

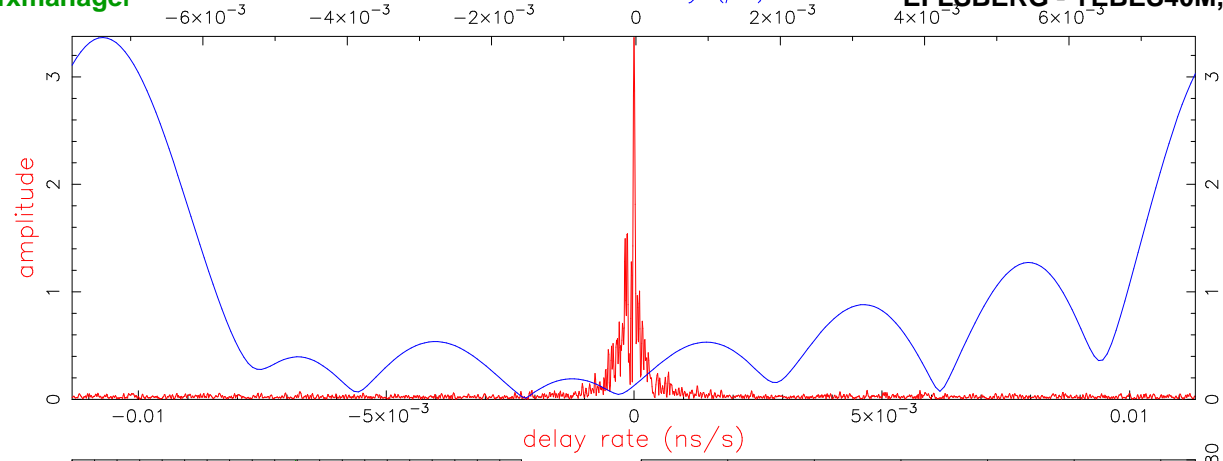
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, BY

EFLSBERG - YEBES40M, fgroup W, pol RR

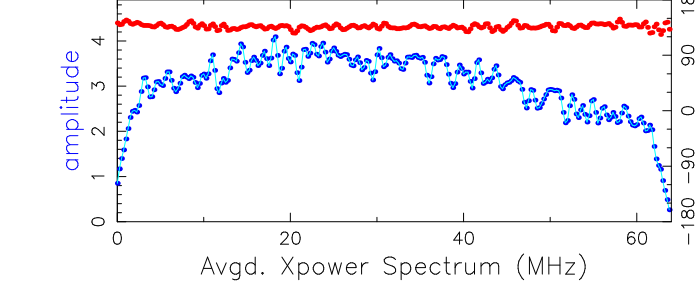
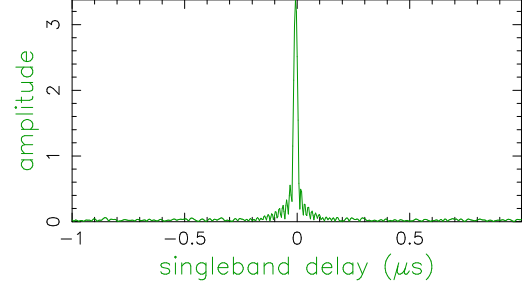
multiband delay (μ s)



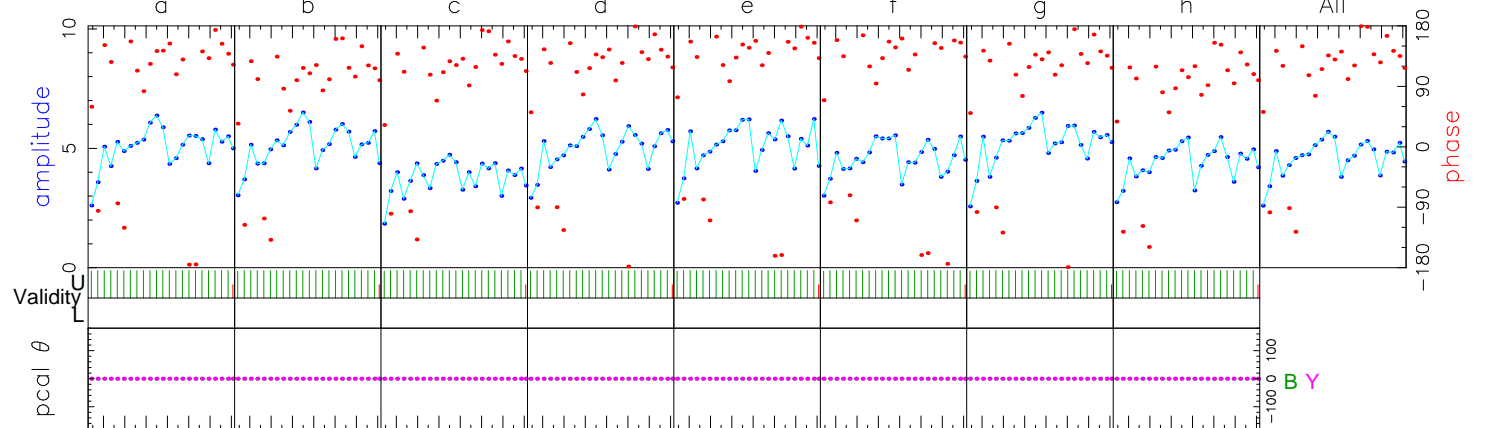
Fringe quality 4

SNR 185.1
 Int time 401.928
 Amp 3.377
 Phase 139.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.007064
 MBD -0.007365
 Fringe rate (Hz) 0.000007
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043944
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"



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	147.6	120.2	135.3	141.3	156.8	156.2	140.8	114.2	Phase	139.4
B	3.7	3.7	2.7	3.6	3.8	3.3	3.8	3.2	Ampl.	3.5
Y	255.2	254.7	255.5	255.2	255.3	255.0	255.1	254.0	Sbd box	255.2
B	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.33410736378E+03		Apriori delay (usec)		-2.33409999837E+03		Resid mbdelay (usec)		-7.36541E-03	+/- 5.9E-06
Sband delay (usec)	-2.33410706262E+03		Apriori clock (usec)		-3.6104015E+01		Resid sbdelay (usec)		-7.06425E-03	+/- 4.7E-05
Phase delay (usec)	-2.33409999387E+03		Apriori clockrate (us/s)		-2.9999999E-09		Resid phdelay (usec)		4.49677E-06	+/- 2.0E-08
Delay rate (us/s)	-2.05862282686E-01		Apriori rate (us/s)		-2.05862282773E-01		Resid rate (us/s)		8.64440E-11	+/- 8.6E-11
Total phase (deg)			Apriori accel (us/s/s)		1.26268464924E-05		Resid phase (deg)		139.4	+/- 0.6

	RMS	Theor.	Amplitude	3.377 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	51.9	1.5	Search (2048X32)	3.361	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	42.9	2.6	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	16.7	0.9	Inc. seg. avg.	4.632	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	11.0	1.5	Inc. frq. avg.	3.475	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 178.2 el 41.2 pa -1.1 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1193.803 1111.887 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/BY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/BY.W.14.1W87WX

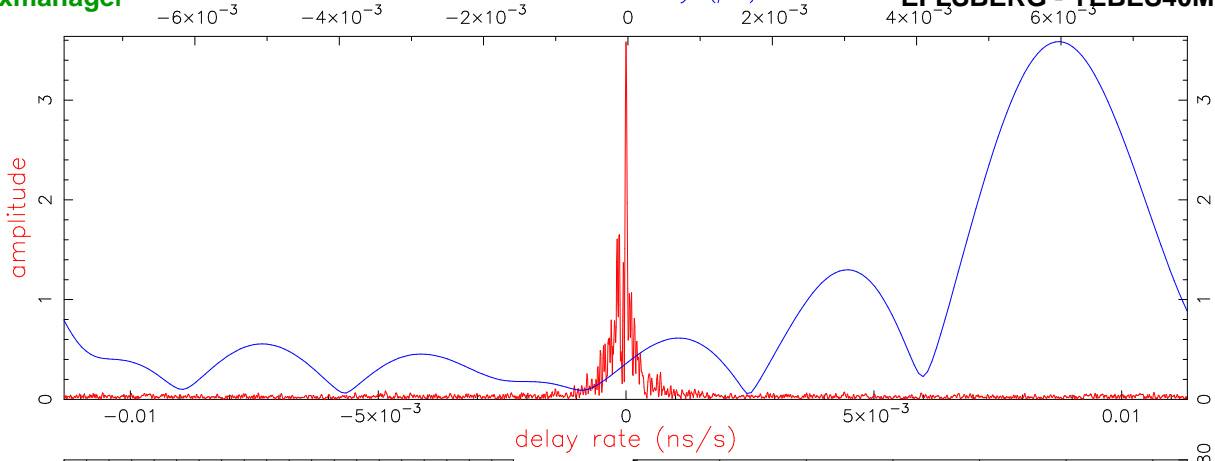
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, BY

EFLSBERG - YEBES40M, fgroup W, pol LL

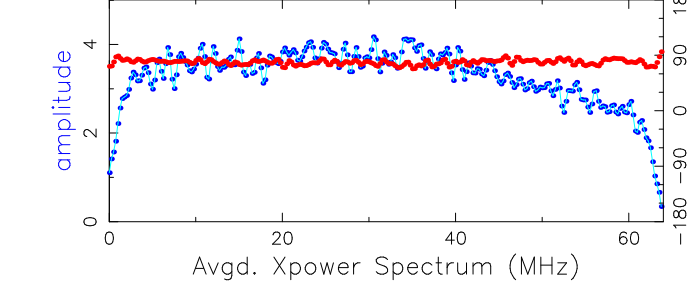
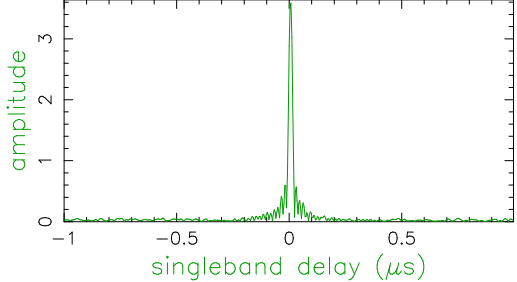
multiband delay (μ s)



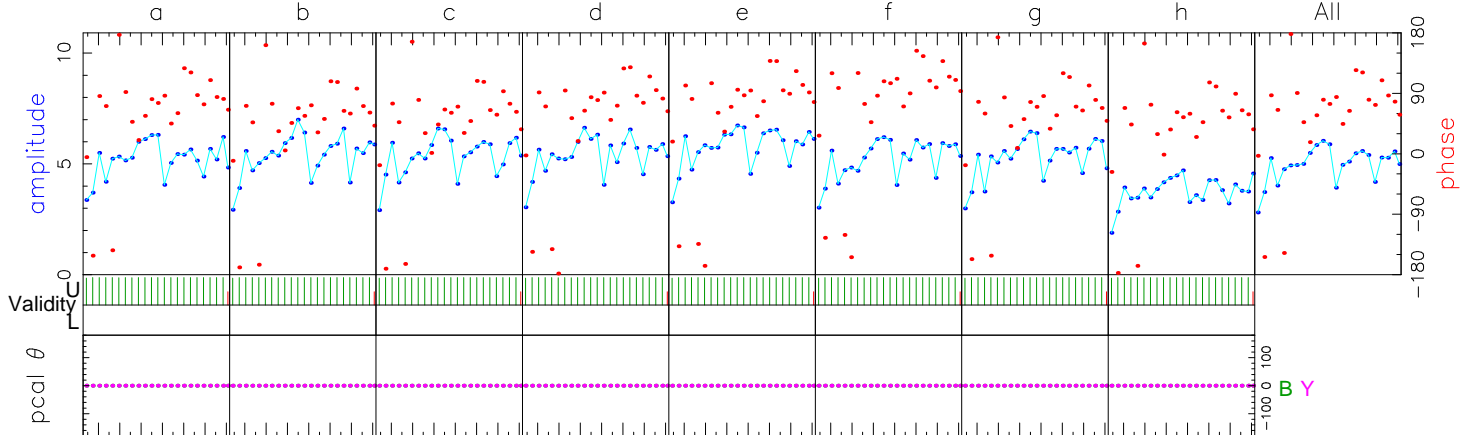
Fringe quality 4

SNR 199.5
Int time 401.928
Amp 3.639
Phase 82.7
PFD 0.0e+00
Delays (us)
SBD 0.006189
MBD 0.005921
Fringe rate (Hz) 0.000027
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 103016.89
Stop 103659.84
FRT 103330.00
Corr/FF/build
2021:288:002135
2021:288:043941
2021:252:122852
RA & Dec (J2000)
01h08m38.771111s
+01°35'00.317183"



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
	83.4	68.2	68.2	88.2	97.3	111.4	76.1	63.5	Phase	82.7
	3.7	4.0	3.8	3.8	4.1	3.8	3.8	2.7	Ampl.	3.7
	258.7	258.4	258.7	258.7	258.8	258.4	258.3	256.9	Sbd box	258.6
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.33409407728E+03		Apriori delay (usec)		-2.33409999837E+03		Resid mbdelay (usec)		5.92109E-03	+/- 5.4E-06
Sband delay (usec)	-2.33409380987E+03		Apriori clock (usec)		-3.6104015E+01		Resid sbdelay (usec)		6.18850E-03	+/- 4.3E-05
Phase delay (usec)	-2.33409999570E+03		Apriori clockrate (us/s)		-2.9999999E-09		Resid phdelay (usec)		2.66816E-06	+/- 1.9E-08
Delay rate (us/s)	-2.05862282460E-01		Apriori rate (us/s)		-2.05862282773E-01		Resid rate (us/s)		3.12474E-10	+/- 8.0E-11
Total phase (deg)			Apriori accel (us/s/s)		1.26268464924E-05		Resid phase (deg)		82.7	+/- 0.6

