

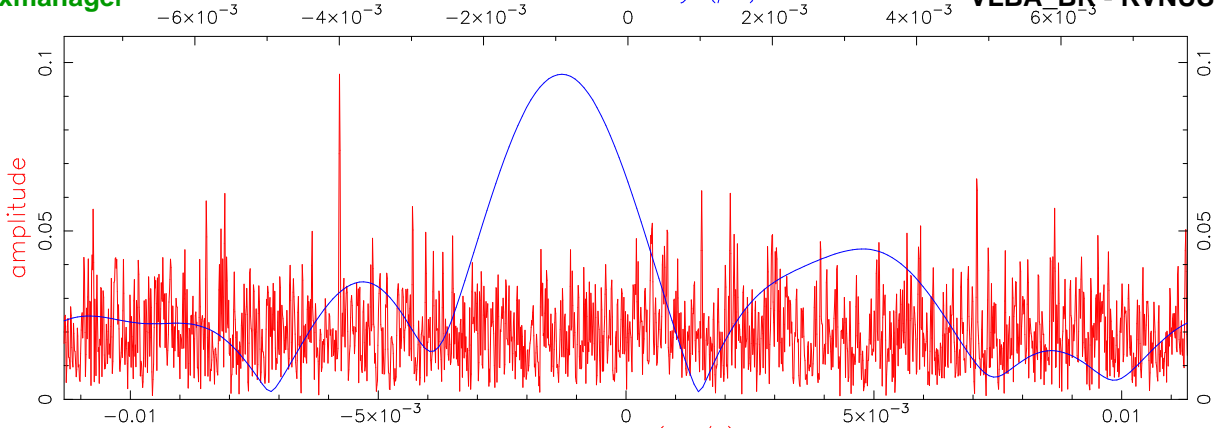
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, bu

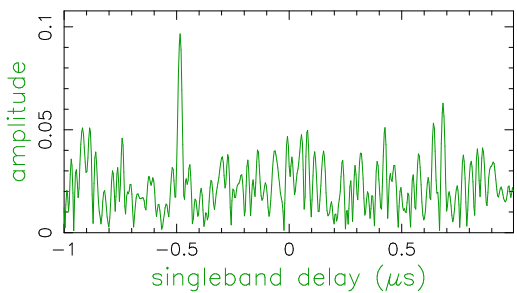
VLBA_BR - KVNUS, fgroup W, pol LL

multiband delay (μ s)

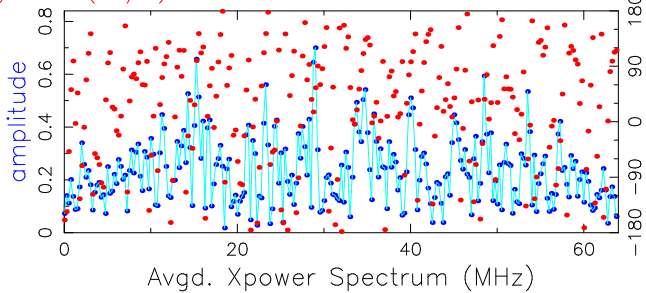


Fringe quality 0

SNR 5.8
Int time 479.978
Amp 0.108
Phase -105.4
PFD 8.3e-01
Delays (us)
SBD -0.484738
MBD -0.000925
Fringe rate (Hz)
-0.498562
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

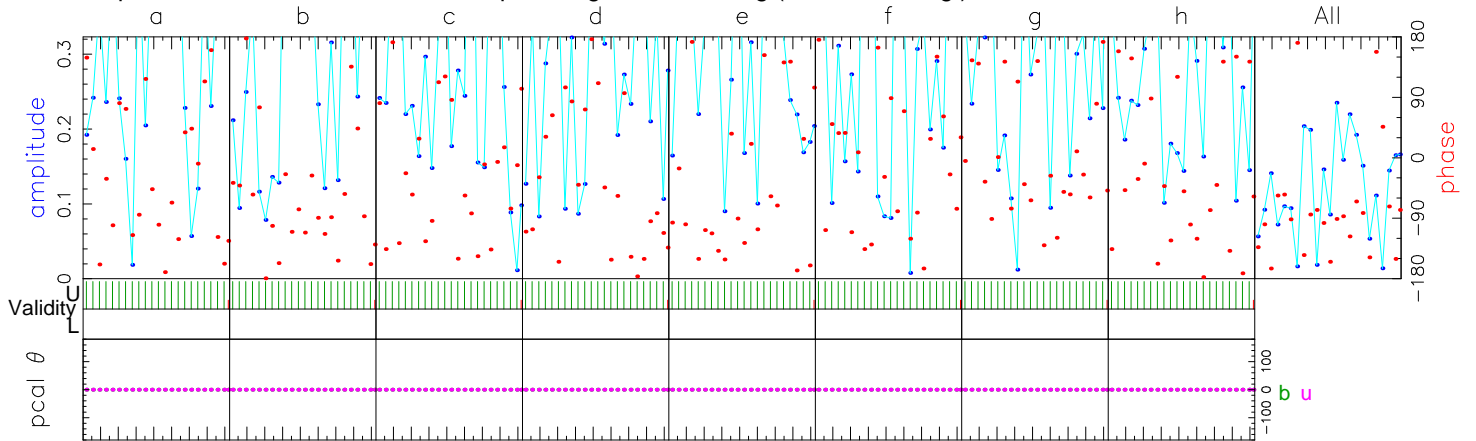


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133459
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-114.4	-85.7	-106.3	-155.9	-113.3	-97.8	-58.5	-125.5	Phase	-105.4
	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	421.2	253.8	261.0	276.9	357.1	367.8	37.0	429.9	Sbd box	132.9
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.19710993451E+02	Apriori delay (usec)	5.20196293783E+02	Resid mbdelay (usec)	-9.25333E-04	+/-	1.9E-04
Sband delay (usec)	5.19711555783E+02	Apriori clock (usec)	-4.2730966E+00	Resid sbdelay (usec)	-4.84738E-01	+/-	1.5E-03
Phase delay (usec)	5.20196290386E+02	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	-3.39756E-06	+/-	6.4E-07
Delay rate (us/s)	-1.41640644902E+00	Apriori rate (us/s)	-1.41640066121E+00	Resid rate (us/s)	-5.78781E-06	+/-	2.3E-09
Total phase (deg)	163.4	Apriori accel (us/s/s)	9.44813764817E-06	Resid phase (deg)	-105.4	+/-	19.8

ph/seg (deg)	52.8	Theor.	47.5	Amplitude	0.108 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	72.4		82.9	Search (2048X32)	0.094	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	30.9		28.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.0		48.9	Inc. seg. avg.	0.101	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.106	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

b: az 281.8 el 50.9 pa 60.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 10860.007 1606.050 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu.W.17.1IM8OF

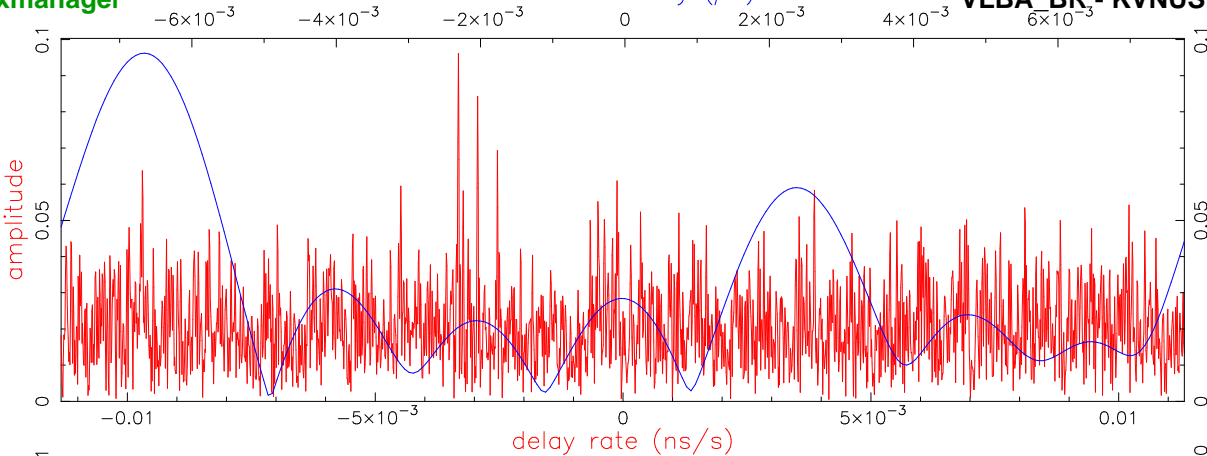
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, bu

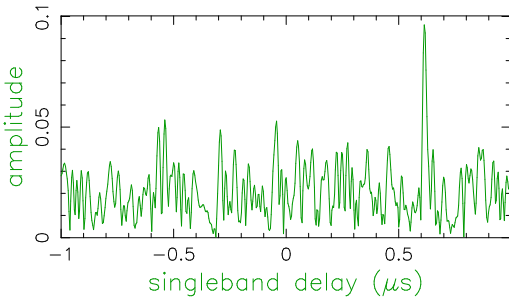
VLBA_BR- KVNUS, fgroup W, pol RR

multiband delay (μ s)

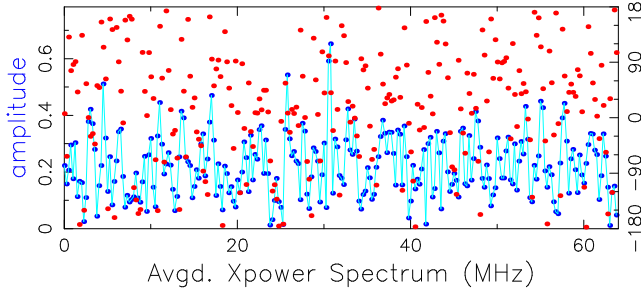


Fringe quality 0

SNR 5.8
 Int time 479.978
 Amp 0.100
 Phase 5.7
 PFD 8.1e-01
 Delays (us)
 SBD 0.614350
 MBD -0.006635
 Fringe rate (Hz)
 -0.286236
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

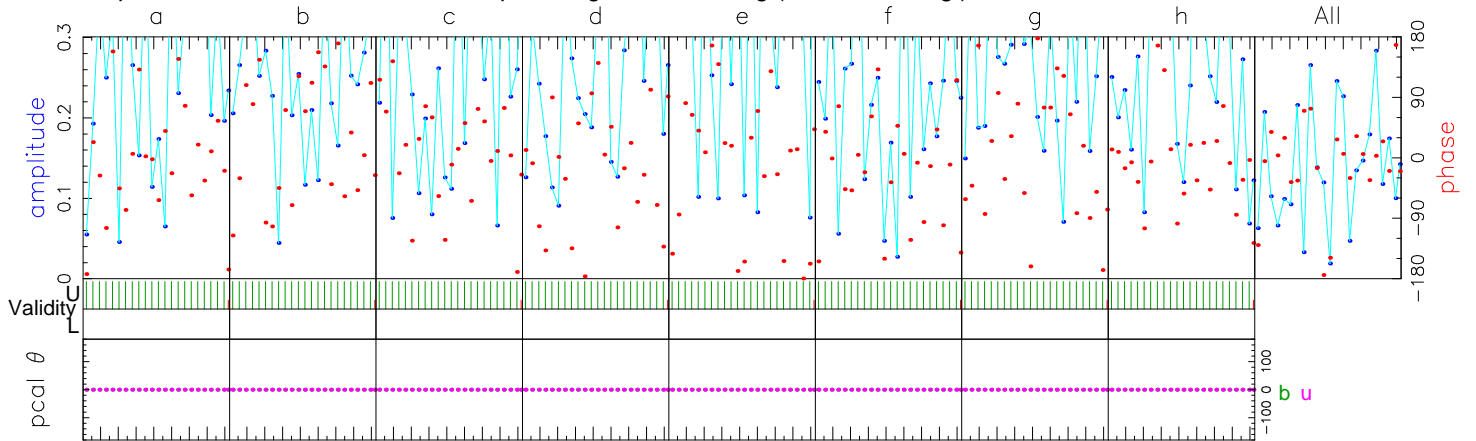


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133503
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-13.4	60.5	28.6	-19.7	28.8	-7.0	25.2	-4.8	Phase	5.7
	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.2	Ampl.	0.1
	466.5	83.1	363.1	229.4	112.4	107.1	182.3	196.8	Sbd box	414.3
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.20814658756E+02		Apriori delay (usec)		5.20196293783E+02		Resid mbdelay (usec)		-6.63503E-03	+/- 1.9E-04
Sband delay (usec)	5.20810643533E+02		Apriori clock (usec)		-4.2730966E+00		Resid sbdelay (usec)		6.14350E-01	+/- 1.5E-03
Phase delay (usec)	5.20196293966E+02		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		1.83245E-07	+/- 6.4E-07
Delay rate (us/s)	-1.41640398412E+00		Apriori rate (us/s)		-1.41640066121E+00		Resid rate (us/s)		-3.32292E-06	+/- 2.3E-09
Total phase (deg)	274.4		Apriori accel (us/s/s)		9.44813764817E-06		Resid phase (deg)		5.7	+/- 19.8

	RMS	Theor.	Amplitude	0.100 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	73.4	47.4	Search (2048X32)	0.094	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	88.6	82.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	30.9	27.9	Inc. seg. avg.	0.108	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	40.5	48.8	Inc. frq. avg.	0.096	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

b: az 281.8 el 50.9 pa 60.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 10860.007 1606.050 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu.W.37.1IM8OF

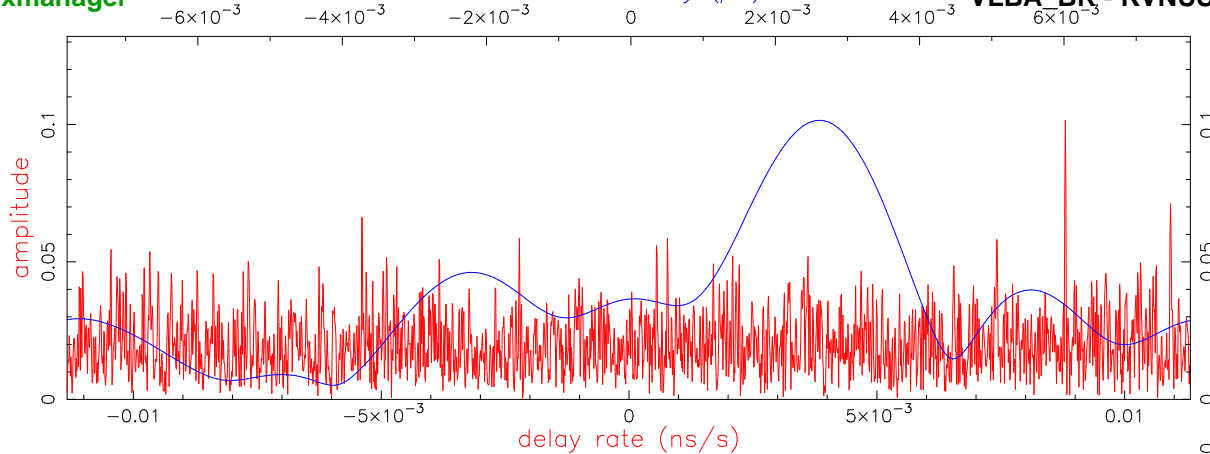
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, bu

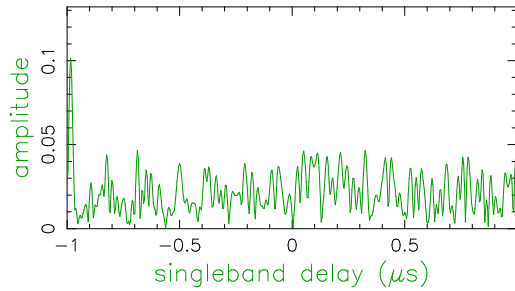
VLBA_BR - KVNUS, fgroup W, pol LR

multiband delay (μ s)

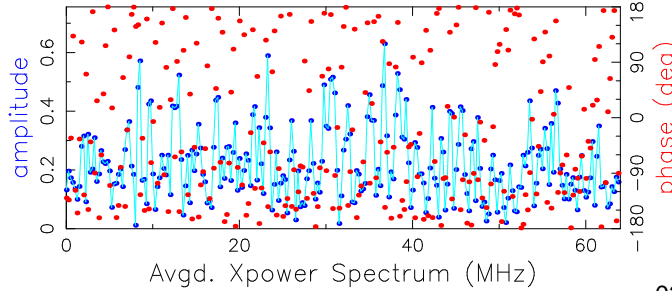


Fringe quality 0

SNR 6.1
 Int time 479.978
 Amp 0.132
 Phase 4.9
 PFD 2.6e-01
 Delays (us)
 SBD -0.984071
 MBD 0.002620
 Fringe rate (Hz)
 0.759152
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

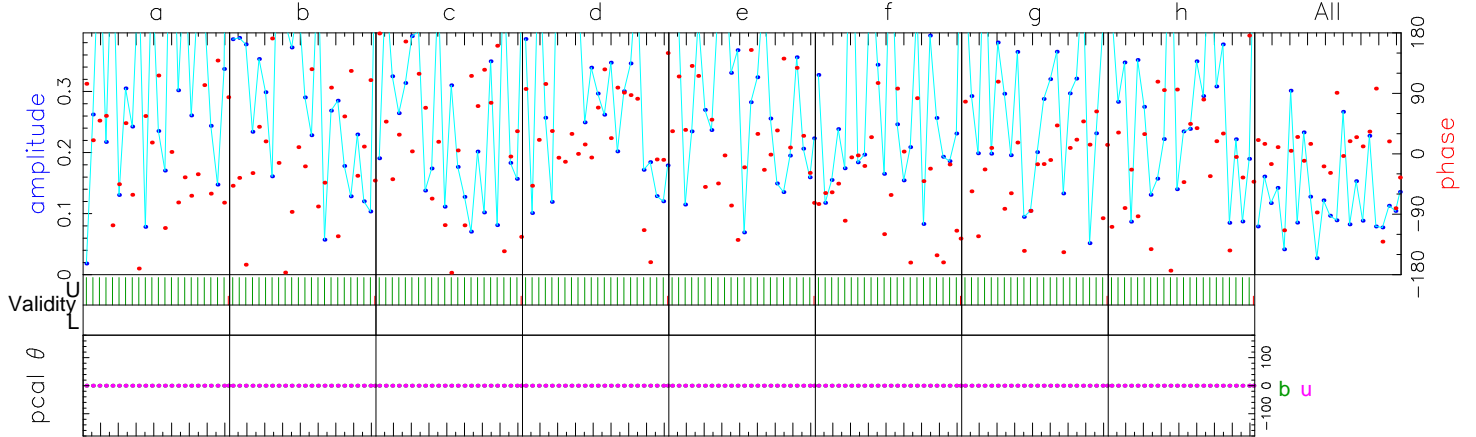


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133507
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec

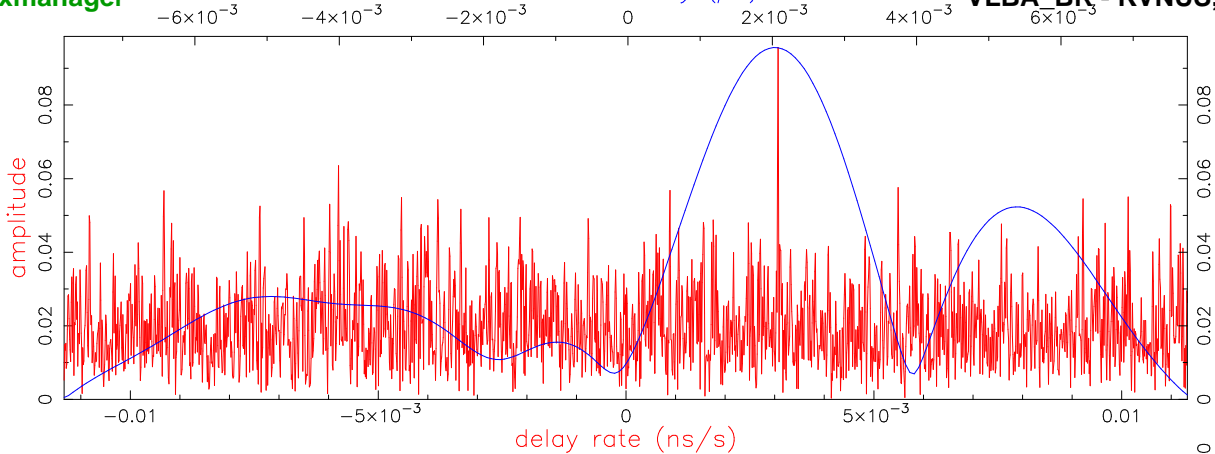


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-10.4	-29.1	55.1	37.4	21.2	-32.8	2.0	-8.2	Phase	4.9
	0.2	0.1	0.1	0.3	0.1	0.1	0.2	0.1	Ampl.	0.1
	472.2	253.4	351.4	6.1	310.1	323.0	203.6	344.1	Sbd box	5.1
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
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	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)	5.19214538665E+02		Apriori delay (usec)		5.20196293783E+02		Resid mbdelay (usec)		2.61988E-03	+/- 1.8E-04
Sband delay (usec)	5.19212223033E+02		Apriori clock (usec)		-4.2730966E+00		Resid sbdelay (usec)		-9.84071E-01	+/- 1.4E-03
Phase delay (usec)	5.20196293940E+02		Apriori clockrate (us/s)		-3.9999997E-07		Resid phdelay (usec)		1.56458E-07	+/- 6.1E-07
Delay rate (us/s)	-1.41639184821E+00		Apriori rate (us/s)		-1.41640066121E+00		Resid rate (us/s)		8.81300E-06	+/- 2.2E-09
Total phase (deg)	273.6		Apriori accel (us/s/s)		9.44813764817E-06		Resid phase (deg)		4.9	+/- 18.8

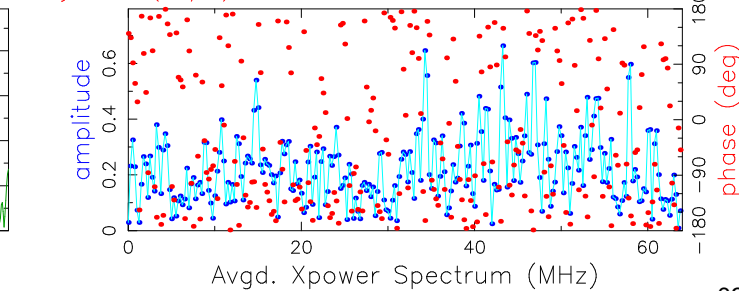
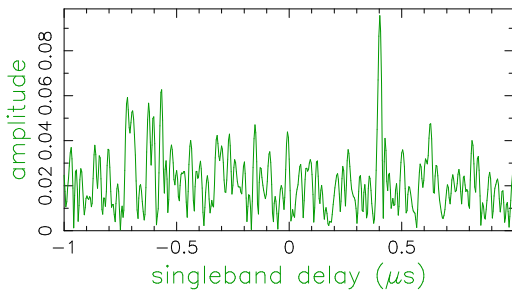
ph/seg (deg) 55.8 45.1 Search (2048X32) 0.100 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 72.7 78.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.7 26.6 Inc. seg. avg. 0.127 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 43.7 46.5 Inc. frq. avg. 0.134 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 281.8 el 50.9 pa 60.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 10860.007 1606.050 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu.W.54.1IM8OF

multiband delay (μ s)

Fringe quality 0

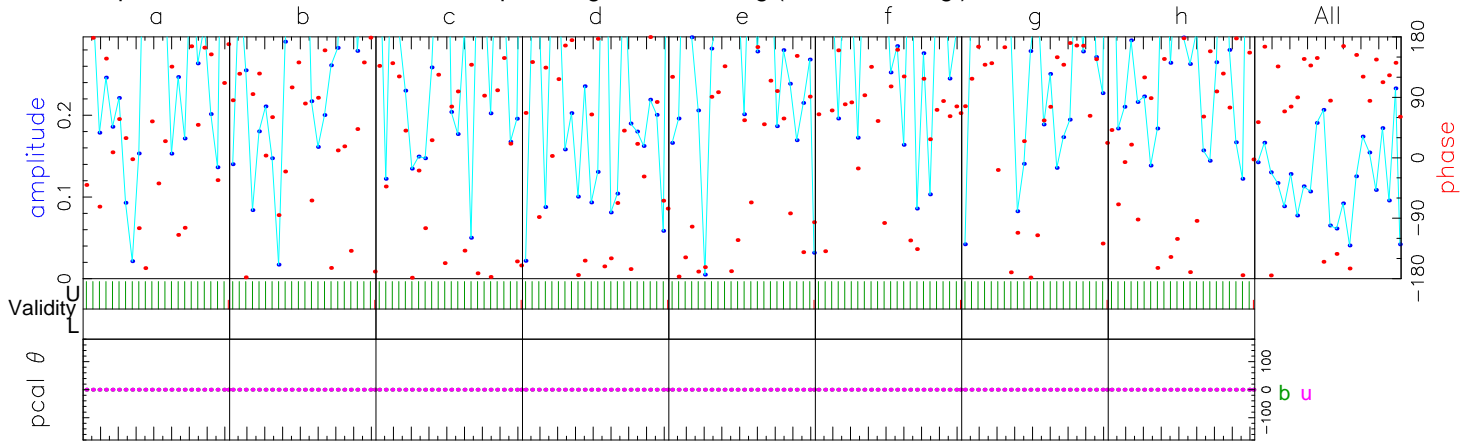


SNR 5.7
Int time 479.978
Amp 0.099
Phase 134.5
PFD 9.1e-01
Delays (us)
SBD 0.402736
MBD 0.002040
Fringe rate (Hz)
0.264201
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133511
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	144.0	116.7	143.6	171.7	156.8	94.2	146.6	144.1	Phase	134.5
	0.0	0.1	0.2	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	249.1	53.8	105.7	276.3	389.0	302.8	476.1	340.5	Sbd box	360.1
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.20604583700E+02	Apriori delay (usec)	5.20196293783E+02	Resid mbdelay (usec)	2.03992E-03	+/-	1.9E-04	
Sband delay (usec)	5.20599029783E+02	Apriori clock (usec)	-4.2730966E+00	Resid sbdelay (usec)	4.02736E-01	+/-	1.5E-03	
Phase delay (usec)	5.20196298119E+02	Apriori clockrate (us/s)	-3.9999997E-07	Resid phdelay (usec)	4.33577E-06	+/-	6.4E-07	
Delay rate (us/s)	-1.41639759409E+00	Apriori rate (us/s)	-1.41640066121E+00	Resid rate (us/s)	3.06711E-06	+/-	2.3E-09	
Total phase (deg)		43.2	Apriori accel (us/s/s)	9.44813764817E-06	Resid phase (deg)	134.5	+/-	20.0

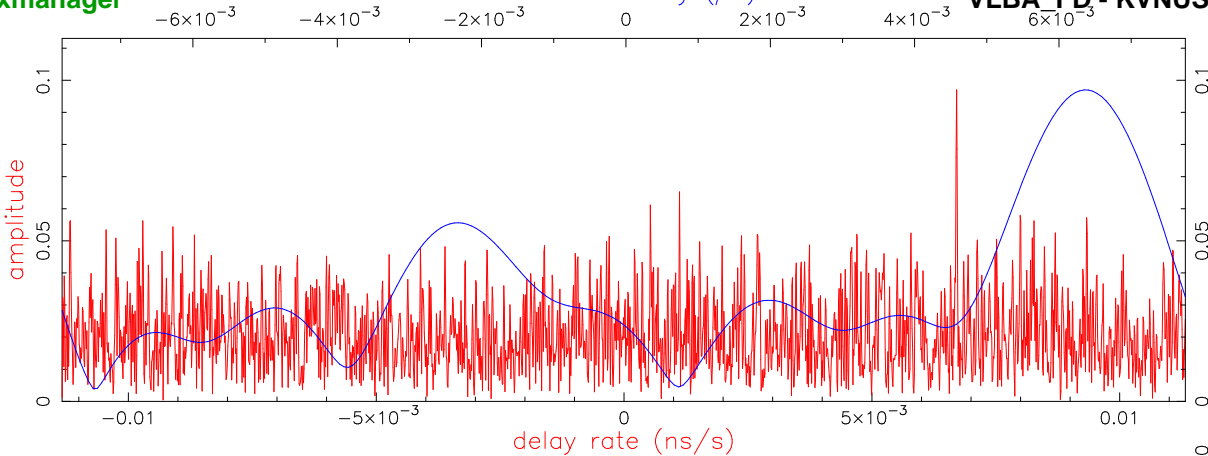
ph/seg (deg)	44.8	Theor.	47.9	Amplitude	0.099 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	60.7		83.6	Search (2048X32)	0.093	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	26.6		28.3	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
amp/frq (%)	47.4		49.3	Inc. seg. avg.	0.096	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
				Inc. frq. avg.	0.096	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

b: az 281.8 el 50.9 pa 60.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 10860.007 1606.050 simultaneous interpolator

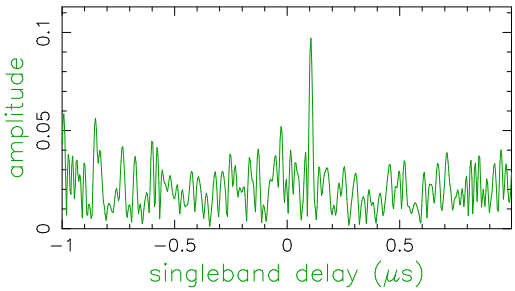
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/bu.W.75.1IM8OF

multiband delay (μs)

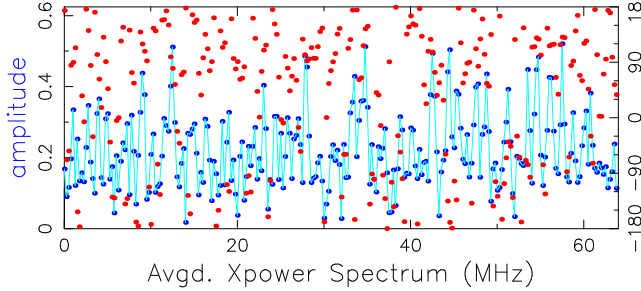
Fringe quality 0



SNR 5.8
Int time 476.224
Amp 0.113
Phase 177.0
PFD 7.9e-01
Delays (us)
SBD 0.104709
MBD 0.006348
Fringe rate (Hz)
0.579058
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

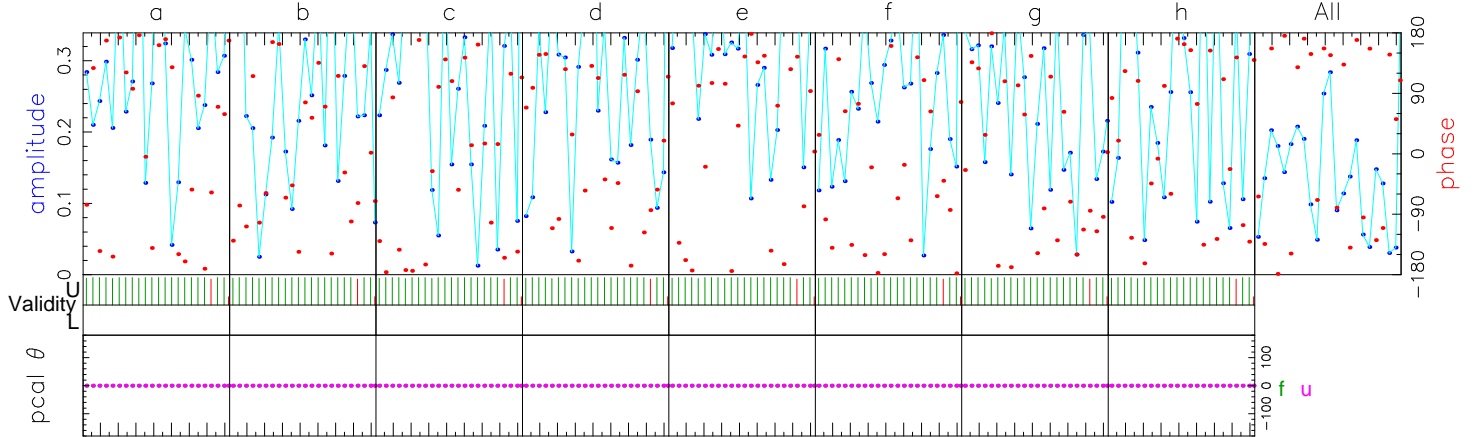


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.51
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133522
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	934/0	934/0	934/0	934/0	934/0	934/0	934/0	934/0		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-4.50026049418E+03	Apriori delay (usec)	-4.50036059253E+03	Resid mbdelay (usec)	6.34835E-03	+/-	1.9E-04
Sband delay (usec)	-4.50025588303E+03	Apriori clock (usec)	5.3120003E+00	Resid sbdelay (usec)	1.04709E-01	+/-	1.5E-03
Phase delay (usec)	-4.50036058682E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	5.70844E-06	+/-	6.4E-07
Delay rate (us/s)	-1.72039822235E+00	Apriori rate (us/s)	-1.72040494464E+00	Resid rate (us/s)	6.72229E-06	+/-	2.3E-09
Total phase (deg)	18.3	Apriori accel (us/s/s)	1.85973416393E-05	Resid phase (deg)	177.0	+/-	19.7

ph/seg (deg)	61.6	Theor.	47.2	Amplitude	0.113 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	86.6		82.4	Search (2048X32)	0.095	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	33.0		27.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.4		48.7	Inc. seg. avg.	0.119	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.110	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 302.4 el 32.9 pa 75.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 13209.983 657.152 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu.W.112.11M8OF

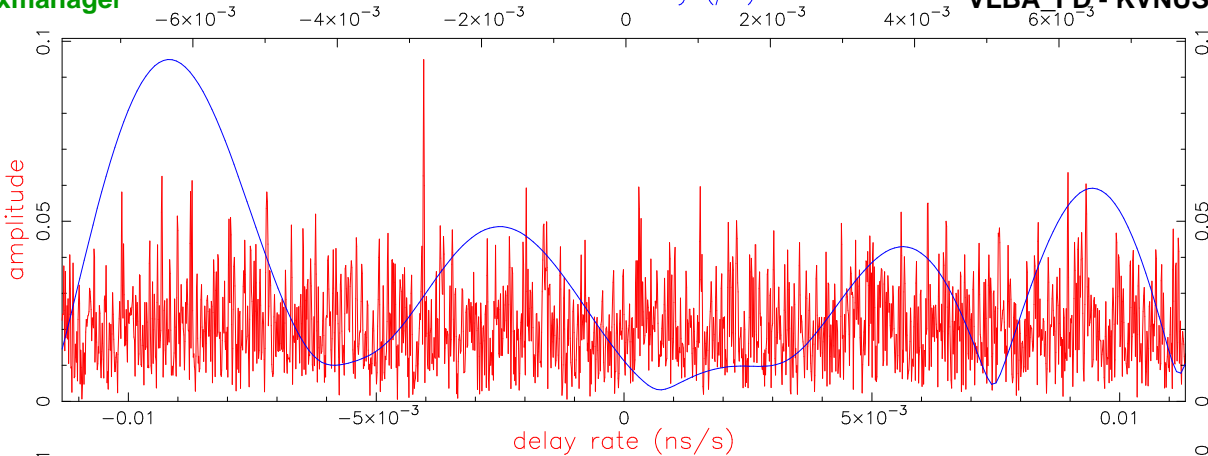
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

multiband delay (μ s)

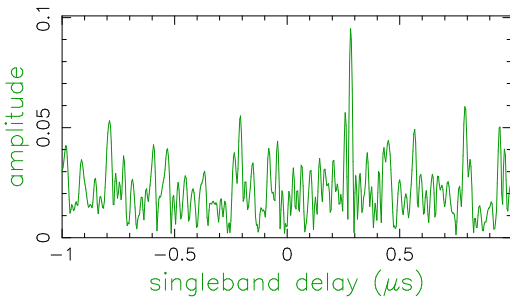
3C84.11M8OF, No0119, fu

VLBA_FD - KVNUS, fgroup W, pol RL

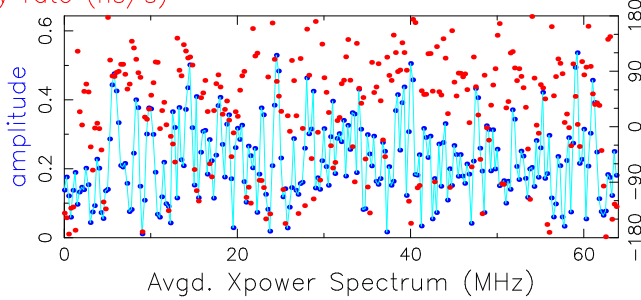


Fringe quality 0

SNR 5.7
 Int time 476.224
 Amp 0.101
 Phase 156.1
 PFD 9.5e-01
 Delays (us)
 SBD 0.282234
 MBD -0.006307
 Fringe rate (Hz)
 -0.349070
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

