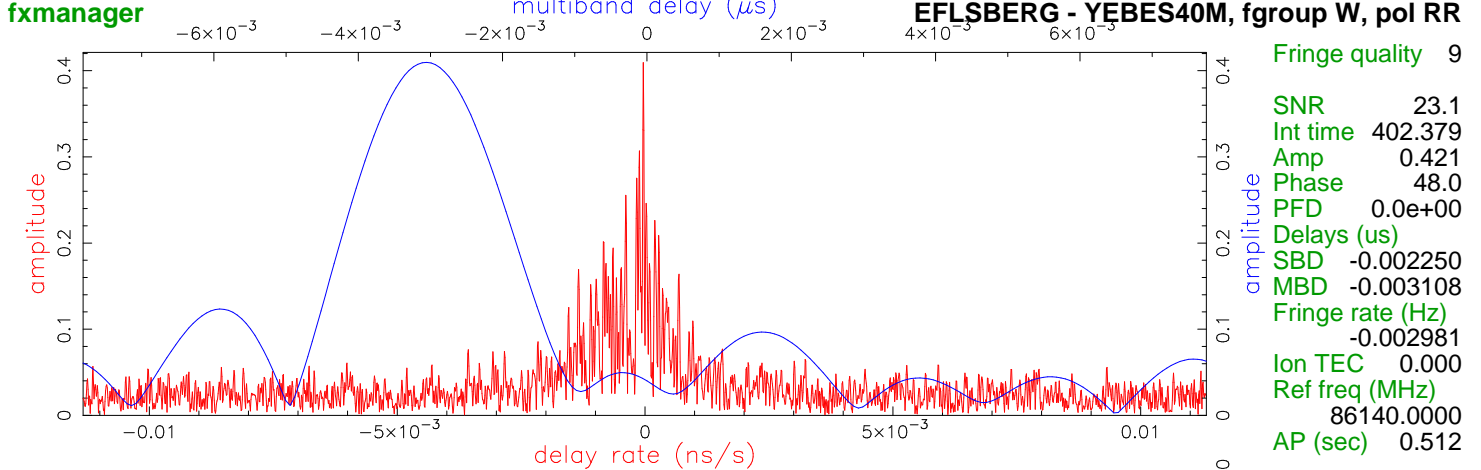


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, BY

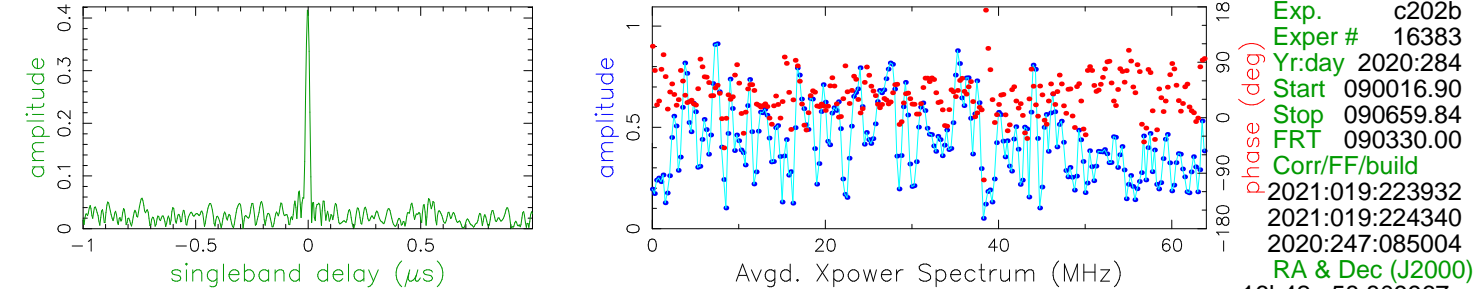
EFLSBERG - YEBES40M, fgroup W, pol RR



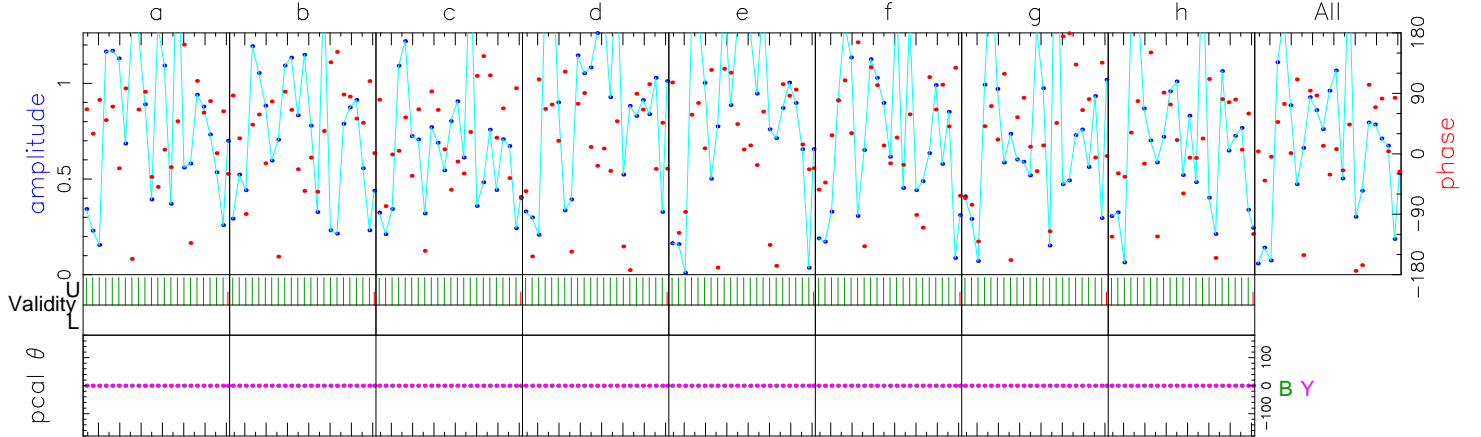
Fringe quality 9

SNR 23.1  
Int time 402.379  
Amp 0.421  
Phase 48.0  
PFD 0.0e+00  
Delays (us)  
SBD -0.002250  
MBD -0.003108  
Fringe rate (Hz)  
-0.002981  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224340  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"



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



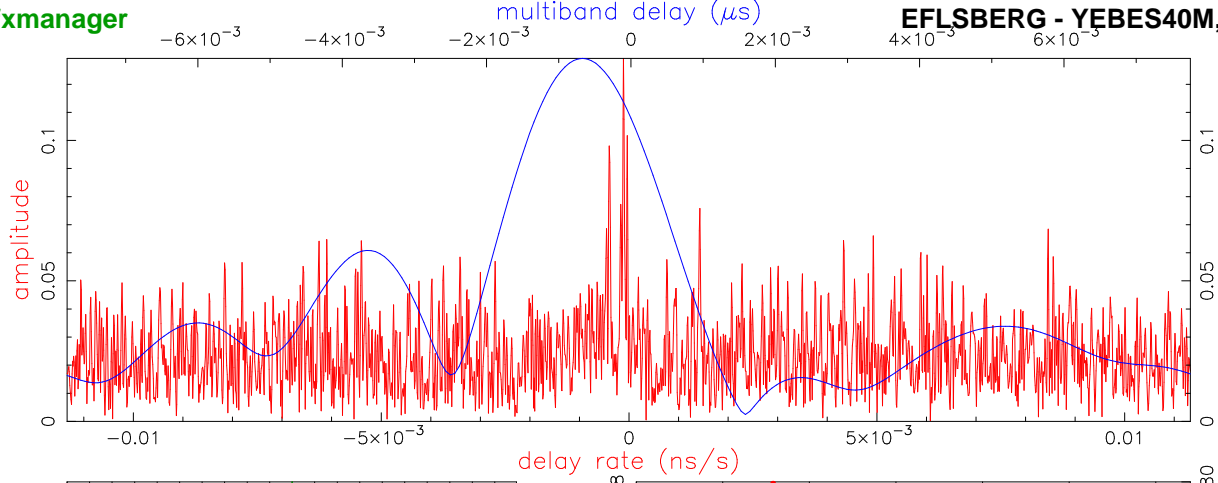
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
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)	3.76920205781E+03	Apriori delay (usec)		3.76920516559E+03	Resid mbdelay (usec)		-3.10778E-03	+/-	4.7E-05	
Sband delay (usec)	3.76920291559E+03	Apriori clock (usec)		-3.5827711E+00	Resid sbdelay (usec)		-2.25000E-03	+/-	3.7E-04	
Phase delay (usec)	3.76920516714E+03	Apriori clockrate (us/s)		-3.1999999E-07	Resid phdelay (usec)		1.54765E-06	+/-	1.6E-07	
Delay rate (us/s)	-1.37911650761E-01	Apriori rate (us/s)		-1.37911616160E-01	Resid rate (us/s)		-3.46017E-08	+/-	6.9E-10	
Total phase (deg)	35.1		Apriori accel (us/s/s)		-1.12397334127E-05	Resid phase (deg)		48.0	+/-	5.0

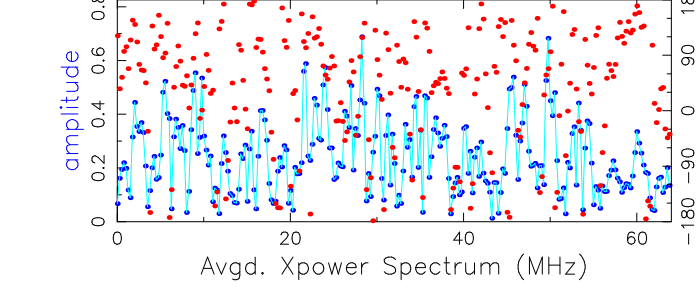
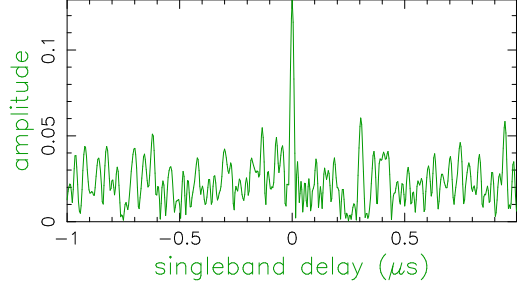
ph/seg (deg)	RMS 71.4	Theor. 11.9	Amplitude	0.421 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	114.1	20.8	Search (2048X32)	0.405	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	12.3	7.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	8.9	12.2	Inc. seg. avg.	0.681	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
			Inc. frq. avg.	0.413	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 62.3 el 29.8 pa -47.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1010.280 84.763 simultaneous interpolator

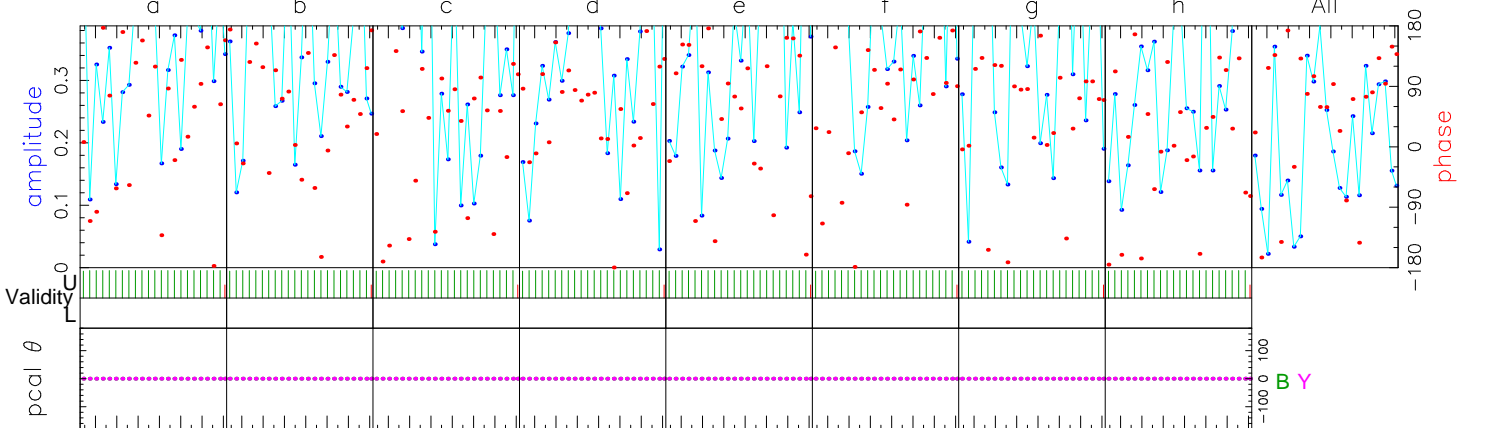
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY.W.28.1IFSML



Fringe quality 0  
SNR 7.1  
Int time 402.379  
Amp 0.129  
Phase 95.4  
PFD 4.1e-04  
Delays (us)  
SBD -0.000155  
MBD -0.000674  
Fringe rate (Hz)  
-0.009216  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224344  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"



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
	93.0	92.4	91.3	77.5	140.5	112.1	98.3	45.4	Phase	95.4
	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	Ampl.	0.1
	436.0	332.5	415.1	255.8	124.6	257.9	256.2	184.0	Sbd box	257.0
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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)	3.76920449165E+03		Apriori delay (usec)		3.76920516559E+03		Resid mbdelay (usec)		-6.73944E-04	+/- 1.5E-04
Sband delay (usec)	3.76920501059E+03		Apriori clock (usec)		-3.5827711E+00		Resid sbdelay (usec)		-1.55000E-04	+/- 1.2E-03
Phase delay (usec)	3.76920516867E+03		Apriori clockrate (us/s)		-3.1999999E-07		Resid phdelay (usec)		3.07652E-06	+/- 5.2E-07
Delay rate (us/s)	-1.37911723153E-01		Apriori rate (us/s)		-1.37911616160E-01		Resid rate (us/s)		-1.06993E-07	+/- 2.2E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.12397334127E-05		Resid phase (deg)		95.4	+/- 16.2

ph/seg (deg) 71.8 38.8 Amplitude 0.129 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
amp/seg (%) 97.3 67.7 Search (2048X32) 0.124 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
ph/frq (deg) 29.4 22.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
amp/frq (%) 33.6 39.9 Inc. seg. avg. 0.160 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011  
B: az 62.3 el 29.8 pa -47.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1010.280 84.763 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/No0080/BY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY.W.48.1IFSML simultaneous interpolator

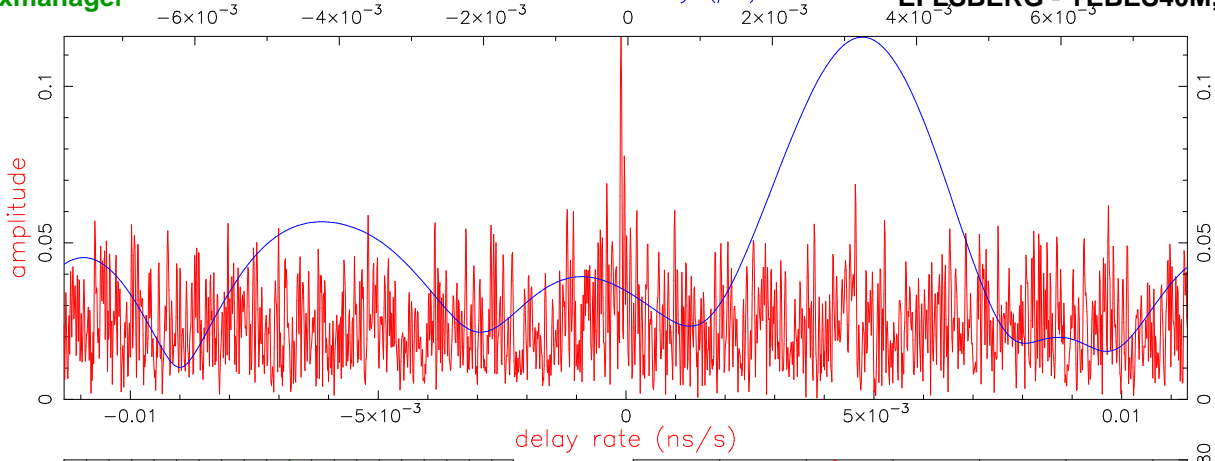
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

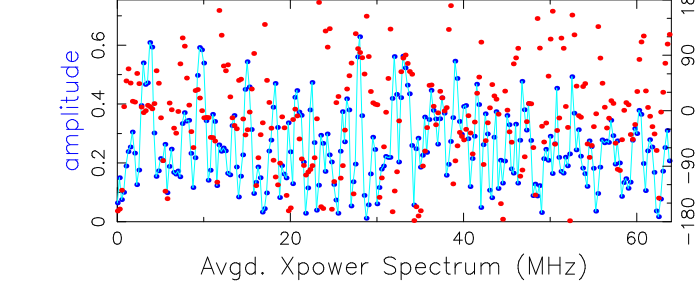
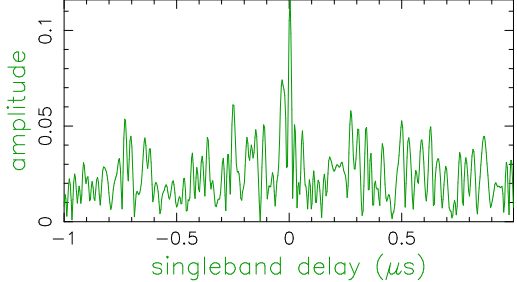
3C345.1IFSML, No0080, BY

EFLSBERG - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

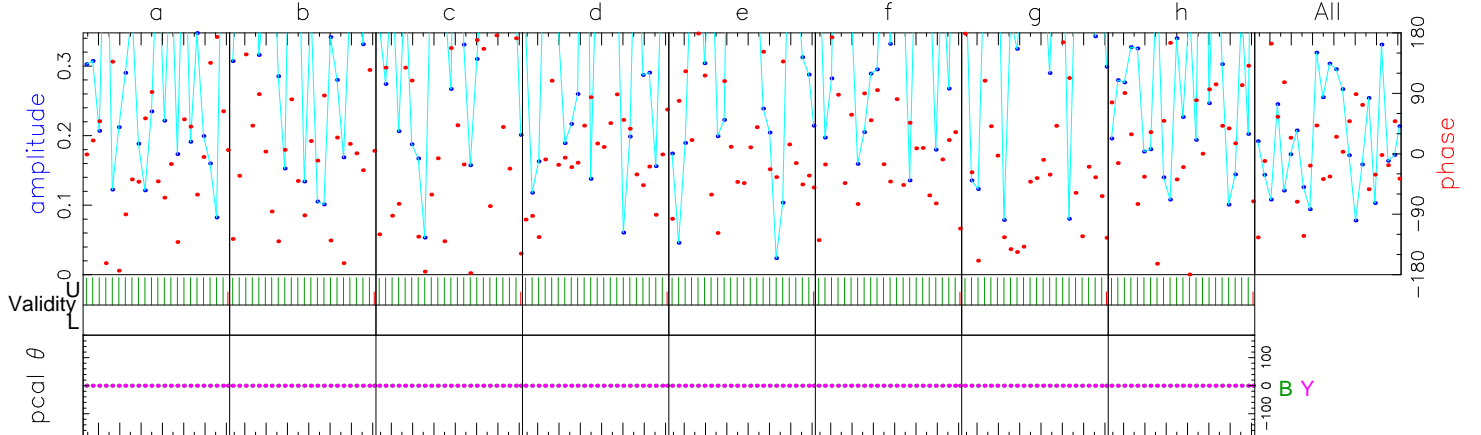


Fringe quality 0  
 SNR 6.4  
 Int time 402.379  
 Amp 0.116  
 Phase 0.9  
 PFD 5.4e-02  
 Delays (us)  
 SBD 0.003427  
 MBD 0.003239  
 Fringe rate (Hz)  
 -0.008484  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224348  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

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
	-1.3	9.7	-138.9	12.1	-11.0	10.3	-51.4	39.6	Phase	0.9
	0.1	0.1	0.0	0.2	0.2	0.2	0.1	0.1	Ampl.	0.1
	201.0	28.6	479.3	258.2	259.1	258.1	248.3	253.5	Sbd box	257.9
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	3.76920840450E+03		Apriori delay (usec)		3.76920516559E+03		Resid mbdelay (usec)		3.23891E-03	+/- 1.7E-04
Sband delay (usec)	3.76920859259E+03		Apriori clock (usec)		-3.5827711E+00		Resid sbdelay (usec)		3.42700E-03	+/- 1.4E-03
Phase delay (usec)	3.76920516562E+03		Apriori clockrate (us/s)		-3.1999999E-07		Resid phdelay (usec)		3.04831E-08	+/- 5.8E-07
Delay rate (us/s)	-1.37911714645E-01		Apriori rate (us/s)		-1.37911616160E-01		Resid rate (us/s)		-9.84853E-08	+/- 2.5E-09
Total phase (deg)	348.0		Apriori accel (us/s/s)		-1.12397334127E-05		Resid phase (deg)		0.9	+/- 18.0

ph/seg (deg) 68.3 43.2 Search (2048X32) 0.114 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 94.3 75.4 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 63.6 25.5 Inc. seg. avg. 0.152 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 50.6 44.5 Inc. frq. avg. 0.124 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 B: az 62.3 el 29.8 pa -47.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1010.280 84.763 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY.W.68.1IFSML

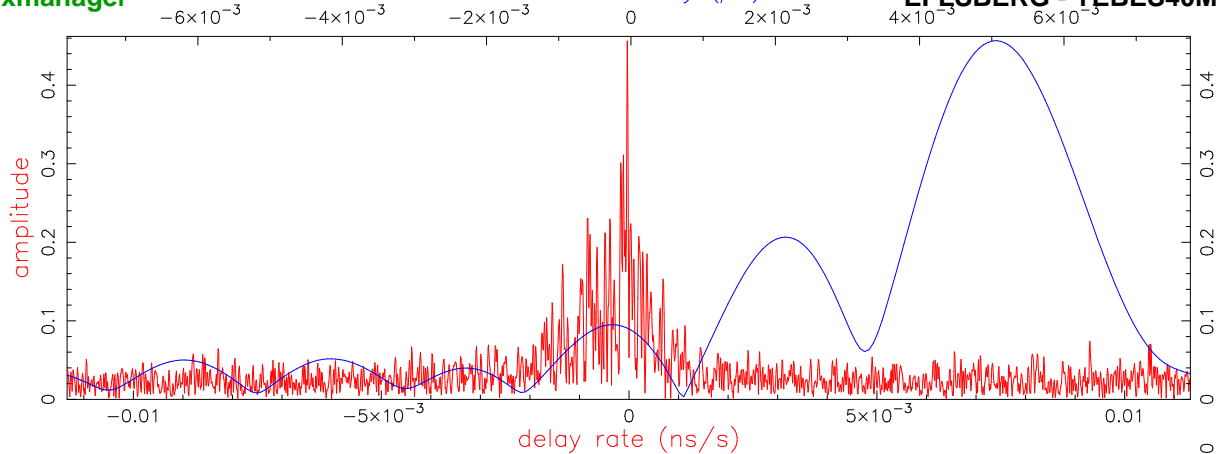
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, BY

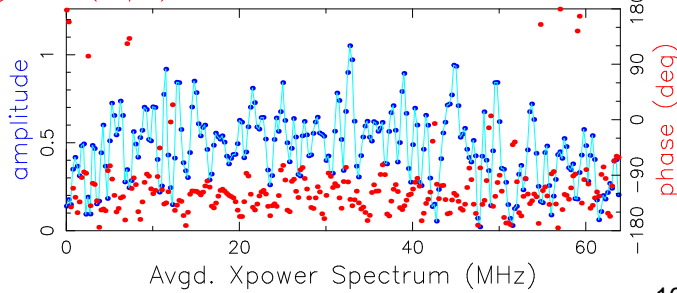
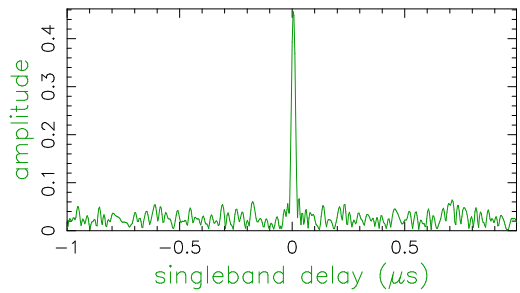
EFLSBERG - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



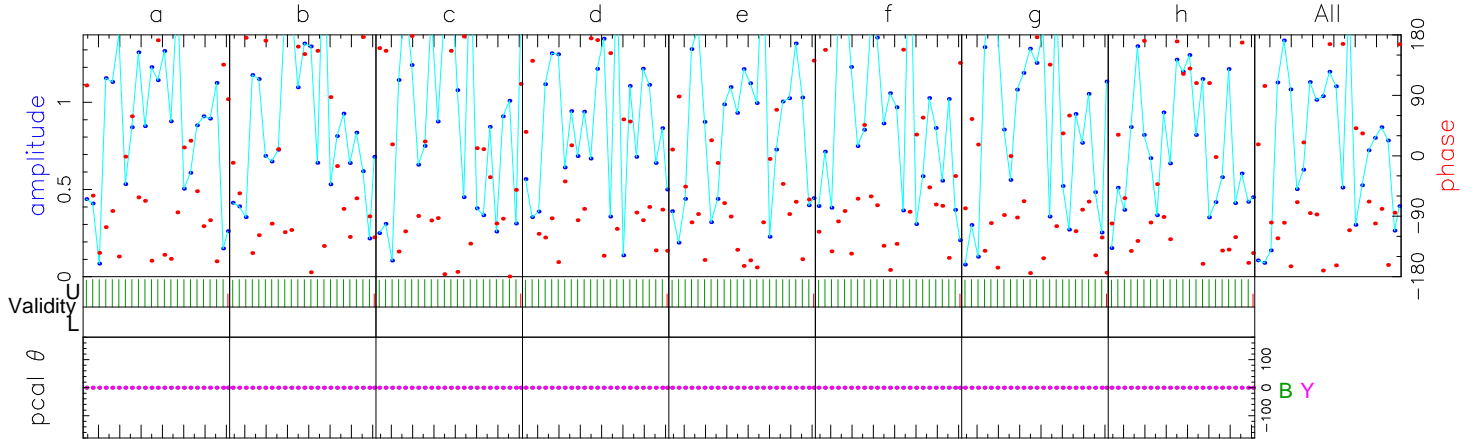
Fringe quality 6

SNR 25.4  
 Int time 402.379  
 Amp 0.462  
 Phase -120.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.005433  
 MBD 0.005099  
 Fringe rate (Hz)  
 -0.003074  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224337  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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

