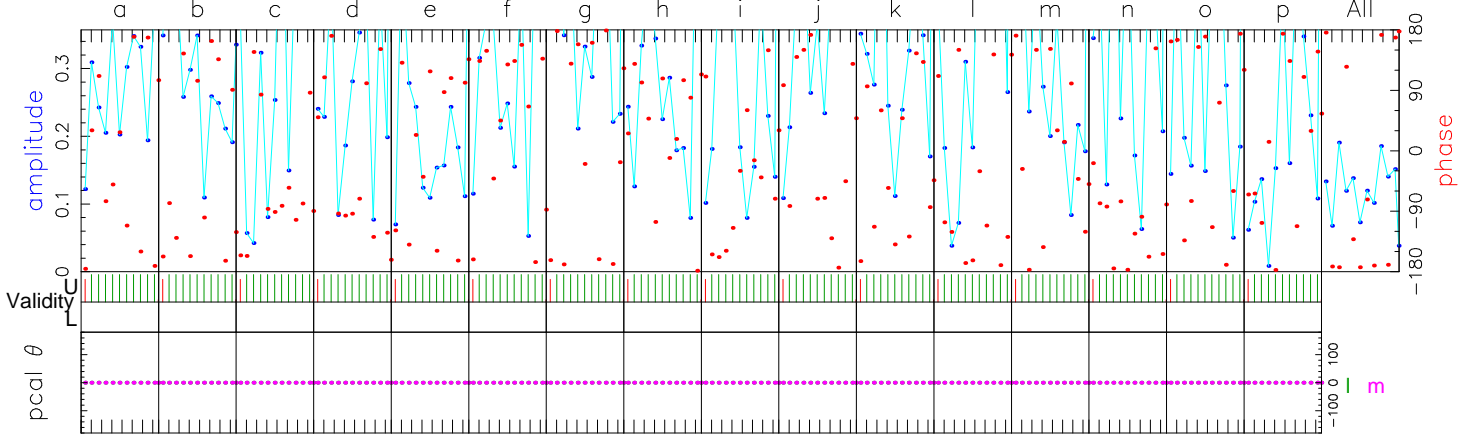


Fringe quality 0

SNR 5.9  
Int time 412.925  
Amp 0.119  
Phase -173.0  
PFD 6.6e-01  
Delays (us)  
SBD -0.408174  
MBD 0.009879  
Fringe rate (Hz) 0.518865  
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 2020:083:025951  
2020:093:045041  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



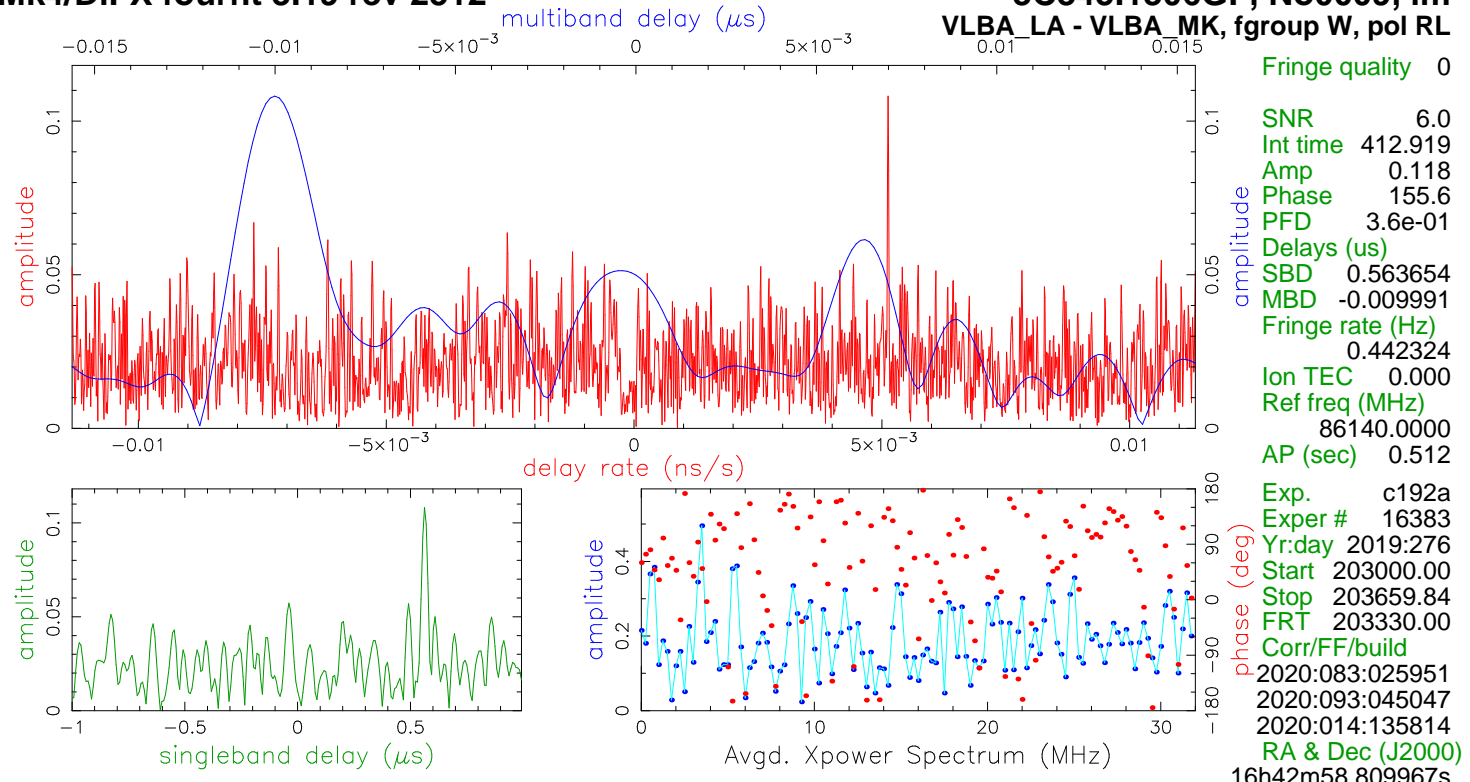
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-156.6	-170.1	-96.1	-174.7	138.1	149.5	-179.9	94.9	-116.1	-153.8	129.6	-159.4	-173.5	-144.6	172.3	-179.6	Phase	-173.0
	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.1	0.2	0.0	0.2	0.2	0.1	0.1	Ampl.	0.1
	137.8	113.7	58.6	34.7	211.1	78.5	77.0	66.1	157.0	93.0	115.3	175.6	159.2	6.2	28.1	251.8	Sbd box	76.8
U/L	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
l:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	1.28574258556E+04			Apriori delay (usec)			1.28578222271E+04			Resid mbdelay (usec)			9.87855E-03			+/- 1.8E-04		
Sband delay (usec)	1.28574140531E+04			Apriori clock (usec)			-3.3067610E+00			Resid sbdelay (usec)			-4.08174E-01			+/- 2.9E-03		
Phase delay (usec)	1.28578222215E+04			Apriori clockrate (us/s)			-3.4277971E-07			Resid phdelay (usec)			-5.57934E-06			+/- 6.3E-07		
Delay rate (us/s)	-5.43226715007E-01			Apriori rate (us/s)			-5.43232738512E-01			Resid rate (us/s)			6.02351E-06			+/- 2.6E-09		
Total phase (deg)	58.0			Apriori accel (us/s/s)			-5.06737882748E-05			Resid phase (deg)			-173.0			+/- 19.5		

ph/seg (deg) 38.7 33.7 Search (2048X64) 0.119 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 42.3 58.8 Interp. 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 43.7 39.0 Inc. seg. avg. 0.123 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 61.0 68.1 Inc. frq. avg. 0.120 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/lm..1306GF Output file: /Exps/c192a/v2/1234/No0009/lm.W.274.1306GF simultaneous interpolator



Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol RL



Fringe quality 0

SNR 6.0

Int time 412.919

Amp 0.118

Phase 155.6

PFD 3.6e-01

Delays (us)

SBD 0.563654

MBD -0.009991

Fringe rate (Hz)

0.442324

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

2020:083:025951

2020:093:045047

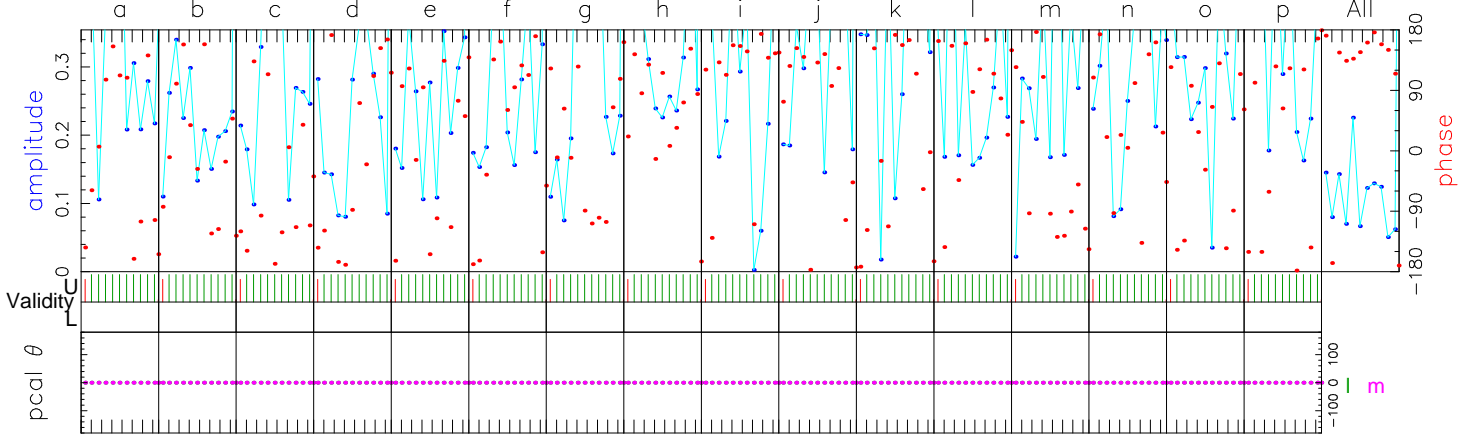
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	815/0	815/0	815/0	815/0	815/0	815/0	815/0	815/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0	816/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)		1.28583747362E+04								1.28578222271E+04							-9.99091E-03	+/- 1.8E-04
Sband delay (usec)		1.28583858816E+04								-3.3067610E+00							5.63654E-01	+/- 2.9E-03
Phase delay (usec)		1.2857822321E+04								-3.4277971E-07							5.01685E-06	+/- 6.1E-07
Delay rate (us/s)		-5.43227603564E-01								-5.43232738512E-01							5.13495E-06	+/- 2.5E-09
Total phase (deg)					26.6					-5.06737882748E-05							155.6	+/- 19.0
pcal mode:										MANUAL								
PCal rate:										0.000E+00							0.000E+00	(us/s)
Bits/sample:										2x2								
Sample rate(MSamp/s):										64								
Data rate(Mb/s):										2048								
PCal period (AP's)										5								
sb window (us)																	-1.000	1.000
mb window (us)																	-0.016	0.016
dr window (ns/s)																	-0.011	0.011
ion window (TEC)																	0.00	0.00

ph/seg (deg) 21.0 32.9 Search (2048X64) 0.105 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5

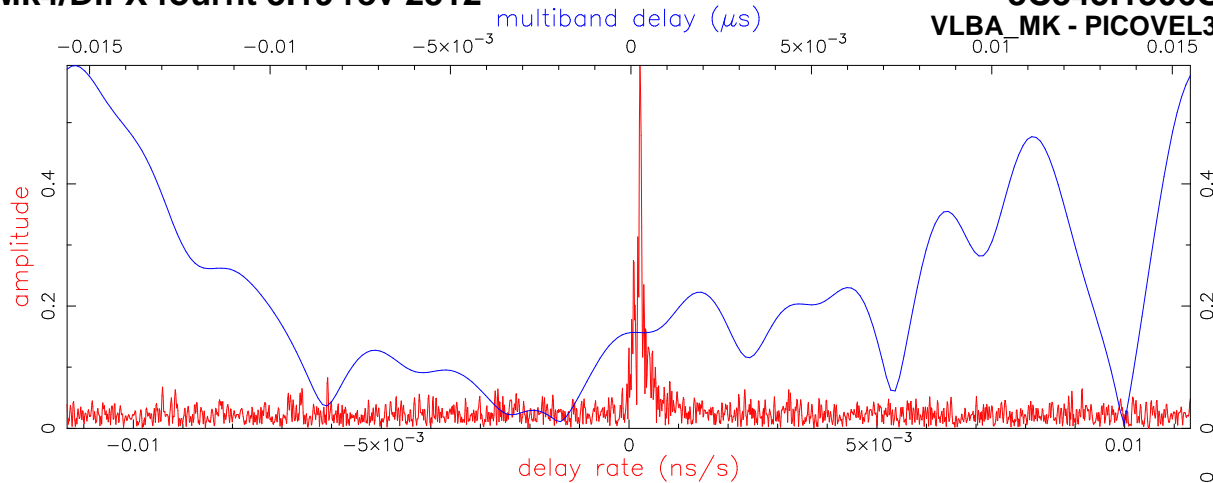
amp/seg (%) 66.8 57.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 54.0 38.0 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 65.2 66.4 Inc. frq. avg. 0.126 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

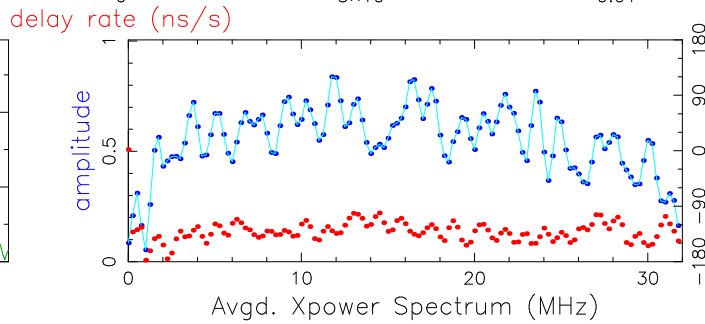
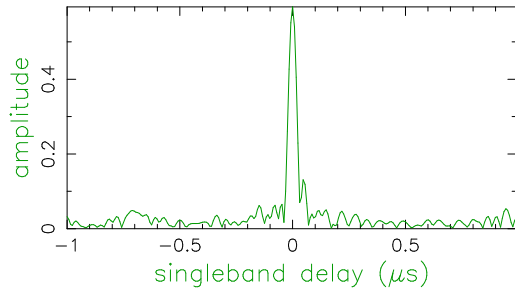
l: az 70.8 el 60.4 pa -86.3 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 3964.906 -1691.519 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/lm..1306GF Output file: /Exps/c192a/v2/1234/No0009/lm.W.294.1306GF



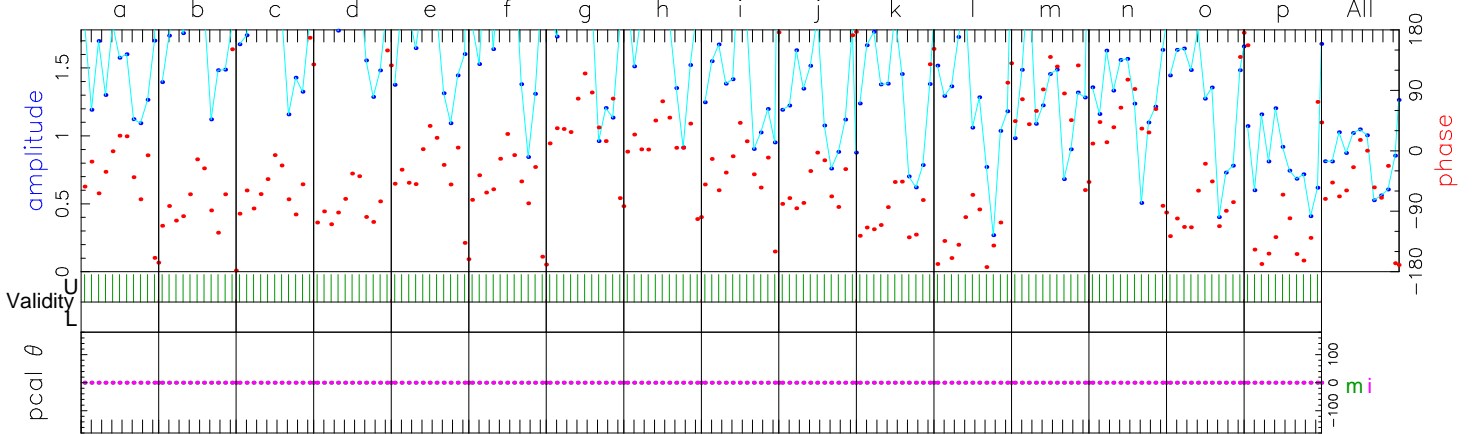
Fringe quality 5

SNR 33.3  
Int time 419.686  
Amp 0.594  
Phase -44.3  
PFD 0.0e+00  
Delays (us)  
SBD -0.000425  
MBD -0.015422  
Fringe rate (Hz)  
0.018682  
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  
2020:083:025951  
2020:093:045037  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

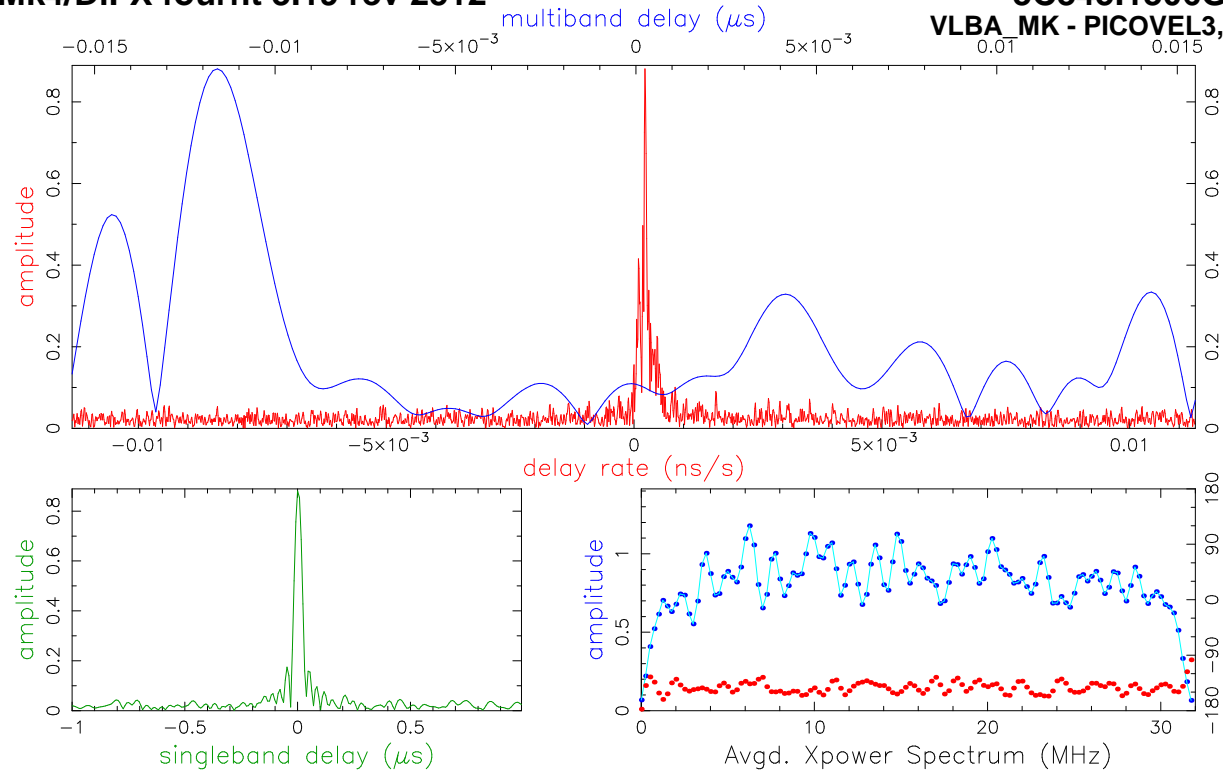
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-29.6	-81.0	-62.3	-86.5	-23.1	-42.4	45.4	18.8	-18.6	-59.6	-100.3	-132.5	77.3	41.3	-93.5	-148.3	Phase	-44.3
	1.0	1.2	1.3	1.5	1.2	1.3	1.2	1.3	1.0	0.9	0.9	0.9	0.8	0.9	0.9	0.5	Ampl.	1.0
	127.3	128.7	128.8	128.5	128.6	128.9	128.7	128.8	128.8	128.4	128.6	128.7	128.8	128.6	128.8	127.4	Sbd box	128.9
UL	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-7.67628066402E+03			Apriori delay (usec)			-7.67626524196E+03			Resid mbdelay (usec)			-1.54221E-02			+/- 3.2E-05		
Sband delay (usec)	-7.67626566696E+03			Apriori clock (usec)			3.0554860E+07			Resid sbdelay (usec)			-4.25000E-04			+/- 5.2E-04		
Phase delay (usec)	-7.67626524339E+03			Apriori clockrate (us/s)			3.4430770E-07			Resid phdelay (usec)			-1.42700E-06			+/- 1.1E-07		
Delay rate (us/s)	1.99255077203E+00			Apriori rate (us/s)			1.99255055516E+00			Resid rate (us/s)			2.16876E-07			+/- 4.6E-10		
Total phase (deg)	-23.7			Apriori accel (us/s/s)			2.18045818411E-05			Resid phase (deg)			-44.3			+/- 3.4		
ph/seg (deg)	RMS	Theor.	Amplitude		0.594 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000			
amp/seg (%)	47.7	6.0	Search (2048X64)		0.579		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016 0.016					
ph/frq (deg)	51.4	10.4	Interp.		0.000		Sample rate(MISamp/s): 64				dr window (ns/s)		-0.011 0.011					
amp/frq (%)	67.3	6.9	Inc. seg. avg.		0.831		Data rate(Mb/s): 2048				ion window (TEC)		0.00 0.00					
	84.4	12.0	Inc. frq. avg.		1.030		nlags: 128		t_cohere infinite									
m: az 52.6 el 15.0 pa -76.4			i: az 294.5 el 39.8 pa 71.3			u,v (fr/asec) -14813.895 -188.764						simultaneous interpolator						
Control file: cf_1234_gmva			Input file: /Exps/c192a/v2/1234/No0009/mi..1306GF			Output file: /Exps/c192a/v2/1234/No0009/mi.W.260.1306GF												

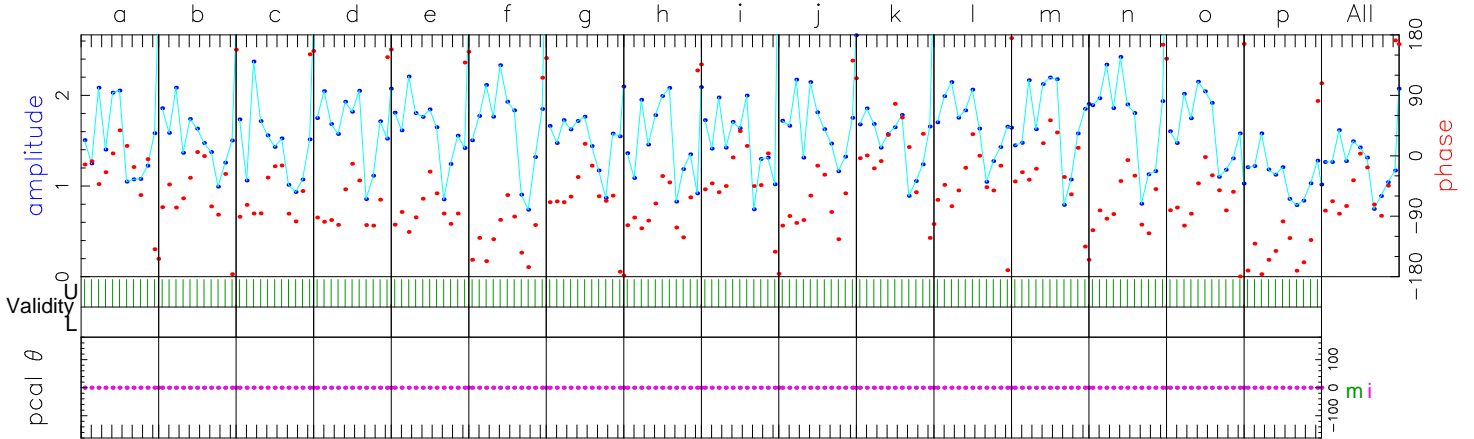
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mi  
VLBA\_MK - PICOVEL3, fgroup W, pol RR



Fringe quality 2  
SNR 49.8  
Int time 419.692  
Amp 0.889  
Phase -61.5  
PFD 0.0e+00  
Delays (us)  
SBD 0.002576  
MBD -0.011588  
Fringe rate (Hz) 0.018792  
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  
2020:083:025951  
2020:093:045043  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

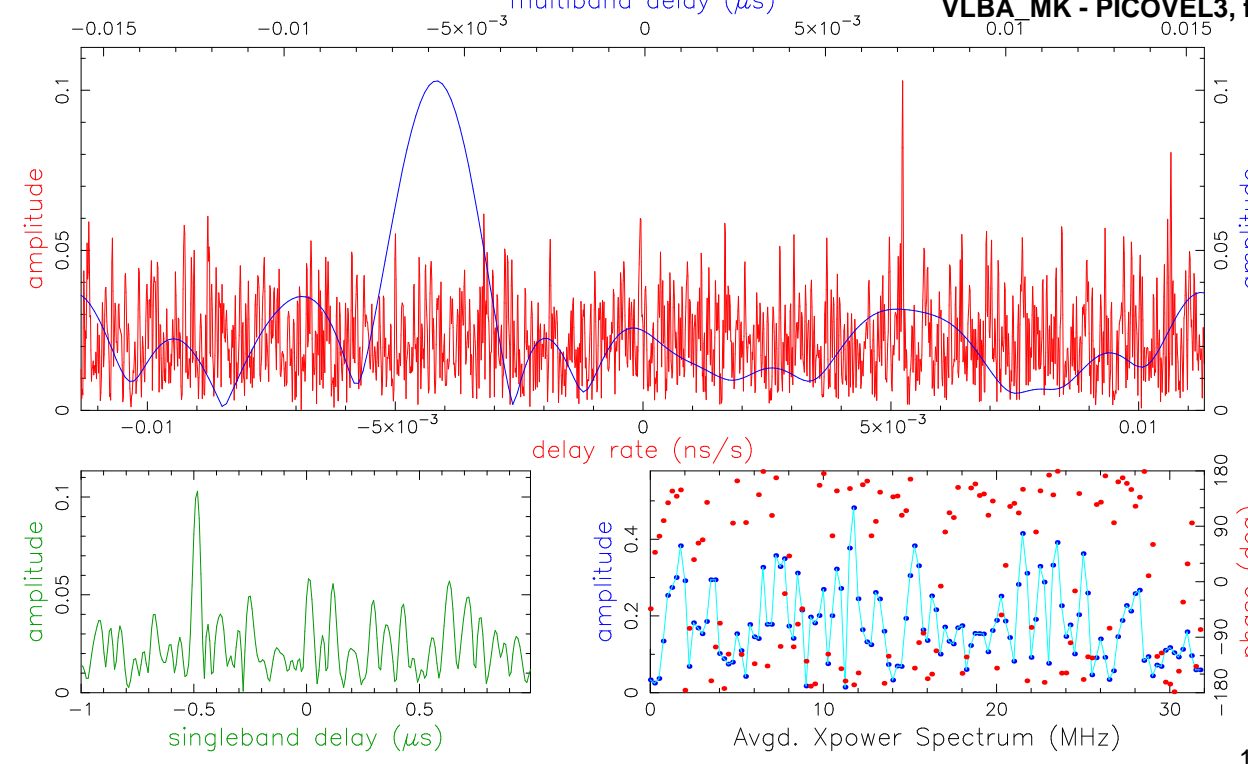


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0				
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
m:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
m:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks		
Group delay (usec)(sbd)		-7.67627683012E+03																		
Sband delay (usec)		-7.67626266596E+03																		
Phase delay (usec)		-7.67626524395E+03																		
Delay rate (us/s)		1.99255077331E+00																		
Total phase (deg)					-40.9															
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)																				

ph/seg (deg) 49.1 4.0 Search (2048X64) 0.868 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 48.2 7.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 42.7 4.6 Inc. seg. avg. 1.232 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 25.9 8.0 Inc. frq. avg. 1.096 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
m: az 52.6 el 15.0 pa -76.4 i: az 294.5 el 39.8 pa 71.3 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mi..1306GF Output file: /Exps/c192a/v2/1234/No0009/mi.W.283.1306GF

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mi  
VLBA\_MK - PICOVEL3, fgroup W, pol LR



Fringe quality 0

SNR 5.8

Int time 419.686

Amp 0.113

Phase -77.1

PFD 7.9e-01

Delays (us)

SBD -0.486636

MBD -0.005773

Fringe rate (Hz)

