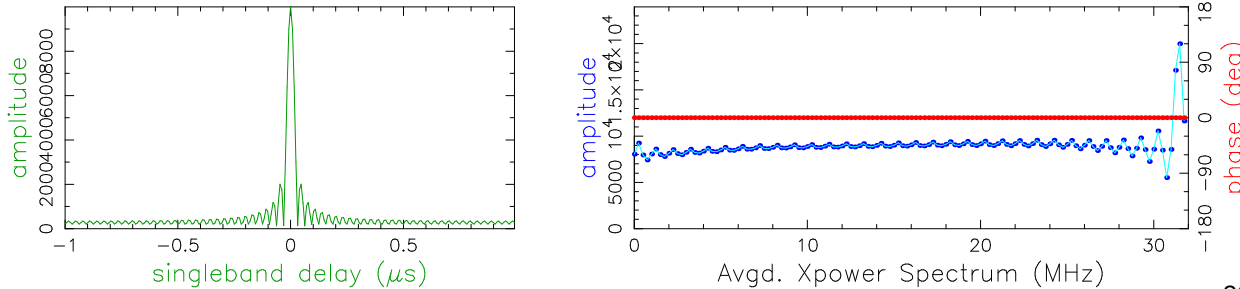
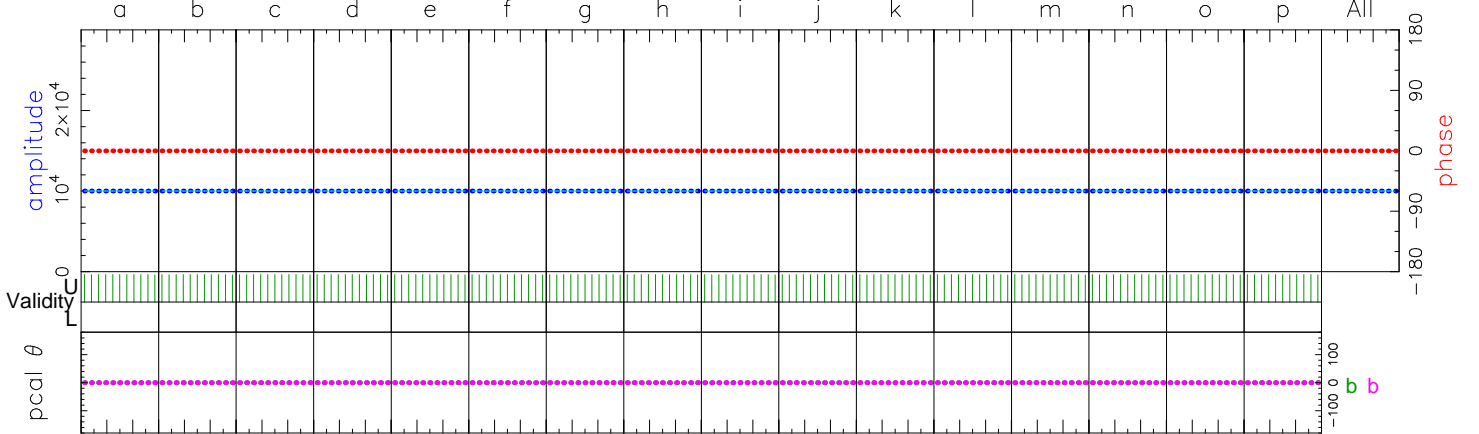


Fringe quality 9
SNR 366573.2
Int time 179.691
Amp 9999.998
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050203
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

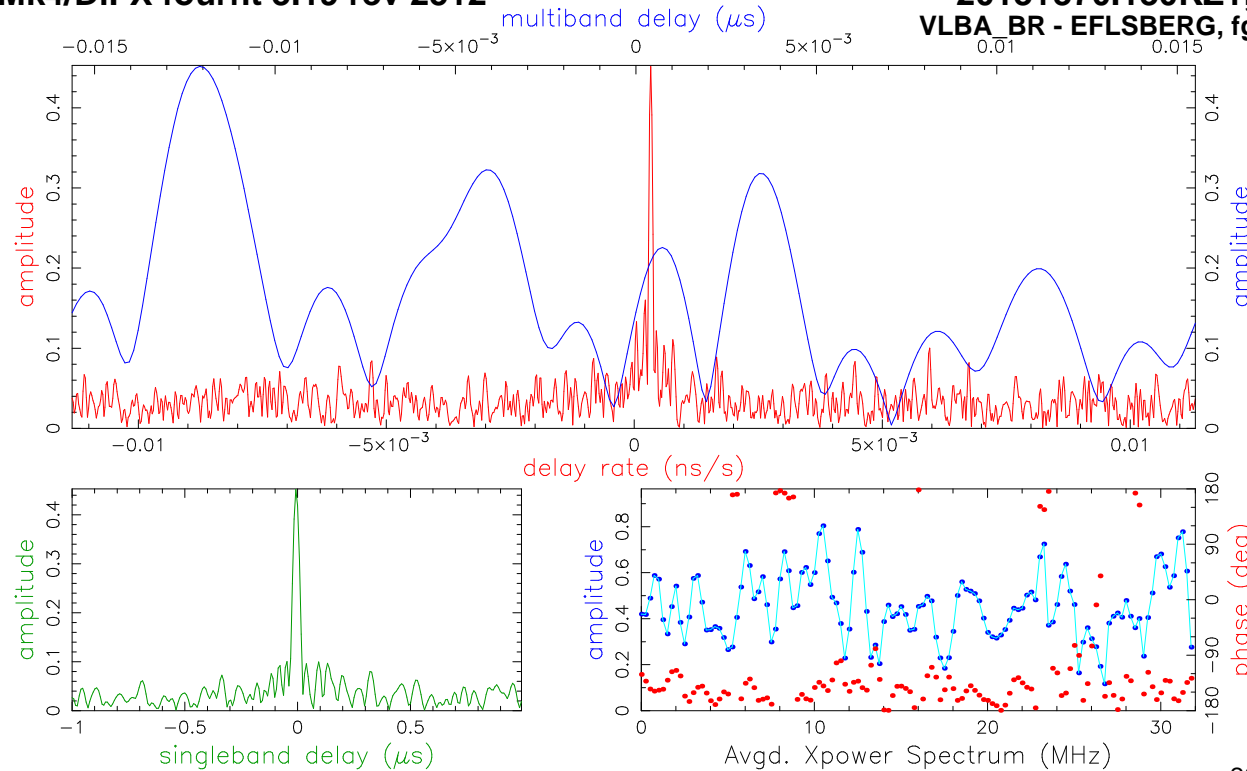


Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



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
-0.0	0.0	0.0	0.0	-0.0	-0.0	-0.0	0.0	0.0	-0.0	0.0	0.0	-0.0	0.0	-0.0	0.0	Phase	0.0
10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L 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	
b 1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:b 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b:b 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
b 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 W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
b W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
Group delay (usec)(sbd)	0.0000000000E+00		Apriori delay (usec)		0.0000000000E+00		Resid mbdelay (usec)		0.000000E+00		+/- 2.9E-09						
Sband delay (usec)	0.0000000000E+00		Apriori clock (usec)		0.000000E+00		Resid sbdelay (usec)		0.000000E+00		+/- 4.7E-08						
Phase delay (usec)	1.03901018782E-19		Apriori clockrate (us/s)		0.000000E+00		Resid phdelay (usec)		1.03901E-19		+/- 1.0E-11						
Delay rate (us/s)	0.0000000000E+00		Apriori rate (us/s)		0.0000000000E+00		Resid rate (us/s)		0.000000E+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 Theor. Amplitude 9999.998 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (1024X64) 9999.998 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(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 b: az 57.4 el 21.3 pa -45.0 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/No0044/bb..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bb.W.13.130KZ1 simultaneous interpolator

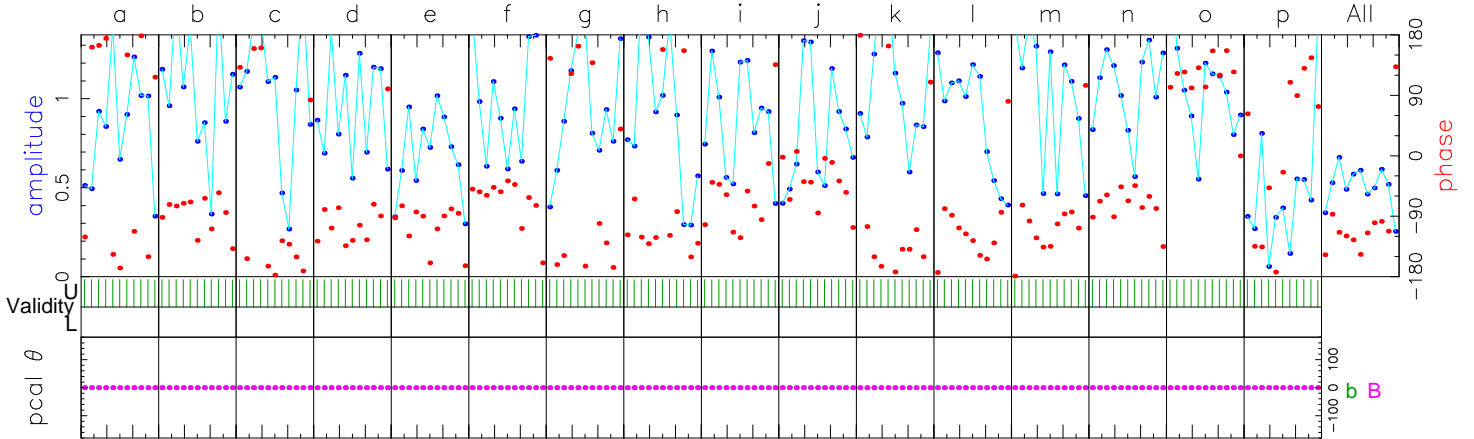


Fringe quality 8

SNR 16.6
Int time 179.483
Amp 0.453
Phase -118.1
PFD 0.0e+00
Delays (us)
SBD -0.006638
MBD -0.012058
Fringe rate (Hz) 0.028041
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050203
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

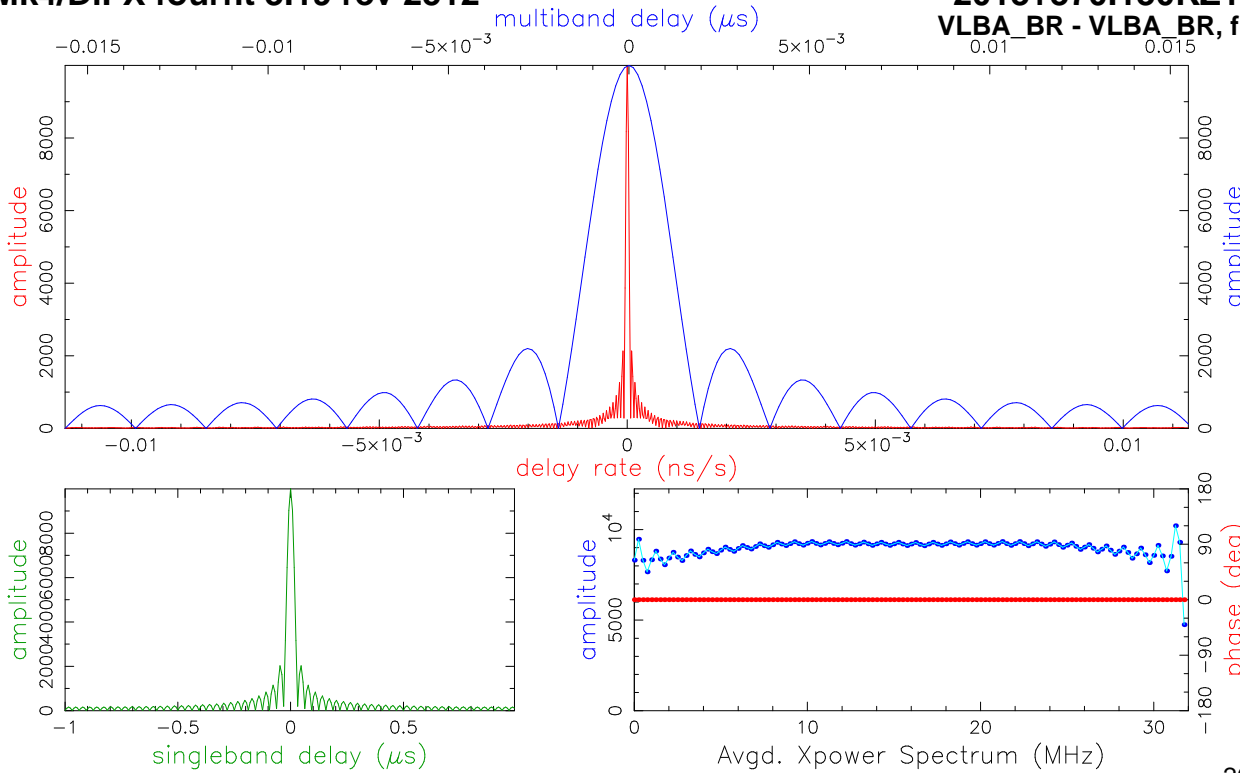


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-167.1	-81.7	177.5	-104.8	-101.5	-67.6	176.9	-124.4	-69.8	-38.0	-164.9	-123.7	-113.3	-74.9	117.8	114.0	Phase	-118.1				
	0.7	1.0	0.9	0.8	0.6	0.9	0.6	0.7	0.7	0.7	0.9	0.7	0.8	1.0	0.9	0.2	Ampl.	0.7				
	128.2	128.6	128.0	128.1	128.3	128.1	128.6	128.5	127.9	127.8	128.0	128.3	127.9	127.9	127.9	126.0	Sbd box	128.2				
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
b	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Group delay (usec)(sbd)			-1.17406036745E+04														Apriori delay (usec)	-1.17405916165E+04	Resid mbdelay (usec)	-1.20581E-02	+/-	6.5E-05
Sband delay (usec)			-1.17405982540E+04														Apriori clock (usec)	-1.7421412E+01	Resid sbdelay (usec)	-6.63750E-03	+/-	1.0E-03
Phase delay (usec)			-1.17405916203E+04														Apriori clockrate (us/s)	-4.2395080E-08	Resid phdelay (usec)	-3.80762E-06	+/-	2.2E-07
Delay rate (us/s)			1.17782459750E+00														Apriori rate (us/s)	1.17782427198E+00	Resid rate (us/s)	3.25527E-07	+/-	2.1E-09
Total phase (deg)																	Apriori accel (us/s/s)	6.04735831471E-05	Resid phase (deg)	-118.1	+/-	6.9

ph/seg (deg) RMS Theor. Amplitude 0.453 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 37.2 11.5 Search (1024X64) 0.442 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.2 20.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 65.3 13.8 Inc. seg. avg. 0.497 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 75.7 24.1 Inc. frq. avg. 0.722 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 B: az 245.8 el 66.6 pa 46.5 u,v (fr/asec) -8428.633 3469.155 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bB..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bB.W.17.130KZ1

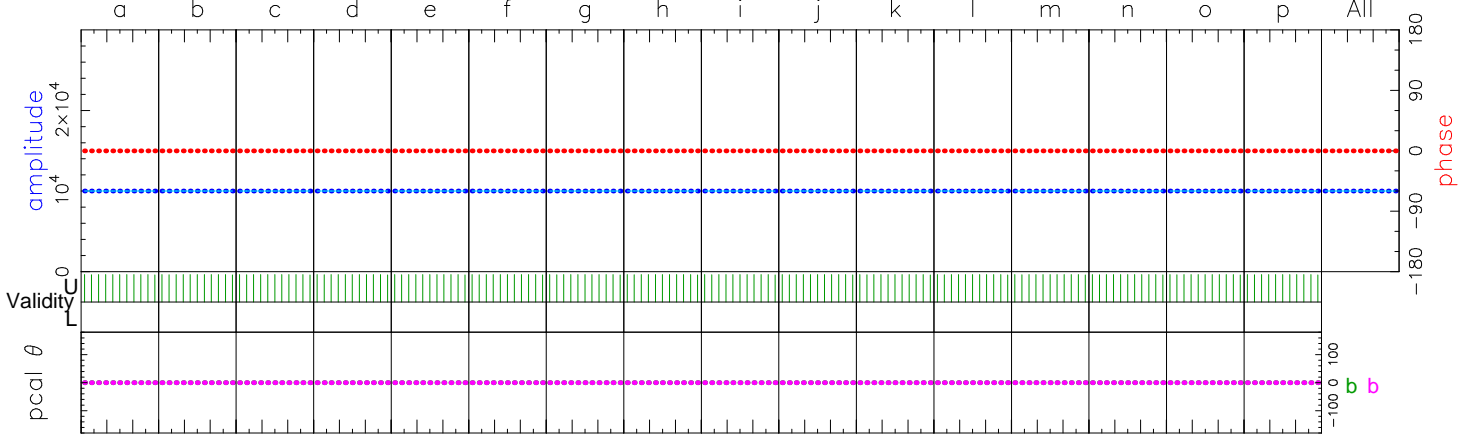


Fringe quality 9

SNR 366573.3
Int time 179.691
Amp 9999.999
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
Yr:day 16383
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050201
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

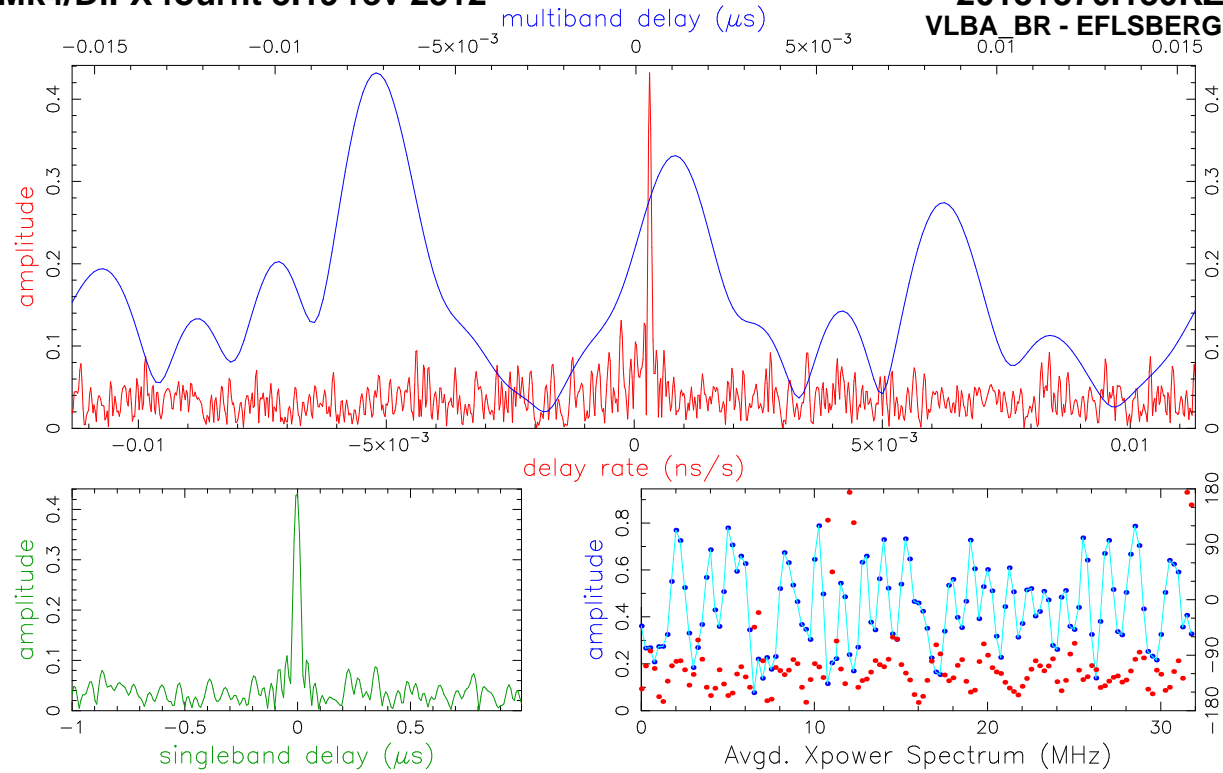


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	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		
b	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) -7.19663758685E-20 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -7.19664E-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 9999.999 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (1024X64) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.999 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 b: az 57.4 el 21.3 pa -45.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bb..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bb.W.2.130KZ1

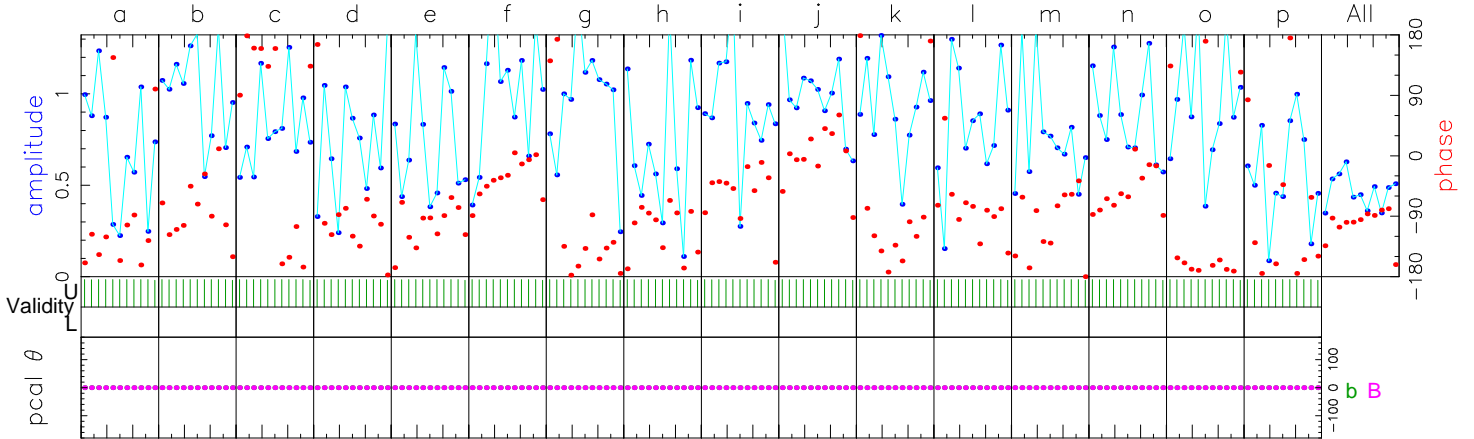


Fringe quality 9

SNR 16.2
Int time 179.483
Amp 0.441
Phase -101.1
PFD 0.0e+00
Delays (us)
SBD -0.003506
MBD -0.007214
Fringe rate (Hz) 0.026969
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050201
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
	-142.9	-80.0	174.2	-114.8	-105.5	-29.1	-149.4	-102.1	-47.3	3.3	-132.6	-87.5	-93.5	-52.7	-174.3	-164.9	Phase	-101.1
	0.5	0.8	0.6	0.6	0.6	0.9	0.8	0.6	0.8	0.8	0.8	0.7	0.6	0.8	0.9	0.4	Ampl.	0.7
	128.1	128.2	128.3	129.0	129.5	128.9	128.7	128.0	128.1	127.9	128.1	129.0	128.3	128.7	128.2	128.8	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	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

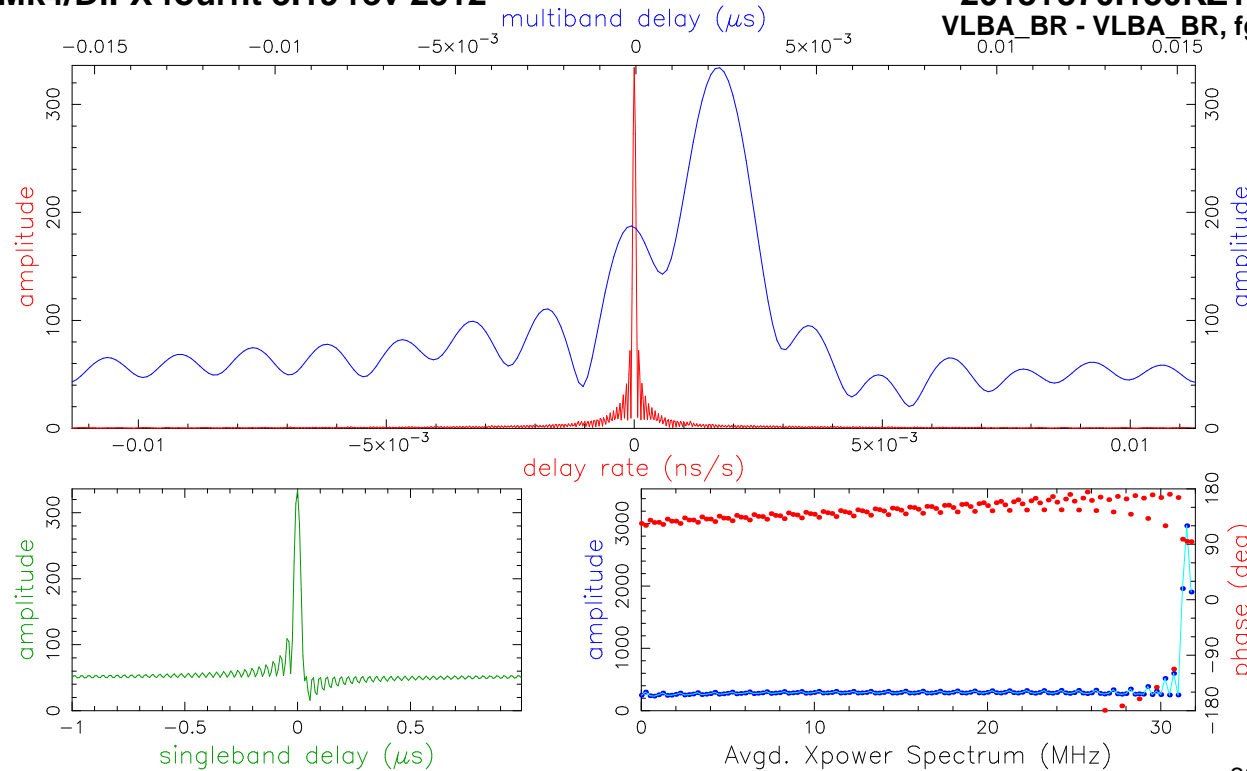
Group delay (usec)(sbd) -1.17405988300E+04 Apriori delay (usec) -1.17405916165E+04 Resid mbdelay (usec) -7.21355E-03 +/- 6.7E-05
 Sband delay (usec) -1.17405951225E+04 Apriori clock (usec) -1.7421412E+01 Resid sbdelay (usec) -3.50600E-03 +/- 1.1E-03
 Phase delay (usec) -1.17405916197E+04 Apriori clockrate (us/s) -4.2395080E-08 Resid phdelay (usec) -3.26175E-06 +/- 2.3E-07
 Delay rate (us/s) 1.17782458506E+00 Apriori rate (us/s) 1.17782427198E+00 Resid rate (us/s) 3.13086E-07 +/- 2.2E-09
 Total phase (deg) -44.1 Apriori accel (us/s/s) 6.04735831471E-05 Resid phase (deg) -101.1 +/- 7.1

RMS Theor. Amplitude 0.441 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 23.6 11.8 Search (1024X64) 0.427 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 20.7 20.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 56.0 14.2 Inc. seg. avg. 0.459 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 65.8 24.8 Inc. frq. avg. 0.676 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 B: az 245.8 el 66.6 pa 46.5 u,v (fr/asec) -8428.633 3469.155 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bB..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bB.W.3.130KZ1

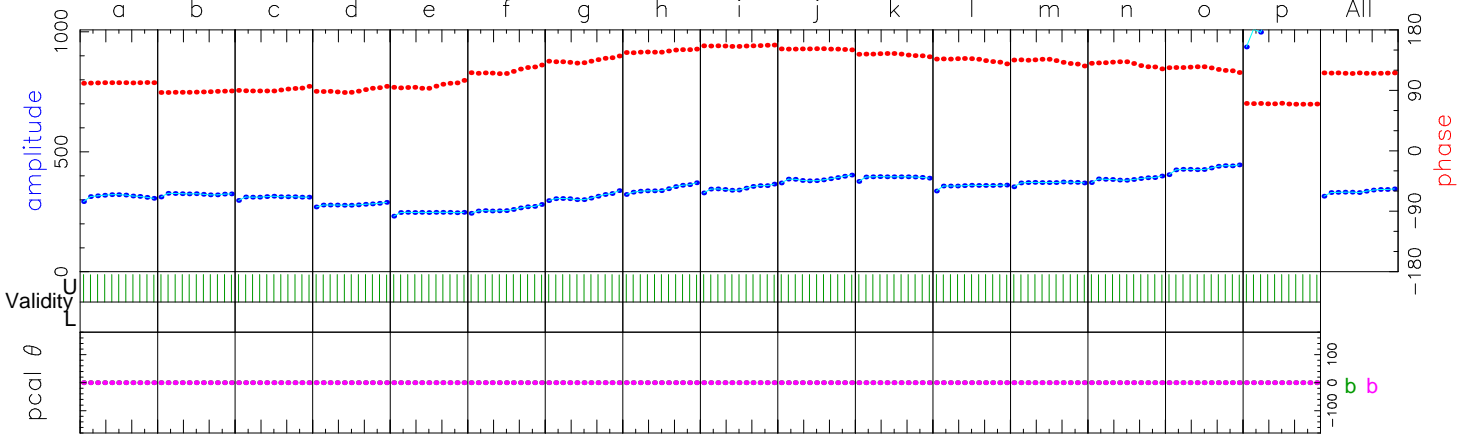
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bb
VLBA_BR - VLBA_BR, fgroup W, pol LR



Fringe quality 5
 SNR 12322.9
 Int time 179.691
 Amp 336.164
 Phase 115.5
 PFD 0.0e+00
 Delays (us)
 SBD -0.001764
 MBD 0.002286
 Fringe rate (Hz)
 -0.000002
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:278
 Start 204000.00
 Stop 204300.23
 FRT 204130.00
 Corr/FF/build
 2020:076:083738
 2020:086:050206
 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

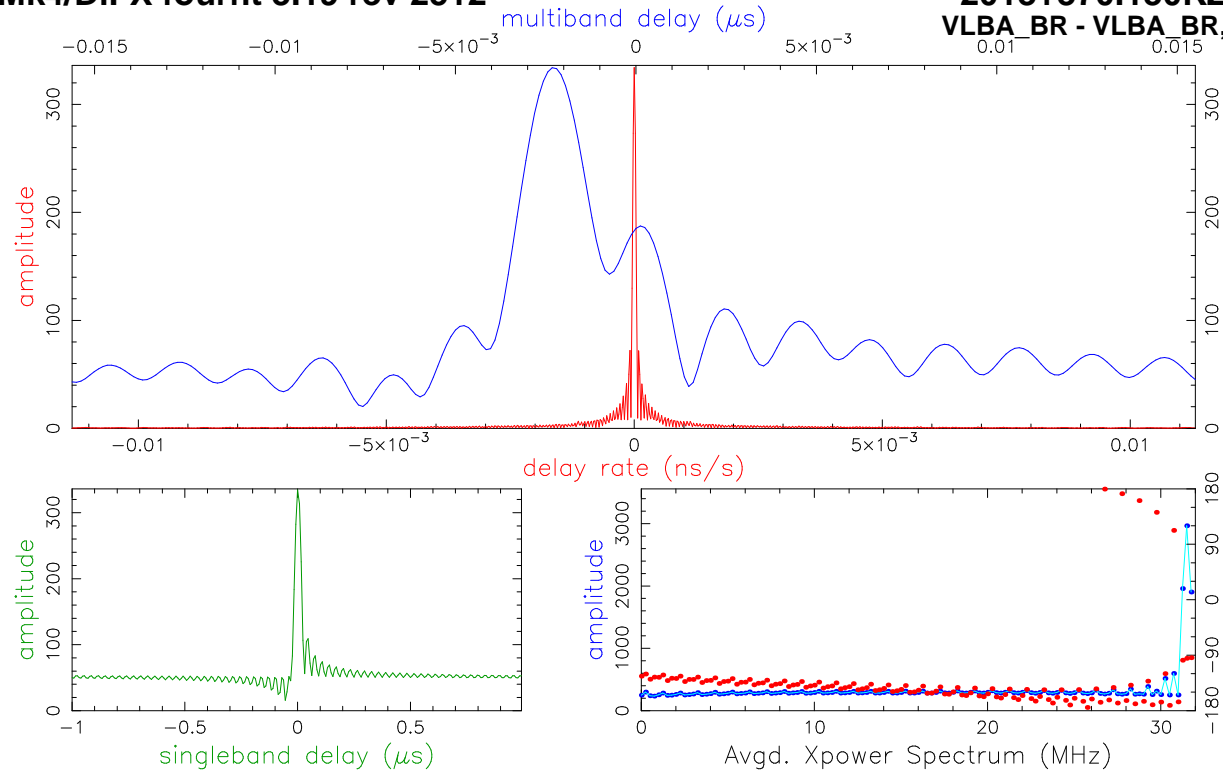


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	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		Chan ids
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)	2.28612500000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			2.28612E-03			+/- 8.8E-08		
Sband delay (usec)	-1.76350000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			-1.76350E-03			+/- 1.4E-06		
Phase delay (usec)	3.72506672410E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			3.72507E-06			+/- 3.0E-10		
Delay rate (us/s)	-2.83423047834E-11			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			-2.83423E-11			+/- 2.9E-12		
Total phase (deg)	115.5			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			115.5			+/- 0.0		

ph/seg (deg) RMS Theor. Amplitude 336.164 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.3 0.0 Search (1024X64) 330.064 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 2.5 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 27.7 0.0 Inc. seg. avg. 334.236 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 54.9 0.0 Inc. frq. avg. 381.502 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 b: az 57.4 el 21.3 pa -45.0 b: az 57.4 el 21.3 pa -45.0 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bb..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bb.W.36.130KZ1

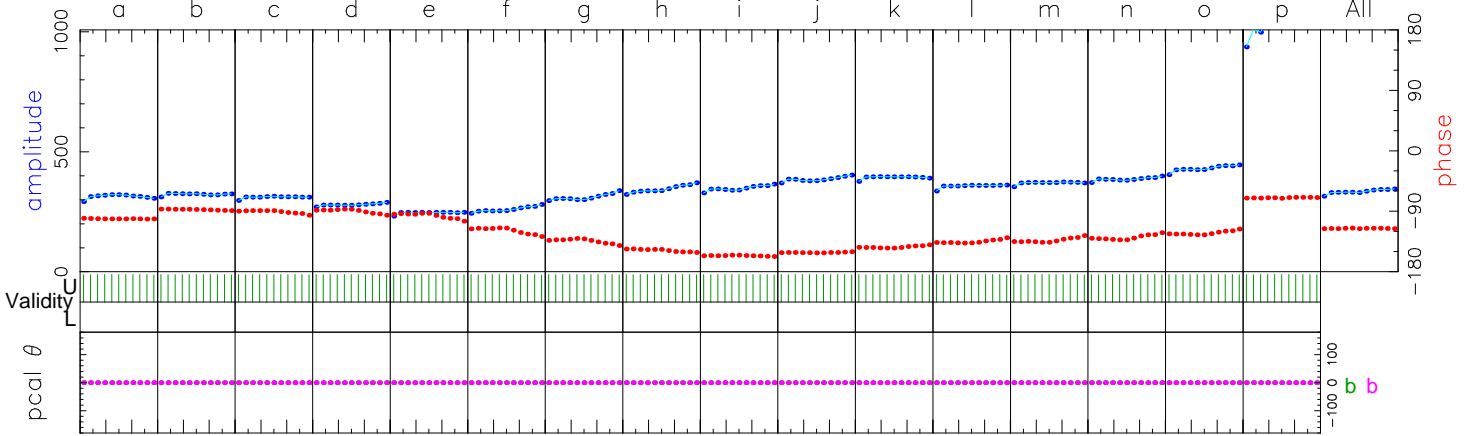
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bb
VLBA_BR - VLBA_BR, fgroup W, pol RL



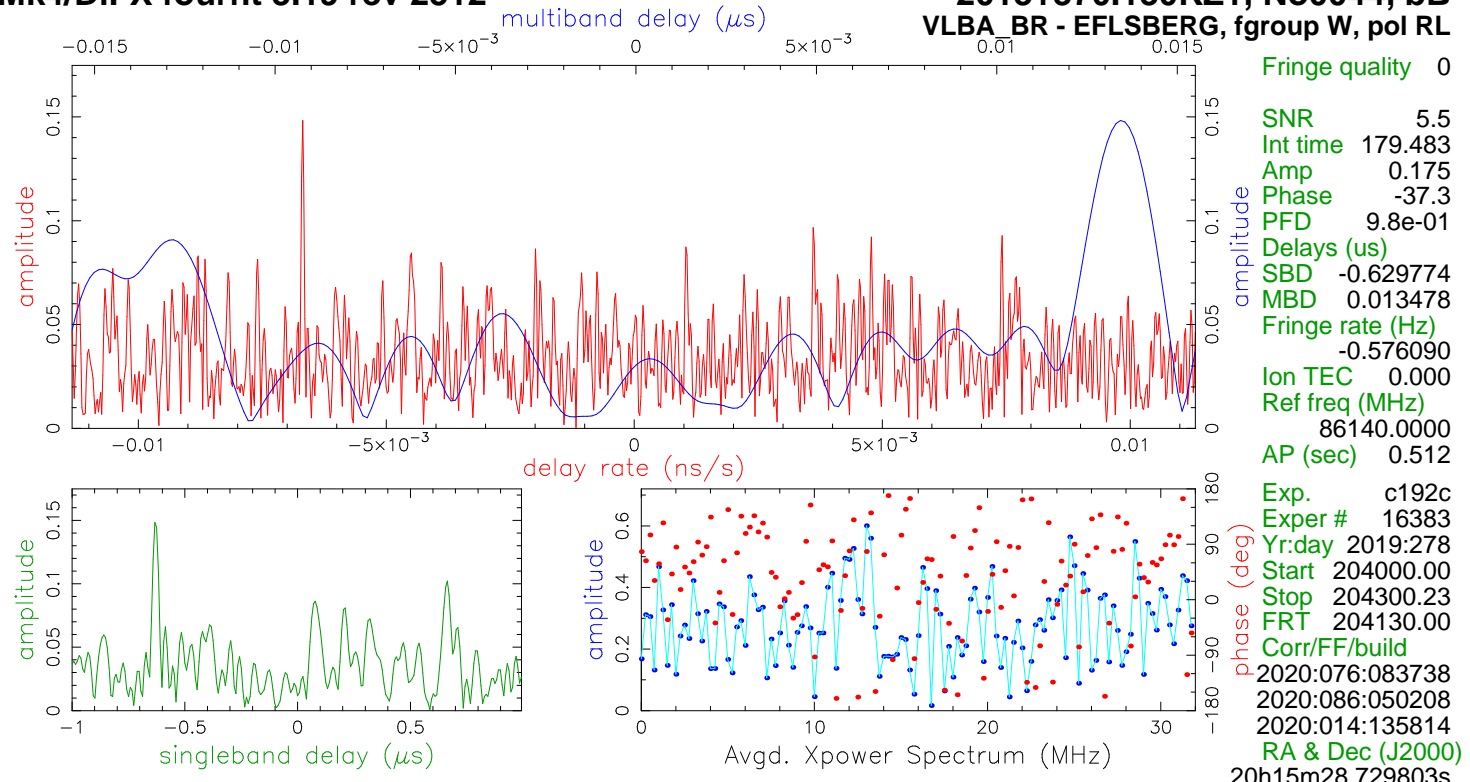
Fringe quality 5
SNR 12322.9
Int time 179.691
Amp 336.164
Phase -115.5
PFD 0.0e+00
Delays (us)
SBD 0.001764
MBD -0.002286
Fringe rate (Hz) 0.000002
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050208
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

