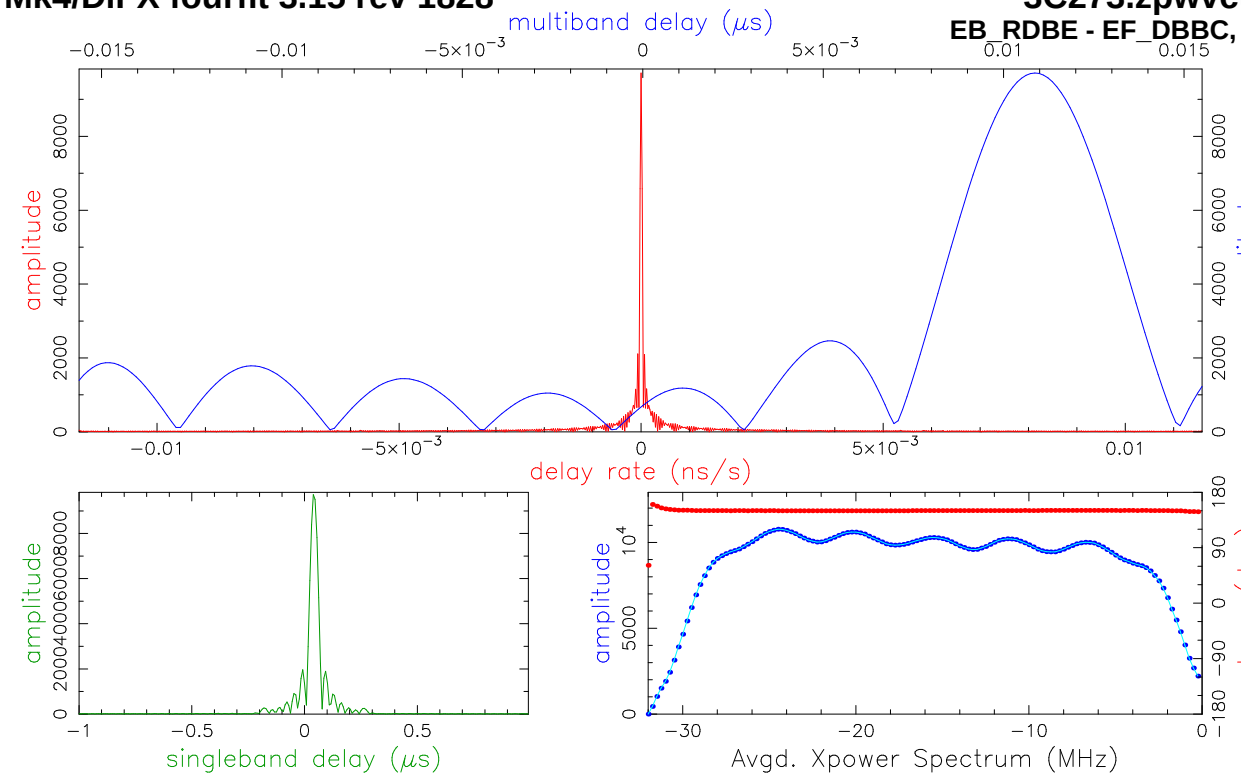
Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, BF

EB_RDBE - EF_DBBC, fgroup W, pol LL

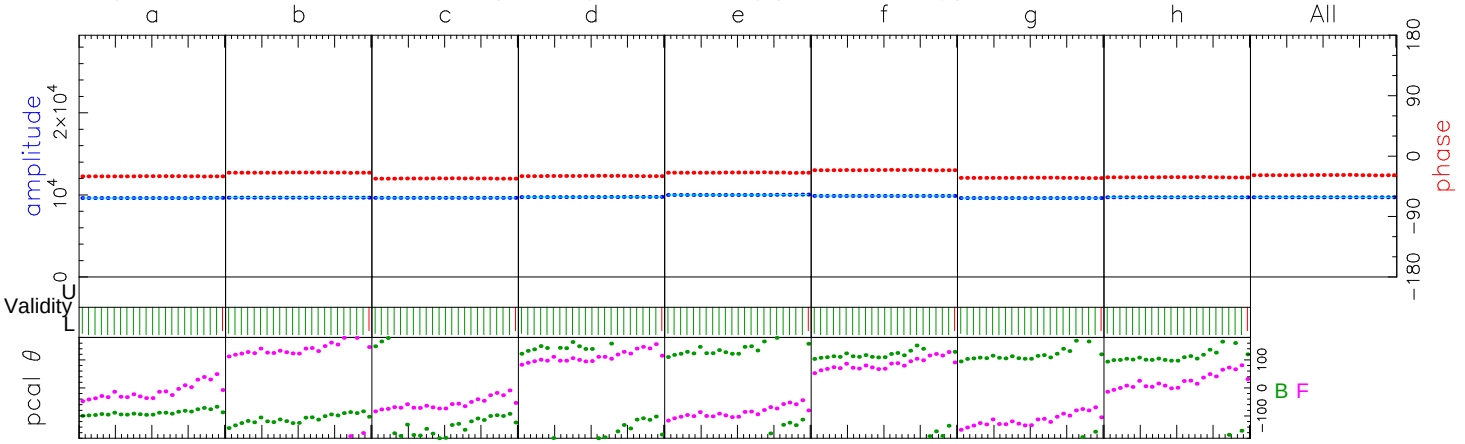


Fringe quality 9

SNR 293942.8
Int time 239.429
Amp 9824.081
Phase -208.3
PFD 0.0e+00
Delays (us)
SBD 0.041922
MBD 0.010876
Fringe rate (Hz)
-0.000005
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.500

Exp. c171a
Exper # 16383
Yr:day 2017:090
Start 044000.00
Stop 044400.00
FRT 044200.00
Corr/FF/build
2017:208:013416
2017:215:022552
2017:188:152524
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-30.1	-24.6	-33.3	-29.6	-24.6	-20.8	-32.4	-31.5	Phase	-28.3
	9634.7	9674.5	9651.4	9754.0	10009.1	9884.7	9617.9	9717.8	Ampl.	9743.0
	134.4	134.3	134.4	134.4	134.5	134.3	134.4	134.2	Sbd box	134.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
B	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	4.82126312500E-01	Apriori delay (usec)	4.40000000000E-01	Resid mbdelay (usec)	1.08763E-02	+/-	7.4E-09
Sband delay (usec)	4.81922500000E-01	Apriori clock (usec)	4.4000244E-01	Resid sbdelay (usec)	4.19225E-02	+/-	5.9E-08
Phase delay (usec)	4.39999086062E-01	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-9.13938E-07	+/-	1.3E-11
Delay rate (us/s)	-6.09472951010E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-6.09473E-11	+/-	9.1E-14
Total phase (deg)	7.7	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-208.3	+/-	0.0

	RMS	Theor.						
			Amplitude	9824.081 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.2	0.0	Search (1024X32)	9700.196	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	1.1	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	4.8	0.0	Inc. seg. avg.	9716.990	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	1.5	0.0	Inc. frq. avg.	9743.022	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

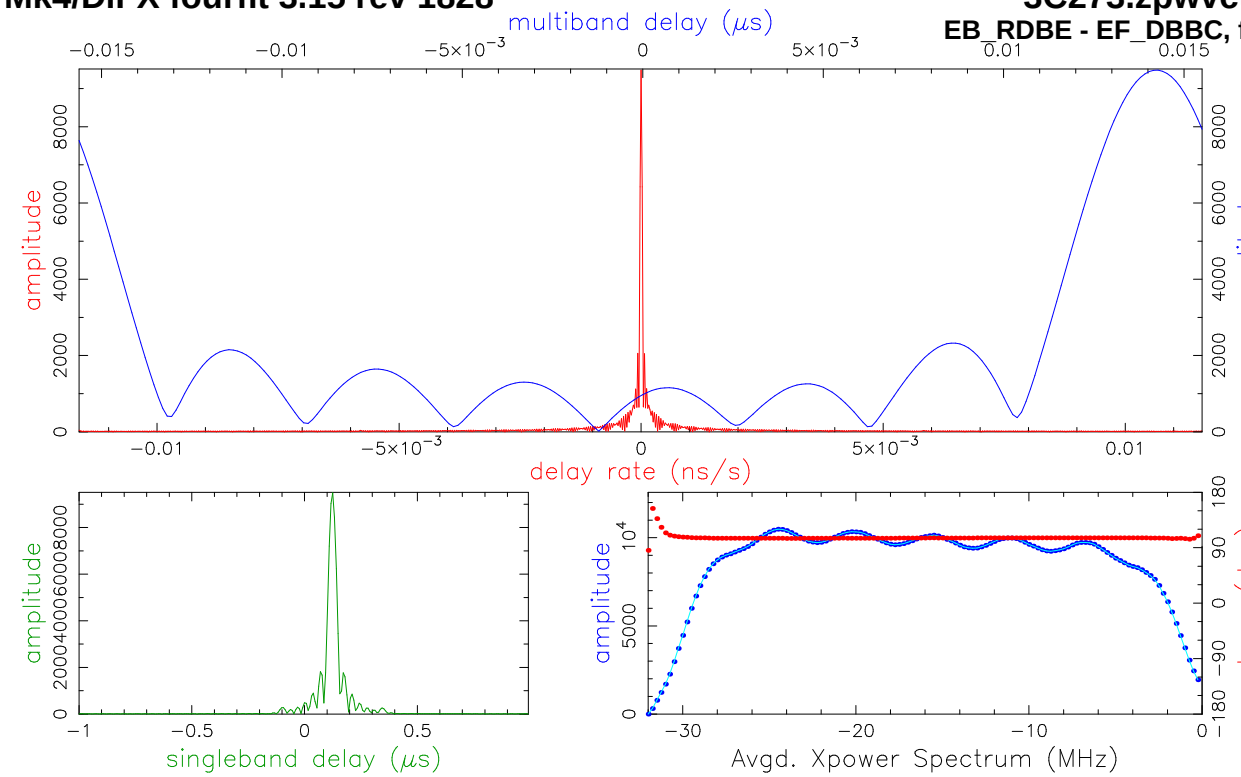
B: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/BF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/BF.W.41.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, BF

EB_RDBE - EF_DBBC, fgroup W, pol RR

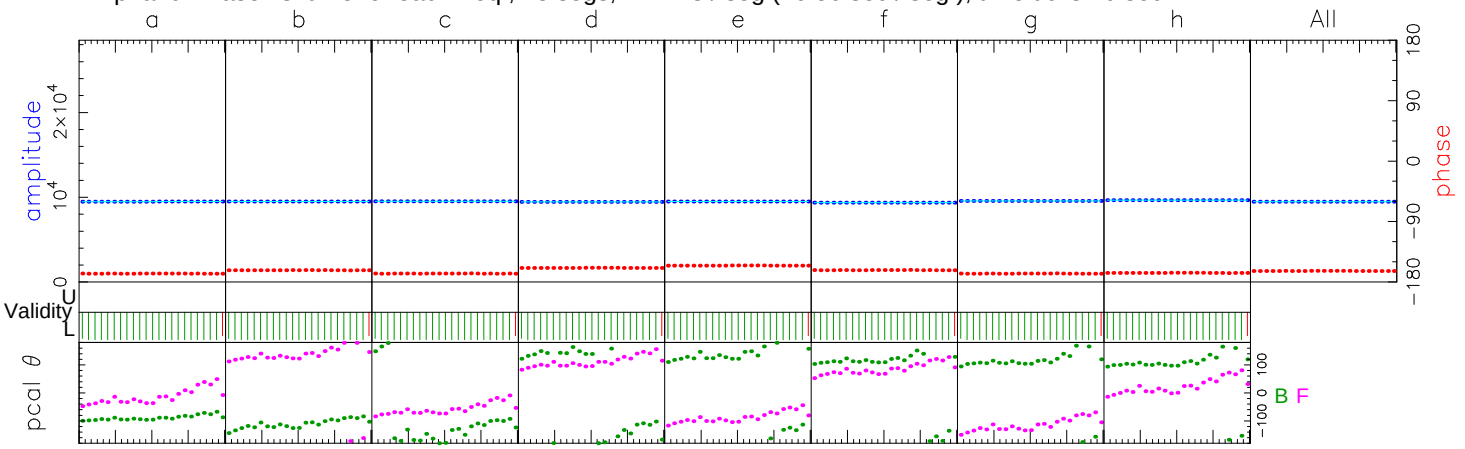


Fringe quality 9

SNR 284654.8
Int time 239.429
Amp 9513.658
Phase -703.5
PFD 0.0e+00
Delays (us)
SBD 0.123466
MBD 0.014233
Fringe rate (Hz)
-0.000003
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.500

Exp. c171a
Exper # 16383
Yr:day 2017:090
Start 044000.00
Stop 044400.00
FRT 044200.00
Corr/FF/build
2017:208:013416
2017:215:022553
2017:188:152524
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-167.4	-162.4	-167.3	-158.9	-155.5	-162.3	-167.4	-166.4	Phase	-163.5
	9490.4	9505.5	9522.9	9464.5	9503.3	9369.7	9566.8	9654.5	Ampl.	9509.7
	144.8	144.8	144.9	144.9	144.9	144.6	144.9	144.7	Sbd box	144.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
B	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	5.47982562500E-01	Apriori delay (usec)	4.40000000000E-01	Resid mbdelay (usec)	1.42326E-02	+/-	7.6E-09
Sband delay (usec)	5.63466500000E-01	Apriori clock (usec)	4.4000244E-01	Resid sbdelay (usec)	1.23466E-01	+/-	6.1E-08
Phase delay (usec)	4.39994728083E-01	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-5.27192E-06	+/-	1.3E-11
Delay rate (us/s)	-3.48270257720E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-3.48270E-11	+/-	9.4E-14
Total phase (deg)	-487.5	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-703.5	+/-	0.0

	RMS	Theor.						
			Amplitude	9513.657 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.1	0.0	Search (1024X32)	9310.301	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	0.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	4.9	0.0	Inc. seg. avg.	9484.163	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	0.8	0.0	Inc. frq. avg.	9509.695	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

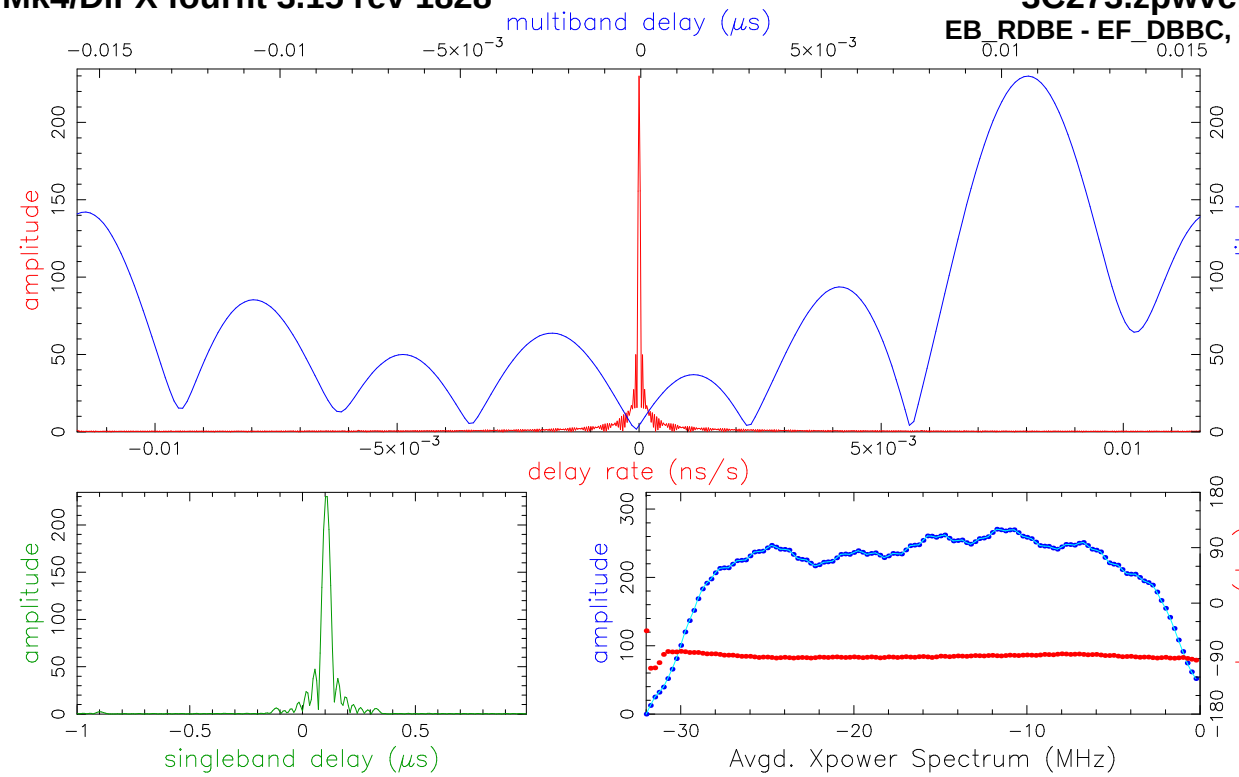
B: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/BF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/BF.W.42.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, BF

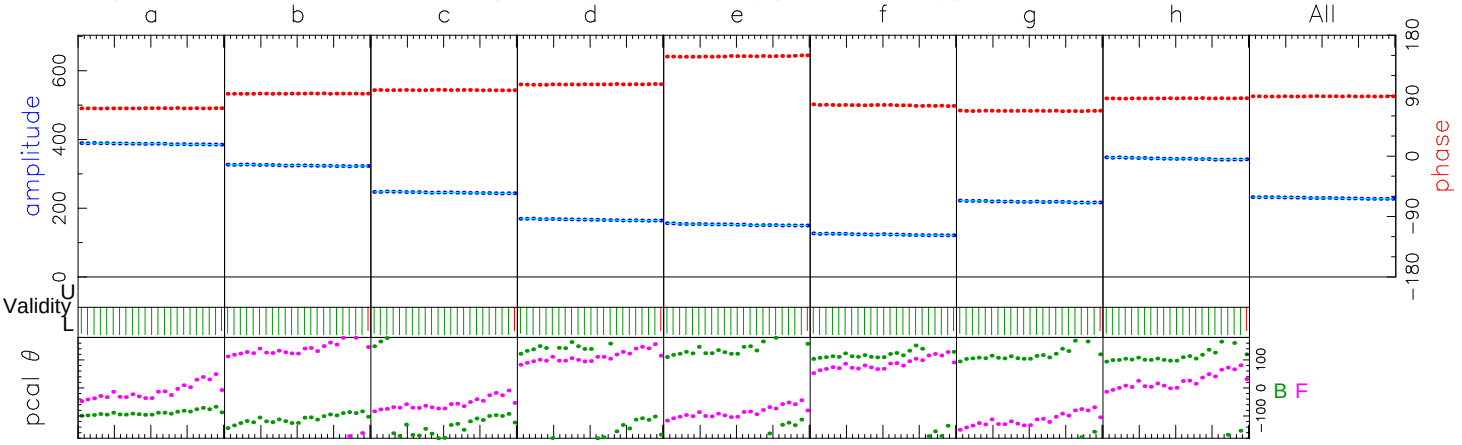
EB_RDBE - EF_DBBC, fgroup W, pol LR



Fringe quality 6

SNR	7017.0
Int time	239.429
Amp	234.521
Phase	-451.1
PFD	0.0e+00
Delays (us)	
SBD	0.105471
MBD	0.010718
Fringe rate (Hz)	
	-0.000014
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022554
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	71.1	92.9	98.2	106.7	148.6	75.7	67.3	85.9	Phase	88.9
	387.4	324.7	245.9	166.7	152.4	123.7	219.0	344.3	Ampl.	245.5
	142.6	143.0	142.2	142.8	143.0	141.6	143.1	142.6	Sbd box	142.5
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
B	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	5.44467687500E-01	Apriori delay (usec)	4.40000000000E-01	Resid mbdelay (usec)	1.07177E-02	+/-	3.1E-07
Sband delay (usec)	5.45471000000E-01	Apriori clock (usec)	4.4000244E-01	Resid sbdelay (usec)	1.05471E-01	+/-	2.5E-06
Phase delay (usec)	4.40002866281E-01	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.86628E-06	+/-	5.3E-10
Delay rate (us/s)	-1.62526120269E-10	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-1.62526E-10	+/-	3.8E-12
Total phase (deg)	-235.1	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-451.1	+/-	0.0

	RMS	Theor.							
			Amplitude	234.521 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	0.1	0.0	Search (1024X32)	229.889	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	2.1	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	28.7	0.0	Inc. seg. avg.	229.894	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	39.2	0.0	Inc. frq. avg.	245.536	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

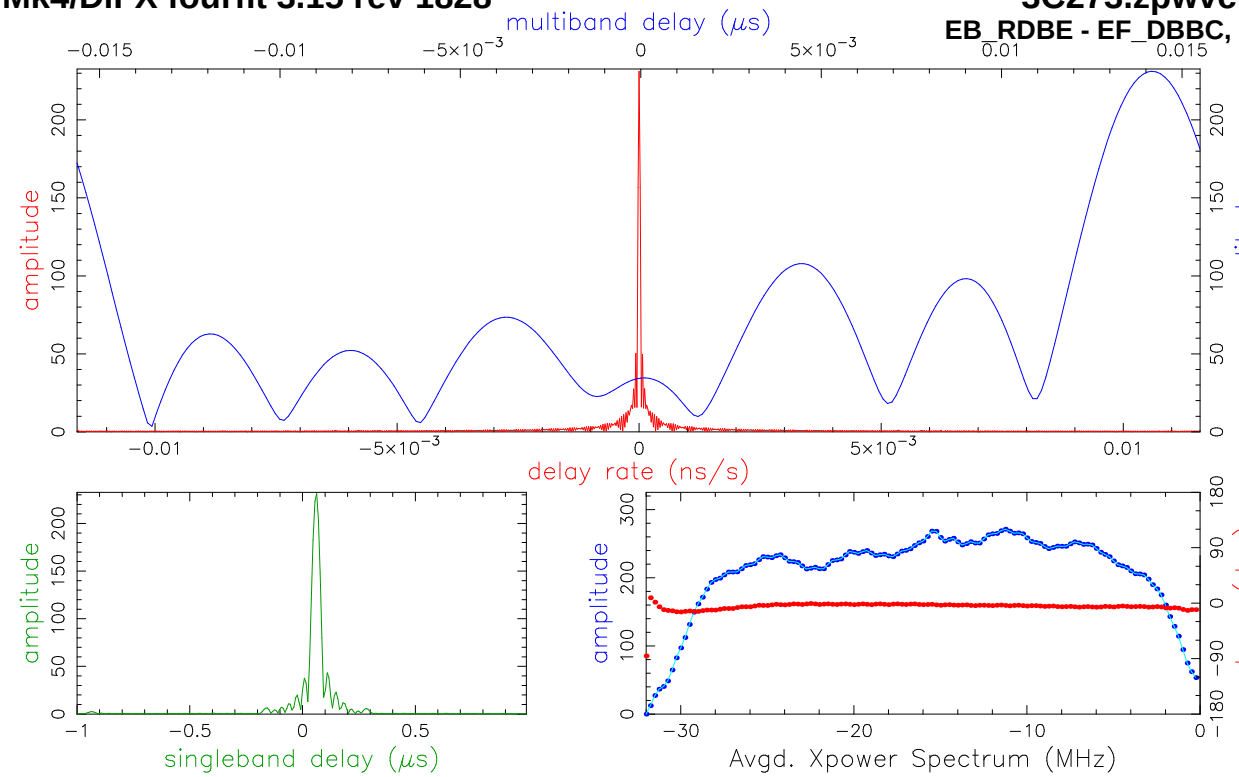
B: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/BF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/BF.W.43.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, BF

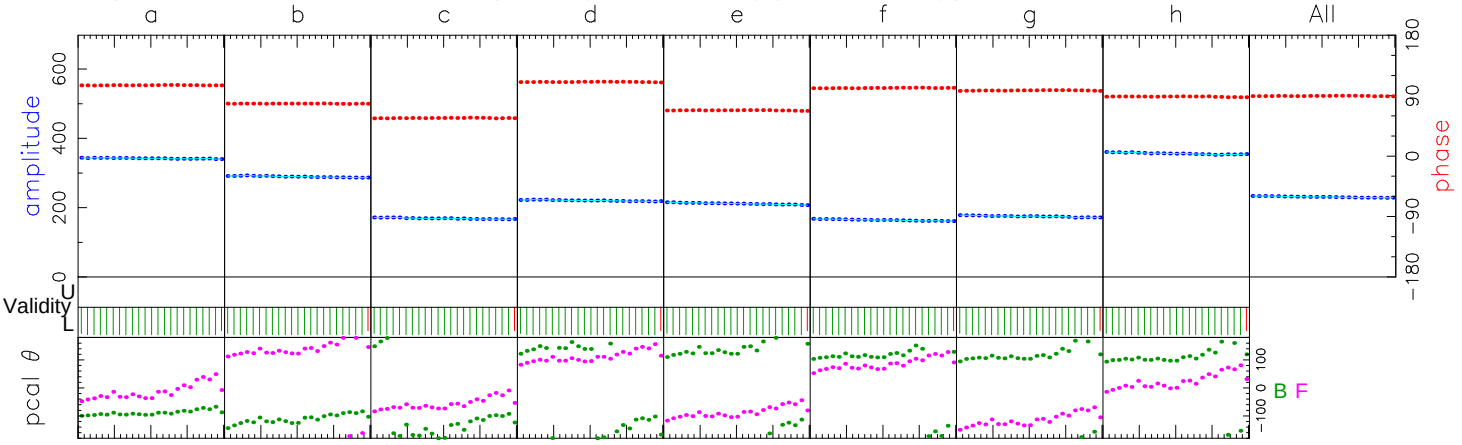
EB_RDBE - EF_DBBC, fgroup W, pol RL



Fringe quality 7

SNR	6961.5
Int time	239.429
Amp	232.665
Phase	-90.6
PFD	0.0e+00
Delays (us)	
SBD	0.060296
MBD	0.014185
Fringe rate (Hz)	
	0.000007
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022555
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	105.4	78.1	56.7	110.3	68.0	101.4	97.7	88.5	Phase	89.4
	342.5	289.7	169.2	220.7	211.8	164.5	175.1	356.4	Ampl.	241.3
	136.8	136.1	137.6	136.8	136.8	137.2	135.9	136.9	Sbd box	136.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
B	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	4.85434812500E-01	Apriori delay (usec)	4.40000000000E-01	Resid mbdelay (usec)	1.41848E-02	+/-	3.1E-07
Sband delay (usec)	5.00296000000E-01	Apriori clock (usec)	4.4000244E-01	Resid sbdelay (usec)	6.02960E-02	+/-	2.5E-06
Phase delay (usec)	4.40002884408E-01	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	2.88441E-06	+/-	5.3E-10
Delay rate (us/s)	8.27141862085E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	8.27142E-11	+/-	3.8E-12
Total phase (deg)	125.4	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-90.6	+/-	0.0

	RMS	Theor.						
			Amplitude	232.665 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.2	0.0	Search (1024X32)	224.363	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	1.0	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	20.7	0.0	Inc. seg. avg.	231.206	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	31.6	0.0	Inc. frq. avg.	241.254	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

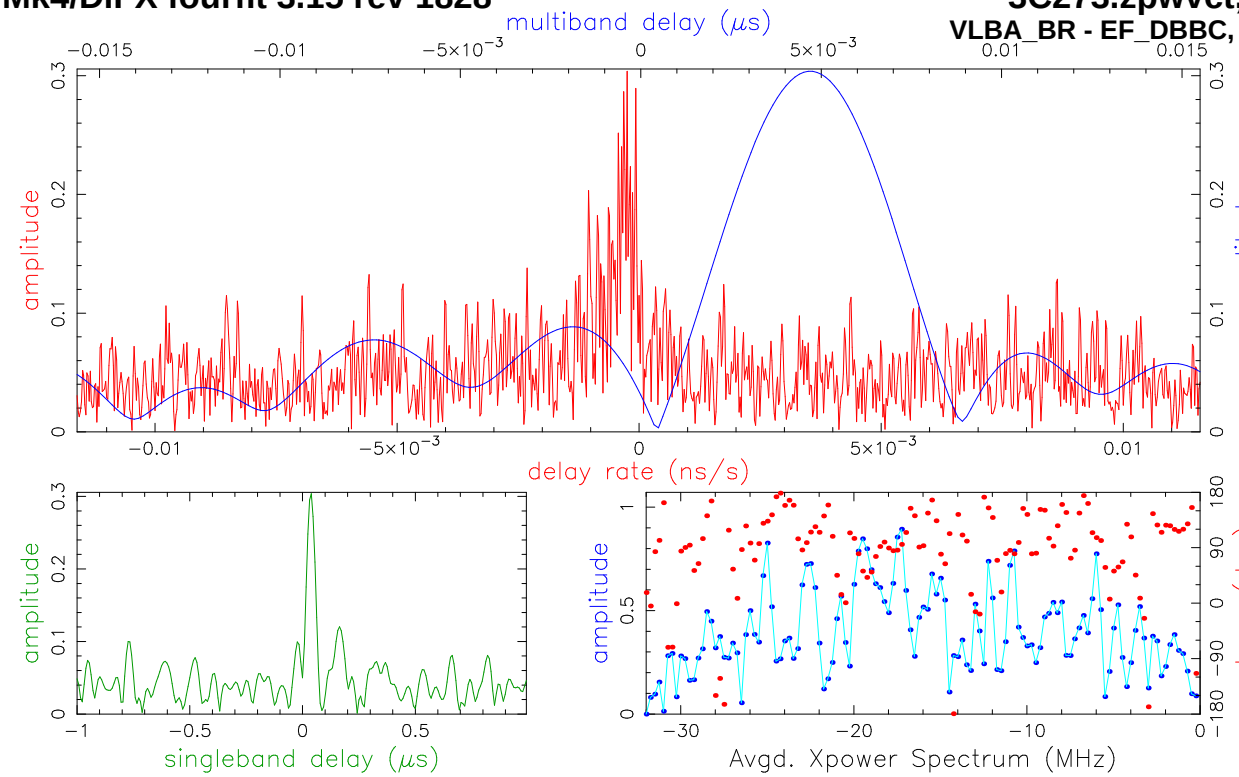
B: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/BF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/BF.W.44.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, bF

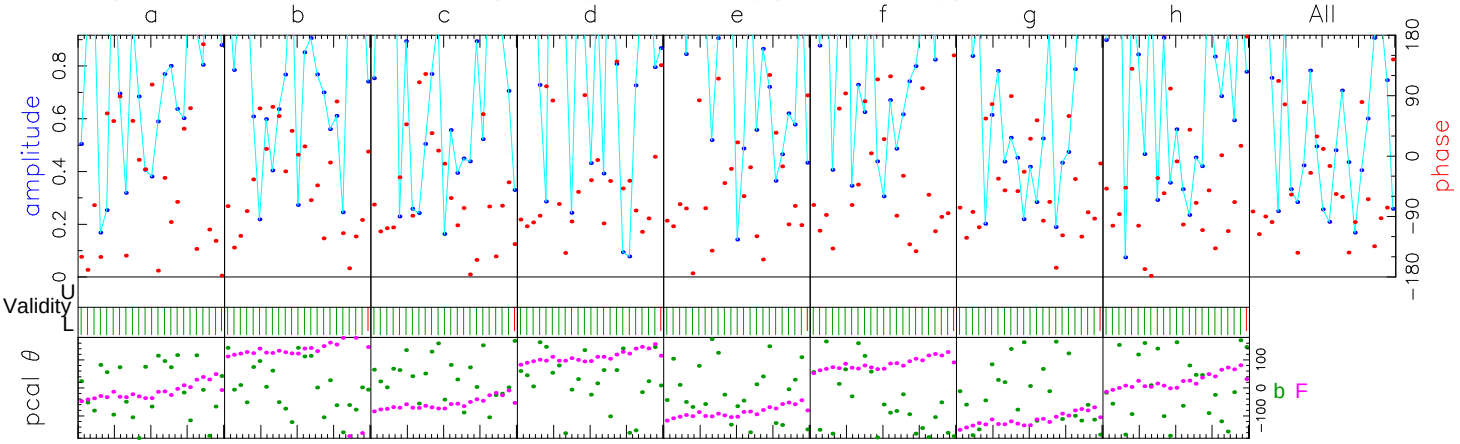
VLBA_BR - EF_DBBC, fgroup W, pol LL



Fringe quality 9

SNR	9.2
Int time	239.895
Amp	0.306
Phase	-260.8
PFD	5.3e-12
Delays (us)	
SBD	0.036798
MBD	0.004695
Fringe rate (Hz)	
	-0.021270
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022514
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-124.0	-59.1	-91.0	-77.3	-81.1	-81.1	-73.0	-88.6	Phase	-80.8
	0.1	0.3	0.4	0.4	0.4	0.2	0.4	0.4	Ampl.	0.3
	126.3	135.1	134.3	132.5	134.6	204.1	133.2	134.5	Sbd box	133.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
b	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	6.80495611885E+03	Apriori delay (usec)	6.80492017340E+03	Resid mbdelay (usec)	4.69545E-03	+/-	2.4E-04
Sband delay (usec)	6.80495697140E+03	Apriori clock (usec)	-3.2764366E+01	Resid sbdelay (usec)	3.67980E-02	+/-	1.9E-03
Phase delay (usec)	6.80492017080E+03	Apriori clockrate (us/s)	3.7026890E-08	Resid phdelay (usec)	-2.60639E-06	+/-	4.0E-07
Delay rate (us/s)	1.73808188221E+00	Apriori rate (us/s)	1.73808212913E+00	Resid rate (us/s)	-2.46922E-07	+/-	2.9E-09
Total phase (deg)	4.5	Apriori accel (us/s/s)	-3.64571948783E-05	Resid phase (deg)	-260.8	+/-	12.5

	RMS	Theor.					
			Amplitude	0.306 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	84.5	30.0	Search (1024X32)	0.299	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	146.4	52.4	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	20.7	17.7	Inc. seg. avg.	0.536	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	32.1	30.9	Inc. frq. avg.	0.298	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

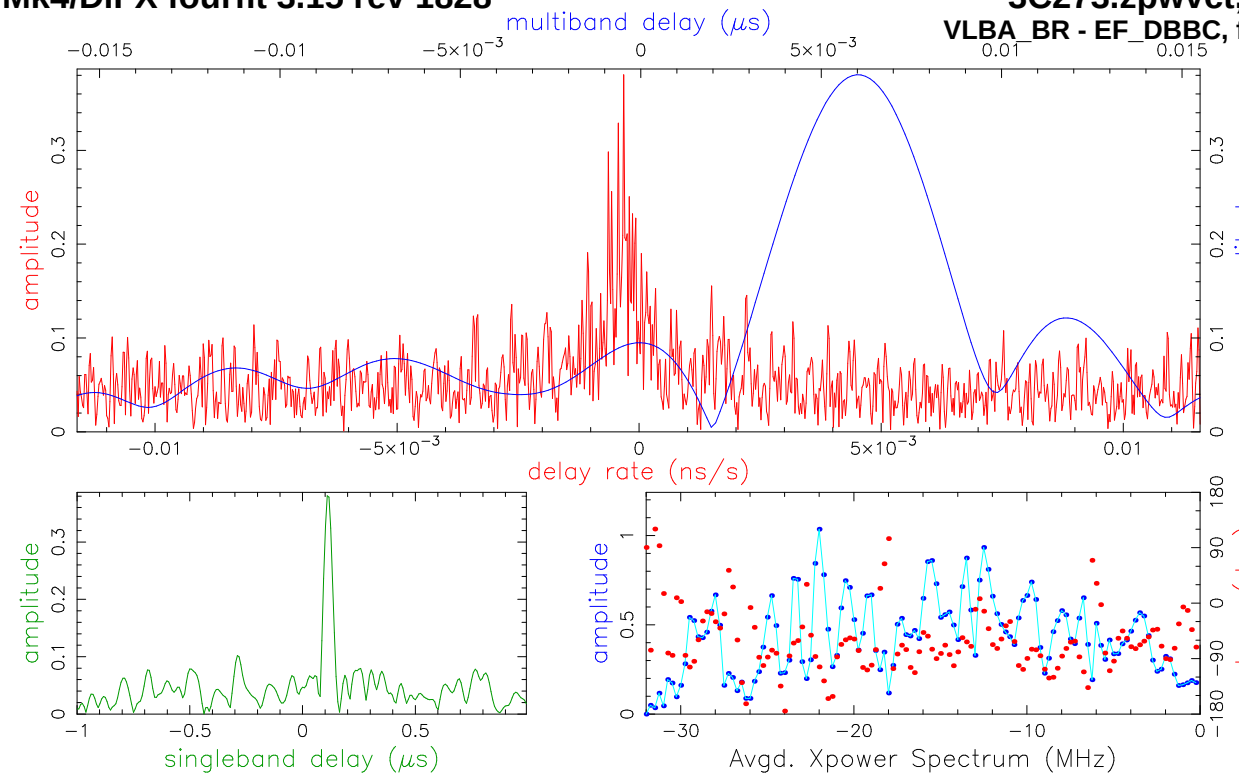
b: az 122.2 el 27.9 pa -34.4 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) -9984.394 -334.226 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/bF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/bF.W.5.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

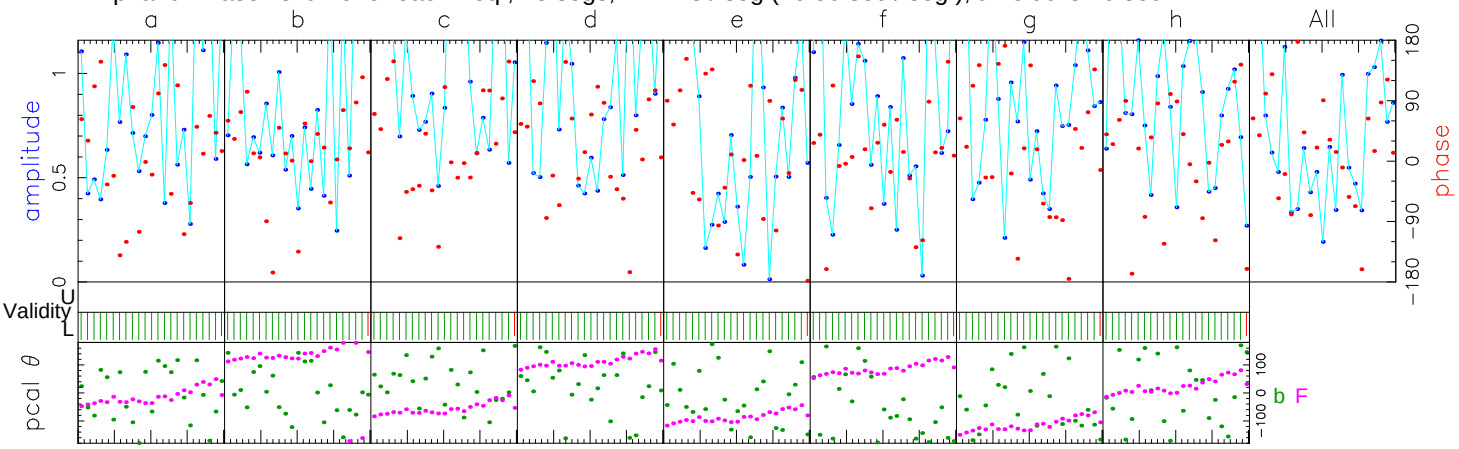
3C273.zpwvct, No0577, bF

VLBA_BR - EF_DBBC, fgroup W, pol RR



Fringe quality	9
SNR	11.6
Int time	239.895
Amp	0.387
Phase	-505.5
PFD	6.5e-23
Delays (us)	
SBD	0.112951
MBD	0.006071
Fringe rate (Hz)	
	-0.026587
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022515
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	24.5	42.3	32.3	37.0	68.1	24.4	20.7	36.5	Phase	34.5
	0.3	0.5	0.5	0.4	0.3	0.5	0.3	0.4	Ampl.	0.4
	143.9	143.5	143.5	143.1	144.1	143.7	142.8	144.4	Sbd box	143.5
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
b	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	6.80501999420E+03	Apriori delay (usec)	6.80492017340E+03	Resid mbdelay (usec)	6.07080E-03	+/-	1.9E-04
Sband delay (usec)	6.80503312440E+03	Apriori clock (usec)	-3.2764366E+01	Resid sbdelay (usec)	1.12951E-01	+/-	1.5E-03
Phase delay (usec)	6.80492017452E+03	Apriori clockrate (us/s)	3.7026890E-08	Resid phdelay (usec)	1.11313E-06	+/-	3.2E-07
Delay rate (us/s)	1.73808182048E+00	Apriori rate (us/s)	1.73808212913E+00	Resid rate (us/s)	-3.08653E-07	+/-	2.3E-09
Total phase (deg)	-240.1	Apriori accel (us/s/s)	-3.64571948783E-05	Resid phase (deg)	-505.5	+/-	9.9