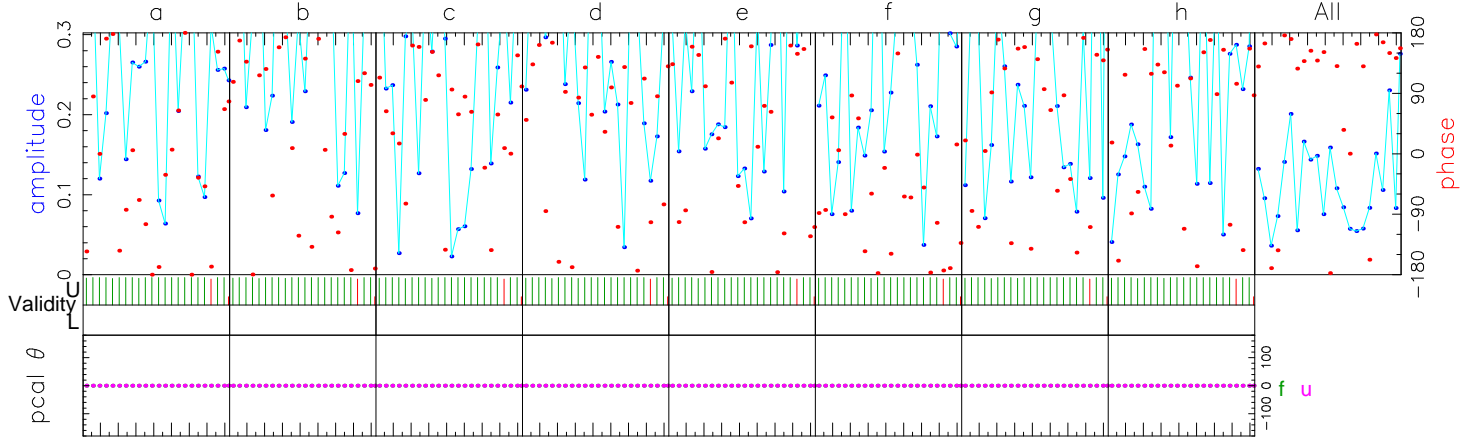


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133526
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-171.5	160.2	98.4	137.1	164.5	-112.7	155.1	138.9	Phase	156.1
	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
	401.8	441.5	365.5	227.3	376.8	464.1	195.5	346.7	Sbd box	329.3
U/L	934/0	934/0	934/0	934/0	934/0	934/0	934/0	934/0	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	

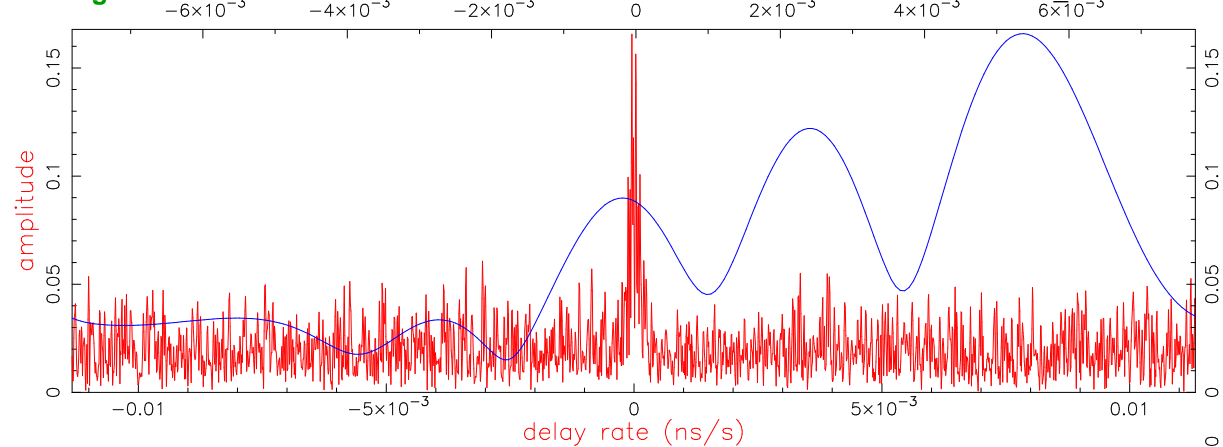
Group delay (usec)(sbd)	-4.50008564992E+03	Apriori delay (usec)	-4.50036059253E+03	Resid mbdelay (usec)	-6.30738E-03	+/-	1.9E-04
Sband delay (usec)	-4.50007835878E+03	Apriori clock (usec)	5.3120003E+00	Resid sbdelay (usec)	2.82234E-01	+/-	1.5E-03
Phase delay (usec)	-4.50036058750E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	5.03359E-06	+/-	6.5E-07
Delay rate (us/s)	-1.72040899700E+00	Apriori rate (us/s)	-1.72040494464E+00	Resid rate (us/s)	-4.05236E-06	+/-	2.3E-09
Total phase (deg)	-2.6	Apriori accel (us/s/s)	1.85973416393E-05	Resid phase (deg)	156.1	+/-	20.1

ph/seg (deg)	48.2	Theor.	48.1	Amplitude	0.101 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	59.1	Search (2048X32)	0.093	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	47.3	Inc. seg. avg.	0.088	Inc. frq. avg.	0.108	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	34.1	Inc. frq. avg.	0.108			Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011	
f: az 302.4 el 32.9 pa 75.8		u: az 64.5 el 47.0 pa -79.7		u, v (fr/asec)	13209.983 657.152	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/c202b/v1/v1_3mm/1234/No0119/fu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu.W.131.11M8OF

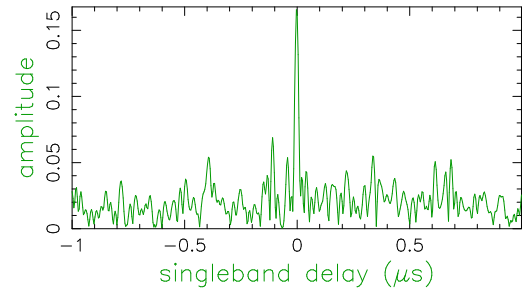
simultaneous interpolator

multiband delay (μ s)

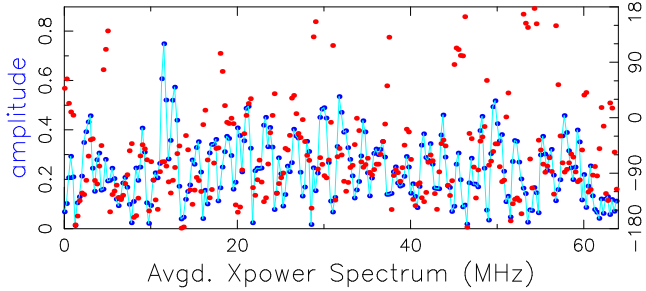


Fringe quality 9

SNR 10.0
Int time 476.224
Amp 0.168
Phase -166.6
PFD 5.6e-15
Delays (us)
SBD -0.002405
MBD 0.005425
Fringe rate (Hz)
-0.004015
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

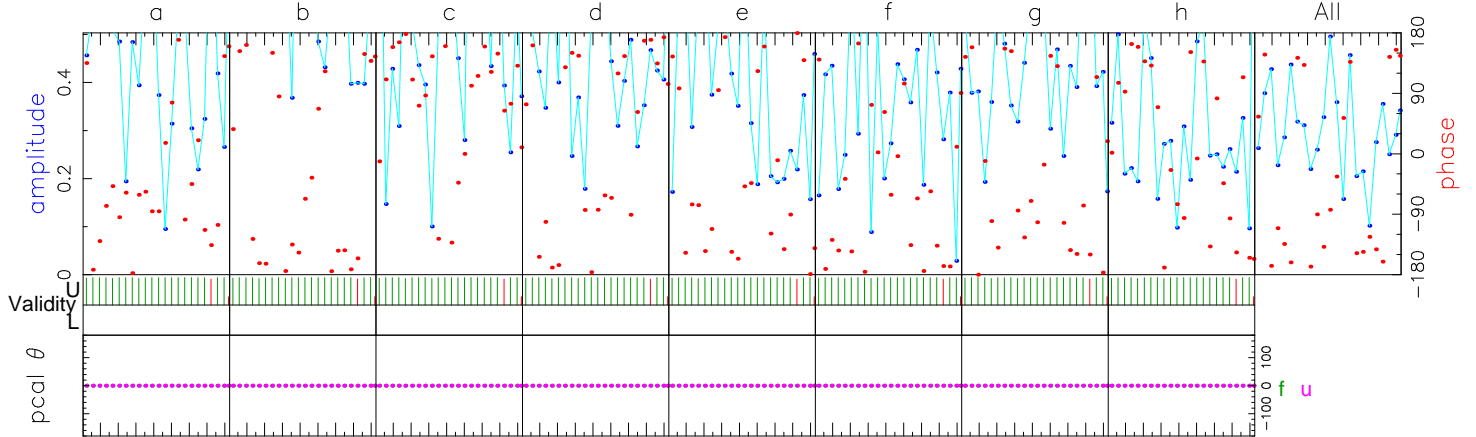


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.51
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133514
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-110.2	-176.9	129.4	-180.0	-149.8	-136.3	-146.2	142.1	Phase	-166.6
	0.3	0.3	0.3	0.2	0.2	0.1	0.2	0.1	Ampl.	0.2
	254.4	255.6	256.8	256.7	257.1	360.2	255.9	488.4	Sbd box	256.4
U/L	934/0	934/0	934/0	934/0	934/0	934/0	934/0	934/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-4.50037079281E+03	Apriori delay (usec)	-4.50036059253E+03	Resid mbdelay (usec)	5.42472E-03	+/-	1.1E-04
Sband delay (usec)	-4.50036299753E+03	Apriori clock (usec)	5.3120003E+00	Resid sbdelay (usec)	-2.40500E-03	+/-	8.6E-04
Phase delay (usec)	-4.50036059790E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.37113E-06	+/-	3.7E-07
Delay rate (us/s)	-1.72040499125E+00	Apriori rate (us/s)	-1.72040494464E+00	Resid rate (us/s)	-4.66139E-08	+/-	1.3E-09
Total phase (deg)	-325.2	Apriori accel (us/s/s)	1.85973416393E-05	Resid phase (deg)	-166.6	+/-	11.4

ph/seg (deg)	64.8	Theor.	27.4	Amplitude	0.168 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	98.2		47.8	Search (2048X32)	0.163	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	44.4		16.2	Inc. seg. avg.	0.271	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.9		28.2	Inc. frq. avg.	0.200	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

f: az 302.4 el 32.9 pa 75.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 13209.983 657.152 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu.W.77.11M8OF

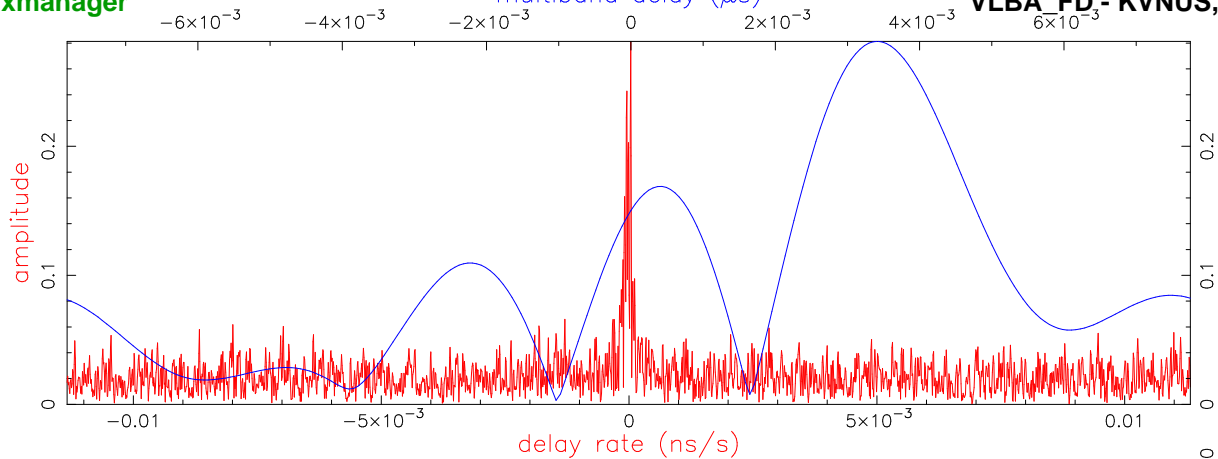
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.11M8OF, No0119, fu

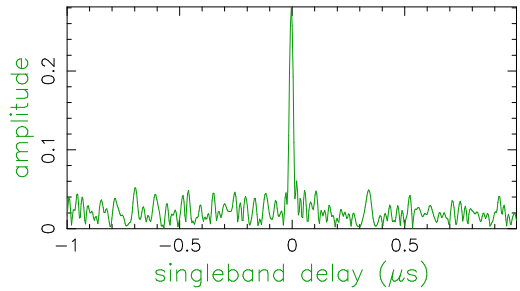
VLBA_FD- KVNUS, fgroup W, pol RR

multiband delay (μ s)

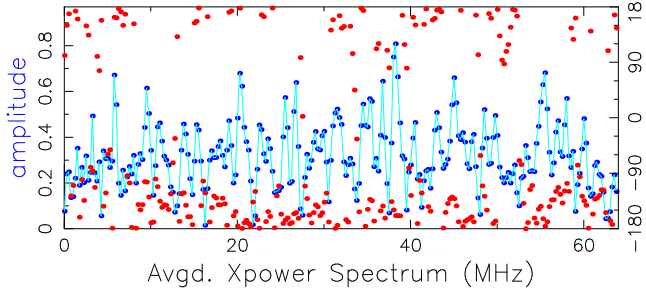


Fringe quality 8

SNR 16.8
 Int time 476.224
 Amp 0.281
 Phase 114.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003954
 MBD 0.003410
 Fringe rate (Hz) 0.003105
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

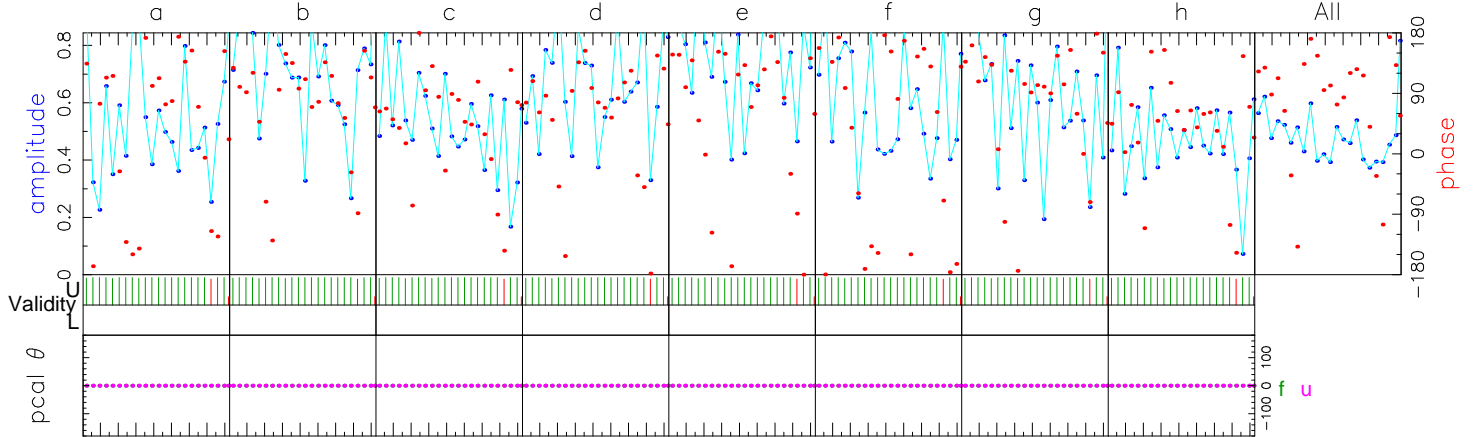


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133518
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

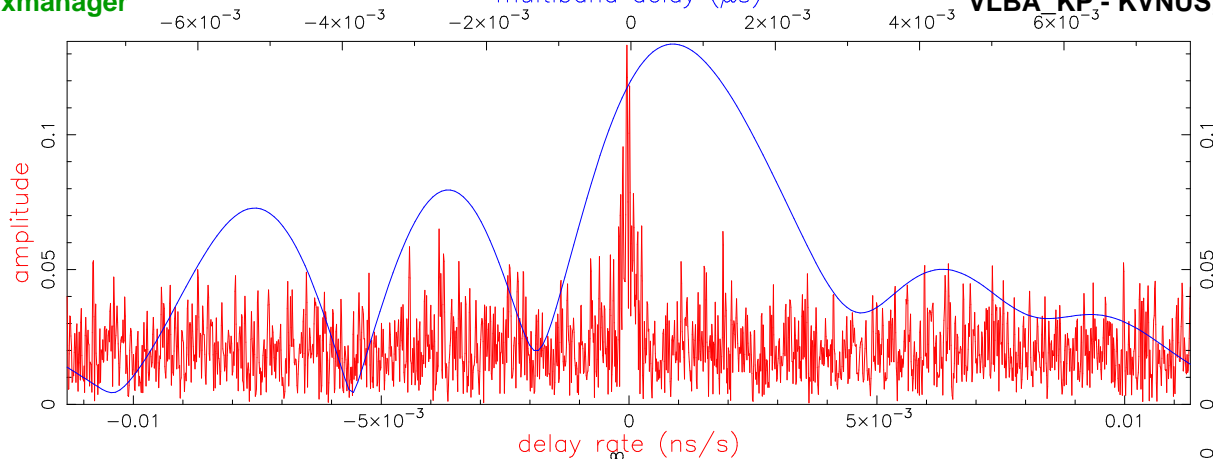
Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	146.7	109.1	60.9	92.8	128.4	165.7	127.4	63.5	Phase	114.7
	0.2	0.4	0.3	0.3	0.4	0.3	0.4	0.3	Ampl.	0.3
	254.4	255.7	256.4	255.9	256.0	256.7	255.7	254.4	Sbd box	256.0
U/L	934/0	934/0	934/0	934/0	934/0	934/0	934/0	934/0	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)	-4.50035718212E+03			Apriori delay (usec)	-4.50036059253E+03			Resid mbdelay (usec)	3.41041E-03	+/- 6.5E-05
Sband delay (usec)	-4.50036454653E+03			Apriori clock (usec)	5.3120003E+00			Resid sbdelay (usec)	-3.95400E-03	+/- 5.1E-04
Phase delay (usec)	-4.50036058883E+03			Apriori clockrate (us/s)	0.0000000E+00			Resid phdelay (usec)	3.69797E-06	+/- 2.2E-07
Delay rate (us/s)	-1.72040490860E+00			Apriori rate (us/s)	-1.72040494464E+00			Resid rate (us/s)	3.60450E-08	+/- 8.0E-10
Total phase (deg)		-44.0		Apriori accel (us/s/s)	1.85973416393E-05			Resid phase (deg)	114.7	+/- 6.8

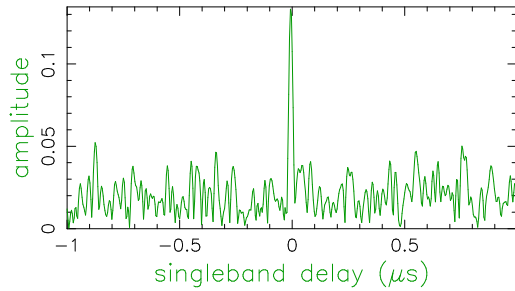
ph/seg (deg) 65.4 16.3 Theor. Amplitude 0.281 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 75.4 28.5 Search (2048X32) 0.275 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 40.8 9.7 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 30.5 16.8 Inc. seg. avg. 0.460 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 f: az 302.4 el 32.9 pa 75.8 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 13209.983 657.152 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/fu.W.92.11M8OF simultaneous interpolator

multiband delay (μs)



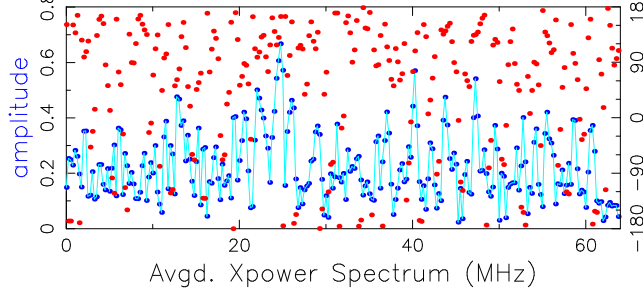
Fringe quality 9

SNR 8.0
Int time 477.467
Amp 0.135
Phase 41.2
PFD 3.0e-07
Delays (us)
SBD -0.006432
MBD 0.000695
Fringe rate (Hz)
-0.003553
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



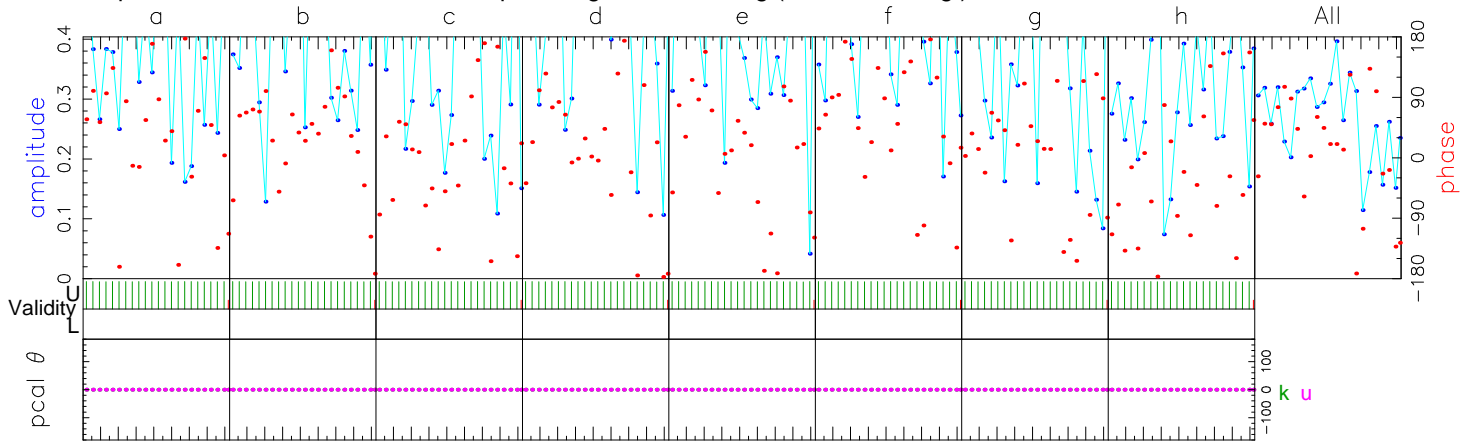
singleband delay (μs)

delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133521
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

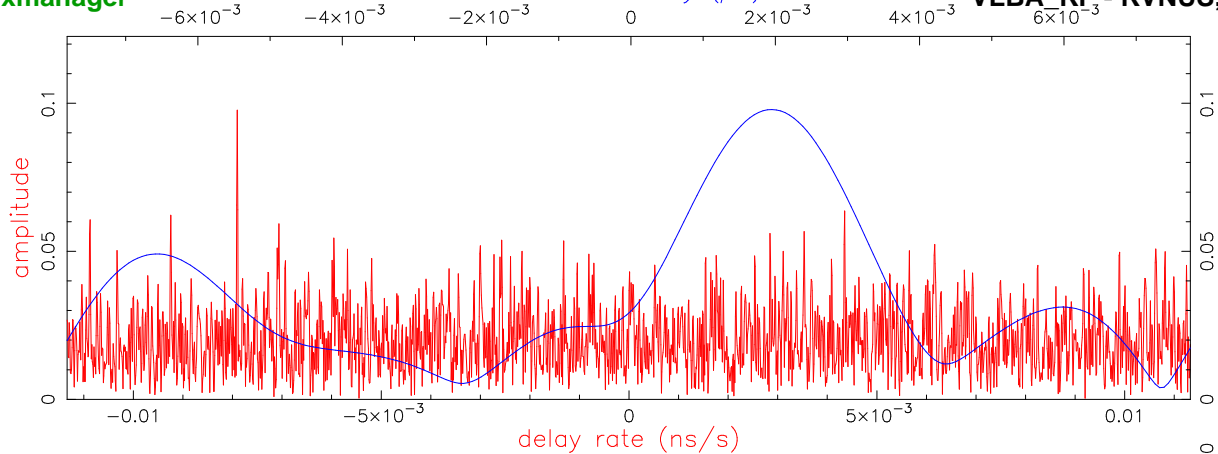
Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	67.9	41.5	-23.3	29.2	49.4	94.2	40.1	-86.1	Phase	41.2
	0.2	0.3	0.1	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	253.5	255.1	416.8	255.8	255.6	256.1	254.6	414.1	Sbd box	255.4
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	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)	-2.60140119173E+03		Apriori delay (usec)		-2.60140188640E+03		Resid mbdelay (usec)		6.94664E-04	+/- 1.3E-04
Sband delay (usec)	-2.60140831865E+03		Apriori clock (usec)		-2.2243218E+00		Resid sbdelay (usec)		-6.43225E-03	+/- 1.1E-03
Phase delay (usec)	-2.60140188507E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		1.32944E-06	+/- 4.6E-07
Delay rate (us/s)	-1.65956556745E+00		Apriori rate (us/s)		-1.65956552621E+00		Resid rate (us/s)		-4.12430E-08	+/- 1.7E-09
Total phase (deg)			Apriori accel (us/s/s)		9.93551826814E-06		Resid phase (deg)		41.2	+/- 14.2

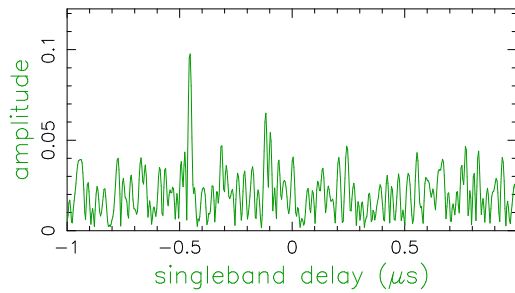
ph/seg (deg) 77.5 34.2 Amplitude 0.135 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 112.9 59.6 Search (2048X32) 0.133 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 63.4 20.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 45.4 35.2 Inc. seg. avg. 0.229 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
k: az 300.0 el 39.2 pa 78.6 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 12725.376 190.022 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku.W.110.1M8OF

multiband delay (μ s)

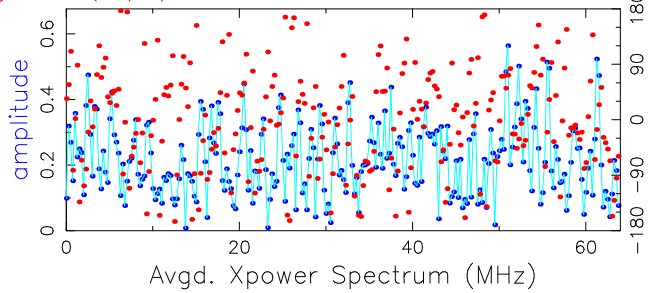


Fringe quality 0

SNR 5.9
Int time 477.468
Amp 0.123
Phase 141.8
PFD 5.2e-01
Delays (us)
SBD -0.454727
MBD 0.001861
Fringe rate (Hz)
-0.682142
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

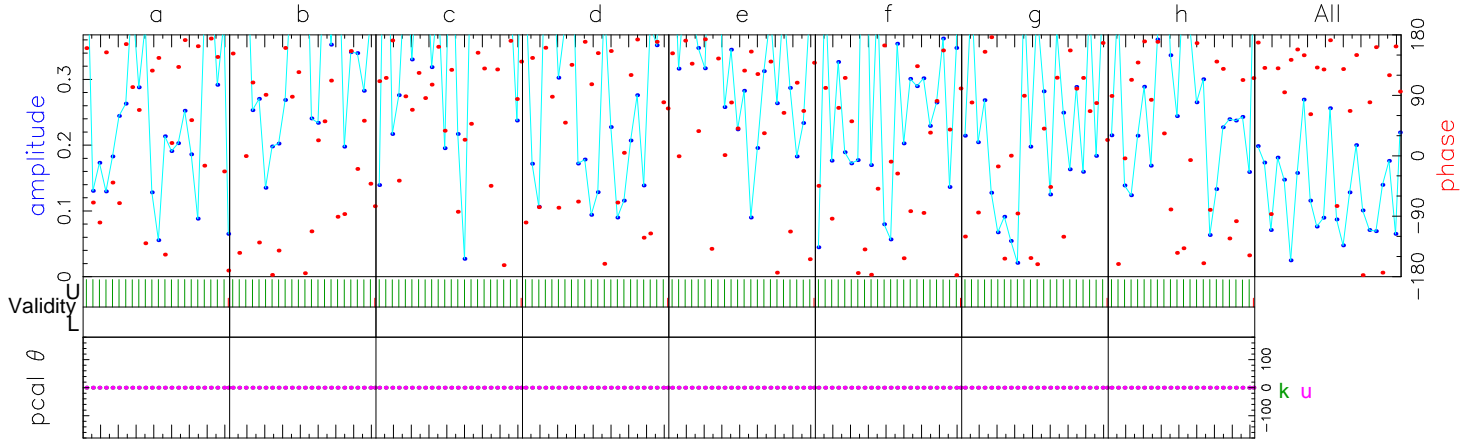


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133525
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	161.8	163.4	120.6	155.7	133.8	168.0	124.3	176.8	Phase	141.8
	0.1	0.1	0.3	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	161.4	60.6	141.2	93.8	226.8	232.1	336.8	346.2	Sbd box	140.6
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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)	-2.60185315047E+03			Apriori delay (usec)	-2.60140188640E+03			Resid mbdelay (usec)	1.86093E-03	+/- 1.8E-04
Sband delay (usec)	-2.60185661315E+03			Apriori clock (usec)	-2.2243218E+00			Resid sbdelay (usec)	-4.54727E-01	+/- 1.5E-03
Phase delay (usec)	-2.60140188182E+03			Apriori clockrate (us/s)	-2.9999999E-07			Resid phdelay (usec)	4.57394E-06	+/- 6.2E-07
Delay rate (us/s)	-1.65957344520E+00			Apriori rate (us/s)	-1.65956552621E+00			Resid rate (us/s)	-7.91899E-06	+/- 2.2E-09
Total phase (deg)		-36.1		Apriori accel (us/s/s)	9.93551826814E-06			Resid phase (deg)	141.8	+/- 19.3

RMS Theor. Amplitude 0.123 +/- 0.021
 ph/seg (deg) 53.7 46.3 Search (2048X32) 0.093
 amp/seg (%) 72.9 80.7 Interp. 0.000
 ph/frq (deg) 25.1 27.3 Inc. seg. avg. 0.122
 amp/frq (%) 59.7 47.6 Inc. frq. avg. 0.115
 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(MISamp/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

k: az 300.0 el 39.2 pa 78.6 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 12725.376 190.022 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku.W.128.1M8OF

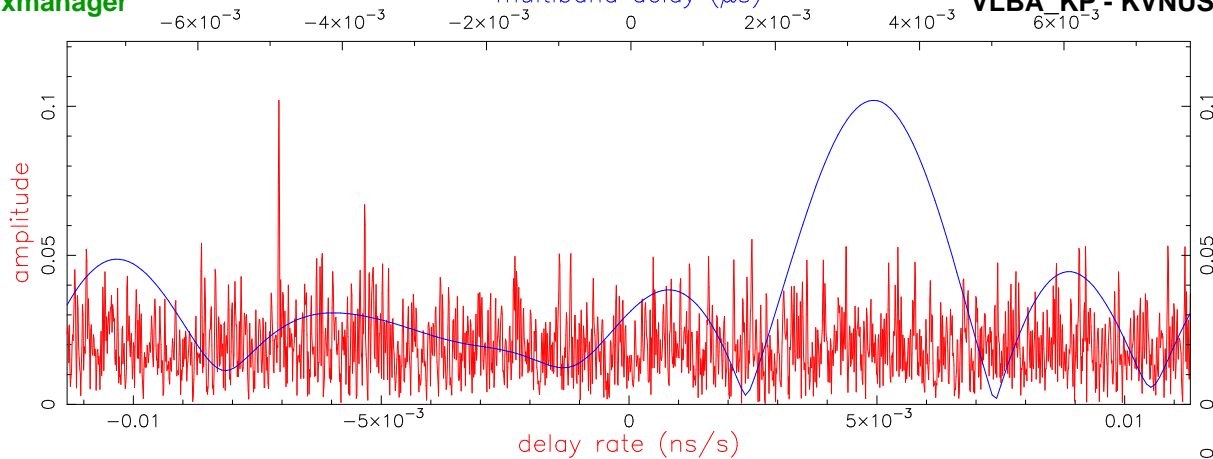
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, ku

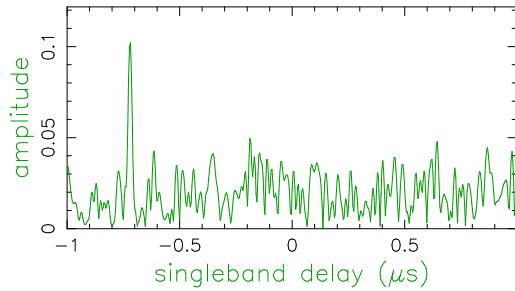
VLBA_KP - KVNUS, fgroup W, pol RL

multiband delay (μ s)

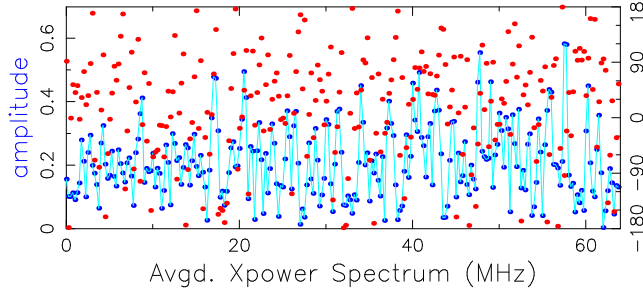


Fringe quality 0

SNR 6.2
Int time 477.467
Amp 0.122
Phase -12.0
PFD 1.7e-01
Delays (us)
SBD -0.720230
MBD 0.003338
Fringe rate (Hz)
-0.609331
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

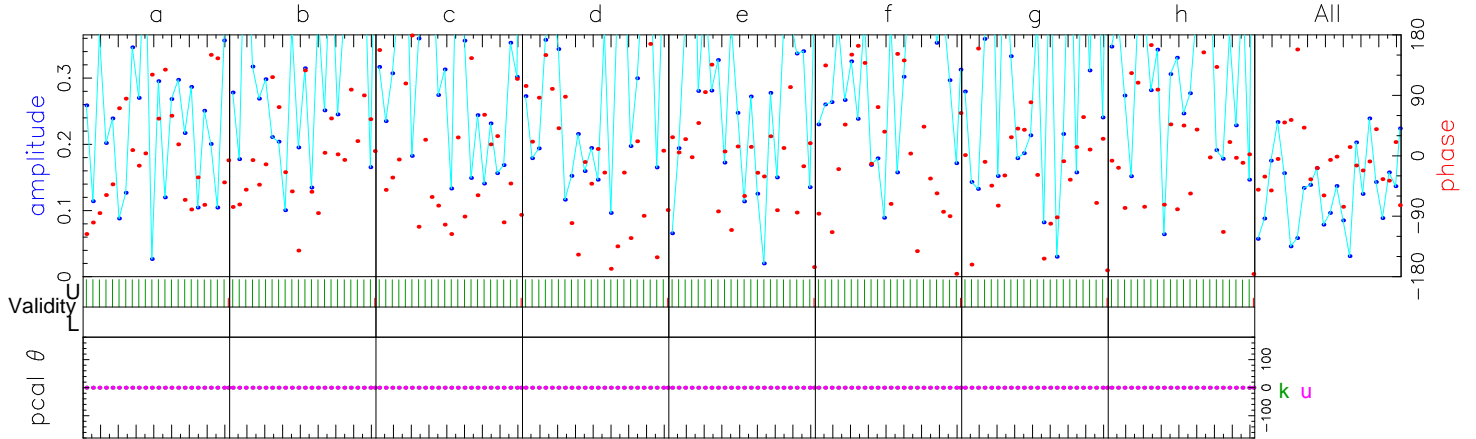


delay rate (ns/s)



Exp. c202b
Yr:day 16383
Start 2021:023:101405
Stop 2021:023:133529
FRT 2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-21.8	7.7	-37.2	-22.5	6.8	-58.2	-19.3	7.4	Phase	-12.0
	0.1	0.2	0.1	0.0	0.2	0.1	0.2	0.1	Ampl.	0.1
	163.7	72.9	299.5	123.6	123.8	260.7	72.8	490.1	Sbd box	72.6
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

