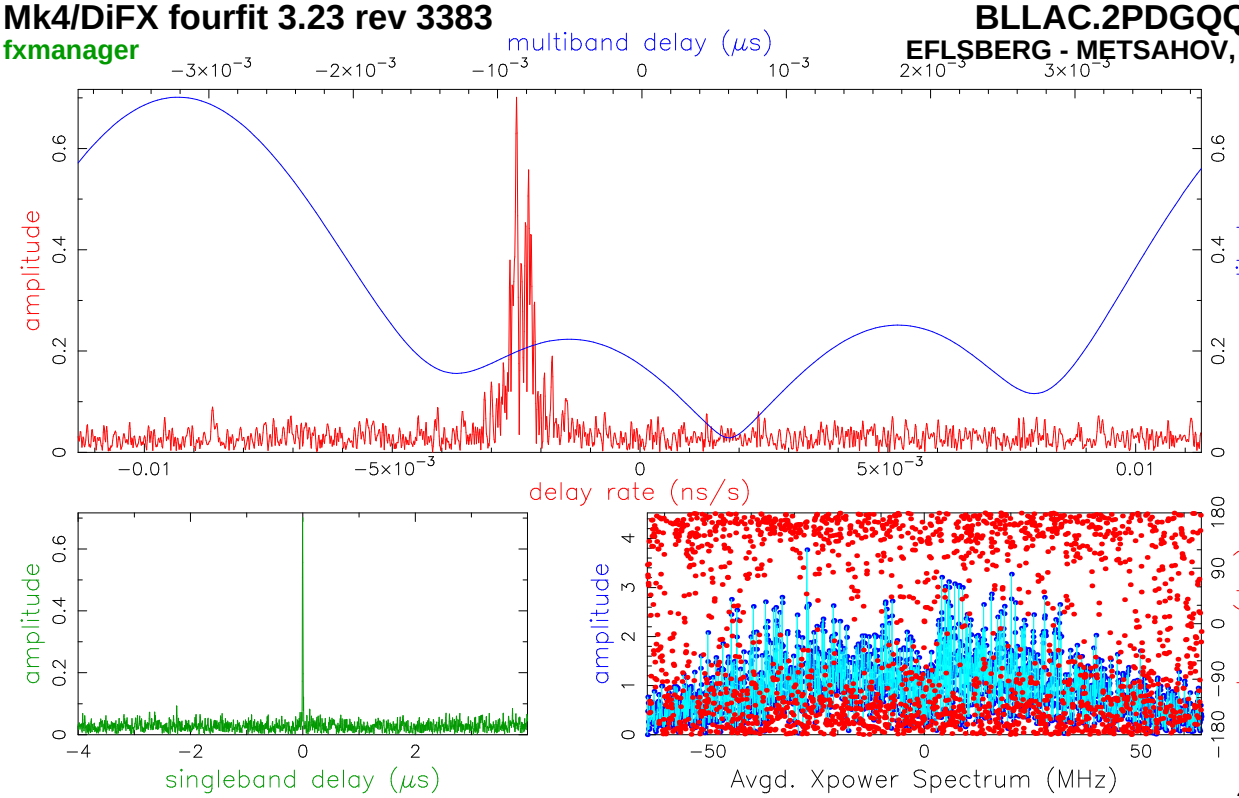
Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

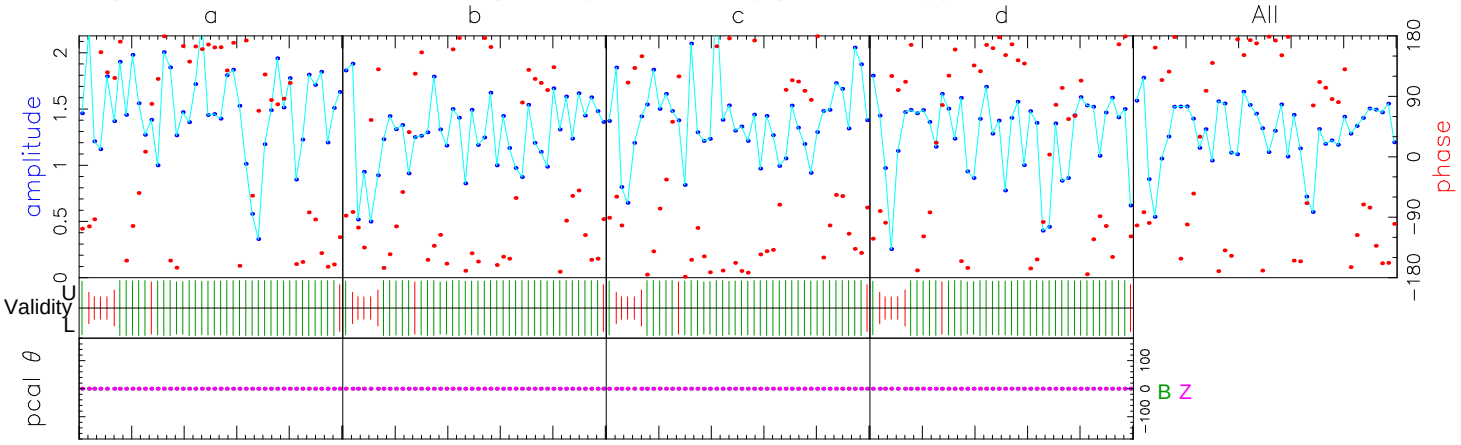
BLLAC.2PDGQQ, No0001, BZ

EFLSBERG - METSAHOV, fgroup W, pol LL



Fringe quality	6
SNR	32.1
Int time	279.517
Amp	0.717
Phase	-168.8
PFD	0.0e+00
Delays (us)	
SBD	-0.003583
MBD	-0.003207
Fringe rate (Hz)	-0.214490
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 2023:124:143527 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
	177.7	-154.1	-152.4	173.3	Phase	-168.8
	0.8	0.7	0.8	0.7	Ampl.	0.7
	1024.0	1024.2	1024.1	1023.7	Sbd box	1024.1
U/L	568/568	568/568	568/568	568/568	APs used	
B	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
B:Z	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
B	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	1.42294450138E+03	Apriori delay (usec)	1.42294770868E+03	Resid mbdelay (usec)	-3.20730E-03	+/- 3.5E-05
Sband delay (usec)	1.42294412543E+03	Apriori clock (usec)	-8.1796989E+00	Resid sbdelay (usec)	-3.58325E-03	+/- 1.3E-04
Phase delay (usec)	1.42294770323E+03	Apriori clockrate (us/s)	2.0100000E-06	Resid phdelay (usec)	-5.44489E-06	+/- 5.8E-08
Delay rate (us/s)	-1.48620815491E-01	Apriori rate (us/s)	-1.48618325478E-01	Resid rate (us/s)	-2.49001E-06	+/- 6.9E-10
Total phase (deg)	56.4	Apriori accel (us/s/s)	-1.49300169577E-05	Resid phase (deg)	-168.8	+/- 1.8

	RMS	Theor.	Amplitude	0.717 +/- 0.022
ph/seg (deg)	65.6	11.4	Search (2048X16)	0.694
amp/seg (%)	94.0	19.9	Interp.	0.000
ph/frq (deg)	22.2	3.6	Inc. seg. avg.	1.313
amp/frq (%)	7.4	6.2	Inc. frq. avg.	0.742

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us
Data rate(Mb/s): 2048 nlags: 1024 t_cohere infinite

sb window (us)	-4.000	4.000
mb window (us)	-0.004	0.004
dr window (ns/s)	-0.011	0.011
ion window (TEC)	0.00	0.00

B: az 293.3 el 38.1 pa 52.2 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 1132.290 -1710.165 simultaneous interpolator

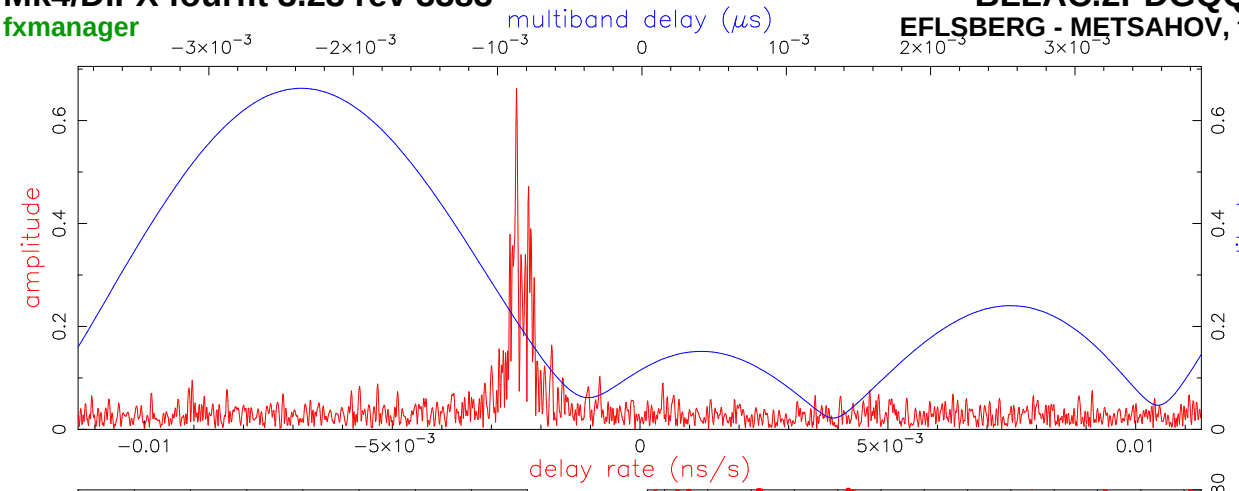
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BZ.W.1.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

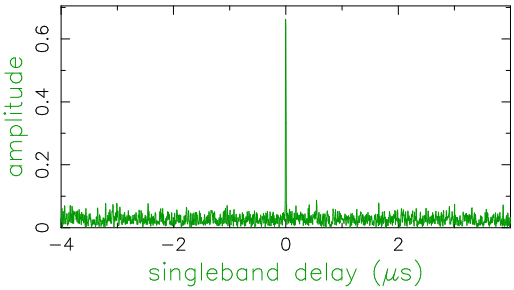
fxmanager

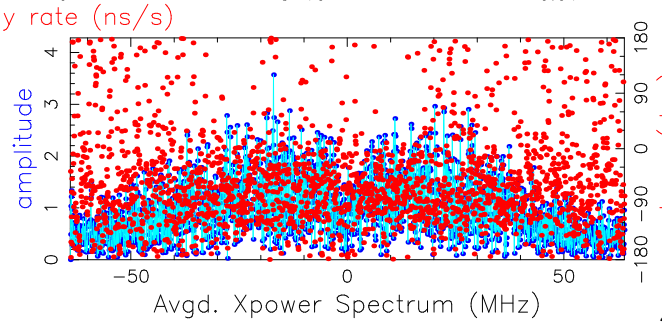
BLLAC.2PDGQQ, No0001, BZ

EFLSBERG - METSAHOV, fgroup W, pol RR

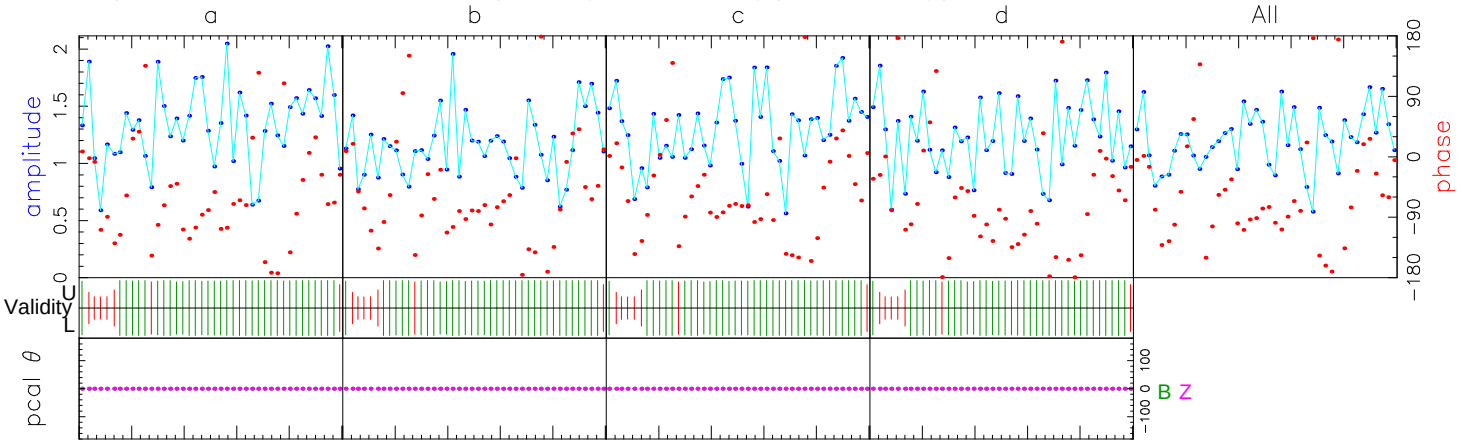


Fringe quality	8
SNR	31.6
Int time	279.517
Amp	0.705
Phase	-72.6
PFD	0.0e+00
Delays (us)	
SBD	-0.002294
MBD	-0.002322
Fringe rate (Hz)	-0.214494
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.512
Exp.	f231a
Exper #	1234
Yr:day	2023:124
Start	120000.00
Stop	120500.03
FRT	120230.00
Corr/FF/build	2023:124:143316 2023:124:143532 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
	-74.2	-72.1	-60.3	-84.9	Phase	-72.6
	0.7	0.6	0.7	0.7	Ampl.	0.7
	1024.4	1024.6	1024.5	1024.1	Sbd box	1024.4
U/L	568/568	568/568	568/568	568/568	APs used	
B	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
B:Z	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
B	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	1.42294538635E+03	Apriori delay (usec)	1.42294770868E+03	Resid mbdelay (usec)	-2.32233E-03	+/-	3.5E-05
Sband delay (usec)	1.42294541418E+03	Apriori clock (usec)	-8.1796989E+00	Resid sbdelay (usec)	-2.29450E-03	+/-	1.4E-04
Phase delay (usec)	1.42294770634E+03	Apriori clockrate (us/s)	2.0100000E-06	Resid phdelay (usec)	-2.34201E-06	+/-	5.8E-08
Delay rate (us/s)	-1.48620815540E-01	Apriori rate (us/s)	-1.48618325478E-01	Resid rate (us/s)	-2.49006E-06	+/-	7.0E-10
Total phase (deg)	152.6	Apriori accel (us/s/s)	-1.49300169577E-05	Resid phase (deg)	-72.6	+/-	1.8