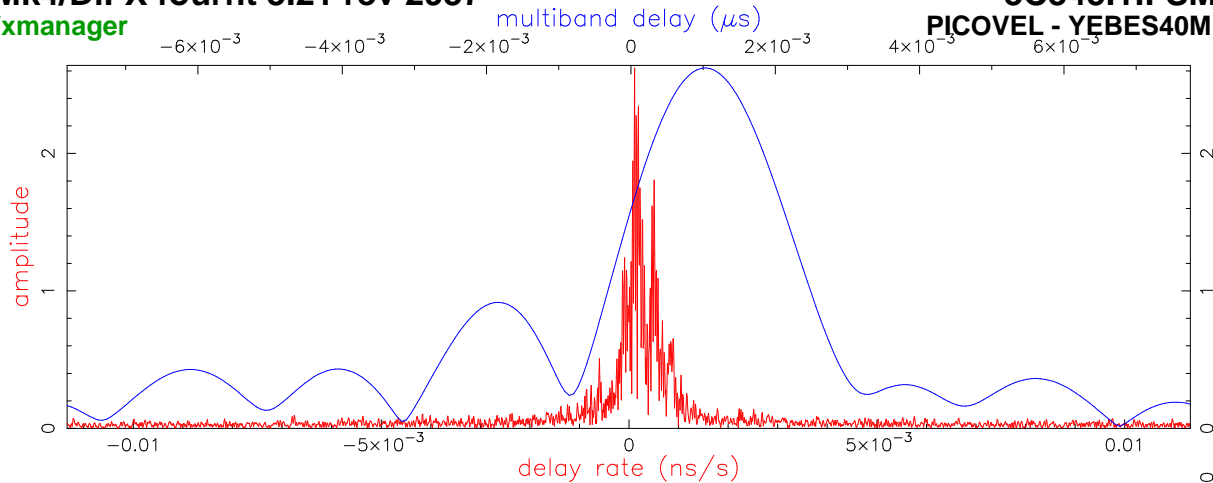


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-108.8	-133.8	-140.9	-111.3	-101.9	-96.6	-121.2	-161.1	Phase	-120.2
	0.4	0.5	0.5	0.5	0.5	0.6	0.5	0.4	Ampl.	0.5
	258.2	258.6	257.9	258.8	258.4	258.2	258.2	257.9	Sbd box	258.4
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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	Manl 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	
									Tracks	
Group delay (usec)(sbd)	3.76921026450E+03		Apriori delay (usec)		3.76920516559E+03		Resid mbdelay (usec)		5.09891E-03	+/- 4.3E-05
Sband delay (usec)	3.76921059809E+03		Apriori clock (usec)		-3.5827711E+00		Resid sbdelay (usec)		5.43250E-03	+/- 3.4E-04
Phase delay (usec)	3.76920516172E+03		Apriori clockrate (us/s)		-3.1999999E-07		Resid phdelay (usec)		-3.87599E-06	+/- 1.5E-07
Delay rate (us/s)	-1.37911651845E-01		Apriori rate (us/s)		-1.37911616160E-01		Resid rate (us/s)		-3.56851E-08	+/- 6.3E-10
Total phase (deg)	226.9		Apriori accel (us/s/s)		-1.12397334127E-05		Resid phase (deg)		-120.2	+/- 4.5

	RMS	Theor.	Amplitude	0.462 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	78.8	10.8	Search (2048X32)	0.446	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	110.0	18.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	23.8	6.4	Inc. seg. avg.	0.743	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	12.0	11.2	Inc. frq. avg.	0.482	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

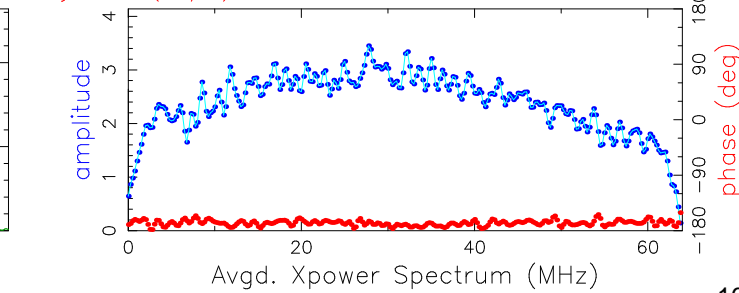
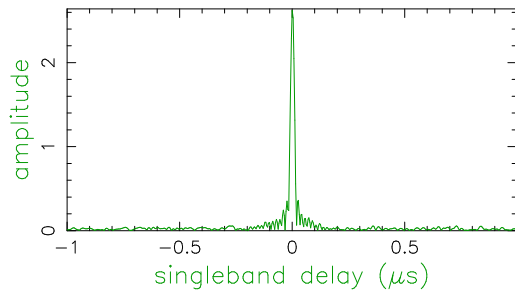
B: az 62.3 el 29.8 pa -47.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1010.280 84.763 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/BY.W.7.1IFSML



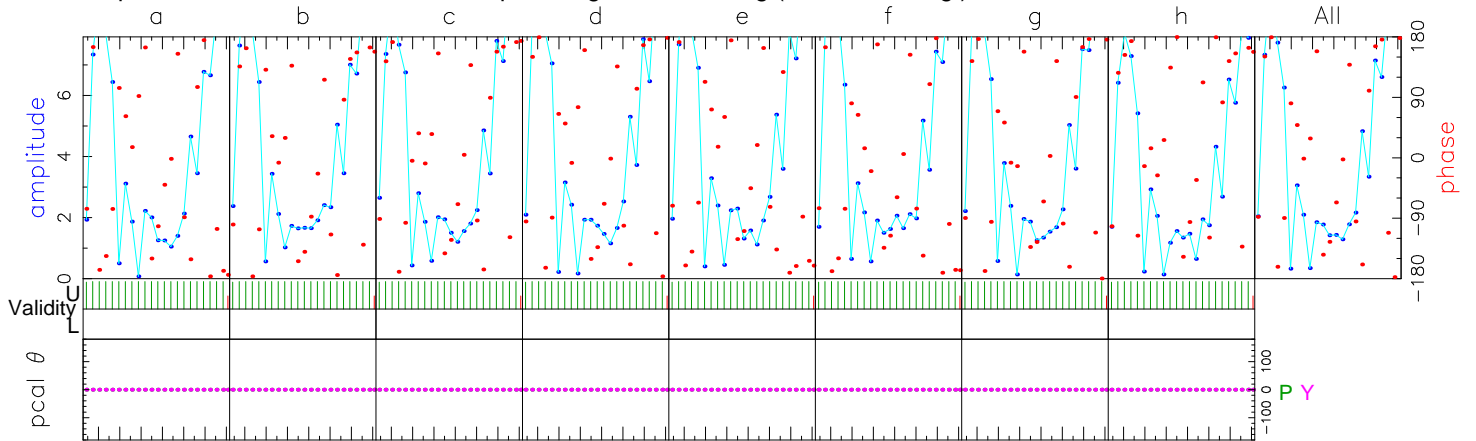
Fringe quality 4

SNR 144.8  
Int time 401.967  
Amp 2.641  
Phase -167.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.001152  
MBD 0.001056  
Fringe rate (Hz)  
0.009608  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224340  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

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
	-157.8	175.1	-173.4	-166.8	-145.0	-155.4	-170.8	170.9	Phase	-167.3
	2.6	2.7	2.7	2.9	2.9	2.7	2.8	2.3	Ampl.	2.7
	257.5	257.1	257.5	257.4	257.1	257.1	257.0	256.9	Sbd box	257.3
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.12791184882E+02		Apriori delay (usec)		-8.12792241201E+02		Resid mbdelay (usec)		1.05632E-03	+/- 7.5E-06
Sband delay (usec)	-8.12791089451E+02		Apriori clock (usec)		-1.3894214E+01		Resid sbdelay (usec)		1.15175E-03	+/- 6.0E-05
Phase delay (usec)	-8.12792246596E+02		Apriori clockrate (us/s)		-5.2000000E-07		Resid phdelay (usec)		-5.39528E-06	+/- 2.6E-08
Delay rate (us/s)	4.39537860111E-02		Apriori rate (us/s)		4.39536744713E-02		Resid rate (us/s)		1.11540E-07	+/- 1.1E-10
Total phase (deg)			Apriori accel (us/s/s)		8.65375277852E-07		Resid phase (deg)		-167.3	+/- 0.8

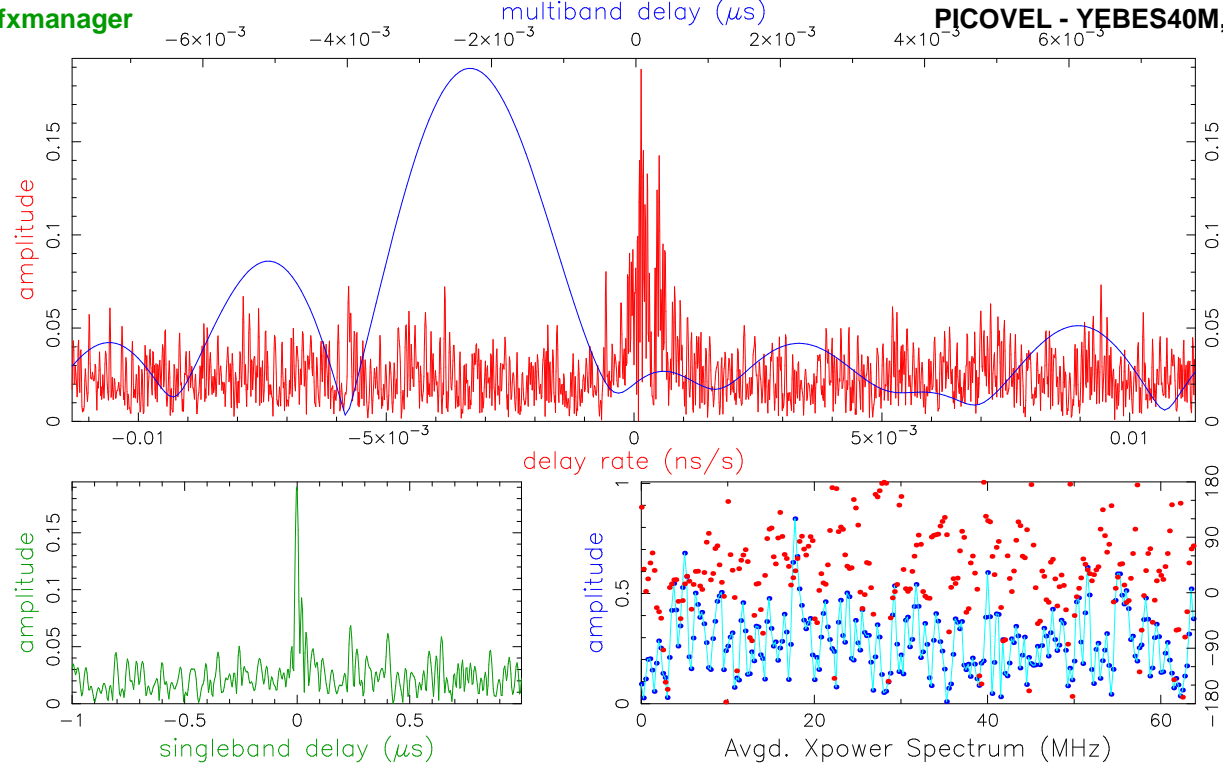
RMS Theor. Amplitude 2.641 +/- 0.018  
 ph/seg (deg) 85.5 1.9 Search (2048X32) 2.601 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 131.0 3.3 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 16.1 1.1 Inc. seg. avg. 4.211 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 6.7 2.0 Inc. frq. avg. 2.699 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 P: az 52.1 el 16.3 pa -55.5 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) -326.801 -258.506 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY.W.26.1IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, PY

PICOVEL - YEBES40M, fgroup W, pol LR

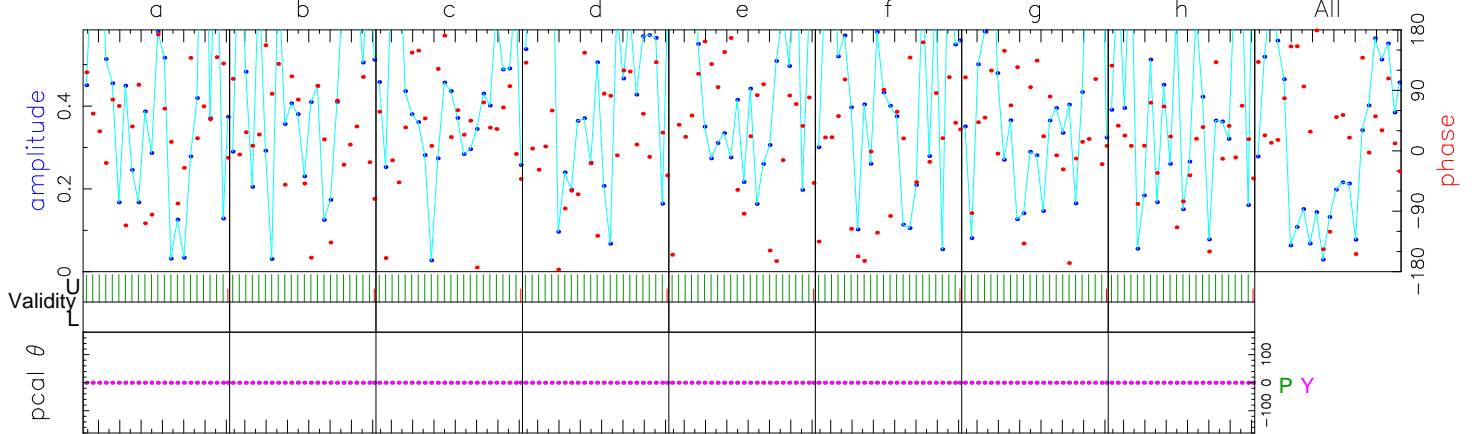


Fringe quality 9

SNR 10.7  
 Int time 401.967  
 Amp 0.195  
 Phase 45.7  
 PFD 6.1e-18  
 Delays (us)  
 SBD -0.001808  
 MBD -0.002216  
 Fringe rate (Hz) 0.012505  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224344  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-8.12794456977E+02	Apriori delay (usec)	-8.12792241201E+02	Resid mbdelay (usec)	-2.21578E-03	+/-	1.0E-04
Sband delay (usec)	-8.12794049451E+02	Apriori clock (usec)	-1.3894214E+01	Resid sbdelay (usec)	-1.80825E-03	+/-	8.1E-04
Phase delay (usec)	-8.12792239727E+02	Apriori clockrate (us/s)	-5.2000000E-07	Resid phdelay (usec)	1.47465E-06	+/-	3.5E-07
Delay rate (us/s)	4.39538196449E-02	Apriori rate (us/s)	4.39536744713E-02	Resid rate (us/s)	1.45174E-07	+/-	1.5E-09
Total phase (deg)		Apriori accel (us/s/s)	8.65375277852E-07	Resid phase (deg)	45.7	+/-	10.7

ph/seg (deg)	83.6	Theor.	25.7	Search (2048X32)	0.186	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	115.2		44.9	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)	21.0		15.2	Inc. seg. avg.	0.277	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	15.5		26.5	Inc. frq. avg.	0.192	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

P: az 52.1 el 16.3 pa -55.5 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) -326.801 -258.506 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY.W.47.1IFSML

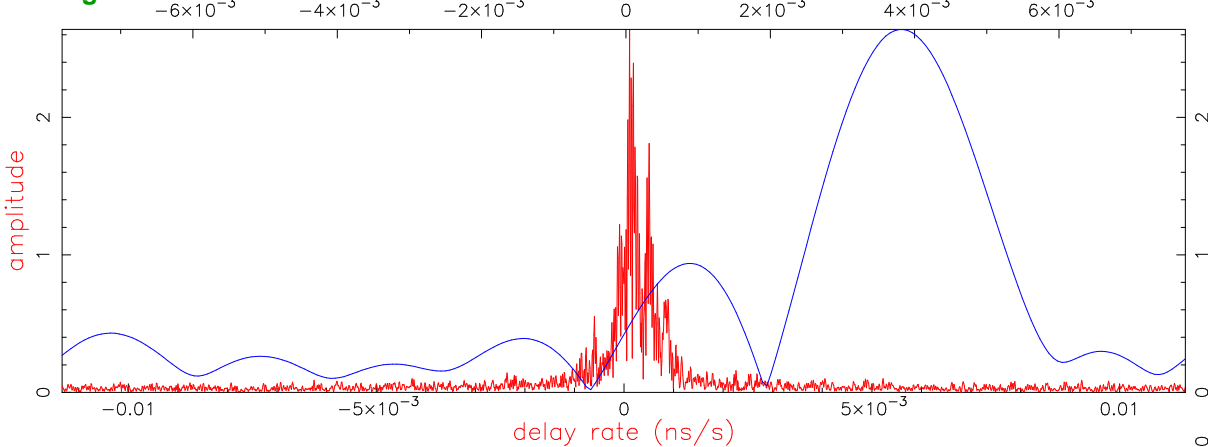
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, PY

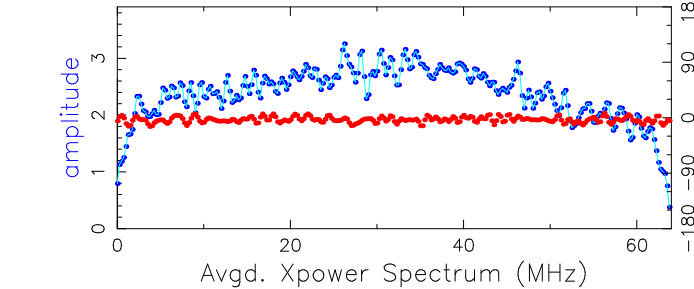
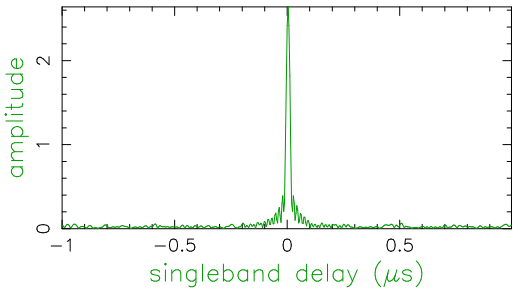
PICOVEL - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



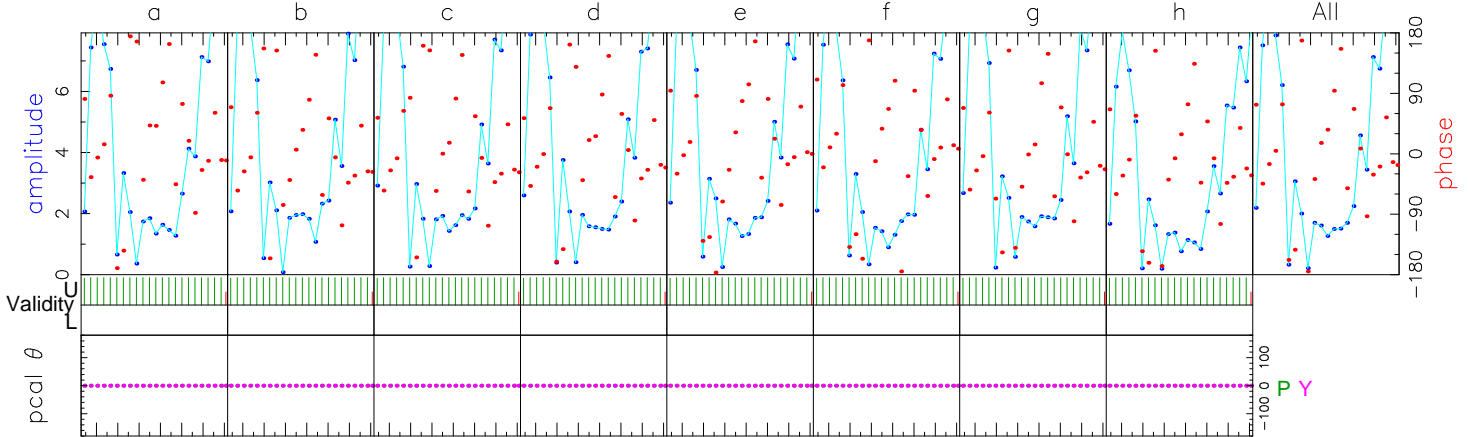
Fringe quality 4

SNR 144.7  
 Int time 401.967  
 Amp 2.639  
 Phase -2.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003898  
 MBD 0.003815  
 Fringe rate (Hz)  
 0.009608  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224336  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-8.12788425851E+02	Apriori delay (usec)	-8.12792241201E+02	Resid mbdelay (usec)	3.81535E-03	+/-	7.5E-06
Sband delay (usec)	-8.12788342951E+02	Apriori clock (usec)	-1.3894214E+01	Resid sbdelay (usec)	3.89825E-03	+/-	6.0E-05
Phase delay (usec)	-8.12792241269E+02	Apriori clockrate (us/s)	-5.2000000E-07	Resid phdelay (usec)	-6.81441E-08	+/-	2.6E-08
Delay rate (us/s)	4.39537860125E-02	Apriori rate (us/s)	4.39536744713E-02	Resid rate (us/s)	1.11541E-07	+/-	1.1E-10
Total phase (deg)	-238.7	Apriori accel (us/s/s)	8.65375277852E-07	Resid phase (deg)	-2.1	+/-	0.8

ph/seg (deg)	87.9	RMS	2.639 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	132.2	Theor.	2.607	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	15.0	Search (2048X32)	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	9.9	Interp.	4.211	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. seg. avg.	2.706	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	
		Inc. frq. avg.		nlags:	256	t_cohere infinite		

P: az 52.1 el 16.3 pa -55.5 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) -326.801 -258.506 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY.W.5.1IFSML

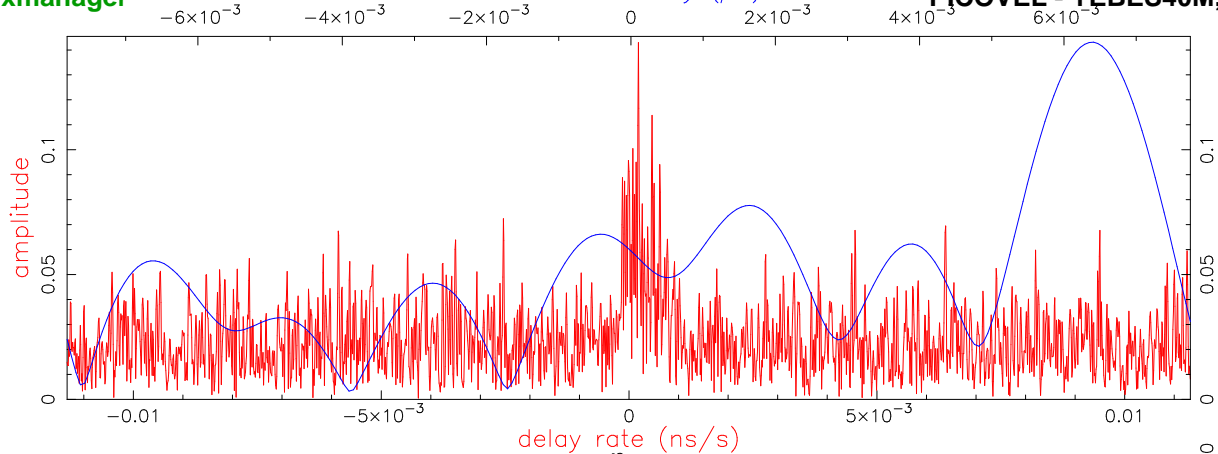
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, PY

PICOVEL - YEBES40M, fgroup W, pol RL

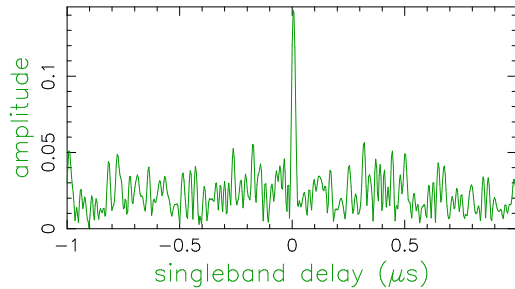
multiband delay ( $\mu$ s)



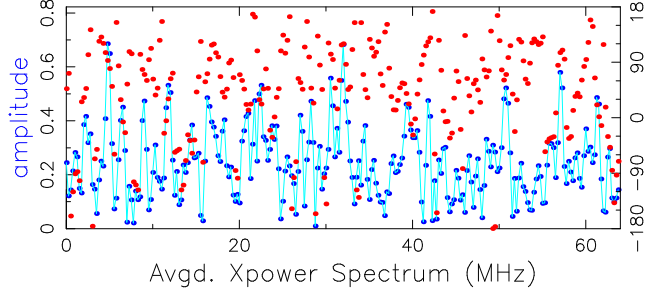
Fringe quality 9

SNR 8.0  
 Int time 401.967  
 Amp 0.145  
 Phase 53.0  
 PFD 5.3e-07  
 Delays (us)  
 SBD 0.005635  
 MBD 0.006429  
 Fringe rate (Hz)  
 0.016352  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

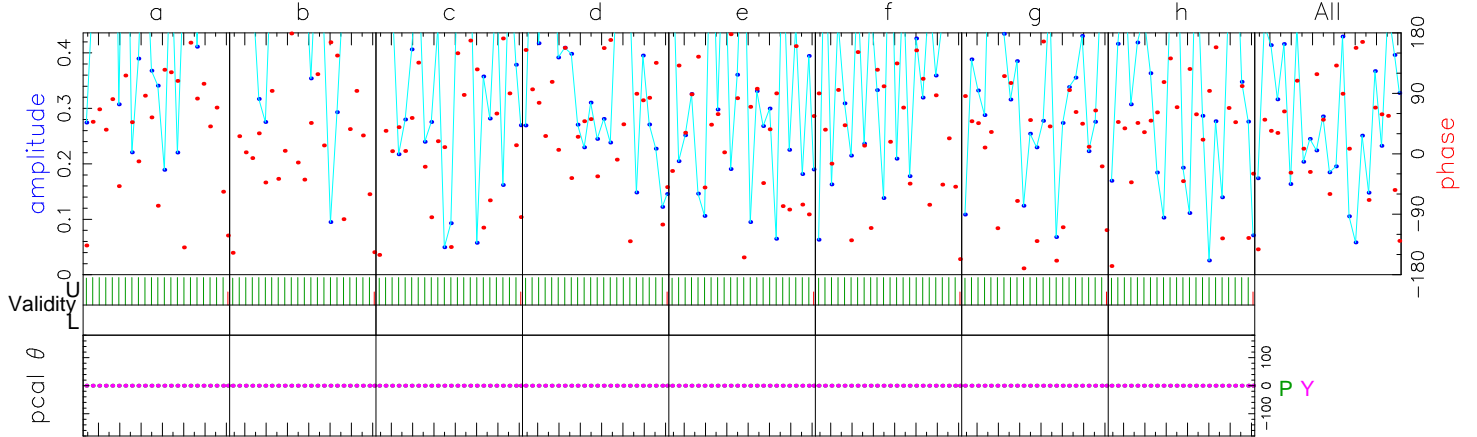
Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224348  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



delay rate (ns/s)



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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-8.12785811749E+02	Apriori delay (usec)	-8.12792241201E+02	Resid mbdelay (usec)	6.42945E-03	+/-	1.4E-04
Sband delay (usec)	-8.12786606451E+02	Apriori clock (usec)	-1.3894214E+01	Resid sbdelay (usec)	5.63475E-03	+/-	1.1E-03
Phase delay (usec)	-8.12792239492E+02	Apriori clockrate (us/s)	-5.2000000E-07	Resid phdelay (usec)	1.70872E-06	+/-	4.6E-07
Delay rate (us/s)	4.39538642982E-02	Apriori rate (us/s)	4.39536744713E-02	Resid rate (us/s)	1.89827E-07	+/-	2.0E-09
Total phase (deg)	-183.6	Apriori accel (us/s/s)	8.65375277852E-07	Resid phase (deg)	53.0	+/-	14.4

ph/seg (deg)	78.3	Theor.	34.5	Amplitude	0.145 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	125.8	Search (2048X32)	0.142	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	27.3	Inc. seg. avg.	0.239	Inc. frq. avg.	0.148	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	48.7	Inc. frq. avg.	0.148			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

P: az 52.1 el 16.3 pa -55.5 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) -326.801 -258.506 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/PY.W.67.1IFSML



