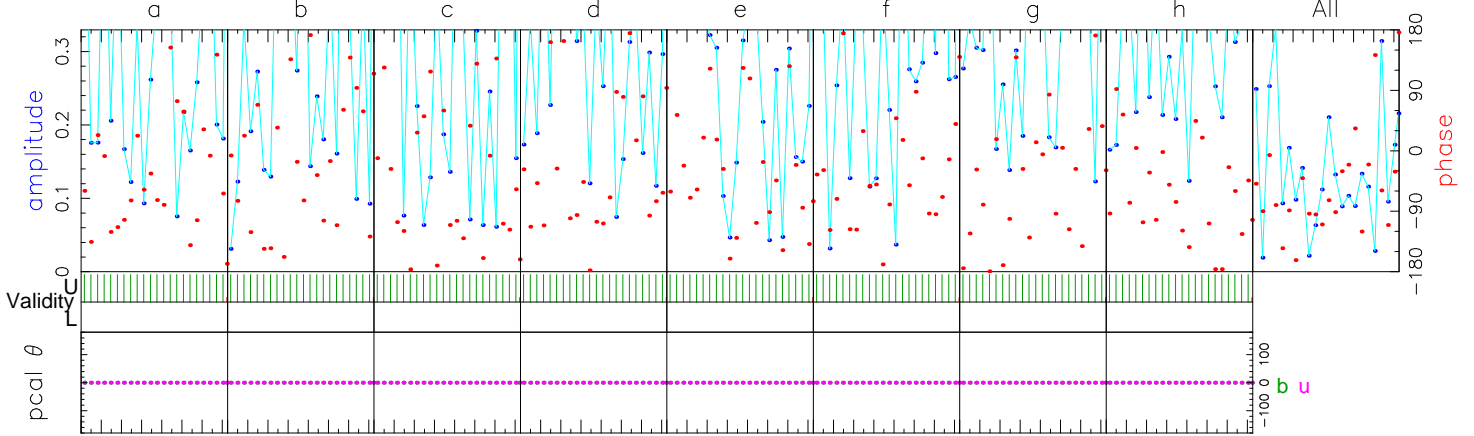


Fringe quality 0

SNR 5.7  
Int time 419.802  
Amp 0.110  
Phase -65.6  
PFD 9.2e-01  
Delays (us)  
SBD -0.926812  
MBD 0.002644  
Fringe rate (Hz)  
-0.406946  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

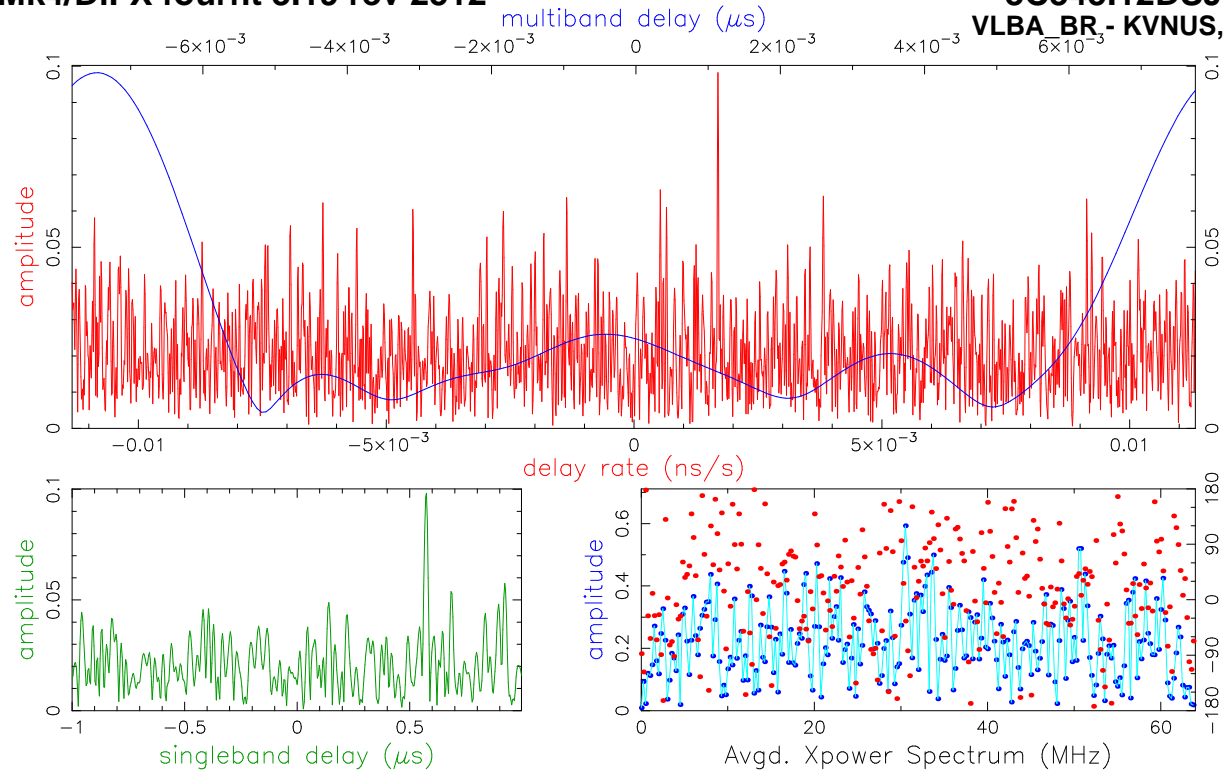
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183350  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-55.2	25.5	-113.6	-89.4	-30.2	-54.4	-61.0	-64.5	Phase	-65.6
	0.1	0.0	0.1	0.2	0.1	0.2	0.1	0.2	Ampl.	0.1
	234.2	413.9	14.9	449.2	276.1	19.8	209.5	18.8	Sbd box	19.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.67598011945E+03		Apriori delay (usec)		-1.67506088875E+03		Resid mbdelay (usec)		2.64430E-03	+/- 1.9E-04
Sband delay (usec)	-1.67598770025E+03		Apriori clock (usec)		-9.0468569E+00		Resid sbdelay (usec)		-9.26812E-01	+/- 1.5E-03
Phase delay (usec)	-1.67506089086E+03		Apriori clockrate (us/s)		-6.4239505E-07		Resid phdelay (usec)		-2.11405E-06	+/- 6.5E-07
Delay rate (us/s)	-1.43365363795E+00		Apriori rate (us/s)		-1.43364891371E+00		Resid rate (us/s)		-4.72424E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		2.06555117848E-05		Resid phase (deg)		-65.6	+/- 20.0

ph/seg (deg) 57.2 48.0 Amplitude 0.110 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 90.6 83.8 Search (2048X32) 0.097 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 46.0 28.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 43.2 49.4 Inc. seg. avg. 0.110 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 b: az 283.1 el 45.8 pa 57.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 10720.494 2333.376 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/bu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/bu.W.16.12DSJB

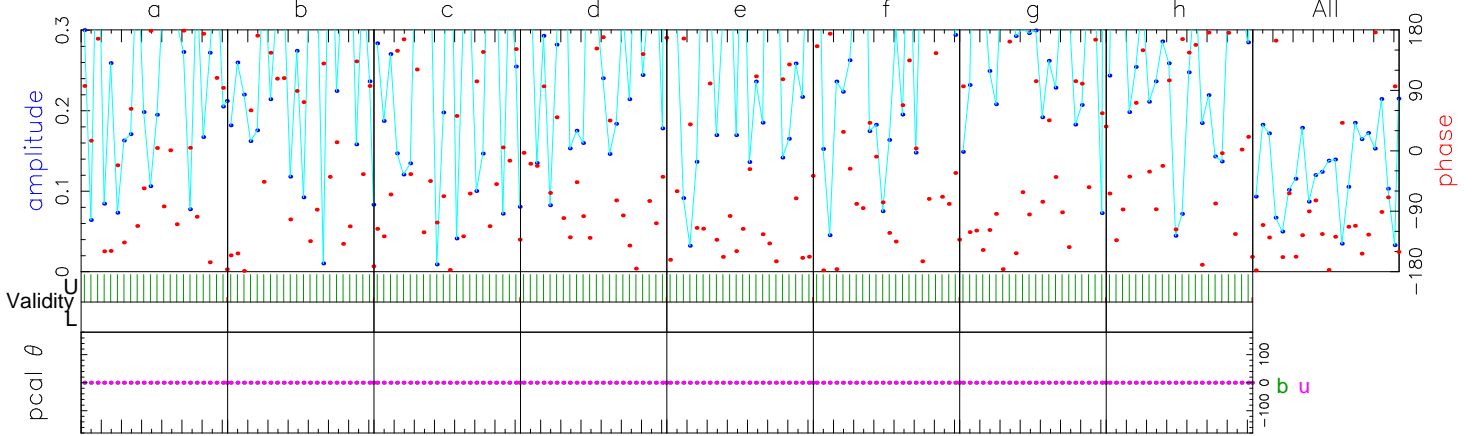


Fringe quality 0

SNR 5.6  
Int time 419.803  
Amp 0.100  
Phase -126.1  
PFD 1.0e+00  
Delays (us)  
SBD 0.572742  
MBD -0.007470  
Fringe rate (Hz) 0.145804  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

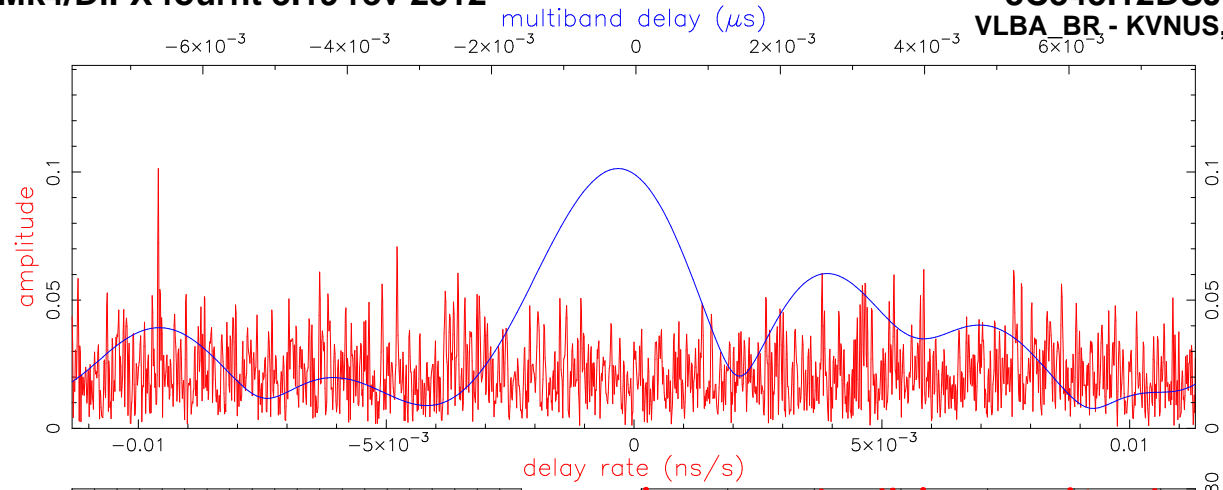
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183354  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

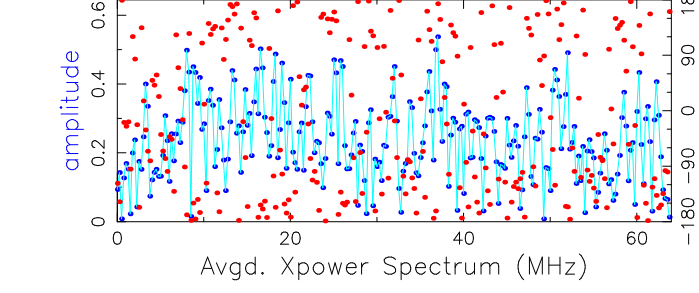
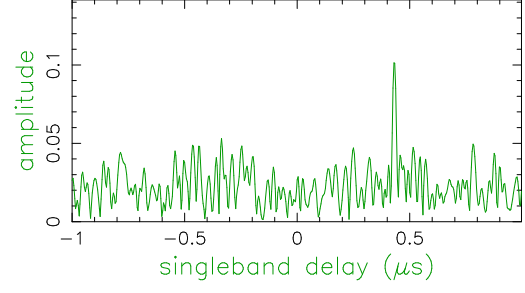


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-148.4	-133.3	-110.9	-103.6	-140.4	-113.9	-132.0	-128.6	Phase	-126.1
	0.1	0.0	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	287.0	28.3	494.1	136.9	402.8	357.9	50.5	511.0	Sbd box	403.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.67449023424E+03		Apriori delay (usec)		-1.67506088875E+03		Resid mbdelay (usec)		-7.47050E-03	+/- 2.0E-04
Sband delay (usec)	-1.67448814725E+03		Apriori clock (usec)		-9.0468569E+00		Resid sbdelay (usec)		5.72742E-01	+/- 1.5E-03
Phase delay (usec)	-1.67506089281E+03		Apriori clockrate (us/s)		-6.4239505E-07		Resid phdelay (usec)		-4.06647E-06	+/- 6.6E-07
Delay rate (us/s)	-1.43364722107E+00		Apriori rate (us/s)		-1.43364891371E+00		Resid rate (us/s)		1.69264E-06	+/- 2.7E-09
Total phase (deg)			Apriori accel (us/s/s)		2.06555117848E-05		Resid phase (deg)		-126.1	+/- 20.6

ph/seg (deg) 58.8 58.8 49.4 49.4 Search (2048X32) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 56.8 56.8 86.2 86.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 16.7 16.7 29.1 29.1 Inc. seg. avg. 0.092 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 41.5 41.5 50.8 50.8 Inc. frq. avg. 0.091 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 b: az 283.1 el 45.8 pa 57.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 10720.494 2333.376 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/bu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/bu.W.36.12DSJB

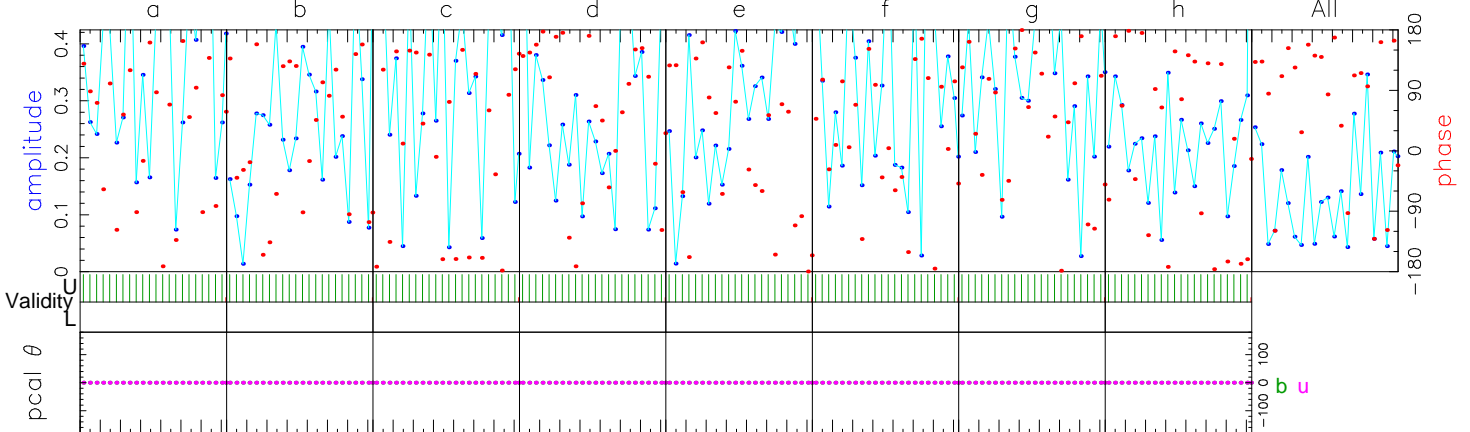


Fringe quality 0  
SNR 5.8  
Int time 419.802  
Amp 0.142  
Phase 128.6  
PFD 8.3e-01  
Delays (us)  
SBD 0.431566  
MBD -0.000245  
Fringe rate (Hz)  
-0.827762  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183359  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"



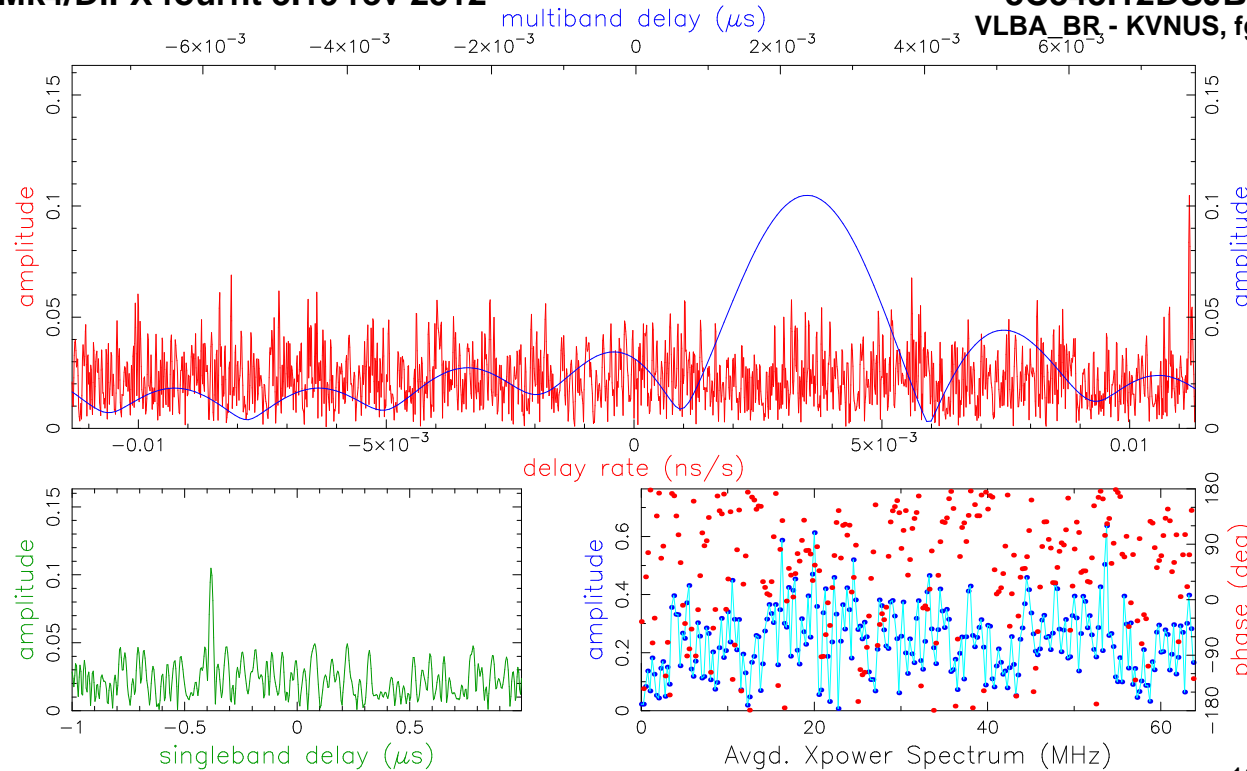
Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:u	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		
u	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.67462363378E+03				-1.67506088875E+03				-2.45038E-04	+/- 1.9E-04
Sband delay (usec)	-1.67462932300E+03				-9.0468569E+00				4.31566E-01	+/- 1.5E-03
Phase delay (usec)	-1.67506088460E+03				-6.4239505E-07				4.14729E-06	+/- 6.4E-07
Delay rate (us/s)	-1.43365852321E+00				-1.43364891371E+00				-9.60950E-06	+/- 2.6E-09
Total phase (deg)			-215.8		2.06555117848E-05				128.6	+/- 19.8
	RMS	Theor.	Amplitude	0.142 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	63.2	47.5	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	90.3	82.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	36.4	28.0	Inc. seg. avg.	0.141	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	42.4	48.9	Inc. frq. avg.	0.143	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 283.1 el 45.8 pa 57.8      u: az 68.6 el 51.4 pa -80.7      u,v (fr/asec) 10720.494 2333.376      simultaneous interpolator  
Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0041/bu..12DSJB    Output file: /Exps/c192a/v1\_PV/1234/No0041/bu.W.56.12DSJB

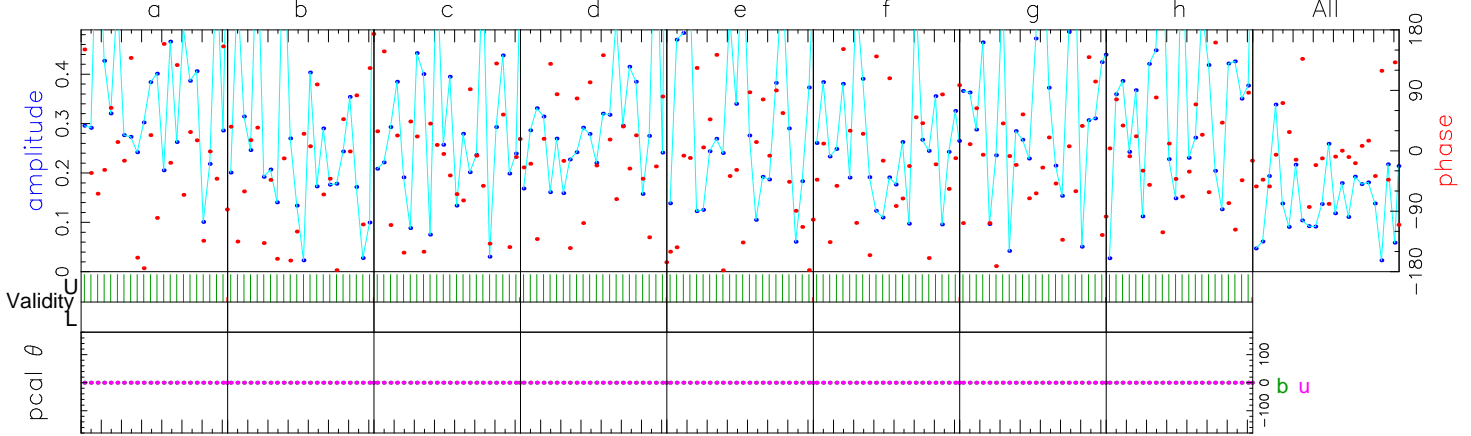


Fringe quality 0

SNR 5.9  
Int time 419.803  
Amp 0.163  
Phase -17.8  
PFD 6.3e-01  
Delays (us)  
SBD -0.382163  
MBD 0.002383  
Fringe rate (Hz)  
0.966276  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

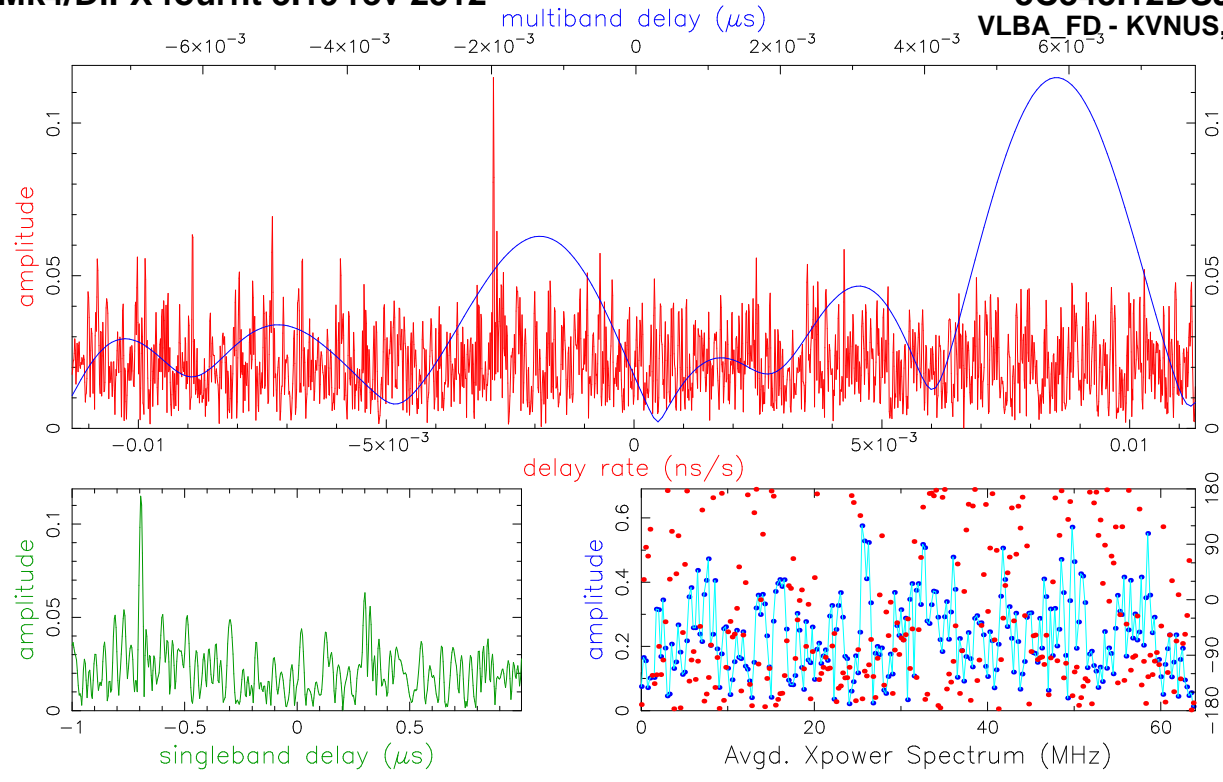
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183403  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-26.2	-15.5	-8.7	-11.0	-12.6	-19.1	-20.9	-21.1	Phase	-17.8
	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1
	499.9	69.8	35.1	209.0	498.4	151.0	329.1	118.9	Sbd box	159.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.67544913116E+03		Apriori delay (usec)		-1.67506088875E+03		Resid mbdelay (usec)		2.38259E-03	+/- 1.8E-04
Sband delay (usec)	-1.67544305225E+03		Apriori clock (usec)		-9.0468569E+00		Resid sbdelay (usec)		-3.82163E-01	+/- 1.5E-03
Phase delay (usec)	-1.67506088932E+03		Apriori clockrate (us/s)		-6.4239505E-07		Resid phdelay (usec)		-5.73769E-07	+/- 6.3E-07
Delay rate (us/s)	-1.43363769620E+00		Apriori rate (us/s)		-1.43364891371E+00		Resid rate (us/s)		1.12175E-05	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		2.06555117848E-05		Resid phase (deg)		-17.8	+/- 19.5

ph/seg (deg) 64.0 46.7 Search (2048X32) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 79.7 81.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 6.5 27.5 Inc. seg. avg. 0.169 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 31.1 48.1 Inc. frq. avg. 0.147 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 b: az 283.1 el 45.8 pa 57.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 10720.494 2333.376 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/bu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/bu.W.75.12DSJB

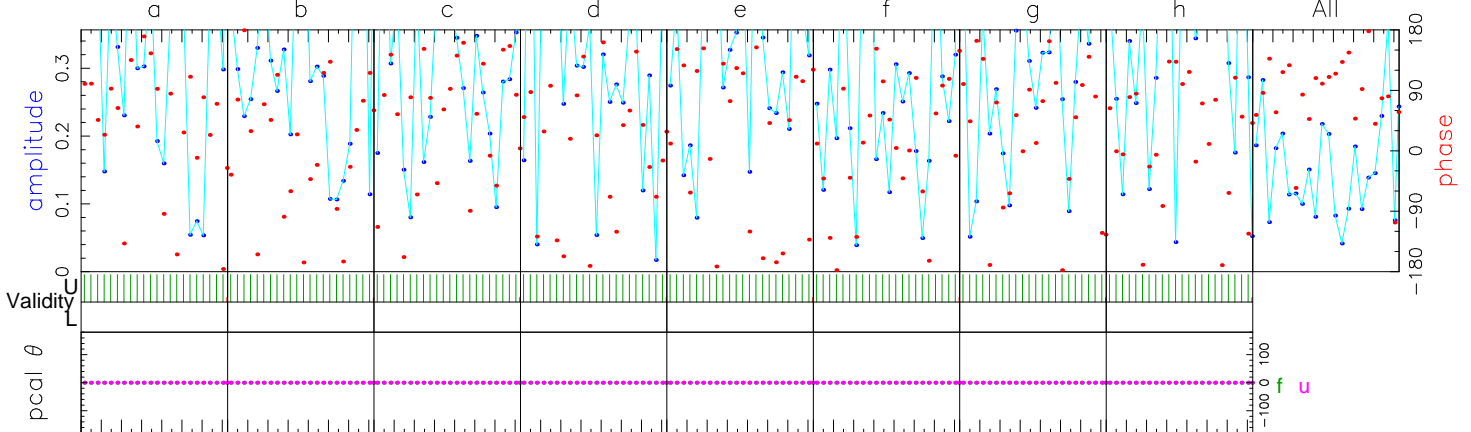


Fringe quality 0

SNR 6.5  
Int time 419.830  
Amp 0.119  
Phase 87.3  
PFD 2.4e-02  
Delays (us)  
SBD -0.694173  
MBD 0.005819  
Fringe rate (Hz)  
-0.244272  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183414  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

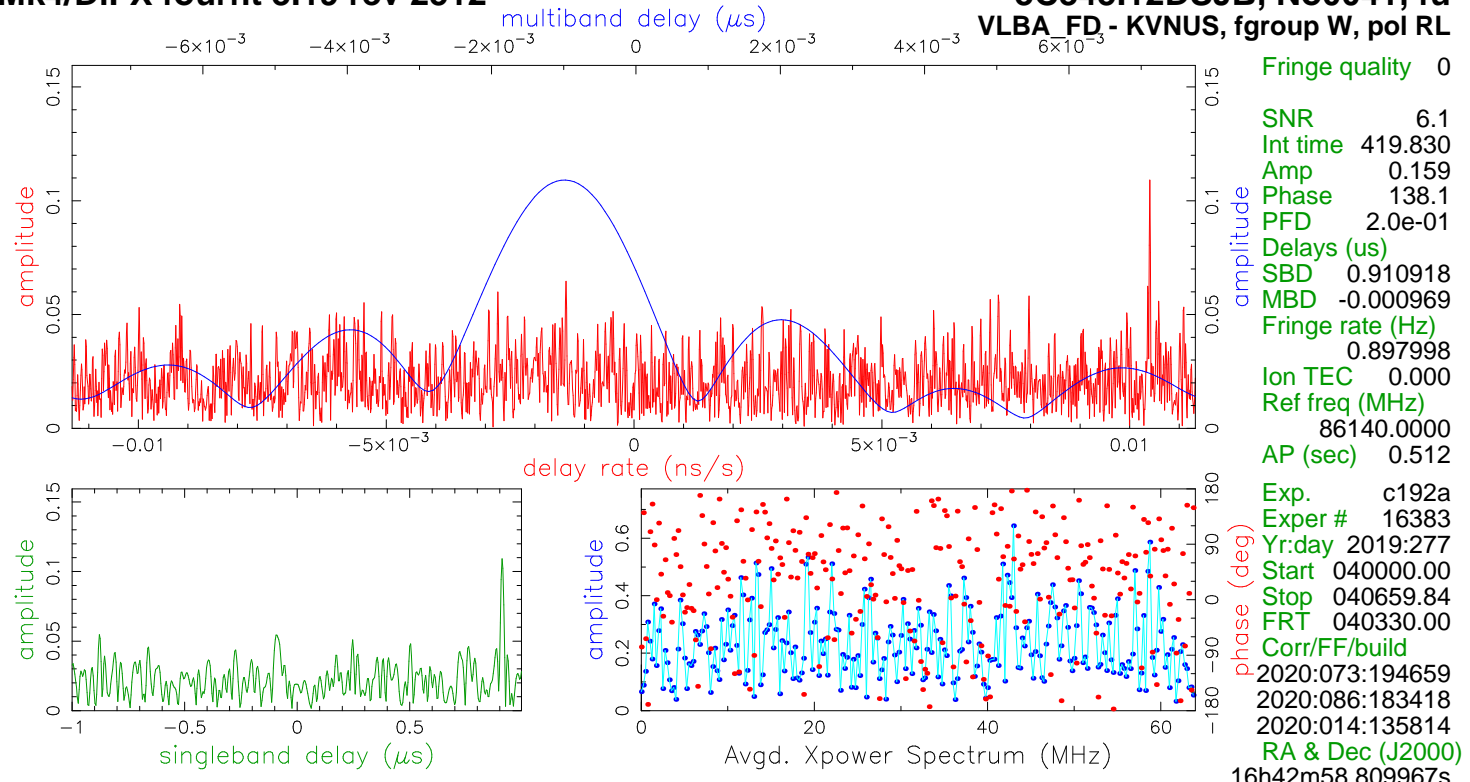


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

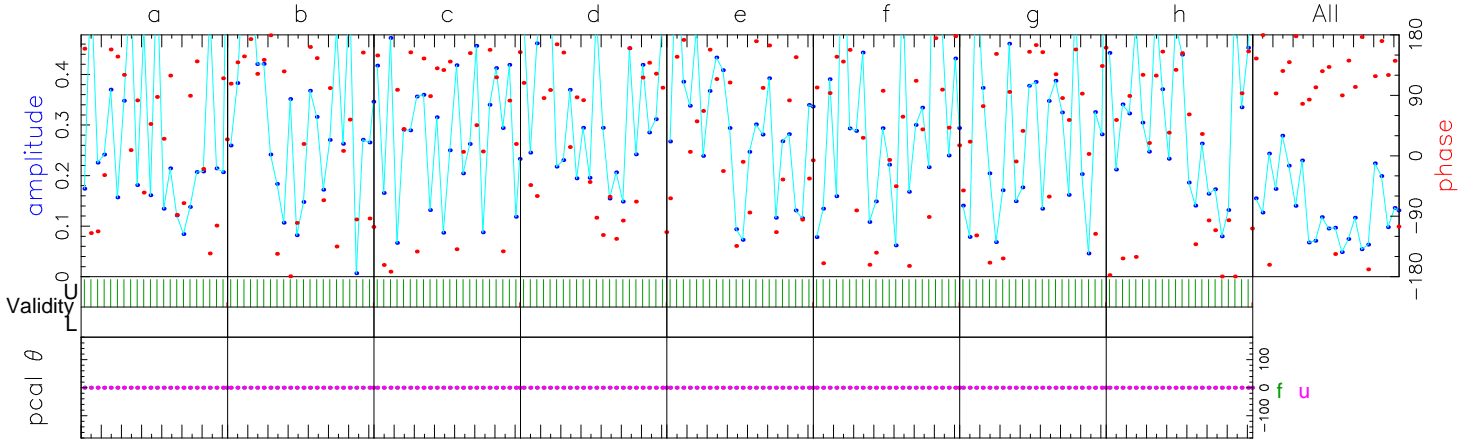
Group delay (usec)(sbd)	-7.06743603230E+03	Apriori delay (usec)	-7.06673872596E+03	Resid mbdelay (usec)	5.81866E-03	+/-	1.7E-04
Sband delay (usec)	-7.06743289871E+03	Apriori clock (usec)	-7.9741988E+00	Resid sbdelay (usec)	-6.94173E-01	+/-	1.3E-03
Phase delay (usec)	-7.06673872314E+03	Apriori clockrate (us/s)	-4.9094946E-07	Resid phdelay (usec)	2.81655E-06	+/-	5.7E-07
Delay rate (us/s)	-1.73095726582E+00	Apriori rate (us/s)	-1.73095443006E+00	Resid rate (us/s)	-2.83576E-06	+/-	2.3E-09
Total phase (deg)	-220.1	Apriori accel (us/s/s)	3.23661877374E-05	Resid phase (deg)	87.3	+/-	17.7

ph/seg (deg) 58.6 42.3 Search (2048X32) 0.113 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 74.2 73.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 31.6 25.0 Inc. seg. avg. 0.124 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 28.5 43.6 Inc. frq. avg. 0.122 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 f: az 301.9 el 27.8 pa 71.6 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 12952.070 1471.820 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/fu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/fu.W.112.12DSJB





Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

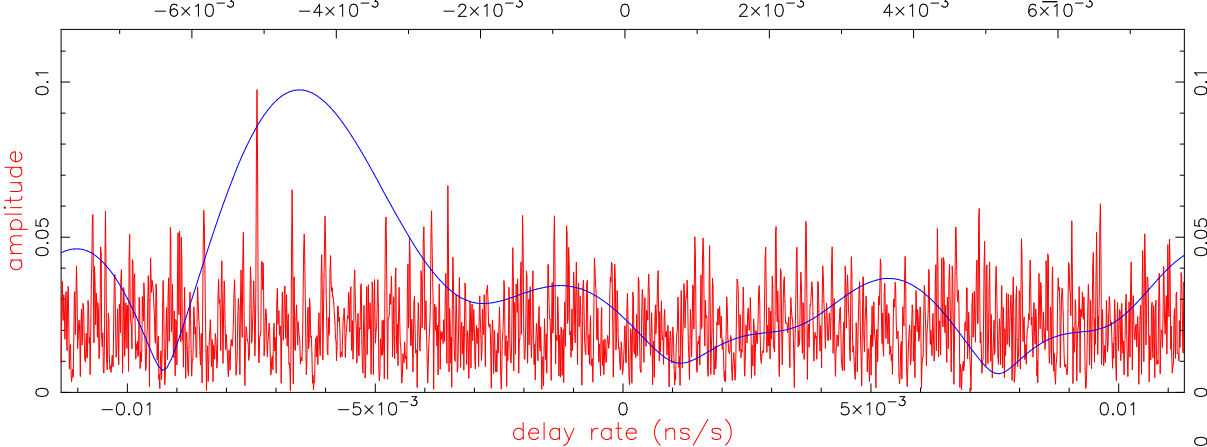


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
135.4	151.8	141.4	119.9	113.8	123.4	144.7	148.0	148.0	Phase	138.1
0.0	0.3	0.2	0.1	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1
352.8	439.1	56.9	87.7	30.7	511.6	255.1	490.0	490.0	Sbd box	490.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.06583344458E+03		Apriori delay (usec)	-7.06673872596E+03	Resid mbdelay (usec)	-9.68625E-04	+/-	1.8E-04		
Sband delay (usec)	-7.06582780771E+03		Apriori clock (usec)	-7.9741988E+00	Resid sbdelay (usec)	9.10918E-01	+/-	1.4E-03		
Phase delay (usec)	-7.06673872151E+03		Apriori clockrate (us/s)	-4.9094946E-07	Resid phdelay (usec)	4.45230E-06	+/-	6.0E-07		
Delay rate (us/s)	-1.73094400519E+00		Apriori rate (us/s)	-1.73095443006E+00	Resid rate (us/s)	1.04249E-05	+/-	2.5E-09		
Total phase (deg)		-169.4	Apriori accel (us/s/s)	3.23661877374E-05	Resid phase (deg)	138.1	+/-	18.7		

ph/seg (deg) RMS Theor. Amplitude 0.159 +/- 0.026 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 39.7 44.8 Search (2048X32) 0.102 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 66.2 78.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 15.7 26.4 Inc. seg. avg. 0.154 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 45.8 46.1 Inc. frq. avg. 0.147 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

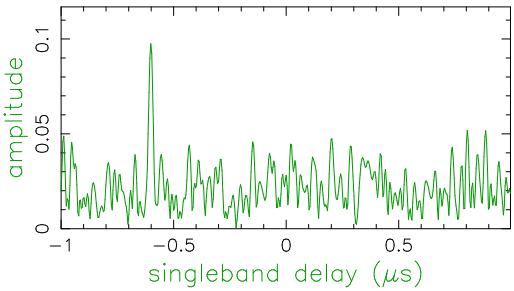
f: az 301.9 el 27.8 pa 71.6 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 12952.070 1471.820 simultaneous interpolator

multiband delay ( $\mu$ s)

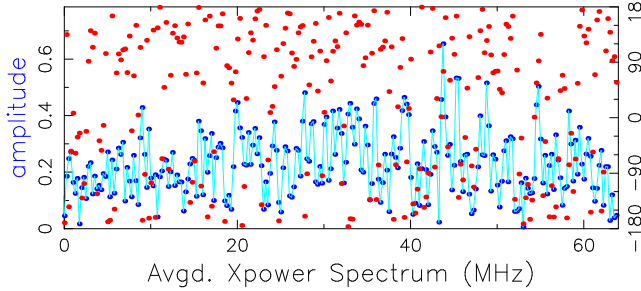


Fringe quality 0

SNR 5.5  
Int time 419.830  
Amp 0.117  
Phase 113.2  
PFD 1.0e+00  
Delays (us)  
SBD -0.601154  
MBD -0.004517  
Fringe rate (Hz)  
-0.636811  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