0.451379

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

2020:083:025951

2020:093:045048

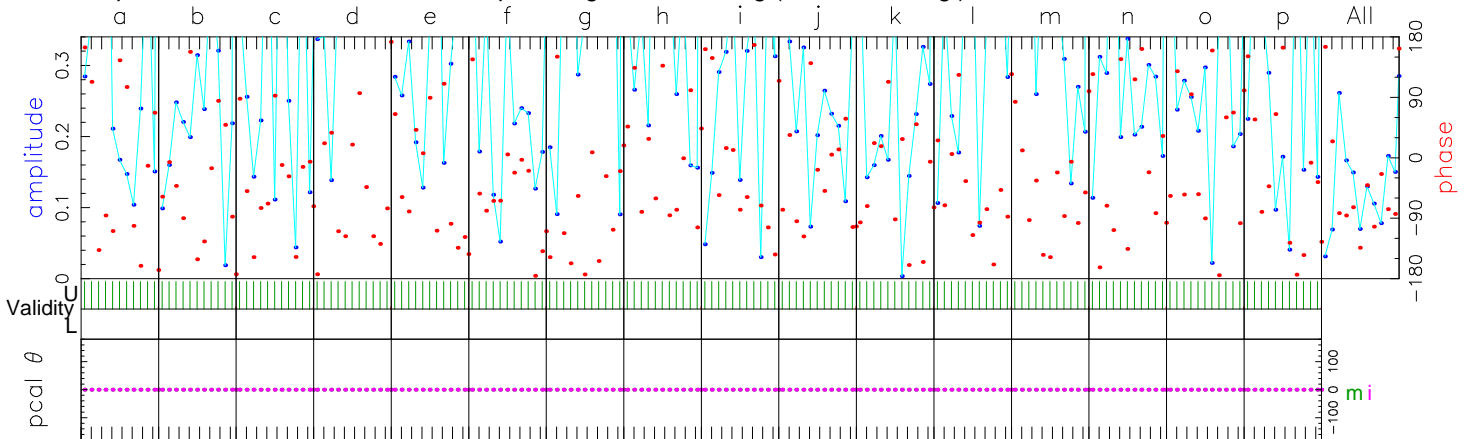
2020:014:135814

RA & Dec (J2000)

16h42m58.80967s

+39°48'36.993984"

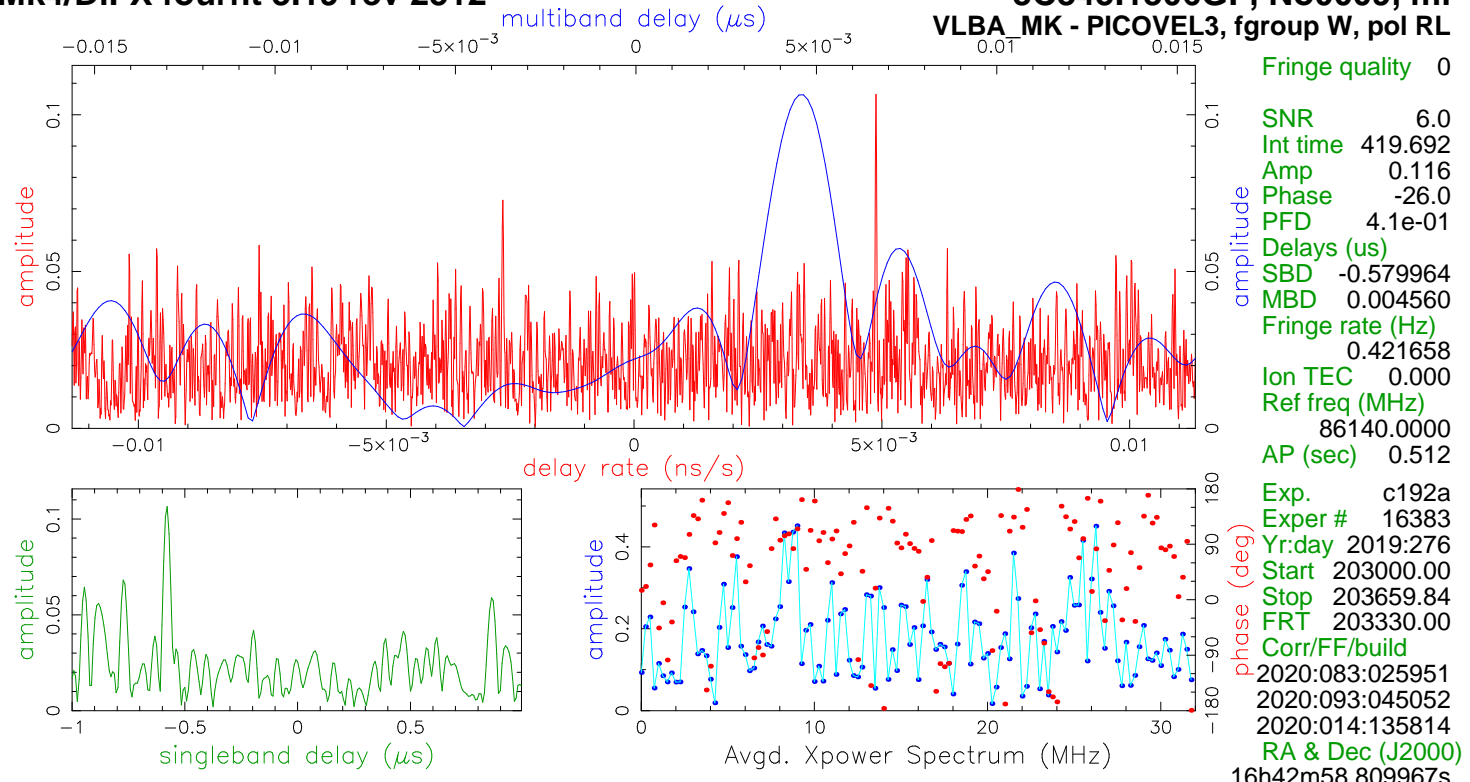
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



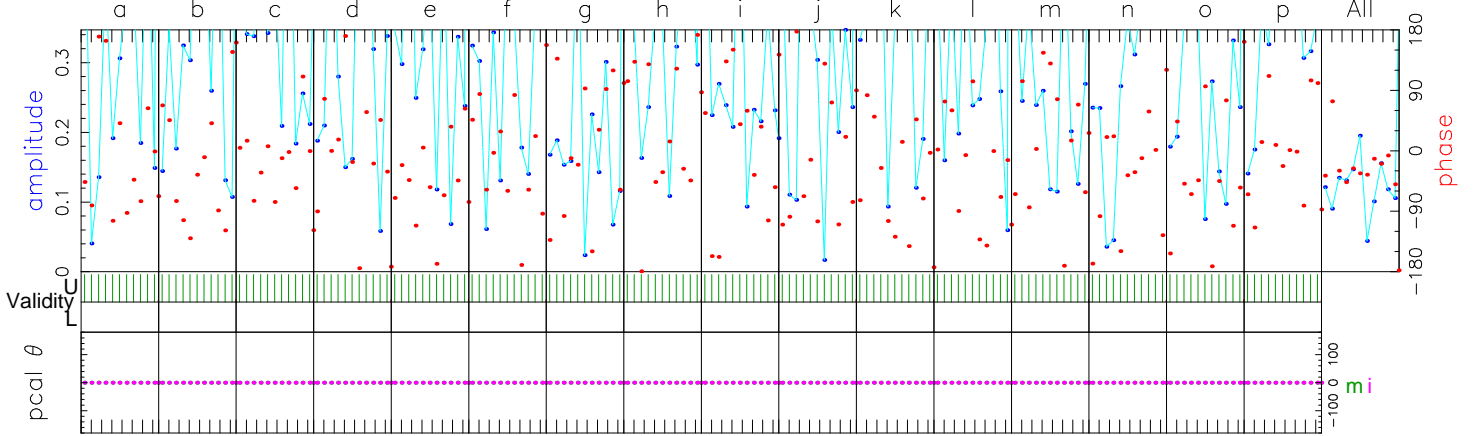
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
-127.9	-80.1	-27.9	-81.5	-102.5	-47.6	-108.3	-38.5	-82.2	-55.4	-71.5	-77.1	-75.0	-121.4	-38.6	-69.8	Phase	-77.1	
0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.0	Ampl.	0.1	
235.0	120.6	60.1	105.3	226.6	21.6	91.6	73.9	226.3	183.1	87.4	30.8	102.9	179.3	104.4	163.2	Sbd box	66.7	
U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
i 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
m:i 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
m:i 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
i 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
m W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
i W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																Chan ids		
																Tracks		
Group delay (usec)(sbd)		-7.67673976544E+03				Apriori delay (usec)				-7.67626524196E+03				Resid mbdelay (usec)		-5.77348E-03 +/- 1.9E-04		
Sband delay (usec)		-7.67675187796E+03				Apriori clock (usec)				3.0554860E+00				Resid sbdelay (usec)		-4.86636E-01 +/- 3.0E-03		
Phase delay (usec)		-7.67626524445E+03				Apriori clockrate (us/s)				3.4430770E-07				Resid phdelay (usec)		-2.48653E-06 +/- 6.4E-07		
Delay rate (us/s)		1.99255579522E+00				Apriori rate (us/s)				1.99255055516E+00				Resid rate (us/s)		5.24006E-06 +/- 2.6E-09		
Total phase (deg)		-56.5				Apriori accel (us/s/s)				2.18045818411E-05				Resid phase (deg)		-77.1 +/- 19.7		
ph/seg (deg)	RMS 55.0	Theor. 34.2	Amplitude Search (2048X64)			0.113 +/- 0.020			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	64.3	59.6	Interp.			0.000			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	30.5	39.4	Inc. seg. avg.			0.118			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	51.5	68.8	Inc. frq. avg.			0.104			Sample rate(MISamp/s): 64						dr window (ns/s)		-0.011 0.011	
m: az 52.6 el 15.0 pa -76.4		i: az 294.5 el 39.8 pa 71.3		u,v (fr/asec)		-14813.895 -188.764				Data rate(Mb/s): 2048		nlags: 128 t_cohere infinite		ion window (TEC)		0.00 0.00		
Control file: cf_1234_gmva				Input file: /Exps/c192a/v2/1234/No0009/mi..1306GF				Output file: /Exps/c192a/v2/1234/No0009/mi.W.302.1306GF				simultaneous interpolator						

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mi  
VLBA\_MK - PICOVEL3, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-42.1	-49.1	-17.2	13.2	-47.8	5.4	-9.5	43.0	47.4	-62.8	-23.8	-11.0	-84.8	-36.5	-70.3	9.2	Phase	-26.0
	0.1	0.2	0.3	0.1	0.3	0.1	0.0	0.0	0.1	0.2	0.1	0.2	0.0	0.1	0.1	0.2	Ampl.	0.1
	25.9	109.3	54.6	255.6	54.9	62.3	237.6	123.7	134.2	153.6	52.4	218.7	239.6	60.4	206.1	79.4	Sbd box	54.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Tracks	
Group delay (usec)(sbd)	-7.67685443212E+03			Apriori delay (usec)			-7.67626524196E+03			Resid mbdelay (usec)			4.55985E-03			+/- 1.8E-04		
Sband delay (usec)	-7.67684520596E+03			Apriori clock (usec)			3.0554860E+03			Resid sbdelay (usec)			-5.79964E-01			+/- 2.9E-03		
Phase delay (usec)	-7.67626524280E+03			Apriori clockrate (us/s)			3.4430770E-07			Resid phdelay (usec)			-8.36912E-07			+/- 6.2E-07		
Delay rate (us/s)	1.99255545019E+00			Apriori rate (us/s)			1.99255055516E+00			Resid rate (us/s)			4.89503E-06			+/- 2.5E-09		
Total phase (deg)	-5.4			Apriori accel (us/s/s)			2.18045818411E-05			Resid phase (deg)			-26.0			+/- 19.1		

	RMS	Theor.	Amplitude	0.116 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	35.1	33.1	Search (2048X64)	0.104	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	43.0	57.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	40.2	38.2	Inc. seg. avg.	0.115	Sample rate(MISamp/s): 64		dr window (ns/s)	-0.011 0.011
amp/frq (%)	64.9	66.7	Inc. frq. avg.	0.109	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

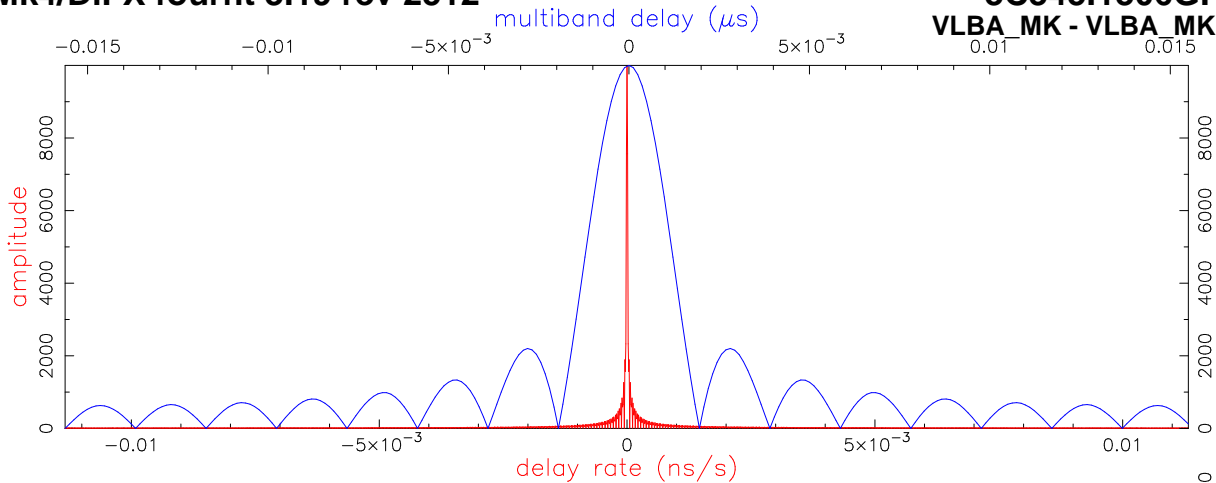
m: az 52.6 el 15.0 pa -76.4 i: az 294.5 el 39.8 pa 71.3 u,v (fr/asec) -14813.895 -188.764 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mi.1306GF Output file: /Exps/c192a/v2/1234/No0009/mi.W.314.1306GF



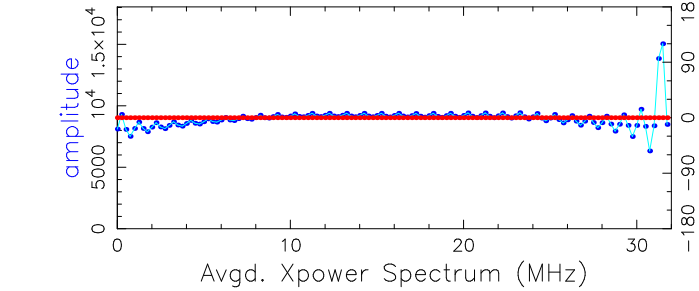
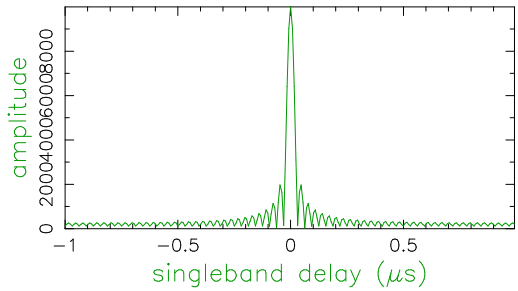
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mm  
VLBA\_MK - VLBA\_MK, fgroup W, pol LL



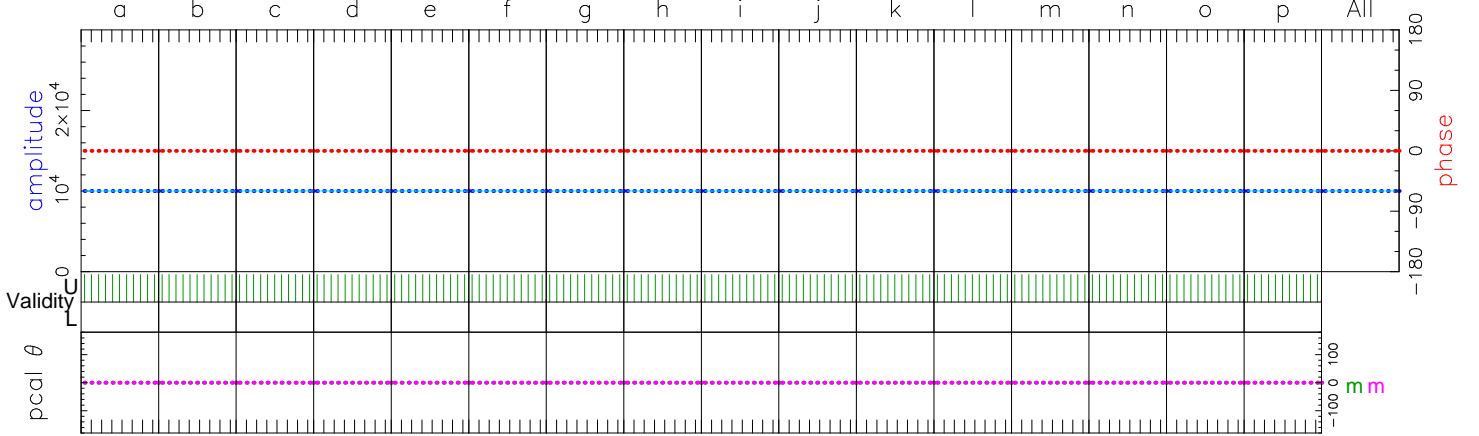
Fringe quality 9

SNR 560225.6  
Int time 419.692  
Amp 9999.993  
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  
2020:083:025951  
2020:093:045034  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-0.0	0.0	-0.0	-0.0	0.0	-0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-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	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L 820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m:m 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
m:m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

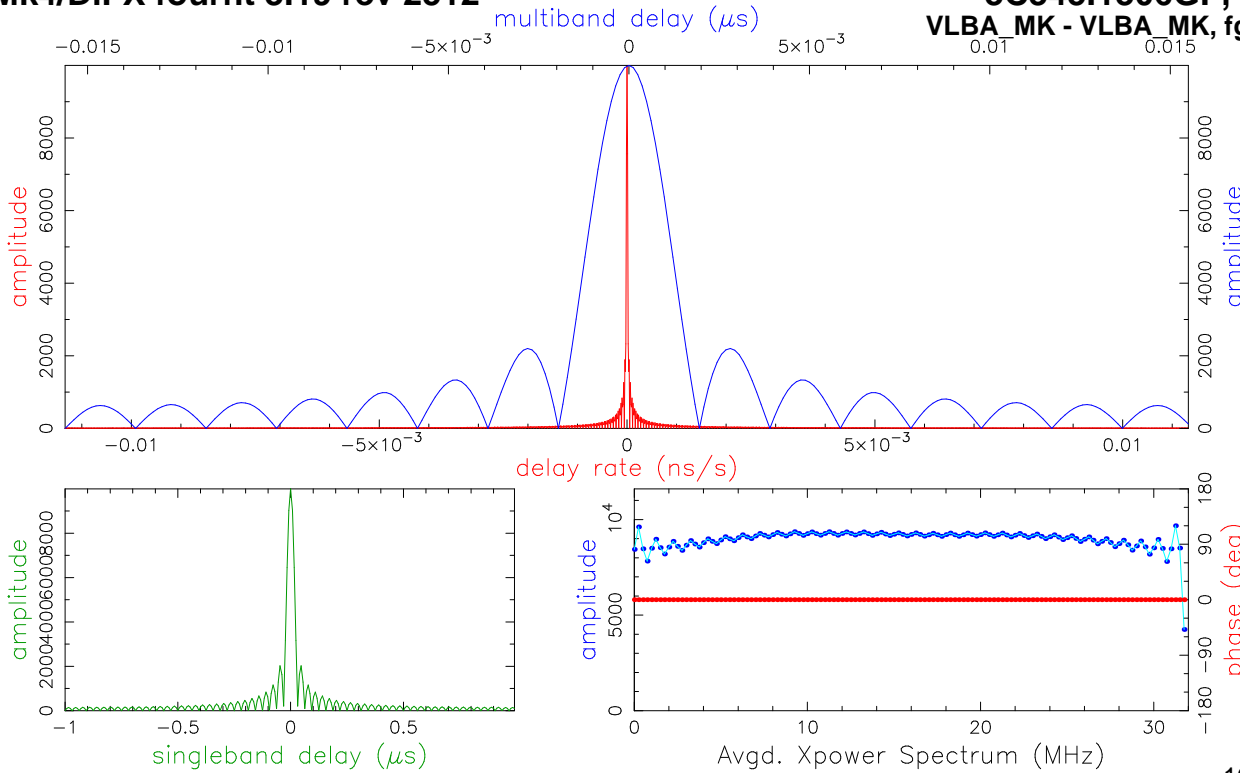
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 1.9E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 3.1E-08  
 Phase delay (usec) 6.95582100019E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 6.95582E-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 9999.993 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X64) 9999.993 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) -0.016 0.016  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.993 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/mm..1306GF Output file: /Exps/c192a/v2/1234/No0009/mm.W.252.1306GF

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mm  
VLBA\_MK - VLBA\_MK, fgroup W, pol RR

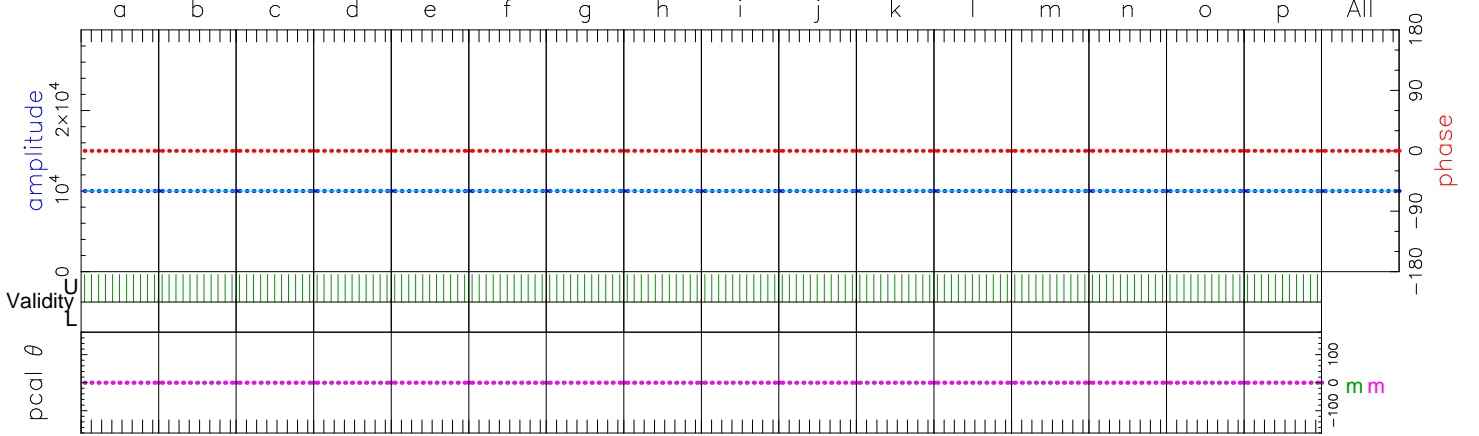


Fringe quality 9

SNR 560229.1  
Int time 419.698  
Amp 9999.993  
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  
2020:083:025951  
2020:093:045039  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



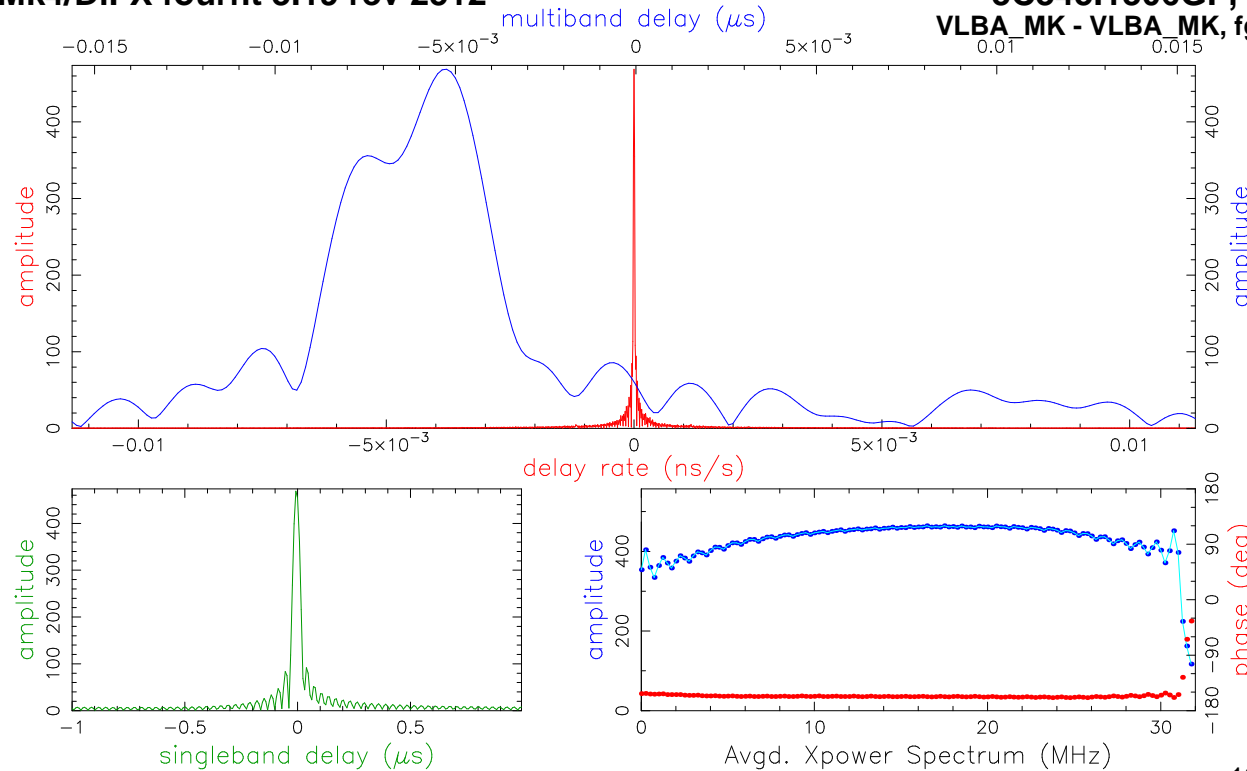
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		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 +/- 3.1E-08  
 Phase delay (usec) -1.86440838887E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -1.86441E-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 9999.993 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X64) 9999.993 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) -0.016 0.016  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.993 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

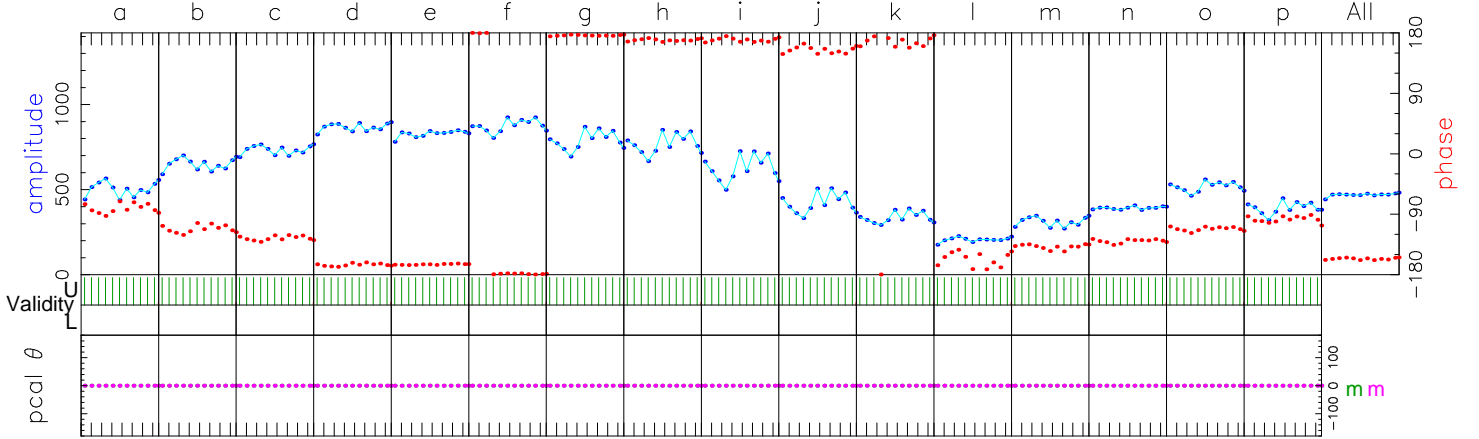
m: az 52.6 el 15.0 pa -76.4 m: az 52.6 el 15.0 pa -76.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mm..1306GF Output file: /Exps/c192a/v2/1234/No0009/mm.W.269.1306GF



Fringe quality 5  
SNR 26546.1  
Int time 419.692  
Amp 473.846  
Phase -156.3  
PFD 0.0e+00  
Delays (us)  
SBD -0.005203  
MBD -0.005248  
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  
2020:083:025951  
2020:093:045045  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

