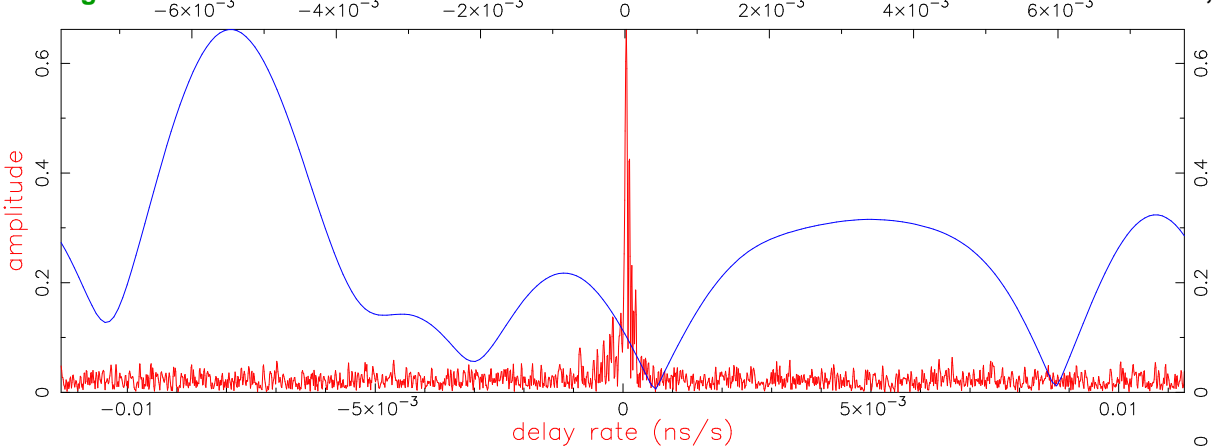
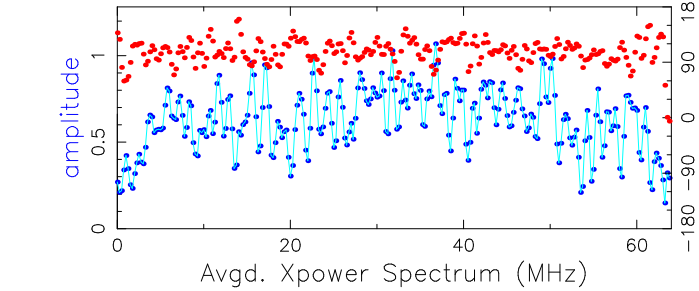
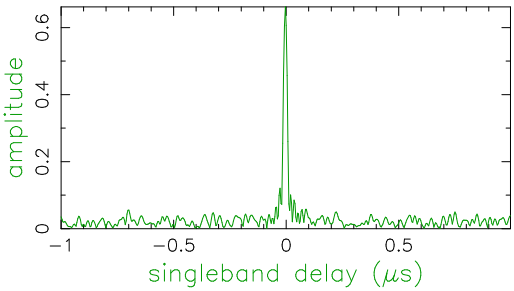


multiband delay ( $\mu$ s)



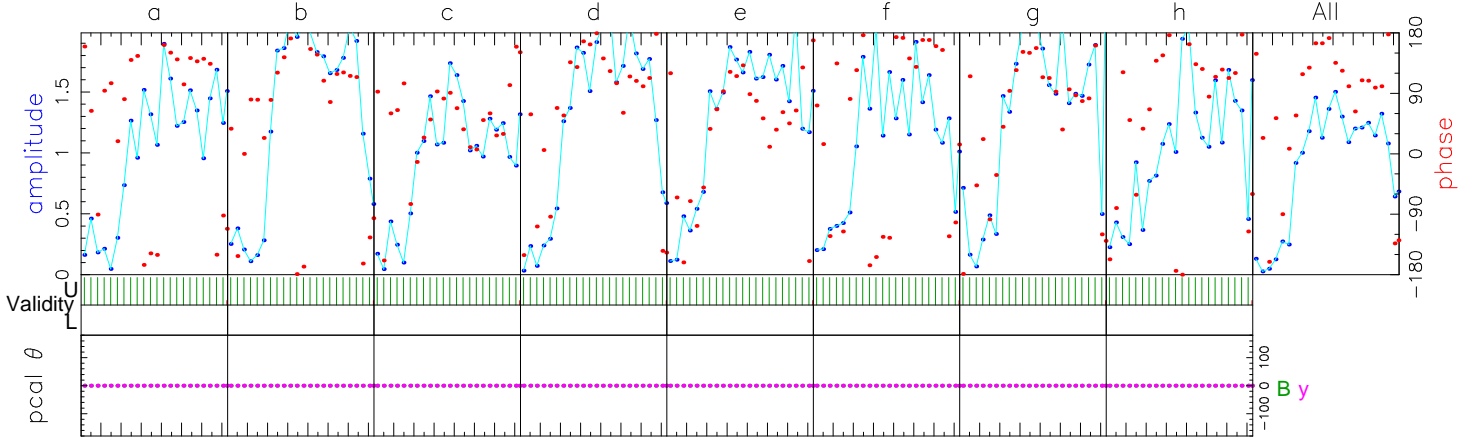
Fringe quality 4

SNR 37.1  
 Int time 419.814  
 Amp 0.662  
 Phase 125.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003868  
 MBD -0.005463  
 Fringe rate (Hz)  
 0.005964  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



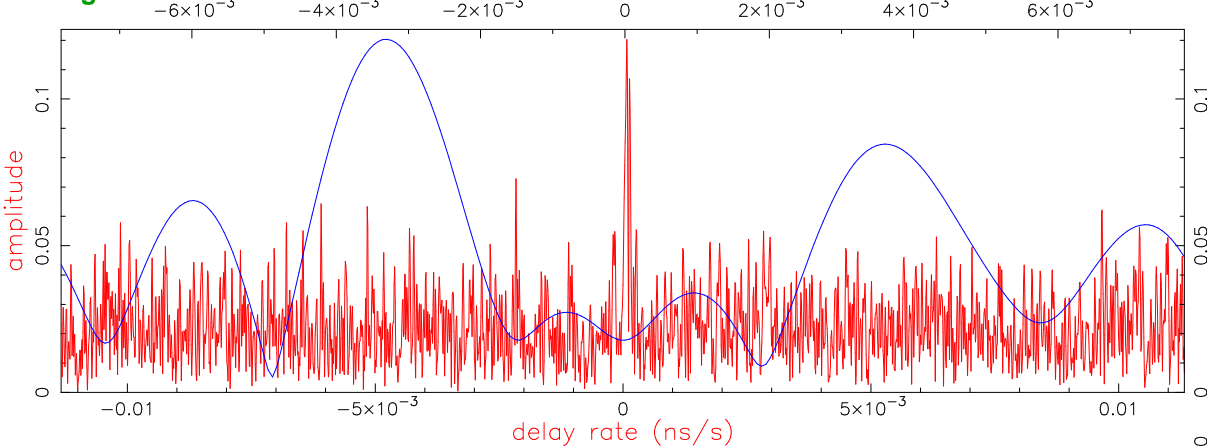
Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031652  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



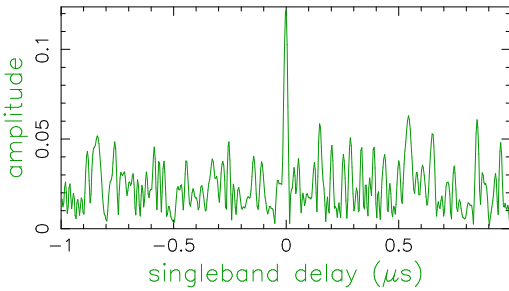
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
y	1000	1000	1000	1000	1000	1000	1000	1000			
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
y	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		4.87885007580E+03			4.8788553899E+03				Resid mbdelay (usec)	-5.46319E-03	+/- 2.9E-05
Sband delay (usec)		4.87885167124E+03			8.8529367E+00				Resid sbdelay (usec)	-3.86775E-03	+/- 2.3E-04
Phase delay (usec)		4.87885554305E+03			-2.9999999E-07				Resid phdelay (usec)	4.05663E-06	+/- 1.0E-07
Delay rate (us/s)		9.96360906174E-01			9.96360836939E-01				Resid rate (us/s)	6.92346E-08	+/- 4.1E-10
Total phase (deg)			172.2		-1.02702107994E-05				Resid phase (deg)	125.8	+/- 3.1
	RMS	Theor.	Amplitude	0.662 +/- 0.018					PCal mode: MANUAL, MANUAL		
ph/seg (deg)	62.9	7.4	Search (2048X32)	0.653					PCal rate: 0.000E+00, 0.000E+00 (us/s)		
amp/seg (%)	81.9	12.9	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled	sb window (us) -1.000 1.000
ph/frq (deg)	45.0	4.4	Inc. seg. avg.	0.883					Sample rate(MISamp/s): 128		mb window (us) -0.008 0.008
amp/frq (%)	29.4	7.6	Inc. frq. avg.	0.821					Data rate(Mb/s): 2048		dr window (ns/s) -0.011 0.011
									nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

multiband delay ( $\mu$ s)

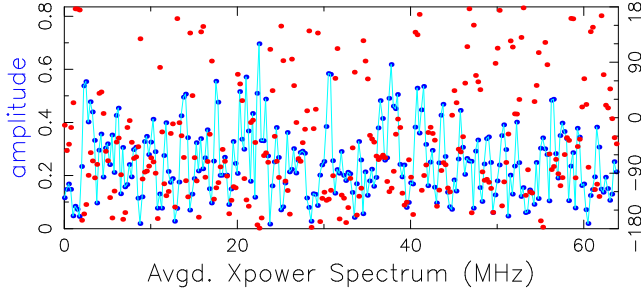


Fringe quality 0

SNR 6.9  
Int time 419.814  
Amp 0.124  
Phase -74.7  
PFD 1.2e-03  
Delays (us)  
SBD -0.001661  
MBD -0.003269  
Fringe rate (Hz)  
0.006510  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

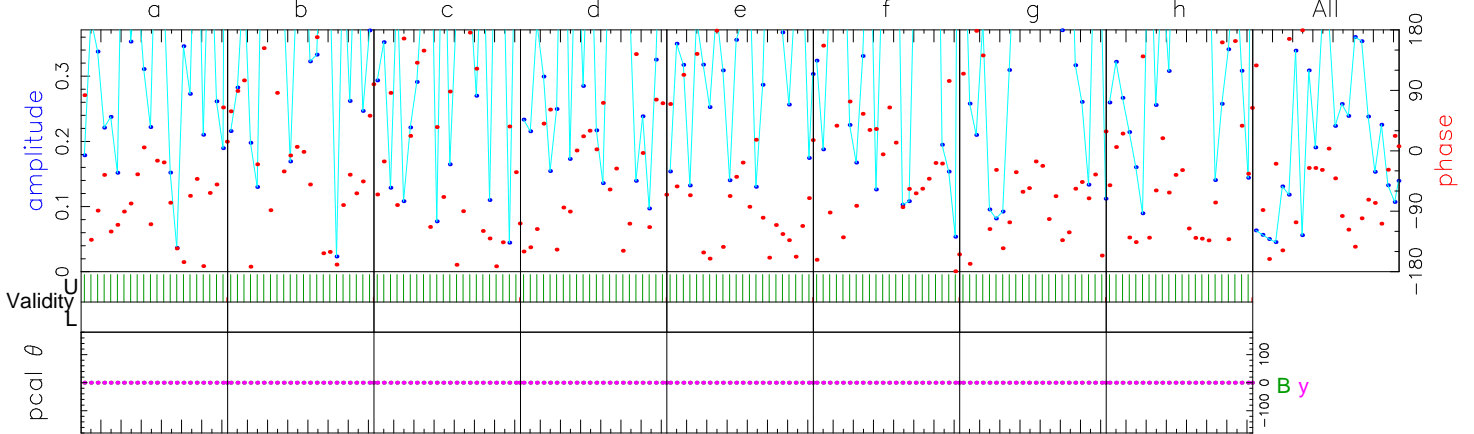


delay rate (ns/s)



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031655  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

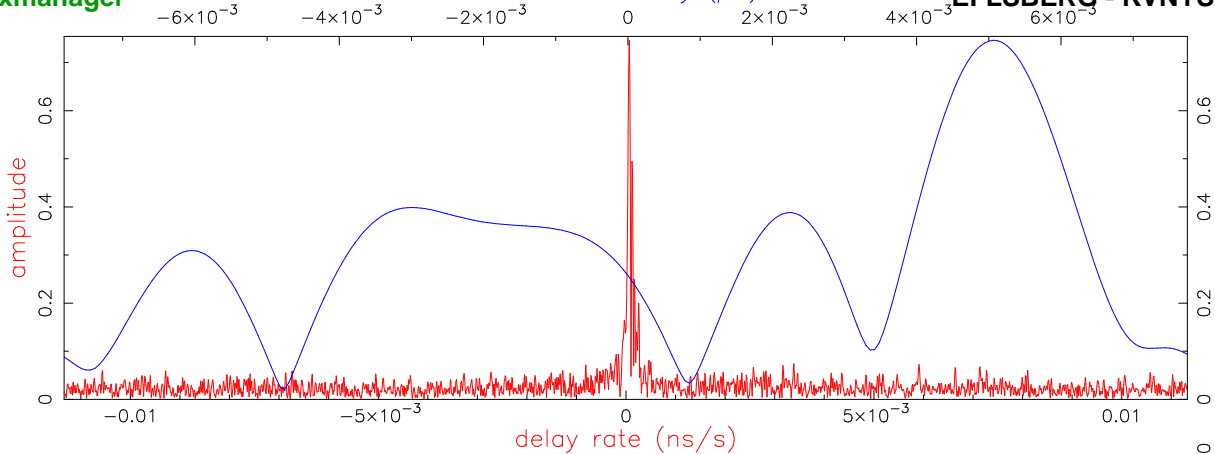
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-61.6	-42.3	-119.6	-36.6	-122.4	-13.3	-78.9	-90.8	Phase	-74.7
	0.2	0.0	0.2	0.1	0.2	0.2	0.1	0.1	Ampl.	0.1
	255.1	388.3	433.0	472.7	256.7	257.4	256.3	252.7	Sbd box	256.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.87885227022E+03		Apriori delay (usec)		4.8788553899E+03		Resid mbdelay (usec)		-3.26878E-03	+/- 1.6E-04
Sband delay (usec)	4.87885387799E+03		Apriori clock (usec)		8.8529367E+00		Resid sbdelay (usec)		-1.66100E-03	+/- 1.2E-03
Phase delay (usec)	4.8788553659E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		-2.40873E-06	+/- 5.3E-07
Delay rate (us/s)	9.96360912511E-01		Apriori rate (us/s)		9.96360836939E-01		Resid rate (us/s)		7.55719E-08	+/- 2.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.02702107994E-05		Resid phase (deg)		-74.7	+/- 16.5

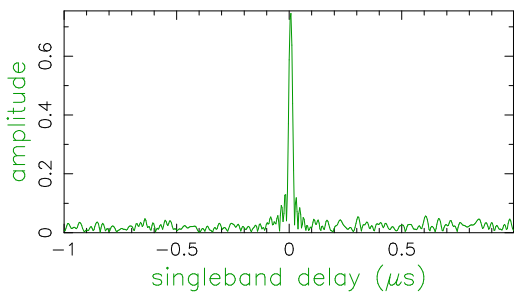
	RMS	Theor.	Amplitude	0.124 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	68.2	39.6	Search (2048X32)	0.119	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	111.4	69.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	42.8	23.4	Inc. seg. avg.	0.162	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	45.6	40.8	Inc. frq. avg.	0.138	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

multiband delay ( $\mu$ s)

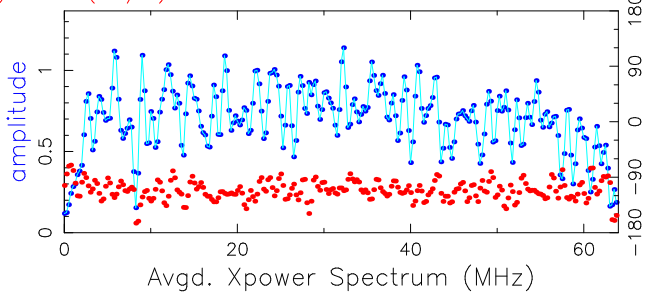


Fringe quality 4

SNR 42.3  
Int time 419.814  
Amp 0.754  
Phase -95.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.006404  
MBD 0.005031  
Fringe rate (Hz)  
0.006159  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

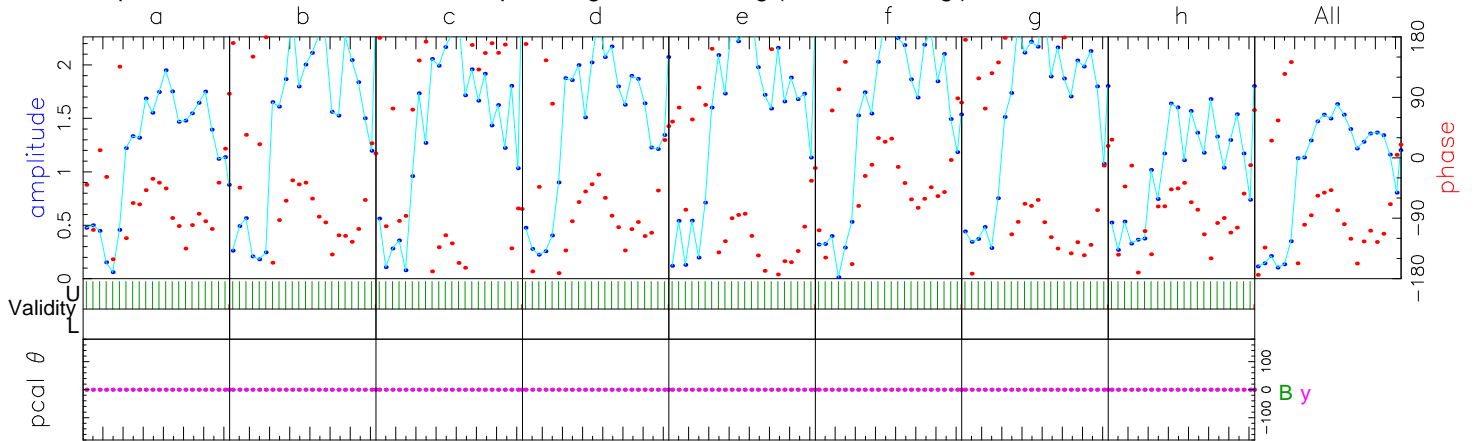


delay rate (ns/s)



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031648  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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



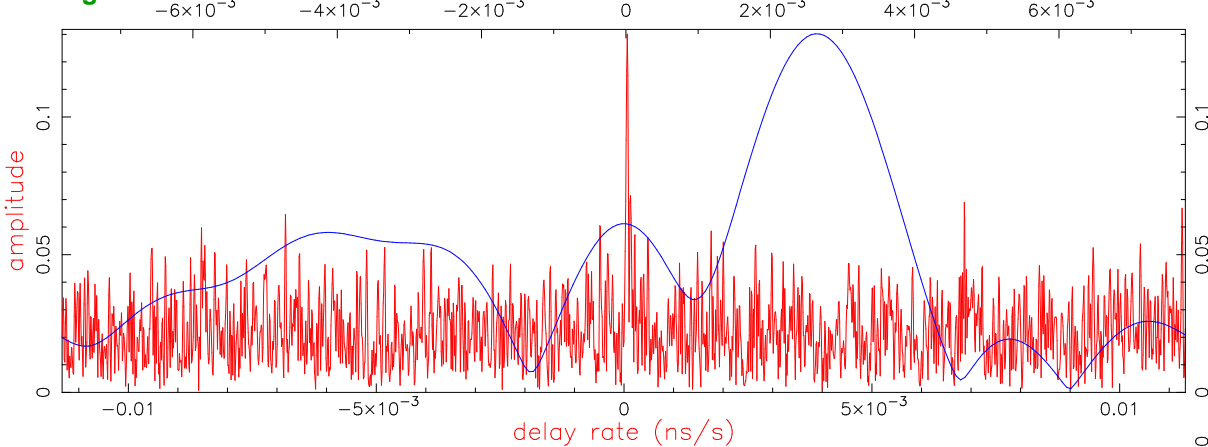
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-72.5	-82.2	-168.8	-83.8	-132.7	-26.2	-114.7	-80.2	Phase	-95.2
	0.9	1.0	1.0	1.0	1.0	1.0	1.1	0.8	Ampl.	1.0
	257.5	258.8	259.3	259.6	259.4	259.3	258.8	257.9	Sbd box	258.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	4.87886056955E+03	Apriori delay (usec)	4.8788553899E+03	Resid mbdelay (usec)	5.03056E-03	+/-	2.6E-05
Sband delay (usec)	4.87886194324E+03	Apriori clock (usec)	8.8529367E+00	Resid sbdelay (usec)	6.40425E-03	+/-	2.0E-04
Phase delay (usec)	4.8788553592E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	-3.06971E-06	+/-	8.7E-08
Delay rate (us/s)	9.96360908442E-01	Apriori rate (us/s)	9.96360836939E-01	Resid rate (us/s)	7.15027E-08	+/-	3.6E-10
Total phase (deg)	-48.8	Apriori accel (us/s/s)	-1.02702107994E-05	Resid phase (deg)	-95.2	+/-	2.7

ph/seg (deg)	RMS 70.1	Theor. 6.5	Amplitude Search (2048X32)	0.754 +/- 0.018	0.719	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	79.0	11.3	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)	46.6	3.8	Inc. seg. avg.	1.005		Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	31.0	6.7	Inc. frq. avg.	0.969		Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

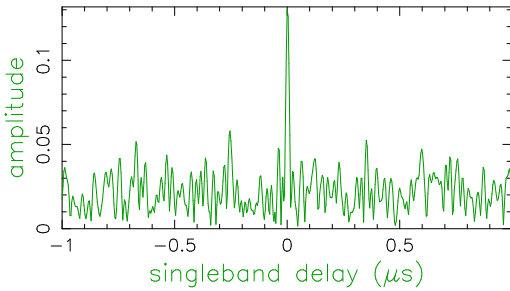
B: az 54.8 el 61.0 pa -84.1 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) -10946.773 -434.755 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/By..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/By.W.5.1IUDSP

multiband delay ( $\mu$ s)

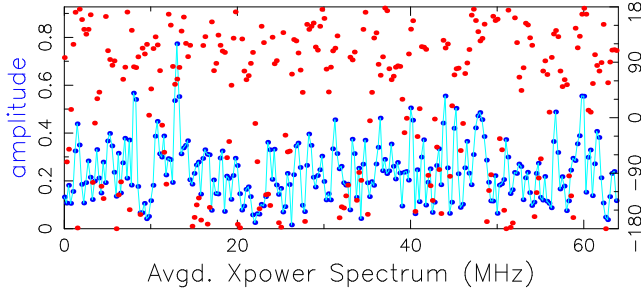


Fringe quality 9

SNR 7.4  
 Int time 419.814  
 Amp 0.132  
 Phase 112.2  
 PFD 4.8e-05  
 Delays (us)  
 SBD 0.001391  
 MBD 0.002695  
 Fringe rate (Hz)  
 0.005949  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

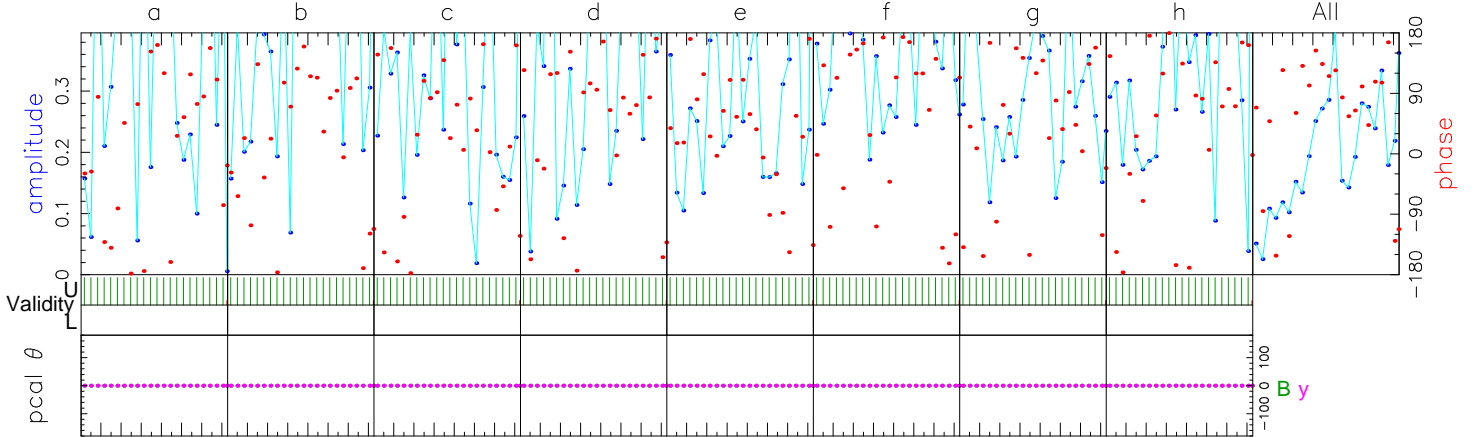


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031659  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



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

Group delay (usec)(sbd)	4.87885823433E+03	Apriori delay (usec)	4.87885553899E+03	Resid mbdelay (usec)	2.69534E-03	+/-	1.5E-04
Sband delay (usec)	4.87885692999E+03	Apriori clock (usec)	8.8529367E+00	Resid sbdelay (usec)	1.39100E-03	+/-	1.2E-03
Phase delay (usec)	4.87885554261E+03	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	3.61913E-06	+/-	5.0E-07
Delay rate (us/s)	9.96360906005E-01	Apriori rate (us/s)	9.96360836939E-01	Resid rate (us/s)	6.90659E-08	+/-	2.1E-09
Total phase (deg)	158.6	Apriori accel (us/s/s)	-1.02702107994E-05	Resid phase (deg)	112.2	+/-	15.5

ph/seg (deg)	65.1	Theor.	37.2	Amplitude	0.132 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	84.1		64.9	Search (2048X32)	0.126	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	37.2		21.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	34.2		38.3	Inc. seg. avg.	0.159	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.140	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

