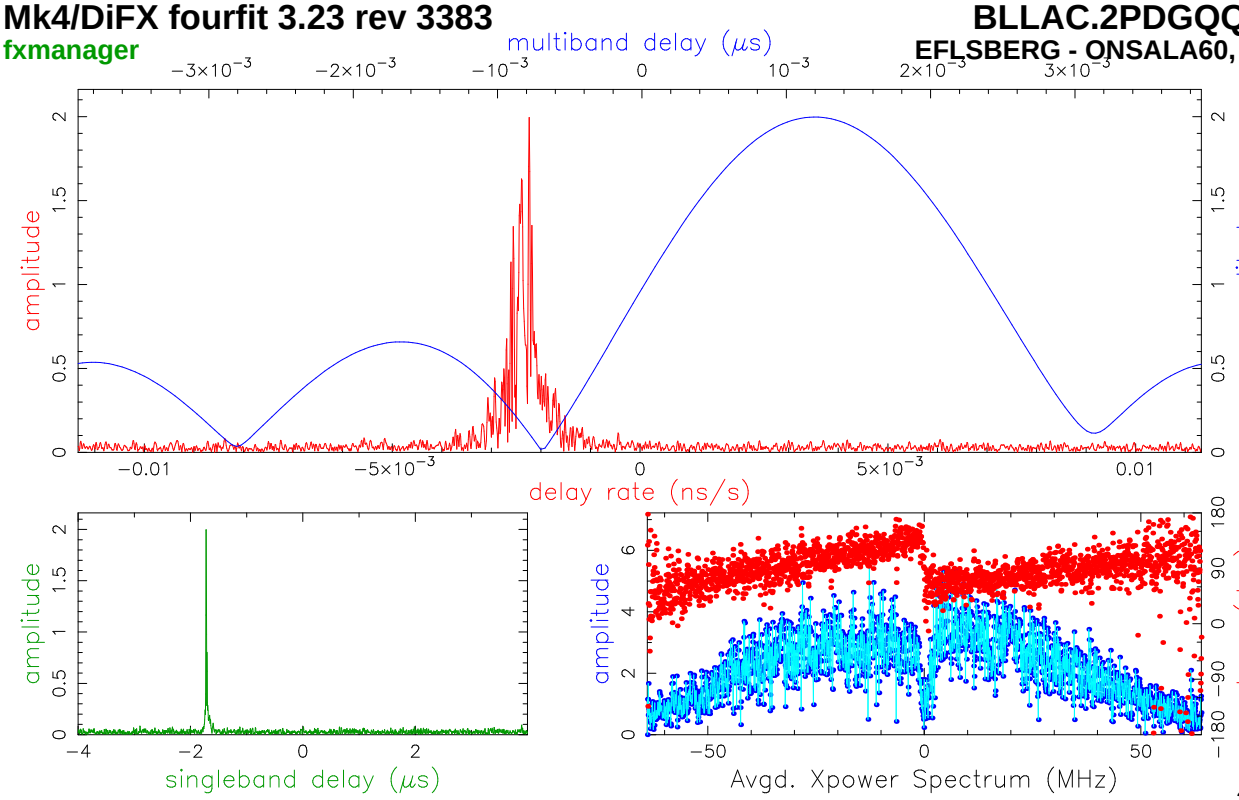
Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

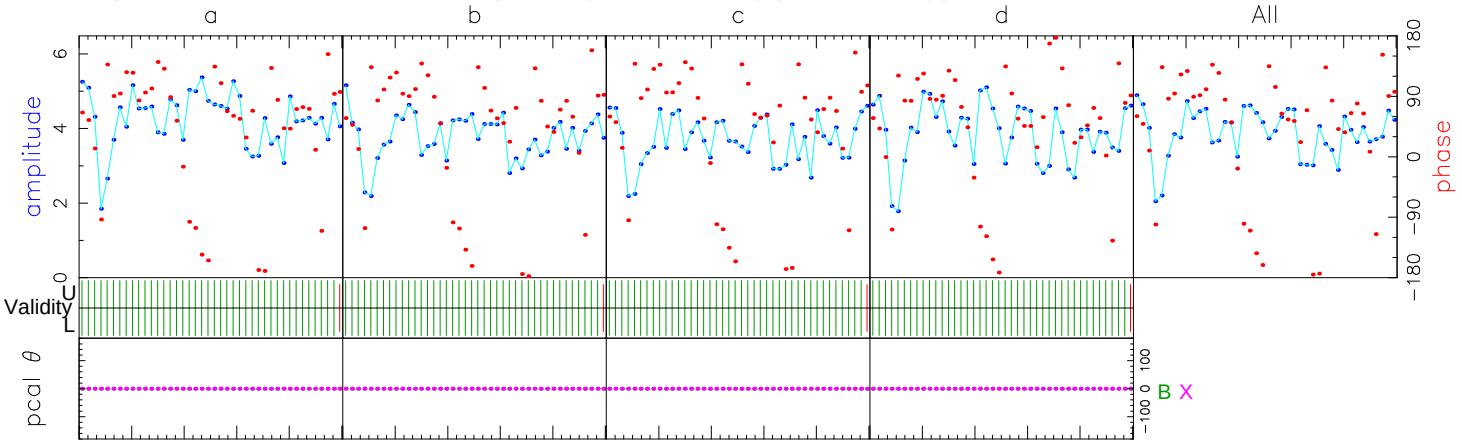
BLLAC.2PDGQQ, No0001, BX

EFLSBERG - ONSALA60, fgroup W, pol LL



Fringe quality	5
SNR	100.8
Int time	299.946
Amp	2.162
Phase	-269.7
PFD	0.0e+00
Delays (us)	
SBD	-1.720672
MBD	0.001247
Fringe rate (Hz)	-0.192796
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143547 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	92.4	90.5	95.4	82.9	Phase	90.3
	2.2	2.0	1.9	2.0	Ampl.	2.0
	584.2	584.6	584.8	584.3	Sbd box	584.5
U/L	586/586	586/586	586/586	586/586	APs used	
B	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
B:X	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
B	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-7.60969869858E+01	Apriori delay (usec)	-7.43794844443E+01	Resid mbdelay (usec)	1.24746E-03	+/-	1.1E-05
Sband delay (usec)	-7.61001566943E+01	Apriori clock (usec)	-1.0016479E+02	Resid sbdelay (usec)	-1.72067E+00	+/-	4.3E-05
Phase delay (usec)	-7.43794815315E+01	Apriori clockrate (us/s)	1.3800001E-06	Resid phdelay (usec)	2.91278E-06	+/-	1.8E-08
Delay rate (us/s)	-1.00631715630E-01	Apriori rate (us/s)	-1.00629477458E-01	Resid rate (us/s)	-2.23817E-06	+/-	2.1E-10
Total phase (deg)	-194.1	Apriori accel (us/s/s)	-5.51047275209E-06	Resid phase (deg)	-269.7	+/-	0.6

	RMS	Theor.	Amplitude	2.162 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	71.3	3.7	Search (2048X16)	1.974	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	88.1	6.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	6.5	1.1	Inc. seg. avg.	3.942	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	7.7	2.0	Inc. frq. avg.	2.034	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 293.3 el 38.1 pa 52.2 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 772.443 -864.252 simultaneous interpolator

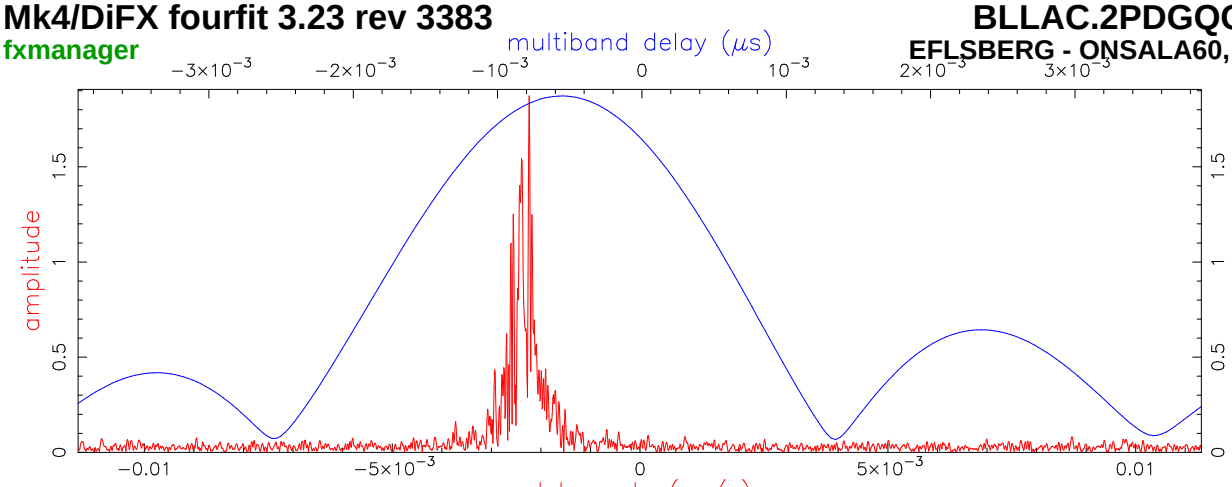
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BX.W.5.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

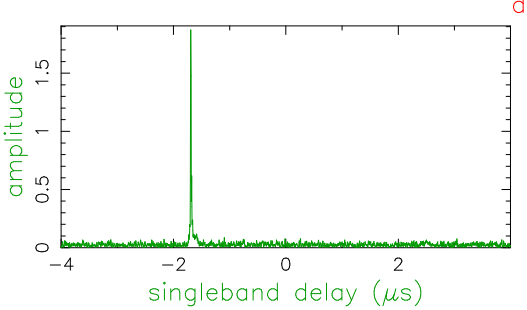
BLLAC.2PDGQQ, No0001, BX

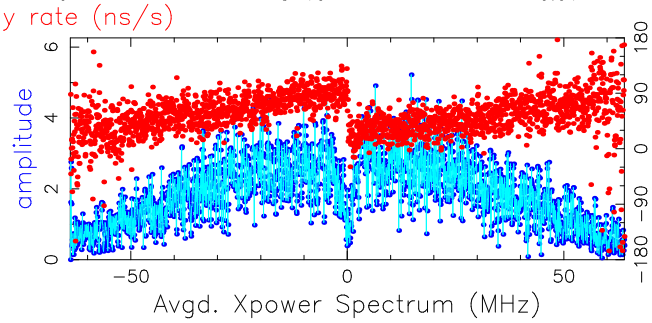
EFLSBERG - ONSALA60, fgroup W, pol RR



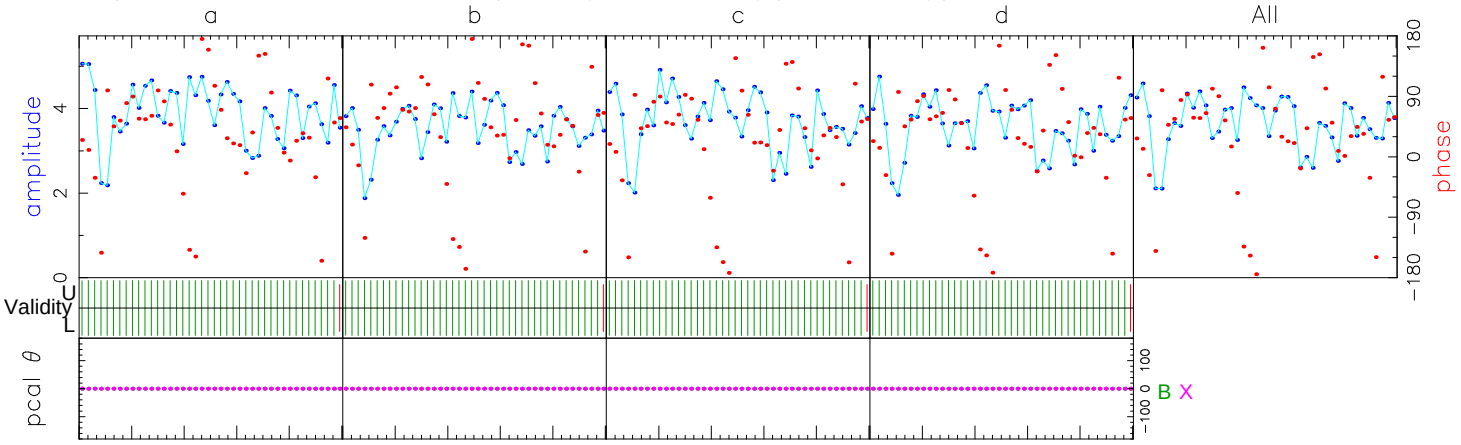
Fringe quality 5

SNR	88.9
Int time	299.946
Amp	1.907
Phase	-304.2
PFD	0.0e+00
Delays (us)	
SBD	-1.691043
MBD	-0.000544
Fringe rate (Hz)	-0.192802
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143552 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"





Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	a	b	c	d		All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	51.5	66.7	51.3	54.5	Phase	55.8
	2.0	1.8	2.0	1.8	Ampl.	1.9
	591.9	592.2	592.2	592.0	Sbd box	592.1
U/L	586/586	586/586	586/586	586/586	APs used	
B	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
B:X	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
B	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-7.60675284545E+01	Apriori delay (usec)	-7.43794844443E+01	Resid mbdelay (usec)	-5.44010E-04	+/-	1.3E-05
Sband delay (usec)	-7.60705276943E+01	Apriori clock (usec)	-1.0016479E+02	Resid sbdelay (usec)	-1.69104E+00	+/-	4.8E-05
Phase delay (usec)	-7.43794826451E+01	Apriori clockrate (us/s)	1.3800001E-06	Resid phdelay (usec)	1.79921E-06	+/-	2.1E-08
Delay rate (us/s)	-1.00631715700E-01	Apriori rate (us/s)	-1.00629477458E-01	Resid rate (us/s)	-2.23824E-06	+/-	2.4E-10
Total phase (deg)	-228.6	Apriori accel (us/s/s)	-5.51047275209E-06	Resid phase (deg)	-304.2	+/-	0.6

