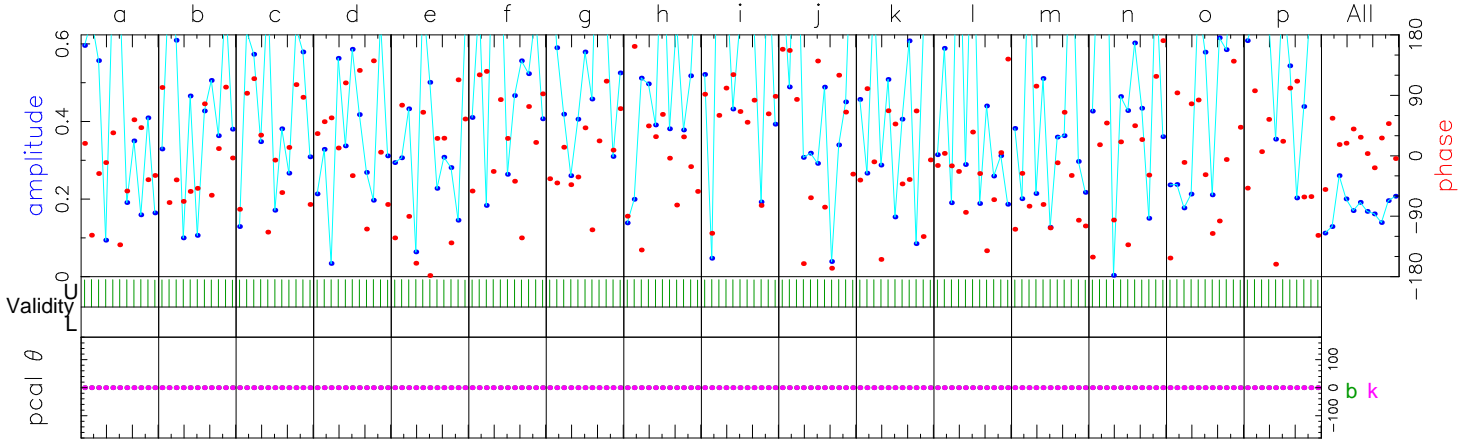


Fringe quality 0

SNR 5.8
Int time 178.721
Amp 0.208
Phase 17.1
PFD 5.5e-01
Delays (us)
SBD -0.984393
MBD -0.010065
Fringe rate (Hz)
-0.767675
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053306
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-24.9	-15.8	73.5	17.7	73.0	37.4	6.2	-7.8	74.7	112.8	-18.3	-12.4	-56.1	50.9	46.7	4.1		Phase	17.1				
	0.2	0.3	0.1	0.2	0.1	0.3	0.4	0.3	0.7	0.1	0.3	0.4	0.3	0.2	0.2	0.2		Ampl.	0.2				
	92.0	55.1	248.3	143.2	147.0	233.7	3.6	5.3	3.1	11.7	214.5	227.0	58.0	64.1	193.7	76.8		Sbd box	3.0				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			-6.76172822749E+02															Apriori delay (usec)	-6.75194008227E+02	Resid mbdelay (usec)	-1.00645E-02	+/-	1.9E-04
Sband delay (usec)			-6.76178401727E+02															Apriori clock (usec)	-2.2197992E-01	Resid sbdelay (usec)	-9.84393E-01	+/-	3.0E-03
Phase delay (usec)			-6.75194007676E+02															Apriori clockrate (us/s)	-4.7816091E-08	Resid phdelay (usec)	5.51174E-07	+/-	6.4E-07
Delay rate (us/s)			-6.40103772088E-02															Apriori rate (us/s)	-6.40014652630E-02	Resid rate (us/s)	-8.91195E-06	+/-	6.1E-09
Total phase (deg)					-295.6													Apriori accel (us/s/s)	1.82917948754E-05	Resid phase (deg)	17.1	+/-	19.7

ph/seg (deg) 29.4 32.7
amp/seg (%) 27.2 57.1
ph/frq (deg) 48.1 39.5
amp/frq (%) 72.9 68.9

RMS Theor. Amplitude 0.208 +/- 0.036
Search (1024X64) 0.151
Interp. 0.000
Inc. seg. avg. 0.198
Inc. frq. avg. 0.227

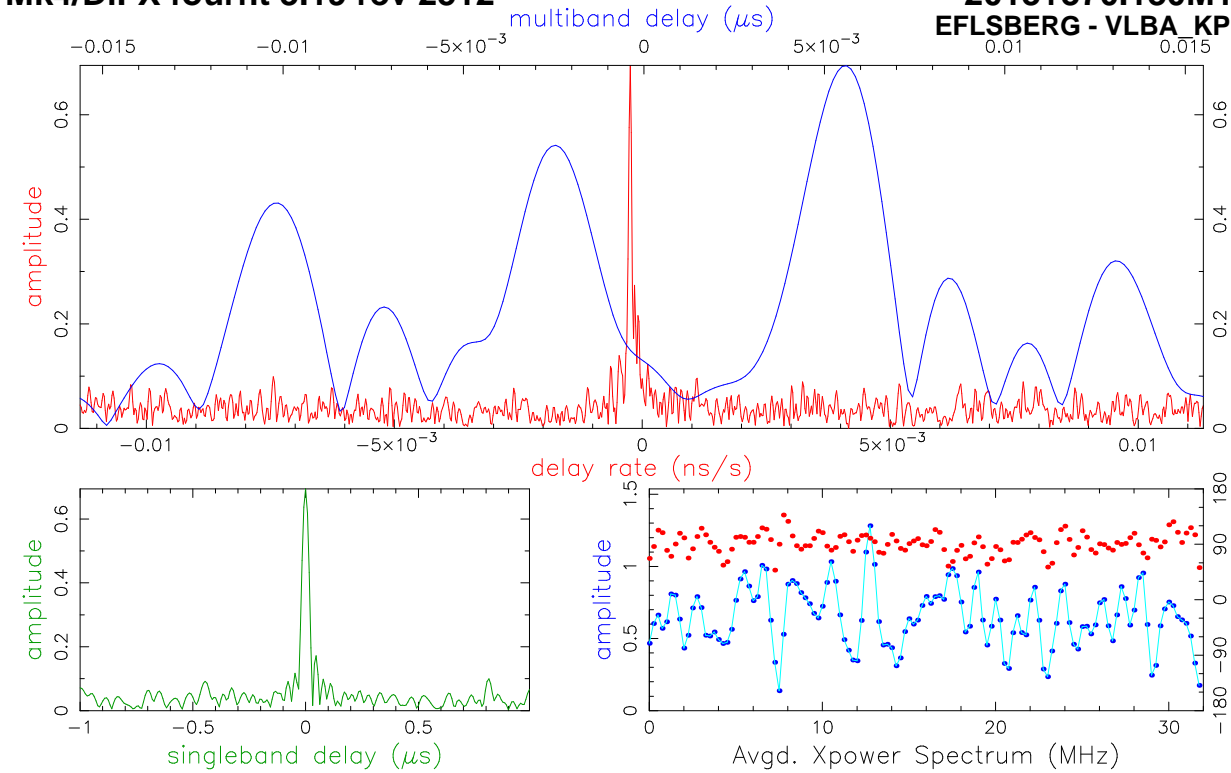
b: az 88.3 el 52.8 pa -56.9
k: az 69.4 el 55.9 pa -86.3
u,v (fr/asec) 477.387 2608.265

Group delay (usec)(sbd) -6.76172822749E+02 Apriori delay (usec) -6.75194008227E+02 Resid mbdelay (usec) -1.00645E-02 +/- 1.9E-04
Sband delay (usec) -6.76178401727E+02 Apriori clock (usec) -2.2197992E-01 Resid sbdelay (usec) -9.84393E-01 +/- 3.0E-03
Phase delay (usec) -6.75194007676E+02 Apriori clockrate (us/s) -4.7816091E-08 Resid phdelay (usec) 5.51174E-07 +/- 6.4E-07
Delay rate (us/s) -6.40103772088E-02 Apriori rate (us/s) -6.40014652630E-02 Resid rate (us/s) -8.91195E-06 +/- 6.1E-09
Total phase (deg) -295.6 Apriori accel (us/s/s) 1.82917948754E-05 Resid phase (deg) 17.1 +/- 19.7

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/bk.W.16.130M17

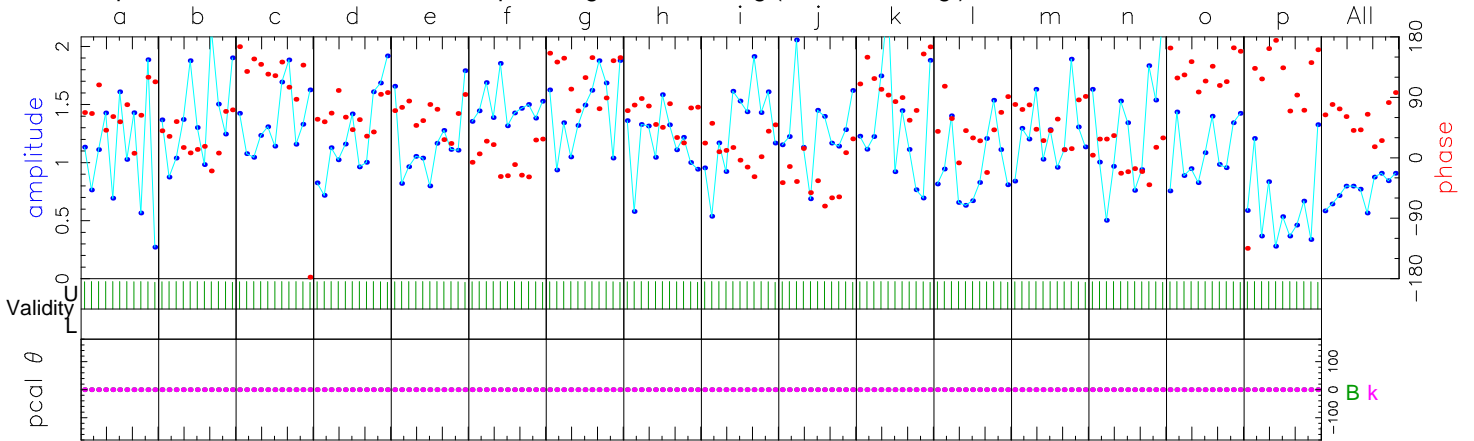


Fringe quality 6

SNR 25.4
Int time 179.012
Amp 0.694
Phase 57.8
PFD 0.0e+00
Delays (us)
SBD -0.000551
MBD 0.005575
Fringe rate (Hz)
-0.021708
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053307
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

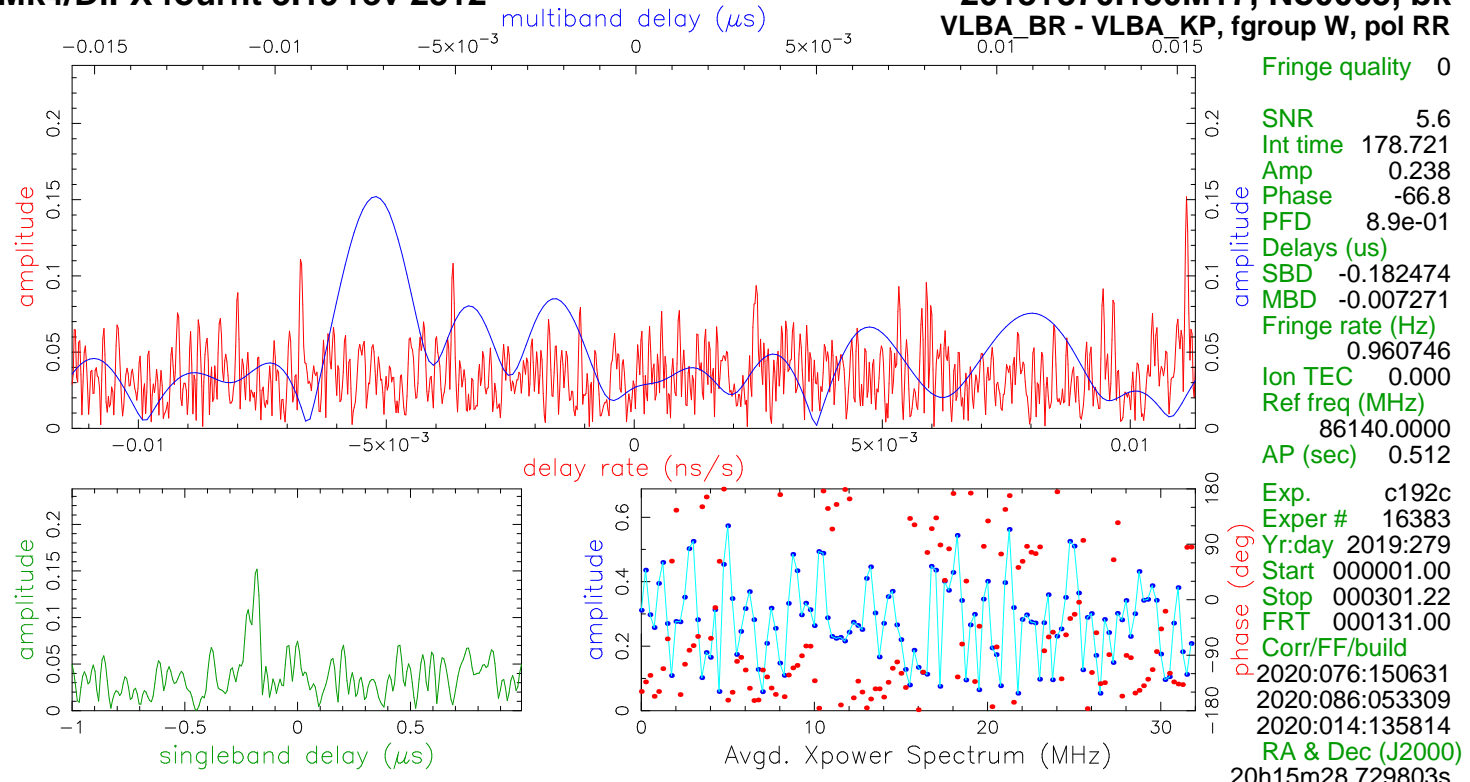


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	138.6	Phase
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	138.6	Ampl.
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	138.6	Sbd box
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	138.6	APs used
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	138.6	PC freqs
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	138.6	PC phase
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	138.6	Mani PC
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	138.6	PC amp
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) -5.41720570768E+03 Apriori delay (usec) -5.41721128260E+03 Resid mbdelay (usec) 5.57492E-03 +/- 4.2E-05
 Sband delay (usec) -5.41721183360E+03 Apriori clock (usec) 1.7199942E+01 Resid sbdelay (usec) -5.51000E-04 +/- 6.8E-04
 Phase delay (usec) -5.41721128074E+03 Apriori clockrate (us/s) -5.4210100E-09 Resid phdelay (usec) 1.86254E-06 +/- 1.5E-07
 Delay rate (us/s) -1.45546478005E+00 Apriori rate (us/s) -1.45546452804E+00 Resid rate (us/s) -2.52013E-07 +/- 1.4E-09
 Total phase (deg) -260.3 Apriori accel (us/s/s) 4.54638514456E-05 Resid phase (deg) 57.8 +/- 4.5

RMS Theor. Amplitude 0.694 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 23.7 7.5 Search (1024X64) 0.660 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 19.7 13.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 55.3 9.0 Inc. seg. avg. 0.758 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 62.2 15.7 Inc. frq. avg. 1.063 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 287.8 el 35.4 pa 49.5 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 10509.625 4363.968 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/Bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/Bk.W.25.130M17



Fringe quality 0

SNR 5.6

Int time 178.721

Amp 0.238

Phase -66.8

PFD 8.9e-01

Delays (us)

SBD -0.182474

MBD -0.007271

Fringe rate (Hz)

0.960746

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000001.00

Stop 000301.22

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053309

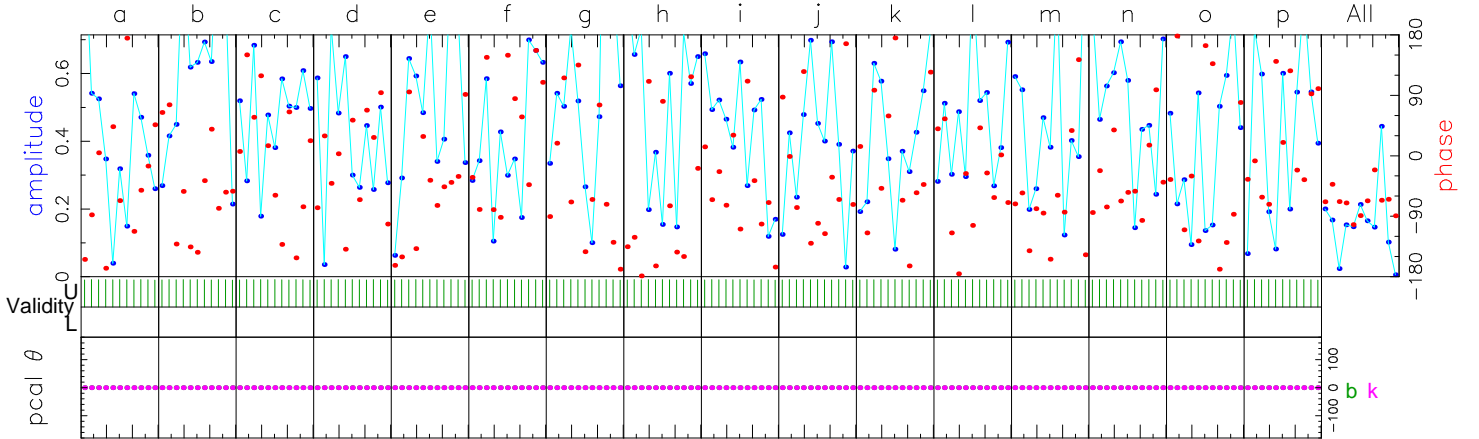
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

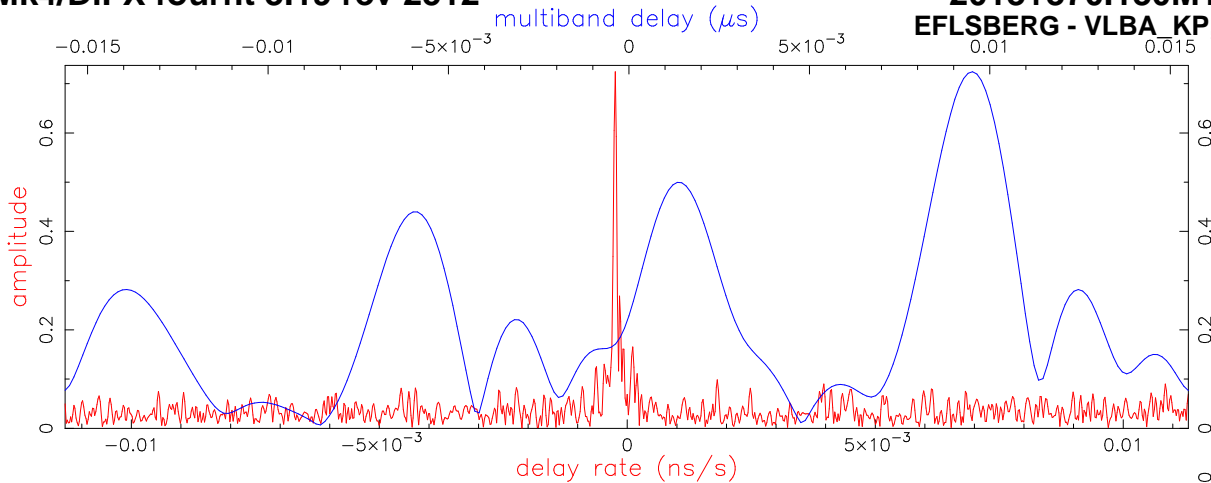
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



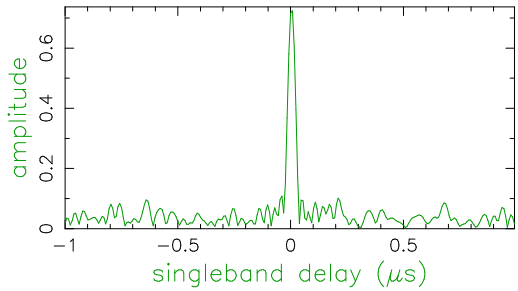
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All							
	-92.5	-65.8	5.3	-27.1	-35.6	153.0	-102.6	-144.4	-51.7	-81.1	-20.6	-43.5	-95.4	-46.8	-122.5	-4.0		Phase -66.8							
	0.3	0.5	0.2	0.2	0.4	0.1	0.3	0.4	0.4	0.3	0.1	0.3	0.4	0.6	0.3	0.4		Ampl. 0.3							
	95.5	105.6	133.2	115.9	211.4	251.1	56.3	19.2	99.4	81.8	198.9	154.8	186.1	106.6	78.8	7.5		Sbd box 105.6							
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used							
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs							
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase							
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC							
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp							
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000									
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000									
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids							
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks							
																		Chan ids							
																		Tracks							
Group delay (usec)(sbd)			-6.75388779266E+02															Apriori delay (usec)	-6.75194008227E+02	Resid mbdelay (usec)	-7.27104E-03	+/-	1.9E-04		
Sband delay (usec)			-6.75376482227E+02															Apriori clock (usec)	-2.2197992E-01	Resid sbdelay (usec)	-1.82474E-01	+/-	3.1E-03		
Phase delay (usec)			-6.75194010383E+02															Apriori clockrate (us/s)	-4.7816091E-08	Resid phdelay (usec)	-2.15570E-06	+/-	6.6E-07		
Delay rate (us/s)			-6.39903119581E-02															Apriori rate (us/s)	-6.40014652630E-02	Resid rate (us/s)	1.11533E-05	+/-	6.3E-09		
Total phase (deg)					-19.6													Apriori accel (us/s/s)	1.82917948754E-05	Resid phase (deg)	-66.8	+/-	20.4		
		RMS	Theor.																PCal mode: MANUAL, MANUAL		PC period (AP's)	5, 5			
ph/seg (deg)		21.3	33.7																PCal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)		71.1	58.9																Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.016	0.016	
ph/frq (deg)		57.8	40.7																Sample rate(MSamp/s): 64		dr window (ns/s)	-0.011	0.011		
amp/frq (%)		61.5	71.0																Data rate(Mb/s): 2048		nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00
b: az 88.3 el 52.8 pa -56.9																									
k: az 69.4 el 55.9 pa -86.3																									
u,v (fr/asec) 477.387 2608.265																									
Control file: cf_1234_gmva																									
Input file: /Exps/c192c/v2/1234/No0065/bk..130M17																									
Output file: /Exps/c192c/v2/1234/No0065/bk.W.37.130M17																									

simultaneous interpolator

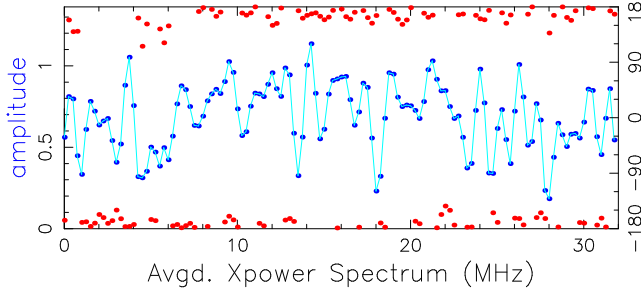


Fringe quality 7

SNR 27.0
Int time 179.012
Amp 0.737
Phase 148.4
PFD 0.0e+00
Delays (us)
SBD 0.004423
MBD 0.009484
Fringe rate (Hz)
-0.021617
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

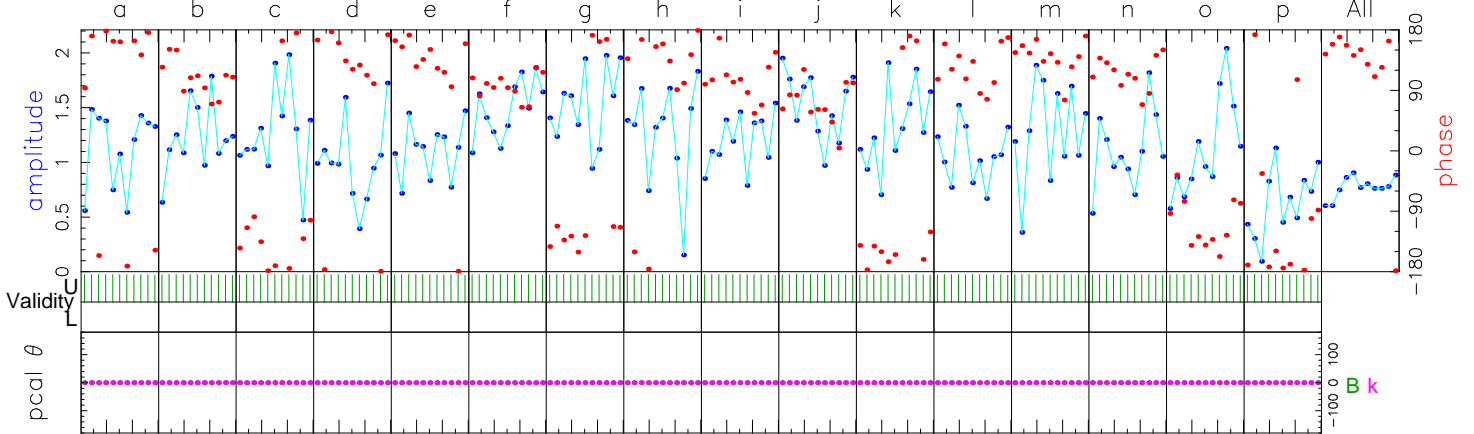


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053309
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
U/L	173.1	106.5	-153.2	153.5	145.1	94.5	-141.4	155.9	106.4	74.2	-165.6	126.3	140.5	115.3	-112.9	-154.5	Phase	148.4				
B	1.0	1.1	1.1	0.9	1.0	1.4	1.3	1.1	1.0	1.3	1.2	0.9	1.2	1.0	0.9	0.5	Ampl.	1.1				
k	129.9	129.3	129.2	128.8	129.8	129.5	129.7	129.8	129.8	130.0	129.6	129.0	129.6	130.0	128.9	129.2	Sbd box	129.6				
B:k	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
B:k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
Group delay (usec)(sbd)			-5.41720179906E+03														Apriori delay (usec)	-5.41721128260E+03	Resid mbdelay (usec)	9.48355E-03	+/-	4.0E-05
Sband delay (usec)			-5.41720685960E+03														Apriori clock (usec)	1.7199942E+01	Resid sbdelay (usec)	4.42300E-03	+/-	6.4E-04
Phase delay (usec)			-5.41721127782E+03														Apriori clockrate (us/s)	-5.4210100E-09	Resid phdelay (usec)	4.78456E-06	+/-	1.4E-07
Delay rate (us/s)			-1.45546477899E+00														Apriori rate (us/s)	-1.45546452804E+00	Resid rate (us/s)	-2.50948E-07	+/-	1.3E-09
Total phase (deg)					-169.7												Apriori accel (us/s/s)	4.54638514456E-05	Resid phase (deg)	148.4	+/-	4.2

ph/seg (deg) 20.0 7.0
amp/seg (%) 13.5 12.3
ph/frq (deg) 51.9 8.5
amp/frq (%) 53.2 14.8

RMS Theor. Amplitude 0.737 +/- 0.027
Search (1024X64) 0.693
Interp. 0.000
Inc. seg. avg. 0.766
Inc. frq. avg. 1.055

Group delay (usec)(sbd) -5.41720179906E+03
Sband delay (usec) -5.41720685960E+03
Phase delay (usec) -5.41721127782E+03
Delay rate (us/s) -1.45546477899E+00
Total phase (deg) -169.7

Apriori delay (usec) -5.41721128260E+03
Apriori clock (usec) 1.7199942E+01
Apriori clockrate (us/s) -5.4210100E-09
Apriori rate (us/s) -1.45546452804E+00
Apriori accel (us/s/s) 4.54638514456E-05

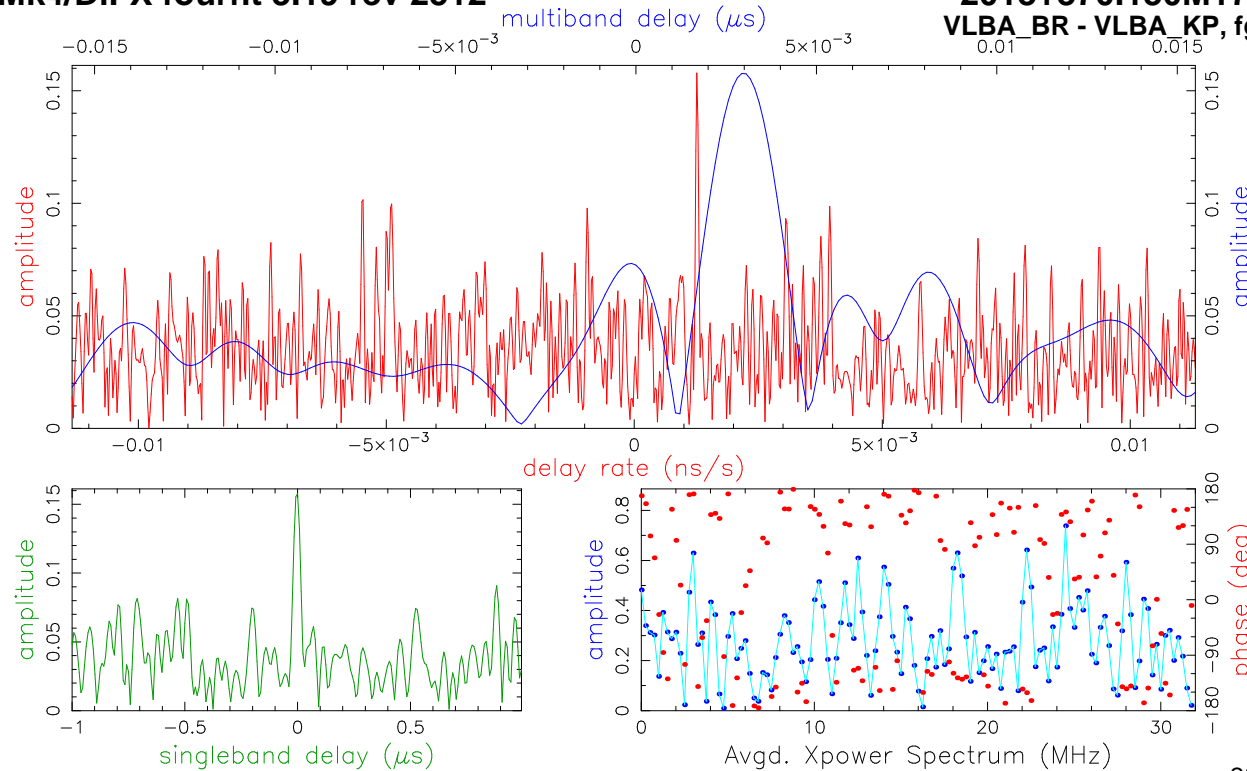
Resid mbdelay (usec) 9.48355E-03
Resid sbdelay (usec) 4.42300E-03
Resid phdelay (usec) 4.78456E-06
Resid rate (us/s) -2.50948E-07
Resid phase (deg) 148.4

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

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

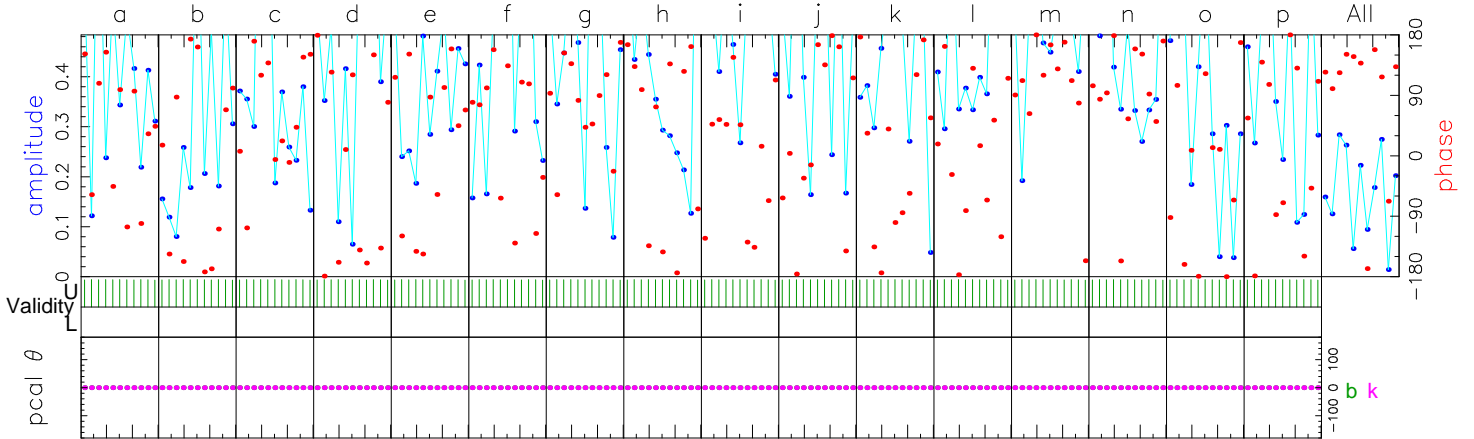
B: az 287.8 el 35.4 pa 49.5 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 10509.625 4363.968 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/Bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/Bk.W.43.130M17



Fringe quality 0
SNR 5.9
Int time 178.721
Amp 0.161
Phase 135.0
PFD 4.3e-01
Delays (us)
SBD -0.003273
MBD 0.002968
Fringe rate (Hz) 0.108606
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build 2020:076:150631
2020:086:053311
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

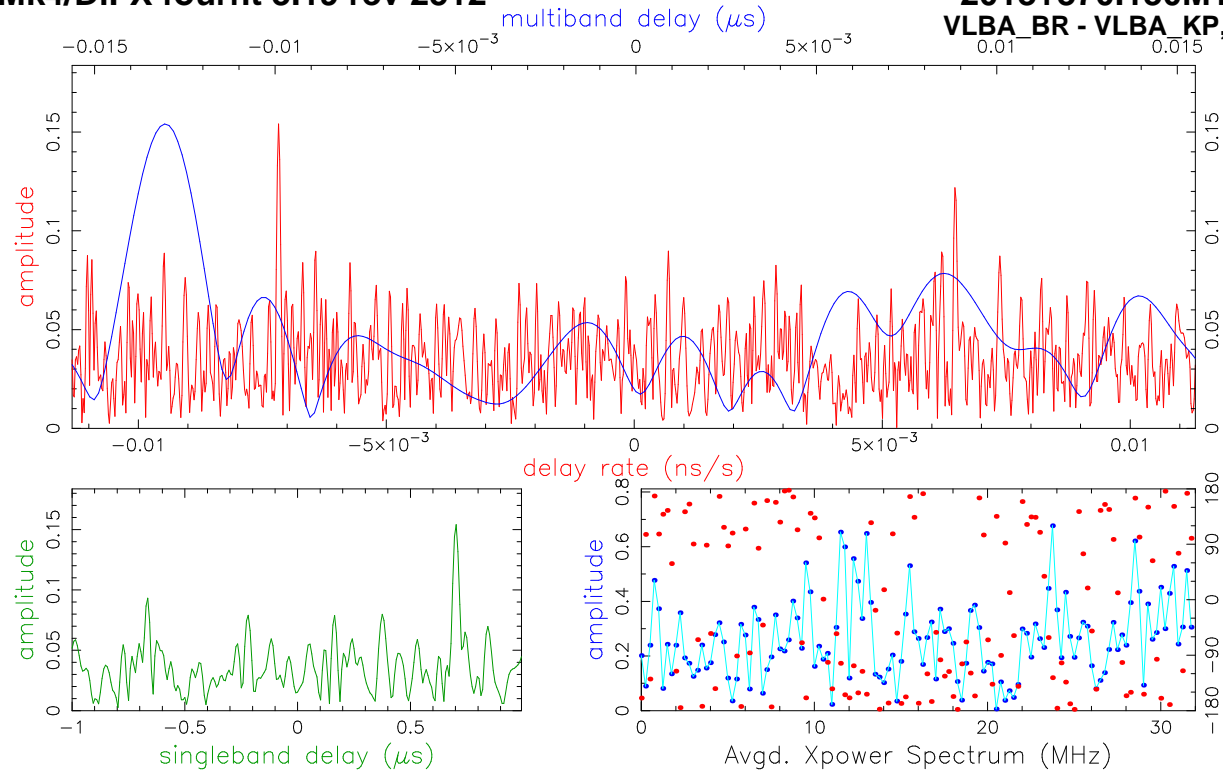
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All																		
102.3	155.6	112.7	167.1	121.9	126.0	98.7	171.2	28.4	167.9	-154.6	33.7	134.3	115.9	150.7	145.9	145.9	Phase	135.0																		
0.1	0.2	0.2	0.3	0.1	0.2	0.3	0.2	0.0	0.2	0.1	0.1	0.4	0.4	0.2	0.1	0.1	Ampl.	0.2																		
1.4	90.3	48.6	60.0	183.8	156.0	78.7	35.2	99.3	61.4	22.7	24.6	7.7	72.2	104.3	246.1	246.1	Sbd box	128.6																		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used																			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs																			
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs																			
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase																			
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC																			
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp																			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids																			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks																			
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks																			
Group delay (usec)(sbd)		-6.75191040459E+02					Apriori delay (usec)					-6.75194008227E+02					Resid mbdelay (usec)					2.96777E-03					+/- 1.8E-04									
Sband delay (usec)		-6.75197281227E+02					Apriori clock (usec)					-2.2197992E-01					Resid sbdelay (usec)					-3.27300E-03					+/- 2.9E-03									
Phase delay (usec)		-6.75194003875E+02					Apriori clockrate (us/s)					-4.7816091E-08					Resid phdelay (usec)					4.35200E-06					+/- 6.3E-07									
Delay rate (us/s)		-6.40002044499E-02					Apriori rate (us/s)					-6.40014652630E-02					Resid rate (us/s)					1.26081E-06					+/- 6.1E-09									
Total phase (deg)		-177.8					Apriori accel (us/s/s)					1.82917948754E-05					Resid phase (deg)					135.0					+/- 19.5									
ph/seg (deg)		RMS 52.9					Theor. 32.4					Amplitude 0.161 +/- 0.027					Pcal mode: MANUAL, MANUAL					PC period (AP's) 5, 5														
amp/seg (%)		54.1					56.5					Search (1024X64) 0.157					Pcal rate: 0.000E+00, 0.000E+00 (us/s)					sb window (us)					-1.000 1.000									
ph/frq (deg)		49.5					39.1					Interp. 0.000					Bits/sample: 2x2					SampCntNorm: enabled					mb window (us)					-0.016 0.016				
amp/frq (%)		59.9					68.2					Inc. seg. avg. 0.148					Sample rate(MSamp/s): 64					dr window (ns/s)					-0.011 0.011									
												Data rate(Mb/s): 2048					nlags: 128					t_cohere infinite					ion window (TEC)					0.00 0.00				
b: az 88.3 el 52.8 pa -56.9							k: az 69.4 el 55.9 pa -86.3										u,v (fr/asec) 477.387 2608.265															simultaneous interpolator				
Control file: cf_1234_gmva							Input file: /Exps/c192c/v2/1234/No0065/bk..130M17																									Output file: /Exps/c192c/v2/1234/No0065/bk.W.54.130M17				

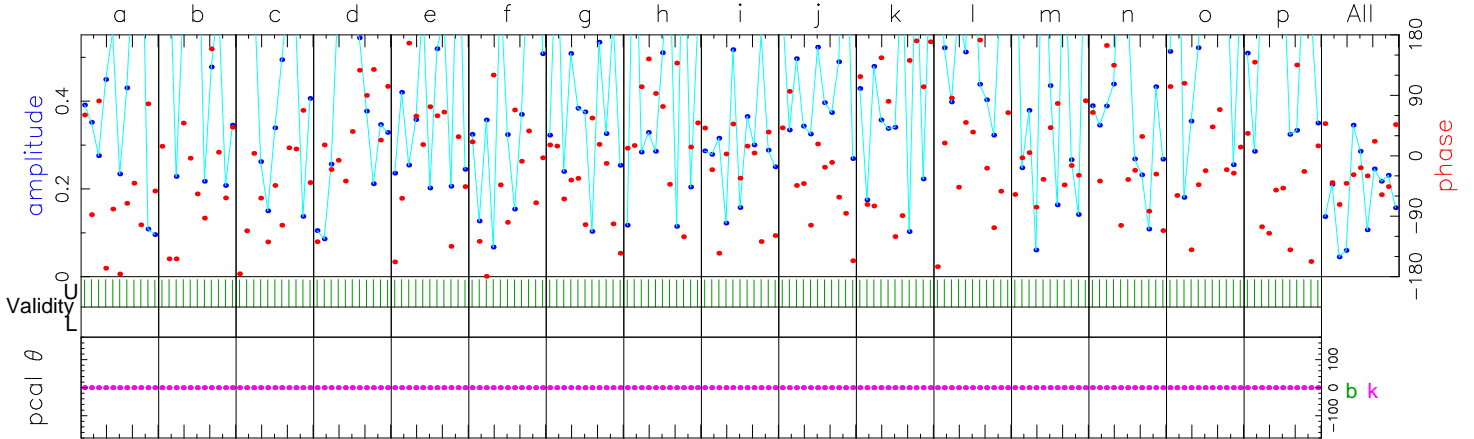
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, bk
VLBA_BR - VLBA_KP, fgroup W, pol RL



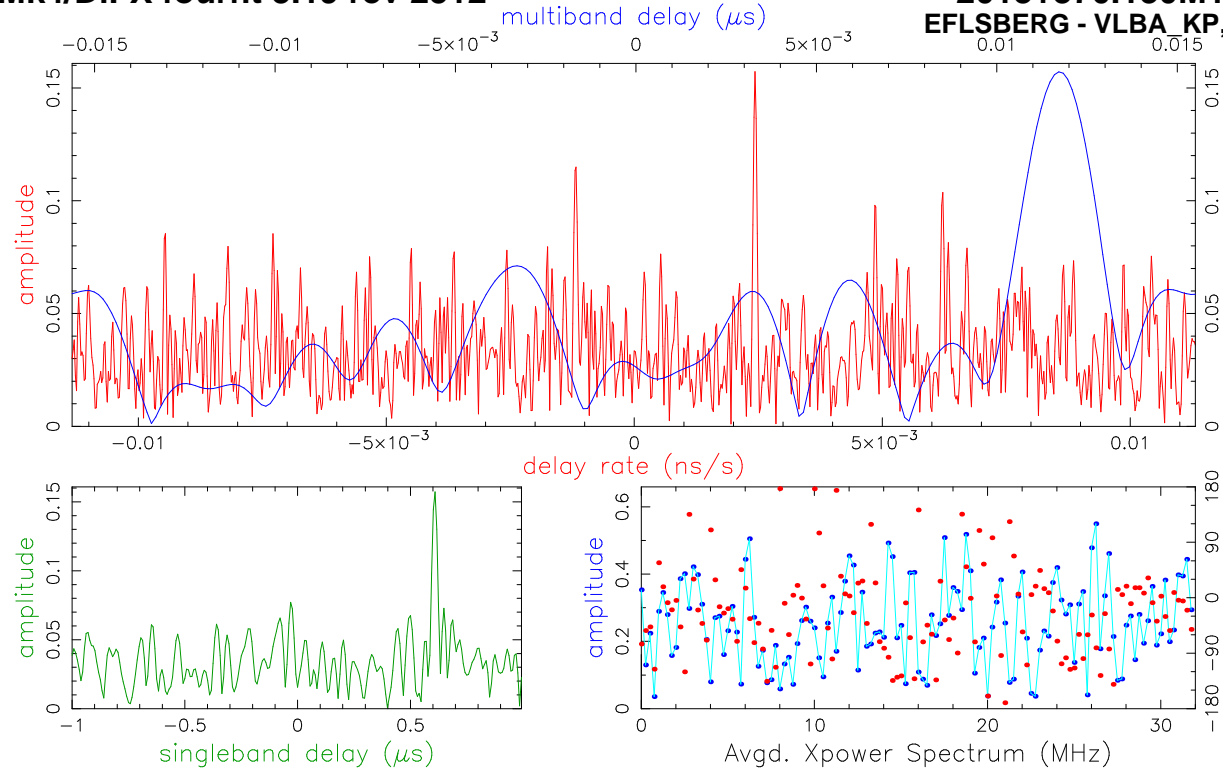
Fringe quality 0
SNR 5.7
Int time 178.721
Amp 0.184
Phase -19.7
PFD 8.4e-01
Delays (us)
SBD 0.701561
MBD -0.013051
Fringe rate (Hz)
-0.619617
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053313
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-84.1	-15.4	-47.1	35.1	35.8	-29.7	-29.2	29.6	-7.6	-35.4	-174.0	22.5	-13.4	-52.0	-1.4	-73.6	Phase	-19.7				
	0.2	0.3	0.2	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.2	0.4	0.1	0.4	0.2	Ampl.	0.2				
	96.1	99.2	84.5	229.3	128.1	153.5	94.8	42.2	181.0	158.6	207.0	237.9	134.2	39.4	9.5	179.0	Sbd box	218.8				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
b:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Group delay (usec)(sbd)			-6.74488309363E+02														Apriori delay (usec)	-6.75194008227E+02	Resid mbdelay (usec)	-1.30511E-02	+/-	1.9E-04
Sband delay (usec)			-6.74492447227E+02														Apriori clock (usec)	-2.2197992E-01	Resid sbdelay (usec)	7.01561E-01	+/-	3.0E-03
Phase delay (usec)			-6.75194008862E+02														Apriori clockrate (us/s)	-4.7816091E-08	Resid phdelay (usec)	-6.35167E-07	+/-	6.5E-07
Delay rate (us/s)			-6.40086584011E-02														Apriori rate (us/s)	-6.40014652630E-02	Resid rate (us/s)	-7.19314E-06	+/-	6.3E-09
Total phase (deg)																	Apriori accel (us/s/s)	1.82917948754E-05	Resid phase (deg)	-19.7	+/-	20.2

ph/seg (deg) 38.8 33.6 Search (1024X64) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 61.1 58.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 56.0 40.5 Inc. seg. avg. 0.188 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 51.6 70.7 Inc. frq. avg. 0.200 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 88.3 el 52.8 pa -56.9 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 477.387 2608.265 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/bk.W.71.130M17