B: az 54.8 el 61.0 pa -84.1 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) -10946.773 -434.755 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/By..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/By.W.66.1IUDSP

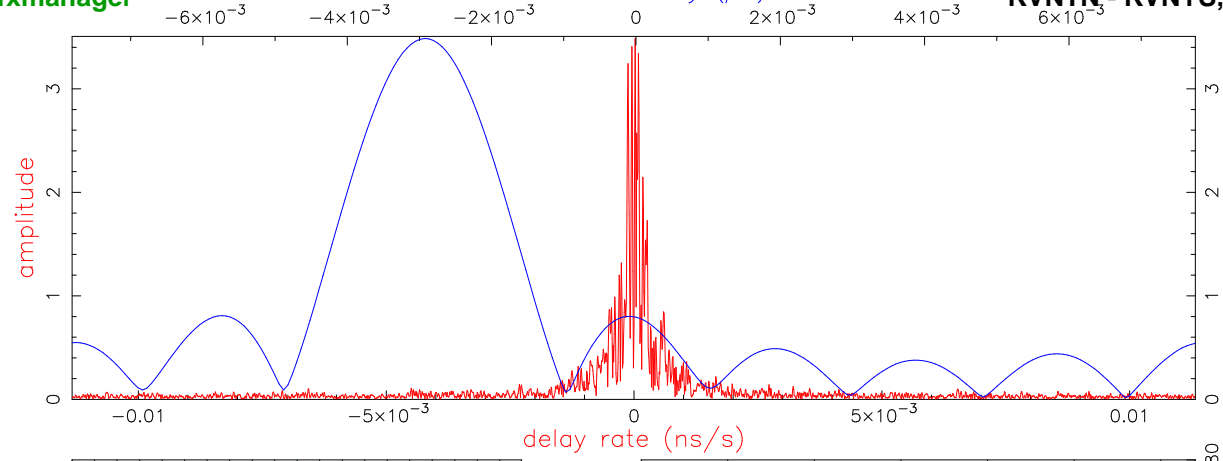
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, ty

KVNTN - KVNYs, fgroup W, pol RR

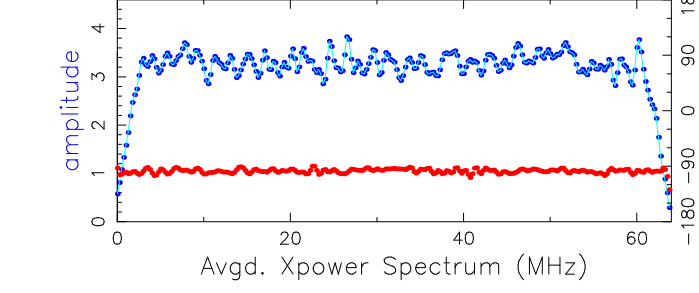
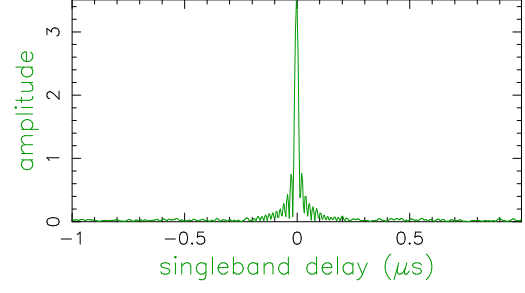
multiband delay ( $\mu$ s)



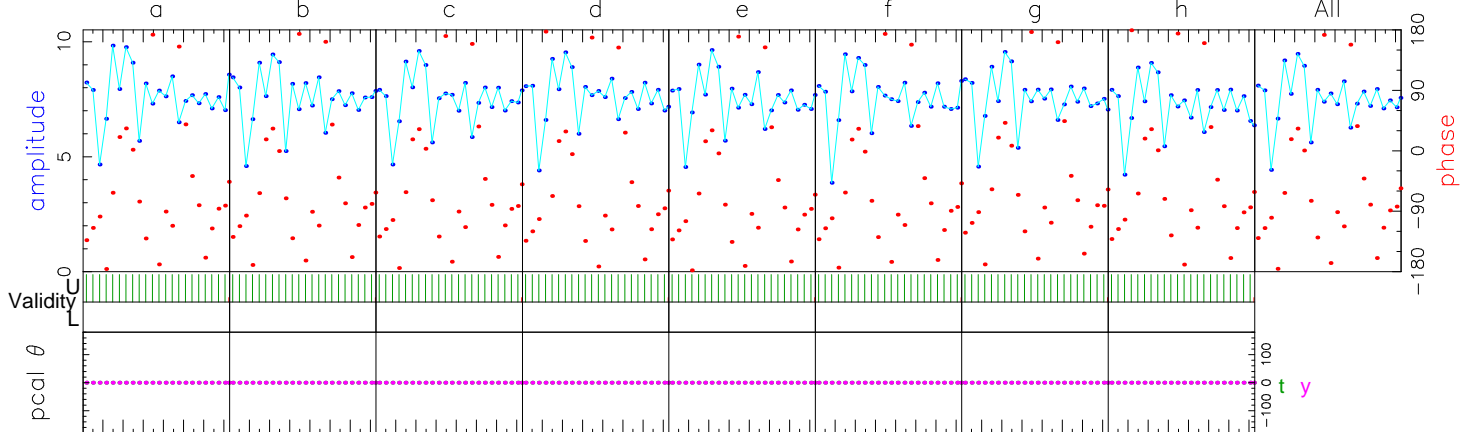
Fringe quality 5

SNR 196.5  
 Int time 419.826  
 Amp 3.506  
 Phase -97.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002920  
 MBD -0.002919  
 Fringe rate (Hz) 0.002129  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031652  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-97.4	-95.5	-96.1	-102.3	-101.9	-98.1	-92.5	-99.1	Phase	-97.8
	3.4	3.6	3.5	3.6	3.5	3.5	3.5	3.4	Ampl.	3.5
	256.3	256.2	256.1	256.3	256.3	256.4	256.2	256.2	Sbd box	256.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	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)	-8.74078632845E+02		Apriori delay (usec)		-8.74075713802E+02		Resid mbdelay (usec)		-2.91904E-03	+/- 5.5E-06
Sband delay (usec)	-8.74078633552E+02		Apriori clock (usec)		1.3600063E-01		Resid sbdelay (usec)		-2.91975E-03	+/- 4.4E-05
Phase delay (usec)	-8.74075716957E+02		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-3.15523E-06	+/- 1.9E-08
Delay rate (us/s)	-3.13809418118E-02		Apriori rate (us/s)		-3.13809665255E-02		Resid rate (us/s)		2.47138E-08	+/- 7.8E-11
Total phase (deg)			Apriori accel (us/s/s)		-1.19503104774E-06		Resid phase (deg)		-97.8	+/- 0.6

ph/seg (deg) 67.3 1.4 Theor. Amplitude 3.506 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 118.0 2.4 Search (2048X32) 3.414 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 3.6 0.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 2.0 1.4 Inc. seg. avg. 7.495 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 t: az 321.4 el 38.0 pa 87.5 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 341.813 -438.387 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty.W.27.1IUDSP



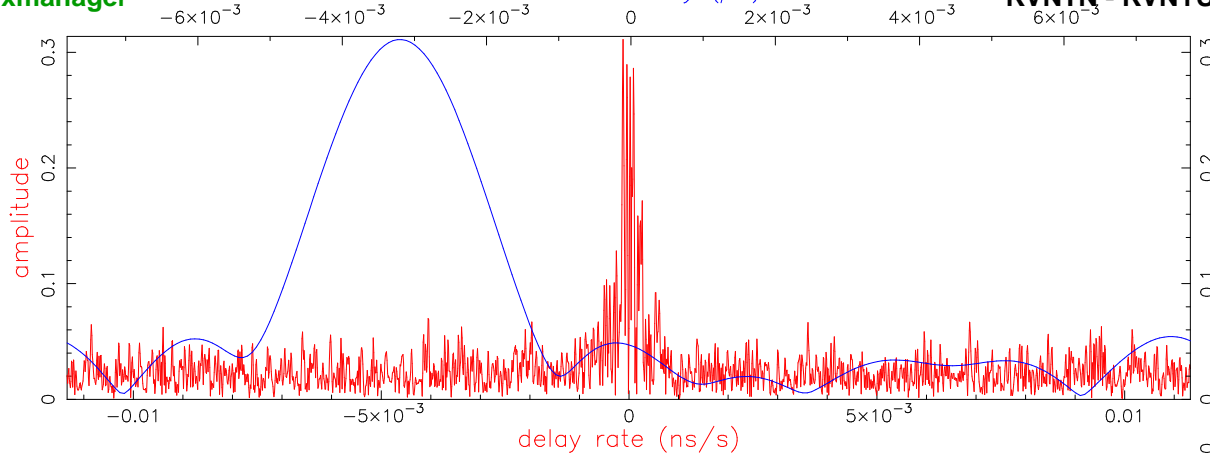
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, ty

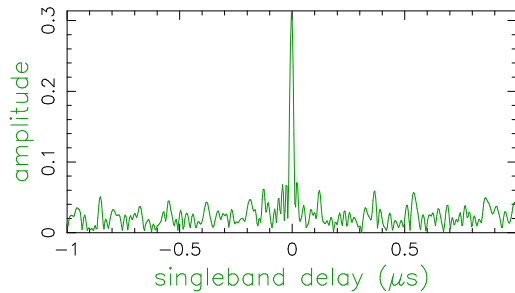
KVNTN - KVNYS, fgroup W, pol LR

multiband delay ( $\mu$ s)

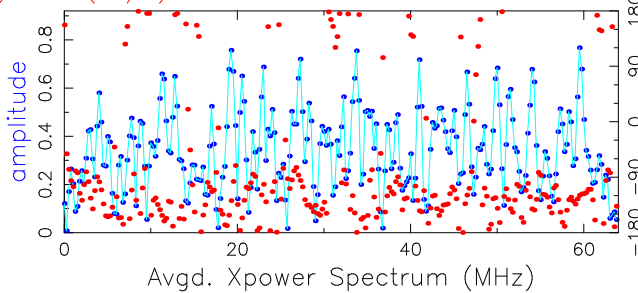


Fringe quality 9

SNR 17.6  
 Int time 419.826  
 Amp 0.314  
 Phase -127.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002741  
 MBD -0.003205  
 Fringe rate (Hz)  
 -0.010249  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

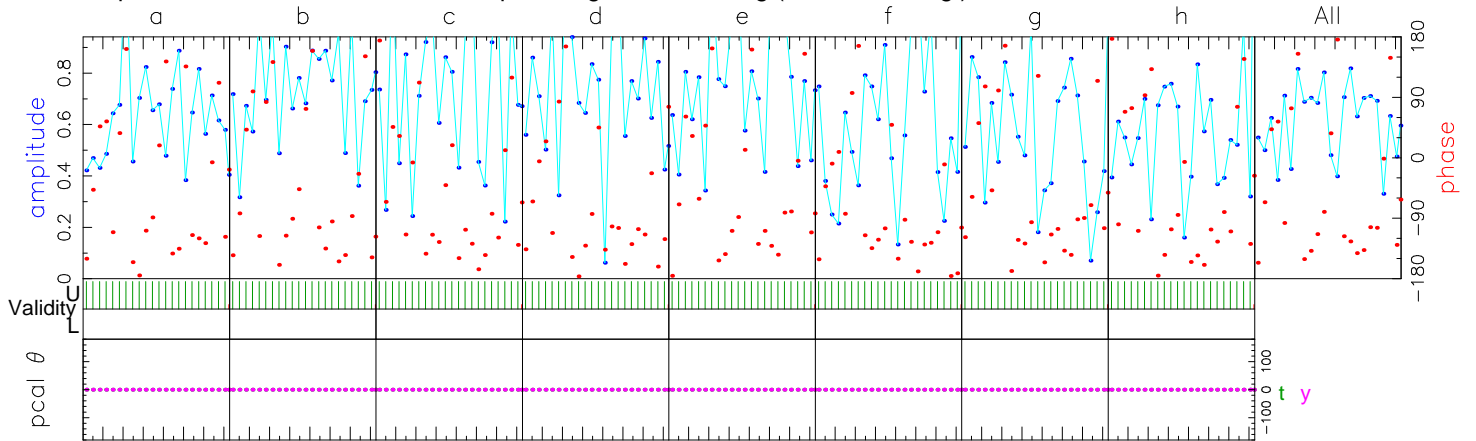


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031655  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ty	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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-8.74078918845E+02	-8.74078454552E+02	-8.74075717913E+02	-8.74075713802E+02	-8.74075713802E+02	-8.74075713802E+02	-8.74075713802E+02	-8.74075713802E+02		
Sband delay (usec)	-137.2	-137.6	-119.6	-117.8	-122.8	-127.7	-120.5	-145.0		
Phase delay (usec)	0.2	0.3	0.3	0.4	0.4	0.4	0.3	0.3		
Delay rate (us/s)	256.3	256.1	256.0	256.8	256.2	255.9	256.7	256.1		
Total phase (deg)			-122.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
ion window (TEC)										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
amplitude	83.9	15.6	Search (2048X32)	0.301	0.314 +/- 0.018	0.0000000E+00	0.0000000E+00	0.0000000E+00		
amp/seg (%)	105.4	27.3	Interp.	0.000	0.000	0.0000000E+00	0.0000000E+00	0.0000000E+00		
ph/frq (deg)	11.0	9.2	Inc. seg. avg.	0.591	0.591	0.0000000E+00	0.0000000E+00	0.0000000E+00		
amp/frq (%)	18.6	16.1	Inc. frq. avg.	0.311	0.311	0.0000000E+00	0.0000000E+00	0.0000000E+00		
t: az 321.4 el 38.0 pa 87.5			y: az 319.2 el 41.0 pa 82.1			u, v (fr/asec) 341.813 -438.387				
Control file: cf_1234_gmva			Input file: /Exps/c202b/v1/v1_3mm/1234/No0162/ty..1IUDSP			Output file: /Exps/c202b/v1/v1_3mm/1234/No0162/ty.W.46.1IUDSP				

simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

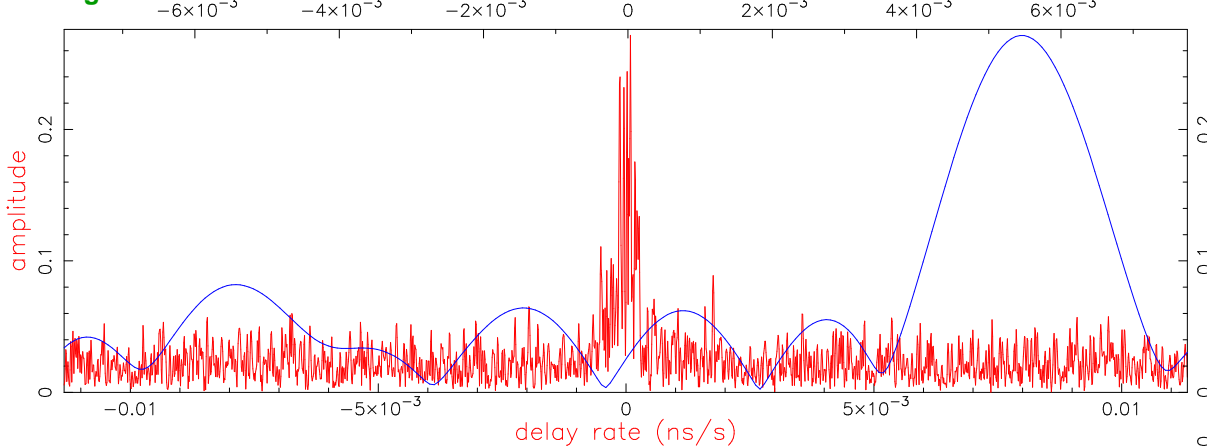
fxmanager

0102+584.1IUDSP, No0162, ty

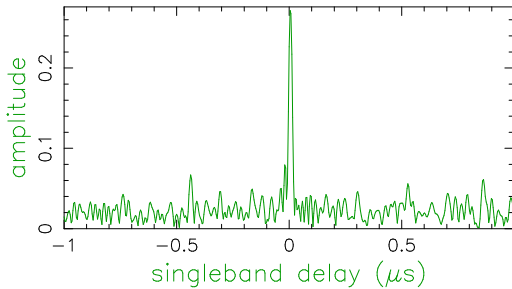
KVNTN - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)

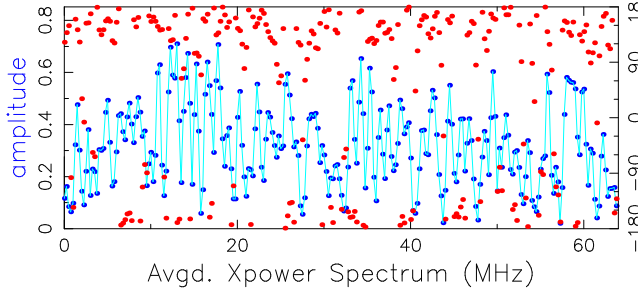
Fringe quality 9



SNR 15.5  
 Int time 419.826  
 Amp 0.276  
 Phase 159.0  
 PFD 2.8e-45  
 Delays (us)  
 SBD 0.005541  
 MBD 0.005459  
 Fringe rate (Hz) 0.007951  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

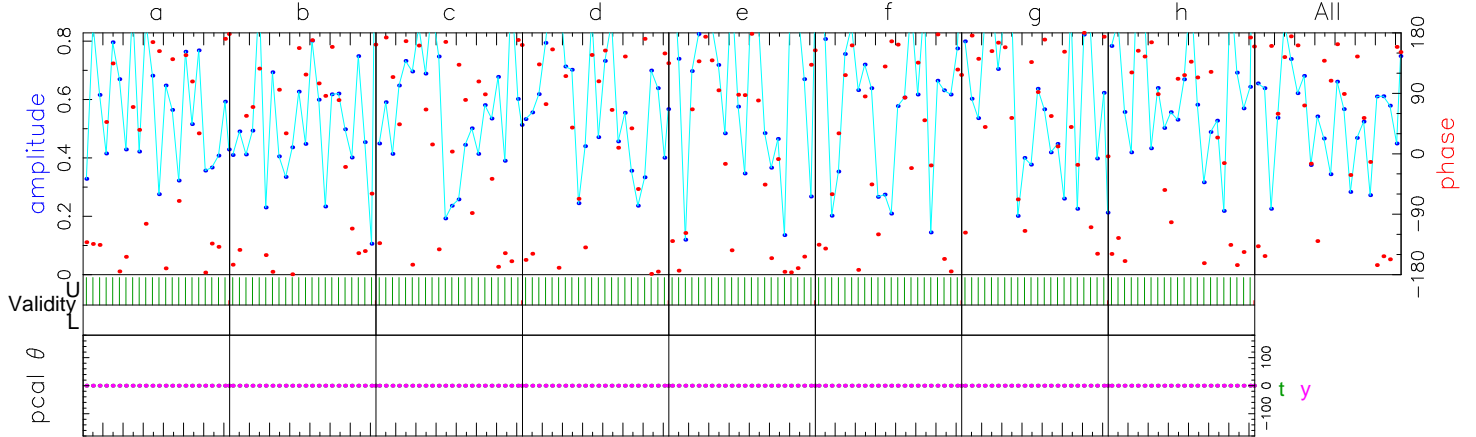


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031659  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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

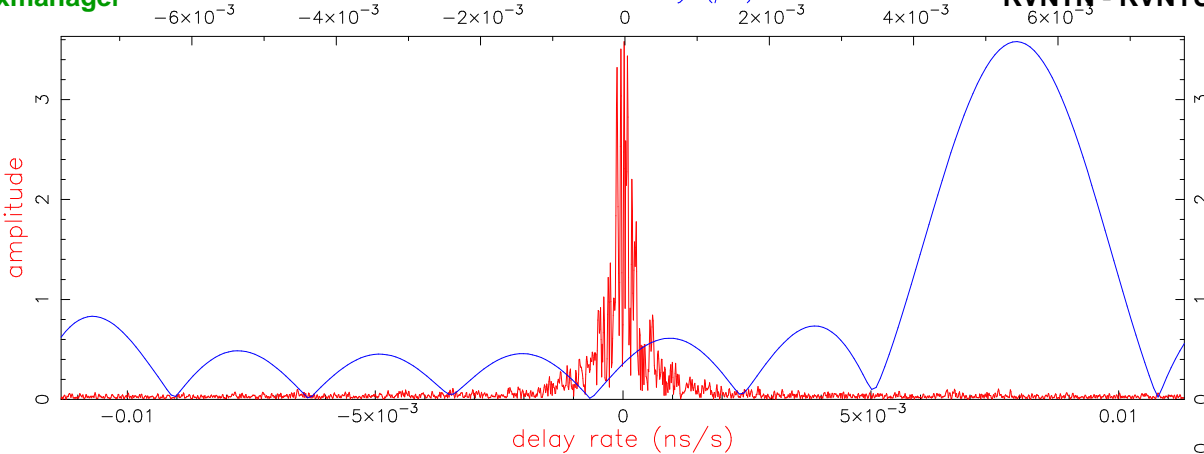


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-8.74070255193E+02									
Sband delay (usec)	-8.74070173052E+02									
Phase delay (usec)	-8.74075708673E+02									
Delay rate (us/s)	-3.13808742274E-02									
Total phase (deg)			-196.2							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode:	MANUAL	MANUAL								
Pcal rate:	0.000E+00	0.000E+00								
Bits/sample:	2x2									
Sample rate(MISamp/s):	128									
Data rate(Mb/s):	2048									
nlags:	256									
t_cohere	infinite									
sb window (us)	-1.000	1.000								
mb window (us)	-0.008	0.008								
dr window (ns/s)	-0.011	0.011								
ion window (TEC)	0.00	0.00								

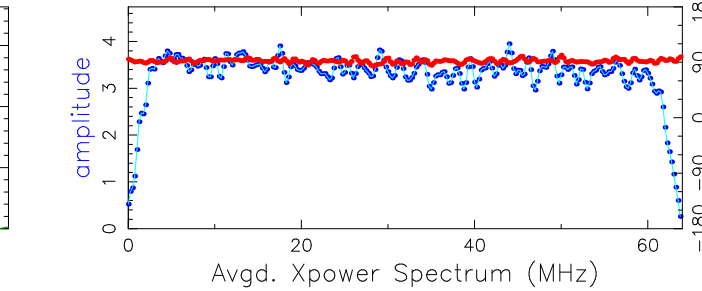
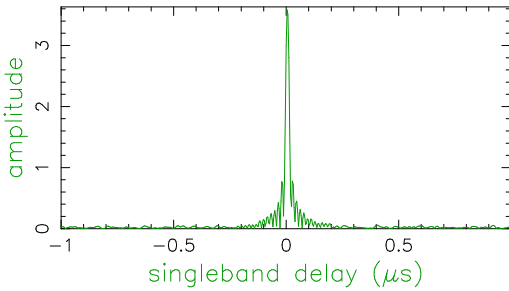
ph/seg (deg) 80.2 17.8 Search (2048X32) 0.260 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 109.6 31.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 11.2 10.5 Inc. seg. avg. 0.510 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 20.7 18.3 Inc. frq. avg. 0.271 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 321.4 el 38.0 pa 87.5 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 341.813 -438.387 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty.W.68.1IUDSP

multiband delay ( $\mu$ s)

Fringe quality 5

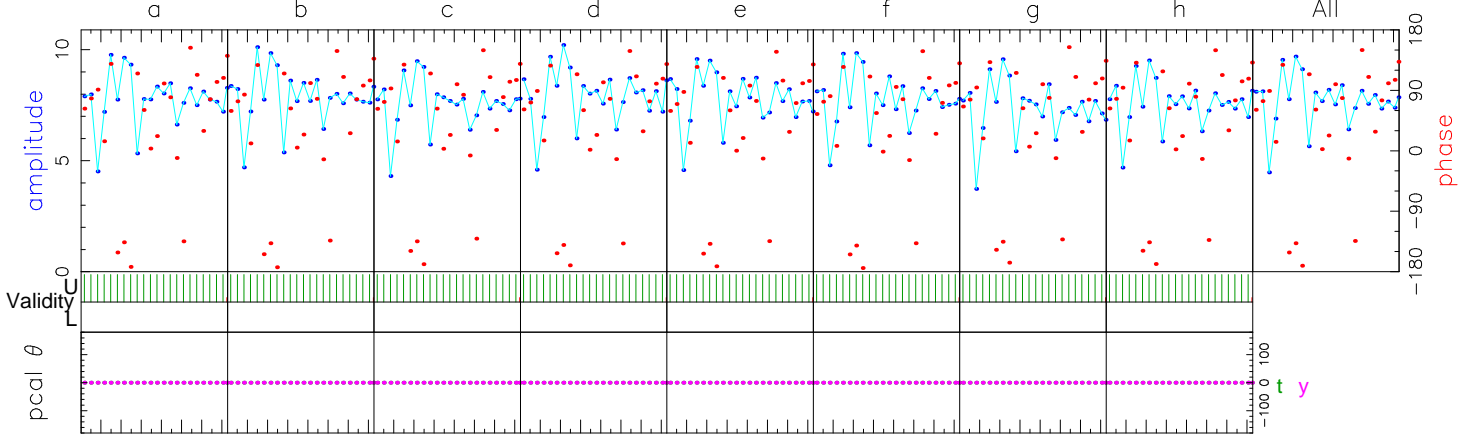


SNR 203.6  
 Int time 419.826  
 Amp 3.633  
 Phase 91.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005433  
 MBD 0.005427  
 Fringe rate (Hz) 0.002139  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031649  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:y	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