	RMS	Theor.	Amplitude	0.705 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	64.5	11.6	Search (2048X16)	0.658	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	84.0	20.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	12.3	3.6	Inc. seg. avg.	1.216	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	6.5	6.3	Inc. frq. avg.	0.682	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 1132.290 -1710.165 simultaneous interpolator

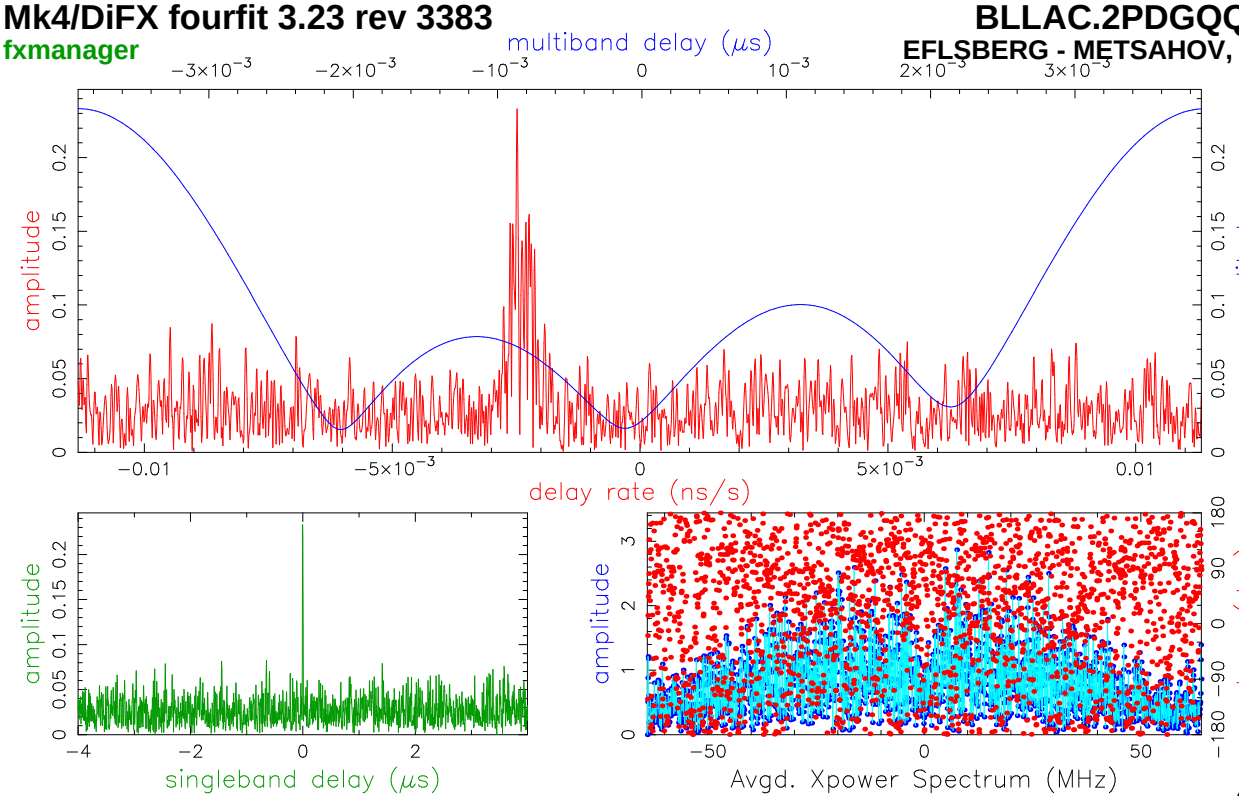
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BZ.W.2.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

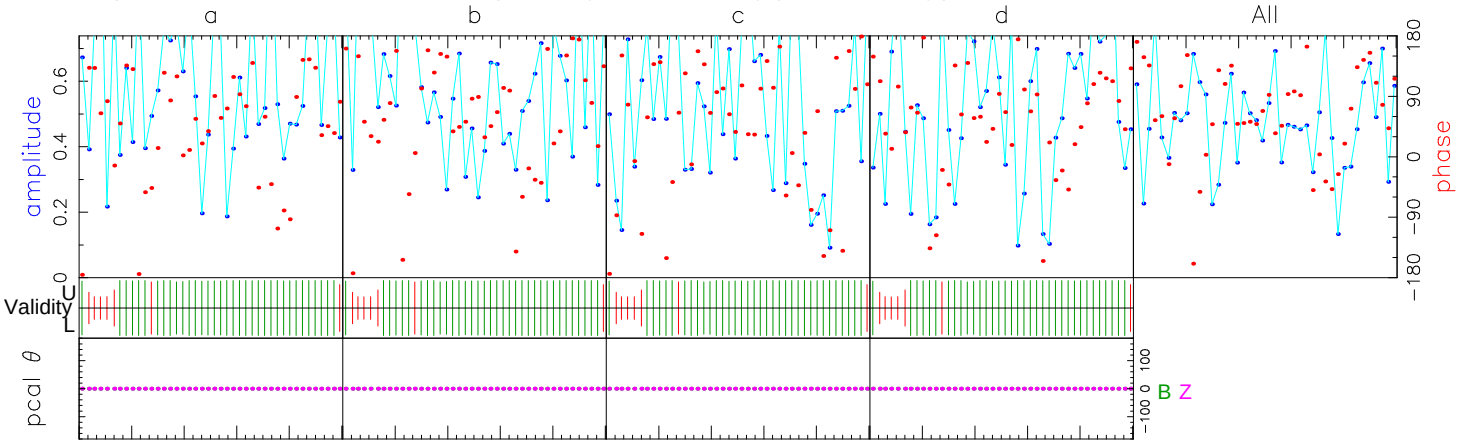
BLLAC.2PDGQQ, No0001, BZ

EFLSBERG - METSAHOV, fgroup W, pol LR



Fringe quality	9
SNR	11.0
Int time	279.517
Amp	0.246
Phase	81.2
PFD	2.3e-19
Delays (us)	
SBD	-0.002439
MBD	-0.003861
Fringe rate (Hz)	-0.214141
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
	2023:124:143537
	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)	
	78.4	84.9	97.2	69.5	Phase	81.2
	0.2	0.2	0.2	0.3	Ampl.	0.2
	1024.8	1024.8	1024.3	1023.7	Sbd box	1024.4
U/L	568/568	568/568	568/568	568/568	APs used	
B	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
B:Z	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
B	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	1.42294384723E+03	Apriori delay (usec)	1.42294770868E+03	Resid mbdelay (usec)	-3.86145E-03	+/-	1.0E-04
Sband delay (usec)	1.42294526943E+03	Apriori clock (usec)	-8.1796989E+00	Resid sbdelay (usec)	-2.43925E-03	+/-	3.9E-04
Phase delay (usec)	1.42294771130E+03	Apriori clockrate (us/s)	2.0100000E-06	Resid phdelay (usec)	2.61726E-06	+/-	1.7E-07
Delay rate (us/s)	-1.48620811441E-01	Apriori rate (us/s)	-1.48618325478E-01	Resid rate (us/s)	-2.48596E-06	+/-	2.0E-09
Total phase (deg)	306.4	Apriori accel (us/s/s)	-1.49300169577E-05	Resid phase (deg)	81.2	+/-	5.2

	RMS	Theor.	Amplitude	0.246 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	65.5	33.1	Search (2048X16)	0.226	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	114.5	57.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	14.4	10.4	Inc. seg. avg.	0.417	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	14.6	18.1	Inc. frq. avg.	0.238	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 1132.290 -1710.165 simultaneous interpolator

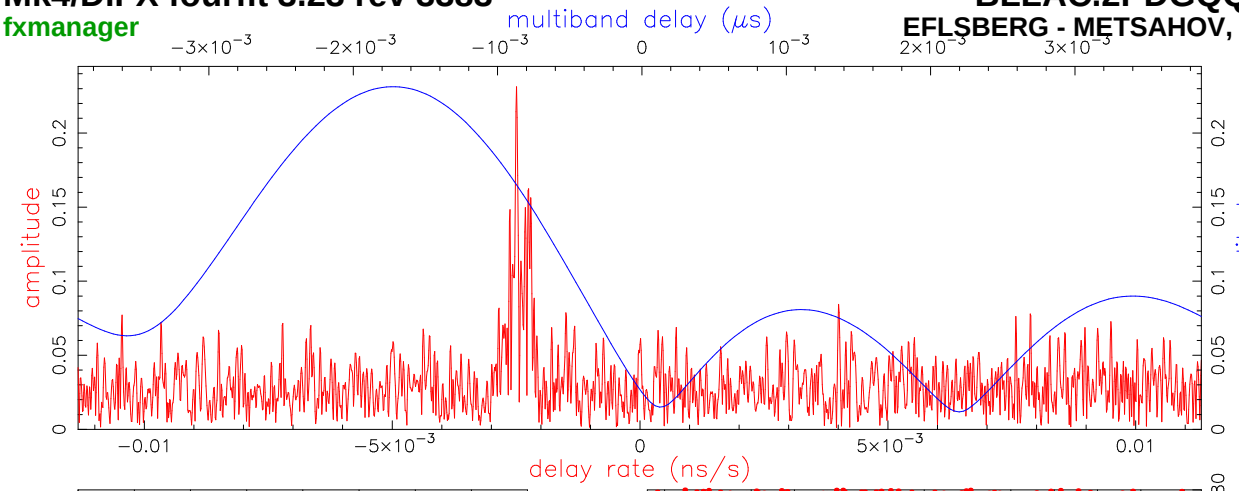
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BZ.W.3.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