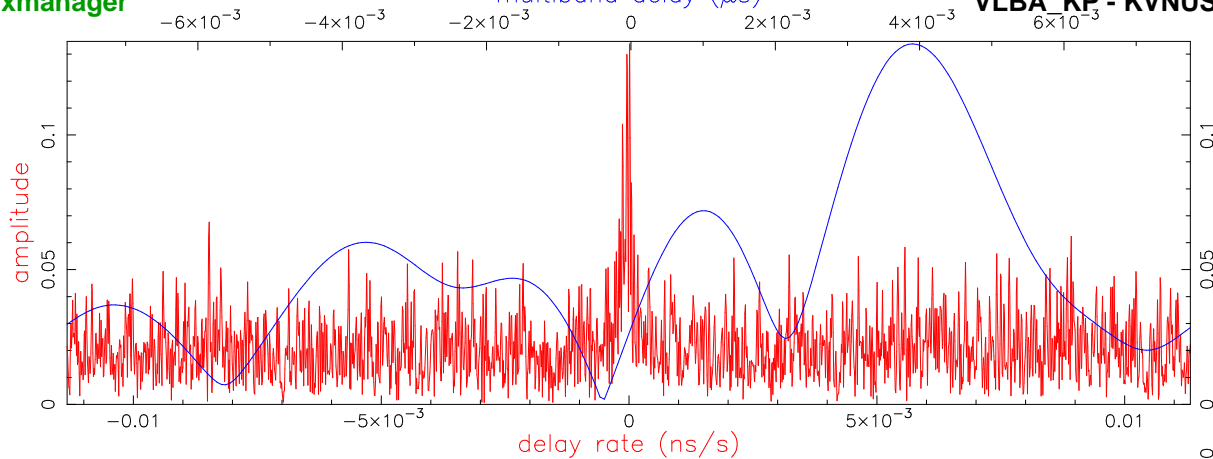
Group delay (usec)(sbd)	-2.60211729815E+03	Apriori delay (usec)	-2.60140188640E+03	Resid mbdelay (usec)	3.33824E-03	+/-	1.8E-04
Sband delay (usec)	-2.60212211615E+03	Apriori clock (usec)	-2.2243218E+00	Resid sbdelay (usec)	-7.20230E-01	+/-	1.4E-03
Phase delay (usec)	-2.60140188678E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	-3.87027E-07	+/-	6.0E-07
Delay rate (us/s)	-1.65957259994E+00	Apriori rate (us/s)	-1.65956552621E+00	Resid rate (us/s)	-7.07373E-06	+/-	2.2E-09
Total phase (deg)	-189.9	Apriori accel (us/s/s)	9.93551826814E-06	Resid phase (deg)	-12.0	+/-	18.6

ph/seg (deg)	50.6	Theor.	44.5	Amplitude	0.122 +/- 0.020	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	59.8	Search (2048X32)	0.099	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	26.3	Inc. seg. avg.	0.115	Inc. frq. avg.	0.115	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	45.1	Inc. frq. avg.	0.115			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

k: az 300.0 el 39.2 pa 78.6 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 12725.376 190.022 simultaneous interpolator

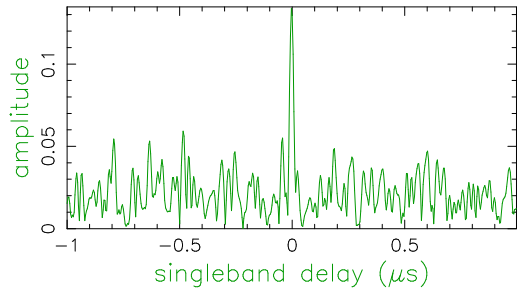
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku.W.146.1M8OF

multiband delay (μ s)

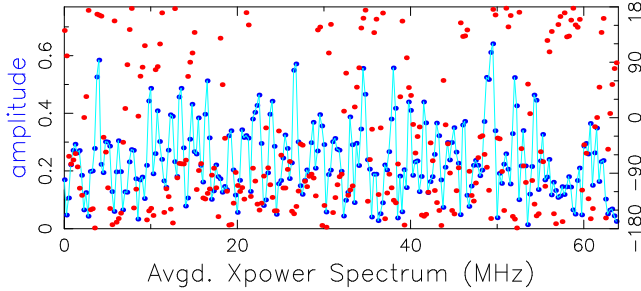


Fringe quality 9

SNR 8.1
Int time 477.468
Amp 0.135
Phase 142.8
PFD 2.8e-07
Delays (us)
SBD -0.002756
MBD 0.003922
Fringe rate (Hz)
0.001195
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

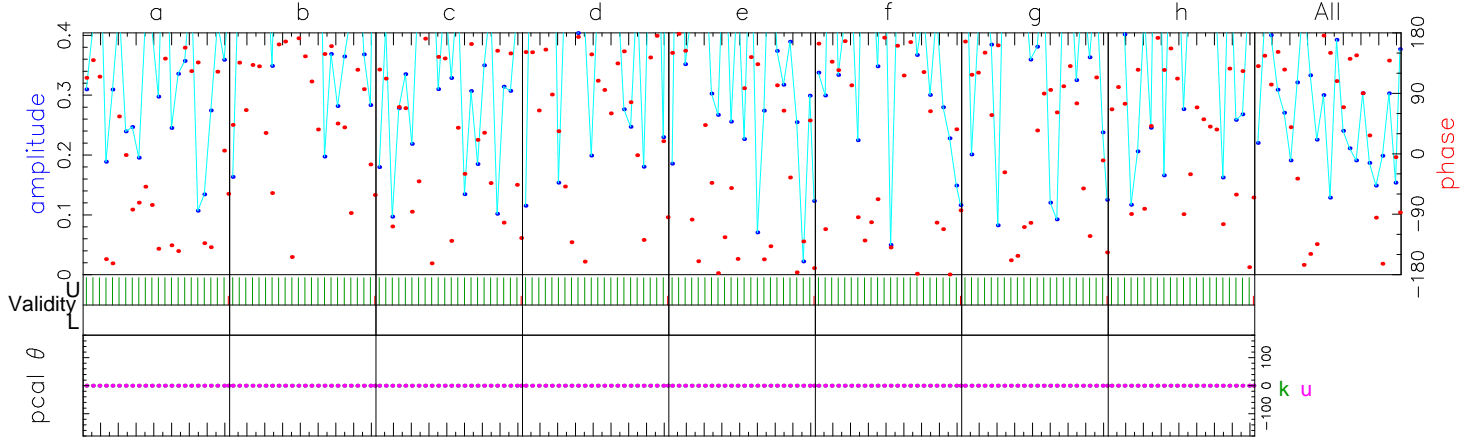


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133517
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	163.3	116.4	159.0	132.1	-174.0	175.5	137.6	96.2	Phase	142.8
	0.1	0.2	0.0	0.2	0.1	0.2	0.1	0.2	Ampl.	0.1
	153.2	256.1	22.8	256.0	257.6	255.9	35.9	255.0	Sbd box	256.3
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

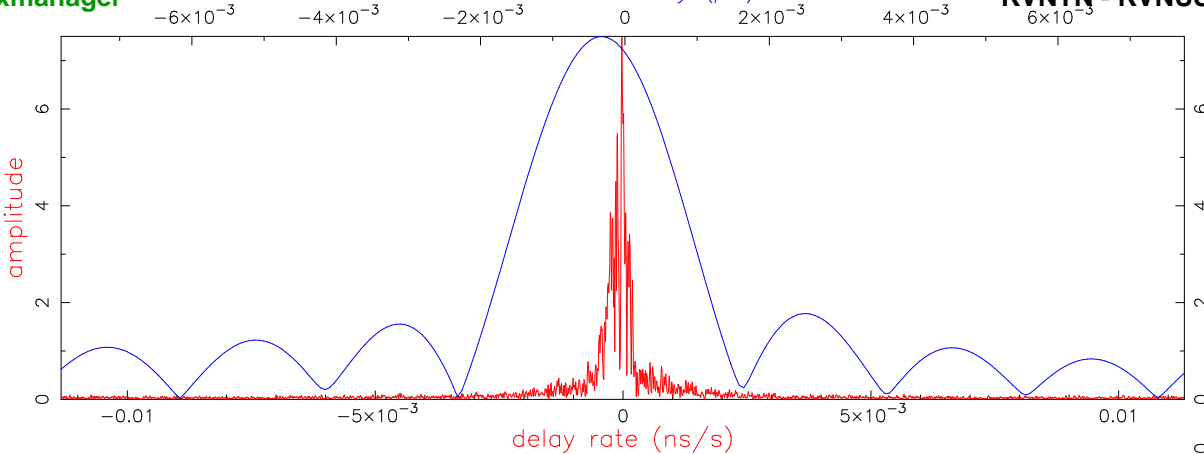
Group delay (usec)(sbd)	-2.60139796477E+03	Apriori delay (usec)	-2.60140188640E+03	Resid mbdelay (usec)	3.92162E-03	+/-	1.3E-04
Sband delay (usec)	-2.60140464215E+03	Apriori clock (usec)	-2.2243218E+00	Resid sbdelay (usec)	-2.75575E-03	+/-	1.1E-03
Phase delay (usec)	-2.60140188179E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	4.60380E-06	+/-	4.6E-07
Delay rate (us/s)	-1.65956551234E+00	Apriori rate (us/s)	-1.65956552621E+00	Resid rate (us/s)	1.38686E-08	+/-	1.7E-09
Total phase (deg)	-35.1	Apriori accel (us/s/s)	9.93551826814E-06	Resid phase (deg)	142.8	+/-	14.2

ph/seg (deg)	75.8	Theor.	34.1	Amplitude	0.135 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	121.7		59.6	Search (2048X32)	0.131	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	33.2		20.1	Inc. seg. avg.	0.230	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	51.6		35.1	Inc. frq. avg.	0.145	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

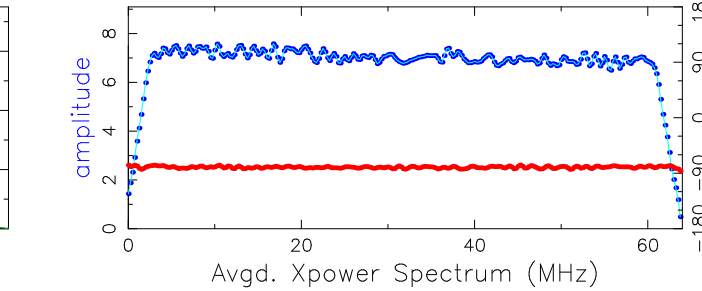
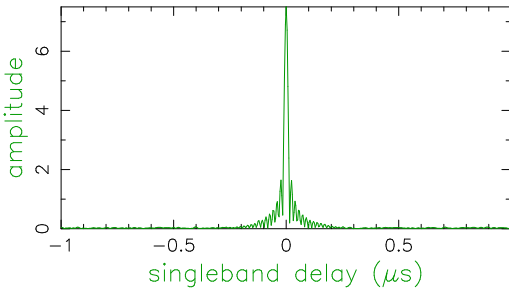
k: az 300.0 el 39.2 pa 78.6 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 12725.376 190.022 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ku.W.90.1M8OF

multiband delay (μs)

Fringe quality 5

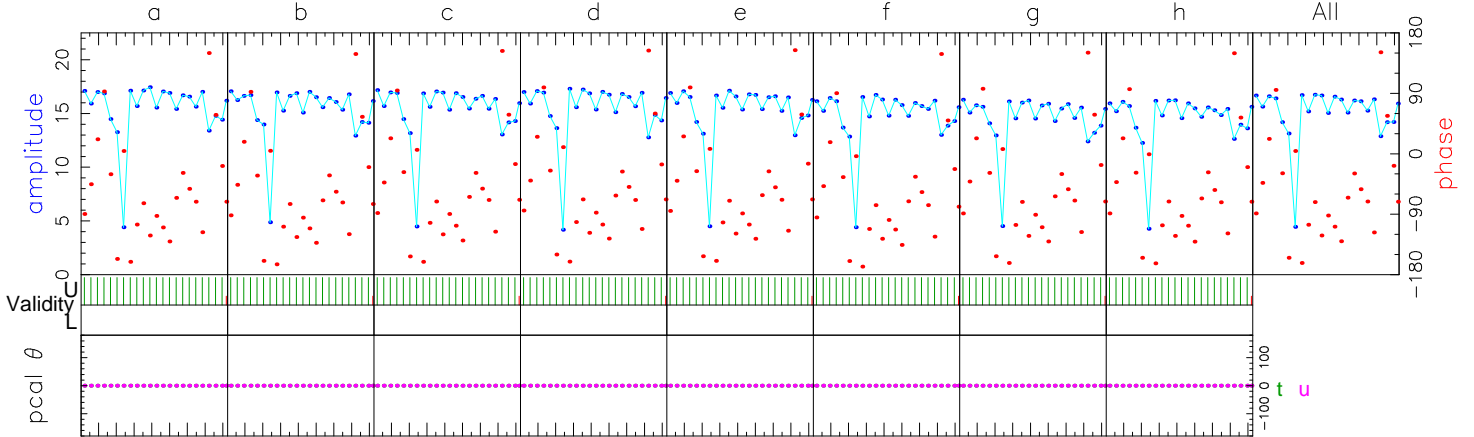


SNR 449.3
Int time 479.970
Amp 7.500
Phase -79.5
PFD 0.0e+00
Delays (us)
SBD -0.000263
MBD -0.000325
Fringe rate (Hz)
-0.002239
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133537
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-80.2	-82.7	-77.8	-75.9	-76.0	-84.9	-79.3	-79.5	Phase	-79.5
	7.7	7.6	7.7	7.7	7.6	7.4	7.2	7.2	Ampl.	7.5
	257.0	256.8	257.1	256.9	256.9	256.8	257.0	256.9	Sbd box	256.9
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-7.85826846134E+02	Apriori delay (usec)	-7.85826521294E+02	Resid mbdelay (usec)	-3.24840E-04	+/-	2.4E-06
Sband delay (usec)	-7.85826784544E+02	Apriori clock (usec)	-1.1853223E+00	Resid sbdelay (usec)	-2.63250E-04	+/-	1.9E-05
Phase delay (usec)	-7.85826523858E+02	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	-2.56437E-06	+/-	8.2E-09
Delay rate (us/s)	4.76411649611E-02	Apriori rate (us/s)	4.76411909588E-02	Resid rate (us/s)	-2.59977E-08	+/-	3.0E-11
Total phase (deg)	-275.5	Apriori accel (us/s/s)	1.74311360391E-06	Resid phase (deg)	-79.5	+/-	0.3

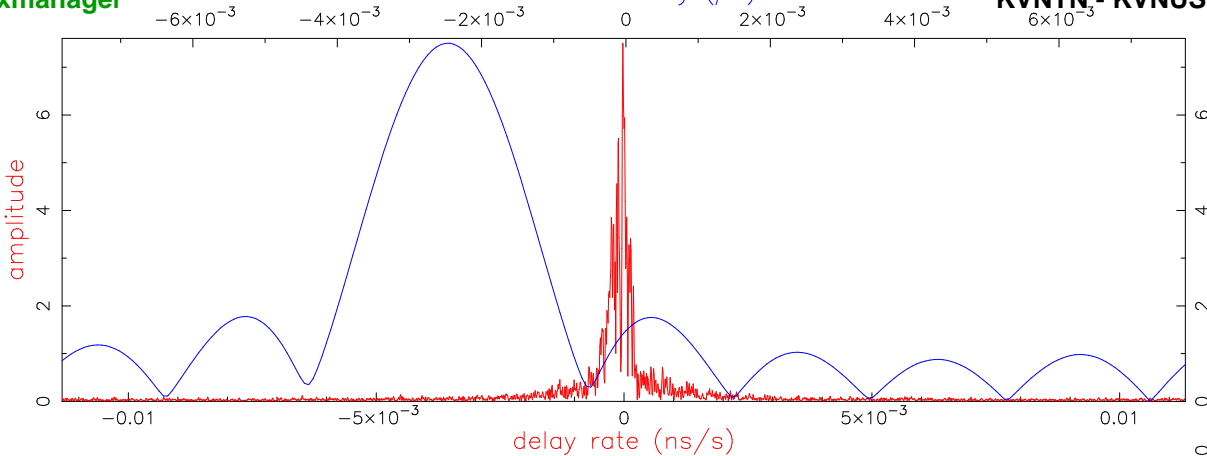
ph/seg (deg)	RMS 71.6	Theor. 0.6	Amplitude Search (2048X32)	7.206	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	106.2	1.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	3.4	0.4	Inc. seg. avg.	15.038	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	2.7	0.6	Inc. frq. avg.	7.507	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 62.0 el 43.9 pa -80.0 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) -360.475 -88.967 simultaneous interpolator

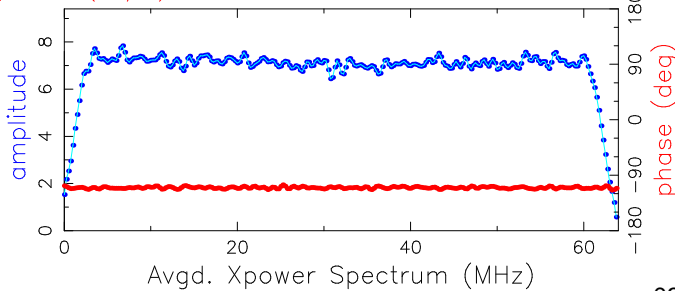
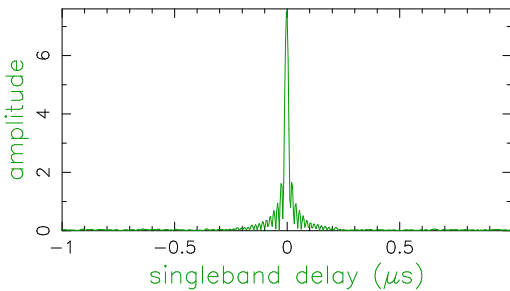
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu.W.168.11M8OF

multiband delay (μ s)

Fringe quality 5

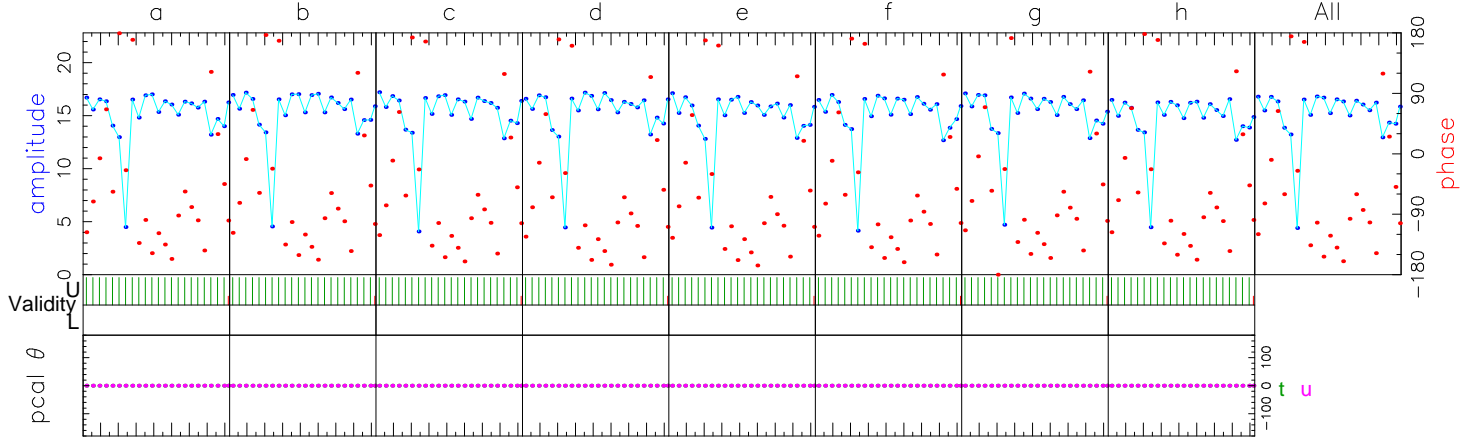


SNR 455.6
Int time 479.970
Amp 7.605
Phase -110.3
PFD 0.0e+00
Delays (us)
SBD -0.002446
MBD -0.002465
Fringe rate (Hz)
-0.002240
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133540
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-106.0	-108.6	-110.6	-115.2	-115.7	-112.4	-105.5	-108.0	Phase	-110.3
	7.5	7.6	7.6	7.5	7.4	7.5	7.6	7.4	Ampl.	7.5
	256.4	256.3	256.3	256.3	256.4	256.4	256.4	256.4	Sbd box	256.4
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.85828985821E+02			Apriori delay (usec)	-7.85826521294E+02			Resid mbdelay (usec)	-2.46453E-03	+/- 2.4E-06
Sband delay (usec)	-7.85828967794E+02			Apriori clock (usec)	-1.1853223E+00			Resid sbdelay (usec)	-2.44650E-03	+/- 1.9E-05
Phase delay (usec)	-7.85826524849E+02			Apriori clockrate (us/s)	-2.9999999E-07			Resid phdelay (usec)	-3.55539E-06	+/- 8.1E-09
Delay rate (us/s)	4.76411649519E-02			Apriori rate (us/s)	4.76411909588E-02			Resid rate (us/s)	-2.60069E-08	+/- 2.9E-11
Total phase (deg)		-306.2		Apriori accel (us/s/s)	1.74311360391E-06			Resid phase (deg)	-110.3	+/- 0.3

ph/seg (deg) 71.6 0.6
amp/seg (%) 103.6 1.1
ph/frq (deg) 4.2 0.4
amp/frq (%) 1.6 0.6

RMS Theor. Amplitude 7.605 +/- 0.017
Search (2048X32) 7.296
Interp. 0.000
Inc. seg. avg. 15.051
Inc. frq. avg. 7.519

t: az 62.0 el 43.9 pa -80.0
u: az 64.5 el 47.0 pa -79.7
u,v (fr/asec) -360.475 -88.967

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu.W.184.11M8OF

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

Mk4/DiFX fourfit 3.21 rev 2937

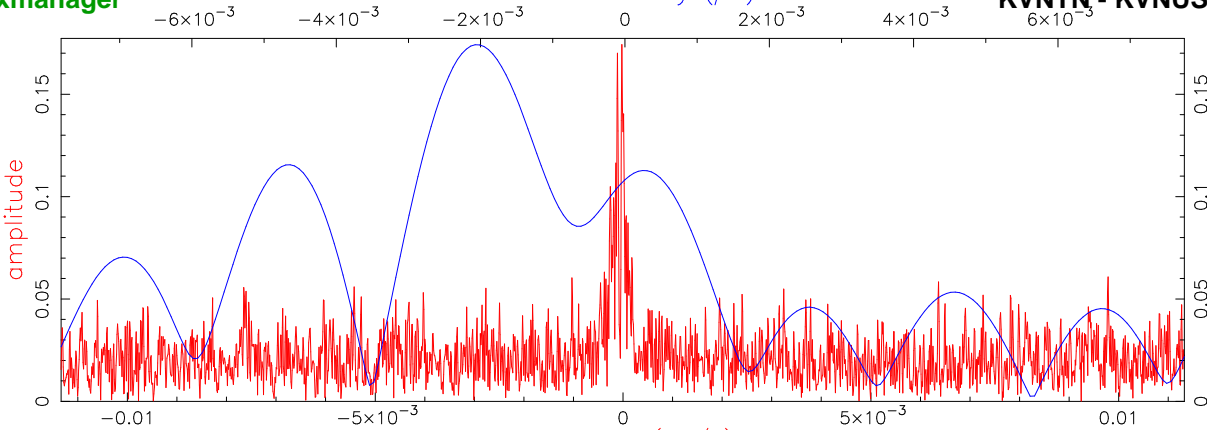
fxmanager

3C84.11M8OF, No0119, tu

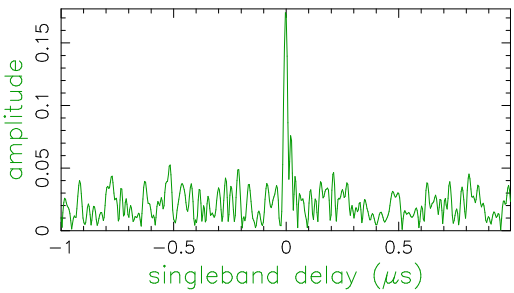
KVNTN - KVNUS, fgroup W, pol LR

multiband delay (μ s)

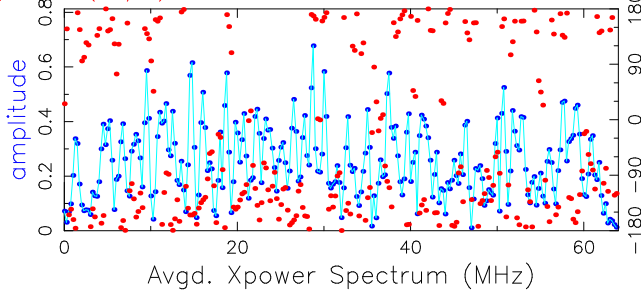
Fringe quality 9



SNR 10.6
 Int time 479.970
 Amp 0.177
 Phase -161.6
 PFD 1.1e-17
 Delays (us)
 SBD -0.002189
 MBD -0.002062
 Fringe rate (Hz)
 -0.002122
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

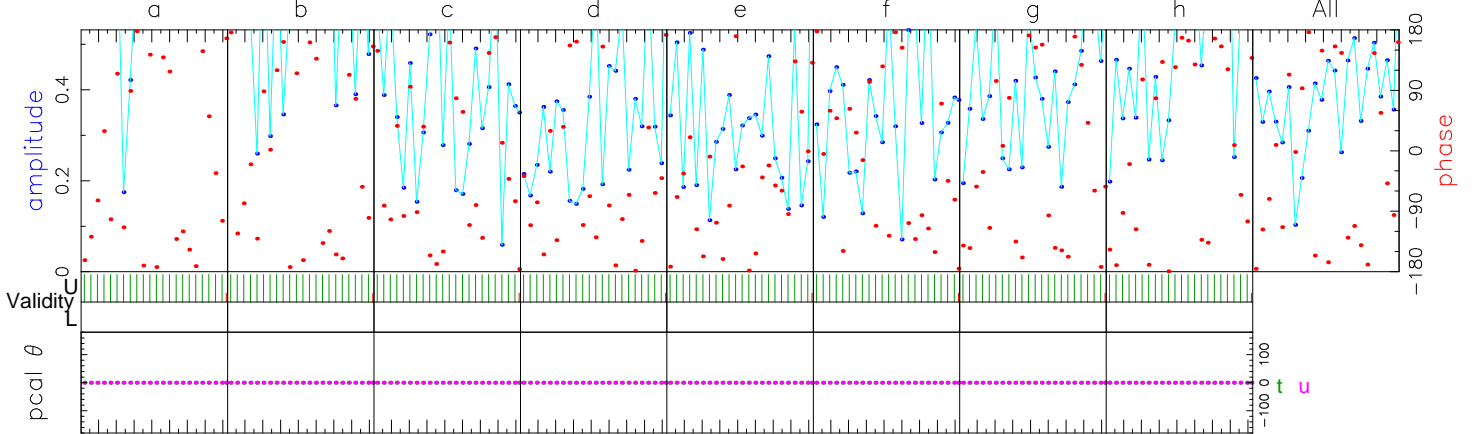


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133544
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-171.9	-176.1	-154.5	-109.5	-94.2	-131.1	-160.8	169.8	Phase	-161.6
	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.3	Ampl.	0.2
	256.5	256.0	343.5	149.5	149.3	395.3	201.6	256.6	Sbd box	256.4
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	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	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.85828582978E+02			Apriori delay (usec)	-7.85826521294E+02			Resid mbdelay (usec)	-2.06168E-03	+/- 1.0E-04
Sband delay (usec)	-7.85828710044E+02			Apriori clock (usec)	-1.1853223E+00			Resid sbdelay (usec)	-2.18875E-03	+/- 8.1E-04
Phase delay (usec)	-7.85826526504E+02			Apriori clockrate (us/s)	-2.9999999E-07			Resid phdelay (usec)	-5.20967E-06	+/- 3.5E-07
Delay rate (us/s)	4.76411663223E-02			Apriori rate (us/s)	4.76411909588E-02			Resid rate (us/s)	-2.46365E-08	+/- 1.3E-09
Total phase (deg)		-357.5		Apriori accel (us/s/s)	1.74311360391E-06			Resid phase (deg)	-161.6	+/- 10.8

ph/seg (deg) 78.5 25.9 Search (2048X32) 0.171 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 126.7 45.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 39.5 15.3 Inc. seg. avg. 0.342 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 58.1 26.6 Inc. frq. avg. 0.189 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 62.0 el 43.9 pa -80.0 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) -360.475 -88.967 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu.W.202.11M8OF

Mk4/DiFX fourfit 3.21 rev 2937

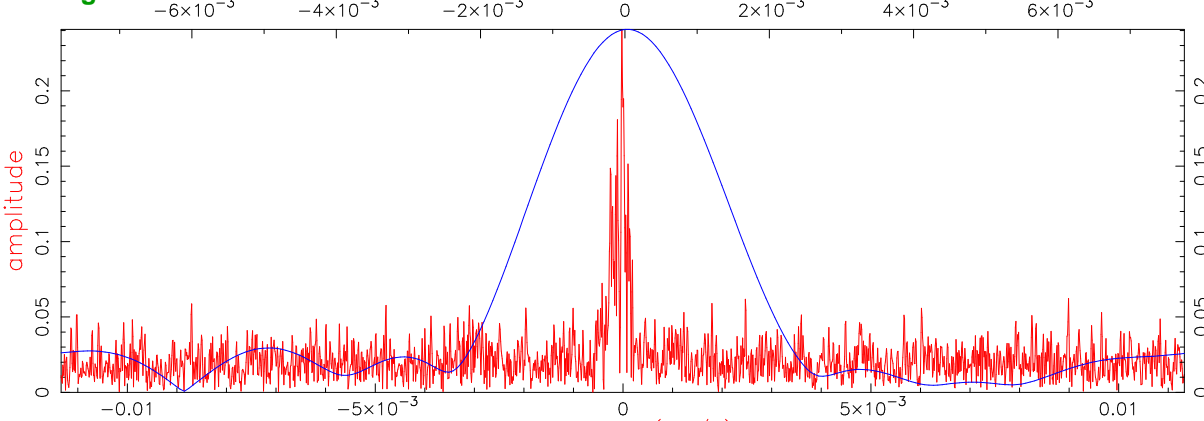
fxmanager

3C84.11M8OF, No0119, tu

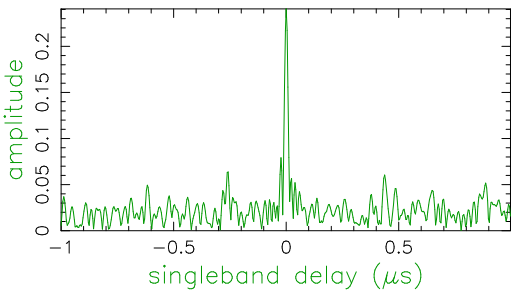
KVNTN - KVNUS, fgroup W, pol RL

multiband delay (μ s)

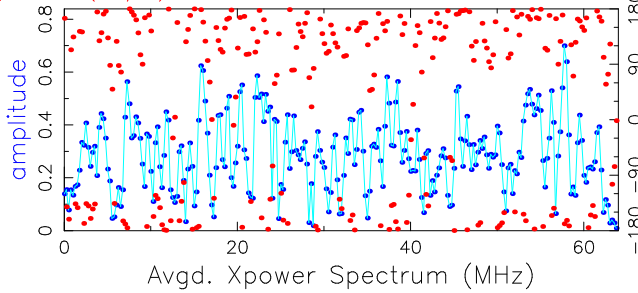
Fringe quality 9



SNR 14.4
 Int time 479.970
 Amp 0.241
 Phase 163.2
 PFD 2.2e-38
 Delays (us)
 SBD 0.000016
 MBD 0.000035
 Fringe rate (Hz)
 -0.002240
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

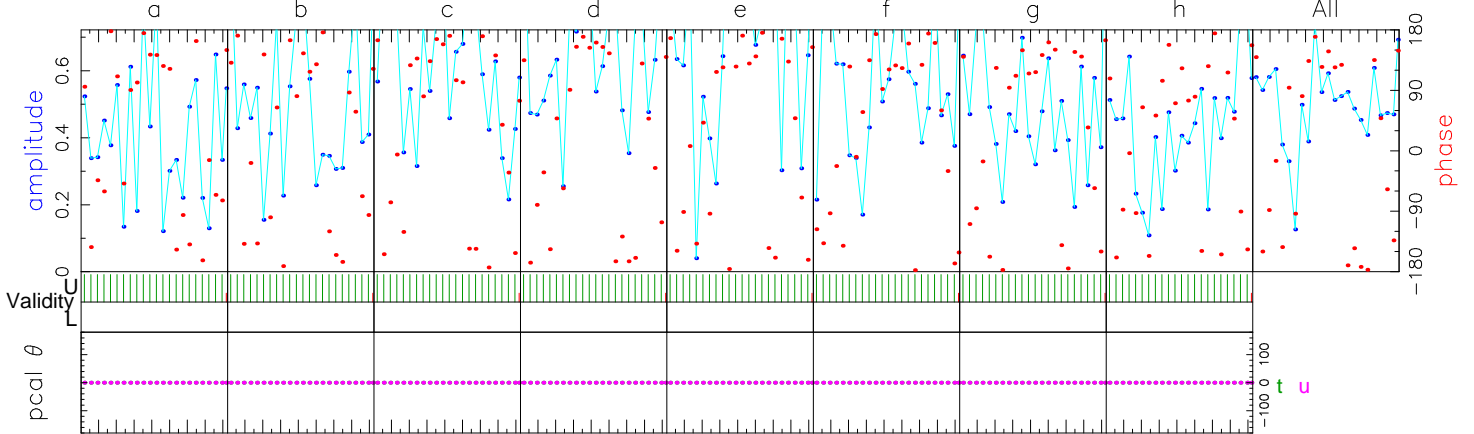


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133548
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-7.85826486540E+02	Apriori delay (usec)	-7.85826521294E+02	Resid mbdelay (usec)	3.47540E-05	+/-	7.5E-05
Sband delay (usec)	-7.85826505544E+02	Apriori clock (usec)	-1.1853223E+00	Resid sbdelay (usec)	1.57500E-05	+/-	6.0E-04
Phase delay (usec)	-7.85826516031E+02	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	5.26332E-06	+/-	2.6E-07
Delay rate (us/s)	4.76411649512E-02	Apriori rate (us/s)	4.76411909588E-02	Resid rate (us/s)	-2.60076E-08	+/-	9.2E-10
Total phase (deg)	-32.7	Apriori accel (us/s/s)	1.74311360391E-06	Resid phase (deg)	163.2	+/-	7.9

ph/seg (deg)	73.0	RMS	19.1	Theor.	19.1	Amplitude	0.241 +/- 0.017	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	117.5	Search (2048X32)	0.235	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	9.3	Inc. seg. avg.	0.470	Inc. frq. avg.	0.238	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	32.8	Inc. frq. avg.	0.238	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 62.0 el 43.9 pa -80.0 u: az 64.5 el 47.0 pa -79.7 u, v (fr/asec) -360.475 -88.967 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/tu.W.222.11M8OF

Mk4/DiFX fourfit 3.21 rev 2937

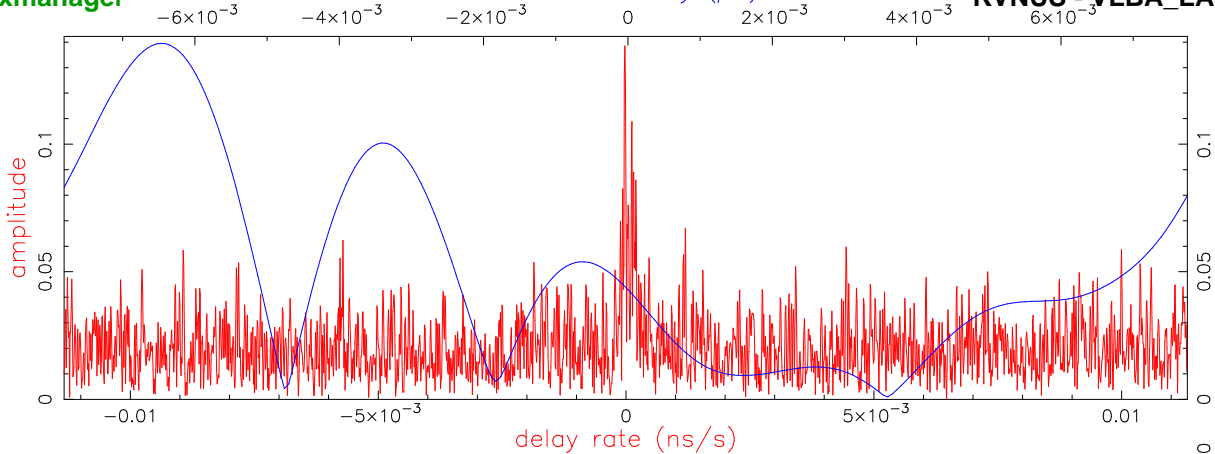
fxmanager

3C84.11M8OF, No0119, ul

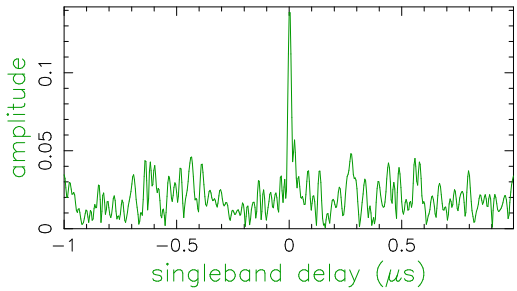
KVNUS - VLBA_LA, fgroup W, pol LL

multiband delay (μ s)

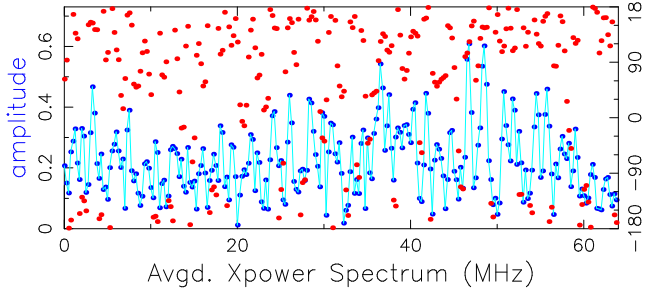
Fringe quality 9



SNR 8.5
 Int time 479.979
 Amp 0.142
 Phase -125.1
 PFD 5.7e-09
 Delays (us)
 SBD 0.001927
 MBD -0.006608
 Fringe rate (Hz)
 -0.001663
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