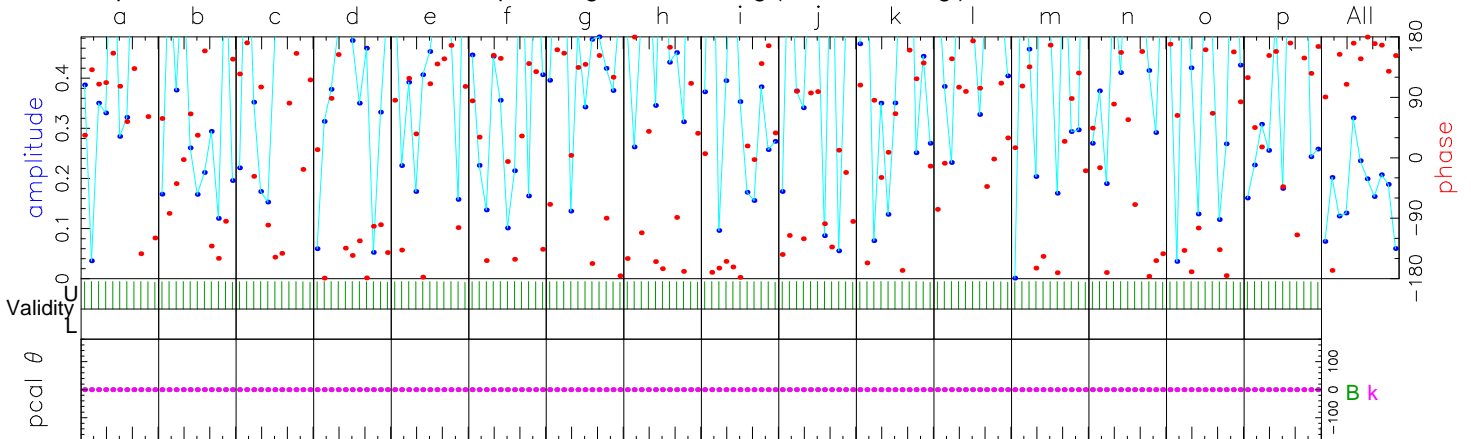


Fringe quality 0

SNR 5.8
Int time 179.012
Amp 0.161
Phase 158.2
PFD 6.2e-01
Delays (us)
SBD 0.607979
MBD 0.011737
Fringe rate (Hz) 0.210279
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

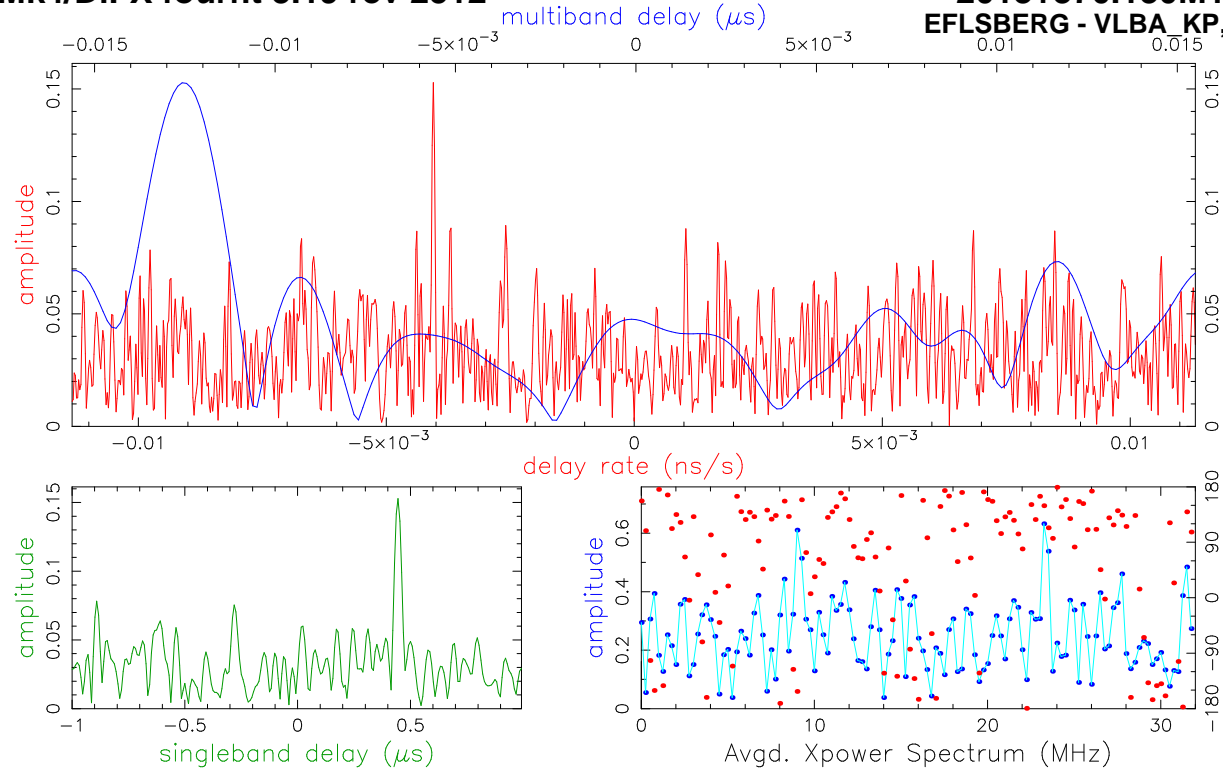
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build 2020:076:150631
2020:086:053313
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-5.41660579595E+03																
Sband delay (usec)		-5.41660330360E+03																
Phase delay (usec)		-5.41721127750E+03																
Delay rate (us/s)		-1.45546208692E+00																
Total phase (deg)					-159.8													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 30.3 32.9 Search (1024X64) 0.152 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 45.9 57.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 53.7 39.7 Inc. seg. avg. 0.152 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 51.2 69.3 Inc. frq. avg. 0.163 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
B: az 287.8 el 35.4 pa 49.5 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 10509.625 4363.968 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/Bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/Bk.W.74.130M17

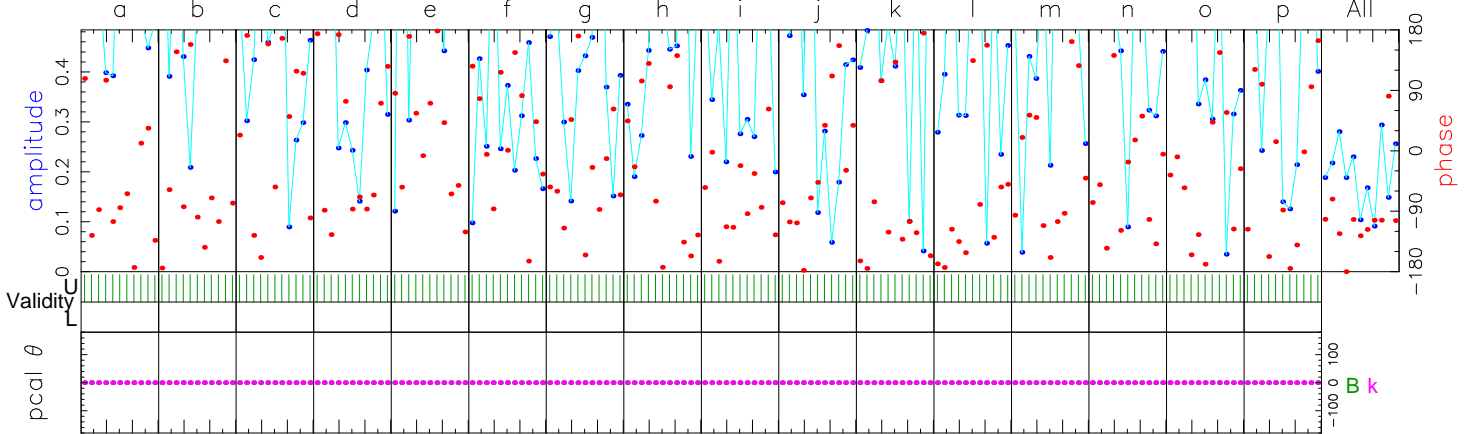


Fringe quality 0

SNR 5.6
Int time 179.012
Amp 0.161
Phase -111.9
PFD 9.3e-01
Delays (us)
SBD 0.444501
MBD -0.012537
Fringe rate (Hz)
-0.350002
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053315
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

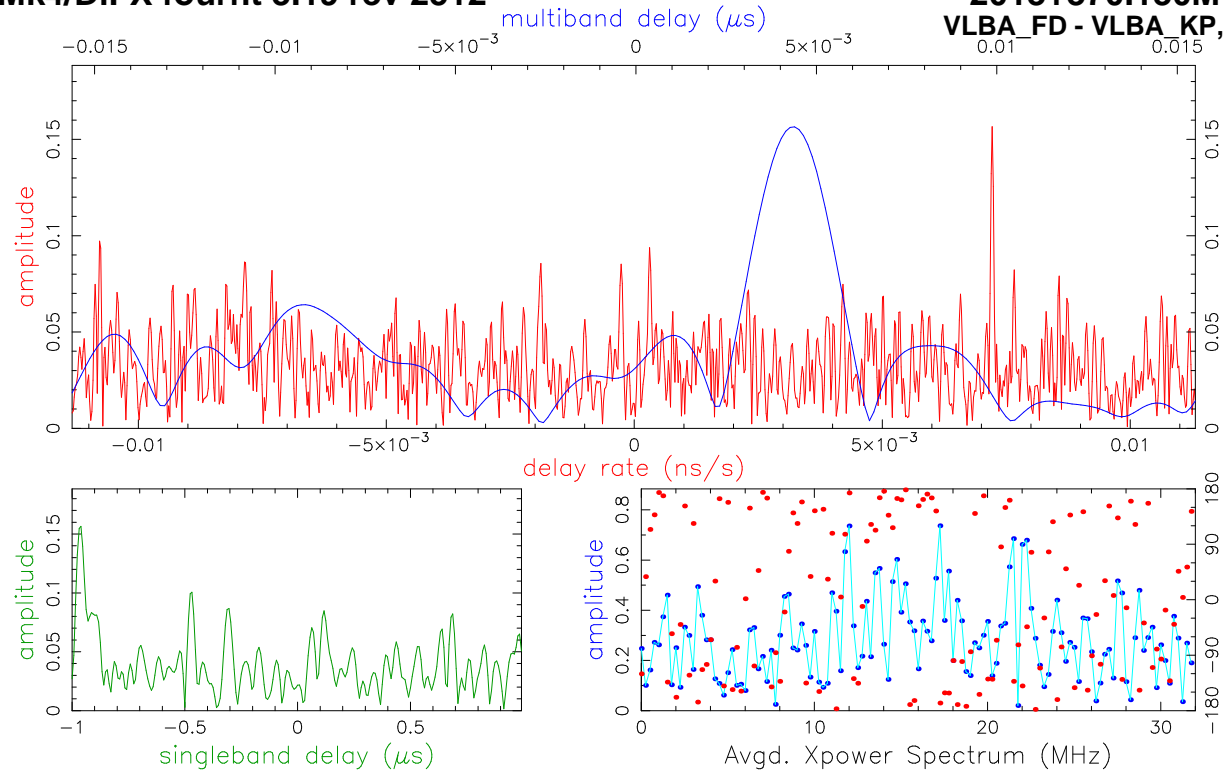


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-96.5	-130.0	-172.5	-124.4	-50.4	37.0	-73.7	-163.1	-78.4	-78.3	-144.8	-128.6	-125.6	-67.8	-99.9	117.7	Phase	-111.9				
	0.2	0.3	0.2	0.2	0.2	0.0	0.3	0.2	0.2	0.3	0.4	0.3	0.2	0.2	0.1	0.1	Ampl.	0.2				
	193.4	188.1	102.7	127.6	48.1	23.2	68.9	36.3	117.2	211.6	49.3	40.7	144.8	16.6	75.8	241.1	Sbd box	185.9				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
B:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-5.41675506980E+03														Apriori delay (usec)	-5.41721128260E+03	Resid mbdelay (usec)	-1.25372E-02	+/-	1.9E-04
Sband delay (usec)			-5.41676678210E+03														Apriori clock (usec)	1.7199942E+01	Resid sbdelay (usec)	4.44501E-01	+/-	3.1E-03
Phase delay (usec)			-5.41721128621E+03														Apriori clockrate (us/s)	-5.4210100E-09	Resid phdelay (usec)	-3.60795E-06	+/-	6.6E-07
Delay rate (us/s)			-1.45546859121E+00														Apriori rate (us/s)	-1.45546452804E+00	Resid rate (us/s)	-4.06317E-06	+/-	6.3E-09
Total phase (deg)					-69.9												Apriori accel (us/s/s)	4.54638514456E-05	Resid phase (deg)	-111.9	+/-	20.5

ph/seg (deg) 56.2 33.9 Search (1024X64) 0.161 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 50.5 59.2 Interp. 0.145 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 64.0 40.9 Inc. seg. avg. 0.177 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 60.5 71.5 Inc. frq. avg. 0.169 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 287.8 el 35.4 pa 49.5 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 10509.625 4363.968 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/Bk..130M17 Output file: /Exps/c192c/v2/1234/No0065/Bk.W.83.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, fk
VLBA_FD - VLBA_KP, fgroup W, pol RR

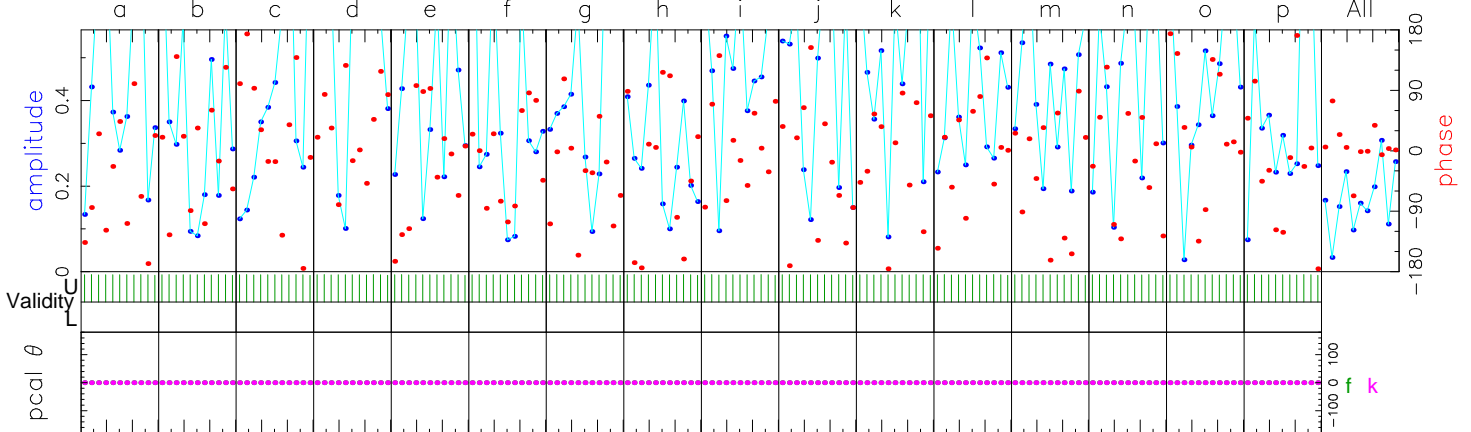


Fringe quality 0

SNR 5.8
Int time 178.462
Amp 0.188
Phase 4.6
PFD 6.0e-01
Delays (us)
SBD -0.964190
MBD 0.004357
Fringe rate (Hz) 0.623605
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053320
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-51.9	36.4	15.0	31.3	-31.7	20.0	-52.5	28.7	-6.9	-9.9	21.7	16.3	2.0	4.6	54.1	-20.4		Phase	4.6
	0.2	0.2	0.2	0.4	0.1	0.3	0.2	0.1	0.3	0.1	0.4	0.2	0.1	0.2	0.1	0.2		Ampl.	0.2
	211.7	42.8	152.8	6.2	67.8	67.9	113.4	49.9	92.4	184.5	117.1	88.4	41.4	216.7	54.3	231.6		Sbd box	5.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	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	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	

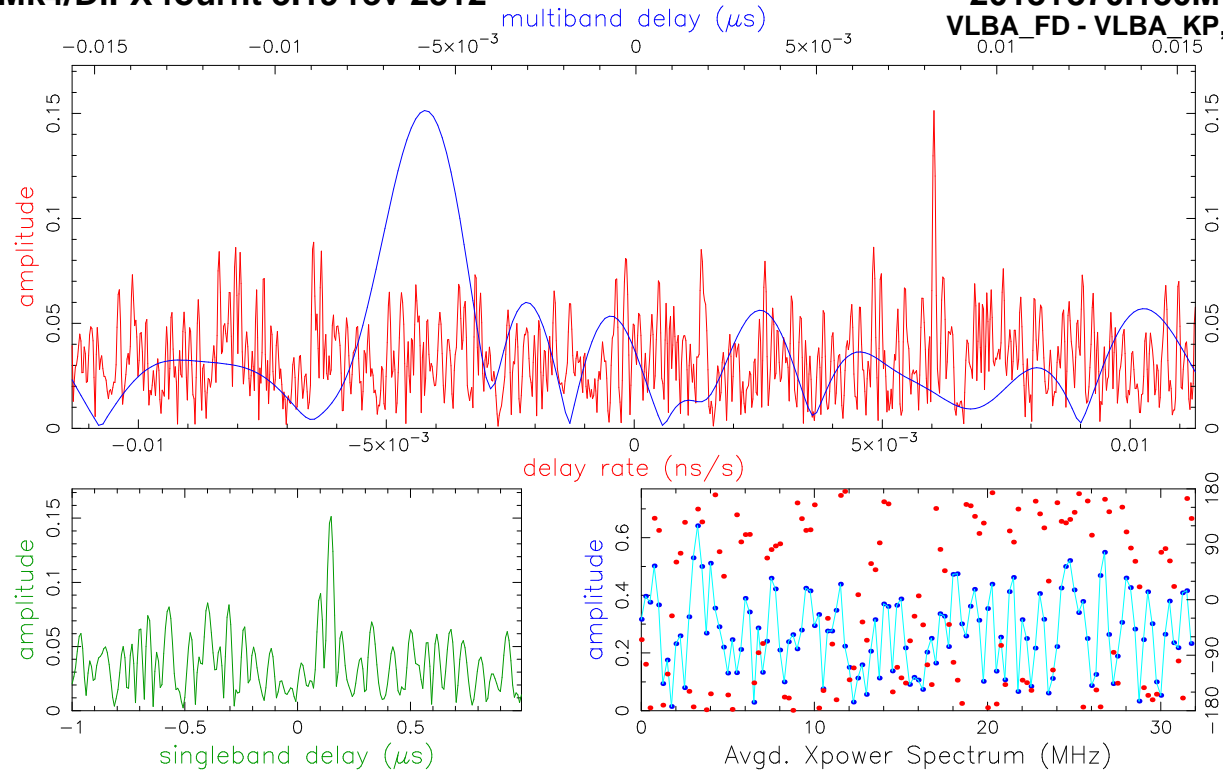
Group delay (usec)(sbd) 1.07536009984E+03 Apriori delay (usec) 1.07632449317E+03 Resid mbdelay (usec) 4.35667E-03 +/- 1.9E-04
 Sband delay (usec) 1.07536030267E+03 Apriori clock (usec) 8.7364858E-01 Resid sbdelay (usec) -9.64190E-01 +/- 3.0E-03
 Phase delay (usec) 1.07632449332E+03 Apriori clockrate (us/s) 1.0362949E-07 Resid phdelay (usec) 1.48130E-07 +/- 6.4E-07
 Delay rate (us/s) -1.03851895638E-01 Apriori rate (us/s) -1.03859135078E-01 Resid rate (us/s) 7.23944E-06 +/- 6.1E-09
 Total phase (deg) 307.7 Apriori accel (us/s/s) -7.06460941952E-06 Resid phase (deg) 4.6 +/- 19.8

RMS Theor. Amplitude 0.188 +/- 0.033 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 32.6 32.9 Search (1024X64) 0.153 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 47.1 57.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 31.9 39.6 Inc. seg. avg. 0.173 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 55.9 69.2 Inc. frq. avg. 0.170 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

f: az 67.5 el 61.5 pa -93.1 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 741.564 -565.373 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/fk..130M17 Output file: /Exps/c192c/v2/1234/No0065/fk.W.113.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, fk
VLBA_FD - VLBA_KP, fgroup W, pol LR

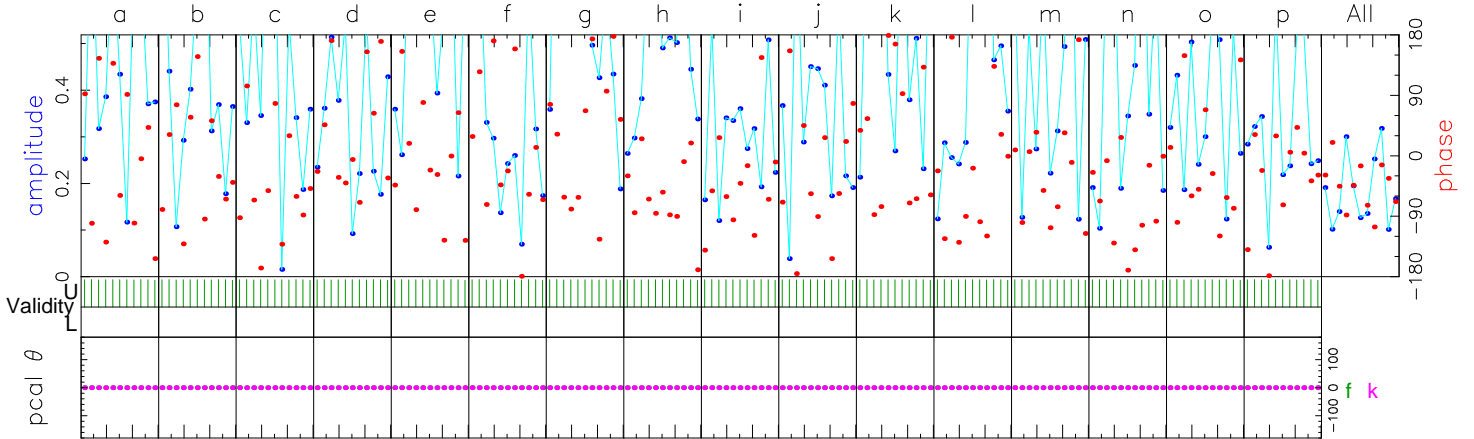


Fringe quality 0

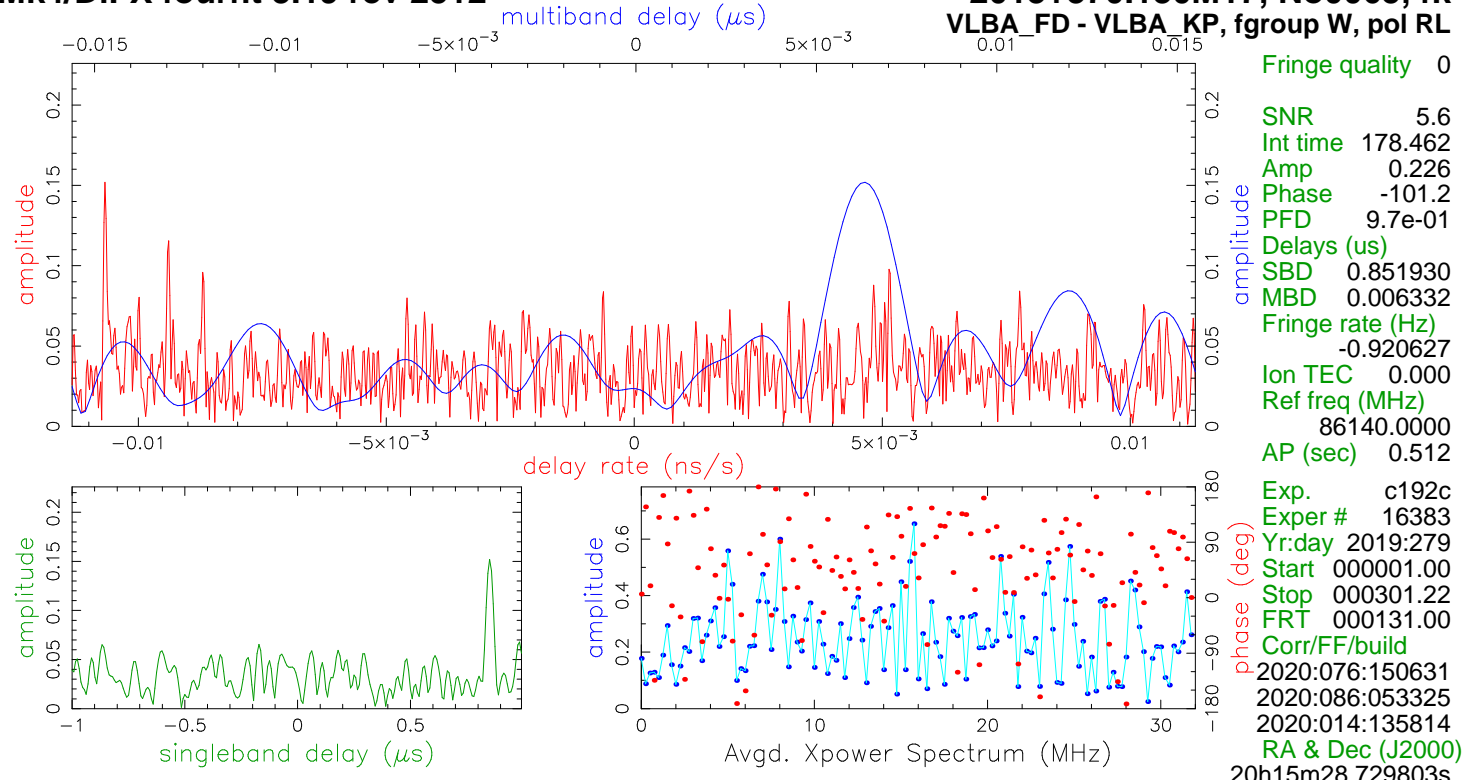
SNR 5.6
Int time 178.463
Amp 0.173
Phase -50.4
PFD 9.2e-01
Delays (us)
SBD 0.145754
MBD -0.005865
Fringe rate (Hz)
0.521156
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053322
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
-113.4	-58.6	-42.3	-23.7	-28.8	-4.8	5.4	-53.9	-62.0	-62.5	-57.9	-85.8	-23.2	-88.7	-64.8	2.0	Phase	-50.4	
0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.4	0.2	0.1	0.1	0.2	0.3	0.3	0.2	0.3	Ampl.	0.2	
221.8	89.9	126.5	30.4	181.8	84.1	241.1	148.0	152.2	133.3	227.9	230.1	16.7	150.1	220.2	227.6	Sbd box	147.7	
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
k 1000	1000	1000	1000	1000	1000	1000	1000	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	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
f 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
k 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	1.07647487782E+03			Apriori delay (usec)			1.07632449317E+03			Resid mbdelay (usec)			-5.86535E-03			+/-	1.9E-04	
Sband delay (usec)	1.07647024717E+03			Apriori clock (usec)			8.7364858E-01			Resid sbdelay (usec)			1.45754E-01			+/-	3.1E-03	
Phase delay (usec)	1.07632449155E+03			Apriori clockrate (us/s)			1.0362949E-07			Resid phdelay (usec)			-1.62396E-06			+/-	6.6E-07	
Delay rate (us/s)	-1.03853084975E-01			Apriori rate (us/s)			-1.03859135078E-01			Resid rate (us/s)			6.05010E-06			+/-	6.3E-09	
Total phase (deg)	252.7			Apriori accel (us/s/s)			-7.06460941952E-06			Resid phase (deg)			-50.4			+/-	20.5	
ph/seg (deg)	RMS	Theor.	Amplitude			0.173 +/- 0.031			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5						
amp/seg (%)	35.3	33.9	Search (1024X64)			0.150			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)			-1.000	1.000		
ph/frq (deg)	51.5	59.2	Interp.			0.000			Bits/sample: 2x2			SampCntNorm: enabled			mb window (us)	-0.016	0.016	
amp/frq (%)	35.1	40.9	Inc. seg. avg.			0.177			Sample rate(MSamp/s): 64			dr window (ns/s)			-0.011	0.011		
	51.1	71.4	Inc. frq. avg.			0.156			Data rate(Mb/s): 2048			nlags: 128 t_cohere infinite			ion window (TEC)	0.00	0.00	
f: az 67.5 el 61.5 pa -93.1	k: az 69.4 el 55.9 pa -86.3			u,v (fr/asec) 741.564 -565.373			simultaneous interpolator											
Control file: cf_1234_gmva	Input file: /Exps/c192c/v2/1234/No0065/fk..130M17			Output file: /Exps/c192c/v2/1234/No0065/fk.W.135.130M17														



Fringe quality 0

SNR 5.6

Int time 178.462

Amp 0.226

Phase -101.2

PFD 9.7e-01

Delays (us)

SBD 0.851930

MBD 0.006332

Fringe rate (Hz) -0.920627

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000001.00

Stop 000301.22

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053325

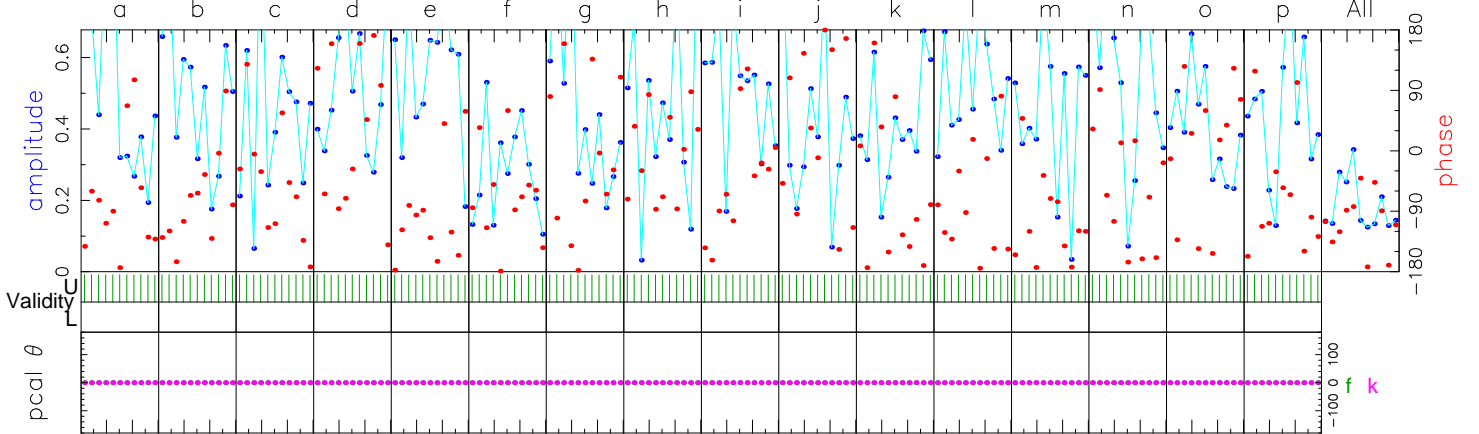
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-102.9	-96.1	-59.6	-137.6	-124.2	-82.1	-137.0	-5.8	-87.2	-138.5	-150.8	-106.8	-108.3	-53.2	62.5	-114.3	Phase	-101.2
	0.5	0.4	0.2	0.2	0.5	0.2	0.2	0.3	0.2	0.1	0.3	0.3	0.4	0.2	0.2	0.3	Ampl.	0.2
	129.4	232.5	16.0	104.8	217.7	34.4	245.2	205.3	44.2	179.5	84.9	32.6	130.1	211.6	177.4	52.0	Sbd box	238.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k	1000	1000	1000	1000	1000	1000	1000	1000	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	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 1.07717457563E+03 Apriori delay (usec) 1.07632449317E+03 Resid mbdelay (usec) 6.33246E-03 +/- 1.9E-04

Sband delay (usec) 1.07717642367E+03 Apriori clock (usec) 8.7364858E-01 Resid sbdelay (usec) 8.51930E-01 +/- 3.1E-03

Phase delay (usec) 1.07632448991E+03 Apriori clockrate (us/s) 1.0362949E-07 Resid phdelay (usec) -3.26442E-06 +/- 6.7E-07

Delay rate (us/s) -1.03869822639E-01 Apriori rate (us/s) -1.03859135078E-01 Resid rate (us/s) -1.06876E-05 +/- 6.4E-09

Total phase (deg) 201.8 Apriori accel (us/s/s) -7.06460941952E-06 Resid phase (deg) -101.2 +/- 20.6

ph/seg (deg) RMS Theor. Amplitude 0.226 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 41.3 34.2 Search (1024X64) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 51.7 59.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

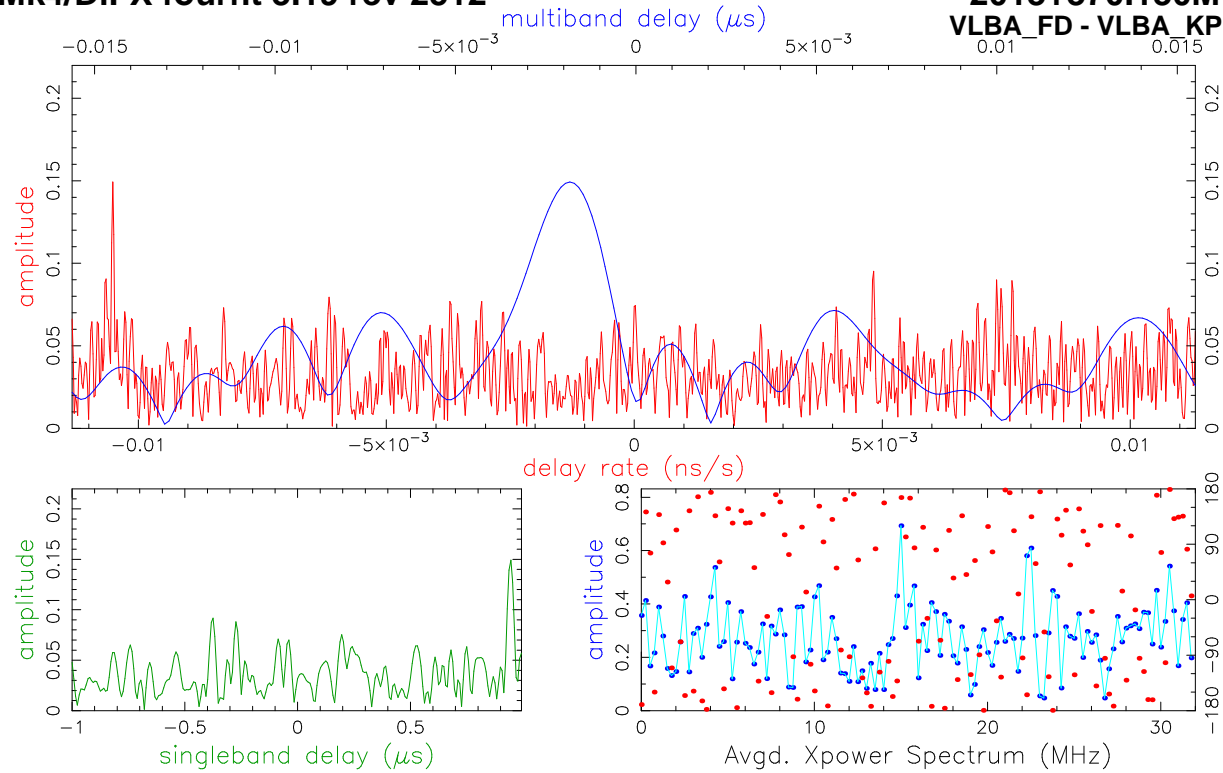
amp/frq (%) 58.4 41.3 Inc. seg. avg. 0.234 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

f: az 67.5 el 61.5 pa -93.1 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 741.564 -565.373 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/fk..130M17 Output file: /Exps/c192c/v2/1234/No0065/fk.W.157.130M17

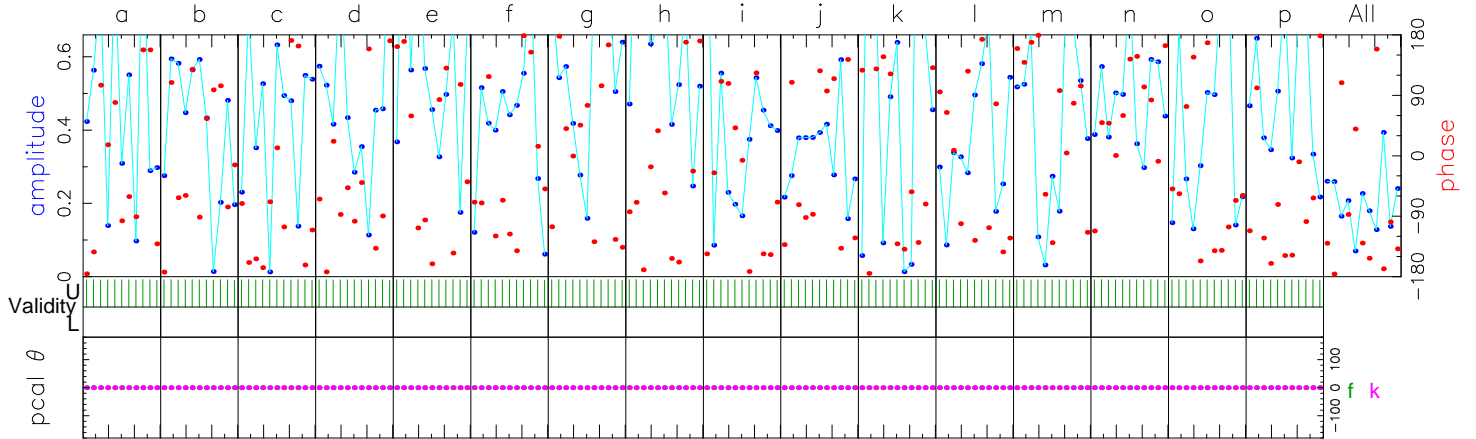
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, fk
VLBA_FD - VLBA_KP, fgroup W, pol LL



Fringe quality 0
SNR 5.5
Int time 178.462
Amp 0.220
Phase -150.4
PFD 9.9e-01
Delays (us)
SBD 0.943763
MBD -0.001809
Fringe rate (Hz)
-0.906418
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053317
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



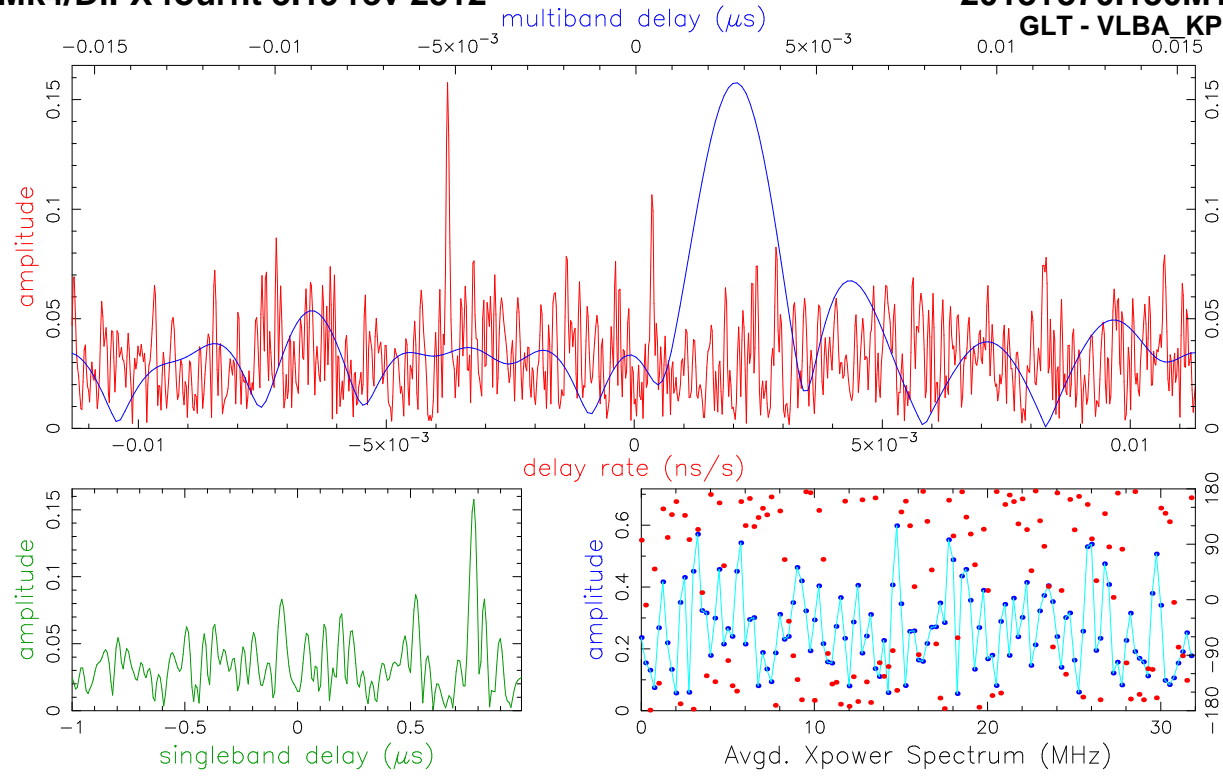
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U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd)	1.07726018393E+03	Apriori delay (usec)	1.07632449317E+03	Resid mbdelay (usec)	-1.80924E-03	+/-	2.0E-04
Sband delay (usec)	1.07726825667E+03	Apriori clock (usec)	8.7364858E-01	Resid sbdelay (usec)	9.43763E-01	+/-	3.1E-03
Phase delay (usec)	1.07632448832E+03	Apriori clockrate (us/s)	1.0362949E-07	Resid phdelay (usec)	-4.84956E-06	+/-	6.7E-07
Delay rate (us/s)	-1.03869657688E-01	Apriori rate (us/s)	-1.03859135078E-01	Resid rate (us/s)	-1.05226E-05	+/-	6.5E-09
Total phase (deg)	152.7	Apriori accel (us/s/s)	-7.06460941952E-06	Resid phase (deg)	-150.4	+/-	20.9

ph/seg (deg)	67.6	RMS	34.7	Theor.	Amplitude	0.220 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	66.7	Search (1024X64)	0.146	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	53.6	Inc. seg. avg.	0.256	Inc. frq. avg.	0.236	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016	
amp/frq (%)	55.9	Inc. frq. avg.	0.236			Sample rate(MSamp/s): 64	dr window (ns/s)	-0.011 0.011		
						Data rate(Mb/s): 2048	nlags: 128	t_cohere infinite	ion window (TEC)	0.00 0.00

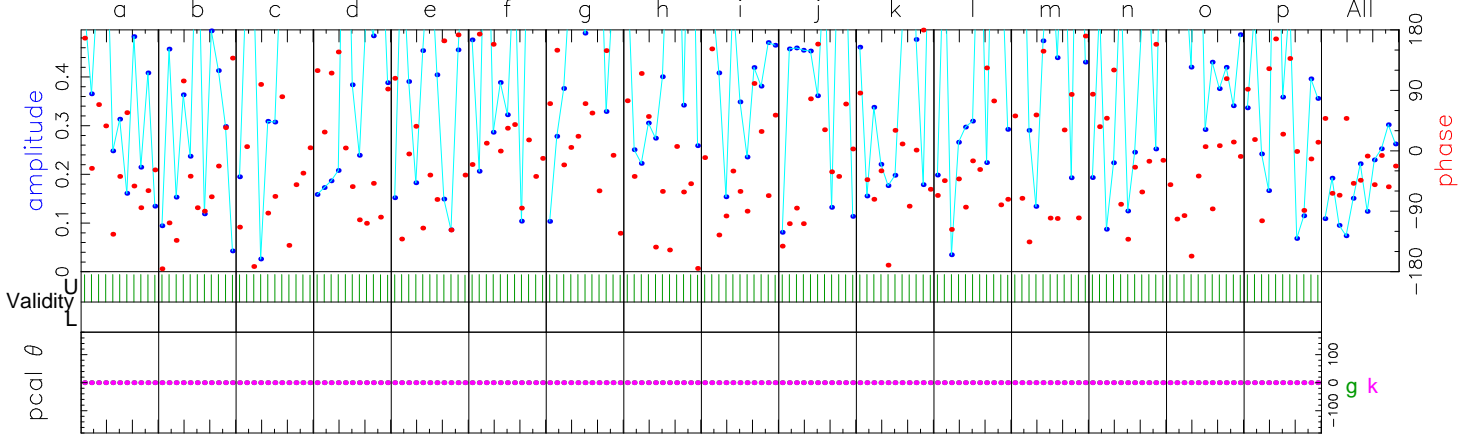
f: az 67.5 el 61.5 pa -93.1 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 741.564 -565.373 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/fk..130M17 Output file: /Exps/c192c/v2/1234/No0065/fk.W.93.130M17



Fringe quality 0
 SNR 5.8
 Int time 179.188
 Amp 0.166
 Phase -33.5
 PFD 5.8e-01
 Delays (us)
 SBD 0.779903
 MBD 0.002768
 Fringe rate (Hz)
 -0.324440
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 000001.00
 Stop 000301.22
 FRT 000131.00
 Corr/FF/build
 2020:076:150631
 2020:086:053324
 2020:014:135814
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-10.0	-69.8	-47.0	-47.3	-76.8	4.2	1.8	-38.4	-27.5	-20.3	-39.3	-35.3	-91.5	-19.7	-51.6	83.6	Phase	-33.5				
	0.1	0.2	0.2	0.2	0.2	0.4	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.1	Ampl.	0.2				
	3.1	33.2	123.8	118.9	49.7	230.2	253.9	184.0	216.3	20.4	96.6	81.2	21.7	234.4	229.4	14.7	Sbd box	228.8				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.21403828105E+03														Apriori delay (usec)	-1.21482229911E+03	Resid mbdelay (usec)	2.76806E-03	+/-	1.9E-04
Sband delay (usec)			-1.21404239611E+03														Apriori clock (usec)	1.7039311E+00	Resid sbdelay (usec)	7.79903E-01	+/-	3.0E-03
Phase delay (usec)			-1.21482230019E+03														Apriori clockrate (us/s)	2.6957898E-07	Resid phdelay (usec)	-1.07962E-06	+/-	6.4E-07
Delay rate (us/s)			-6.97259547508E-01														Apriori rate (us/s)	-6.97255781085E-01	Resid rate (us/s)	-3.76642E-06	+/-	6.1E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.67832990012E-05	Resid phase (deg)	-33.5	+/-	19.8

ph/seg (deg) 40.2 32.8
 amp/seg (%) 48.7 57.3
 ph/frq (deg) 42.0 39.6
 amp/frq (%) 48.6 69.1