	RMS	Theor.		
			Amplitude	0.387 +/- 0.033
ph/seg (deg)	76.7	23.7	Search (1024X32)	0.352
amp/seg (%)	121.3	41.4	Interp.	0.000
ph/frq (deg)	16.3	14.0	Inc. seg. avg.	0.657
amp/frq (%)	23.4	24.4	Inc. frq. avg.	0.378

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
Sample rate(MSamp/s): 64
Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite

sb window (us)	-1.000	1.000
mb window (us)	-0.016	0.016
dr window (ns/s)	-0.012	0.012
ion window (TEC)	0.00	0.00

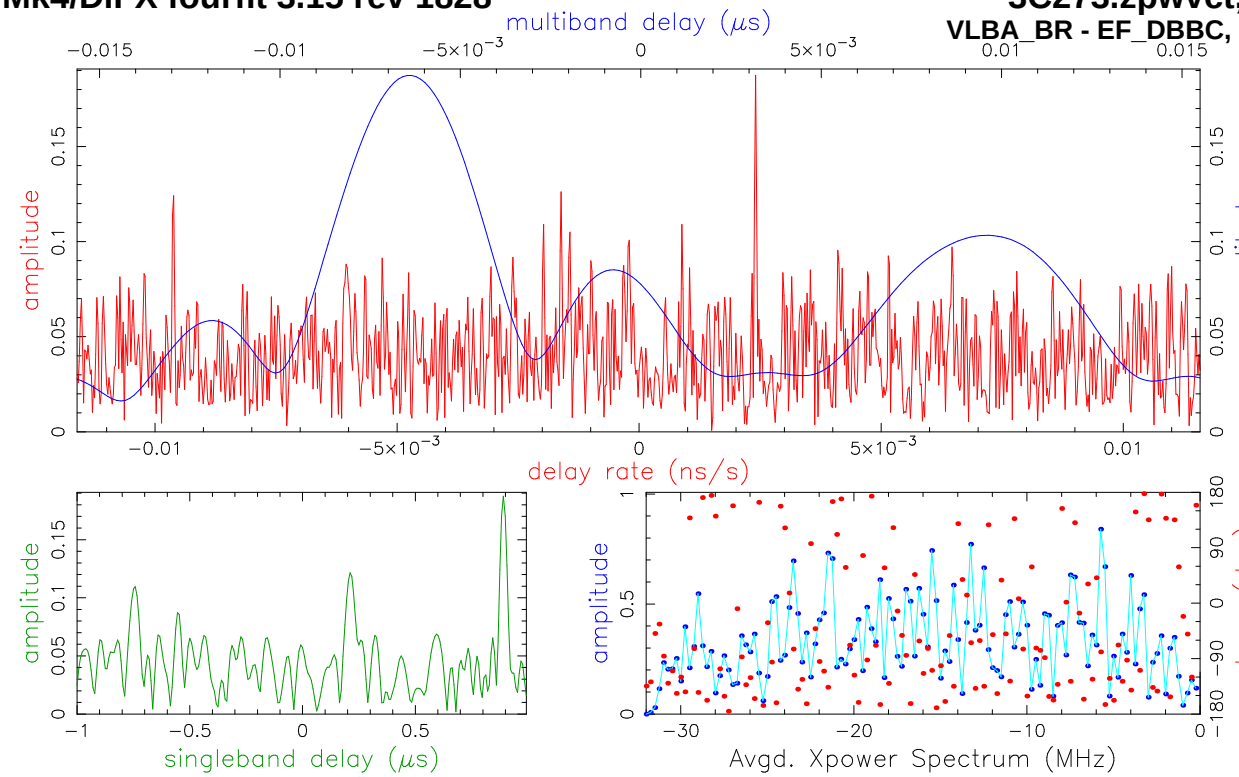
b: az 122.2 el 27.9 pa -34.4 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) -9984.394 -334.226 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/bF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/bF.W.6.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, bF

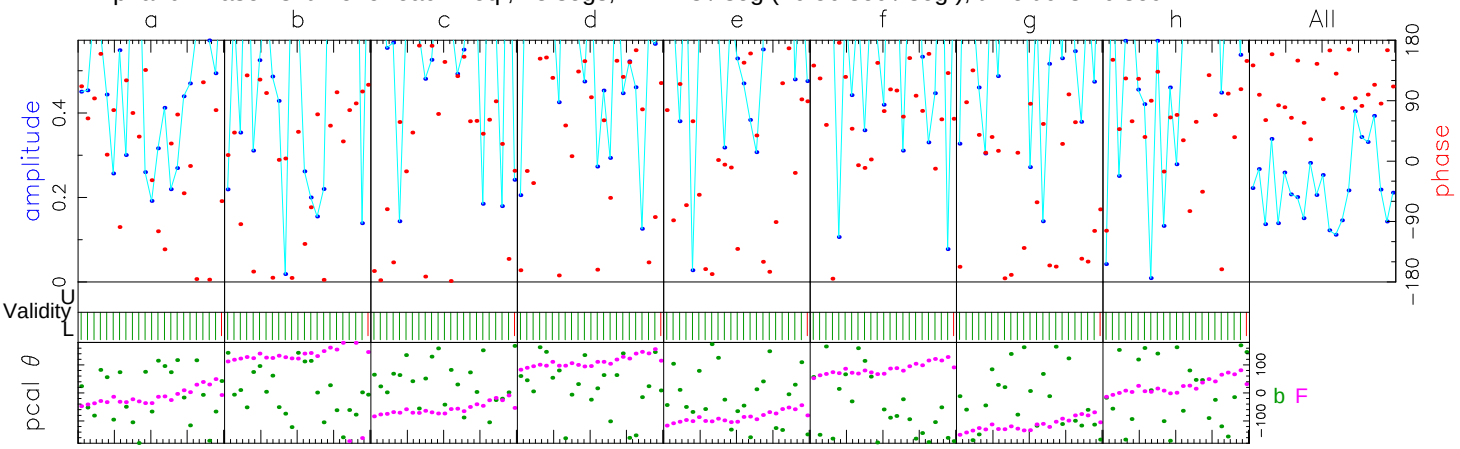
VLBA_BR - EF_DBBC, fgroup W, pol LR



Fringe quality 0

SNR	5.6
Int time	239.895
Amp	0.191
Phase	-5115.2
PFD	7.0e-01
Delays (us)	
SBD	0.890517
MBD	-0.006413
Fringe rate (Hz)	
	0.206901
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022516
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	83.5	88.2	122.5	125.4	-171.2	92.3	141.5	89.8	Phase	104.8
	0.1	0.3	0.2	0.2	0.1	0.4	0.1	0.3	Ampl.	0.2
	129.7	27.7	31.8	253.5	34.5	242.4	101.2	242.6	Sbd box	243.0
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
b	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	6.80582001090E+03	Apriori delay (usec)	6.80492017340E+03	Resid mbdelay (usec)	-6.41250E-03	+/-	3.9E-04
Sband delay (usec)	6.80581069090E+03	Apriori clock (usec)	-3.2764366E+01	Resid sbdelay (usec)	8.90517E-01	+/-	3.1E-03
Phase delay (usec)	6.80492017678E+03	Apriori clockrate (us/s)	3.7026890E-08	Resid phdelay (usec)	3.37866E-06	+/-	6.6E-07
Delay rate (us/s)	1.73808453104E+00	Apriori rate (us/s)	1.73808212913E+00	Resid rate (us/s)	2.40191E-06	+/-	4.8E-09
Total phase (deg)	-5209.9	Apriori accel (us/s/s)	-3.64571948783E-05	Resid phase (deg)	-5115.2	+/-	20.4

	RMS	Theor.							
			Amplitude	0.191 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	38.4	48.9	Search (1024X32)	0.183	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	50.7	85.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	41.4	28.9	Inc. seg. avg.	0.172	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	54.1	50.4	Inc. frq. avg.	0.189	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

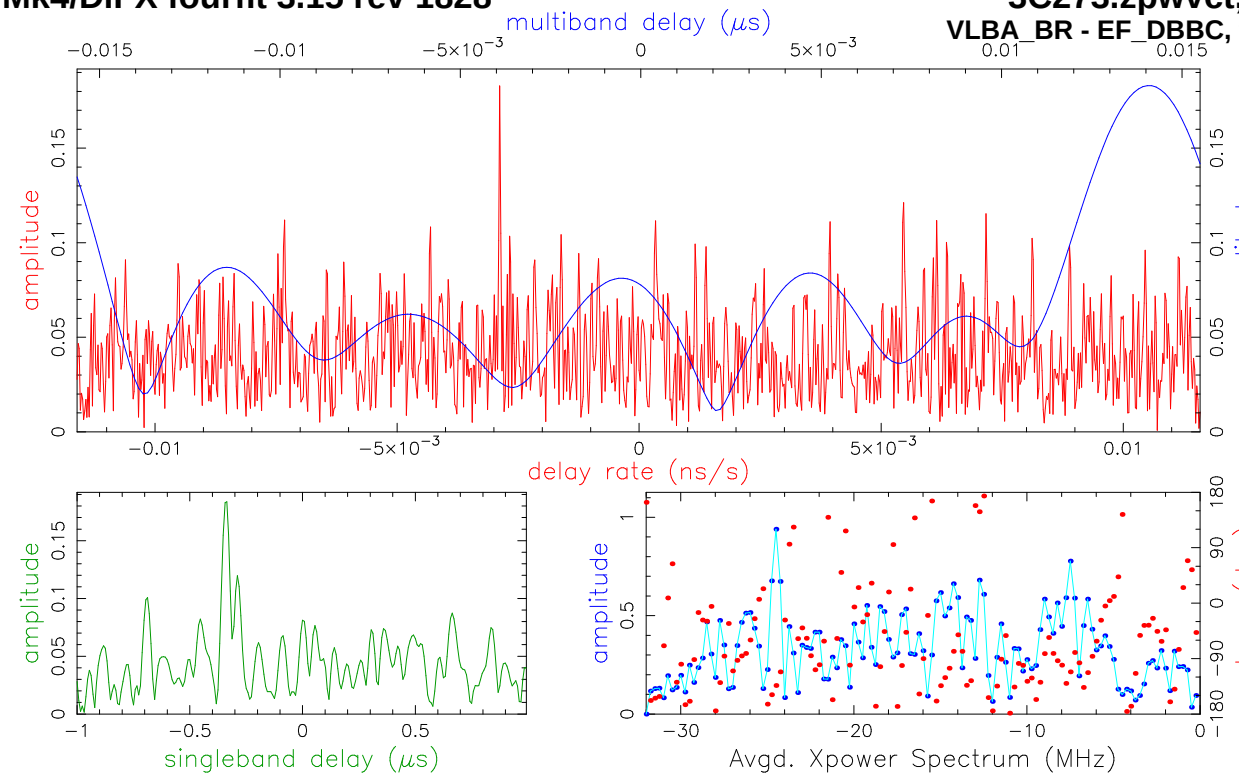
b: az 122.2 el 27.9 pa -34.4 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) -9984.394 -334.226 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/bF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/bF.W.7.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

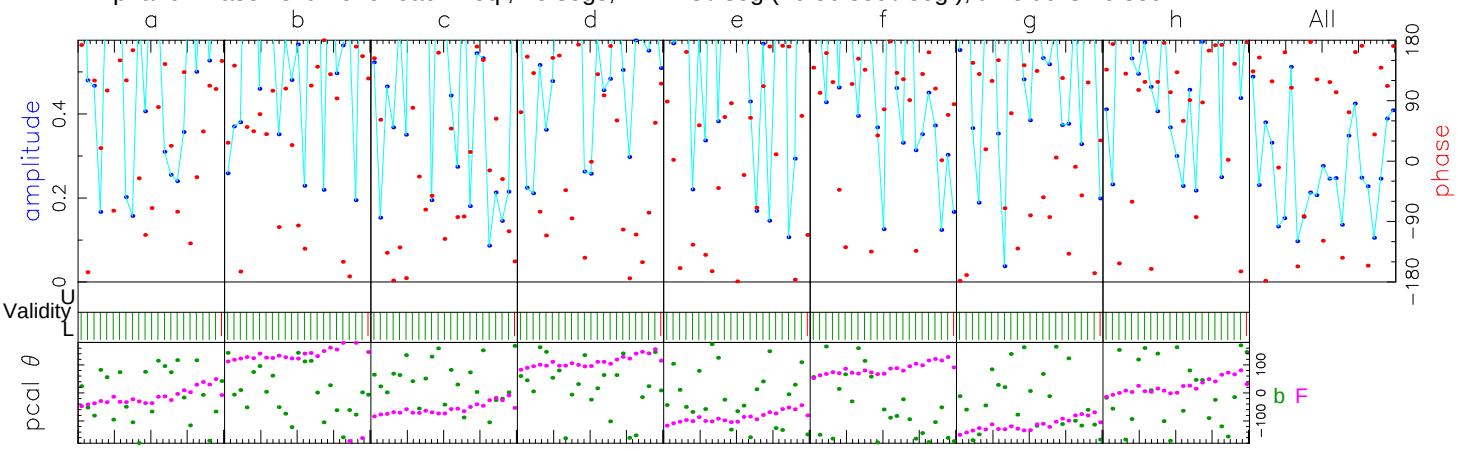
3C273.zpwvct, No0577, bF

VLBA_BR - EF_DBBC, fgroup W, pol RL



Fringe quality	0
SNR	5.6
Int time	239.895
Amp	0.192
Phase	2124.7
PFD	7.2e-01
Delays (us)	
SBD	-0.339601
MBD	0.013982
Fringe rate (Hz)	
	-0.248187
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022517
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	147.2	111.4	-141.3	-169.9	128.6	139.1	148.0	147.7	Phase	144.7
	0.1	0.3	0.1	0.1	0.2	0.3	0.1	0.3	Ampl.	0.2
	222.9	86.7	236.9	44.7	173.7	84.6	131.1	187.4	Sbd box	85.5
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
b	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	6.80459040570E+03	Apriori delay (usec)	6.80492017340E+03	Resid mbdelay (usec)	1.39823E-02	+/-	3.9E-04
Sband delay (usec)	6.80458057290E+03	Apriori clock (usec)	-3.2764366E+01	Resid sbdelay (usec)	-3.39601E-01	+/-	3.1E-03
Phase delay (usec)	6.80492017807E+03	Apriori clockrate (us/s)	3.7026890E-08	Resid phdelay (usec)	4.66519E-06	+/-	6.6E-07
Delay rate (us/s)	1.73807924792E+00	Apriori rate (us/s)	1.73808212913E+00	Resid rate (us/s)	-2.88121E-06	+/-	4.8E-09
Total phase (deg)	2030.0	Apriori accel (us/s/s)	-3.64571948783E-05	Resid phase (deg)	2124.7	+/-	20.5

	RMS	Theor.							
			Amplitude	0.192 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	62.8	49.1	Search (1024X32)	0.179	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	76.6	85.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	38.6	28.9	Inc. seg. avg.	0.202	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	46.8	50.5	Inc. frq. avg.	0.188	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

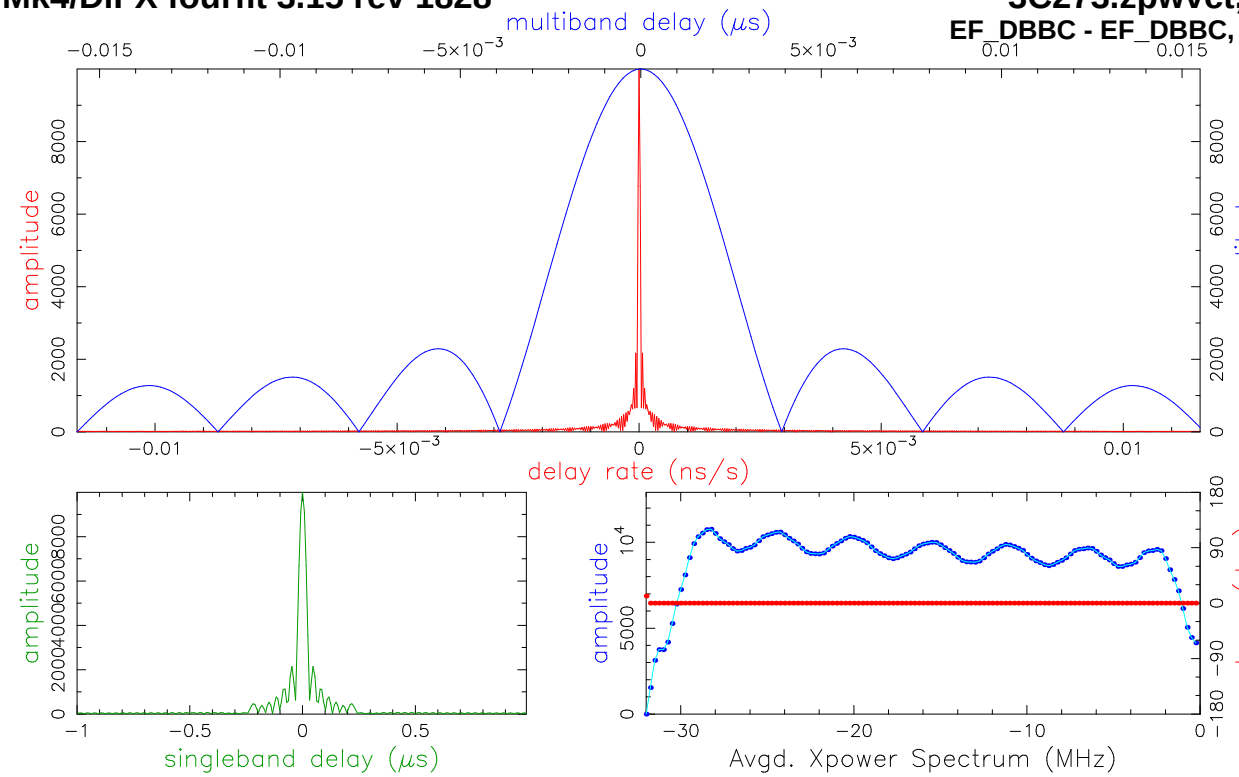
b: az 122.2 el 27.9 pa -34.4 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) -9984.394 -334.226 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/bF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/bF.W.8.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FF

EF_DBBC - EF_DBBC, fgroup W, pol LL

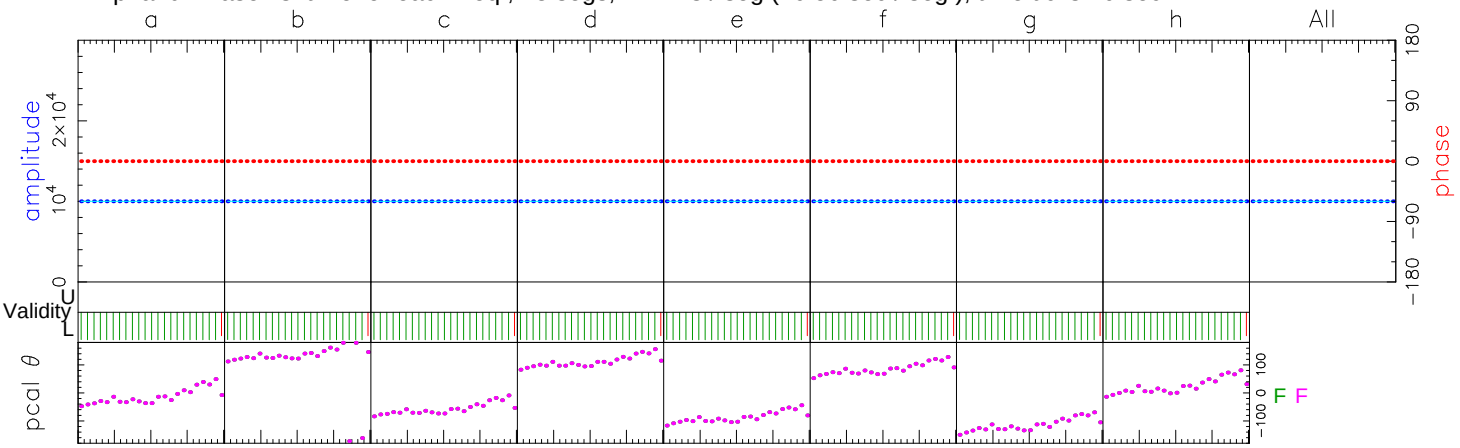


Fringe quality 9

SNR 299497.3
Int time 239.895
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) 0.500

Exp. c171a
Exper # 16383
Yr:day 2017:090
Start 044000.00
Stop 044400.00
FRT 044200.00
Corr/FF/build
2017:208:013416
2017:215:022917
2017:188:152524
RA & Dec (J2000)
12h29m 6.6997s
+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Phase	0.0
	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	7.2E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	5.8E-08
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	1.2E-11
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	8.9E-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 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	0.0	0.0	Search (1024X32)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

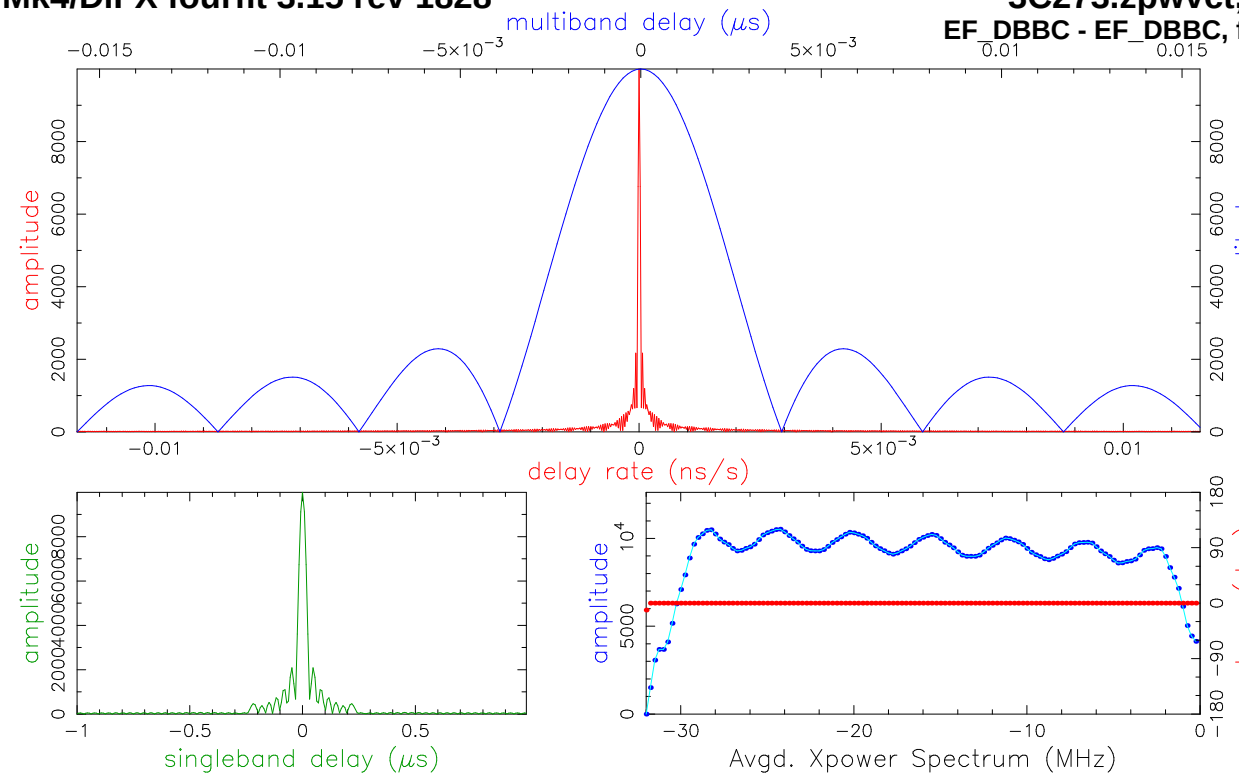
F: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FF.W.229.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

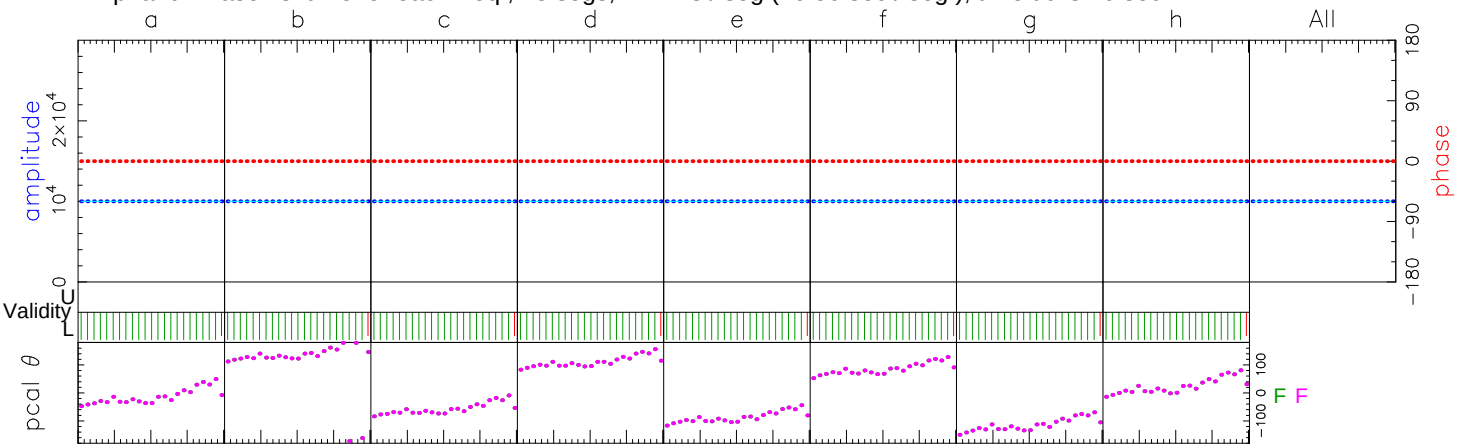
3C273.zpwvct, No0577, FF

EF_DBBC - EF_DBBC, fgroup W, pol RR



Fringe quality	9
SNR	299497.3
Int time	239.895
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)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022918
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	Phase	0.0
	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	10000.0	Ampl.	10000.0
	129.0	129.0	129.0	129.0	129.0	129.0	129.0	129.0	Sbd box	129.0
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	

Group delay (usec)(sbd)	0.00000000000E+00	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/- 7.2E-09
Sband delay (usec)	0.00000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/- 5.8E-08
Phase delay (usec)	0.00000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/- 1.2E-11
Delay rate (us/s)	0.00000000000E+00	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	0.00000E+00	+/- 8.9E-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 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	0.0	0.0	Search (1024X32)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	0.0	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	0.0	0.0	Inc. seg. avg.	10000.000	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	0.0	0.0	Inc. frq. avg.	10000.000	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

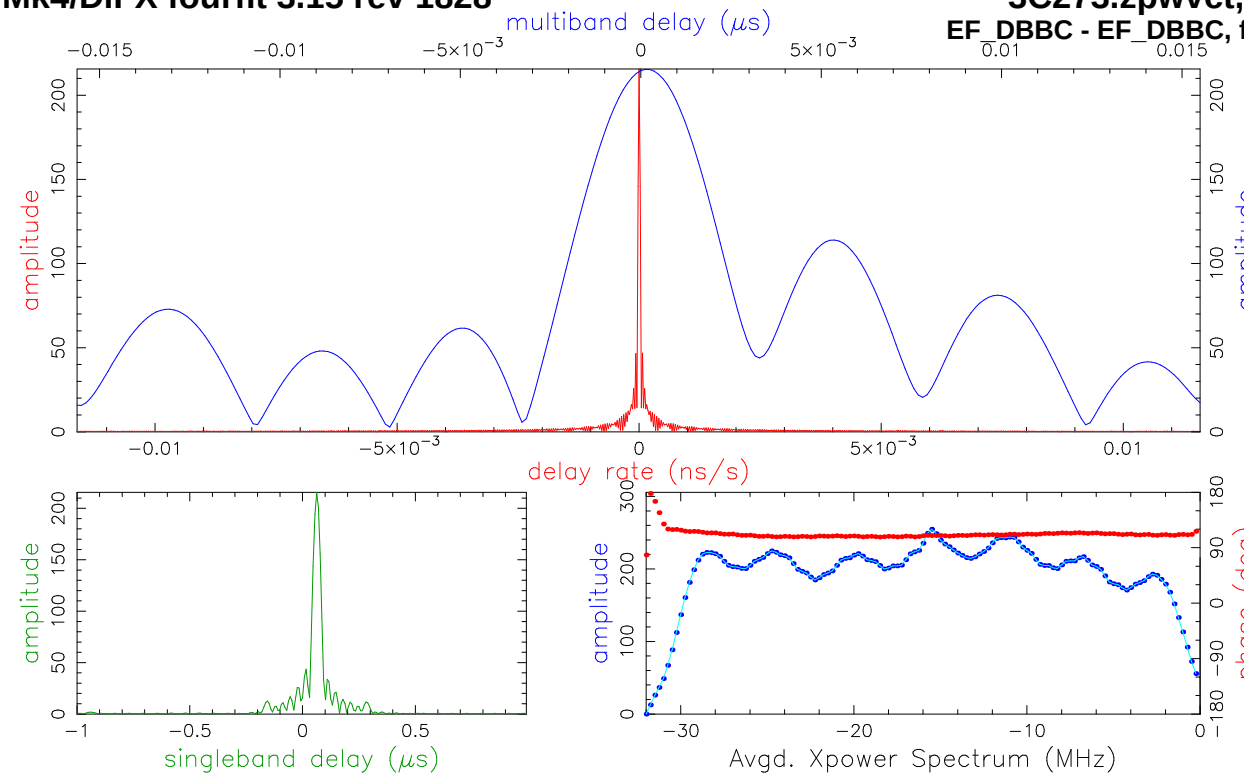
F: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FF.W.230.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FF

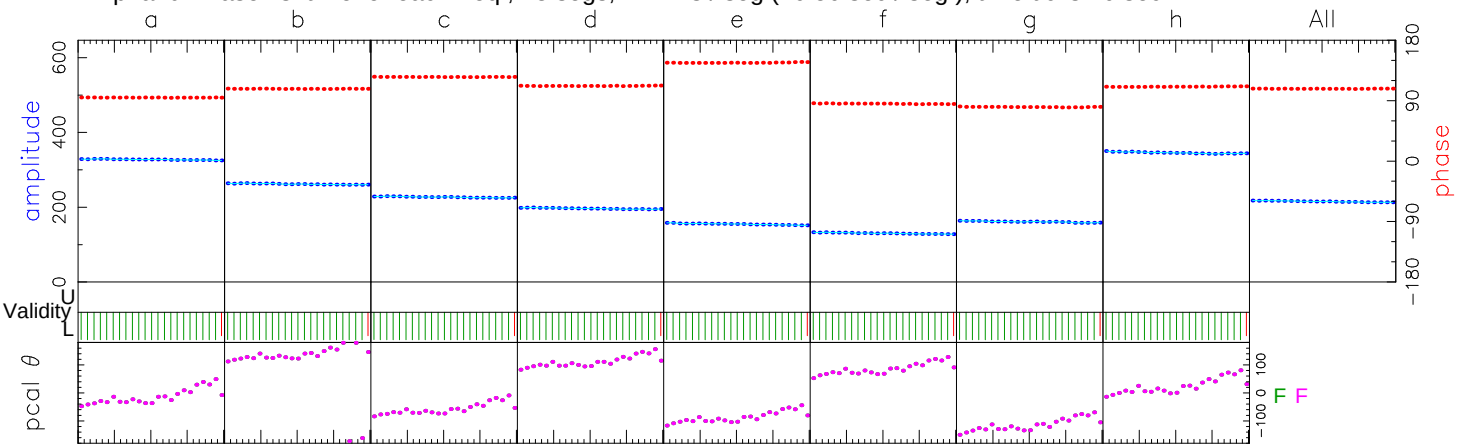
EF_DBBC - EF_DBBC, fgroup W, pol LR



Fringe quality 6

SNR	6457.3
Int time	239.895
Amp	215.604
Phase	-252.3
PFD	0.0e+00
Delays (us)	
SBD	0.063261
MBD	0.000169
Fringe rate (Hz)	
	-0.000007
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022919
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	94.5	107.6	125.2	111.9	146.5	85.4	80.5	110.8	Phase	107.7
	327.5	262.0	227.1	196.7	154.9	130.4	161.1	345.7	Ampl.	225.7
	137.1	137.7	136.8	137.1	137.1	136.4	137.9	137.1	Sbd box	137.1
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	6.26691250000E-02	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	1.69125E-04	+/-	3.4E-07
Sband delay (usec)	6.32610000000E-02	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	6.32610E-02	+/-	2.7E-06
Phase delay (usec)	3.47298900622E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.47299E-06	+/-	5.7E-10
Delay rate (us/s)	-7.98119340608E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	-7.98119E-11	+/-	4.1E-12
Total phase (deg)	-252.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	-252.3	+/-	0.0

	RMS	Theor.							
			Amplitude	215.604 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	0.1	0.0	Search (1024X32)	214.577	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	0.7	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	23.3	0.0	Inc. seg. avg.	215.432	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	35.2	0.0	Inc. frq. avg.	225.660	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

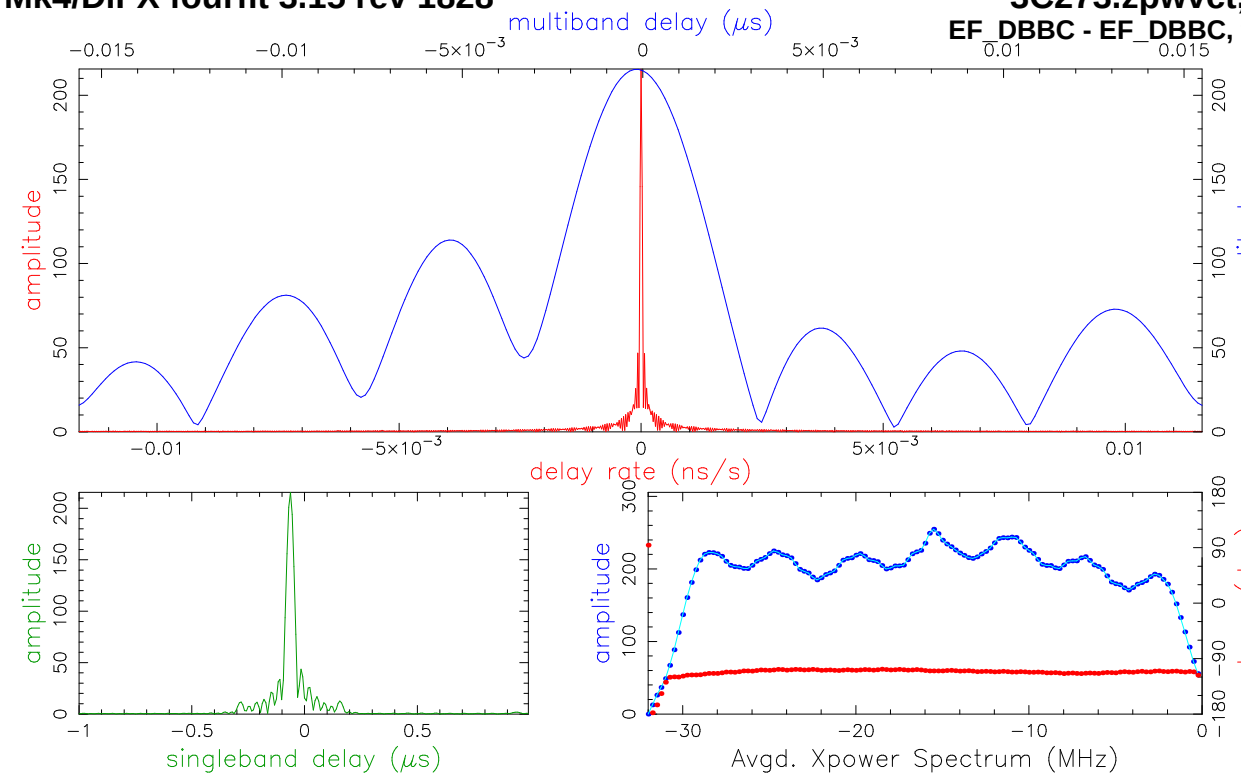
F: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FF.W.231.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

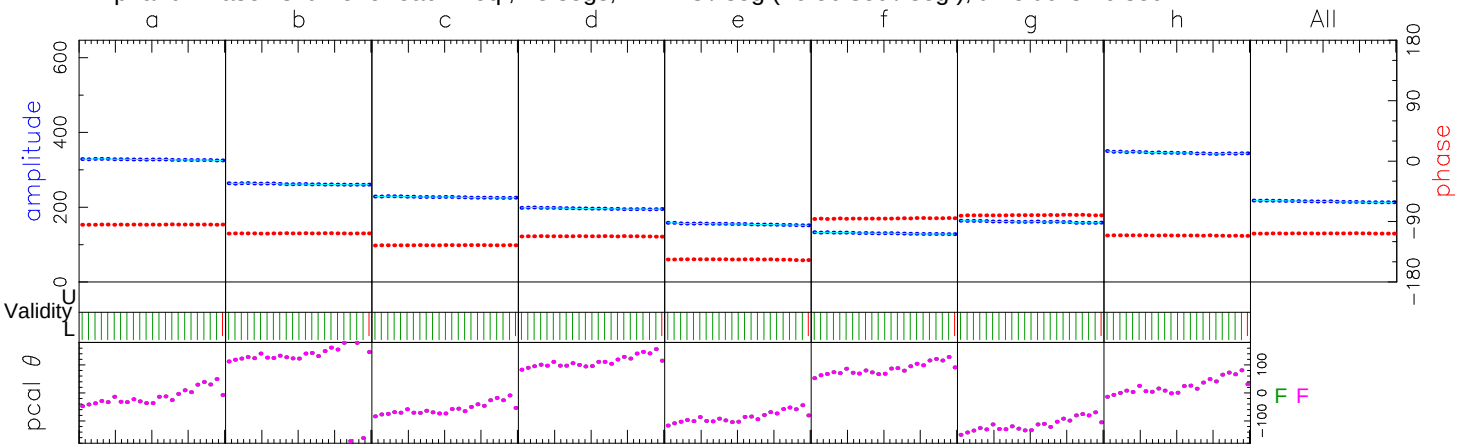
3C273.zpwvct, No0577, FF

EF_DBBC - EF_DBBC, fgroup W, pol RL



Fringe quality	6
SNR	6457.3
Int time	239.895
Amp	215.604
Phase	252.3
PFD	0.0e+00
Delays (us)	
SBD	-0.063261
MBD	-0.000169
Fringe rate (Hz)	
	0.000007
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022920
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-94.5	-107.6	-125.2	-111.9	-146.5	-85.4	-80.5	-110.8	Phase	-107.7
	327.5	262.0	227.1	196.7	154.9	130.4	161.1	345.7	Ampl.	225.7
	120.9	120.3	121.2	120.9	120.9	121.6	120.1	120.9	Sbd box	120.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:F	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
F	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-6.26691250000E-02	Apriori delay (usec)	0.00000000000E+00	Resid mbdelay (usec)	-1.69125E-04	+/-	3.4E-07
Sband delay (usec)	-6.32610000000E-02	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	-6.32610E-02	+/-	2.7E-06
Phase delay (usec)	-3.47298900615E-06	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.47299E-06	+/-	5.7E-10
Delay rate (us/s)	7.98119340608E-11	Apriori rate (us/s)	0.00000000000E+00	Resid rate (us/s)	7.98119E-11	+/-	4.1E-12
Total phase (deg)	252.3	Apriori accel (us/s/s)	0.00000000000E+00	Resid phase (deg)	252.3	+/-	0.0