RMS Theor. Amplitude 3.639 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 52.2 1.4 Search (2048X32) 3.570 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 42.5 2.4 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 17.8 0.8 Inc. seg. avg. 4.980 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 11.4 1.4 Inc. frq. avg. 3.714 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

B: az 178.2 el 41.2 pa -1.1 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1193.803 1111.887 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/BY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/BY.W.2.1W87WX

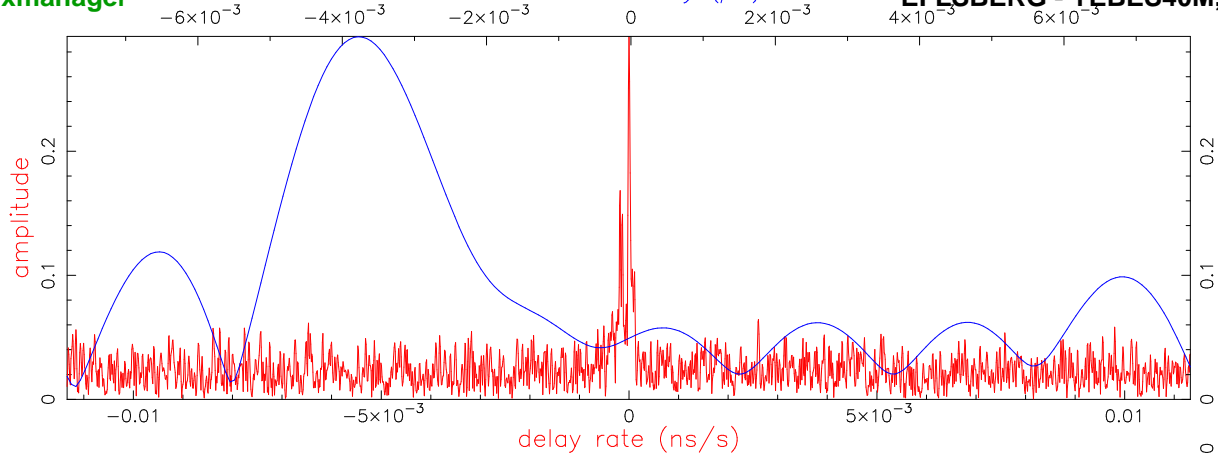
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, BY

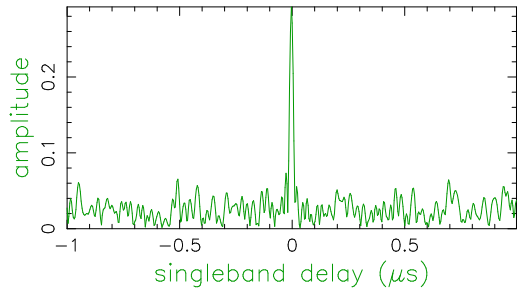
EFLSBERG - YEYES40M, fgroup W, pol LR

multiband delay (μ s)

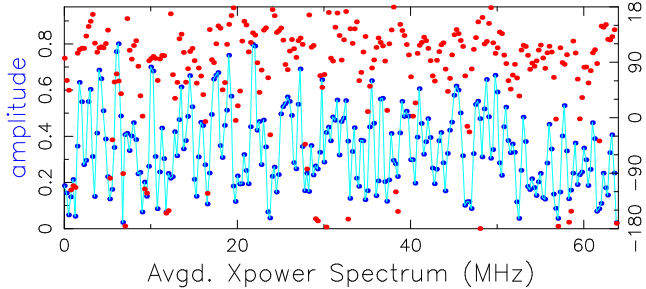


Fringe quality 8

SNR 16.0
 Int time 401.928
 Amp 0.292
 Phase 115.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.003483
 MBD -0.003758
 Fringe rate (Hz)
 0.000007
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

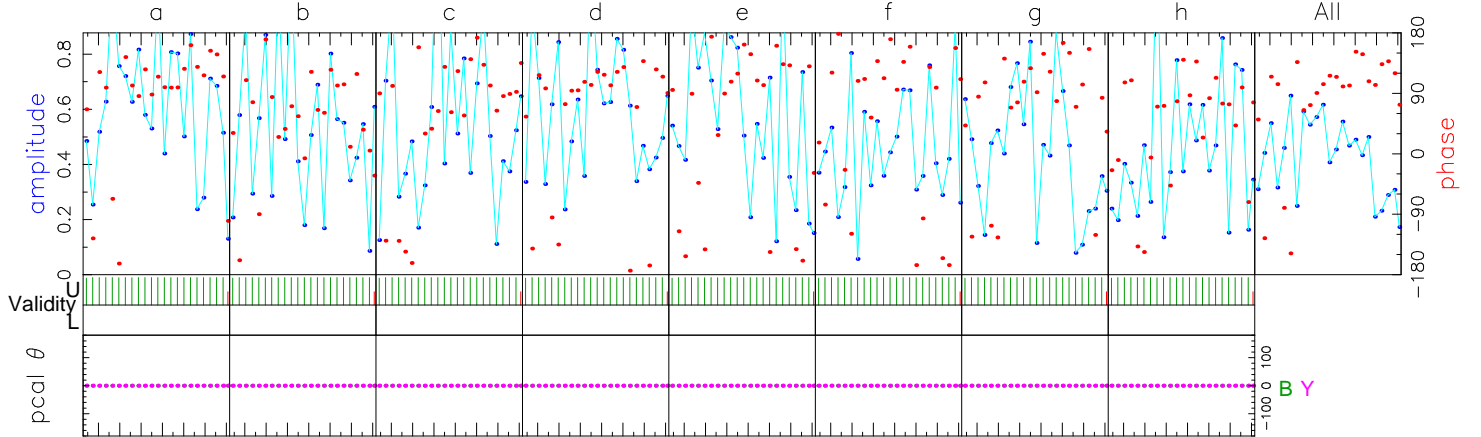


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043948
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-2.33410375656E+03	Apriori delay (usec)	-2.33409999837E+03	Resid mbdelay (usec)	-3.75819E-03	+/-	6.8E-05
Sband delay (usec)	-2.33410348137E+03	Apriori clock (usec)	-3.6104015E+01	Resid sbdelay (usec)	-3.48300E-03	+/-	5.4E-04
Phase delay (usec)	-2.33409999465E+03	Apriori clockrate (us/s)	-2.9999999E-09	Resid phdelay (usec)	3.72238E-06	+/-	2.3E-07
Delay rate (us/s)	-2.05862282696E-01	Apriori rate (us/s)	-2.05862282773E-01	Resid rate (us/s)	7.72328E-11	+/-	9.9E-10
Total phase (deg)	-194.0	Apriori accel (us/s/s)	1.26268464924E-05	Resid phase (deg)	115.4	+/-	7.1

ph/seg (deg)	53.8	Theor.	17.1	Amplitude	0.292 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	66.2	Search (2048X32)	0.290	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	27.7	Inc. seg. avg.	0.414	Inc. frq. avg.	0.312	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	22.4	Inc. frq. avg.	0.312			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
						Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 178.2 el 41.2 pa -1.1 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1193.803 1111.887 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/BY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/BY.W.26.1W87WX

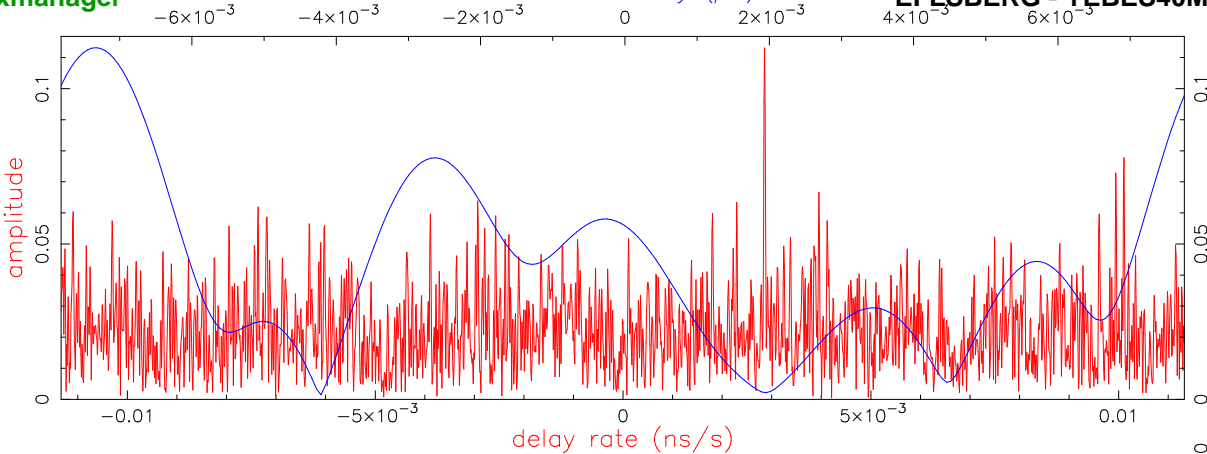
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, BY

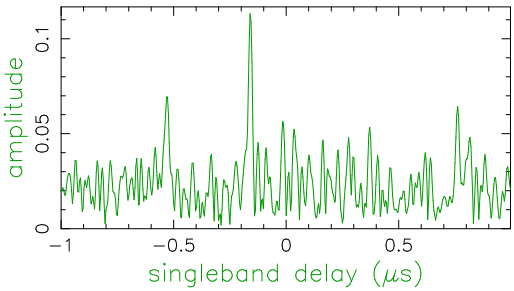
EFLSBERG - YEYES40M, fgroup W, pol RL

multiband delay (μ s)

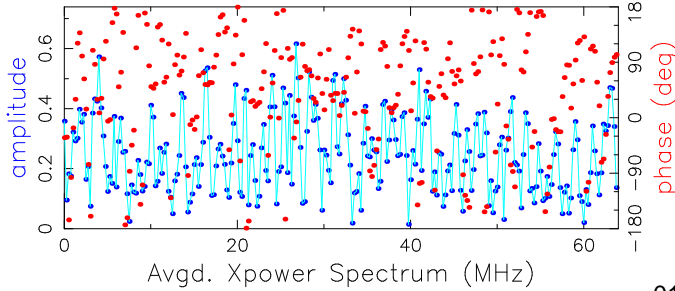


Fringe quality 0

SNR 6.2
 Int time 401.928
 Amp 0.117
 Phase 122.6
 PFD 1.1e-01
 Delays (us)
 SBD -0.159128
 MBD -0.007306
 Fringe rate (Hz)
 0.246582
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

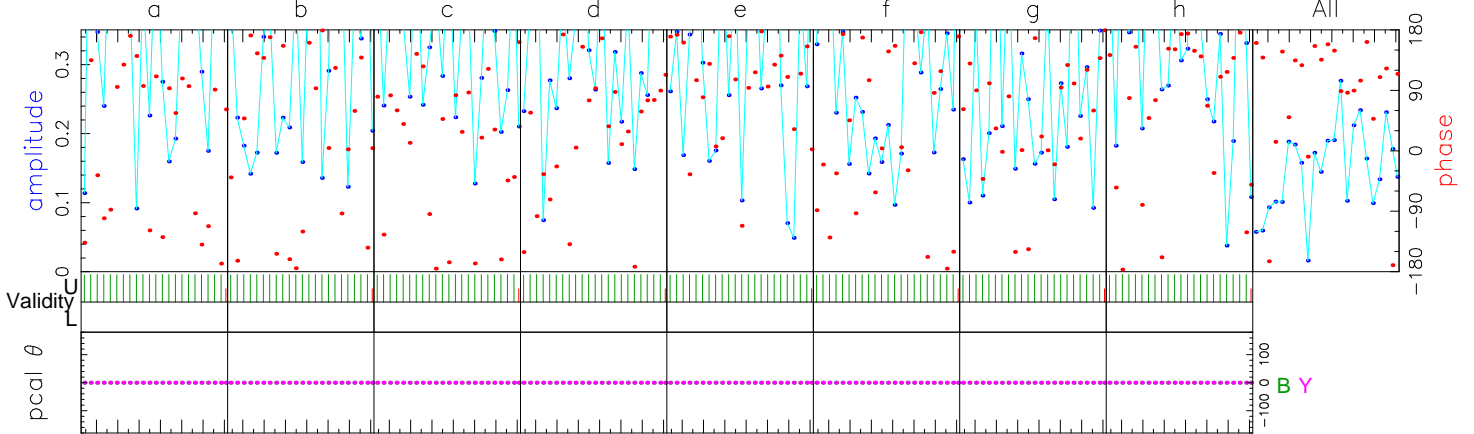


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043951
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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	145.4	151.4	81.5	90.3	114.0	-150.9	75.7	147.1	Phase	122.6
B	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	Ampl.	0.1
Y	294.0	87.7	499.5	214.3	107.3	299.4	120.0	216.1	Sbd box	216.3
B	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	

Group delay (usec)(sbd)	-2.33426355401E+03	Apriori delay (usec)	-2.33409999837E+03	Resid mbdelay (usec)	-7.30564E-03	+/-	1.7E-04
Sband delay (usec)	-2.33425912612E+03	Apriori clock (usec)	-3.6104015E+01	Resid sbdelay (usec)	-1.59128E-01	+/-	1.4E-03
Phase delay (usec)	-2.33409999442E+03	Apriori clockrate (us/s)	-2.9999999E-09	Resid phdelay (usec)	3.95200E-06	+/-	5.9E-07
Delay rate (us/s)	-2.05859420199E-01	Apriori rate (us/s)	-2.05862282773E-01	Resid rate (us/s)	2.86257E-06	+/-	2.5E-09
Total phase (deg)	-186.9	Apriori accel (us/s/s)	1.26268464924E-05	Resid phase (deg)	122.6	+/-	18.4

ph/seg (deg)	52.2	Theor.	44.0	Amplitude	0.117 +/- 0.019	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	63.4	Search (2048X32)	0.107	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	49.1	Inc. seg. avg.	0.118	Inc. frq. avg.	0.129	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	43.8	Inc. frq. avg.	0.129			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