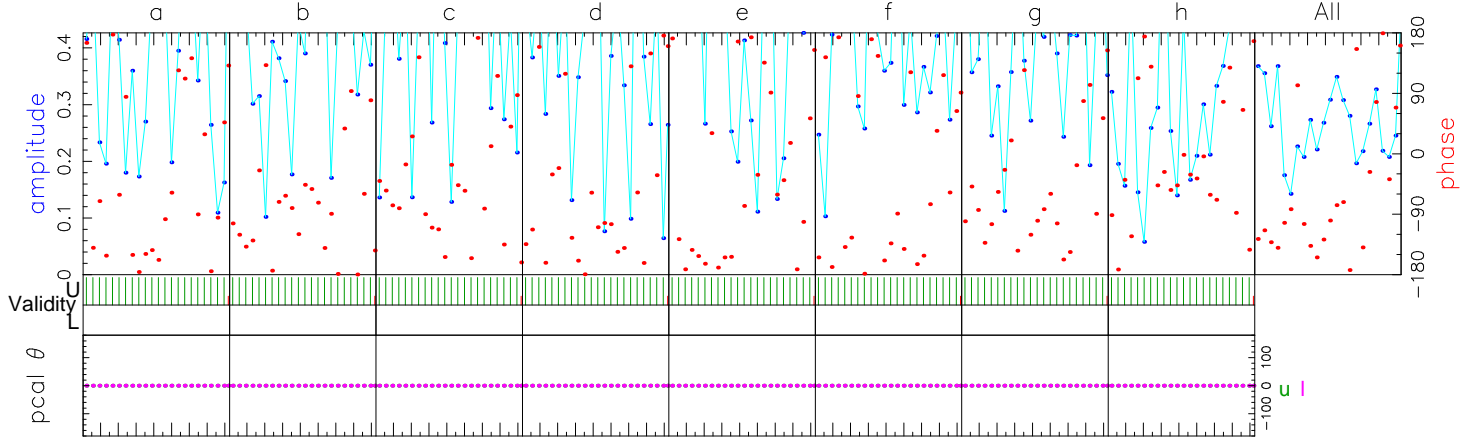


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133537
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
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)	3.19216751916E+03	Apriori delay (usec)	3.19215850244E+03	Resid mbdelay (usec)	-6.60828E-03	+/-	1.3E-04
Sband delay (usec)	3.19216042944E+03	Apriori clock (usec)	2.9658704E+00	Resid sbdelay (usec)	1.92700E-03	+/-	1.0E-03
Phase delay (usec)	3.19215849841E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-4.03431E-06	+/-	4.3E-07
Delay rate (us/s)	1.65422590261E+00	Apriori rate (us/s)	1.65422592192E+00	Resid rate (us/s)	-1.93054E-08	+/-	1.6E-09
Total phase (deg)	19.0	Apriori accel (us/s/s)	-1.72145192741E-05	Resid phase (deg)	-125.1	+/-	13.4

ph/seg (deg)	70.5	Theor.	32.2	Amplitude	0.142 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	98.2		56.3	Search (2048X32)	0.139	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	48.3		19.0	Inc. seg. avg.	0.229	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	35.5		33.2	Inc. frq. avg.	0.166	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 64.5 el 47.0 pa -79.7 l: az 298.7 el 37.2 pa 72.5 u,v (fr/asec) -12699.390 -1064.236 simultaneous interpolator

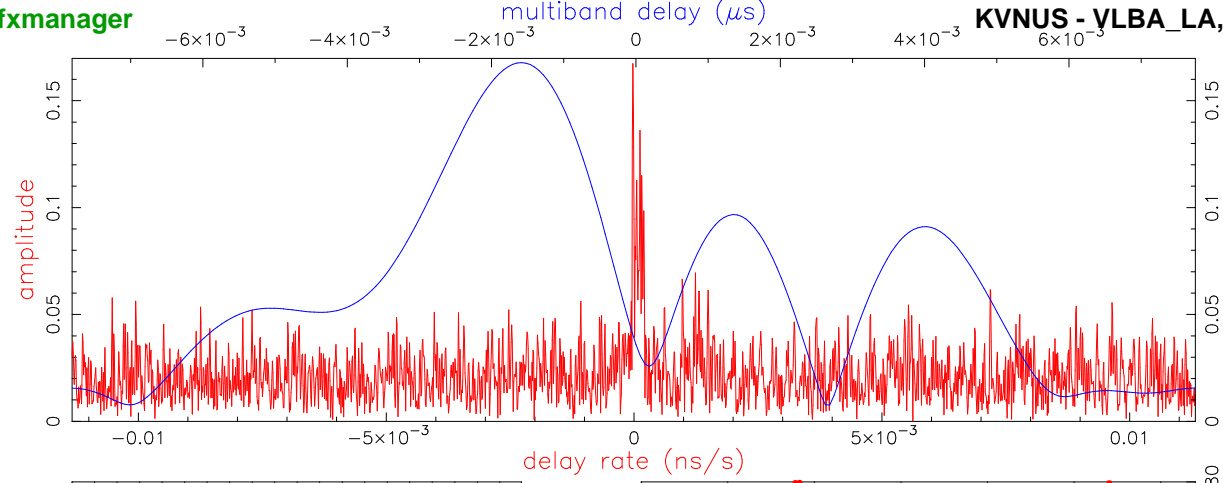
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul.W.170.11M8OF

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, ul

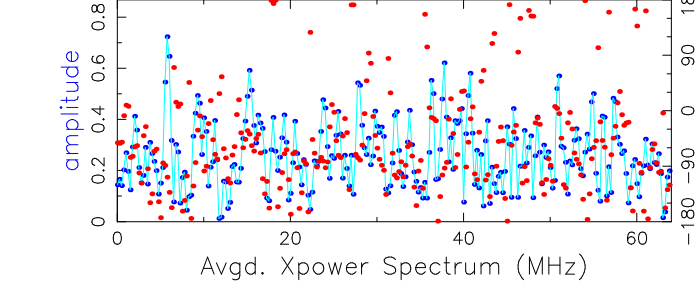
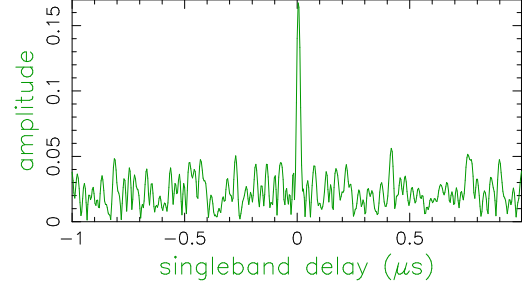
KVNUS - VLBA_LA, fgroup W, pol RR



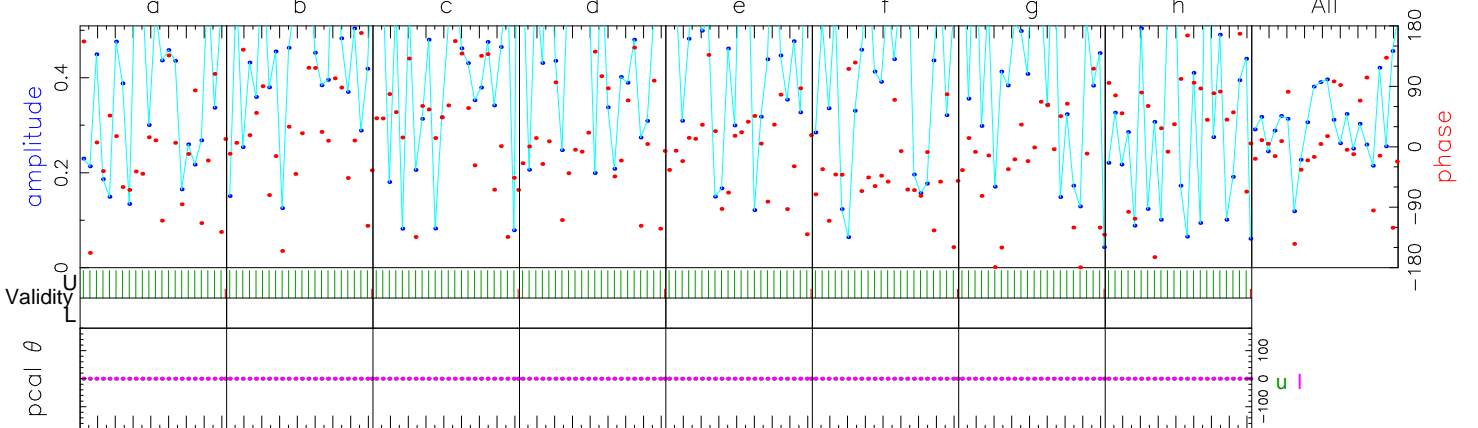
Fringe quality 9

SNR 10.2
 Int time 479.979
 Amp 0.170
 Phase 7.2
 PFD 1.1e-15
 Delays (us)
 SBD 0.005449
 MBD -0.001507
 Fringe rate (Hz)
 -0.002030
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133540
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0					
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR					
Group delay (usec)(sbd)		3.19215699516E+03				3.19215850244E+03			Resid mbdelay (usec)	-1.50728E-03	+/- 1.1E-04		
Sband delay (usec)		3.19216395094E+03				2.9658704E+00			Resid sbdelay (usec)	5.44850E-03	+/- 8.5E-04		
Phase delay (usec)		3.19215850267E+03				5.0000000E-07			Resid phdelay (usec)	2.32099E-07	+/- 3.6E-07		
Delay rate (us/s)		1.65422589836E+00				1.65422592192E+00			Resid rate (us/s)	-2.35610E-08	+/- 1.3E-09		
Total phase (deg)			151.3						Resid phase (deg)	7.2	+/- 11.3		
	RMS	Theor.	Amplitude	0.170 +/- 0.017		Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5				
ph/seg (deg)	68.4	27.0	Search (2048X32)	0.166		Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000	1.000		
amp/seg (%)	92.1	47.1	Interp.	0.000		Bits/sample: 2x2			SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	45.4	15.9	Inc. seg. avg.	0.275		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011	0.011		
amp/frq (%)	34.6	27.8	Inc. frq. avg.	0.201		Data rate(Mb/s): 2048			nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
u: az 64.5 el 47.0 pa -79.7			l: az 298.7 el 37.2 pa 72.5			u,v (fr/asec) -12699.390 -1064.236						simultaneous interpolator	

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul.W.185.11M8OF

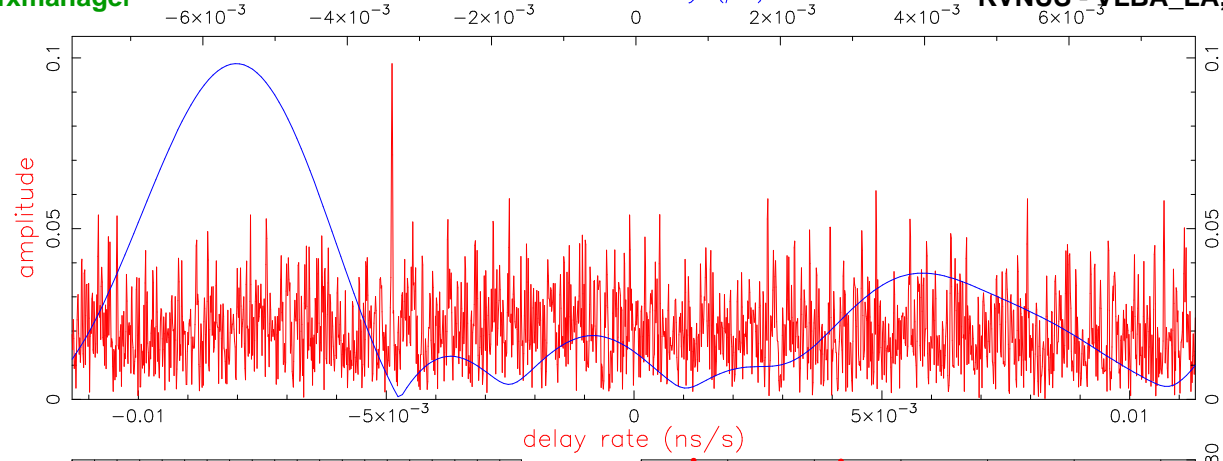
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

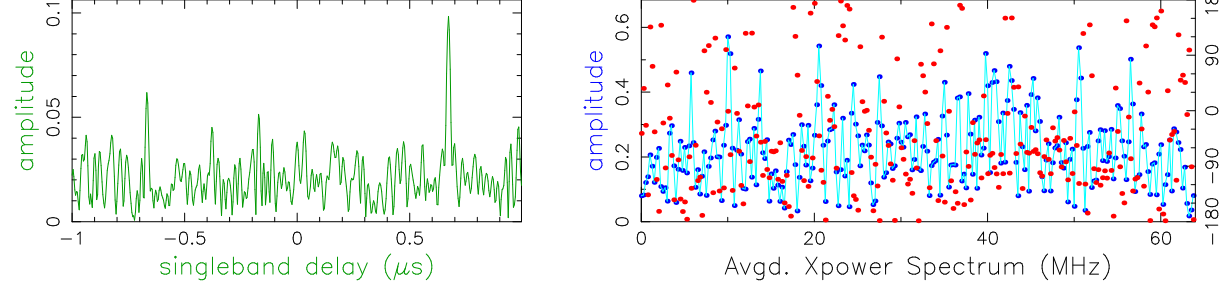
3C84.11M8OF, No0119, ul

KVNUS - VLBA_LA, fgroup W, pol LR

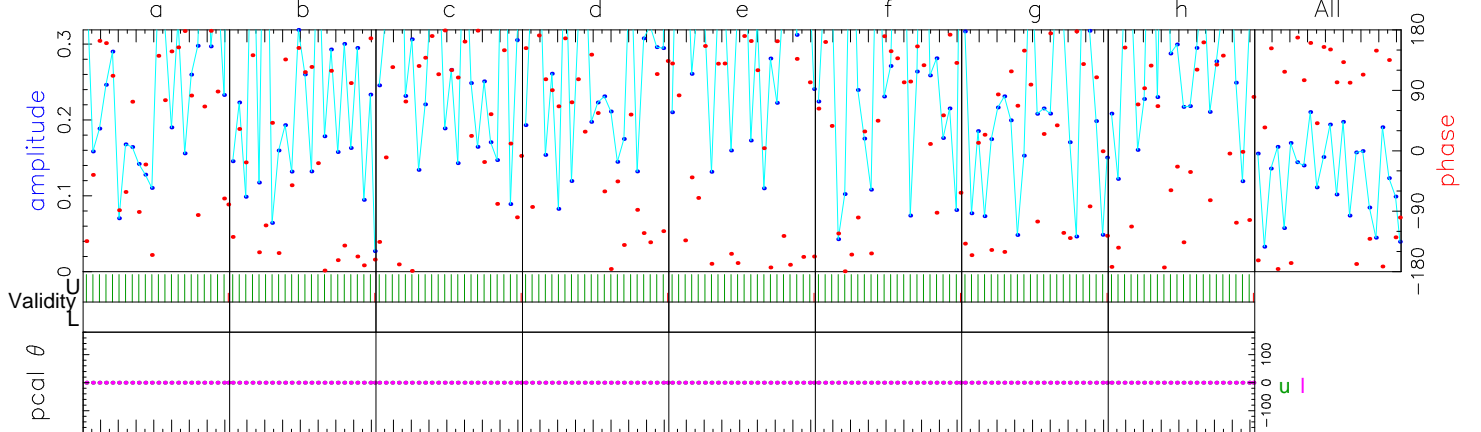
multiband delay (μ s)



Fringe quality 0
 SNR 5.9
 Int time 479.979
 Amp 0.106
 Phase 156.6
 PFD 6.2e-01
 Delays (us)
 SBD 0.672085
 MBD -0.005532
 Fringe rate (Hz)
 -0.421300
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c202b
 Yr:day 16383
 Start 2021:023:101405
 Stop 2021:023:133544
 FRT 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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	
Group delay (usec)(sbd)		3.19282484585E+03			3.19215850244E+03				Resid mbdelay (usec)	-5.53159E-03 +/- 1.8E-04
Sband delay (usec)		3.19283058694E+03			2.9658704E+00				Resid sbdelay (usec)	6.72085E-01 +/- 1.5E-03
Phase delay (usec)		3.19215850749E+03			5.0000000E-07				Resid phdelay (usec)	5.05135E-06 +/- 6.3E-07
Delay rate (us/s)		1.65422103104E+00			1.65422592192E+00				Resid rate (us/s)	-4.89088E-06 +/- 2.3E-09
Total phase (deg)			300.7		-1.72145192741E-05				Resid phase (deg)	156.6 +/- 19.5
	RMS	Theor.	Amplitude	0.106 +/- 0.018					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	52.6	46.6	Search (2048X32)	0.096					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	60.7	81.4	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	17.5	27.5	Inc. seg. avg.	0.106					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	43.6	48.0	Inc. frq. avg.	0.099					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 l: az 298.7 el 37.2 pa 72.5 u,v (fr/asec) -12699.390 -1064.236 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul.W.203.11M8OF

Mk4/DiFX fourfit 3.21 rev 2937

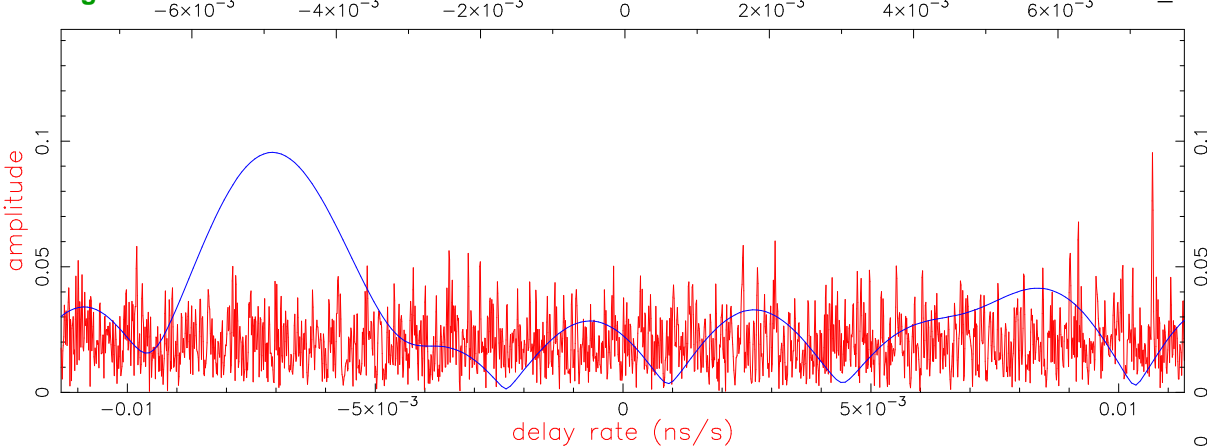
fxmanager

3C84.1IM8OF, No0119, ul

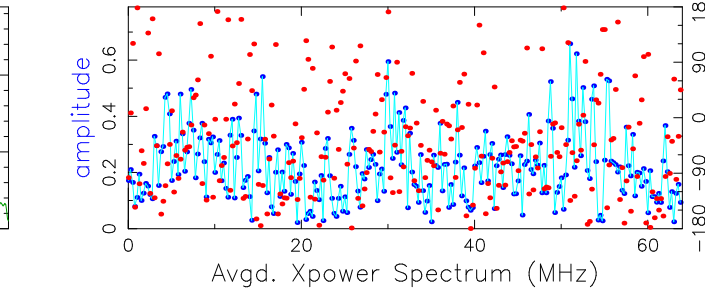
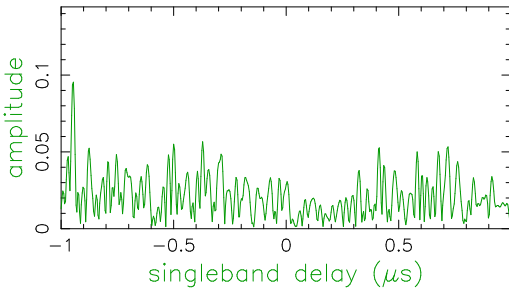
KVNUS - VLBA_LA, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 0

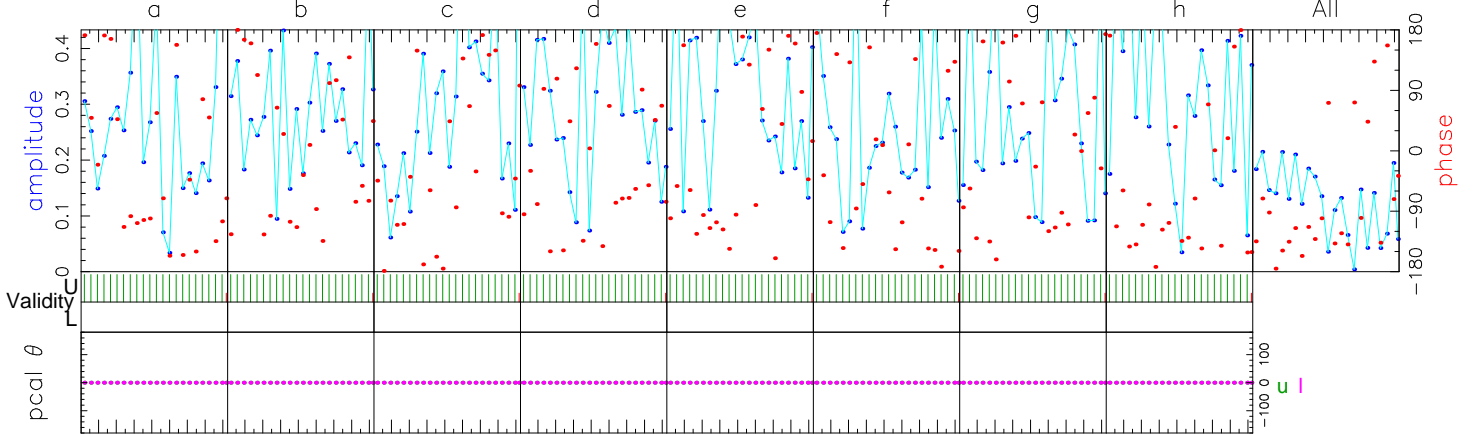


SNR 5.8
 Int time 479.979
 Amp 0.144
 Phase -123.9
 PFD 7.8e-01
 Delays (us)
 SBD -0.946918
 MBD -0.004939
 Fringe rate (Hz)
 0.921875
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133548
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	-109.3	-179.1	-97.7	-122.7	-129.6	-101.0	-126.3	Phase	-123.9
	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3	Ampl.	0.1
	183.9	452.6	42.7	48.0	440.3	123.4	99.6	15.6	Sbd box	14.6
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.19121606370E+03		Apriori delay (usec)		3.19215850244E+03		Resid mbdelay (usec)		-4.93874E-03	+/- 1.9E-04
Sband delay (usec)	3.19121158469E+03		Apriori clock (usec)		2.9658704E+00		Resid sbdelay (usec)		-9.46918E-01	+/- 1.5E-03
Phase delay (usec)	3.19215849845E+03		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		-3.99570E-06	+/- 6.4E-07
Delay rate (us/s)	1.65423662398E+00		Apriori rate (us/s)		1.65422592192E+00		Resid rate (us/s)		1.07021E-05	+/- 2.3E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.72145192741E-05		Resid phase (deg)		-123.9	+/- 19.7

ph/seg (deg) 71.6 47.3 Search (2048X32) 0.092 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.5 82.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 27.5 27.9 Inc. seg. avg. 0.142 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 37.9 48.6 Inc. frq. avg. 0.137 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 64.5 el 47.0 pa -79.7 l: az 298.7 el 37.2 pa 72.5 u,v (fr/asec) -12699.390 -1064.236 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/ul.W.220.1IM8OF

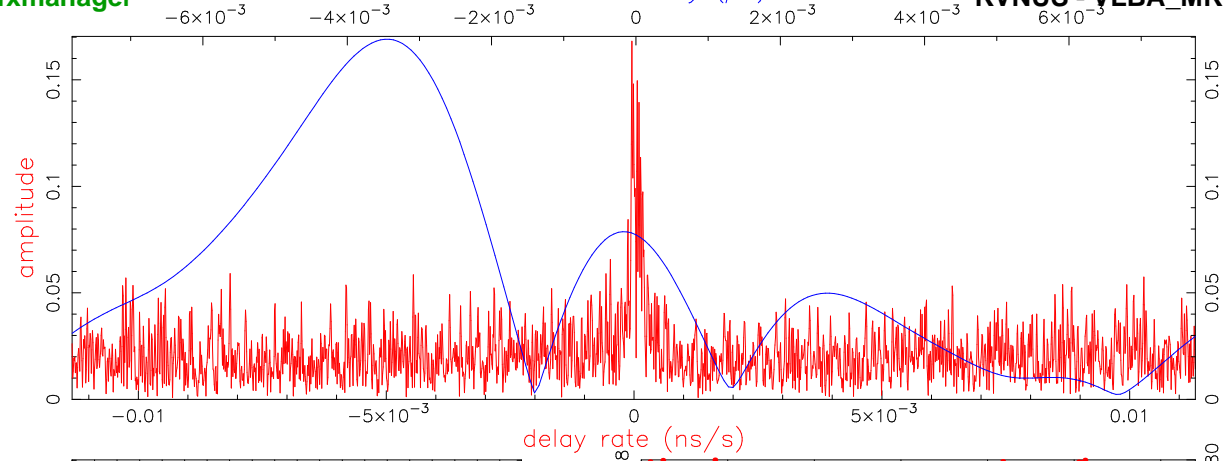
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, um

KVNUS - VLBA_MK, fgroup W, pol LL

multiband delay (μ s)



Fringe quality 9

SNR 10.2

Int time 477.969

Amp 0.170

Phase -134.0

PFD 9.8e-16

Delays (us)

SBD 0.005482

MBD -0.003302

Fringe rate (Hz)

-0.003471

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c202b

Exper # 16383

Yr:day 2020:284

Start 134502.54

Stop 135301.26

FRT 134901.00

Corr/FF/build

2021:023:101405

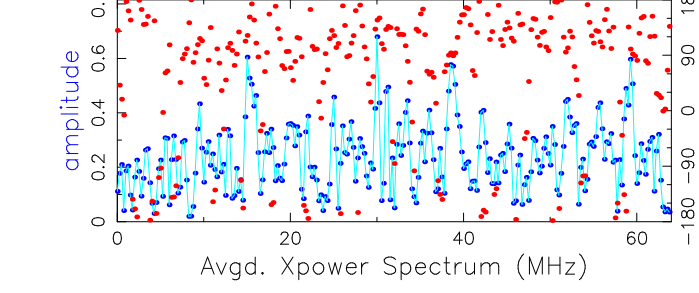
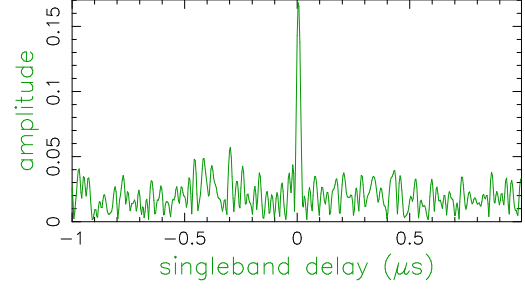
2021:023:133536

2020:247:085004

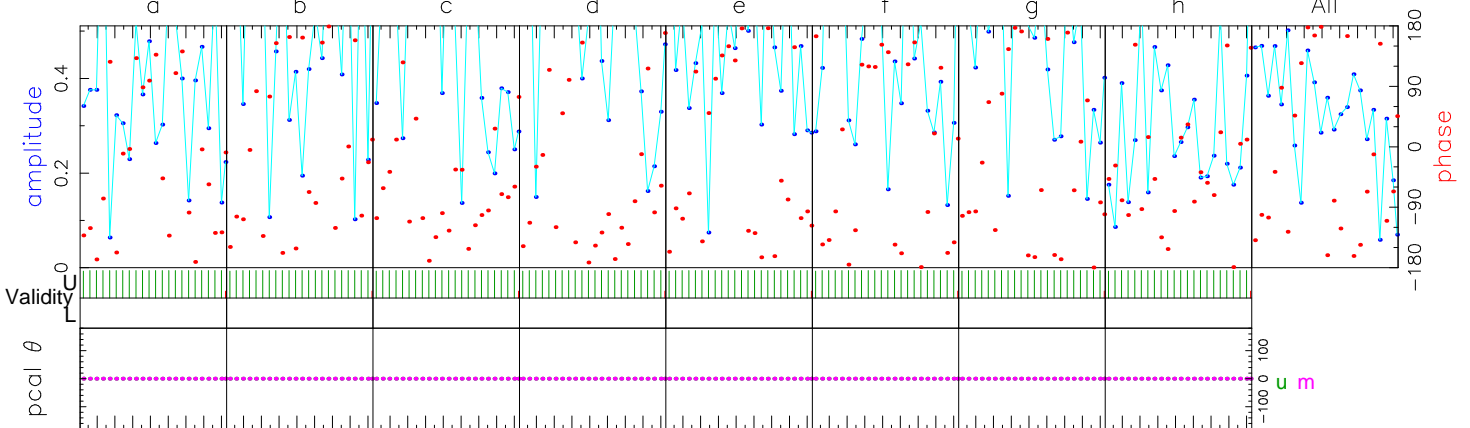
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-146.1	-123.4	-94.3	-135.7	-152.8	166.5	-138.8	-61.1	Phase	-134.0
	0.1	0.2	0.3	0.3	0.3	0.2	0.2	0.1	Ampl.	0.2
	260.9	258.4	257.7	257.9	258.7	258.2	258.8	260.4	Sbd box	258.4
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.99475886317E+03	Apriori delay (usec)	-2.99477118619E+03	Resid mbdelay (usec)	-3.30199E-03	+/-	1.1E-04
Sband delay (usec)	-2.99476570394E+03	Apriori clock (usec)	-1.0805677E+01	Resid sbdelay (usec)	5.48225E-03	+/-	8.5E-04
Phase delay (usec)	-2.99477119051E+03	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-4.32138E-06	+/-	3.6E-07
Delay rate (us/s)	1.16025784837E+00	Apriori rate (us/s)	1.16025788866E+00	Resid rate (us/s)	-4.02935E-08	+/-	1.3E-09
Total phase (deg)	-126.1	Apriori accel (us/s/s)	3.39862984722E-05	Resid phase (deg)	-134.0	+/-	11.2

ph/seg (deg)	75.8	Theor.	27.0	Amplitude	0.170 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	116.0		47.1	Search (2048X32)	0.161	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	43.0		15.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	42.4		27.8	Inc. seg. avg.	0.300	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.195	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

u: az 64.5 el 47.0 pa -79.7 m: az 326.6 el 62.5 pa 135.3 u,v (fr/asec) -8811.547 4082.343 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/um..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/um.W.163.11M8OF

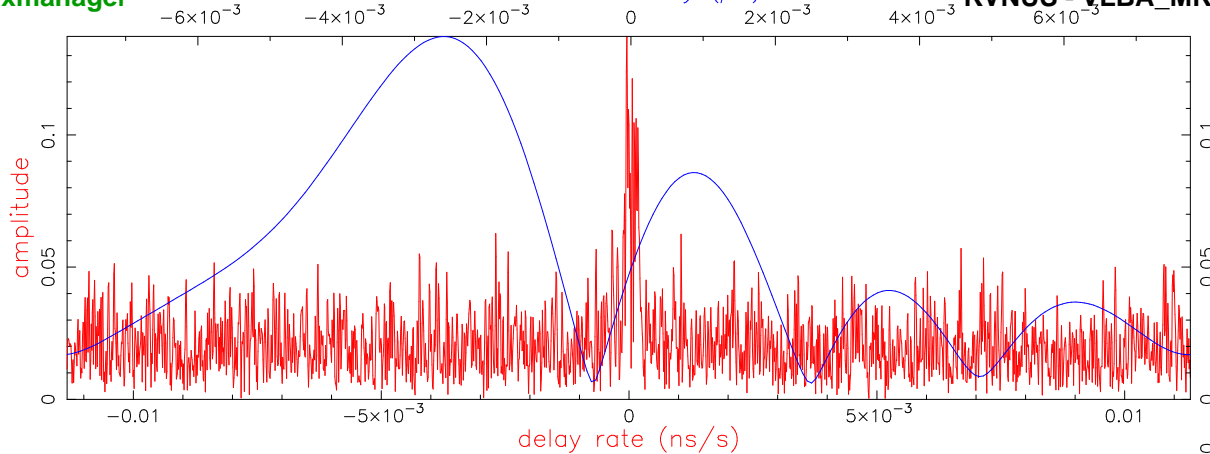
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, um

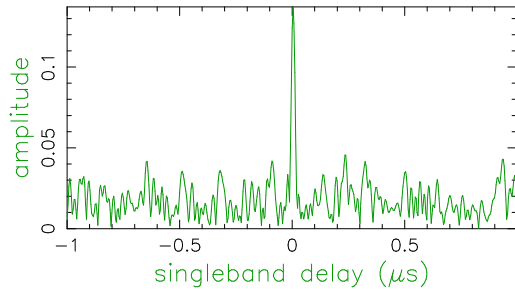
KVNUS - VLBA_MK, fgroup W, pol RR

multiband delay (μ s)

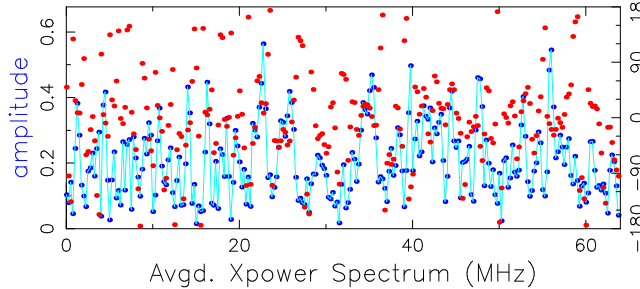


Fringe quality 9

SNR 8.2
 Int time 477.969
 Amp 0.137
 Phase 75.2
 PFD 8.1e-08
 Delays (us)
 SBD 0.004114
 MBD -0.002588
 Fringe rate (Hz)
 -0.003858
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

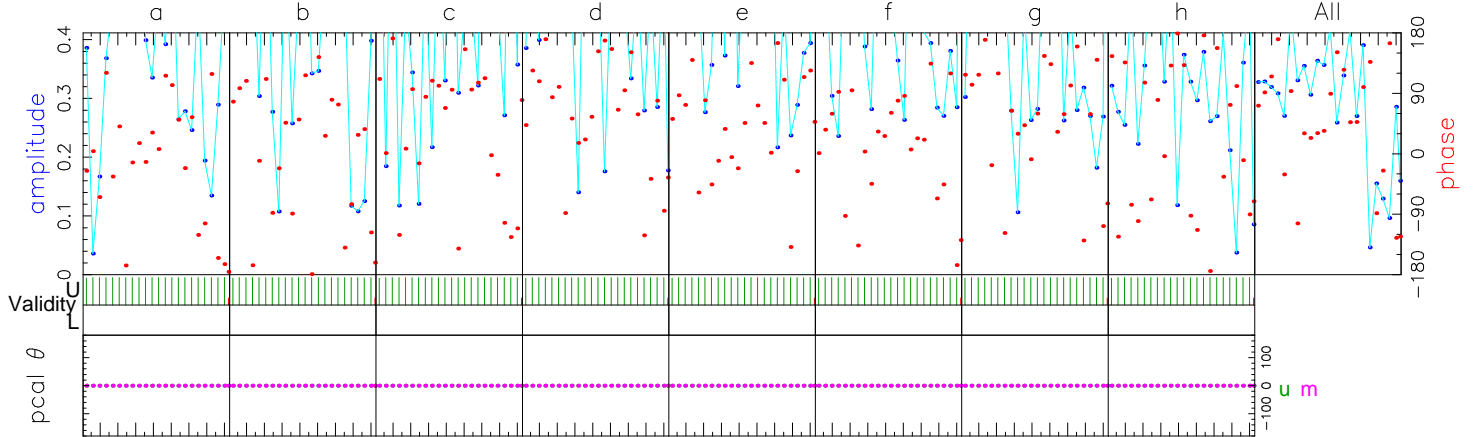


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134502.54
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133540
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0		
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: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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) -2.99477377427E+03 Apriori delay (usec) -2.99477118619E+03 Resid mbdelay (usec) -2.58808E-03 +/- 1.3E-04
 Sband delay (usec) -2.99476707169E+03 Apriori clock (usec) -1.0805677E+01 Resid sbdelay (usec) 4.11450E-03 +/- 1.0E-03
 Phase delay (usec) -2.99477118376E+03 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) 2.42655E-06 +/- 4.5E-07
 Delay rate (us/s) 1.16025784387E+00 Apriori rate (us/s) 1.16025788866E+00 Resid rate (us/s) -4.47872E-08 +/- 1.6E-09
 Total phase (deg) -276.8 Apriori accel (us/s/s) 3.39862984722E-05 Resid phase (deg) 75.2 +/- 14.0

RMS Theor. Amplitude 0.137 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 83.2 33.5 Search (2048X32) 0.136 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 137.8 58.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 66.8 19.8 Inc. seg. avg. 0.252 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 52.3 34.5 Inc. frq. avg. 0.165 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 m: az 326.6 el 62.5 pa 135.3 u,v (fr/asec) -8811.547 4082.343 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/um..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/um.W.182.11M8OF