	RMS	Theor.	Amplitude	1.907 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	71.3	4.2	Search (2048X16)	1.817	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	100.4	7.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	8.9	1.3	Inc. seg. avg.	3.709	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	3.8	2.3	Inc. frq. avg.	1.913	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 293.3 el 38.1 pa 52.2 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 772.443 -864.252 simultaneous interpolator

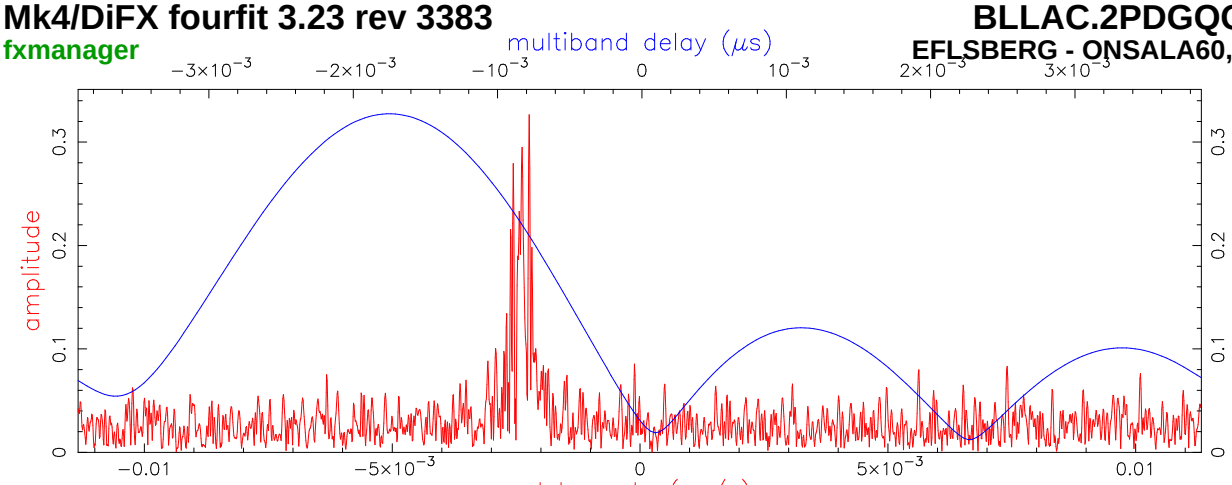
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BX.W.6.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

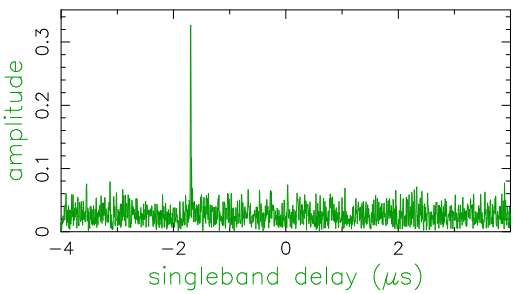
BLLAC.2PDGQQ, No0001, BX

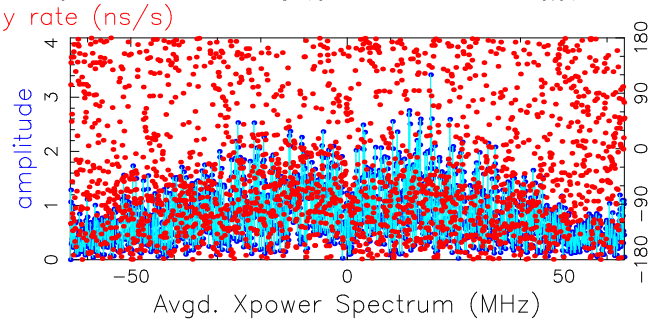
EFLSBERG - ONSALA60, fgroup W, pol LR



Fringe quality 9

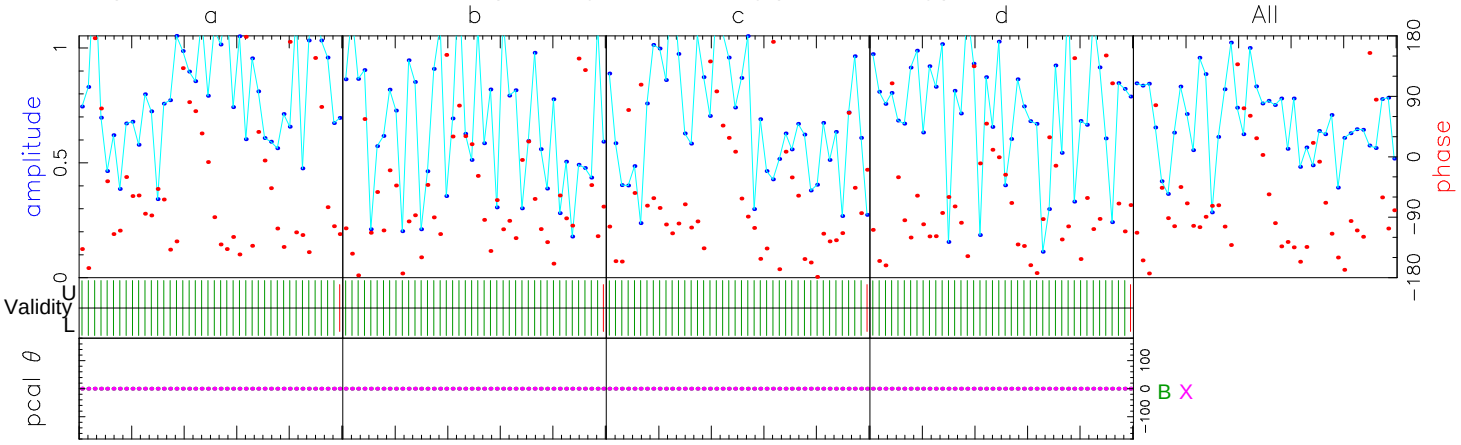
SNR	16.4
Int time	299.946
Amp	0.351
Phase	-101.8
PFD	0.0e+00
Delays (us)	
SBD	-1.693190
MBD	-0.001829
Fringe rate (Hz)	-0.192796
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512





Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316
	2023:124:143557
	2021:298:074129
RA & Dec (J2000)	22h02m43.291370s
	+42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	a	b	c	d		All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	
	-118.7	-90.1	-94.0	-103.6	Phase	-101.8
	0.3	0.3	0.3	0.4	Ampl.	0.3
	591.2	591.8	591.8	591.3	Sbd box	591.5
U/L	586/586	586/586	586/586	586/586	APs used	
B	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
B:X	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
B	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-7.60688132045E+01	Apriori delay (usec)	-7.43794844443E+01	Resid mbdelay (usec)	-1.82876E-03	+/-	6.8E-05
Sband delay (usec)	-7.60726744443E+01	Apriori clock (usec)	-1.0016479E+02	Resid sbdelay (usec)	-1.69319E+00	+/-	2.6E-04
Phase delay (usec)	-7.43794877260E+01	Apriori clockrate (us/s)	1.3800001E-06	Resid phdelay (usec)	-3.28164E-06	+/-	1.1E-07
Delay rate (us/s)	-1.00631715635E-01	Apriori rate (us/s)	-1.00629477458E-01	Resid rate (us/s)	-2.23818E-06	+/-	1.3E-09
Total phase (deg)	-26.2	Apriori accel (us/s/s)	-5.51047275209E-06	Resid phase (deg)	-101.8	+/-	3.5

	RMS	Theor.							
			Amplitude	0.351 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	74.6	22.7	Search (2048X16)	0.324	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000	4.000
amp/seg (%)	108.0	39.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	15.6	7.0	Inc. seg. avg.	0.641	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011	0.011
amp/frq (%)	10.5	12.2	Inc. frq. avg.	0.335	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00	0.00

B: az 293.3 el 38.1 pa 52.2 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 772.443 -864.252 simultaneous interpolator

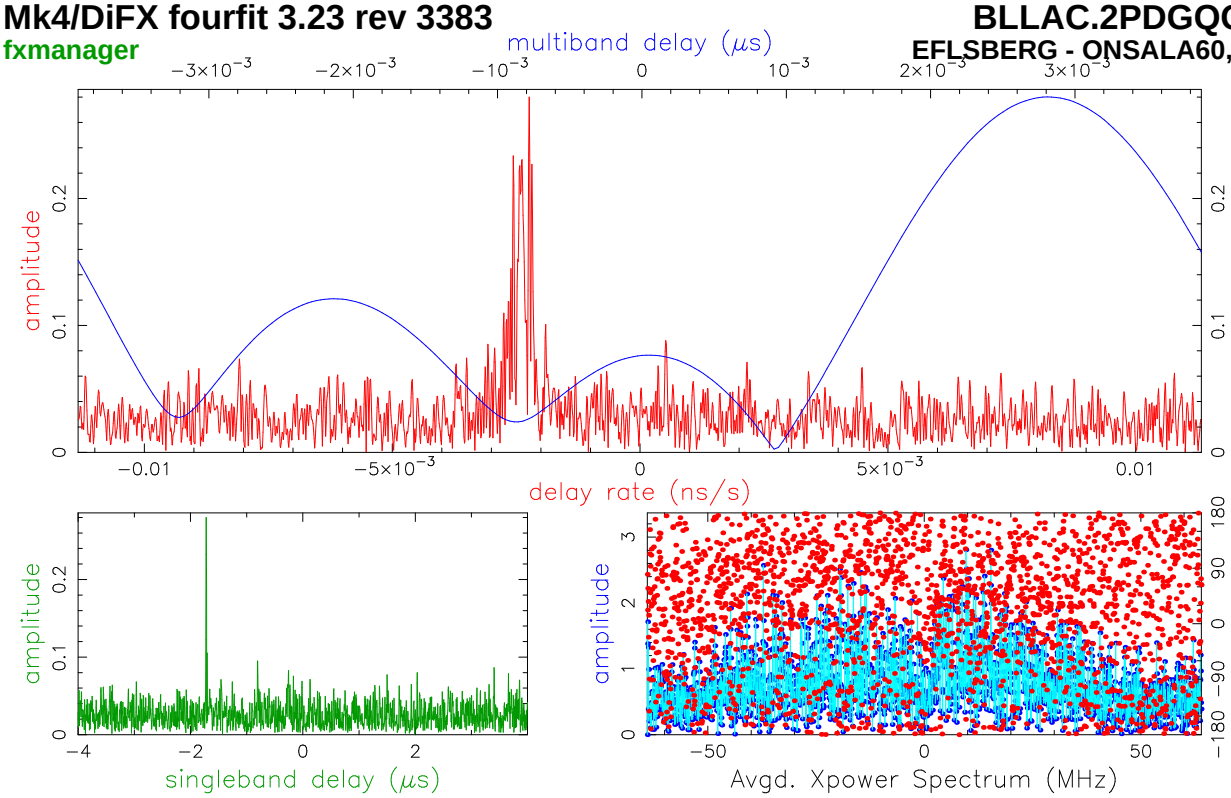
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BX.W.7.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, BX

EFLSBERG - ONSALA60, fgroup W, pol RL

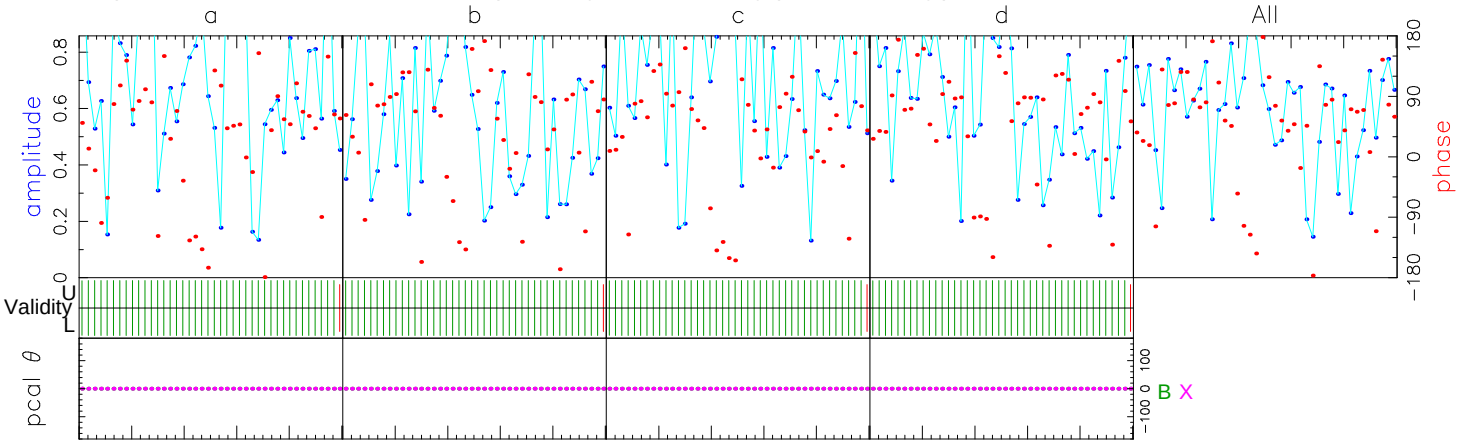


Fringe quality 9

SNR 13.3
Int time 299.946
Amp 0.286
Phase -288.2
PFD 1.8e-31
Delays (us)
SBD -1.719289
MBD 0.002796
Fringe rate (Hz)
-0.192638
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. f231a
Exper # 1234
Yr:day 2023:124
Start 120000.00
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143602
2021:298:074129
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	72.2	75.9	60.6	79.8	Phase	71.8
	0.3	0.2	0.3	0.3	Ampl.	0.3
	584.5	585.1	585.1	584.8	Sbd box	584.9
U/L	586/586	586/586	586/586	586/586	APs used	
B	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
B:X	0:0	0:0	0:0	0:0	PC phase	
B:X	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
B	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-7.60954388608E+01	Apriori delay (usec)	-7.43794844443E+01	Resid mbdelay (usec)	2.79558E-03	+/-	8.3E-05
Sband delay (usec)	-7.60987736943E+01	Apriori clock (usec)	-1.0016479E+02	Resid sbdelay (usec)	-1.71929E+00	+/-	3.2E-04
Phase delay (usec)	-7.43794821300E+01	Apriori clockrate (us/s)	1.3800001E-06	Resid phdelay (usec)	2.31431E-06	+/-	1.4E-07
Delay rate (us/s)	-1.00631713800E-01	Apriori rate (us/s)	-1.00629477458E-01	Resid rate (us/s)	-2.23634E-06	+/-	1.6E-09
Total phase (deg)	-212.6	Apriori accel (us/s/s)	-5.51047275209E-06	Resid phase (deg)	-288.2	+/-	4.3