B: az 178.2 el 41.2 pa -1.1 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1193.803 1111.887 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/BY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/BY.W.38.1W87WX

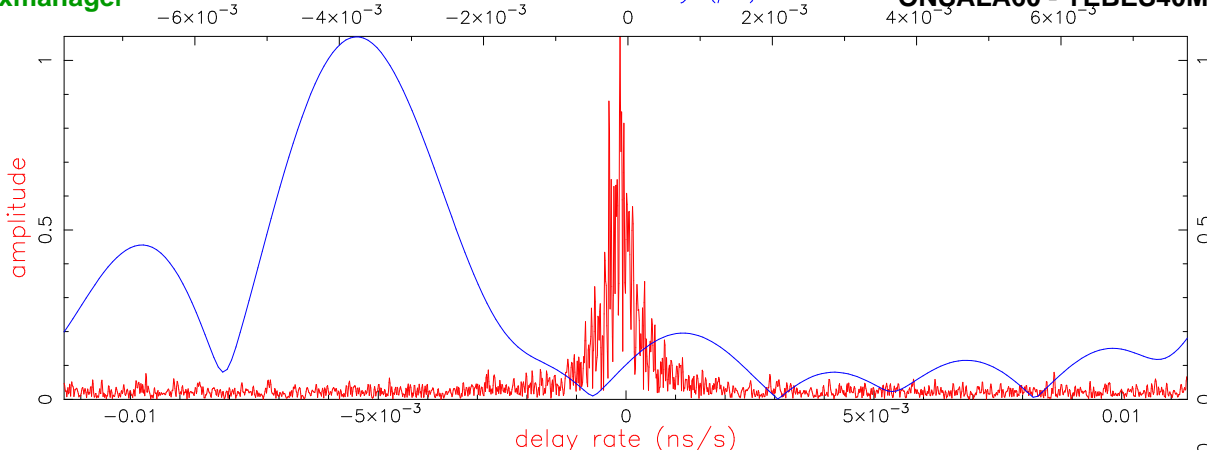
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, XY

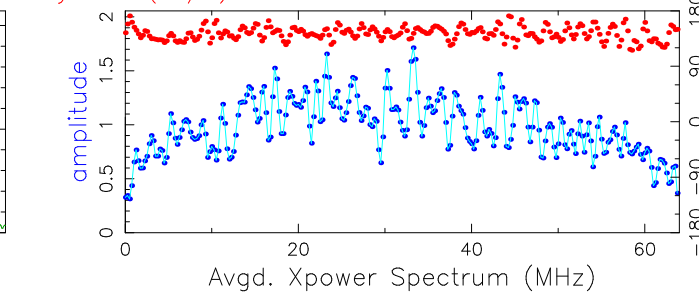
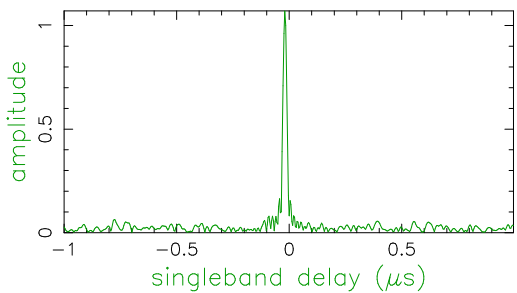
ONŞALA60 - YEŞES40M, fgroup W, pol RR

multiband delay (μ s)



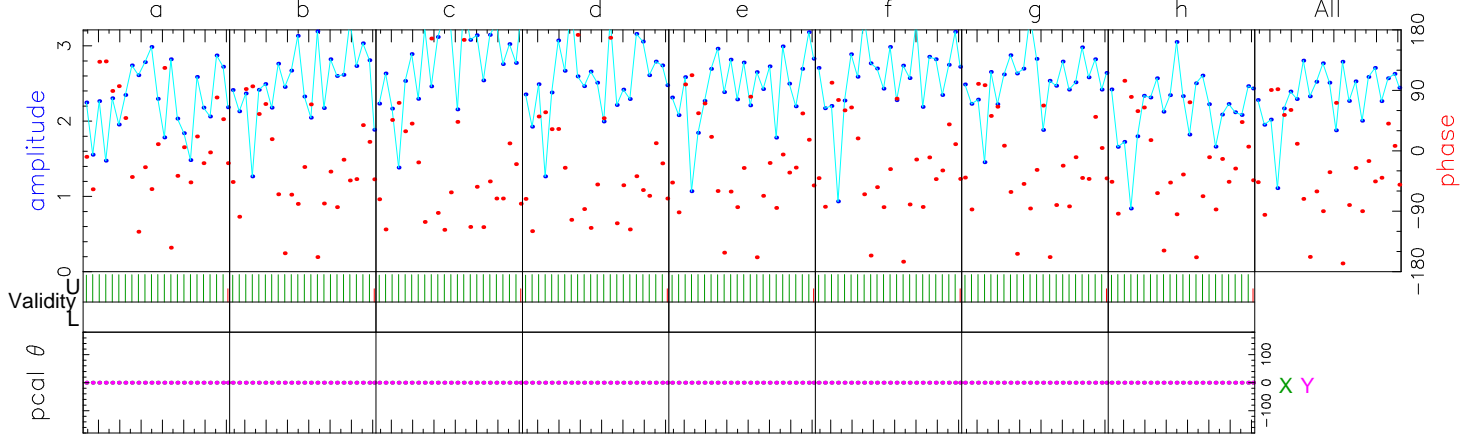
Fringe quality 3

SNR 58.7
 Int time 401.928
 Amp 1.071
 Phase -33.2
 PFD 0.0e+00
 Delays (us)
 SBD -0.019096
 MBD -0.003747
 Fringe rate (Hz)
 -0.010827
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043944
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 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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
Group delay (usec)(sbd)	6.2	-31.8	-64.5	-54.9	-22.6	-24.7	-30.4	-30.9	Phase	-33.2
Sband delay (usec)	0.9	1.2	1.3	1.2	1.1	1.2	1.2	1.0	Ampl.	1.1
Phase delay (usec)	252.0	251.3	252.0	252.3	252.3	251.9	252.0	252.1	Sbd box	252.1
Delay rate (us/s)	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	0:0	PC phase	
X:Y 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
X 1000	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y 1000	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	
Apriori delay (usec)									Resid mbdelay (usec)	-3.74661E-03 +/- 1.8E-05
Apriori clock (usec)									Resid sbdelay (usec)	-1.90955E-02 +/- 1.5E-04
Apriori clockrate (us/s)									Resid phdelay (usec)	-1.07216E-06 +/- 6.3E-08
Apriori rate (us/s)									Resid rate (us/s)	-1.25696E-07 +/- 2.7E-10
Apriori accel (us/s/s)									Resid phase (deg)	-33.2 +/- 2.0

ph/seg (deg) 72.0 4.7 Search (2048X32) 1.021 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 123.4 8.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 23.1 2.8 Inc. seg. avg. 2.331 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 12.2 4.8 Inc. frq. avg. 1.132 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 184.5 el 34.2 pa 2.9 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1635.876 1763.619 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/XY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/XY.W.16.1W87WX

Mk4/DiFX fourfit 3.21 rev 2937

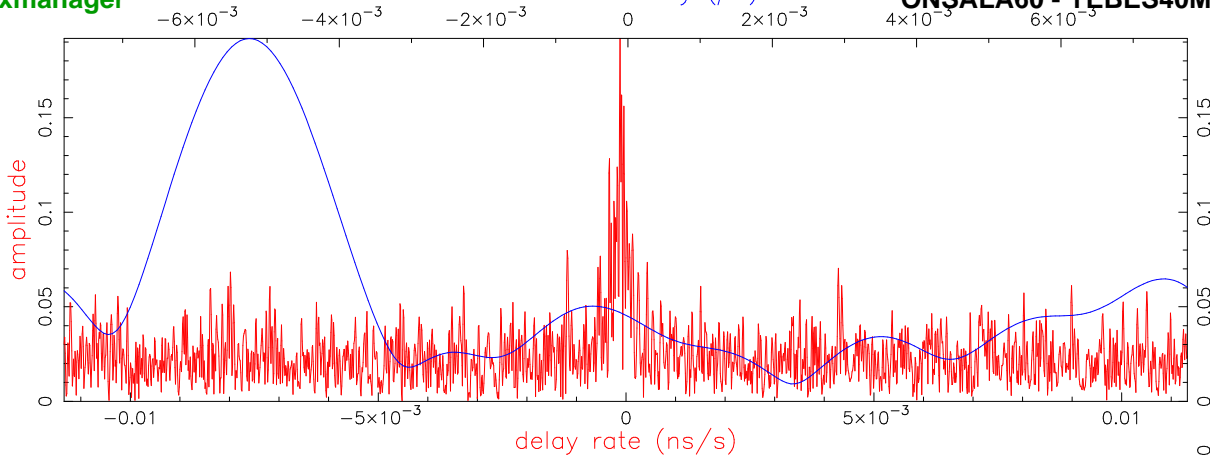
fxmanager

0106+013.1W87WX, No0007, XY

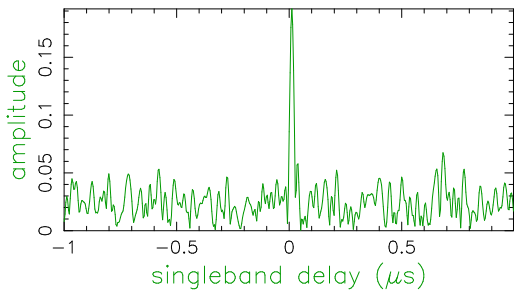
ONŞALA60 - YEŞES40M, fgroup W, pol LR

multiband delay (μ s)

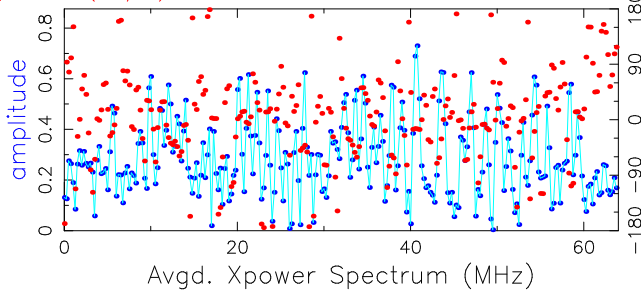
Fringe quality 9



SNR 10.5
 Int time 401.928
 Amp 0.192
 Phase -159.3
 PFD 3.1e-17
 Delays (us)
 SBD 0.011944
 MBD -0.005241
 Fringe rate (Hz)
 -0.010948
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

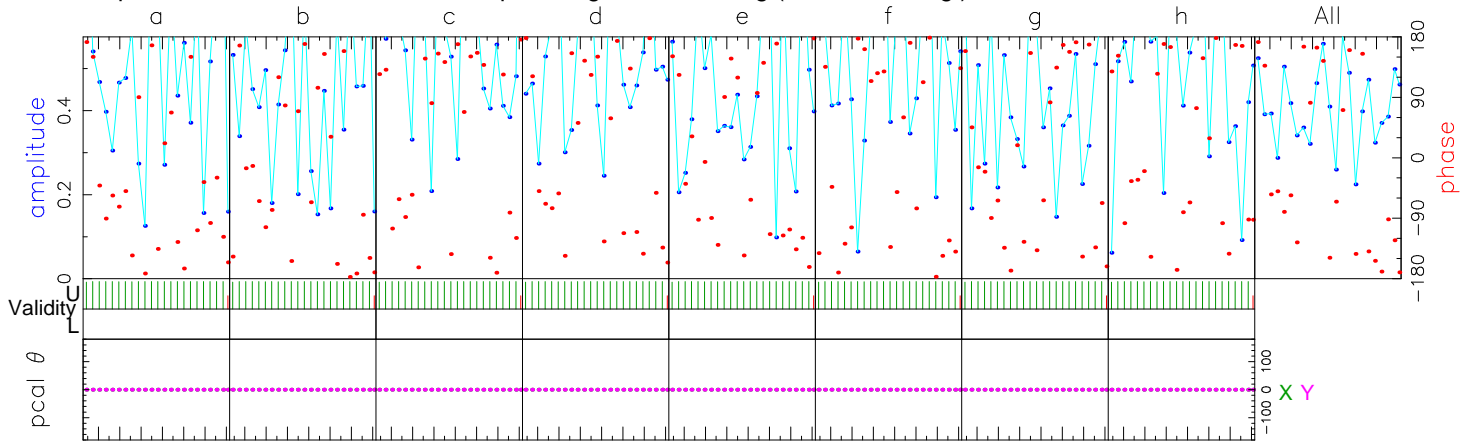


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043947
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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
	-128.2	-159.4	173.7	-165.5	-142.2	-177.8	-150.1	-140.0	Phase	-159.3
	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.1	Ampl.	0.2
	259.9	160.5	260.2	370.3	259.7	259.0	260.5	402.3	Sbd box	260.1
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	Manl 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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-4.30876595404E+03	Apriori delay (usec)	-4.30877633831E+03	Resid mbdelay (usec)	-5.24074E-03	+/-	1.0E-04
Sband delay (usec)	-4.30876439431E+03	Apriori clock (usec)	4.2315945E+01	Resid sbdelay (usec)	1.19440E-02	+/-	8.2E-04
Phase delay (usec)	-4.30877634345E+03	Apriori clockrate (us/s)	5.2500002E-07	Resid phdelay (usec)	-5.13708E-06	+/-	3.5E-07
Delay rate (us/s)	-2.80762946883E-01	Apriori rate (us/s)	-2.80762819783E-01	Resid rate (us/s)	-1.27100E-07	+/-	1.5E-09
Total phase (deg)	-80.8	Apriori accel (us/s/s)	2.37796539615E-05	Resid phase (deg)	-159.3	+/-	10.9

ph/seg (deg)	67.4	Theor.	26.1	Amplitude	0.192 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	123.1	Search (2048X32)	0.179	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	21.7	Inc. seg. avg.	0.371	Inc. frq. avg.	0.197	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	26.2	Inc. frq. avg.	0.197			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