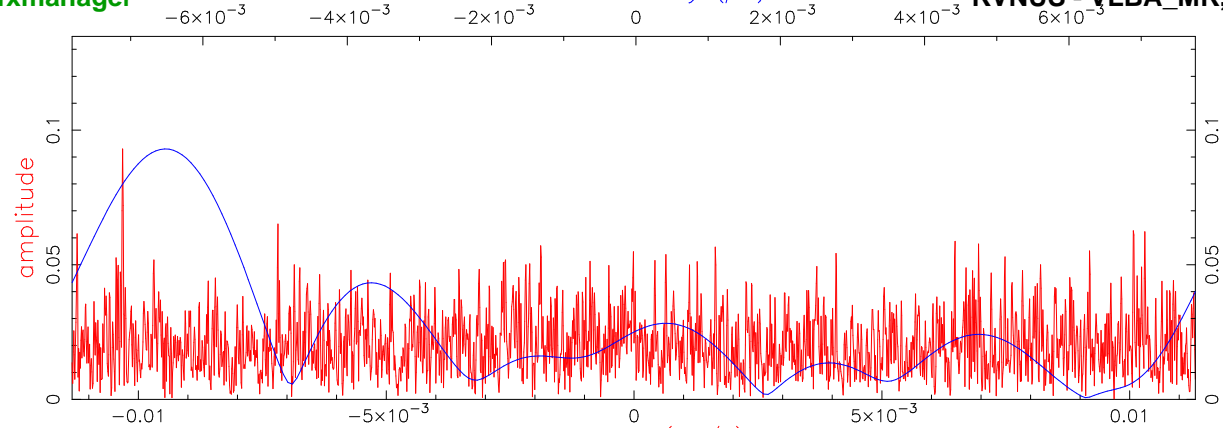
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, um

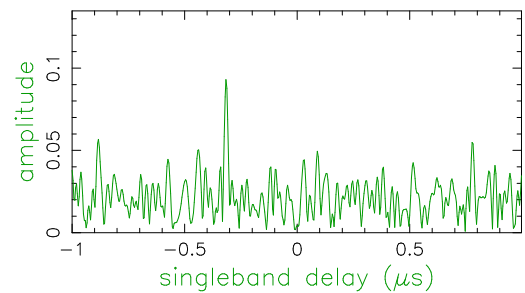
KVNUS - VLBA_MK, fgroup W, pol LR

multiband delay (μ s)

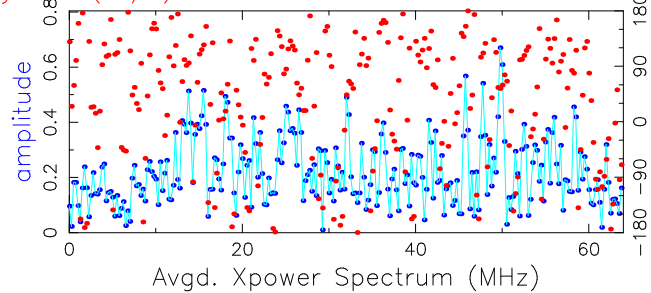


Fringe quality 0

SNR 5.6
 Int time 477.969
 Amp 0.135
 Phase 134.8
 PFD 1.0e+00
 Delays (us)
 SBD -0.315776
 MBD -0.006511
 Fringe rate (Hz)
 -0.890573
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

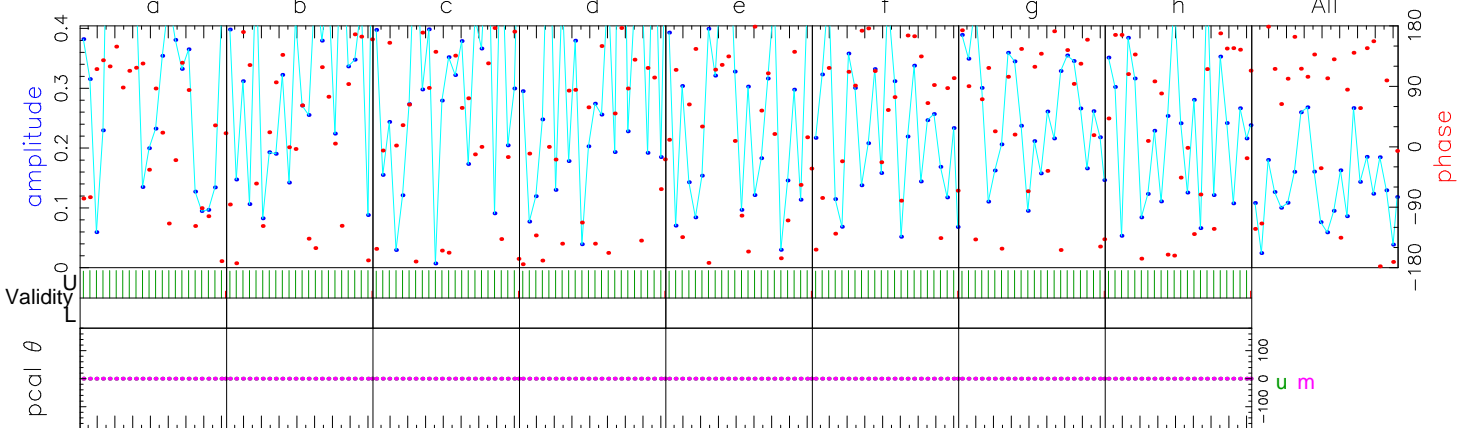


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134502.54
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133543
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	113.2	164.3	152.0	157.4	98.7	115.8	134.2	145.6	Phase	134.8
u	0.2	0.1	0.1	0.2	0.1	0.2	0.2	0.1	Ampl.	0.1
m	482.7	433.6	125.4	136.5	66.8	274.8	333.5	490.9	Sbd box	176.2
u	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	APs used	
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	

Group delay (usec)(sbd) -2.99509019722E+03 Apriori delay (usec) -2.99477118619E+03 Resid mbdelay (usec) -6.51104E-03 +/- 1.9E-04
 Sband delay (usec) -2.99508696269E+03 Apriori clock (usec) -1.0805677E+01 Resid sbdelay (usec) -3.15776E-01 +/- 1.5E-03
 Phase delay (usec) -2.99477118184E+03 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) 4.34562E-06 +/- 6.6E-07
 Delay rate (us/s) 1.16024754999E+00 Apriori rate (us/s) 1.16025788866E+00 Resid rate (us/s) -1.03387E-05 +/- 2.4E-09
 Total phase (deg) -217.3 Apriori accel (us/s/s) 3.39862984722E-05 Resid phase (deg) 134.8 +/- 20.6

RMS Theor. Amplitude 0.135 +/- 0.024 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 63.9 49.3 Search (2048X32) 0.090 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 85.9 86.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 25.6 29.1 Inc. seg. avg. 0.146 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 22.0 50.8 Inc. frq. avg. 0.128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 m: az 326.6 el 62.5 pa 135.3 u,v (fr/asec) -8811.547 4082.343 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/um..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/um.W.200.11M8OF

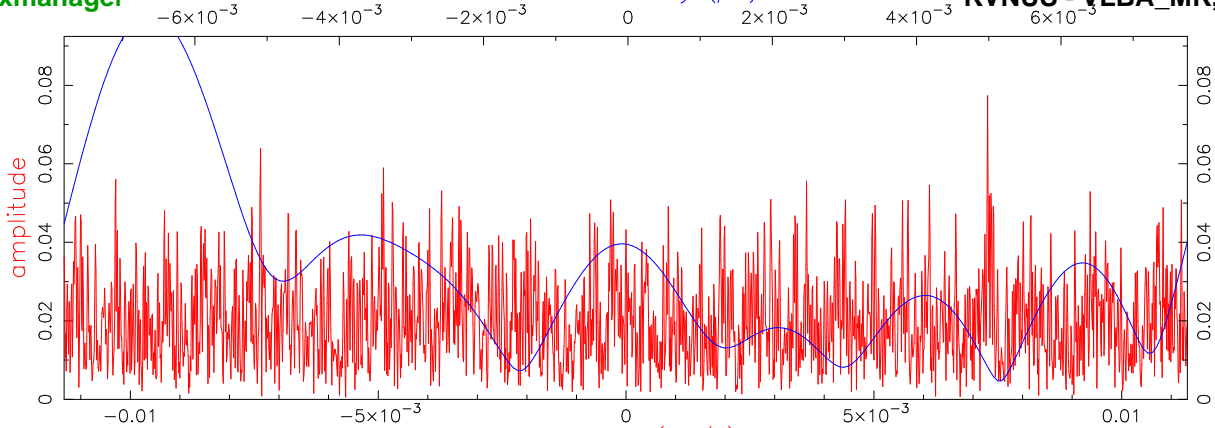
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, um

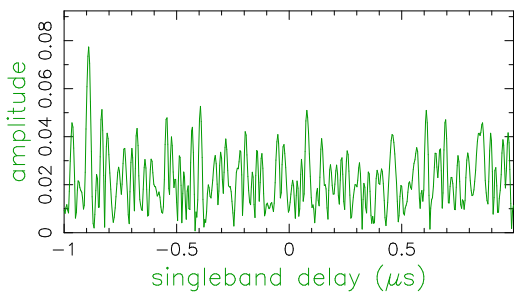
KVNUS - VLBA_MK, fgroup W, pol RL

multiband delay (μ s)

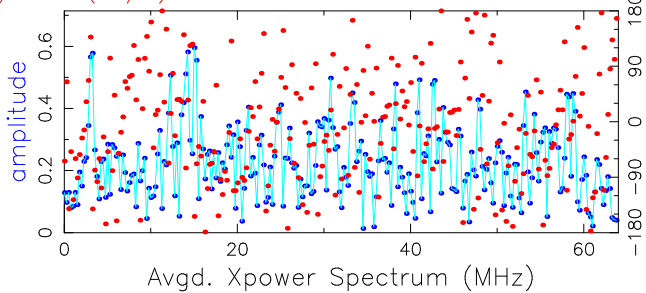


Fringe quality 0

SNR 4.6
 Int time 477.969
 Amp 0.092
 Phase 60.4
 PFD 1.0e+00
 Delays (us)
 SBD -0.891144
 MBD 0.008301
 Fringe rate (Hz)
 0.629346
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

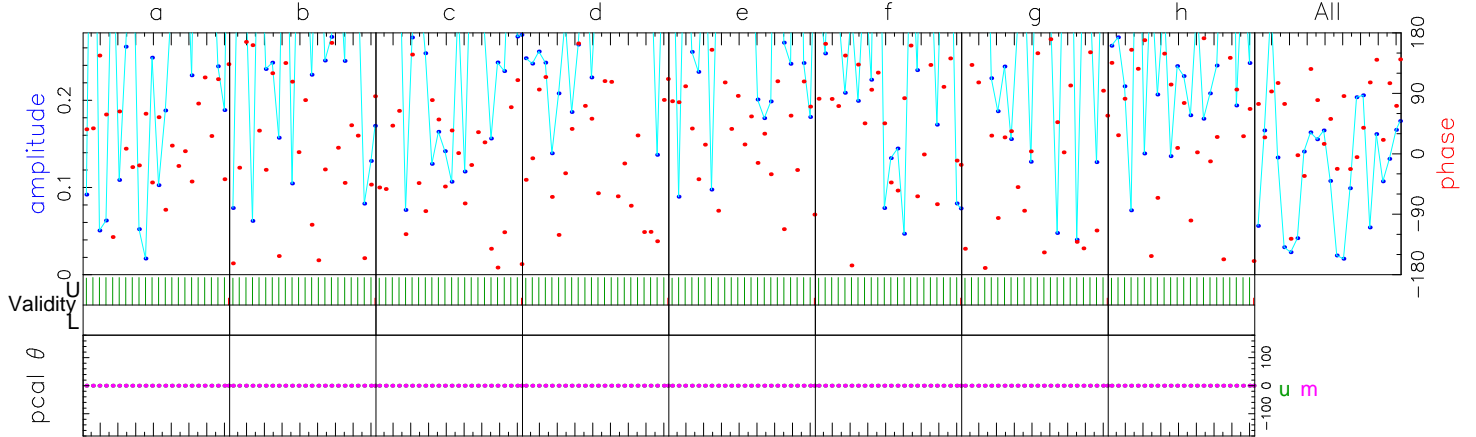


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134502.54
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133547
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
24.0	42.0	9.4	19.1	45.0	105.3	143.7	114.7	114.7	Phase	60.4
0.2	0.1	0.1	0.1	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1
30.0	510.0	242.5	506.3	29.6	278.3	434.2	454.7	454.7	Sbd box	28.9
U/L 935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	APs used	
u 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m 1000	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	0:0	PC phase	
u:m 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	
m 1000	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	
									Tracks	
Group delay (usec)(sbd)	-2.99566913540E+03		Apriori delay (usec)	-2.99477118619E+03	Resid mbdelay (usec)	8.30078E-03	+/-	2.3E-04		
Sband delay (usec)	-2.99566233044E+03		Apriori clock (usec)	-1.0805677E+01	Resid sbdelay (usec)	-8.91144E-01	+/-	1.9E-03		
Phase delay (usec)	-2.99477118424E+03		Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	1.94737E-06	+/-	8.0E-07		
Delay rate (us/s)	1.16026519474E+00		Apriori rate (us/s)	1.16025788866E+00	Resid rate (us/s)	7.30608E-06	+/-	2.9E-09		
Total phase (deg)		-291.7	Apriori accel (us/s/s)	3.39862984722E-05	Resid phase (deg)	60.4	+/-	24.7		

ph/seg (deg) 62.6 59.3 Search (2048X32) 0.098 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 109.6 103.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 55.0 35.0 Inc. seg. avg. 0.095 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 63.0 61.1 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 64.5 el 47.0 pa -79.7 m: az 326.6 el 62.5 pa 135.3 u,v (fr/asec) -8811.547 4082.343 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/um..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/um.W.219.11M8OF

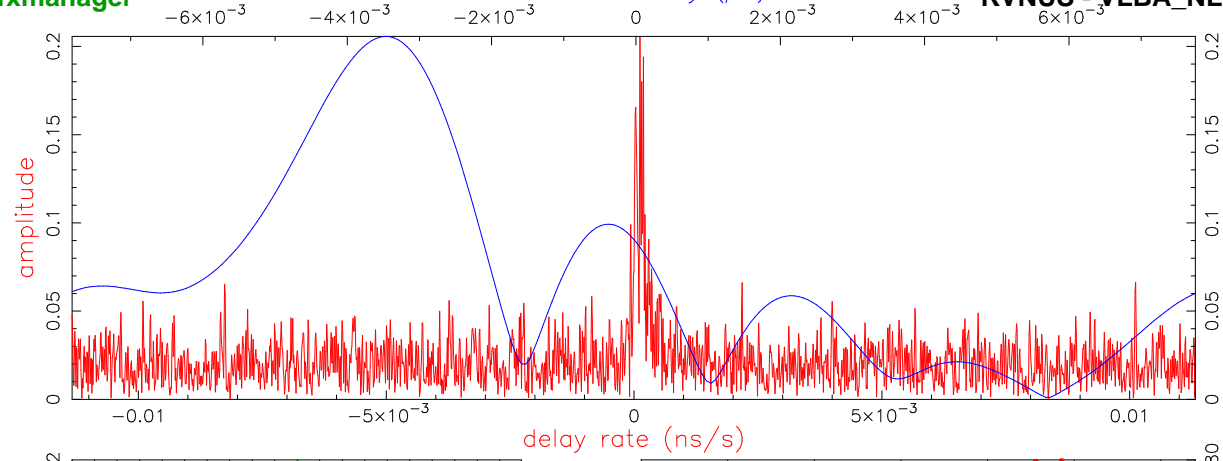
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, un

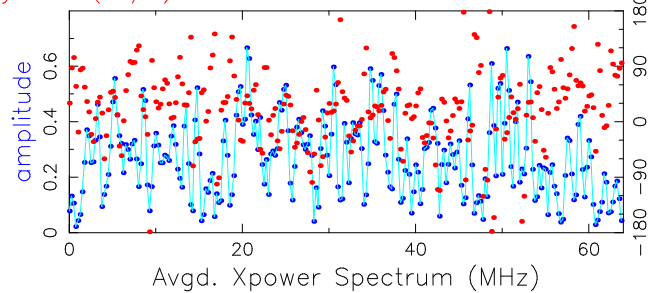
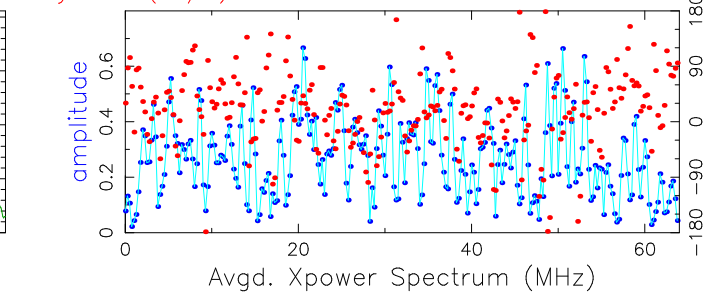
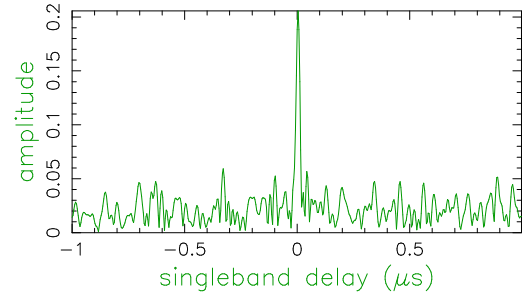
KVNUS - VLBA_NL, fgroup W, pol LL

multiband delay (μ s)



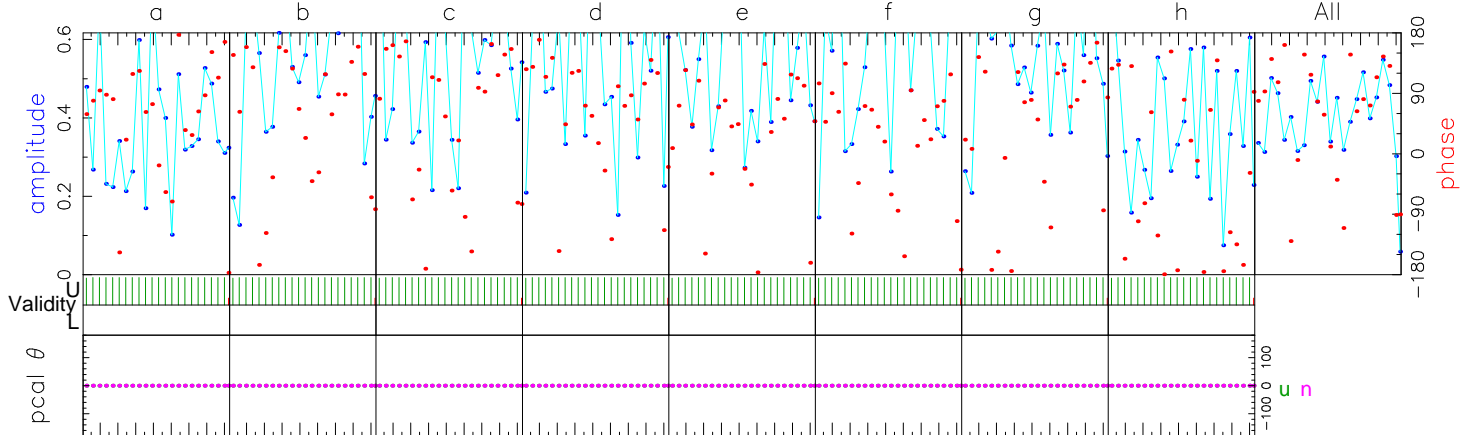
Fringe quality 9

SNR 12.3
 Int time 477.984
 Amp 0.206
 Phase 104.8
 PFD 4.9e-26
 Delays (us)
 SBD 0.003923
 MBD -0.003462
 Fringe rate (Hz)
 0.010646
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134502.54
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133536
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
n	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		
u:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

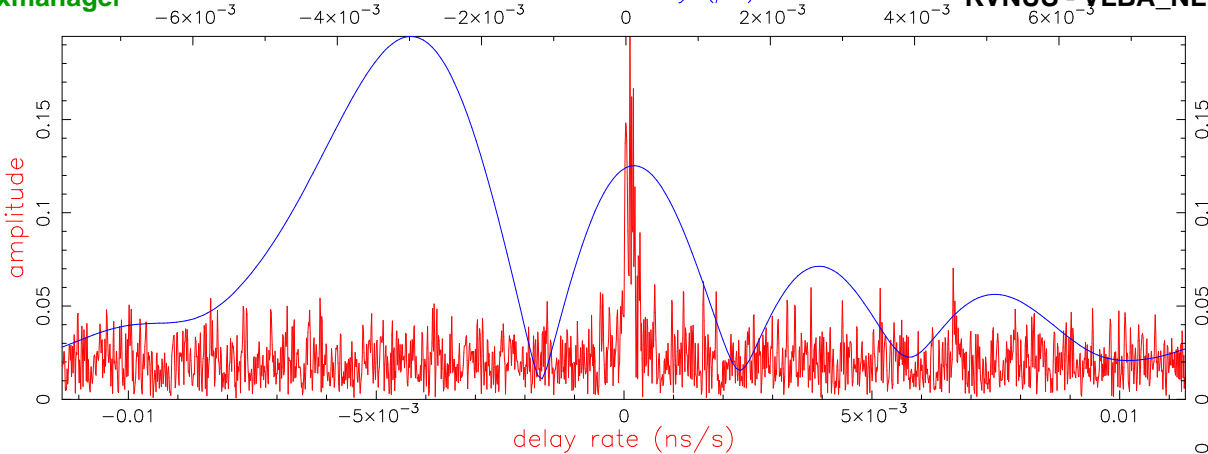
Group delay (usec)(sbd)	5.36176246783E+03	Apriori delay (usec)	5.36176593029E+03	Resid mbdelay (usec)	-3.46246E-03	+/-	8.8E-05
Sband delay (usec)	5.36176985379E+03	Apriori clock (usec)	2.3872266E+00	Resid sbdelay (usec)	3.92350E-03	+/-	7.0E-04
Phase delay (usec)	5.36176593367E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	3.37941E-06	+/-	3.0E-07
Delay rate (us/s)	1.62985651674E+00	Apriori rate (us/s)	1.62985639314E+00	Resid rate (us/s)	1.23594E-07	+/-	1.1E-09
Total phase (deg)	189.4	Apriori accel (us/s/s)	-3.48494436437E-05	Resid phase (deg)	104.8	+/-	9.3

ph/seg (deg)	RMS 76.7	Theor. 22.3	Amplitude Search (2048X32)	0.206 +/- 0.017	0.202	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	109.0	39.0	Interp.	0.000	0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	42.1	13.2	Inc. seg. avg.	0.383	Sample rate(MISamp/s): 128		mb window (us) -0.008 0.008
amp/frq (%)	33.9	23.0	Inc. frq. avg.	0.236	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	dr window (ns/s) -0.011 0.011
u: az 64.5 el 47.0 pa -79.7	n: az 300.7 el 30.2 pa 59.1	u,v (fr/asec)	-12549.655 -2834.731				ion window (TEC) 0.00 0.00

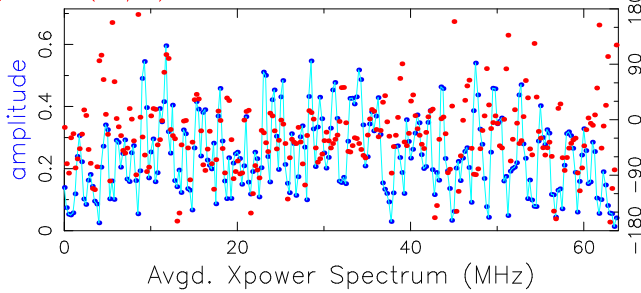
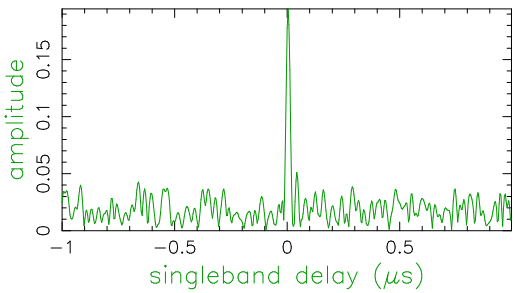
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/un..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/un.W.167.1IM8OF

multiband delay (μ s)

Fringe quality 9

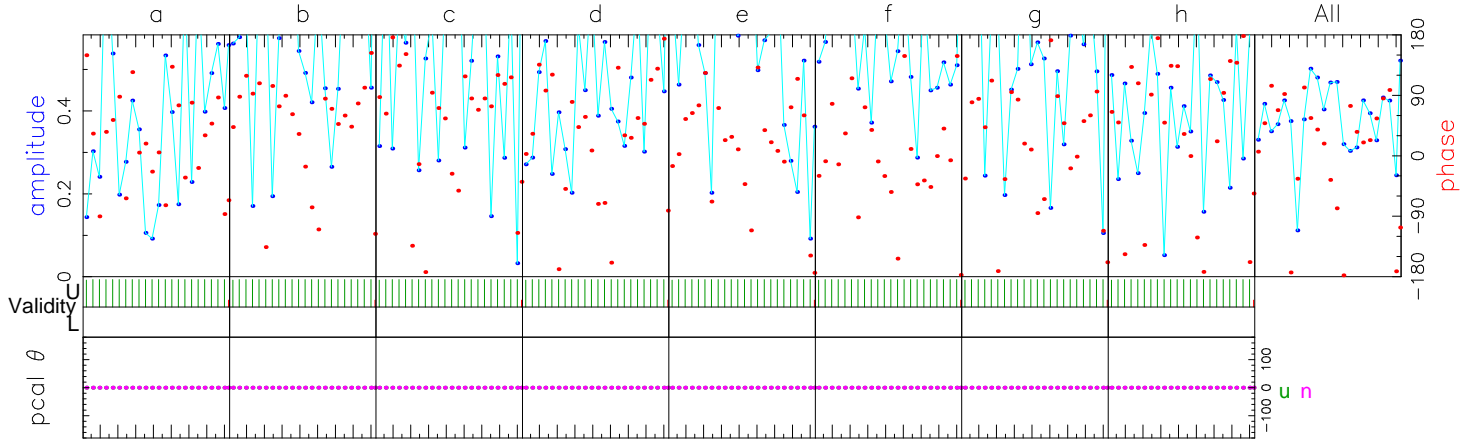


SNR 11.6
Int time 477.984
Amp 0.195
Phase 55.4
PFD 1.4e-22
Delays (us)
SBD 0.004086
MBD -0.002972
Fringe rate (Hz) 0.010641
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134502.54
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133541
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	20.6	78.6	87.2	73.3	33.5	7.4	45.5	135.0	Phase	55.4
	0.2	0.3	0.2	0.2	0.4	0.2	0.2	0.2	Ampl.	0.2
	259.9	258.2	257.3	193.3	258.2	258.6	258.7	260.3	Sbd box	258.0
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.36176295852E+03		Apriori delay (usec)		5.36176593029E+03		Resid mbdelay (usec)		-2.97177E-03	+/- 9.3E-05
Sband delay (usec)	5.36177001604E+03		Apriori clock (usec)		2.3872266E+00		Resid sbdelay (usec)		4.08575E-03	+/- 7.4E-04
Phase delay (usec)	5.36176593207E+03		Apriori clockrate (us/s)		-1.0000003E-07		Resid phdelay (usec)		1.78633E-06	+/- 3.2E-07
Delay rate (us/s)	1.62985651667E+00		Apriori rate (us/s)		1.62985639314E+00		Resid rate (us/s)		1.23529E-07	+/- 1.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-3.48494436437E-05		Resid phase (deg)		55.4	+/- 9.9

	RMS	Theor.	Amplitude	0.195 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	69.5	23.6	Search (2048X32)	0.191	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	104.1	41.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	45.3	13.9	Inc. seg. avg.	0.348	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	41.0	24.3	Inc. frq. avg.	0.230	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 n: az 300.7 el 30.2 pa 59.1 u,v (fr/asec) -12549.655 -2834.731 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/un..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/un.W.192.1IM8OF

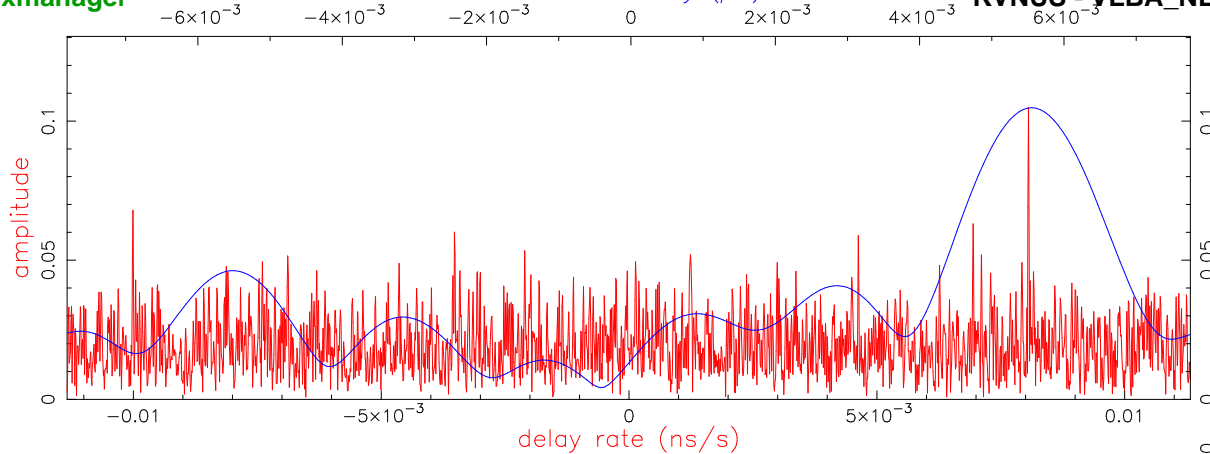
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, un

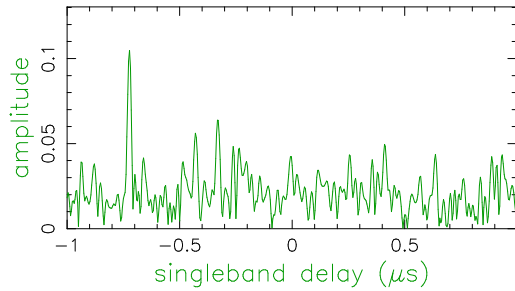
KVNUS - VLBA_NL, fgroup W, pol LR

multiband delay (μ s)

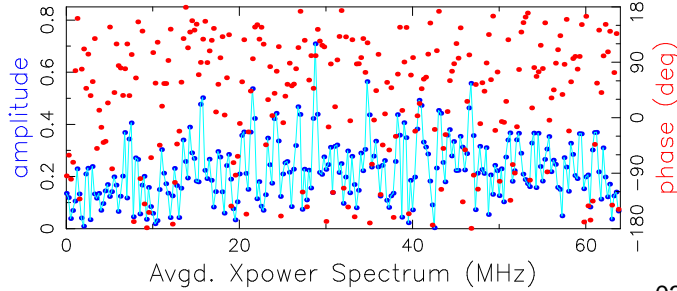


Fringe quality 0

SNR 6.3
 Int time 477.984
 Amp 0.130
 Phase -20.3
 PFD 9.3e-02
 Delays (us)
 SBD -0.723064
 MBD 0.005546
 Fringe rate (Hz)
 0.695354
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

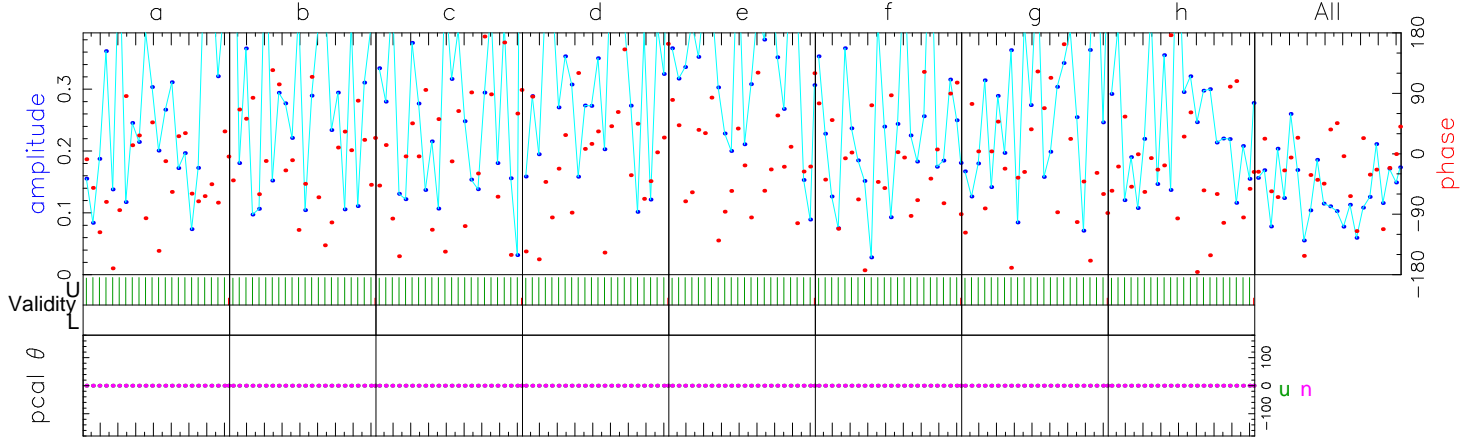


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134502.54
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133545
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



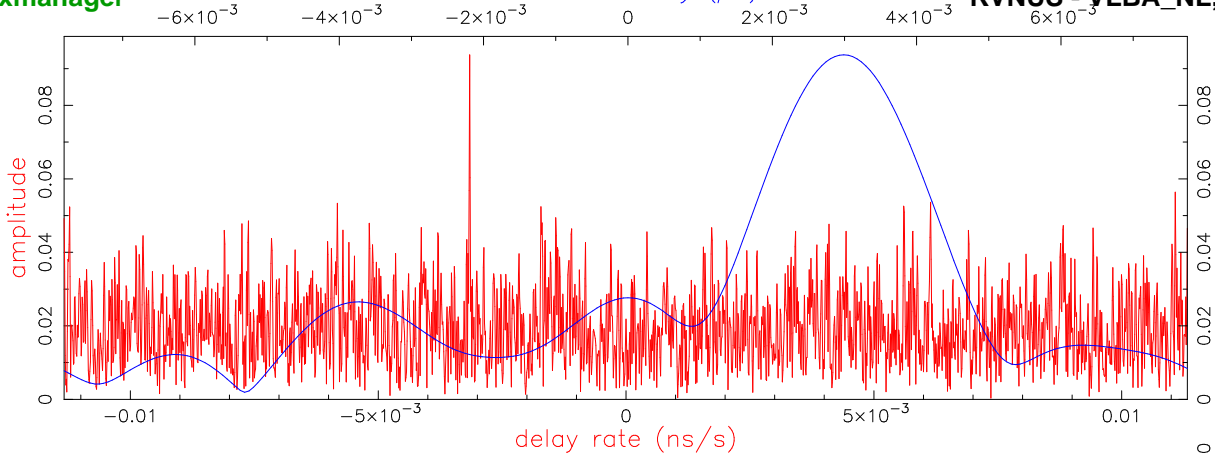
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-41.4	-16.7	11.9	-0.1	-3.0	-12.4	-31.3	-44.1	Phase	-20.3
	0.2	0.2	0.0	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	72.7	148.3	173.0	322.2	70.4	421.6	416.9	399.9	Sbd box	71.9
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	APs 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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 5.36103710134E+03 Apriori delay (usec) 5.36176593029E+03 Resid mbdelay (usec) 5.54606E-03 +/- 1.7E-04
 Sband delay (usec) 5.36104286654E+03 Apriori clock (usec) 2.3872266E+00 Resid sbdelay (usec) -7.23064E-01 +/- 1.4E-03
 Phase delay (usec) 5.36176592963E+03 Apriori clockrate (us/s) -1.0000003E-07 Resid phdelay (usec) -6.54922E-07 +/- 5.9E-07
 Delay rate (us/s) 1.62986446551E+00 Apriori rate (us/s) 1.62985639314E+00 Resid rate (us/s) 8.07237E-06 +/- 2.1E-09
 Total phase (deg) 64.3 Apriori accel (us/s/s) -3.48494436437E-05 Resid phase (deg) -20.3 +/- 18.3

RMS Theor. Amplitude 0.130 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 50.2 43.8 Search (2048X32) 0.101 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 56.3 76.5 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 22.2 25.8 Inc. seg. avg. 0.130 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 44.9 45.1 Inc. frq. avg. 0.124 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

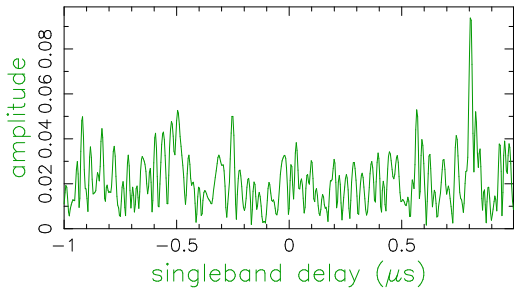
u: az 64.5 el 47.0 pa -79.7 n: az 300.7 el 30.2 pa 59.1 u,v (fr/asec) -12549.655 -2834.731 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/un..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/un.W.210.1IM8OF

multiband delay (μ s)

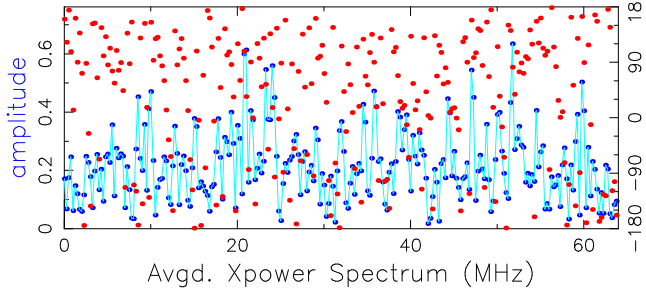


Fringe quality 0

SNR 5.7
Int time 477.984
Amp 0.099
Phase -0.2
PFD 9.3e-01
Delays (us)
SBD 0.806446
MBD 0.003007
Fringe rate (Hz)
-0.271803
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