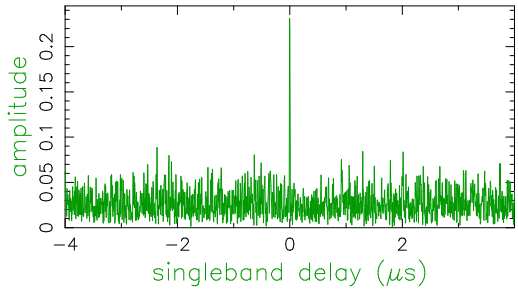
BLLAC.2PDGQQ, No0001, BZ

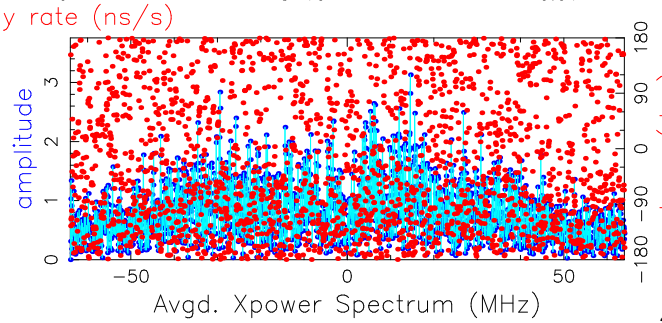
EFLSBERG - METSAHOV, fgroup W, pol RL



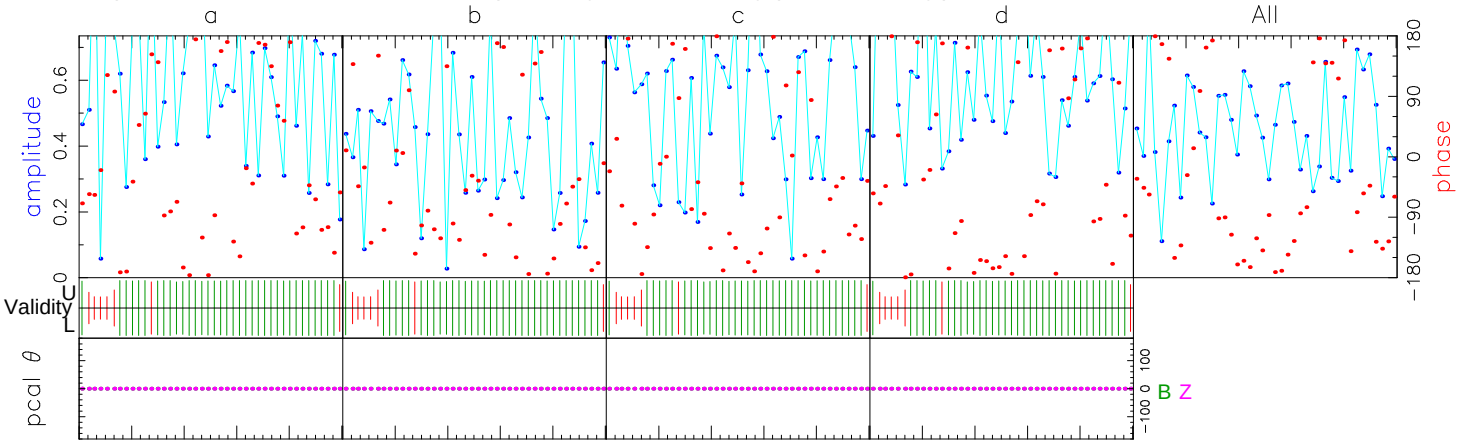
Fringe quality 9

SNR	11.0
Int time	279.517
Amp	0.245
Phase	-128.0
PFD	4.4e-19
Delays (us)	
SBD	-0.002434
MBD	-0.001692
Fringe rate (Hz)	-0.214263
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 2023:124:143542 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
	-140.9	-106.1	-118.1	-141.5	Phase	-128.0
	0.2	0.2	0.3	0.3	Ampl.	0.2
	1024.7	369.1	1024.2	1024.2	Sbd box	1024.4
U/L	568/568	568/568	568/568	568/568	APs used	
B	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
B:Z	0:0	0:0	0:0	0:0	PC phase	
B:Z	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
B	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	1.42294601626E+03	Apriori delay (usec)	1.42294770868E+03	Resid mbdelay (usec)	-1.69242E-03	+/-	1.0E-04
Sband delay (usec)	1.42294527493E+03	Apriori clock (usec)	-8.1796989E+00	Resid sbdelay (usec)	-2.43375E-03	+/-	3.9E-04
Phase delay (usec)	1.42294770455E+03	Apriori clockrate (us/s)	2.0100000E-06	Resid phdelay (usec)	-4.12922E-06	+/-	1.7E-07
Delay rate (us/s)	-1.48620812862E-01	Apriori rate (us/s)	-1.48618325478E-01	Resid rate (us/s)	-2.48738E-06	+/-	2.0E-09
Total phase (deg)	97.2	Apriori accel (us/s/s)	-1.49300169577E-05	Resid phase (deg)	-128.0	+/-	5.2

	RMS	Theor.	Amplitude	0.245 +/- 0.022
ph/seg (deg)	63.9	33.3	Search (2048X16)	0.228
amp/seg (%)	108.1	58.1	Interp.	0.000
ph/frq (deg)	21.5	10.4	Inc. seg. avg.	0.398
amp/frq (%)	14.5	18.2	Inc. frq. avg.	0.240

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us
Data rate(Mb/s): 2048 nlags: 1024 t_cohere infinite

sb window (us)	-4.000	4.000
mb window (us)	-0.004	0.004
dr window (ns/s)	-0.011	0.011
ion window (TEC)	0.00	0.00

B: az 293.3 el 38.1 pa 52.2 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 1132.290 -1710.165 simultaneous interpolator

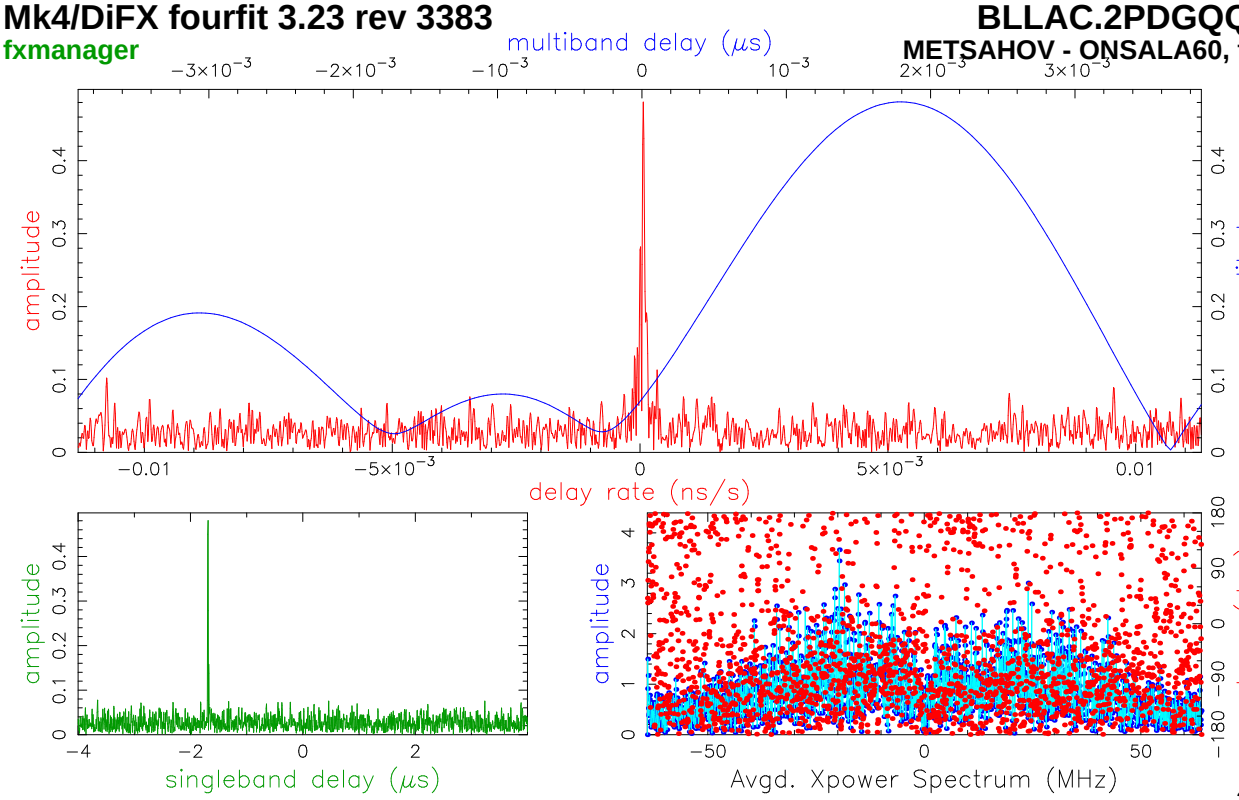
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/BZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/BZ.W.4.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

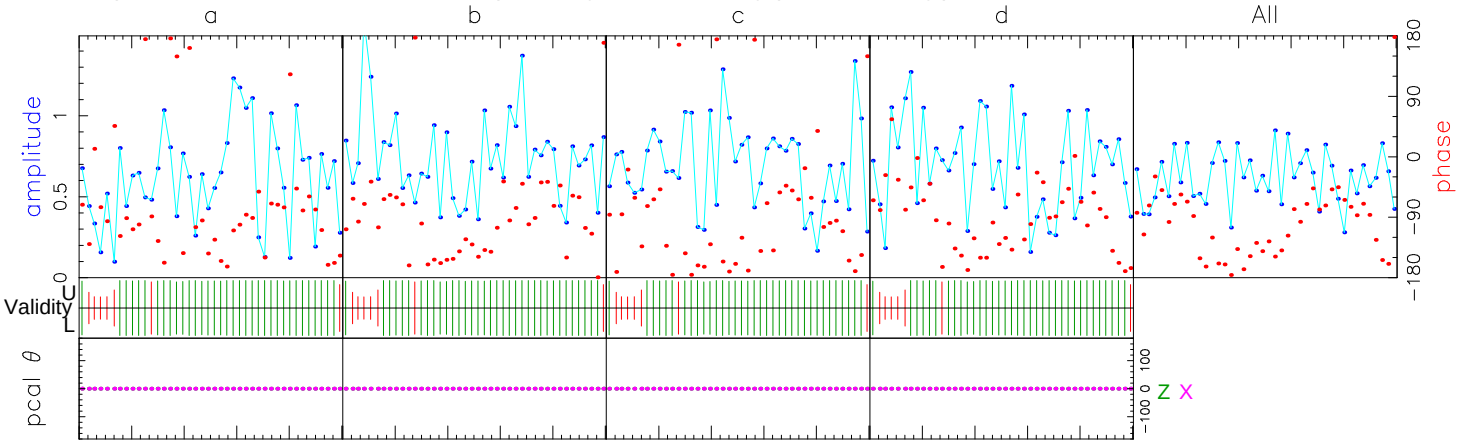
BLLAC.2PDGQQ, No0001, ZX

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

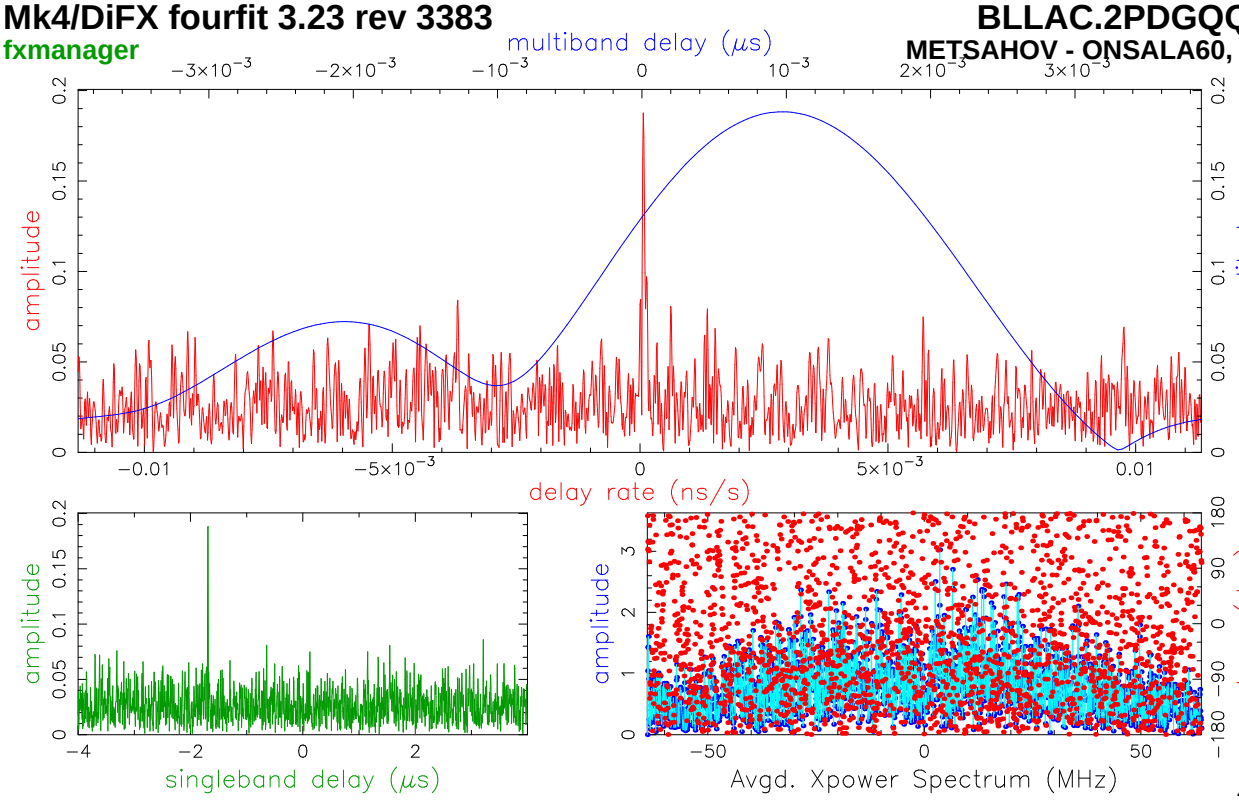
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.10.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