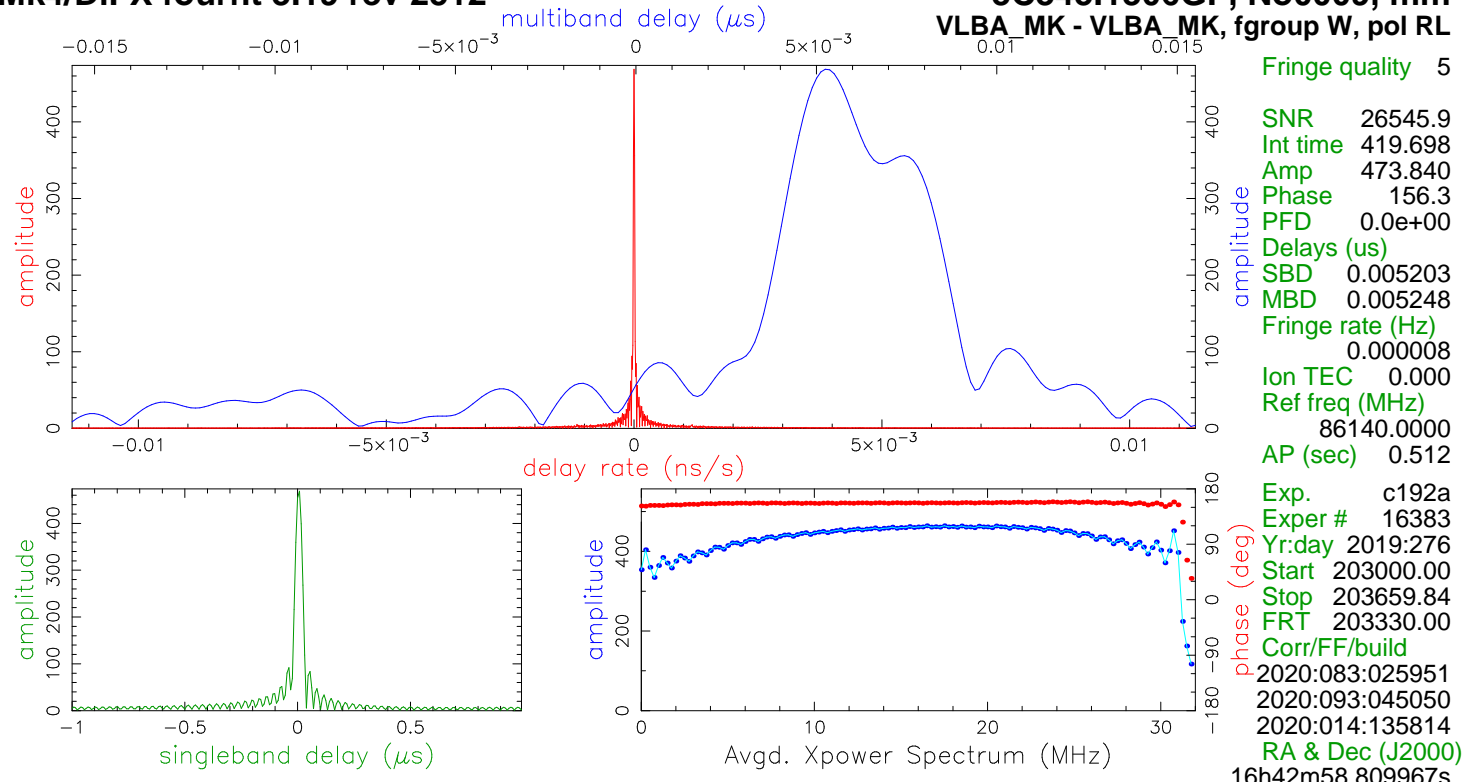


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-81.4	-111.6	-125.5	-165.0	-164.6	-179.1	176.1	169.0	169.0	153.4	166.6	-157.3	-138.3	-129.7	-111.4	-96.6	Phase	-156.3
	496.7	644.2	730.3	864.7	828.1	877.2	792.0	772.4	629.1	423.9	336.0	202.5	309.7	391.8	518.3	392.7	Ampl.	575.6
	128.1	128.0	128.1	128.0	128.3	128.0	128.3	128.3	128.3	128.3	128.5	129.1	128.3	128.7	128.3	129.6	Sbd box	128.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-5.24821875000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			-5.24822E-03			+/- 4.1E-08		
Sband delay (usec)	-5.20350000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			-5.20350E-03			+/- 6.5E-07		
Phase delay (usec)	-5.04165707472E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			-5.04166E-06			+/- 1.4E-10		
Delay rate (us/s)	-9.21124905460E-11			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			-9.21125E-11			+/- 5.7E-13		
Total phase (deg)	-156.3			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			-156.3			+/- 0.0		

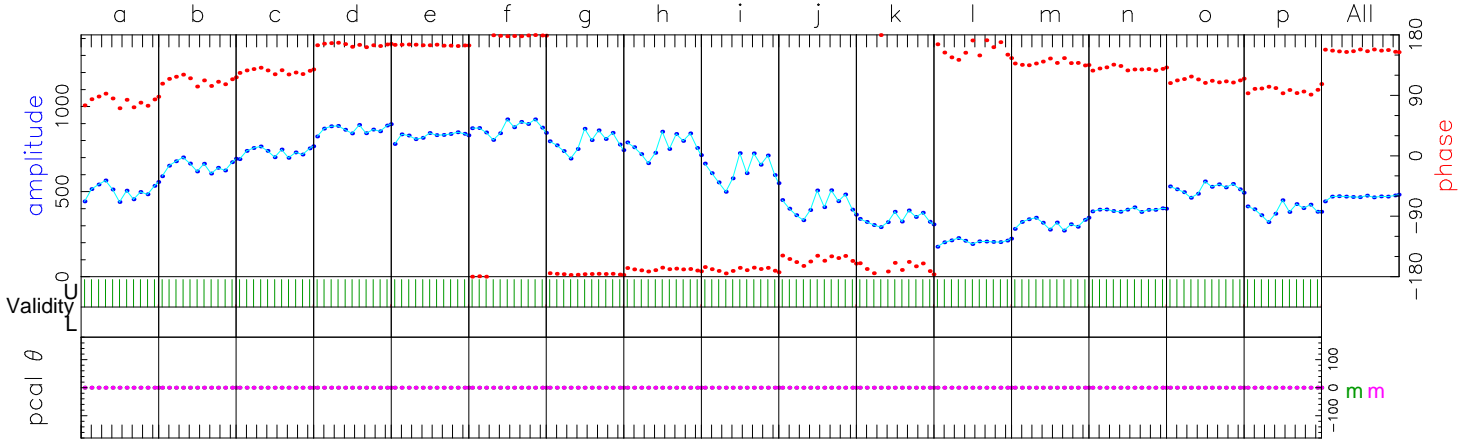
ph/seg (deg) 1.3 0.0 Search (2048X64) 473.846 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 2.1 0.0 Interp. 468.007 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 40.5 0.0 Inc. seg. avg. 469.047 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 49.7 0.0 Inc. frq. avg. 575.602 Data rate(Mb/s): 2048 nlags: 128 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 ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mm...1306GF Output file: /Exps/c192a/v2/1234/No0009/mm.W.288.1306GF

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mm  
VLBA\_MK - VLBA\_MK, fgroup W, pol RL

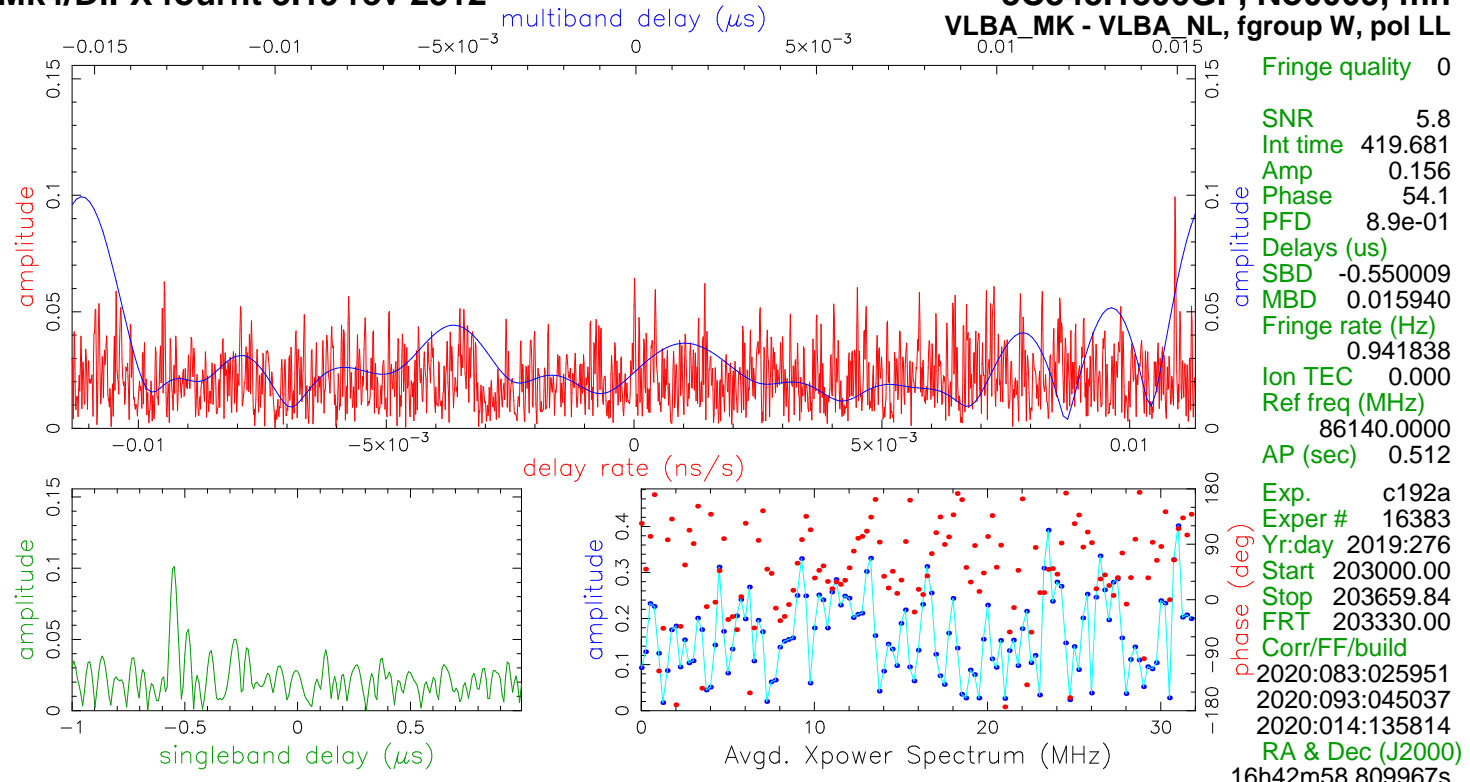


Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	81.4	111.6	125.5	165.0	164.6	179.1	-176.1	-169.0	-169.0	-153.4	-166.6	157.3	138.3	129.7	111.4	96.6	Phase	156.3
	496.7	644.2	730.3	864.7	828.1	877.2	792.0	772.4	629.1	423.9	336.0	202.5	309.7	391.8	518.3	392.7	Ampl.	575.6
	129.9	130.0	129.9	130.0	129.7	130.0	129.7	129.7	129.7	129.7	129.5	128.9	129.7	129.3	129.7	128.4	Sbd box	129.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	5.24821875000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		5.24822E-03		+/- 4.1E-08							
Sband delay (usec)	5.20350000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		5.20350E-03		+/- 6.5E-07							
Phase delay (usec)	5.04165707501E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		5.04166E-06		+/- 1.4E-10							
Delay rate (us/s)	9.21124905460E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		9.21125E-11		+/- 5.7E-13							
Total phase (deg)	156.3		Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		156.3		+/- 0.0							

ph/seg (deg) RMS Theor. Amplitude 473.840 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 2.1 0.0 Search (2048X64) 468.001 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 40.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 49.7 0.0 Inc. seg. avg. 469.041 Sample rate(MISamp/s): 64 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 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mm..1306GF Output file: /Exps/c192a/v2/1234/No0009/mm.W.306.1306GF simultaneous interpolator



Fringe quality 0

SNR 5.8

Int time 419.681

Amp 0.156

Phase 54.1

PFD 8.9e-01

Delays (us)

SBD -0.550009

MBD 0.015940

Fringe rate (Hz) 0.941838

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

2020:083:025951

2020:093:045037

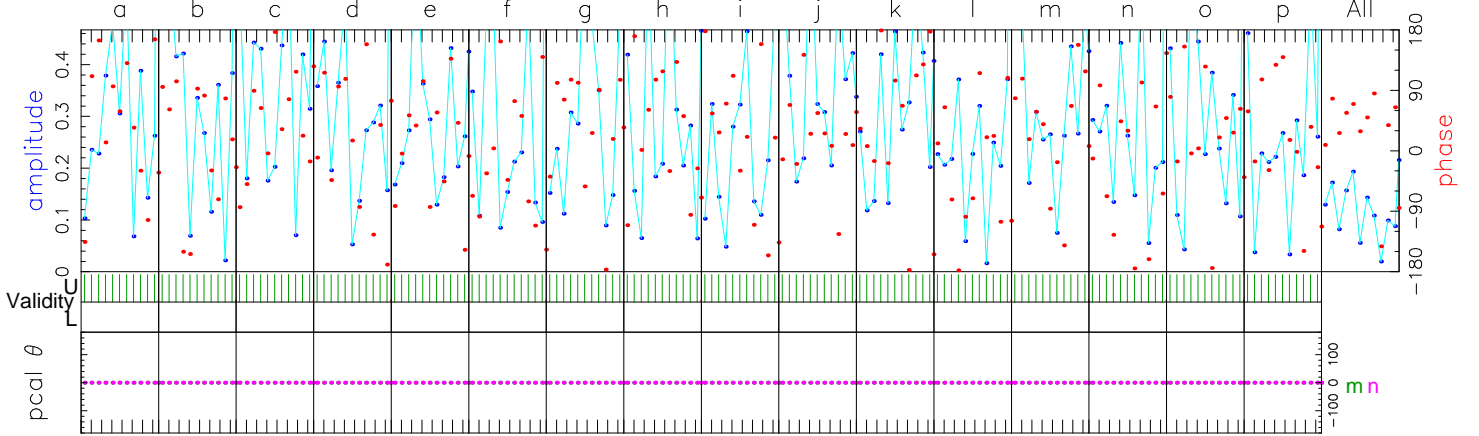
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	92.8	76.2	38.6	96.3	46.3	-38.4	61.5	25.8	32.4	17.6	117.8	97.3	88.0	55.5	33.8	45.0	Phase	54.1
	0.2	0.2	0.3	0.1	0.1	0.2	0.2	0.1	0.1	0.4	0.3	0.0	0.3	0.1	0.2	0.2	Ampl.	0.2
	181.6	60.0	192.6	67.0	143.3	24.6	221.7	210.4	87.8	56.6	104.8	198.8	75.4	93.2	94.2	244.7	Sbd box	58.6
UL	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Tracks	
Group delay (usec)(sbd)	-1.46501242096E+04			Apriori delay (usec)			-1.46495776500E+04			Resid mbdelay (usec)			1.59404E-02			+/- 1.9E-04		
Sband delay (usec)	-1.46501276590E+04			Apriori clock (usec)			-2.3912329E+01			Resid sbdelay (usec)			-5.50009E-01			+/- 3.0E-03		
Phase delay (usec)	-1.46495776482E+04			Apriori clockrate (us/s)			-1.4291580E-07			Resid phdelay (usec)			1.74575E-06			+/- 6.4E-07		
Delay rate (us/s)	7.88301717783E-01			Apriori rate (us/s)			7.88290783983E-01			Resid rate (us/s)			1.09338E-05			+/- 2.7E-09		
Total phase (deg)	-223.0			Apriori accel (us/s/s)			5.41810625334E-05			Resid phase (deg)			54.1			+/- 19.9		

ph/seg (deg) 55.4 34.5 Theor. Amplitude 0.156 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 49.9 60.2 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 40.4 39.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

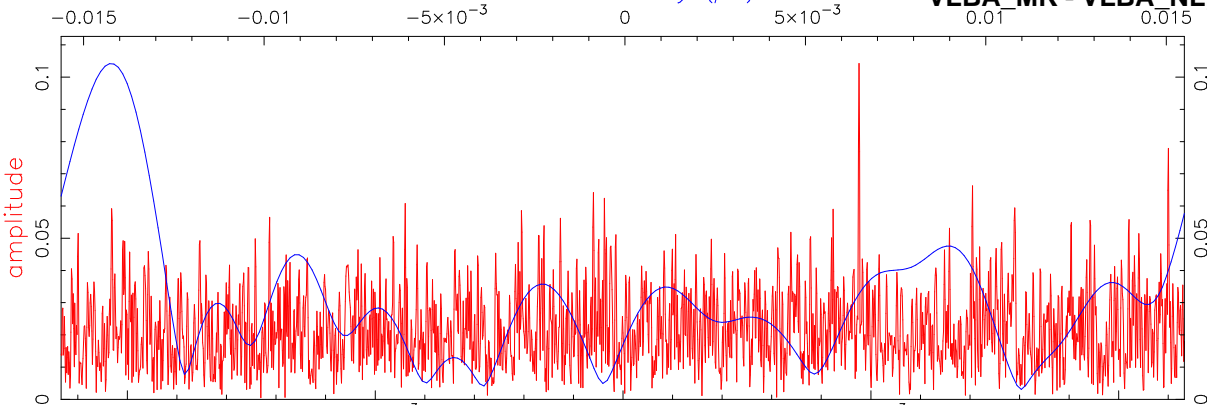
amp/frq (%) 54.5 69.6 Inc. seg. avg. 0.147 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

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 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mn..1306GF Output file: /Exps/c192a/v2/1234/No0009/mn.W.259.1306GF simultaneous interpolator

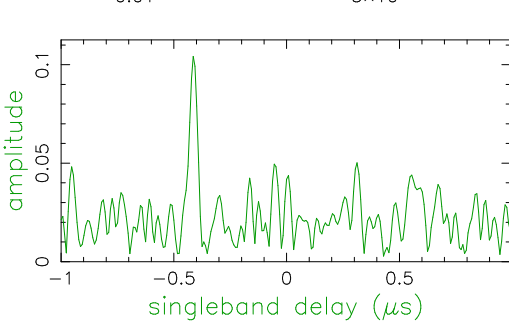


multiband delay ( $\mu$ s)

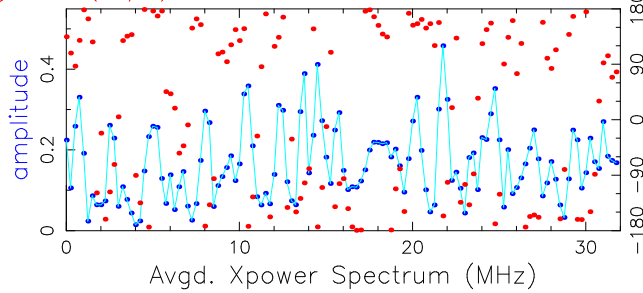


Fringe quality 0

SNR 5.9  
Int time 419.687  
Amp 0.113  
Phase 41.5  
PFD 6.9e-01  
Delays (us)  
SBD -0.412446  
MBD -0.014231  
Fringe rate (Hz)  
0.410961  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

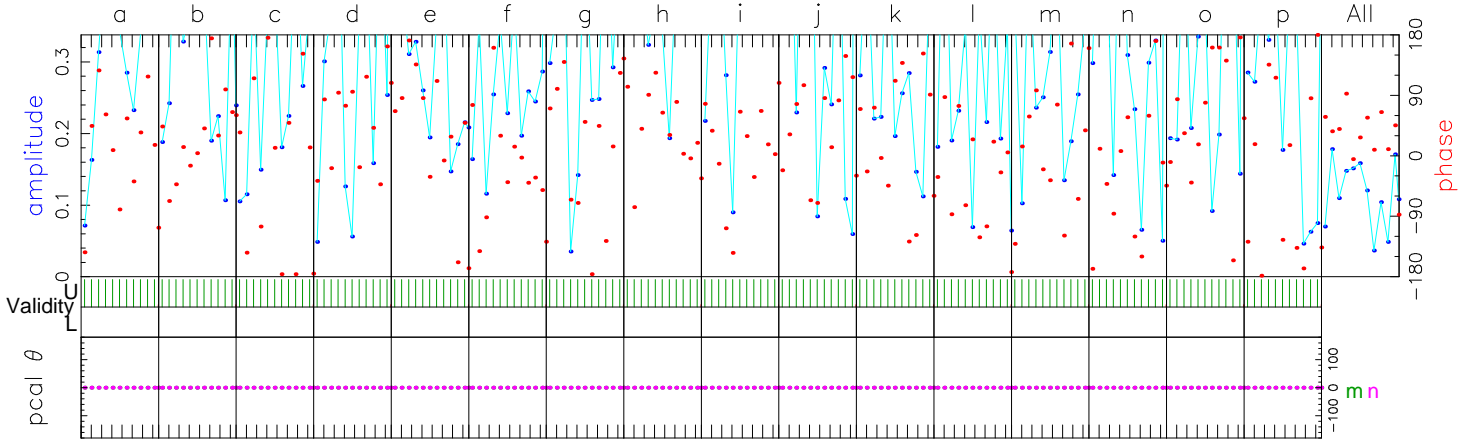


delay rate (ns/s)



Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045042  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

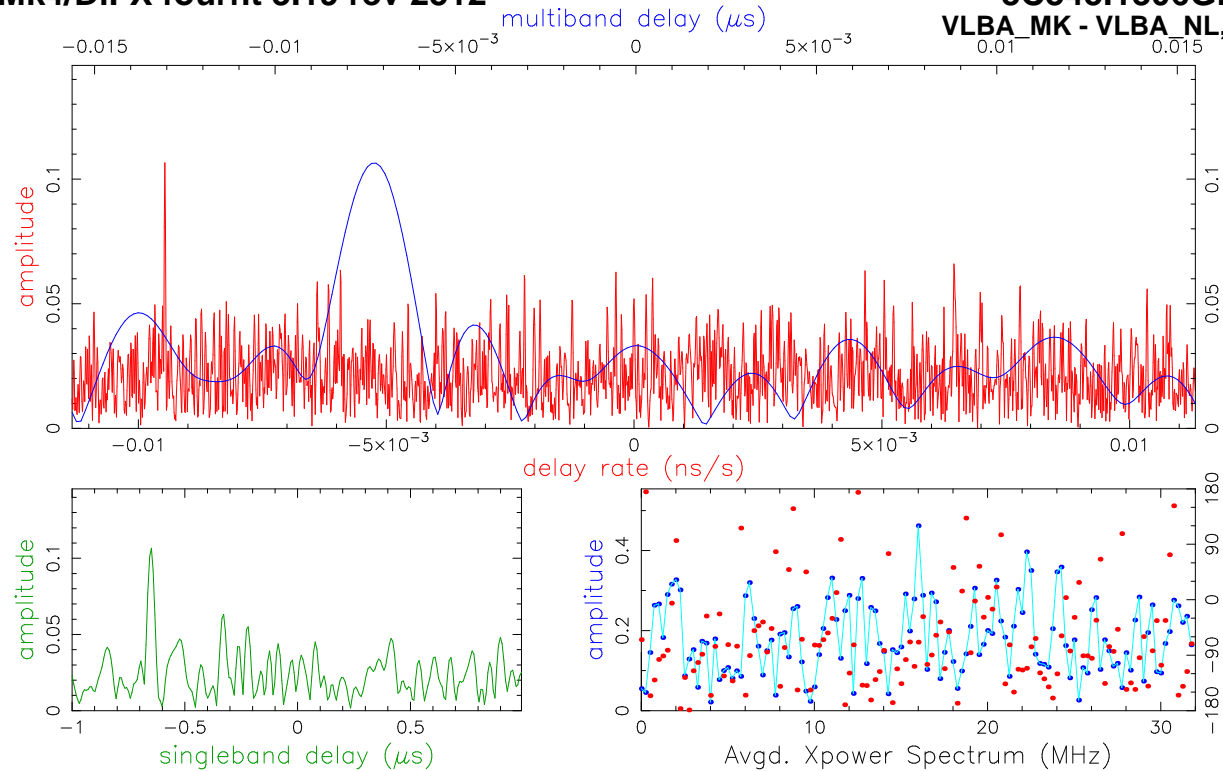


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	41.5		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1		
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.1		
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.1		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks		
Group delay (usec)(sbd)		-1.46499981309E+04																-1.42309E-02	+/- 1.8E-04	
Sband delay (usec)		-1.46499900965E+04																	-4.12446E-01	+/- 2.9E-03
Phase delay (usec)		-1.46495776486E+04																	1.33673E-06	+/- 6.3E-07
Delay rate (us/s)		7.88295554833E-01																	4.77085E-06	+/- 2.6E-09
Total phase (deg)					-235.7														41.5	+/- 19.6
Apriori delay (usec)																				
Apriori clock (usec)																				
Apriori clockrate (us/s)																				
Apriori rate (us/s)																				
Apriori accel (us/s/s)																				
RMS	29.2	33.9																		
ph/seg (deg)	29.2	33.9																		
amp/seg (%)	46.3	59.1																		
ph/frq (deg)	56.0	39.1																		
amp/frq (%)	64.4	68.3																		
PCal mode: MANUAL, MANUAL																				
PCal rate: 0.000E+00, 0.000E+00 (us/s)																				
Bits/sample: 2x2																				
Sample rate(MISamp/s): 64																				
Data rate(Mb/s): 2048																				
nlags: 128																				
t_cohere infinite																				
ion window (TEC)																				
sb window (us)																				
mb window (us)																				
dr window (ns/s)																				
ion window (TEC)																				

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/v2/1234/No0009/mn..1306GF Output file: /Exps/c192a/v2/1234/No0009/mn.W.279.1306GF

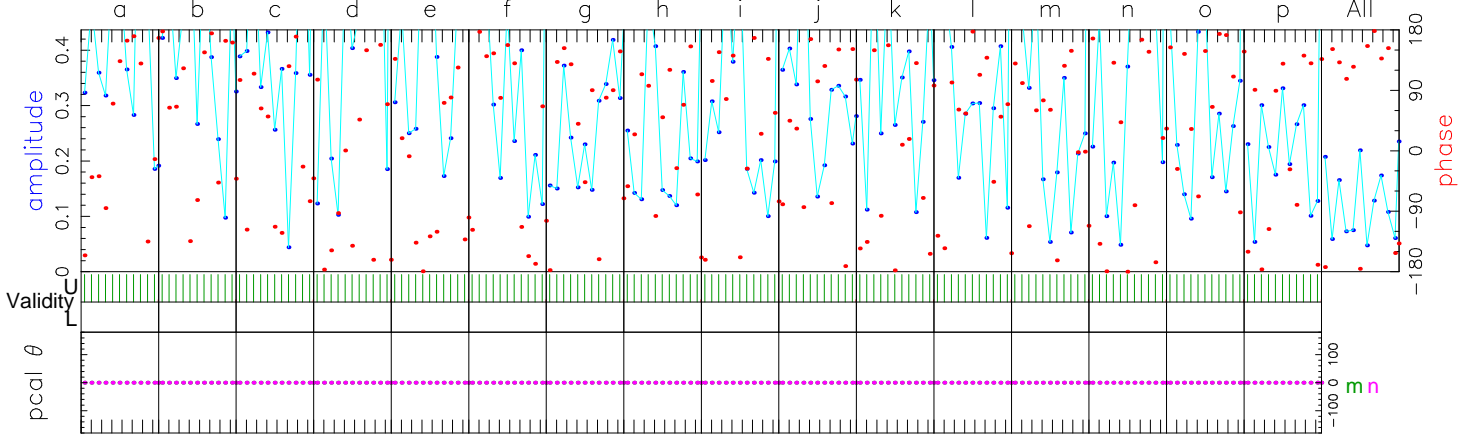
Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mn  
VLBA\_MK - VLBA\_NL, fgroup W, pol LR



Fringe quality 0  
SNR 6.0  
Int time 419.681  
Amp 0.146  
Phase 160.7  
PFD 3.9e-01  
Delays (us)  
SBD -0.650387  
MBD -0.007267  
Fringe rate (Hz)  
-0.816663  
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  
2020:083:025951  
2020:093:045047  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

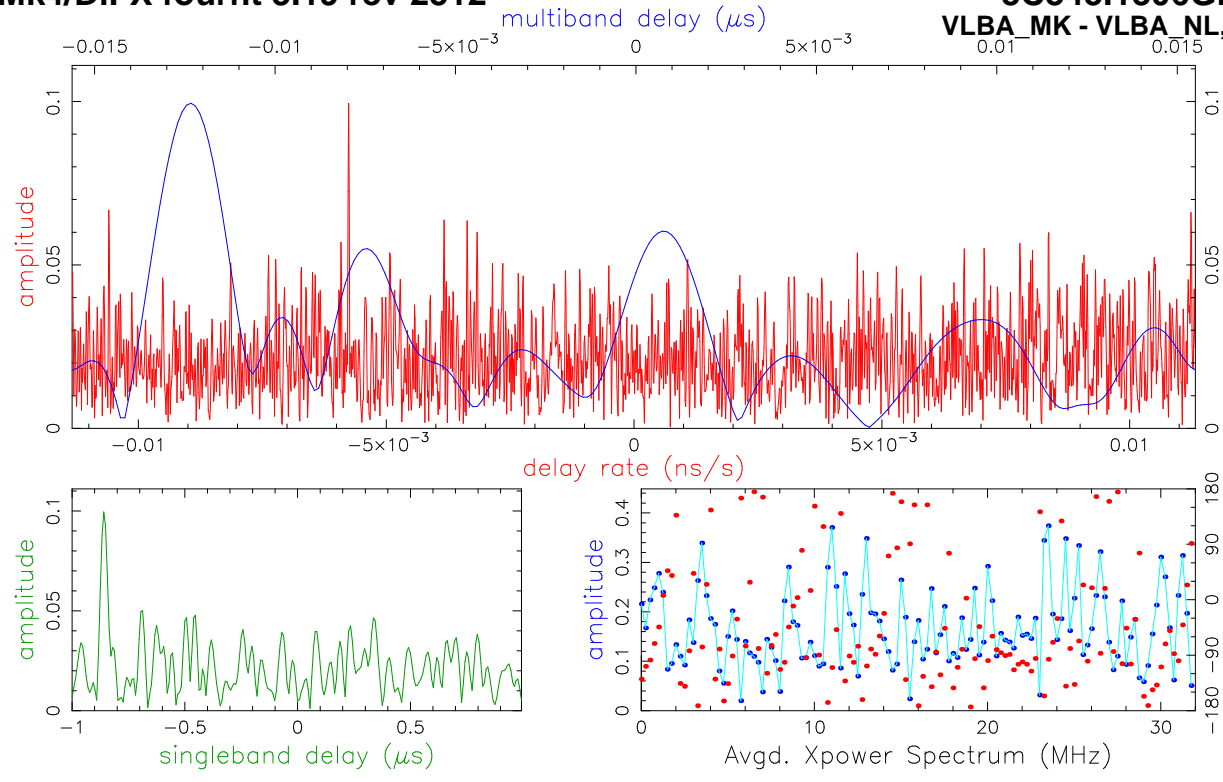


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	160.9	Phase
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	Ampl.
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	Sbd box
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	160.9	APs used
m:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	160.9	PC freqs
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	PC phase
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	ManI PC
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	160.9	PC amp
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	160.9	Chan ids
																	160.7	Tracks
																	160.7	Tracks