	RMS	Theor.	Amplitude	0.286 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	76.0	27.9	Search (2048X16)	0.273	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	129.7	48.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	10.2	8.6	Inc. seg. avg.	0.540	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	16.0	15.0	Inc. frq. avg.	0.284	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 293.3 el 38.1 pa 52.2 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 772.443 -864.252 simultaneous interpolator

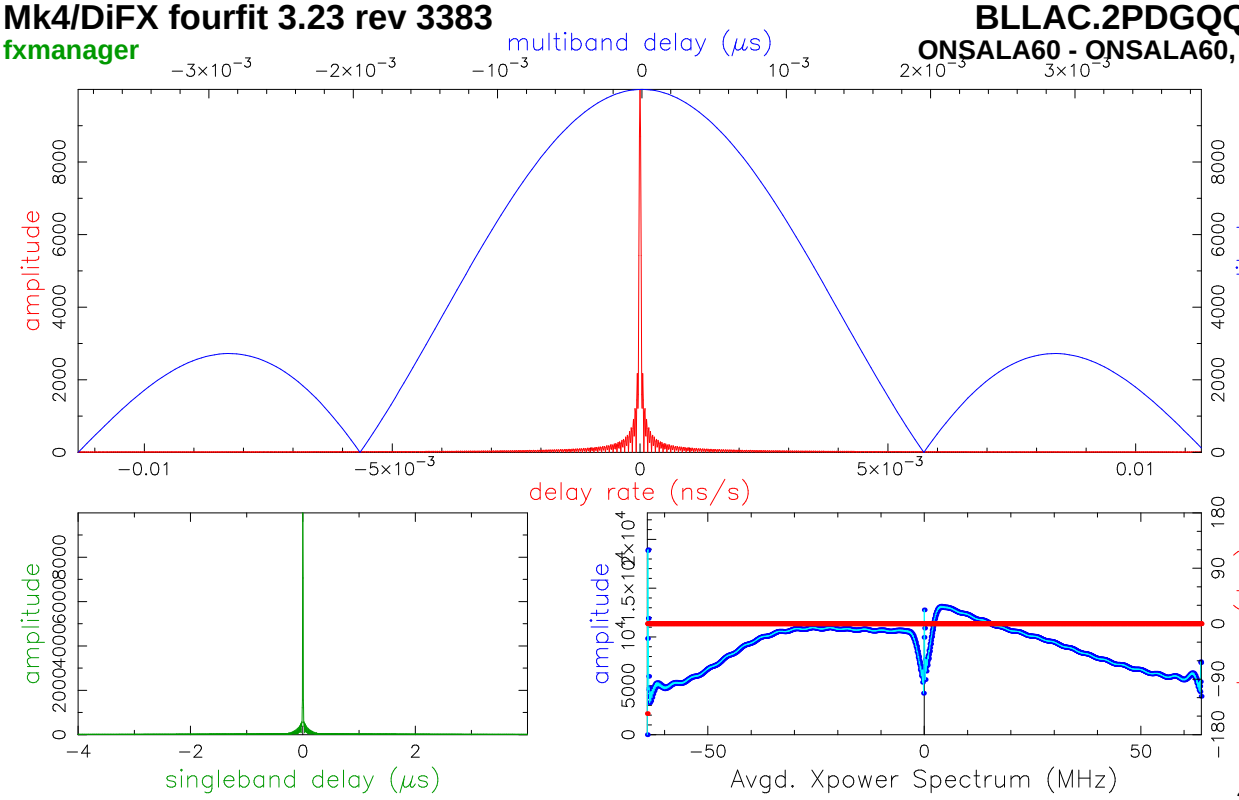
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BX.W.8.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, XX

ONSALA60 - ONSALA60, fgroup W, pol LL

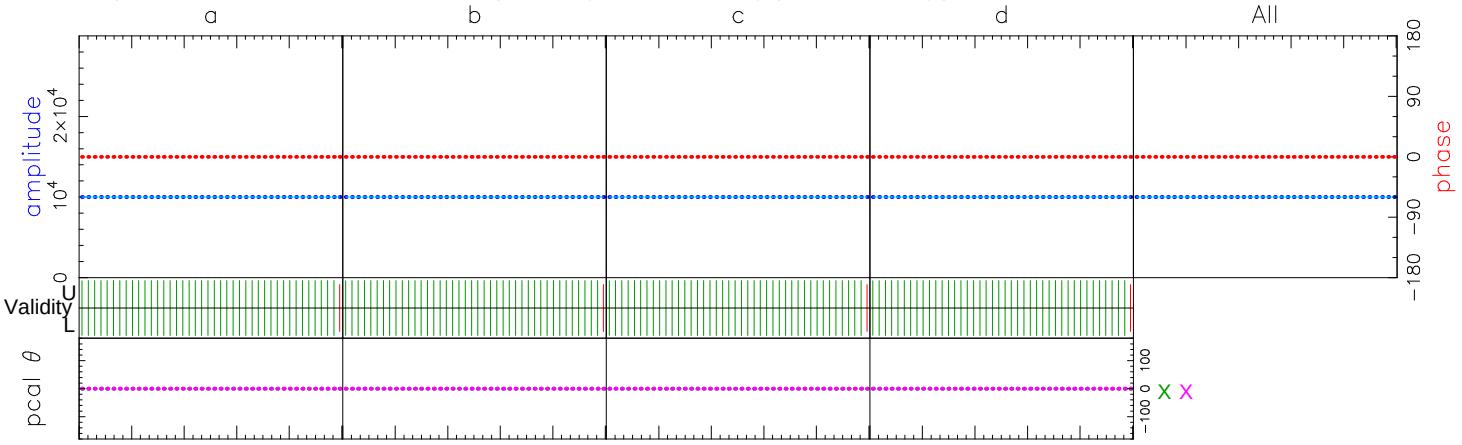


Fringe quality 9

SNR 473607.8
Int time 299.946
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. f231a
Exper # 1234
Yr:day 2023:124
Start 120000.00
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143704
2021:298:074129
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	0.0	0.0	0.0	0.0	Phase	0.0
	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
	1025.0	1025.0	1025.0	1025.0	Sbd box	1025.0
U/L	586/586	586/586	586/586	586/586	APs used	
X	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
X:X	0:0	0:0	0:0	0:0	PC phase	
X:X	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	2.3E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	9.1E-09
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	3.9E-12
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	4.5E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.	Amplitude	9999.999 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X16)	9999.999	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	0.0	0.0	Inc. frq. avg.	9999.999	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

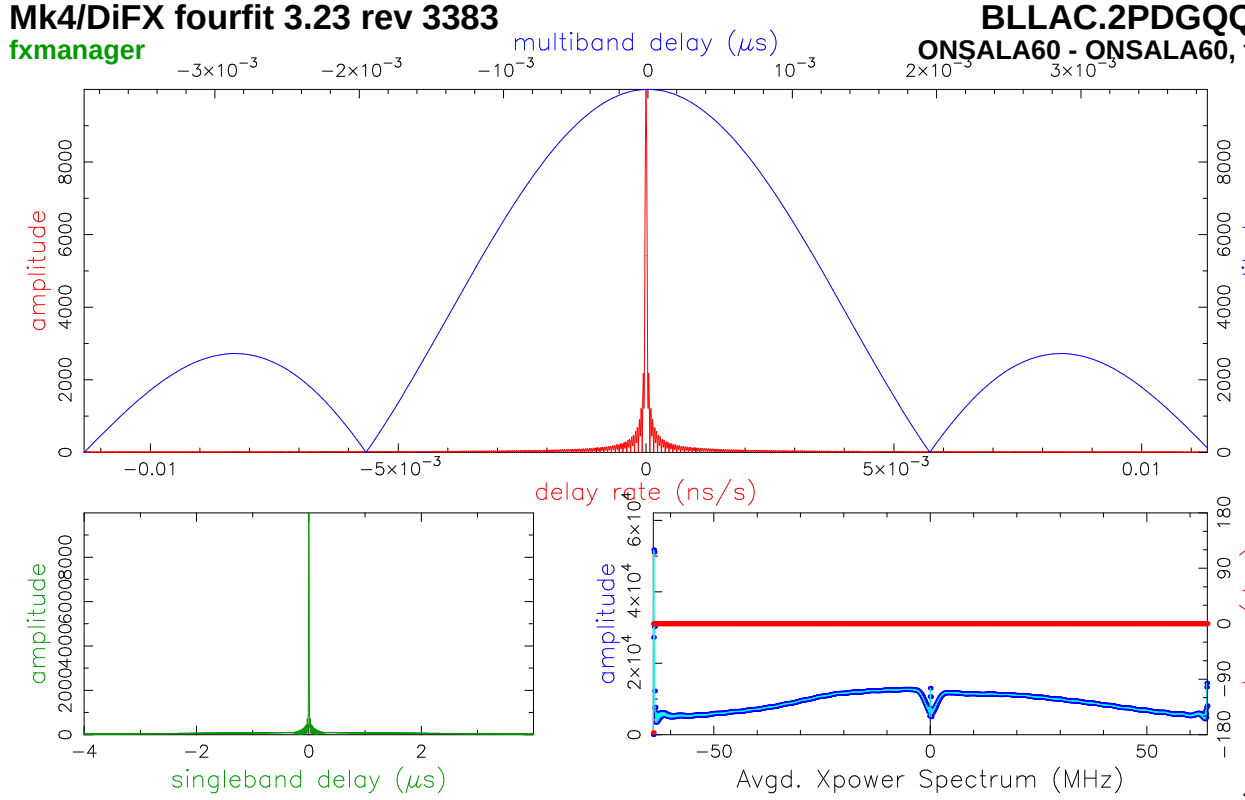
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XX.W.21.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, XX

ONSALA60 - ONSALA60, fgroup W, pol RR

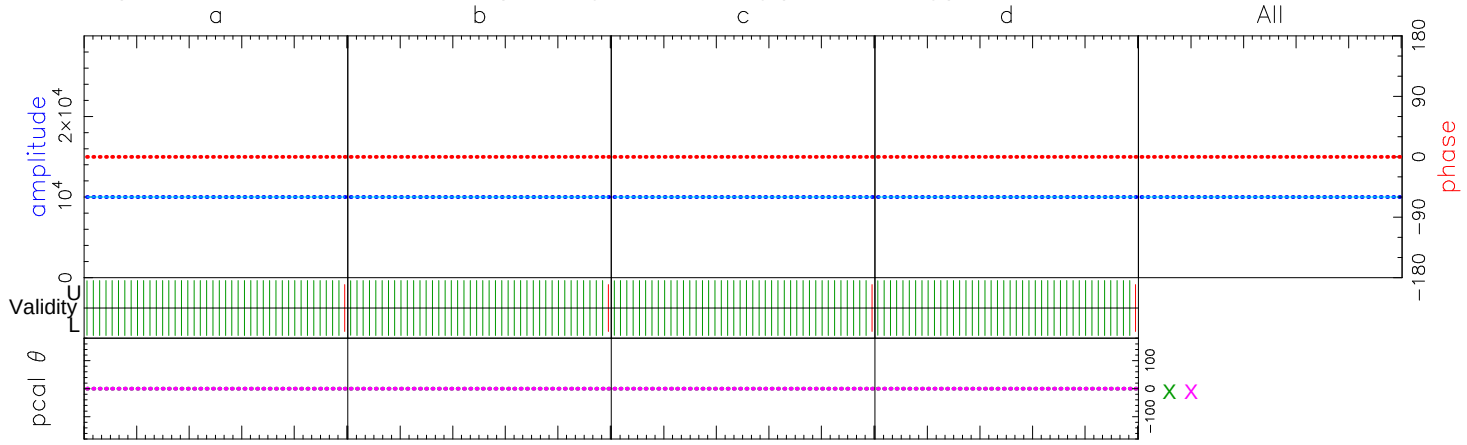


Fringe quality 9

SNR 473607.8
Int time 299.946
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. f231a
Exper # 1234
Yr:day 2023:124
Start 120000.00
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143709
2021:298:074129
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	0.0	0.0	0.0	0.0	Phase	0.0
	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
	1025.0	1025.0	1025.0	1025.0	Sbd box	1025.0
U/L	586/586	586/586	586/586	586/586	APs used	
X	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
X:X	0:0	0:0	0:0	0:0	PC phase	
X:X	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	2.3E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	9.1E-09
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	3.9E-12
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	4.5E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.	Amplitude	9999.999 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X16)	9999.999	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	0.0	0.0	Inc. frq. avg.	9999.999	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XX.W.22.2PDGQQ