	RMS	Theor.							
ph/seg (deg)	0.1	0.0	Amplitude	215.604 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	0.7	0.1	Search (1024X32)	214.577	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
ph/frq (deg)	23.3	0.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
amp/frq (%)	35.2	0.0	Inc. seg. avg.	215.432	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
			Inc. frq. avg.	225.660	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

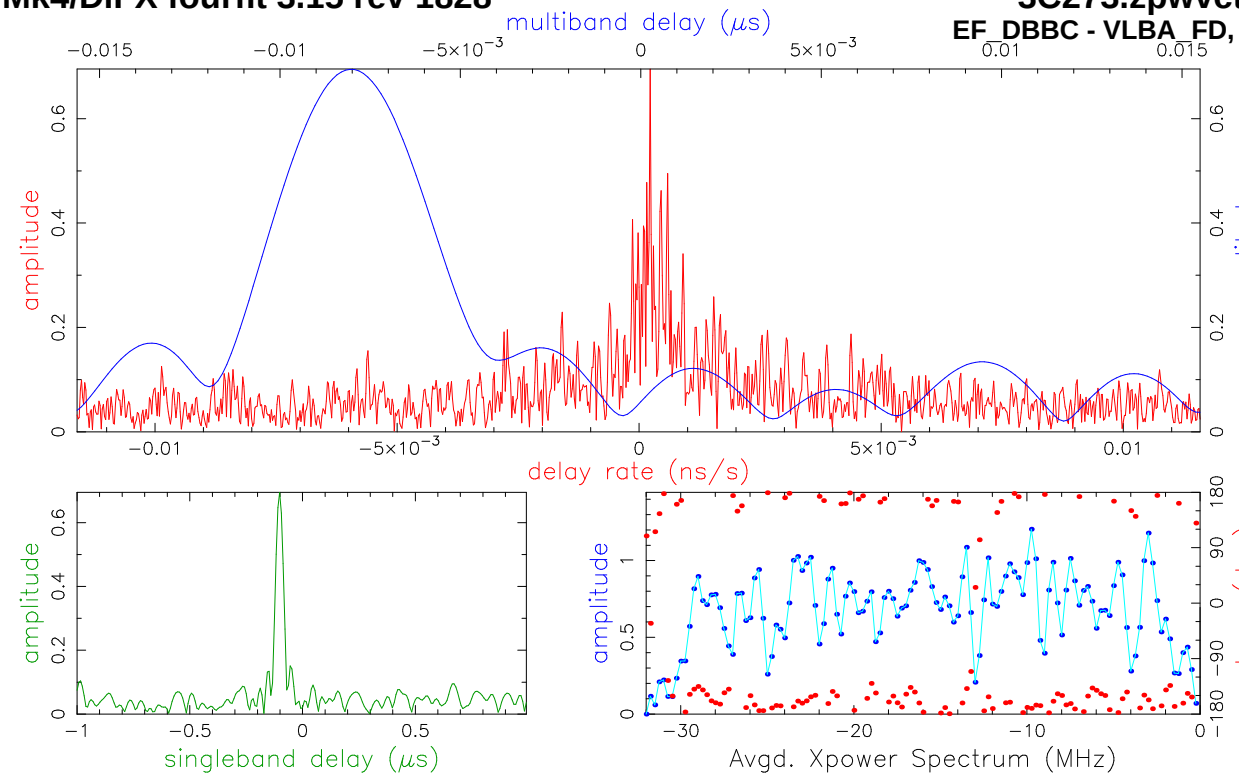
F: az 262.0 el 9.0 pa 39.1 F: az 262.0 el 9.0 pa 39.1 u,v (fr/asec) 0.000 0.000 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FF..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FF.W.232.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

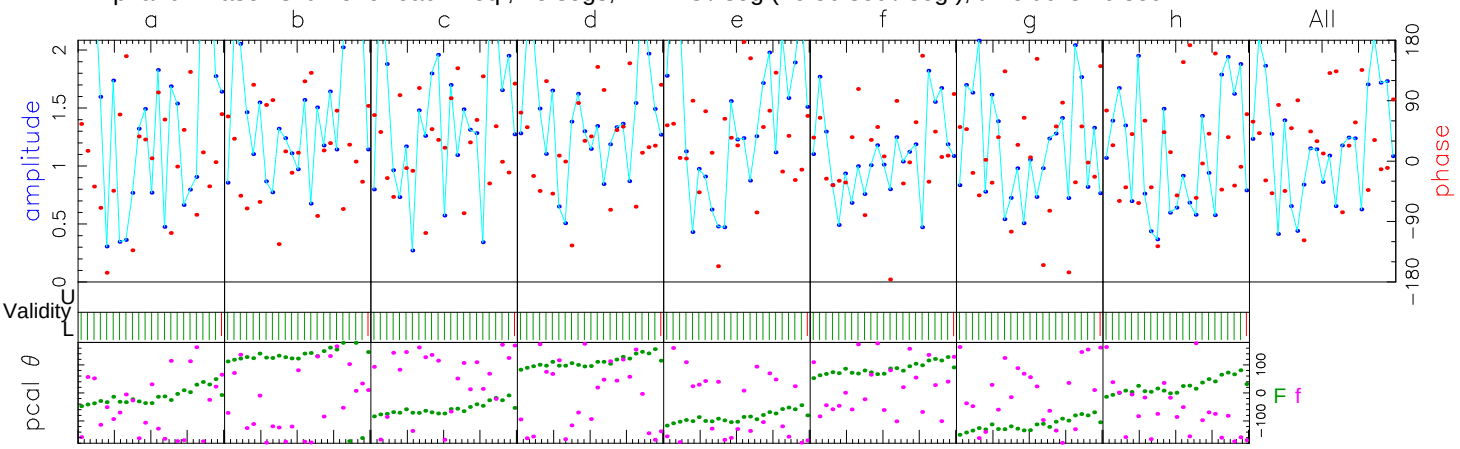
3C273.zpwvct, No0577, Ff

EF_DBBC - VLBA_FD, fgroup W, pol LL



Fringe quality	9
SNR	20.8
Int time	239.895
Amp	0.695
Phase	554.9
PFD	0.0e+00
Delays (us)	
SBD	-0.102156
MBD	-0.008032
Fringe rate (Hz)	0.020189
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022630
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	1.4	3.0	27.4	27.0	30.2	21.8	6.9	-4.4	Phase	14.9
	0.8	0.7	0.8	0.7	0.9	0.7	0.6	0.6	Ampl.	0.7
	116.1	116.1	116.3	115.8	115.8	115.5	116.5	115.8	Sbd box	115.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
f	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
f	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.26117756590E+04	Apriori delay (usec)	-1.26116738770E+04	Resid mbdelay (usec)	-8.03204E-03	+/-	1.0E-04
Sband delay (usec)	-1.26117760335E+04	Apriori clock (usec)	2.9053398E+01	Resid sbdelay (usec)	-1.02156E-01	+/-	8.3E-04
Phase delay (usec)	-1.26116738765E+04	Apriori clockrate (us/s)	3.9640749E-07	Resid phdelay (usec)	4.80535E-07	+/-	1.8E-07
Delay rate (us/s)	-1.67997798537E+00	Apriori rate (us/s)	-1.67997821975E+00	Resid rate (us/s)	2.34377E-07	+/-	1.3E-09
Total phase (deg)	280.0	Apriori accel (us/s/s)	6.82196421581E-05	Resid phase (deg)	554.9	+/-	5.5

	RMS	Theor.							
			Amplitude	0.695 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	67.7	13.2	Search (1024X32)	0.644	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	101.4	23.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	15.0	7.8	Inc. seg. avg.	1.177	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	13.4	13.6	Inc. frq. avg.	0.707	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

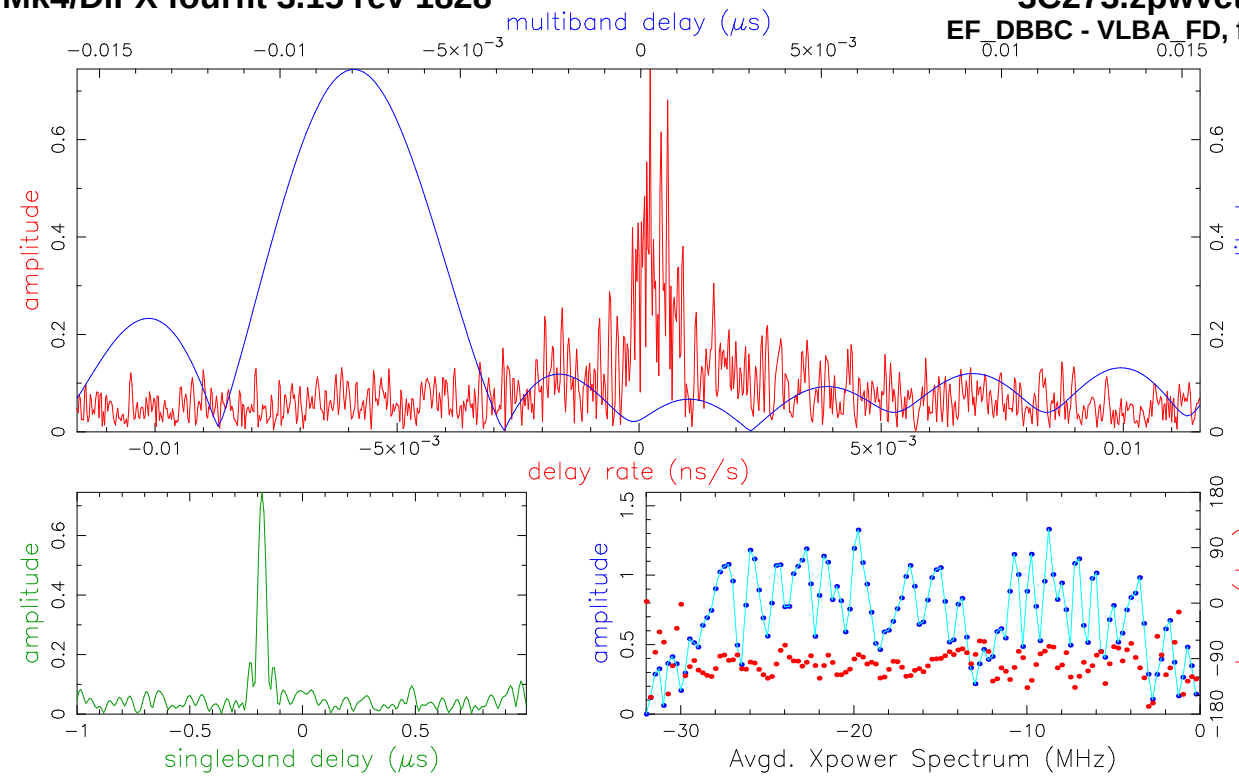
F: az 262.0 el 9.0 pa 39.1 f: az 126.5 el 47.8 pa -43.9 u,v (fr/asec) 9673.708 2500.883 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Ff..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Ff.W.77.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Ff

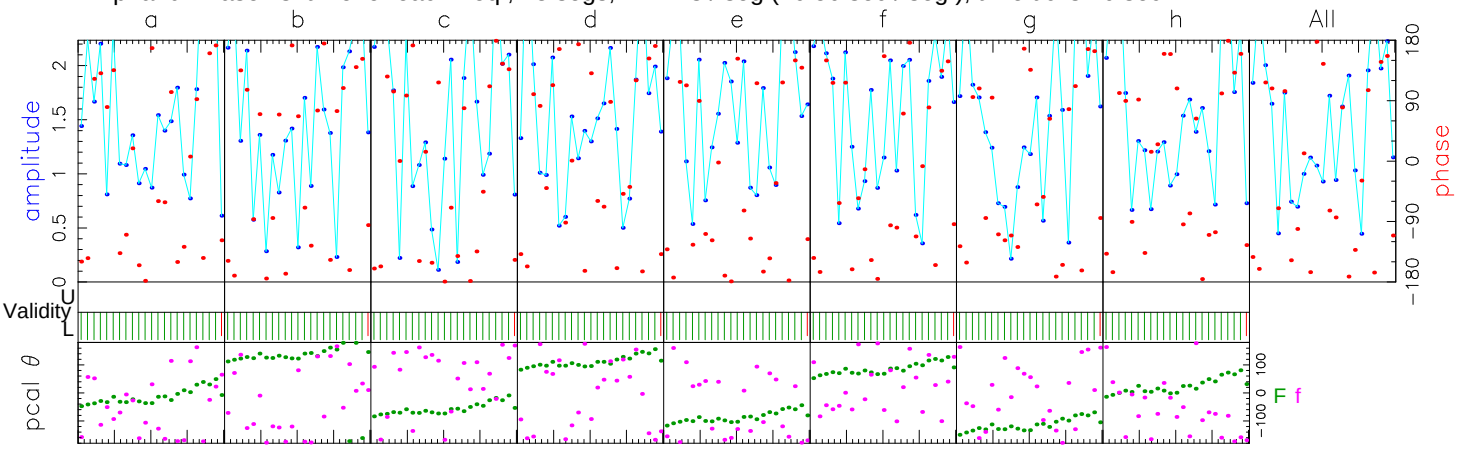
EF_DBBC - VLBA_FD, fgroup W, pol RR



Fringe quality 9

SNR	22.3
Int time	239.895
Amp	0.745
Phase	1253.1
PFD	0.0e+00
Delays (us)	
SBD	-0.180018
MBD	-0.007955
Fringe rate (Hz)	
	0.020271
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022631
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-179.4	166.3	164.0	173.9	177.7	176.9	-177.3	161.2	Phase	173.1
	0.8	0.8	0.8	0.6	0.8	0.8	0.8	0.7	Ampl.	0.7
	105.6	106.3	106.5	105.9	105.7	106.5	105.7	105.4	Sbd box	106.0
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
f	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
f	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.26118693320E+04	Apriori delay (usec)	-1.26116738770E+04	Resid mbdelay (usec)	-7.95497E-03	+/-	9.7E-05
Sband delay (usec)	-1.26118538955E+04	Apriori clock (usec)	2.9053398E+01	Resid sbdelay (usec)	-1.80018E-01	+/-	7.7E-04
Phase delay (usec)	-1.26116738714E+04	Apriori clockrate (us/s)	3.9640749E-07	Resid phdelay (usec)	5.58184E-06	+/-	1.7E-07
Delay rate (us/s)	-1.67997798442E+00	Apriori rate (us/s)	-1.67997821975E+00	Resid rate (us/s)	2.35326E-07	+/-	1.2E-09
Total phase (deg)	978.2	Apriori accel (us/s/s)	6.82196421581E-05	Resid phase (deg)	1253.1	+/-	5.1

	RMS	Theor.						
			Amplitude	0.745 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	77.1	12.3	Search (1024X32)	0.677	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	128.9	21.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	8.7	7.3	Inc. seg. avg.	1.430	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	9.7	12.7	Inc. frq. avg.	0.745	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

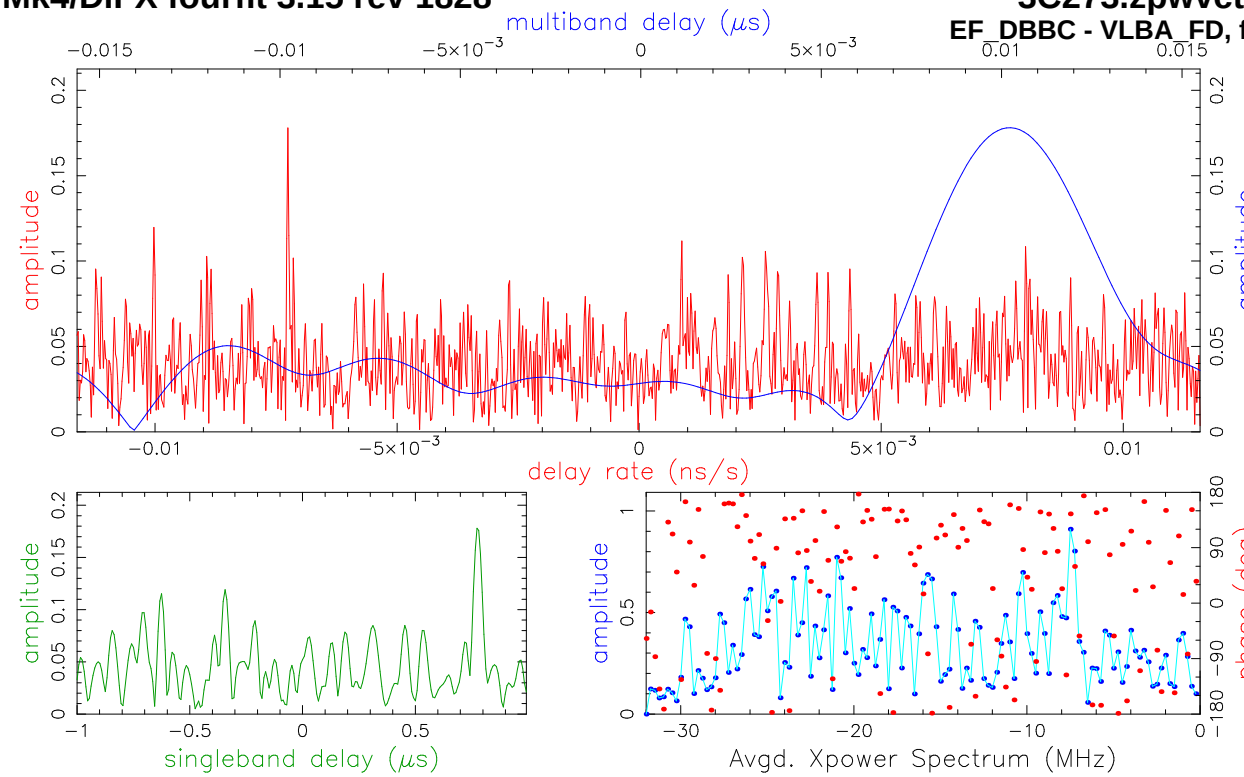
F: az 262.0 el 9.0 pa 39.1 f: az 126.5 el 47.8 pa -43.9 u,v (fr/asec) 9673.708 2500.883 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Ff..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Ff.W.78.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Ff

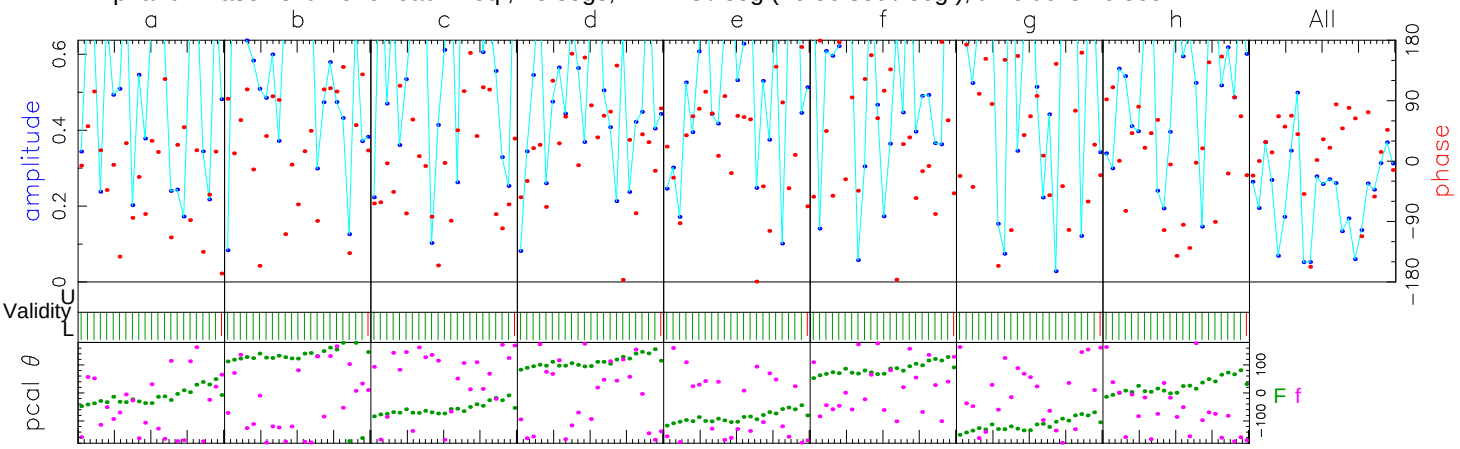
EF_DBBC - VLBA_FD, fgroup W, pol LR



Fringe quality 0

SNR	5.4
Int time	239.895
Amp	0.212
Phase	-4471.4
PFD	9.8e-01
Delays (us)	
SBD	0.776600
MBD	0.010141
Fringe rate (Hz)	
	-0.625134
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022632
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	3.4	45.2	6.8	47.8	43.6	23.4	21.7	14.4	Phase	28.6
	0.3	0.3	0.2	0.3	0.3	0.1	0.1	0.1	Ampl.	0.2
	216.0	134.3	94.8	53.4	111.4	99.9	186.6	124.1	Sbd box	228.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
f	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
f	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.26108824860E+04	Apriori delay (usec)	-1.26116738770E+04	Resid mbdelay (usec)	1.01410E-02	+/-	4.0E-04
Sband delay (usec)	-1.26108972775E+04	Apriori clock (usec)	2.9053398E+01	Resid sbdelay (usec)	7.76600E-01	+/-	3.2E-03
Phase delay (usec)	-1.26116738761E+04	Apriori clockrate (us/s)	3.9640749E-07	Resid phdelay (usec)	9.20663E-07	+/-	6.9E-07
Delay rate (us/s)	-1.67998547694E+00	Apriori rate (us/s)	-1.67997821975E+00	Resid rate (us/s)	-7.25719E-06	+/-	4.9E-09
Total phase (deg)	-4746.3	Apriori accel (us/s/s)	6.82196421581E-05	Resid phase (deg)	-4471.4	+/-	21.3

	RMS	Theor.						
			Amplitude	0.212 +/- 0.039	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	59.9	51.0	Search (1024X32)	0.173	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	69.1	89.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	19.4	30.1	Inc. seg. avg.	0.196	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	33.0	52.5	Inc. frq. avg.	0.194	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

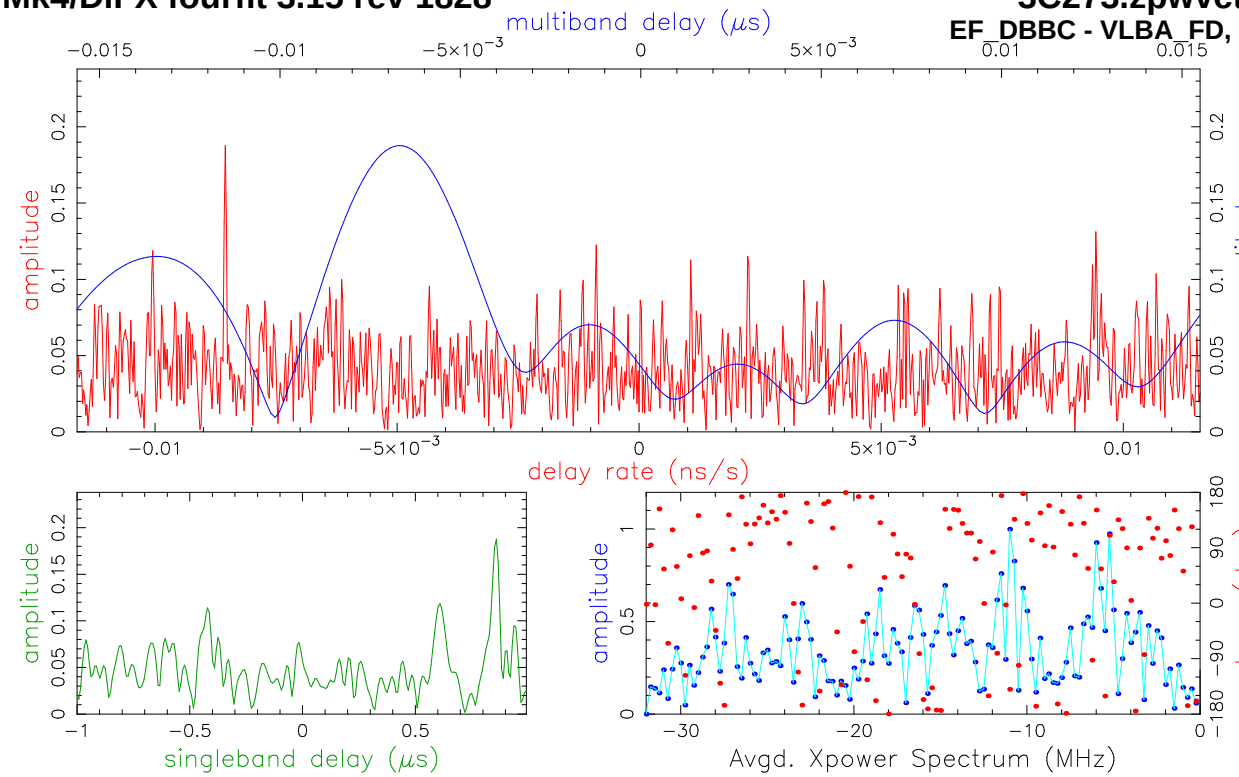
F: az 262.0 el 9.0 pa 39.1 f: az 126.5 el 47.8 pa -43.9 u,v (fr/asec) 9673.708 2500.883 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Ff..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Ff.W.79.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

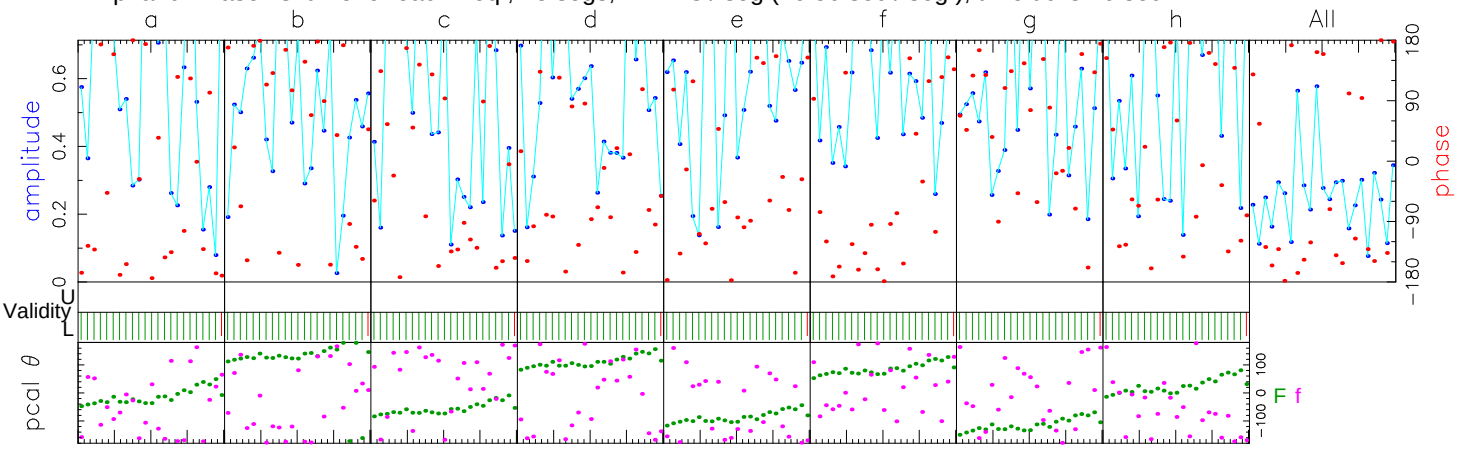
3C273.zpwvct, No0577, Ff

EF_DBBC - VLBA_FD, fgroup W, pol RL



Fringe quality	0
SNR	5.6
Int time	239.895
Amp	0.238
Phase	-5206.3
PFD	6.5e-01
Delays (us)	
SBD	0.857798
MBD	-0.006737
Fringe rate (Hz)	
	-0.736317
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022633
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-170.6	-177.5	178.9	-85.3	-137.2	-162.3	121.7	-148.7	Phase	-166.3
	0.4	0.3	0.2	0.1	0.3	0.4	0.2	0.2	Ampl.	0.2
	238.2	240.0	234.7	127.6	3.2	239.1	225.2	255.6	Sbd box	238.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
f	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:f	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
f	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
f	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.26108056144E+04	Apriori delay (usec)	-1.26116738770E+04	Resid mbdelay (usec)	-6.73744E-03	+/-	3.8E-04
Sband delay (usec)	-1.26108160795E+04	Apriori clock (usec)	2.9053398E+01	Resid sbdelay (usec)	8.57798E-01	+/-	3.1E-03
Phase delay (usec)	-1.26116738824E+04	Apriori clockrate (us/s)	3.9640749E-07	Resid phdelay (usec)	-5.36400E-06	+/-	6.6E-07
Delay rate (us/s)	-1.67998676766E+00	Apriori rate (us/s)	-1.67997821975E+00	Resid rate (us/s)	-8.54791E-06	+/-	4.7E-09
Total phase (deg)	-5121.2	Apriori accel (us/s/s)	6.82196421581E-05	Resid phase (deg)	-5206.3	+/-	20.3

	RMS	Theor.					
			Amplitude	0.238 +/- 0.042	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	53.4	48.7	Search (1024X32)	0.184	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	74.2	85.0	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	47.1	28.7	Inc. seg. avg.	0.241	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	44.0	50.1	Inc. frq. avg.	0.246	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

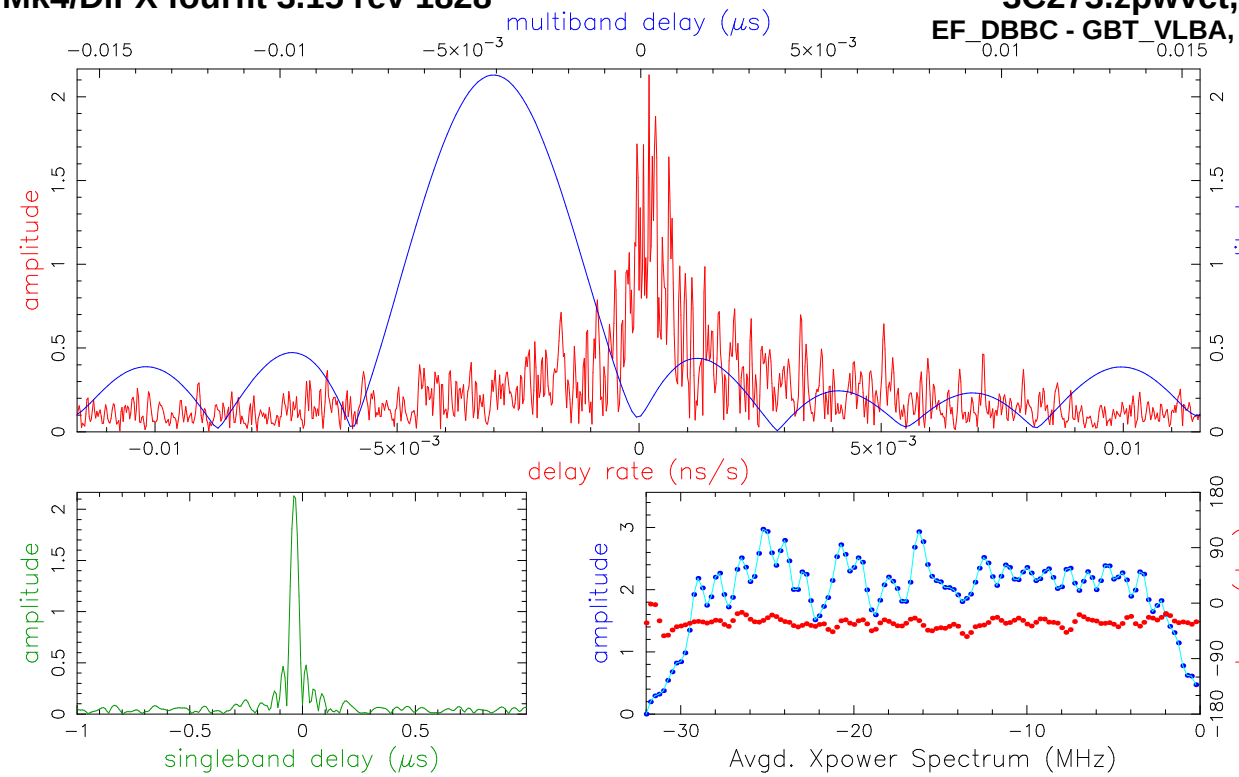
F: az 262.0 el 9.0 pa 39.1 f: az 126.5 el 47.8 pa -43.9 u,v (fr/asec) 9673.708 2500.883 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Ff..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Ff.W.80.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

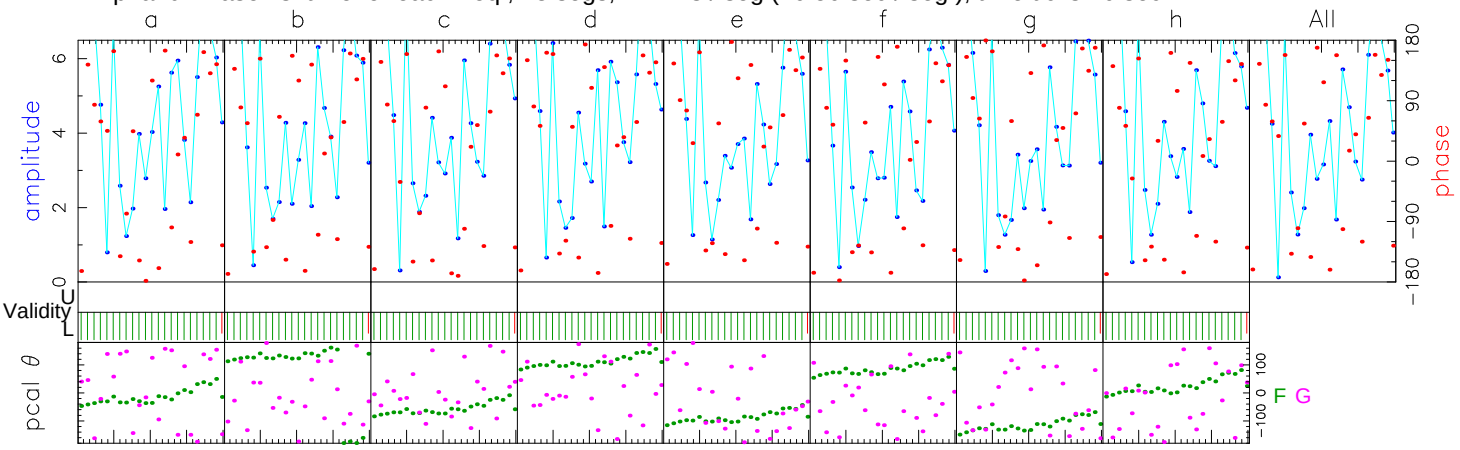
3C273.zpwvct, No0577, FG

EF_DBBC - GBT_VLBA, fgroup W, pol LL



Fringe quality	5
SNR	64.7
Int time	238.965
Amp	2.166
Phase	330.6
PFD	0.0e+00
Delays (us)	
SBD	-0.035673
MBD	-0.004071
Fringe rate (Hz)	0.016726
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044001.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:023003
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	150.5	147.2	151.8	152.2	154.4	145.1	160.3	143.0	Phase	150.6
	2.1	2.1	2.3	2.1	2.3	2.0	2.0	2.1	Ampl.	2.1
	124.4	124.5	124.5	124.5	124.4	124.6	124.4	124.2	Sbd box	124.4
U/L	0/478	0/478	0/478	0/478	0/478	0/478	0/478	0/478	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
G	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	
G	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-1.36961201761E+04	Apriori delay (usec)	-1.36960848552E+04	Resid mbdelay (usec)	-4.07083E-03	+/-	3.4E-05
Sband delay (usec)	-1.36961205282E+04	Apriori clock (usec)	3.9563175E+01	Resid sbdelay (usec)	-3.56730E-02	+/-	2.7E-04
Phase delay (usec)	-1.36960848504E+04	Apriori clockrate (us/s)	-2.5640010E-07	Resid phdelay (usec)	4.85652E-06	+/-	5.7E-08
Delay rate (us/s)	-1.13953325196E+00	Apriori rate (us/s)	-1.13953344613E+00	Resid rate (us/s)	1.94174E-07	+/-	4.1E-10
Total phase (deg)	175.8	Apriori accel (us/s/s)	7.36110546422E-05	Resid phase (deg)	330.6	+/-	1.8

	RMS	Theor.							
			Amplitude	2.166 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	74.4	4.2	Search (1024X32)	1.873	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	149.5	7.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	5.9	2.5	Inc. seg. avg.	4.459	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	4.9	4.4	Inc. frq. avg.	2.137	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

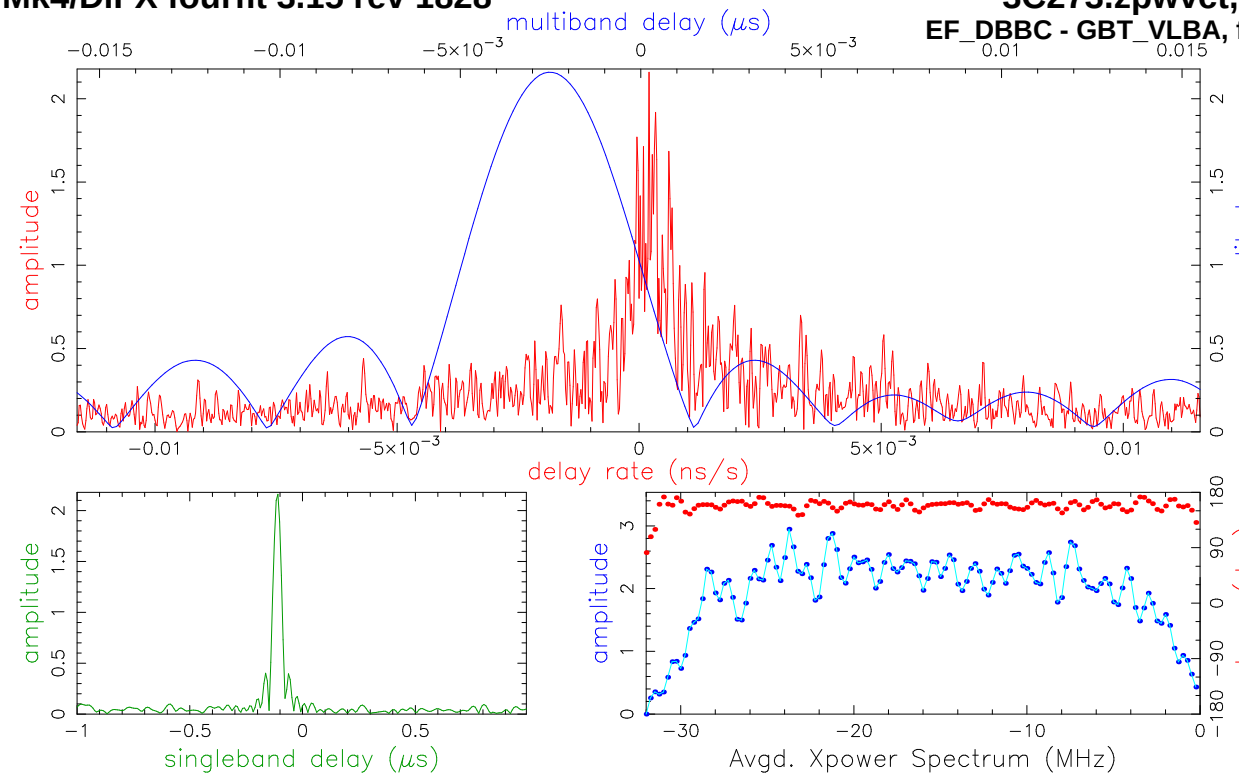
F: az 262.0 el 9.0 pa 39.1 G: az 165.7 el 52.7 pa -10.7 u,v (fr/asec) 6580.324 1526.117 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FG..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FG.W.273.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

