

Fringe quality 9

SNR 14.8

Int time 419.310

Amp 0.264

Phase -118.3

PFD 1.5e-40

Delays (us)

SBD 0.000804

MBD 0.006682

Fringe rate (Hz)

-0.006101

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213000.00

Stop 213659.84

FRT 213330.00

Corr/FF/build

2020:079:073823

2020:086:094023

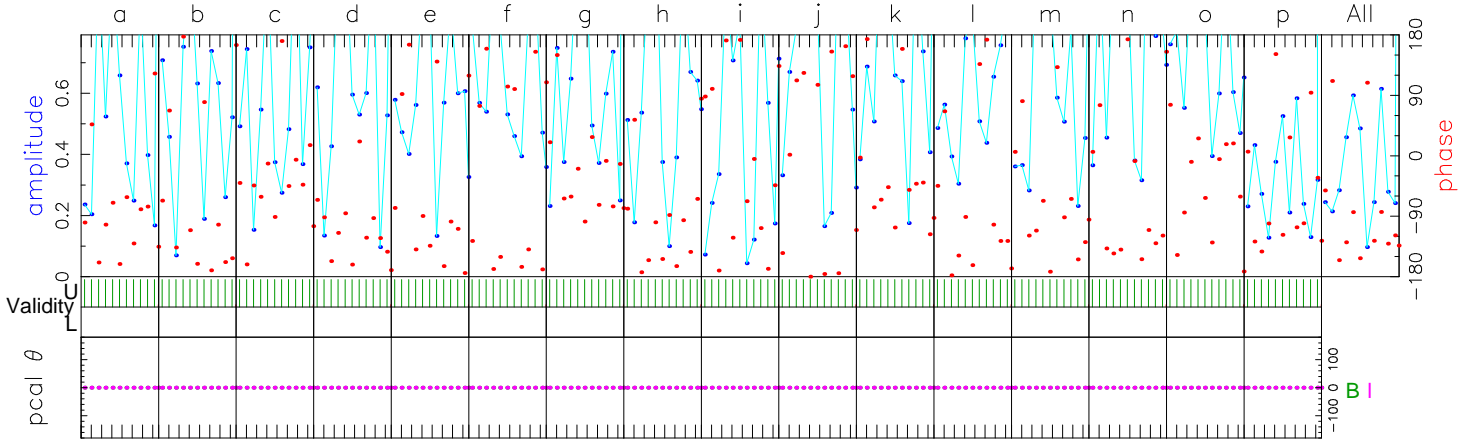
2020:014:135814

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
	-106.3	-143.9	-34.1	-107.1	-129.3	178.2	-50.3	-119.6	-157.0	146.0	-70.7	-138.8	-109.2	-139.2	-10.9	-119.9	Phase	-118.3
	0.4	0.3	0.4	0.5	0.4	0.5	0.4	0.5	0.3	0.5	0.4	0.4	0.3	0.5	0.4	0.4	Ampl.	0.4
	129.7	129.5	128.5	128.9	128.8	129.3	129.4	129.4	129.6	129.0	129.6	129.3	130.5	128.6	129.6	8.1	Sbd box	129.1
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	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B: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	
B: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	
B	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	
B	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	
	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)	-1.03619004853E+04			Apriori delay (usec)			-1.03619071671E+04			Resid mbdelay (usec)			6.68179E-03			+/-	7.3E-05	
Sband delay (usec)	-1.03619063631E+04			Apriori clock (usec)			1.7572041E+01			Resid sbdelay (usec)			8.04000E-04			+/-	1.2E-03	
Phase delay (usec)	-1.03619071709E+04			Apriori clockrate (us/s)			1.5147200E-07			Resid phdelay (usec)			-3.81434E-06			+/-	2.5E-07	
Delay rate (us/s)	-1.09793799082E+00			Apriori rate (us/s)			-1.09793792000E+00			Resid rate (us/s)			-7.08274E-08			+/-	1.0E-09	
Total phase (deg)	-252.9			Apriori accel (us/s/s)			6.87126527965E-05			Resid phase (deg)			-118.3			+/-	7.8	

ph/seg (deg) 63.4 13.4 Search (2048X64) 0.250 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

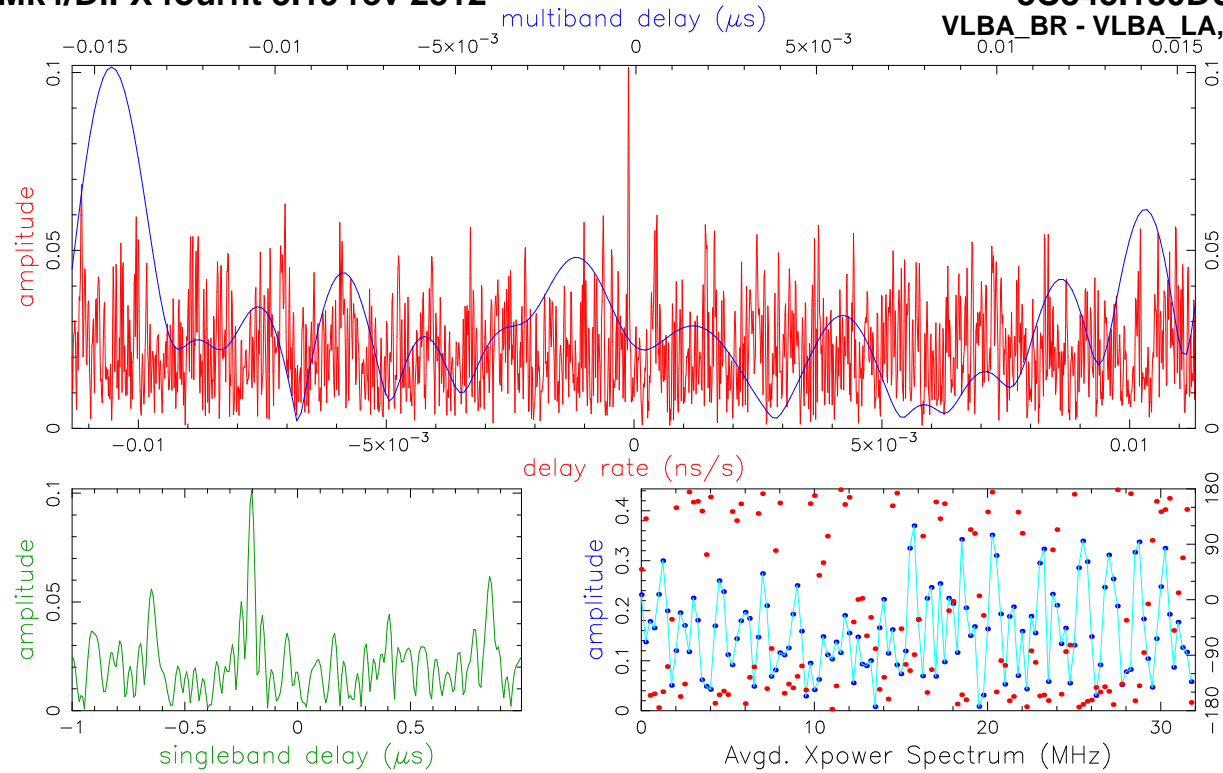
amp/seg (%) 102.1 23.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 54.9 15.5 Inc. seg. avg. 0.348 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 55.2 27.1 Inc. frq. avg. 0.385 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

B: az 299.0 el 28.6 pa 46.4 I: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 8301.713 5668.423 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/BI..130DUS Output file: /Exps/c192b/v2/1234/No0115/BI.W.10.130DUS

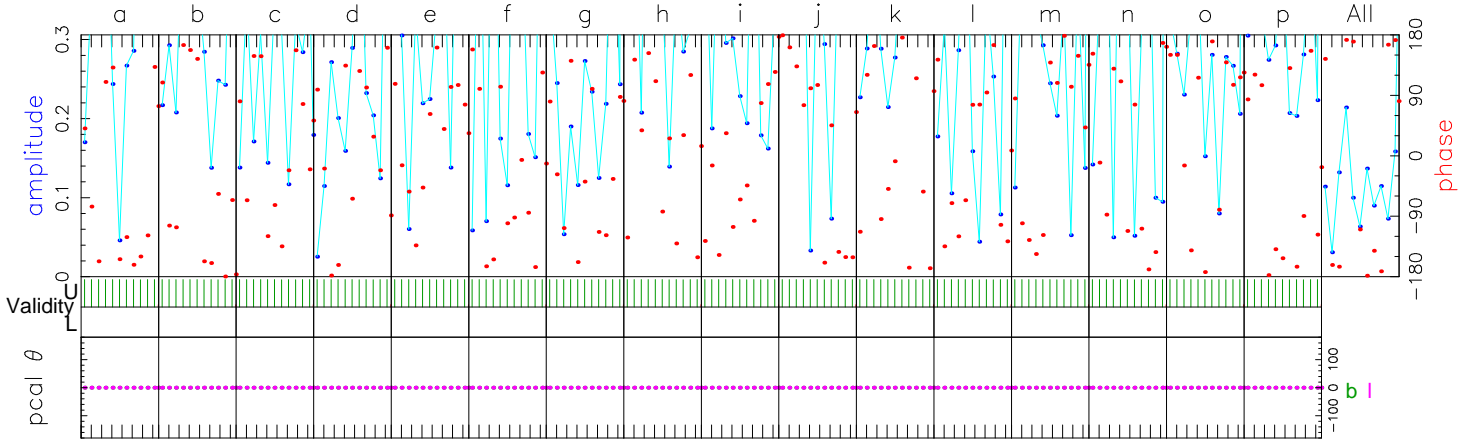


Fringe quality 0

SNR 5.7  
Int time 418.469  
Amp 0.102  
Phase 179.6  
PFD 9.4e-01  
Delays (us)  
SBD -0.204810  
MBD -0.014521  
Fringe rate (Hz)  
-0.009319  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094027  
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

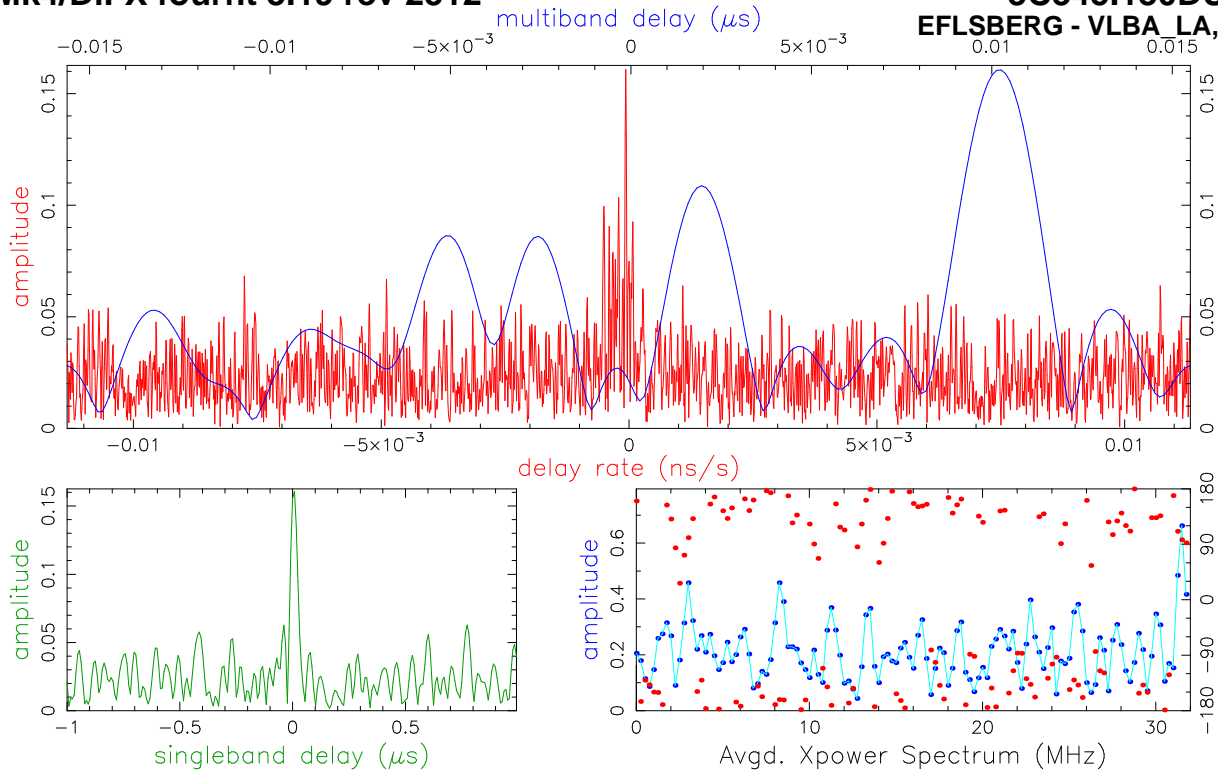


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-168.2	-165.3	-118.3	147.7	82.5	177.1	5.8	164.8	-111.1	157.6	-158.9	-132.1	-170.7	-149.2	146.4	168.5	Phase	179.6
	0.2	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
	92.6	132.9	9.7	237.9	226.1	131.5	235.9	163.1	227.3	35.9	242.2	172.0	167.4	89.6	56.5	229.3	Sbd box	102.8
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	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	-1.20039741173E+03			Apriori delay (usec)			-1.20019539113E+03			Resid mbdelay (usec)			-1.45206E-02			+/- 1.9E-04		
Sband delay (usec)	-1.20040020113E+03			Apriori clock (usec)			1.3815972E-01			Resid sbdelay (usec)			-2.04810E-01			+/- 3.0E-03		
Phase delay (usec)	-1.20019538534E+03			Apriori clockrate (us/s)			1.0907692E-07			Resid phdelay (usec)			5.79294E-06			+/- 6.5E-07		
Delay rate (us/s)	1.05871637459E-01			Apriori rate (us/s)			1.05871745641E-01			Resid rate (us/s)			-1.08183E-07			+/- 2.7E-09		
Total phase (deg)	-177.6			Apriori accel (us/s/s)			1.79324623858E-05			Resid phase (deg)			179.6			+/- 20.1		

ph/seg (deg) RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 54.3 60.7 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 63.0 40.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 56.4 70.1 Inc. seg. avg. 0.096 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 b: az 95.6 el 63.8 pa -59.9 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -755.590 2271.528 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/bl..130DUS Output file: /Exps/c192b/v2/1234/No0115/bl.W.26.130DUS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, BI  
EFLSBERG - VLBA LA, fgroup W, pol RR

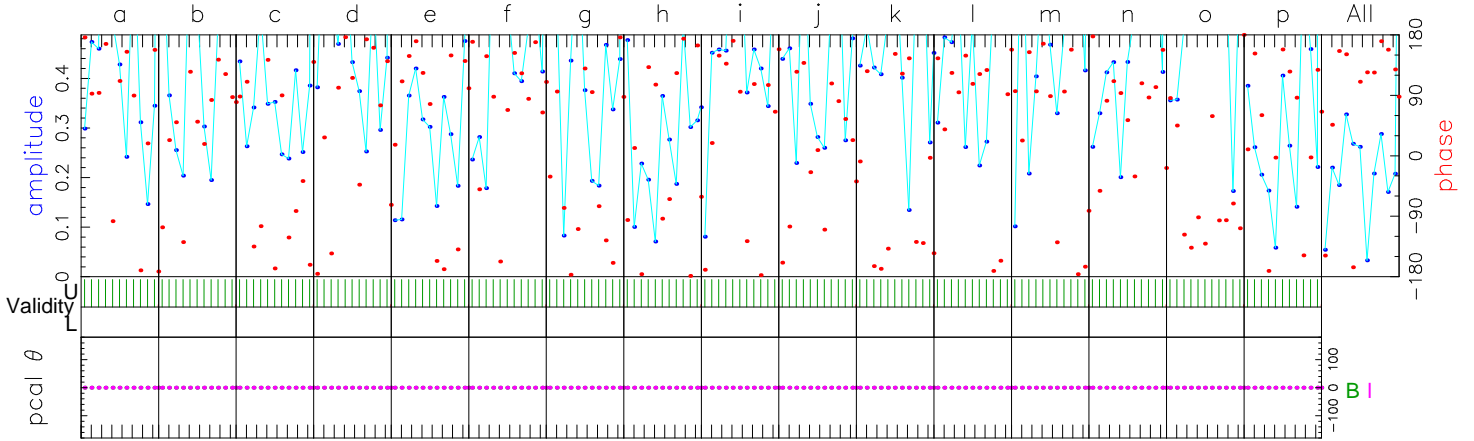


Fringe quality 9

SNR 9.1  
Int time 419.310  
Amp 0.163  
Phase 142.0  
PFD 3.3e-11  
Delays (us)  
SBD 0.005116  
MBD 0.010191  
Fringe rate (Hz)  
-0.005840  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
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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

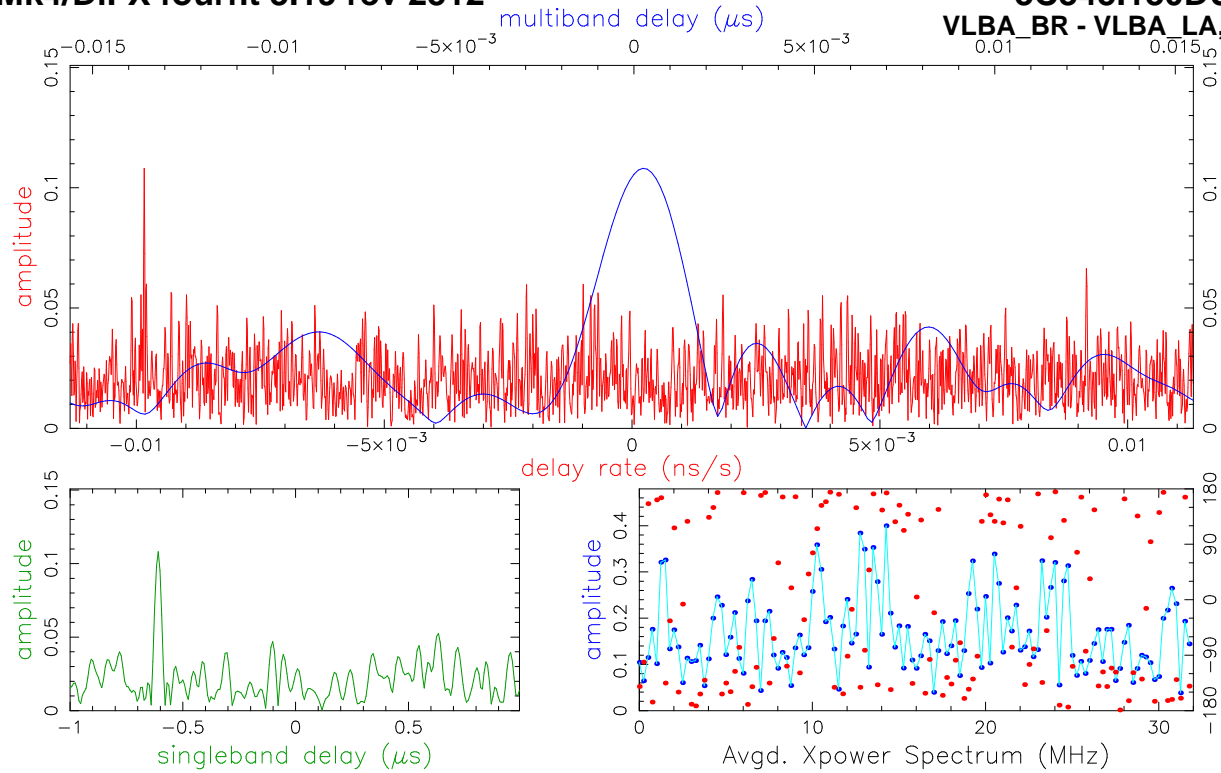


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	140.0	98.4	-160.9	145.8	148.9	118.9	-161.3	-157.0	126.9	94.1	-169.4	124.8	139.3	90.4	-107.4	96.9	Phase	142.0
B	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.3	0.1	0.2	0.3	0.2	0.3	0.3	0.1	Ampl.	0.2
I	129.7	228.6	92.1	200.8	138.8	129.7	16.7	6.1	129.7	190.1	129.9	130.0	166.7	130.6	129.5	38.0	Sbd box	129.7
B:1	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:l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:1	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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	
I	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	
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)	-1.03618969760E+04			Apriori delay (usec)			-1.03619071671E+04			Resid mbdelay (usec)			1.01911E-02			+/- 1.2E-04		
Sband delay (usec)	-1.03619020511E+04			Apriori clock (usec)			1.7572041E+01			Resid sbdelay (usec)			5.11600E-03			+/- 1.9E-03		
Phase delay (usec)	-1.03619071625E+04			Apriori clockrate (us/s)			1.5147200E-07			Resid phdelay (usec)			4.57930E-06			+/- 4.1E-07		
Delay rate (us/s)	-1.09793798779E+00			Apriori rate (us/s)			-1.09793792000E+00			Resid rate (us/s)			-6.77969E-08			+/- 1.7E-09		
Total phase (deg)	7.3			Apriori accel (us/s/s)			6.87126527965E-05			Resid phase (deg)			142.0			+/- 12.6		
ph/seg (deg)	RMS	Theor.	Amplitude		0.163 +/- 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 (%)	42.6	21.8	Search (2048X64)		0.160		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016 0.016					
ph/frq (deg)	71.2	38.0	Interp.		0.000		Sample rate(MISamp/s): 64				dr window (ns/s)		-0.011 0.011					
amp/frq (%)	49.9	25.2	Inc. seg. avg.		0.194		Data rate(Mb/s): 2048		nlags: 128		ion window (TEC)		0.00 0.00					
	57.5	43.9	Inc. frq. avg.		0.205													
B: az 299.0 el 28.6 pa 46.4	I: az 70.2 el 72.7 pa -97.6			u,v (fr/asec) 8301.713 5668.423									simultaneous interpolator					

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/BI..130DUS Output file: /Exps/c192b/v2/1234/No0115/BI.W.29.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, bl  
VLBA\_BR - VLBA\_LA, fgroup W, pol LR

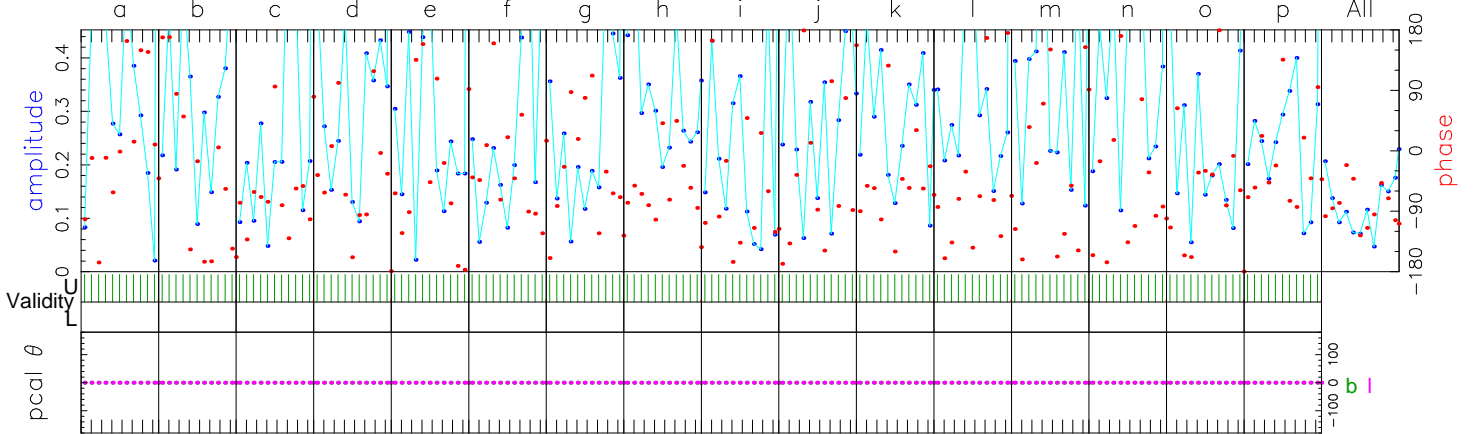


Fringe quality 0

SNR 6.0  
Int time 418.470  
Amp 0.151  
Phase -81.3  
PFD 3.2e-01  
Delays (us)  
SBD -0.609901  
MBD 0.000255  
Fringe rate (Hz)  
-0.849378  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
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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					
	-26.3	-166.1	-91.9	-46.5	-103.6	-74.5	-58.4	-54.2	-120.2	-112.6	-59.0	-112.6	-164.4	-83.6	-83.2	-42.9		Phase	-81.3				
	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.3	0.3	0.1	0.2	0.2	0.2		Ampl.	0.1				
	85.9	105.6	202.7	73.8	185.9	210.8	239.0	50.4	126.4	211.6	114.9	64.9	237.3	89.9	69.1	122.0		Sbd box	50.9				
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
b:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-1.20082013614E+03															Apriori delay (usec)	-1.20019539113E+03	Resid mbdelay (usec)	2.54991E-04	+/-	1.8E-04
Sband delay (usec)			-1.20080529213E+03															Apriori clock (usec)	1.3815972E-01	Resid sbdelay (usec)	-6.09901E-01	+/-	2.8E-03
Phase delay (usec)			-1.20019539376E+03															Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	-2.62236E-06	+/-	6.1E-07
Delay rate (us/s)			1.05861885199E-01															Apriori rate (us/s)	1.05871745641E-01	Resid rate (us/s)	-9.86044E-06	+/-	2.5E-09
Total phase (deg)					-78.5													Apriori accel (us/s/s)	1.79324623858E-05	Resid phase (deg)	-81.3	+/-	18.9

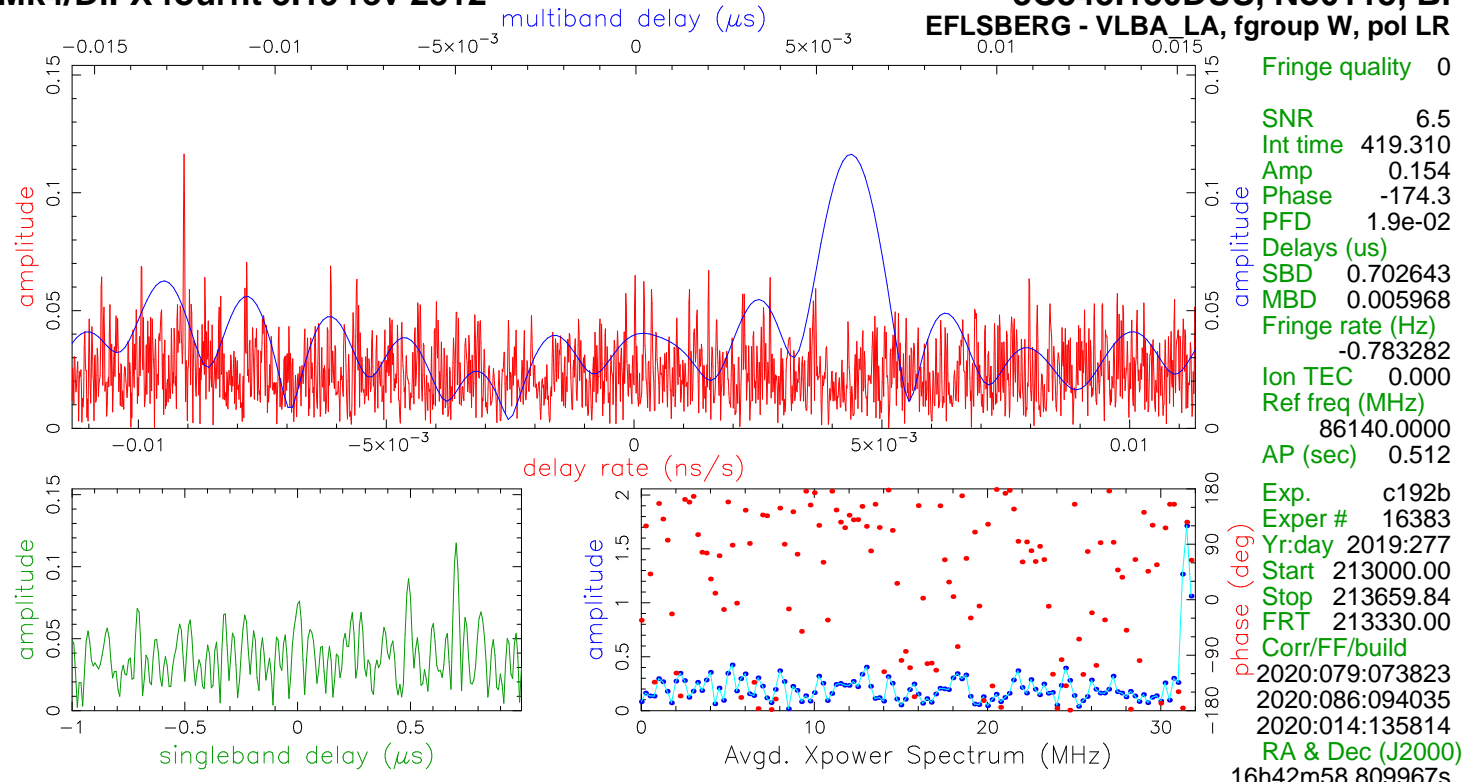
ph/seg (deg) 30.9 32.8  
amp/seg (%) 46.2 57.3  
ph/frq (deg) 42.9 37.9  
amp/frq (%) 51.6 66.1

RMS Theor. Amplitude 0.151 +/- 0.025  
Search (2048X64) 0.101  
Interp. 0.000  
Inc. seg. avg. 0.148  
Inc. frq. avg. 0.147

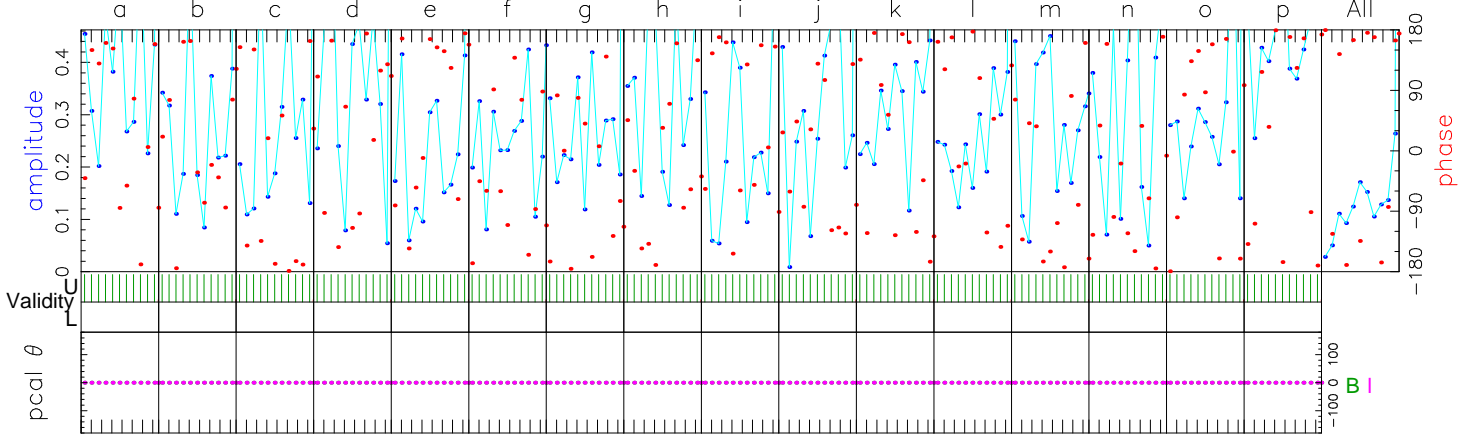
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

b: az 95.6 el 63.8 pa -59.9 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -755.590 2271.528 simultaneous interpolator

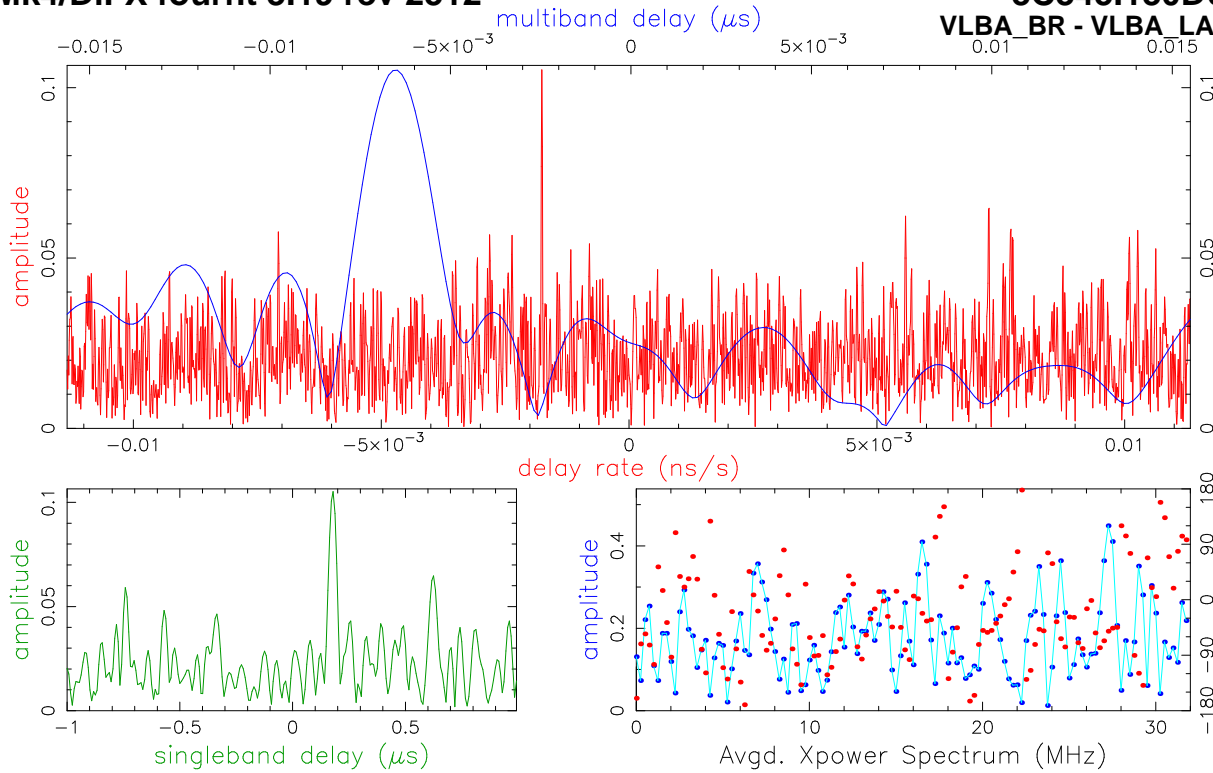
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/bl..130DUS Output file: /Exps/c192b/v2/1234/No0115/bl.W.49.130DUS



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								
-173.6	58.3	-175.0	-162.8	177.2	-166.5	176.6	-167.6	-148.8	-133.8	-162.6	167.0	174.0	-141.9	144.6	179.0	Phase	-174.3								
0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.3	0.1	0.7	0.1	Ampl.	0.1								
63.9	33.0	144.7	216.4	233.3	234.6	254.6	63.0	162.6	112.2	148.6	6.2	99.4	85.8	15.0	156.4	Sbd box	218.9								
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	APs used									
B	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	PC phase									
B: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	ManI PC									
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp									
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000										
B	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								
Group delay (usec)(sbd)																	-1.03612136987E+04	Apriori delay (usec)	-1.03619071671E+04	Resid mbdelay (usec)	5.96841E-03	+/-	1.7E-04		
Sband delay (usec)																	-1.03612045241E+04	Apriori clock (usec)	1.7572041E+01	Resid sbdelay (usec)	7.02643E-01	+/-	2.6E-03		
Phase delay (usec)																	-1.03619071727E+04	Apriori clockrate (us/s)	1.5147200E-07	Resid phdelay (usec)	-5.62209E-06	+/-	5.7E-07		
Delay rate (us/s)																	-1.09794701313E+00	Apriori rate (us/s)	-1.09793792000E+00	Resid rate (us/s)	-9.09313E-06	+/-	2.3E-09		
Total phase (deg)																	-309.0	Apriori accel (us/s/s)	6.87126527965E-05	Resid phase (deg)	-174.3	+/-	17.6		
ph/seg (deg)																	RMS	Theor.	Amplitude	0.154 +/- 0.024	Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5				
amp/seg (%)																	37.5	30.4	Search (2048X64)	0.111	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				
ph/frq (deg)																	169.8	53.1	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled				
amp/frq (%)																	39.9	35.1	Inc. seg. avg.	0.163	Sample rate(MISamp/s): 64				
																	97.0	61.3	Inc. frq. avg.	0.141	Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite				
B: az 299.0 el 28.6 pa 46.4																	I: az 70.2 el 72.7 pa -97.6			u,v (fr/asec) 8301.713 5668.423			simultaneous interpolator		
Control file: cf_1234_gmva																	Input file: /Exps/c192b/v2/1234/No0115/BI..130DUS			Output file: /Exps/c192b/v2/1234/No0115/BI.W.57.130DUS					

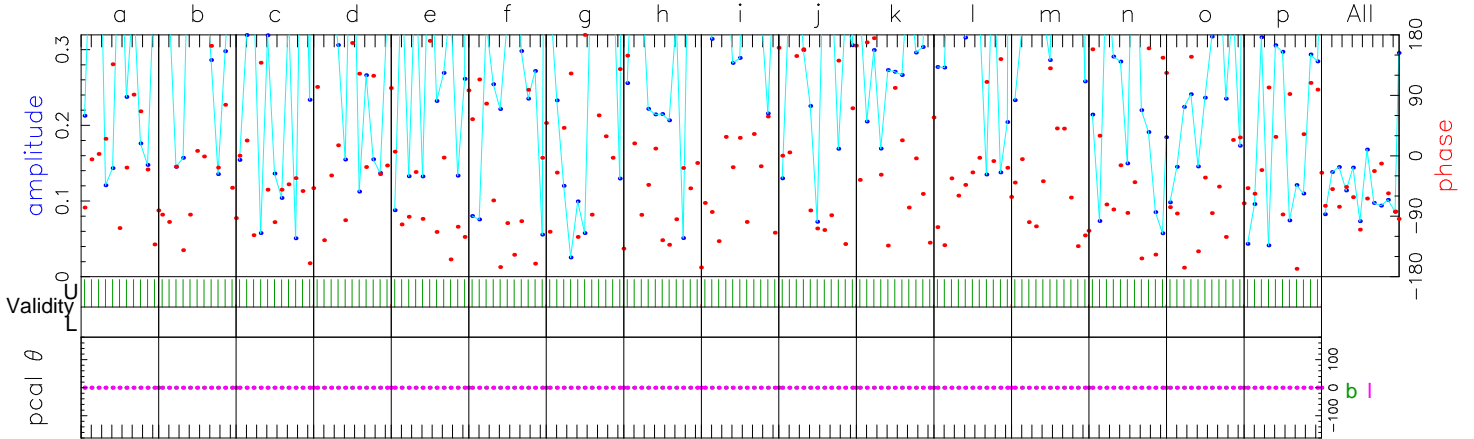


Fringe quality 0

SNR 5.9  
Int time 418.470  
Amp 0.107  
Phase -59.5  
PFD 6.0e-01  
Delays (us)  
SBD 0.178235  
MBD -0.006518  
Fringe rate (Hz)  
-0.151629  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094040  
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	-56.2	-57.2	-7.6	-108.4	-144.5	-3.3	-50.5	-55.0	-135.4	-77.6	-41.6	-63.6	-76.7	-68.6	31.1	Phase	-59.5				
	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.1	0.1	0.1	Ampl.	0.1				
	138.7	111.3	174.6	126.7	131.9	219.5	66.3	206.3	18.5	206.0	90.9	151.1	22.2	124.2	69.6	186.8	Sbd box	151.8				
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
b:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
l	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					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.20001440879E+03														Apriori delay (usec)	-1.20019539113E+03	Resid mbdelay (usec)	-6.51765E-03	+/-	1.8E-04
Sband delay (usec)			-1.20001715663E+03														Apriori clock (usec)	1.3815972E-01	Resid sbdelay (usec)	1.78235E-01	+/-	2.9E-03
Phase delay (usec)			-1.20019539305E+03														Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	-1.91871E-06	+/-	6.3E-07
Delay rate (us/s)			1.05869985379E-01														Apriori rate (us/s)	1.05871745641E-01	Resid rate (us/s)	-1.76026E-06	+/-	2.6E-09
Total phase (deg)																	Apriori accel (us/s/s)	1.79324623858E-05	Resid phase (deg)	-59.5	+/-	19.4

ph/seg (deg) 26.3 33.6  
amp/seg (%) 32.7 58.7  
ph/frq (deg) 47.5 38.8  
amp/frq (%) 58.3 67.8

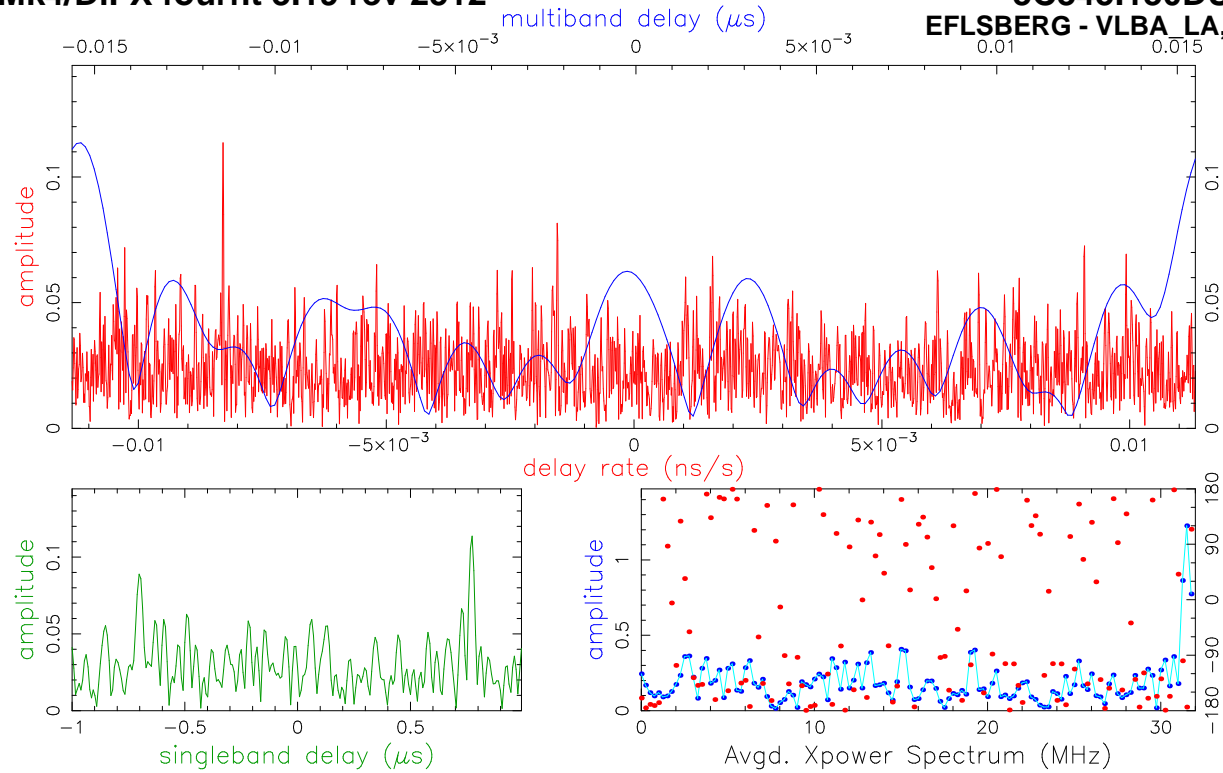
RMS Theor. Amplitude 0.107 +/- 0.018  
Search (2048X64) 0.102  
Interp. 0.000  
Inc. seg. avg. 0.099  
Inc. frq. avg. 0.104

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

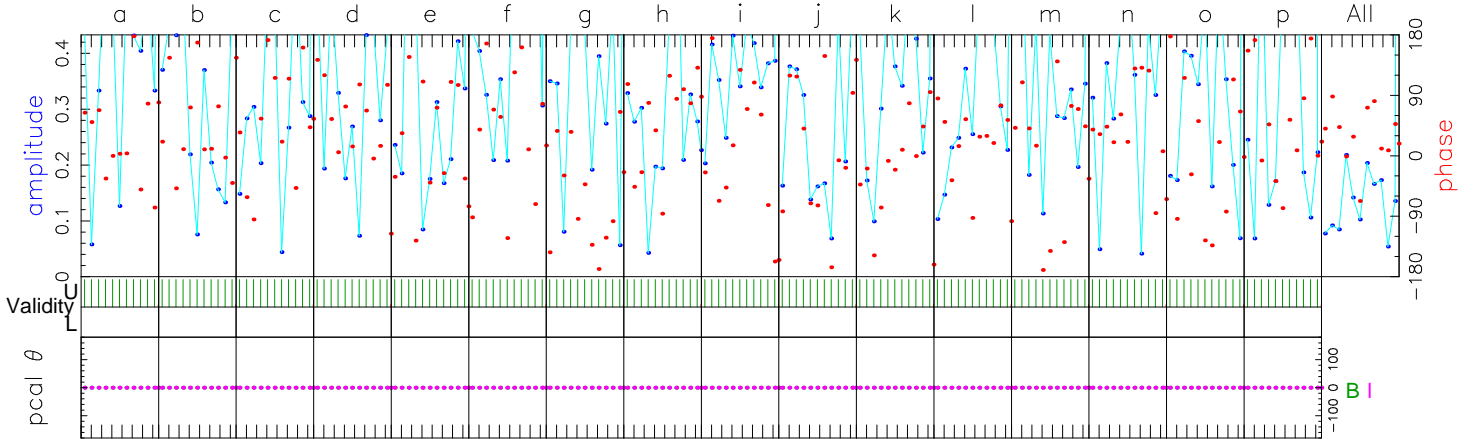
b: az 95.6 el 63.8 pa -59.9 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -755.590 2271.528 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/bl..130DUS Output file: /Exps/c192b/v2/1234/No0115/bl.W1.130DUS



Fringe quality 0  
SNR 6.4  
Int time 419.310  
Amp 0.144  
Phase 34.3  
PFD 3.8e-02  
Delays (us)  
SBD 0.771521  
MBD -0.015383  
Fringe rate (Hz)  
-0.715419  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094040  
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