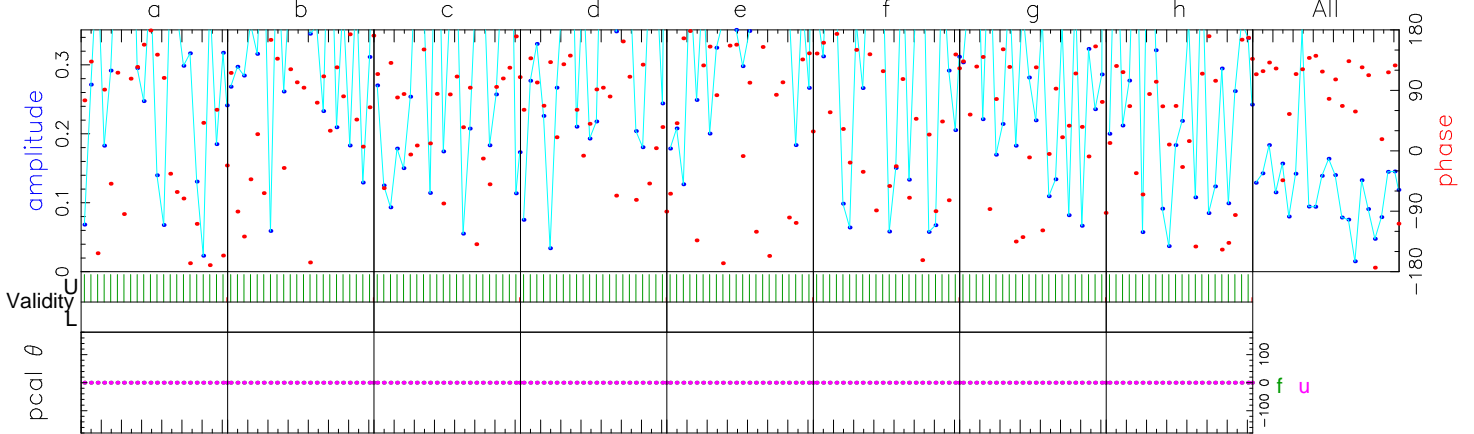


delay rate (ns/s)



Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183407  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-7.06733699345E+03	Apriori delay (usec)	-7.06673872596E+03	Resid mbdelay (usec)	-4.51749E-03	+/-	2.0E-04
Sband delay (usec)	-7.06733988021E+03	Apriori clock (usec)	-7.9741988E+00	Resid sbdelay (usec)	-6.01154E-01	+/-	1.6E-03
Phase delay (usec)	-7.06673872231E+03	Apriori clockrate (us/s)	-4.9094946E-07	Resid phdelay (usec)	3.64966E-06	+/-	6.8E-07
Delay rate (us/s)	-1.73096182281E+00	Apriori rate (us/s)	-1.73095443006E+00	Resid rate (us/s)	-7.39275E-06	+/-	2.8E-09
Total phase (deg)	-194.3	Apriori accel (us/s/s)	3.23661877374E-05	Resid phase (deg)	113.2	+/-	21.0

ph/seg (deg)	49.8	RMS	49.8	Theor.	50.3	Amplitude	0.117 +/- 0.021	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	71.1		71.1		87.7	Search (2048X32)	0.096	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	37.8		37.8		29.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	37.5		37.5		51.7	Inc. seg. avg.	0.108	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
						Inc. frq. avg.	0.123	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

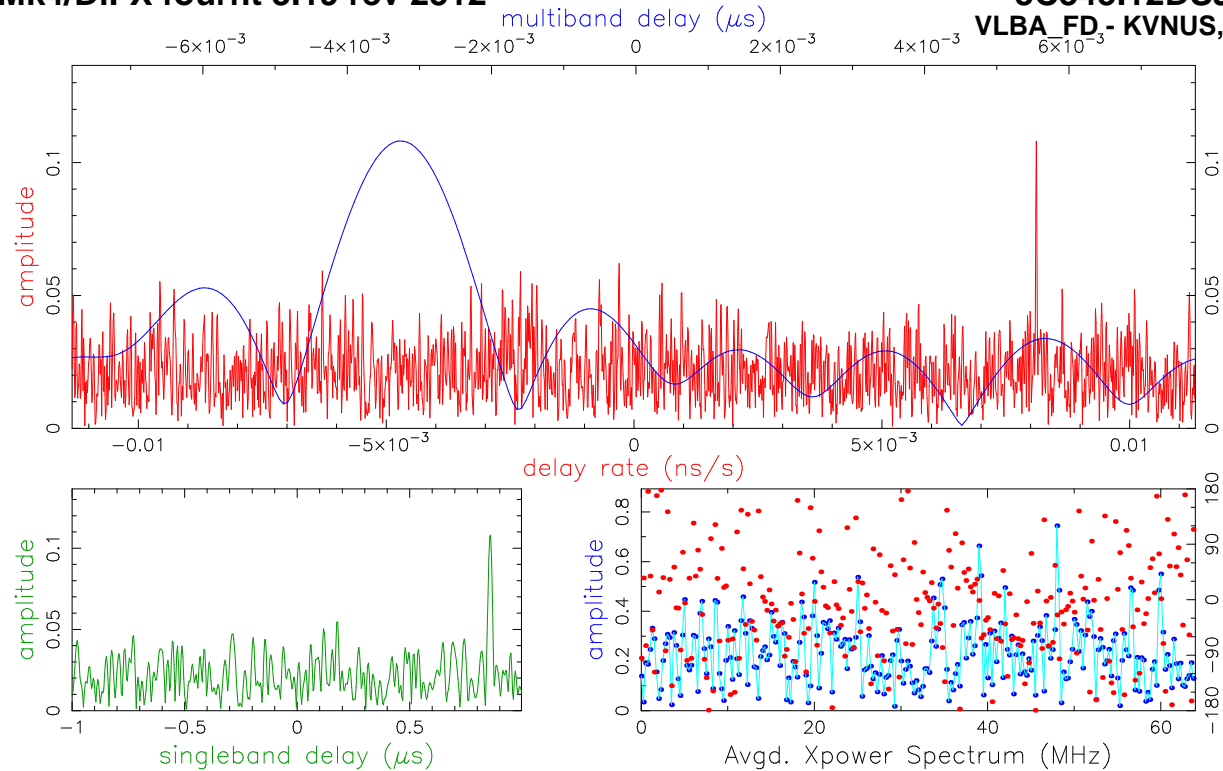
f: az 301.9 el 27.8 pa 71.6

u: az 68.6 el 51.4 pa -80.7

u,v (fr/asec) 12952.070 1471.820

simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/fu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/fu.W.84.12DSJB

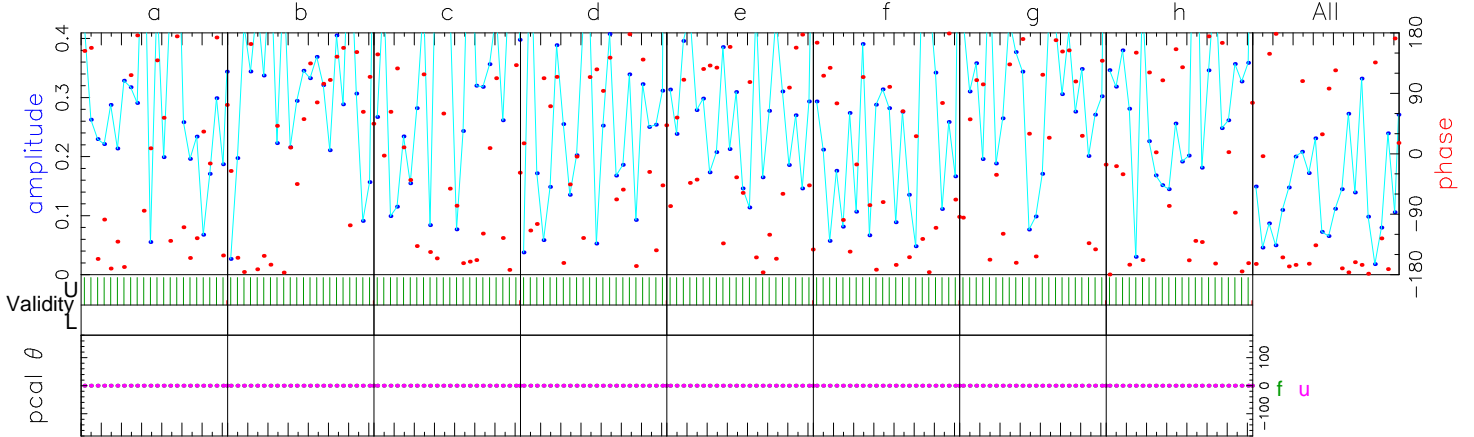


Fringe quality 0

SNR 6.1  
Int time 419.830  
Amp 0.137  
Phase -175.7  
PFD 2.0e-01  
Delays (us)  
SBD 0.857611  
MBD -0.003312  
Fringe rate (Hz)  
0.699843  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183410  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

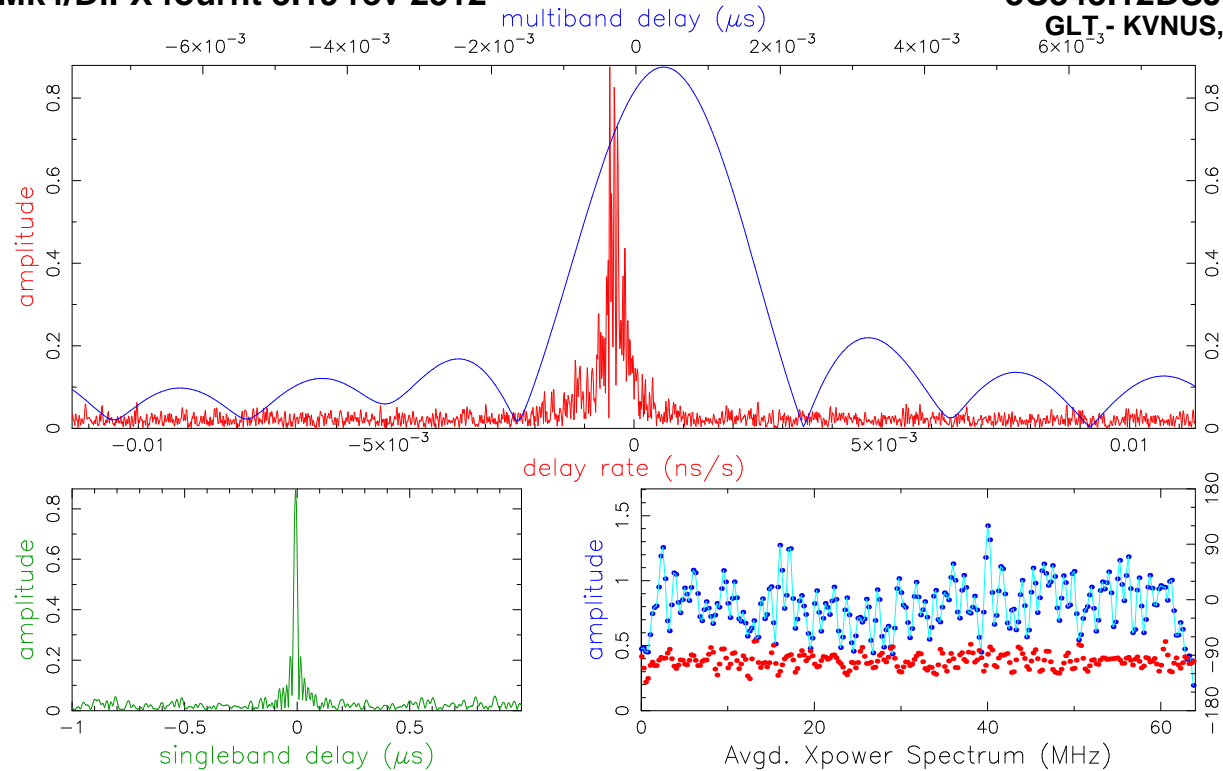
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-165.3	160.3	175.9	-170.5	-142.1	-171.2	156.9	-156.6	Phase	-175.7
	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1
	476.1	479.0	247.7	180.1	447.6	190.1	184.5	475.4	Sbd box	476.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.06588266271E+03		Apriori delay (usec)		-7.06673872596E+03		Resid mbdelay (usec)		-3.31175E-03	+/- 1.8E-04
Sband delay (usec)	-7.06588111546E+03		Apriori clock (usec)		-7.9741988E+00		Resid sbdelay (usec)		8.57611E-01	+/- 1.4E-03
Phase delay (usec)	-7.06673873162E+03		Apriori clockrate (us/s)		-4.9094946E-07		Resid phdelay (usec)		-5.66624E-06	+/- 6.0E-07
Delay rate (us/s)	-1.73094630557E+00		Apriori rate (us/s)		-1.73095443006E+00		Resid rate (us/s)		8.12448E-06	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		3.23661877374E-05		Resid phase (deg)		-175.7	+/- 18.7

ph/seg (deg) 61.7 44.8 Search (2048X32) 0.106 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 77.6 78.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 22.5 26.4 Inc. seg. avg. 0.135 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 36.0 46.1 Inc. frq. avg. 0.129 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 f: az 301.9 el 27.8 pa 71.6 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 12952.070 1471.820 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/fu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/fu.W.95.12DSJB simultaneous interpolator



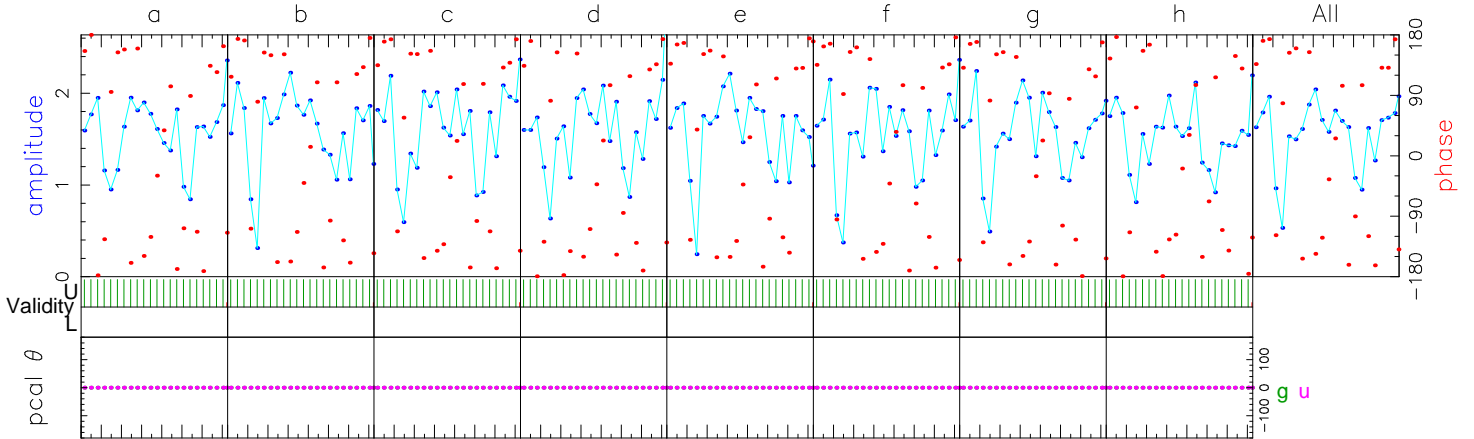


Fringe quality 5

SNR 49.2  
Int time 419.605  
Amp 0.879  
Phase 175.1  
PFD 0.0e+00  
Delays (us)  
SBD -0.007074  
MBD 0.000386  
Fringe rate (Hz)  
-0.041943  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

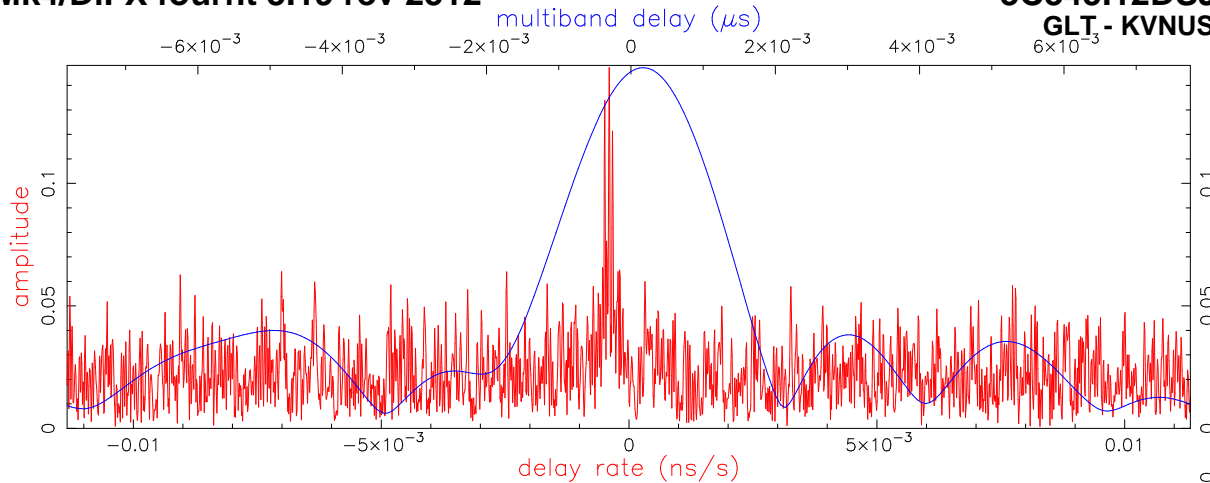
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183414  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



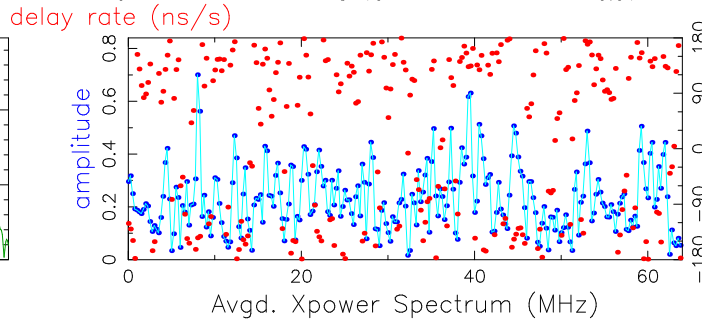
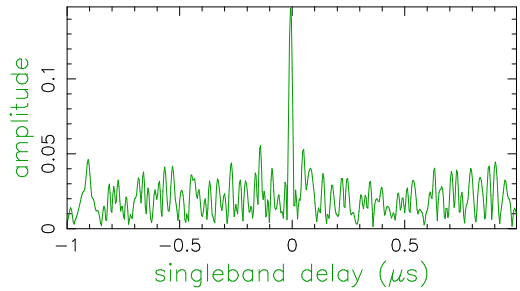
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-5.10308513107E+03	-5.10309259124E+03	-5.10308551160E+03	-9.78977409671E-01						
Sband delay (usec)										
Phase delay (usec)										
Delay rate (us/s)										
Total phase (deg)			11.1							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									175.1	+/- 2.2E-05
PCal mode: MANUAL, MANUAL										
PCal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 65.9 5.6 Search (2048X32) 0.866 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 86.8 9.7 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 6.0 3.3 Inc. seg. avg. 1.543 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 4.9 5.7 Inc. frq. avg. 0.878 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 g: az 301.9 el 33.5 pa 14.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 7395.791 6202.824 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/gu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/gu.W.111.12DSJB simultaneous interpolator



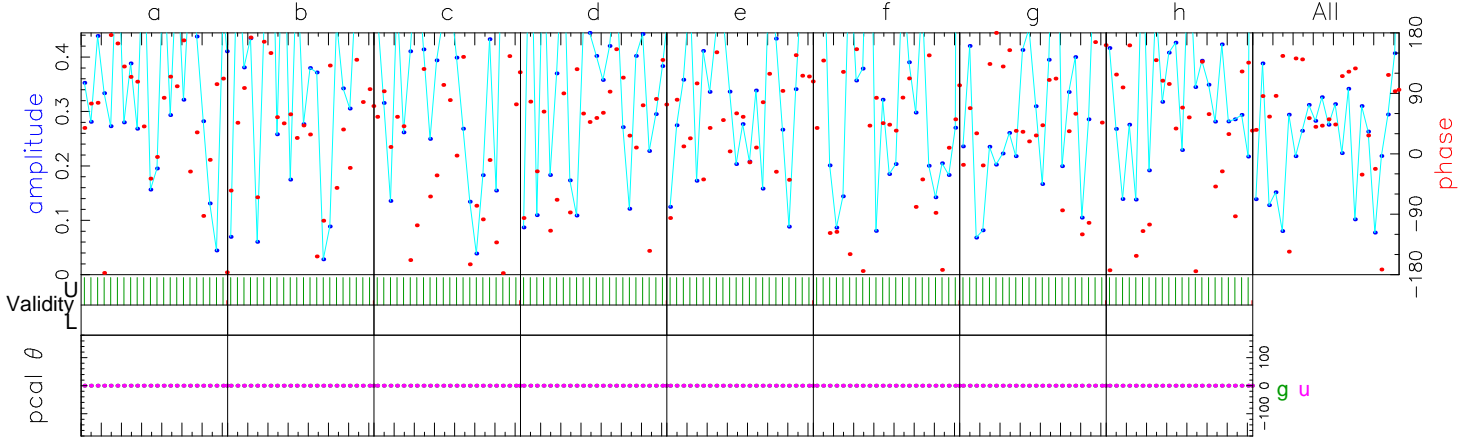
Fringe quality 9

SNR 8.3  
Int time 419.600  
Amp 0.148  
Phase 82.3  
PFD 3.8e-08  
Delays (us)  
SBD -0.006882  
MBD 0.000160  
Fringe rate (Hz)  
-0.034239  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



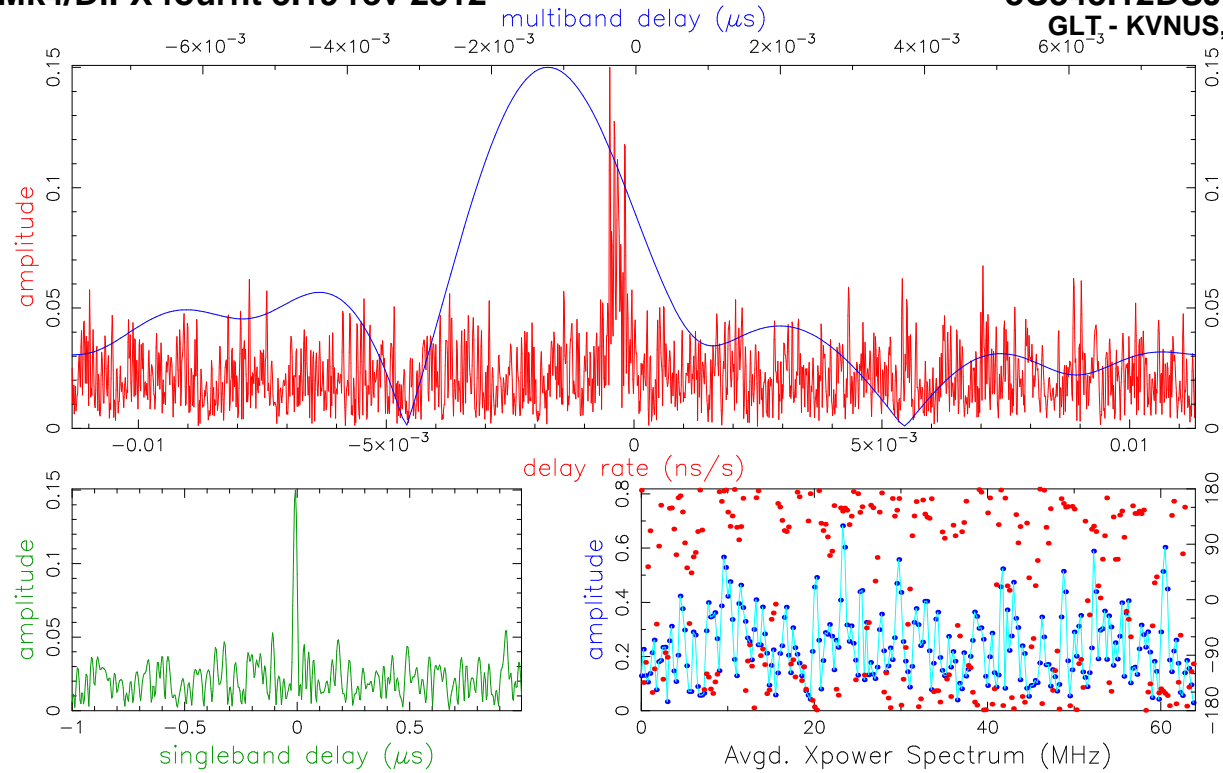
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183420  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-5.10308535706E+03									
Sband delay (usec)	-5.10309239874E+03									
Phase delay (usec)	-5.10308551459E+03									
Delay rate (us/s)	-9.78977320232E-01									
Total phase (deg)			-81.7							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									82.3	+/- 13.8
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate(MSamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
ion window (TEC)	0.00									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
simultaneous interpolator										

ph/seg (deg) 60.9 33.1 Amplitude 0.148 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 96.1 57.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 16.4 19.5 Inc. seg. avg. 0.213 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 27.6 34.1 Inc. frq. avg. 0.143 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 g: az 301.9 el 33.5 pa 14.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 7395.791 6202.824 ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/gu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/gu.W.134.12DSJB

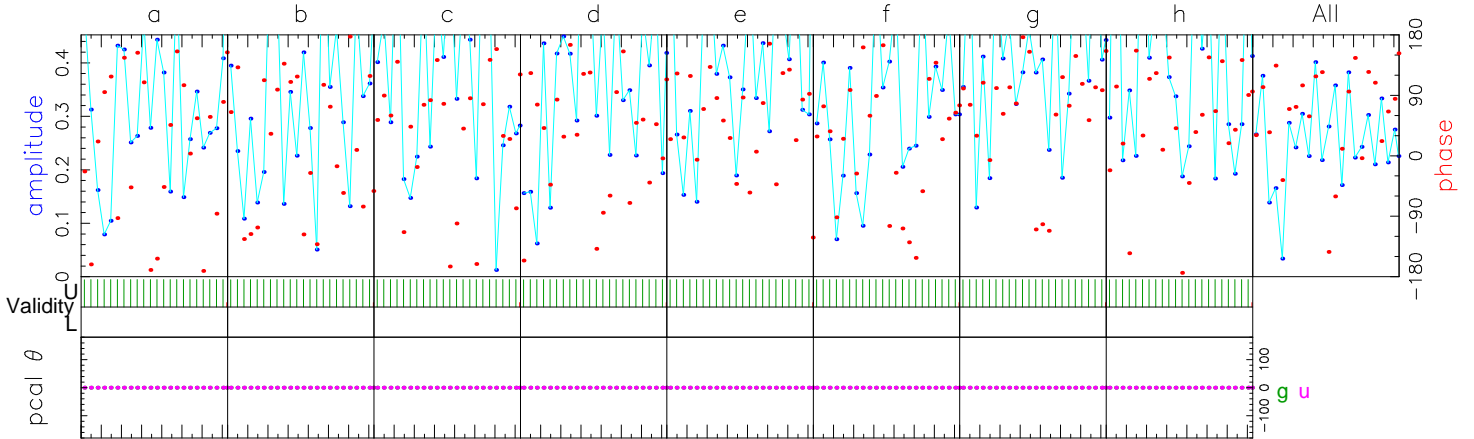


Fringe quality 9

SNR 8.4  
Int time 419.605  
Amp 0.151  
Phase 83.7  
PFD 1.1e-08  
Delays (us)  
SBD -0.008674  
MBD -0.001212  
Fringe rate (Hz)  
-0.042109  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

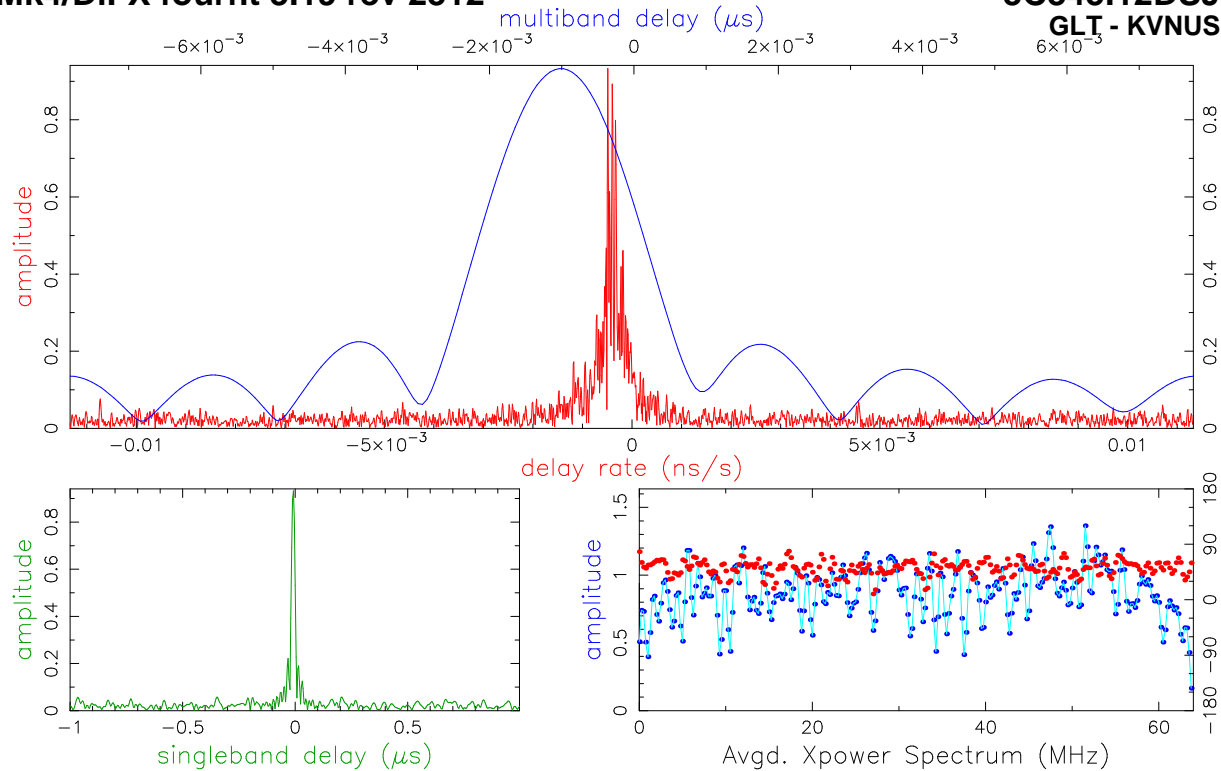
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183424  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
g	0	0	0	0	0	0	0	0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-5.10308672945E+03									
Sband delay (usec)	-5.10309419149E+03									
Phase delay (usec)	-5.10308551455E+03									
Delay rate (us/s)	-9.78977411591E-01									
Total phase (deg)			-80.3							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									83.7	+/- 13.6
PCal mode:	MANUAL	MANUAL								
PCal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate(MSamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

ph/seg (deg) 63.5 32.5 Search (2048X32) 0.146 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 90.2 56.8 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 28.7 19.2 Inc. seg. avg. 0.221 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 48.9 33.5 Inc. frq. avg. 0.150 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 g: az 301.9 el 33.5 pa 14.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 7395.791 6202.824 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/gu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/gu.W.152.12DSJB

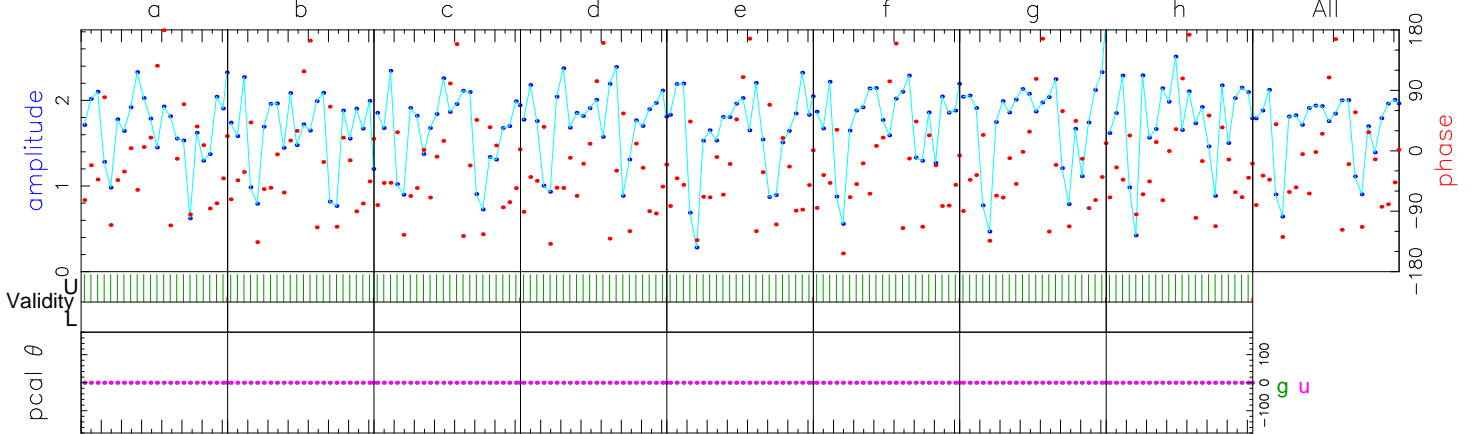


Fringe quality 5

SNR 52.7  
Int time 419.600  
Amp 0.941  
Phase -40.3  
PFD 0.0e+00  
Delays (us)  
SBD -0.008935  
MBD -0.001012  
Fringe rate (Hz)  
-0.041931  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

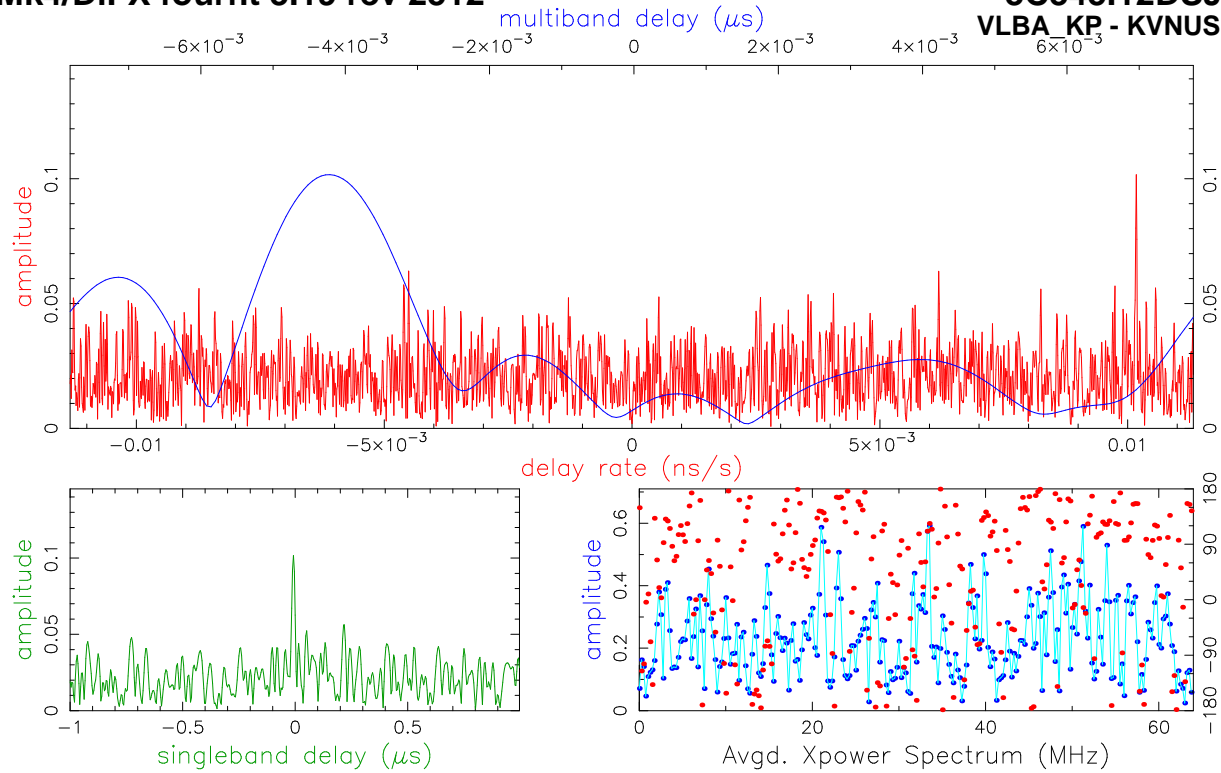
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183410  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



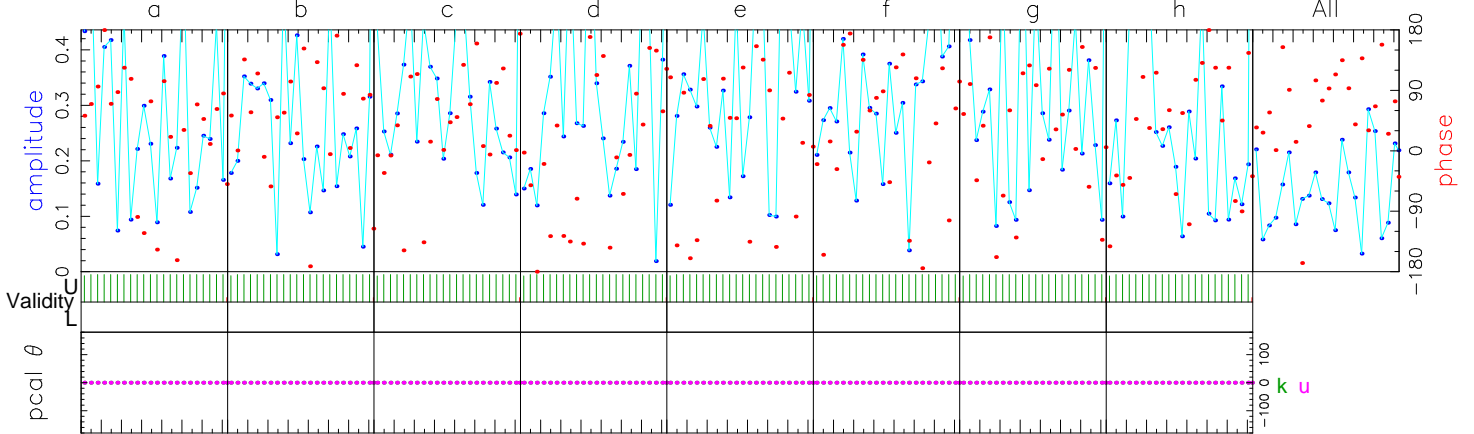
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-30.6	-37.5	-43.3	-49.2	-49.9	-41.7	-39.4	-31.0	Phase	-40.3
	0.9	0.9	0.9	1.0	0.9	1.0	0.9	1.0	Ampl.	0.9
	254.7	254.8	254.6	254.7	254.8	254.7	254.8	254.7	Sbd box	254.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
g	0	0	0	0	0	0	0	0	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
g:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
g:u	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	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-5.10310215432E+03		Apriori delay (usec)		-5.10308551724E+03		Resid mbdelay (usec)		-1.01208E-03	+/- 2.1E-05
Sband delay (usec)	-5.10309445224E+03		Apriori clock (usec)		-7.1271830E+00		Resid sbdelay (usec)		-8.93500E-03	+/- 1.6E-04
Phase delay (usec)	-5.10308551854E+03		Apriori clockrate (us/s)		-3.2499998E-07		Resid phdelay (usec)		-1.30031E-06	+/- 7.0E-08
Delay rate (us/s)	-9.78977409531E-01		Apriori rate (us/s)		-9.78976922749E-01		Resid rate (us/s)		-4.86782E-07	+/- 2.9E-10
Total phase (deg)			Apriori accel (us/s/s)		5.53976456848E-05		Resid phase (deg)		-40.3	+/- 2.2

ph/seg (deg) 67.2 5.2 Search (2048X32) 0.920 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.7 9.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 7.9 3.1 Inc. seg. avg. 1.676 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 6.3 5.4 Inc. frq. avg. 0.939 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 g: az 301.9 el 33.5 pa 14.8 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 7395.791 6202.824 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/gu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/gu.W.90.12DSJB