RMS Theor. Amplitude 0.166 +/- 0.029
 Search (1024X64) 0.154
 Interp. 0.000
 Inc. seg. avg. 0.165
 Inc. frq. avg. 0.158

g: az 182.0 el 50.7 pa 0.6
 k: az 69.4 el 55.9 pa -86.3
 u,v (fr/asec) 5050.692 5297.985

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2 SampCntNorm: enabled
 Sample rate(MSamp/s): 64
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

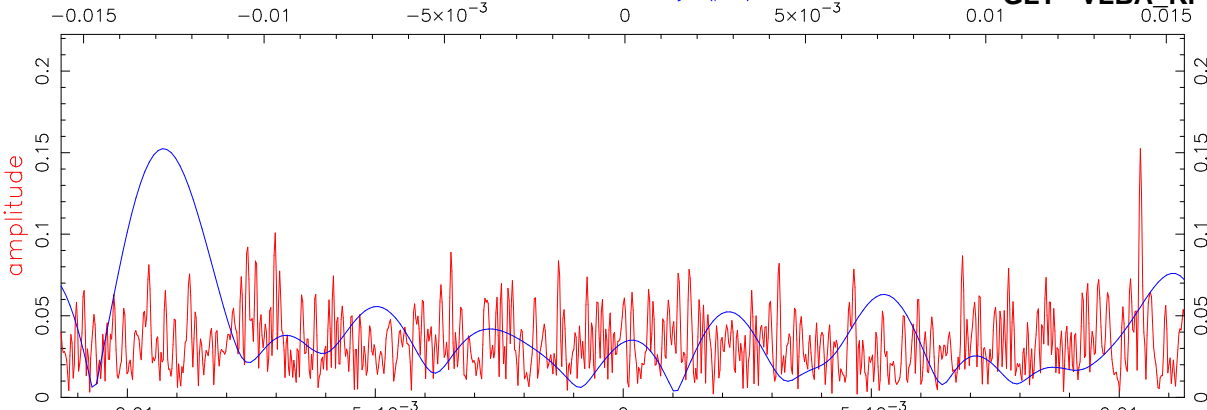
sb window (us) -1.000 1.000
 mb window (us) -0.016 0.016
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

simultaneous interpolator

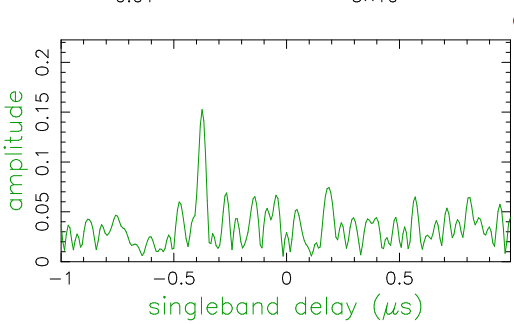
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/gk..130M17 Output file: /Exps/c192c/v2/1234/No0065/gk.W.149.130M17

multiband delay (μ s)

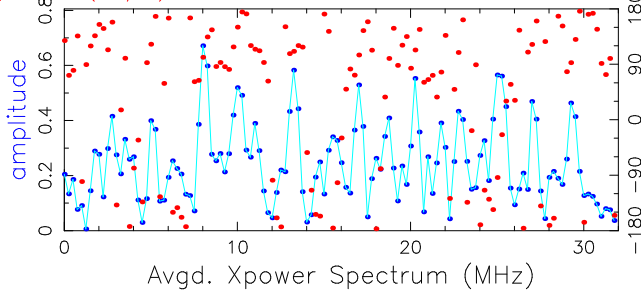
Fringe quality 0



SNR 5.6
Int time 179.162
Amp 0.223
Phase -150.8
PFD 9.4e-01
Delays (us)
SBD -0.374281
MBD -0.012798
Fringe rate (Hz)
0.899839
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

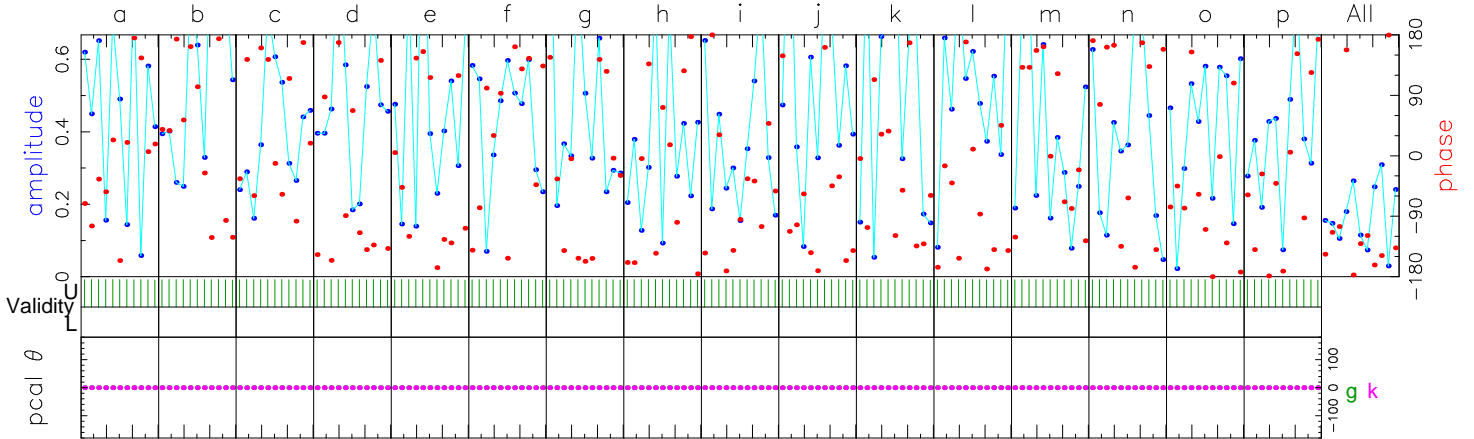


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053326
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-43.3	-163.3	139.3	-158.2	-157.2	168.4	-178.9	-175.3	-89.7	-134.7	-104.6	-117.2	158.2	179.0	-116.0	-158.2		Phase	-150.8				
	0.2	0.3	0.0	0.5	0.3	0.2	0.3	0.2	0.2	0.5	0.3	0.3	0.3	0.4	0.3	0.2		Ampl.	0.2				
	101.9	216.0	100.9	86.3	247.7	206.3	117.1	220.8	234.7	161.2	41.6	14.9	132.5	124.3	178.3	163.2		Sbd box	81.1				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-1.21521009670E+03															Apriori delay (usec)	-1.21482229911E+03	Resid mbdelay (usec)	-1.27976E-02	+/-	1.9E-04
Sband delay (usec)			-1.21519658011E+03															Apriori clock (usec)	1.7039311E+00	Resid sbdelay (usec)	-3.74281E-01	+/-	3.1E-03
Phase delay (usec)			-1.21482230397E+03															Apriori clockrate (us/s)	2.6957898E-07	Resid phdelay (usec)	-4.86157E-06	+/-	6.6E-07
Delay rate (us/s)			-6.97245334843E-01															Apriori rate (us/s)	-6.97255781085E-01	Resid rate (us/s)	1.04462E-05	+/-	6.4E-09
Total phase (deg)				-95.0														Apriori accel (us/s/s)	3.67832990012E-05	Resid phase (deg)	-150.8	+/-	20.5

ph/seg (deg) 29.4 34.0
amp/seg (%) 55.7 59.4
ph/frq (deg) 47.7 41.0
amp/frq (%) 54.5 71.6
g: az 182.0 el 50.7 pa 0.6
Control file: cf_1234_gmva

RMS Theor. Amplitude 0.223 +/- 0.040
Search (1024X64) 0.150
Interp. 0.000
Inc. seg. avg. 0.211
Inc. frq. avg. 0.222

pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

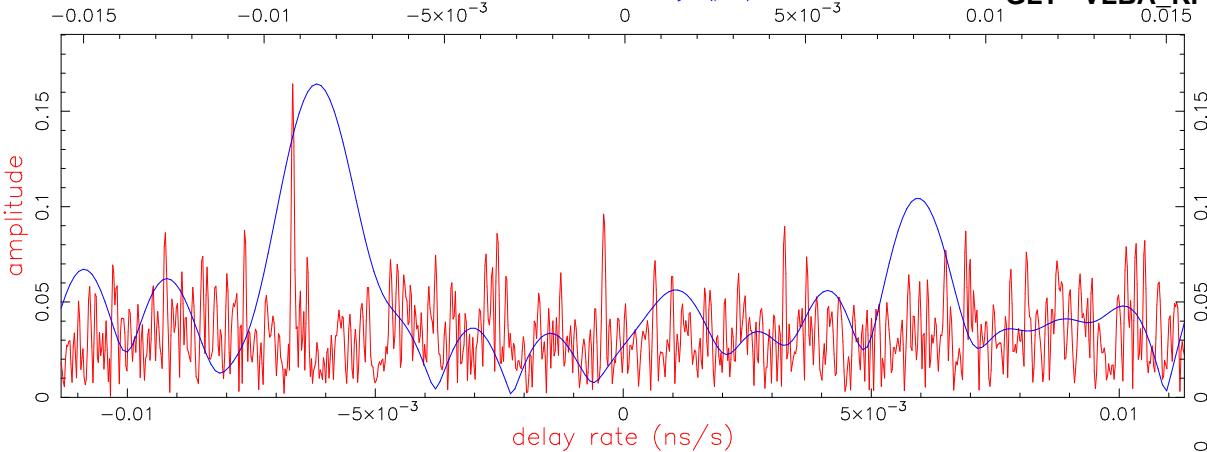
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 5050.692 5297.985 simultaneous interpolator

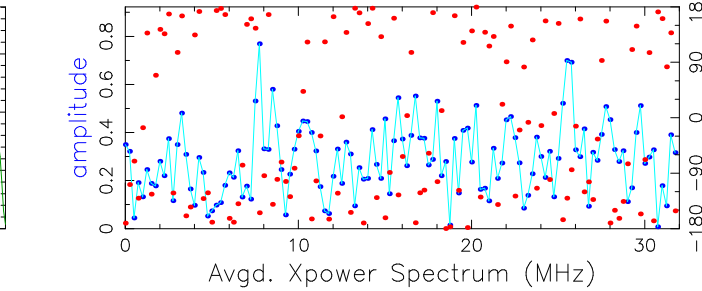
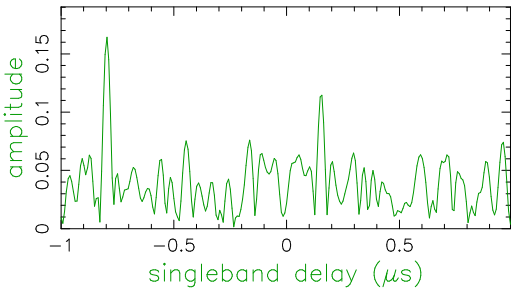
Input file: /Exps/c192c/v2/1234/No0065/gk..130M17 Output file: /Exps/c192c/v2/1234/No0065/gk.W.162.130M17

multiband delay (μ s)

Fringe quality 0

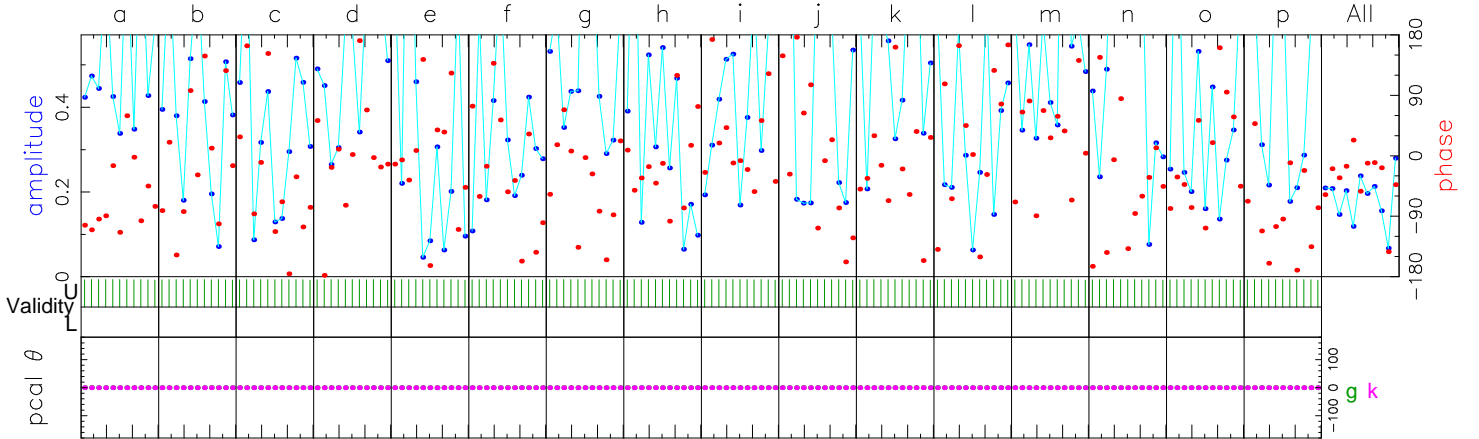


SNR 6.0
Int time 179.188
Amp 0.190
Phase -29.0
PFD 2.0e-01
Delays (us)
SBD -0.797409
MBD -0.008537
Fringe rate (Hz)
-0.574094
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053328
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-72.8	8.7	-116.4	3.0	-27.2	-20.4	-20.3	-24.0	-0.2	-48.3	-17.4	168.9	33.7	-69.7	-14.0	-88.1		Phase	-29.0				
	0.4	0.1	0.1	0.3	0.3	0.1	0.4	0.3	0.3	0.2	0.4	0.1	0.3	0.2	0.3	0.3		Ampl.	0.2				
	27.5	34.0	73.2	64.0	18.3	205.1	251.6	88.6	122.8	80.3	141.4	255.6	251.5	1.5	114.7	70.6		Sbd box	26.9				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																			Tracks				
Group delay (usec)(sbd)			-1.21561208565E+03															Apriori delay (usec)	-1.21482229911E+03	Resid mbdelay (usec)	-8.53654E-03	+/-	1.8E-04
Sband delay (usec)			-1.21561970811E+03															Apriori clock (usec)	1.7039311E+00	Resid sbdelay (usec)	-7.97409E-01	+/-	2.9E-03
Phase delay (usec)			-1.21482230004E+03															Apriori clockrate (us/s)	2.6957898E-07	Resid phdelay (usec)	-9.34331E-07	+/-	6.1E-07
Delay rate (us/s)			-6.97262445745E-01															Apriori rate (us/s)	-6.97255781085E-01	Resid rate (us/s)	-6.66466E-06	+/-	5.9E-09
Total phase (deg)				-333.2														Apriori accel (us/s/s)	3.67832990012E-05	Resid phase (deg)	-29.0	+/-	19.0

ph/seg (deg) 40.8 31.6
amp/seg (%) 36.4 55.1
ph/frq (deg) 59.2 38.1
amp/frq (%) 62.4 66.5

RMS Theor. Amplitude 0.190 +/- 0.032
Search (1024X64) 0.162
Interp. 0.000
Inc. seg. avg. 0.186
Inc. frq. avg. 0.202

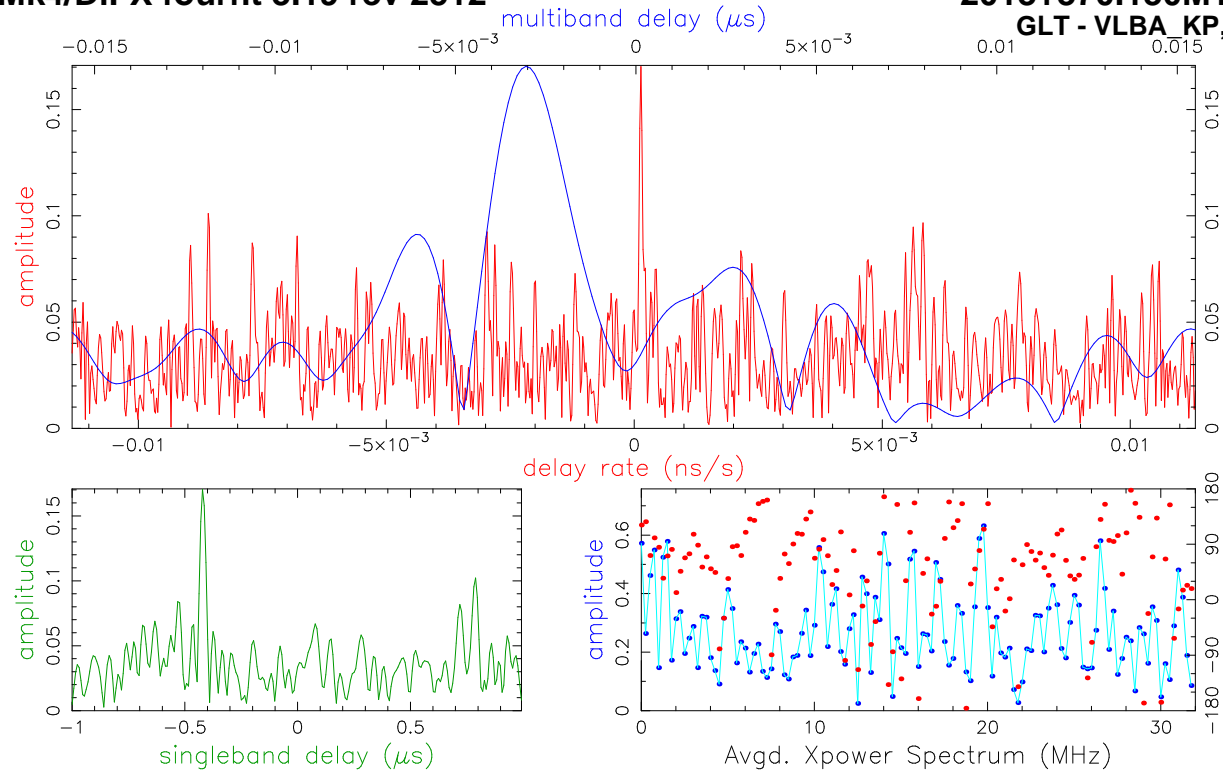
g: az 182.0 el 50.7 pa 0.6
k: az 69.4 el 55.9 pa -86.3
u,v (fr/asec) 5050.692 5297.985

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

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

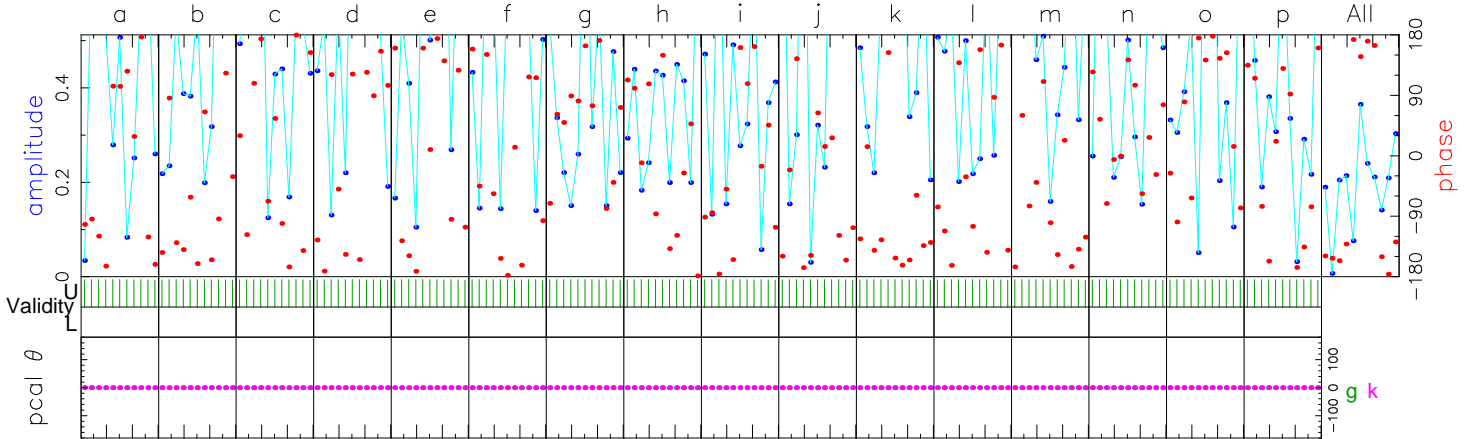
simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/gk..130M17 Output file: /Exps/c192c/v2/1234/No0065/gk.W.176.130M17



Fringe quality 0
SNR 6.3
Int time 179.161
Amp 0.171
Phase -168.8
PFD 5.3e-02
Delays (us)
SBD -0.420610
MBD -0.003017
Fringe rate (Hz) 0.011345
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Yr:day 16383
Start 2020:076:150631
Stop 2020:086:053331
FRT 2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-151.1	-139.7	-178.6	155.4	-178.9	-175.7	118.0	174.0	-165.8	-142.9	-144.5	-143.0	-133.4	36.3	-165.0	144.5	Phase	-168.8				
	0.2	0.2	0.2	0.3	0.4	0.2	0.1	0.1	0.2	0.3	0.4	0.3	0.2	0.2	0.2	0.3	Ampl.	0.2				
	234.7	124.8	72.5	229.5	75.6	239.2	196.3	37.5	244.8	76.6	75.0	189.7	4.3	24.1	116.4	23.9	Sbd box	75.2				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
g:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-1.21523156628E+03														Apriori delay (usec)	-1.21482229911E+03	Resid mbdelay (usec)	-3.01717E-03	+/-	1.7E-04
Sband delay (usec)			-1.21524290911E+03														Apriori clock (usec)	1.7039311E+00	Resid sbdelay (usec)	-4.20610E-01	+/-	2.8E-03
Phase delay (usec)			-1.21482230455E+03														Apriori clockrate (us/s)	2.6957898E-07	Resid phdelay (usec)	-5.44472E-06	+/-	5.9E-07
Delay rate (us/s)			-6.97255649385E-01														Apriori rate (us/s)	-6.97255781085E-01	Resid rate (us/s)	1.31700E-07	+/-	5.7E-09
Total phase (deg)																	Apriori accel (us/s/s)	3.67832990012E-05	Resid phase (deg)	-168.8	+/-	18.3

ph/seg (deg) 26.4 30.4
amp/seg (%) 56.7 53.0
ph/frq (deg) 51.9 36.7
amp/frq (%) 53.6 64.0
g: az 182.0 el 50.7 pa 0.6
Control file: cf_1234_gmva

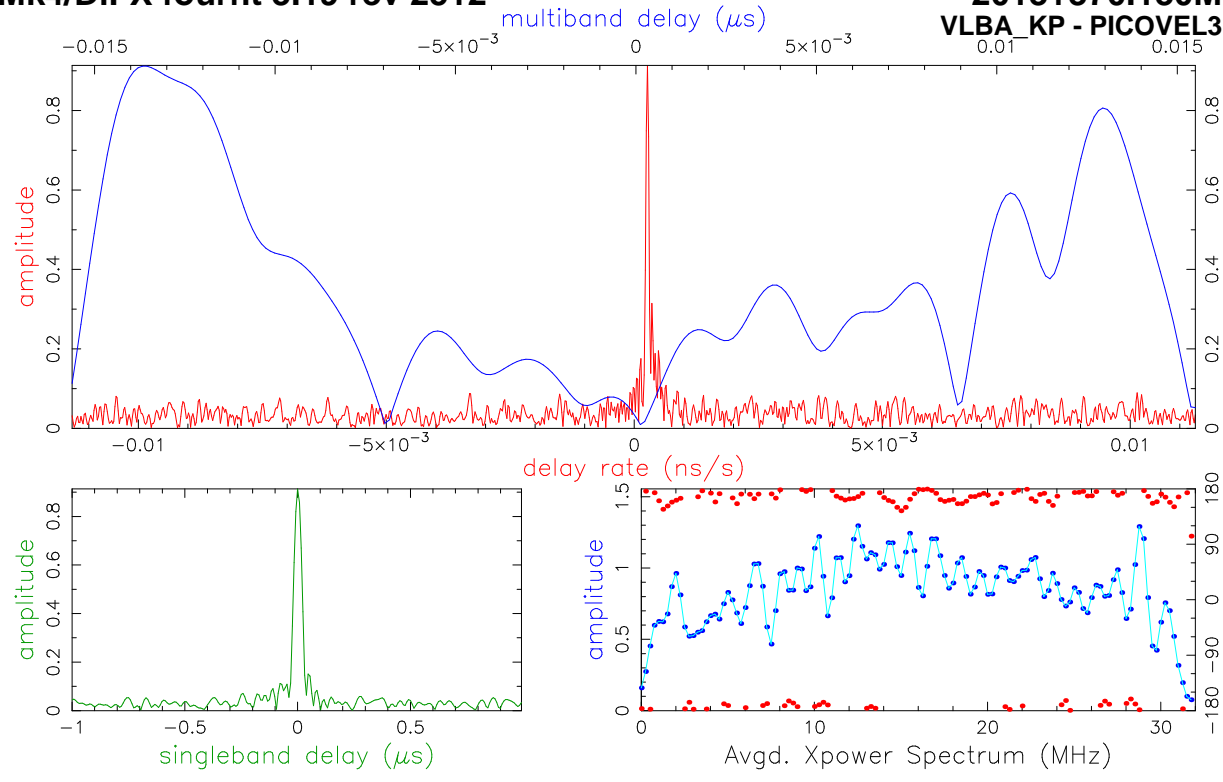
RMS Theor. Amplitude 0.171 +/- 0.027
Search (1024X64) 0.169
Interp. 0.000
Inc. seg. avg. 0.172
Inc. frq. avg. 0.180
k: az 69.4 el 55.9 pa -86.3
u,v (fr/asec) 5050.692 5297.985
Input file: /Exps/c192c/v2/1234/No0065/gk..130M17

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MSamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00
simultaneous interpolator

Output file: /Exps/c192c/v2/1234/No0065/gk.W.193.130M17

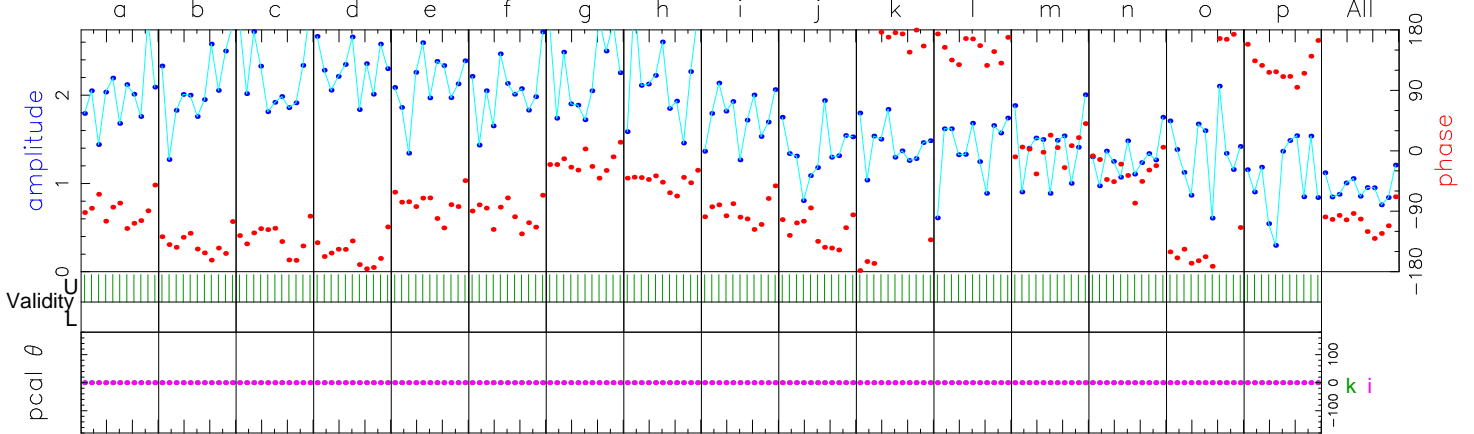
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, ki
VLBA_KP - PICOVEL3, fgroup W, pol LL



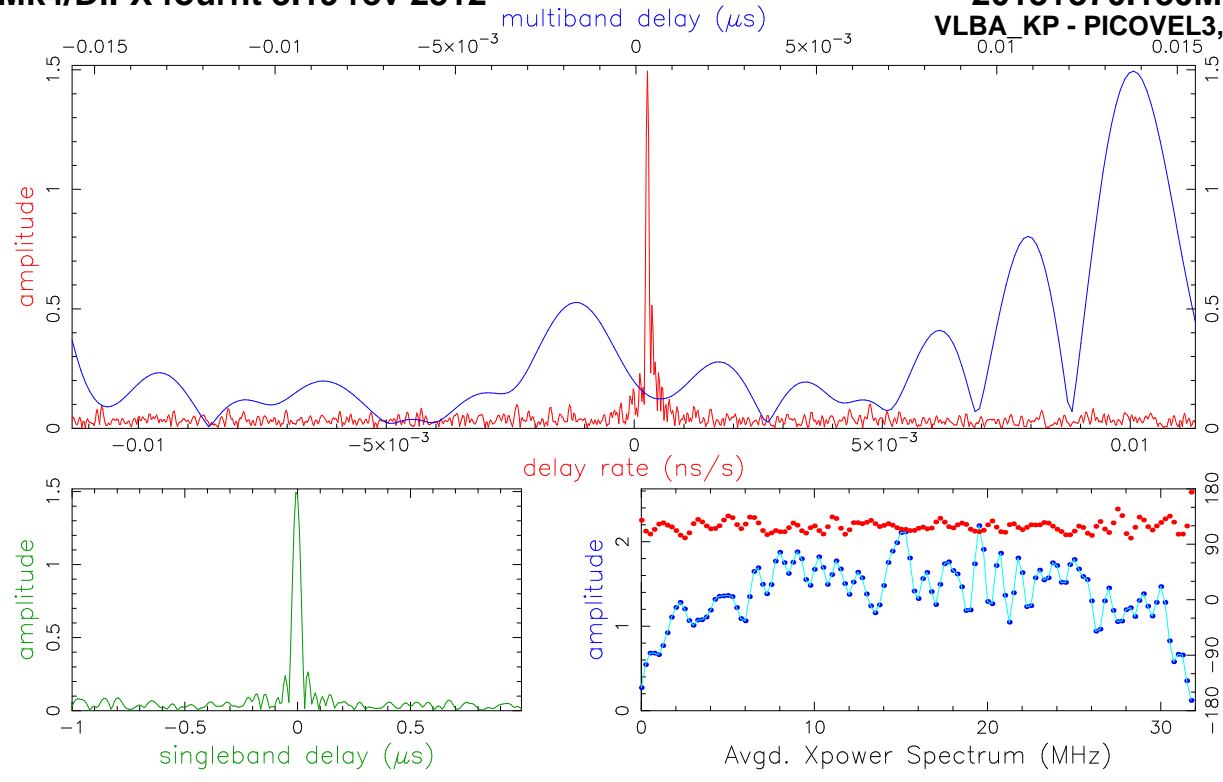
Fringe quality 6
SNR 33.4
Int time 179.212
Amp 0.914
Phase -103.1
PFD 0.0e+00
Delays (us)
SBD 0.001037
MBD -0.013599
Fringe rate (Hz) 0.023116
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053328
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-89.5	-138.4	-128.4	-150.7	-78.4	-92.7	-18.2	-43.9	-88.8	-119.8	179.1	150.3	2.5	-29.1	-164.7	125.1		Phase -103.1					
	1.9	2.0	2.1	2.2	2.0	1.9	2.2	2.2	1.7	1.3	1.4	1.3	1.3	1.2	1.3	1.0		Ampl. 1.7					
	128.2	128.9	128.9	128.8	128.8	129.2	128.9	129.0	128.8	128.5	128.8	128.8	128.8	129.0	128.6	127.4		Sbd box 129.1					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
k:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
k:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			4.70325042858E+03															Apriori delay (usec)	4.70326402768E+03	Resid mbdelay (usec)	-1.35991E-02	+/-	3.2E-05
Sband delay (usec)			4.70326506518E+03															Apriori clock (usec)	1.4954063E-01	Resid sbdelay (usec)	1.03750E-03	+/-	5.2E-04
Phase delay (usec)			4.70326402435E+03															Apriori clockrate (us/s)	1.5842101E-07	Resid phdelay (usec)	-3.32439E-06	+/-	1.1E-07
Delay rate (us/s)			1.59776272751E+00															Apriori rate (us/s)	1.59776245916E+00	Resid rate (us/s)	2.68349E-07	+/-	1.1E-09
Total phase (deg)					20.7													Apriori accel (us/s/s)	-3.00295659893E-05	Resid phase (deg)	-103.1	+/-	3.4

ph/seg (deg) 16.1 5.7 Search (1024X64) 0.908 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 14.7 9.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 71.5 6.9 Inc. seg. avg. 0.948 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 95.6 12.0 Inc. frq. avg. 1.673 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 i: az 291.9 el 37.9 pa 68.5 u,v (fr/asec) -11519.307 -2243.607 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ki..130M17 Output file: /Exps/c192c/v2/1234/No0065/ki.W.177.130M17

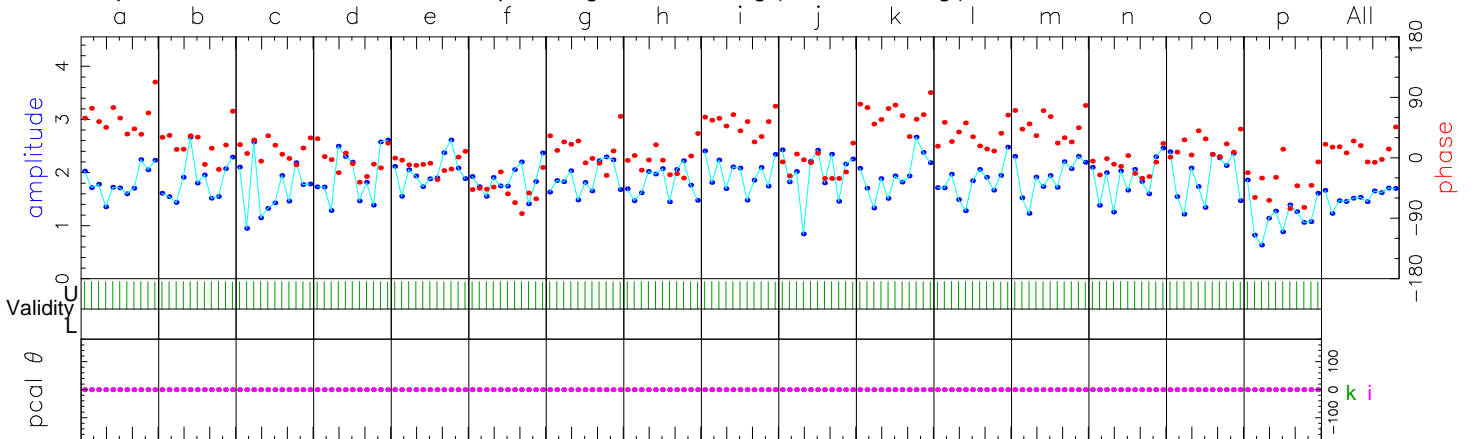


Fringe quality 5

SNR 55.6
Int time 179.212
Amp 1.519
Phase 13.4
PFD 0.0e+00
Delays (us)
SBD -0.004423
MBD 0.013794
Fringe rate (Hz) 0.023171
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053331
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

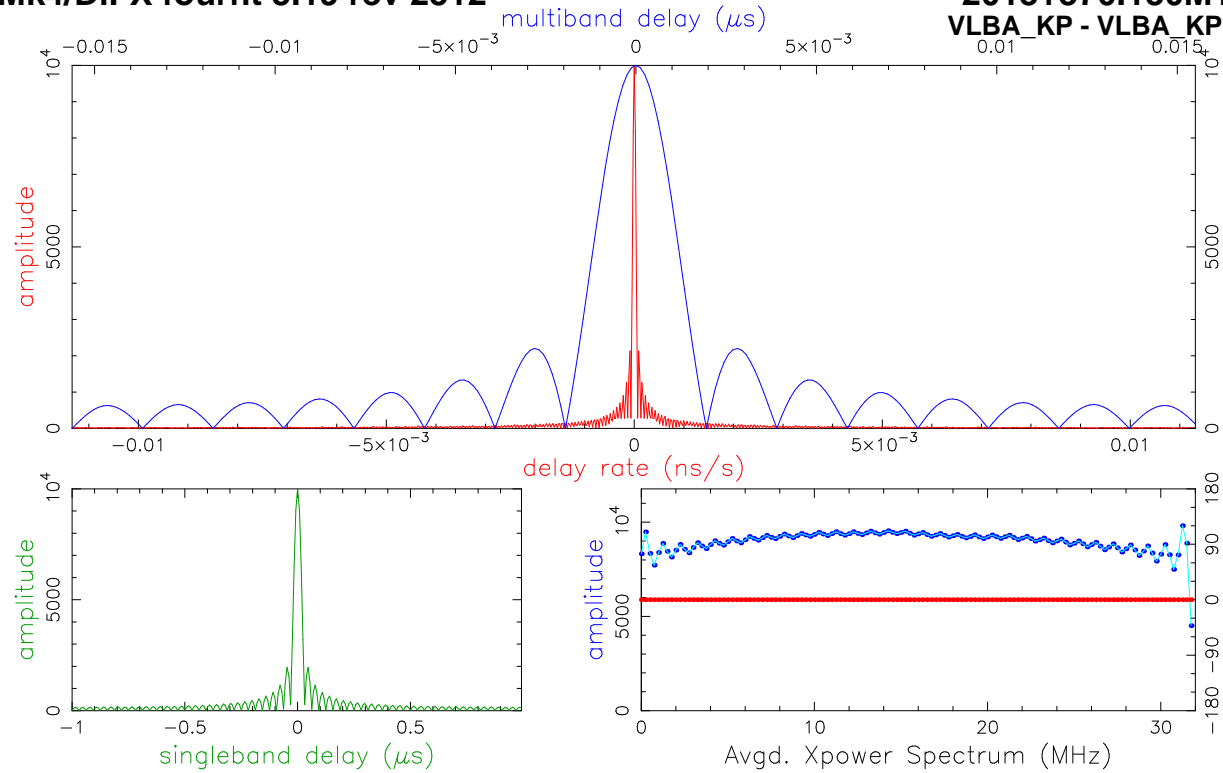
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	127.9	128.4
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.6	128.4
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.4	128.3
k:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	128.4	128.3
k:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	128.4	128.3
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.6	128.4
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	128.6	128.4
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	128.6	128.4
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	128.6	128.4
Group delay (usec)(sbd)	4.70324657199E+03			Apriori delay (usec)			4.70326402768E+03			Resid mbdelay (usec)			1.37943E-02			+/- 1.9E-05		
Sband delay (usec)	4.70325960468E+03			Apriori clock (usec)			1.4954063E-01			Resid sbdelay (usec)			-4.42300E-03			+/- 3.1E-04		
Phase delay (usec)	4.70326402811E+03			Apriori clockrate (us/s)			1.5842101E-07			Resid phdelay (usec)			4.30832E-07			+/- 6.6E-08		
Delay rate (us/s)	1.59776272815E+00			Apriori rate (us/s)			1.59776245916E+00			Resid rate (us/s)			2.68988E-07			+/- 6.4E-10		
Total phase (deg)	137.2			Apriori accel (us/s/s)			-3.00295659893E-05			Resid phase (deg)			13.4			+/- 2.1		
ph/seg (deg)	RMS	Theor.	Amplitude		1.519 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000 1.000			
amp/seg (%)	14.5	3.4	Search (1024X64)		1.478		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)		-0.016 0.016					
ph/frq (deg)	9.2	6.0	Interp.		0.000		Sample rate(MSamp/s): 64				dr window (ns/s)		-0.011 0.011					
amp/frq (%)	34.9	4.1	Inc. seg. avg.		1.544		Data rate(Mb/s): 2048		nlags: 128		ion window (TEC)		0.00 0.00					
	20.2	7.2	Inc. frq. avg.		1.749													

k: az 69.4 el 55.9 pa -86.3 i: az 291.9 el 37.9 pa 68.5 u,v (fr/asec) -11519.307 -2243.607 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ki..130M17 Output file: /Exps/c192c/v2/1234/No0065/ki.W.198.130M17

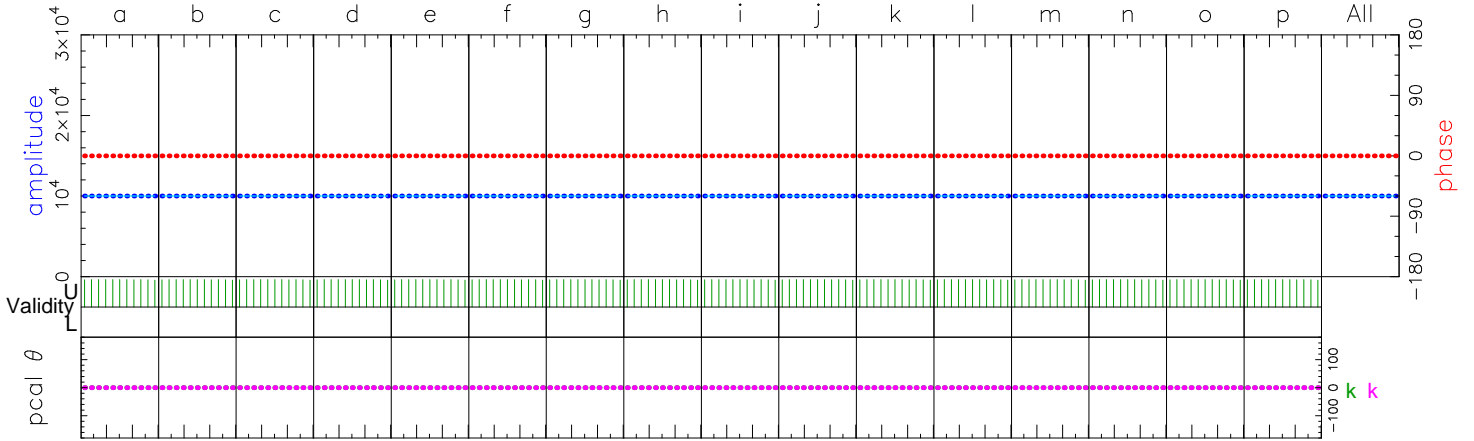


Fringe quality 9

SNR 366084.7
Int time 179.212
Amp 10000.004
Phase -0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053330
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

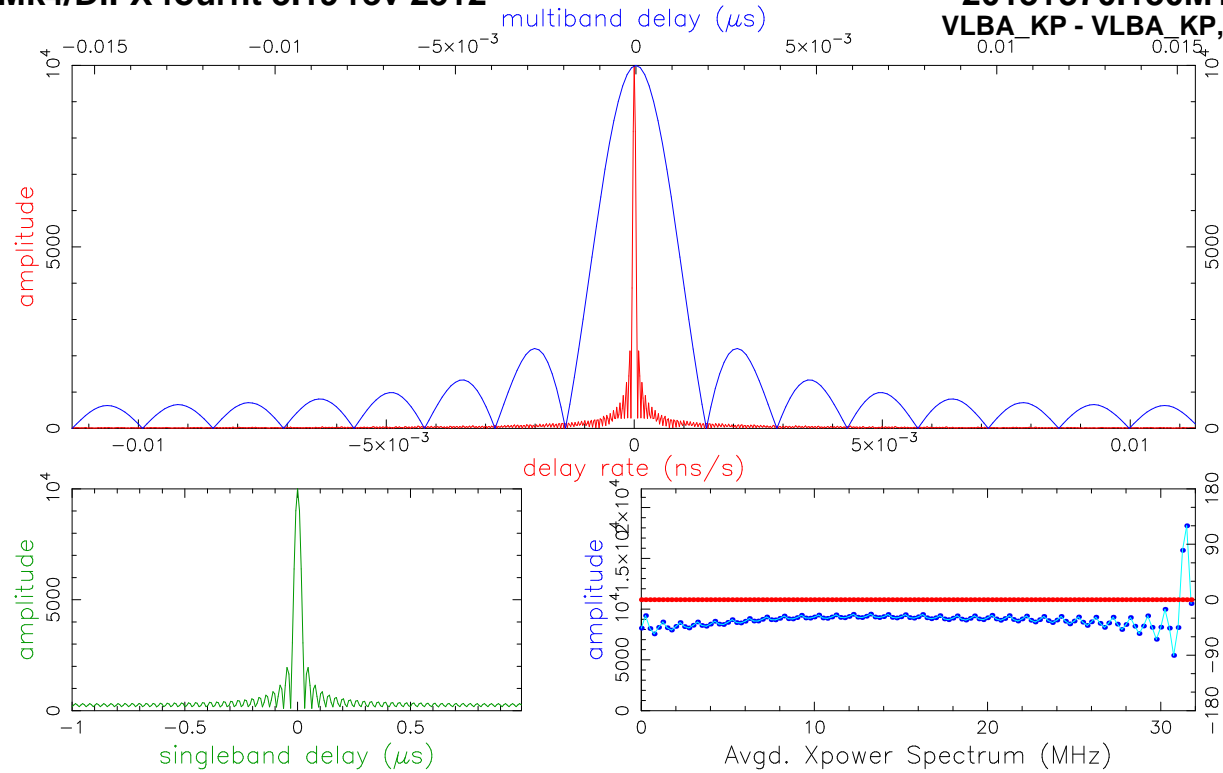


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	129.0	129.0
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.9E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 4.7E-08
 Phase delay (usec) -7.96016021261E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -7.96016E-20 +/- 1.0E-11
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14
 Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

RMS Theor. Amplitude 10000.004 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X64) 10000.004 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.004 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kk..130M17 Output file: /Exps/c192c/v2/1234/No0065/kk.W.185.130M17

