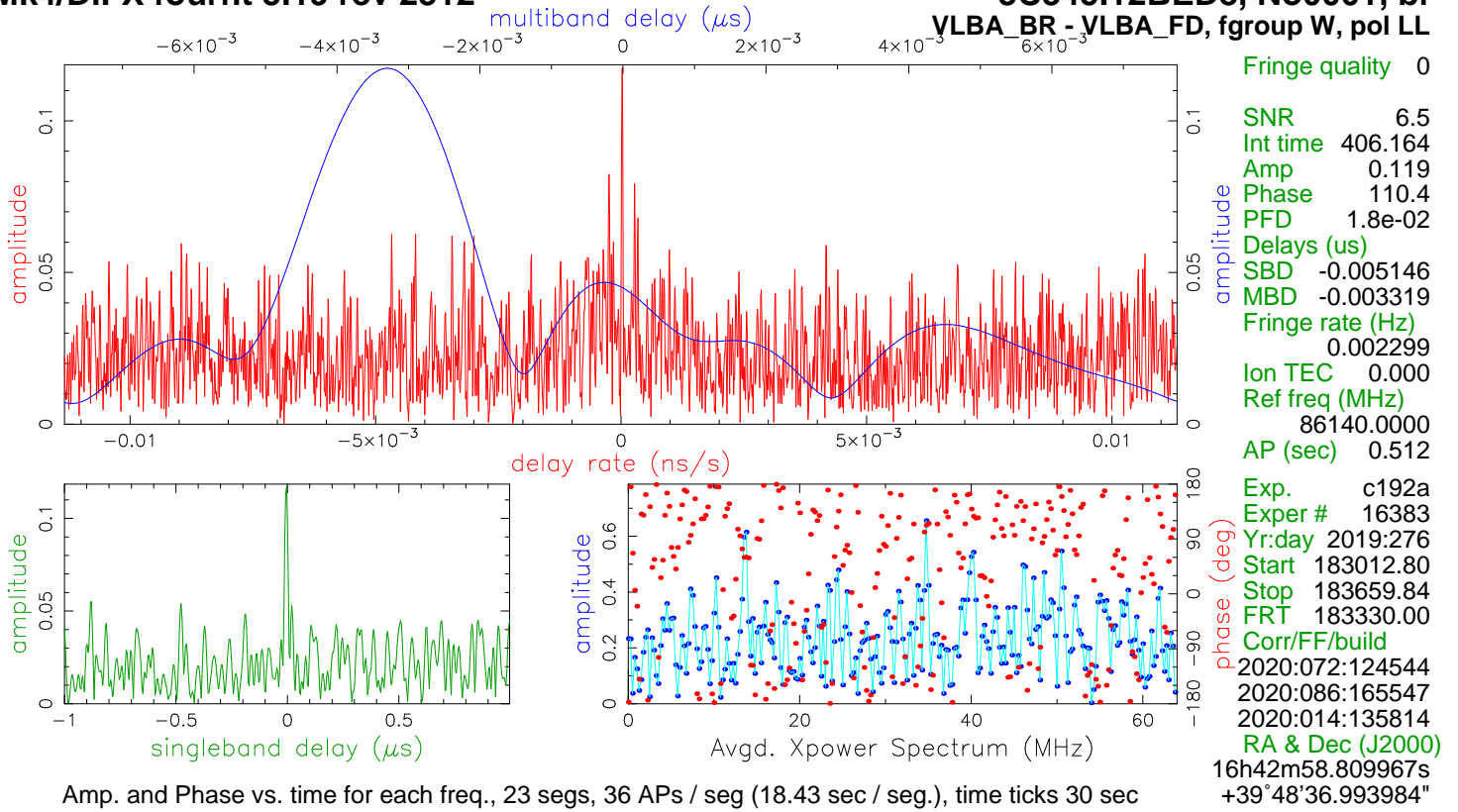


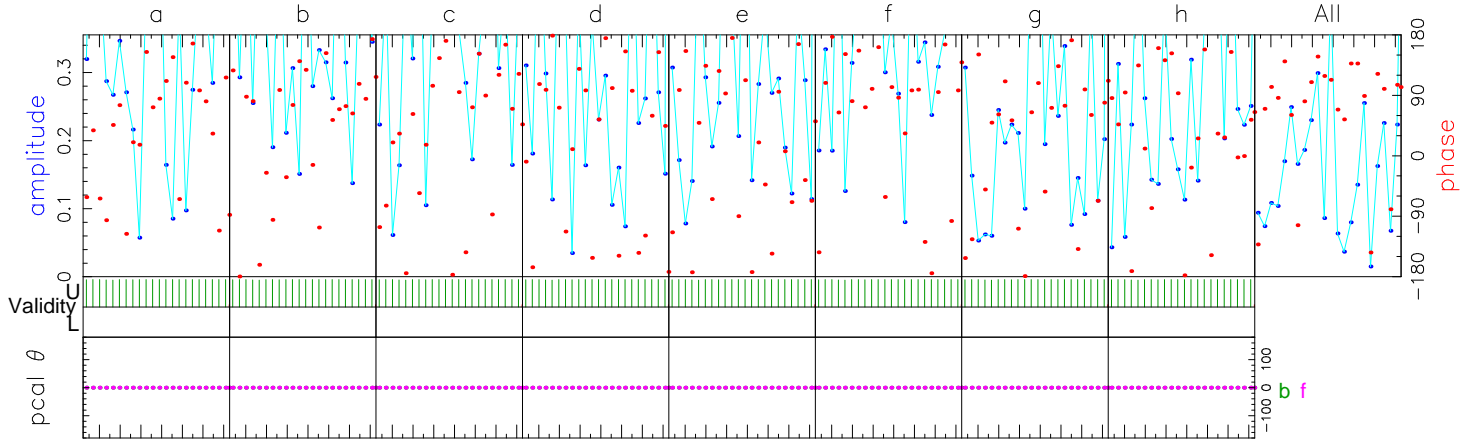
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, bf

VLBA_BR - VLBA_FD, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.8	105.6	149.9	120.8	113.3	118.6	92.7	102.4	Phase	110.4
	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	476.3	255.8	317.4	134.0	252.0	208.1	466.5	74.5	Sbd box	255.7
U/L	795/0	795/0	795/0	795/0	795/0	795/0	795/0	795/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-1.02685061015E+03	Apriori delay (usec)	-1.02684729122E+03	Resid mbdelay (usec)	-3.31892E-03	+/-	1.7E-04
Sband delay (usec)	-1.02685243722E+03	Apriori clock (usec)	-1.0674781E+00	Resid sbdelay (usec)	-5.14600E-03	+/-	1.3E-03
Phase delay (usec)	-1.02684728766E+03	Apriori clockrate (us/s)	-1.5144557E-07	Resid phdelay (usec)	3.56136E-06	+/-	5.7E-07
Delay rate (us/s)	-1.40198796278E-01	Apriori rate (us/s)	-1.40198822967E-01	Resid rate (us/s)	2.66892E-08	+/-	2.4E-09
Total phase (deg)	-129.4	Apriori accel (us/s/s)	2.24195151398E-05	Resid phase (deg)	110.4	+/-	17.5

	RMS	Theor.	Amplitude	0.119 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	64.0	42.1	Search (2048X32)	0.114	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	89.2	73.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	25.7	24.8	Inc. seg. avg.	0.125	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.1	43.3	Inc. frq. avg.	0.114	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

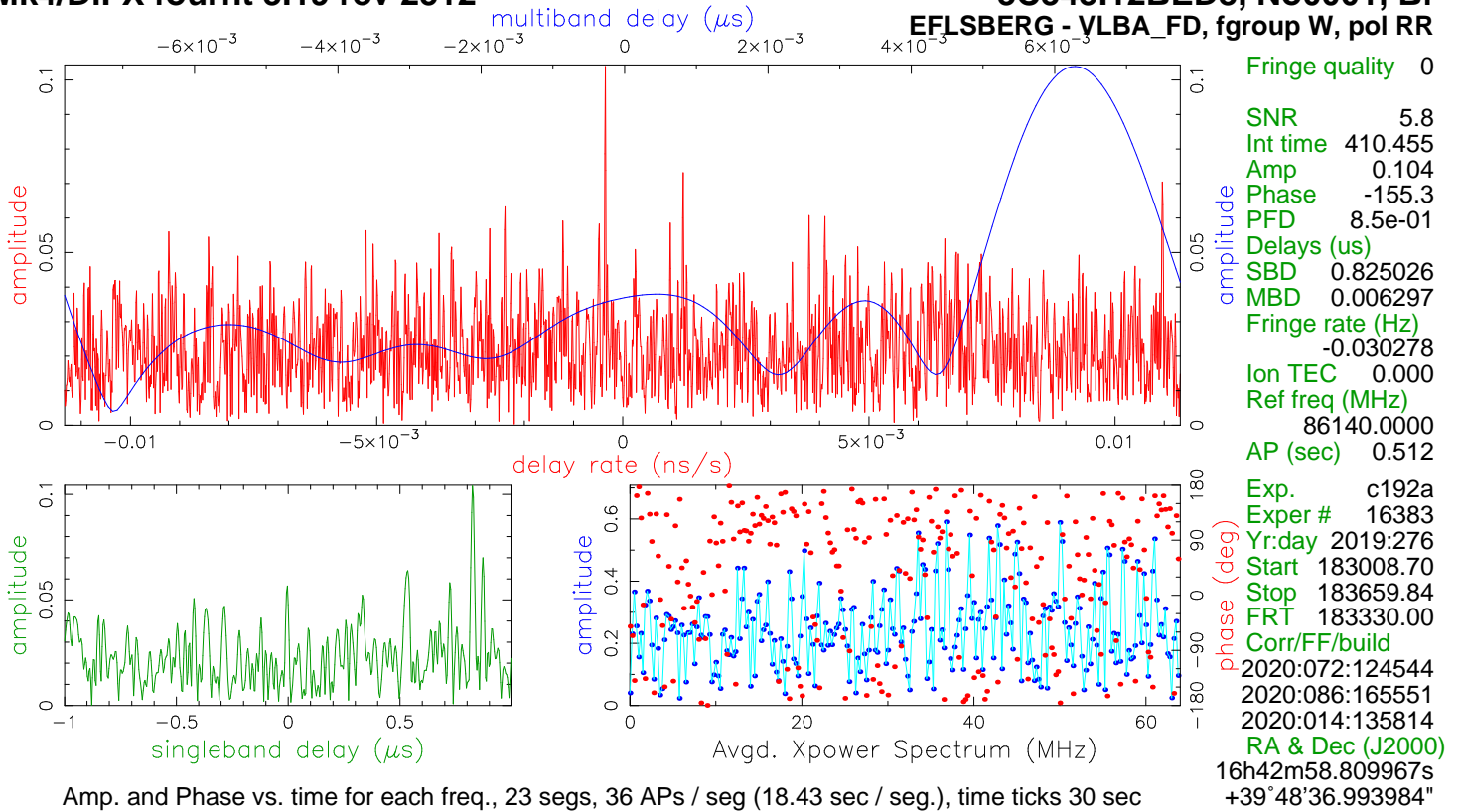
b: az 66.1 el 33.9 pa -52.6

f: az 61.0 el 37.1 pa -78.2

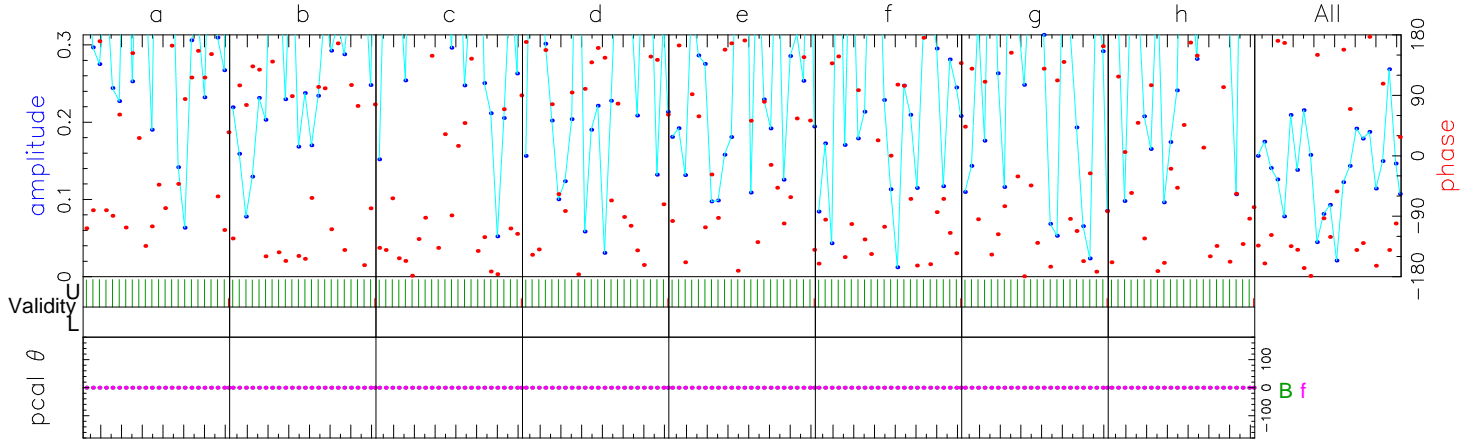
u,v (fr/asec) 1086.832 3053.430

simultaneous interpolator

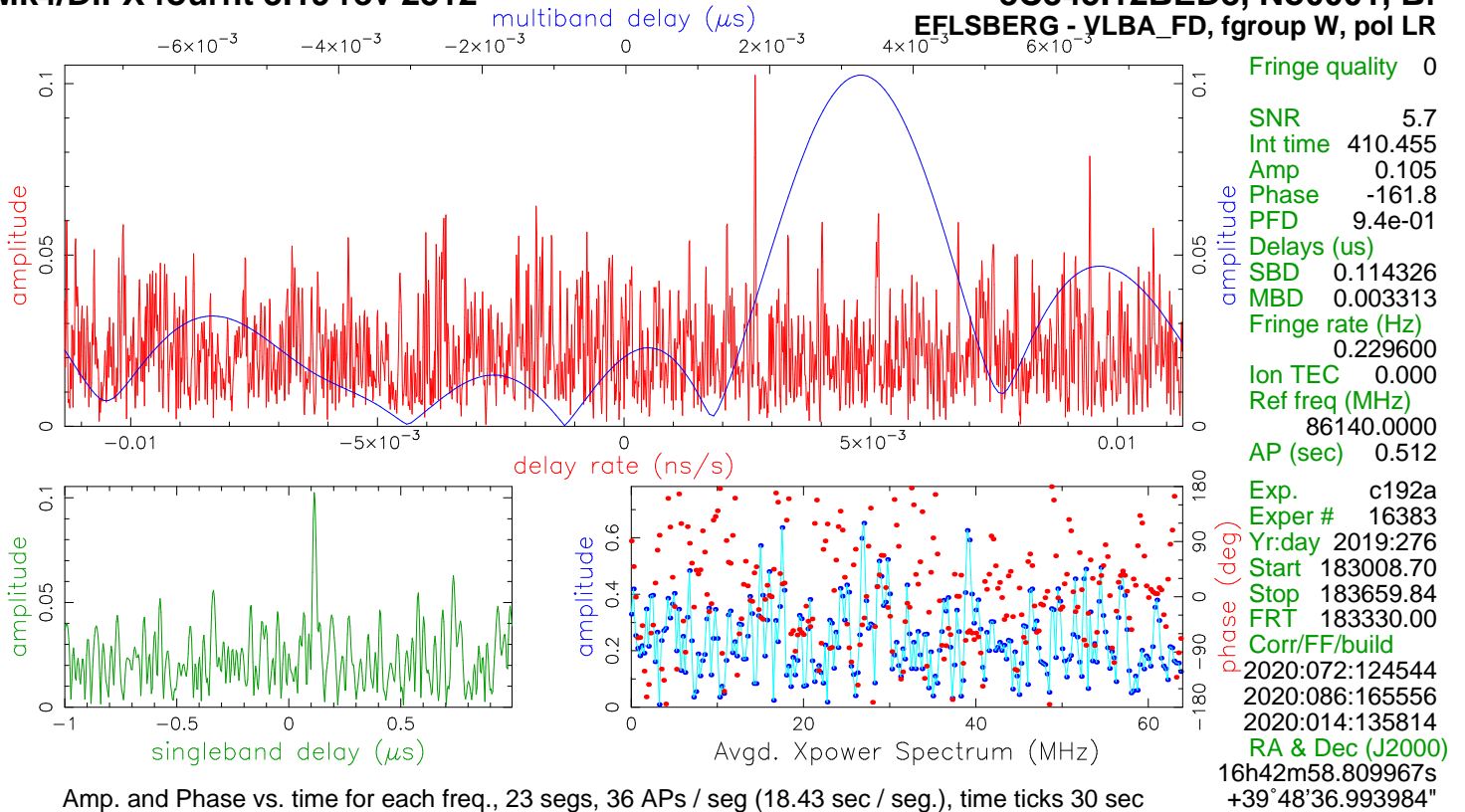
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/bf..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/bf.W.13.12BED8



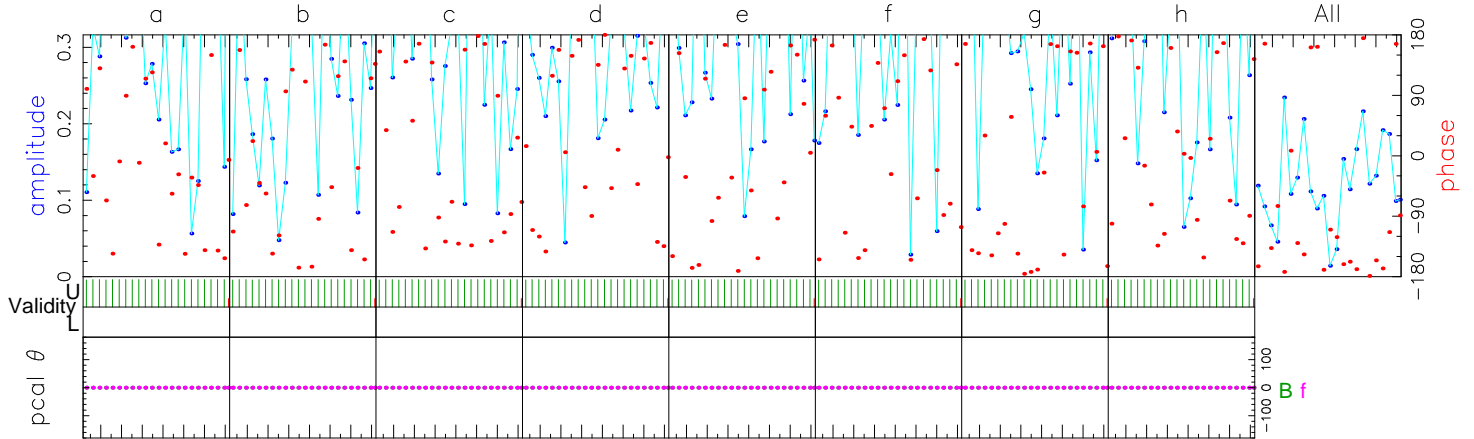
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-113.4	159.5	-141.7	-164.8	171.7	-140.7	-155.6	-152.6	Phase	-155.3
	0.1	0.1	0.2	0.1	0.0	0.1	0.1	0.1	Ampl.	0.1
	324.3	304.8	468.1	292.0	238.0	417.2	383.7	478.8	Sbd box	468.2
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	4.63817124657E+03		Apriori delay (usec)	4.63735244955E+03	Resid mbdelay (usec)	6.29703E-03	+/-	1.9E-04		
Sband delay (usec)	4.63817747555E+03		Apriori clock (usec)	1.6384283E+01	Resid sbdelay (usec)	8.25026E-01	+/-	1.5E-03		
Phase delay (usec)	4.63735244454E+03		Apriori clockrate (us/s)	-1.0905050E-07	Resid phdelay (usec)	-5.00856E-06	+/-	6.4E-07		
Delay rate (us/s)	-1.47663420616E+00		Apriori rate (us/s)	-1.47663385466E+00	Resid rate (us/s)	-3.51500E-07	+/-	2.7E-09		
Total phase (deg)	-153.8		Apriori accel (us/s/s)	-5.63668925130E-06	Resid phase (deg)	-155.3	+/-	19.8		
RMS	55.5	Theor.	Amplitude	0.104 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	64.7	47.5	Search (2048X32)	0.102	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	64.7	83.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	30.0	28.0	Inc. seg. avg.	0.106	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	39.2	48.9	Inc. frq. avg.	0.102	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00	
B: az 269.2 el 56.7 pa 55.8			f: az 61.0 el 37.1 pa -78.2		u,v (fr/asec) 10997.354 1283.837					simultaneous interpolator



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-118.8	173.4	-149.0	-152.2	-157.7	168.6	-170.4	-146.2	Phase	-161.8
	0.0	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	174.6	351.1	173.6	387.2	413.2	145.0	268.8	431.9	Sbd box	286.3
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	4.63746513752E+03	Apriori delay (usec)	4.63735244955E+03	Resid mbdelay (usec)	3.31297E-03	+/-	1.9E-04
Sband delay (usec)	4.63746677530E+03	Apriori clock (usec)	1.6384283E+01	Resid sbdelay (usec)	1.14326E-01	+/-	1.5E-03
Phase delay (usec)	4.63735244433E+03	Apriori clockrate (us/s)	-1.0905050E-07	Resid phdelay (usec)	-5.21871E-06	+/-	6.5E-07
Delay rate (us/s)	-1.47663118924E+00	Apriori rate (us/s)	-1.47663385466E+00	Resid rate (us/s)	2.66543E-06	+/-	2.7E-09
Total phase (deg)	-160.4	Apriori accel (us/s/s)	-5.63668925130E-06	Resid phase (deg)	-161.8	+/-	20.1

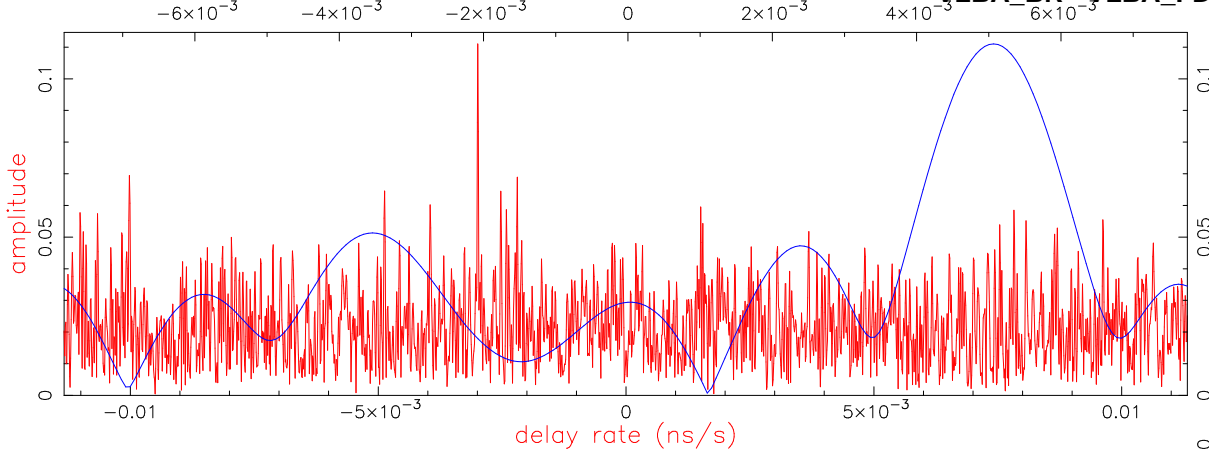
	RMS	Theor.	Amplitude	0.105 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	48.4	48.1	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	58.8	84.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	25.6	28.4	Inc. seg. avg.	0.094	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	38.8	49.5	Inc. frq. avg.	0.098	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 269.2 el 56.7 pa 55.8 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 10997.354 1283.837 simultaneous interpolator

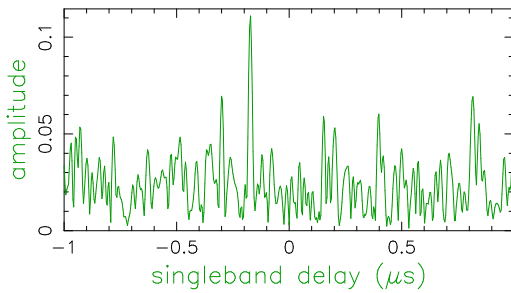
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/Bf..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/Bf.W.51.12BED8

multiband delay (μ s)

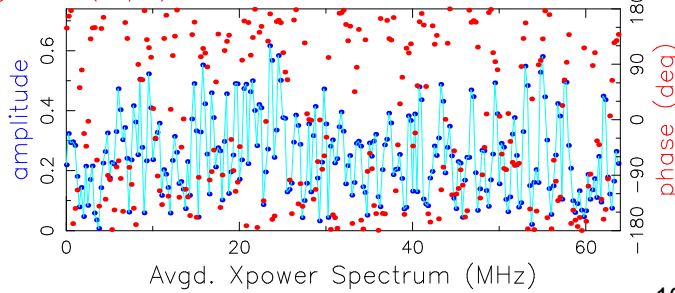
Fringe quality 0



SNR 6.1
Int time 406.164
Amp 0.115
Phase -68.1
PFD 2.0e-01
Delays (us)
SBD -0.172656
MBD 0.005045
Fringe rate (Hz)
-0.258303
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

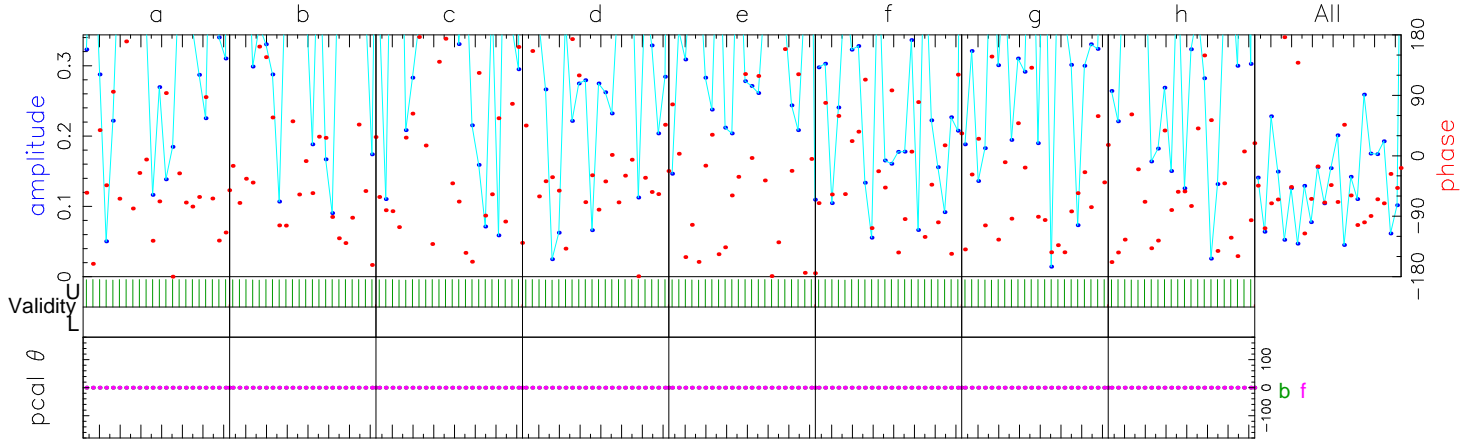


delay rate (ns/s)



Exp. c192a
Yr:day 16383
Exp# 2019:276
Start 183012.80
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165557
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-71.0	-52.5	-105.6	-41.3	-106.1	-27.1	-76.2	-67.9	Phase	-68.1
b	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
f	55.9	276.1	362.6	199.7	101.3	240.2	425.3	295.3	Sbd box	212.8
b:f	795/0	795/0	795/0	795/0	795/0	795/0	795/0	795/0	APs used	
b:f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

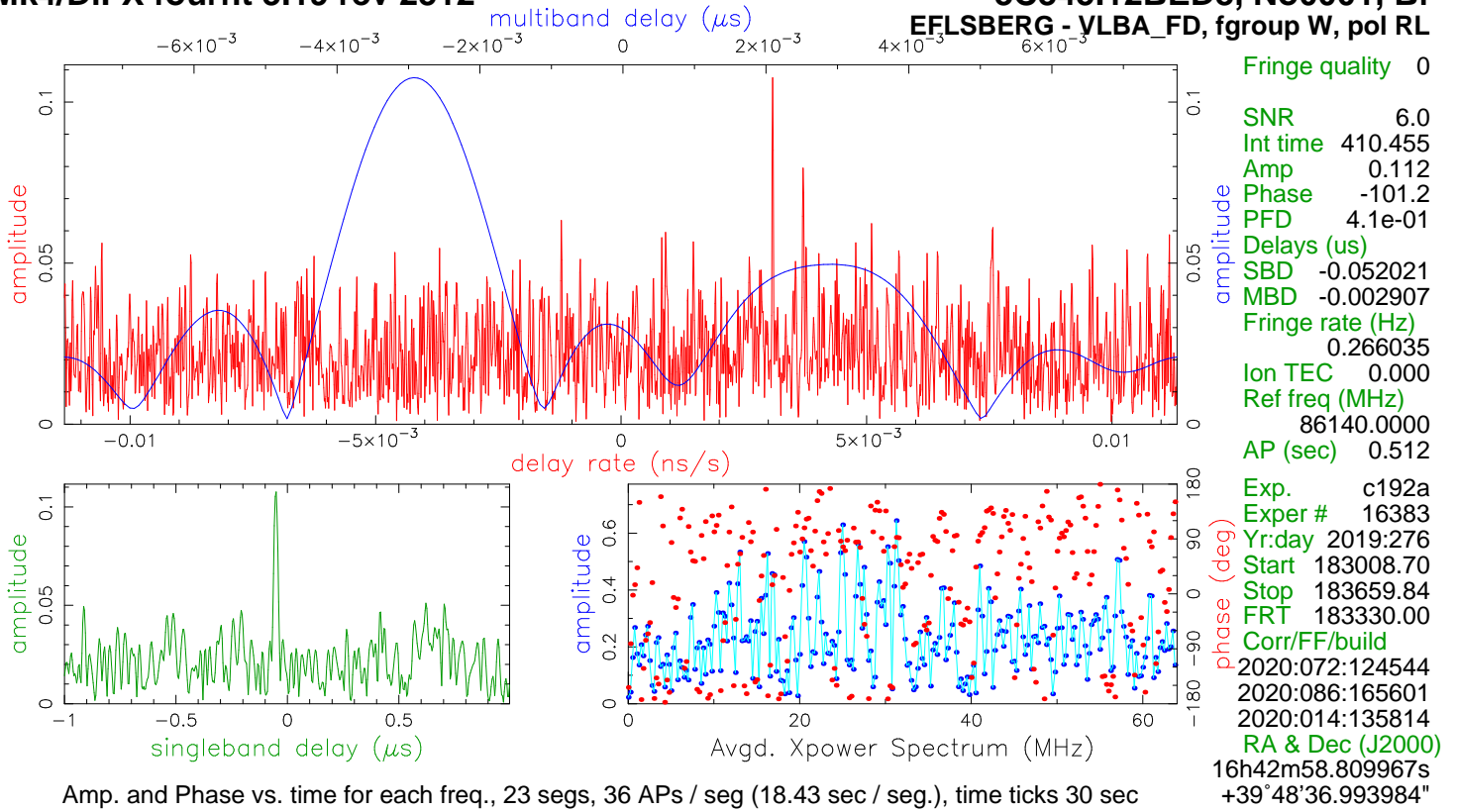
Group delay (usec)(sbd)	-1.02701412168E+03	Apriori delay (usec)	-1.02684729122E+03	Resid mbdelay (usec)	5.04455E-03	+/-	1.8E-04
Sband delay (usec)	-1.02701994697E+03	Apriori clock (usec)	-1.0674781E+00	Resid sbdelay (usec)	-1.72656E-01	+/-	1.4E-03
Phase delay (usec)	-1.02684729342E+03	Apriori clockrate (us/s)	-1.5144557E-07	Resid phdelay (usec)	-2.19546E-06	+/-	6.0E-07
Delay rate (us/s)	-1.40201821614E-01	Apriori rate (us/s)	-1.40198822967E-01	Resid rate (us/s)	-2.99865E-06	+/-	2.6E-09
Total phase (deg)	-307.9	Apriori accel (us/s/s)	2.24195151398E-05	Resid phase (deg)	-68.1	+/-	18.7

	RMS	Theor.	Amplitude	0.115 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	53.4	44.8	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	60.4	78.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	30.4	26.4	Inc. seg. avg.	0.105	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.9	46.1	Inc. frq. avg.	0.113	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

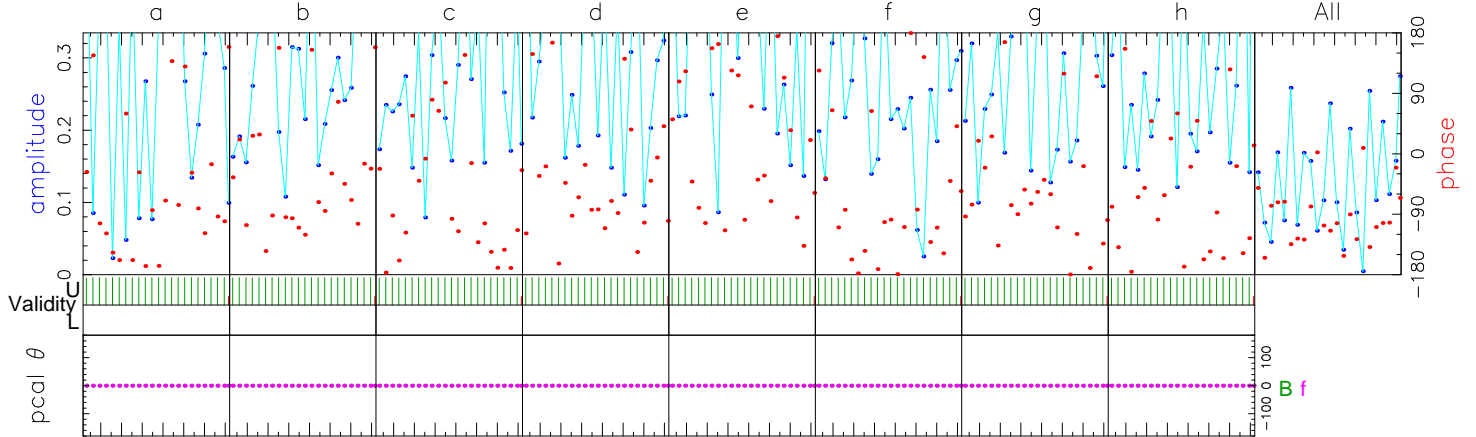
b: az 66.1 el 33.9 pa -52.6 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 1086.832 3053.430 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/bf..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/bf.W.58.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, Bf
EFLSBERG - VLBA_FD, fgroup W, pol RL

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-107.0	-75.0	-143.1	-83.7	-56.1	-133.4	-84.4	-112.1	Phase	-101.2
	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
	406.8	275.8	396.8	328.0	456.6	195.9	219.3	286.5	Sbd box	243.7
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	4.63730266803E+03					4.63735244955E+03			Resid mbdelay (usec)	-2.90651E-03 +/- 1.8E-04
Sband delay (usec)	4.63730042855E+03					1.6384283E+01			Resid sbdelay (usec)	-5.20210E-02 +/- 1.4E-03
Phase delay (usec)	4.63735244628E+03					-1.0905050E-07			Resid phdelay (usec)	-3.26492E-06 +/- 6.2E-07
Delay rate (us/s)	-1.47663076626E+00					-1.47663385466E+00			Resid rate (us/s)	3.08840E-06 +/- 2.6E-09
Total phase (deg)	-99.8					-5.63668925130E-06			Resid phase (deg)	-101.2 +/- 19.1

RMS Theor. Amplitude 0.112 +/- 0.019

ph/seg (deg) 45.1 45.8 Search (2048X32) 0.106

amp/seg (%) 70.3 80.0 Interp. 0.000

ph/frq (deg) 32.3 27.0 Inc. seg. avg. 0.102

amp/frq (%) 23.6 47.2 Inc. frq. avg. 0.111

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

PCal rate: 0.000E+00, 0.000E+00 (us/s)

Bits/sample: 2x2 SampCntNorm: enabled

Sample rate(MSamp/s): 128

Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite

sb window (us) -1.000 1.000

mb window (us) -0.008 0.008

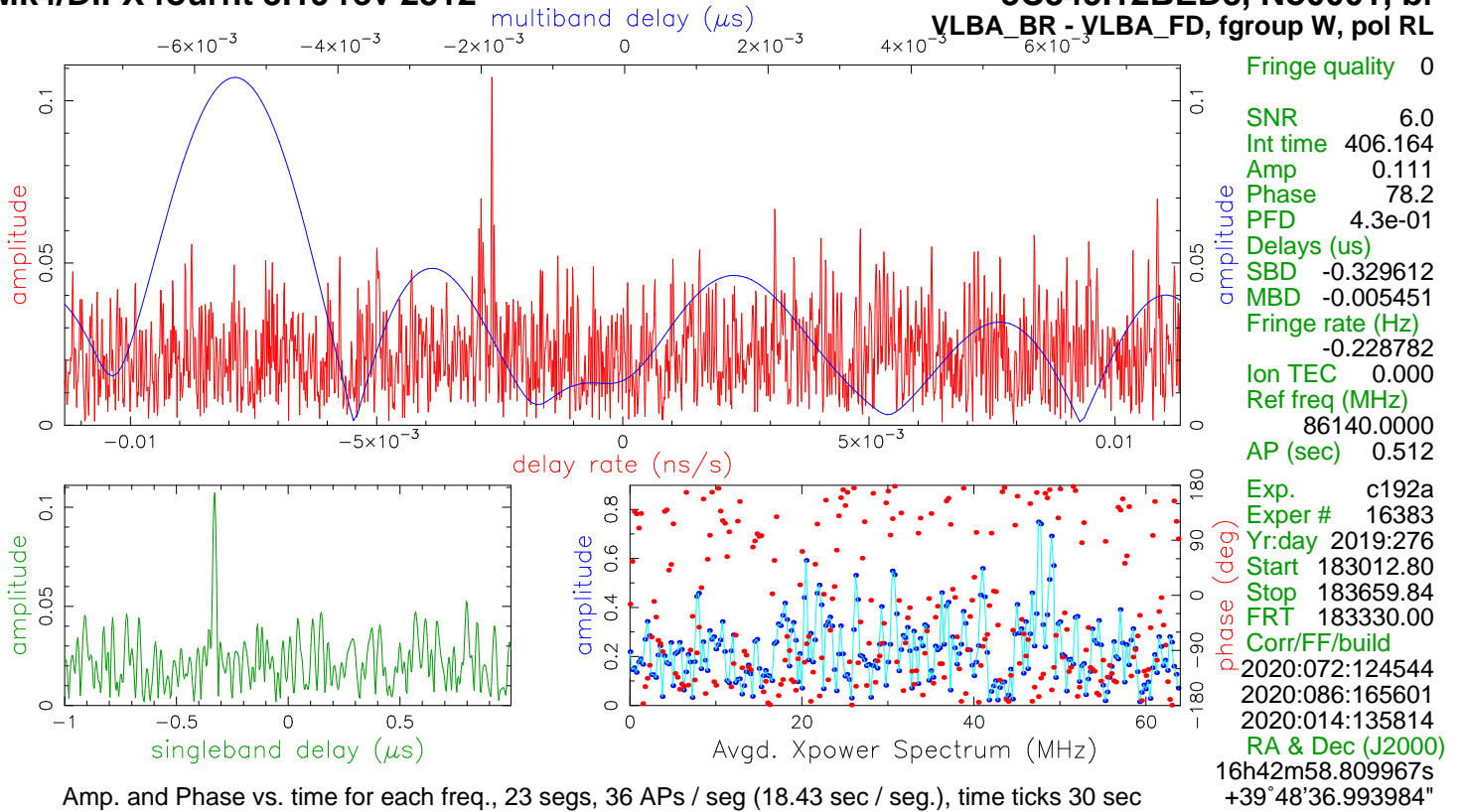
dr window (ns/s) -0.011 0.011

ion window (TEC) 0.00 0.00

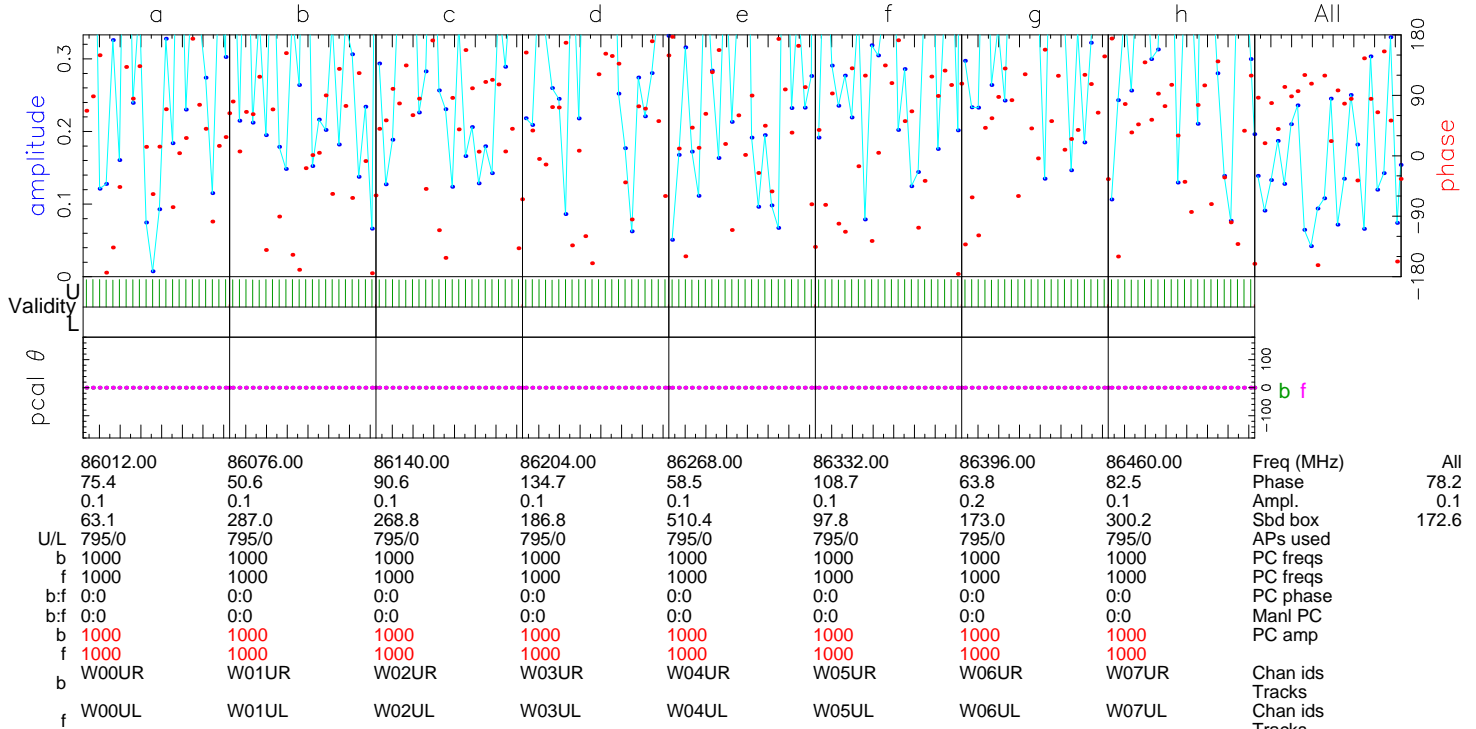
B: az 269.2 el 56.7 pa 55.8 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 10997.354 1283.837 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/Bf.12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/Bf.W.73.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