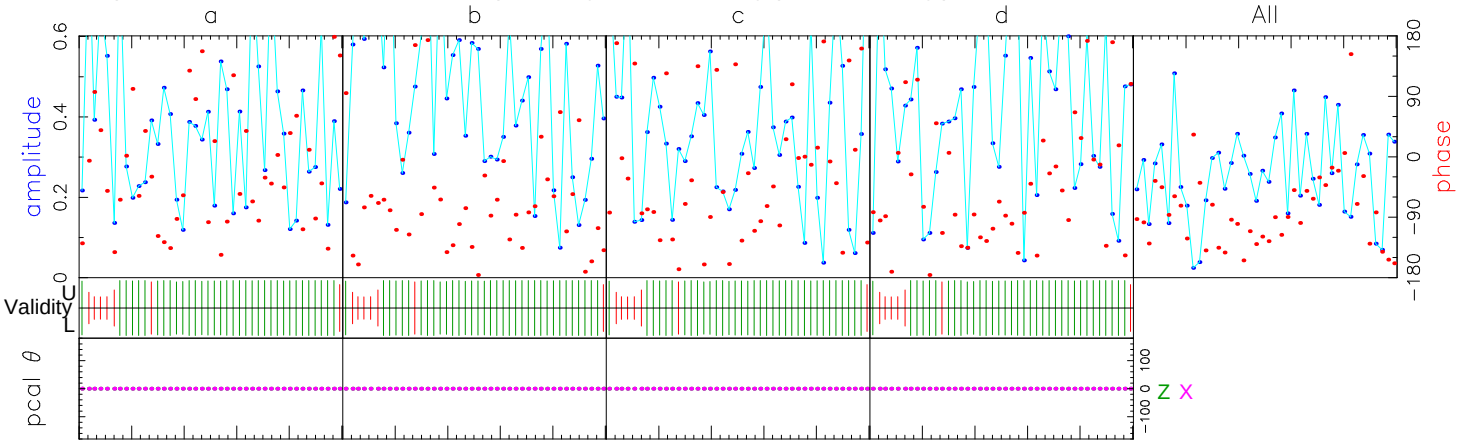
BLLAC.2PDGQQ, No0001, ZX

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

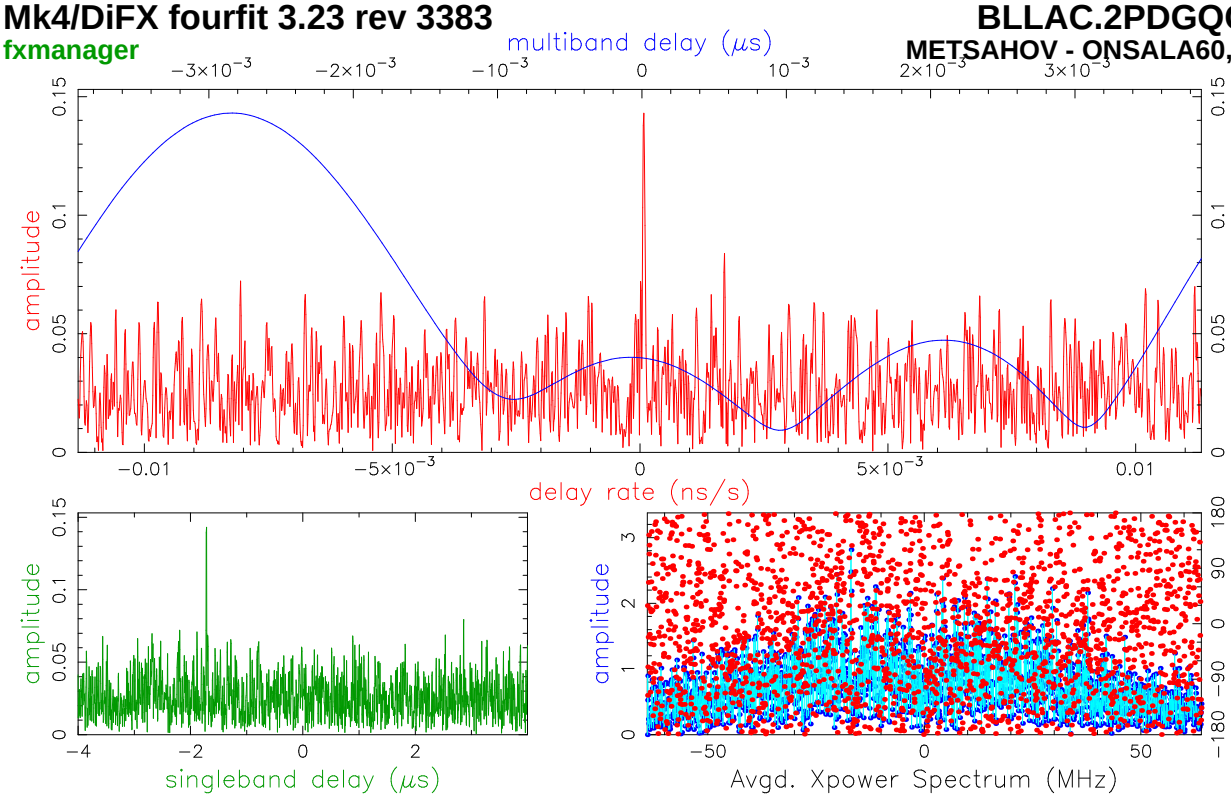
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.11.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

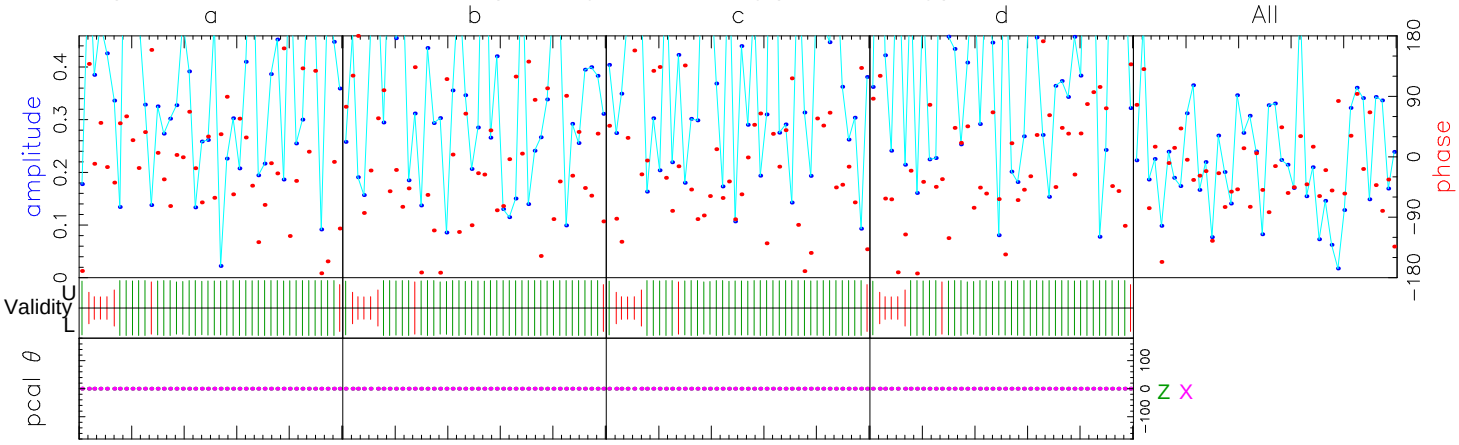
BLLAC.2PDGQQ, No0001, ZX

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

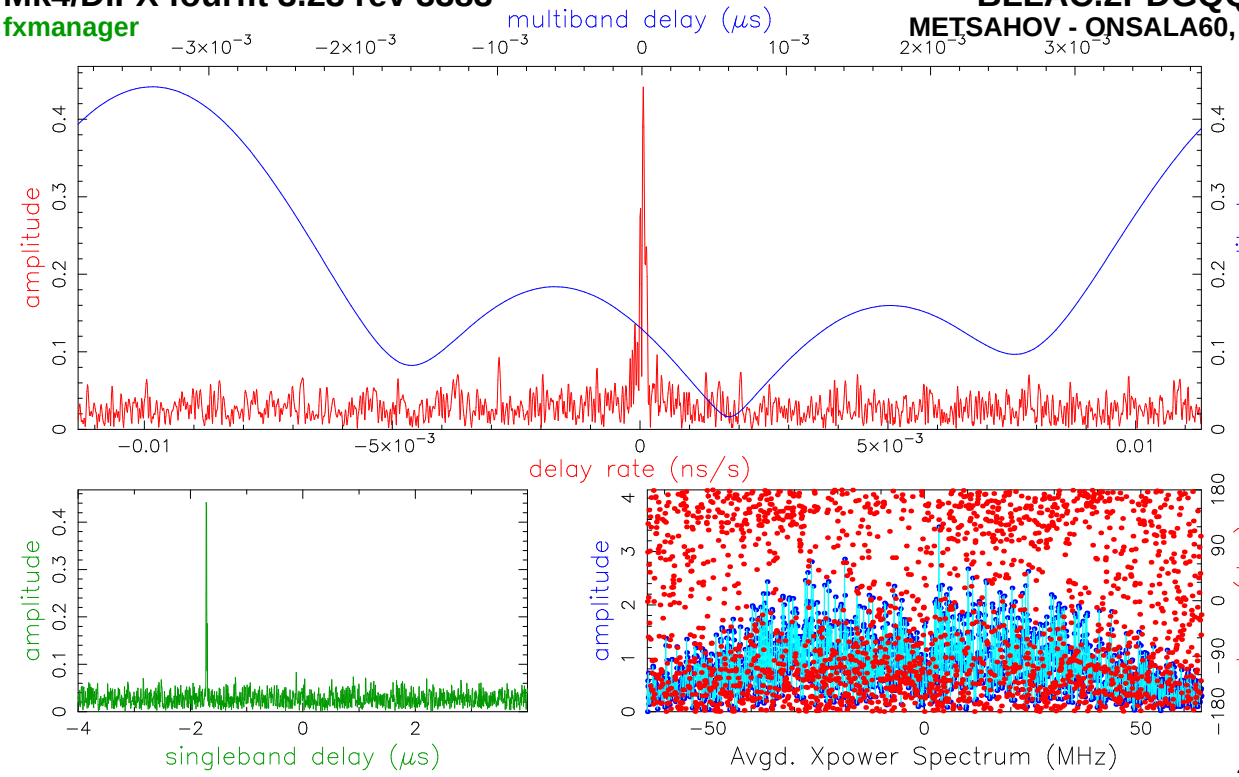
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.12.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

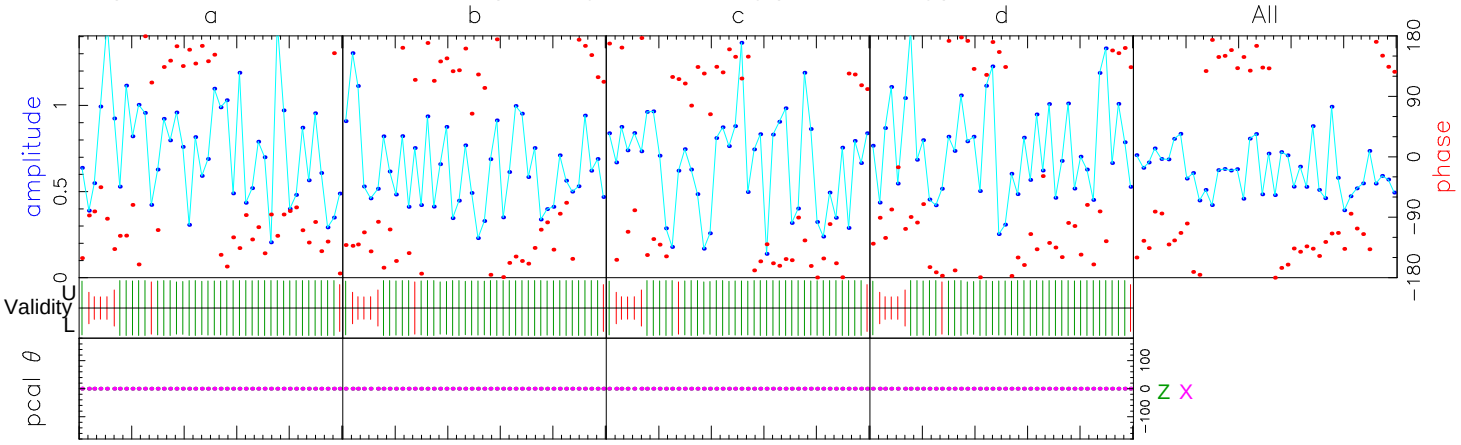
BLLAC.2PDGQQ, No0001, ZX

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

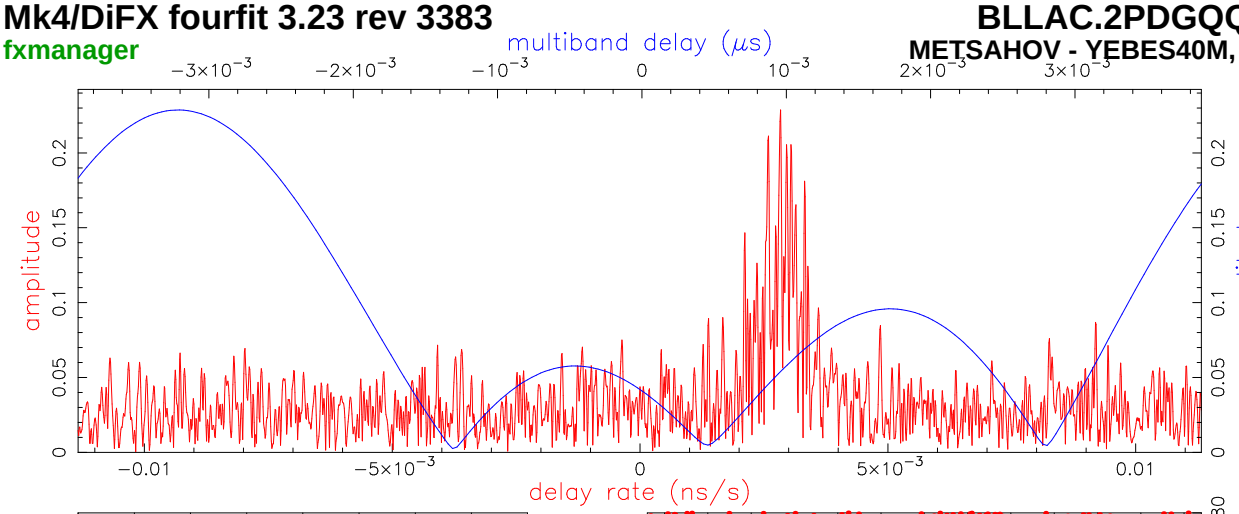
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZX..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZX.W.9.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