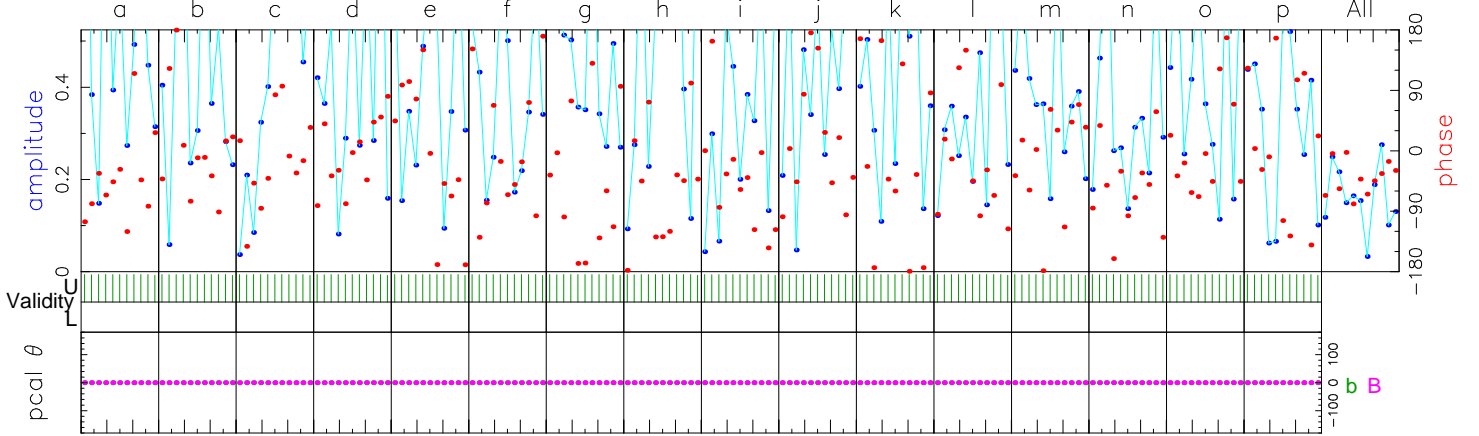


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-101.2	-87.6	-90.8	-89.9	-96.7	-119.1	-134.4	-148.3	-156.1	-151.3	-143.2	-135.0	-133.1	-128.8	-122.2	-69.9	Phase	-115.5
	313.5	323.0	310.5	279.2	245.4	259.5	310.4	345.0	348.1	386.0	393.0	356.9	370.0	385.6	430.1	1047.9	Ampl.	381.5
	129.0	128.6	128.8	128.5	128.4	128.5	128.5	128.6	128.7	128.7	128.8	128.8	128.8	128.7	128.9	129.7	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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:b	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
b	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	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
Group delay (usec)(sbd)	-2.28612500000E-03			Apriori delay (usec)			0.00000000000E+00			Resid mbdelay (usec)			-2.28612E-03			+/- 8.8E-08		
Sband delay (usec)	1.76350000000E-03			Apriori clock (usec)			0.0000000E+00			Resid sbdelay (usec)			1.76350E-03			+/- 1.4E-06		
Phase delay (usec)	-3.72506672419E-06			Apriori clockrate (us/s)			0.0000000E+00			Resid phdelay (usec)			-3.72507E-06			+/- 3.0E-10		
Delay rate (us/s)	2.83423047834E-11			Apriori rate (us/s)			0.00000000000E+00			Resid rate (us/s)			2.83423E-11			+/- 2.9E-12		
Total phase (deg)	-115.5			Apriori accel (us/s/s)			0.00000000000E+00			Resid phase (deg)			-115.5			+/- 0.0		

ph/seg (deg) 0.3 0.0 Theor. Amplitude 336.164 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 2.5 0.0 Search (1024X64) 330.064 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.7 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 54.9 0.0 Inc. seg. avg. 334.236 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 b: az 57.4 el 21.3 pa -45.0 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bb..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bb.W.54.130KZ1 simultaneous interpolator



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				
	-66.1	-23.9	4.3	-2.2	30.4	-79.0	-109.3	-66.7	-54.9	-27.1	-133.4	-53.1	13.3	-36.5	-39.5	-133.8	Phase	-37.3				
	0.4	0.3	0.3	0.3	0.1	0.1	0.4	0.2	0.2	0.0	0.1	0.3	0.2	0.3	0.1	0.1	Ampl.	0.2				
	48.6	169.3	79.2	164.1	170.9	86.0	166.1	213.9	178.5	40.8	212.3	27.0	118.1	137.7	228.0	147.6	Sbd box	48.4				
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
B	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
b:B	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp					
b	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Group delay (usec)(sbd)		-1.17412343883E+04															Apriori delay (usec)	-1.17405916165E+04	Resid mbdelay (usec)	1.34781E-02	+/-	2.0E-04
Sband delay (usec)		-1.17412213905E+04															Apriori clock (usec)	-1.7421412E+01	Resid sbdelay (usec)	-6.29774E-01	+/-	3.1E-03
Phase delay (usec)		-1.17405916177E+04															Apriori clockrate (us/s)	-4.2395080E-08	Resid phdelay (usec)	-1.20176E-06	+/-	6.7E-07
Delay rate (us/s)		1.17781758414E+00															Apriori rate (us/s)	1.17782427198E+00	Resid rate (us/s)	-6.68784E-06	+/-	6.4E-09
Total phase (deg)					-340.2												Apriori accel (us/s/s)	6.04735831471E-05	Resid phase (deg)	-37.3	+/-	20.7

ph/seg (deg) 24.6 34.4
 amp/seg (%) 44.3 60.0
 ph/frq (deg) 52.2 41.5
 amp/frq (%) 72.7 72.4

RMS Theor. Amplitude 0.175 +/- 0.032
 Search (1024X64) 0.146
 Interp. 0.000
 Inc. seg. avg. 0.159
 Inc. frq. avg. 0.165

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

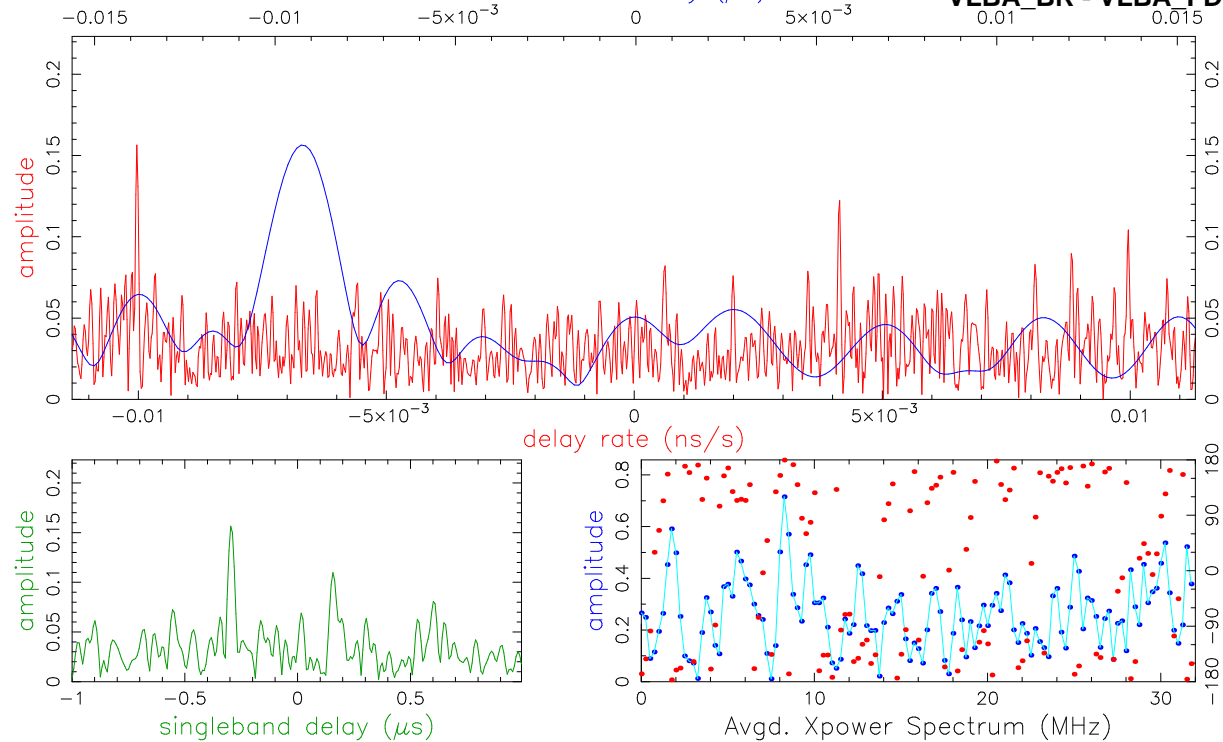
b: az 57.4 el 21.3 pa -45.0 B: az 245.8 el 66.6 pa 46.5 u,v (fr/asec) -8428.633 3469.155 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bB..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bB.W.55.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

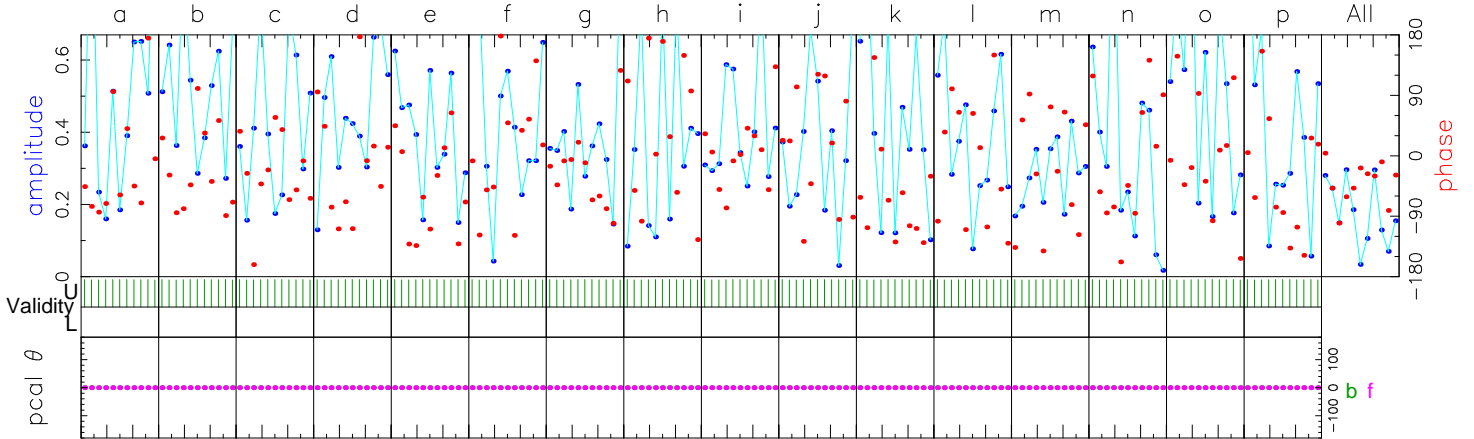
2013+370.130KZ1, No0044, bf
VLBA_BR - VLBA_FD, fgroup W, pol LL

multiband delay (μ s)



Fringe quality 0
SNR 5.8
Int time 178.940
Amp 0.223
Phase -38.8
PFD 6.3e-01
Delays (us)
SBD -0.294652
MBD -0.009210
Fringe rate (Hz)
-0.866088
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050203
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



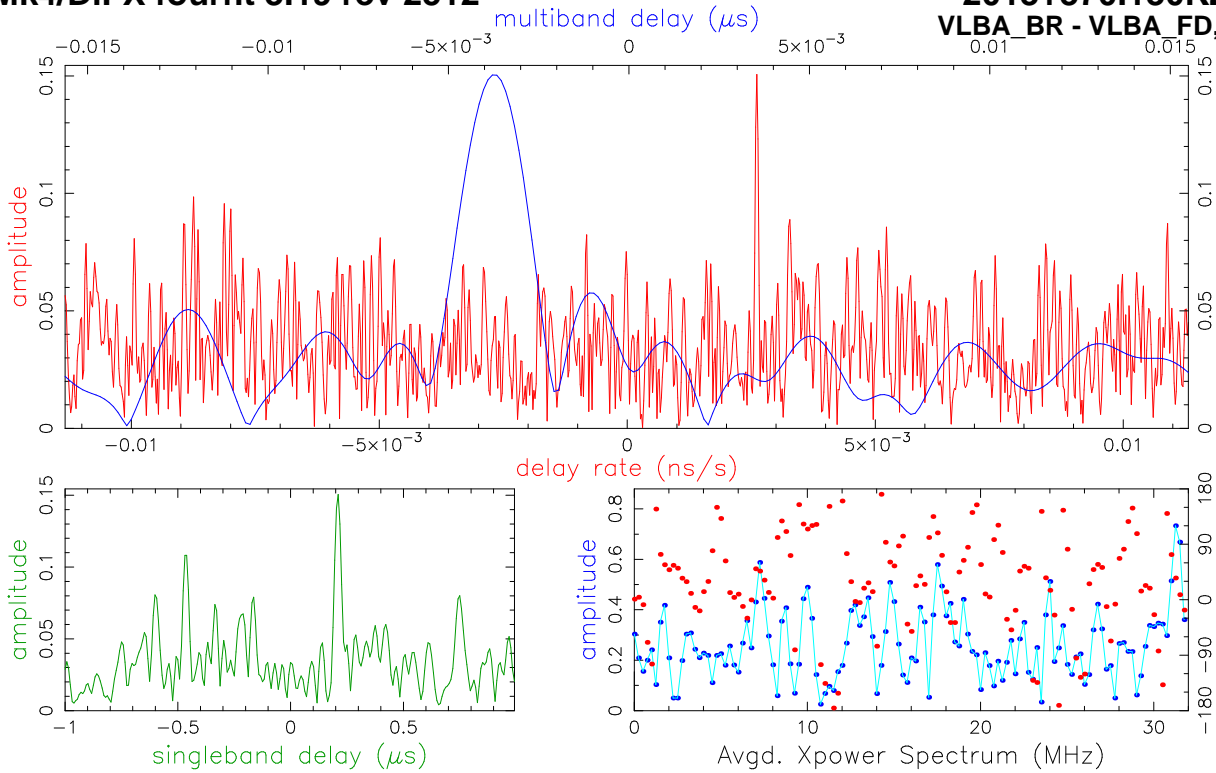
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-45.4	-32.9	-38.6	-36.0	-36.2	-10.8	-22.2	-121.3	-1.8	-2.2	-92.2	-46.6	-5.4	-80.2	-8.8	-60.7	Phase	-38.8
	0.4	0.4	0.4	0.3	0.2	0.1	0.3	0.2	0.4	0.1	0.5	0.1	0.1	0.4	0.4	0.2	Ampl.	0.2
	232.8	138.3	107.6	84.0	198.0	6.9	85.5	205.9	244.5	125.7	108.7	149.8	31.0	169.3	155.2	117.7	Sbd box	91.3
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-4.59017213509E+02		Apriori delay (usec)		-4.58726753811E+02		Resid mbdelay (usec)		-9.20970E-03		+/-		1.9E-04					
Sband delay (usec)	-4.59021405811E+02		Apriori clock (usec)		-1.0938110E+00		Resid sbdelay (usec)		-2.94652E-01		+/-		3.0E-03					
Phase delay (usec)	-4.58726755062E+02		Apriori clockrate (us/s)		-1.5144557E-07		Resid phdelay (usec)		-1.25067E-06		+/-		6.4E-07					
Delay rate (us/s)	-2.41386451903E-01		Apriori rate (us/s)		-2.41376397484E-01		Resid rate (us/s)		-1.00544E-05		+/-		6.2E-09					
Total phase (deg)			-245.2		Apriori accel (us/s/s)		1.84821196192E-05		Resid phase (deg)		-38.8		+/-		19.9			

ph/seg (deg) 29.7 32.9 Search (1024X64) 0.155 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 56.8 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) 35.6 39.7 Inc. seg. avg. 0.215 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 62.8 69.3 Inc. frq. avg. 0.207 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 f: az 58.9 el 22.5 pa -67.8 u,v (fr/asec) 1753.821 2751.119 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bf..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bf.W.14.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bf
VLBA_BR - VLBA_FD, fgroup W, pol LR

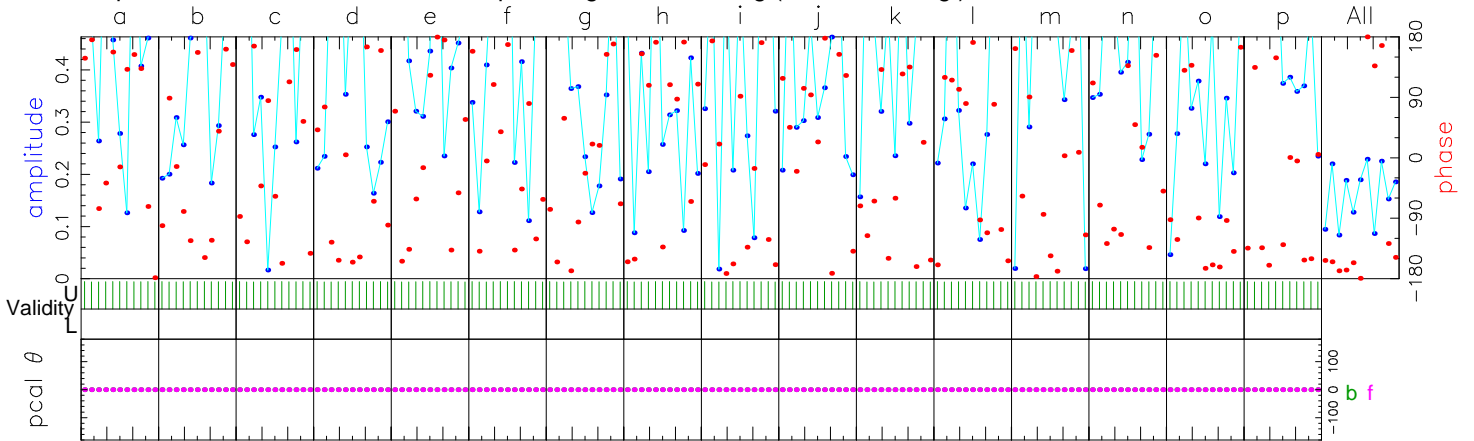


Fringe quality 0

SNR 5.5
Int time 178.941
Amp 0.154
Phase -167.5
PFD 9.8e-01
Delays (us)
SBD 0.209518
MBD -0.003739
Fringe rate (Hz) 0.224529
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050207
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					
	179.5	-170.0	-146.6	-145.9	-170.4	-157.8	-144.4	167.2	-169.7	114.4	-151.5	163.6	-128.2	-135.0	-165.4	-159.4	Phase	-167.5					
	0.2	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.3	Ampl.	0.1					
	125.2	35.2	117.6	116.2	233.4	129.8	137.3	42.7	41.8	199.3	122.5	255.5	166.3	2.2	7.5	105.7	Sbd box	155.8					
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						
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase						
b:f	0:0	0:0	0:0	0:0	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:f	0:0	0:0	0:0	0:0	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						
f	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						
f	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)		-4.58511742422E+02															Apriori delay (usec)	-4.58726753811E+02	Resid mbdelay (usec)	-3.73861E-03	+/-	2.0E-04	
Sband delay (usec)		-4.58517235811E+02																Apriori clock (usec)	-1.0938110E+00	Resid sbdelay (usec)	2.09518E-01	+/-	3.1E-03
Phase delay (usec)		-4.58726759214E+02																Apriori clockrate (us/s)	-1.5144557E-07	Resid phdelay (usec)	-5.40265E-06	+/-	6.7E-07
Delay rate (us/s)		-2.41373790931E-01																Apriori rate (us/s)	-2.41376397484E-01	Resid rate (us/s)	2.60655E-06	+/-	6.4E-09
Total phase (deg)					-13.9													Apriori accel (us/s/s)	1.84821196192E-05	Resid phase (deg)	-167.5	+/-	20.7

ph/seg (deg) 24.4 34.4
amp/seg (%) 36.1 60.0
ph/frq (deg) 29.6 41.5
amp/frq (%) 37.9 72.4

RMS Theor. Amplitude 0.154 +/- 0.028
Search (1024X64) 0.147
Interp. 0.000
Inc. seg. avg. 0.140
Inc. frq. avg. 0.136

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

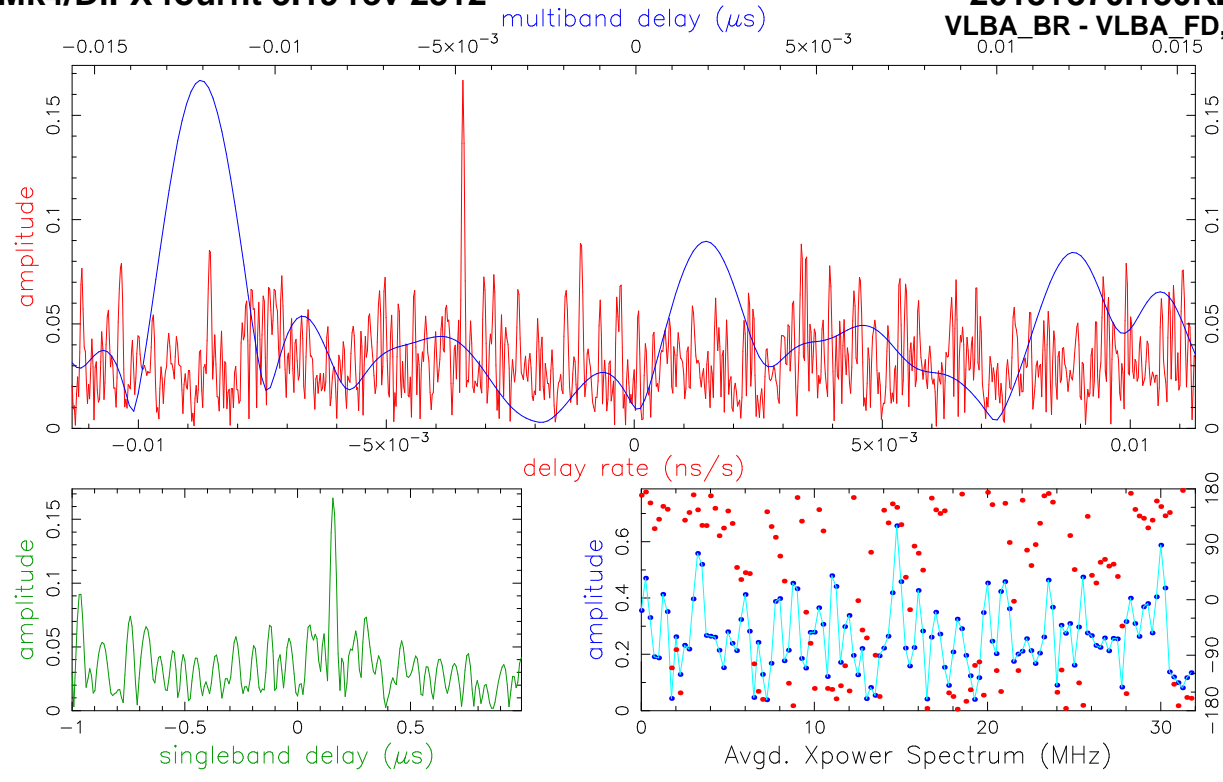
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 f: az 58.9 el 22.5 pa -67.8 u,v (fr/asec) 1753.821 2751.119 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bf..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bf.W.46.130KZ1

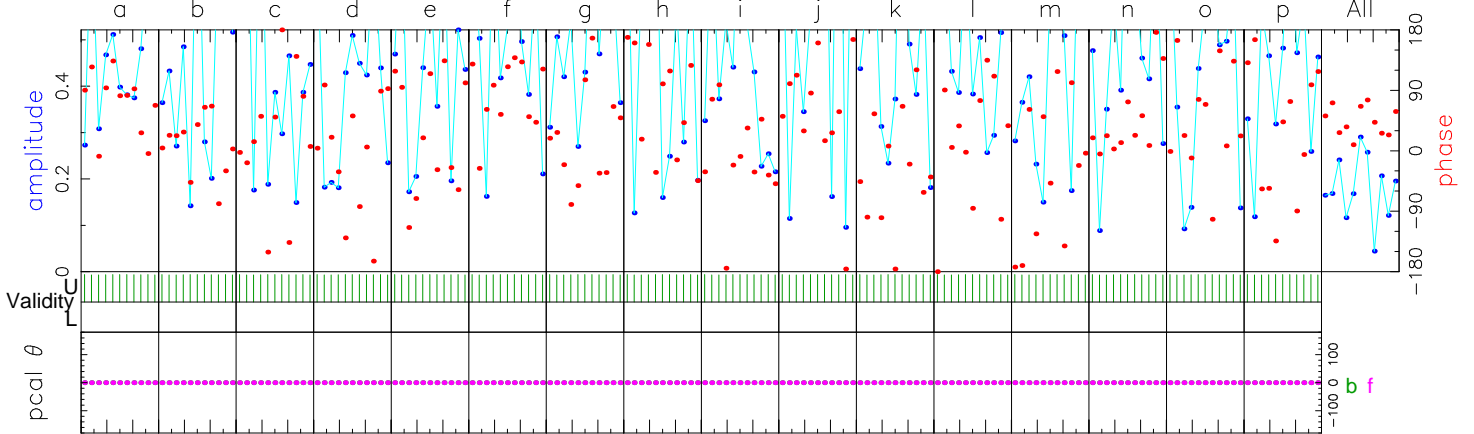
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bf
VLBA_BR - VLBA_FD, fgroup W, pol RL



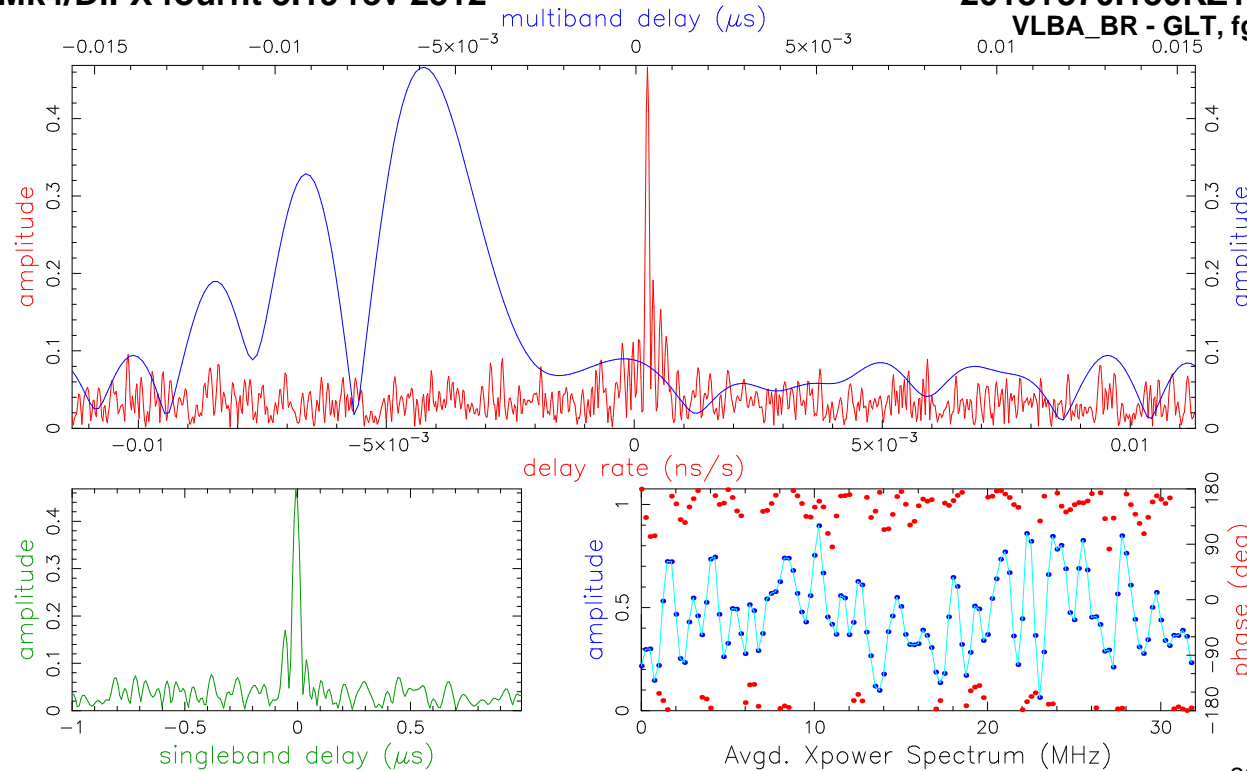
Fringe quality 0
SNR 6.1
Int time 178.940
Amp 0.174
Phase 47.2
PFD 1.2e-01
Delays (us)
SBD 0.157622
MBD -0.012035
Fringe rate (Hz)
-0.297585
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050209
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	75.0	4.9	22.8	21.4	88.9	96.7	7.2	76.7	11.5	77.1	-6.2	54.4	-9.7	42.4	67.4	24.6		Phase	47.2				
b	0.4	0.4	0.2	0.1	0.2	0.4	0.2	0.1	0.2	0.4	0.2	0.2	0.1	0.3	0.1	0.1		Ampl.	0.2				
f	172.8	149.6	135.1	81.9	93.3	149.8	71.1	32.8	2.0	254.1	200.7	69.4	89.6	149.8	251.7	112.9		Sbd box	149.2				
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		APs used					
f	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase					
b:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
Group delay (usec)(sbd)			-4.58582538401E+02															Apriori delay (usec)	-4.58726753811E+02	Resid mbdelay (usec)	-1.20346E-02	+/-	1.8E-04
Sband delay (usec)			-4.58569132311E+02															Apriori clock (usec)	-1.0938110E+00	Resid sbdelay (usec)	1.57622E-01	+/-	2.8E-03
Phase delay (usec)			-4.58726752289E+02															Apriori clockrate (us/s)	-1.5144557E-07	Resid phdelay (usec)	1.52279E-06	+/-	6.0E-07
Delay rate (us/s)			-2.41379852148E-01															Apriori rate (us/s)	-2.41376397484E-01	Resid rate (us/s)	-3.45466E-06	+/-	5.8E-09
Total phase (deg)					-159.2													Apriori accel (us/s/s)	1.84821196192E-05	Resid phase (deg)	47.2	+/-	18.7

ph/seg (deg) 21.2 31.0 Amplitude 0.174 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 40.7 54.2 Search (1024X64) 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.6 37.4 Inc. seg. avg. 0.163 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 65.5 65.3 Inc. frq. avg. 0.173 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 57.4 el 21.3 pa -45.0 f: az 58.9 el 22.5 pa -67.8 u,v (fr/asec) 1753.821 2751.119 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bf..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bf.W.63.130KZ1

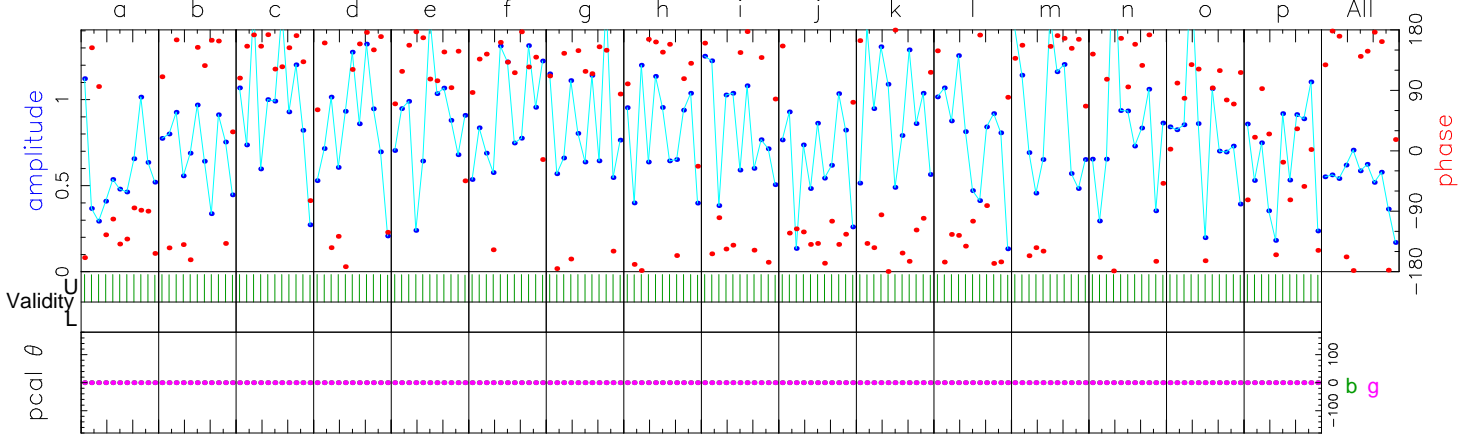


Fringe quality 8

SNR 17.2
Int time 179.584
Amp 0.469
Phase 166.1
PFD 0.0e+00
Delays (us)
SBD -0.006096
MBD -0.005872
Fringe rate (Hz) 0.023414
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

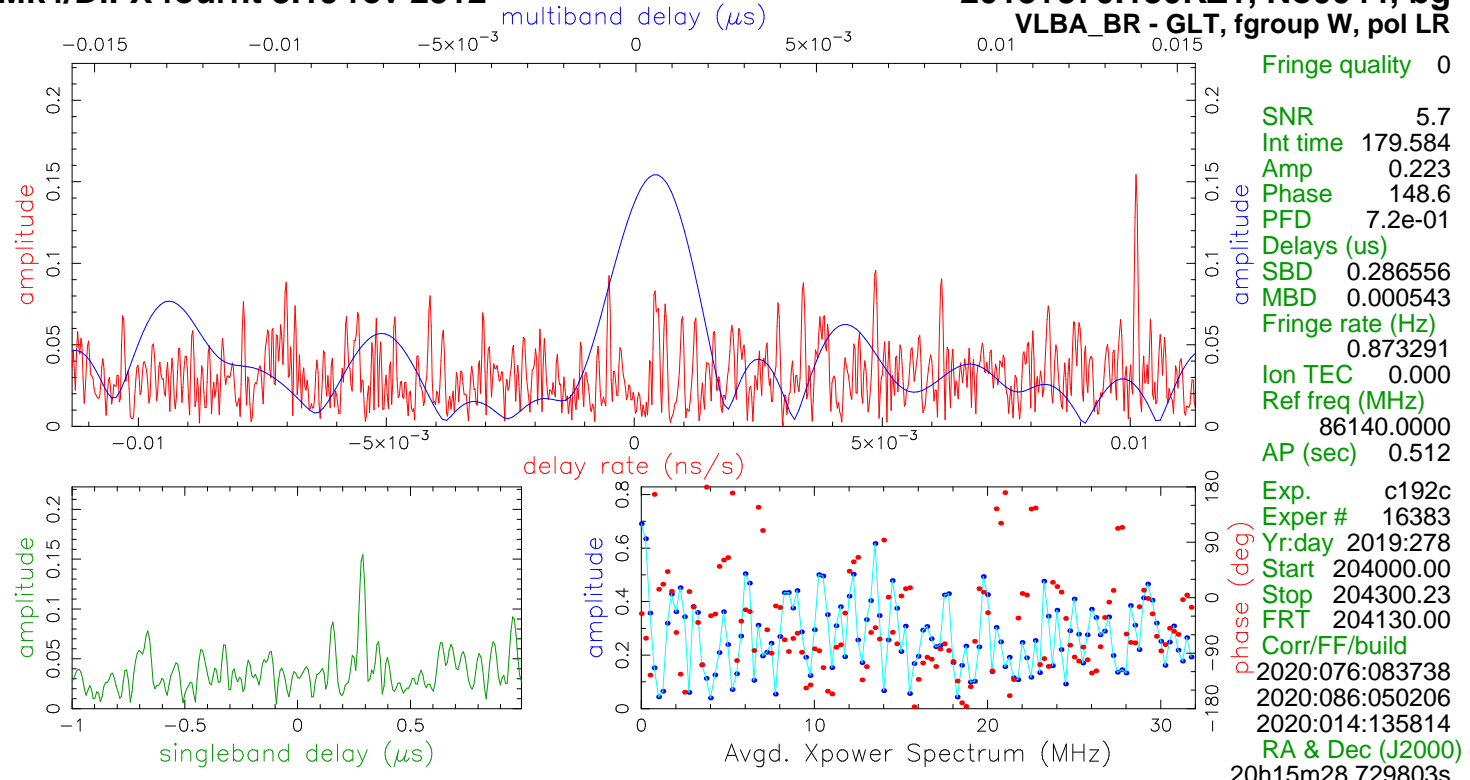
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050204
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

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	
	-124.7	170.4	148.2	168.5	122.3	137.3	144.3	150.8	-173.2	-138.7	-145.5	-149.1	162.4	158.7	98.2	-12.4	Phase	166.1	
	0.4	0.5	0.9	0.6	0.6	0.6	0.7	0.6	0.7	0.5	0.8	0.6	0.8	0.6	0.7	0.4	Ampl.	0.6	
	127.2	127.7	128.2	129.0	128.8	128.2	128.0	128.6	128.1	128.3	128.3	128.0	127.7	127.8	127.2	126.4	Sbd box	128.2	
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		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs		
b:g	0:0	0:0	0:0	0:0	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:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC		
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)		-7.37527586814E+03								-7.37526999592E+03							Resid mbdelay (usec)	-5.87222E-03	+/- 6.3E-05
Sband delay (usec)		-7.37527609242E+03								-1.9221020E+00							Resid sbdelay (usec)	-6.09650E-03	+/- 1.0E-03
Phase delay (usec)		-7.37526999056E+03								-3.1739506E-07							Resid phdelay (usec)	5.35661E-06	+/- 2.2E-07
Delay rate (us/s)		6.00510244063E-01								6.00509972250E-01							Resid rate (us/s)	2.71813E-07	+/- 2.1E-09
Total phase (deg)					4.6					2.35954527228E-05							Resid phase (deg)	166.1	+/- 6.7

ph/seg (deg) 49.1 11.1 Search (1024X64) 0.460 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 32.4 19.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 61.5 13.3 Inc. seg. avg. 0.521 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 41.5 23.3 Inc. frq. avg. 0.609 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 57.4 el 21.3 pa -45.0 g: az 122.0 el 45.4 pa -14.3 u,v (fr/asec) -4305.718 -177.780 ion window (TEC) 0.00 0.00 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bg..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bg.W.20.130KZ1



Fringe quality 0

SNR 5.7

Int time 179.584

Amp 0.223

Phase 148.6

PFD 7.2e-01

Delays (us)

SBD 0.286556

MBD 0.000543

Fringe rate (Hz)