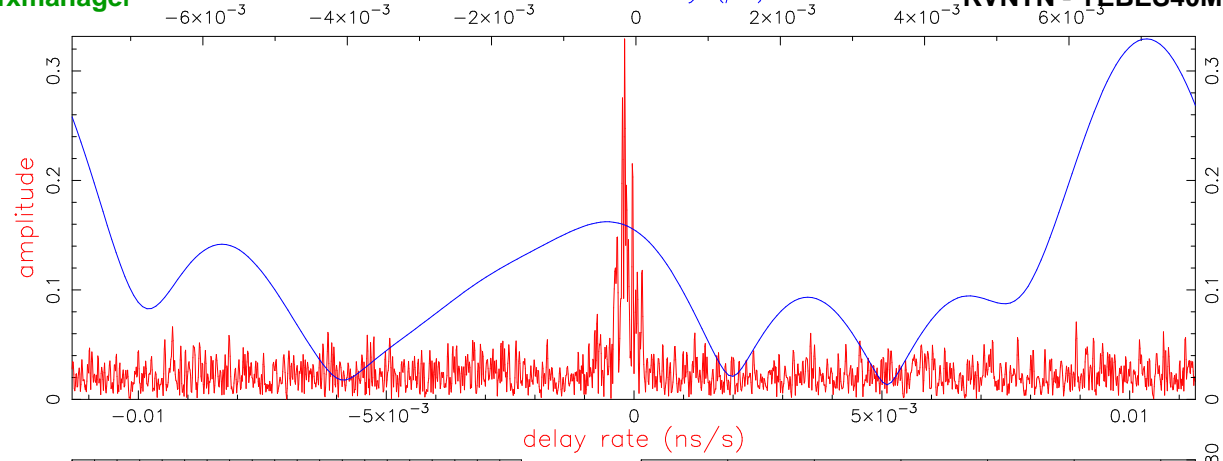
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

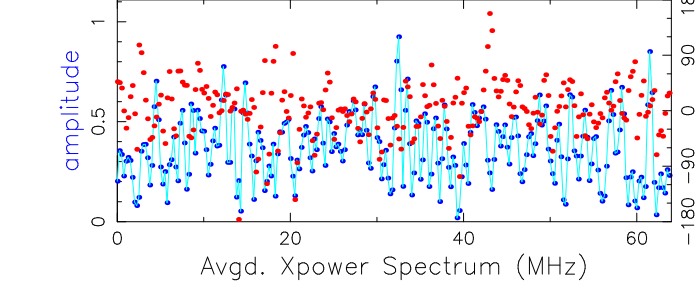
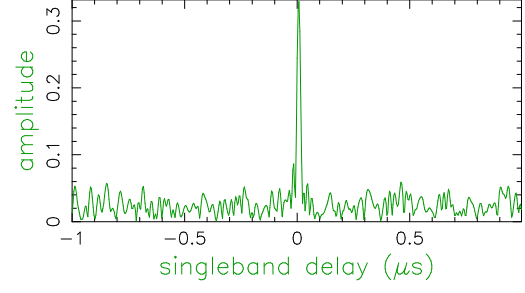
3C345.1IFSML, No0080, tY

KVNTN - YEBES40M, fgroup W, pol LL

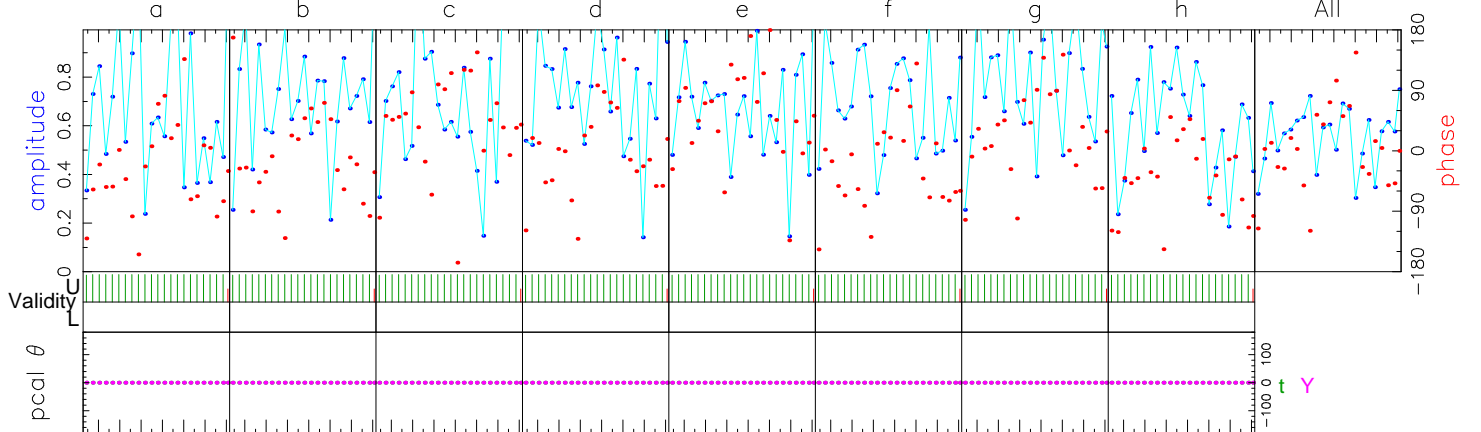
multiband delay ( $\mu$ s)



Fringe quality 8  
 SNR 18.2  
 Int time 402.379  
 Amp 0.332  
 Phase 2.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.006759  
 MBD 0.007042  
 Fringe rate (Hz)  
 -0.016538  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224339  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



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
	-31.9	-24.2	50.3	-2.9	57.9	-30.4	21.3	-31.4		2.0
	0.3	0.4	0.5	0.4	0.4	0.4	0.5	0.4		0.4
	260.4	258.4	258.3	257.9	257.8	257.6	258.7	258.4		258.7
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.22469319860E+04	Apriori delay (usec)	1.22469249436E+04	Resid mbdelay (usec)	7.04233E-03	+/-	6.0E-05
Sband delay (usec)	1.22469317029E+04	Apriori clock (usec)	-1.2311588E+01	Resid sbdelay (usec)	6.75925E-03	+/-	4.7E-04
Phase delay (usec)	1.22469249437E+04	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	6.47135E-08	+/-	2.0E-07
Delay rate (us/s)	-1.40891849133E+00	Apriori rate (us/s)	-1.40891829934E+00	Resid rate (us/s)	-1.91992E-07	+/-	8.7E-10
Total phase (deg)	234.3	Apriori accel (us/s/s)	-7.24741849477E-05	Resid phase (deg)	2.0	+/-	6.3

ph/seg (deg)	62.4	Theor.	15.1	Search (2048X32)	0.312	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	76.5		26.4	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	40.5		8.9	Inc. seg. avg.	0.536	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	23.8		15.6	Inc. frq. avg.	0.396	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

t: az 293.8 el 65.2 pa 96.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10371.297 -5554.330 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY.W.20.1IFSML

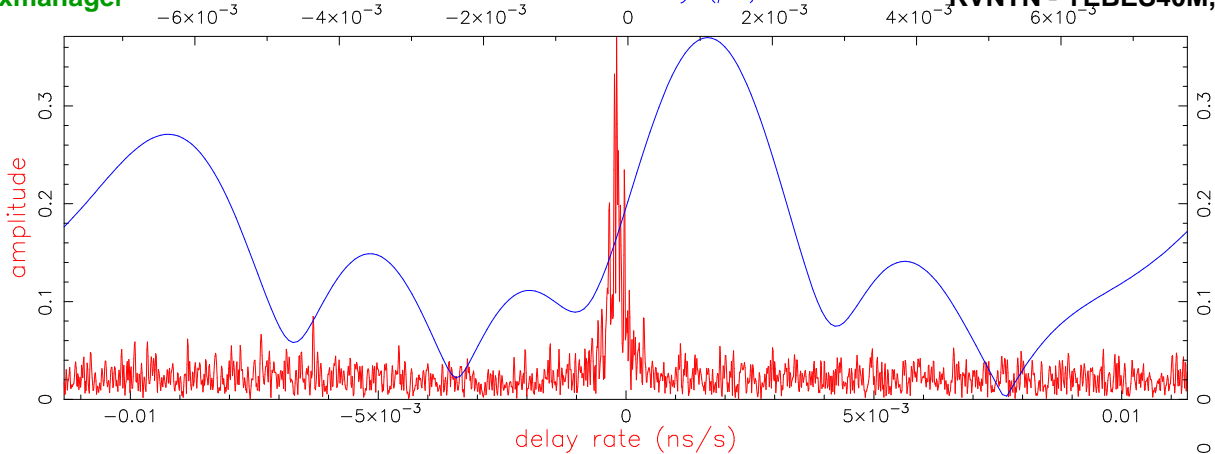
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, tY

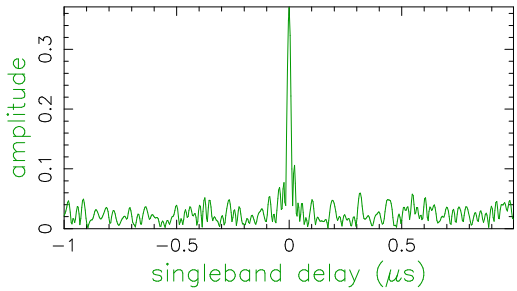
KVNTN - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

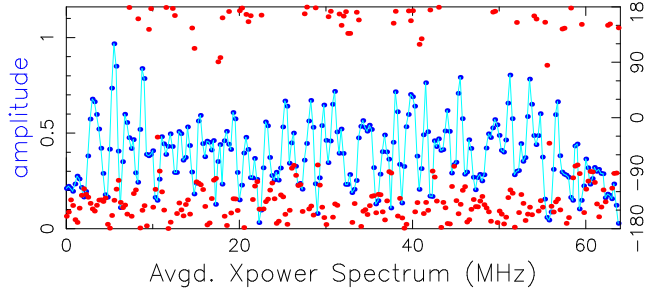


Fringe quality 8

SNR 20.4  
 Int time 402.379  
 Amp 0.371  
 Phase -171.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000716  
 MBD 0.001088  
 Fringe rate (Hz)  
 -0.016527  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

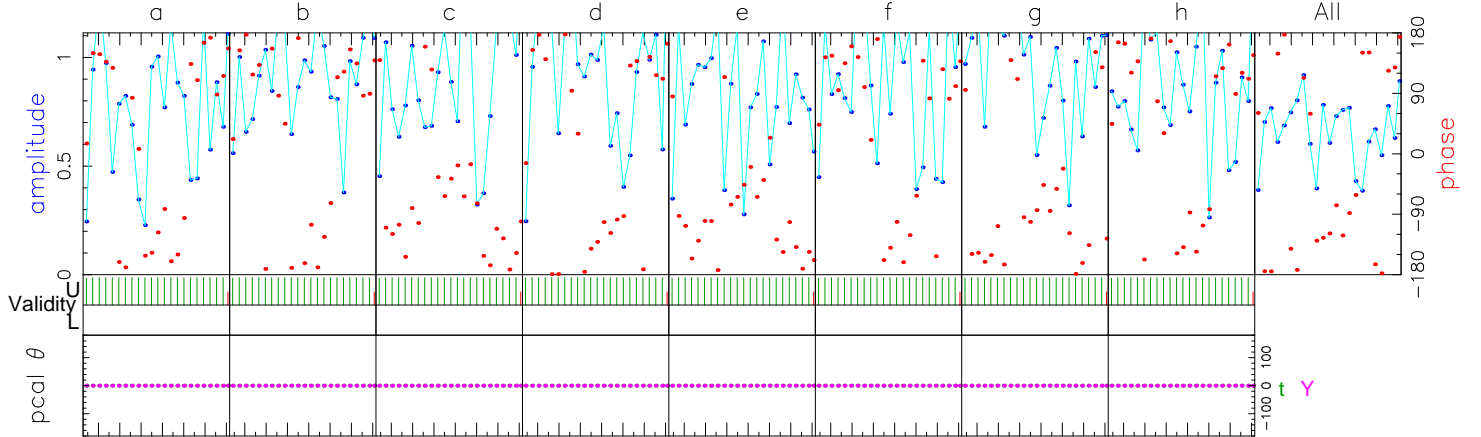


delay rate (ns/s)



Exp. c202b  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224342  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	171.8	148.3	-103.1	169.9	-110.4	142.4	-147.5	159.8	Phase	-171.9
t	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.4	Ampl.	0.5
Y	258.6	256.1	256.6	256.1	256.7	256.3	256.9	256.5	Sbd box	256.8
t	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	
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	

Group delay (usec)(sbd)	1.22469260318E+04	Apriori delay (usec)	1.22469249436E+04	Resid mbdelay (usec)	1.08820E-03	+/-	5.3E-05
Sband delay (usec)	1.22469242271E+04	Apriori clock (usec)	-1.2311588E+01	Resid sbdelay (usec)	-7.16500E-04	+/-	4.2E-04
Phase delay (usec)	1.22469249381E+04	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-5.54471E-06	+/-	1.8E-07
Delay rate (us/s)	-1.40891849120E+00	Apriori rate (us/s)	-1.40891829934E+00	Resid rate (us/s)	-1.91867E-07	+/-	7.8E-10
Total phase (deg)	60.3	Apriori accel (us/s/s)	-7.24741849477E-05	Resid phase (deg)	-171.9	+/-	5.6

ph/seg (deg)	62.9	RMS	13.5	Theor.	0.371 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	86.4	Search (2048X32)	0.352	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	48.6	Inc. seg. avg.	0.639	Inc. frq. avg.	0.491	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	35.5	Inc. frq. avg.	0.491	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011
t: az 293.8 el 65.2 pa 96.4	Y: az 53.1 el 18.6 pa -52.8	u, v (fr/asec)	10371.297 -5554.330							ion window (TEC)	0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY.W.37.1IFSML simultaneous interpolator

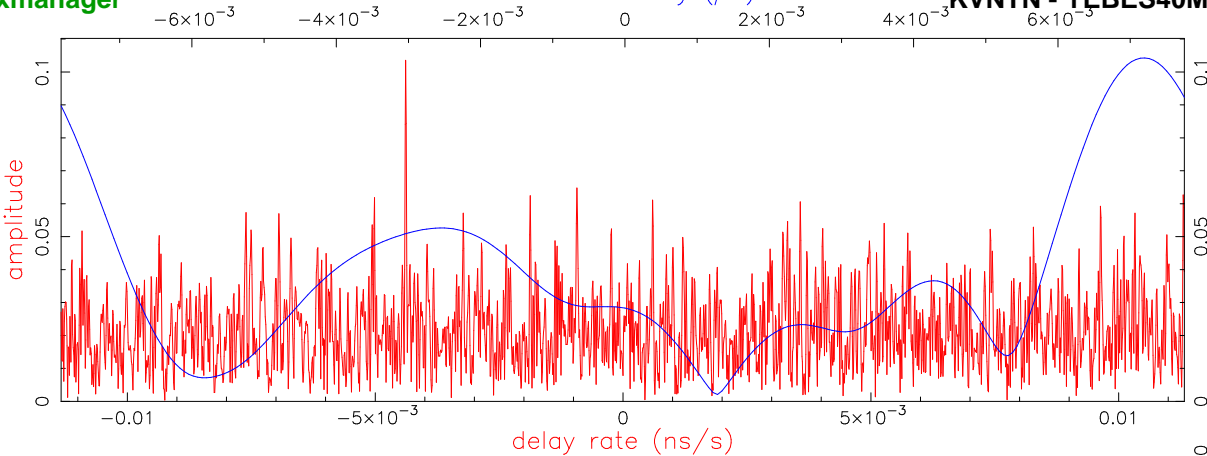
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, tY

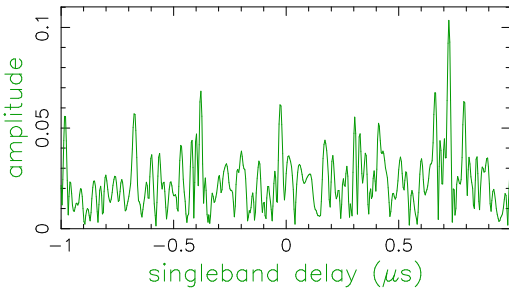
KVNTN - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

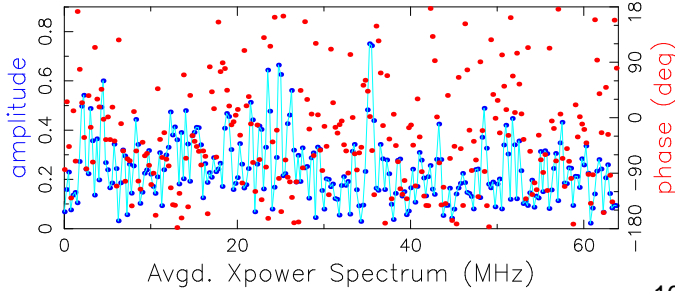


Fringe quality 0

SNR 5.7  
 Int time 402.379  
 Amp 0.110  
 Phase 93.5  
 PFD 9.6e-01  
 Delays (us)  
 SBD 0.722714  
 MBD -0.008301  
 Fringe rate (Hz)  
 -0.377933  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

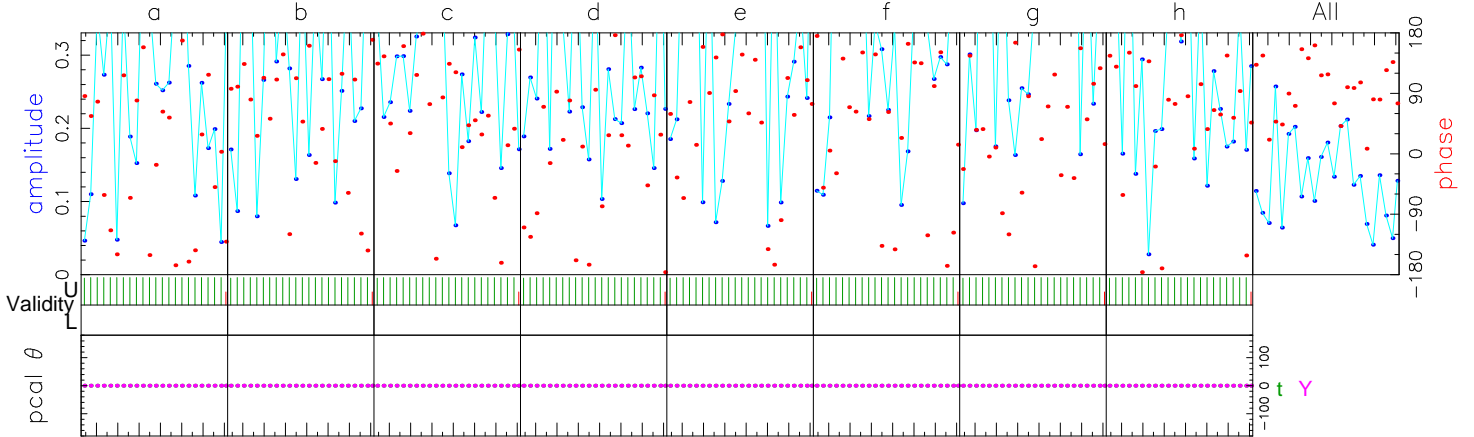


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224347  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.22476510179E+04	Apriori delay (usec)	1.22469249436E+04	Resid mbdelay (usec)	-8.30078E-03	+/-	1.9E-04
Sband delay (usec)	1.22476476574E+04	Apriori clock (usec)	-1.2311588E+01	Resid sbdelay (usec)	7.22714E-01	+/-	1.5E-03
Phase delay (usec)	1.22469249467E+04	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	3.01423E-06	+/-	6.5E-07
Delay rate (us/s)	-1.40892268677E+00	Apriori rate (us/s)	-1.40891829934E+00	Resid rate (us/s)	-4.38743E-06	+/-	2.8E-09
Total phase (deg)	325.8	Apriori accel (us/s/s)	-7.24741849477E-05	Resid phase (deg)	93.5	+/-	20.2

ph/seg (deg)	RMS 42.5	Theor. 48.4	Amplitude Search (2048X32)	0.110 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	61.3	84.4	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)	44.2	28.5	Inc. seg. avg.	0.103	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	37.0	49.8	Inc. frq. avg.	0.117	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

t: az 293.8 el 65.2 pa 96.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10371.297 -5554.330 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY.W.62.1IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

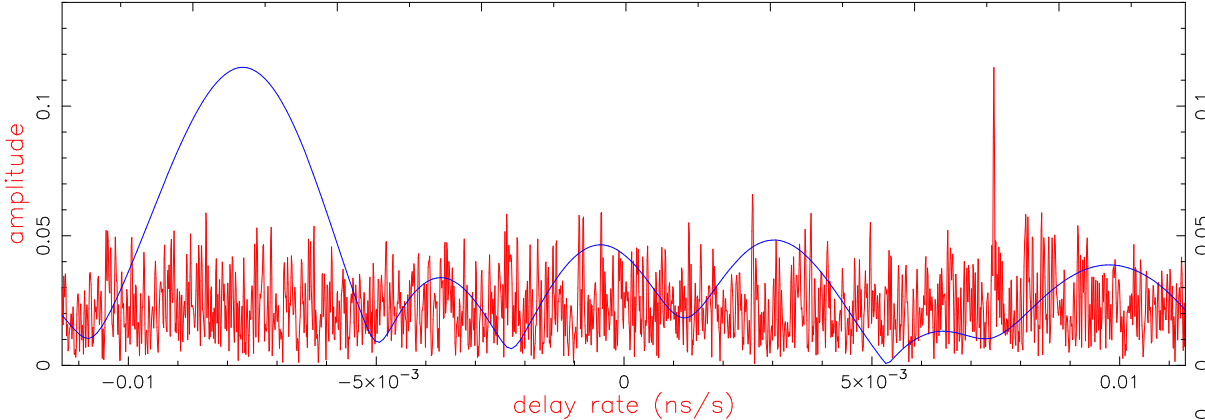
3C345.1FSML, No0080, tY

KVNTN - YEBES40M, fgroup W, pol RL

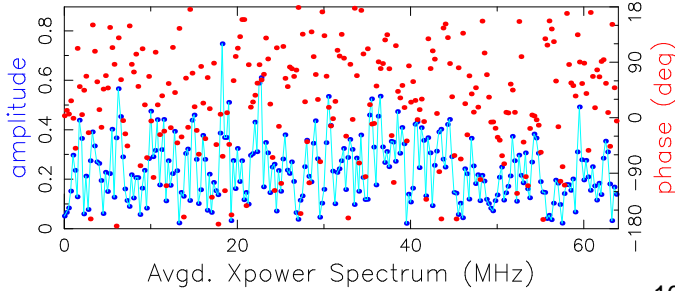
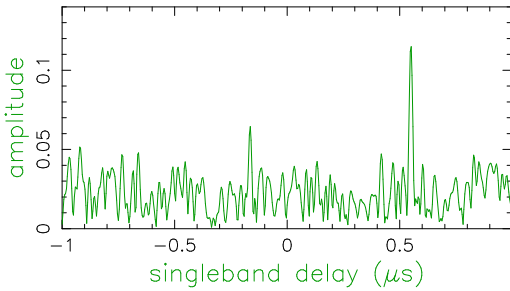
multiband delay ( $\mu$ s)

$-6 \times 10^{-3}$   $-4 \times 10^{-3}$   $-2 \times 10^{-3}$  0  $2 \times 10^{-3}$   $4 \times 10^{-3}$   $6 \times 10^{-3}$

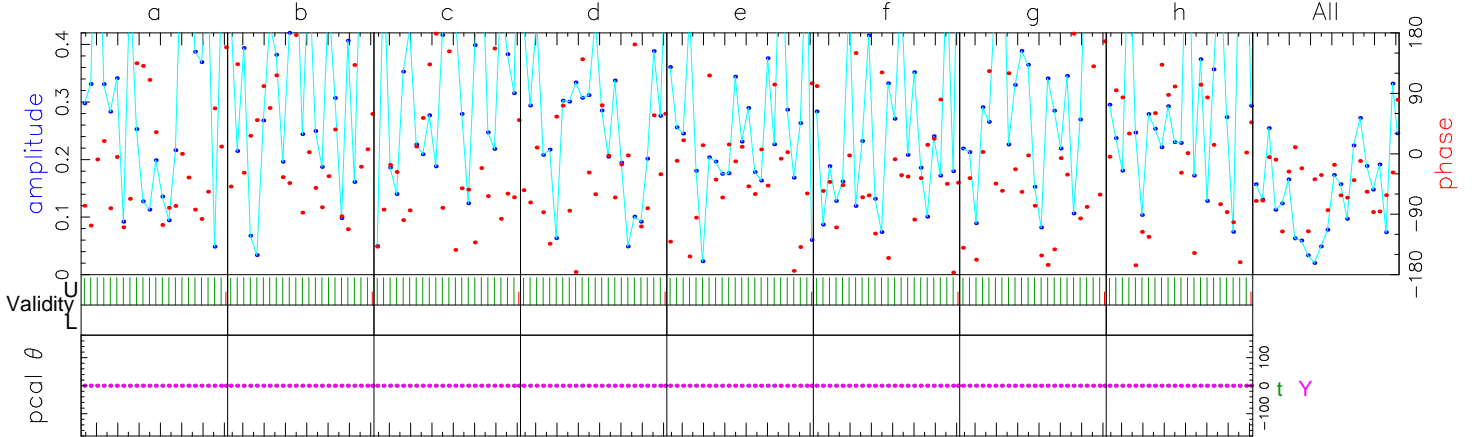
Fringe quality 0



SNR 6.4  
 Int time 402.379  
 Amp 0.140  
 Phase -41.8  
 PFD 4.7e-02  
 Delays (us)  
 SBD 0.549386  
 MBD -0.005346  
 Fringe rate (Hz)  
 0.643286  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224350  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



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
	-41.0	-10.5	-82.4	-32.3	-39.6	-43.1	-70.7	20.7	Phase	-41.8
	0.2	0.1	0.2	0.1	0.2	0.2	0.2	0.1	Ampl.	0.1
	399.0	277.2	473.5	12.6	212.8	225.0	62.8	291.8	Sbd box	397.6
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.22474820978E+04		Apriori delay (usec)		1.22469249436E+04		Resid mbdelay (usec)		-5.34586E-03	+/- 1.7E-04
Sband delay (usec)	1.22474743299E+04		Apriori clock (usec)		-1.2311588E+01		Resid sbdelay (usec)		5.49386E-01	+/- 1.3E-03
Phase delay (usec)	1.22469249423E+04		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		-1.34674E-06	+/- 5.8E-07
Delay rate (us/s)	-1.40891083142E+00		Apriori rate (us/s)		-1.40891829934E+00		Resid rate (us/s)		7.46791E-06	+/- 2.5E-09
Total phase (deg)	190.5		Apriori accel (us/s/s)		-7.24741849477E-05		Resid phase (deg)		-41.8	+/- 18.0

	RMS	Theor.	Amplitude	0.140 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	39.2	43.1	Search (2048X32)	0.108	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	72.8	75.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	35.3	25.4	Inc. seg. avg.	0.135	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	27.4	44.3	Inc. frq. avg.	0.142	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

t: az 293.8 el 65.2 pa 96.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10371.297 -5554.330 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY..1FSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/tY.W.79.1FSML