Group delay (usec)(sbd) -1.46502411667E+04 Apriori delay (usec) -1.46495776500E+04 Resid mbdelay (usec) -7.26674E-03 +/- 1.8E-04  
 Sband delay (usec) -1.46502280365E+04 Apriori clock (usec) -2.3912329E+01 Resid sbdelay (usec) -6.50387E-01 +/- 2.9E-03  
 Phase delay (usec) -1.46495776448E+04 Apriori clockrate (us/s) -1.4291580E-07 Resid phdelay (usec) 5.18109E-06 +/- 6.2E-07  
 Delay rate (us/s) 7.88281303338E-01 Apriori rate (us/s) 7.88290783983E-01 Resid rate (us/s) -9.48064E-06 +/- 2.5E-09  
 Total phase (deg) -116.4 Apriori accel (us/s/s) 5.41810625334E-05 Resid phase (deg) 160.7 +/- 19.1

RMS Theor. Amplitude 0.146 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.7 33.1 Search (2048X64) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 57.8 57.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 47.7 38.2 Inc. seg. avg. 0.140 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 56.1 66.6 Inc. frq. avg. 0.139 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 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/v2/1234/No0009/mn..1306GF Output file: /Exps/c192a/v2/1234/No0009/mn.W.295.1306GF

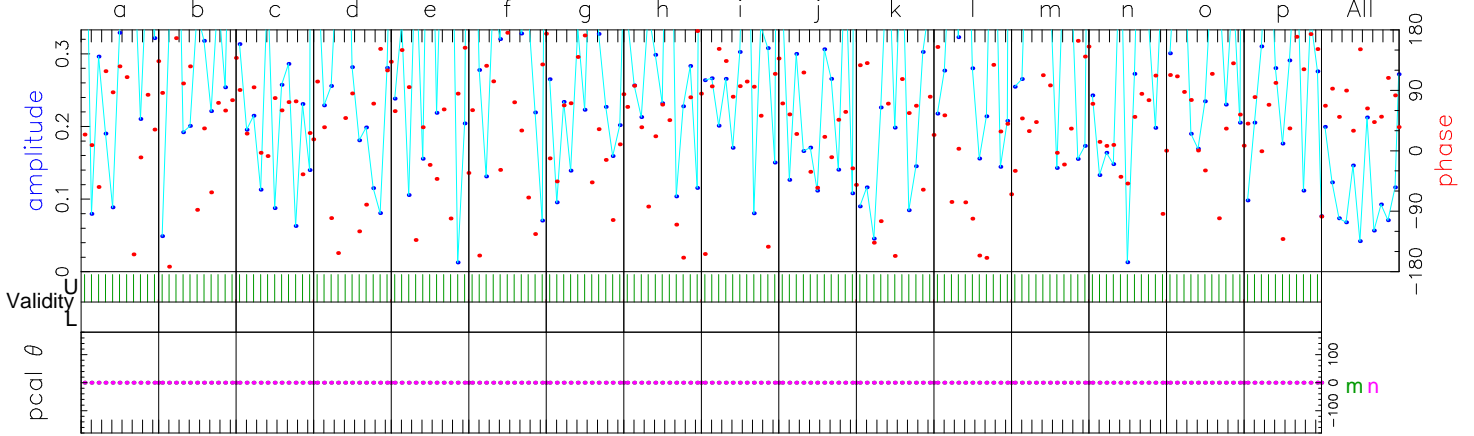


Fringe quality 0

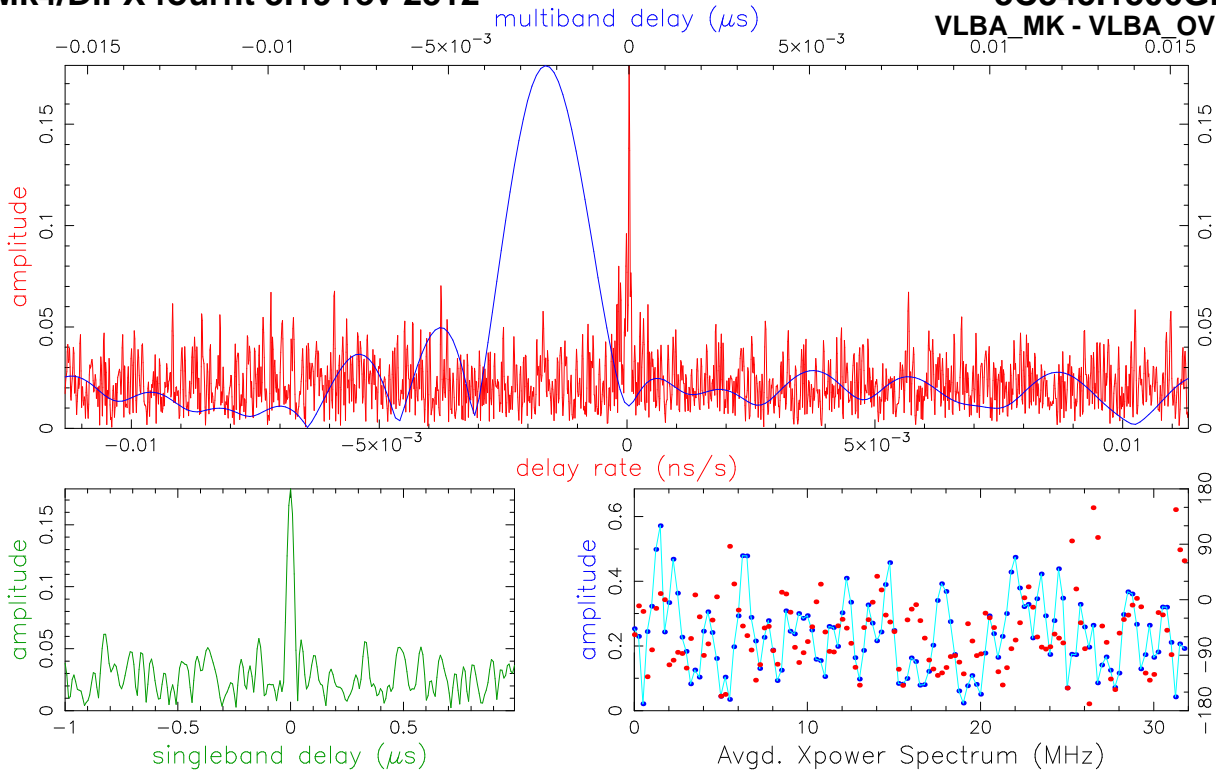
SNR 5.6  
Int time 419.687  
Amp 0.111  
Phase 67.7  
PFD 1.0e+00  
Delays (us)  
SBD -0.858352  
MBD -0.012320  
Fringe rate (Hz)  
-0.496729  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045051  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
71.3	109.2	40.5	97.4	-27.3	108.4	7.4	56.8	116.5	30.4	89.1	-79.6	44.6	36.2	87.8	106.5	106.5	Phase	67.7
0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1
210.0	195.1	57.0	132.9	38.1	182.3	206.5	100.7	20.2	225.3	177.8	126.0	17.6	59.0	145.6	226.2	226.2	Sbd box	19.1
UL	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.46504337201E+04			Apriori delay (usec)			-1.46495776500E+04			Resid mbdelay (usec)			-1.23201E-02			+/- 1.9E-04		
Sband delay (usec)	-1.46504360020E+04			Apriori clock (usec)			-2.3912329E+01			Resid sbdelay (usec)			-8.58352E-01			+/- 3.1E-03		
Phase delay (usec)	-1.46495776478E+04			Apriori clockrate (us/s)			-1.4291580E-07			Resid phdelay (usec)			2.18397E-06			+/- 6.6E-07		
Delay rate (us/s)	7.88285017455E-01			Apriori rate (us/s)			7.88290783983E-01			Resid rate (us/s)			-5.76653E-06			+/- 2.7E-09		
Total phase (deg)	-209.4			Apriori accel (us/s/s)			5.41810625334E-05			Resid phase (deg)			67.7			+/- 20.5		
ph/seg (deg)	RMS	Theor.	Amplitude			0.111 +/- 0.020			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	33.8	35.6	Search (2048X64)			0.098			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000			
ph/frq (deg)	57.1	62.1	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)		-0.016 0.016	
amp/frq (%)	58.0	41.1	Inc. seg. avg.			0.103			Sample rate(MISamp/s): 64			dr window (ns/s)			-0.011 0.011			
	54.0	71.7	Inc. frq. avg.			0.114			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)		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/v2/1234/No0009/mn..1306GF			Output file: /Exps/c192a/v2/1234/No0009/mn.W.309.1306GF														

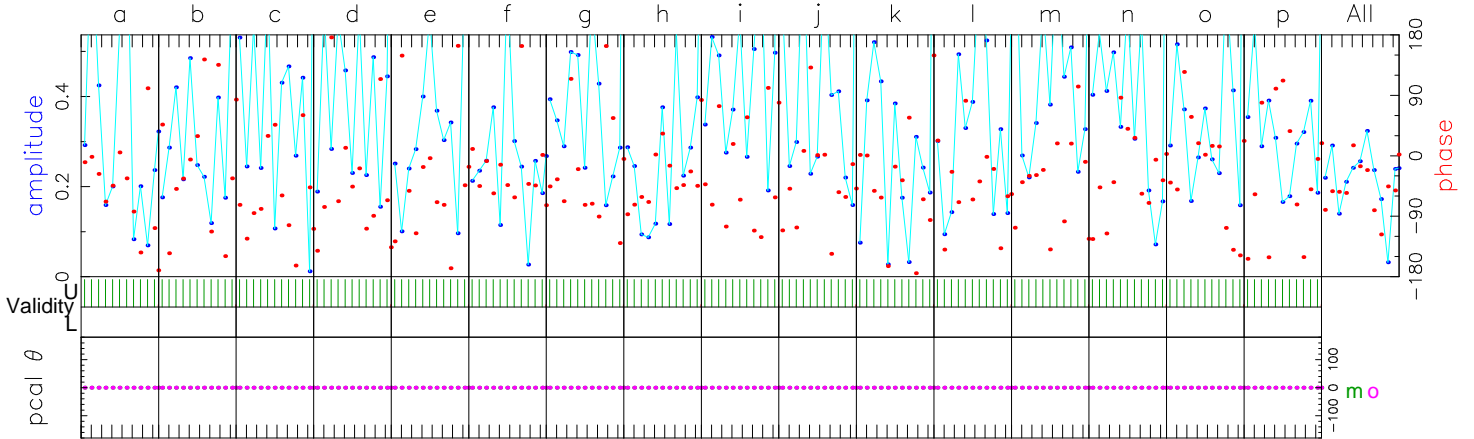


Fringe quality 9

SNR 10.0  
Int time 419.684  
Amp 0.179  
Phase -47.1  
PFD 4.9e-15  
Delays (us)  
SBD -0.000791  
MBD -0.002307  
Fringe rate (Hz) 0.004293  
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 2020:083:025951  
2020:093:045037  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-27.1	-28.3	-64.2	-66.7	-60.1	-38.2	-57.5	-37.8	-66.1	-44.0	-49.1	-37.5	-38.5	-36.5	-41.1	-87.5		Phase	-47.1				
	0.3	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1		Ampl.	0.2				
	129.8	18.0	75.6	127.8	2.8	94.0	39.4	85.9	23.0	239.5	133.8	130.4	33.9	58.9	99.3	2.1		Sbd box	128.9				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			-1.11048017987E+04															Apriori delay (usec)	-1.11047994914E+04	Resid mbdelay (usec)	-2.30733E-03	+/-	1.1E-04
Sband delay (usec)			-1.11048002829E+04															Apriori clock (usec)	-1.4065811E+01	Resid sbdelay (usec)	-7.91500E-04	+/-	1.7E-03
Phase delay (usec)			-1.11047994929E+04															Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	-1.52017E-06	+/-	3.7E-07
Delay rate (us/s)			4.07185263428E-01															Apriori rate (us/s)	4.07185213590E-01	Resid rate (us/s)	4.98378E-08	+/-	1.5E-09
Total phase (deg)					-115.1													Apriori accel (us/s/s)	3.97901369329E-05	Resid phase (deg)	-47.1	+/-	11.4

ph/seg (deg) 34.3 19.8  
amp/seg (%) 46.5 34.5  
ph/frq (deg) 17.3 22.9  
amp/frq (%) 29.2 39.9

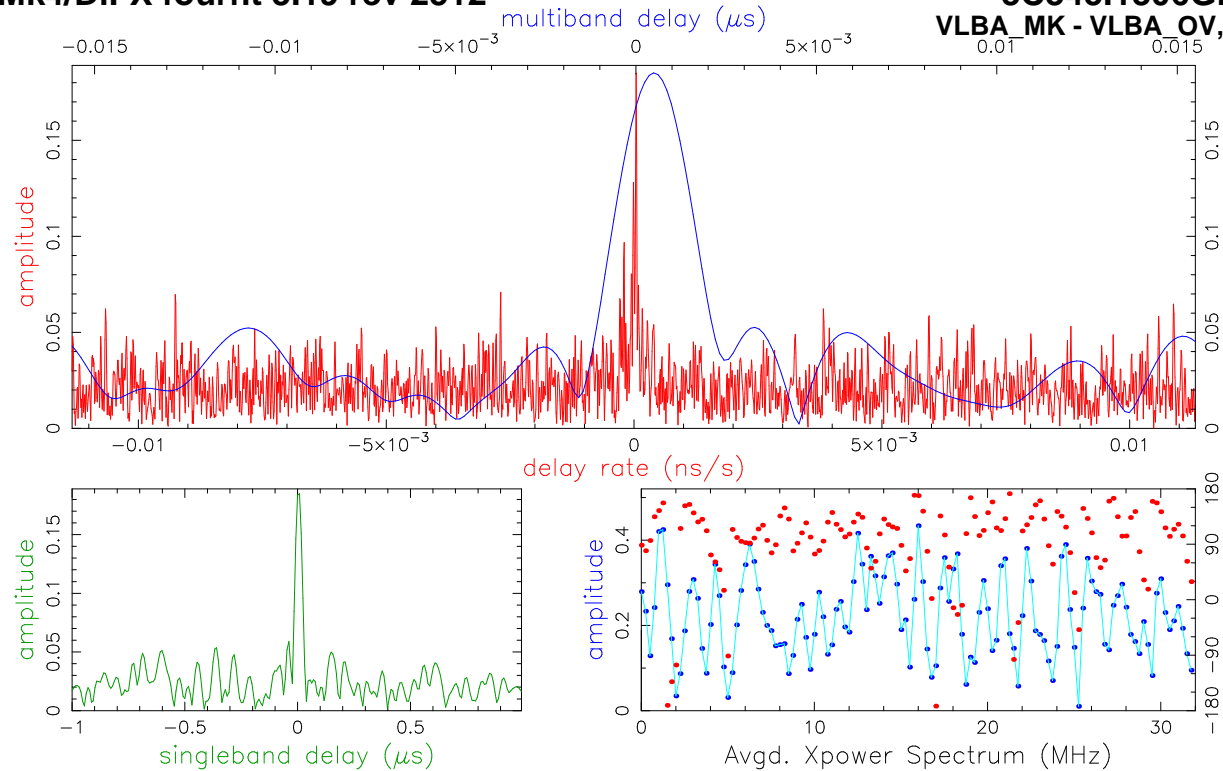
RMS Theor. Amplitude 0.179 +/- 0.018  
Search (2048X64) 0.167  
Interp. 0.000  
Inc. seg. avg. 0.203  
Inc. frq. avg. 0.171

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MSamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
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/v2/1234/No0009/mo..1306GF Output file: /Exps/c192a/v2/1234/No0009/mo.W.256.1306GF

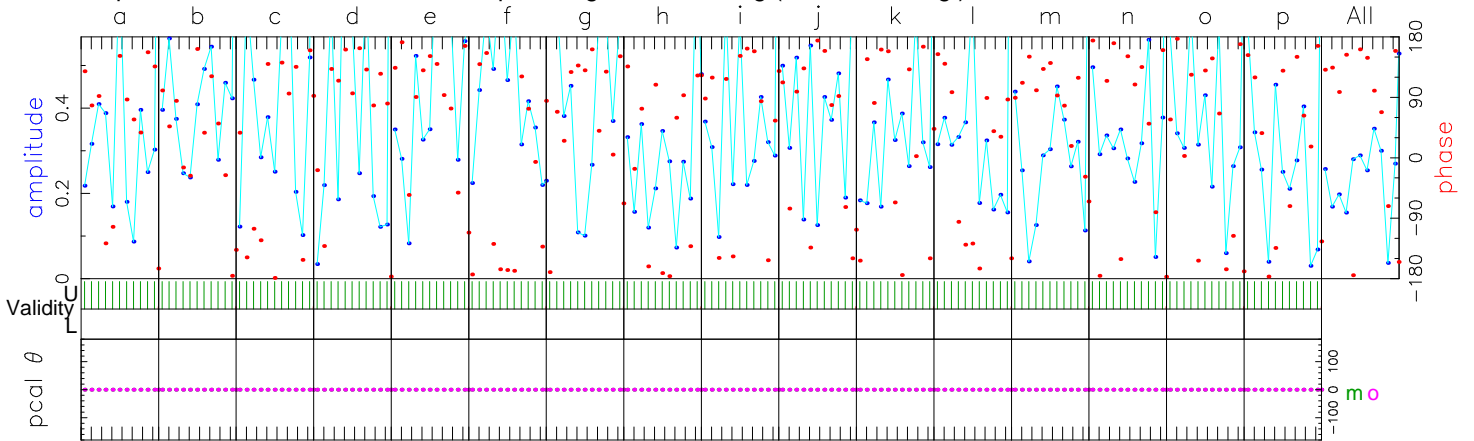


Fringe quality 9

SNR 10.6  
Int time 419.690  
Amp 0.189  
Phase 135.0  
PFD 1.5e-17  
Delays (us)  
SBD 0.004166  
MBD 0.000458  
Fringe rate (Hz) 0.004149  
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 2020:083:025951  
2020:093:045042  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
127.4	71.4	162.7	136.0	122.9	176.2	106.7	130.9	131.5	154.7	156.4	174.8	97.2	148.8	123.0	142.1	135.0	Phase	135.0		
0.2	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	Ampl.	0.2		
56.2	199.0	83.9	129.3	129.2	130.4	128.6	129.3	128.9	90.7	247.8	83.1	161.6	176.5	155.3	82.9	82.9	Sbd box	129.5		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
o	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp			
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids			
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks			
																	Chan ids			
																	Tracks			
Group delay (usec)(sbd)	-1.11047990334E+04				Apriori delay (usec)				-1.11047994914E+04				Resid mbdelay (usec)				4.57976E-04		+/- 1.0E-04	
Sband delay (usec)	-1.11047953254E+04				Apriori clock (usec)				-1.4065811E+01				Resid sbdelay (usec)				4.16600E-03		+/- 1.6E-03	
Phase delay (usec)	-1.11047994870E+04				Apriori clockrate (us/s)				-9.6732924E-09				Resid phdelay (usec)				4.35316E-06		+/- 3.5E-07	
Delay rate (us/s)	4.07185261758E-01				Apriori rate (us/s)				4.07185213590E-01				Resid rate (us/s)				4.81685E-08		+/- 1.4E-09	
Total phase (deg)	67.0				Apriori accel (us/s/s)				3.97901369329E-05				Resid phase (deg)				135.0		+/- 10.8	

ph/seg (deg) RMS Theor. Amplitude 0.189 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.5 18.7 Search (2048X64) 0.181 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.9 32.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 29.0 21.6 Inc. seg. avg. 0.223 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 33.5 37.8 Inc. frq. avg. 0.192 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

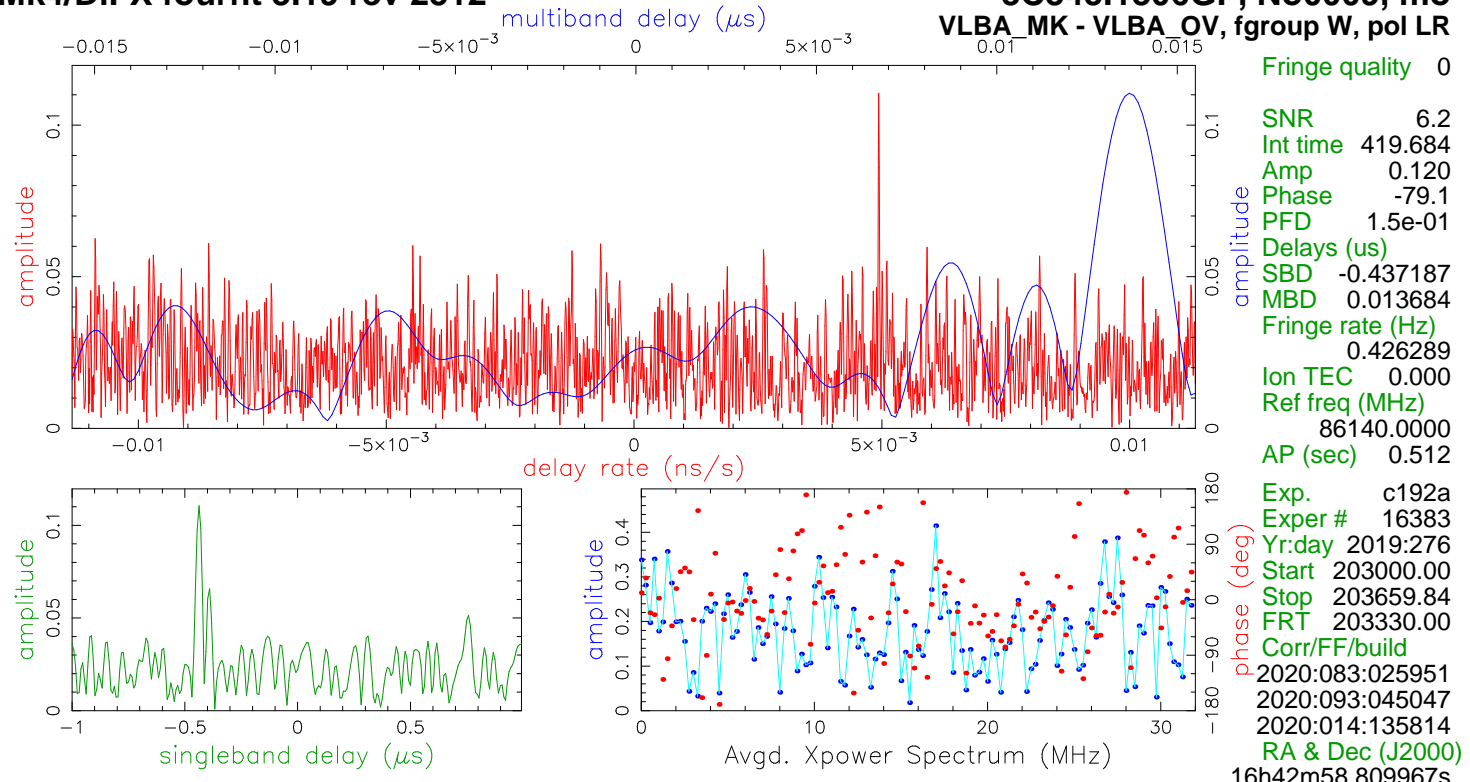
m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mo..1306GF Output file: /Exps/c192a/v2/1234/No0009/mo.W.276.1306GF



Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mo  
VLBA\_MK - VLBA\_OV, fgroup W, pol LR



Fringe quality 0

SNR 6.2

Int time 419.684

Amp 0.120

Phase -79.1

PFD 1.5e-01

Delays (us)

SBD -0.437187

MBD 0.013684

Fringe rate (Hz)

0.426289

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

2020:083:025951

2020:093:045047

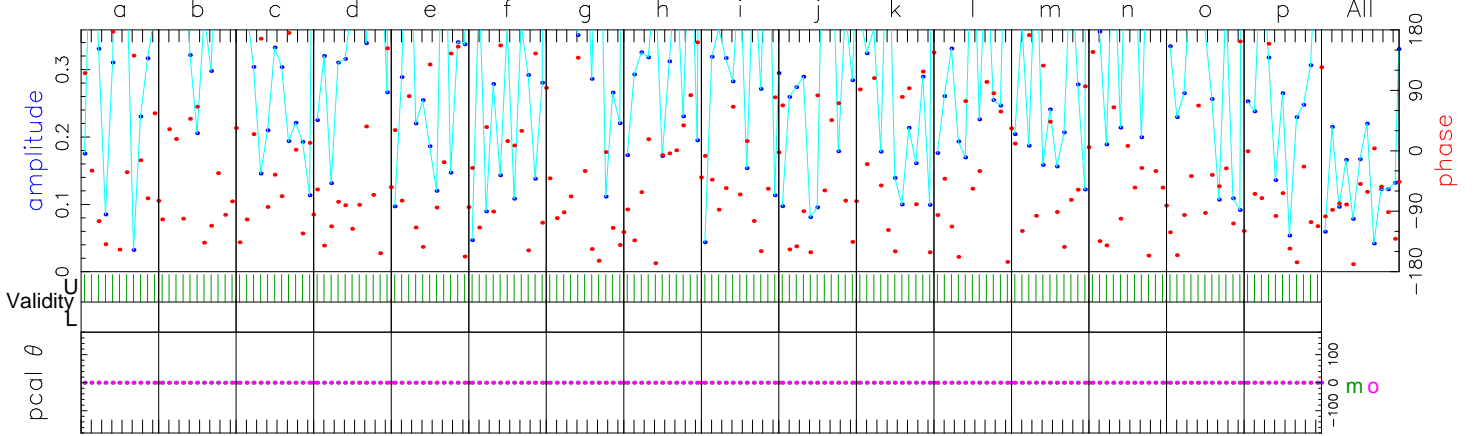
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-75.0	-56.3	-88.8	-95.7	-168.8	-75.9	-102.6	-0.4	-63.7	-77.0	139.9	-109.9	-83.4	-61.2	-71.4	-90.5	Phase	-79.1				
	0.1	0.2	0.1	0.3	0.0	0.1	0.2	0.1	0.2	0.1	0.0	0.0	0.1	0.1	0.2	0.2	Ampl.	0.1				
	7.4	226.5	145.7	73.3	1.4	202.0	74.0	28.8	1.4	144.3	8.5	134.6	51.8	18.8	31.4	49.6	Sbd box	73.0				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
m:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.11052233074E+04														Apriori delay (usec)	-1.11047994914E+04	Resid mbdelay (usec)	1.36840E-02	+/-	1.7E-04
Sband delay (usec)			-1.11052366789E+04														Apriori clock (usec)	-1.4065811E+01	Resid sbdelay (usec)	-4.37187E-01	+/-	2.8E-03
Phase delay (usec)			-1.11047994939E+04														Apriori clockrate (us/s)	-9.6732924E-09	Resid phdelay (usec)	-2.55059E-06	+/-	6.0E-07
Delay rate (us/s)			4.07190162387E-01														Apriori rate (us/s)	4.07185213590E-01	Resid rate (us/s)	4.94880E-06	+/-	2.5E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.97901369329E-05	Resid phase (deg)	-79.1	+/-	18.5

ph/seg (deg) 42.6 32.1 Amplitude 0.120 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

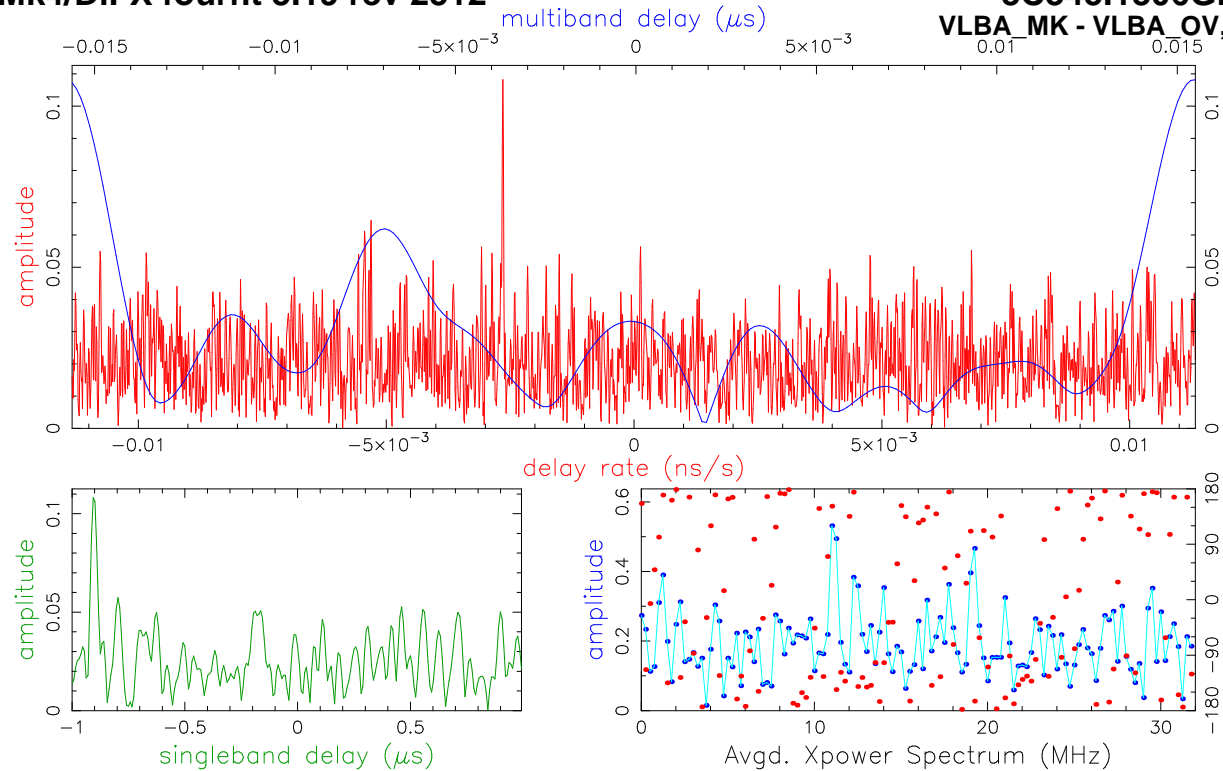
amp/seg (%) 55.9 56.0 Search (2048X64) 0.109 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 51.6 37.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 61.4 64.6 Inc. seg. avg. 0.122 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