0.873291

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 204000.00

Stop 204300.23

FRT 204130.00

Corr/FF/build

2020:076:083738

2020:086:050206

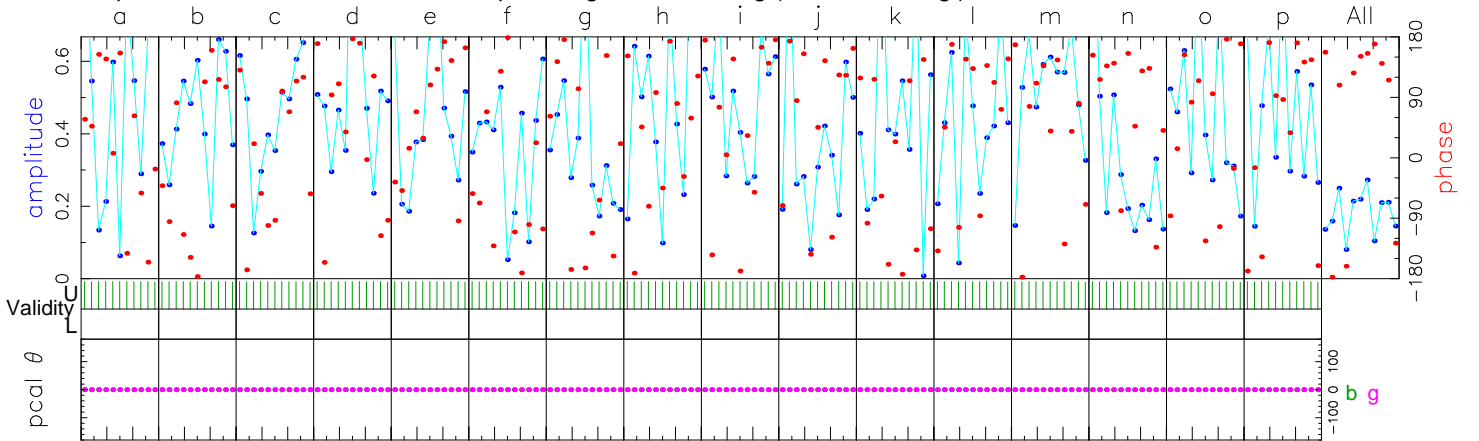
2020:014:135814

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
	38.5	166.1	128.2	174.4	116.7	-114.3	171.2	107.8	154.4	152.9	-132.3	129.7	107.0	146.5	174.7	151.2	Phase	148.6
	0.2	0.2	0.1	0.4	0.2	0.1	0.3	0.3	0.4	0.3	0.2	0.4	0.3	0.3	0.1	0.4	Ampl.	0.2
	228.0	211.6	47.1	159.6	239.7	18.5	252.0	247.3	125.3	230.1	82.5	139.8	31.1	84.2	215.5	232.6	Sbd box	165.7
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
b:g	0:0	0:0	0:0	0:0	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:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
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	Chan ids	
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

Group delay (usec)(sbd) -7.37498820268E+03 Apriori delay (usec) -7.37526999592E+03 Resid mbdelay (usec) 5.43240E-04 +/- 1.9E-04

Sband delay (usec) -7.37498343992E+03 Apriori clock (usec) -1.9221020E+00 Resid sbdelay (usec) 2.86556E-01 +/- 3.0E-03

Phase delay (usec) -7.37526999113E+03 Apriori clockrate (us/s) -3.1739506E-07 Resid phdelay (usec) 4.79235E-06 +/- 6.5E-07

Delay rate (us/s) 6.00520110293E-01 Apriori rate (us/s) 6.00509972250E-01 Resid rate (us/s) 1.01380E-05 +/- 6.2E-09

Total phase (deg) -12.9 Apriori accel (us/s/s) 2.35954527228E-05 Resid phase (deg) 148.6 +/- 20.0

ph/seg (deg) RMS Theor. Amplitude 0.223 +/- 0.039 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 36.3 33.2 Search (1024X64) 0.152 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

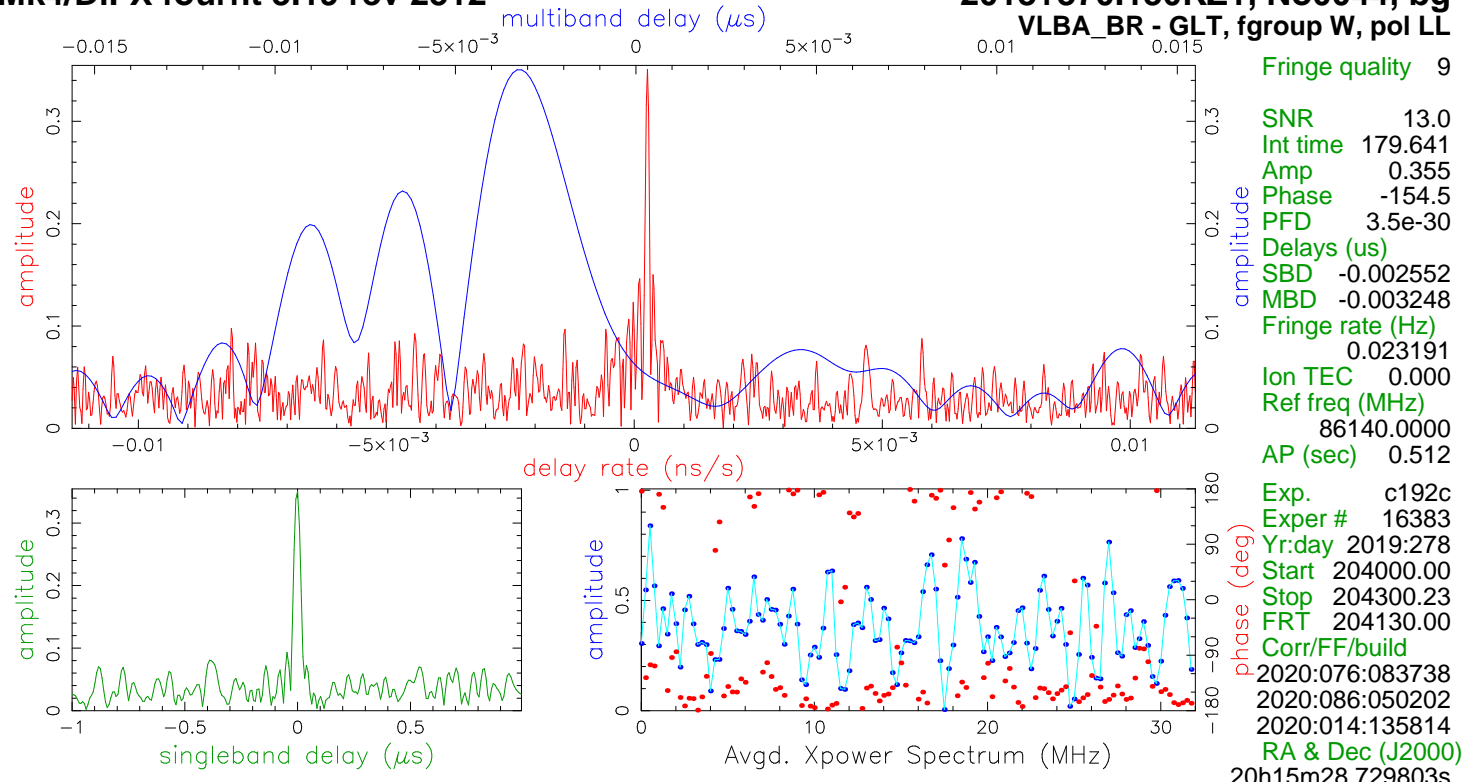
ph/frq (deg) 40.8 57.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

amp/frq (%) 50.2 40.0 Inc. seg. avg. 0.222 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011

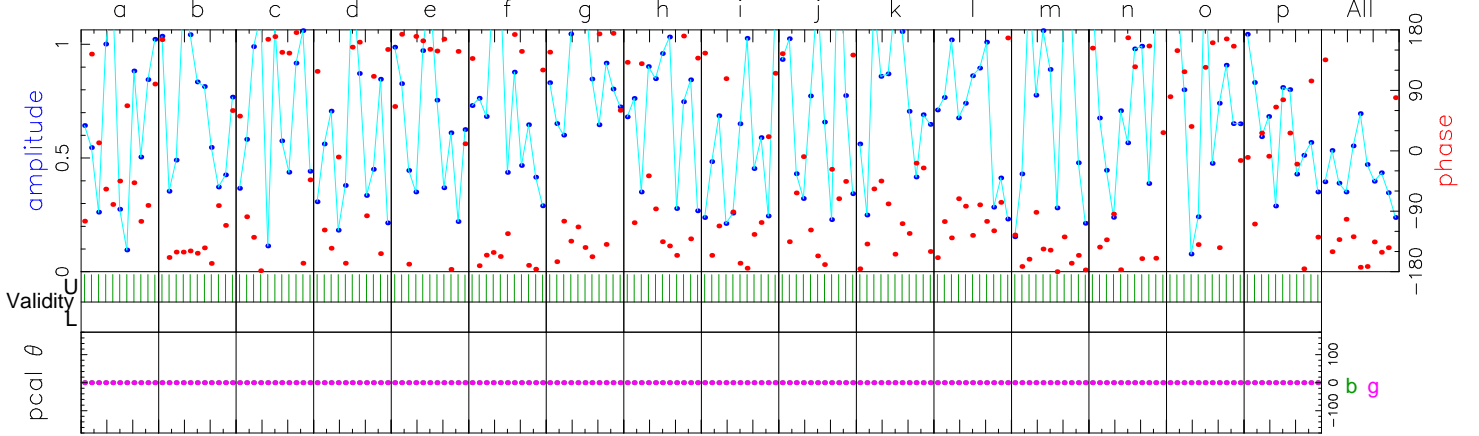
amp/frq (%) 49.1 69.8 Inc. frq. avg. 0.220 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 g: az 122.0 el 45.4 pa -14.3 u,v (fr/asec) -4305.718 -177.780 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bg..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bg.W.41.130KZ1



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					
	-72.3	-156.6	-171.8	-178.9	150.2	-172.5	-154.3	-137.2	-166.3	-118.5	-96.6	-108.3	-148.1	174.5	137.5	15.6		Phase -154.5					
	0.3	0.5	0.5	0.4	0.5	0.6	0.6	0.4	0.3	0.4	0.5	0.6	0.7	0.5	0.5	0.2		Ampl. 0.5					
	126.5	128.9	127.8	128.2	128.4	129.6	128.6	128.4	160.2	128.8	128.5	129.0	128.8	127.8	128.2	127.0		Sbd box 128.7					
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		PC freqs					
b:g	0:0	0:0	0:0	0:0	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:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp					
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		Chan ids					
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)		-7.37527324373E+03																Apriori delay (usec)	-7.37526999592E+03	Resid mbdelay (usec)	-3.24781E-03	+/-	8.3E-05
Sband delay (usec)		-7.37527254842E+03																Apriori clock (usec)	-1.9221020E+00	Resid sbdelay (usec)	-2.55250E-03	+/-	1.3E-03
Phase delay (usec)		-7.37527000090E+03																Apriori clockrate (us/s)	-3.1739506E-07	Resid phdelay (usec)	-4.98100E-06	+/-	2.8E-07
Delay rate (us/s)		6.00510241474E-01																Apriori rate (us/s)	6.00509972250E-01	Resid rate (us/s)	2.69224E-07	+/-	2.7E-09
Total phase (deg)																		Apriori accel (us/s/s)	2.35954527228E-05	Resid phase (deg)	-154.5	+/-	8.8

ph/seg (deg) 48.6 14.6
 amp/seg (%) 40.4 25.5
 ph/frq (deg) 61.4 17.6
 amp/frq (%) 47.3 30.8

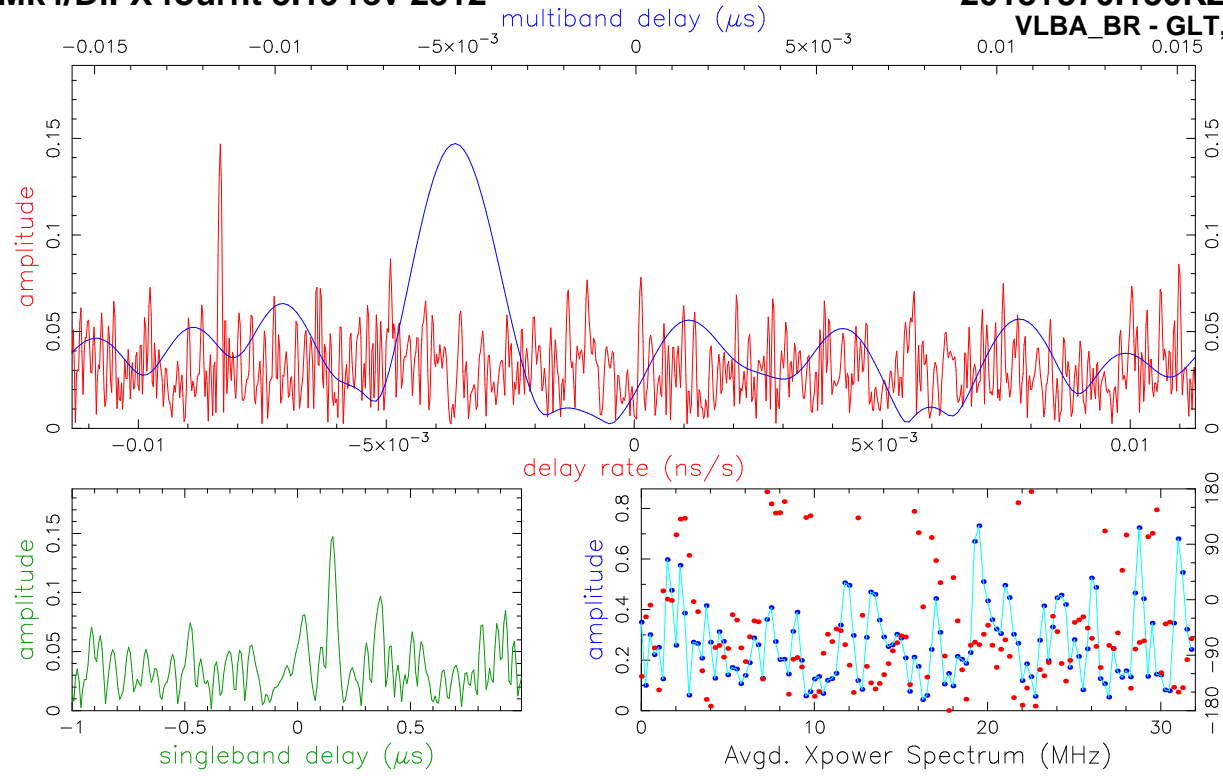
RMS Theor. Amplitude 0.355 +/- 0.027
 Search (1024X64) 0.346
 Interp. 0.000
 Inc. seg. avg. 0.424
 Inc. frq. avg. 0.451

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

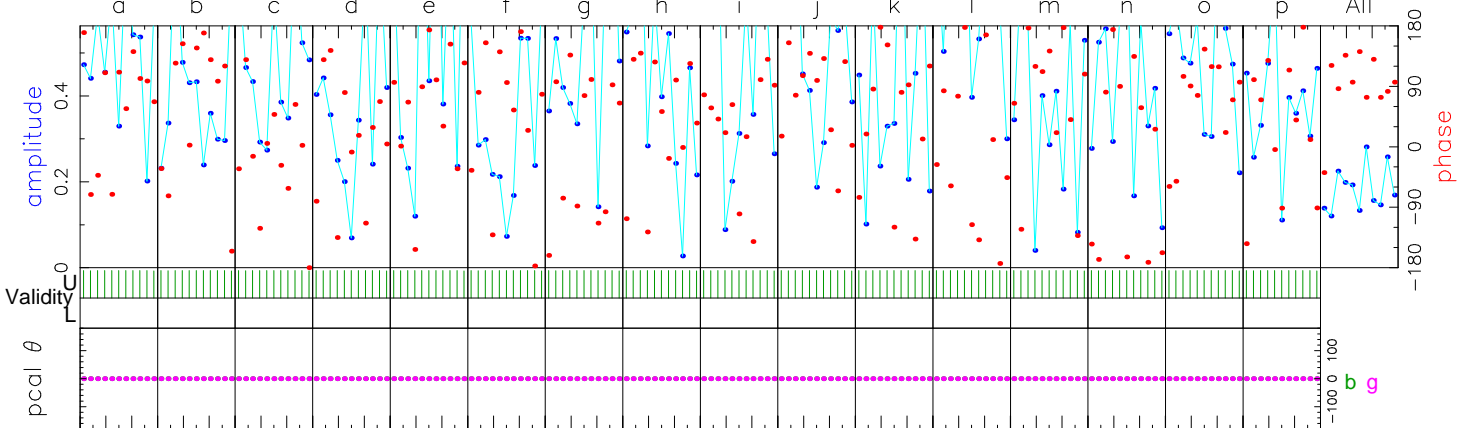
b: az 57.4 el 21.3 pa -45.0 g: az 122.0 el 45.4 pa -14.3 u,v (fr/asec) -4305.718 -177.780 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bg..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bg.W.5.130KZ1



Fringe quality 0
SNR 5.4
Int time 179.641
Amp 0.188
Phase 96.1
PFD 1.0e+00
Delays (us)
SBD 0.153466
MBD -0.005081
Fringe rate (Hz)
-0.720095
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050209
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

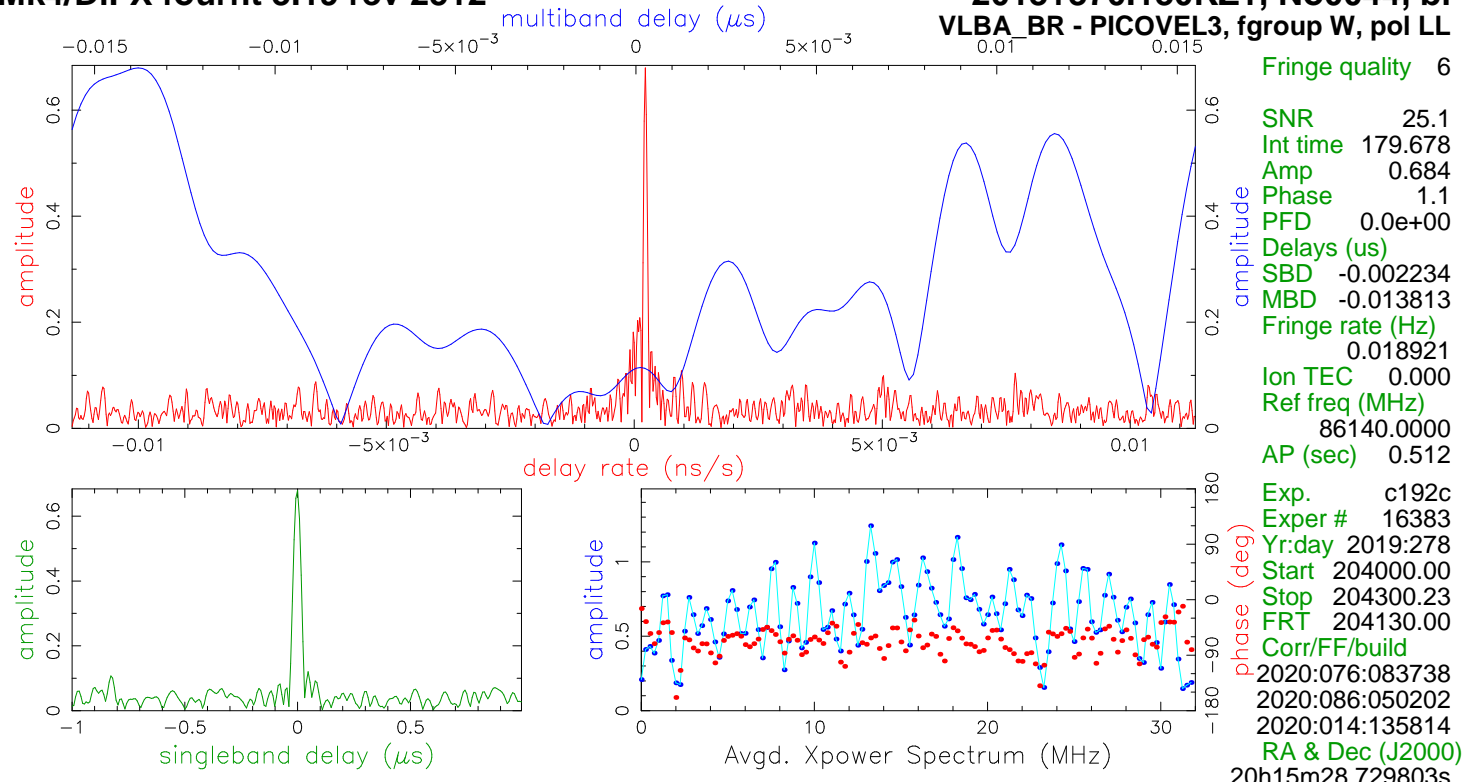


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
85.6	144.8	9.4	50.0	105.2	96.4	105.7	123.2	72.0	80.4	85.2	-143.9	120.2	138.2	78.4	81.9	81.9	Phase	96.1
0.2	0.3	0.3	0.1	0.5	0.1	0.2	0.2	0.4	0.3	0.2	0.1	0.2	0.2	0.3	0.1	0.1	Ampl.	0.2
176.0	175.5	46.8	196.5	148.9	230.1	135.1	41.6	149.8	110.2	255.5	153.0	3.7	168.9	93.8	81.3	81.3	Sbd box	148.6
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	
g	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	PC freqs	
b:g	0:0	0:0	0:0	0:0	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:g	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC	
g	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	

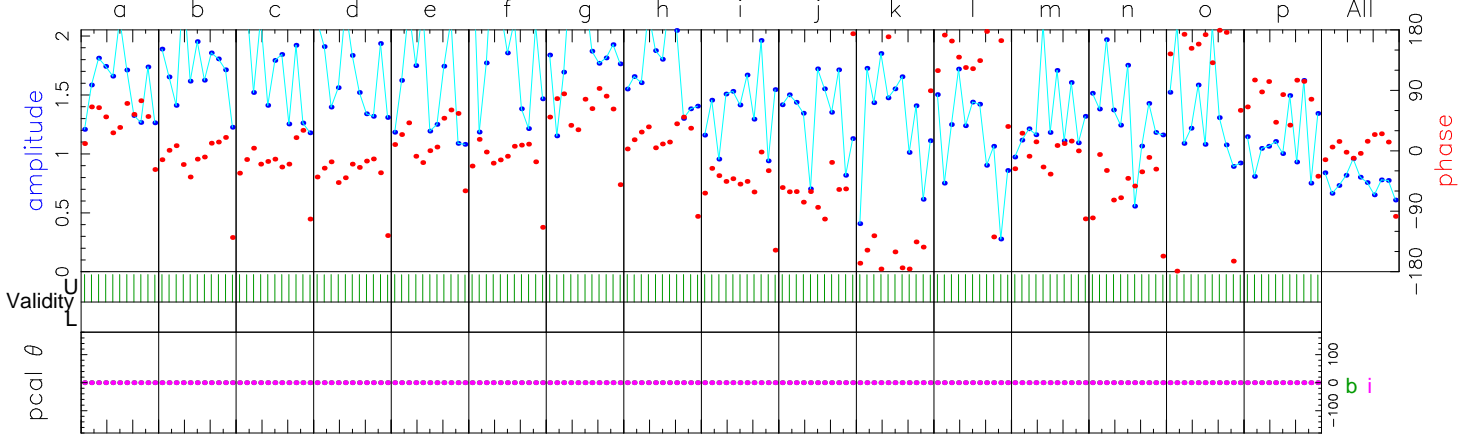
Group delay (usec)(sbd) -7.37511882735E+03 Apriori delay (usec) -7.37526999592E+03 Resid mbdelay (usec) -5.08142E-03 +/- 2.0E-04
 Sband delay (usec) -7.37511652942E+03 Apriori clock (usec) -1.9221020E+00 Resid sbdelay (usec) 1.53466E-01 +/- 3.2E-03
 Phase delay (usec) -7.37526999282E+03 Apriori clockrate (us/s) -3.1739506E-07 Resid phdelay (usec) 3.09970E-06 +/- 6.8E-07
 Delay rate (us/s) 6.00501612656E-01 Apriori rate (us/s) 6.00509972250E-01 Resid rate (us/s) -8.35959E-06 +/- 6.5E-09
 Total phase (deg) -65.4 Apriori accel (us/s/s) 2.35954527228E-05 Resid phase (deg) 96.1 +/- 21.1

RMS Theor. Amplitude 0.188 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 47.6 34.9 Search (1024X64) 0.142 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 41.5 60.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 47.2 42.1 Inc. seg. avg. 0.196 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 64.5 73.5 Inc. frq. avg. 0.180 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 g: az 122.0 el 45.4 pa -14.3 u,v (fr/asec) -4305.718 -177.780 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bg..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bg.W.60.130KZ1



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

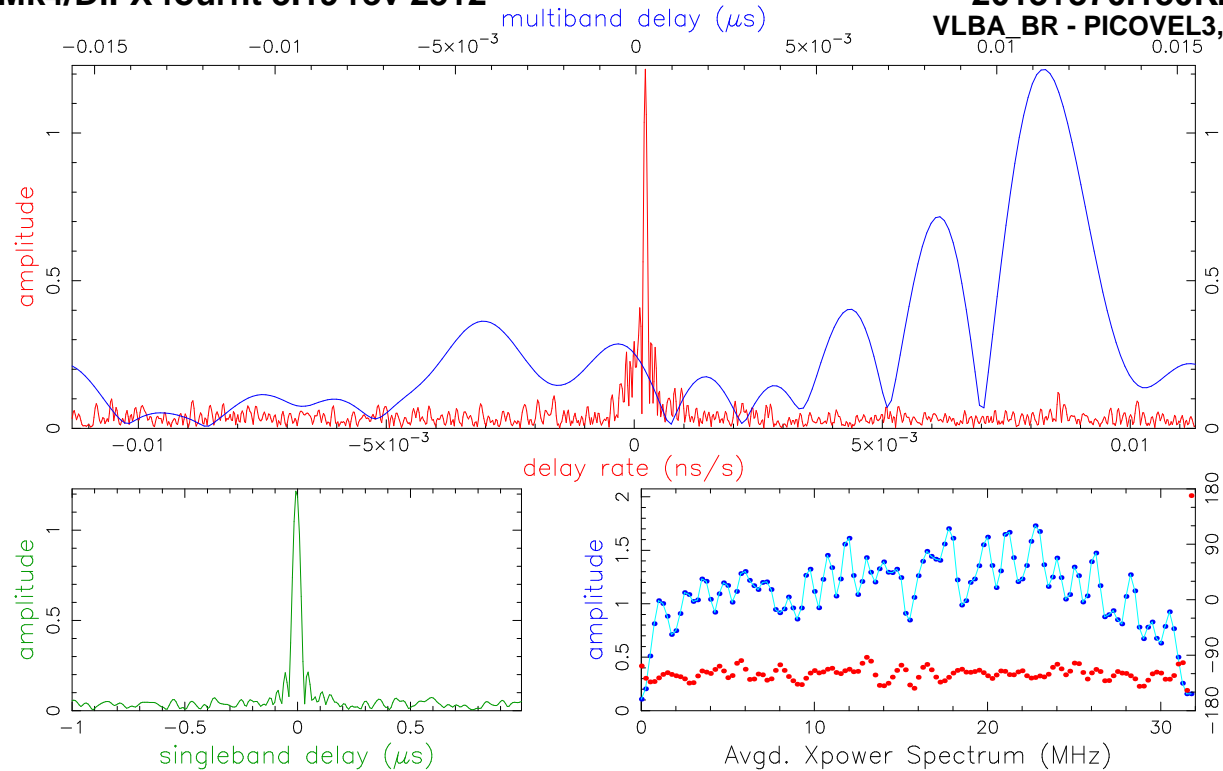


86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All		
46.0	-8.3	-14.2	-33.1	18.5	-11.6	58.2	18.7	-45.3	-69.1	-164.1	141.8	-8.4	-48.0	159.9	72.8	Phase	1.1		
1.4	1.5	1.5	1.5	1.3	1.7	1.6	1.5	1.2	1.1	1.1	0.9	1.1	1.0	1.2	0.9	Ampl.	1.3		
128.1	128.8	128.9	128.8	128.8	128.6	128.8	128.3	128.9	128.6	128.5	129.2	129.1	128.7	128.7	127.6	Sbd box	128.7		
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	APs used			
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase			
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
b	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				
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
i	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks		
Group delay (usec)(sbd)		-1.29101852589E+04				Apriori delay (usec)				-1.29101714456E+04				Resid mbdelay (usec)				-1.38133E-02 +/- 4.3E-05	
Sband delay (usec)		-1.29101736801E+04				Apriori clock (usec)				-7.3766649E-02				Resid sbdelay (usec)				-2.23450E-03 +/- 6.9E-04	
Phase delay (usec)		-1.29101714455E+04				Apriori clockrate (us/s)				1.1060491E-07				Resid phdelay (usec)				3.51356E-08 +/- 1.5E-07	
Delay rate (us/s)		1.10655001651E+00				Apriori rate (us/s)				1.10654979686E+00				Resid rate (us/s)				2.19650E-07 +/- 1.4E-09	
Total phase (deg)		-114.4				Apriori accel (us/s/s)				7.83306531107E-05				Resid phase (deg)				1.1 +/- 4.6	

ph/seg (deg) RMS Theor. Amplitude 0.684 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 32.5 7.6 Search (1024X64) 0.676 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 17.9 13.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 82.2 9.1 Inc. seg. avg. 0.757 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 95.4 15.9 Inc. frq. avg. 1.269 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 i: az 275.9 el 76.6 pa 85.5 u,v (fr/asec) -7900.011 5725.087 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bi..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bi.W.10.130KZ1

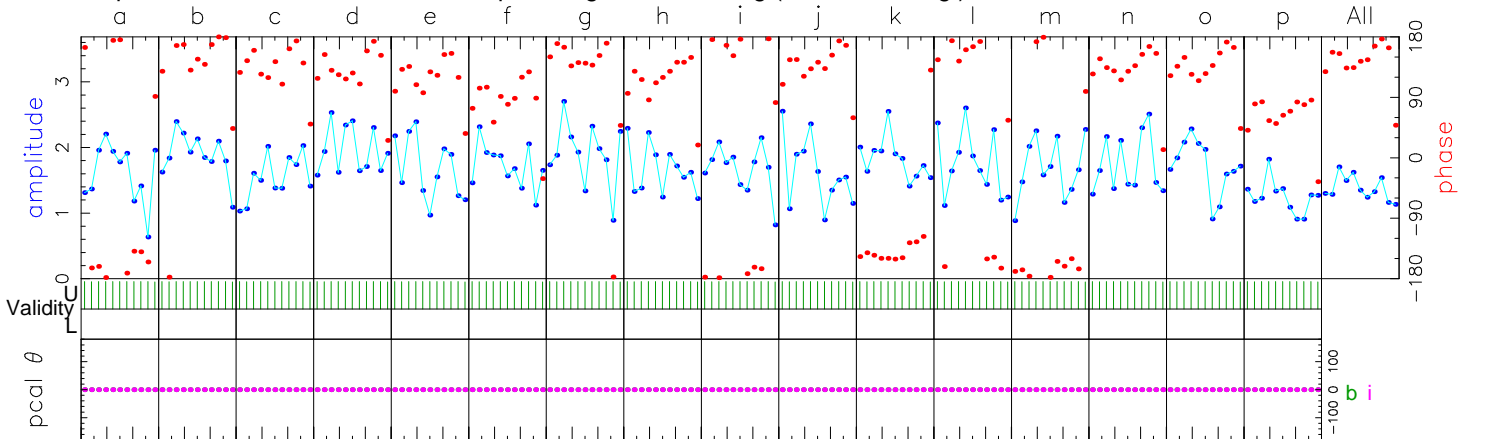


Fringe quality 4

SNR 45.0
Int time 179.678
Amp 1.229
Phase 145.5
PFD 0.0e+00
Delays (us)
SBD -0.005027
MBD 0.011318
Fringe rate (Hz) 0.018752
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050206
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
	-177.3	156.7	136.0	130.8	121.2	89.0	146.3	115.5	176.6	135.5	-146.1	170.6	-177.8	137.0	132.2	61.4	Phase	145.5
	1.4	1.7	1.3	1.6	1.5	1.4	1.6	1.4	1.5	1.7	1.5	1.5	1.7	1.5	1.5	1.1	Ampl.	1.5
	127.8	128.5	128.8	128.5	128.2	128.3	128.2	128.2	128.3	127.8	127.7	127.8	128.0	127.4	127.9	126.7	Sbd box	128.4
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	

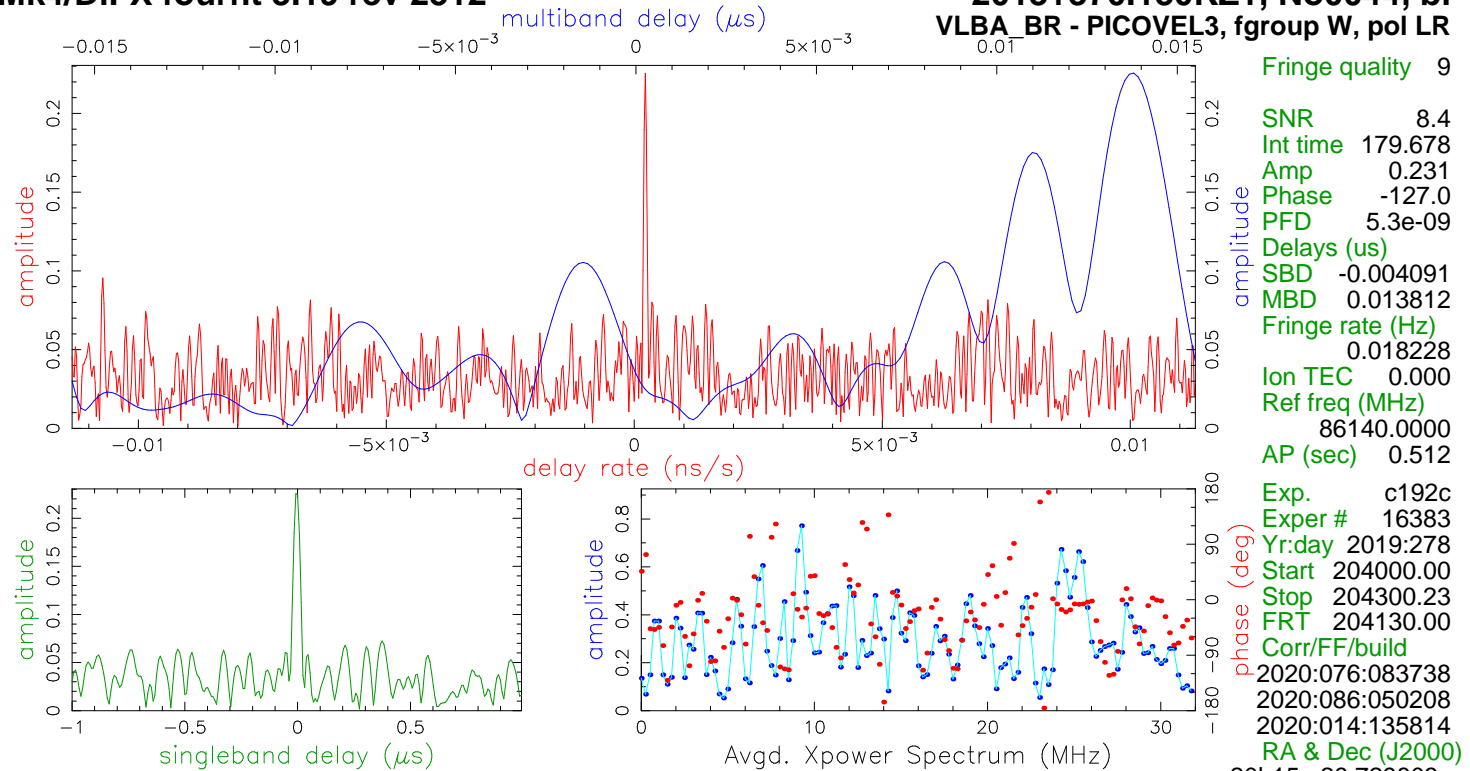
Group delay (usec)(sbd) -1.29101913779E+04 Apriori delay (usec) -1.29101714456E+04 Resid mbdelay (usec) 1.13177E-02 +/- 2.4E-05
 Sband delay (usec) -1.29101764731E+04 Apriori clock (usec) -7.3766649E-02 Resid sbdelay (usec) -5.02750E-03 +/- 3.8E-04
 Phase delay (usec) -1.29101714409E+04 Apriori clockrate (us/s) 1.1060491E-07 Resid phdelay (usec) 4.69131E-06 +/- 8.2E-08
 Delay rate (us/s) 1.10655001455E+00 Apriori rate (us/s) 1.10654979686E+00 Resid rate (us/s) 2.17692E-07 +/- 7.9E-10
 Total phase (deg) 30.0 Apriori accel (us/s/s) 7.83306531107E-05 Resid phase (deg) 145.5 +/- 2.5

RMS Theor. Amplitude 1.229 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 32.8 4.2 Search (1024X64) 1.208 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 19.0 7.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 39.2 5.1 Inc. seg. avg. 1.376 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 22.7 8.9 Inc. frq. avg. 1.465 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 i: az 275.9 el 76.6 pa 85.5 u,v (fr/asec) -7900.011 5725.087 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bi..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bi.W.40.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bi
VLBA_BR - PICOVEL3, fgroup W, pol LR



Fringe quality 9

SNR 8.4

Int time 179.678

Amp 0.231

Phase -127.0

PFD 5.3e-09

Delays (us)

SBD -0.004091

MBD 0.013812

Fringe rate (Hz) 0.018228

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 204000.00

Stop 204300.23

FRT 204130.00

Corr/FF/build

2020:076:083738

2020:086:050208

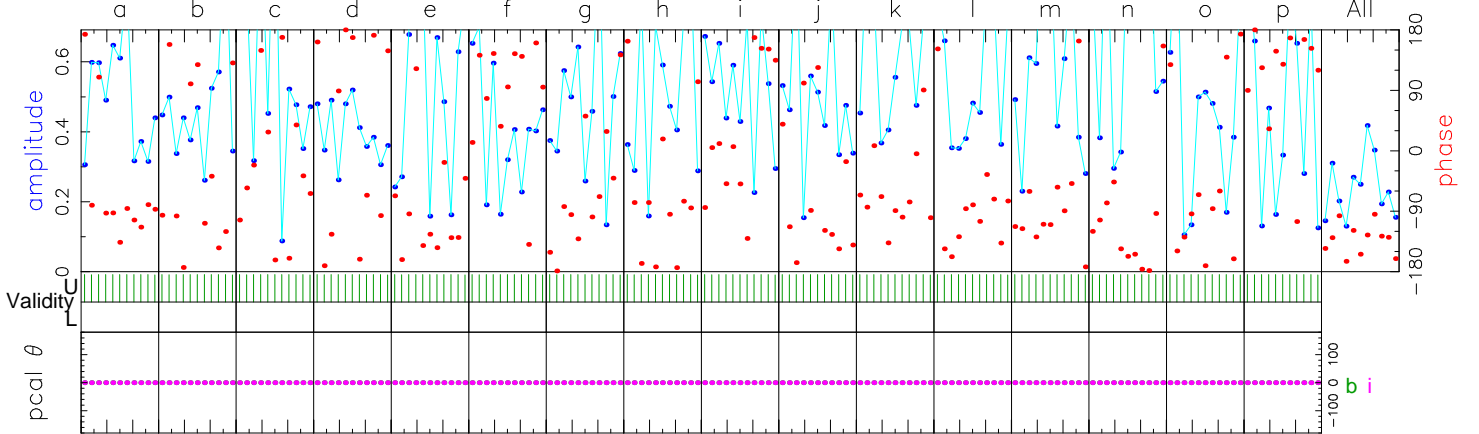
2020:014:135814

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	
	-104.7	-147.0	-115.6	-171.2	-121.1	123.8	-102.1	-121.9	-64.9	-132.8	-70.6	-103.5	-99.6	-141.2	-150.0	148.0	Phase	-127.0	
	0.4	0.2	0.2	0.3	0.3	0.2	0.3	0.2	0.1	0.2	0.4	0.4	0.5	0.5	0.3	0.3	Ampl.	0.3	
	118.9	120.6	156.4	170.4	193.0	208.4	97.5	124.4	69.7	17.1	127.1	127.7	128.9	128.6	145.1	249.7	Sbd box	128.5	
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	352/0	APs used		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
b:i	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
i	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids		
i	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks		
																	Chan ids		
																	Tracks		
Group delay (usec)(sbd)			-1.29101888839E+04					Apriori delay (usec)									1.38117E-02	+/-	1.3E-04
Sband delay (usec)			-1.29101755361E+04					Apriori clock (usec)									-4.09050E-03	+/-	2.0E-03
Phase delay (usec)			-1.29101714497E+04					Apriori clockrate (us/s)									-4.09496E-06	+/-	4.4E-07
Delay rate (us/s)			1.1065500847E+00					Apriori rate (us/s)									2.11609E-07	+/-	4.2E-09
Total phase (deg)								Apriori accel (us/s/s)									-127.0	+/-	13.6
ph/seg (deg)			RMS					Amplitude									0.231 +/- 0.027		
amp/seg (%)			22.7					Search (1024X64)									0.217		
ph/frq (deg)			37.5					Interp.									0.000		
amp/frq (%)			47.7					Inc. seg. avg.									0.224		
			54.1					Inc. frq. avg.									0.263		
b: az 57.4 el 21.3 pa -45.0								i: az 275.9 el 76.6 pa 85.5									u,v (fr/asec)		-7900.011 5725.087
Control file: cf_1234_gmva								Input file: /Exps/c192c/v2/1234/No0044/bi..130KZ1									Output file: /Exps/c192c/v2/1234/No0044/bi.W.56.130KZ1		