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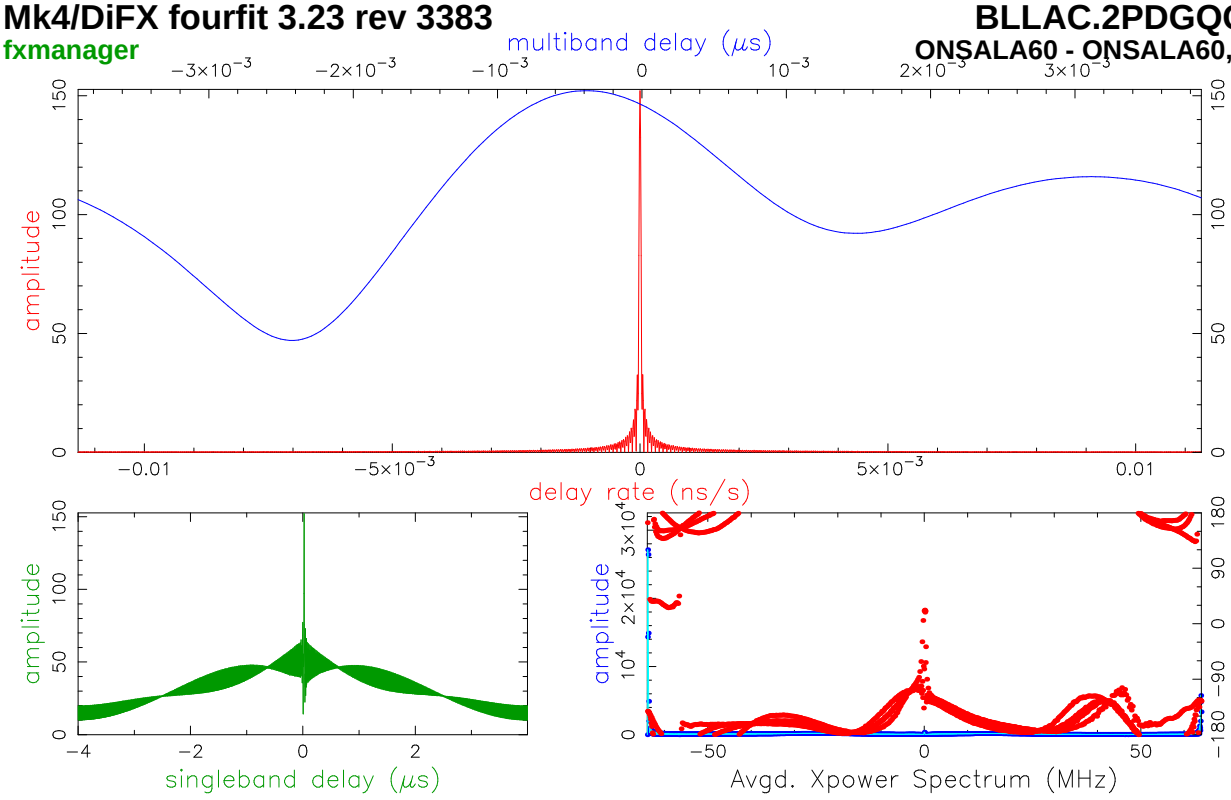
fxmanager

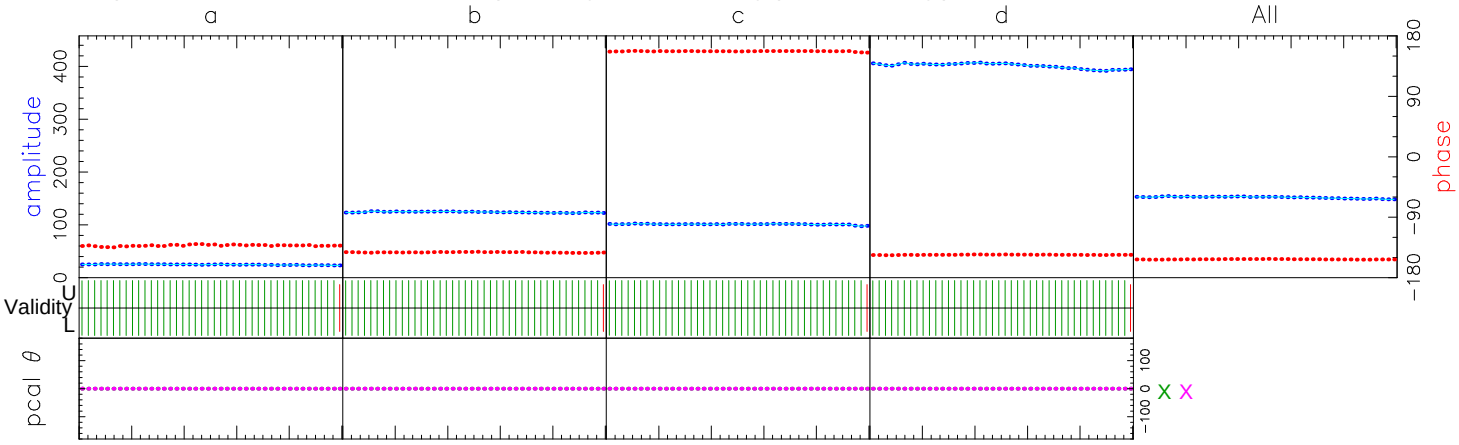
BLLAC.2PDGQQ, No0001, XX

ONSALA60 - ONSALA60, fgroup W, pol LR



Fringe quality	5
Error code	G
SNR	7232.2
Int time	299.946
Amp	152.703
Phase	27.5
PFD	0.0e+00
Delays (us)	
SBD	0.023108
MBD	-0.000403
Fringe rate (Hz)	-0.000010
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143713 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-132.0	-142.2	157.0	-145.8	Phase	-152.5
	24.9	124.2	101.3	401.4	Ampl.	163.0
	1033.2	1031.3	1031.4	1030.9	Sbd box	1030.9
U/L	586/586	586/586	586/586	586/586	APs used	
X	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
X:X	0:0	0:0	0:0	0:0	PC phase	
X:X	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	2.30341250000E-02	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-4.03375E-04	+/-	1.5E-07
Sband delay (usec)	2.31085000000E-02	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	2.31085E-02	+/-	6.0E-07
Phase delay (usec)	-4.91907125053E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.91907E-06	+/-	2.6E-10
Delay rate (us/s)	-1.17620564851E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.17621E-10	+/-	2.9E-12
Total phase (deg)	27.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	27.5	+/-	0.0

	RMS	Theor.						
			Amplitude	152.703 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.3	0.1	Search (2048X16)	151.709	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	1.2	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	39.5	0.0	Inc. seg. avg.	152.146	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	93.5	0.0	Inc. frq. avg.	162.954	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

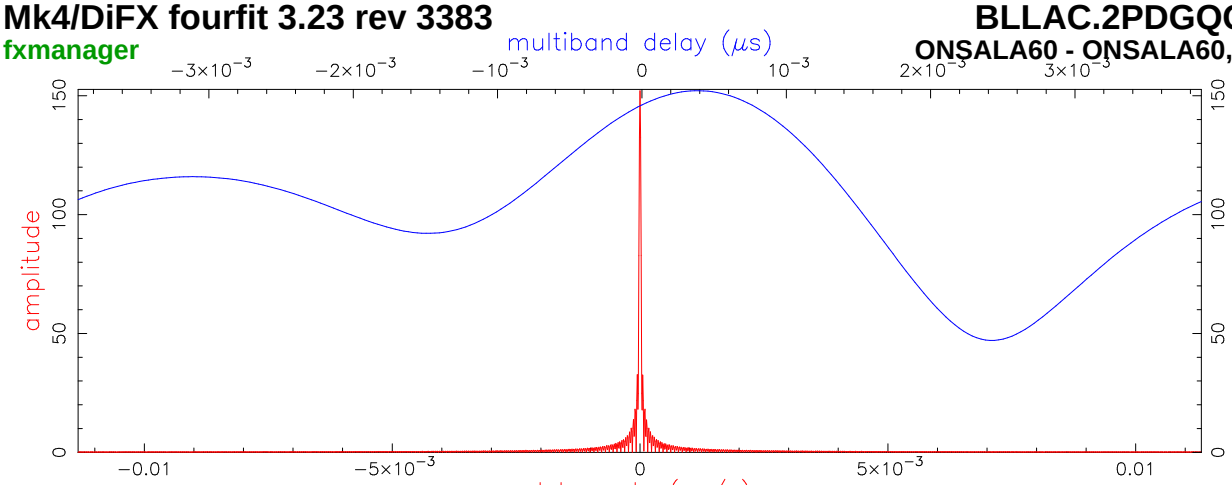
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XX.W.23.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

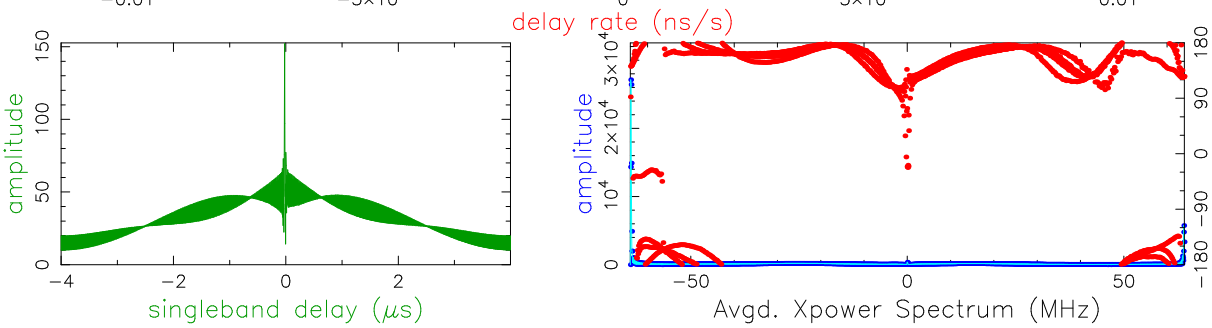
fxmanager

BLLAC.2PDGQQ, No0001, XX

ONSALA60 - ONSALA60, fgroup W, pol RL

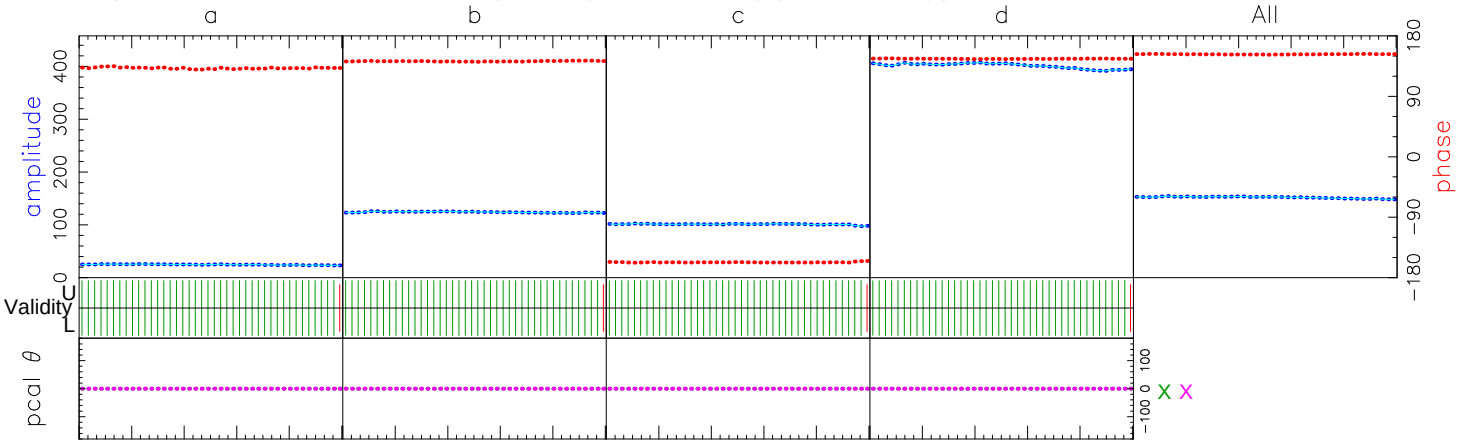


Fringe quality	5
Error code	G
SNR	7232.2
Int time	299.946
Amp	152.703
Phase	-27.5
PFD	0.0e+00
Delays (us)	
SBD	-0.023108
MBD	0.000403
Fringe rate (Hz)	0.000010
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512



Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316
	2023:124:143718
	2021:298:074129
RA & Dec (J2000)	22h02m43.291370s
	+42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	a	b	c	d		All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	132.0	142.2	-157.0	145.8	Phase	152.5
	24.9	124.2	101.3	401.4	Ampl.	163.0
	1016.8	1018.7	1018.6	1019.1	Sbd box	1019.1
U/L	586/586	586/586	586/586	586/586	APs used	
X	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
X:X	0:0	0:0	0:0	0:0	PC phase	
X:X	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-2.30341250000E-02	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	4.03375E-04	+/-	1.5E-07
Sband delay (usec)	-2.31085000000E-02	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-2.31085E-02	+/-	6.0E-07
Phase delay (usec)	4.91907125044E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	4.91907E-06	+/-	2.6E-10
Delay rate (us/s)	1.17620564851E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	1.17621E-10	+/-	2.9E-12
Total phase (deg)	-27.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-27.5	+/-	0.0

	RMS	Theor.						
			Amplitude	152.703 +/- 0.021	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.3	0.1	Search (2048X16)	151.709	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	1.2	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	39.5	0.0	Inc. seg. avg.	152.146	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	93.5	0.0	Inc. frq. avg.	162.954	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XX.W.24.2PDGQQ

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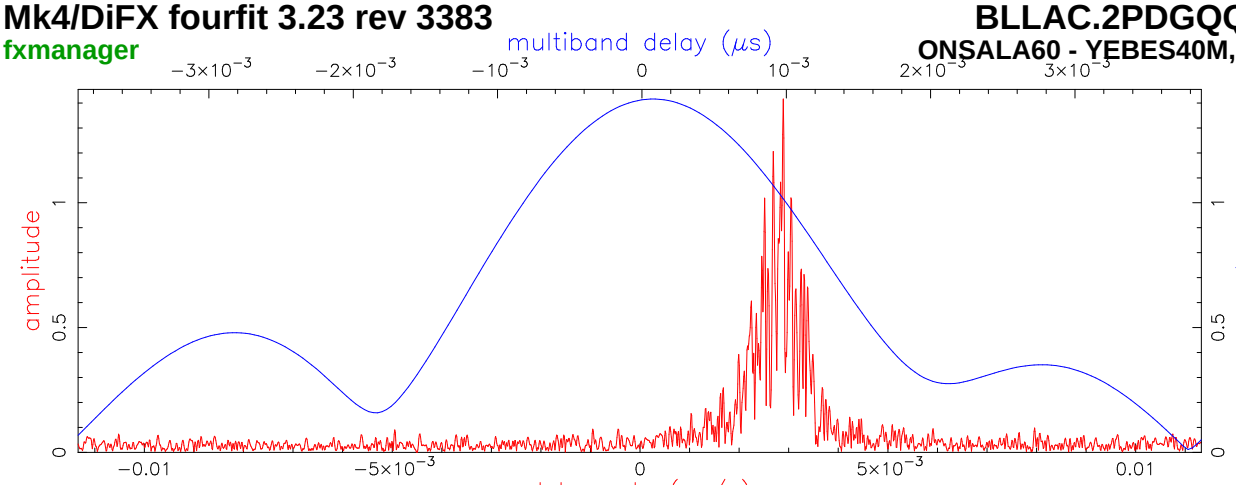
fxmanager