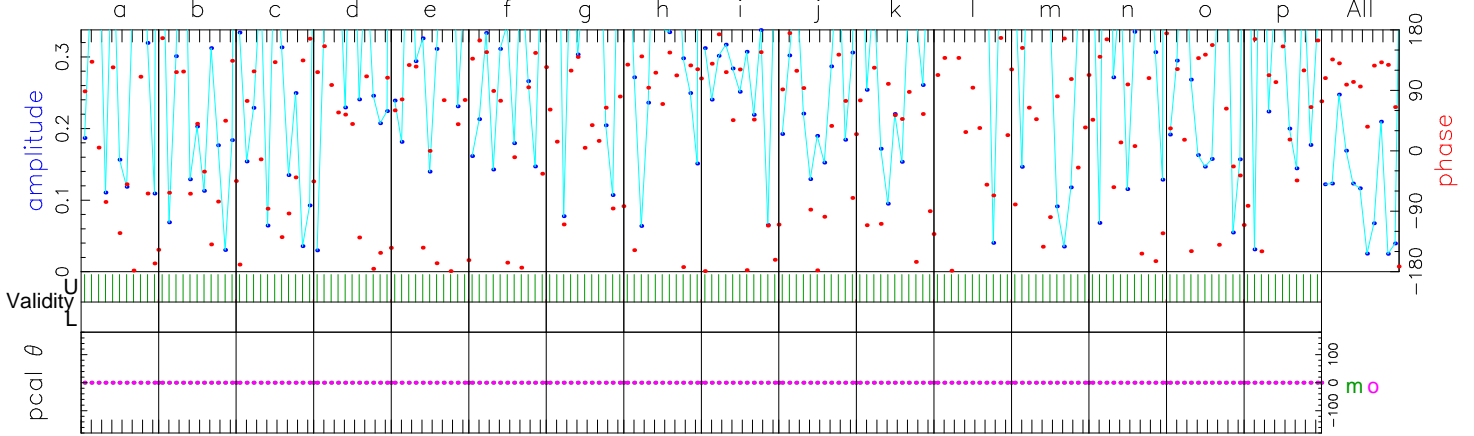
m: az 52.6 el 15.0 pa -76.4 o: az 70.5 el 51.7 pa -77.4 u,v (fr/asec) -2970.150 828.970 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mo..1306GF Output file: /Exps/c192a/v2/1234/No0009/mo.W.298.1306GF simultaneous interpolator



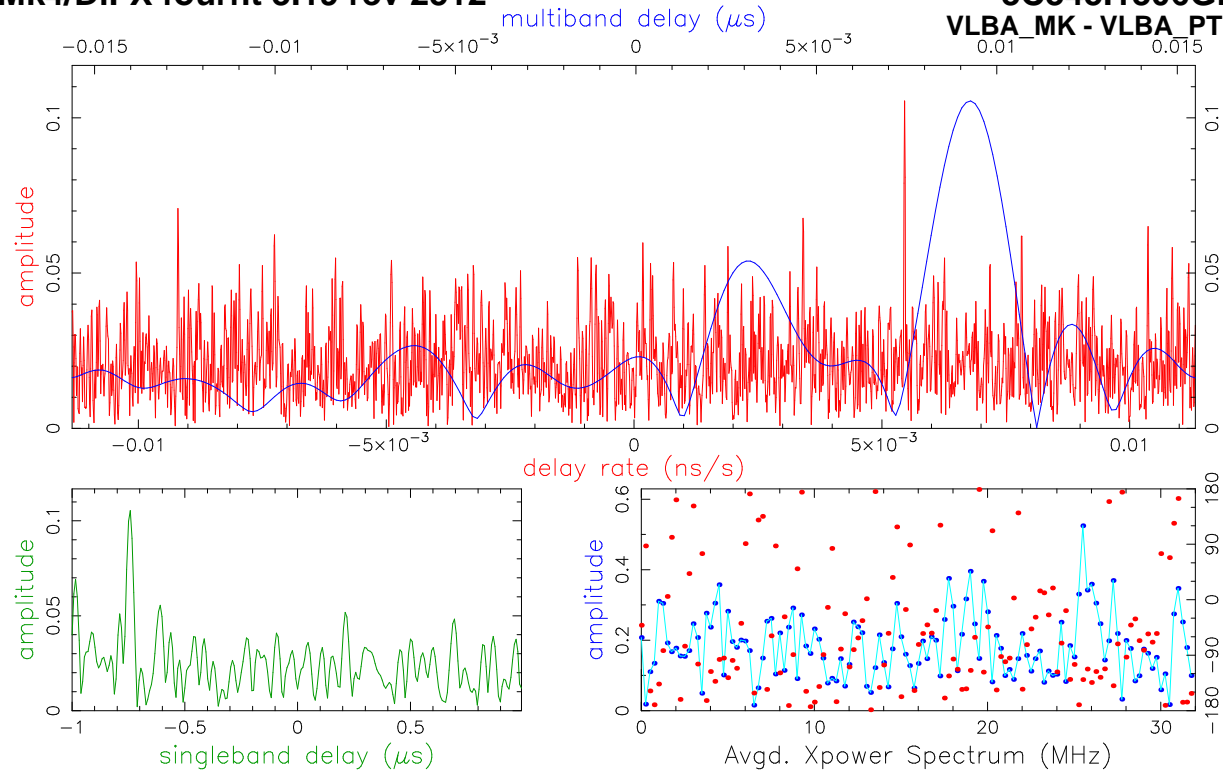
Fringe quality 0  
 SNR 6.2  
 Int time 419.690  
 Amp 0.113  
 Phase 116.6  
 PFD 1.7e-01  
 Delays (us)  
 SBD -0.903082  
 MBD -0.015765  
 Fringe rate (Hz)  
 -0.228452  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192a  
 Exper # 16383  
 Yr:day 2019:276  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:083:025951  
 2020:093:045052  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	129.5	145.0	-174.6	103.7	121.9	139.2	47.0	125.9	150.0	127.0	103.7	106.8	20.4	133.3	90.1	159.9	Phase	116.6
	0.1	0.1	0.0	0.2	0.2	0.1	0.3	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	144.2	107.0	169.4	113.1	148.0	32.5	14.3	12.5	252.9	22.6	180.9	228.1	187.7	165.2	17.4	19.2	Sbd box	13.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)			-1.11056902567E+04					Apriori delay (usec)	-1.11047994914E+04				Resid mbdelay (usec)	-1.57653E-02			+/-	1.7E-04
Sband delay (usec)			-1.11057025739E+04					Apriori clock (usec)	-1.4065811E+01				Resid sbdelay (usec)	-9.03082E-01			+/-	2.8E-03
Phase delay (usec)			-1.11047994876E+04					Apriori clockrate (us/s)	-9.6732924E-09				Resid phdelay (usec)	3.76001E-06			+/-	6.0E-07
Delay rate (us/s)			4.07182561485E-01					Apriori rate (us/s)	4.07185213590E-01				Resid rate (us/s)	-2.65210E-06			+/-	2.5E-09
Total phase (deg)				48.6				Apriori accel (us/s/s)	3.97901369329E-05				Resid phase (deg)	116.6			+/-	18.6

ph/seg (deg) 32.4 32.2 Search (2048X64) 0.103 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 66.6 56.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 42.2 37.2 Inc. seg. avg. 0.104 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.1 64.8 Inc. frq. avg. 0.111 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mo..1306GF Output file: /Exps/c192a/v2/1234/No0009/mo.W.315.1306GF

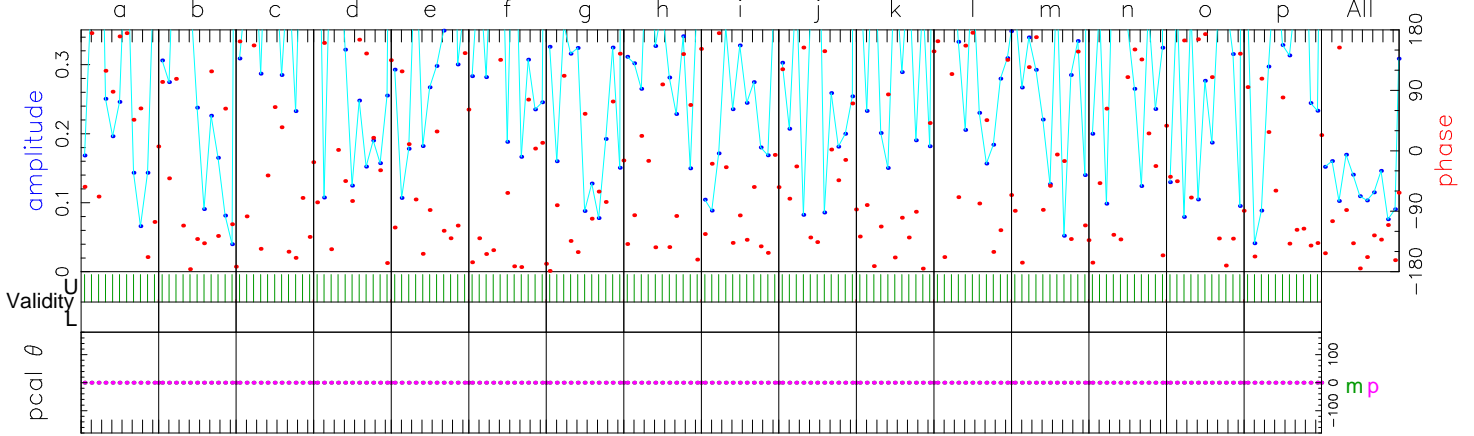


Fringe quality 0

SNR 5.9  
Int time 419.683  
Amp 0.117  
Phase -135.8  
PFD 5.2e-01  
Delays (us)  
SBD -0.744035  
MBD 0.009251  
Fringe rate (Hz) 0.470636  
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 2020:083:025951  
2020:093:045038  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

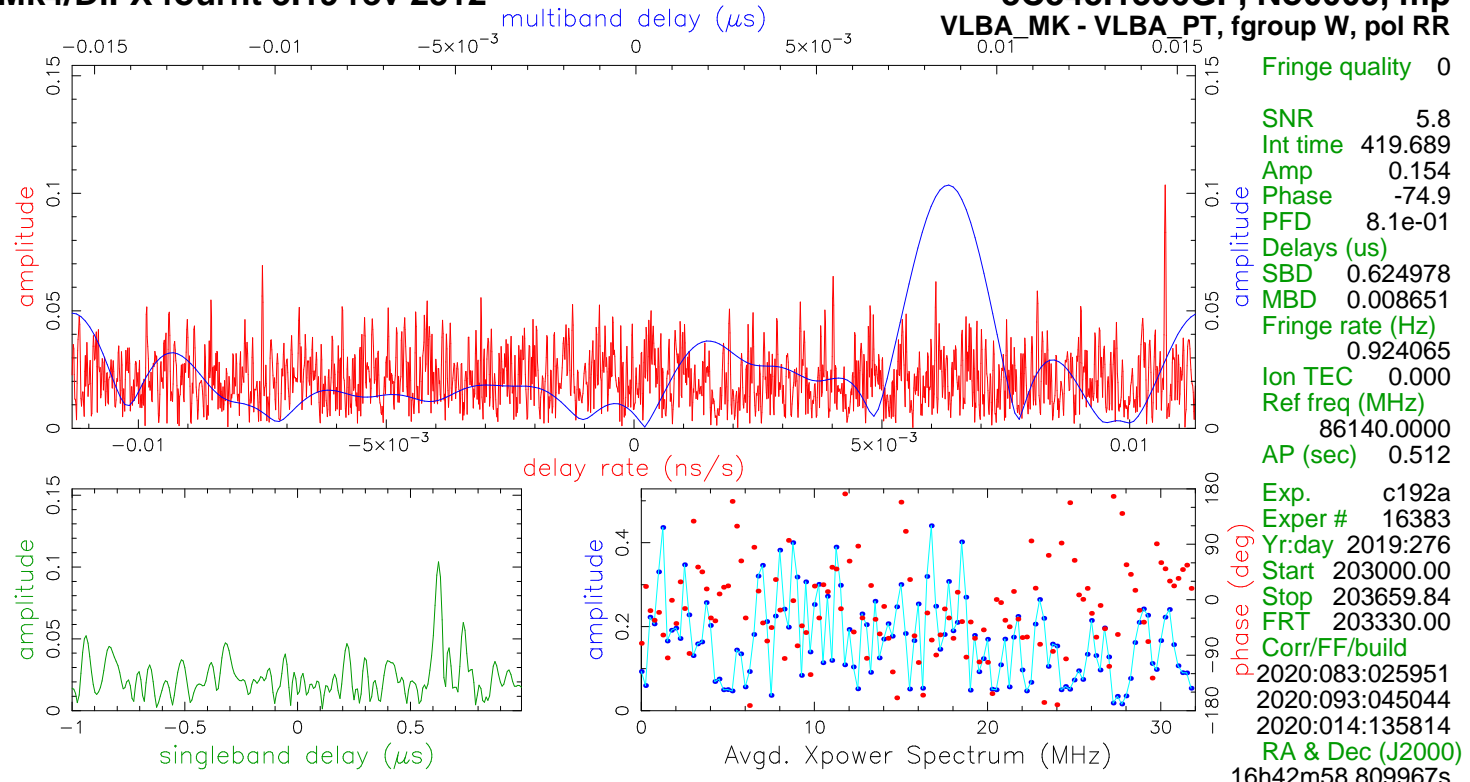


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-143.7	-179.6	-118.5	-86.5	-116.5	-171.6	-167.2	-145.1	-83.6	-84.2	-140.3	179.6	-136.7	-143.0	-128.1	-121.0	Phase	-135.8
	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.1	Ampl.	0.1
	156.8	207.9	61.7	64.1	177.3	124.3	14.0	232.6	21.5	202.0	206.2	220.8	4.8	22.3	216.1	179.5	Sbd box	33.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	-1.25109946202E+04			Apriori delay (usec)			-1.25102538715E+04			Resid mbdelay (usec)			9.25124E-03			+/- 1.8E-04		
Sband delay (usec)	-1.25109979065E+04			Apriori clock (usec)			-9.3433962E+00			Resid sbdelay (usec)			-7.44035E-01			+/- 2.9E-03		
Phase delay (usec)	-1.25102538759E+04			Apriori clockrate (us/s)			-2.1257888E-07			Resid phdelay (usec)			-4.37947E-06			+/- 6.2E-07		
Delay rate (us/s)	5.07151115949E-01			Apriori rate (us/s)			5.07145652329E-01			Resid rate (us/s)			5.46362E-06			+/- 2.6E-09		
Total phase (deg)	-312.0			Apriori accel (us/s/s)			5.02758199747E-05			Resid phase (deg)			-135.8			+/- 19.3		

ph/seg (deg) 33.5 33.4 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 36.4 58.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 32.9 38.6 Inc. seg. avg. 0.118 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.5 67.3 Inc. frq. avg. 0.109 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 -87.0 u,v (fr/asec) -3696.360 1805.374 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mp..1306GF Output file: /Exps/c192a/v2/1234/No0009/mp.W.266.1306GF simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, mp  
VLBA\_MK - VLBA\_PT, fgroup W, pol RR



Fringe quality 0

SNR 5.8

Int time 419.689

Amp 0.154

Phase -74.9

PFD 8.1e-01

Delays (us)

SBD 0.624978

MBD 0.008651

Fringe rate (Hz)

0.924065

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

2020:083:025951

2020:093:045044

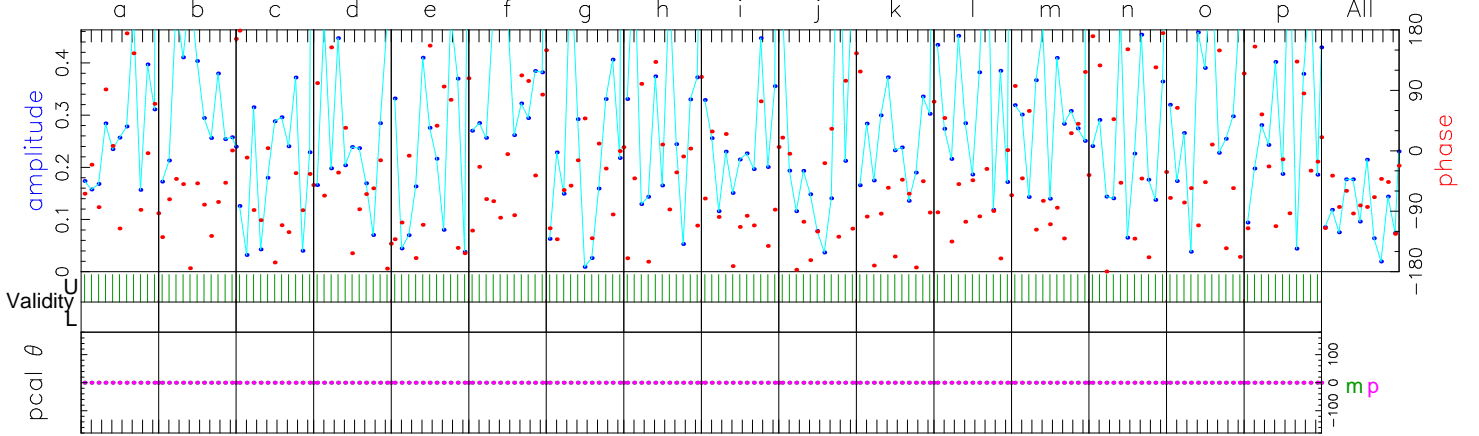
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-13.4	-72.9	-83.5	-80.3	-172.0	-53.2	-47.0	-71.2	-72.1	-111.3	-90.4	-68.5	-58.3	-145.5	-82.2	-44.9		Phase	-74.9				
	0.0	0.3	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.1	0.2	0.3	0.1	0.1	0.2	0.2		Ampl.	0.1				
	117.5	208.5	181.0	238.3	158.6	187.0	8.6	200.1	96.9	124.5	23.3	208.8	100.4	60.6	123.1	19.3		Sbd box	209.0				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-1.25096202206E+04															Apriori delay (usec)	-1.25102538715E+04	Resid mbdelay (usec)	8.65088E-03	+/-	1.9E-04
Sband delay (usec)			-1.25096288930E+04															Apriori clock (usec)	-9.3433962E+00	Resid sbdelay (usec)	6.24978E-01	+/-	3.0E-03
Phase delay (usec)			-1.25102538739E+04															Apriori clockrate (us/s)	-2.1257888E-07	Resid phdelay (usec)	-2.41507E-06	+/-	6.4E-07
Delay rate (us/s)			5.07156379809E-01															Apriori rate (us/s)	5.07145652329E-01	Resid rate (us/s)	1.07275E-05	+/-	2.6E-09
Total phase (deg)					-251.1													Apriori accel (us/s/s)	5.02758199747E-05	Resid phase (deg)	-74.9	+/-	19.8

ph/seg (deg) 27.4 34.2 27.4 34.2  
 amp/seg (%) 55.7 59.7  
 ph/frq (deg) 40.0 39.5  
 amp/frq (%) 52.5 69.0

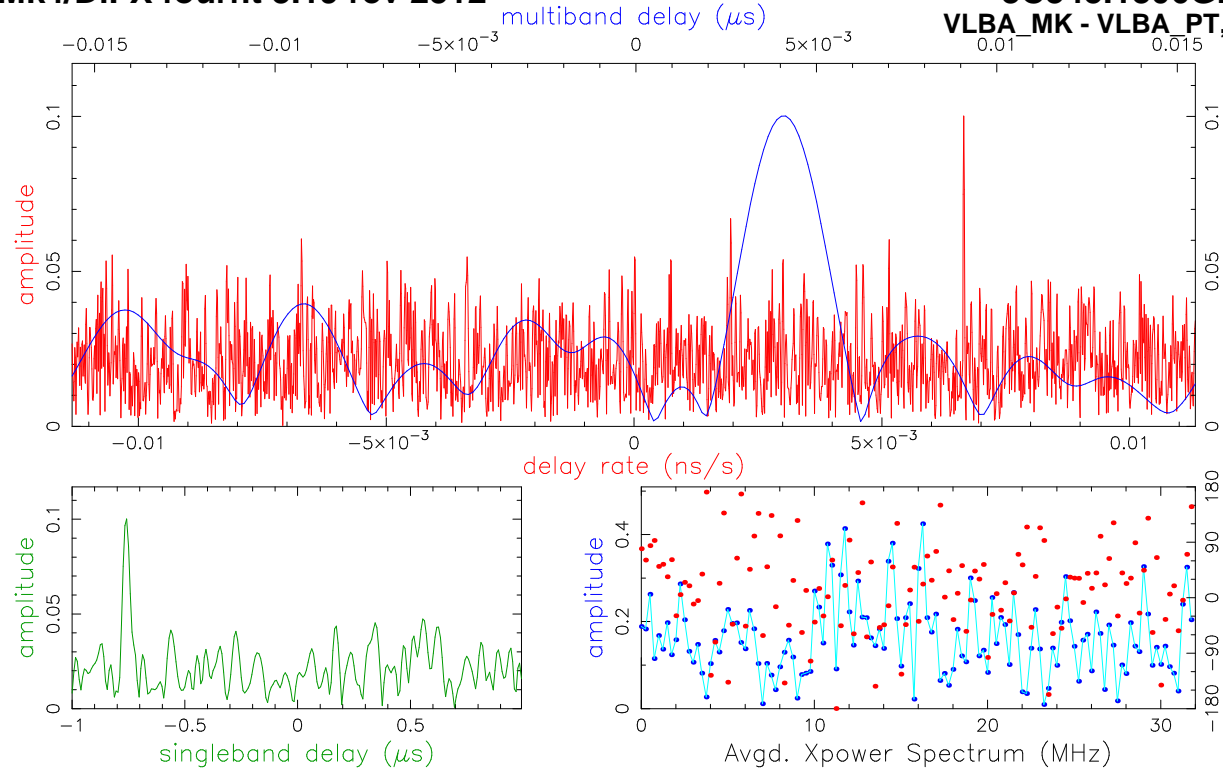
RMS Theor. Amplitude 0.154 +/- 0.027  
 Search (2048X64) 0.102  
 Interp. 0.000  
 Inc. seg. avg. 0.144  
 Inc. frq. avg. 0.140

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 PCal rate: 0.000E+00, 0.000E+00 (us/s)  
 Bits/sample: 2x2 SampCntNorm: enabled  
 Sample rate(MISamp/s): 64  
 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

sb window (us) -1.000 1.000  
 mb window (us) -0.016 0.016  
 dr window (ns/s) -0.011 0.011  
 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 -87.0 u,v (fr/asec) -3696.360 1805.374 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mp..1306GF Output file: /Exps/c192a/v2/1234/No0009/mp.W.286.1306GF

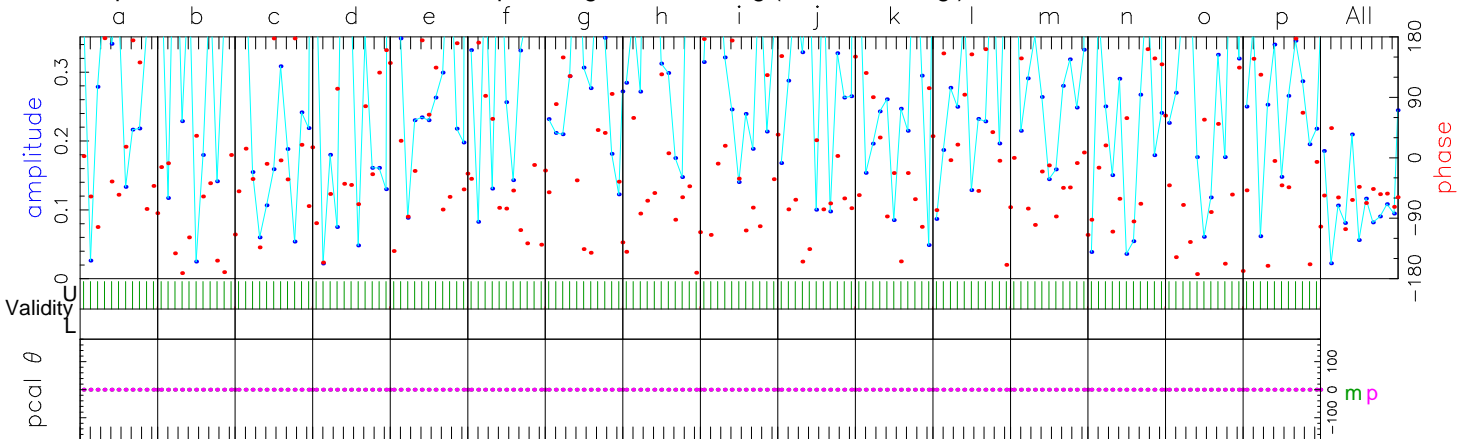


Fringe quality 0

SNR 5.7  
Int time 419.683  
Amp 0.117  
Phase -60.6  
PFD 9.7e-01  
Delays (us)  
SBD -0.760311  
MBD 0.004139  
Fringe rate (Hz) 0.574469  
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 2020:083:025951  
2020:093:045048  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

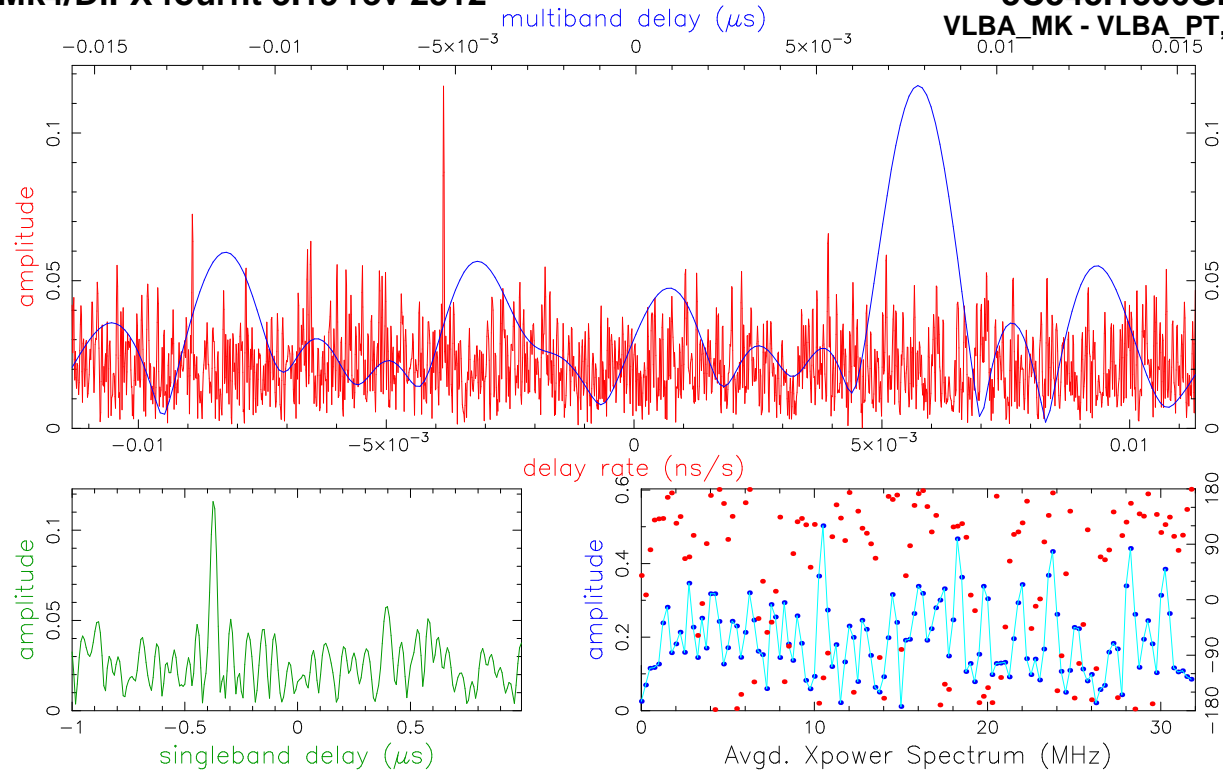
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-61.9	-90.1	-19.9	-43.0	-72.9	-72.2	27.1	-62.7	-78.6	-84.5	-59.3	53.1	-37.0	-60.7	-99.7	-83.9	Phase	-60.6					
	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.0	Ampl.	0.1					
	4.0	220.5	101.7	15.8	196.7	92.9	151.7	125.6	89.6	208.3	105.3	95.0	30.7	211.0	180.1	35.0	Sbd box	31.7					
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase						
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC						
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids						
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks						
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids						
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks						
Group delay (usec)(sbd)			-1.25109997323E+04														Apriori delay (usec)	-1.25102538715E+04	Resid mbdelay (usec)	4.13923E-03	+/-	1.9E-04	
Sband delay (usec)			-1.25110141830E+04															Apriori clock (usec)	-9.3433962E+00	Resid sbdelay (usec)	-7.60311E-01	+/-	3.0E-03
Phase delay (usec)			-1.25102538734E+04															Apriori clockrate (us/s)	-2.1257888E-07	Resid phdelay (usec)	-1.95400E-06	+/-	6.5E-07
Delay rate (us/s)			5.07152321348E-01															Apriori rate (us/s)	5.07145652329E-01	Resid rate (us/s)	6.66902E-06	+/-	2.7E-09
Total phase (deg)					-236.8													Apriori accel (us/s/s)	5.02758199747E-05	Resid phase (deg)	-60.6	+/-	20.2