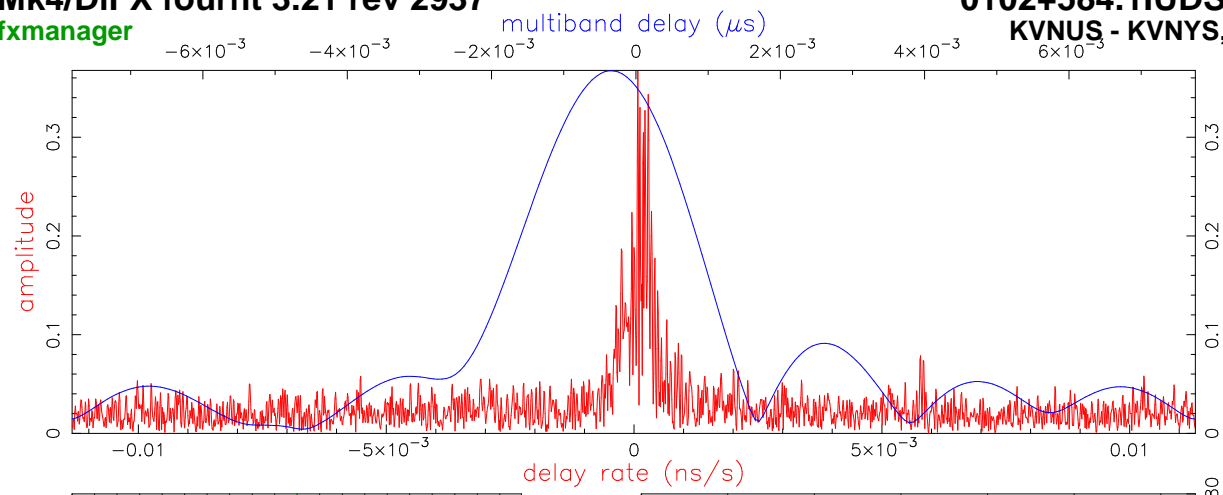
Group delay (usec)(sbd) -8.74070287157E+02 Apriori delay (usec) -8.74075713802E+02 Resid mbdelay (usec) 5.42664E-03 +/- 5.3E-06  
 Sband delay (usec) -8.74070281302E+02 Apriori clock (usec) 1.3600063E-01 Resid sbdelay (usec) 5.43250E-03 +/- 4.2E-05  
 Phase delay (usec) -8.74075710844E+02 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 2.95767E-06 +/- 1.8E-08  
 Delay rate (us/s) -3.13809416885E-02 Apriori rate (us/s) -3.13809665255E-02 Resid rate (us/s) 2.48371E-08 +/- 7.5E-11  
 Total phase (deg) -263.6 Apriori accel (us/s/s) -1.19503104774E-06 Resid phase (deg) 91.7 +/- 0.6

RMS Theor. Amplitude 3.633 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 67.3 1.3 Search (2048X32) 3.497 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 115.9 2.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 2.6 0.8 Inc. seg. avg. 7.688 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 3.2 1.4 Inc. frq. avg. 3.584 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

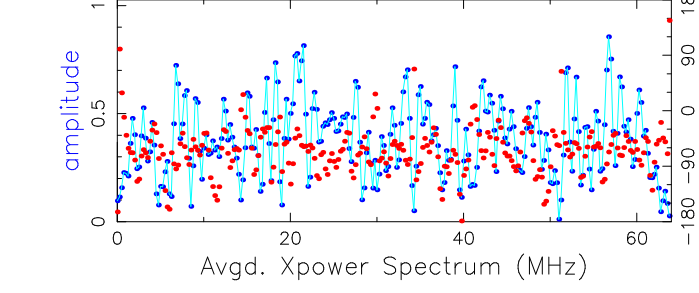
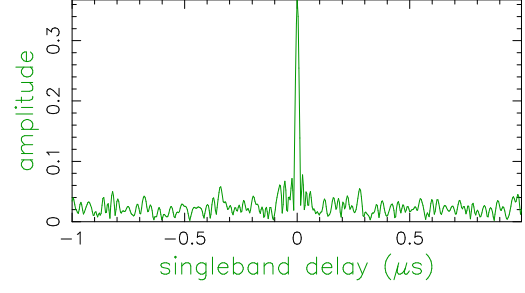
t: az 321.4 el 38.0 pa 87.5 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 341.813 -438.387 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/ty.W.8.1IUDSP

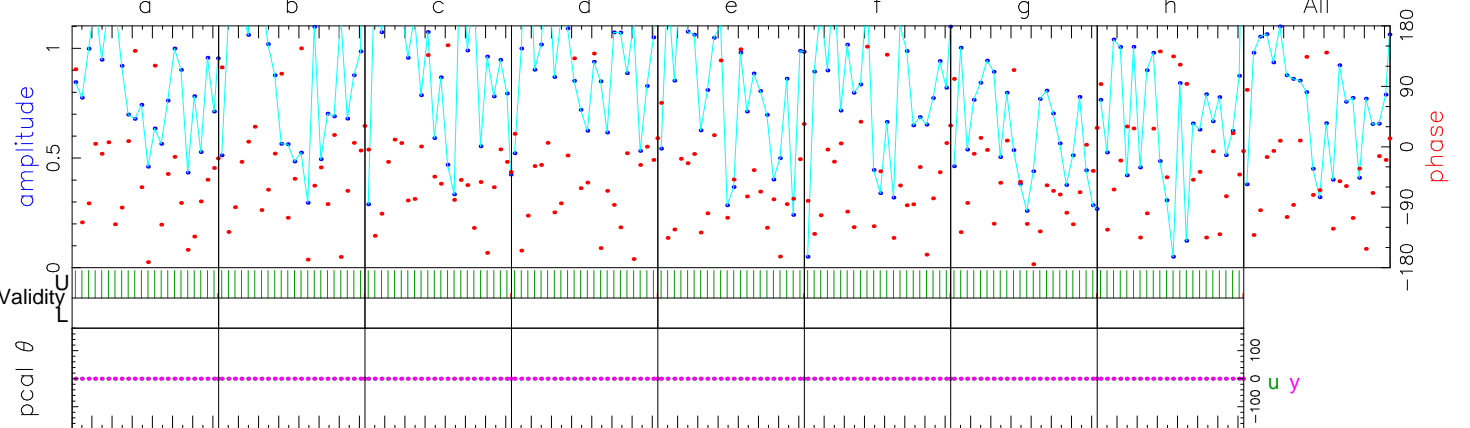




Fringe quality 9  
SNR 20.6  
Int time 419.826  
Amp 0.368  
Phase -58.5  
PFD 0.0e+00  
Delays (us)  
SBD 0.000354  
MBD -0.000345  
Fringe rate (Hz) 0.006364  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031710  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"



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

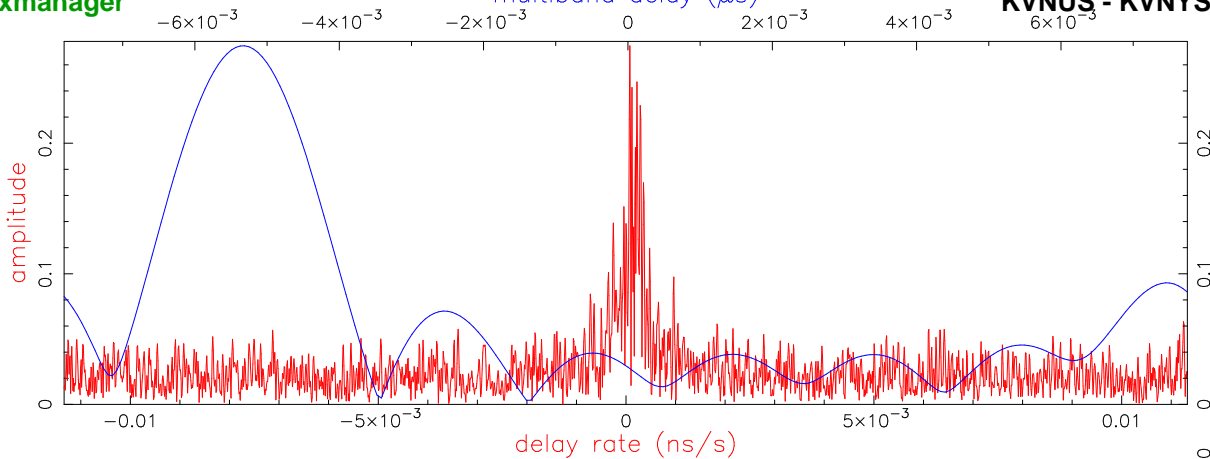


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-61.1	-45.9	-57.5	-64.1	-65.5	-68.3	-62.4	-35.8	Phase	-58.5
	0.4	0.4	0.5	0.4	0.3	0.4	0.3	0.2	Ampl.	0.4
	257.5	257.0	257.0	256.9	256.6	257.2	257.0	257.6	Sbd box	257.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-7.8606627867E+02		Apriori delay (usec)		-7.86066283028E+02		Resid mbdelay (usec)		-3.44839E-04	+/- 5.3E-05
Sband delay (usec)	-7.86065929278E+02		Apriori clock (usec)		1.3280635E+00		Resid sbdelay (usec)		3.53750E-04	+/- 4.2E-04
Phase delay (usec)	-7.86066284914E+02		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		-1.88582E-06	+/- 1.8E-07
Delay rate (us/s)	-2.39480188376E-02		Apriori rate (us/s)		-2.39480927146E-02		Resid rate (us/s)		7.38771E-08	+/- 7.4E-10
Total phase (deg)			Apriori accel (us/s/s)		1.46439640794E-06		Resid phase (deg)		-58.5	+/- 5.6

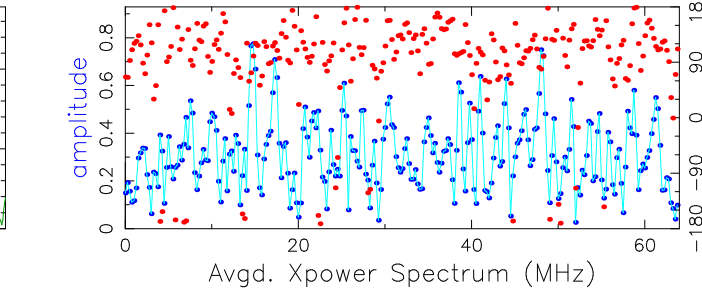
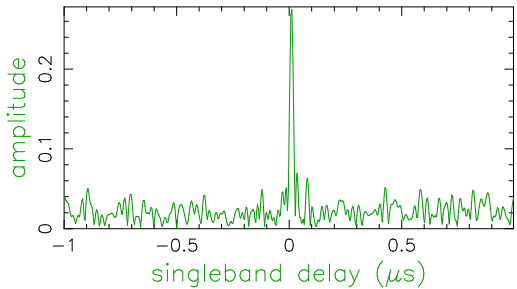
ph/seg (deg) RMS Theor. Amplitude 0.368 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 73.0 13.3 Search (2048X32) 0.353 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 121.6 23.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 12.1 7.9 Inc. seg. avg. 0.732 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
amp/frq (%) 21.6 13.7 Inc. frq. avg. 0.369 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
u: az 320.5 el 38.3 pa 82.0 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 265.863 53.684 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy.W.113.1IUDSP

multiband delay ( $\mu$ s)

Fringe quality 9

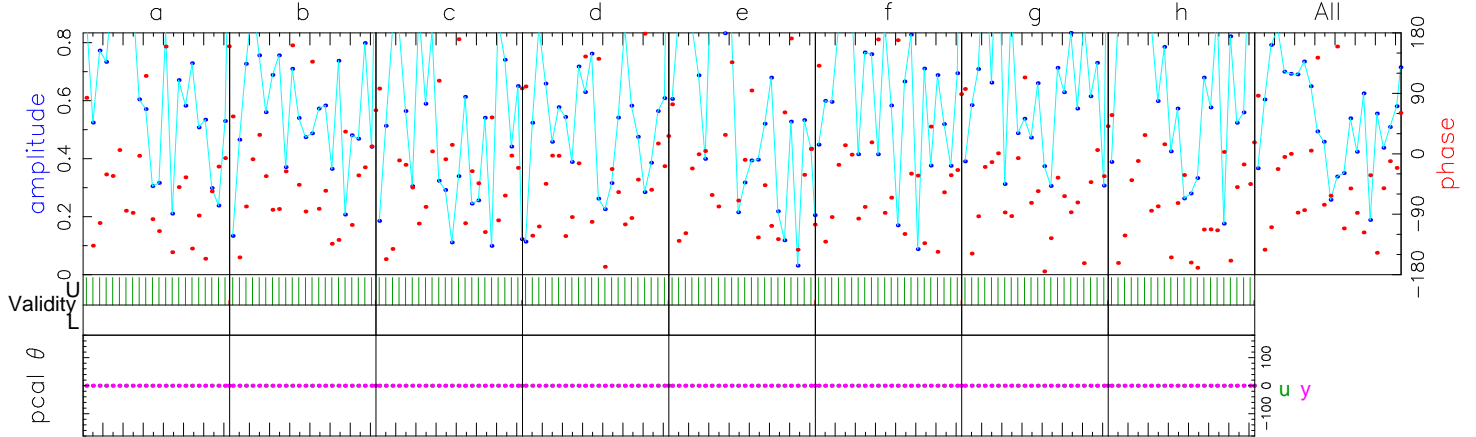


SNR 15.6  
Int time 419.826  
Amp 0.278  
Phase -63.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.010313  
MBD -0.005347  
Fringe rate (Hz) 0.006342  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031713  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-71.5	-59.0	-64.8	-68.1	-57.8	-57.7	-53.9	-73.8	Phase	-63.3
	0.2	0.3	0.3	0.3	0.2	0.3	0.3	0.3	Ampl.	0.3
	259.7	259.5	259.7	260.2	259.8	259.5	259.4	259.4	Sbd box	259.6
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

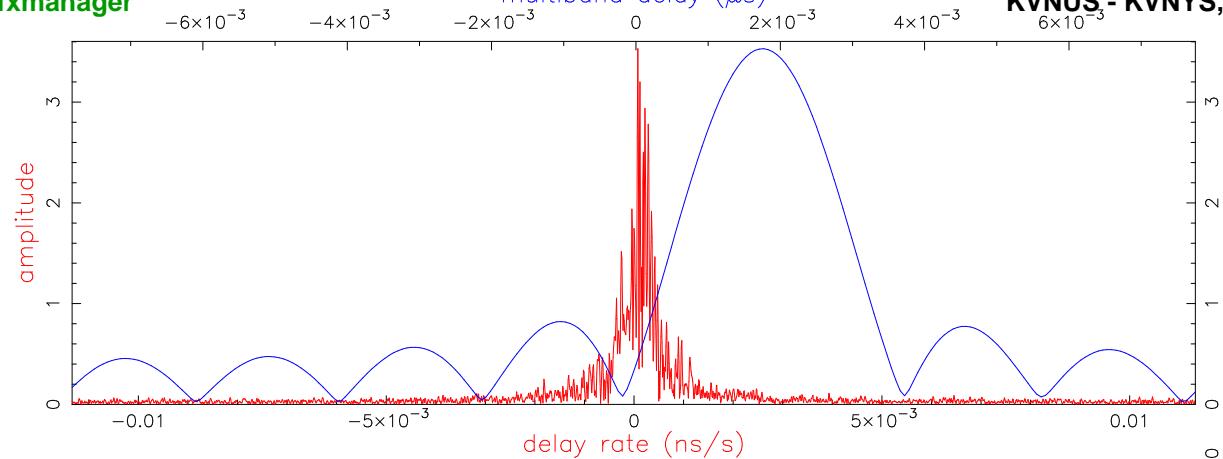
Group delay (usec)(sbd)	-7.86056005086E+02	Apriori delay (usec)	-7.86066283028E+02	Resid mbdelay (usec)	-5.34706E-03	+/-	7.0E-05
Sband delay (usec)	-7.86055970528E+02	Apriori clock (usec)	1.3280635E+00	Resid sbdelay (usec)	1.03125E-02	+/-	5.5E-04
Phase delay (usec)	-7.86066285070E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-2.04179E-06	+/-	2.4E-07
Delay rate (us/s)	-2.39480190913E-02	Apriori rate (us/s)	-2.39480927146E-02	Resid rate (us/s)	7.36234E-08	+/-	9.8E-10
Total phase (deg)	-286.5	Apriori accel (us/s/s)	1.46439640794E-06	Resid phase (deg)	-63.3	+/-	7.4

ph/seg (deg)	RMS 70.2	Theor. 17.6	Amplitude Search (2048X32)	0.278 +/- 0.018	0.266	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	112.2	30.8	Interp.	0.000	0.266	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	7.9	10.4	Inc. seg. avg.	0.515	0.266	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	15.5	18.2	Inc. frq. avg.	0.272	0.266	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 320.5 el 38.3 pa 82.0 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 265.863 53.684 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy.W.129.1IUDSP

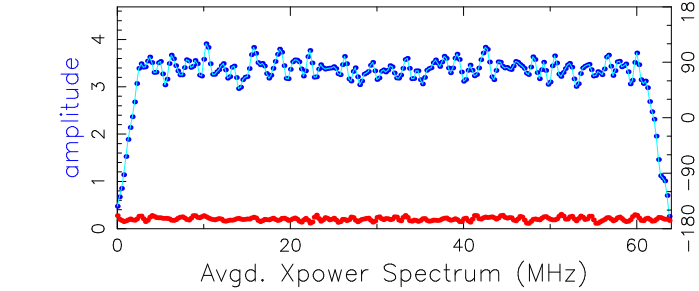
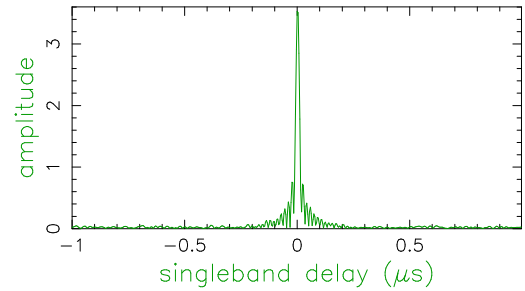


multiband delay ( $\mu$ s)



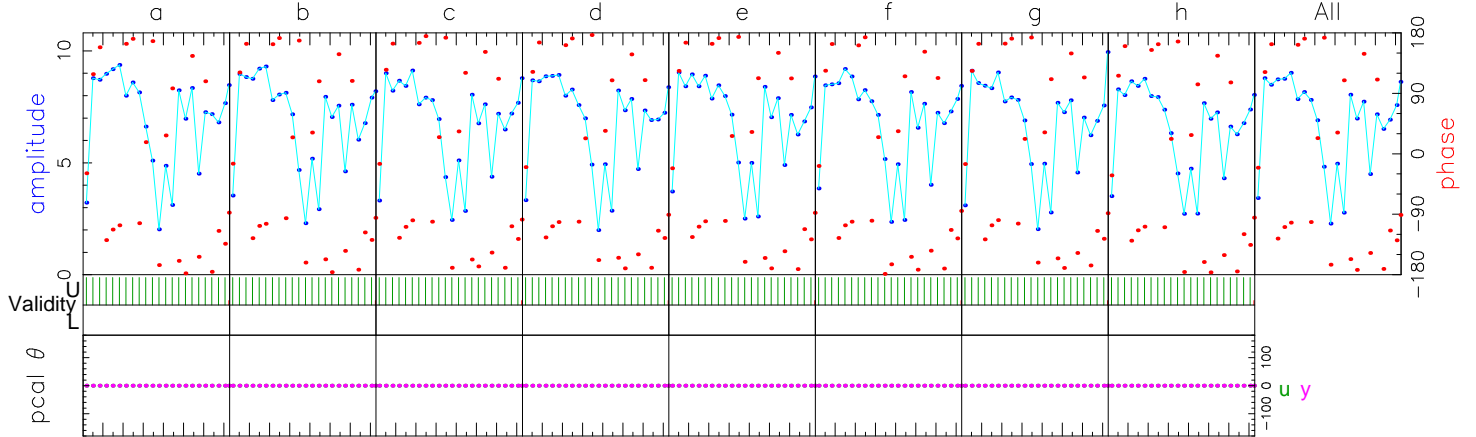
Fringe quality 5

SNR 201.9  
Int time 419.826  
Amp 3.603  
Phase -163.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.001813  
MBD 0.001759  
Fringe rate (Hz)  
0.006399  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031707  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

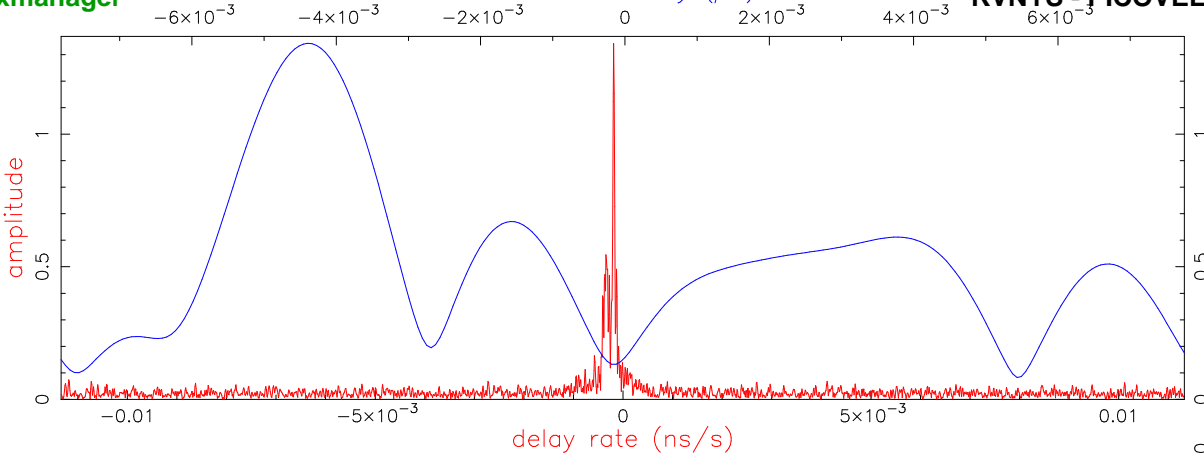
Group delay (usec)(sbd)	-7.86064524117E+02	Apriori delay (usec)	-7.86066283028E+02	Resid mbdelay (usec)	1.75891E-03	+/-	5.4E-06
Sband delay (usec)	-7.86064469528E+02	Apriori clock (usec)	1.3280635E+00	Resid sbdelay (usec)	1.81350E-03	+/-	4.3E-05
Phase delay (usec)	-7.86066288312E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-5.28336E-06	+/-	1.8E-08
Delay rate (us/s)	-2.39480184337E-02	Apriori rate (us/s)	-2.39480927146E-02	Resid rate (us/s)	7.42809E-08	+/-	7.6E-11
Total phase (deg)	-27.1	Apriori accel (us/s/s)	1.46439640794E-06	Resid phase (deg)	-163.8	+/-	0.6

ph/seg (deg)	73.8	1.4	Search (2048X32)	3.363	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	103.3	2.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	2.8	0.8	Inc. seg. avg.	6.749	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	2.6	1.4	Inc. frq. avg.	3.533	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

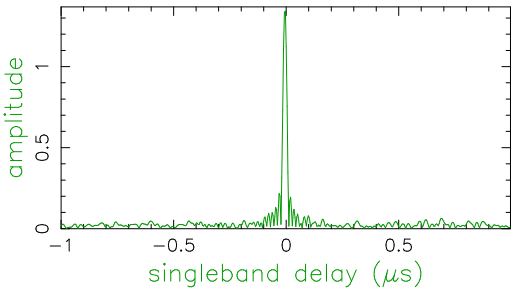
u: az 320.5 el 38.3 pa 82.0 y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 265.863 53.684 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/uy.W.97.1IUDSP

multiband delay ( $\mu$ s)

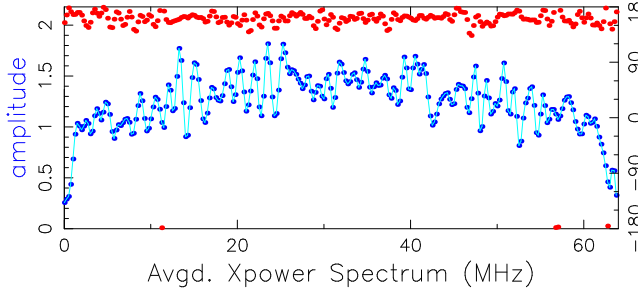
Fringe quality 3



SNR 76.7  
 Int time 419.394  
 Amp 1.369  
 Phase 145.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005764  
 MBD -0.004429  
 Fringe rate (Hz)  
 -0.016189  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

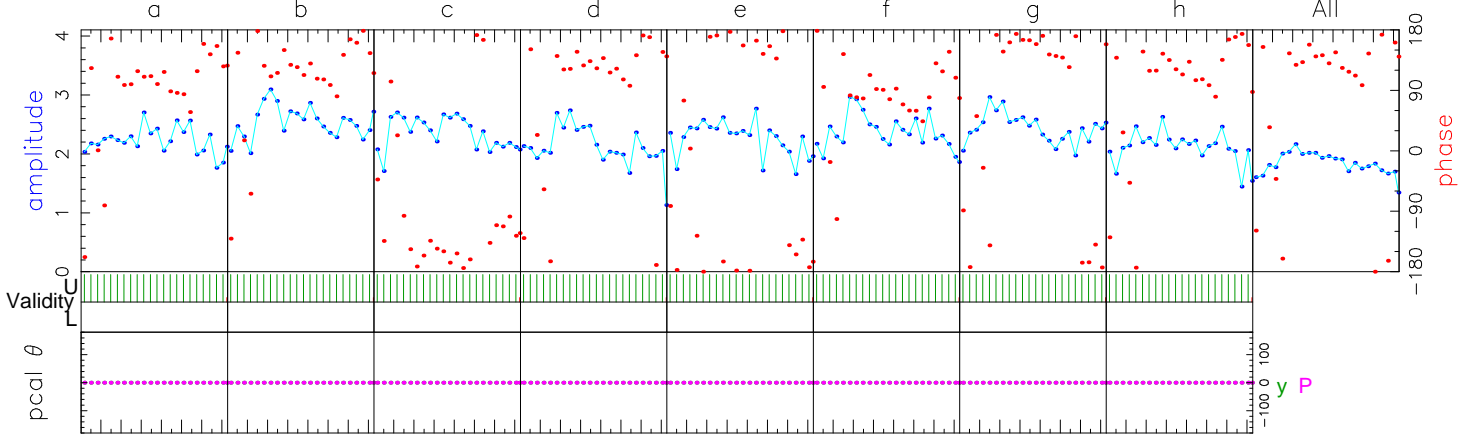


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031708  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	113.6	132.0	-145.9	140.7	-179.0	91.3	171.4	133.4	Phase	145.9
	1.6	1.9	1.6	1.6	1.6	1.7	1.7	1.5	Ampl.	1.7
	257.1	255.3	255.0	254.6	255.0	254.9	255.2	255.6	Sbd box	255.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-1.72802691752E+03	Apriori delay (usec)	-1.72802248854E+03	Resid mbdelay (usec)	-4.42898E-03	+/-	1.4E-05
Sband delay (usec)	-1.72802825304E+03	Apriori clock (usec)	1.4664259E+00	Resid sbdelay (usec)	-5.76450E-03	+/-	1.1E-04
Phase delay (usec)	-1.72802248384E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	4.70439E-06	+/-	4.8E-08
Delay rate (us/s)	-1.16359661887E+00	Apriori rate (us/s)	-1.16359643094E+00	Resid rate (us/s)	-1.87933E-07	+/-	2.0E-10
Total phase (deg)		Apriori accel (us/s/s)	9.83704959870E-06	Resid phase (deg)	145.9	+/-	1.5

ph/seg (deg)	53.9	Theor.	3.6	Amplitude	1.369 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	37.0		6.3	Search (2048X32)	1.331	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	42.7		2.1	Inc. seg. avg.	1.848	Sample rate (MSamp/s):	128	nlags:	256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	22.8		3.7	Inc. frq. avg.	1.660	Data rate (Mb/s):	2048	t_cohere	infinite	ion window (TEC)	0.00	0.00

y: az 319.2 el 41.0 pa 82.1 P: az 40.8 el 46.5 pa -93.3 u,v (fr/asec) 12778.452 1139.649 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP.W.101.1IUDSP