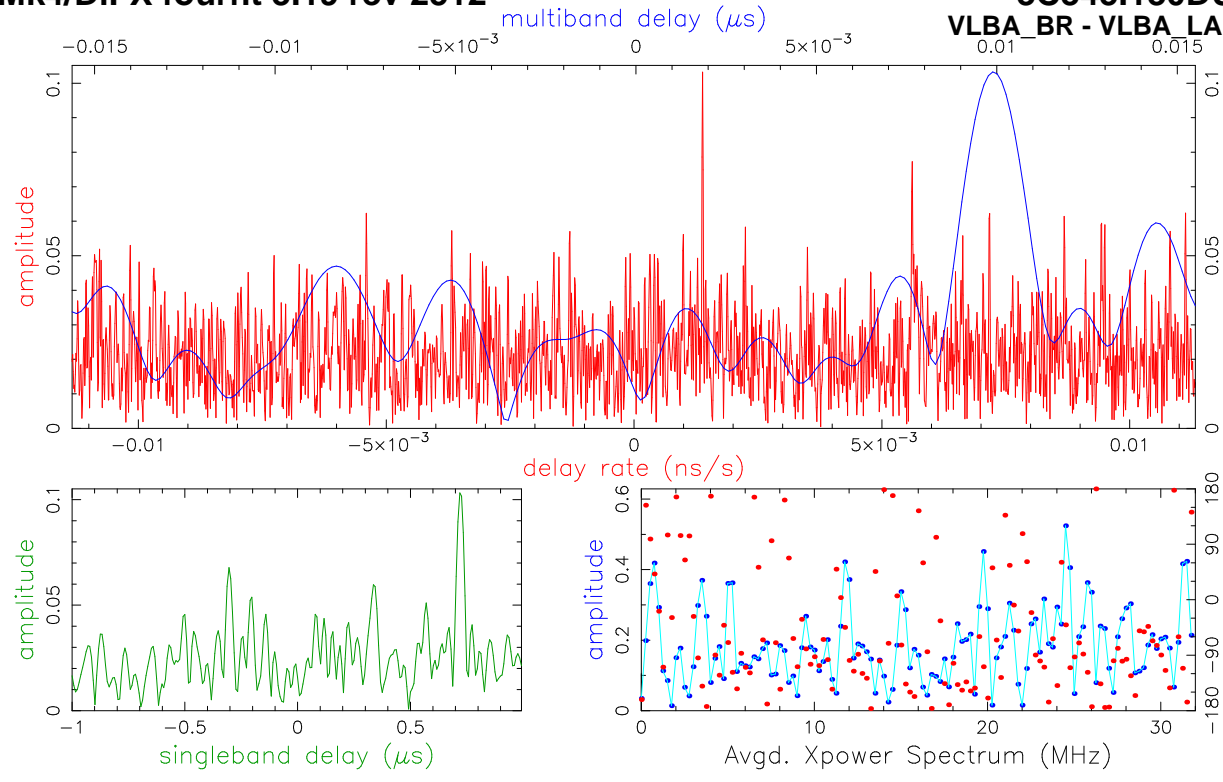
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	10.8	11.1	103.4	60.6	103.8	64.4	-87.5	82.4	70.6	73.0	3.7	28.5	72.2	43.6	-20.0	17.3		Phase	34.3
B	0.2	0.2	0.0	0.3	0.1	0.1	0.2	0.2	0.0	0.1	0.3	0.3	0.2	0.3	0.1	0.5		Ampl.	0.2
I	55.4	210.7	153.2	146.6	216.5	158.0	38.0	139.3	165.8	219.4	68.6	227.3	93.5	37.1	135.8	71.1		Sbd box	227.8
B:	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:l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
B:	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
B:l	0:0	0:0	0:0	0:0	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	
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
B	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	

Group delay (usec)(sbd) -1.03611413003E+04 Apriori delay (usec) -1.03619071671E+04 Resid mbdelay (usec) -1.53832E-02 +/- 1.7E-04  
 Sband delay (usec) -1.03611356461E+04 Apriori clock (usec) 1.7572041E+01 Resid sbdelay (usec) 7.71521E-01 +/- 2.7E-03  
 Phase delay (usec) -1.03619071660E+04 Apriori clockrate (us/s) 1.5147200E-07 Resid phdelay (usec) 1.10511E-06 +/- 5.8E-07  
 Delay rate (us/s) -1.09794622530E+00 Apriori rate (us/s) -1.09793792000E+00 Resid rate (us/s) -8.30530E-06 +/- 2.4E-09  
 Total phase (deg) -100.4 Apriori accel (us/s/s) 6.87126527965E-05 Resid phase (deg) 34.3 +/- 17.9

RMS Theor. Amplitude 0.144 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 42.1 30.9 Search (2048X64) 0.111 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 125.9 54.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 52.1 35.7 Inc. seg. avg. 0.157 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 82.5 62.3 Inc. frq. avg. 0.154 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, bl  
VLBA\_BR - VLBA\_LA, fgroup W, pol LL

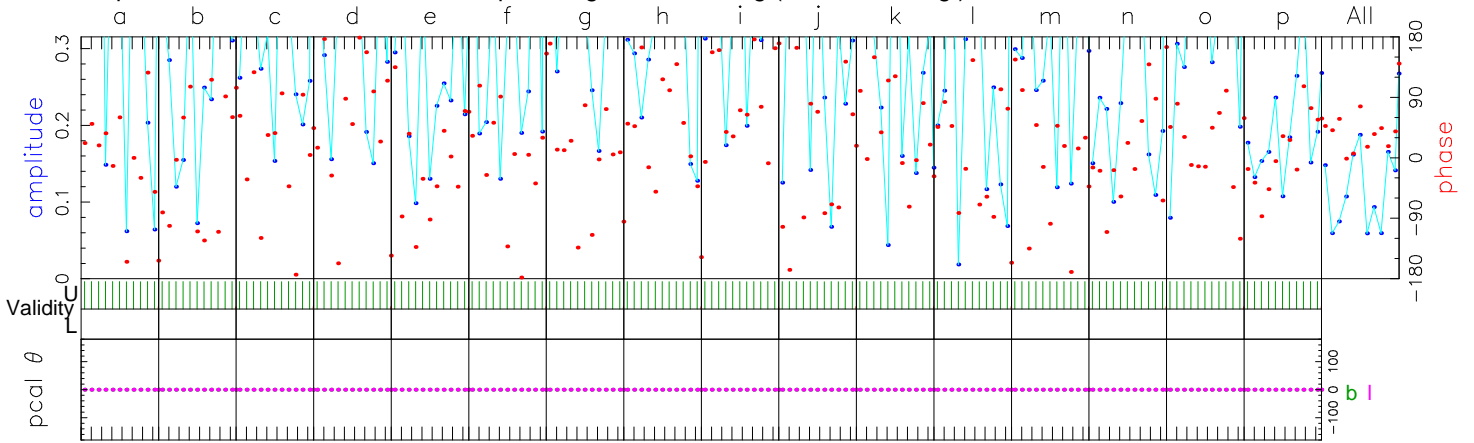


Fringe quality 0

SNR 5.8  
Int time 418.470  
Amp 0.105  
Phase 36.1  
PFD 7.2e-01  
Delays (us)  
SBD 0.721928  
MBD 0.009945  
Fringe rate (Hz) 0.119405  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094023  
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				
	18.1	143.6	47.7	95.2	-25.4	15.0	24.4	75.8	94.4	-172.0	71.3	33.2	24.6	-4.7	20.7	15.1	Phase	36.1				
	0.3	0.0	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1				
	222.5	205.4	155.2	161.9	51.1	63.1	4.5	223.4	174.0	38.0	199.8	31.3	255.2	235.2	222.5	201.0	Sbd box	221.4				
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
b	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					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Group delay (usec)(sbd)			-1.19946669577E+03														Apriori delay (usec)	-1.20019539113E+03	Resid mbdelay (usec)	9.94536E-03	+/-	1.8E-04
Sband delay (usec)			-1.19947346363E+03														Apriori clock (usec)	1.3815972E-01	Resid sbdelay (usec)	7.21928E-01	+/-	2.9E-03
Phase delay (usec)			-1.20019538997E+03														Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	1.16514E-06	+/-	6.3E-07
Delay rate (us/s)			1.05873131817E-01														Apriori rate (us/s)	1.05871745641E-01	Resid rate (us/s)	1.38618E-06	+/-	2.6E-09
Total phase (deg)					-321.1												Apriori accel (us/s/s)	1.79324623858E-05	Resid phase (deg)	36.1	+/-	19.6

ph/seg (deg) 23.7 34.0  
amp/seg (%) 46.8 59.3  
ph/frq (deg) 60.7 39.2  
amp/frq (%) 67.5 68.4

RMS Theor. Amplitude 0.105 +/- 0.018  
Search (2048X64) 0.101  
Interp. 0.000  
Inc. seg. avg. 0.099  
Inc. frq. avg. 0.108

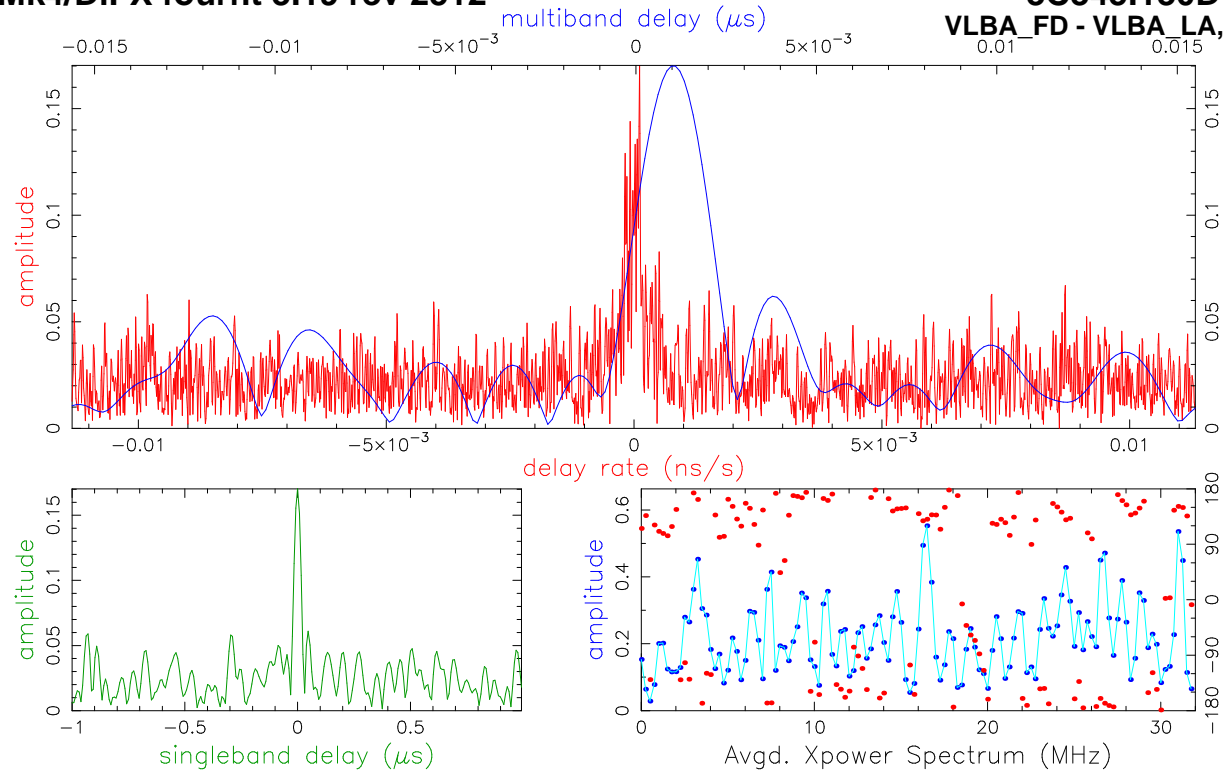
pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MISamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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

b: az 95.6 el 63.8 pa -59.9 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -755.590 2271.528 simultaneous interpolator

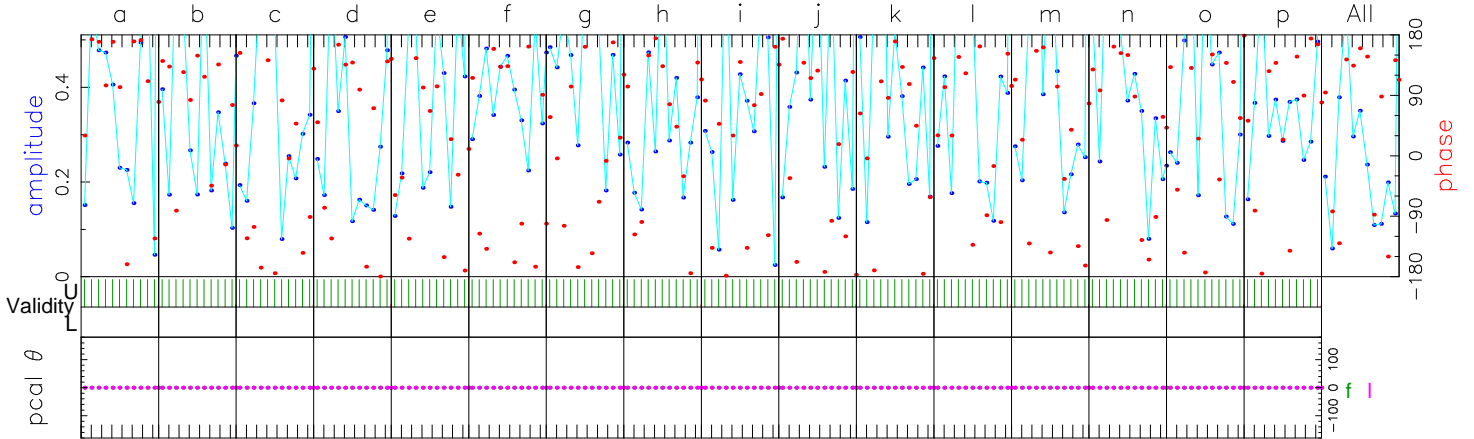
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/bl..130DUS Output file: /Exps/c192b/v2/1234/No0115/bl.W.9.130DUS





Fringe quality 9  
SNR 9.5  
Int time 418.595  
Amp 0.170  
Phase 157.8  
PFD 6.5e-13  
Delays (us)  
SBD -0.000481  
MBD 0.001029  
Fringe rate (Hz) 0.009815  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Yr:exp # 16383  
Start 2020:079:073823  
Stop 2020:079:073823  
FRT 2020:086:094053  
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



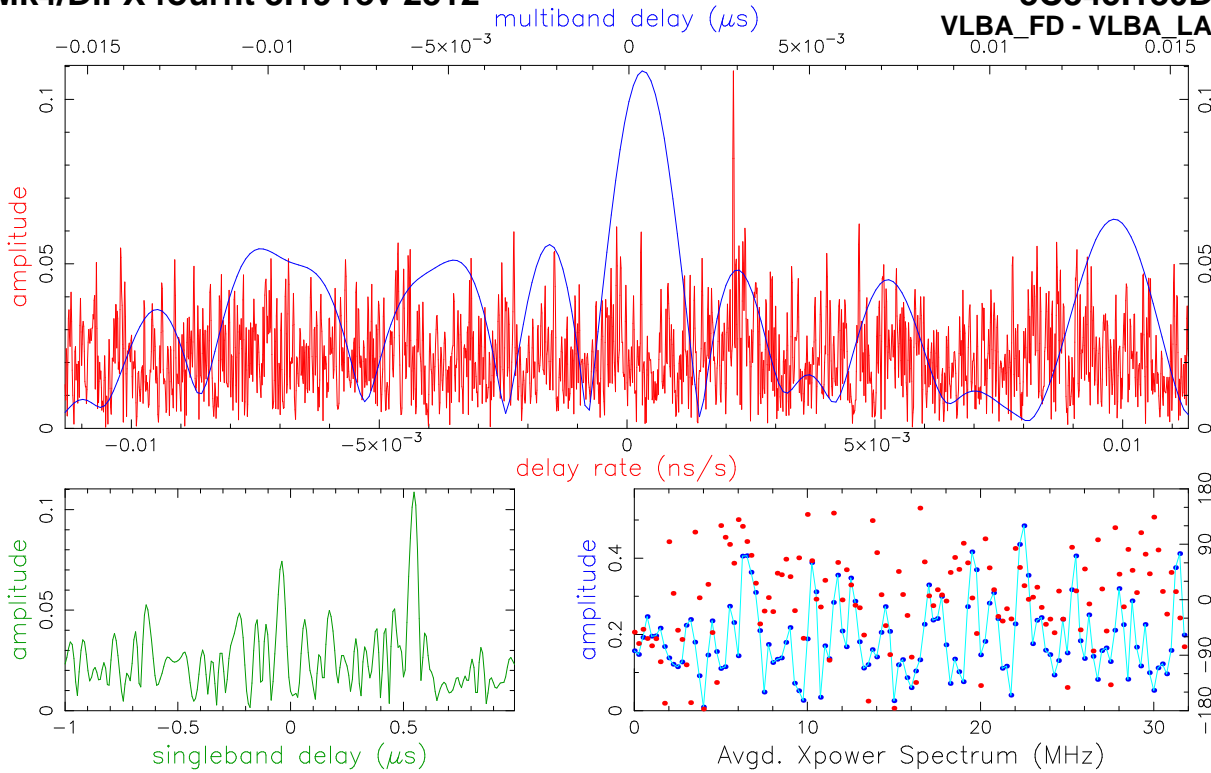
86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
145.5	125.2	-165.1	161.6	169.8	177.3	-166.9	131.9	155.0	172.4	127.2	152.2	172.8	164.5	156.0	158.5	Phase	157.8
0.3	0.1	0.2	0.2	0.1	0.3	0.1	0.2	0.2	0.2	0.3	0.2	0.2	0.2	0.1	0.2	Ampl.	0.2
128.1	162.5	85.6	34.4	179.5	129.8	159.8	209.8	159.1	130.8	130.0	253.7	128.0	3.1	77.1	128.1	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	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f:l 0:0	0:0	0:0	0:0	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:l 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
f W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
l W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
Group delay (usec)(sbd) -8.09307903840E+01 Apriori delay (usec) -8.09318192615E+01 Resid mbdelay (usec) 1.02888E-03 +/- 1.1E-04 Sband delay (usec) -8.09323007615E+01 Apriori clock (usec) 1.2203583E+00 Resid sbdelay (usec) -4.81500E-04 +/- 1.8E-03 Phase delay (usec) -8.09318141739E+01 Apriori clockrate (us/s) 2.6052251E-07 Resid phdelay (usec) 5.08758E-06 +/- 3.9E-07 Delay rate (us/s) -1.84957427270E-02 Apriori rate (us/s) -1.84958566652E-02 Resid rate (us/s) 1.13938E-07 +/- 1.6E-09 Total phase (deg) -170.3 Apriori accel (us/s/s) -4.97842675752E-06 Resid phase (deg) 157.8 +/- 12.0																	

ph/seg (deg) 64.1 20.8 Amplitude 0.170 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 99.6 36.4 Search (2048X64) 0.167 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.6 24.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 35.8 42.0 Inc. seg. avg. 0.231 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 f: az 54.3 el 72.0 pa -113.7 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 128.086 -837.996 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/fl..130DUS Output file: /Exps/c192b/v2/1234/No0115/fl.W.111.130DUS simultaneous interpolator



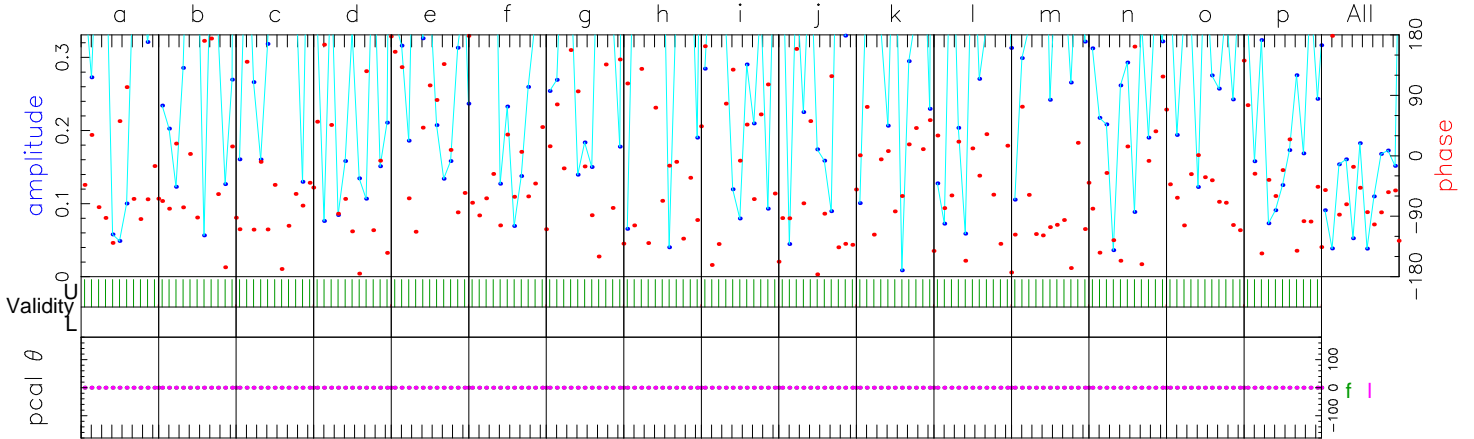
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, fl  
VLBA\_FD - VLBA\_LA, fgroup W, pol RL



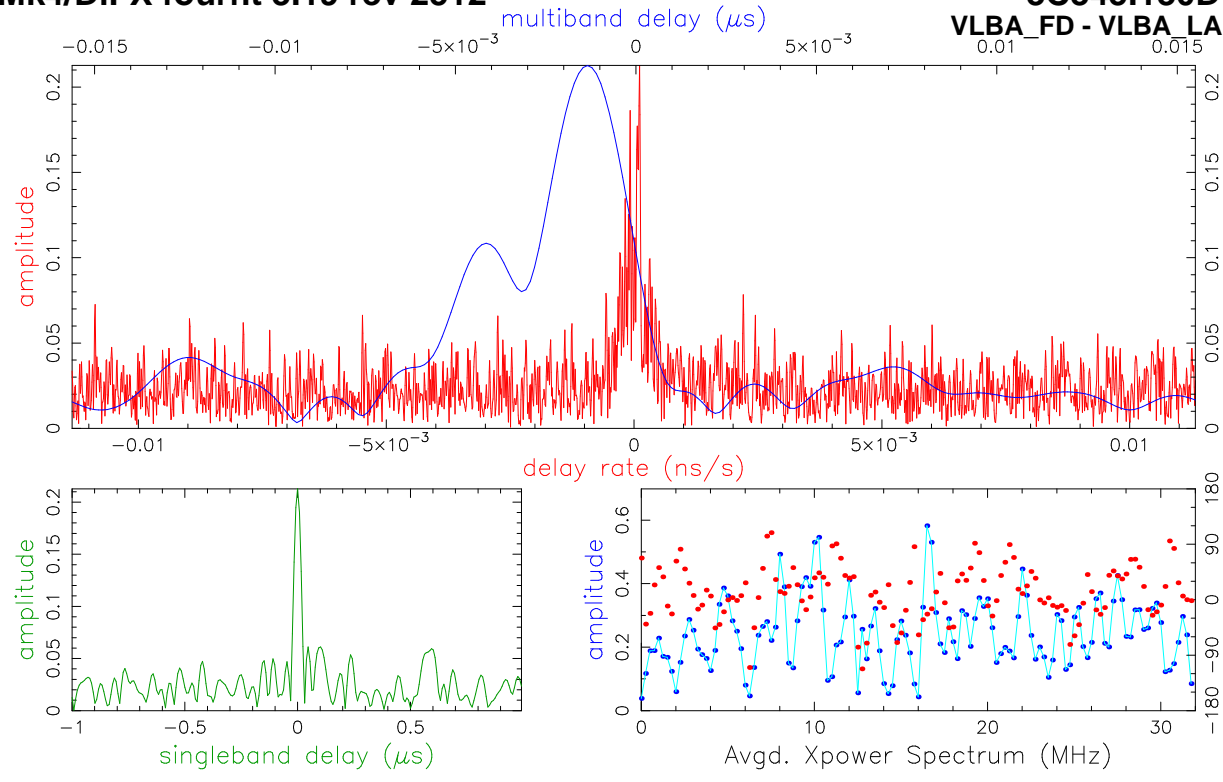
Fringe quality 0  
SNR 6.1  
Int time 418.595  
Amp 0.110  
Phase -69.6  
PFD 2.7e-01  
Delays (us)  
SBD 0.547550  
MBD 0.000385  
Fringe rate (Hz)  
0.185706  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094104  
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



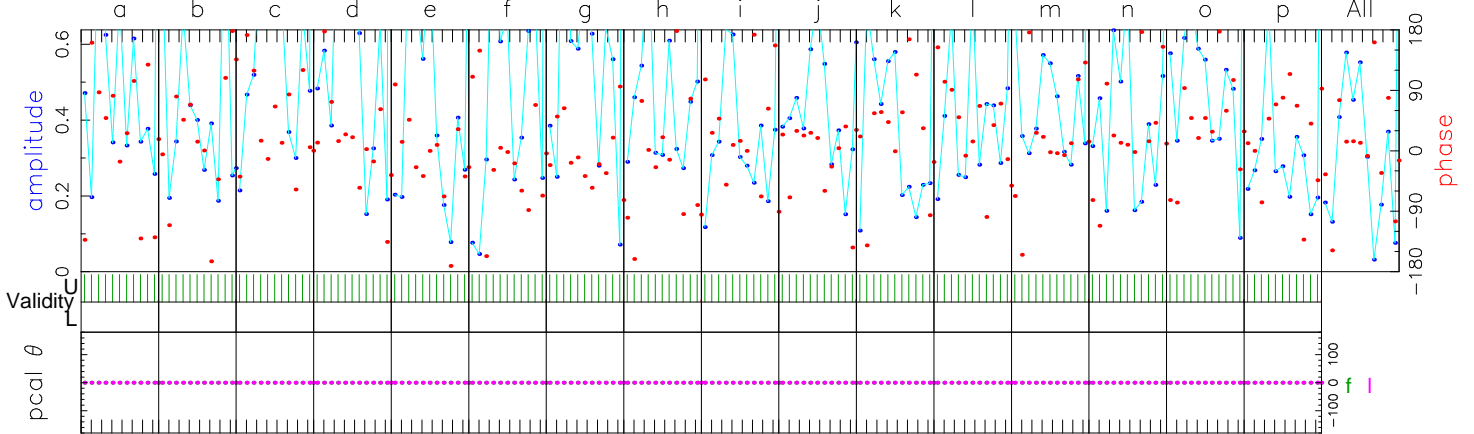
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0								
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000								
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000								
f:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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								
l	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						
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks						
																			Tracks					
Group delay (usec)(sbd)			-8.03689341980E+01																Apriori delay (usec)	-8.09318192615E+01	Resid mbdelay (usec)	3.85063E-04	+/-	1.8E-04
Sband delay (usec)			-8.03842692615E+01																Apriori clock (usec)	1.2203583E+00	Resid sbdelay (usec)	5.47550E-01	+/-	2.8E-03
Phase delay (usec)			-8.09318215057E+01																Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	-2.24422E-06	+/-	6.1E-07
Delay rate (us/s)			-1.84937008064E-02																Apriori rate (us/s)	-1.84958566652E-02	Resid rate (us/s)	2.15586E-06	+/-	2.5E-09
Total phase (deg)																			Apriori accel (us/s/s)	-4.97842675752E-06	Resid phase (deg)	-69.6	+/-	18.8

ph/seg (deg) 41.2 32.6 Search (2048X64) 0.105 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 57.8 57.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 56.2 37.7 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 83.0 65.8 Inc. frq. avg. 0.114 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
f: az 54.3 el 72.0 pa -113.7 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 128.086 -837.996 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/fl..130DUS Output file: /Exps/c192b/v2/1234/No0115/fl.W.153.130DUS simultaneous interpolator



Fringe quality 9  
SNR 11.9  
Int time 418.595  
Amp 0.213  
Phase 17.7  
PFD 5.8e-24  
Delays (us)  
SBD -0.000449  
MBD -0.001344  
Fringe rate (Hz) 0.009965  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094048  
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		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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		
l	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		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

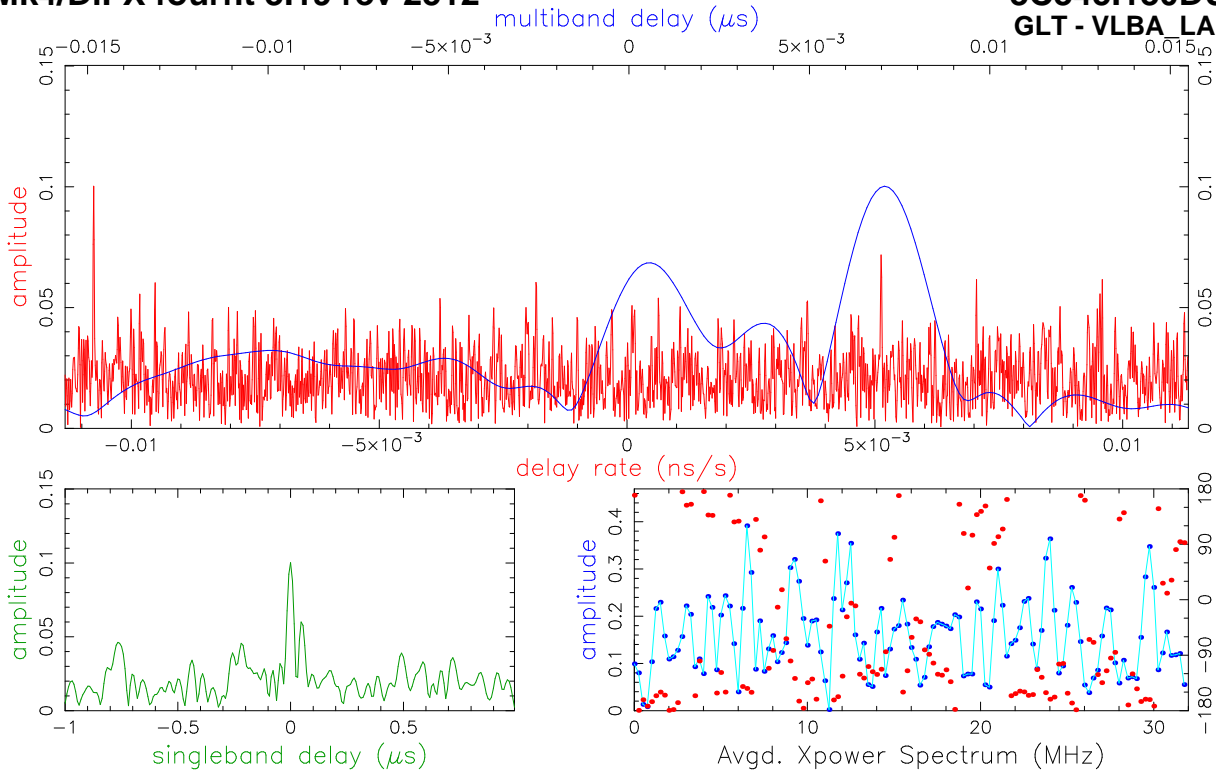
Group delay (usec)(sbd) -8.09331631028E+01 Apriori delay (usec) -8.09318192615E+01 Resid mbdelay (usec) -1.34384E-03 +/- 9.1E-05  
 Sband delay (usec) -8.09322682615E+01 Apriori clock (usec) 1.2203583E+00 Resid sbdelay (usec) -4.49000E-04 +/- 1.4E-03  
 Phase delay (usec) -8.09318186896E+01 Apriori clockrate (us/s) 2.6052251E-07 Resid phdelay (usec) 5.71878E-07 +/- 3.1E-07  
 Delay rate (us/s) -1.84957409825E-02 Apriori rate (us/s) -1.84958566652E-02 Resid rate (us/s) 1.15683E-07 +/- 1.3E-09  
 Total phase (deg) -310.3 Apriori accel (us/s/s) -4.97842675752E-06 Resid phase (deg) 17.7 +/- 9.6

RMS Theor. Amplitude 0.213 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 83.0 16.7 Search (2048X64) 0.206 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 100.8 29.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 29.7 19.3 Inc. seg. avg. 0.291 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 40.3 33.6 Inc. frq. avg. 0.224 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

f: az 54.3 el 72.0 pa -113.7 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 128.086 -837.996 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/fl..130DUS Output file: /Exps/c192b/v2/1234/No0115/fl.W.90.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, gl  
GLT - VLBA LA, fgroup W, pol LL

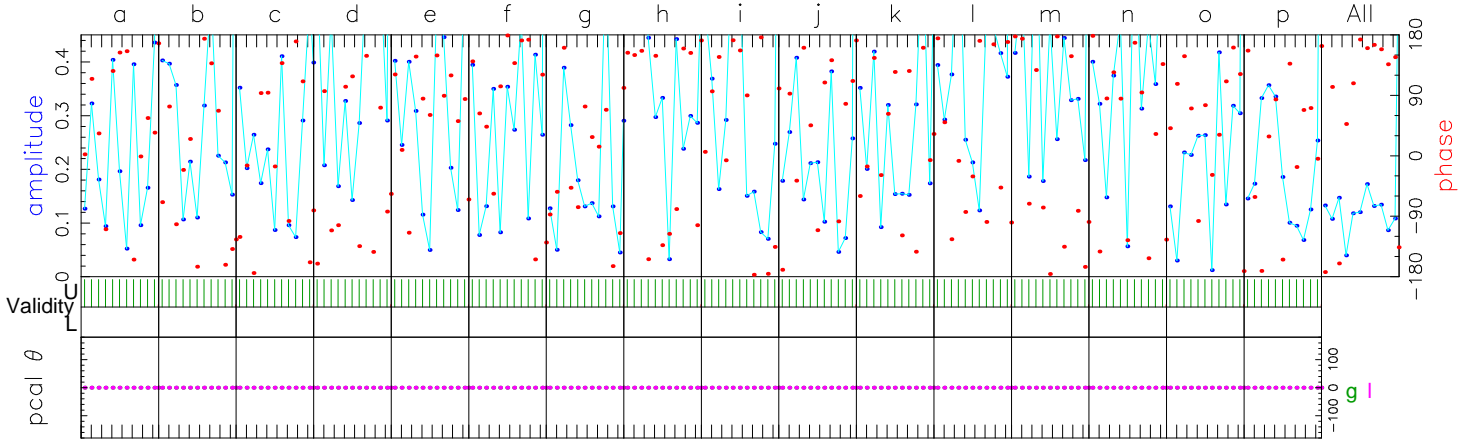


Fringe quality 0

SNR 5.6  
Int time 419.008  
Amp 0.150  
Phase 157.7  
PFD 9.9e-01  
Delays (us)  
SBD -0.000918  
MBD 0.007075  
Fringe rate (Hz)  
-0.928096  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094107  
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

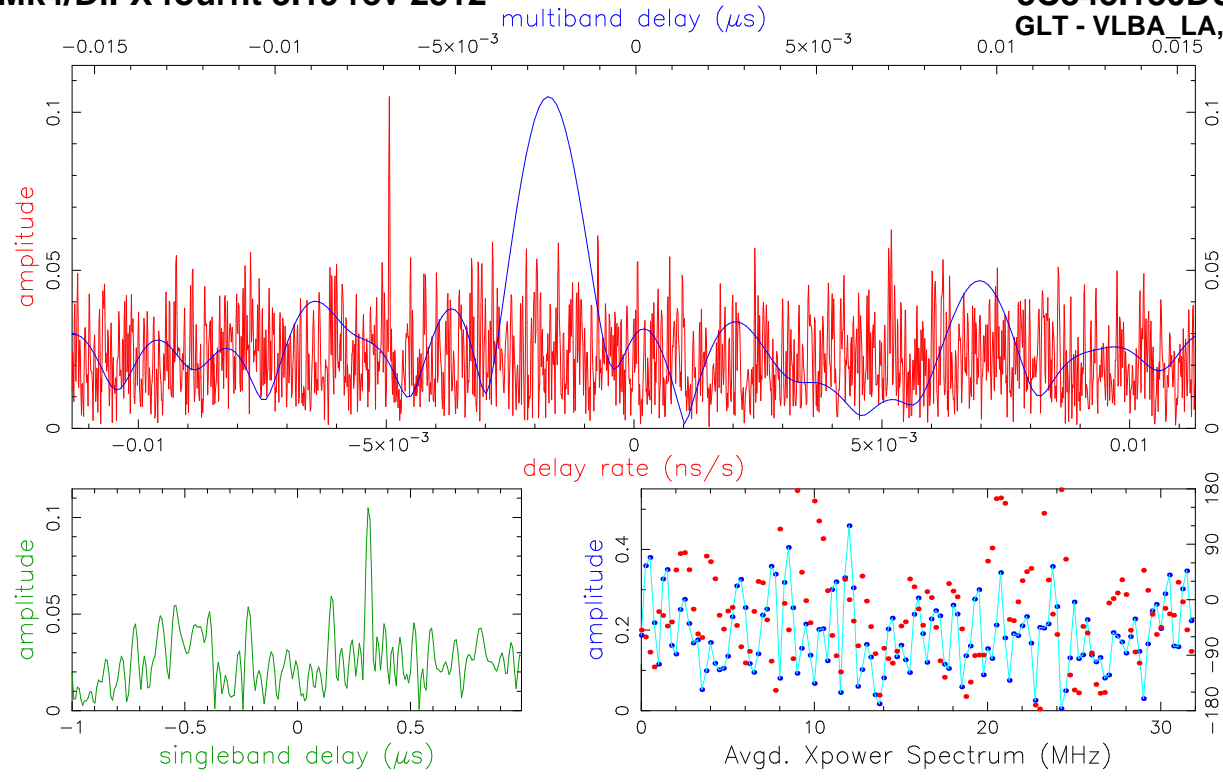


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
102.6	178.2	167.7	-173.2	111.1	167.3	51.0	-178.4	141.5	128.2	158.6	-101.8	-172.9	145.1	105.1	86.3	86.3	Phase	157.7
0.1	0.1	0.2	0.2	0.3	0.2	0.1	0.4	0.2	0.1	0.1	0.2	0.4	0.4	0.2	0.1	0.1	Ampl.	0.2
174.3	112.2	138.3	136.2	142.1	186.5	66.9	129.0	149.2	27.1	23.9	202.2	129.5	221.2	196.3	66.8	66.8	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	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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	
g	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	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-3.51471338107E+03			Apriori delay (usec)			-3.51472045637E+03			Resid mbdelay (usec)			7.07530E-03			+/-	1.9E-04	
Sband delay (usec)	-3.51472137387E+03			Apriori clock (usec)			2.0518289E+00			Resid sbdelay (usec)			-9.17500E-04			+/-	3.1E-03	
Phase delay (usec)	-3.51472045128E+03			Apriori clockrate (us/s)			4.2647201E-07			Resid phdelay (usec)			5.08419E-06			+/-	6.6E-07	
Delay rate (us/s)	-4.20924938061E-01			Apriori rate (us/s)			-4.20914163789E-01			Resid rate (us/s)			-1.07743E-05			+/-	2.7E-09	
Total phase (deg)	117.5			Apriori accel (us/s/s)			4.67533464947E-05			Resid phase (deg)			157.7			+/-	20.4	

ph/seg (deg) 44.1 35.3 Search (2048X64) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 59.2 61.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 52.6 40.8 Inc. seg. avg. 0.154 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 75.8 71.2 Inc. frq. avg. 0.153 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 200.6 el 52.6 pa 5.8 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 3222.670 5664.907 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/gl..130DUS Output file: /Exps/c192b/v2/1234/No0115/gl.W.161.130DUS

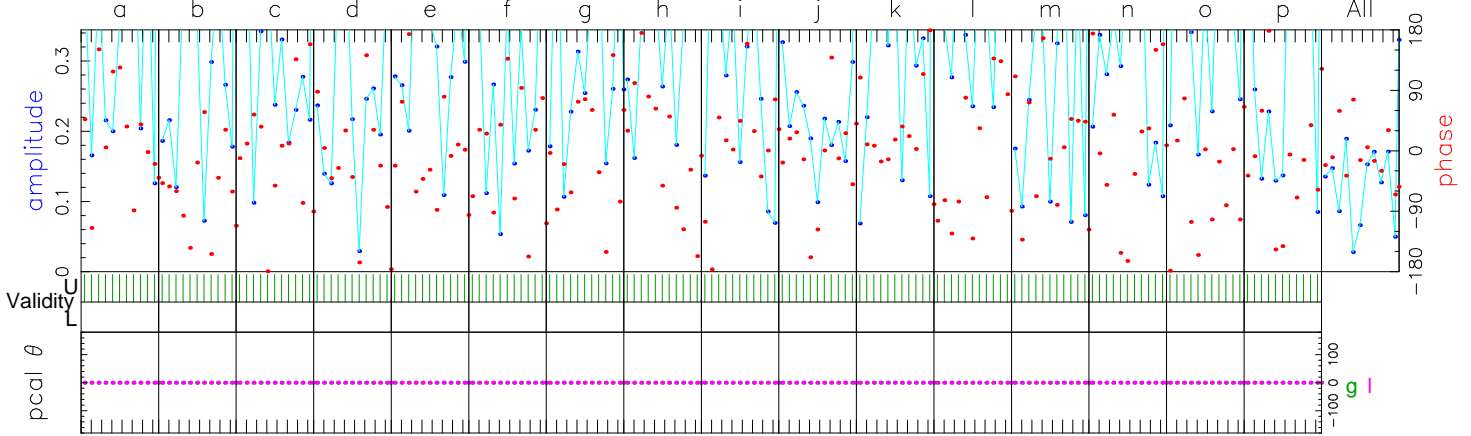
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, gl  
GLT - VLBA LA, fgroup W, pol RR



Fringe quality 0  
SNR 5.9  
Int time 419.044  
Amp 0.115  
Phase -8.7  
PFD 5.3e-01  
Delays (us)  
SBD 0.314718  
MBD -0.002418  
Fringe rate (Hz)  
-0.425887  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094114  
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

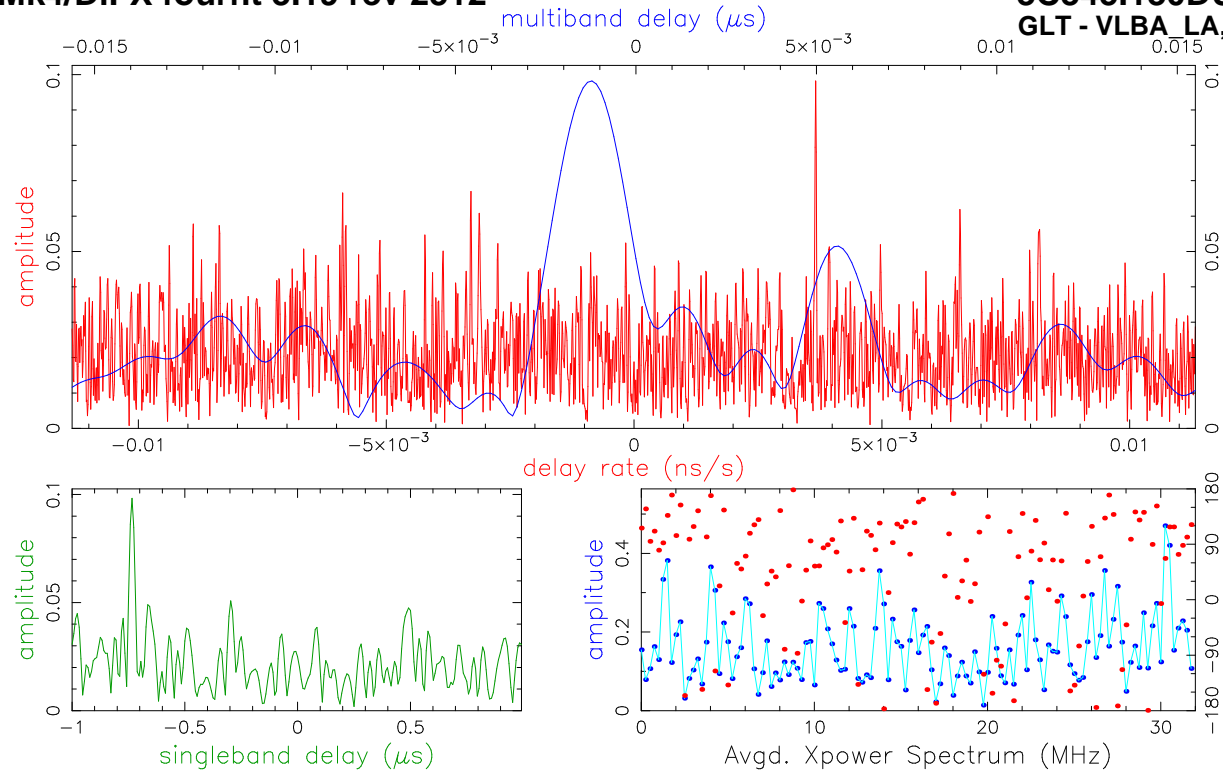


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
g:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:l	0:0	0:0	0:0	0:0	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		
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		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-3.51441037411E+03																
Sband delay (usec)		-3.51440573887E+03																
Phase delay (usec)		-3.51472045665E+03																
Delay rate (us/s)		-4.20919107911E-01																
Total phase (deg)					-48.9													
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)																		
Pcal mode: MANUAL, MANUAL																		
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																		
PC period (AP's) 5, 5																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		
nlags: 128																		
t_cohere infinite																		

ph/seg (deg) 40.7 33.4 Search (2048X64) 0.099 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 53.6 58.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 40.3 38.6 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 56.2 67.4 Inc. frq. avg. 0.108 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 200.6 el 52.6 pa 5.8 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 3222.670 5664.907 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/gl..130DUS Output file: /Exps/c192b/v2/1234/No0115/gl.W.181.130DUS

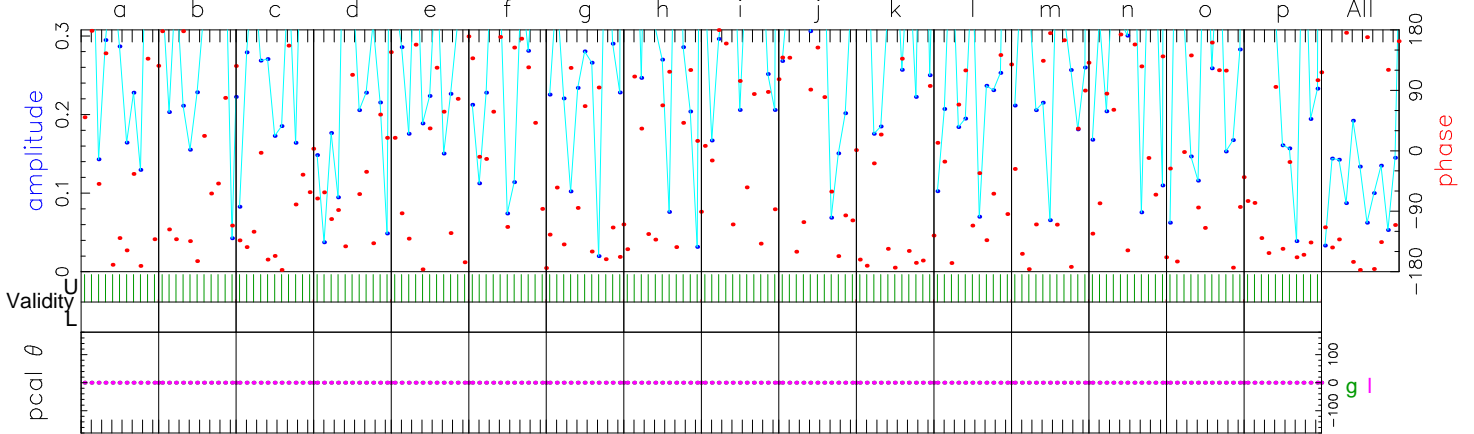
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, gl  
GLT - VLBA LA, fgroup W, pol LR



Fringe quality 0  
SNR 5.5  
Int time 419.007  
Amp 0.103  
Phase -156.1  
PFD 1.0e+00  
Delays (us)  
SBD -0.734685  
MBD -0.001244  
Fringe rate (Hz)  
0.316583  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094119  
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