Fringe quality 0  
SNR 5.7  
Int time 418.958  
Amp 0.145  
Phase 74.1  
PFD 9.6e-01  
Delays (us)  
SBD -0.007835  
MBD -0.004223  
Fringe rate (Hz)  
0.878165  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183421  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	74.1	64.9	59.2	154.4	104.7	84.6	65.0	52.0	Phase	74.1
	0.2	0.2	0.2	0.0	0.2	0.1	0.2	0.1	Ampl.	0.1
	134.6	180.8	476.8	148.8	34.8	481.4	188.5	472.2	Sbd box	255.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ku	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	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.0465379511E+03	Apriori delay (usec)	-5.04652957200E+03	Resid mbdelay (usec)	-4.22311E-03	+/-	1.9E-04
Sband delay (usec)	-5.04653740750E+03	Apriori clock (usec)	-8.8344450E+00	Resid sbdelay (usec)	-7.83550E-03	+/-	1.5E-03
Phase delay (usec)	-5.04652956961E+03	Apriori clockrate (us/s)	-5.9457897E-07	Resid phdelay (usec)	2.38991E-06	+/-	6.5E-07
Delay rate (us/s)	-1.68142188111E+00	Apriori rate (us/s)	-1.68143207574E+00	Resid rate (us/s)	1.01946E-05	+/-	2.7E-09
Total phase (deg)	-45.3	Apriori accel (us/s/s)	2.30420530726E-05	Resid phase (deg)	74.1	+/-	20.1

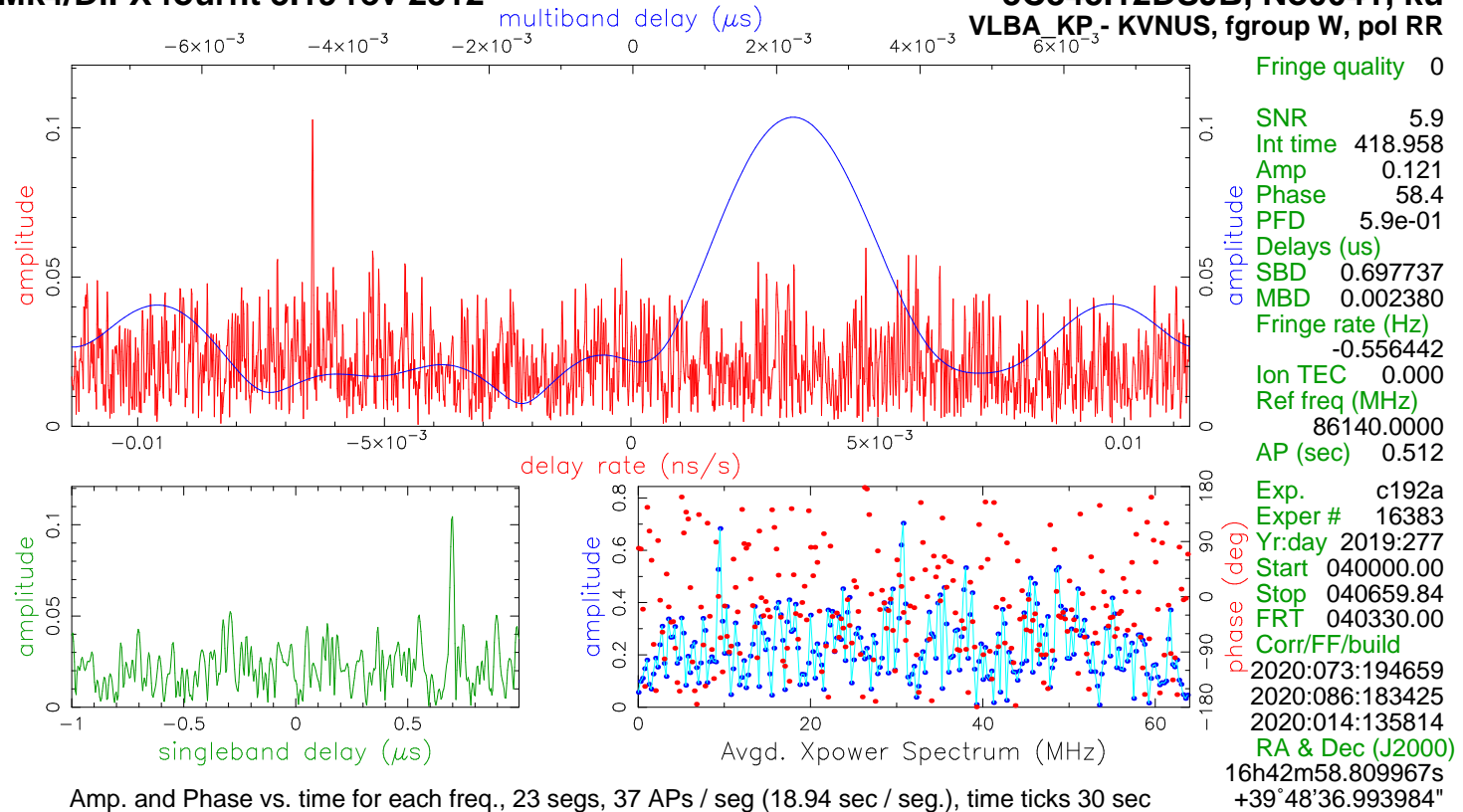
ph/seg (deg)	52.4	Theor.	48.3	Amplitude	0.145 +/- 0.026	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	81.9	Search (2048X32)	0.100	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	37.4	Inc. seg. avg.	0.154	Inc. frq. avg.	0.137	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	39.3	Inc. frq. avg.	0.137	Sample rate(MISamp/s): 128		Data rate(Mb/s): 2048	nlags: 256
				u, v (fr/asec) 12567.416 1000.877			t_cohere infinite

k: az 299.2 el 34.1 pa 74.3 u: az 68.6 el 51.4 pa -80.7 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/ku..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/ku.W.138.12DSJB

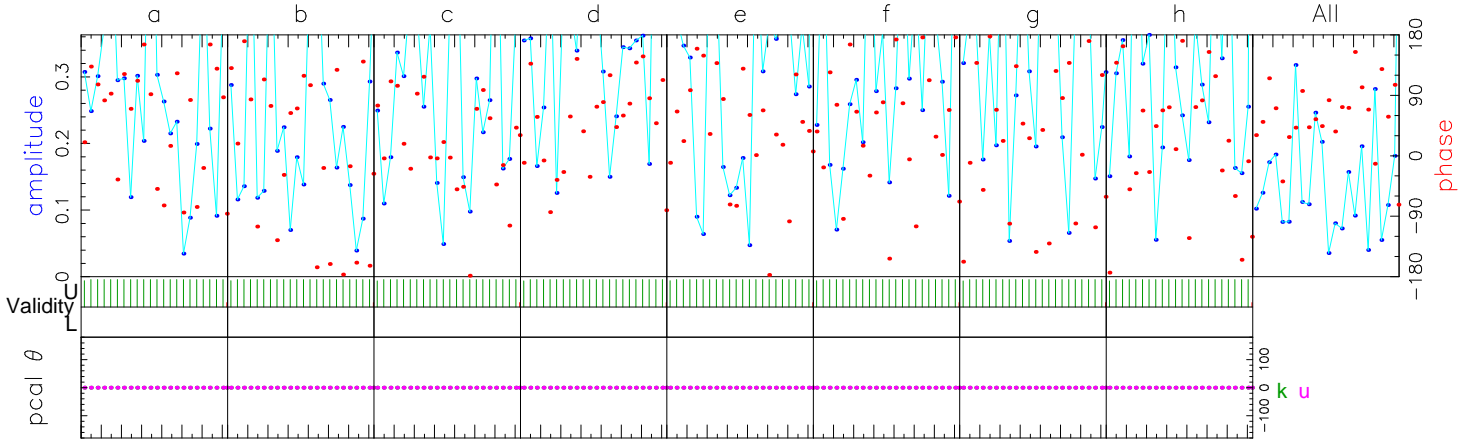


Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, ku  
VLBA\_KP - KVNUS, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



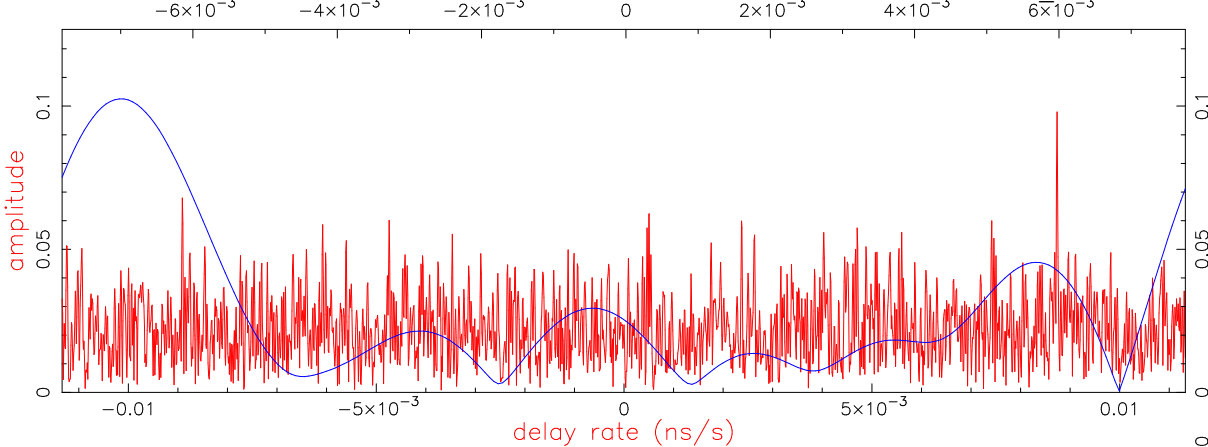
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	78.7	123.4	17.7	57.2	47.4	58.3	77.7	48.8	Phase	58.4
	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.1	Ampl.	0.1
	431.6	275.4	486.5	435.3	67.0	13.4	401.2	398.0	Sbd box	435.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ku	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	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.04582406692E+03		Apriori delay (usec)		-5.04652957200E+03		Resid mbdelay (usec)		2.38008E-03	+/- 1.8E-04
Sband delay (usec)	-5.04583183475E+03		Apriori clock (usec)		-8.8344450E+00		Resid sbdelay (usec)		6.97737E-01	+/- 1.5E-03
Phase delay (usec)	-5.04652957011E+03		Apriori clockrate (us/s)		-5.9457897E-07		Resid phdelay (usec)		1.88348E-06	+/- 6.3E-07
Delay rate (us/s)	-1.68143853548E+00		Apriori rate (us/s)		-1.68143207574E+00		Resid rate (us/s)		-6.45974E-06	+/- 2.6E-09
Total phase (deg)			Apriori accel (us/s/s)		2.30420530726E-05		Resid phase (deg)		58.4	+/- 19.4

	RMS	Theor.	Amplitude	0.121 +/- 0.020	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		sb window (us)	-1.000 1.000
ph/seg (deg)	44.7	46.5	Search (2048X32)	0.100	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008	
amp/seg (%)	86.0	81.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011	
ph/frq (deg)	33.9	27.4	Inc. seg. avg.	0.122	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00	
amp/frq (%)	35.6	47.9	Inc. frq. avg.	0.119	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

k: az 299.2 el 34.1 pa 74.3      u: az 68.6 el 51.4 pa -80.7      u,v (fr/asec) 12567.416 1000.877      simultaneous interpolator

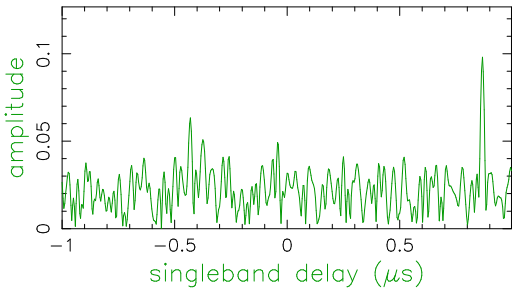
Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0041/ku..12DSJB    Output file: /Exps/c192a/v1\_PV/1234/No0041/ku.W.155.12DSJB

multiband delay ( $\mu\text{s}$ )

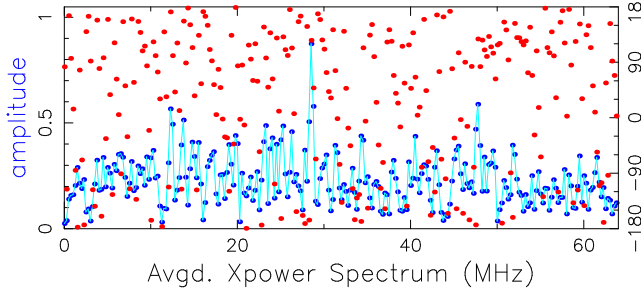


Fringe quality 0

SNR 5.5  
Int time 418.958  
Amp 0.127  
Phase -62.5  
PFD 1.0e+00  
Delays (us)  
SBD 0.867118  
MBD 0.008301  
Fringe rate (Hz)  
0.753480  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

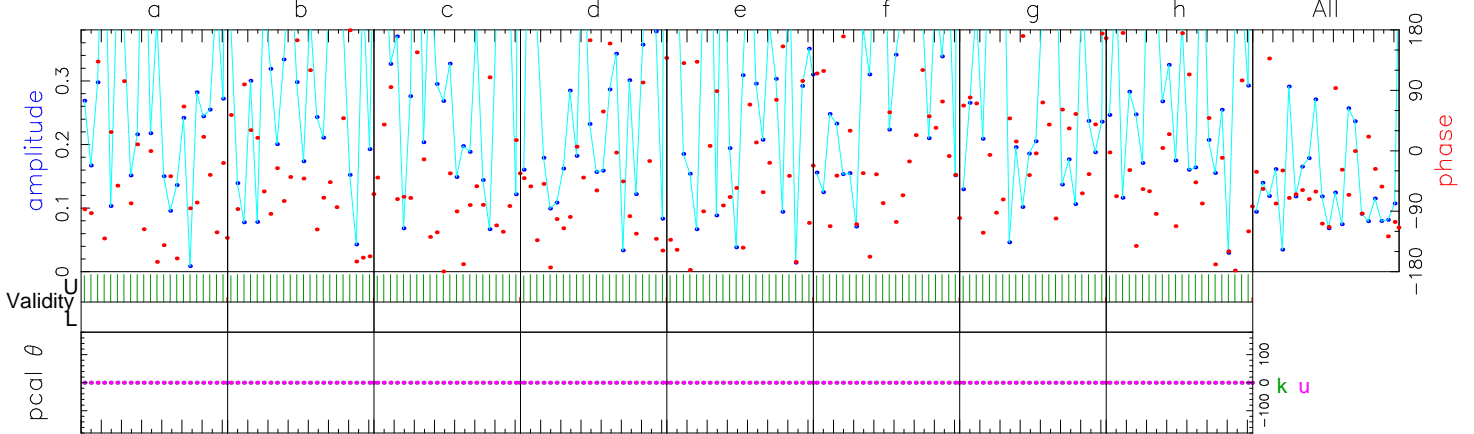


delay rate (ns/s)



Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183429  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

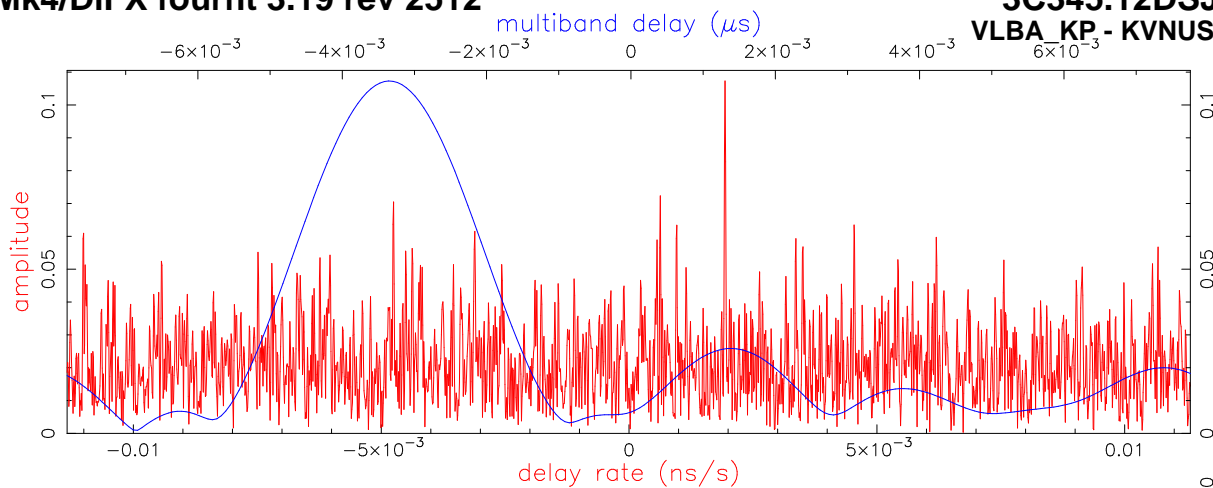


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-94.4	-69.1	-87.7	-72.7	-59.5	-22.1	-14.6	-76.3		Phase
	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.1		Ampl.
	245.1	241.8	136.5	96.1	197.9	496.9	182.6	284.9		Sbd box
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
k	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
u	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
k:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
ku	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC
k	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
u	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec)(sbd)	-5.04566189622E+03		Apriori delay (usec)		-5.04652957200E+03		Resid mbdelay (usec)		8.30078E-03	+/- 2.0E-04
Sband delay (usec)	-5.04566245425E+03		Apriori clock (usec)		-8.8344450E+00		Resid sbdelay (usec)		8.67118E-01	+/- 1.6E-03
Phase delay (usec)	-5.04652957401E+03		Apriori clockrate (us/s)		-5.9457897E-07		Resid phdelay (usec)		-2.01407E-06	+/- 6.7E-07
Delay rate (us/s)	-1.68142332859E+00		Apriori rate (us/s)		-1.68143207574E+00		Resid rate (us/s)		8.74715E-06	+/- 2.8E-09
Total phase (deg)			Apriori accel (us/s/s)		2.30420530726E-05		Resid phase (deg)		-62.5	+/- 20.9

	RMS	Theor.	Amplitude	0.127 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	59.3	50.1	Search (2048X32)	0.101	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	85.9	87.5	Interp.	0.000	SampCntNorm: enabled	mb window (us)	-0.008	0.008		
ph/frq (deg)	31.4	29.6	Inc. seg. avg.	0.130	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011		
amp/frq (%)	20.7	51.6	Inc. frq. avg.	0.126	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00	

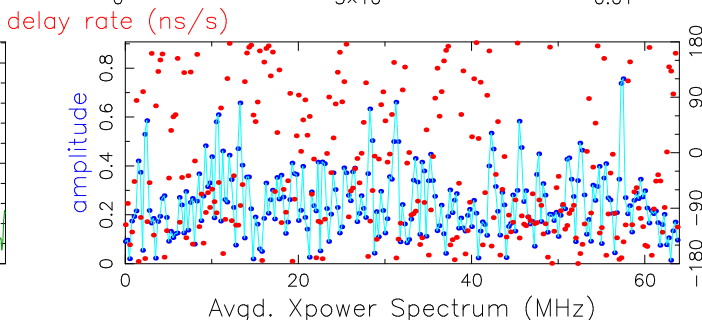
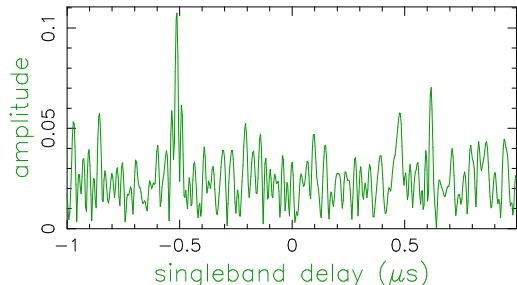
k: az 299.2 el 34.1 pa 74.3      u: az 68.6 el 51.4 pa -80.7      u,v (fr/asec) 12567.416 1000.877      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0041/ku..12DSJB    Output file: /Exps/c192a/v1\_PV/1234/No0041/ku.W.168.12DSJB



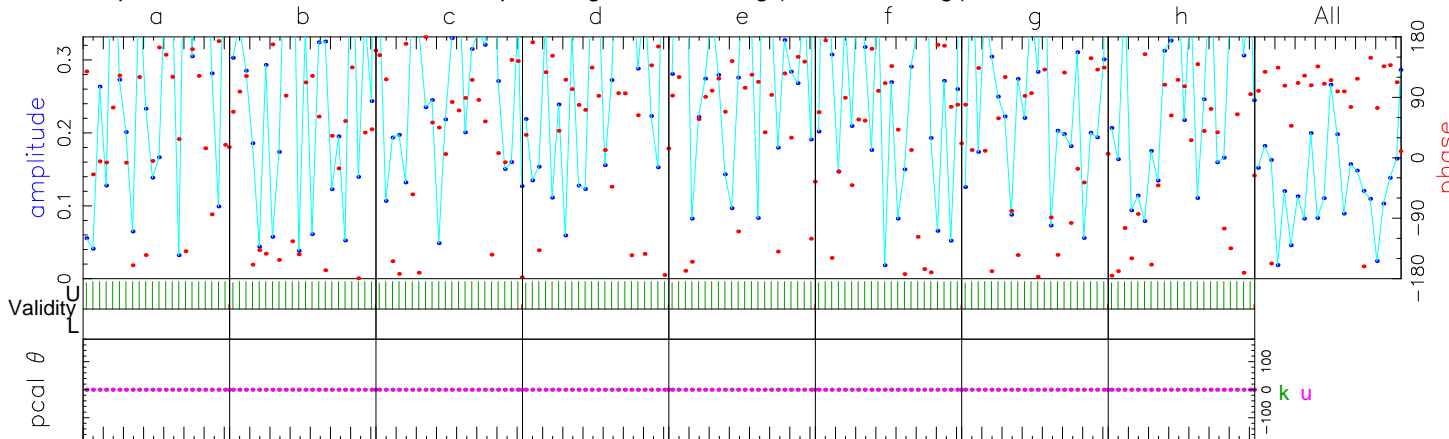
Fringe quality 0

SNR 6.1  
Int time 418.958  
Amp 0.111  
Phase 118.5  
PFD 2.3e-01  
Delays (us)  
SBD -0.513198  
MBD -0.003347  
Fringe rate (Hz)  
0.167429  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183435  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

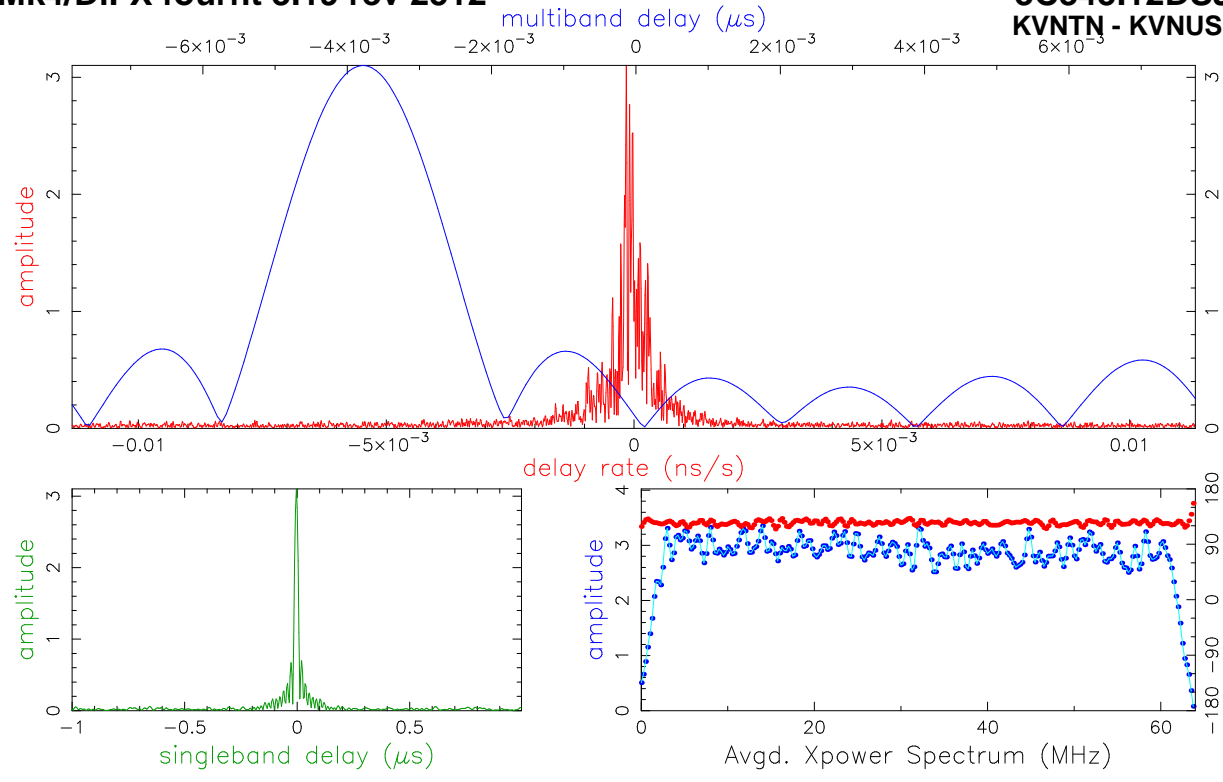
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		118.5
u	1000	1000	1000	1000	1000	1000	1000	1000		0.1
k:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		125.6
ku	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		
u	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Group delay (usec)(sbd)	Apriori delay (usec)	Resid mbdelay (usec)	-3.34690E-03	+/- 1.8E-04
Sband delay (usec)	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.04704277050E+03	-5.13198E-01	+/- 1.4E-03
Phase delay (usec)	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	-5.04652956818E+03	3.82042E-06	+/- 6.0E-07
Delay rate (us/s)	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	-1.68143013206E+00	1.94368E-06	+/- 2.5E-09
Total phase (deg)		-1.0										118.5	+/- 18.7

	RMS	Theor.	Amplitude	0.111 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	ph/seg (deg)	35.6	45.0	Search (2048X32)	0.101	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000
amp/seg (%)	56.7	78.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011		
ph/frq (deg)	10.5	26.5	Inc. seg. avg.	0.099	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00					
amp/frq (%)	30.3	46.3	Inc. frq. avg.	0.099											

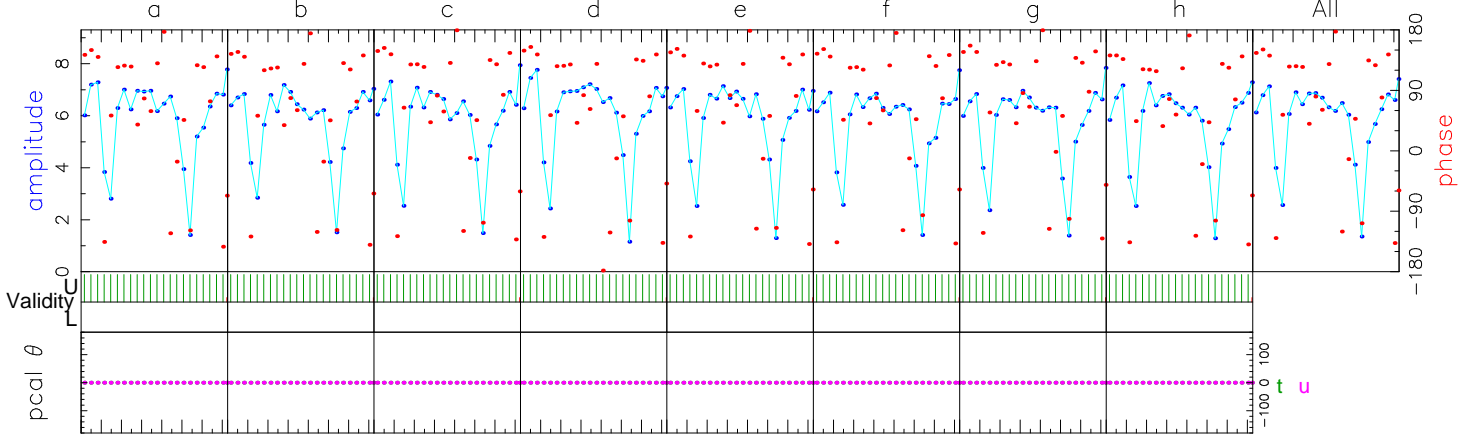


Fringe quality 5

SNR 173.8  
Int time 419.840  
Amp 3.102  
Phase 125.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.003721  
MBD -0.003783  
Fringe rate (Hz)  
-0.013308  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183446  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-6.86523527166E+02									
Sband delay (usec)	-6.86523464719E+02									
Phase delay (usec)	-6.86519739924E+02									
Delay rate (us/s)	5.12313216440E-02									
Total phase (deg)			-142.9							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									125.4	+/- 0.7
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256 t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 68.7 1.6  
amp/seg (%) 99.0 2.8  
ph/frq (deg) 3.5 0.9  
amp/frq (%) 2.9 1.6

RMS Theor. Amplitude 3.102 +/- 0.018  
Search (2048X32) 3.056  
Interp. 0.000  
Inc. seg. avg. 5.797  
Inc. frq. avg. 3.105

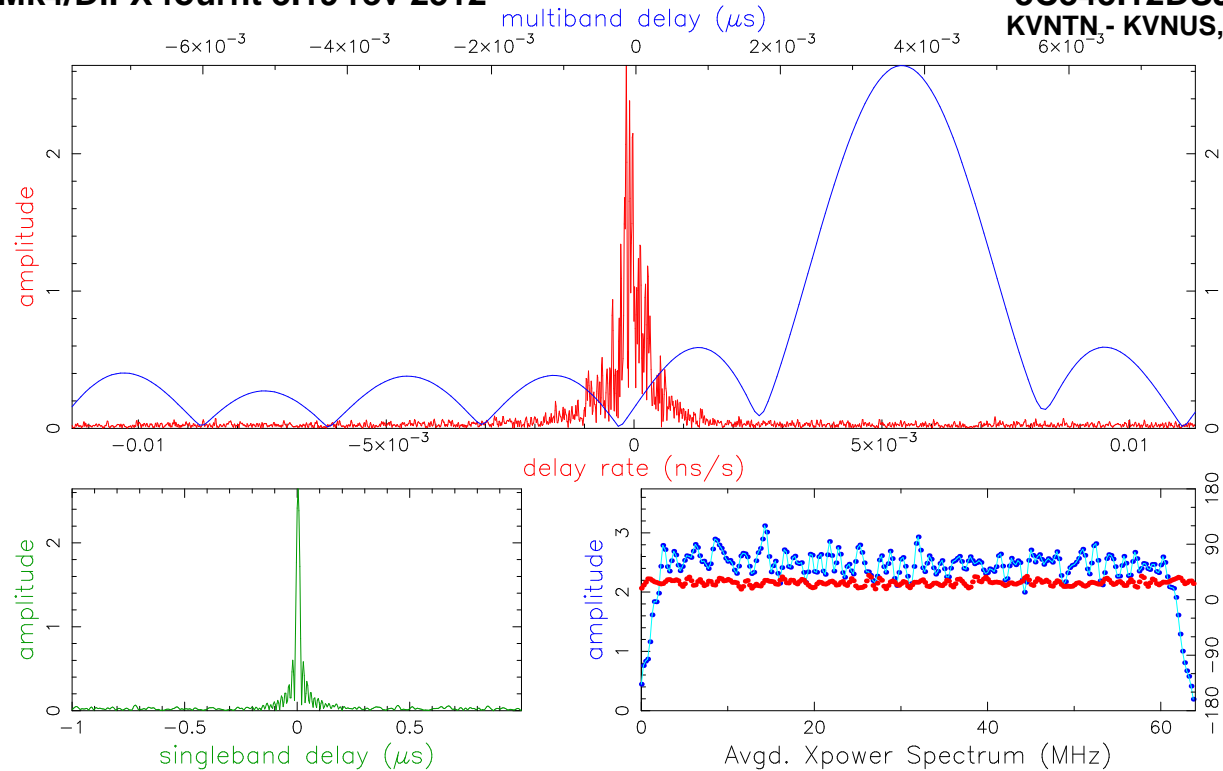
Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
Sb window (us) -1.000 1.000  
Mb window (us) -0.008 0.008  
Dr window (ns/s) -0.011 0.011  
Ion window (TEC) 0.00 0.00

t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/tu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/tu.W.238.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, tu  
KVNTN- KVNUS, fgroup W, pol RR

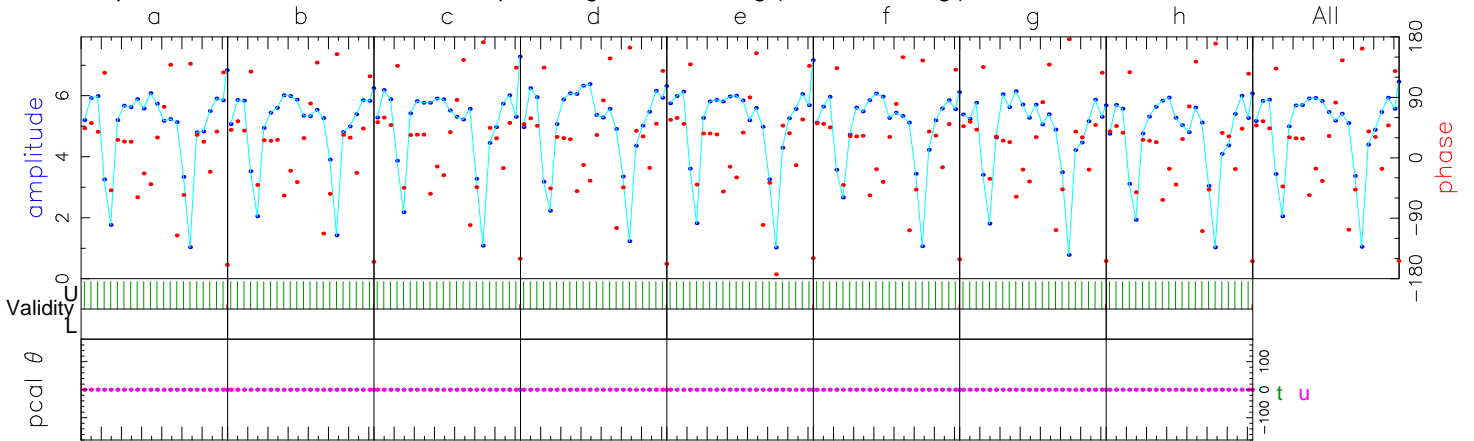


Fringe quality 5

SNR 148.1  
Int time 419.840  
Amp 2.644  
Phase 28.7  
PFD 0.0e+00  
Delays (us)  
SBD 0.003773  
MBD 0.003682  
Fringe rate (Hz)  
-0.013323  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183451  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t	1000	1000	1000	1000	1000	1000	1000	1000	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	-6.86516061916E+02								3.68205E-03	+/- 7.3E-06
Sband delay (usec)	-6.86515970469E+02								3.77350E-03	+/- 5.8E-05
Phase delay (usec)	-6.86519743043E+02								9.25557E-07	+/- 2.5E-08
Delay rate (us/s)	5.12313214761E-02								-1.54665E-07	+/- 1.0E-10
Total phase (deg)			-239.7						28.7	+/- 0.8
	RMS	Theor.	Amplitude	2.644 +/- 0.018					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	69.3	1.9	Search (2048X32)	2.592					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	99.3	3.2	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	4.4	1.1	Inc. seg. avg.	4.928					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	2.3	1.9	Inc. frq. avg.	2.649					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

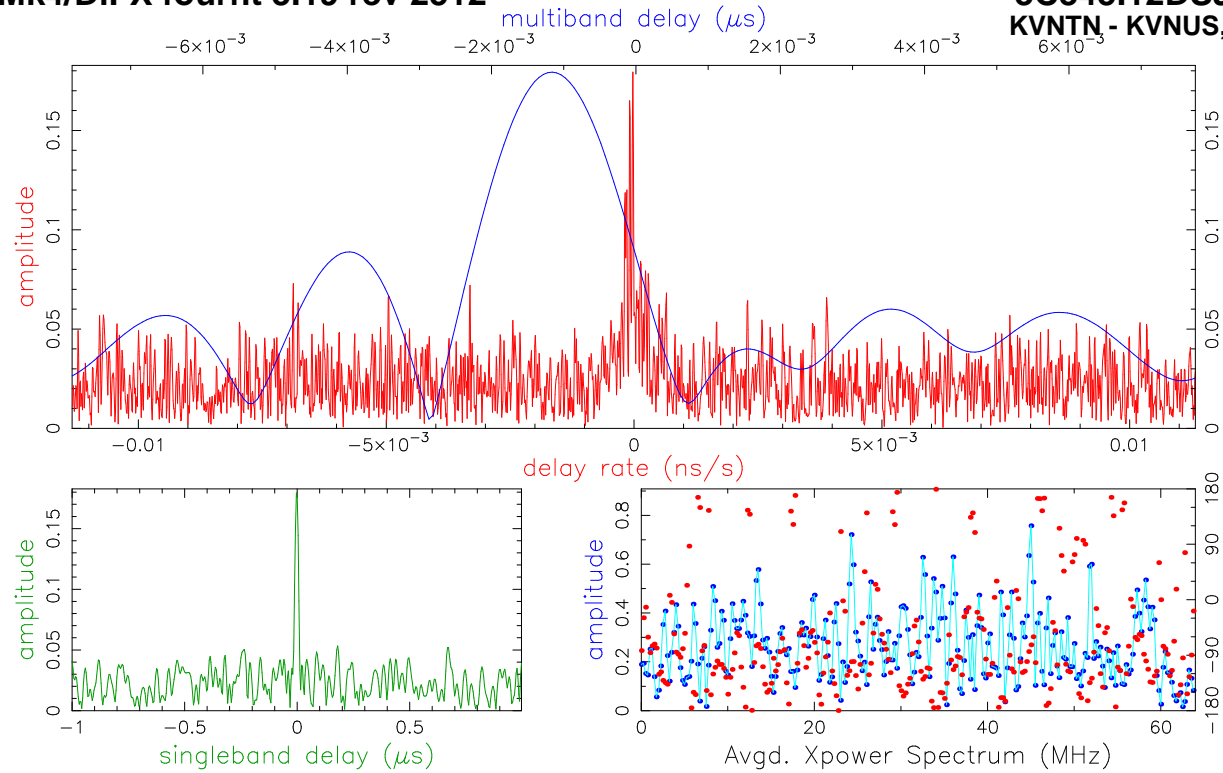
t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/tu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/tu.W.250.12DSJB



Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, tu  
KVNTN - KVNUS, fgroup W, pol LR