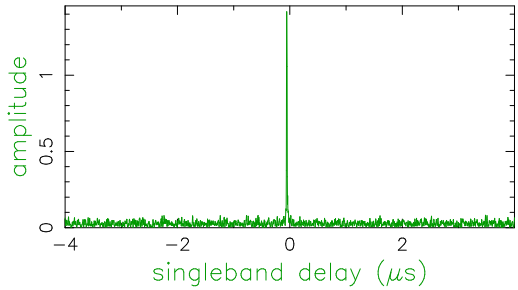
BLLAC.2PDGQQ, No0001, XY

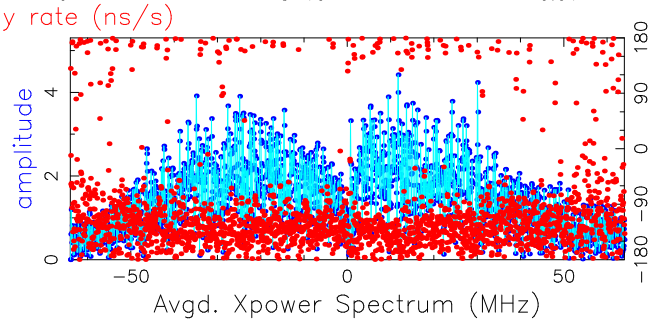
ONSALA60 - YEBES40M, fgroup W, pol LL



Fringe quality 6

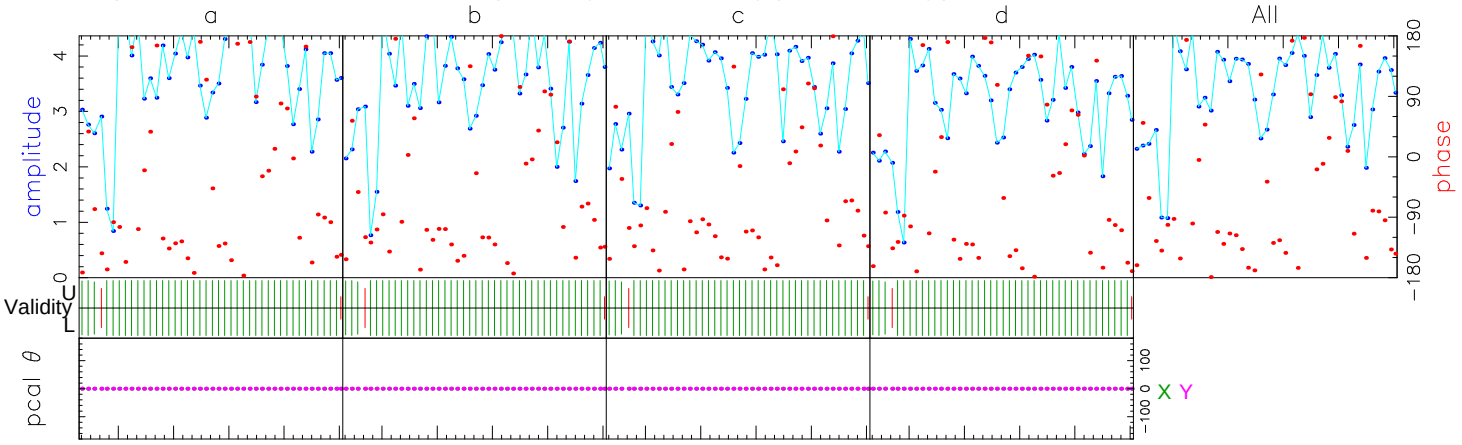
SNR 64.8
Int time 279.874
Amp 1.455
Phase -311.4
PFD 0.0e+00
Delays (us)
SBD -0.054707
MBD 0.000077
Fringe rate (Hz)
0.249172
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512





Exp. f231a
Exper # 1234
Yr:day 2023:124
Start 120017.41
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143804
2021:298:074129
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979897"

Amp. and Phase vs. time for each freq., 43 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-141.2	-125.2	-114.0	-147.5	Phase	-131.4
	1.6	1.5	1.6	1.3	Ampl.	1.5
	1011.0	1011.2	1010.9	1010.7	Sbd box	1011.0
U/L	549/549	549/549	549/549	549/549	APs used	
X	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
X:Y	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Y	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-4.93916168751E+02	Apriori delay (usec)	-4.93861558366E+02	Resid mbdelay (usec)	7.71151E-05	+/-	1.7E-05
Sband delay (usec)	-4.93916265366E+02	Apriori clock (usec)	1.6230489E+02	Resid sbdelay (usec)	-5.47070E-02	+/-	6.6E-05
Phase delay (usec)	-4.93861562604E+02	Apriori clockrate (us/s)	-7.8000003E-07	Resid phdelay (usec)	-4.23752E-06	+/-	2.9E-08
Delay rate (us/s)	1.97782897599E-01	Apriori rate (us/s)	1.97780004954E-01	Resid rate (us/s)	2.89265E-06	+/-	3.5E-10
Total phase (deg)	-181.0	Apriori accel (us/s/s)	1.81570079614E-05	Resid phase (deg)	-311.4	+/-	0.9

	RMS	Theor.	Amplitude	1.455 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	79.9	5.8	Search (2048X16)	1.380	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	149.3	10.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	18.6	1.8	Inc. seg. avg.	3.434	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	7.7	3.1	Inc. frq. avg.	1.492	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1508.338 2577.102 simultaneous interpolator

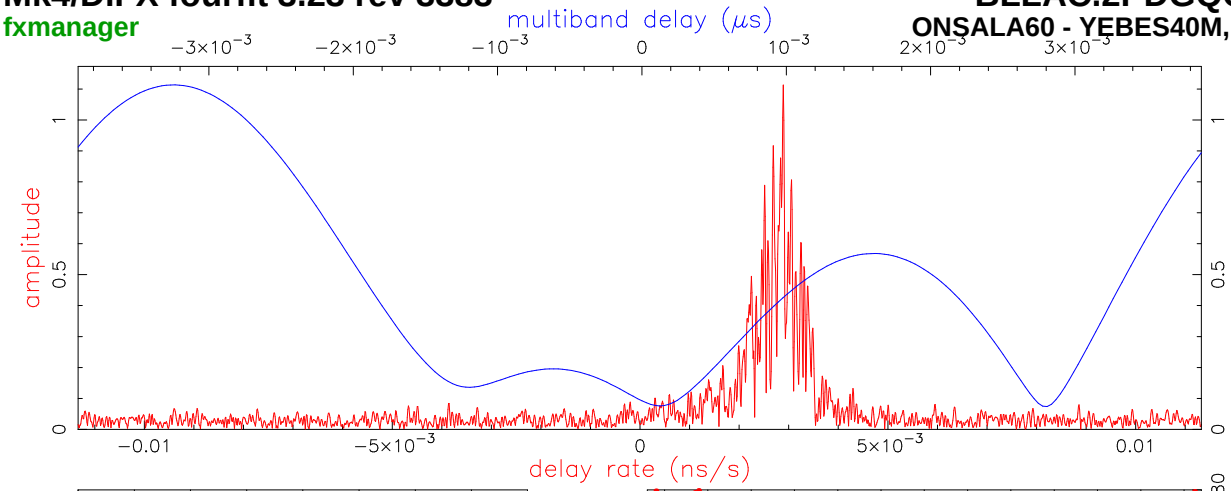
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XY.W.33.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

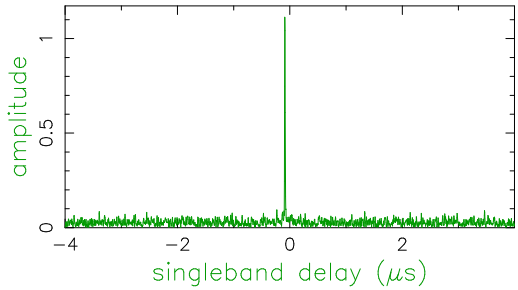
BLLAC.2PDGQQ, No0001, XY

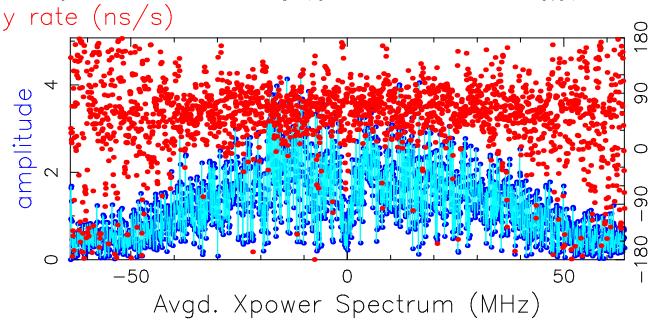
ONSALA60 - YEBES40M, fgroup W, pol RR



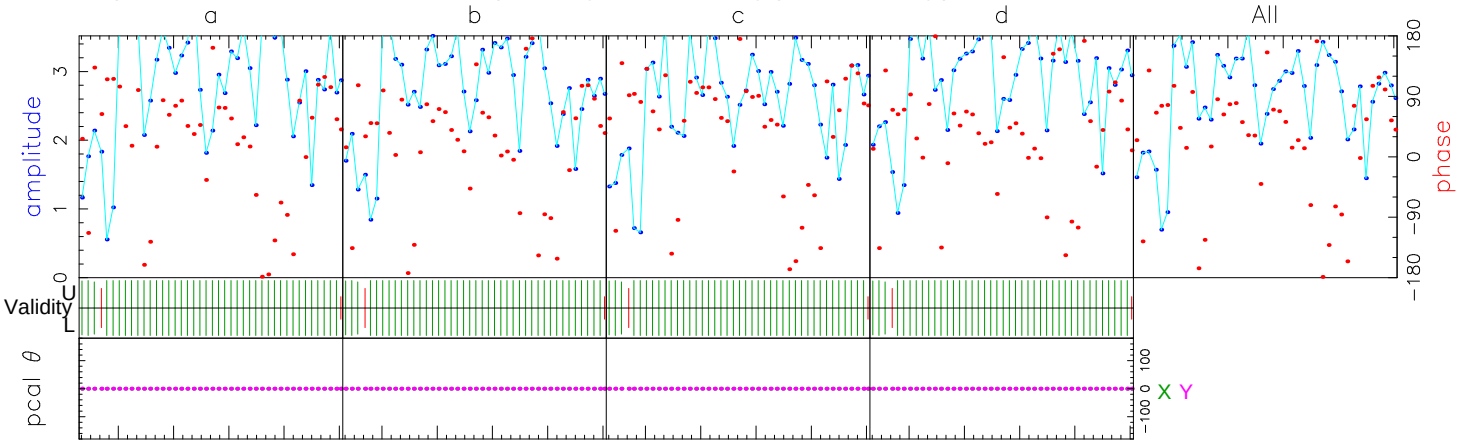
Fringe quality 5

SNR	52.2
Int time	279.874
Amp	1.173
Phase	-115.5
PFD	0.0e+00
Delays (us)	
SBD	-0.088492
MBD	-0.003227
Fringe rate (Hz)	0.249211
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120017.41
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143809 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"





Amp. and Phase vs. time for each freq., 43 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



	a	b	c	d		All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	65.1	51.2	93.6	48.9	Phase	64.5
	1.2	1.2	1.2	1.2	Ampl.	1.2
	1002.2	1002.5	1002.3	1002.1	Sbd box	1002.3
U/L	549/549	549/549	549/549	549/549	APs used	
X	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
X:Y	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Y	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-4.93950722407E+02	Apriori delay (usec)	-4.93861558366E+02	Resid mbdelay (usec)	-3.22654E-03	+/-	2.1E-05
Sband delay (usec)	-4.93950050616E+02	Apriori clock (usec)	1.6230489E+02	Resid sbdelay (usec)	-8.84923E-02	+/-	8.2E-05
Phase delay (usec)	-4.93861556288E+02	Apriori clockrate (us/s)	-7.8000003E-07	Resid phdelay (usec)	2.07840E-06	+/-	3.5E-08
Delay rate (us/s)	1.97782898045E-01	Apriori rate (us/s)	1.97780004954E-01	Resid rate (us/s)	2.89309E-06	+/-	4.4E-10
Total phase (deg)	-345.1	Apriori accel (us/s/s)	1.81570079614E-05	Resid phase (deg)	-115.5	+/-	1.1

	RMS	Theor.	Amplitude	1.173 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	78.8	7.2	Search (2048X16)	1.078	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	143.6	12.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	25.2	2.2	Inc. seg. avg.	2.680	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	3.3	3.8	Inc. frq. avg.	1.199	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1508.338 2577.102 simultaneous interpolator

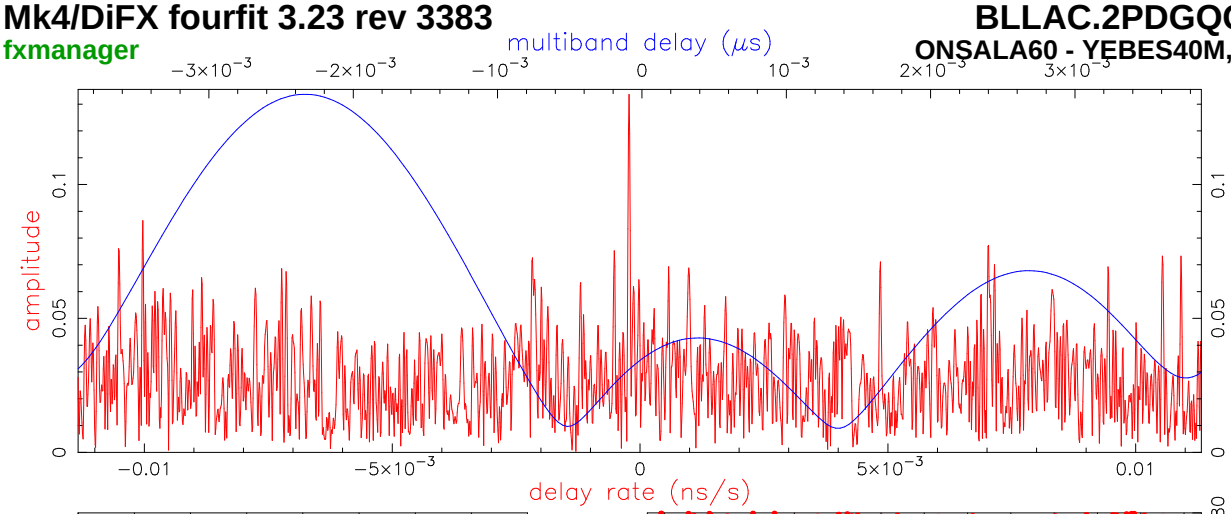
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XY.W.34.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, XY