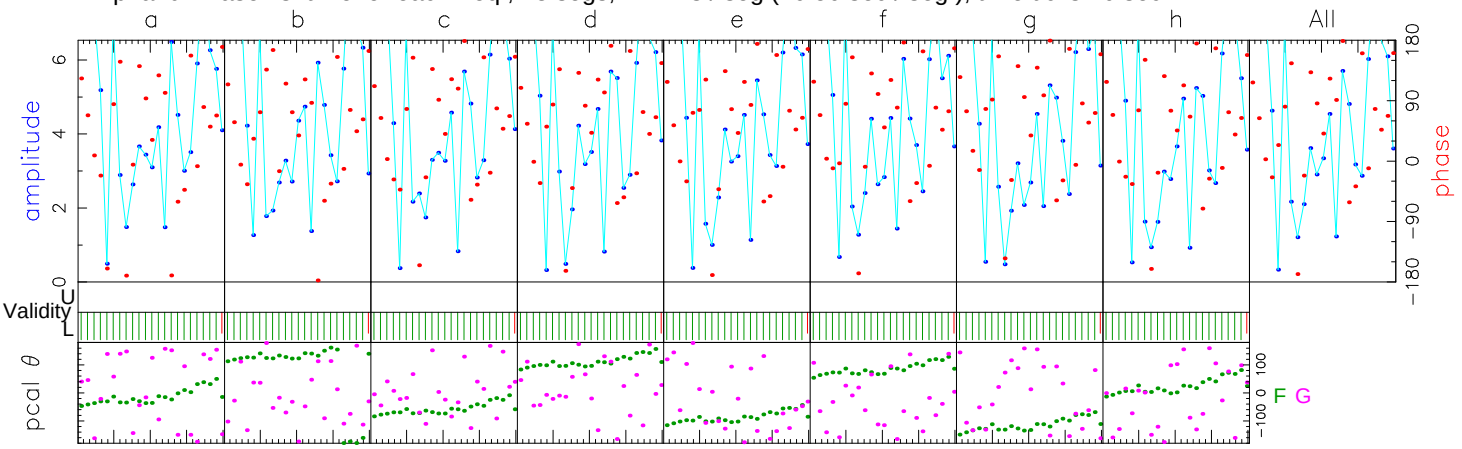
3C273.zpwvct, No0577, FG

EF_DBBC - GBT_VLBA, fgroup W, pol RR



Fringe quality	5
SNR	65.1
Int time	238.965
Amp	2.179
Phase	608.5
PFD	0.0e+00
Delays (us)	
SBD	-0.111863
MBD	-0.002513
Fringe rate (Hz)	0.016758
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044001.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:023004
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	76.3	60.9	69.9	66.0	64.4	71.6	76.4	63.6	Phase	68.5
	2.1	2.3	2.1	2.2	2.2	2.2	2.1	2.2	Ampl.	2.2
	114.6	114.6	114.8	114.6	114.8	115.0	114.7	114.5	Sbd box	114.7
U/L	0/478	0/478	0/478	0/478	0/478	0/478	0/478	0/478	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
G	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
G	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.36961811182E+04	Apriori delay (usec)	-1.36960848552E+04	Resid mbdelay (usec)	-2.51295E-03	+/-	3.3E-05
Sband delay (usec)	-1.36961967182E+04	Apriori clock (usec)	3.9563175E+01	Resid sbdelay (usec)	-1.11863E-01	+/-	2.6E-04
Phase delay (usec)	-1.36960848530E+04	Apriori clockrate (us/s)	-2.5640010E-07	Resid phdelay (usec)	2.20906E-06	+/-	5.7E-08
Delay rate (us/s)	-1.13953325158E+00	Apriori rate (us/s)	-1.13953344613E+00	Resid rate (us/s)	1.94550E-07	+/-	4.1E-10
Total phase (deg)	453.7	Apriori accel (us/s/s)	7.36110546422E-05	Resid phase (deg)	608.5	+/-	1.8

	RMS	Theor.						
			Amplitude	2.179 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	71.7	4.2	Search (1024X32)	1.893	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	150.7	7.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	6.3	2.5	Inc. seg. avg.	4.492	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	3.0	4.3	Inc. frq. avg.	2.168	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

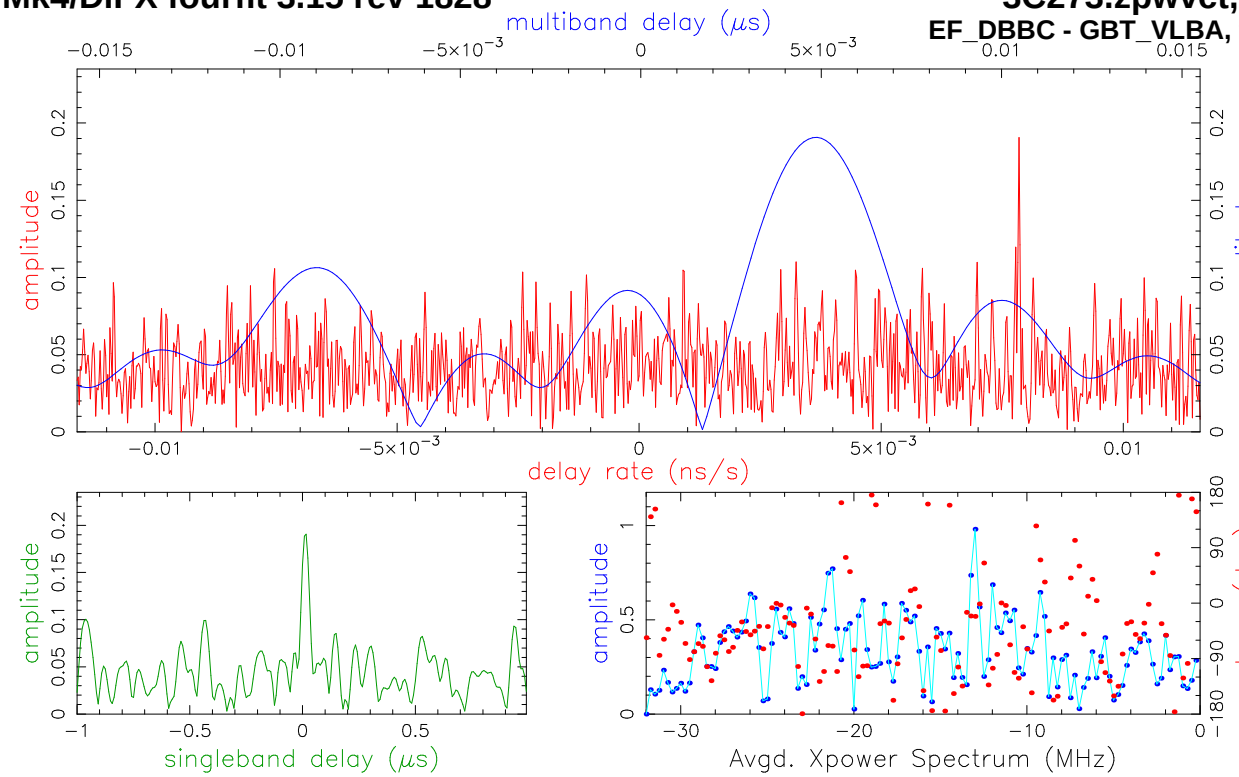
F: az 262.0 el 9.0 pa 39.1 G: az 165.7 el 52.7 pa -10.7 u,v (fr/asec) 6580.324 1526.117 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FG..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FG.W.274.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

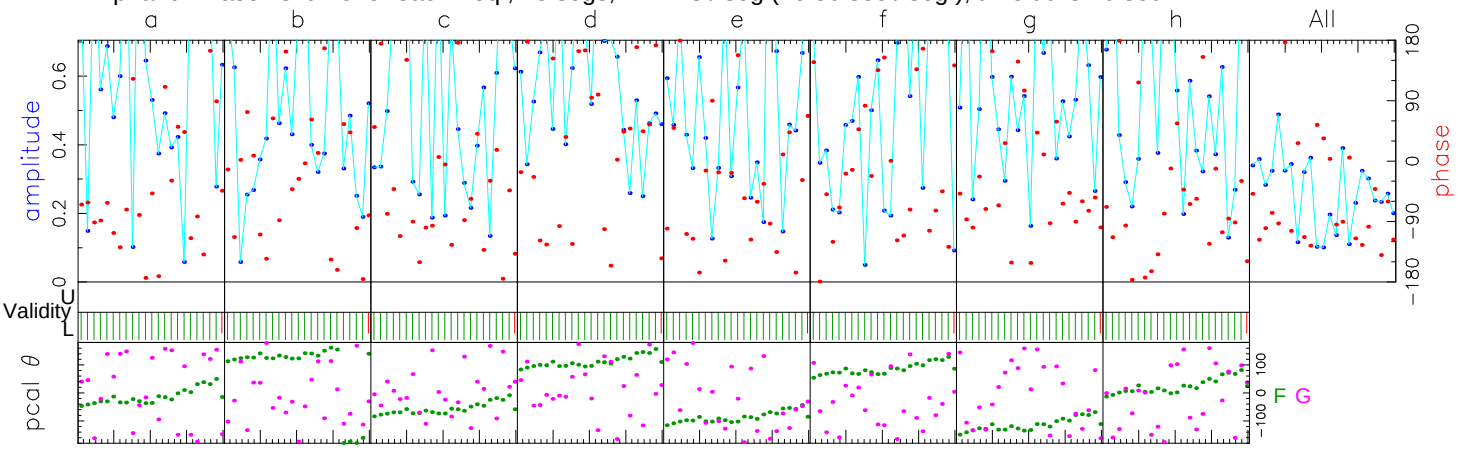
3C273.zpwvct, No0577, FG

EF_DBBC - GBT_VLBA, fgroup W, pol LR



Fringe quality	0
SNR	5.8
Int time	238.965
Amp	0.235
Phase	-95.3
PFD	3.8e-01
Delays (us)	
SBD	0.012253
MBD	0.004770
Fringe rate (Hz)	
	0.675996
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044001.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023005
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-96.5	-42.7	-101.9	-167.9	-98.8	-102.6	-66.0	-100.1	Phase	-95.3
	0.4	0.1	0.3	0.2	0.2	0.2	0.3	0.3	Ampl.	0.2
	120.1	25.0	235.9	145.9	85.5	48.6	71.1	76.1	Sbd box	130.6
U/L	0/478	0/478	0/478	0/478	0/478	0/478	0/478	0/478	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
G	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
G	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.36960800848E+04	Apriori delay (usec)	-1.36960848552E+04	Resid mbdelay (usec)	4.77042E-03	+/-	3.8E-04
Sband delay (usec)	-1.36960726017E+04	Apriori clock (usec)	3.9563175E+01	Resid sbdelay (usec)	1.22535E-02	+/-	3.0E-03
Phase delay (usec)	-1.36960848583E+04	Apriori clockrate (us/s)	-2.5640010E-07	Resid phdelay (usec)	-3.07426E-06	+/-	6.4E-07
Delay rate (us/s)	-1.13952559849E+00	Apriori rate (us/s)	-1.13953344613E+00	Resid rate (us/s)	7.84764E-06	+/-	4.6E-09
Total phase (deg)	-250.1	Apriori accel (us/s/s)	7.36110546422E-05	Resid phase (deg)	-95.3	+/-	19.8

	RMS	Theor.							
			Amplitude	0.235 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	64.1	47.6	Search (1024X32)	0.187	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	64.7	83.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	38.8	28.1	Inc. seg. avg.	0.240	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	44.6	49.0	Inc. frq. avg.	0.229	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

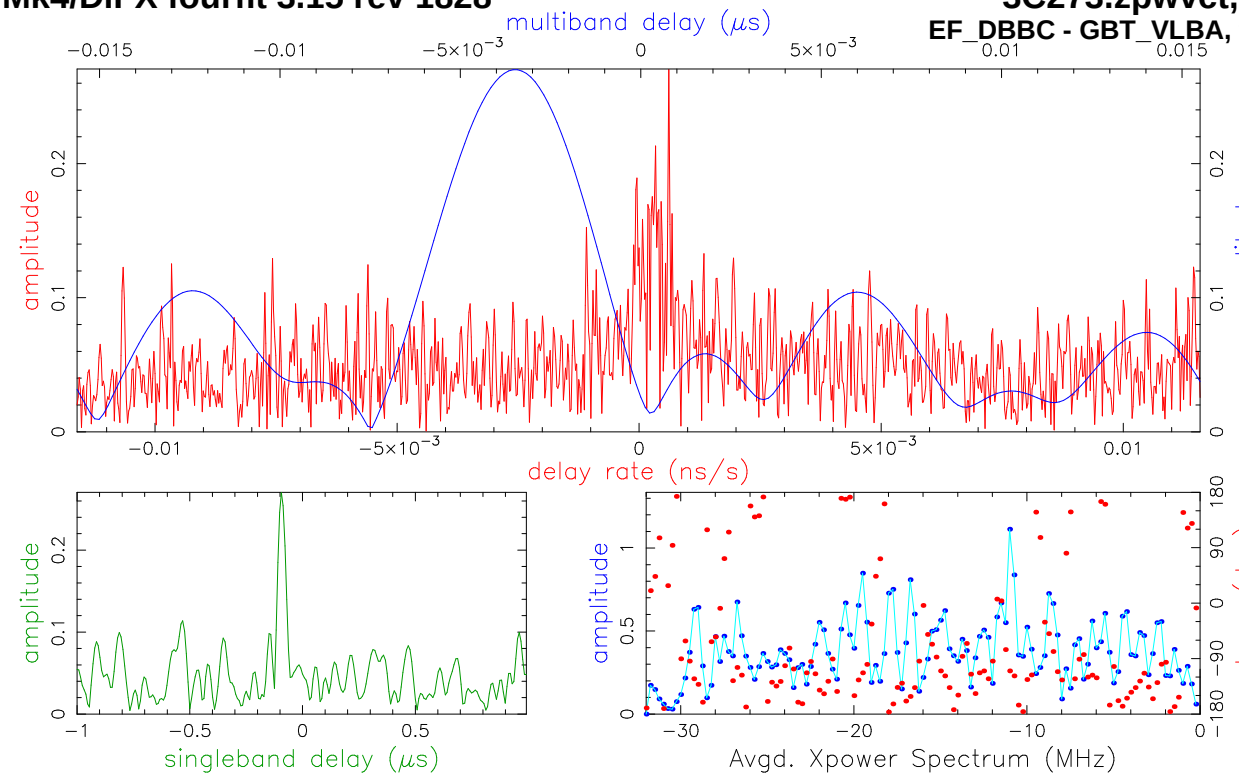
F: az 262.0 el 9.0 pa 39.1 G: az 165.7 el 52.7 pa -10.7 u,v (fr/asec) 6580.324 1526.117 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FG..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FG.W.275.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FG

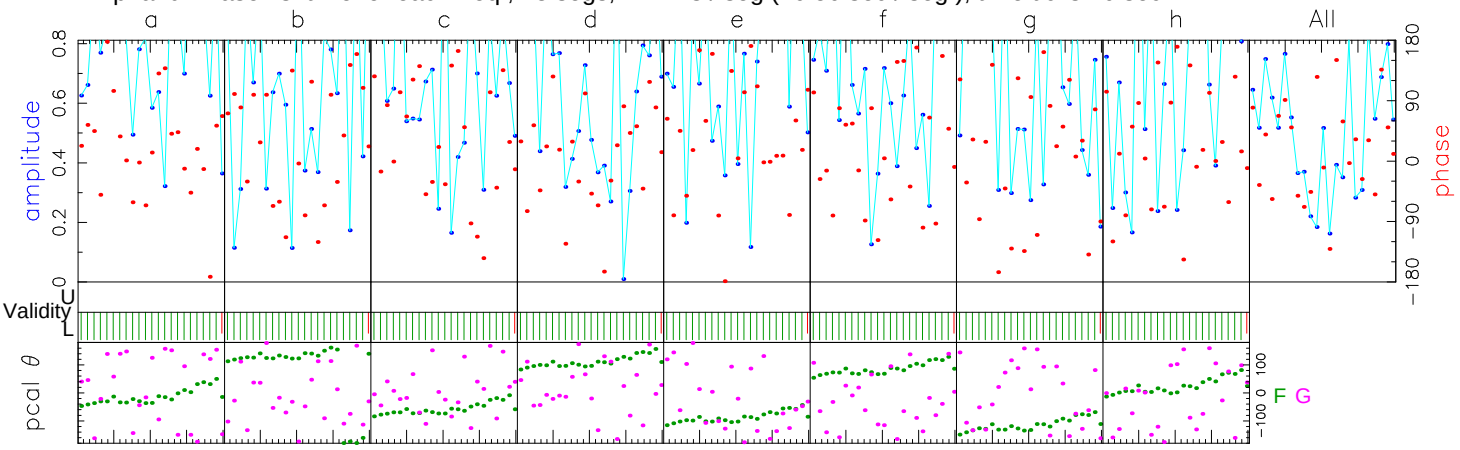
EF_DBBC - GBT_VLBA, fgroup W, pol RL



Fringe quality 9

SNR	8.1
Int time	238.965
Amp	0.271
Phase	566.8
PFD	5.7e-08
Delays (us)	
SBD	-0.093033
MBD	-0.003489
Fringe rate (Hz)	
	0.053060
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044001.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023006
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	23.4	25.0	44.2	26.2	35.2	-1.2	28.4	30.7	Phase	26.8
	0.5	0.2	0.2	0.3	0.4	0.2	0.2	0.3	Ampl.	0.3
	117.1	222.7	128.0	117.6	116.1	60.4	124.5	187.6	Sbd box	117.1
U/L	0/478	0/478	0/478	0/478	0/478	0/478	0/478	0/478	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
G	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:G	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
G	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
G	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.36961820938E+04	Apriori delay (usec)	-1.36960848552E+04	Resid mbdelay (usec)	-3.48855E-03	+/-	2.7E-04
Sband delay (usec)	-1.36961778877E+04	Apriori clock (usec)	3.9563175E+01	Resid sbdelay (usec)	-9.30325E-02	+/-	2.1E-03
Phase delay (usec)	-1.36960848544E+04	Apriori clockrate (us/s)	-2.5640010E-07	Resid phdelay (usec)	8.63729E-07	+/-	4.6E-07
Delay rate (us/s)	-1.13953283015E+00	Apriori rate (us/s)	-1.13953344613E+00	Resid rate (us/s)	6.15977E-07	+/-	3.3E-09
Total phase (deg)	412.0	Apriori accel (us/s/s)	7.36110546422E-05	Resid phase (deg)	566.8	+/-	14.2

	RMS	Theor.					
			Amplitude	0.271 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	71.1	34.0	Search (1024X32)	0.259	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	117.2	59.4	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	14.1	20.1	Inc. seg. avg.	0.435	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	38.7	35.0	Inc. frq. avg.	0.259	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

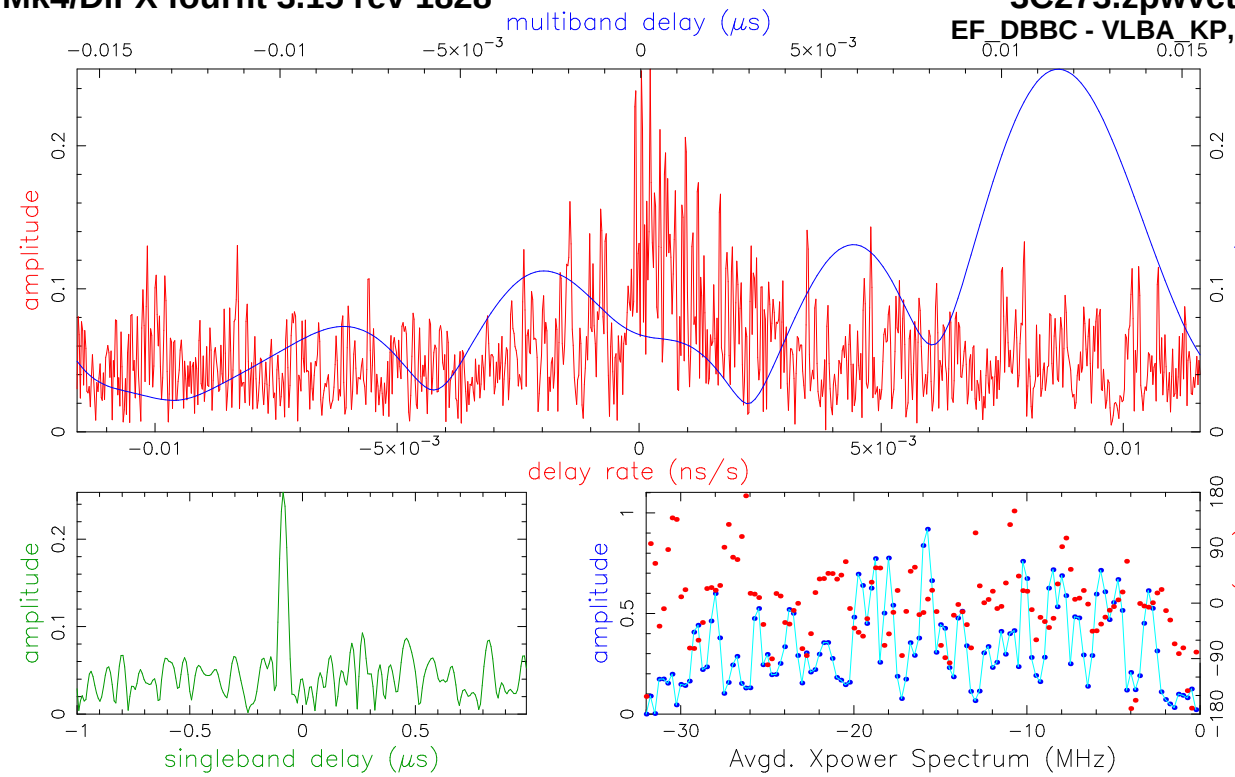
F: az 262.0 el 9.0 pa 39.1 G: az 165.7 el 52.7 pa -10.7 u,v (fr/asec) 6580.324 1526.117 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FG..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FG.W.276.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fk

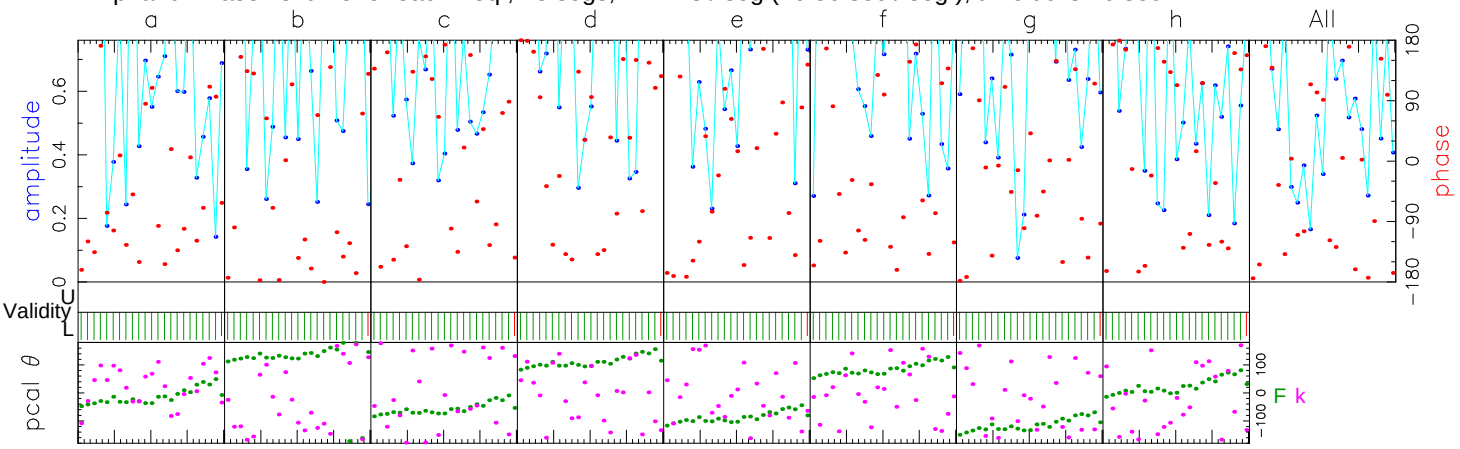
EF_DBBC - VLBA_KP, fgroup W, pol LL



Fringe quality 9

SNR	7.6
Int time	239.895
Amp	0.254
Phase	376.7
PFD	2.5e-06
Delays (us)	
SBD	-0.085360
MBD	0.011581
Fringe rate (Hz)	
	0.019523
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022634
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-114.7	178.6	-176.5	-178.6	179.3	-121.2	176.0	-171.0	Phase	-163.3
	0.3	0.5	0.3	0.4	0.2	0.4	0.1	0.3	Ampl.	0.3
	31.9	118.4	91.1	250.5	21.6	117.8	171.8	130.1	Sbd box	118.1
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
k	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
k	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.09890184508E+04	Apriori delay (usec)	-1.09889362819E+04	Resid mbdelay (usec)	1.15811E-02	+/-	2.9E-04
Sband delay (usec)	-1.09890216424E+04	Apriori clock (usec)	3.1364964E+01	Resid sbdelay (usec)	-8.53605E-02	+/-	2.3E-03
Phase delay (usec)	-1.09889362872E+04	Apriori clockrate (us/s)	-2.2380921E-08	Resid phdelay (usec)	-5.26581E-06	+/-	4.9E-07
Delay rate (us/s)	-1.81260205550E+00	Apriori rate (us/s)	-1.81260228214E+00	Resid rate (us/s)	2.26643E-07	+/-	3.5E-09
Total phase (deg)	260.1	Apriori accel (us/s/s)	5.95271612621E-05	Resid phase (deg)	376.7	+/-	15.1

	RMS	Theor.							
			Amplitude	0.254 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	83.4	36.2	Search (1024X32)	0.252	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	167.7	63.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	30.7	21.3	Inc. seg. avg.	0.494	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	46.6	37.2	Inc. frq. avg.	0.265	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

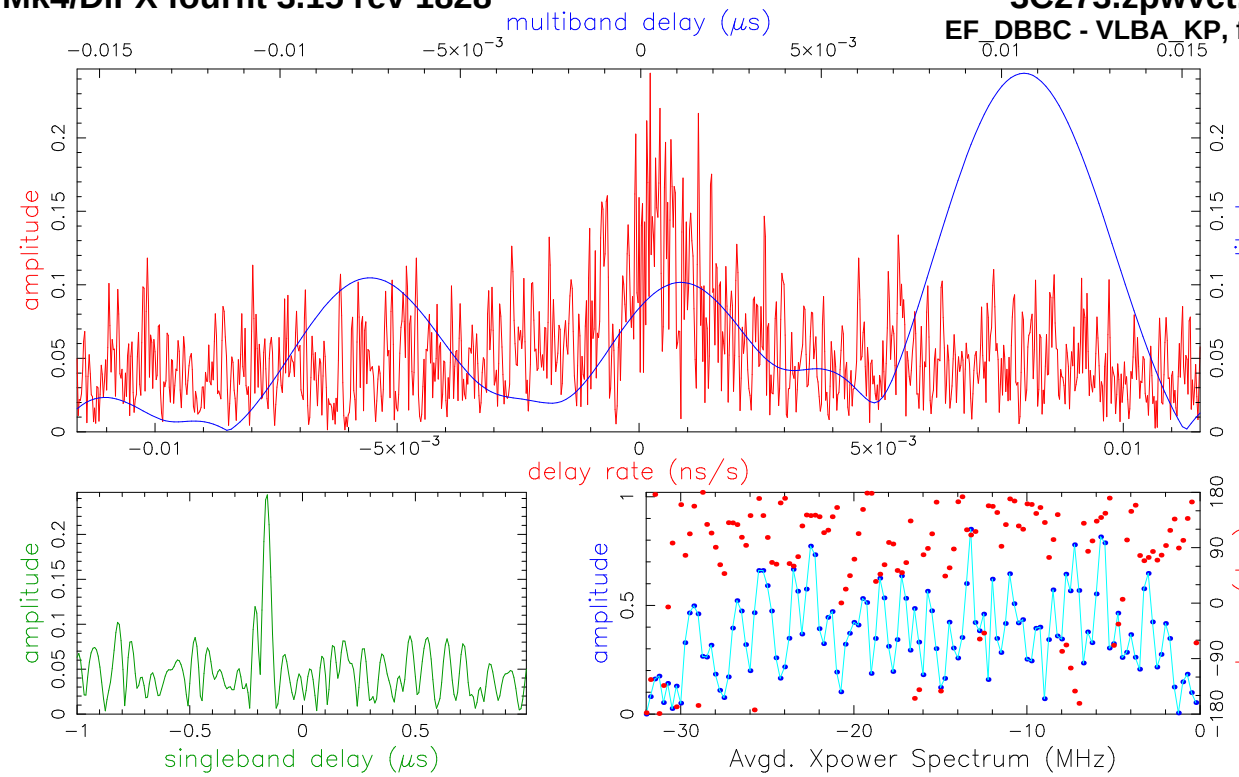
F: az 262.0 el 9.0 pa 39.1 k: az 120.0 el 41.6 pa -47.1 u,v (fr/asec) 10427.668 2302.584 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fk..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fk.W.81.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fk

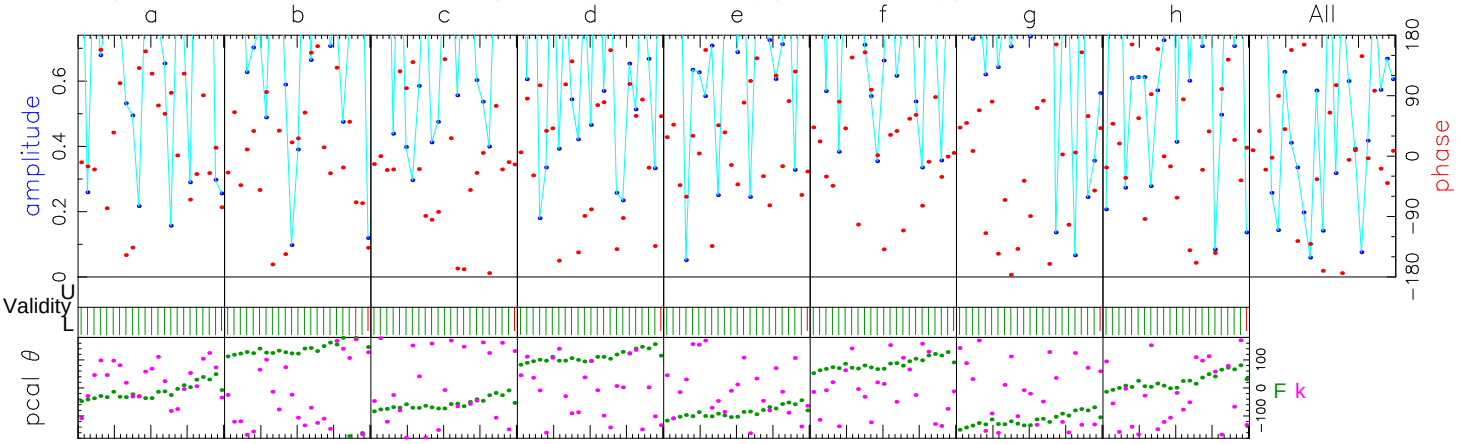
EF_DBBC - VLBA_KP, fgroup W, pol RR



Fringe quality 9

SNR	7.4
Int time	239.895
Amp	0.247
Phase	921.0
PFD	1.1e-05
Delays (us)	
SBD	-0.159146
MBD	0.010608
Fringe rate (Hz)	
	0.019553
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022635
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	42.5	14.0	-10.4	60.1	8.0	17.9	42.6	26.5	Phase	21.0
	0.2	0.3	0.3	0.3	0.3	0.3	0.0	0.3	Ampl.	0.2
	67.4	251.5	108.9	74.8	110.6	108.9	66.7	108.0	Sbd box	108.6
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
k	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
k	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.09890819241E+04	Apriori delay (usec)	-1.09889362819E+04	Resid mbdelay (usec)	1.06078E-02	+/-	2.9E-04
Sband delay (usec)	-1.09890954279E+04	Apriori clock (usec)	3.1364964E+01	Resid sbdelay (usec)	-1.59146E-01	+/-	2.3E-03
Phase delay (usec)	-1.09889362812E+04	Apriori clockrate (us/s)	-2.2380921E-08	Resid phdelay (usec)	6.76591E-07	+/-	5.0E-07
Delay rate (us/s)	-1.81260205516E+00	Apriori rate (us/s)	-1.81260228214E+00	Resid rate (us/s)	2.26987E-07	+/-	3.6E-09
Total phase (deg)	804.4	Apriori accel (us/s/s)	5.95271612621E-05	Resid phase (deg)	921.0	+/-	15.5

	RMS	Theor.							
			Amplitude	0.247 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	90.9	37.2	Search (1024X32)	0.242	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	171.4	64.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	24.8	21.9	Inc. seg. avg.	0.438	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	37.2	38.3	Inc. frq. avg.	0.244	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

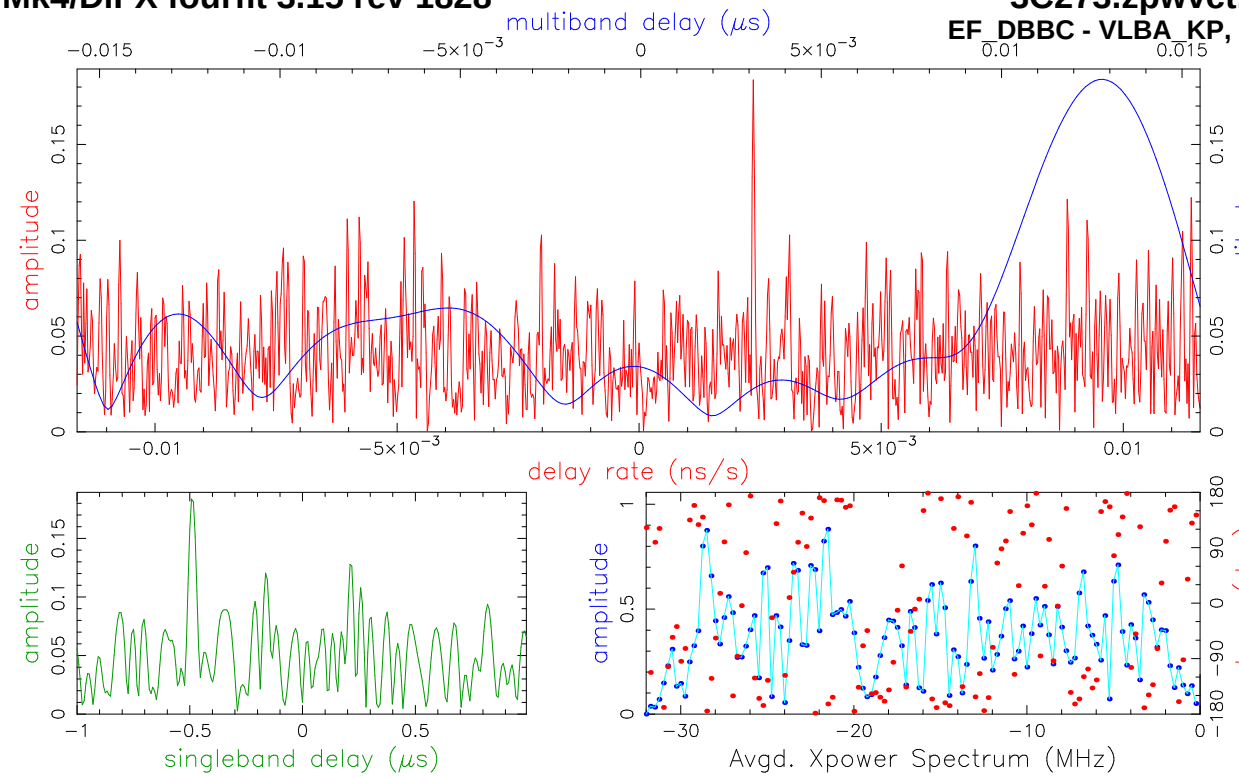
F: az 262.0 el 9.0 pa 39.1 k: az 120.0 el 41.6 pa -47.1 u,v (fr/asec) 10427.668 2302.584 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fk..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fk.W.82.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

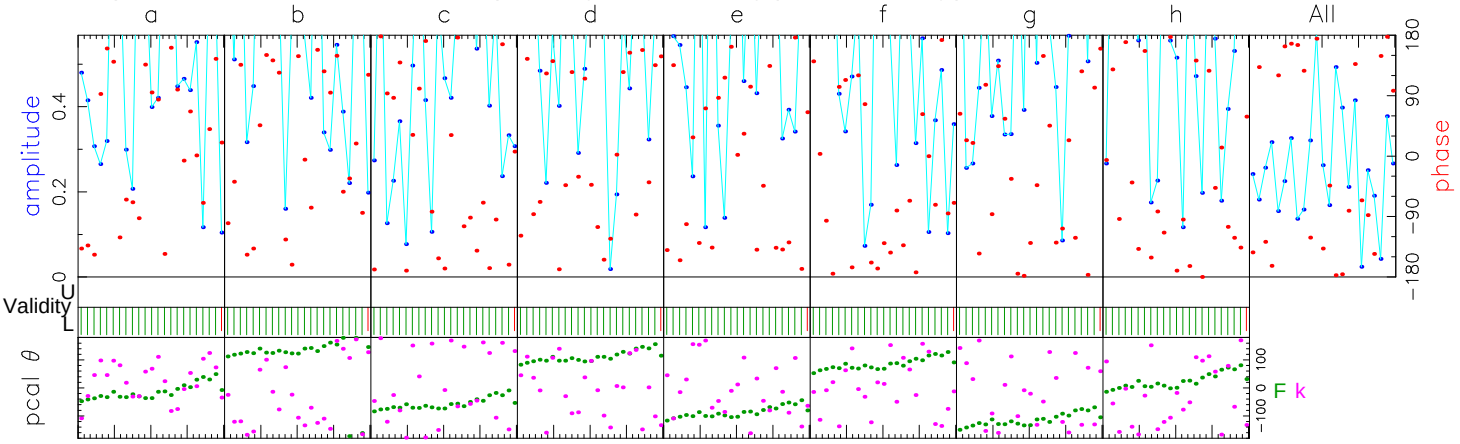
3C273.zpwvct, No0577, Fk

EF_DBBC - VLBA_KP, fgroup W, pol LR



Fringe quality	0
SNR	5.6
Int time	239.895
Amp	0.189
Phase	2706.6
PFD	7.7e-01
Delays (us)	
SBD	-0.488959
MBD	0.012653
Fringe rate (Hz)	0.203774
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:022636
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	165.7	156.4	-154.1	-148.9	-170.5	-153.7	145.4	-160.7	Phase	-173.4
	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	Ampl.	0.2
	169.2	13.9	19.4	125.8	14.8	227.8	93.7	101.9	Sbd box	66.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
k	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
k	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.09894236292E+04	Apriori delay (usec)	-1.09889362819E+04	Resid mbdelay (usec)	1.26527E-02	+/-	3.9E-04
Sband delay (usec)	-1.09894252404E+04	Apriori clock (usec)	3.1364964E+01	Resid sbdelay (usec)	-4.88959E-01	+/-	3.1E-03
Phase delay (usec)	-1.09889362875E+04	Apriori clockrate (us/s)	-2.2380921E-08	Resid phdelay (usec)	-5.59137E-06	+/-	6.6E-07
Delay rate (us/s)	-1.81259991653E+00	Apriori rate (us/s)	-1.81260228214E+00	Resid rate (us/s)	2.36561E-06	+/-	4.8E-09
Total phase (deg)	2590.0	Apriori accel (us/s/s)	5.95271612621E-05	Resid phase (deg)	2706.6	+/-	20.6