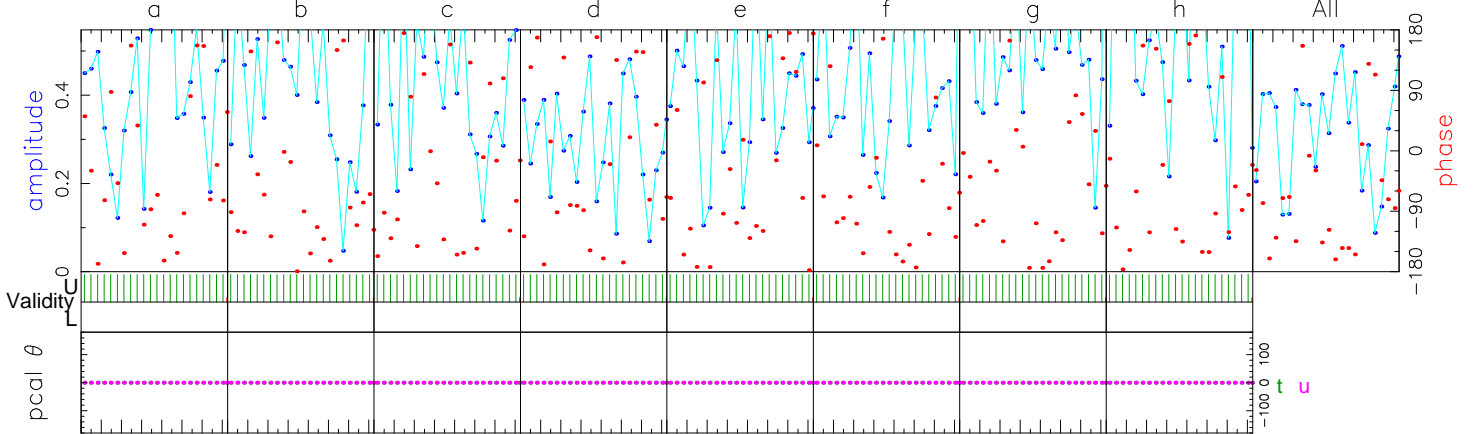


Fringe quality 9

SNR 10.2  
Int time 419.840  
Amp 0.183  
Phase -120.8  
PFD 5.7e-16  
Delays (us)  
SBD -0.002153  
MBD -0.001175  
Fringe rate (Hz)  
-0.002281  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

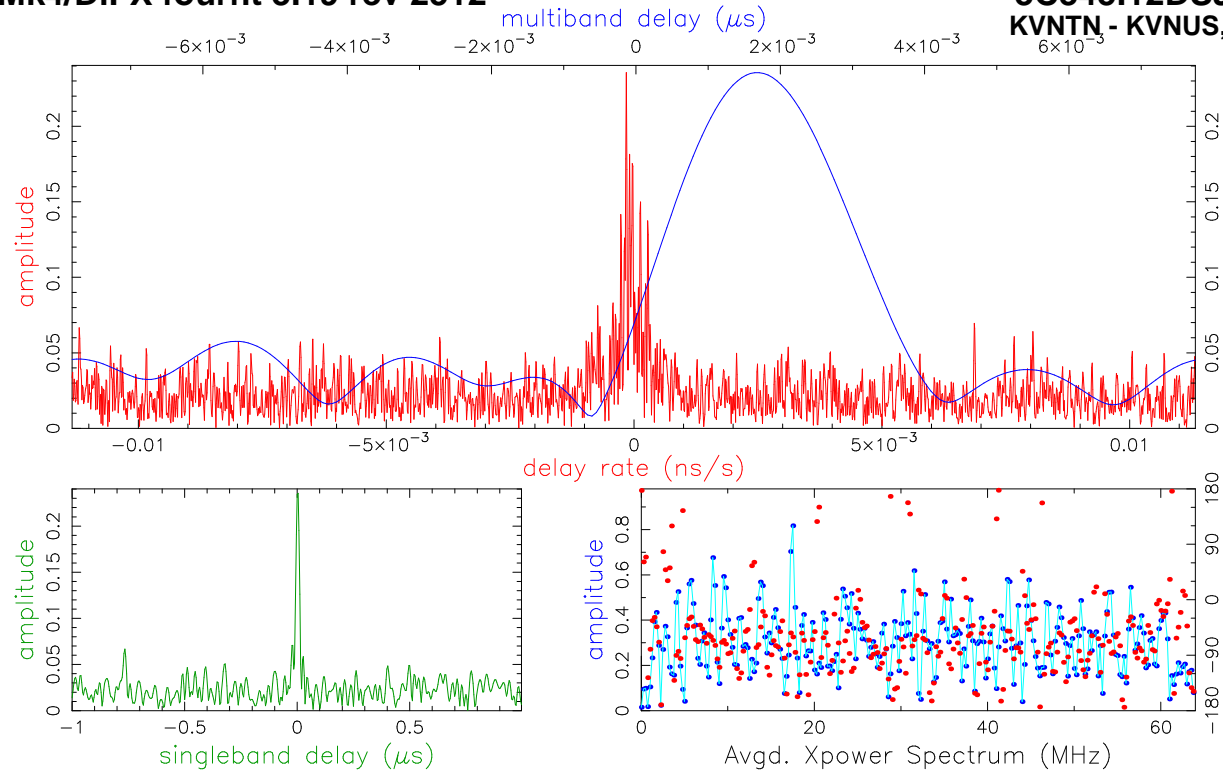
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183455  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-117.8	-110.1	-137.8	-143.8	-145.3	-101.9	-75.0	-132.6	Phase	-120.8
	0.1	0.3	0.2	0.1	0.2	0.2	0.1	0.3	Ampl.	0.2
	346.0	256.3	243.1	51.6	257.1	256.4	257.6	256.3	Sbd box	256.4
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.86520918582E+02		Apriori delay (usec)		-6.86519743969E+02		Resid mbdelay (usec)		-1.17461E-03	+/- 1.1E-04
Sband delay (usec)	-6.86521896719E+02		Apriori clock (usec)		1.9282120E+01		Resid sbdelay (usec)		-2.15275E-03	+/- 8.4E-04
Phase delay (usec)	-6.86519747865E+02		Apriori clockrate (us/s)		-1.9999998E-07		Resid phdelay (usec)		-3.89646E-06	+/- 3.6E-07
Delay rate (us/s)	5.12314496584E-02		Apriori rate (us/s)		5.12314761415E-02		Resid rate (us/s)		-2.64831E-08	+/- 1.5E-09
Total phase (deg)			Apriori accel (us/s/s)		1.41132908190E-06		Resid phase (deg)		-120.8	+/- 11.2

ph/seg (deg) 68.8 26.8 Search (2048X32) 0.170 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 99.0 46.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 26.2 15.8 Inc. seg. avg. 0.287 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 39.8 27.6 Inc. frq. avg. 0.185 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) -379.845 -123.979 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/tu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/tu.W.268.12DSJB

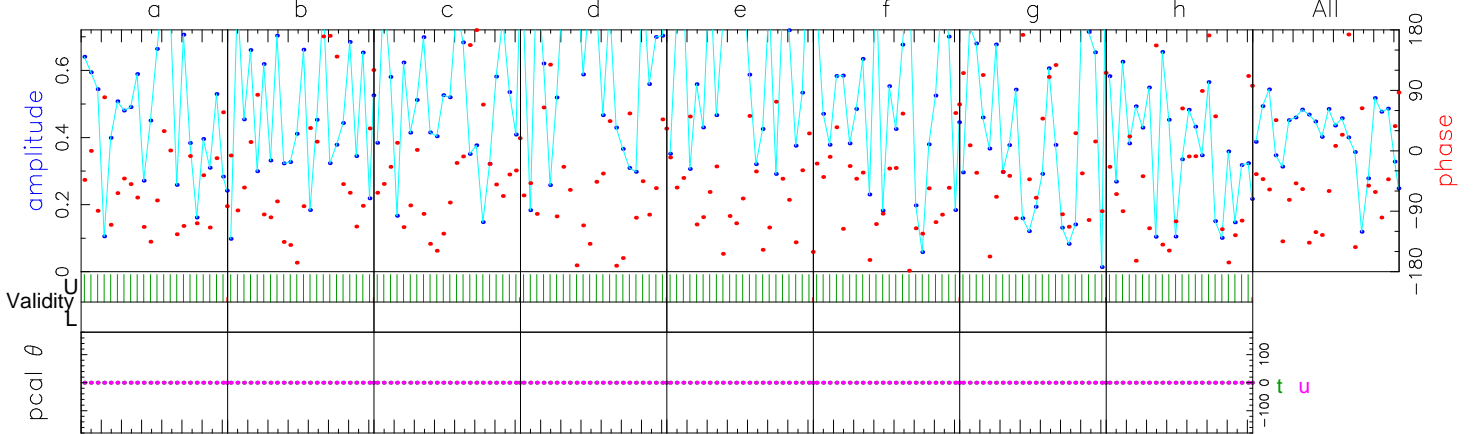


Fringe quality 9

SNR 13.5  
Int time 419.840  
Amp 0.240  
Phase -63.5  
PFD 1.4e-32  
Delays (us)  
SBD 0.002095  
MBD 0.001697  
Fringe rate (Hz) -0.013412  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183458  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

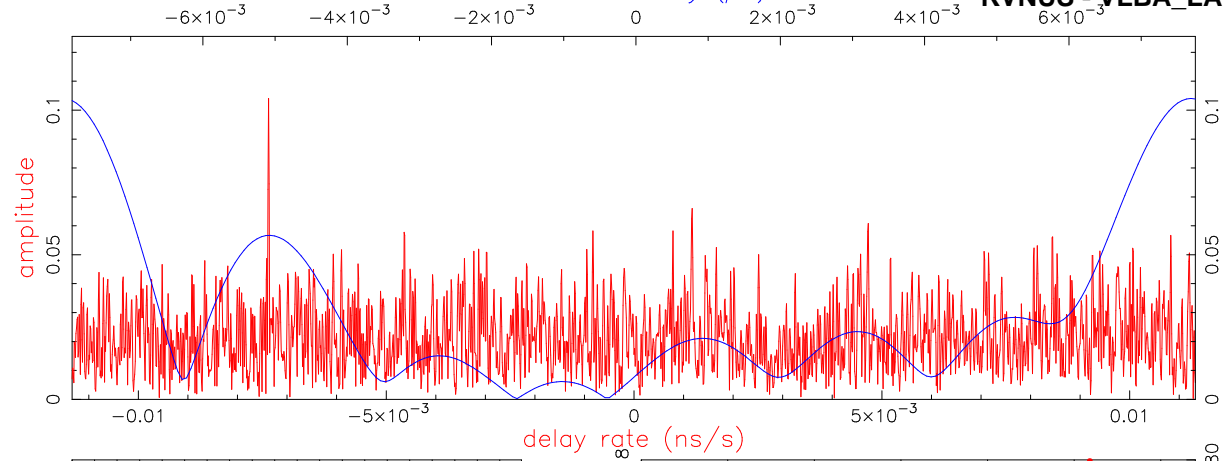


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-51.6	-87.1	-59.8	-66.2	-66.6	-56.5	-32.0	-101.9	Phase	-63.5
	0.3	0.2	0.3	0.3	0.4	0.3	0.1	0.1	Ampl.	0.2
	258.1	257.1	257.6	257.9	258.0	256.8	389.2	67.2	Sbd box	257.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
tu	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.86518047103E+02		Apriori delay (usec)		-6.86519743969E+02		Resid mbdelay (usec)		1.69687E-03	+/- 8.1E-05
Sband delay (usec)	-6.86517648969E+02		Apriori clock (usec)		1.9282120E+01		Resid sbdelay (usec)		2.09500E-03	+/- 6.4E-04
Phase delay (usec)	-6.86519746017E+02		Apriori clockrate (us/s)		-1.9999998E-07		Resid phdelay (usec)		-2.04866E-06	+/- 2.7E-07
Delay rate (us/s)	5.12313204430E-02		Apriori rate (us/s)		5.12314761415E-02		Resid rate (us/s)		-1.55698E-07	+/- 1.1E-09
Total phase (deg)			Apriori accel (us/s/s)		1.41132908190E-06		Resid phase (deg)		-63.5	+/- 8.5

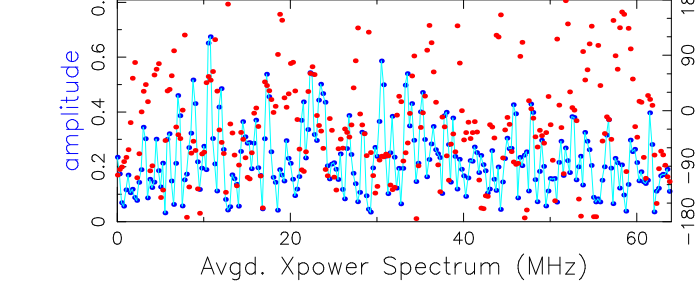
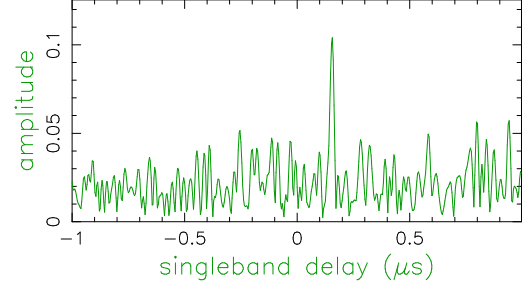
ph/seg (deg) 66.1 20.4 Search (2048X32) 0.230 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.4 35.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.3 12.0 Inc. seg. avg. 0.390 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 37.0 21.0 Inc. frq. avg. 0.239 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 65.6 el 48.4 pa -81.7 u: az 68.6 el 51.4 pa -80.7 u, v (fr/asec) -379.845 -123.979 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/tu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/tu.W.284.12DSJB

multiband delay ( $\mu$ s)

Fringe quality 0

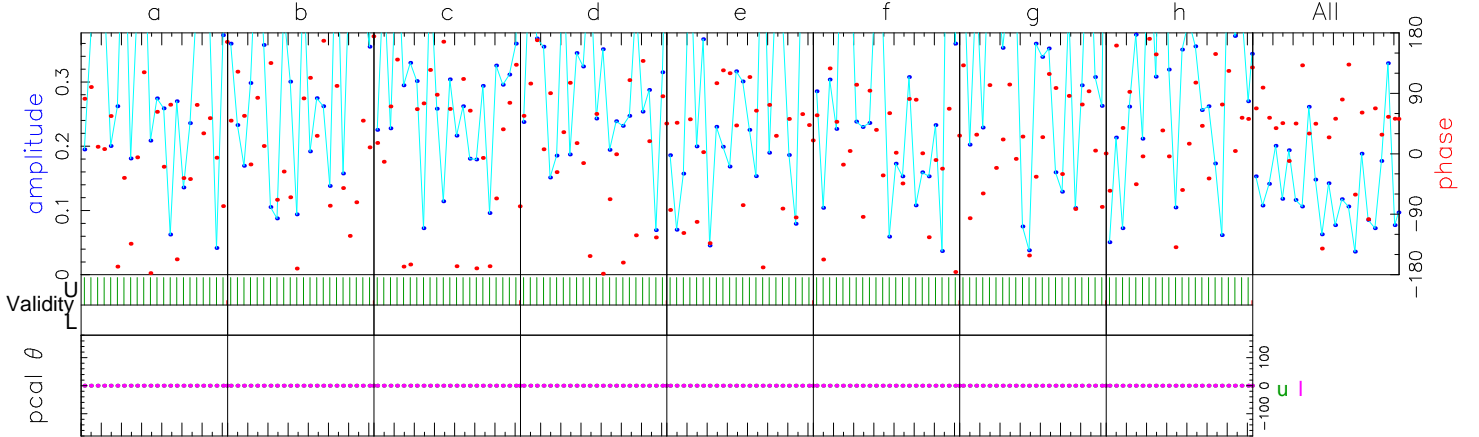


SNR 5.9  
Int time 419.829  
Amp 0.126  
Phase 49.3  
PFD 6.7e-01  
Delays (us)  
SBD 0.155123  
MBD -0.007930  
Fringe rate (Hz)  
-0.636206  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183449  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



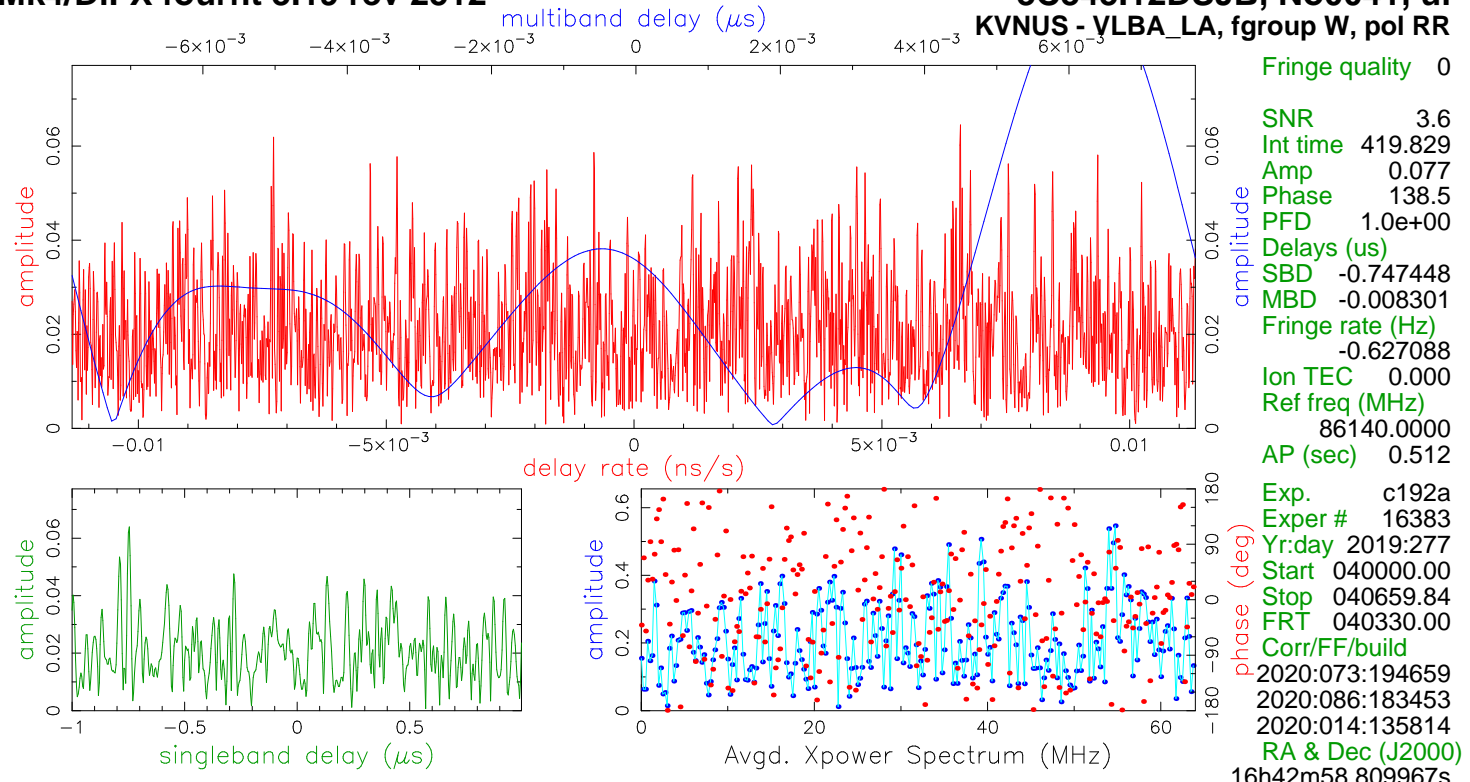
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.68727516355E+03	Apriori delay (usec)	5.68712684352E+03	Resid mbdelay (usec)	-7.92997E-03	+/-	1.8E-04
Sband delay (usec)	5.68728196602E+03	Apriori clock (usec)	9.1781445E+00	Resid sbdelay (usec)	1.55123E-01	+/-	1.5E-03
Phase delay (usec)	5.68712684511E+03	Apriori clockrate (us/s)	7.5147196E-07	Resid phdelay (usec)	1.59130E-06	+/-	6.3E-07
Delay rate (us/s)	1.66533678062E+00	Apriori rate (us/s)	1.66534416634E+00	Resid rate (us/s)	-7.38572E-06	+/-	2.6E-09
Total phase (deg)	157.7	Apriori accel (us/s/s)	-3.04391354251E-05	Resid phase (deg)	49.3	+/-	19.5

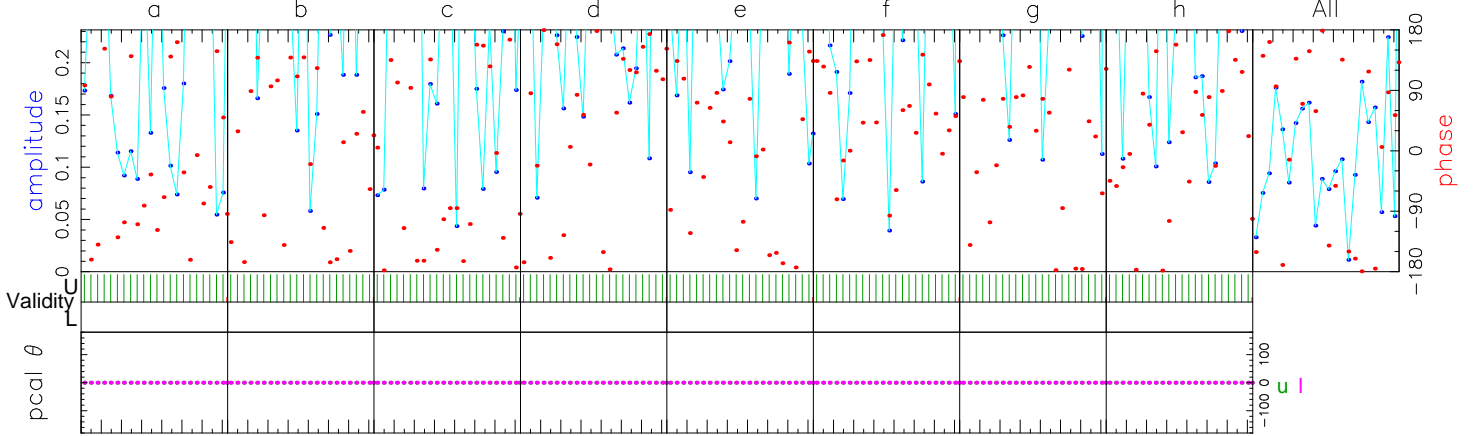
ph/seg (deg)	62.2	Theor.	46.8	Amplitude	0.126 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	70.6	Search (2048X32)	0.103	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	25.3	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	24.7	Inc. seg. avg.	0.123	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.119	Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00	

u: az 68.6 el 51.4 pa -80.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12461.097 -1862.584 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/ul..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/ul.W.246.12DSJB



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-121.6	162.0	-173.0	139.2	162.7	73.8	76.7	86.3	Phase	138.5
	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.0	Ampl.	0.1
	78.0	130.1	404.6	230.8	32.7	162.7	275.9	119.2	Sbd box	65.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.68638416774E+03		Apriori delay (usec)	5.68712684352E+03	Resid mbdelay (usec)	-8.30078E-03	+/-	3.0E-04		
Sband delay (usec)	5.68637939527E+03		Apriori clock (usec)	9.1781445E+00	Resid sbdelay (usec)	-7.47448E-01	+/-	2.4E-03		
Phase delay (usec)	5.68712684799E+03		Apriori clockrate (us/s)	7.5147196E-07	Resid phdelay (usec)	4.46619E-06	+/-	1.0E-06		
Delay rate (us/s)	1.66533688647E+00		Apriori rate (us/s)	1.66534416634E+00	Resid rate (us/s)	-7.27987E-06	+/-	4.2E-09		
Total phase (deg)		246.9	Apriori accel (us/s/s)	-3.04391354251E-05	Resid phase (deg)	138.5	+/-	31.6		

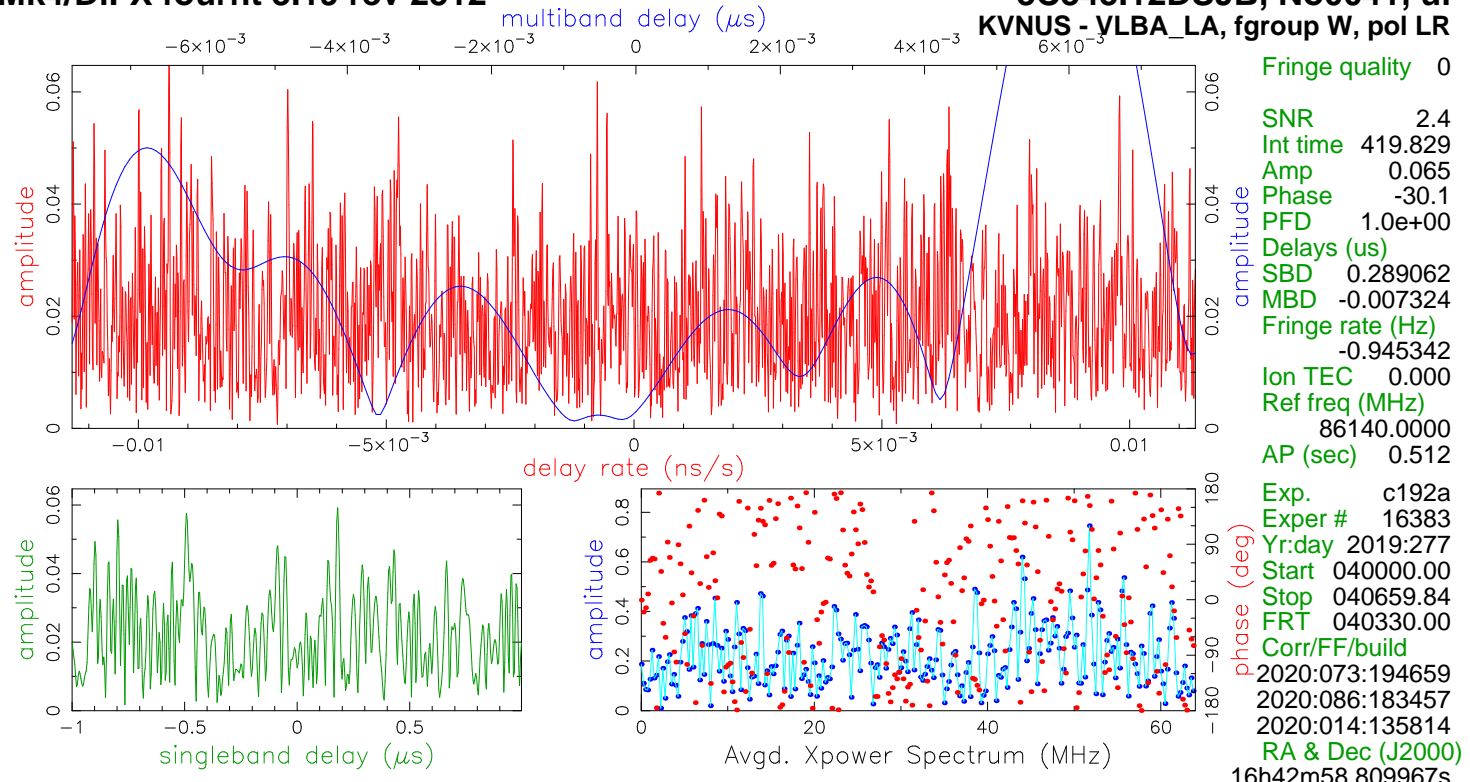
	RMS	Theor.	Amplitude	0.077 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	74.1	75.8	Search (2048X32)	0.099	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
amp/seg (%)	116.8	132.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
ph/frq (deg)	63.5	44.7	Inc. seg. avg.	0.071	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011		
amp/frq (%)	88.1	78.0	Inc. frq. avg.	0.094	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

u: az 68.6 el 51.4 pa -80.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12461.097 -1862.584 simultaneous interpolator

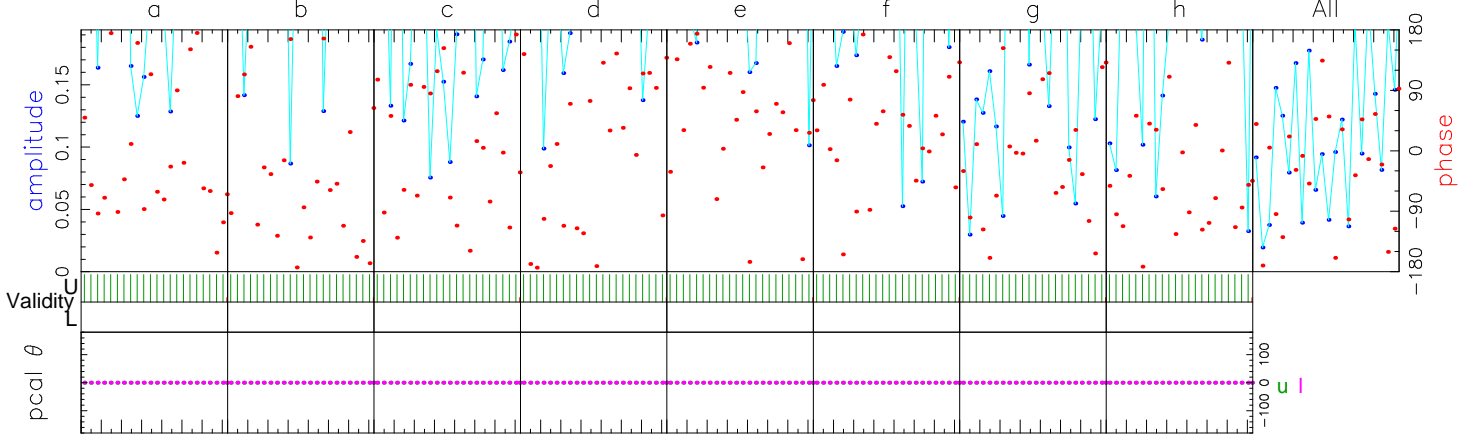
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/ul..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/ul.W.262.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, ul  
KVNUS - VLBA\_LA, fgroup W, pol LR



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-71.1	-94.6	-150.1	145.4	68.3	42.9	-12.9	-57.7	Phase	-30.1
	0.2	0.2	0.0	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1
	282.1	290.8	443.0	52.4	115.2	395.1	489.1	331.7	Sbd box	331.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.68741639430E+03		Apriori delay (usec)		5.68712684352E+03		Resid mbdelay (usec)		-7.32422E-03	+/- 4.6E-04
Sband delay (usec)	5.68741590602E+03		Apriori clock (usec)		9.1781445E+00		Resid sbdelay (usec)		2.89062E-01	+/- 3.6E-03
Phase delay (usec)	5.68712684255E+03		Apriori clockrate (us/s)		7.5147196E-07		Resid phdelay (usec)		-9.70861E-07	+/- 1.6E-06
Delay rate (us/s)	1.66533319186E+00		Apriori rate (us/s)		1.66534416634E+00		Resid rate (us/s)		-1.09745E-05	+/- 6.4E-09
Total phase (deg)	78.3		Apriori accel (us/s/s)		-3.04391354251E-05		Resid phase (deg)		-30.1	+/- 48.1

ph/seg (deg) 81.2 115.4 Search (2048X32) 0.099 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 211.3 201.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 105.8 68.0 Inc. seg. avg. 0.056 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 168.0 118.8 Inc. frq. avg. 0.092 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

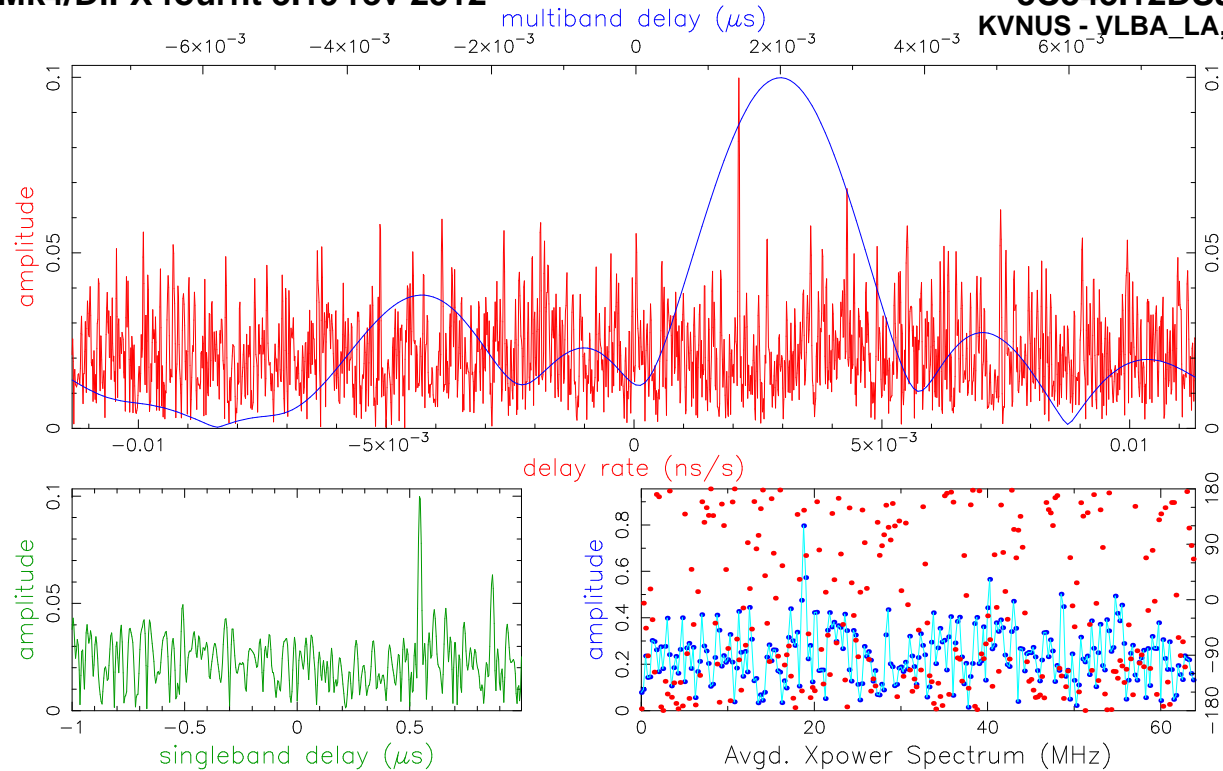
u: az 68.6 el 51.4 pa -80.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12461.097 -1862.584 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/ul..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/ul.W.279.12DSJB



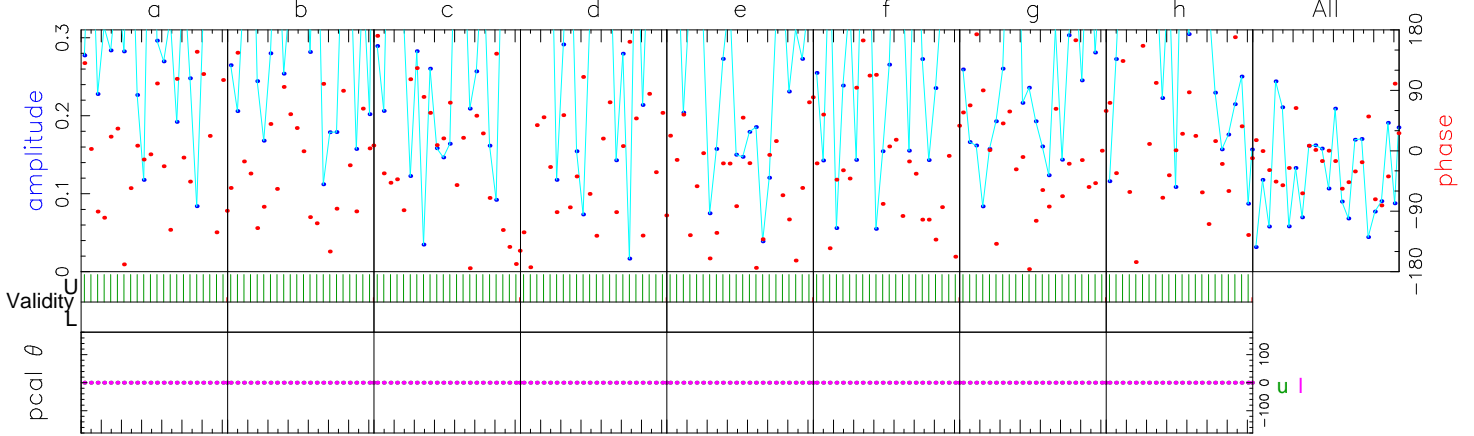
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, ul  
KVNUS - VLBA\_LA, fgroup W, pol RL



Fringe quality 0  
SNR 5.7  
Int time 419.829  
Amp 0.103  
Phase -21.4  
PFD 9.4e-01  
Delays (us)  
SBD 0.544702  
MBD 0.002045  
Fringe rate (Hz) 0.182086  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183500  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

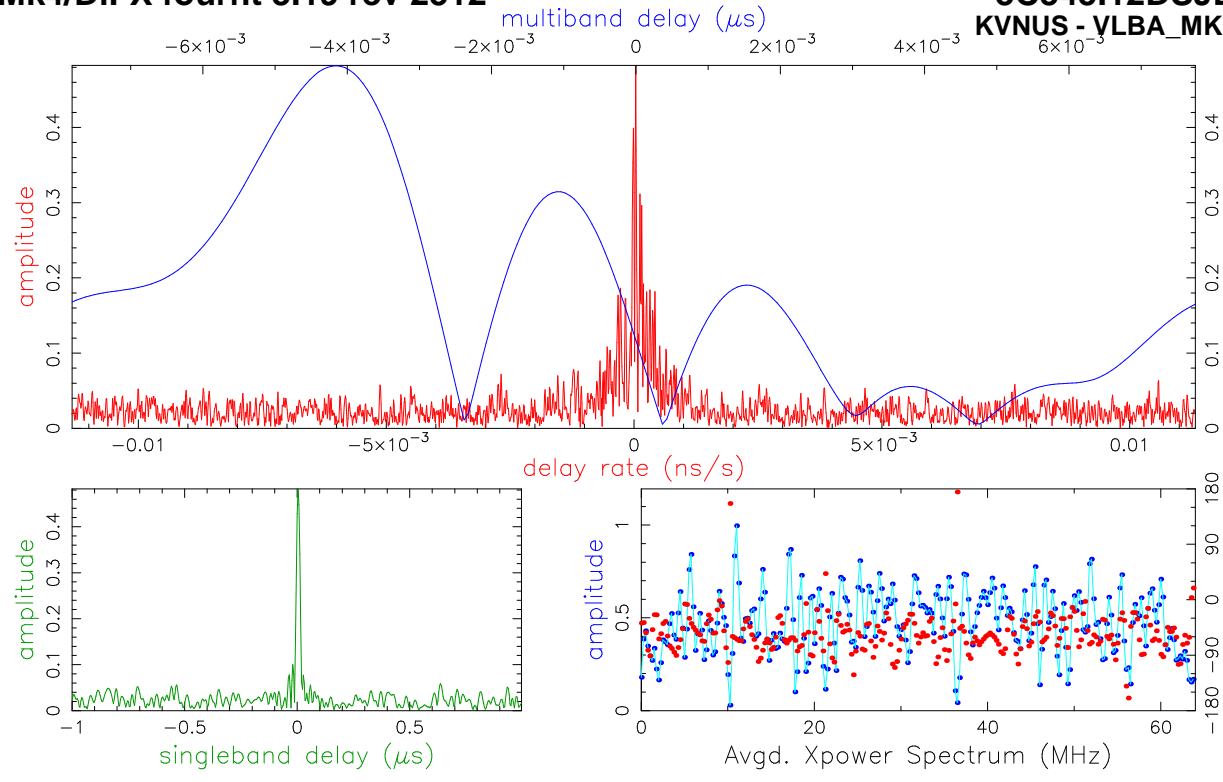


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.68767576348E+03	Apriori delay (usec)	5.68712684352E+03	Resid mbdelay (usec)	2.04496E-03	+/-	1.9E-04
Sband delay (usec)	5.68767154577E+03	Apriori clock (usec)	9.1781445E+00	Resid sbdelay (usec)	5.44702E-01	+/-	1.5E-03
Phase delay (usec)	5.68712684283E+03	Apriori clockrate (us/s)	7.5147196E-07	Resid phdelay (usec)	-6.91367E-07	+/-	6.5E-07
Delay rate (us/s)	1.66534628019E+00	Apriori rate (us/s)	1.66534416634E+00	Resid rate (us/s)	2.11384E-06	+/-	2.7E-09
Total phase (deg)	86.9	Apriori accel (us/s/s)	-3.04391354251E-05	Resid phase (deg)	-21.4	+/-	20.1

ph/seg (deg)	44.1	Theor.	48.1	Amplitude	0.103 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	62.1	Search (2048X32)	0.098	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000	
ph/frq (deg)	21.8	Inc. seg. avg.	0.093	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	18.8	Inc. frq. avg.	0.095	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
				Data rate(Mb/s): 2048		ion window (TEC)	0.00 0.00	

u: az 68.6 el 51.4 pa -80.7 l: az 298.6 el 32.1 pa 68.3 u,v (fr/asec) -12461.097 -1862.584 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/ul..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/ul.W.295.12DSJB