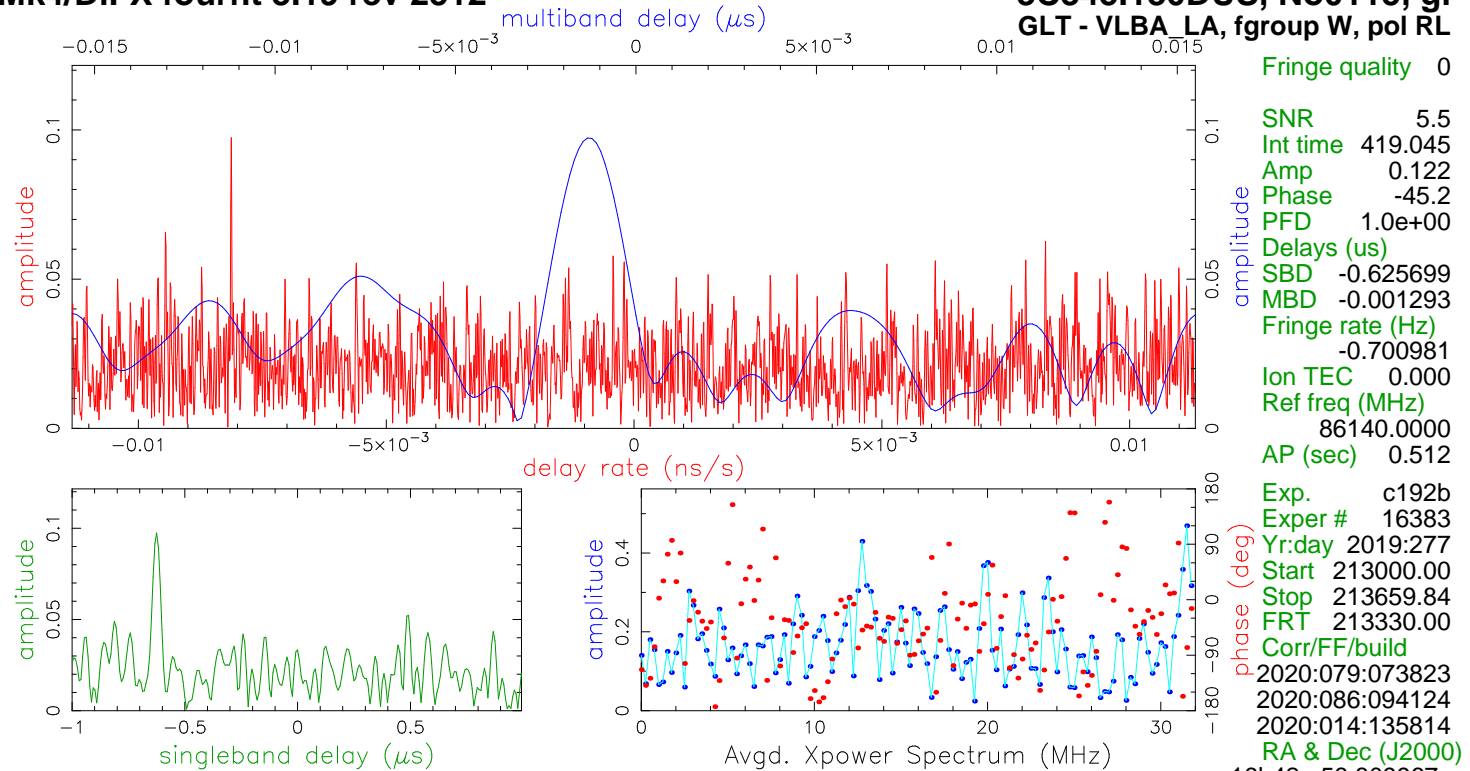


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
170.7	-115.5	-103.7	-119.7	152.8	122.4	-130.9	-172.6	-150.3	179.7	-169.9	-120.1	-170.5	-153.7	-161.0	-134.3	-134.3	Phase	-156.1				
0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.1	0.3	0.1	0.1	0.0	0.1	0.2	0.2	Ampl.	0.1				
115.0	219.2	43.3	199.1	95.9	160.7	79.6	244.6	152.5	4.5	35.2	110.4	46.5	24.8	253.5	33.7	33.7	Sbd box	35.0				
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					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
g	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					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)		-3.51544045008E+03															Apriori delay (usec)	-3.51472045637E+03	Resid mbdelay (usec)	-1.24371E-03	+/-	2.0E-04
Sband delay (usec)		-3.51545514187E+03															Apriori clock (usec)	2.0518289E+00	Resid sbdelay (usec)	-7.34685E-01	+/-	3.1E-03
Phase delay (usec)		-3.51472046140E+03															Apriori clockrate (us/s)	4.2647201E-07	Resid phdelay (usec)	-5.03540E-06	+/-	6.7E-07
Delay rate (us/s)		-4.20910488569E-01															Apriori rate (us/s)	-4.20914163789E-01	Resid rate (us/s)	3.67522E-06	+/-	2.8E-09
Total phase (deg)																	Apriori accel (us/s/s)	4.67533464947E-05	Resid phase (deg)	-156.1	+/-	20.8

ph/seg (deg) 36.9 36.1 Search (2048X64) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 54.0 63.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 37.6 41.7 Inc. seg. avg. 0.099 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 53.4 72.7 Inc. frq. avg. 0.095 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
g: az 200.6 el 52.6 pa 5.8 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 3222.670 5664.907 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/gl..130DUS Output file: /Exps/c192b/v2/1234/No0115/gl.W.202.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, gl  
GLT - VLBA LA, fgroup W, pol RL



Fringe quality 0

SNR 5.5

Int time 419.045

Amp 0.122

Phase -45.2

PFD 1.0e+00

Delays (us)

SBD -0.625699

MBD -0.001293

Fringe rate (Hz)

-0.700981

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213000.00

Stop 213659.84

FRT 213330.00

Corr/FF/build

2020:079:073823

2020:086:094124

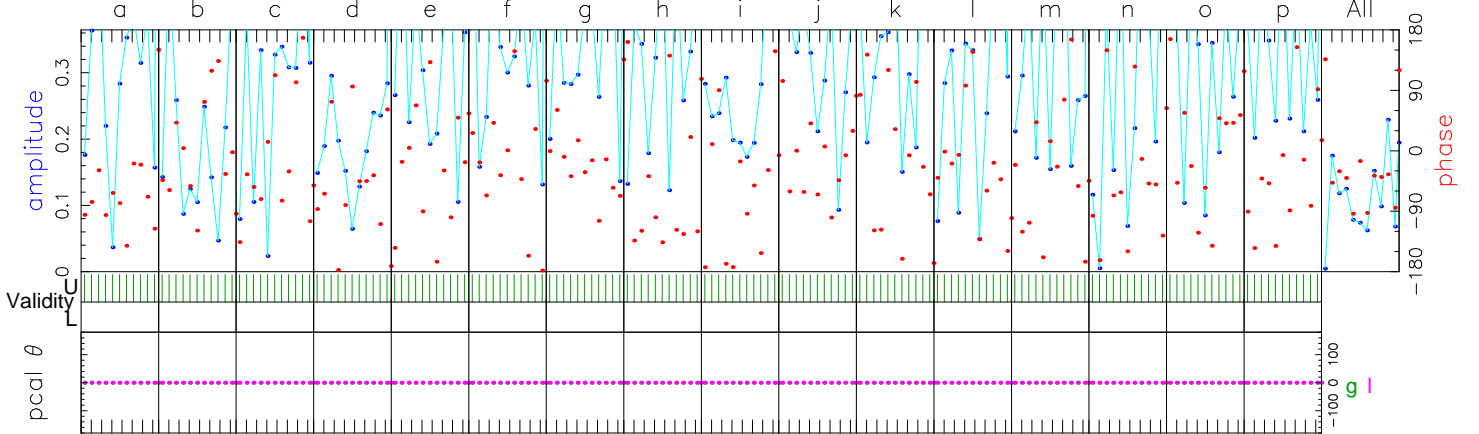
2020:014:135814

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					
	-67.5	-18.1	-84.8	-53.7	-33.5	6.9	-19.4	-120.5	-126.3	-8.5	-12.3	-32.3	-79.0	-71.9	12.4	-65.8		Phase -45.2					
	0.3	0.1	0.1	0.1	0.1	0.2	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2		Ampl. 0.1					
	48.9	200.1	53.1	37.6	180.9	20.5	49.5	48.1	190.6	202.9	24.8	41.9	178.1	157.8	117.0	107.6		Sbd box 48.9					
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					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
g:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
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					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-3.51534674928E+03															Apriori delay (usec)	-3.51472045637E+03	Resid mbdelay (usec)	-1.29291E-03	+/-	2.0E-04
Sband delay (usec)			-3.51534615537E+03															Apriori clock (usec)	2.0518289E+00	Resid sbdelay (usec)	-6.25699E-01	+/-	3.2E-03
Phase delay (usec)			-3.51472045783E+03															Apriori clockrate (us/s)	4.2647201E-07	Resid phdelay (usec)	-1.45853E-06	+/-	6.8E-07
Delay rate (us/s)			-4.20922301489E-01															Apriori rate (us/s)	-4.20914163789E-01	Resid rate (us/s)	-8.13770E-06	+/-	2.8E-09
Total phase (deg)					-85.4													Apriori accel (us/s/s)	4.67533464947E-05	Resid phase (deg)	-45.2	+/-	21.0

ph/seg (deg) 61.3 36.4 Search (2048X64) 0.096 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 61.6 63.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 43.8 42.0 Inc. seg. avg. 0.113 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 70.0 73.3 Inc. frq. avg. 0.123 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011

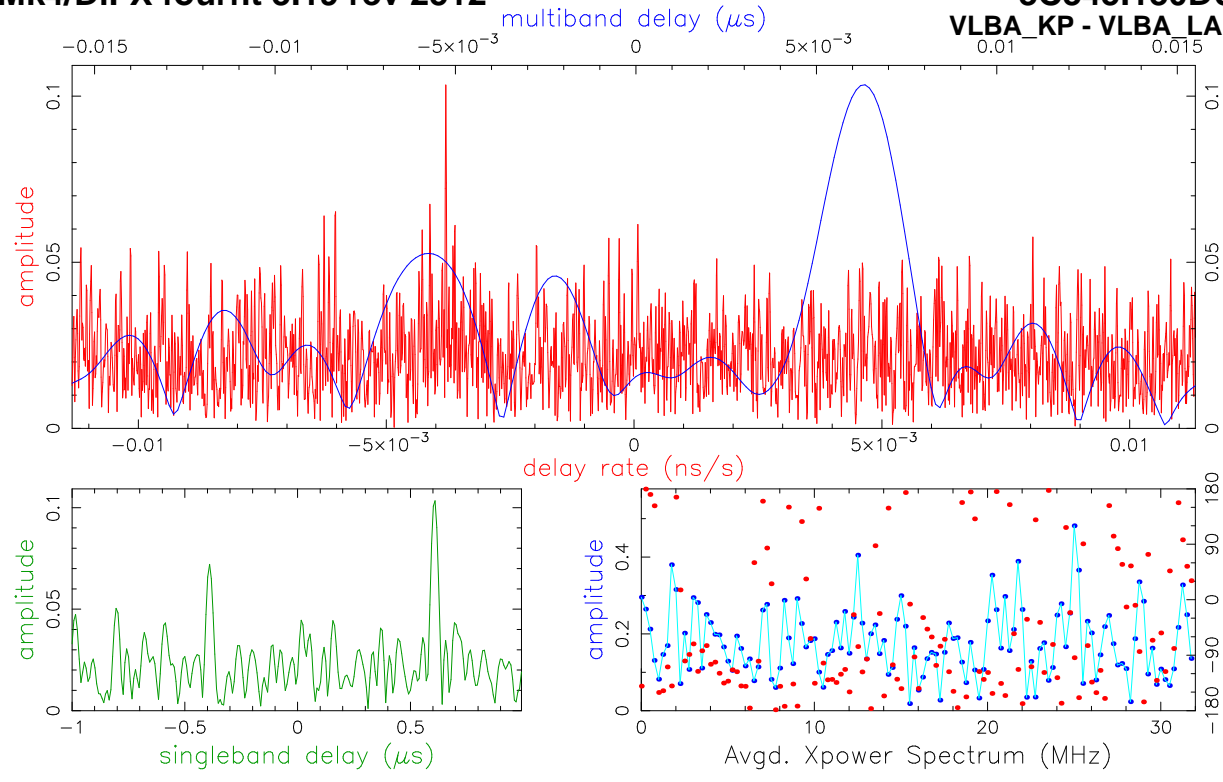
g: az 200.6 el 52.6 pa 5.8 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 3222.670 5664.907 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/gl..130DUS Output file: /Exps/c192b/v2/1234/No0115/gl.W.217.130DUS



Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, kl  
VLBA\_KP - VLBA\_LA, fgroup W, pol LL

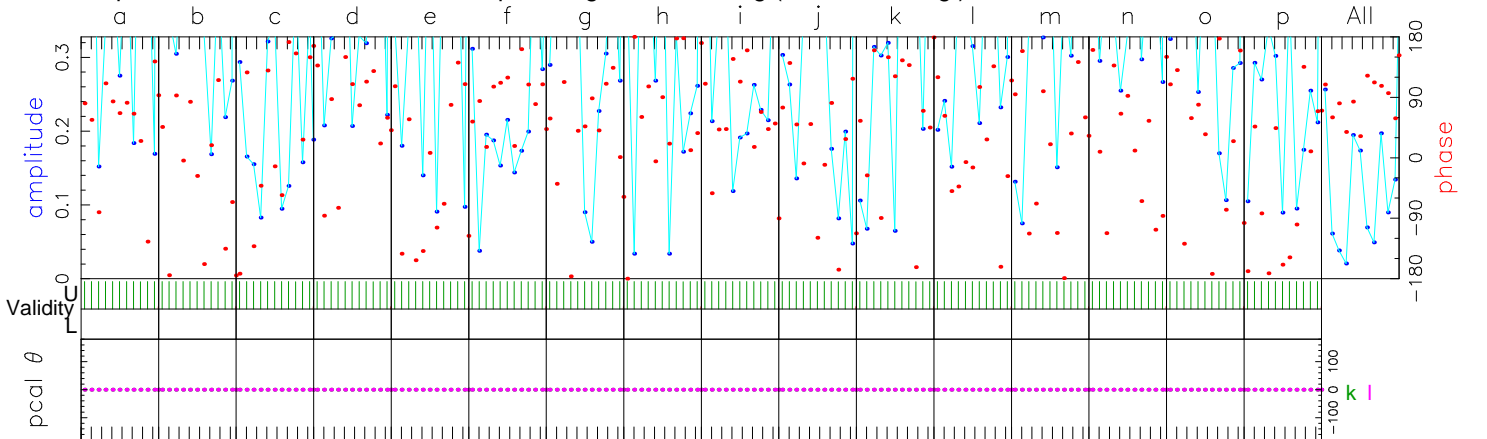


Fringe quality 0

SNR 5.8  
Int time 418.593  
Amp 0.109  
Phase 87.2  
PFD 7.4e-01  
Delays (us)  
SBD 0.606739  
MBD 0.006255  
Fringe rate (Hz)  
-0.327929  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094112  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

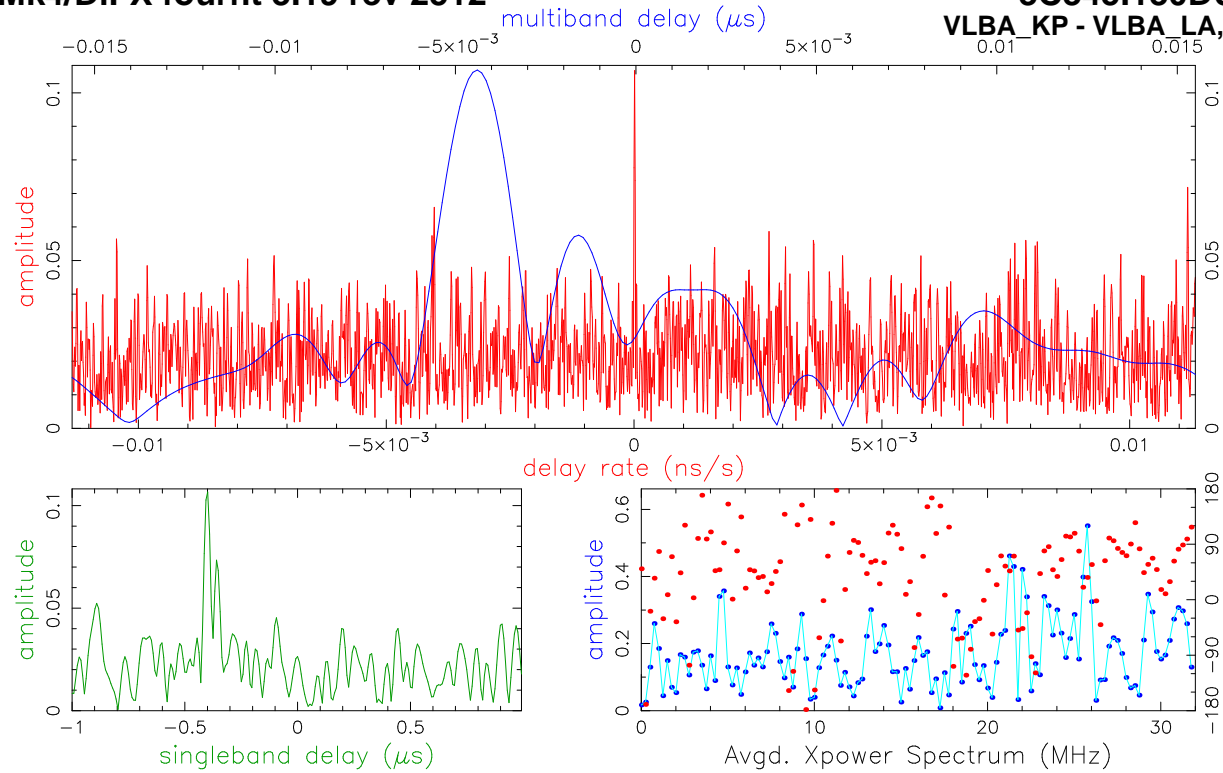
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	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:l	0:0	0:0	0:0	0:0	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		
l	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
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
Group delay (usec)(sbd)	-6.95051126417E+02			Apriori delay (usec)			-6.95651131013E+02			Resid mbdelay (usec)			6.25460E-03			+/- 1.8E-04		
Sband delay (usec)	-6.95044392513E+02			Apriori clock (usec)			3.5358366E-01			Resid sbdelay (usec)			6.06739E-01			+/- 3.0E-03		
Phase delay (usec)	-6.95651128203E+02			Apriori clockrate (us/s)			1.5689301E-07			Resid phdelay (usec)			2.81088E-06			+/- 6.3E-07		
Delay rate (us/s)	1.02625637691E-01			Apriori rate (us/s)			1.02629444618E-01			Resid rate (us/s)			-3.80693E-06			+/- 2.6E-09		
Total phase (deg)	-66.0			Apriori accel (us/s/s)			-2.91502485409E-07			Resid phase (deg)			87.2			+/- 19.6		
ph/seg (deg)	RMS	Theor.	Amplitude		0.109 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		sb window (us)		-1.000 1.000					
amp/seg (%)	30.3	34.0	Search (2048X64)		0.100		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		SampCntNorm: enabled		mb window (us)		-0.016 0.016					
ph/frq (deg)	76.2	59.4	Interp.		0.000		Bits/sample: 2x2		Sample rate(MISamp/s): 64		dr window (ns/s)		-0.011 0.011					
amp/frq (%)	39.7	39.3	Inc. seg. avg.		0.106		Data rate(Mb/s): 2048		nlags: 128		ion window (TEC)		0.00 0.00					
	68.2	68.6	Inc. frq. avg.		0.103													

k: az 62.6 el 67.1 pa -101.5 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -766.106 -386.372 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/kl..130DUS Output file: /Exps/c192b/v2/1234/No0115/kl.W.173.130DUS

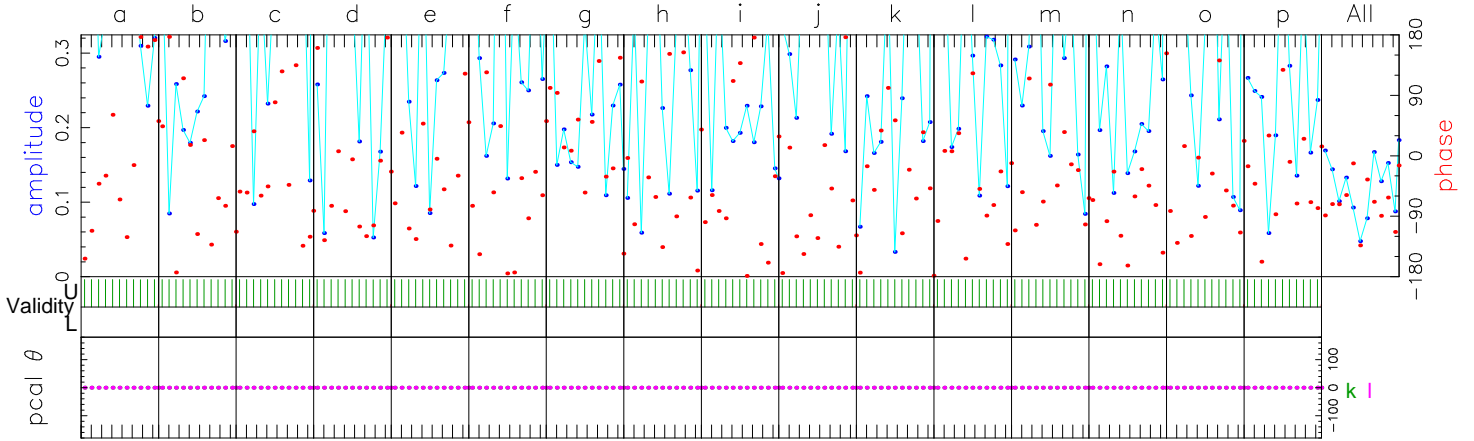


Fringe quality 0

SNR 6.1  
Int time 418.592  
Amp 0.108  
Phase -70.9  
PFD 3.1e-01  
Delays (us)  
SBD -0.401119  
MBD -0.004455  
Fringe rate (Hz) 0.000960  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094117  
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:l	0:0	0:0	0:0	0:0	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		
l	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		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)			-6.96061835629E+02															
Sband delay (usec)			-6.96052250013E+02															
Phase delay (usec)			-6.95651133300E+02															
Delay rate (us/s)			1.02629455764E-01															
Total phase (deg)																		
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) 32.5 32.8  
amp/seg (%) 36.4 57.2  
ph/frq (deg) 48.5 37.9  
amp/frq (%) 41.8 66.1

RMS Theor. Amplitude 0.108 +/- 0.018  
Search (2048X64) 0.107  
Interp. 0.000  
Inc. seg. avg. 0.102  
Inc. frq. avg. 0.109

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

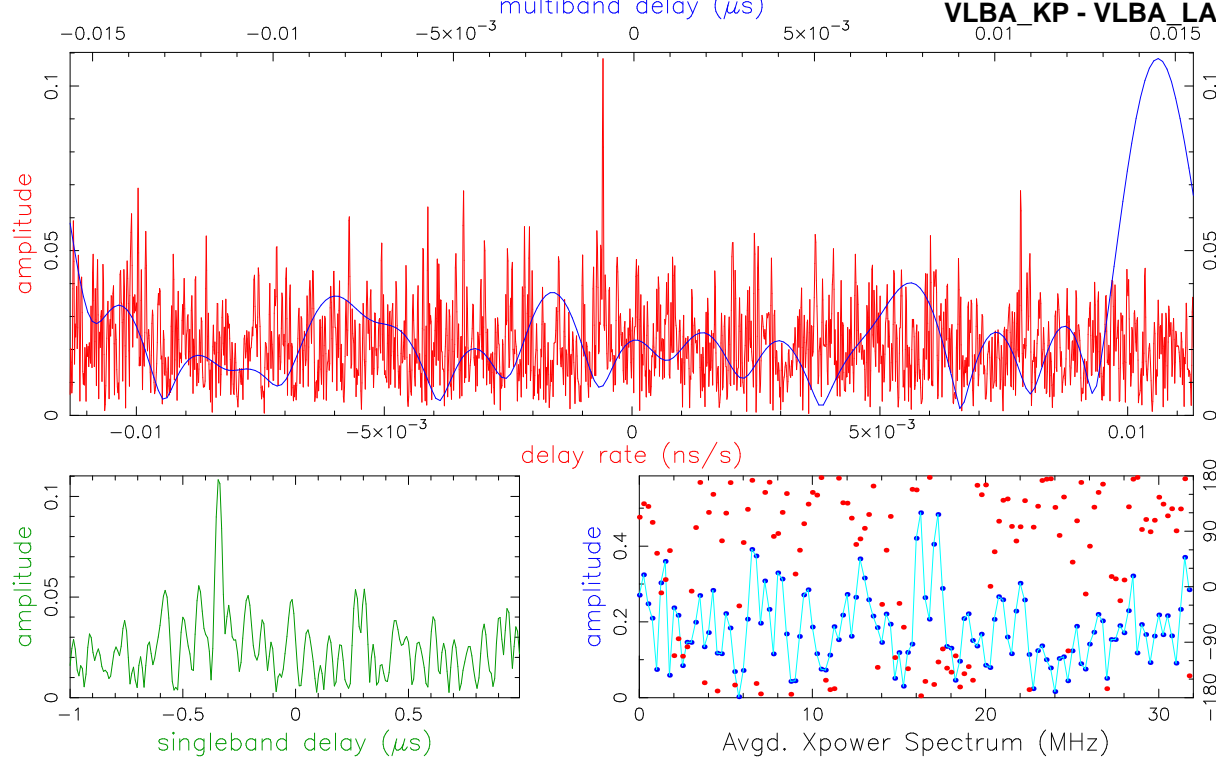
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

k: az 62.6 el 67.1 pa -101.5 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -766.106 -386.372 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/kl..130DUS Output file: /Exps/c192b/v2/1234/No0115/kl.W.192.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, kl  
VLBA\_KP - VLBA\_LA, fgroup W, pol LR



Fringe quality 0

SNR 6.2

Int time 418.592

Amp 0.110

Phase -100.9

PFD 1.8e-01

Delays (us)

SBD -0.340549

MBD 0.014554

Fringe rate (Hz)

-0.050655

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213000.00

Stop 213659.84

FRT 213330.00

Corr/FF/build

2020:079:073823

2020:086:094122

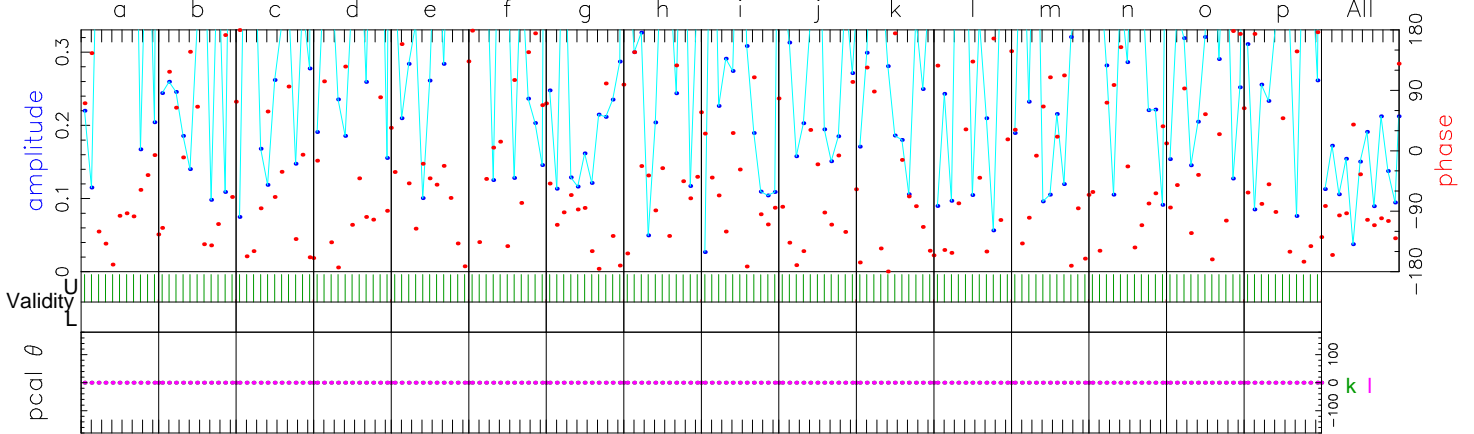
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

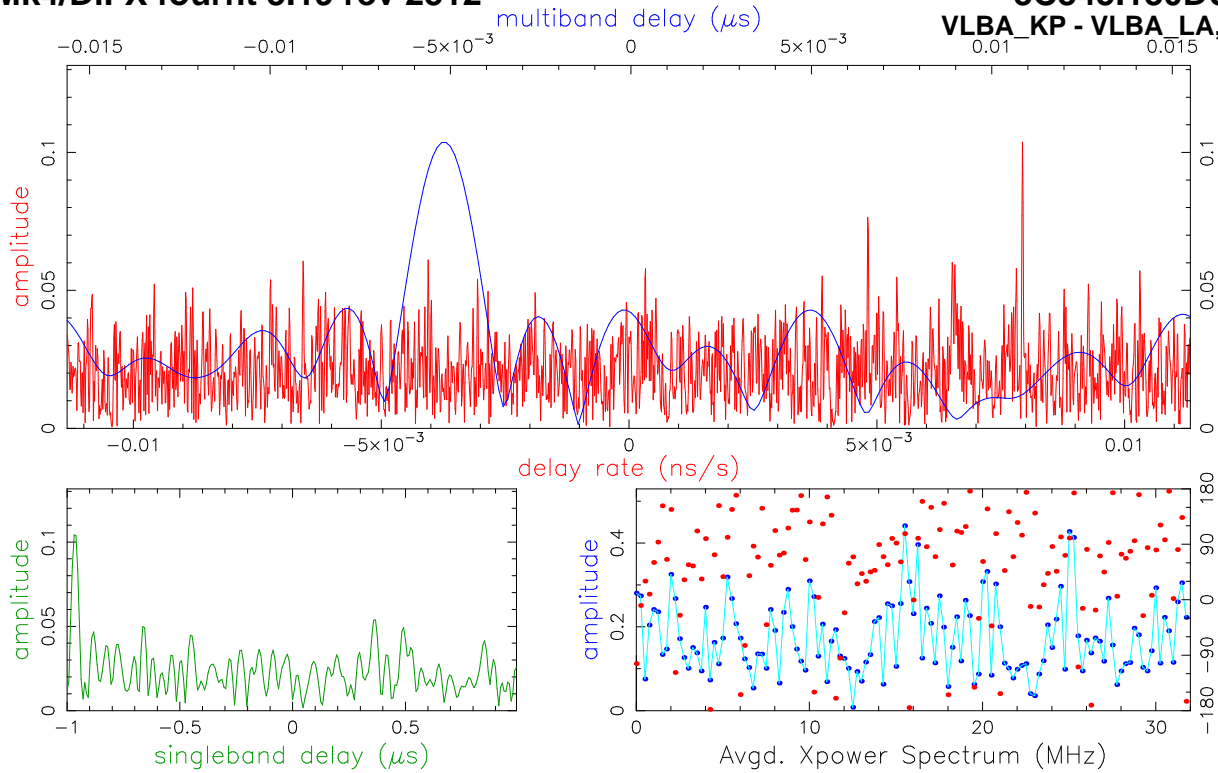
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	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	
	-106.0	-111.3	-130.0	-108.1	-75.7	-110.7	-116.1	-71.4	-52.2	-77.4	-162.8	-67.6	-97.3	-109.4	-110.3	-127.0		Phase	-100.9
	0.3	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1		Ampl.	0.1
	196.1	29.7	150.6	56.7	162.5	109.3	44.2	86.8	231.4	218.1	121.2	242.6	106.0	24.5	76.9	86.3		Sbd box	85.4
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	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
k:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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	
l	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	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-6.95980327211E+02			Apriori delay (usec)			-6.95651131013E+02			Resid mbdelay (usec)			1.45538E-02			+/- 1.8E-04			
Sband delay (usec)	-6.95991680513E+02			Apriori clock (usec)			3.5358366E-01			Resid sbdelay (usec)			-3.40549E-01			+/- 2.8E-03			
Phase delay (usec)	-6.95651134267E+02			Apriori clockrate (us/s)			1.5689301E-07			Resid phdelay (usec)			-3.25327E-06			+/- 6.0E-07			
Delay rate (us/s)	1.02628856565E-01			Apriori rate (us/s)			1.02629444618E-01			Resid rate (us/s)			-5.88053E-07			+/- 2.5E-09			
Total phase (deg)	-254.1			Apriori accel (us/s/s)			-2.91502485409E-07			Resid phase (deg)			-100.9			+/- 18.6			
ph/seg (deg)	RMS	Theor.	Amplitude			0.110 +/- 0.018			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5							
amp/seg (%)	51.7	32.2	Search (2048X64)			0.106			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000 1.000				
ph/frq (deg)	48.8	56.2	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us) -0.016 0.016				
amp/frq (%)	28.8	37.2	Inc. seg. avg.			0.115			Sample rate(MISamp/s): 64			dr window (ns/s)			-0.011 0.011				
	46.0	64.9	Inc. frq. avg.			0.101			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC) 0.00 0.00				
k: az 62.6 el 67.1 pa -101.5	l: az 70.2 el 72.7 pa -97.6			u,v (fr/asec) -766.106 -386.372												simultaneous interpolator			
Control file: cf_1234_gmva			Input file: /Exps/c192b/v2/1234/No0115/kl..130DUS			Output file: /Exps/c192b/v2/1234/No0115/kl.W.211.130DUS													

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, kl  
VLBA\_KP - VLBA\_LA, fgroup W, pol RL

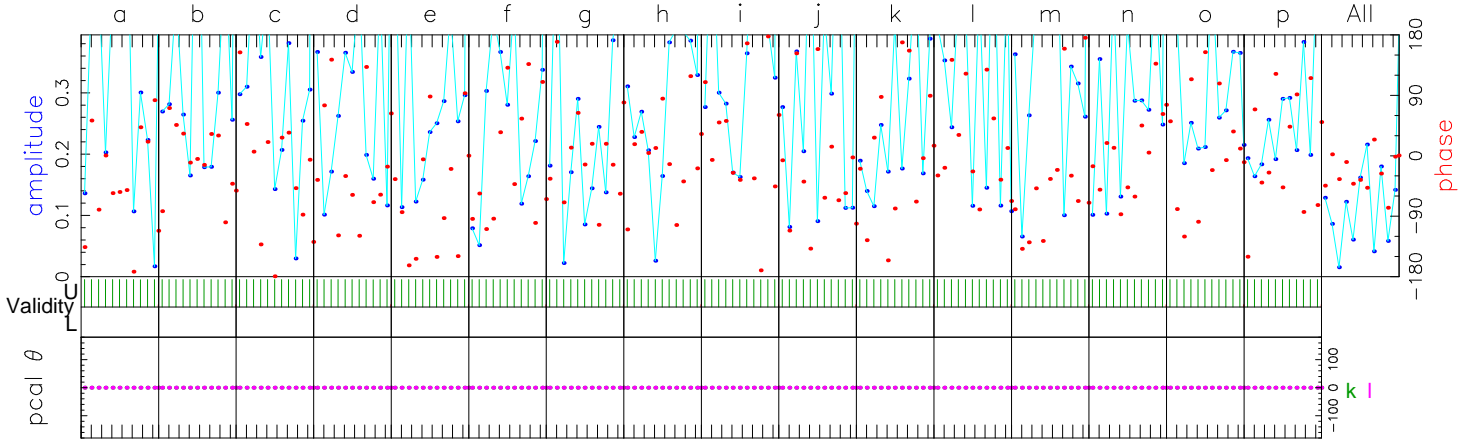


Fringe quality 0

SNR 6.0  
Int time 418.593  
Amp 0.132  
Phase -27.6  
PFD 4.8e-01  
Delays (us)  
SBD -0.965050  
MBD -0.005220  
Fringe rate (Hz) 0.684343  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094127  
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					
	-36.9	-4.3	9.9	-67.5	-83.7	-68.8	-18.0	-12.8	2.7	-73.2	-65.4	19.8	-66.3	0.5	8.2	-35.2		Phase -27.6					
	0.3	0.3	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.0	0.2	0.3	0.2	0.1	0.1		Ampl. 0.1					
	4.9	5.1	110.2	52.0	87.7	137.0	81.0	106.9	241.7	32.9	93.8	216.8	220.2	82.9	152.9	212.1		Sbd box 5.5					
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					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-6.96625100637E+02															Apriori delay (usec)	-6.95651131013E+02	Resid mbdelay (usec)	-5.21962E-03	+/-	1.8E-04
Sband delay (usec)			-6.96616180513E+02															Apriori clock (usec)	3.5358366E-01	Resid sbdelay (usec)	-9.65050E-01	+/-	2.9E-03
Phase delay (usec)			-6.95651131903E+02															Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	-8.89709E-07	+/-	6.2E-07
Delay rate (us/s)			1.02637389159E-01															Apriori rate (us/s)	1.02629444618E-01	Resid rate (us/s)	7.94454E-06	+/-	2.6E-09
Total phase (deg)																		Apriori accel (us/s/s)	-2.91502485409E-07	Resid phase (deg)	-27.6	+/-	19.2

ph/seg (deg) 27.1 33.3  
amp/seg (%) 60.8 58.1  
ph/frq (deg) 36.9 38.4  
amp/frq (%) 56.5 67.1

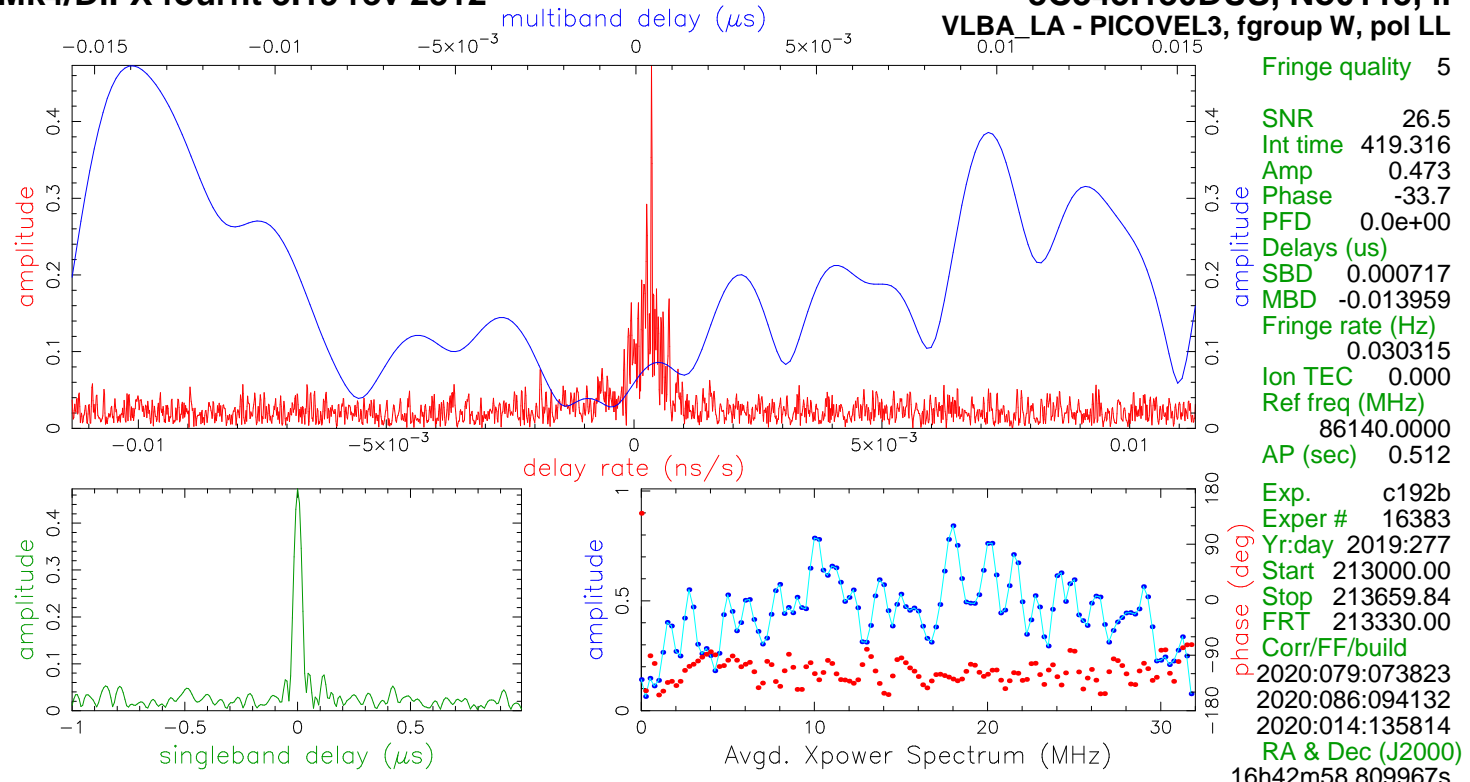
RMS Theor. Amplitude 0.132 +/- 0.022  
Search (2048X64) 0.099  
Interp. 0.000  
Inc. seg. avg. 0.119  
Inc. frq. avg. 0.125

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

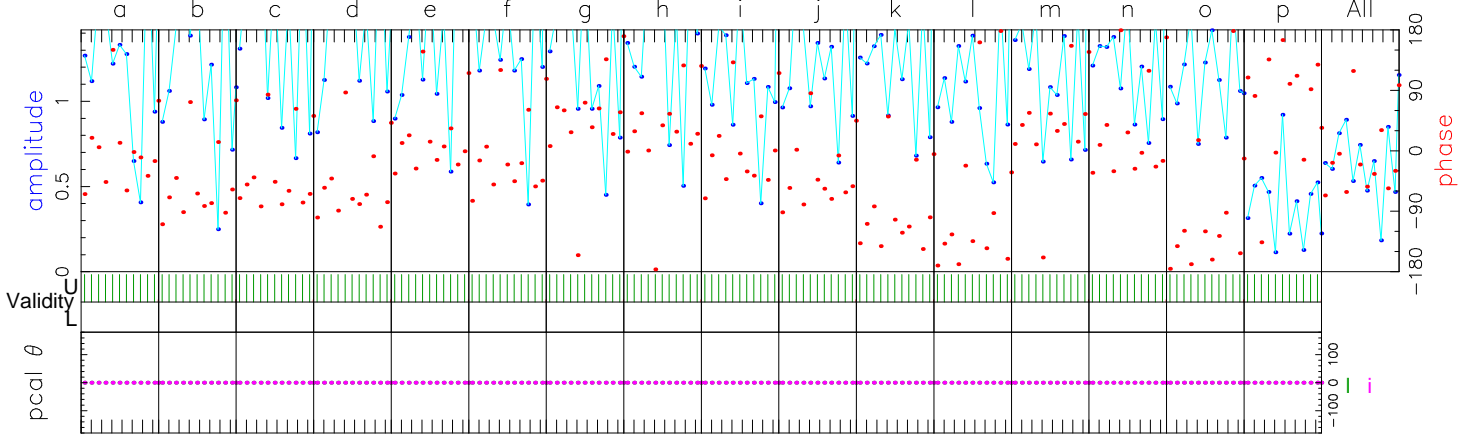
sb window (us) -1.000 1.000  
mb window (us) -0.016 0.016  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

k: az 62.6 el 67.1 pa -101.5 l: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) -766.106 -386.372 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/kl..130DUS Output file: /Exps/c192b/v2/1234/No0115/kl.W.229.130DUS



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		
l	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		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
li	0:0	0:0	0:0	0:0	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		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
Group delay (usec)(sbd)		1.04578216019E+04																
Sband delay (usec)		1.04578362783E+04																
Phase delay (usec)		1.04578355602E+04																
Delay rate (us/s)		1.28368597093E+00																
Total phase (deg)			55.6															
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 $\theta$																		

ph/seg (deg) 54.4 7.5  
amp/seg (%) 53.4 13.1  
ph/frq (deg) 76.2 8.7  
amp/frq (%) 93.7 15.1

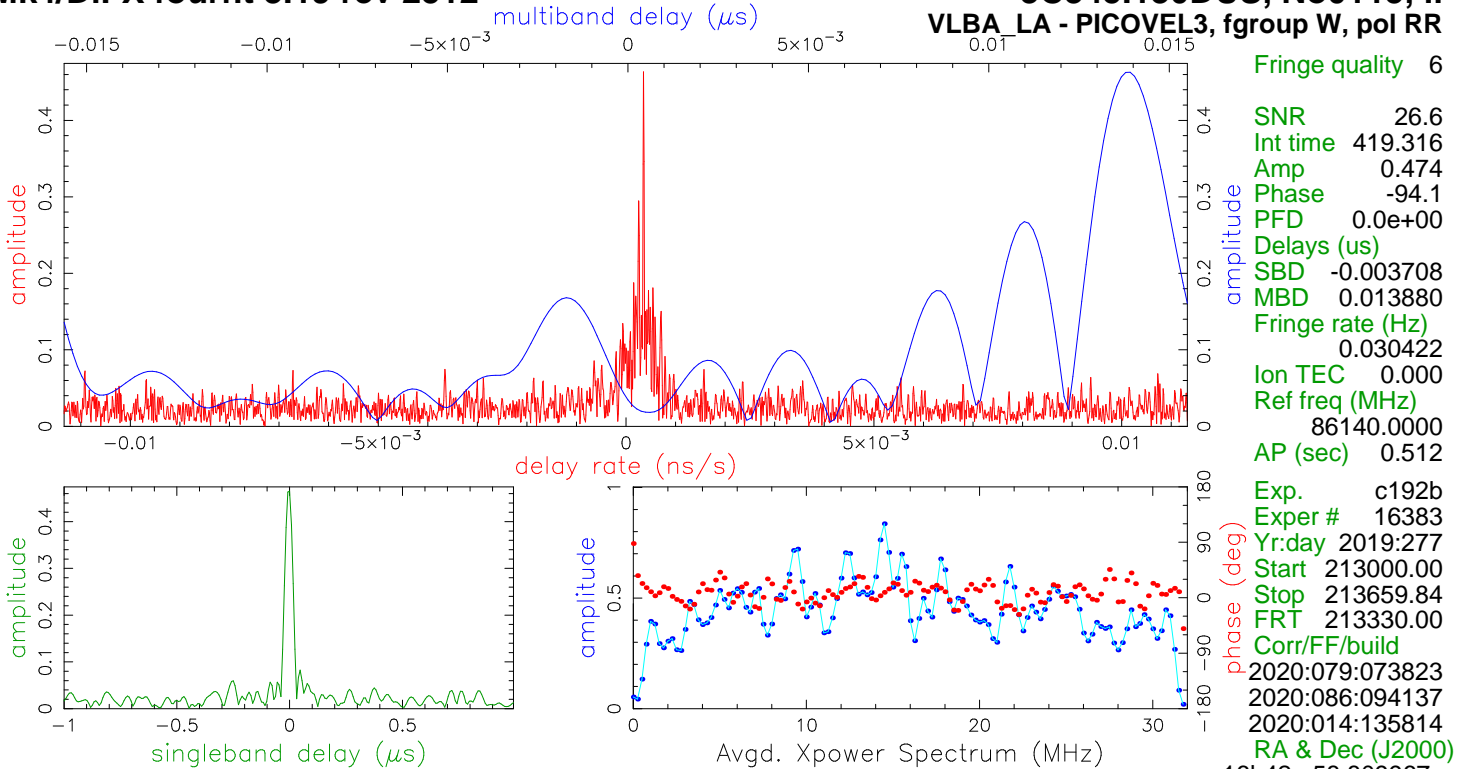
RMS Theor. Amplitude 0.473 +/- 0.018  
Search (2048X64) 0.462  
Interp. 0.000  
Inc. seg. avg. 0.622  
Inc. frq. avg. 0.868

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
SampCntNorm: enabled  
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

l: az 70.2 el 72.7 pa -97.6 i: az 300.2 el 28.5 pa 64.3 u,v (fr/asec) -9662.860 -3729.656 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/li..130DUS Output file: /Exps/c192b/v2/1234/No0115/li.W.242.130DUS