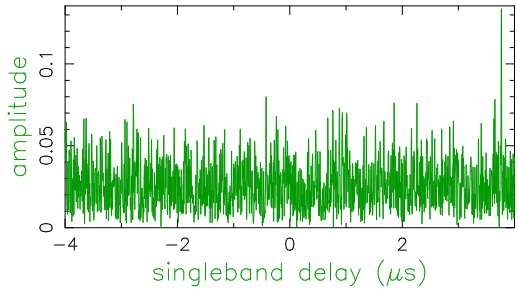
ONSALA60 - YEBES40M, fgroup W, pol LR

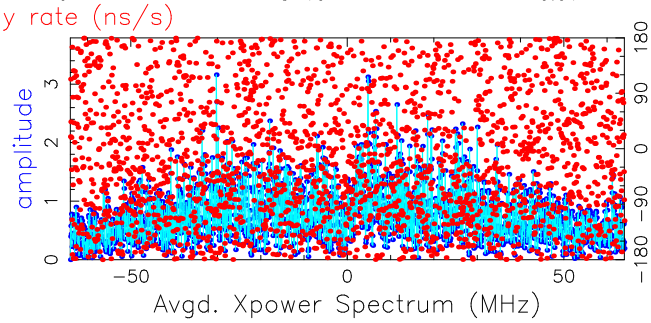


Fringe quality 0

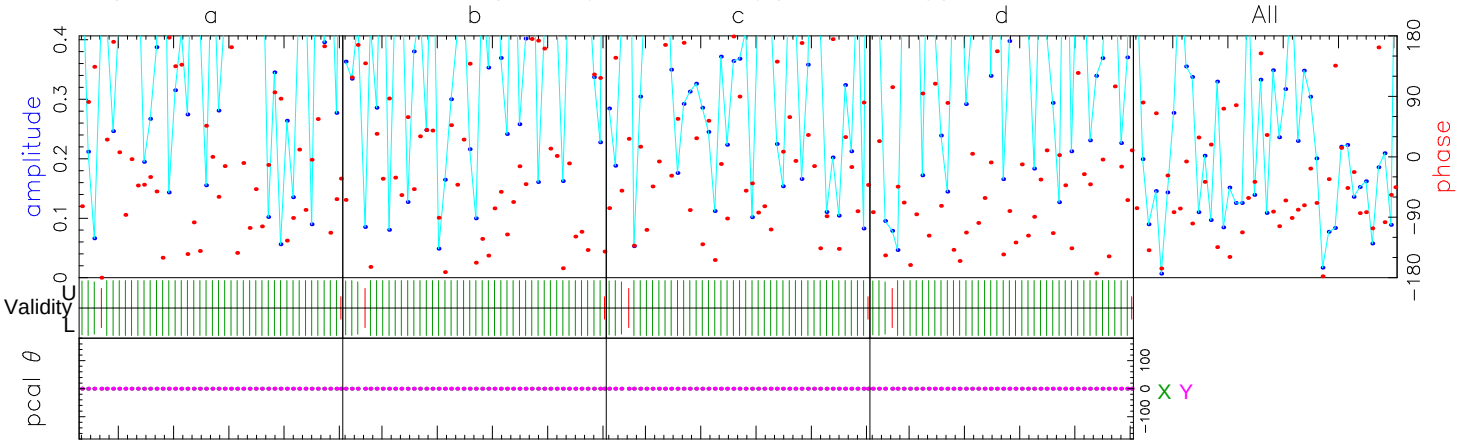
SNR 6.2
Int time 279.874
Amp 0.135
Phase 291.2
PFD 2.6e-01
Delays (us)
SBD 3.764649
MBD -0.002309
Fringe rate (Hz)
-0.019544
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. f231a
Exper # 1234
Yr:day 2023:124
Start 120017.41
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143814
2021:298:074129
RA & Dec (J2000)
22h02m43.291370s
+42°16'39.979897"





Amp. and Phase vs. time for each freq., 43 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-75.1	-66.9	-44.8	-82.7	Phase	-68.8
	0.1	0.1	0.1	0.2	Ampl.	0.1
	418.7	1470.5	1731.6	1988.3	Sbd box	1988.8
U/L	549/549	549/549	549/549	549/549	APs used	
X	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
X:Y	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Y	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-4.90098242321E+02	Apriori delay (usec)	-4.93861558366E+02	Resid mbdelay (usec)	-2.30895E-03	+/-	1.8E-04
Sband delay (usec)	-4.90096909366E+02	Apriori clock (usec)	1.6230489E+02	Resid sbdelay (usec)	3.76465E+00	+/-	6.9E-04
Phase delay (usec)	-4.93861560585E+02	Apriori clockrate (us/s)	-7.8000003E-07	Resid phdelay (usec)	-2.21882E-06	+/-	3.0E-07
Delay rate (us/s)	1.97779778065E-01	Apriori rate (us/s)	1.97780004954E-01	Resid rate (us/s)	-2.26889E-07	+/-	3.7E-09
Total phase (deg)	61.6	Apriori accel (us/s/s)	1.81570079614E-05	Resid phase (deg)	291.2	+/-	9.2

	RMS	Theor.	Amplitude	0.135 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	73.7	60.5	Search (2048X16)	0.129	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-4.000	4.000
amp/seg (%)	121.6	105.5	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.004	0.004
ph/frq (deg)	20.2	18.5	Inc. seg. avg.	0.141	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us	dr window (ns/s)	-0.011	0.011
amp/frq (%)	18.9	32.3	Inc. frq. avg.	0.131	Data rate(Mb/s): 2048 nlags: 1024 t_cohere infinite	ion window (TEC)	0.00	0.00

X: az 291.5 el 38.0 pa 42.6 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1508.338 2577.102 simultaneous interpolator

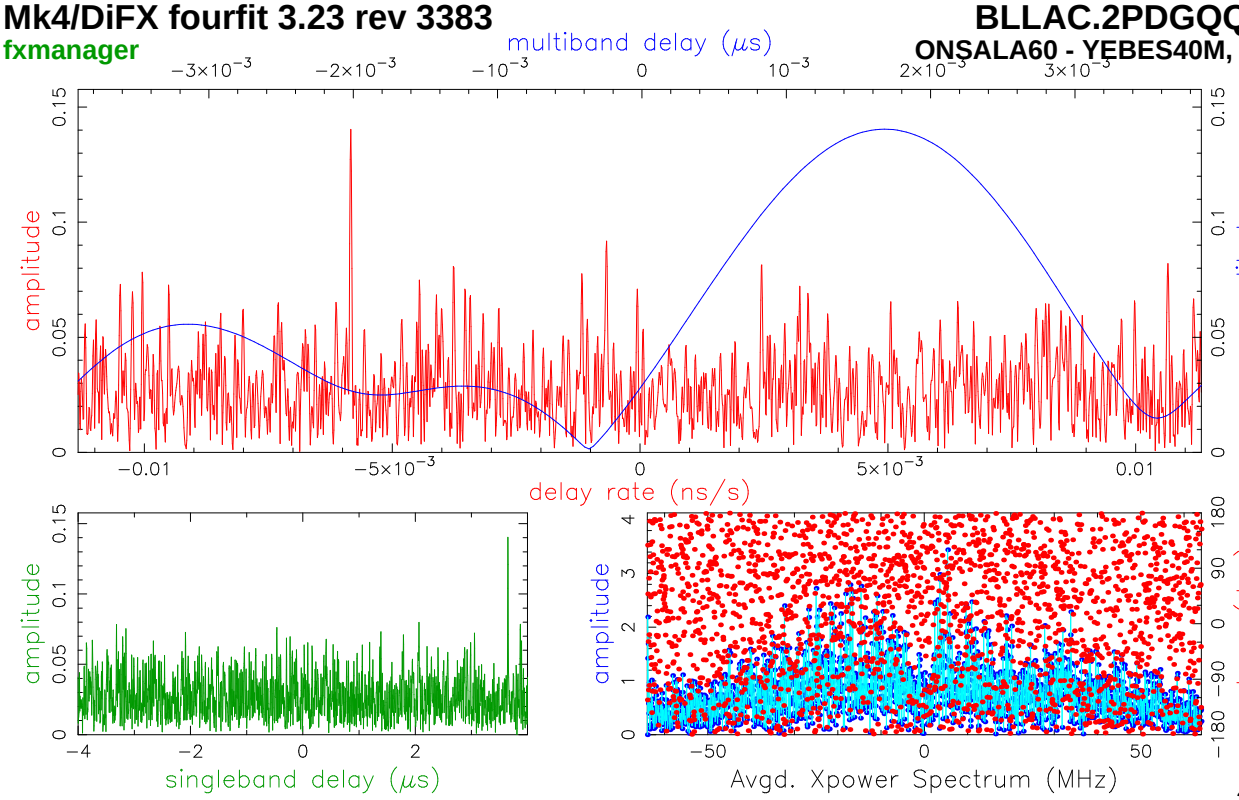
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XY.W.35.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

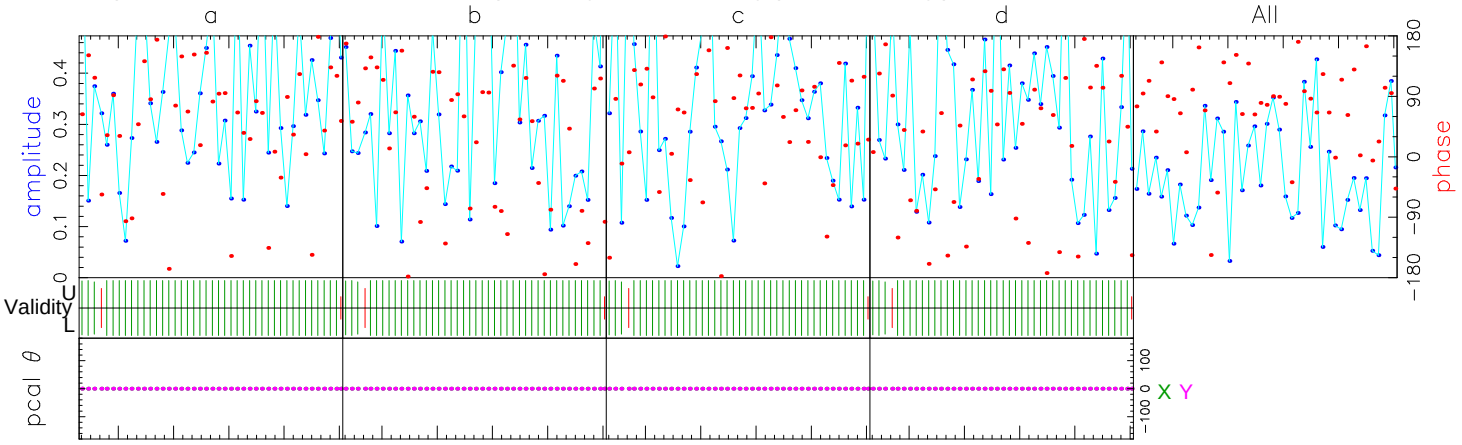
BLLAC.2PDGQQ, No0001, XY

ONSALA60 - YEBES40M, fgroup W, pol RL



Fringe quality	0
SNR	6.5
Int time	279.874
Amp	0.158
Phase	270.3
PFD	5.9e-02
Delays (us)	
SBD	3.649047
MBD	0.001719
Fringe rate (Hz)	-0.502647
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120017.41
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143819 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 43 segs, 13 APs / seg (6.66 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	86.1	109.1	80.9	88.2	Phase	90.3
	0.2	0.1	0.2	0.1	Ampl.	0.2
	595.5	454.2	1960.1	1872.4	Sbd box	1959.2
U/L	549/549	549/549	549/549	549/549	APs used	
X	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
X:Y	0:0	0:0	0:0	0:0	PC phase	
X:Y	0:0	0:0	0:0	0:0	Manl PC	
X	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Y	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-4.90211401828E+02	Apriori delay (usec)	-4.93861558366E+02	Resid mbdelay (usec)	1.71904E-03	+/-	1.7E-04
Sband delay (usec)	-4.90212511616E+02	Apriori clock (usec)	1.6230489E+02	Resid sbdelay (usec)	3.64905E+00	+/-	6.7E-04
Phase delay (usec)	-4.93861555453E+02	Apriori clockrate (us/s)	-7.8000003E-07	Resid phdelay (usec)	2.91303E-06	+/-	2.9E-07
Delay rate (us/s)	1.97774169724E-01	Apriori rate (us/s)	1.97780004954E-01	Resid rate (us/s)	-5.83523E-06	+/-	3.5E-09
Total phase (deg)	40.8	Apriori accel (us/s/s)	1.81570079614E-05	Resid phase (deg)	270.3	+/-	8.9

	RMS	Theor.	Amplitude	0.158 +/- 0.024	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	57.1	58.1	Search (2048X16)	0.139	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	85.5	101.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	15.2	17.8	Inc. seg. avg.	0.152	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	18.4	31.0	Inc. frq. avg.	0.152	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

X: az 291.5 el 38.0 pa 42.6 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1508.338 2577.102 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/XY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/XY.W.36.2PDGQQ