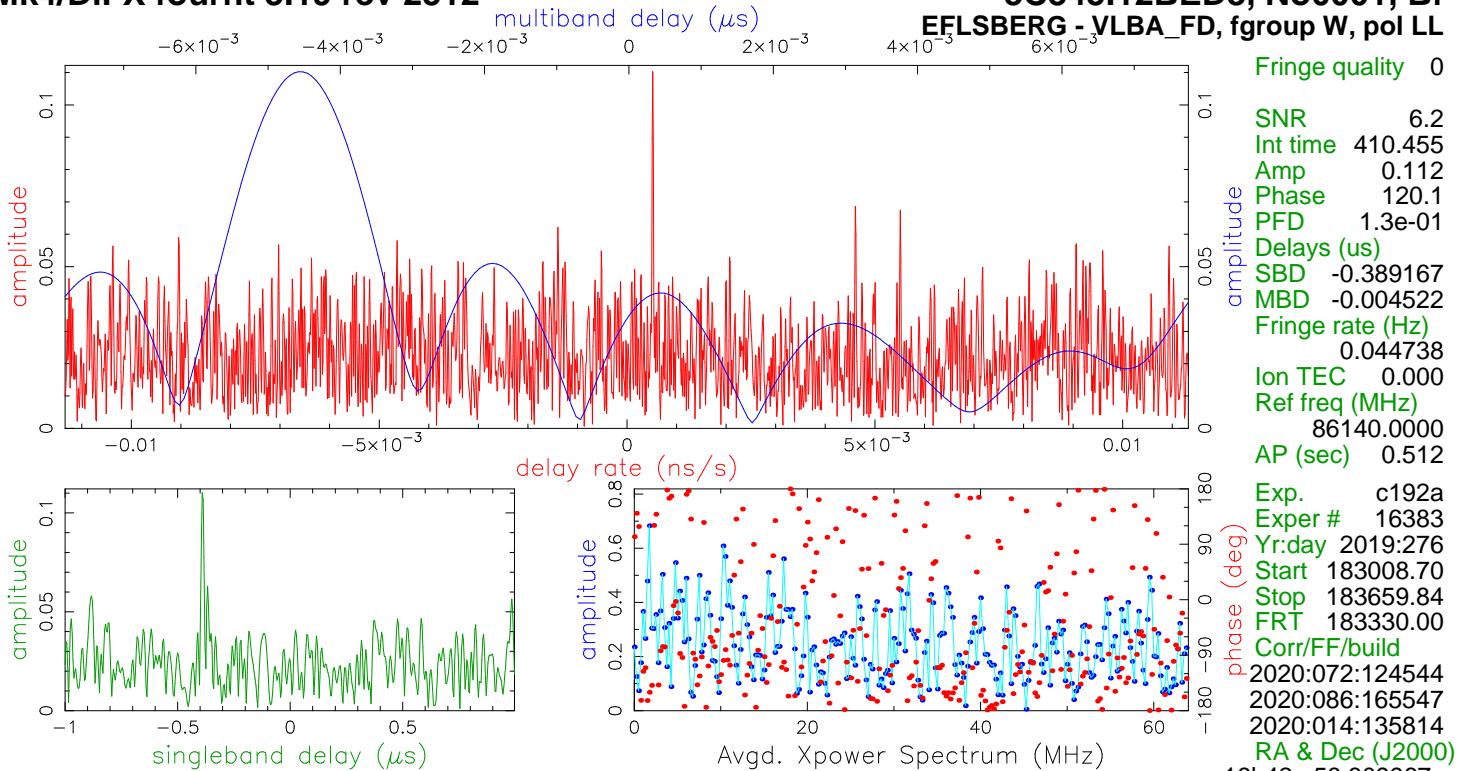
3C345.12BED8, No0001, bf
VLBA_BR - VLBA_FD, fgroup W, pol RL

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

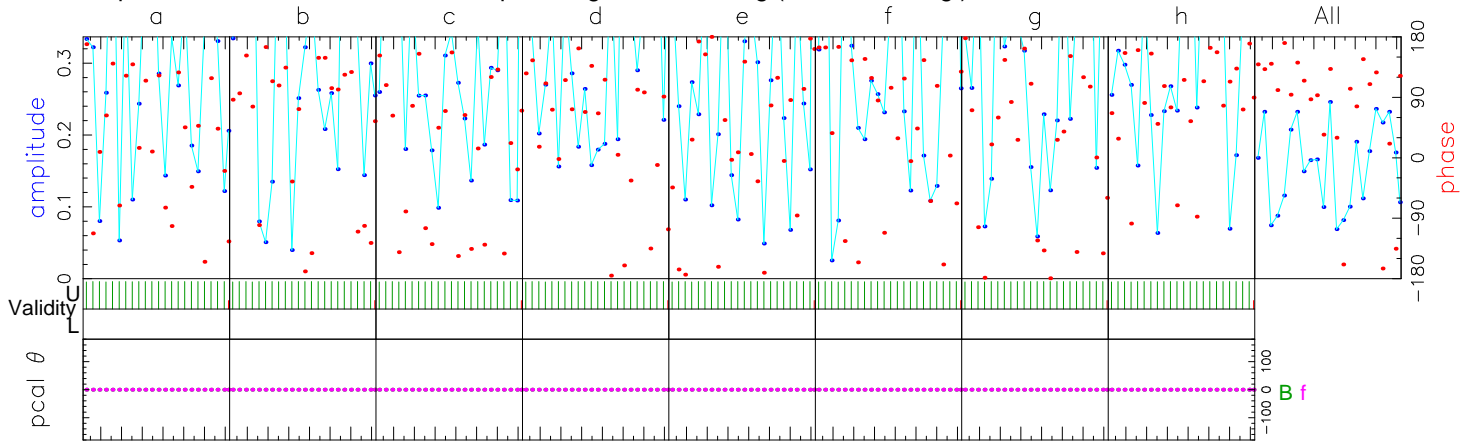


Group delay (usec)(sbd)	-1.02718086687E+03	Apriori delay (usec)	-1.02684729122E+03	Resid mbdelay (usec)	-5.45064E-03	+/-	1.8E-04	
Sband delay (usec)	-1.02717690372E+03	Apriori clock (usec)	-1.0674781E+00	Resid sbdelay (usec)	-3.29612E-01	+/-	1.4E-03	
Phase delay (usec)	-1.02684728870E+03	Apriori clockrate (us/s)	-1.5144557E-07	Resid phdelay (usec)	2.52149E-06	+/-	6.2E-07	
Delay rate (us/s)	-1.40201478894E-01	Apriori rate (us/s)	-1.40198822967E-01	Resid rate (us/s)	-2.65593E-06	+/-	2.6E-09	
Total phase (deg)	-161.6	Apriori accel (us/s/s)	2.24195151398E-05	Resid phase (deg)	78.2	+/-	19.2	
RMS	56.0	Theor.	45.9	Amplitude	0.111 +/- 0.019			
ph/seg (deg)	56.0	Search (2048X32)	0.106	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	83.0	Interp.	0.000	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	30.7	Inc. seg. avg.	0.118	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	32.8	Inc. frq. avg.	0.106	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011	
				Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
b: az 66.1 el 33.9 pa -52.6		f: az 61.0 el 37.1 pa -78.2		u,v (fr/asec)	1086.832 3053.430		simultaneous interpolator	
Control file: cf_1234_gmva		Input file: /Exps/c192a/v1_PV/1234/No0001/bf..12BED8		Output file: /Exps/c192a/v1_PV/1234/No0001/bf.W.75.12BED8				

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, Bf
EFLSBERG - VLBA_FD, fgroup W, pol LL

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



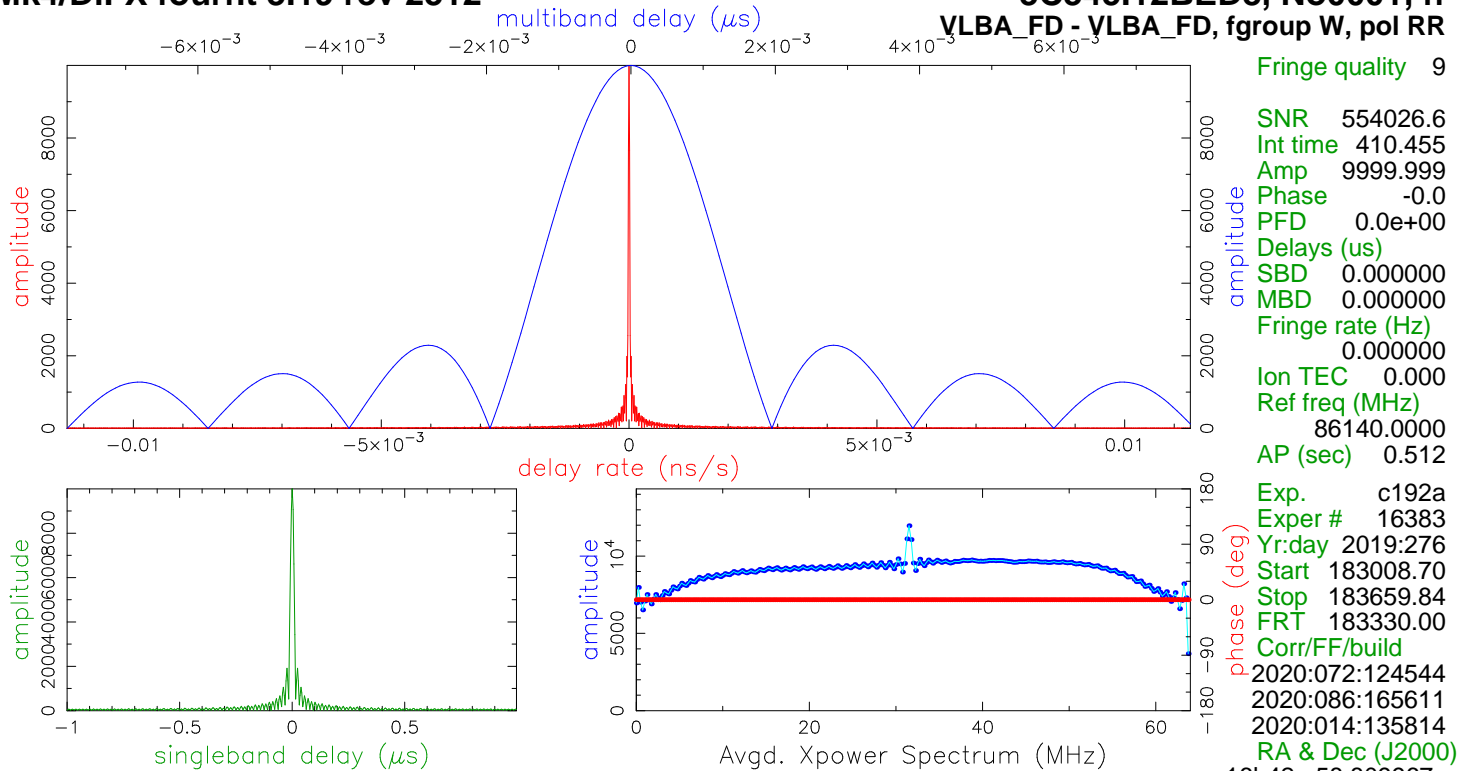
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
102.9	130.6	133.1	112.6	105.8	137.9	118.4	114.6	114.6	Phase	120.1
0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
45.4	157.8	446.8	208.7	199.9	20.3	360.3	157.4	157.4	Sbd box	157.4
U/L 803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
B 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:f 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:f 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	PC amp	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	4.63695730222E+03	Apriori delay (usec)	4.63735244955E+03	Resid mbdelay (usec)	-4.52233E-03	+/-	1.7E-04
Sband delay (usec)	4.63696328230E+03	Apriori clock (usec)	1.6384283E+01	Resid sbdelay (usec)	-3.89167E-01	+/-	1.4E-03
Phase delay (usec)	4.63735245342E+03	Apriori clockrate (us/s)	-1.0905050E-07	Resid phdelay (usec)	3.87231E-06	+/-	5.9E-07
Delay rate (us/s)	-1.47663333529E+00	Apriori rate (us/s)	-1.47663385466E+00	Resid rate (us/s)	5.19367E-07	+/-	2.5E-09
Total phase (deg)	121.6	Apriori accel (us/s/s)	-5.63668925130E-06	Resid phase (deg)	120.1	+/-	18.4

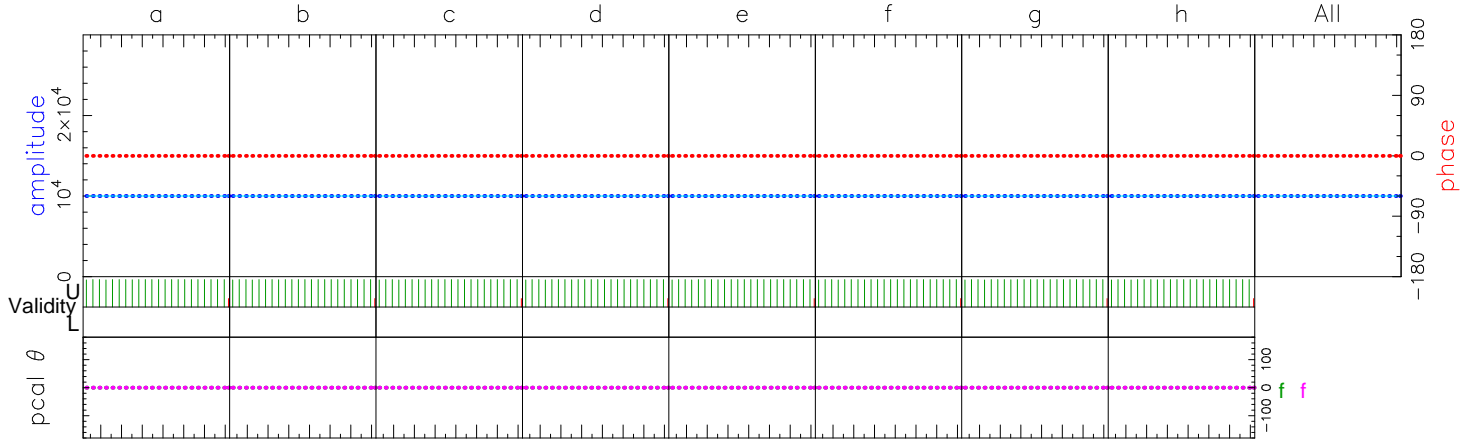
	RMS	Theor.	Amplitude	0.112 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	51.3	44.2	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	67.2	77.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	14.1	26.1	Inc. seg. avg.	0.123	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	46.2	45.5	Inc. frq. avg.	0.102	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 269.2 el 56.7 pa 55.8 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 10997.354 1283.837 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/Bf..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/Bf.W.8.12BED8



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-0.0	-0.0	-0.0	0.0	-0.0	-0.0	-0.0	0.0	Phase	-0.0
f	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
f:f	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	Sbd box	257.0
f:f	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.6E-08
Phase delay (usec)	-8.9518835583E-20	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-8.95188E-20	+/-	6.7E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	2.8E-14
Total phase (deg)	-0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	-0.0	+/-	0.0

	RMS	Theor.	Amplitude	9999.999 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X32)	9999.999	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	0.0	0.0	Inc. frq. avg.	9999.999	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2

f: az 61.0 el 37.1 pa -78.2

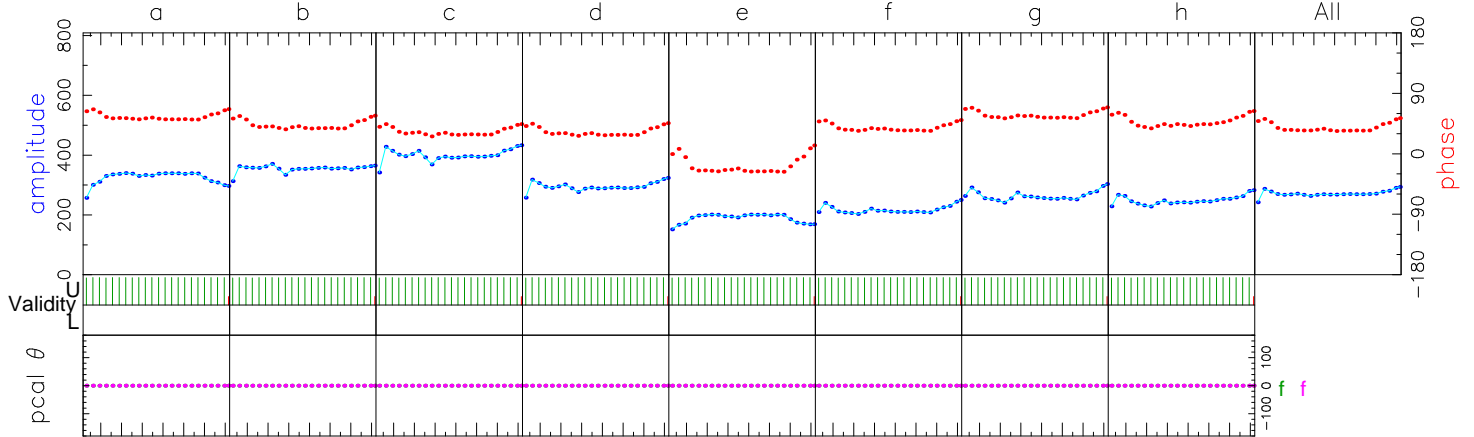
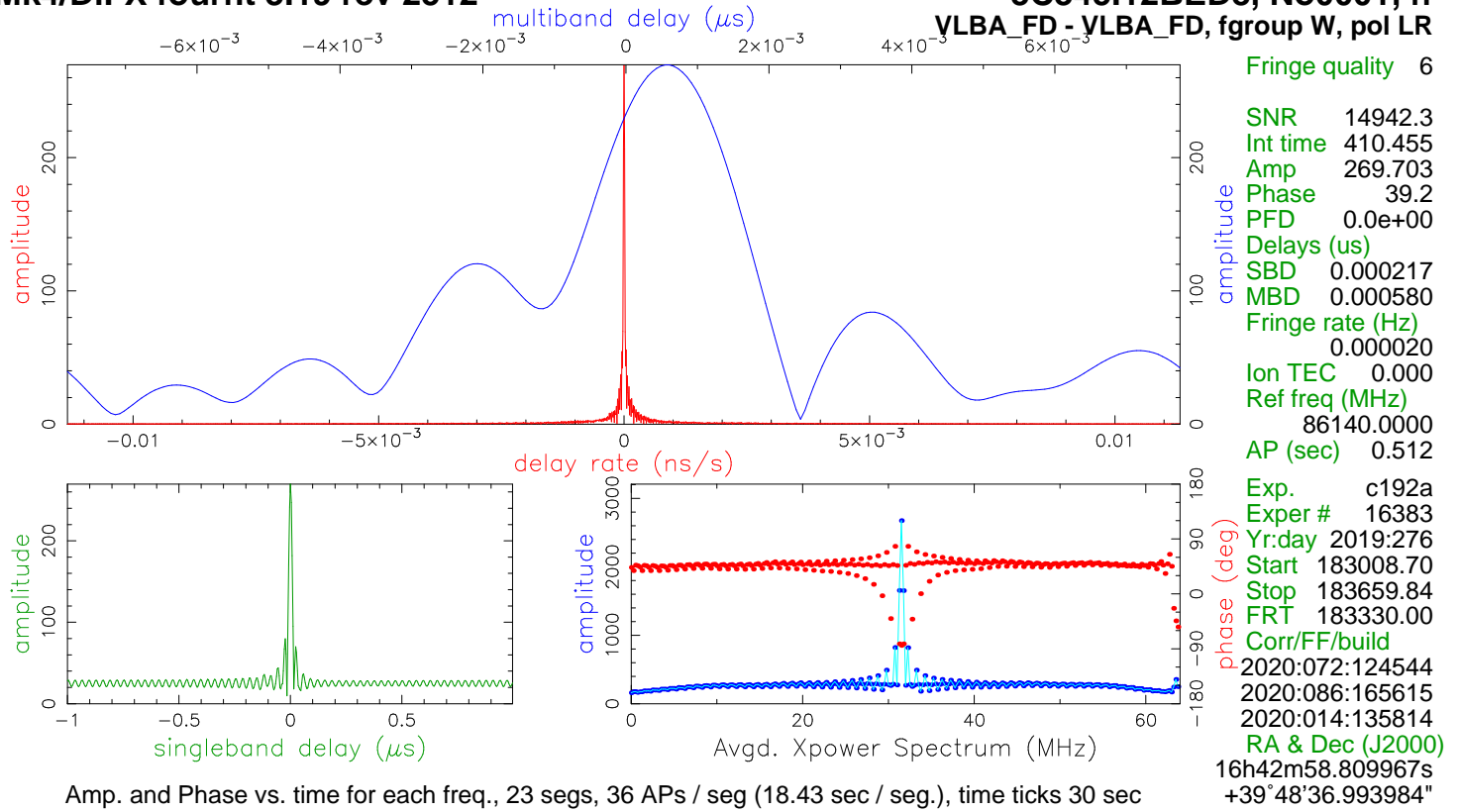
u,v (fr/asec) 0.000 0.000

simultaneous interpolator

Control file: cf_1234_gmva

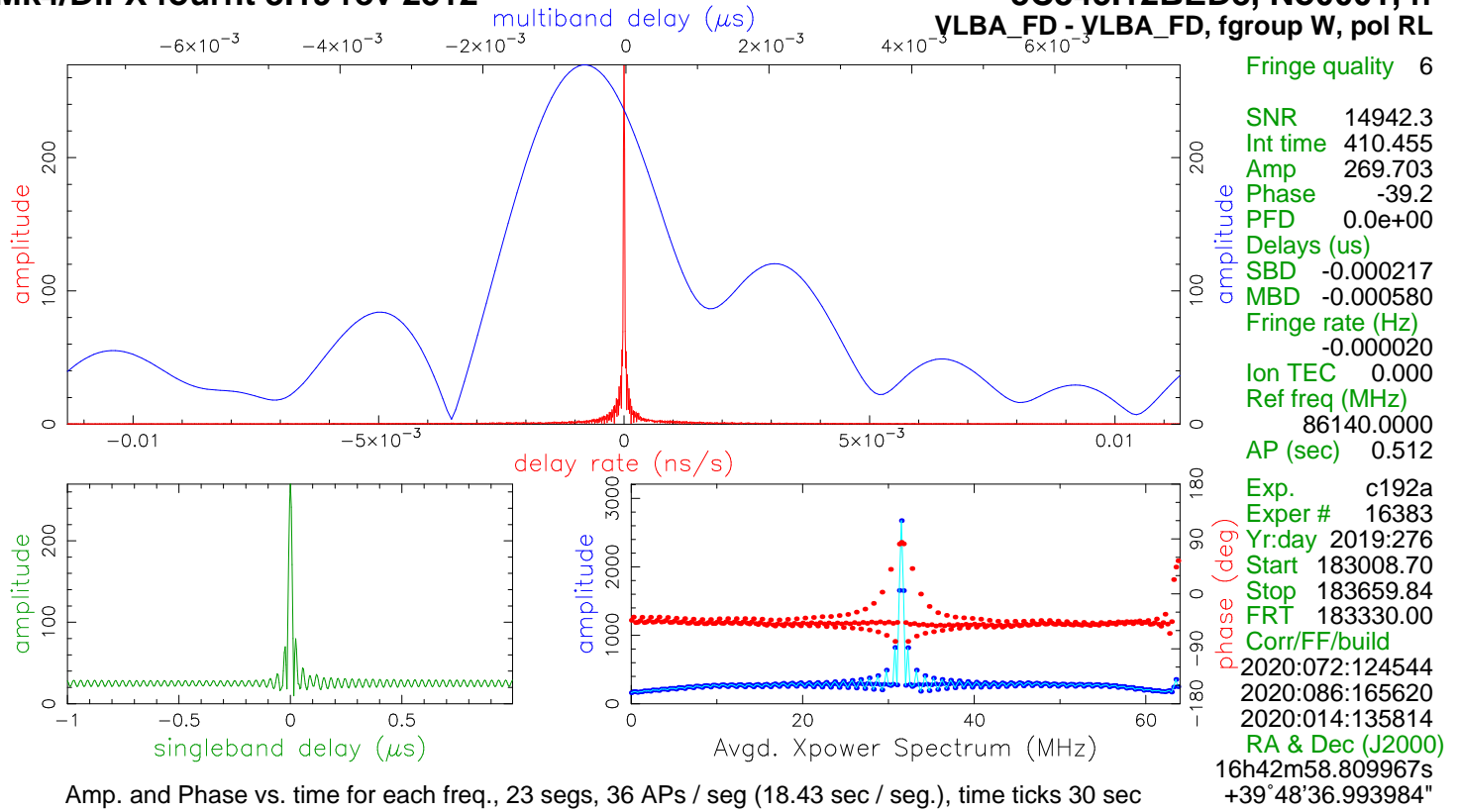
Input file: /Exps/c192a/v1_PV/1234/No0001/ff..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/ff.W.112.12BED8

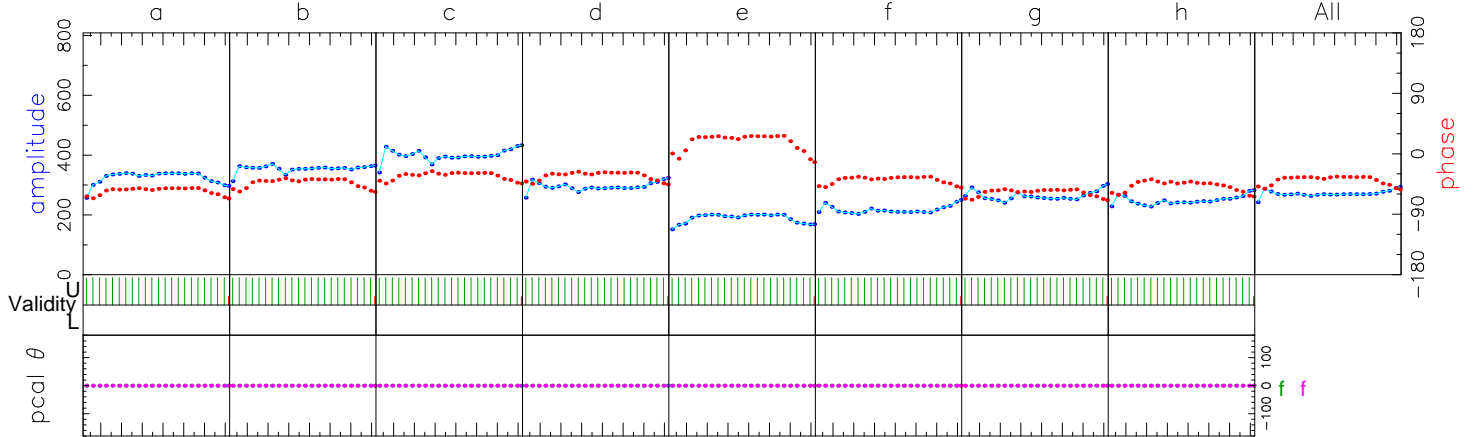


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	PC freqs	284.7
f	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	257.1
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.79812500000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	5.79813E-04	+/-	7.3E-08	
Sband delay (usec)	2.16500000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.16500E-04	+/-	5.8E-07	
Phase delay (usec)	1.26468381352E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	1.26468E-06	+/-	2.5E-10	
Delay rate (us/s)	2.33824014463E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	2.33824E-10	+/-	1.0E-12	
Total phase (deg)	39.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	39.2	+/-	0.0	
ph/seg (deg)	6.2	RMS	Theor.	Amplitude	269.703 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	3.5	0.0	Search (2048X32)	268.688	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	26.2	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	25.4	0.0	Inc. seg. avg.	271.220	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
			Inc. frq. avg.	284.717	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00
f: az 61.0 el 37.1 pa -78.2		f: az 61.0 el 37.1 pa -78.2		u,v (fr/asec) 0.000 0.000		simultaneous interpolator		
Control file: cf_1234_gmva		Input file: /Exps/c192a/v1_PV/1234/No0001/ff..12BED8		Output file: /Exps/c192a/v1_PV/1234/No0001/ff.W.128.12BED8				



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-55.0	-42.9	-33.0	-32.8	18.6	-39.1	-58.1	-48.0	Phase	-39.2
	324.2	352.8	397.7	293.2	185.4	215.8	262.5	246.2	Ampl.	284.7
	257.2	256.9	257.1	256.8	262.4	256.7	257.1	257.4	Sbd box	256.9
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-5.79812500000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-5.79813E-04	+/-	7.3E-08
Sband delay (usec)	-2.16500000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.16500E-04	+/-	5.8E-07
Phase delay (usec)	-1.26468381370E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.26468E-06	+/-	2.5E-10
Delay rate (us/s)	-2.33824014463E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-2.33824E-10	+/-	1.0E-12
Total phase (deg)	-39.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-39.2	+/-	0.0

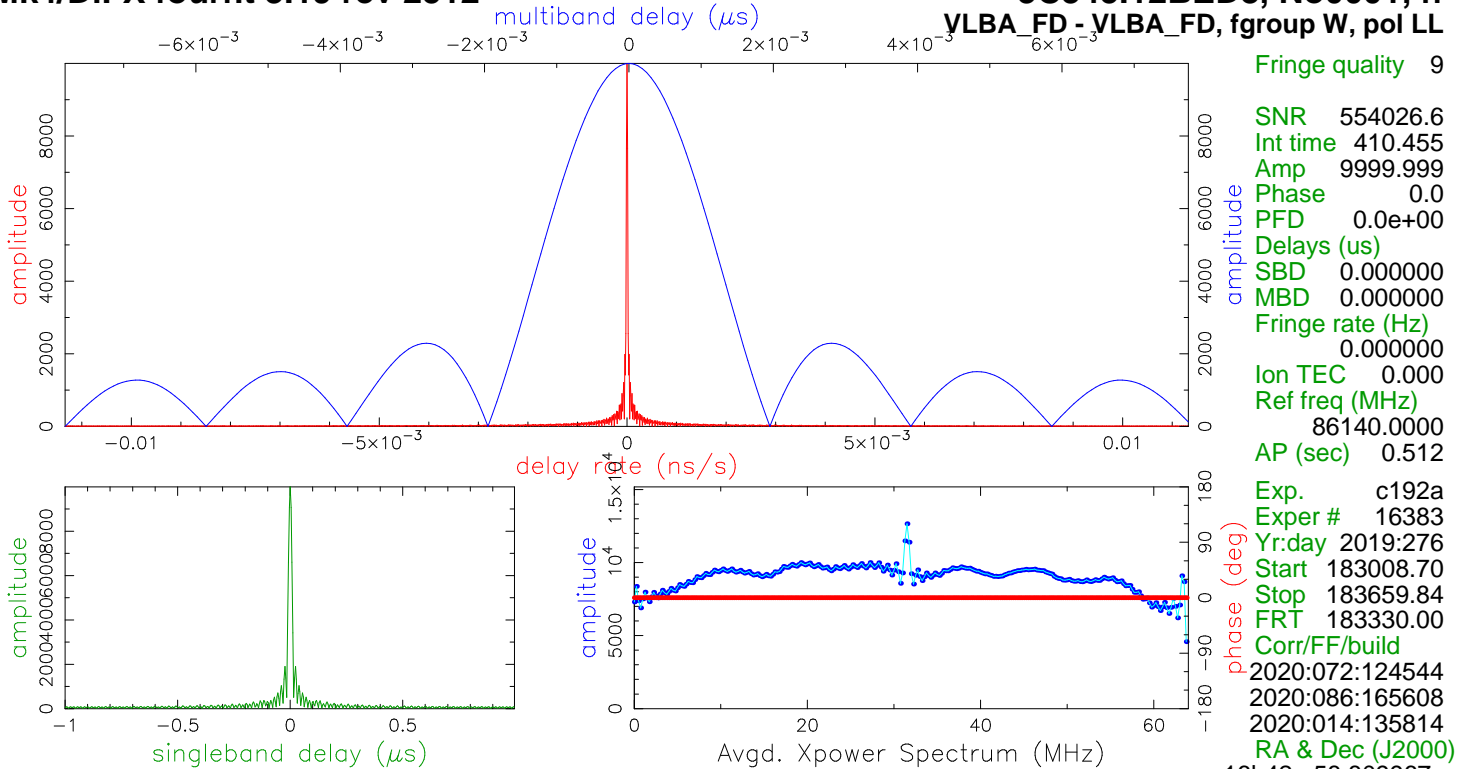
	RMS	Theor.	Amplitude	269.703 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	6.2	0.0	Search (2048X32)	268.688	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	3.5	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	26.2	0.0	Inc. seg. avg.	271.220	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	25.4	0.0	Inc. frq. avg.	284.717	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

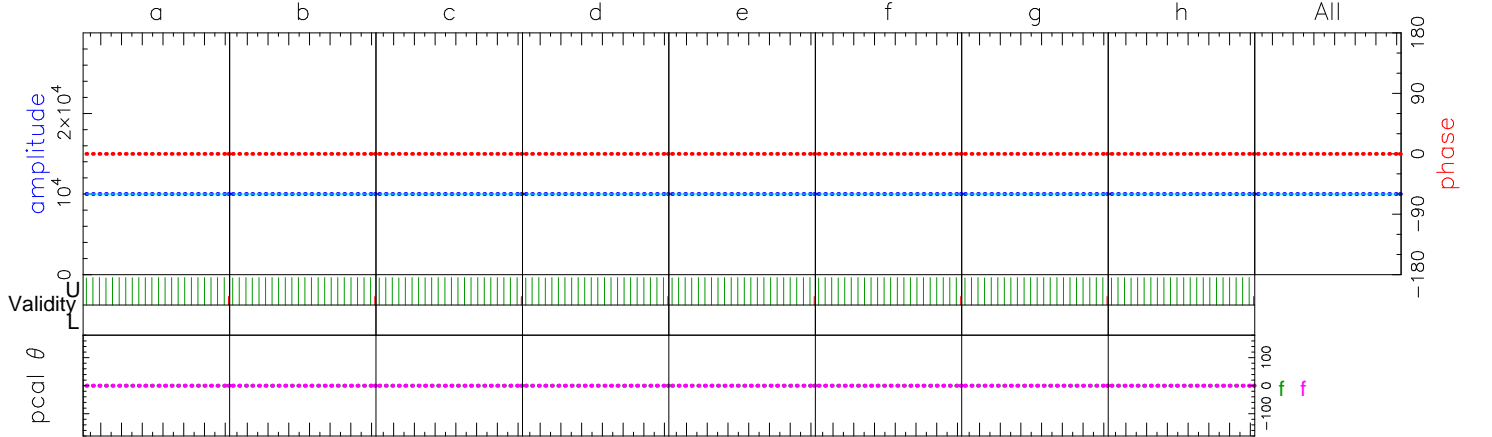
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/ff..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/ff.W.150.12BED8

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3C345.12BED8, No0001, ff
VLBA_FD - VLBA_FD, fgroup W, pol LL

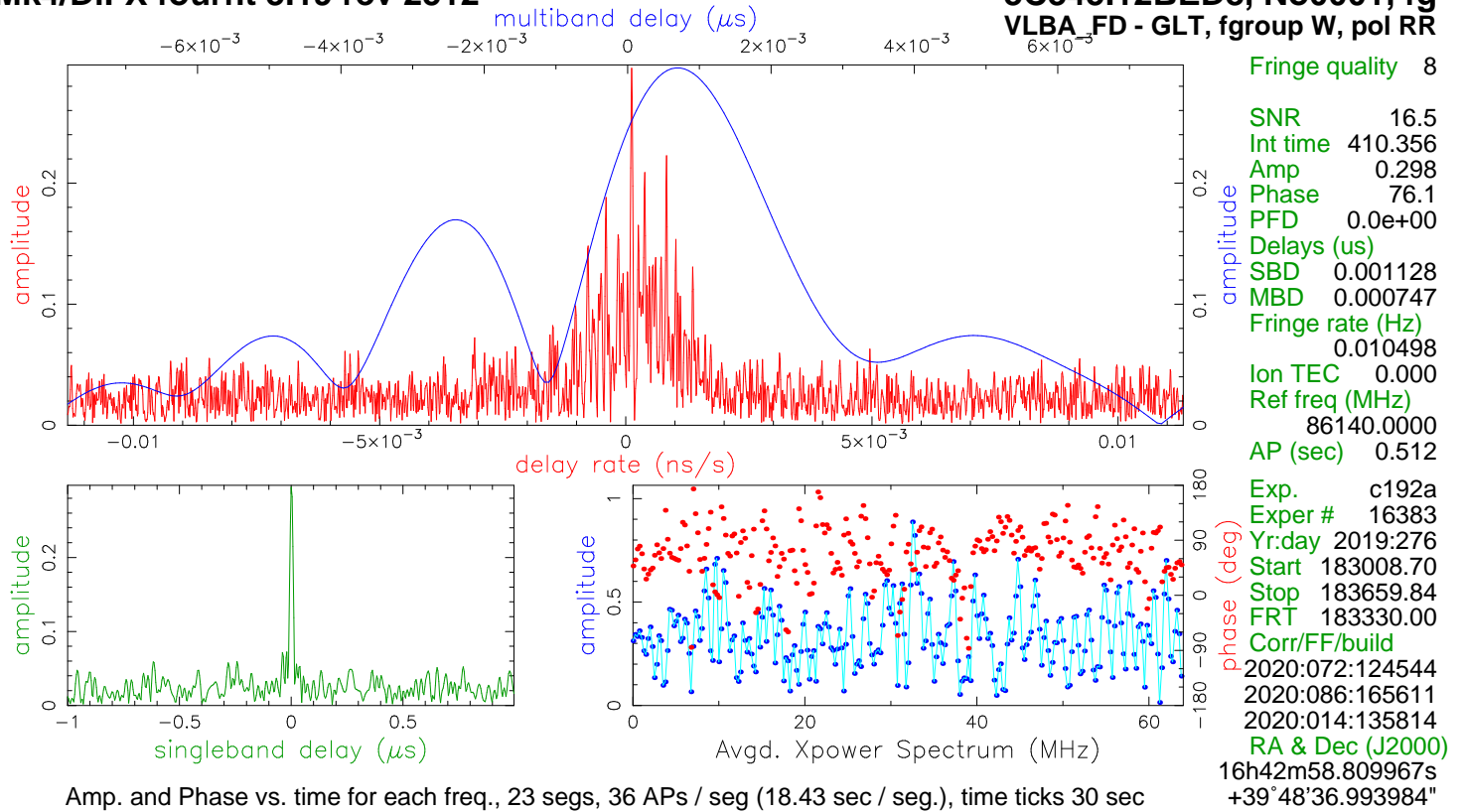


Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-0.0	0.0	-0.0	-0.0	0.0	-0.0	0.0	0.0	Phase	0.0
f	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
f:f	257.0	257.0	257.0	257.0	257.0	257.0	257.0	257.0	Sbd box	257.0
f:f	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	+/-	2.0E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	+/-	1.6E-08
Phase delay (usec)	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	1.75514760929E-20	+/-	6.7E-12
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	+/-	2.8E-14
Total phase (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	+/-	0.0
Apriori delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori clock (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori clockrate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Apriori accel (us/s/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Resid mbdelay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Resid sbdelay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Resid phdelay (usec)	1.75515E-20	1.75515E-20	1.75515E-20	1.75515E-20	1.75515E-20	1.75515E-20	1.75515E-20	1.75515E-20		
Resid rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Resid phase (deg)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Search (2048X32) 10000.000 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) -0.008 0.008
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
f: az 61.0 el 37.1 pa -78.2 f: az 61.0 el 37.1 pa -78.2 u,v (fr/asec) 0.000 0.000 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/ff..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/ff.W.95.12BED8 simultaneous interpolator



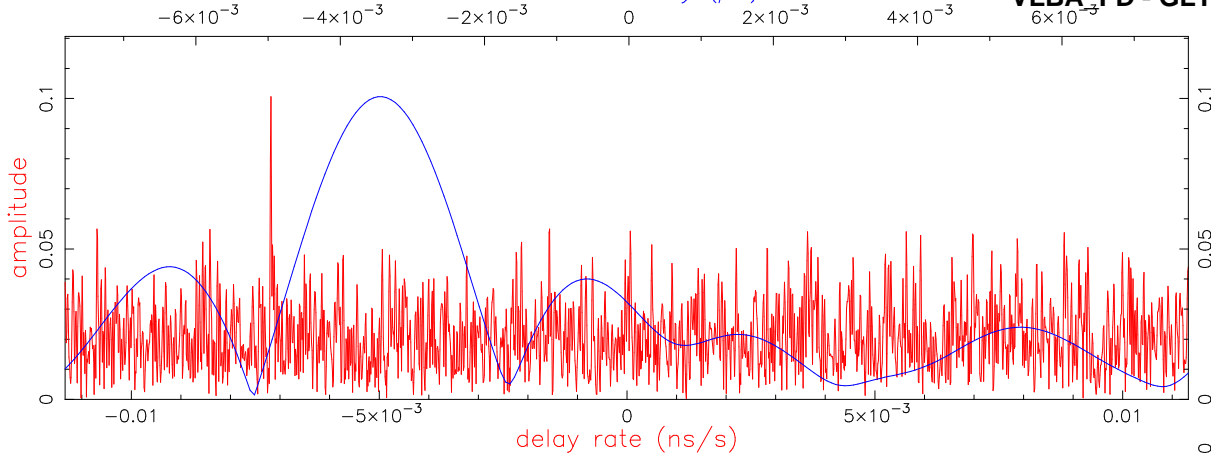
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fg

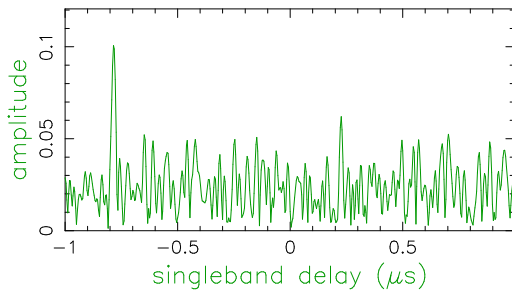
VLBA_FD - GLT, fgroupp W, pol LR

multiband delay (μ s)

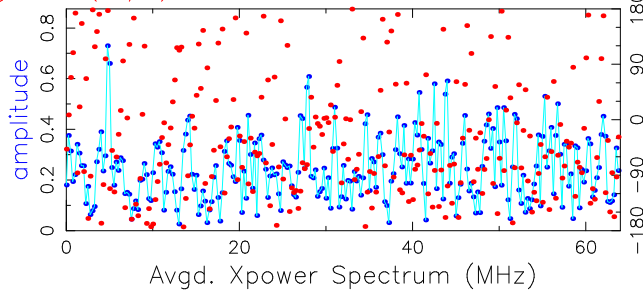
Fringe quality 0



SNR 5.6
Int time 410.356
Amp 0.121
Phase -65.7
PFD 9.9e-01
Delays (us)
SBD -0.783684
MBD -0.003428
Fringe rate (Hz)
-0.619970
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

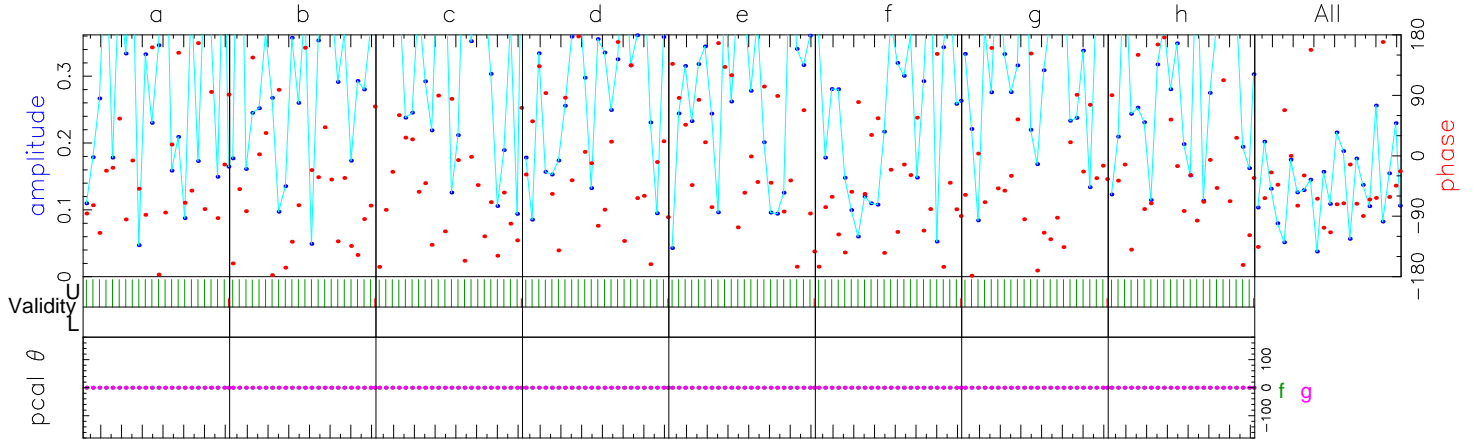


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165615
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-56.0	-72.6	-67.8	-82.3	-16.6	-78.3	-69.7	-56.2	Phase	-65.7
	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.1	Ampl.	0.1
	431.0	494.8	207.8	288.5	406.5	333.1	55.1	34.2	Sbd box	56.4
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-3.52786663251E+03		Apriori delay (usec)	-3.52708195471E+03		Resid mbdelay (usec)	-3.42780E-03		+/-	1.9E-04
Sband delay (usec)	-3.52786563871E+03		Apriori clock (usec)	-8.4134048E-01		Resid sbdelay (usec)	-7.83684E-01		+/-	1.5E-03
Phase delay (usec)	-3.52708195683E+03		Apriori clockrate (us/s)	-1.6594950E-07		Resid phdelay (usec)	-2.11973E-06		+/-	6.6E-07
Delay rate (us/s)	7.90235407408E-01		Apriori rate (us/s)	7.90242604651E-01		Resid rate (us/s)	-7.19724E-06		+/-	2.8E-09
Total phase (deg)	-274.0		Apriori accel (us/s/s)	-1.47175634827E-05		Resid phase (deg)	-65.7		+/-	20.4