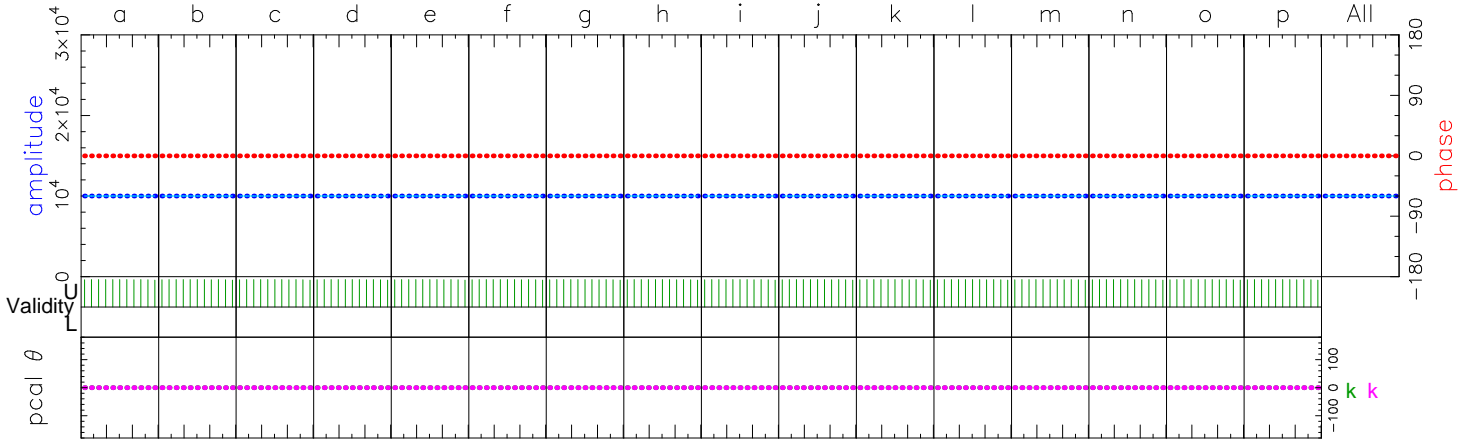


Fringe quality 9

SNR 366084.8
Int time 179.212
Amp 10000.002
Phase -0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053333
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)	0.0000000000E+00			Apriori delay (usec)			0.0000000000E+00			Resid mbdelay (usec)			0.00000E+00			+/-	2.9E-09	
Sband delay (usec)	0.0000000000E+00			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			0.00000E+00			+/-	4.7E-08	
Phase delay (usec)	-1.33683696310E-19			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			-1.33684E-19			+/-	1.0E-11	
Delay rate (us/s)	0.0000000000E+00			Apriori rate (us/s)			0.0000000000E+00			Resid rate (us/s)			0.00000E+00			+/-	9.7E-14	
Total phase (deg)	-0.0			Apriori accel (us/s/s)			0.0000000000E+00			Resid phase (deg)			-0.0			+/-	0.0	

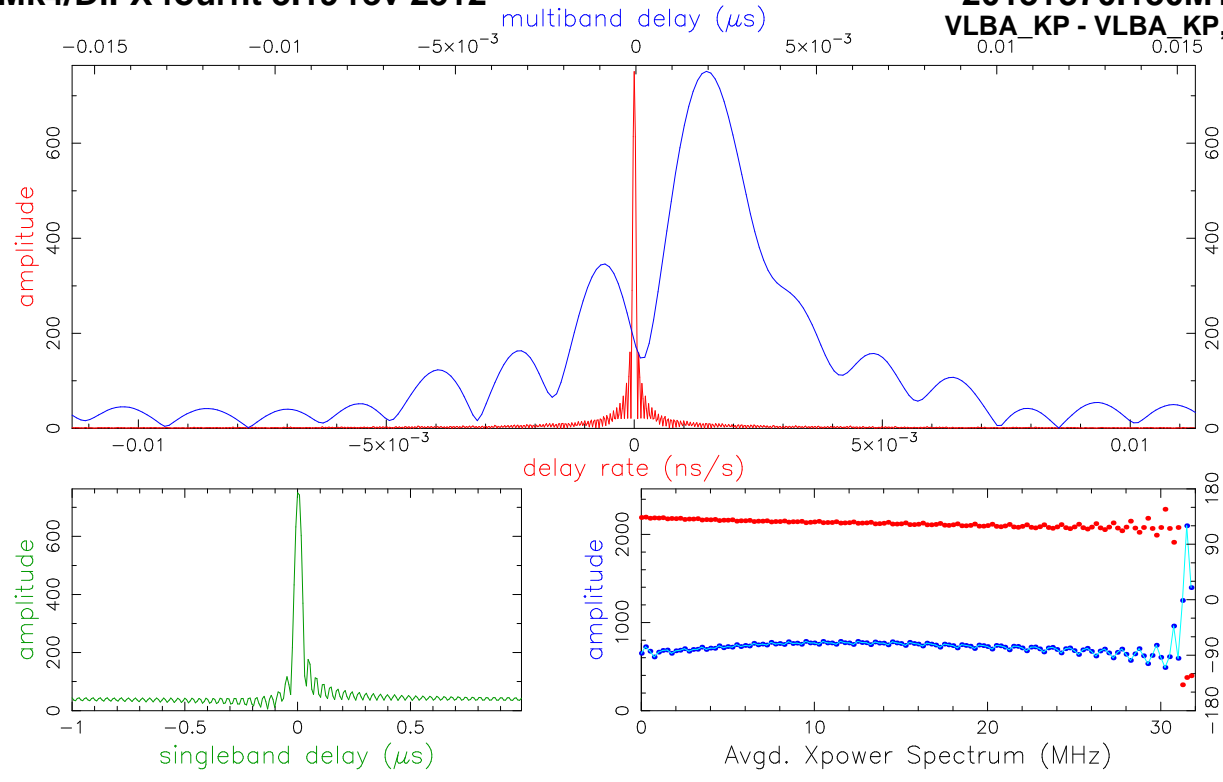
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.002 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 10000.002 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.002 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kk..130M17 Output file: /Exps/c192c/v2/1234/No0065/kk.W.207.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kk
VLBA_KP - VLBA_KP, fgroup W, pol LR

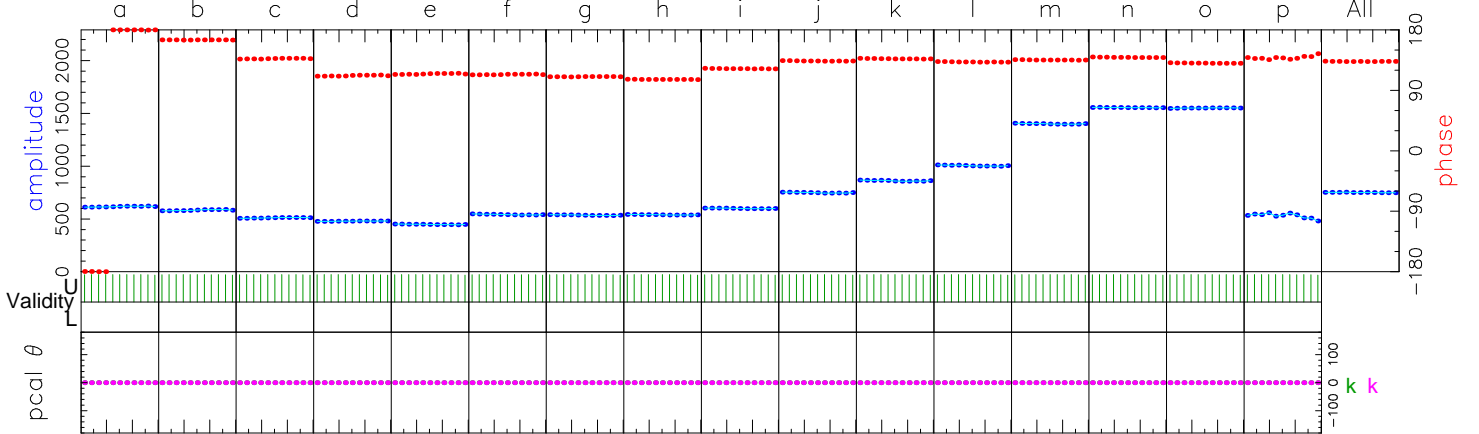


Fringe quality 6

SNR 27962.6
Int time 179.212
Amp 763.828
Phase 132.9
PFD 0.0e+00
Delays (us)
SBD 0.003438
MBD 0.002009
Fringe rate (Hz) 0.000010
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053335
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

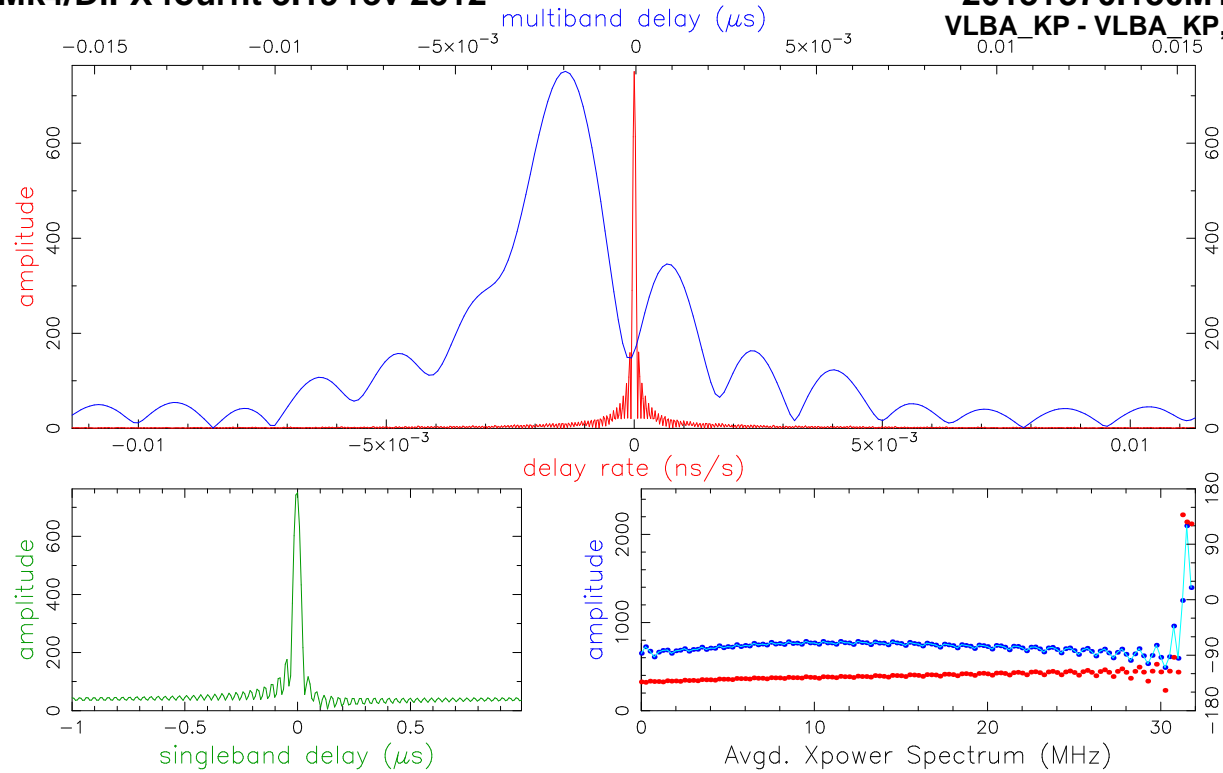


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)	2.00896875000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			2.00897E-03			+/-	3.9E-08	
Sband delay (usec)	3.43800000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			3.43800E-03			+/-	6.2E-07	
Phase delay (usec)	4.28626949812E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			4.28627E-06			+/-	1.3E-10	
Delay rate (us/s)	1.14786334373E-10			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			1.14786E-10			+/-	1.3E-12	
Total phase (deg)	132.9			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			132.9			+/-	0.0	

ph/seg (deg) 0.1 0.0 Theor. Amplitude 763.828 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 1.7 0.0 Search (1024X64) 751.430 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 20.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 49.1 0.0 Inc. seg. avg. 750.750 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 k: az 69.4 el 55.9 pa -86.3 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kk..130M17 Output file: /Exps/c192c/v2/1234/No0065/kk.W.225.130M17 simultaneous interpolator

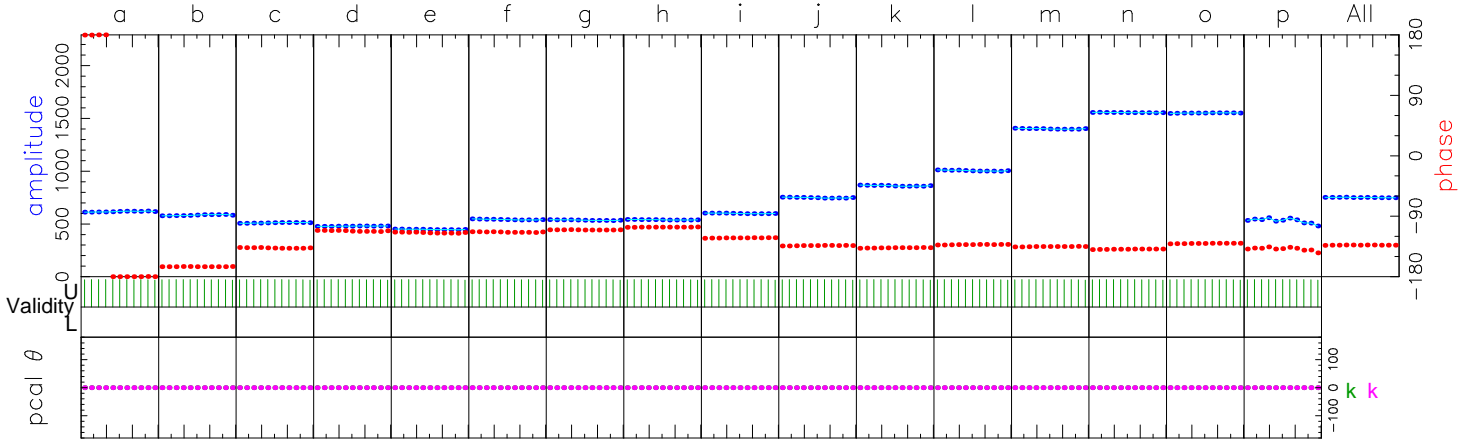
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kk
VLBA_KP - VLBA_KP, fgroup W, pol RL



Fringe quality 6
SNR 27962.5
Int time 179.212
Amp 763.827
Phase -132.9
PFD 0.0e+00
Delays (us)
SBD -0.003438
MBD -0.002009
Fringe rate (Hz)
-0.000010
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053337
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

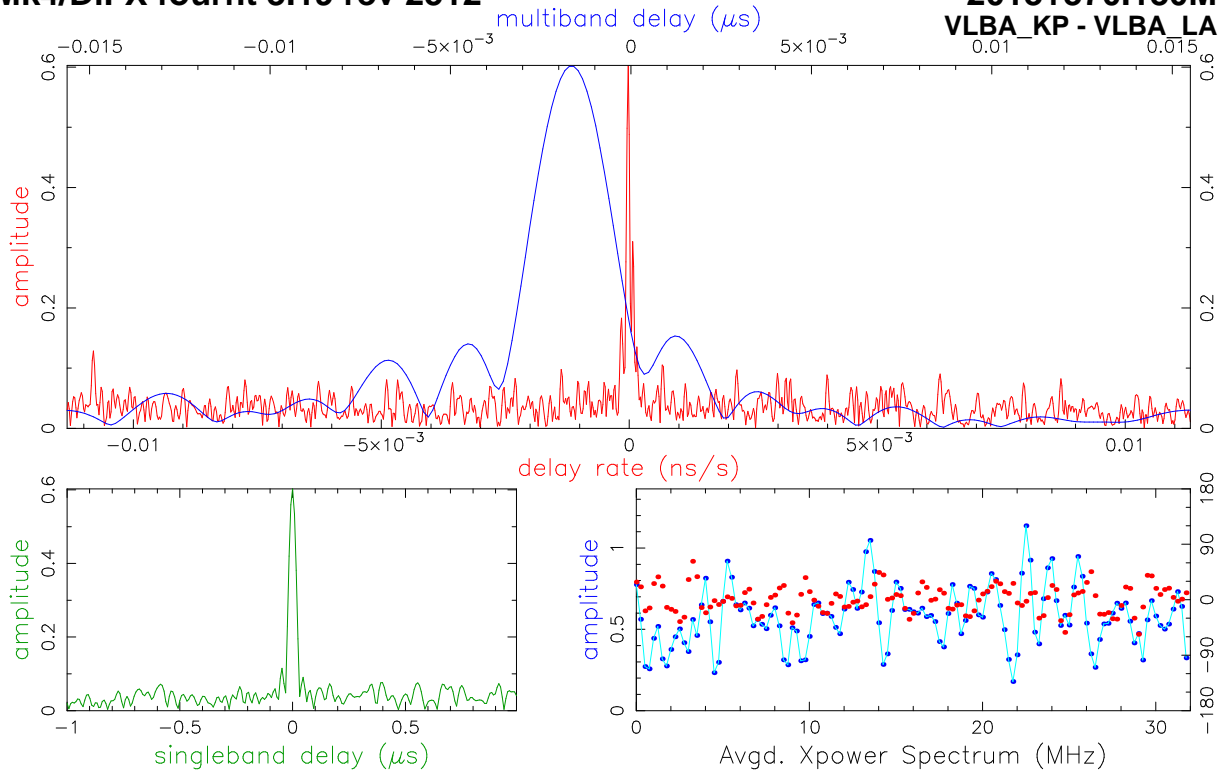


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-180.0	-164.9	-137.1	-111.7	-114.3	-113.5	-110.3	-106.2	-122.2	-133.6	-136.9	-132.2	-135.1	-139.0	-130.4	-138.5	Phase	-132.9				
	617.2	583.4	510.7	479.4	448.6	541.8	536.4	539.7	600.0	749.2	862.2	1005.5	1401.3	1554.5	1550.4	530.3	Ampl.	781.9				
	128.9	128.9	129.1	128.8	128.5	128.8	128.8	128.8	128.5	128.7	128.7	128.8	128.7	128.7	129.0	126.9	Sbd box	128.6				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-2.00896875000E-03														Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-2.00897E-03	+/-	3.9E-08
Sband delay (usec)			-3.43800000000E-03														Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-3.43800E-03	+/-	6.2E-07
Phase delay (usec)			-4.28626949818E-06														Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.28627E-06	+/-	1.3E-10
Delay rate (us/s)			-1.14786334373E-10														Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.14786E-10	+/-	1.3E-12
Total phase (deg)																	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-132.9	+/-	0.0

ph/seg (deg) 0.1 0.0 RMS Theor. Amplitude 763.827 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 1.7 0.0 Search (1024X64) 751.429 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 20.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 49.1 0.0 Inc. seg. avg. 750.749 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 k: az 69.4 el 55.9 pa -86.3 u,v (fr/asec) 0.000 0.000 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kk..130M17 Output file: /Exps/c192c/v2/1234/No0065/kk.W.234.130M17 simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kl
VLBA_KP - VLBA_LA, fgroup W, pol LL

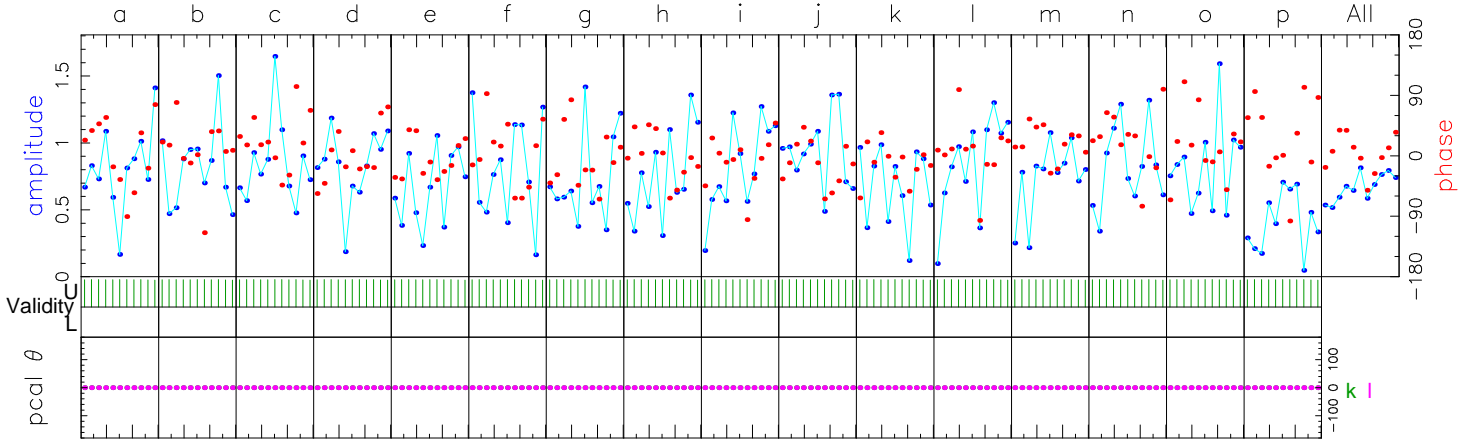


Fringe quality 8

SNR 22.0
Int time 178.856
Amp 0.603
Phase 4.9
PFD 0.0e+00
Delays (us)
SBD -0.000922
MBD -0.001655
Fringe rate (Hz)
-0.001691
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053331
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

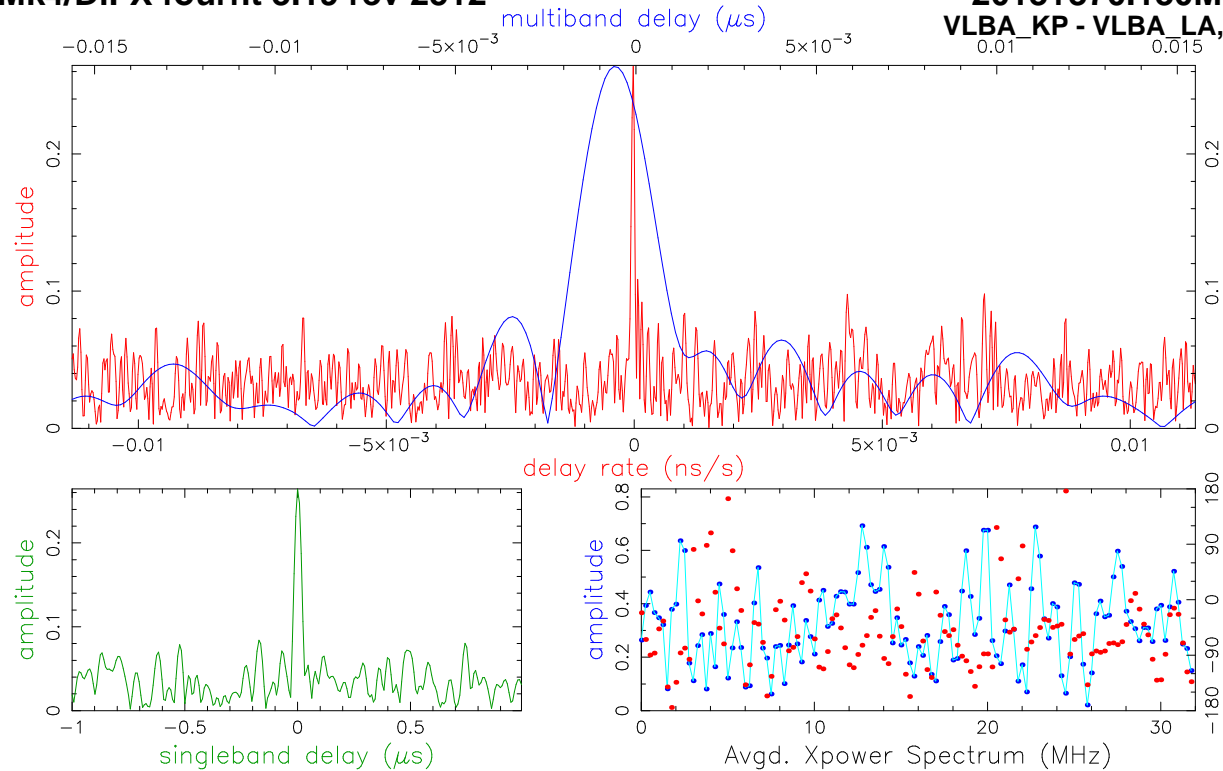
Group delay (usec)(sbd) -1.03375923381E+03 Apriori delay (usec) -1.03375757861E+03 Resid mbdelay (usec) -1.65521E-03 +/- 4.9E-05
 Sband delay (usec) -1.03375850061E+03 Apriori clock (usec) 3.6853263E-01 Resid sbdelay (usec) -9.22000E-04 +/- 7.8E-04
 Phase delay (usec) -1.03375757845E+03 Apriori clockrate (us/s) 1.5689301E-07 Resid phdelay (usec) 1.57876E-07 +/- 1.7E-07
 Delay rate (us/s) 1.03728865291E-01 Apriori rate (us/s) 1.03728884917E-01 Resid rate (us/s) -1.96256E-08 +/- 1.6E-09
 Total phase (deg) -290.7 Apriori accel (us/s/s) 1.72210551325E-06 Resid phase (deg) 4.9 +/- 5.2

RMS Theor. Amplitude 0.603 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 26.9 8.6 Search (1024X64) 0.593 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 19.6 15.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 12.4 10.4 Inc. seg. avg. 0.661 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 18.5 18.1 Inc. frq. avg. 0.605 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 l: az 76.3 el 61.3 pa -82.0 u,v (fr/asec) -745.732 -282.809 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kl..130M17 Output file: /Exps/c192c/v2/1234/No0065/kl.W.192.130M17

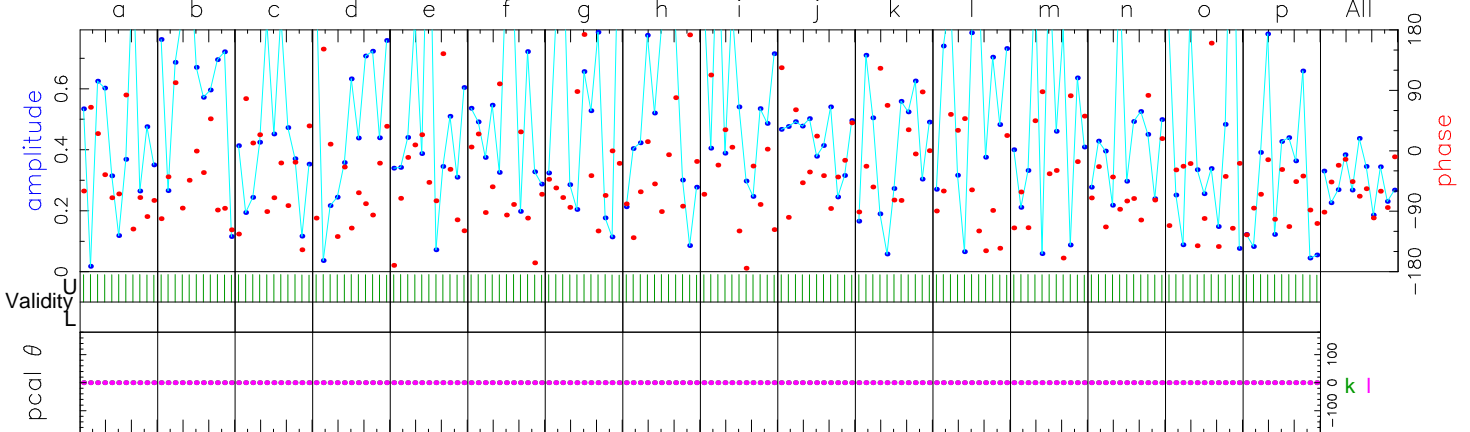
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kl
VLBA_KP - VLBA_LA, fgroup W, pol RR



Fringe quality 9
SNR 9.7
Int time 178.856
Amp 0.264
Phase -53.0
PFD 8.1e-14
Delays (us)
SBD 0.001286
MBD -0.000571
Fringe rate (Hz) -0.001796
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053333
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
	-64.5	-53.6	-43.1	-70.0	-44.2	-69.5	-61.7	-31.8	-43.6	-20.2	-18.9	-64.2	-26.7	-65.7	-92.5	-50.7		Phase -53.0						
	0.3	0.4	0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3		Ampl. 0.3						
	206.4	129.4	226.2	2.1	96.8	49.1	128.7	115.1	234.1	95.8	5.3	132.0	198.3	110.1	119.9	20.0		Sbd box 129.2						
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used						
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs						
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs						
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase						
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC						
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp						
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp						
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids						
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks						
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids						
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks						
Group delay (usec)(sbd)			-1.03375814915E+03															Apriori delay (usec)	-1.03375757861E+03	Resid mbdelay (usec)	-5.70550E-04	+/-	1.1E-04	
Sband delay (usec)			-1.03375629311E+03																Apriori clock (usec)	3.6853263E-01	Resid sbdelay (usec)	1.28550E-03	+/-	1.8E-03
Phase delay (usec)			-1.03375758031E+03																Apriori clockrate (us/s)	1.5689301E-07	Resid phdelay (usec)	-1.70805E-06	+/-	3.8E-07
Delay rate (us/s)			1.03728864064E-01																Apriori rate (us/s)	1.03728884917E-01	Resid rate (us/s)	-2.08529E-08	+/-	3.7E-09
Total phase (deg)																			Apriori accel (us/s/s)	1.72210551325E-06	Resid phase (deg)	-53.0	+/-	11.8

RMS Theor. Amplitude 0.264 +/- 0.027
 ph/seg (deg) 29.4 19.6 Search (1024X64) 0.263
 amp/seg (%) 30.2 34.3 Interp. 0.000
 ph/frq (deg) 21.2 23.7 Inc. seg. avg. 0.283
 amp/frq (%) 18.1 41.4 Inc. frq. avg. 0.257

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 PCal rate: 0.000E+00, 0.000E+00 (us/s)
 Bits/sample: 2x2 SampCntNorm: enabled
 Sample rate(MSamp/s): 64
 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

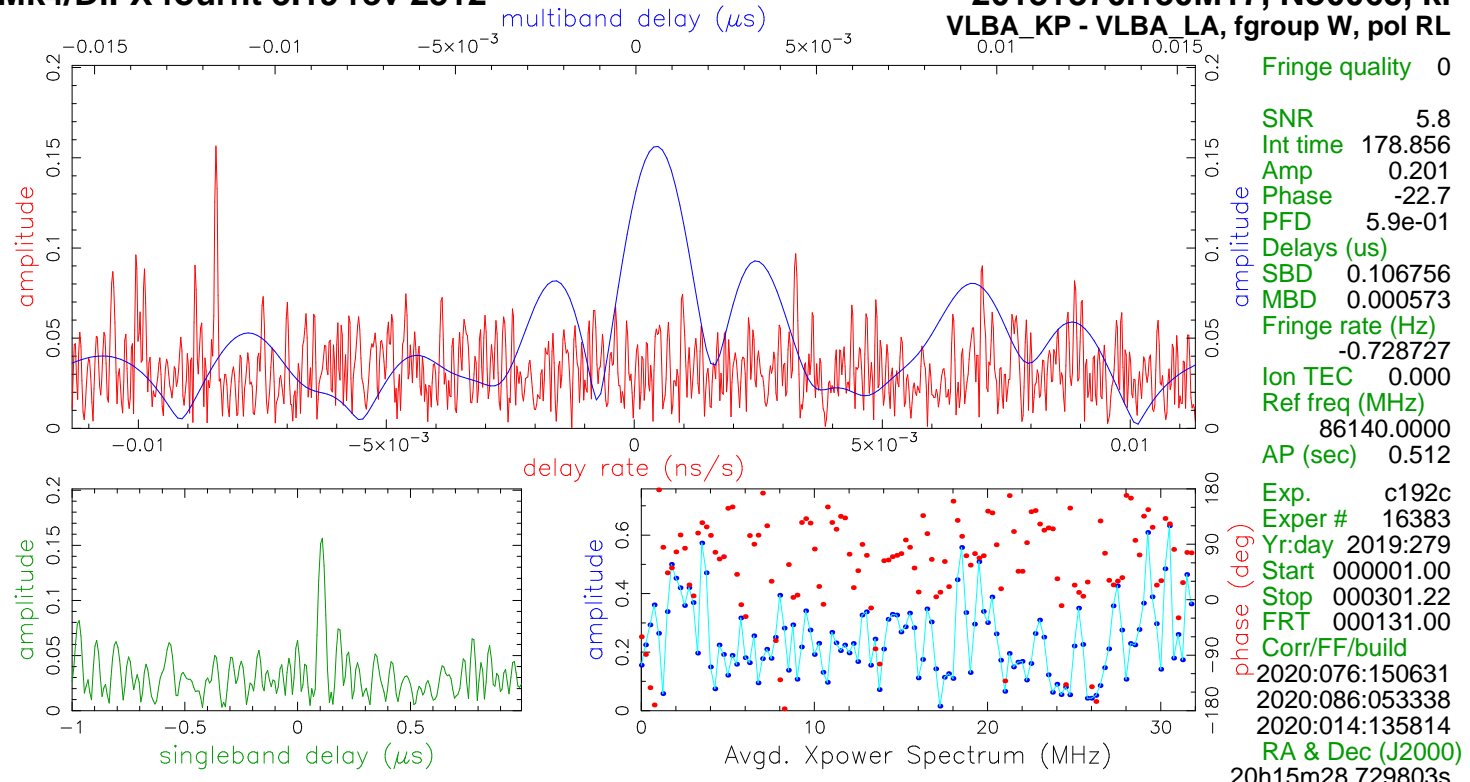
sb window (us) -1.000 1.000
 mb window (us) -0.016 0.016
 dr window (ns/s) -0.011 0.011
 ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 l: az 76.3 el 61.3 pa -82.0 u,v (fr/asec) -745.732 -282.809 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kl.130M17 Output file: /Exps/c192c/v2/1234/No0065/kl.W.212.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kl
VLBA_KP - VLBA_LA, fgroup W, pol RL



Fringe quality 0

SNR 5.8

Int time 178.856

Amp 0.201

Phase -22.7

PFD 5.9e-01

Delays (us)

SBD 0.106756

MBD 0.000573

Fringe rate (Hz)

-0.728727

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000001.00

Stop 000301.22

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053338

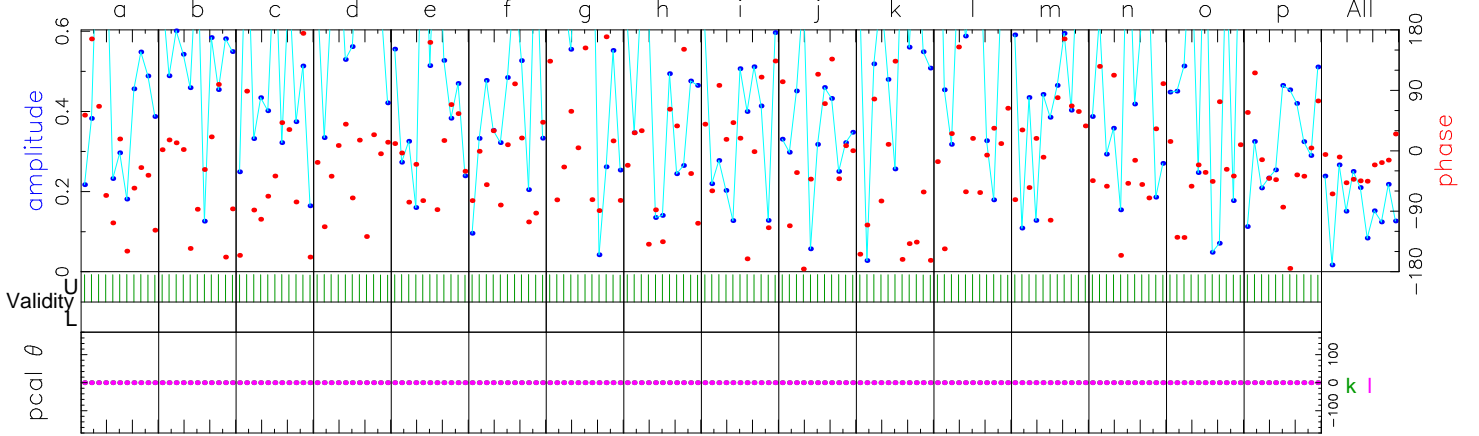
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-36.4	-25.0	-35.7	-14.3	-33.9	-13.4	-32.3	-15.8	57.5	79.9	-134.9	-4.9	25.9	-39.6	-34.7	-21.3		Phase	-22.7
	0.2	0.3	0.1	0.6	0.3	0.2	0.2	0.2	0.2	0.1	0.3	0.4	0.2	0.2	0.5	0.1		Ampl.	0.2
	182.5	200.6	40.6	143.4	19.9	24.2	123.4	27.3	178.0	109.3	138.0	209.4	218.1	222.9	142.0	110.2		Sbd box	142.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
k:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
																		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-1.03366325554E+03			Apriori delay (usec)			-1.03375757861E+03			Resid mbdelay (usec)			5.73065E-04			+/- 1.9E-04			
Sband delay (usec)	-1.03365082311E+03			Apriori clock (usec)			3.6853263E-01			Resid sbdelay (usec)			1.06756E-01			+/- 3.0E-03			
Phase delay (usec)	-1.03375757934E+03			Apriori clockrate (us/s)			1.5689301E-07			Resid phdelay (usec)			-7.30482E-07			+/- 6.4E-07			
Delay rate (us/s)	1.03720425125E-01			Apriori rate (us/s)			1.03728884917E-01			Resid rate (us/s)			-8.45979E-06			+/- 6.1E-09			
Total phase (deg)	-318.2			Apriori accel (us/s/s)			1.72210551325E-06			Resid phase (deg)			-22.7			+/- 19.8			

ph/seg (deg) 24.4 32.8 Search (1024X64) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

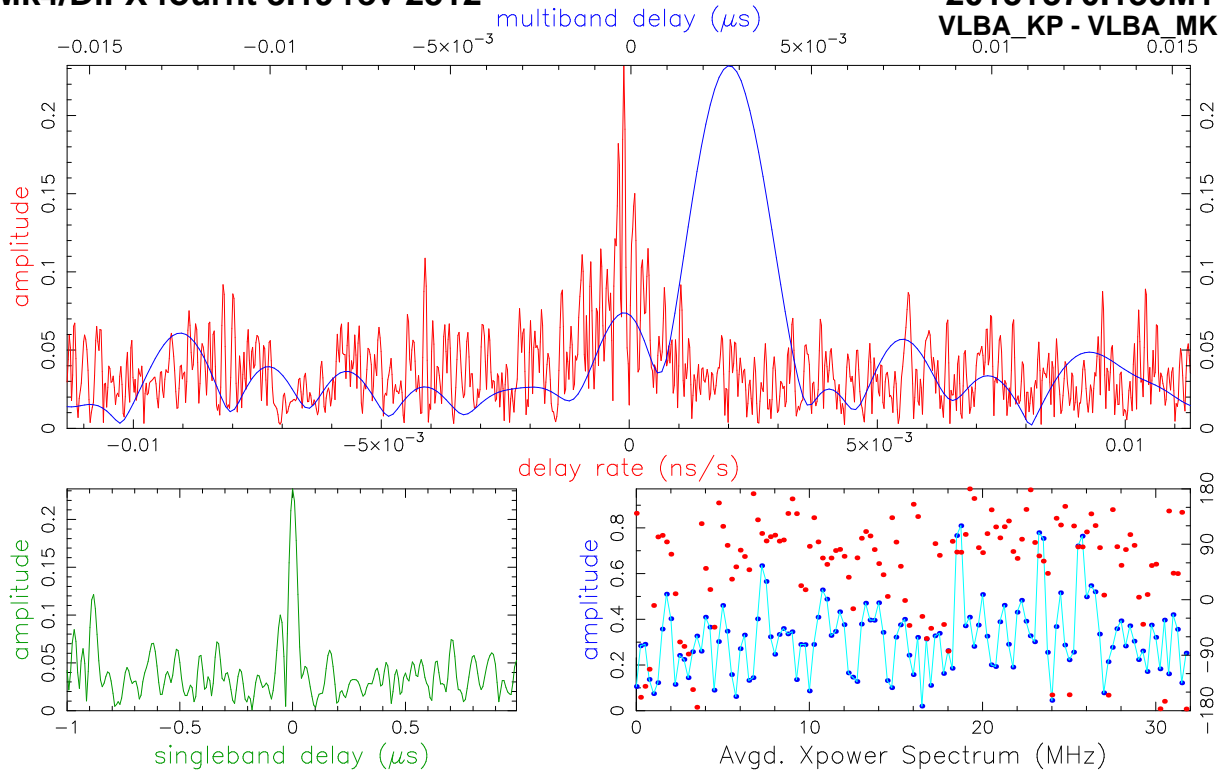
amp/seg (%) 47.0 57.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 48.9 39.6 Inc. seg. avg. 0.182 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 66.2 69.1 Inc. frq. avg. 0.203 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

k: az 69.4 el 55.9 pa -86.3 l: az 76.3 el 61.3 pa -82.0 u,v (fr/asec) -745.732 -282.809 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kl..130M17 Output file: /Exps/c192c/v2/1234/No0065/kl.W.242.130M17

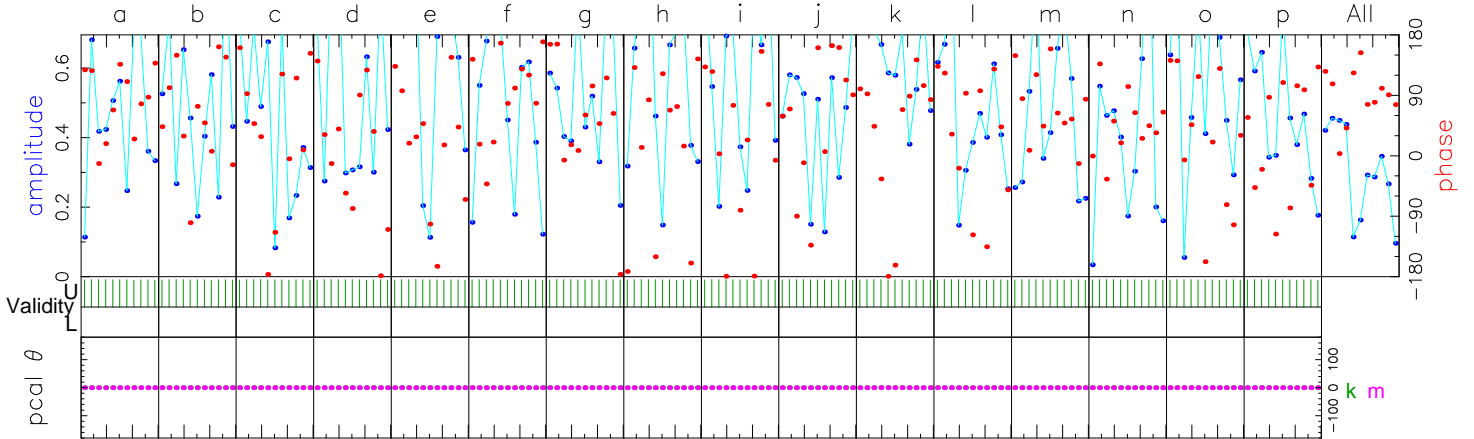


Fringe quality 9

SNR 8.5
Int time 178.385
Amp 0.232
Phase 83.9
PFD 4.3e-09
Delays (us)
SBD 0.001035
MBD 0.002750
Fringe rate (Hz)
-0.009342
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053330
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



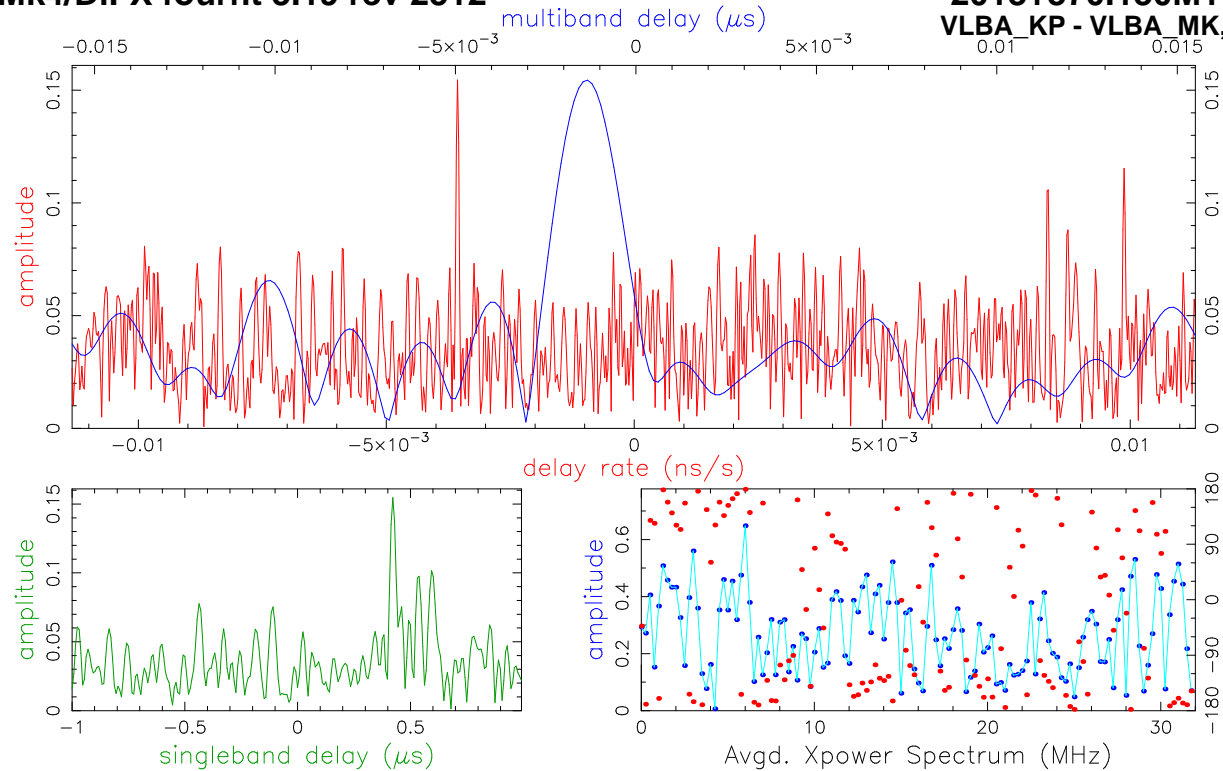
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd)	1.18530932308E+04	Apriori delay (usec)	1.18530904807E+04	Resid mbdelay (usec)	2.75010E-03	+/-	1.3E-04
Sband delay (usec)	1.18530915157E+04	Apriori clock (usec)	-2.9977391E+00	Resid sbdelay (usec)	1.03500E-03	+/-	2.0E-03
Phase delay (usec)	1.18530904834E+04	Apriori clockrate (us/s)	-1.8588669E-07	Resid phdelay (usec)	2.70571E-06	+/-	4.4E-07
Delay rate (us/s)	-4.71053844066E-01	Apriori rate (us/s)	-4.71053735616E-01	Resid rate (us/s)	-1.08450E-07	+/-	4.2E-09
Total phase (deg)	85.3	Apriori accel (us/s/s)	-5.00631488698E-05	Resid phase (deg)	83.9	+/-	13.5

ph/seg (deg)	39.8	RMS	22.4	Theor.	Amplitude	0.232 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	63.0	Search (1024X64)	0.227	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000	
ph/frq (deg)	23.1	Inc. seg. avg.	0.282	Inc. frq. avg.	0.223	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
amp/frq (%)	32.2	Inc. frq. avg.	0.223	Sample rate(MSamp/s):	64	Data rate(Mb/s):	2048	dr window (ns/s)	-0.011	0.011
						nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00

k: az 69.4 el 55.9 pa -86.3 m: az 55.4 el 15.6 pa -76.7 u,v (fr/asec) 3353.388 -1669.441 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/km..130M17 Output file: /Exps/c192c/v2/1234/No0065/km.W.189.130M17