Fringe quality 6

SNR 26.6

Int time 419.316

Amp 0.474

Phase -94.1

PFD 0.0e+00

Delays (us)

SBD -0.003708

MBD 0.013880

Fringe rate (Hz)

0.030422

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213000.00

Stop 213659.84

FRT 213330.00

Corr/FF/build

2020:079:073823

2020:086:094137

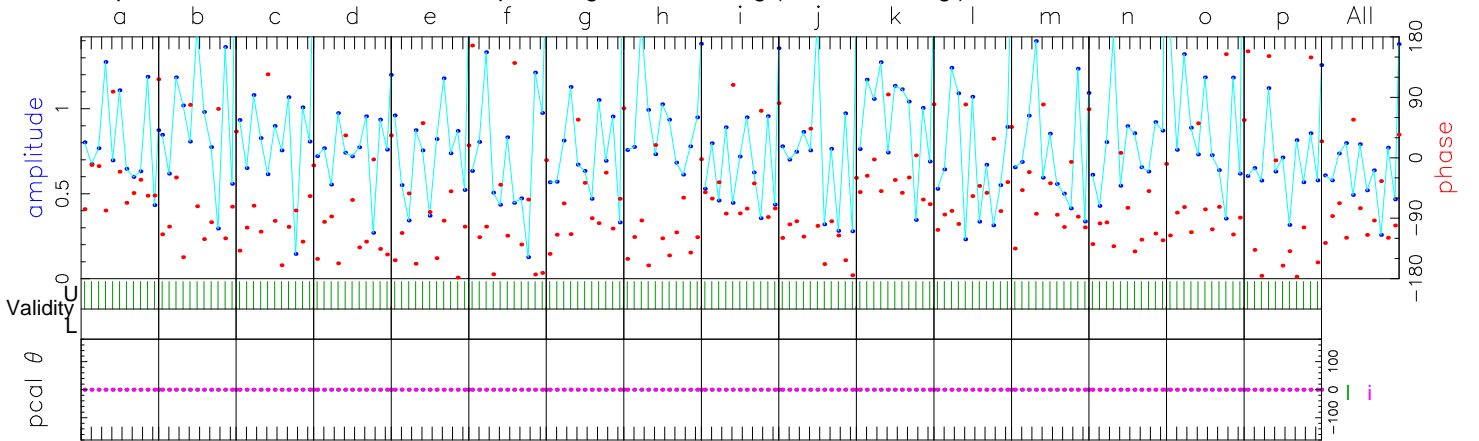
2020:014:135814

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



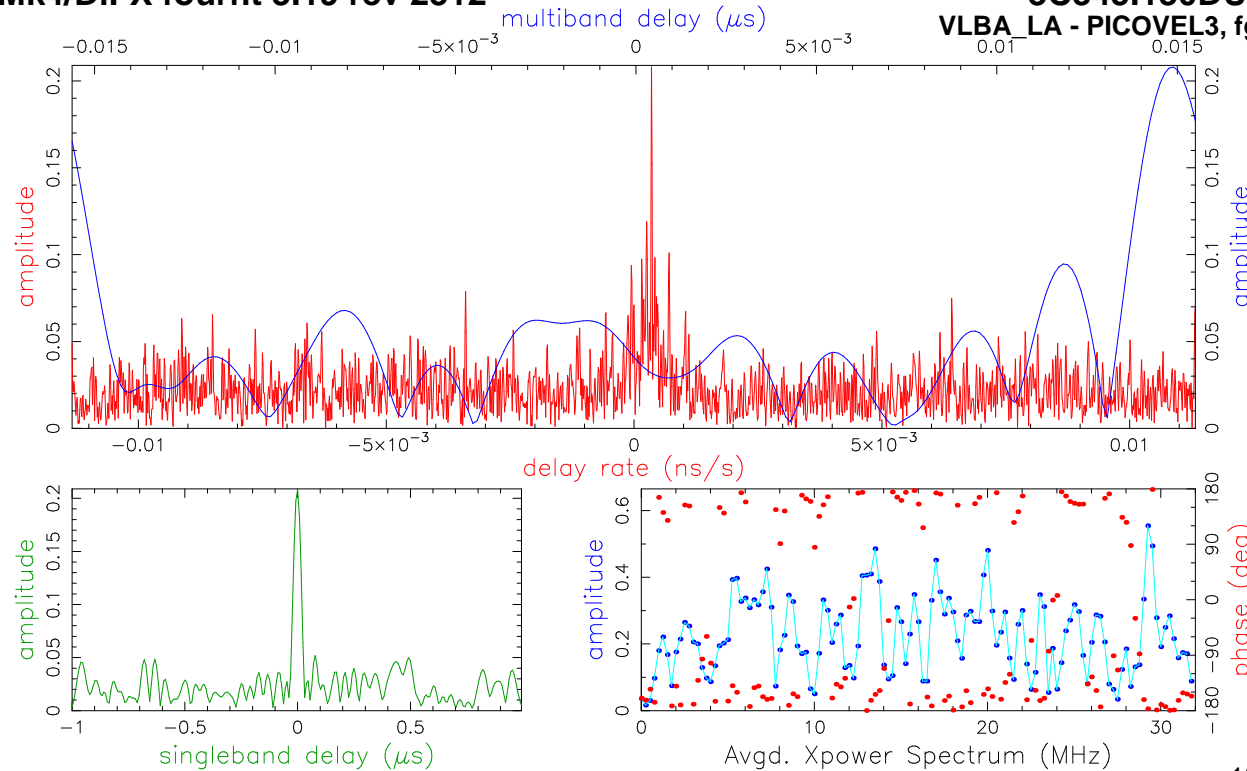
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
li	0:0	0:0	0:0	0:0	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		
l	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
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks

Group delay (usec)(sbd)	1.04578181911E+04	Apriori delay (usec)	1.04578355613E+04	Resid mbdelay (usec)	1.38798E-02	+/-	4.1E-05
Sband delay (usec)	1.04578318533E+04	Apriori clock (usec)	-2.3313755E-01	Resid sbdelay (usec)	-3.70800E-03	+/-	6.5E-04
Phase delay (usec)	1.04578355582E+04	Apriori clockrate (us/s)	1.5279932E-09	Resid phdelay (usec)	-3.03562E-06	+/-	1.4E-07
Delay rate (us/s)	1.28368597217E+00	Apriori rate (us/s)	1.28368561900E+00	Resid rate (us/s)	3.53166E-07	+/-	5.7E-10
Total phase (deg)	-4.8	Apriori accel (us/s/s)	-5.69256261958E-05	Resid phase (deg)	-94.1	+/-	4.3

ph/seg (deg)	RMS 53.3	Theor. 7.5	Amplitude Search (2048X64)	0.474 +/- 0.018	0.456	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	46.3	13.0	Interp.	0.000	0.456	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	37.3	8.6	Inc. seg. avg.	0.606	0.456	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	26.2	15.1	Inc. frq. avg.	0.552	0.456	Sample rate(MISamp/s): 64	dr window (ns/s) -0.016 0.016
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
						nlags: 128	t_cohere infinite

l: az 70.2 el 72.7 pa -97.6 i: az 300.2 el 28.5 pa 64.3 u,v (fr/asec) -9662.860 -3729.656 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/li..130DUS Output file: /Exps/c192b/v2/1234/No0115/li.W.258.130DUS

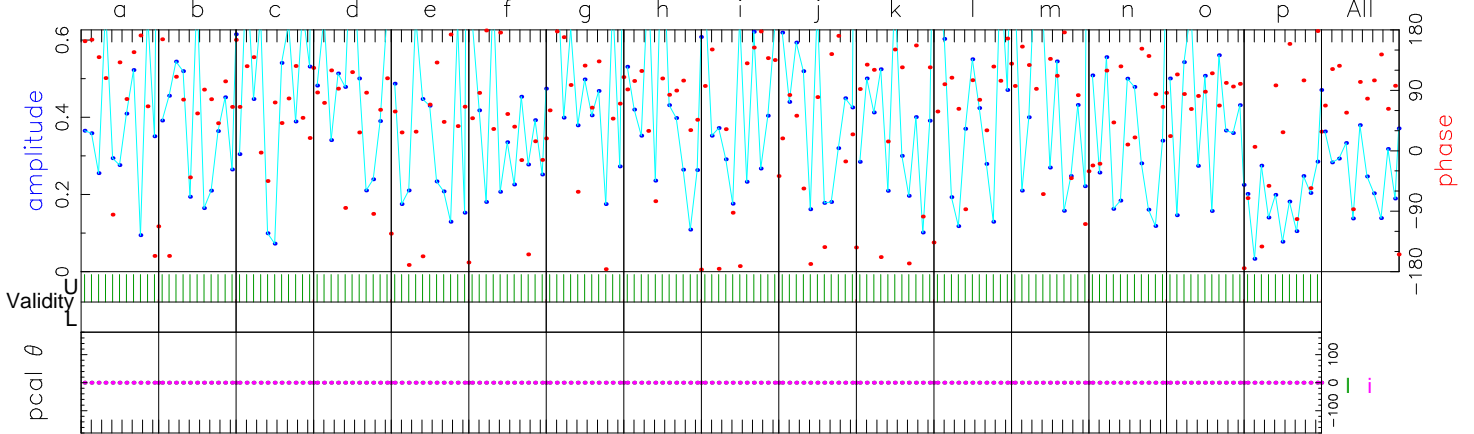


Fringe quality 9

SNR 11.7  
Int time 419.316  
Amp 0.209  
Phase 92.2  
PFD 6.7e-23  
Delays (us)  
SBD -0.001628  
MBD 0.014859  
Fringe rate (Hz) 0.030438  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094142  
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

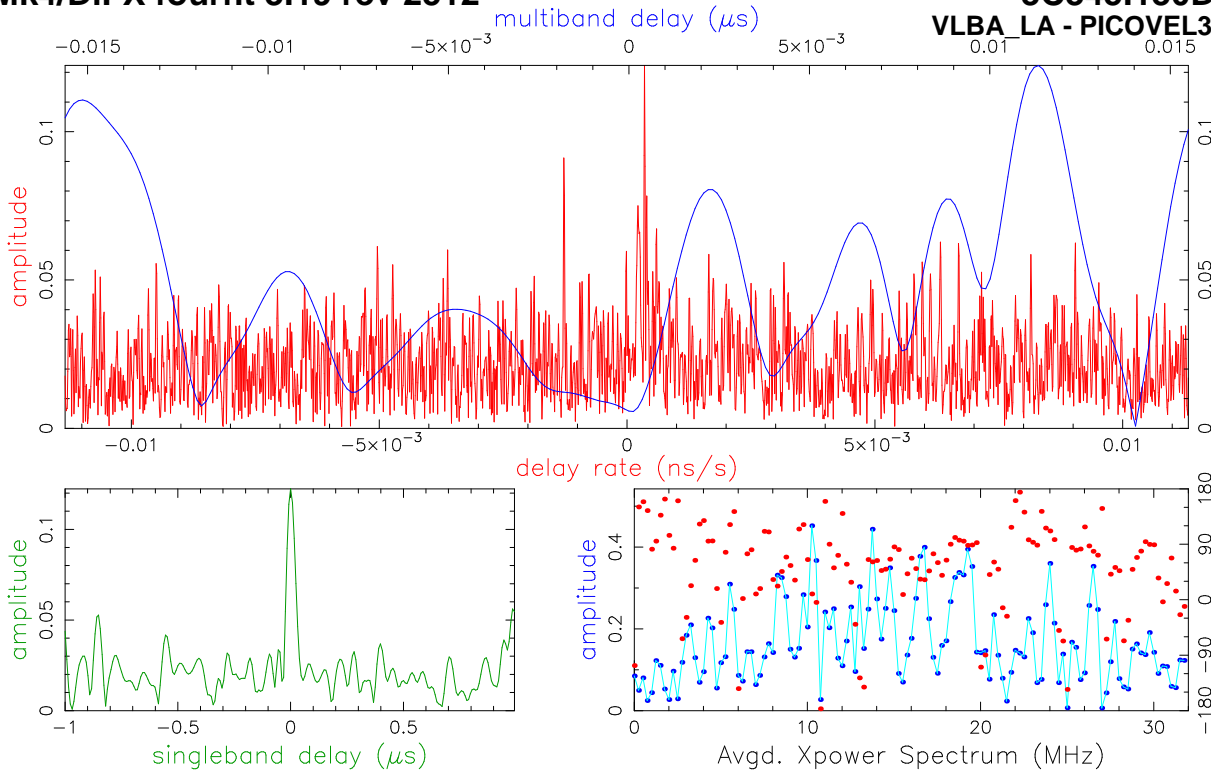


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	132.3	90.5	68.6	89.8	65.8	38.6	105.9	84.1	146.2	44.7	144.3	94.6	103.7	50.4	78.9	-155.5	Phase	92.2
	0.2	0.2	0.3	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.4	0.0	Ampl.	0.2
	148.4	130.2	129.2	128.5	168.8	127.3	129.2	129.2	91.5	143.3	127.7	128.5	127.4	127.3	128.4	244.3	Sbd box	128.8
	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	
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
	0:0	0:0	0:0	0:0	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	
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)			1.04578191698E+04					Apriori delay (usec)	1.04578355613E+04				Resid mbdelay (usec)	1.48585E-02			+/-	9.2E-05
Sband delay (usec)			1.04578339338E+04					Apriori clock (usec)	-2.3313755E-01				Resid sbdelay (usec)	-1.62750E-03			+/-	1.5E-03
Phase delay (usec)			1.04578355642E+04					Apriori clockrate (us/s)	1.5279932E-09				Resid phdelay (usec)	2.97183E-06			+/-	3.2E-07
Delay rate (us/s)			1.28368597236E+00					Apriori rate (us/s)	1.28368561900E+00				Resid rate (us/s)	3.53356E-07			+/-	1.3E-09
Total phase (deg)				181.5				Apriori accel (us/s/s)	-5.69256261958E-05				Resid phase (deg)	92.2			+/-	9.8

RMS Theor. Amplitude 0.209 +/- 0.018  
 ph/seg (deg) 60.8 17.0 Search (2048X64) 0.204  
 amp/seg (%) 47.1 29.6 Interp. 0.000  
 ph/frq (deg) 45.2 19.6 Inc. seg. avg. 0.252  
 amp/frq (%) 41.8 34.2 Inc. frq. avg. 0.232

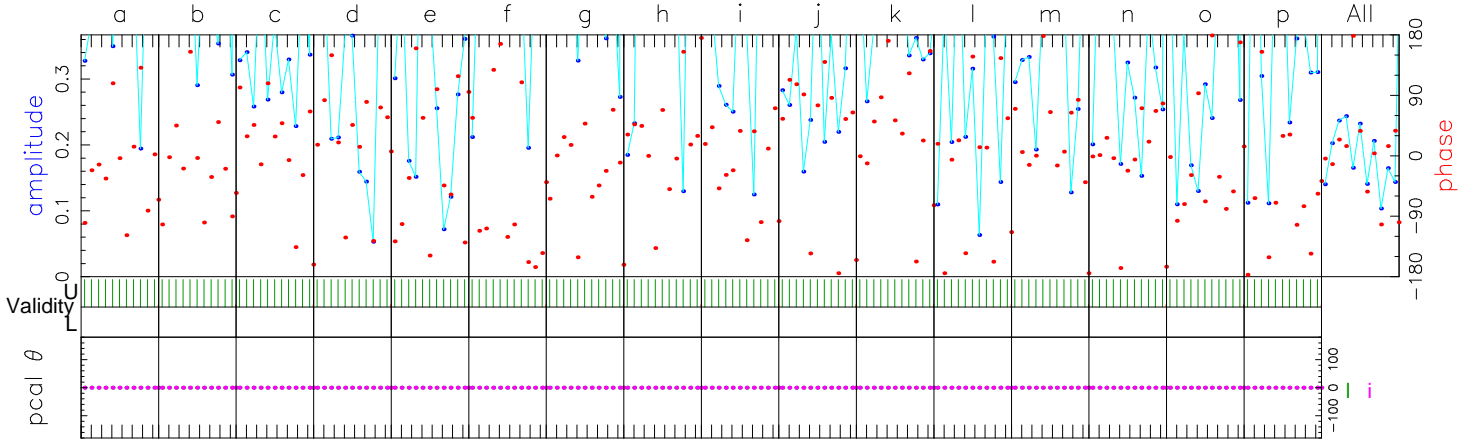
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 i: az 300.2 el 28.5 pa 64.3 u,v (fr/asec) -9662.860 -3729.656 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/li..130DUS Output file: /Exps/c192b/v2/1234/No0115/li.W.277.130DUS



Fringe quality 0  
SNR 6.8  
Int time 419.316  
Amp 0.122  
Phase 6.0  
PFD 2.2e-03  
Delays (us)  
SBD 0.000059  
MBD 0.011328  
Fringe rate (Hz) 0.030345  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094147  
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



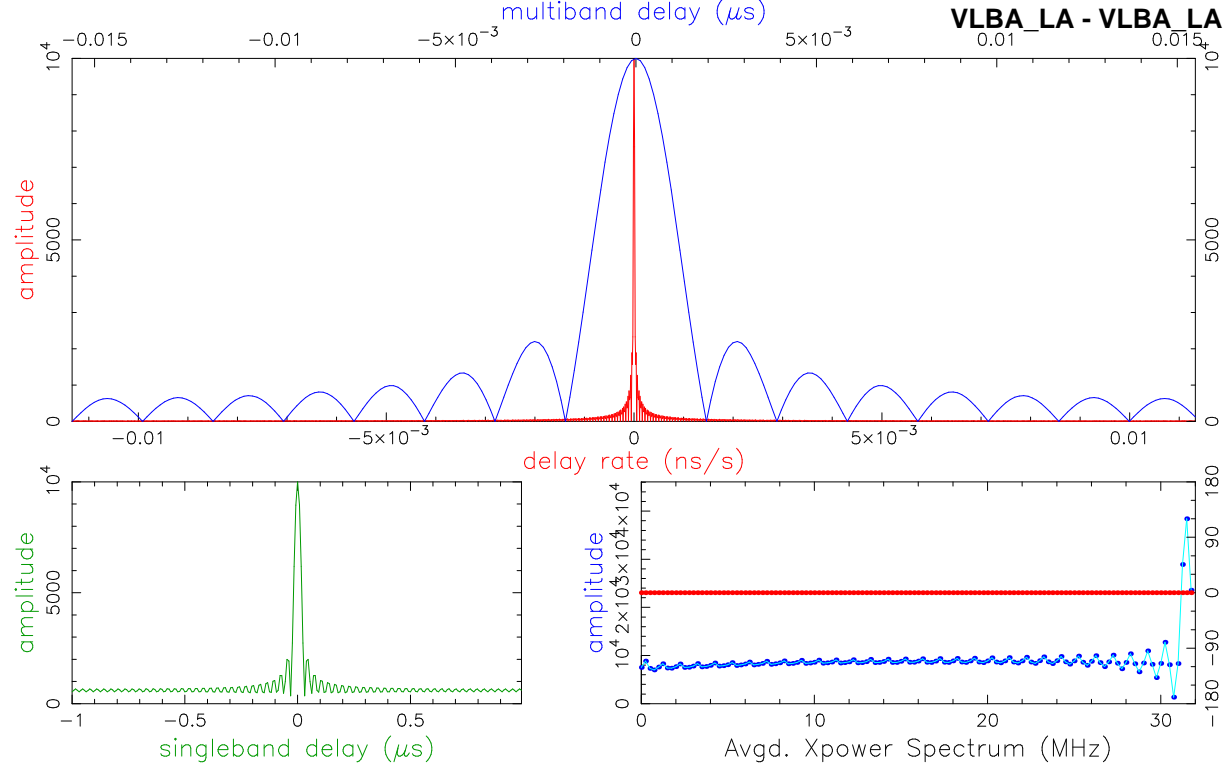
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0				
l	1000	1000	1000	1000	1000	1000	1000	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				
li	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
li	0:0	0:0	0:0	0:0	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				
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000				
W	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR				
U	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL				
Group delay (usec)(sbd)		1.04578468896E+04															1.13283E-02	+/- 1.6E-04		
Sband delay (usec)		1.04578356203E+04															5.90000E-05	+/- 2.5E-03		
Phase delay (usec)		1.04578355615E+04															1.92724E-07	+/- 5.4E-07		
Delay rate (us/s)		1.28368597128E+00															3.52279E-07	+/- 2.2E-09		
Total phase (deg)				95.3													6.0	+/- 16.7		
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		
Bits/sample:	2x2																SampCntNorm: enabled	mb window (us)	-0.016 0.016	
Sample rate(MSamp/s):	64																dr window (ns/s)	-0.011 0.011		
Data rate(Mb/s):	2048																nlags: 128	t_cohere infinite	ion window (TEC)	0.00 0.00

ph/seg (deg) 66.3 29.0 Search (2048X64) 0.120 0.120 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 63.1 50.6 Interp. 0.000 0.120 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 77.7 33.5 Inc. seg. avg. 0.161 0.120 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 95.4 58.4 Inc. frq. avg. 0.182 0.120 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 I: az 70.2 el 72.7 pa -97.6 i: az 300.2 el 28.5 pa 64.3 u,v (fr/asec) -9662.860 -3729.656 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/li..130DUS Output file: /Exps/c192b/v2/1234/No0115/li.W.297.130DUS



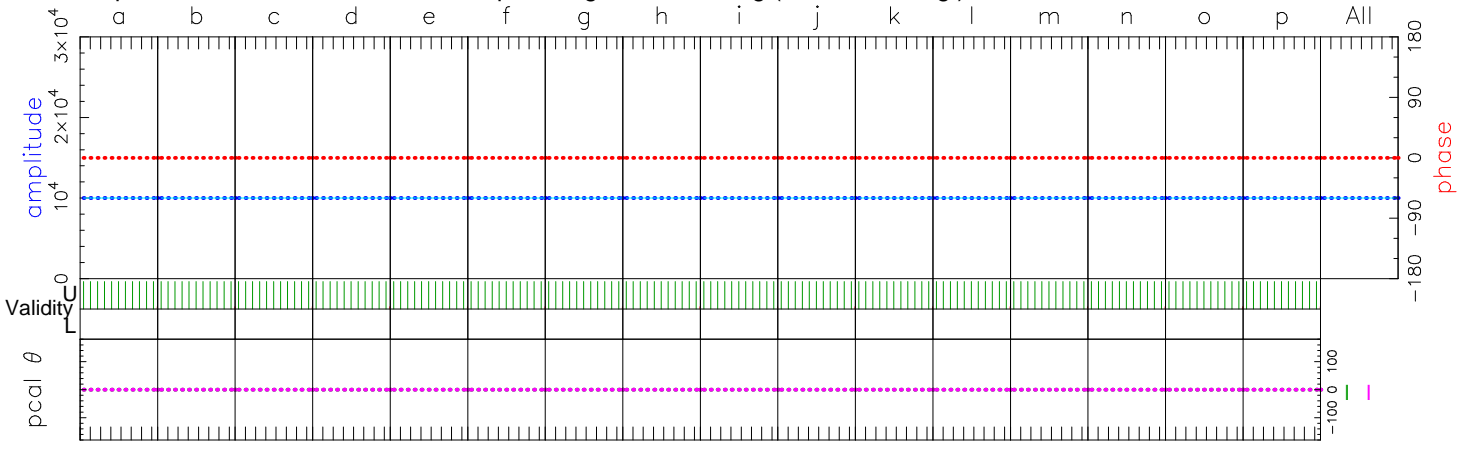
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, II  
VLBA\_LA - VLBA\_LA, fgroup W, pol LL



Fringe quality 9  
SNR 559974.7  
Int time 419.316  
Amp 10000.004  
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. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094130  
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

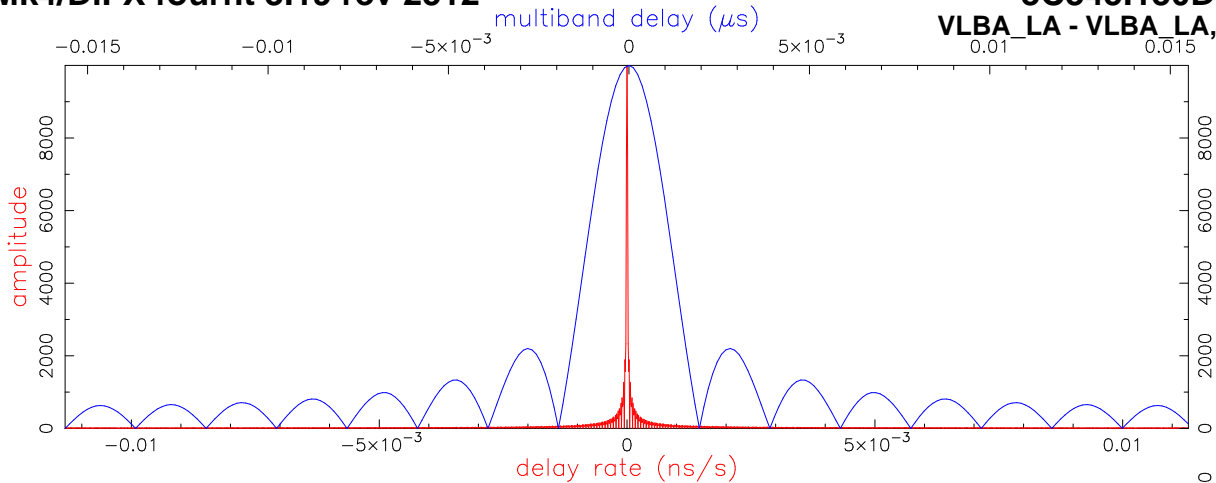


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
Q	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
																	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)	-7.63149233931E-19			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			-7.63149E-19			+/-	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	

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.004 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (2048X64) 10000.004 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 10000.004 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 I: az 70.2 el 72.7 pa -97.6 I: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/ll..130DUS Output file: /Exps/c192b/v2/1234/No0115/ll.W.238.130DUS

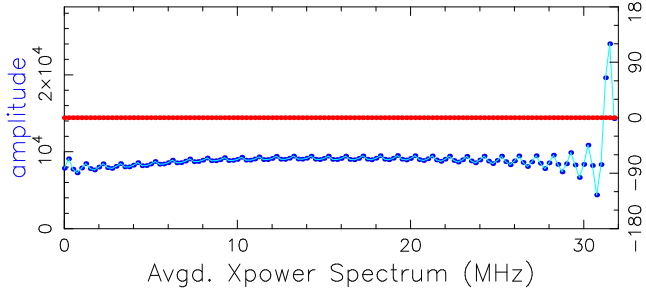
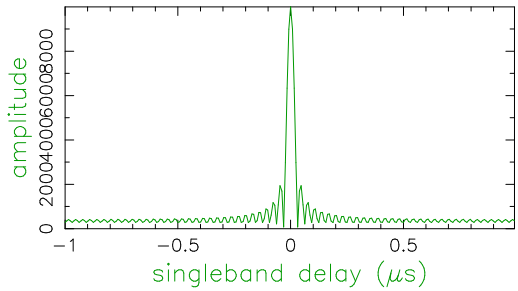
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, II  
VLBA\_LA - VLBA\_LA, fgroup W, pol RR



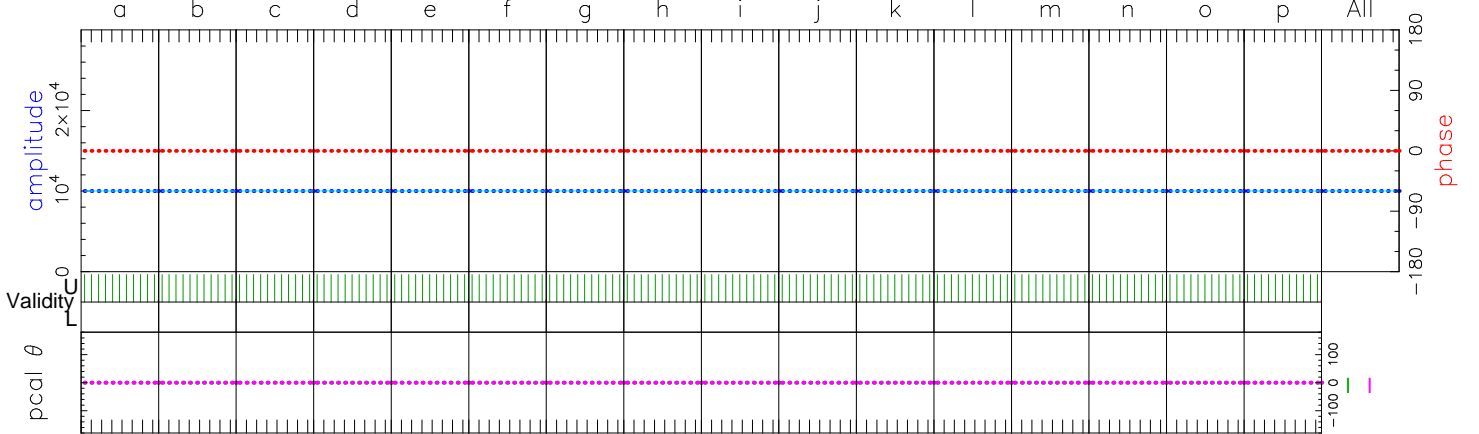
Fringe quality 9

SNR 559974.2  
Int time 419.316  
Amp 9999.998  
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



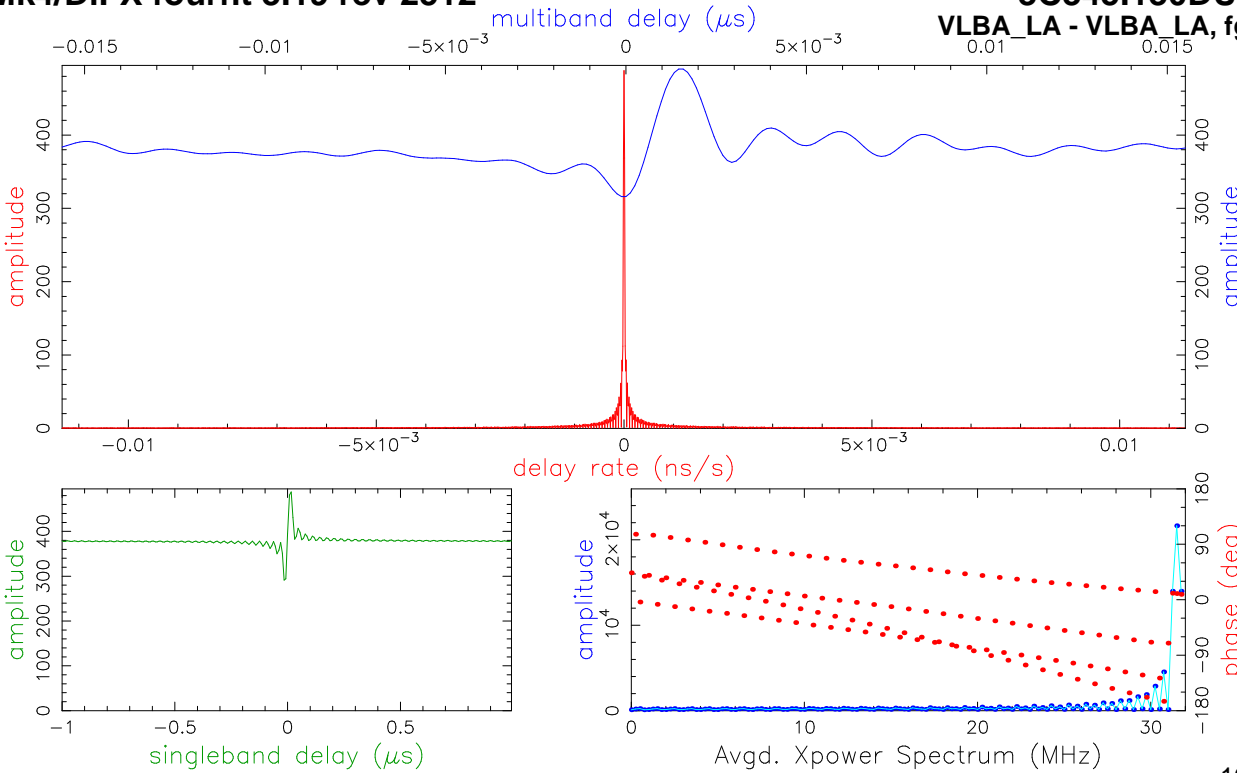
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094135  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

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	
I 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	
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	
I 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		
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
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)	-2.30100990048E-19		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.30101E-19		+/- 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						

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.998 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 0.0 0.0 Search (2048X64) 9999.997 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
Inc. frq. avg. 9999.997 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
I: az 70.2 el 72.7 pa -97.6 I: az 70.2 el 72.7 pa -97.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/ll..130DUS Output file: /Exps/c192b/v2/1234/No0115/ll.W.252.130DUS

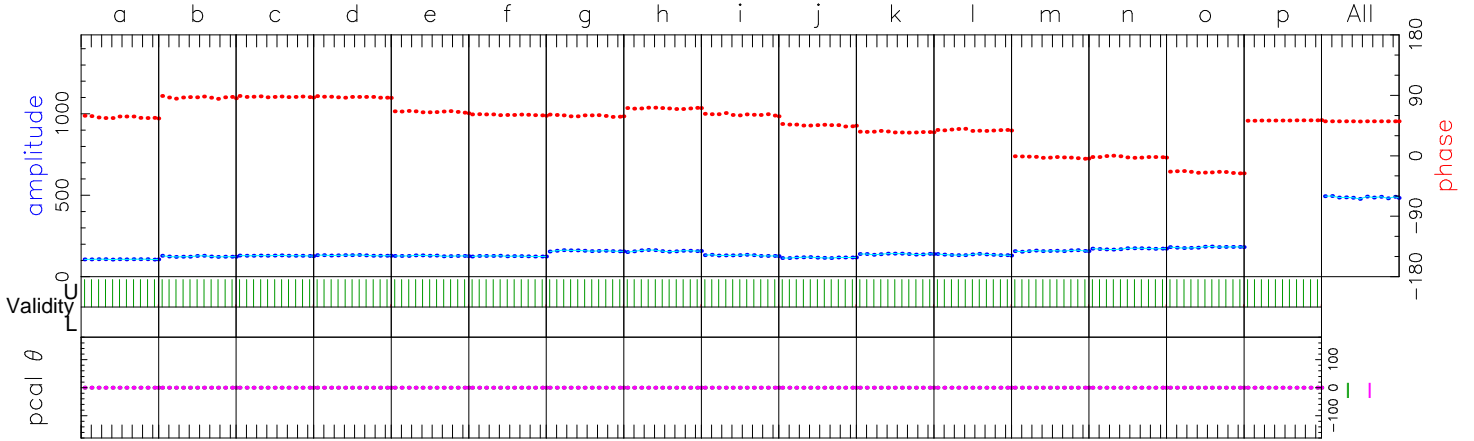


Fringe quality 5

SNR 27720.1  
Int time 419.316  
Amp 495.023  
Phase 51.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.012300  
MBD 0.001660  
Fringe rate (Hz)  
-0.000005  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094140  
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
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		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l:l	0:0	0:0	0:0	0:0	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:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		1.65978125000E-03															1.65978E-03	+/- 3.9E-08
Sband delay (usec)		1.23000000000E-02															1.23000E-02	+/- 6.2E-07
Phase delay (usec)		1.65331633784E-06															1.65332E-06	+/- 1.3E-10
Delay rate (us/s)		-6.23530705234E-11															-6.23531E-11	+/- 5.5E-13
Total phase (deg)					51.3												51.3	+/- 0.0

ph/seg (deg) 0.1 0.0  
amp/seg (%) 1.8 0.0  
ph/frq (deg) 34.5 0.0  
amp/frq (%) 290.6 0.0

RMS Theor. Amplitude 495.023 +/- 0.018  
Search (2048X64) 490.049  
Interp. 0.000  
Inc. seg. avg. 487.922  
Inc. frq. avg. 511.234

Group delay (usec)(sbd) 1.65978125000E-03  
Sband delay (usec) 1.23000000000E-02  
Phase delay (usec) 1.65331633784E-06  
Delay rate (us/s) -6.23530705234E-11  
Total phase (deg) 51.3

Apriori delay (usec) 0.00000000000E+00  
Apriori clock (usec) 0.0000000E+00  
Apriori clockrate (us/s) 0.0000000E+00  
Apriori rate (us/s) 0.00000000000E+00  
Apriori accel (us/s/s) 0.00000000000E+00

Resid mbdelay (usec) 1.65978E-03 +/- 3.9E-08  
Resid sbdelay (usec) 1.23000E-02 +/- 6.2E-07  
Resid phdelay (usec) 1.65332E-06 +/- 1.3E-10  
Resid rate (us/s) -6.23531E-11 +/- 5.5E-13  
Resid phase (deg) 51.3 +/- 0.0

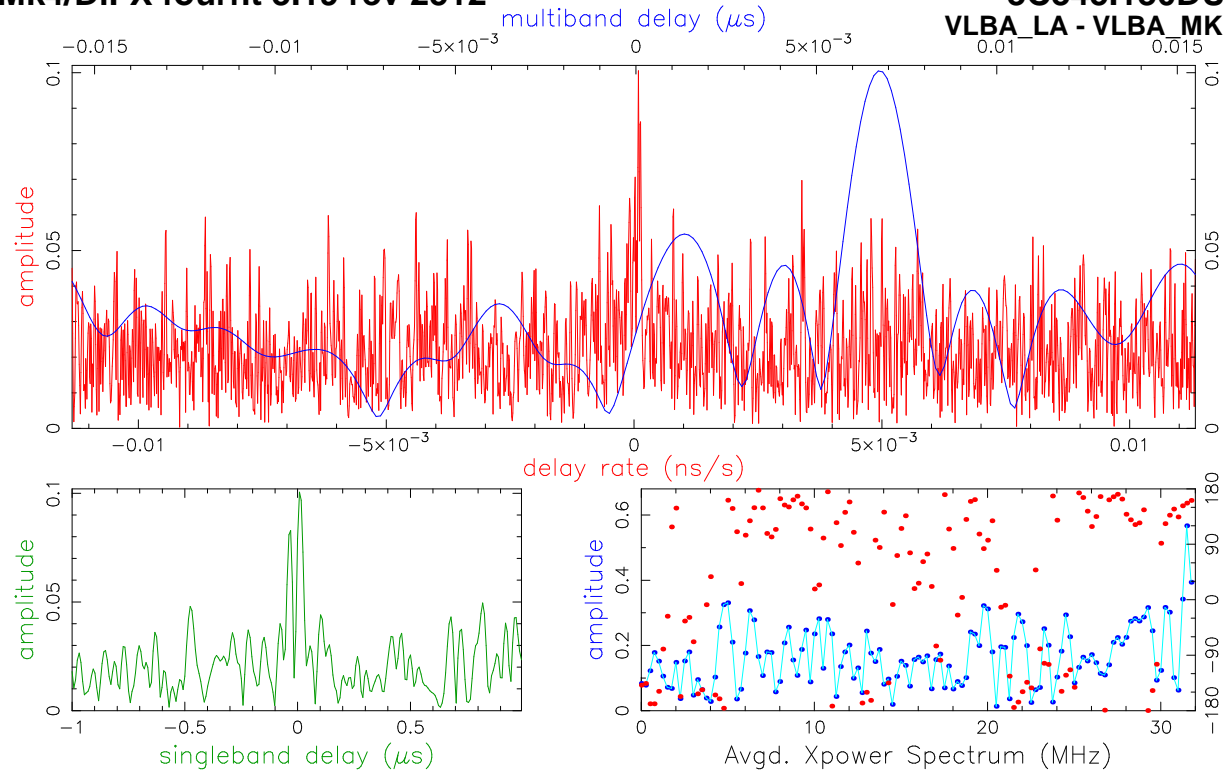
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Pcal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MISamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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

l: az 70.2 el 72.7 pa -97.6  
l: az 70.2 el 72.7 pa -97.6  
u,v (fr/asec) 0.000 0.000  
simultaneous interpolator

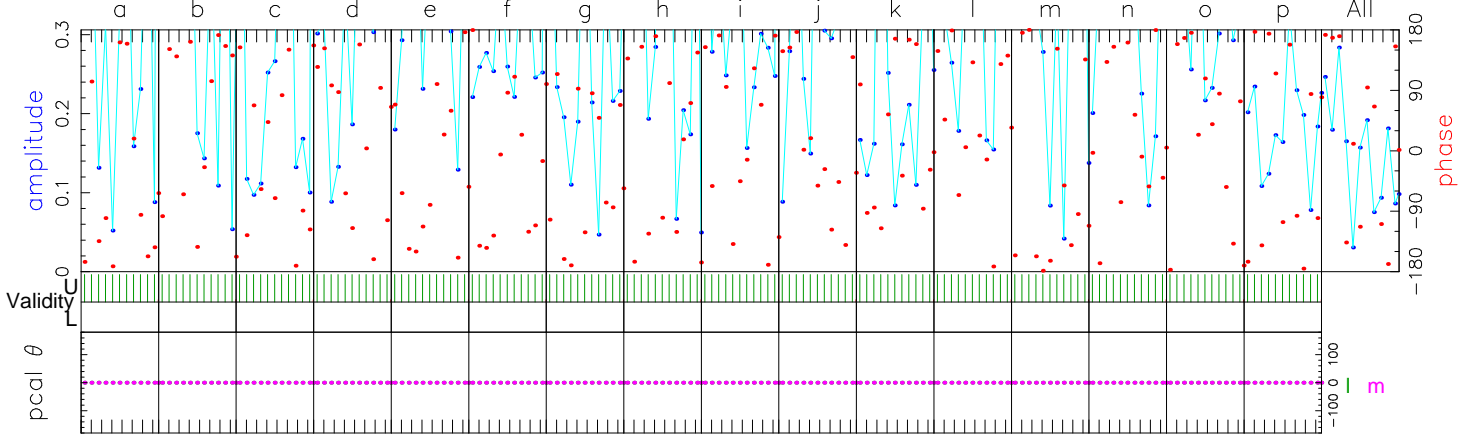
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/ll.130DUS Output file: /Exps/c192b/v2/1234/No0115/ll.W.270.130DUS





Fringe quality 0  
SNR 5.7  
Int time 418.772  
Amp 0.102  
Phase 178.2  
PFD 9.4e-01  
Delays (us)  
SBD 0.010469  
MBD 0.006754  
Fringe rate (Hz)  
0.007557  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094132  
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

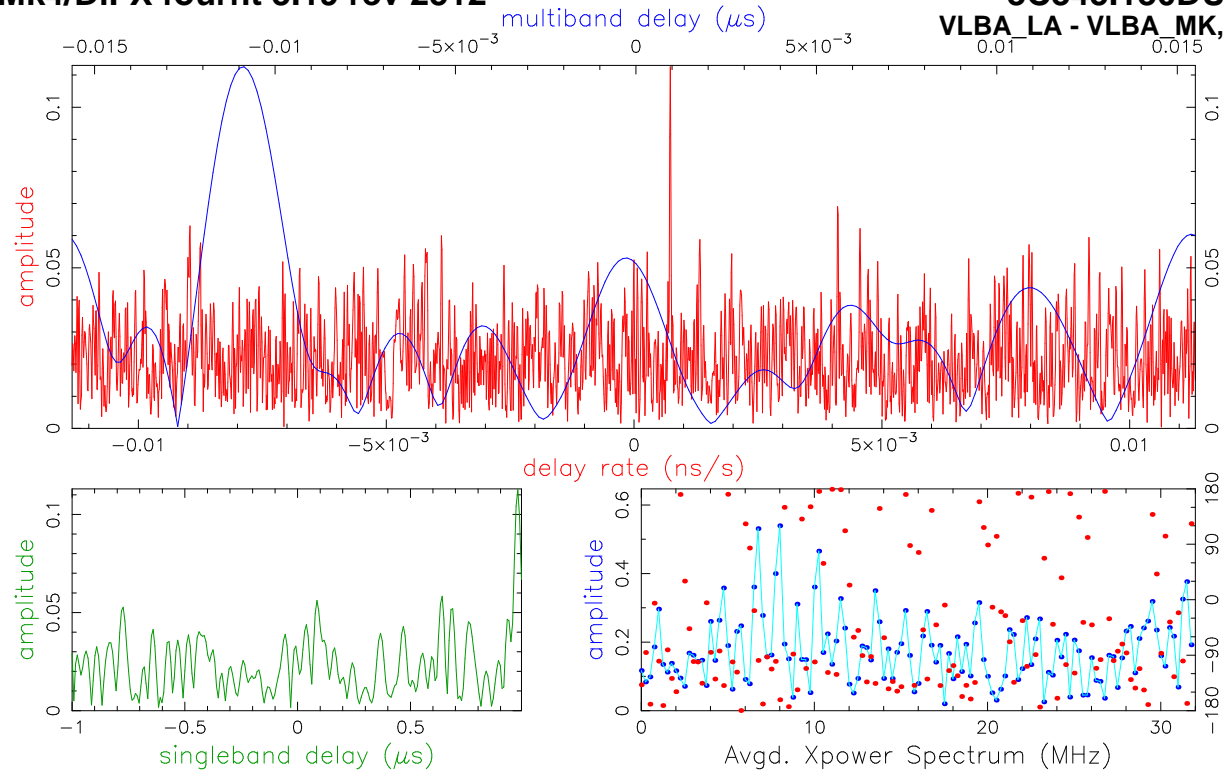


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-171.0	164.1	147.4	144.9	-151.0	-110.1	-121.3	162.6	173.6	-101.3	-93.0	105.6	-172.0	149.5	132.5	-166.9	Phase	178.2	
	0.2	0.2	0.1	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.1	Ampl.	0.1	
	250.2	131.0	1.4	137.0	213.6	26.4	135.5	168.1	1.4	212.5	94.0	103.0	130.6	163.5	245.7	124.5	Sbd box	130.3	
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		
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)			1.04306684863E+04							1.04306617321E+04							Resid mbdelay (usec)	6.75426E-03	+/- 1.9E-04
Sband delay (usec)			1.04306722016E+04							-3.3376112E+00							Resid sbdelay (usec)	1.04695E-02	+/- 3.0E-03
Phase delay (usec)			1.04306617378E+04							-3.4277971E-07							Resid phdelay (usec)	5.74769E-06	+/- 6.5E-07
Delay rate (us/s)			-7.13978132535E-01							-7.13978220262E-01							Resid rate (us/s)	8.77265E-08	+/- 2.7E-09
Total phase (deg)				34.9						-3.77686970578E-05							Resid phase (deg)	178.2	+/- 20.1

ph/seg (deg) RMS Theor. Amplitude 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 87.0 60.7 Search (2048X64) 0.100 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 50.2 40.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 65.0 70.1 Inc. seg. avg. 0.130 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.105 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 l: az 70.2 el 72.7 pa -97.6 m: az 54.6 el 27.2 pa -86.0 u,v (fr/asec) 5259.289 -863.163 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lm..130DUS Output file: /Exps/c192b/v2/1234/No0115/lm.W.246.130DUS