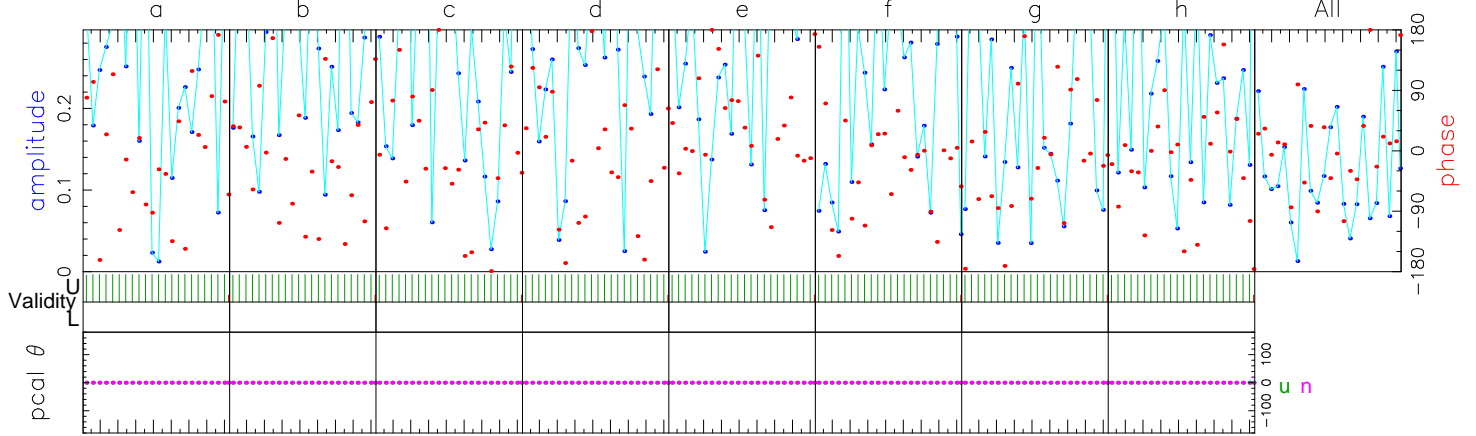


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134502.54
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133549
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
n	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		
u:n	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		
n	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	5.36256581211E+03	Apriori delay (usec)	5.36176593029E+03	Resid mbdelay (usec)	3.00682E-03	+/-	1.9E-04	
Sband delay (usec)	5.36257237629E+03	Apriori clock (usec)	2.3872266E+00	Resid sbdelay (usec)	8.06446E-01	+/-	1.5E-03	
Phase delay (usec)	5.36176593028E+03	Apriori clockrate (us/s)	-1.0000003E-07	Resid phdelay (usec)	-7.42373E-09	+/-	6.5E-07	
Delay rate (us/s)	1.62985323777E+00	Apriori rate (us/s)	1.62985639314E+00	Resid rate (us/s)	-3.15537E-06	+/-	2.3E-09	
Total phase (deg)		84.3	Apriori accel (us/s/s)	-3.48494436437E-05	Resid phase (deg)	-0.2	+/-	20.0

ph/seg (deg)	63.5	Theor.	48.1	Amplitude	0.099 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.2		83.9	Search (2048X32)	0.091	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	19.0		28.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	33.1		49.5	Inc. seg. avg.	0.097	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.090	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

u: az 64.5 el 47.0 pa -79.7 n: az 300.7 el 30.2 pa 59.1 u,v (fr/asec) -12549.655 -2834.731 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/un..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/un.W.226.1IM8OF

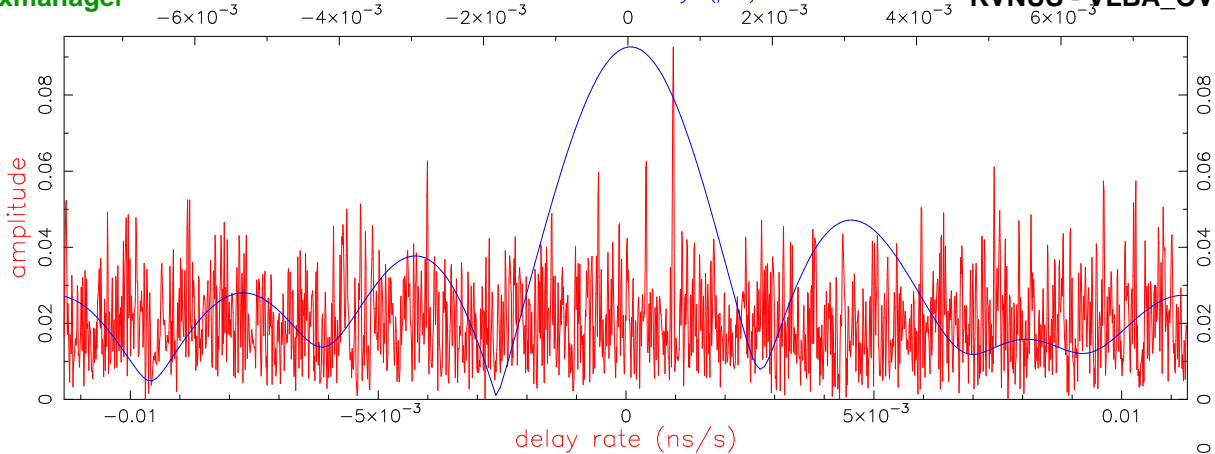
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, uo

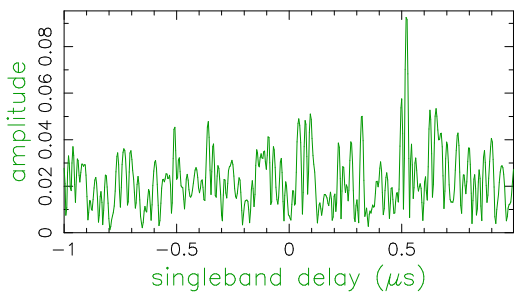
KVNUS - VLBA_OV, fgroup W, pol LL

multiband delay (μ s)

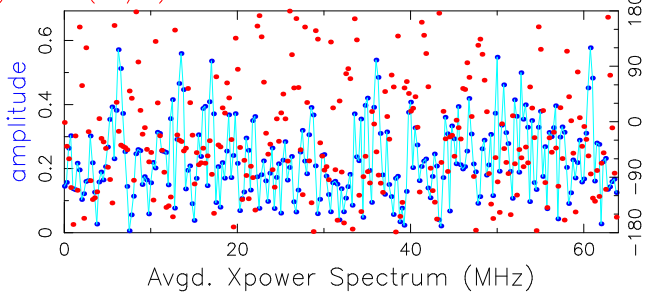


Fringe quality 0

SNR 5.7
 Int time 476.813
 Amp 0.095
 Phase -170.9
 PFD 9.6e-01
 Delays (us)
 SBD 0.521315
 MBD 0.000083
 Fringe rate (Hz)
 0.082016
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

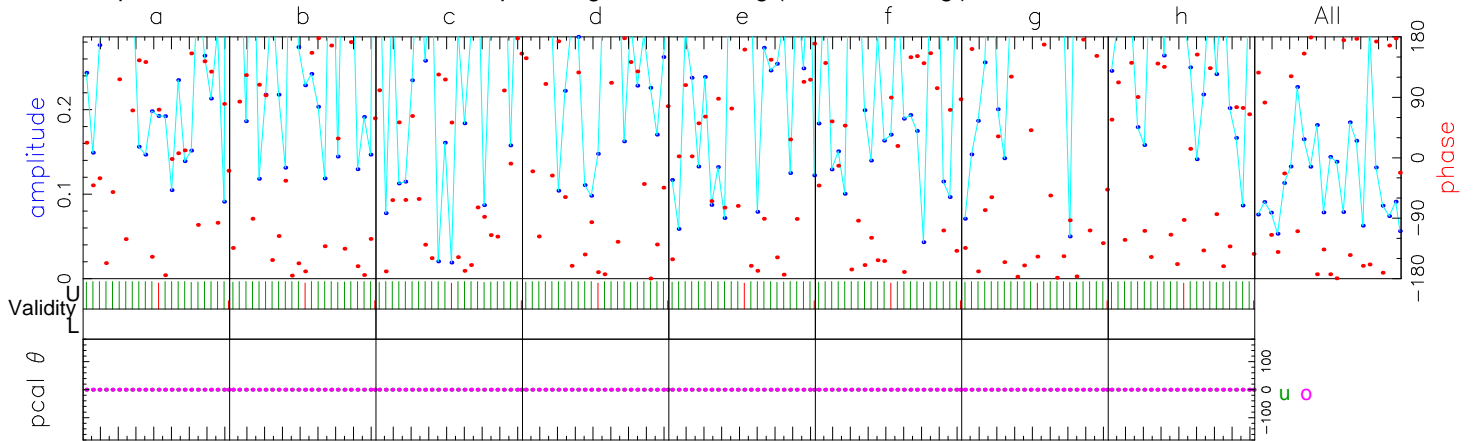


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133538
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-173.3	-171.8	-143.0	-169.9	150.8	173.0	-155.8	-178.6	Phase	-170.9
	0.0	0.2	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
	435.2	286.9	230.3	448.7	449.6	382.8	391.3	127.2	Sbd box	390.5
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	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	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	5.68681750303E+02	Apriori delay (usec)	5.68166042368E+02	Resid mbdelay (usec)	8.29349E-05	+/-	1.9E-04
Sband delay (usec)	5.68687357118E+02	Apriori clock (usec)	-1.8835131E+01	Resid sbdelay (usec)	5.21315E-01	+/-	1.5E-03
Phase delay (usec)	5.68166036856E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-5.51177E-06	+/-	6.5E-07
Delay rate (us/s)	1.55360455780E+00	Apriori rate (us/s)	1.55360360568E+00	Resid rate (us/s)	9.52125E-07	+/-	2.4E-09
Total phase (deg)	149.3	Apriori accel (us/s/s)	-4.90188091896E-06	Resid phase (deg)	-170.9	+/-	20.2

ph/seg (deg)	52.4	Theor.	48.3	Amplitude	0.095 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	69.4	Search (2048X32)	0.090	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	21.6	Inc. seg. avg.	0.093	Inc. frq. avg.	0.086	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	50.0	Inc. frq. avg.	0.086			Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011		
u: az 64.5 el 47.0 pa -79.7		o: az 294.2 el 46.5 pa 75.7		u, v (fr/asec)	-11902.400 -350.823	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/c202b/v1/v1_3mm/1234/No0119/uo..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo.W.175.1IM8OF

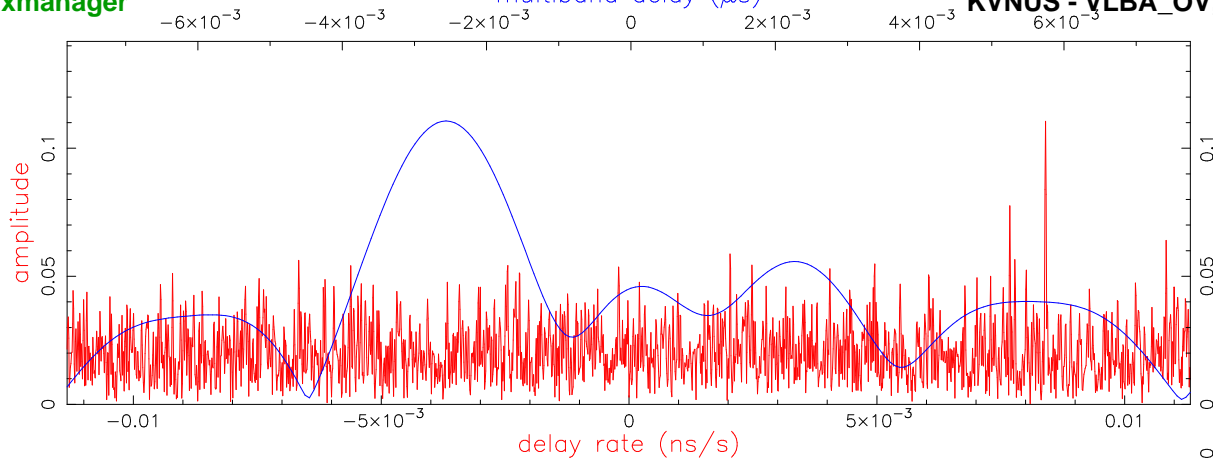
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, uo

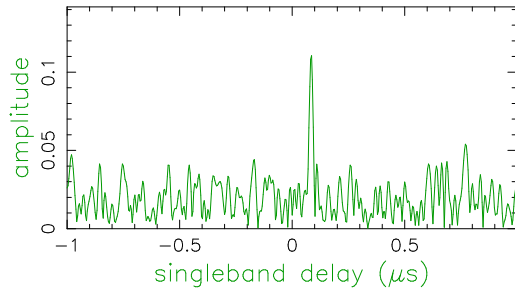
KVNUS - VLBA_OV, fgroup W, pol RR

multiband delay (μ s)

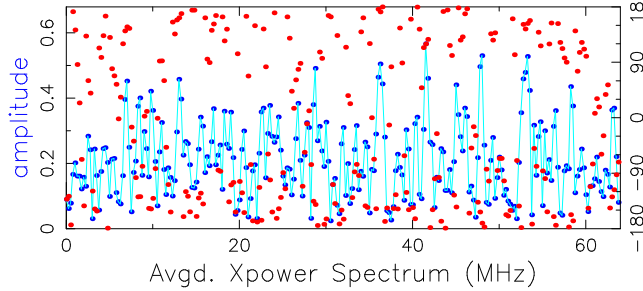


Fringe quality 0

SNR 6.7
 Int time 476.813
 Amp 0.142
 Phase 107.7
 PFD 7.3e-03
 Delays (us)
 SBD 0.084509
 MBD -0.002612
 Fringe rate (Hz)
 0.724860
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

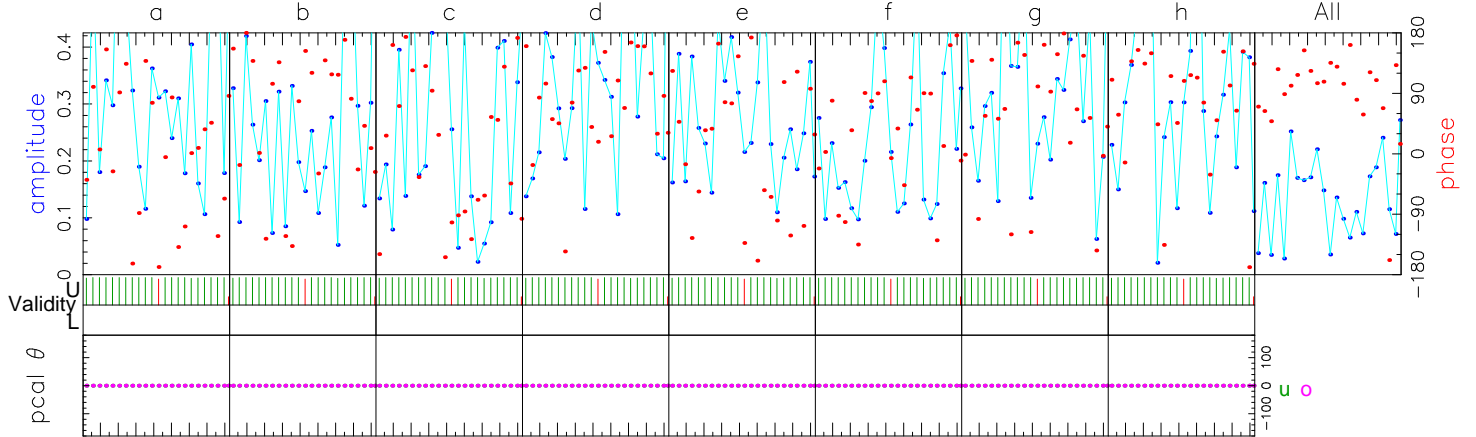


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133542
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	90.8	131.2	122.4	94.7	145.8	76.4	100.9	123.4	Phase	107.7
	0.1	0.1	0.1	0.3	0.0	0.1	0.2	0.3	Ampl.	0.1
	105.1	485.8	140.5	278.9	398.9	257.3	68.1	278.8	Sbd box	278.6
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	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	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	5.68257180045E+02		Apriori delay (usec)		5.68166042368E+02		Resid mbdelay (usec)		-2.61232E-03	+/- 1.6E-04
Sband delay (usec)	5.68250551118E+02		Apriori clock (usec)		-1.8835131E+01		Resid sbdelay (usec)		8.45087E-02	+/- 1.3E-03
Phase delay (usec)	5.68166045841E+02		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		3.47277E-06	+/- 5.5E-07
Delay rate (us/s)	1.55361202059E+00		Apriori rate (us/s)		1.55360360568E+00		Resid rate (us/s)		8.41491E-06	+/- 2.0E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.90188091896E-06		Resid phase (deg)		107.7	+/- 17.2

ph/seg (deg) 37.5 41.1 Search (2048X32) 0.108 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 63.8 71.8 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 25.7 24.3 Inc. seg. avg. 0.134 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 61.4 42.4 Inc. frq. avg. 0.136 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 64.5 el 47.0 pa -79.7 o: az 294.2 el 46.5 pa 75.7 u,v (fr/asec) -11902.400 -350.823 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo.W.193.1IM8OF

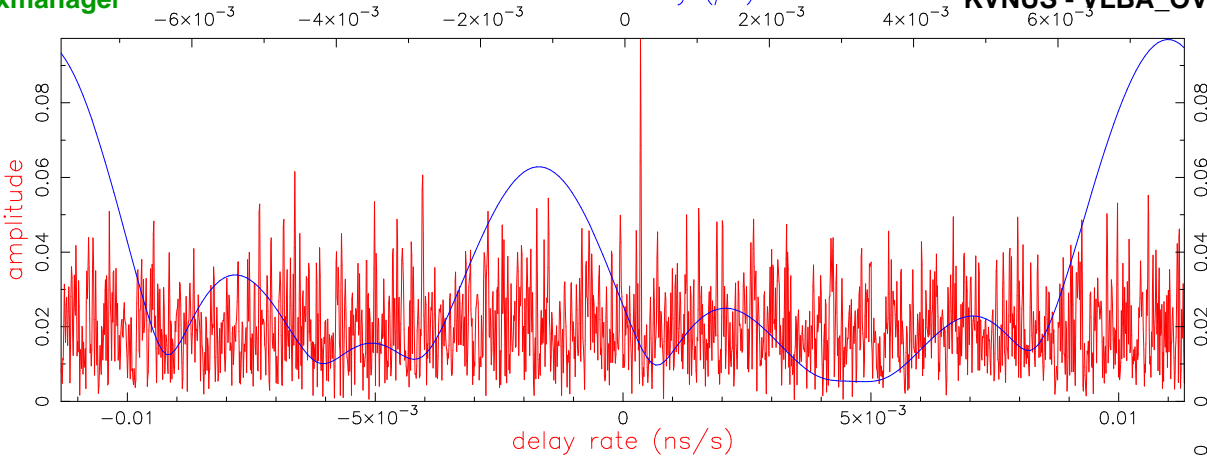
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, uo

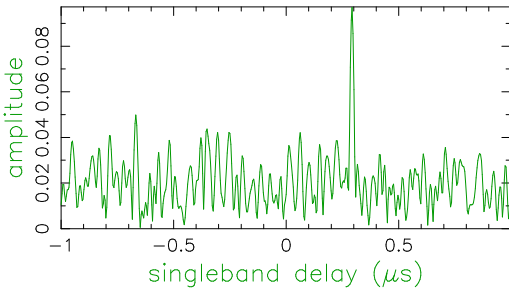
KVNUS - VLBA_OV, fgroup W, pol LR

multiband delay (μ s)

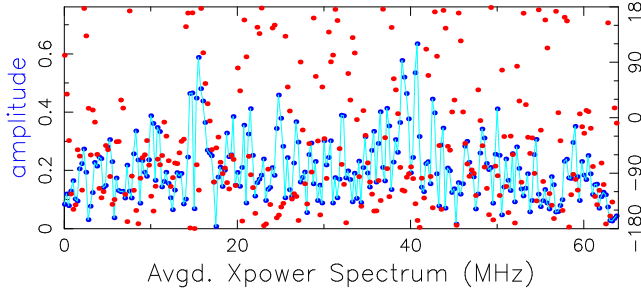


Fringe quality 0

SNR 5.8
 Int time 476.813
 Amp 0.097
 Phase -69.8
 PFD 8.0e-01
 Delays (us)
 SBD 0.292286
 MBD 0.007511
 Fringe rate (Hz)
 0.030505
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

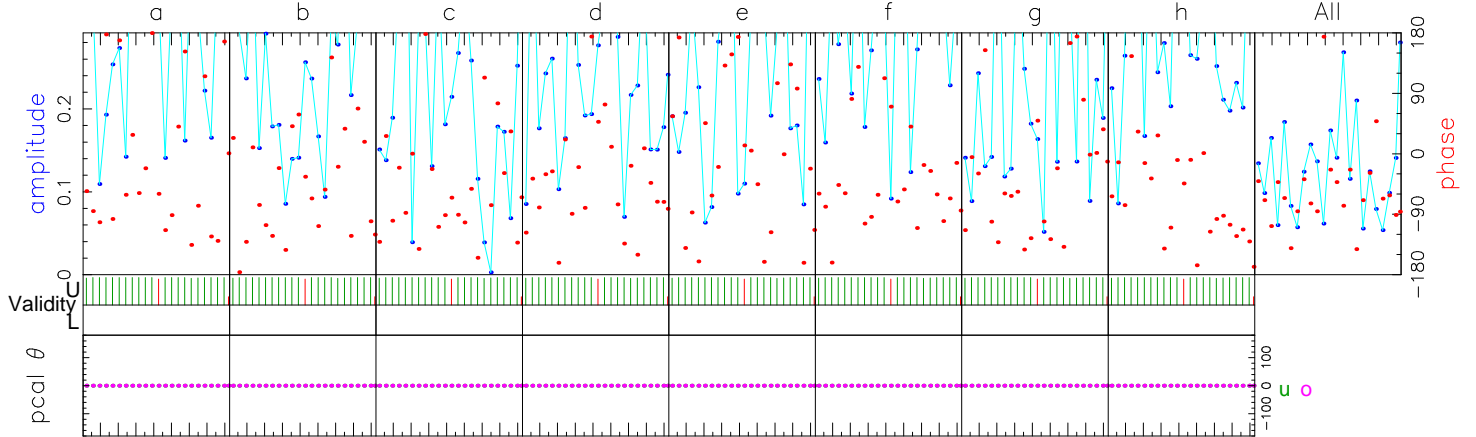


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133545
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-95.3	-34.2	-89.5	-38.2	-58.3	-62.0	-106.8	-71.3	Phase	-69.8
	0.1	0.1	0.1	0.1	0.0	0.2	0.1	0.1	Ampl.	0.1
	333.1	126.0	497.5	272.3	15.3	330.9	505.1	28.6	Sbd box	331.8
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	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	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)	5.68454803061E+02		Apriori delay (usec)		5.68166042368E+02		Resid mbdelay (usec)		7.51069E-03	+/- 1.9E-04
Sband delay (usec)	5.68458328118E+02		Apriori clock (usec)		-1.8835131E+01		Resid sbdelay (usec)		2.92286E-01	+/- 1.5E-03
Phase delay (usec)	5.68166040117E+02		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		-2.25162E-06	+/- 6.4E-07
Delay rate (us/s)	1.55360395981E+00		Apriori rate (us/s)		1.55360360568E+00		Resid rate (us/s)		3.54134E-07	+/- 2.3E-09
Total phase (deg)	250.4		Apriori accel (us/s/s)		-4.90188091896E-06		Resid phase (deg)		-69.8	+/- 19.7

ph/seg (deg) 47.3 47.3 Search (2048X32) 0.095 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 65.6 82.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 28.5 27.9 Inc. seg. avg. 0.094 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.0 48.7 Inc. frq. avg. 0.094 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 64.5 el 47.0 pa -79.7 o: az 294.2 el 46.5 pa 75.7 u,v (fr/asec) -11902.400 -350.823 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo.W.212.1IM8OF

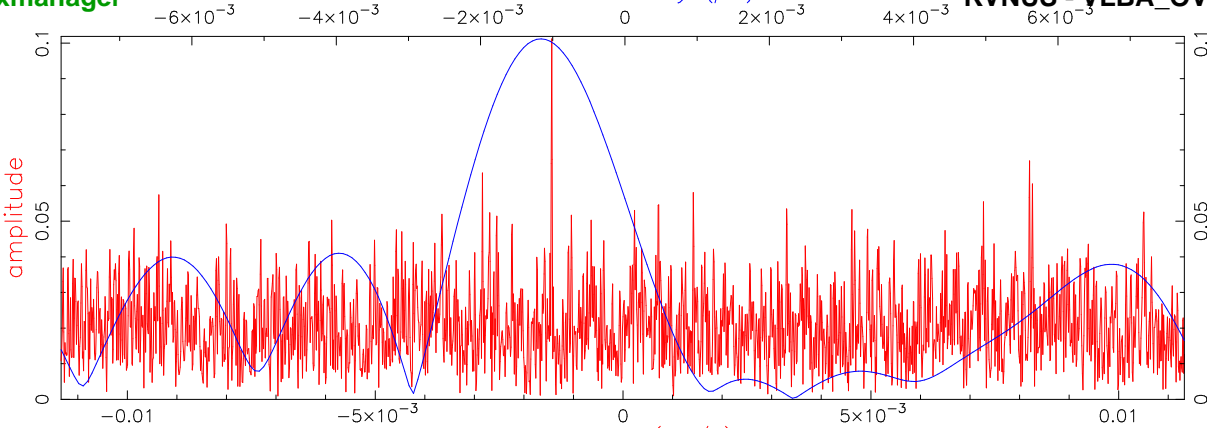
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, uo

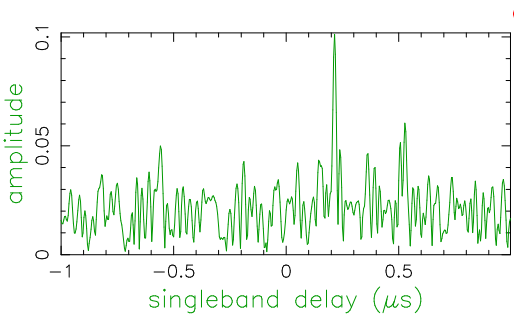
KVNUS - VLBA_OV, fgroup W, pol RL

multiband delay (μ s)

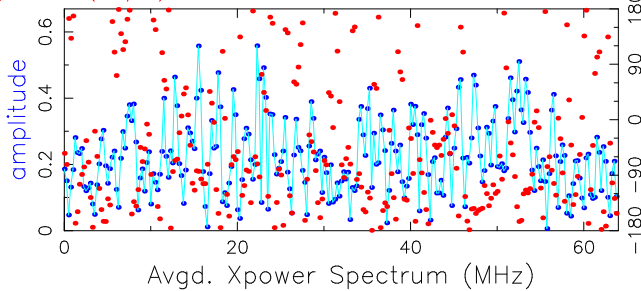


Fringe quality 0

SNR 6.0
 Int time 476.813
 Amp 0.102
 Phase -144.5
 PFD 3.3e-01
 Delays (us)
 SBD 0.215027
 MBD -0.001165
 Fringe rate (Hz)
 -0.124208
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

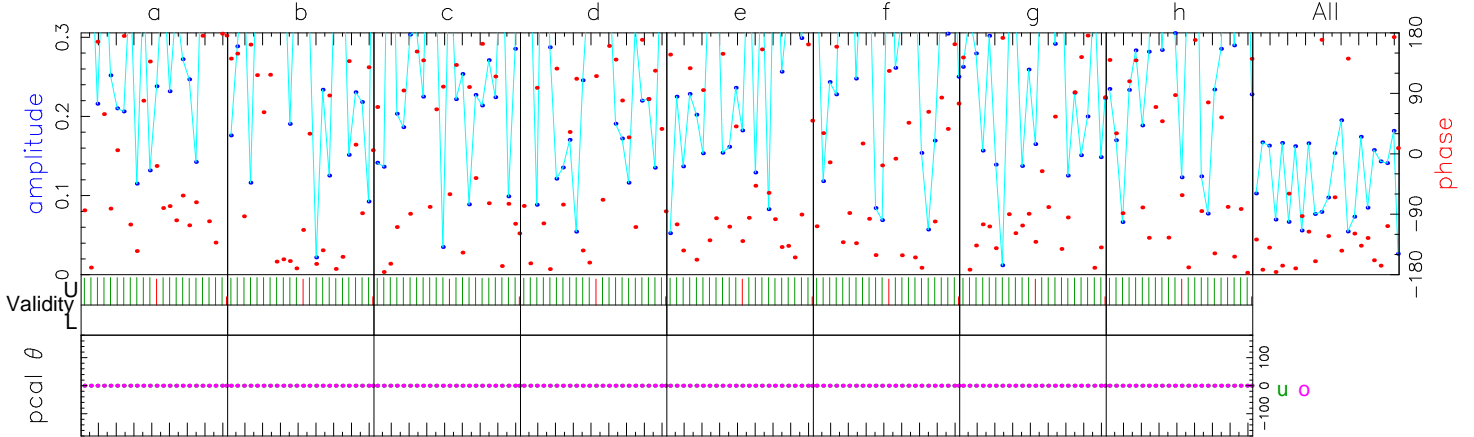


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.51
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133549
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-119.2	-180.0	-144.1	-156.8	-134.8	-131.3	-126.9	-171.9	Phase	-144.5
	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	Ampl.	0.1
	183.9	351.5	46.8	466.8	311.6	399.6	281.2	318.2	Sbd box	312.0
U/L	935/0	935/0	935/0	935/0	935/0	935/0	935/0	935/0	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	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)	5.68383627458E+02	Apriori delay (usec)	5.68166042368E+02	Resid mbdelay (usec)	-1.16491E-03	+/-	1.8E-04
Sband delay (usec)	5.68381069368E+02	Apriori clock (usec)	-1.8835131E+01	Resid sbdelay (usec)	2.15027E-01	+/-	1.4E-03
Phase delay (usec)	5.68166037709E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-4.65888E-06	+/-	6.1E-07
Delay rate (us/s)	1.55360216375E+00	Apriori rate (us/s)	1.55360360568E+00	Resid rate (us/s)	-1.44193E-06	+/-	2.2E-09
Total phase (deg)	175.8	Apriori accel (us/s/s)	-4.90188091896E-06	Resid phase (deg)	-144.5	+/-	19.0

ph/seg (deg)	42.7	Theor.	45.4	Amplitude	0.102 +/- 0.017	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	51.6		79.3	Search (2048X32)	0.097	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	23.7		26.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.6		46.8	Inc. seg. avg.	0.094	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.098	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

u: az 64.5 el 47.0 pa -79.7 o: az 294.2 el 46.5 pa 75.7 u,v (fr/asec) -11902.400 -350.823 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo..1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uo.W.228.1IM8OF

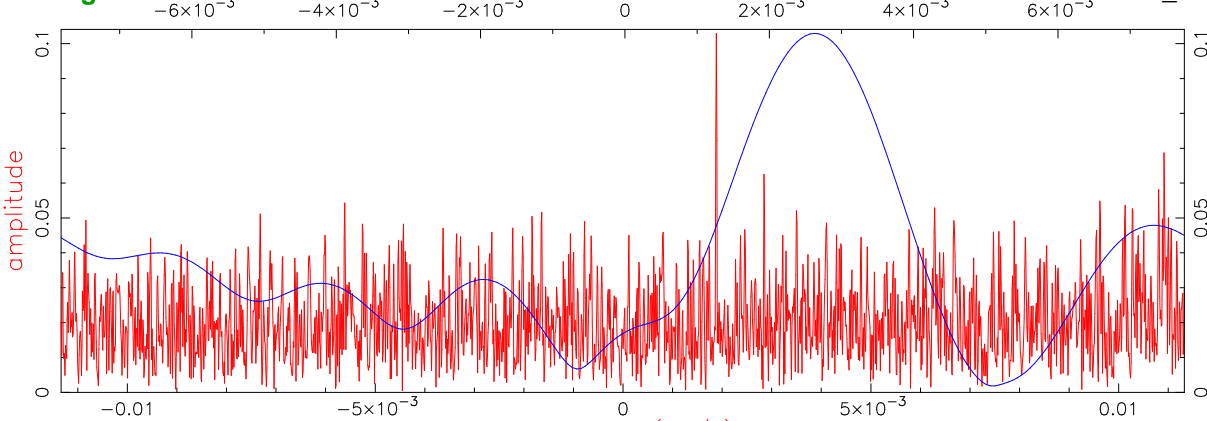
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, up

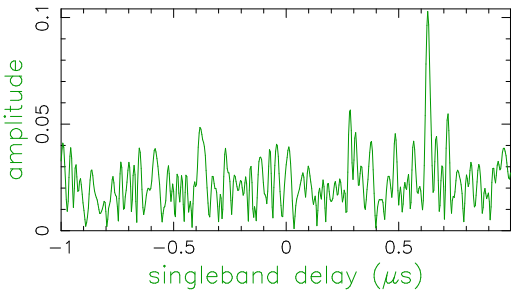
KVNUS - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

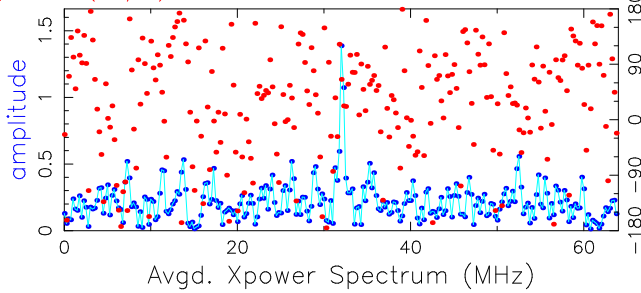


Fringe quality 0

SNR 6.2
 Int time 479.979
 Amp 0.104
 Phase 68.0
 PFD 1.7e-01
 Delays (us)
 SBD 0.628898
 MBD 0.002630
 Fringe rate (Hz)
 0.161920
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

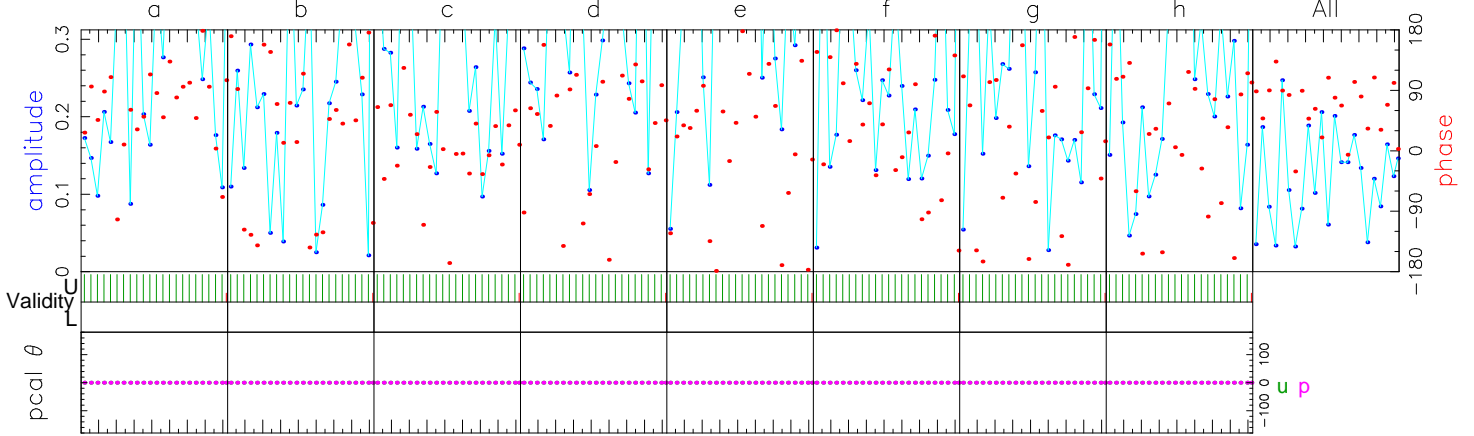


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133538
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
u:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:p	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		
p	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	3.00625586923E+03	Apriori delay (usec)	3.00562823951E+03	Resid mbdelay (usec)	2.62972E-03	+/-	1.8E-04
Sband delay (usec)	3.00625713776E+03	Apriori clock (usec)	2.4770007E+00	Resid sbdelay (usec)	6.28898E-01	+/-	1.4E-03
Phase delay (usec)	3.00562824170E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.19353E-06	+/-	6.0E-07
Delay rate (us/s)	1.65932948536E+00	Apriori rate (us/s)	1.65932760562E+00	Resid rate (us/s)	1.87973E-06	+/-	2.2E-09
Total phase (deg)	266.5	Apriori accel (us/s/s)	-1.46510971175E-05	Resid phase (deg)	68.0	+/-	18.6

ph/seg (deg)	RMS 39.3	Theor. 44.6	Amplitude Search (2048X32)	0.104 +/- 0.017	0.099	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	62.2	77.8	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	33.0	26.3	Inc. seg. avg.	0.095	0.000	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	50.2	45.9	Inc. frq. avg.	0.105	0.000	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 64.5 el 47.0 pa -79.7 p: az 299.2 el 37.8 pa 74.2 u,v (fr/asec) -12733.224 -745.827 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/up...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/up.W.176.1IM8OF