	RMS	Theor.							
			Amplitude	0.189 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	57.4	49.3	Search (1024X32)	0.179	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	80.3	86.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	27.6	29.1	Inc. seg. avg.	0.194	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	21.9	50.7	Inc. frq. avg.	0.180	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

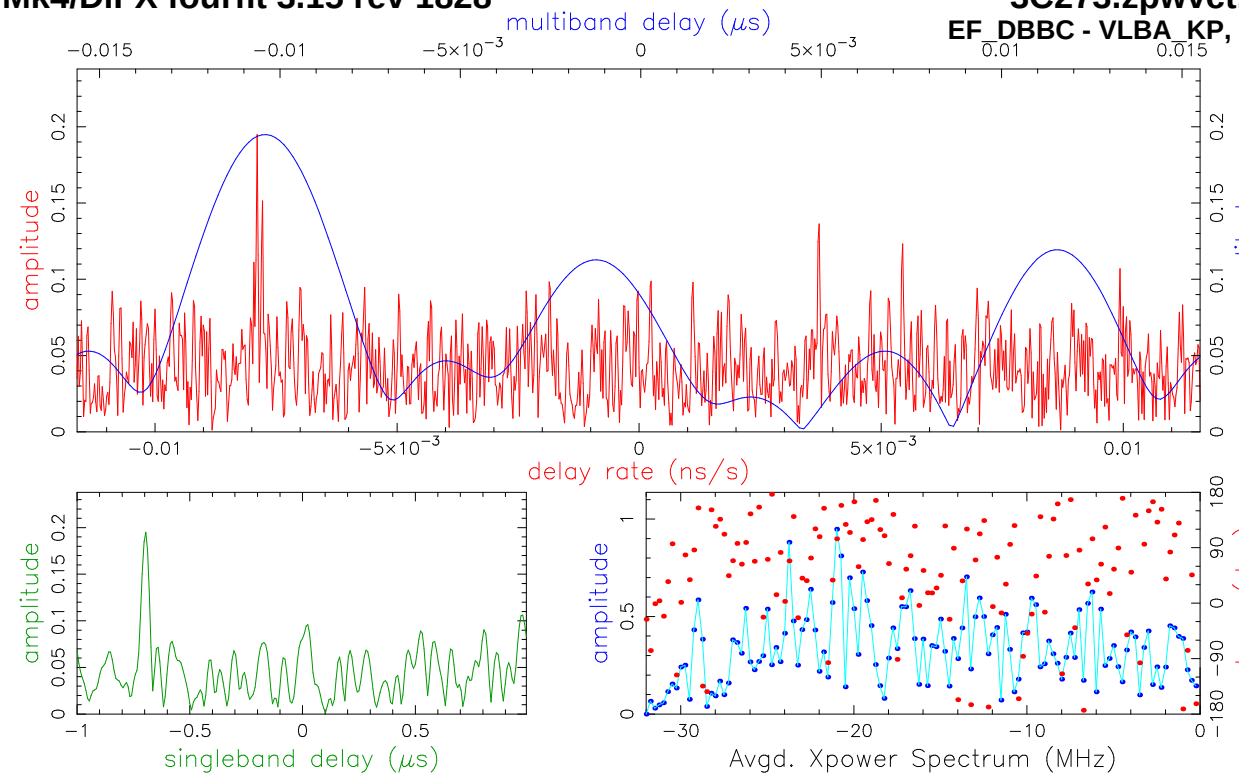
F: az 262.0 el 9.0 pa 39.1 k: az 120.0 el 41.6 pa -47.1 u,v (fr/asec) 10427.668 2302.584 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fk..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fk.W.83.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fk

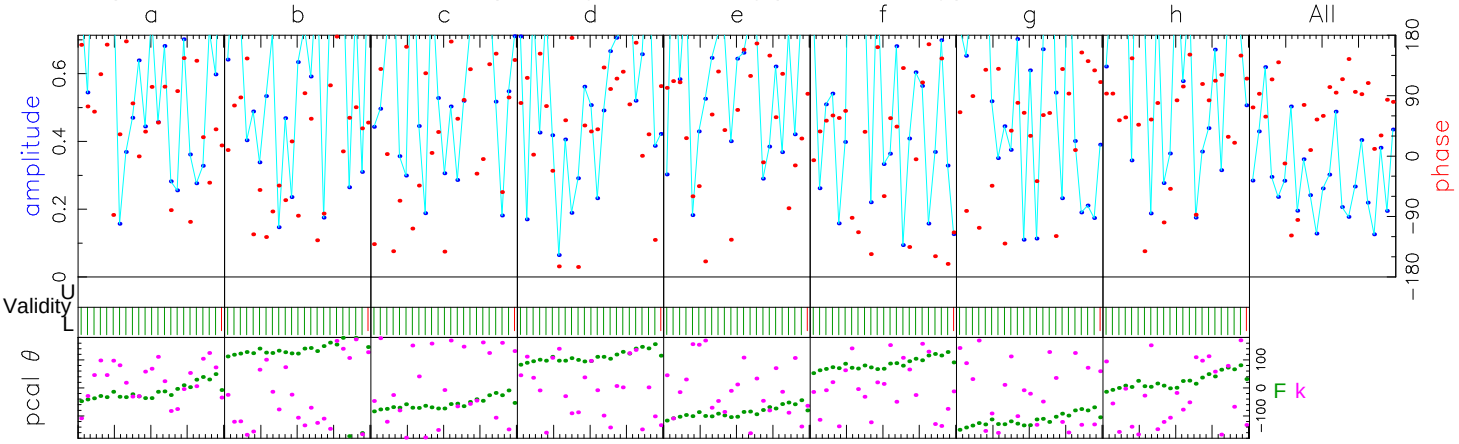
EF_DBBC - VLBA_KP, fgroup W, pol RL



Fringe quality 0

SNR	5.8
Int time	239.895
Amp	0.238
Phase	4040.6
PFD	2.7e-01
Delays (us)	
SBD	-0.696413
MBD	-0.010444
Fringe rate (Hz)	
	-0.679944
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022637
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	85.4	52.2	116.3	77.3	89.2	-15.6	81.6	81.2	Phase	80.6
	0.3	0.1	0.0	0.4	0.3	0.0	0.3	0.5	Ampl.	0.2
	241.4	37.6	140.0	20.4	222.5	232.3	127.4	40.7	Sbd box	39.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
k	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:k	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
k	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.09896342260E+04	Apriori delay (usec)	-1.09889362819E+04	Resid mbdelay (usec)	-1.04441E-02	+/-	3.7E-04
Sband delay (usec)	-1.09896326944E+04	Apriori clock (usec)	3.1364964E+01	Resid sbdelay (usec)	-6.96413E-01	+/-	2.9E-03
Phase delay (usec)	-1.09889362793E+04	Apriori clockrate (us/s)	-2.2380921E-08	Resid phdelay (usec)	2.59936E-06	+/-	6.3E-07
Delay rate (us/s)	-1.81261017562E+00	Apriori rate (us/s)	-1.81260228214E+00	Resid rate (us/s)	-7.89347E-06	+/-	4.6E-09
Total phase (deg)	3924.0	Apriori accel (us/s/s)	5.95271612621E-05	Resid phase (deg)	4040.6	+/-	19.6

	RMS	Theor.							
			Amplitude	0.238 +/- 0.041	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	63.2	47.0	Search (1024X32)	0.188	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	84.9	82.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	43.7	27.7	Inc. seg. avg.	0.278	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	64.4	48.4	Inc. frq. avg.	0.219	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

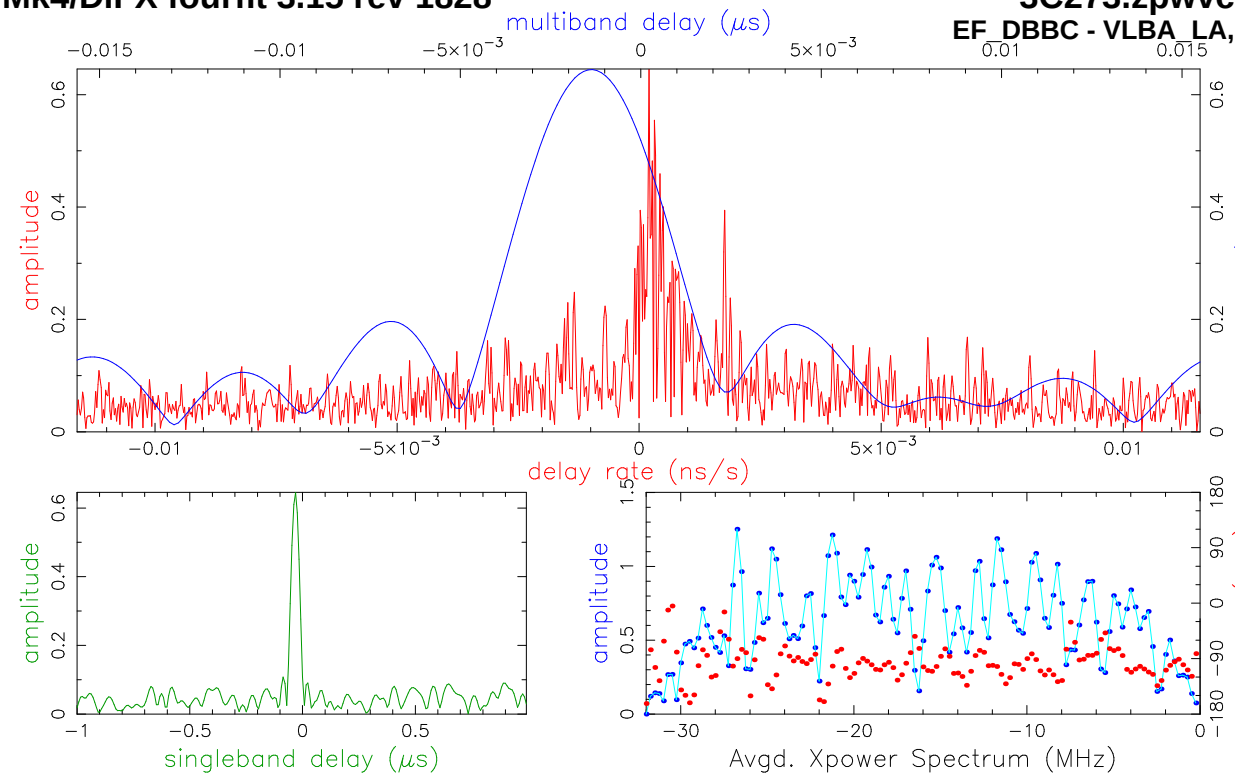
F: az 262.0 el 9.0 pa 39.1 k: az 120.0 el 41.6 pa -47.1 u,v (fr/asec) 10427.668 2302.584 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fk..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fk.W.84.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

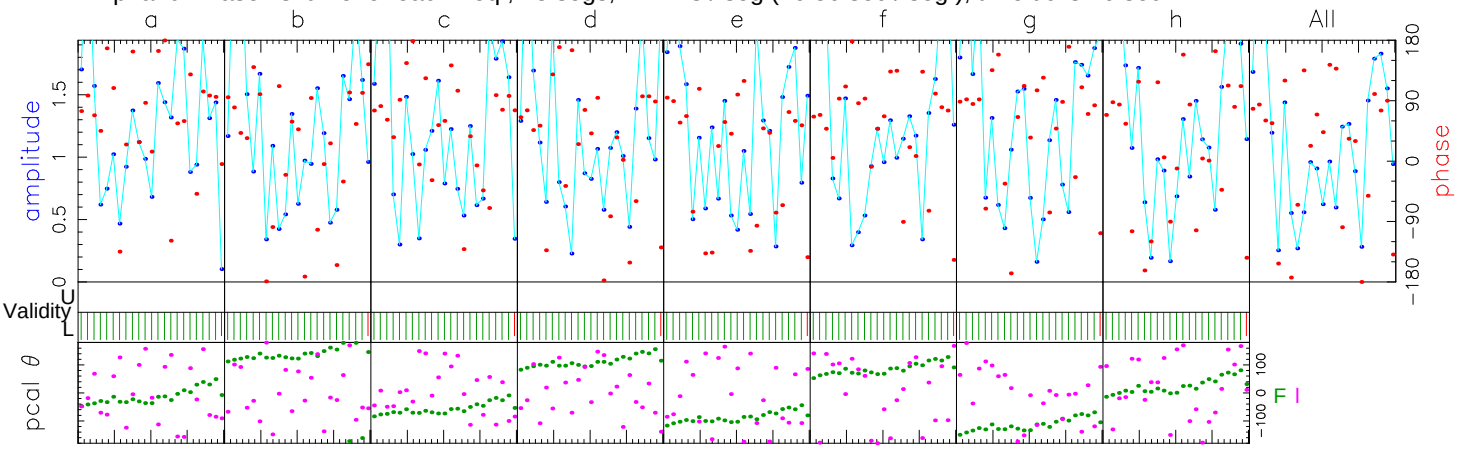
3C273.zpwvct, No0577, Fl

EF_DBBC - VLBA_LA, fgroup W, pol LL



Fringe quality	9
SNR	19.3
Int time	239.895
Amp	0.646
Phase	258.9
PFD	0.0e+00
Delays (us)	
SBD	-0.032277
MBD	-0.001374
Fringe rate (Hz)	0.017282
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022639
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	94.3	69.6	75.3	73.6	70.0	69.5	88.8	86.3	Phase	78.9
	0.7	0.6	0.7	0.5	0.5	0.8	0.7	0.6	Ampl.	0.6
	124.8	124.4	125.0	125.3	124.7	125.1	124.5	125.2	Sbd box	124.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
I	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	
I	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-1.14013465951E+04	Apriori delay (usec)	-1.14013139711E+04	Resid mbdelay (usec)	-1.37400E-03	+/- 1.1E-04
Sband delay (usec)	-1.14013462481E+04	Apriori clock (usec)	3.2572906E+01	Resid sbdelay (usec)	-3.22770E-02	+/- 8.9E-04
Phase delay (usec)	-1.14013139686E+04	Apriori clockrate (us/s)	7.6213009E-08	Resid phdelay (usec)	2.54529E-06	+/- 1.9E-07
Delay rate (us/s)	-1.68184226296E+00	Apriori rate (us/s)	-1.68184246359E+00	Resid rate (us/s)	2.00624E-07	+/- 1.4E-09
Total phase (deg)	88.8	Apriori accel (us/s/s)	6.15133901048E-05	Resid phase (deg)	258.9	+/- 5.9

	RMS	Theor.						
			Amplitude	0.646 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	80.4	14.2	Search (1024X32)	0.624	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	124.5	24.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	10.7	8.4	Inc. seg. avg.	1.107	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	15.0	14.6	Inc. frq. avg.	0.647	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

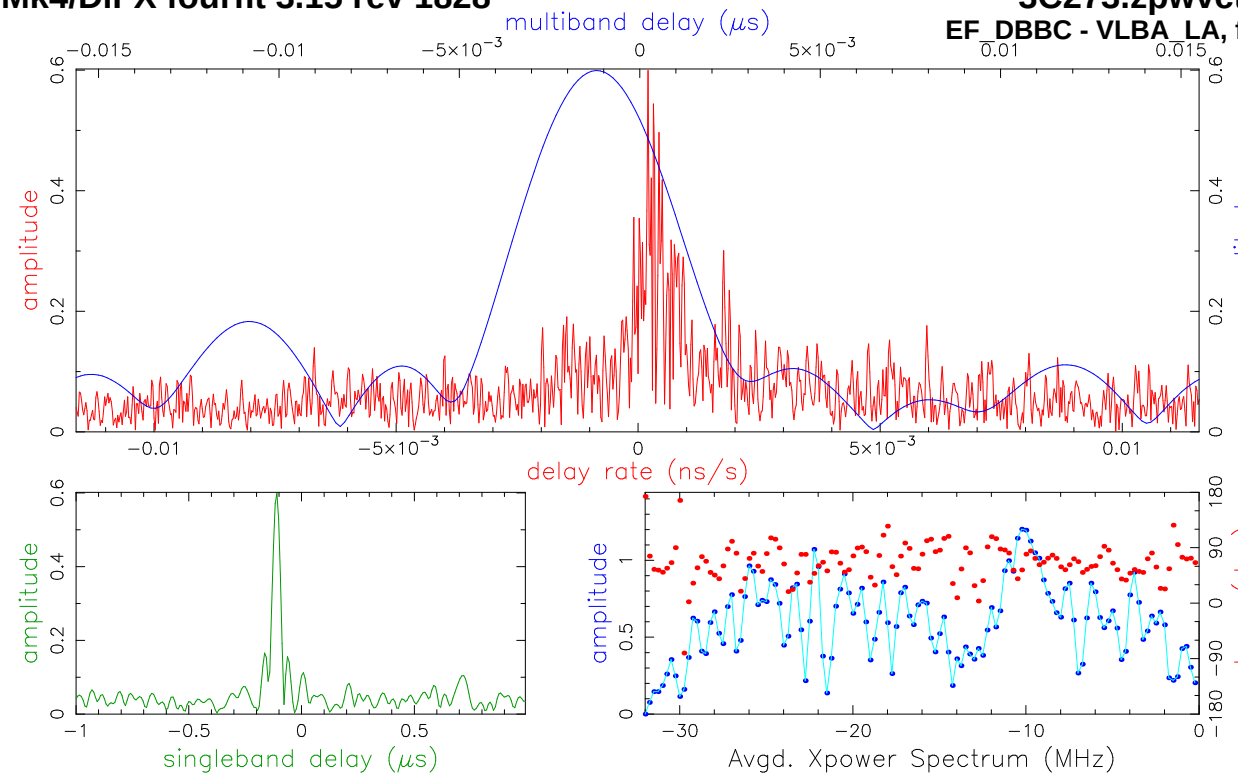
F: az 262.0 el 9.0 pa 39.1 l: az 128.2 el 43.2 pa -39.4 u,v (fr/asec) 9679.635 1818.551 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fl..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fl.W.85.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fl

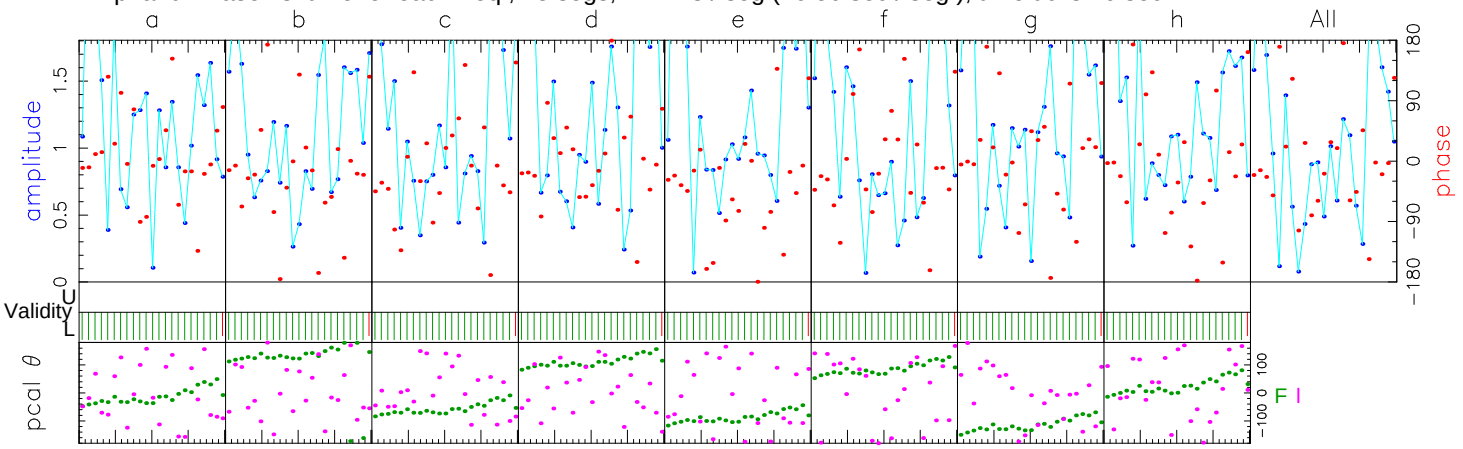
EF_DBBC - VLBA_LA, fgroup W, pol RR



Fringe quality 9

SNR	18.0
Int time	239.895
Amp	0.602
Phase	700.2
PFD	0.0e+00
Delays (us)	
SBD	-0.111074
MBD	-0.001194
Fringe rate (Hz)	
	0.017388
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022640
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	0.7	-33.9	-27.7	-17.7	-39.2	-23.6	-1.7	-14.8	Phase	-19.8
	0.7	0.5	0.5	0.7	0.7	0.7	0.5	0.6	Ampl.	0.6
	114.3	114.5	113.8	114.7	114.8	115.1	115.5	115.0	Sbd box	114.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
I	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
I	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.14014401648E+04	Apriori delay (usec)	-1.14013139711E+04	Resid mbdelay (usec)	-1.19369E-03	+/-	1.2E-04
Sband delay (usec)	-1.14014250456E+04	Apriori clock (usec)	3.2572906E+01	Resid sbdelay (usec)	-1.11074E-01	+/-	9.6E-04
Phase delay (usec)	-1.14013139718E+04	Apriori clockrate (us/s)	7.6213009E-08	Resid phdelay (usec)	-6.39485E-07	+/-	2.1E-07
Delay rate (us/s)	-1.68184226173E+00	Apriori rate (us/s)	-1.68184246359E+00	Resid rate (us/s)	2.01856E-07	+/-	1.5E-09
Total phase (deg)	530.0	Apriori accel (us/s/s)	6.15133901048E-05	Resid phase (deg)	700.2	+/-	6.4

	RMS	Theor.		
			Amplitude	0.602 +/- 0.033
ph/seg (deg)	77.7	15.2	Search (1024X32)	0.590
amp/seg (%)	132.2	26.6	Interp.	0.000
ph/frq (deg)	15.4	9.0	Inc. seg. avg.	1.030
amp/frq (%)	14.9	15.7	Inc. frq. avg.	0.609

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
Sample rate(MSamp/s): 64
Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite

sb window (us)	-1.000	1.000
mb window (us)	-0.016	0.016
dr window (ns/s)	-0.012	0.012
ion window (TEC)	0.00	0.00

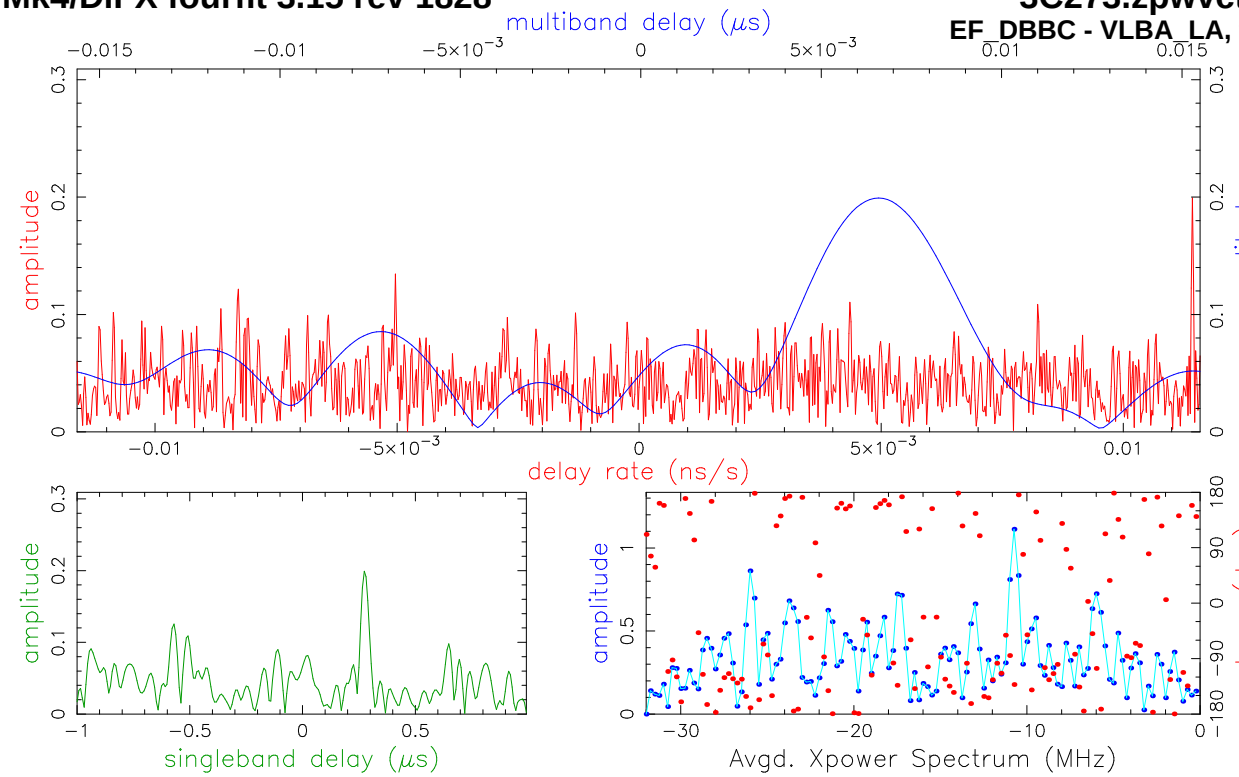
F: az 262.0 el 9.0 pa 39.1 l: az 128.2 el 43.2 pa -39.4 u,v (fr/asec) 9679.635 1818.551 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fl..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fl.W.86.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

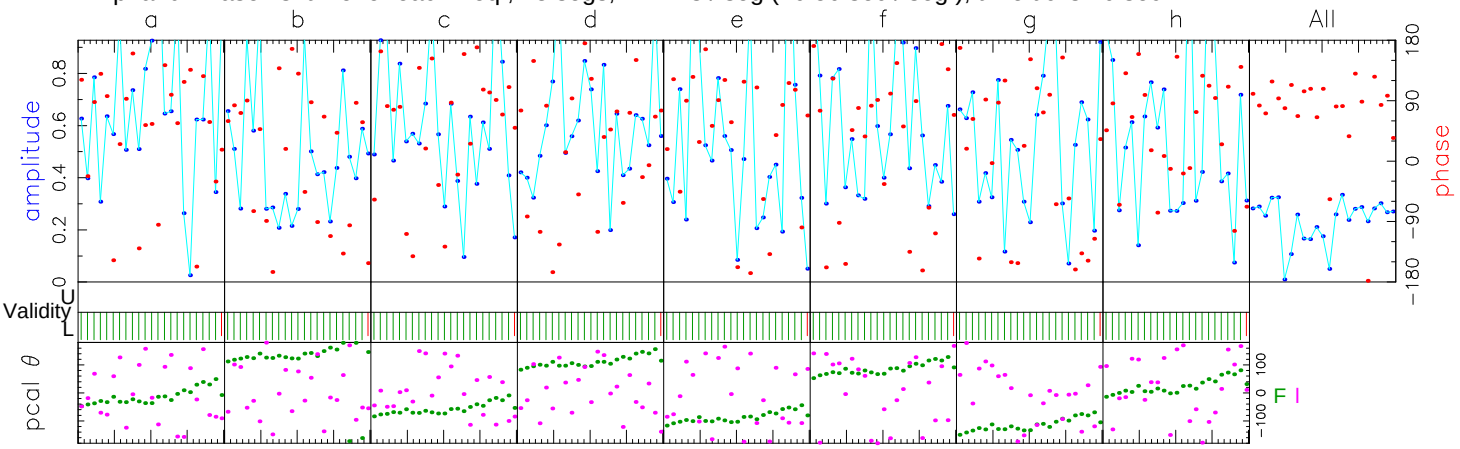
3C273.zpwvct, No0577, Fl

EF_DBBC - VLBA_LA, fgroup W, pol LR



Fringe quality	0
SNR	6.0
Int time	239.895
Amp	0.309
Phase	-1527.8
PFD	1.3e-01
Delays (us)	
SBD	0.275304
MBD	0.006514
Fringe rate (Hz)	0.983707
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:022641
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	83.6	60.3	97.4	81.3	104.1	118.5	117.6	64.0	Phase	92.2
	0.4	0.2	0.4	0.2	0.4	0.4	0.2	0.4	Ampl.	0.3
	166.6	217.9	163.1	31.7	162.9	236.3	110.4	74.8	Sbd box	164.2
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
I	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
I	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.14010262070E+04	Apriori delay (usec)	-1.14013139711E+04	Resid mbdelay (usec)	6.51414E-03	+/-	3.6E-04
Sband delay (usec)	-1.14010386666E+04	Apriori clock (usec)	3.2572906E+01	Resid sbdelay (usec)	2.75304E-01	+/-	2.9E-03
Phase delay (usec)	-1.14013139682E+04	Apriori clockrate (us/s)	7.6213009E-08	Resid phdelay (usec)	2.97263E-06	+/-	6.2E-07
Delay rate (us/s)	-1.68183104373E+00	Apriori rate (us/s)	-1.68184246359E+00	Resid rate (us/s)	1.14199E-05	+/-	4.5E-09
Total phase (deg)	-1698.0	Apriori accel (us/s/s)	6.15133901048E-05	Resid phase (deg)	-1527.8	+/-	19.1

	RMS	Theor.						
			Amplitude	0.309 +/- 0.052	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	43.3	45.9	Search (1024X32)	0.185	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	45.2	80.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	24.2	27.0	Inc. seg. avg.	0.273	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	37.8	47.2	Inc. frq. avg.	0.295	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

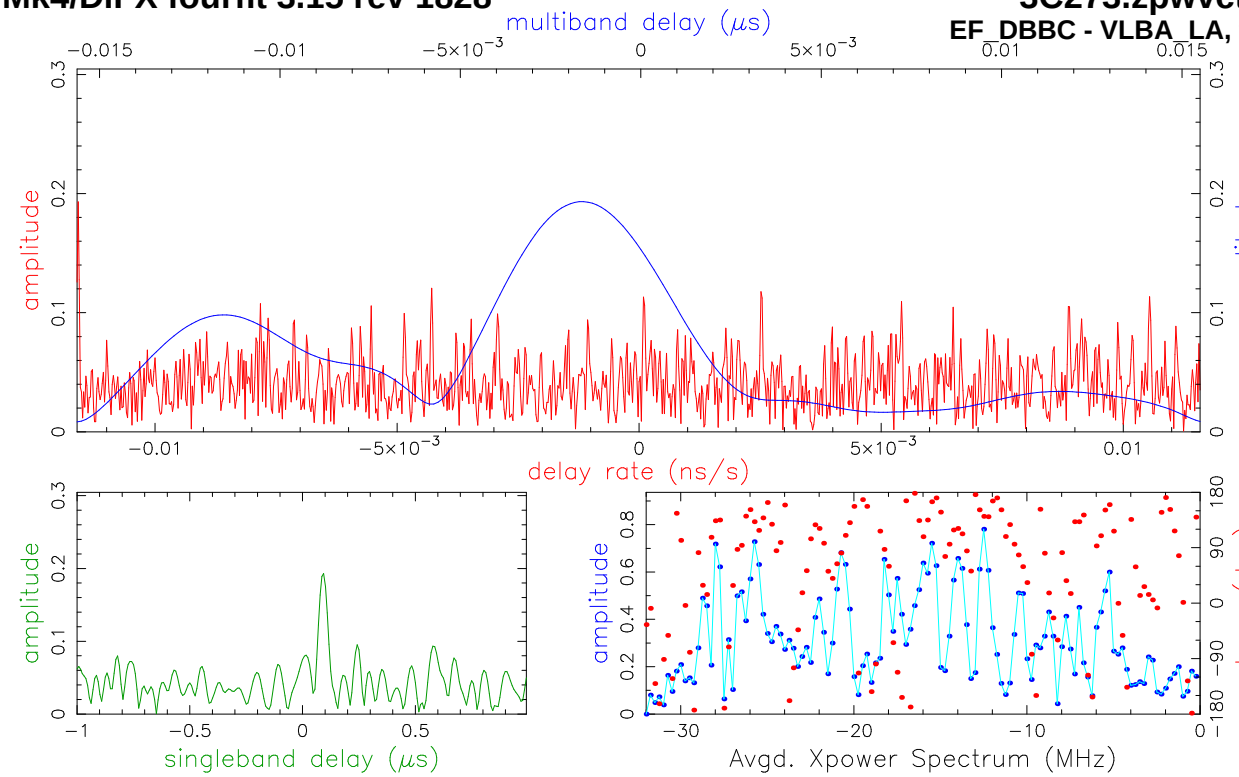
F: az 262.0 el 9.0 pa 39.1 l: az 128.2 el 43.2 pa -39.4 u,v (fr/asec) 9679.635 1818.551 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fl..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fl.W.87.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

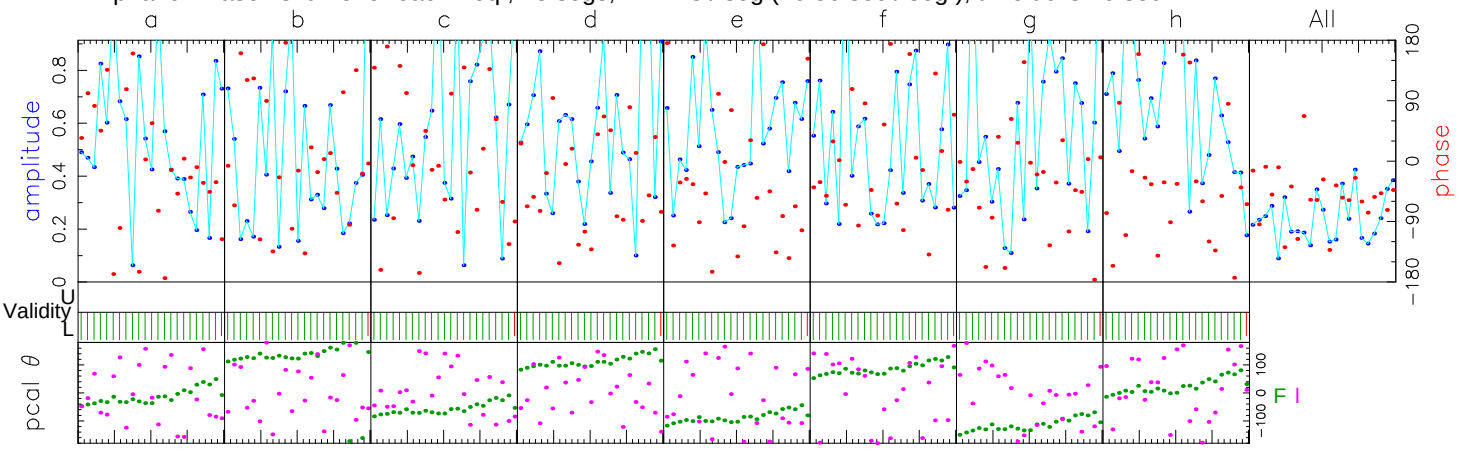
3C273.zpwvct, No0577, Fl

EF_DBBC - VLBA_LA, fgroup W, pol RL



Fringe quality	0
SNR	5.8
Int time	239.895
Amp	0.305
Phase	-593.2
PFD	3.1e-01
Delays (us)	
SBD	0.091227
MBD	-0.001524
Fringe rate (Hz)	
	-0.998297
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022642
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-36.1	-59.9	-43.1	-45.0	-87.2	-39.0	-23.5	-82.4	Phase	-53.2
	0.1	0.2	0.2	0.4	0.4	0.3	0.5	0.4	Ampl.	0.3
	203.4	157.9	190.2	142.2	43.9	19.8	139.9	140.0	Sbd box	140.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
I	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:I	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
I	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
I	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.14012217449E+04	Apriori delay (usec)	-1.14013139711E+04	Resid mbdelay (usec)	-1.52378E-03	+/-	3.7E-04
Sband delay (usec)	-1.14012227446E+04	Apriori clock (usec)	3.2572906E+01	Resid sbdelay (usec)	9.12265E-02	+/-	3.0E-03
Phase delay (usec)	-1.14013139728E+04	Apriori clockrate (us/s)	7.6213009E-08	Resid phdelay (usec)	-1.71425E-06	+/-	6.4E-07
Delay rate (us/s)	-1.68185405283E+00	Apriori rate (us/s)	-1.68184246359E+00	Resid rate (us/s)	-1.15892E-05	+/-	4.6E-09
Total phase (deg)	-763.3	Apriori accel (us/s/s)	6.15133901048E-05	Resid phase (deg)	-593.2	+/-	19.7

	RMS	Theor.					
			Amplitude	0.305 +/- 0.052	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	42.1	47.2	Search (1024X32)	0.186	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	51.1	82.4	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	24.5	27.8	Inc. seg. avg.	0.281	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	44.7	48.6	Inc. frq. avg.	0.295	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

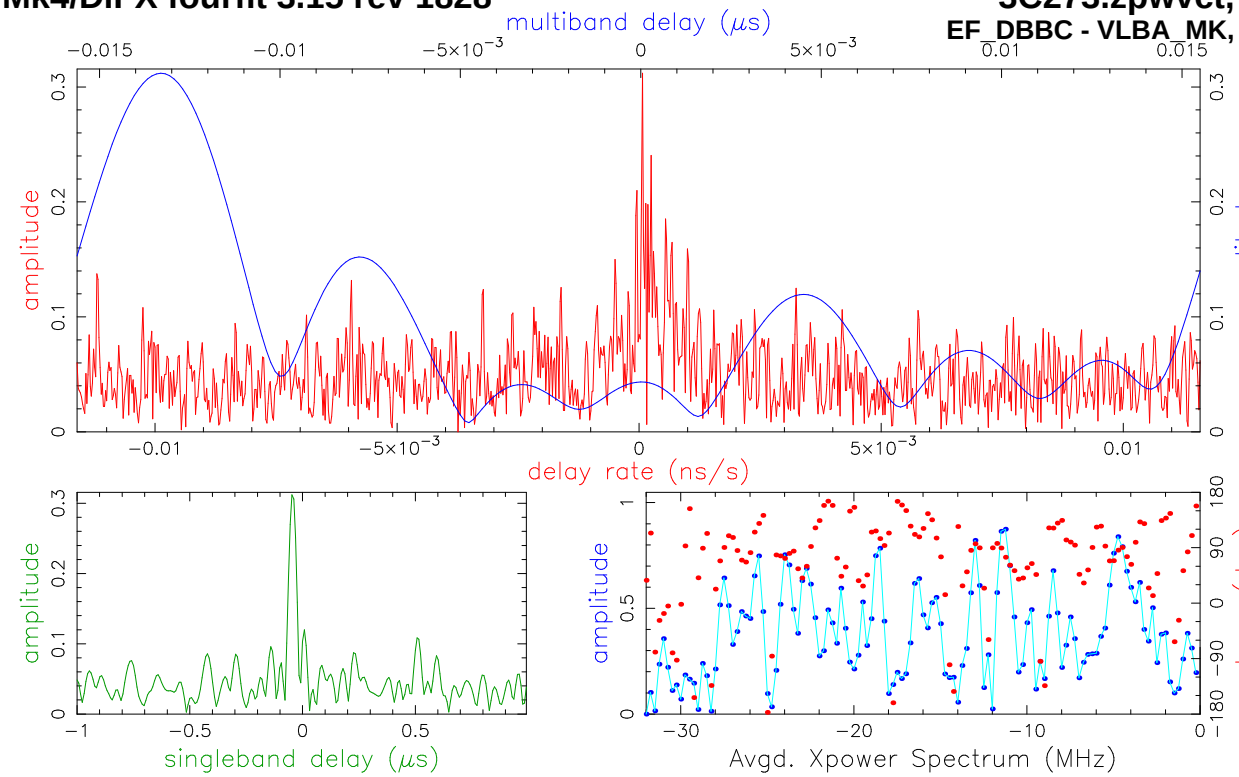
F: az 262.0 el 9.0 pa 39.1 l: az 128.2 el 43.2 pa -39.4 u,v (fr/asec) 9679.635 1818.551 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fl..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fl.W.88.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