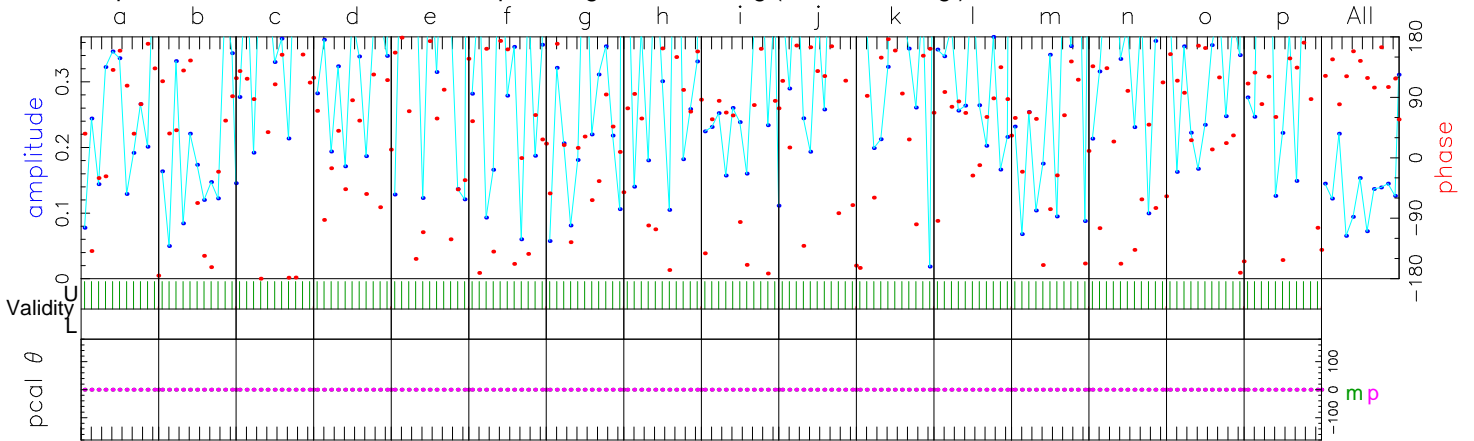
ph/seg (deg) RMS Theor. Amplitude 0.117 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 35.3 35.0 Search (2048X64) 0.094 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.5 61.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.1 40.4 Inc. seg. avg. 0.103 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 -87.0 u,v (fr/asec) -3696.360 1805.374 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mp..1306GF Output file: /Exps/c192a/v2/1234/No0009/mp.W.303.1306GF simultaneous interpolator





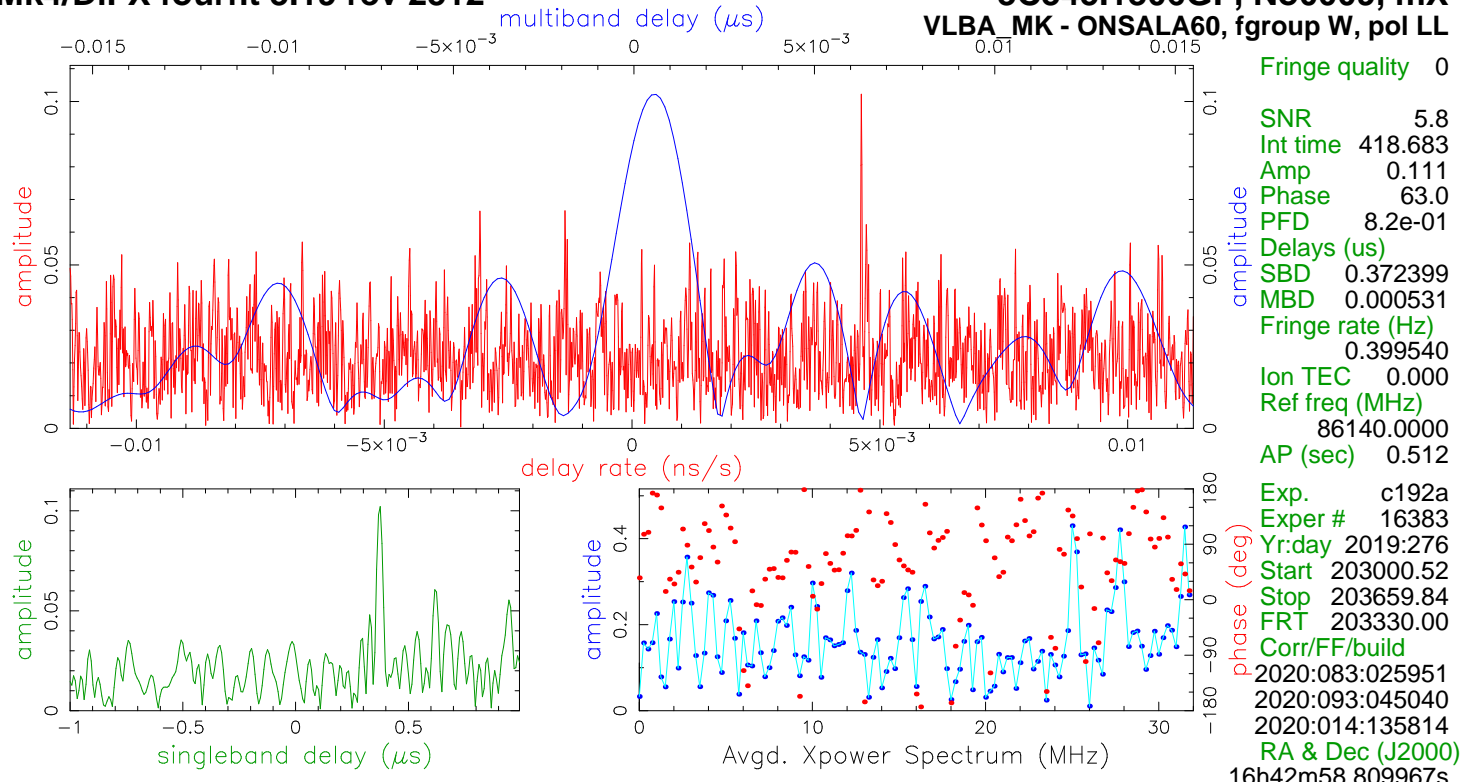
Fringe quality 0  
SNR 6.6  
Int time 419.689  
Amp 0.123  
Phase 121.5  
PFD 1.5e-02  
Delays (us)  
SBD -0.372422  
MBD 0.007880  
Fringe rate (Hz)  
-0.331840  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.00  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045054  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

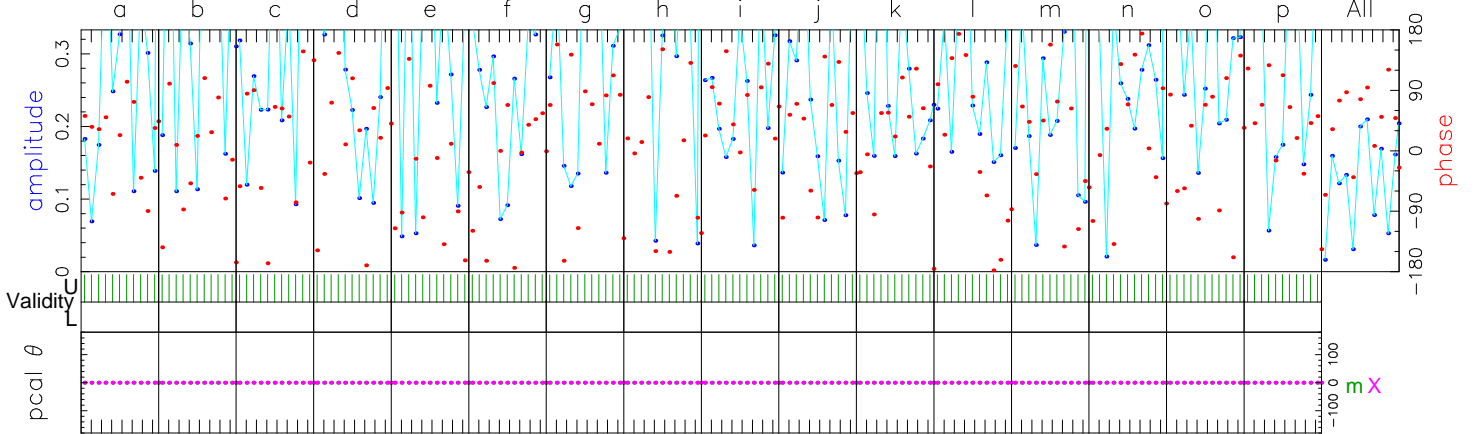


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
126.3	80.9	136.8	38.8	160.2	172.0	20.7	127.7	116.0	163.8	150.5	58.8	92.3	148.8	103.3	124.5	124.5	Phase	121.5
0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.3	Ampl.	0.1
180.3	255.7	80.9	149.3	255.7	135.0	177.8	169.3	175.7	156.6	56.3	172.1	133.8	101.5	25.9	214.0	214.0	Sbd box	81.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
m:p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.25106209919E+04			Apriori delay (usec)			-1.25102538715E+04			Resid mbdelay (usec)			7.87962E-03			+/- 1.6E-04		
Sband delay (usec)	-1.25106262940E+04			Apriori clock (usec)			-9.3433962E+00			Resid sbdelay (usec)			-3.72422E-01			+/- 2.6E-03		
Phase delay (usec)	-1.25102538676E+04			Apriori clockrate (us/s)			-2.1257888E-07			Resid phdelay (usec)			3.91824E-06			+/- 5.6E-07		
Delay rate (us/s)	5.07141799992E-01			Apriori rate (us/s)			5.07145652329E-01			Resid rate (us/s)			-3.85234E-06			+/- 2.3E-09		
Total phase (deg)	-54.7			Apriori accel (us/s/s)			5.02758199747E-05			Resid phase (deg)			121.5			+/- 17.5		

ph/seg (deg) 25.1 30.3 Amplitude 0.123 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 38.8 52.8 Search (2048X64) 0.113 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 47.4 34.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 58.2 61.0 Inc. seg. avg. 0.120 Sample rate(MISamp/s): 64 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 -87.0 u,v (fr/asec) -3696.360 1805.374 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mp..1306GF Output file: /Exps/c192a/v2/1234/No0009/mp.W.316.1306GF simultaneous interpolator



Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

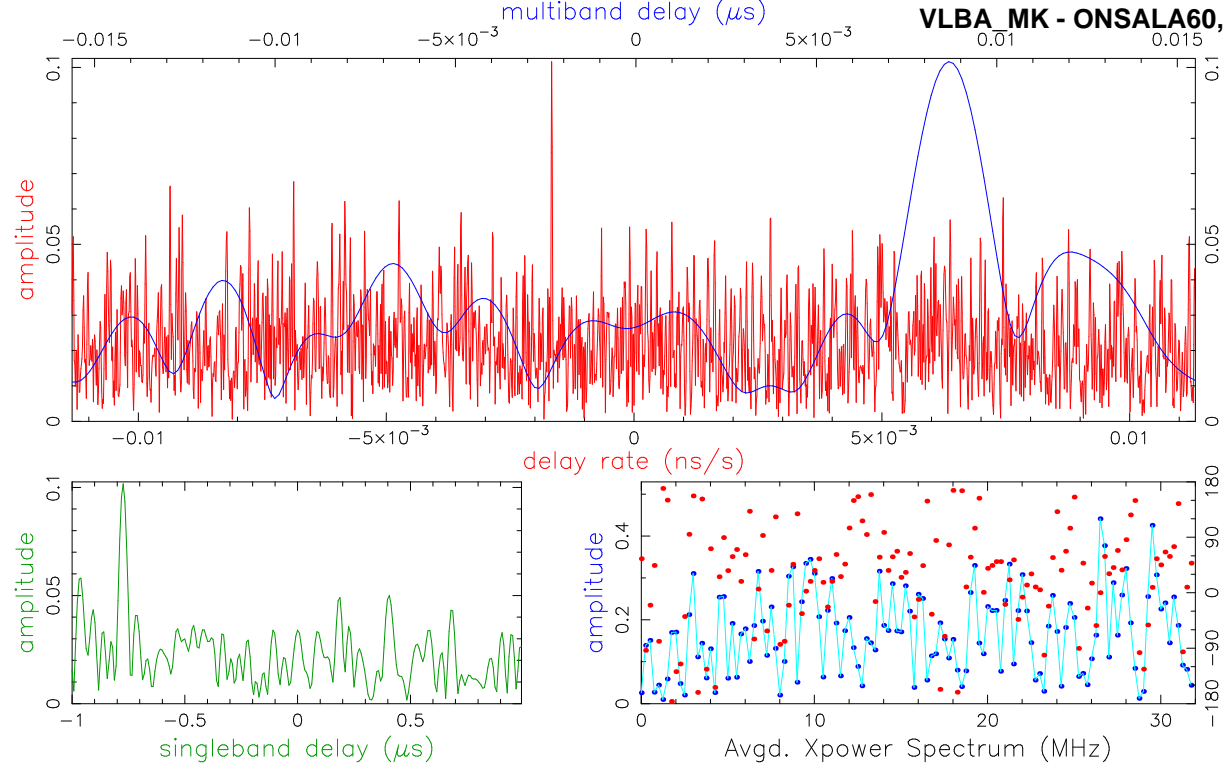


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
27.5	45.3	65.1	95.1	-150.0	49.3	91.0	34.6	63.0	51.5	39.1	158.9	72.1	-87.0	69.5	59.4	59.4	Phase	63.0				
0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.3	0.3	Ampl.	0.1				
178.9	142.7	147.8	27.6	130.5	187.8	149.0	146.9	179.3	116.1	57.5	148.9	182.8	50.9	57.5	176.5	176.5	Sbd box	176.7				
U/L	819/0	819/0	819/0	819/0	819/0	819/0	819/0	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	1000	1000	1000	1000	1000	1000	1000	PC freqs					
X	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-6.99915650011E+03														Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	5.30687E-04	+/-	1.9E-04
Sband delay (usec)			-6.99915963180E+03														Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	3.72399E-01	+/-	3.0E-03
Phase delay (usec)			-6.99953202876E+03														Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	2.03285E-06	+/-	6.4E-07
Delay rate (us/s)			1.75690999073E+00														Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	4.63826E-06	+/-	2.6E-09
Total phase (deg)					15.2												Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	63.0	+/-	19.8

	RMS	Theor.	Amplitude	0.111 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	57.9	34.3	Search (2048X64)	0.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	64.5	59.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	64.7	39.6	Inc. seg. avg.	0.111	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	56.0	69.0	Inc. frq. avg.	0.110	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

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/v2/1234/No0009/mX..1306GF Output file: /Exps/c192a/v2/1234/No0009/mX.W.272.1306GF

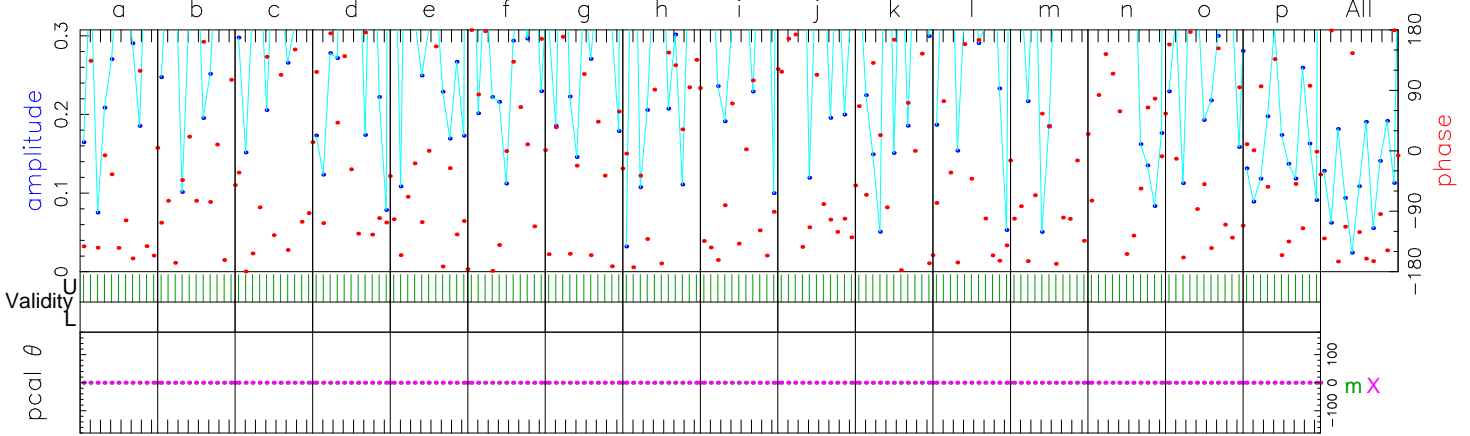


Fringe quality 0

SNR 5.7  
Int time 418.688  
Amp 0.103  
Phase -145.8  
PFD 9.6e-01  
Delays (us)  
SBD -0.774039  
MBD 0.008674  
Fringe rate (Hz)  
-0.143229  
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  
2020:083:025951  
2020:093:045046  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

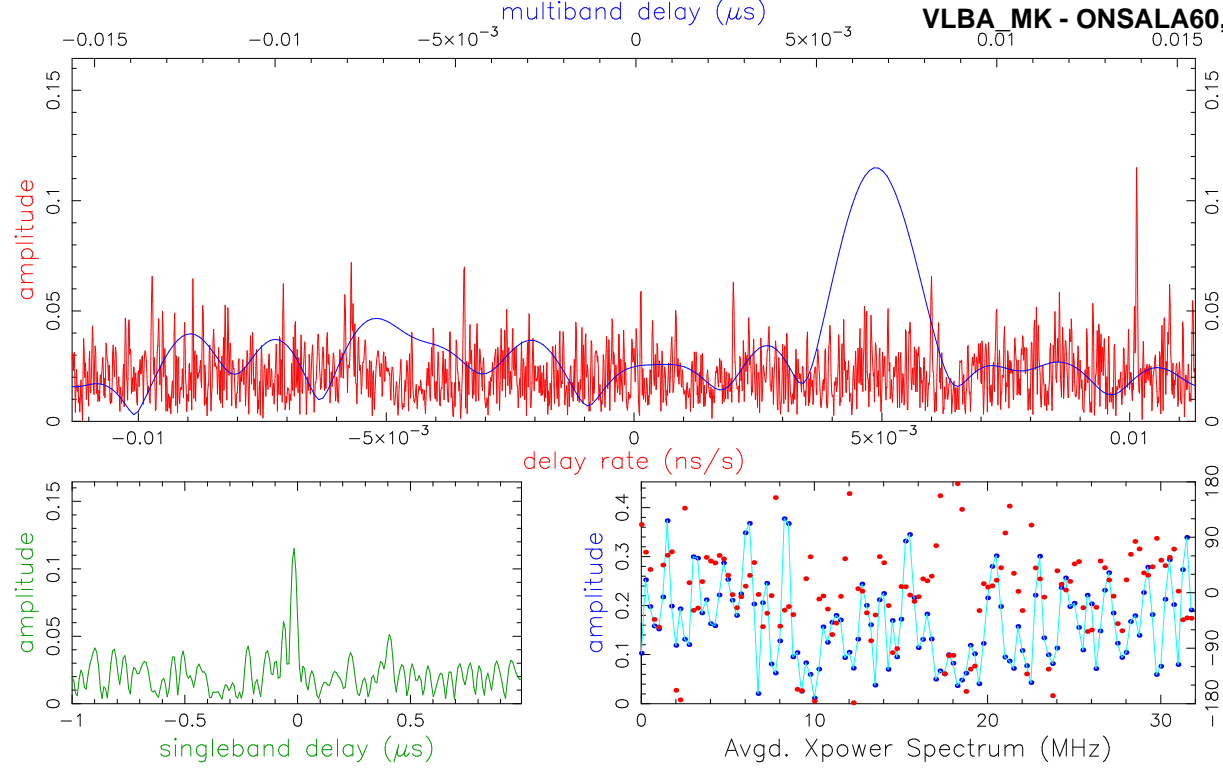
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
	-146.1	-106.2	-133.2	-144.6	-92.9	164.7	161.9	144.4	-139.9	-154.3	-172.5	-118.7	-97.9	132.7	-136.5	-104.8	Phase	-145.8		
	0.2	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.0	Ampl.	0.1		
	24.1	210.6	243.1	202.2	255.6	42.3	37.3	30.3	27.9	30.3	105.2	186.8	30.6	9.4	237.9	56.5	Sbd box	29.9		
U/L	819/0	819/0	819/0	819/0	819/0	819/0	819/0	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	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase			
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC			
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids			
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids			
	Group delay (usec)(sbd)		-7.00030460676E+03				Apriori delay (usec)				-6.99953203080E+03				Resid mbdelay (usec)		8.67403E-03		+/- 1.9E-04	
	Sband delay (usec)		-7.00030606980E+03				Apriori clock (usec)				-2.9765079E+01				Resid sbdelay (usec)		-7.74039E-01		+/- 3.0E-03	
	Phase delay (usec)		-6.99953203550E+03				Apriori clockrate (us/s)				-5.3669233E-07				Resid phdelay (usec)		-4.70064E-06		+/- 6.5E-07	
	Delay rate (us/s)		1.75690368972E+00				Apriori rate (us/s)				1.75690535246E+00				Resid rate (us/s)		-1.66275E-06		+/- 2.7E-09	
	Total phase (deg)		-193.6				Apriori accel (us/s/s)				7.26374145009E-07				Resid phase (deg)		-145.8		+/- 20.1	
		RMS	Theor.	Amplitude		0.103 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5										
	ph/seg (deg)	35.4	34.9	Search (2048X64)		0.098		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000						
	amp/seg (%)	59.0	60.9	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016		0.016				
	ph/frq (deg)	43.8	40.3	Inc. seg. avg.		0.101		Sample rate(MISamp/s): 64		dr window (ns/s)		-0.011		0.011						
	amp/frq (%)	68.4	70.3	Inc. frq. avg.		0.105		Data rate(Mb/s): 2048		nlags: 128		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/v2/1234/No0009/mX..1306GF Output file: /Exps/c192a/v2/1234/No0009/mX.W.289.1306GF

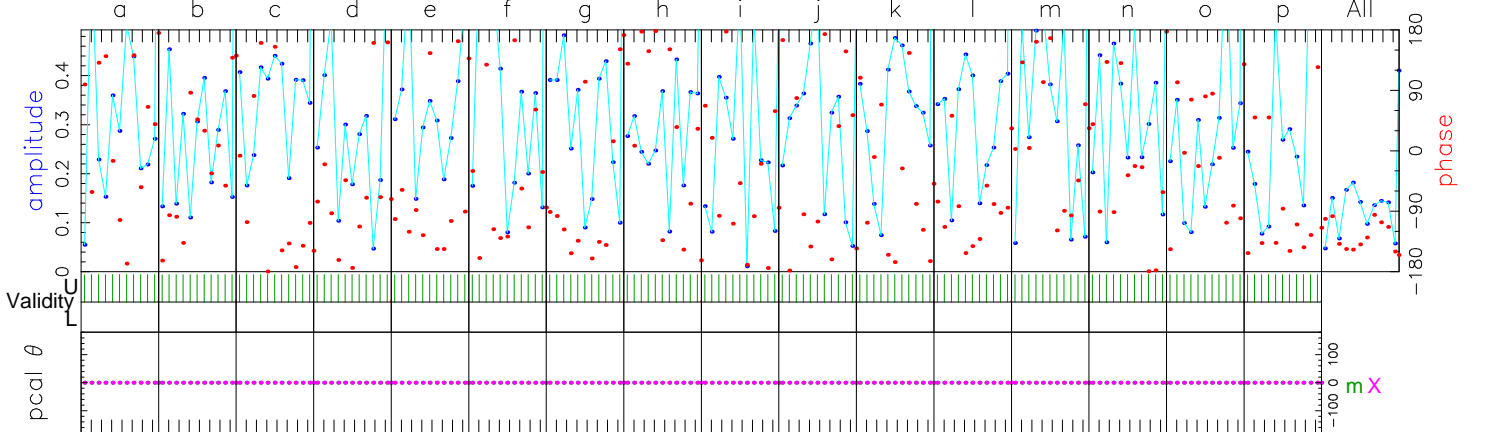


Fringe quality 0

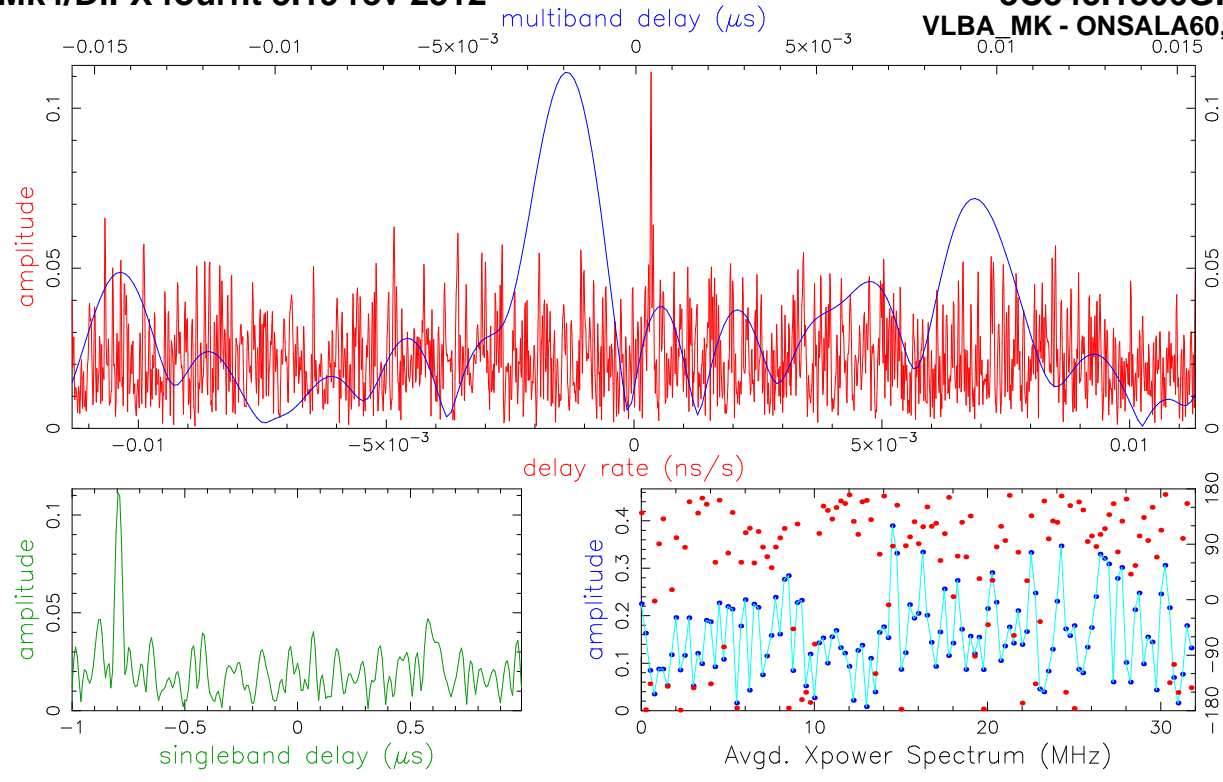
SNR 6.5  
Int time 418.683  
Amp 0.164  
Phase -124.6  
PFD 3.0e-02  
Delays (us)  
SBD -0.016855  
MBD 0.006636  
Fringe rate (Hz) 0.875250  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203000.52  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:083:025951  
2020:093:045051  
2020:014:135814  
RA & Dec (J2000) 16h42m58.80967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-123.2	-39.9	-162.7	-99.4	-123.5	-137.6	-126.3	157.1	-90.4	-153.0	-138.7	-100.2	164.0	-87.8	-74.5	-143.1	Phase	-124.6
	0.0	0.1	0.3	0.2	0.4	0.2	0.3	0.0	0.2	0.2	0.2	0.3	0.1	0.1	0.1	0.3	Ampl.	0.2
	112.6	135.3	126.1	26.5	128.3	214.5	127.2	12.7	41.8	55.7	209.6	14.8	72.1	111.1	192.9	166.2	Sbd box	126.8
UL	819/0	819/0	819/0	819/0	819/0	819/0	819/0	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	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
m:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-6.99955664445E+03			Apriori delay (usec)			-6.99953203080E+03			Resid mbdelay (usec)			6.63635E-03			+/- 1.7E-04		
Sband delay (usec)	-6.99954888530E+03			Apriori clock (usec)			-2.9765079E+01			Resid sbdelay (usec)			-1.68545E-02			+/- 2.7E-03		
Phase delay (usec)	-6.99953203482E+03			Apriori clockrate (us/s)			-5.3669233E-07			Resid phdelay (usec)			-4.01906E-06			+/- 5.7E-07		
Delay rate (us/s)	1.75691551325E+00			Apriori rate (us/s)			1.75690535246E+00			Resid rate (us/s)			1.01608E-05			+/- 2.4E-09		
Total phase (deg)	-172.4			Apriori accel (us/s/s)			7.26374145009E-07			Resid phase (deg)			-124.6			+/- 17.8		
ph/seg (deg)	RMS	Theor.	Amplitude		0.164 +/- 0.025		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000			
amp/seg (%)	20.6	30.8	Search (2048X64)		0.113		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016 0.016					
ph/frq (deg)	42.8	53.7	Interp.		0.000		Sample rate(MISamp/s): 64				dr window (ns/s)		-0.011 0.011					
amp/frq (%)	44.4	35.5	Inc. seg. avg.		0.153		Data rate(Mb/s): 2048		nlags: 128 t_cohere infinite		ion window (TEC)		0.00 0.00					
	63.1	62.0	Inc. frq. avg.		0.162													
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/v2/1234/No0009/mX..1306GF			Output file: /Exps/c192a/v2/1234/No0009/mX.W.308.1306GF														