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

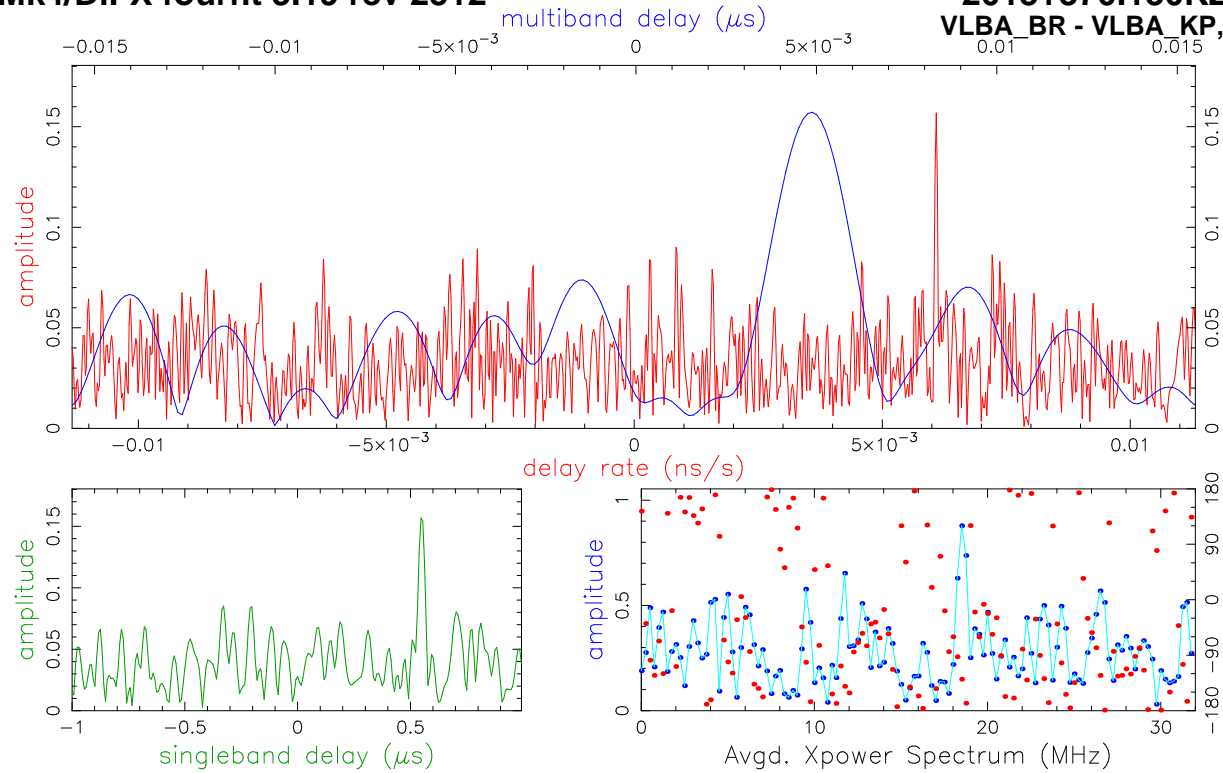
dr window (ns/s) -0.011 0.011

ion window (TEC) 0.00 0.00

simultaneous interpolator

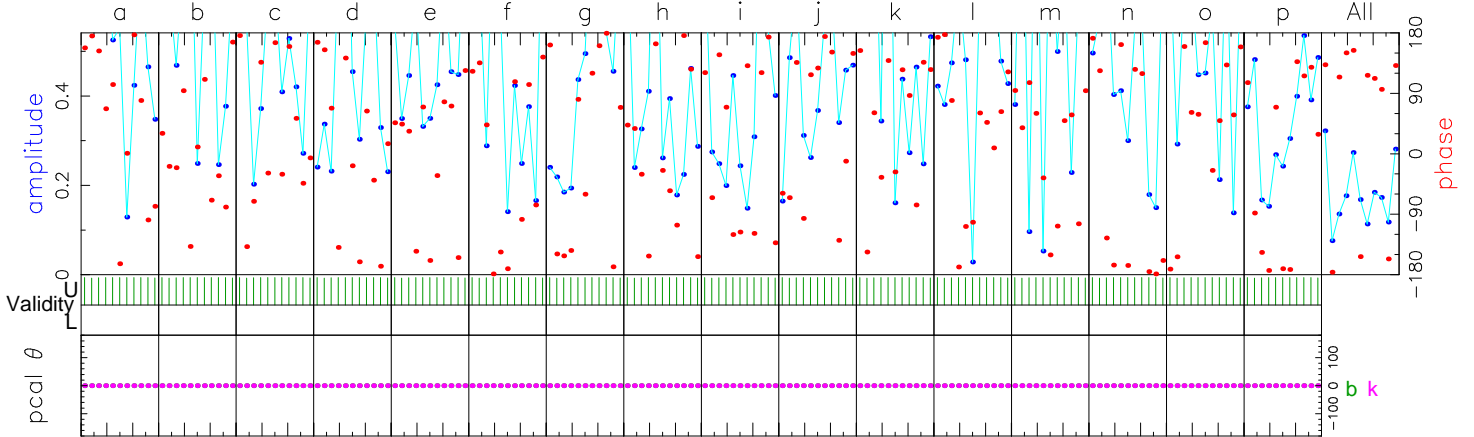
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bk
VLBA_BR - VLBA_KP, fgroup W, pol RR



Fringe quality 0
SNR 5.8
Int time 179.061
Amp 0.180
Phase 140.4
PFD 4.7e-01
Delays (us)
SBD 0.550184
MBD 0.004948
Fringe rate (Hz) 0.524772
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050205
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

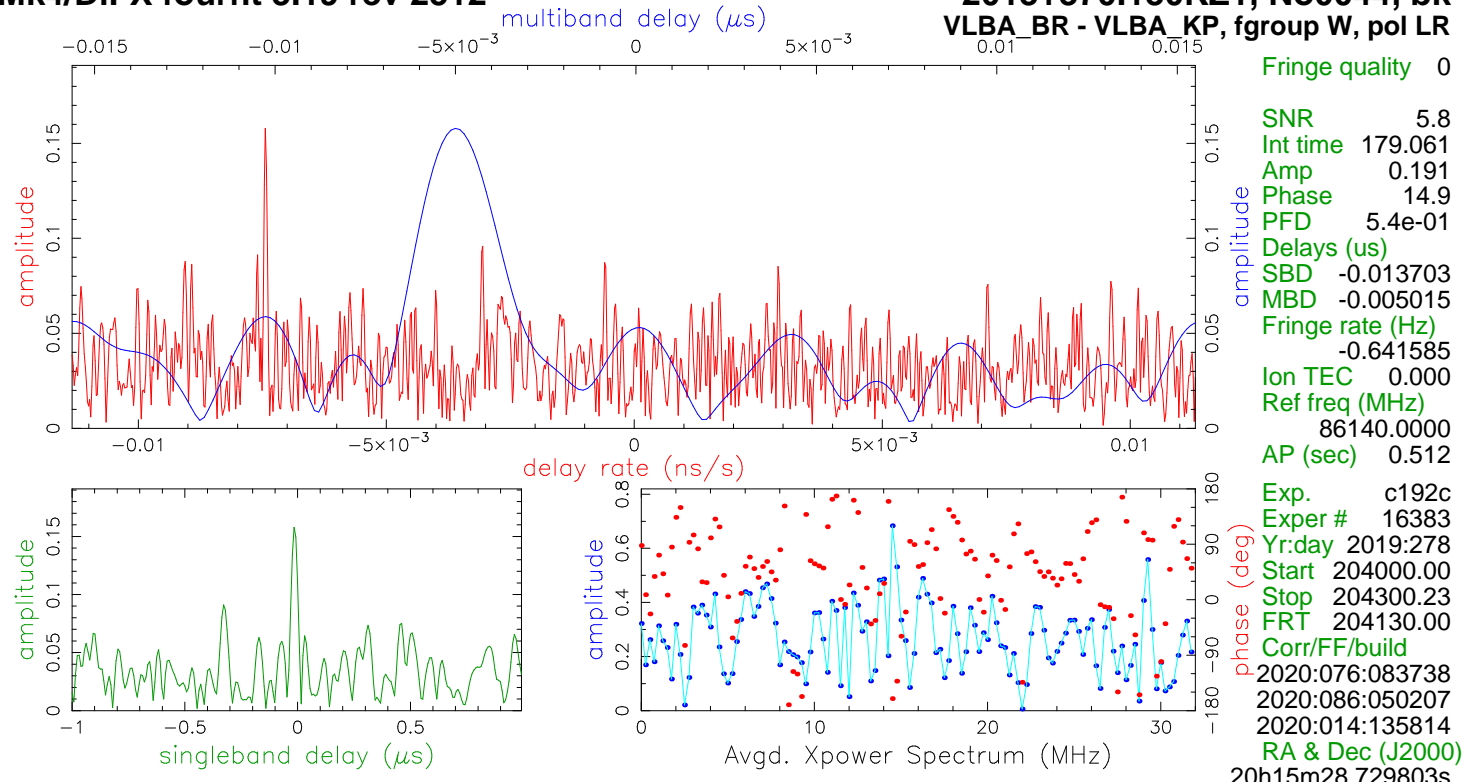


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	146.9	-35.1	-147.5	155.1	87.9	150.0	149.1	156.1	166.2	169.5	128.6	90.4	69.1	171.7	133.9	133.5		Phase	140.4
b	0.3	0.1	0.1	0.1	0.2	0.4	0.3	0.1	0.2	0.2	0.3	0.2	0.2	0.4	0.3	0.2		Ampl.	0.2
k	232.3	93.6	48.2	119.8	241.5	200.2	224.6	104.5	196.8	210.1	64.5	253.9	59.8	201.1	15.0	47.3		Sbd box	199.4
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		APs used	
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			
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)	1.23435253686E+03			Apriori delay (usec)			1.23381633858E+03			Resid mbdelay (usec)			4.94828E-03			+/- 1.8E-04			
Sband delay (usec)	1.23436652258E+03			Apriori clock (usec)			-2.2140607E-01			Resid sbdelay (usec)			5.50184E-01			+/- 2.9E-03			
Phase delay (usec)	1.23381634311E+03			Apriori clockrate (us/s)			-4.7816091E-08			Resid phdelay (usec)			4.52805E-06			+/- 6.3E-07			
Delay rate (us/s)	-2.33567130444E-01			Apriori rate (us/s)			-2.33573222526E-01			Resid rate (us/s)			6.09208E-06			+/- 6.1E-09			
Total phase (deg)	286.4			Apriori accel (us/s/s)			8.14123250481E-06			Resid phase (deg)			140.4			+/- 19.6			

ph/seg (deg) 36.7 32.5 Search (1024X64) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 48.6 56.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 59.6 39.2 Inc. seg. avg. 0.179 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 59.0 68.4 Inc. frq. avg. 0.178 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 57.4 el 21.3 pa -45.0 k: az 56.6 el 17.7 pa -63.1 u,v (fr/asec) 1689.576 1994.834 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bk..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bk.W.27.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bk
VLBA_BR - VLBA_KP, fgroup W, pol LR



Fringe quality 0

SNR 5.8

Int time 179.061

Amp 0.191

Phase 14.9

PFD 5.4e-01

Delays (us)

SBD -0.013703

MBD -0.005015

Fringe rate (Hz)

-0.641585

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 204000.00

Stop 204300.23

FRT 204130.00

Corr/FF/build

2020:076:083738

2020:086:050207

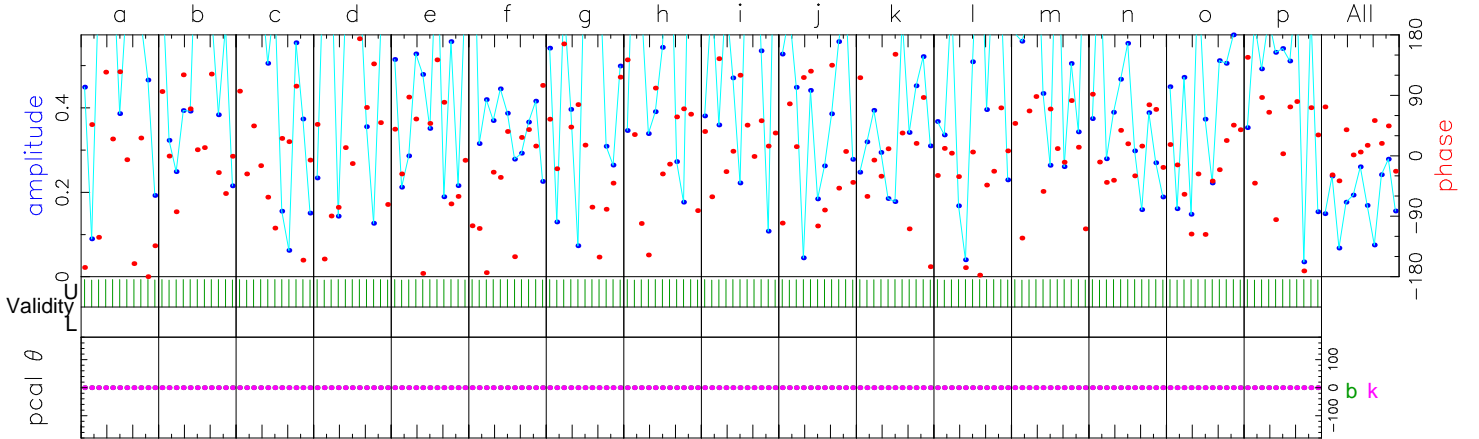
2020:014:135814

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		Chan ids
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd)		1.23381132353E+03																
Sband delay (usec)		1.23380263558E+03																
Phase delay (usec)		1.23381633907E+03																
Delay rate (us/s)		-2.33580670695E-01																
Total phase (deg)				160.9														
ph/seg (deg)	RMS	Theor.	Amplitude	0.191 +/- 0.033														
amp/seg (%)	33.7	32.7	Search (1024X64)	0.154														
ph/frq (deg)	44.5	57.0	Interp.	0.000														
amp/frq (%)	46.9	39.4	Inc. seg. avg.	0.189														
	59.4	68.8	Inc. frq. avg.	0.179														
b: az 57.4 el 21.3 pa -45.0			k: az 56.6 el 17.7 pa -63.1															
Control file: cf_1234_gmva			Input file: /Exps/c192c/v2/1234/No0044/bk..130KZ1															
			Output file: /Exps/c192c/v2/1234/No0044/bk.W.50.130KZ1															

Group delay (usec)(sbd) 1.23381132353E+03 Apriori delay (usec) 1.23381633858E+03 Resid mbdelay (usec) -5.01506E-03 +/- 1.9E-04

Sband delay (usec) 1.23380263558E+03 Apriori clock (usec) -2.2140607E-01 Resid sbdelay (usec) -1.37030E-02 +/- 3.0E-03

Phase delay (usec) 1.23381633907E+03 Apriori clockrate (us/s) -4.7816091E-08 Resid phdelay (usec) 4.81563E-07 +/- 6.4E-07

Delay rate (us/s) -2.33580670695E-01 Apriori rate (us/s) -2.33573222526E-01 Resid rate (us/s) -7.44817E-06 +/- 6.1E-09

Total phase (deg) 160.9 Apriori accel (us/s/s) 8.14123250481E-06 Resid phase (deg) 14.9 +/- 19.7

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

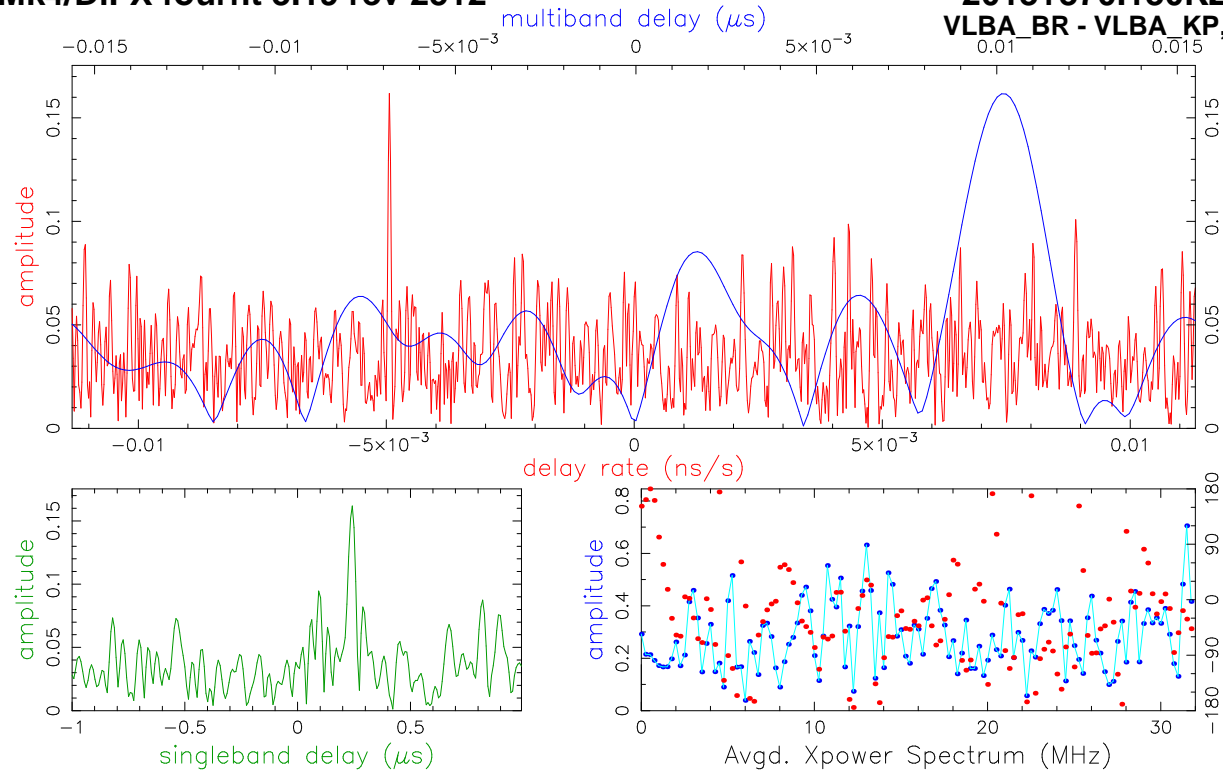
PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

Sample rate(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

simultaneous interpolator

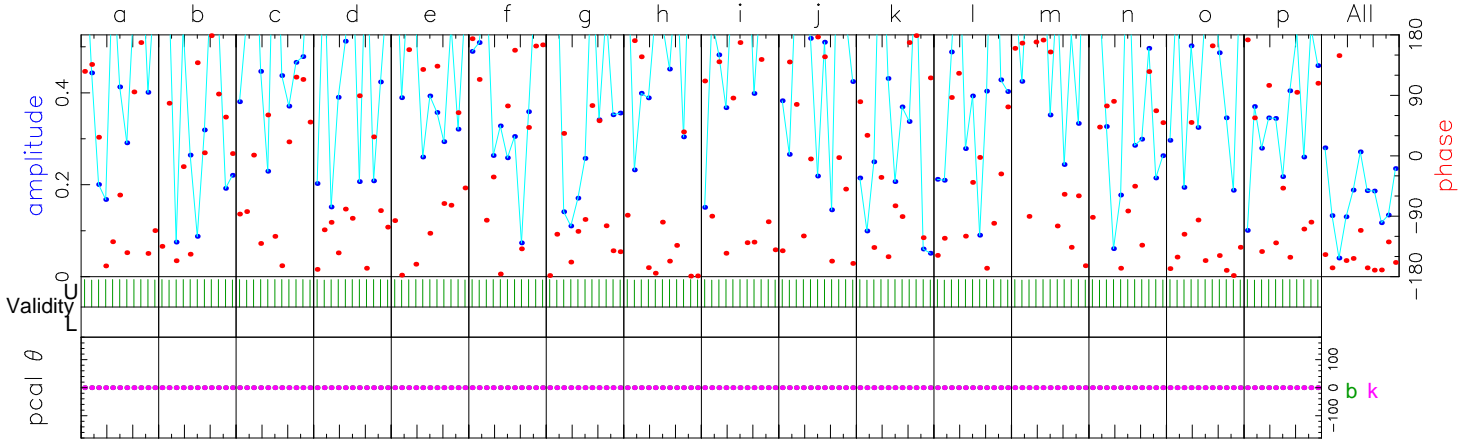


Fringe quality 0

SNR 5.9
Int time 179.061
Amp 0.175
Phase -151.7
PFD 3.2e-01
Delays (us)
SBD 0.241265
MBD 0.010188
Fringe rate (Hz)
-0.425109
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050210
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	
	-176.7	101.1	-54.6	-113.8	-131.6	164.0	-142.0	-157.0	-160.2	-97.6	-122.4	-133.6	-156.7	-55.7	-158.3	178.0	178.0	Phase -151.7	
	0.3	0.1	0.0	0.3	0.2	0.2	0.2	0.4	0.3	0.0	0.1	0.1	0.4	0.1	0.3	0.1	0.1	Ampl. 0.2	
	234.6	7.2	132.7	161.2	117.8	15.5	234.9	159.4	26.8	177.8	45.0	193.6	160.9	183.5	140.8	165.9	165.9	Sbd box 159.9	
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	352/0	APs used	
b	1000	1000	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	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	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	0:0	0:0	ManI PC
k	1000	1000	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	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

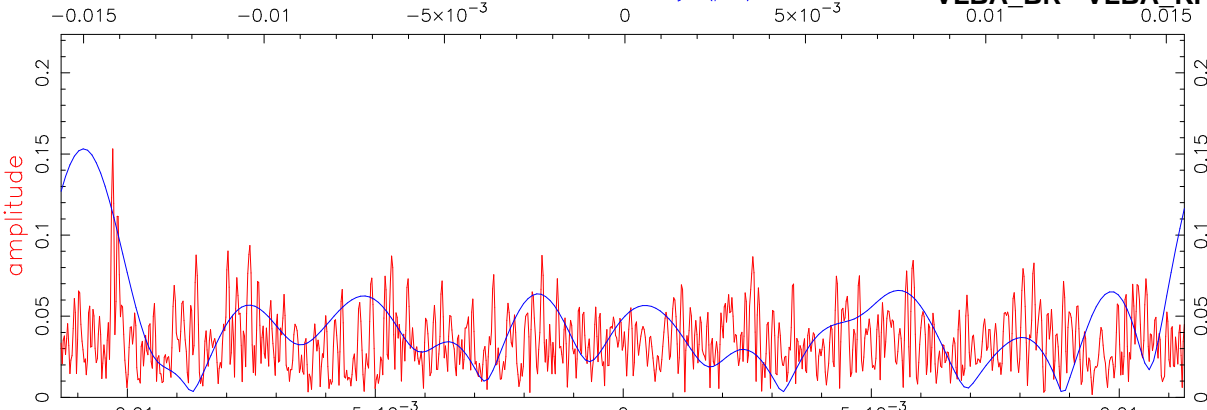
Group delay (usec)(sbd) 1.23404527645E+03 Apriori delay (usec) 1.23381633858E+03 Resid mbdelay (usec) 1.01879E-02 +/- 1.8E-04
 Sband delay (usec) 1.23405760308E+03 Apriori clock (usec) -2.2140607E-01 Resid sbdelay (usec) 2.41265E-01 +/- 2.9E-03
 Phase delay (usec) 1.23381633369E+03 Apriori clockrate (us/s) -4.7816091E-08 Resid phdelay (usec) -4.89328E-06 +/- 6.2E-07
 Delay rate (us/s) -2.33578157621E-01 Apriori rate (us/s) -2.33573222526E-01 Resid rate (us/s) -4.93510E-06 +/- 6.0E-09
 Total phase (deg) -5.7 Apriori accel (us/s/s) 8.14123250481E-06 Resid phase (deg) -151.7 +/- 19.3

RMS Theor. Amplitude 0.175 +/- 0.030 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 25.1 32.1 Search (1024X64) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 42.7 55.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 53.4 38.7 Inc. seg. avg. 0.162 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 77.3 67.5 Inc. frq. avg. 0.166 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

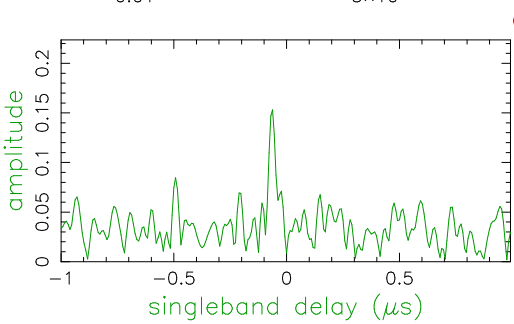
b: az 57.4 el 21.3 pa -45.0 k: az 56.6 el 17.7 pa -63.1 u,v (fr/asec) 1689.576 1994.834 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bk..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bk.W.75.130KZ1

multiband delay (μ s)

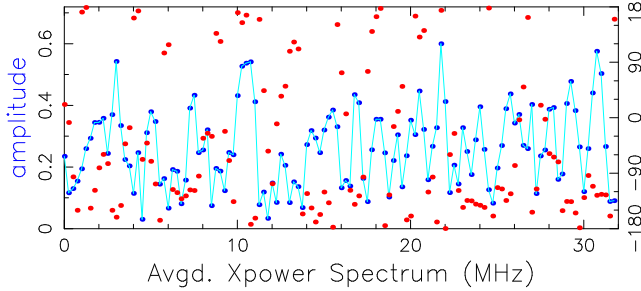
Fringe quality 0



SNR 5.7
Int time 179.061
Amp 0.224
Phase -69.0
PFD 8.3e-01
Delays (us)
SBD -0.065012
MBD -0.015025
Fringe rate (Hz)
-0.889187
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

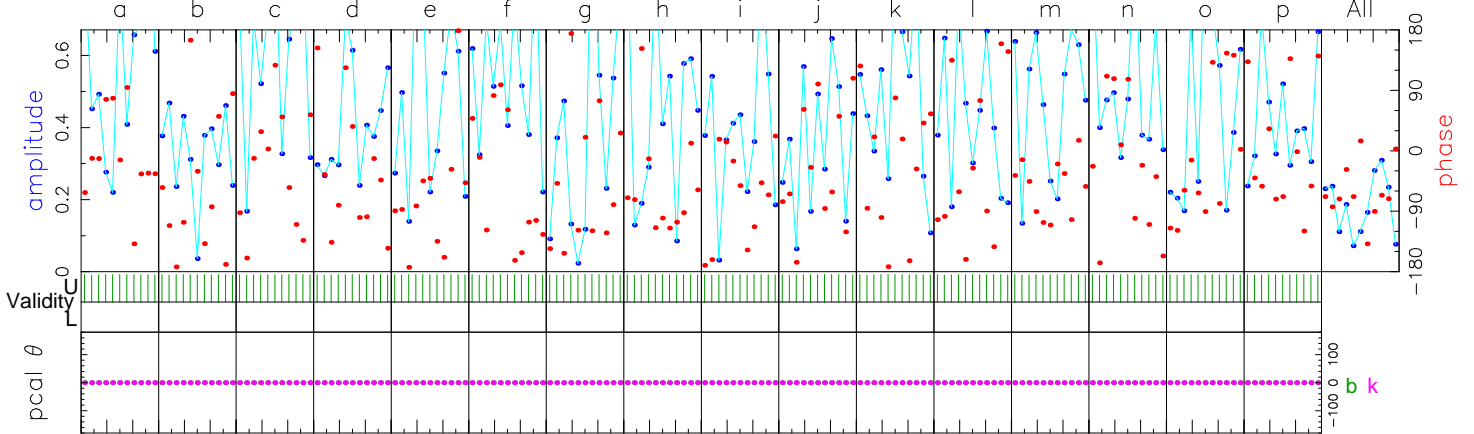


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050202
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
	-28.6	-127.4	-49.6	-89.0	-86.9	-151.1	-90.5	-80.8	-68.5	10.5	19.9	-106.7	-57.1	-58.3	-72.0	-52.4	Phase	-69.0
	0.5	0.2	0.2	0.1	0.4	0.2	0.2	0.5	0.3	0.1	0.1	0.3	0.5	0.2	0.2	0.2	Ampl.	0.2
	72.4	103.0	206.3	236.0	119.5	92.8	138.0	120.7	251.4	227.1	172.4	185.2	120.7	245.1	64.8	205.8	Sbd box	120.7
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	
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids	

Group delay (usec)(sbd)	1.23373881376E+03	Apriori delay (usec)	1.23381633858E+03	Resid mbdelay (usec)	-1.50248E-02	+/-	1.9E-04
Sband delay (usec)	1.23375132708E+03	Apriori clock (usec)	-2.2140607E-01	Resid sbdelay (usec)	-6.50115E-02	+/-	3.0E-03
Phase delay (usec)	1.23381633636E+03	Apriori clockrate (us/s)	-4.7816091E-08	Resid phdelay (usec)	-2.22604E-06	+/-	6.5E-07
Delay rate (us/s)	-2.33583545101E-01	Apriori rate (us/s)	-2.33573222526E-01	Resid rate (us/s)	-1.03226E-05	+/-	6.3E-09
Total phase (deg)	77.0	Apriori accel (us/s/s)	8.14123250481E-06	Resid phase (deg)	-69.0	+/-	20.2

ph/seg (deg)	41.9	RMS	41.9	Theor.	33.5	Amplitude	0.224 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5				
amp/seg (%)	53.9	Search (1024X64)	0.150	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		
ph/frq (deg)	46.0	Inc. seg. avg.	0.226	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
amp/frq (%)	67.4	Inc. frq. avg.	0.215	u,v (fr/asec)	1689.576 1994.834	simultaneous interpolator									

b: az 57.4 el 21.3 pa -45.0

k: az 56.6 el 17.7 pa -63.1

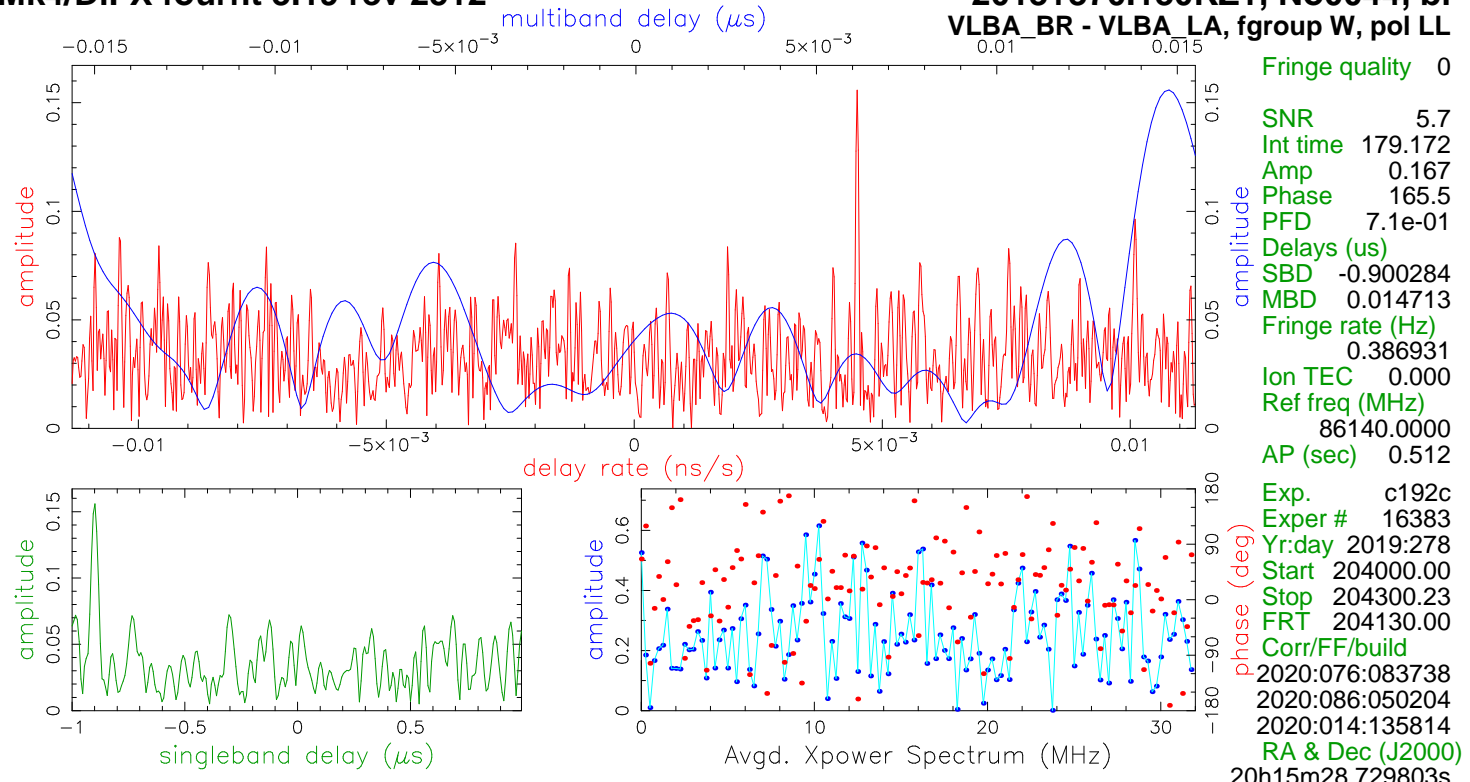
u,v (fr/asec) 1689.576 1994.834

simultaneous interpolator

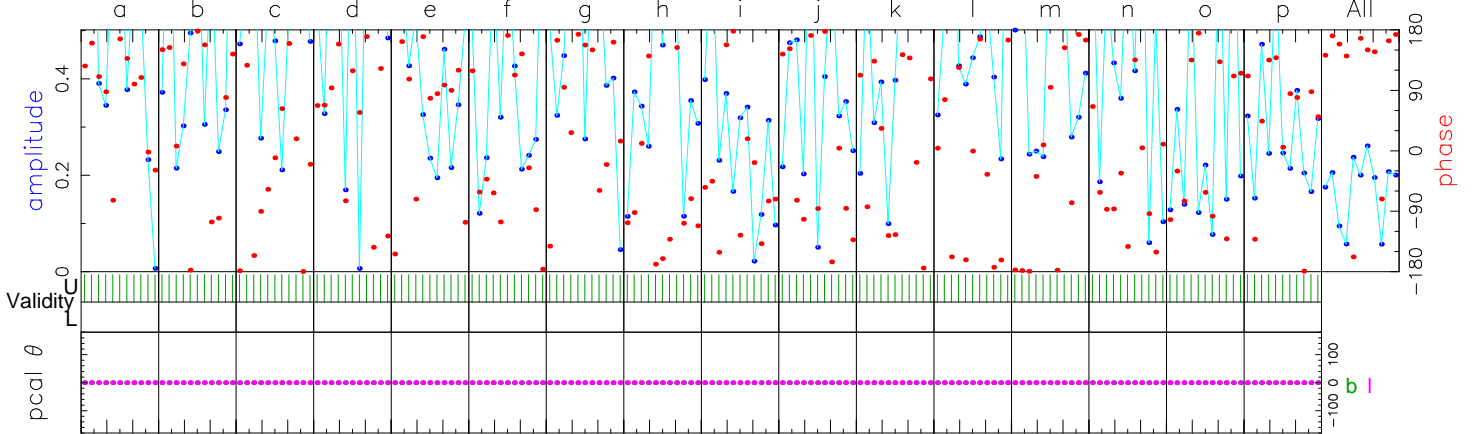
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bk..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bk.W.8.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bl
VLBA_BR - VLBA_LA, 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				
	135.1	164.7	-160.1	139.2	156.9	-159.4	160.6	-143.1	-81.2	-157.9	153.6	172.6	165.4	-68.7	134.2	95.3	Phase	165.5				
	0.3	0.4	0.1	0.4	0.2	0.1	0.2	0.3	0.1	0.2	0.2	0.2	0.3	0.1	0.2	0.2	Ampl.	0.2				
	15.0	15.0	147.1	188.1	152.0	170.0	5.8	60.4	123.2	55.9	86.0	34.0	189.1	214.4	84.8	218.2	Sbd box	13.8				
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					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000						
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
																	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-7.76470493694E+02														Apriori delay (usec)	-7.75578956961E+02	Resid mbdelay (usec)	1.47133E-02	+/-	1.9E-04
Sband delay (usec)			-7.76479240961E+02														Apriori clock (usec)	1.4524366E-01	Resid sbdelay (usec)	-9.00284E-01	+/-	3.0E-03
Phase delay (usec)			-7.75578951624E+02														Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	5.33655E-06	+/-	6.4E-07
Delay rate (us/s)			-1.85215675695E-01														Apriori rate (us/s)	-1.85220167583E-01	Resid rate (us/s)	4.49189E-06	+/-	6.2E-09
Total phase (deg)				38.5													Apriori accel (us/s/s)	1.50506735196E-05	Resid phase (deg)	165.5	+/-	20.0