X: az 184.5 el 34.2 pa 2.9 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1635.876 1763.619 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/XY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/XY.W.25.1W87WX

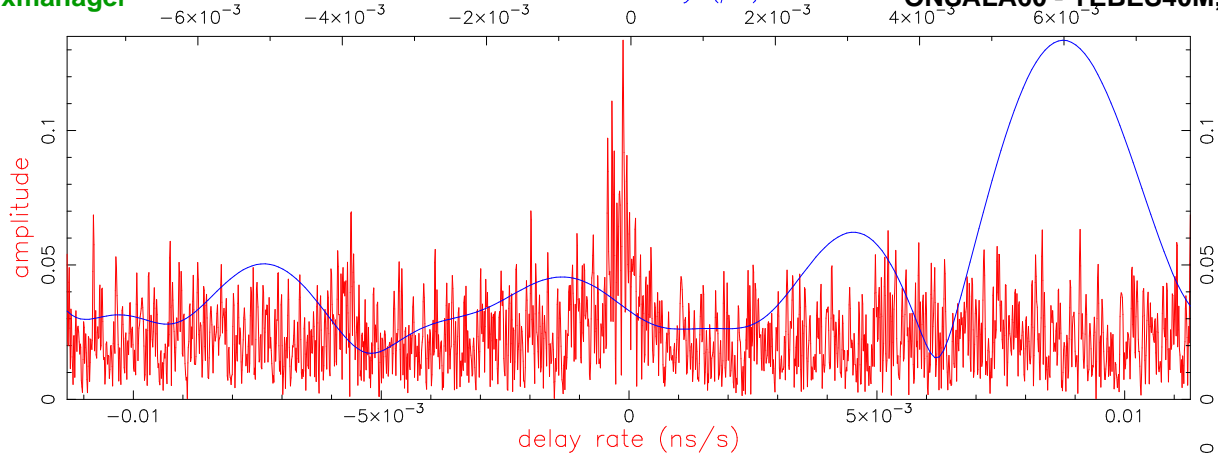
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, XY

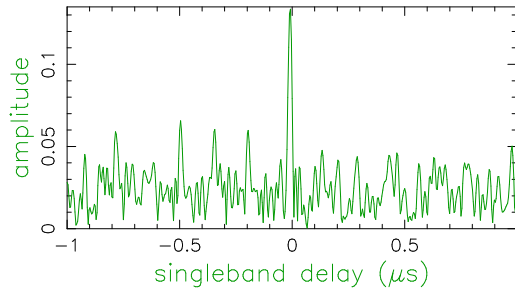
ONŞALA60 - YEŞES40M, fgroup W, pol RL

multiband delay (μ s)

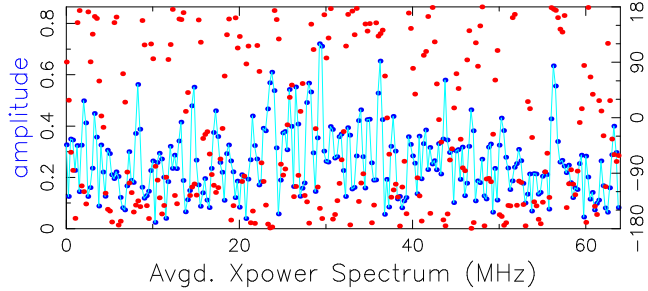


Fringe quality 9

SNR 7.4
 Int time 401.928
 Amp 0.135
 Phase 27.4
 PFD 4.3e-05
 Delays (us)
 SBD -0.009241
 MBD 0.005983
 Fringe rate (Hz)
 -0.010717
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

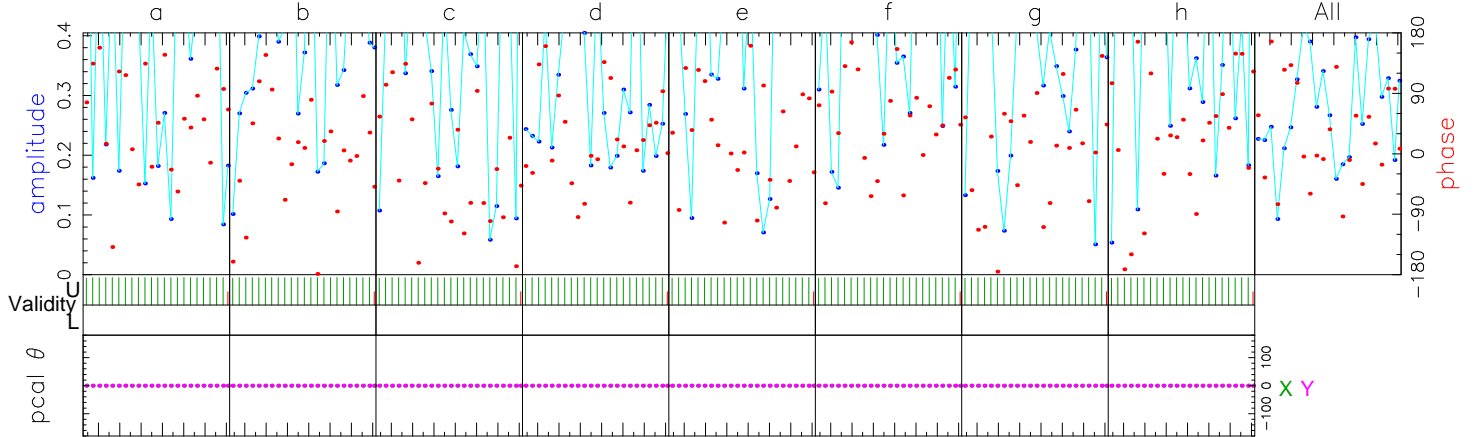


delay rate (ns/s)



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043951
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec)(sbd)	-4.30878598054E+03	Apriori delay (usec)	-4.30877633831E+03	Resid mbdelay (usec)	5.98276E-03	+/-	1.5E-04
Sband delay (usec)	-4.30878557956E+03	Apriori clock (usec)	4.2315945E+01	Resid sbdelay (usec)	-9.24125E-03	+/-	1.2E-03
Phase delay (usec)	-4.30877633743E+03	Apriori clockrate (us/s)	5.2500002E-07	Resid phdelay (usec)	8.82686E-07	+/-	5.0E-07
Delay rate (us/s)	-2.80762944192E-01	Apriori rate (us/s)	-2.80762819783E-01	Resid rate (us/s)	-1.24409E-07	+/-	2.1E-09
Total phase (deg)	-254.1	Apriori accel (us/s/s)	2.37796539615E-05	Resid phase (deg)	27.4	+/-	15.5

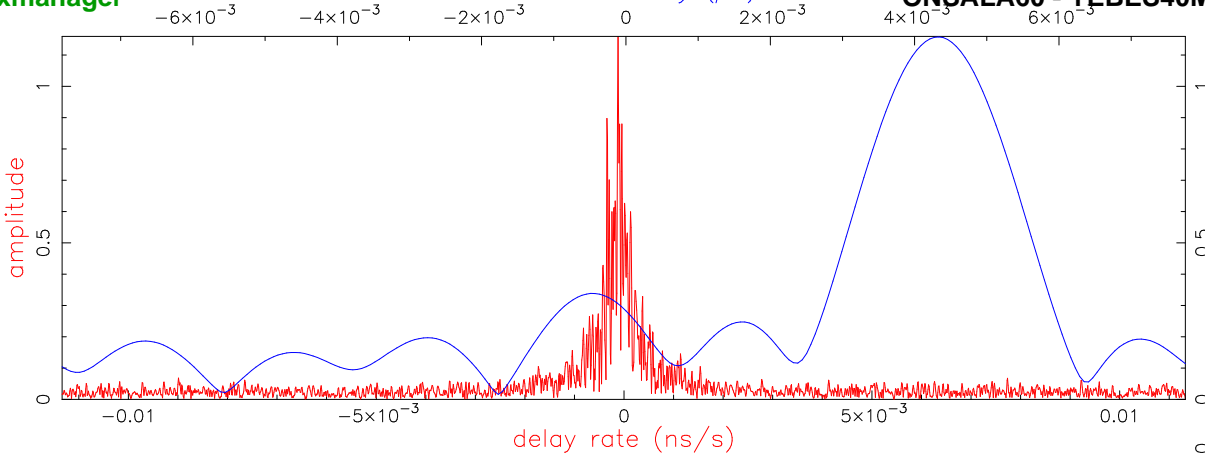
ph/seg (deg)	72.2	Theor.	37.1	Amplitude	0.135 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	125.2		64.8	Search (2048X32)	0.130	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	39.5		21.9	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	29.8		38.2	Inc. seg. avg.	0.230	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.143	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 184.5 el 34.2 pa 2.9 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1635.876 1763.619 simultaneous interpolator

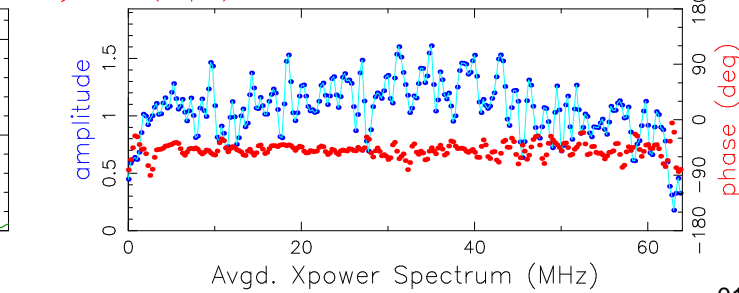
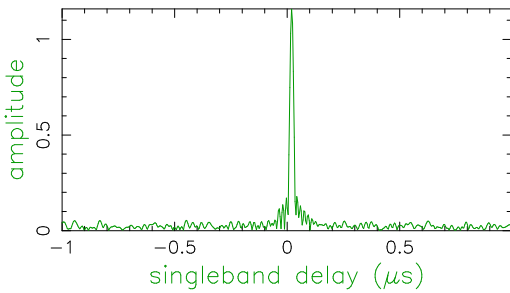
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/XY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/XY.W.36.1W87WX

multiband delay (μ s)

Fringe quality 4

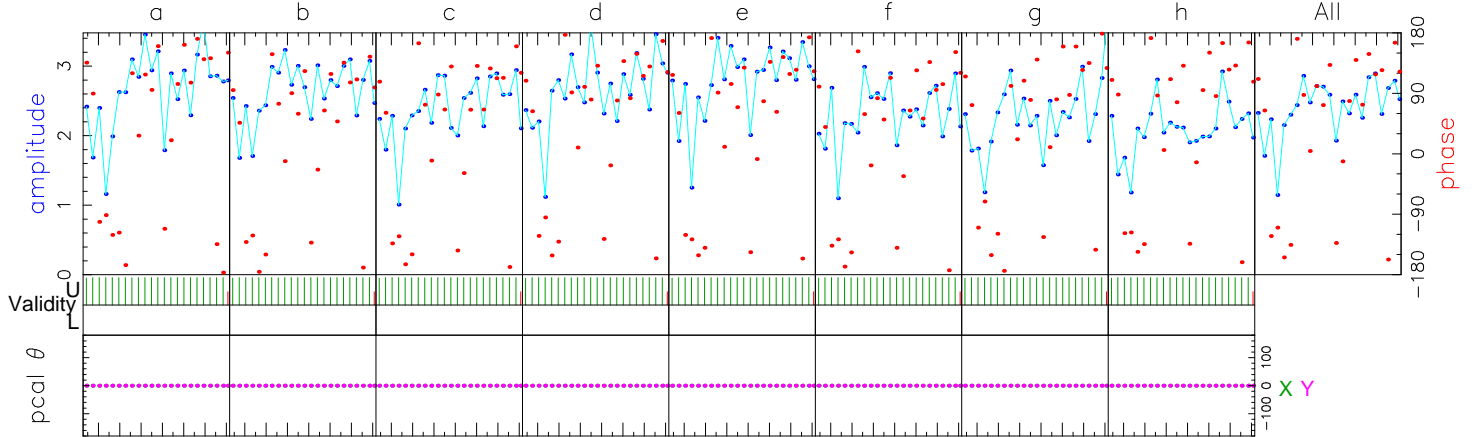


SNR 63.6
 Int time 401.928
 Amp 1.160
 Phase 131.1
 PFD 0.0e+00
 Delays (us)
 SBD 0.020042
 MBD 0.004340
 Fringe rate (Hz)
 -0.010881
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043941
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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		
X	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
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

Group delay (usec)(sbd)	-4.30875637292E+03	Apriori delay (usec)	-4.30877633831E+03	Resid mbdelay (usec)	4.34039E-03	+/-	1.7E-05
Sband delay (usec)	-4.30875629656E+03	Apriori clock (usec)	4.2315945E+01	Resid sbdelay (usec)	2.00418E-02	+/-	1.4E-04
Phase delay (usec)	-4.30877633408E+03	Apriori clockrate (us/s)	5.2500002E-07	Resid phdelay (usec)	4.22915E-06	+/-	5.8E-08
Delay rate (us/s)	-2.80762946100E-01	Apriori rate (us/s)	-2.80762819783E-01	Resid rate (us/s)	-1.26317E-07	+/-	2.5E-10
Total phase (deg)	-150.3	Apriori accel (us/s/s)	2.37796539615E-05	Resid phase (deg)	131.1	+/-	1.8

ph/seg (deg)	70.4	Theor.	4.3	Amplitude	1.160 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	112.5	Search (2048X32)	1.106	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	14.2	Inc. seg. avg.	2.395	Inc. frq. avg.	1.184	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	11.1	Inc. frq. avg.	1.184			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
						Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