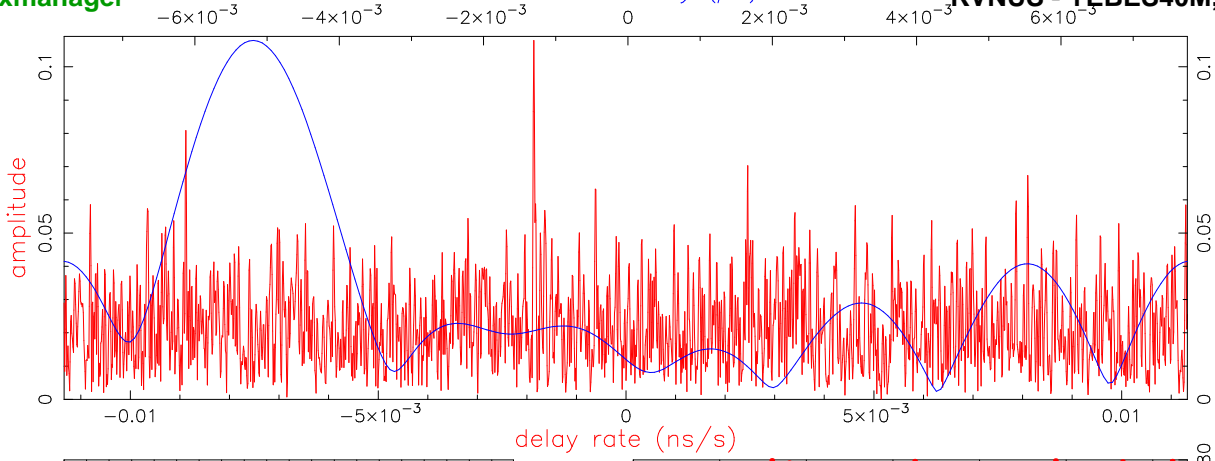
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

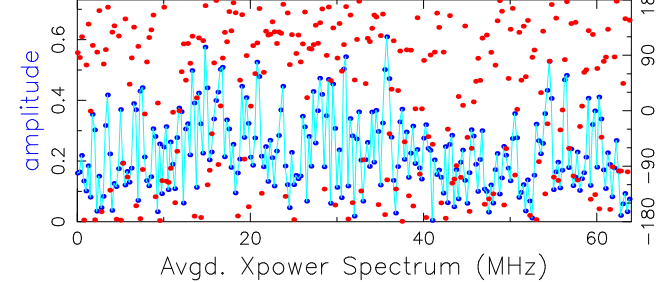
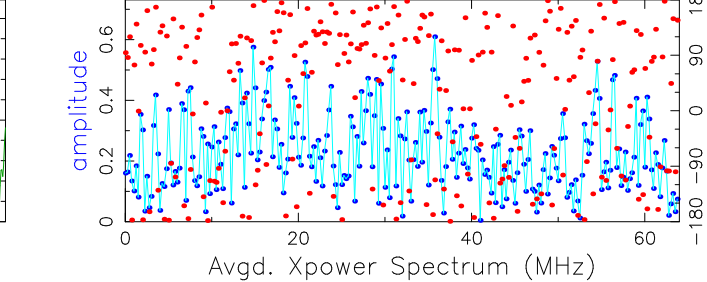
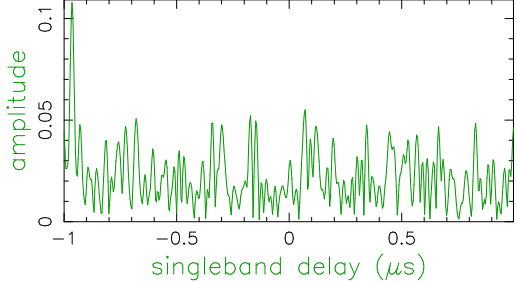
3C345.1IFSML, No0080, uY

KVNUS - YEYES40M, fgroup W, pol LR

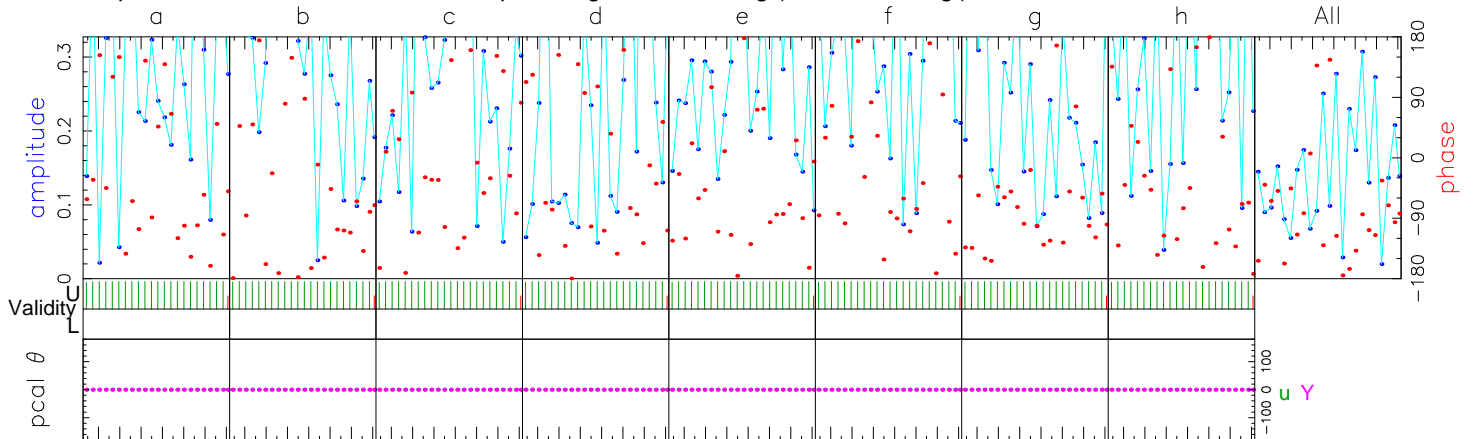
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.9  
 Int time 402.332  
 Amp 0.109  
 Phase -109.5  
 PFD 5.6e-01  
 Delays (us)  
 SBD -0.964691  
 MBD -0.005189  
 Fringe rate (Hz)  
 -0.160802  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224359  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



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	
	-91.5	-152.2	-113.9	-99.9	-98.7	-114.3	-97.9	-120.5	Phase	-109.5	
	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	Ampl.	0.1	
	495.4	183.3	66.9	214.1	172.0	363.5	510.1	147.5	Sbd box	10.0	
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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	Manl 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)	1.20295884121E+04		Apriori delay (usec)		1.20305467264E+04		Resid mbdelay (usec)		-5.18933E-03	+/- 1.8E-04	
Sband delay (usec)	1.20295820356E+04		Apriori clock (usec)		-1.1131405E+01		Resid sbdelay (usec)		-9.64691E-01	+/- 1.5E-03	
Phase delay (usec)	1.20305467229E+04		Apriori clockrate (us/s)		2.7999998E-07		Resid phdelay (usec)		-3.53203E-06	+/- 6.2E-07	
Delay rate (us/s)	-1.43533608692E+00		Apriori rate (us/s)		-1.43533422017E+00		Resid rate (us/s)		-1.86675E-06	+/- 2.7E-09	
Total phase (deg)			Apriori accel (us/s/s)		-6.89757017805E-05		Resid phase (deg)		-109.5	+/- 19.4	
RMS	Theor.	Amplitude	0.109 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
57.3	46.4	Search (2048X32)	0.103		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
82.1	81.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008 0.008	
21.0	27.4	Inc. seg. avg.	0.112		Sample rate(MISamp/s): 128				dr window (ns/s)	-0.011 0.011	
25.8	47.8	Inc. frq. avg.	0.102		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00 0.00	
u: az 289.2 el 63.9 pa 88.4		Y: az 53.1 el 18.6 pa -52.8		u,v (fr/asec) 10574.690 -5107.129						simultaneous interpolator	

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY.W.117.1IFSML

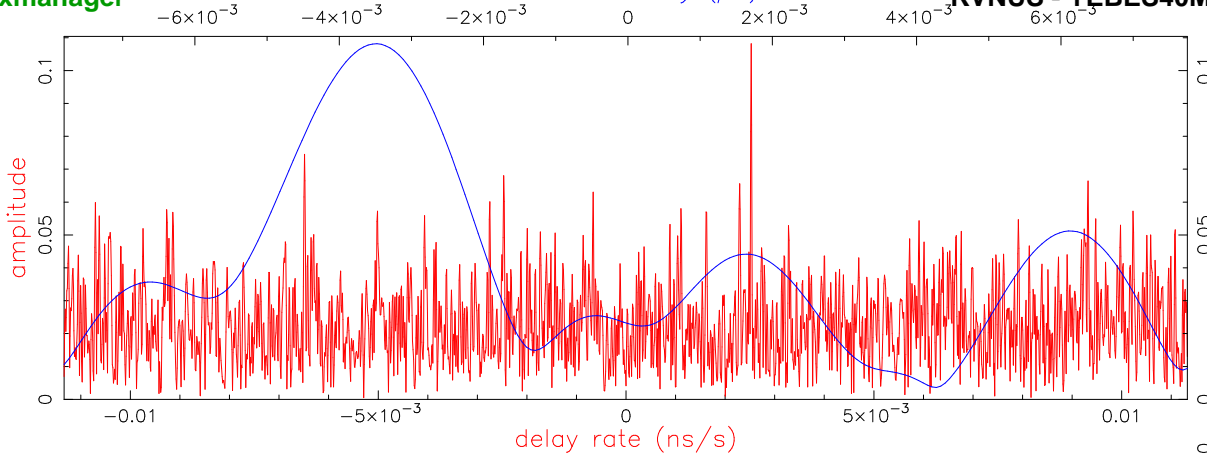
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, uY

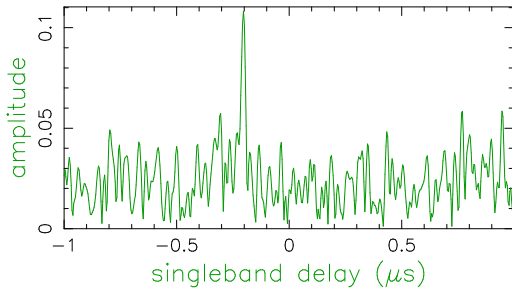
KVNUS - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

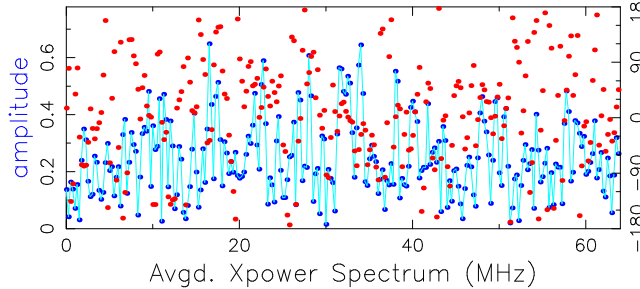


Fringe quality 0

SNR 5.9  
Int time 402.332  
Amp 0.110  
Phase -122.3  
PFD 5.4e-01  
Delays (us)  
SBD -0.203096  
MBD -0.003491  
Fringe rate (Hz)  
0.218191  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

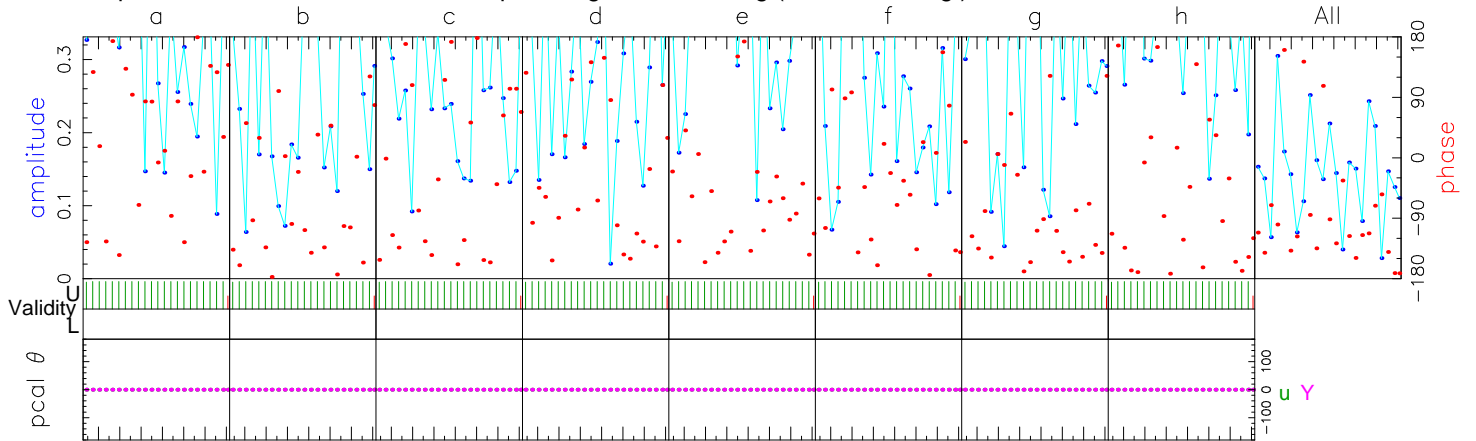


delay rate (ns/s)



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224402  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

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

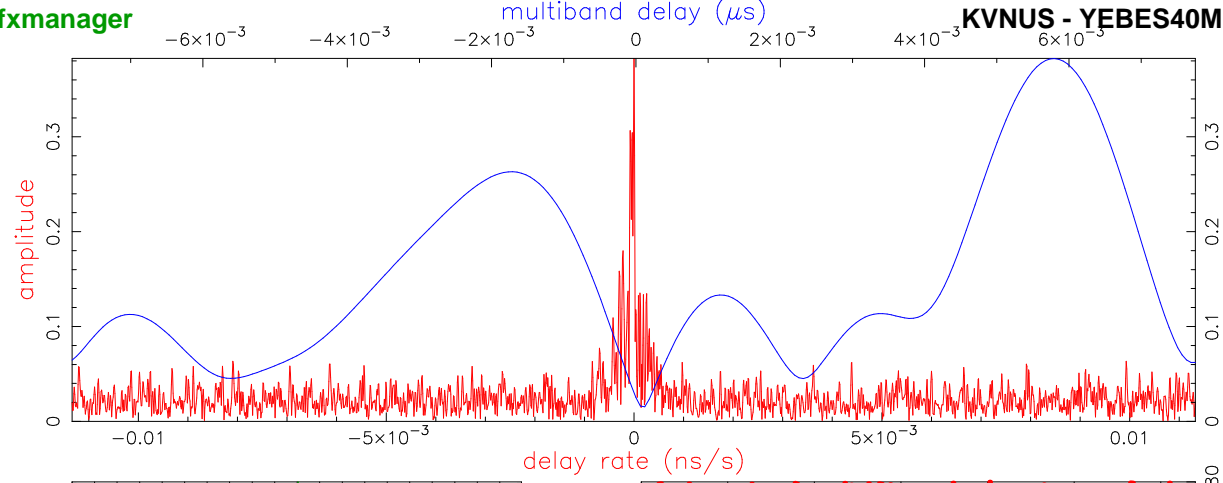


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	125.4	-111.7	-147.5	-123.3	-102.1	-84.2	-119.0	-145.1	Phase	-122.3
	0.0	0.1	0.1	0.1	0.2	0.1	0.2	0.2	Ampl.	0.1
	53.1	175.9	208.0	498.9	205.3	105.1	257.1	205.3	Sbd box	205.0
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	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)	1.20303401106E+04	Apriori delay (usec)	1.20305467264E+04	Resid mbdelay (usec)	-3.49076E-03	+/-	1.8E-04
Sband delay (usec)	1.20303436306E+04	Apriori clock (usec)	-1.1131405E+01	Resid sbdelay (usec)	-2.03096E-01	+/-	1.5E-03
Phase delay (usec)	1.20305467225E+04	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	-3.94402E-06	+/-	6.2E-07
Delay rate (us/s)	-1.43533168719E+00	Apriori rate (us/s)	-1.43533422017E+00	Resid rate (us/s)	2.53298E-06	+/-	2.7E-09
Total phase (deg)	-118.0	Apriori accel (us/s/s)	-6.89757017805E-05	Resid phase (deg)	-122.3	+/-	19.3

ph/seg (deg)	51.0	Theor.	46.3	Amplitude	0.110 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	71.6		80.9	Search (2048X32)	0.105	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	51.2		27.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	56.1		47.7	Inc. seg. avg.	0.112	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.111	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

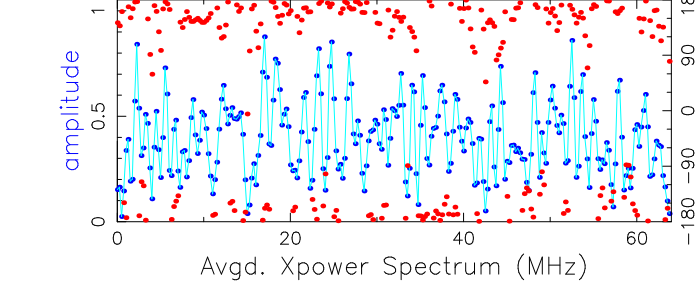
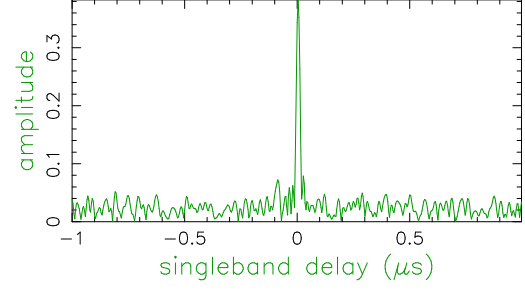
u: az 289.2 el 63.9 pa 88.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10574.690 -5107.129 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY.W.133.1IFSML



Fringe quality 8

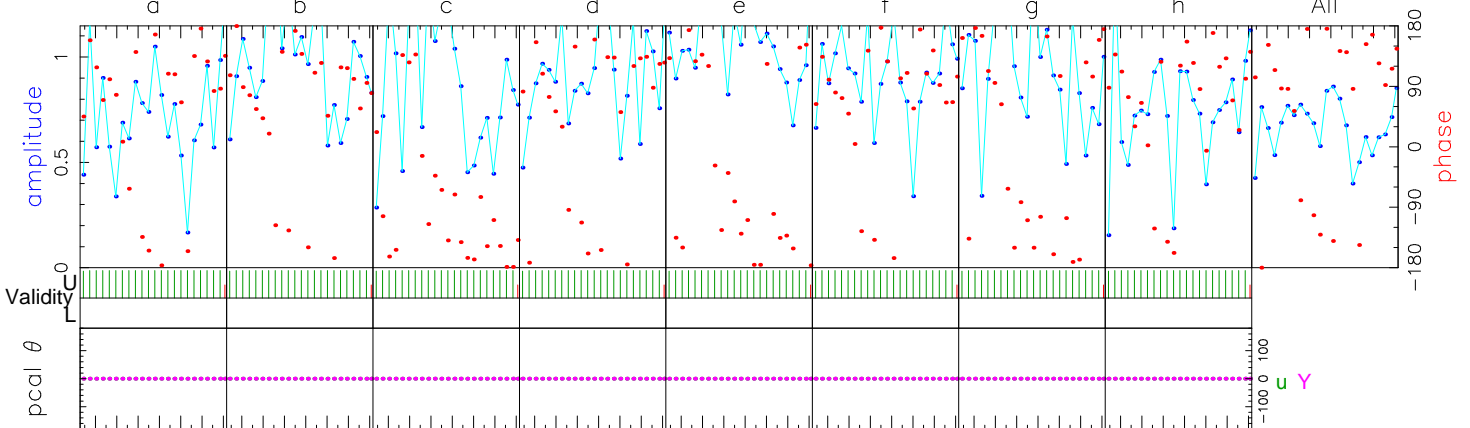
SNR 21.0  
Int time 402.332  
Amp 0.383  
Phase 149.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.004146  
MBD 0.005797  
Fringe rate (Hz) 0.000121  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224352  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"



Avgd. Xpower Spectrum (MHz)

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
	128.8	117.9	-139.8	134.4	-162.8	109.4	-176.6	113.4	Phase	149.2
	0.4	0.5	0.5	0.5	0.6	0.6	0.5	0.4	Ampl.	0.5
	259.2	257.8	257.7	257.4	257.8	257.4	257.9	257.6	Sbd box	258.1
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.20305525233E+04	Apriori delay (usec)	1.20305467264E+04	Resid mbdelay (usec)	5.79694E-03	+/-	5.2E-05
Sband delay (usec)	1.20305508724E+04	Apriori clock (usec)	-1.1131405E+01	Resid sbdelay (usec)	4.14600E-03	+/-	4.1E-04
Phase delay (usec)	1.20305467312E+04	Apriori clockrate (us/s)	2.7999998E-07	Resid phdelay (usec)	4.80996E-06	+/-	1.8E-07
Delay rate (us/s)	-1.43533421877E+00	Apriori rate (us/s)	-1.43533422017E+00	Resid rate (us/s)	1.40436E-09	+/-	7.6E-10
Total phase (deg)	153.5	Apriori accel (us/s/s)	-6.89757017805E-05	Resid phase (deg)	149.2	+/-	5.5

ph/seg (deg)	58.5	Theor.	13.1	Search (2048X32)	0.380	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	80.6		22.8	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)	46.5		7.7	Inc. seg. avg.	0.648	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	33.7		13.5	Inc. frq. avg.	0.494	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

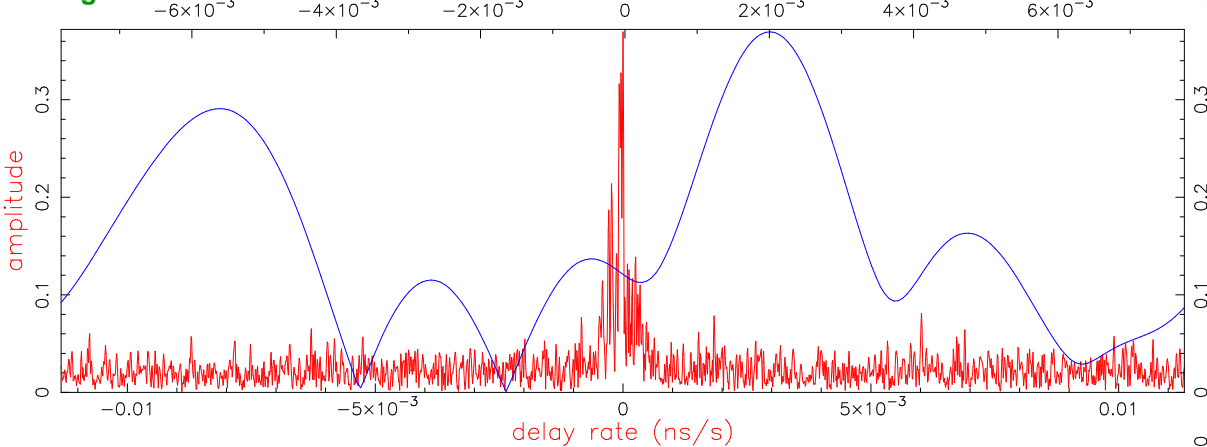
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, uY

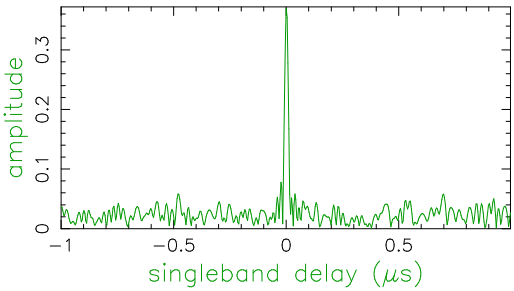
KVNUS - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

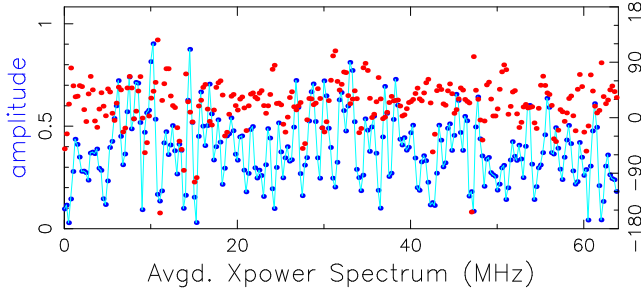


Fringe quality 7

SNR 20.4  
 Int time 402.332  
 Amp 0.372  
 Phase 14.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.001063  
 MBD 0.002039  
 Fringe rate (Hz) 0.000227  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

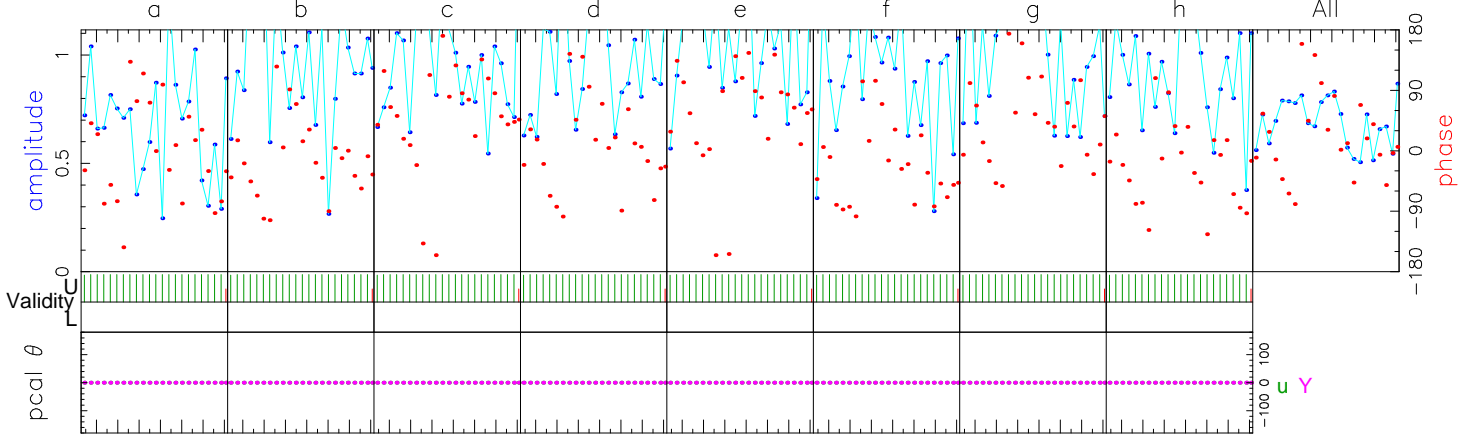


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224355  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	-7.7	-17.9	77.7	-0.8	81.2	-27.8	44.9	-22.8		14.1
	0.3	0.6	0.5	0.5	0.6	0.5	0.5	0.6		0.5
	259.2	256.9	256.9	256.6	256.6	256.4	257.0	256.9		257.3
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		APs used
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
										Chan ids
										Tracks
Group delay (usec)(sbd)	1.20305487654E+04		Apriori delay (usec)		1.20305467264E+04		Resid mbdelay (usec)		2.03903E-03	+/- 5.3E-05
Sband delay (usec)	1.20305477894E+04		Apriori clock (usec)		-1.1131405E+01		Resid sbdelay (usec)		1.06300E-03	+/- 4.2E-04
Phase delay (usec)	1.20305467269E+04		Apriori clockrate (us/s)		2.7999998E-07		Resid phdelay (usec)		4.53272E-07	+/- 1.8E-07
Delay rate (us/s)	-1.43533421754E+00		Apriori rate (us/s)		-1.43533422017E+00		Resid rate (us/s)		2.63300E-09	+/- 7.8E-10
Total phase (deg)	18.3		Apriori accel (us/s/s)		-6.89757017805E-05		Resid phase (deg)		14.1	+/- 5.6