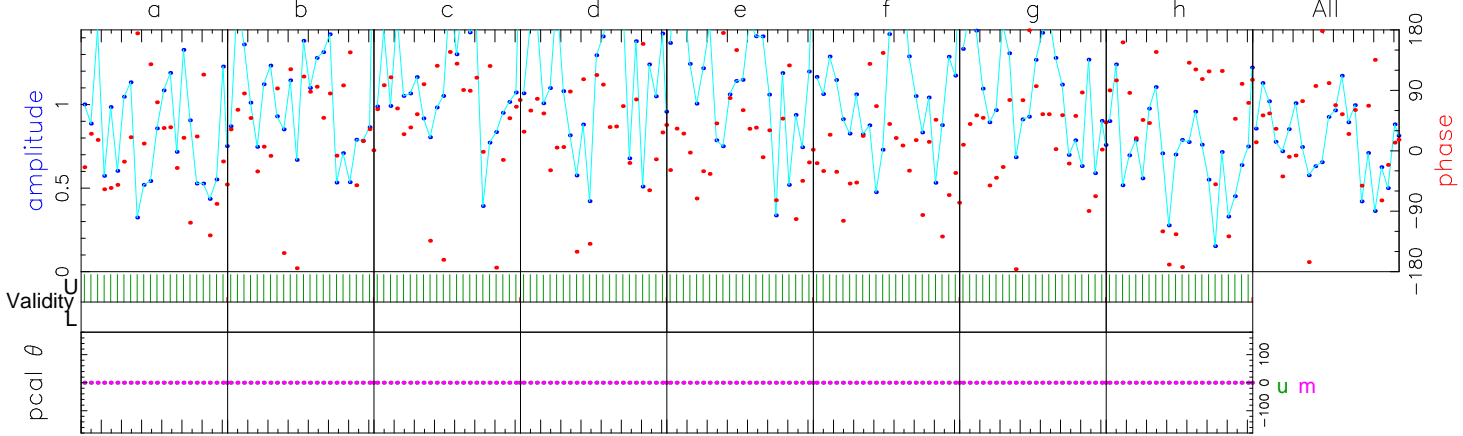


Fringe quality 6

SNR 27.0  
Int time 419.111  
Amp 0.482  
Phase 40.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.004352  
MBD -0.004132  
Fringe rate (Hz)  
0.003044  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183449  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



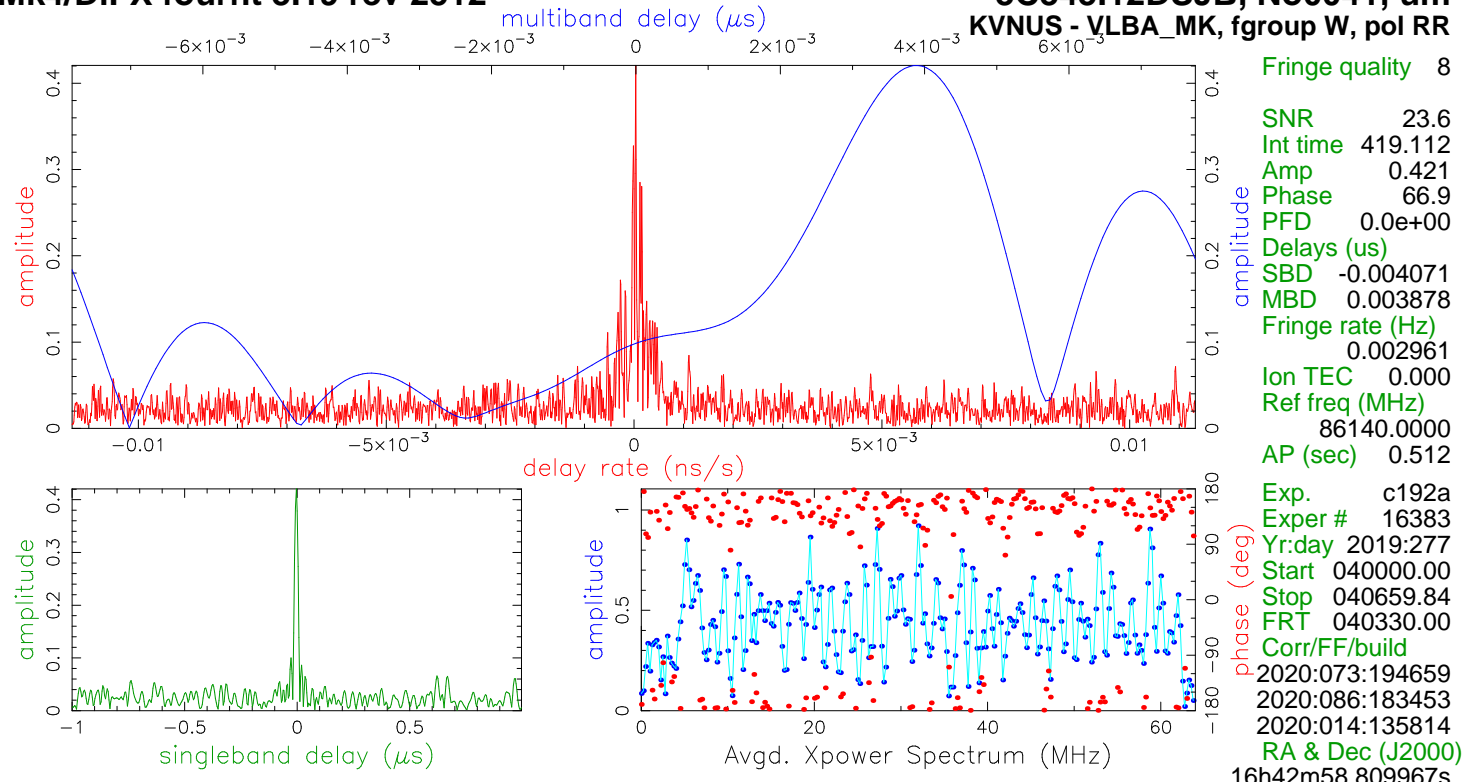
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.54622622856E+03	Apriori delay (usec)	-1.54623772199E+03	Resid mbdelay (usec)	-4.13156E-03	+/-	4.0E-05
Sband delay (usec)	-1.54623336999E+03	Apriori clock (usec)	5.8621283E+00	Resid sbdelay (usec)	4.35200E-03	+/-	3.2E-04
Phase delay (usec)	-1.54623772070E+03	Apriori clockrate (us/s)	4.0869229E-07	Resid phdelay (usec)	1.29615E-06	+/-	1.4E-07
Delay rate (us/s)	1.23532888821E+00	Apriori rate (us/s)	1.23532885287E+00	Resid rate (us/s)	3.53393E-08	+/-	5.6E-10
Total phase (deg)	-93.9	Apriori accel (us/s/s)	2.57203577631E-05	Resid phase (deg)	40.2	+/-	4.2

ph/seg (deg)	67.3	RMS	10.2	Theor.	Amplitude	0.482 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	78.1	Search (2048X32)	0.469	Pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000	
ph/frq (deg)	47.7	Inc. seg. avg.	0.780	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	35.2	Inc. frq. avg.	0.612	Sample rate (MSamp/s):	128		dr window (ns/s)	-0.011	0.011	
				Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 68.6 el 51.4 pa -80.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9156.820 3441.218 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/um..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/um.W.244.12DSJB



Fringe quality 8

SNR 23.6

Int time 419.112

Amp 0.421

Phase 66.9

PFD 0.0e+00

Delays (us)

SBD -0.004071

MBD 0.003878

Fringe rate (Hz)

0.002961

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192a

Exper # 16383

Yr:day 2019:277

Start 040000.00

Stop 040659.84

FRT 040330.00

Corr/FF/build

2020:073:194659

2020:086:183453

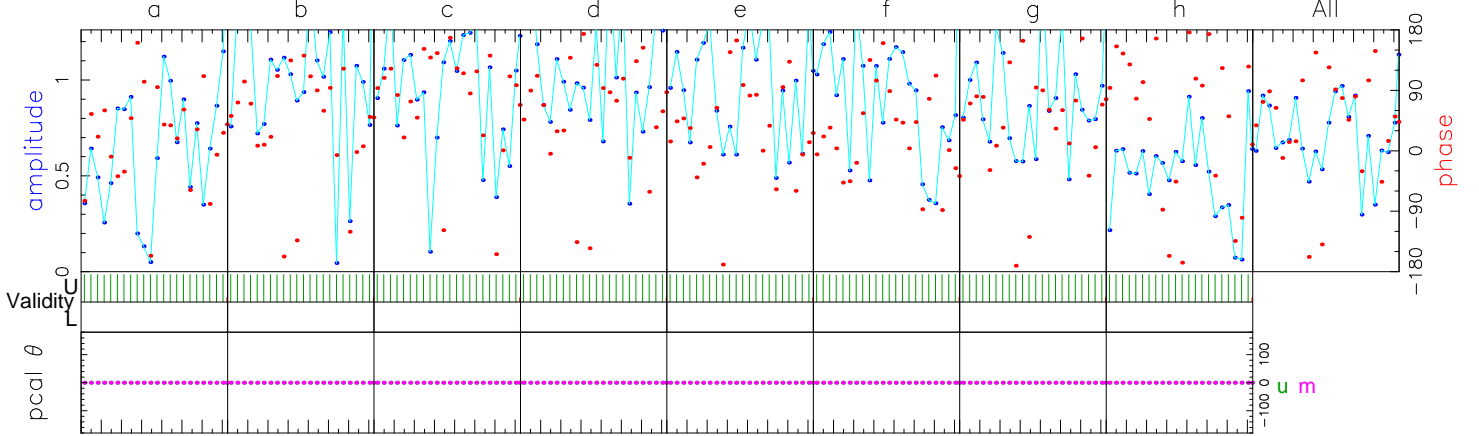
2020:014:135814

RA & Dec (J2000)

16h42m58.809967s

+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.54624946896E+03				-1.54623772199E+03				3.87803E-03	+/- 4.6E-05
Sband delay (usec)	-1.54624179299E+03				5.8621283E+00				-4.07100E-03	+/- 3.7E-04
Phase delay (usec)	-1.54623771984E+03				4.0869229E-07				2.15819E-06	+/- 1.6E-07
Delay rate (us/s)	1.23532888724E+00				1.23532885287E+00				3.43686E-08	+/- 6.5E-10
Total phase (deg)			-67.2		2.57203577631E-05				66.9	+/- 4.9
									Resid mbdelay (usec)	
									Resid sbdelay (usec)	
									Resid phdelay (usec)	
									Resid rate (us/s)	
									Resid phase (deg)	
									PCal mode: MANUAL, MANUAL	
									PCal rate: 0.000E+00, 0.000E+00 (us/s)	
									SampCntNorm: enabled	
									Sample rate(MISamp/s): 128	
									Data rate(Mb/s): 2048	
									nlags: 256	
									t_cohere infinite	
									sb window (us)	-1.000 1.000
									mb window (us)	-0.008 0.008
									dr window (ns/s)	-0.011 0.011
									ion window (TEC)	0.00 0.00

ph/seg (deg) 67.5 11.7 Search (2048X32) 0.419 PCal mode: MANUAL, MANUAL PC period (AP's) 5, 5

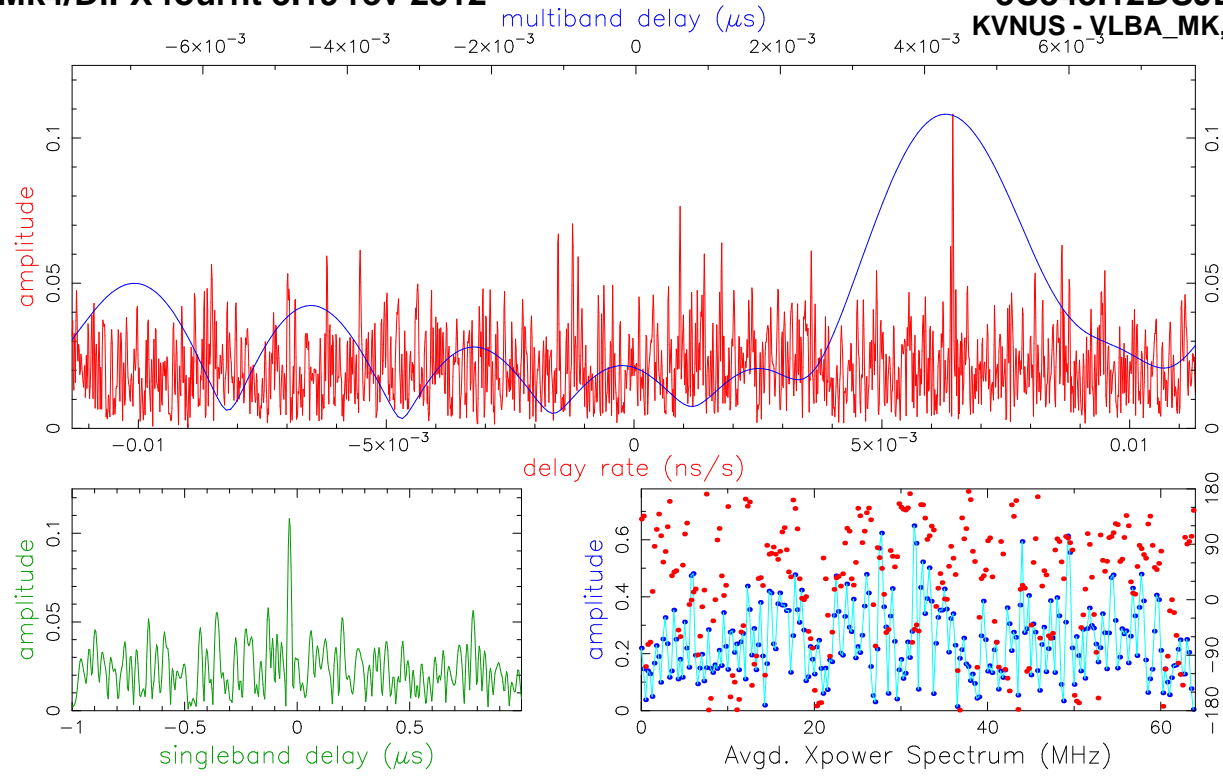
amp/seg (%) 80.1 20.4 Interp. 0.000 PCal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 45.0 6.9 Inc. seg. avg. 0.689 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 33.7 12.0 Inc. frq. avg. 0.508 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011

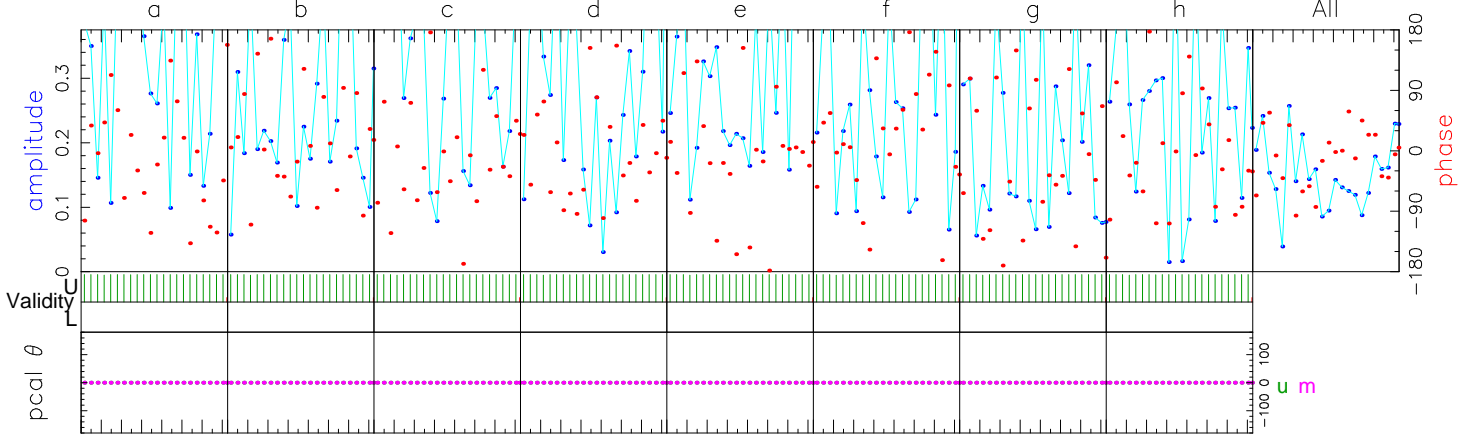
u: az 68.6 el 51.4 pa -80.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9156.820 3441.218 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/um..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/um.W.261.12DSJB



Fringe quality 0  
SNR 6.1  
Int time 419.112  
Amp 0.125  
Phase -7.7  
PFD 2.4e-01  
Delays (us)  
SBD -0.034043  
MBD 0.004297  
Fringe rate (Hz) 0.555149  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183457  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-11.8	4.5	-16.9	-11.1	1.6	40.6	-103.1	-13.8	Phase	-7.7
	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	419.3	62.7	300.0	271.6	189.3	51.6	28.8	146.0	Sbd box	248.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.54626467471E+03					-1.54623772199E+03			Resid mbdelay (usec)	4.29729E-03 +/- 1.8E-04
Sband delay (usec)	-1.54627176474E+03					5.8621283E+00			Resid sbdelay (usec)	-3.40427E-02 +/- 1.4E-03
Phase delay (usec)	-1.54623772224E+03					4.0869229E-07			Resid phdelay (usec)	-2.48376E-07 +/- 6.1E-07
Delay rate (us/s)	1.23533529760E+00					1.23532885287E+00			Resid rate (us/s)	6.44473E-06 +/- 2.5E-09
Total phase (deg)		-141.8				2.57203577631E-05			Resid phase (deg)	-7.7 +/- 18.8

ph/seg (deg) 44.2 45.0  
amp/seg (%) 61.3 78.6  
ph/frq (deg) 44.4 26.5  
amp/frq (%) 40.7 46.3

RMS Theor. Amplitude 0.125 +/- 0.020  
Search (2048X32) 0.106  
Interp. 0.000  
Inc. seg. avg. 0.132  
Inc. frq. avg. 0.122

Group delay (usec)(sbd) -1.54626467471E+03  
Sband delay (usec) -1.54627176474E+03  
Phase delay (usec) -1.54623772224E+03  
Delay rate (us/s) 1.23533529760E+00  
Total phase (deg) -141.8

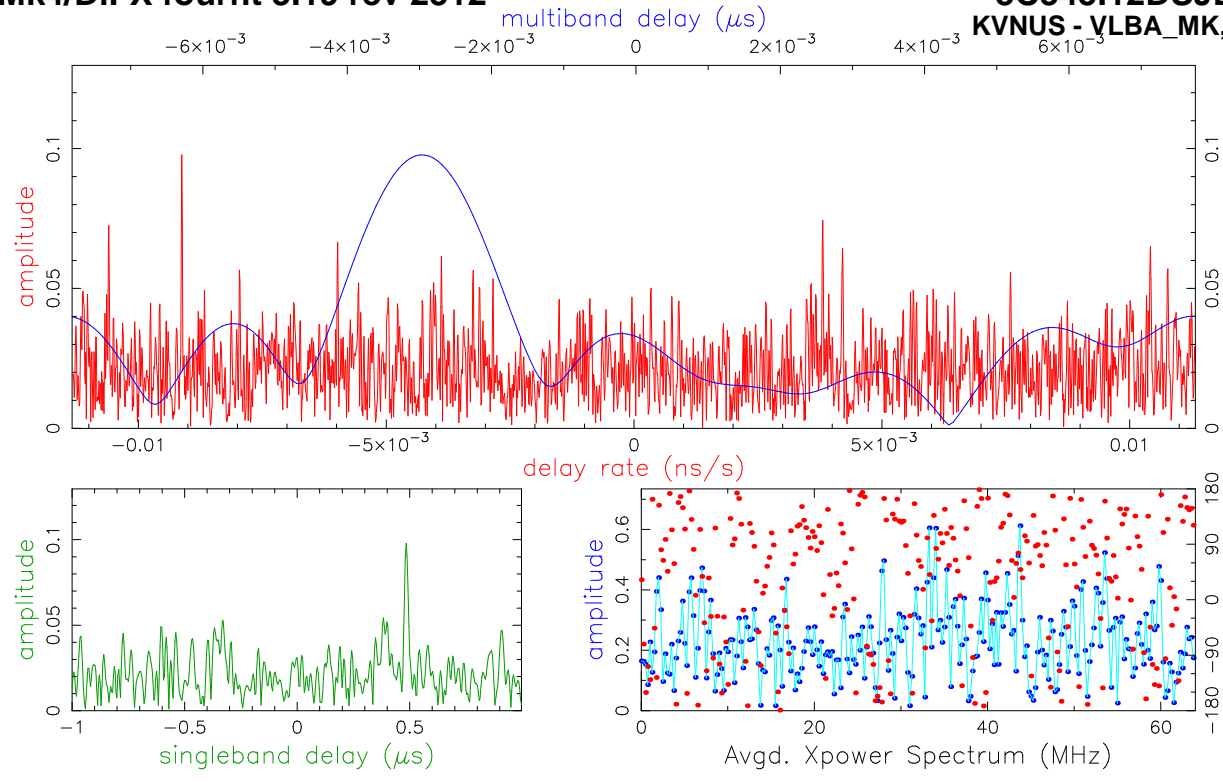
Apriori delay (usec) -1.54623772199E+03  
Apriori clock (usec) 5.8621283E+00  
Apriori clockrate (us/s) 4.0869229E-07  
Apriori rate (us/s) 1.23532885287E+00  
Apriori accel (us/s/s) 2.57203577631E-05

Resid mbdelay (usec) 4.29729E-03 +/- 1.8E-04  
Resid sbdelay (usec) -3.40427E-02 +/- 1.4E-03  
Resid phdelay (usec) -2.48376E-07 +/- 6.1E-07  
Resid rate (us/s) 6.44473E-06 +/- 2.5E-09  
Resid phase (deg) -7.7 +/- 18.8

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): 128  
Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite

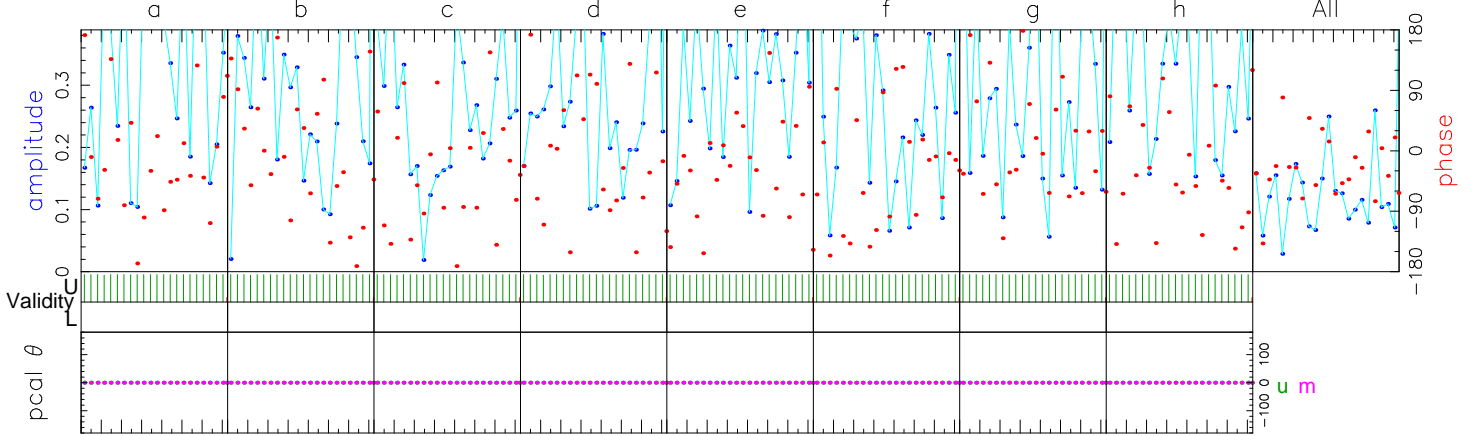
sb window (us) -1.000 1.000  
mb window (us) -0.008 0.008  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00

u: az 68.6 el 51.4 pa -80.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9156.820 3441.218 simultaneous interpolator



Fringe quality 0  
SNR 5.5  
Int time 419.111  
Amp 0.130  
Phase -27.3  
PFD 1.0e+00  
Delays (us)  
SBD 0.484530  
MBD -0.002960  
Fringe rate (Hz)  
-0.786902  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183500  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-29.0	-16.7	-61.5	-1.1	-26.5	-47.5	3.8	-48.4	Phase	-27.3
	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
	381.7	481.2	256.0	293.8	32.3	68.3	218.9	412.4	Sbd box	381.0
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.54575630727E+03	Apriori delay (usec)	-1.54623772199E+03	Resid mbdelay (usec)	-2.96028E-03	+/-	2.0E-04
Sband delay (usec)	-1.54575319199E+03	Apriori clock (usec)	5.8621283E+00	Resid sbdelay (usec)	4.84530E-01	+/-	1.6E-03
Phase delay (usec)	-1.54623772287E+03	Apriori clockrate (us/s)	4.0869229E-07	Resid phdelay (usec)	-8.79275E-07	+/-	6.8E-07
Delay rate (us/s)	1.23531971772E+00	Apriori rate (us/s)	1.23532885287E+00	Resid rate (us/s)	-9.13515E-06	+/-	2.8E-09
Total phase (deg)	-161.4	Apriori accel (us/s/s)	2.57203577631E-05	Resid phase (deg)	-27.3	+/-	20.9

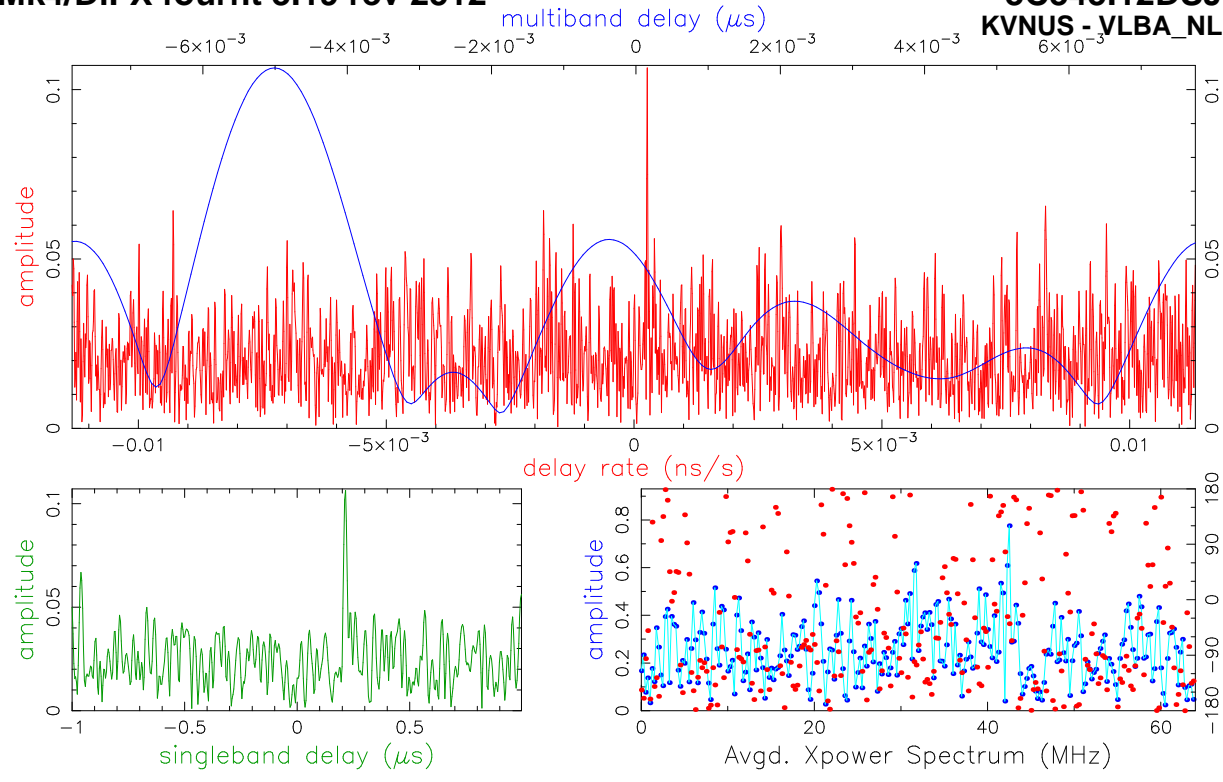
ph/seg (deg)	46.9	Theor.	50.2	Search (2048X32)	0.096	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	66.7		87.6	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	25.2		29.6	Inc. seg. avg.	0.119	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.4		51.7	Inc. frq. avg.	0.122	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

u: az 68.6 el 51.4 pa -80.7 m: az 317.4 el 59.9 pa 123.3 u,v (fr/asec) -9156.820 3441.218 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/um..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/um.W.293.12DSJB



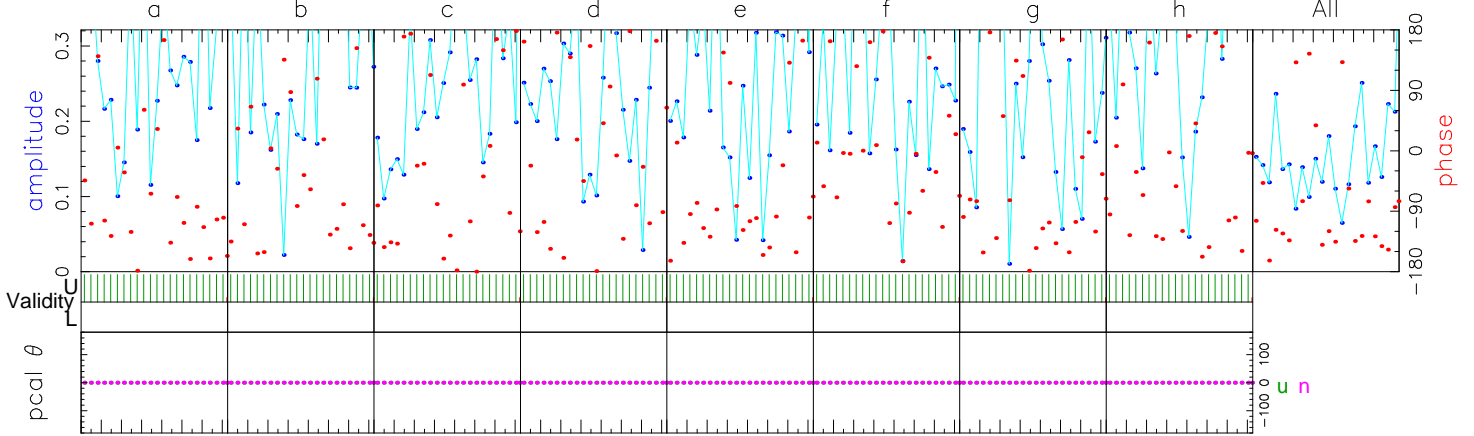
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, un  
KVNU - VLBA\_NL, fgroup W, pol LL



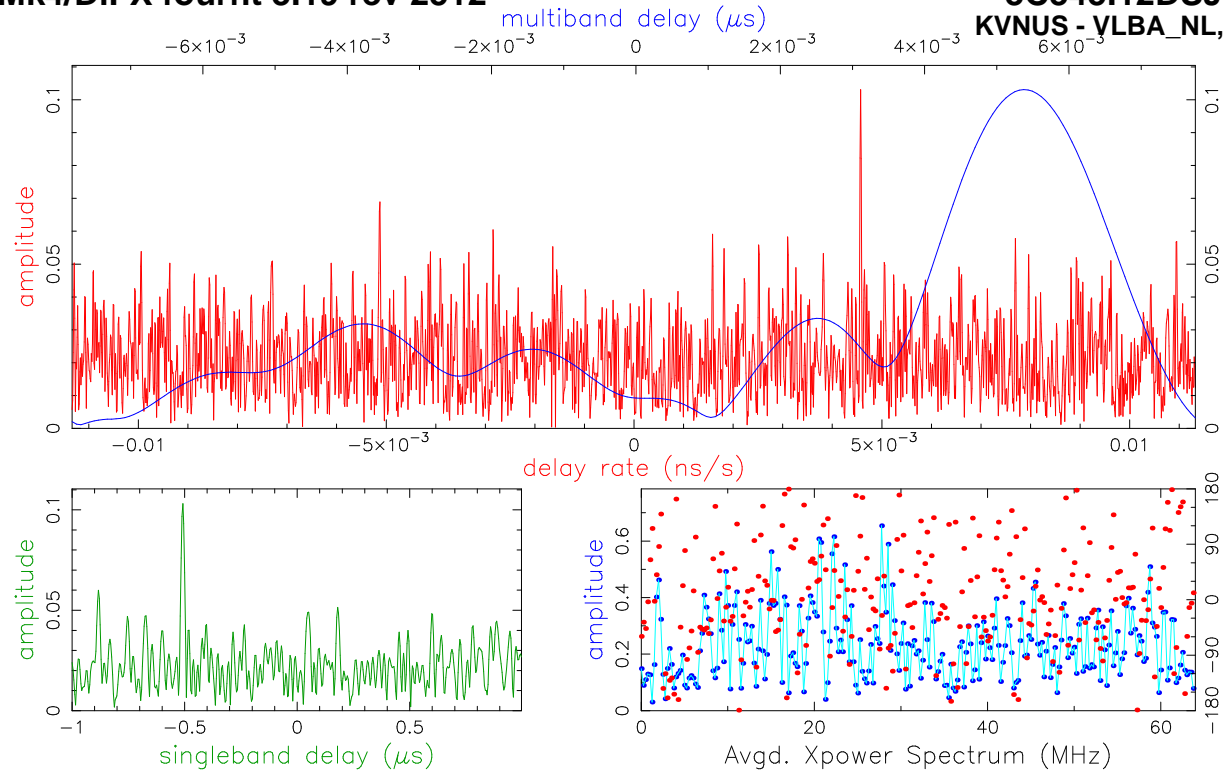
Fringe quality 0  
SNR 6.0  
Int time 419.831  
Amp 0.107  
Phase -119.4  
PFD 3.9e-01  
Delays (us)  
SBD 0.213798  
MBD -0.005021  
Fringe rate (Hz)  
0.022809  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183449  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



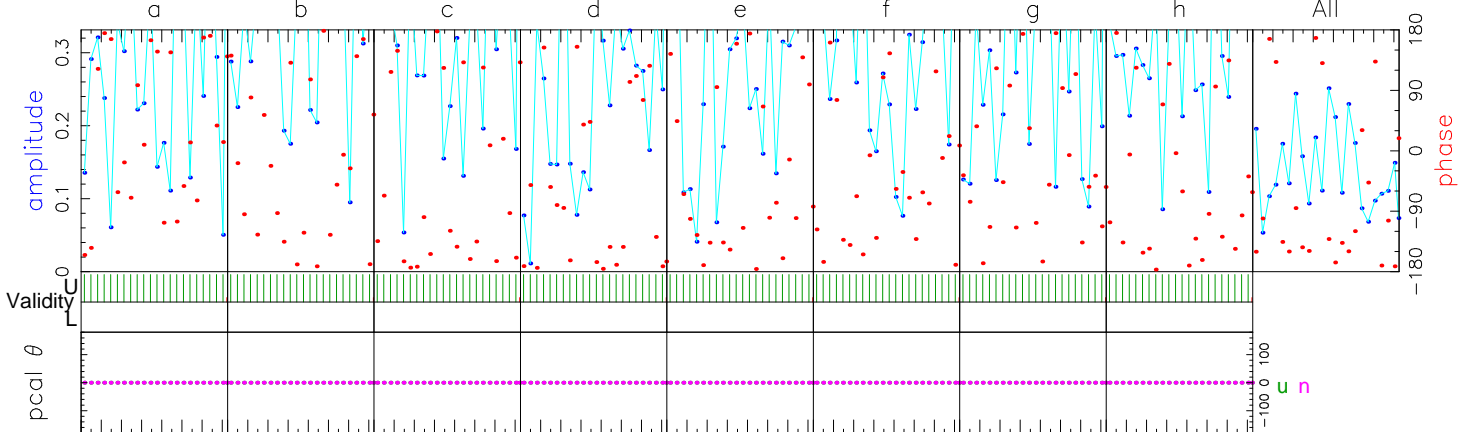
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-115.2	-105.8	-159.3	-144.9	-116.1	-40.9	-139.4	-120.9	Phase	-119.4
	0.2	0.1	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	352.4	60.9	173.4	457.9	262.4	459.9	444.1	343.0	Sbd box	311.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.90865140994E+03		Apriori delay (usec)		7.90843768062E+03		Resid mbdelay (usec)		-5.02068E-03	+/- 1.8E-04
Sband delay (usec)	7.90865147912E+03		Apriori clock (usec)		-1.8054058E-01		Resid sbdelay (usec)		2.13798E-01	+/- 1.4E-03
Phase delay (usec)	7.90843767677E+03		Apriori clockrate (us/s)		2.6577647E-07		Resid phdelay (usec)		-3.85180E-06	+/- 6.2E-07
Delay rate (us/s)	1.61468456000E+00		Apriori rate (us/s)		1.61468429521E+00		Resid rate (us/s)		2.64791E-07	+/- 2.5E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.82712856259E-05		Resid phase (deg)		-119.4	+/- 19.1

ph/seg (deg) 58.9 45.8 Search (2048X32) 0.104 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 63.4 79.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 38.8 27.0 Inc. seg. avg. 0.114 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 31.0 47.1 Inc. frq. avg. 0.109 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
u: az 68.6 el 51.4 pa -80.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12115.463 -3587.335 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/un..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/un.W.247.12DSJB



Fringe quality 0  
SNR 5.8  
Int time 419.831  
Amp 0.110  
Phase -150.0  
PFD 8.4e-01  
Delays (us)  
SBD -0.508217  
MBD 0.005375  
Fringe rate (Hz) 0.394627  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183453  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

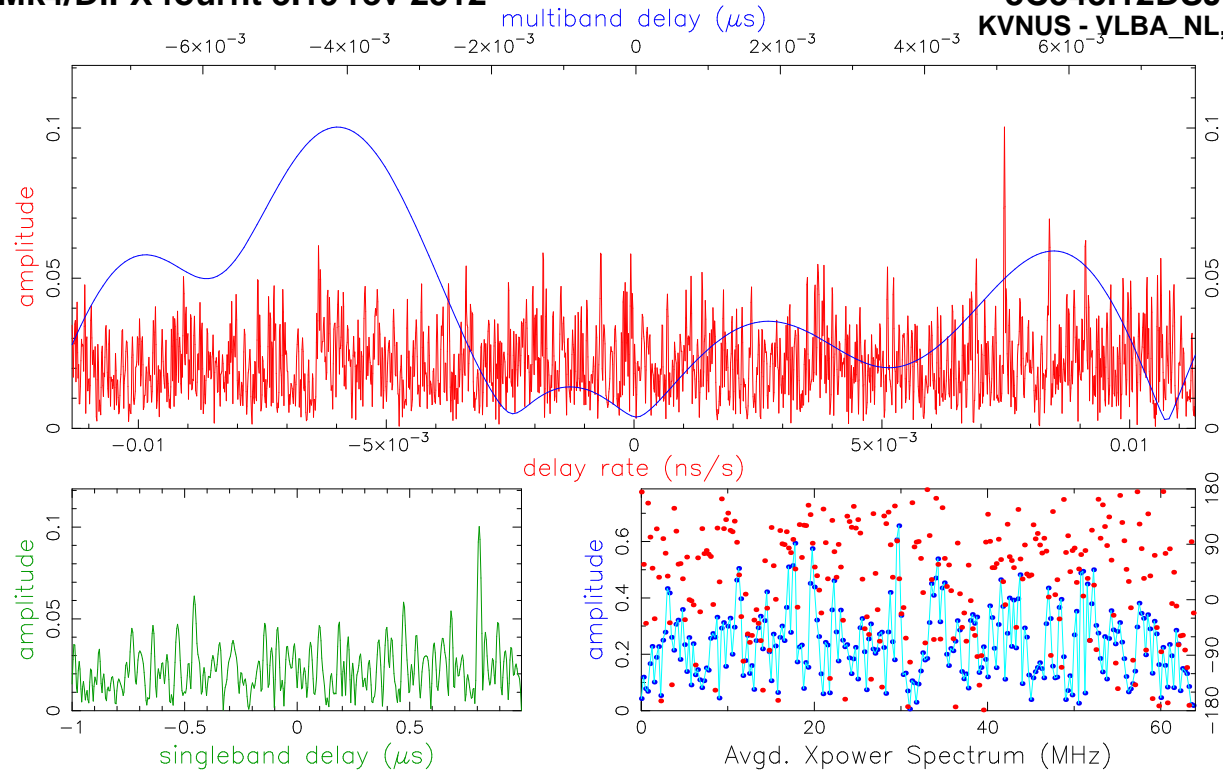
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0
u	63000	63000	63000	63000	63000	63000	63000	63000	63000	63000
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		7.90792743035E+03				7.90843767578E+03				
Sband delay (usec)		7.90792946387E+03				7.90843767578E+03				
Phase delay (usec)		7.90843767578E+03				7.90843767578E+03				
Delay rate (us/s)		1.61468887644E+00				1.61468887644E+00				
Total phase (deg)			141.0							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
u, v (fr/asec)										
simultaneous interpolator										