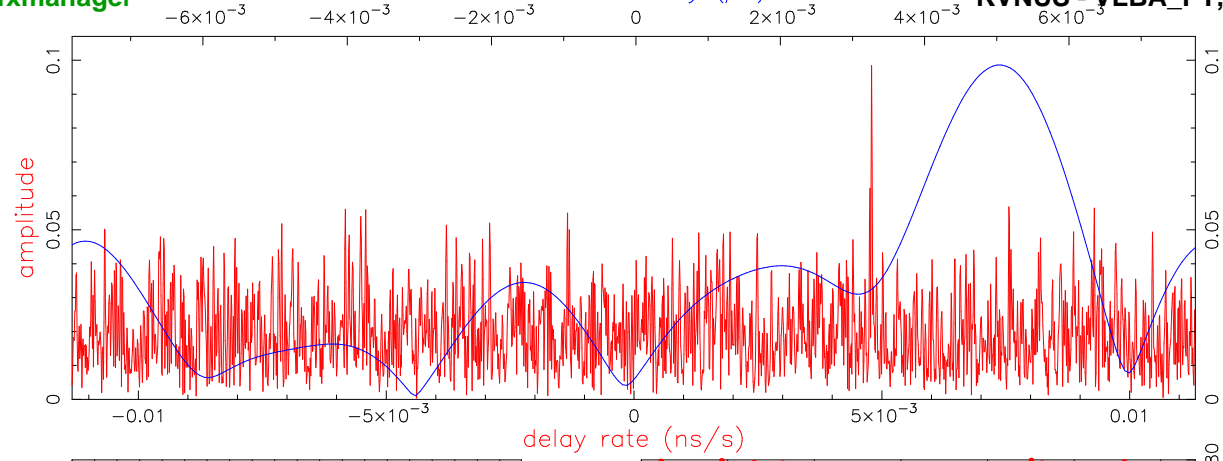
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1IM8OF, No0119, up

KVNUS - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)



Fringe quality 0

SNR 5.9

Int time 479.979

Amp 0.107

Phase 108.9

PFD 5.0e-01

Delays (us)

SBD -0.650940

MBD 0.005103

Fringe rate (Hz)

0.413858

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c202b

Yr:day 16383

Start 2021:023:101405

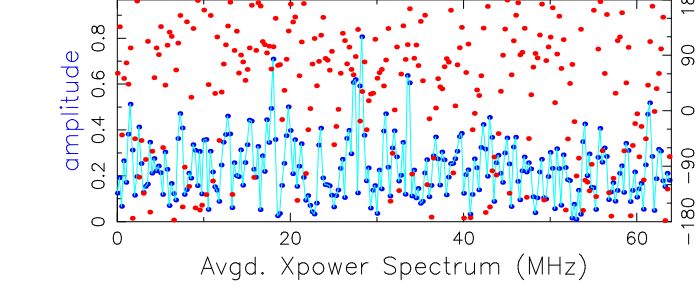
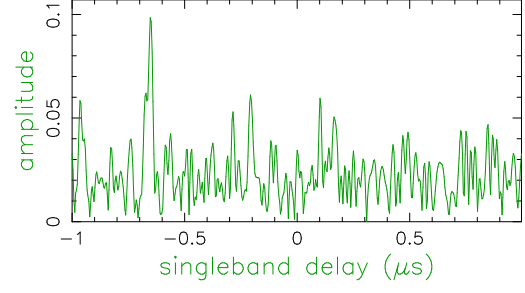
Stop 2021:023:133542

FRT 2020:247:085004

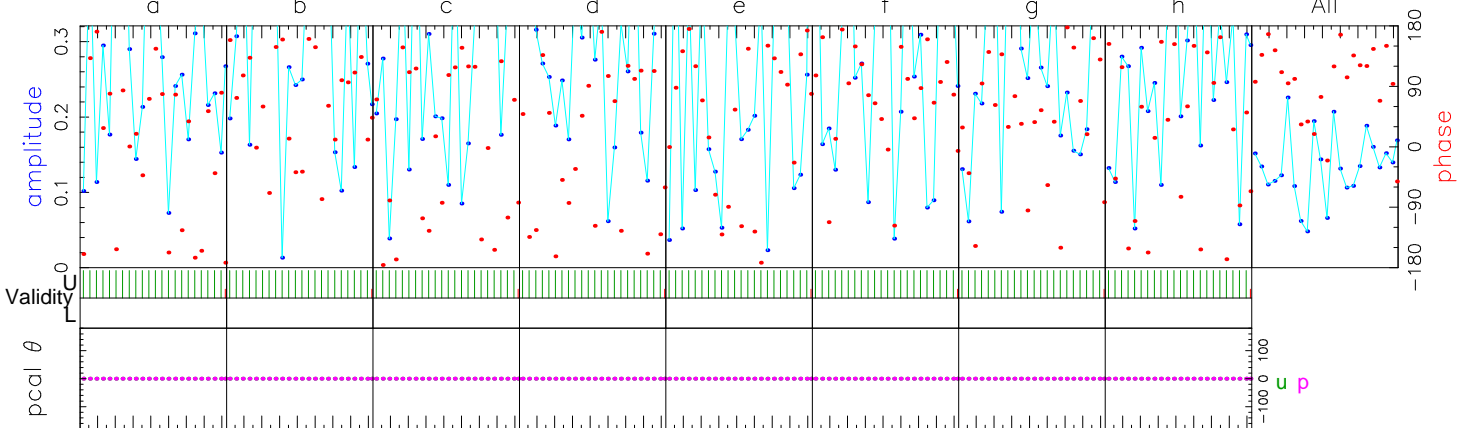
RA & Dec (J2000)

03h19m48.160095s

+41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	107.3	81.3	156.3	153.5	121.4	94.1	75.7	125.4	Phase	108.9
	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	Ampl.	0.1
	331.1	511.6	68.3	11.2	510.2	90.0	202.9	282.7	Sbd box	90.4
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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	Manl 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)	3.00497709293E+03		Apriori delay (usec)		3.00562823951E+03		Resid mbdelay (usec)		5.10342E-03	+/- 1.8E-04
Sband delay (usec)	3.00497729926E+03		Apriori clock (usec)		2.4770007E+00		Resid sbdelay (usec)		-6.50940E-01	+/- 1.4E-03
Phase delay (usec)	3.00562824302E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		3.51078E-06	+/- 6.2E-07
Delay rate (us/s)	1.65933241011E+00		Apriori rate (us/s)		1.65932760562E+00		Resid rate (us/s)		4.80449E-06	+/- 2.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.46510971175E-05		Resid phase (deg)		108.9	+/- 19.3

ph/seg (deg) 52.0 46.2 Search (2048X32) 0.097 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

amp/seg (%) 56.4 80.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 33.6 27.2 Inc. seg. avg. 0.109 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 39.3 47.5 Inc. frq. avg. 0.106 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 64.5 el 47.0 pa -79.7 p: az 299.2 el 37.8 pa 74.2 u,v (fr/asec) -12733.224 -745.827 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/up...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/up.W.194.1IM8OF

Mk4/DiFX fourfit 3.21 rev 2937

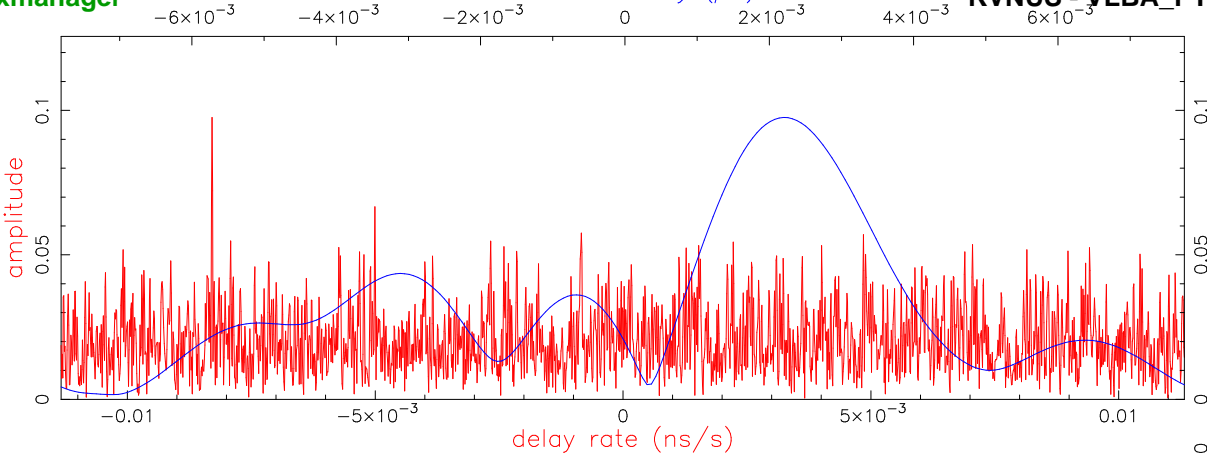
fxmanager

multiband delay (μ s)

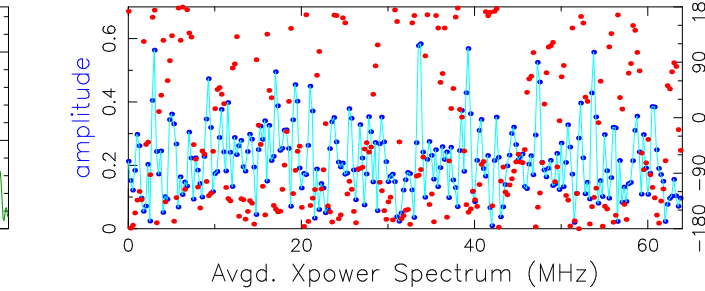
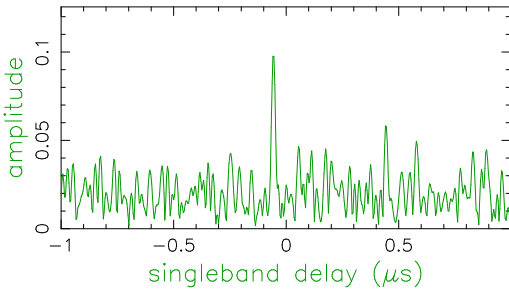
3C84.1IM8OF, No0119, up

KVNUS - VLBA_PT, fgroup W, pol LR

Fringe quality 0

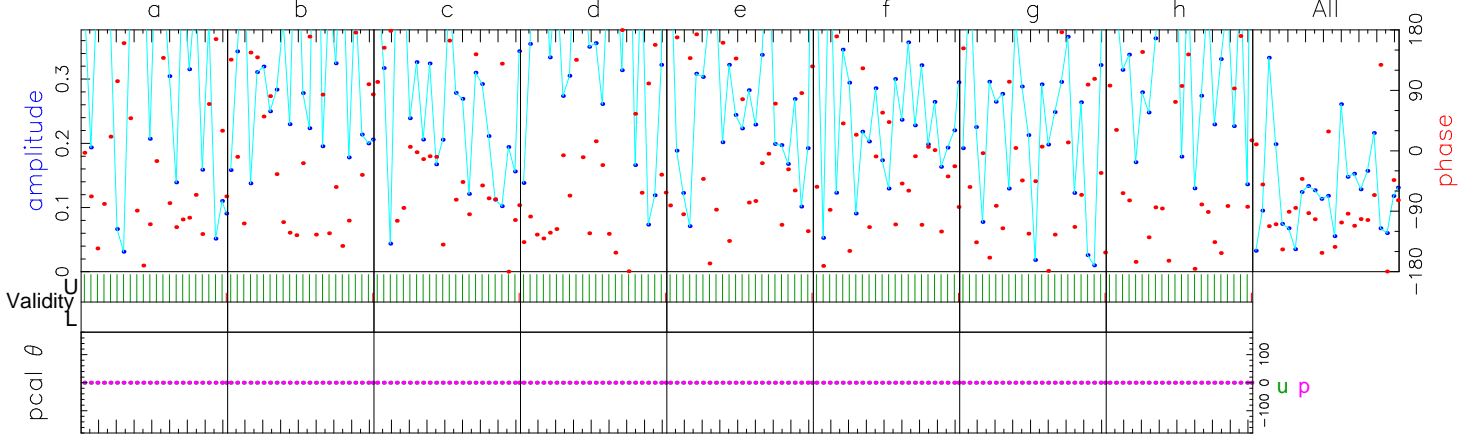


SNR 6.0
 Int time 479.979
 Amp 0.126
 Phase -96.7
 PFD 4.6e-01
 Delays (us)
 SBD -0.056649
 MBD 0.002193
 Fringe rate (Hz)
 -0.715307
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133546
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-77.4	-123.8	-83.6	-112.8	-93.4	-53.3	-82.1	-137.8	Phase	-96.7
	0.1	0.2	0.1	0.2	0.1	0.2	0.1	0.1	Ampl.	0.1
	8.8	276.8	314.7	242.6	128.1	1.4	24.9	292.1	Sbd box	242.5
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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) 3.00556793257E+03 Apriori delay (usec) 3.00562823951E+03 Resid mbdelay (usec) 2.19306E-03 +/- 1.8E-04
 Sband delay (usec) 3.00557159101E+03 Apriori clock (usec) 2.4770007E+00 Resid sbdelay (usec) -5.66485E-02 +/- 1.4E-03
 Phase delay (usec) 3.00562823639E+03 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -3.11957E-06 +/- 6.2E-07
 Delay rate (us/s) 1.65931930162E+00 Apriori rate (us/s) 1.65932760562E+00 Resid rate (us/s) -8.30400E-06 +/- 2.2E-09
 Total phase (deg) 101.7 Apriori accel (us/s/s) -1.46510971175E-05 Resid phase (deg) -96.7 +/- 19.2

RMS Theor. Amplitude 0.126 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 56.0 46.0 Search (2048X32) 0.095 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 77.1 80.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 29.8 27.1 Inc. seg. avg. 0.122 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 34.7 47.4 Inc. frq. avg. 0.123 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 p: az 299.2 el 37.8 pa 74.2 u,v (fr/asec) -12733.224 -745.827 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/up...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/up.W.213.1IM8OF

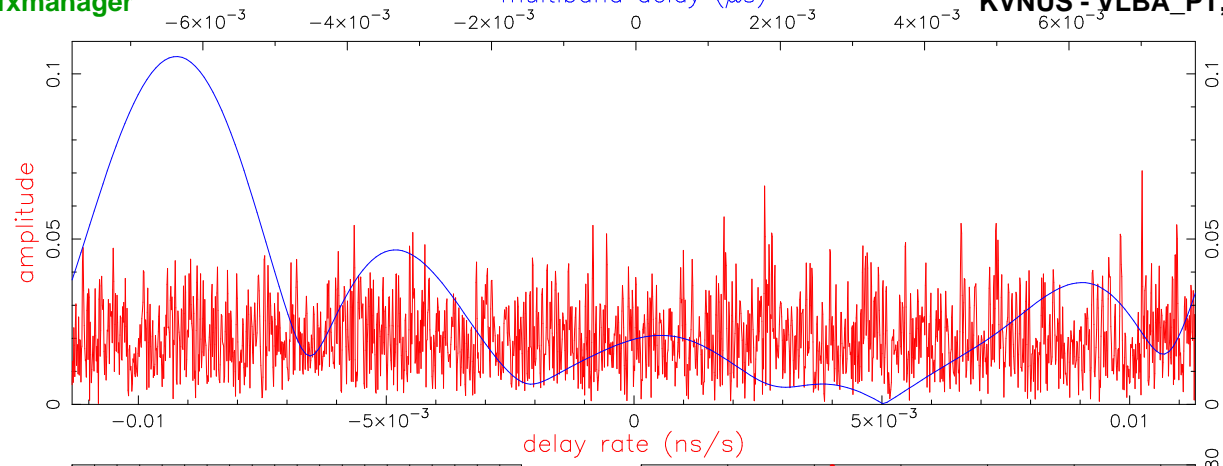
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

multiband delay (μ s)

3C84.1IM8OF, No0119, up

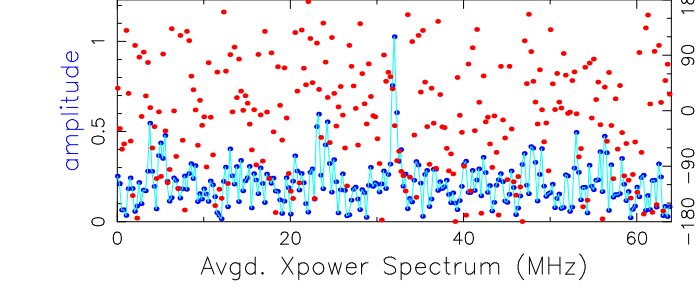
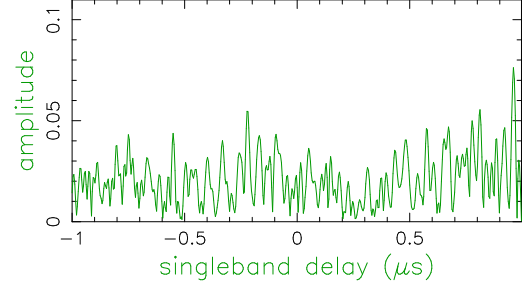
KVNUS - VLBA_PT, fgroup W, pol RL



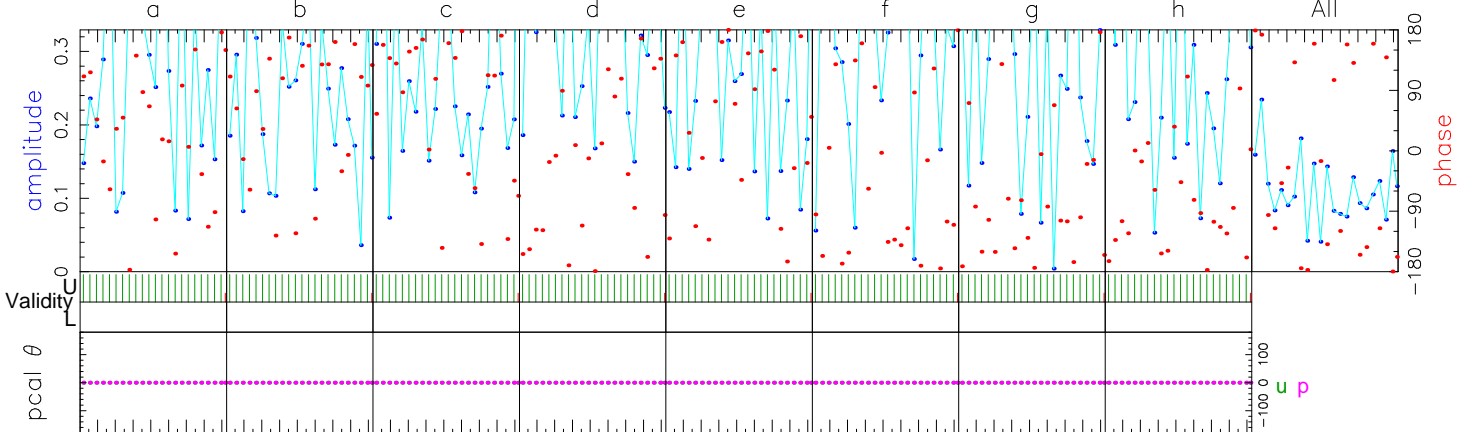
Fringe quality 0

SNR 4.6
 Int time 479.979
 Amp 0.110
 Phase -169.9
 PFD 1.0e+00
 Delays (us)
 SBD 0.961268
 MBD 0.008301
 Fringe rate (Hz)
 0.884865
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133549
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"



Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



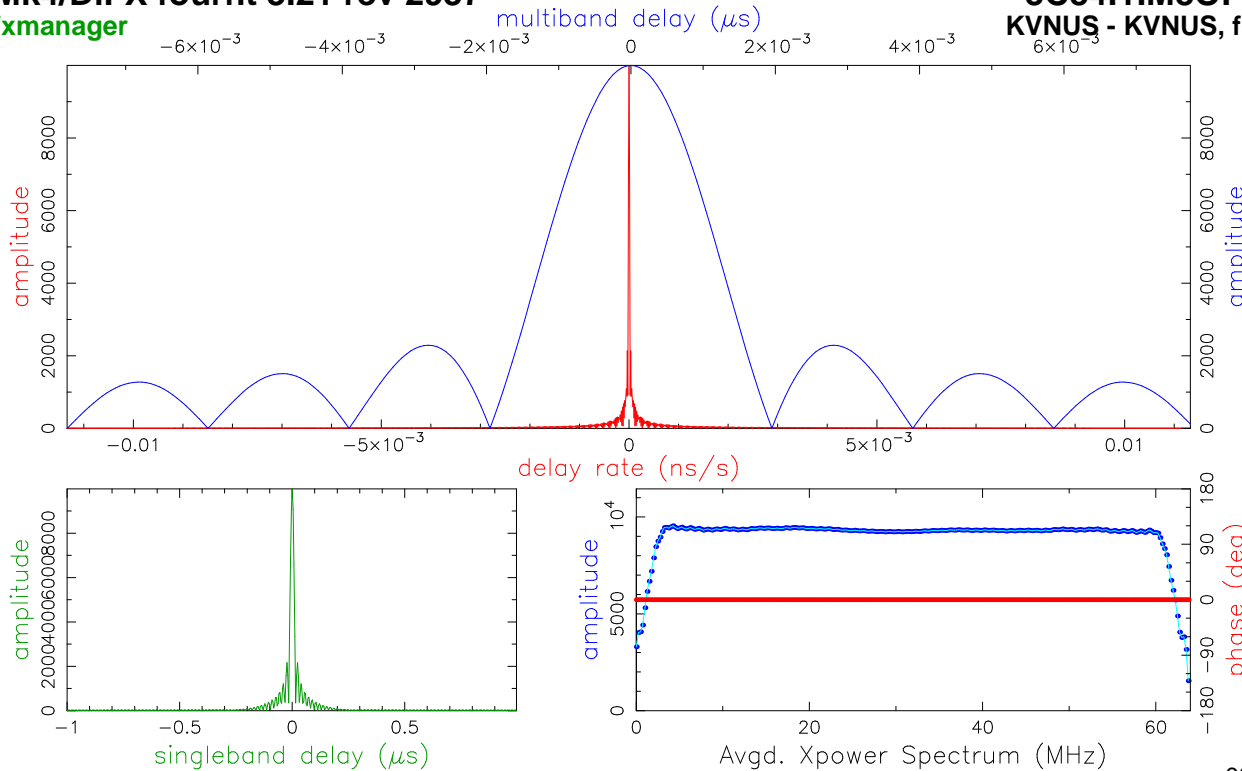
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	84.6	118.8	149.6	-179.3	155.2	-144.0	-132.9	-107.6	Phase	-169.9
	0.1	0.1	0.2	0.1	0.1	0.2	0.3	0.2	Ampl.	0.1
	85.2	450.0	101.0	68.2	465.4	202.8	504.6	465.2	Sbd box	503.1
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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	

Group delay (usec)(sbd)	3.00658966529E+03	Apriori delay (usec)	3.00562823951E+03	Resid mbdelay (usec)	8.30078E-03	+/-	2.4E-04
Sband delay (usec)	3.00658950776E+03	Apriori clock (usec)	2.4770007E+00	Resid sbdelay (usec)	9.61268E-01	+/-	1.9E-03
Phase delay (usec)	3.00562823403E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.47897E-06	+/-	8.1E-07
Delay rate (us/s)	1.65933787803E+00	Apriori rate (us/s)	1.65932760562E+00	Resid rate (us/s)	1.02724E-05	+/-	2.9E-09
Total phase (deg)	28.6	Apriori accel (us/s/s)	-1.46510971175E-05	Resid phase (deg)	-169.9	+/-	25.1

ph/seg (deg)	65.6	Theor.	60.1	Amplitude	0.110 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	75.2	Search (2048X32)	0.103	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	64.7	Inc. seg. avg.	0.104	Inc. frq. avg.	0.130	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	72.1	Inc. frq. avg.	0.130			Sample rate(MISamp/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 64.5 el 47.0 pa -79.7 p: az 299.2 el 37.8 pa 74.2 u,v (fr/asec) -12733.224 -745.827 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/up...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/up.W.227.1IM8OF

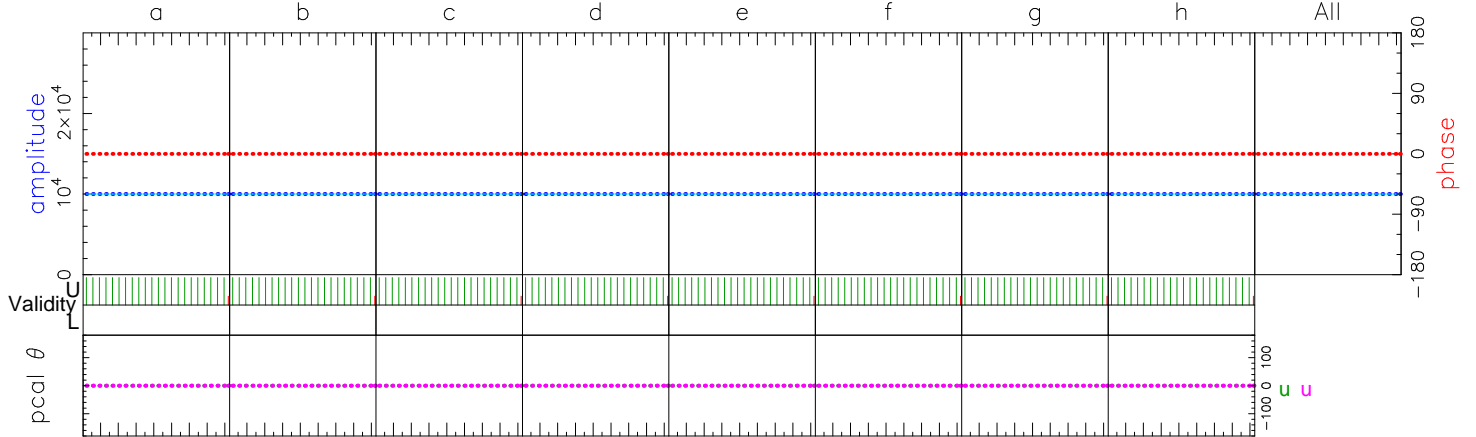


Fringe quality 9

SNR 599112.7
Int time 479.979
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. c202b
Yr:day # 16383
Start 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133551
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec

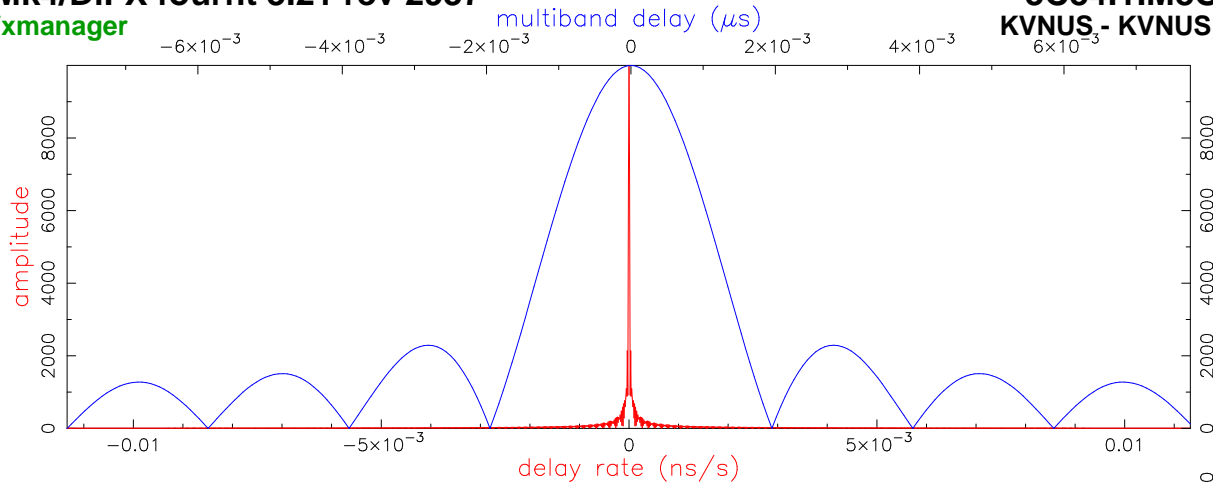


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
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		

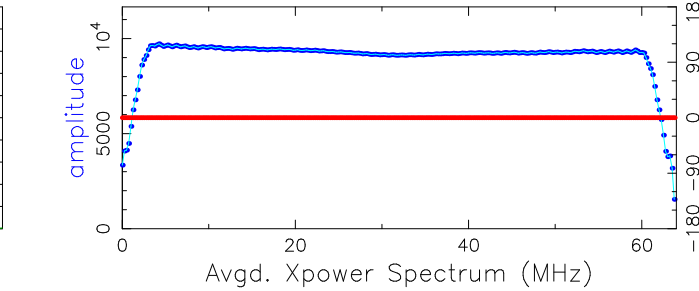
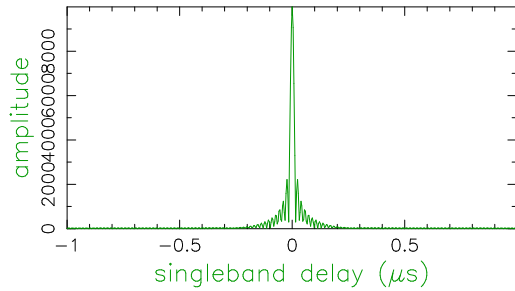
Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 1.8E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.4E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 6.2E-12
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.2E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

RMS Theor. Amplitude 9999.999 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 0.0 0.0 Search (2048X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 0.0 0.0 Inc. frq. avg. 9999.999 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

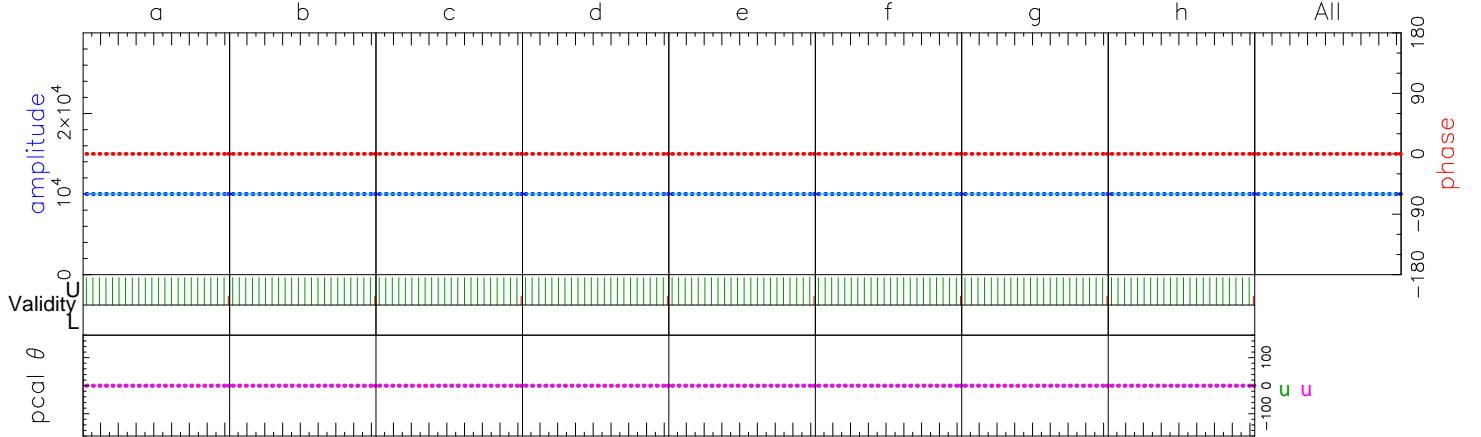
u: az 64.5 el 47.0 pa -79.7 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu.W.229.1IM8OF



Fringe quality 9
SNR 599112.7
Int time 479.979
Amp 9999.999
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c202b
Yr:day # 16383
Start 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133554
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

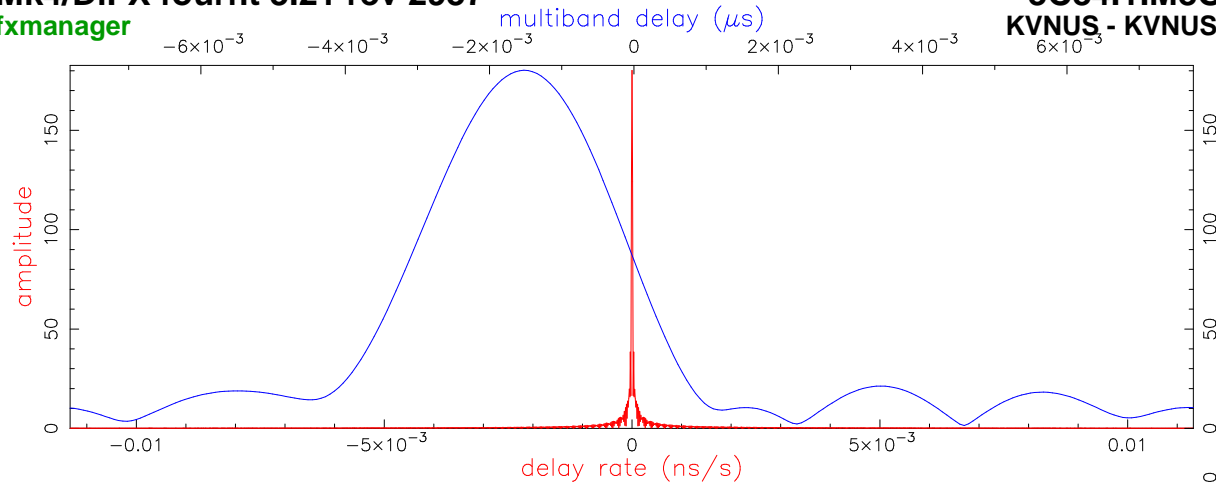


Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec

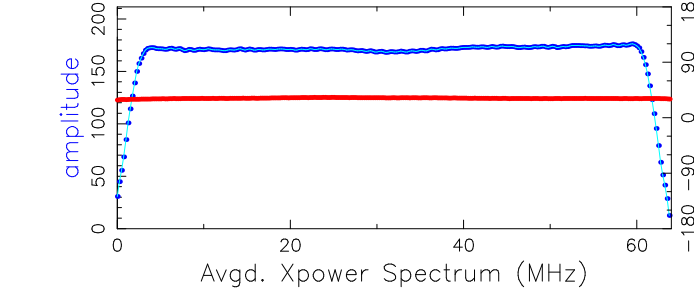
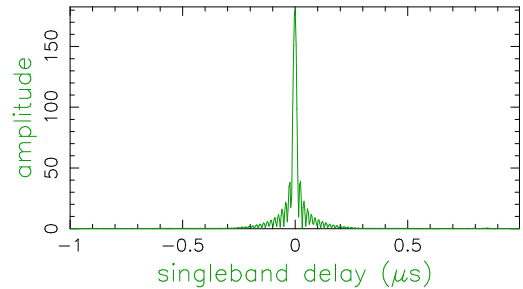


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	0.0000000000E+00		Apriori delay (usec)		0.0000000000E+00		Resid mbdelay (usec)		0.00000E+00	+/- 1.8E-09
Sband delay (usec)	0.0000000000E+00		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		0.00000E+00	+/- 1.4E-08
Phase delay (usec)	0.0000000000E+00		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		0.00000E+00	+/- 6.2E-12
Delay rate (us/s)	0.0000000000E+00		Apriori rate (us/s)		0.0000000000E+00		Resid rate (us/s)		0.00000E+00	+/- 2.2E-14
Total phase (deg)	0.0		Apriori accel (us/s/s)		0.0000000000E+00		Resid phase (deg)		0.0	+/- 0.0

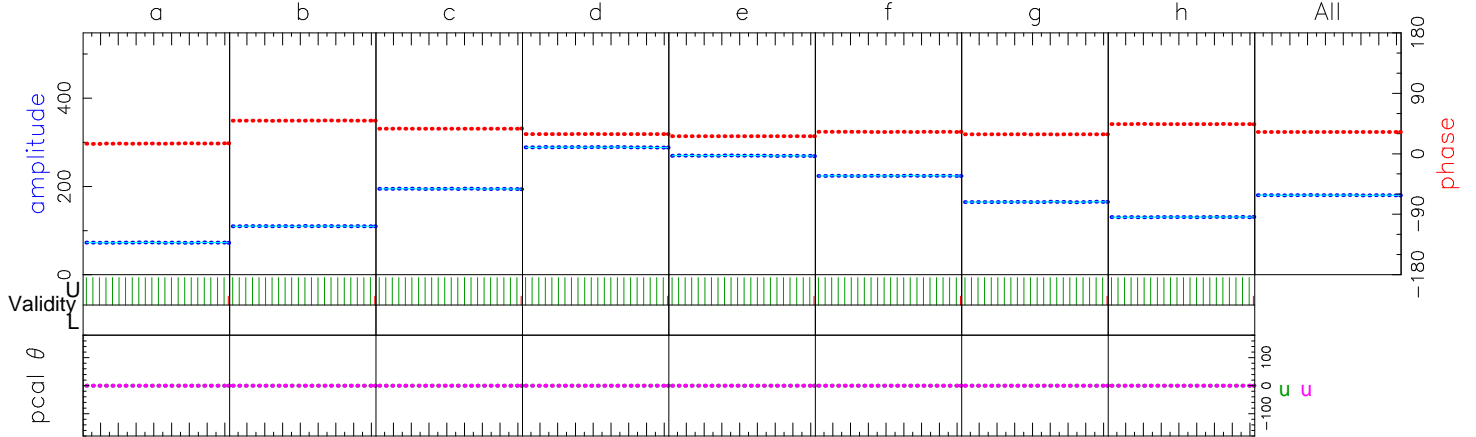
ph/seg (deg) 0.0 0.0 Theor. Amplitude 9999.999 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Search (2048X32) 9999.999 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
u: az 64.5 el 47.0 pa -79.7 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 0.000 0.000 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/c202b/v1/v1_3mm/1234/No0119/uu...1IM8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu.W.237.1IM8OF simultaneous interpolator