RMS Theor. Amplitude 0.121 +/- 0.021
ph/seg (deg) 57.4 48.8 Search (2048X32) 0.099
amp/seg (%) 66.8 85.2 Interp. 0.000
ph/frq (deg) 22.7 28.8 Inc. seg. avg. 0.121
amp/frq (%) 33.9 50.2 Inc. frq. avg. 0.110

f: az 61.0 el 37.1 pa -78.2

g: az 142.5 el 51.0 pa -10.6

u,v (fr/asec) -5920.965 -4047.708

simultaneous interpolator

Control file: cf_1234_gmva

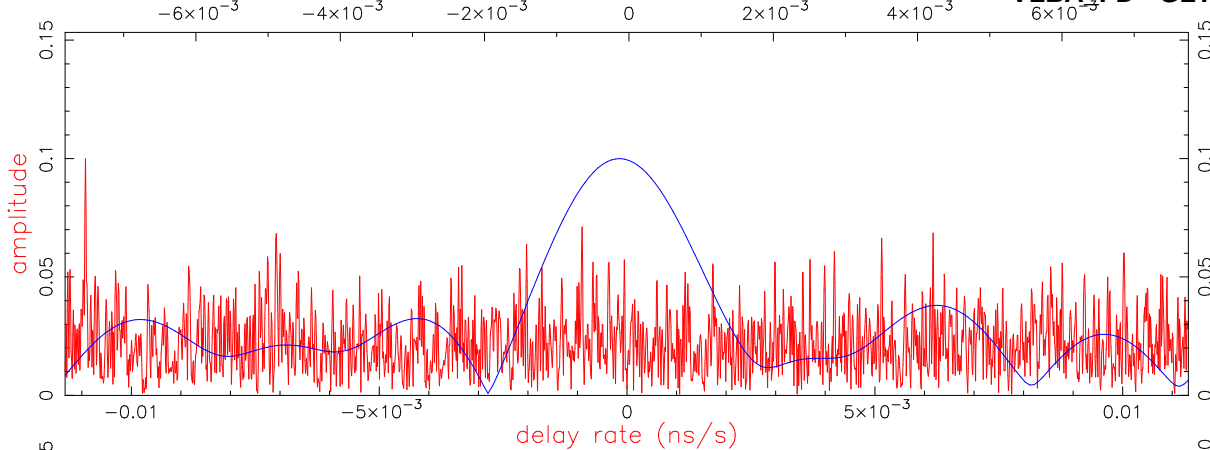
Input file: /Exps/c192a/v1_PV/1234/No0001/fg..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fg.W.130.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

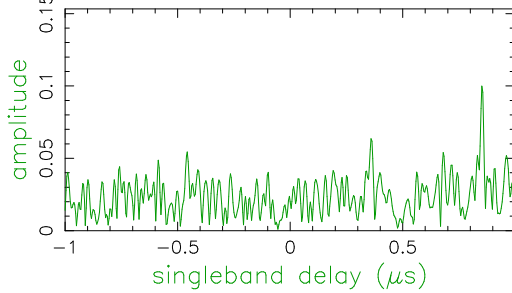
3C345.12BED8, No0001, fg

VLBA_FD - GLT, fgroupp W, pol RL

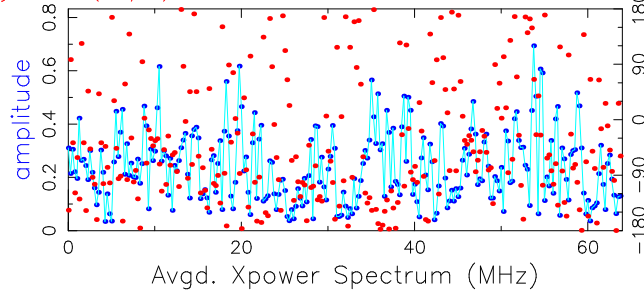
multiband delay (μ s)

Fringe quality 0

SNR 5.6
Int time 410.314
Amp 0.153
Phase 9.9
PFD 1.0e+00
Delays (us)
SBD 0.852749
MBD -0.000096
Fringe rate (Hz)
-0.943068
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

singleband delay (μ s)

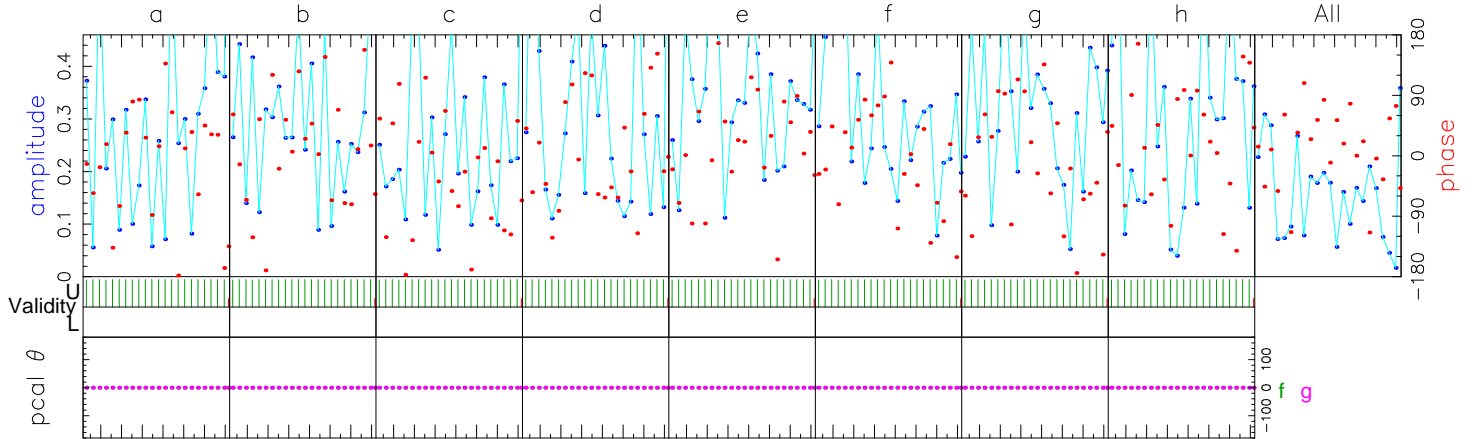
delay rate (ns/s)



Avgd. Xpower Spectrum (MHz)

Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165620
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	19.6	31.7	-26.7	-17.3	28.0	11.6	12.5	4.7	Phase	9.9
	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.2	Ampl.	0.1
	231.3	227.2	11.8	4.3	169.4	342.6	130.1	416.2	Sbd box	475.3
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	PC freqs	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-3.52622267608E+03	Apriori delay (usec)	-3.52708195471E+03	Resid mbdelay (usec)	-9.63670E-05	+/-	1.9E-04
Sband delay (usec)	-3.52622920621E+03	Apriori clock (usec)	-8.4134048E-01	Resid sbdelay (usec)	8.52749E-01	+/-	1.5E-03
Phase delay (usec)	-3.52708195439E+03	Apriori clockrate (us/s)	-1.6594950E-07	Resid phdelay (usec)	3.20766E-07	+/-	6.6E-07
Delay rate (us/s)	7.90231656566E-01	Apriori rate (us/s)	7.90242604651E-01	Resid rate (us/s)	-1.09481E-05	+/-	2.8E-09
Total phase (deg)	-198.4	Apriori accel (us/s/s)	-1.47175634827E-05	Resid phase (deg)	9.9	+/-	20.5

	RMS	Theor.	Amplitude	0.153 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	57.8	49.2	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	96.9	85.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	22.4	29.0	Inc. seg. avg.	0.170	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	32.4	50.6	Inc. frq. avg.	0.142	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2

g: az 142.5 el 51.0 pa -10.6

u,v (fr/asec) -5920.965 -4047.708

simultaneous interpolator

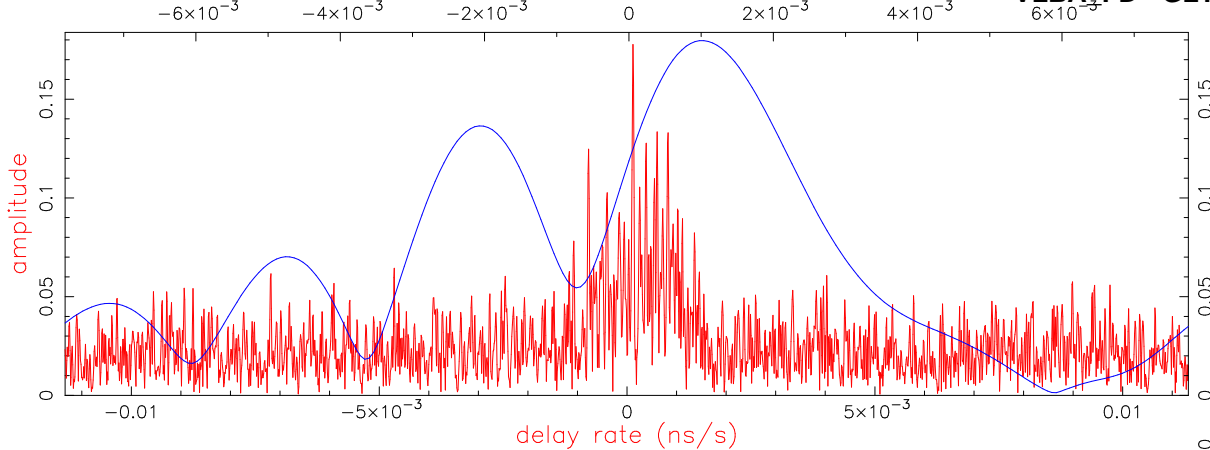
Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fg..12BED8

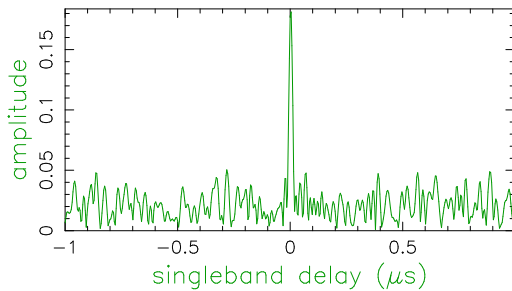
Output file: /Exps/c192a/v1_PV/1234/No0001/fg.W.153.12BED8

multiband delay (μ s)

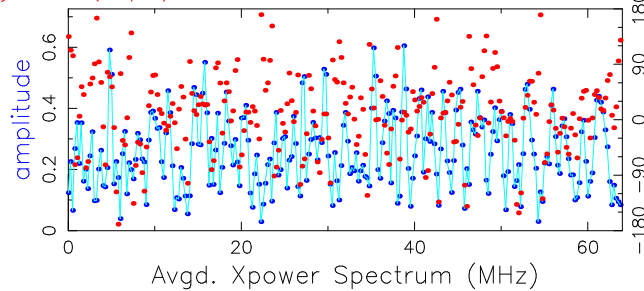
Fringe quality 9



SNR 10.2
Int time 410.314
Amp 0.184
Phase 30.2
PFD 1.0e-15
Delays (us)
SBD 0.002376
MBD 0.001204
Fringe rate (Hz)
0.010330
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

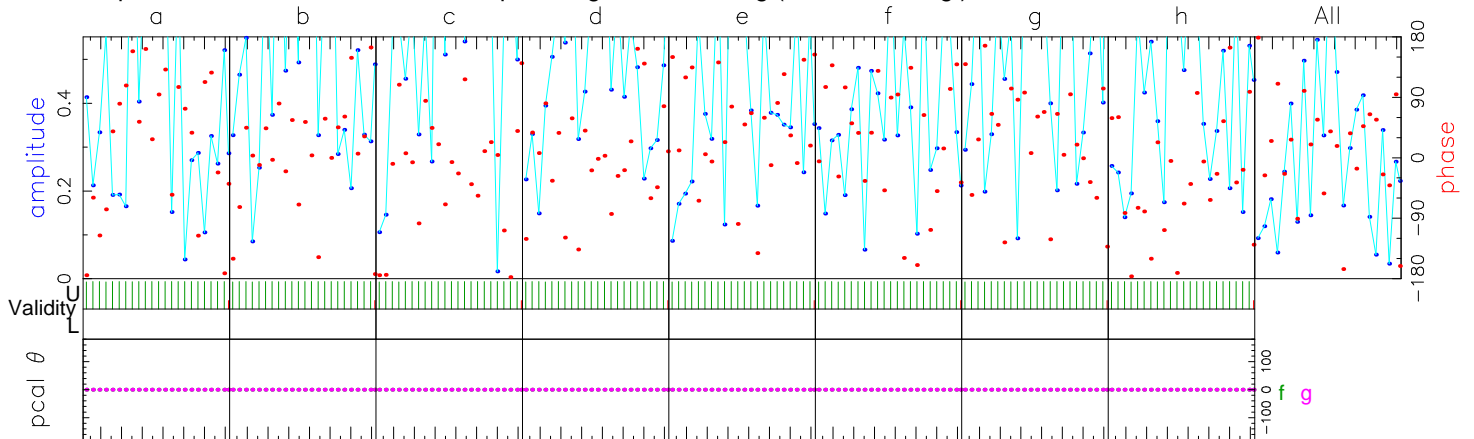


delay rate (ns/s)



Exp. c192a
Yr:day 16383
Exper # 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165607
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	Sbd box	257.6
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	PC phase	
f:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-3.52708075063E+03	Apriori delay (usec)	-3.52708195471E+03	Resid mbdelay (usec)	1.20408E-03	+/-	1.1E-04
Sband delay (usec)	-3.52707957896E+03	Apriori clock (usec)	-8.4134048E-01	Resid sbdelay (usec)	2.37575E-03	+/-	8.5E-04
Phase delay (usec)	-3.52708195373E+03	Apriori clockrate (us/s)	-1.6594950E-07	Resid phdelay (usec)	9.75156E-07	+/-	3.6E-07
Delay rate (us/s)	7.90242724571E-01	Apriori rate (us/s)	7.90242604651E-01	Resid rate (us/s)	1.19921E-07	+/-	1.5E-09
Total phase (deg)	-178.1	Apriori accel (us/s/s)	-1.47175634827E-05	Resid phase (deg)	30.2	+/-	11.3

	RMS	Theor.	Amplitude	0.184 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	71.5	27.0	Search (2048X32)	0.179	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	112.9	47.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	52.6	15.9	Inc. seg. avg.	0.249	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	47.7	27.8	Inc. frq. avg.	0.216	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2 g: az 142.5 el 51.0 pa -10.6 u,v (fr/asec) -5920.965 -4047.708

simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fg..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fg.W.90.12BED8

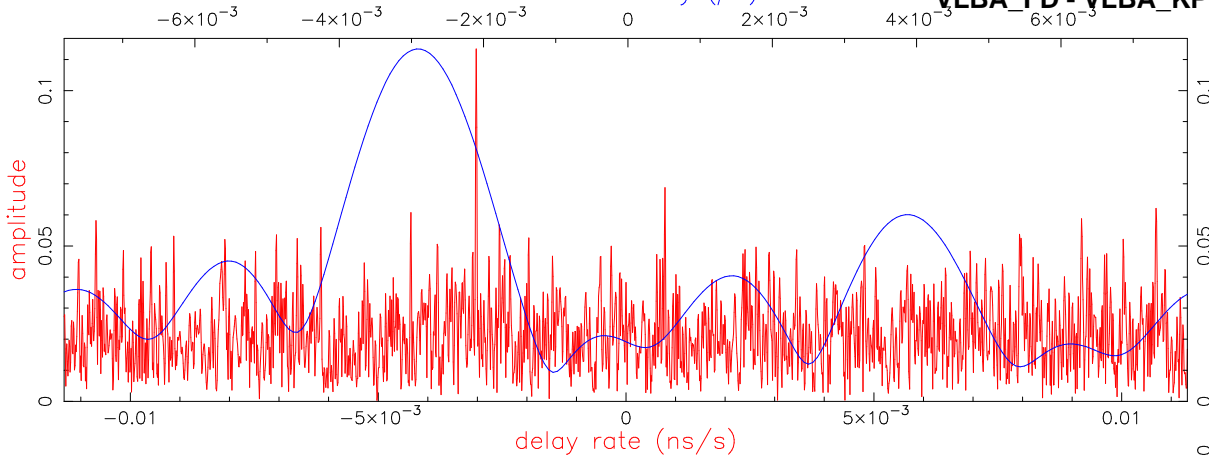
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fk

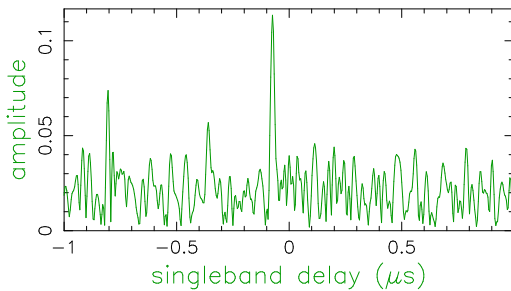
VLBA_FD - VLBA_KP, fgroup W, pol RR

multiband delay (μ s)

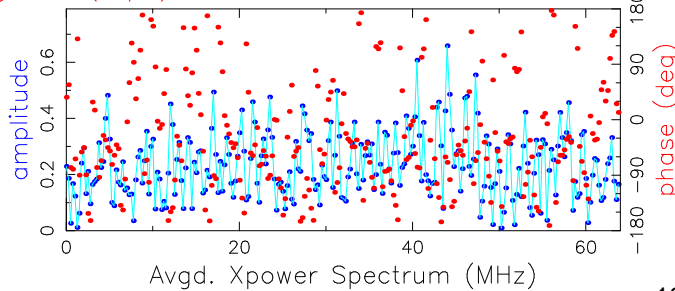
Fringe quality 0



SNR 6.3
Int time 407.360
Amp 0.117
Phase -167.8
PFD 9.9e-02
Delays (us)
SBD -0.074185
MBD -0.002909
Fringe rate (Hz)
-0.260557
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

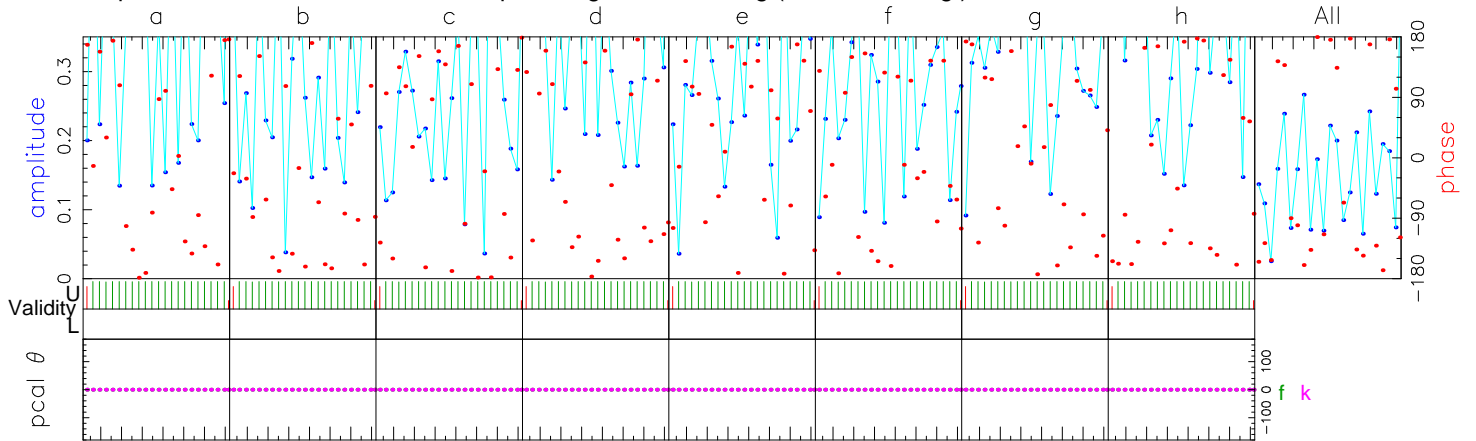


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165612
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	801/0	801/0	801/0	801/0	801/0	801/0	802/0	802/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:k	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		
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.54133648065E+03	Apriori delay (usec)	1.54141751422E+03	Resid mbdelay (usec)	-2.90857E-03	+/-	1.7E-04
Sband delay (usec)	1.54134332947E+03	Apriori clock (usec)	8.5670185E-01	Resid sbdelay (usec)	-7.41848E-02	+/-	1.4E-03
Phase delay (usec)	1.54141750881E+03	Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	-5.41080E-06	+/-	5.9E-07
Delay rate (us/s)	-3.76585488541E-02	Apriori rate (us/s)	-3.76555240401E-02	Resid rate (us/s)	-3.02481E-06	+/-	2.5E-09
Total phase (deg)	75.1	Apriori accel (us/s/s)	-9.61461128275E-06	Resid phase (deg)	-167.8	+/-	18.3

	RMS	Theor.	Amplitude	0.117 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	46.8	43.9	Search (2048X32)	0.109	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	72.0	76.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	25.2	25.9	Inc. seg. avg.	0.119	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	45.3	45.2	Inc. frq. avg.	0.114	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

k: az 60.1 el 32.1 pa -73.4

u,v (fr/asec) 263.798 -766.247

simultaneous interpolator

Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fk..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fk.W.113.12BED8

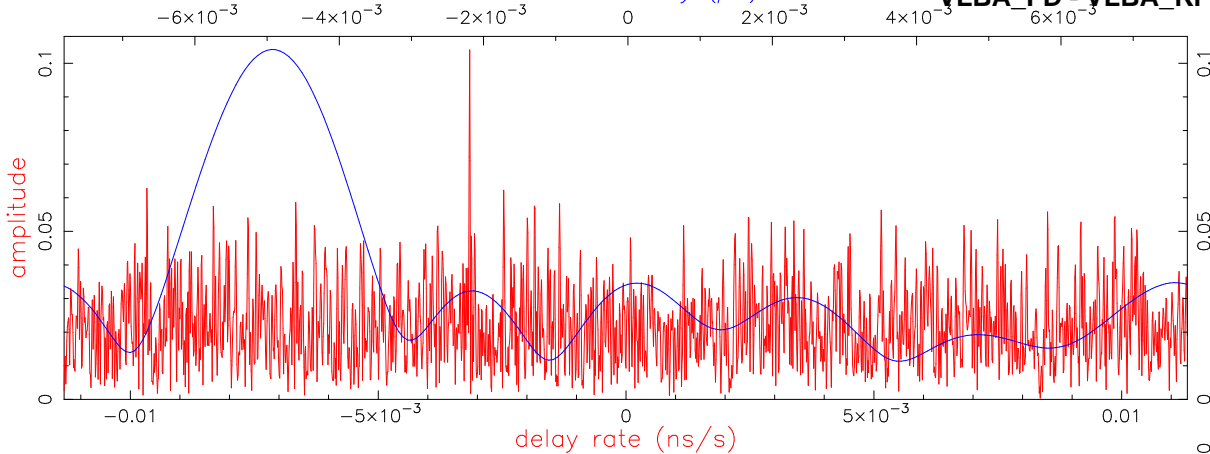
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fk

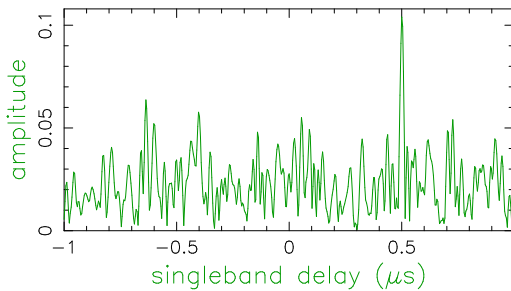
VLBA_FD - VLBA_KP, fgroup W, pol LR

multiband delay (μ s)

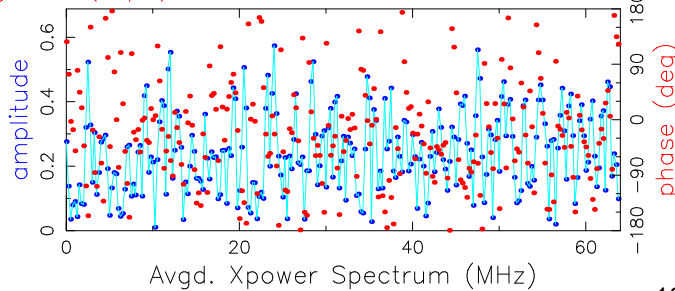
Fringe quality 0



SNR 5.8
Int time 407.360
Amp 0.108
Phase 32.1
PFD 8.6e-01
Delays (us)
SBD 0.500967
MBD -0.004880
Fringe rate (Hz)
-0.272512
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

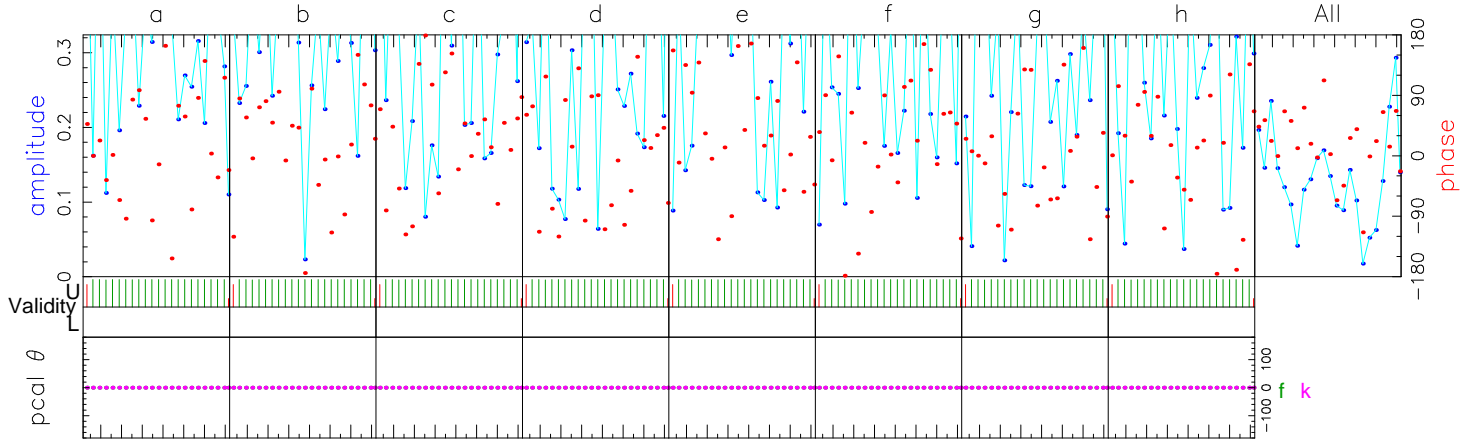


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165616
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	25.8	42.9	37.4	9.9	27.5	67.5	-14.4	52.5	Phase	32.1
f	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
k	480.4	385.0	386.6	352.2	298.6	339.7	484.9	137.9	Sbd box	385.2
f:k	801/0	801/0	801/0	801/0	801/0	801/0	802/0	802/0	APs used	
f:k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.54191263443E+03	Apriori delay (usec)	1.54141751422E+03	Resid mbdelay (usec)	-4.87979E-03	+/-	1.9E-04
Sband delay (usec)	1.54191848147E+03	Apriori clock (usec)	8.5670185E-01	Resid sbdelay (usec)	5.00967E-01	+/-	1.5E-03
Phase delay (usec)	1.54141751525E+03	Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	1.03515E-06	+/-	6.4E-07
Delay rate (us/s)	-3.76586876358E-02	Apriori rate (us/s)	-3.76555240401E-02	Resid rate (us/s)	-3.16360E-06	+/-	2.7E-09
Total phase (deg)	274.9	Apriori accel (us/s/s)	-9.61461128275E-06	Resid phase (deg)	32.1	+/-	19.9

ph/seg (deg)	50.2	Theor.	47.6	Amplitude	0.108 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	66.3		83.0	Search (2048X32)	0.101	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.5		28.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	29.8		49.0	Inc. seg. avg.	0.101	Sample rate(MSamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.105	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

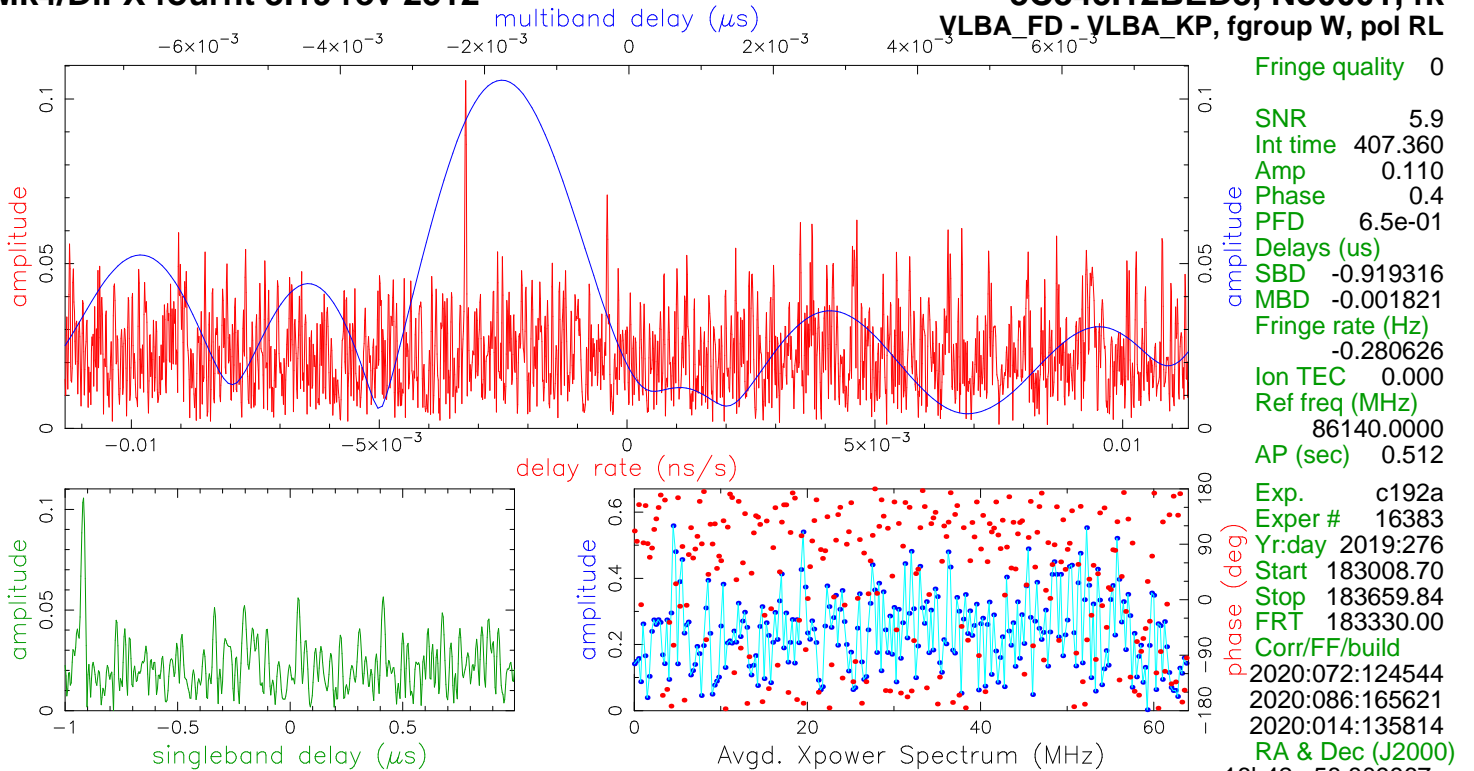
f: az 61.0 el 37.1 pa -78.2 k: az 60.1 el 32.1 pa -73.4 u,v (fr/asec) 263.798 -766.247 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fk..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fk.W.136.12BED8

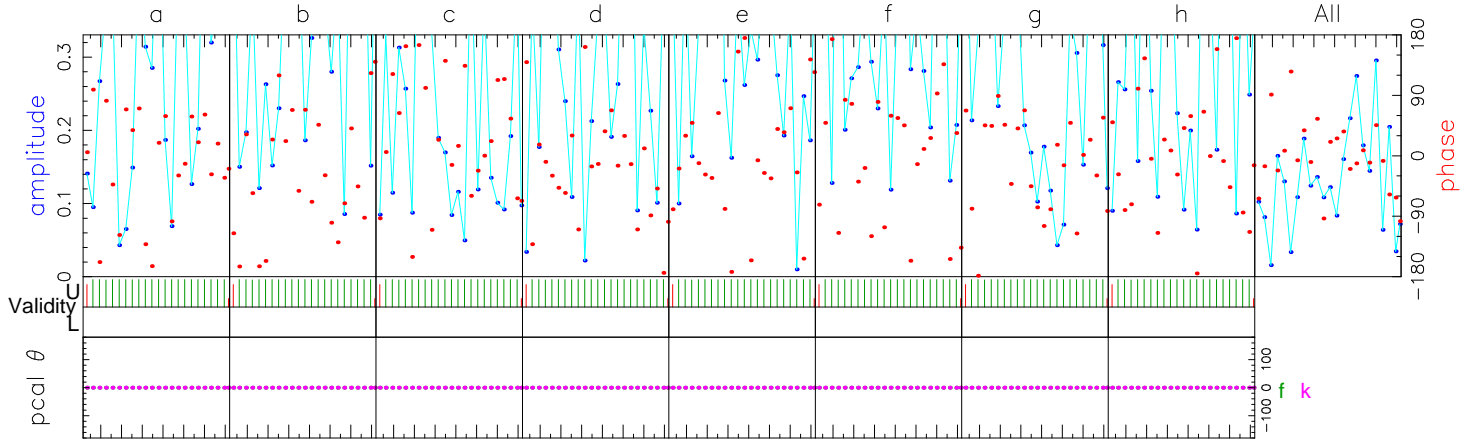
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fk

VLBA_FD - VLBA_KP, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	13.4	-32.2	25.5	-22.6	8.7	36.7	15.9	-11.6	Phase	0.4
	0.1	0.1	0.0	0.2	0.1	0.1	0.2	0.1	Ampl.	0.1
	2.1	484.1	480.8	314.0	228.8	362.8	255.7	295.8	Sbd box	21.7
U/L	802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.54049381812E+03		Apriori delay (usec)	1.54141751422E+03	Resid mbdelay (usec)	-1.82109E-03	+/-	1.8E-04		
Sband delay (usec)	1.54049819772E+03		Apriori clock (usec)	8.5670185E-01	Resid sbdelay (usec)	-9.19316E-01	+/-	1.5E-03		
Phase delay (usec)	1.54141751423E+03		Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	1.14591E-08	+/-	6.3E-07		
Delay rate (us/s)	-3.76587818307E-02		Apriori rate (us/s)	-3.76555240401E-02	Resid rate (us/s)	-3.25779E-06	+/-	2.7E-09		
Total phase (deg)	243.2		Apriori accel (us/s/s)	-9.61461128275E-06	Resid phase (deg)	0.4	+/-	19.5		
RMS	Theor.	Amplitude	0.110 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5					
ph/seg (deg)	50.6	46.7	Search (2048X32)	0.103	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	71.9	81.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	26.3	27.6	Inc. seg. avg.	0.105	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	40.3	48.1	Inc. frq. avg.	0.105	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 61.0 el 37.1 pa -78.2		k: az 60.1 el 32.1 pa -73.4		u,v (fr/asec) 263.798 -766.247						simultaneous interpolator
Control file: cf_1234_gmva		Input file: /Exps/c192a/v1_PV/1234/No0001/fk..12BED8		Output file: /Exps/c192a/v1_PV/1234/No0001/fk.W.155.12BED8						

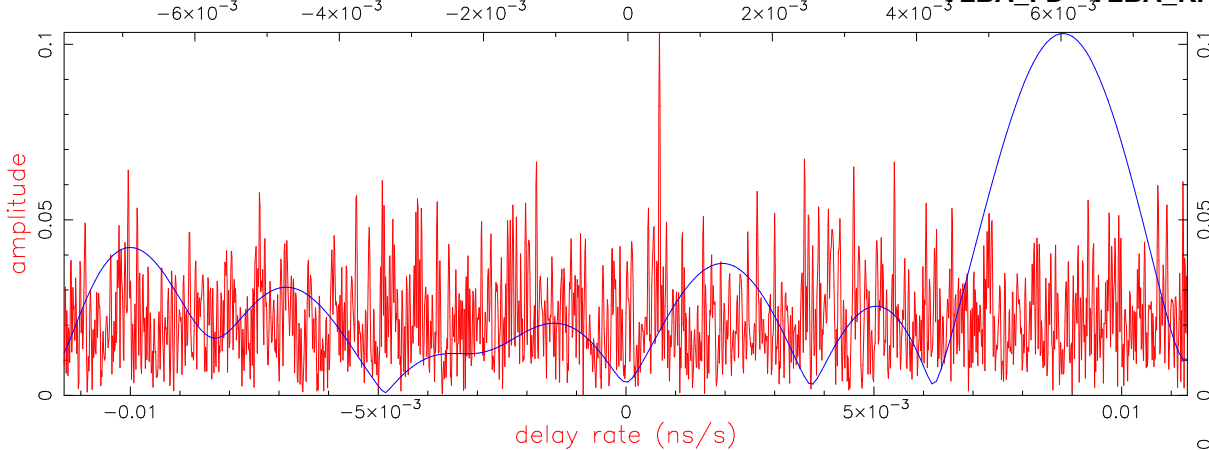
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fk

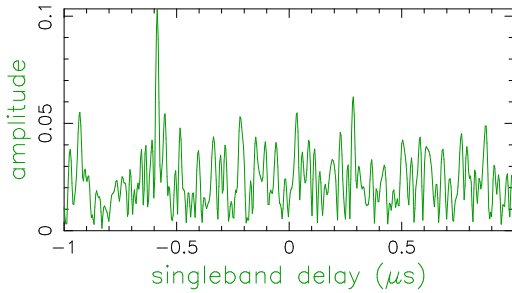
VLBA_FD - VLBA_KP, fgroup W, pol LL

multiband delay (μ s)

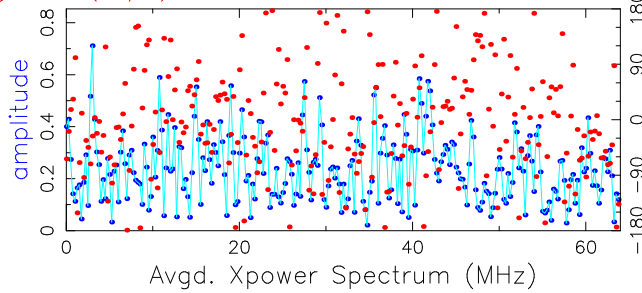
Fringe quality 0



SNR 5.7
Int time 407.360
Amp 0.103
Phase 8.3
PFD 9.5e-01
Delays (us)
SBD -0.586412
MBD 0.006011
Fringe rate (Hz)
0.057917
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

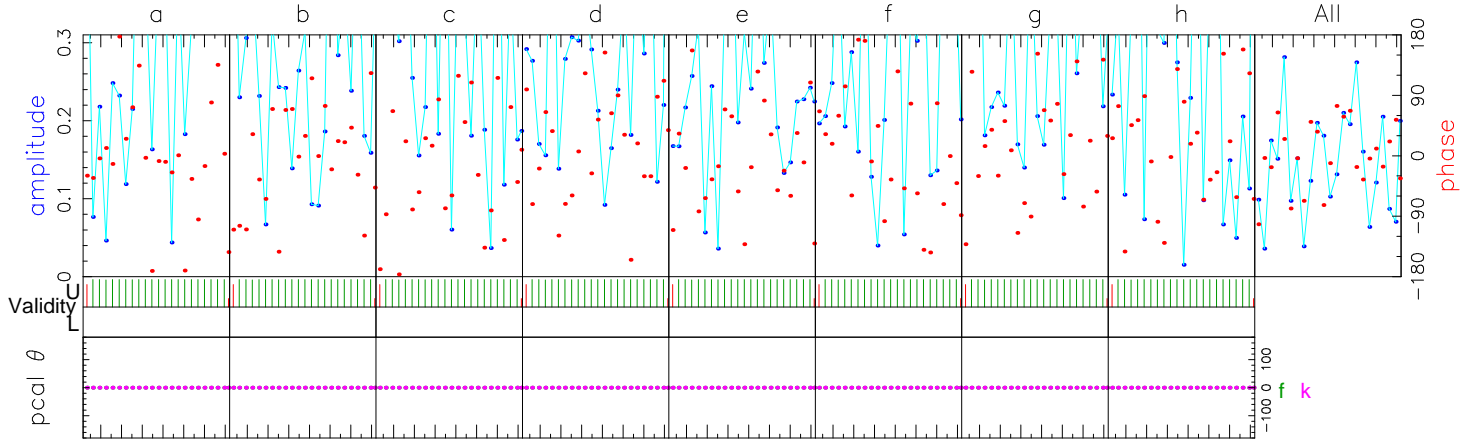


delay rate (ns/s)



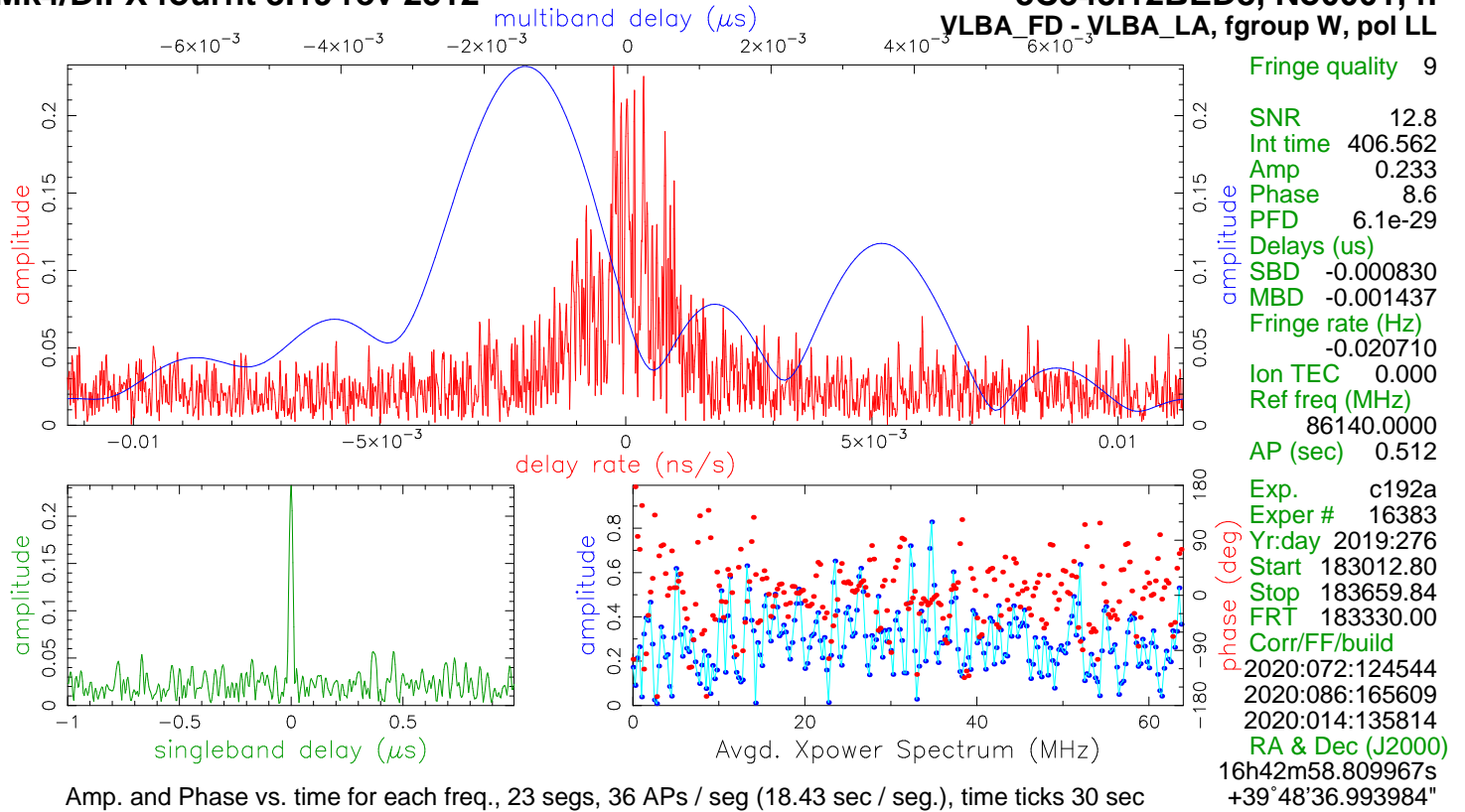
Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165608
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