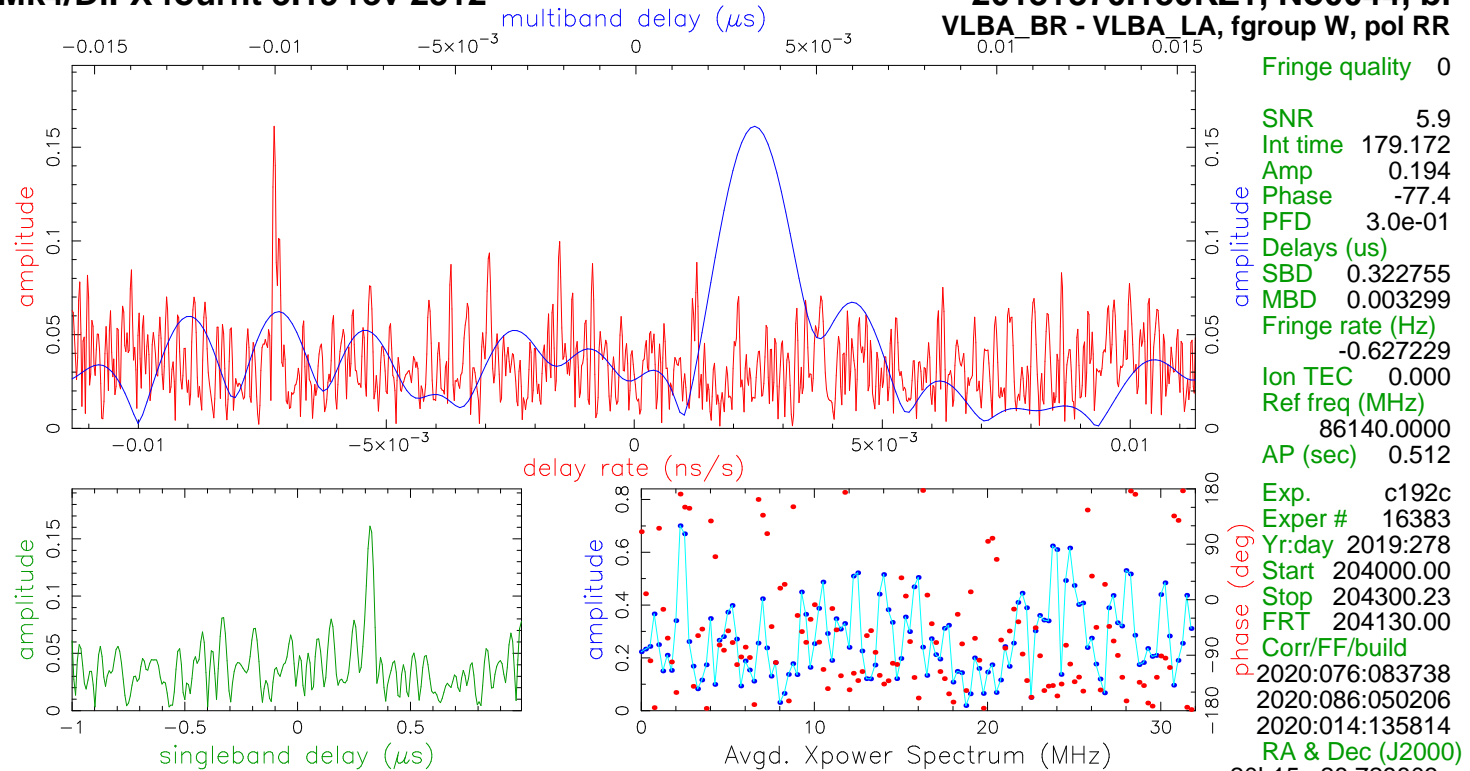
	RMS	Theor.	Amplitude	0.167 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	40.9	33.1	Search (1024X64)	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	43.8	57.9	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.016 0.016
ph/frq (deg)	55.3	40.0	Inc. seg. avg.	0.157	Sample rate(MSamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	60.9	69.8	Inc. frq. avg.	0.175	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 l: az 60.0 el 23.5 pa -62.1 u,v (fr/asec) 1346.178 2019.470 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bl..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bl.W.24.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bl
VLBA_BR - VLBA_LA, fgroup W, pol RR



Fringe quality 0

SNR 5.9

Int time 179.172

Amp 0.194

Phase -77.4

PF 3.0e-01

Delays (us)

SBD 0.322755

MBD 0.003299

Fringe rate (Hz) -0.627229

Ion TEC 0.000

Ref freq (MHz) 86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:278

Start 204000.00

Stop 204300.23

FRT 204130.00

Corr/FF/build

2020:076:083738

2020:086:050206

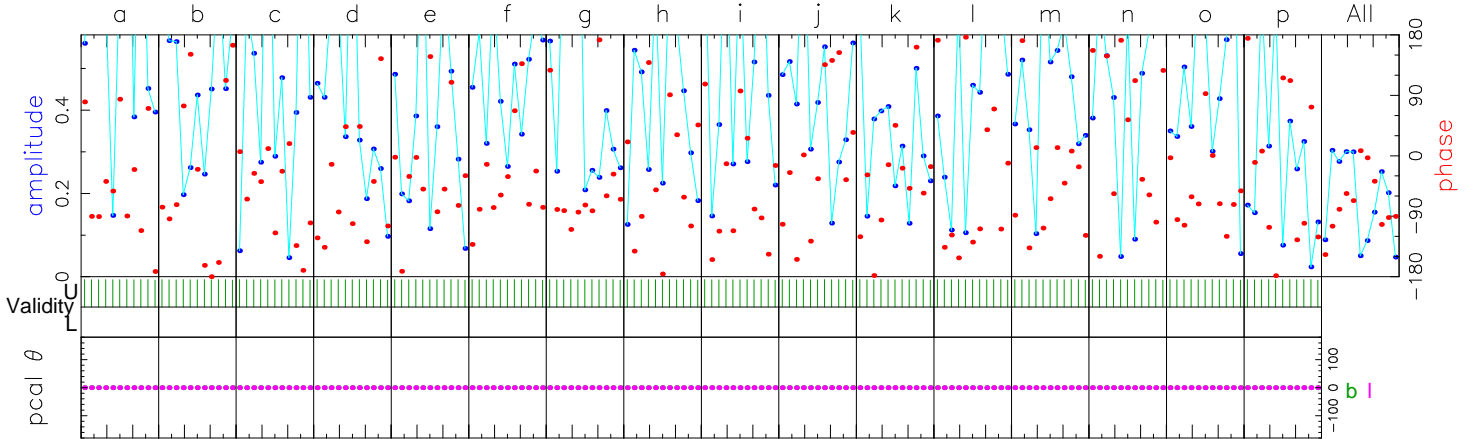
2020:014:135814

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					
	-81.3	-139.7	-63.4	-81.5	-40.5	-60.6	-86.8	-52.8	-68.9	-29.3	-80.8	-123.5	-68.3	-147.5	-71.0	-139.4		Phase -77.4					
	0.3	0.2	0.3	0.3	0.3	0.3	0.4	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.4	0.1	Ampl. 0.2					
	20.9	165.5	26.3	77.3	130.3	220.1	179.0	212.5	148.8	21.5	93.7	162.0	189.6	47.6	250.0	143.7		Sbd box 170.3					
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase					
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC					
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC amp					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000							
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
																		Chan ids					
																		Tracks					
Group delay (usec)(sbd)			-7.75263158264E+02															Apriori delay (usec)	-7.75578956961E+02	Resid mbdelay (usec)	3.29870E-03	+/-	1.8E-04
Sband delay (usec)			-7.75256202461E+02															Apriori clock (usec)	1.4524366E-01	Resid sbdelay (usec)	3.22755E-01	+/-	2.9E-03
Phase delay (usec)			-7.75578959458E+02															Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	-2.49744E-06	+/-	6.2E-07
Delay rate (us/s)			-1.85227449095E-01															Apriori rate (us/s)	-1.85220167583E-01	Resid rate (us/s)	-7.28151E-06	+/-	6.0E-09
Total phase (deg)																		Apriori accel (us/s/s)	1.50506735196E-05	Resid phase (deg)	-77.4	+/-	19.3

ph/seg (deg) 44.2 32.0 Search (1024X64) 0.159 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 63.6 55.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 37.6 38.6 Inc. seg. avg. 0.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

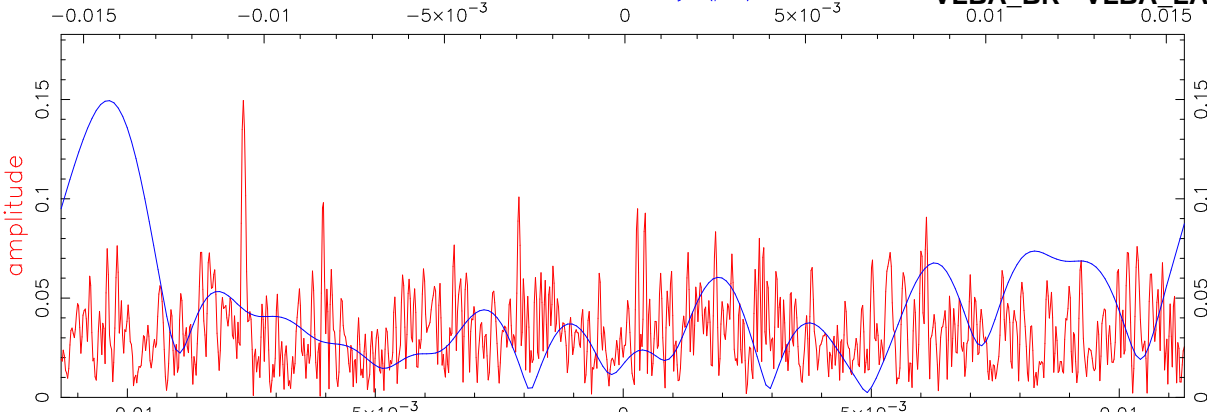
amp/frq (%) 55.4 67.3 Inc. frq. avg. 0.177 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

b: az 57.4 el 21.3 pa -45.0 l: az 60.0 el 23.5 pa -62.1 u,v (fr/asec) 1346.178 2019.470 ion window (TEC) 0.00 0.00 simultaneous interpolator

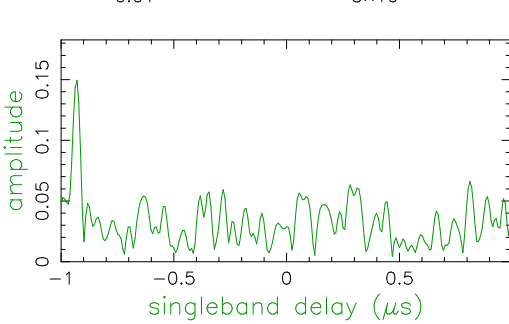
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bl..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bl.W.39.130KZ1

multiband delay (μ s)

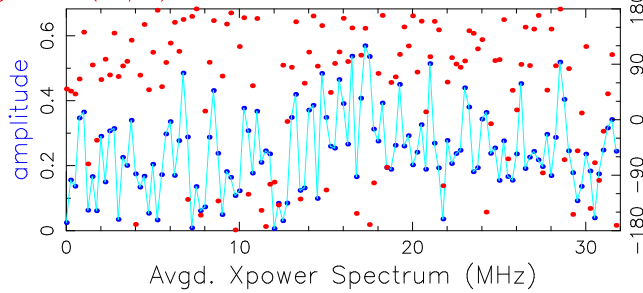
Fringe quality 0



SNR 5.5
Int time 179.172
Amp 0.183
Phase -114.5
PFD 9.9e-01
Delays (us)
SBD -0.931651
MBD -0.014299
Fringe rate (Hz)
-0.660639
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

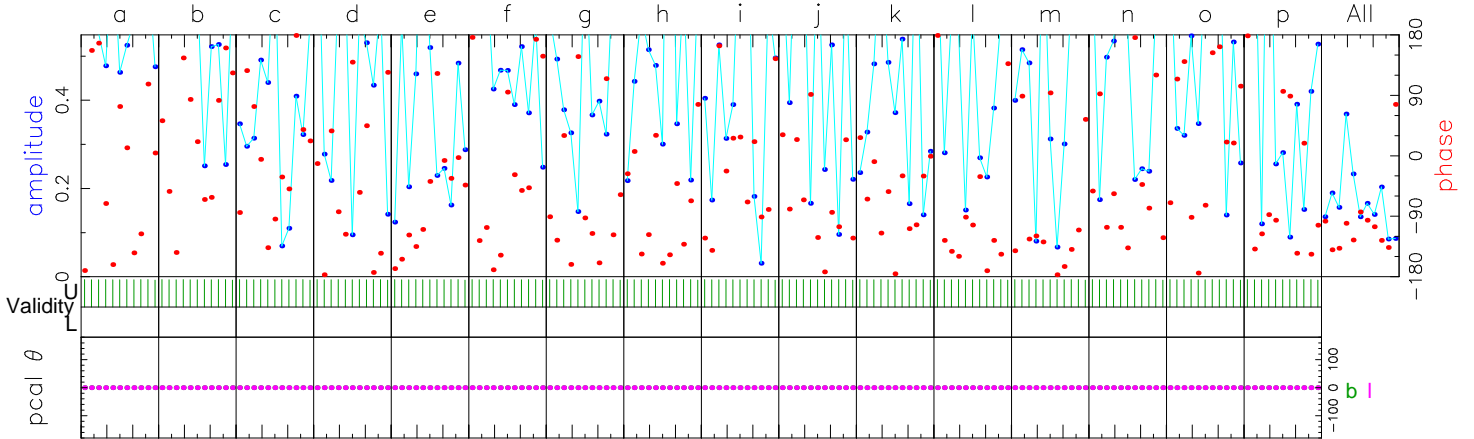


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050210
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



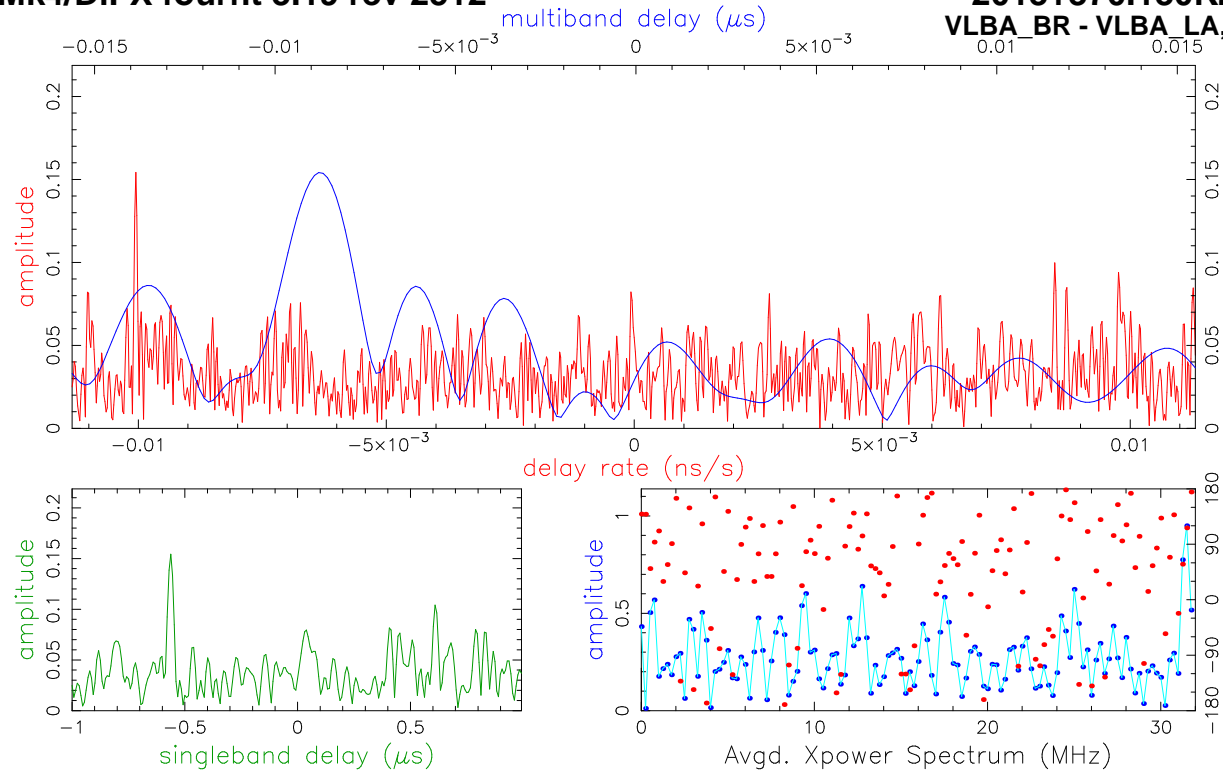
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All				
	-176.0	86.1	-47.3	-83.2	-90.4	-139.7	-110.6	-123.1	-53.7	-40.1	-69.5	-147.2	-151.8	-103.2	-157.1	-127.2	Phase	-114.5				
	0.3	0.1	0.1	0.2	0.2	0.3	0.3	0.2	0.1	0.3	0.3	0.4	0.2	0.3	0.1	0.4	Ampl.	0.2				
	244.5	216.5	246.6	111.3	246.1	218.3	9.3	196.9	120.3	79.3	8.3	8.8	206.5	63.9	135.0	92.5	Sbd box	9.7				
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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC					
l	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					
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
b	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					
Group delay (usec)(sbd)			-7.76499506046E+02														Apriori delay (usec)	-7.75578956961E+02	Resid mbdelay (usec)	-1.42991E-02	+/-	2.0E-04
Sband delay (usec)			-7.76510607461E+02														Apriori clock (usec)	1.4524366E-01	Resid sbdelay (usec)	-9.31651E-01	+/-	3.1E-03
Phase delay (usec)			-7.75578960653E+02														Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	-3.69191E-06	+/-	6.7E-07
Delay rate (us/s)			-1.85227836947E-01														Apriori rate (us/s)	-1.85220167583E-01	Resid rate (us/s)	-7.66936E-06	+/-	6.5E-09
Total phase (deg)					-241.4												Apriori accel (us/s/s)	1.50506735196E-05	Resid phase (deg)	-114.5	+/-	20.8

ph/seg (deg) 53.9 34.5 Search (1024X64) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 52.4 60.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 60.8 41.7 Inc. seg. avg. 0.178 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 60.8 72.7 Inc. frq. avg. 0.195 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 57.4 el 21.3 pa -45.0 l: az 60.0 el 23.5 pa -62.1 u,v (fr/asec) 1346.178 2019.470 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bl..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bl.W.67.130KZ1

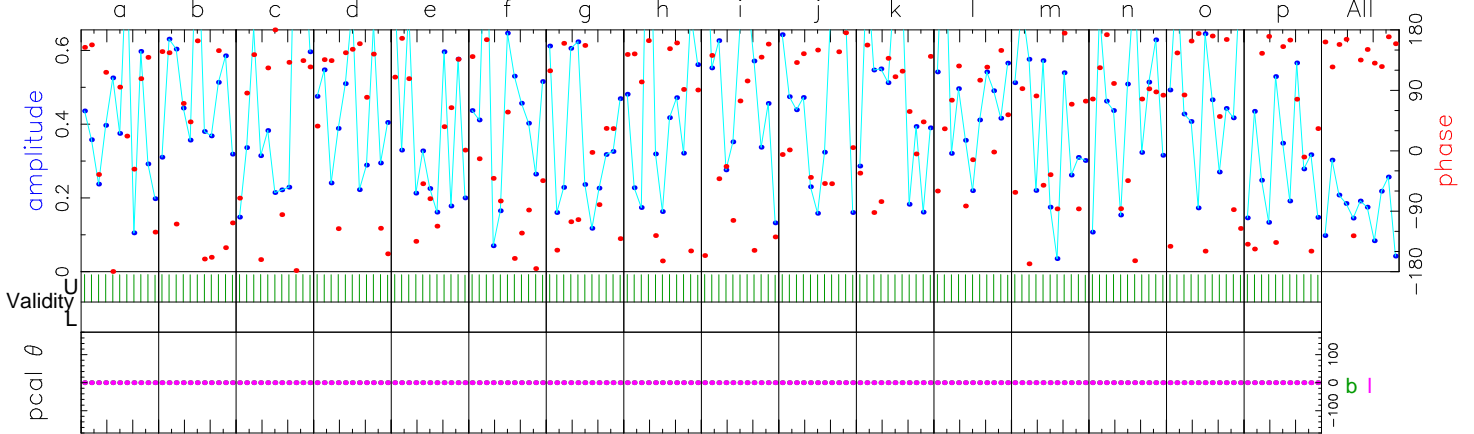
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bl
VLBA_BR - VLBA_LA, fgroup W, pol RL



Fringe quality 0
SNR 5.6
Int time 179.172
Amp 0.219
Phase 151.4
PFD 8.6e-01
Delays (us)
SBD -0.563113
MBD -0.008752
Fringe rate (Hz)
-0.867530
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050211
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		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

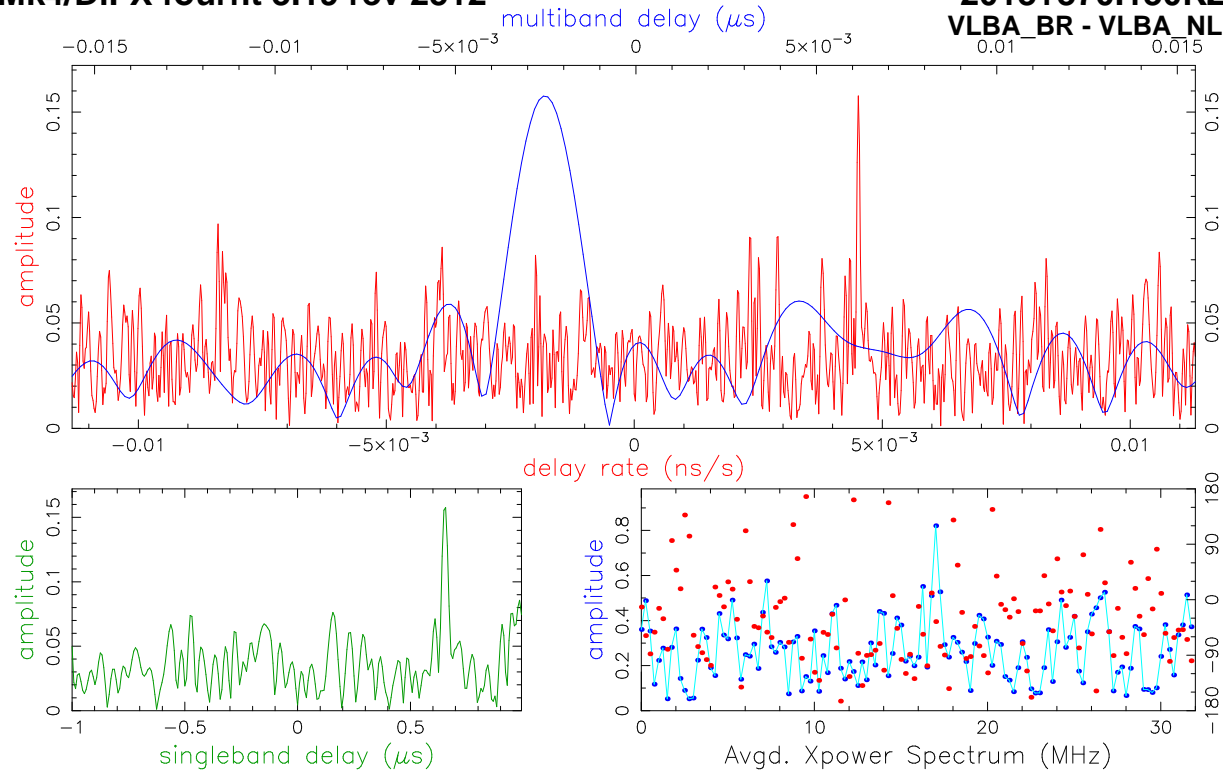
Group delay (usec)(sbd)	-7.76150208864E+02	Apriori delay (usec)	-7.75578956961E+02	Resid mbdelay (usec)	-8.75190E-03	+/-	1.9E-04
Sband delay (usec)	-7.76142069961E+02	Apriori clock (usec)	1.4524366E-01	Resid sbdelay (usec)	-5.63113E-01	+/-	3.0E-03
Phase delay (usec)	-7.75578952077E+02	Apriori clockrate (us/s)	1.0907692E-07	Resid phdelay (usec)	4.88361E-06	+/-	6.5E-07
Delay rate (us/s)	-1.85230238749E-01	Apriori rate (us/s)	-1.85220167583E-01	Resid rate (us/s)	-1.00712E-05	+/-	6.3E-09
Total phase (deg)	24.5	Apriori accel (us/s/s)	1.50506735196E-05	Resid phase (deg)	151.4	+/-	20.3

ph/seg (deg)	29.5	RMS	70.6	Theor.	33.6	Amplitude	0.219 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	49.1	Search (1024X64)	0.152	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000				
ph/frq (deg)	47.2	Inc. seg. avg.	0.210	Inc. frq. avg.	0.216	Bits/sample:	2x2	SampCntNorm:	enabled	mb window (us)	-0.016	0.016		
amp/frq (%)	70.6	Inc. frq. avg.	0.216	Sample rate (MSamp/s):	64	Data rate (Mb/s):	2048	nlags:	128	t_cohere	infinite	ion window (TEC)	0.00	0.00

b: az 57.4 el 21.3 pa -45.0 l: az 60.0 el 23.5 pa -62.1 u,v (fr/asec) 1346.178 2019.470 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bl..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bl.W.83.130KZ1

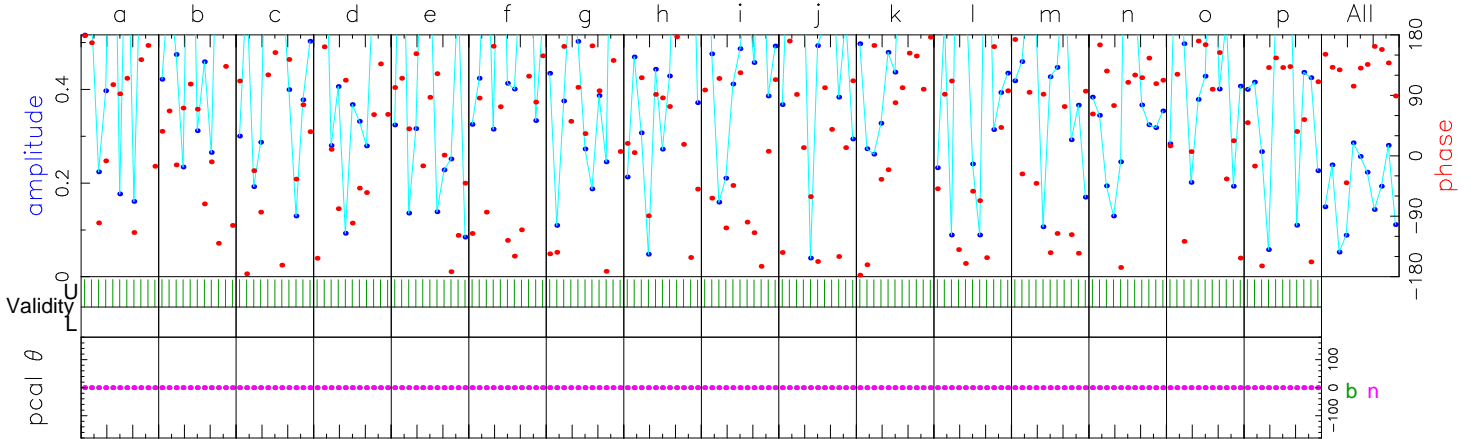
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bn
VLBA_BR - VLBA_NL, fgroup W, pol LL



Fringe quality 0
SNR 5.9
Int time 178.759
Amp 0.172
Phase 132.5
PFD 3.9e-01
Delays (us)
SBD 0.652792
MBD -0.002541
Fringe rate (Hz) 0.389184
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050204
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

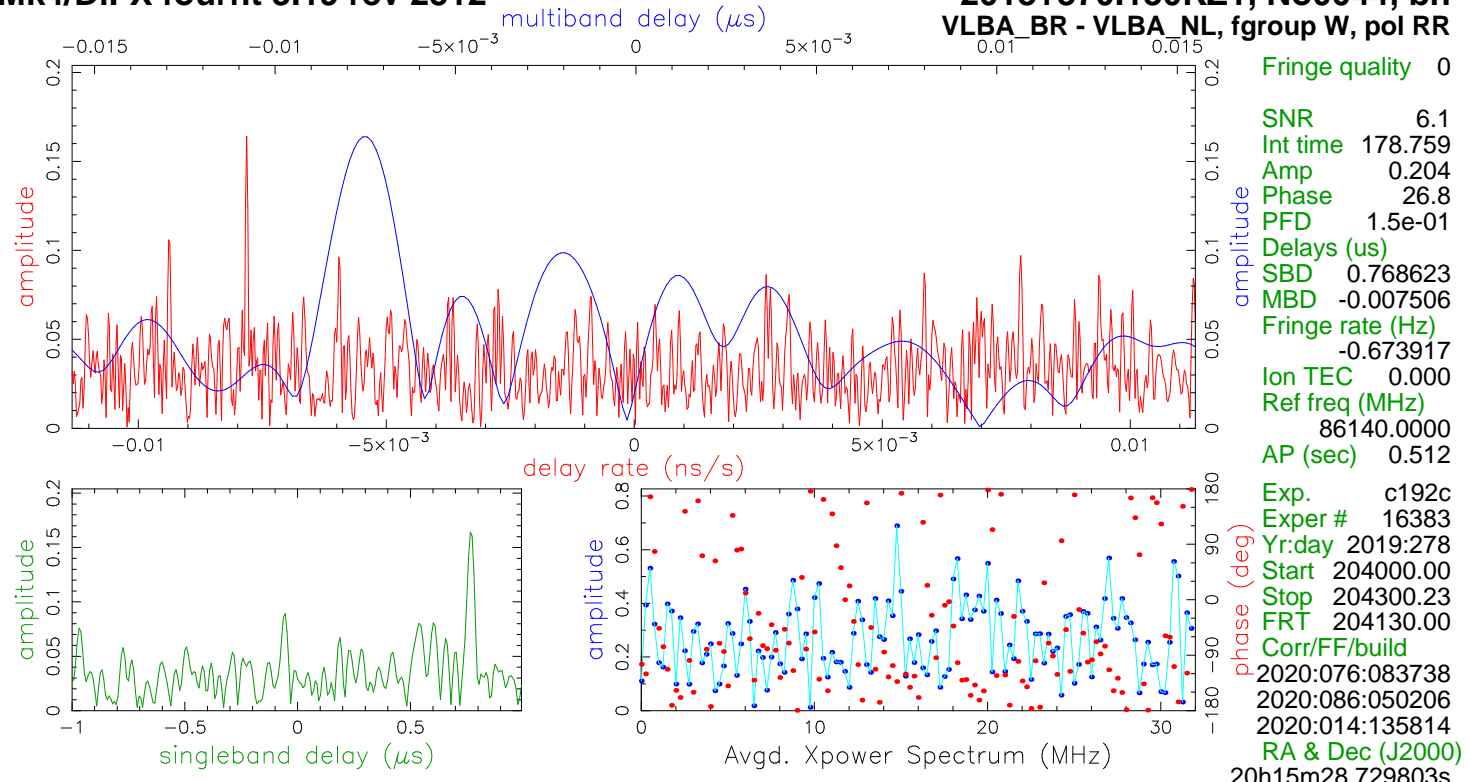


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
U/L	131.7	95.7	140.3	168.0	97.0	160.6	115.2	108.7	-168.1	98.9	137.0	-168.6	-170.5	118.1	136.7	120.6	132.5	Phase
b	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.1	0.1	0.2	0.3	0.2	0.0	0.4	0.2	0.2	0.2	Ampl.
n	161.0	199.2	252.6	217.7	216.2	175.2	139.2	248.0	64.1	232.0	111.4	120.9	149.9	212.2	81.9	35.8	212.6	Sbd box
b	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
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC
n	1000	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	1000	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Tracks
Group delay (usec)(sbd)	-4.92802466516E+03			Apriori delay (usec)			-4.92867837444E+03			Resid mbdelay (usec)			-2.54072E-03			+/- 1.8E-04		
Sband delay (usec)	-4.92802558244E+03			Apriori clock (usec)			-2.7156006E+01			Resid sbdelay (usec)			6.52792E-01			+/- 2.9E-03		
Phase delay (usec)	-4.92867837017E+03			Apriori clockrate (us/s)			-3.7661858E-07			Resid phdelay (usec)			4.27379E-06			+/- 6.3E-07		
Delay rate (us/s)	-5.69556350254E-02			Apriori rate (us/s)			-5.69601530680E-02			Resid rate (us/s)			4.51804E-06			+/- 6.0E-09		
Total phase (deg)	69.7			Apriori accel (us/s/s)			3.14309785430E-05			Resid phase (deg)			132.5			+/- 19.5		

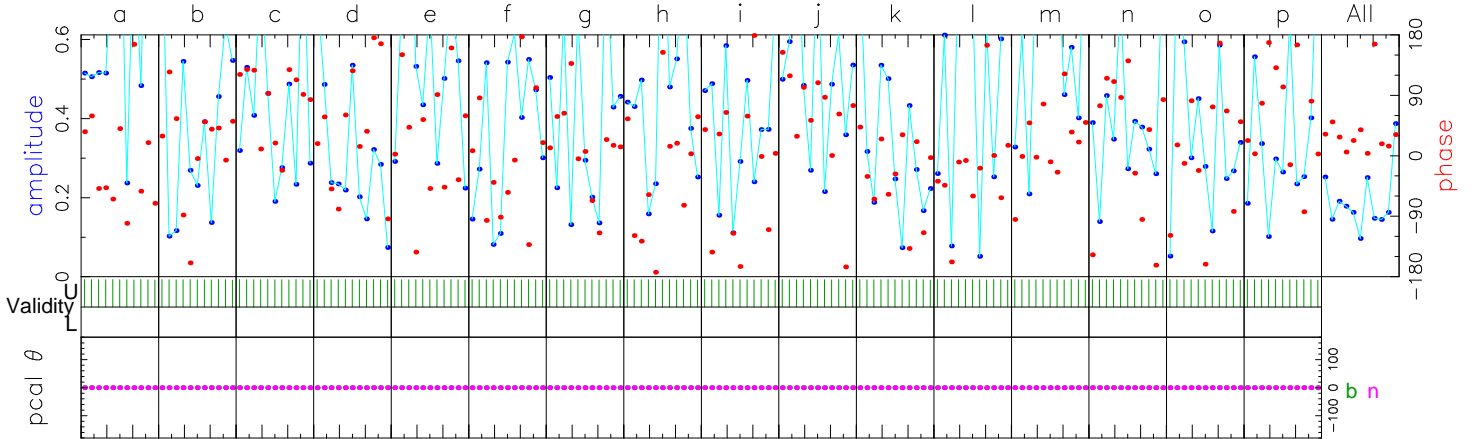
ph/seg (deg) 56.0 32.3 Search (1024X64) 0.156 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 49.5 56.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.2 38.9 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 50.7 67.9 Inc. frq. avg. 0.154 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 57.4 el 21.3 pa -45.0 n: az 69.5 el 36.3 pa -61.3 u,v (fr/asec) 434.681 2429.105 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bn..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bn.W.23.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bn
VLBA_BR - VLBA_NL, fgroup W, pol RR



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	
	-11.1	22.2	89.0	57.0	32.3	-55.8	19.6	-45.0	29.3	82.6	-10.7	-25.8	19.7	100.9	22.6	29.8	26.8	Phase	
	0.4	0.3	0.4	0.1	0.1	0.1	0.4	0.1	0.1	0.4	0.2	0.4	0.5	0.2	0.2	0.2	0.2	Ampl.	
	73.2	228.4	86.3	121.9	52.6	154.4	228.4	121.6	57.9	22.4	38.6	228.4	227.5	143.9	234.5	129.7	227.4	Sbd box	
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	
b	1000	1000	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	1000	1000	PC freqs
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
b:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	ManI PC
b	1000	1000	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	1000	1000	PC amp
b	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
																			Tracks
Group delay (usec)(sbd)	-4.92790463056E+03			Apriori delay (usec)			-4.92867837444E+03			Resid mbdelay (usec)			-7.50612E-03			+/- 1.8E-04			
Sband delay (usec)	-4.92790975194E+03			Apriori clock (usec)			-2.7156006E+01			Resid sbdelay (usec)			7.68623E-01			+/- 2.8E-03			
Phase delay (usec)	-4.92867837358E+03			Apriori clockrate (us/s)			-3.7661858E-07			Resid phdelay (usec)			8.65753E-07			+/- 6.1E-07			
Delay rate (us/s)	-5.69679765715E-02			Apriori rate (us/s)			-5.69601530680E-02			Resid rate (us/s)			-7.82350E-06			+/- 5.8E-09			
Total phase (deg)	-36.0			Apriori accel (us/s/s)			3.14309785430E-05			Resid phase (deg)			26.8			+/- 18.8			

ph/seg (deg) 44.0 31.3 Search (1024X64) 0.158 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

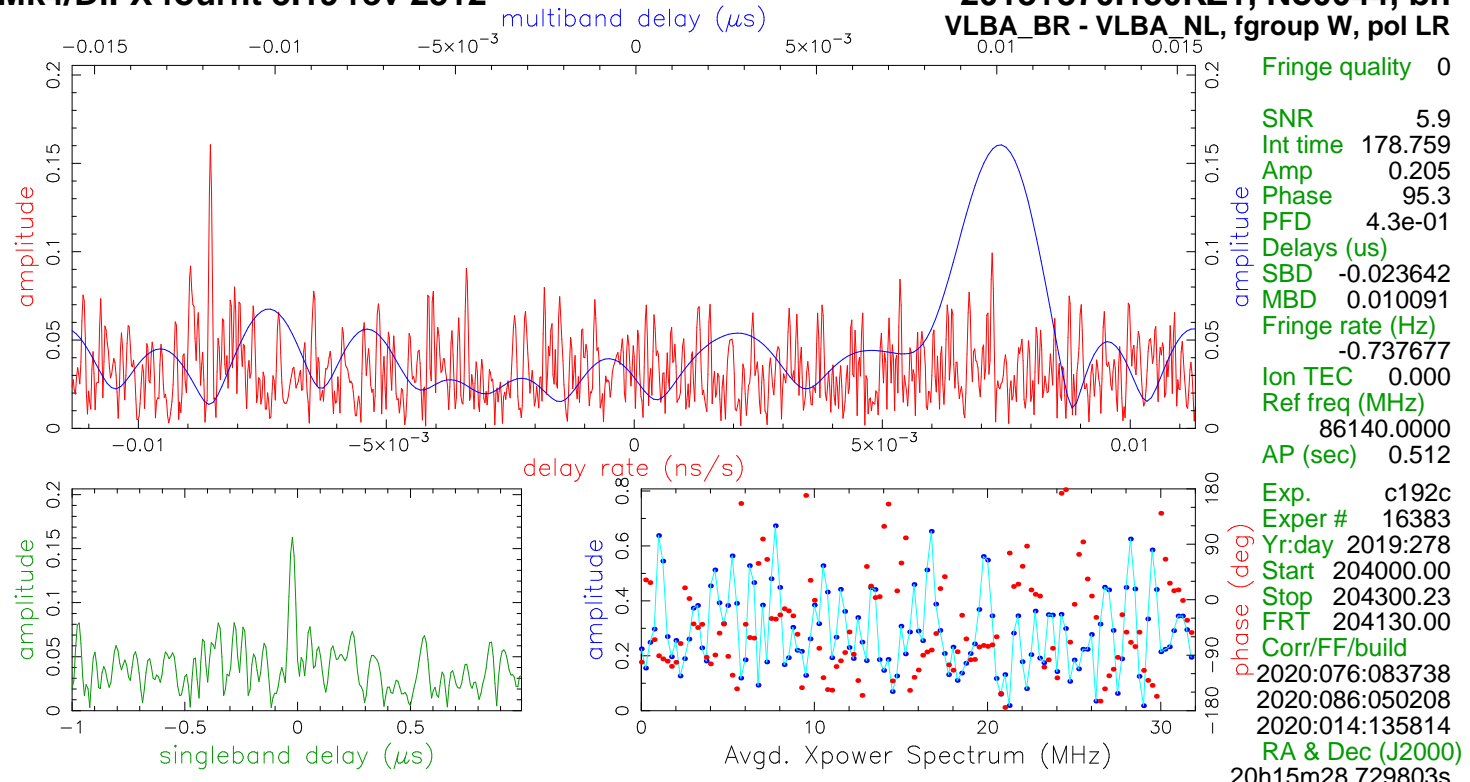
amp/seg (%) 47.8 54.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 47.2 37.7 Inc. seg. avg. 0.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