	RMS	Theor.	Amplitude	0.372 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000 1.000
ph/seg (deg)	61.3	13.5	Search (2048X32)	0.363	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008 0.008
amp/seg (%)	88.8	23.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
ph/frq (deg)	48.9	7.9	Inc. seg. avg.	0.666	Sample rate(MISamp/s): 128		ion window (TEC)	0.00 0.00
amp/frq (%)	41.4	13.9	Inc. frq. avg.	0.499	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite		

u: az 289.2 el 63.9 pa 88.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10574.690 -5107.129 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/uY.W.99.1IFSML



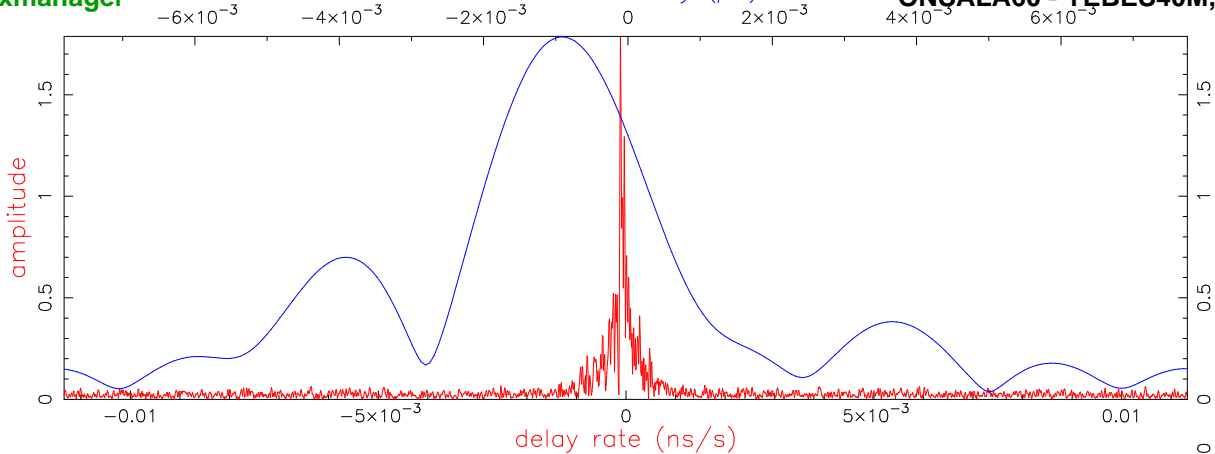
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, XY

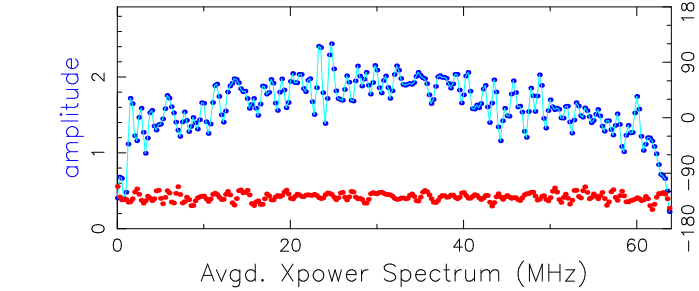
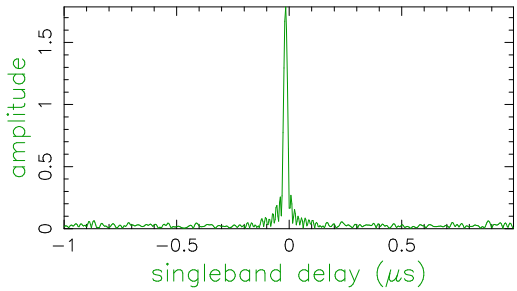
ONŞALA60 - YEŞES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



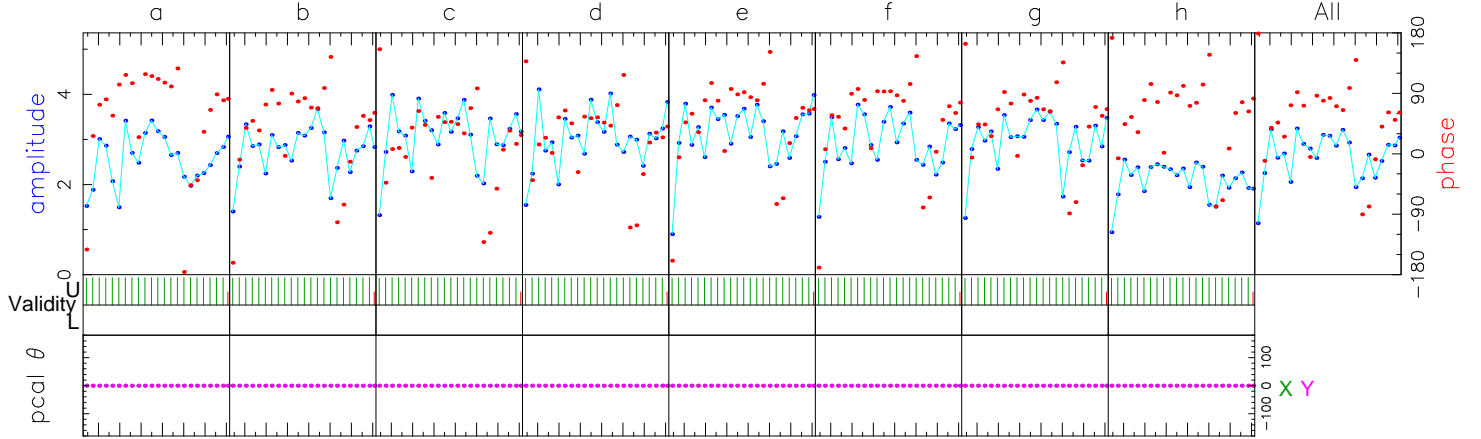
Fringe quality 4

SNR 98.0  
 Int time 402.379  
 Amp 1.787  
 Phase 56.6  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.016114  
 MBD -0.000923  
 Fringe rate (Hz)  
 -0.009101  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224356  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	89.7	56.6	23.9	31.4	65.2	69.6	56.6	65.5	Phase	56.6
	1.8	1.8	2.0	2.0	2.1	2.0	2.0	1.4	Ampl.	1.9
	253.0	252.0	252.8	252.9	253.2	252.6	252.7	252.9	Sbd box	252.9
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.50663579324E+03		Apriori delay (usec)		5.50665234171E+03		Resid mbdelay (usec)		-9.23476E-04	+/- 1.1E-05
Sband delay (usec)	5.50663622771E+03		Apriori clock (usec)		3.4650383E+01		Resid sbdelay (usec)		-1.61140E-02	+/- 8.8E-05
Phase delay (usec)	5.50665234354E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		1.82526E-06	+/- 3.8E-08
Delay rate (us/s)	-2.57210276874E-01		Apriori rate (us/s)		-2.57210171221E-01		Resid rate (us/s)		-1.05654E-07	+/- 1.6E-10
Total phase (deg)	314.0		Apriori accel (us/s/s)		-1.51753086801E-05		Resid phase (deg)		56.6	+/- 1.2

ph/seg (deg) 60.1 2.8 Search (2048X32) 1.694 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.1 4.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 22.8 1.7 Inc. seg. avg. 2.635 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 13.3 2.9 Inc. frq. avg. 1.896 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 X: az 69.7 el 35.3 pa -41.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1893.589 297.672 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY.W.100.1IFSML

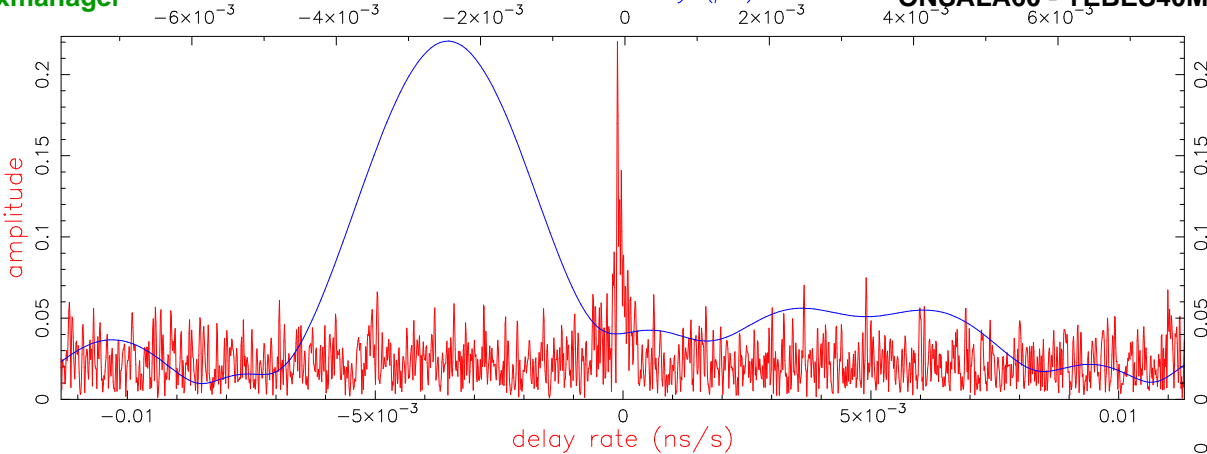
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, XY

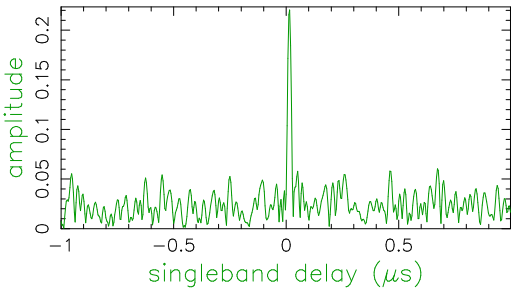
ONŞALA60 - YEŞES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

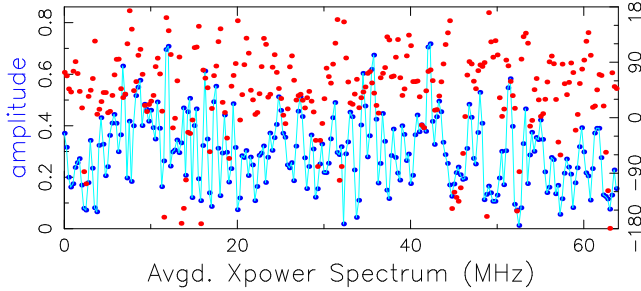


Fringe quality 9

SNR 12.3  
Int time 402.379  
Amp 0.224  
Phase -109.5  
PFD 7.7e-26  
Delays (us)  
SBD 0.014112  
MBD -0.002518  
Fringe rate (Hz)  
-0.009233  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

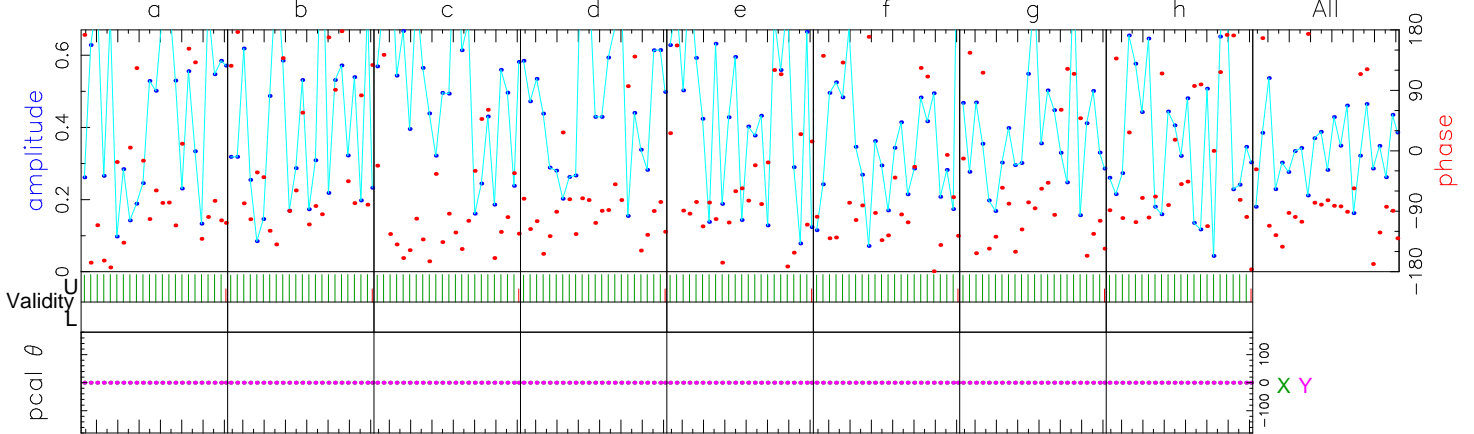


delay rate (ns/s)



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224359  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

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
	-113.1	-114.8	-123.3	-91.7	-106.1	-122.2	-109.9	-97.2	Phase	-109.5
	0.3	0.2	0.3	0.4	0.2	0.2	0.1	0.1	Ampl.	0.2
	260.3	344.7	260.5	260.4	259.9	258.9	360.6	250.2	Sbd box	260.6
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	5.50666544880E+03	Apriori delay (usec)	5.50665234171E+03	Resid mbdelay (usec)	-2.51791E-03	+/-	8.9E-05
Sband delay (usec)	5.5066645346E+03	Apriori clock (usec)	3.4650383E+01	Resid sbdelay (usec)	1.41117E-02	+/-	7.0E-04
Phase delay (usec)	5.50665233818E+03	Apriori clockrate (us/s)	4.0800002E-07	Resid phdelay (usec)	-3.53221E-06	+/-	3.0E-07
Delay rate (us/s)	-2.57210278412E-01	Apriori rate (us/s)	-2.57210171221E-01	Resid rate (us/s)	-1.07191E-07	+/-	1.3E-09
Total phase (deg)	147.9	Apriori accel (us/s/s)	-1.51753086801E-05	Resid phase (deg)	-109.5	+/-	9.3

ph/seg (deg)	55.5	Theor.	22.4	Amplitude	0.224 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	65.3	Search (2048X32)	0.214	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)	12.1	Inc. seg. avg.	0.312	Inc. frq. avg.	0.219	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	39.5	Inc. frq. avg.	0.219			Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

X: az 69.7 el 35.3 pa -41.4 Y: az 53.1 el 18.6 pa -52.8 u, v (fr/asec) 1893.589 297.672 simultaneous interpolator

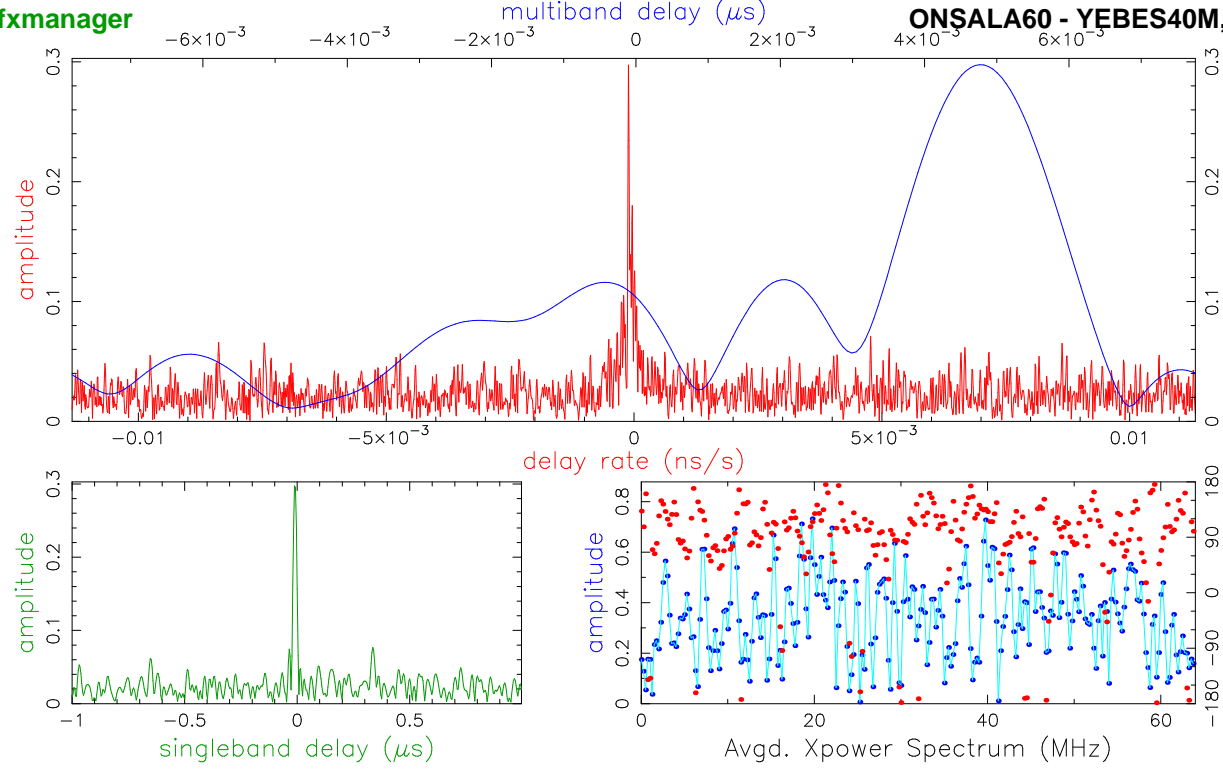
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY.W.116.11IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, XY

ONŞALA60 - YEŞES40M, fgroup W, pol RL

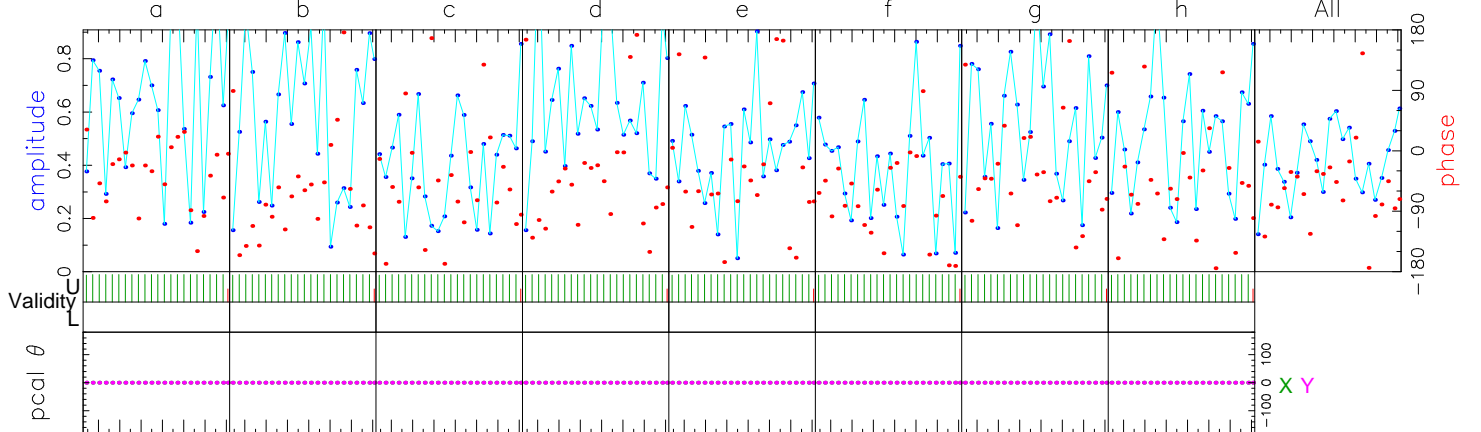


Fringe quality 9

SNR 16.6  
 Int time 402.379  
 Amp 0.303  
 Phase -63.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.009941  
 MBD 0.004829  
 Fringe rate (Hz)  
 -0.009157  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224402  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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		
	-27.6	-90.2	-68.4	-70.9	-71.1	-63.0	-56.0	-63.8	Phase	-63.1		
	0.4	0.4	0.2	0.4	0.2	0.2	0.3	0.2	Ampl.	0.3		
	253.7	254.2	254.8	254.0	253.9	254.3	254.6	254.8	Sbd box	254.5		
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec)(sbd)	5.50664154583E+03		Apriori delay (usec)		5.50665234171E+03		Resid mbdelay (usec)		4.82912E-03	+/- 6.5E-05		
Sband delay (usec)	5.50664240071E+03		Apriori clock (usec)		3.4650383E+01		Resid sbdelay (usec)		-9.94100E-03	+/- 5.2E-04		
Phase delay (usec)	5.50665233968E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		-2.03431E-06	+/- 2.2E-07		
Delay rate (us/s)	-2.57210277519E-01		Apriori rate (us/s)		-2.57210171221E-01		Resid rate (us/s)		-1.06299E-07	+/- 9.6E-10		
Total phase (deg)	194.3		Apriori accel (us/s/s)		-1.51753086801E-05		Resid phase (deg)		-63.1	+/- 6.9		
	RMS	Theor.	Amplitude	0.303 +/- 0.018		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	54.4	16.5	Search (2048X32)	0.284		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	55.9	28.9	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	19.1	9.8	Inc. seg. avg.	0.400		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	32.9	17.0	Inc. frq. avg.	0.310		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
X: az 69.7 el 35.3 pa -41.4	Y: az 53.1 el 18.6 pa -52.8		u, v (fr/asec) 1893.589 297.672						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c202b/v1/v1_3mm/1234/No0080/XY..1IFSML		Output file: /Exps/c202b/v1/v1_3mm/1234/No0080/XY.W.132.1IFSML									

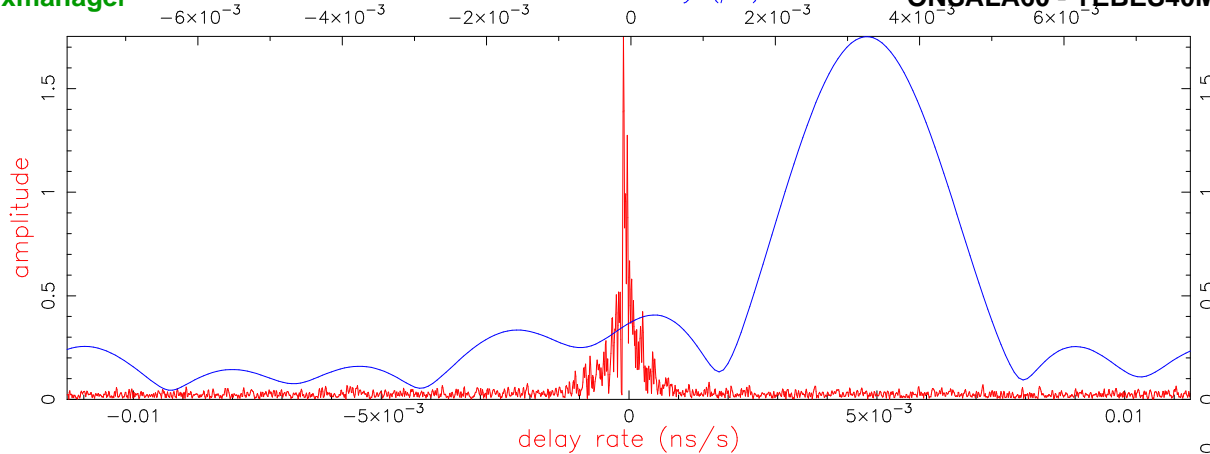
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, XY

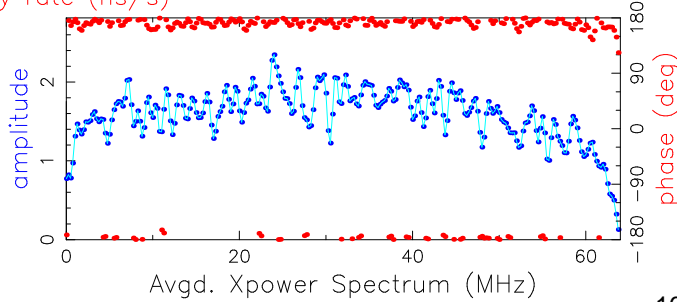
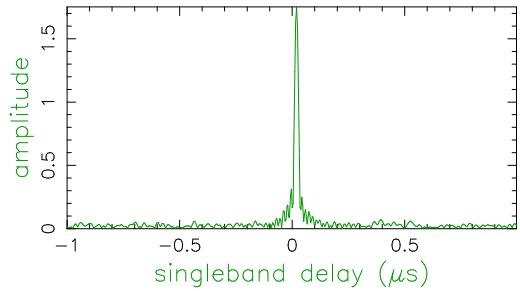
ONŞALA60 - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)



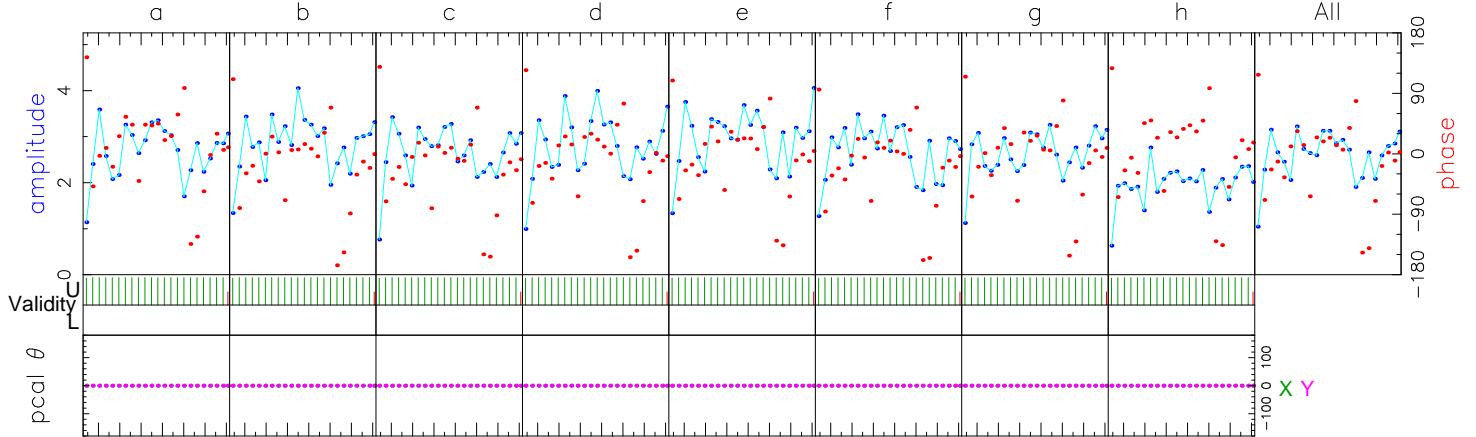
Fringe quality 4

SNR 96.1  
 Int time 402.379  
 Amp 1.752  
 Phase -3.1  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.019151  
 MBD 0.003259  
 Fringe rate (Hz)  
 -0.009085  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224352  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	16.7	-12.3	-19.1	-2.0	-0.4	-11.1	-1.0	10.2	Phase	-3.1
	1.8	1.9	1.8	1.9	2.0	1.8	1.8	1.2	Ampl.	1.8
	261.9	261.9	261.8	261.9	261.8	261.9	262.2	261.3	Sbd box	261.9
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	5.50667122552E+03		Apriori delay (usec)		5.50665234171E+03		Resid mbdelay (usec)		3.25881E-03	+/- 1.1E-05
Sband delay (usec)	5.50667149321E+03		Apriori clock (usec)		3.4650383E+01		Resid sbdelay (usec)		1.91515E-02	+/- 9.0E-05
Phase delay (usec)	5.50665234161E+03		Apriori clockrate (us/s)		4.0800002E-07		Resid phdelay (usec)		-9.85058E-08	+/- 3.8E-08
Delay rate (us/s)	-2.57210276683E-01		Apriori rate (us/s)		-2.57210171221E-01		Resid rate (us/s)		-1.05462E-07	+/- 1.7E-10
Total phase (deg)	254.4		Apriori accel (us/s/s)		-1.51753086801E-05		Resid phase (deg)		-3.1	+/- 1.2

ph/seg (deg) 59.9 2.9 Search (2048X32) 1.649 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 55.3 5.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 12.8 1.7 Inc. seg. avg. 2.583 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 12.7 2.9 Inc. frq. avg. 1.782 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 X: az 69.7 el 35.3 pa -41.4 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 1893.589 297.672 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY...1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/XY.W.84.1IFSML