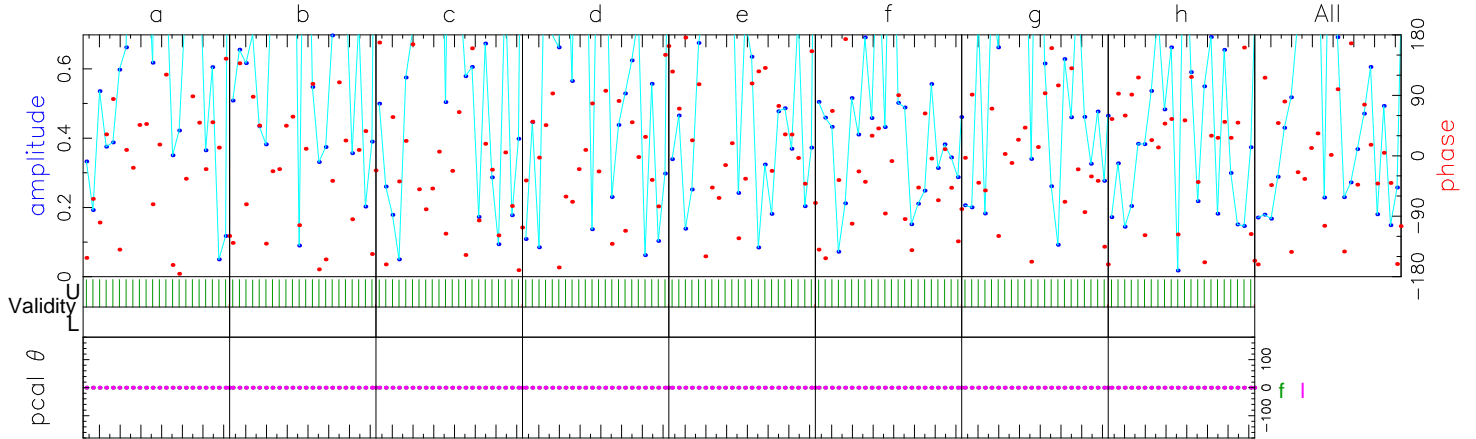


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
2.4	-4.4	25.7	19.2	21.8	-14.2	3.0	9.9		Phase	8.3
0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2		Ampl.	0.1
386.9	261.9	314.7	324.8	181.1	236.1	201.1	383.5		Sbd box	106.9
U/L	802/0	802/0	802/0	802/0	802/0	802/0	802/0		APs used	
f	1000	1000	1000	1000	1000	1000	1000		PC freqs	
k	1000	1000	1000	1000	1000	1000	1000		PC phase	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC	
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
f	1000	1000	1000	1000	1000	1000	1000			
k	1000	1000	1000	1000	1000	1000	1000			
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.54082977558E+03		Apriori delay (usec)	1.54141751422E+03	Resid mbdelay (usec)	6.01136E-03	+/-	1.9E-04		
Sband delay (usec)	1.54083110247E+03		Apriori clock (usec)	8.5670185E-01	Resid sbdelay (usec)	-5.86412E-01	+/-	1.5E-03		
Phase delay (usec)	1.54141751448E+03		Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	2.67460E-07	+/-	6.5E-07		
Delay rate (us/s)	-3.76548516806E-02		Apriori rate (us/s)	-3.76555240401E-02	Resid rate (us/s)	6.72360E-07	+/-	2.7E-09		
Total phase (deg)	251.1		Apriori accel (us/s/s)	-9.61461128275E-06	Resid phase (deg)	8.3	+/-	20.1		

ph/seg (deg) 49.1 48.2 Theor. Amplitude 0.103 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.8 84.1 Search (2048X32) 0.100 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 14.9 28.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 32.2 49.6 Inc. seg. avg. 0.107 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 61.0 el 37.1 pa -78.2 k: az 60.1 el 32.1 pa -73.4 u,v (fr/asec) 263.798 -766.247 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fk..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fk.W.94.12BED8 simultaneous interpolator



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

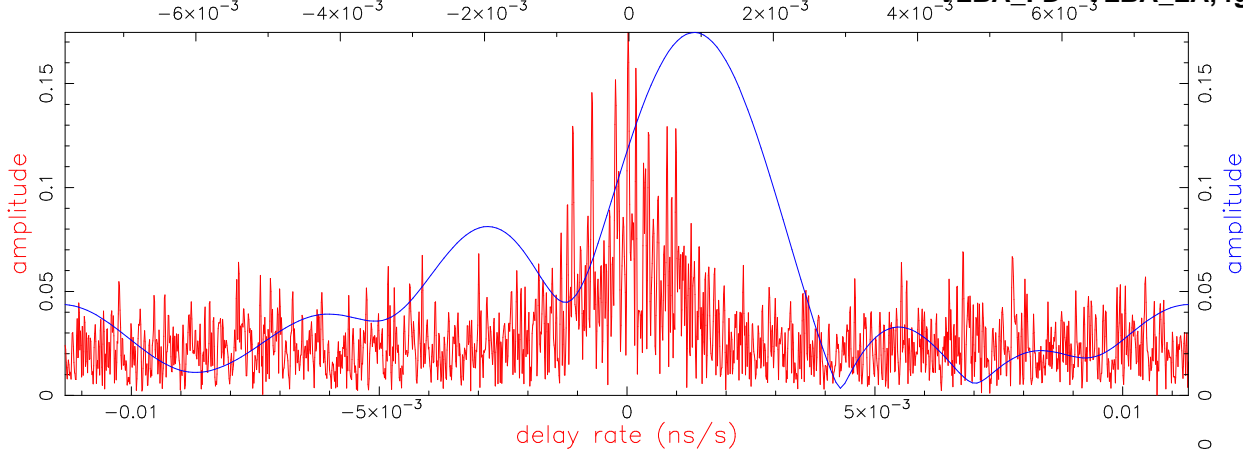


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	795/0	795/0	795/0	795/0	795/0	795/0	795/0	795/0	256.6	256.8
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	PC freqs
l	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	PC phase
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	Mani PC
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	PC amp
f	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	Chan ids
l	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	Tracks
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	Chan ids
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	Tracks

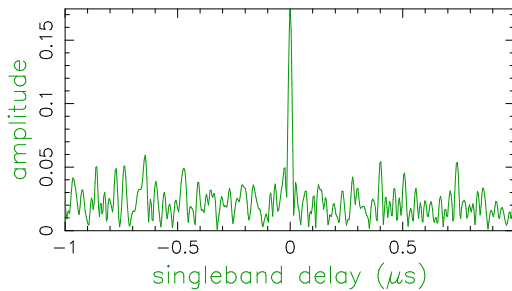
Group delay (usec)(sbd)	-1.85321725836E+02	Apriori delay (usec)	-1.85320288805E+02	Resid mbdelay (usec)	-1.43703E-03	+/-	8.5E-05		
Sband delay (usec)	-1.85321118805E+02	Apriori clock (usec)	1.1950355E+00	Resid sbdelay (usec)	-8.30000E-04	+/-	6.7E-04		
Phase delay (usec)	-1.85320288527E+02	Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	-2.77834E-07	+/-	2.9E-07		
Delay rate (us/s)	3.63773423369E-02	Apriori rate (us/s)	3.63775827554E-02	Resid rate (us/s)	-2.40419E-07	+/-	1.2E-09		
Total phase (deg)	-235.3	Apriori accel (us/s/s)	-4.42350530936E-06	Resid phase (deg)	8.6	+/-	8.9		
	RMS	Theor.	Amplitude	0.233 +/- 0.018	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	92.2	21.4	Search (2048X32)	0.228	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	176.1	37.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	30.2	12.6	Inc. seg. avg.	0.452	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	24.9	22.0	Inc. frq. avg.	0.249	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 61.0 el 37.1 pa -78.2 l: az 63.9 el 37.8 pa -72.0 u,v (fr/asec) -279.838 -796.742 simultaneous interpolator									
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fl..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fl.W.102.12BED8									

multiband delay (μ s)

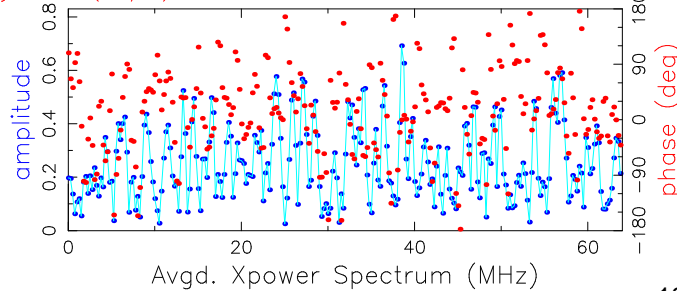
Fringe quality 9



SNR 9.6
Int time 406.563
Amp 0.175
Phase 3.1
PFD 2.5e-13
Delays (us)
SBD -0.000217
MBD 0.000901
Fringe rate (Hz)
0.001674
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

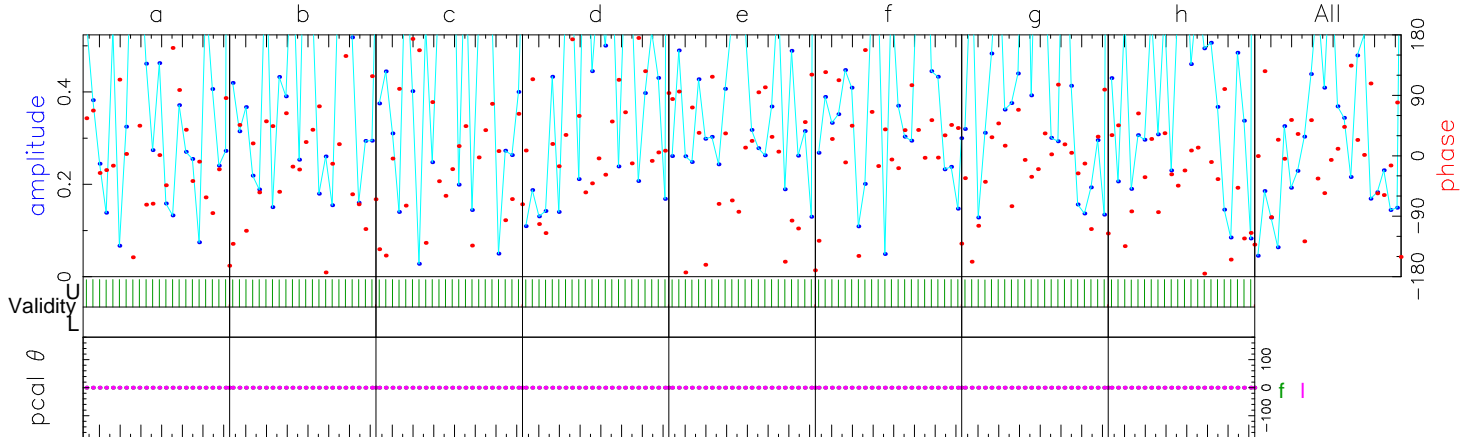


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183012.80
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165614
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

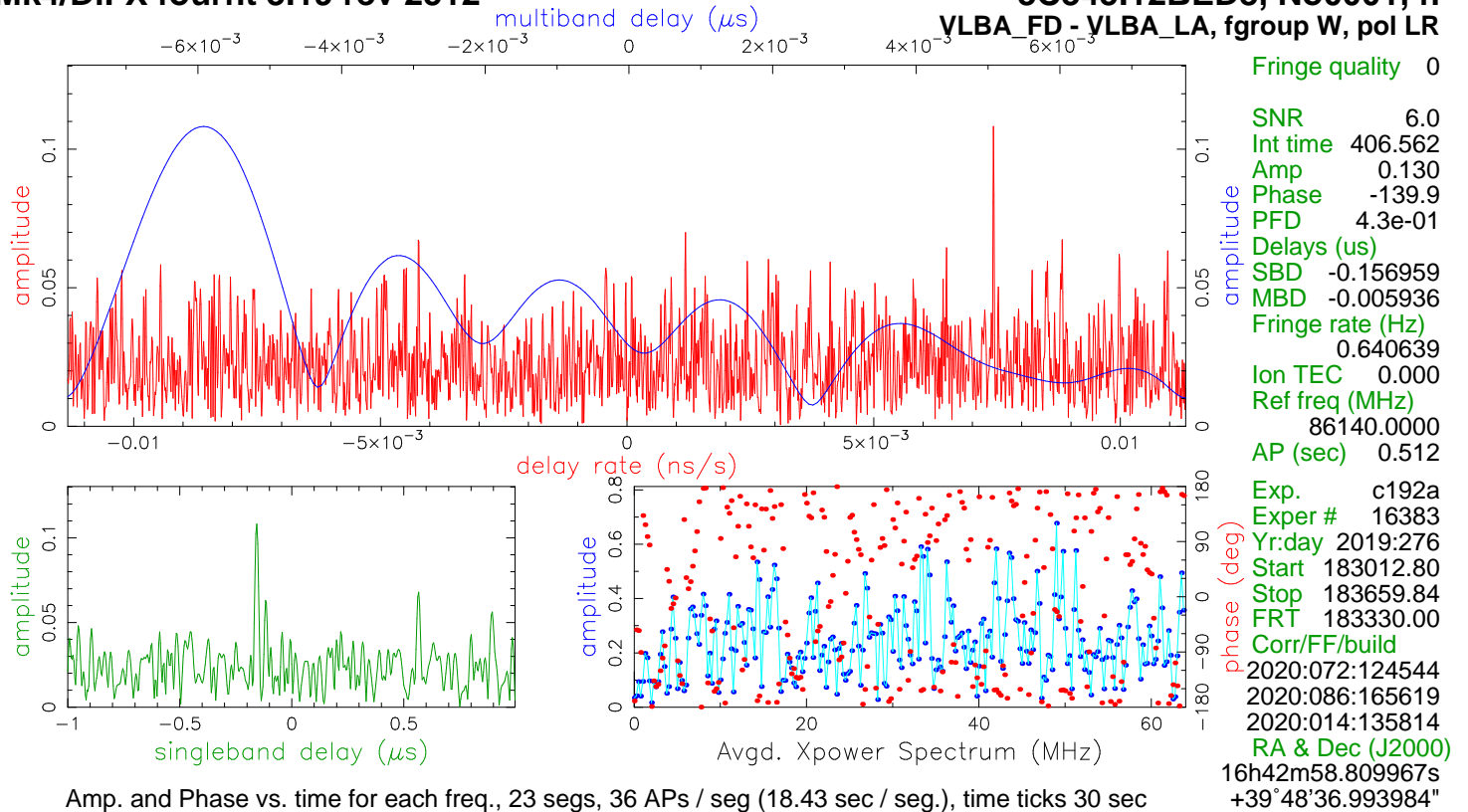
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



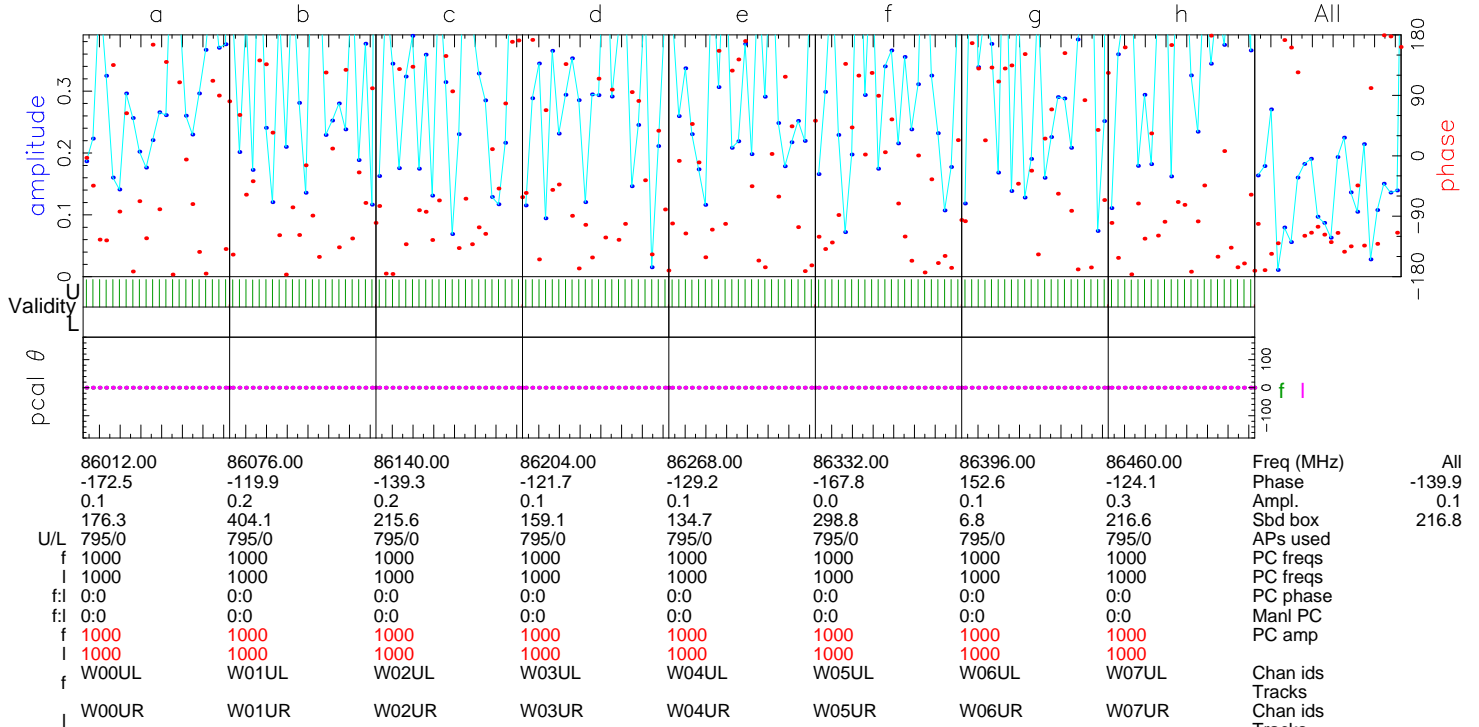
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-9.3	9.8	-24.1	13.5	11.9	27.6	3.2	-20.7	Phase	3.1
f	0.1	0.2	0.1	0.2	0.1	0.3	0.3	0.2	Ampl.	0.2
l	38.0	304.0	176.0	256.6	36.5	258.2	256.9	256.3	Sbd box	256.9
f:l	795/0	795/0	795/0	795/0	795/0	795/0	795/0	795/0	APs used	
f:l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-1.85319387757E+02		Apriori delay (usec)	-1.85320288805E+02	Resid mbdelay (usec)	9.01048E-04	+/-	1.1E-04		
Sband delay (usec)	-1.85320505805E+02		Apriori clock (usec)	1.1950355E+00	Resid sbdelay (usec)	-2.17000E-04	+/-	8.9E-04		
Phase delay (usec)	-1.85320288705E+02		Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	9.97735E-08	+/-	3.8E-07		
Delay rate (us/s)	3.63776021933E-02		Apriori rate (us/s)	3.63775827554E-02	Resid rate (us/s)	1.94379E-08	+/-	1.6E-09		
Total phase (deg)	-240.9		Apriori accel (us/s/s)	-4.42350530936E-06	Resid phase (deg)	3.1	+/-	11.9		

RMS Theor. Amplitude 0.175 +/- 0.018
ph/seg (deg) 66.5 28.5 Search (2048X32) 0.173
amp/seg (%) 122.4 49.8 Interp. 0.000
ph/frq (deg) 19.5 16.8 Inc. seg. avg. 0.263
amp/frq (%) 35.7 29.4 Inc. frq. avg. 0.175
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) -0.008 0.008
Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
f: az 61.0 el 37.1 pa -78.2 l: az 63.9 el 37.8 pa -72.0 u,v (fr/asec) -279.838 -796.742 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fl..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fl.W.123.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fl
VLBA_FD - VLBA_LA, fgroup W, pol LR

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



Group delay (usec)(sbd)	-1.85482474476E+02	Apriori delay (usec)	-1.85320288805E+02	Resid mbdelay (usec)	-5.93567E-03	+/-	1.8E-04
Sband delay (usec)	-1.85477248055E+02	Apriori clock (usec)	1.1950355E+00	Resid sbdelay (usec)	-1.56959E-01	+/-	1.4E-03
Phase delay (usec)	-1.85320293316E+02	Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	-4.51150E-06	+/-	6.2E-07
Delay rate (us/s)	3.63850199427E-02	Apriori rate (us/s)	3.63775827554E-02	Resid rate (us/s)	7.43719E-06	+/-	2.6E-09
Total phase (deg)	-23.9	Apriori accel (us/s/s)	-4.42350530936E-06	Resid phase (deg)	-139.9	+/-	19.2

ph/seg (deg) 47.1 45.9 Theor. Amplitude 0.130 +/- 0.022 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

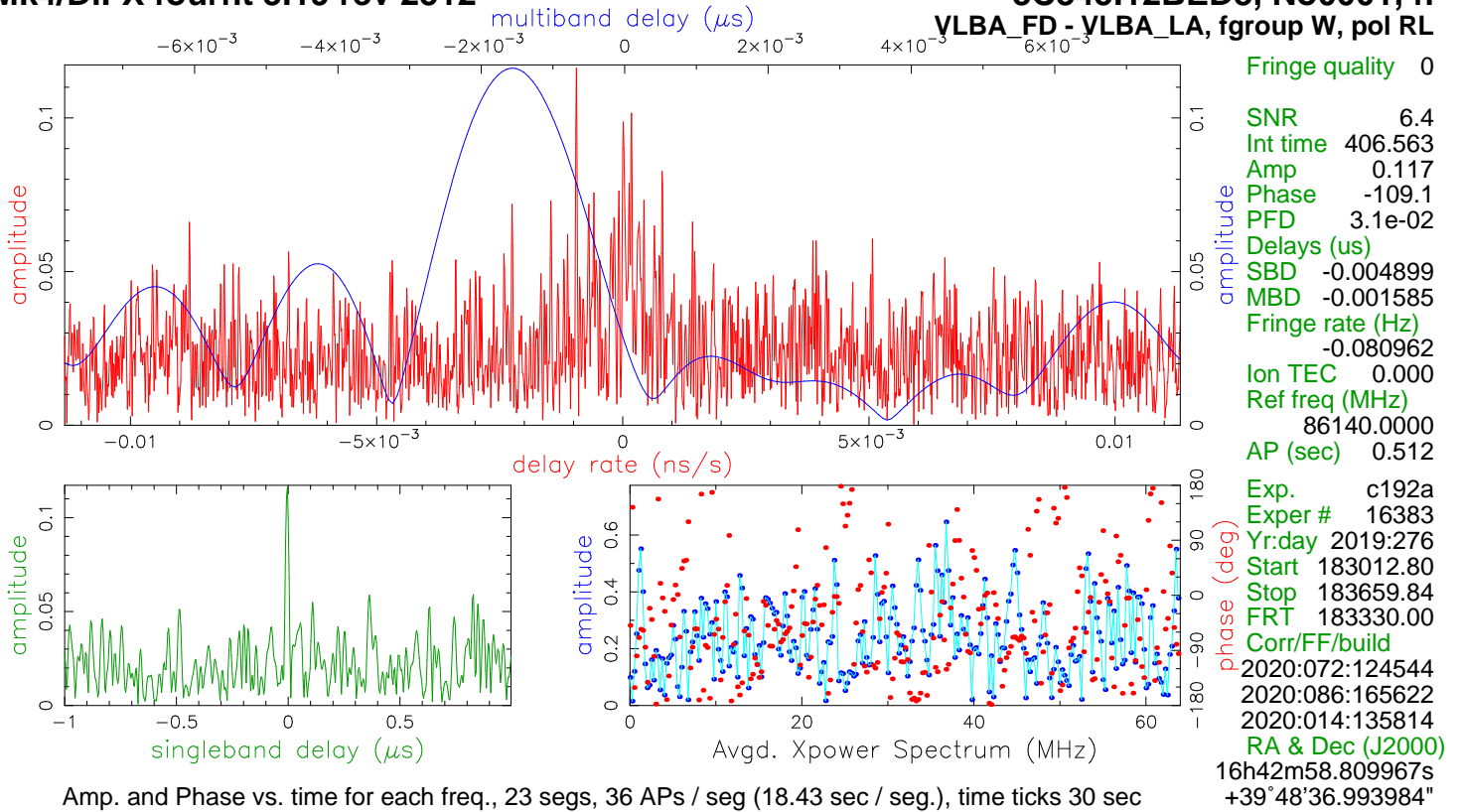
amp/seg (%) 69.0 80.2 Search (2048X32) 0.106 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 35.3 27.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

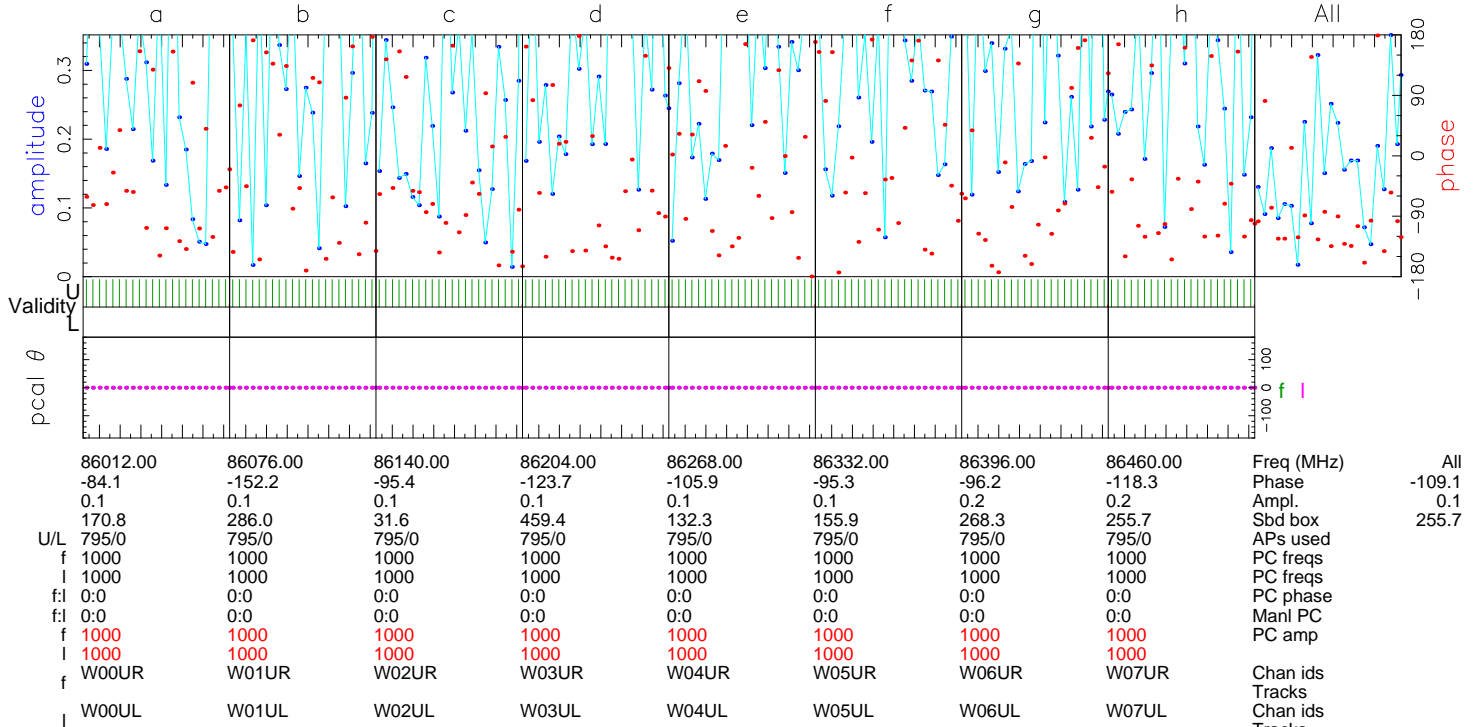
amp/frq (%) 49.7 47.3 Inc. seg. avg. 0.125 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011

f: az 61.0 el 37.1 pa -78.2 l: az 63.9 el 37.8 pa -72.0 u,v (fr/asec) -279.838 -796.742 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fl..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fl.W.144.12BED8 simultaneous interpolator



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



Group delay (usec)(sbd)	-1.85321873796E+02	Apriori delay (usec)	-1.85320288805E+02	Resid mbdelay (usec)	-1.58499E-03	+/-	1.7E-04
Sband delay (usec)	-1.85325187305E+02	Apriori clock (usec)	1.1950355E+00	Resid sbdelay (usec)	-4.89850E-03	+/-	1.3E-03
Phase delay (usec)	-1.85320292322E+02	Apriori clockrate (us/s)	2.6052251E-07	Resid phdelay (usec)	-3.51728E-06	+/-	5.7E-07
Delay rate (us/s)	3.63766428700E-02	Apriori rate (us/s)	3.63775827554E-02	Resid rate (us/s)	-9.39885E-07	+/-	2.4E-09
Total phase (deg)	-353.0	Apriori accel (us/s/s)	-4.42350530936E-06	Resid phase (deg)	-109.1	+/-	17.8

ph/seg (deg) 56.8 Theor. 42.6 Amplitude 0.117 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 78.4 74.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

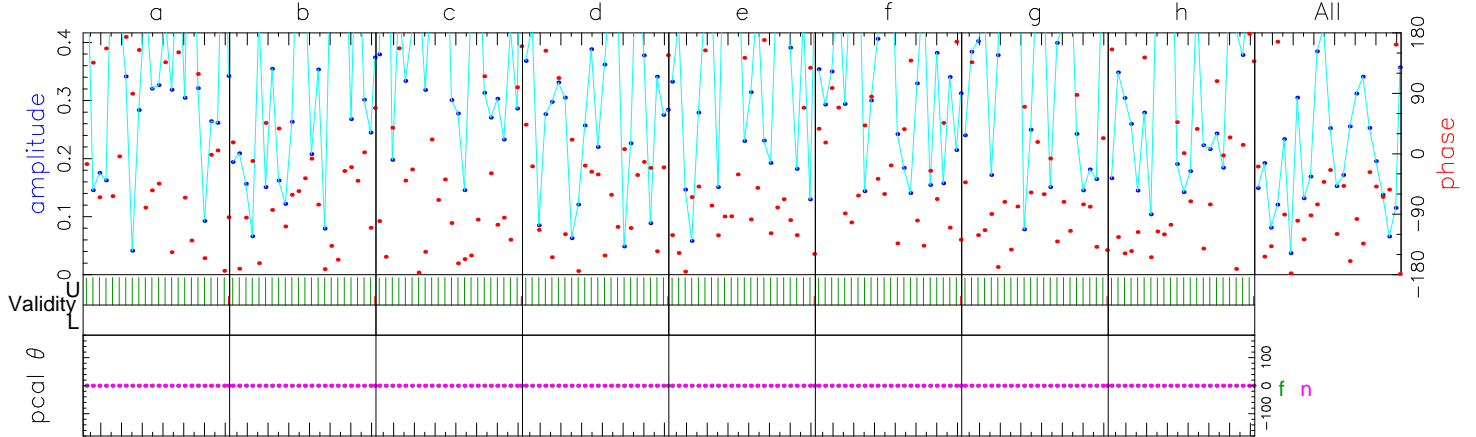
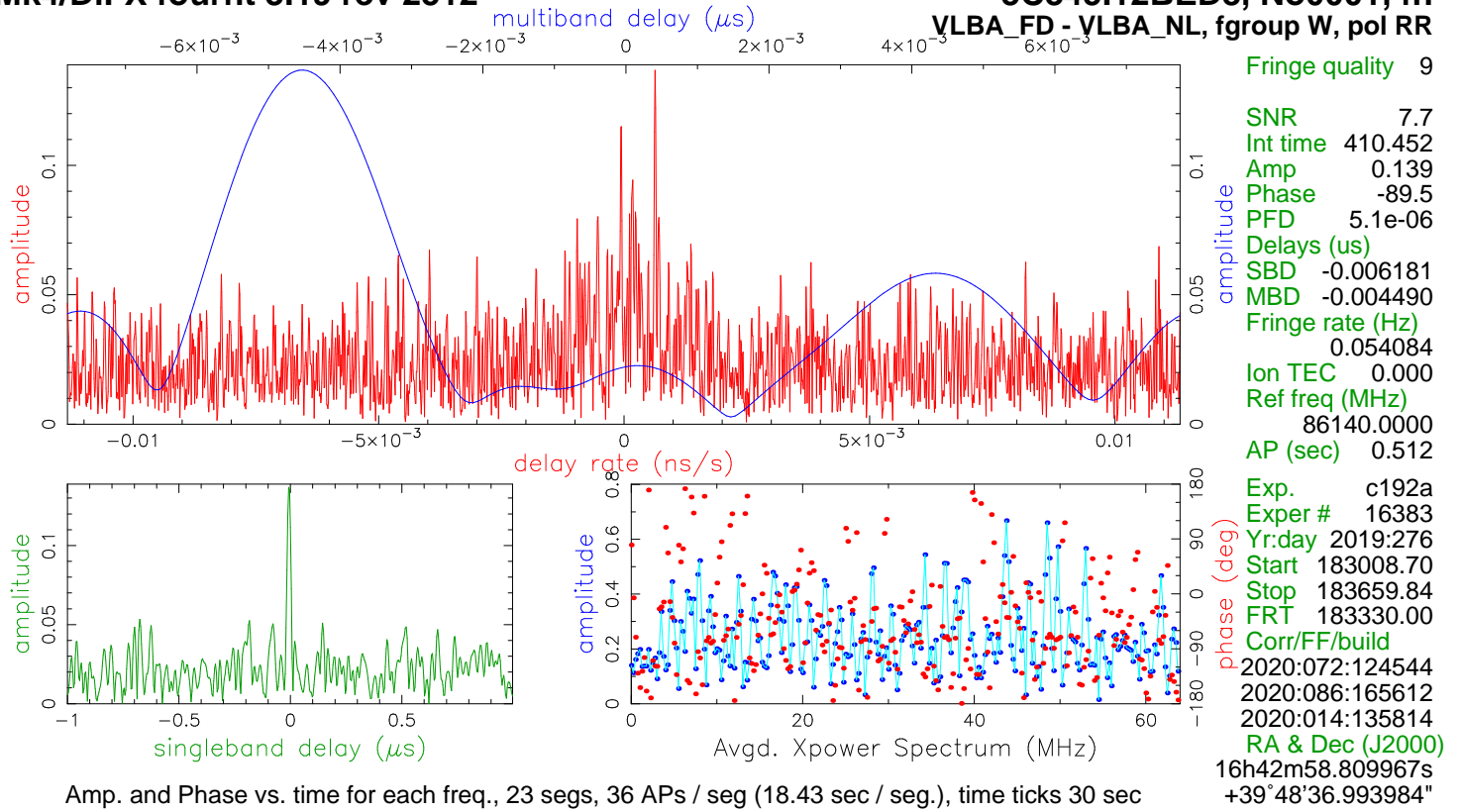
ph/frq (deg) 23.6 25.1 Inc. seg. avg. 0.123 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 25.3 43.9 Inc. frq. avg. 0.114 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011

f: az 61.0 el 37.1 pa -78.2 l: az 63.9 el 37.8 pa -72.0 u,v (fr/asec) -279.838 -796.742 ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fl..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fl.W.161.12BED8 simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fn
VLBA_FD - VLBA_NL, fgroup W, pol RR

	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-113.8	-65.3	-113.6	-62.0	-96.0	-51.0	-88.3	-131.6	Phase	-89.5
	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1
	132.1	254.7	254.4	307.6	256.4	387.8	255.7	315.5	Sbd box	255.4
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-3.57270625625E+03	Apriori delay (usec)	-3.57270176659E+03	Resid mbdelay (usec)	-4.48966E-03	+/-	1.4E-04
Sband delay (usec)	-3.57270794784E+03	Apriori clock (usec)	-2.6020557E+01	Resid sbdelay (usec)	-6.18125E-03	+/-	1.1E-03
Phase delay (usec)	-3.57270176948E+03	Apriori clockrate (us/s)	-2.2517302E-07	Resid phdelay (usec)	-2.88706E-06	+/-	4.8E-07
Delay rate (us/s)	2.24320943593E-01	Apriori rate (us/s)	2.24320315735E-01	Resid rate (us/s)	6.27858E-07	+/-	2.0E-09
Total phase (deg)	-152.2	Apriori accel (us/s/s)	7.56842907894E-06	Resid phase (deg)	-89.5	+/-	14.9

	RMS	Theor.	Amplitude	0.139 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	55.6	35.8	Search (2048X32)	0.133	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	88.1	62.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	31.1	21.1	Inc. seg. avg.	0.173	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	33.2	36.8	Inc. frq. avg.	0.141	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 61.0 el 37.1 pa -78.2			n: az 74.7 el 50.6 pa -69.4	u,v (fr/asec)	-1661.023 -549.903				simultaneous interpolator

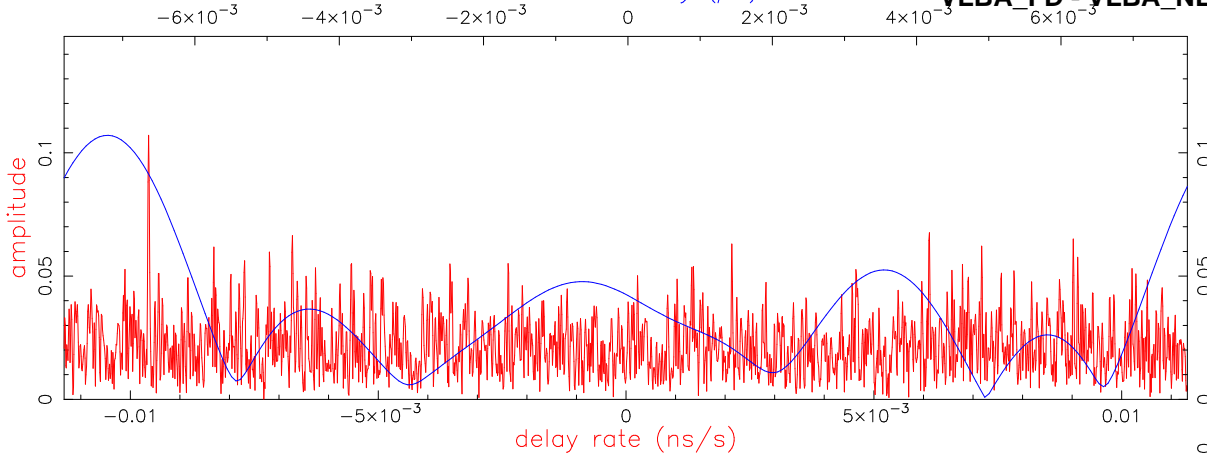
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fn

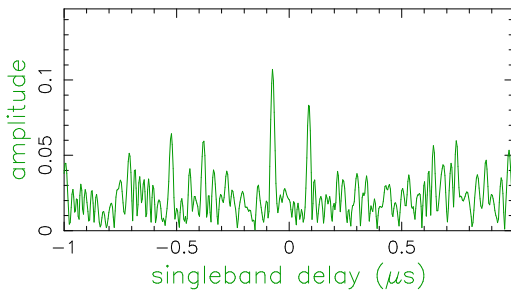
VLBA_FD - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)

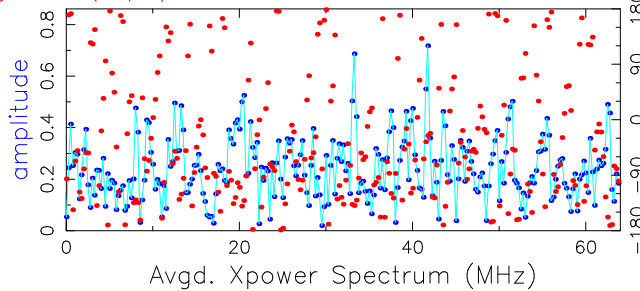
Fringe quality 0



SNR 5.9
Int time 410.452
Amp 0.147
Phase -152.5
PFD 5.3e-01
Delays (us)
SBD -0.074076
MBD -0.007211
Fringe rate (Hz)
-0.831358
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

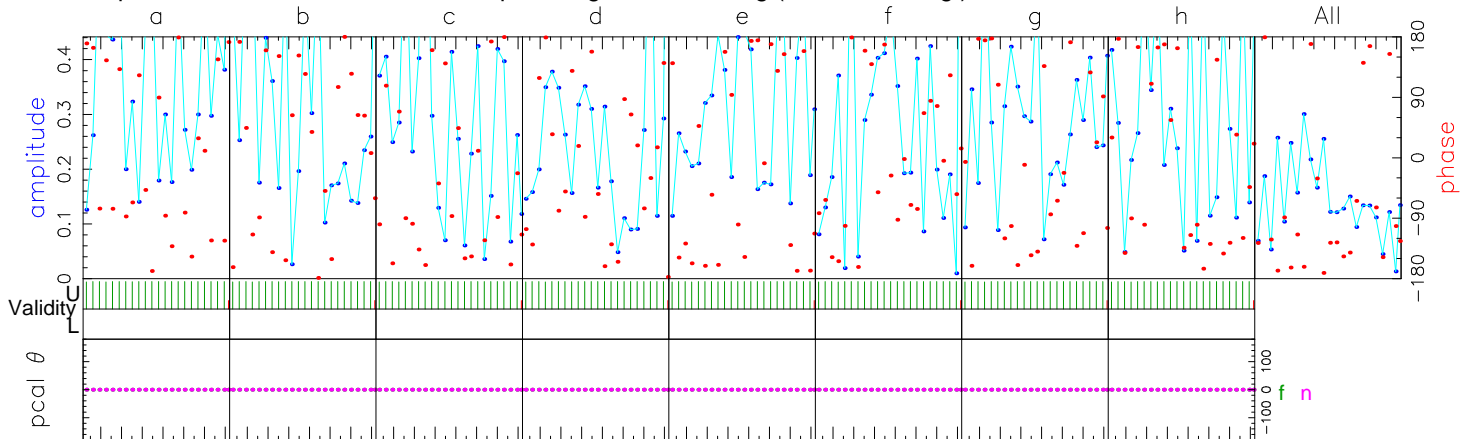


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165616
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-139.1	171.6	-128.9	-97.0	-172.9	-135.1	-147.9	-152.5	Phase	-152.5
f	0.2	0.2	0.2	0.1	0.3	0.1	0.2	0.2	Ampl.	0.1
n	447.1	470.3	505.8	489.9	237.8	388.7	509.2	239.4	Sbd box	238.0
f	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-3.57277147764E+03	Apriori delay (usec)	-3.57270176659E+03	Resid mbdelay (usec)	-7.21105E-03	+/-	1.8E-04
Sband delay (usec)	-3.57277584234E+03	Apriori clock (usec)	-2.6020557E+01	Resid sbdelay (usec)	-7.40758E-02	+/-	1.5E-03
Phase delay (usec)	-3.57270177151E+03	Apriori clockrate (us/s)	-2.2517302E-07	Resid phdelay (usec)	-4.91676E-06	+/-	6.2E-07
Delay rate (us/s)	2.24310664488E-01	Apriori rate (us/s)	2.24320315735E-01	Resid rate (us/s)	-9.65125E-06	+/-	2.6E-09
Total phase (deg)	-215.2	Apriori accel (us/s/s)	7.56842907894E-06	Resid phase (deg)	-152.5	+/-	19.3

ph/seg (deg)	48.5	Theor.	46.3	Amplitude	0.147 +/- 0.025	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	76.0		80.8	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	31.2		27.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	45.9		47.7	Inc. seg. avg.	0.150	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
				Inc. frq. avg.	0.143	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2 n: az 74.7 el 50.6 pa -69.4 u,v (fr/asec) -1661.023 -549.903 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fn..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fn.W.134.12BED8

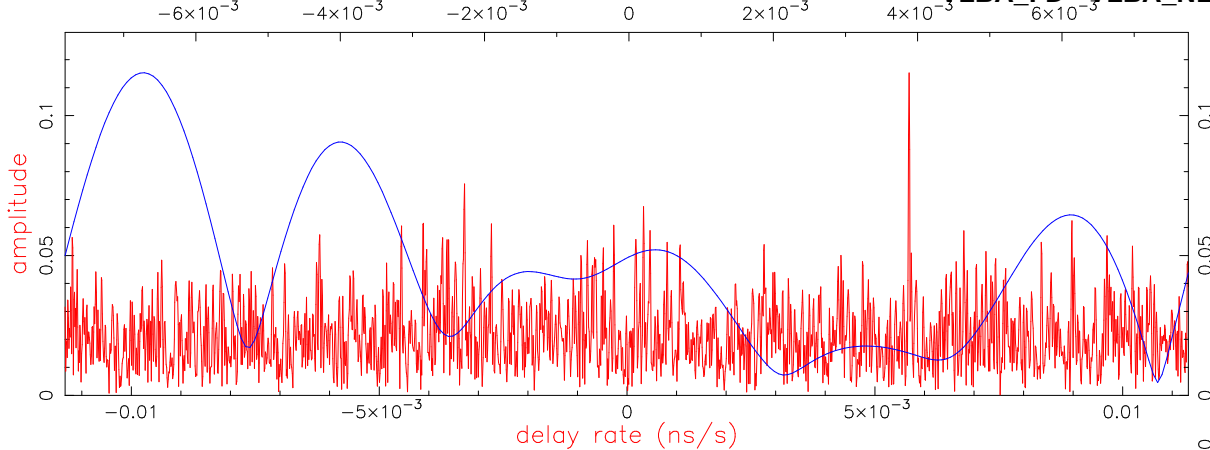
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fn

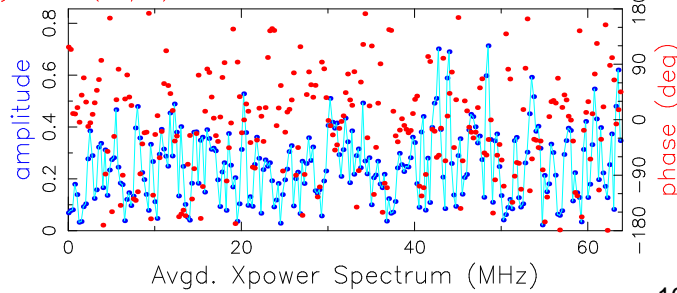
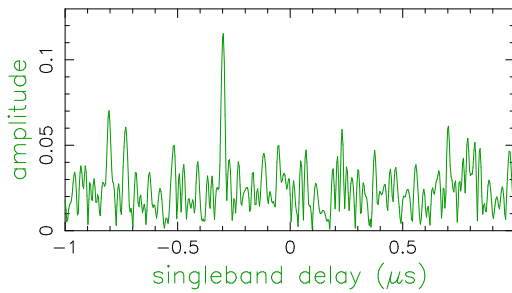
VLBA_FD - VLBA_NL, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