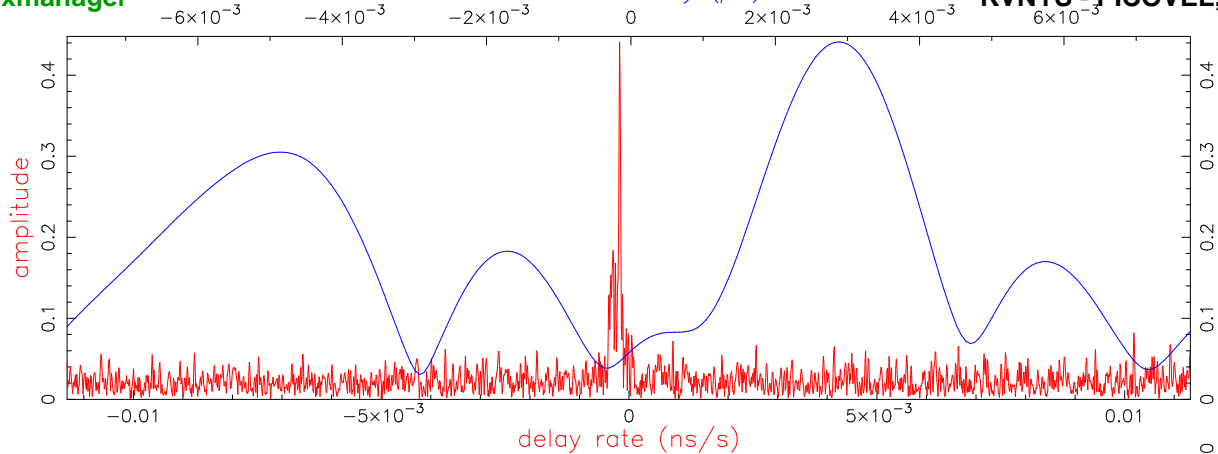
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yP

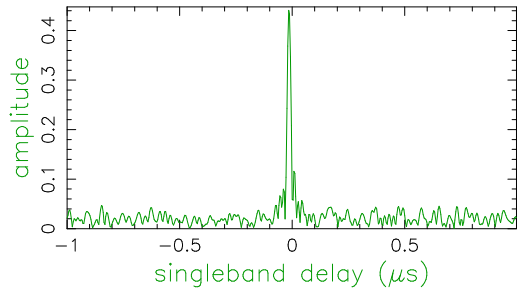
KVNYS - PICOVEL, fgroup W, pol LR

multiband delay ( $\mu$ s)

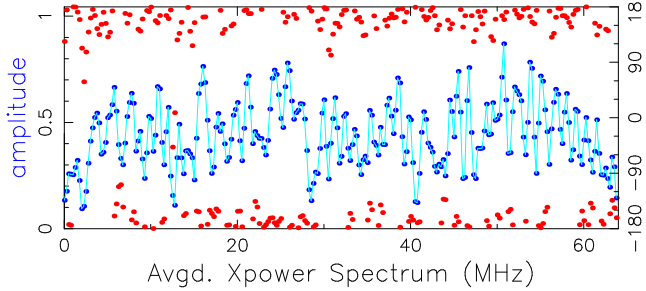


Fringe quality 6

SNR 25.1  
 Int time 419.394  
 Amp 0.448  
 Phase -20.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.014016  
 MBD 0.002921  
 Fringe rate (Hz)  
 -0.016314  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

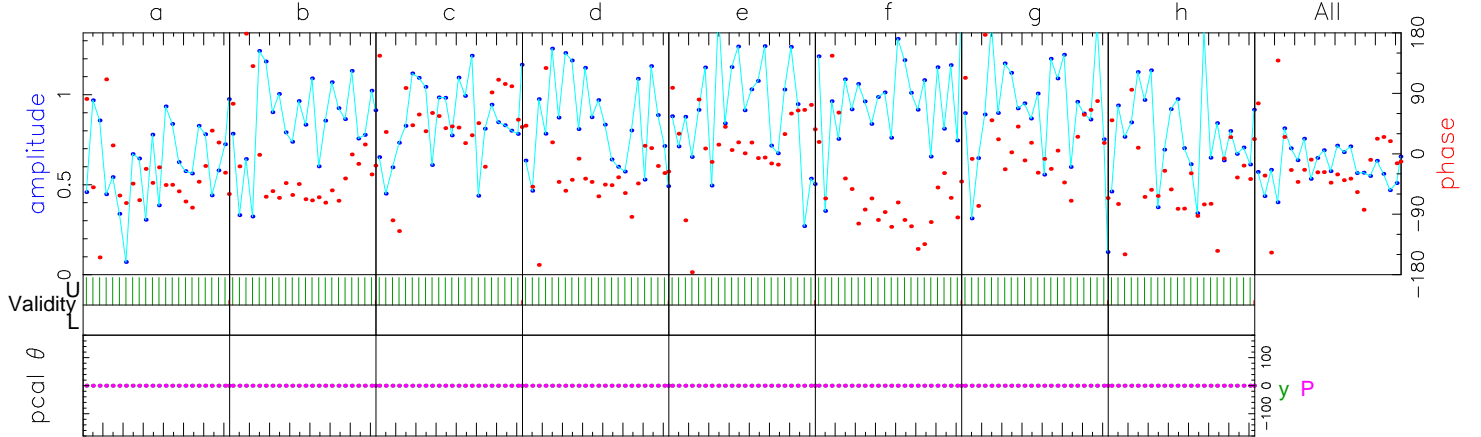


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031711  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-40.1	-42.9	53.6	-33.7	22.1	-79.9	13.2	-49.8		Phase
	0.4	0.6	0.6	0.7	0.7	0.7	0.6	0.5		Ampl.
	255.3	253.2	252.7	252.8	252.8	253.0	253.3	253.9		Sbd box
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
P	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks

Group delay (usec)(sbd) -1.72803519280E+03 Apriori delay (usec) -1.72802248854E+03 Resid mbdelay (usec) 2.92074E-03 +/- 4.3E-05  
 Sband delay (usec) -1.72803650504E+03 Apriori clock (usec) 1.4664259E+00 Resid sbdelay (usec) -1.40165E-02 +/- 3.4E-04  
 Phase delay (usec) -1.72802248919E+03 Apriori clockrate (us/s) 5.0000000E-07 Resid phdelay (usec) -6.50224E-07 +/- 1.5E-07  
 Delay rate (us/s) -1.16359662033E+00 Apriori rate (us/s) -1.16359643094E+00 Resid rate (us/s) -1.89394E-07 +/- 6.1E-10  
 Total phase (deg) -78.8 Apriori accel (us/s/s) 9.83704959870E-06 Resid phase (deg) -20.2 +/- 4.6

RMS Theor. Amplitude 0.448 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 54.3 11.0 Search (2048X32) 0.437 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 41.9 19.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 48.1 6.5 Inc. seg. avg. 0.595 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 35.9 11.3 Inc. frq. avg. 0.585 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

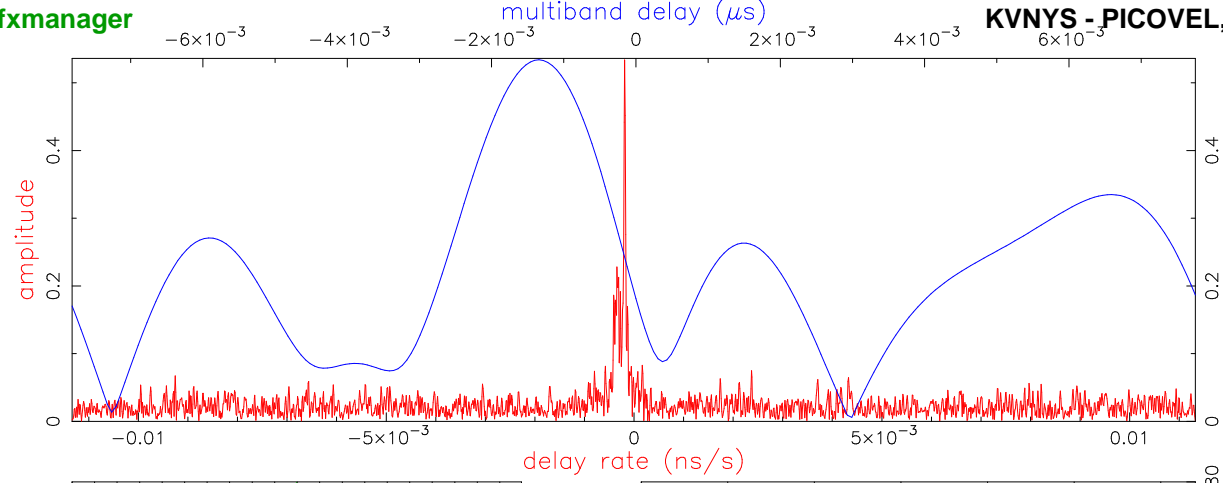
y: az 319.2 el 41.0 pa 82.1 P: az 40.8 el 46.5 pa -93.3 u,v (fr/asec) 12778.452 1139.649 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP.W.116.1IUDSP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yP

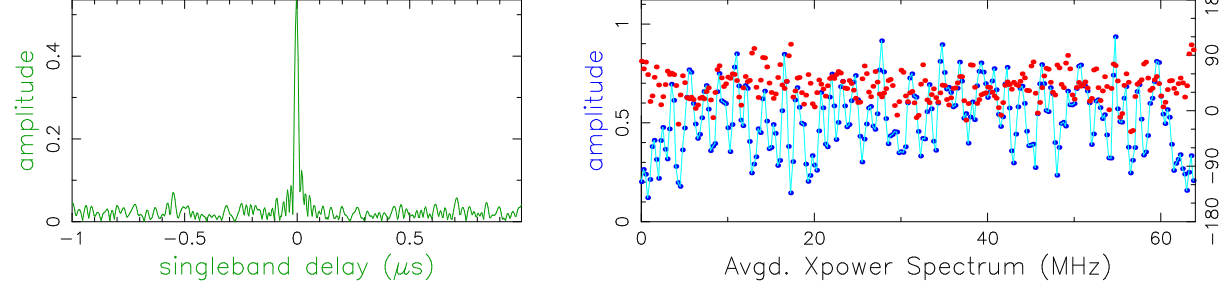
KVNYS - PICOVEL, fgroup W, pol RL



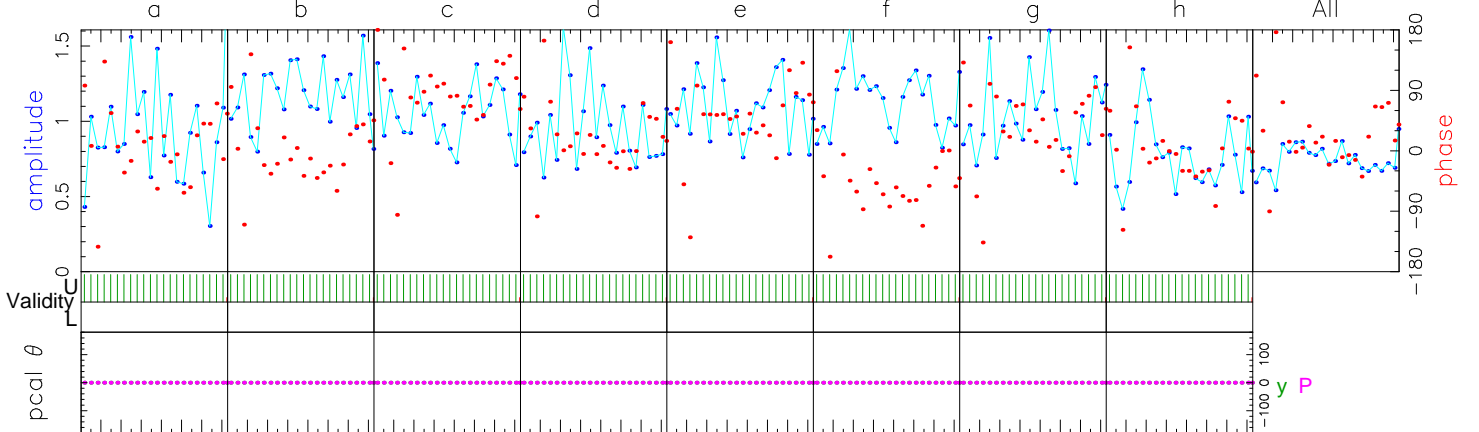
Fringe quality 4

SNR 30.0  
 Int time 419.394  
 Amp 0.536  
 Phase 18.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.003104  
 MBD -0.001329  
 Fringe rate (Hz)  
 -0.016170  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031714  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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



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

Group delay (usec)(sbd)	-1.72802381739E+03	Apriori delay (usec)	-1.72802248854E+03	Resid mbdelay (usec)	-1.32885E-03	+/-	3.6E-05
Sband delay (usec)	-1.72802559279E+03	Apriori clock (usec)	1.4664259E+00	Resid sbdelay (usec)	-3.10425E-03	+/-	2.9E-04
Phase delay (usec)	-1.72802248794E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	6.01855E-07	+/-	1.2E-07
Delay rate (us/s)	-1.16359661866E+00	Apriori rate (us/s)	-1.16359643094E+00	Resid rate (us/s)	-1.87715E-07	+/-	5.1E-10
Total phase (deg)	-40.0	Apriori accel (us/s/s)	9.83704959870E-06	Resid phase (deg)	18.7	+/-	3.8

ph/seg (deg) 53.7 9.2 Search (2048X32) 0.524 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 41.1 16.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.5 5.4 Inc. seg. avg. 0.730 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 37.7 9.4 Inc. frq. avg. 0.712 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 P: az 40.8 el 46.5 pa -93.3 u,v (fr/asec) 12778.452 1139.649 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP.W.132.1IUDSP

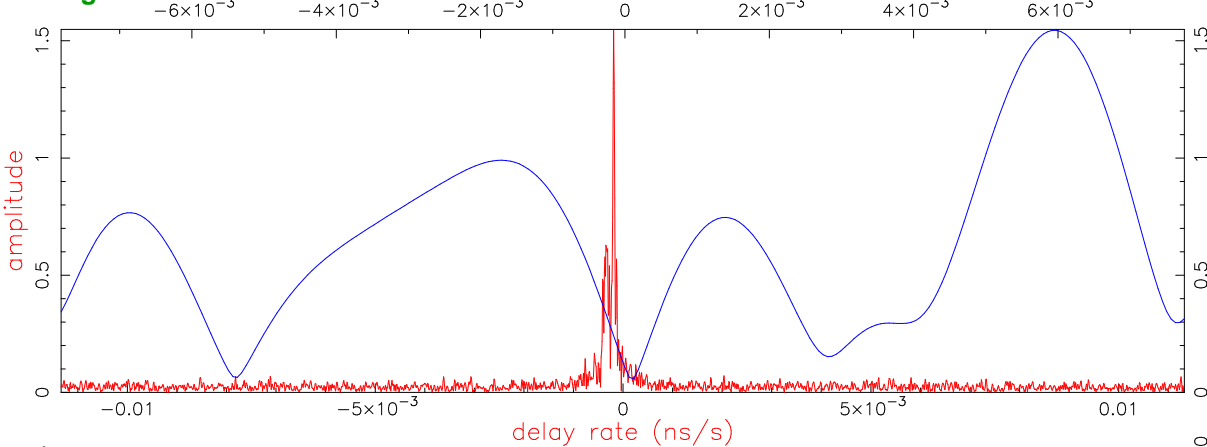
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yP

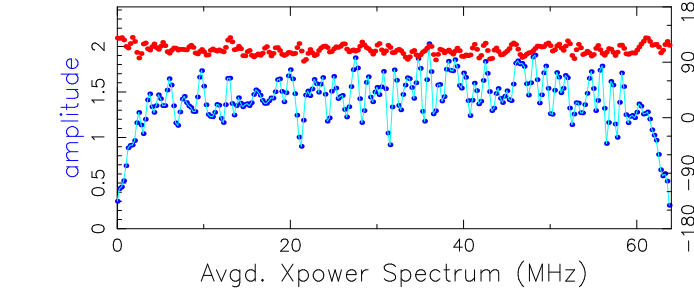
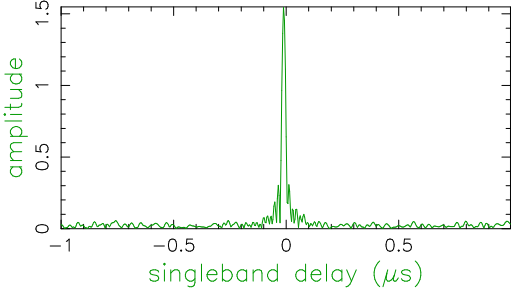
KVNYS - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



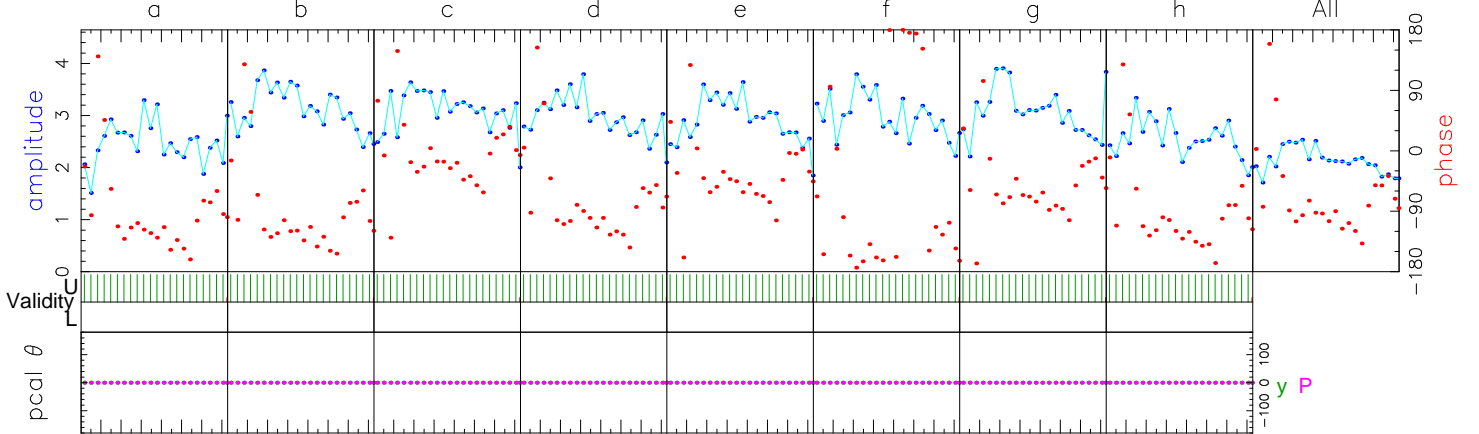
Fringe quality 2

SNR 86.7  
 Int time 419.394  
 Amp 1.549  
 Phase -86.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.011077  
 MBD 0.005967  
 Fringe rate (Hz)  
 -0.016196  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031705  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-110.1	-111.6	-12.5	-93.4	-43.9	-155.6	-59.3	-109.4	Phase	-86.4
	1.8	2.3	2.3	2.1	2.1	2.1	2.2	1.8	Ampl.	2.1
	255.4	254.0	253.8	253.5	253.5	253.6	254.0	254.1	Sbd box	254.2
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.72803214699E+03	Apriori delay (usec)	-1.72802248854E+03	Resid mbdelay (usec)	5.96656E-03	+/-	1.3E-05
Sband delay (usec)	-1.72803356579E+03	Apriori clock (usec)	1.4664259E+00	Resid sbdelay (usec)	-1.10773E-02	+/-	9.9E-05
Phase delay (usec)	-1.72802249133E+03	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-2.78676E-06	+/-	4.3E-08
Delay rate (us/s)	-1.16359661896E+00	Apriori rate (us/s)	-1.16359643094E+00	Resid rate (us/s)	-1.88022E-07	+/-	1.8E-10
Total phase (deg)	-145.1	Apriori accel (us/s/s)	9.83704959870E-06	Resid phase (deg)	-86.4	+/-	1.3

ph/seg (deg)	52.5	Theor.	3.2	Amplitude	1.549 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	41.2		5.5	Search (2048X32)	1.522	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	49.3		1.9	Inc. seg. avg.	2.140	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	37.0		3.3	Inc. frq. avg.	2.088	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

y: az 319.2 el 41.0 pa 82.1 P: az 40.8 el 46.5 pa -93.3 u,v (fr/asec) 12778.452 1139.649 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yP.W.86.1IUDSP

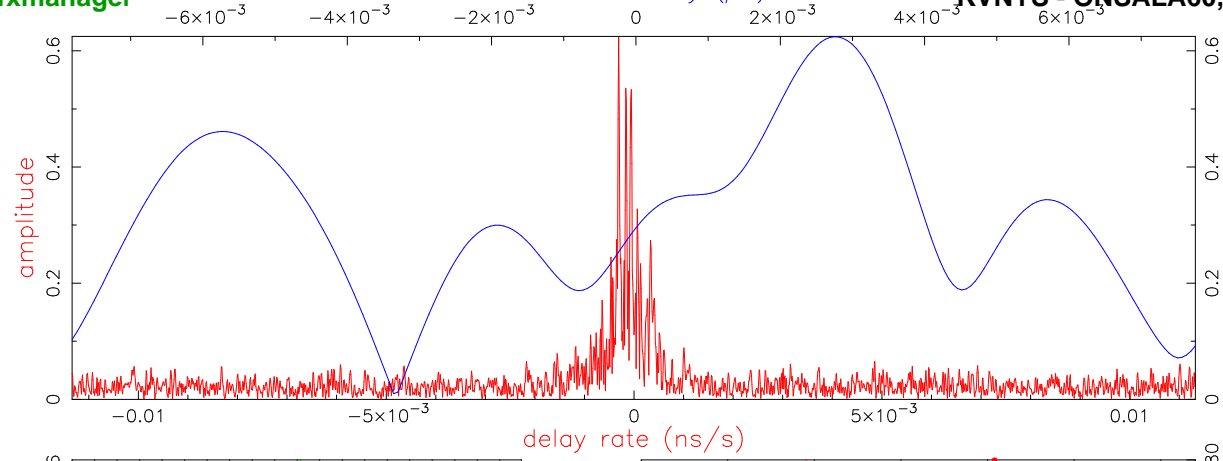
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yX

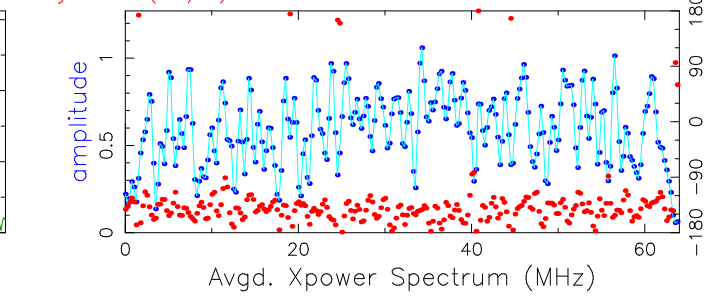
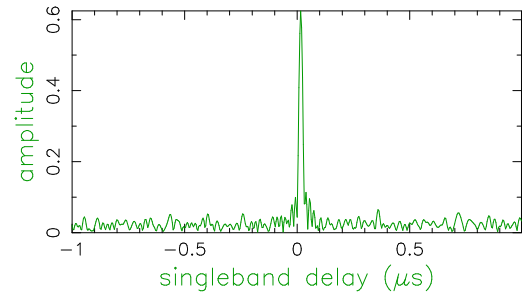
KVNYS - ONSALA60, fgroup W, pol RR

multiband delay ( $\mu$ s)