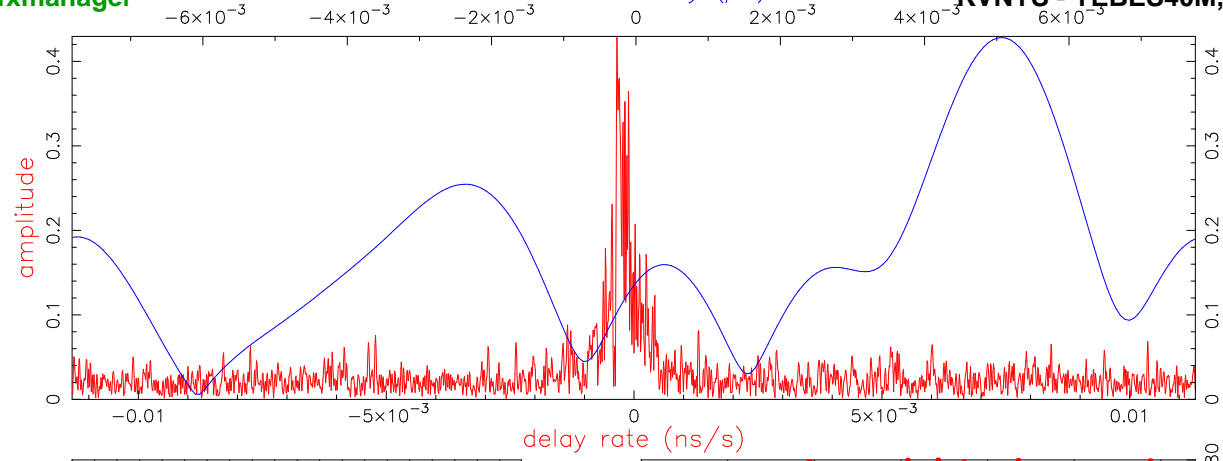
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, yY

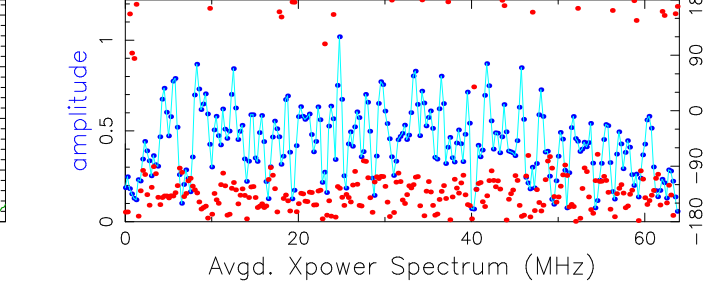
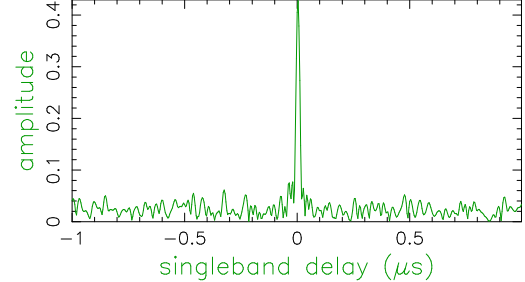
KVNYS - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)



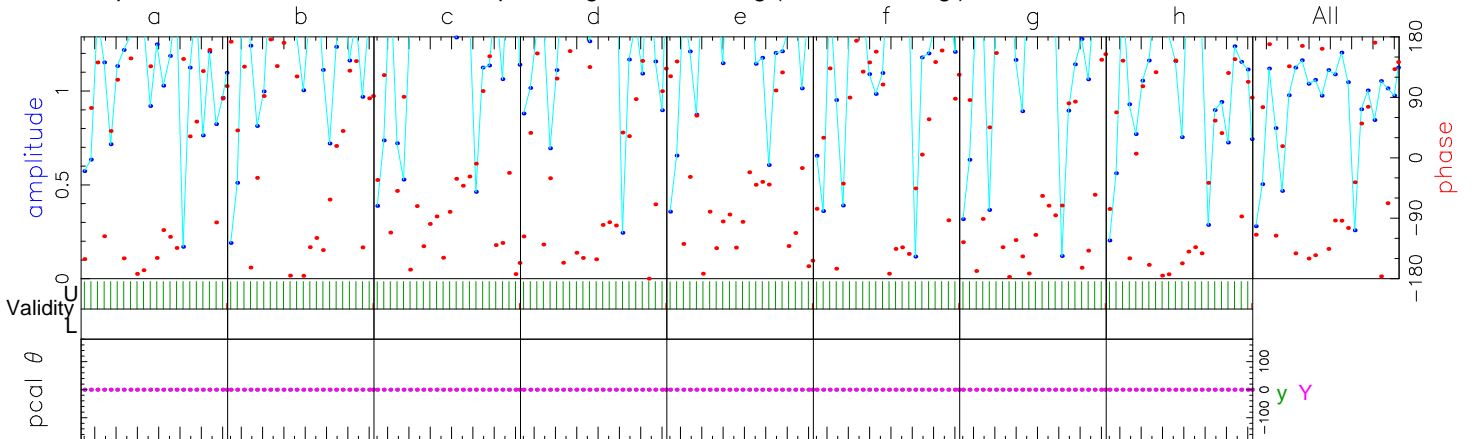
Fringe quality 8

SNR 23.4  
Int time 397.670  
Amp 0.430  
Phase -159.8  
PFD 0.0e+00  
Delays (us)  
SBD 0.003180  
MBD 0.005054  
Fringe rate (Hz)  
-0.029720  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090021.50  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224357  
2020:247:085004  
RA & Dec (J2000)  
16h42m58.809967s  
+39°48'36.993984"

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
U/L	172.6	159.4	-99.1	-159.7	-103.1	161.7	-141.3	168.5	Phase	-159.8
y	0.5	0.5	0.6	0.5	0.6	0.6	0.6	0.5	Ampl.	0.5
Y	259.0	257.4	258.1	257.6	257.1	256.9	257.4	257.5	Sbd box	257.8
y:Y	778/0	778/0	778/0	778/0	778/0	778/0	778/0	778/0	APs used	
y: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)	1.24092428432E+04	Apriori delay (usec)	1.24092377889E+04	Resid mbdelay (usec)	5.05424E-03	+/-	4.6E-05
Sband delay (usec)	1.24092409694E+04	Apriori clock (usec)	-1.2447588E+01	Resid sbdelay (usec)	3.18050E-03	+/-	3.7E-04
Phase delay (usec)	1.24092377838E+04	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-5.15346E-06	+/-	1.6E-07
Delay rate (us/s)	-1.38934601345E+00	Apriori rate (us/s)	-1.38934566843E+00	Resid rate (us/s)	-3.45023E-07	+/-	6.9E-10
Total phase (deg)	-109.5	Apriori accel (us/s/s)	-6.89537466392E-05	Resid phase (deg)	-159.8	+/-	4.9

ph/seg (deg)	RMS 79.3	Theor. 11.7	Amplitude Search (2048X32)	0.430 +/- 0.018	0.414	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	128.9	20.5	Interp.	0.000	0.894	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	45.0	6.9	Inc. seg. avg.	0.894	0.546	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	29.7	12.1	Inc. frq. avg.	0.546		Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

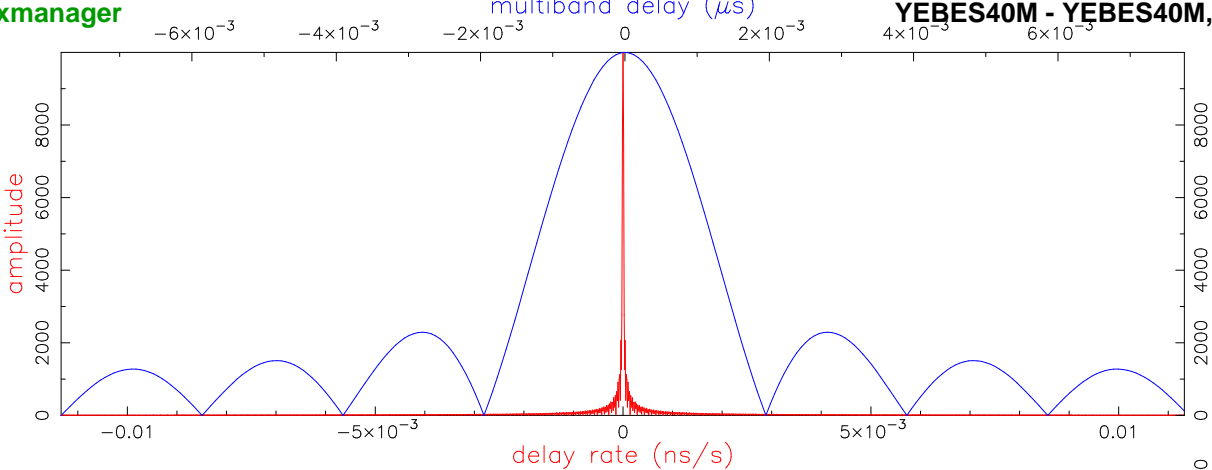
y: az 284.8 el 66.2 pa 85.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10232.548 -4908.787 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY.W.107.1IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

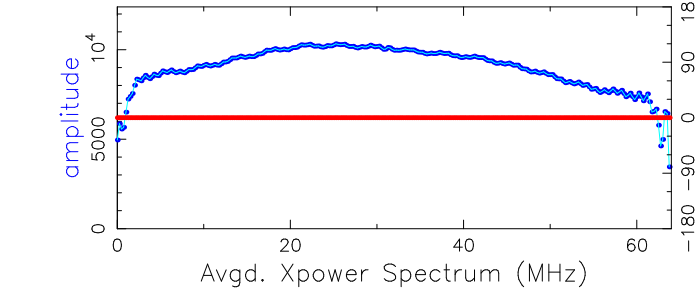
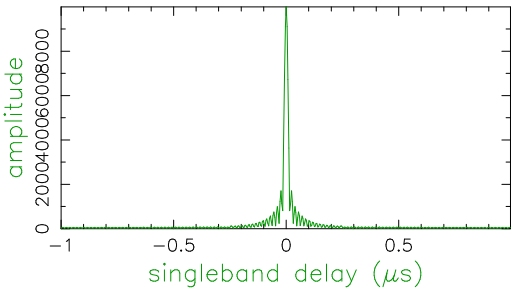
3C345.1IFSML, No0080, YY

YEBES40M - YEBES40M, fgroup W, pol RR



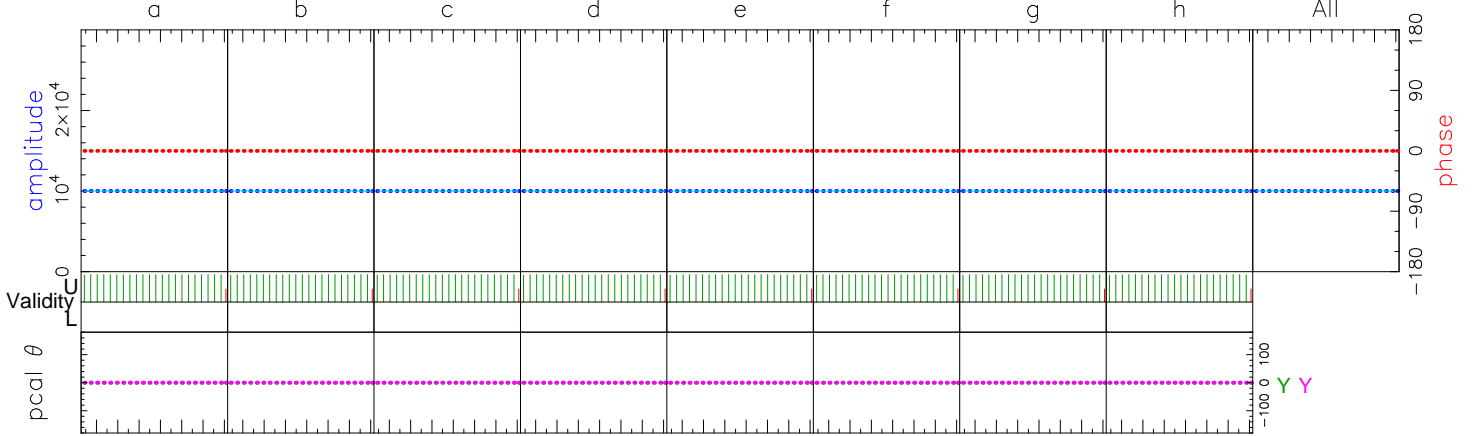
Fringe quality 9

SNR 548548.8  
 Int time 402.379  
 Amp 9999.999  
 Phase 0.0  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000000  
 MBD 0.000000  
 Fringe rate (Hz)  
 0.000000  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224357  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
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	+/-	2.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.6E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	6.7E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	2.9E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	Theor.	Amplitude	9999.999 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	0.0	0.0	0.0	Search (2048X32)	9999.999	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	9999.999	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

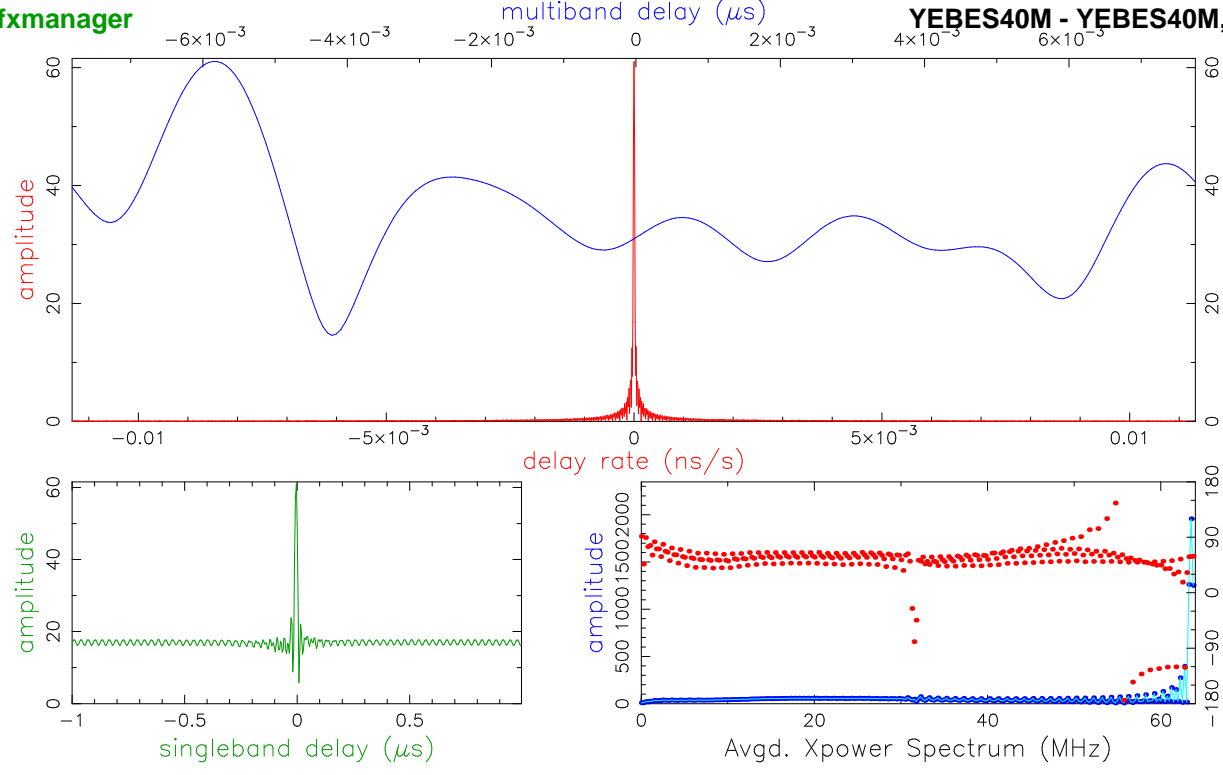
Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY.W.108.1IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, YY

YEBES40M - YEBES40M, fgroup W, pol LR

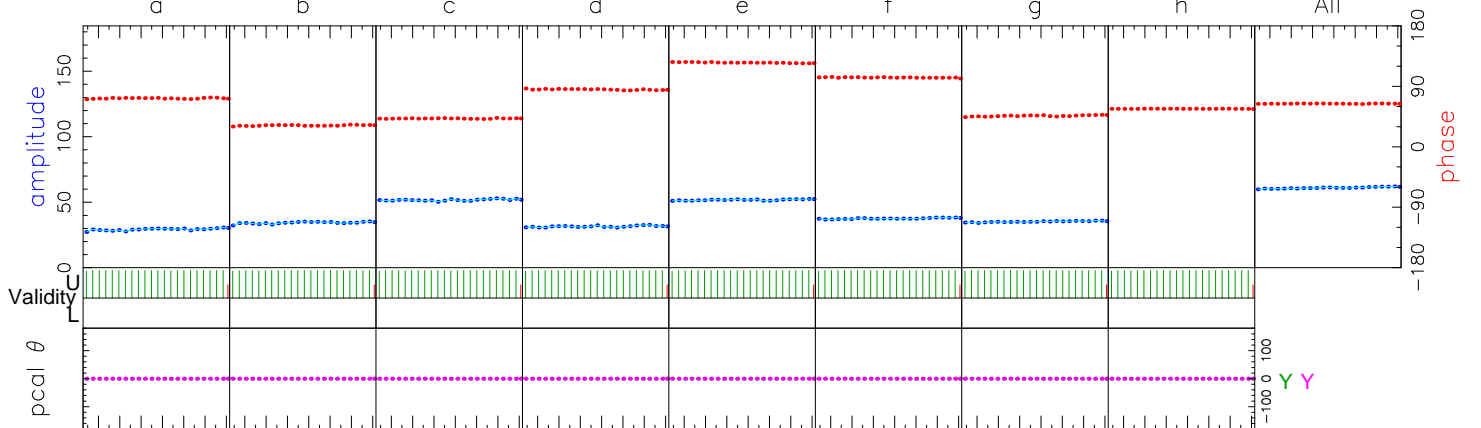


Fringe quality 5

SNR 3376.8  
 Int time 402.379  
 Amp 61.559  
 Phase 64.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004914  
 MBD -0.005805  
 Fringe rate (Hz) 0.000003  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224400  
 2020:247:085004  
 RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

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
	72.1	31.7	42.1	85.3	125.3	103.0	46.0	56.5	Phase	64.2
	29.3	34.3	51.7	31.6	51.8	37.6	35.2	267.5	Ampl.	67.4
	256.5	255.0	255.8	256.8	254.9	255.0	254.8	256.0	Sbd box	255.7
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	Manl 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	
									Tracks	
Group delay (usec)(sbd)	-5.80450000000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-5.80450E-03	+/- 3.2E-07
Sband delay (usec)	-4.91400000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-4.91400E-03	+/- 2.6E-06
Phase delay (usec)	2.06923382634E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		2.06923E-06	+/- 1.1E-09
Delay rate (us/s)	3.11765352617E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		3.11765E-11	+/- 4.7E-12
Total phase (deg)	64.2		Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		64.2	+/- 0.0

ph/seg (deg) 0.2 0.1 Search (2048X32) 61.049 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.3 0.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 35.8 0.0 Inc. seg. avg. 61.031 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 123.9 0.1 Inc. frq. avg. 67.373 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 53.1 el 18.6 pa -52.8 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY.W.123.1IFSML

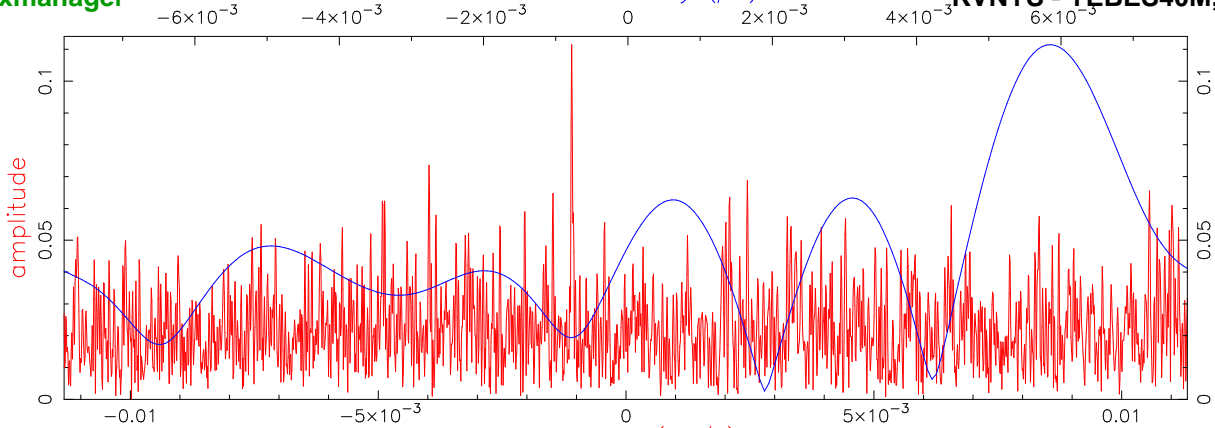
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, yY

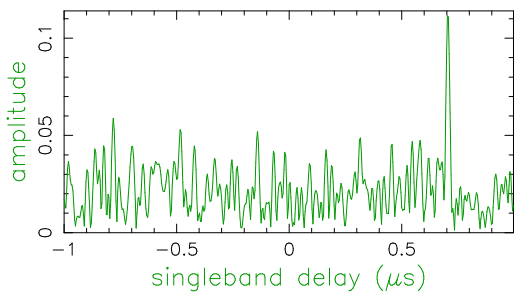
KVNYS - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

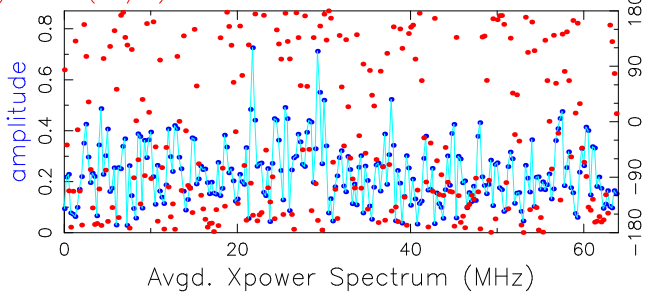


Fringe quality 0

SNR 6.2  
 Int time 397.670  
 Amp 0.114  
 Phase -29.4  
 PFD 1.4e-01  
 Delays (us)  
 SBD 0.704959  
 MBD 0.005877  
 Fringe rate (Hz)  
 -0.094241  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

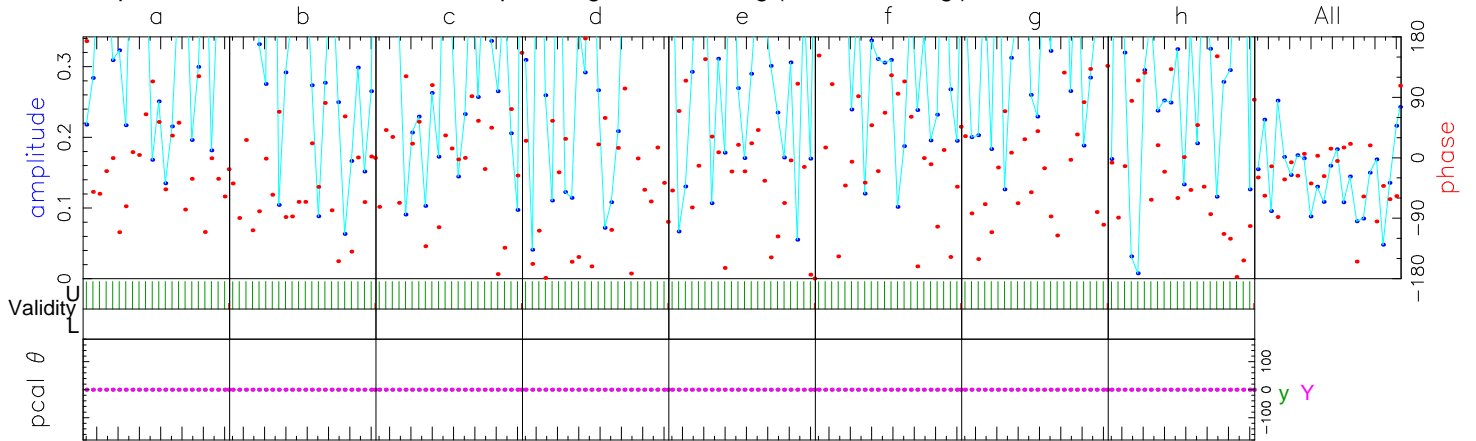


delay rate (ns/s)



Exp. c202b  
 Yr:day 16383  
 Start 2021:09:223932  
 Stop 2021:09:224400  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224400  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	-21.5	-58.4	23.9	-58.2	-18.3	42.0	-27.5	-80.6	Phase	-29.4
	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	Ampl.	0.1
	438.0	437.0	311.3	316.1	397.7	52.3	430.0	28.2	Sbd box	437.5
U/L	778/0	778/0	778/0	778/0	778/0	778/0	778/0	778/0	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	

Group delay (usec)(sbd)	1.24099467910E+04	Apriori delay (usec)	1.24092377889E+04	Resid mbdelay (usec)	5.87702E-03	+/-	1.8E-04
Sband delay (usec)	1.24099427477E+04	Apriori clock (usec)	-1.2447588E+01	Resid sbdelay (usec)	7.04959E-01	+/-	1.4E-03
Phase delay (usec)	1.24092377880E+04	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-9.47627E-07	+/-	6.0E-07
Delay rate (us/s)	-1.38934676248E+00	Apriori rate (us/s)	-1.38934566843E+00	Resid rate (us/s)	-1.09405E-06	+/-	2.6E-09
Total phase (deg)	20.9	Apriori accel (us/s/s)	-6.89537466392E-05	Resid phase (deg)	-29.4	+/-	18.5

ph/seg (deg)	44.0	Theor.	44.3	Amplitude	0.114 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	52.4		77.4	Search (2048X32)	0.108	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	45.5		26.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	48.3		45.6	Inc. seg. avg.	0.113	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.125	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		
y: az 284.8 el 66.2 pa 85.2		Y: az 53.1 el 18.6 pa -52.8		u, v (fr/asec)	10232.548 -4908.787					simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY.W.125.1IFSML