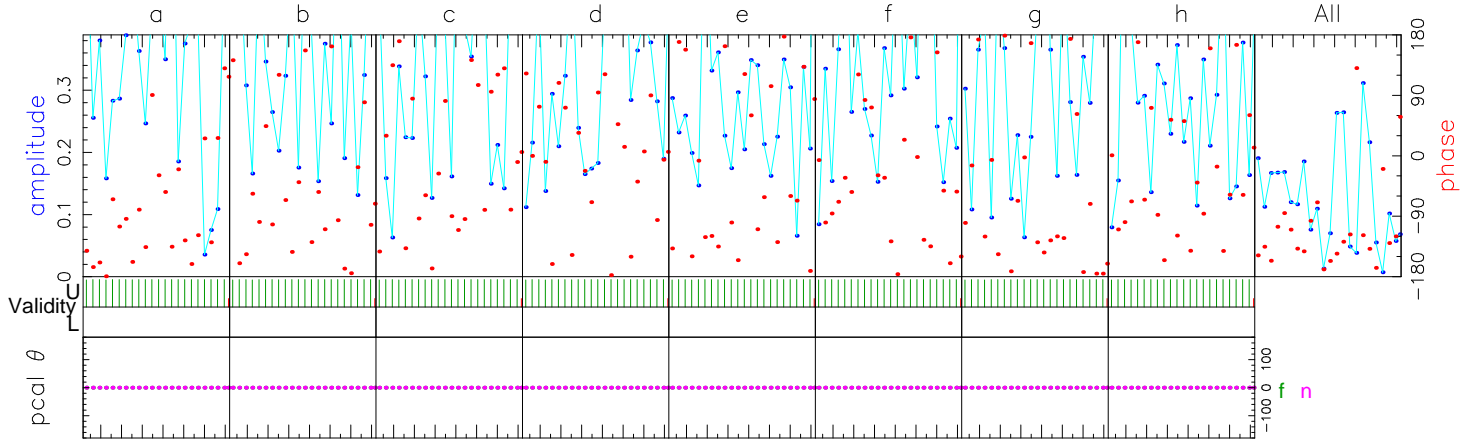


SNR 6.5
Int time 410.452
Amp 0.130
Phase -128.8
PFD 2.8e-02
Delays (us)
SBD -0.298356
MBD -0.006764
Fringe rate (Hz)
0.490508
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165619
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-131.0	-130.8	-96.3	59.4	-153.4	-107.6	-145.9	-97.0	Phase	-128.8
	0.2	0.2	0.1	0.1	0.1	0.1	0.3	0.1	Ampl.	0.1
	200.7	181.0	227.7	501.5	419.2	85.0	181.1	48.9	Sbd box	180.6
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

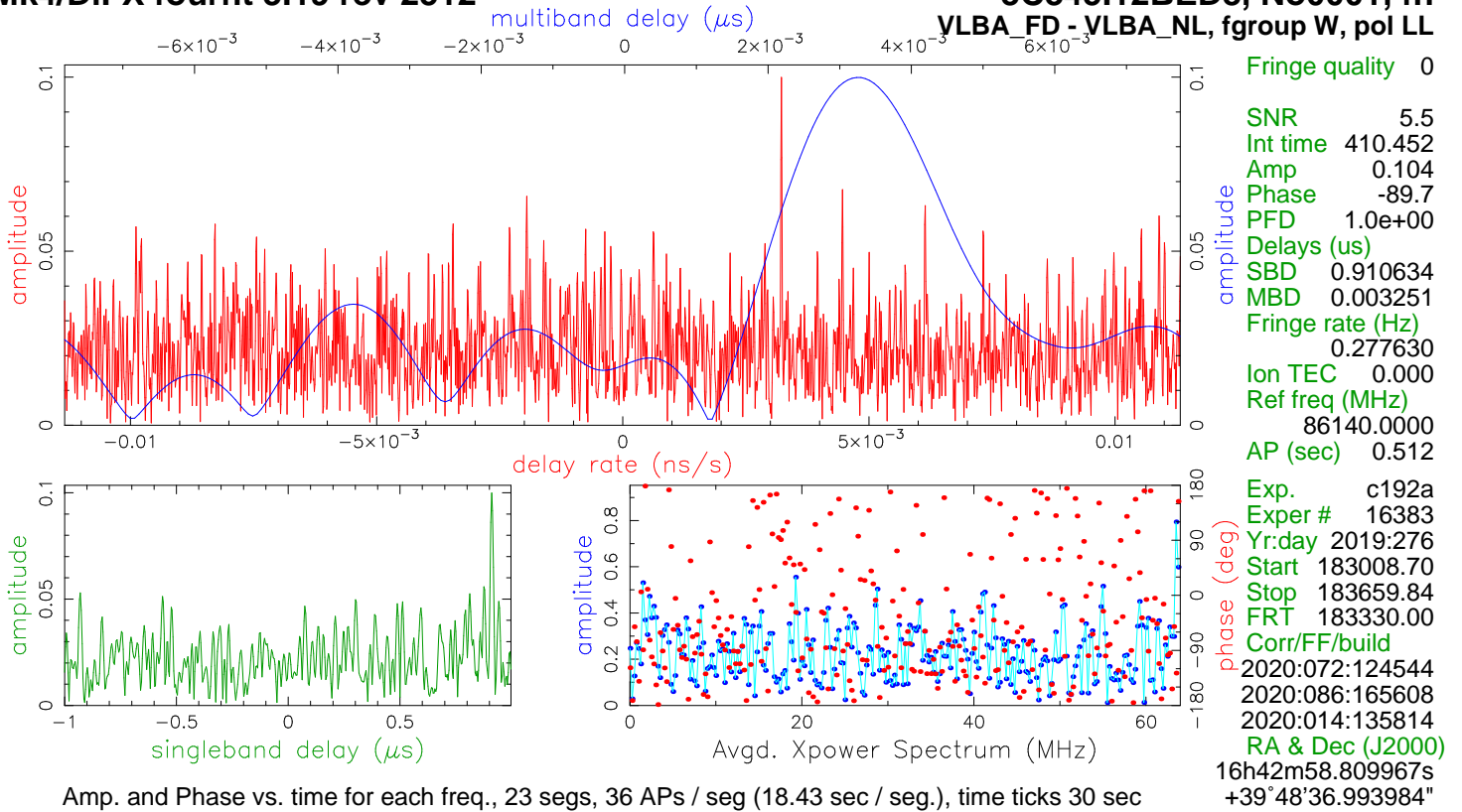
Group delay (usec)(sbd)	-3.57300540540E+03	Apriori delay (usec)	-3.57270176659E+03	Resid mbdelay (usec)	-6.76380E-03	+/-	1.7E-04
Sband delay (usec)	-3.57300012284E+03	Apriori clock (usec)	-2.6020557E+01	Resid sbdelay (usec)	-2.98356E-01	+/-	1.3E-03
Phase delay (usec)	-3.57270177075E+03	Apriori clockrate (us/s)	-2.2517302E-07	Resid phdelay (usec)	-4.15343E-06	+/-	5.7E-07
Delay rate (us/s)	2.24326010042E-01	Apriori rate (us/s)	2.24320315735E-01	Resid rate (us/s)	5.69431E-06	+/-	2.4E-09
Total phase (deg)	-191.5	Apriori accel (us/s/s)	7.56842907894E-06	Resid phase (deg)	-128.8	+/-	17.7

	RMS	Theor.	Amplitude	0.130 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	44.7	42.5	Search (2048X32)	0.112	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	71.5	74.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	74.1	25.1	Inc. seg. avg.	0.113	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.9	43.7	Inc. frq. avg.	0.145	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

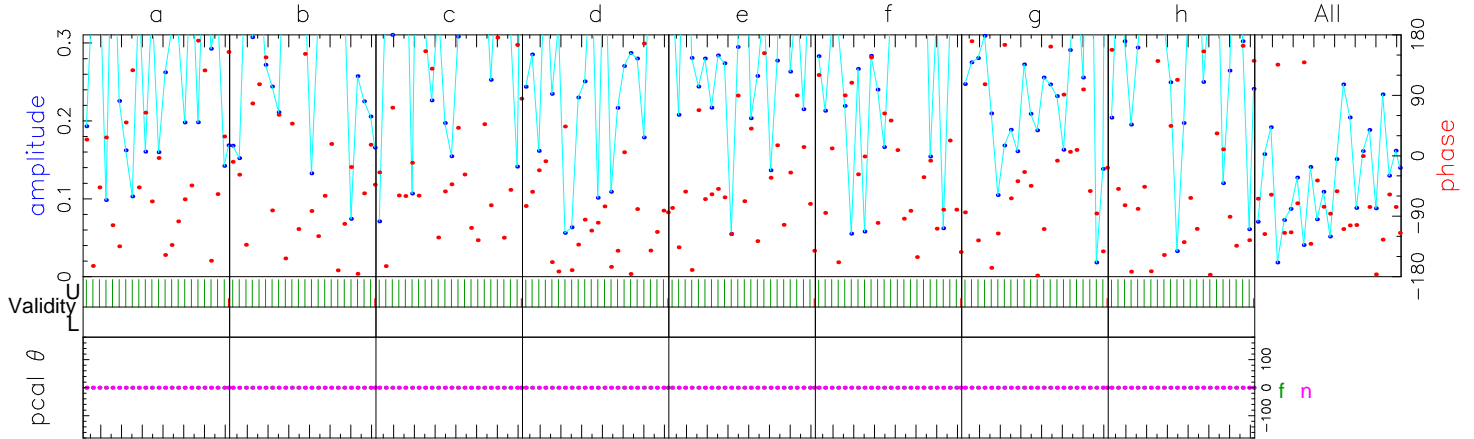
f: az 61.0 el 37.1 pa -78.2 n: az 74.7 el 50.6 pa -69.4 u,v (fr/asec) -1661.023 -549.903 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fn..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fn.W.148.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fn
VLBA_FD - VLBA_NL, fgroup W, pol LL

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

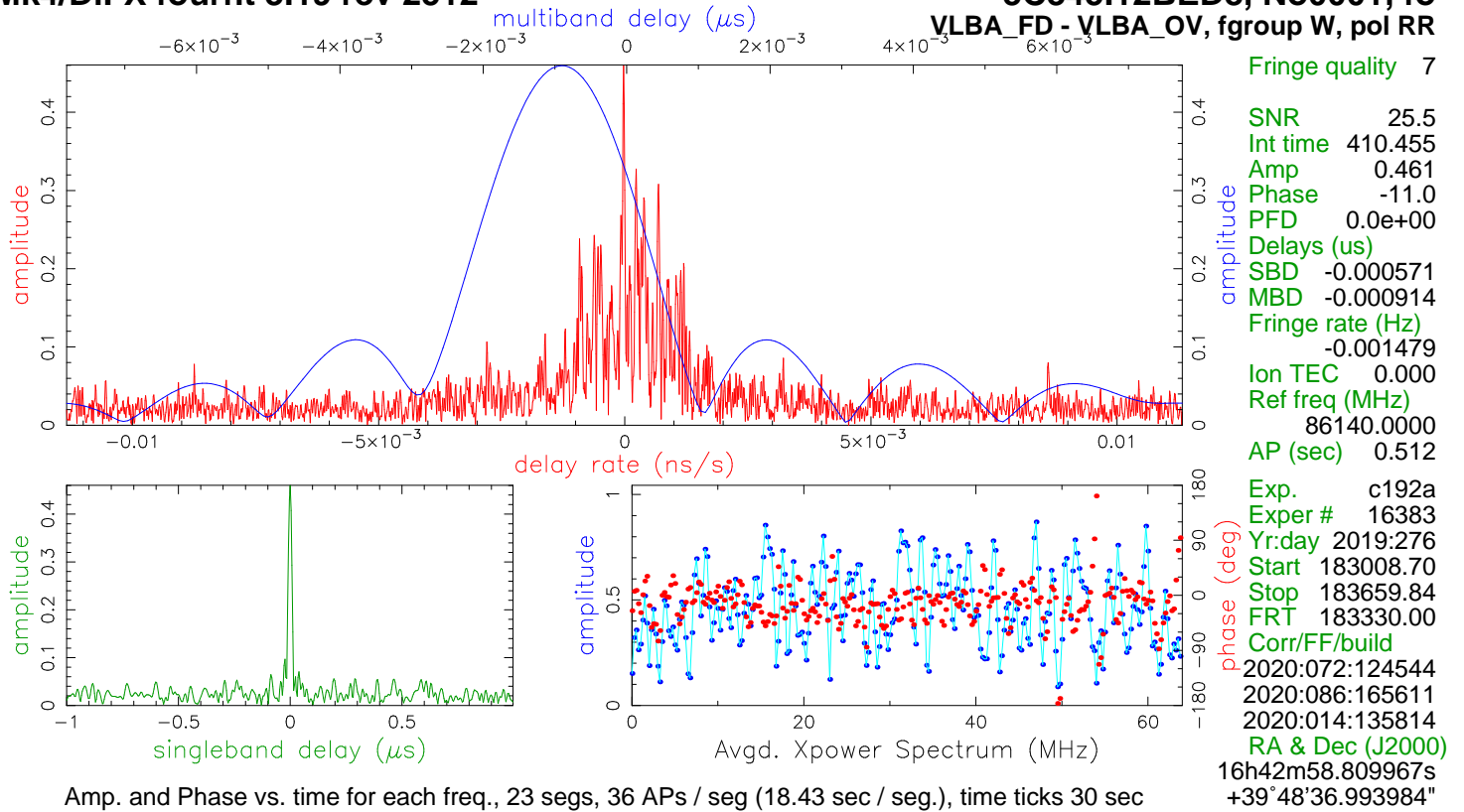


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-90.0	-114.2	-88.3	-101.9	-66.9	-62.6	-61.8	-122.9	Phase	-89.7
	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	Ampl.	0.1
	442.0	273.6	333.7	488.5	265.4	302.7	280.1	138.9	Sbd box	490.1
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

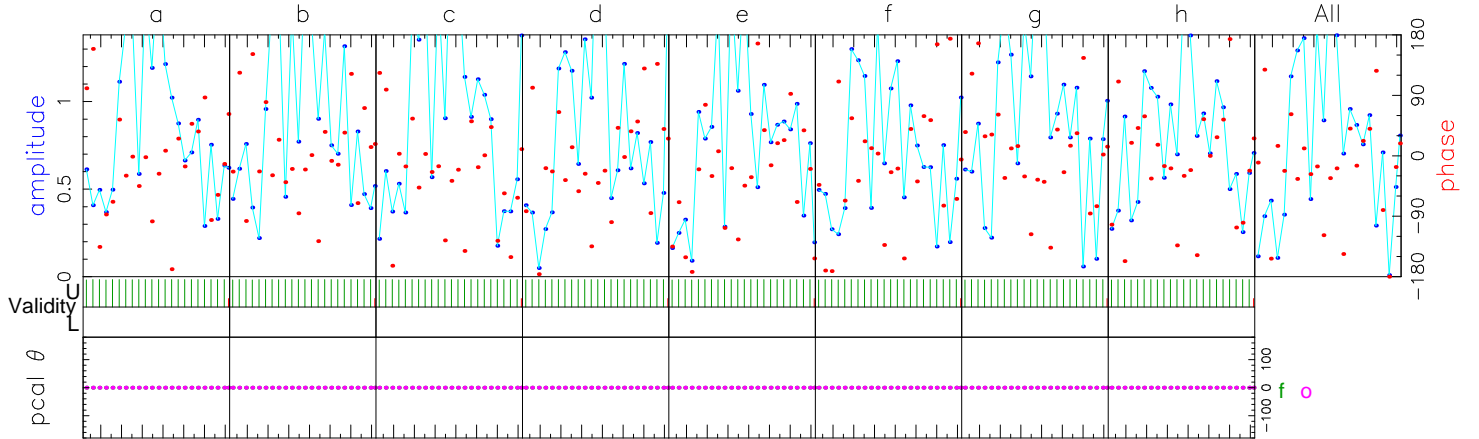
Group delay (usec)(sbd)	-3.57179226518E+03	Apriori delay (usec)	-3.57270176659E+03	Resid mbdelay (usec)	3.25141E-03	+/-	2.0E-04
Sband delay (usec)	-3.57179113259E+03	Apriori clock (usec)	-2.6020557E+01	Resid sbdelay (usec)	9.10634E-01	+/-	1.6E-03
Phase delay (usec)	-3.57270176949E+03	Apriori clockrate (us/s)	-2.2517302E-07	Resid phdelay (usec)	-2.89390E-06	+/-	6.7E-07
Delay rate (us/s)	2.24323538747E-01	Apriori rate (us/s)	2.24320315735E-01	Resid rate (us/s)	3.22301E-06	+/-	2.8E-09
Total phase (deg)	-152.5	Apriori accel (us/s/s)	7.56842907894E-06	Resid phase (deg)	-89.7	+/-	20.7
RMS	53.7	Theor.	49.5	Amplitude	0.104 +/- 0.019		
ph/seg (deg)	66.6	Search (2048X32)	0.098	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	66.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
ph/frq (deg)	25.5	Inc. seg. avg.	0.096	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.4	Inc. frq. avg.	0.098	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
				Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2 n: az 74.7 el 50.6 pa -69.4 u,v (fr/asec) -1661.023 -549.903 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fn..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fn.W.93.12BED8



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-12.8	-4.5	-15.0	-13.0	-14.8	-8.5	-12.1	-5.3	Phase	-11.0
	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.4	Ampl.	0.5
	257.2	256.7	256.9	256.8	256.6	257.2	257.0	256.2	Sbd box	256.9
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.22717447022E+03		Apriori delay (usec)	2.22717538439E+03	Resid mbdelay (usec)	-9.14170E-04	+/-	4.3E-05		
Sband delay (usec)	2.22717481289E+03		Apriori clock (usec)	-1.6174999E+01	Resid sbdelay (usec)	-5.71500E-04	+/-	3.4E-04		
Phase delay (usec)	2.22717538403E+03		Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	-3.53738E-07	+/-	1.4E-07		
Delay rate (us/s)	-6.53444916950E-03		Apriori rate (us/s)	-6.53443200115E-03	Resid rate (us/s)	-1.71684E-08	+/-	6.1E-10		
Total phase (deg)	209.0		Apriori accel (us/s/s)	-1.88137562833E-05	Resid phase (deg)	-11.0	+/-	4.5		

RMS Theor. Amplitude 0.461 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

ph/seg (deg) 78.2 10.8 Search (2048X32) 0.448 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

amp/seg (%) 121.6 18.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

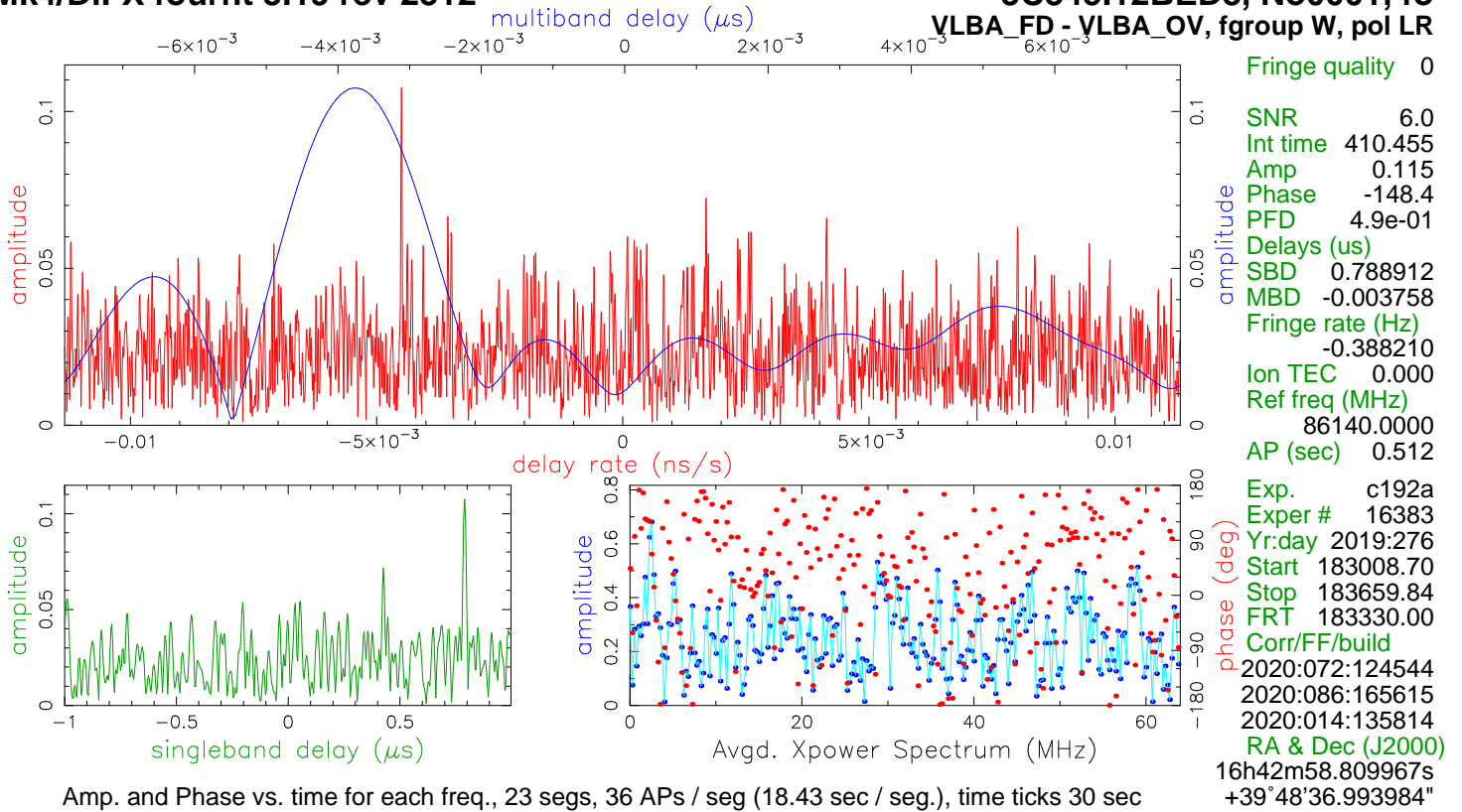
ph/frq (deg) 4.5 6.4 Inc. seg. avg. 0.751 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011

amp/frq (%) 13.9 11.1 Inc. frq. avg. 0.458 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

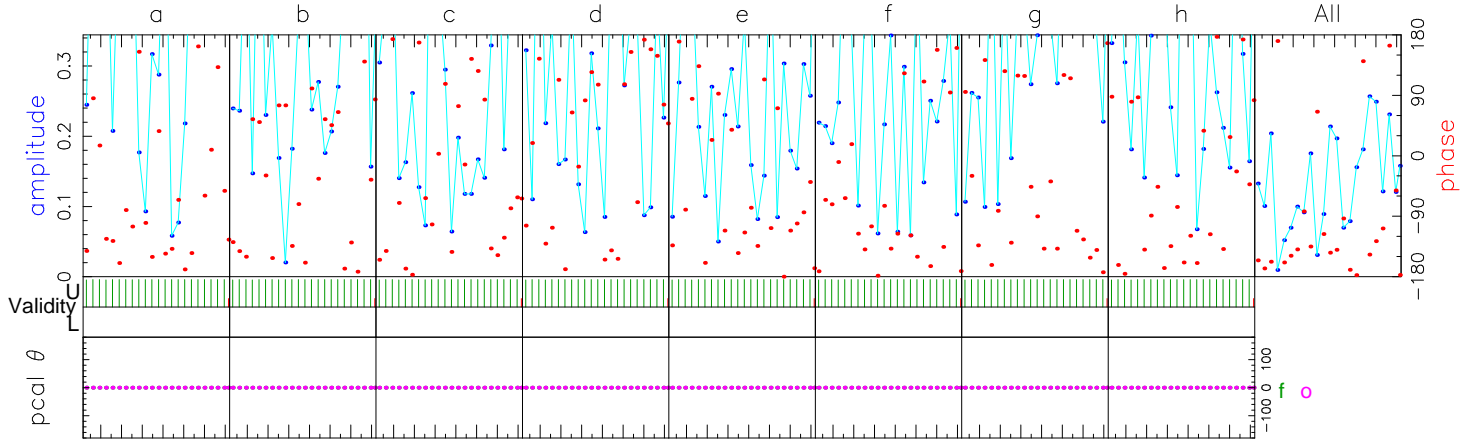
f: az 61.0 el 37.1 pa -78.2 o: az 60.7 el 29.9 pa -64.6 u,v (fr/asec) 14.933 -1880.128 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fo..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fo.W.111.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fo
VLBA_FD - VLBA_OV, fgroup W, pol LR

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-131.1	-178.5	-133.5	164.6	-119.4	-130.9	-160.9	-139.0	Phase	-148.4
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	Ampl.	0.1
	458.2	484.6	460.8	300.3	175.9	406.2	198.9	366.2	Sbd box	459.0
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	2.22796850144E+03	Apriori delay (usec)	2.22717538439E+03	Resid mbdelay (usec)	-3.75795E-03	+/-	1.8E-04
Sband delay (usec)	2.22796429664E+03	Apriori clock (usec)	-1.6174999E+01	Resid sbdelay (usec)	7.88912E-01	+/-	1.4E-03
Phase delay (usec)	2.22717537960E+03	Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	-4.78690E-06	+/-	6.2E-07
Delay rate (us/s)	-6.53893872875E-03	Apriori rate (us/s)	-6.53443200115E-03	Resid rate (us/s)	-4.50673E-06	+/-	2.6E-09
Total phase (deg)	71.5	Apriori accel (us/s/s)	-1.88137562833E-05	Resid phase (deg)	-148.4	+/-	19.2

	RMS	Theor.	Amplitude	0.115 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	48.6	46.1	Search (2048X32)	0.106	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	69.2	80.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	29.0	27.2	Inc. seg. avg.	0.108	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	25.5	47.5	Inc. frq. avg.	0.113	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

o: az 60.7 el 29.9 pa -64.6

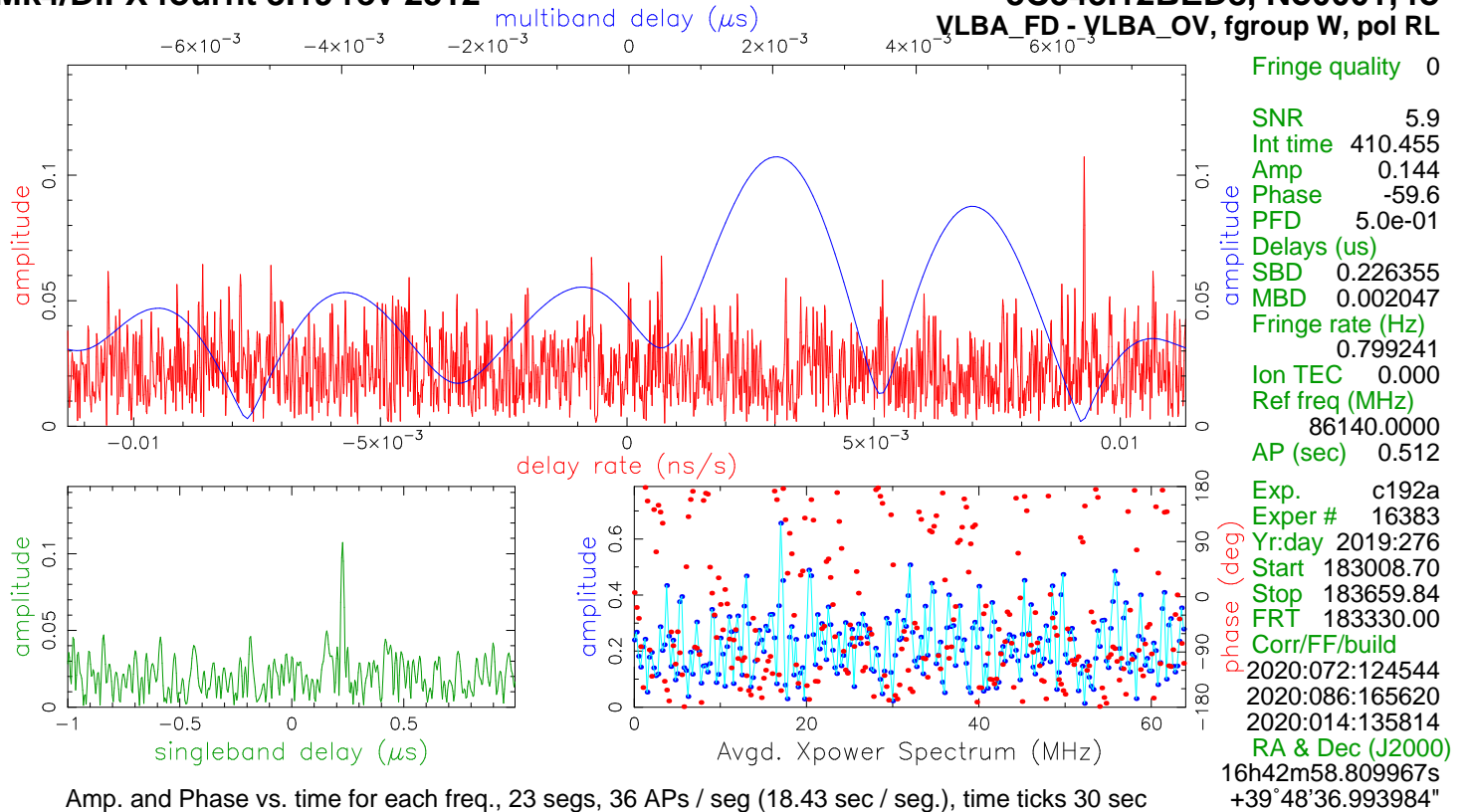
u,v (fr/asec) 14.933 -1880.128

simultaneous interpolator

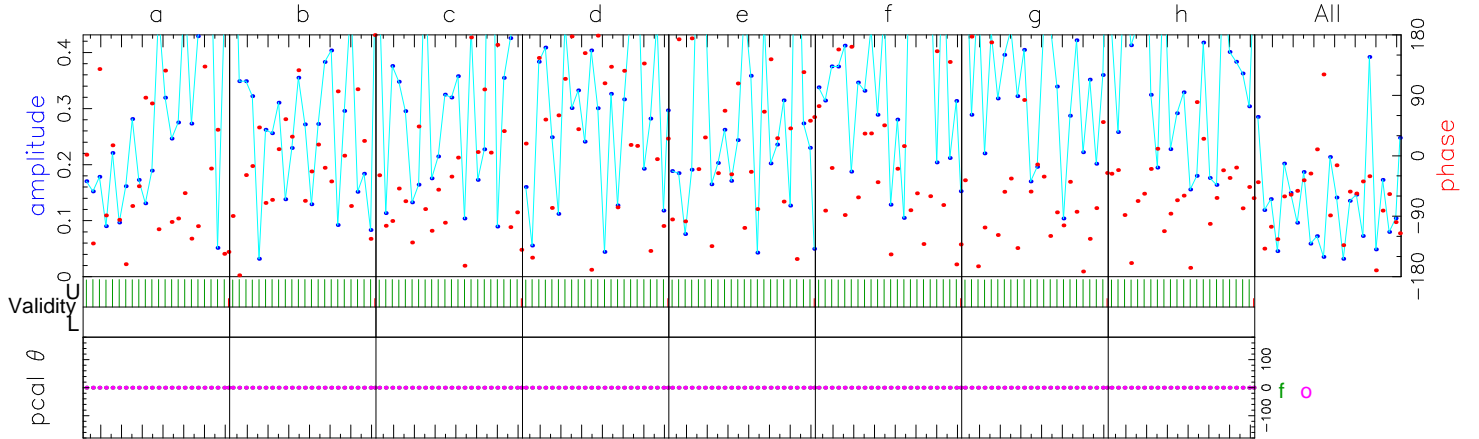
Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fo..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fo.W.133.12BED8



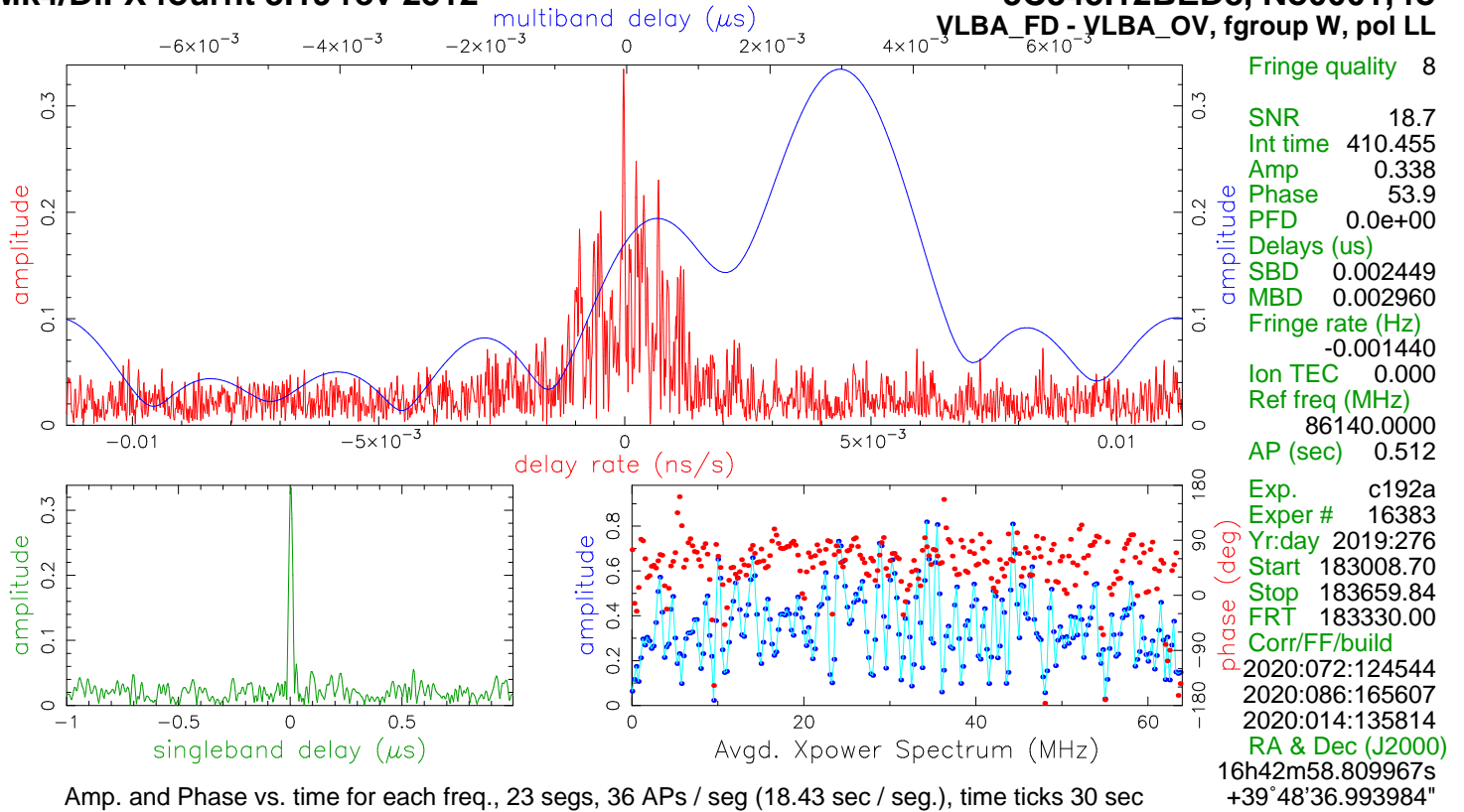
Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



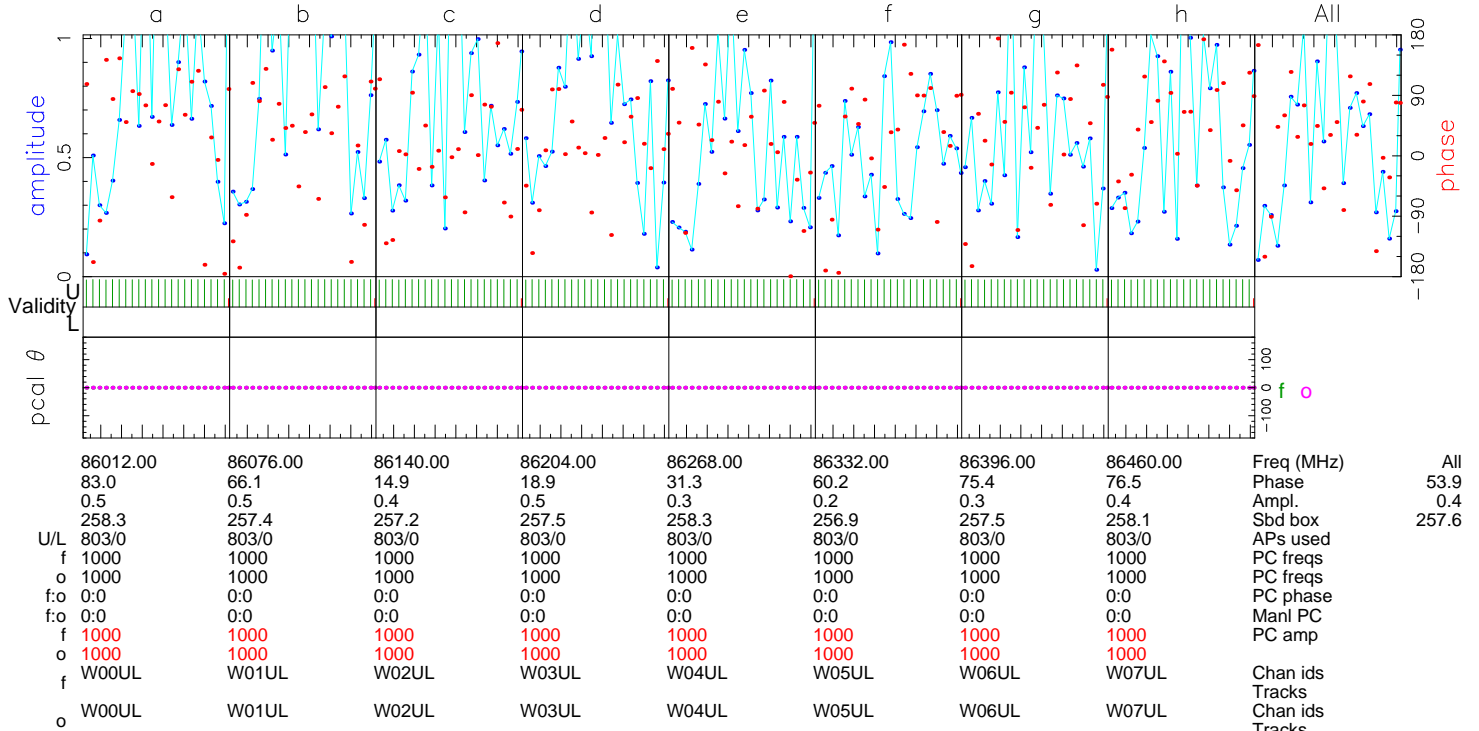
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-101.6	-36.6	-57.4	97.1	-12.3	-60.5	-85.2	-54.5	Phase	-59.6
	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.3	Ampl.	0.2
	145.4	209.6	321.0	426.3	425.8	234.4	478.7	314.6	Sbd box	314.9
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.22739618129E+03	2.22740173939E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.04690E-03	+/- 1.8E-04
Sband delay (usec)	2.22740173939E+03	2.22740173939E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.26355E-01	+/- 1.4E-03
Phase delay (usec)	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	2.22717538246E+03	-1.92293E-06	+/- 6.2E-07
Delay rate (us/s)	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	-6.52515360422E-03	9.27840E-06	+/- 2.6E-09
Total phase (deg)	160.4	160.4	160.4	160.4	160.4	160.4	160.4	160.4	-59.6	+/- 19.3
ph/seg (deg)	58.6	46.2	46.2	46.2	46.2	46.2	46.2	46.2	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	83.5	80.6	80.6	80.6	80.6	80.6	80.6	80.6	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	70.5	27.2	27.2	27.2	27.2	27.2	27.2	27.2	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	62.5	47.5	47.5	47.5	47.5	47.5	47.5	47.5	Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011
									Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
									nlags: 256	t_cohere infinite
f: az 61.0 el 37.1 pa -78.2										
o: az 60.7 el 29.9 pa -64.6										
u,v (fr/asec) 14.933 -1880.128										
Control file: cf_1234_gmva										
Input file: /Exps/c192a/v1_PV/1234/No0001/fo..12BED8										
Output file: /Exps/c192a/v1_PV/1234/No0001/fo.W.152.12BED8										

simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

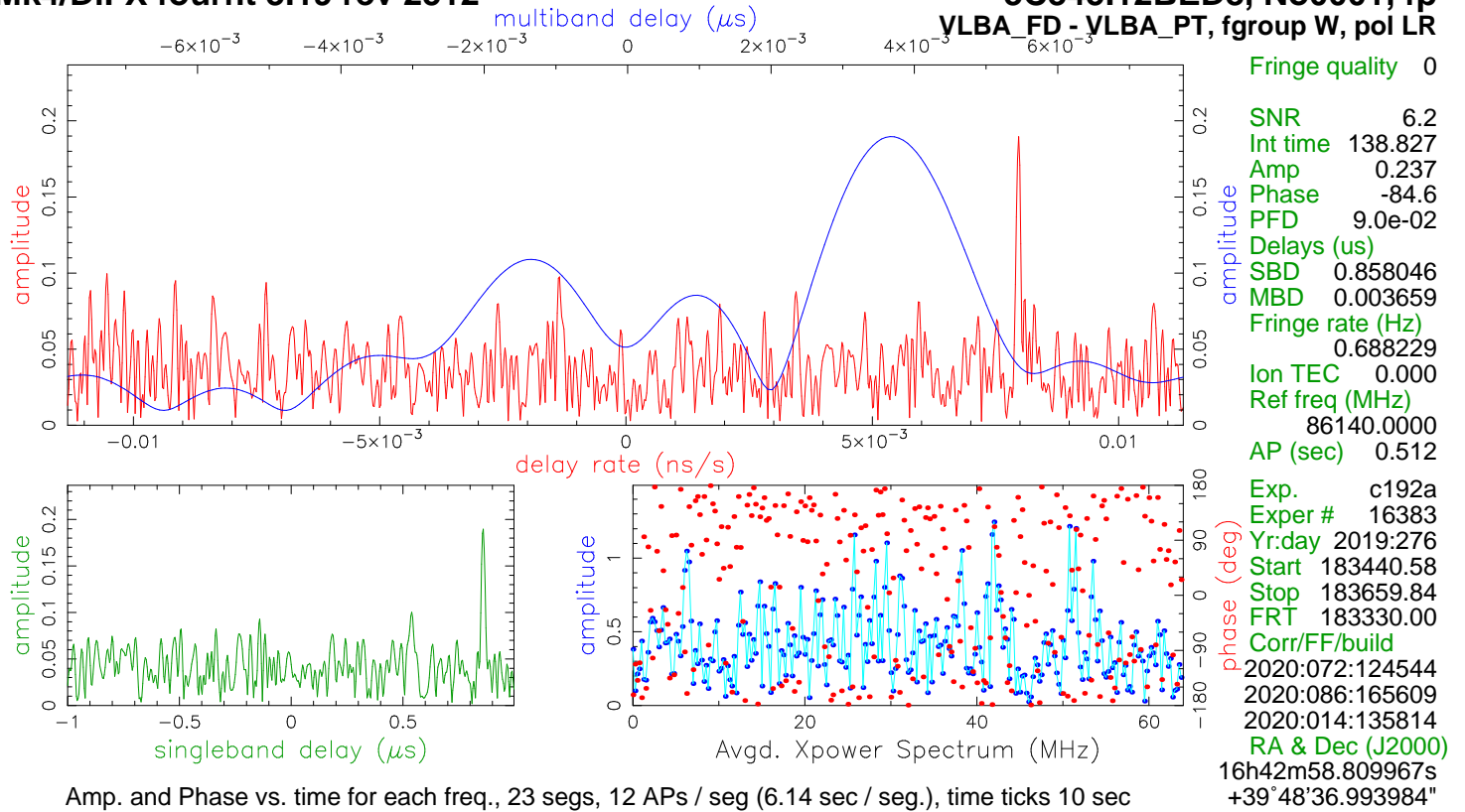
3C345.12BED8, No0001, fo
VLBA_FD - VLBA_OV, fgroup W, pol LL