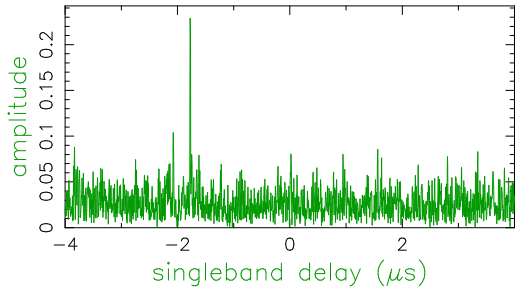
BLLAC.2PDGQQ, No0001, ZY

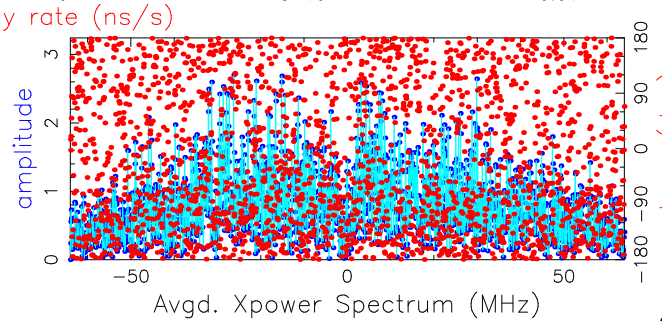
METSAHOV - YEBES40M, fgroup W, pol LL



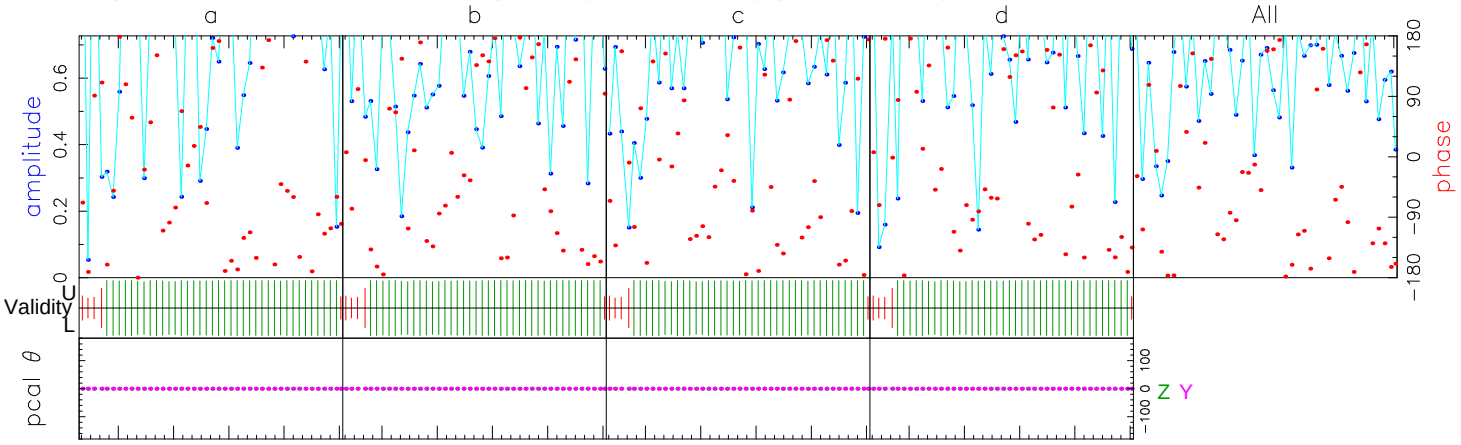
Fringe quality 9

SNR	10.5
Int time	266.155
Amp	0.242
Phase	-145.6
PFD	5.1e-17
Delays (us)	
SBD	-1.772055
MBD	-0.003214
Fringe rate (Hz)	0.244479
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 2023:124:143745 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
	-143.6	-154.8	-133.7	-149.6	Phase	-145.6
	0.3	0.2	0.2	0.3	Ampl.	0.2
	571.2	571.4	571.5	571.3	Sbd box	571.4
U/L	537/537	537/537	537/537	537/537	APs used	
Z	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
Z	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)	-1.99295759045E+03	Apriori delay (usec)	-1.99118875149E+03	Resid mbdelay (usec)	-3.21396E-03	+/-	1.1E-04
Sband delay (usec)	-1.99296080674E+03	Apriori clock (usec)	7.0319786E+01	Resid sbdelay (usec)	-1.77206E+00	+/-	4.1E-04
Phase delay (usec)	-1.99118875618E+03	Apriori clockrate (us/s)	-1.4100000E-06	Resid phdelay (usec)	-4.69496E-06	+/-	1.8E-07
Delay rate (us/s)	2.45771691127E-01	Apriori rate (us/s)	2.45768852973E-01	Resid rate (us/s)	2.83815E-06	+/-	2.2E-09
Total phase (deg)	-164.8	Apriori accel (us/s/s)	2.75765521670E-05	Resid phase (deg)	-145.6	+/-	5.4

	RMS	Theor.	Amplitude	0.242 +/- 0.023	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	77.8	35.2	Search (2048X16)	0.223	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	180.9	61.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	11.1	10.9	Inc. seg. avg.	0.541	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	8.5	19.0	Inc. frq. avg.	0.233	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 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1868.185 3423.014 simultaneous interpolator

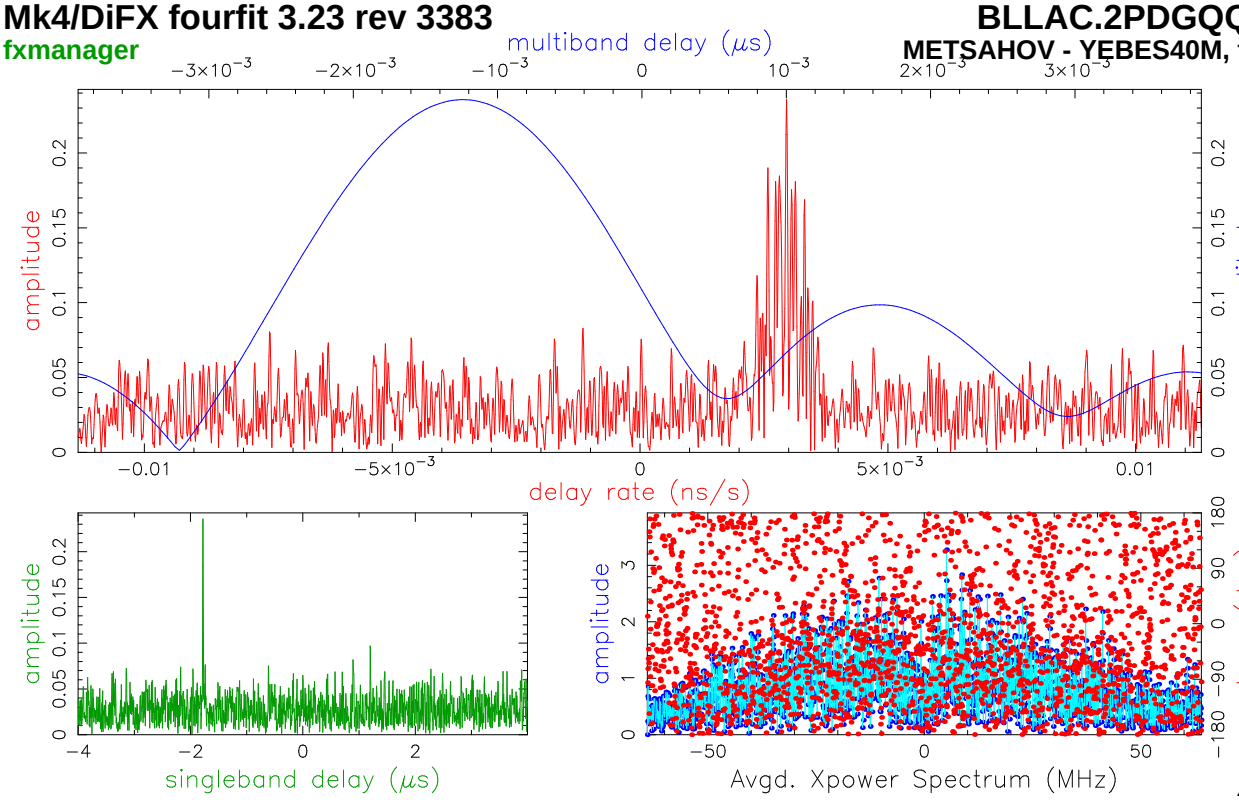
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZY.W.29.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, ZY

METSAHOV - YEBES40M, fgroup W, pol RR

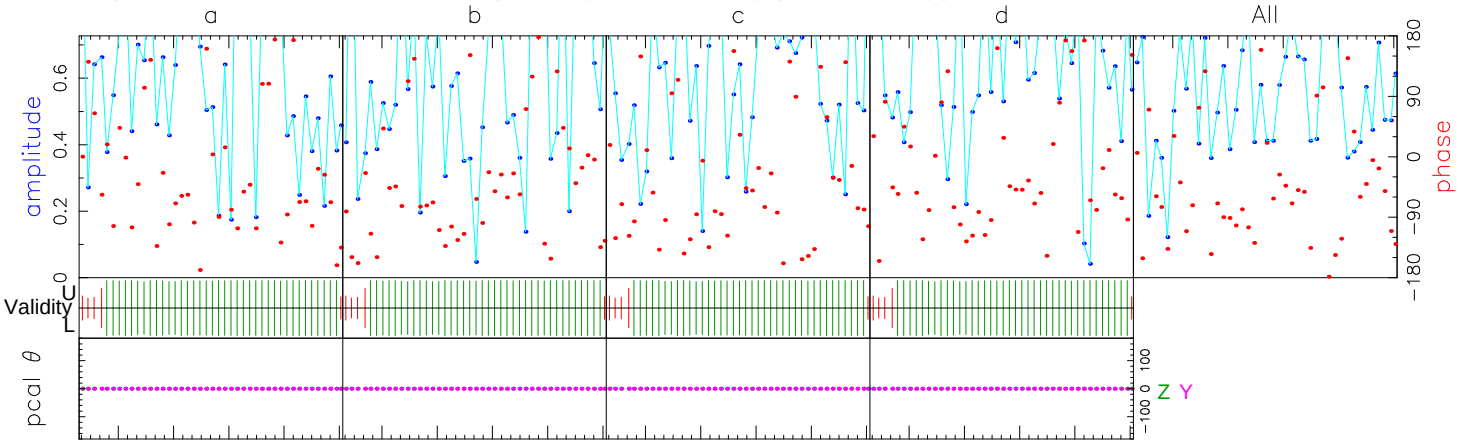


Fringe quality 9

SNR 10.5
Int time 266.155
Amp 0.242
Phase -258.0
PFD 6.4e-17
Delays (us)
SBD -1.777524
MBD -0.001245
Fringe rate (Hz)
0.254918
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
2023:124:143750
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
	-76.2	-71.7	-95.2	-70.1	Phase	-78.0
	0.2	0.2	0.2	0.3	Ampl.	0.2
	569.5	570.5	570.1	569.8	Sbd box	570.0
U/L	537/537	537/537	537/537	537/537	APs used	
Z	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
Z	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)	-1.99296343421E+03	Apriori delay (usec)	-1.99118875149E+03	Resid mbdelay (usec)	-1.24522E-03	+/-	1.1E-04
Sband delay (usec)	-1.99296627574E+03	Apriori clock (usec)	7.0319786E+01	Resid sbdelay (usec)	-1.77752E+00	+/-	4.1E-04
Phase delay (usec)	-1.99118875400E+03	Apriori clockrate (us/s)	-1.4100000E-06	Resid phdelay (usec)	-2.51386E-06	+/-	1.8E-07
Delay rate (us/s)	2.45771812316E-01	Apriori rate (us/s)	2.45768852973E-01	Resid rate (us/s)	2.95934E-06	+/-	2.2E-09
Total phase (deg)	-277.1	Apriori accel (us/s/s)	2.75765521670E-05	Resid phase (deg)	-258.0	+/-	5.4

	RMS	Theor.	Amplitude	0.242 +/- 0.023
ph/seg (deg)	77.8	35.2	Search (2048X16)	0.230
amp/seg (%)	150.7	61.5	Interp.	0.000
ph/frq (deg)	14.2	10.9	Inc. seg. avg.	0.472
amp/frq (%)	15.3	19.0	Inc. frq. avg.	0.242

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us
Data rate(Mb/s): 2048 nlags: 1024 t_cohere infinite

sb window (us)	-4.000	4.000
mb window (us)	-0.004	0.004
dr window (ns/s)	-0.011	0.011
ion window (TEC)	0.00	0.00

Z: az 298.4 el 33.3 pa 36.1 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1868.185 3423.014 simultaneous interpolator

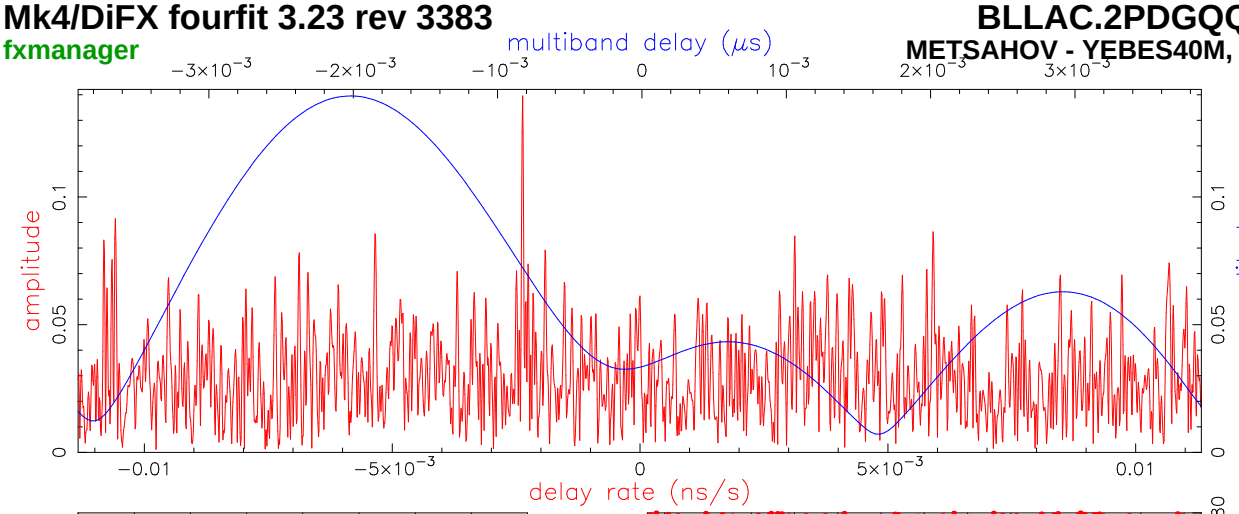
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZY.W.30.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