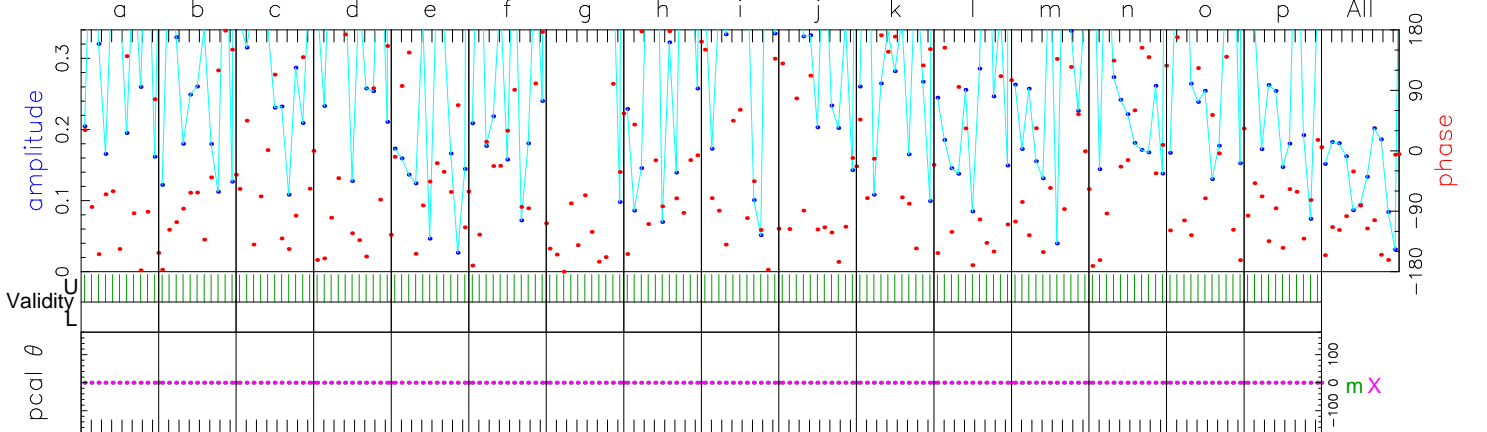


Fringe quality 0

SNR 6.3  
Int time 418.688  
Amp 0.113  
Phase -115.0  
PFD 6.0e-02  
Delays (us)  
SBD -0.793548  
MBD -0.001891  
Fringe rate (Hz)  
0.029180  
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  
2020:083:025951  
2020:093:045057  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

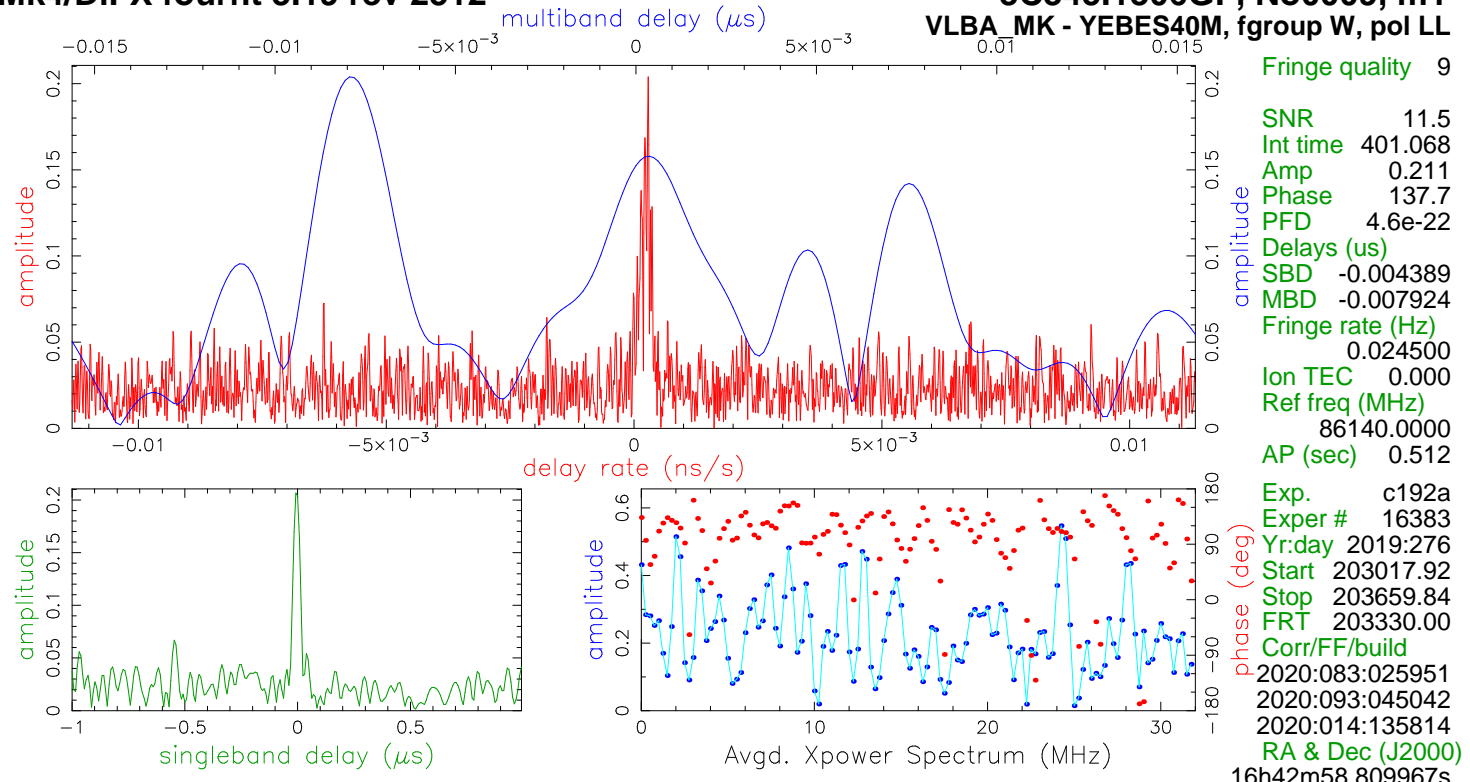
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



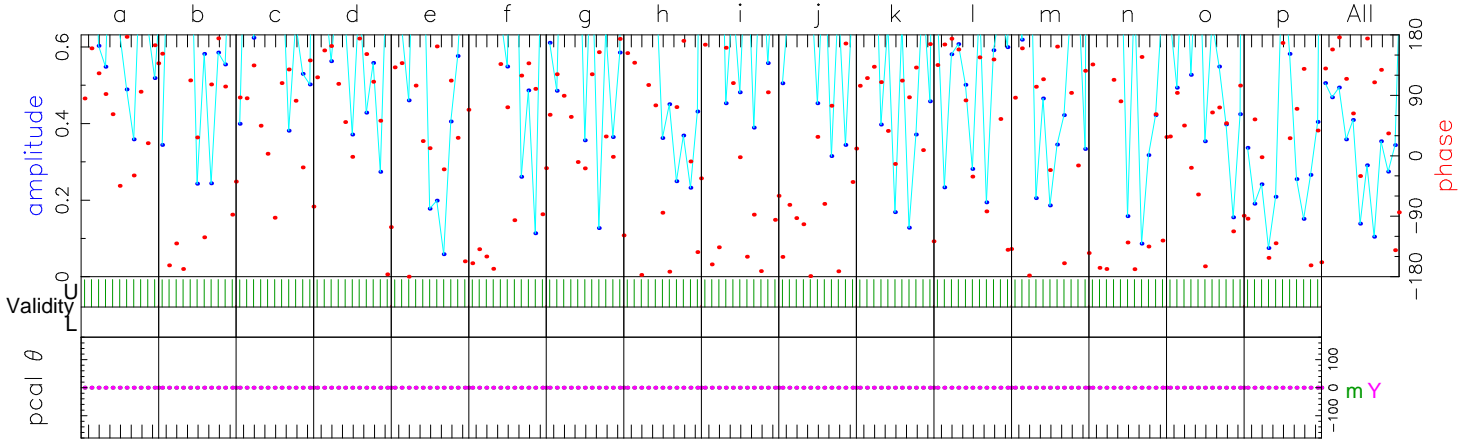
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-104.0	-120.6	-67.1	-130.3	-48.5	76.8	-144.9	-70.0	-162.3	-144.0	-136.1	-162.9	-67.5	-137.3	-140.1	-70.0	Phase	-115.0				
	0.2	0.2	0.1	0.2	0.1	0.0	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.2	Ampl.	0.1				
	74.6	25.1	91.9	28.8	139.4	68.4	219.6	8.4	91.0	139.6	148.3	156.6	40.6	46.1	32.6	47.3	Sbd box	27.4				
UL	819/0	819/0	819/0	819/0	819/0	819/0	819/0	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	1000	1000	1000	1000	1000	1000	1000	PC freqs					
X	1000	1000	1000	1000	1000	1000	1000	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	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-7.00031517155E+03														Apriori delay (usec)	-6.99953203080E+03	Resid mbdelay (usec)	-1.89075E-03	+/-	1.7E-04
Sband delay (usec)			-7.00032557830E+03														Apriori clock (usec)	-2.9765079E+01	Resid sbdelay (usec)	-7.93548E-01	+/-	2.7E-03
Phase delay (usec)			-6.99953203450E+03														Apriori clockrate (us/s)	-5.3669233E-07	Resid phdelay (usec)	-3.70881E-06	+/-	5.8E-07
Delay rate (us/s)			1.75690569122E+00														Apriori rate (us/s)	1.75690535246E+00	Resid rate (us/s)	3.38750E-07	+/-	2.4E-09
Total phase (deg)																	Apriori accel (us/s/s)	7.26374145009E-07	Resid phase (deg)	-115.0	+/-	18.1

ph/seg (deg) 49.3 31.3 Search (2048X64) 0.113 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 54.8 54.6 Interp. 0.107 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 59.5 36.1 Inc. seg. avg. 0.120 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.1 63.1 Inc. frq. avg. 0.114 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 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 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mX..1306GF Output file: /Exps/c192a/v2/1234/No0009/mX.W.327.1306GF simultaneous interpolator



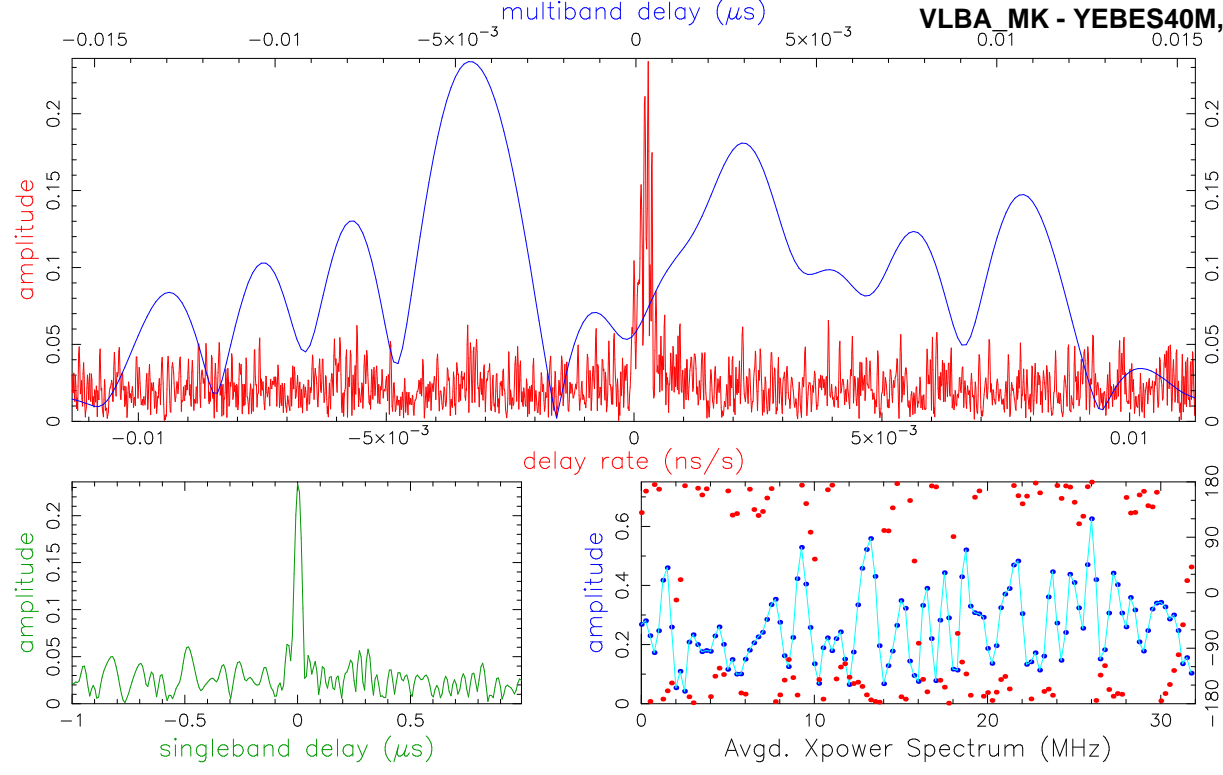


Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec



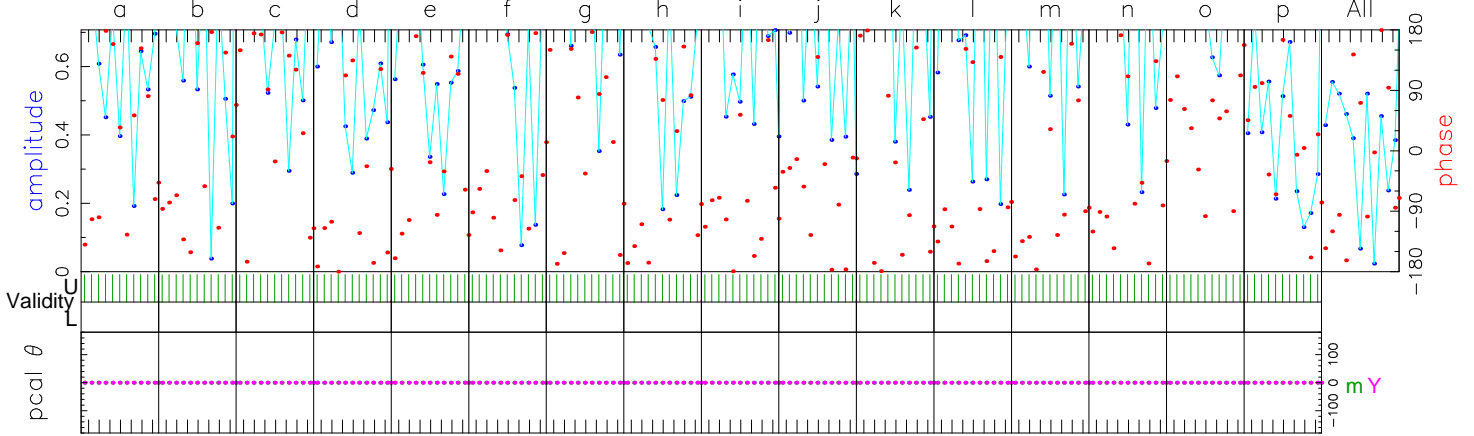
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	97.6	-169.3	79.7	132.9	113.6	-151.4	65.2	143.9	-163.8	-104.8	102.9	144.8	130.8	165.7	38.2	108.3	137.7	Phase					
	0.3	0.3	0.3	0.4	0.3	0.4	0.4	0.4	0.5	0.3	0.4	0.3	0.3	0.4	0.3	0.1	0.1	Ampl.					
	128.3	128.5	127.6	128.6	129.0	128.4	128.0	129.4	128.9	129.0	129.1	128.0	127.7	128.9	128.3	68.3	128.4	Sbd box					
UL	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	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	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	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	0:0	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-8.01252859880E+03															Apriori delay (usec)	-8.01252067530E+03	Resid mbdelay (usec)	-7.92350E-03	+/-	9.4E-05
Sband delay (usec)			-8.01252506430E+03															Apriori clock (usec)	-7.0895882E+00	Resid sbdelay (usec)	-4.38900E-03	+/-	1.5E-03
Phase delay (usec)			-8.01252067086E+03															Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	4.43978E-06	+/-	3.2E-07
Delay rate (us/s)			1.95303488837E+00															Apriori rate (us/s)	1.95303460395E+00	Resid rate (us/s)	2.84422E-07	+/-	1.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	2.01558556878E-05	Resid phase (deg)	137.7	+/-	9.9

ph/seg (deg) 71.9 17.2 Search (2048X64) 0.199 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 87.2 30.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 59.0 19.9 Inc. seg. avg. 0.327 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 72.7 34.7 Inc. frq. avg. 0.316 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 67.0 u,v (fr/asec) -14523.031 -619.242 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mY..1306GF Output file: /Exps/c192a/v2/1234/No0009/mY.W.278.1306GF simultaneous interpolator



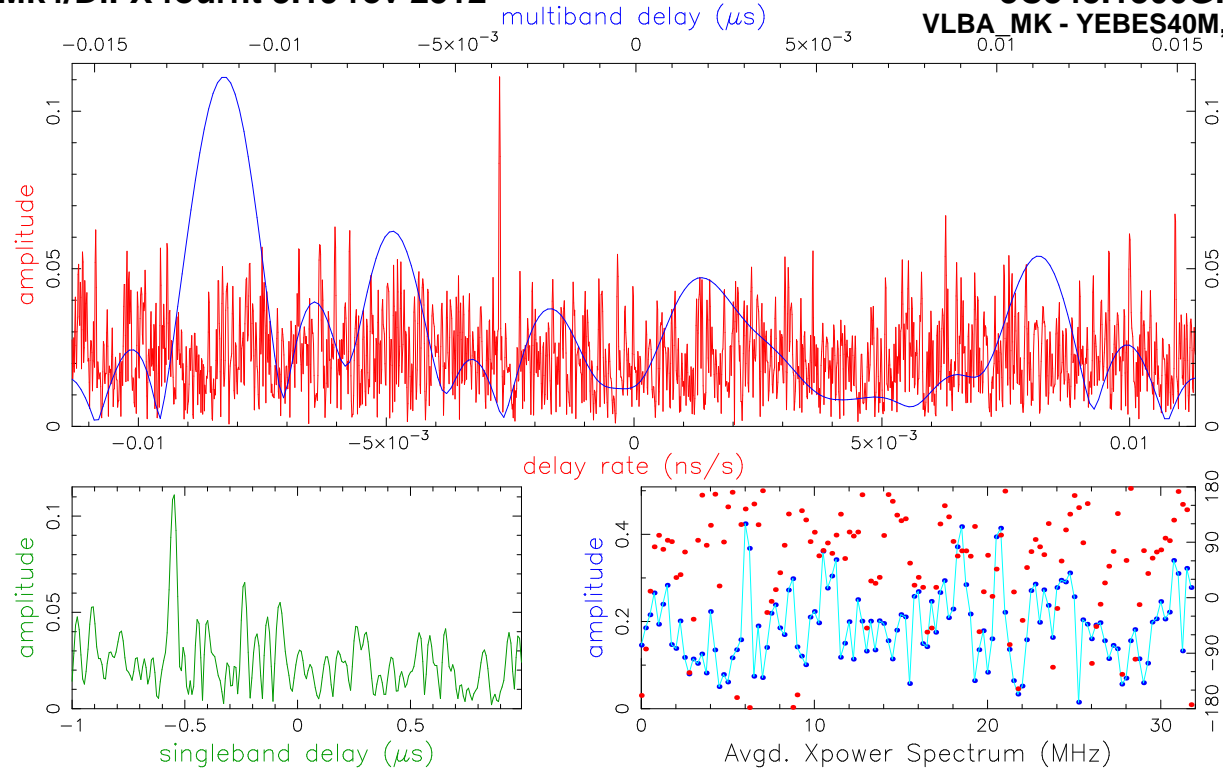
Fringe quality 9  
SNR 12.9  
Int time 401.073  
Amp 0.236  
Phase -136.5  
PFD 2.0e-29  
Delays (us)  
SBD 0.002298  
MBD -0.004588  
Fringe rate (Hz) 0.024709  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build 2020:083:025951  
2020:093:045047  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-140.5	-107.9	168.2	-155.2	-138.5	-84.2	146.3	-151.4	-102.5	-42.8	160.8	-122.5	-165.3	-121.6	52.5	55.9	Phase	-136.5				
	0.3	0.4	0.4	0.4	0.3	0.5	0.3	0.4	0.5	0.4	0.4	0.6	0.5	0.5	0.4	0.2	Ampl.	0.4				
	139.0	129.3	128.9	128.8	130.6	129.0	128.9	129.4	129.2	128.6	128.6	129.1	128.8	129.0	129.0	187.1	Sbd box	129.3				
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.01252526377E+03														Apriori delay (usec)	-8.01252067530E+03	Resid mbdelay (usec)	-4.58847E-03	+/-	8.4E-05
Sband delay (usec)			-8.01251837730E+03														Apriori clock (usec)	-7.0895882E+00	Resid sbdelay (usec)	2.29800E-03	+/-	1.3E-03
Phase delay (usec)			-8.01252067970E+03														Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	-4.40231E-06	+/-	2.9E-07
Delay rate (us/s)			1.95303489080E+00														Apriori rate (us/s)	1.95303460395E+00	Resid rate (us/s)	2.86847E-07	+/-	1.2E-09
Total phase (deg)																	Apriori accel (us/s/s)	2.01558556878E-05	Resid phase (deg)	-136.5	+/-	8.9

ph/seg (deg) 81.6 15.4 Theor. Amplitude 0.236 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 93.2 26.8 Search (2048X64) 0.229 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 78.2 17.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 85.2 31.0 Inc. seg. avg. 0.357 Sample rate(MISamp/s): 64 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 67.0 u,v (fr/asec) -14523.031 -619.242 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mY..1306GF Output file: /Exps/c192a/v2/1234/No0009/mY.W.299.1306GF simultaneous interpolator

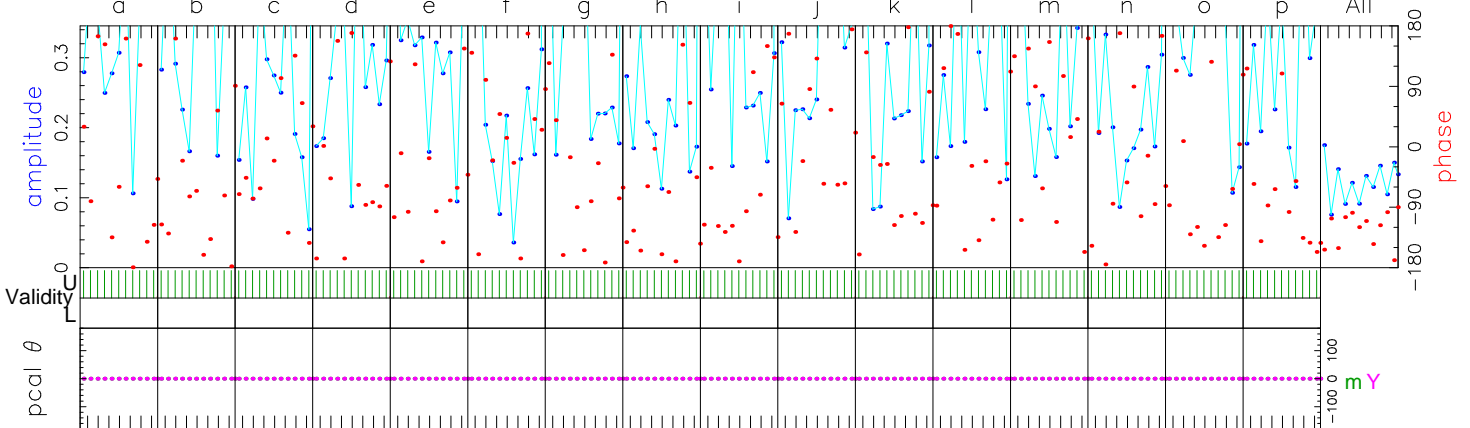


Fringe quality 0

SNR 6.2  
Int time 401.068  
Amp 0.115  
Phase -127.8  
PFD 1.8e-01  
Delays (us)  
SBD -0.549873  
MBD -0.011392  
Fringe rate (Hz)  
-0.233929  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

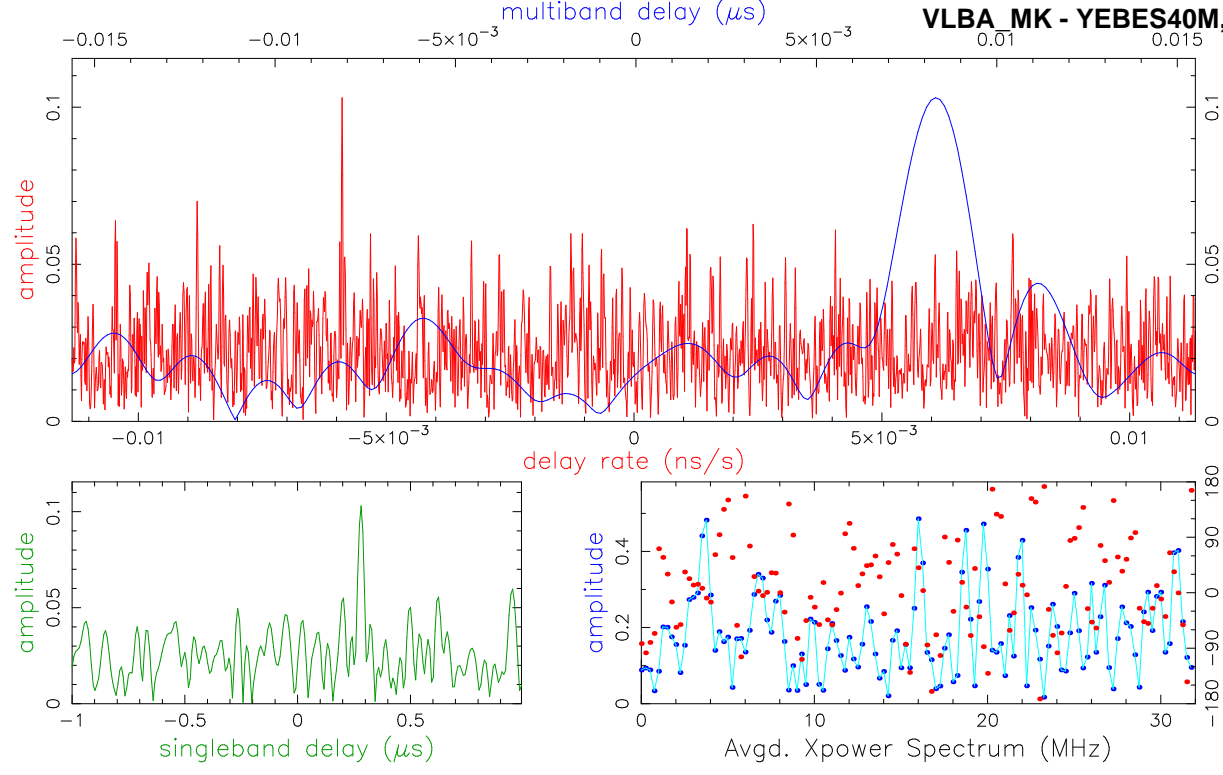
Exp. c192a  
Exper # 16383  
Yr:day 2019:276  
Start 203017.92  
Stop 203659.84  
FRT 203330.00  
Corr/FF/build  
2020:083:025951  
2020:093:045052  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec



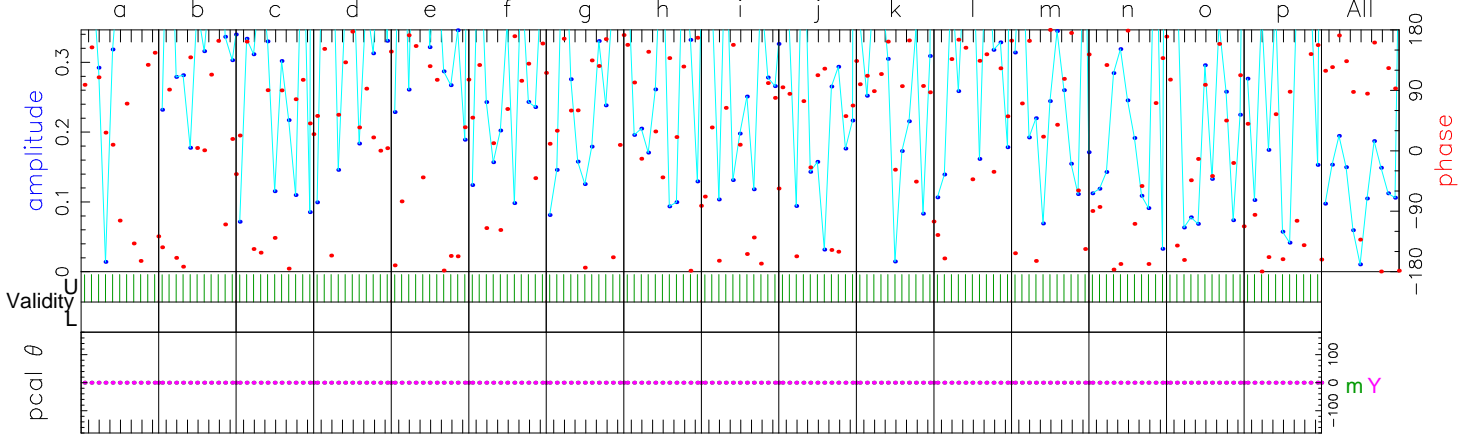
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-149.5	-133.4	-50.6	-91.4	-113.6	119.6	-128.3	-142.6	-134.2	-28.7	-138.0	-105.4	162.6	-121.2	-132.1	-125.2	Phase	-127.8				
	0.2	0.3	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1				
	62.8	58.9	66.0	128.7	110.3	112.4	100.0	247.4	3.7	64.0	227.3	222.0	216.0	21.4	168.3	178.1	Sbd box	58.6				
UL	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
m:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.01306331714E+03														Apriori delay (usec)	-8.01252067530E+03	Resid mbdelay (usec)	-1.13918E-02	+/-	1.8E-04
Sband delay (usec)			-8.01307054830E+03														Apriori clock (usec)	-7.0895882E+00	Resid sbdelay (usec)	-5.49873E-01	+/-	2.8E-03
Phase delay (usec)			-8.01252067942E+03														Apriori clockrate (us/s)	-2.2869228E-07	Resid phdelay (usec)	-4.12034E-06	+/-	6.0E-07
Delay rate (us/s)			1.95303188827E+00														Apriori rate (us/s)	1.95303460395E+00	Resid rate (us/s)	-2.71568E-06	+/-	2.6E-09
Total phase (deg)																	Apriori accel (us/s/s)	2.01558556878E-05	Resid phase (deg)	-127.8	+/-	18.6

ph/seg (deg) 24.2 32.2 Search (2048X64) 0.115 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 26.7 56.2 Interp. 0.107 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.9 37.2 Inc. seg. avg. 0.108 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 50.8 64.9 Inc. frq. avg. 0.114 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 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 67.0 u,v (fr/asec) -14523.031 -619.242 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mY..1306GF Output file: /Exps/c192a/v2/1234/No0009/mY.W.313.1306GF simultaneous interpolator