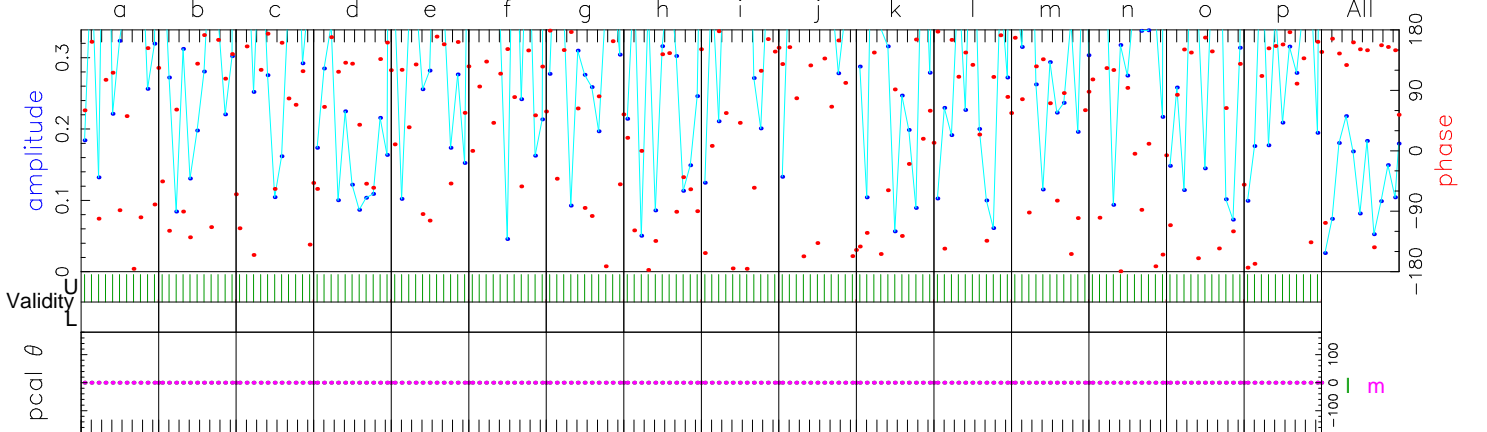
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol RR



Fringe quality 0  
SNR 6.3  
Int time 418.772  
Amp 0.113  
Phase 151.7  
PFD 7.1e-02  
Delays (us)  
SBD 0.975537  
MBD -0.010902  
Fringe rate (Hz)  
0.063410  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094139  
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

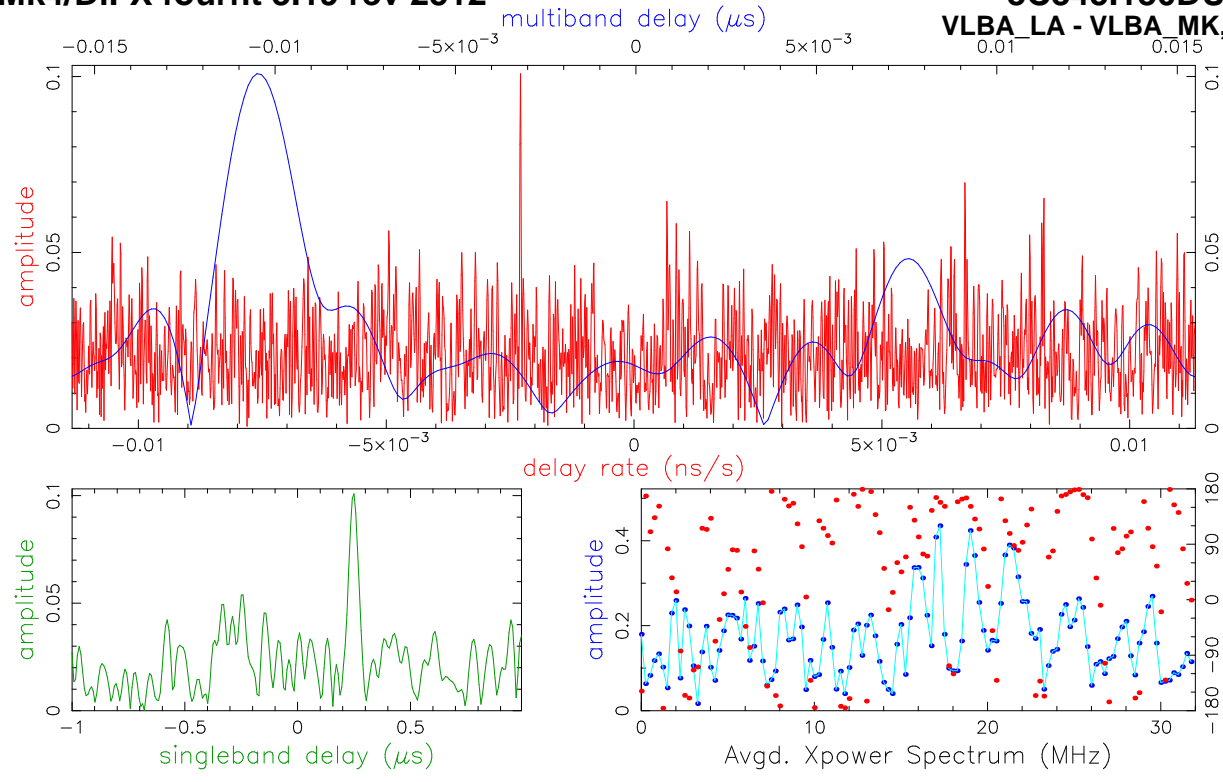


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		1.04316508300E+04																
Sband delay (usec)		1.04316372691E+04																
Phase delay (usec)		1.04306617370E+04																
Delay rate (us/s)		-7.13977484138E-01																
Total phase (deg)					8.3													
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																		
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)																		

l: az 70.2 el 72.7 pa -97.6 m: az 54.6 el 27.2 pa -86.0 u,v (fr/asec) 5259.289 -863.163 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lm..130DUS Output file: /Exps/c192b/v2/1234/No0115/lm.W.265.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, Im  
VLBA\_LA - VLBA\_MK, fgroup W, pol LR

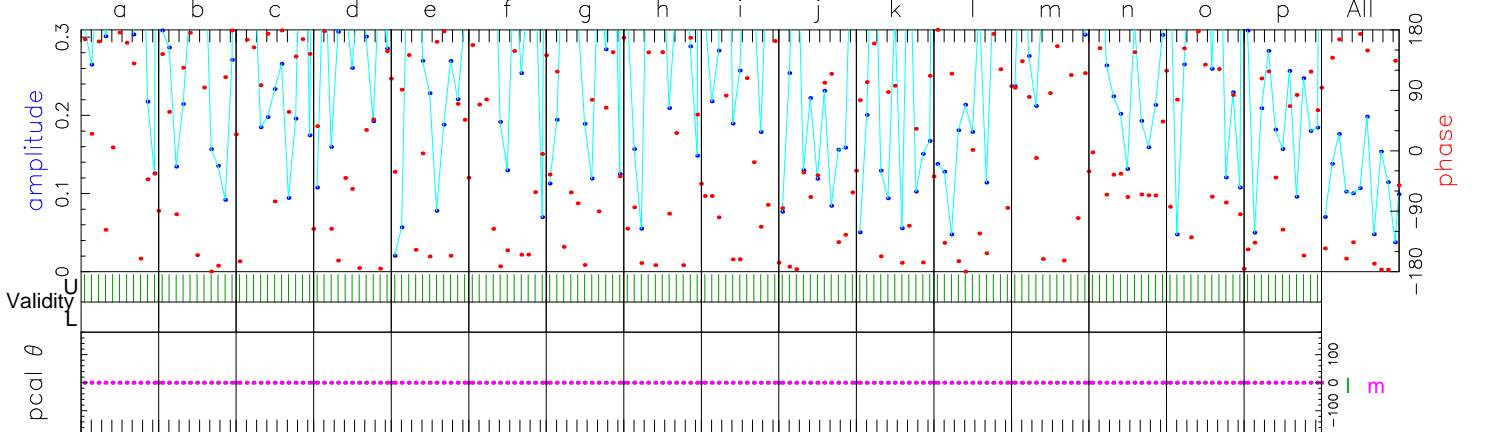


Fringe quality 0

SNR 5.7  
Int time 418.772  
Amp 0.103  
Phase 174.9  
PFD 9.7e-01  
Delays (us)  
SBD 0.247485  
MBD -0.010445  
Fringe rate (Hz)  
-0.197518  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094144  
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

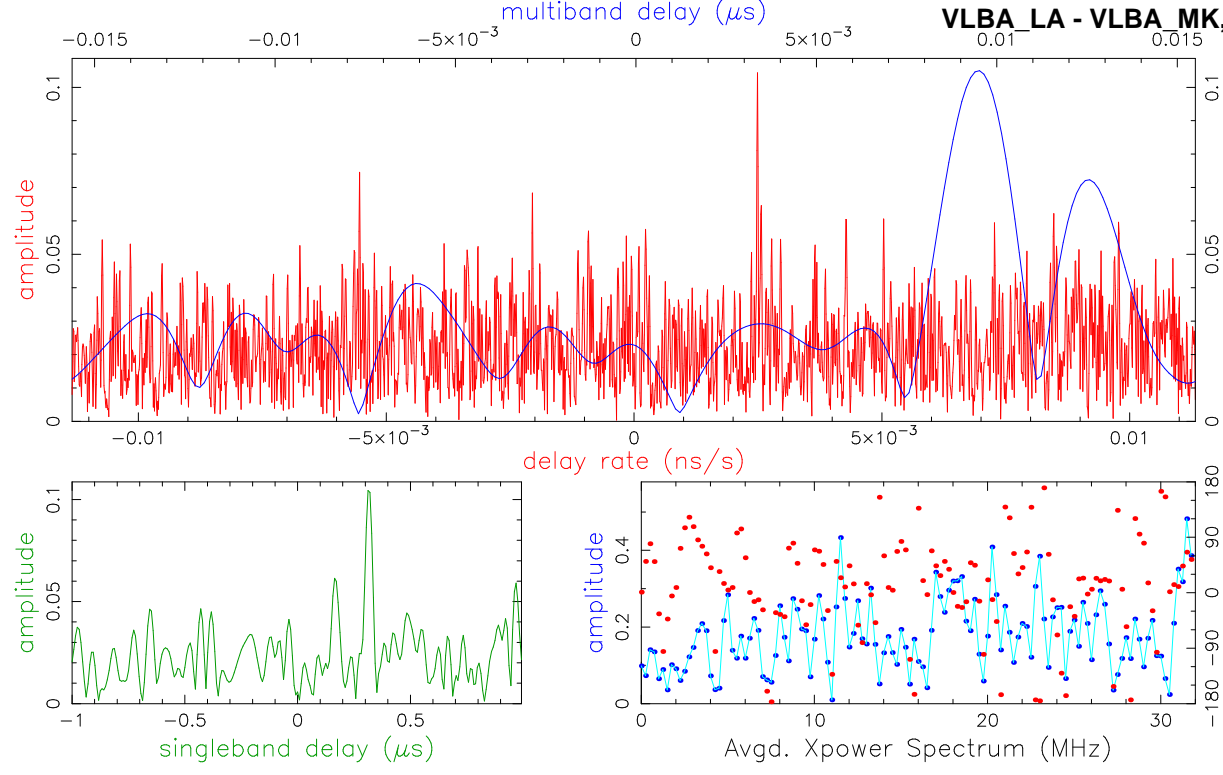


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	179.3	148.3	166.1	-173.3	168.6	177.9	-133.9	-176.4	-170.0	-116.0	154.3	-164.3	137.3	-28.5	176.7	131.3	Phase	174.9
l	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
m	233.0	140.4	162.0	153.4	236.8	199.6	14.6	238.0	174.1	228.7	102.0	14.3	161.7	100.1	101.2	226.8	Sbd box	160.7
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
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		
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	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) 1.04309012875E+04 Apriori delay (usec) 1.04306617321E+04 Resid mbdelay (usec) -1.04446E-02 +/- 1.9E-04  
 Sband delay (usec) 1.04309092171E+04 Apriori clock (usec) -3.3376112E+00 Resid sbdelay (usec) 2.47485E-01 +/- 3.0E-03  
 Phase delay (usec) 1.04306617377E+04 Apriori clockrate (us/s) -3.4277971E-07 Resid phdelay (usec) 5.63885E-06 +/- 6.5E-07  
 Delay rate (us/s) -7.13980513254E-01 Apriori rate (us/s) -7.13978220262E-01 Resid rate (us/s) -2.29299E-06 +/- 2.7E-09  
 Total phase (deg) 31.5 Apriori accel (us/s/s) -3.77686970578E-05 Resid phase (deg) 174.9 +/- 20.2

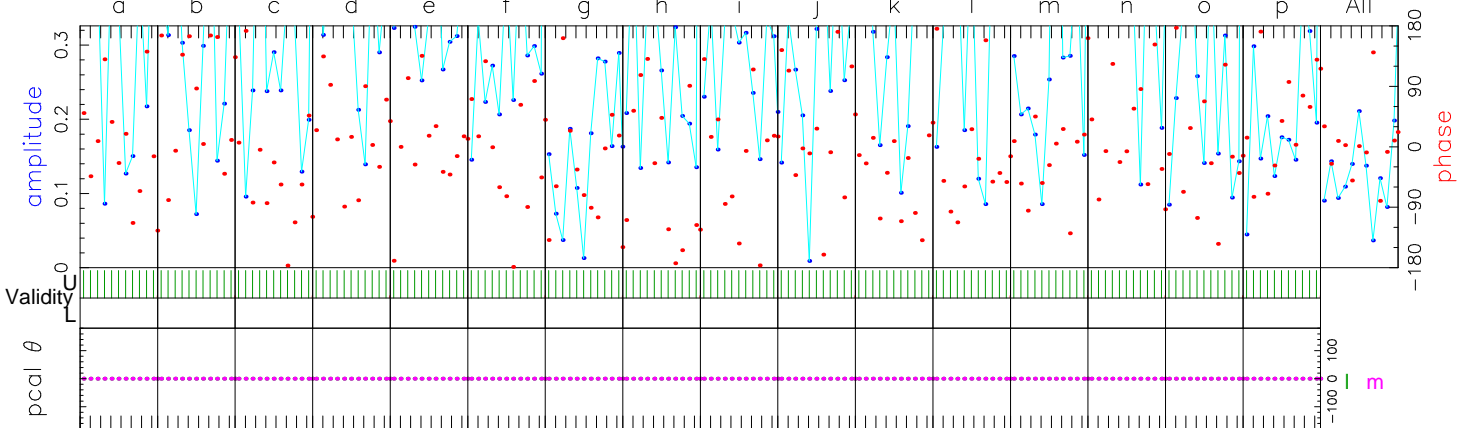
RMS Theor. Amplitude 0.103 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 30.4 35.0 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 48.8 61.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 51.7 40.4 Inc. seg. avg. 0.097 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 51.0 70.5 Inc. frq. avg. 0.100 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 m: az 54.6 el 27.2 pa -86.0 u,v (fr/asec) 5259.289 -863.163 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lm..130DUS Output file: /Exps/c192b/v2/1234/No0115/lm.W.286.130DUS



Fringe quality 0  
SNR 6.0  
Int time 418.772  
Amp 0.109  
Phase -9.1  
PFD 4.8e-01  
Delays (us)  
SBD 0.316077  
MBD 0.009612  
Fringe rate (Hz) 0.214710  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094149  
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

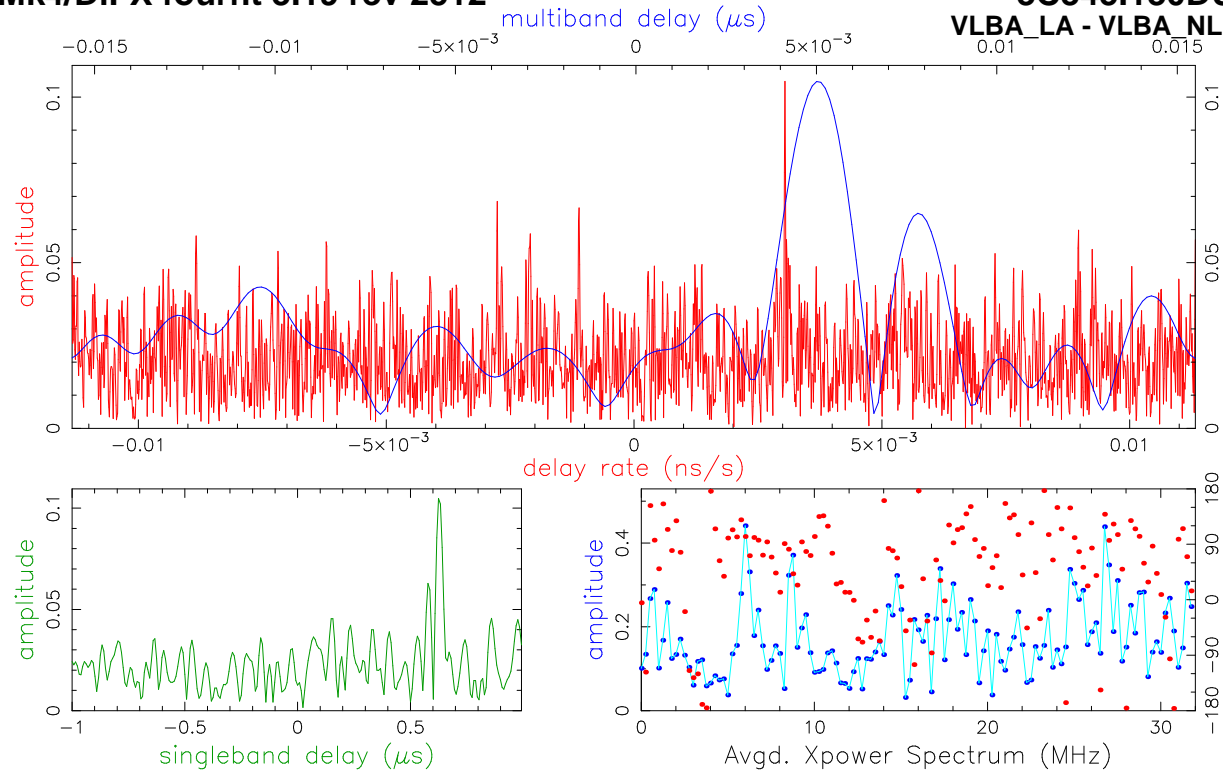


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	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)		1.04309838438E+04								1.04306617321E+04							9.61170E-03	+/- 1.8E-04
Sband delay (usec)		1.04309778091E+04								-3.3376112E+00							3.16077E-01	+/- 2.9E-03
Phase delay (usec)		1.04306617318E+04								-3.4277971E-07							-2.94274E-07	+/- 6.2E-07
Delay rate (us/s)		-7.13975727691E-01								-7.13978220262E-01							2.49257E-06	+/- 2.6E-09
Total phase (deg)					207.5					-3.77686970578E-05							-9.1	+/- 19.2
ph/seg (deg)		RMS 53.7	Theor. 33.3							0.109 +/- 0.018								
amp/seg (%)		52.0	58.1							0.000								
ph/frq (deg)		63.4	38.5							0.110								
amp/frq (%)		69.0	67.1							0.107								
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															
Bits/sample:	2x2		SampCntNorm: enabled															
Sample rate(MSamp/s):	64		dr window (ns/s) -0.011 0.011															
Data rate(Mb/s):	2048		ion window (TEC) 0.00 0.00															
nlags:	128		t_cohere infinite															



Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, In  
VLBA\_LA - VLBA\_NL, fgroup W, pol LL

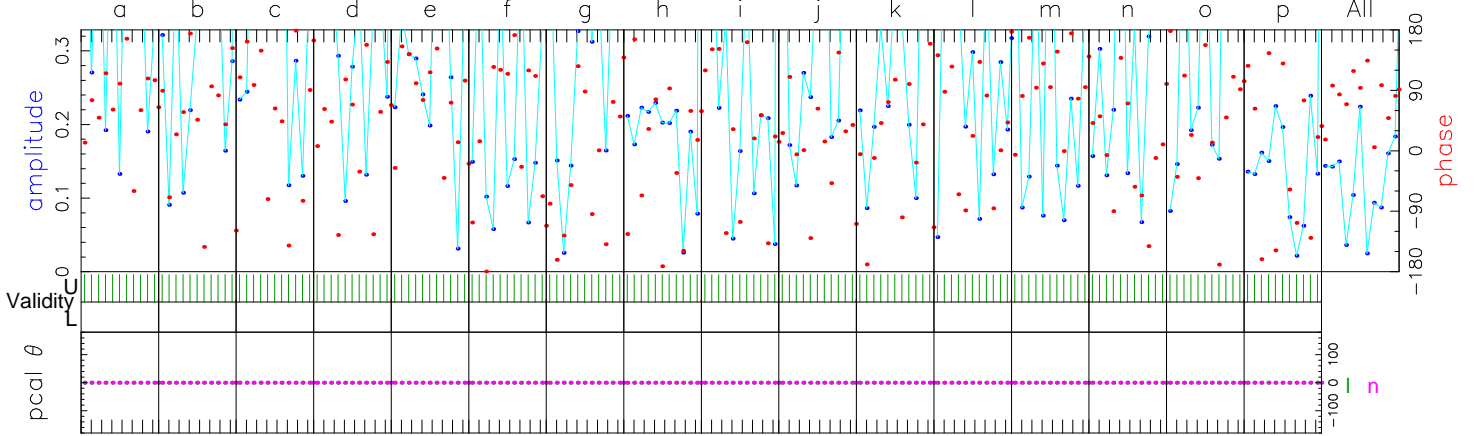


Fringe quality 0

SNR 5.9  
Int time 418.211  
Amp 0.110  
Phase 75.9  
PFD 5.0e-01  
Delays (us)  
SBD 0.627917  
MBD 0.005065  
Fringe rate (Hz)  
0.262287  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094132  
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		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l: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		
l: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		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	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

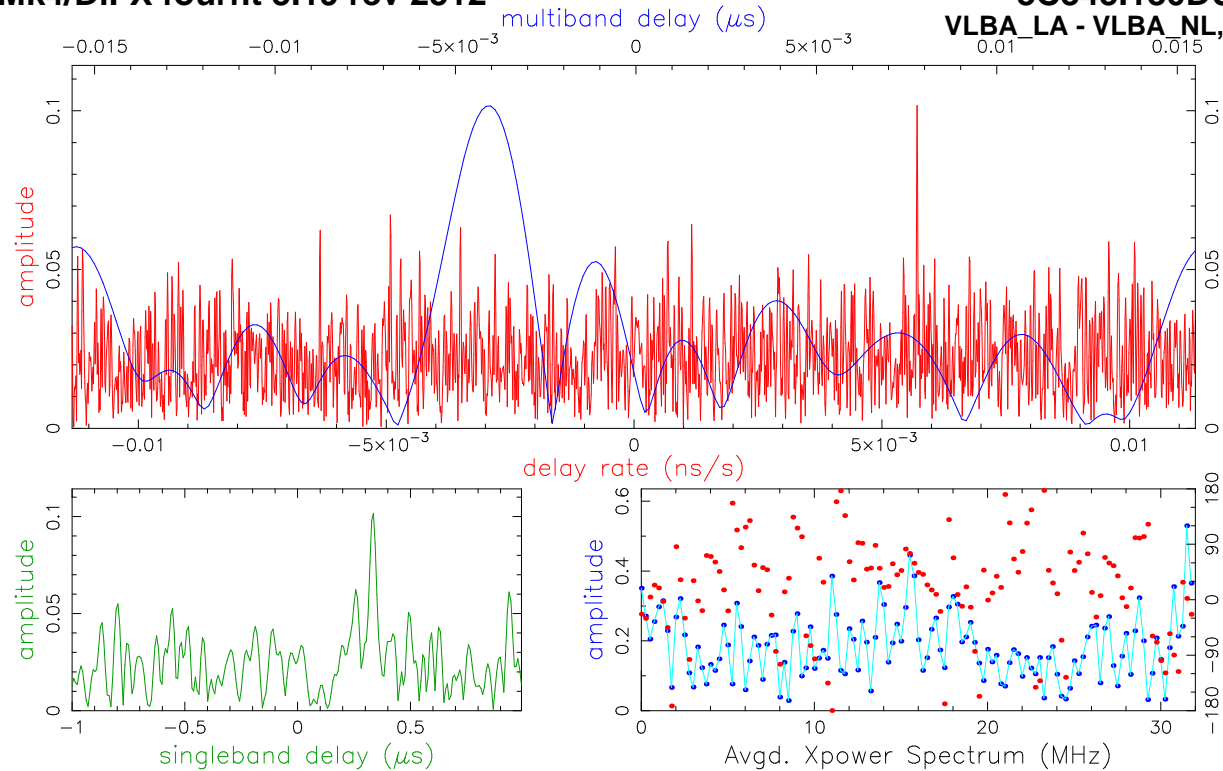
Group delay (usec)(sbd) -8.37714905565E+02 Apriori delay (usec) -8.38344970711E+02 Resid mbdelay (usec) 5.06515E-03 +/- 1.8E-04  
 Sband delay (usec) -8.37717054211E+02 Apriori clock (usec) -2.7262800E+01 Resid sbdelay (usec) 6.27917E-01 +/- 2.9E-03  
 Phase delay (usec) -8.38344968264E+02 Apriori clockrate (us/s) -4.8569552E-07 Resid phdelay (usec) 2.44697E-06 +/- 6.2E-07  
 Delay rate (us/s) 2.48815365629E-01 Apriori rate (us/s) 2.48812320732E-01 Resid rate (us/s) 3.04490E-06 +/- 2.6E-09  
 Total phase (deg) -203.8 Apriori accel (us/s/s) -1.56273057087E-06 Resid phase (deg) 75.9 +/- 19.3

ph/seg (deg) 37.8 33.4 Search (2048X64) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 59.8 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) 42.1 38.5 Inc. seg. avg. 0.110 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 64.7 67.3 Inc. frq. avg. 0.106 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 70.2 el 72.7 pa -97.6 n: az 109.2 el 84.5 pa -64.3 u,v (fr/asec) -1857.955 -633.875 ion window (TEC) 0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/In...130DUS Output file: /Exps/c192b/v2/1234/No0115/In.W.243.130DUS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, In  
VLBA\_LA - VLBA\_NL, fgroup W, pol RR

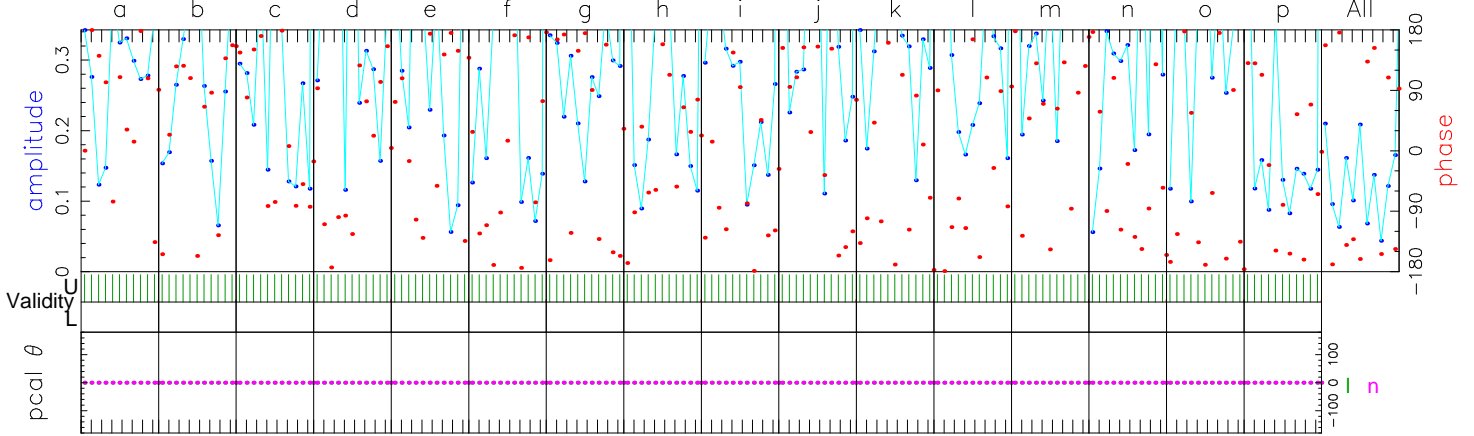


Fringe quality 0

SNR 5.7  
Int time 418.211  
Amp 0.114  
Phase -178.4  
PFD 9.0e-01  
Delays (us)  
SBD 0.333438  
MBD -0.004095  
Fringe rate (Hz)  
0.493198  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094138  
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



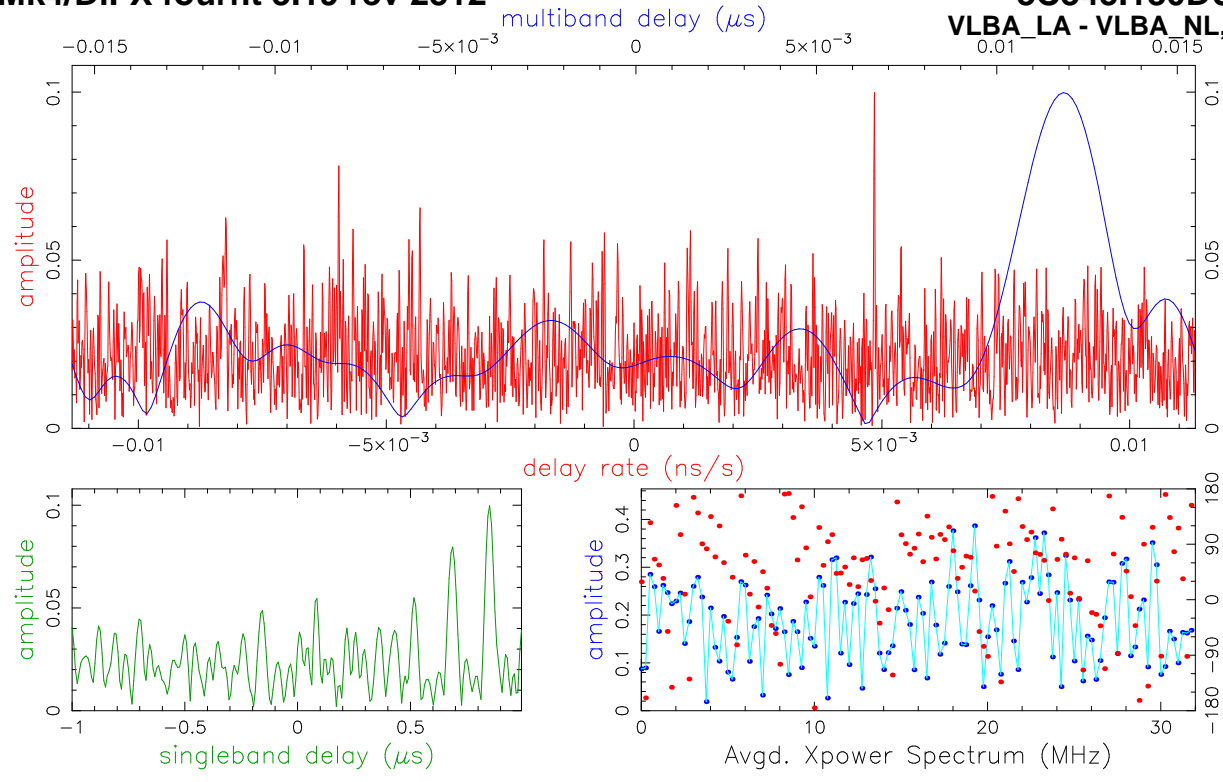
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	102.1	138.6	-131.5	-144.6	-137.5	-153.0	-176.8	162.9	-106.7	144.1	-144.0	171.4	141.7	-144.1	-159.6	151.7	Phase	-178.4				
	0.1	0.2	0.1	0.2	0.1	0.1	0.2	0.0	0.1	0.3	0.1	0.2	0.1	0.3	0.1	0.3	Ampl.	0.1				
	59.3	199.4	246.7	86.8	47.7	221.3	170.5	93.2	107.0	73.4	54.8	181.2	15.4	22.2	123.6	190.6	Sbd box	171.7				
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					
l	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					
l: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					
l: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					
l	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					
l	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					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.38005315612E+02														Apriori delay (usec)	-8.38344970711E+02	Resid mbdelay (usec)	-4.09490E-03	+/-	1.9E-04
Sband delay (usec)			-8.38011532711E+02														Apriori clock (usec)	-2.7262800E+01	Resid sbdelay (usec)	3.33438E-01	+/-	3.0E-03
Phase delay (usec)			-8.38344976464E+02														Apriori clockrate (us/s)	-4.8569552E-07	Resid phdelay (usec)	-5.75283E-06	+/-	6.4E-07
Delay rate (us/s)			2.48818046277E-01														Apriori rate (us/s)	2.48812320732E-01	Resid rate (us/s)	5.72555E-06	+/-	2.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	-1.56273057087E-06	Resid phase (deg)	-178.4	+/-	20.0

ph/seg (deg) 37.4 34.6 Search (2048X64) 0.100 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 61.6 60.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 43.1 39.9 Inc. seg. avg. 0.120 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 65.8 69.7 Inc. frq. avg. 0.112 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 n: az 109.2 el 84.5 pa -64.3 u,v (fr/asec) -1857.955 -633.875 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/In..130DUS Output file: /Exps/c192b/v2/1234/No0115/In.W.261.130DUS

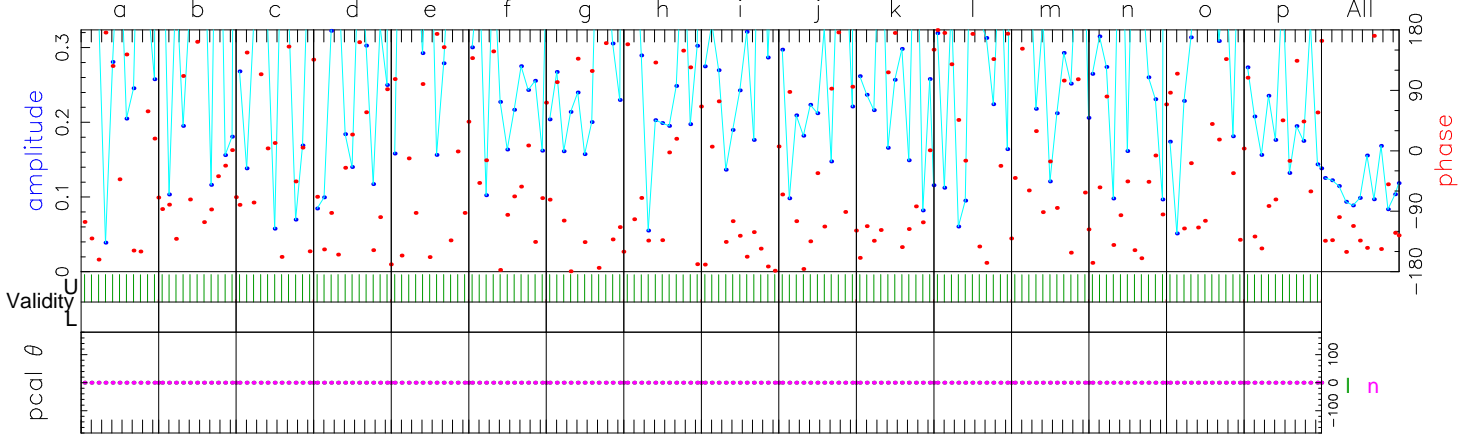
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, In  
VLBA\_LA - VLBA\_NL, fgroup W, pol LR



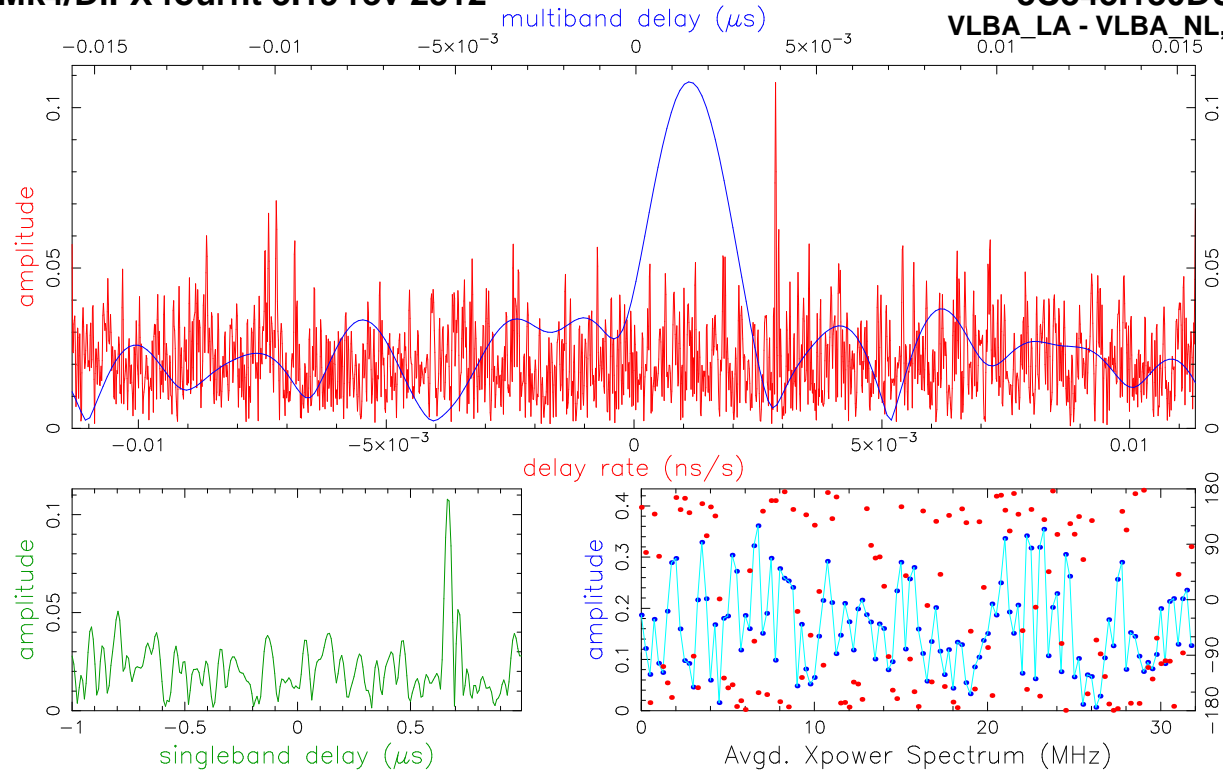
Fringe quality 0  
SNR 5.6  
Int time 418.212  
Amp 0.108  
Phase -132.0  
PFD 1.0e+00  
Delays (us)  
SBD 0.850415  
MBD 0.011824  
Fringe rate (Hz)  
0.418737  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094143  
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				
	-133.1	-84.0	-154.9	-150.0	-132.0	-96.1	-172.7	-170.1	-152.6	-124.0	-121.9	177.7	-79.9	-107.4	-76.5	-9.2	Phase	-132.0				
	0.2	0.2	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.0	Ampl.	0.1				
	5.1	171.8	216.8	123.0	40.3	56.1	133.3	4.6	219.0	31.0	194.8	173.2	53.7	250.3	214.9	40.9	Sbd box	237.9				
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					
l	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					
l: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					
l: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					
l	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					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.37489396706E+02														Apriori delay (usec)	-8.38344970711E+02	Resid mbdelay (usec)	1.18240E-02	+/-	1.9E-04
Sband delay (usec)			-8.37494555711E+02														Apriori clock (usec)	-2.7262800E+01	Resid sbdelay (usec)	8.50415E-01	+/-	3.1E-03
Phase delay (usec)			-8.38344974968E+02														Apriori clockrate (us/s)	-4.8569552E-07	Resid phdelay (usec)	-4.25728E-06	+/-	6.6E-07
Delay rate (us/s)			2.48817181855E-01														Apriori rate (us/s)	2.48812320732E-01	Resid rate (us/s)	4.86112E-06	+/-	2.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	-1.56273057087E-06	Resid phase (deg)	-132.0	+/-	20.5

ph/seg (deg) 33.4 35.5  
amp/seg (%) 29.5 62.0  
ph/frq (deg) 47.9 41.0  
amp/frq (%) 55.3 71.6  
RMS Theor. Amplitude 0.108 +/- 0.019  
Search (2048X64) 0.098  
Interp. 0.000  
Inc. seg. avg. 0.103  
Inc. frq. avg. 0.104  
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  
l: az 70.2 el 72.7 pa -97.6 n: az 109.2 el 84.5 pa -64.3 u,v (fr/asec) -1857.955 -633.875 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/In...130DUS Output file: /Exps/c192b/v2/1234/No0115/In.W.279.130DUS

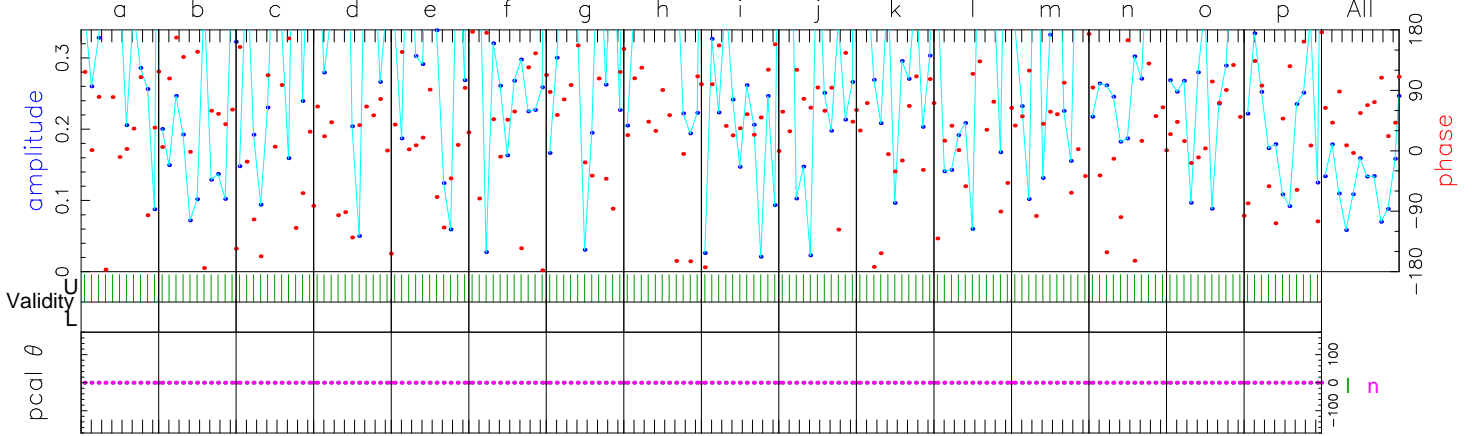


Fringe quality 0

SNR 6.2  
Int time 418.211  
Amp 0.113  
Phase 53.4  
PFD 1.7e-01  
Delays (us)  
SBD 0.667709  
MBD 0.001564  
Fringe rate (Hz) 0.246349  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094149  
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

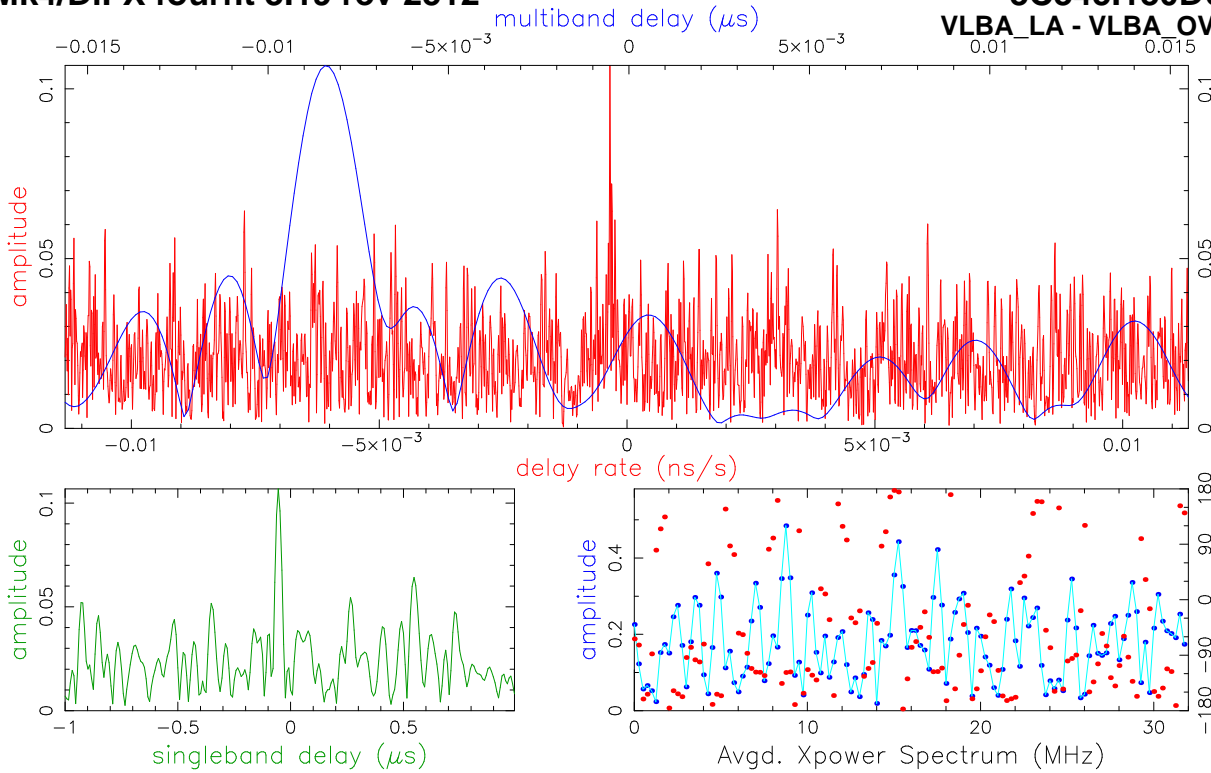


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
l: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			
l: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			
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
n	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	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
Group delay (usec)(sbd)			-8.37687156760E+02																
Sband delay (usec)			-8.37677262211E+02																
Phase delay (usec)			-8.38344968989E+02																
Delay rate (us/s)			2.48815180597E-01																
Total phase (deg)					-226.3														
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																			
ion window (TEC)																			
sb window (us)																			
mb window (us)																			
dr window (ns/s)																			
ion window (TEC)																			

ph/seg (deg) 32.5 32.2 Search (2048X64) 0.103 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 35.9 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) 55.8 37.2 Inc. seg. avg. 0.108 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 54.2 64.9 Inc. frq. avg. 0.108 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 70.2 el 72.7 pa -97.6 n: az 109.2 el 84.5 pa -64.3 u,v (fr/asec) -1857.955 -633.875 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/In..130DUS Output file: /Exps/c192b/v2/1234/No0115/In.W.302.130DUS

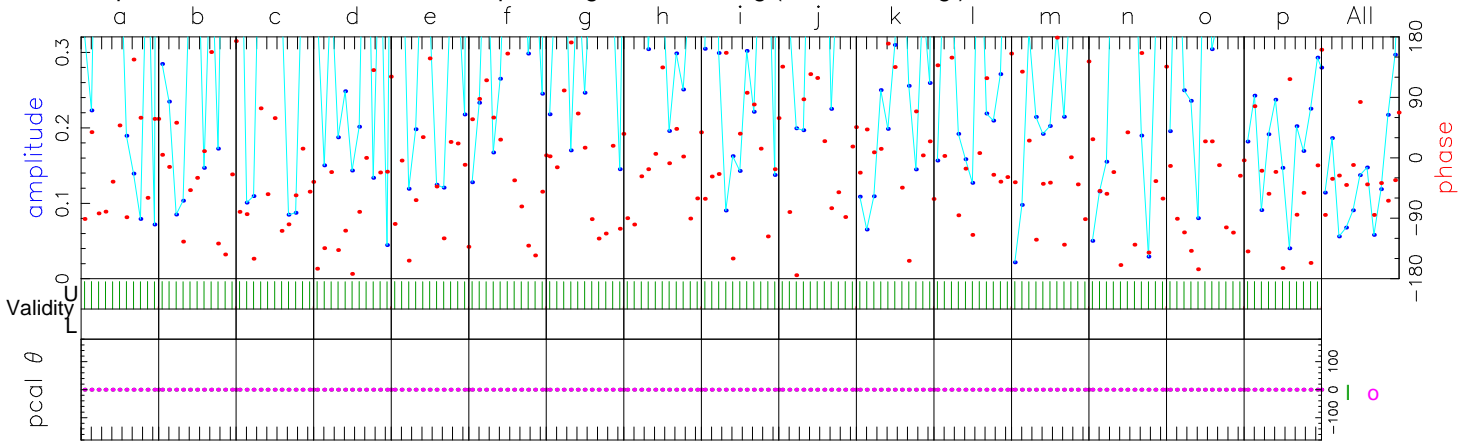
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol LL