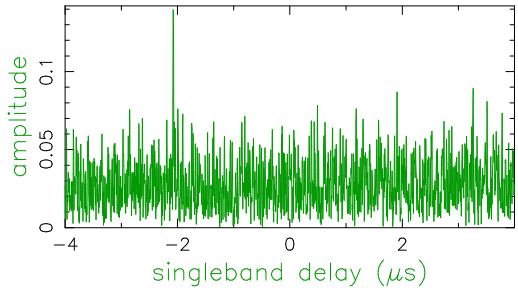
BLLAC.2PDGQQ, No0001, ZY

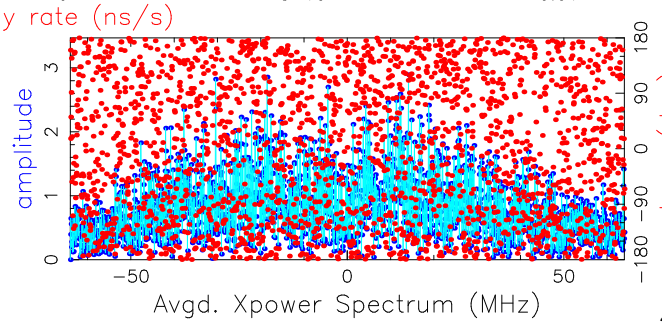
METSAHOV - YEBES40M, fgroup W, pol LR



Fringe quality 0

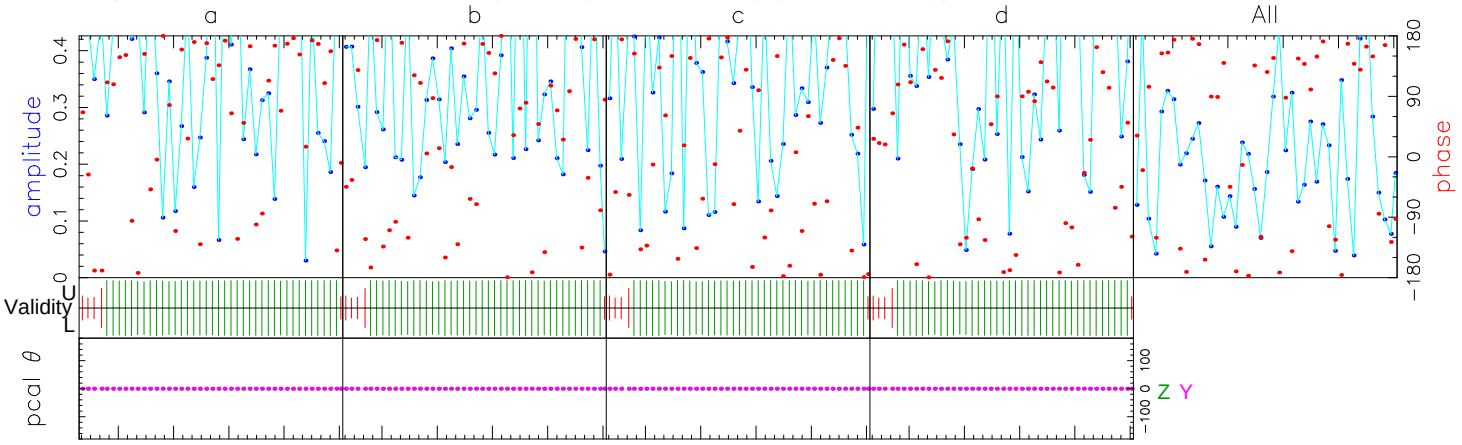
SNR 6.2
Int time 266.155
Amp 0.142
Phase -13.0
PFD 2.2e-01
Delays (us)
SBD -2.074342
MBD -0.002017
Fringe rate (Hz)
-0.204007
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512





Exp. f231a
Exper # 1234
Yr:day 2023:124
Start 120017.41
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143755
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
	158.3	173.4	-170.5	148.9	Phase	167.0
	0.2	0.1	0.1	0.1	Ampl.	0.1
	493.9	108.0	1358.2	630.1	Sbd box	494.0
U/L	537/537	537/537	537/537	537/537	APs used	
Z	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
Z	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)	-1.99326108074E+03	Apriori delay (usec)	-1.99118875149E+03	Resid mbdelay (usec)	-2.01675E-03	+/-	1.8E-04
Sband delay (usec)	-1.99326309299E+03	Apriori clock (usec)	7.0319786E+01	Resid sbdelay (usec)	-2.07434E+00	+/-	6.9E-04
Phase delay (usec)	-1.99118874610E+03	Apriori clockrate (us/s)	-1.4100000E-06	Resid phdelay (usec)	5.38399E-06	+/-	3.0E-07
Delay rate (us/s)	2.45766484653E-01	Apriori rate (us/s)	2.45768852973E-01	Resid rate (us/s)	-2.36832E-06	+/-	3.7E-09
Total phase (deg)	-32.2	Apriori accel (us/s/s)	2.75765521670E-05	Resid phase (deg)	-13.0	+/-	9.2

	RMS	Theor.	Amplitude	0.142 +/- 0.023
ph/seg (deg)	62.4	59.5	Search (2048X16)	0.135
amp/seg (%)	98.8	103.9	Interp.	0.000
ph/frq (deg)	21.8	18.4	Inc. seg. avg.	0.140
amp/frq (%)	15.3	32.1	Inc. frq. avg.	0.140

Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
Pcal rate: 0.000E+00, 0.000E+00 (us/s)
Bits/sample: 2x2 SampCntNorm: enabled
Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us
Data rate(Mb/s): 2048 nlags: 1024 t_cohere infinite

sb window (us)	-4.000	4.000
mb window (us)	-0.004	0.004
dr window (ns/s)	-0.011	0.011
ion window (TEC)	0.00	0.00

Z: az 298.4 el 33.3 pa 36.1 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1868.185 3423.014 simultaneous interpolator

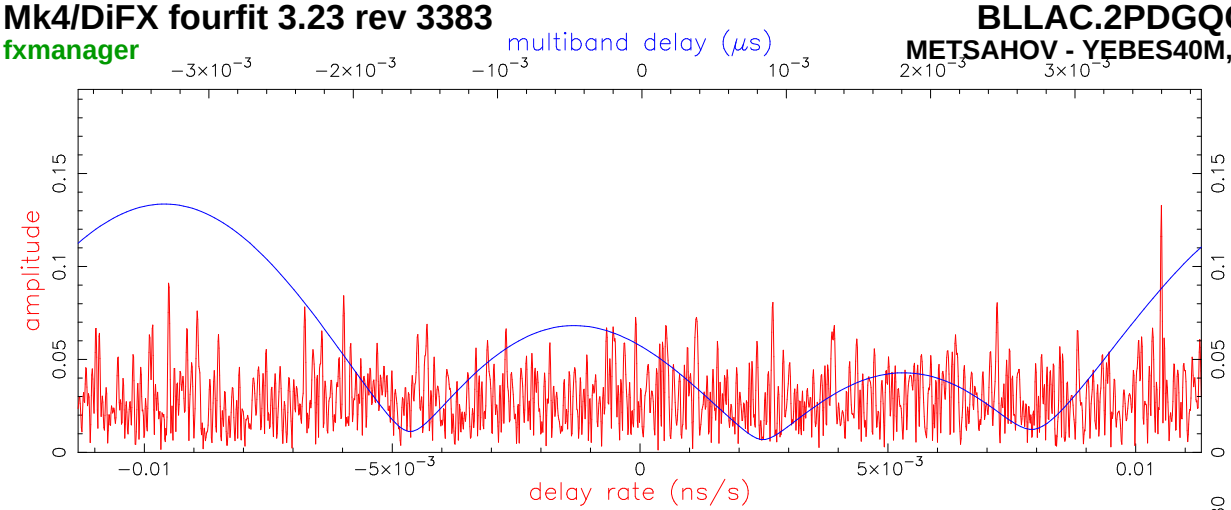
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZY.W.31.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

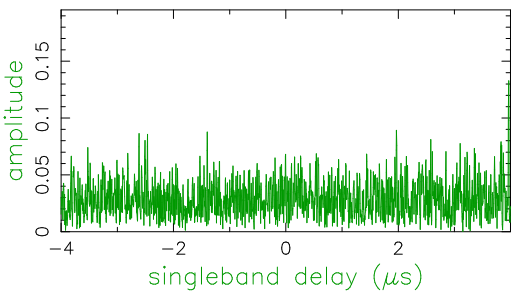
BLLAC.2PDGQQ, No0001, ZY

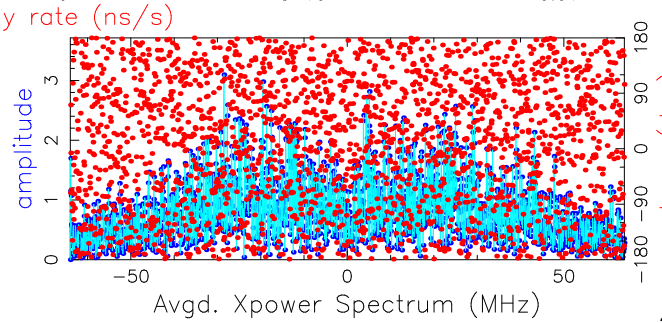
METSAHOV - YEBES40M, fgroup W, pol RL



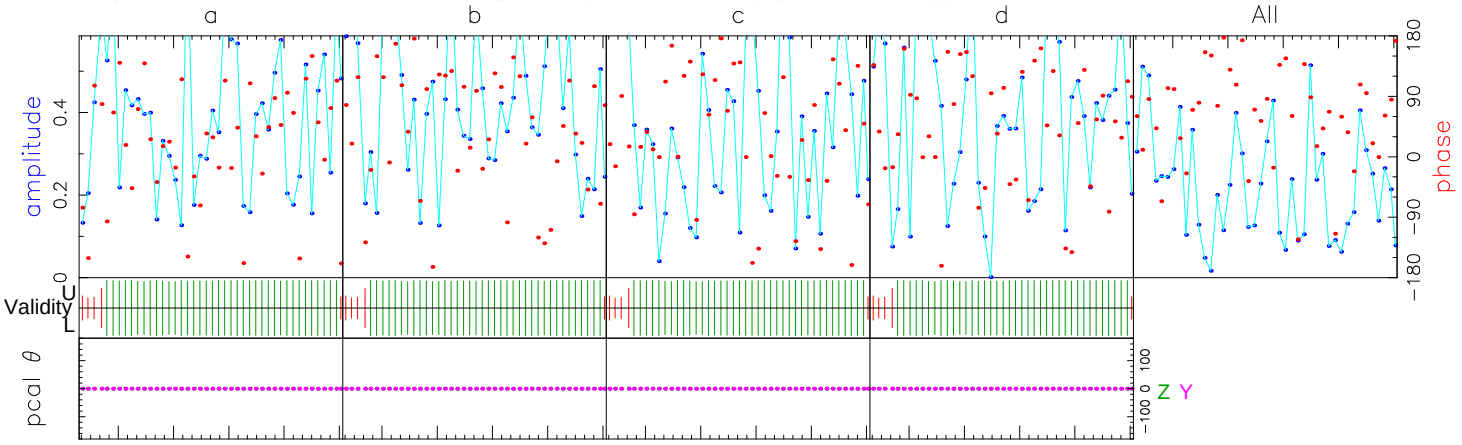
Fringe quality 0

SNR	5.9
Int time	266.155
Amp	0.195
Phase	248.3
PFD	7.8e-01
Delays (us)	
SBD	3.964547
MBD	0.004395
Fringe rate (Hz)	0.906857
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 2023:124:143759 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
	50.9	89.6	65.7	72.7	Phase	68.3
	0.2	0.2	0.2	0.2	Ampl.	0.2
	2002.0	188.9	55.8	1049.3	Sbd box	2039.9
U/L	537/537	537/537	537/537	537/537	APs used	
Z	0	0	0	0	PC freqs	
Y	0	0	0	0	PC freqs	
Z:Y	0:0	0:0	0:0	0:0	PC phase	
Z:Y	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000		
Z	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)	-1.98722341946E+03	Apriori delay (usec)	-1.99118875149E+03	Resid mbdelay (usec)	4.39453E-03	+/-	1.9E-04
Sband delay (usec)	-1.98722420474E+03	Apriori clock (usec)	7.0319786E+01	Resid sbdelay (usec)	3.96455E+00	+/-	7.3E-04
Phase delay (usec)	-1.99118874929E+03	Apriori clockrate (us/s)	-1.4100000E-06	Resid phdelay (usec)	2.20253E-06	+/-	3.1E-07
Delay rate (us/s)	2.45779380689E-01	Apriori rate (us/s)	2.45768852973E-01	Resid rate (us/s)	1.05277E-05	+/-	3.9E-09
Total phase (deg)	229.1	Apriori accel (us/s/s)	2.75765521670E-05	Resid phase (deg)	248.3	+/-	9.7