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec

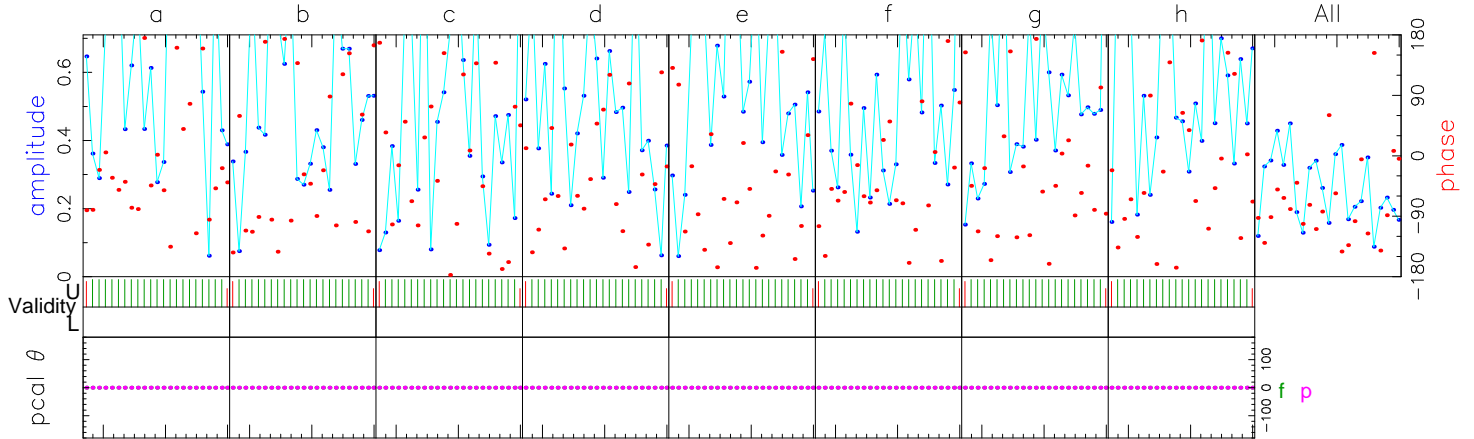


Group delay (usec)(sbd)	2.22717834482E+03	Apriori delay (usec)	2.22717538439E+03	Resid mbdelay (usec)	2.96043E-03	+/-	5.8E-05
Sband delay (usec)	2.22717783339E+03	Apriori clock (usec)	-1.6174999E+01	Resid sbdelay (usec)	2.44900E-03	+/-	4.6E-04
Phase delay (usec)	2.22717538613E+03	Apriori clockrate (us/s)	-9.1930498E-08	Resid phdelay (usec)	1.73956E-06	+/-	2.0E-07
Delay rate (us/s)	-6.53444871248E-03	Apriori rate (us/s)	-6.53443200115E-03	Resid rate (us/s)	-1.67113E-08	+/-	8.3E-10
Total phase (deg)	273.9	Apriori accel (us/s/s)	-1.88137562833E-05	Resid phase (deg)	53.9	+/-	6.1
RMS	Theor.	Amplitude	0.338 +/- 0.018	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	79.5	Search (2048X32)	0.326	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	119.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	29.6	Inc. seg. avg.	0.544	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	30.9	Inc. frq. avg.	0.369	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00
f: az 61.0 el 37.1 pa -78.2		o: az 60.7 el 29.9 pa -64.6		u,v (fr/asec)	14.933 -1880.128		simultaneous interpolator
Control file: cf_1234_gmva		Input file: /Exps/c192a/v1_PV/1234/No0001/fo..12BED8		Output file: /Exps/c192a/v1_PV/1234/No0001/fo.W.91.12BED8			

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fp
VLBA_FD - VLBA_PT, fgroup W, pol LR

Amp. and Phase vs. time for each freq., 23 segs, 12 APs / seg (6.14 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-61.3	-125.6	97.7	-76.4	-92.3	-69.9	-73.2	-95.1	Phase	-84.6
	0.4	0.3	0.0	0.2	0.3	0.3	0.3	0.2	Ampl.	0.2
	476.0	324.1	359.7	473.2	475.1	264.1	72.1	199.4	Sbd box	476.7
U/L	272/0	272/0	272/0	272/0	272/0	272/0	272/0	272/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	4.01084057932E+02		Apriori delay (usec)	4.00221023997E+02	Resid mbdelay (usec)	3.65894E-03	+/-	1.8E-04		
Sband delay (usec)	4.01079070497E+02		Apriori clock (usec)	-1.1451123E+01	Resid sbdelay (usec)	8.58046E-01	+/-	1.4E-03		
Phase delay (usec)	4.00221021269E+02		Apriori clockrate (us/s)	-2.9483610E-07	Resid phdelay (usec)	-2.72812E-06	+/-	6.0E-07		
Delay rate (us/s)	7.89453625839E-03		Apriori rate (us/s)	7.88654660518E-03	Resid rate (us/s)	7.98965E-06	+/-	7.5E-09		
Total phase (deg)	-82.0		Apriori accel (us/s/s)	-6.08685133288E-06	Resid phase (deg)	-84.6	+/-	18.6		
RMS	56.7	Theor. 44.6	Amplitude	0.237 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	64.3	77.8	Search (1024X32)	0.186	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	64.3	77.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	75.7	26.3	Inc. seg. avg.	0.248	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	40.9	45.9	Inc. frq. avg.	0.235	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00	
f: az 61.0 el 37.1 pa -78.2			p: az 62.4 el 35.8 pa -72.8							simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192a/v1_PV/1234/No0001/fp.12BED8							
			Output file: /Exps/c192a/v1_PV/1234/No0001/fp.W.103.12BED8							

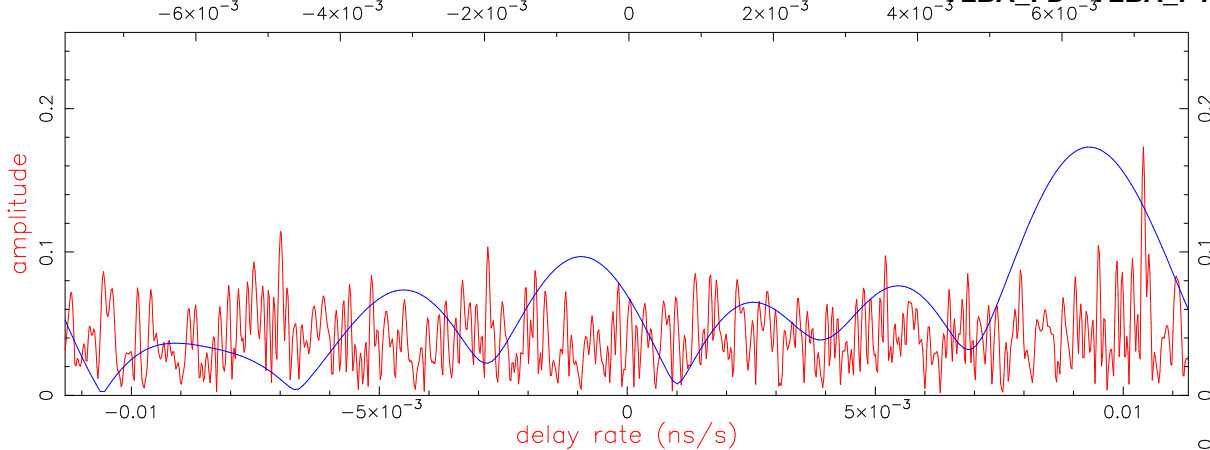
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fp

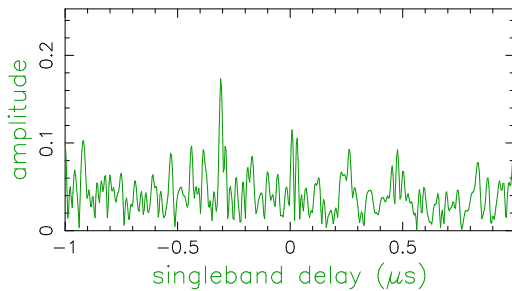
VLBA_FD - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

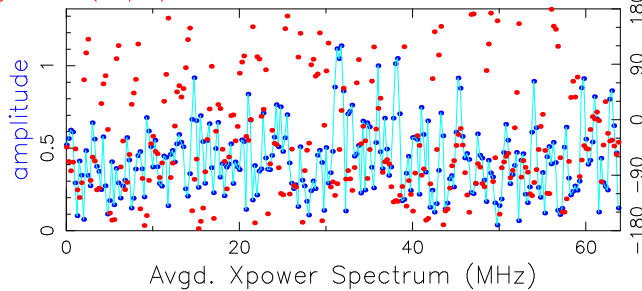
Fringe quality 0



SNR 5.6
Int time 138.827
Amp 0.253
Phase -89.1
PFD 9.3e-01
Delays (us)
SBD -0.307894
MBD 0.006398
Fringe rate (Hz)
0.898660
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

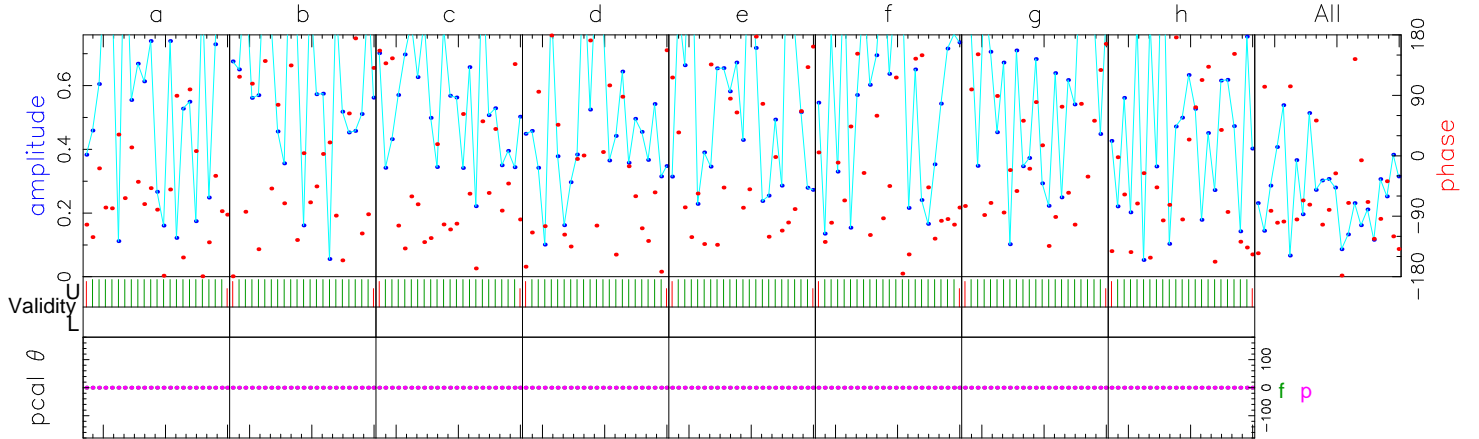


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183440.58
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165612
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 12 APs / seg (6.14 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	-71.1	-130.2	-95.9	-103.9	-85.7	-97.3	-27.8	-110.2	Phase	-89.1
f	0.6	0.2	0.3	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
p	179.0	182.4	289.9	67.2	91.1	500.1	317.7	474.8	Sbd box	178.2
f:p	272/0	272/0	272/0	272/0	272/0	272/0	272/0	272/0	APs used	
f:p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.99914922284E+02		Apriori delay (usec)	4.00221023997E+02	Resid mbdelay (usec)	6.39829E-03	+/-	1.9E-04		
Sband delay (usec)	3.99913130497E+02		Apriori clock (usec)	-1.1451123E+01	Resid sbdelay (usec)	-3.07894E-01	+/-	1.5E-03		
Phase delay (usec)	4.00221021124E+02		Apriori clockrate (us/s)	-2.9483610E-07	Resid phdelay (usec)	-2.87342E-06	+/-	6.6E-07		
Delay rate (us/s)	7.89697916099E-03		Apriori rate (us/s)	7.88654660518E-03	Resid rate (us/s)	1.04326E-05	+/-	8.2E-09		
Total phase (deg)	-86.5		Apriori accel (us/s/s)	-6.08685133288E-06	Resid phase (deg)	-89.1	+/-	20.5		

RMS Theor. Amplitude 0.253 +/- 0.045 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 73.7 49.1 Search (1024X32) 0.168 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 87.5 85.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg) 33.1 28.9 Inc. seg. avg. 0.282 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
amp/frq (%) 48.0 50.5 Inc. frq. avg. 0.247 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 61.0 el 37.1 pa -78.2

p: az 62.4 el 35.8 pa -72.8

u,v (fr/asec) -70.059 -764.932

simultaneous interpolator

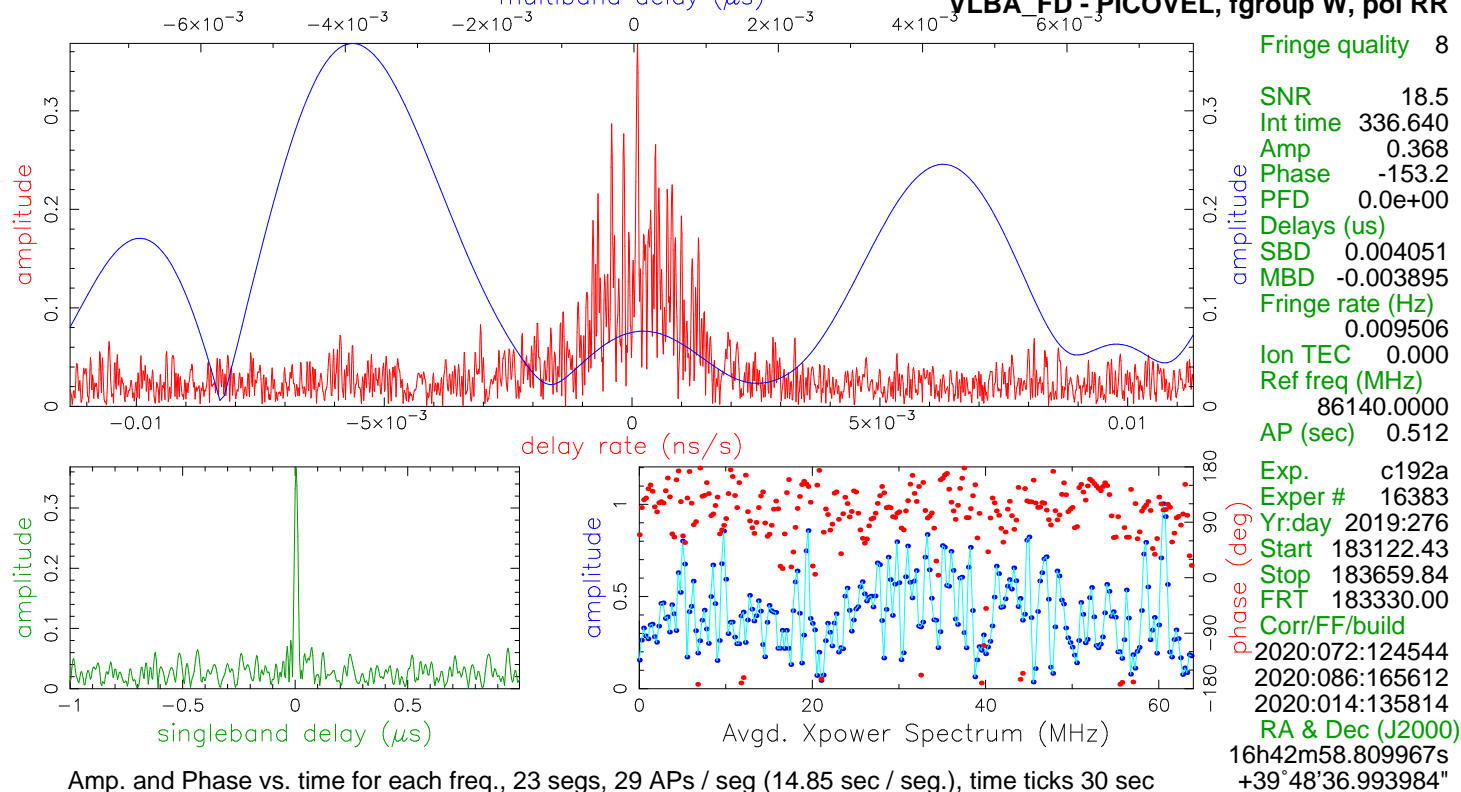
Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fp..12BED8

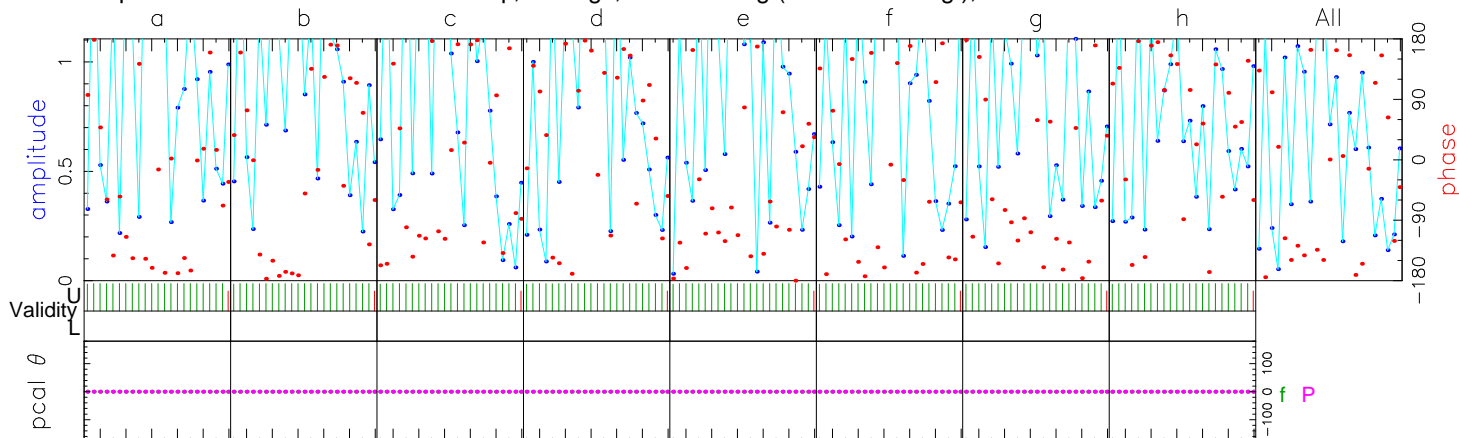
Output file: /Exps/c192a/v1_PV/1234/No0001/fp.W.116.12BED8

multiband delay (μs)

3C345.12BED8, No0001, fP
VLBA_FD - PICOVEL, fgroup W, pol RR

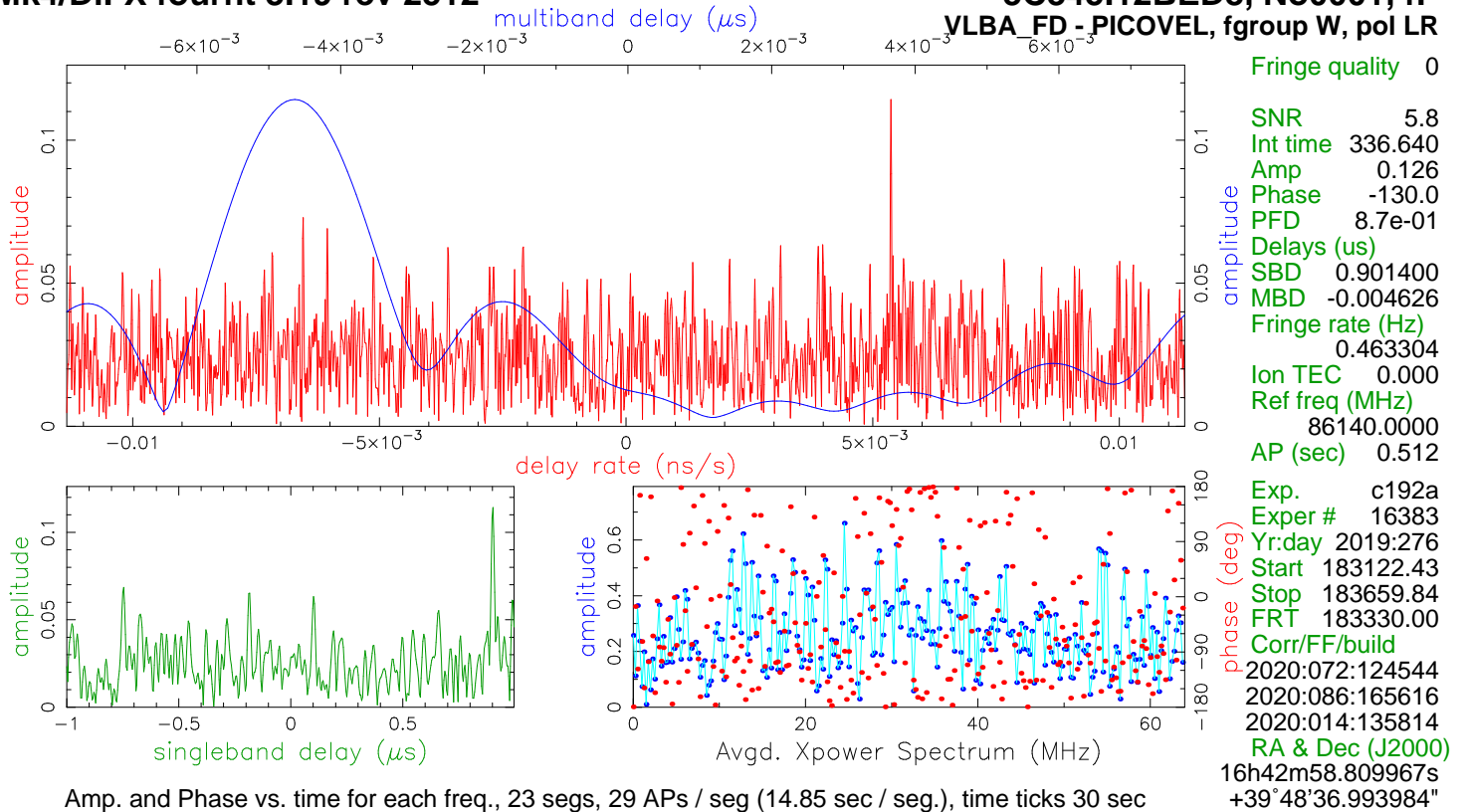


Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec

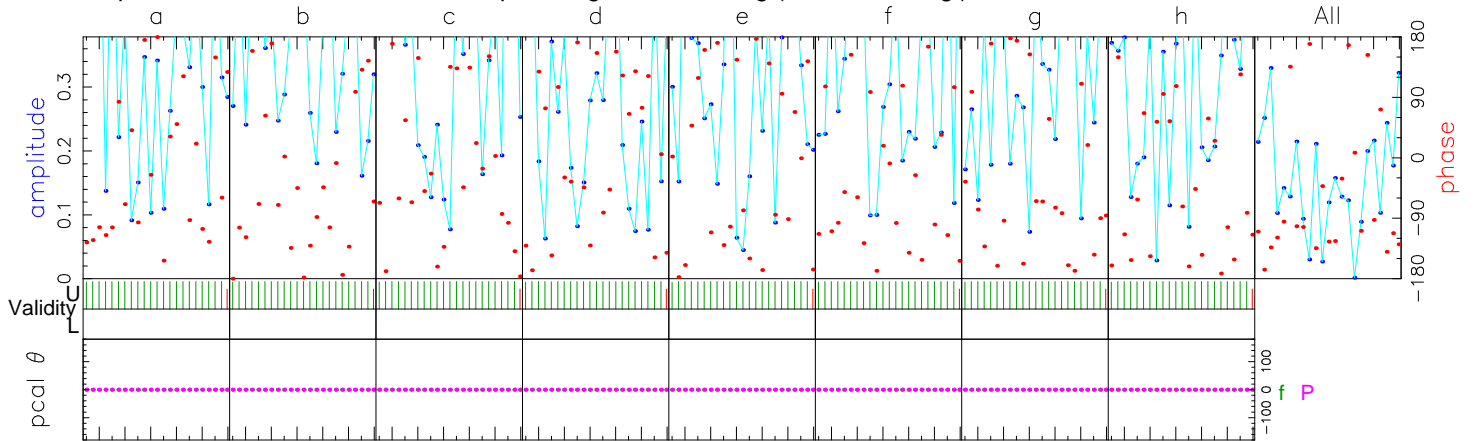


U/L	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-145.6	177.8	-130.6	159.6	-100.1	-156.2	-111.8	141.1	Phase	-153.2		
	0.4	0.5	0.6	0.5	0.5	0.5	0.4	0.3	Ampl.	0.5		
	257.6	257.7	257.3	257.3	257.4	257.4	256.8	256.0	Sbd box	258.0		
	659/0	659/0	659/0	659/0	659/0	659/0	659/0	659/0	APs used			
	f 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	P 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	f:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
	f:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC			
	f 1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
P 1000	1000	1000	1000	1000	1000	1000	1000					
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)		-5.69764062591E+03		Apriori delay (usec)		-5.69765235591E+03		Resid mbdelay (usec)		-3.89500E-03	+/-	5.9E-05
Sband delay (usec)		-5.69764830466E+03		Apriori clock (usec)		5.4474944E-01		Resid sbdelay (usec)		4.05125E-03	+/-	4.7E-04
Phase delay (usec)		-5.69765236085E+03		Apriori clockrate (us/s)		2.6205050E-07		Resid phdelay (usec)		-4.94150E-06	+/-	2.0E-07
Delay rate (us/s)		1.48892330417E+00		Apriori rate (us/s)		1.48892319381E+00		Resid rate (us/s)		1.10354E-07	+/-	1.0E-09
Total phase (deg)		-130.9		Apriori accel (us/s/s)		2.35697441985E-05		Resid phase (deg)		-153.2	+/-	6.2
		RMS	Theor.	Amplitude	0.368 +/- 0.020		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)		85.6	14.9	Search (2048X32)	0.368		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000
amp/seg (%)		127.1	25.9	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)		45.6	8.8	Inc. seg. avg.	0.599		Sample rate(MSamp/s): 128				dr window (ns/s)	-0.011 0.011
amp/frq (%)		30.4	15.3	Inc. frq. avg.	0.457		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
f: az 61.0 el 37.1 pa -78.2		P: az 286.6 el 62.3 pa 84.7		u,v (fr/asec) -11055.496 1041.055		simultaneous interpolator						
Control file: cf. 1234 gmva		Input file: /Exps/c192a/v1_PV/1234/No0001/fP..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fP.W.117.12BED8										

Mk4/DiFX fourfit 3.19 rev 2512

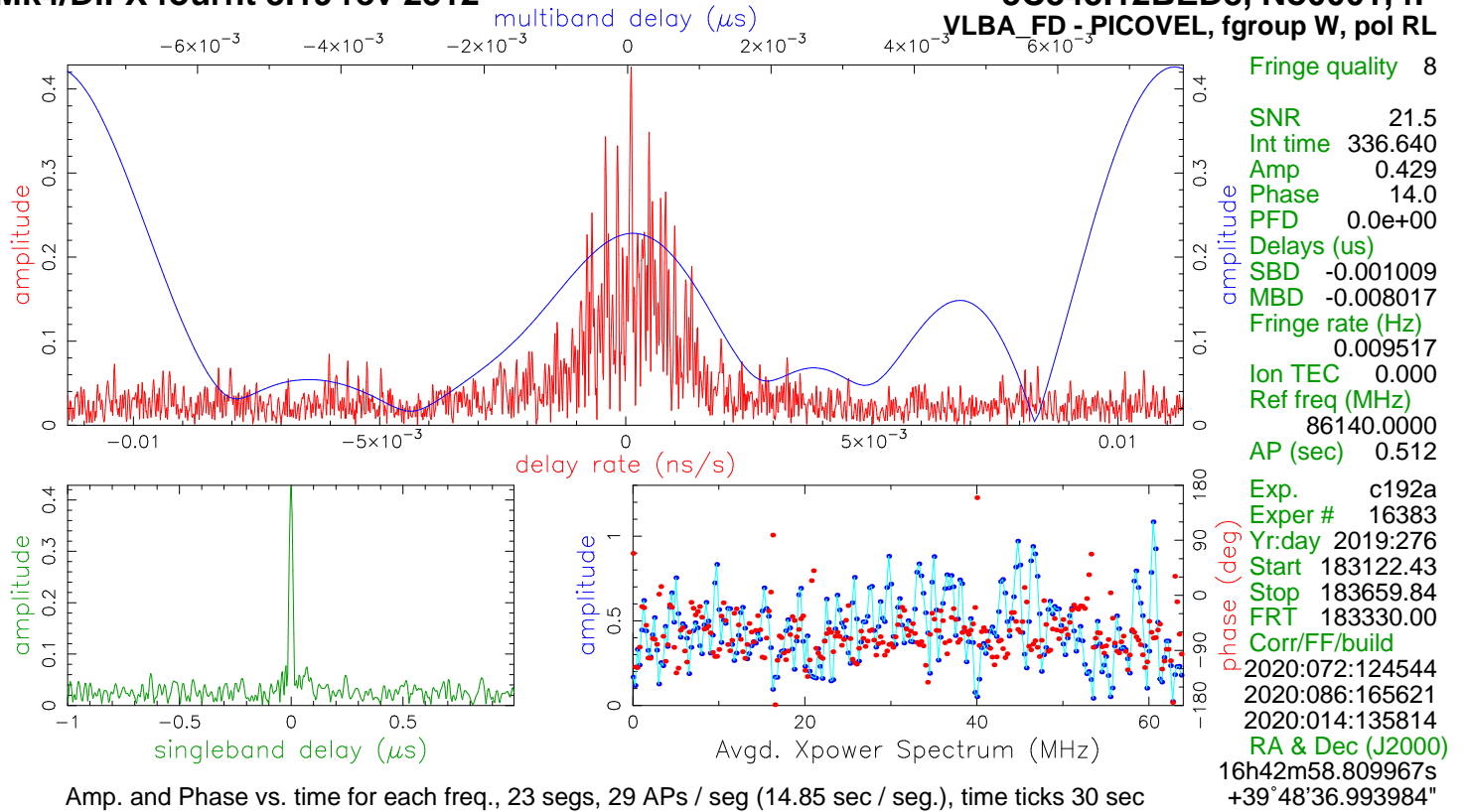
3C345.12BED8, No0001, fP
VLBA_FD - PICOVEL, fgroup W, pol LR

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec

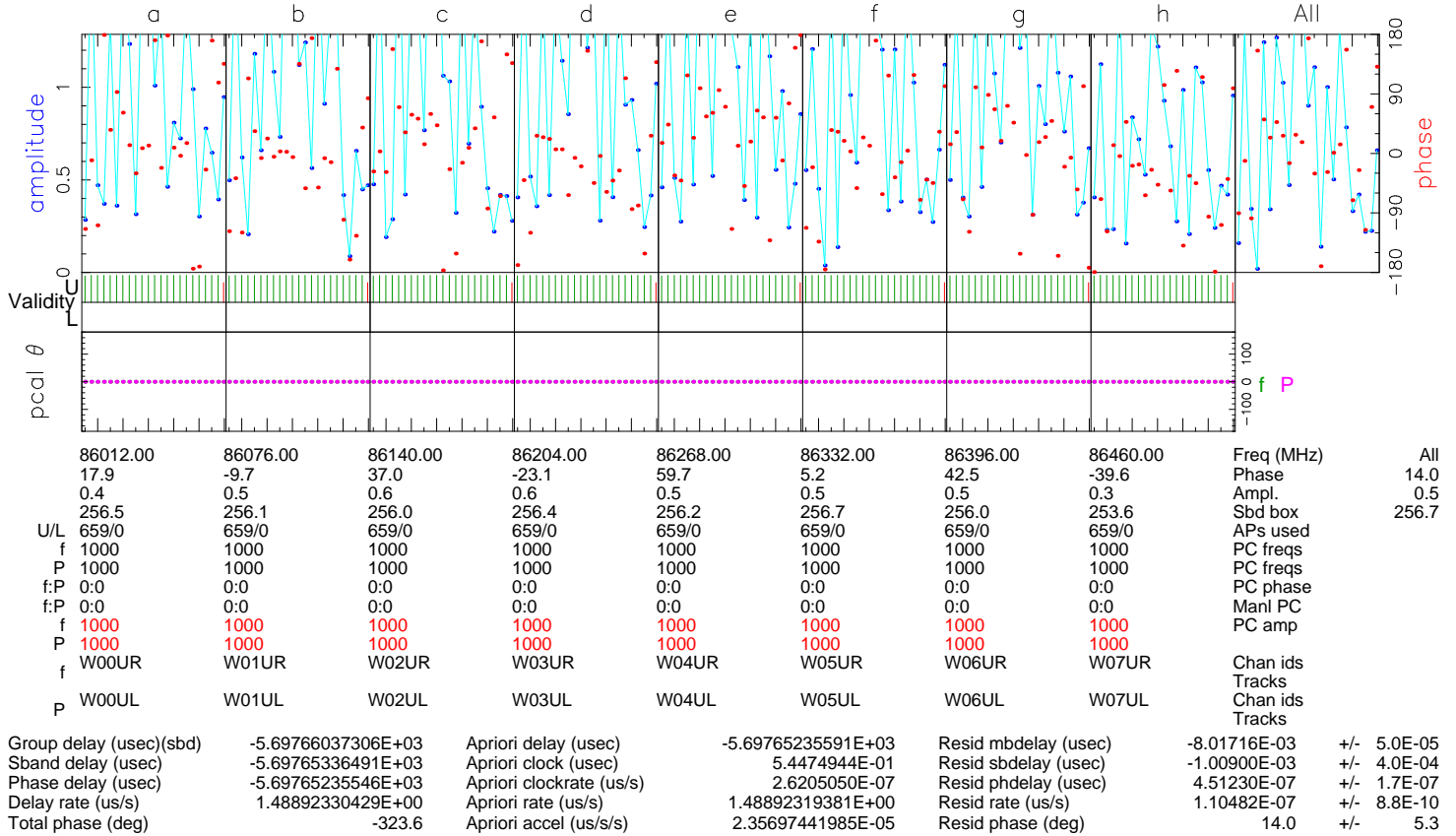


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-120.7	-125.0	-116.3	-156.7	-167.0	-120.3	-116.9	-133.8	Phase	-130.0		
	0.1	0.2	0.1	0.1	0.1	0.2	0.2	0.1	Ampl.	0.1		
	502.0	312.6	155.1	303.8	471.4	401.2	390.5	510.0	Sbd box	487.8		
U/L	659/0	659/0	659/0	659/0	659/0	659/0	659/0	659/0	APs used			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
f:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC			
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
P	1000	1000	1000	1000	1000	1000	1000	1000				
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
									Tracks			
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
									Tracks			
Group delay (usec)(sbd)	-5.69675073183E+03			Apriori delay (usec)		-5.69765235591E+03		Resid mbdelay (usec)		-4.62592E-03	+/-	1.9E-04
Sband delay (usec)	-5.69675095591E+03			Apriori clock (usec)		5.4474944E-01		Resid sbdelay (usec)		9.01400E-01	+/-	1.5E-03
Phase delay (usec)	-5.69765236010E+03			Apriori clockrate (us/s)		2.6205050E-07		Resid phdelay (usec)		-4.19217E-06	+/-	6.4E-07
Delay rate (us/s)	1.48892857232E+00			Apriori rate (us/s)		1.48892319381E+00		Resid rate (us/s)		5.37850E-06	+/-	3.3E-09
Total phase (deg)	-107.6			Apriori accel (us/s/s)		2.35697441985E-05		Resid phase (deg)		-130.0	+/-	19.9
	RMS	Theor.	Amplitude	0.126 +/- 0.022		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	63.3	47.7	Search (2048X32)	0.113		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
amp/seg (%)	80.7	83.2	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	21.1	28.1	Inc. seg. avg.	0.127		Sample rate(MISamp/s): 128				dr window (ns/s)	-0.011	0.011
amp/frq (%)	19.9	49.1	Inc. frq. avg.	0.117		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
f: az 61.0 el 37.1 pa -78.2 P: az 286.6 el 62.3 pa 84.7 u,v (fr/asec) -11055.496 1041.055 simultaneous interpolator												

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fP
VLBA_FD - PICOVEL, fgroup W, pol RL

Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec



ph/seg (deg) 85.7 12.8 Theor. Amplitude 0.429 +/- 0.020

amp/seg (%) 132.9 22.3 Search (2048X32) 0.420

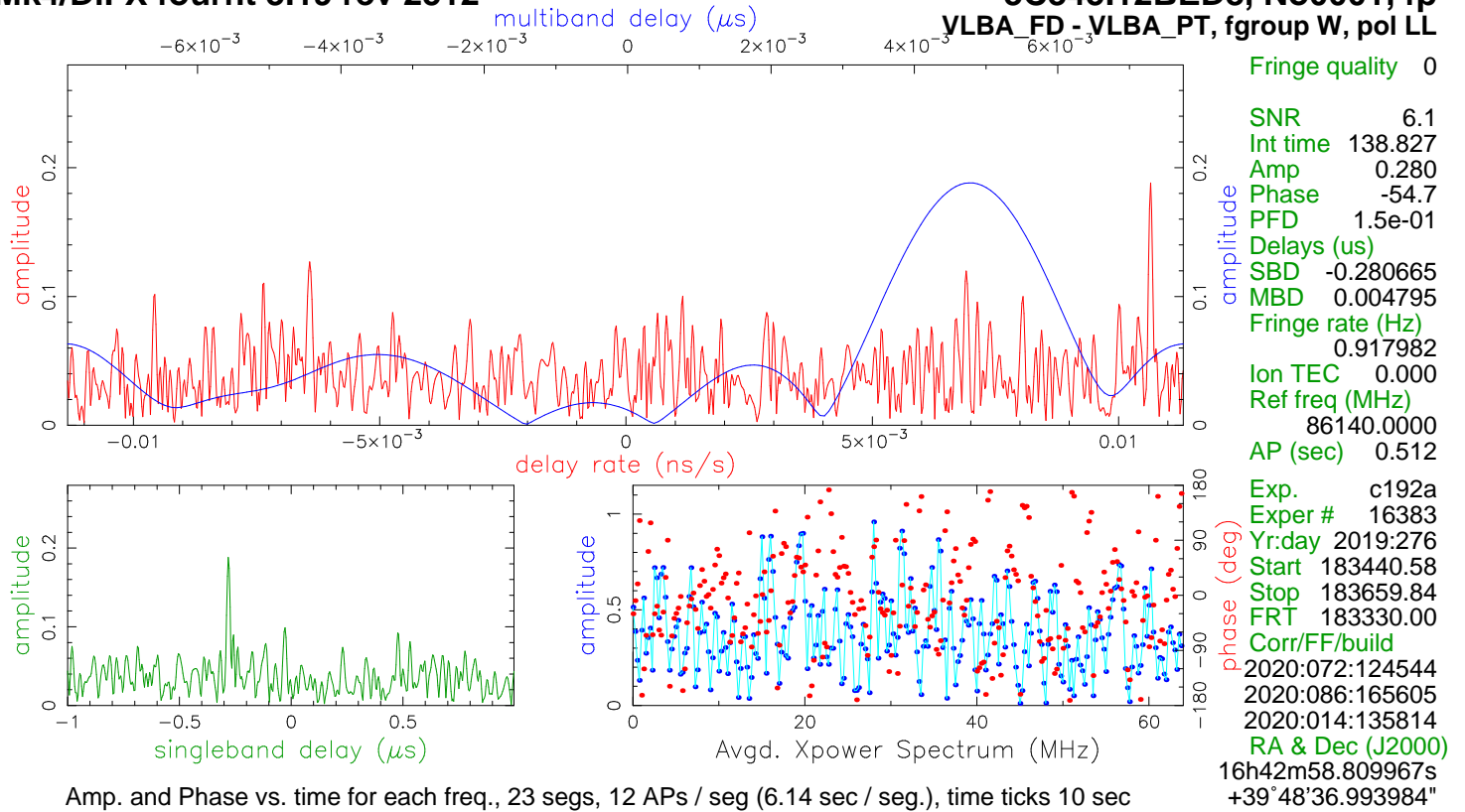
ph/frq (deg) 37.3 7.5 Interp. 0.000

amp/frq (%) 26.6 13.2 Inc. seg. avg. 0.716

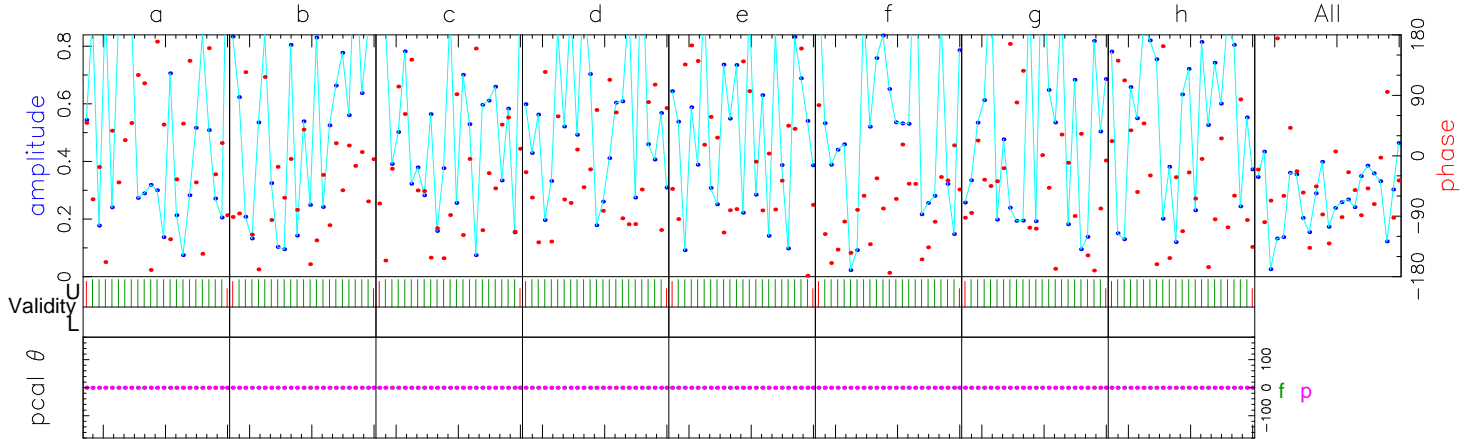
f: az 61.0 el 37.1 pa -78.2 P: az 286.6 el 62.3 pa 84.7 u,v (fr/asec) -11055.496 1041.055

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fP..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fP.W.154.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fp
VLBA_FD - VLBA_PT, fgroup W, pol LL

Amp. and Phase vs. time for each freq., 23 segs, 12 APs / seg (6.14 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-62.0	-43.0	-64.2	-50.1	-62.0	-66.1	-48.2	-51.9	Phase	-54.7
	0.1	0.4	0.2	0.3	0.1	0.4	0.4	0.3	Ampl.	0.3
	302.4	387.9	125.8	213.8	477.3	186.0	206.3	186.8	Sbd box	185.1
U/L	272/0	272/0	272/0	272/0	272/0	272/0	272/0	272/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	3.99944569007E+02		Apriori delay (usec)	4.00221023997E+02	Resid mbdelay (usec)	4.79501E-03	+/-	1.8E-04		
Sband delay (usec)	3.99940358997E+02		Apriori clock (usec)	-1.1451123E+01	Resid sbdelay (usec)	-2.80665E-01	+/-	1.4E-03		
Phase delay (usec)	4.00221022232E+02		Apriori clockrate (us/s)	-2.9483610E-07	Resid phdelay (usec)	-1.76510E-06	+/-	6.1E-07		
Delay rate (us/s)	7.89720346199E-03		Apriori rate (us/s)	7.88654660518E-03	Resid rate (us/s)	1.06569E-05	+/-	7.6E-09		
Total phase (deg)	-52.2		Apriori accel (us/s/s)	-6.08685133288E-06	Resid phase (deg)	-54.7	+/-	18.8		
RMS	58.9	Theor.	Amplitude	0.280 +/- 0.046	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	58.9	45.2	Search (1024X32)	0.184	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	72.9	78.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	9.4	26.7	Inc. seg. avg.	0.308	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	38.0	46.5	Inc. frq. avg.	0.255	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
f: az 61.0 el 37.1 pa -78.2			p: az 62.4 el 35.8 pa -72.8							simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192a/v1_PV/1234/No0001/fp..12BED8							
			Output file: /Exps/c192a/v1_PV/1234/No0001/fp.W.87.12BED8							

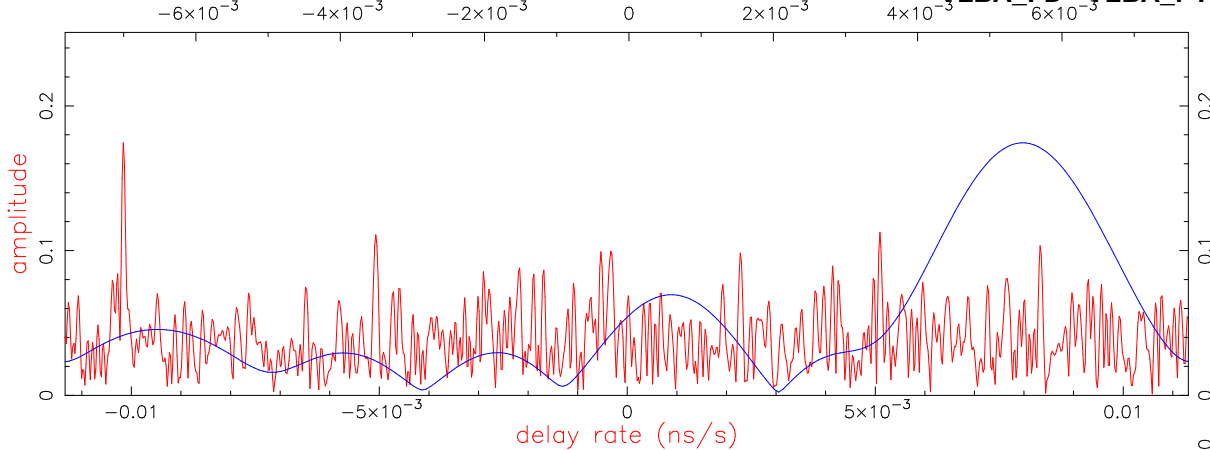
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fp

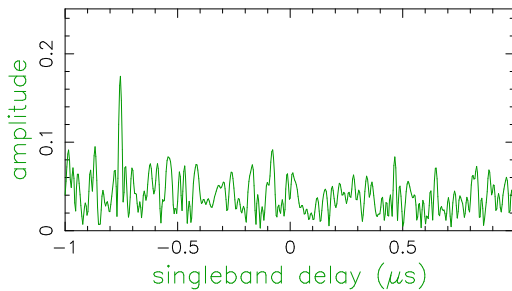
VLBA_FD - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