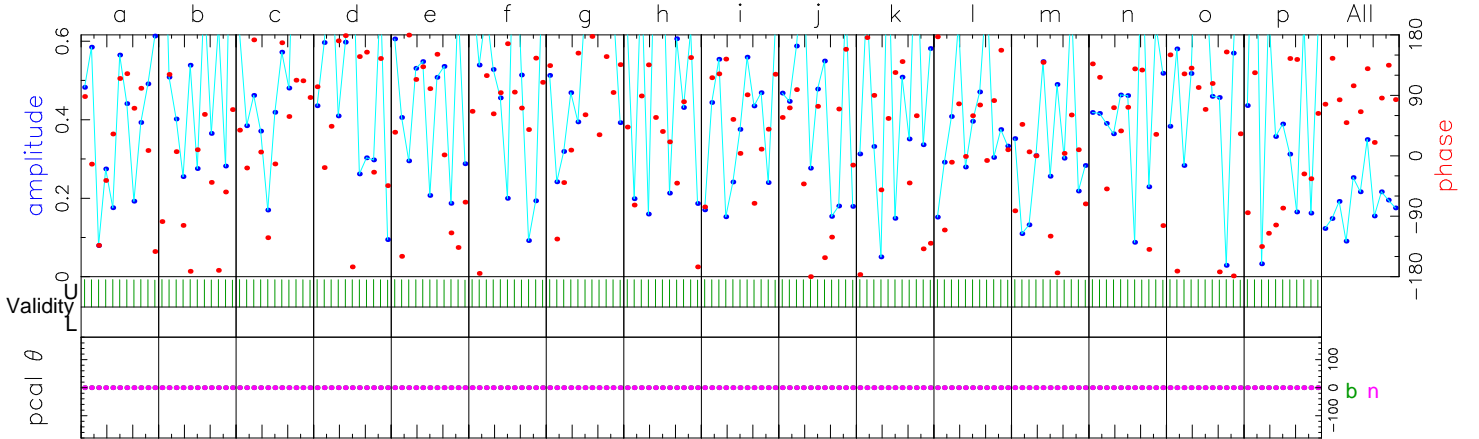
amp/frq (%) 72.4 65.8 Inc. frq. avg. 0.217 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

b: az 57.4 el 21.3 pa -45.0 n: az 69.5 el 36.3 pa -61.3 u,v (fr/asec) 434.681 2429.105 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bn..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bn.W.38.130KZ1



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	40.7	87.7	142.4	153.6	100.1	113.1	59.3	77.9	99.8	121.5	42.4	26.0	88.4	116.6	-133.8		Phase	95.3	
0.2	0.0	0.4	0.2	0.5	0.3	0.4	0.2	0.2	0.2	0.3	0.1	0.2	0.4	0.1	0.1		Ampl.	0.2	
81.4	246.6	125.8	87.0	193.9	126.2	228.5	228.1	46.9	23.3	212.5	121.0	112.5	77.5	201.0	249.9		Sbd box	126.0	
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	
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
b: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	
b	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		Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	
																		Tracks	
Group delay (usec)(sbd)	-4.92869953341E+03			Apriori delay (usec)			-4.92867837444E+03			Resid mbdelay (usec)			1.00910E-02			+/- 1.8E-04			
Sband delay (usec)	-4.92870201594E+03			Apriori clock (usec)			-2.7156006E+01			Resid sbdelay (usec)			-2.36415E-02			+/- 2.9E-03			
Phase delay (usec)	-4.92867837137E+03			Apriori clockrate (us/s)			-3.7661858E-07			Resid phdelay (usec)			3.07406E-06			+/- 6.3E-07			
Delay rate (us/s)	-5.69687167691E-02			Apriori rate (us/s)			-5.69601530680E-02			Resid rate (us/s)			-8.56370E-06			+/- 6.1E-09			
Total phase (deg)	32.5			Apriori accel (us/s/s)			3.14309785430E-05			Resid phase (deg)			95.3			+/- 19.5			

ph/seg (deg) 36.5 32.4 Search (1024X64) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 45.8 56.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 51.4 39.1 Inc. seg. avg. 0.212 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016

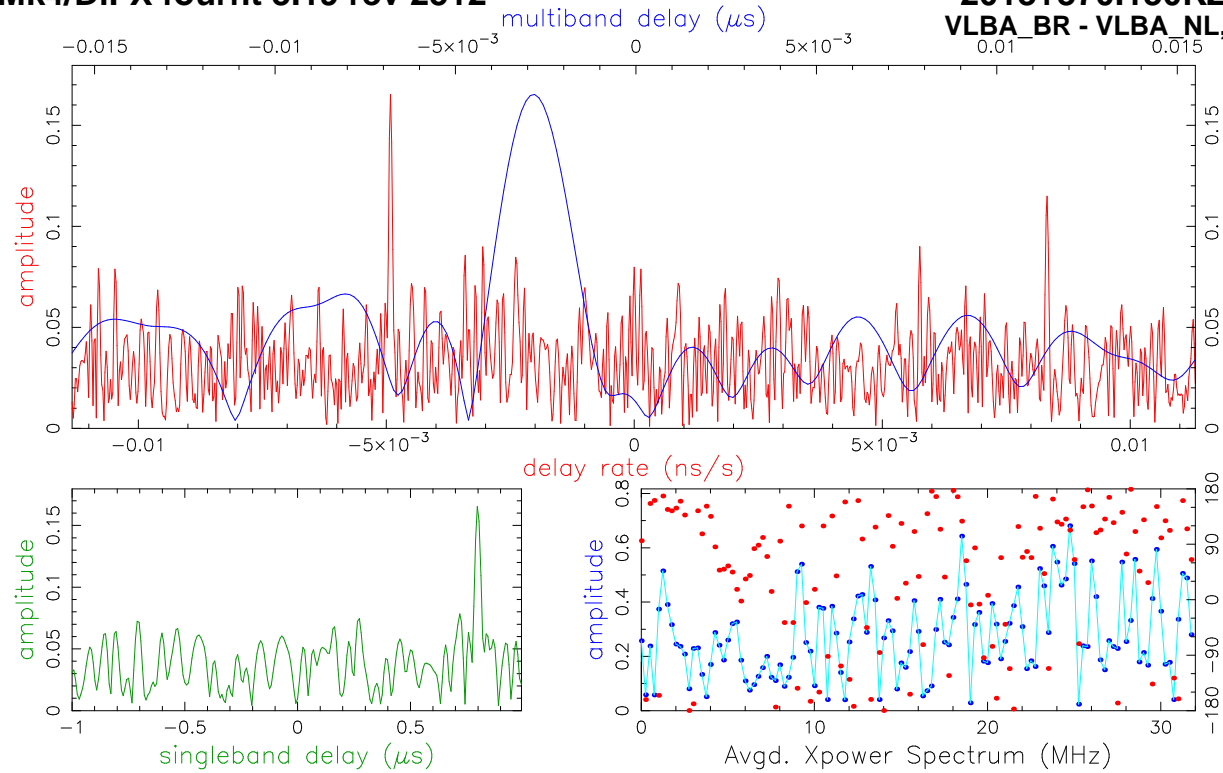
amp/frq (%) 70.6 68.2 Inc. frq. avg. 0.195 Sample rate(MSamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011

b: az 57.4 el 21.3 pa -45.0 n: az 69.5 el 36.3 pa -61.3 u,v (fr/asec) 434.681 2429.105 ion window (TEC) 0.00 0.00 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bn..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bn.W.53.130KZ1

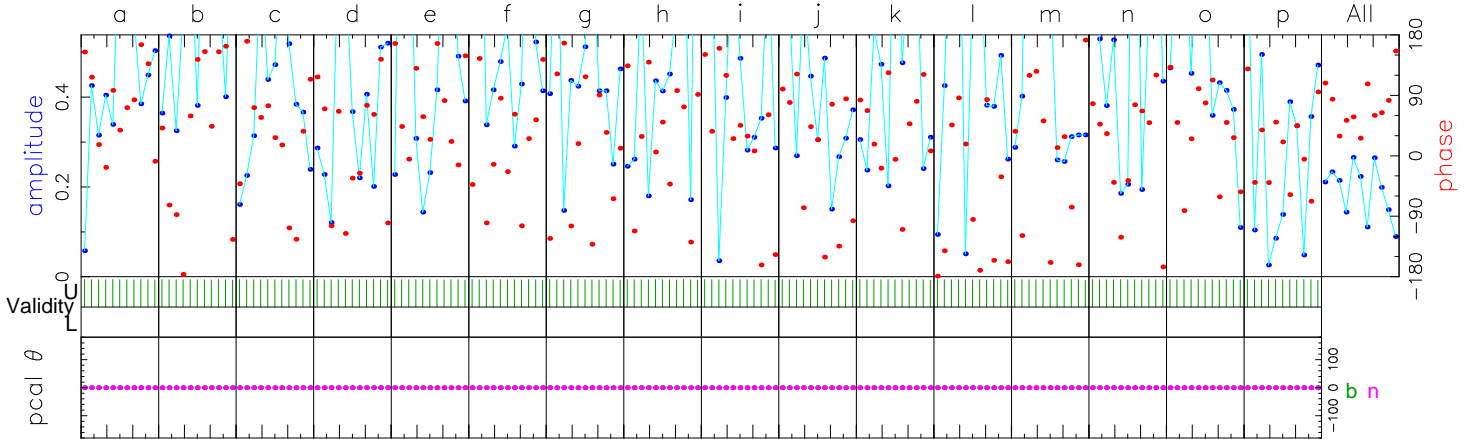
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bn
VLBA_BR - VLBA_NL, fgroup W, pol RL



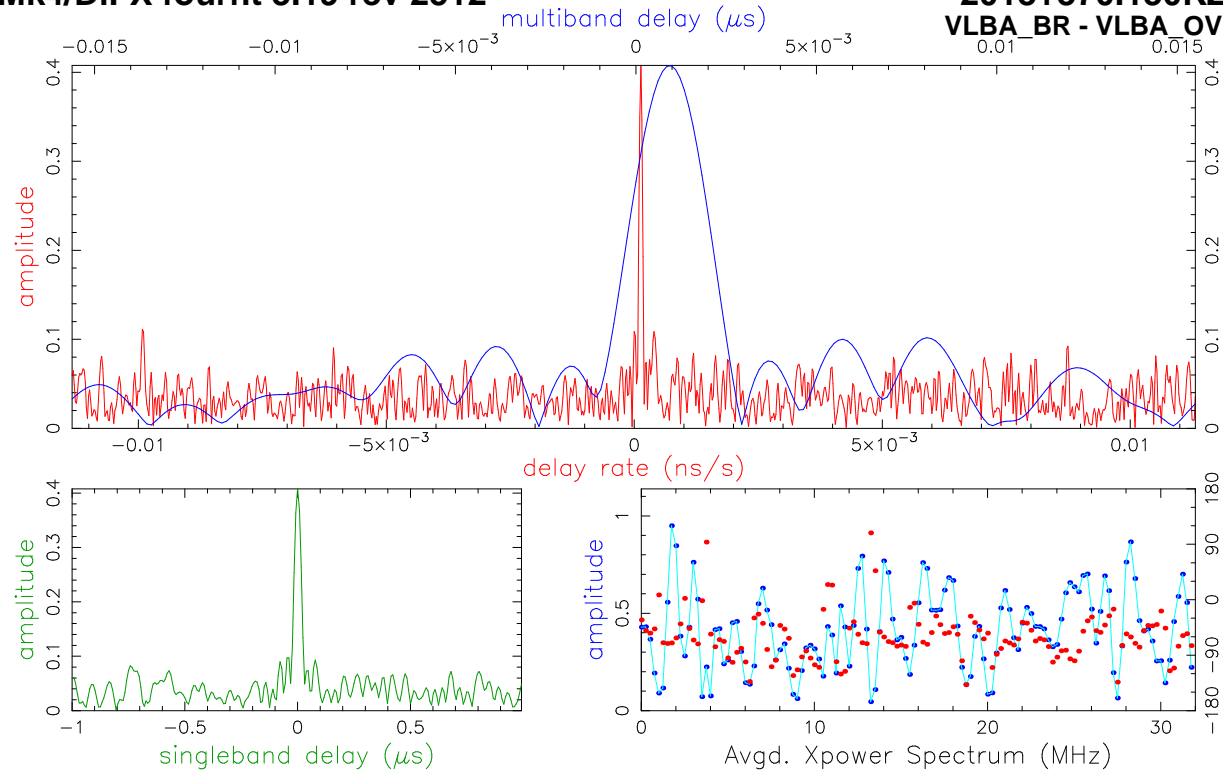
Fringe quality 0
SNR 6.1
Int time 178.759
Amp 0.180
Phase 67.4
PFD 1.5e-01
Delays (us)
SBD 0.798405
MBD -0.002825
Fringe rate (Hz)
-0.423427
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050210
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		
68.4	152.0	41.7	76.0	46.7	35.1	126.5	67.5	65.9	88.5	33.1	138.0	130.8	70.8	57.0	51.8	51.8	Phase	67.4		
0.3	0.2	0.2	0.0	0.4	0.2	0.1	0.3	0.3	0.1	0.3	0.1	0.2	0.4	0.3	0.1	0.1	Ampl.	0.2		
27.1	156.7	164.7	15.4	231.1	141.8	216.8	106.9	149.0	185.0	231.4	185.3	188.1	230.6	6.9	87.2	87.2	Sbd box	231.2		
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			
b	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			
b: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			
b: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			
b	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			
b	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)	-4.92786869900E+03				Apriori delay (usec)				-4.92867837444E+03				Resid mbdelay (usec)				-2.82455E-03		+/-	1.8E-04
Sband delay (usec)	-4.92787996994E+03				Apriori clock (usec)				-2.7156006E+01				Resid sbdelay (usec)				7.98405E-01		+/-	2.8E-03
Phase delay (usec)	-4.92867837227E+03				Apriori clockrate (us/s)				-3.7661858E-07				Resid phdelay (usec)				2.17219E-06		+/-	6.1E-07
Delay rate (us/s)	-5.69650686340E-02				Apriori rate (us/s)				-5.69601530680E-02				Resid rate (us/s)				-4.91557E-06		+/-	5.8E-09
Total phase (deg)	4.5				Apriori accel (us/s/s)				3.14309785430E-05				Resid phase (deg)				67.4		+/-	18.9

ph/seg (deg) 36.9 31.3 Search (1024X64) 0.165 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 37.5 54.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 41.3 37.7 Inc. seg. avg. 0.180 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 61.7 65.9 Inc. frq. avg. 0.173 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 57.4 el 21.3 pa -45.0 n: az 69.5 el 36.3 pa -61.3 u,v (fr/asec) 434.681 2429.105 ion window (TEC) 0.00 0.00 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bn..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bn.W.69.130KZ1

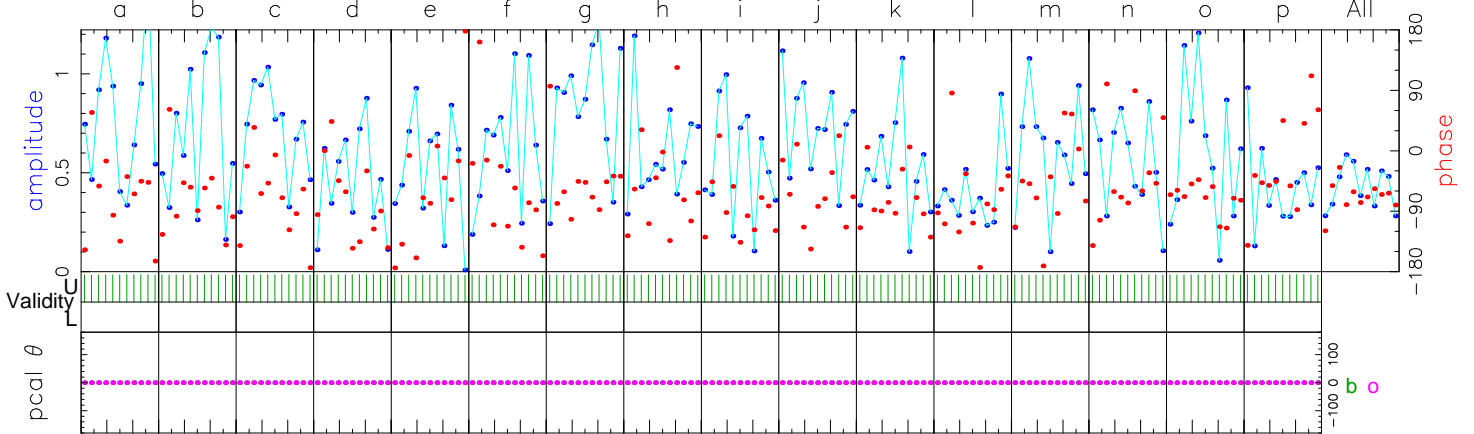


Fringe quality 9

SNR 14.9
Int time 178.567
Amp 0.408
Phase -66.0
PFD 1.1e-41
Delays (us)
SBD 0.000176
MBD 0.000937
Fringe rate (Hz) 0.011419
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050203
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		
	-61.8	-69.3	-51.9	-63.5	-68.6	-75.2	-63.8	-73.9	-84.7	-60.9	-71.3	-77.0	-47.4	-70.3	-66.3	-41.7		Phase	-66.0	
	0.5	0.6	0.5	0.3	0.3	0.4	0.7	0.4	0.4	0.5	0.4	0.3	0.3	0.3	0.6	0.2		Ampl.	0.4	
	129.2	128.9	129.3	233.0	53.2	128.7	129.2	128.4	161.9	129.8	128.7	85.0	126.2	128.8	128.9	131.3		Sbd box	129.0	
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		
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs		
b: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		
b: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		
b	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		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Chan ids		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks		
																			Chan ids	
																			Tracks	
Group delay (usec)(sbd)	1.79385008001E+03			Apriori delay (usec)			1.79384914327E+03			Resid mbdelay (usec)			9.36735E-04			+/- 7.2E-05				
Sband delay (usec)	1.79384931927E+03			Apriori clock (usec)			-1.7288401E+01			Resid sbdelay (usec)			1.76000E-04			+/- 1.2E-03				
Phase delay (usec)	1.79384914114E+03			Apriori clockrate (us/s)			-2.4337607E-07			Resid phdelay (usec)			-2.12873E-06			+/- 2.5E-07				
Delay rate (us/s)	-1.60378512961E-01			Apriori rate (us/s)			-1.60378645522E-01			Resid rate (us/s)			1.32561E-07			+/- 2.4E-09				
Total phase (deg)	6.6			Apriori accel (us/s/s)			-9.43396912153E-08			Resid phase (deg)			-66.0			+/- 7.7				

ph/seg (deg) 22.1 12.8
amp/seg (%) 26.8 22.3
ph/frq (deg) 11.6 15.4
amp/frq (%) 35.6 26.8

RMS Theor. Amplitude 0.408 +/- 0.027
Search (1024X64) 0.407
Interp. 0.000
Inc. seg. avg. 0.423
Inc. frq. avg. 0.399

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

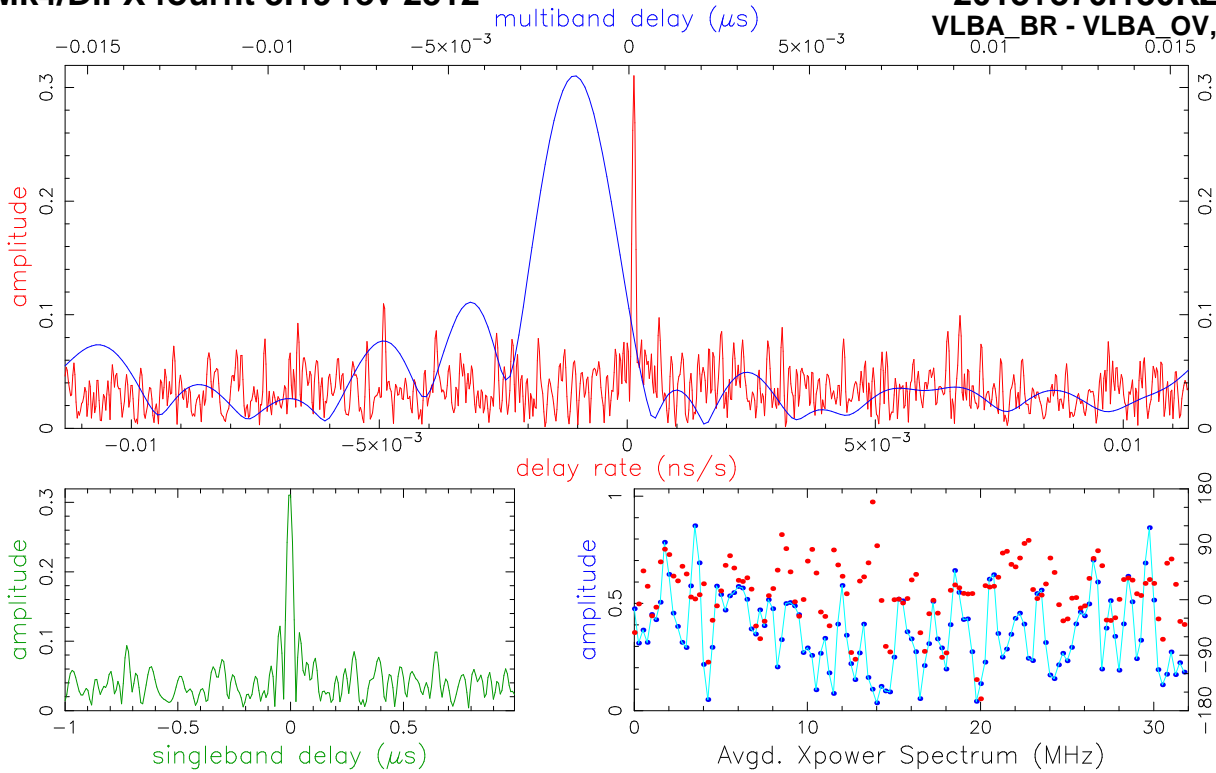
sb window (us) -1.000 1.000
mb window (us) -0.016 0.016
dr window (ns/s) -0.011 0.011
ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 o: az 55.1 el 16.1 pa -55.2 u,v (fr/asec) 1155.692 972.402 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bo..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bo.W.16.130KZ1

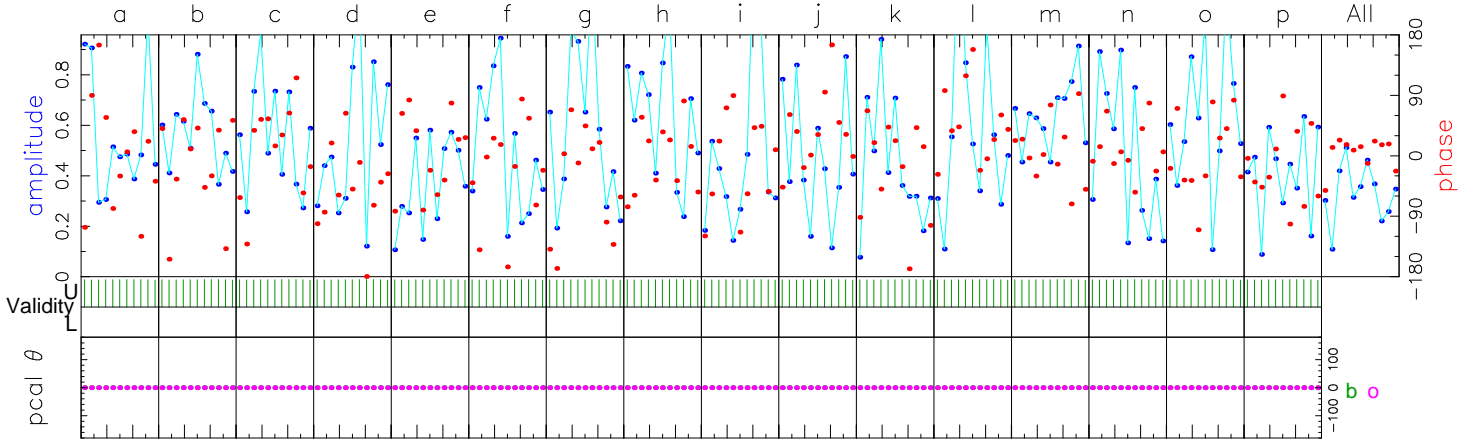
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bo
VLBA_BR - VLBA_OV, fgroup W, pol RR



Fringe quality 9
SNR 11.7
Int time 178.567
Amp 0.319
Phase 4.8
PFD 4.3e-23
Delays (us)
SBD -0.003901
MBD -0.001520
Fringe rate (Hz) 0.011508
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050207
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

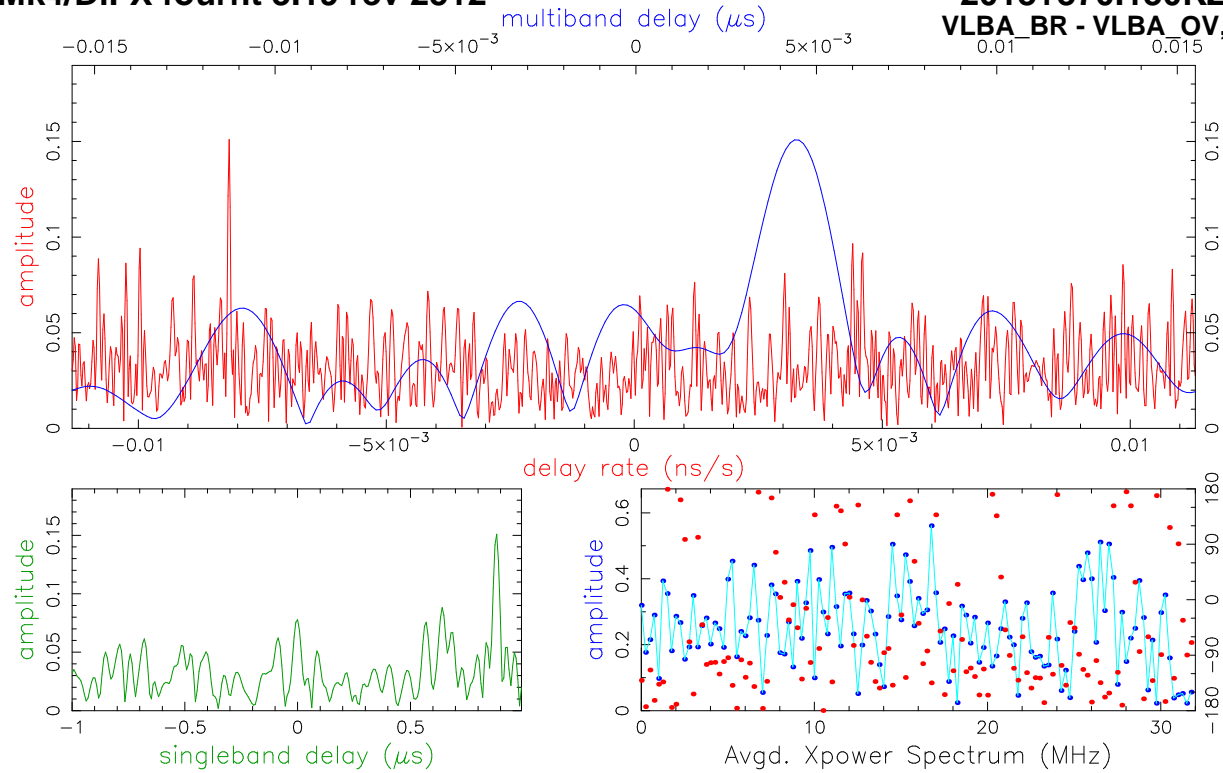


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-12.0	6.9	29.4	-38.1	17.1	-8.1	7.3	1.3	13.3	24.1	7.7	41.2	6.0	4.9	-2.9	-31.4	Phase	4.8
	0.2	0.3	0.4	0.4	0.2	0.3	0.3	0.4	0.3	0.4	0.2	0.4	0.4	0.4	0.4	0.3	Ampl.	0.3
	72.0	129.0	22.8	128.7	199.6	43.0	134.3	128.4	8.1	85.9	54.0	89.9	129.0	129.0	129.6	161.3	Sbd box	128.5
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	352/0	APs used	
b	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	
b: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	
b: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	
b	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	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks	
																	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	1.79384762320E+03			Apriori delay (usec)			1.79384914327E+03			Resid mbdelay (usec)			-1.52008E-03			+/-	9.2E-05	
Sband delay (usec)	1.79384524227E+03			Apriori clock (usec)			-1.7288401E+01			Resid sbdelay (usec)			-3.90100E-03			+/-	1.5E-03	
Phase delay (usec)	1.79384914343E+03			Apriori clockrate (us/s)			-2.4337607E-07			Resid phdelay (usec)			1.54066E-07			+/-	3.2E-07	
Delay rate (us/s)	-1.60378511923E-01			Apriori rate (us/s)			-1.60378645522E-01			Resid rate (us/s)			1.33599E-07			+/-	3.0E-09	
Total phase (deg)	77.3			Apriori accel (us/s/s)			-9.43396912153E-08			Resid phase (deg)			4.8			+/-	9.8	

ph/seg (deg) 22.1 16.3 Search (1024X64) 0.309 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 34.0 28.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 21.1 19.6 Inc. seg. avg. 0.321 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 23.9 34.3 Inc. frq. avg. 0.312 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
b: az 57.4 el 21.3 pa -45.0 o: az 55.1 el 16.1 pa -55.2 u,v (fr/asec) 1155.692 972.402 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bo..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bo.W.45.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bo
VLBA_BR - VLBA_OV, fgroup W, pol RL

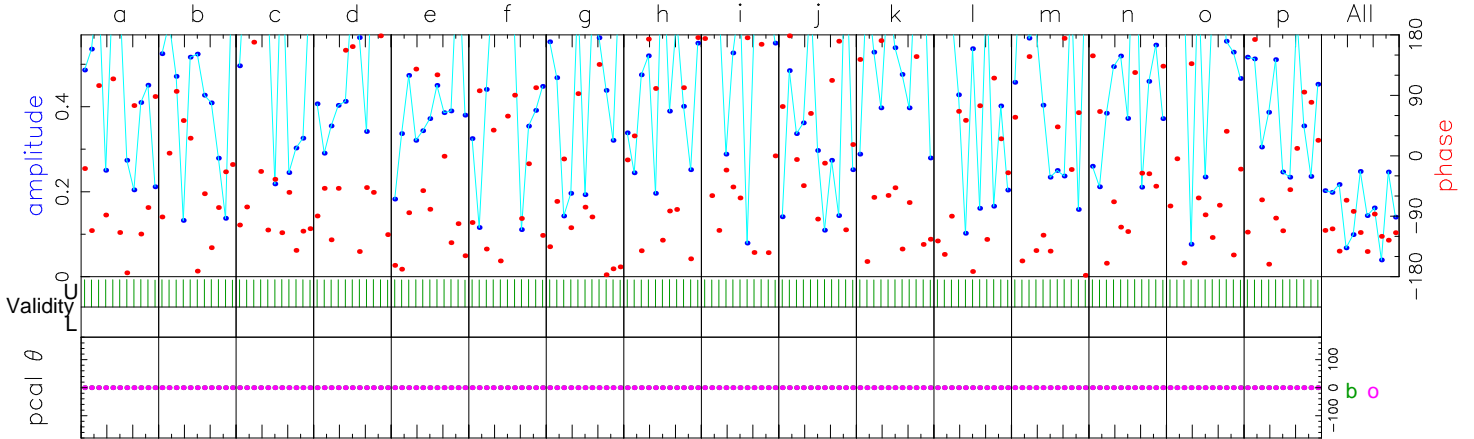


Fringe quality 0

SNR 5.5
Int time 178.567
Amp 0.190
Phase -114.7
PFD 9.7e-01
Delays (us)
SBD 0.881147
MBD 0.004470
Fringe rate (Hz)
-0.704053
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050211
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

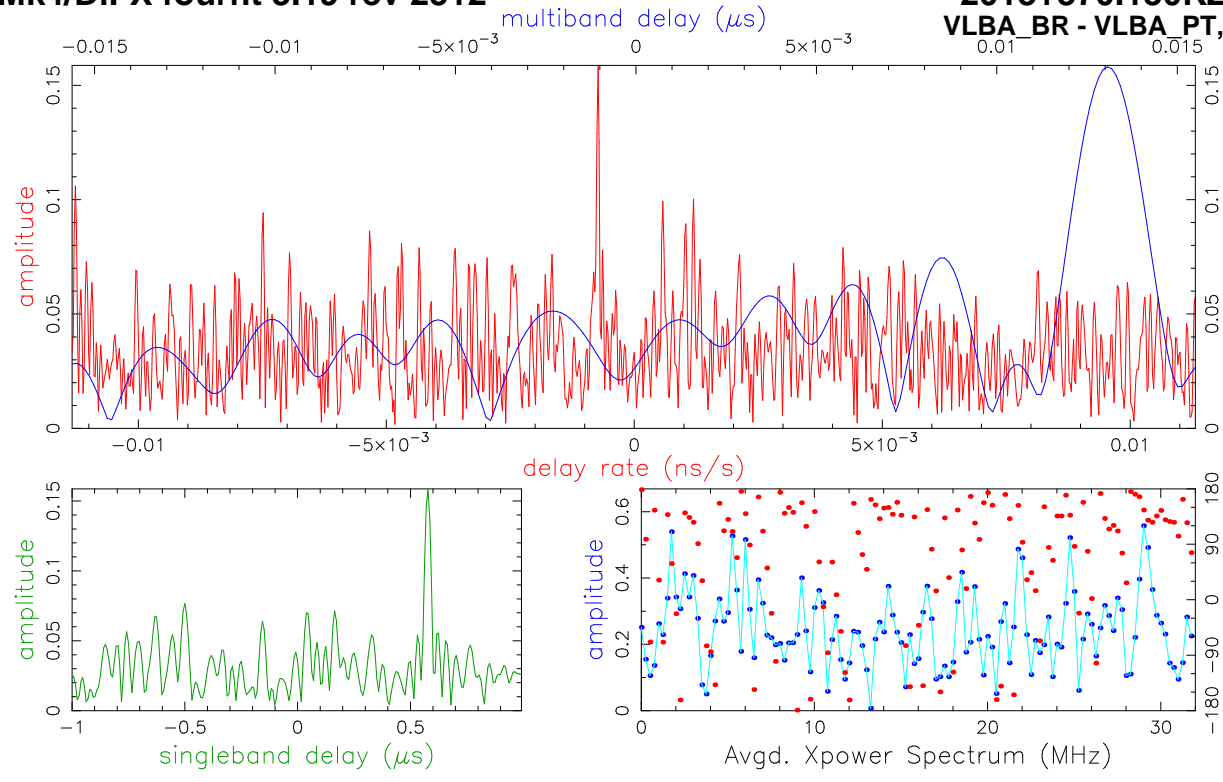


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
	-139.0	-32.3	-101.3	-118.7	-117.0	95.1	-152.9	-139.9	-106.4	-45.8	-125.7	-130.0	-166.2	-119.5	-77.1	-82.9		Phase -114.7
	0.1	0.2	0.5	0.4	0.2	0.1	0.3	0.2	0.3	0.0	0.4	0.2	0.2	0.1	0.4	0.1		Ampl. 0.2
	168.4	116.6	247.1	236.6	138.7	2.0	140.0	163.6	63.0	28.6	192.9	79.9	99.1	32.5	79.2	182.5		Sbd box 241.8
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
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase
b: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
b	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		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	1.79472861289E+03			Apriori delay (usec)			1.79384914327E+03			Resid mbdelay (usec)			4.46962E-03			+/- 1.9E-04		
Sband delay (usec)	1.79473029027E+03			Apriori clock (usec)			-1.7288401E+01			Resid sbdelay (usec)			8.81147E-01			+/- 3.1E-03		
Phase delay (usec)	1.79384913957E+03			Apriori clockrate (us/s)			-2.4337607E-07			Resid phdelay (usec)			-3.69884E-06			+/- 6.7E-07		
Delay rate (us/s)	-1.60386818879E-01			Apriori rate (us/s)			-1.60378645522E-01			Resid rate (us/s)			-8.17336E-06			+/- 6.4E-09		
Total phase (deg)	-42.1			Apriori accel (us/s/s)			-9.43396912153E-08			Resid phase (deg)			-114.7			+/- 20.7		

ph/seg (deg) 23.1 34.3 Search (1024X64) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 44.5 59.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 55.1 41.3 Inc. seg. avg. 0.170 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
amp/frq (%) 68.4 72.2 Inc. frq. avg. 0.180 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 57.4 el 21.3 pa -45.0 o: az 55.1 el 16.1 pa -55.2 u,v (fr/asec) 1155.692 972.402 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bo..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bo.W.76.130KZ1

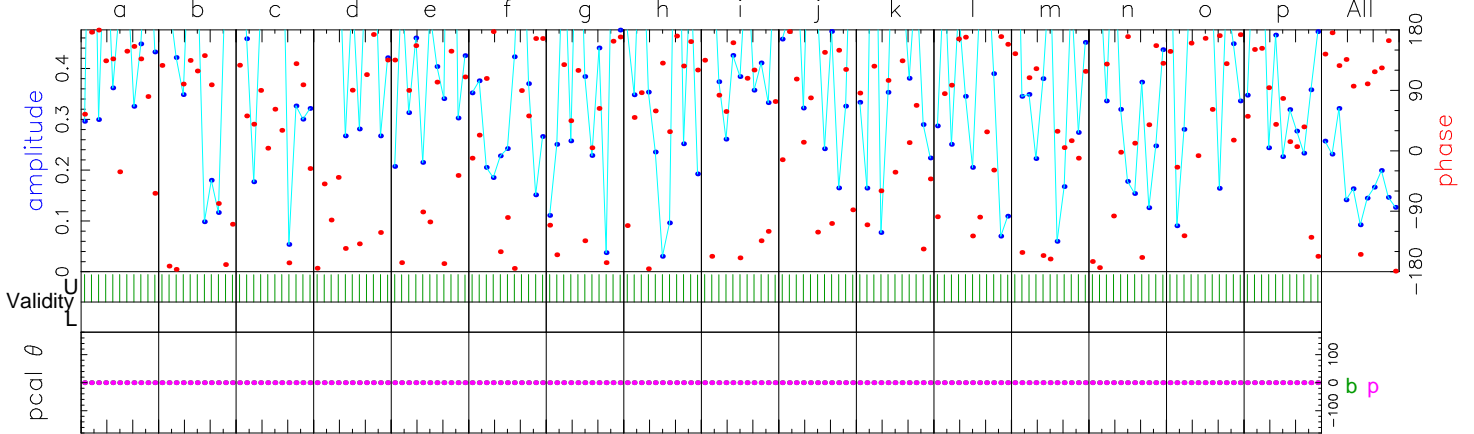
Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bp
VLBA_BR - VLBA_PT, fgroup W, pol RR



Fringe quality 0
SNR 5.8
Int time 179.472
Amp 0.159
Phase 138.8
PFD 5.5e-01
Delays (us)
SBD 0.577027
MBD 0.013078
Fringe rate (Hz)
-0.063091
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050205
2020:014:135814
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

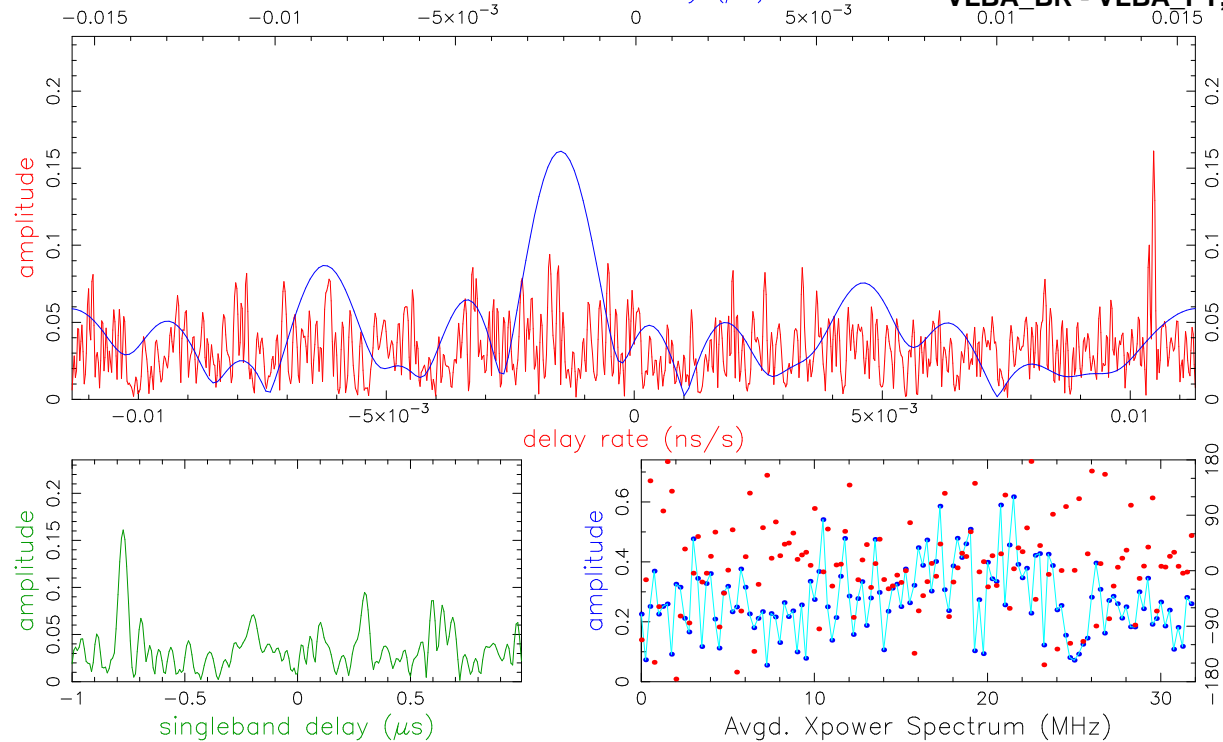
Amp. and Phase vs. time for each freq., 11 segs, 32 APs / seg (16.38 sec / seg.), time ticks 30 sec