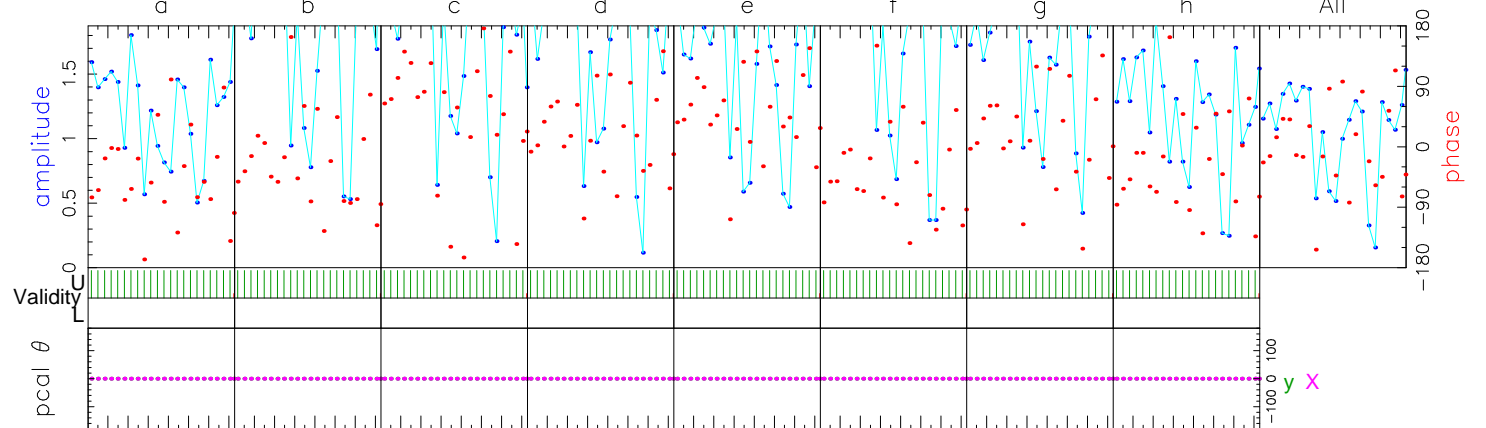
Fringe quality 3

SNR 35.0  
 Int time 419.770  
 Amp 0.625  
 Phase 8.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.015939  
 MBD 0.002773  
 Fringe rate (Hz)  
 -0.026439  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031708  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

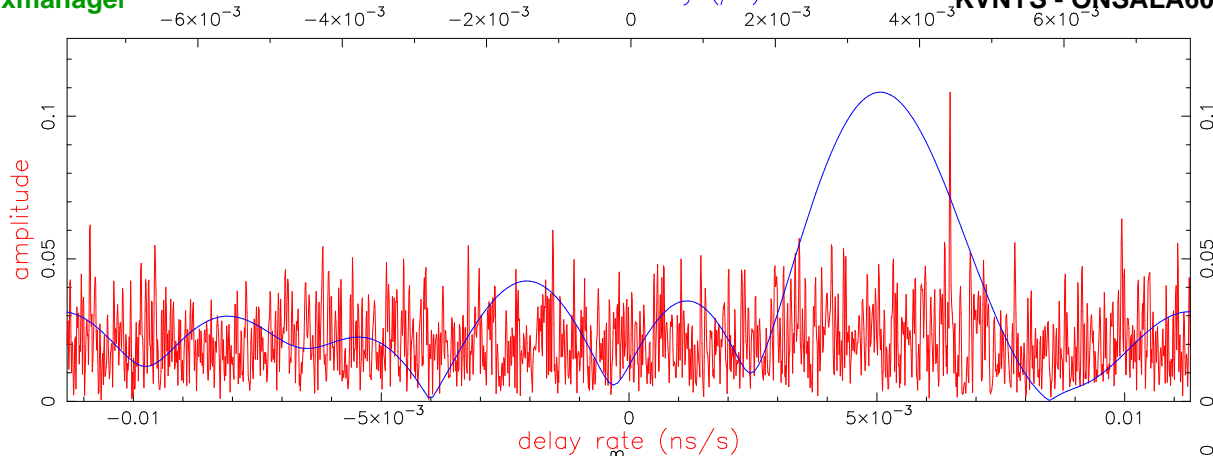
Amp. and Phase vs. time for each freq., 23 segs, 37 APs / seg (18.94 sec / seg.), time ticks 30 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-45.5	-23.7	99.2	26.4	55.9	-42.4	29.5	-40.9		Phase
	0.7	1.1	1.0	1.0	1.0	1.1	1.0	0.7		Ampl.
	262.4	261.4	261.2	260.5	260.4	260.9	260.8	260.7		Sbd box
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		261.1
y	1000	1000	1000	1000	1000	1000	1000	1000		APs used
X	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Manl PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec)(sbd)	-5.85877566109E+03		Apriori delay (usec)		-5.85879405957E+03		Resid mbdelay (usec)		2.77348E-03	+/- 3.1E-05
Sband delay (usec)	-5.85877812032E+03		Apriori clock (usec)		-4.7114922E+01		Resid sbdelay (usec)		1.59393E-02	+/- 2.5E-04
Phase delay (usec)	-5.85879405931E+03		Apriori clockrate (us/s)		-4.2800003E-07		Resid phdelay (usec)		2.63371E-07	+/- 1.1E-07
Delay rate (us/s)	-9.10830684129E-01		Apriori rate (us/s)		-9.10830377193E-01		Resid rate (us/s)		-3.06936E-07	+/- 4.4E-10
Total phase (deg)			Apriori accel (us/s/s)		8.48006464797E-06		Resid phase (deg)		8.2	+/- 3.3

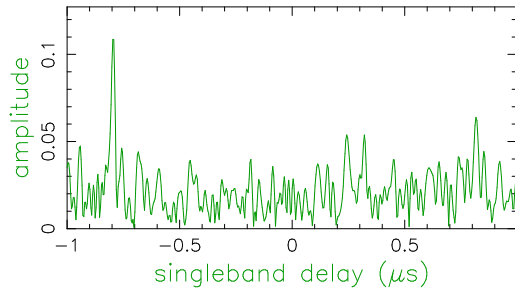
ph/seg (deg) 63.8 7.9 Search (2048X32) 0.607 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.0 13.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 58.0 4.6 Inc. seg. avg. 1.037 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 57.0 8.1 Inc. frq. avg. 0.942 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 X: az 68.4 el 66.9 pa -73.9 u,v (fr/asec) 10005.569 -110.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX.W.104.1IUDSP

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

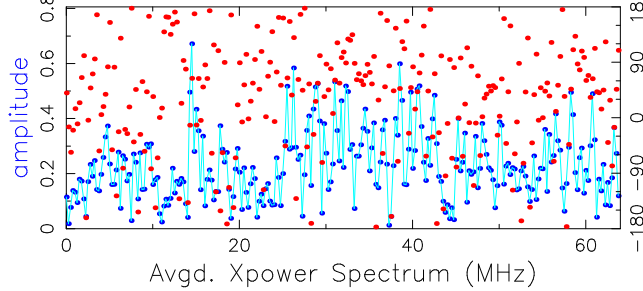


Fringe quality 0

SNR 6.2  
 Int time 419.770  
 Amp 0.127  
 Phase -144.1  
 PFD 1.3e-01  
 Delays (us)  
 SBD -0.794904  
 MBD 0.003456  
 Fringe rate (Hz)  
 0.559005  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

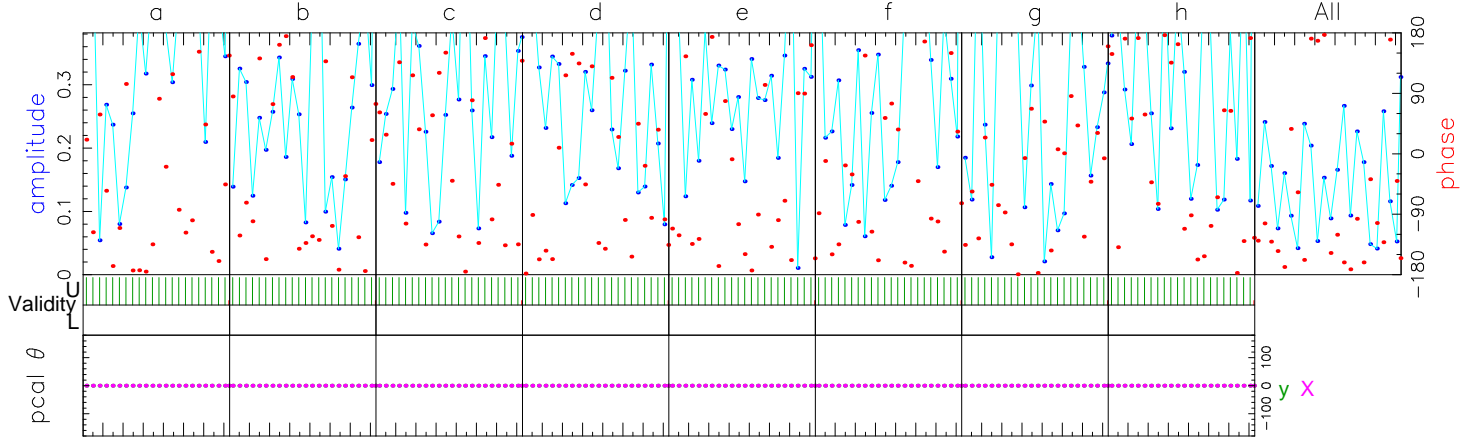


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031711  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-138.2	-158.1	-161.6	-137.9	-148.4	-124.7	-104.8	-168.7	Phase	-144.1
	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	Ampl.	0.1
	465.7	194.8	167.0	307.8	346.9	244.9	64.4	23.1	Sbd box	53.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	-5.85958747887E+03	Apriori delay (usec)	-5.85879405957E+03	Resid mbdelay (usec)	3.45570E-03	+/-	1.7E-04
Sband delay (usec)	-5.85958896332E+03	Apriori clock (usec)	-4.7114922E+01	Resid sbdelay (usec)	-7.94904E-01	+/-	1.4E-03
Phase delay (usec)	-5.85879406422E+03	Apriori clockrate (us/s)	-4.2800003E-07	Resid phdelay (usec)	-4.64821E-06	+/-	6.0E-07
Delay rate (us/s)	-9.10823887702E-01	Apriori rate (us/s)	-9.10830377193E-01	Resid rate (us/s)	6.48949E-06	+/-	2.5E-09
Total phase (deg)	-249.1	Apriori accel (us/s/s)	8.48006464797E-06	Resid phase (deg)	-144.1	+/-	18.5

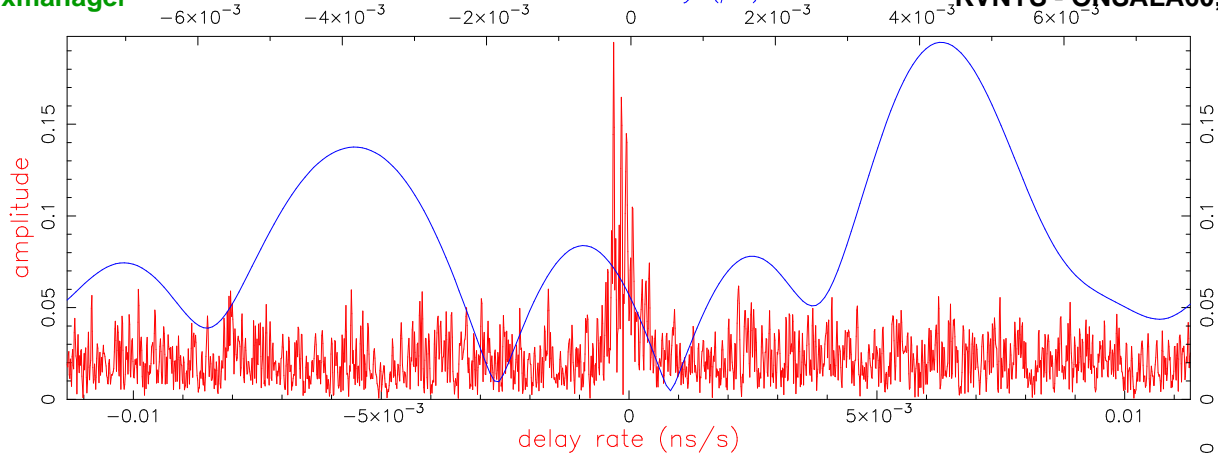
ph/seg (deg)	RMS 59.5	Theor. 44.3	Amplitude Search (2048X32)	0.127 +/- 0.021	0.106	PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	73.2	77.2	Interp.	0.000	0.106	PCal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	22.8	26.1	Inc. seg. avg.	0.125	0.125	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	29.7	45.6	Inc. frq. avg.	0.119	0.119	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 319.2 el 41.0 pa 82.1 X: az 68.4 el 66.9 pa -73.9 u,v (fr/asec) 10005.569 -110.498 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX.W.118.1IUDSP

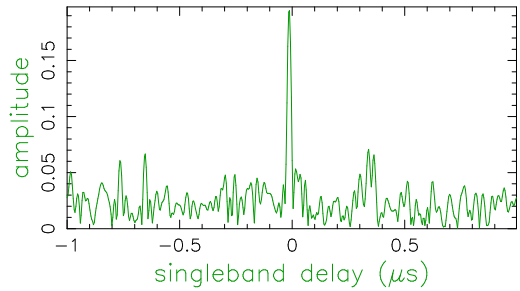


multiband delay ( $\mu\text{s}$ )

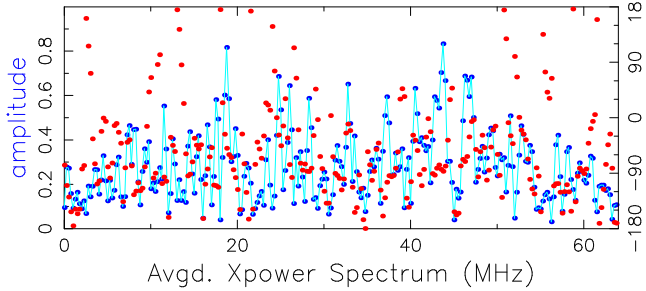


Fringe quality 9

SNR 11.1  
 Int time 419.770  
 Amp 0.198  
 Phase 84.6  
 PFD 7.1e-20  
 Delays (us)  
 SBD -0.013481  
 MBD 0.004284  
 Fringe rate (Hz)  
 -0.026589  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

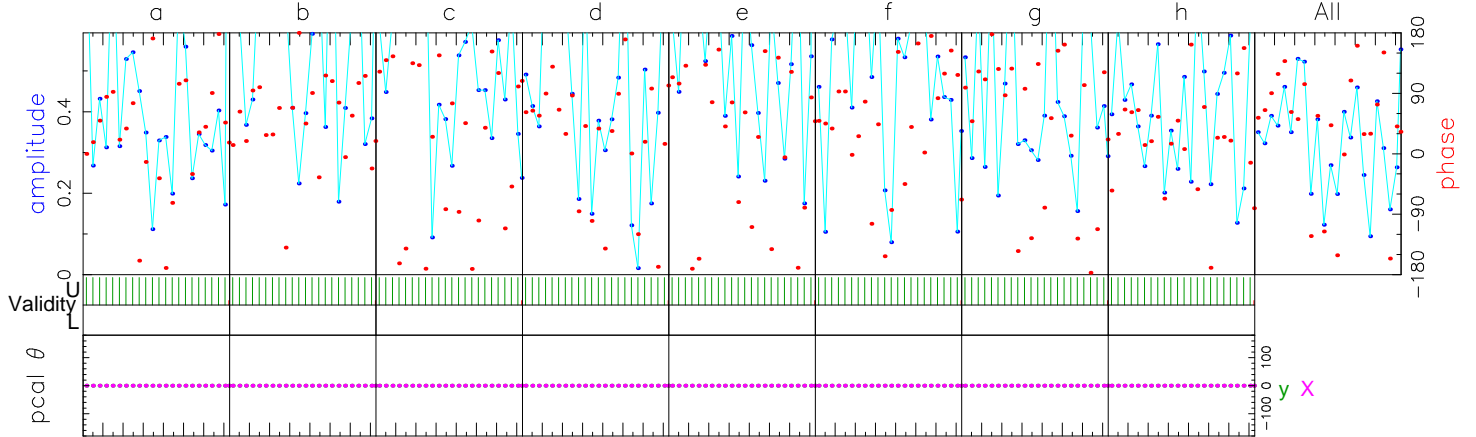


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031714  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	57.9	61.0	167.2	71.5	130.7	71.1	127.6	24.2		84.6
	0.2	0.4	0.2	0.3	0.3	0.2	0.3	0.3		0.3
	255.7	253.8	253.7	252.9	253.0	253.1	252.4	253.5		253.5
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
X	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks
										Tracks
Group delay (usec)(sbd)	-5.85880540066E+03		Apriori delay (usec)		-5.85879405957E+03		Resid mbdelay (usec)		4.28392E-03	+/- 9.8E-05
Sband delay (usec)	-5.85880754082E+03		Apriori clock (usec)		-4.7114922E+01		Resid sbdelay (usec)		-1.34813E-02	+/- 7.8E-04
Phase delay (usec)	-5.85879405684E+03		Apriori clockrate (us/s)		-4.2800003E-07		Resid phdelay (usec)		2.72937E-06	+/- 3.3E-07
Delay rate (us/s)	-9.10830685870E-01		Apriori rate (us/s)		-9.10830377193E-01		Resid rate (us/s)		-3.08677E-07	+/- 1.4E-09
Total phase (deg)			Apriori accel (us/s/s)		8.48006464797E-06		Resid phase (deg)		84.6	+/- 10.3

ph/seg (deg) 72.1 24.8 Search (2048X32) 0.192 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.1 43.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 51.7 14.6 Inc. seg. avg. 0.299 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 42.1 25.5 Inc. frq. avg. 0.256 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 X: az 68.4 el 66.9 pa -73.9 u,v (fr/asec) 10005.569 -110.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX.W.133.1IUDSP

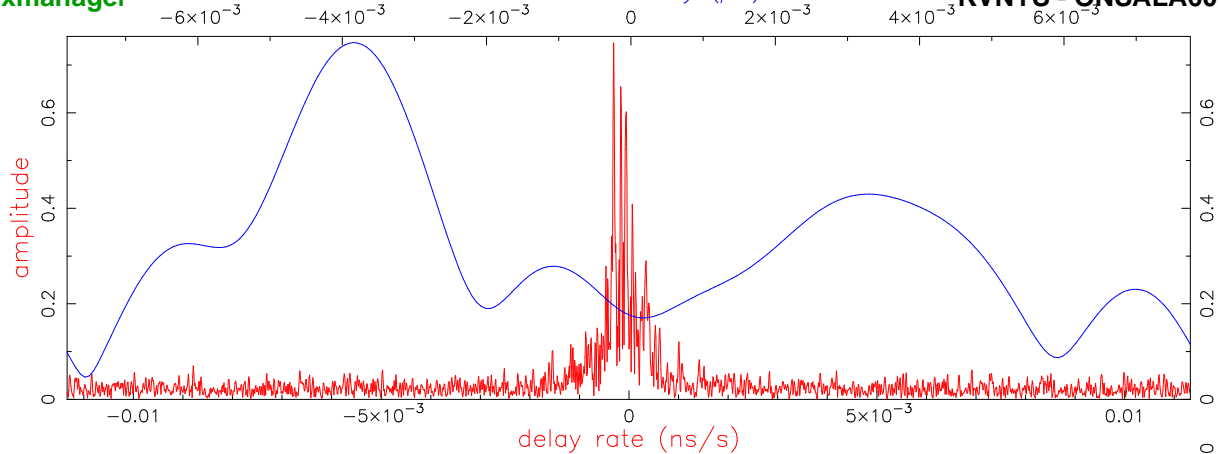
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yX

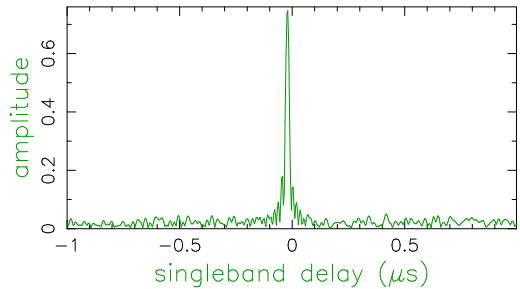
KVNYS - ONSALA60, fgroup W, pol LL

multiband delay ( $\mu$ s)

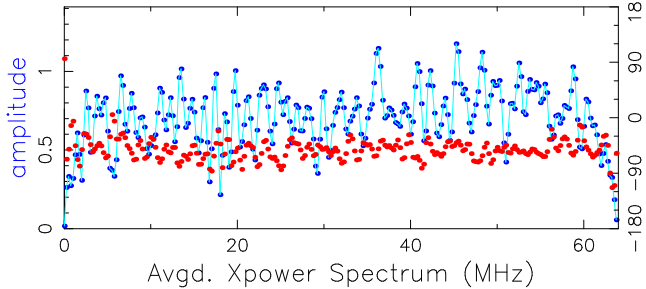


Fringe quality 4

SNR 42.6  
 Int time 419.770  
 Amp 0.760  
 Phase 106.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.021238  
 MBD -0.003885  
 Fringe rate (Hz)  
 -0.026424  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

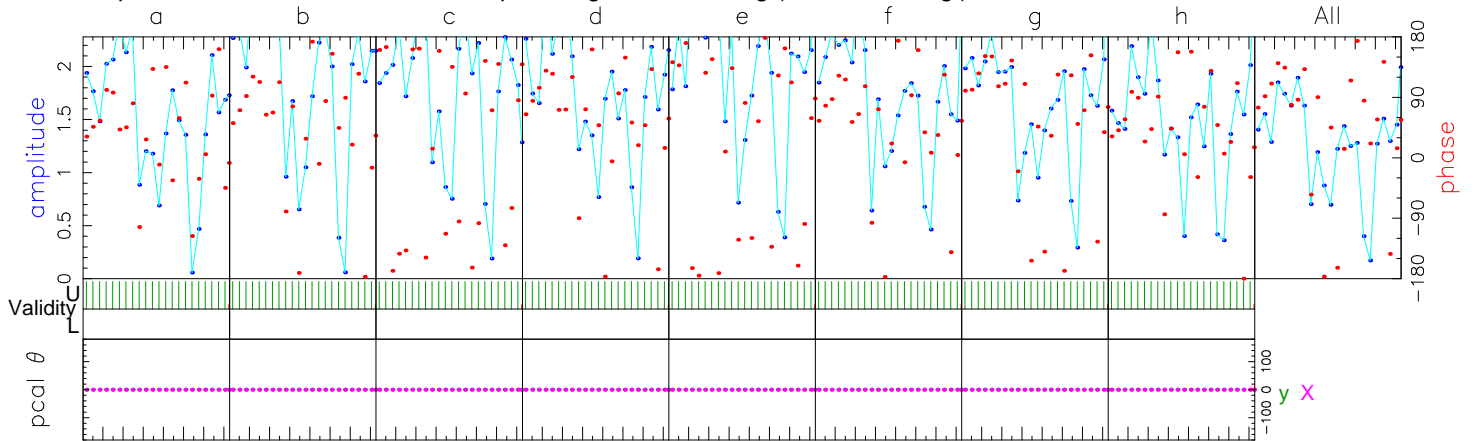


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031705  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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

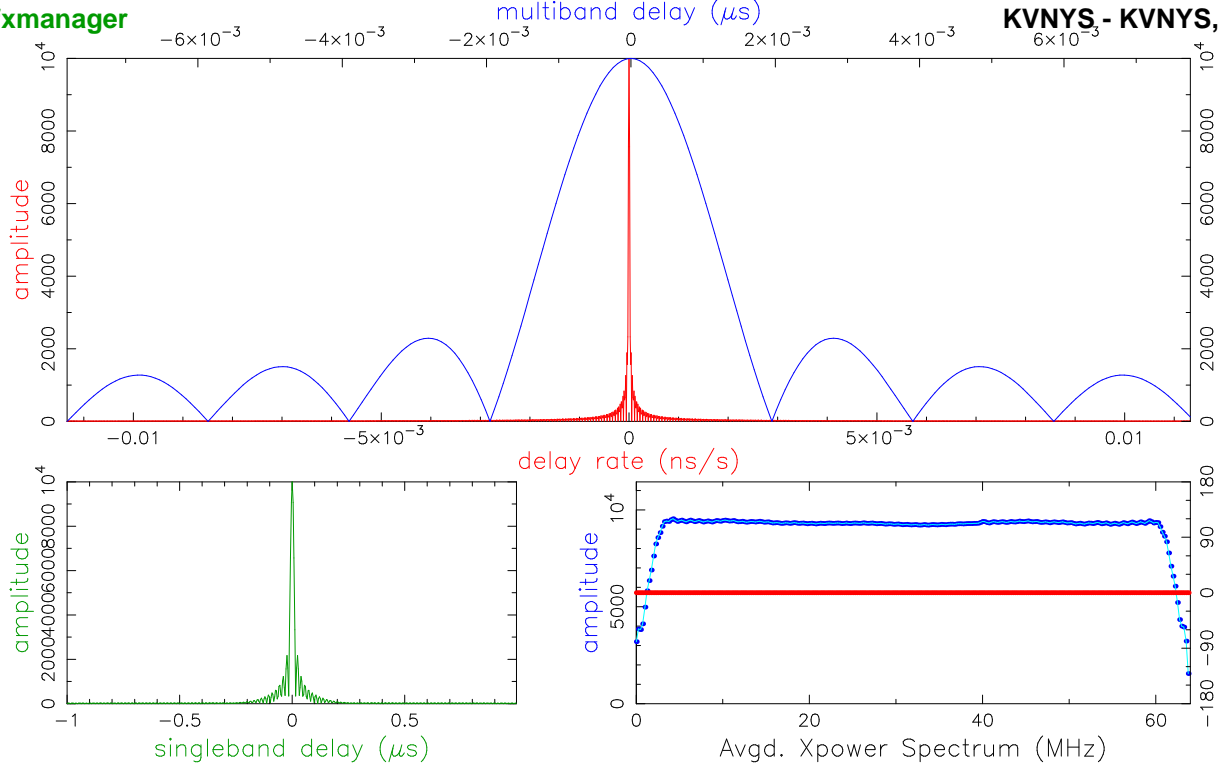


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
y	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-5.85881356941E+03	Apriori delay (usec)	-5.85879405957E+03	Resid mbdelay (usec)	-3.88483E-03	+/-	2.5E-05
Sband delay (usec)	-5.85881529732E+03	Apriori clock (usec)	-4.7114922E+01	Resid sbdelay (usec)	-2.12377E-02	+/-	2.0E-04
Phase delay (usec)	-5.85879405613E+03	Apriori clockrate (us/s)	-4.2800003E-07	Resid phdelay (usec)	3.43974E-06	+/-	8.7E-08
Delay rate (us/s)	-9.10830683947E-01	Apriori rate (us/s)	-9.10830377193E-01	Resid rate (us/s)	-3.06754E-07	+/-	3.6E-10
Total phase (deg)	1.7	Apriori accel (us/s/s)	8.48006464797E-06	Resid phase (deg)	106.7	+/-	2.7