X: az 184.5 el 34.2 pa 2.9 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 1635.876 1763.619 simultaneous interpolator

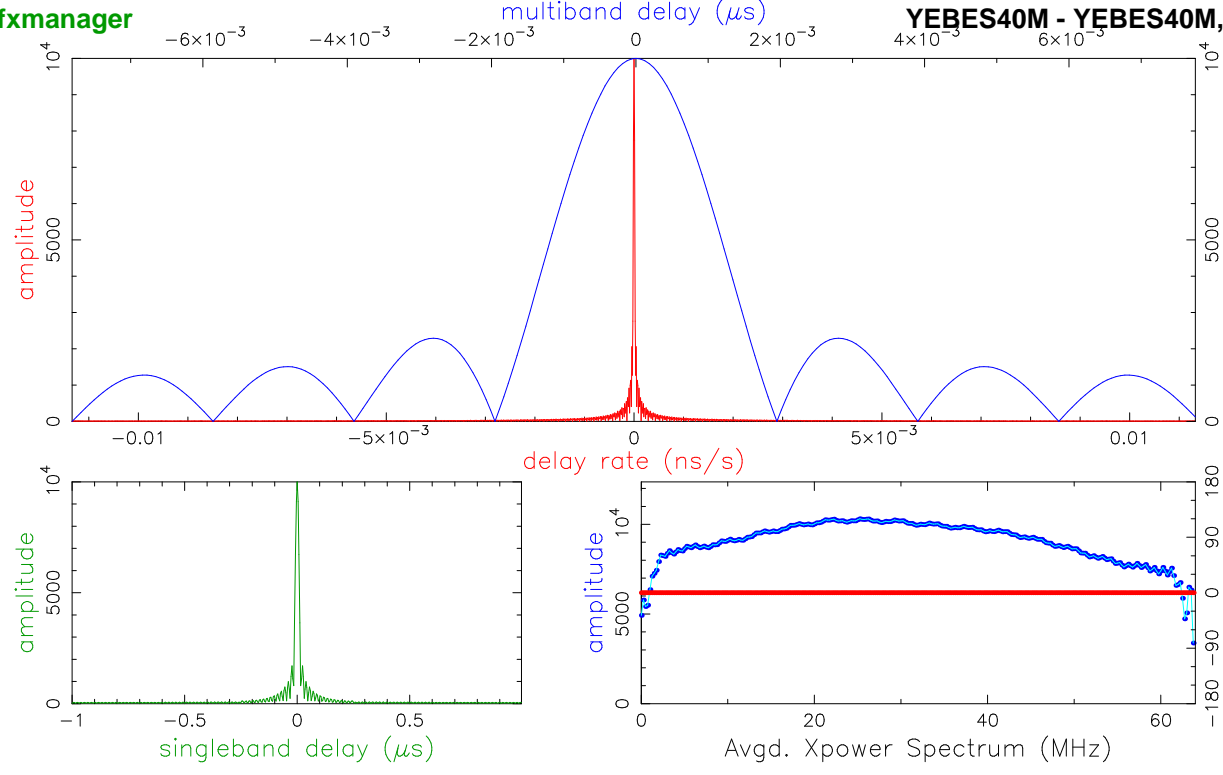
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/XY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/XY.W.5.1W87WX

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, YY

YEBES40M - YEBES40M, fgroup W, pol RR

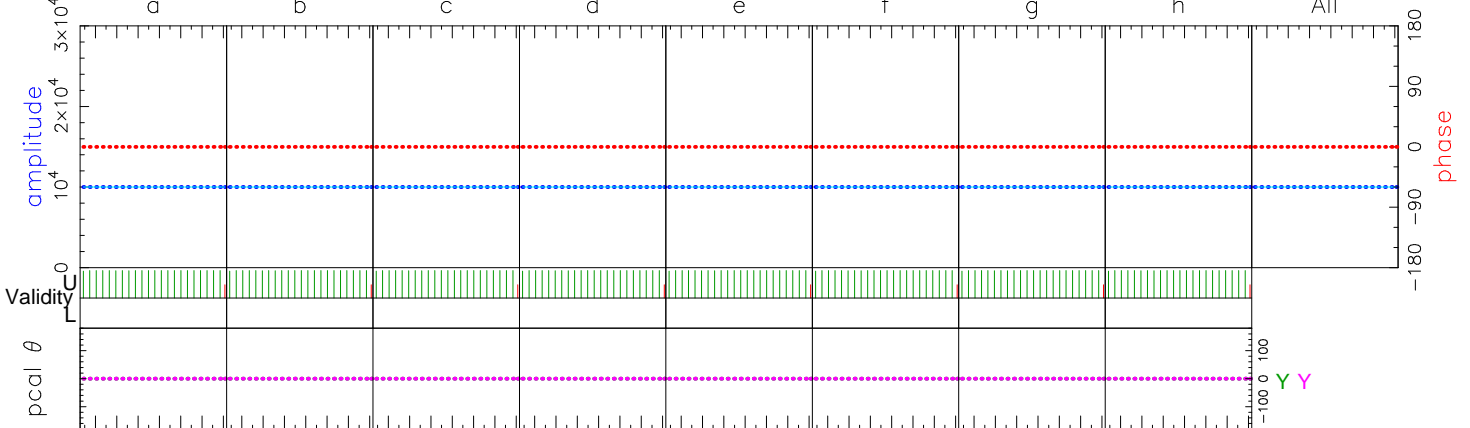


Fringe quality 9

SNR 548242.2
 Int time 401.928
 Amp 10000.012
 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. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043944
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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	Ampl.	10000.0
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	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	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Mani PC	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	PC amp	
									Chan ids	
									Tracks	
									Chan ids	
									Tracks	

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.0E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.6E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 6.7E-12
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.9E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.012 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (2048X32) 10000.012 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Y: az 162.3 el 49.8 pa -12.6 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/YY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/YY.W.15.1W87WX

Mk4/DiFX fourfit 3.21 rev 2937

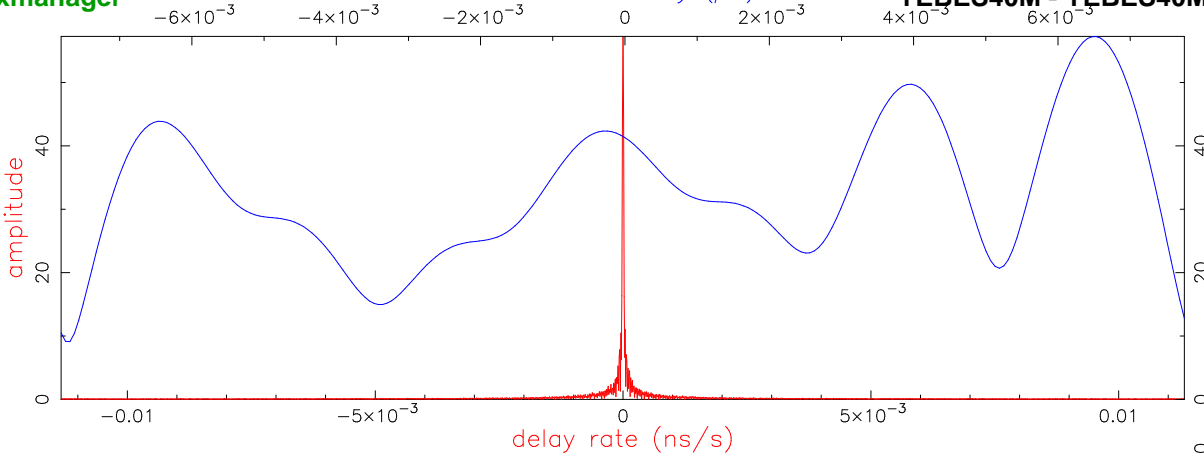
fxmanager

0106+013.1W87WX, No0007, YY

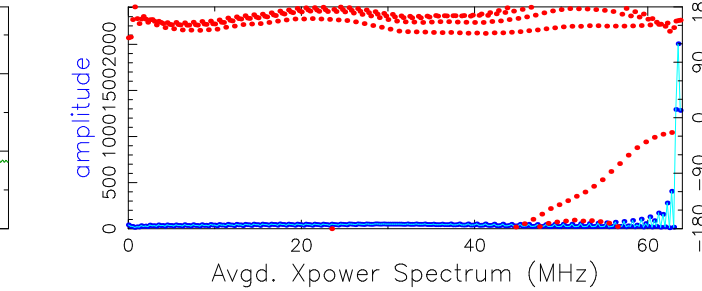
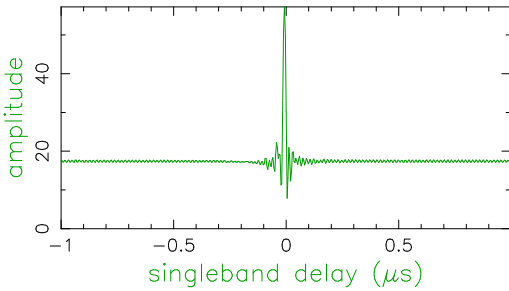
YEBES40M - YEBES40M, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 5

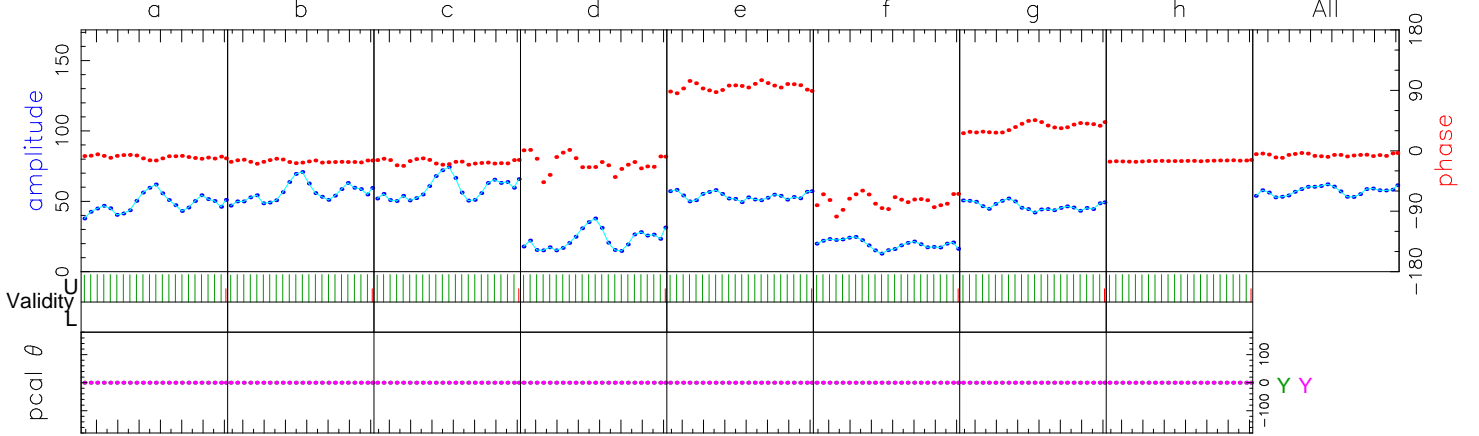


SNR 3139.9
 Int time 401.928
 Amp 57.271
 Phase -6.4
 PFD 0.0e+00
 Delays (us)
 SBD -0.007943
 MBD 0.006508
 Fringe rate (Hz)
 -0.000013
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043947
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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	
	-9.5	-16.0	-17.0	-18.5	95.1	-74.8	34.9	-15.2		Phase	-6.4
	48.5	56.2	58.7	22.5	53.4	19.4	46.4	246.0		Ampl.	68.9
	254.7	254.3	254.7	254.5	253.5	252.0	256.0	255.0		Sbd box	255.0
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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Tracks	
										Chan ids	
										Tracks	

Group delay (usec)(sbd) -9.11715625000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) 6.50784E-03 +/- 3.5E-07
 Sband delay (usec) -7.94300000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) -7.94300E-03 +/- 2.7E-06
 Phase delay (usec) -2.06887030863E-07 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) -2.06887E-07 +/- 1.2E-09
 Delay rate (us/s) -1.47379984874E-10 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) -1.47380E-10 +/- 5.1E-12
 Total phase (deg) -6.4 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) -6.4 +/- 0.0

RMS Theor. Amplitude 57.271 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 1.9 0.1 Search (2048X32) 56.352 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 4.9 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 53.4 0.1 Inc. seg. avg. 57.294 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 121.1 0.1 Inc. frq. avg. 68.895 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Y: az 162.3 el 49.8 pa -12.6 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/YY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/YY.W.24.1W87WX