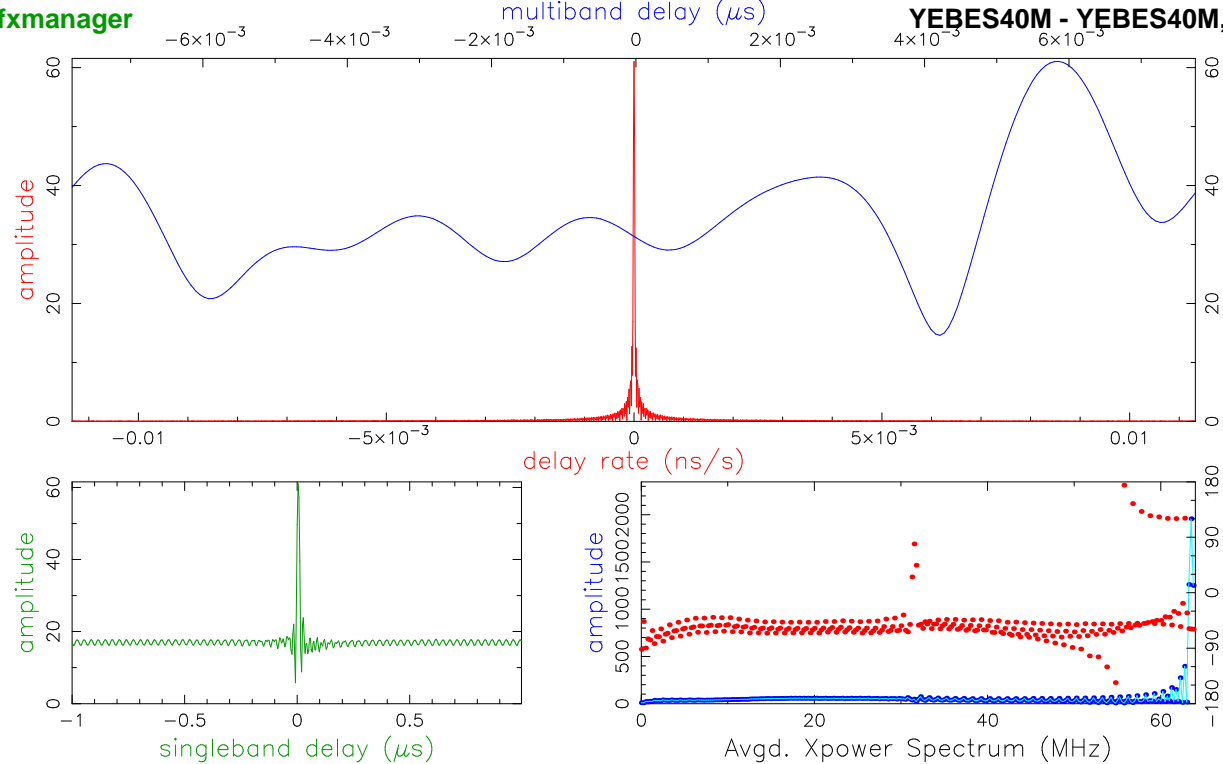


Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

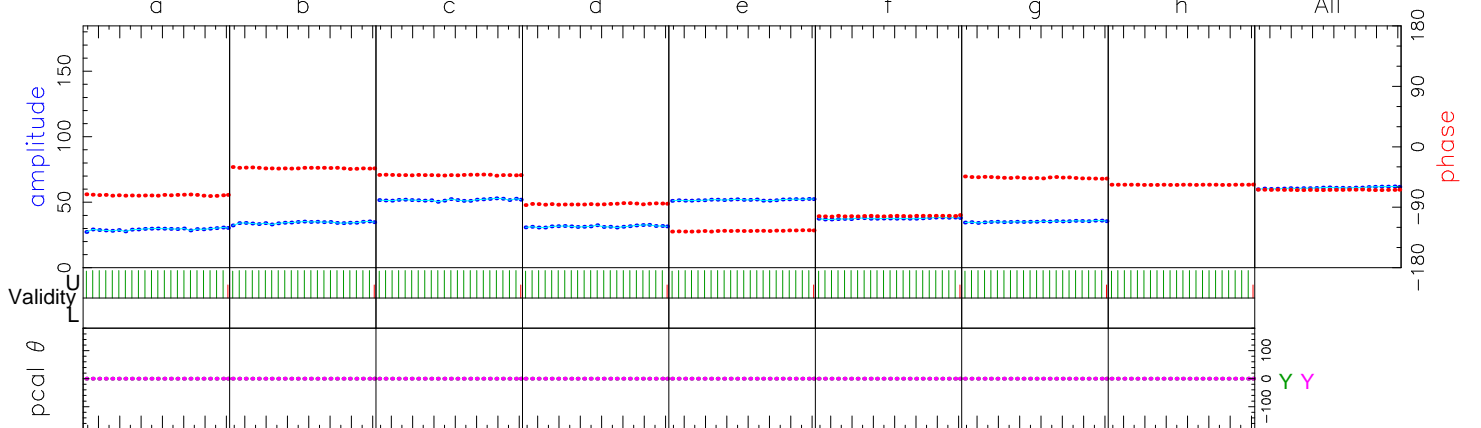
3C345.1IFSML, No0080, YY

YEBES40M - YEBES40M, fgroup W, pol RL



Fringe quality 5  
 SNR 3376.8  
 Int time 402.379  
 Amp 61.559  
 Phase -64.2  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004914  
 MBD 0.005805  
 Fringe rate (Hz)  
 -0.000003  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224403  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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	
	-72.1	-31.7	-42.1	-85.3	-125.3	-103.0	-46.0	-56.5		Phase	-64.2
	29.3	34.3	51.7	31.6	51.8	37.6	35.2	267.5		Ampl.	67.4
	257.5	259.0	258.2	257.2	259.1	259.0	259.2	258.0		Sbd box	258.3
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		PC amp	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks	
										Tracks	
Group delay (usec)(sbd)	5.80450000000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		5.80450E-03		+/- 3.2E-07
Sband delay (usec)	4.91400000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		4.91400E-03		+/- 2.6E-06
Phase delay (usec)	-2.06923382627E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.06923E-06		+/- 1.1E-09
Delay rate (us/s)	-3.11765352617E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-3.11765E-11		+/- 4.7E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-64.2		+/- 0.0

ph/seg (deg) 0.2 0.1 Search (2048X32) 61.049 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 1.3 0.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 35.8 0.0 Inc. seg. avg. 61.031 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 123.9 0.1 Inc. frq. avg. 67.373 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 53.1 el 18.6 pa -52.8 u,v (fr/asec) 0.000 0.000 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/YY.W.137.1IFSML

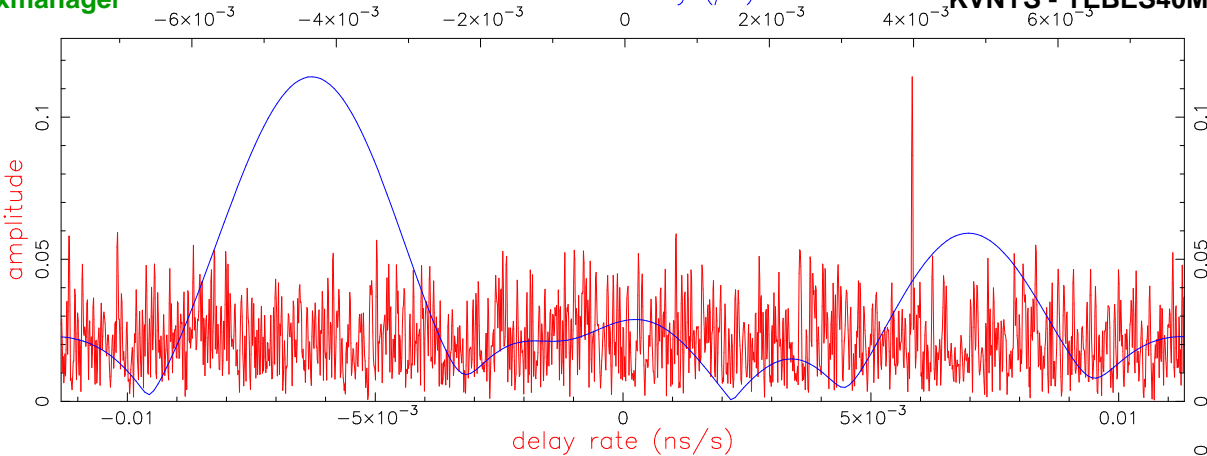
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, yY

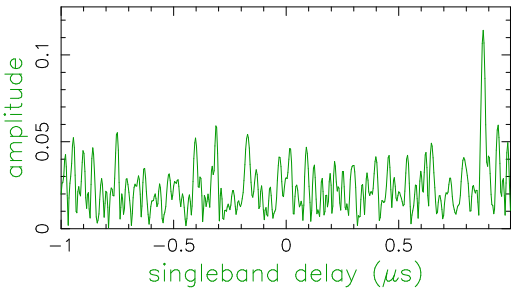
KVNYS - YEBES40M, fgroup W, pol RL

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

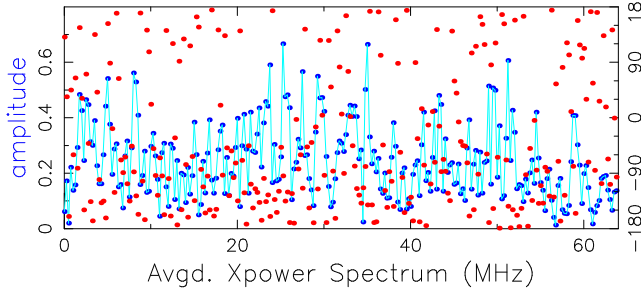


Fringe quality 0

SNR 6.2  
 Int time 397.670  
 Amp 0.128  
 Phase -78.0  
 PFD 1.2e-01  
 Delays (us)  
 SBD 0.875034  
 MBD -0.004342  
 Fringe rate (Hz)  
 0.503288  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

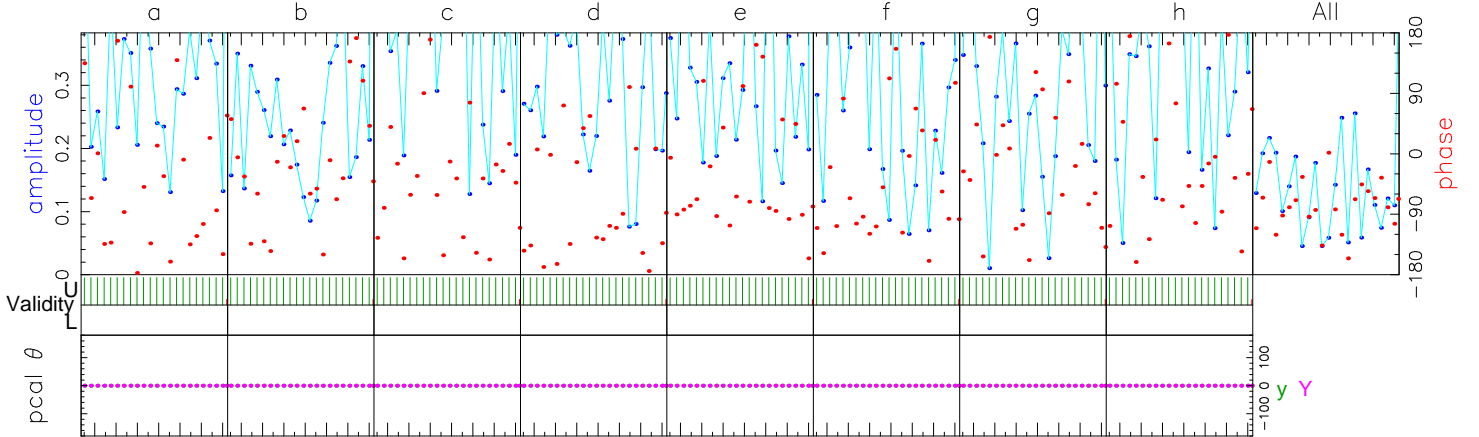


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090021.50  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224404  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	-108.3	-34.8	-68.9	-113.0	-73.0	-95.0	-33.2	-93.3	Phase	-78.0
	0.1	0.1	0.2	0.1	0.2	0.2	0.1	0.2	Ampl.	0.1
	316.0	485.1	373.6	174.4	480.8	138.2	135.2	482.1	Sbd box	481.0
U/L	778/0	778/0	778/0	778/0	778/0	778/0	778/0	778/0	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) 1.24101084474E+04 Apriori delay (usec) 1.24092377889E+04 Resid mbdelay (usec) -4.34156E-03 +/- 1.7E-04  
 Sband delay (usec) 1.24101128232E+04 Apriori clock (usec) -1.2447588E+01 Resid sbdelay (usec) 8.75034E-01 +/- 1.4E-03  
 Phase delay (usec) 1.24092377864E+04 Apriori clockrate (us/s) -2.0000006E-08 Resid phdelay (usec) -2.51576E-06 +/- 5.9E-07  
 Delay rate (us/s) -1.38933982576E+00 Apriori rate (us/s) -1.38934566843E+00 Resid rate (us/s) 5.84268E-06 +/- 2.6E-09  
 Total phase (deg) -27.7 Apriori accel (us/s/s) -6.89537466392E-05 Resid phase (deg) -78.0 +/- 18.4

RMS Theor. Amplitude 0.128 +/- 0.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 37.8 44.1 Search (2048X32) 0.111 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 62.6 77.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 33.3 26.0 Inc. seg. avg. 0.116 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 29.5 45.4 Inc. frq. avg. 0.129 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

y: az 284.8 el 66.2 pa 85.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10232.548 -4908.787 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY.W.141.1IFSML

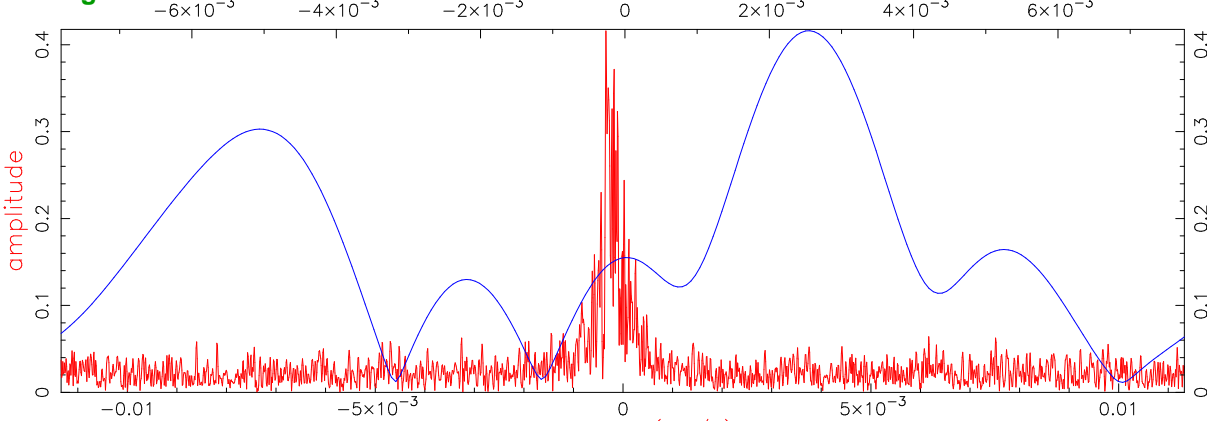
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, yY

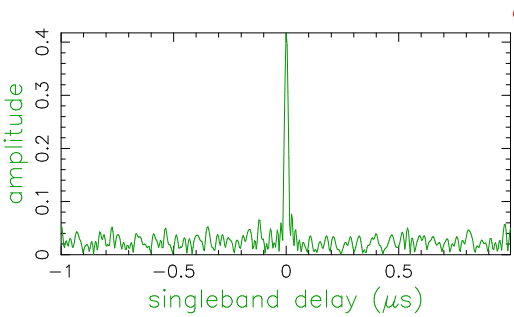
KVNYS - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu$ s)

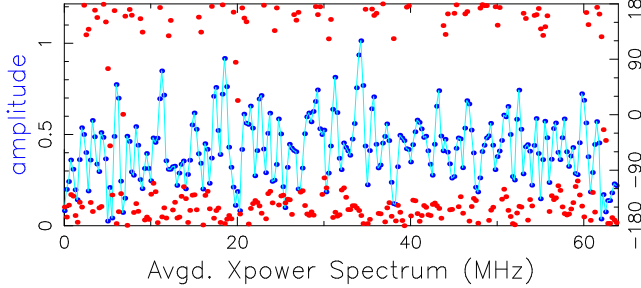


Fringe quality 8

SNR 22.8  
 Int time 397.670  
 Amp 0.418  
 Phase 175.4  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.000787  
 MBD 0.002577  
 Fringe rate (Hz)  
 -0.029808  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

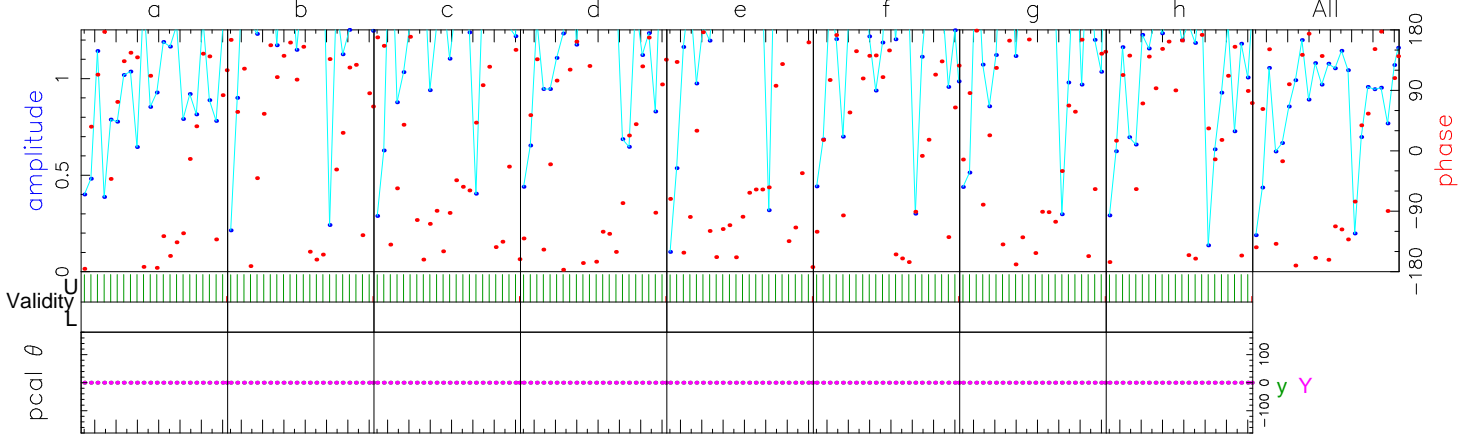


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090021.50  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224353  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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

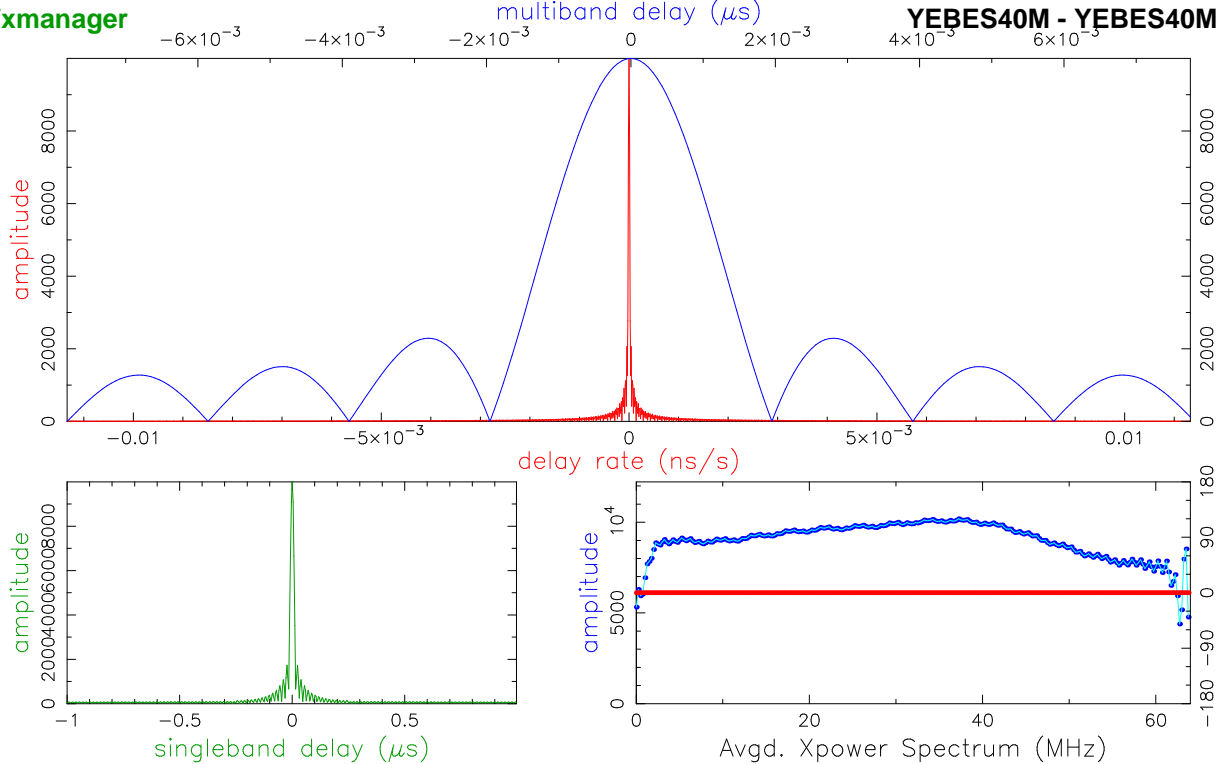


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	778/0	778/0	778/0	778/0	778/0	778/0	778/0	778/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
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) 1.24092403655E+04 Apriori delay (usec) 1.24092377889E+04 Resid mbdelay (usec) 2.57658E-03 +/- 4.8E-05  
 Sband delay (usec) 1.24092385759E+04 Apriori clock (usec) -1.2447588E+01 Resid sbdelay (usec) 7.87000E-04 +/- 3.8E-04  
 Phase delay (usec) 1.24092377946E+04 Apriori clockrate (us/s) -2.0000006E-08 Resid phdelay (usec) 5.65564E-06 +/- 1.6E-07  
 Delay rate (us/s) -1.38934601447E+00 Apriori rate (us/s) -1.38934566843E+00 Resid rate (us/s) -3.46042E-07 +/- 7.1E-10  
 Total phase (deg) 225.7 Apriori accel (us/s/s) -6.89537466392E-05 Resid phase (deg) 175.4 +/- 5.0

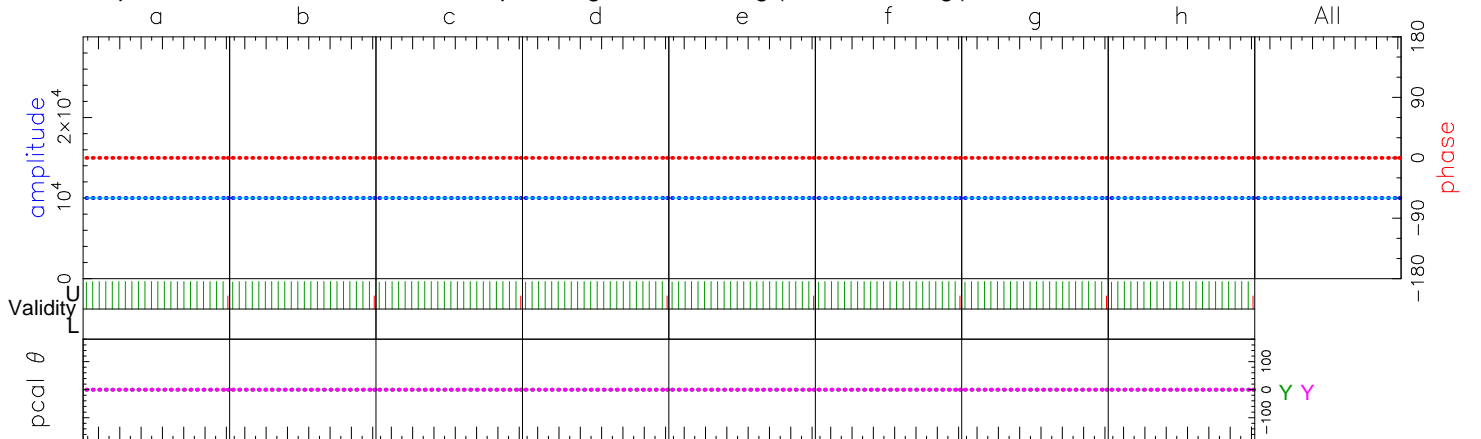
RMS Theor. Amplitude 0.418 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 75.8 12.1 Search (2048X32) 0.404 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 125.3 21.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 47.5 7.1 Inc. seg. avg. 0.842 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 36.7 12.4 Inc. frq. avg. 0.551 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

y: az 284.8 el 66.2 pa 85.2 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 10232.548 -4908.787 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/yY.W.89.1IFSML



Fringe quality 9  
SNR 548548.8  
Int time 402.379  
Amp 9999.999  
Phase 0.0  
PFD 0.0e+00  
Delays (us)  
SBD 0.000000  
MBD 0.000000  
Fringe rate (Hz) 0.000000  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c202b  
Exper # 16383  
Yr:day 2020:284  
Start 090016.90  
Stop 090659.84  
FRT 090330.00  
Corr/FF/build  
2021:019:223932  
2021:019:224353  
2020:247:085004  
RA & Dec (J2000) 16h42m58.809967s +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	Ampl.	10000.0
Y	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	257.0
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Y	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd)	0.000000000000E+00	Apriori delay (usec)	0.000000000000E+00	Resid mbdelay (usec)	0.000000E+00	+/-	2.0E-09
Sband delay (usec)	0.000000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.000000E+00	+/-	1.6E-08
Phase delay (usec)	0.000000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.000000E+00	+/-	6.7E-12
Delay rate (us/s)	0.000000000000E+00	Apriori rate (us/s)	0.000000000000E+00	Resid rate (us/s)	0.000000E+00	+/-	2.9E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.000000000000E+00	Resid phase (deg)	0.0	+/-	0.0

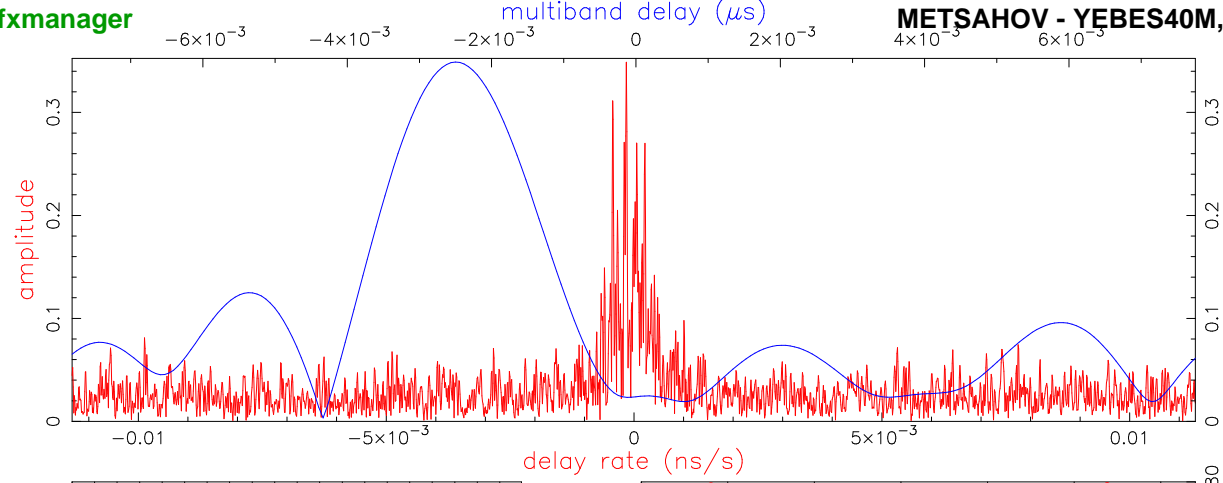
ph/seg (deg)	0.0	RMS	Theor.	Amplitude	9999.999 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	0.0	0.0	0.0	Search (2048X32)	9999.999	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	0.0	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	0.0	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 128	mb window (us) -0.008 0.008
				Inc. frq. avg.	9999.999	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