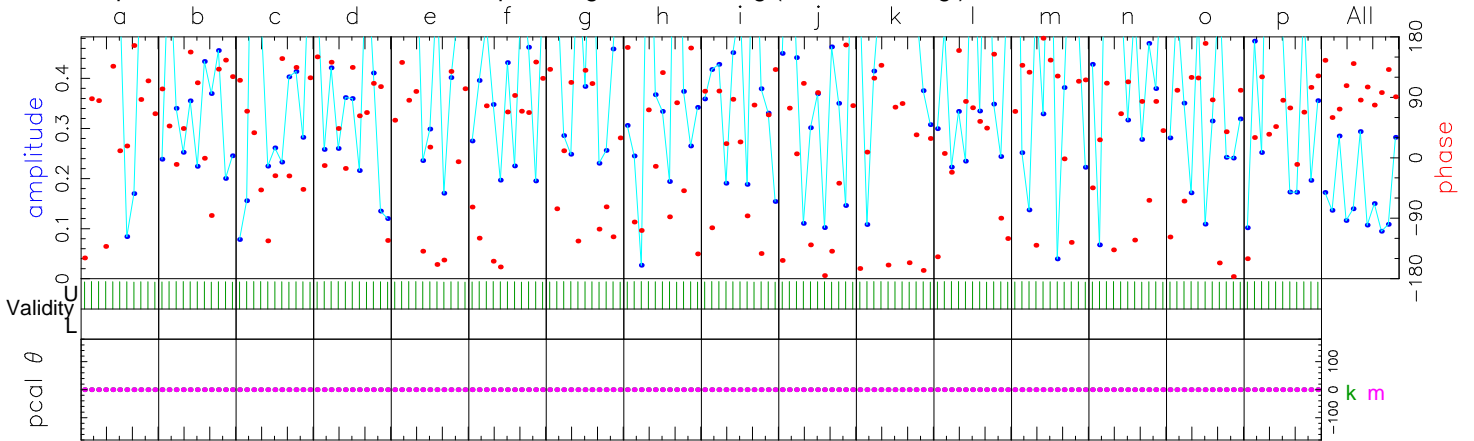


Fringe quality 0

SNR 5.6
Int time 178.386
Amp 0.161
Phase 96.5
PFD 8.7e-01
Delays (us)
SBD 0.422045
MBD -0.001364
Fringe rate (Hz)
-0.307227
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

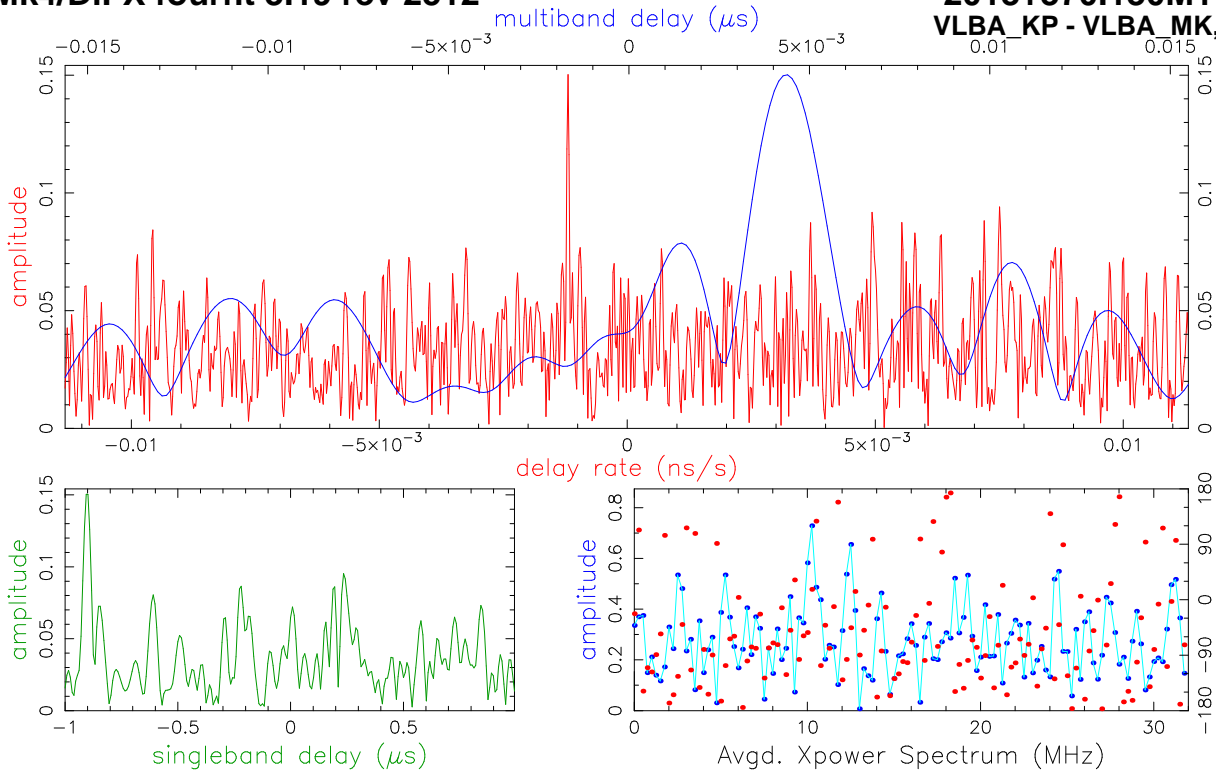
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053335
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		1.18535266165E+04																
Sband delay (usec)		1.18535125262E+04																
Phase delay (usec)		1.18530904838E+04																
Delay rate (us/s)		-4.71057302220E-01																
Total phase (deg)			97.9															
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 27.1 33.7 Search (1024X64) 0.153 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 48.9 58.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 33.9 40.6 Inc. seg. avg. 0.152 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 49.3 70.9 Inc. frq. avg. 0.146 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 m: az 55.4 el 15.6 pa -76.7 u,v (fr/asec) 3353.388 -1669.441 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/km..130M17 Output file: /Exps/c192c/v2/1234/No0065/km.W.223.130M17

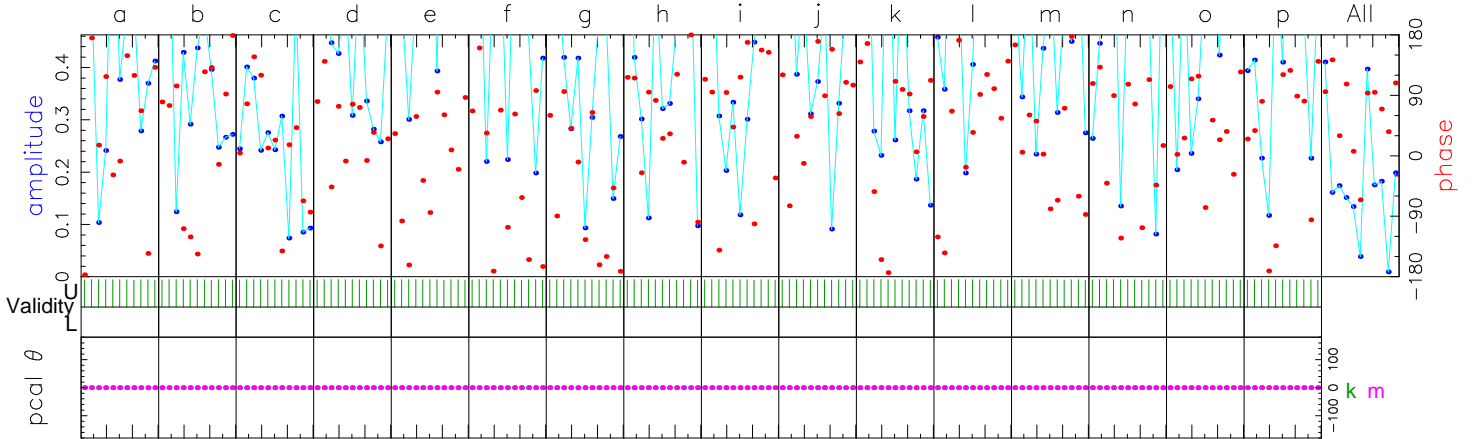


Fringe quality 0

SNR 5.6
Int time 178.385
Amp 0.154
Phase 87.9
PFD 9.2e-01
Delays (us)
SBD -0.902387
MBD 0.004355
Fringe rate (Hz)
-0.102424
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053337
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	141.2	119.8	56.6	48.2	24.0	110.0	126.1	91.6	134.2	80.5	138.6	106.4	-14.7	72.5	46.0	109.7	Phase	87.9
k	0.1	0.2	0.1	0.2	0.3	0.2	0.0	0.2	0.2	0.2	0.2	0.3	0.1	0.2	0.3	0.3	Ampl.	0.2
m	243.2	244.6	118.1	86.3	216.4	182.9	125.6	54.0	160.2	99.4	179.6	93.7	238.8	133.7	4.9	113.8	Sbd box	13.5
k	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

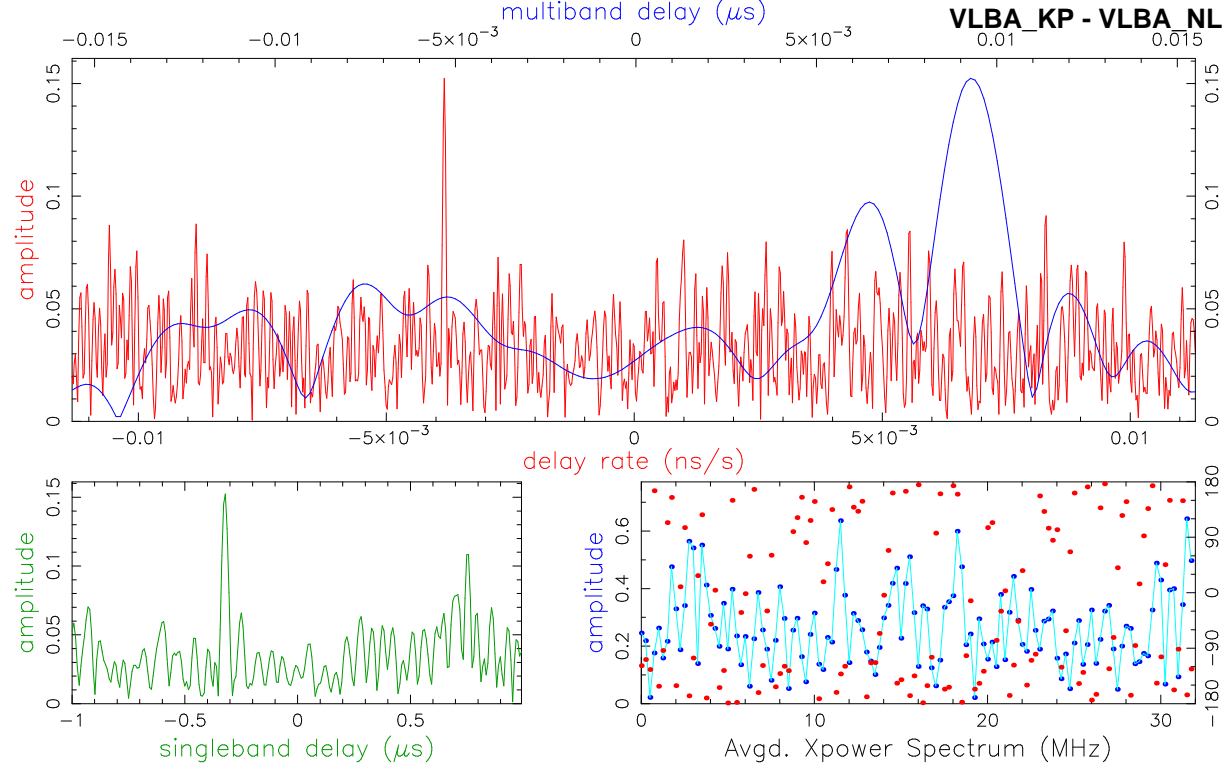
Group delay (usec)(sbd) 1.18521885852E+04 Apriori delay (usec) 1.18530904807E+04 Resid mbdelay (usec) 4.35457E-03 +/- 1.9E-04
 Sband delay (usec) 1.18521880932E+04 Apriori clock (usec) -2.9977391E+00 Resid sbdelay (usec) -9.02387E-01 +/- 3.1E-03
 Phase delay (usec) 1.18530904835E+04 Apriori clockrate (us/s) -1.8588669E-07 Resid phdelay (usec) 2.83313E-06 +/- 6.6E-07
 Delay rate (us/s) -4.71054924654E-01 Apriori rate (us/s) -4.71053735616E-01 Resid rate (us/s) -1.18904E-06 +/- 6.3E-09
 Total phase (deg) 89.3 Apriori accel (us/s/s) -5.00631488698E-05 Resid phase (deg) 87.9 +/- 20.4

RMS Theor. Amplitude 0.154 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 60.7 33.9 Search (1024X64) 0.146 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 79.4 59.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 46.7 40.9 Inc. seg. avg. 0.158 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 56.3 71.3 Inc. frq. avg. 0.156 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 m: az 55.4 el 15.6 pa -76.7 u,v (fr/asec) 3353.388 -1669.441 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/km..130M17 Output file: /Exps/c192c/v2/1234/No0065/km.W.235.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kn
VLBA_KP - VLBA_NL, fgroup W, pol LL

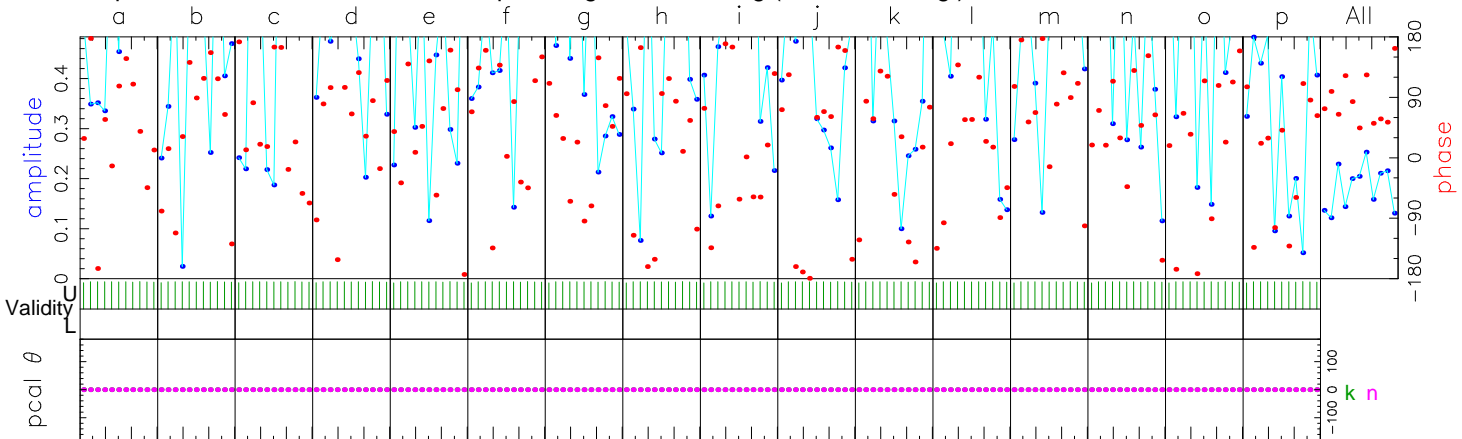


Fringe quality 0

SNR 5.6
Int time 177.528
Amp 0.161
Phase 80.1
PFD 9.3e-01
Delays (us)
SBD -0.322542
MBD 0.009288
Fringe rate (Hz)
-0.330191
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Yr:day 16383
Start 2020:076:150631
Stop 2020:086:053330
FRT 2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd)	-2.73082048876E+03	Apriori delay (usec)	-2.73048602683E+03	Resid mbdelay (usec)	9.28807E-03	+/-	1.9E-04
Sband delay (usec)	-2.73080856883E+03	Apriori clock (usec)	-2.6938545E+01	Resid sbdelay (usec)	-3.22542E-01	+/-	3.1E-03
Phase delay (usec)	-2.73048602424E+03	Apriori clockrate (us/s)	-3.2880250E-07	Resid phdelay (usec)	2.58345E-06	+/-	6.6E-07
Delay rate (us/s)	3.58361289096E-01	Apriori rate (us/s)	3.58365122281E-01	Resid rate (us/s)	-3.83318E-06	+/-	6.3E-09
Total phase (deg)	-46.2	Apriori accel (us/s/s)	5.04099167861E-06	Resid phase (deg)	80.1	+/-	20.5

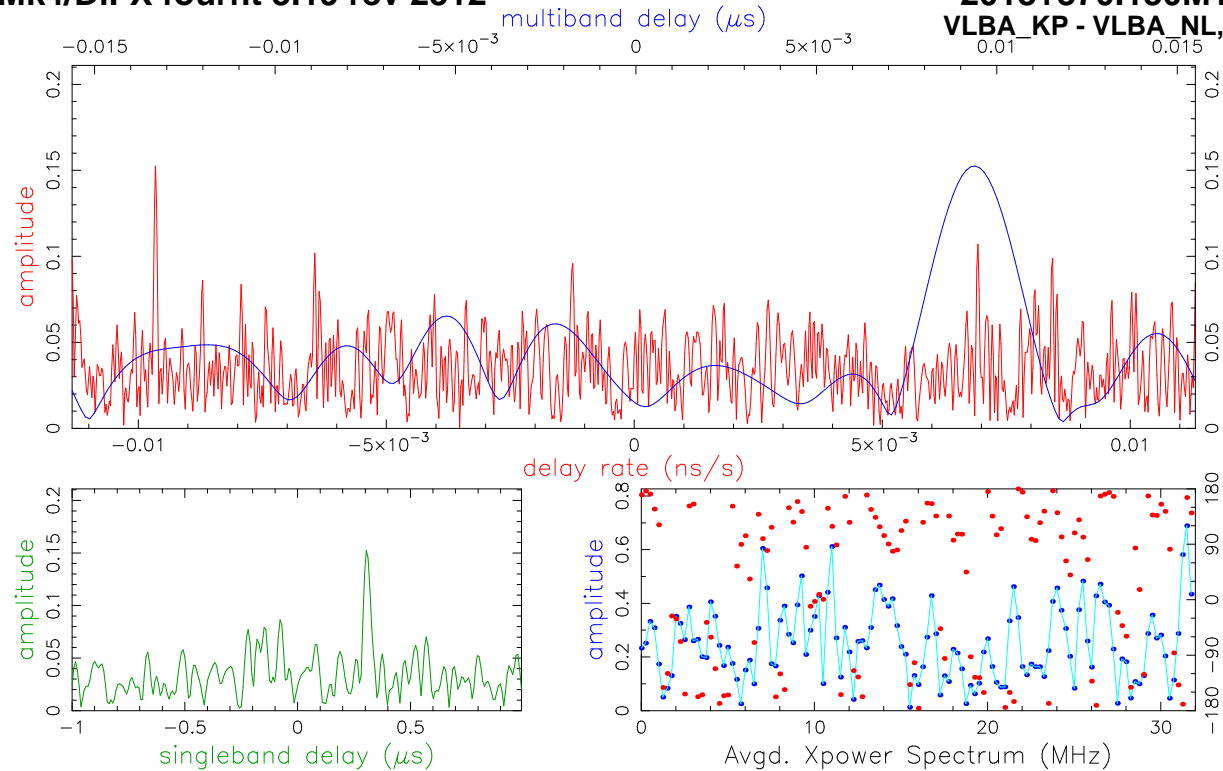
ph/seg (deg)	36.2	Theor.	33.9	Amplitude	0.161 +/- 0.029	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	33.7	Search (1024X64)	0.149	Interp.	0.000	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	50.4	Inc. seg. avg.	0.163	Inc. frq. avg.	0.167	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016		
amp/frq (%)	52.6	Inc. frq. avg.	0.167			Sample rate (MSamp/s):	64	dr window (ns/s)	-0.011 0.011			
						Data rate (Mb/s):	2048	nlags:	128	t_cohere infinite	ion window (TEC)	0.00 0.00

k: az 69.4 el 55.9 pa -86.3 n: az 98.4 el 73.0 pa -67.6 u,v (fr/asec) -2576.333 -647.790 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kn..130M17 Output file: /Exps/c192c/v2/1234/No0065/kn.W.188.130M17

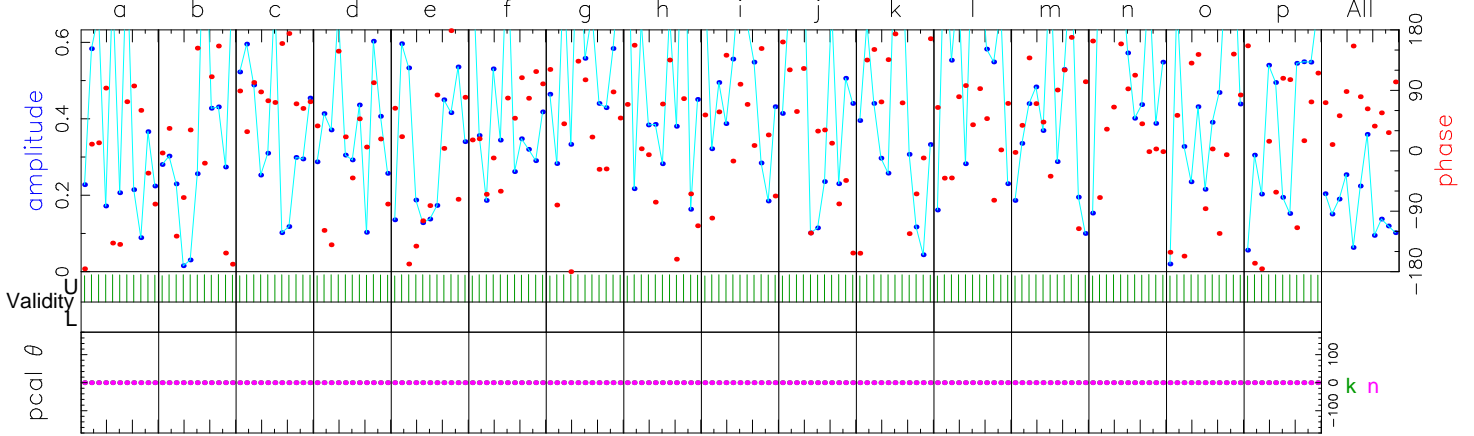
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kn
VLBA_KP - VLBA_NL, fgroup W, pol RR



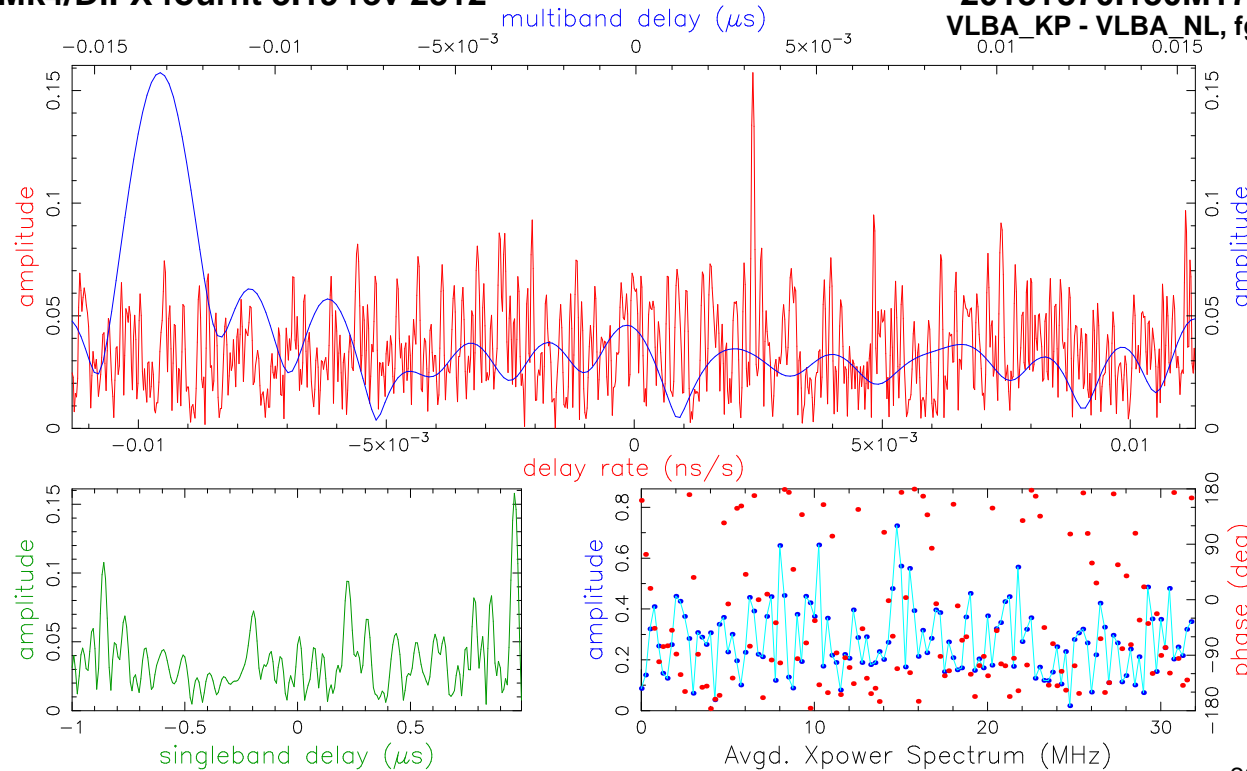
Fringe quality 0
SNR 5.6
Int time 177.528
Amp 0.211
Phase 64.5
PFD 9.4e-01
Delays (us)
SBD 0.306610
MBD 0.009358
Fringe rate (Hz)
-0.832031
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053332
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



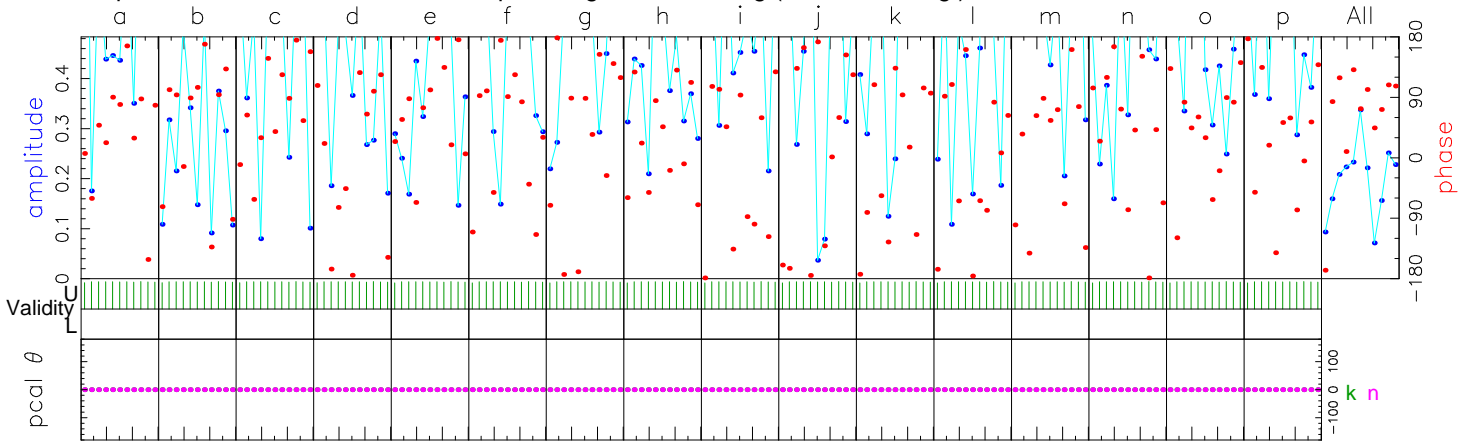
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
25.3	170.6	75.5	59.9	-30.3	46.8	66.4	68.8	52.1	80.6	145.2	28.6	89.4	39.8	94.5	69.0	Phase	64.5					
0.1	0.0	0.5	0.1	0.0	0.4	0.4	0.2	0.3	0.3	0.3	0.5	0.2	0.4	0.1	0.1	Ampl.	0.2					
142.0	26.8	186.6	12.0	64.7	222.6	186.4	92.7	166.4	231.4	90.6	62.7	28.0	217.0	101.1	212.1	Sbd box	168.2					
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)		-2.73016416916E+03															Apriori delay (usec)	-2.73048602683E+03	Resid mbdelay (usec)	9.35766E-03	+/-	1.9E-04
Sband delay (usec)		-2.73017941633E+03															Apriori clock (usec)	-2.6938545E+01	Resid sbdelay (usec)	3.06610E-01	+/-	3.1E-03
Phase delay (usec)		-2.73048602475E+03															Apriori clockrate (us/s)	-3.2880250E-07	Resid phdelay (usec)	2.07972E-06	+/-	6.6E-07
Delay rate (us/s)		3.58355463228E-01															Apriori rate (us/s)	3.58365122281E-01	Resid rate (us/s)	-9.65905E-06	+/-	6.4E-09
Total phase (deg)																	Apriori accel (us/s/s)	5.04099167861E-06	Resid phase (deg)	64.5	+/-	20.5

ph/seg (deg) 38.3 34.0 Search (1024X64) 0.150 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 54.6 59.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 48.3 41.0 Inc. seg. avg. 0.202 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 69.5 71.6 Inc. frq. avg. 0.197 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 n: az 98.4 el 73.0 pa -67.6 u,v (fr/asec) -2576.333 -647.790 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kn..130M17 Output file: /Exps/c192c/v2/1234/No0065/kn.W.205.130M17



Fringe quality 0
SNR 5.8
Int time 177.528
Amp 0.161
Phase 93.1
PFD 6.4e-01
Delays (us)
SBD 0.961996
MBD -0.013183
Fringe rate (Hz) 0.206281
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053335
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

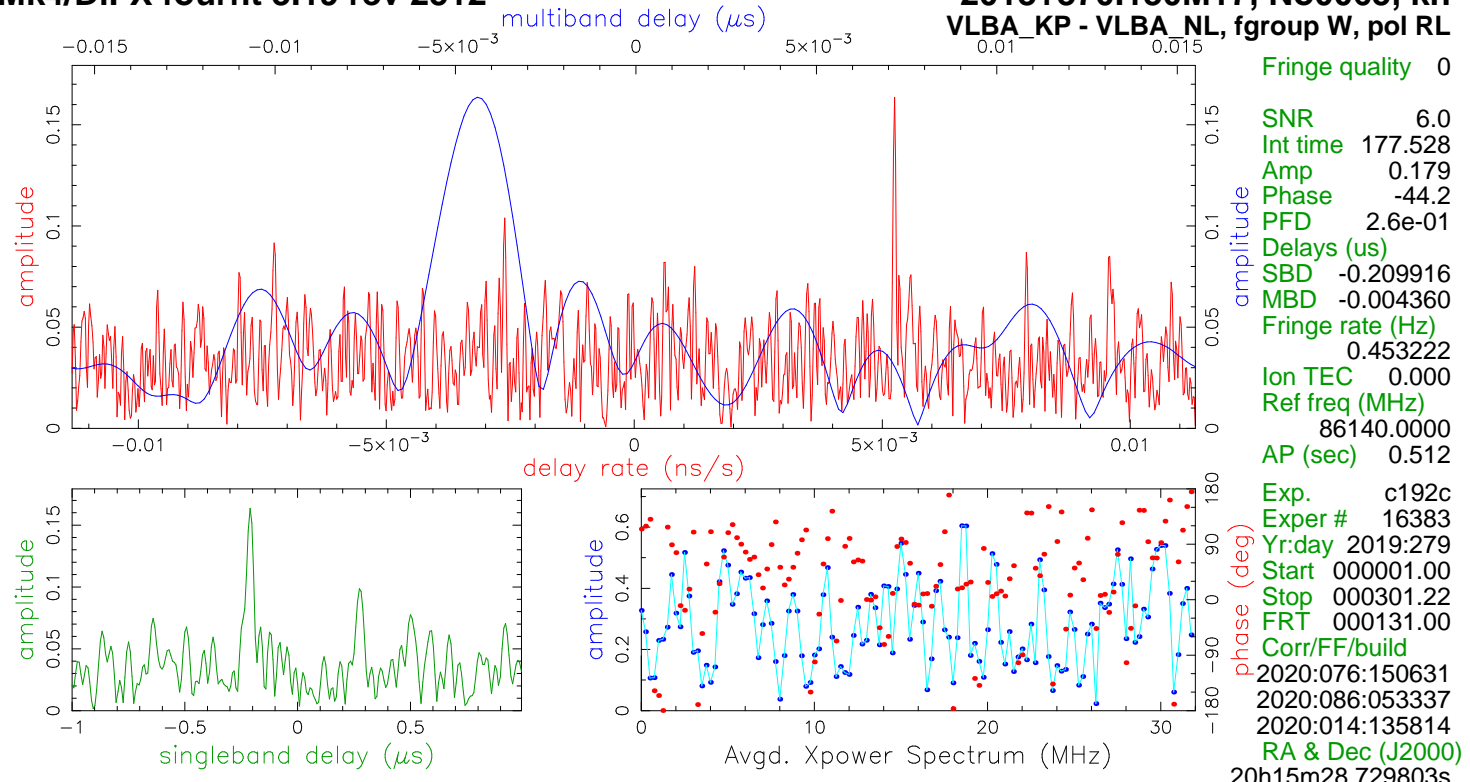


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-2.72953045978E+03																
Sband delay (usec)		-2.72952403083E+03																
Phase delay (usec)		-2.73048602383E+03																
Delay rate (us/s)		3.58367517002E-01																
Total phase (deg)					-33.2													
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
Pcal mode: MANUAL, MANUAL																		
Pcal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

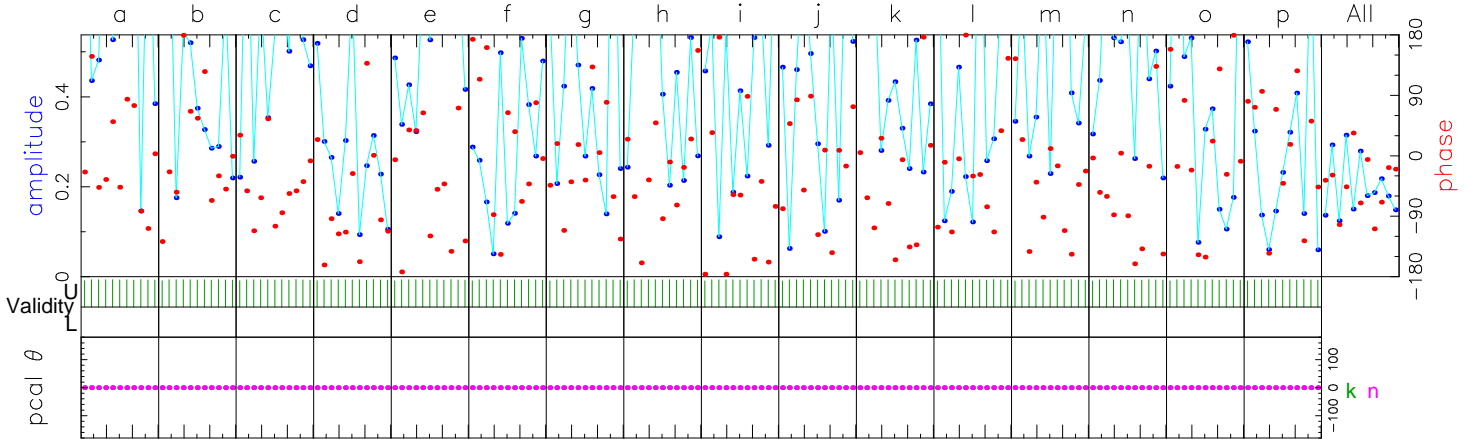
ph/seg (deg) 45.3 33.0 Search (1024X64) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 51.7 57.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 32.2 39.7 Inc. seg. avg. 0.174 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 44.4 69.4 Inc. frq. avg. 0.147 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 n: az 98.4 el 73.0 pa -67.6 u,v (fr/asec) -2576.333 -647.790 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kn..130M17 Output file: /Exps/c192c/v2/1234/No0065/kn.W.226.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kn
VLBA_KP - VLBA_NL, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

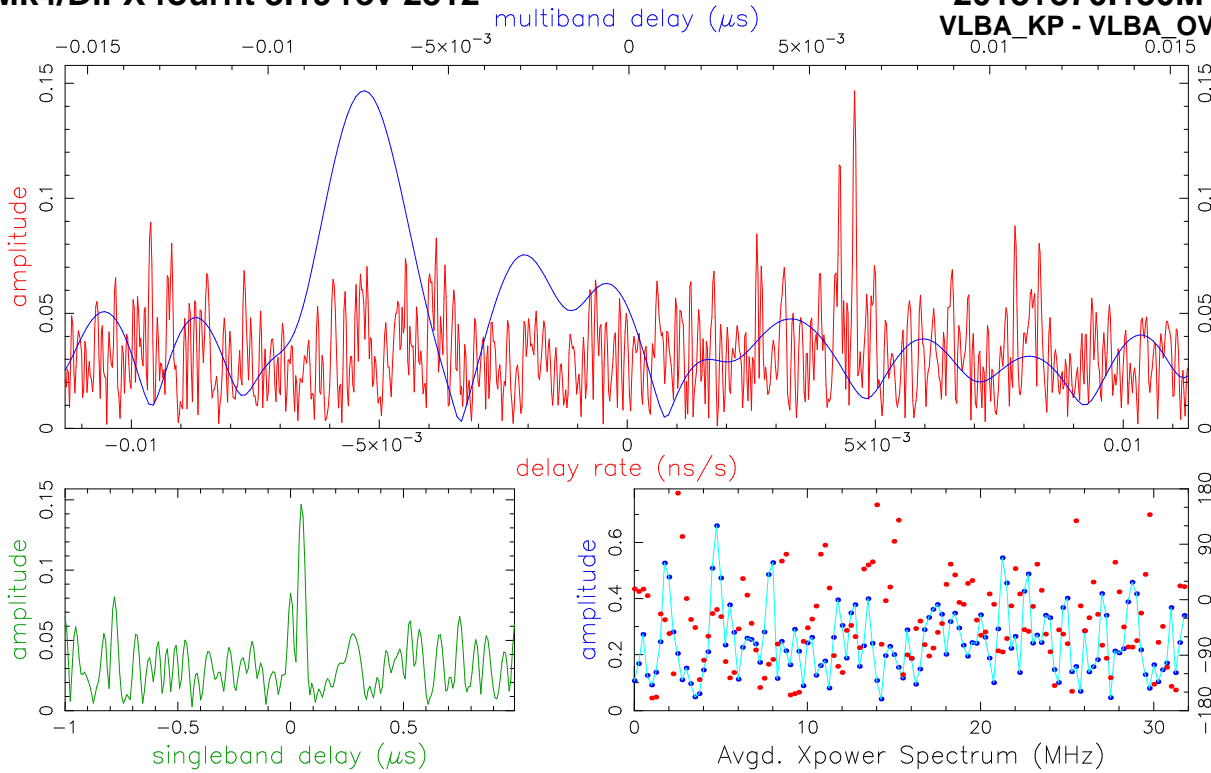


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-15.4	-33.6	-54.2	-62.6	-33.7	-55.4	-42.2	-32.7	-103.4	-16.0	-70.9	-56.5	-60.0	-78.0	0.1	64.4	Phase	-44.2				
	0.3	0.1	0.5	0.1	0.1	0.0	0.3	0.2	0.2	0.1	0.3	0.1	0.3	0.3	0.2	0.2	Ampl.	0.2				
	157.3	69.2	102.2	248.3	119.0	160.0	181.3	167.0	172.4	170.0	2.7	115.5	36.6	44.6	220.9	165.5	Sbd box	102.1				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Tracks					
Group delay (usec)(sbd)			-2.73070913664E+03														Apriori delay (usec)	-2.73048602683E+03	Resid mbdelay (usec)	-4.35981E-03	+/-	1.8E-04
Sband delay (usec)			-2.73069594233E+03														Apriori clock (usec)	-2.6938545E+01	Resid sbdelay (usec)	-2.09916E-01	+/-	2.9E-03
Phase delay (usec)			-2.73048602825E+03														Apriori clockrate (us/s)	-3.2880250E-07	Resid phdelay (usec)	-1.42635E-06	+/-	6.2E-07
Delay rate (us/s)			3.58370383744E-01														Apriori rate (us/s)	3.58365122281E-01	Resid rate (us/s)	5.26146E-06	+/-	5.9E-09
Total phase (deg)																	Apriori accel (us/s/s)	5.04099167861E-06	Resid phase (deg)	-44.2	+/-	19.2

ph/seg (deg) RMS Theor. Amplitude 0.179 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 40.5 31.8 Search (1024X64) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.0 55.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 39.7 38.4 Inc. seg. avg. 0.191 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 62.4 67.0 Inc. frq. avg. 0.175 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 n: az 98.4 el 73.0 pa -67.6 u,v (fr/asec) -2576.333 -647.790 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kn..130M17 Output file: /Exps/c192c/v2/1234/No0065/kn.W.238.130M17

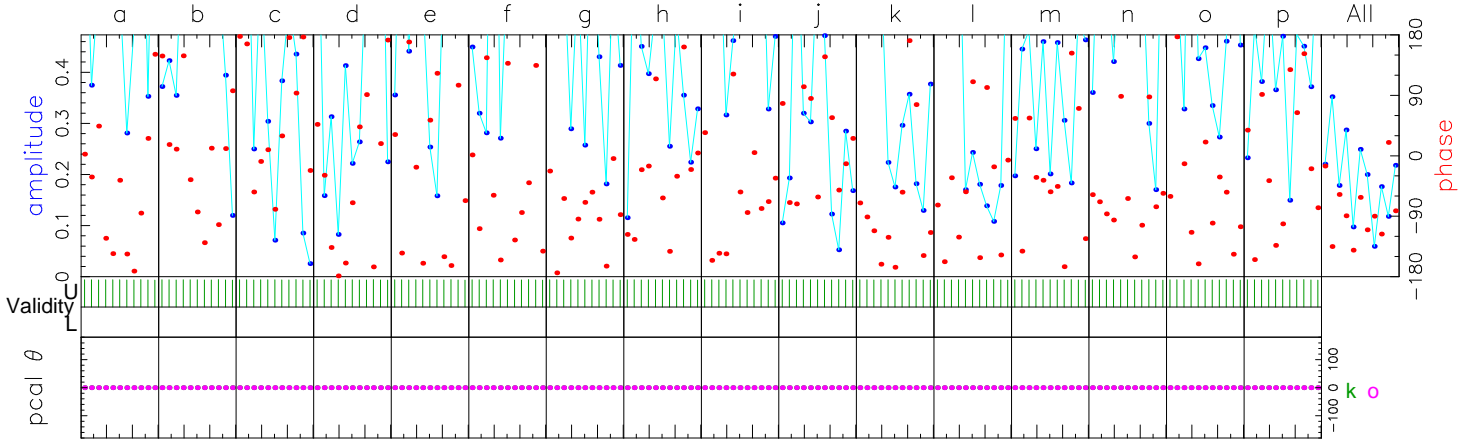


Fringe quality 0

SNR 5.4
Int time 178.135
Amp 0.158
Phase -86.6
PFD 1.0e+00
Delays (us)
SBD 0.048457
MBD -0.007317
Fringe rate (Hz)
0.396334
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053331
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