Fringe quality 0  
SNR 6.0  
Int time 417.648  
Amp 0.107  
Phase -36.9  
PFD 4.6e-01  
Delays (us)  
SBD -0.054420  
MBD -0.008387  
Fringe rate (Hz)  
-0.029223  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094132  
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

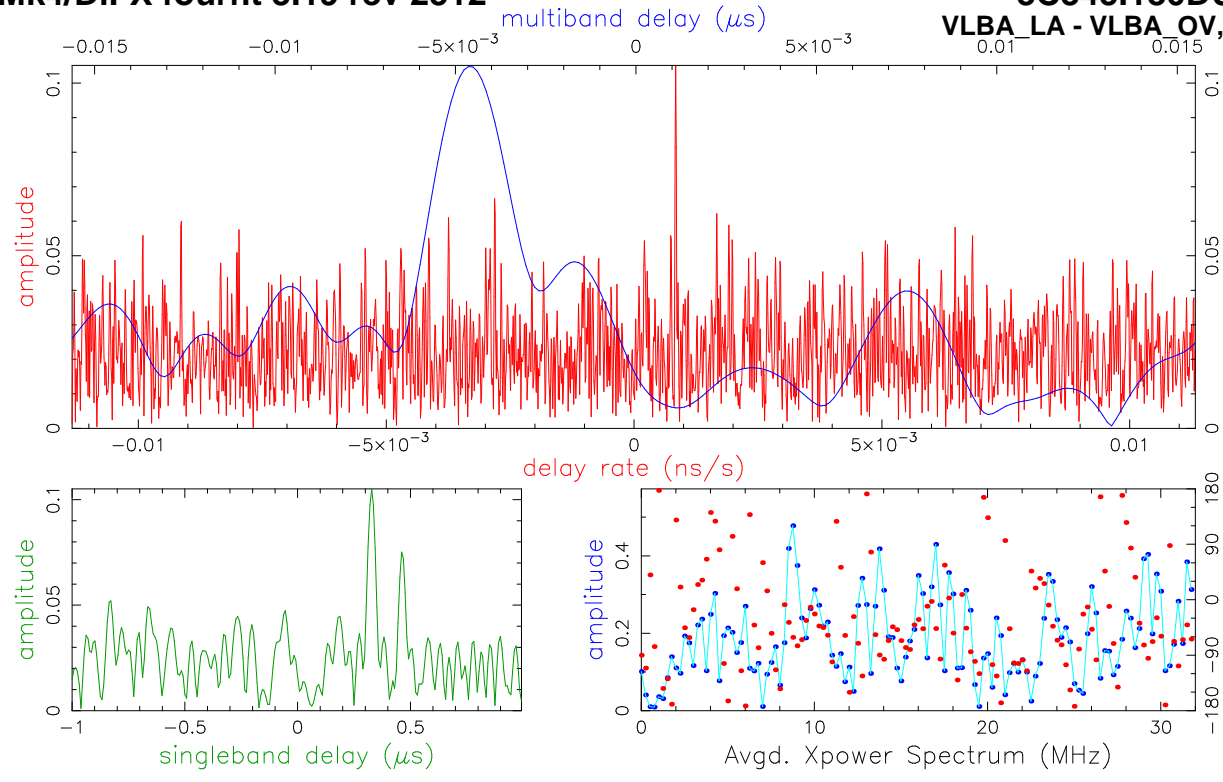


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-48.5	-56.4	-40.5	-56.8	-13.8	-73.1	-14.3	-35.8	-18.7	66.4	3.5	-10.1	-59.9	-67.3	-55.9	-60.3	Phase	-36.9	
	0.2	0.1	0.2	0.1	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1	
	108.1	151.6	233.2	231.7	85.5	169.8	199.2	122.1	144.2	63.6	105.6	210.8	10.5	41.1	26.1	115.2	Sbd box	122.0	
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		
l	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		
lo	0:0	0:0	0:0	0:0	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		
lo	0:0	0:0	0:0	0:0	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		
o	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		
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)			1.15830818326E+03					Apriori delay (usec)	1.15834782006E+03								Resid mbdelay (usec)	-8.38680E-03	+/- 1.8E-04
Sband delay (usec)			1.15829340006E+03					Apriori clock (usec)	-1.7407291E+01								Resid sbdelay (usec)	-5.44200E-02	+/- 2.9E-03
Phase delay (usec)			1.15834781887E+03					Apriori clockrate (us/s)	-3.5245298E-07								Resid phdelay (usec)	-1.19137E-06	+/- 6.2E-07
Delay rate (us/s)			-1.71966860806E-01					Apriori rate (us/s)	-1.71966521555E-01								Resid rate (us/s)	-3.39250E-07	+/- 2.6E-09
Total phase (deg)				42.2				Apriori accel (us/s/s)	-7.72168328447E-06								Resid phase (deg)	-36.9	+/- 19.2

ph/seg (deg) 44.1 33.2 Amplitude 0.107 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 74.9 58.0 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 36.8 38.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 47.5 67.0 Inc. seg. avg. 0.118 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.098 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00  
 l: az 70.2 el 72.7 pa -97.6 o: az 74.0 el 63.9 pa -84.7 u,v (fr/asec) 1267.812 -659.067 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lo..130DUS Output file: /Exps/c192b/v2/1234/No0115/lo.W.245.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol RR

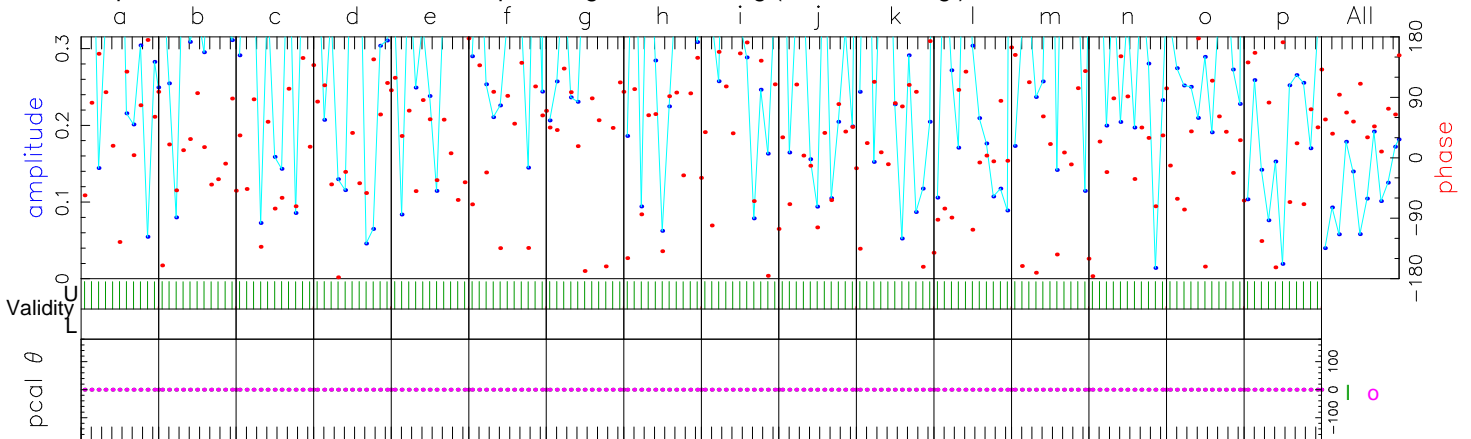


Fringe quality 0

SNR 5.9  
Int time 417.649  
Amp 0.105  
Phase 56.4  
PFD 6.9e-01  
Delays (us)  
SBD 0.328104  
MBD -0.004596  
Fringe rate (Hz)  
0.072569  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094138  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

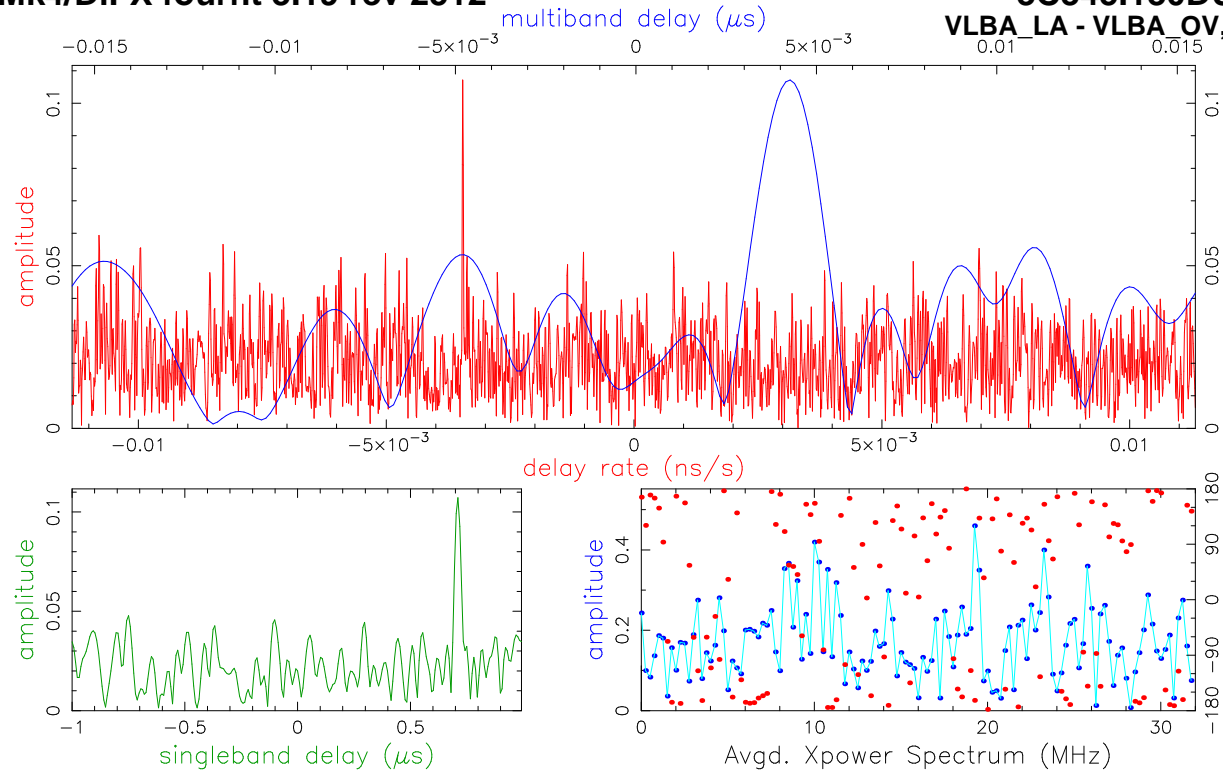
Amp. and Phase vs. time for each freq., 12 segs, 74 APs / seg (37.89 sec / seg.), time ticks 60 sec



	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						
76.0	6.7	45.2	43.3	18.5	99.2	94.7	88.6	128.1	30.8	38.7	-71.7	58.2	55.7	9.8	48.9	Phase	56.4							
0.1	0.2	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.0	0.1	0.2	0.1	0.0	Ampl.	0.1							
33.3	244.3	73.5	204.2	187.1	94.3	170.4	183.2	23.6	57.2	109.5	211.1	22.6	148.7	219.1	49.5	Sbd box	171.0							
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							
l	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							
lo	0:0	0:0	0:0	0:0	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							
lo	0:0	0:0	0:0	0:0	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							
o	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							
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)		1.15868697432E+03															Apriori delay (usec)	1.15834782006E+03	Resid mbdelay (usec)	-4.59574E-03	+/-	1.8E-04		
Sband delay (usec)		1.15867592406E+03															Apriori clock (usec)	-1.7407291E+01	Resid sbdelay (usec)	3.28104E-01	+/-	2.9E-03		
Phase delay (usec)		1.15834782188E+03															Apriori clockrate (us/s)	-3.5245298E-07	Resid phdelay (usec)	1.81909E-06	+/-	6.3E-07		
Delay rate (us/s)		-1.71965679102E-01															Apriori rate (us/s)	-1.71966521555E-01	Resid rate (us/s)	8.42453E-07	+/-	2.6E-09		
Total phase (deg)			135.6														Apriori accel (us/s/s)	-7.72168328447E-06	Resid phase (deg)	56.4	+/-	19.5		
RMS	28.4	33.9															Amplitude	0.105 +/- 0.018	PCal mode: MANUAL, MANUAL					
ph/seg (deg)	48.3	59.1															Search (2048X64)	0.103	PCal rate: 0.000E+00, 0.000E+00 (us/s)					
amp/seg (%)	49.1	39.1															Interp.	0.000	SampCntNorm: enabled					
ph/frq (deg)	54.5	68.2															Inc. seg. avg.	0.098	mb window (us)	-1.000	1.000			
amp/frq (%)																	Inc. frq. avg.	0.108	dr window (ns/s)	-0.016	0.016			
																			Sample rate(MISamp/s): 64					
																			Data rate(Mb/s): 2048					
																			nlags: 128					
																			t_cohere infinite					
																			ion window (TEC)					

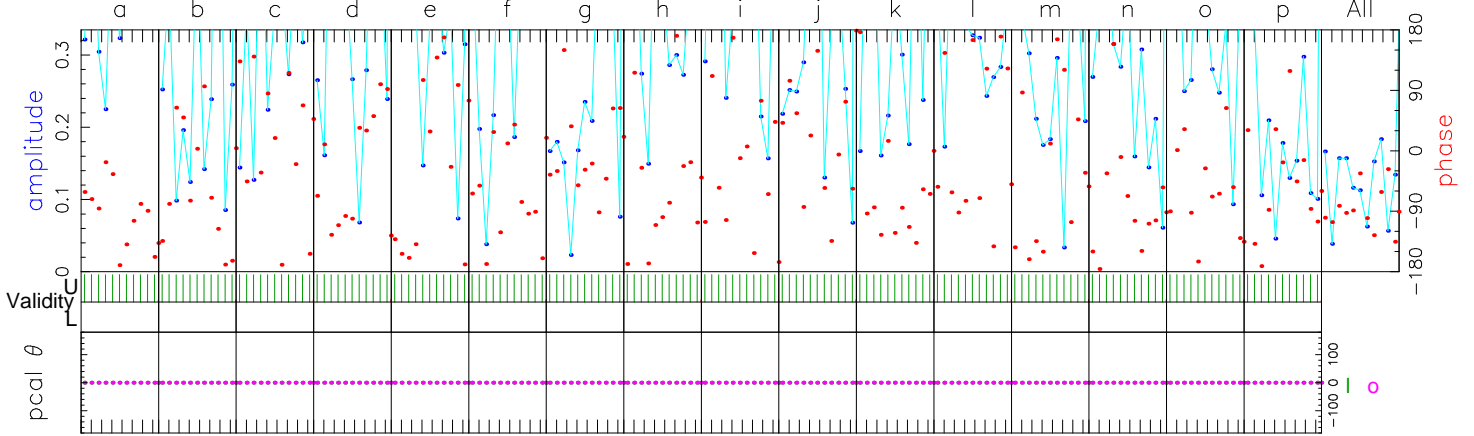
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol LR



Fringe quality 0  
SNR 6.0  
Int time 417.649  
Amp 0.112  
Phase -89.2  
PFD 3.9e-01  
Delays (us)  
SBD 0.709741  
MBD 0.004239  
Fringe rate (Hz)  
-0.298079  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094144  
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
	-94.0	-90.6	9.2	-81.5	-174.2	-78.1	-29.4	-105.6	-29.8	64.1	-95.0	-111.8	-148.5	-107.2	-69.4	-52.9	Phase	-89.2
	0.3	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	220.3	185.6	87.0	30.4	27.7	220.2	115.3	11.9	69.9	7.4	219.4	217.3	128.0	243.8	246.8	255.6	Sbd box	219.8
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	
l	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	
lo	0:0	0:0	0:0	0:0	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	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

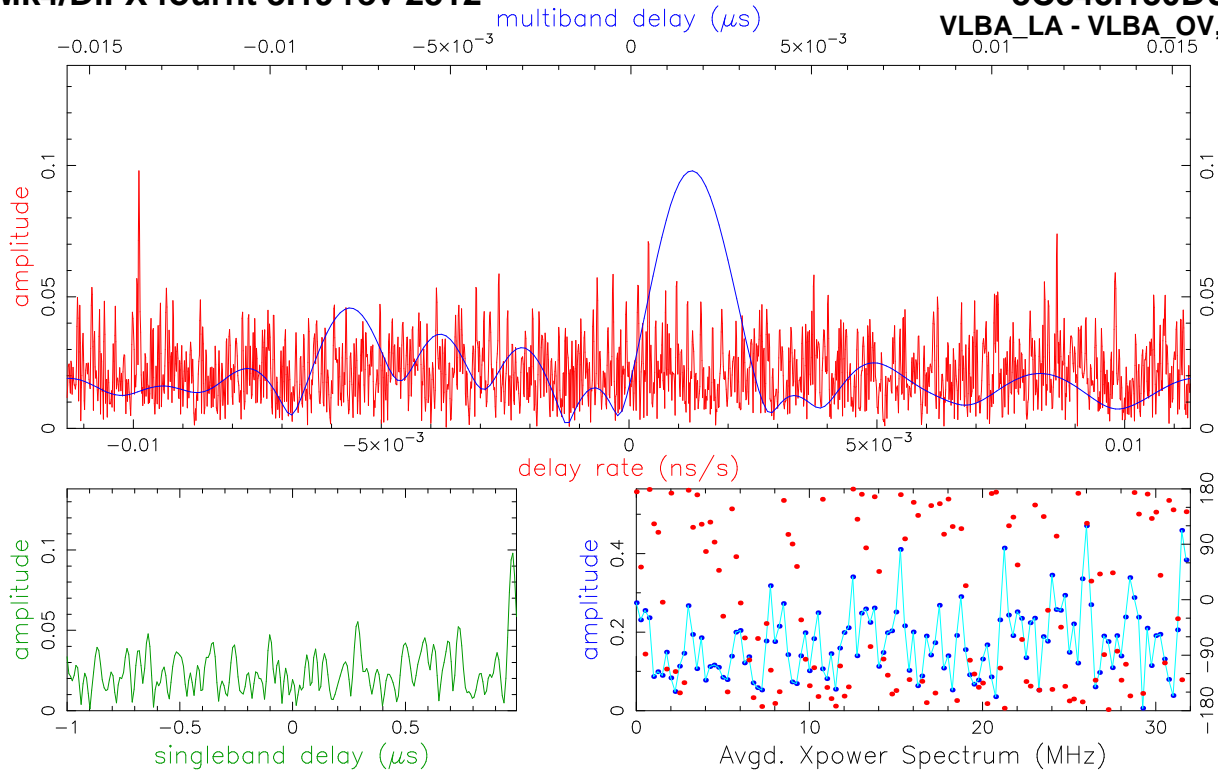
Group delay (usec)(sbd) 1.15907080933E+03 Apriori delay (usec) 1.15834782006E+03 Resid mbdelay (usec) 4.23927E-03 +/- 1.8E-04  
 Sband delay (usec) 1.15905756156E+03 Apriori clock (usec) -1.7407291E+01 Resid sbdelay (usec) 7.09741E-01 +/- 2.9E-03  
 Phase delay (usec) 1.15834781718E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) -2.87646E-06 +/- 6.2E-07  
 Delay rate (us/s) -1.71969981957E-01 Apriori rate (us/s) -1.71966521555E-01 Resid rate (us/s) -3.46040E-06 +/- 2.5E-09  
 Total phase (deg) -10.0 Apriori accel (us/s/s) -7.72168328447E-06 Resid phase (deg) -89.2 +/- 19.1

RMS Theor. Amplitude 0.112 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 32.5 33.1 Search (2048X64) 0.100 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 49.0 57.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 62.2 38.2 Inc. seg. avg. 0.110 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 77.9 66.6 Inc. frq. avg. 0.118 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 o: az 74.0 el 63.9 pa -84.7 u,v (fr/asec) 1267.812 -659.067 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lo..130DUS Output file: /Exps/c192b/v2/1234/No0115/lo.W.284.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lo  
VLBA\_LA - VLBA\_OV, fgroup W, pol RL

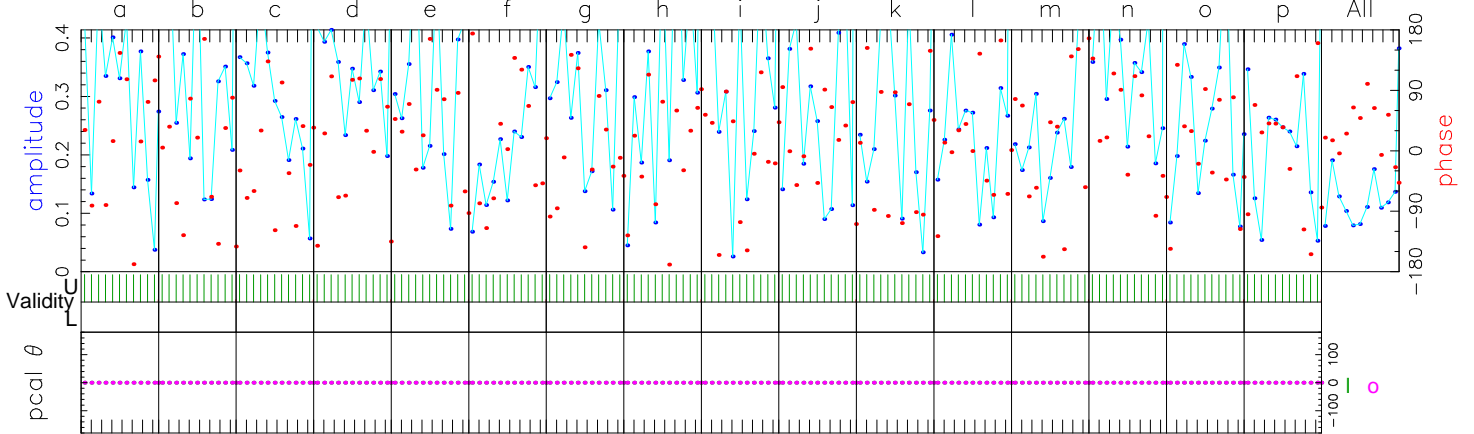


Fringe quality 0

SNR 5.5  
Int time 417.647  
Amp 0.138  
Phase 28.5  
PFD 1.0e+00  
Delays (us)  
SBD 0.974410  
MBD 0.001680  
Fringe rate (Hz)  
-0.852743  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094149  
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



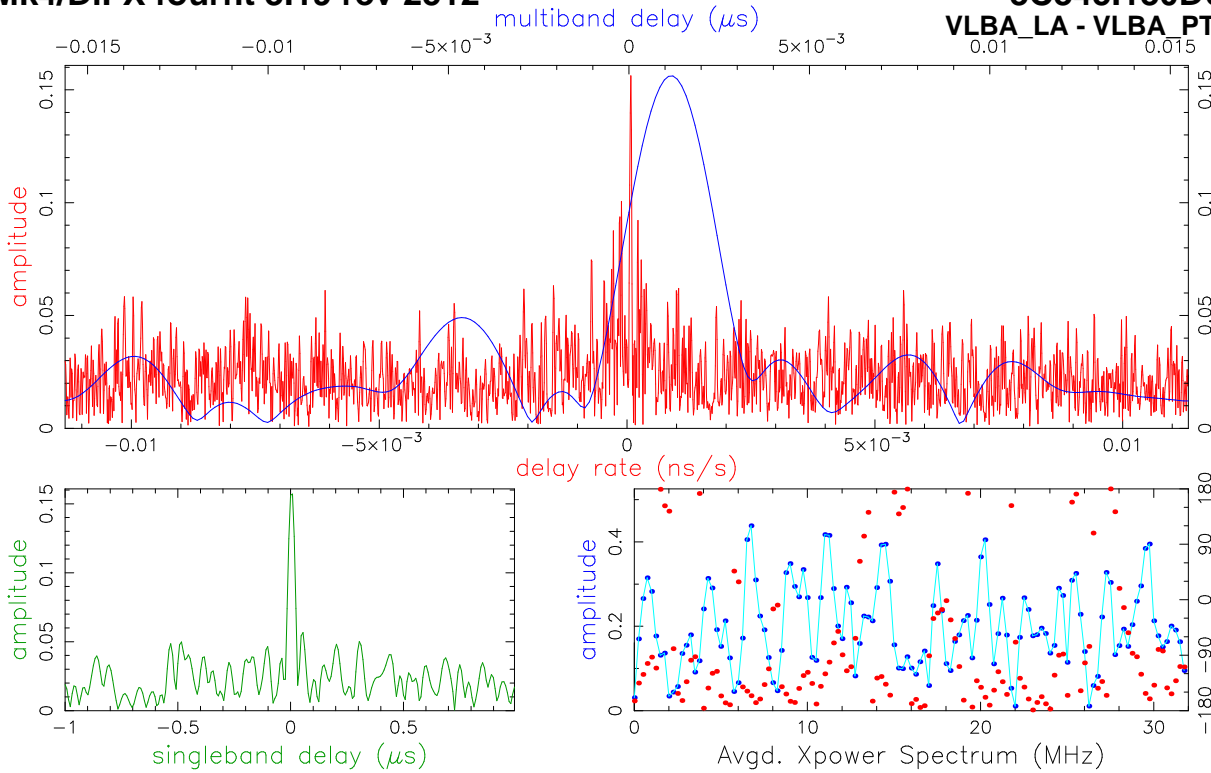
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	55.5	11.1	-27.1	61.0	38.3	-16.0	-0.5	50.8	42.4	11.3	88.9	-6.0	-24.9	55.1	23.8	-2.7	Phase	28.5
	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.2	0.0	0.2	0.2	0.1	Ampl.	0.1
	214.0	86.9	232.5	146.1	216.2	29.7	121.7	174.6	188.1	116.1	10.0	13.1	231.5	236.2	104.8	204.6	Sbd box	253.7
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	
l	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	
lo	0:0	0:0	0:0	0:0	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	
lo	0:0	0:0	0:0	0:0	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	
o	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	
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) 1.15931825030E+03 Apriori delay (usec) 1.15834782006E+03 Resid mbdelay (usec) 1.68024E-03 +/- 2.0E-04  
 Sband delay (usec) 1.15932222956E+03 Apriori clock (usec) -1.7407291E+01 Resid sbdelay (usec) 9.74410E-01 +/- 3.1E-03  
 Phase delay (usec) 1.15834782098E+03 Apriori clockrate (us/s) -3.5245298E-07 Resid phdelay (usec) 9.19316E-07 +/- 6.7E-07  
 Delay rate (us/s) -1.71976421056E-01 Apriori rate (us/s) -1.71966521555E-01 Resid rate (us/s) -9.89950E-06 +/- 2.8E-09  
 Total phase (deg) 107.7 Apriori accel (us/s/s) -7.72168328447E-06 Resid phase (deg) 28.5 +/- 20.8

RMS Theor. Amplitude 0.138 +/- 0.025 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 36.0 36.0 Search (2048X64) 0.096 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 48.3 62.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 36.3 41.6 Inc. seg. avg. 0.142 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 50.5 72.6 Inc. frq. avg. 0.123 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

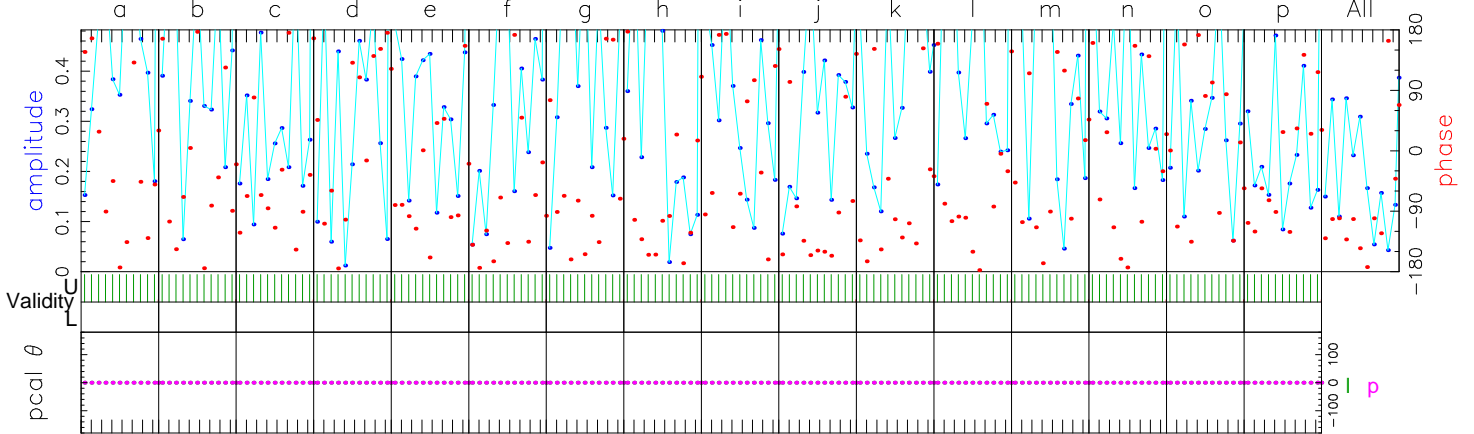
l: az 70.2 el 72.7 pa -97.6 o: az 74.0 el 63.9 pa -84.7 u,v (fr/asec) 1267.812 -659.067 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lo..130DUS Output file: /Exps/c192b/v2/1234/No0115/lo.W.300.130DUS





Fringe quality 9  
SNR 9.0  
Int time 419.148  
Amp 0.161  
Phase -121.6  
PFD 8.3e-11  
Delays (us)  
SBD 0.004113  
MBD 0.001195  
Fringe rate (Hz) 0.006623  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094131  
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

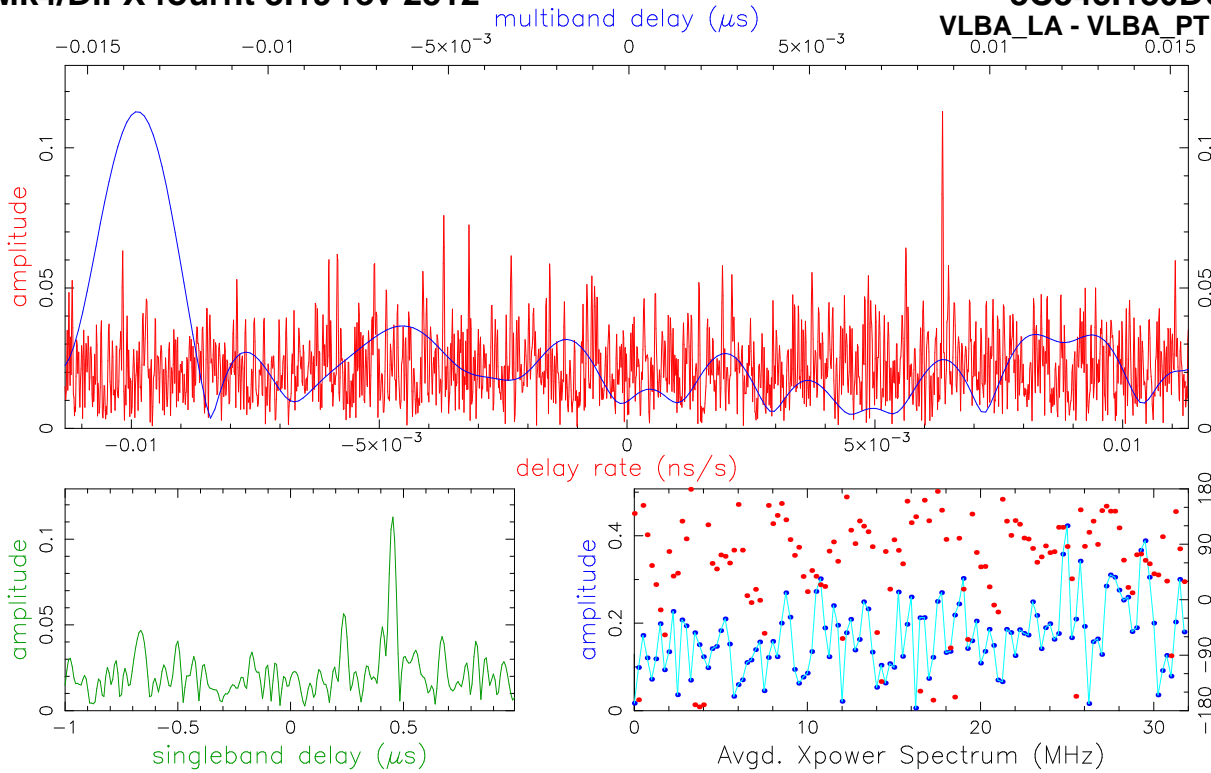


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-118.2	-120.3	-96.8	157.9	-93.9	-101.7	-120.1	-140.0	-122.6	-140.7	-121.4	-114.3	-104.2	-149.8	-125.8	-95.1		Phase	-121.6
	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.0	0.1		Ampl.	0.2
	101.5	129.7	130.8	189.2	33.5	59.2	129.3	130.1	46.7	215.7	58.3	48.2	161.5	67.1	237.8	15.2		Sbd box	129.5
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	
l	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	
lp	0:0	0:0	0:0	0:0	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	
lp	0:0	0:0	0:0	0:0	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	
p	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	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
Group delay (usec)(sbd)	2.07983025223E+02			Apriori delay (usec)			2.07981830562E+02			Resid mbdelay (usec)			1.19466E-03			+/-	1.2E-04		
Sband delay (usec)	2.07985943062E+02			Apriori clock (usec)			-1.2700139E+01			Resid sbdelay (usec)			4.11250E-03			+/-	1.9E-03		
Phase delay (usec)	2.07981826642E+02			Apriori clockrate (us/s)			-5.5535860E-07			Resid phdelay (usec)			-3.91988E-06			+/-	4.1E-07		
Delay rate (us/s)	-3.61911983401E-02			Apriori rate (us/s)			-3.61912752271E-02			Resid rate (us/s)			7.68870E-08			+/-	1.7E-09		
Total phase (deg)	196.9			Apriori accel (us/s/s)			3.44010816212E-07			Resid phase (deg)			-121.6			+/-	12.7		

ph/seg (deg) 41.9 22.0 Search (2048X64) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 66.8 38.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 27.8 25.5 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 38.9 44.4 Inc. frq. avg. 0.154 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 70.2 el 72.7 pa -97.6 p: az 66.7 el 70.7 pa -98.5 u,v (fr/asec) 270.594 162.357 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lp..130DUS Output file: /Exps/c192b/v2/1234/No0115/lp.W.239.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lp  
VLBA\_LA - VLBA\_PT, fgroup W, pol RR

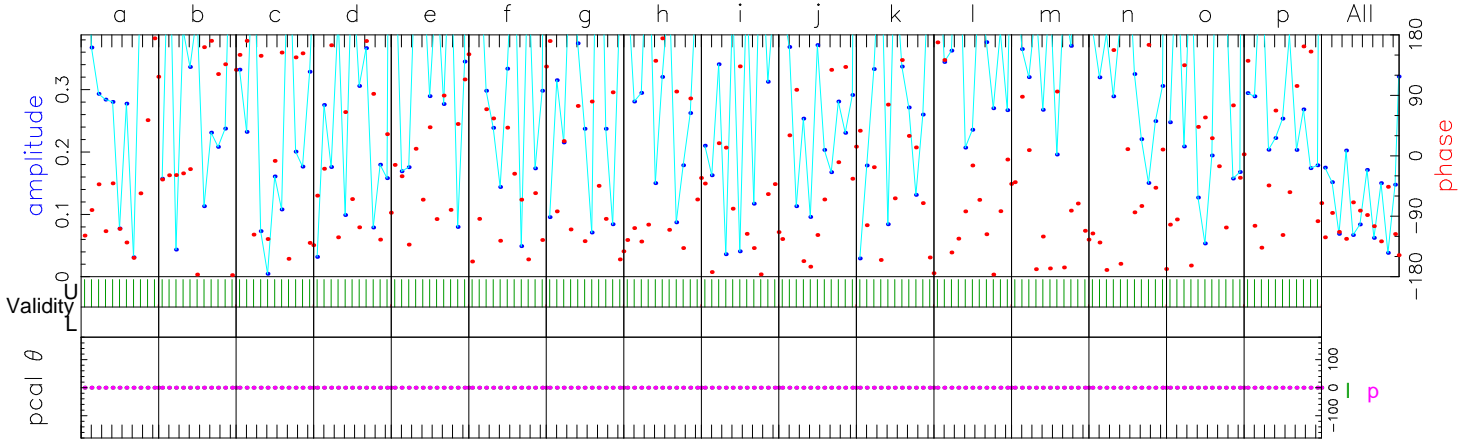


Fringe quality 0

SNR 6.3  
Int time 419.148  
Amp 0.129  
Phase -105.9  
PFD 6.3e-02  
Delays (us)  
SBD 0.451917  
MBD -0.013625  
Fringe rate (Hz)  
0.549529  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094136  
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

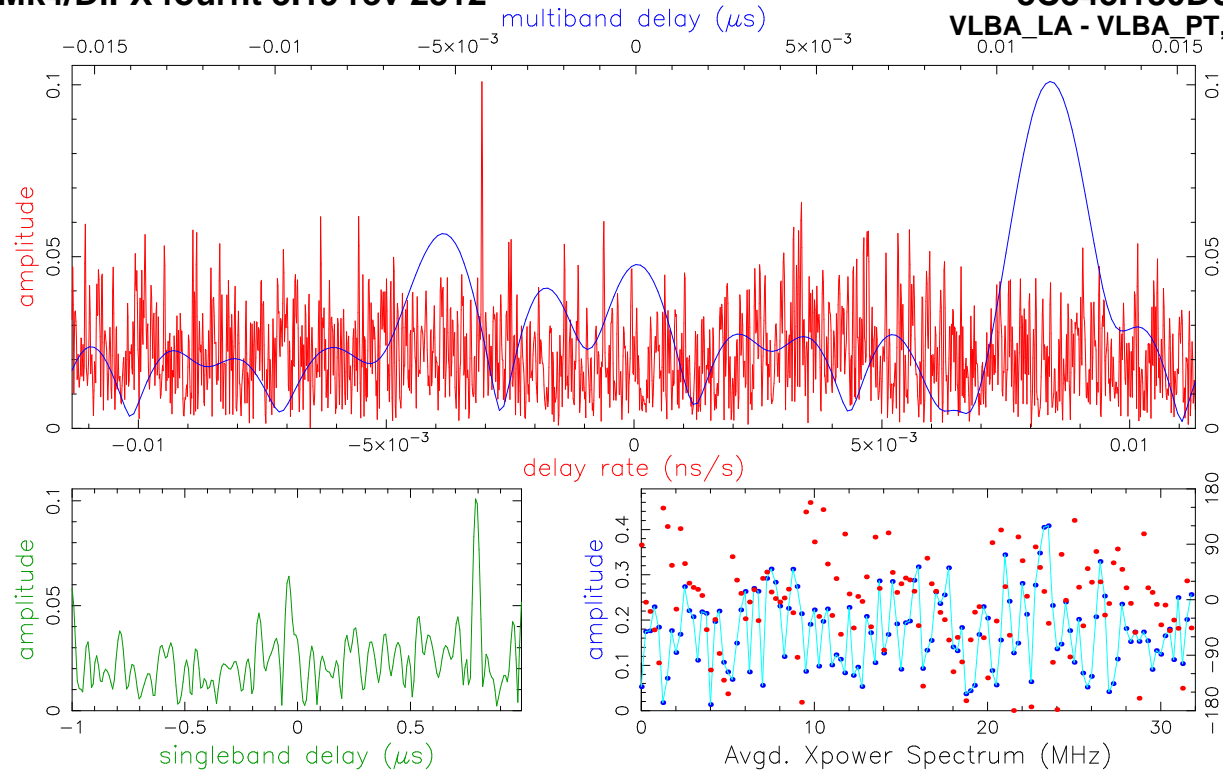


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-93.0	-151.0	-162.3	-102.6	-31.1	-100.6	-90.1	-117.0	-90.1	-89.6	-107.8	-119.7	-113.8	-112.8	-64.0	-133.1	Phase	-105.9
	0.2	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.1	Ampl.	0.1
	42.2	86.9	81.5	60.7	216.3	206.6	29.2	188.1	26.8	9.2	59.3	202.8	149.6	63.3	27.9	119.3	Sbd box	186.8
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	
l	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 freqs	
l: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 phase	
l: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	
l	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		
l	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	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	2.08436955635E+02			Apriori delay (usec)			2.07981830562E+02			Resid mbdelay (usec)			-1.36249E-02			+/- 1.7E-04		
Sband delay (usec)	2.08433748062E+02			Apriori clock (usec)			-1.2700139E+01			Resid sbdelay (usec)			4.51917E-01			+/- 2.7E-03		
Phase delay (usec)	2.07981827146E+02			Apriori clockrate (us/s)			-5.5535860E-07			Resid phdelay (usec)			-3.41655E-06			+/- 5.8E-07		
Delay rate (us/s)	-3.61848957385E-02			Apriori rate (us/s)			-3.61912752271E-02			Resid rate (us/s)			6.37949E-06			+/- 2.4E-09		
Total phase (deg)	212.5			Apriori accel (us/s/s)			3.44010816212E-07			Resid phase (deg)			-105.9			+/- 18.1		

ph/seg (deg) 26.2 31.3 Search (2048X64) 0.109 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.3 54.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 32.4 36.2 Inc. seg. avg. 0.121 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 42.8 63.1 Inc. frq. avg. 0.123 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 70.2 el 72.7 pa -97.6 p: az 66.7 el 70.7 pa -98.5 u,v (fr/asec) 270.594 162.357 ion window (TEC) 0.00 0.00 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lp..130DUS Output file: /Exps/c192b/v2/1234/No0115/lp.W.255.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, lp  
VLBA\_LA - VLBA\_PT, fgroup W, pol LR

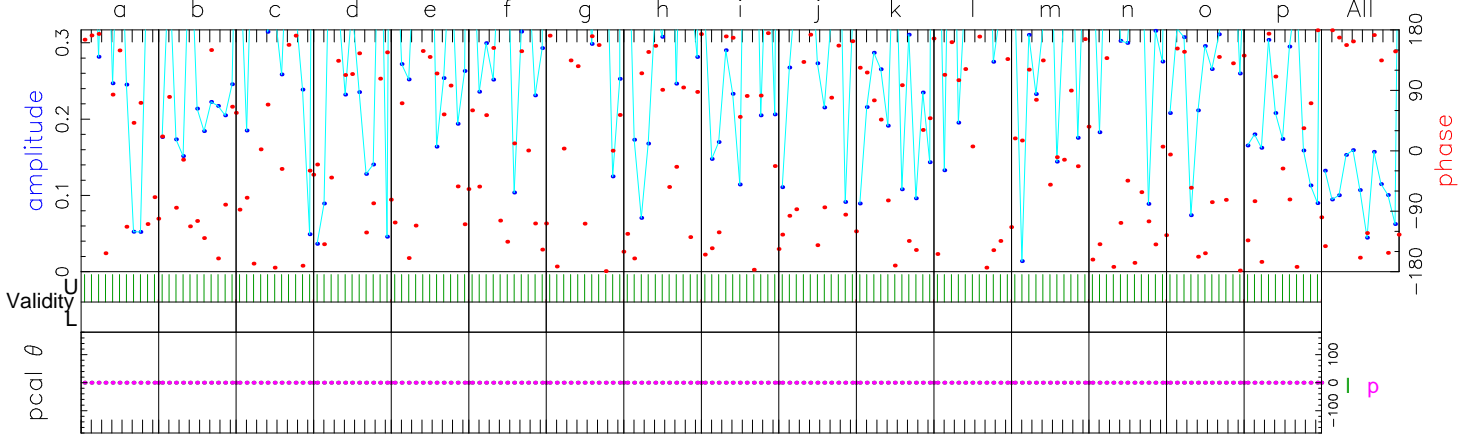


Fringe quality 0

SNR 5.7  
Int time 419.148  
Amp 0.106  
Phase 178.9  
PFD 9.1e-01  
Delays (us)  
SBD 0.792061  
MBD 0.011529  
Fringe rate (Hz)  
-0.265007  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094141  
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
	-165.6	-113.8	-154.2	123.9	170.6	-115.2	165.5	175.0	159.3	-172.1	127.9	169.4	56.1	-140.1	-178.7	-150.3	Phase	178.9
	0.2	0.0	0.1	0.1	0.1	0.0	0.2	0.1	0.2	0.2	0.1	0.3	0.1	0.2	0.1	0.1	Ampl.	0.1
	209.3	188.0	136.9	196.0	250.7	44.1	128.2	54.3	104.7	54.2	89.4	251.0	218.3	201.4	125.7	172.8	Sbd box	230.4
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	
l	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 freqs	
l: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 phase	
l: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	Manl PC	
l	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	PC amp	
l	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	
																	Tracks	
Group delay (usec)(sbd)	2.08774609544E+02			Apriori delay (usec)			2.07981830562E+02			Resid mbdelay (usec)			1.15290E-02			+/- 1.9E-04		
Sband delay (usec)	2.08773891562E+02			Apriori clock (usec)			-1.2700139E+01			Resid sbdelay (usec)			7.92061E-01			+/- 3.0E-03		
Phase delay (usec)	2.07981836330E+02			Apriori clockrate (us/s)			-5.5535860E-07			Resid phdelay (usec)			5.76789E-06			+/- 6.4E-07		
Delay rate (us/s)	-3.61943517007E-02			Apriori rate (us/s)			-3.61912752271E-02			Resid rate (us/s)			-3.07647E-06			+/- 2.7E-09		
Total phase (deg)	137.3			Apriori accel (us/s/s)			3.44010816212E-07			Resid phase (deg)			178.9			+/- 20.0		