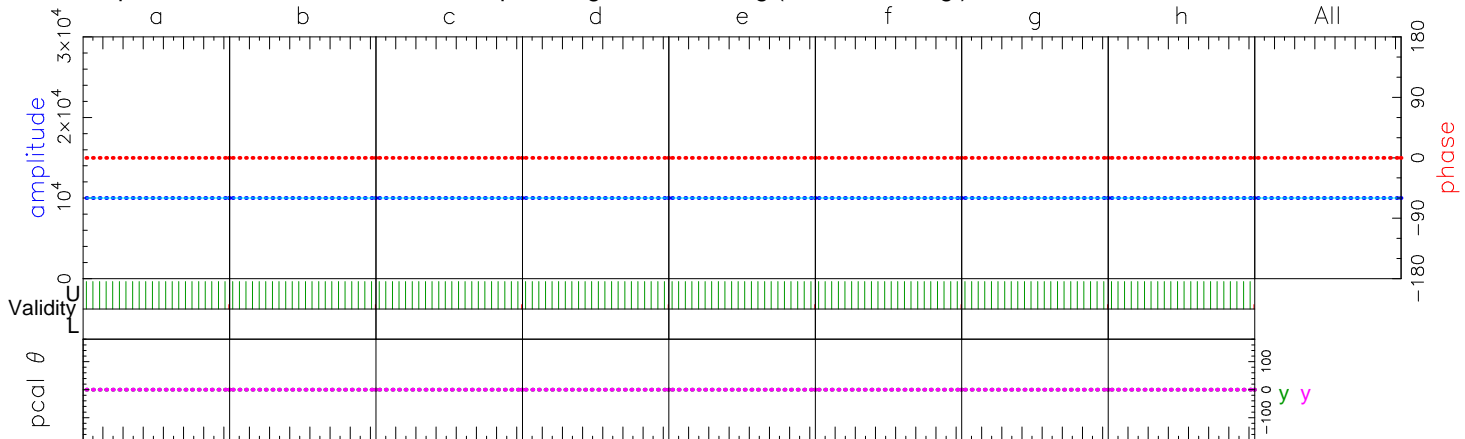
ph/seg (deg)	65.5	RMS	Theor.	Amplitude	0.760 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	88.4	65.5	6.5	Search (2048X32)	0.724	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	49.8	11.3	11.3	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	34.2	3.8	3.8	Inc. seg. avg.	1.260	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		6.6	6.6	Inc. frq. avg.	0.996	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

y: az 319.2 el 41.0 pa 82.1 X: az 68.4 el 66.9 pa -73.9 u,v (fr/asec) 10005.569 -110.498 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yX.W.89.1IUDSP



Fringe quality 9  
SNR 560315.1  
Int time 419.826  
Amp 10000.000  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c202b  
Yr:day 16383  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031708  
2020:247:085004  
RA & Dec (J2000) 01h02m45.762375s +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) 0.000000000000E+00 Apriori delay (usec) 0.000000000000E+00 Resid mbdelay (usec) 0.000000E+00 +/- 1.9E-09  
 Sband delay (usec) 0.000000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.000000E+00 +/- 1.5E-08  
 Phase delay (usec) 0.000000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.000000E+00 +/- 6.6E-12  
 Delay rate (us/s) 0.000000000000E+00 Apriori rate (us/s) 0.000000000000E+00 Resid rate (us/s) 0.000000E+00 +/- 2.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.000000000000E+00 Resid phase (deg) 0.0 +/- 0.0

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

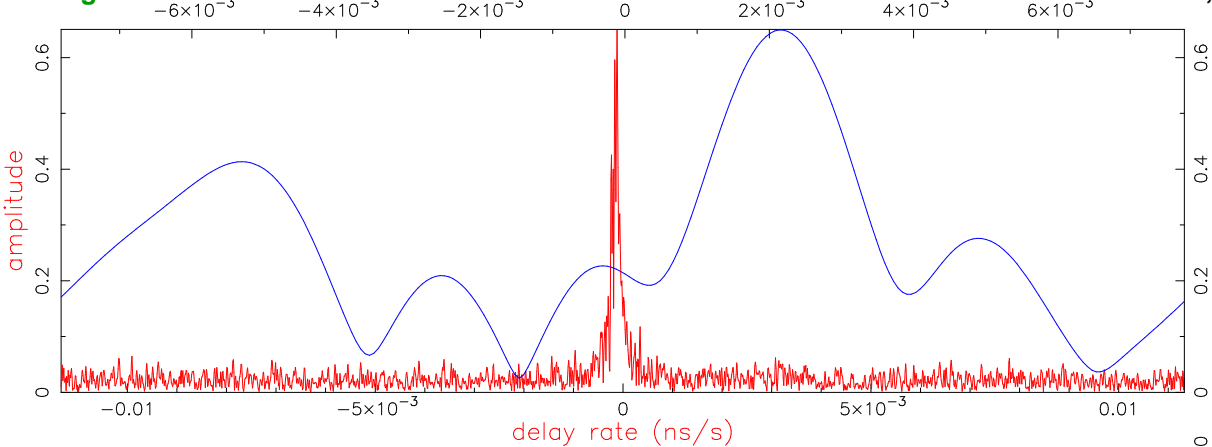
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yY

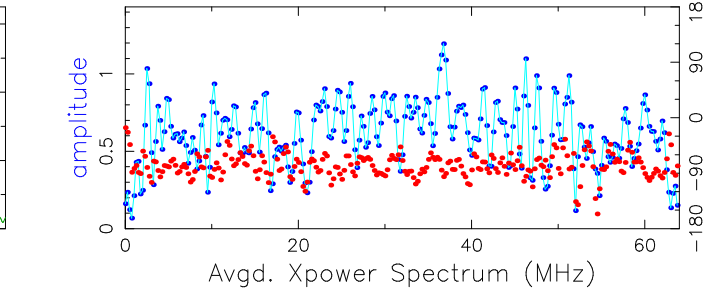
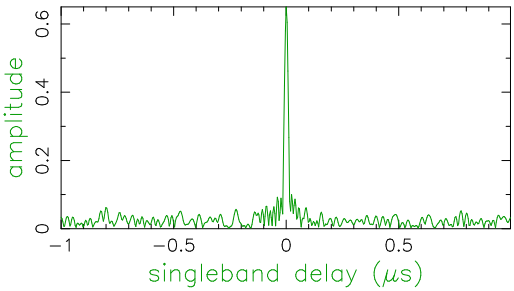
KVNYS - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

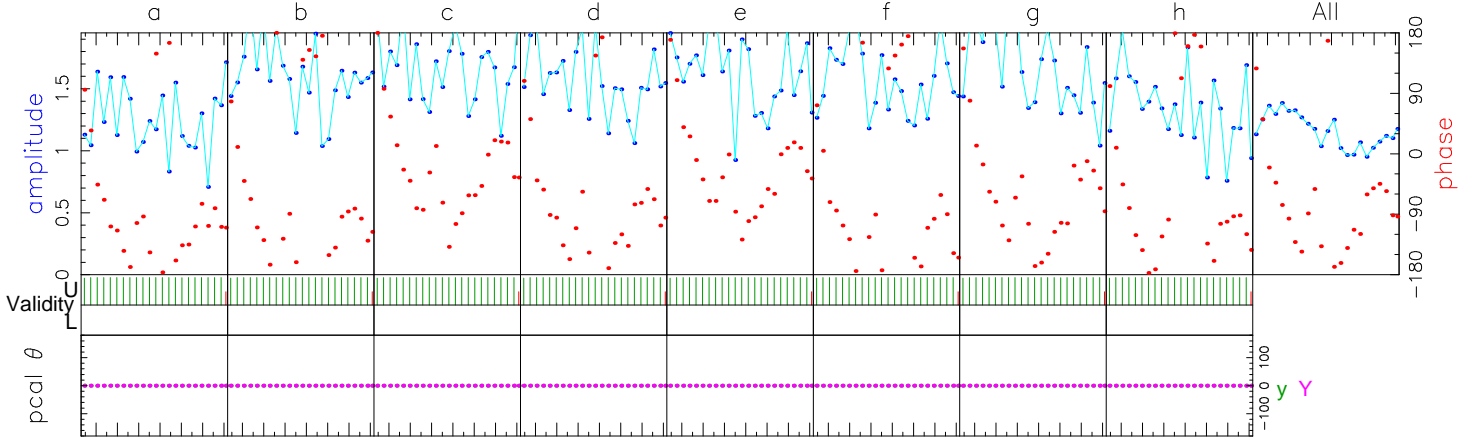


Fringe quality 4

SNR 35.6  
 Int time 401.603  
 Amp 0.650  
 Phase -97.7  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000451  
 MBD 0.002168  
 Fringe rate (Hz)  
 -0.010110  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200017.90  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031709  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-122.8	-128.3	-37.3	-106.1	-34.7	-136.7	-75.1	-137.4	Phase	-97.7
	0.8	0.9	0.9	0.8	0.9	0.9	0.9	0.7	Ampl.	0.8
	258.6	256.6	257.3	256.5	256.5	256.2	256.8	257.1	Sbd box	257.1
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-2.40885264767E+03	Apriori delay (usec)	-2.40885481578E+03	Resid mbdelay (usec)	2.16811E-03	+/-	3.0E-05
Sband delay (usec)	-2.40885436478E+03	Apriori clock (usec)	-1.2448380E+01	Resid sbdelay (usec)	4.51000E-04	+/-	2.4E-04
Phase delay (usec)	-2.40885481893E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-3.15097E-06	+/-	1.0E-07
Delay rate (us/s)	-1.13561164903E+00	Apriori rate (us/s)	-1.13561153166E+00	Resid rate (us/s)	-1.17369E-07	+/-	4.5E-10
Total phase (deg)		Apriori accel (us/s/s)	8.87480108424E-06	Resid phase (deg)	-97.7	+/-	3.2

ph/seg (deg)	61.7	Theor.	7.7	Search (2048X32)	0.618	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.8		13.5	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)	46.3		4.5	Inc. seg. avg.	1.149	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	31.3		7.9	Inc. frq. avg.	0.845	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 319.2 el 41.0 pa 82.1 Y: az 43.4 el 49.2 pa -90.2 u,v (fr/asec) 12469.814 803.094 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY.W.107.1IUDSP

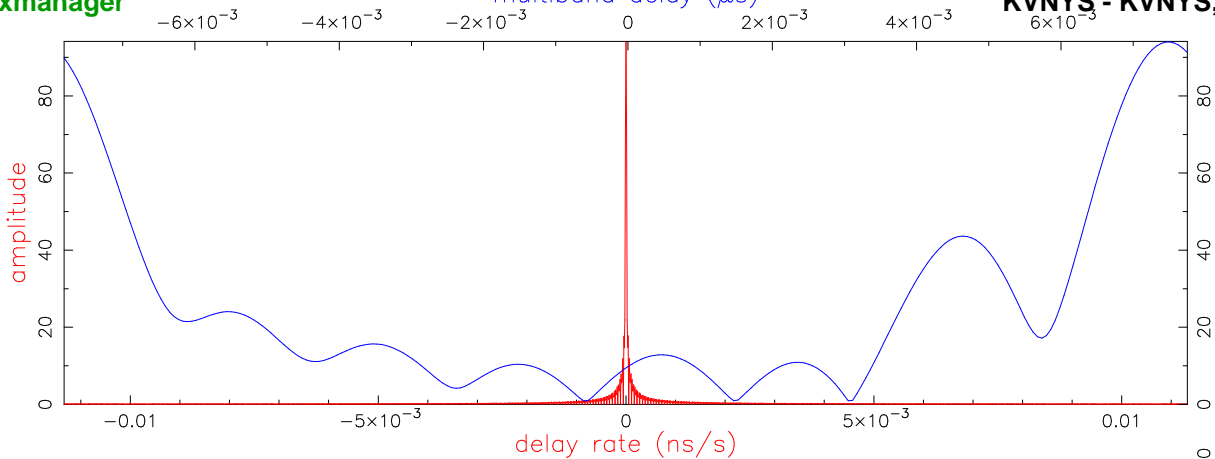
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IU DSP, No0162, yy

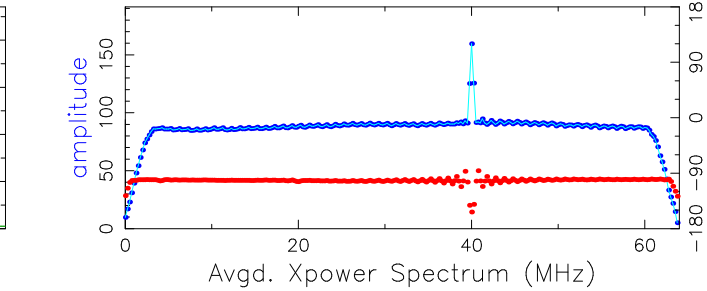
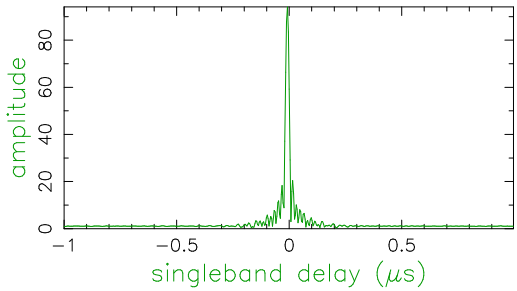
KVNYs - KVNYs, fgroup W, pol LR

multiband delay ( $\mu$ s)



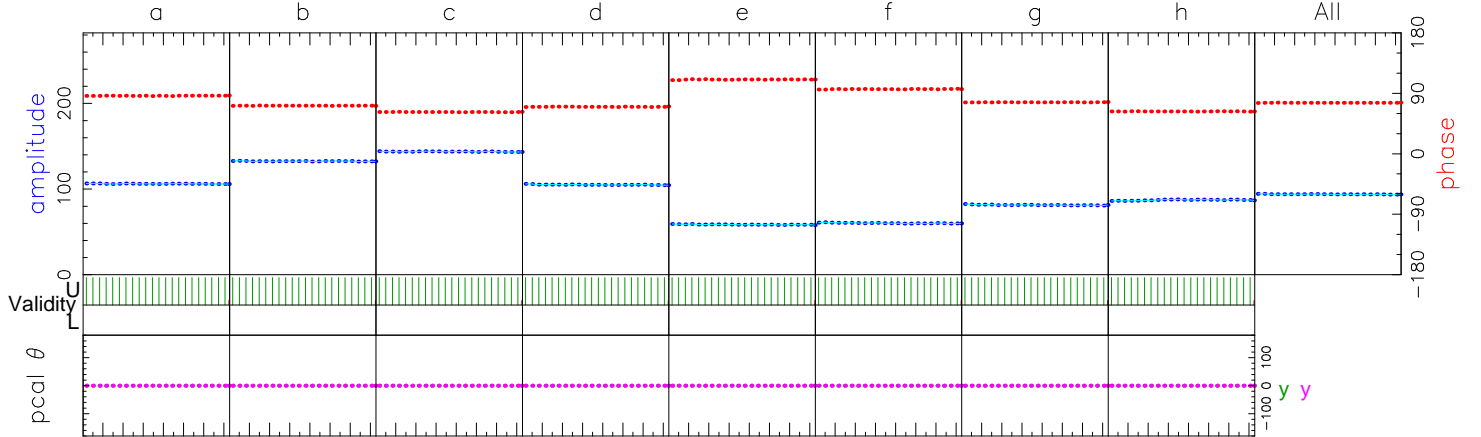
Fringe quality 7

SNR 5275.6  
 Int time 419.826  
 Amp 94.153  
 Phase 75.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.008304  
 MBD 0.007489  
 Fringe rate (Hz)  
 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031712  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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

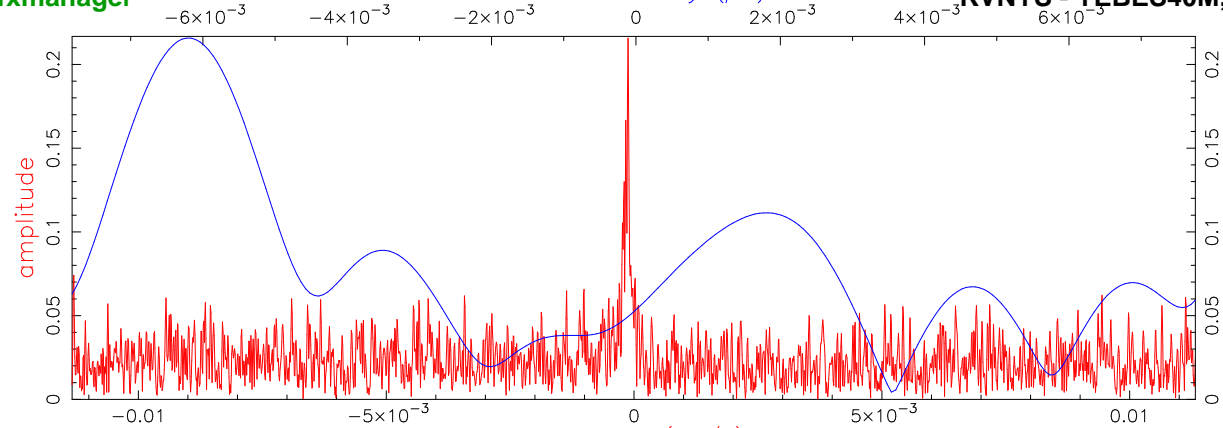


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-8.13606250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		7.48894E-03	+/- 2.1E-07
Sband delay (usec)	-8.30425000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-8.30425E-03	+/- 1.6E-06
Phase delay (usec)	2.44607439989E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		2.44607E-06	+/- 7.0E-10
Delay rate (us/s)	1.41711523917E-12		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		1.41712E-12	+/- 2.9E-12
Total phase (deg)			75.9		Apriori accel (us/s/s)		0.00000000000E+00		75.9	+/- 0.0

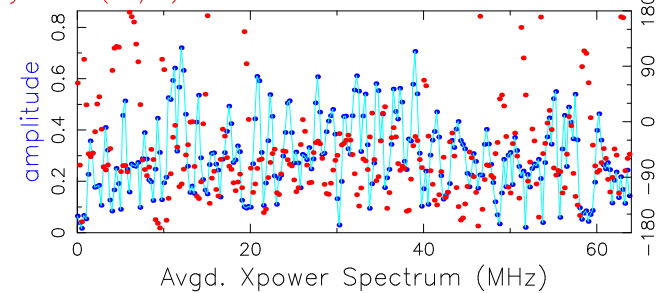
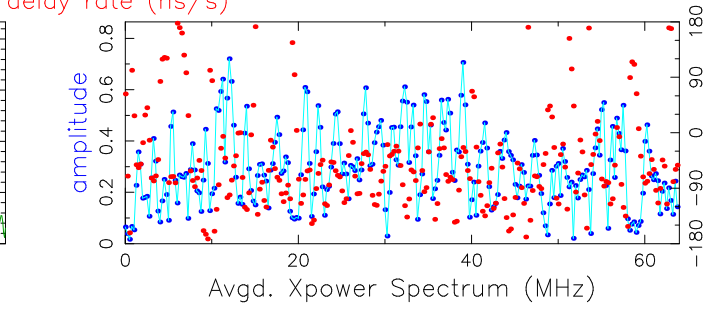
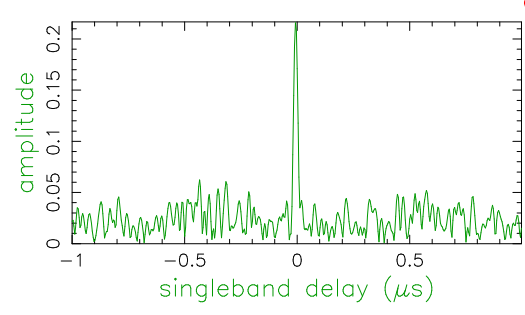
ph/seg (deg) 0.1 0.1 Theor. Amplitude 94.153 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.3 0.1 Search (2048X32) 92.944 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 18.8 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 31.0 0.1 Inc. seg. avg. 94.015 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 y: az 319.2 el 41.0 pa 82.1 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/No0162/yy..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yy.W.121.1IUDSP simultaneous interpolator



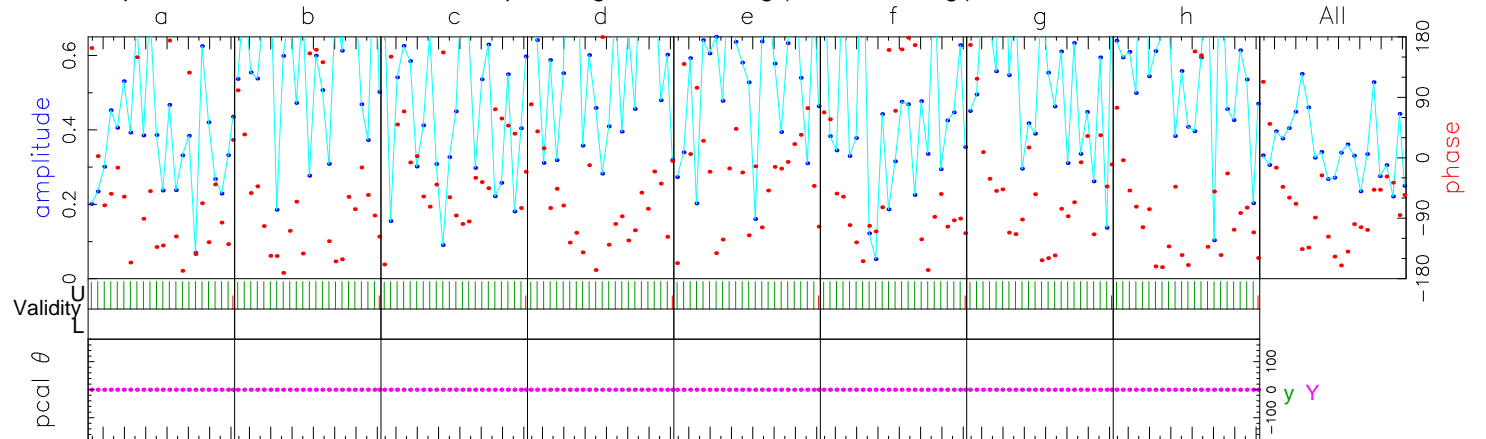
multiband delay ( $\mu$ s)



Fringe quality 9  
 SNR 11.9  
 Int time 401.603  
 Amp 0.217  
 Phase -82.4  
 PFD 7.8e-24  
 Delays (us)  
 SBD -0.006868  
 MBD -0.006173  
 Fringe rate (Hz)  
 -0.010283  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200017.90  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031712  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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



86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
-102.5	-109.2	-41.6	-82.4	-20.4	-111.8	-63.7	-114.7	Phase	-82.4
0.2	0.3	0.2	0.3	0.3	0.2	0.2	0.3	Ampl.	0.3
257.2	255.0	254.8	254.3	254.1	255.7	254.4	254.6	Sbd box	255.2
U/L 787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
y 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Y 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Y 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y 1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y 1000	1000	1000	1000	1000	1000	1000	1000		
y W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
								Chan ids	
								Tracks	
Group delay (usec)(sbd)	-2.40886098907E+03		Apriori delay (usec)	-2.40885481578E+03		Resid mbdelay (usec)	-6.17330E-03	+/-	9.1E-05
Sband delay (usec)	-2.40886168428E+03		Apriori clock (usec)	-1.2448380E+01		Resid sbdelay (usec)	-6.86850E-03	+/-	7.3E-04
Phase delay (usec)	-2.40885481843E+03		Apriori clockrate (us/s)	-2.0000006E-08		Resid phdelay (usec)	-2.65792E-06	+/-	3.1E-07
Delay rate (us/s)	-1.13561165104E+00		Apriori rate (us/s)	-1.13561153166E+00		Resid rate (us/s)	-1.19380E-07	+/-	1.3E-09
Total phase (deg)		-21.6	Apriori accel (us/s/s)	8.87480108424E-06		Resid phase (deg)	-82.4	+/-	9.6

ph/seg (deg) 61.0 23.1 Search (2048X32) 0.211 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 75.1 40.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 38.5 13.6 Inc. seg. avg. 0.328 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 32.1 23.8 Inc. frq. avg. 0.250 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 Y: az 43.4 el 49.2 pa -90.2 u,v (fr/asec) 12469.814 803.094 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY.W.124.1IUDSP

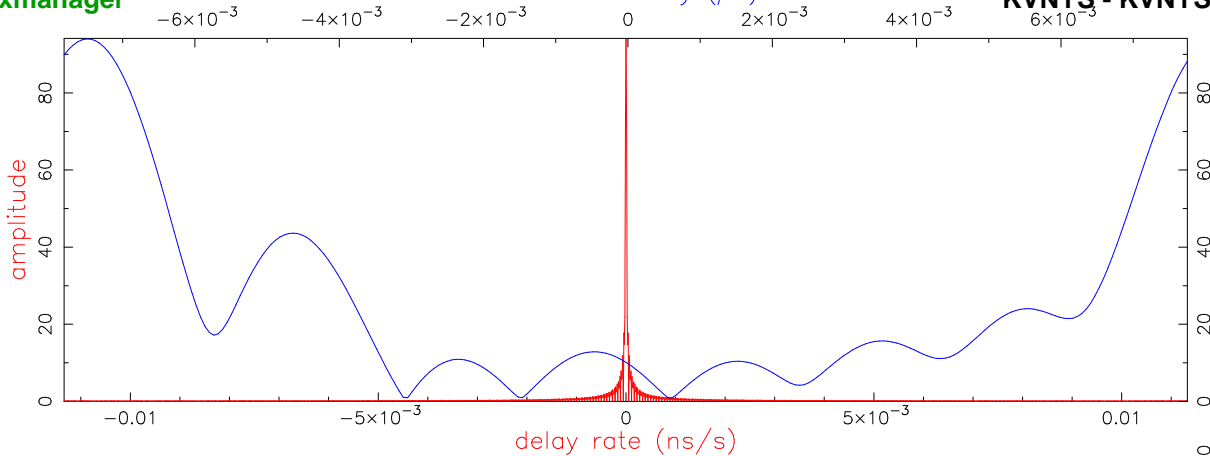
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IU DSP, No0162, yy