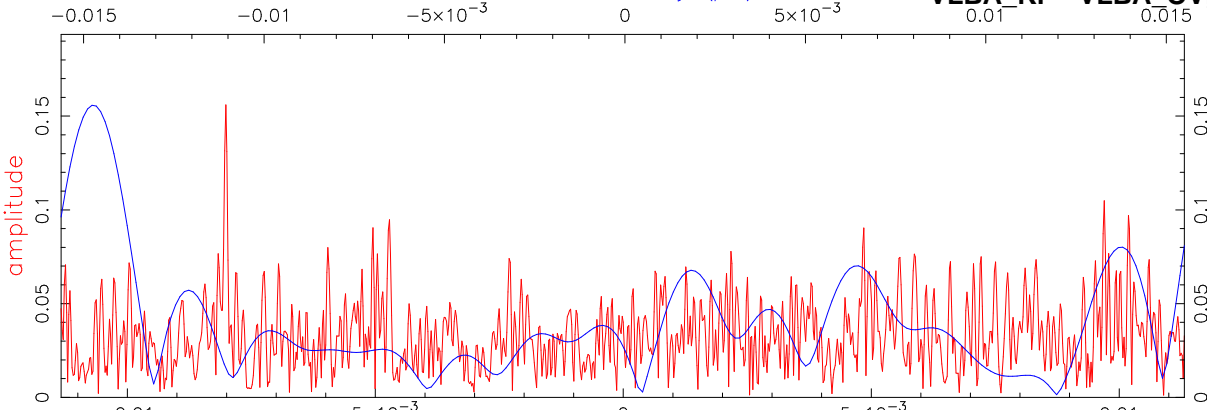


86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
-85.7	-49.2	139.3	69.0	-157.8	-96.7	-74.3	-58.0	-76.0	-30.7	-112.1	-80.0	-44.8	-80.2	-103.6	-85.0	Phase	-86.6
0.1	0.2	0.1	0.1	0.2	0.3	0.4	0.1	0.2	0.1	0.3	0.2	0.1	0.4	0.3	0.1	Ampl.	0.2
221.2	181.0	30.9	252.4	155.0	166.8	136.3	242.5	218.8	90.6	136.4	226.1	175.9	215.6	141.4	29.8	Sbd box	135.2
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:o 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
k 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
o W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	7.74418681701E+02		Apriori delay (usec)		7.74363498467E+02		Resid mbdelay (usec)		-7.31677E-03		+/-		2.0E-04				
Sband delay (usec)	7.74411955967E+02		Apriori clock (usec)		-1.7069342E+01		Resid sbdelay (usec)		4.84575E-02		+/-		3.2E-03				
Phase delay (usec)	7.74363495675E+02		Apriori clockrate (us/s)		-1.9555999E-07		Resid phdelay (usec)		-2.79288E-06		+/-		6.9E-07				
Delay rate (us/s)	-3.97807542980E-02		Apriori rate (us/s)		-3.97853553381E-02		Resid rate (us/s)		4.60104E-06		+/-		6.6E-09				
Total phase (deg)	186.3		Apriori accel (us/s/s)		-9.37549139601E-06		Resid phase (deg)		-86.6		+/-		21.3				

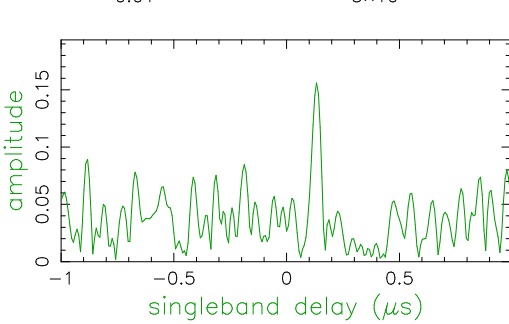
ph/seg (deg) 47.2 35.3 Search (1024X64) 0.145 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 64.2 61.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 63.1 42.6 Inc. seg. avg. 0.177 Sample rate(MSamp/s): 64 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 68.1 74.4 Inc. frq. avg. 0.155 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 o: az 74.9 el 52.2 pa -74.9 u,v (fr/asec) 278.043 -1095.314 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ko..130M17 Output file: /Exps/c192c/v2/1234/No0065/ko.W.195.130M17

multiband delay (μ s)

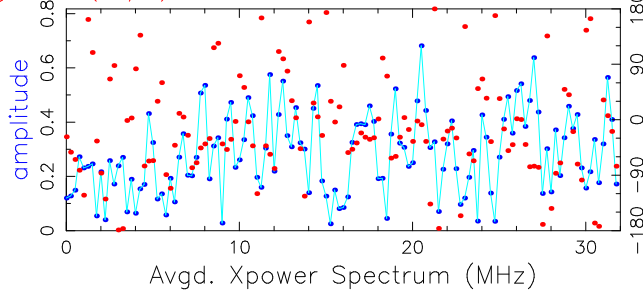
Fringe quality 0



SNR 5.7
Int time 178.136
Amp 0.194
Phase 106.8
PFD 7.9e-01
Delays (us)
SBD 0.133324
MBD -0.014731
Fringe rate (Hz)
-0.692334
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

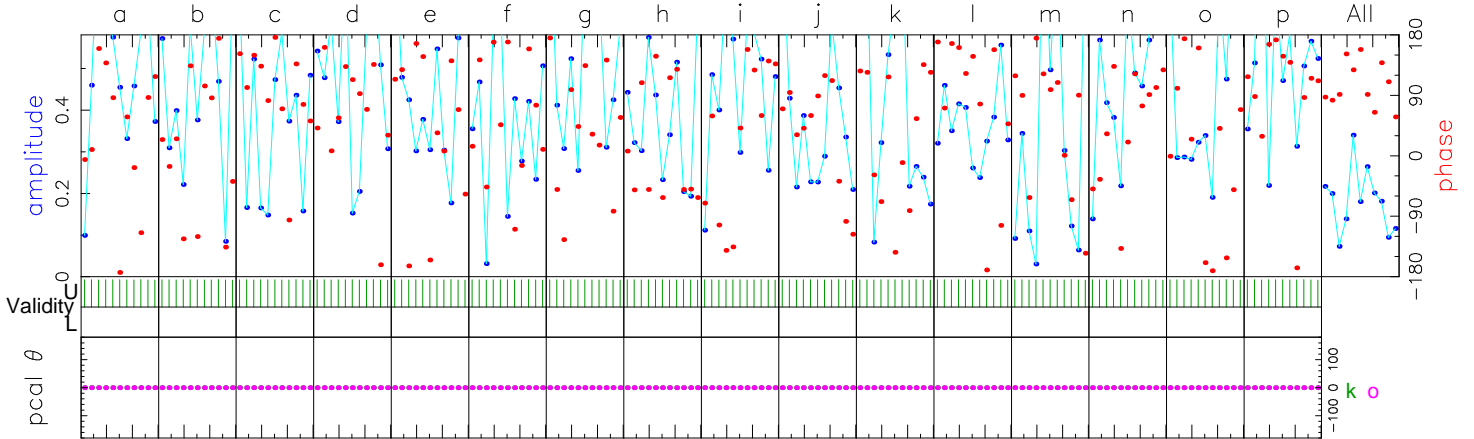


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053334
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	116.5	70.9	125.6	98.1	114.6	90.3	87.8	-33.4	153.1	70.7	122.4	147.0	122.5	87.0	37.4	114.5	Phase	106.8
	0.2	0.1	0.3	0.3	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.3	0.2	0.4	0.1	0.4	Ampl.	0.2
	86.0	170.4	51.7	34.8	255.5	15.4	126.0	87.8	71.7	54.0	42.2	233.4	92.7	116.8	97.8	147.1	Sbd box	146.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

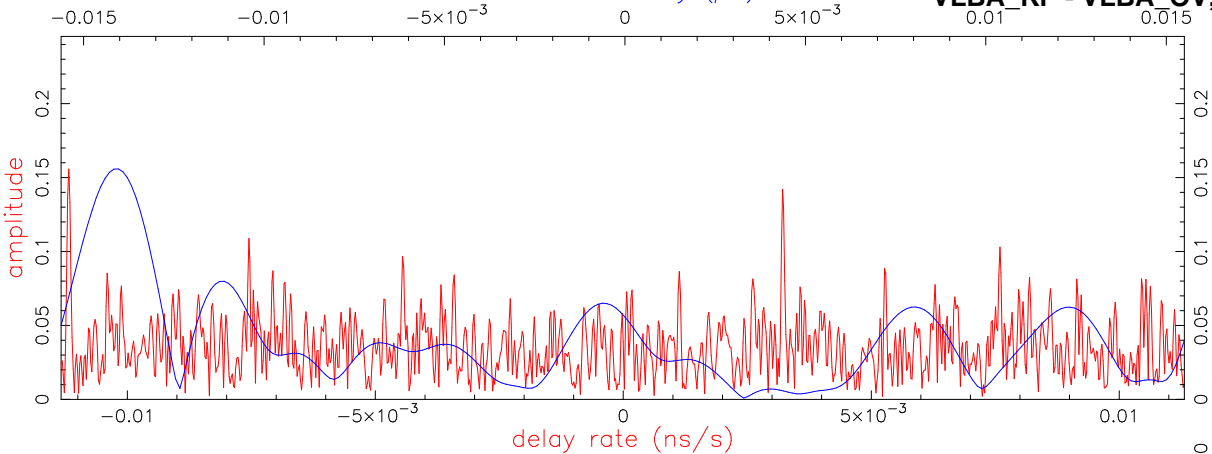
Group delay (usec)(sbd) 7.74505017882E+02 Apriori delay (usec) 7.74363498467E+02 Resid mbdelay (usec) -1.47306E-02 +/- 1.9E-04
 Sband delay (usec) 7.74496822467E+02 Apriori clock (usec) -1.7069342E+01 Resid sbdelay (usec) 1.33324E-01 +/- 3.0E-03
 Phase delay (usec) 7.74363501912E+02 Apriori clockrate (us/s) -1.9555999E-07 Resid phdelay (usec) 3.44482E-06 +/- 6.5E-07
 Delay rate (us/s) -3.97933926447E-02 Apriori rate (us/s) -3.97853553381E-02 Resid rate (us/s) -8.03731E-06 +/- 6.2E-09
 Total phase (deg) 19.7 Apriori accel (us/s/s) -9.37549139601E-06 Resid phase (deg) 106.8 +/- 20.1

RMS Theor. Amplitude 0.194 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 32.6 33.4 Search (1024X64) 0.153 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 50.0 58.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 48.5 40.3 Inc. seg. avg. 0.194 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 54.5 70.3 Inc. frq. avg. 0.181 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

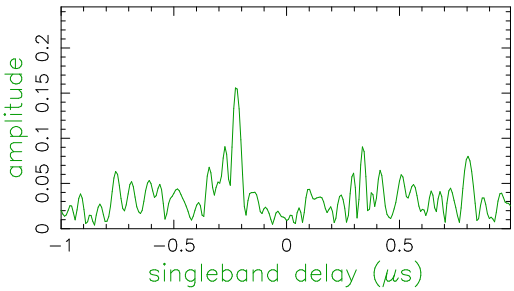
k: az 69.4 el 55.9 pa -86.3 o: az 74.9 el 52.2 pa -74.9 u,v (fr/asec) 278.043 -1095.314 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ko..130M17 Output file: /Exps/c192c/v2/1234/No0065/ko.W.215.130M17

multiband delay (μ s)

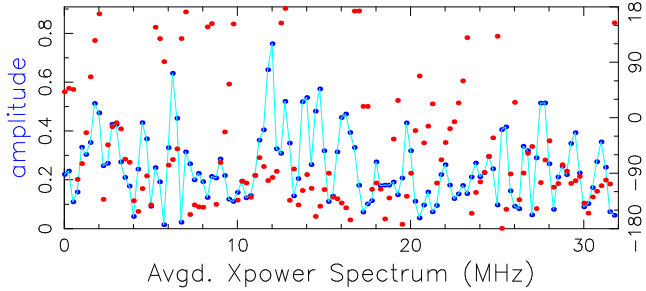
Fringe quality 0



SNR 5.8
Int time 178.135
Amp 0.245
Phase 129.0
PFD 6.3e-01
Delays (us)
SBD -0.223151
MBD -0.014023
Fringe rate (Hz)
-0.965278
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

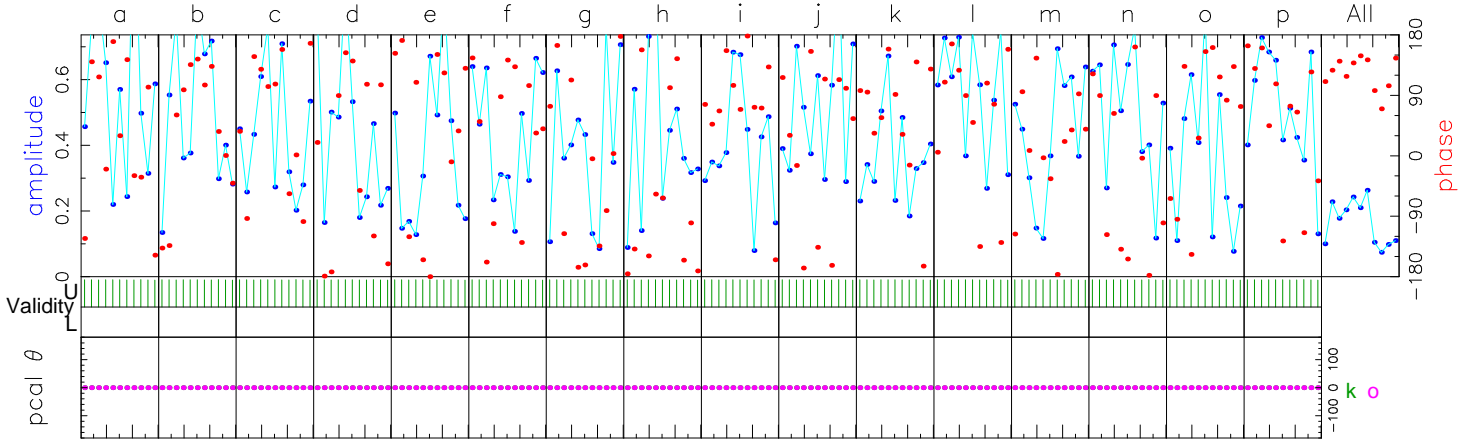


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053335
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

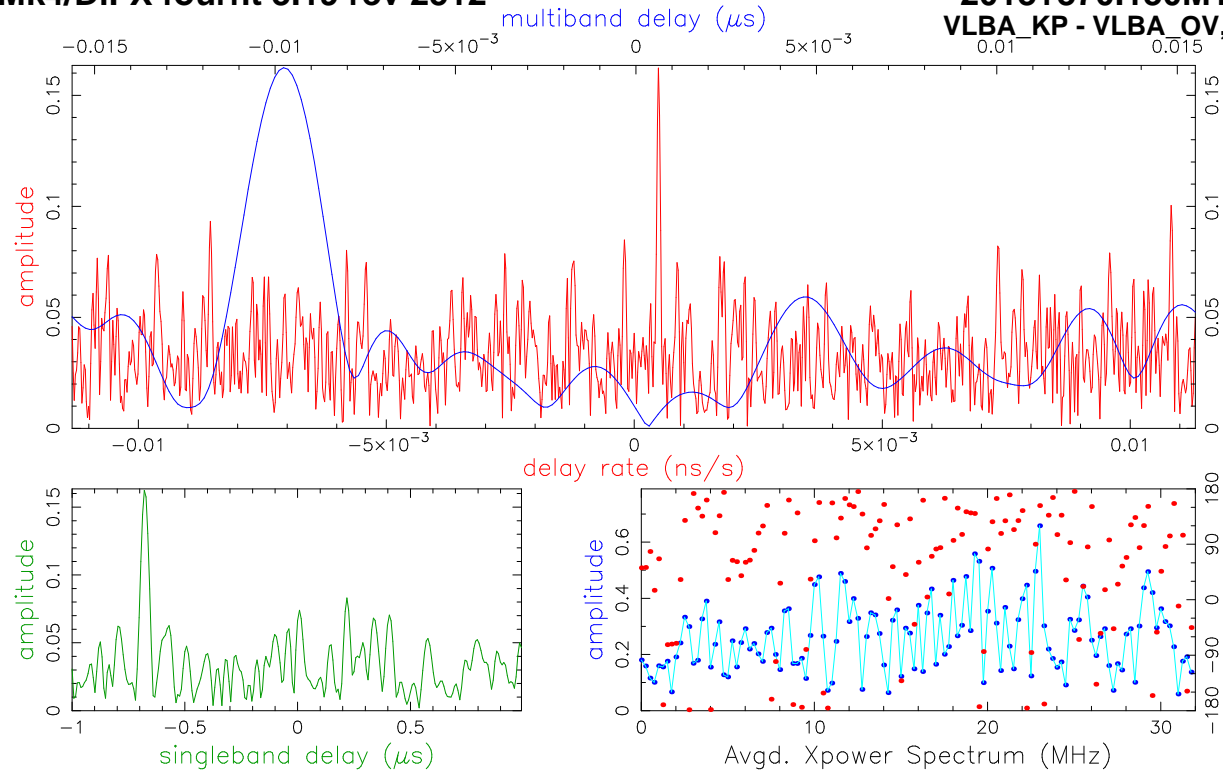


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	35.8	110.3	133.3	141.9	148.5	110.1	-159.8	-140.3	100.8	123.9	100.5	119.9	47.0	158.8	141.1	120.1		Phase	129.0
	0.1	0.4	0.3	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.2	0.3	0.2	0.4		Ampl.	0.2
	34.9	102.1	13.7	87.7	235.0	28.6	68.0	94.7	183.3	68.1	161.7	210.8	94.5	48.9	71.0	87.6		Sbd box	100.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids	
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	

Group delay (usec)(sbd) 7.74130725563E+02 Apriori delay (usec) 7.74363498467E+02 Resid mbdelay (usec) -1.40229E-02 +/- 1.9E-04
 Sband delay (usec) 7.74140347967E+02 Apriori clock (usec) -1.7069342E+01 Resid sbdelay (usec) -2.23151E-01 +/- 3.0E-03
 Phase delay (usec) 7.74363502628E+02 Apriori clockrate (us/s) -1.9555999E-07 Resid phdelay (usec) 4.16076E-06 +/- 6.4E-07
 Delay rate (us/s) -3.97965612562E-02 Apriori rate (us/s) -3.97853553381E-02 Resid rate (us/s) -1.12059E-05 +/- 6.2E-09
 Total phase (deg) 41.9 Apriori accel (us/s/s) -9.37549139601E-06 Resid phase (deg) 129.0 +/- 19.9

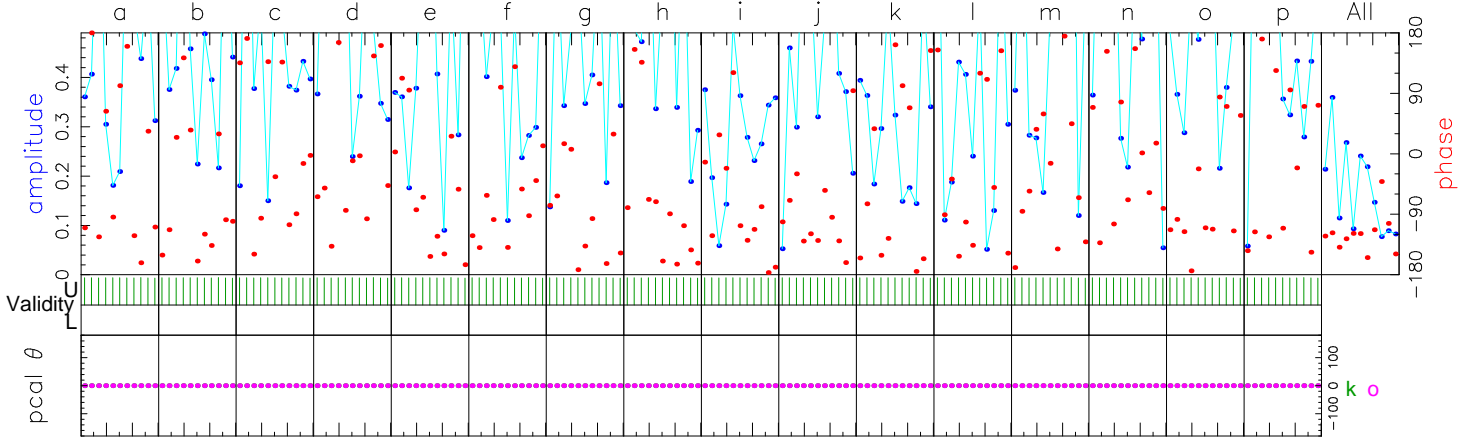
RMS Theor. Amplitude 0.245 +/- 0.043 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 24.7 32.9 Search (1024X64) 0.154 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 41.5 57.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 48.4 39.7 Inc. seg. avg. 0.220 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 42.9 69.3 Inc. frq. avg. 0.246 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 o: az 74.9 el 52.2 pa -74.9 u,v (fr/asec) 278.043 -1095.314 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ko..130M17 Output file: /Exps/c192c/v2/1234/No0065/ko.W.229.130M17



Fringe quality 0
SNR 6.0
Int time 178.135
Amp 0.163
Phase -123.1
PFD 2.7e-01
Delays (us)
SBD -0.677361
MBD -0.009702
Fringe rate (Hz)
0.042395
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053338
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

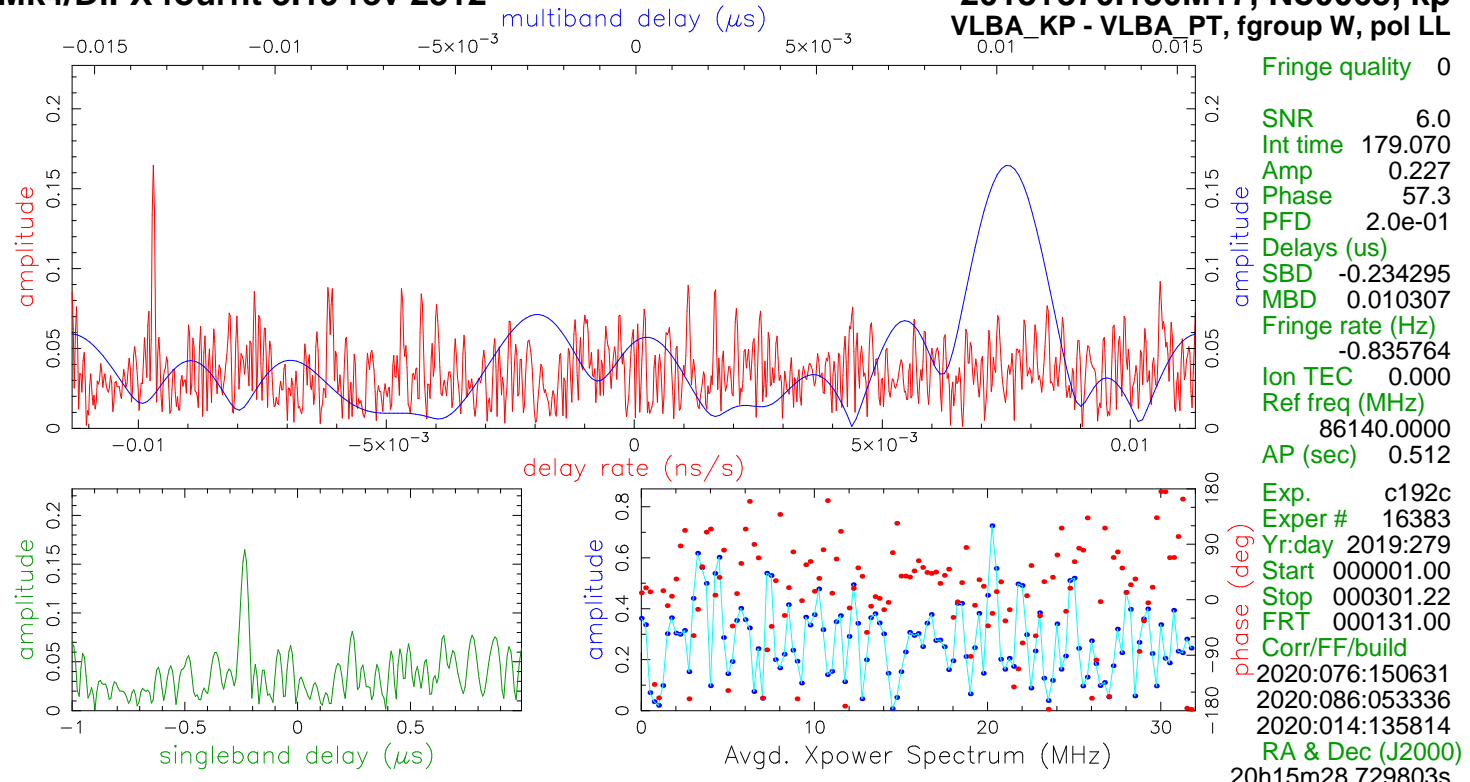


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-151.4	-134.4	-125.3	-96.9	-115.5	-99.4	-66.9	-115.1	-130.2	-105.8	-160.3	-179.9	-70.1	-86.8	-110.7	-169.6	Phase	-123.1				
	0.2	0.2	0.1	0.3	0.2	0.2	0.1	0.4	0.1	0.3	0.2	0.2	0.1	0.1	0.2	0.2	Ampl.	0.2				
	32.8	68.5	60.3	17.8	129.1	83.9	201.5	42.1	211.3	43.7	187.7	129.9	131.7	177.9	190.3	18.9	Sbd box	42.3				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)		7.73697546654E+02															Apriori delay (usec)	7.74363498467E+02	Resid mbdelay (usec)	-9.70181E-03	+/-	1.8E-04
Sband delay (usec)		7.73686136967E+02															Apriori clock (usec)	-1.7069342E+01	Resid sbdelay (usec)	-6.77361E-01	+/-	2.9E-03
Phase delay (usec)		7.74363494499E+02															Apriori clockrate (us/s)	-1.9555999E-07	Resid phdelay (usec)	-3.96863E-06	+/-	6.2E-07
Delay rate (us/s)		-3.97848631783E-02															Apriori rate (us/s)	-3.97853553381E-02	Resid rate (us/s)	4.92160E-07	+/-	6.0E-09
Total phase (deg)				149.8													Apriori accel (us/s/s)	-9.37549139601E-06	Resid phase (deg)	-123.1	+/-	19.2

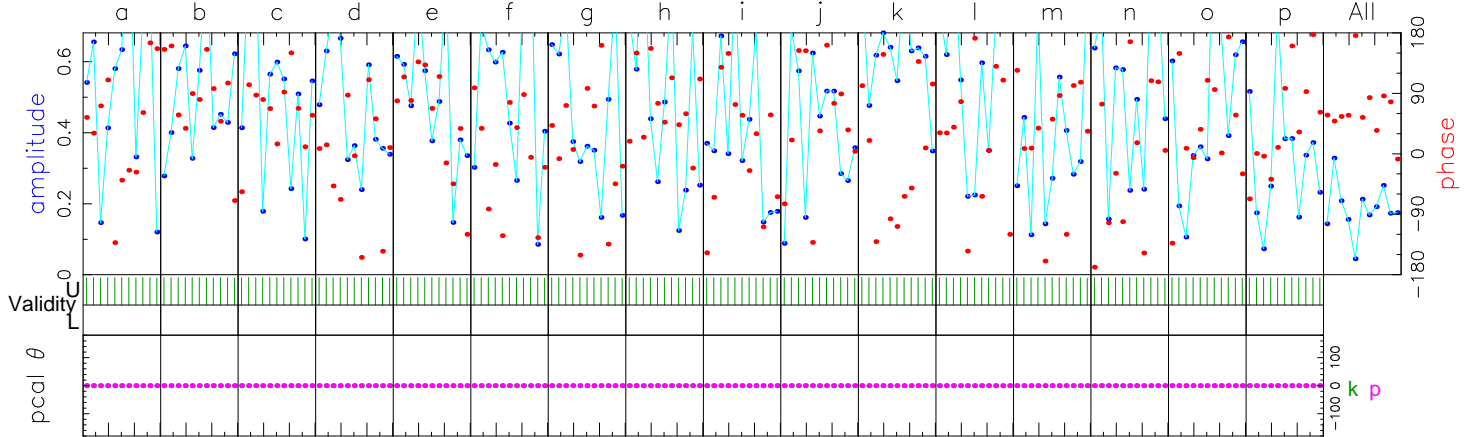
ph/seg (deg) RMS Theor. Amplitude 0.163 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 54.8 55.6 Search (1024X64) 0.160 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 34.7 38.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 51.0 67.1 Inc. seg. avg. 0.150 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 k: az 69.4 el 55.9 pa -86.3 o: az 74.9 el 52.2 pa -74.9 u,v (fr/asec) 278.043 -1095.314 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/ko..130M17 Output file: /Exps/c192c/v2/1234/No0065/ko.W.245.130M17 simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kp
VLBA_KP - VLBA_PT, fgroup W, pol LL



Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All						
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	99.0					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	0.2					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	0.1					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	57.3					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	0.2					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	19.0					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Tracks	57.3					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	57.3					
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	57.3					
Group delay (usec)(sbd)		-7.07958557900E+02																Apriori delay (usec)	-7.07718864497E+02	Resid mbdelay (usec)	1.03066E-02	+/-	1.8E-04	
Sband delay (usec)		-7.07953158997E+02																	Apriori clock (usec)	-1.2384522E+01	Resid sbdelay (usec)	-2.34295E-01	+/-	2.9E-03
Phase delay (usec)		-7.07718862649E+02																	Apriori clockrate (us/s)	-3.9846558E-07	Resid phdelay (usec)	1.84792E-06	+/-	6.1E-07
Delay rate (us/s)		6.62501420388E-02																	Apriori rate (us/s)	6.62598444288E-02	Resid rate (us/s)	-9.70239E-06	+/-	5.9E-09
Total phase (deg)			-298.3																Apriori accel (us/s/s)	1.35610179175E-06	Resid phase (deg)	57.3	+/-	19.0

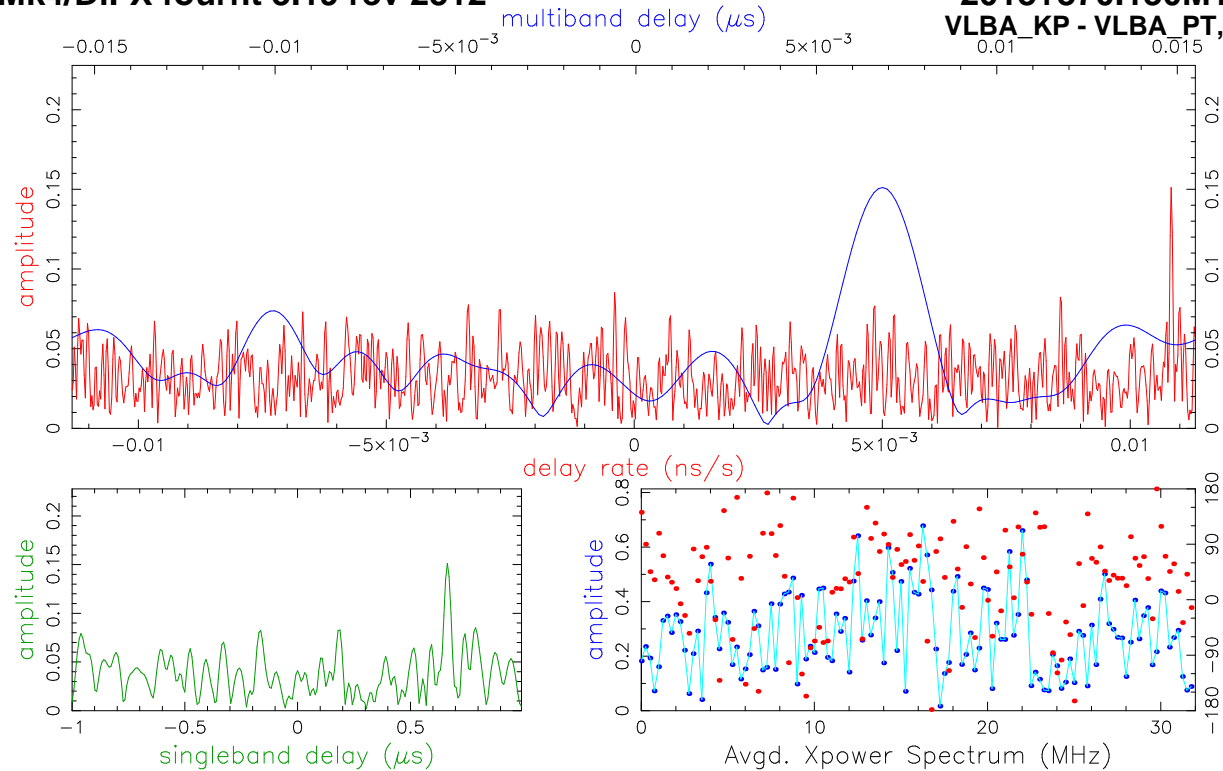
	RMS	Theor.	Amplitude	0.227 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	43.4	31.5	Search (1024X64)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	42.8	55.0	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	51.3	38.0	Inc. seg. avg.	0.224	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	51.2	66.4	Inc. frq. avg.	0.221	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
					nlags: 128	t_cohere infinite

k: az 69.4 el 55.9 pa -86.3 p: az 73.4 el 59.4 pa -83.7 u,v (fr/asec) -476.152 -158.001 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kp..130M17 Output file: /Exps/c192c/v2/1234/No0065/kp.W.231.130M17

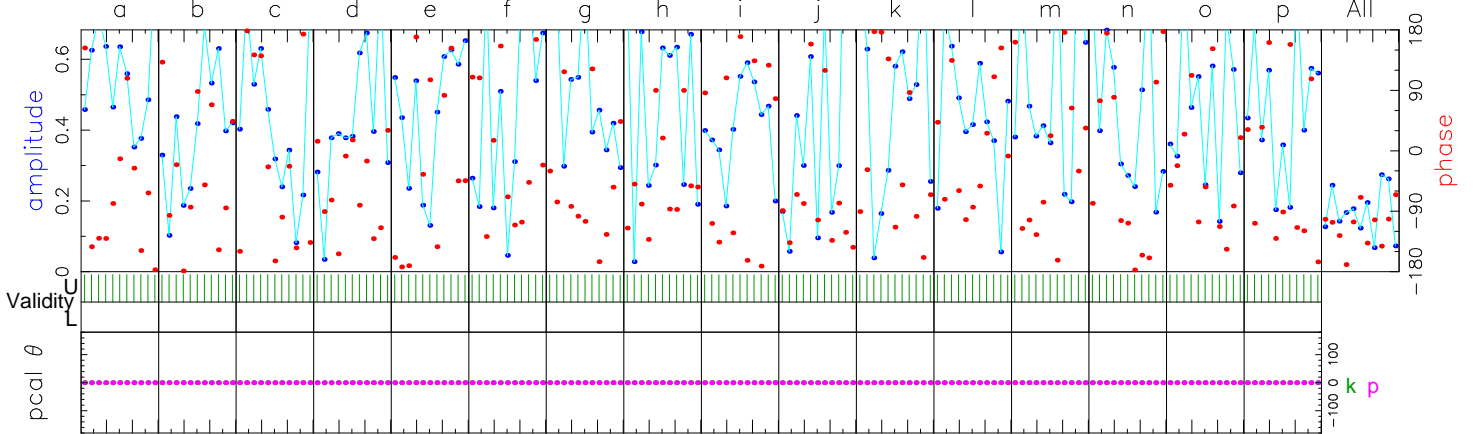
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kp
VLBA_KP - VLBA_PT, fgroup W, pol RR



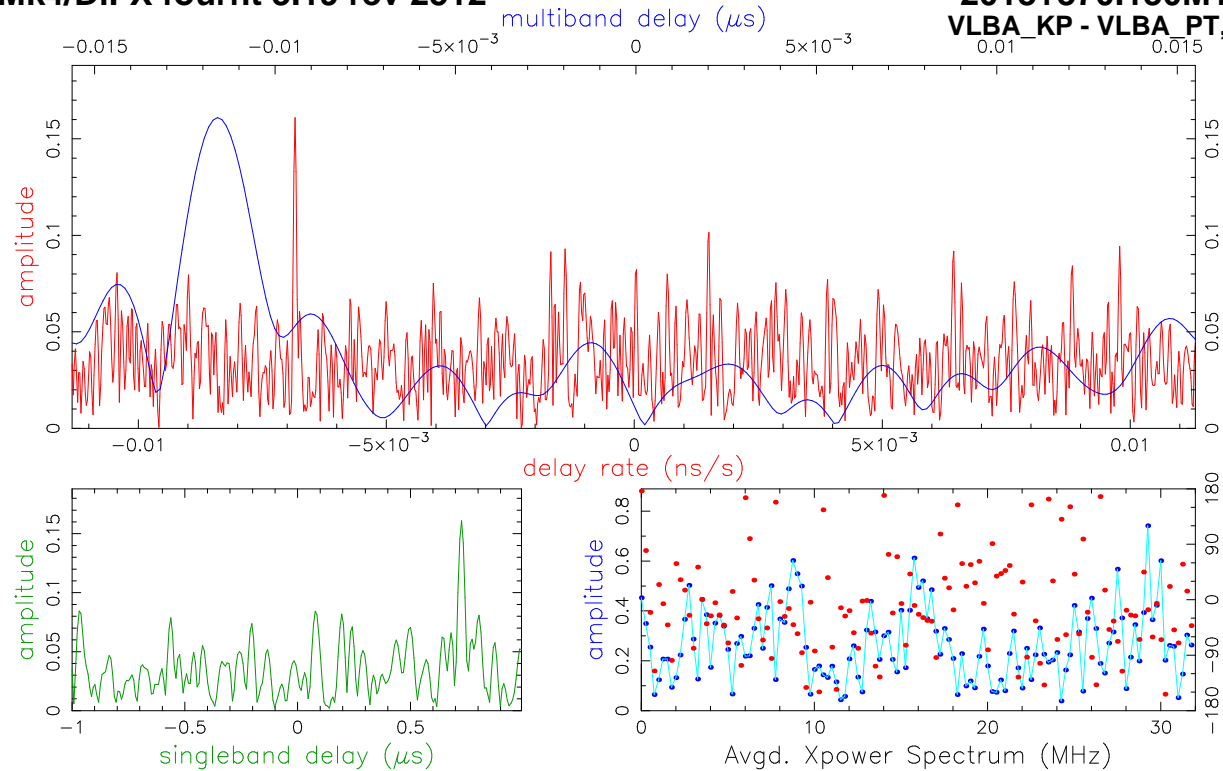
Fringe quality 0
SNR 5.5
Int time 179.070
Amp 0.228
Phase -116.8
PFD 9.8e-01
Delays (us)
SBD 0.664435
MBD 0.006830
Fringe rate (Hz) 0.934509
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053339
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-131.9	-35.0	-164.9	-61.0	-164.9	-107.0	-87.8	-73.4	170.9	-135.0	-102.0	-49.1	-95.5	-164.0	-74.4	-144.1		Phase	-116.8				
	0.4	0.1	0.4	0.3	0.2	0.3	0.4	0.4	0.4	0.4	0.4	0.2	0.3	0.3	0.2	0.3		Ampl.	0.2				
	69.8	26.7	153.4	75.9	3.7	238.9	146.7	52.4	20.1	103.1	55.4	156.4	121.9	194.1	183.1	151.1		Sbd box	214.0				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-7.07055784450E+02															Apriori delay (usec)	-7.07718864497E+02	Resid mbdelay (usec)	6.83005E-03	+/-	1.9E-04
Sband delay (usec)			-7.07054429497E+02															Apriori clock (usec)	-1.2384522E+01	Resid sbdelay (usec)	6.64435E-01	+/-	3.1E-03
Phase delay (usec)			-7.07718868262E+02															Apriori clockrate (us/s)	-3.9846558E-07	Resid phdelay (usec)	-3.76550E-06	+/-	6.7E-07
Delay rate (us/s)			6.62706931531E-02															Apriori rate (us/s)	6.62598444288E-02	Resid rate (us/s)	1.08487E-05	+/-	6.4E-09
Total phase (deg)																		Apriori accel (us/s/s)	1.35610179175E-06	Resid phase (deg)	-116.8	+/-	20.7

RMS Theor. Amplitude 0.228 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 29.6 34.3 Search (1024X64) 0.150 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 46.1 59.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 48.6 41.4 Inc. seg. avg. 0.216 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 53.1 72.3 Inc. frq. avg. 0.241 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 k: az 69.4 el 55.9 pa -86.3 p: az 73.4 el 59.4 pa -83.7 u,v (fr/asec) -476.152 -158.001 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kp..130M17 Output file: /Exps/c192c/v2/1234/No0065/kp.W.250.130M17

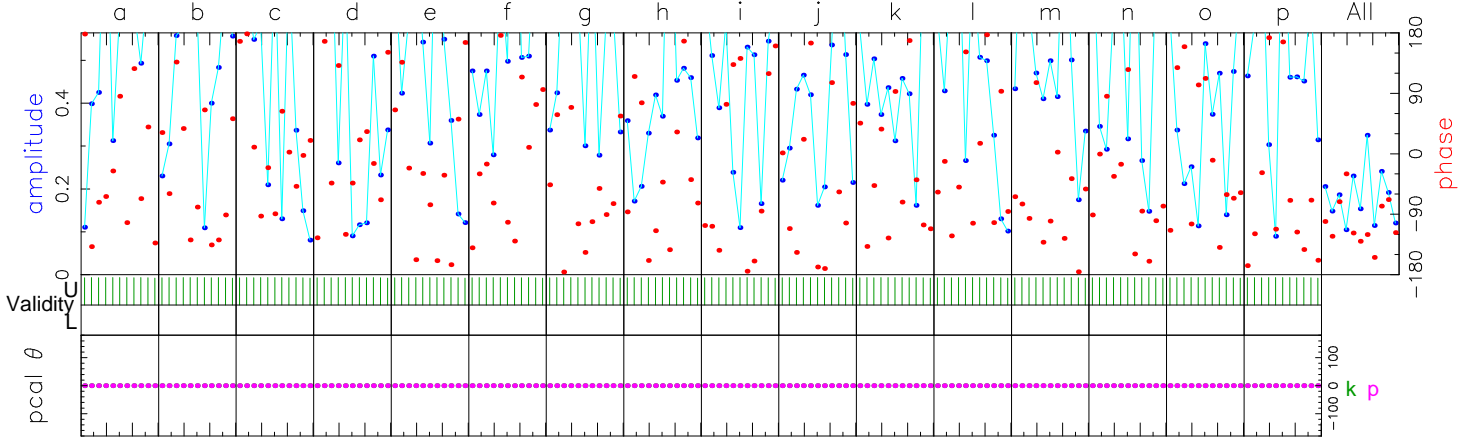


Fringe quality 0

SNR 5.9
Int time 179.070
Amp 0.188
Phase -102.2
PFD 3.8e-01
Delays (us)
SBD 0.726158
MBD -0.011588
Fringe rate (Hz)
-0.590623
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053342
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

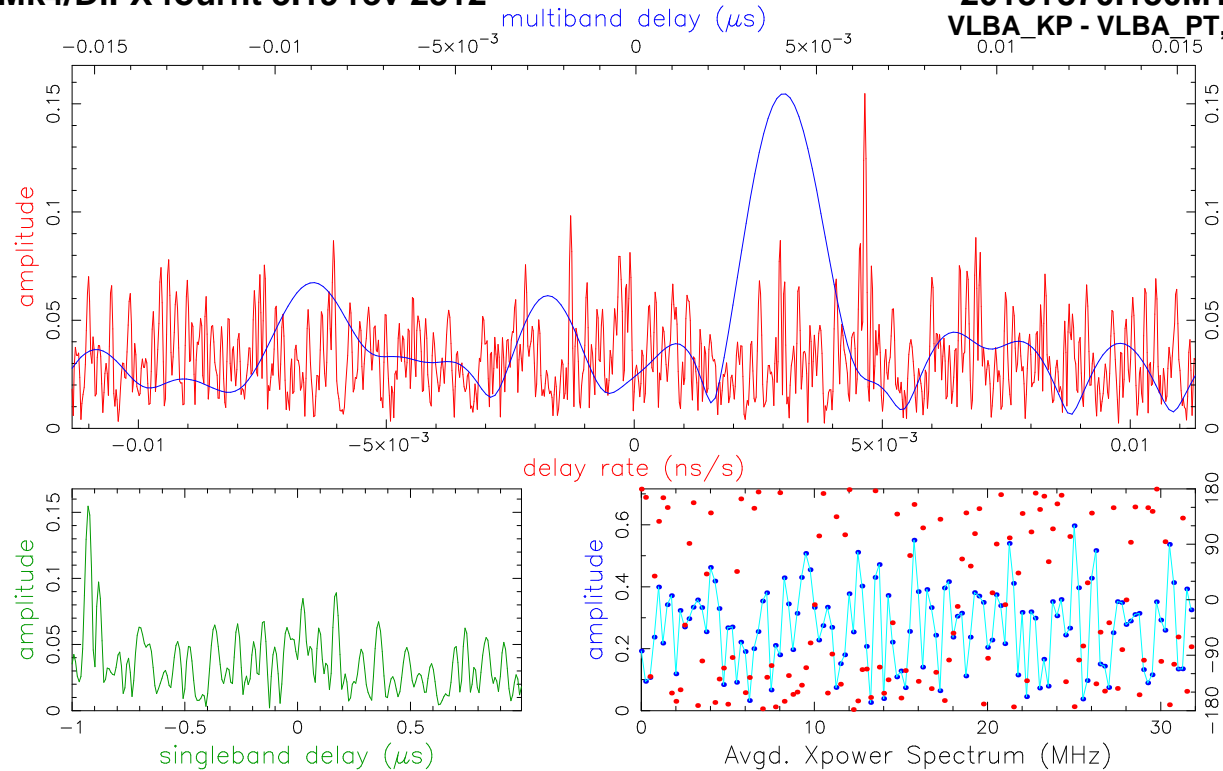


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		-7.06980452513E+02																
Sband delay (usec)		-7.06992706497E+02																
Phase delay (usec)		-7.07718867794E+02																
Delay rate (us/s)		6.62529878811E-02																
Total phase (deg)																		
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MSamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 34.0 32.3 Search (1024X64) 0.153 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 41.5 56.3 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 28.5 38.9 Inc. seg. avg. 0.186 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 49.6 67.9 Inc. frq. avg. 0.170 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 p: az 73.4 el 59.4 pa -83.7 u,v (fr/asec) -476.152 -158.001 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kp..130M17 Output file: /Exps/c192c/v2/1234/No0065/kp.W.270.130M17