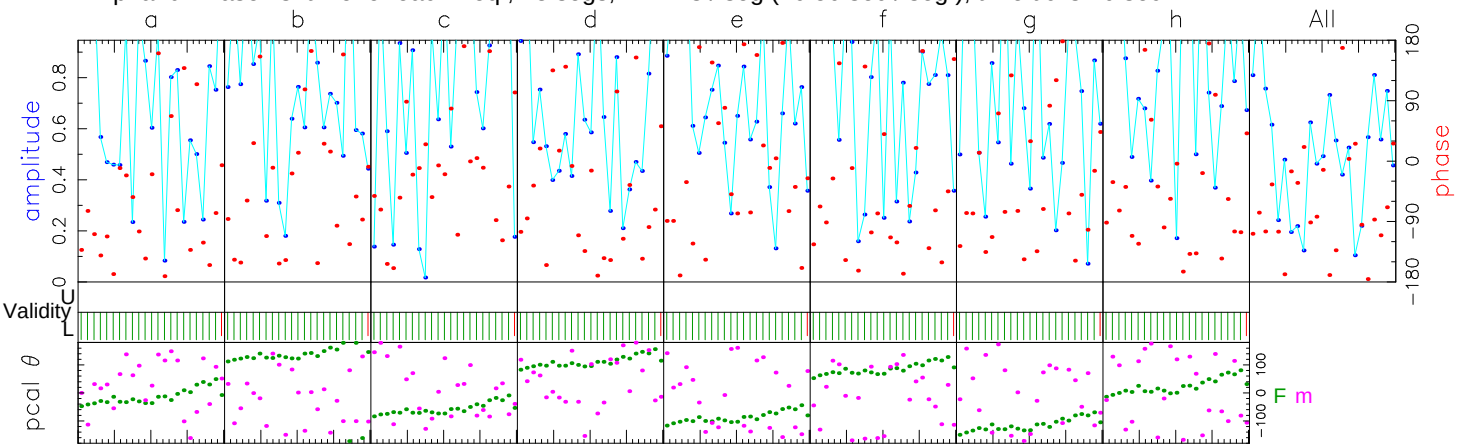
3C273.zpwvct, No0577, Fm

EF_DBBC - VLBA_MK, fgroup W, pol LL



Fringe quality	9
SNR	9.5
Int time	239.895
Amp	0.316
Phase	88.4
PFD	3.3e-13
Delays (us)	
SBD	-0.043882
MBD	-0.013282
Fringe rate (Hz)	0.005578
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:022643
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-100.6	-97.5	-53.0	-107.5	-102.5	-106.0	-88.0	-87.3	Phase	-91.6
	0.3	0.2	0.4	0.2	0.2	0.4	0.4	0.5	Ampl.	0.3
	123.2	160.7	122.7	240.3	91.2	124.0	122.2	123.1	Sbd box	123.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
m	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	
m	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	8.13532134134E+02	Apriori delay (usec)	8.13576666364E+02	Resid mbdelay (usec)	-1.32822E-02	+/-	2.3E-04
Sband delay (usec)	8.13532784364E+02	Apriori clock (usec)	2.7282021E+01	Resid sbdelay (usec)	-4.38820E-02	+/-	1.8E-03
Phase delay (usec)	8.13576663411E+02	Apriori clockrate (us/s)	3.8340011E-08	Resid phdelay (usec)	-2.95232E-06	+/-	3.9E-07
Delay rate (us/s)	-2.41986880068E+00	Apriori rate (us/s)	-2.41986886544E+00	Resid rate (us/s)	6.47565E-08	+/-	2.8E-09
Total phase (deg)	103.1	Apriori accel (us/s/s)	-2.50168220072E-06	Resid phase (deg)	88.4	+/-	12.1

	RMS	Theor.						
			Amplitude	0.316 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	65.7	29.1	Search (1024X32)	0.303	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	102.5	50.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	19.2	17.1	Inc. seg. avg.	0.458	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	31.2	29.9	Inc. frq. avg.	0.312	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

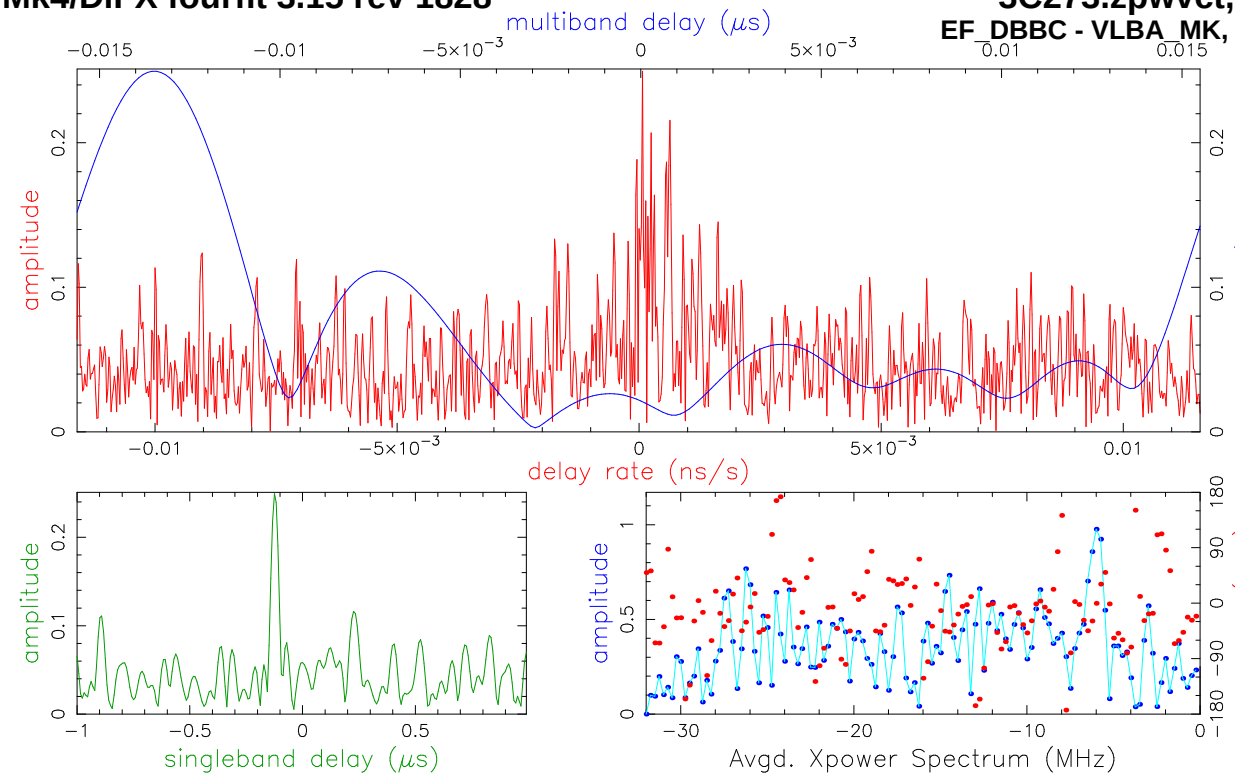
F: az 262.0 el 9.0 pa 39.1 m: az 90.1 el 6.1 pa -70.3 u,v (fr/asec) 13865.230 3817.252 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fm..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fm.W.89.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

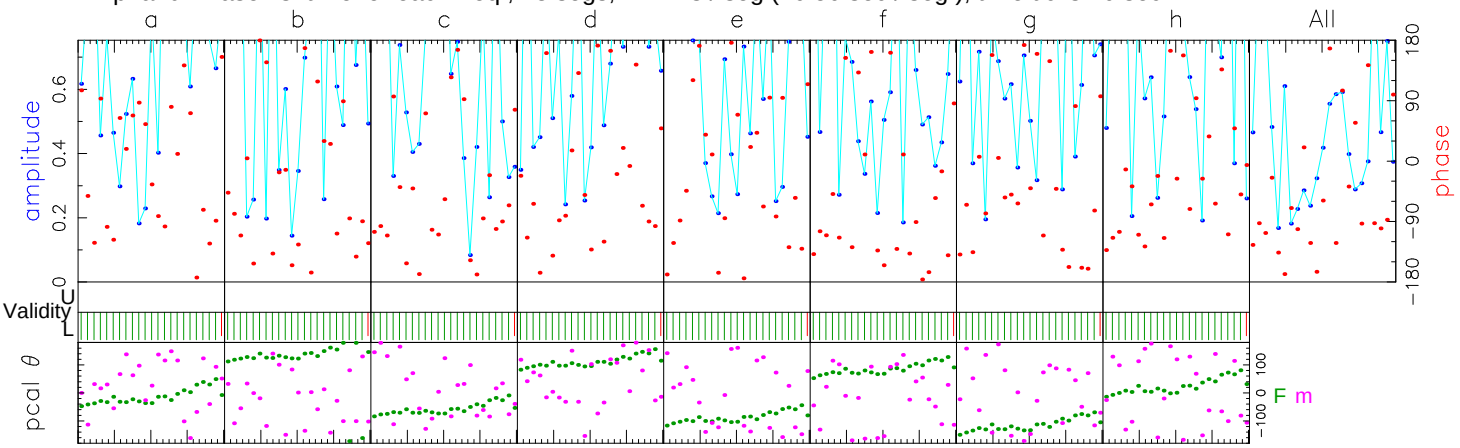
3C273.zpwvct, No0577, Fm

EF_DBBC - VLBA_MK, fgroup W, pol RR



Fringe quality	9
SNR	7.5
Int time	239.895
Amp	0.251
Phase	611.9
PFD	4.5e-06
Delays (us)	
SBD	-0.122896
MBD	-0.013514
Fringe rate (Hz)	
	0.005563
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022644
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	a	b	c	d	e	f	g	h		
	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-84.2	-117.5	-102.2	-105.4	-113.1	-131.6	-115.5	-81.2	Phase	-108.1
	0.1	0.3	0.3	0.2	0.2	0.4	0.2	0.3	Ampl.	0.2
	160.0	113.4	112.5	58.4	102.7	113.8	72.1	16.0	Sbd box	113.3
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
m	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	
m	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	

Group delay (usec)(sbd)	8.13438152572E+02	Apriori delay (usec)	8.13576666364E+02	Resid mbdelay (usec)	-1.35138E-02	+/-	2.9E-04
Sband delay (usec)	8.13453770364E+02	Apriori clock (usec)	2.7282021E+01	Resid sbdelay (usec)	-1.22896E-01	+/-	2.3E-03
Phase delay (usec)	8.13576662879E+02	Apriori clockrate (us/s)	3.8340011E-08	Resid phdelay (usec)	-3.48478E-06	+/-	4.9E-07
Delay rate (us/s)	-2.41986880086E+00	Apriori rate (us/s)	-2.41986886544E+00	Resid rate (us/s)	6.45809E-08	+/-	3.5E-09
Total phase (deg)	626.5	Apriori accel (us/s/s)	-2.50168220072E-06	Resid phase (deg)	611.9	+/-	15.2

	RMS	Theor.								
			Amplitude	0.251 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	75.4	36.6	Search (1024X32)	0.245	Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000	1.000
amp/seg (%)	132.4	63.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled		mb window (us)	-0.016	0.016
ph/frq (deg)	18.5	21.6	Inc. seg. avg.	0.398	Sample rate(MSamp/s): 64			dr window (ns/s)	-0.012	0.012
amp/frq (%)	32.4	37.6	Inc. frq. avg.	0.243	Data rate(Mb/s): 1024	nlags: 128	t_cohere infinite	ion window (TEC)	0.00	0.00

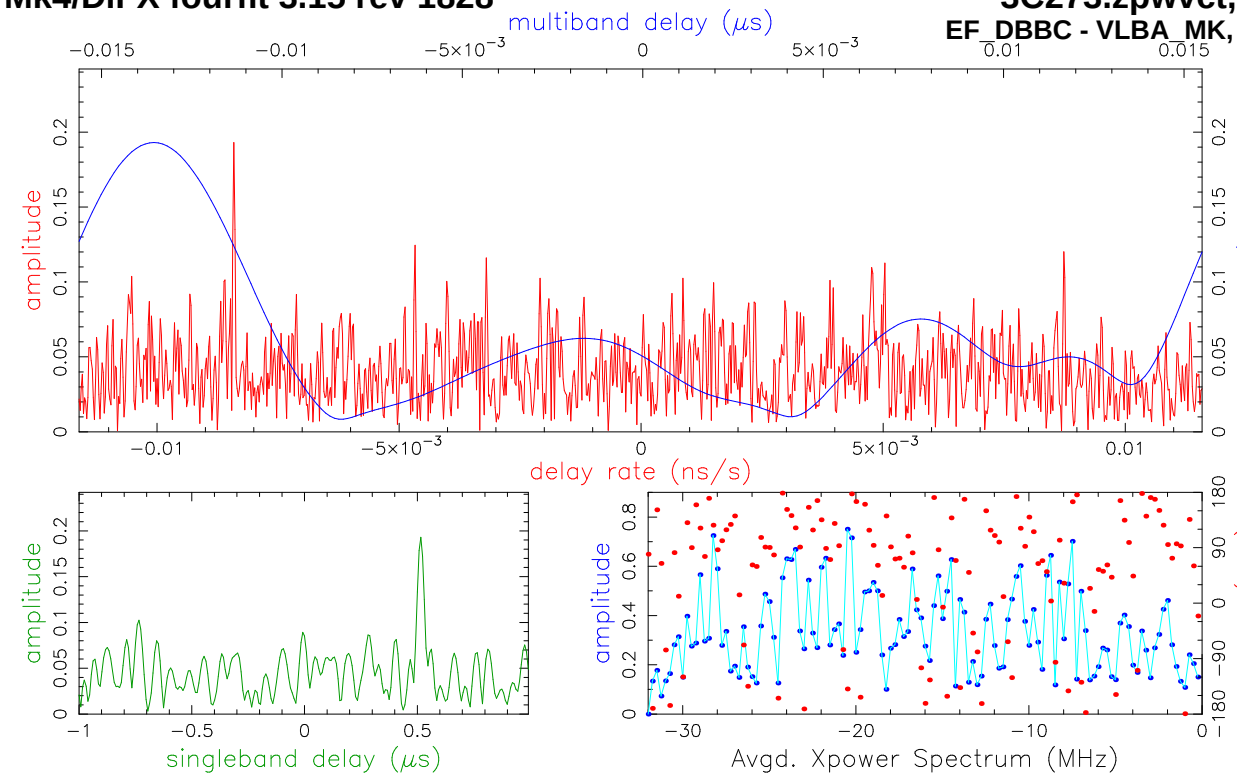
F: az 262.0 el 9.0 pa 39.1 m: az 90.1 el 6.1 pa -70.3 u,v (fr/asec) 13865.230 3817.252 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fm..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fm.W.90.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

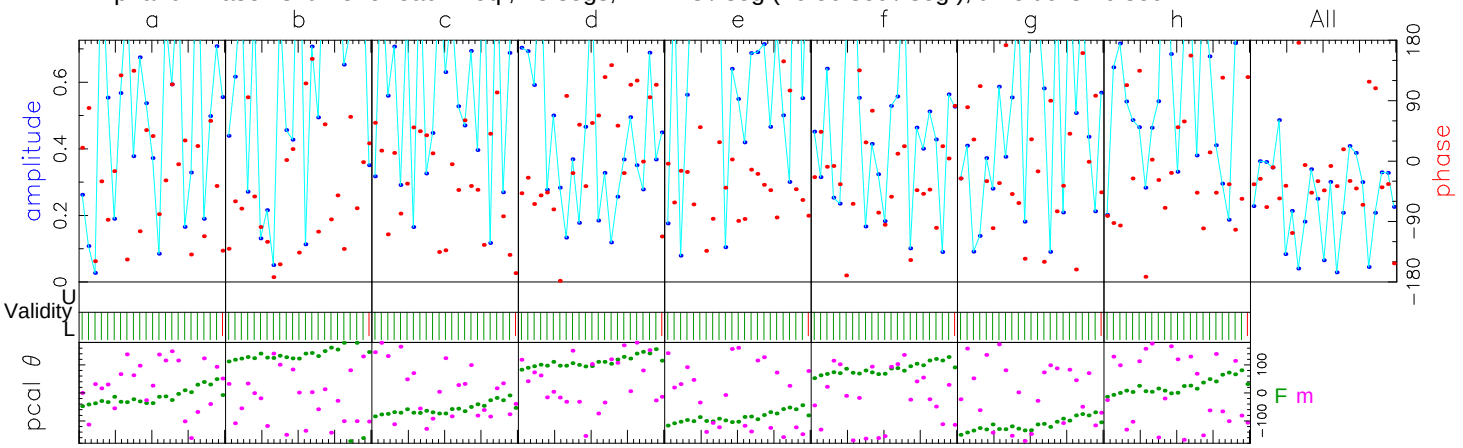
3C273.zpwvct, No0577, Fm

EF_DBBC - VLBA_MK, fgroup W, pol LR



Fringe quality	0
SNR	5.8
Int time	239.895
Amp	0.242
Phase	-3098.3
PFD	3.6e-01
Delays (us)	
SBD	0.514897
MBD	-0.013559
Fringe rate (Hz)	
	-0.724049
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022645
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	a	b	c	d	e	f	g	h		
	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-16.4	-70.1	-34.9	-2.5	-45.0	-21.7	-33.7	-55.2	Phase	-38.3
	0.2	0.3	0.2	0.2	0.5	0.3	0.2	0.2	Ampl.	0.2
	16.8	63.4	153.8	165.9	195.3	253.6	10.5	10.1	Sbd box	194.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
m	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
m	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	8.14094357715E+02	Apriori delay (usec)	8.13576666364E+02	Resid mbdelay (usec)	-1.35586E-02	+/-	3.8E-04
Sband delay (usec)	8.14091562864E+02	Apriori clock (usec)	2.7282021E+01	Resid sbdelay (usec)	5.14897E-01	+/-	3.0E-03
Phase delay (usec)	8.13576665130E+02	Apriori clockrate (us/s)	3.8340011E-08	Resid phdelay (usec)	-1.23347E-06	+/-	6.4E-07
Delay rate (us/s)	-2.41987727094E+00	Apriori rate (us/s)	-2.41986886544E+00	Resid rate (us/s)	-8.40550E-06	+/-	4.6E-09
Total phase (deg)	-3083.6	Apriori accel (us/s/s)	-2.50168220072E-06	Resid phase (deg)	-3098.3	+/-	19.8

	RMS	Theor.							
			Amplitude	0.242 +/- 0.042	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	63.3	47.5	Search (1024X32)	0.184	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	71.6	82.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	23.8	28.0	Inc. seg. avg.	0.232	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	46.6	48.9	Inc. frq. avg.	0.229	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

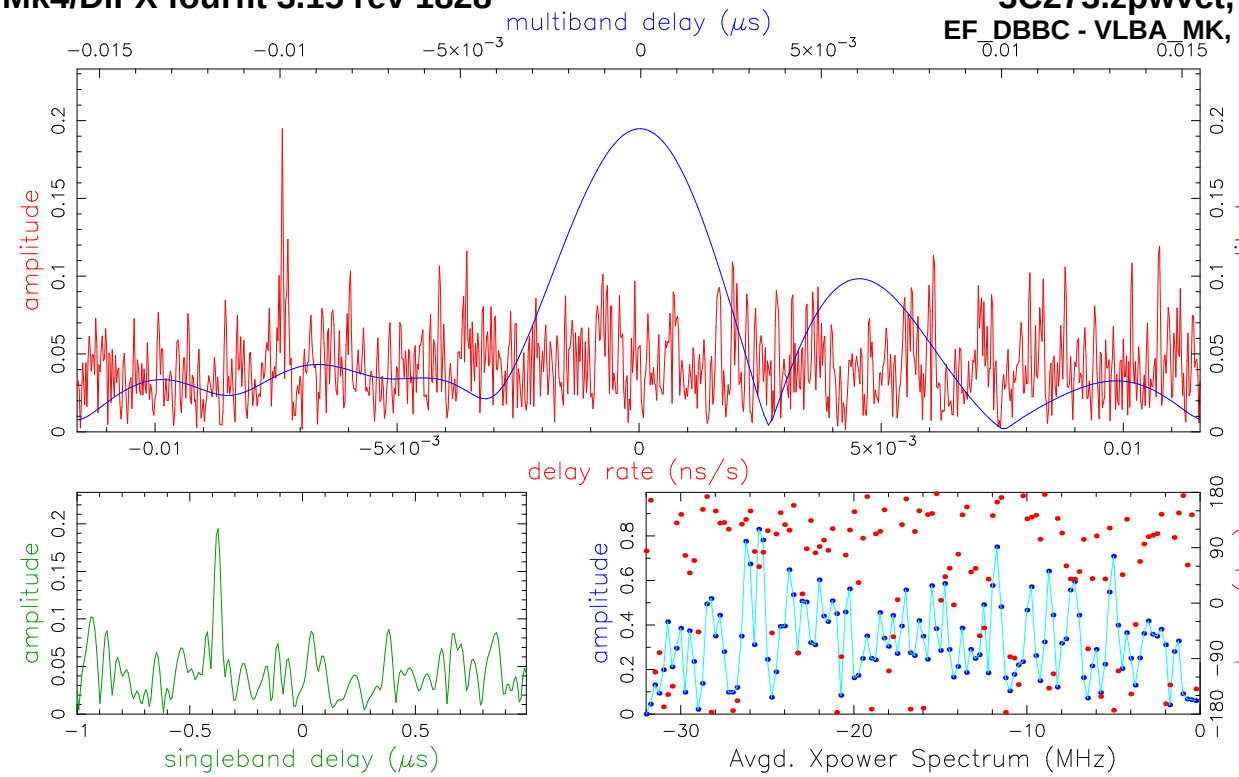
F: az 262.0 el 9.0 pa 39.1 m: az 90.1 el 6.1 pa -70.3 u,v (fr/asec) 13865.230 3817.252 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fm..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fm.W.91.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

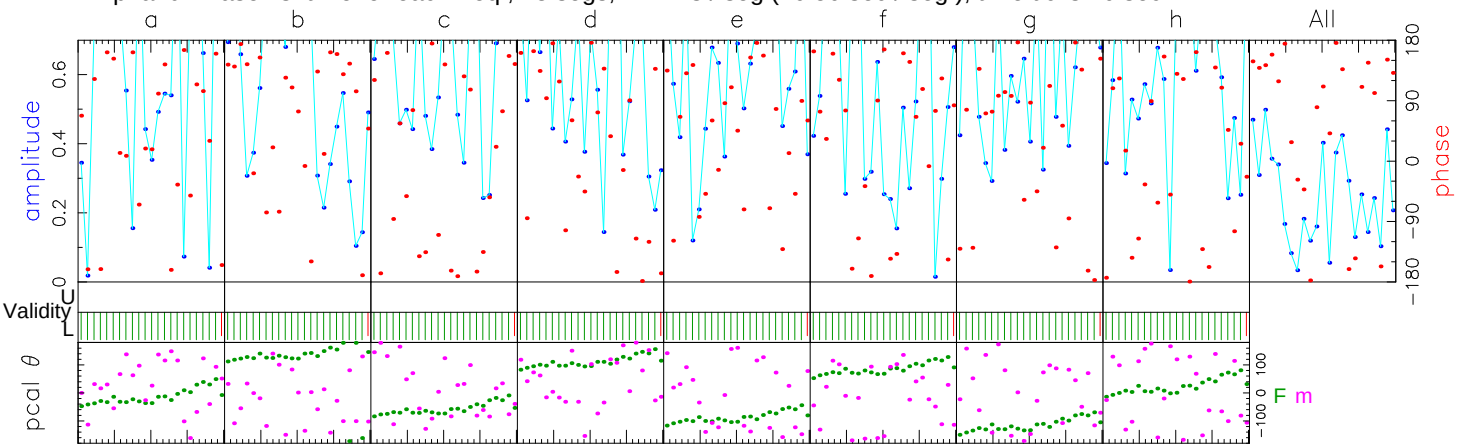
3C273.zpwvct, No0577, Fm

EF_DBBC - VLBA_MK, fgroup W, pol RL



Fringe quality	0
SNR	5.9
Int time	239.895
Amp	0.233
Phase	2303.2
PFD	2.3e-01
Delays (us)	
SBD	-0.377349
MBD	0.000008
Fringe rate (Hz)	
	-0.634491
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022646
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	140.2	130.4	168.5	155.1	95.7	126.3	137.0	160.6	Phase	143.2
	0.2	0.2	0.4	0.3	0.2	0.2	0.3	0.3	Ampl.	0.2
	95.3	140.3	80.6	43.1	207.8	189.6	224.1	145.3	Sbd box	80.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
m	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
m	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	8.13201674051E+02	Apriori delay (usec)	8.13576666364E+02	Resid mbdelay (usec)	7.68730E-06	+/-	3.7E-04
Sband delay (usec)	8.13199317864E+02	Apriori clock (usec)	2.7282021E+01	Resid sbdelay (usec)	-3.77349E-01	+/-	2.9E-03
Phase delay (usec)	8.13576670980E+02	Apriori clockrate (us/s)	3.8340011E-08	Resid phdelay (usec)	4.61627E-06	+/-	6.3E-07
Delay rate (us/s)	-2.41987623126E+00	Apriori rate (us/s)	-2.41986886544E+00	Resid rate (us/s)	-7.36582E-06	+/-	4.5E-09
Total phase (deg)	2317.8	Apriori accel (us/s/s)	-2.50168220072E-06	Resid phase (deg)	2303.2	+/-	19.5

	RMS	Theor.							
			Amplitude	0.233 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	68.7	46.7	Search (1024X32)	0.189	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	75.9	81.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	25.3	27.5	Inc. seg. avg.	0.225	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	25.9	48.1	Inc. frq. avg.	0.222	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

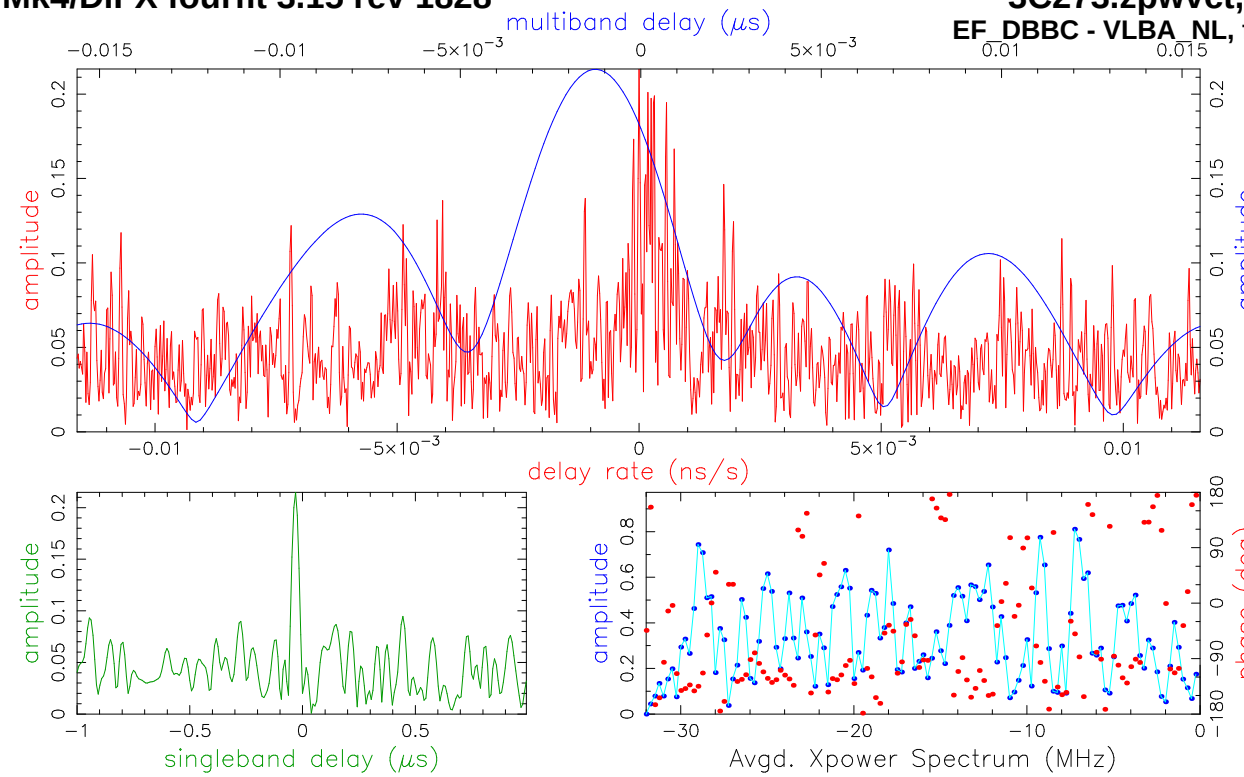
F: az 262.0 el 9.0 pa 39.1 m: az 90.1 el 6.1 pa -70.3 u,v (fr/asec) 13865.230 3817.252 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fm..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fm.W.92.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

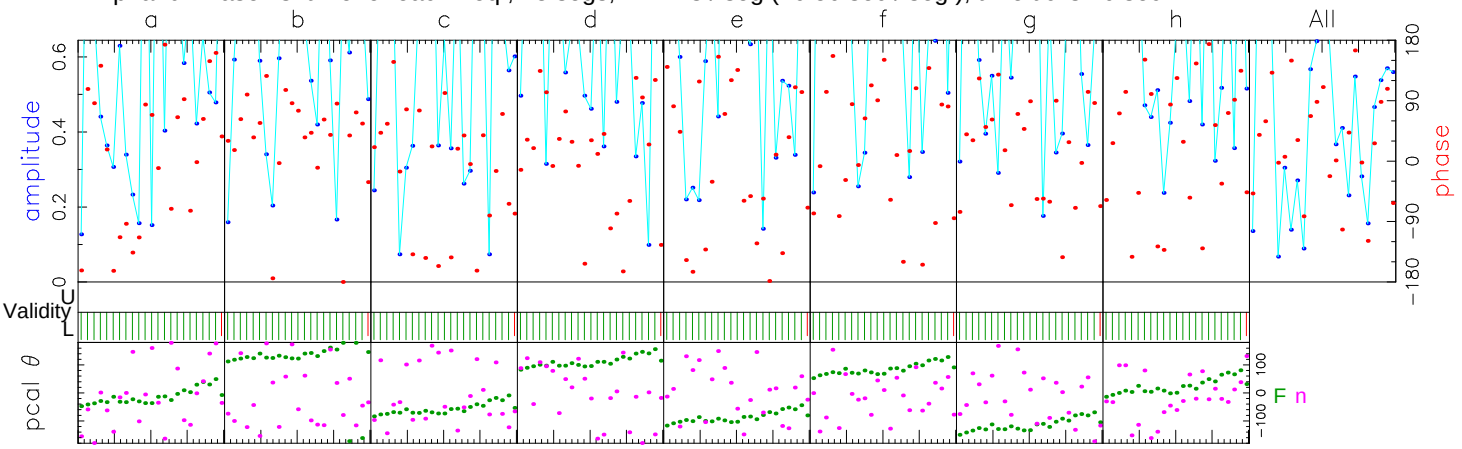
3C273.zpwvct, No0577, Fn

EF_DBBC - VLBA_NL, fgroup W, pol LL



Fringe quality	0
SNR	6.4
Int time	239.895
Amp	0.215
Phase	239.2
PFD	8.6e-03
Delays (us)	
SBD	-0.032066
MBD	-0.001276
Fringe rate (Hz)	0.000059
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:022647
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	65.8	62.8	41.2	28.5	123.3	84.0	24.5	95.8	Phase	59.2
	0.2	0.5	0.2	0.2	0.2	0.2	0.3	0.2	Ampl.	0.2
	25.9	125.0	146.9	238.0	111.8	218.2	125.3	12.2	Sbd box	124.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
n	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
n	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.21723944985E+04	Apriori delay (usec)	-1.21723619722E+04	Resid mbdelay (usec)	-1.27631E-03	+/-	3.4E-04
Sband delay (usec)	-1.21723940382E+04	Apriori clock (usec)	2.2927135E+01	Resid sbdelay (usec)	-3.20660E-02	+/-	2.7E-03
Phase delay (usec)	-1.21723619703E+04	Apriori clockrate (us/s)	-3.2134660E-07	Resid phdelay (usec)	1.91033E-06	+/-	5.7E-07
Delay rate (us/s)	-1.36113877794E+00	Apriori rate (us/s)	-1.36113877862E+00	Resid rate (us/s)	6.80578E-10	+/-	4.1E-09
Total phase (deg)	136.5	Apriori accel (us/s/s)	6.52487098866E-05	Resid phase (deg)	239.2	+/-	17.8

	RMS	Theor.						
			Amplitude	0.215 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	82.6	42.7	Search (1024X32)	0.213	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	159.5	74.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	37.8	25.2	Inc. seg. avg.	0.350	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	60.4	44.0	Inc. frq. avg.	0.223	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

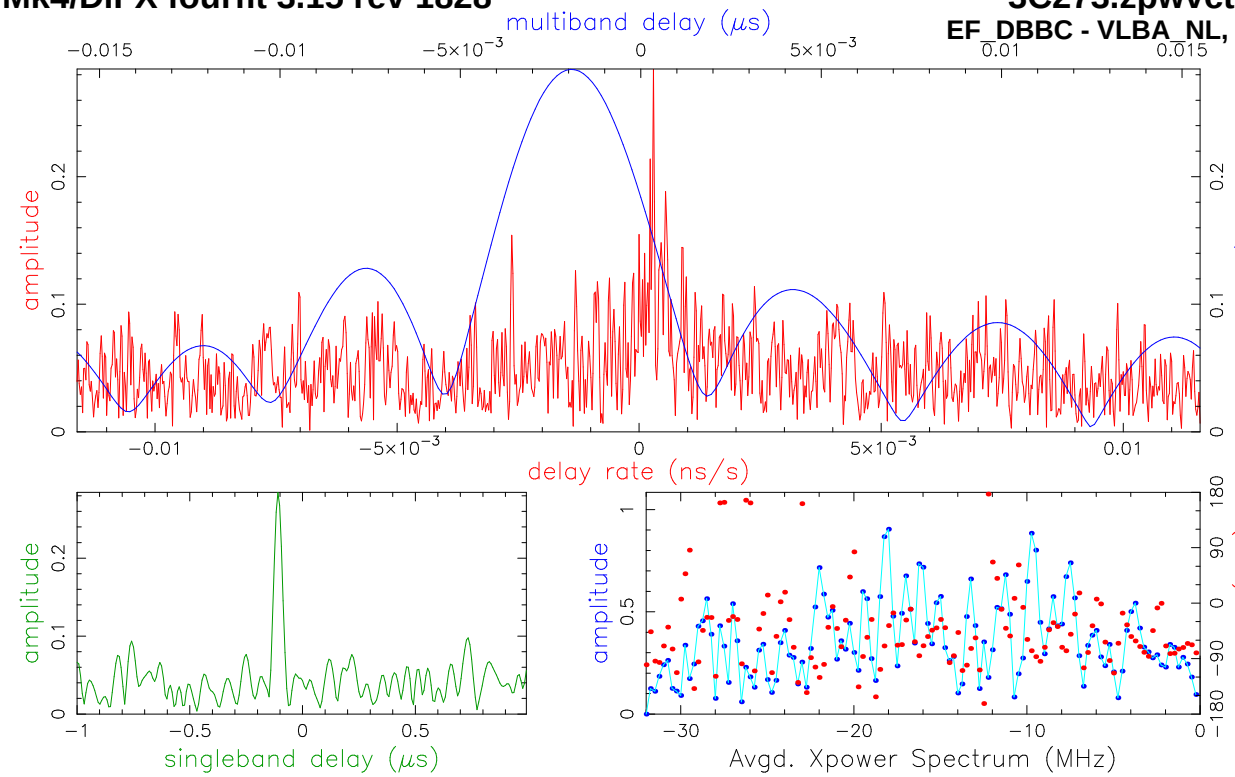
F: az 262.0 el 9.0 pa 39.1 n: az 149.9 el 46.2 pa -21.7 u,v (fr/asec) 7844.334 1108.798 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fn..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fn.W.93.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fn

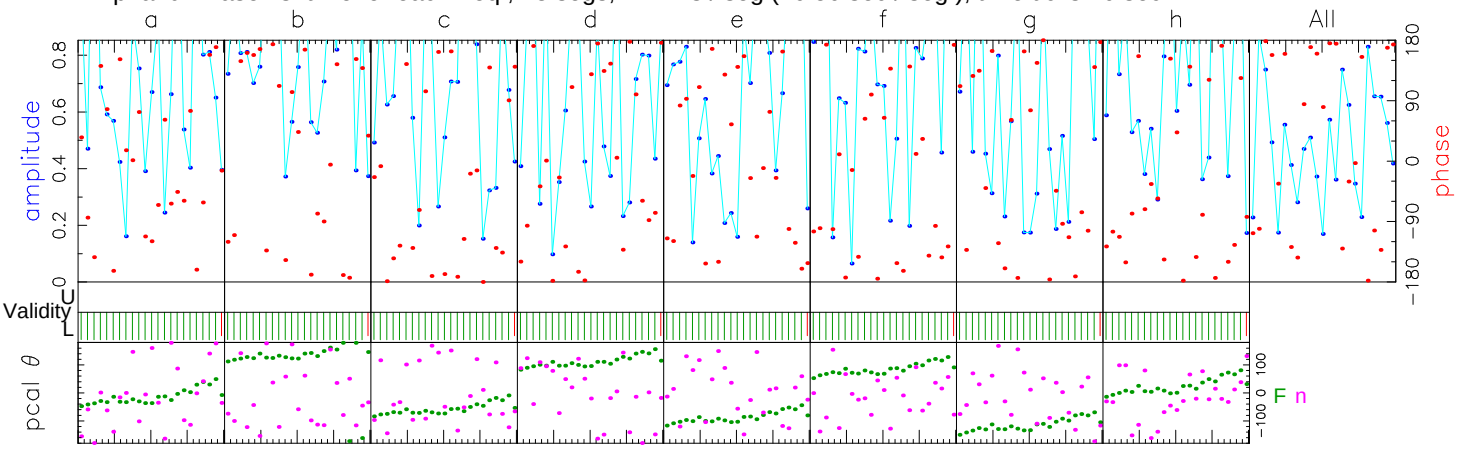
EF_DBBC - VLBA_NL, fgroup W, pol RR



Fringe quality 9

SNR	8.5
Int time	239.895
Amp	0.284
Phase	379.3
PFD	1.5e-09
Delays (us)	
SBD	-0.108604
MBD	-0.001912
Fringe rate (Hz)	
	0.026323
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022648
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-106.2	176.7	-157.7	-158.2	-152.1	-155.1	-170.6	-156.7	Phase	-160.7
	0.2	0.4	0.3	0.2	0.2	0.3	0.4	0.5	Ampl.	0.3
	129.5	114.8	117.8	66.6	172.4	113.4	115.6	115.4	Sbd box	115.1
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
n	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
n	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.21724576347E+04	Apriori delay (usec)	-1.21723619722E+04	Resid mbdelay (usec)	-1.91245E-03	+/-	2.5E-04
Sband delay (usec)	-1.21724705767E+04	Apriori clock (usec)	2.2927135E+01	Resid sbdelay (usec)	-1.08604E-01	+/-	2.0E-03
Phase delay (usec)	-1.21723619774E+04	Apriori clockrate (us/s)	-3.2134660E-07	Resid phdelay (usec)	-5.18228E-06	+/-	4.3E-07
Delay rate (us/s)	-1.36113847303E+00	Apriori rate (us/s)	-1.36113877862E+00	Resid rate (us/s)	3.05587E-07	+/-	3.1E-09
Total phase (deg)	276.6	Apriori accel (us/s/s)	6.52487098866E-05	Resid phase (deg)	379.3	+/-	13.5