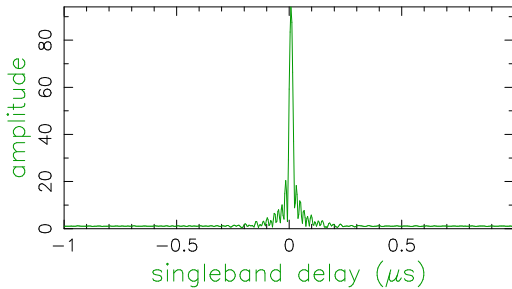
KVNY S - KVNY S, fgroup W, pol RL

multiband delay ( $\mu$ s)

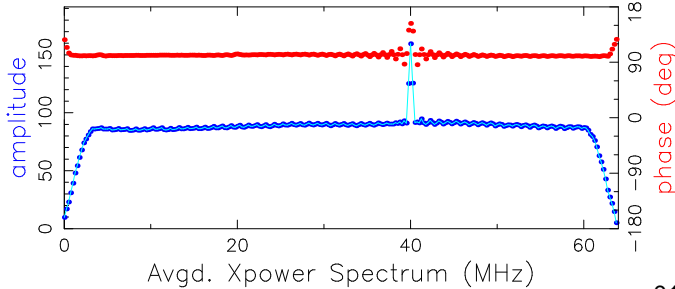


Fringe quality 7

SNR 5275.6  
 Int time 419.826  
 Amp 94.153  
 Phase -75.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.008304  
 MBD -0.007489  
 Fringe rate (Hz)  
 -0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

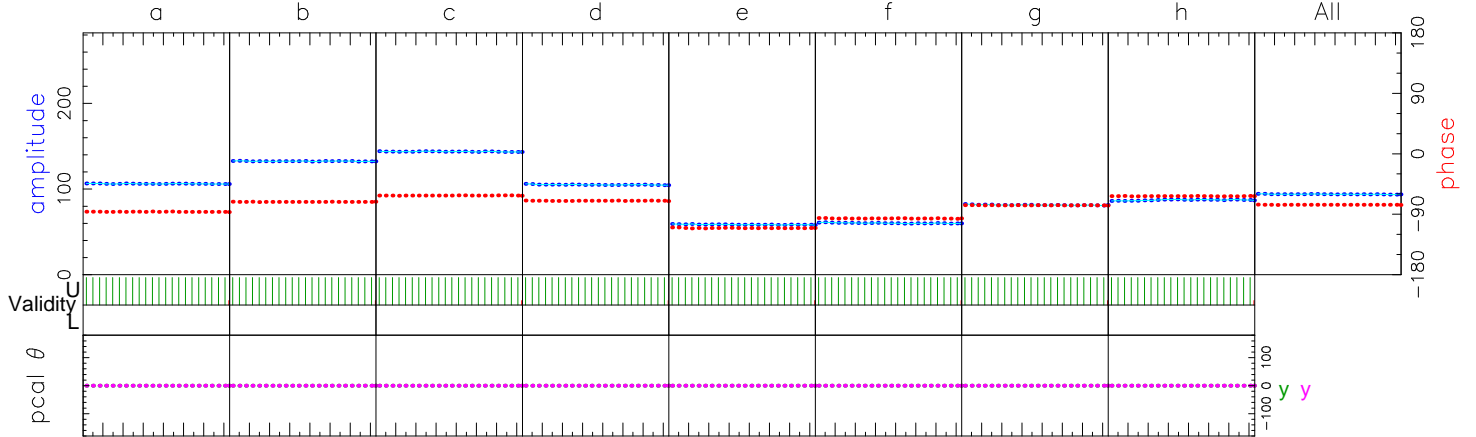


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031715  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-86.3	-71.6	-62.1	-69.9	-110.5	-96.1	-76.6	-63.0		Phase
	106.2	132.6	143.8	105.1	58.6	60.3	81.4	87.2		Ampl.
	259.2	259.2	259.2	258.7	258.8	259.5	259.2	259.1		Sbd box
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks
										Chan ids
										Tracks

Group delay (usec)(sbd)	8.13606250000E-03	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-7.48894E-03	+/-	2.1E-07
Sband delay (usec)	8.30425000000E-03	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	8.30425E-03	+/-	1.6E-06
Phase delay (usec)	-2.44607439978E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-2.44607E-06	+/-	7.0E-10
Delay rate (us/s)	-1.41711523917E-12	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.41712E-12	+/-	2.9E-12
Total phase (deg)		Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-75.9	+/-	0.0

ph/seg (deg)	0.1	Theor.	Amplitude	94.153 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	0.3	0.1	Search (2048X32)	92.944	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	18.8	0.0	Inc. seg. avg.	94.015	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	31.0	0.1	Inc. frq. avg.	96.906	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

y: az 319.2 el 41.0 pa 82.1      y: az 319.2 el 41.0 pa 82.1      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yy..1IU DSP      Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yy.W.140.1IU DSP

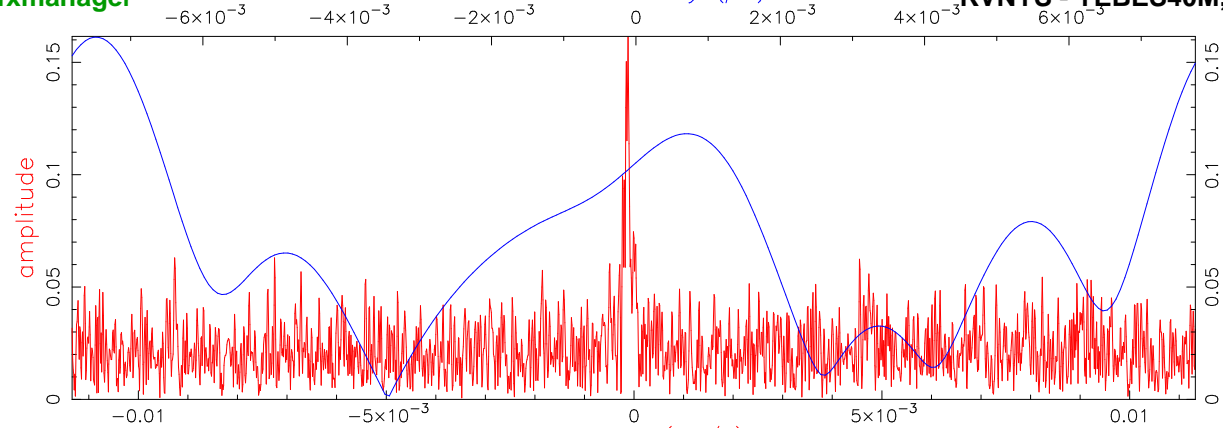
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yY

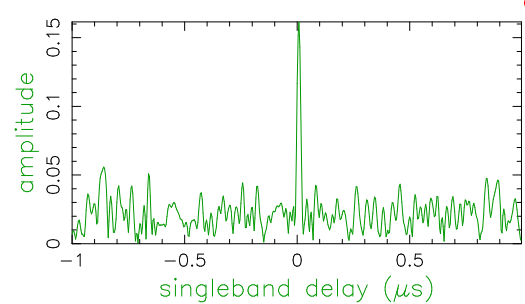
KVNYS - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

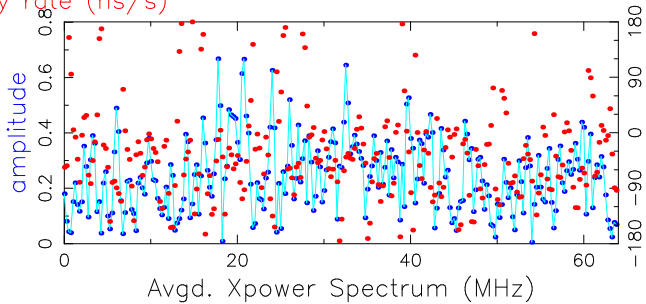


Fringe quality 9

SNR 8.9  
 Int time 401.603  
 Amp 0.162  
 Phase 116.5  
 PFD 3.2e-10  
 Delays (us)  
 SBD 0.007206  
 MBD -0.007500  
 Fringe rate (Hz)  
 -0.010548  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

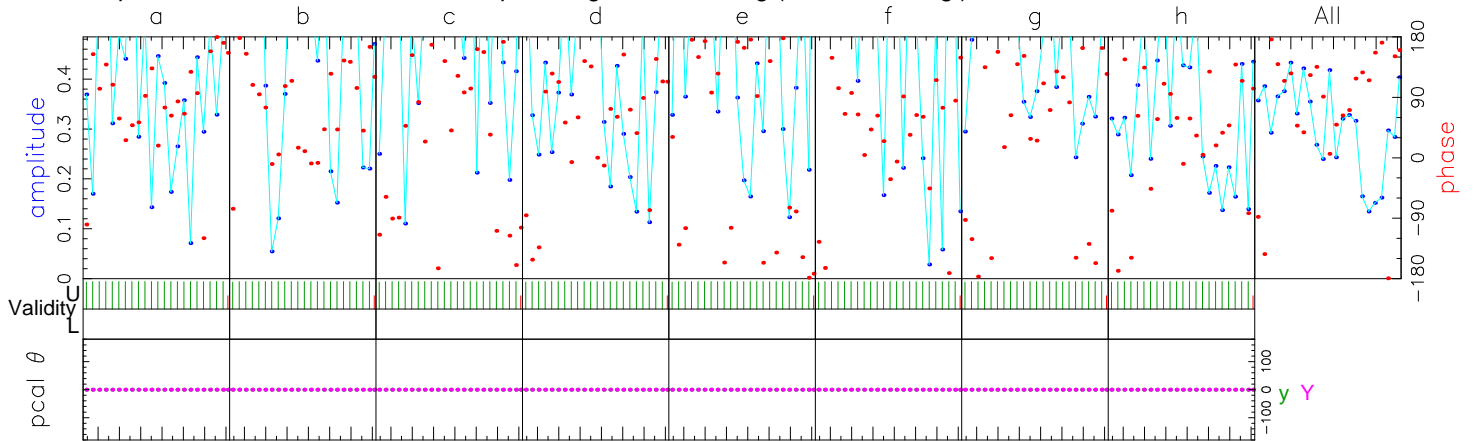


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200017.90  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031716  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	99.0	88.8	172.0	92.5	-172.4	70.1	137.3	75.2	Phase	116.5
	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.2	Ampl.	0.2
	260.3	259.0	257.5	258.5	258.7	257.6	258.4	257.9	Sbd box	258.8
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.40884669104E+03	Apriori delay (usec)	-2.40885481578E+03	Resid mbdelay (usec)	-7.50027E-03	+/-	1.2E-04
Sband delay (usec)	-2.40884761003E+03	Apriori clock (usec)	-1.2448380E+01	Resid sbdelay (usec)	7.20575E-03	+/-	9.7E-04
Phase delay (usec)	-2.40885481202E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	3.75560E-06	+/-	4.2E-07
Delay rate (us/s)	-1.13561165411E+00	Apriori rate (us/s)	-1.13561153166E+00	Resid rate (us/s)	-1.22447E-07	+/-	1.8E-09
Total phase (deg)	-182.7	Apriori accel (us/s/s)	8.87480108424E-06	Resid phase (deg)	116.5	+/-	12.9

ph/seg (deg)	60.6	Theor.	31.0	Amplitude	0.162 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	103.6		54.2	Search (2048X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	48.4		18.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	46.3		32.0	Inc. seg. avg.	0.265	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.209	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

y: az 319.2 el 41.0 pa 82.1      Y: az 43.4 el 49.2 pa -90.2      u,v (fr/asec) 12469.814 803.094      simultaneous interpolator

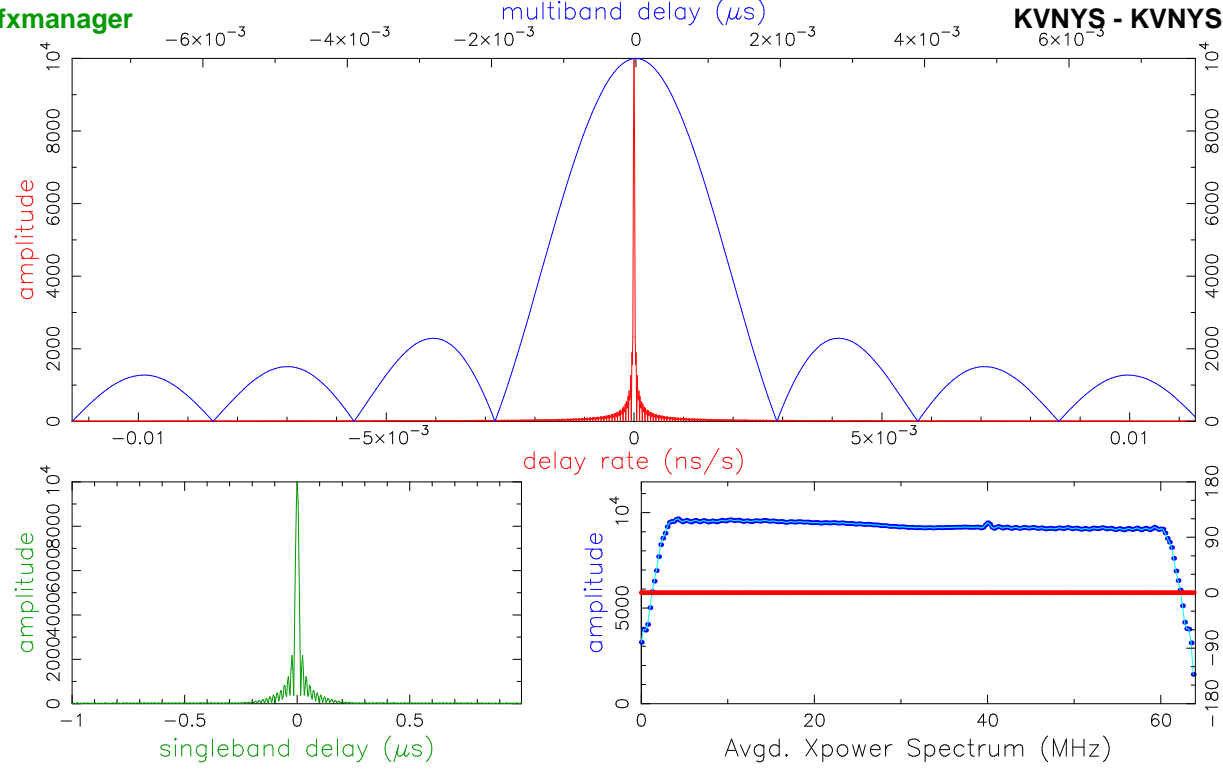
Control file: cf\_1234\_gmva    Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY..1IUDSP    Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY.W.141.1IUDSP

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IU DSP, No0162, yy

KVNY\$ - KVNY\$, fgroup W, pol LL

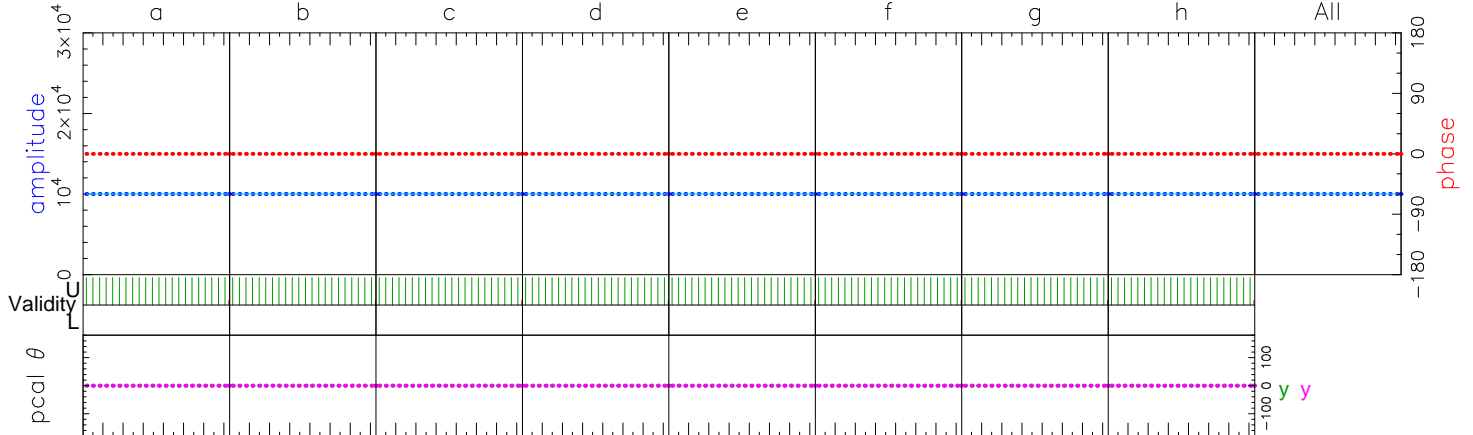


Fringe quality 9

SNR 560315.1  
 Int time 419.826  
 Amp 10000.000  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz) 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031705  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



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

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

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

y: az 319.2 el 41.0 pa 82.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yy..1IU DSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yy.W.87.1IU DSP

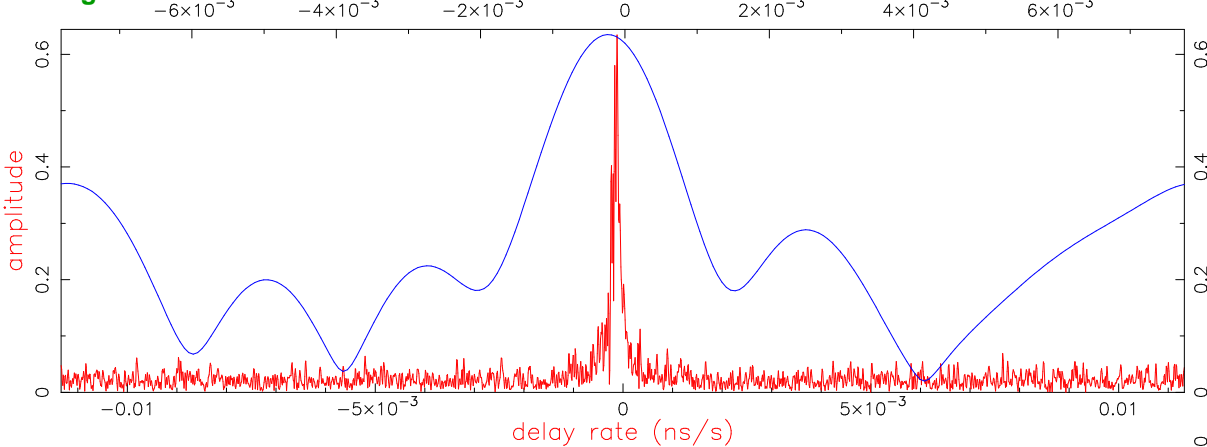
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yY

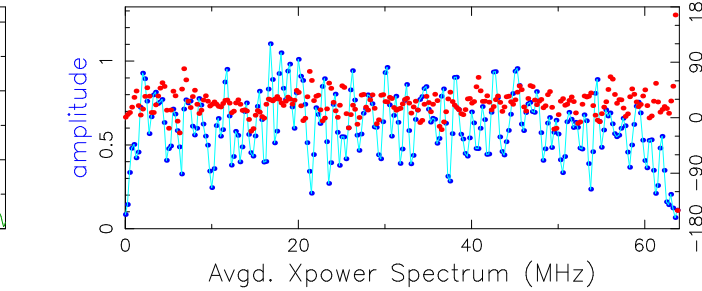
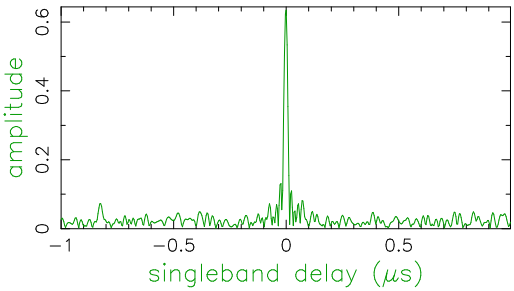
KVNYS - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



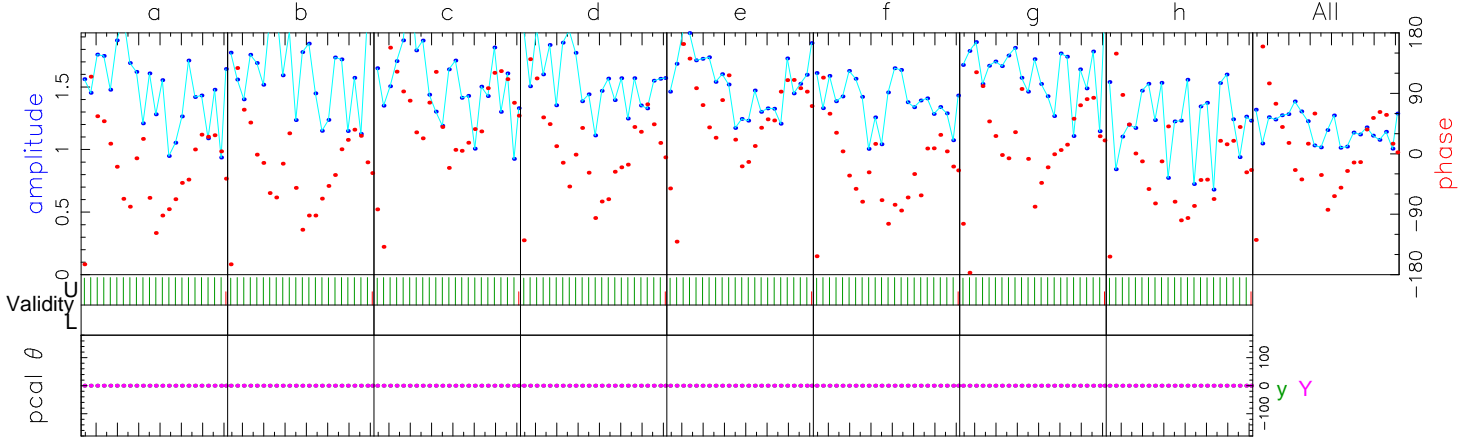
Fringe quality 4

SNR 35.3  
 Int time 401.603  
 Amp 0.644  
 Phase 8.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.001591  
 MBD -0.000279  
 Fringe rate (Hz)  
 -0.010054  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200017.90  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031705  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-20.9	-23.3	66.9	4.1	73.2	-29.9	29.6	-25.5	Phase	8.2
	0.8	0.9	0.8	0.8	0.9	0.8	0.8	0.7	Ampl.	0.8
	258.1	256.3	256.3	255.8	255.8	255.6	256.4	255.9	Sbd box	256.6
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.40885509470E+03	Apriori delay (usec)	-2.40885481578E+03	Resid mbdelay (usec)	-2.78923E-04	+/-	3.1E-05
Sband delay (usec)	-2.40885640678E+03	Apriori clock (usec)	-1.2448380E+01	Resid sbdelay (usec)	-1.59100E-03	+/-	2.4E-04
Phase delay (usec)	-2.40885481551E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	2.63981E-07	+/-	1.0E-07
Delay rate (us/s)	-1.13561164838E+00	Apriori rate (us/s)	-1.13561153166E+00	Resid rate (us/s)	-1.16719E-07	+/-	4.5E-10
Total phase (deg)	-291.0	Apriori accel (us/s/s)	8.87480108424E-06	Resid phase (deg)	8.2	+/-	3.2

ph/seg (deg)	63.5	Theor.	7.8	Search (2048X32)	0.605	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	83.1		13.6	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)	45.8		4.6	Inc. seg. avg.	1.157	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	28.4		8.0	Inc. frq. avg.	0.816	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 319.2 el 41.0 pa 82.1 Y: az 43.4 el 49.2 pa -90.2 u,v (fr/asec) 12469.814 803.094 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yY.W.91.1IUDSP



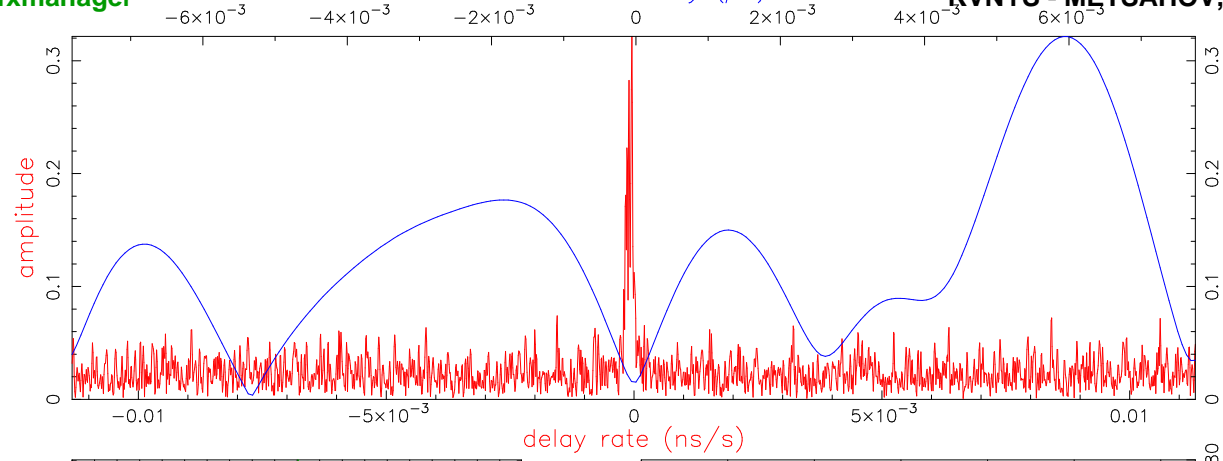
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yZ