Mk4/DiFX fourfit 3.21 rev 2937

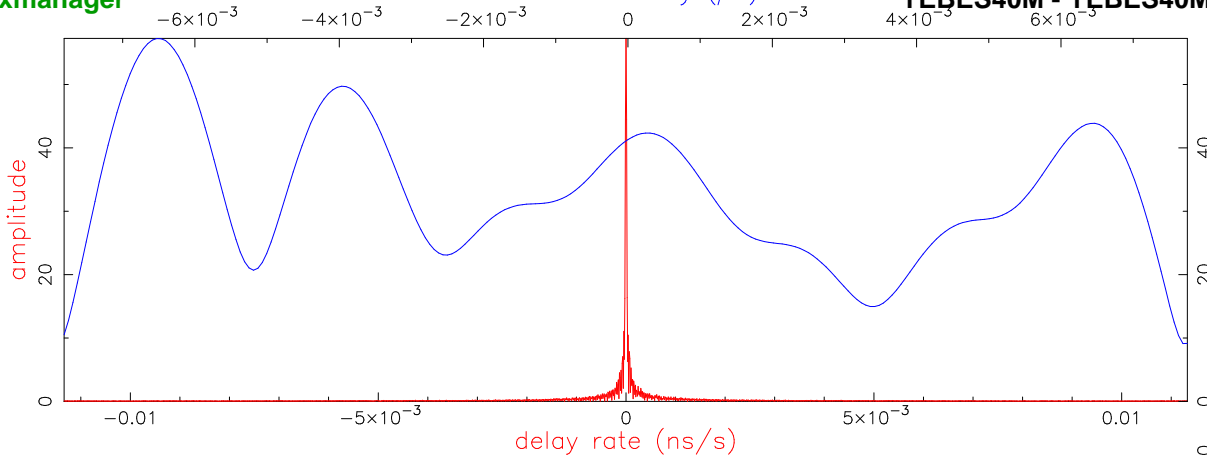
fxmanager

0106+013.1W87WX, No0007, YY

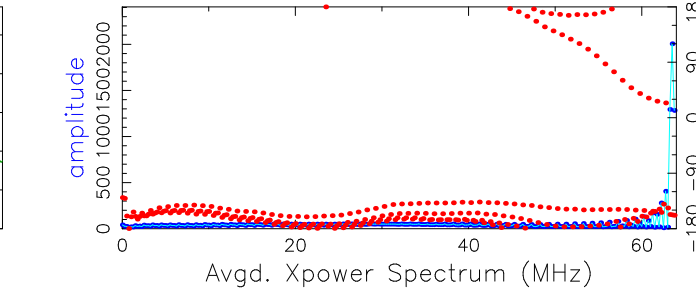
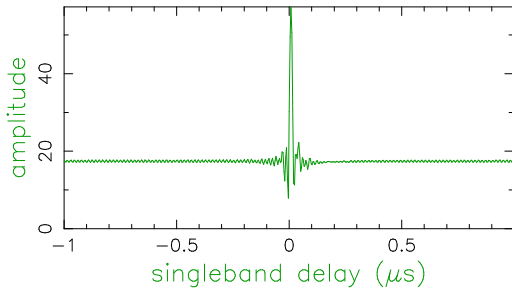
YEBES40M - YEBES40M, fgroup W, pol RL

multiband delay (μ s)

Fringe quality 5

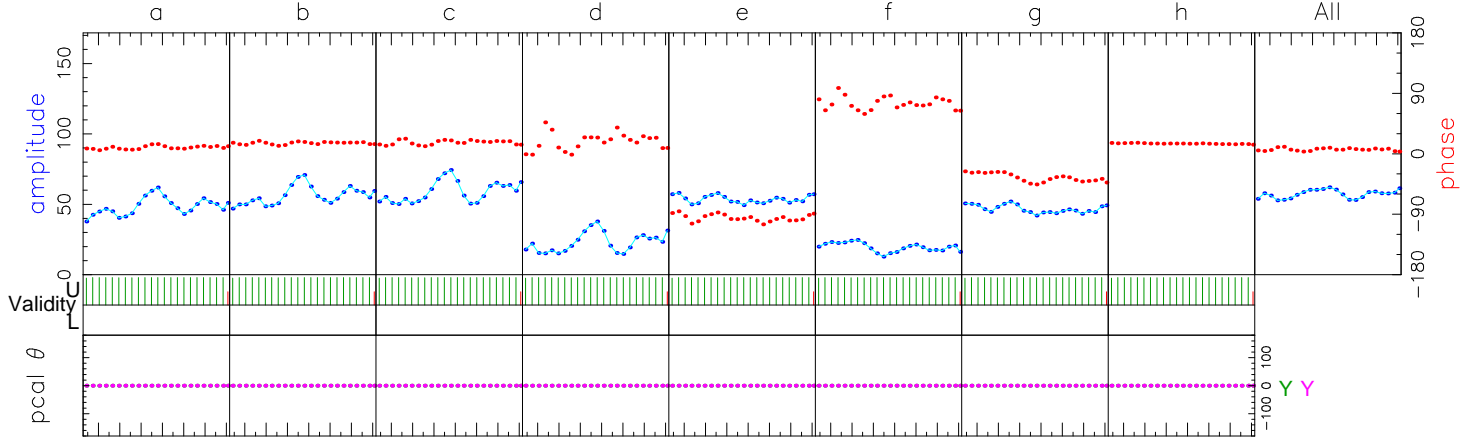


SNR 3139.9
 Int time 401.928
 Amp 57.271
 Phase 6.4
 PFD 0.0e+00
 Delays (us)
 SBD 0.007943
 MBD -0.006508
 Fringe rate (Hz)
 0.000013
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043950
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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
	9.5	16.0	17.0	18.5	-95.1	74.8	-34.9	15.2	Phase	6.4
	48.5	56.2	58.7	22.5	53.4	19.4	46.4	246.0	Ampl.	68.9
	259.3	259.7	259.3	259.5	260.5	262.0	258.0	259.0	Sbd box	259.0
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	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 9.11715625000E-03 Apriori delay (usec) 0.00000000000E+00 Resid mbdelay (usec) -6.50784E-03 +/- 3.5E-07
 Sband delay (usec) 7.94300000000E-03 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 7.94300E-03 +/- 2.7E-06
 Phase delay (usec) 2.06887030878E-07 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 2.06887E-07 +/- 1.2E-09
 Delay rate (us/s) 1.47379984874E-10 Apriori rate (us/s) 0.00000000000E+00 Resid rate (us/s) 1.47380E-10 +/- 5.1E-12
 Total phase (deg) 6.4 Apriori accel (us/s/s) 0.00000000000E+00 Resid phase (deg) 6.4 +/- 0.0

RMS Theor. Amplitude 57.271 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 1.9 0.1 Search (2048X32) 56.352 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 4.9 0.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 53.4 0.1 Inc. seg. avg. 57.294 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 121.1 0.1 Inc. frq. avg. 68.895 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

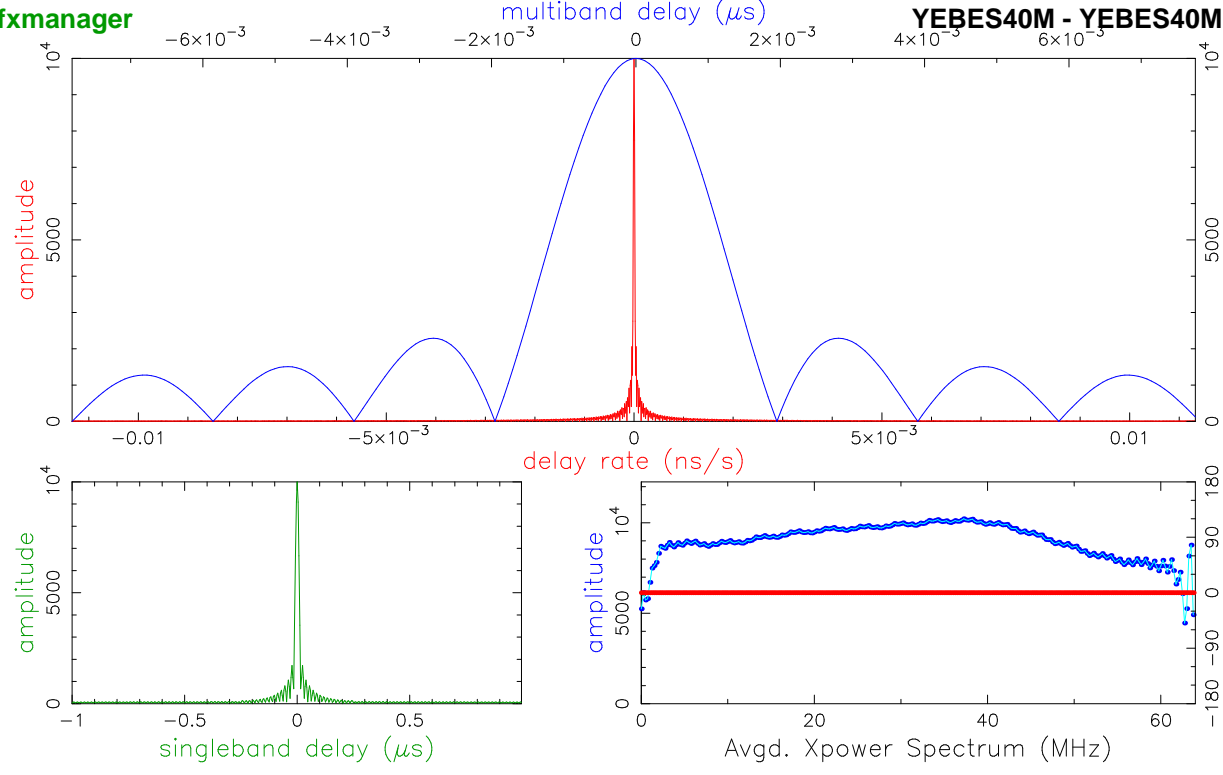
Y: az 162.3 el 49.8 pa -12.6 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/YY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/YY.W.33.1W87WX

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, YY

YEBES40M - YEBES40M, fgroup W, pol LL

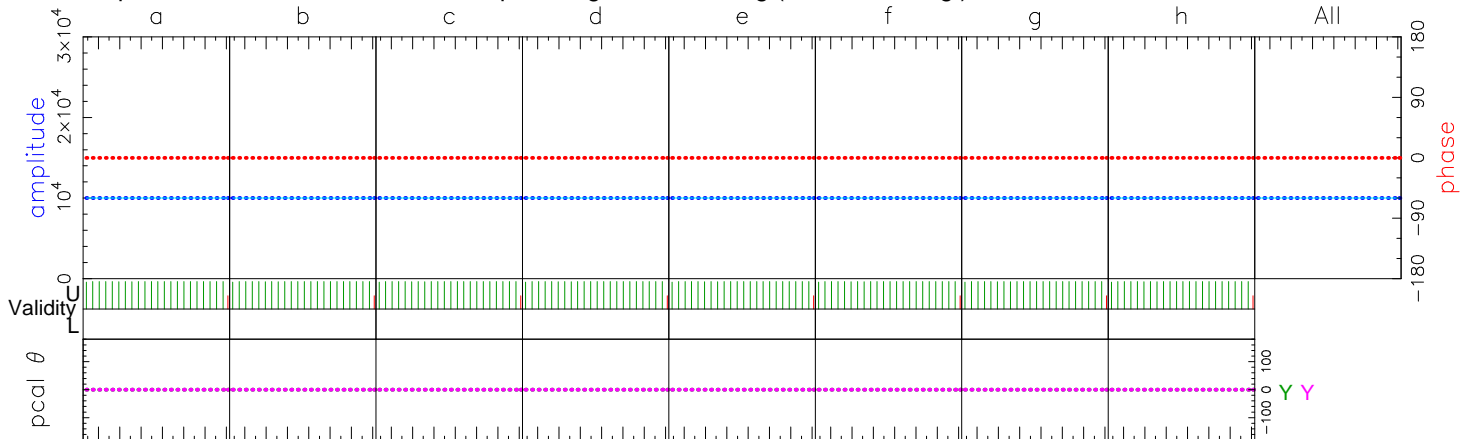


Fringe quality 9

SNR 548242.2
 Int time 401.928
 Amp 10000.012
 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. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043941
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"

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	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 2.0E-09
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 1.6E-08
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 6.7E-12
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 2.9E-14
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.012 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 0.0 0.0 Search (2048X32) 10000.012 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Y: az 162.3 el 49.8 pa -12.6 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/YY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/YY.W.7.1W87WX

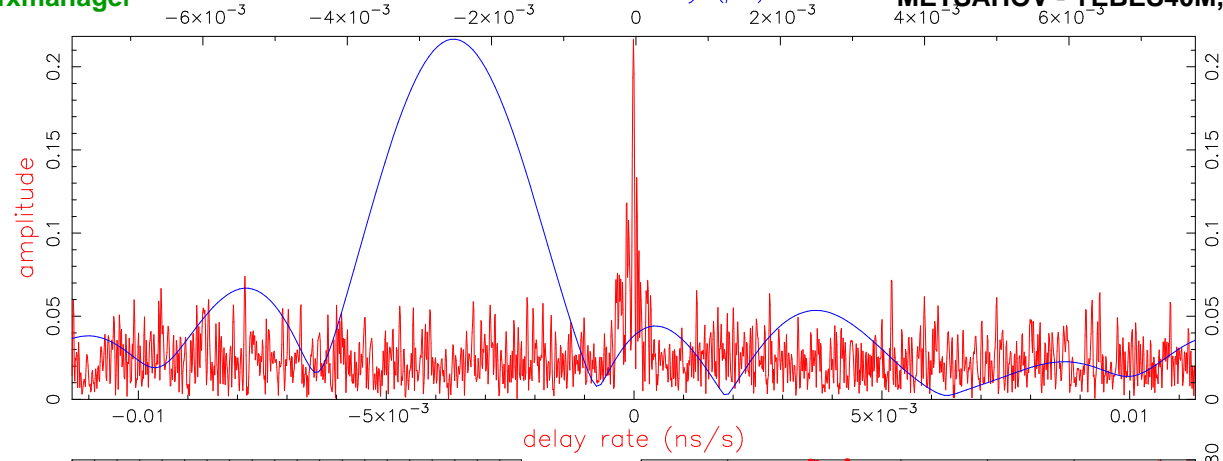
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