	RMS	Theor.					
			Amplitude	0.284 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	69.1	32.3	Search (1024X32)	0.251	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	101.6	56.3	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	24.9	19.0	Inc. seg. avg.	0.424	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	40.9	33.2	Inc. frq. avg.	0.282	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

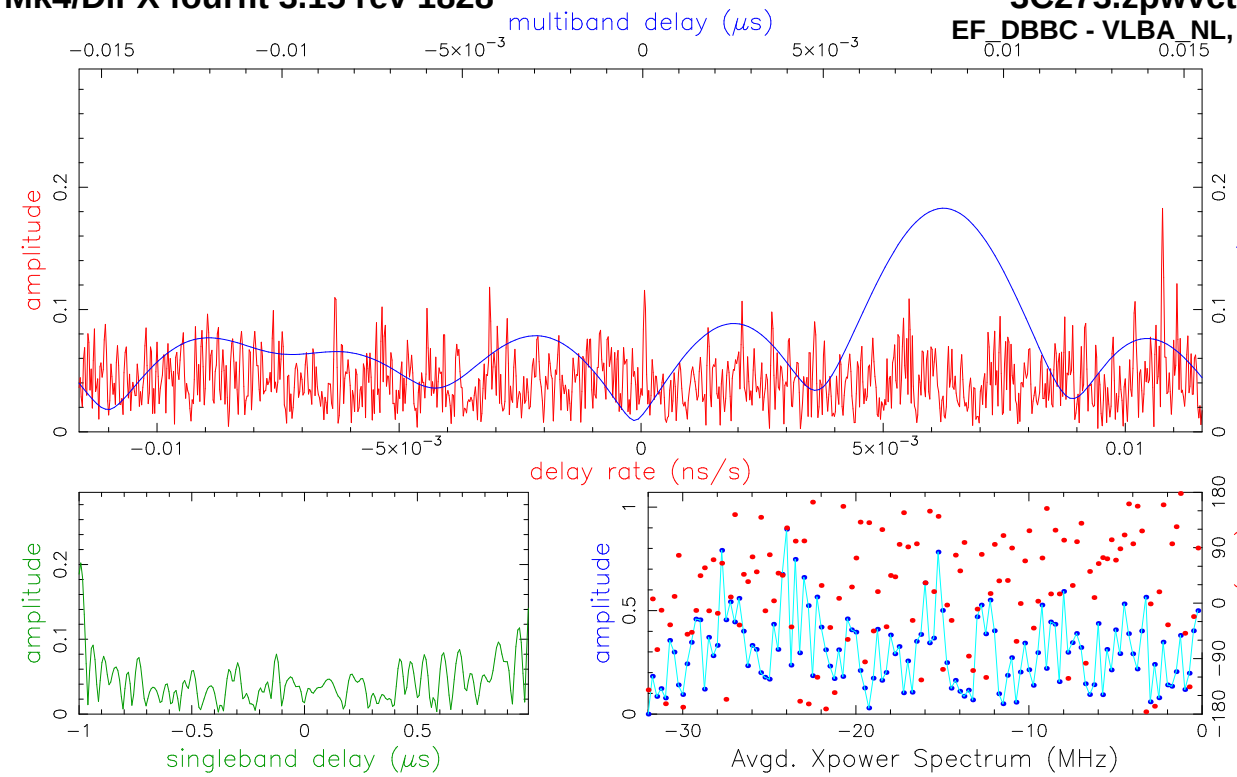
F: az 262.0 el 9.0 pa 39.1 n: az 149.9 el 46.2 pa -21.7 u,v (fr/asec) 7844.334 1108.798 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fn..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fn.W.94.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

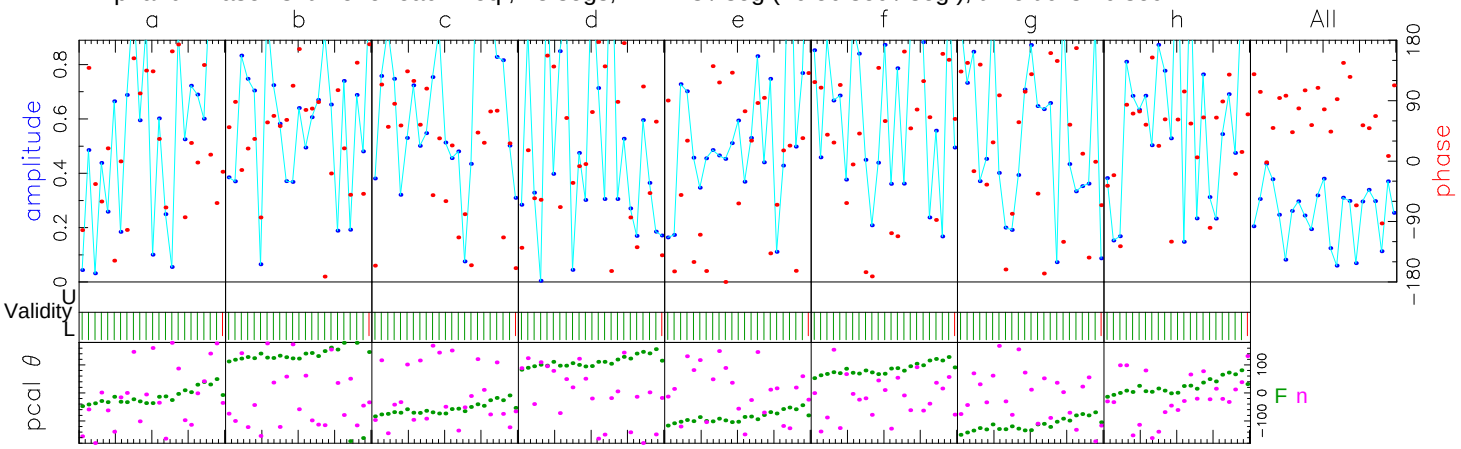
3C273.zpwvct, No0577, Fn

EF_DBBC - VLBA_NL, fgroup W, pol LR



Fringe quality	0
SNR	6.1
Int time	239.895
Amp	0.297
Phase	5833.0
PFD	8.7e-02
Delays (us)	
SBD	-0.992702
MBD	0.008271
Fringe rate (Hz)	
	0.927701
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022649
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	15.4	65.3	61.3	130.8	89.0	84.8	105.9	58.0	Phase	73.0
	0.0	0.4	0.4	0.1	0.2	0.4	0.1	0.6	Ampl.	0.3
	180.4	1.8	184.7	201.7	7.8	3.2	74.8	2.1	Sbd box	1.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
n	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
n	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.21733537009E+04	Apriori delay (usec)	-1.21723619722E+04	Resid mbdelay (usec)	8.27134E-03	+/-	3.6E-04
Sband delay (usec)	-1.21733546747E+04	Apriori clock (usec)	2.2927135E+01	Resid sbdelay (usec)	-9.92702E-01	+/-	2.8E-03
Phase delay (usec)	-1.21723619698E+04	Apriori clockrate (us/s)	-3.2134660E-07	Resid phdelay (usec)	2.35383E-06	+/-	6.1E-07
Delay rate (us/s)	-1.36112800893E+00	Apriori rate (us/s)	-1.36113877862E+00	Resid rate (us/s)	1.07697E-05	+/-	4.4E-09
Total phase (deg)	5730.3	Apriori accel (us/s/s)	6.52487098866E-05	Resid phase (deg)	5833.0	+/-	18.9

	RMS	Theor.							
			Amplitude	0.297 +/- 0.049	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	58.3	45.4	Search (1024X32)	0.199	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	57.8	79.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	37.8	26.8	Inc. seg. avg.	0.286	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	58.1	46.7	Inc. frq. avg.	0.260	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

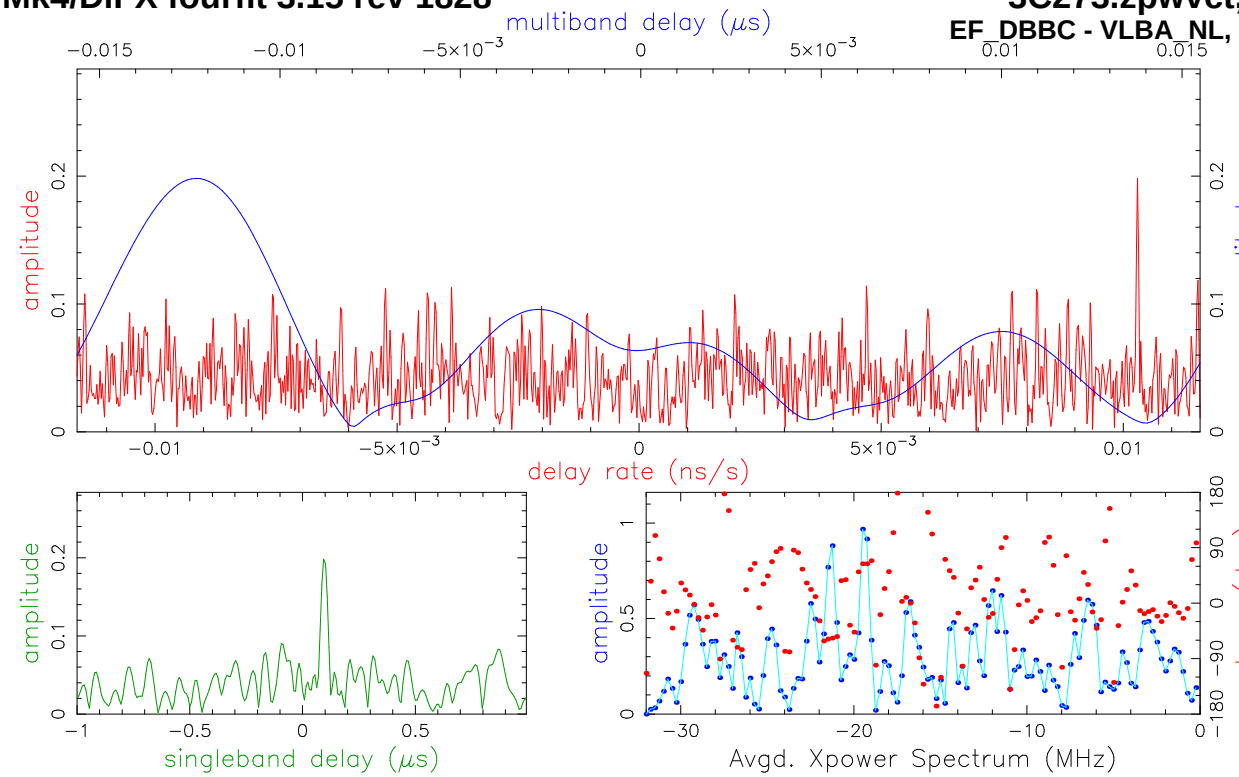
F: az 262.0 el 9.0 pa 39.1 n: az 149.9 el 46.2 pa -21.7 u,v (fr/asec) 7844.334 1108.798 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fn..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fn.W.95.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fn

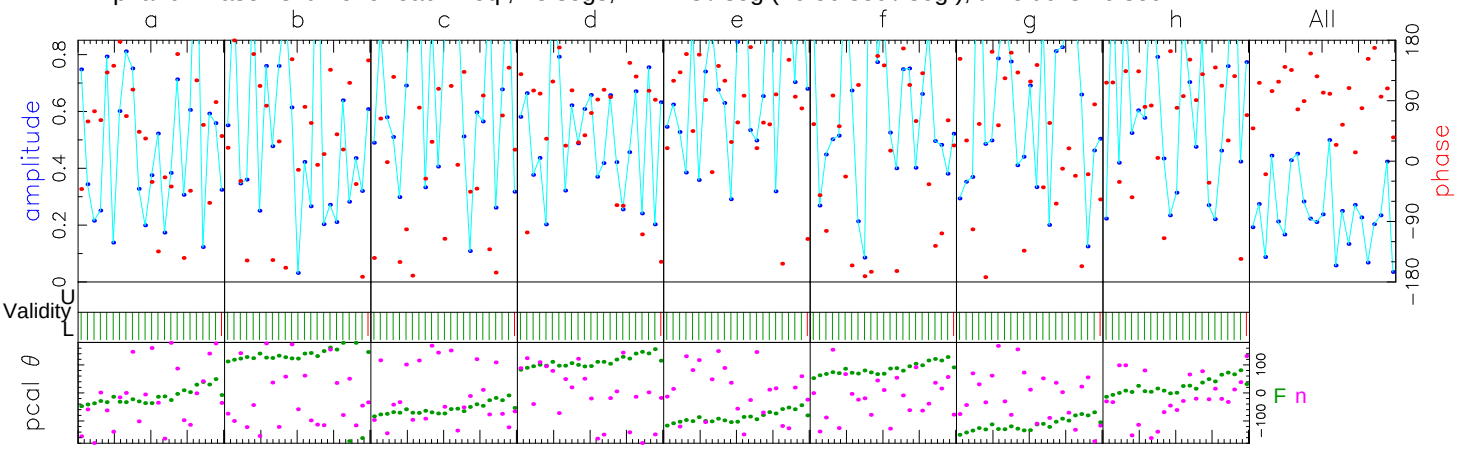
EF_DBBC - VLBA_NL, fgroup W, pol RL



Fringe quality 0

SNR	6.0
Int time	239.895
Amp	0.284
Phase	-439.2
PFD	1.1e-01
Delays (us)	
SBD	0.096497
MBD	-0.012304
Fringe rate (Hz)	
	0.885948
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022650
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	89.3	107.0	107.3	109.2	92.9	138.3	55.6	104.2	Phase	100.8
	0.2	0.2	0.2	0.4	0.6	0.2	0.2	0.5	Ampl.	0.3
	184.8	244.1	15.2	120.9	141.0	215.8	107.4	140.6	Sbd box	141.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
n	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
n	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.21722805263E+04	Apriori delay (usec)	-1.21723619722E+04	Resid mbdelay (usec)	-1.23041E-02	+/-	3.6E-04
Sband delay (usec)	-1.21722654747E+04	Apriori clock (usec)	2.2927135E+01	Resid sbdelay (usec)	9.64975E-02	+/-	2.9E-03
Phase delay (usec)	-1.21723619689E+04	Apriori clockrate (us/s)	-3.2134660E-07	Resid phdelay (usec)	3.25089E-06	+/-	6.1E-07
Delay rate (us/s)	-1.36112849364E+00	Apriori rate (us/s)	-1.36113877862E+00	Resid rate (us/s)	1.02850E-05	+/-	4.4E-09
Total phase (deg)	-541.9	Apriori accel (us/s/s)	6.52487098866E-05	Resid phase (deg)	-439.2	+/-	19.1

	RMS	Theor.							
			Amplitude	0.284 +/- 0.047	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	48.0	45.7	Search (1024X32)	0.185	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	67.4	79.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	25.2	27.0	Inc. seg. avg.	0.264	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	57.9	47.1	Inc. frq. avg.	0.263	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

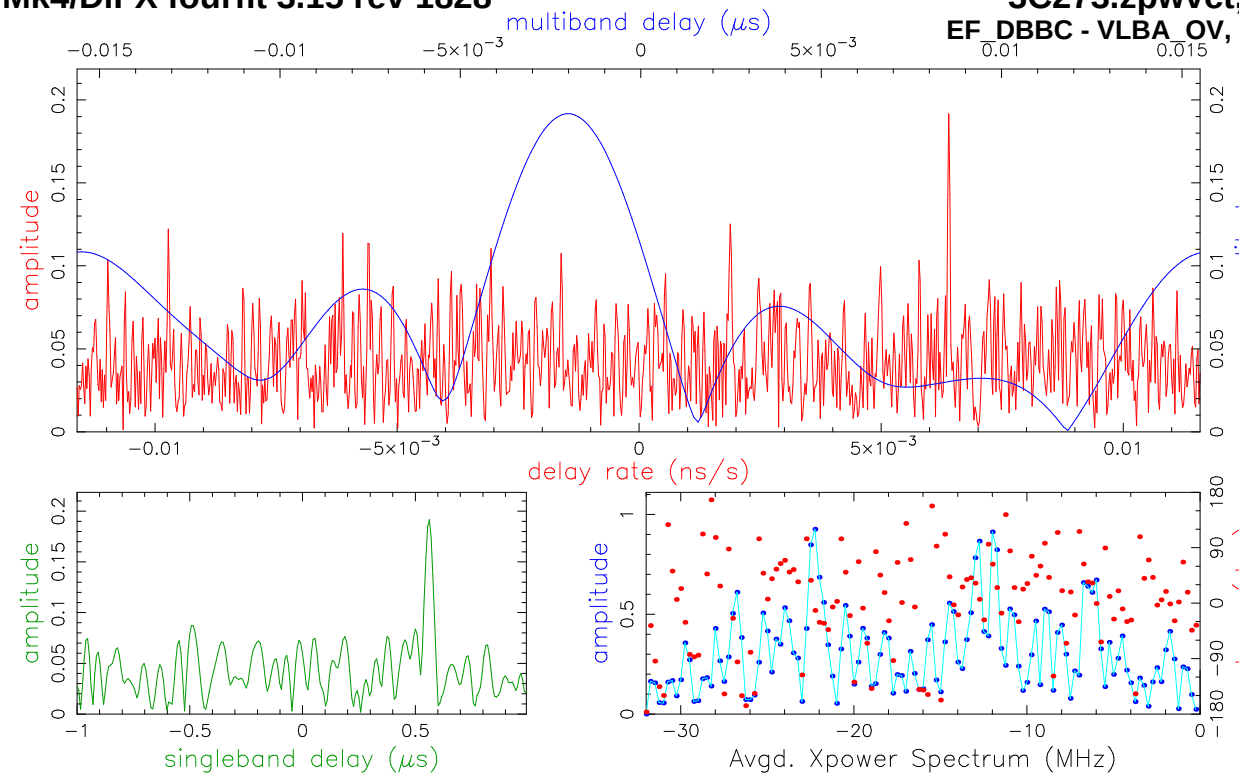
F: az 262.0 el 9.0 pa 39.1 n: az 149.9 el 46.2 pa -21.7 u,v (fr/asec) 7844.334 1108.798 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fn..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fn.W.96.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

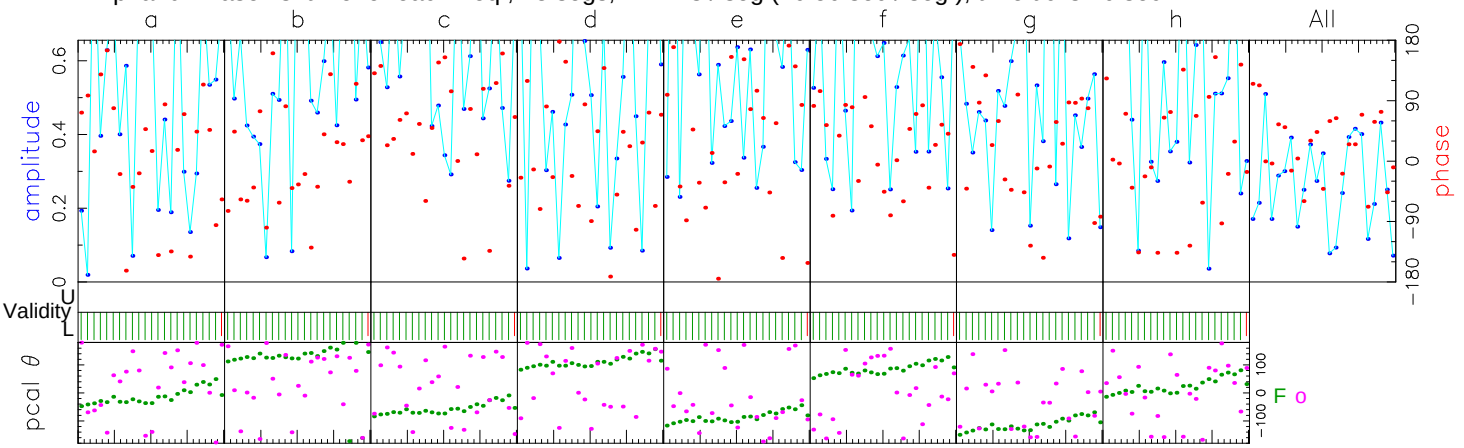
3C273.zpwvct, No0577, Fo

EF_DBBC - VLBA_OV, fgroup W, pol RL



Fringe quality	0
SNR	5.8
Int time	239.895
Amp	0.219
Phase	-3216.6
PFD	4.1e-01
Delays (us)	
SBD	0.560764
MBD	-0.002004
Fringe rate (Hz)	
	0.550882
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022654
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	39.0	-2.2	58.6	-14.7	-131.7	34.9	18.8	23.8	Phase	23.4
	0.2	0.3	0.3	0.3	0.0	0.4	0.2	0.2	Ampl.	0.2
	64.0	200.5	91.0	59.3	196.9	199.9	171.9	13.9	Sbd box	200.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
o	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
o	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-8.84778989703E+03	Apriori delay (usec)	-8.84835039334E+03	Resid mbdelay (usec)	-2.00369E-03	+/-	3.8E-04
Sband delay (usec)	-8.84778962884E+03	Apriori clock (usec)	2.6121778E+01	Resid sbdelay (usec)	5.60764E-01	+/-	3.0E-03
Phase delay (usec)	-8.84835039259E+03	Apriori clockrate (us/s)	-2.8424398E-07	Resid phdelay (usec)	7.53059E-07	+/-	6.4E-07
Delay rate (us/s)	-1.86552253107E+00	Apriori rate (us/s)	-1.86552892626E+00	Resid rate (us/s)	6.39520E-06	+/-	4.6E-09
Total phase (deg)	-3534.4	Apriori accel (us/s/s)	4.78254333880E-05	Resid phase (deg)	-3216.6	+/-	19.9

	RMS	Theor.						
			Amplitude	0.219 +/- 0.038	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	50.1	47.7	Search (1024X32)	0.188	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	74.6	83.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	68.0	28.1	Inc. seg. avg.	0.227	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012 0.012
amp/frq (%)	45.5	49.1	Inc. frq. avg.	0.221	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

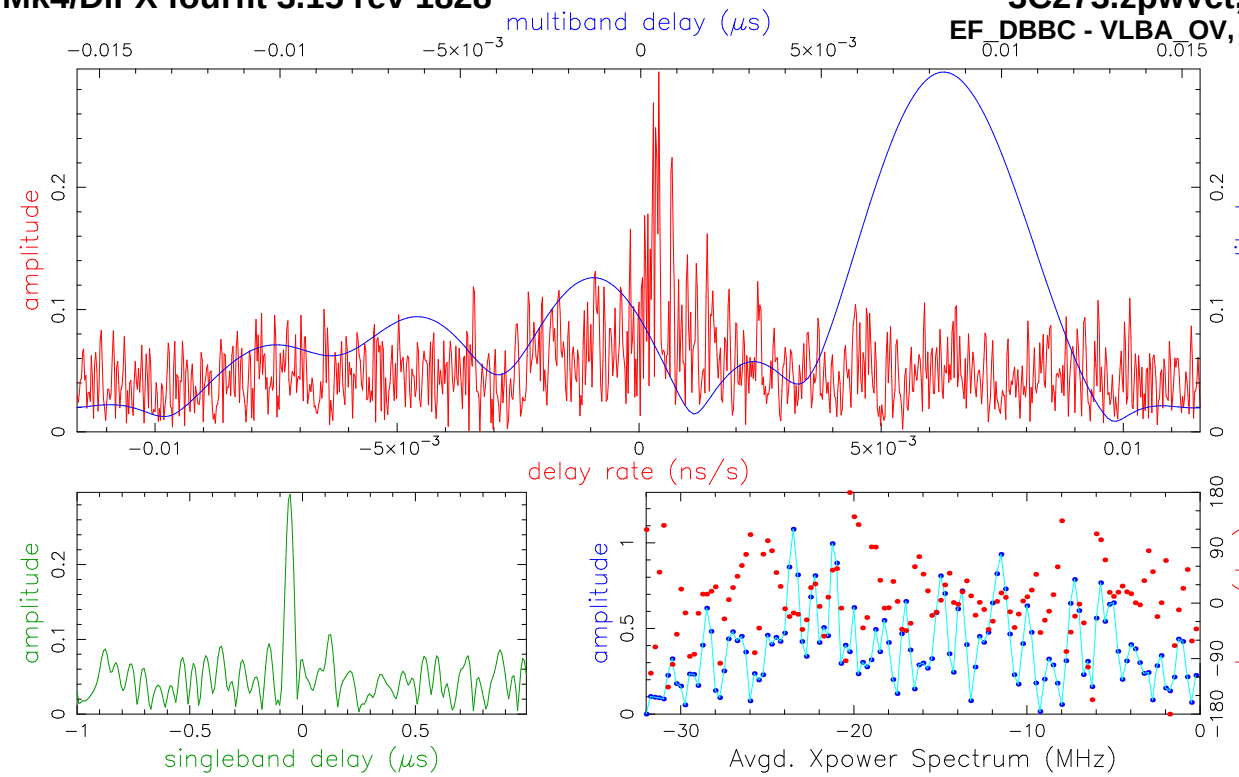
F: az 262.0 el 9.0 pa 39.1 o: az 117.8 el 34.3 pa -44.6 u,v (fr/asec) 10722.769 1600.927 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fo..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fo.W.100.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

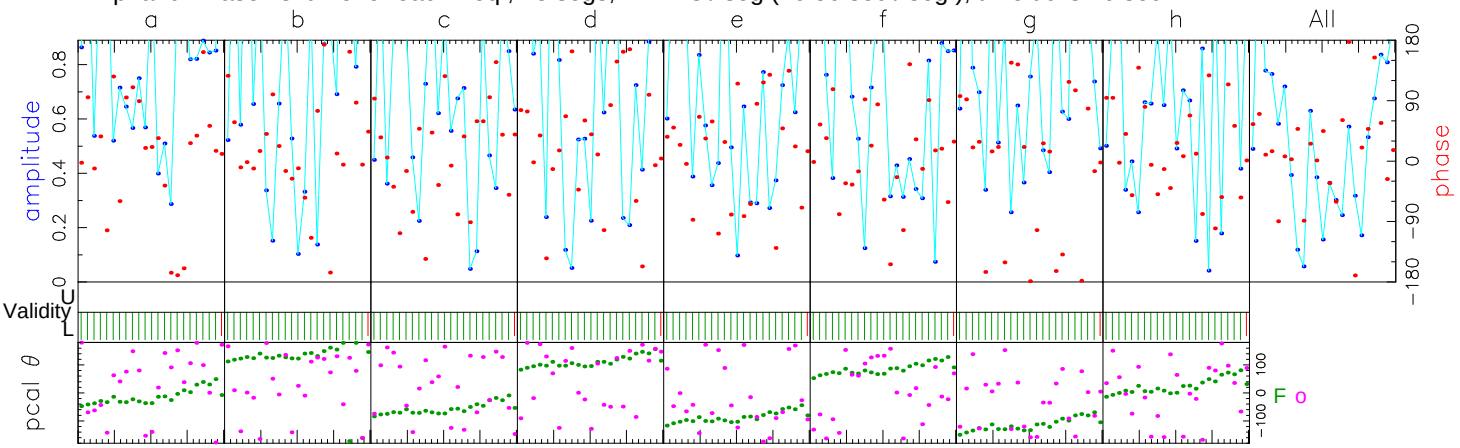
3C273.zpwvct, No0577, Fo

EF_DBBC - VLBA_OV, fgroup W, pol LL



Fringe quality	9
SNR	8.9
Int time	239.895
Amp	0.297
Phase	385.9
PFD	6.1e-11
Delays (us)	
SBD	-0.057322
MBD	0.008385
Fringe rate (Hz)	0.034868
Ion TEC	0.000
Ref freq (MHz)	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	2017:208:013416
	2017:215:022651
	2017:188:152524
RA & Dec (J2000)	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	43.0	14.1	13.2	33.1	26.0	3.6	101.4	9.7	Phase	25.9
	0.3	0.4	0.3	0.4	0.4	0.4	0.2	0.3	Ampl.	0.3
	120.8	121.9	248.3	122.0	120.8	121.5	68.9	123.3	Sbd box	121.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
o	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	
o	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-8.84840450816E+03	Apriori delay (usec)	-8.84835039334E+03	Resid mbdelay (usec)	8.38519E-03	+/-	2.4E-04
Sband delay (usec)	-8.84840771534E+03	Apriori clock (usec)	2.6121778E+01	Resid sbdelay (usec)	-5.73220E-02	+/-	1.9E-03
Phase delay (usec)	-8.84835039251E+03	Apriori clockrate (us/s)	-2.8424398E-07	Resid phdelay (usec)	8.35460E-07	+/-	4.2E-07
Delay rate (us/s)	-1.86552852148E+00	Apriori rate (us/s)	-1.86552892626E+00	Resid rate (us/s)	4.04789E-07	+/-	3.0E-09
Total phase (deg)	68.2	Apriori accel (us/s/s)	4.78254333880E-05	Resid phase (deg)	385.9	+/-	12.9

	RMS	Theor.					
			Amplitude	0.297 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	70.8	30.9	Search (1024X32)	0.285	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	126.6	54.0	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	34.4	18.2	Inc. seg. avg.	0.459	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	17.9	31.8	Inc. frq. avg.	0.310	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

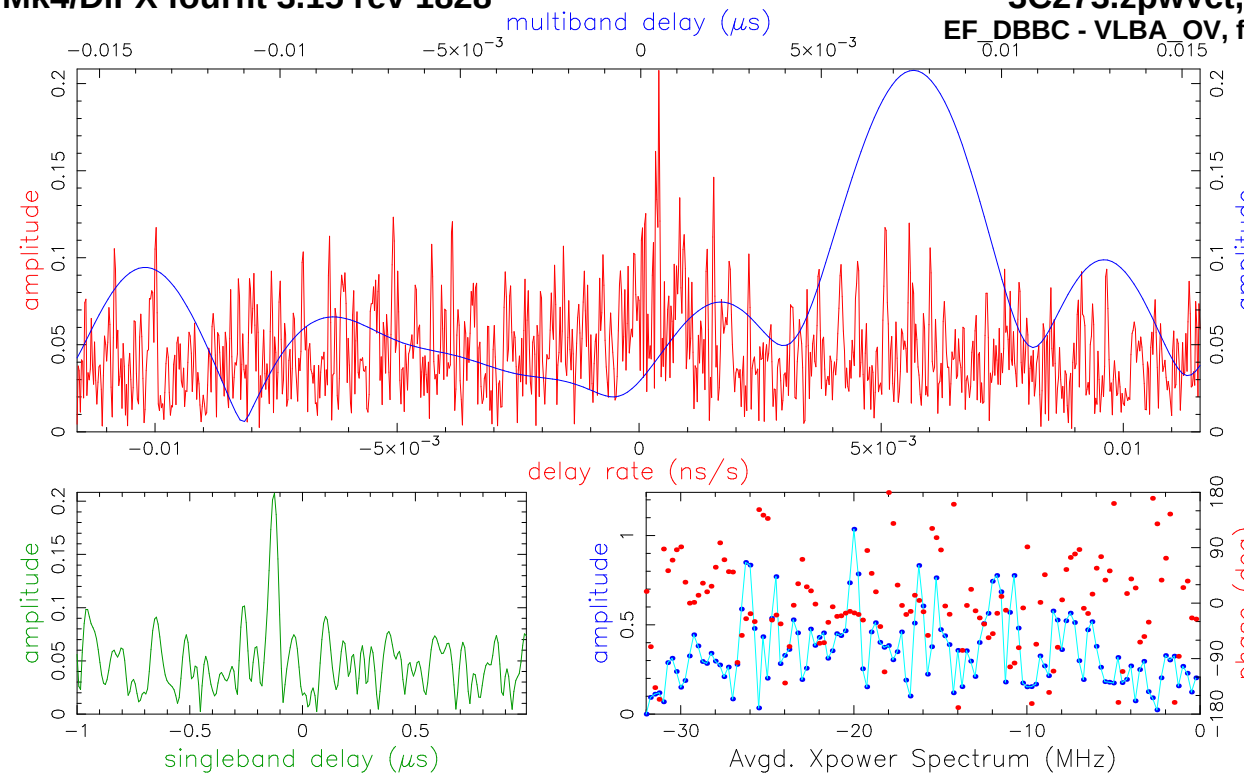
F: az 262.0 el 9.0 pa 39.1 o: az 117.8 el 34.3 pa -44.6 u,v (fr/asec) 10722.769 1600.927 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fo..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fo.W.97.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

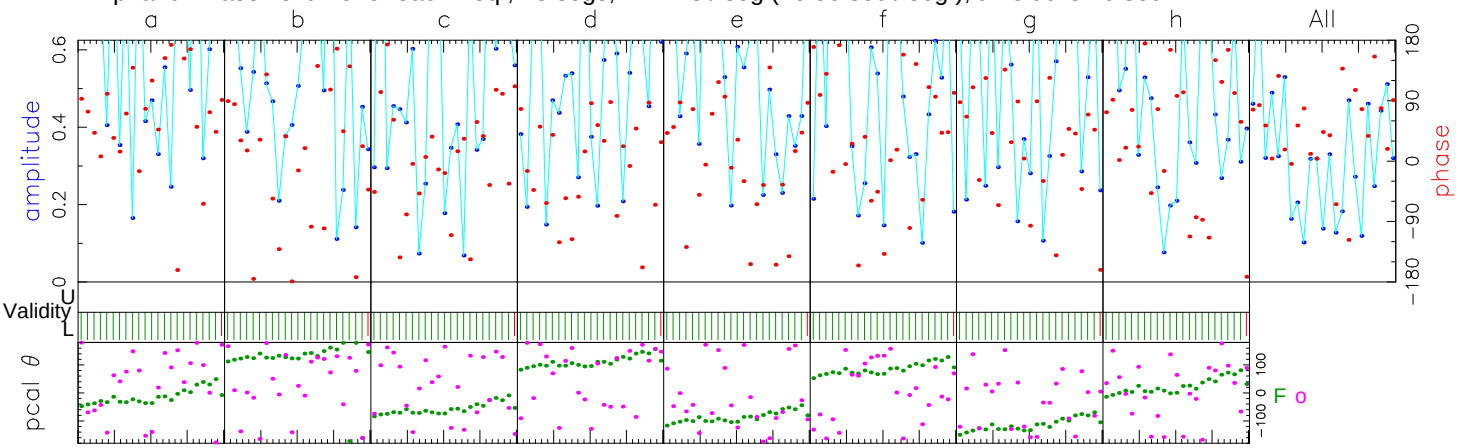
3C273.zpwvct, No0577, Fo

EF_DBBC - VLBA_OV, fgroup W, pol RR



Fringe quality	0
SNR	6.2
Int time	239.895
Amp	0.208
Phase	773.0
PFD	2.9e-02
Delays (us)	
SBD	-0.127039
MBD	0.007630
Fringe rate (Hz)	
	0.034425
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022653
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	70.0	79.4	31.7	6.9	49.8	37.8	54.0	93.3	Phase	53.0
	0.4	0.1	0.2	0.2	0.2	0.2	0.3	0.1	Ampl.	0.2
	113.4	123.9	174.7	112.3	131.6	246.9	20.2	139.9	Sbd box	112.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
o	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
o	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-8.84846776353E+03	Apriori delay (usec)	-8.84835039334E+03	Resid mbdelay (usec)	7.62981E-03	+/-	3.5E-04
Sband delay (usec)	-8.84847743234E+03	Apriori clock (usec)	2.6121778E+01	Resid sbdelay (usec)	-1.27039E-01	+/-	2.8E-03
Phase delay (usec)	-8.84835039163E+03	Apriori clockrate (us/s)	-2.8424398E-07	Resid phdelay (usec)	1.70863E-06	+/-	5.9E-07
Delay rate (us/s)	-1.86552852663E+00	Apriori rate (us/s)	-1.86552892626E+00	Resid rate (us/s)	3.99639E-07	+/-	4.3E-09
Total phase (deg)	455.3	Apriori accel (us/s/s)	4.78254333880E-05	Resid phase (deg)	773.0	+/-	18.4

	RMS	Theor.							
			Amplitude	0.208 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	61.4	44.0	Search (1024X32)	0.192	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	99.1	76.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	30.1	26.0	Inc. seg. avg.	0.257	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	43.2	45.3	Inc. frq. avg.	0.206	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

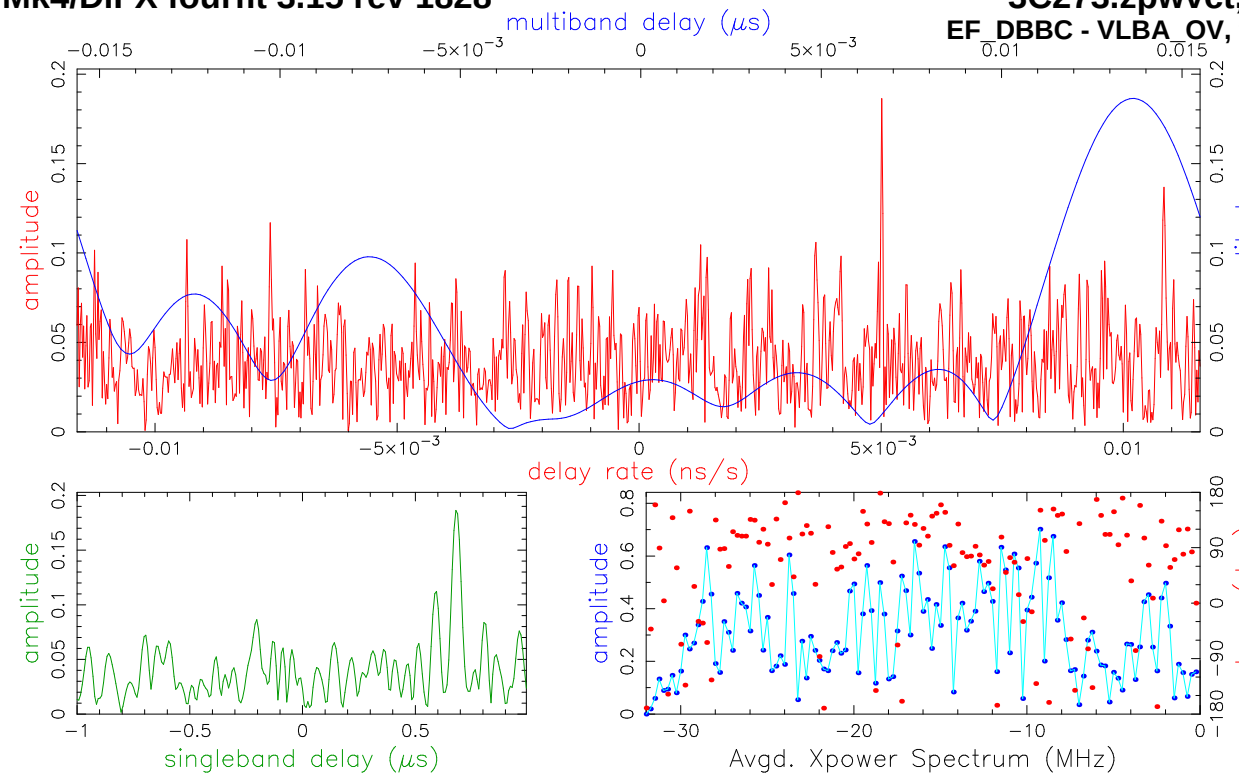
F: az 262.0 el 9.0 pa 39.1 o: az 117.8 el 34.3 pa -44.6 u,v (fr/asec) 10722.769 1600.927 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fo..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fo.W.98.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fo