Fringe quality 7
SNR 10944.8
Int time 479.979
Amp 182.683
Phase 32.4
PFD 0.0e+00
Delays (us)
SBD -0.001480
MBD -0.001538
Fringe rate (Hz)
-0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c202b
Yr:day 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133557
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

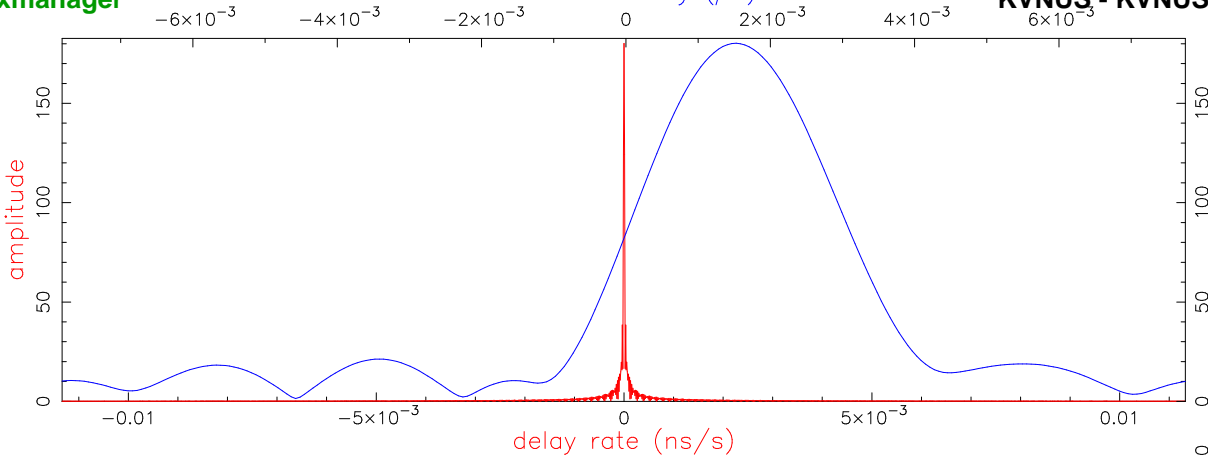


Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 sec / seg.), time ticks 30 sec



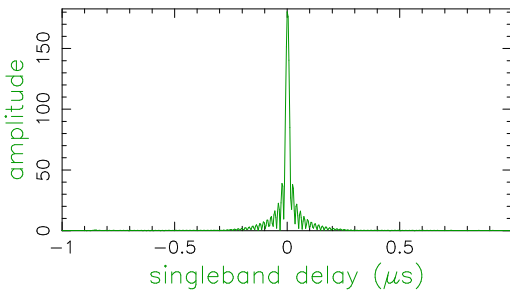
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:u	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.53812500000E-03								-1.53812E-03	+/- 9.9E-08
Sband delay (usec)	-1.47975000000E-03								-1.47975E-03	+/- 7.9E-07
Phase delay (usec)	1.04476679506E-06								1.04477E-06	+/- 3.4E-10
Delay rate (us/s)	-4.95990333709E-12								-4.95990E-12	+/- 1.2E-12
Total phase (deg)			32.4						32.4	+/- 0.0
	RMS	Theor.	Amplitude	182.683 +/- 0.017	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X32)	180.057	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
amp/seg (%)	1.4	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	11.6	0.0	Inc. seg. avg.	180.211	Sample rate (MSamp/s):	128		dr window (ns/s)	-0.011 0.011	
amp/frq (%)	39.2	0.0	Inc. frq. avg.	181.939	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
u: az 64.5 el 47.0 pa -79.7			u: az 64.5 el 47.0 pa -79.7							simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu..1IM8OF							Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu.W.245.1IM8OF

multiband delay (μ s)

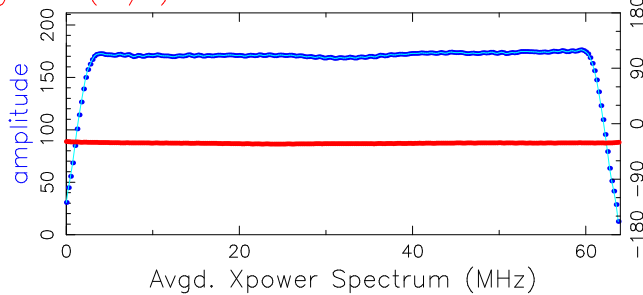


Fringe quality 7

SNR 10944.8
Int time 479.979
Amp 182.683
Phase -32.4
PFD 0.0e+00
Delays (us)
SBD 0.001480
MBD 0.001538
Fringe rate (Hz)
0.000000
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

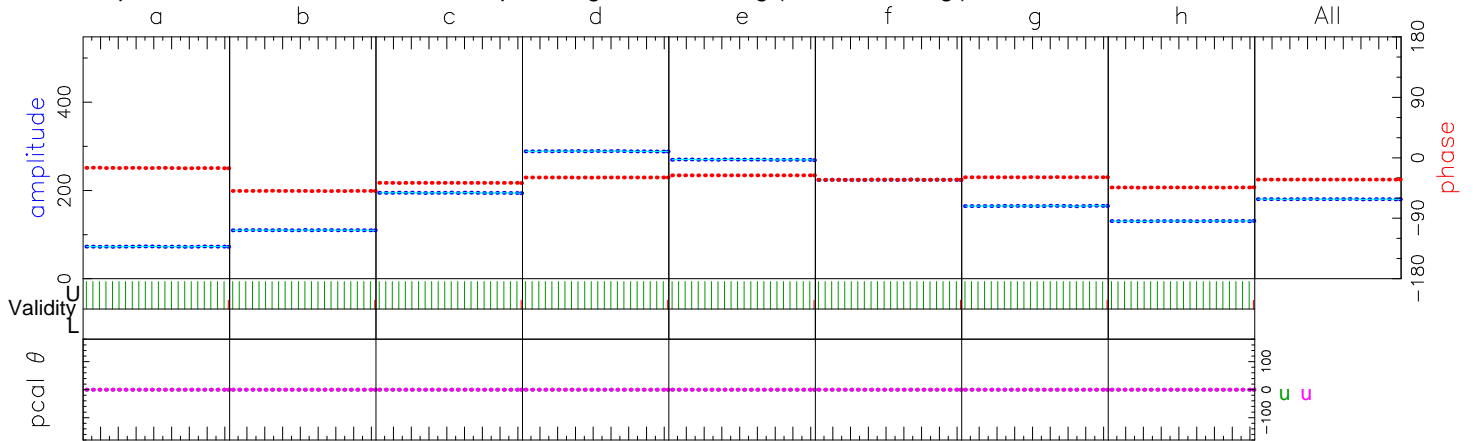


delay rate (ns/s)



Exp. c202b
Yr:day 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133600
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-15.2	-49.3	-37.3	-29.4	-26.1	-32.6	-28.9	-44.2	Phase	-32.4
	72.9	110.0	194.6	288.8	269.7	224.0	164.8	130.6	Ampl.	181.9
	256.8	257.5	257.6	257.5	257.4	257.4	257.4	257.3	Sbd box	257.4
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	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	

Group delay (usec)(sbd)	1.53812500000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.53812E-03	+/-	9.9E-08
Sband delay (usec)	1.47975000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.47975E-03	+/-	7.9E-07
Phase delay (usec)	-1.04476679511E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-1.04477E-06	+/-	3.4E-10
Delay rate (us/s)	4.95990333709E-12	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	4.95990E-12	+/-	1.2E-12
Total phase (deg)	-32.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-32.4	+/-	0.0

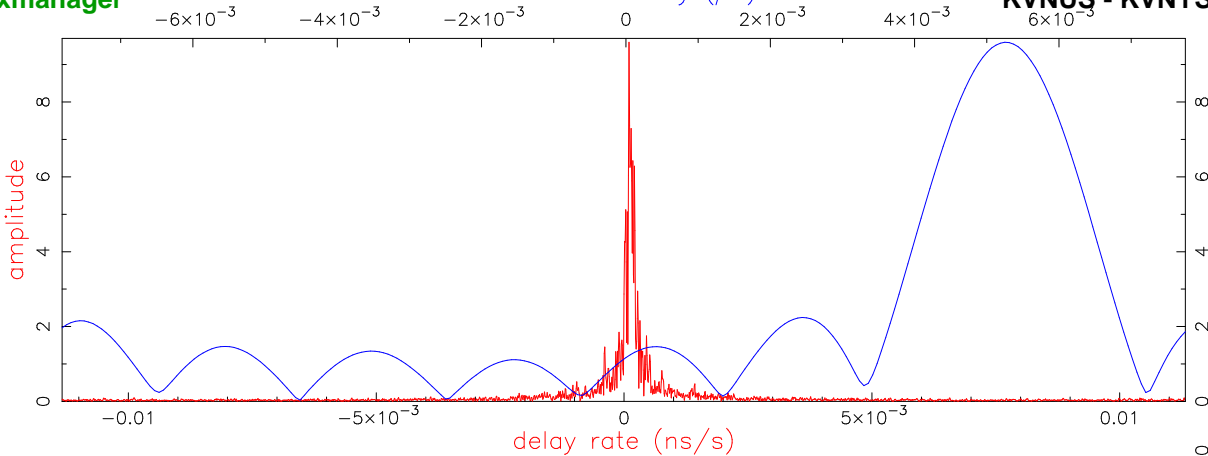
ph/seg (deg)	0.0	RMS	Theor.	Amplitude	182.683 +/- 0.017	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	1.4	0.0	0.0	Search (2048X32)	180.057	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	11.6	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	39.2	0.0	0.0	Inc. seg. avg.	180.211	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	181.939	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

u: az 64.5 el 47.0 pa -79.7 u: az 64.5 el 47.0 pa -79.7 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

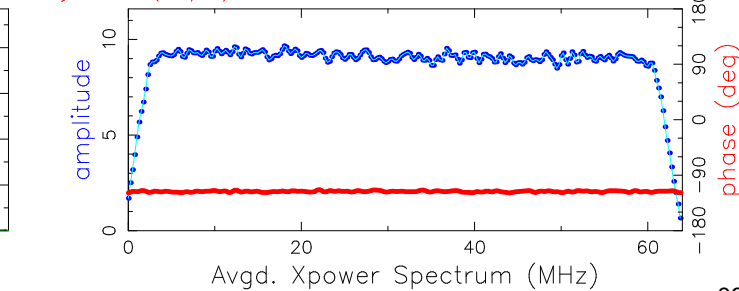
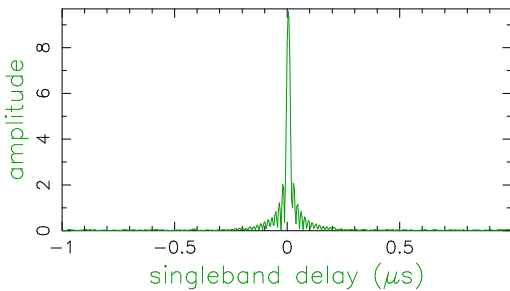
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu..11M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uu.W.253.11M8OF

multiband delay (μ s)

Fringe quality 5

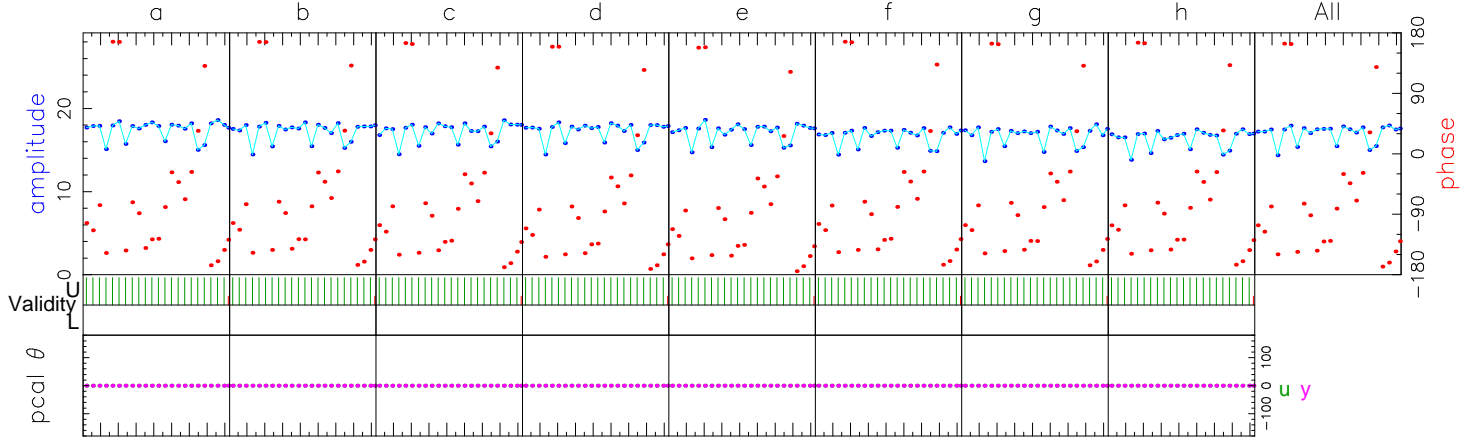


SNR 581.2
Int time 479.969
Amp 9.701
Phase -117.2
PFD 0.0e+00
Delays (us)
SBD 0.005222
MBD 0.005263
Fringe rate (Hz)
0.008637
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133552
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	-114.8	-114.3	-117.8	-121.4	-123.6	-114.4	-115.7	-115.2	Phase	-117.2
	9.9	9.7	9.7	9.8	9.6	9.5	9.4	9.3	Ampl.	9.6
	258.3	258.4	258.2	258.3	258.3	258.4	258.3	258.3	Sbd box	258.3
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	

Group delay (usec)(sbd) 2.16317304003E+02 Apriori delay (usec) 2.16312040646E+02 Resid mbdelay (usec) 5.26336E-03 +/- 1.9E-06
 Sband delay (usec) 2.16317262396E+02 Apriori clock (usec) 1.3213220E+00 Resid sbdelay (usec) 5.22175E-03 +/- 1.5E-05
 Phase delay (usec) 2.16312036868E+02 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) -3.77799E-06 +/- 6.4E-09
 Delay rate (us/s) -1.41902882100E-03 Apriori rate (us/s) -1.41912908757E-03 Resid rate (us/s) 1.00267E-07 +/- 2.3E-11
 Total phase (deg) -51.9 Apriori accel (us/s/s) -3.26222175702E-06 Resid phase (deg) -117.2 +/- 0.2

RMS Theor. Amplitude 9.701 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 61.6 0.5 Search (2048X32) 9.480 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 75.9 0.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 3.8 0.3 Inc. seg. avg. 16.991 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 2.3 0.5 Inc. frq. avg. 9.613 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 y: az 65.9 el 46.1 pa -75.8 u,v (fr/asec) 4.241 -414.968 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy.W.234.1M8OF

Mk4/DiFX fourfit 3.21 rev 2937

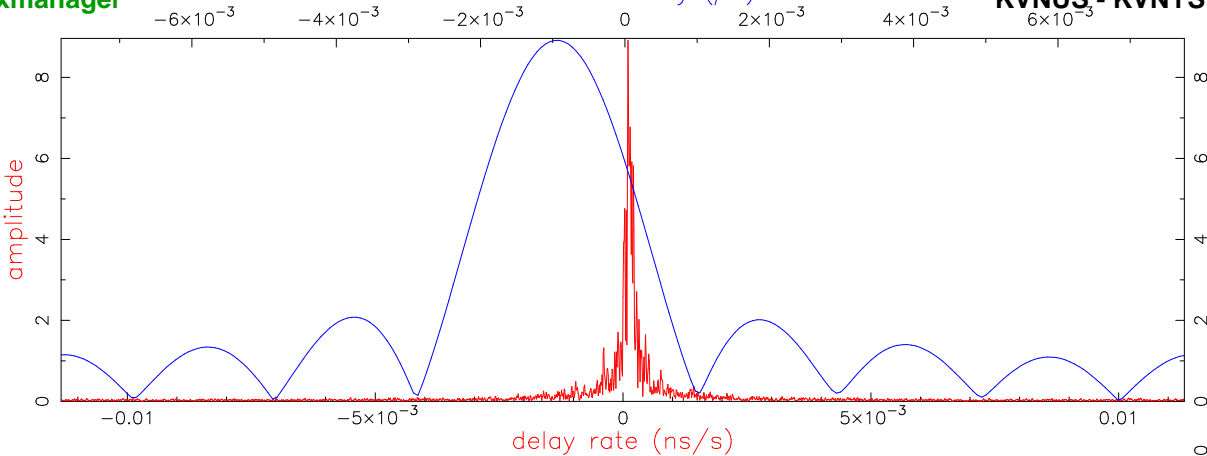
fxmanager

3C84.1M8OF, No0119, uy

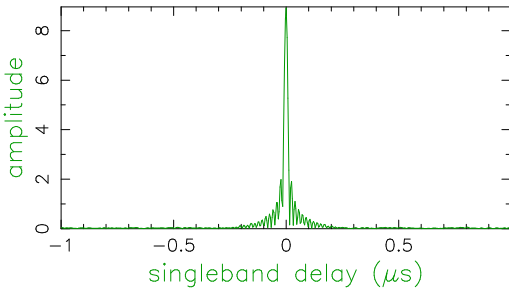
KVNU_s - KVNY_s, fgroup W, pol RR

multiband delay (μ s)

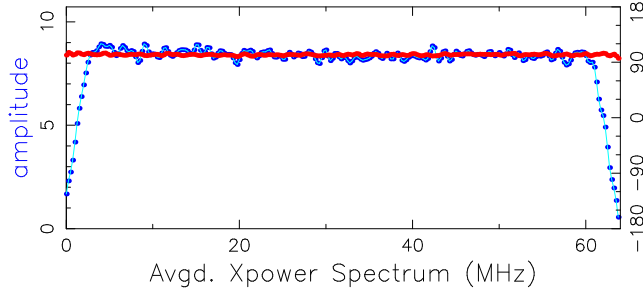
Fringe quality 5



SNR 537.1
 Int time 479.969
 Amp 8.965
 Phase 102.8
 PFD 0.0e+00
 Delays (us)
 SBD -0.000909
 MBD -0.000943
 Fringe rate (Hz)
 0.008641
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

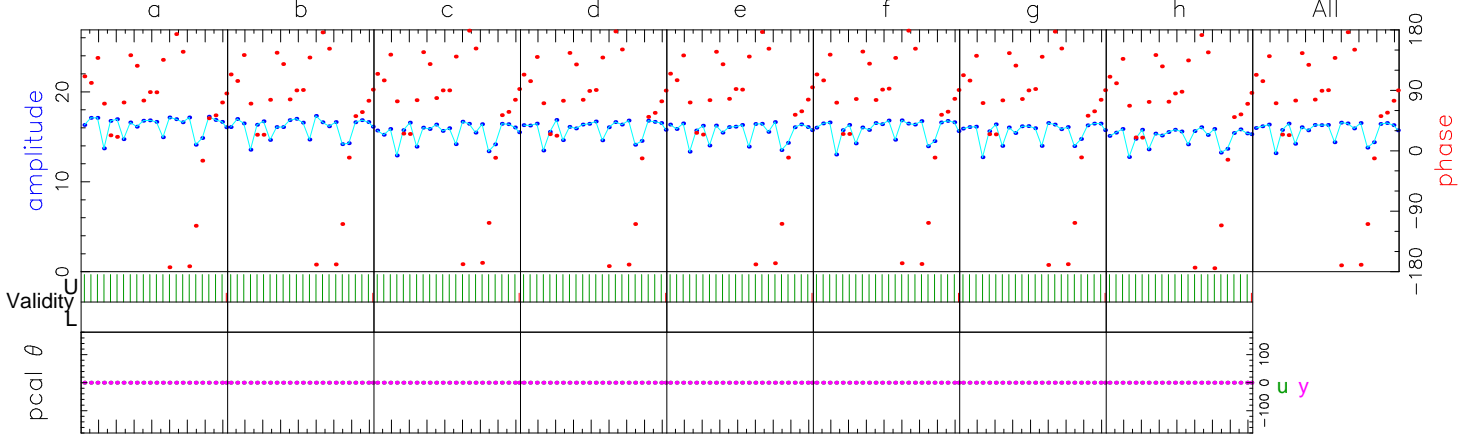


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133555
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	APs used	1000
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	1000
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	0:0
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	0:0
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	1000
y	1000	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	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	2.16311097972E+02					2.16312040646E+02			Resid mbdelay (usec)	-9.42674E-04 +/- 2.0E-06
Sband delay (usec)	2.16311131896E+02					1.3213220E+00			Resid sbdelay (usec)	-9.08750E-04 +/- 1.6E-05
Phase delay (usec)	2.16312043962E+02					2.9999999E-07			Resid phdelay (usec)	3.31529E-06 +/- 6.9E-09
Delay rate (us/s)	-1.41902877069E-03					-1.41912908757E-03			Resid rate (us/s)	1.00317E-07 +/- 2.5E-11
Total phase (deg)		168.1				-3.26222175702E-06			Resid phase (deg)	102.8 +/- 0.2

ph/seg (deg) 61.4 0.5
 amp/seg (%) 76.3 0.9
 ph/frq (deg) 2.0 0.3
 amp/frq (%) 2.2 0.5

RMS Theor. Amplitude 8.965 +/- 0.017
 Search (2048X32) 8.874
 Interp. 0.000
 Inc. seg. avg. 15.736
 Inc. frq. avg. 8.922

Group delay (usec)(sbd) 2.16311097972E+02 Apriori delay (usec) 2.16312040646E+02 Resid mbdelay (usec) -9.42674E-04 +/- 2.0E-06
 Sband delay (usec) 2.16311131896E+02 Apriori clock (usec) 1.3213220E+00 Resid sbdelay (usec) -9.08750E-04 +/- 1.6E-05
 Phase delay (usec) 2.16312043962E+02 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) 3.31529E-06 +/- 6.9E-09
 Delay rate (us/s) -1.41902877069E-03 Apriori rate (us/s) -1.41912908757E-03 Resid rate (us/s) 1.00317E-07 +/- 2.5E-11
 Total phase (deg) 168.1 Apriori accel (us/s/s) -3.26222175702E-06 Resid phase (deg) 102.8 +/- 0.2

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(MISamp/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 64.5 el 47.0 pa -79.7 y: az 65.9 el 46.1 pa -75.8 u,v (fr/asec) 4.241 -414.968 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy.W.243.1M8OF

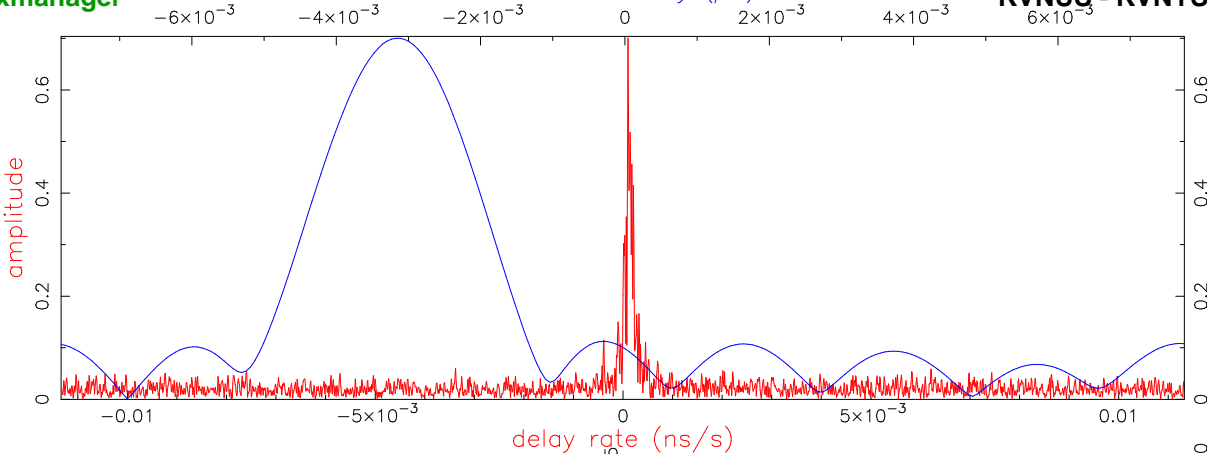
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C84.1M8OF, No0119, uy

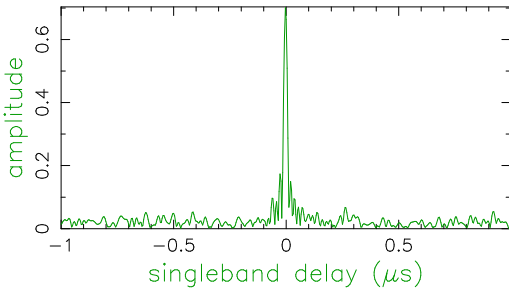
KVNU_S - KVNY_S, fgroup W, pol LR

multiband delay (μ s)

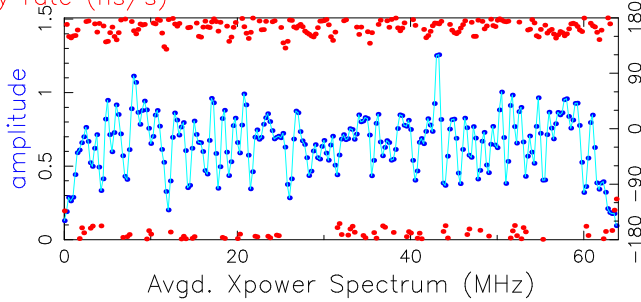


Fringe quality 7

SNR 42.2
 Int time 479.969
 Amp 0.704
 Phase 171.7
 PFD 0.0e+00
 Delays (us)
 SBD -0.003030
 MBD -0.003149
 Fringe rate (Hz) 0.008583
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

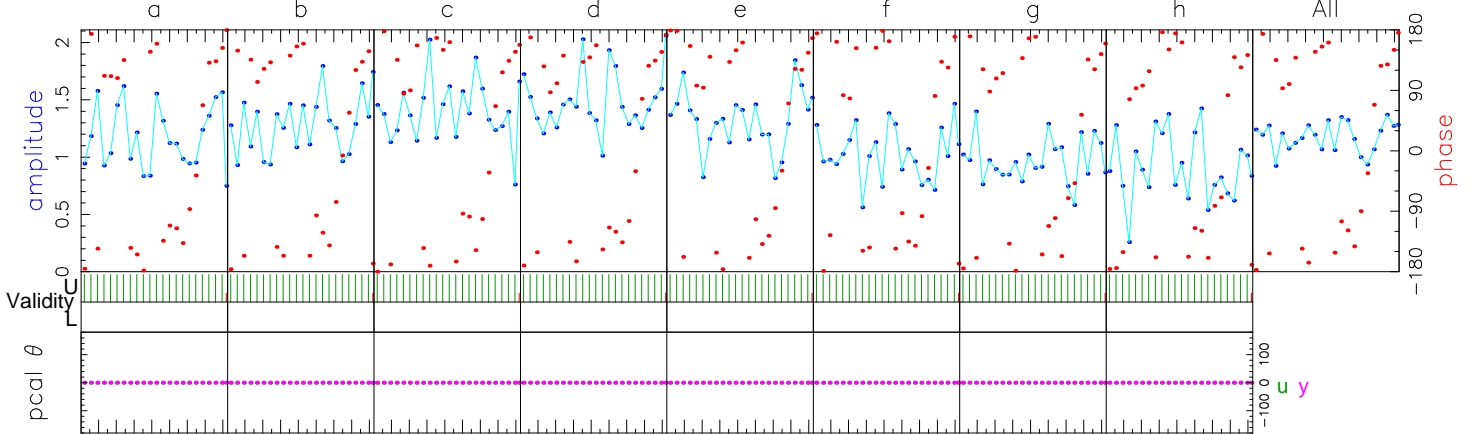


delay rate (ns/s)



Exp. c202b
 Exper # 16383
 Yr:day 2020:284
 Start 134501.00
 Stop 135301.26
 FRT 134901.00
 Corr/FF/build
 2021:023:101405
 2021:023:133559
 2020:247:085004
 RA & Dec (J2000)
 03h19m48.160095s
 +41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
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		

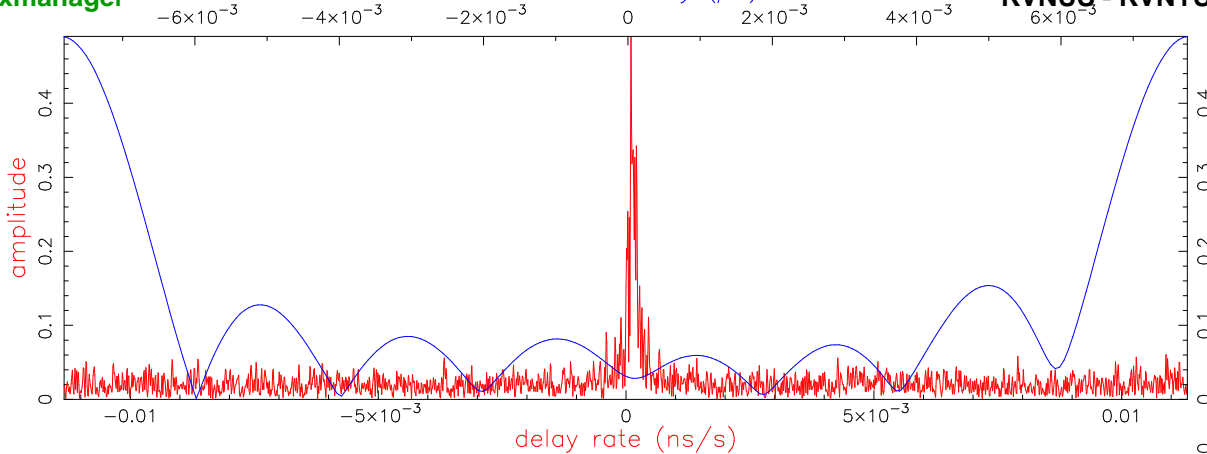
Group delay (usec)(sbd)	2.16308891816E+02	Apriori delay (usec)		2.16312040646E+02	Resid mbdelay (usec)		-3.14883E-03	+/-	2.6E-05
Sband delay (usec)	2.16309010146E+02	Apriori clock (usec)		1.3213220E+00	Resid sbdelay (usec)		-3.03050E-03	+/-	2.0E-04
Phase delay (usec)	2.16312046184E+02	Apriori clockrate (us/s)		2.9999999E-07	Resid phdelay (usec)		5.53786E-06	+/-	8.8E-08
Delay rate (us/s)	-1.41902944595E-03	Apriori rate (us/s)		-1.41912908757E-03	Resid rate (us/s)		9.96416E-08	+/-	3.2E-10
Total phase (deg)	237.0	Apriori accel (us/s/s)		-3.26222175702E-06	Resid phase (deg)		171.7	+/-	2.7

ph/seg (deg)	60.9	RMS	Theor.	Amplitude	0.704 +/- 0.017	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	69.5	60.9	6.5	Search (2048X32)	0.682	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	3.5	69.5	11.4	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	15.4	3.5	3.8	Inc. seg. avg.	1.169	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
		15.4	6.7	Inc. frq. avg.	0.700	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

u: az 64.5 el 47.0 pa -79.7 y: az 65.9 el 46.1 pa -75.8 u,v (fr/asec) 4.241 -414.968 simultaneous interpolator

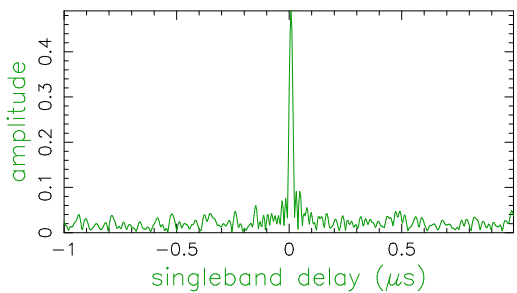
Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy.W.252.1M8OF

multiband delay (μ s)

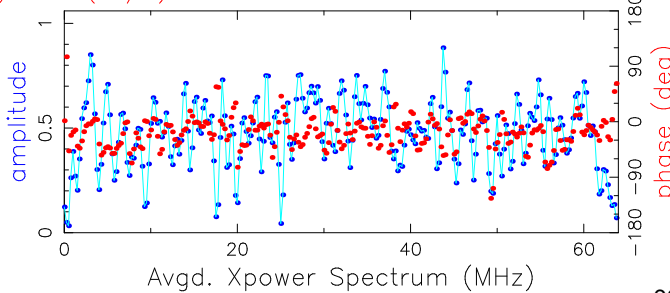


Fringe quality 7

SNR 29.4
Int time 479.969
Amp 0.490
Phase 165.5
PFD 0.0e+00
Delays (us)
SBD 0.008057
MBD -0.007853
Fringe rate (Hz)
0.008632
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

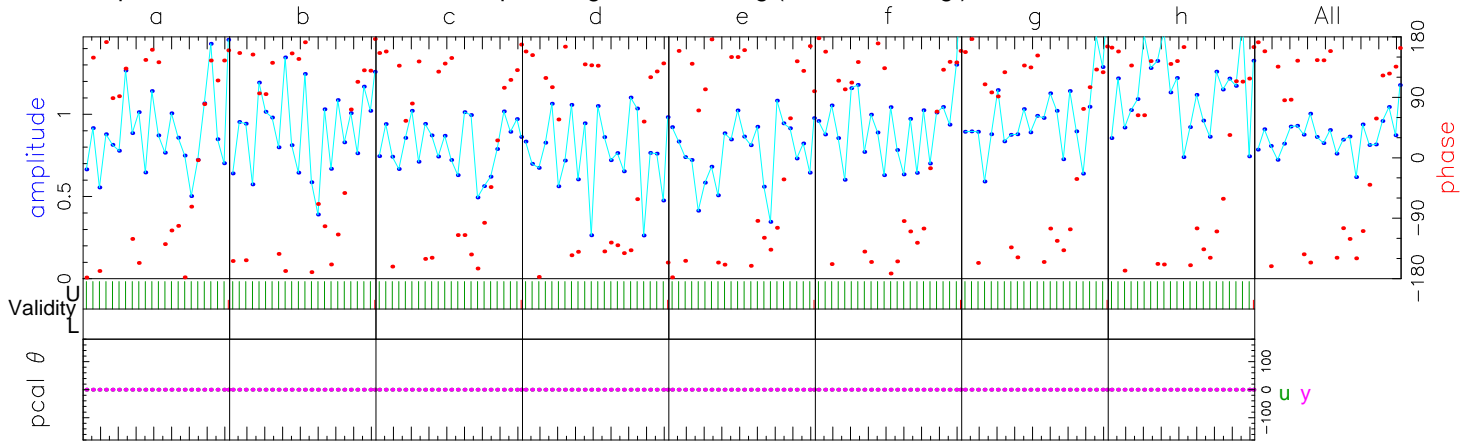


delay rate (ns/s)



Exp. c202b
Exper # 16383
Yr:day 2020:284
Start 134501.00
Stop 135301.26
FRT 134901.00
Corr/FF/build
2021:023:101405
2021:023:133603
2020:247:085004
RA & Dec (J2000)
03h19m48.160095s
+41°30'42.104042"

Amp. and Phase vs. time for each freq., 23 segs, 42 APs / seg (21.50 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
	162.4	165.8	158.2	172.1	174.2	168.8	162.8	161.1	Phase	165.5
	0.5	0.5	0.4	0.4	0.4	0.6	0.5	0.6	Ampl.	0.5
	258.6	259.0	258.8	259.5	259.8	259.0	259.2	258.8	Sbd box	259.1
U/L	938/0	938/0	938/0	938/0	938/0	938/0	938/0	938/0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 2.16319812878E+02 Apriori delay (usec) 2.16312040646E+02 Resid mbdelay (usec) -7.85277E-03 +/- 3.7E-05
 Sband delay (usec) 2.16320097896E+02 Apriori clock (usec) 1.3213220E+00 Resid sbdelay (usec) 8.05725E-03 +/- 2.9E-04
 Phase delay (usec) 2.16312045985E+02 Apriori clockrate (us/s) 2.9999999E-07 Resid phdelay (usec) 5.33835E-06 +/- 1.3E-07
 Delay rate (us/s) -1.41902887414E-03 Apriori rate (us/s) -1.41912908757E-03 Resid rate (us/s) 1.00213E-07 +/- 4.5E-10
 Total phase (deg) 230.8 Apriori accel (us/s/s) -3.26222175702E-06 Resid phase (deg) 165.5 +/- 3.9

RMS Theor. Amplitude 0.490 +/- 0.017 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 61.6 9.4 Search (2048X32) 0.487 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 78.8 16.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 6.0 5.5 Inc. seg. avg. 0.853 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 11.5 9.6 Inc. frq. avg. 0.490 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

u: az 64.5 el 47.0 pa -79.7 y: az 65.9 el 46.1 pa -75.8 u,v (fr/asec) 4.241 -414.968 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy..1M8OF Output file: /Exps/c202b/v1/v1_3mm/1234/No0119/uy.W.260.1M8OF