	RMS	Theor.	Amplitude	0.195 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	69.8	62.4	Search (2048X16)	0.131	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	113.8	109.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	19.8	19.3	Inc. seg. avg.	0.199	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	17.3	33.7	Inc. frq. avg.	0.190	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 Y: az 295.9 el 40.3 pa 67.5 u,v (fr/asec) -1868.185 3423.014 simultaneous interpolator

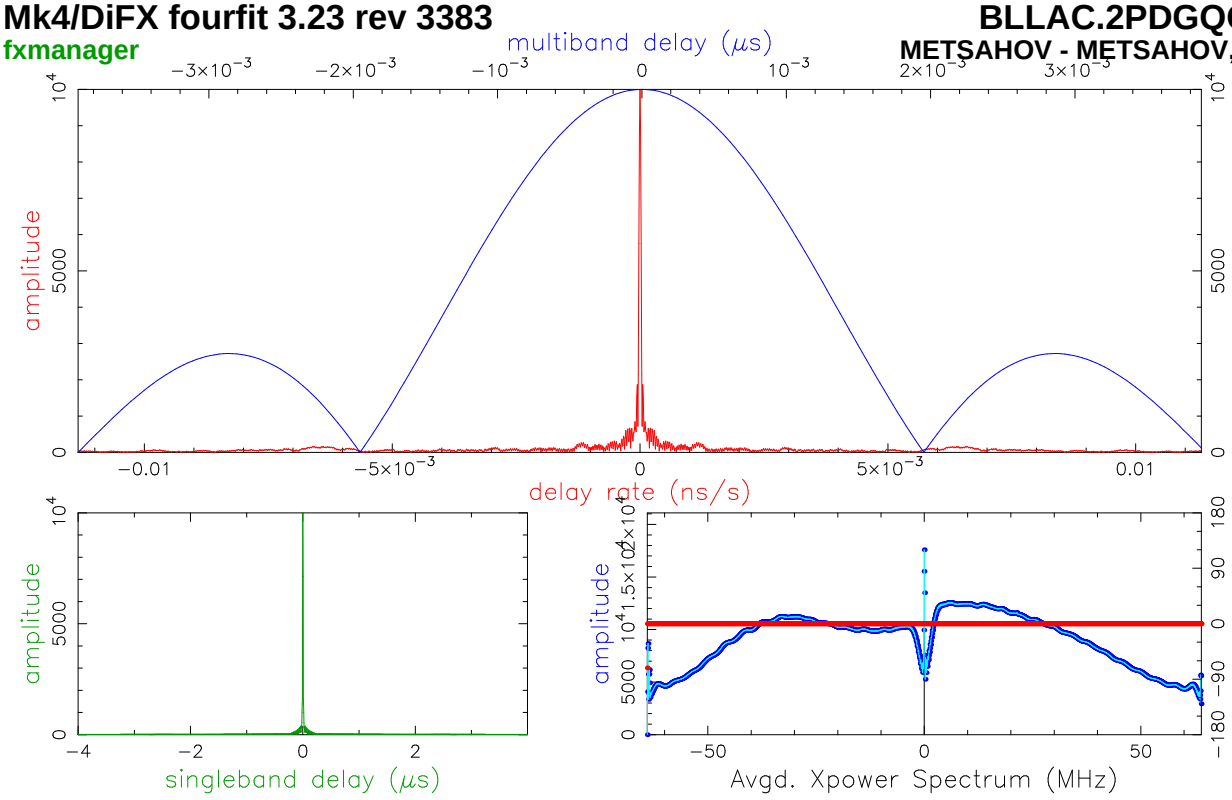
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZY..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZY.W.32.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, ZZ

METSAHOV - METSAHOV, fgroup W, pol LL

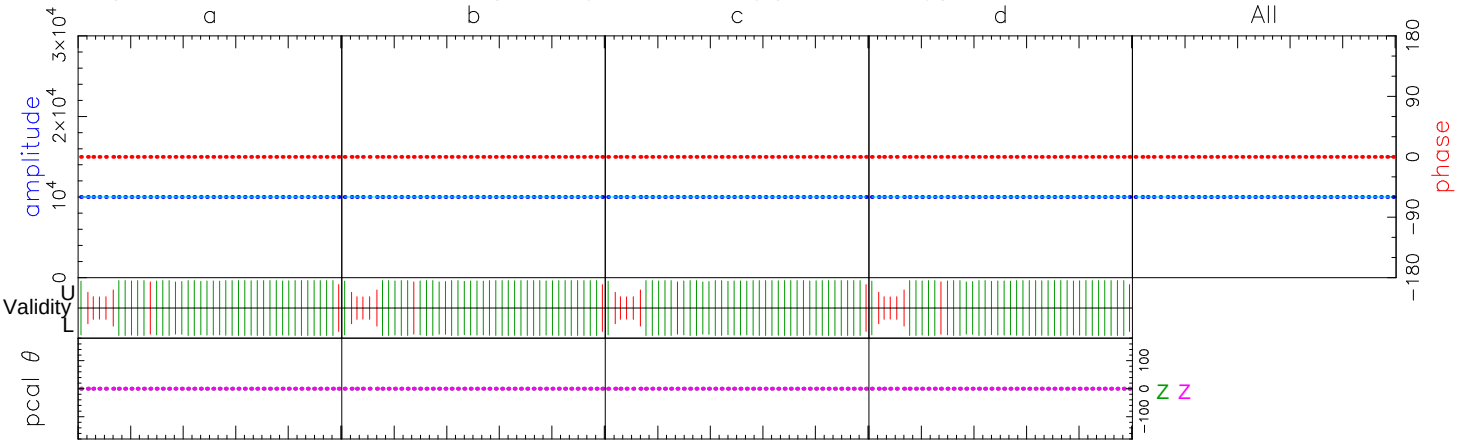


Fringe quality 9

SNR 457195.4
Int time 279.517
Amp 10000.005
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
2023:124:143645
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	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
Z:Z	0:0	0:0	0:0	0:0	PC phase	
Z:Z	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Z	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	+/-	2.4E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	9.4E-09
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	4.0E-12
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	4.8E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.						
			Amplitude	10000.005 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X16)	10000.005	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.	10000.005	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

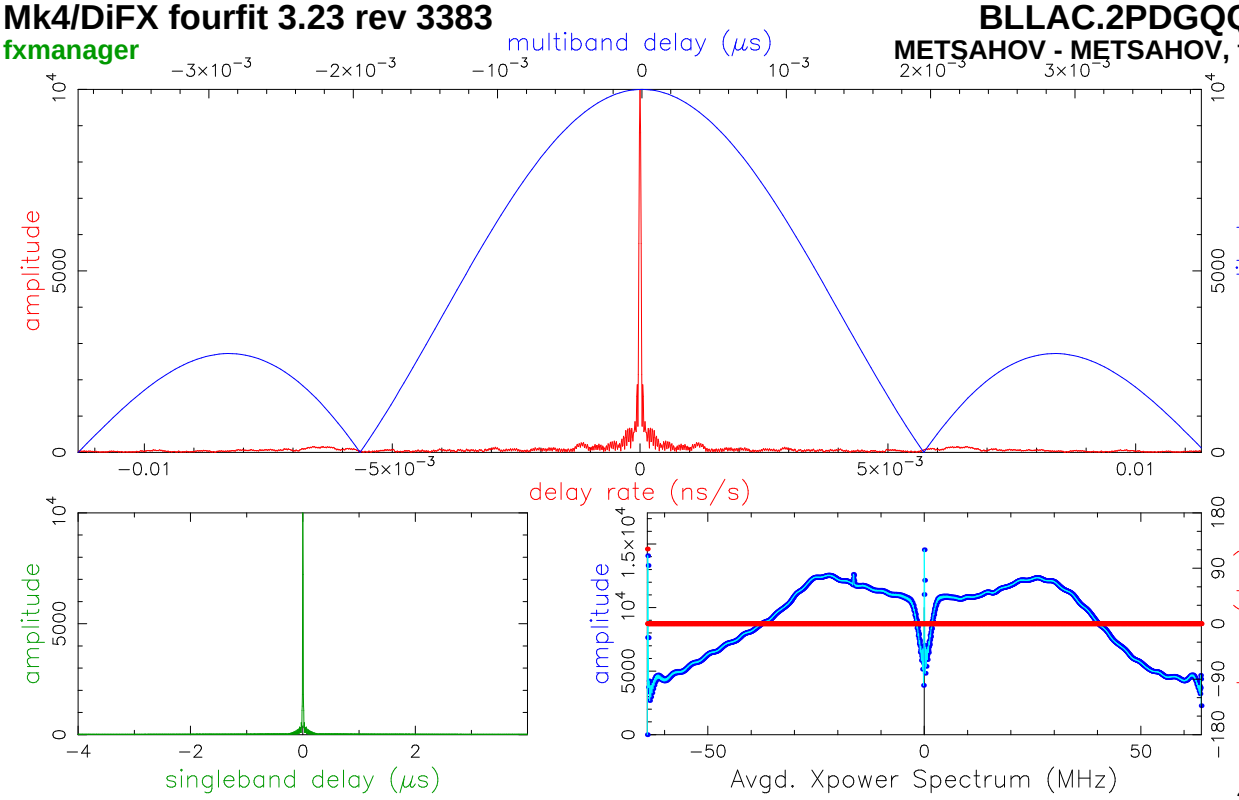
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZZ.W.17.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

BLLAC.2PDGQQ, No0001, ZZ

METSAHOV - METSAHOV, fgroup W, pol RR

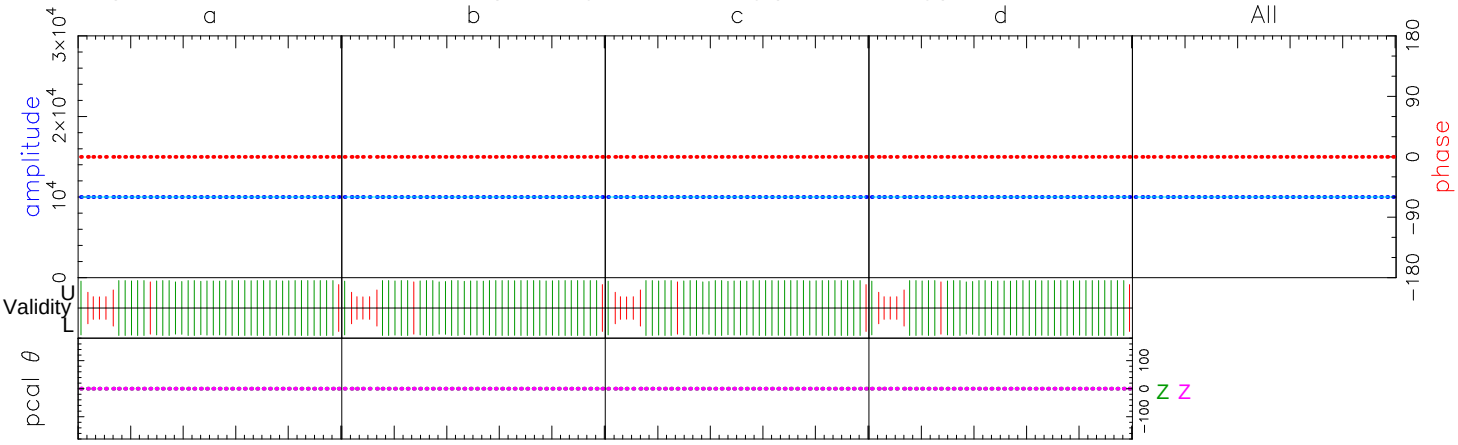


Fringe quality 9

SNR 457195.4
Int time 279.517
Amp 10000.005
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
2023:124:143650
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	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
Z:Z	0:0	0:0	0:0	0:0	PC phase	
Z:Z	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Z	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	+/-	2.4E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	9.4E-09
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	4.0E-12
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	4.8E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	0.0	+/-	0.0

	RMS	Theor.						
			Amplitude	10000.005 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (2048X16)	10000.005	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.	10000.005	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