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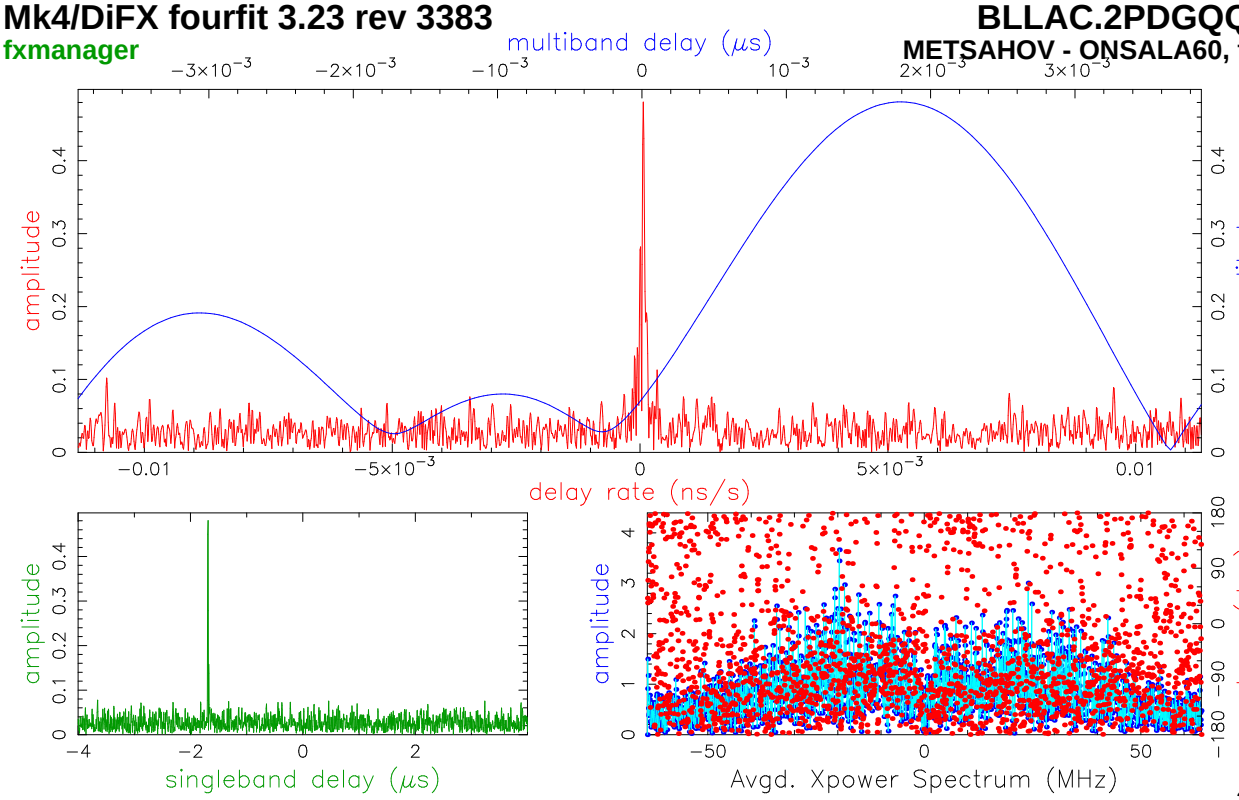
fxmanager

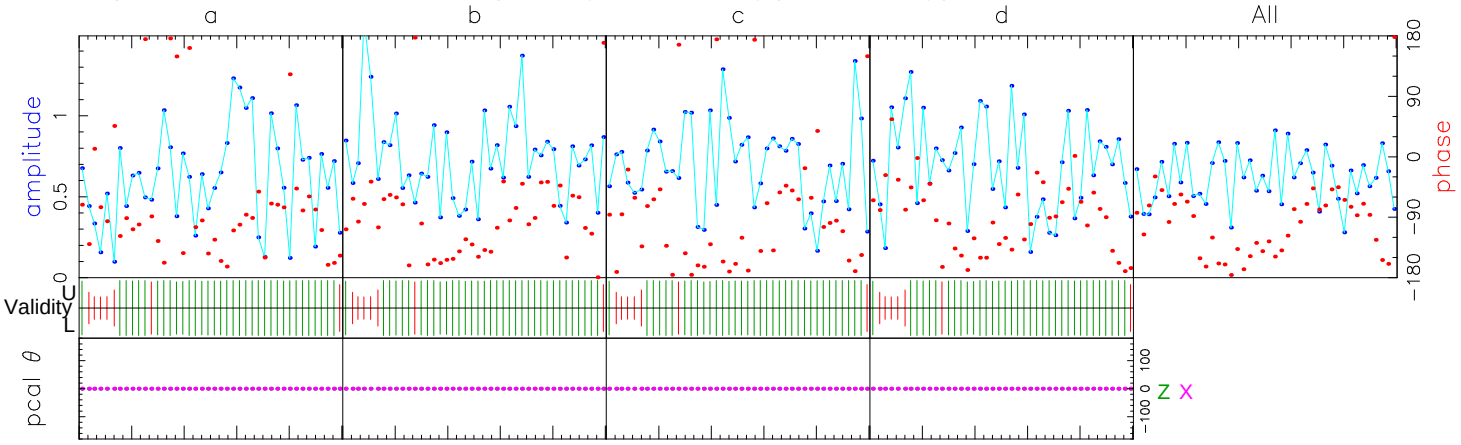
BLLAC.2PDGQQ, No0001, ZX

METSAHOV - ONSALA60, fgroup W, pol RR



Fringe quality	8
SNR	22.8
Int time	279.517
Amp	0.498
Phase	-107.6
PFD	0.0e+00
Delays (us)	
SBD	-1.688937
MBD	0.001761
Fringe rate (Hz)	0.005906
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143612 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-111.8	-97.9	-124.0	-98.4	Phase	-107.6
	0.5	0.5	0.5	0.5	Ampl.	0.5
	592.3	592.8	592.6	592.9	Sbd box	592.6
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
Z:X	0:0	0:0	0:0	0:0	PC phase	
Z:X	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-1.49901293202E+03	Apriori delay (usec)	-1.49732719312E+03	Resid mbdelay (usec)	1.76110E-03	+/-	4.9E-05
Sband delay (usec)	-1.49901613012E+03	Apriori clock (usec)	-9.1985100E+01	Resid sbdelay (usec)	-1.68894E+00	+/-	1.9E-04
Phase delay (usec)	-1.49732719659E+03	Apriori clockrate (us/s)	-6.2999996E-07	Resid phdelay (usec)	-3.46966E-06	+/-	8.1E-08
Delay rate (us/s)	4.79889165835E-02	Apriori rate (us/s)	4.79888480192E-02	Resid rate (us/s)	6.85643E-08	+/-	9.7E-10
Total phase (deg)	-257.2	Apriori accel (us/s/s)	9.41954420558E-06	Resid phase (deg)	-107.6	+/-	2.5

	RMS	Theor.	Amplitude	0.498 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	41.5	16.1	Search (2048X16)	0.472	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	41.1	28.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	15.3	5.0	Inc. seg. avg.	0.604	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	4.8	8.8	Inc. frq. avg.	0.487	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 298.4 el 33.3 pa 36.1 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) -359.847 845.912 simultaneous interpolator

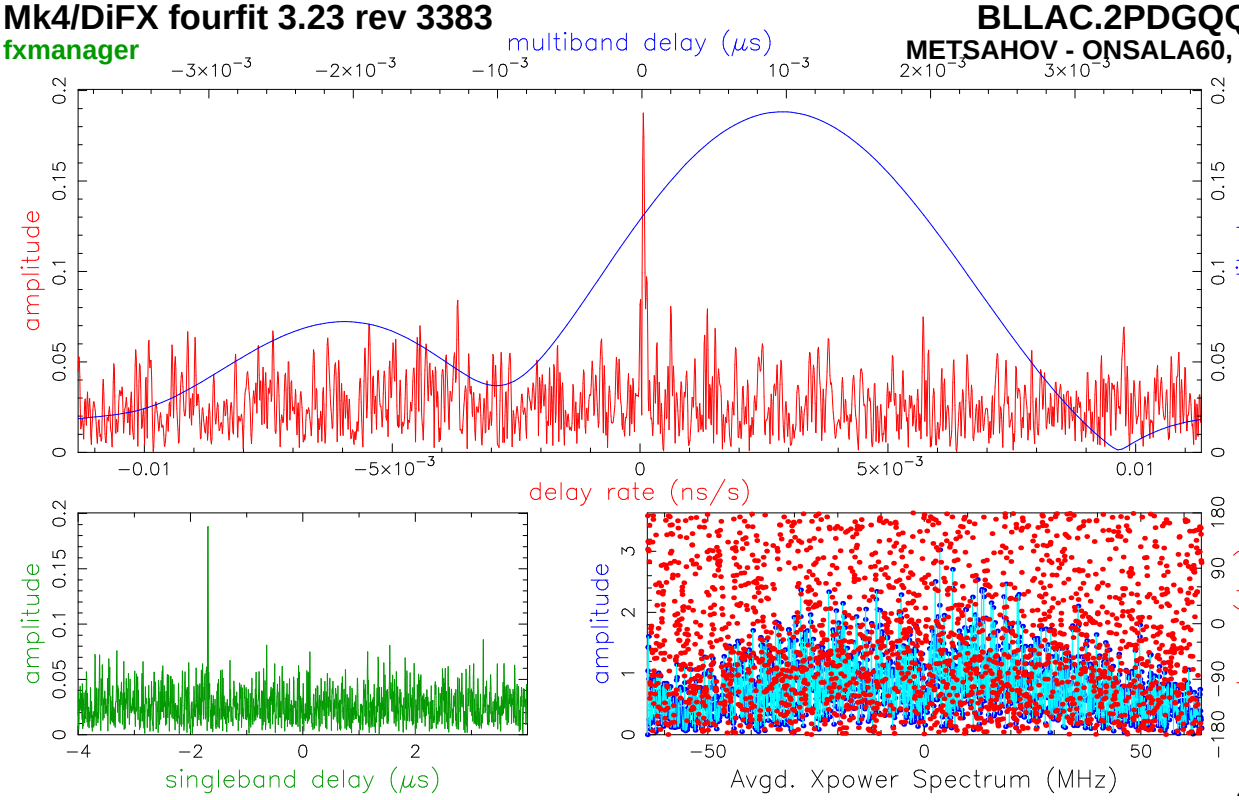
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.10.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

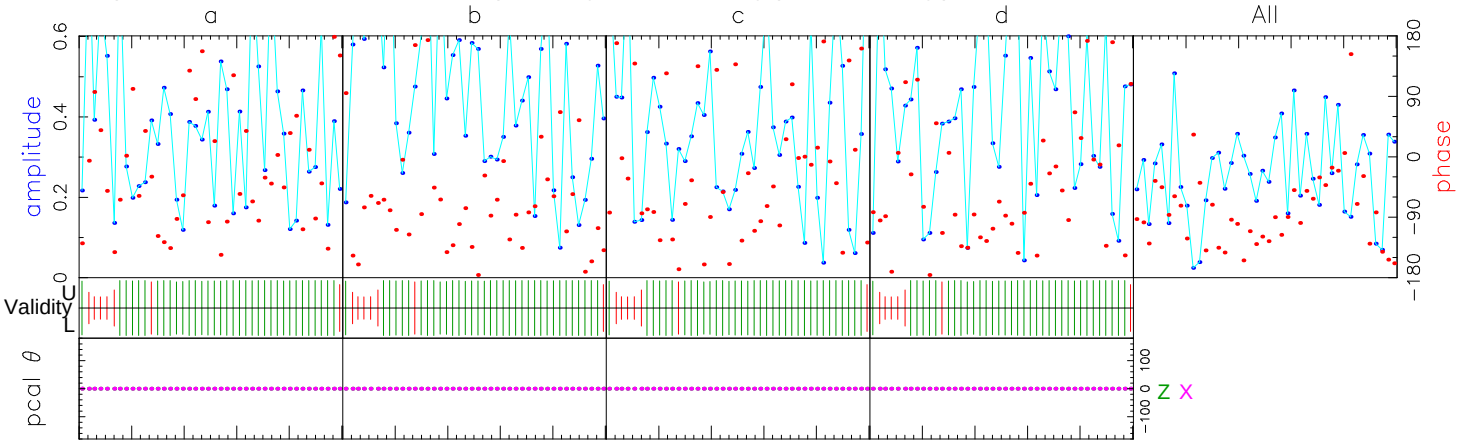
BLLAC.2PDGQQ, No0001, ZX

METSAHOV - ONSALA60, fgroup W, pol LR



Fringe quality	9
SNR	9.2
Int time	279.517
Amp	0.201
Phase	-87.4
PFD	3.6e-11
Delays (us)	
SBD	-1.689407
MBD	0.001073
Fringe rate (Hz)	0.005614
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143617 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	a	b	c	d	Freq (MHz)	All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-65.5	-98.4	-85.8	-89.8	Phase	-87.4
	0.2	0.3	0.2	0.2	Ampl.	0.2
	1130.0	592.4	1371.0	592.3	Sbd box	592.5
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
Z:X	0:0	0:0	0:0	0:0	PC phase	
Z:X	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-1.49901362036E+03	Apriori delay (usec)	-1.49732719312E+03	Resid mbdelay (usec)	1.07276E-03	+/- 1.2E-04
Sband delay (usec)	-1.49901660062E+03	Apriori clock (usec)	-9.1985100E+01	Resid sbdelay (usec)	-1.68941E+00	+/- 4.7E-04
Phase delay (usec)	-1.49732719594E+03	Apriori clockrate (us/s)	-6.2999996E-07	Resid phdelay (usec)	-2.81802E-06	+/- 2.0E-07
Delay rate (us/s)	4.79889131938E-02	Apriori rate (us/s)	4.79888480192E-02	Resid rate (us/s)	6.51745E-08	+/- 2.4E-09
Total phase (deg)	-237.0	Apriori accel (us/s/s)	9.41954420558E-06	Resid phase (deg)	-87.4	+/- 6.2

	RMS	Theor.	Amplitude	0.201 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	50.2	39.9	Search (2048X16)	0.188	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	64.0	69.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	17.5	12.5	Inc. seg. avg.	0.209	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	26.8	21.8	Inc. frq. avg.	0.187	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 298.4 el 33.3 pa 36.1 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) -359.847 845.912 simultaneous interpolator