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, un  
KVNUS - VLBA\_NL, fgroup W, pol LR

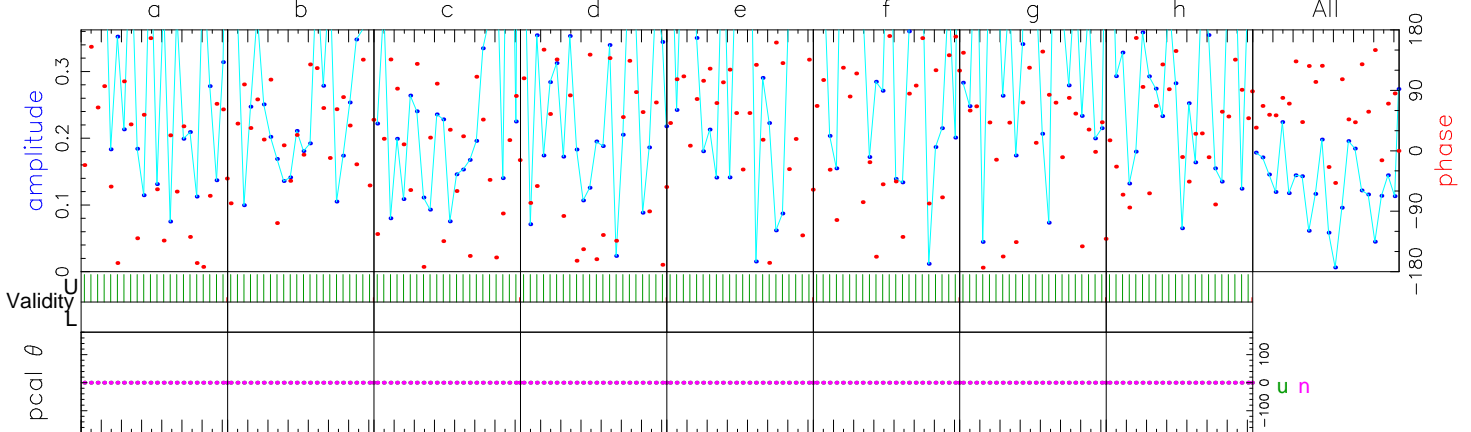


Fringe quality 0

SNR 5.6  
Int time 419.831  
Amp 0.121  
Phase 70.4  
PFD 9.9e-01  
Delays (us)  
SBD 0.808812  
MBD -0.004142  
Fringe rate (Hz) 0.644489  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183457  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

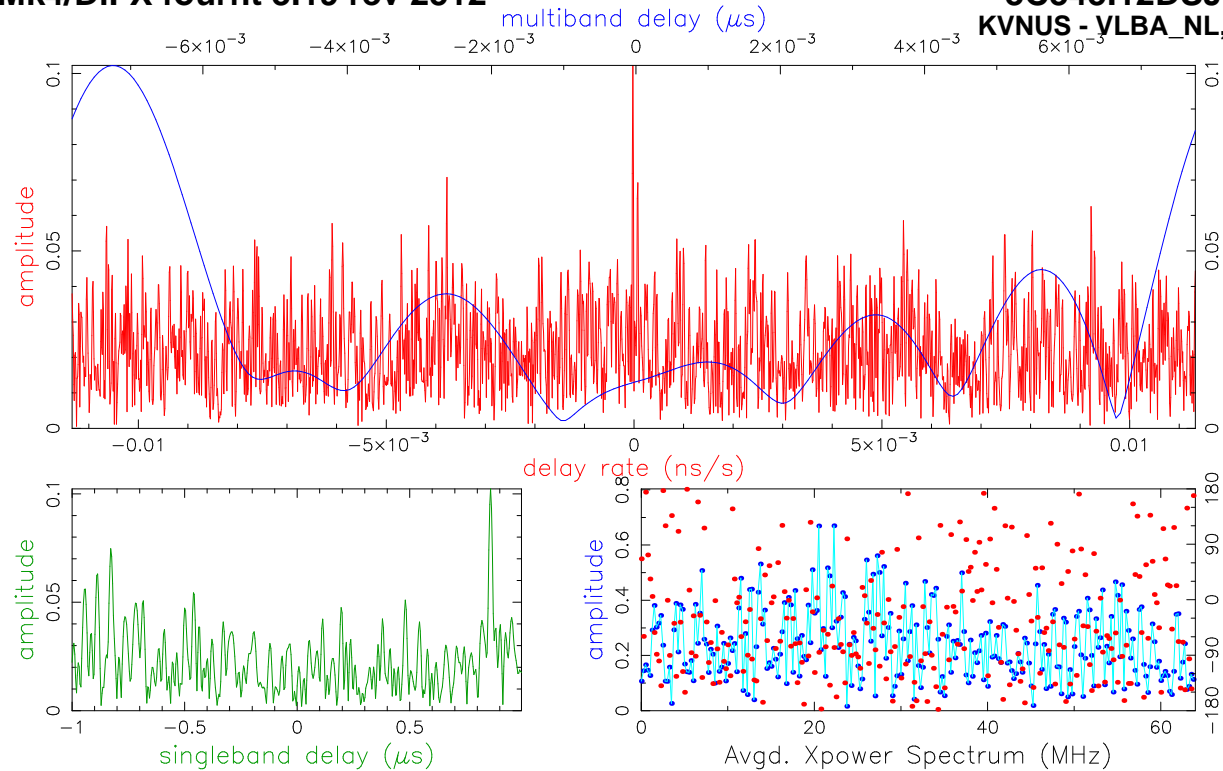
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0
u	63000	63000	63000	63000	63000	63000	63000	63000	63000	63000
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
n	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		7.90924603846E+03				7.90843768062E+03			-4.14215E-03	+/- 1.9E-04
Sband delay (usec)		7.90924649287E+03				-1.8054058E+01			8.08812E-01	+/- 1.5E-03
Phase delay (usec)		7.90843768289E+03				2.6577647E-07			2.27046E-06	+/- 6.6E-07
Delay rate (us/s)		1.61469177709E+00				1.61468429521E+00			7.48188E-06	+/- 2.7E-09
Total phase (deg)			1.4			-4.82712856259E-05			70.4	+/- 20.4
pcal mode:						MANUAL, MANUAL			PC period (AP's) 5, 5	
pcal rate:						0.000E+00, 0.000E+00 (us/s)			sb window (us) -1.000 1.000	
Bits/sample:						2x2			SampCntNorm: enabled mb window (us) -0.008 0.008	
Sample rate (MSamp/s):						128			dr window (ns/s) -0.011 0.011	
Data rate (Mb/s):						2048			nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00	

u: az 68.6 el 51.4 pa -80.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12115.463 -3587.335 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/un..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/un.W.281.12DSJB

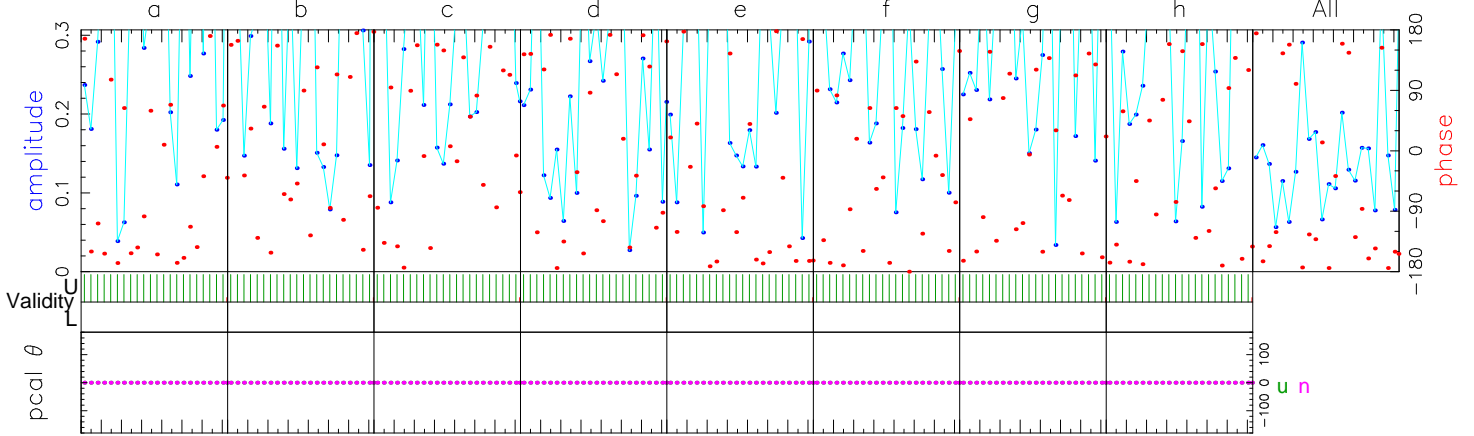


Fringe quality 0

SNR 5.7  
Int time 419.831  
Amp 0.102  
Phase -169.0  
PFD 9.1e-01  
Delays (us)  
SBD 0.859130  
MBD -0.007246  
Fringe rate (Hz)  
-0.002002  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

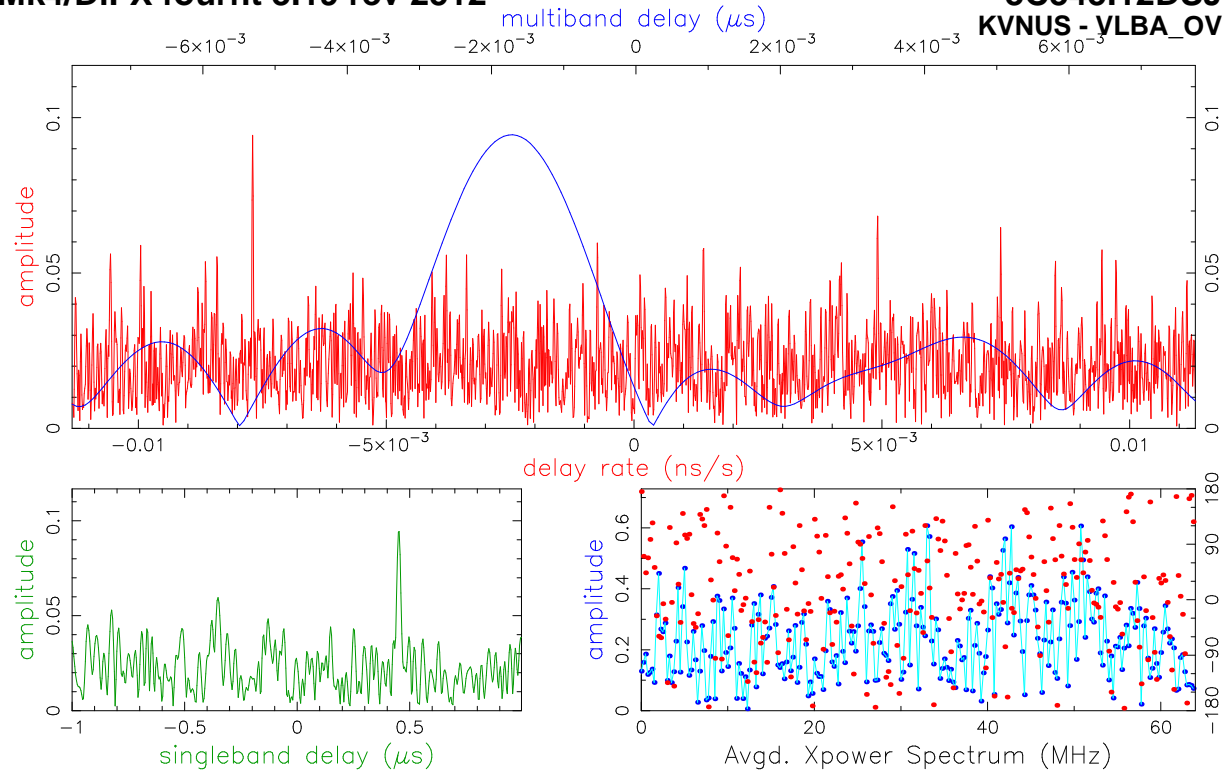
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183501  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



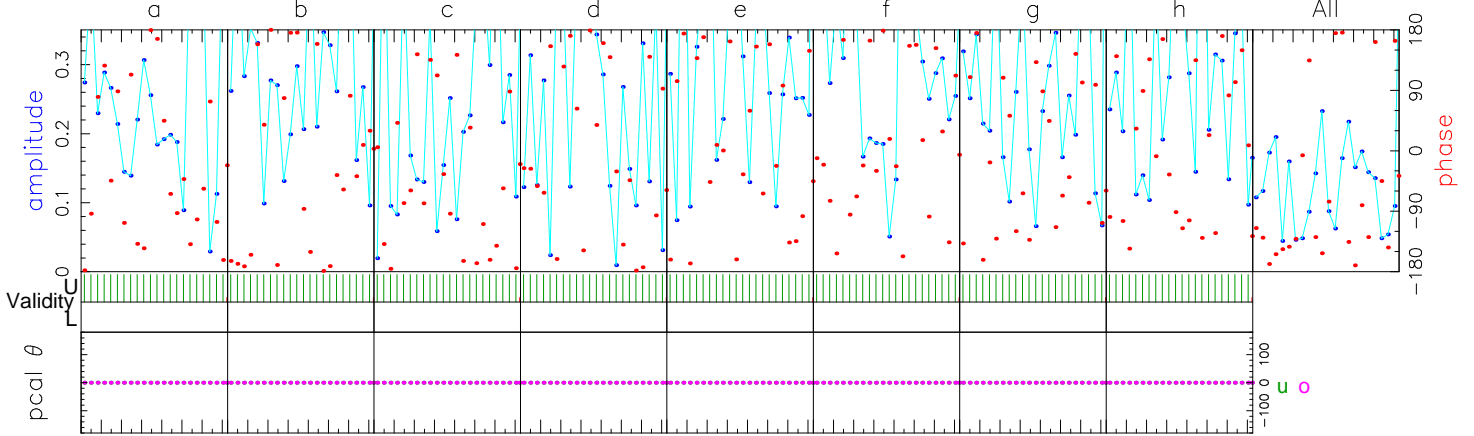
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.90928980913E+03				7.90843768062E+03				Resid mbdelay (usec)	-7.24649E-03 +/- 1.9E-04
Sband delay (usec)	7.90929681087E+03				-1.8054058E+01				Resid sbdelay (usec)	8.59130E-01 +/- 1.5E-03
Phase delay (usec)	7.90843767517E+03				2.6577647E-07				Resid phdelay (usec)	-5.44890E-06 +/- 6.4E-07
Delay rate (us/s)	1.61468427197E+00				1.61468429521E+00				Resid rate (us/s)	-2.32421E-08 +/- 2.7E-09
Total phase (deg)		122.1			-4.82712856259E-05				Resid phase (deg)	-169.0 +/- 20.0

ph/seg (deg) 60.6 47.9 Search (2048X32) 0.102 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 80.5 83.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 23.8 28.3 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 31.1 49.3 Inc. frq. avg. 0.096 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 u: az 68.6 el 51.4 pa -80.7 n: az 301.9 el 25.2 pa 55.5 u,v (fr/asec) -12115.463 -3587.335 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/un..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/un.W.296.12DSJB



Fringe quality 0  
SNR 5.4  
Int time 419.826  
Amp 0.117  
Phase -145.1  
PFD 1.0e+00  
Delays (us)  
SBD 0.451241  
MBD -0.001788  
Fringe rate (Hz)  
-0.663635  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183448  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

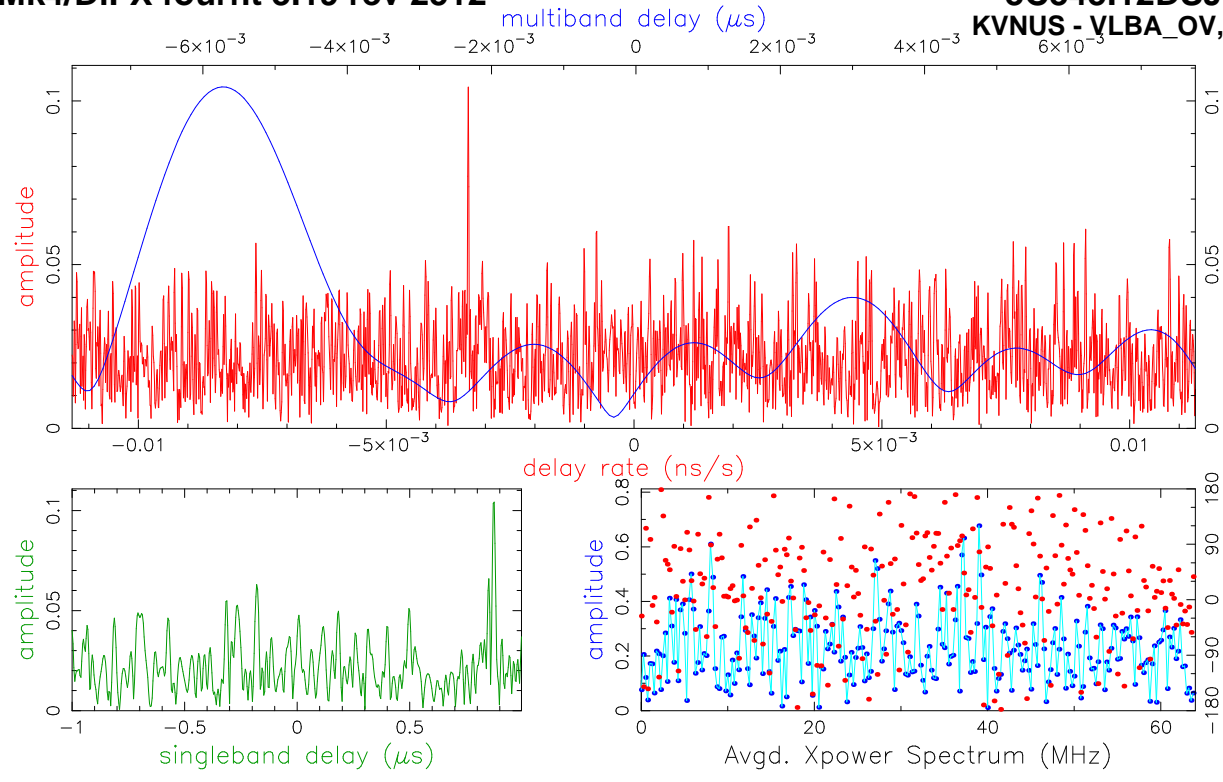


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-128.2	-168.4	-135.3	-164.0	-163.9	-121.8	-132.5	-136.6	Phase	-145.1
	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
	438.1	225.7	277.6	128.3	383.7	191.9	201.6	289.7	Sbd box	372.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.88060640467E+03	Apriori delay (usec)	2.88015506749E+03	Resid mbdelay (usec)	-1.78782E-03	+/-	2.0E-04
Sband delay (usec)	2.88060630899E+03	Apriori clock (usec)	-8.2039442E+00	Resid sbdelay (usec)	4.51241E-01	+/-	1.6E-03
Phase delay (usec)	2.88015506282E+03	Apriori clockrate (us/s)	3.9901898E-07	Resid phdelay (usec)	-4.67776E-06	+/-	6.9E-07
Delay rate (us/s)	1.58049120467E+00	Apriori rate (us/s)	1.58049890882E+00	Resid rate (us/s)	-7.70415E-06	+/-	2.8E-09
Total phase (deg)	40.0	Apriori accel (us/s/s)	-1.70751588383E-05	Resid phase (deg)	-145.1	+/-	21.3

ph/seg (deg)	RMS 51.3	Theor. 51.1	Amplitude Search (2048X32)	0.117 +/- 0.022	0.093	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	71.3	89.3	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	20.0	30.2	Inc. seg. avg.	0.108	Sample rate(MISamp/s): 128	nlags: 256	mb window (us) -0.008 0.008
amp/frq (%)	24.6	52.6	Inc. frq. avg.	0.106	Data rate(Mb/s): 2048	t_cohere infinite	dr window (ns/s) -0.011 0.011
u: az 68.6 el 51.4 pa -80.7	o: az 293.7 el 41.4 pa 71.3	u, v (fr/asec)	-11806.337 -1135.131		ion window (TEC)	0.00 0.00	simultaneous interpolator



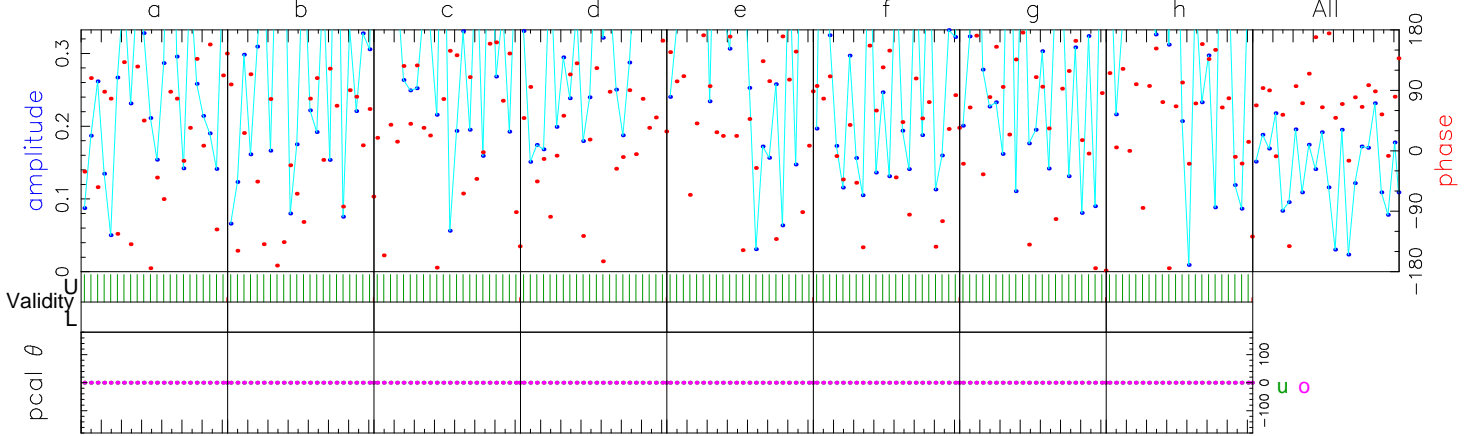


Fringe quality 0

SNR 6.0  
Int time 419.826  
Amp 0.111  
Phase 81.2  
PFD 4.2e-01  
Delays (us)  
SBD 0.873136  
MBD -0.005753  
Fringe rate (Hz)  
-0.288055  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183453  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

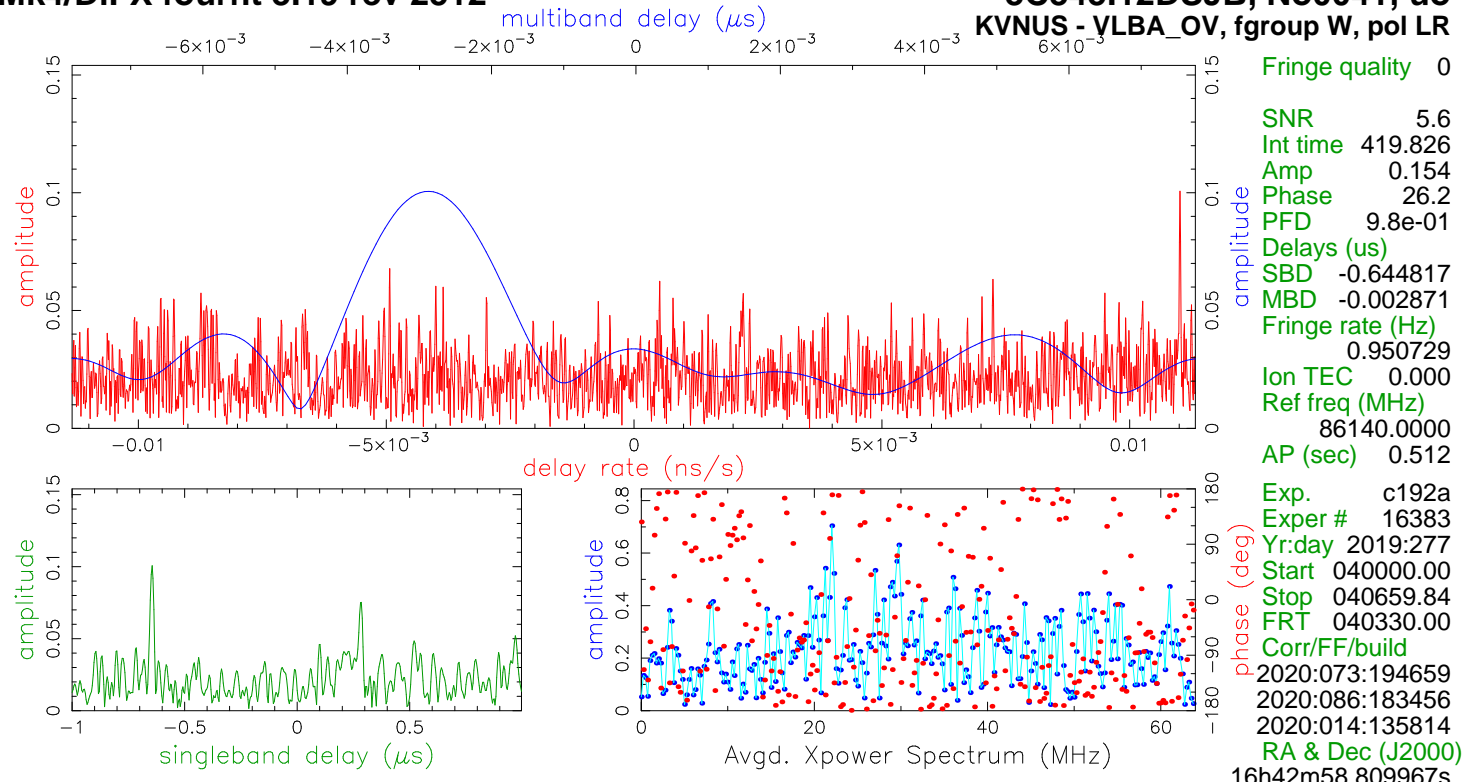


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	
u	63000	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp
o	1000	1000	1000	1000	1000	1000	1000	1000	1000	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
Group delay (usec)(sbd)		2.88102431481E+03			2.88015506749E+03				Resid mbdelay (usec)	-5.75269E-03 +/- 1.8E-04
Sband delay (usec)		2.88102820374E+03			-8.2039442E+00				Resid sbdelay (usec)	8.73136E-01 +/- 1.4E-03
Phase delay (usec)		2.88015507011E+03			3.9901898E-07				Resid phdelay (usec)	2.61779E-06 +/- 6.2E-07
Delay rate (us/s)		1.58049556479E+00			1.58049890882E+00				Resid rate (us/s)	-3.34403E-06 +/- 2.5E-09
Total phase (deg)			266.2		-1.70751588383E-05				Resid phase (deg)	81.2 +/- 19.1

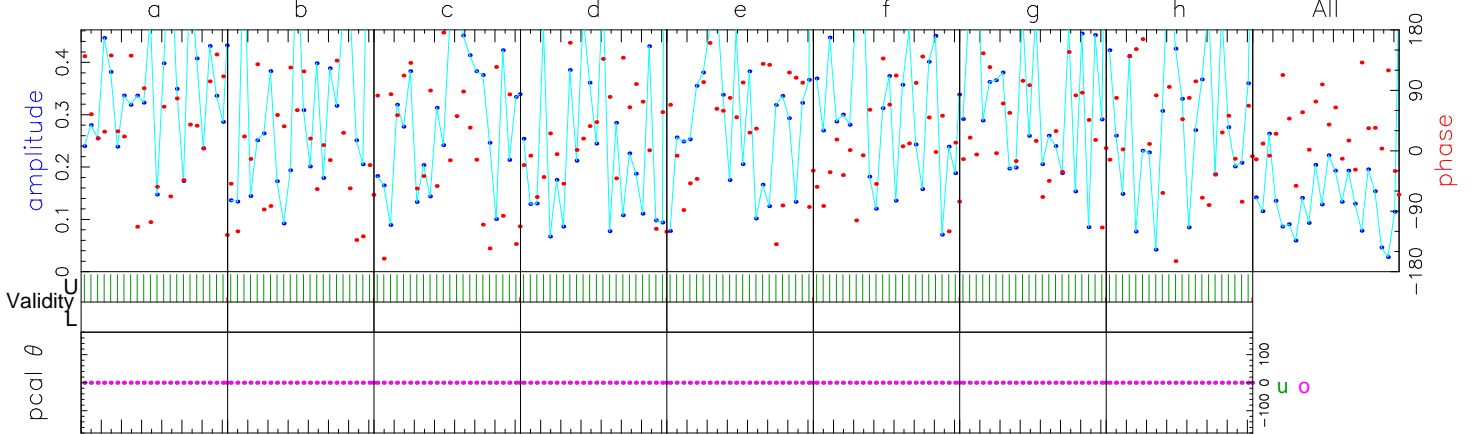
ph/seg (deg) 54.7 45.9 Search (2048X32) 0.102 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.8 80.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.7 27.1 Inc. seg. avg. 0.112 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 41.4 47.2 Inc. frq. avg. 0.100 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 u: az 68.6 el 51.4 pa -80.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11806.337 -1135.131 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uo..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uo.W.260.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, uo  
KVNUS - VLBA\_OV, fgroup W, pol LR



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	56.3	-7.6	43.4	19.1	59.0	-1.8	37.7	32.1	Phase	26.2
	0.2	0.2	0.1	0.1	0.1	0.2	0.3	0.1	Ampl.	0.1
	329.6	255.4	82.7	87.7	312.8	93.3	91.8	41.0	Sbd box	91.9
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.87951157124E+03		Apriori delay (usec)		2.88015506749E+03		Resid mbdelay (usec)		-2.87125E-03	+/- 1.9E-04
Sband delay (usec)	2.87951024999E+03		Apriori clock (usec)		-8.2039442E+00		Resid sbdelay (usec)		-6.44817E-01	+/- 1.5E-03
Phase delay (usec)	2.88015506834E+03		Apriori clockrate (us/s)		3.9901898E-07		Resid phdelay (usec)		8.45485E-07	+/- 6.6E-07
Delay rate (us/s)	1.58050994584E+00		Apriori rate (us/s)		1.58049890882E+00		Resid rate (us/s)		1.10370E-05	+/- 2.7E-09
Total phase (deg)	211.3		Apriori accel (us/s/s)		-1.70751588383E-05		Resid phase (deg)		26.2	+/- 20.3

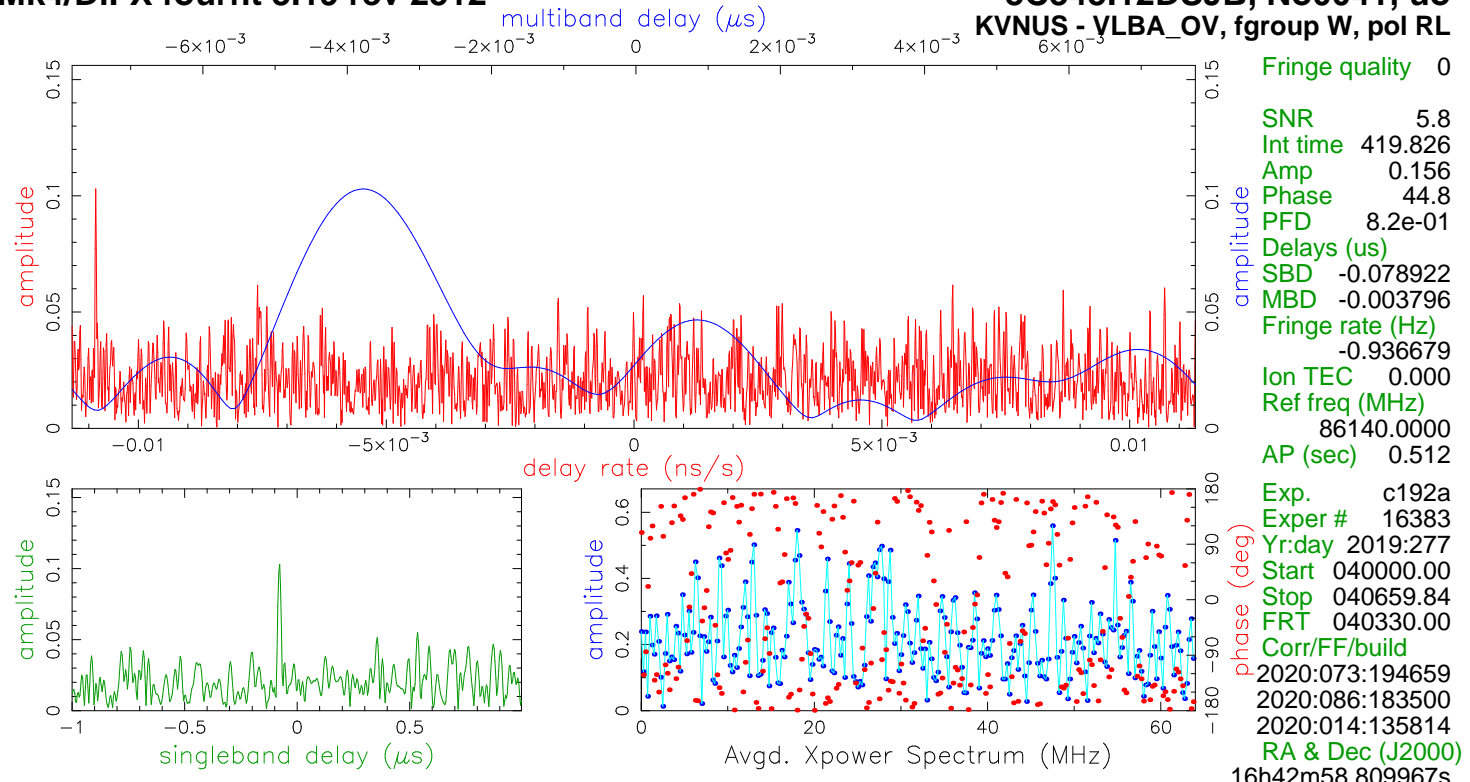
	RMS	Theor.	Amplitude	0.154 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	50.7	48.7	Search (2048X32)	0.098	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	74.4	85.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	27.2	28.7	Inc. seg. avg.	0.154	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	39.3	50.2	Inc. frq. avg.	0.150	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

u: az 68.6 el 51.4 pa -80.7 o: az 293.7 el 41.4 pa 71.3 u,v (fr/asec) -11806.337 -1135.131 simultaneous interpolator

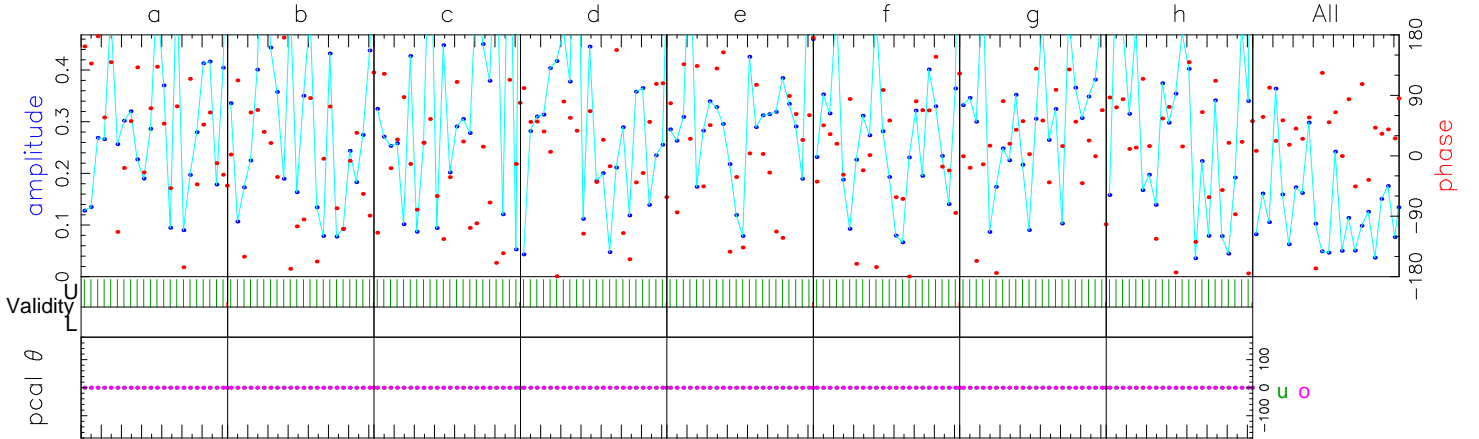
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uo..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uo.W.276.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, uo  
KVNUS - VLBA\_OV, fgroup W, pol RL



Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



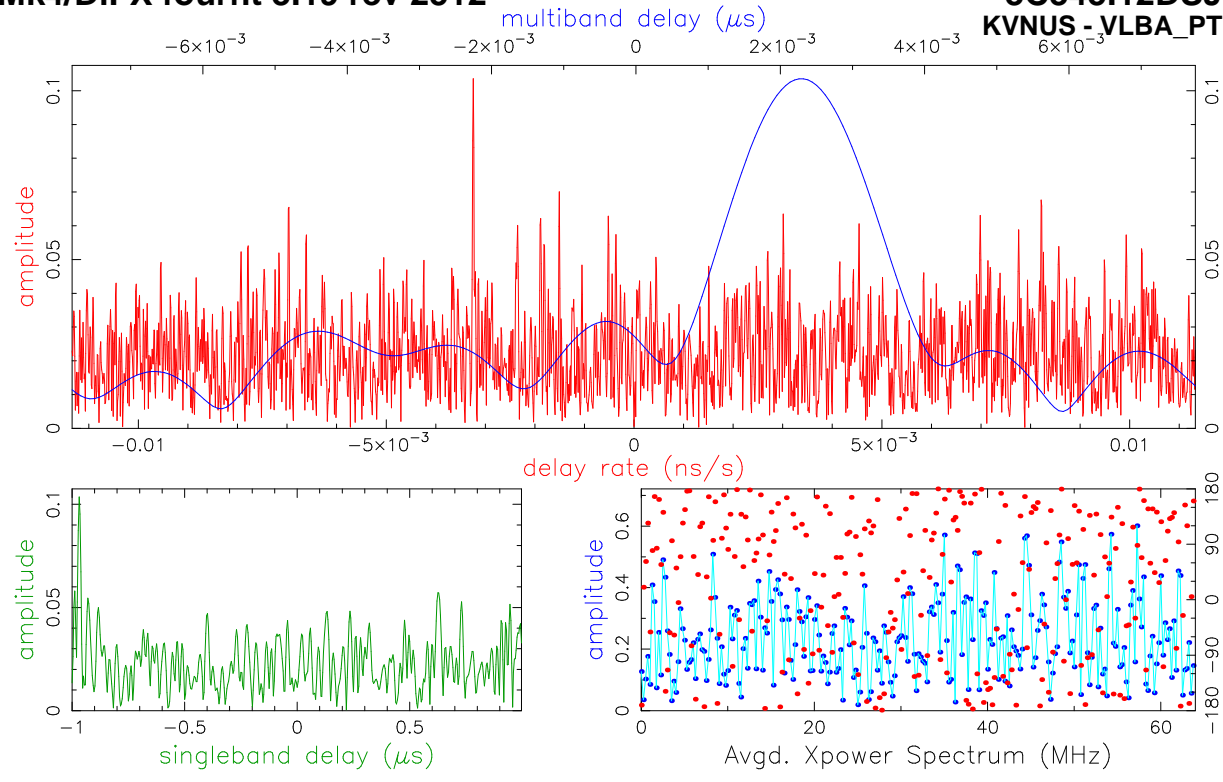
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
68.4	20.6	-7.5	44.0	50.4	37.9	35.0	62.5	62.5	Phase	44.8
0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	Ampl.	0.1
324.6	363.9	188.8	332.5	176.9	124.1	4.3	505.9	505.9	Sbd box	236.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	2.88007314620E+03	Apriori delay (usec)	2.88015506749E+03	Resid mbdelay (usec)	-3.79629E-03	+/-	1.9E-04
Sband delay (usec)	2.88007614574E+03	Apriori clock (usec)	-8.2039442E+00	Resid sbdelay (usec)	-7.89218E-02	+/-	1.5E-03
Phase delay (usec)	2.88015506894E+03	Apriori clockrate (us/s)	3.9901898E-07	Resid phdelay (usec)	1.44338E-06	+/-	6.4E-07
Delay rate (us/s)	1.58048803491E+00	Apriori rate (us/s)	1.58049890882E+00	Resid rate (us/s)	-1.08739E-05	+/-	2.6E-09
Total phase (deg)	229.8	Apriori accel (us/s/s)	-1.70751588383E-05	Resid phase (deg)	44.8	+/-	19.8

ph/seg (deg)	51.2	Theor.	47.4	Amplitude	0.156 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	84.0	Search (2048X32)	0.101	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	27.0	Inc. seg. avg.	0.148	Inc. frq. avg.	0.146	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	38.5	Inc. frq. avg.	0.146			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
u: az 68.6 el 51.4 pa -80.7		o: az 293.7 el 41.4 pa 71.3		u, v (fr/asec)	-11806.337 -1135.131	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