Fringe quality 0  
SNR 5.6  
Int time 401.073  
Amp 0.116  
Phase 137.9  
PFD 9.8e-01  
Delays (us)  
SBD 0.280701  
MBD 0.008307  
Fringe rate (Hz)  
-0.508410  
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  
2020:083:025951  
2020:093:045058  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 71 APs / seg (36.35 sec / seg.), time ticks 60 sec

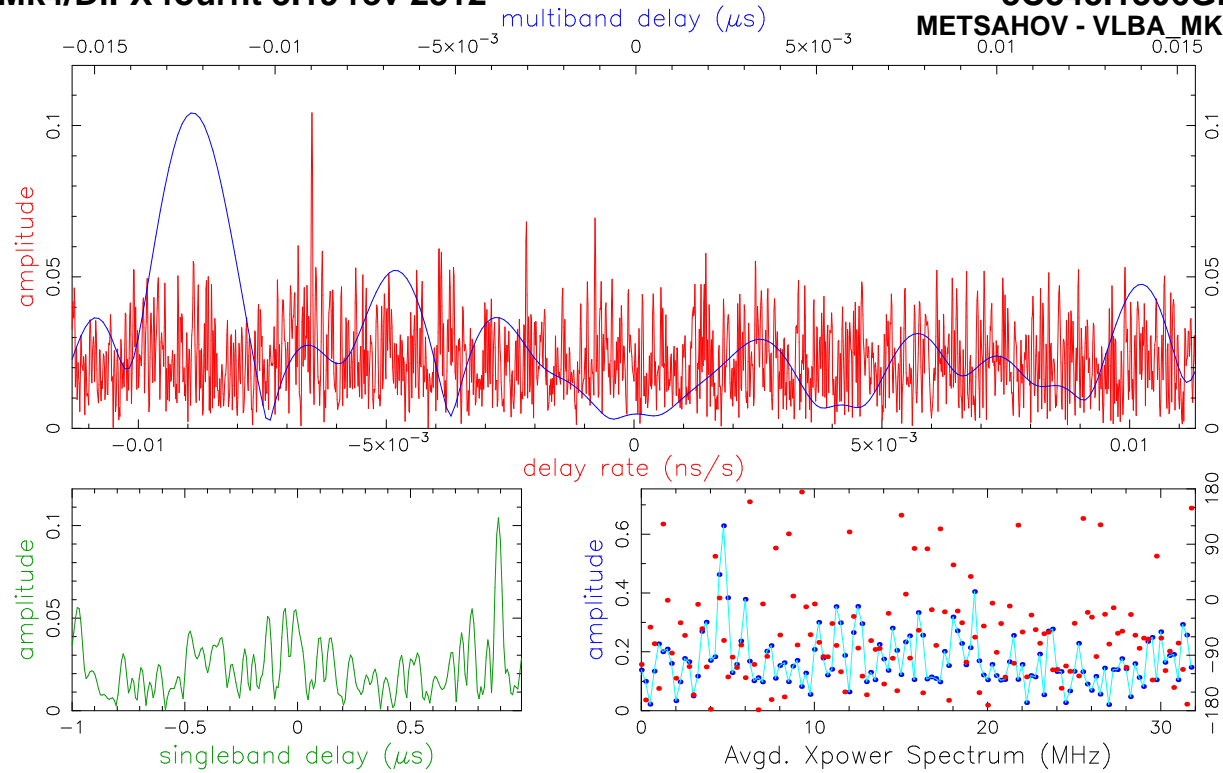


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
UL	159.7	130.5	137.8	112.6	-169.2	122.8	127.8	124.6	83.5	99.0	109.3	146.2	159.1	173.7	124.7	-179.4	Phase	137.9
m	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
Y	209.5	94.4	85.9	191.7	103.1	110.8	158.9	29.6	236.5	36.4	216.7	248.8	157.1	141.5	195.9	245.9	Sbd box	164.9
m	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	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	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	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) -8.01223111793E+03 Apriori delay (usec) -8.01252067530E+03 Resid mbdelay (usec) 8.30737E-03 +/- 1.9E-04  
Sband delay (usec) -8.01223997480E+03 Apriori clock (usec) -7.0895882E+00 Resid sbdelay (usec) 2.80701E-01 +/- 3.1E-03  
Phase delay (usec) -8.01252067085E+03 Apriori clockrate (us/s) -2.2869228E-07 Resid phdelay (usec) 4.44604E-06 +/- 6.5E-07  
Delay rate (us/s) 1.95302870182E+00 Apriori rate (us/s) 1.95303460395E+00 Resid rate (us/s) -5.90213E-06 +/- 2.8E-09  
Total phase (deg) -211.4 Apriori accel (us/s/s) 2.01558556878E-05 Resid phase (deg) 137.9 +/- 20.3

RMS Theor. Amplitude 0.116 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
ph/seg (deg) 42.4 35.2 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
amp/seg (%) 59.1 61.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
ph/frq (deg) 31.1 40.6 Inc. seg. avg. 0.115 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
amp/frq (%) 39.5 70.9 Inc. frq. avg. 0.104 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

m: az 52.6 el 15.0 pa -76.4 Y: az 291.9 el 41.0 pa 67.0 u,v (fr/asec) -14523.031 -619.242 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/mY..1306GF Output file: /Exps/c192a/v2/1234/No0009/mY.W.330.1306GF

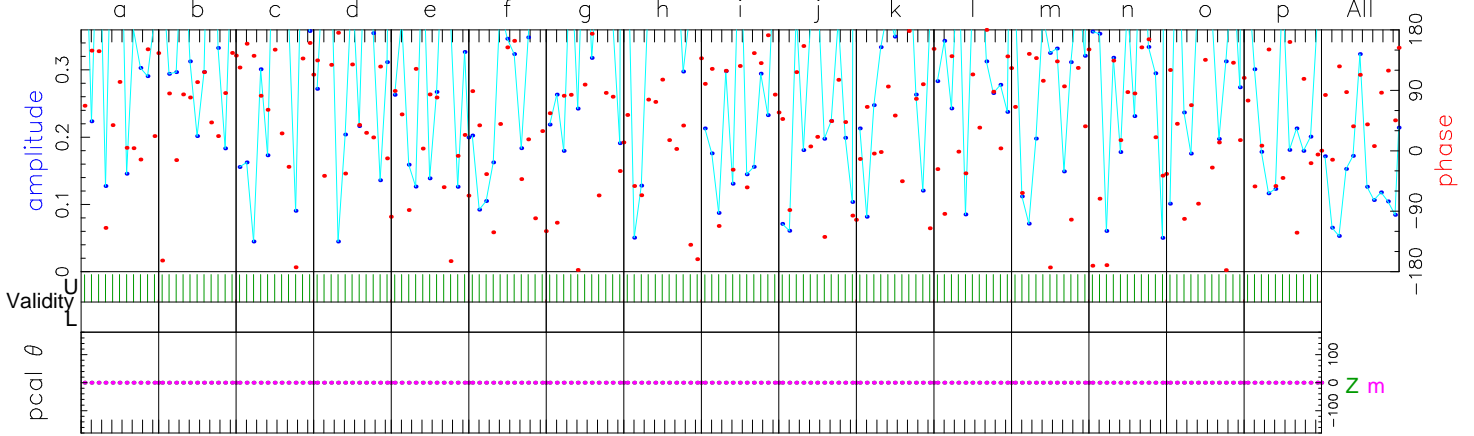


Fringe quality 0

SNR 5.8  
 Int time 418.889  
 Amp 0.120  
 Phase 76.1  
 PFD 7.4e-01  
 Delays (us)  
 SBD 0.890028  
 MBD -0.012289  
 Fringe rate (Hz)  
 -0.560588  
 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  
 2020:083:025951  
 2020:093:045106  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
73.5	84.2	116.6	45.3	24.5	18.6	87.7	51.1	118.3	58.4	35.7	50.3	116.3	131.1	90.4	-7.9		Phase	76.1	
0.2	0.3	0.2	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1		Ampl.	0.1	
128.7	89.8	110.8	50.4	251.8	205.0	98.4	80.4	139.0	141.8	169.1	168.2	72.9	249.8	63.2	58.4		Sbd box	242.9	
UL	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

Group delay (usec)(sbd) 5.44879833442E+03 Apriori delay (usec) 5.44790437380E+03 Resid mbdelay (usec) -1.22894E-02 +/- 1.8E-04  
 Sband delay (usec) 5.44879440130E+03 Apriori clock (usec) -2.3816485E+00 Resid sbdelay (usec) 8.90028E-01 +/- 3.0E-03  
 Phase delay (usec) 5.44790437625E+03 Apriori clockrate (us/s) 2.4985100E-08 Resid phdelay (usec) 2.45381E-06 +/- 6.3E-07  
 Delay rate (us/s) -1.71195031133E+00 Apriori rate (us/s) -1.71194380346E+00 Resid rate (us/s) -6.50787E-06 +/- 2.6E-09  
 Total phase (deg) 349.4 Apriori accel (us/s/s) 9.20117244546E-06 Resid phase (deg) 76.1 +/- 19.6

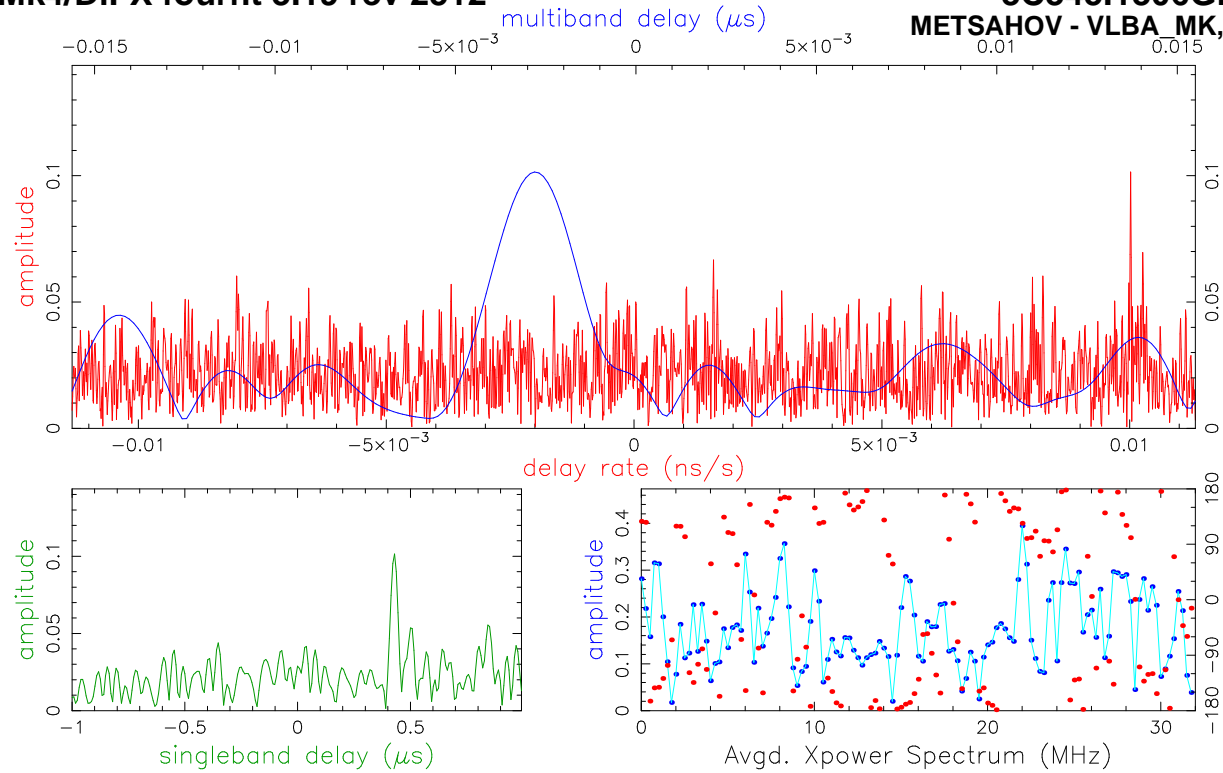
RMS Theor. Amplitude 0.120 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 45.6 34.0 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 73.9 59.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 42.8 39.3 Inc. seg. avg. 0.132 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 53.2 68.5 Inc. frq. avg. 0.119 Data rate(Mb/s): 2048 nlags: 128 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/v2/1234/No0009/Zm..1306GF Output file: /Exps/c192a/v2/1234/No0009/Zm.W.359.1306GF



Mk4/DiFX fourfit 3.19 rev 2512

3C345.1306GF, No0009, Zm  
METSAROV - VLBA\_MK, fgroup W, pol RR

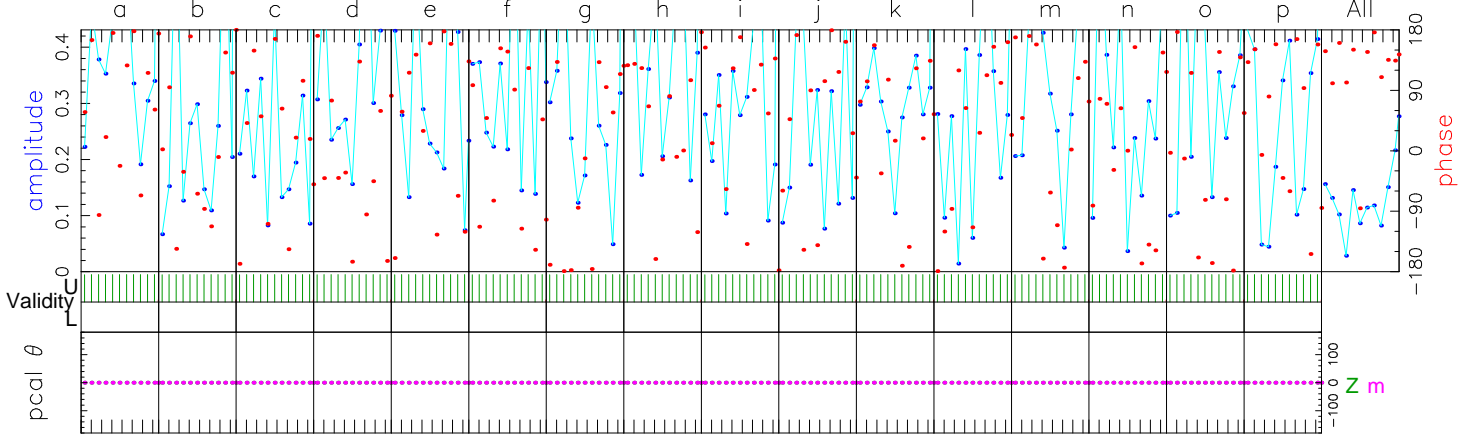


Fringe quality 0

SNR 5.7  
Int time 418.895  
Amp 0.144  
Phase 142.7  
PFD 9.6e-01  
Delays (us)  
SBD 0.428566  
MBD -0.002790  
Fringe rate (Hz) 0.864223  
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 2020:083:025951  
2020:093:045112  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	183.9				
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Group delay (usec)(sbd)		5.44833908427E+03																Apriori delay (usec)	5.44790437380E+03	Resid mbdelay (usec)	-2.78953E-03	+/-	1.9E-04
Sband delay (usec)		5.44833293930E+03																Apriori clock (usec)	-2.3816485E+08	Resid sbdelay (usec)	4.28566E-01	+/-	3.0E-03
Phase delay (usec)		5.44790437840E+03																Apriori clockrate (us/s)	2.4985100E-08	Resid phdelay (usec)	4.60101E-06	+/-	6.5E-07
Delay rate (us/s)		-1.71193377069E+00																Apriori rate (us/s)	-1.71194380346E+00	Resid rate (us/s)	1.00328E-05	+/-	2.7E-09
Total phase (deg)				55.9														Apriori accel (us/s/s)	9.20117244546E-06	Resid phase (deg)	142.7	+/-	20.1

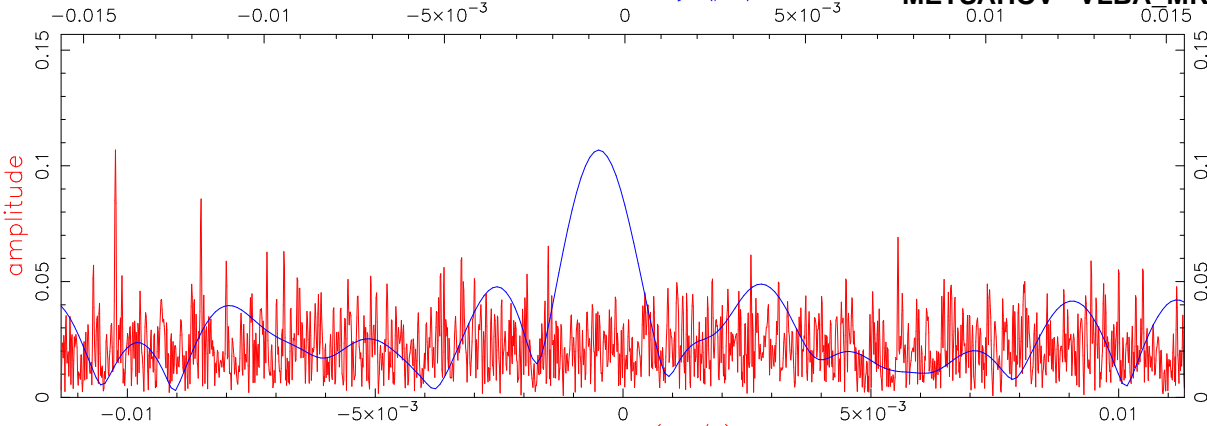
ph/seg (deg) 46.2 34.9 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 51.3 60.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 49.1 40.3 Inc. seg. avg. 0.146 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 44.1 70.3 Inc. frq. avg. 0.143 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite 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 ion window (TEC) 0.00 0.00  
 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/Zm..1306GF Output file: /Exps/c192a/v2/1234/No0009/Zm.W.380.1306GF

Mk4/DiFX fourfit 3.19 rev 2512

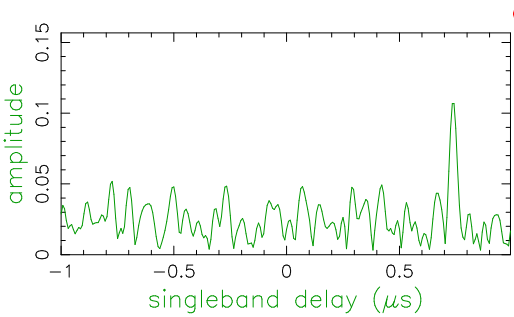
3C345.1306GF, No0009, Zm  
 METSAHOV - VLBA\_MK, fgroup W, pol LR

multiband delay ( $\mu$ s)

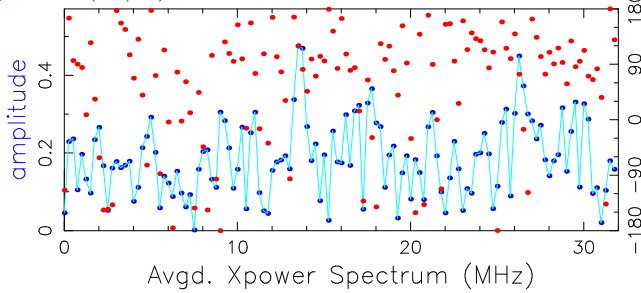


Fringe quality 0

SNR 6.1  
 Int time 418.895  
 Amp 0.157  
 Phase 48.8  
 PFD 2.4e-01  
 Delays (us)  
 SBD 0.738240  
 MBD -0.000726  
 Fringe rate (Hz)  
 -0.883291  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

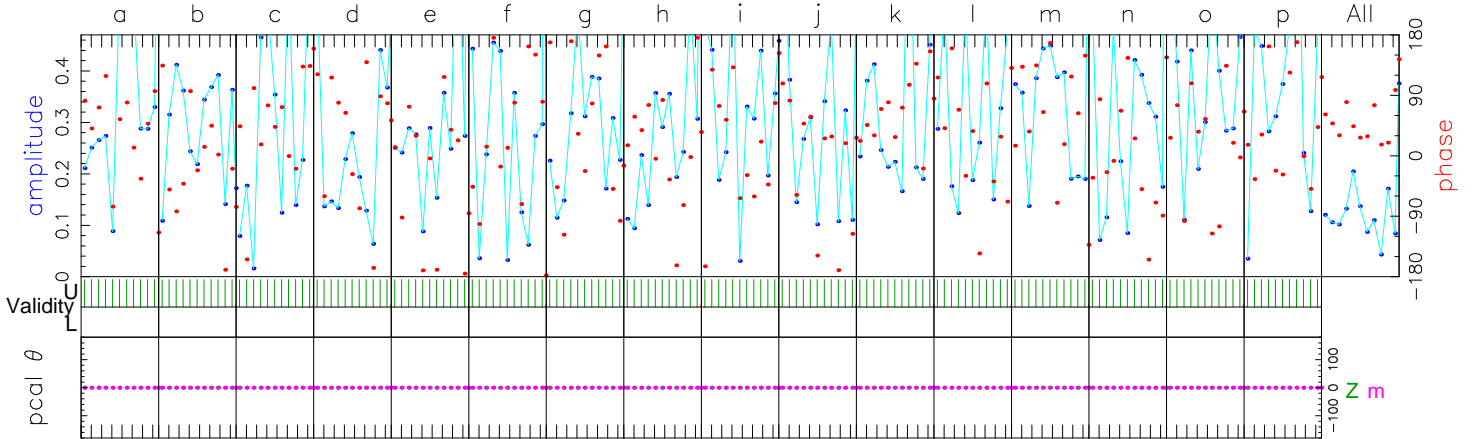


delay rate (ns/s)



Exp. c192a  
 Exper # 16383  
 Yr:day 2019:276  
 Start 203000.00  
 Stop 203659.84  
 FRT 203330.00  
 Corr/FF/build  
 2020:083:025951  
 2020:093:045116  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec

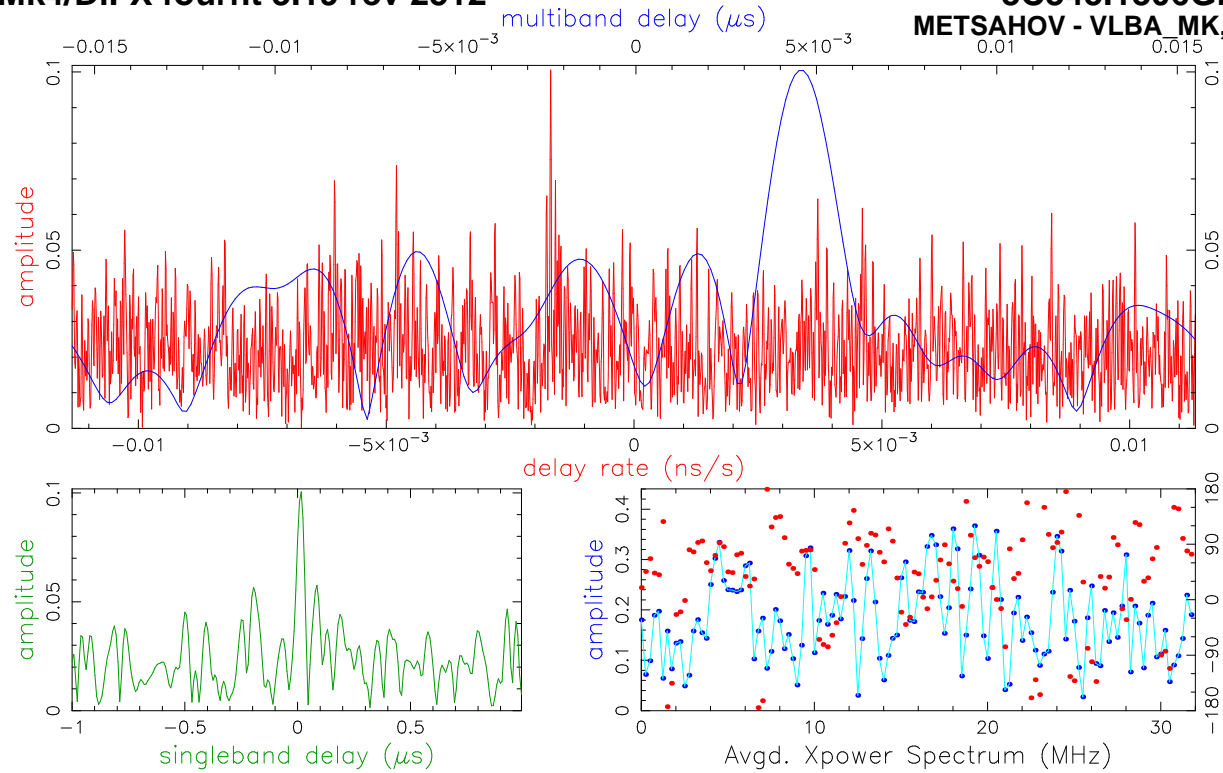


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	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	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	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	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)			5.44865364814E+03								5.44790437380E+03						Resid mbdelay (usec)	-7.25659E-04	+/- 1.8E-04
Sband delay (usec)			5.44864261330E+03								-2.3816485E+00						Resid sbdelay (usec)	7.38240E-01	+/- 2.8E-03
Phase delay (usec)			5.44790437537E+03								2.4985100E-08						Resid phdelay (usec)	1.57266E-06	+/- 6.1E-07
Delay rate (us/s)			-1.71195405760E+00								-1.71194380346E+00						Resid rate (us/s)	-1.02541E-05	+/- 2.5E-09
Total phase (deg)					322.0						9.20117244546E-06						Resid phase (deg)	48.8	+/- 18.8

	RMS	Theor.	Amplitude	0.157 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	27.0	32.5	Search (2048X64)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	43.9	56.7	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	36.5	37.5	Inc. seg. avg.	0.148	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	56.3	65.5	Inc. frq. avg.	0.152	Data rate(Mb/s): 2048	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/v2/1234/No0009/Zm..1306GF Output file: /Exps/c192a/v2/1234/No0009/Zm.W.398.1306GF

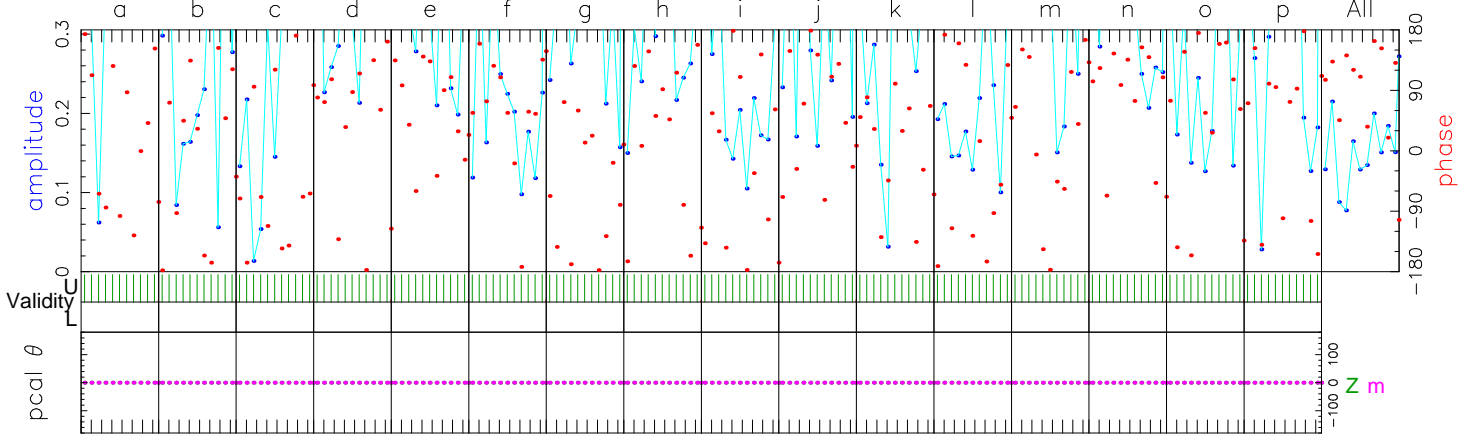


Fringe quality 0

SNR 5.6  
 Int time 418.889  
 Amp 0.102  
 Phase 114.0  
 PFD 9.8e-01  
 Delays (us)  
 SBD 0.013968  
 MBD 0.004592  
 Fringe rate (Hz)  
 -0.144886  
 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  
 2020:083:025951  
 2020:093:045120  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	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	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
Z:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)	5.44790896587E+03			Apriori delay (usec)			5.44790437380E+03			Resid mbdelay (usec)			4.59207E-03			+/-	1.9E-04	
Sband delay (usec)	5.44791834180E+03			Apriori clock (usec)			-2.3816485E+00			Resid sbdelay (usec)			1.39680E-02			+/-	3.1E-03	
Phase delay (usec)	5.44790437748E+03			Apriori clockrate (us/s)			2.4985100E-08			Resid phdelay (usec)			3.67667E-06			+/-	6.5E-07	
Delay rate (us/s)	-1.71194548544E+00			Apriori rate (us/s)			-1.71194380346E+00			Resid rate (us/s)			-1.68198E-06			+/-	2.7E-09	
Total phase (deg)	27.3			Apriori accel (us/s/s)			9.20117244546E-06			Resid phase (deg)			114.0			+/-	20.3	

ph/seg (deg) 49.2 35.1 Search (2048X64) 0.099 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 62.8 61.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.9 40.6 Inc. seg. avg. 0.126 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 60.3 70.8 Inc. frq. avg. 0.110 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite 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 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v2/1234/No0009/Zm..1306GF Output file: /Exps/c192a/v2/1234/No0009/Zm.W.406.1306GF