KVNYS - METSAHOV, fgroup W, pol RR

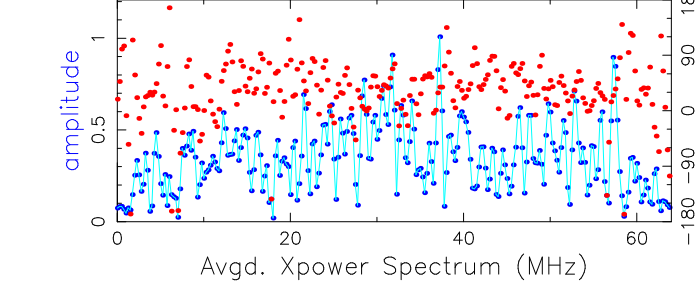
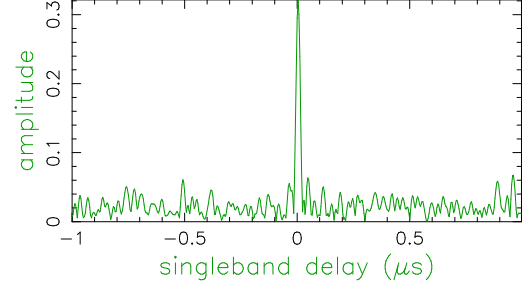
multiband delay ( $\mu$ s)



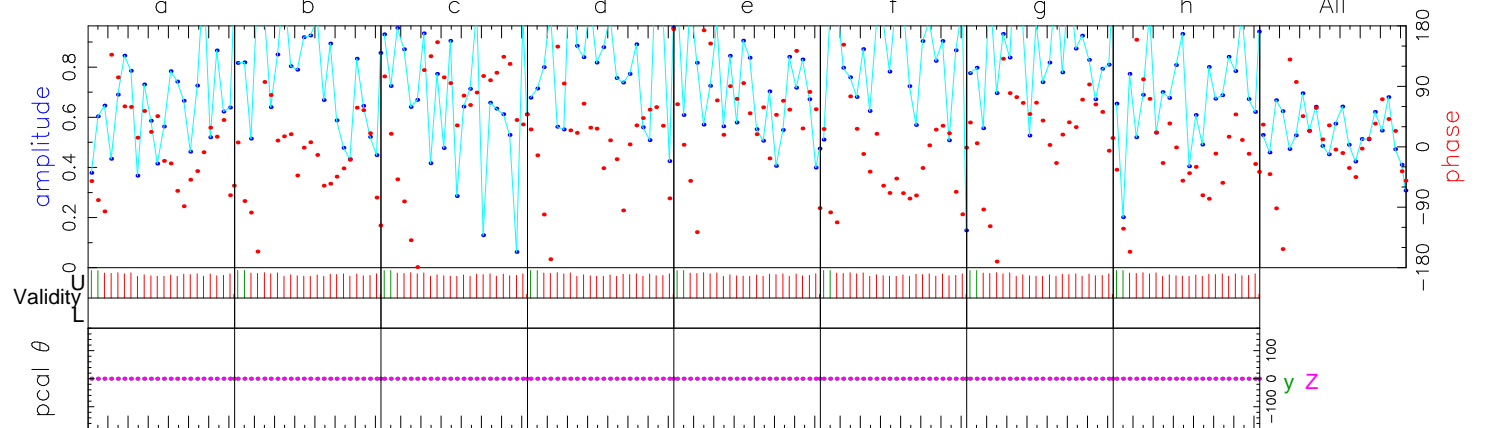
Fringe quality 8

SNR 16.7  
 Int time 361.415  
 Amp 0.322  
 Phase 16.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004136  
 MBD 0.005953  
 Fringe rate (Hz) -0.004028  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031709  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-5.3	-8.0	95.2	20.5	59.1	-37.2	44.4	-9.3		16.8
	0.3	0.4	0.3	0.5	0.4	0.5	0.5	0.4		0.4
	259.3	258.5	257.5	257.2	257.3	257.5	257.5	258.3		258.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		APs used
Z	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks
										Chan ids
										Tracks
Group delay (usec)(sbd)	-6.65768086294E+03		Apriori delay (usec)		-6.65768681575E+03		Resid mbdelay (usec)		5.95281E-03	+/- 6.5E-05
Sband delay (usec)	-6.65768267975E+03		Apriori clock (usec)		1.0991888E+00		Resid sbdelay (usec)		4.13600E-03	+/- 5.2E-04
Phase delay (usec)	-6.65768681521E+03		Apriori clockrate (us/s)		8.3999986E-08		Resid phdelay (usec)		5.40488E-07	+/- 2.2E-07
Delay rate (us/s)	-8.17501785339E-01		Apriori rate (us/s)		-8.17501738582E-01		Resid rate (us/s)		-4.67577E-08	+/- 9.1E-10
Total phase (deg)			Apriori accel (us/s/s)		1.05219514058E-05		Resid phase (deg)		16.8	+/- 6.9

ph/seg (deg) 61.5 16.4 Search (2048X32) 0.317 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.9 28.7 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 9.7 Inc. seg. avg. 0.522 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 33.3 16.9 Inc. frq. avg. 0.405 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 319.2 el 41.0 pa 82.1 Z: az 82.1 el 73.9 pa -69.9 u,v (fr/asec) 8986.872 45.098 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ.W.108.1IUDSP

Mk4/DiFX fourfit 3.21 rev 2937

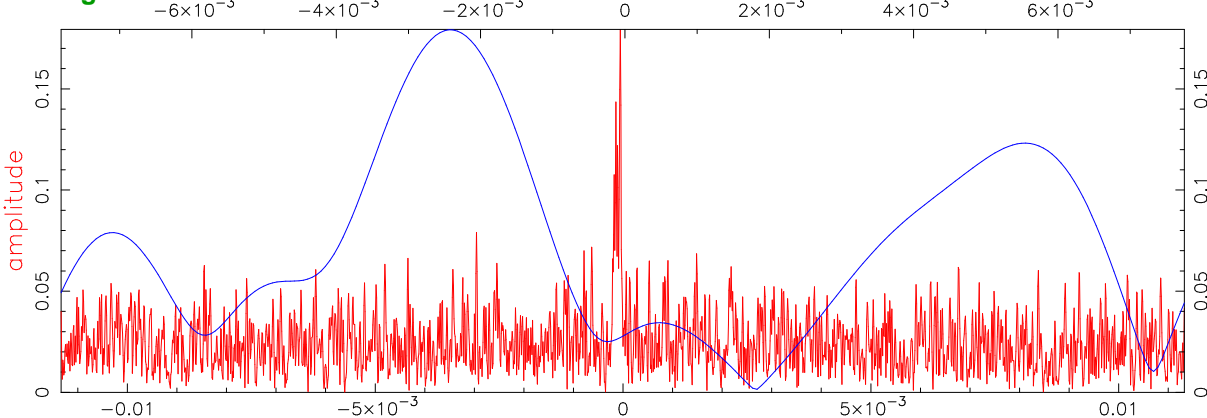
fxmanager

0102+584.1IUDSP, No0162, yZ

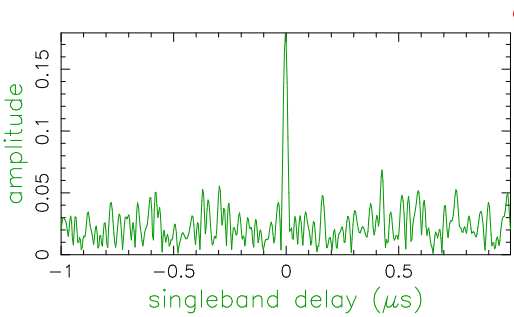
KVNYS - METSAHOV, fgroup W, pol LR

multiband delay ( $\mu$ s)

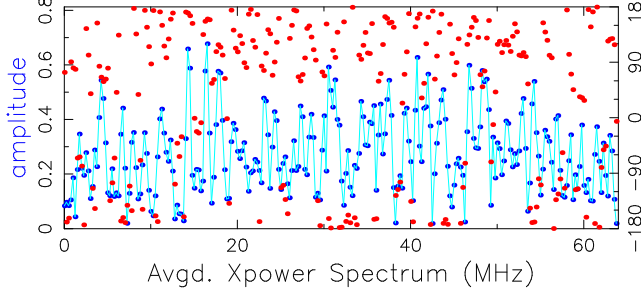
Fringe quality 9



SNR 9.3  
Int time 361.415  
Amp 0.179  
Phase 127.1  
PFD 4.3e-12  
Delays (us)  
SBD -0.003415  
MBD -0.002410  
Fringe rate (Hz)  
-0.004386  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

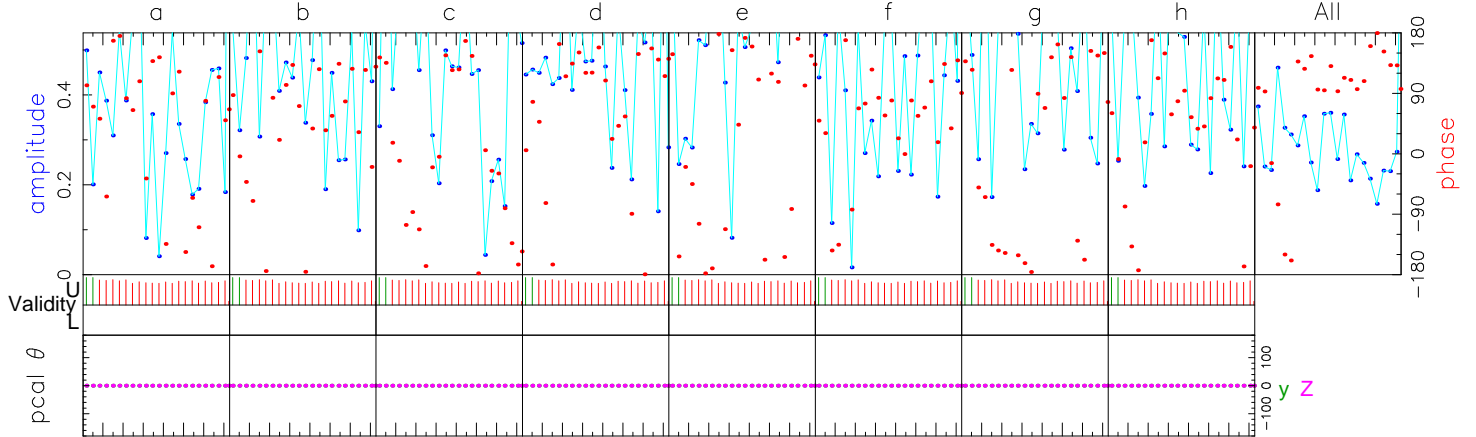


delay rate (ns/s)



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 200001.00  
Stop 200700.84  
FRT 200331.00  
Corr/FF/build  
2021:027:194527  
2021:029:031712  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	110.8	89.8	-165.6	122.8	169.5	75.5	164.9	78.6	Phase	127.1
	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.2	Ampl.	0.2
	258.2	511.3	148.1	254.6	255.0	256.8	255.7	166.8	Sbd box	256.1
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-6.65768922577E+03		Apriori delay (usec)		-6.65768681575E+03		Resid mbdelay (usec)		-2.41002E-03	+/- 1.2E-04
Sband delay (usec)	-6.65769023050E+03		Apriori clock (usec)		1.0991888E+00		Resid sbdelay (usec)		-3.41475E-03	+/- 9.2E-04
Phase delay (usec)	-6.65768681165E+03		Apriori clockrate (us/s)		8.3999986E-08		Resid phdelay (usec)		4.09848E-06	+/- 4.0E-07
Delay rate (us/s)	-8.17501789495E-01		Apriori rate (us/s)		-8.17501738582E-01		Resid rate (us/s)		-5.09134E-08	+/- 1.6E-09
Total phase (deg)			Apriori accel (us/s/s)		1.05219514058E-05		Resid phase (deg)		127.1	+/- 12.3

	RMS	Theor.	Amplitude	0.179 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	57.0	29.5	Search (2048X32)	0.173	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
amp/seg (%)	74.1	51.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
ph/frq (deg)	49.1	17.4	Inc. seg. avg.	0.252	Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011	
amp/frq (%)	43.2	30.3	Inc. frq. avg.	0.226	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

y: az 319.2 el 41.0 pa 82.1 Z: az 82.1 el 73.9 pa -69.9 u,v (fr/asec) 8986.872 45.098 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ.W.123.1IUDSP

Mk4/DiFX fourfit 3.21 rev 2937

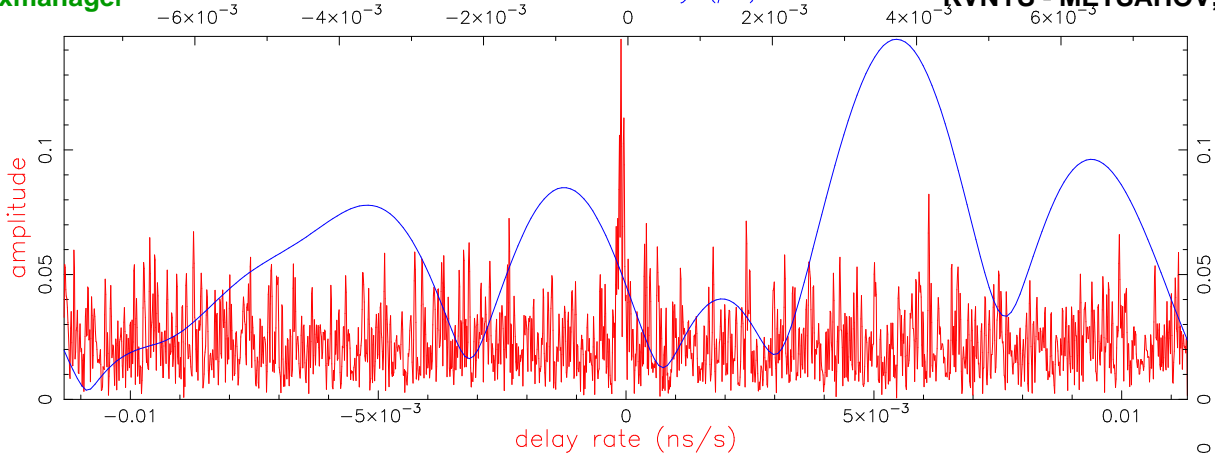
fxmanager

0102+584.1IUDSP, No0162, yZ

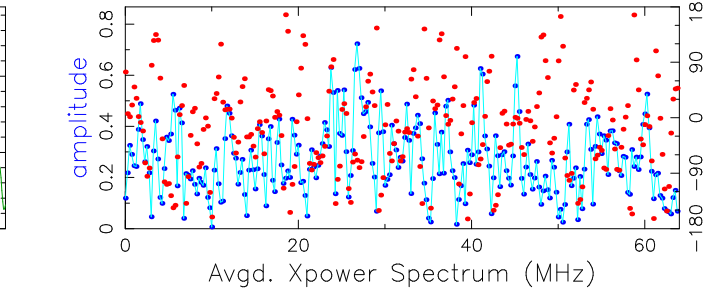
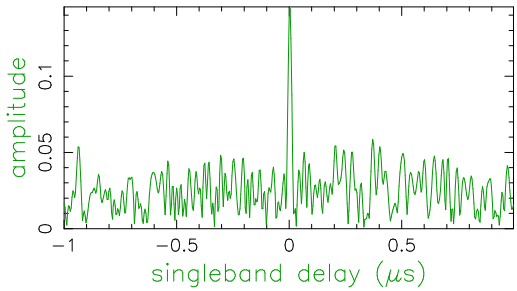
KVNYS - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 9

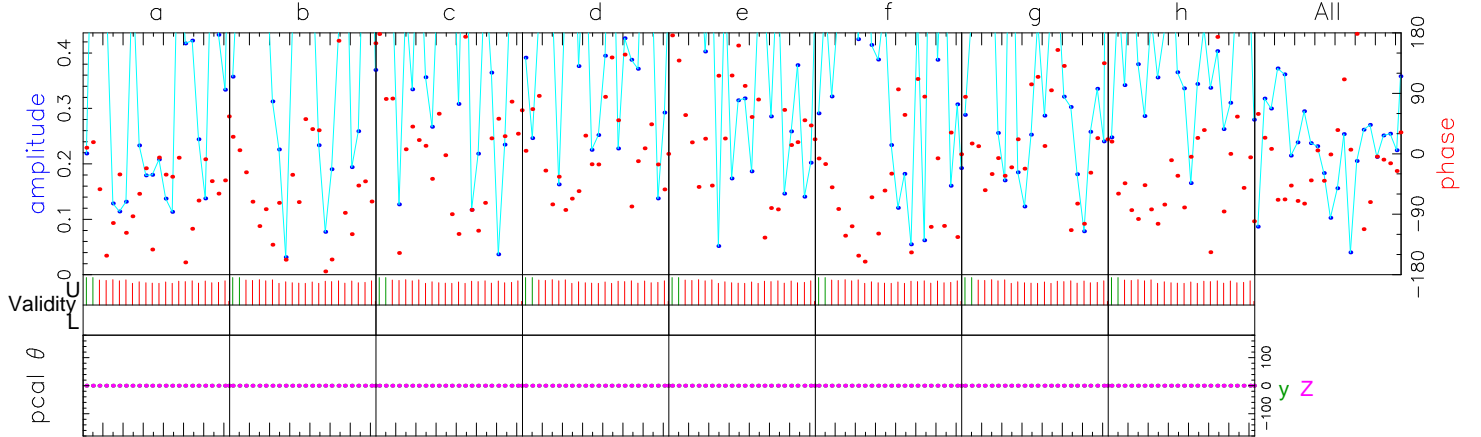


SNR 7.6  
 Int time 361.415  
 Amp 0.145  
 Phase -32.0  
 PFD 1.3e-05  
 Delays (us)  
 SBD 0.002726  
 MBD 0.003706  
 Fringe rate (Hz)  
 -0.008876  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031715  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-51.2	-54.5	32.9	-5.5	21.3	-92.1	9.7	-46.6	Phase	-32.0
	0.2	0.2	0.1	0.2	0.1	0.2	0.2	0.2	Ampl.	0.2
	258.4	258.5	112.8	256.7	165.3	257.1	256.4	258.2	Sbd box	257.7
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -6.65768310962E+03 Apriori delay (usec) -6.65768681575E+03 Resid mbdelay (usec) 3.70613E-03 +/- 1.4E-04  
 Sband delay (usec) -6.65768408975E+03 Apriori clock (usec) 1.0991888E+00 Resid sbdelay (usec) 2.72600E-03 +/- 1.1E-03  
 Phase delay (usec) -6.65768681678E+03 Apriori clockrate (us/s) 8.3999986E-08 Resid phdelay (usec) -1.03316E-06 +/- 4.9E-07  
 Delay rate (us/s) -8.17501841618E-01 Apriori rate (us/s) -8.17501738582E-01 Resid rate (us/s) -1.03036E-07 +/- 2.0E-09  
 Total phase (deg) -143.1 Apriori accel (us/s/s) 1.05219514058E-05 Resid phase (deg) -32.0 +/- 15.2

RMS Theor. Amplitude 0.145 +/- 0.019 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 60.2 36.3 Search (2048X32) 0.139 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 81.8 63.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 48.6 21.4 Inc. seg. avg. 0.193 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 41.4 37.4 Inc. frq. avg. 0.173 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

y: az 319.2 el 41.0 pa 82.1 Z: az 82.1 el 73.9 pa -69.9 u,v (fr/asec) 8986.872 45.098 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ.W.138.1IUDSP

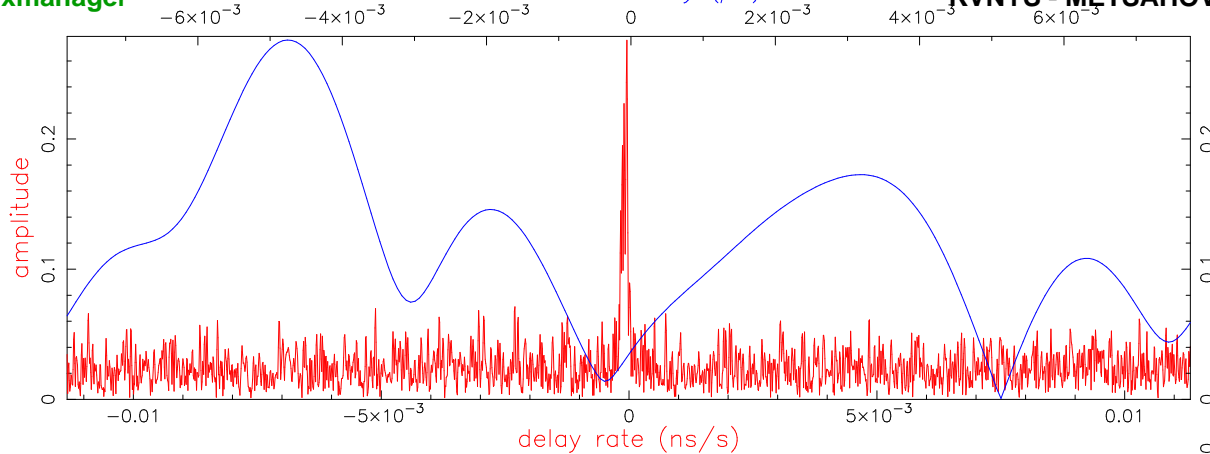
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1IUDSP, No0162, yZ

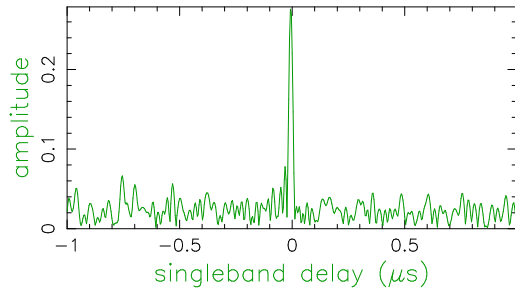
KVNYS - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

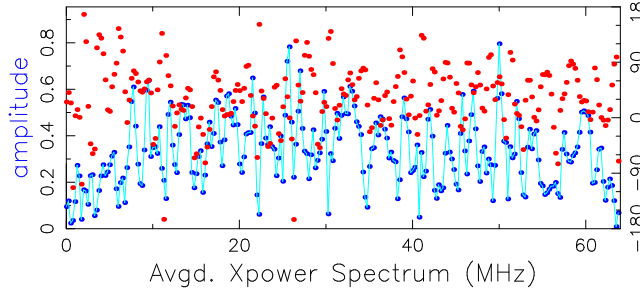


Fringe quality 7

SNR 14.5  
 Int time 361.415  
 Amp 0.279  
 Phase 16.2  
 PFD 7.9e-39  
 Delays (us)  
 SBD -0.006446  
 MBD -0.004719  
 Fringe rate (Hz)  
 -0.004254  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

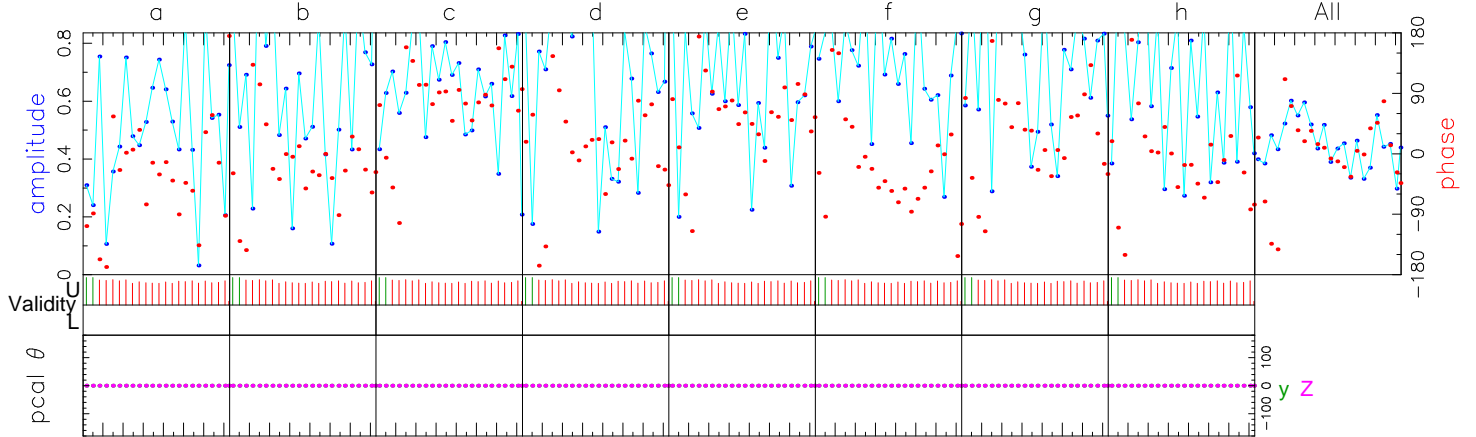


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 200001.00  
 Stop 200700.84  
 FRT 200331.00  
 Corr/FF/build  
 2021:027:194527  
 2021:029:031705  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-24.8	-17.5	87.9	22.3	68.5	-37.2	32.1	-18.7		Phase 16.2
	0.3	0.4	0.4	0.4	0.5	0.4	0.4	0.3		Ampl. 0.4
	257.2	254.9	254.8	254.5	254.6	254.7	255.2	255.7		Sbd box 255.3
U/L	820/0	820/0	820/0	820/0	820/0	820/0	820/0	820/0		APs used
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
Z	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec)(sbd)	-6.65769153448E+03	Apriori delay (usec)	-6.65768681575E+03	Resid mbdelay (usec)	-4.71874E-03	+/-	7.5E-05
Sband delay (usec)	-6.65769326225E+03	Apriori clock (usec)	1.0991888E+00	Resid sbdelay (usec)	-6.44650E-03	+/-	5.9E-04
Phase delay (usec)	-6.65768681523E+03	Apriori clockrate (us/s)	8.3999986E-08	Resid phdelay (usec)	5.21803E-07	+/-	2.5E-07
Delay rate (us/s)	-8.17501787963E-01	Apriori rate (us/s)	-8.17501738582E-01	Resid rate (us/s)	-4.93815E-08	+/-	1.1E-09
Total phase (deg)		Apriori accel (us/s/s)	1.05219514058E-05	Resid phase (deg)	16.2	+/-	7.9

ph/seg (deg)	61.9	Theor.	19.0	Search (2048X32)	0.264	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	68.9		33.1	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)	50.1		11.2	Inc. seg. avg.	0.429	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	40.3		19.5	Inc. frq. avg.	0.374	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 319.2 el 41.0 pa 82.1 Z: az 82.1 el 73.9 pa -69.9 u,v (fr/asec) 8986.872 45.098 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ..1IUDSP Output file: /Exps/c202b/v1/v1\_3mm/1234/No0162/yZ.W.92.1IUDSP