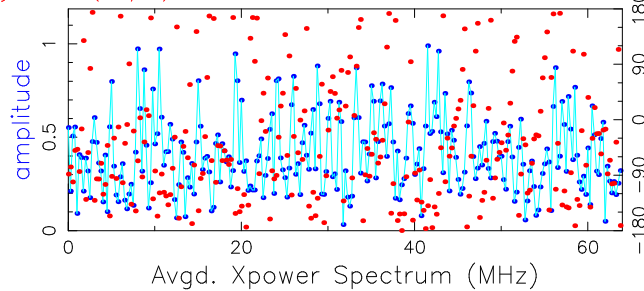
Fringe quality 0



SNR 5.7
Int time 138.827
Amp 0.251
Phase 148.3
PFD 8.6e-01
Delays (us)
SBD -0.754789
MBD 0.005414
Fringe rate (Hz)
-0.877435
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

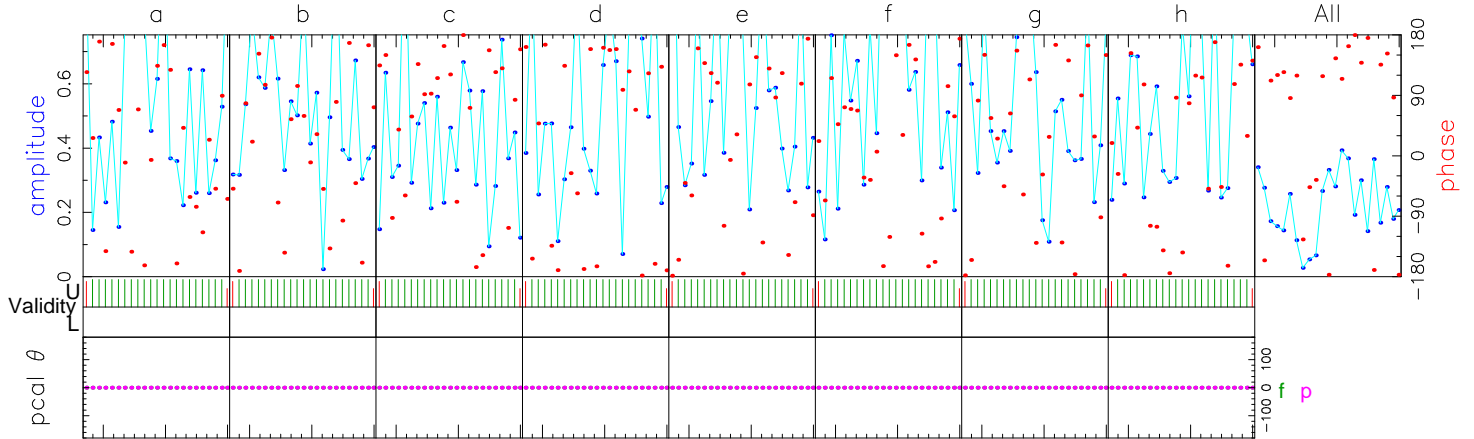


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183440.58
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165607
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 12 APs / seg (6.14 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	164.4	87.3	137.7	168.6	154.4	144.2	163.1	133.8	Phase	148.3
f	0.2	0.2	0.2	0.4	0.3	0.2	0.3	0.3	Ampl.	0.2
p	87.1	50.4	193.8	64.5	403.4	316.8	114.4	39.2	Sbd box	63.8
f:p	272/0	272/0	272/0	272/0	272/0	272/0	272/0	272/0	APs used	
f:p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	3.99460813270E+02	Apriori delay (usec)	4.00221023997E+02	Resid mbdelay (usec)	5.41427E-03	+/-	1.9E-04
Sband delay (usec)	3.99466235497E+02	Apriori clock (usec)	-1.1451123E+01	Resid sbdelay (usec)	-7.54789E-01	+/-	1.5E-03
Phase delay (usec)	4.00221028780E+02	Apriori clockrate (us/s)	-2.9483610E-07	Resid phdelay (usec)	4.78323E-06	+/-	6.5E-07
Delay rate (us/s)	7.87636045878E-03	Apriori rate (us/s)	7.88654660518E-03	Resid rate (us/s)	-1.01861E-05	+/-	8.1E-09
Total phase (deg)	150.9	Apriori accel (us/s/s)	-6.08685133288E-06	Resid phase (deg)	148.3	+/-	20.3

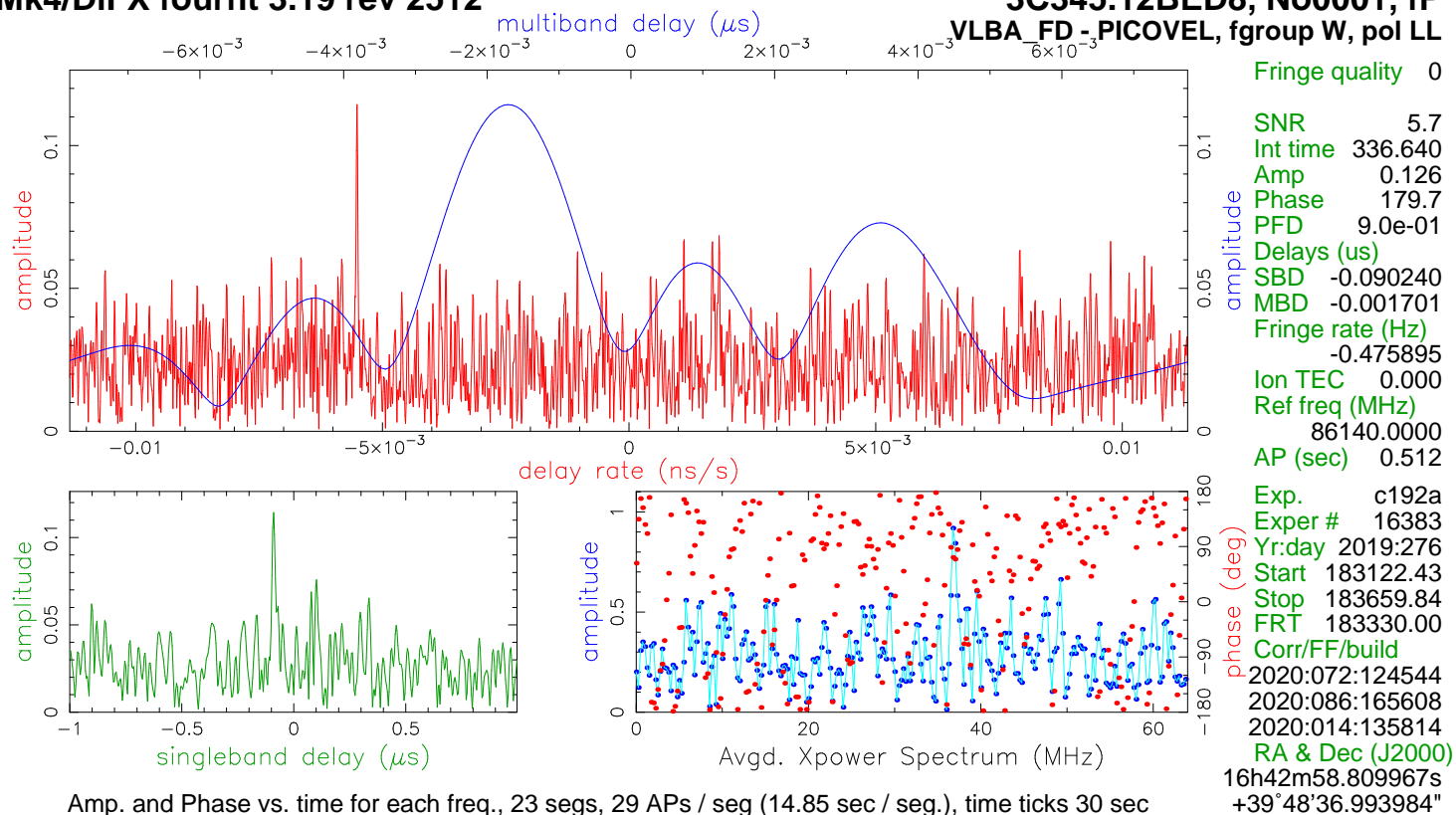
	RMS	Theor.	Amplitude	0.251 +/- 0.044	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	62.5	48.6	Search (1024X32)	0.172	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	64.5	84.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	28.8	28.7	Inc. seg. avg.	0.232	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	34.3	50.0	Inc. frq. avg.	0.239	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2 p: az 62.4 el 35.8 pa -72.8 u,v (fr/asec) -70.059 -764.932 simultaneous interpolator

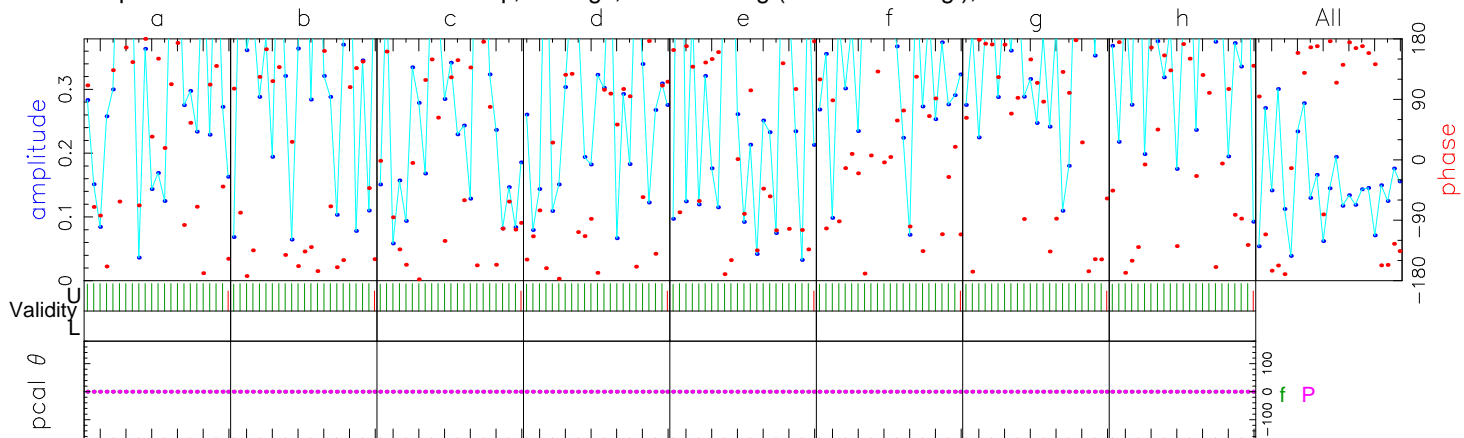
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fp..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fp.W.92.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fP
VLBA_FD - PICOVEL, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 23 segs, 29 APs / seg (14.85 sec / seg.), time ticks 30 sec

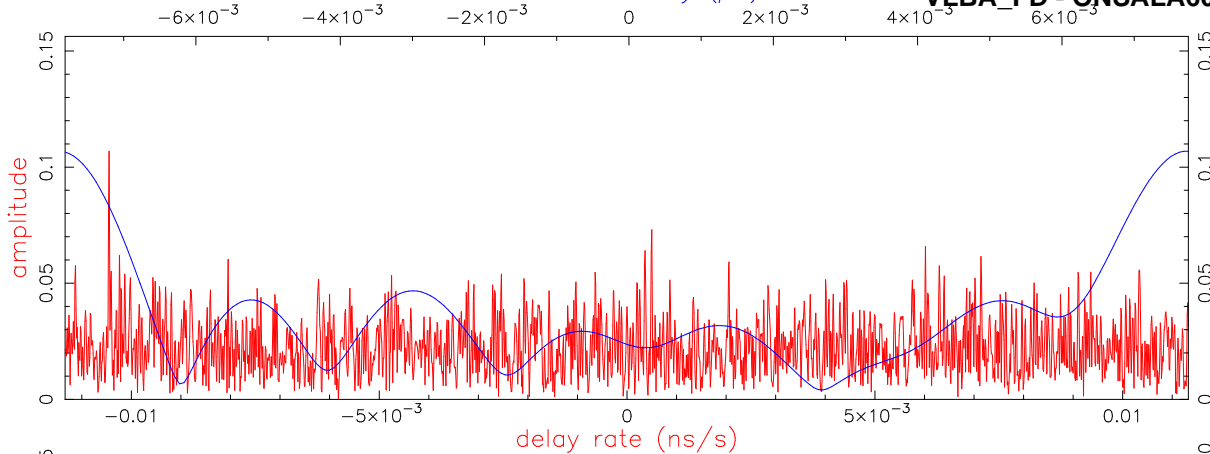


U/L	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	166.7	-169.5	173.5	170.8	-150.3	16.2	166.7	-172.8	Phase	179.7		
	0.1	0.2	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1		
	111.7	234.0	412.0	486.7	260.6	253.4	299.3	18.1	Sbd box	233.9		
	659/0	659/0	659/0	659/0	659/0	659/0	659/0	659/0	APs used			
	f 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	P 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
	f:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
	f:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC			
	f 1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
P 1000	1000	1000	1000	1000	1000	1000	1000					
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)		-5.69774780684E+03		Apriori delay (usec)		-5.69765235591E+03		Resid mbdelay (usec)		-1.70093E-03	+/-	1.9E-04
Sband delay (usec)		-5.69774259566E+03		Apriori clock (usec)		5.4474944E-01		Resid sbdelay (usec)		-9.02397E-02	+/-	1.5E-03
Phase delay (usec)		-5.69765235011E+03		Apriori clockrate (us/s)		2.6205050E-07		Resid phdelay (usec)		5.79583E-06	+/-	6.4E-07
Delay rate (us/s)		1.48891766915E+00		Apriori rate (us/s)		1.48892319381E+00		Resid rate (us/s)		-5.52466E-06	+/-	3.3E-09
Total phase (deg)		-157.9		Apriori accel (us/s/s)		2.35697441985E-05		Resid phase (deg)		179.7	+/-	20.0
		RMS	Theor.	Amplitude	0.126 +/- 0.022		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)		54.6	47.9	Search (2048X32)	0.114		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000
amp/seg (%)		67.0	83.5	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008
ph/frq (deg)		68.6	28.2	Inc. seg. avg.	0.123		Sample rate(MSamp/s): 128				dr window (ns/s)	-0.011 0.011
amp/frq (%)		39.4	49.3	Inc. frq. avg.	0.136		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00
f: az 61.0 el 37.1 pa -78.2 P: az 286.6 el 62.3 pa 84.7 u,v (fr/asec) -11055.496 1041.055 simultaneous interpolator												
Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fP..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fP.W.99.12BED8												

Mk4/DiFX fourfit 3.19 rev 2512

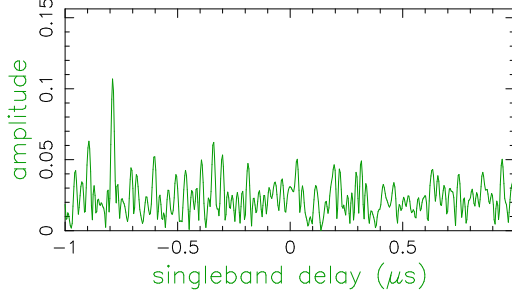
3C345.12BED8, No0001, fX

VLBA_FD - ONSALA60, fgroup W, pol LL

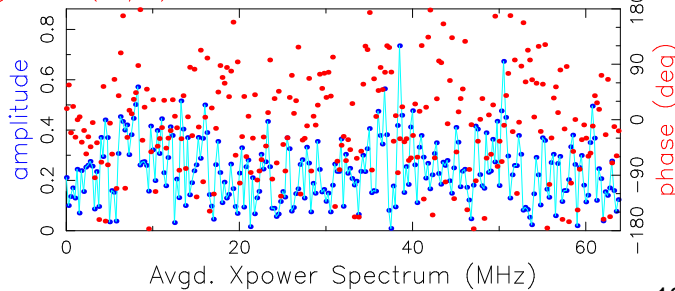
multiband delay (μ s)

Fringe quality 0

SNR 5.9
Int time 408.957
Amp 0.156
Phase 2.7
PFD 5.6e-01
Delays (us)
SBD -0.788597
MBD -0.007883
Fringe rate (Hz)
-0.901284
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

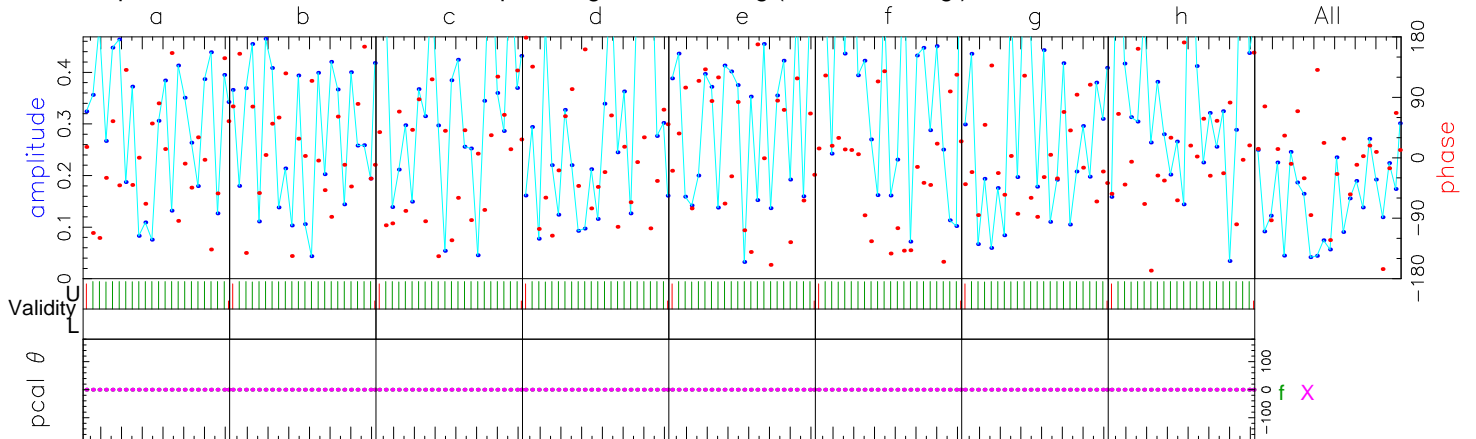


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165610
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-30.7	25.0	15.5	-13.8	61.8	5.3	-12.2	-3.7	Phase	2.7
	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	Ampl.	0.2
	264.1	97.9	344.9	313.8	248.2	387.6	65.9	55.7	Sbd box	55.1
U/L	802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-3.93545683559E+03	Apriori delay (usec)	-3.93466770219E+03	Resid mbdelay (usec)	-7.88341E-03	+/-	1.8E-04
Sband delay (usec)	-3.93545629894E+03	Apriori clock (usec)	-3.1870474E+01	Resid sbdelay (usec)	-7.88597E-01	+/-	1.5E-03
Phase delay (usec)	-3.93466770210E+03	Apriori clockrate (us/s)	-6.1894950E-07	Resid phdelay (usec)	8.77490E-08	+/-	6.2E-07
Delay rate (us/s)	1.42989300554E+00	Apriori rate (us/s)	1.42990346855E+00	Resid rate (us/s)	-1.04630E-05	+/-	2.6E-09
Total phase (deg)	-309.2	Apriori accel (us/s/s)	-3.28242095453E-06	Resid phase (deg)	2.7	+/-	19.4

	RMS	Theor.	Amplitude	0.156 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	66.9	46.4	Search (2048X32)	0.106	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	81.3	81.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	31.1	27.4	Inc. seg. avg.	0.169	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	38.5	47.8	Inc. frq. avg.	0.154	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2

X: az 263.7 el 53.3 pa 44.2

u,v (fr/asec) -10665.569 -2352.321

simultaneous interpolator

Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fX..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fX.W.108.12BED8

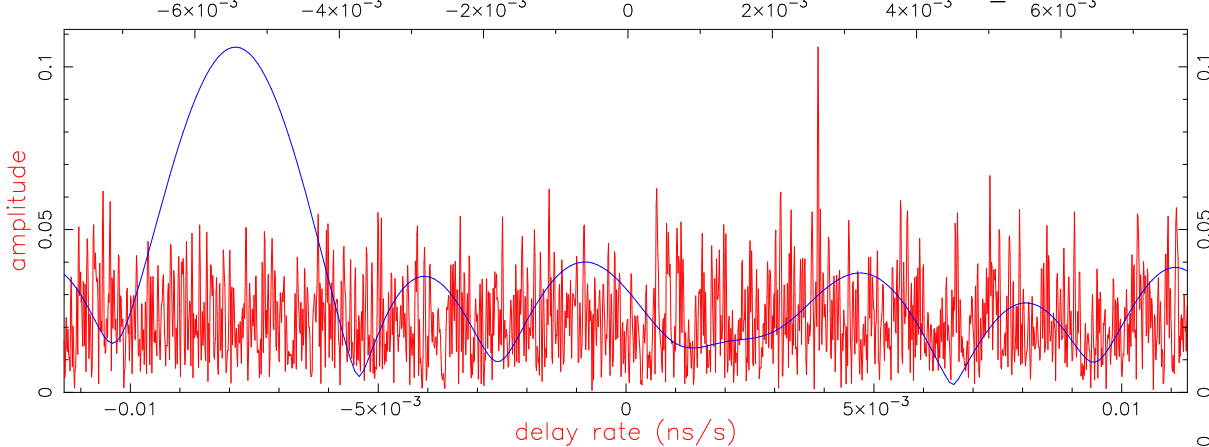
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fX

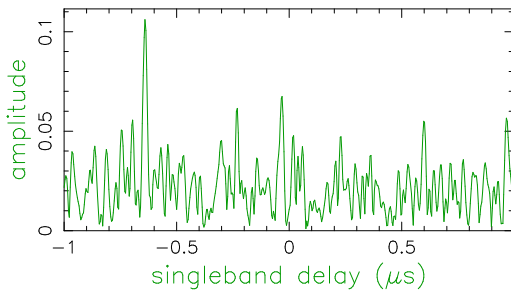
VLBA_FD - ONSALA60, fgroup W, pol RR

multiband delay (μ s)

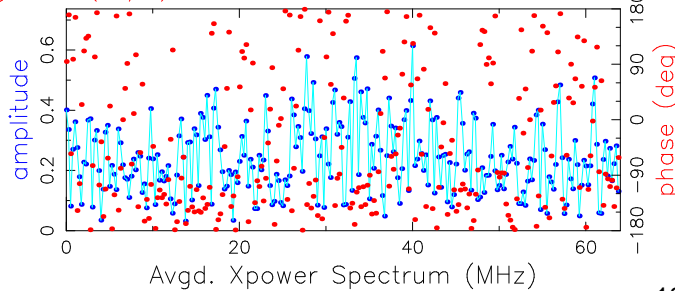
Fringe quality 0



SNR 5.9
Int time 408.957
Amp 0.111
Phase 101.3
PFD 6.7e-01
Delays (us)
SBD -0.640110
MBD -0.005424
Fringe rate (Hz)
0.334604
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

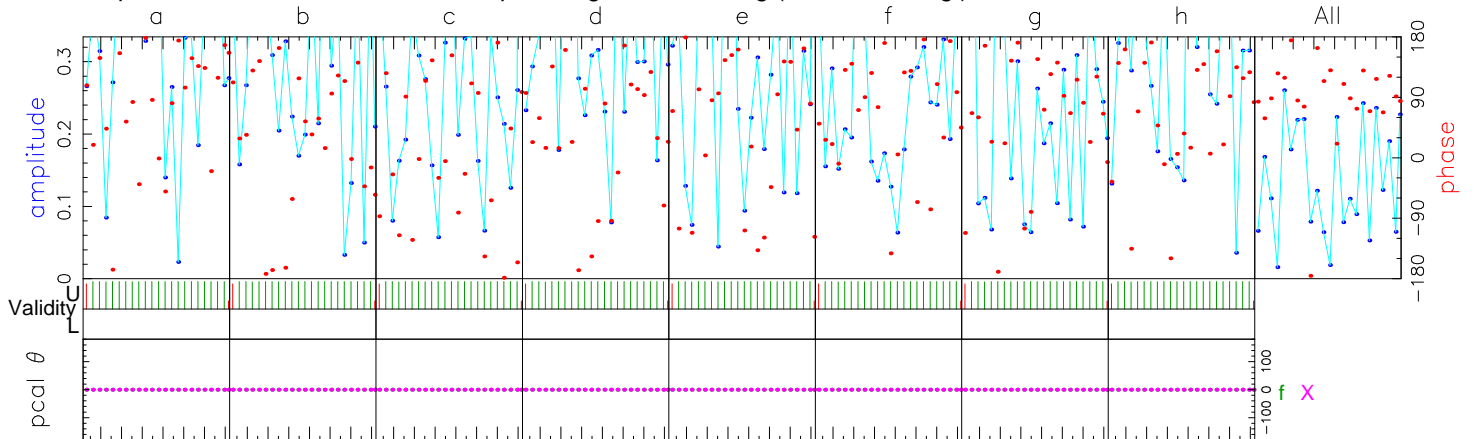


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165615
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	97.1	99.7	159.4	82.2	132.6	88.6	104.6	95.3	Phase	101.3
f	0.2	0.1	0.0	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
X	90.5	119.5	297.2	396.6	80.0	347.9	117.9	124.9	Sbd box	93.1
f:X	802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	APs used	
f:X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-3.93531375098E+03	Apriori delay (usec)	-3.93466770219E+03	Resid mbdelay (usec)	-5.42379E-03	+/-	1.8E-04
Sband delay (usec)	-3.93530781244E+03	Apriori clock (usec)	-3.1870474E+01	Resid sbdelay (usec)	-6.40110E-01	+/-	1.5E-03
Phase delay (usec)	-3.93466769892E+03	Apriori clockrate (us/s)	-6.1894950E-07	Resid phdelay (usec)	3.26606E-06	+/-	6.3E-07
Delay rate (us/s)	1.42990735297E+00	Apriori rate (us/s)	1.42990346855E+00	Resid rate (us/s)	3.88442E-06	+/-	2.7E-09
Total phase (deg)	-210.6	Apriori accel (us/s/s)	-3.28242095453E-06	Resid phase (deg)	101.3	+/-	19.5

	RMS	Theor.	Amplitude	0.111 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	38.3	46.8	Search (2048X32)	0.104	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	76.2	81.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	28.7	27.6	Inc. seg. avg.	0.106	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011
amp/frq (%)	31.8	48.2	Inc. frq. avg.	0.105	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 61.0 el 37.1 pa -78.2

X: az 263.7 el 53.3 pa 44.2

u,v (fr/asec) -10665.569 -2352.321

simultaneous interpolator

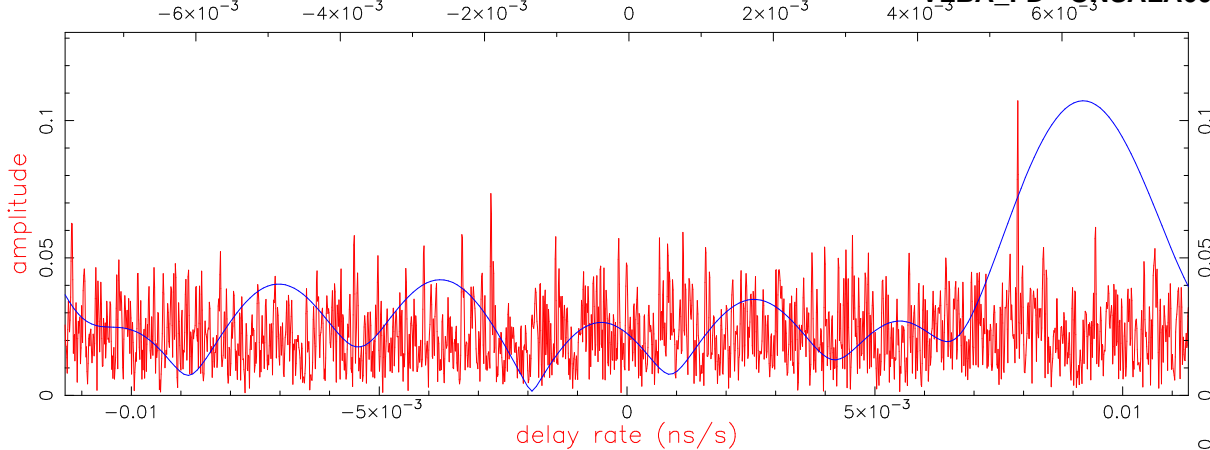
Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fX..12BED8

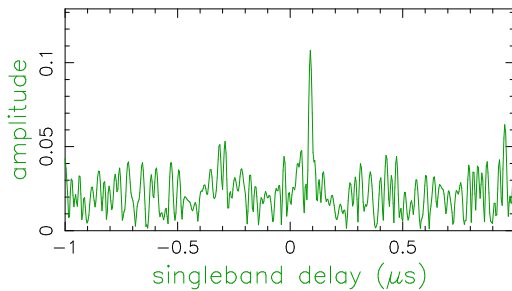
Output file: /Exps/c192a/v1_PV/1234/No0001/fX.W.131.12BED8

multiband delay (μ s)

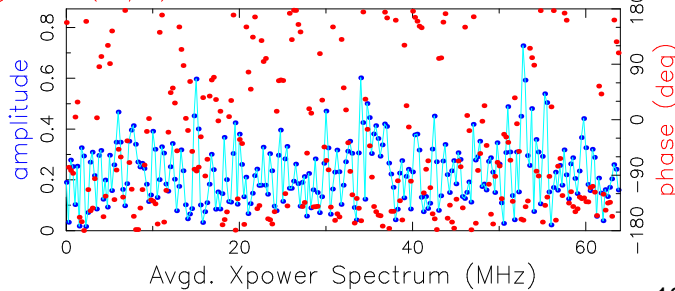
Fringe quality 0



SNR 5.9
Int time 408.957
Amp 0.132
Phase 98.8
PFD 5.3e-01
Delays (us)
SBD 0.089567
MBD 0.006288
Fringe rate (Hz)
0.679908
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

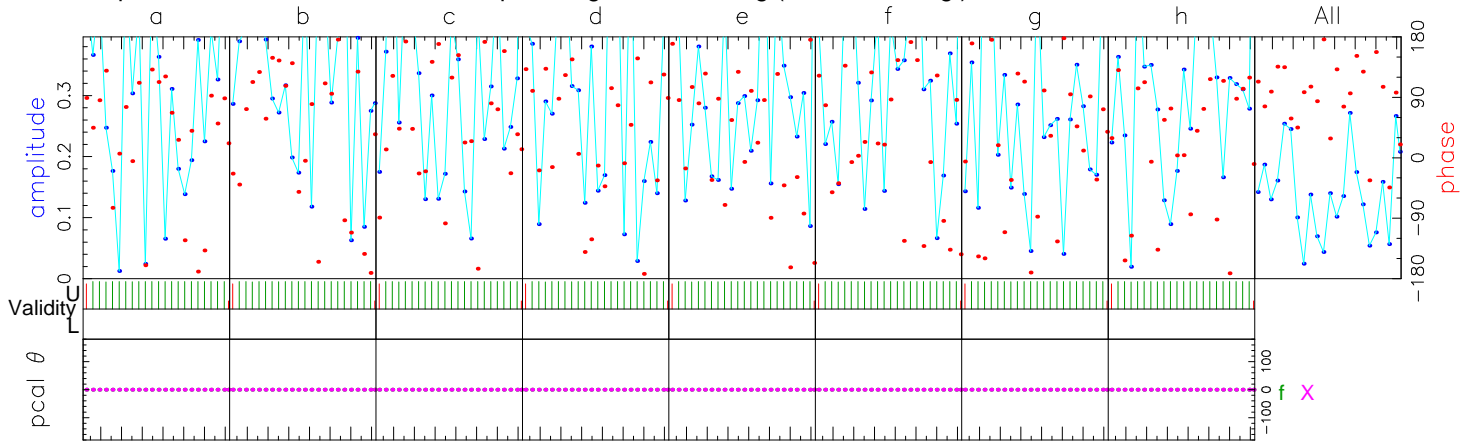


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165620
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
88.2	123.0	95.5	95.9	91.9	120.0	133.6	85.0	85.0	Phase	98.8
0.2	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	Ampl.	0.1
280.0	450.8	213.7	279.1	22.5	173.6	312.9	425.3	425.3	Sbd box	279.9
U/L 802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	APs used	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000		
f W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
X W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	

Group delay (usec)(sbd)	-3.93458328882E+03	Apriori delay (usec)	-3.93466770219E+03	Resid mbdelay (usec)	6.28837E-03	+/-	1.8E-04
Sband delay (usec)	-3.93457813494E+03	Apriori clock (usec)	-3.1870474E+01	Resid sbdelay (usec)	8.95673E-02	+/-	1.5E-03
Phase delay (usec)	-3.93466769900E+03	Apriori clockrate (us/s)	-6.1894950E-07	Resid phdelay (usec)	3.18726E-06	+/-	6.2E-07
Delay rate (us/s)	1.42991136161E+00	Apriori rate (us/s)	1.42990346855E+00	Resid rate (us/s)	7.89306E-06	+/-	2.6E-09
Total phase (deg)	-213.1	Apriori accel (us/s/s)	-3.28242095453E-06	Resid phase (deg)	98.8	+/-	19.3

ph/seg (deg)	55.2	Theor.	46.3	Amplitude	0.132 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.8		80.8	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	20.9		27.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.8		47.7	Inc. seg. avg.	0.130	Sample rate(MSamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.122	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

f: az 61.0 el 37.1 pa -78.2

X: az 263.7 el 53.3 pa 44.2

u,v (fr/asec) -10665.569 -2352.321

simultaneous interpolator

Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fX..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fX.W.149.12BED8

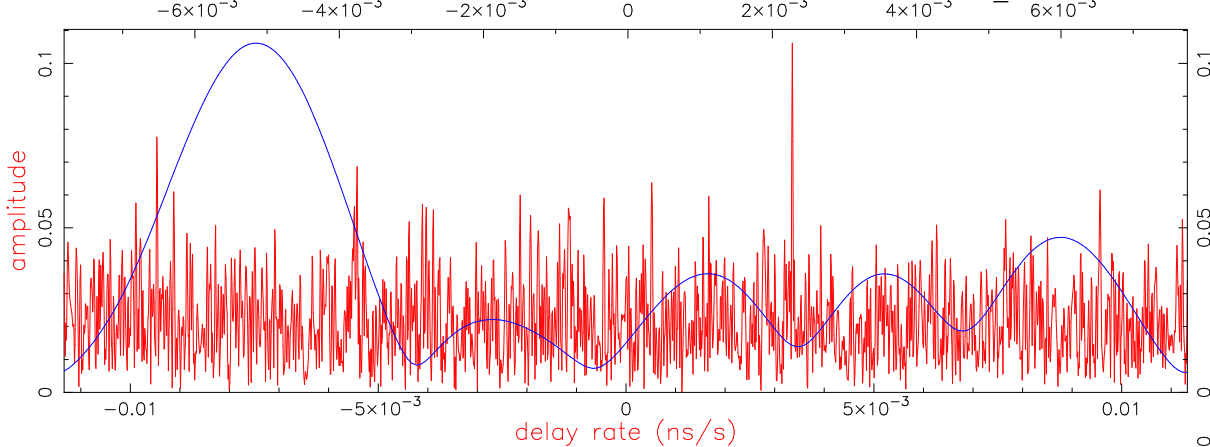
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fX

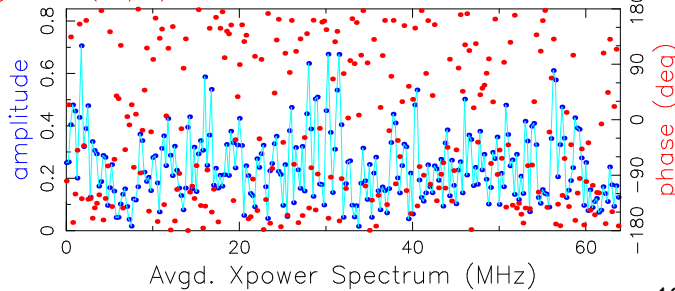
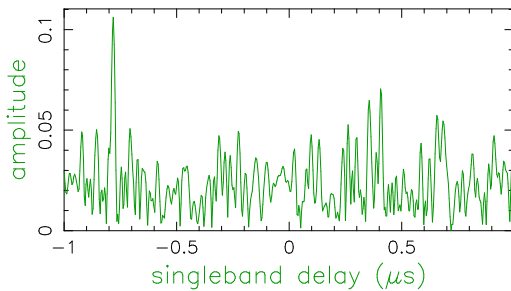
VLBA_FD - ONSALA60, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

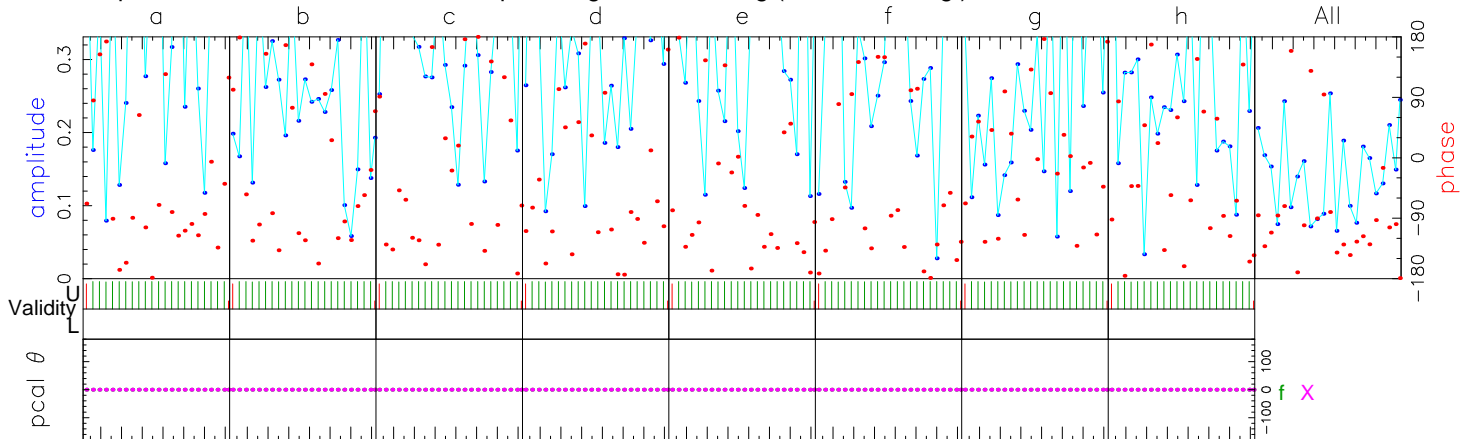


SNR 5.9
Int time 408.957
Amp 0.110
Phase -111.0
PFD 6.4e-01
Delays (us)
SBD -0.781864
MBD -0.005183
Fringe rate (Hz)
0.289053
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165624
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-101.7	-113.9	-131.7	-96.1	-116.1	-136.5	-23.9	-108.8	Phase	-111.0
	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	57.2	167.4	391.4	198.8	244.7	341.7	483.3	271.7	Sbd box	56.8
U/L	802/0	802/0	802/0	802/0	802/0	802/0	802/0	802/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-3.93545413531E+03	Apriori delay (usec)	-3.93466770219E+03	Resid mbdelay (usec)	-5.18313E-03	+/-	1.8E-04
Sband delay (usec)	-3.93544956619E+03	Apriori clock (usec)	-3.1870474E+01	Resid sbdelay (usec)	-7.81864E-01	+/-	1.5E-03
Phase delay (usec)	-3.93466770577E+03	Apriori clockrate (us/s)	-6.1894950E-07	Resid phdelay (usec)	-3.58068E-06	+/-	6.3E-07
Delay rate (us/s)	1.42990682417E+00	Apriori rate (us/s)	1.42990346855E+00	Resid rate (us/s)	3.35562E-06	+/-	2.6E-09
Total phase (deg)	-62.9	Apriori accel (us/s/s)	-3.28242095453E-06	Resid phase (deg)	-111.0	+/-	19.5

	RMS	Theor.	Amplitude	0.110 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	55.6	46.7	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	63.2	81.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	38.8	27.5	Inc. seg. avg.	0.111	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	43.5	48.1	Inc. frq. avg.	0.109	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

X: az 263.7 el 53.3 pa 44.2

u,v (fr/asec) -10665.569 -2352.321

simultaneous interpolator

Control file: cf_1234_gmva

Input file: /Exps/c192a/v1_PV/1234/No0001/fX..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fX.W.166.12BED8

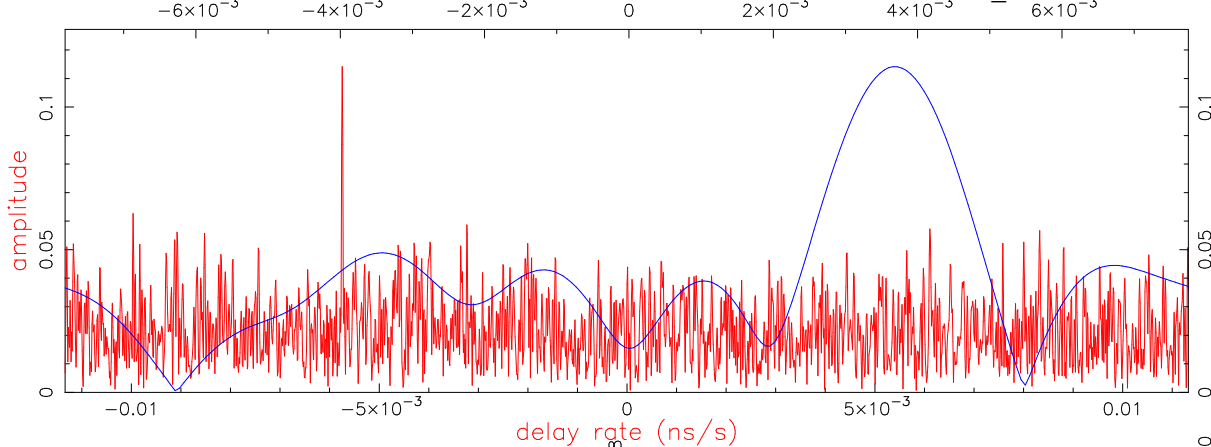
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fY

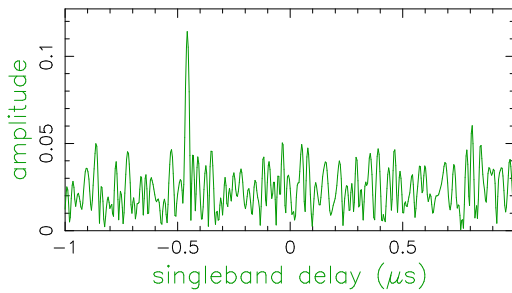
VLBA_FD - YEBES40M, fgroup W, pol RR

multiband delay (μ s)

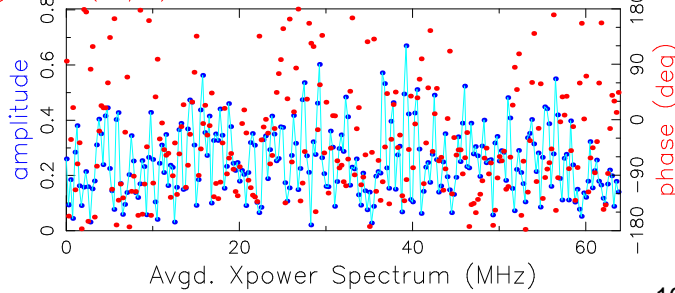
Fringe quality 0



SNR 6.3
Int time 400.946
Amp 0.127
Phase 29.9
PFD 1.0e-01
Delays (us)
SBD -0.456995
MBD 0.003686
Fringe rate (Hz)
-0.495557
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

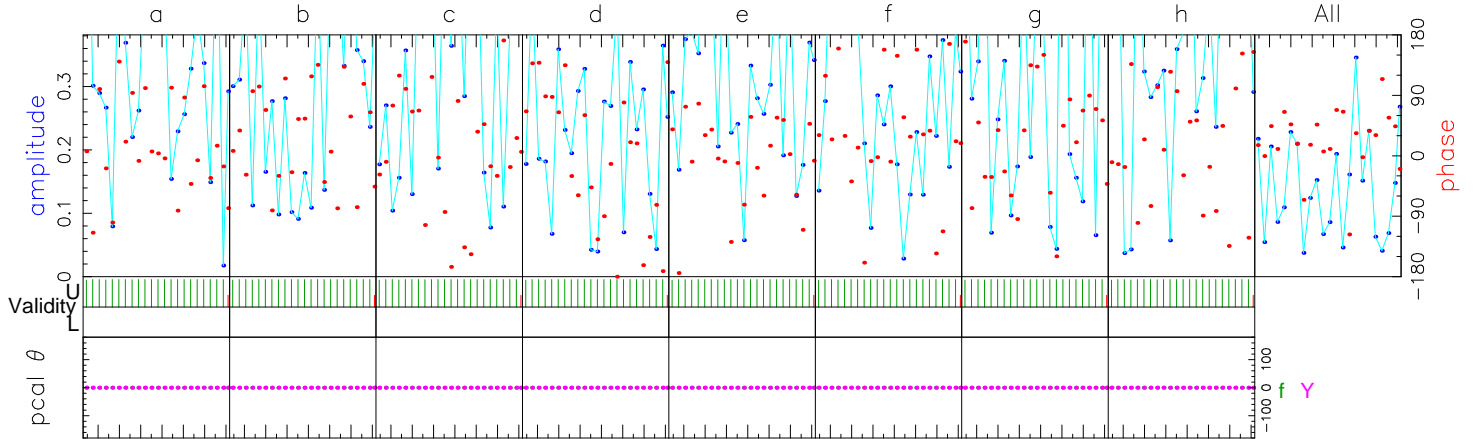


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183017.92
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165613
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
Y	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-5.80409819249E+03	Apriori delay (usec)	-5.80364875393E+03	Resid mbdelay (usec)	3.68644E-03	+/-	1.7E-04
Sband delay (usec)	-5.80410574918E+03	Apriori clock (usec)	-9.1971989E+00	Resid sbdelay (usec)	-4.56995E-01	+/-	1.4E-03
Phase delay (usec)	-5.80364875297E+03	Apriori clockrate (us/s)	-3.1094951E-07	Resid phdelay (usec)	9.63608E-07	+/-	5.9E-07
Delay rate (us/s)	1.46605683460E+00	Apriori rate (us/s)	1.46606258752E+00	Resid rate (us/s)	-5.75292E-06	+/-	2.5E-09
Total phase (deg)	-209.1	Apriori accel (us/s/s)	2.06987568677E-05	Resid phase (deg)	29.9	+/-	18.3

ph/seg (deg)	46.5	Theor.	44.0	Amplitude	0.127 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	73.7	Search (2048X32)	0.109	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	36.2	Inc. seg. avg.	0.121	Inc. frq. avg.	0.124	Bits/sample: 2x2	Sample rate(MSamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.9					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