	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	109.0	138.8
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	109.0	0.2
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	109.0	202.9
b: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	109.0	0.1
b: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	109.0	0.1
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	109.0	0.1
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	109.0	0.1
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	109.0	0.1
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	109.0	0.1
Group delay (usec)(sbd)		-7.92516865645E+01															1.30779E-02	+/- 1.9E-04
Sband delay (usec)		-7.92502374573E+01															5.77027E-01	+/- 3.0E-03
Phase delay (usec)		-7.98272599801E+01															4.47718E-06	+/- 6.4E-07
Delay rate (us/s)		-2.05382460680E-01															-7.32429E-07	+/- 6.1E-09
Total phase (deg)					-62.9												138.8	+/- 19.7
Apriori delay (usec)																		
Apriori clock (usec)																		
Apriori clockrate (us/s)																		
Apriori rate (us/s)																		
Apriori accel (us/s/s)																		
RMS	33.7	32.7																
Theor.																		
Amplitude																		
Search (1024X64)																		
Interp.																		
Inc. seg. avg.																		
Inc. frq. avg.																		
PCal mode:	MANUAL	MANUAL																
PCal rate:	0.000E+00	0.000E+00																
Bits/sample:	2x2																	
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																

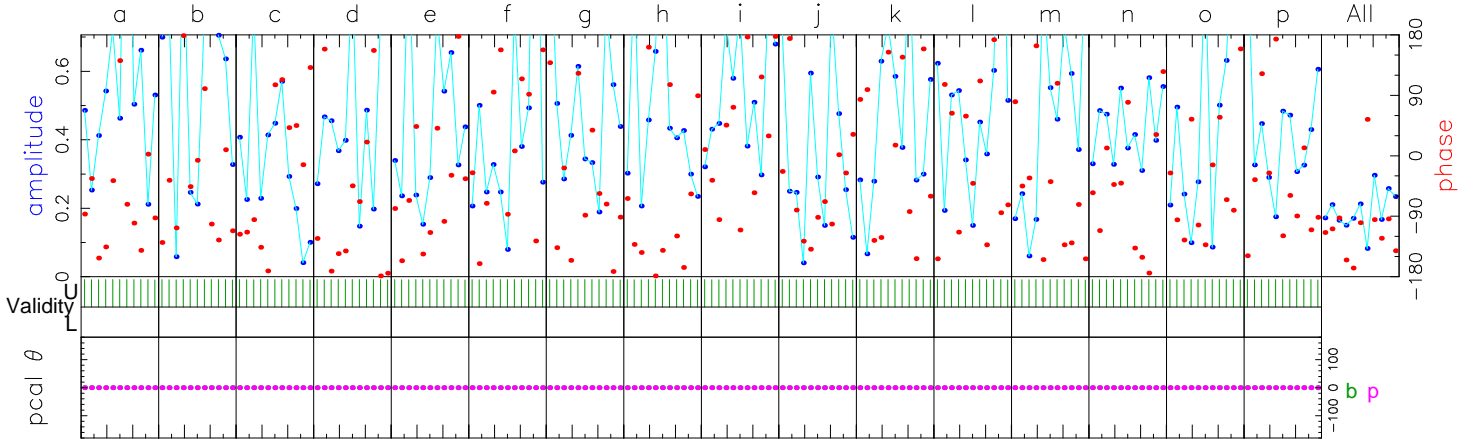
b: az 57.4 el 21.3 pa -45.0 p: az 58.7 el 21.4 pa -62.4 u,v (fr/asec) 1489.750 2027.617 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bp..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bp.W.34.130KZ1

multiband delay (μ s)



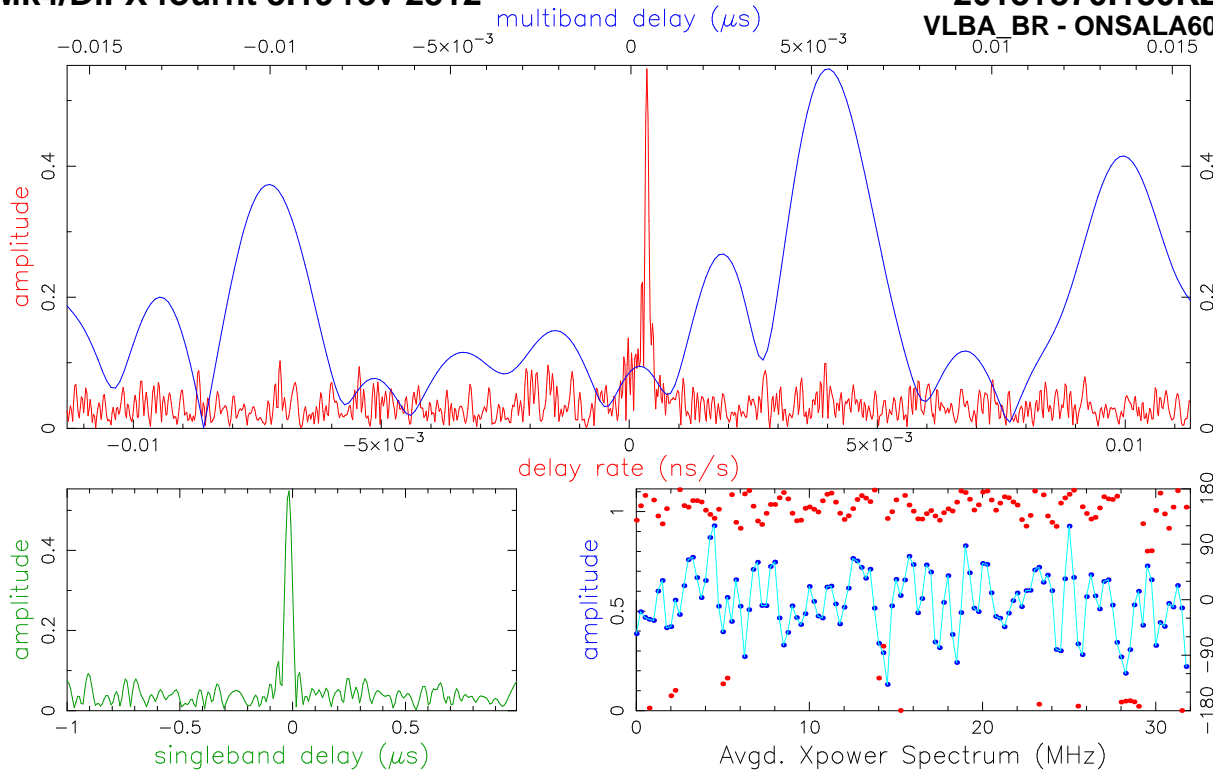
Fringe quality 0
SNR 5.9
Int time 179.472
Amp 0.236
Phase -115.1
PFD 3.7e-01
Delays (us)
SBD -0.773670
MBD -0.002096
Fringe rate (Hz) 0.902617
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050208
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				
	-92.7	-107.5	-167.1	-151.7	-58.3	-161.2	-149.6	-151.9	0.3	-72.6	-130.3	-122.1	-134.1	-84.2	-103.1	-102.1	Phase	-115.1				
	0.6	0.3	0.1	0.3	0.3	0.1	0.2	0.5	0.1	0.3	0.2	0.3	0.4	0.1	0.3	0.3	Ampl.	0.2				
	29.5	238.1	103.7	254.5	122.3	126.3	124.0	211.4	245.6	233.4	128.0	206.5	216.8	181.3	164.4	106.2	Sbd box	30.0				
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					
p	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
b: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					
p	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					
	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-8.06106100979E+01														Apriori delay (usec)	-7.98272644573E+01	Resid mbdelay (usec)	-2.09564E-03	+/-	1.8E-04
Sband delay (usec)			-8.06009349573E+01														Apriori clock (usec)	-1.2601147E+01	Resid sbdelay (usec)	-7.73670E-01	+/-	2.9E-03
Phase delay (usec)			-7.98272681678E+01														Apriori clockrate (us/s)	-4.4628166E-07	Resid phdelay (usec)	-3.71045E-06	+/-	6.3E-07
Delay rate (us/s)			-2.05371249761E-01														Apriori rate (us/s)	-2.05381728251E-01	Resid rate (us/s)	1.04785E-05	+/-	6.0E-09
Total phase (deg)																	Apriori accel (us/s/s)	1.27188799352E-05	Resid phase (deg)	-115.1	+/-	19.4

ph/seg (deg) 56.7 32.2 Amplitude 0.236 +/- 0.040 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 39.6 56.2 Search (1024X64) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 45.9 38.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 58.0 67.8 Inc. seg. avg. 0.243 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 p: az 58.7 el 21.4 pa -62.4 u,v (fr/asec) 1489.750 2027.617 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bp..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bp.W.51.130KZ1 simultaneous interpolator

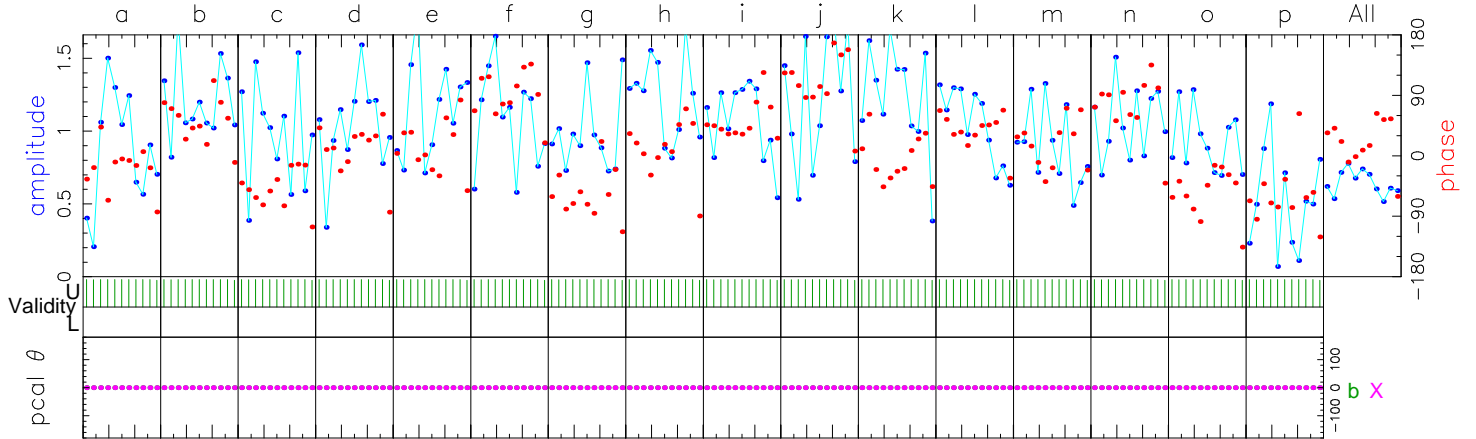


Fringe quality 6

SNR 20.3
Int time 179.483
Amp 0.554
Phase 20.0
PFD 0.0e+00
Delays (us)
SBD -0.018051
MBD 0.005428
Fringe rate (Hz) 0.030433
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050204
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	
	-17.9	54.3	-50.0	16.4	12.7	94.3	-62.1	16.8	49.6	120.0	-2.3	40.4	15.5	79.5	-54.1	-66.8		Phase	20.0
	0.7	1.1	0.9	0.9	0.9	0.9	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.7	0.8	0.5		Ampl.	0.9
	125.8	126.9	126.8	126.6	127.3	126.7	126.0	126.3	127.0	126.4	126.3	126.1	126.3	126.2	126.0	125.0		Sbd box	126.7
UL	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	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC phase	
b:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		ManI PC	
x	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000			
b	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	

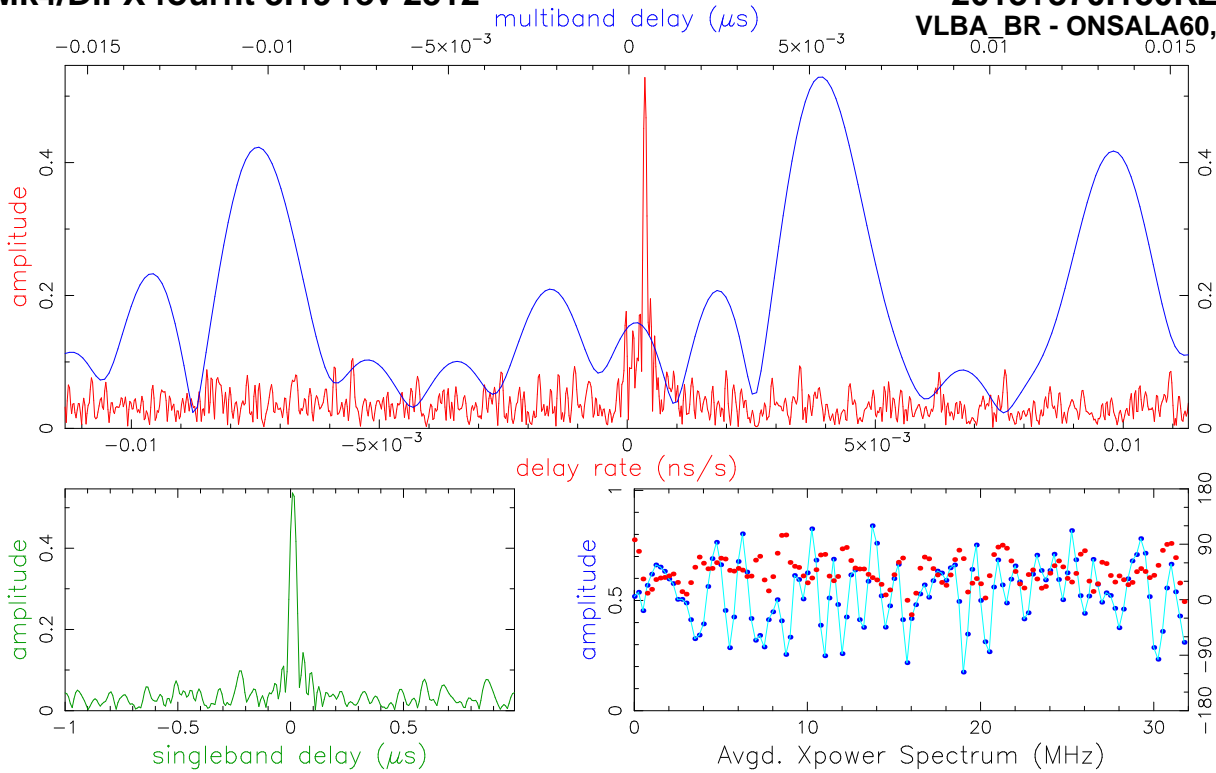
Group delay (usec)(sbd) -1.08046667055E+04 Apriori delay (usec) -1.08046408838E+04 Resid mbdelay (usec) 5.42836E-03 +/- 5.3E-05
 Sband delay (usec) -1.08046589348E+04 Apriori clock (usec) -3.3026993E+01 Resid sbdelay (usec) -1.80510E-02 +/- 8.5E-04
 Phase delay (usec) -1.08046408832E+04 Apriori clockrate (us/s) -7.7039509E-07 Resid phdelay (usec) 6.45693E-07 +/- 1.8E-07
 Delay rate (us/s) 1.17351479054E+00 Apriori rate (us/s) 1.17351443724E+00 Resid rate (us/s) 3.53294E-07 +/- 1.8E-09
 Total phase (deg) -244.1 Apriori accel (us/s/s) 5.05889610066E-05 Resid phase (deg) 20.0 +/- 5.7

RMS Theor. Amplitude 0.554 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 33.9 9.4 Search (1024X64) 0.546 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 22.0 16.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 58.7 11.3 Inc. seg. avg. 0.637 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 62.6 19.7 Inc. frq. avg. 0.853 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 X: az 240.2 el 60.8 pa 35.8 u,v (fr/asec) -8406.078 2380.317 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bX..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bX.W.25.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

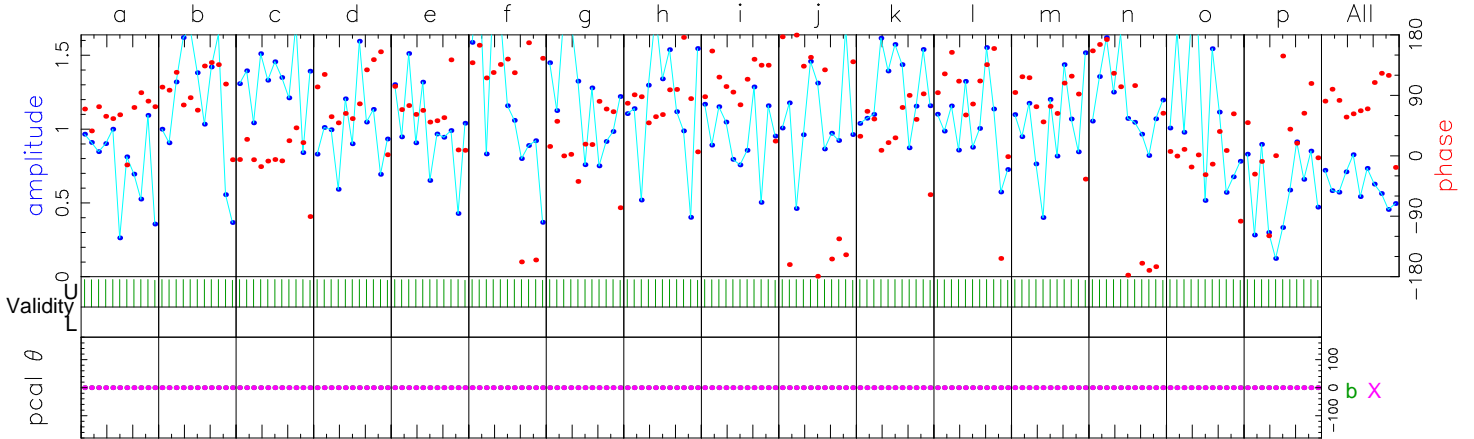
2013+370.130KZ1, No0044, bX
VLBA_BR - ONSALA60, fgroup W, pol RR



Fringe quality 6

SNR 20.0
Int time 179.483
Amp 0.546
Phase 79.5
PFD 0.0e+00
Delays (us)
SBD 0.011148
MBD 0.005236
Fringe rate (Hz)
0.030505
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050207
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



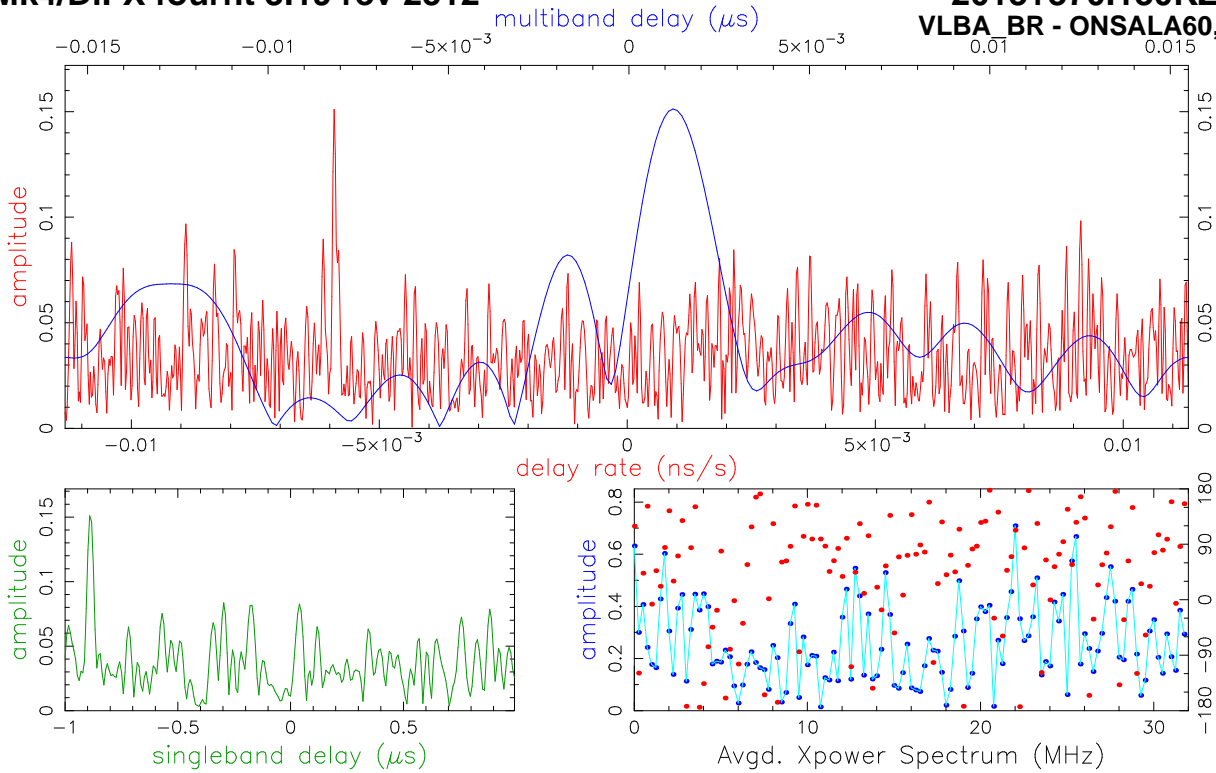
	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	130.4
b	1000	1000	1000	1000	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	1000	PC phase	
b: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	0:0	Mani PC	
b	1000	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	1000	Chan ids	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids	

Group delay (usec)(sbd)	-1.08046356482E+04	Apriori delay (usec)	-1.08046408838E+04	Resid mbdelay (usec)	5.23561E-03	+/-	5.4E-05
Sband delay (usec)	-1.08046297358E+04	Apriori clock (usec)	-3.3026993E+01	Resid sbdelay (usec)	1.11480E-02	+/-	8.6E-04
Phase delay (usec)	-1.08046408813E+04	Apriori clockrate (us/s)	-7.7039509E-07	Resid phdelay (usec)	2.56510E-06	+/-	1.8E-07
Delay rate (us/s)	1.17351479138E+00	Apriori rate (us/s)	1.17351443724E+00	Resid rate (us/s)	3.54136E-07	+/-	1.8E-09
Total phase (deg)	-184.6	Apriori accel (us/s/s)	5.05889610066E-05	Resid phase (deg)	79.5	+/-	5.7

ph/seg (deg)	RMS 36.8	Theor. 9.5	Amplitude Search (1024X64)	0.546 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	24.2	16.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	55.5	11.5	Inc. seg. avg.	0.613	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016	
amp/frq (%)	65.9	20.0	Inc. frq. avg.	0.842	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 57.4 el 21.3 pa -45.0 X: az 240.2 el 60.8 pa 35.8 u,v (fr/asec) -8406.078 2380.317 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bX..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bX.W.43.130KZ1

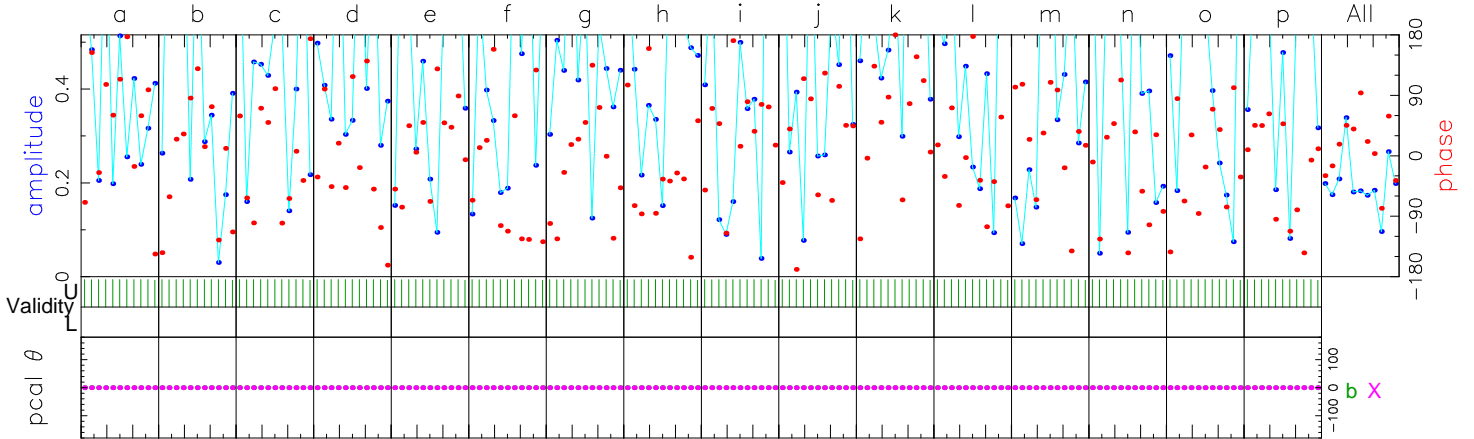


Fringe quality 0

SNR 5.6
Int time 179.483
Amp 0.172
Phase 19.4
PFD 9.1e-01
Delays (us)
SBD -0.887806
MBD 0.001280
Fringe rate (Hz)
-0.510079
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050209
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

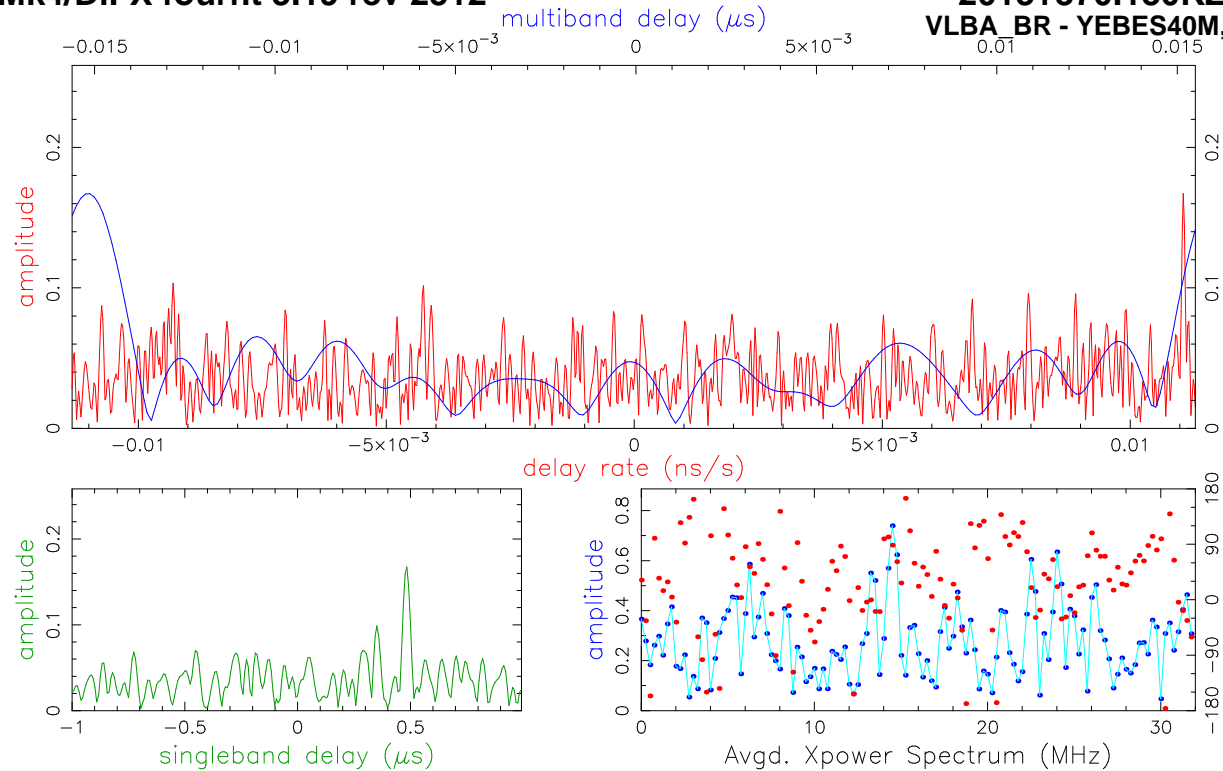


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All
111.8	22.3	9.0	-18.4	28.8	-108.8	0.6	-42.2	48.8	35.6	97.4	-6.1	56.9	16.0	-29.1	15.6	Phase	19.4	
0.1	0.2	0.2	0.3	0.1	0.2	0.2	0.4	0.2	0.4	0.2	0.3	0.2	0.2	0.3	0.2	Ampl.	0.2	
234.3	240.9	32.9	90.1	57.8	6.8	172.9	92.9	75.3	29.4	95.0	101.0	169.0	253.0	161.1	247.0	Sbd box	15.4	
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	
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
b: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	
b:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids	
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids	
																	Tracks	
Group delay (usec)(sbd)	-1.08055146039E+04			Apriori delay (usec)			-1.08046408838E+04			Resid mbdelay (usec)			1.27996E-03			+/-	1.9E-04	
Sband delay (usec)	-1.08055286898E+04			Apriori clock (usec)			-3.3026993E+01			Resid sbdelay (usec)			-8.87806E-01			+/-	3.1E-03	
Phase delay (usec)	-1.08046408832E+04			Apriori clockrate (us/s)			-7.7039509E-07			Resid phdelay (usec)			6.26540E-07			+/-	6.6E-07	
Delay rate (us/s)	1.17350851573E+00			Apriori rate (us/s)			1.17351443724E+00			Resid rate (us/s)			-5.92152E-06			+/-	6.3E-09	
Total phase (deg)	-244.7			Apriori accel (us/s/s)			5.05889610066E-05			Resid phase (deg)			19.4			+/-	20.4	

ph/seg (deg) 47.4 33.8 Amplitude 0.172 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 48.8 59.1 Search (1024X64) 0.145 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 55.0 40.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 50.9 71.2 Inc. seg. avg. 0.191 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.179 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

b: az 57.4 el 21.3 pa -45.0 X: az 240.2 el 60.8 pa 35.8 u,v (fr/asec) -8406.078 2380.317 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bX..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bX.W.64.130KZ1

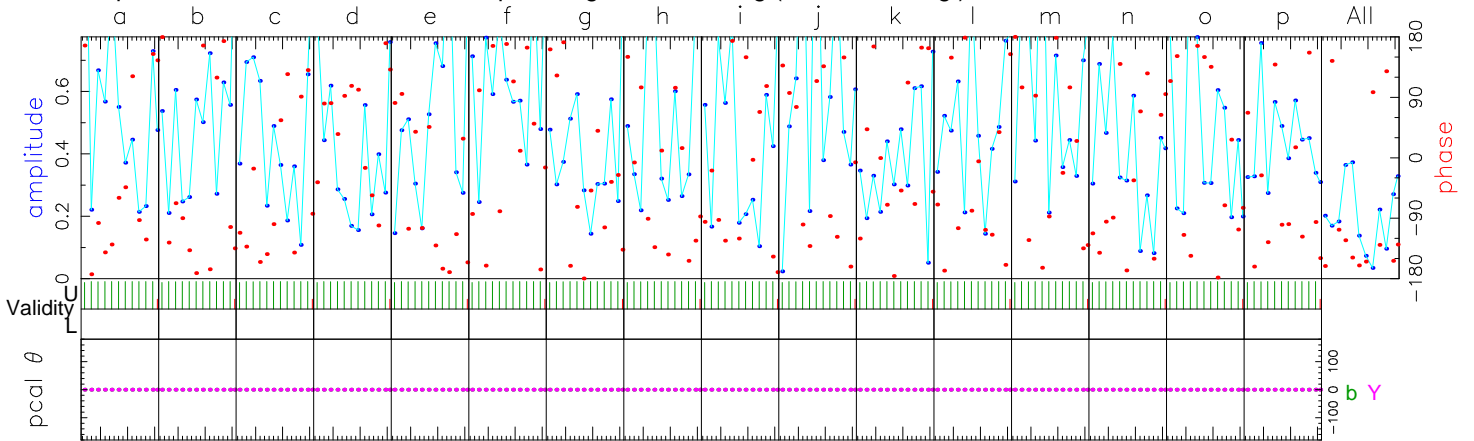


Fringe quality 0

SNR 5.8
Int time 162.028
Amp 0.258
Phase -148.3
PFD 4.6e-01
Delays (us)
SBD 0.482576
MBD 0.016042
Fringe rate (Hz) 0.955633
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

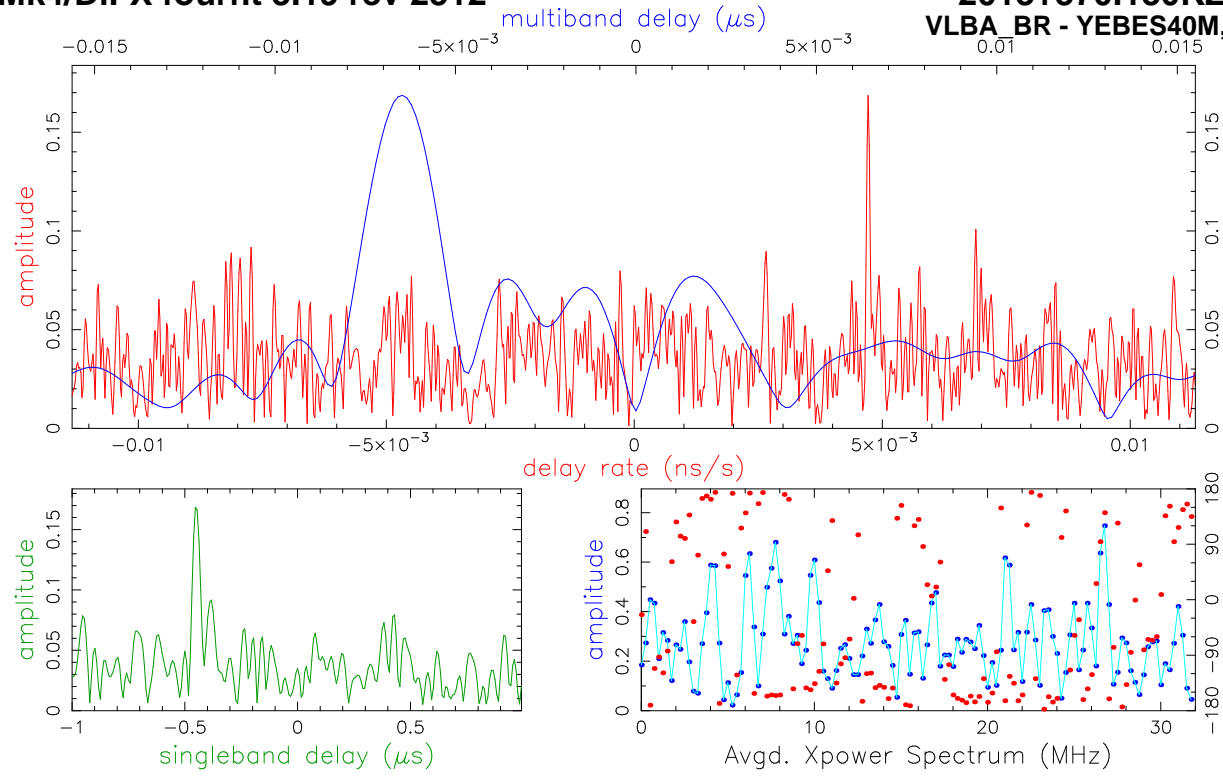
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204016.90
Stop 204259.71
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050216
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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				
	-152.5	-152.8	-131.7	37.1	-160.6	179.3	-126.3	-126.9	-142.2	-176.8	-105.5	-121.9	-176.1	-119.8	-173.2	-108.3	Phase	-148.3				
	0.5	0.5	0.3	0.2	0.3	0.2	0.2	0.3	0.3	0.3	0.2	0.3	0.4	0.2	0.4	0.2	Ampl.	0.2				
	190.1	191.9	65.4	212.7	24.4	121.0	155.8	25.8	127.7	199.5	80.6	211.0	178.1	81.8	75.8	128.5	Sbd box	190.8				
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					
b	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					
b: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					
b: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					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.28870373747E+04														Apriori delay (usec)	-1.28875221669E+04	Resid mbdelay (usec)	1.60421E-02	+/-	1.8E-04
Sband delay (usec)			-1.28870395914E+04														Apriori clock (usec)	-1.0299129E+01	Resid sbdelay (usec)	4.82576E-01	+/-	2.9E-03
Phase delay (usec)			-1.28875221716E+04														Apriori clockrate (us/s)	-4.6239510E-07	Resid phdelay (usec)	-4.78090E-06	+/-	6.3E-07
Delay rate (us/s)			1.09752056920E+00														Apriori rate (us/s)	1.09750947525E+00	Resid rate (us/s)	1.10940E-05	+/-	6.7E-09
Total phase (deg)					-311.6												Apriori accel (us/s/s)	7.49557550146E-05	Resid phase (deg)	-148.3	+/-	19.6

ph/seg (deg) 49.4 33.9 Search (1024X64) 0.165 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.8 59.2 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 39.2 Inc. seg. avg. 0.259 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 49.1 68.4 Inc. frq. avg. 0.246 Sample rate(MISamp/s): 64 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 Y: az 261.7 el 76.3 pa 70.4 u,v (fr/asec) -7838.167 5192.623 ion window (TEC) 0.00 0.00 simultaneous interpolator