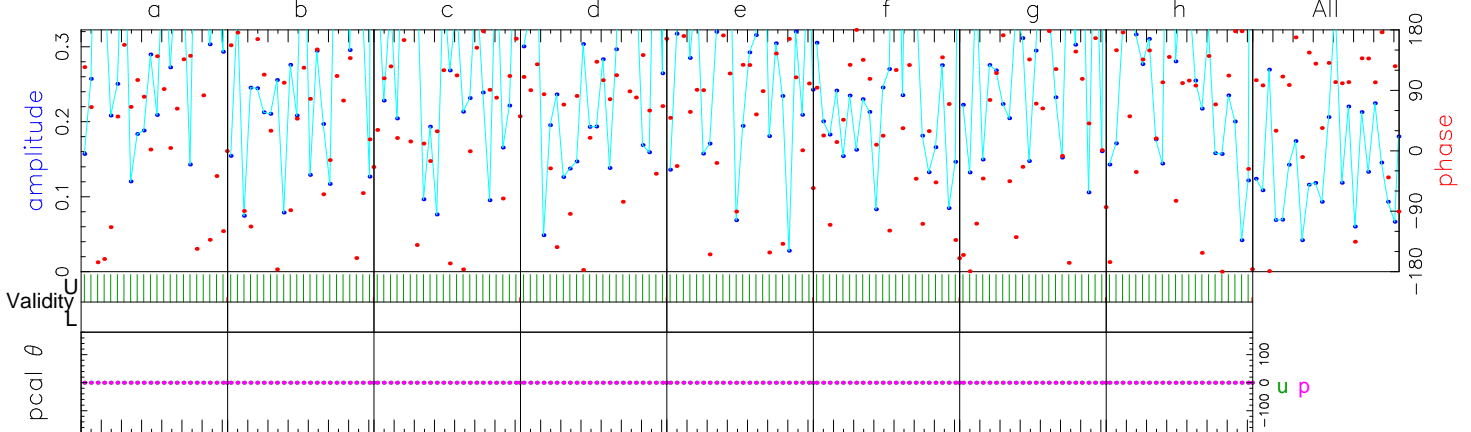
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uo..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uo.W.292.12DSJB

simultaneous interpolator



Fringe quality 0  
 SNR 5.8  
 Int time 419.829  
 Amp 0.108  
 Phase 123.2  
 PFD 7.7e-01  
 Delays (us)  
 SBD -0.968120  
 MBD 0.002302  
 Fringe rate (Hz)  
 -0.279712  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c192a  
 Exper # 16383  
 Yr:day 2019:277  
 Start 040000.00  
 Stop 040659.84  
 FRT 040330.00  
 Corr/FF/build  
 2020:073:194659  
 2020:086:183452  
 2020:014:135814  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

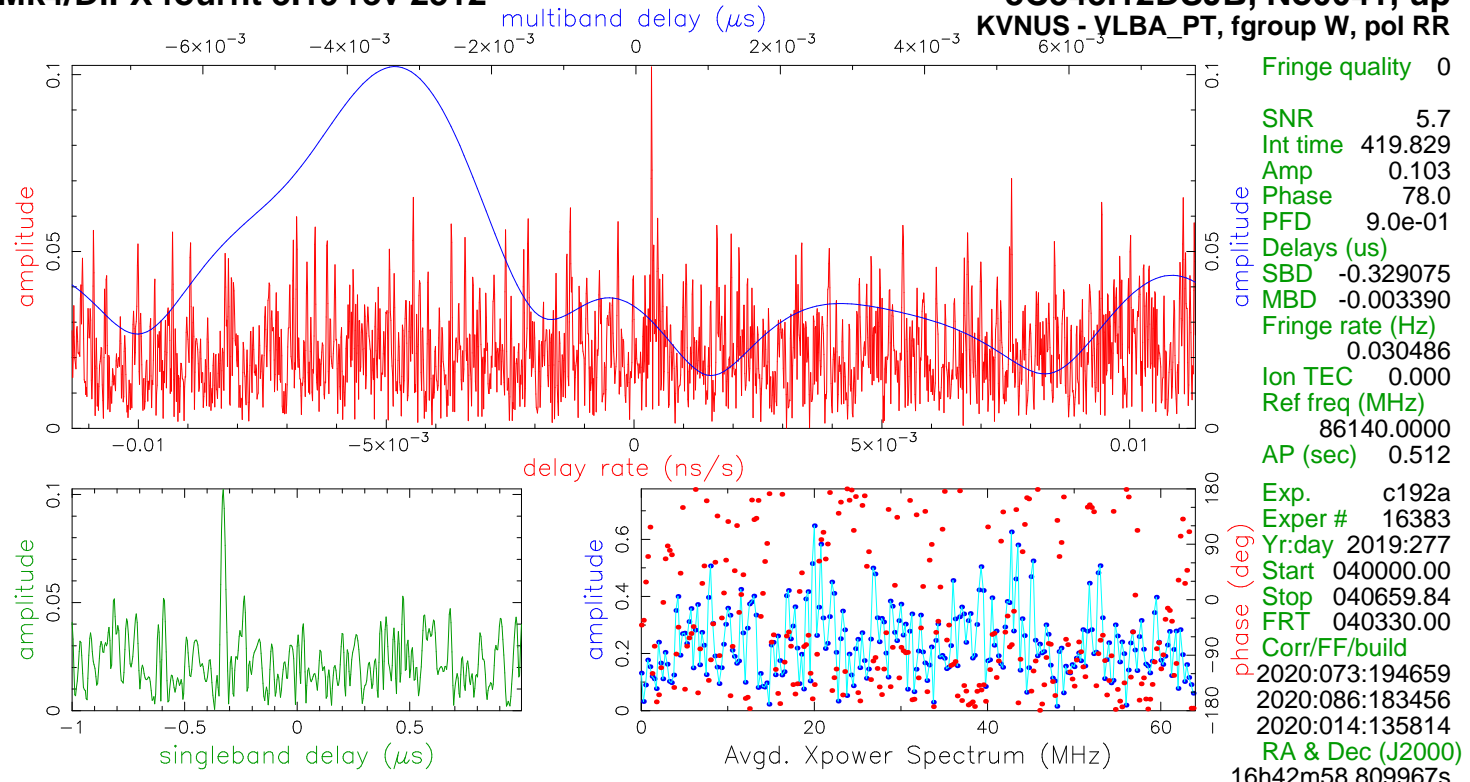


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.47368470159E+03		Apriori delay (usec)		5.47465115006E+03		Resid mbdelay (usec)		2.30152E-03	+/- 1.9E-04
Sband delay (usec)	5.47368303056E+03		Apriori clock (usec)		-3.4870081E+00		Resid sbdelay (usec)		-9.68120E-01	+/- 1.5E-03
Phase delay (usec)	5.47465115404E+03		Apriori clockrate (us/s)		1.9611339E-07		Resid phdelay (usec)		3.97281E-06	+/- 6.3E-07
Delay rate (us/s)	1.67429834976E+00		Apriori rate (us/s)		1.67430159693E+00		Resid rate (us/s)		-3.24718E-06	+/- 2.6E-09
Total phase (deg)	147.2		Apriori accel (us/s/s)		-2.78591527605E-05		Resid phase (deg)		123.2	+/- 19.7

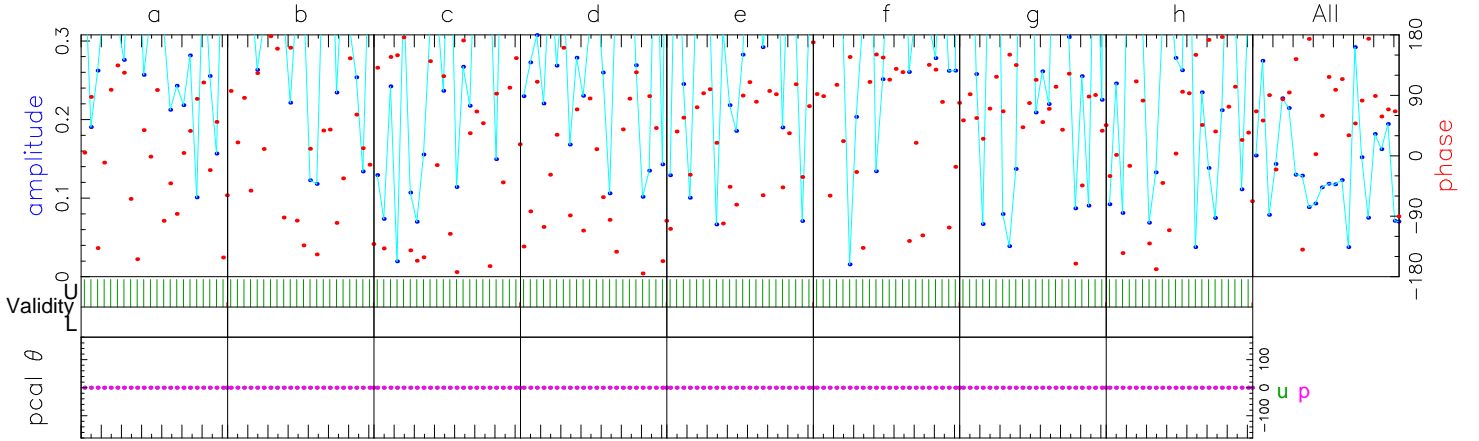
ph/seg (deg) 62.8 47.2 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 82.4 82.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 21.3 27.8 Inc. seg. avg. 0.111 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 23.9 48.6 Inc. frq. avg. 0.100 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 u: az 68.6 el 51.4 pa -80.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12523.089 -1549.942 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/up..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/up.W.259.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, up  
KVNUS - VLBA\_PT, fgroup W, pol RR



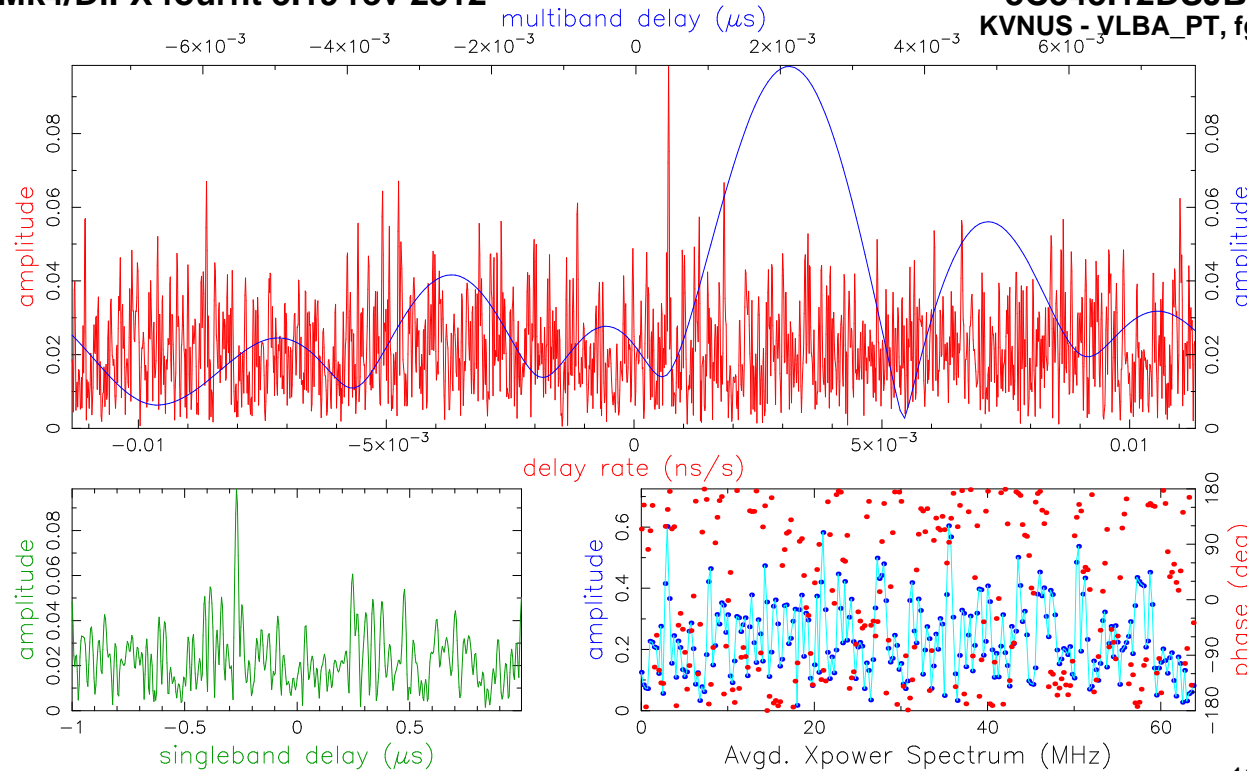
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
25.0	34.0	136.1	55.0	69.1	107.1	76.1	58.7	58.7	Phase	78.0
0.0	0.1	0.1	0.0	0.2	0.1	0.3	0.1	0.1	Ampl.	0.1
246.8	243.7	282.0	488.3	98.9	171.8	173.4	66.3	66.3	Sbd box	172.8
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.47431963556E+03		Apriori delay (usec)	5.47465115006E+03	Resid mbdelay (usec)	-3.38950E-03	+/-	1.9E-04		
Sband delay (usec)	5.47432207481E+03		Apriori clock (usec)	-3.4870081E+00	Resid sbdelay (usec)	-3.29075E-01	+/-	1.5E-03		
Phase delay (usec)	5.47465115258E+03		Apriori clockrate (us/s)	1.9611339E-07	Resid phdelay (usec)	2.51561E-06	+/-	6.4E-07		
Delay rate (us/s)	1.67430195084E+00		Apriori rate (us/s)	1.67430159693E+00	Resid rate (us/s)	3.53907E-07	+/-	2.7E-09		
Total phase (deg)		102.0	Apriori accel (us/s/s)	-2.78591527605E-05	Resid phase (deg)	78.0	+/-	19.9		

ph/seg (deg) 56.9 47.8 Search (2048X32) 0.101 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 74.1 83.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 40.7 28.2 Inc. seg. avg. 0.107 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 76.1 49.2 Inc. frq. avg. 0.103 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
u: az 68.6 el 51.4 pa -80.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12523.089 -1549.942 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/up..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/up.W.277.12DSJB



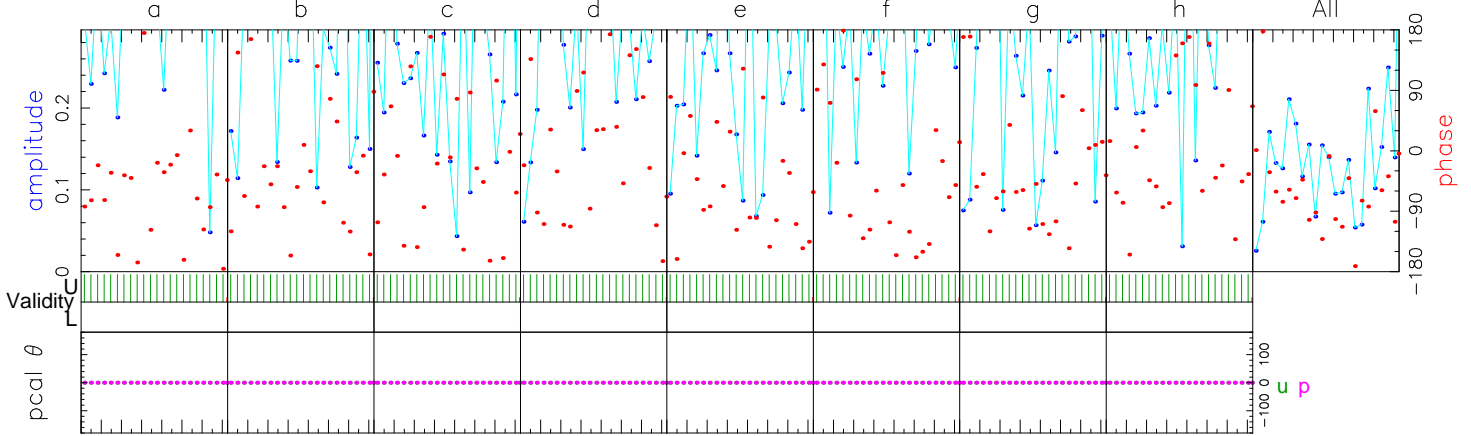


Fringe quality 0

SNR 5.5  
Int time 419.829  
Amp 0.098  
Phase -66.8  
PFD 1.0e+00  
Delays (us)  
SBD -0.269054  
MBD 0.002125  
Fringe rate (Hz)  
0.060115  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183500  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



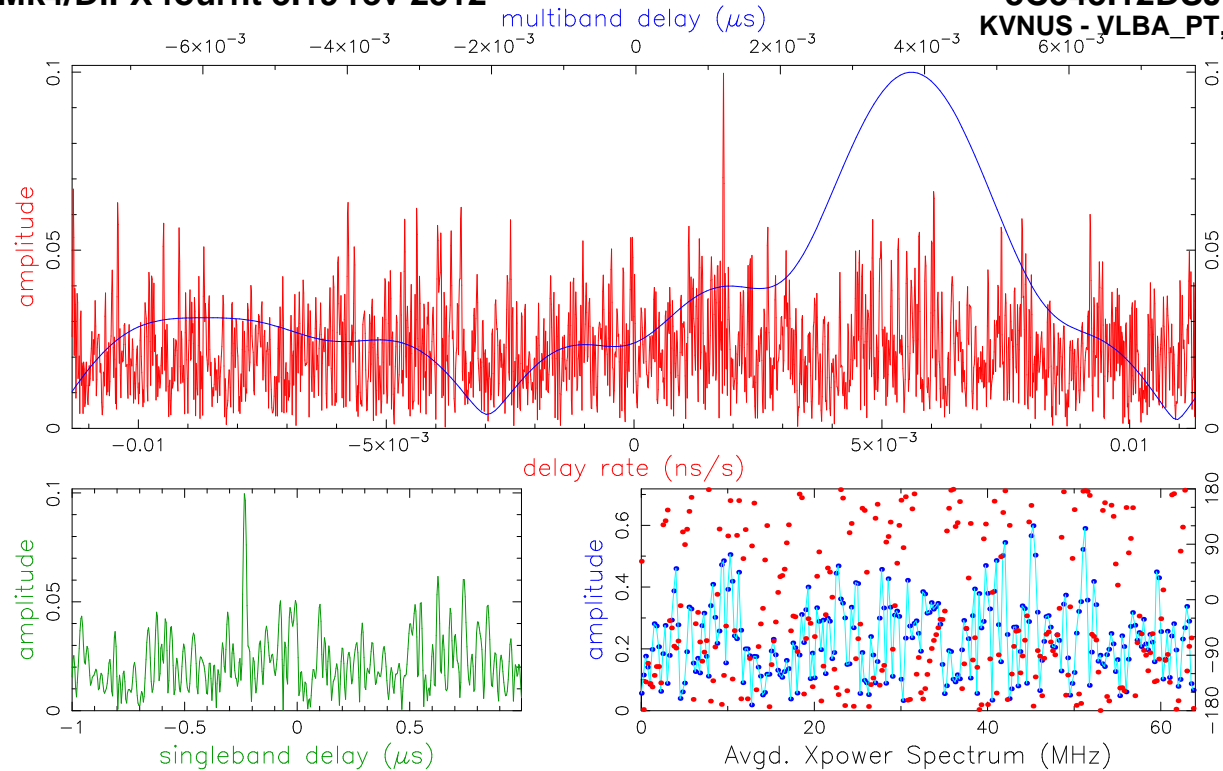
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.47438765055E+03	Apriori delay (usec)	5.47465115006E+03	Resid mbdelay (usec)	2.12548E-03	+/-	2.0E-04
Sband delay (usec)	5.47438209606E+03	Apriori clock (usec)	-3.4870081E+00	Resid sbdelay (usec)	-2.69054E-01	+/-	1.6E-03
Phase delay (usec)	5.47465114791E+03	Apriori clockrate (us/s)	1.9611339E-07	Resid phdelay (usec)	-2.15416E-06	+/-	6.7E-07
Delay rate (us/s)	1.67430229481E+00	Apriori rate (us/s)	1.67430159693E+00	Resid rate (us/s)	6.97878E-07	+/-	2.8E-09
Total phase (deg)	-42.8	Apriori accel (us/s/s)	-2.78591527605E-05	Resid phase (deg)	-66.8	+/-	20.8

ph/seg (deg)	53.6	Theor.	49.9	Amplitude	0.098 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	70.6		87.0	Search (2048X32)	0.097	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	23.8		29.4	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	47.3		51.3	Inc. seg. avg.	0.096	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.092	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

u: az 68.6 el 51.4 pa -80.7      p: az 298.8 el 32.7 pa 70.0      u,v (fr/asec) -12523.089 -1549.942      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c192a/v1\_PV/1234/No0041/up..12DSJB      Output file: /Exps/c192a/v1\_PV/1234/No0041/up.W.294.12DSJB

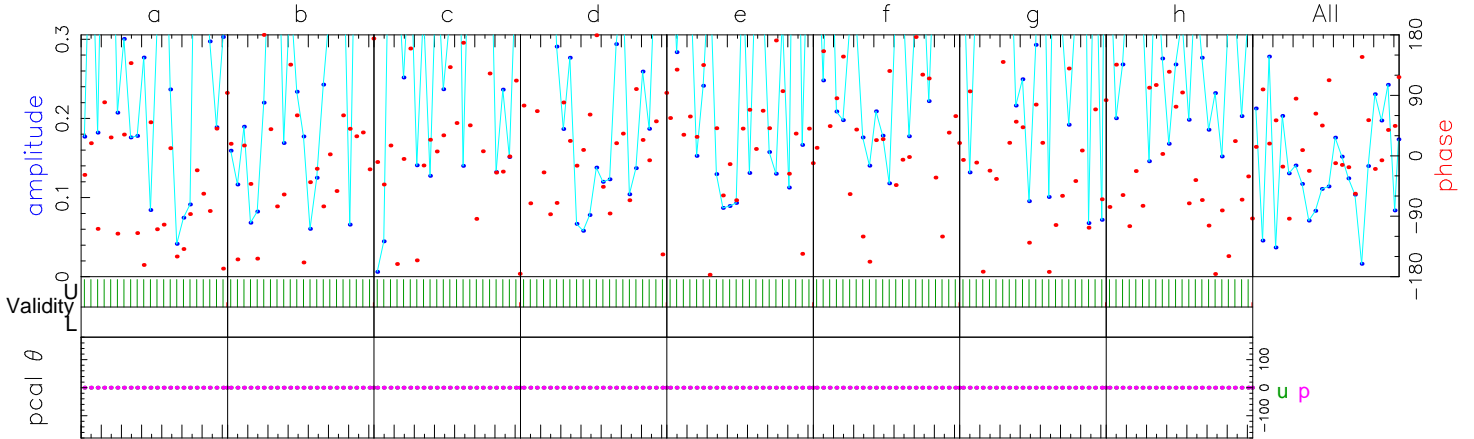


Fringe quality 0

SNR 5.6  
Int time 419.829  
Amp 0.102  
Phase 12.4  
PFD 9.8e-01  
Delays (us)  
SBD -0.233057  
MBD 0.003909  
Fringe rate (Hz)  
0.155251  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

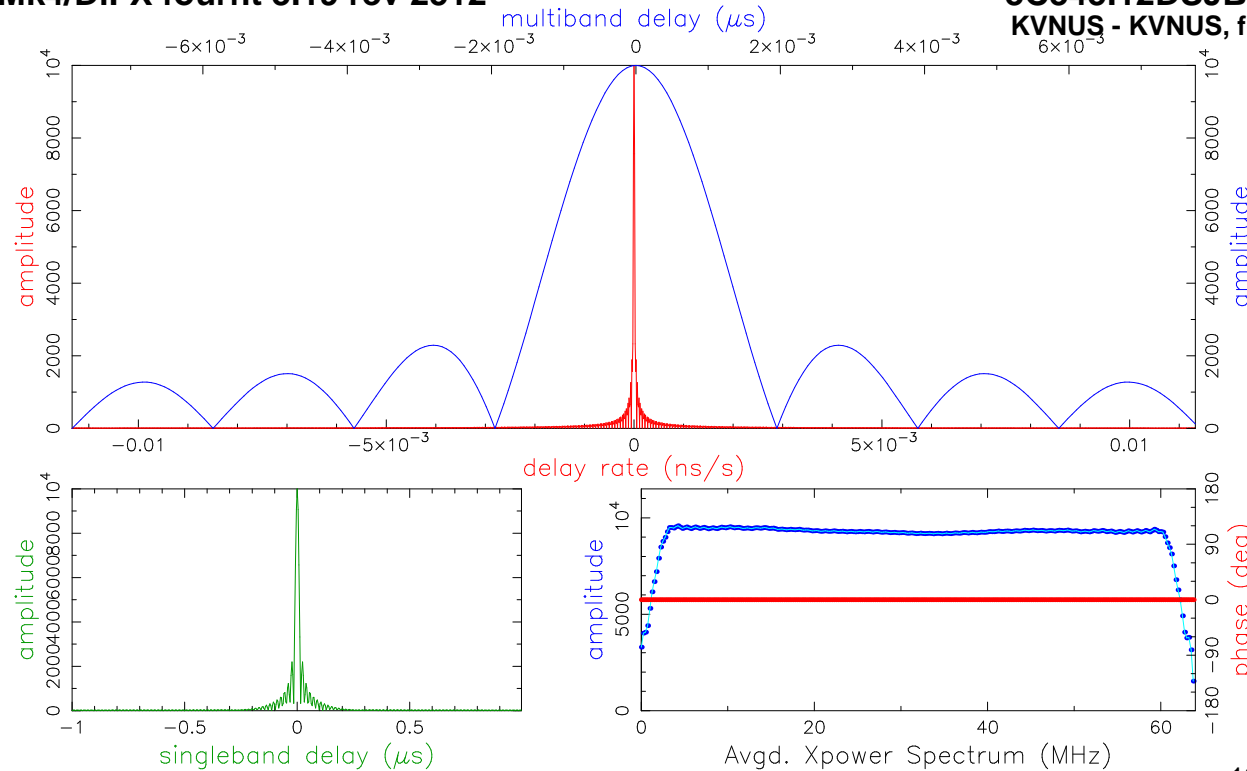
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183503  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-30.5	9.4	41.3	3.4	51.5	29.6	4.4	-54.4	Phase	12.4
	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.1	Ampl.	0.1
	401.3	432.3	416.3	290.4	197.9	182.0	276.0	174.1	Sbd box	197.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.47442068454E+03		Apriori delay (usec)		5.47465115006E+03		Resid mbdelay (usec)		3.90947E-03	+/- 1.9E-04
Sband delay (usec)	5.47441809281E+03		Apriori clock (usec)		-3.4870081E+00		Resid sbdelay (usec)		-2.33057E-01	+/- 1.5E-03
Phase delay (usec)	5.47465115046E+03		Apriori clockrate (us/s)		1.9611339E-07		Resid phdelay (usec)		3.99713E-07	+/- 6.5E-07
Delay rate (us/s)	1.67430339924E+00		Apriori rate (us/s)		1.67430159693E+00		Resid rate (us/s)		1.80231E-06	+/- 2.7E-09
Total phase (deg)	36.3		Apriori accel (us/s/s)		-2.78591527605E-05		Resid phase (deg)		12.4	+/- 20.3

ph/seg (deg) 57.3 48.6 Search (2048X32) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 76.1 84.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 39.0 28.7 Inc. seg. avg. 0.102 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 35.7 50.1 Inc. frq. avg. 0.105 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 u: az 68.6 el 51.4 pa -80.7 p: az 298.8 el 32.7 pa 70.0 u,v (fr/asec) -12523.089 -1549.942 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/up..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/up.W.305.12DSJB

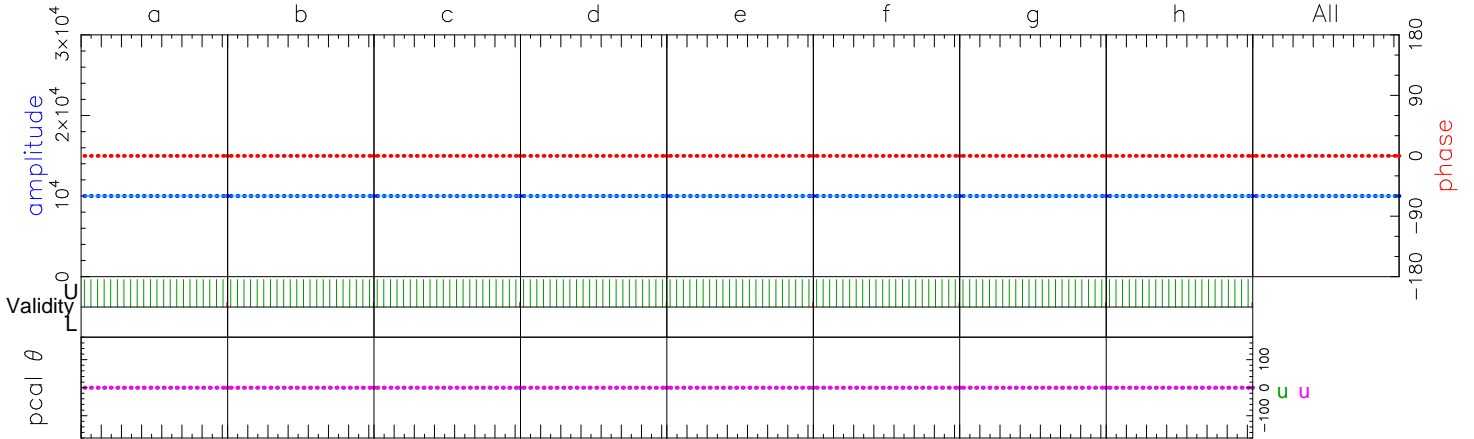


Fringe quality 9

SNR 560324.4  
Int time 419.840  
Amp 10000.000  
Phase -0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Yr:day 16383  
Start 2019:277  
Stop 2019:277  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183451  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

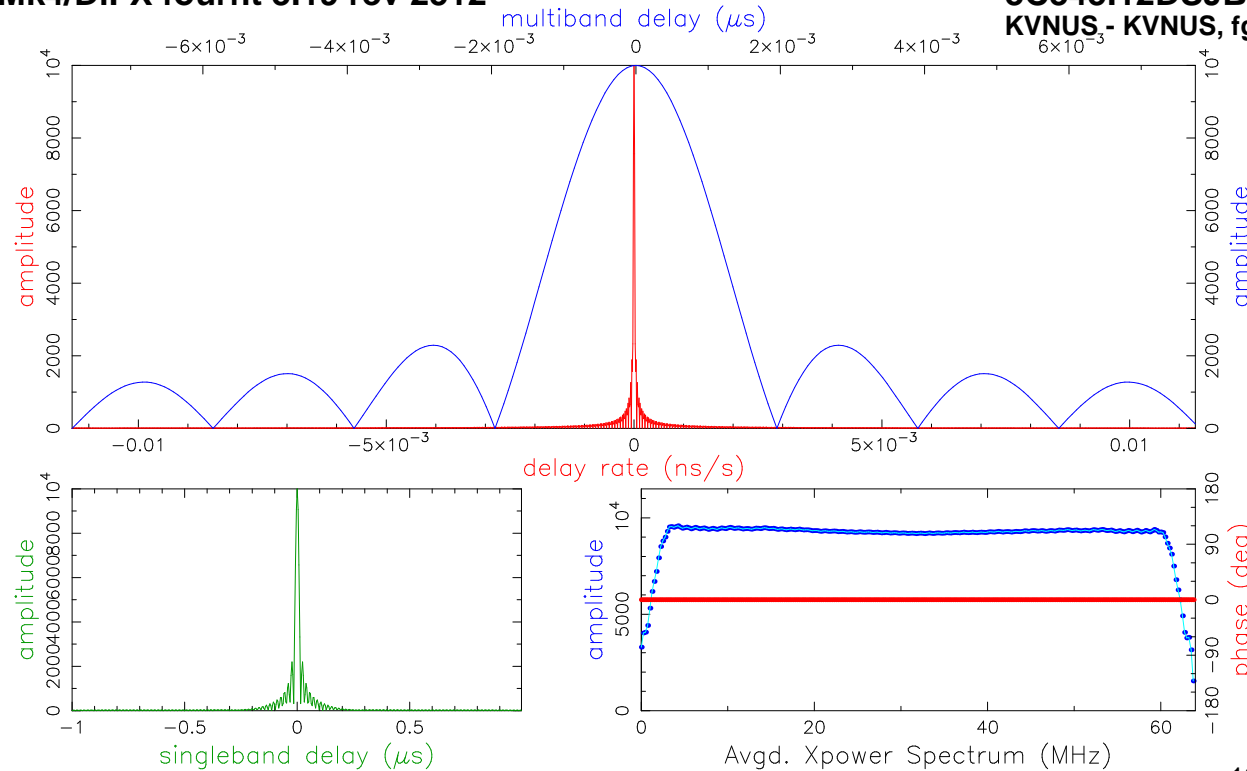


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 1.9E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.5E-08  
 Phase delay (usec) -1.15153169755E-19 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -1.15153E-19 +/- 6.6E-12  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.7E-14  
 Total phase (deg) -0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) -0.0 +/- 0.0

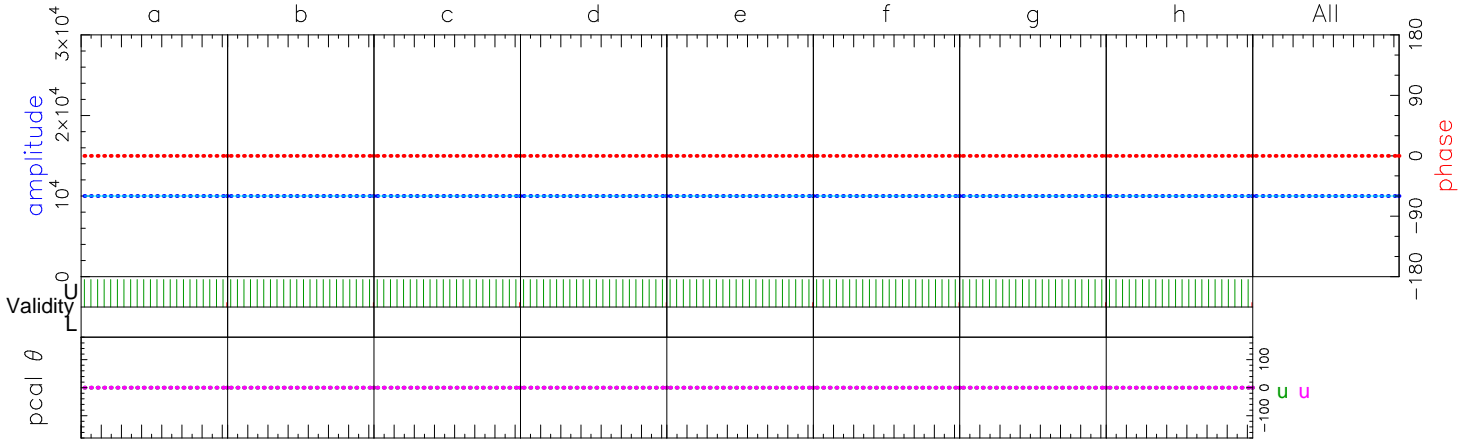
RMS Theor. Amplitude 10000.000 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 10000.000 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

u: az 68.6 el 51.4 pa -80.7 u: az 68.6 el 51.4 pa -80.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uu.W.252.12DSJB



Fringe quality 9  
SNR 560324.4  
Int time 419.840  
Amp 10000.000  
Phase -0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Yr:day 16383  
Start 2019:277  
Stop 2019:277  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183455  
2020:014:135814  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



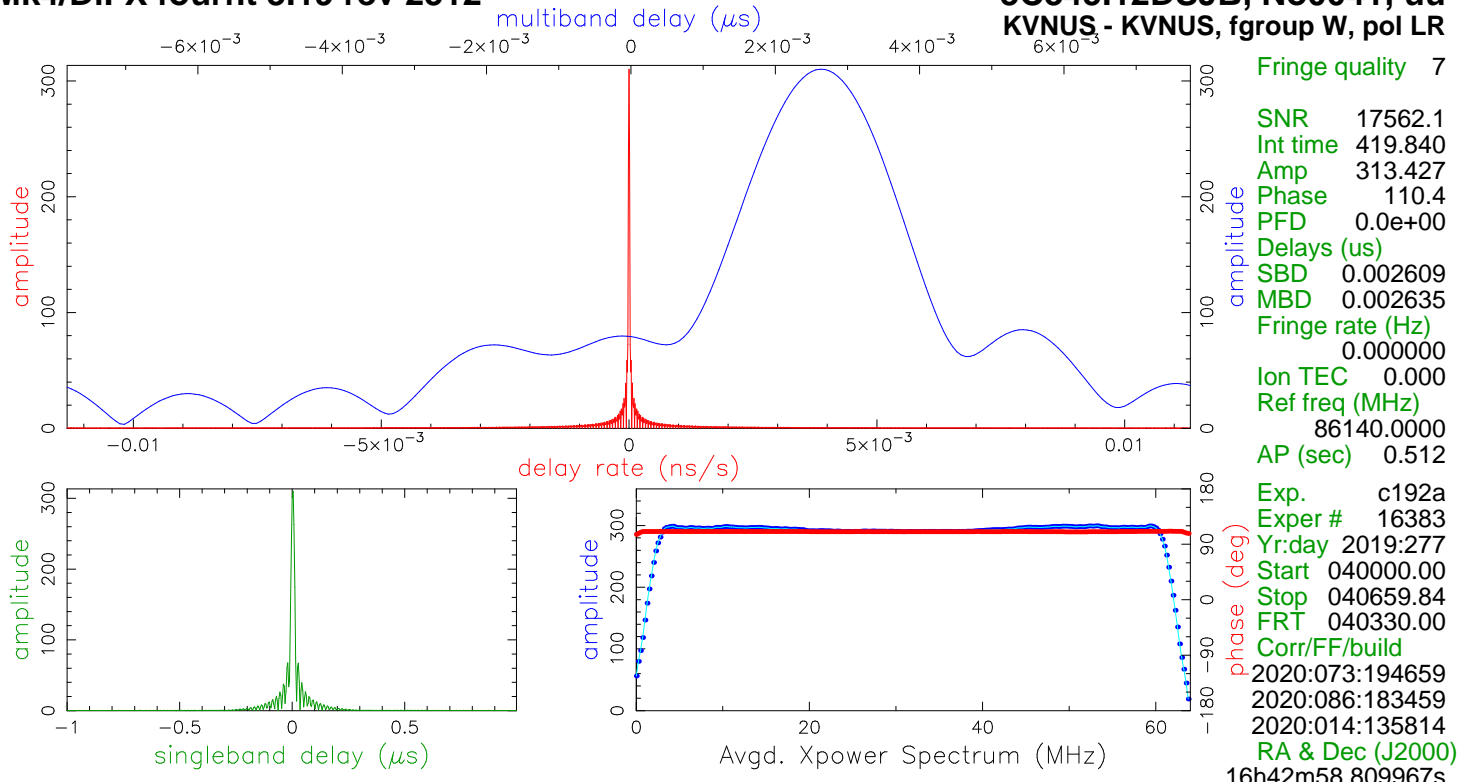
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	10000.0	10000.0
u	63000	63000	63000	63000	63000	63000	63000	63000	10000.0	10000.0
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
u	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
u	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	10000.0	10000.0
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	10000.0	10000.0
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 1.9E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 1.5E-08
Phase delay (usec)	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342369717E-20	-3.05342E-20	+/- 6.6E-12
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 2.7E-14
Total phase (deg)			-0.0						-0.0	+/- 0.0

ph/seg (deg) 0.0 0.0  
amp/seg (%) 0.0 0.0  
ph/frq (deg) 0.0 0.0  
amp/frq (%) 0.0 0.0  
u: az 68.6 el 51.4 pa -80.7  
Control file: cf\_1234\_gmva