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, ZY

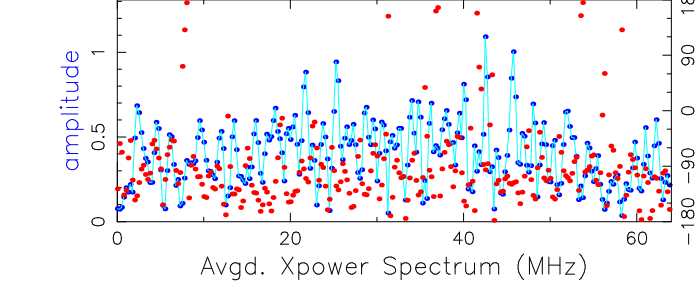
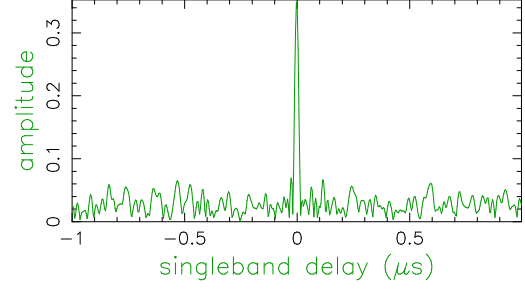
METSÁHOV - YEBES40M, fgroup W, pol RR



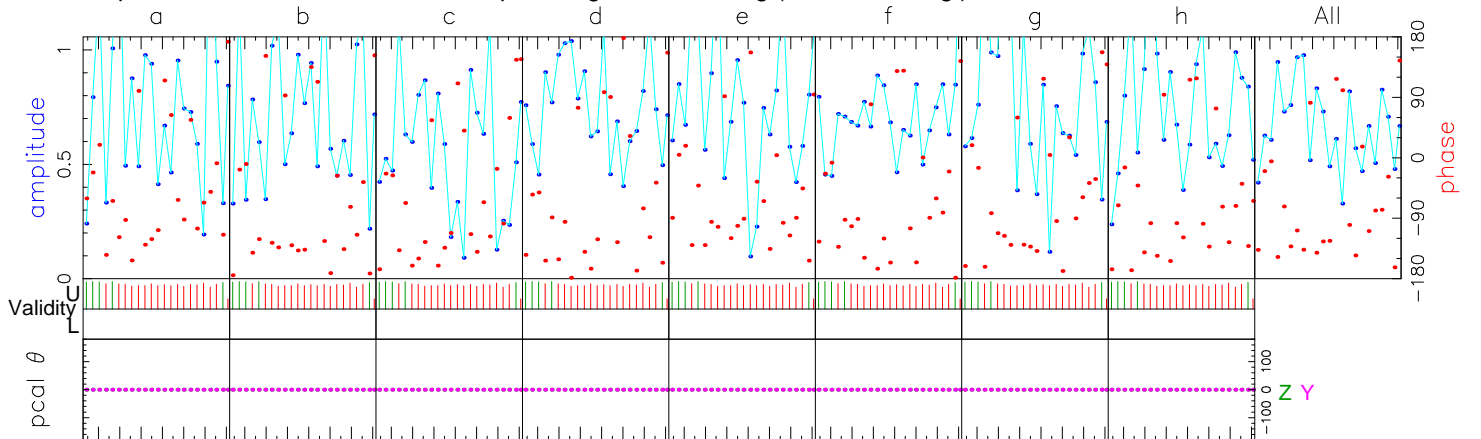
Fringe quality 9

SNR 18.3  
 Int time 361.708  
 Amp 0.353  
 Phase -110.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.002572  
 MBD -0.002460  
 Fringe rate (Hz)  
 -0.013006  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224358  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"



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



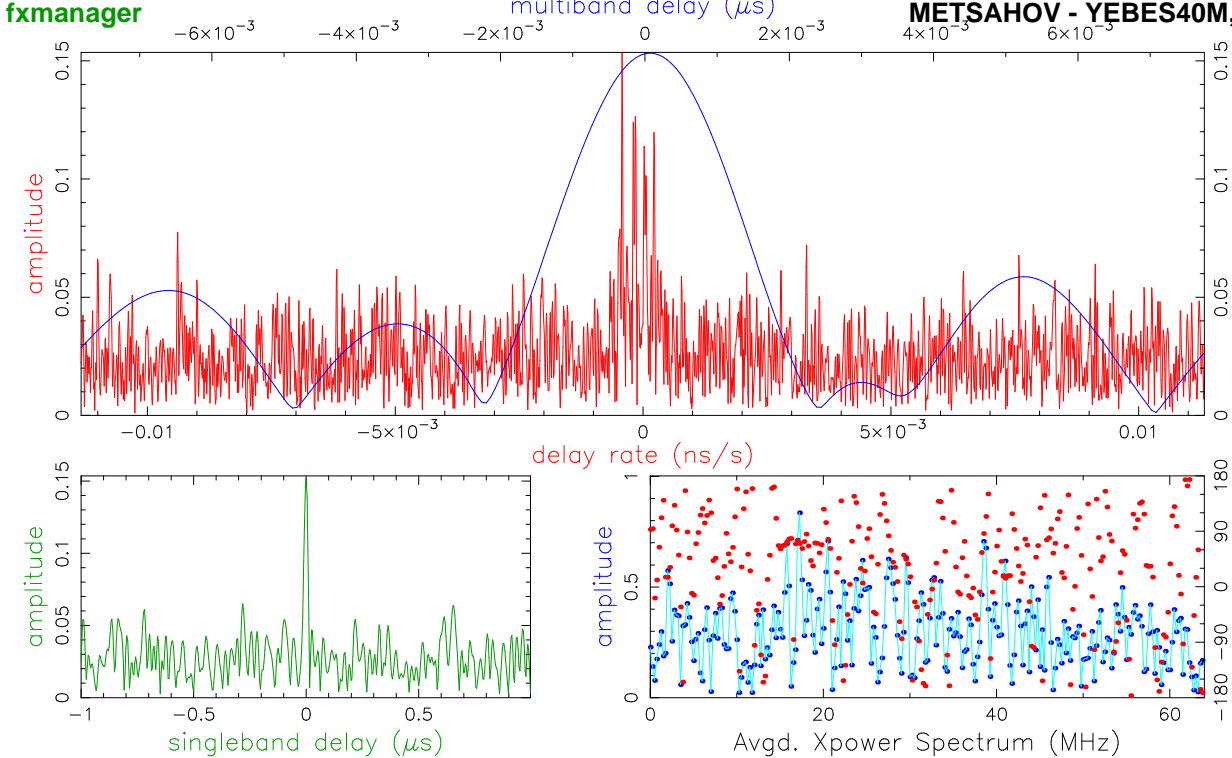
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-76.3	-126.3	-127.3	-133.4	-87.1	-120.5	-105.7	-114.2	Phase	-110.8		
	0.3	0.4	0.3	0.4	0.5	0.3	0.4	0.4	Ampl.	0.4		
	255.0	255.7	256.3	256.7	256.3	256.1	256.1	255.7	Sbd box	256.3		
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used			
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
Y	1000	1000	1000	1000	1000	1000	1000	1000				
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Tracks			
Group delay (usec)(sbd)	7.45599801628E+03		Apriori delay (usec)		7.45600047605E+03		Resid mbdelay (usec)		-2.45977E-03	+/- 5.9E-05		
Sband delay (usec)	7.45599790430E+03		Apriori clock (usec)		-1.3543450E+01		Resid sbdelay (usec)		-2.57175E-03	+/- 4.7E-04		
Phase delay (usec)	7.45600047248E+03		Apriori clockrate (us/s)		-1.0399999E-07		Resid phdelay (usec)		-3.57336E-06	+/- 2.0E-07		
Delay rate (us/s)	-3.35180110693E-01		Apriori rate (us/s)		-3.35179959704E-01		Resid rate (us/s)		-1.50989E-07	+/- 8.7E-10		
Total phase (deg)			Apriori accel (us/s/s)		-2.39495912184E-05		Resid phase (deg)		-110.8	+/- 6.3		
	RMS	Theor.	Amplitude	0.353 +/- 0.019		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	74.8	15.0	Search (2048X32)	0.337		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	100.9	26.2	Interp.	0.000		SampCntNorm: enabled		mb window (us)	-0.008	0.008		
ph/frq (deg)	22.0	8.8	Inc. seg. avg.	0.640		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	11.9	15.4	Inc. frq. avg.	0.364		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
Z: az 81.2 el 42.3 pa -39.7	Y: az 53.1 el 18.6 pa -52.8		u,v (fr/asec) 2459.865 -108.782						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c202b/v1/v1_3mm/1234/No0080/ZY..1IFSML		Output file: /Exps/c202b/v1/v1_3mm/1234/No0080/ZY.W.113.1IFSML									

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

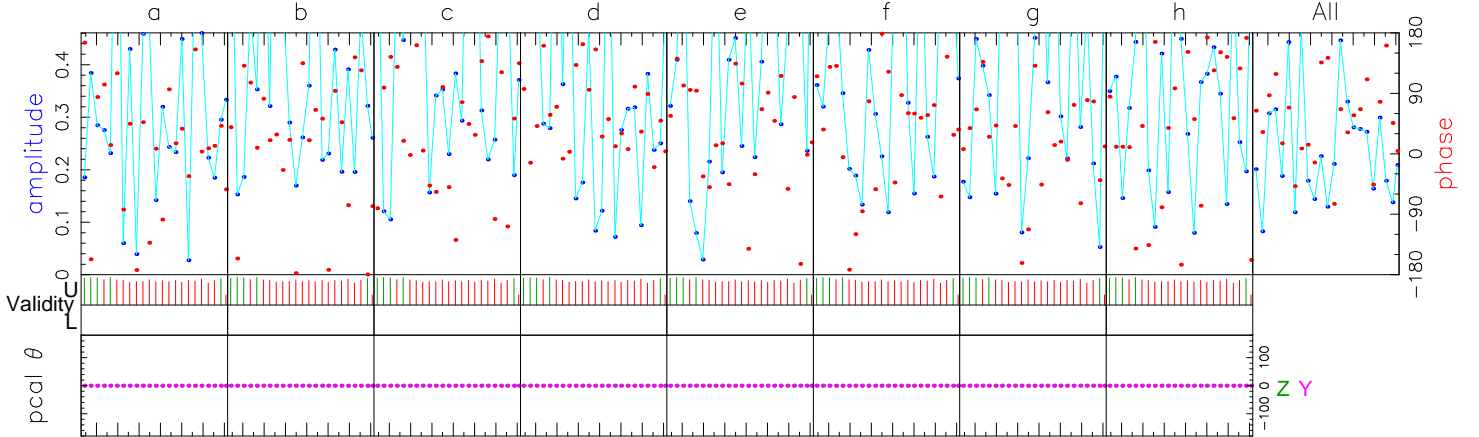
3C345.1IFSML, No0080, ZY

METSAHOV - YEBES40M, fgroup W, pol LR



Fringe quality 9  
 SNR 8.0  
 Int time 361.708  
 Amp 0.154  
 Phase 58.5  
 PFD 4.8e-07  
 Delays (us)  
 SBD -0.000541  
 MBD 0.000081  
 Fringe rate (Hz)  
 -0.036185  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224401  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0		
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) 7.45600055717E+03 Apriori delay (usec) 7.45600047605E+03 Resid mbdelay (usec) 8.11177E-05 +/- 1.4E-04  
 Sband delay (usec) 7.45599993480E+03 Apriori clock (usec) -1.3543450E+01 Resid sbdelay (usec) -5.41250E-04 +/- 1.1E-03  
 Phase delay (usec) 7.45600047793E+03 Apriori clockrate (us/s) -1.0399999E-07 Resid phdelay (usec) 1.88617E-06 +/- 4.6E-07  
 Delay rate (us/s) -3.35180379781E-01 Apriori rate (us/s) -3.35179959704E-01 Resid rate (us/s) -4.20078E-07 +/- 2.0E-09  
 Total phase (deg) 61.0 Apriori accel (us/s/s) -2.39495912184E-05 Resid phase (deg) 58.5 +/- 14.4

ph/seg (deg) 61.7 34.4 Search (2048X32) 0.151 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 89.8 60.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 29.1 20.3 Inc. seg. avg. 0.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 40.3 35.4 Inc. frq. avg. 0.156 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Z: az 81.2 el 42.3 pa -39.7 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 2459.865 -108.782 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY.W.129.1IFSML

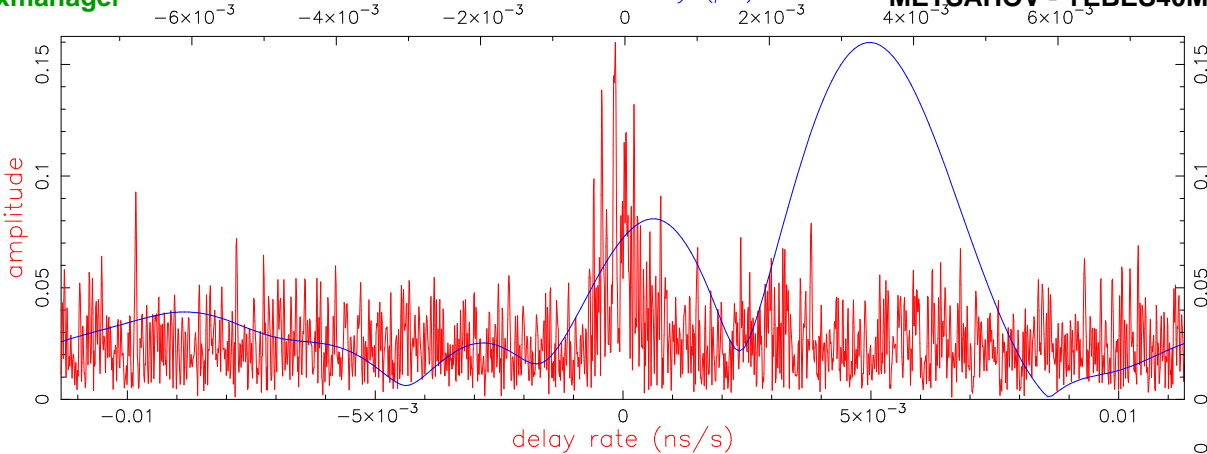
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

3C345.1IFSML, No0080, ZY

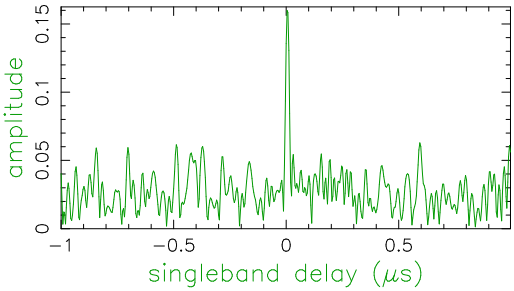
METSAHOV - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

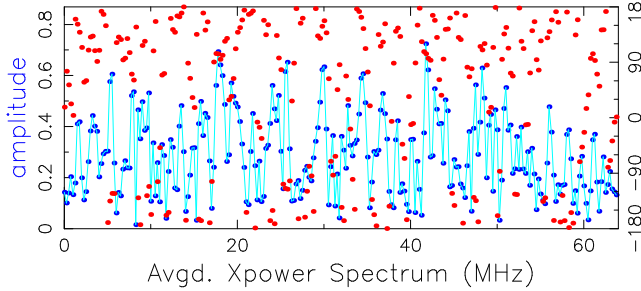


Fringe quality 9

SNR 8.5  
 Int time 361.708  
 Amp 0.163  
 Phase 167.1  
 PFD 1.0e-08  
 Delays (us)  
 SBD 0.005648  
 MBD 0.003397  
 Fringe rate (Hz)  
 -0.013170  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

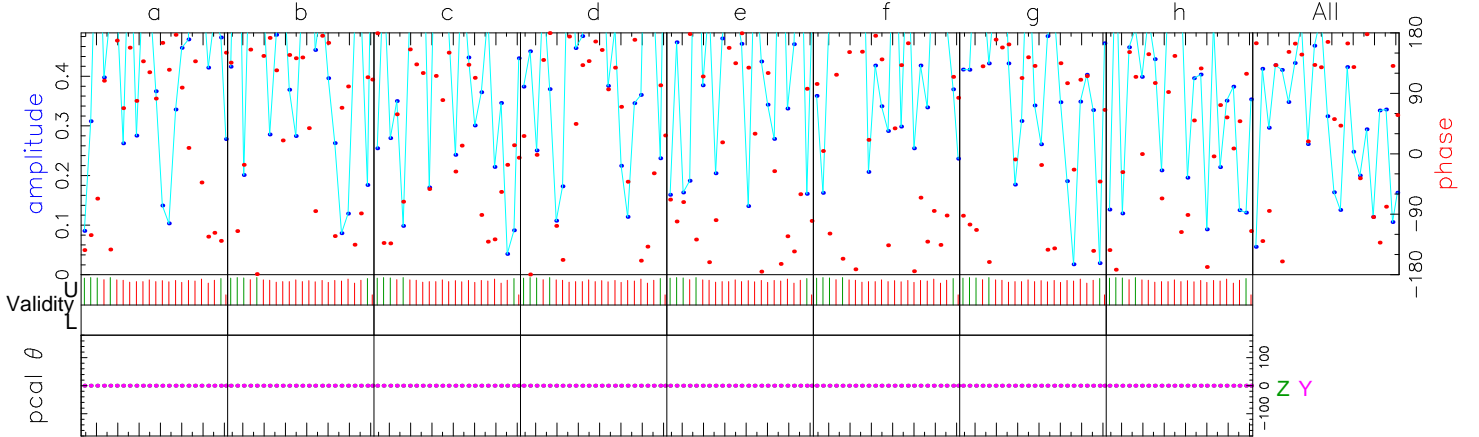


delay rate (ns/s)



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224404  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	169.4	166.8	140.5	150.1	-149.5	-178.6	173.9	117.5	Phase	167.1
	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	43.2	256.9	489.2	259.5	510.9	410.3	258.5	420.3	Sbd box	258.4
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	7.45600387303E+03	Apriori delay (usec)	7.45600047605E+03	Resid mbdelay (usec)	3.39698E-03	+/-	1.3E-04
Sband delay (usec)	7.45600612355E+03	Apriori clock (usec)	-1.3543450E+01	Resid sbdelay (usec)	5.64750E-03	+/-	1.0E-03
Phase delay (usec)	7.45600048144E+03	Apriori clockrate (us/s)	-1.0399999E-07	Resid phdelay (usec)	5.38880E-06	+/-	4.4E-07
Delay rate (us/s)	-3.35180112592E-01	Apriori rate (us/s)	-3.35179959704E-01	Resid rate (us/s)	-1.52888E-07	+/-	1.9E-09
Total phase (deg)	169.6	Apriori accel (us/s/s)	-2.39495912184E-05	Resid phase (deg)	167.1	+/-	13.6

ph/seg (deg)	RMS 76.2	Theor. 32.5	Amplitude Search (2048X32)	0.163 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	76.2	32.5	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)	120.1	56.7	Inc. seg. avg.	0.263	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.5	19.2	Inc. frq. avg.	0.165	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

Z: az 81.2 el 42.3 pa -39.7 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 2459.865 -108.782 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY.W.143.1IFSML

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

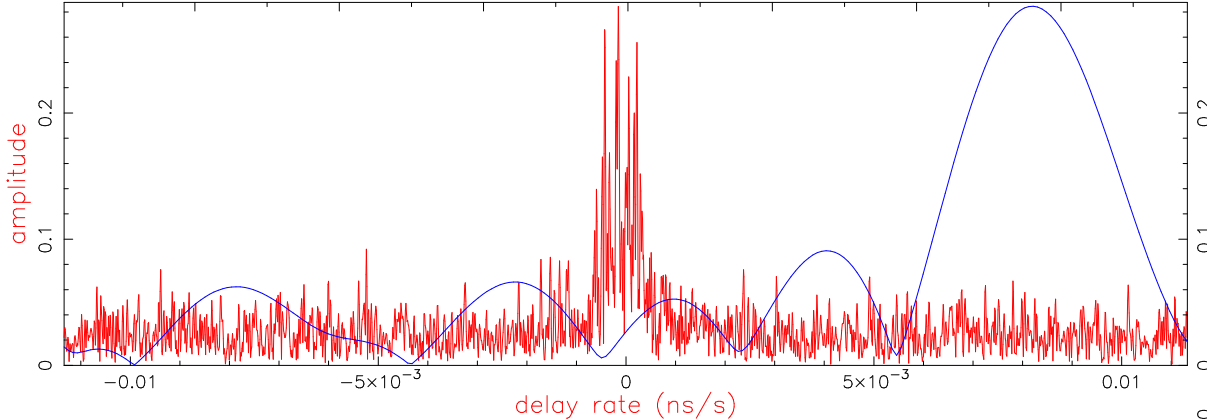
3C345.1IFSML, No0080, ZY

METSAHOV - YEBES40M, fgroup W, pol LL

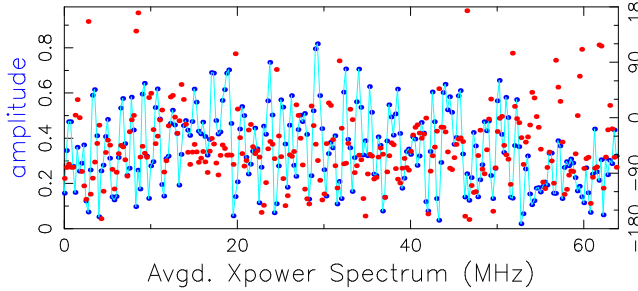
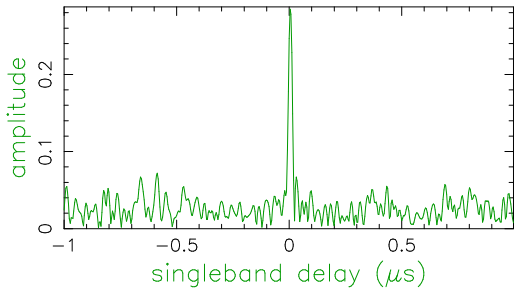
multiband delay ( $\mu$ s)

$-6 \times 10^{-3}$   $-4 \times 10^{-3}$   $-2 \times 10^{-3}$  0  $2 \times 10^{-3}$   $4 \times 10^{-3}$   $6 \times 10^{-3}$

Fringe quality 9

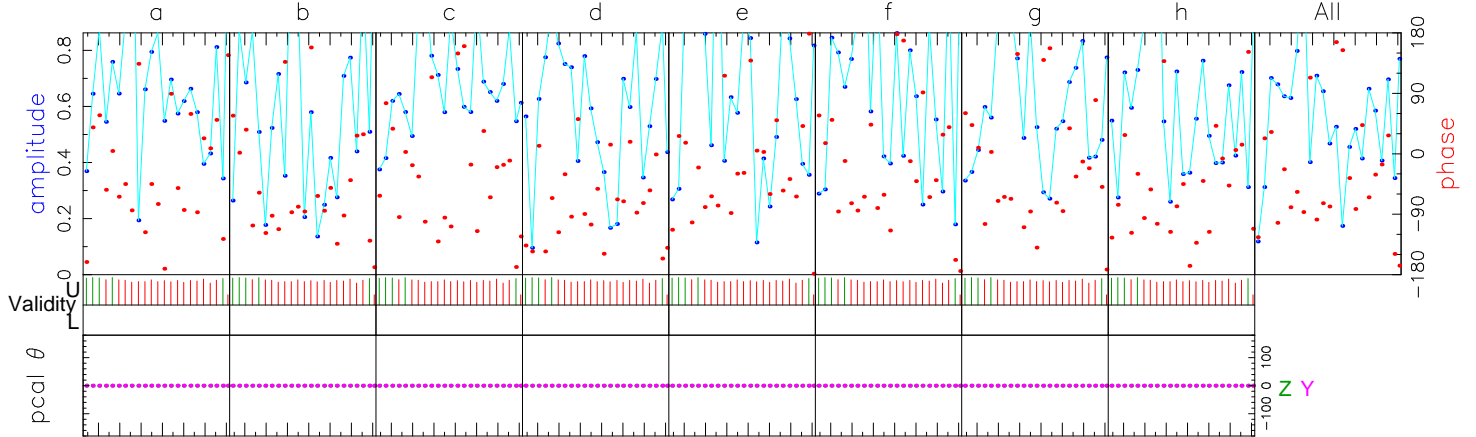


SNR 15.0  
 Int time 361.708  
 Amp 0.288  
 Phase -59.2  
 PFD 8.7e-42  
 Delays (us)  
 SBD 0.005336  
 MBD 0.005630  
 Fringe rate (Hz)  
 -0.013014  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202b  
 Exper # 16383  
 Yr:day 2020:284  
 Start 090016.90  
 Stop 090659.84  
 FRT 090330.00  
 Corr/FF/build  
 2021:019:223932  
 2021:019:224354  
 2020:247:085004  
 RA & Dec (J2000)  
 16h42m58.809967s  
 +39°48'36.993984"

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
	-38.6	-70.2	-59.8	-80.6	-47.4	-45.3	-53.5	-71.3	Phase	-59.2
	0.2	0.3	0.2	0.4	0.3	0.3	0.3	0.3	Ampl.	0.3
	256.7	258.3	258.7	258.2	258.3	258.9	258.1	258.1	Sbd box	258.4
U/L	787/0	787/0	787/0	787/0	787/0	787/0	787/0	787/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	7.45600610616E+03		Apriori delay (usec)		7.45600047605E+03		Resid mbdelay (usec)		5.63011E-03	+/- 7.3E-05
Sband delay (usec)	7.45600581230E+03		Apriori clock (usec)		-1.3543450E+01		Resid sbdelay (usec)		5.33625E-03	+/- 5.8E-04
Phase delay (usec)	7.45600047414E+03		Apriori clockrate (us/s)		-1.0399999E-07		Resid phdelay (usec)		-1.90965E-06	+/- 2.5E-07
Delay rate (us/s)	-3.35180110787E-01		Apriori rate (us/s)		-3.35179959704E-01		Resid rate (us/s)		-1.51083E-07	+/- 1.1E-09
Total phase (deg)			Apriori accel (us/s/s)		-2.39495912184E-05		Resid phase (deg)		-59.2	+/- 7.7

ph/seg (deg) 75.7 18.4 Search (2048X32) 0.272 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 119.0 32.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 15.9 10.8 Inc. seg. avg. 0.524 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 14.6 18.9 Inc. frq. avg. 0.288 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 Z: az 81.2 el 42.3 pa -39.7 Y: az 53.1 el 18.6 pa -52.8 u,v (fr/asec) 2459.865 -108.782 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY..1IFSML Output file: /Exps/c202b/v1/v1\_3mm/1234/No0080/ZY.W.96.1IFSML