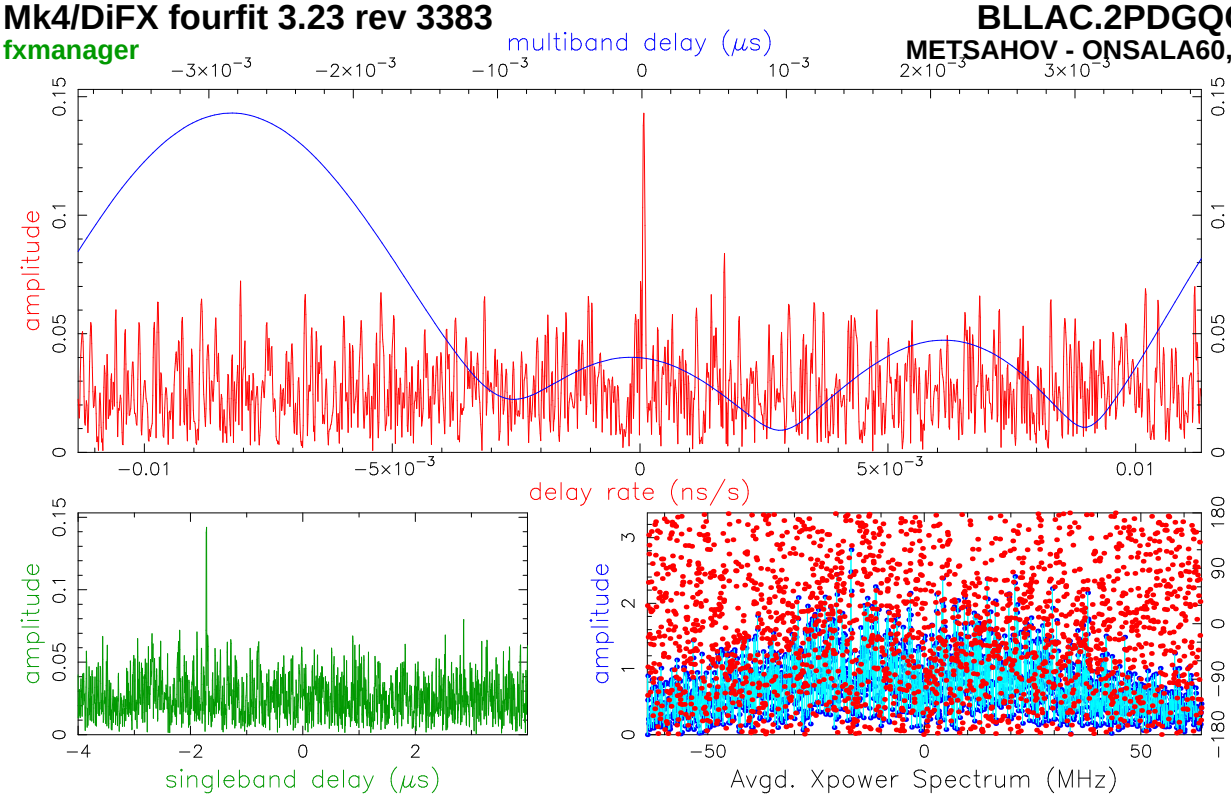
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.11.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

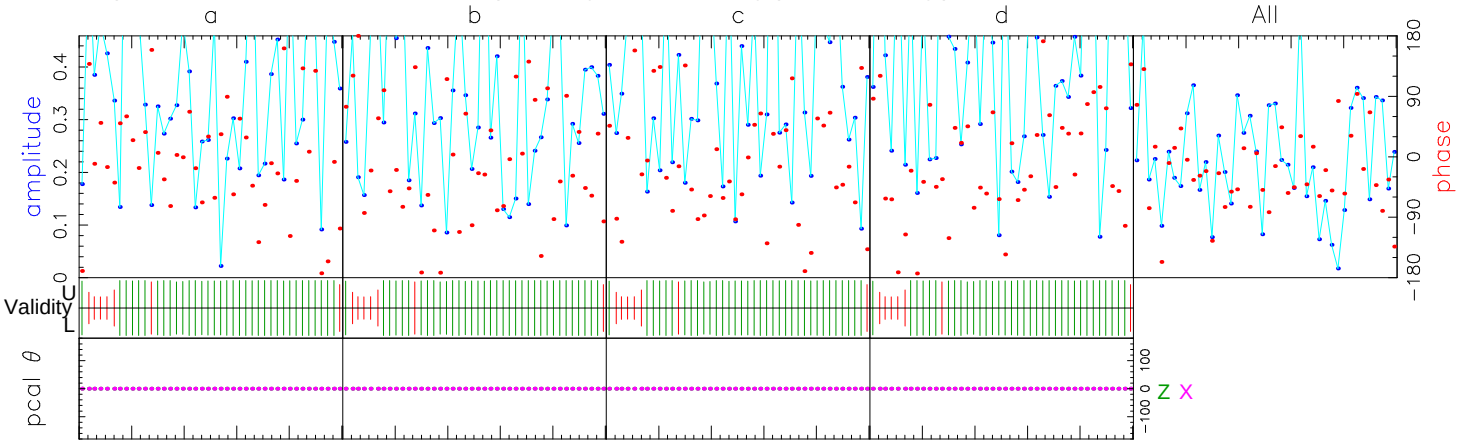
BLLAC.2PDGQQ, No0001, ZX

METSAHOV - ONSALA60, fgroup W, pol RL



Fringe quality	0
SNR	7.0
Int time	279.517
Amp	0.153
Phase	-197.7
PFD	1.6e-03
Delays (us)	
SBD	-1.716623
MBD	-0.002827
Fringe rate (Hz)	0.006291
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143622 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	a	b	c	d		All
	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	
	-5.5	-33.4	-21.7	-11.5	Phase	-17.7
	0.1	0.1	0.2	0.1	Ampl.	0.1
	584.8	238.8	691.1	591.2	Sbd box	585.5
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
Z:X	0:0	0:0	0:0	0:0	PC phase	
Z:X	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-1.49904095714E+03	Apriori delay (usec)	-1.49732719312E+03	Resid mbdelay (usec)	-2.82652E-03	+/-	1.6E-04
Sband delay (usec)	-1.49904381587E+03	Apriori clock (usec)	-9.1985100E+01	Resid sbdelay (usec)	-1.71662E+00	+/-	6.2E-04
Phase delay (usec)	-1.49732719369E+03	Apriori clockrate (us/s)	-6.2999996E-07	Resid phdelay (usec)	-5.71113E-07	+/-	2.6E-07
Delay rate (us/s)	4.79889210496E-02	Apriori rate (us/s)	4.79888480192E-02	Resid rate (us/s)	7.30303E-08	+/-	3.1E-09
Total phase (deg)	-347.3	Apriori accel (us/s/s)	9.41954420558E-06	Resid phase (deg)	-197.7	+/-	8.2

	RMS	Theor.	Amplitude	0.153 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	56.6	52.2	Search (2048X16)	0.142	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	86.8	91.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	15.0	16.4	Inc. seg. avg.	0.161	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	7.6	28.6	Inc. frq. avg.	0.140	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 298.4 el 33.3 pa 36.1 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) -359.847 845.912 simultaneous interpolator

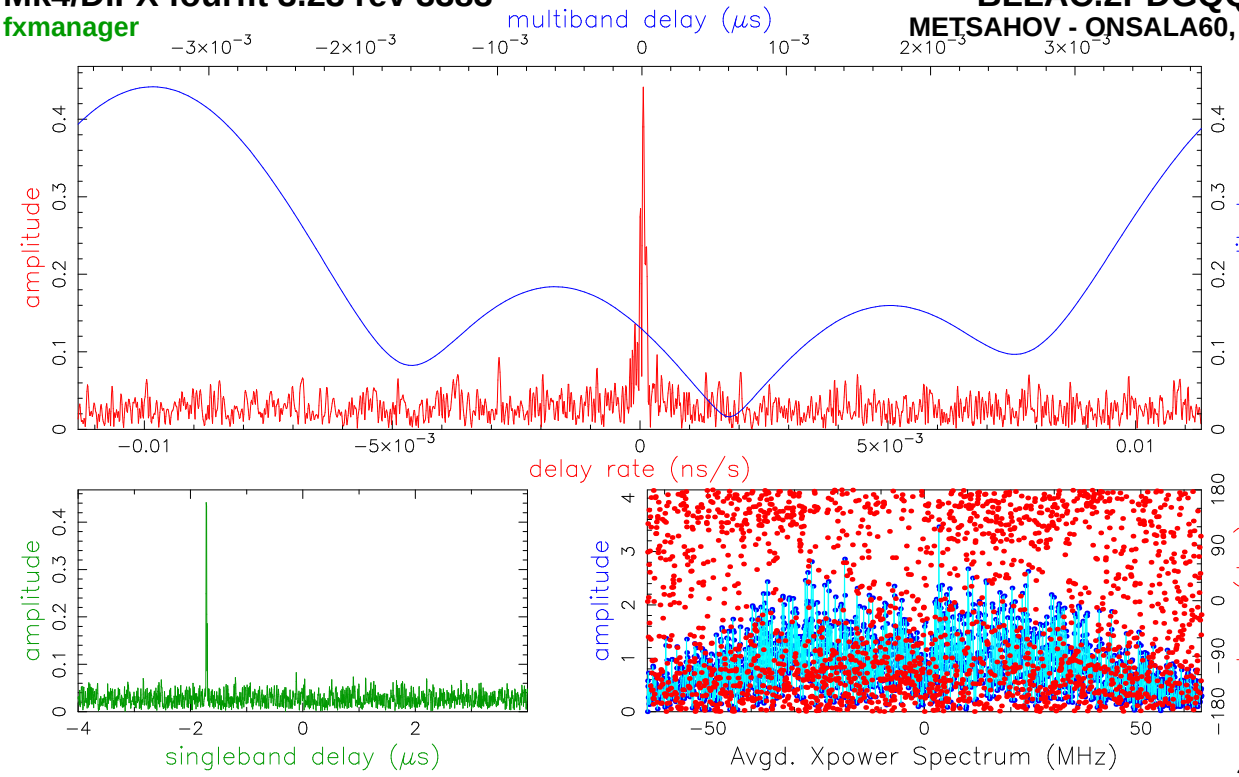
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.12.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

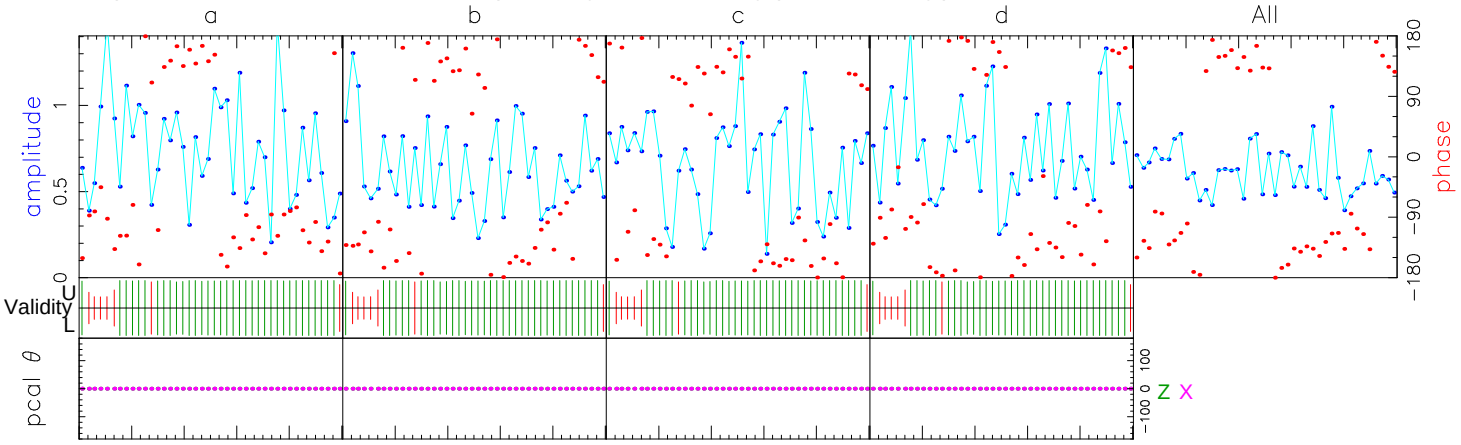
BLLAC.2PDGQQ, No0001, ZX

METSAHOV - ONSALA60, fgroup W, pol LL



Fringe quality	7
SNR	21.4
Int time	279.517
Amp	0.468
Phase	-341.3
PFD	0.0e+00
Delays (us)	
SBD	-1.716897
MBD	-0.003340
Fringe rate (Hz)	0.005811
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143607 2021:298:074129
RA & Dec (J2000)	22h02m43.291370s +42°16'39.979897"

Amp. and Phase vs. time for each freq., 42 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86076.00	86204.00	86332.00	86460.00	Freq (MHz)	All
	-143.6	-172.7	174.1	-147.6	Phase	-161.3
	0.5	0.4	0.4	0.5	Ampl.	0.5
	585.4	585.0	585.6	585.8	Sbd box	585.5
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
X	0	0	0	0	PC freqs	
Z:X	0:0	0:0	0:0	0:0	PC phase	
Z:X	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000		
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
X	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	-1.49904147099E+03	Apriori delay (usec)	-1.49732719312E+03	Resid mbdelay (usec)	-3.34037E-03	+/-	5.2E-05
Sband delay (usec)	-1.49904408987E+03	Apriori clock (usec)	-9.1985100E+01	Resid sbdelay (usec)	-1.71690E+00	+/-	2.0E-04
Phase delay (usec)	-1.49732719832E+03	Apriori clockrate (us/s)	-6.2999996E-07	Resid phdelay (usec)	-5.20001E-06	+/-	8.6E-08
Delay rate (us/s)	4.79889154775E-02	Apriori rate (us/s)	4.79888480192E-02	Resid rate (us/s)	6.74582E-08	+/-	1.0E-09
Total phase (deg)	-130.9	Apriori accel (us/s/s)	9.41954420558E-06	Resid phase (deg)	-341.3	+/-	2.7

	RMS	Theor.	Amplitude	0.468 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	45.4	17.1	Search (2048X16)	0.441	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	43.4	29.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	24.9	5.4	Inc. seg. avg.	0.590	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	6.6	9.3	Inc. frq. avg.	0.461	Data rate(Mb/s): 2048	nlags: 1024 t_cohere infinite	ion window (TEC)	0.00 0.00

Z: az 298.4 el 33.3 pa 36.1 X: az 291.5 el 38.0 pa 42.6 u,v (fr/asec) -359.847 845.912 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.9.2PDGQQ