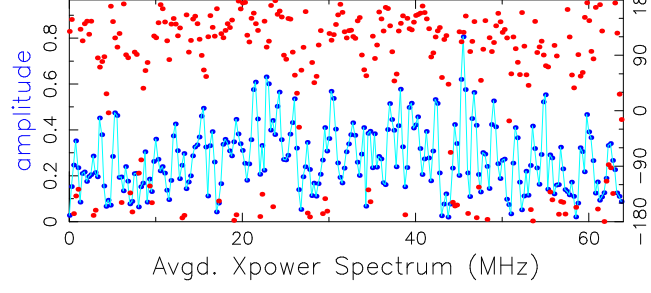
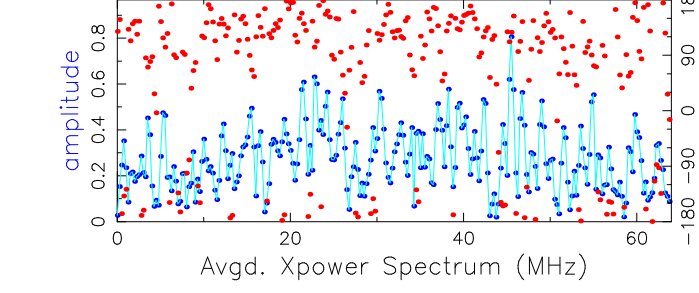
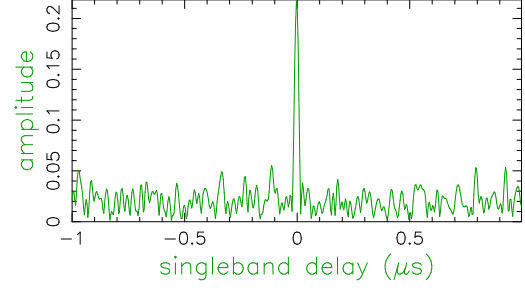
0106+013.1W87WX, No0007, ZY

METSAHOV - YEBES40M, fgroup W, pol RR

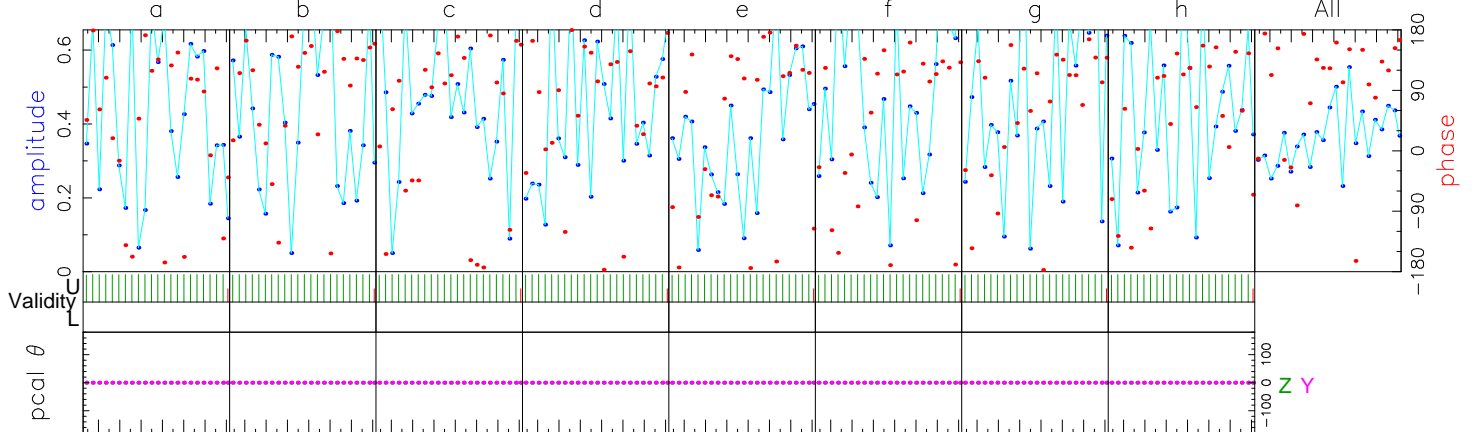
multiband delay (μ s)



Fringe quality 9
 SNR 12.0
 Int time 401.573
 Amp 0.218
 Phase 134.7
 PFD 2.8e-24
 Delays (us)
 SBD -0.002611
 MBD -0.002491
 Fringe rate (Hz) -0.001249
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c211a
 Exper # 16383
 Yr:day 2021:113
 Start 103016.89
 Stop 103659.84
 FRT 103330.00
 Corr/FF/build
 2021:288:002135
 2021:288:043945
 2021:252:122852
 RA & Dec (J2000)
 01h08m38.771111s
 +01°35'00.317183"



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
	131.9	137.2	141.6	122.9	153.0	145.2	128.2	120.7	Phase	134.7
	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	Ampl.	0.2
	256.0	255.5	255.6	256.4	256.7	255.9	256.6	507.6	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	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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-5.67424965637E+03		Apriori delay (usec)		-5.67424716571E+03		Resid mbdelay (usec)		-2.49067E-03	+/- 9.1E-05
Sband delay (usec)	-5.67424977696E+03		Apriori clock (usec)		-1.4757925E+01		Resid sbdelay (usec)		-2.61125E-03	+/- 7.2E-04
Phase delay (usec)	-5.67424716136E+03		Apriori clockrate (us/s)		1.3000000E-08		Resid phdelay (usec)		4.34321E-06	+/- 3.1E-07
Delay rate (us/s)	-4.40283449169E-01		Apriori rate (us/s)		-4.40283434672E-01		Resid rate (us/s)		-1.44978E-08	+/- 1.3E-09
Total phase (deg)			Apriori accel (us/s/s)		3.08223169527E-05		Resid phase (deg)		134.7	+/- 9.6

ph/seg (deg) 69.6 23.0 Search (2048X32) 0.214 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 76.7 40.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 12.1 13.5 Inc. seg. avg. 0.338 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 17.4 23.6 Inc. frq. avg. 0.214 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 198.8 el 30.2 pa 9.7 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 2558.014 2006.814 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/ZY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/ZY.W.17.1W87WX

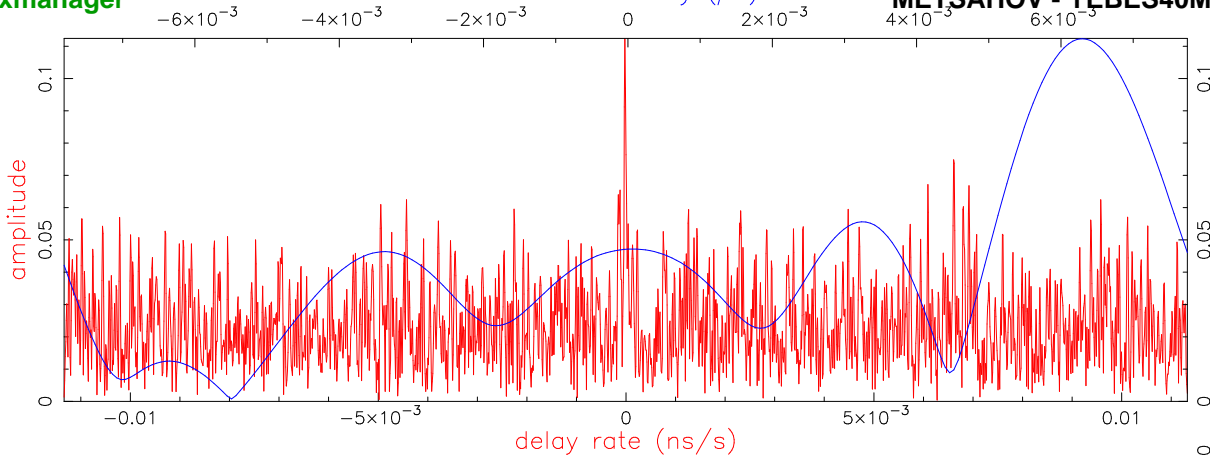
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, ZY

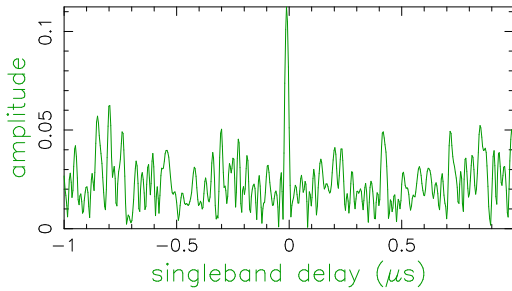
METSAHOV - YEBES40M, fgroup W, pol LR

multiband delay (μ s)

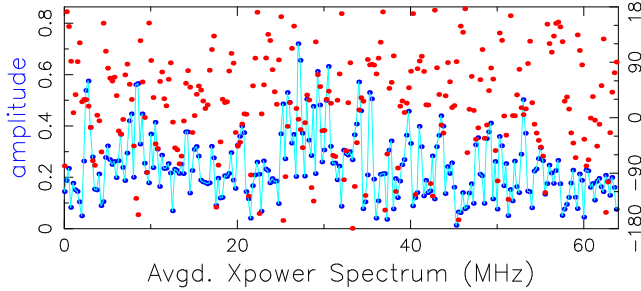


Fringe quality 0

SNR 6.2
Int time 401.573
Amp 0.112
Phase -172.3
PFD 1.7e-01
Delays (us)
SBD -0.011324
MBD 0.006307
Fringe rate (Hz)
-0.001768
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

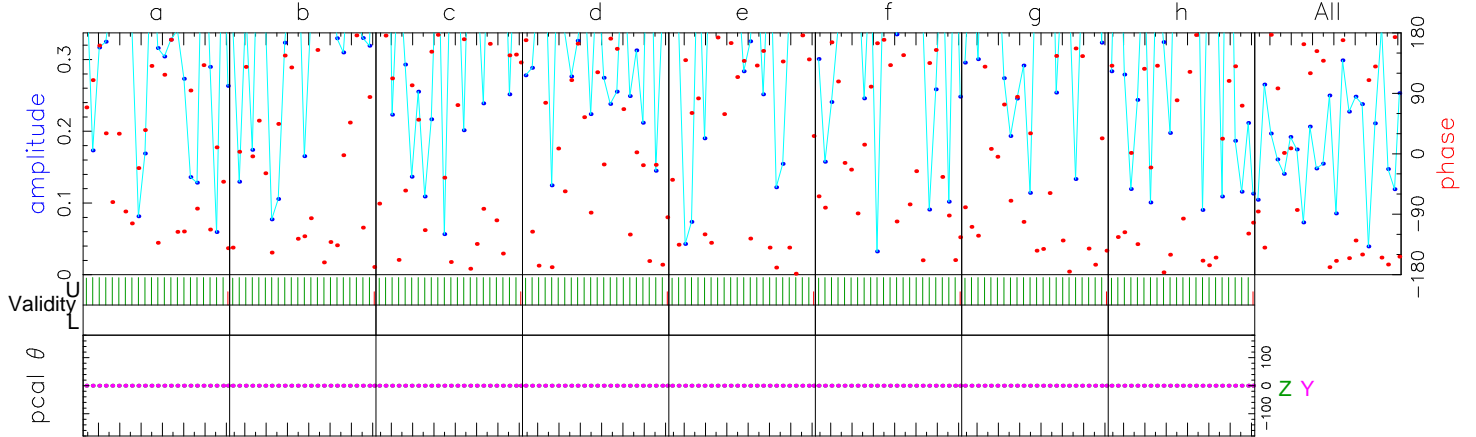


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 103016.89
Stop 103659.84
FRT 103330.00
Corr/FF/build
2021:288:002135
2021:288:043948
2021:252:122852
RA & Dec (J2000)
01h08m38.771111s
+01°35'00.317183"

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
	-137.9	-173.8	-177.1	172.5	170.4	-122.5	-137.0	167.7	Phase	-172.3
	0.0	0.1	0.2	0.0	0.2	0.1	0.1	0.2	Ampl.	0.1
	233.2	438.7	253.5	439.9	255.0	248.0	179.1	255.8	Sbd box	254.1
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	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

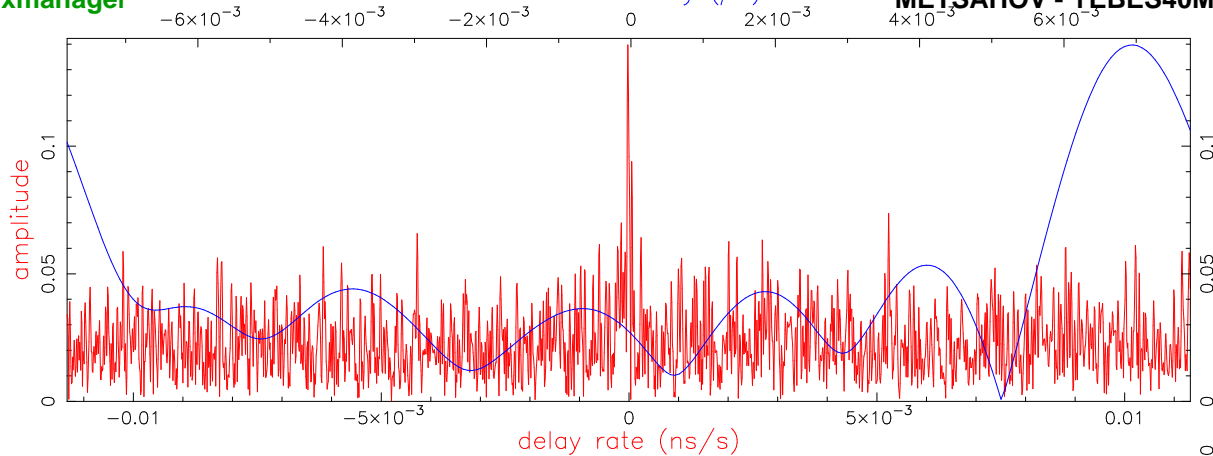
Group delay (usec)(sbd)	-5.67425648420E+03	Apriori delay (usec)	-5.67424716571E+03	Resid mbdelay (usec)	6.30651E-03	+/-	1.8E-04
Sband delay (usec)	-5.67425848946E+03	Apriori clock (usec)	-1.4757925E+01	Resid sbdelay (usec)	-1.13238E-02	+/-	1.4E-03
Phase delay (usec)	-5.67424717126E+03	Apriori clockrate (us/s)	1.3000000E-08	Resid phdelay (usec)	-5.55732E-06	+/-	6.0E-07
Delay rate (us/s)	-4.40283455196E-01	Apriori rate (us/s)	-4.40283434672E-01	Resid rate (us/s)	-2.05241E-08	+/-	2.6E-09
Total phase (deg)	-119.8	Apriori accel (us/s/s)	3.08223169527E-05	Resid phase (deg)	-172.3	+/-	18.6

ph/seg (deg)	69.7	Theor.	44.6	Amplitude	0.112 +/- 0.018	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	91.8		77.8	Search (2048X32)	0.112	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	31.3		26.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	59.7		45.9	Inc. seg. avg.	0.142	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
				Inc. frq. avg.	0.110	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