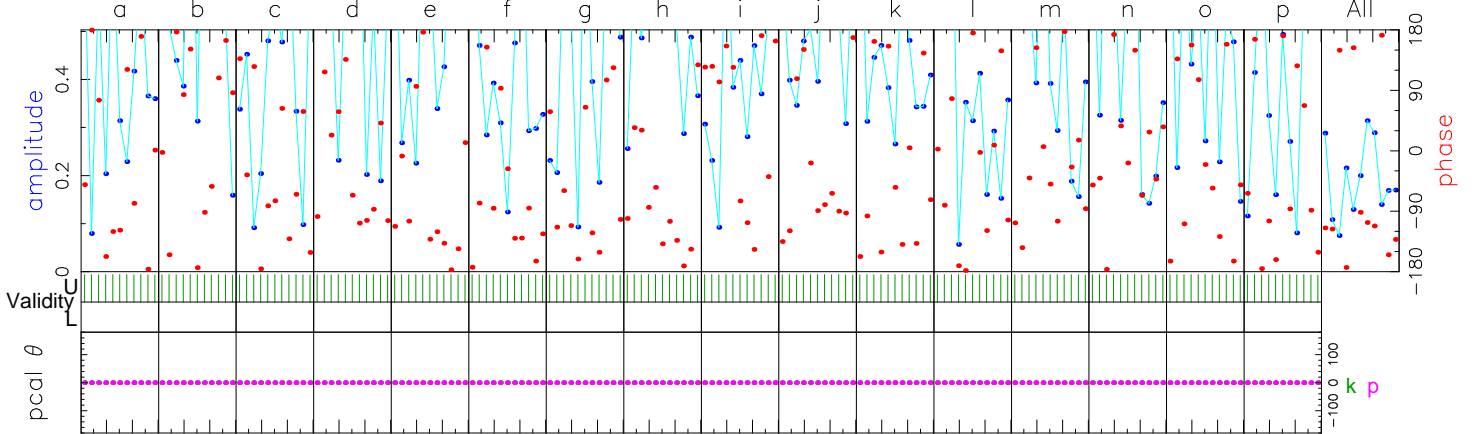
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kp
VLBA_KP - VLBA_PT, fgroup W, pol RL



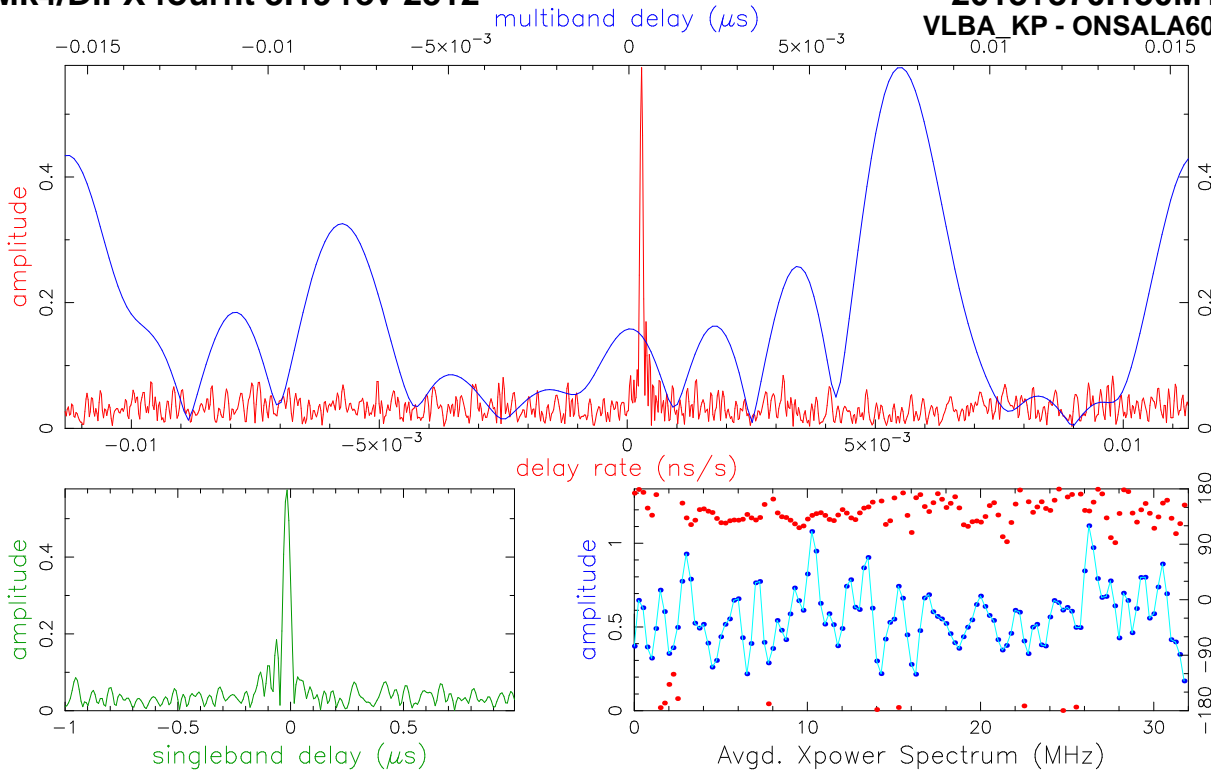
Fringe quality 0
SNR 5.7
Int time 179.070
Amp 0.168
Phase -133.6
PFD 7.3e-01
Delays (us)
SBD -0.927249
MBD 0.004088
Fringe rate (Hz) 0.401505
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build 2020:076:150631
2020:086:053344
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-130.3	175.8	-107.5	-99.5	-138.0	-135.1	-170.4	-108.3	175.6	-108.9	-145.2	-9.4	-83.9	-101.3	-155.5	-152.5		Phase	-133.6				
	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.2	0.3	0.3	0.1	0.2	0.0	0.2	0.2		Ampl.	0.2				
	88.1	222.8	1.4	137.5	2.1	11.6	188.3	54.7	15.9	70.6	99.9	101.4	199.6	224.4	141.2	120.0		Sbd box	10.3				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			-7.08652276208E+02															Apriori delay (usec)	-7.07718864497E+02	Resid mbdelay (usec)	4.08829E-03	+/-	1.9E-04
Sband delay (usec)			-7.08646113497E+02															Apriori clock (usec)	-1.2384522E+01	Resid sbdelay (usec)	-9.27249E-01	+/-	3.0E-03
Phase delay (usec)			-7.07718868804E+02															Apriori clockrate (us/s)	-3.9846558E-07	Resid phdelay (usec)	-4.30747E-06	+/-	6.5E-07
Delay rate (us/s)			6.62645055093E-02															Apriori rate (us/s)	6.62598444288E-02	Resid rate (us/s)	4.66108E-06	+/-	6.2E-09
Total phase (deg)					-129.2													Apriori accel (us/s/s)	1.35610179175E-06	Resid phase (deg)	-133.6	+/-	20.0

ph/seg (deg) 42.5 33.2 Theor. Amplitude 0.168 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 53.0 58.0 Search (1024X64) 0.145 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.9 40.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 54.0 69.9 Inc. seg. avg. 0.175 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 k: az 69.4 el 55.9 pa -86.3 p: az 73.4 el 59.4 pa -83.7 u,v (fr/asec) -476.152 -158.001 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kp..130M17 Output file: /Exps/c192c/v2/1234/No0065/kp.W.286.130M17 simultaneous interpolator

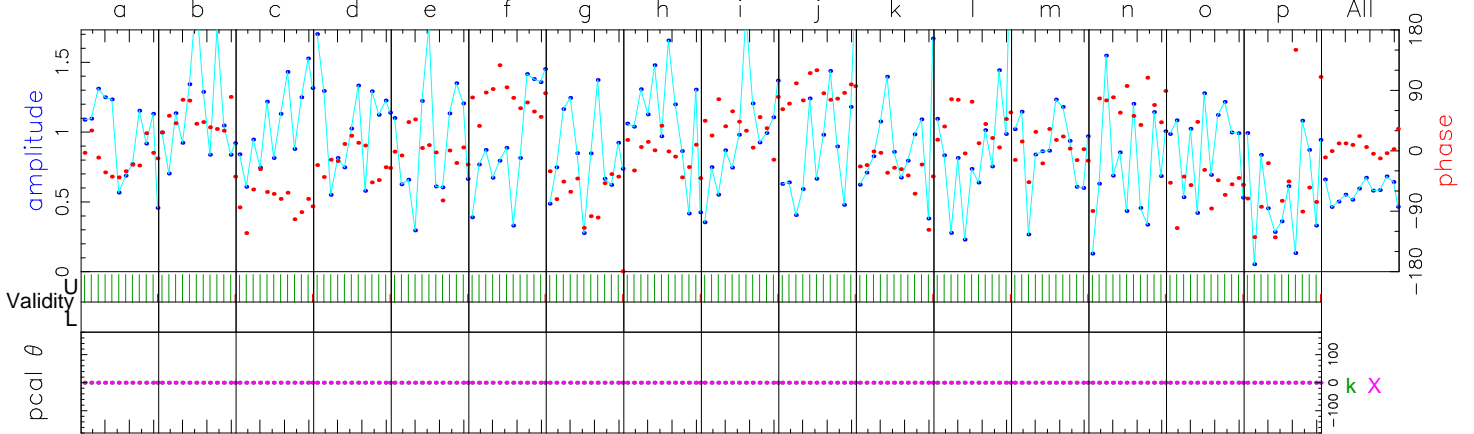


Fringe quality 7

SNR 21.1
Int time 178.049
Amp 0.578
Phase 3.1
PFD 0.0e+00
Delays (us)
SBD -0.017447
MBD 0.007485
Fringe rate (Hz)
0.024261
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.51
Stop 000300.71
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053334
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	-12.4	45.3	-73.1	-17.1	-0.4	73.5	-63.0	-0.2	32.8	89.2	-28.8	35.4	6.6	67.2	-52.6	-72.1		Phase	3.1
	0.9	1.1	1.0	1.0	0.9	0.8	0.7	1.0	0.9	0.8	0.8	0.8	0.8	0.7	0.8	0.4		Ampl.	0.8
	126.7	126.5	127.2	126.5	127.3	126.9	126.4	126.4	127.2	126.7	127.1	126.5	126.7	126.8	126.3	125.3		Sbd box	126.8
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	

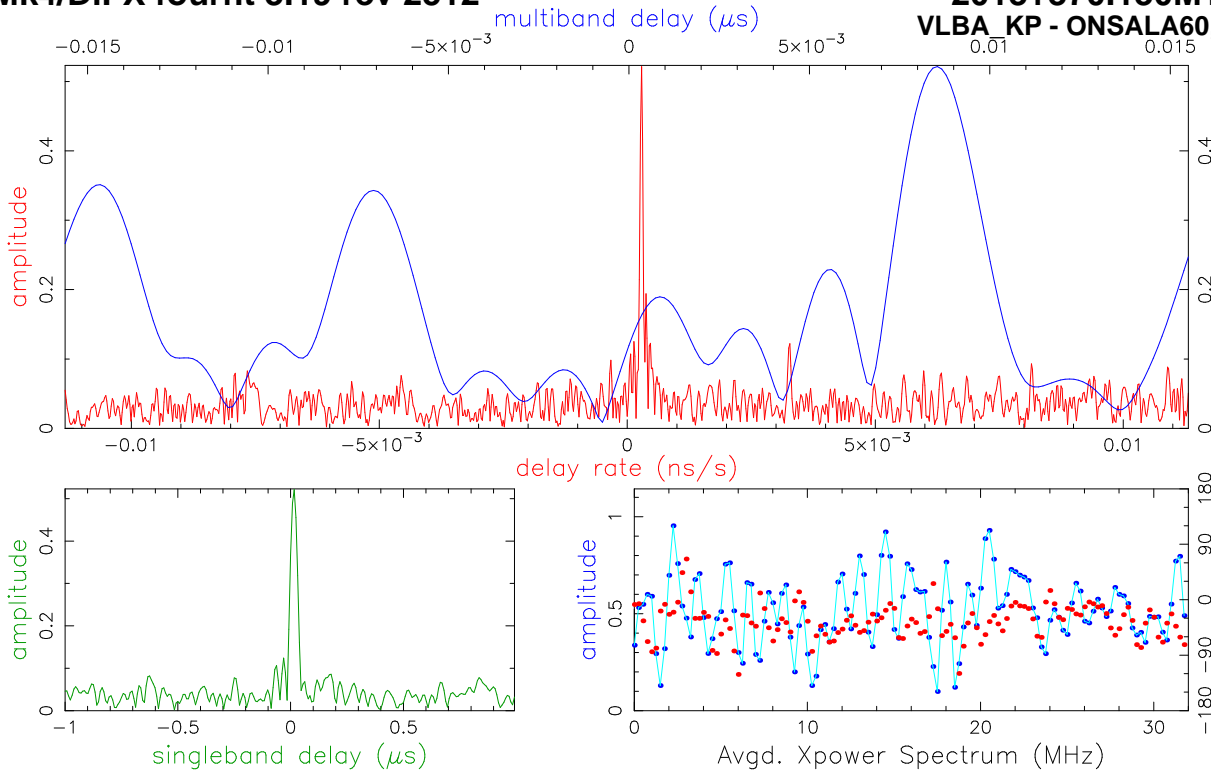
Group delay (usec)(sbd)	5.64024078394E+03	Apriori delay (usec)	5.64026454907E+03	Resid mbdelay (usec)	7.48487E-03	+/-	5.1E-05
Sband delay (usec)	5.64024710157E+03	Apriori clock (usec)	-3.2814255E+01	Resid sbdelay (usec)	-1.74475E-02	+/-	8.2E-04
Phase delay (usec)	5.64026454917E+03	Apriori clockrate (us/s)	-7.2257901E-07	Resid phdelay (usec)	9.96684E-08	+/-	1.8E-07
Delay rate (us/s)	1.34864903295E+00	Apriori rate (us/s)	1.34864875131E+00	Resid rate (us/s)	2.81643E-07	+/-	1.7E-09
Total phase (deg)	95.5	Apriori accel (us/s/s)	-5.15577167517E-05	Resid phase (deg)	3.1	+/-	5.4

ph/seg (deg) RMS Theor. Amplitude 0.578 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 10.5 9.4 Search (1024X64) 0.558 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 12.4 16.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 54.0 10.9 Inc. seg. avg. 0.576 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 52.8 19.0 Inc. frq. avg. 0.829 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 X: az 286.6 el 34.6 pa 40.4 u,v (fr/asec) -9746.748 -5230.805 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kX..130M17 Output file: /Exps/c192c/v2/1234/No0065/kX.W.220.130M17

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kX
VLBA_KP - ONSALA60, fgroup W, pol RR

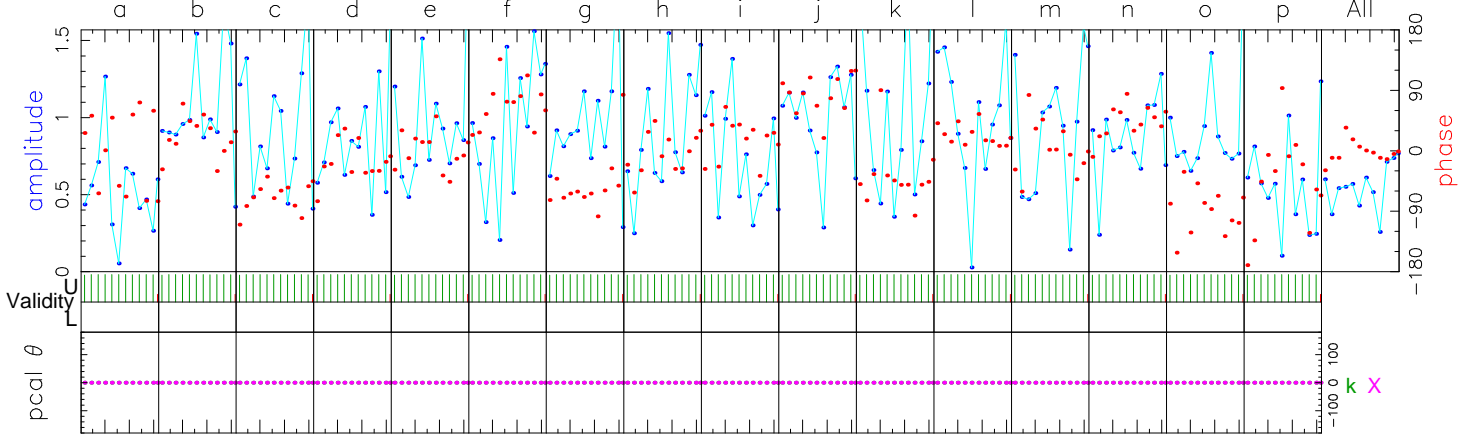


Fringe quality 9

SNR 19.1
Int time 178.050
Amp 0.523
Phase -2.1
PFD 0.0e+00
Delays (us)
SBD 0.014231
MBD 0.008517
Fringe rate (Hz) 0.024138
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

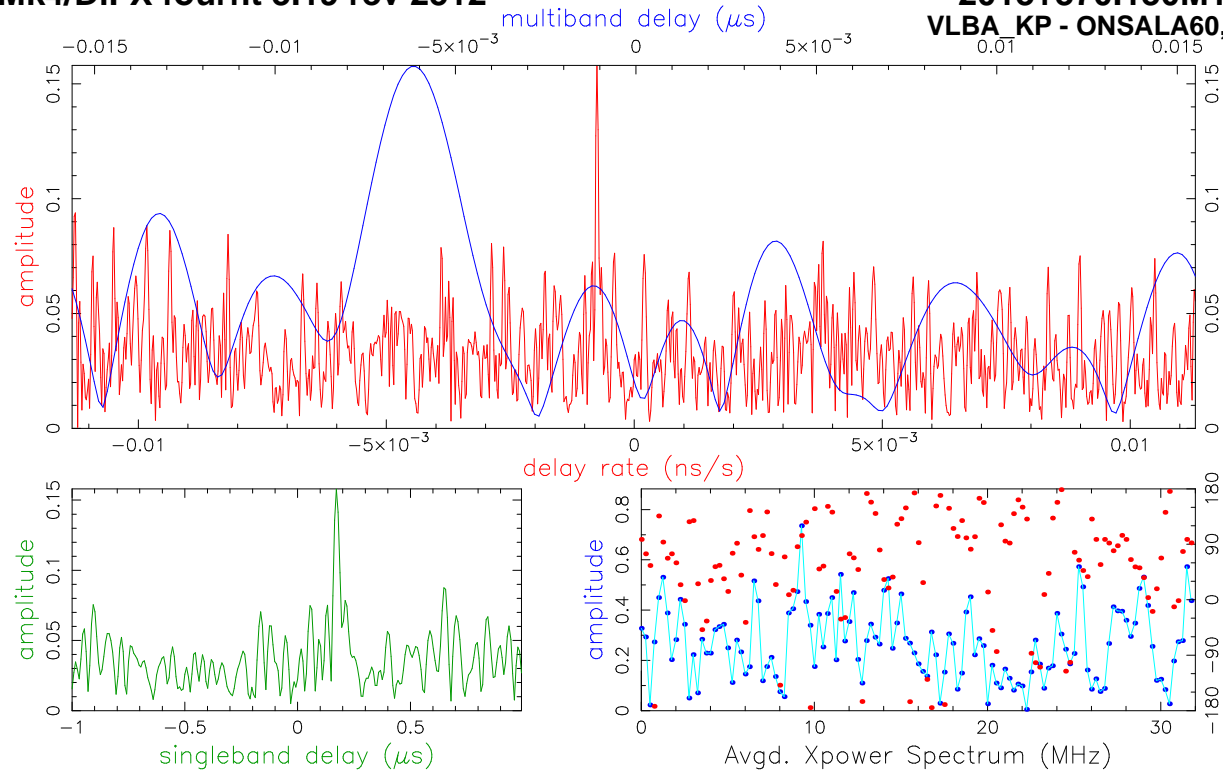
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.51
Stop 000300.71
FRT 000131.00
Corr/FF/build 2020:076:150631
2020:086:053337
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



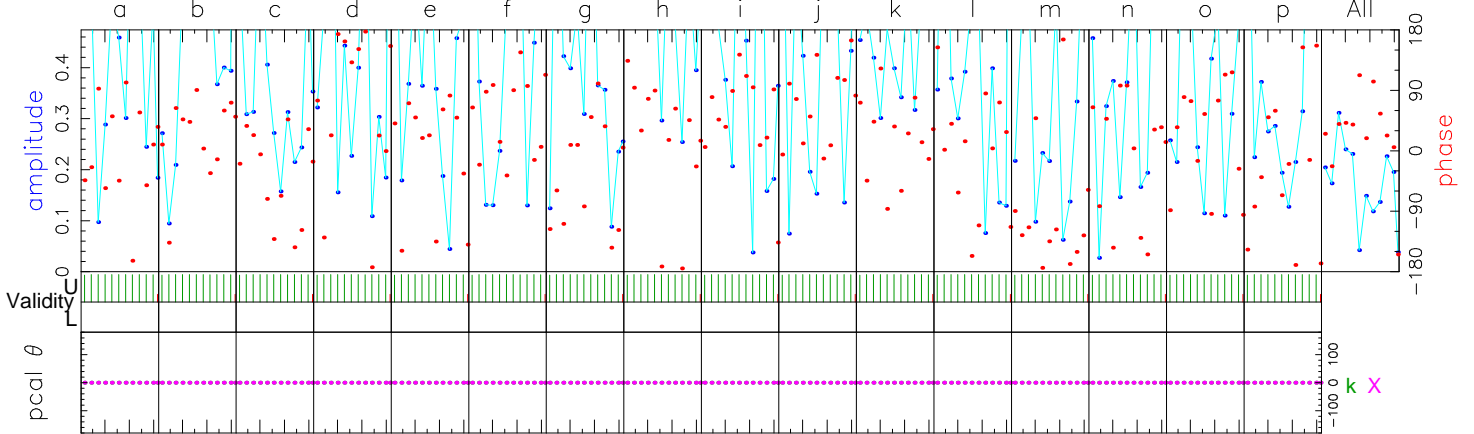
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		
Group delay (usec)(sbd)		5.64027306632E+03																
Sband delay (usec)		5.64027878007E+03																
Phase delay (usec)		5.64026454900E+03																
Delay rate (us/s)		1.34864903153E+00																
Total phase (deg)				90.4														
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
Resid mbdelay (usec)																		
Resid sbdelay (usec)																		
Resid phdelay (usec)																		
Resid rate (us/s)																		
Resid phase (deg)																		
PCal mode: MANUAL, MANUAL																		
PCal rate: 0.000E+00, 0.000E+00 (us/s)																		
Bits/sample: 2x2																		
Sample rate(MISamp/s): 64																		
Data rate(Mb/s): 2048																		
nlags: 128																		
t_cohere infinite																		
ion window (TEC)																		
sb window (us)																		
mb window (us)																		
dr window (ns/s)																		
ion window (TEC)																		

ph/seg (deg) 15.8 10.4 Search (1024X64) 0.499 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 26.6 18.1 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 51.0 12.0 Inc. seg. avg. 0.534 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 61.2 21.0 Inc. frq. avg. 0.758 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
k: az 69.4 el 55.9 pa -86.3 X: az 286.6 el 34.6 pa 40.4 u,v (fr/asec) -9746.748 -5230.805 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kX..130M17 Output file: /Exps/c192c/v2/1234/No0065/kX.W.233.130M17



Fringe quality 0
SNR 5.8
Int time 178.049
Amp 0.158
Phase 31.9
PFD 6.6e-01
Delays (us)
SBD 0.172359
MBD -0.006148
Fringe rate (Hz) -0.065498
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.51
Stop 000300.71
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053338
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

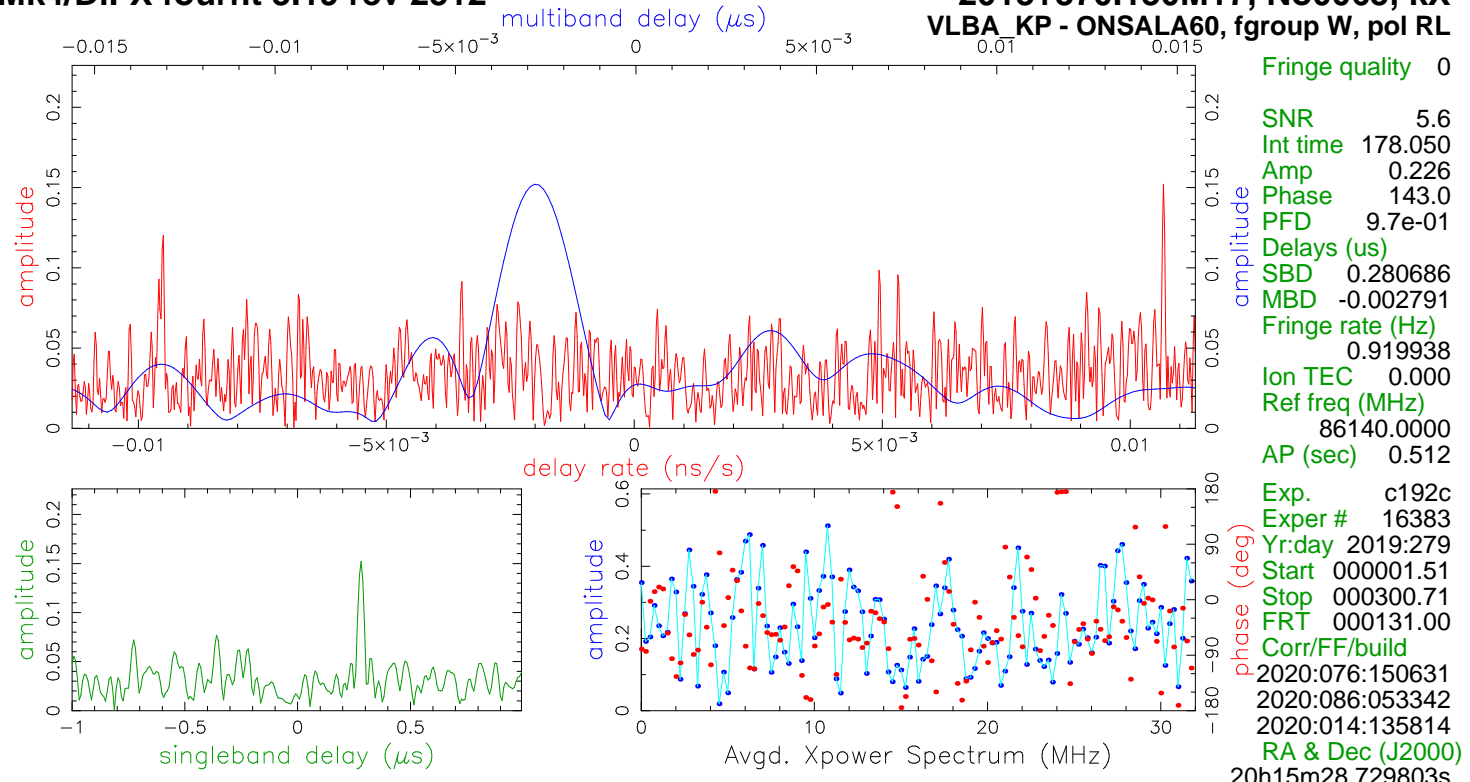
Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-7.8	37.2	-12.0	132.0	32.5	54.5	-12.4	61.8	58.9	42.7	12.5	-21.1	-125.5	41.0	47.6	-124.7	Phase	31.9				
	0.2	0.4	0.2	0.1	0.2	0.3	0.2	0.4	0.3	0.2	0.3	0.1	0.3	0.2	0.1	0.1	Ampl.	0.2				
	228.0	151.9	206.8	35.3	216.8	23.3	145.9	150.2	60.6	146.4	155.7	66.3	150.1	217.8	209.8	166.5	Sbd box	151.1				
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)		5.64044590108E+03															Apriori delay (usec)	5.64026454907E+03	Resid mbdelay (usec)	-6.14799E-03	+/-	1.9E-04
Sband delay (usec)		5.64043690807E+03															Apriori clock (usec)	-3.2814255E+01	Resid sbdelay (usec)	1.72359E-01	+/-	3.0E-03
Phase delay (usec)		5.64026455010E+03															Apriori clockrate (us/s)	-7.2257901E-07	Resid phdelay (usec)	1.02834E-06	+/-	6.4E-07
Delay rate (us/s)		1.34864799094E+00															Apriori rate (us/s)	1.34864875131E+00	Resid rate (us/s)	-7.60370E-07	+/-	6.2E-09
Total phase (deg)				124.3													Apriori accel (us/s/s)	-5.15577167517E-05	Resid phase (deg)	31.9	+/-	19.9

ph/seg (deg) RMS Theor. Amplitude 0.158 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 47.0 34.5 Search (1024X64) 0.151 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 47.6 60.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 71.0 39.8 Inc. seg. avg. 0.153 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 73.9 69.5 Inc. frq. avg. 0.187 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 X: az 286.6 el 34.6 pa 40.4 u,v (fr/asec) -9746.748 -5230.805 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kX..130M17 Output file: /Exps/c192c/v2/1234/No0065/kX.W.248.130M17



Fringe quality 0

SNR 5.6

Int time 178.050

Amp 0.226

Phase 143.0

PFD 9.7e-01

Delays (us)

SBD 0.280686

MBD -0.002791

Fringe rate (Hz)

0.919938

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000001.51

Stop 000300.71

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053342

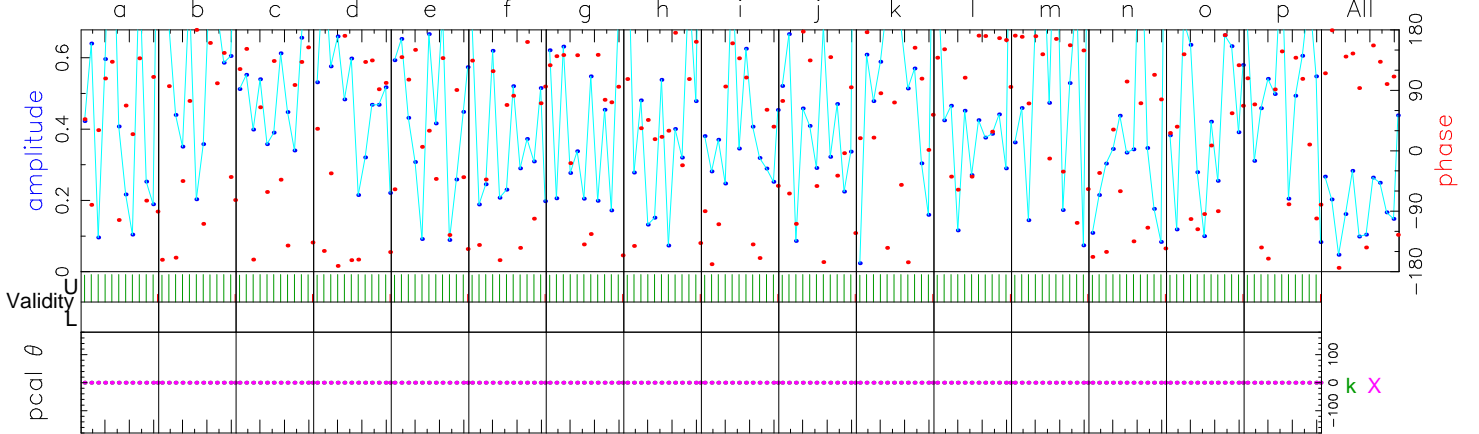
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 31 APs / seg (15.87 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	131.3	146.9	155.2	163.0	88.1	128.3	134.5	99.5	164.6	-149.9	120.1	139.6	174.4	109.7	129.2	132.5	Phase	143.0
	0.2	0.3	0.4	0.3	0.1	0.3	0.3	0.3	0.3	0.1	0.2	0.3	0.4	0.0	0.1	0.3	Ampl.	0.2
	155.2	149.0	166.8	83.5	201.9	79.2	224.7	84.6	173.7	198.9	192.6	99.1	166.0	216.8	94.1	17.8	Sbd box	164.9
U/L	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	350/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
k:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

Group delay (usec)(sbd) 5.64054300775E+03 Apriori delay (usec) 5.64026454907E+03 Resid mbdelay (usec) -2.79131E-03 +/- 1.9E-04

Sband delay (usec) 5.64054523457E+03 Apriori clock (usec) -3.2814255E+01 Resid sbdelay (usec) 2.80686E-01 +/- 3.1E-03

Phase delay (usec) 5.64026455368E+03 Apriori clockrate (us/s) -7.2257901E-07 Resid phdelay (usec) 4.61239E-06 +/- 6.7E-07

Delay rate (us/s) 1.34865943088E+00 Apriori rate (us/s) 1.34864875131E+00 Resid rate (us/s) 1.06796E-05 +/- 6.4E-09

Total phase (deg) 235.5 Apriori accel (us/s/s) -5.15577167517E-05 Resid phase (deg) 143.0 +/- 20.6

ph/seg (deg) RMS Theor. Amplitude 0.226 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 39.2 35.7 Search (1024X64) 0.147 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 60.0 62.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 31.4 41.3 Inc. seg. avg. 0.233 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011

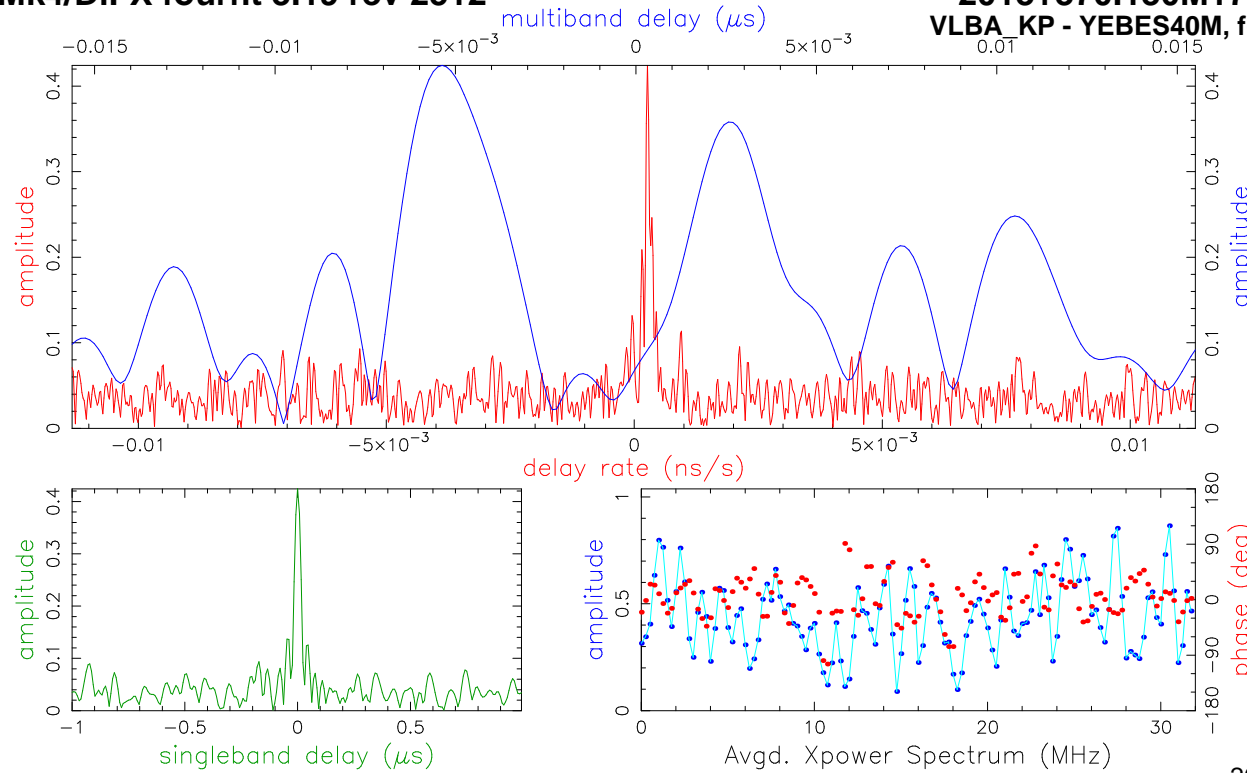
amp/frq (%) 48.3 72.0 Inc. frq. avg. 0.197 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 X: az 286.6 el 34.6 pa 40.4 u,v (fr/asec) -9746.748 -5230.805 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kX..130M17 Output file: /Exps/c192c/v2/1234/No0065/kX.W.269.130M17

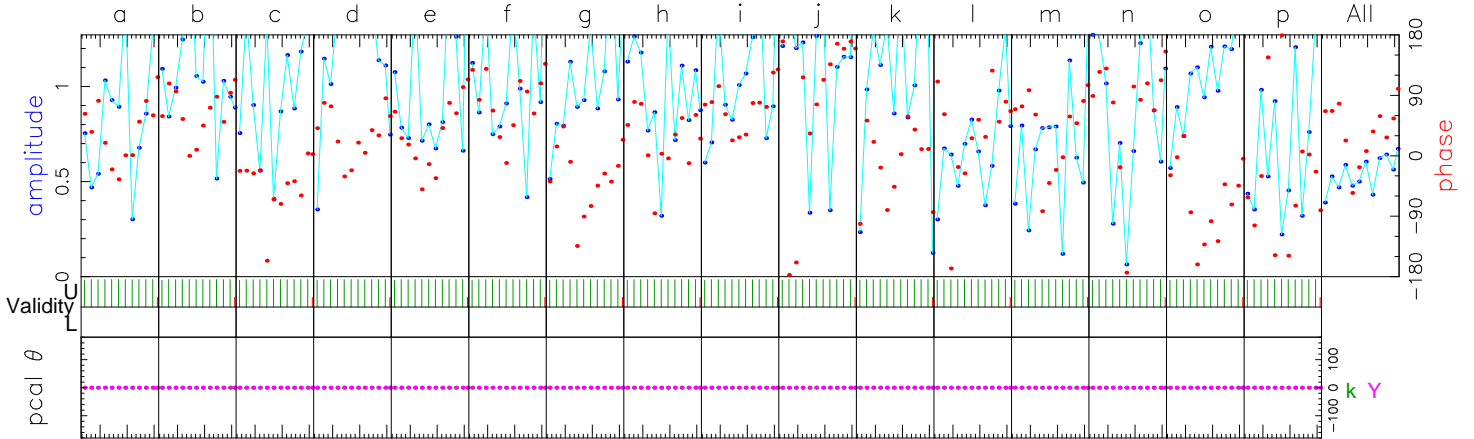
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130M17, No0065, kY
VLBA_KP - YEBES40M, fgroup W, pol LL



Fringe quality 9
SNR 14.7
Int time 161.653
Amp 0.424
Phase 36.1
PFD 1.0e-40
Delays (us)
SBD 0.000080
MBD -0.005373
Fringe rate (Hz)
0.023800
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000017.90
Stop 000300.71
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053335
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec

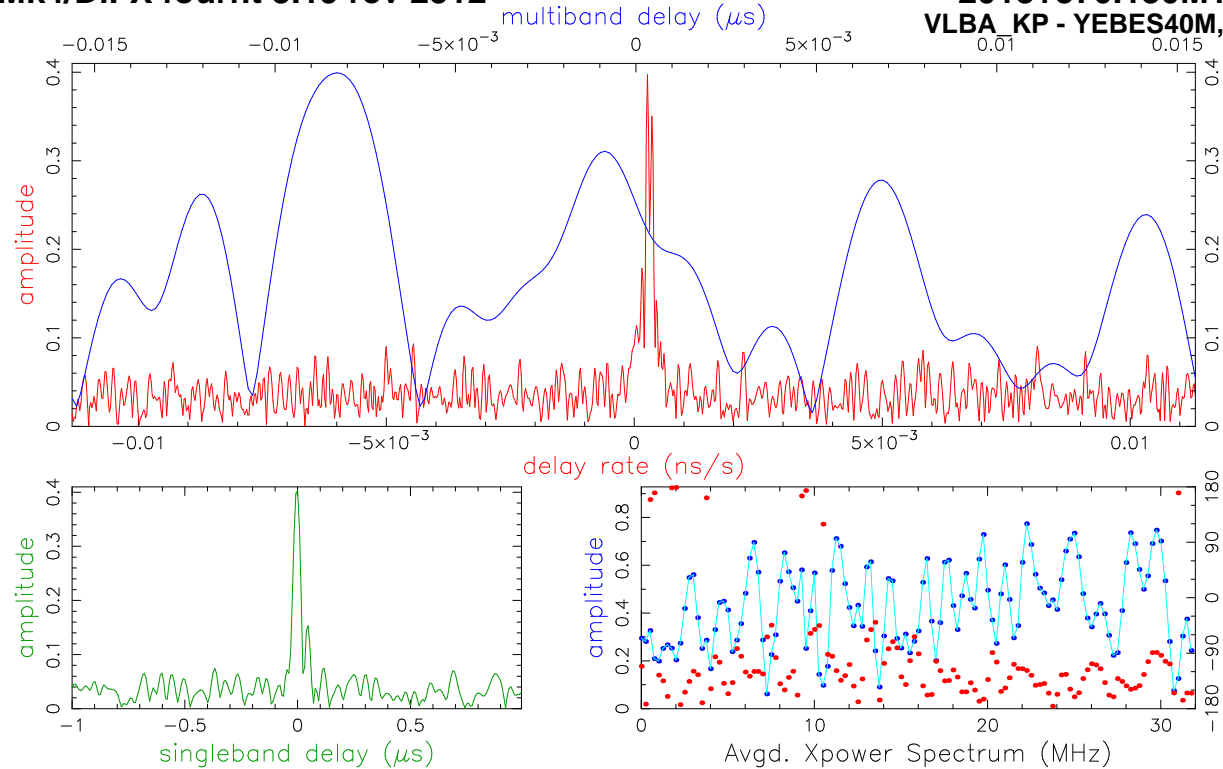


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	33.9	57.6	-38.9	25.4	38.2	84.4	-35.0	33.9	73.9	149.9	3.9	56.4	40.8	100.0	-69.9	-63.5		Phase 36.1
	0.6	0.9	0.8	1.0	0.7	0.8	0.7	0.7	0.9	0.9	0.8	0.4	0.4	0.7	0.7	0.4		Ampl. 0.7
	128.2	129.3	128.9	129.0	129.4	128.2	129.2	129.2	129.4	129.1	128.6	130.1	129.3	128.2	128.2	125.8		Sbd box 129.0
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0		APs used
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

Group delay (usec)(sbd) 4.40282843277E+03 Apriori delay (usec) 4.40283380563E+03 Resid mbdelay (usec) -5.37286E-03 +/- 7.3E-05
Sband delay (usec) 4.40283388513E+03 Apriori clock (usec) -1.0082699E+01 Resid sbdelay (usec) 7.95000E-05 +/- 1.2E-03
Phase delay (usec) 4.40283380680E+03 Apriori clockrate (us/s) -4.1457899E-07 Resid phdelay (usec) 1.16339E-06 +/- 2.5E-07
Delay rate (us/s) 1.55644180423E+00 Apriori rate (us/s) 1.55644152794E+00 Resid rate (us/s) 2.76289E-07 +/- 2.7E-09
Total phase (deg) 42.3 Apriori accel (us/s/s) -3.16865212267E-05 Resid phase (deg) 36.1 +/- 7.8

RMS Theor. Amplitude 0.424 +/- 0.029 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
ph/seg (deg) 40.0 13.5 Search (1024X64) 0.407 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
amp/seg (%) 32.2 23.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
ph/frq (deg) 62.5 15.5 Inc. seg. avg. 0.520 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
amp/frq (%) 80.9 27.1 Inc. frq. avg. 0.689 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kY..130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.224.130M17

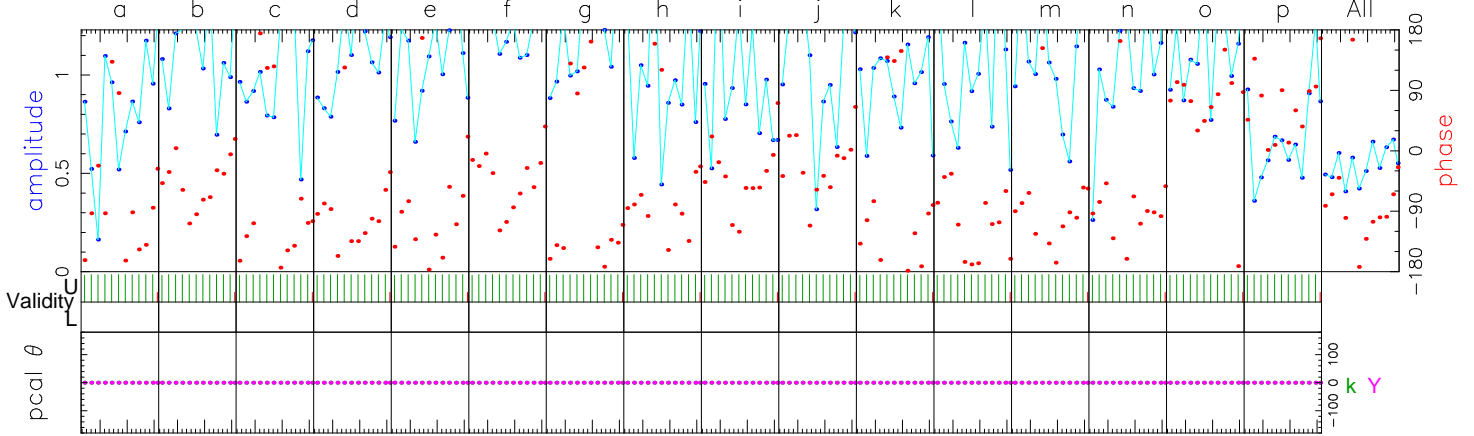


Fringe quality 9

SNR 14.3
Int time 161.653
Amp 0.410
Phase -97.0
PFD 1.3e-37
Delays (us)
SBD -0.003267
MBD -0.008477
Fringe rate (Hz) 0.023653
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Yr:day 2019:279
Start 000017.90
Stop 000300.71
FRT 000131.00
Corr/FF/build 2020:076:150631
2020:086:053337
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-127.3	-50.4	-151.1	-113.5	-113.5	-40.7	-168.4	-107.2	-47.6	-16.7	-153.4	-100.4	-102.8	-102.3	89.1	64.6	Phase	-97.0				
	0.5	0.9	0.8	0.8	0.8	1.0	0.9	0.6	0.7	0.8	0.6	0.8	0.8	0.8	0.8	0.5	Ampl.	0.7				
	128.7	128.9	128.8	128.5	129.1	128.7	128.5	129.2	128.4	127.7	129.3	128.3	128.4	128.2	128.4	126.7	Sbd box	128.6				
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			4.40282532830E+03														Apriori delay (usec)	4.40283380563E+03	Resid mbdelay (usec)	-8.47733E-03	+/-	7.6E-05
Sband delay (usec)			4.40283053913E+03														Apriori clock (usec)	-1.0082699E+01	Resid sbdelay (usec)	-3.26650E-03	+/-	1.2E-03
Phase delay (usec)			4.40283380251E+03														Apriori clockrate (us/s)	-4.1457899E-07	Resid phdelay (usec)	-3.12654E-06	+/-	2.8E-07
Delay rate (us/s)			1.55644180252E+00														Apriori rate (us/s)	1.55644152794E+00	Resid rate (us/s)	2.74583E-07	+/-	2.8E-09
Total phase (deg)																	Apriori accel (us/s/s)	-3.16865212267E-05	Resid phase (deg)	-97.0	+/-	8.0

ph/seg (deg) 46.0 13.9
amp/seg (%) 39.1 24.3
ph/frq (deg) 77.2 16.1
amp/frq (%) 91.2 28.1