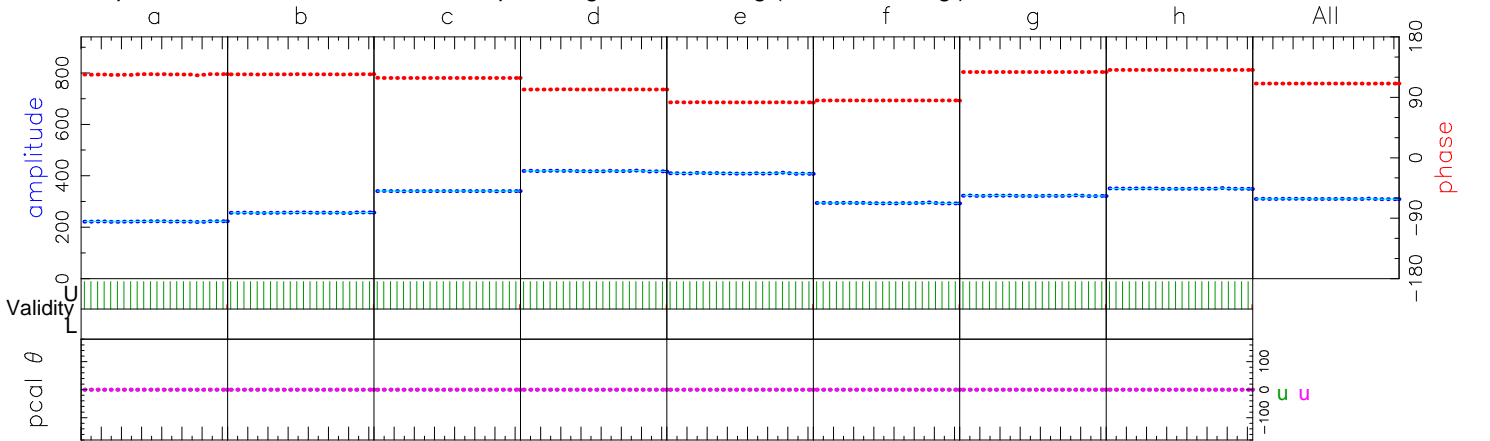
Amplitude 10000.000 +/- 0.018  
Search (2048X32) 10000.000  
Interp. 0.000  
Inc. seg. avg. 10000.000  
Inc. frq. avg. 10000.000  
u: az 68.6 el 51.4 pa -80.7  
Input file: /Exps/c192a/v1\_PV/1234/No0041/uu..12DSJB

PCal mode: MANUAL, MANUAL  
PCal rate: 0.000E+00, 0.000E+00 (us/s)  
Bits/sample: 2x2  
Sample rate(MISamp/s): 128  
Data rate(Mb/s): 2048  
PC period (AP's) 5, 5  
SampCntNorm: enabled  
nlags: 256 t\_cohere infinite  
sb window (us) -1.000 1.000  
mb window (us) -0.008 0.008  
dr window (ns/s) -0.011 0.011  
ion window (TEC) 0.00 0.00  
simultaneous interpolator

Output file: /Exps/c192a/v1\_PV/1234/No0041/uu.W.269.12DSJB



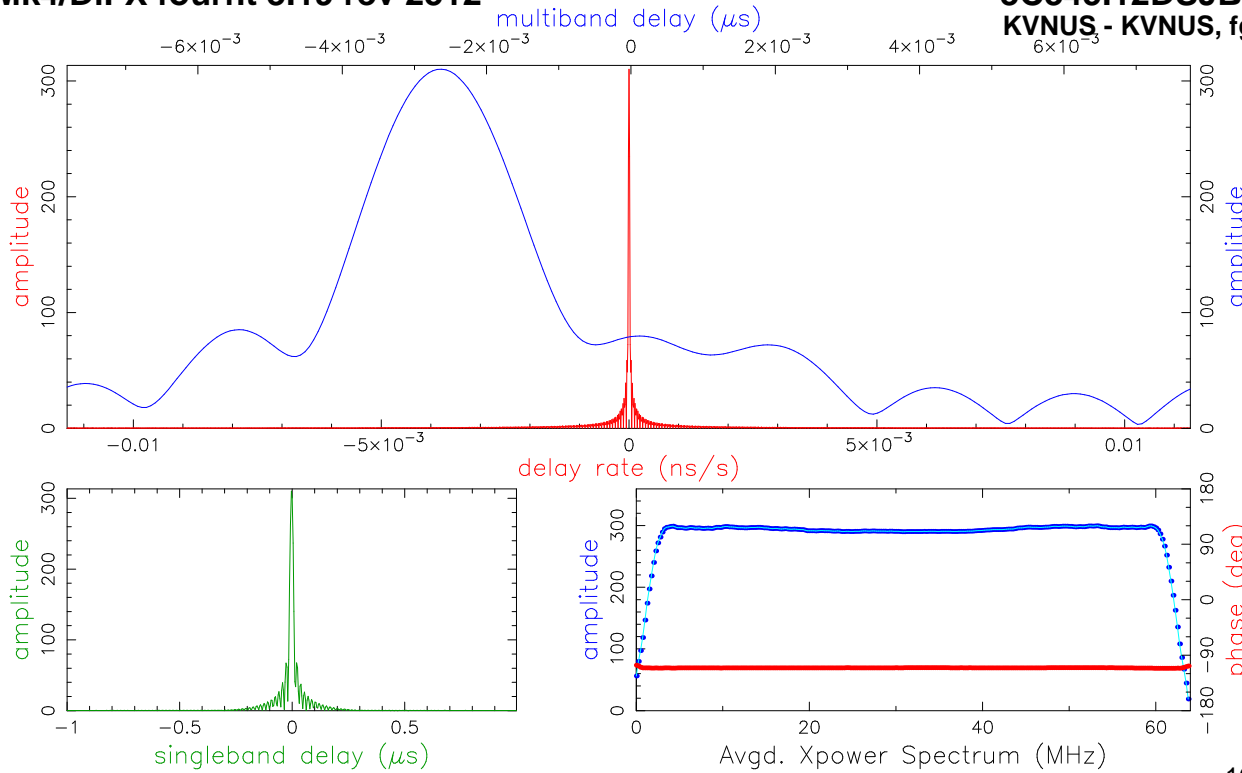
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	2.63521875000E-03								2.63522E-03	+/- 6.2E-08
Sband delay (usec)	2.60925000000E-03								2.60925E-03	+/- 4.9E-07
Phase delay (usec)	3.55959395856E-06								3.55959E-06	+/- 2.1E-10
Delay rate (us/s)	4.25134571751E-12								4.25135E-12	+/- 8.7E-13
Total phase (deg)			110.4						110.4	+/- 0.0
	RMS	Theor.	Amplitude	313.427 +/- 0.018						
ph/seg (deg)	0.0	0.0	Search (2048X32)	305.726						
amp/seg (%)	1.1	0.0	Interp.	0.000						
ph/frq (deg)	21.0	0.0	Inc. seg. avg.	310.160						
amp/frq (%)	20.9	0.0	Inc. frq. avg.	326.883						
u: az 68.6 el 51.4 pa -80.7			u: az 68.6 el 51.4 pa -80.7							
			u, vr (fr/asec) 0.000 0.000							
Control file: cf_1234_gmva	Input file: /Exps/c192a/v1_PV/1234/No0041/uu..12DSJB		Output file: /Exps/c192a/v1_PV/1234/No0041/uu.W.286.12DSJB							

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): 128  
 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite  
 sb window (us) -1.000 1.000  
 mb window (us) -0.008 0.008  
 dr window (ns/s) -0.011 0.011  
 ion window (TEC) 0.00 0.00  
 simultaneous interpolator



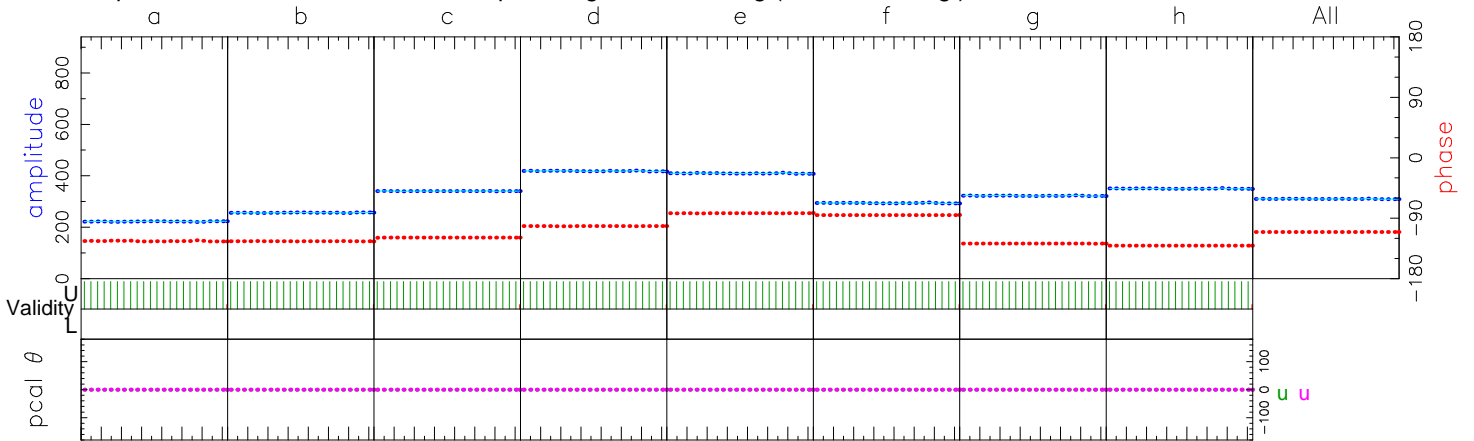


Fringe quality 7

SNR 17562.1  
Int time 419.840  
Amp 313.427  
Phase -110.4  
PFD 0.0e+00  
Delays (us)  
SBD -0.002609  
MBD -0.002635  
Fringe rate (Hz)  
-0.000000  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

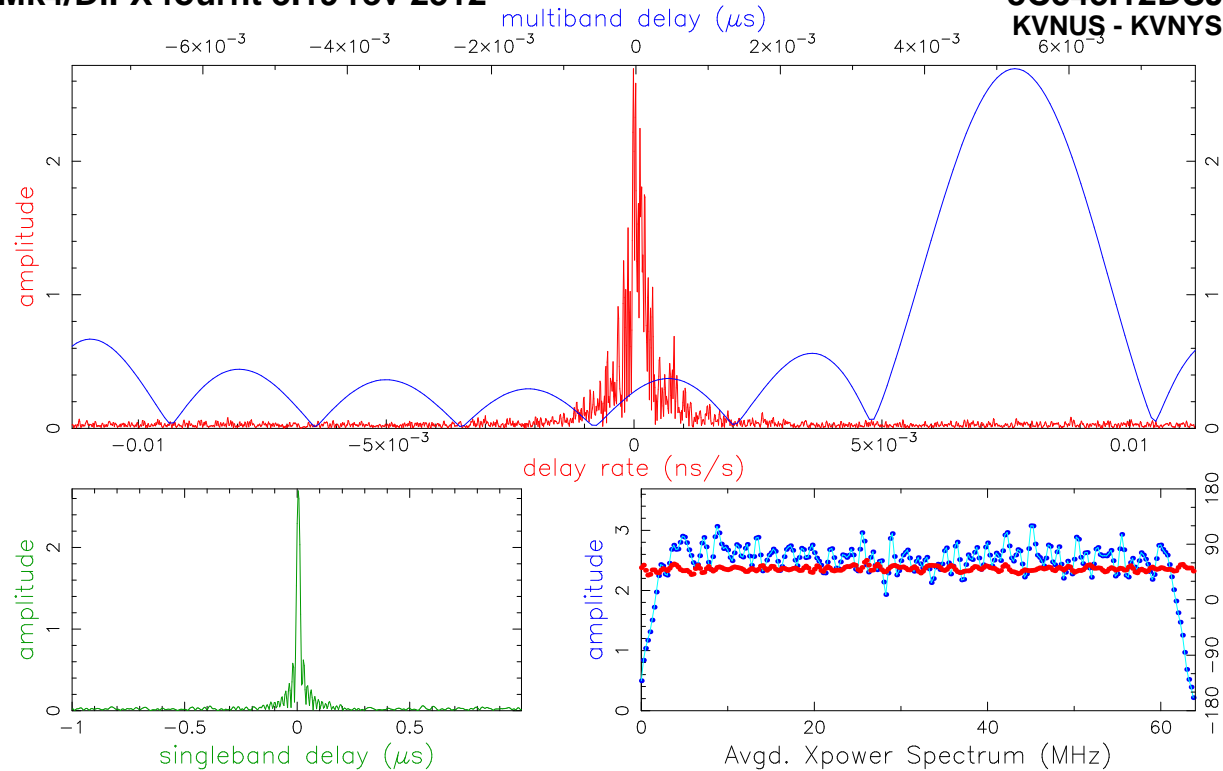
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183502  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All				
	-123.9	-124.2	-118.8	-101.6	-82.5	-85.3	-127.6	-130.8	Phase	-110.4				
	222.4	256.8	340.7	418.7	409.6	294.2	322.4	350.3	Ampl.	326.9				
	256.3	256.3	256.5	256.6	256.5	256.0	256.1	256.5	Sbd box	256.3				
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used					
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
u	1000	1000	1000	1000	1000	1000	1000	1000						
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids					
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks					
									Tracks					
Group delay (usec)(sbd)	-2.63521875000E-03								Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	-2.63522E-03	+/-	6.2E-08
Sband delay (usec)	-2.60925000000E-03								Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.60925E-03	+/-	4.9E-07
Phase delay (usec)	-3.55959395858E-06								Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.55959E-06	+/-	2.1E-10
Delay rate (us/s)	-4.25134571751E-12								Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	-4.25135E-12	+/-	8.7E-13
Total phase (deg)			-110.4						Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	-110.4	+/-	0.0

RMS Theor. Amplitude 313.427 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 0.0 0.0 Search (2048X32) 305.726 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 1.1 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 21.0 0.0 Inc. seg. avg. 310.160 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 20.9 0.0 Inc. frq. avg. 326.883 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 u: az 68.6 el 51.4 pa -80.7 u: az 68.6 el 51.4 pa -80.7 u, v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uu..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uu.W.300.12DSJB

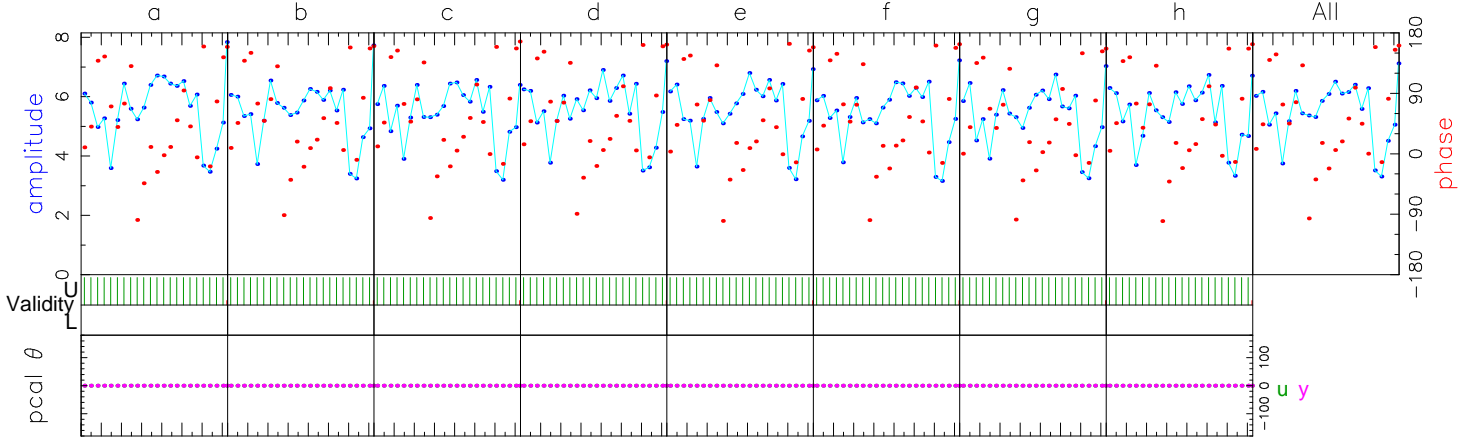


Fringe quality 5

SNR 152.3  
Int time 419.840  
Amp 2.718  
Phase 48.4  
PFD 0.0e+00  
Delays (us)  
SBD 0.005112  
MBD 0.005252  
Fringe rate (Hz)  
-0.000871  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183451  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

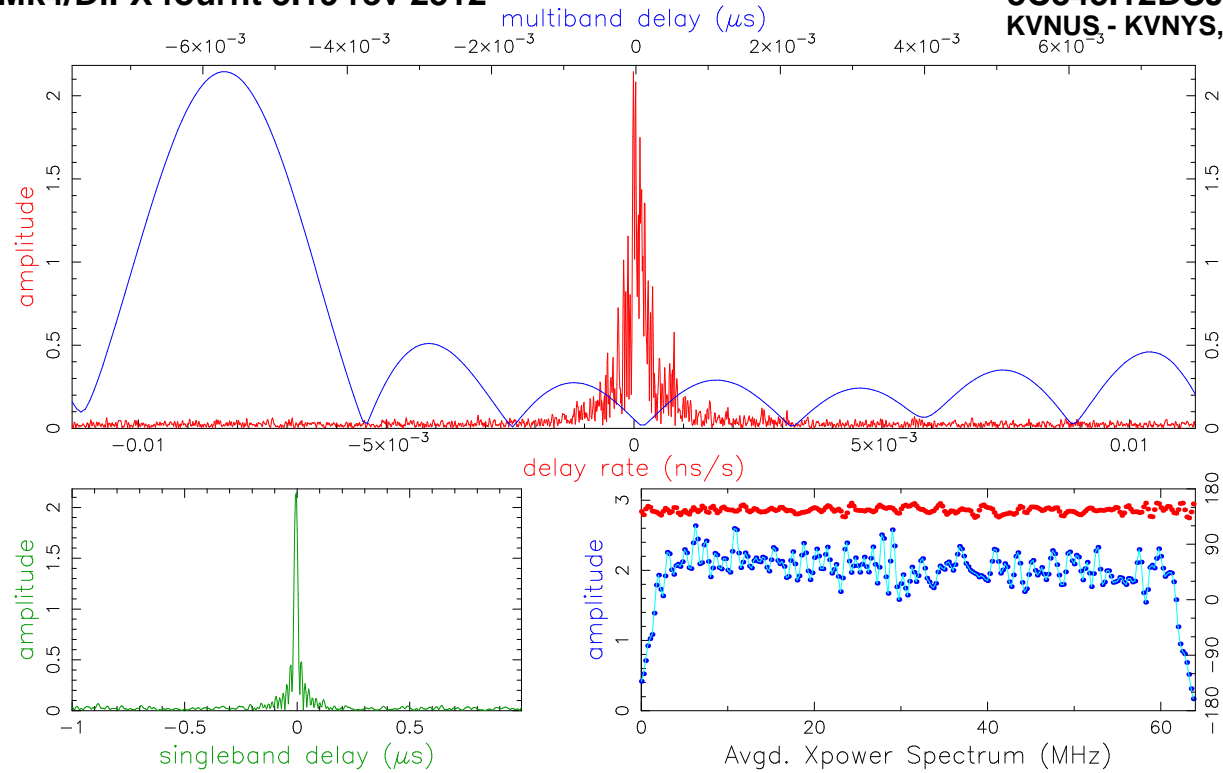


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	42.9	51.3	51.1	50.8	47.9	49.4	45.2	48.3	Phase	48.4
	2.7	2.7	2.7	2.7	2.7	2.7	2.7	2.6	Ampl.	2.7
	258.3	258.4	258.2	258.3	258.3	258.3	258.3	258.3	Sbd box	258.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.19948274454E+02		Apriori delay (usec)		2.19943022526E+02		Resid mbdelay (usec)		5.25193E-03	+/- 7.1E-06
Sband delay (usec)	2.19948134776E+02		Apriori clock (usec)		-2.0764675E+01		Resid sbdelay (usec)		5.11225E-03	+/- 5.7E-05
Phase delay (usec)	2.19943024086E+02		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		1.55931E-06	+/- 2.4E-08
Delay rate (us/s)	-6.21482848694E-03		Apriori rate (us/s)		-6.21481837228E-03		Resid rate (us/s)		-1.01147E-08	+/- 1.0E-10
Total phase (deg)	34.1		Apriori accel (us/s/s)		-3.32270786403E-06		Resid phase (deg)		48.4	+/- 0.8

ph/seg (deg) 67.4 1.8 Theor. Amplitude 2.718 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 105.6 3.1 Search (2048X32) 2.672 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 3.3 1.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 1.3 1.9 Inc. seg. avg. 5.434 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uy..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uy.W.251.12DSJB simultaneous interpolator

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, uy  
KVNU<sub>3</sub> - KVNY<sub>5</sub>, fgroup W, pol RR

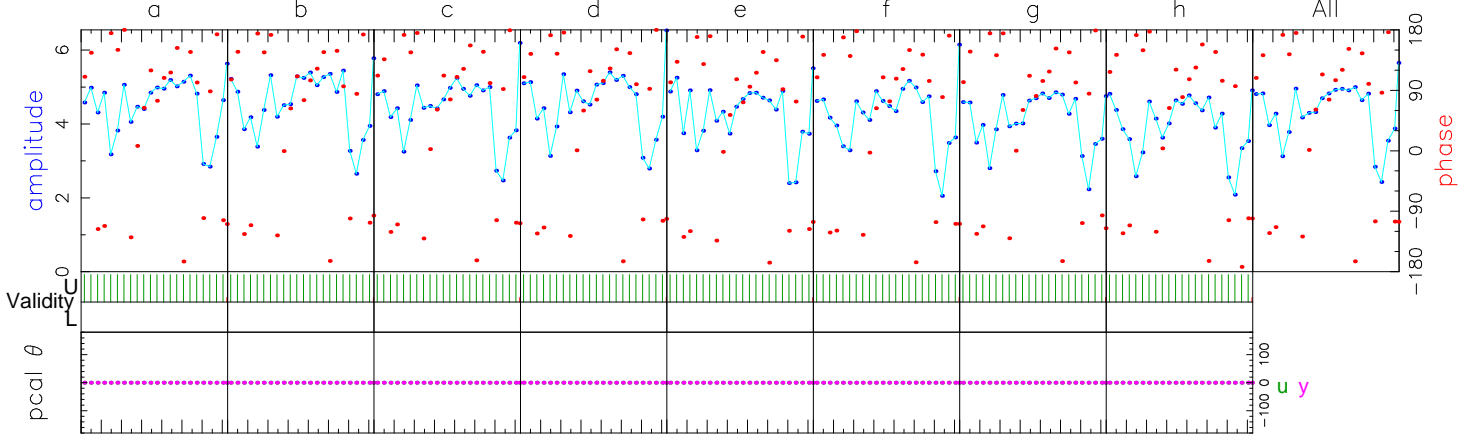


Fringe quality 5

SNR 122.3  
Int time 419.840  
Amp 2.183  
Phase 147.5  
PFD 0.0e+00  
Delays (us)  
SBD -0.005580  
MBD -0.005708  
Fringe rate (Hz)  
-0.000871  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183454  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec

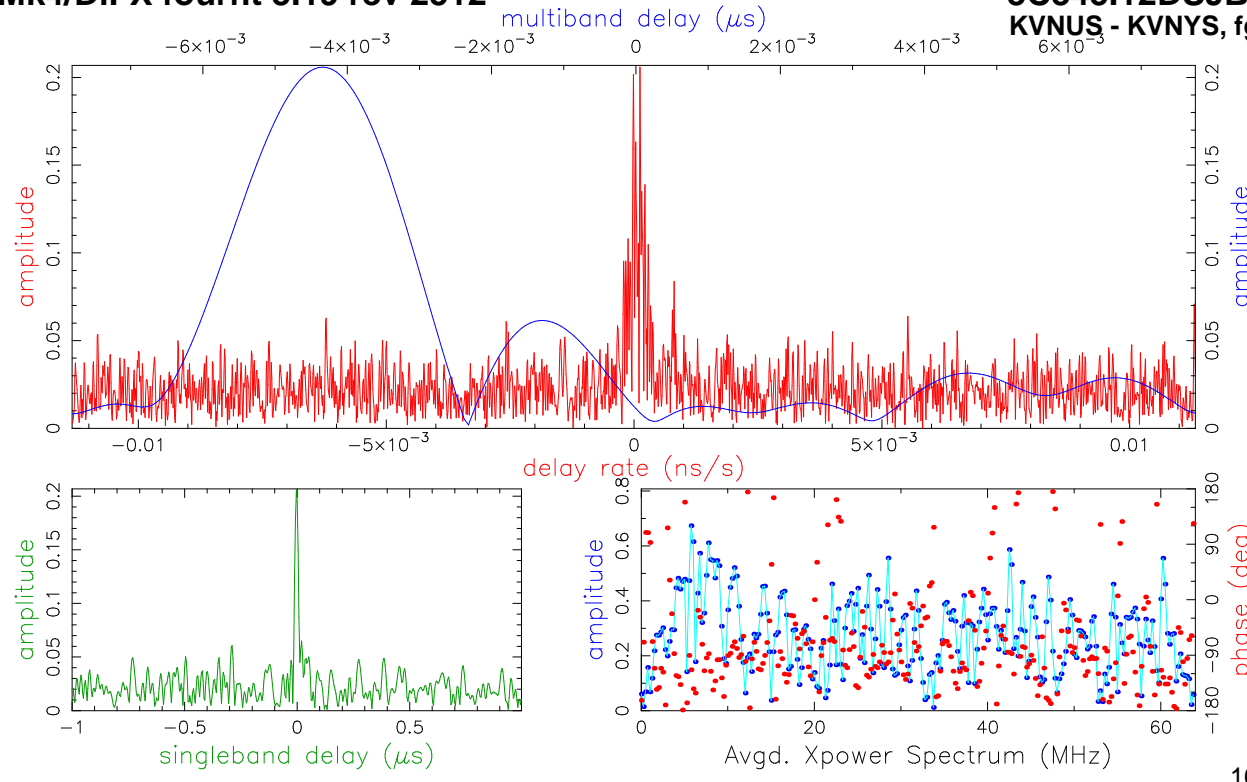


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)		2.19937314704E+02				2.19943022526E+02			Resid mbdelay (usec)	-5.70782E-03 +/- 8.9E-06
Sband delay (usec)		2.19937442026E+02				-2.0764675E+01			Resid sbdelay (usec)	-5.58050E-03 +/- 7.0E-05
Phase delay (usec)		2.19943027282E+02				2.9999999E-07			Resid phdelay (usec)	4.75560E-06 +/- 3.0E-08
Delay rate (us/s)		-6.21482848694E-03				-6.21481837228E-03			Resid rate (us/s)	-1.01147E-08 +/- 1.2E-10
Total phase (deg)			133.2			-3.32270786403E-06			Resid phase (deg)	147.5 +/- 0.9

ph/seg (deg) 67.1 2.2 Search (2048X32) 2.119 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 101.9 3.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 3.6 1.3 Inc. seg. avg. 4.279 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 4.3 2.3 Inc. frq. avg. 2.148 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 ion window (TEC) 0.00 0.00 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uy..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uy.W.267.12DSJB

Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, uy  
KVNUS - KVNYS, fgroup W, pol LR

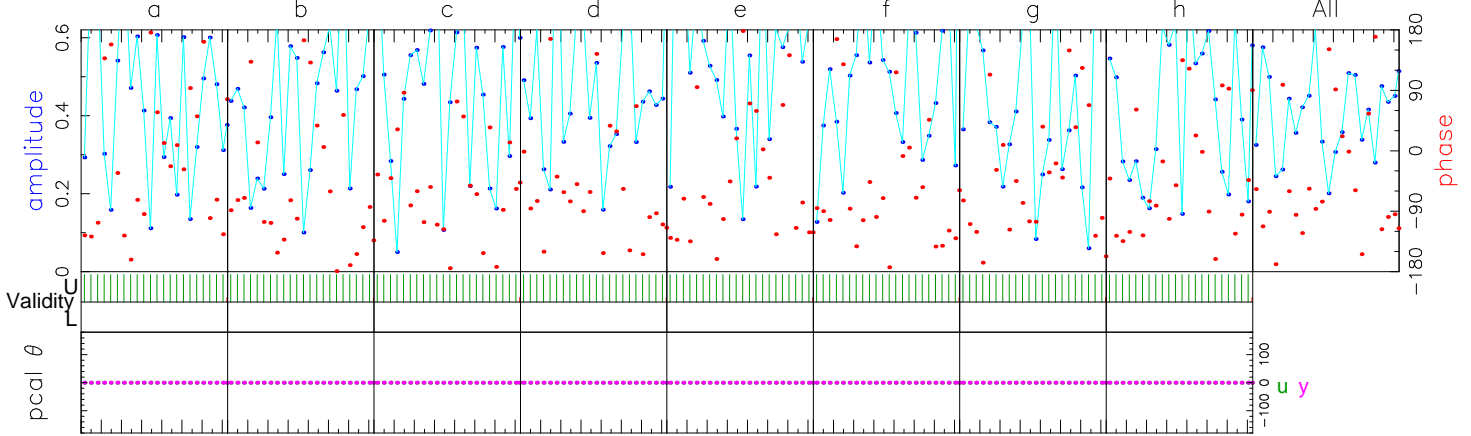


Fringe quality 9

SNR 11.6  
Int time 419.840  
Amp 0.207  
Phase -87.0  
PFD 2.2e-22  
Delays (us)  
SBD -0.003057  
MBD -0.004326  
Fringe rate (Hz) 0.010396  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c192a  
Yr:day 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183458  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	63000	63000	63000	63000	63000	63000	63000	63000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

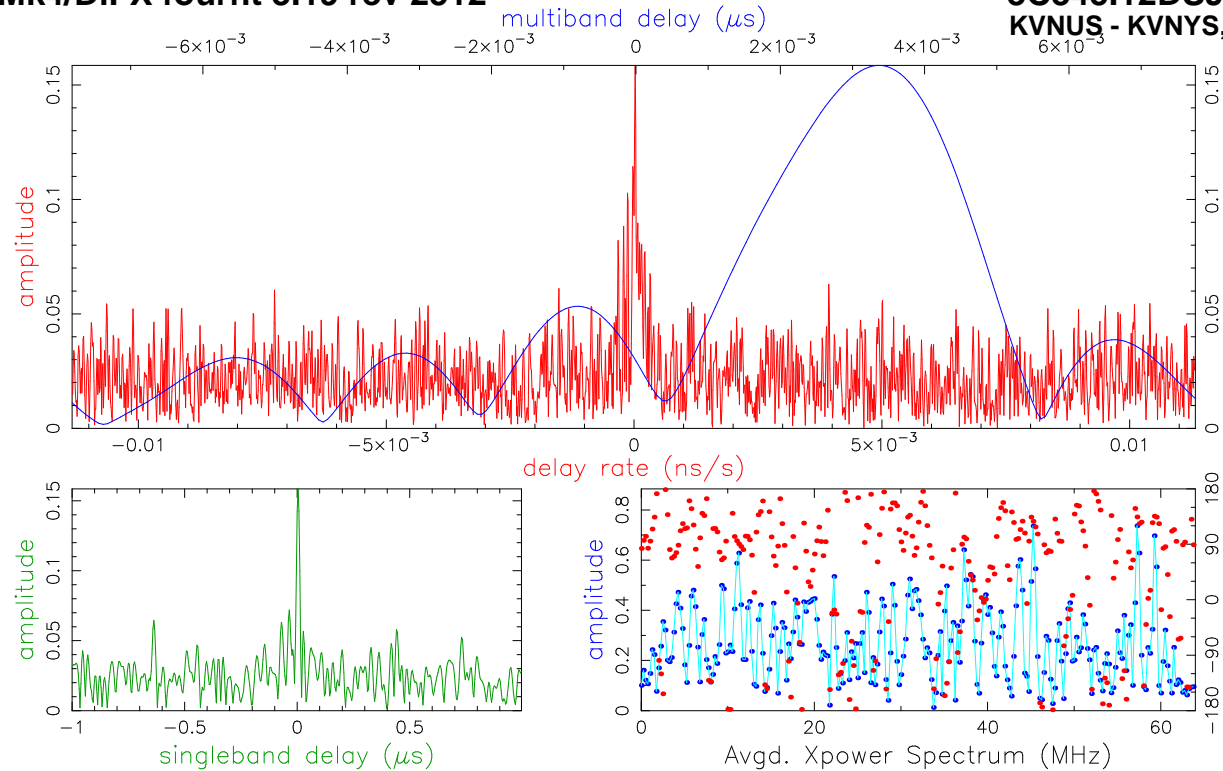
Group delay (usec)(sbd) 2.19938696320E+02 Apriori delay (usec) 2.19943022526E+02 Resid mbdelay (usec) -4.32621E-03 +/- 9.4E-05  
 Sband delay (usec) 2.19939965276E+02 Apriori clock (usec) -2.0764675E+01 Resid sbdelay (usec) -3.05725E-03 +/- 7.4E-04  
 Phase delay (usec) 2.19943019719E+02 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) -2.80679E-06 +/- 3.2E-07  
 Delay rate (us/s) -6.21469768225E-03 Apriori rate (us/s) -6.21481837228E-03 Resid rate (us/s) 1.20690E-07 +/- 1.3E-09  
 Total phase (deg) 258.7 Apriori accel (us/s/s) -3.32270786403E-06 Resid phase (deg) -87.0 +/- 9.9

RMS Theor. Amplitude 0.207 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 80.9 23.7 Search (2048X32) 0.204 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 107.3 41.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 12.6 14.0 Inc. seg. avg. 0.370 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 19.3 24.4 Inc. frq. avg. 0.204 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

u: az 68.6 el 51.4 pa -80.7 y: az 70.3 el 50.4 pa -76.7 u,v (fr/asec) 40.165 -410.500 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c192a/v1\_PV/1234/No0041/uy..12DSJB Output file: /Exps/c192a/v1\_PV/1234/No0041/uy.W.283.12DSJB

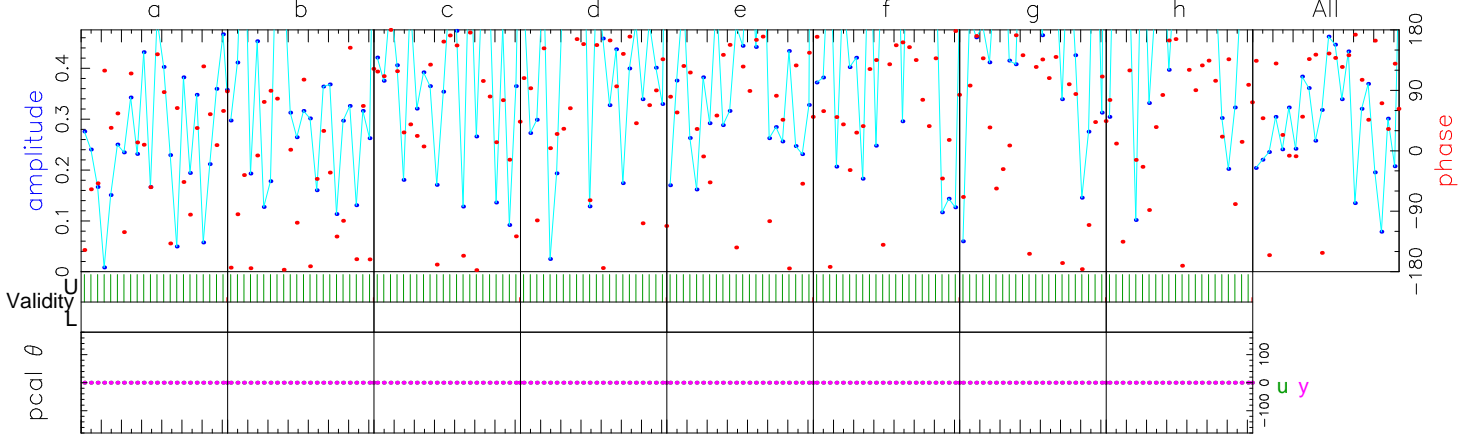
Mk4/DiFX fourfit 3.19 rev 2512

3C345.12DSJB, No0041, uy  
KVNUS - KVNYS, fgroup W, pol RL



Fringe quality 9  
SNR 8.9  
Int time 419.840  
Amp 0.159  
Phase 112.4  
PFD 2.5e-10  
Delays (us)  
SBD 0.003912  
MBD 0.003366  
Fringe rate (Hz) 0.002363  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c192a  
Exper # 16383  
Yr:day 2019:277  
Start 040000.00  
Stop 040659.84  
FRT 040330.00  
Corr/FF/build  
2020:073:194659  
2020:086:183502  
2020:014:135814  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0
u	63000	63000	63000	63000	63000	63000	63000	63000	63000	63000
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0
u	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
y	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	2.1994638889E+02	Apriori delay (usec)	2.19943022526E+02	Resid mbdelay (usec)	3.36636E-03	+/-	1.2E-04
Sband delay (usec)	2.19946934276E+02	Apriori clock (usec)	-2.0764675E+01	Resid sbdelay (usec)	3.91175E-03	+/-	9.7E-04
Phase delay (usec)	2.19943026152E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	3.62530E-06	+/-	4.2E-07
Delay rate (us/s)	-6.21479094260E-03	Apriori rate (us/s)	-6.21481837228E-03	Resid rate (us/s)	2.74297E-08	+/-	1.7E-09
Total phase (deg)		Apriori accel (us/s/s)	-3.32270786403E-06	Resid phase (deg)	112.4	+/-	12.9

ph/seg (deg)	62.6	RMS	30.9	Theor.	Amplitude	0.159 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	104.8	Search (2048X32)	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	0.151		sb window (us)	-1.000	1.000
ph/frq (deg)	69.2	Interp.	0.000	Bits/sample: 2x2	0.255		mb window (us)	-0.008	0.008
amp/frq (%)	50.8	Inc. seg. avg.	0.255	Sample rate(MISamp/s): 128	0.162		dr window (ns/s)	-0.011	0.011
		Inc. frq. avg.	0.162	Data rate(Mb/s): 2048			ion window (TEC)	0.00	0.00

u: az 68.6 el 51.4 pa -80.7      y: az 70.3 el 50.4 pa -76.7      u,v (fr/asec) 40.165 -410.500      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c192a/v1\_PV/1234/No0041/uy..12DSJB    Output file: /Exps/c192a/v1\_PV/1234/No0041/uy.W.298.12DSJB