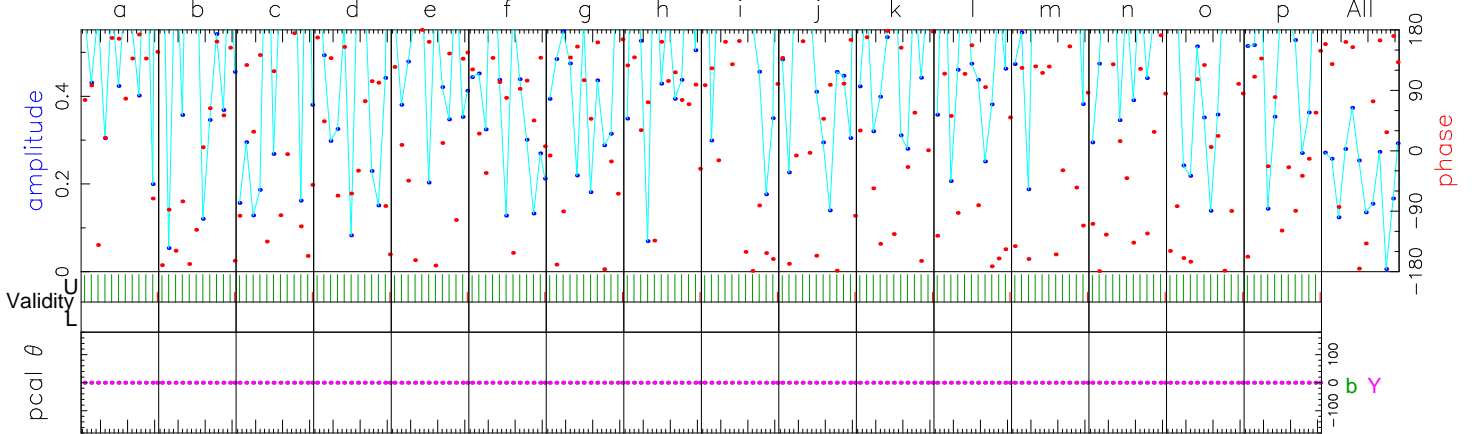


Fringe quality 0

SNR 6.0
Int time 162.028
Amp 0.184
Phase 160.3
PFD 2.9e-01
Delays (us)
SBD -0.449850
MBD -0.006448
Fringe rate (Hz) 0.406425
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204016.90
Stop 204259.71
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050218
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				
	136.1	-167.5	-145.2	134.6	-177.7	112.4	-168.4	109.2	156.3	144.9	-160.8	161.5	155.6	-175.7	176.9	67.0	Phase	160.3				
	0.4	0.4	0.3	0.1	0.2	0.2	0.1	0.3	0.4	0.1	0.1	0.2	0.3	0.2	0.2	0.0	Ampl.	0.2				
	190.9	72.1	20.2	55.9	239.3	147.2	36.5	73.6	140.3	204.1	82.4	174.8	22.5	195.1	139.0	210.6	Sbd box	71.4				
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					
b	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					
b: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					
b: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					
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Tracks					
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-1.28879661152E+04														Apriori delay (usec)	-1.28875221669E+04	Resid mbdelay (usec)	-6.44830E-03	+/-	1.8E-04
Sband delay (usec)			-1.28879720169E+04														Apriori clock (usec)	-1.0299129E+01	Resid sbdelay (usec)	-4.49850E-01	+/-	2.9E-03
Phase delay (usec)			-1.28875221617E+04														Apriori clockrate (us/s)	-4.6239510E-07	Resid phdelay (usec)	5.17031E-06	+/-	6.2E-07
Delay rate (us/s)			1.09751419344E+00														Apriori rate (us/s)	1.09750947525E+00	Resid rate (us/s)	4.17819E-06	+/-	6.6E-09
Total phase (deg)					-3.0												Apriori accel (us/s/s)	7.49557550146E-05	Resid phase (deg)	160.3	+/-	19.3

ph/seg (deg) 62.7 33.3
amp/seg (%) 61.1 58.2
ph/frq (deg) 40.5 38.5
amp/frq (%) 61.3 67.2

RMS Theor. Amplitude 0.184 +/- 0.031
Search (1024X64) 0.168
Interp. 0.000
Inc. seg. avg. 0.194
Inc. frq. avg. 0.174

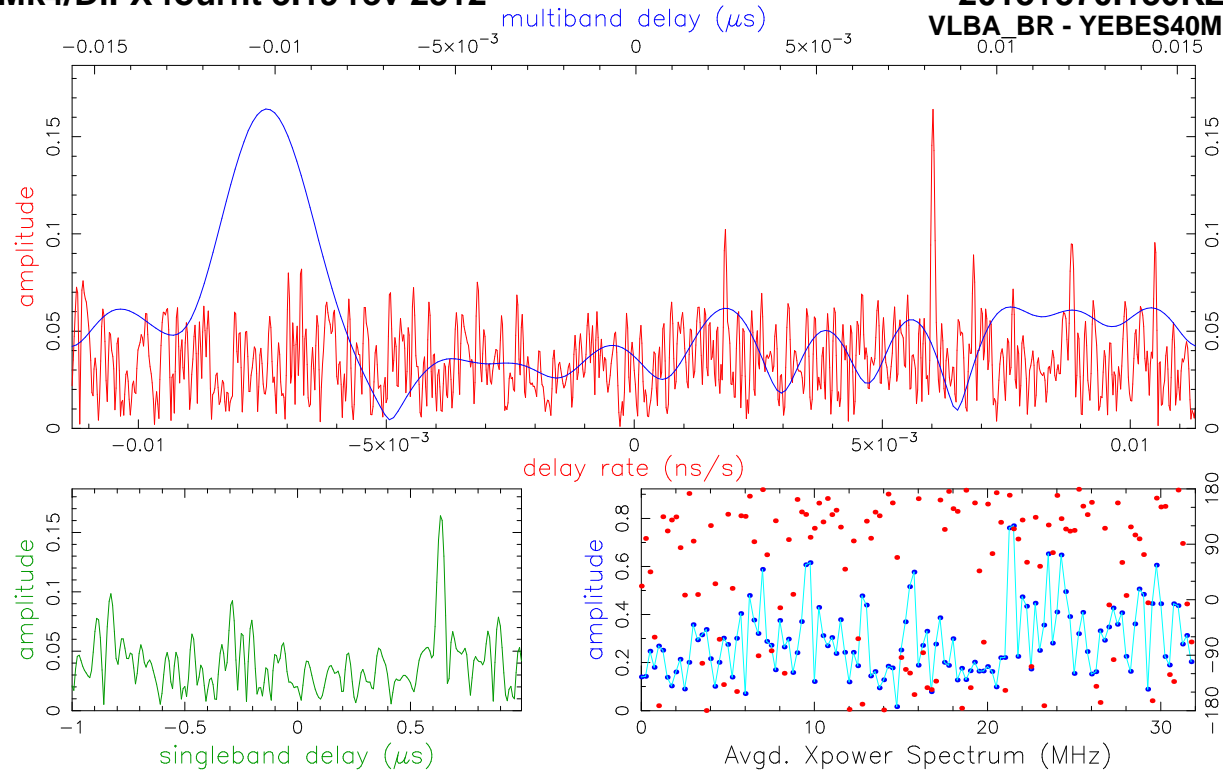
PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5
PCal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Sample rate(MISamp/s): 64
Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite

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 57.4 el 21.3 pa -45.0 Y: az 261.7 el 76.3 pa 70.4 u,v (fr/asec) -7838.167 5192.623 simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bY
VLBA_BR - YEBES40M, fgroup W, pol LL

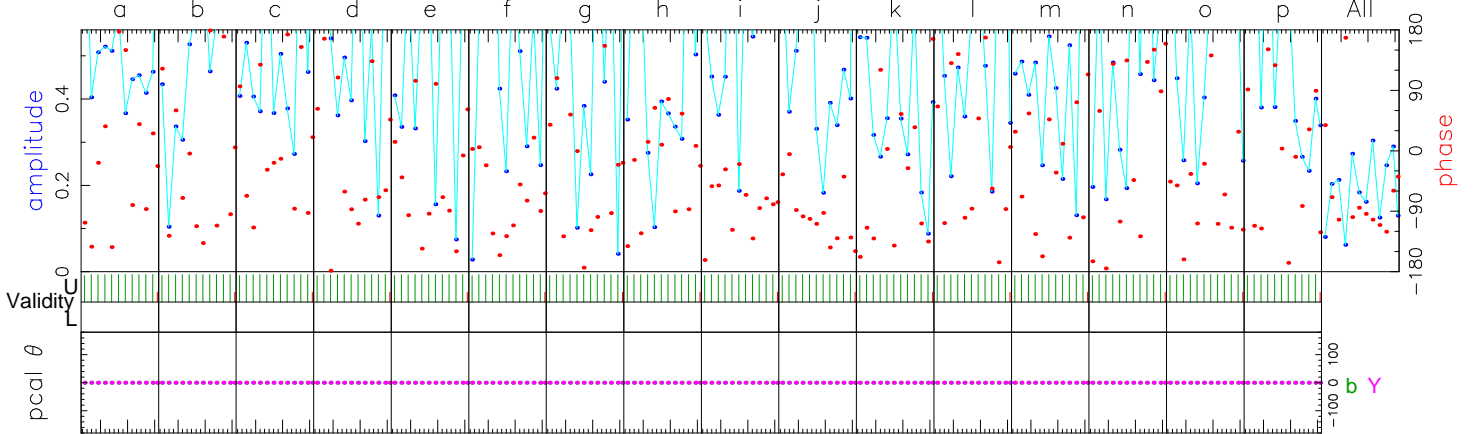


Fringe quality 0

SNR 5.8
Int time 162.028
Amp 0.187
Phase -91.8
PFD 6.3e-01
Delays (us)
SBD 0.635602
MBD -0.010157
Fringe rate (Hz) 0.519511
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204016.90
Stop 204259.71
FRT 204130.00
Corr/FF/build
2020:076:083738
2020:086:050211
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
	-84.1	-133.3	-64.8	-126.7	-72.5	-73.1	-110.3	-41.1	-84.6	-96.9	-123.7	-128.6	-58.7	134.9	-67.6	172.3		Phase -91.8
	0.2	0.3	0.1	0.2	0.3	0.3	0.1	0.3	0.6	0.5	0.1	0.1	0.1	0.2	0.3	0.1		Ampl. 0.2
	91.4	200.4	5.4	59.0	142.9	6.5	123.2	35.3	210.4	210.0	6.6	97.3	65.9	109.4	208.3	80.8		Sbd box 210.4
UL	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
b	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
b: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
b: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		
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		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL		Tracks

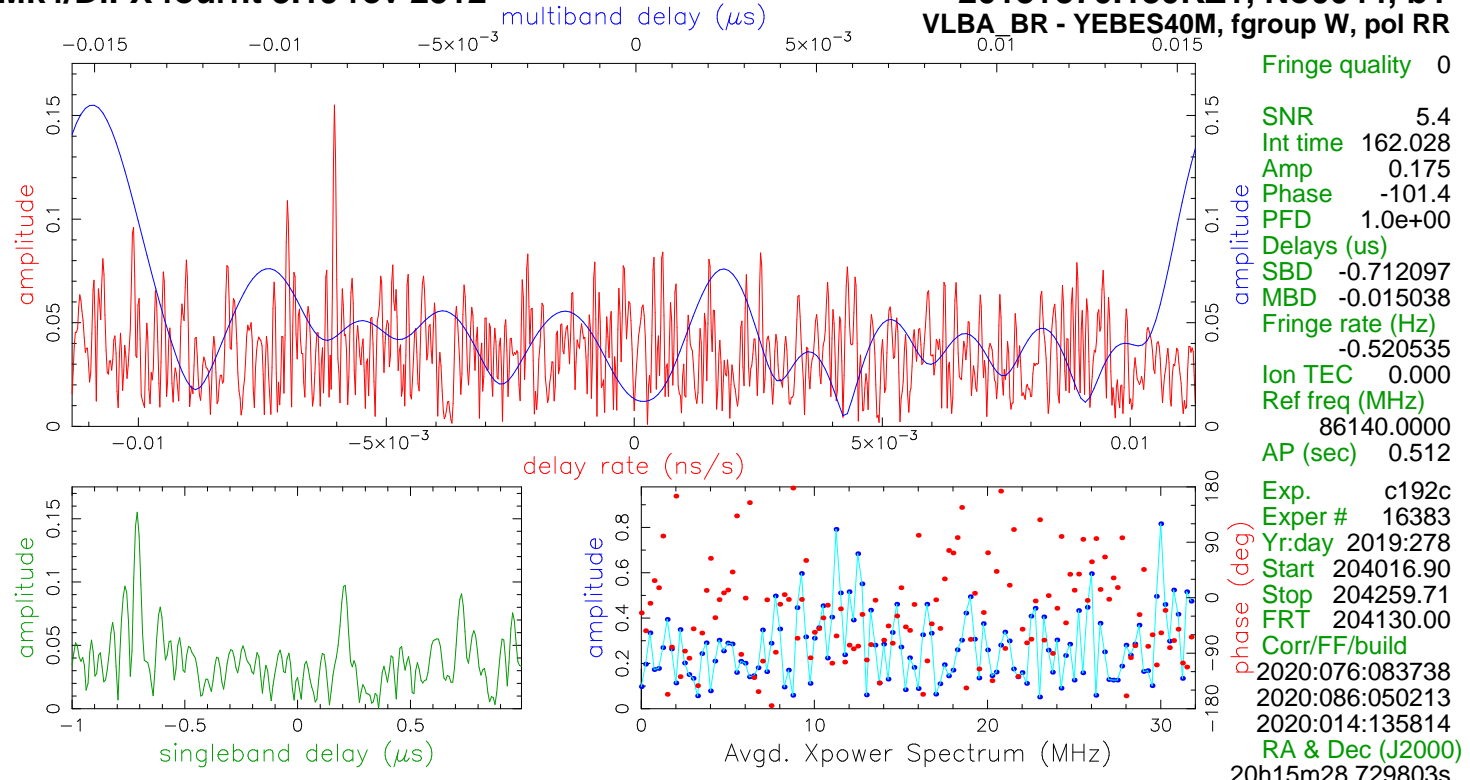
Group delay (usec)(sbd) -1.28868760737E+04 Apriori delay (usec) -1.28875221669E+04 Resid mbdelay (usec) -1.01568E-02 +/- 1.9E-04
 Sband delay (usec) -1.28868865644E+04 Apriori clock (usec) -1.0299129E+01 Resid sbdelay (usec) 6.35602E-01 +/- 3.0E-03
 Phase delay (usec) -1.28875221698E+04 Apriori clockrate (us/s) -4.6239510E-07 Resid phdelay (usec) -2.96048E-06 +/- 6.4E-07
 Delay rate (us/s) 1.09751550626E+00 Apriori rate (us/s) 1.09750947525E+00 Resid rate (us/s) 6.03101E-06 +/- 6.8E-09
 Total phase (deg) -255.2 Apriori accel (us/s/s) 7.49557550146E-05 Resid phase (deg) -91.8 +/- 19.9

RMS Theor. Amplitude 0.187 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 51.8 34.4 Search (1024X64) 0.161 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 49.5 60.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 ph/frq (deg) 52.4 39.7 Inc. seg. avg. 0.184 Sample rate(MISamp/s): 64 dr window (ns/s) -0.011 0.011
 amp/frq (%) 81.3 69.3 Inc. frq. avg. 0.190 Data rate(Mb/s): 2048 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00

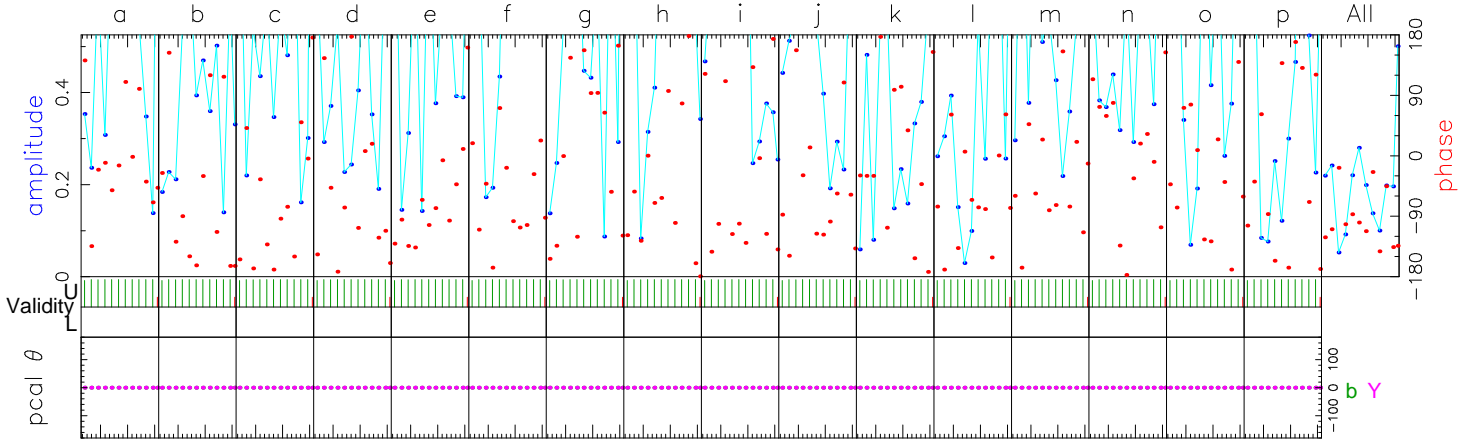
b: az 57.4 el 21.3 pa -45.0 Y: az 261.7 el 76.3 pa 70.4 u,v (fr/asec) -7838.167 5192.623 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bY..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bY.W.82.130KZ1

Mk4/DiFX fourfit 3.19 rev 2512

2013+370.130KZ1, No0044, bY
VLBA_BR - YEBES40M, fgroup W, pol RR



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

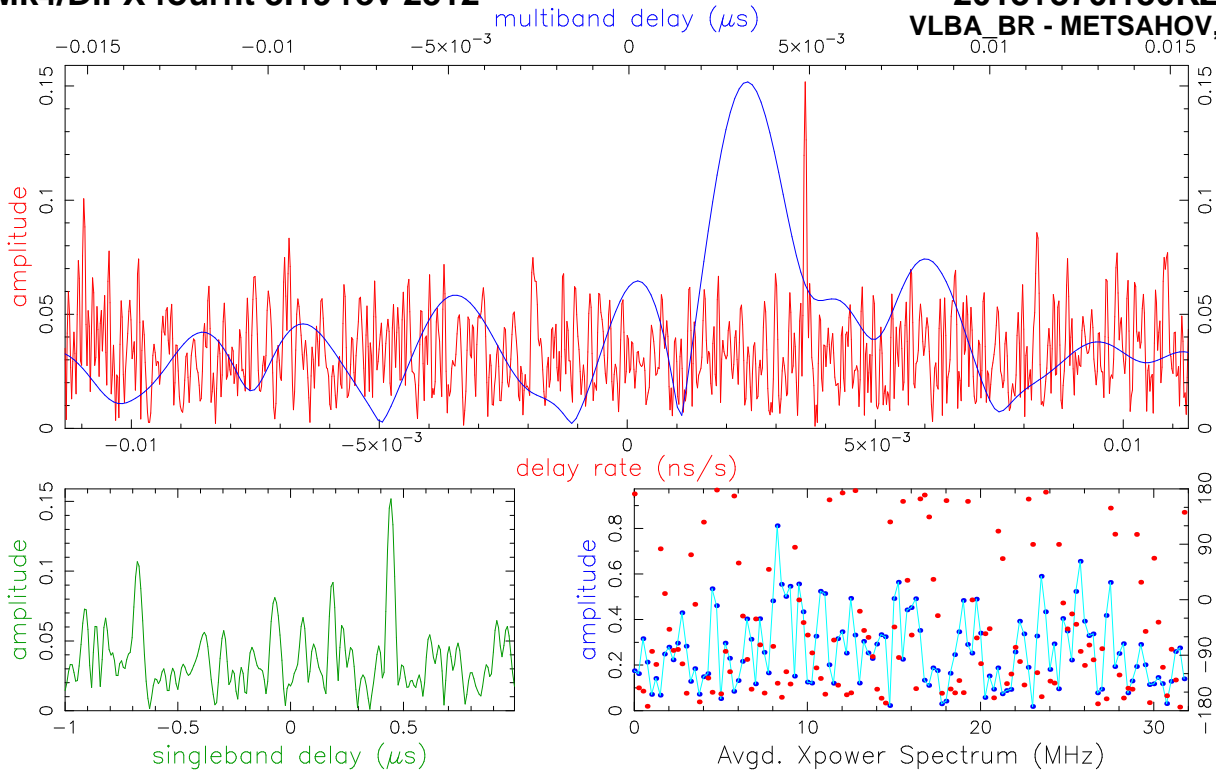


	86012.00	86044.00	86076.00	86108.00	86140.00	86172.00	86204.00	86236.00	86268.00	86300.00	86332.00	86364.00	86396.00	86428.00	86460.00	86492.00	Freq (MHz)	All					
-7.6	-139.6	-133.4	-115.8	-97.7	-62.7	-162.9	-110.8	-139.1	-76.8	-145.2	-70.4	-71.5	62.5	-83.4	-156.3		Phase	-101.4					
0.3	0.2	0.3	0.2	0.4	0.5	0.1	0.2	0.4	0.3	0.1	0.1	0.3	0.1	0.2	0.2		Ampl.	0.2					
135.9	236.7	155.9	108.0	255.6	38.5	228.1	146.1	153.7	222.3	27.6	223.0	4.2	104.5	71.8	225.5		Sbd box	37.9					
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					
b	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					
b: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					
b: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					
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		Tracks					
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Chan ids					
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks					
Group delay (usec)(sbd)			-1.28882247052E+04															Apriori delay (usec)	-1.28875221669E+04	Resid mbdelay (usec)	-1.50383E-02	+/-	2.0E-04
Sband delay (usec)			-1.28882342639E+04															Apriori clock (usec)	-1.0299129E+01	Resid sbdelay (usec)	-7.12097E-01	+/-	3.2E-03
Phase delay (usec)			-1.28875221701E+04															Apriori clockrate (us/s)	-4.6239510E-07	Resid phdelay (usec)	-3.26922E-06	+/-	6.8E-07
Delay rate (us/s)			1.09750343235E+00															Apriori rate (us/s)	1.09750947525E+00	Resid rate (us/s)	-6.04289E-06	+/-	7.3E-09
Total phase (deg)																		Apriori accel (us/s/s)	7.49557550146E-05	Resid phase (deg)	-101.4	+/-	21.2

	RMS	Theor.	Amplitude	0.175 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	42.1	36.7	Search (1024X64)	0.154	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	59.5	64.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	61.5	42.4	Inc. seg. avg.	0.174	Sample rate(MISamp/s): 64	dr window (ns/s) -0.011 0.011
amp/frq (%)	68.9	74.0	Inc. frq. avg.	0.189	Data rate(Mb/s): 2048	nlags: 128 t_cohere infinite
						ion window (TEC) 0.00 0.00

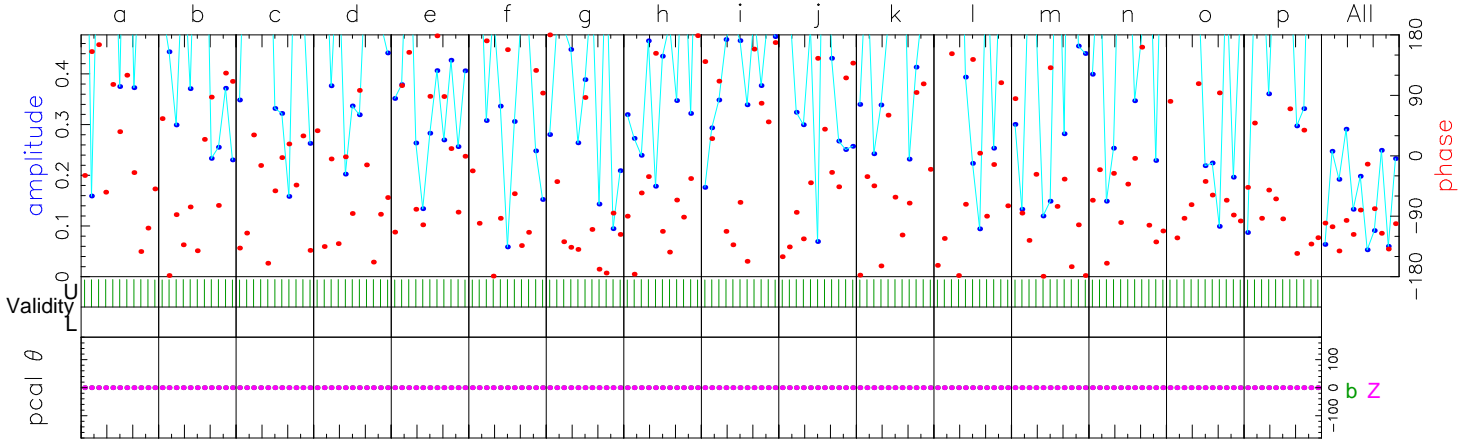
b: az 57.4 el 21.3 pa -45.0 Y: az 261.7 el 76.3 pa 70.4 u,v (fr/asec) -7838.167 5192.623 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bY..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bY.W.88.130KZ1



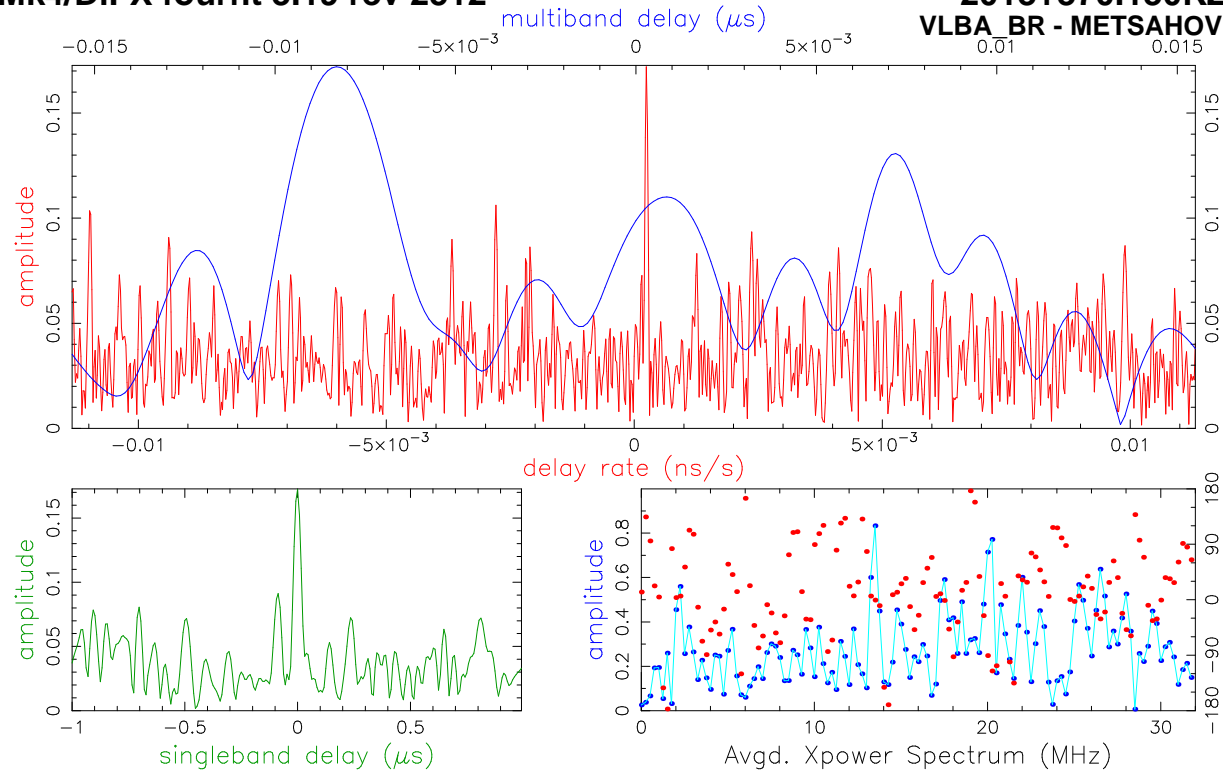
Fringe quality 0
SNR 5.6
Int time 179.434
Amp 0.159
Phase -104.4
PFD 9.4e-01
Delays (us)
SBD 0.443386
MBD 0.003251
Fringe rate (Hz) 0.308497
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050215
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				
	-81.0	-143.7	-50.0	-90.2	140.5	-120.9	-135.9	-108.7	168.9	-82.5	-48.0	-150.6	-124.5	-80.9	-89.8	-86.1	Phase	-104.4				
	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.1	0.1	0.1	0.3	0.3	0.3	0.3	0.3	Ampl.	0.2				
	56.7	95.5	217.0	247.4	155.6	102.2	13.2	2.7	212.8	241.3	159.3	95.5	211.6	13.3	140.5	32.3	Sbd box	185.8				
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					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC phase					
b: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					
b: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					
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	Chan ids					
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	W08UL	W09UL	W10UL	W11UL	W12UL	W13UL	W14UL	W15UL	Tracks					
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR	Chan ids					
																	Tracks					
Group delay (usec)(sbd)			-9.35312302637E+03														Apriori delay (usec)	-9.35356377785E+03	Resid mbdelay (usec)	3.25148E-03	+/-	1.9E-04
Sband delay (usec)			-9.35312039235E+03														Apriori clock (usec)	-8.0259496E-01	Resid sbdelay (usec)	4.43386E-01	+/-	3.1E-03
Phase delay (usec)			-9.35356378121E+03														Apriori clockrate (us/s)	-2.5868787E-07	Resid phdelay (usec)	-3.36509E-06	+/-	6.6E-07
Delay rate (us/s)			1.24976976751E+00														Apriori rate (us/s)	1.24976618616E+00	Resid rate (us/s)	3.58135E-06	+/-	6.4E-09
Total phase (deg)					-41.0												Apriori accel (us/s/s)	4.12963228438E-05	Resid phase (deg)	-104.4	+/-	20.5

ph/seg (deg) 33.9 34.0 Theor. Amplitude 0.159 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 55.2 59.3 Search (1024X64) 0.149 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 49.7 41.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 60.4 71.6 Inc. seg. avg. 0.146 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 Z: az 251.1 el 53.8 pa 36.1 u,v (fr/asec) -8962.063 1648.051 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bZ..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bZ.W.101.130KZ1 simultaneous interpolator

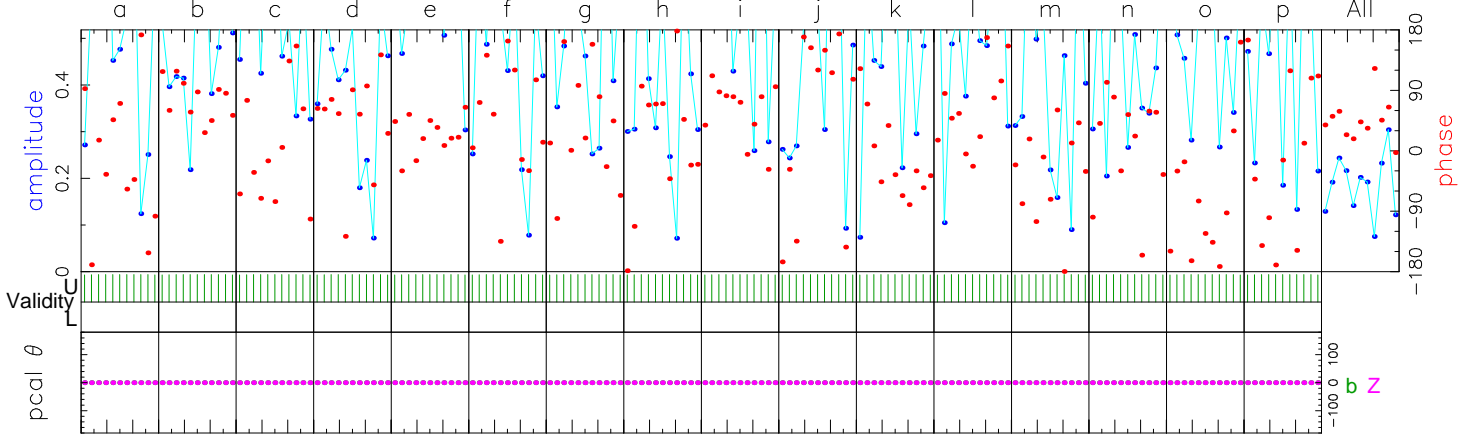


Fringe quality 0

SNR 6.3
Int time 179.434
Amp 0.173
Phase 44.0
PFD 3.4e-02
Delays (us)
SBD -0.001551
MBD -0.008282
Fringe rate (Hz) 0.021799
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

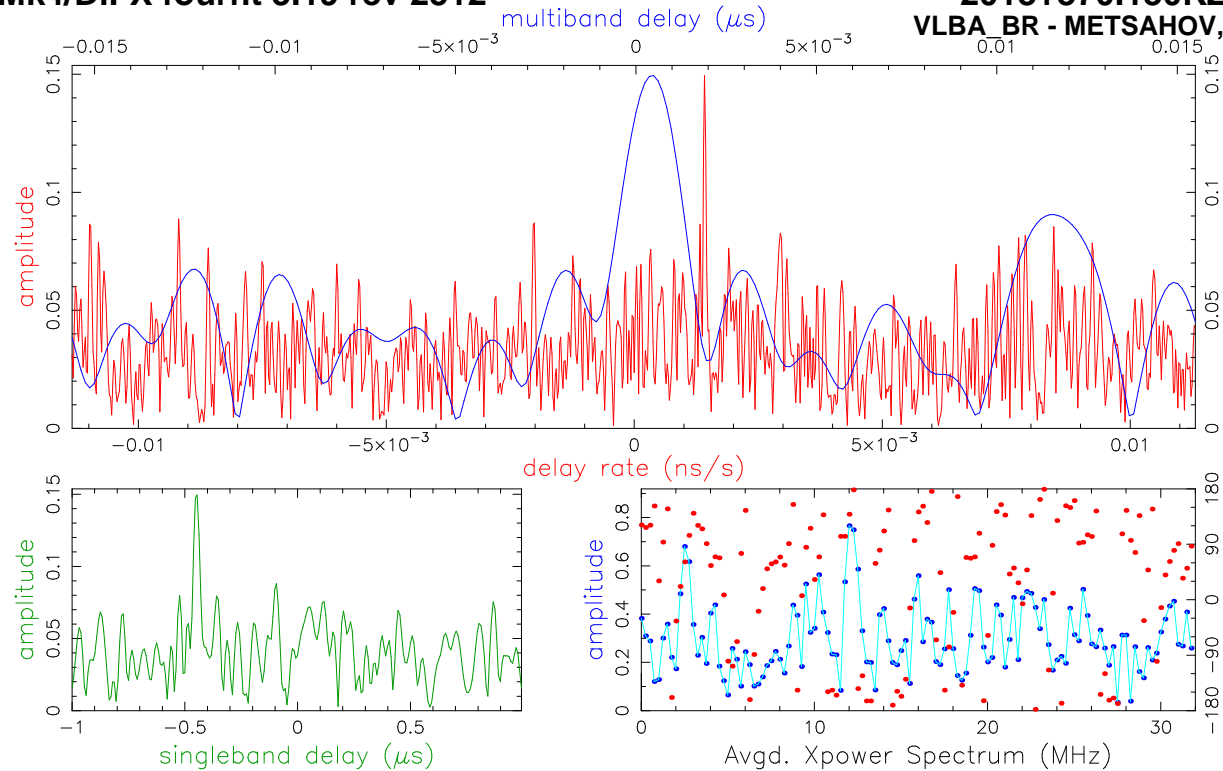
Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050211
2020:014:135814
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

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
UL	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	160.9	Phase 44.0
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	Ampl. 0.2
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	Sbd box 128.8
b: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	160.9	APs used
b: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	160.9	PC freqs
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	PC phase
b	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	Mani PC
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	160.9	PC amp
b	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
																		Chan ids
																		Tracks
Group delay (usec)(sbd)	-9.35357205949E+03			Apriori delay (usec)			-9.35356377785E+03			Resid mbdelay (usec)			-8.28164E-03			+/- 1.7E-04		
Sband delay (usec)	-9.35356532885E+03			Apriori clock (usec)			-8.0259496E-01			Resid sbdelay (usec)			-1.55100E-03			+/- 2.7E-03		
Phase delay (usec)	-9.35356377643E+03			Apriori clockrate (us/s)			-2.5868787E-07			Resid phdelay (usec)			1.41865E-06			+/- 5.8E-07		
Delay rate (us/s)	1.24976643923E+00			Apriori rate (us/s)			1.24976618616E+00			Resid rate (us/s)			2.53067E-07			+/- 5.6E-09		
Total phase (deg)	-252.6			Apriori accel (us/s/s)			4.12963228438E-05			Resid phase (deg)			44.0			+/- 18.1		

ph/seg (deg) RMS 30.6 Theor. 30.0 Amplitude 0.173 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 36.8 52.4 Search (1024X64) 0.165 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 72.8 36.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016
 amp/frq (%) 99.2 63.2 Inc. seg. avg. 0.164 Sample rate(MSamp/s): 64 dr window (ns/s) -0.011 0.011
 b: az 57.4 el 21.3 pa -45.0 Z: az 251.1 el 53.8 pa 36.1 u,v (fr/asec) -8962.063 1648.051 nlags: 128 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v2/1234/No0044/bZ..130KZ1 Output file: /Exps/c192c/v2/1234/No0044/bZ.W.80.130KZ1 simultaneous interpolator

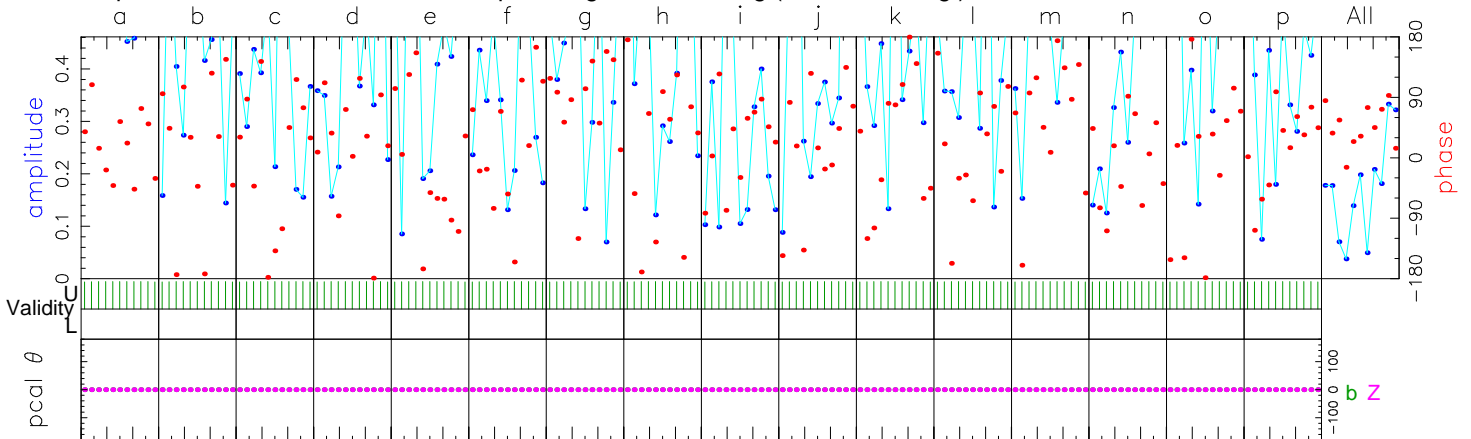


Fringe quality 0

SNR 5.6
Int time 179.434
Amp 0.154
Phase 50.8
PFD 9.3e-01
Delays (us)
SBD -0.448821
MBD 0.000410
Fringe rate (Hz) 0.122022
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:278
Start 204000.00
Stop 204300.23
FRT 204130.00
Corr/FF/build 2020:076:083738
2020:086:050213
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		
Z	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000		
b: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		
b: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		
Z	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		
Z	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
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	W08UR	W09UR	W10UR	W11UR	W12UR	W13UR	W14UR	W15UR		Tracks
Group delay (usec)(sbd) -9.35400086773E+03 Apriori delay (usec) -9.35356377785E+03 Resid mbdelay (usec) 4.10115E-04 +/- 1.9E-04 Sband delay (usec) -9.35401259885E+03 Apriori clock (usec) -8.0259496E-01 Resid sbdelay (usec) -4.48821E-01 +/- 3.1E-03 Phase delay (usec) -9.35356377621E+03 Apriori clockrate (us/s) -2.5868787E-07 Resid phdelay (usec) 1.63846E-06 +/- 6.6E-07 Delay rate (us/s) 1.24976760271E+00 Apriori rate (us/s) 1.24976618616E+00 Resid rate (us/s) 1.41655E-06 +/- 6.3E-09 Total phase (deg) -245.8 Apriori accel (us/s/s) 4.12963228438E-05 Resid phase (deg) 50.8 +/- 20.5																		
ph/seg (deg) RMS 31.4 Theor. 34.0 Amplitude Search (1024X64) 0.154 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5 amp/seg (%) 62.1 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) 49.1 40.9 Inc. seg. avg. 0.147 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.016 0.016 amp/frq (%) 77.7 71.5 Inc. frq. avg. 0.152 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																		