RMS Theor. Amplitude 0.410 +/- 0.029
Search (1024X64) 0.389
Interp. 0.000
Inc. seg. avg. 0.530
Inc. frq. avg. 0.728

Group delay (usec)(sbd) 4.40282532830E+03
Sband delay (usec) 4.40283053913E+03
Phase delay (usec) 4.40283380251E+03
Delay rate (us/s) 1.55644180252E+00
Total phase (deg) -90.8

Apriori delay (usec) 4.40283380563E+03
Apriori clock (usec) -1.0082699E+01
Apriori clockrate (us/s) -4.1457899E-07
Apriori rate (us/s) 1.55644152794E+00
Apriori accel (us/s/s) -3.16865212267E-05

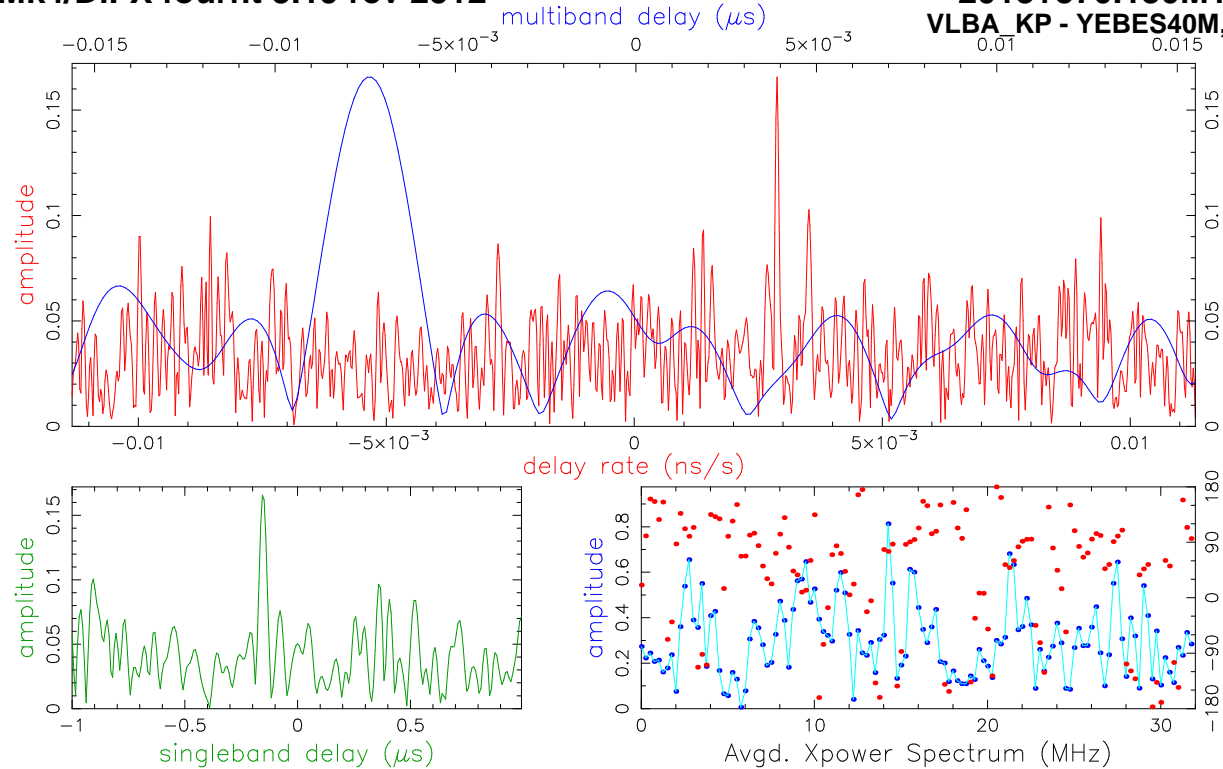
Resid mbdelay (usec) -8.47733E-03
Resid sbdelay (usec) -3.26650E-03
Resid phdelay (usec) -3.12654E-06
Resid rate (us/s) 2.74583E-07
Resid phase (deg) -97.0

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

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

k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kY..130M17 Output file: /Exps/c192c/v2/1234/No0065/kY.W.237.130M17

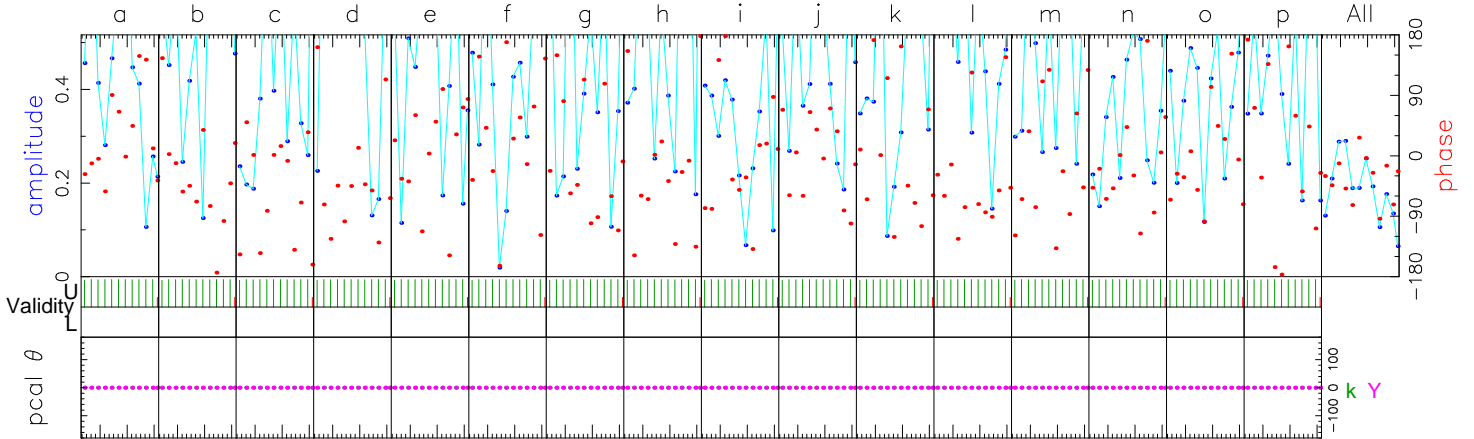


Fringe quality 0

SNR 5.8
Int time 161.653
Amp 0.172
Phase -31.0
PFD 5.1e-01
Delays (us)
SBD -0.153389
MBD -0.007345
Fringe rate (Hz) 0.247973
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000017.90
Stop 000300.71
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053339
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	131.0	Phase -31.0
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	131.0	Ampl. 0.2
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	131.0	Sbd box 109.4
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	131.0	APs used
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	131.0	PC freqs
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	131.0	PC phase
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	131.0	Mani PC
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	131.0	PC amp
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	131.0	Chan ids
																	131.0	Tracks
																	131.0	Tracks
Group delay (usec)(sbd)		4.40267021101E+03								4.40283380563E+03							-7.34462E-03	+/- 1.9E-04
Sband delay (usec)		4.40268041713E+03								-1.0082699E+01							-1.53389E-01	+/- 3.0E-03
Phase delay (usec)		4.40283380463E+03								-4.1457899E-07							-9.99235E-07	+/- 6.3E-07
Delay rate (us/s)		1.55644440666E+00								1.55644152794E+00							2.87872E-06	+/- 6.7E-09
Total phase (deg)					-24.8					-3.16865212267E-05							-31.0	+/- 19.7

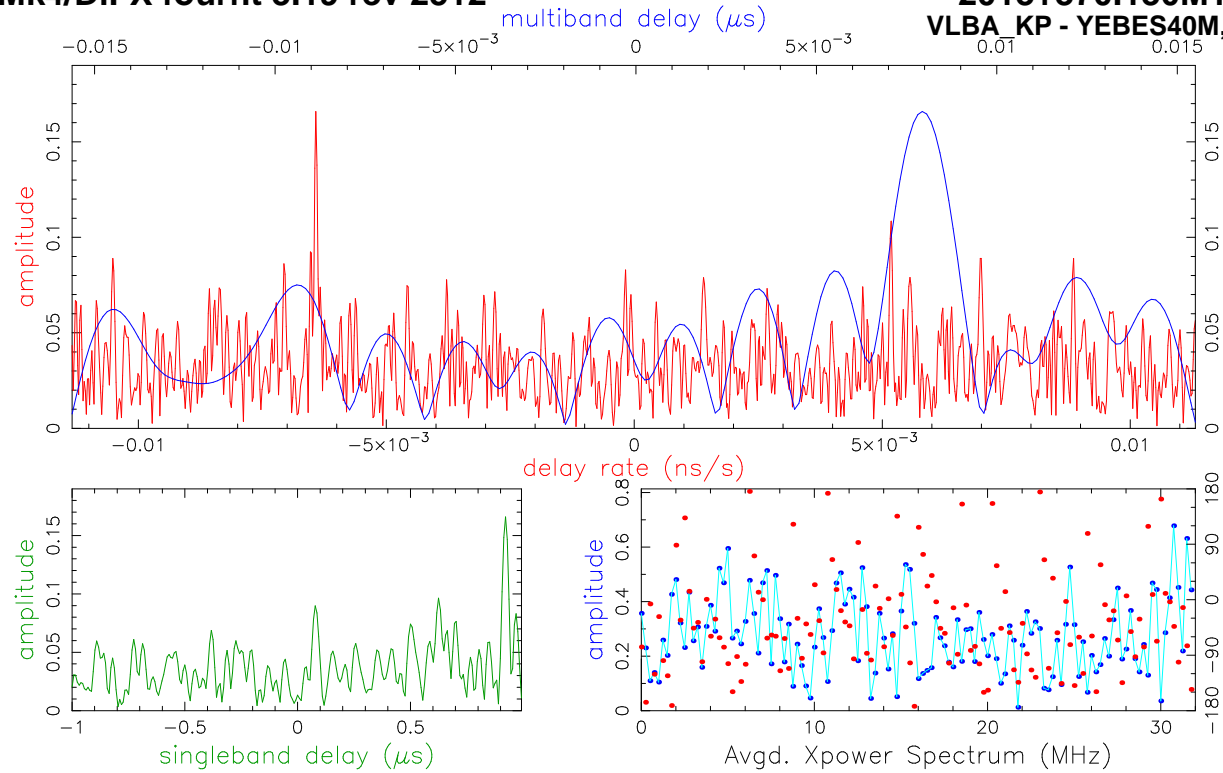
ph/seg (deg) 33.6 34.1
amp/seg (%) 39.7 59.4
ph/frq (deg) 54.1 39.3
amp/frq (%) 51.8 68.6

RMS Theor. Amplitude 0.172 +/- 0.030
Search (1024X64) 0.162
Interp. 0.000
Inc. seg. avg. 0.168
Inc. frq. avg. 0.173

PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

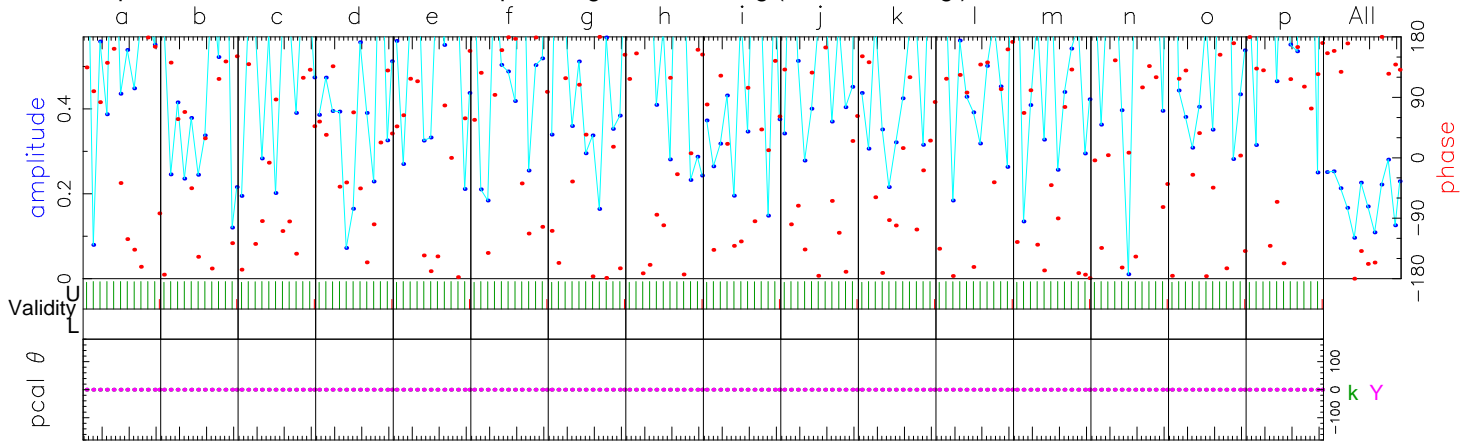
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 Y: az 289.5 el 38.9 pa 64.3 u,v (fr/asec) -11223.927 -2674.860 simultaneous interpolator

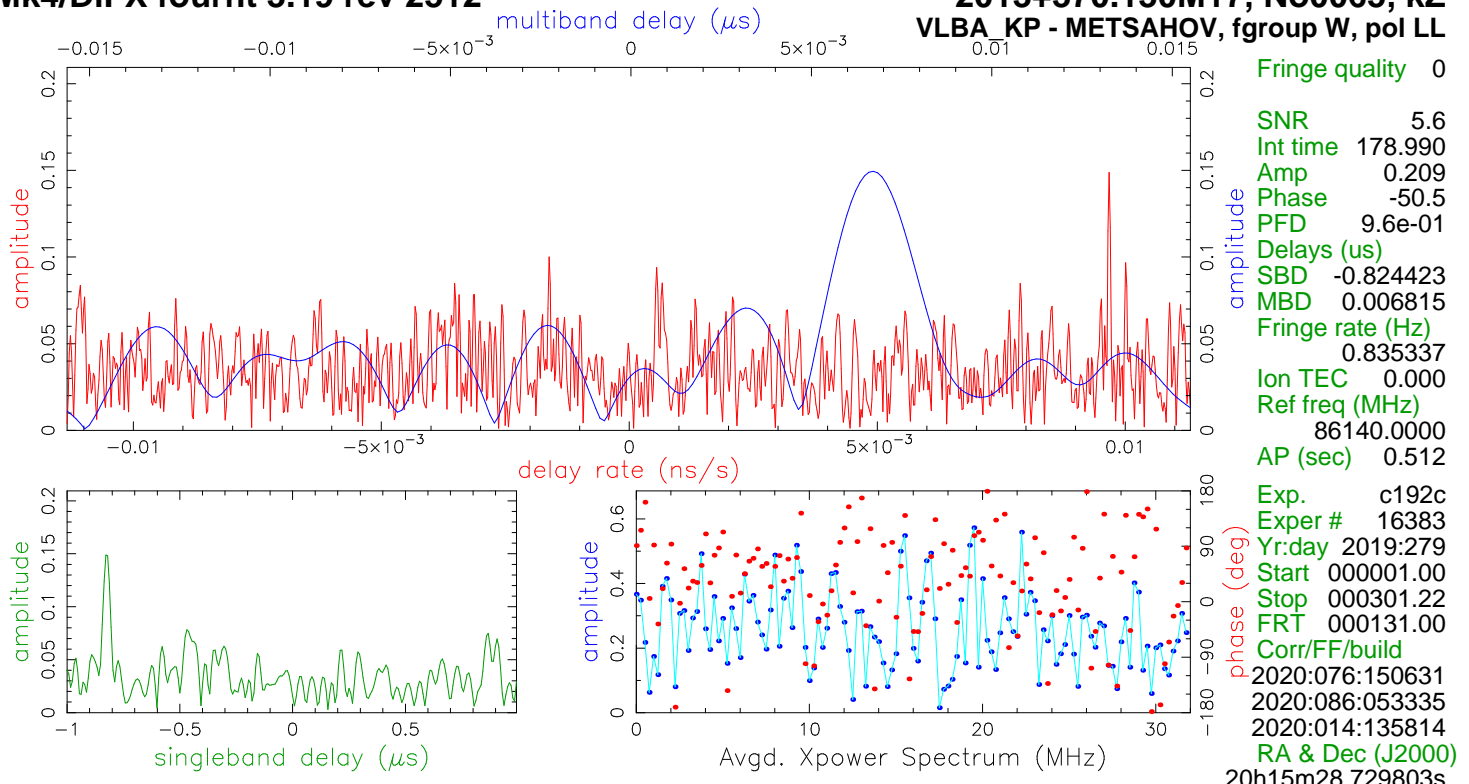


Fringe quality 0
SNR 5.8
Int time 161.653
Amp 0.190
Phase 164.4
PFD 6.3e-01
Delays (us)
SBD 0.921735
MBD 0.007941
Fringe rate (Hz)
-0.553169
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000017.90
Stop 000300.71
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053343
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

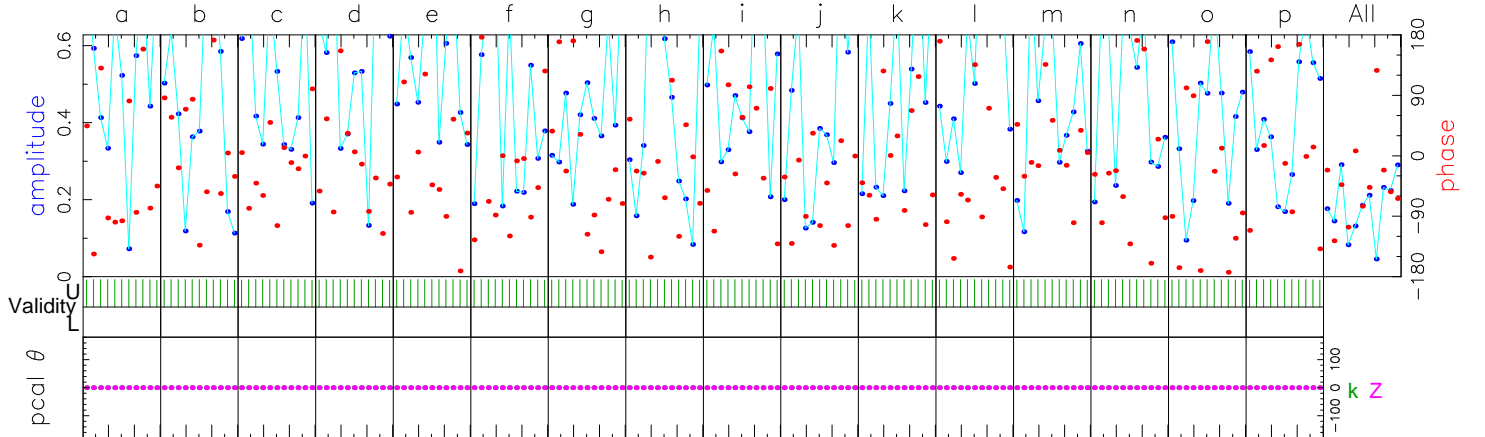
Amp. and Phase vs. time for each freq., 12 segs, 28 APs / seg (14.34 sec / seg.), time ticks 10 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	173.2	147.3	-164.9	21.6	117.6	156.1	172.7	-170.7	140.5	-143.3	-42.1	147.1	-158.8	144.6	173.7	148.2	164.4	Phase
k	0.4	0.2	0.2	0.2	0.2	0.1	0.2	0.3	0.1	0.2	0.0	0.3	0.2	0.2	0.3	0.5	0.2	Ampl.
Y	245.7	254.5	174.5	189.9	14.0	161.6	241.0	192.1	223.6	253.9	183.7	145.7	196.3	51.7	214.3	223.3	247.0	Sbd box
k	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
k:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
Y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Tracks
Group delay (usec)(sbd)	4.40374799676E+03			Apriori delay (usec)			4.40283380563E+03			Resid mbdelay (usec)			7.94113E-03			+/-	1.9E-04	
Sband delay (usec)	4.40375554013E+03			Apriori clock (usec)			-1.0082699E+01			Resid sbdelay (usec)			9.21735E-01			+/-	3.0E-03	
Phase delay (usec)	4.40283381094E+03			Apriori clockrate (us/s)			-4.1457899E-07			Resid phdelay (usec)			5.30298E-06			+/-	6.4E-07	
Delay rate (us/s)	1.55643510620E+00			Apriori rate (us/s)			1.55644152794E+00			Resid rate (us/s)			-6.42174E-06			+/-	6.8E-09	
Total phase (deg)	170.6			Apriori accel (us/s/s)			-3.16865212267E-05			Resid phase (deg)			164.4			+/-	19.9	
ph/seg (deg)	RMS	Theor.	Amplitude	0.190 +/- 0.033			Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5			sb window (us)			-1.000	1.000	
amp/seg (%)	30.9	34.4	Search (1024X64)	0.164			Pcal rate: 0.000E+00, 0.000E+00 (us/s)			SampCntNorm: enabled			mb window (us)			-0.016	0.016	
ph/frq (deg)	39.2	60.1	Interp.	0.000			Sample rate(MISamp/s): 64			Data rate(Mb/s): 2048			dr window (ns/s)			-0.011	0.011	
amp/frq (%)	62.1	39.7	Inc. seg. avg.	0.188			nlags: 128 t_cohere infinite			ion window (TEC)			0.00			0.00		
	66.4	69.3	Inc. frq. avg.	0.188			simultaneous interpolator											
k: az 69.4 el 55.9 pa -86.3	Y: az 289.5 el 38.9 pa 64.3			u,v (fr/asec) -11223.927 -2674.860														
Control file: cf_1234_gmva	Input file: /Exps/c192c/v2/1234/No0065/kY...130M17			Output file: /Exps/c192c/v2/1234/No0065/kY.W.281.130M17														



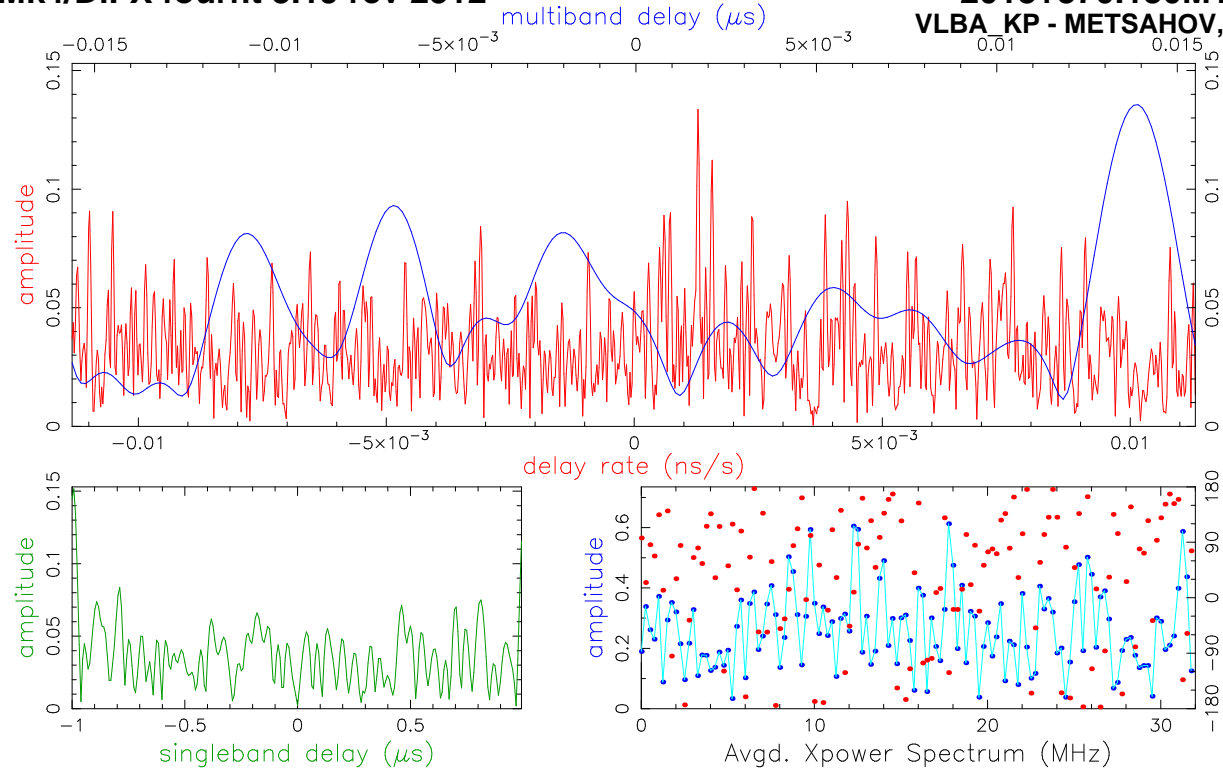
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
-99.8	1.0	-19.4	-45.1	-12.3	-92.8	-66.8	-55.8	15.6	-37.6	-15.2	-84.1	15.2	-102.0	-110.9	-81.8	Phase	-50.5	
0.3	0.1	0.5	0.5	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.3	0.4	0.3	0.2	0.0	Ampl.	0.2	
52.6	56.1	22.1	22.5	233.4	44.5	1.4	102.8	167.2	122.7	60.4	132.3	118.1	116.0	18.5	131.6	Sbd box	23.5	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase		
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC		
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	7.26564092157E+03			Apriori delay (usec)			7.26647785629E+03			Resid mbdelay (usec)			6.81528E-03			+/-	1.9E-04	
Sband delay (usec)	7.26565343279E+03			Apriori clock (usec)			-5.8371955E-01			Resid sbdelay (usec)			-8.24423E-01			+/-	3.1E-03	
Phase delay (usec)	7.26647785467E+03			Apriori clockrate (us/s)			-2.1087179E-07			Resid phdelay (usec)			-1.62882E-06			+/-	6.7E-07	
Delay rate (us/s)	1.29970675094E+00			Apriori rate (us/s)			1.29969705350E+00			Resid rate (us/s)			9.69744E-06			+/-	6.4E-09	
Total phase (deg)	144.3			Apriori accel (us/s/s)			-6.17816101600E-05			Resid phase (deg)			-50.5			+/-	20.6	

ph/seg (deg) 64.8 34.2 Search (1024X64) 0.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 53.2 59.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 44.8 41.3 Inc. seg. avg. 0.215 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 61.8 72.0 Inc. frq. avg. 0.210 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 69.4 el 55.9 pa -86.3 Z: az 294.2 el 29.5 pa 34.7 u,v (fr/asec) -9402.714 -6024.024 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kZ..130M17 Output file: /Exps/c192c/v2/1234/No0065/kZ.W.222.130M17

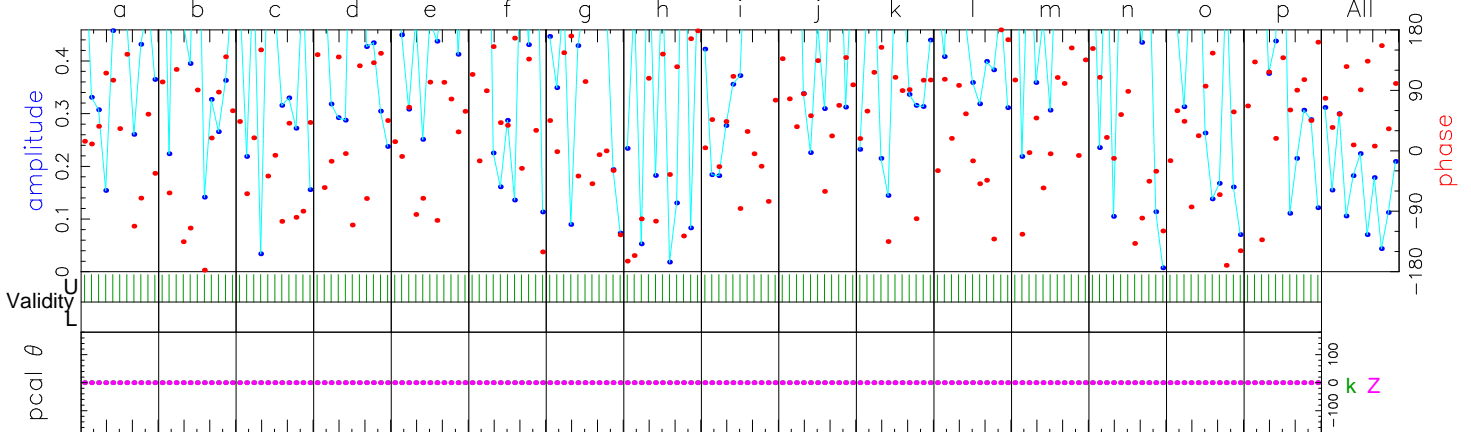


Fringe quality 0

SNR 5.6
Int time 178.990
Amp 0.153
Phase 64.7
PFD 9.5e-01
Delays (us)
SBD -0.993814
MBD 0.013677
Fringe rate (Hz) 0.110524
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053337
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec

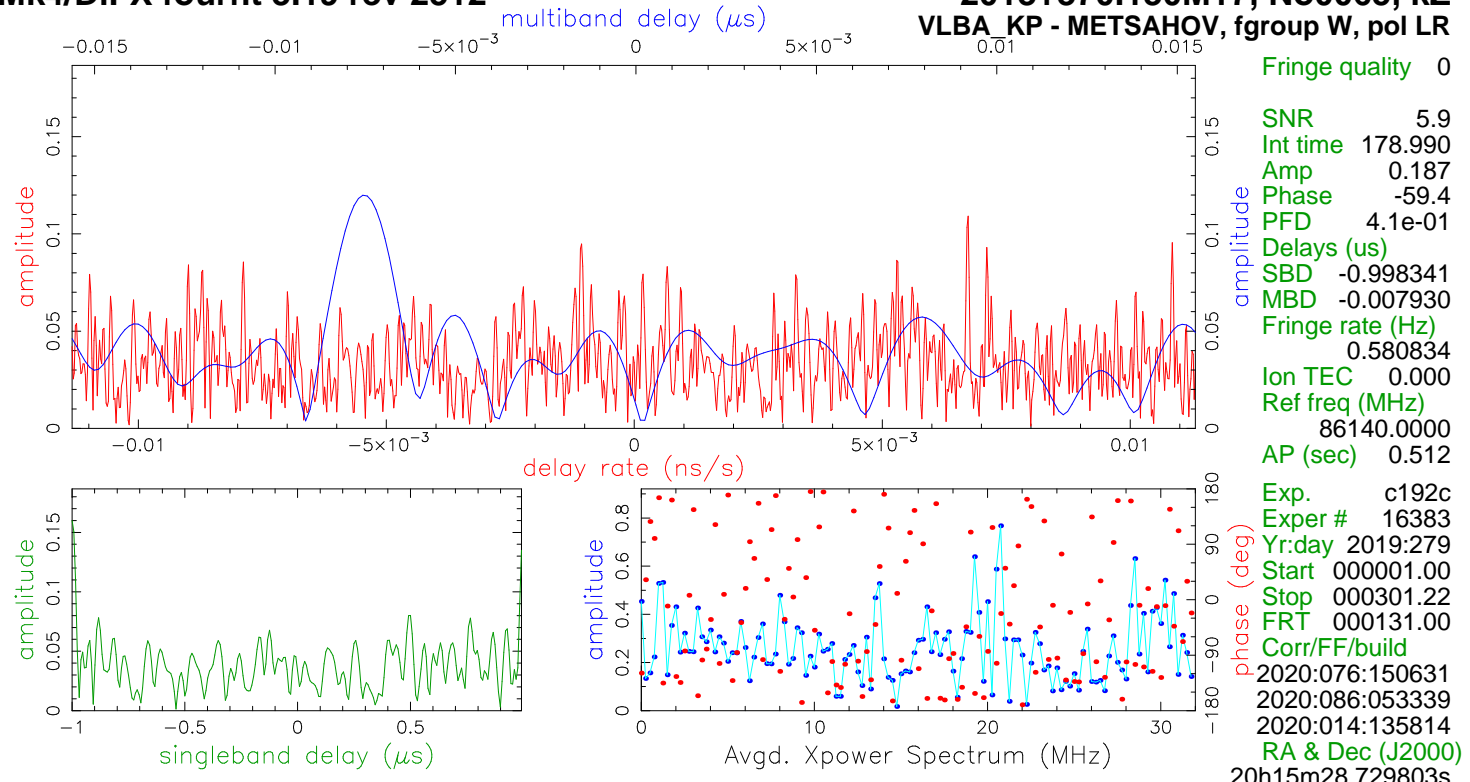


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
	33.1	108.6	-21.1	158.5	43.0	60.9	6.1	-178.1	9.1	77.5	100.5	20.8	76.2	40.0	19.1	113.7		Phase	64.7
	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.2	0.2	0.4	0.3	0.1	0.2	0.1	0.1	0.2		Ampl.	0.2
	142.2	169.5	37.7	231.9	145.1	25.3	108.2	28.5	30.9	2.4	39.8	88.8	83.0	15.4	190.0	151.0		Sbd box	1.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids	
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	

Group delay (usec)(sbd) 7.26549153352E+03 Apriori delay (usec) 7.26647785629E+03 Resid mbdelay (usec) 1.36772E-02 +/- 1.9E-04
 Sband delay (usec) 7.26548404279E+03 Apriori clock (usec) -5.8371955E-01 Resid sbdelay (usec) -9.93814E-01 +/- 3.1E-03
 Phase delay (usec) 7.26647785838E+03 Apriori clockrate (us/s) -2.1087179E-07 Resid phdelay (usec) 2.08541E-06 +/- 6.6E-07
 Delay rate (us/s) 1.29969833658E+00 Apriori rate (us/s) 1.29969705350E+00 Resid rate (us/s) 1.28307E-06 +/- 6.4E-09
 Total phase (deg) 259.5 Apriori accel (us/s/s) -6.17816101600E-05 Resid phase (deg) 64.7 +/- 20.6

RMS Theor. Amplitude 0.153 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 50.0 34.1 Search (1024X64) 0.151 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 55.8 59.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 58.8 41.2 Inc. seg. avg. 0.147 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 63.6 71.8 Inc. frq. avg. 0.167 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 Z: az 294.2 el 29.5 pa 34.7 u,v (fr/asec) -9402.714 -6024.024 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kZ..130M17 Output file: /Exps/c192c/v2/1234/No0065/kZ.W.236.130M17



Fringe quality 0

SNR 5.9

Int time 178.990

Amp 0.187

Phase -59.4

PFD 4.1e-01

Delays (us)

SBD -0.998341

MBD -0.007930

Fringe rate (Hz)

0.580834

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 000001.00

Stop 000301.22

FRT 000131.00

Corr/FF/build

2020:076:150631

2020:086:053339

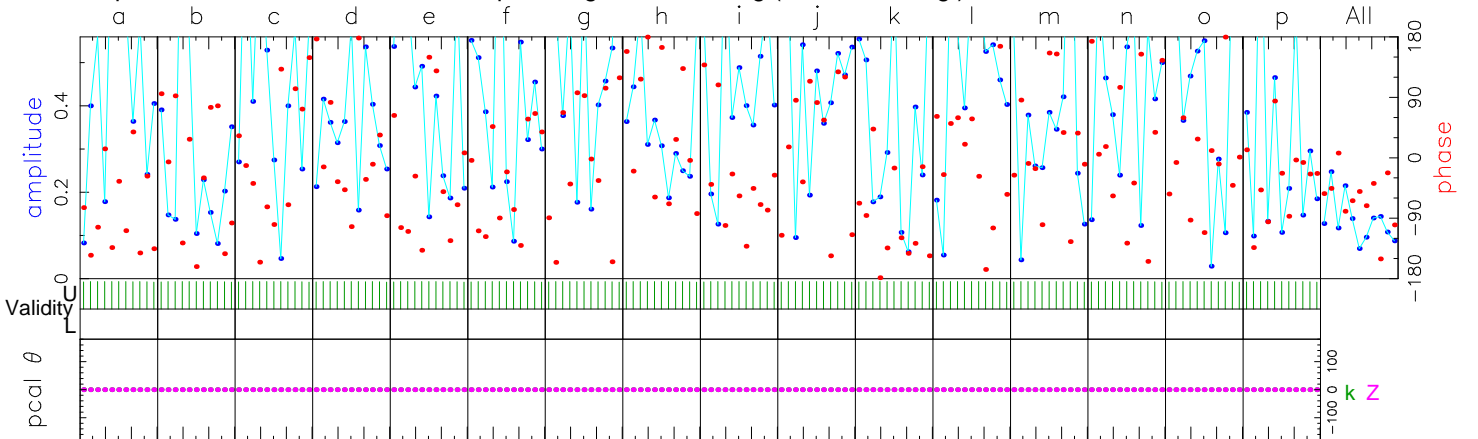
2020:014:135814

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
	-102.9	-97.7	-60.8	-36.6	-92.3	-60.9	139.1	-141.0	-74.6	145.4	-91.0	28.6	-60.6	-29.4	-20.6	-20.6		Phase	-59.4				
	0.3	0.0	0.1	0.2	0.2	0.2	0.1	0.0	0.3	0.0	0.2	0.2	0.1	0.1	0.4	0.3		Ampl.	0.1				
	1.5	67.0	29.6	1.4	183.3	226.9	153.4	212.9	190.9	129.0	67.0	244.2	49.7	100.6	216.8	59.8		Sbd box	1.2				
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		APs used					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Chan ids					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids					
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			7.26546992634E+03															Apriori delay (usec)	7.26647785629E+03	Resid mbdelay (usec)	-7.92995E-03	+/-	1.8E-04
Sband delay (usec)			7.26547951529E+03															Apriori clock (usec)	-5.8371955E-01	Resid sbdelay (usec)	-9.98341E-01	+/-	2.9E-03
Phase delay (usec)			7.26647785438E+03															Apriori clockrate (us/s)	-2.1087179E-07	Resid phdelay (usec)	-1.91391E-06	+/-	6.3E-07
Delay rate (us/s)			1.29970379641E+00															Apriori rate (us/s)	1.29969705350E+00	Resid rate (us/s)	6.74291E-06	+/-	6.0E-09
Total phase (deg)				135.5														Apriori accel (us/s/s)	-6.17816101600E-05	Resid phase (deg)	-59.4	+/-	19.5

ph/seg (deg) RMS Theor. Amplitude 0.187 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 39.4 32.3 Search (1024X64) 0.151 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

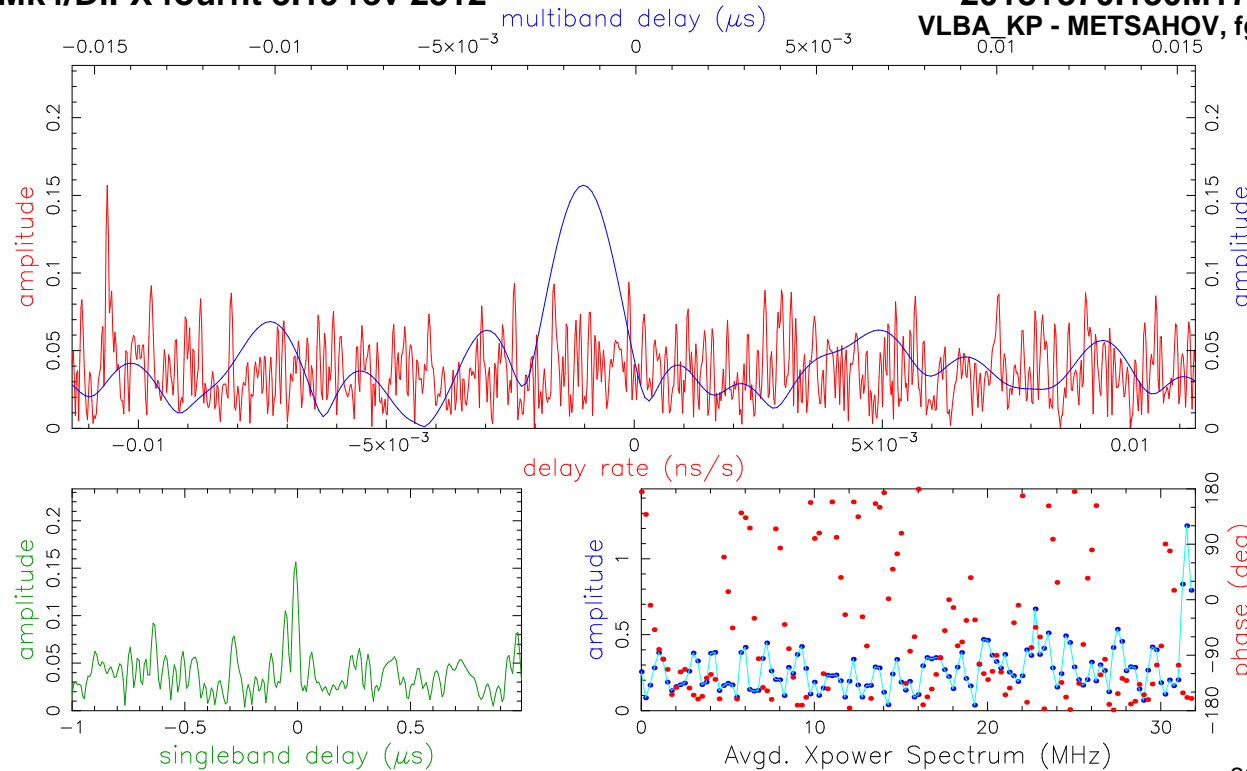
ph/frq (deg) 35.1 56.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 72.8 39.0 Inc. seg. avg. 0.136 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

amp/frq (%) 60.6 68.1 Inc. frq. avg. 0.138 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

k: az 69.4 el 55.9 pa -86.3 Z: az 294.2 el 29.5 pa 34.7 u,v (fr/asec) -9402.714 -6024.024 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kZ..130M17 Output file: /Exps/c192c/v2/1234/No0065/kZ.W.254.130M17

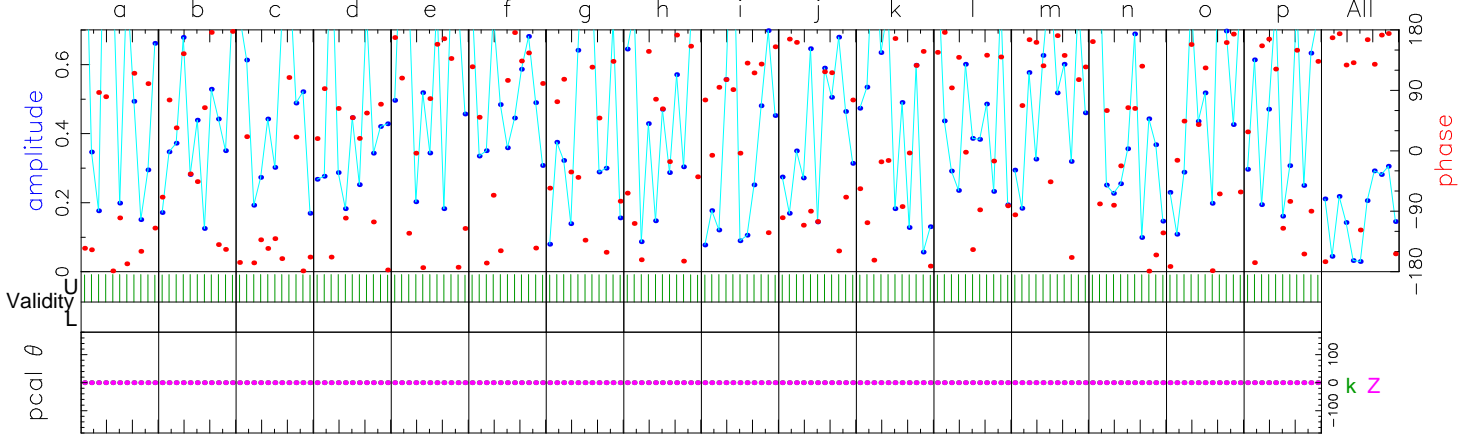


Fringe quality 0

SNR 5.8
Int time 178.990
Amp 0.234
Phase 167.5
PFD 6.3e-01
Delays (us)
SBD -0.009661
MBD -0.001466
Fringe rate (Hz)
-0.917134
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 000001.00
Stop 000301.22
FRT 000131.00
Corr/FF/build
2020:076:150631
2020:086:053342
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	174.3	179.7
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	179.2	91.0
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	91.0	165.0
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.6	0.4
k:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.2	0.1
k	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.4	0.2
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	0.2	0.3
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	157.8	155.3
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	-131.1	118.9

Group delay (usec)(sbd)	7.26647638991E+03	Apriori delay (usec)	7.26647785629E+03	Resid mbdelay (usec)	-1.46638E-03	+/-	1.9E-04
Sband delay (usec)	7.26646819579E+03	Apriori clock (usec)	-5.8371955E-01	Resid sbdelay (usec)	-9.66050E-03	+/-	3.0E-03
Phase delay (usec)	7.26647786170E+03	Apriori clockrate (us/s)	-2.1087179E-07	Resid phdelay (usec)	5.40168E-06	+/-	6.4E-07
Delay rate (us/s)	1.29968640649E+00	Apriori rate (us/s)	1.29969705350E+00	Resid rate (us/s)	-1.06470E-05	+/-	6.2E-09
Total phase (deg)	2.3	Apriori accel (us/s/s)	-6.17816101600E-05	Resid phase (deg)	167.5	+/-	19.9

ph/seg (deg)	33.6	Theor.	32.9	Amplitude	0.234 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	63.3	Search (1024X64)	0.155	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	42.7	Inc. seg. avg.	0.221	Inc. frq. avg.	0.220	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
amp/frq (%)	57.4	Inc. frq. avg.	0.220			Sample rate (MSamp/s):	64	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

k: az 69.4 el 55.9 pa -86.3 Z: az 294.2 el 29.5 pa 34.7 u,v (fr/asec) -9402.714 -6024.024 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0065/kZ..130M17 Output file: /Exps/c192c/v2/1234/No0065/kZ.W.273.130M17