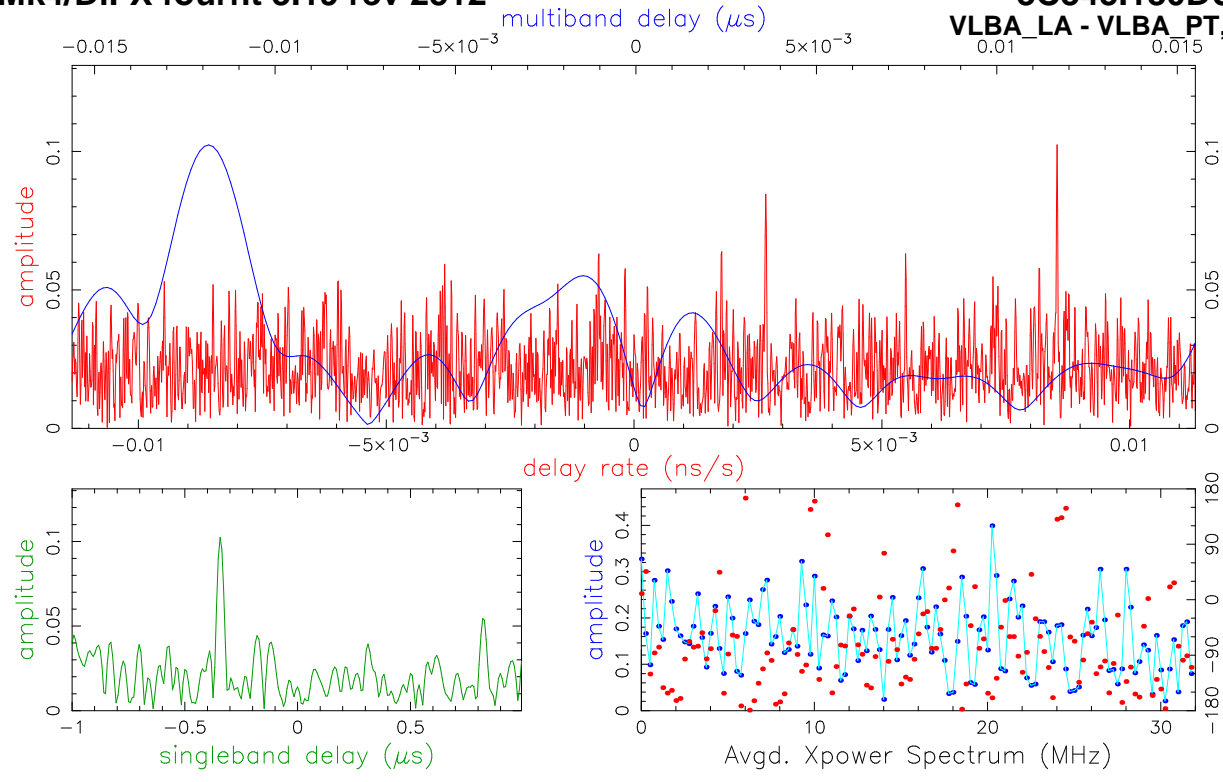
ph/seg (deg) RMS Theor. Amplitude 0.106 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 52.0 60.4 Search (2048X64) 0.100 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 49.3 39.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 66.1 69.7 Inc. seg. avg. 0.100 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.103 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 p: az 66.7 el 70.7 pa -98.5 u,v (fr/asec) 270.594 162.357 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lp..130DUS Output file: /Exps/c192b/v2/1234/No0115/lp.W.274.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, Ip  
VLBA\_LA - VLBA\_PT, fgroup W, pol RL

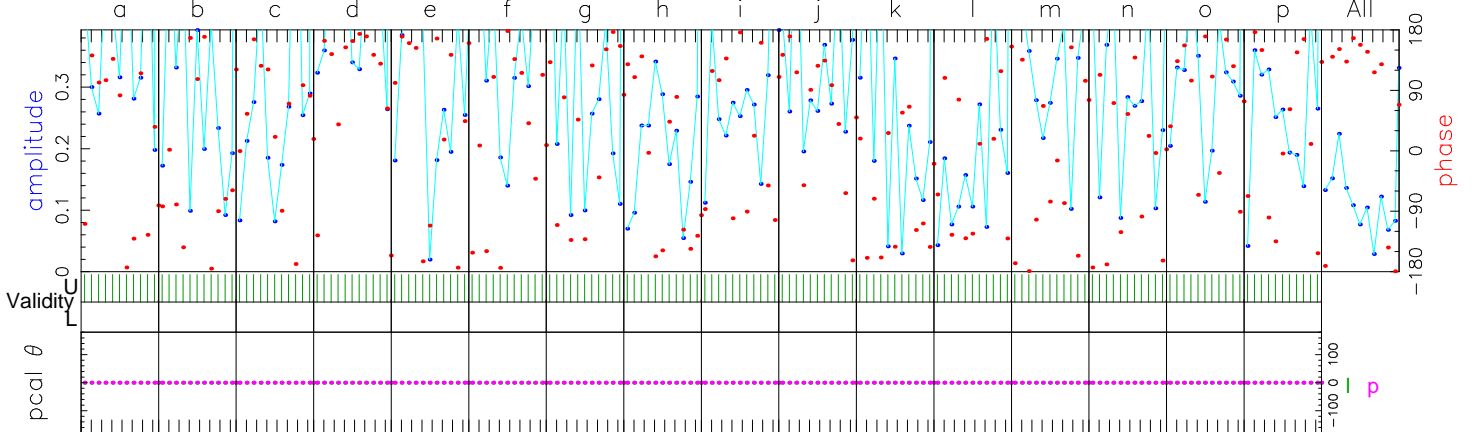


Fringe quality 0

SNR 5.7  
Int time 419.148  
Amp 0.131  
Phase 153.9  
PFD 9.1e-01  
Delays (us)  
SBD -0.342766  
MBD -0.011847  
Fringe rate (Hz) 0.736389  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094146  
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

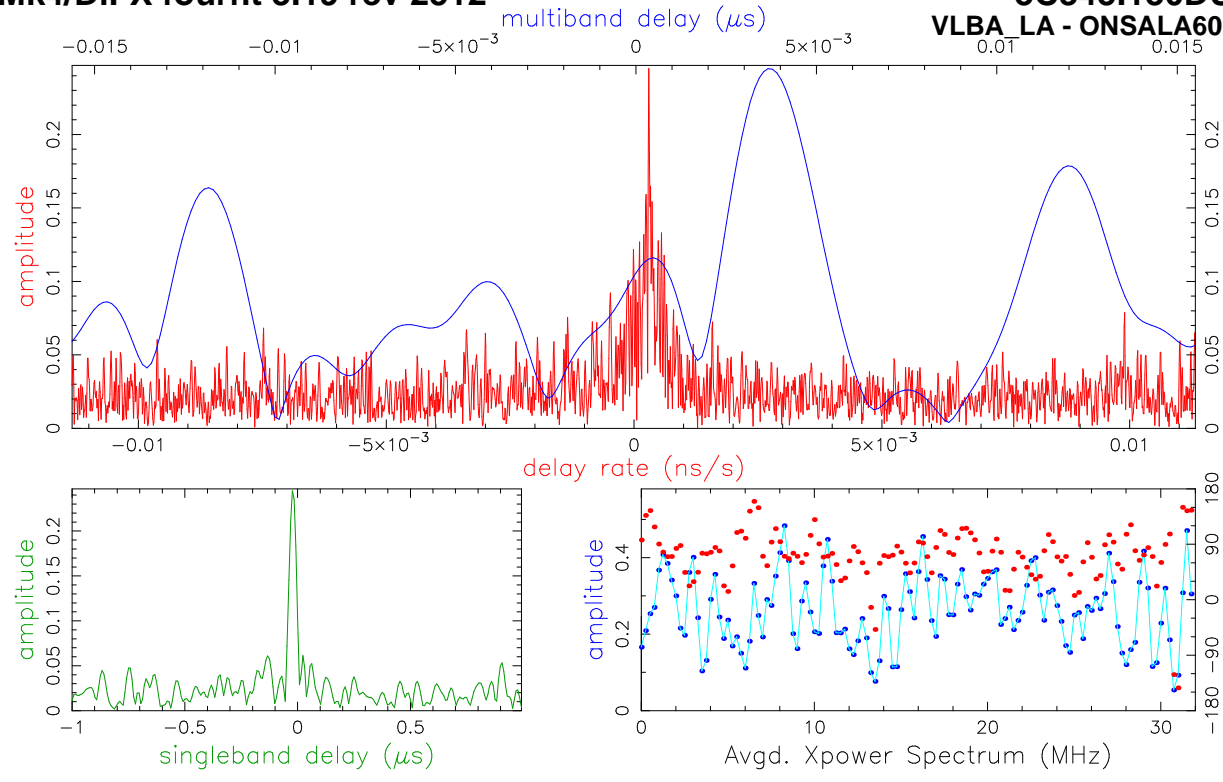


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	165.9	-123.1	124.4	148.9	156.9	124.1	120.0	-171.7	-129.0	119.7	-139.3	65.0	-173.9	130.0	127.7	-175.4	153.9	Phase
	0.2	0.1	0.2	0.4	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.1	0.1	0.1	0.1	0.1	Ampl.
	2.9	1.4	197.2	84.1	85.2	192.9	105.0	101.7	133.4	170.6	168.3	61.4	207.3	243.2	251.8	66.5	85.1	Sbd box
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
l	1000	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	1000	PC freqs
l: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	0:0	PC phase
l: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	0:0	ManI PC
l	1000	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	1000	PC amp
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 2.07626233614E+02 Apriori delay (usec) 2.07981830562E+02 Resid mbdelay (usec) -1.18469E-02 +/- 1.9E-04  
 Sband delay (usec) 2.07639064062E+02 Apriori clock (usec) -1.2700139E+01 Resid sbdelay (usec) -3.42766E-01 +/- 3.0E-03  
 Phase delay (usec) 2.07981835525E+02 Apriori clockrate (us/s) -5.5535860E-07 Resid phdelay (usec) 4.96269E-06 +/- 6.4E-07  
 Delay rate (us/s) -3.61827264844E-02 Apriori rate (us/s) -3.61912752271E-02 Resid rate (us/s) 8.54874E-06 +/- 2.7E-09  
 Total phase (deg) 112.4 Apriori accel (us/s/s) 3.44010816212E-07 Resid phase (deg) 153.9 +/- 20.0

RMS Theor. Amplitude 0.131 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 29.0 34.6 Search (2048X64) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 52.1 60.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 49.2 39.9 Inc. seg. avg. 0.123 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 73.6 69.7 Inc. frq. avg. 0.131 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

l: az 70.2 el 72.7 pa -97.6 p: az 66.7 el 70.7 pa -98.5 u,v (fr/asec) 270.594 162.357 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/lp..130DUS Output file: /Exps/c192b/v2/1234/No0115/lp.W.291.130DUS

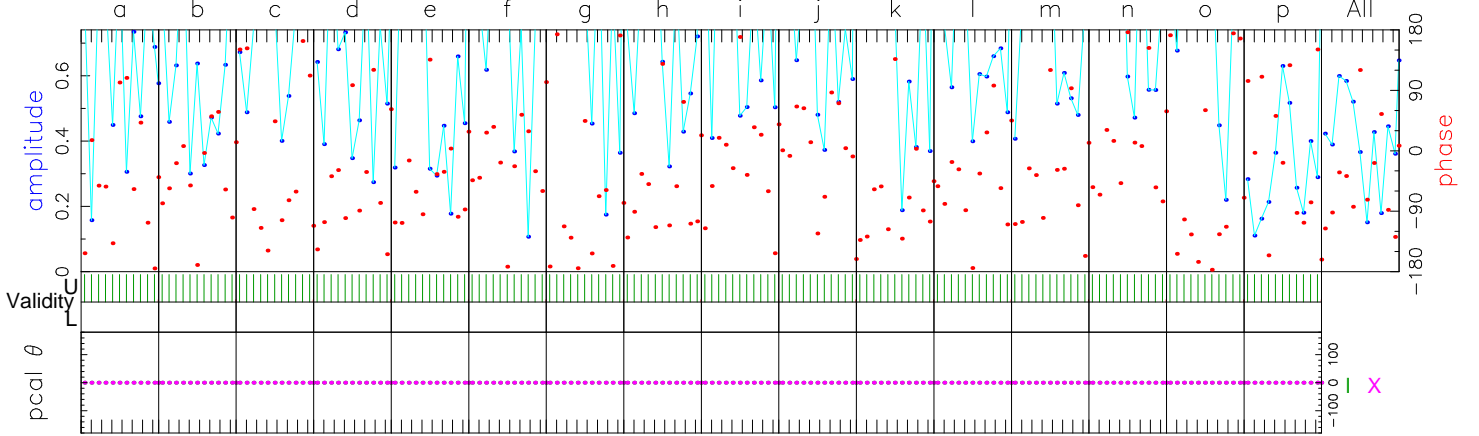


Fringe quality 9

SNR 13.8  
Int time 419.306  
Amp 0.247  
Phase -67.1  
PFD 1.0e-34  
Delays (us)  
SBD -0.021137  
MBD 0.003707  
Fringe rate (Hz) 0.025469  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094131  
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
	-98.5	-41.6	-142.9	-74.2	-70.8	-15.3	-145.1	-82.5	-22.8	23.6	-94.1	-47.9	-65.7	-28.1	-160.3	88.5	Phase	-67.1
	0.2	0.3	0.2	0.4	0.5	0.5	0.4	0.4	0.4	0.5	0.5	0.4	0.3	0.5	0.6	0.0	Ampl.	0.4
	107.1	126.4	126.2	125.3	125.9	126.6	125.4	126.0	126.2	125.8	125.9	125.5	126.2	126.1	125.8	123.4	Sbd box	126.3
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	
I	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	
I: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	
I: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	
I	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	
	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	
	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)	1.00882370820E+04			Apriori delay (usec)			1.00882646247E+04			Resid mbdelay (usec)			3.70735E-03			+/-	7.8E-05	
Sband delay (usec)	1.00882434877E+04			Apriori clock (usec)			-3.3119991E+01			Resid sbdelay (usec)			-2.11370E-02			+/-	1.2E-03	
Phase delay (usec)	1.00882646225E+04			Apriori clockrate (us/s)			-8.7947201E-07			Resid phdelay (usec)			-2.16394E-06			+/-	2.7E-07	
Delay rate (us/s)	9.77395042696E-01			Apriori rate (us/s)			9.77394747027E-01			Resid rate (us/s)			2.95668E-07			+/-	1.1E-09	
Total phase (deg)	209.2			Apriori accel (us/s/s)			-7.24405187618E-05			Resid phase (deg)			-67.1			+/-	8.3	

ph/seg (deg) 71.7 14.4  
amp/seg (%) 85.3 25.1  
ph/frq (deg) 66.6 16.6  
amp/frq (%) 78.4 28.9

RMS Theor. Amplitude 0.247 +/- 0.018  
Search (2048X64) 0.234  
Interp. 0.000  
Inc. seg. avg. 0.394  
Inc. frq. avg. 0.367

Group delay (usec)(sbd) 1.00882370820E+04  
Sband delay (usec) 1.00882434877E+04  
Phase delay (usec) 1.00882646225E+04  
Delay rate (us/s) 9.77395042696E-01  
Total phase (deg) 209.2

Apriori delay (usec) 1.00882646247E+04  
Apriori clock (usec) -3.3119991E+01  
Apriori clockrate (us/s) -8.7947201E-07  
Apriori rate (us/s) 9.77394747027E-01  
Apriori accel (us/s/s) -7.24405187618E-05

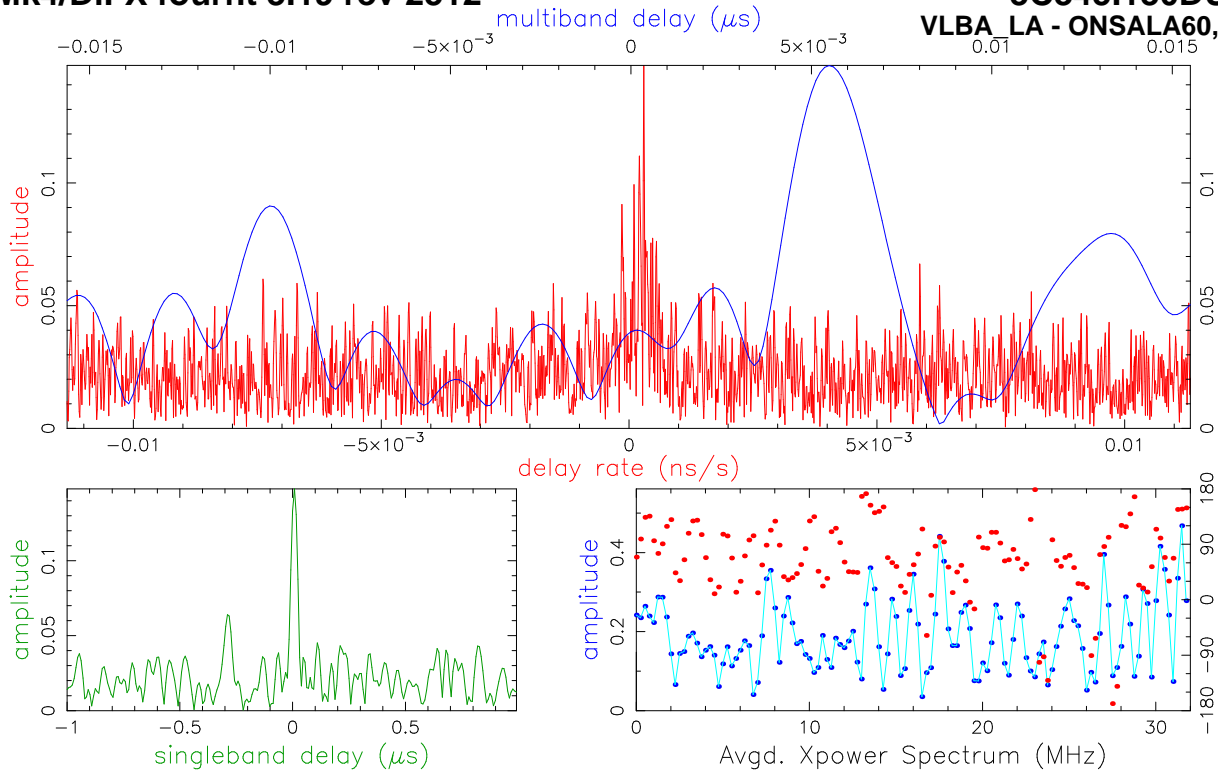
Resid mbdelay (usec) 3.70735E-03  
Resid sbdelay (usec) -2.11370E-02  
Resid phdelay (usec) -2.16394E-06  
Resid rate (us/s) 2.95668E-07  
Resid phase (deg) -67.1

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

I: az 70.2 el 72.7 pa -97.6 X: az 298.9 el 29.3 pa 36.6 u,v (fr/asec) -7411.042 -6404.178 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IX..130DUS Output file: /Exps/c192b/v2/1234/No0115/IX.W.240.130DUS

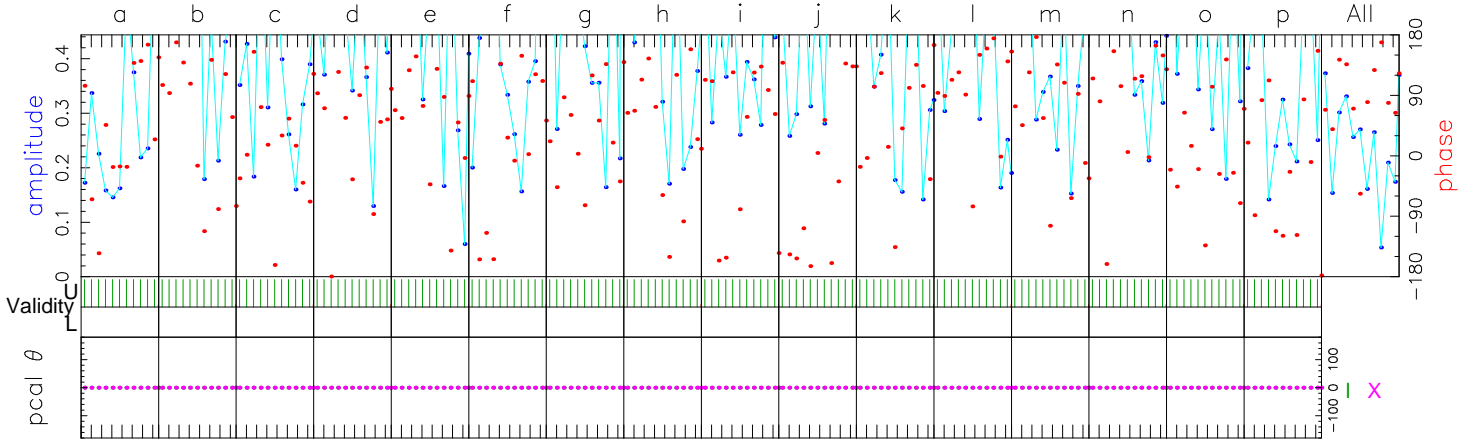


Fringe quality 9

SNR 8.3  
Int time 419.306  
Amp 0.148  
Phase 92.5  
PFD 4.3e-08  
Delays (us)  
SBD 0.007564  
MBD 0.005497  
Fringe rate (Hz) 0.025735  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094137  
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

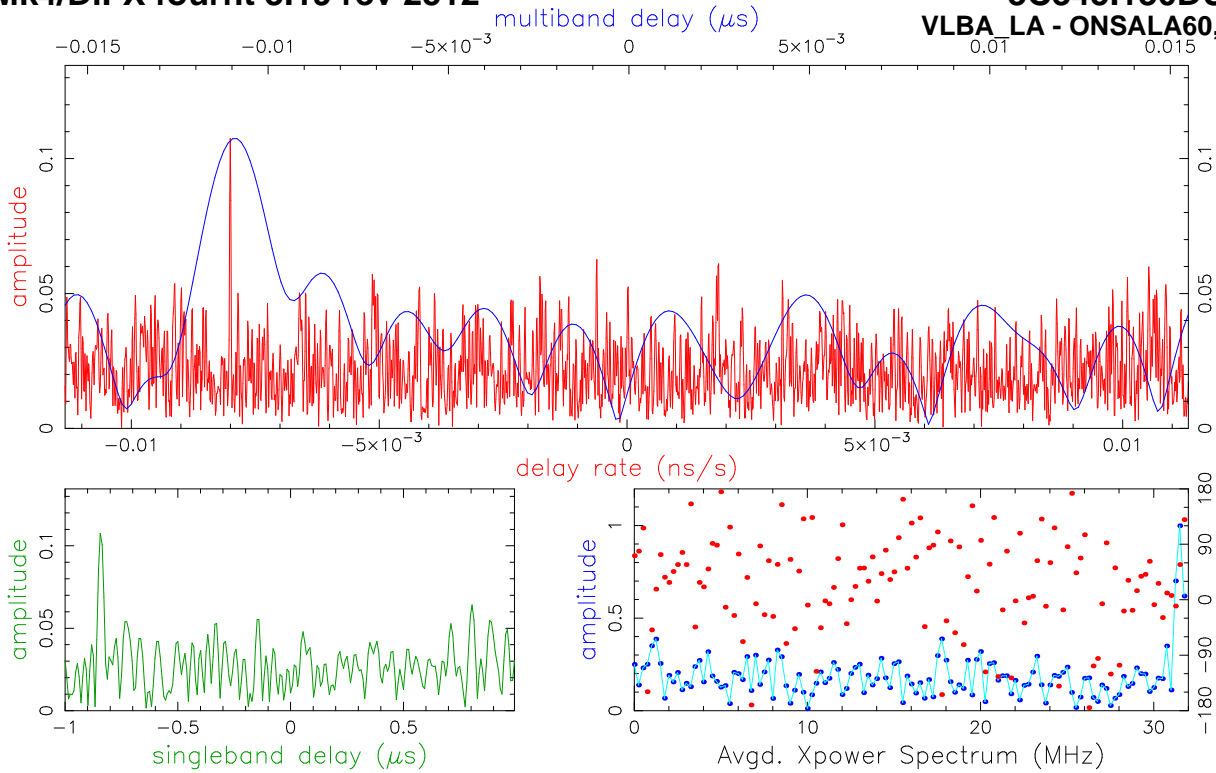


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
I	1000	1000	1000	1000	1000	1000	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
I: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
I: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 amp
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		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)		1.00882701218E+04								1.00882646247E+04							5.49713E-03	+/- 1.3E-04
Sband delay (usec)		1.00882721892E+04								-3.3119991E+01							7.56450E-03	+/- 2.1E-03
Phase delay (usec)		1.00882646276E+04								-8.7947201E-07							2.98290E-06	+/- 4.5E-07
Delay rate (us/s)		9.77395045780E-01								9.77394747027E-01							2.98753E-07	+/- 1.8E-09
Total phase (deg)					8.8					-7.24405187618E-05							92.5	+/- 13.8

ph/seg (deg) 59.2 24.0 Search (2048X64) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.7 41.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 58.3 27.7 Inc. seg. avg. 0.214 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 69.4 48.3 Inc. frq. avg. 0.193 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 I: az 70.2 el 72.7 pa -97.6 X: az 298.9 el 29.3 pa 36.6 u,v (fr/asec) -7411.042 -6404.178 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IX..130DUS Output file: /Exps/c192b/v2/1234/No0115/IX.W.256.130DUS simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, IX  
VLBA\_LA - ONSALA60, fgroup W, pol LR

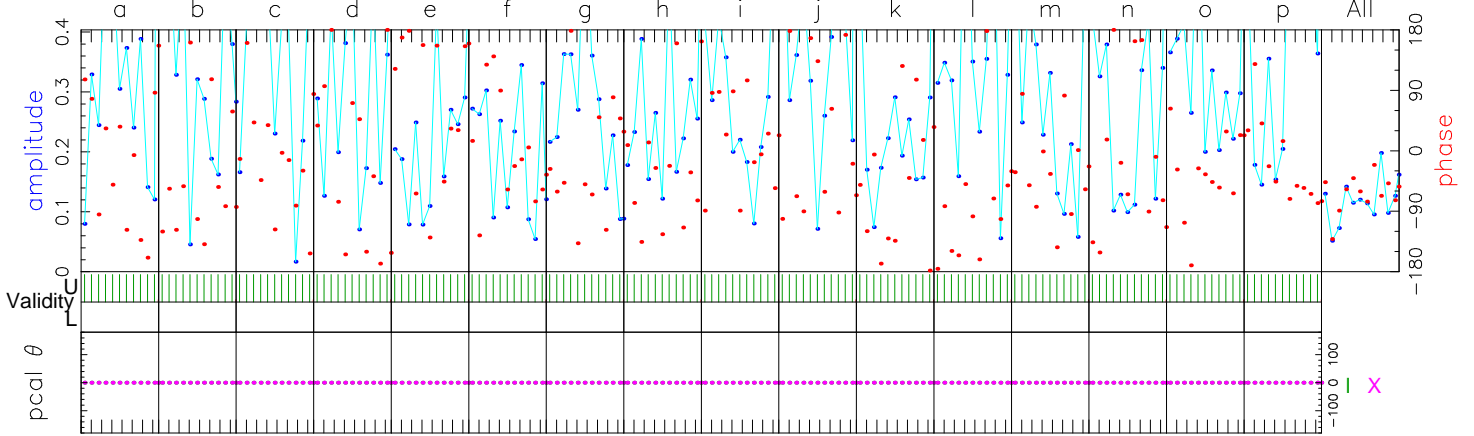


Fringe quality 0

SNR 6.1  
Int time 419.306  
Amp 0.135  
Phase -60.7  
PFD 2.7e-01  
Delays (us)  
SBD -0.841680  
MBD -0.010949  
Fringe rate (Hz)  
-0.690209  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094141  
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

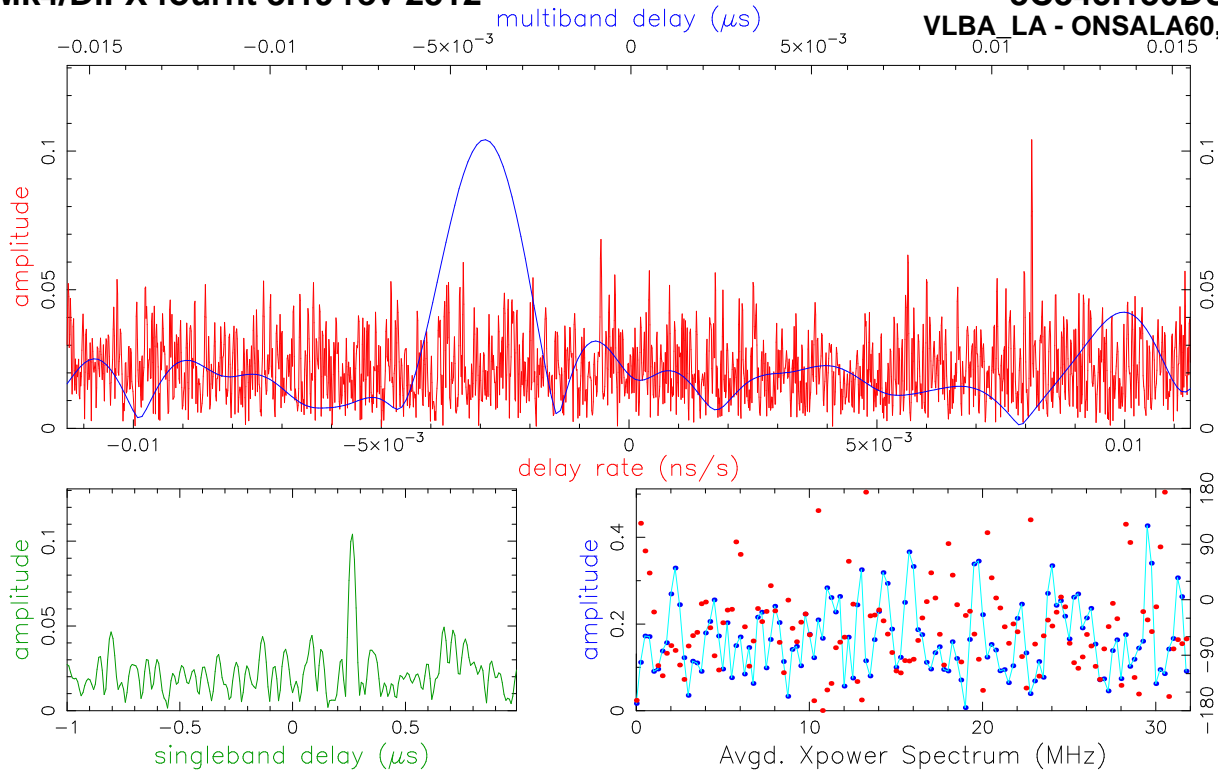


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-23.0	-83.6	-16.4	176.6	144.3	-13.0	-56.2	-60.7	9.4	-103.8	-108.1	-97.8	-44.3	-109.3	-28.2	-43.8	Phase	-60.7
	0.1	0.2	0.2	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.3	0.3	0.1	0.2	0.4	Ampl.	0.1
	122.6	19.7	188.1	173.2	246.8	245.1	239.2	212.7	131.2	7.0	12.2	101.6	21.6	27.4	93.3	12.1	Sbd box	21.3
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	
I	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	
I: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	
I: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	
I	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	
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
X																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) 1.00874099260E+04 Apriori delay (usec) 1.00882646247E+04 Resid mbdelay (usec) -1.09487E-02 +/- 1.8E-04  
 Sband delay (usec) 1.00874229452E+04 Apriori clock (usec) -3.3119991E+01 Resid sbdelay (usec) -8.41680E-01 +/- 2.8E-03  
 Phase delay (usec) 1.00882646227E+04 Apriori clockrate (us/s) -8.7947201E-07 Resid phdelay (usec) -1.95671E-06 +/- 6.1E-07  
 Delay rate (us/s) 9.77386734384E-01 Apriori rate (us/s) 9.77394747027E-01 Resid rate (us/s) -8.01264E-06 +/- 2.5E-09  
 Total phase (deg) 215.6 Apriori accel (us/s/s) -7.24405187618E-05 Resid phase (deg) -60.7 +/- 18.8

RMS Theor. Amplitude 0.135 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 27.8 32.6 Search (2048X64) 0.104 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 34.1 57.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 ph/frq (deg) 65.3 37.7 Inc. seg. avg. 0.123 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 74.0 65.8 Inc. frq. avg. 0.147 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 70.2 el 72.7 pa -97.6 X: az 298.9 el 29.3 pa 36.6 u,v (fr/asec) -7411.042 -6404.178 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IX..130DUS Output file: /Exps/c192b/v2/1234/No0115/IX.W.276.130DUS

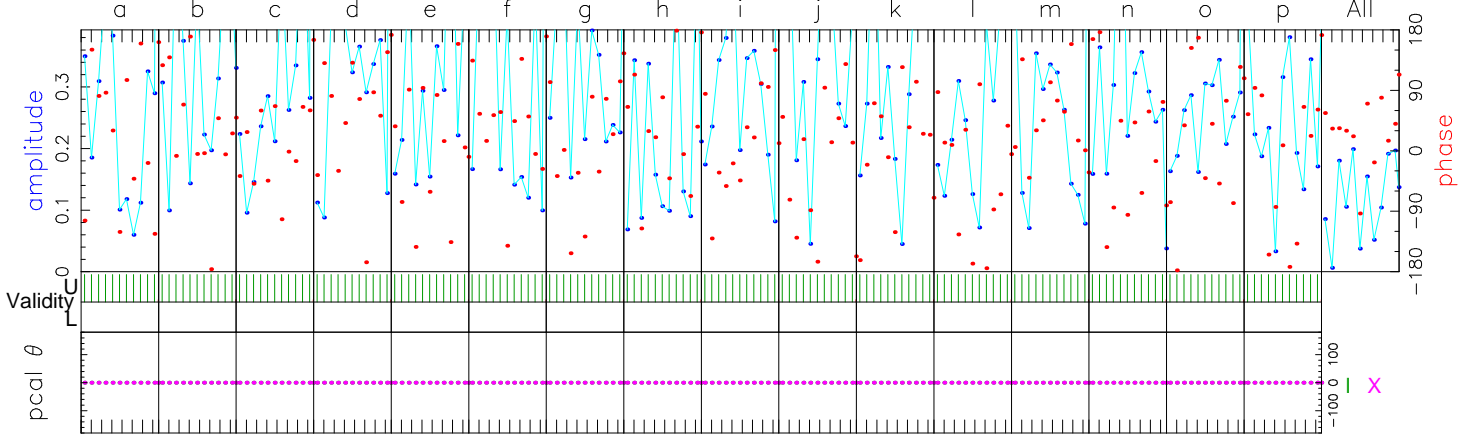


Fringe quality 0

SNR 5.9  
Int time 419.306  
Amp 0.131  
Phase 36.2  
PFD 6.6e-01  
Delays (us)  
SBD 0.263456  
MBD -0.004072  
Fringe rate (Hz) 0.701156  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094146  
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					
	83.0	26.1	8.9	75.2	56.2	44.9	9.9	59.9	2.9	35.1	41.8	-32.5	47.5	23.4	43.8	73.2		Phase 36.2					
	0.1	0.2	0.2	0.2	0.1	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.2	0.1	0.0	0.1		Ampl. 0.1					
	203.9	13.9	190.1	89.9	215.6	78.7	140.0	91.4	225.3	65.5	63.1	206.3	144.4	224.7	247.7	180.9		Sbd box 162.7					
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					
I	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					
I: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					
I: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					
I	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					
I	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)			1.00885418022E+04															Apriori delay (usec)	1.00882646247E+04	Resid mbdelay (usec)	-4.07246E-03	+/-	1.8E-04
Sband delay (usec)			1.00885280802E+04															Apriori clock (usec)	-3.3119991E+01	Resid sbdelay (usec)	2.63456E-01	+/-	2.9E-03
Phase delay (usec)			1.00882646258E+04															Apriori clockrate (us/s)	-8.7947201E-07	Resid phdelay (usec)	1.16775E-06	+/-	6.3E-07
Delay rate (us/s)			9.77402886751E-01															Apriori rate (us/s)	9.77394747027E-01	Resid rate (us/s)	8.13972E-06	+/-	2.6E-09
Total phase (deg)				312.5														Apriori accel (us/s/s)	-7.24405187618E-05	Resid phase (deg)	36.2	+/-	19.5

ph/seg (deg) 46.8 33.8  
amp/seg (%) 64.4 59.0  
ph/frq (deg) 31.5 39.0  
amp/frq (%) 51.5 68.1

RMS Theor. Amplitude 0.131 +/- 0.022  
Search (2048X64) 0.101  
Interp. 0.000  
Inc. seg. avg. 0.127  
Inc. frq. avg. 0.117

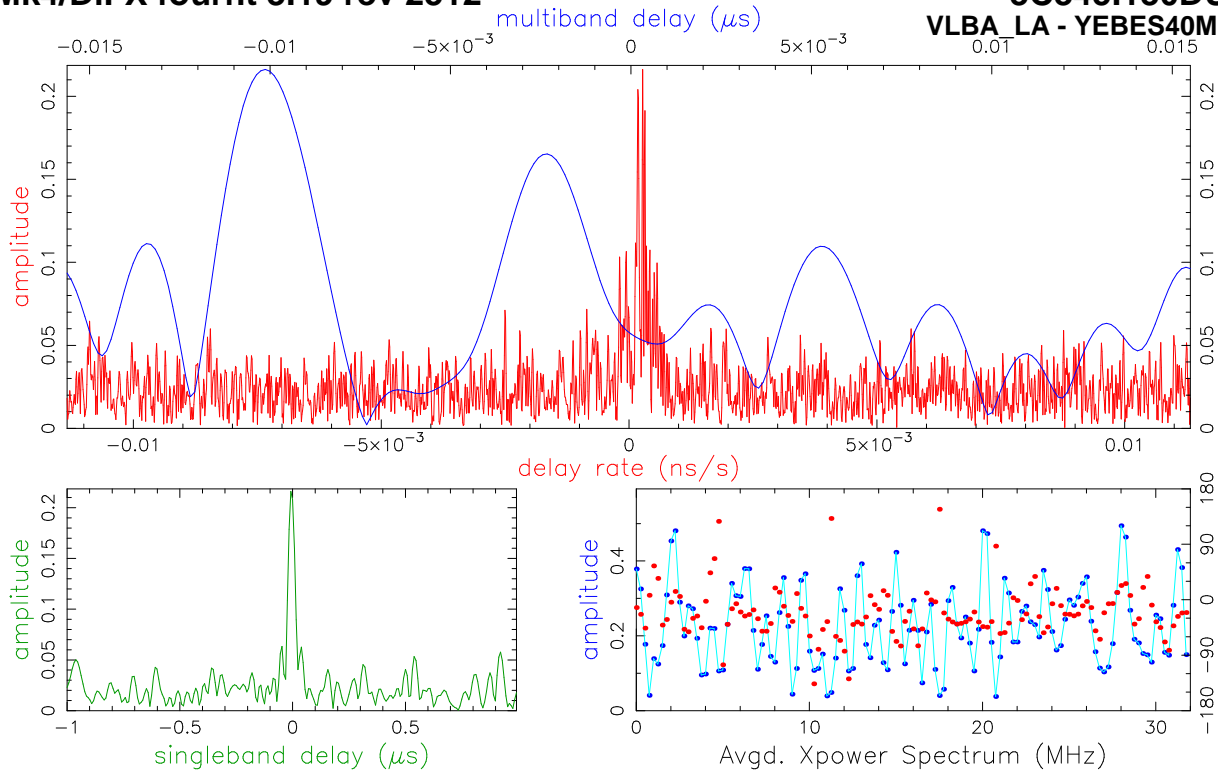
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
PCal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2 SampCntNorm: enabled  
Sample rate(MISamp/s): 64  
Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite

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

I: az 70.2 el 72.7 pa -97.6 X: az 298.9 el 29.3 pa 36.6 u,v (fr/asec) -7411.042 -6404.178 simultaneous interpolator

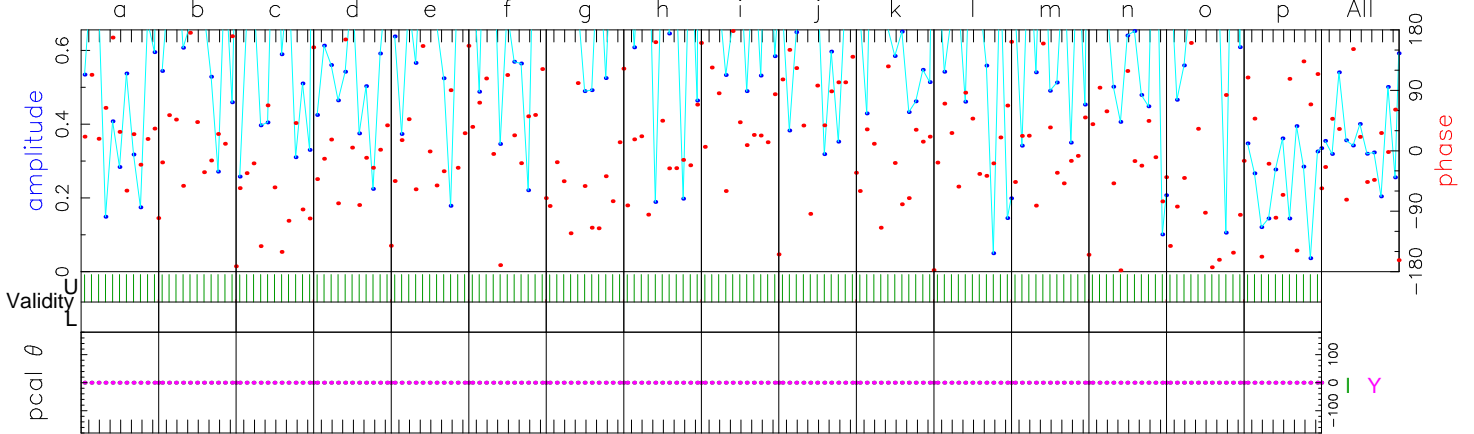
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IX..130DUS Output file: /Exps/c192b/v2/1234/No0115/IX.W.290.130DUS





Fringe quality 9  
SNR 12.0  
Int time 401.801  
Amp 0.219  
Phase 4.3  
PFD 2.3e-24  
Delays (us)  
SBD -0.005304  
MBD -0.010155  
Fringe rate (Hz)  
0.023988  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213016.90  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094131  
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

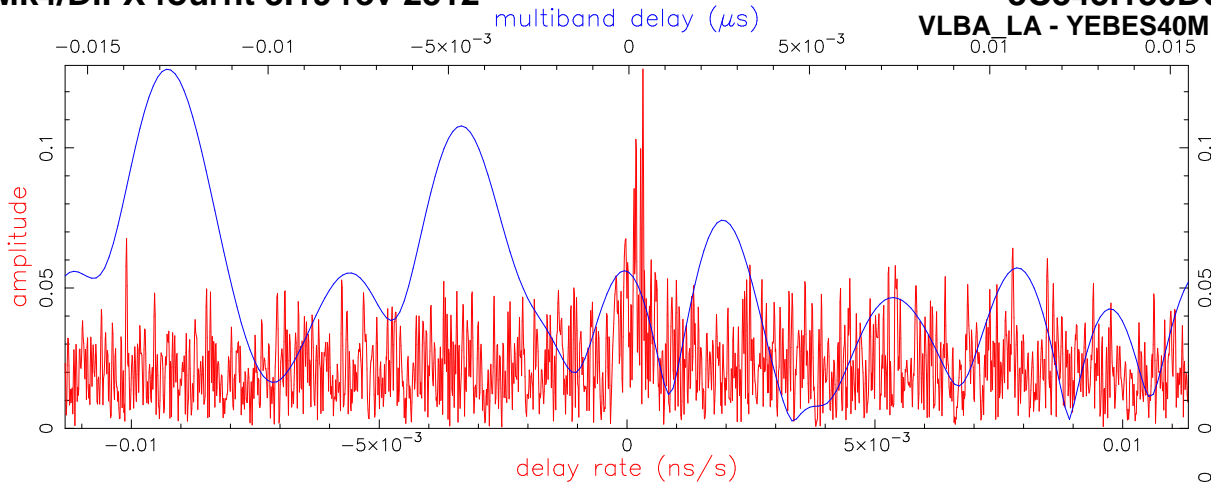


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	128.3				
I	1000	1000	1000	1000	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					
I: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					
I: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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks					
Group delay (usec)(sbd)		9.95987029900E+03															Apriori delay (usec)	9.95988045443E+03	Resid mbdelay (usec)	-1.01554E-02	+/-	9.0E-05
Sband delay (usec)		9.95987514993E+03															Apriori clock (usec)	-1.0417782E+01	Resid sbdelay (usec)	-5.30450E-03	+/-	1.4E-03
Phase delay (usec)		9.95988045457E+03															Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	1.39273E-07	+/-	3.1E-07
Delay rate (us/s)		1.23946353465E+00															Apriori rate (us/s)	1.23946325618E+00	Resid rate (us/s)	2.78472E-07	+/-	1.3E-09
Total phase (deg)				128.5													Apriori accel (us/s/s)	-5.77147264455E-05	Resid phase (deg)	4.3	+/-	9.6

ph/seg (deg) 61.7 16.6 Search (2048X64) 0.213 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 77.0 28.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 69.0 19.1 Inc. seg. avg. 0.344 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 71.5 33.4 Inc. frq. avg. 0.328 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
I: az 70.2 el 72.7 pa -97.6 Y: az 298.6 el 29.9 pa 60.8 u,v (fr/asec) -9335.456 -4104.357 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IY...130DUS Output file: /Exps/c192b/v2/1234/No0115/IY.W.241.130DUS simultaneous interpolator

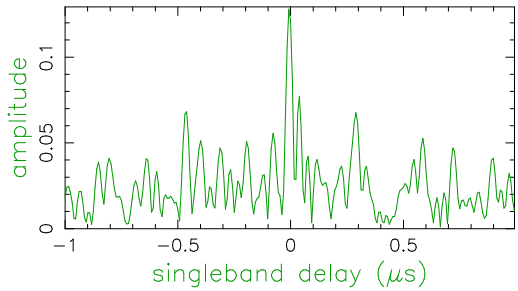
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, IY  
VLBA\_LA - YEBES40M, fgroup W, pol RR

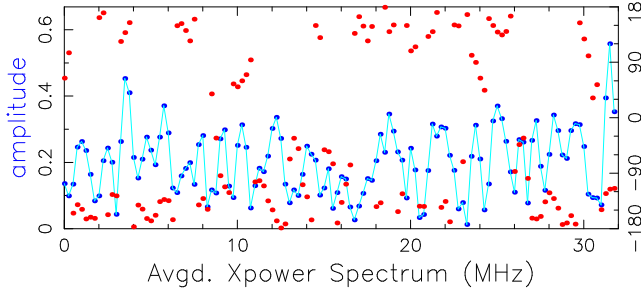


Fringe quality 0

SNR 7.1  
Int time 401.800  
Amp 0.129  
Phase -128.3  
PFD 4.1e-04  
Delays (us)  
SBD -0.005588  
MBD -0.012792  
Fringe rate (Hz)  
0.027713  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

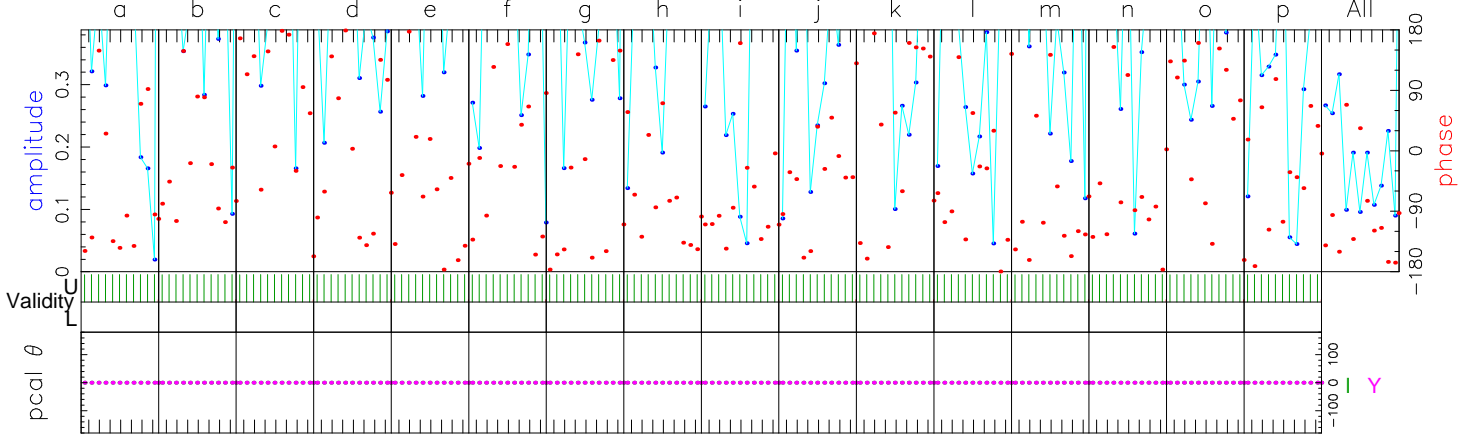


delay rate (ns/s)



Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213016.90  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094137  
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

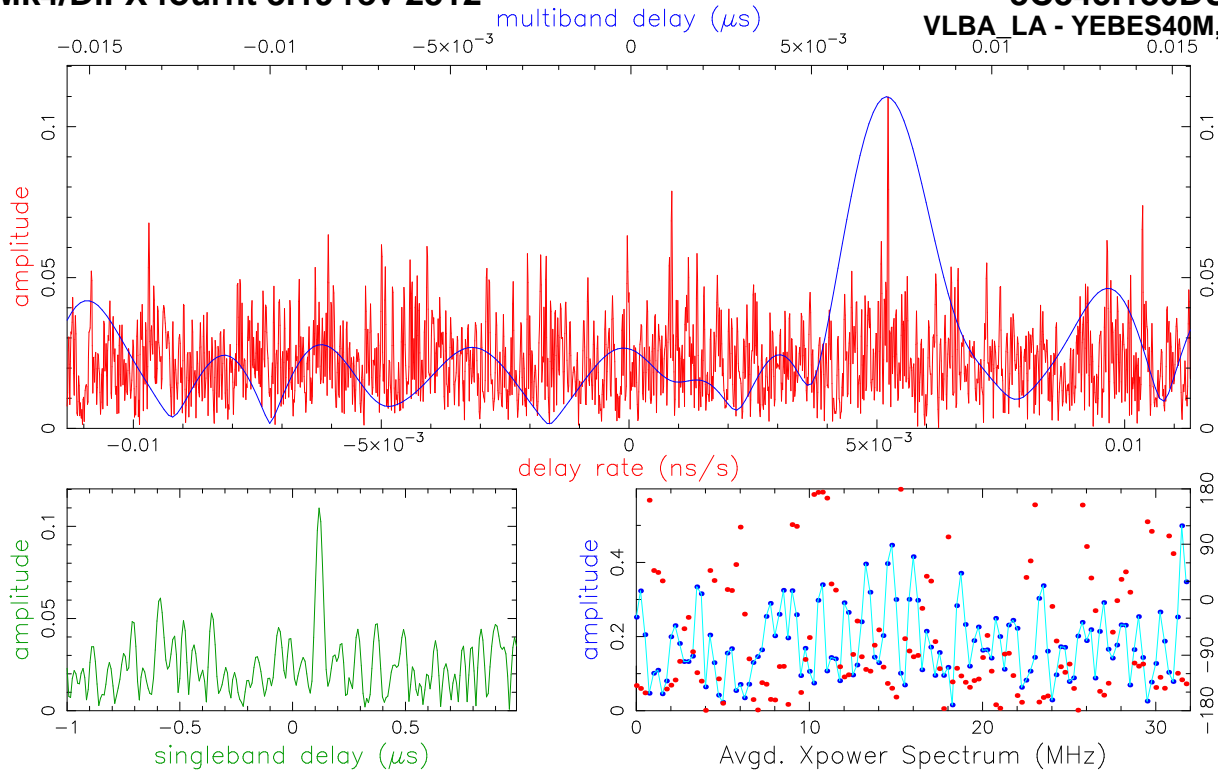


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-143.0	-52.3	127.3	-171.1	-99.9	-116.6	-173.1	-109.7	-91.7	-33.1	-175.0	-116.3	-119.2	-117.5	126.6	-2.1	Phase	-128.3				
	0.2	0.2	0.3	0.1	0.2	0.1	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.2	0.2	0.0	Ampl.	0.2				
	128.8	122.4	126.9	71.0	227.4	95.7	255.5	127.4	128.0	127.2	128.2	211.9	127.0	245.4	108.5	119.7	Sbd box	128.3				
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used					
I	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					
I: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					
I: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					
I	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					
I	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)			9.95986766210E+03														Apriori delay (usec)	9.95988045443E+03	Resid mbdelay (usec)	-1.27923E-02	+/-	1.5E-04
Sband delay (usec)			9.95987486593E+03														Apriori clock (usec)	-1.0417782E+01	Resid sbdelay (usec)	-5.58850E-03	+/-	2.4E-03
Phase delay (usec)			9.95988045030E+03														Apriori clockrate (us/s)	-5.7147201E-07	Resid phdelay (usec)	-4.13862E-06	+/-	5.2E-07
Delay rate (us/s)			1.23946357790E+00														Apriori rate (us/s)	1.23946325618E+00	Resid rate (us/s)	3.21716E-07	+/-	2.2E-09
Total phase (deg)					-4.1												Apriori accel (us/s/s)	-5.77147264455E-05	Resid phase (deg)	-128.3	+/-	16.2

ph/seg (deg) 74.1 28.0 Search (2048X64) 0.126 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 77.8 48.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 66.5 32.3 Inc. seg. avg. 0.164 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 87.9 56.4 Inc. frq. avg. 0.181 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite dr window (ns/s) -0.011 0.011  
I: az 70.2 el 72.7 pa -97.6 Y: az 298.6 el 29.9 pa 60.8 u,v (fr/asec) -9335.456 -4104.357 ion window (TEC) 0.00 0.00  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IY...130DUS Output file: /Exps/c192b/v2/1234/No0115/IY.W.257.130DUS simultaneous interpolator

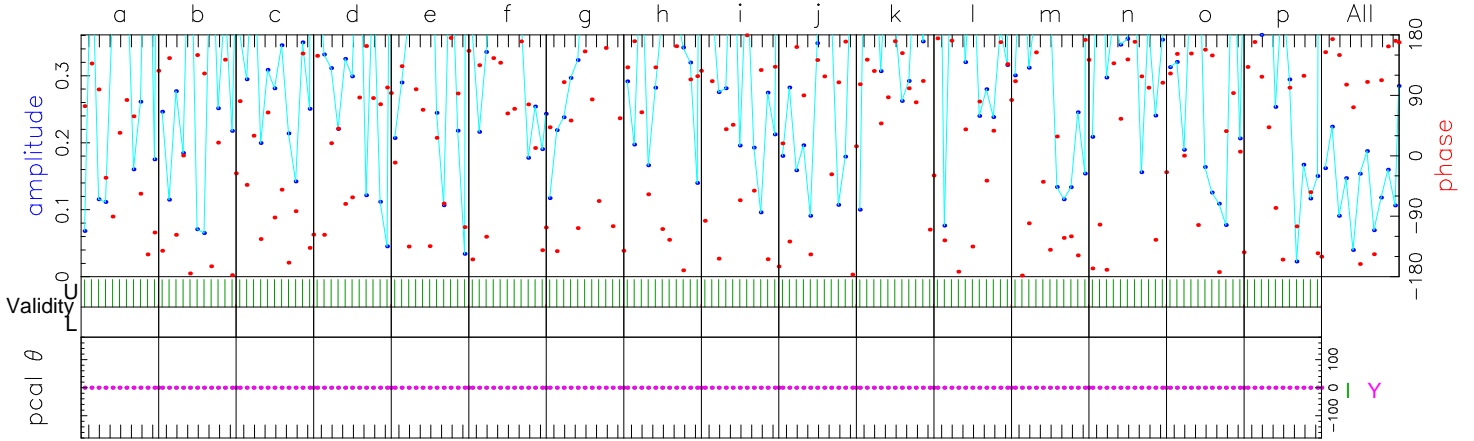
Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, IY  
VLBA\_LA - YEBES40M, fgroup W, pol LR



Fringe quality 0  
SNR 6.0  
Int time 401.801  
Amp 0.120  
Phase 151.2  
PFD 3.4e-01  
Delays (us)  
SBD 0.118167  
MBD 0.007059  
Fringe rate (Hz) 0.450886  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213016.90  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094143  
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
U/L	120.8	-175.5	-58.1	82.9	151.7	135.3	143.4	158.9	169.2	148.1	120.5	167.7	-157.7	157.0	141.1	143.7	Phase	151.2
I	0.0	0.2	0.0	0.1	0.1	0.2	0.1	0.2	0.1	0.1	0.3	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1
Y	119.8	16.1	79.5	55.2	87.6	84.3	111.9	188.1	61.3	5.9	143.2	223.9	48.5	95.8	100.0	132.9	Sbd box	144.1
I:Y	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
I:Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
I: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	
I: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	
I	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		
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

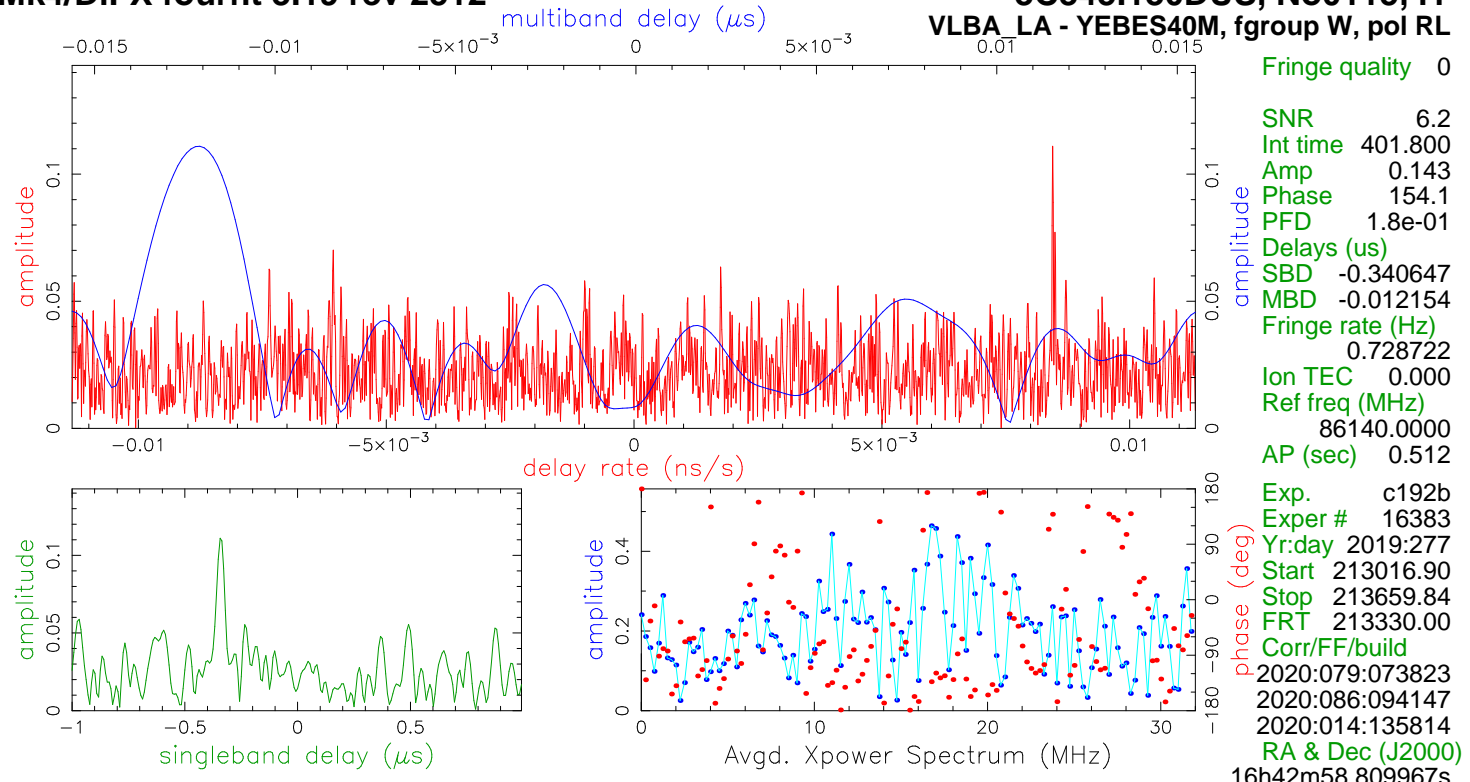
Group delay (usec)(sbd) 9.96001251379E+03 Apriori delay (usec) 9.95988045443E+03 Resid mbdelay (usec) 7.05935E-03 +/- 1.8E-04  
Sband delay (usec) 9.95999862143E+03 Apriori clock (usec) -1.0417782E+01 Resid sbdelay (usec) 1.18167E-01 +/- 2.9E-03  
Phase delay (usec) 9.95988045931E+03 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) 4.87583E-06 +/- 6.1E-07  
Delay rate (us/s) 1.23946849052E+00 Apriori rate (us/s) 1.23946325618E+00 Resid rate (us/s) 5.23433E-06 +/- 2.6E-09  
Total phase (deg) 275.4 Apriori accel (us/s/s) -5.77147264455E-05 Resid phase (deg) 151.2 +/- 19.0

ph/seg (deg) 41.2 32.9 Theor. Amplitude 0.120 +/- 0.020 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 52.5 57.4 Search (2048X64) 0.106 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 49.4 38.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
amp/frq (%) 57.9 66.3 Inc. seg. avg. 0.126 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
Inc. frq. avg. 0.114 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 70.2 el 72.7 pa -97.6 Y: az 298.6 el 29.9 pa 60.8 u,v (fr/asec) -9335.456 -4104.357 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IY...130DUS Output file: /Exps/c192b/v2/1234/No0115/IY.W.278.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, IY  
VLBA\_LA - YEBES40M, fgroup W, pol RL



Fringe quality 0

SNR 6.2

Int time 401.800

Amp 0.143

Phase 154.1

PFD 1.8e-01

Delays (us)

SBD -0.340647

MBD -0.012154

Fringe rate (Hz) 0.728722

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213016.90

Stop 213659.84

FRT 213330.00

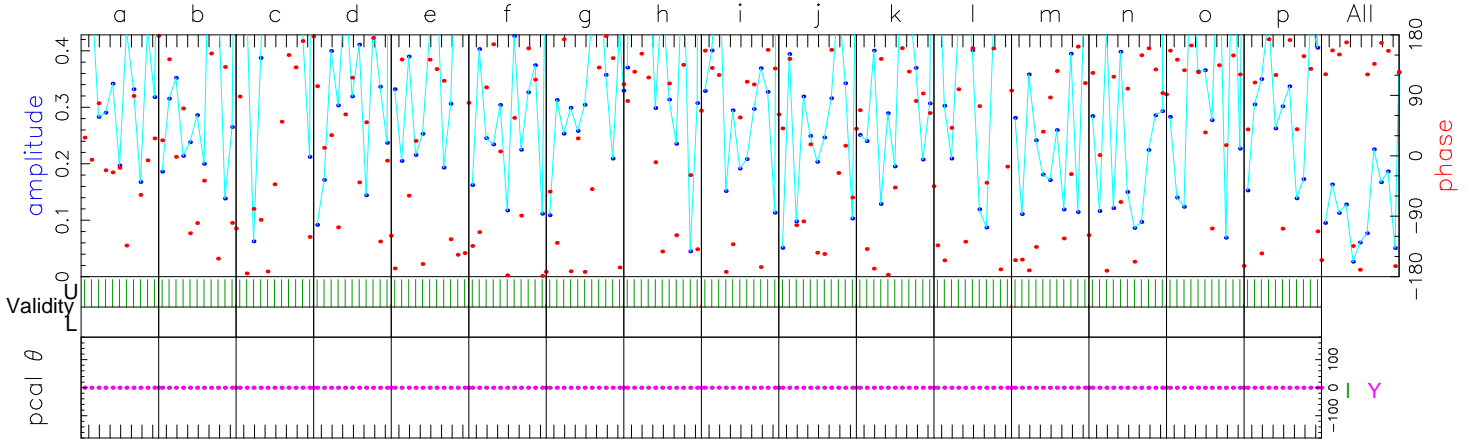
Corr/FF/build 2020:079:073823

2020:086:094147

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
	3.6	-165.1	154.7	30.1	-172.0	150.7	-176.4	135.4	140.2	-76.0	136.1	-175.5	161.4	140.0	141.9	169.5	Phase	154.1
	0.3	0.1	0.2	0.1	0.3	0.1	0.2	0.3	0.3	0.0	0.2	0.2	0.1	0.1	0.3	0.2	Ampl.	0.2
	81.1	193.0	193.6	73.8	220.0	185.5	120.2	84.8	83.6	19.6	255.3	212.8	182.7	146.3	180.8	35.3	Sbd box	85.4
UL	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
I	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	
I: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	
I: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	
I	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	
I	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	
																	Chan ids	
																	Tracks	

Group delay (usec)(sbd) 9.95952455075E+03 Apriori delay (usec) 9.95988045443E+03 Resid mbdelay (usec) -1.21537E-02 +/- 1.8E-04

Sband delay (usec) 9.95953980693E+03 Apriori clock (usec) -1.0417782E+01 Resid sbdelay (usec) -3.40647E-01 +/- 2.8E-03

Phase delay (usec) 9.95988045941E+03 Apriori clockrate (us/s) -5.7147201E-07 Resid phdelay (usec) 4.97054E-06 +/- 6.0E-07

Delay rate (us/s) 1.23947171593E+00 Apriori rate (us/s) 1.23946325618E+00 Resid rate (us/s) 8.45974E-06 +/- 2.6E-09

Total phase (deg) 278.3 Apriori accel (us/s/s) -5.77147264455E-05 Resid phase (deg) 154.1 +/- 18.6

RMS Theor. Amplitude 0.143 +/- 0.023 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 31.7 32.3 Search (2048X64) 0.108 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

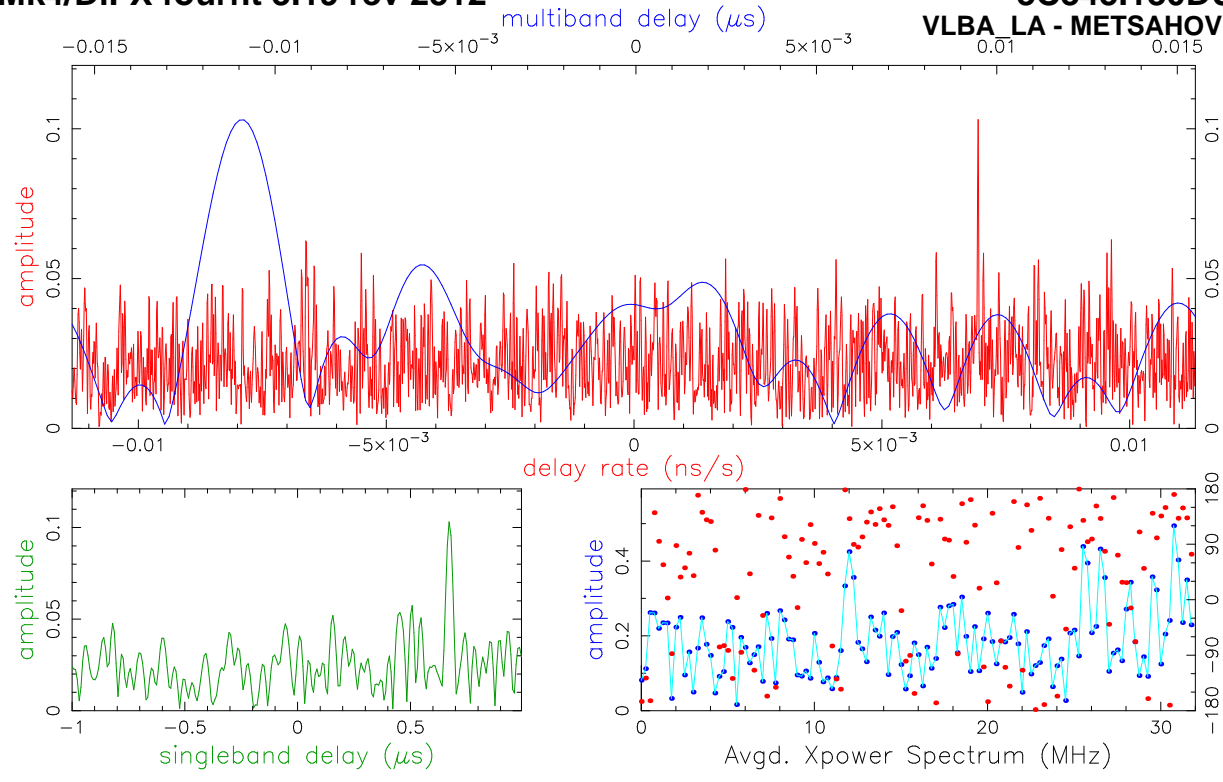
amp/seg (%) 56.6 56.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

ph/frq (deg) 66.0 37.2 Inc. seg. avg. 0.131 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 71.4 65.0 Inc. frq. avg. 0.160 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

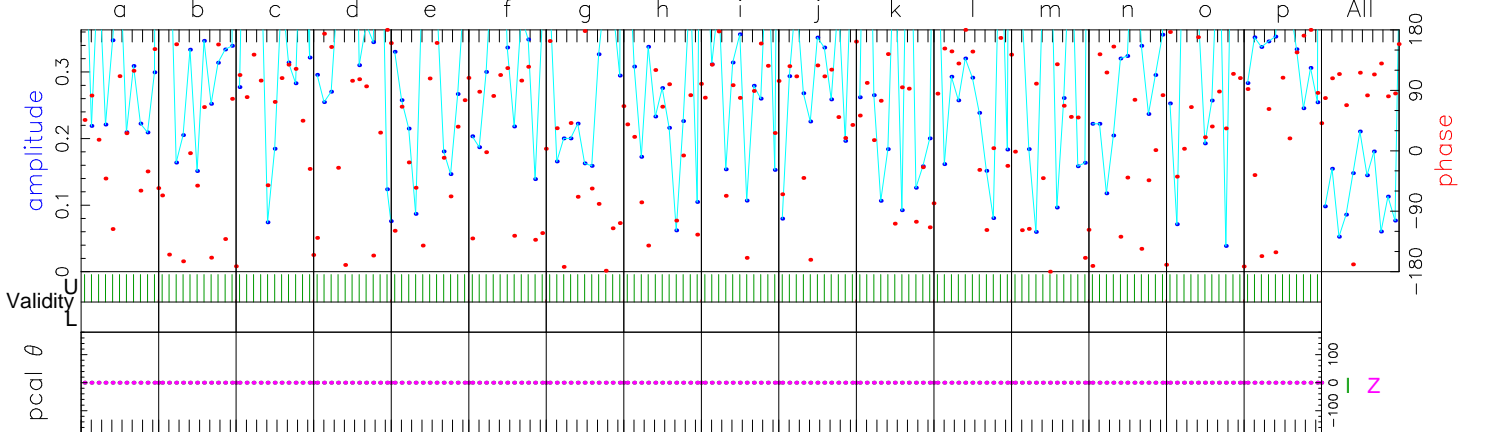
I: az 70.2 el 72.7 pa -97.6 Y: az 298.6 el 29.9 pa 60.8 u,v (fr/asec) -9335.456 -4104.357 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IY...130DUS Output file: /Exps/c192b/v2/1234/No0115/IY.W.298.130DUS



Fringe quality 0  
SNR 5.8  
Int time 418.515  
Amp 0.121  
Phase 107.9  
PFD 8.5e-01  
Delays (us)  
SBD 0.672916  
MBD -0.010916  
Fringe rate (Hz) 0.599221  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build 2020:079:073823  
2020:086:094135  
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

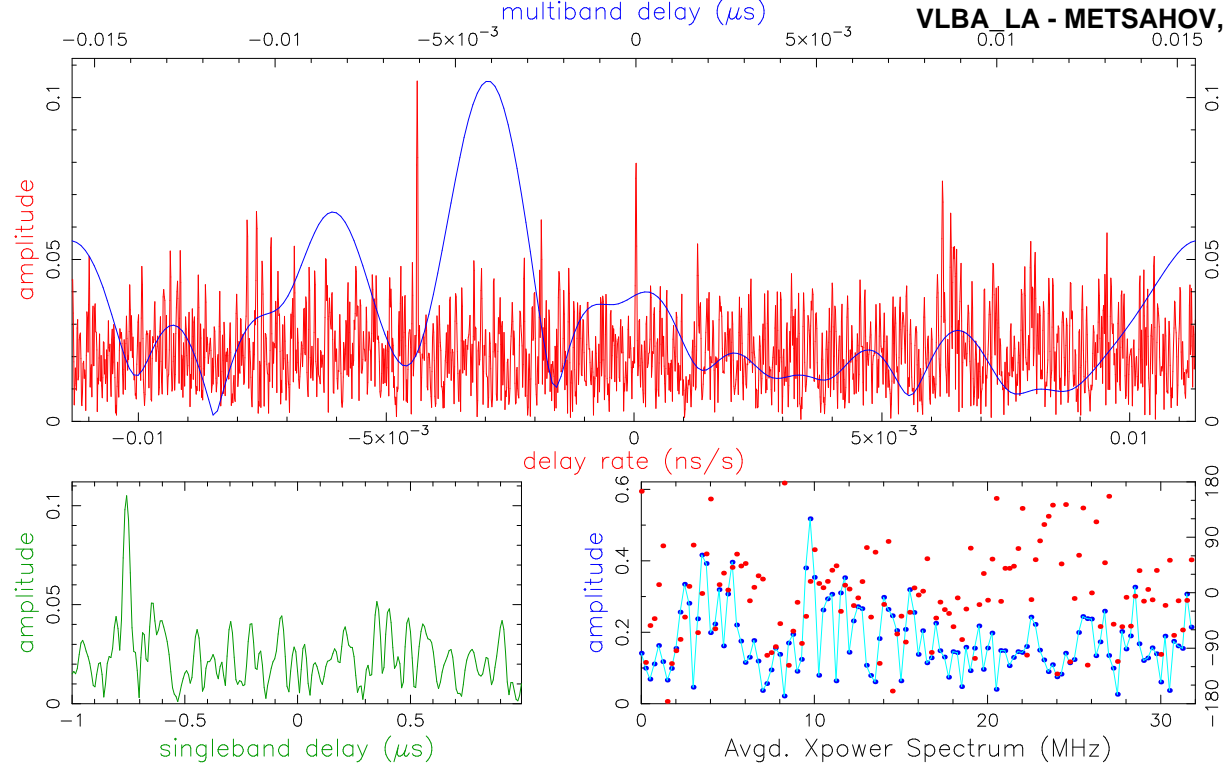


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
I	1000	1000	1000	1000	1000	1000	1000	1000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

Group delay (usec)(sbd) 1.13978132353E+04 Apriori delay (usec) 1.13971366514E+04 Resid mbdelay (usec) -1.09160E-02 +/- 1.9E-04  
 Sband delay (usec) 1.13978095679E+04 Apriori clock (usec) -9.3521118E-01 Resid sbdelay (usec) 6.72916E-01 +/- 3.0E-03  
 Phase delay (usec) 1.13971366548E+04 Apriori clockrate (us/s) -3.6776479E-07 Resid phdelay (usec) 3.47875E-06 +/- 6.4E-07  
 Delay rate (us/s) 8.96600937148E-01 Apriori rate (us/s) 8.96593980788E-01 Resid rate (us/s) 6.95636E-06 +/- 2.6E-09  
 Total phase (deg) 161.5 Apriori accel (us/s/s) -8.10770123916E-05 Resid phase (deg) 107.9 +/- 19.8

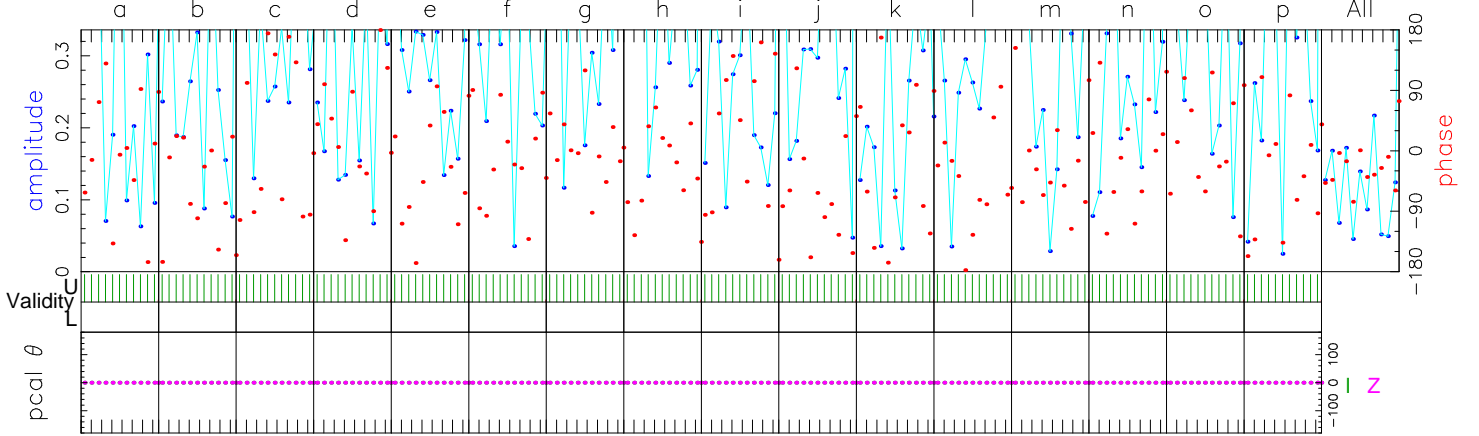
ph/seg (deg) RMS Theor. Amplitude 0.121 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 33.0 34.4 Search (2048X64) 0.098 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 55.0 60.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016  
 amp/frq (%) 56.3 39.7 Inc. seg. avg. 0.122 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 68.3 69.3 Inc. frq. avg. 0.125 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 70.2 el 72.7 pa -97.6 Z: az 306.6 el 25.4 pa 31.6 u,v (fr/asec) -6824.173 -7150.462 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IZ..130DUS Output file: /Exps/c192b/v2/1234/No0115/IZ.W.250.130DUS



Fringe quality 0  
SNR 5.9  
Int time 418.514  
Amp 0.112  
Phase -30.3  
PFD 6.2e-01  
Delays (us)  
SBD -0.758961  
MBD -0.004091  
Fringe rate (Hz)  
-0.377725  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094140  
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					
	-16.3	-41.5	-135.3	60.1	-28.1	-4.2	-4.8	-40.0	78.5	-78.4	-129.7	-29.1	-59.6	-0.2	-21.8	-6.0		Phase -30.3					
	0.2	0.1	0.1	0.1	0.1	0.1	0.3	0.3	0.0	0.2	0.1	0.1	0.2	0.1	0.2	0.1		Ampl. 0.1					
	172.8	149.3	135.6	163.8	86.4	167.4	31.9	31.5	133.4	29.9	138.7	47.2	138.3	118.0	218.2	76.3		Sbd box 31.9					
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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
I:Z	0:0	0:0	0:0	0:0	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					
I:Z	0:0	0:0	0:0	0:0	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					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			1.13963825606E+04															Apriori delay (usec)	1.13971366514E+04	Resid mbdelay (usec)	-4.09078E-03	+/-	1.8E-04
Sband delay (usec)			1.13963776899E+04															Apriori clock (usec)	-9.3521118E-01	Resid sbdelay (usec)	-7.58961E-01	+/-	2.9E-03
Phase delay (usec)			1.13971366504E+04															Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	-9.76303E-07	+/-	6.3E-07
Delay rate (us/s)			8.96589595777E-01															Apriori rate (us/s)	8.96593980788E-01	Resid rate (us/s)	-4.38501E-06	+/-	2.6E-09
Total phase (deg)				23.3														Apriori accel (us/s/s)	-8.10770123916E-05	Resid phase (deg)	-30.3	+/-	19.5

ph/seg (deg) 24.6 33.7  
amp/seg (%) 60.1 58.8  
ph/frq (deg) 58.2 38.9  
amp/frq (%) 72.8 67.9

RMS Theor. Amplitude 0.112 +/- 0.019  
Search (2048X64) 0.102  
Interp. 0.000  
Inc. seg. avg. 0.105  
Inc. frq. avg. 0.117

Group delay (usec)(sbd) 1.13963825606E+04  
Sband delay (usec) 1.13963776899E+04  
Phase delay (usec) 1.13971366504E+04  
Delay rate (us/s) 8.96589595777E-01  
Total phase (deg) 23.3

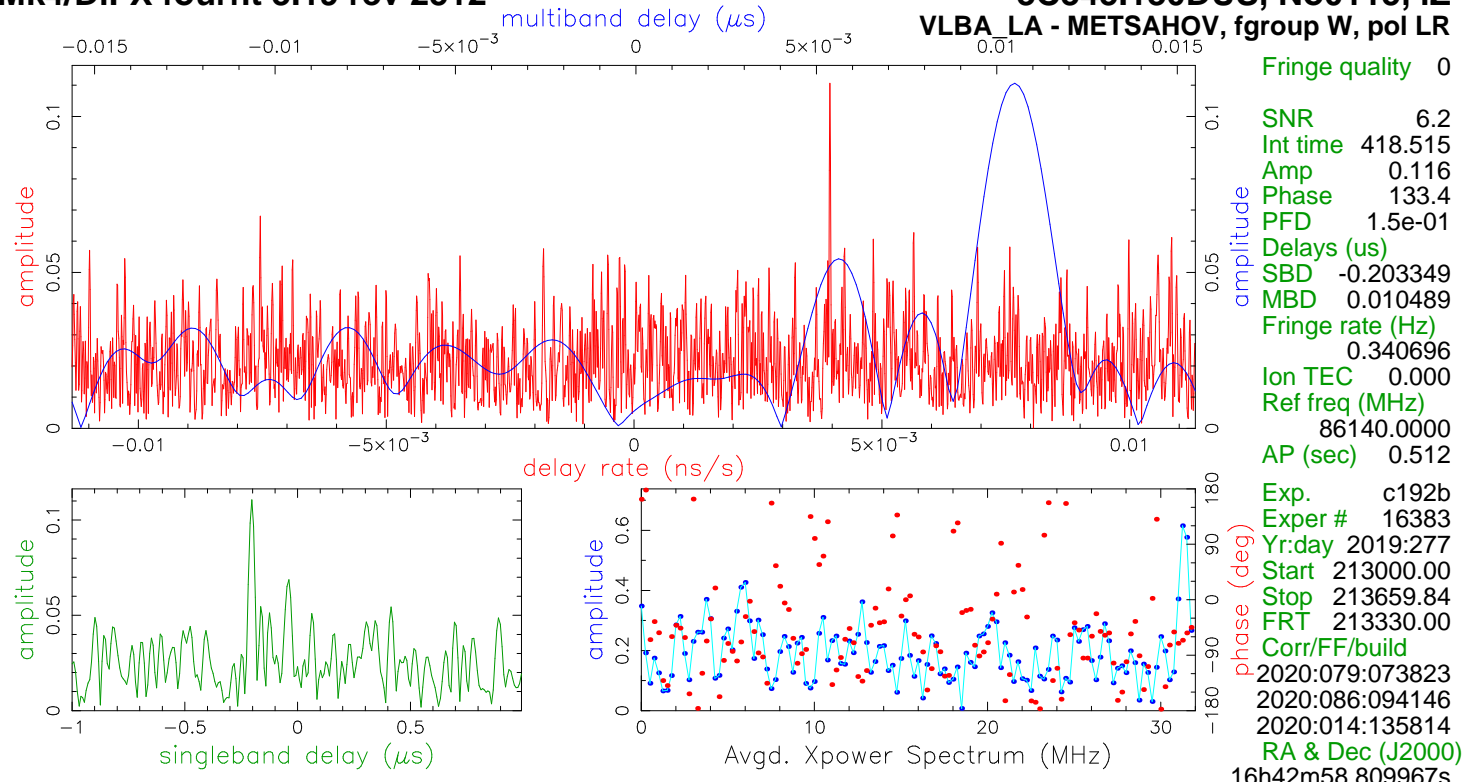
Apriori delay (usec) 1.13971366514E+04  
Apriori clock (usec) -9.3521118E-01  
Apriori clockrate (us/s) -3.6776479E-07  
Apriori rate (us/s) 8.96593980788E-01  
Apriori accel (us/s/s) -8.10770123916E-05

Resid mbdelay (usec) -4.09078E-03  
Resid sbdelay (usec) -7.58961E-01  
Resid phdelay (usec) -9.76303E-07  
Resid rate (us/s) -4.38501E-06  
Resid phase (deg) -30.3

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

I: az 70.2 el 72.7 pa -97.6 Z: az 306.6 el 25.4 pa 31.6 u,v (fr/asec) -6824.173 -7150.462 simultaneous interpolator



Fringe quality 0

SNR 6.2

Int time 418.515

Amp 0.116

Phase 133.4

PFD 1.5e-01

Delays (us)

SBD -0.203349

MBD 0.010489

Fringe rate (Hz)

0.340696

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192b

Exper # 16383

Yr:day 2019:277

Start 213000.00

Stop 213659.84

FRT 213330.00

Corr/FF/build

2020:079:073823

2020:086:094146

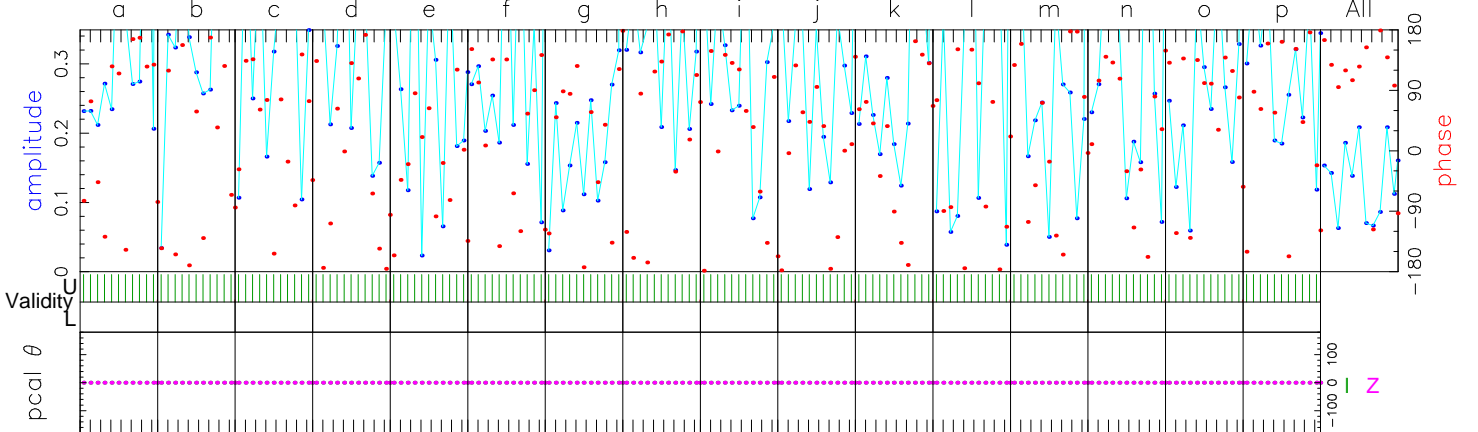
2020:014:135814

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						
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs						
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase						
I:Z	0:0	0:0	0:0	0:0	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						
I:Z	0:0	0:0	0:0	0:0	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						
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids						
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks						
I	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids						
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks						
Group delay (usec)(sbd)		1.13969283907E+04																Apriori delay (usec)	1.13971366514E+04	Resid mbdelay (usec)	1.04893E-02	+/-	1.7E-04	
Sband delay (usec)		1.13969333029E+04																	Apriori clock (usec)	-9.3521118E-01	Resid sbdelay (usec)	-2.03349E-01	+/-	2.8E-03
Phase delay (usec)		1.13971366557E+04																	Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	4.30079E-06	+/-	6.0E-07
Delay rate (us/s)		8.96597935932E-01																	Apriori rate (us/s)	8.96593980788E-01	Resid rate (us/s)	3.95514E-06	+/-	2.5E-09
Total phase (deg)			187.0																Apriori accel (us/s/s)	-8.10770123916E-05	Resid phase (deg)	133.4	+/-	18.5

ph/seg (deg) 43.3 32.1 Amplitude 0.116 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 50.9 56.0 Search (2048X64) 0.107 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 44.5 37.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 36.1 64.6 Inc. seg. avg. 0.119 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

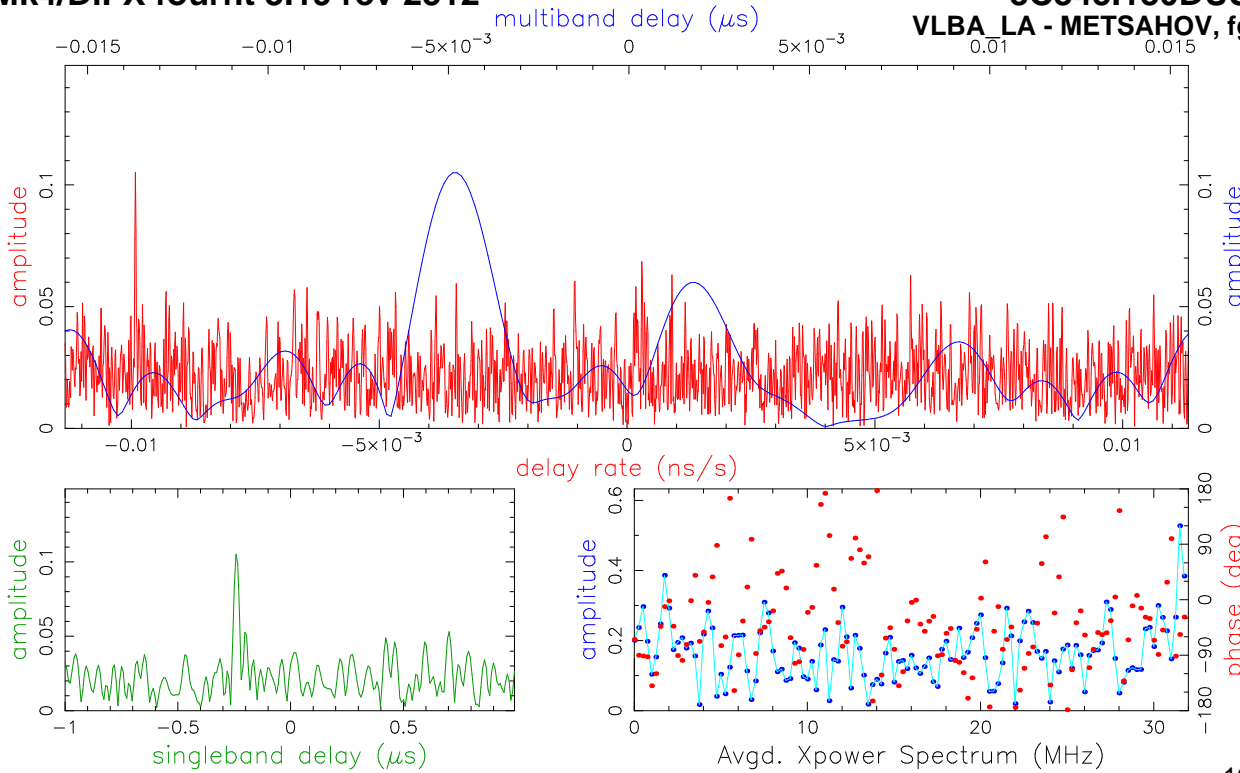
amp/frq (%) 36.1 64.6 Inc. frq. avg. 0.111 Data rate(Mb/s): 2048 nlags: 128 t\_cohere infinite ion window (TEC) 0.00 0.00

I: az 70.2 el 72.7 pa -97.6 Z: az 306.6 el 25.4 pa 31.6 u,v (fr/asec) -6824.173 -7150.462 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IZ\_130DUS Output file: /Exps/c192b/v2/1234/No0115/IZ.W.292.130DUS

Mk4/DiFX fourfit 3.19 rev 2512

3C345.130DUS, No0115, IZ  
VLBA\_LA - METSAHOV, fgroup W, pol RL

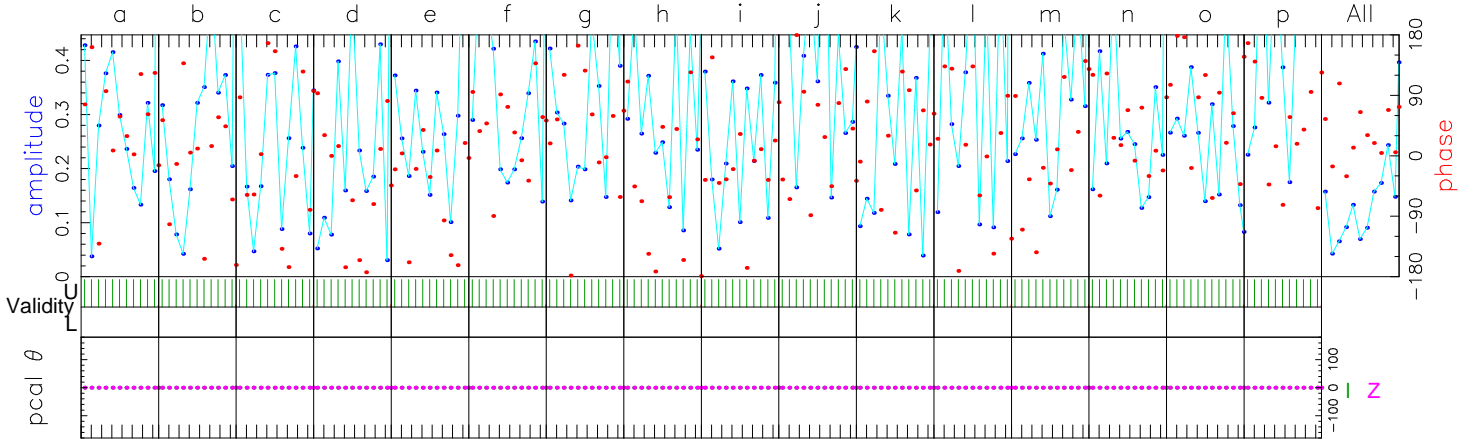


Fringe quality 0

SNR 5.9  
Int time 418.514  
Amp 0.149  
Phase 31.1  
PFD 5.0e-01  
Delays (us)  
SBD -0.240005  
MBD -0.004846  
Fringe rate (Hz)  
-0.855686  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192b  
Exper # 16383  
Yr:day 2019:277  
Start 213000.00  
Stop 213659.84  
FRT 213330.00  
Corr/FF/build  
2020:079:073823  
2020:086:094152  
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	31.1					
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.1					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	98.3					
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
I:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0						
I	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
I	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			1.13968818058E+04															Apriori delay (usec)	1.13971366514E+04	Resid mbdelay (usec)	-4.84557E-03	+/-	1.8E-04
Sband delay (usec)			1.13968966459E+04															Apriori clock (usec)	-9.3521118E-01	Resid sbdelay (usec)	-2.40005E-01	+/-	2.9E-03
Phase delay (usec)			1.13971366524E+04															Apriori clockrate (us/s)	-3.6776479E-07	Resid phdelay (usec)	1.00414E-06	+/-	6.2E-07
Delay rate (us/s)			8.96584047126E-01															Apriori rate (us/s)	8.96593980788E-01	Resid rate (us/s)	-9.93366E-06	+/-	2.6E-09
Total phase (deg)					84.7													Apriori accel (us/s/s)	-8.10770123916E-05	Resid phase (deg)	31.1	+/-	19.3

ph/seg (deg) 39.1 33.4  
amp/seg (%) 59.7 58.3  
ph/frq (deg) 42.6 38.5  
amp/frq (%) 47.7 67.3

RMS Theor. Amplitude 0.149 +/- 0.025  
Search (2048X64) 0.101  
Interp. 0.000  
Inc. seg. avg. 0.152  
Inc. frq. avg. 0.143

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

I: az 70.2 el 72.7 pa -97.6 Z: az 306.6 el 25.4 pa 31.6 u,v (fr/asec) -6824.173 -7150.462 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192b/v2/1234/No0115/IZ\_130DUS Output file: /Exps/c192b/v2/1234/No0115/IZ.W.310.130DUS