Z: az 198.8 el 30.2 pa 9.7 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 2558.014 2006.814 simultaneous interpolator

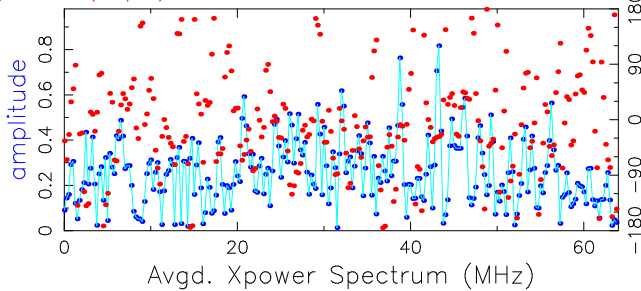
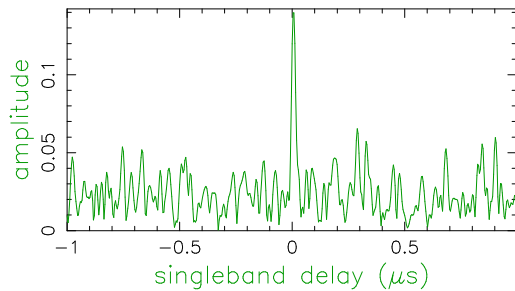
Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/ZY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/ZY.W.28.1W87WX

multiband delay (μs)



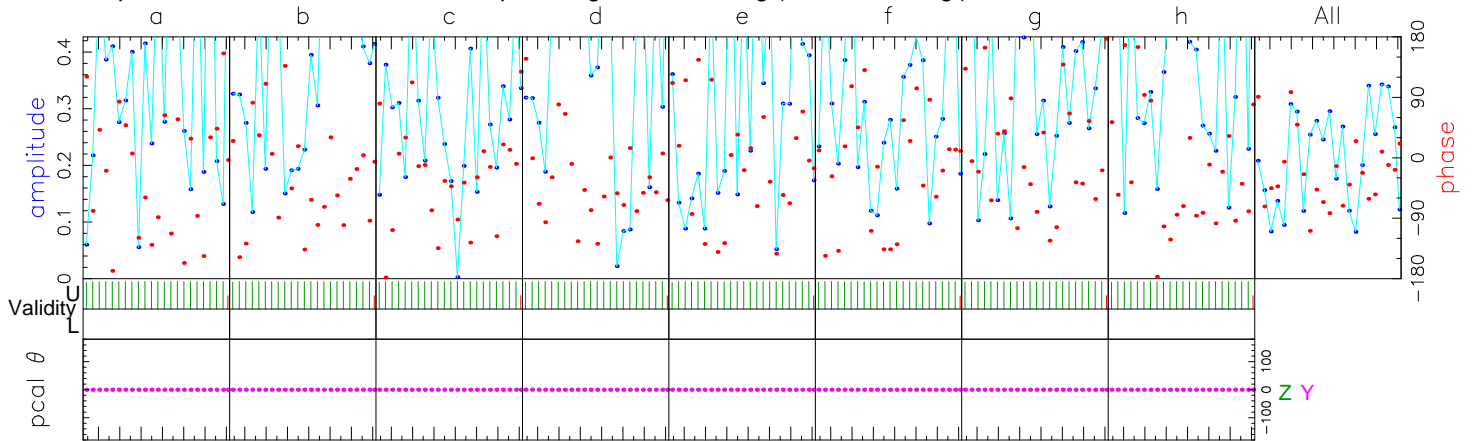
Fringe quality 9

SNR 7.8
Int time 401.573
Amp 0.142
Phase -30.2
PFD 2.1e-06
Delays (us)
SBD 0.005841
MBD 0.006959
Fringe rate (Hz)
-0.001860
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 103016.89
Stop 103659.84
FRT 103330.00
Corr/FF/build
2021:288:002135
2021:288:043951
2021:252:122852
RA & Dec (J2000)
01h08m38.771111s
+01°35'00.317183"

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
	-22.2	-43.6	-23.5	-41.2	-1.1	18.8	-27.4	-54.0	Phase	-30.2
	0.1	0.2	0.1	0.2	0.1	0.1	0.1	0.2	Ampl.	0.1
	475.5	257.7	283.4	258.8	214.7	346.6	249.7	257.0	Sbd box	258.5
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	
									Tracks	
Group delay (usec)(sbd)	-5.67424020666E+03		Apriori delay (usec)		-5.67424716571E+03		Resid mbdelay (usec)		6.95904E-03	+/- 1.4E-04
Sband delay (usec)	-5.67424132496E+03		Apriori clock (usec)		-1.4757925E+01		Resid sbdelay (usec)		5.84075E-03	+/- 1.1E-03
Phase delay (usec)	-5.67424716668E+03		Apriori clockrate (us/s)		1.3000000E-08		Resid phdelay (usec)		-9.73011E-07	+/- 4.7E-07
Delay rate (us/s)	-4.40283456266E-01		Apriori rate (us/s)		-4.40283434672E-01		Resid rate (us/s)		-2.15947E-08	+/- 2.0E-09
Total phase (deg)			Apriori accel (us/s/s)		3.08223169527E-05		Resid phase (deg)		-30.2	+/- 14.7

ph/seg (deg) 51.8 35.2 Amplitude 0.142 +/- 0.018 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 81.0 61.5 Search (2048X32) 0.139 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 26.5 20.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 35.5 36.3 Inc. seg. avg. 0.184 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.140 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Z: az 198.8 el 30.2 pa 9.7 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 2558.014 2006.814 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/ZY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/ZY.W.37.1W87WX

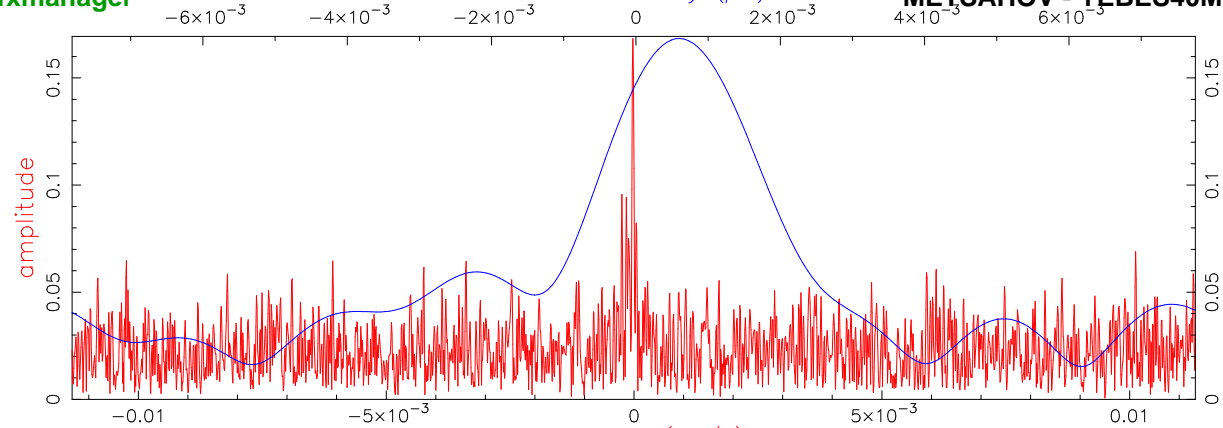
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0106+013.1W87WX, No0007, ZY

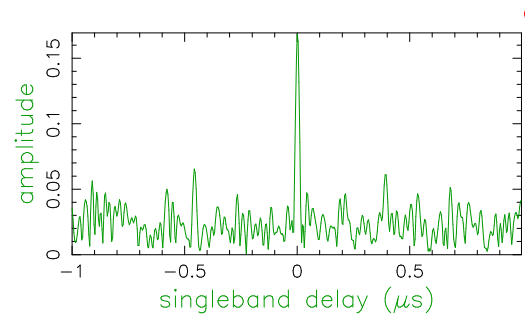
METSAHOV - YEBES40M, fgroup W, pol LL

multiband delay (μ s)

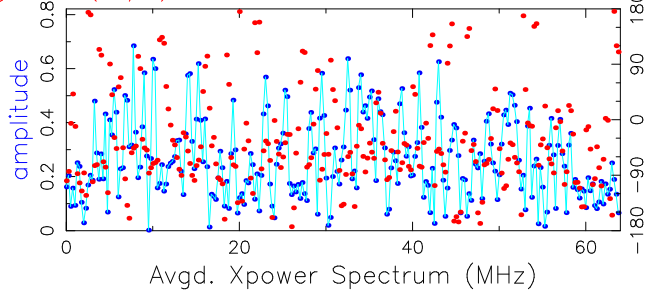


Fringe quality 9

SNR 9.3
Int time 401.573
Amp 0.169
Phase -52.1
PFD 6.5e-12
Delays (us)
SBD 0.001102
MBD 0.000647
Fringe rate (Hz)
-0.001666
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

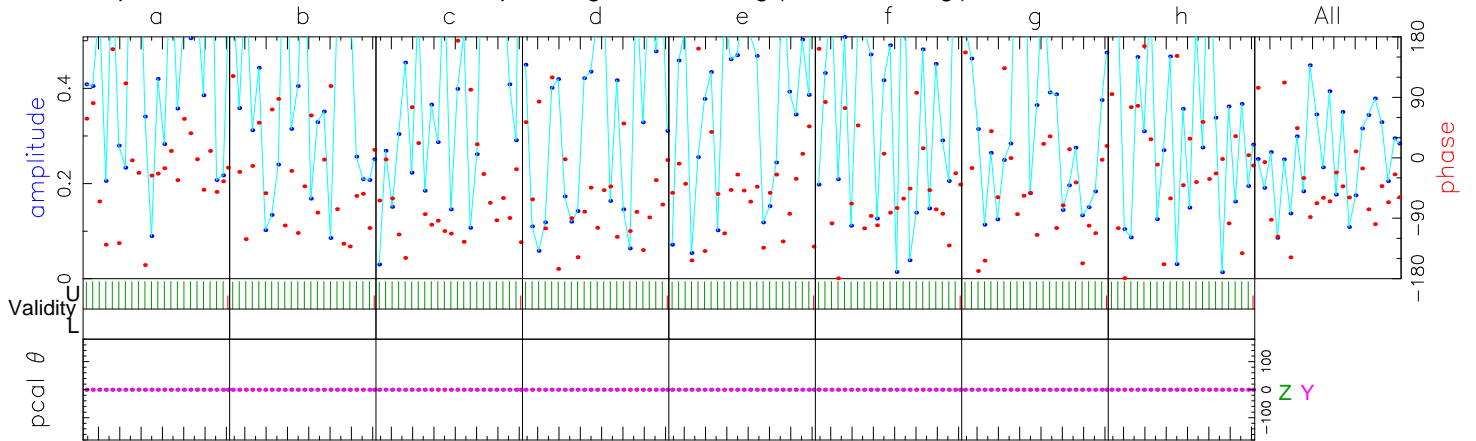


delay rate (ns/s)



Exp. c211a
Exper # 16383
Yr:day 2021:113
Start 103016.89
Stop 103659.84
FRT 103330.00
Corr/FF/build
2021:288:002135
2021:288:043942
2021:252:122852
RA & Dec (J2000)
01h08m38.771111s
+01°35'00.317183"

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
	-3.1	-72.6	-79.5	-76.1	-55.4	-50.3	-48.3	-23.5	Phase	-52.1
	0.3	0.2	0.2	0.2	0.2	0.2	0.1	0.1	Ampl.	0.2
	255.8	346.8	256.7	256.3	257.5	256.8	46.3	188.0	Sbd box	257.3
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	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	

Group delay (usec)(sbd)	-5.67424651904E+03	Apriori delay (usec)	-5.67424716571E+03	Resid mbdelay (usec)	6.46667E-04	+/-	1.2E-04
Sband delay (usec)	-5.67424606346E+03	Apriori clock (usec)	-1.4757925E+01	Resid sbdelay (usec)	1.10225E-03	+/-	9.3E-04
Phase delay (usec)	-5.67424716739E+03	Apriori clockrate (us/s)	1.3000000E-08	Resid phdelay (usec)	-1.68125E-06	+/-	4.0E-07
Delay rate (us/s)	-4.40283454008E-01	Apriori rate (us/s)	-4.40283434672E-01	Resid rate (us/s)	-1.93365E-08	+/-	1.7E-09
Total phase (deg)	-359.6	Apriori accel (us/s/s)	3.08223169527E-05	Resid phase (deg)	-52.1	+/-	12.3

ph/seg (deg)	63.1	Theor.	29.6	Amplitude	0.169 +/- 0.018	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	78.0		51.7	Search (2048X32)	0.167	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	28.9		17.5	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	30.1		30.5	Inc. seg. avg.	0.232	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.179	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

Z: az 198.8 el 30.2 pa 9.7 Y: az 162.3 el 49.8 pa -12.6 u,v (fr/asec) 2558.014 2006.814 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c211a/v2/1234/No0007/ZY..1W87WX Output file: /Exps/c211a/v2/1234/No0007/ZY.W.9.1W87WX