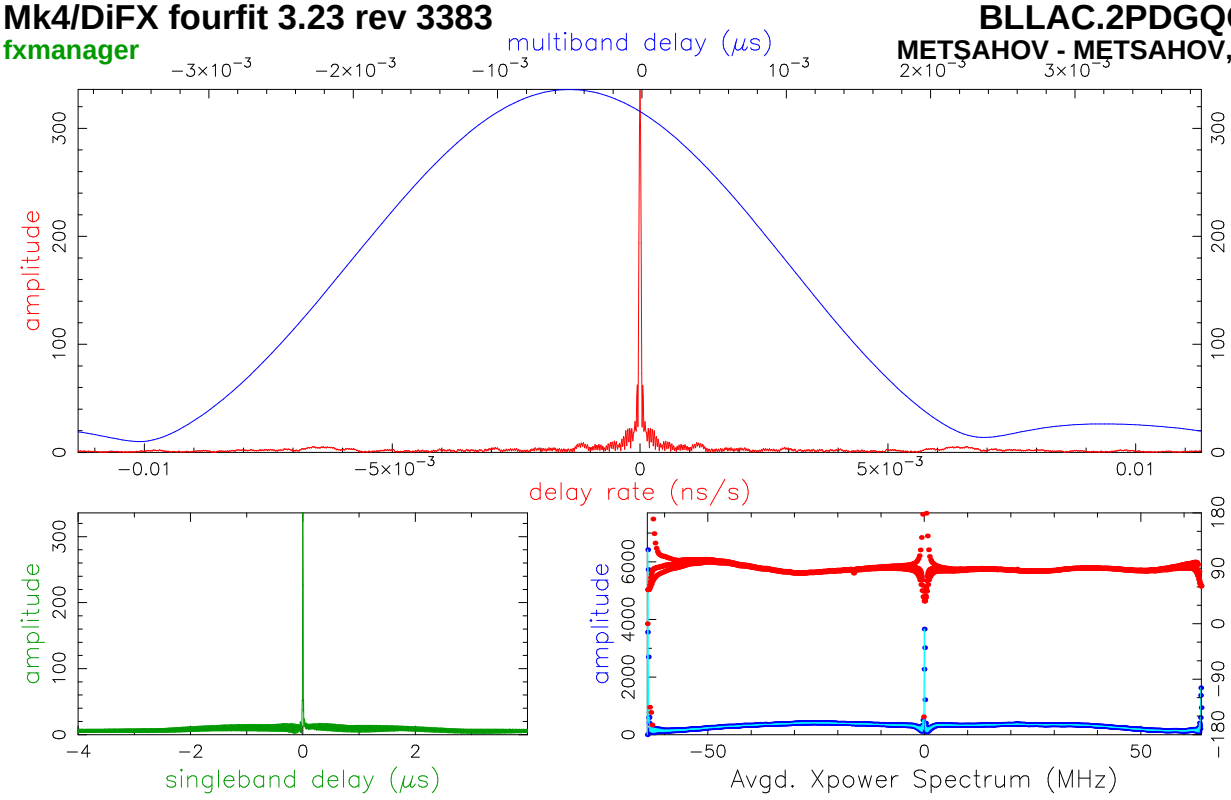
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZZ.W.18.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

fxmanager

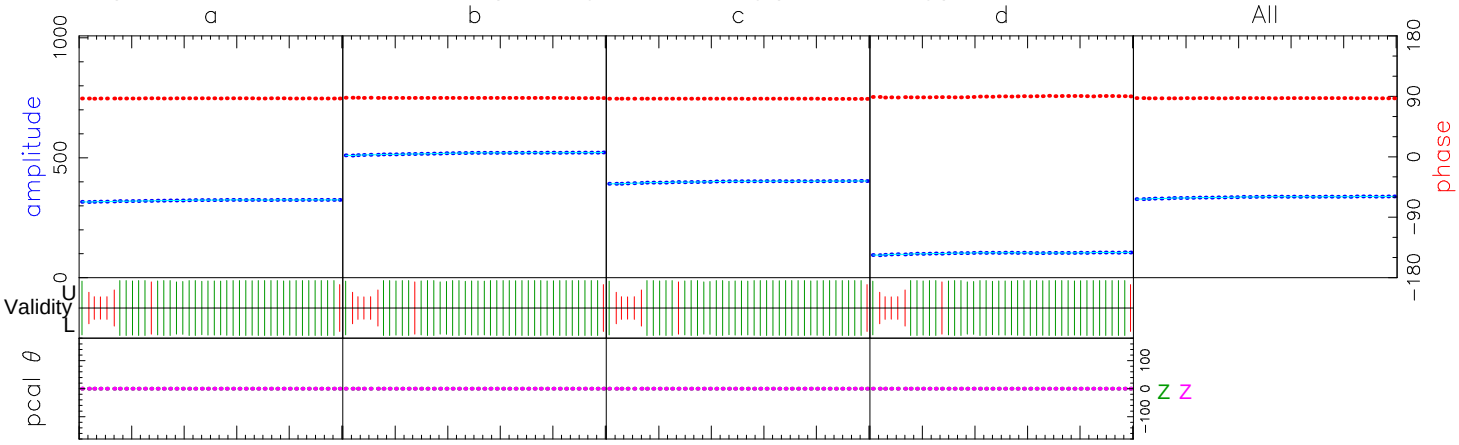
BLLAC.2PDGQQ, No0001, ZZ

METSAHOV - METSAHOV, fgroup W, pol LR



Fringe quality	7
Error code	G
SNR	15365.6
Int time	279.517
Amp	336.085
Phase	87.2
PFD	0.0e+00
Delays (us)	
SBD	-0.000118
MBD	-0.000508
Fringe rate (Hz)	0.000008
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
	2023:124:143655
	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
	86.9	87.6	86.4	89.6	Phase	87.2
	322.5	518.7	400.3	102.6	Ampl.	336.0
	1025.2	1024.9	1025.0	1025.1	Sbd box	1025.0
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
Z:Z	0:0	0:0	0:0	0:0	PC phase	
Z:Z	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	

Group delay (usec) (SBD)	-5.07906250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-5.07906E-04	+/-	7.2E-08
Sband delay (usec)	-1.18000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-1.18000E-04	+/-	2.8E-07
Phase delay (usec)	2.81176005365E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.81176E-06	+/-	1.2E-10
Delay rate (us/s)	9.84895091222E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	9.84895E-11	+/-	1.4E-12
Total phase (deg)	87.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	87.2	+/-	0.0

	RMS	Theor.	Amplitude	336.085 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.1	0.0	Search (2048X16)	335.963	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	0.9	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	1.8	0.0	Inc. seg. avg.	335.982	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	45.2	0.0	Inc. frq. avg.	336.019	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

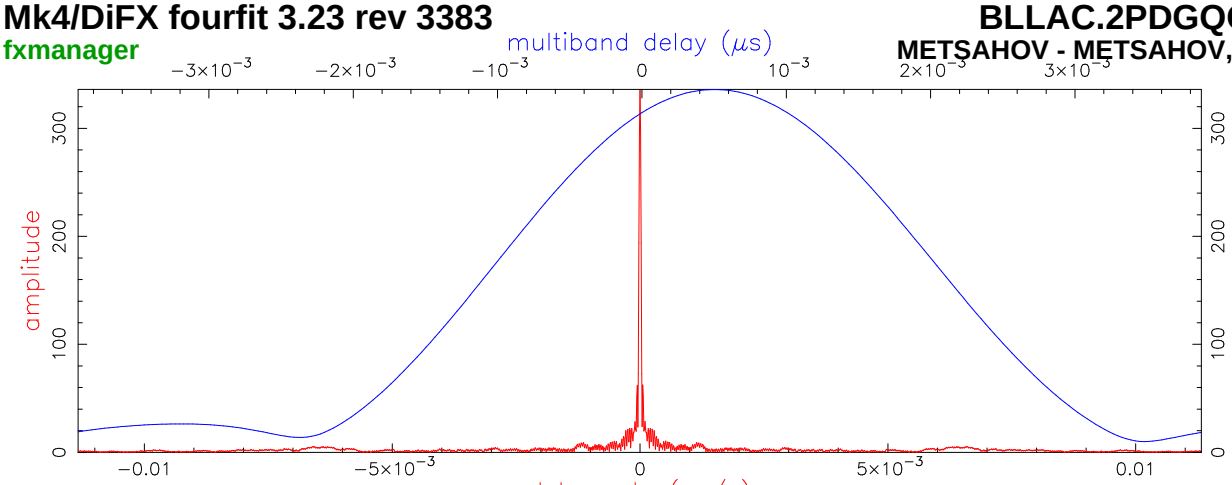
Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZZ.W.19.2PDGQQ

Mk4/DiFX fourfit 3.23 rev 3383

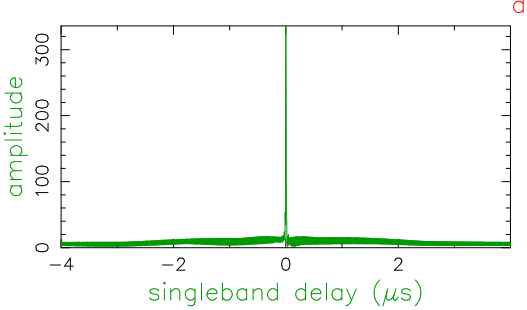
fxmanager

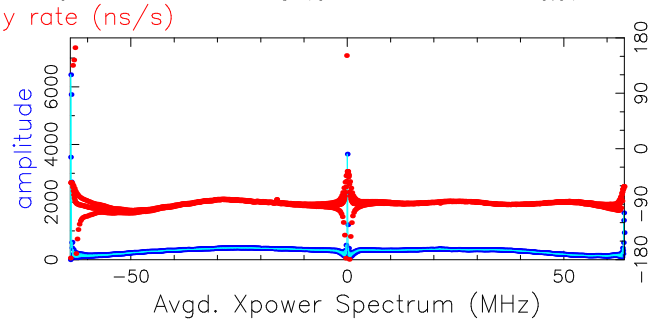
BLLAC.2PDGQQ, No0001, ZZ

METSAHOV - METSAHOV, fgroup W, pol RL



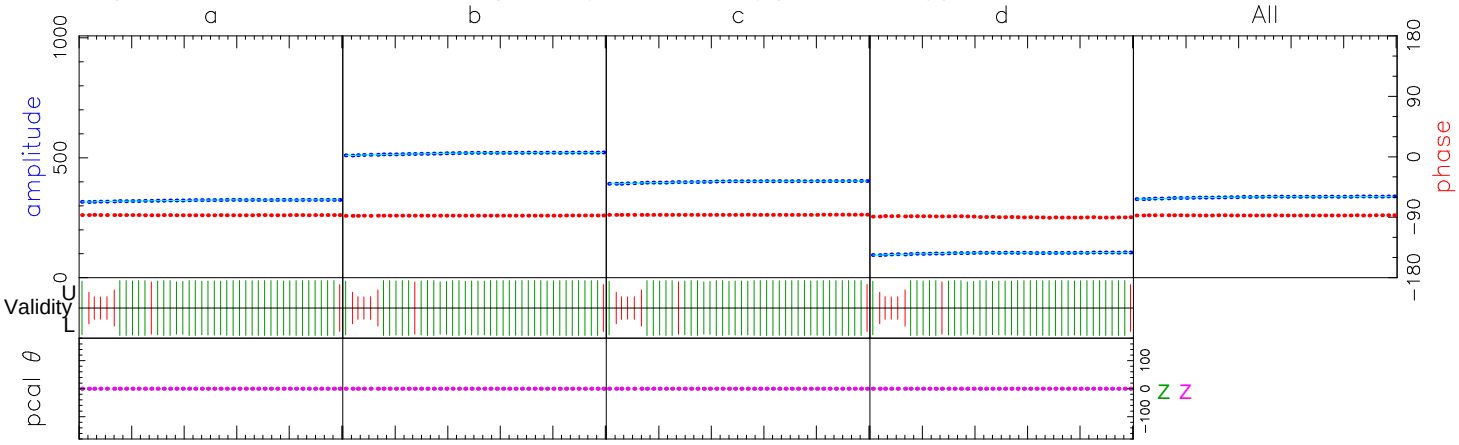
Fringe quality 7
Error code G
SNR 15365.6
Int time 279.517
Amp 336.085
Phase -87.2
PFD 0.0e+00
Delays (us)
SBD 0.000118
MBD 0.000508
Fringe rate (Hz)
-0.000008
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512





Exp. f231a
Exper # 1234
Yr:day 2023:124
Start 120000.00
Stop 120500.03
FRT 120230.00
Corr/FF/build
2023:124:143316
2023:124:143659
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
	-86.9	-87.6	-86.4	-89.6	Phase	-87.2
	322.5	518.7	400.3	102.6	Ampl.	336.0
	1024.8	1025.1	1025.0	1024.9	Sbd box	1025.0
U/L	568/568	568/568	568/568	568/568	APs used	
Z	0	0	0	0	PC freqs	
Z	0	0	0	0	PC freqs	
Z:Z	0:0	0:0	0:0	0:0	PC phase	
Z:Z	0:0	0:0	0:0	0:0	Manl PC	
Z	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000		
Z	W00UR,W00LR	W01UR,W01LR	W02UR,W02LR	W03UR,W03LR	Chan ids Tracks	
Z	W00UL,W00LL	W01UL,W01LL	W02UL,W02LL	W03UL,W03LL	Chan ids Tracks	

Group delay (usec) (SBD)	5.07906250000E-04	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	5.07906E-04	+/-	7.2E-08
Sband delay (usec)	1.18000000000E-04	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	1.18000E-04	+/-	2.8E-07
Phase delay (usec)	-2.81176005365E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-2.81176E-06	+/-	1.2E-10
Delay rate (us/s)	-9.84895091222E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-9.84895E-11	+/-	1.4E-12
Total phase (deg)	-87.2	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-87.2	+/-	0.0

	RMS	Theor.						
			Amplitude	336.085 +/- 0.022	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.1	0.0	Search (2048X16)	335.963	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-4.000 4.000
amp/seg (%)	0.9	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.004 0.004
ph/frq (deg)	1.8	0.0	Inc. seg. avg.	335.982	Data rate(MSamp/s): 128 MBpts 16 Amb 0.008 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	45.2	0.0	Inc. frq. avg.	336.019	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 Z: az 298.4 el 33.3 pa 36.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/f231a/FRINGE/1234/No0001/ZZ..2PDGQQ Output file: /Exps/f231a/FRINGE/1234/No0001/ZZ.W.20.2PDGQQ