Y: az 280.2 el 62.9 pa 76.6

u,v (fr/asec) -10890.829 532.173

simultaneous interpolator

Control file: cf_1234_gmva

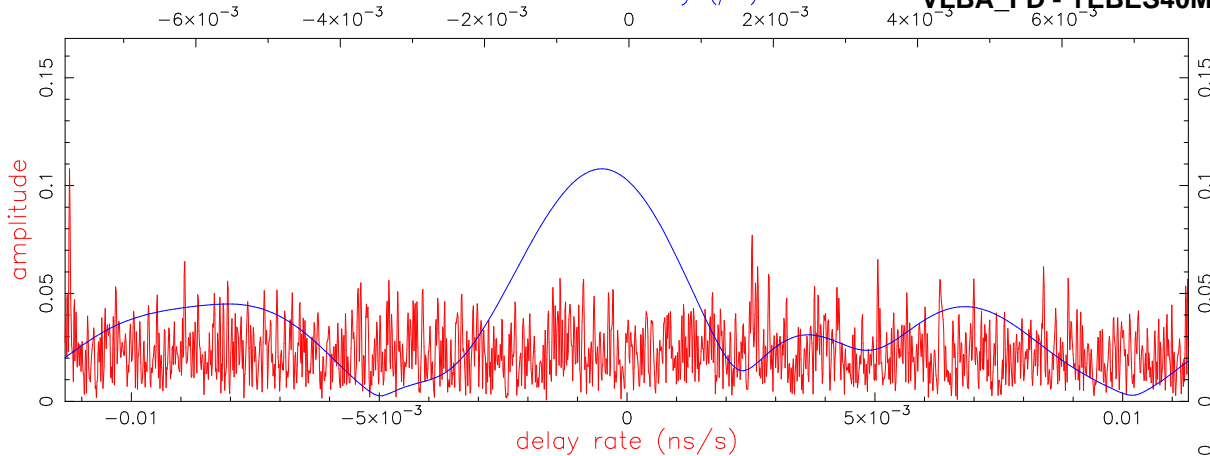
Input file: /Exps/c192a/v1_PV/1234/No0001/fY..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fY.W.121.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

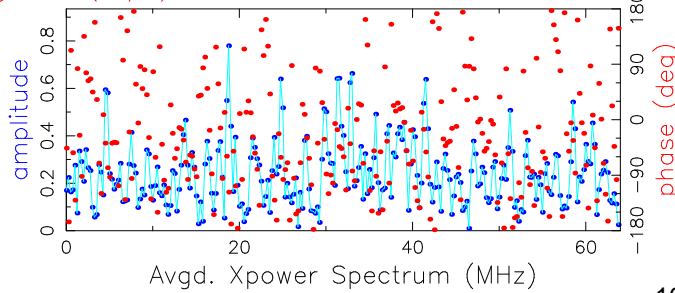
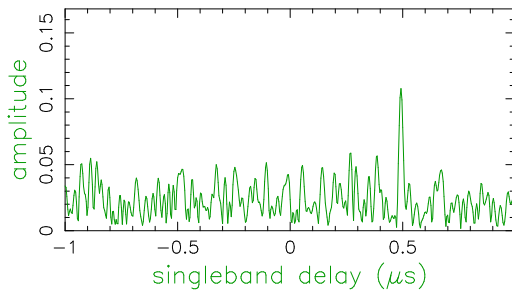
3C345.12BED8, No0001, fY

VLBA_FD - YEBES40M, fgroup W, pol LR

multiband delay (μ s)

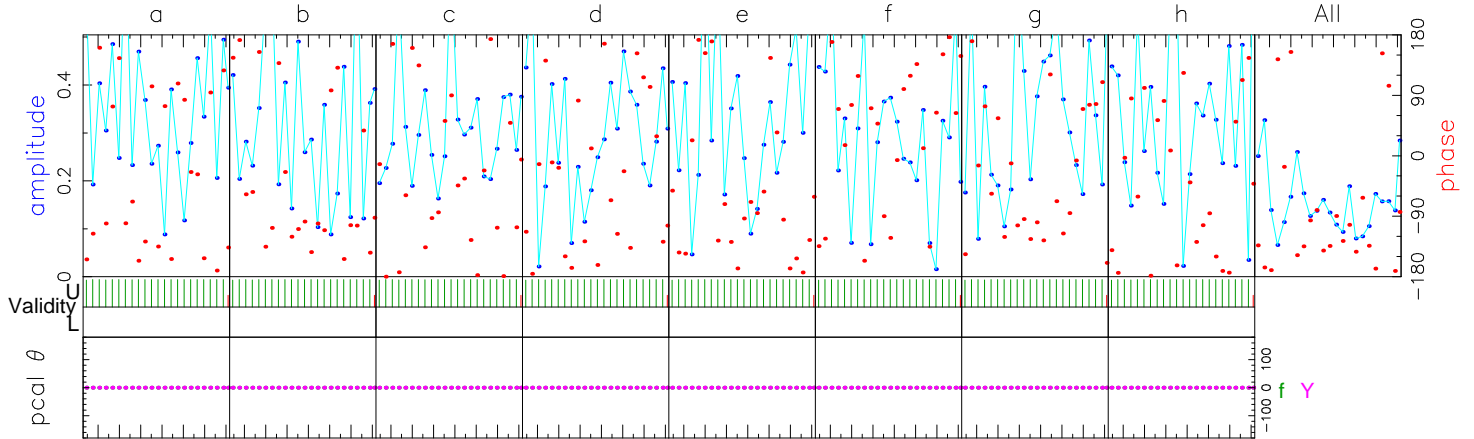
Fringe quality 0

SNR 5.9
Int time 400.946
Amp 0.168
Phase -143.3
PFD 6.0e-01
Delays (us)
SBD 0.491951
MBD -0.000380
Fringe rate (Hz)
-0.970109
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183017.92
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165617
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-164.5	-124.7	-150.4	-135.4	-140.8	151.8	-117.2	-141.8	Phase	-143.3
	0.2	0.3	0.1	0.1	0.3	0.1	0.1	0.1	Ampl.	0.2
	66.9	383.0	452.7	243.9	383.2	170.7	231.6	435.8	Sbd box	382.9
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-5.80314913423E+03	Apriori delay (usec)	-5.80364875393E+03	Resid mbdelay (usec)	-3.80296E-04	+/-	1.8E-04
Sband delay (usec)	-5.80315680243E+03	Apriori clock (usec)	-9.1971989E+00	Resid sbdelay (usec)	4.91951E-01	+/-	1.5E-03
Phase delay (usec)	-5.80364875855E+03	Apriori clockrate (us/s)	-3.1094951E-07	Resid phdelay (usec)	-4.62142E-06	+/-	6.3E-07
Delay rate (us/s)	1.46605132551E+00	Apriori rate (us/s)	1.46606258752E+00	Resid rate (us/s)	-1.12620E-05	+/-	2.7E-09
Total phase (deg)	-22.3	Apriori accel (us/s/s)	2.06987568677E-05	Resid phase (deg)	-143.3	+/-	19.4

	RMS	Theor.	Amplitude	0.168 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	53.5	46.5	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	72.9	81.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	31.1	27.5	Inc. seg. avg.	0.181	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.7	47.9	Inc. frq. avg.	0.163	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

Y: az 280.2 el 62.9 pa 76.6

u,v (fr/asec) -10890.829 532.173

simultaneous interpolator

Control file: cf_1234_gmva

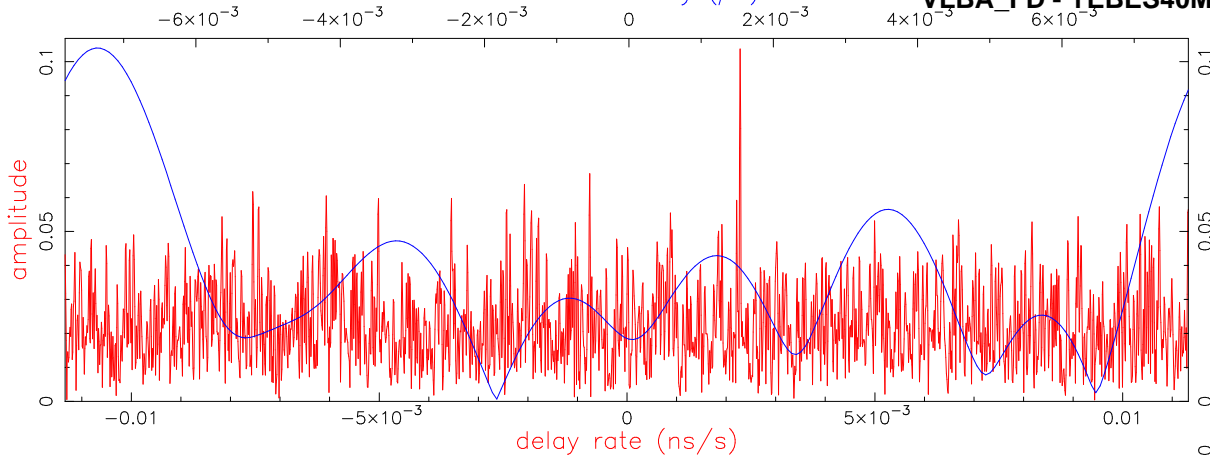
Input file: /Exps/c192a/v1_PV/1234/No0001/fY..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fY.W.138.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

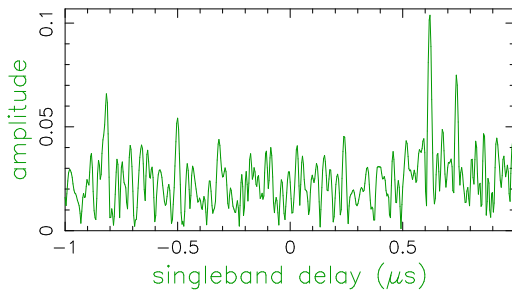
3C345.12BED8, No0001, fY

VLBA_FD - YEBES40M, fgroup W, pol RL

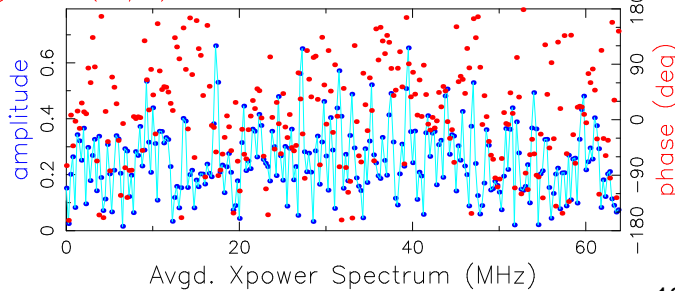
multiband delay (μ s)

Fringe quality 0

SNR 5.8
Int time 400.946
Amp 0.107
Phase 38.8
PFD 8.9e-01
Delays (us)
SBD 0.619614
MBD -0.007441
Fringe rate (Hz)
0.197052
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

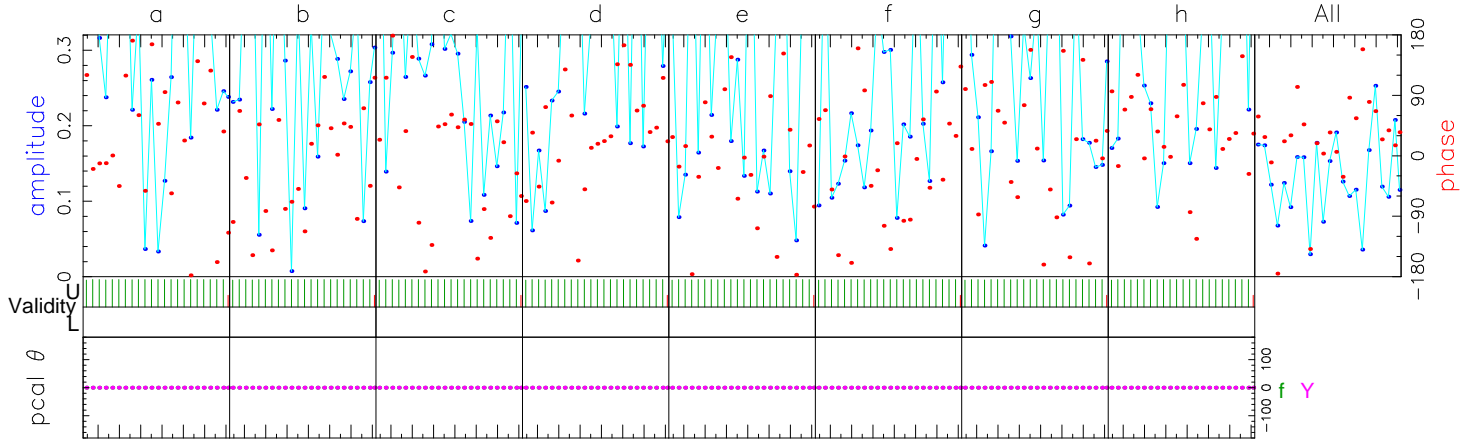


delay rate (ns/s)



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183017.92
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165621
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.4	-19.1	15.2	48.9	22.2	21.2	35.5	54.3	Phase	38.8
	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	359.3	73.0	63.5	498.2	458.8	468.6	236.0	416.1	Sbd box	415.6
U/L	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.80303119457E+03	Apriori delay (usec)	-5.80364875393E+03	Resid mbdelay (usec)	-7.44064E-03	+/-	1.9E-04
Sband delay (usec)	-5.80302913968E+03	Apriori clock (usec)	-9.1971989E+00	Resid sbdelay (usec)	6.19614E-01	+/-	1.5E-03
Phase delay (usec)	-5.80364875268E+03	Apriori clockrate (us/s)	-3.1094951E-07	Resid phdelay (usec)	1.25232E-06	+/-	6.4E-07
Delay rate (us/s)	1.46606487510E+00	Apriori rate (us/s)	1.46606258752E+00	Resid rate (us/s)	2.28758E-06	+/-	2.8E-09
Total phase (deg)	-200.1	Apriori accel (us/s/s)	2.06987568677E-05	Resid phase (deg)	38.8	+/-	19.9

ph/seg (deg)	62.5	Theor.	47.8	Amplitude	0.107 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	57.2	Search (2048X32)	0.100	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	30.7	Inc. seg. avg.	0.100	Inc. frq. avg.	0.103	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	51.5	Inc. frq. avg.	0.103			Sample rate(MSamp/s): 128	dr window (ns/s) -0.011 0.011
						Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

f: az 61.0 el 37.1 pa -78.2

Y: az 280.2 el 62.9 pa 76.6

u,v (fr/asec) -10890.829 532.173

simultaneous interpolator

Control file: cf_1234_gmva

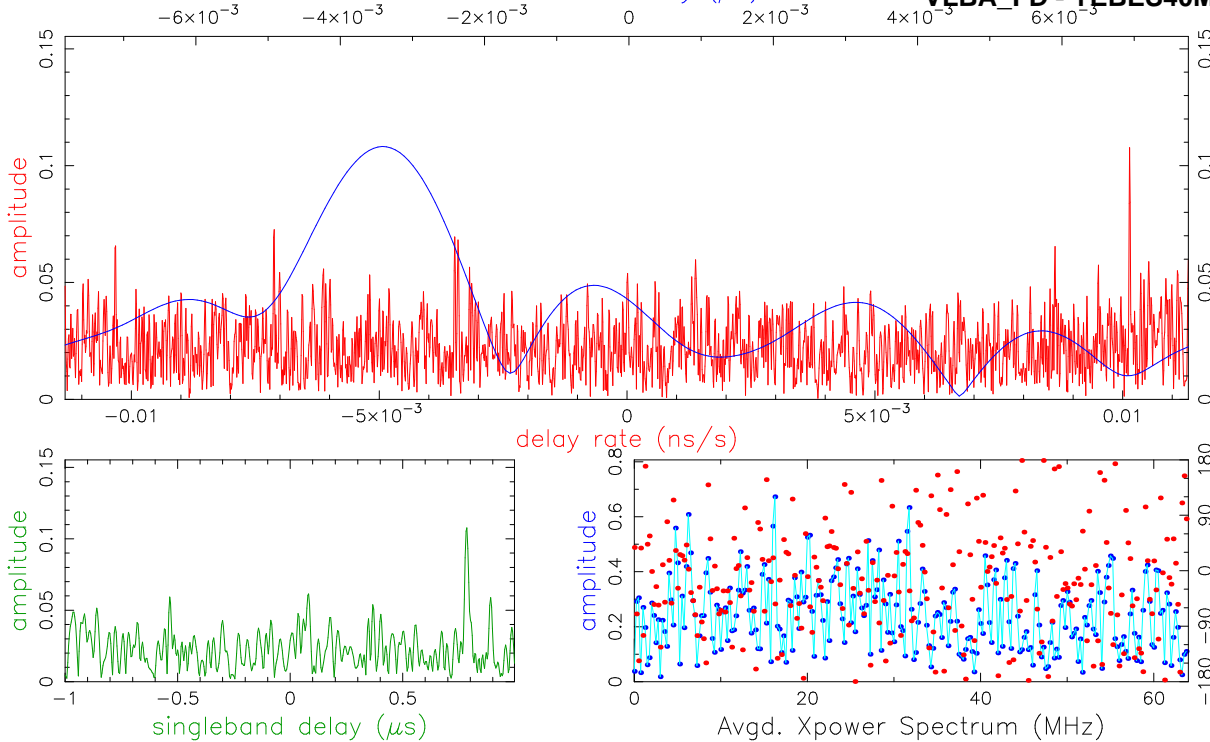
Input file: /Exps/c192a/v1_PV/1234/No0001/fY..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fY.W.157.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fY

VLBA_FD - YEBES40M, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 0

SNR 6.0

Int time 400.946

Amp 0.155

Phase 53.4

PFD 4.7e-01

Delays (us)

SBD 0.783705

MBD -0.003512

Fringe rate (Hz)

0.874538

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:276

Start 183017.92

Stop 183659.84

FRT 183330.00

Corr/FF/build

2020:072:124544

2020:086:165608

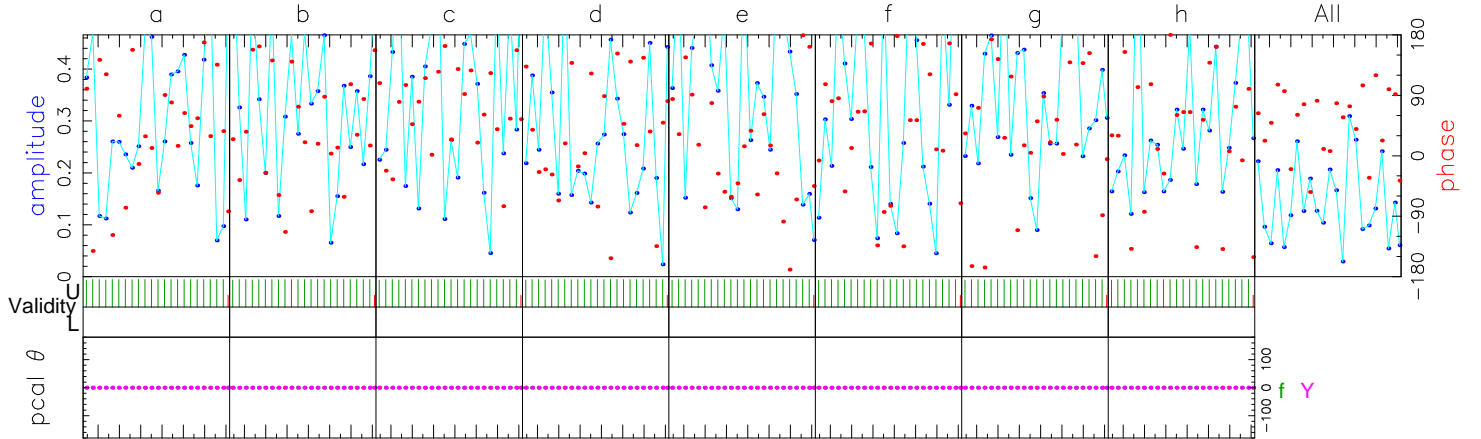
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	50.4	58.0	69.3	28.0	-8.1	60.9	78.7	81.0	Phase	53.4
f	0.2	0.1	0.3	0.1	0.2	0.2	0.1	0.2	Ampl.	0.2
Y	131.1	279.1	458.2	327.9	456.9	456.1	310.2	276.0	Sbd box	457.6
f	785/0	785/0	785/0	785/0	785/0	785/0	785/0	785/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.80287101635E+03		Apriori delay (usec)	-5.80364875393E+03		Resid mbdelay (usec)	-3.51242E-03		+/-	1.8E-04
Sband delay (usec)	-5.80286504868E+03		Apriori clock (usec)	-9.1971989E+00		Resid sbdelay (usec)	7.83705E-01		+/-	1.4E-03
Phase delay (usec)	-5.80364875221E+03		Apriori clockrate (us/s)	-3.1094951E-07		Resid phdelay (usec)	1.72192E-06		+/-	6.2E-07
Delay rate (us/s)	1.46607274004E+00		Apriori rate (us/s)	1.46606258752E+00		Resid rate (us/s)	1.01525E-05		+/-	2.7E-09
Total phase (deg)	-185.6		Apriori accel (us/s/s)	2.06987568677E-05		Resid phase (deg)	53.4		+/-	19.2

ph/seg (deg)	48.0	46.1	Amplitude	0.155 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	78.6	80.4	Search (2048X32)	0.107	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	32.0	27.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	38.0	47.4	Inc. seg. avg.	0.160	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011	
			Inc. frq. avg.	0.157	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2

Y: az 280.2 el 62.9 pa 76.6

u,v (fr/asec) -10890.829 532.173

simultaneous interpolator

Control file: cf_1234_gmva

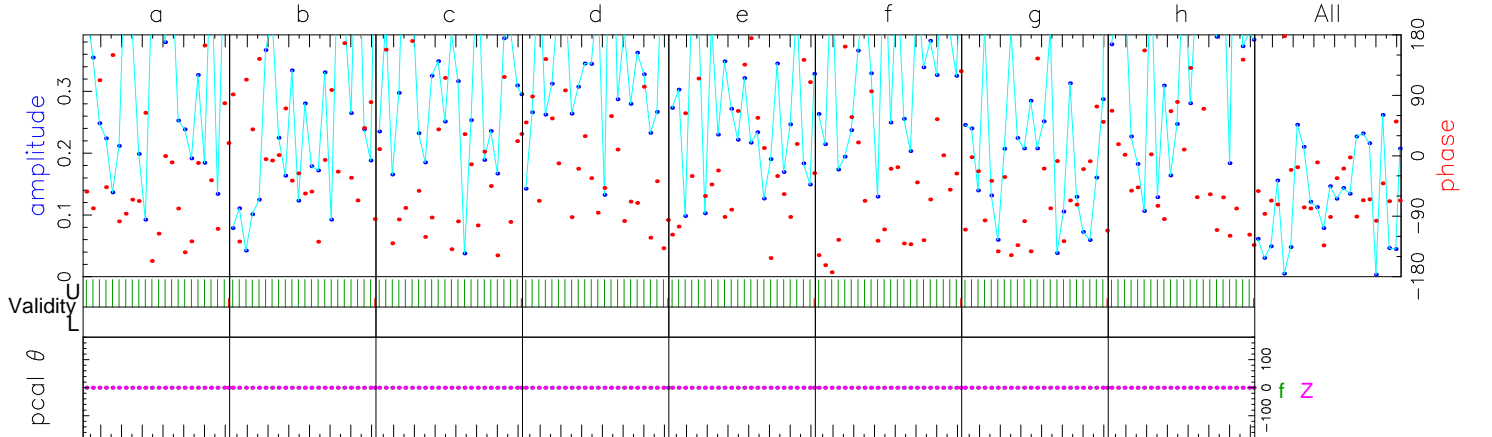
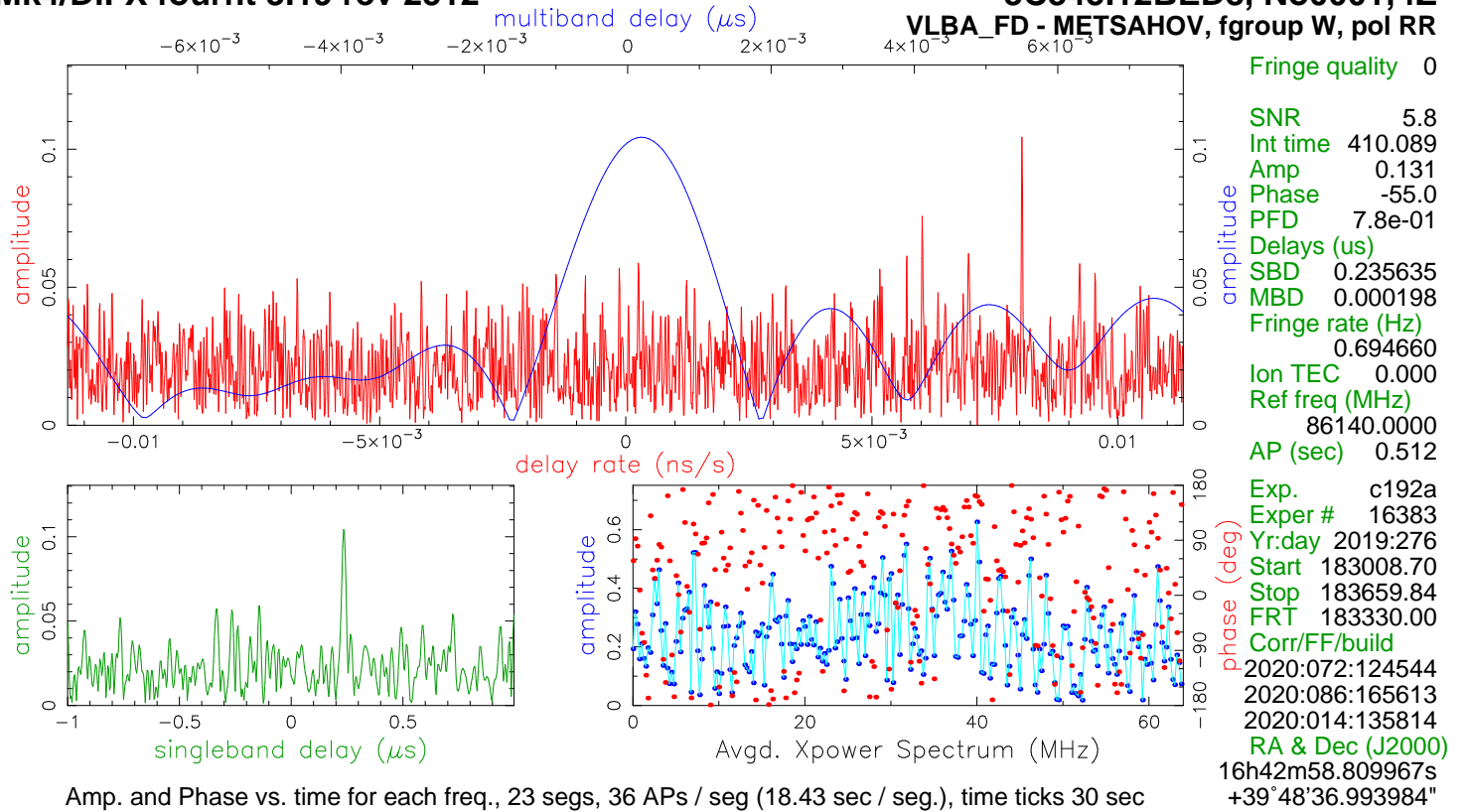
Input file: /Exps/c192a/v1_PV/1234/No0001/fY..12BED8

Output file: /Exps/c192a/v1_PV/1234/No0001/fY.W.97.12BED8

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fZ

VLBA_FD - METSAHOV, fgroup W, pol RR



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-63.8	-24.4	-96.5	-30.4	-42.5	-64.9	-83.9	-37.4	Phase	-55.0
	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
	330.5	231.5	148.0	340.0	169.1	374.1	142.9	376.1	Sbd box	317.3
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-2.32521667696E+03	Apriori delay (usec)	-2.32545125044E+03	Resid mbdelay (usec)	1.98476E-04	+/-	1.9E-04
Sband delay (usec)	-2.32521561569E+03	Apriori clock (usec)	2.7257115E-01	Resid sbdelay (usec)	2.35635E-01	+/-	1.5E-03
Phase delay (usec)	-2.32545125221E+03	Apriori clockrate (us/s)	-1.0724231E-07	Resid phdelay (usec)	-1.77307E-06	+/-	6.4E-07
Delay rate (us/s)	1.45924539032E+00	Apriori rate (us/s)	1.45923732601E+00	Resid rate (us/s)	8.06431E-06	+/-	2.7E-09
Total phase (deg)	-311.5	Apriori accel (us/s/s)	-1.35162140689E-05	Resid phase (deg)	-55.0	+/-	19.7

	RMS	Theor.	Amplitude	0.131 +/- 0.022	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		
ph/seg (deg)	47.4	47.2	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	78.5	82.5	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	28.1	27.9	Inc. seg. avg.	0.115	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	24.2	48.6	Inc. frq. avg.	0.127	Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00

f: az 61.0 el 37.1 pa -78.2 Z: az 271.4 el 46.7 pa 40.3 u,v (fr/asec) -10902.077 -3193.061 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fZ..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fZ.W.120.12BED8

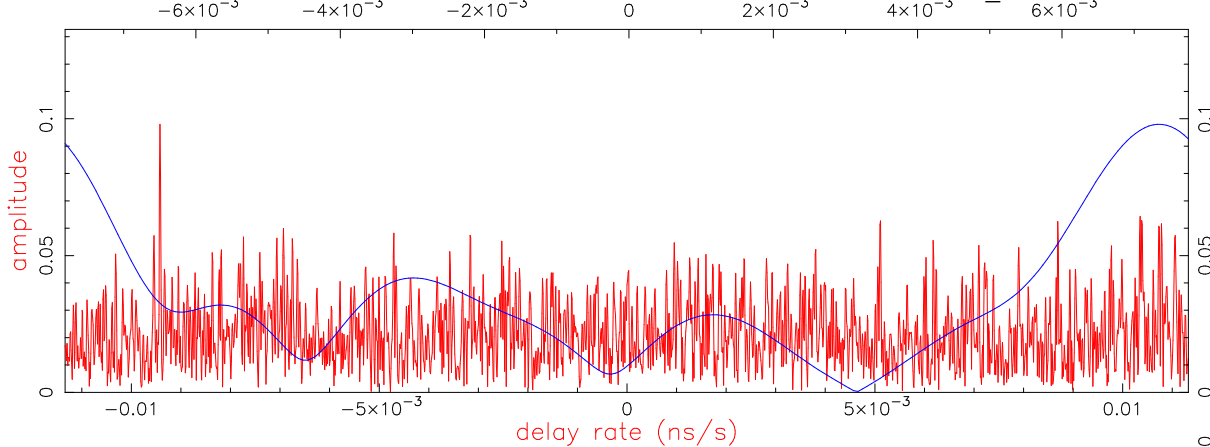
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fZ

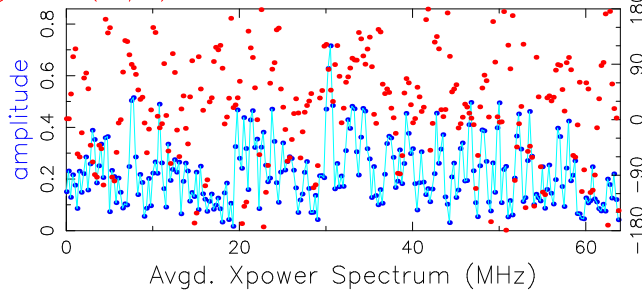
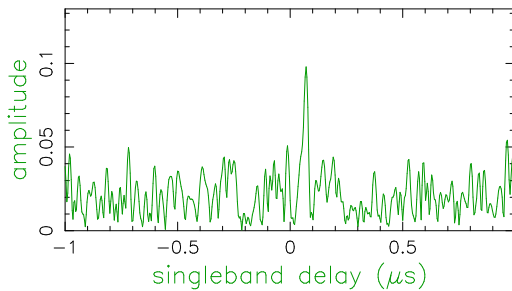
VLBA_FD - METSAHOV, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 0

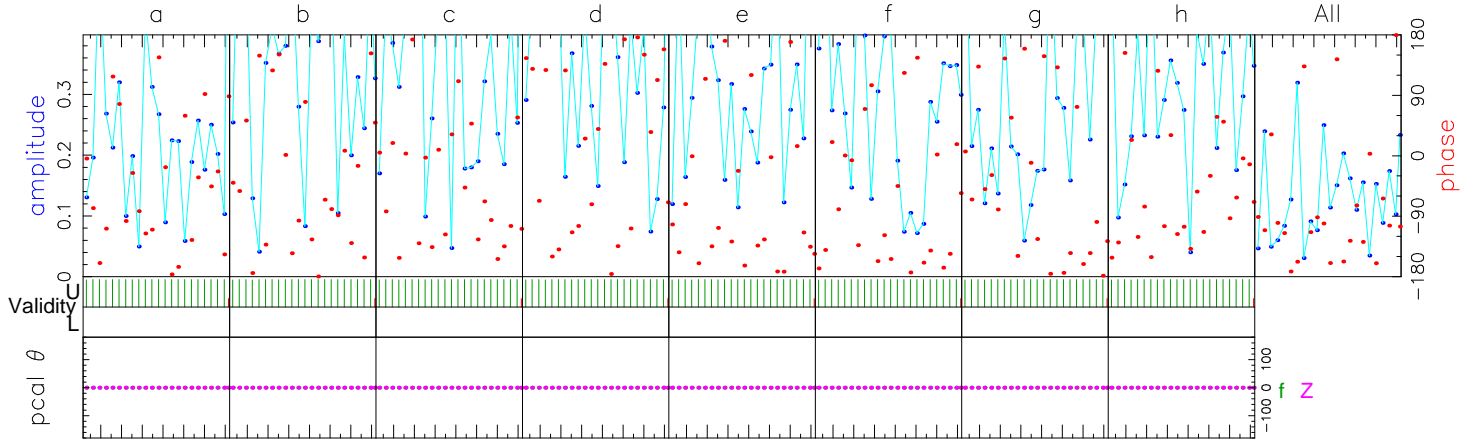


SNR 5.4
Int time 410.089
Amp 0.133
Phase -130.8
PFD 1.0e+00
Delays (us)
SBD 0.070398
MBD -0.008280
Fringe rate (Hz)
-0.812515
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192a
Exper # 16383
Yr:day 2019:276
Start 183008.70
Stop 183659.84
FRT 183330.00
Corr/FF/build
2020:072:124544
2020:086:165618
2020:014:135814
RA & Dec (J2000)
16h42m58.809967s
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-122.6	-102.9	-101.9	-172.0	-144.3	-130.8	-168.3	-80.4	Phase	-130.8
	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.2	Ampl.	0.1
	407.6	158.8	392.8	416.7	273.3	288.2	511.7	127.8	Sbd box	275.0
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.32538140570E+03		Apriori delay (usec)	-2.32545125044E+03		Resid mbdelay (usec)	-8.28027E-03	+/-	2.0E-04	
Sband delay (usec)	-2.32538085219E+03		Apriori clock (usec)	2.7257115E-01		Resid sbdelay (usec)	7.03982E-02	+/-	1.6E-03	
Phase delay (usec)	-2.32545125465E+03		Apriori clockrate (us/s)	-1.0724231E-07		Resid phdelay (usec)	-4.21706E-06	+/-	6.8E-07	
Delay rate (us/s)	1.45922789352E+00		Apriori rate (us/s)	1.45923732601E+00		Resid rate (us/s)	-9.43249E-06	+/-	2.9E-09	
Total phase (deg)	-27.3		Apriori accel (us/s/s)	-1.35162140689E-05		Resid phase (deg)	-130.8	+/-	21.1	

RMS Theor. Amplitude 0.133 +/- 0.024
ph/seg (deg) 61.0 50.6 Search (2048X32) 0.097
amp/seg (%) 82.1 88.4 Interp. 0.000
ph/frq (deg) 35.4 29.9 Inc. seg. avg. 0.126
amp/frq (%) 37.5 52.1 Inc. frq. avg. 0.137

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MSamp/s): 128
Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite

sb window (us) -1.000 1.000
mb window (us) -0.008 0.008
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

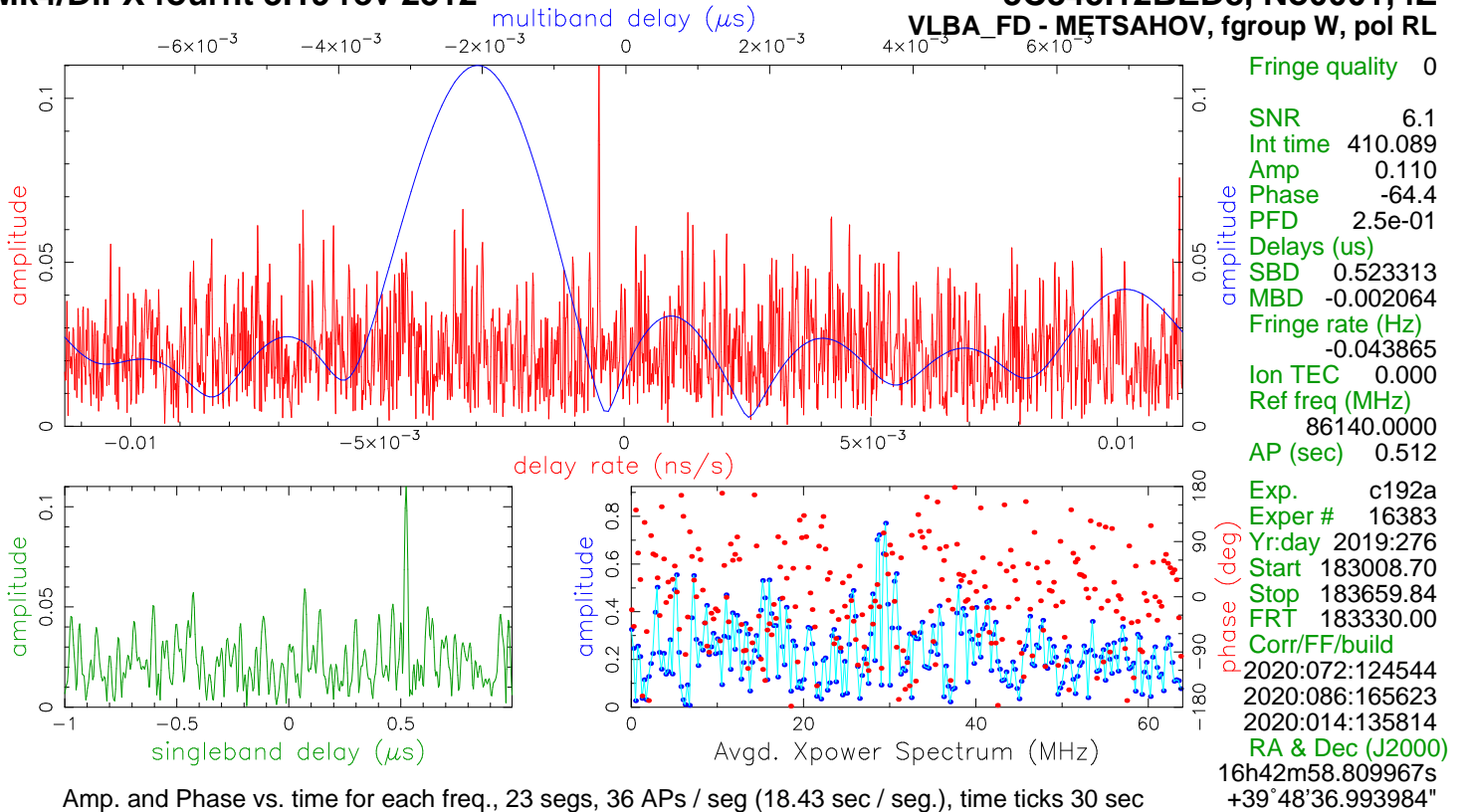
f: az 61.0 el 37.1 pa -78.2 Z: az 271.4 el 46.7 pa 40.3 u,v (fr/asec) -10902.077 -3193.061 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fZ..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fZ.W.141.12BED8

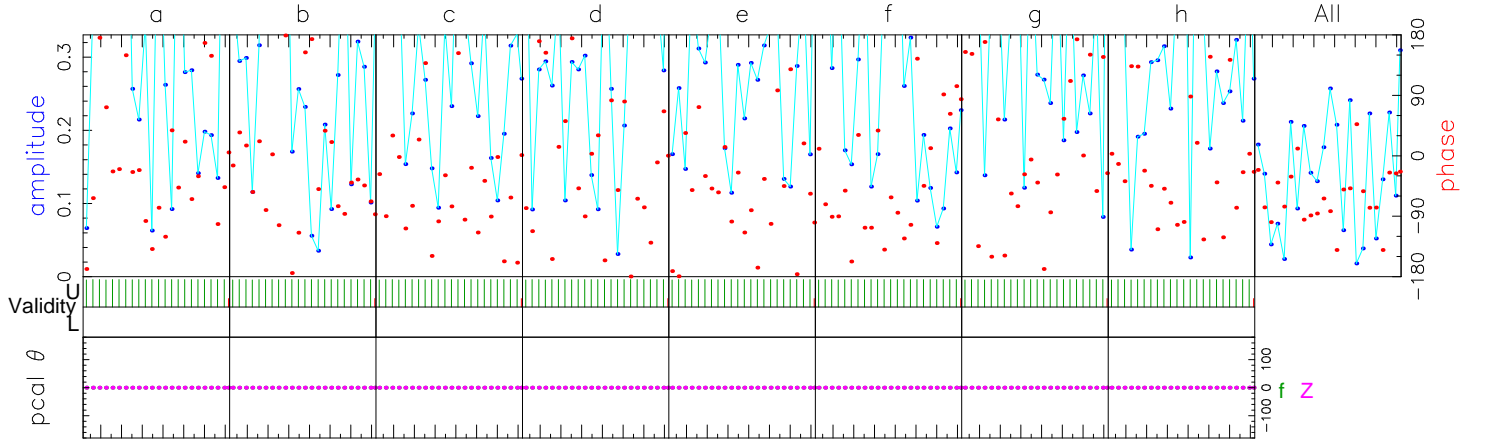
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12BED8, No0001, fZ

VLBA_FD - METSAHOV, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 23 segs, 36 APs / seg (18.43 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-59.8	-58.5	-60.4	-92.2	-55.5	-73.5	-92.4	-50.3	Phase	-64.4
	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.2	Ampl.	0.1
	429.1	193.1	491.0	373.6	185.4	392.5	415.2	178.2	Sbd box	391.0
U/L	803/0	803/0	803/0	803/0	803/0	803/0	803/0	803/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.32492206485E+03			Apriori delay (usec)	-2.32545125044E+03		Resid mbdelay (usec)	-2.06442E-03	+/-	1.8E-04
Sband delay (usec)	-2.32492793769E+03			Apriori clock (usec)	2.7257115E-01		Resid sbdelay (usec)	5.23313E-01	+/-	1.4E-03
Phase delay (usec)	-2.32545125251E+03			Apriori clockrate (us/s)	-1.0724231E-07		Resid phdelay (usec)	-2.07750E-06	+/-	6.1E-07
Delay rate (us/s)	1.45923681677E+00			Apriori rate (us/s)	1.45923732601E+00		Resid rate (us/s)	-5.09234E-07	+/-	2.6E-09
Total phase (deg)	-321.0			Apriori accel (us/s/s)	-1.35162140689E-05		Resid phase (deg)	-64.4	+/-	18.8

	RMS	Theor.	Amplitude	0.110 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	43.0	45.1	Search (2048X32)	0.109	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
amp/seg (%)	74.7	78.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	18.2	26.6	Inc. seg. avg.	0.106	Sample rate(MSamp/s): 128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	30.6	46.4	Inc. frq. avg.	0.102	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00	

f: az 61.0 el 37.1 pa -78.2 Z: az 271.4 el 46.7 pa 40.3 u,v (fr/asec) -10902.077 -3193.061 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192a/v1_PV/1234/No0001/fZ..12BED8 Output file: /Exps/c192a/v1_PV/1234/No0001/fZ.W.163.12BED8