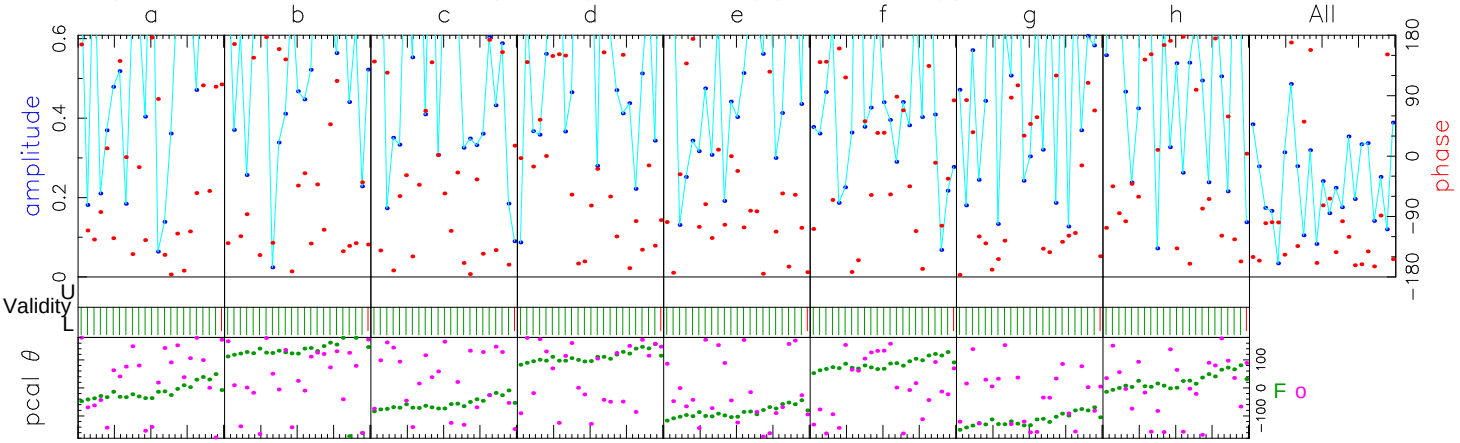
EF_DBBC - VLBA_OV, fgroup W, pol LR



Fringe quality 0

SNR	5.6
Int time	239.895
Amp	0.203
Phase	-3923.5
PFD	6.8e-01
Delays (us)	
SBD	0.682461
MBD	0.013711
Fringe rate (Hz)	
	0.431322
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022653
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-158.4	-138.8	-128.7	-149.4	-112.6	176.3	-178.7	-140.0	Phase	-143.5
	0.2	0.3	0.2	0.2	0.3	0.0	0.2	0.3	Ampl.	0.2
	47.1	217.0	173.4	17.2	193.7	105.3	99.8	211.5	Sbd box	216.4
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
o	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
o	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-8.84768043210E+03	Apriori delay (usec)	-8.84835039334E+03	Resid mbdelay (usec)	1.37112E-02	+/-	3.9E-04
Sband delay (usec)	-8.84766793234E+03	Apriori clock (usec)	2.6121778E+01	Resid sbdelay (usec)	6.82461E-01	+/-	3.1E-03
Phase delay (usec)	-8.84835039797E+03	Apriori clockrate (us/s)	-2.8424398E-07	Resid phdelay (usec)	-4.62780E-06	+/-	6.6E-07
Delay rate (us/s)	-1.86552391904E+00	Apriori rate (us/s)	-1.86552892626E+00	Resid rate (us/s)	5.00722E-06	+/-	4.7E-09
Total phase (deg)	-3881.2	Apriori accel (us/s/s)	4.78254333880E-05	Resid phase (deg)	-3923.5	+/-	20.4

	RMS	Theor.							
			Amplitude	0.203 +/- 0.036	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	52.1	48.9	Search (1024X32)	0.181	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	65.1	85.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	26.8	28.8	Inc. seg. avg.	0.190	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	36.1	50.3	Inc. frq. avg.	0.190	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

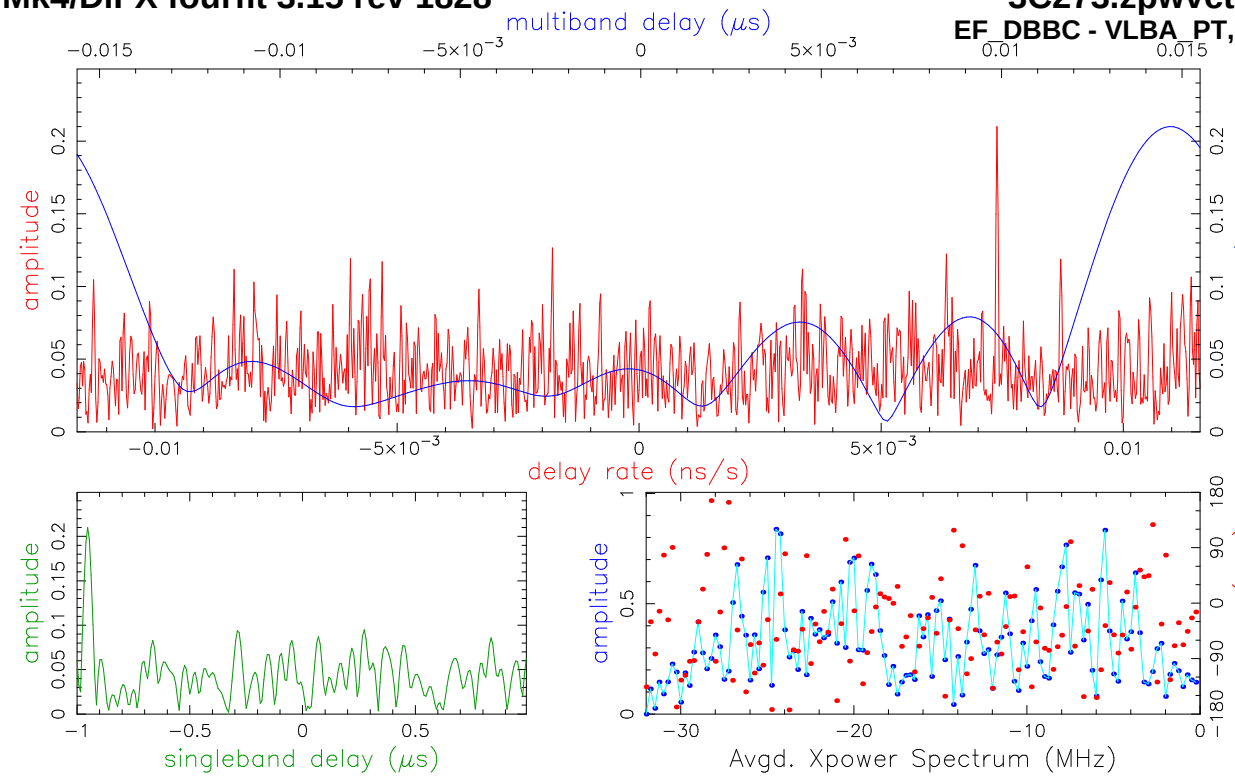
F: az 262.0 el 9.0 pa 39.1 o: az 117.8 el 34.3 pa -44.6 u,v (fr/asec) 10722.769 1600.927 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fo..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fo.W.99.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

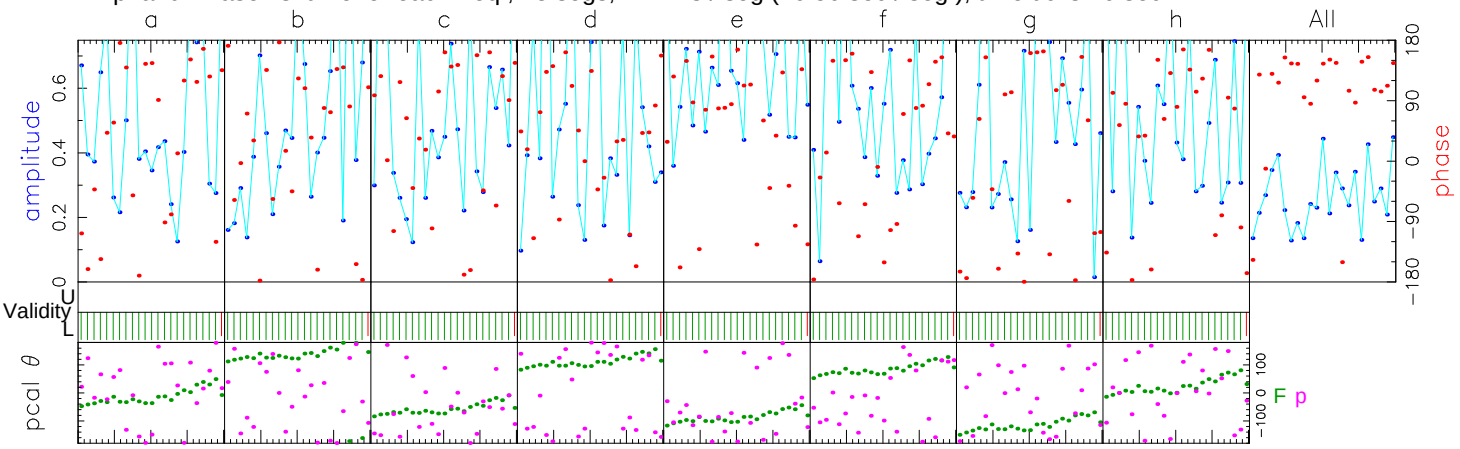
3C273.zpwvct, No0577, Fp

EF_DBBC - VLBA_PT, fgroup W, pol LL



Fringe quality	0
SNR	6.3
Int time	239.895
Amp	0.250
Phase	5710.2
PFD	2.1e-02
Delays (us)	
SBD	-0.952775
MBD	0.014669
Fringe rate (Hz)	
	0.636938
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022656
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	163.4	115.5	133.9	108.3	115.4	127.4	156.3	124.0	Phase	130.2
	0.2	0.3	0.3	0.2	0.3	0.2	0.3	0.3	Ampl.	0.2
	54.8	6.5	249.7	179.9	6.4	127.3	170.4	165.2	Sbd box	7.0
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
p	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	
p	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-1.13192133932E+04	Apriori delay (usec)	-1.13182593122E+04	Resid mbdelay (usec)	1.46690E-02	+/-	3.5E-04
Sband delay (usec)	-1.13192120867E+04	Apriori clock (usec)	2.5924679E+01	Resid sbdelay (usec)	-9.52775E-01	+/-	2.7E-03
Phase delay (usec)	-1.13182593080E+04	Apriori clockrate (us/s)	-2.9093478E-07	Resid phdelay (usec)	4.19959E-06	+/-	5.9E-07
Delay rate (us/s)	-1.72898645525E+00	Apriori rate (us/s)	-1.72899384947E+00	Resid rate (us/s)	7.39422E-06	+/-	4.2E-09
Total phase (deg)	5656.4	Apriori accel (us/s/s)	6.11173478166E-05	Resid phase (deg)	5710.2	+/-	18.2

	RMS	Theor.							
			Amplitude	0.250 +/- 0.040	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	43.8	43.7	Search (1024X32)	0.205	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	52.8	76.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	21.4	25.8	Inc. seg. avg.	0.244	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	25.8	45.0	Inc. frq. avg.	0.238	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

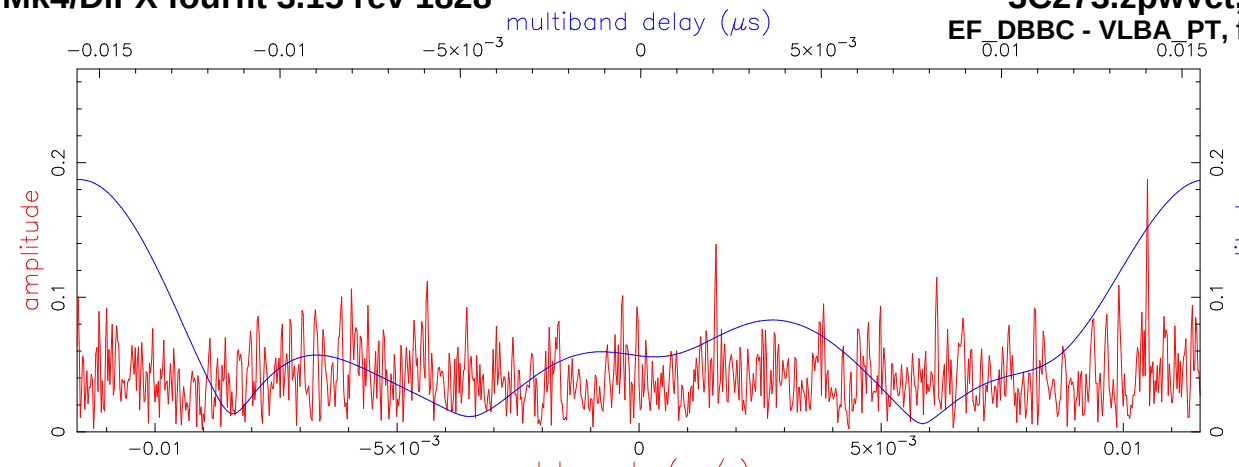
F: az 262.0 el 9.0 pa 39.1 p: az 125.2 el 42.8 pa -42.3 u,v (fr/asec) 9949.592 2003.497 simultaneous interpolator

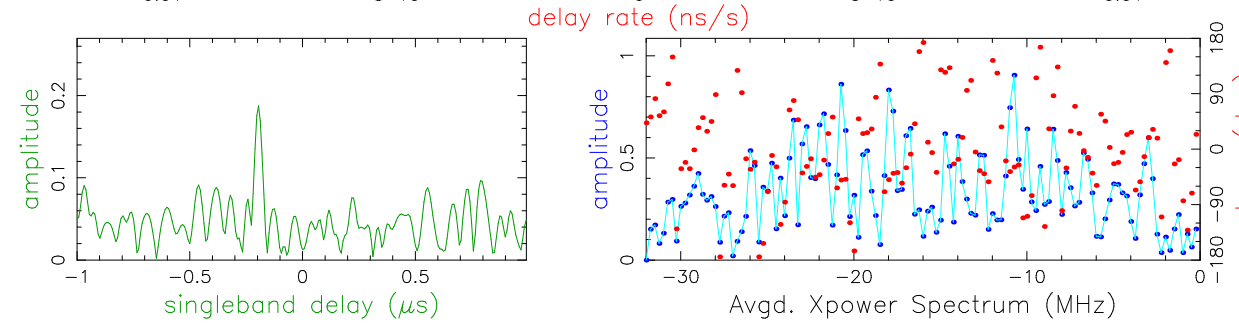
Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fp..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fp.W.101.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fp

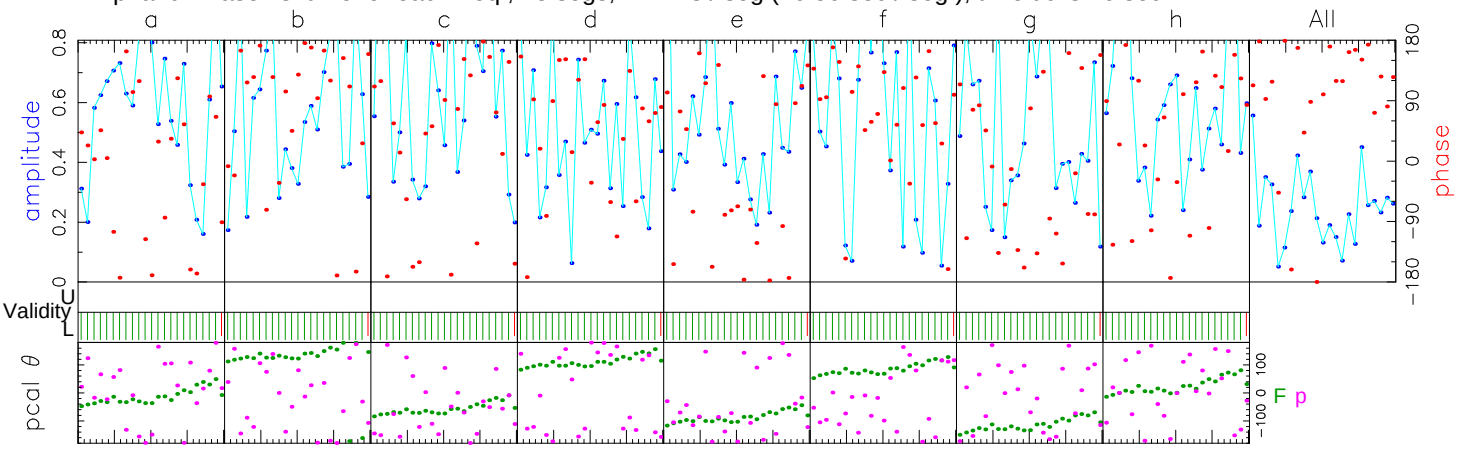
EF_DBBC - VLBA_PT, fgroup W, pol RR





Fringe quality	0
SNR	5.6
Int time	239.895
Amp	0.270
Phase	1389.6
PFD	6.9e-01
Delays (us)	
SBD	-0.196184
MBD	0.015650
Fringe rate (Hz)	
	0.904380
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022657
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	89.4	146.8	139.7	106.7	145.6	95.6	-156.4	131.5	Phase	129.6
	0.1	0.4	0.4	0.3	0.3	0.5	0.2	0.2	Ampl.	0.3
	12.0	125.3	102.4	83.4	51.8	105.3	246.3	198.2	Sbd box	103.9
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
p	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	
p	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-1.13184624117E+04	Apriori delay (usec)	-1.13182593122E+04	Resid mbdelay (usec)	1.56504E-02	+/-	3.9E-04
Sband delay (usec)	-1.13184554962E+04	Apriori clock (usec)	2.5924679E+01	Resid sbdelay (usec)	-1.96184E-01	+/-	3.1E-03
Phase delay (usec)	-1.13182593080E+04	Apriori clockrate (us/s)	-2.9093478E-07	Resid phdelay (usec)	4.17837E-06	+/-	6.6E-07
Delay rate (us/s)	-1.72898335052E+00	Apriori rate (us/s)	-1.72899384947E+00	Resid rate (us/s)	1.04990E-05	+/-	4.7E-09
Total phase (deg)	1335.8	Apriori accel (us/s/s)	6.11173478166E-05	Resid phase (deg)	1389.6	+/-	20.4

	RMS	Theor.							
			Amplitude	0.270 +/- 0.048	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	55.0	48.9	Search (1024X32)	0.184	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	72.8	85.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	39.7	28.8	Inc. seg. avg.	0.264	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	45.1	50.3	Inc. frq. avg.	0.273	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

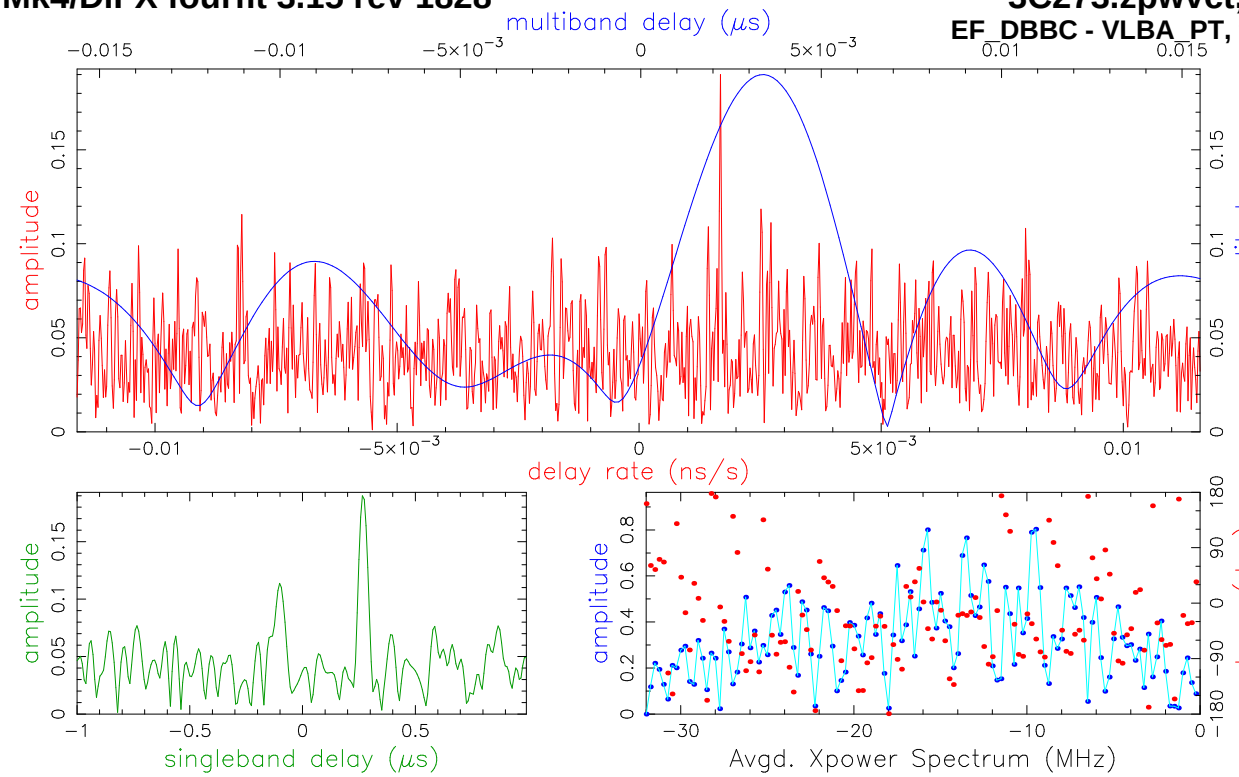
F: az 262.0 el 9.0 pa 39.1 p: az 125.2 el 42.8 pa -42.3 u,v (fr/asec) 9949.592 2003.497 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fp..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fp.W.102.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

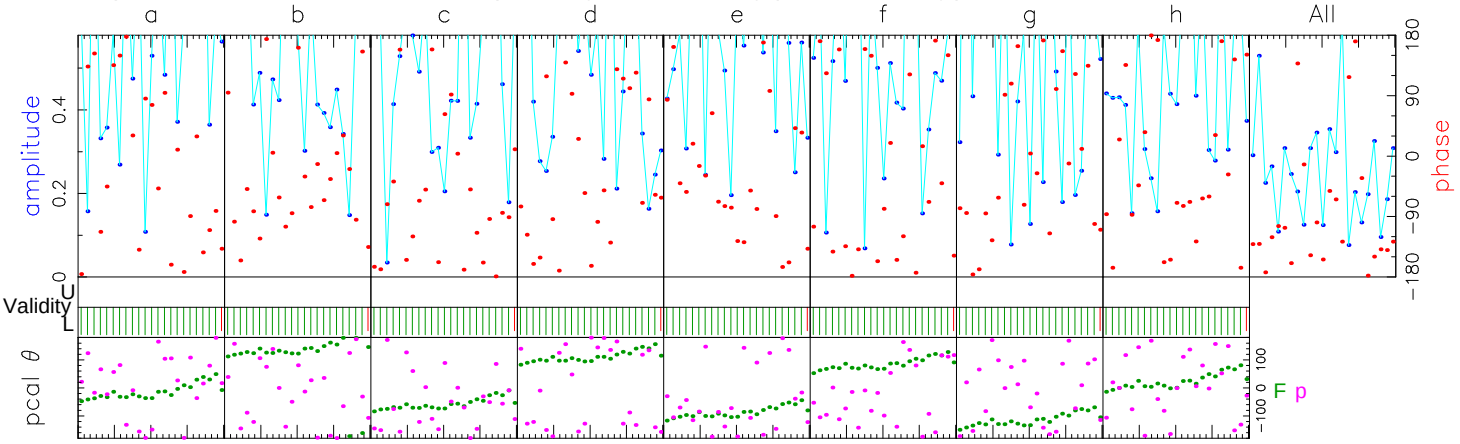
3C273.zpwvct, No0577, Fp

EF_DBBC - VLBA_PT, fgroup W, pol LR



Fringe quality	0
SNR	5.7
Int time	239.895
Amp	0.193
Phase	-1568.6
PFD	4.6e-01
Delays (us)	
SBD	0.268335
MBD	0.003382
Fringe rate (Hz)	
	0.144813
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022658
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	a	b	c	d	e	f	g	h		
	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-154.8	-87.3	-136.8	-143.7	-67.3	-169.7	-110.5	-115.0	Phase	-128.6
	0.2	0.3	0.3	0.2	0.1	0.3	0.2	0.2	Ampl.	0.2
	7.5	164.3	127.5	188.1	160.2	162.6	164.2	173.1	Sbd box	163.3
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
p	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
p	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-1.13180059299E+04	Apriori delay (usec)	-1.13182593122E+04	Resid mbdelay (usec)	3.38230E-03	+/-	3.8E-04
Sband delay (usec)	-1.13179909772E+04	Apriori clock (usec)	2.5924679E+01	Resid sbdelay (usec)	2.68335E-01	+/-	3.0E-03
Phase delay (usec)	-1.13182593163E+04	Apriori clockrate (us/s)	-2.9093478E-07	Resid phdelay (usec)	-4.14685E-06	+/-	6.4E-07
Delay rate (us/s)	-1.72899216834E+00	Apriori rate (us/s)	-1.72899384947E+00	Resid rate (us/s)	1.68113E-06	+/-	4.7E-09
Total phase (deg)	-1622.4	Apriori accel (us/s/s)	6.11173478166E-05	Resid phase (deg)	-1568.6	+/-	20.0

	RMS	Theor.							
			Amplitude	0.193 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	54.2	48.0	Search (1024X32)	0.185	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	76.1	83.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	38.0	28.3	Inc. seg. avg.	0.191	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	37.8	49.4	Inc. frq. avg.	0.201	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

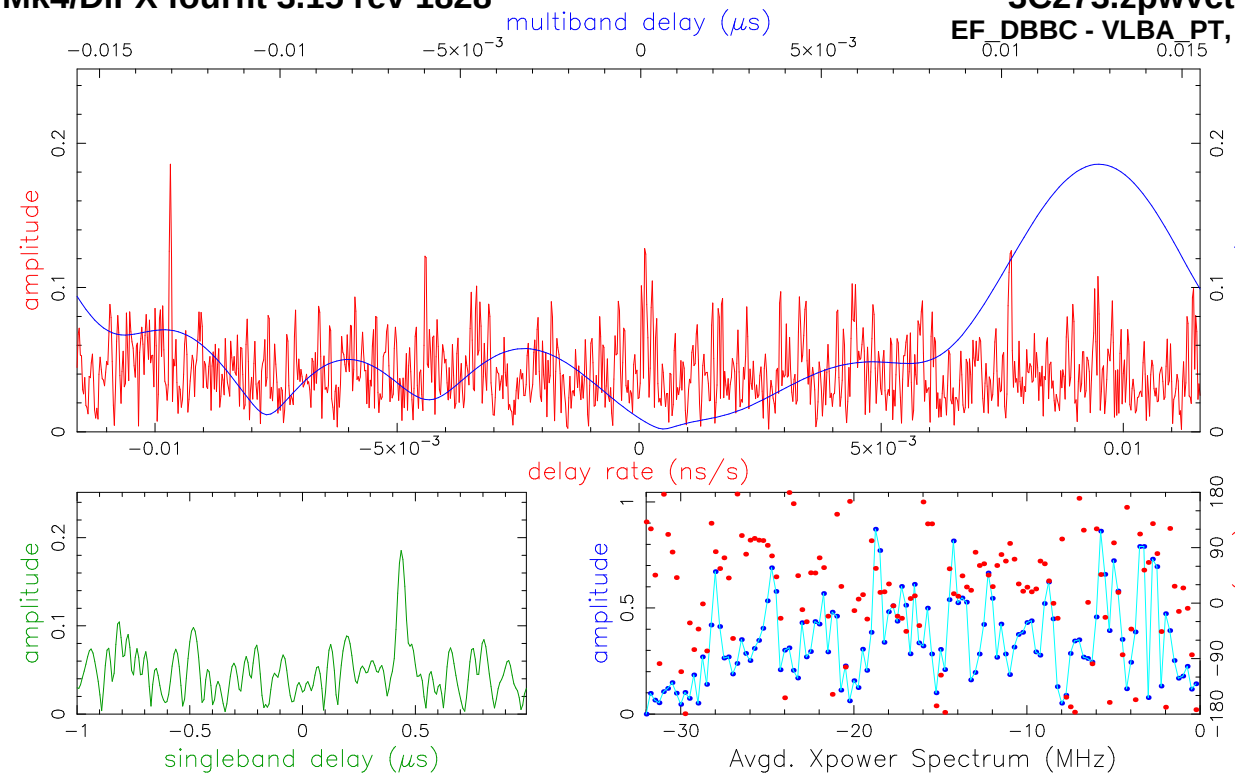
F: az 262.0 el 9.0 pa 39.1 p: az 125.2 el 42.8 pa -42.3 u,v (fr/asec) 9949.592 2003.497 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fp..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fp.W.103.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, Fp

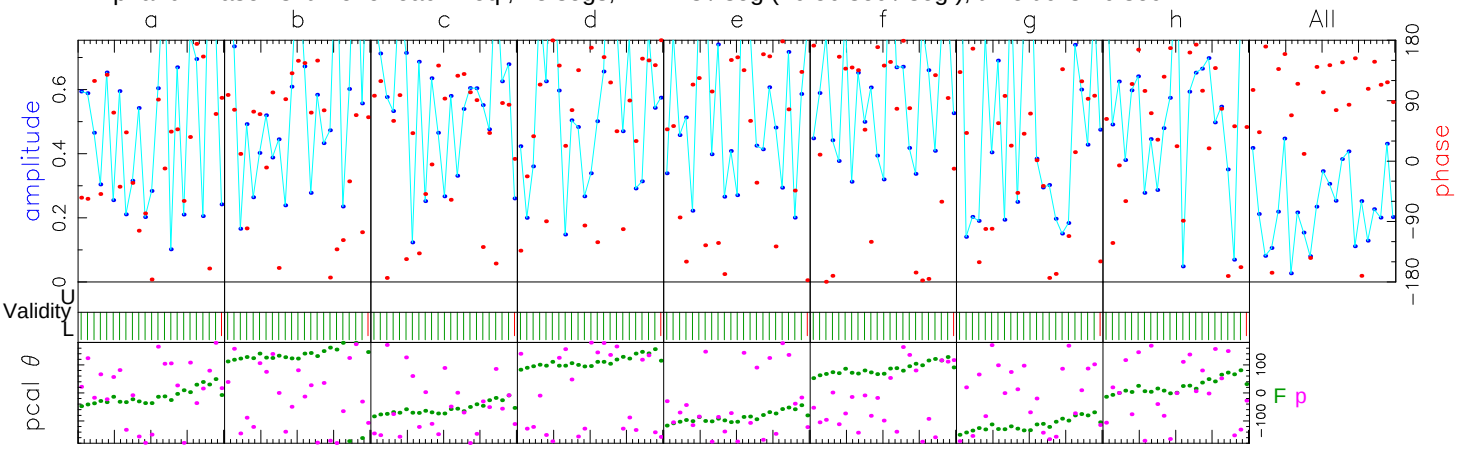
EF_DBBC - VLBA_PT, fgroup W, pol RL



Fringe quality 0

SNR	5.6
Int time	239.895
Amp	0.251
Phase	-2397.4
PFD	8.1e-01
Delays (us)	
SBD	0.438226
MBD	0.012690
Fringe rate (Hz)	
	-0.833439
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022659
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	a	b	c	d	e	f	g	h		All
	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	
	29.3	112.5	118.2	141.1	151.1	149.6	77.5	100.8	Phase	122.6
	0.1	0.3	0.3	0.4	0.3	0.4	0.2	0.3	Ampl.	0.3
	35.2	190.2	249.9	230.3	243.6	201.2	205.0	214.1	Sbd box	185.1
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
p	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
p	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-1.13178091219E+04	Apriori delay (usec)	-1.13182593122E+04	Resid mbdelay (usec)	1.26903E-02	+/-	3.9E-04
Sband delay (usec)	-1.13178210867E+04	Apriori clock (usec)	2.5924679E+01	Resid sbdelay (usec)	4.38226E-01	+/-	3.1E-03
Phase delay (usec)	-1.13182593082E+04	Apriori clockrate (us/s)	-2.9093478E-07	Resid phdelay (usec)	3.95224E-06	+/-	6.6E-07
Delay rate (us/s)	-1.72900352487E+00	Apriori rate (us/s)	-1.72899384947E+00	Resid rate (us/s)	-9.67540E-06	+/-	4.8E-09
Total phase (deg)	-2451.2	Apriori accel (us/s/s)	6.11173478166E-05	Resid phase (deg)	-2397.4	+/-	20.6

	RMS	Theor.					
			Amplitude	0.251 +/- 0.045	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	48.0	49.4	Search (1024X32)	0.177	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	70.5	86.3	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	46.9	29.2	Inc. seg. avg.	0.234	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	37.7	50.9	Inc. frq. avg.	0.256	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

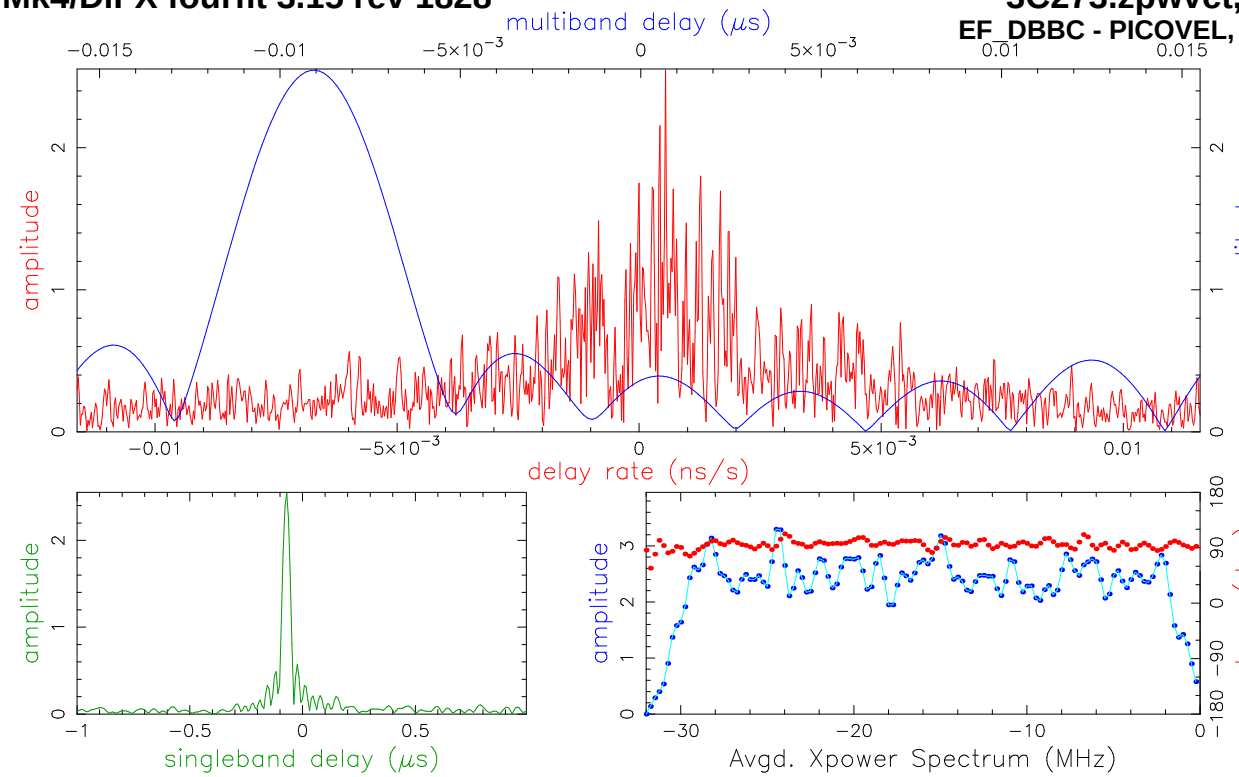
F: az 262.0 el 9.0 pa 39.1 p: az 125.2 el 42.8 pa -42.3 u,v (fr/asec) 9949.592 2003.497 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/Fp..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/Fp.W.104.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FP

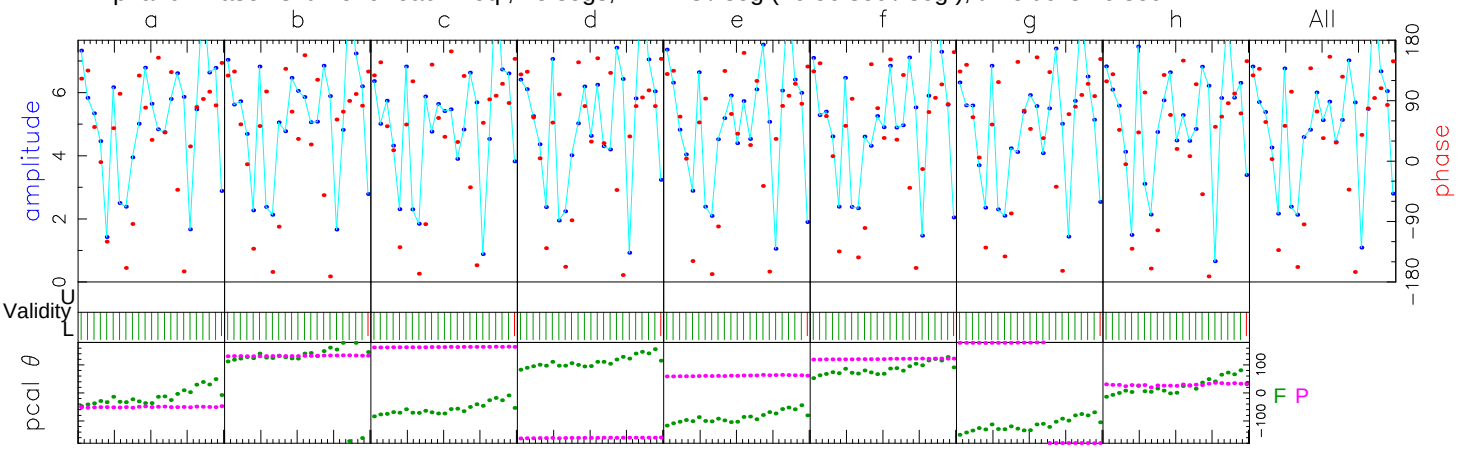
EF_DBBC - PICOVEL, fgroup W, pol LL



Fringe quality 5

SNR	76.3
Int time	239.491
Amp	2.554
Phase	455.8
PFD	0.0e+00
Delays (us)	
SBD	-0.071599
MBD	-0.009064
Fringe rate (Hz)	
	0.046559
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022700
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	92.7	91.9	99.5	98.7	98.6	98.0	99.8	87.2	Phase	95.8
	2.7	2.6	2.4	2.6	2.7	2.4	2.5	2.5	Ampl.	2.6
	119.7	119.9	119.8	119.9	119.9	119.9	119.8	119.8	Sbd box	119.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
P	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
P	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-3.44806976428E+03	Apriori delay (usec)	-3.44799820063E+03	Resid mbdelay (usec)	-9.06365E-03	+/-	2.8E-05
Sband delay (usec)	-3.44806979913E+03	Apriori clock (usec)	2.7882486E+01	Resid sbdelay (usec)	-7.15985E-02	+/-	2.3E-04
Phase delay (usec)	-3.44799819754E+03	Apriori clockrate (us/s)	-5.4640006E-07	Resid phdelay (usec)	3.08804E-06	+/-	4.8E-08
Delay rate (us/s)	1.83529279166E-01	Apriori rate (us/s)	1.83528738668E-01	Resid rate (us/s)	5.40498E-07	+/-	3.5E-10
Total phase (deg)	454.9	Apriori accel (us/s/s)	1.91278894966E-05	Resid phase (deg)	455.8	+/-	1.5

	RMS	Theor.							
			Amplitude	2.554 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	73.2	3.6	Search (1024X32)	2.450	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	121.4	6.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	5.0	2.1	Inc. seg. avg.	5.027	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	4.5	3.7	Inc. frq. avg.	2.553	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

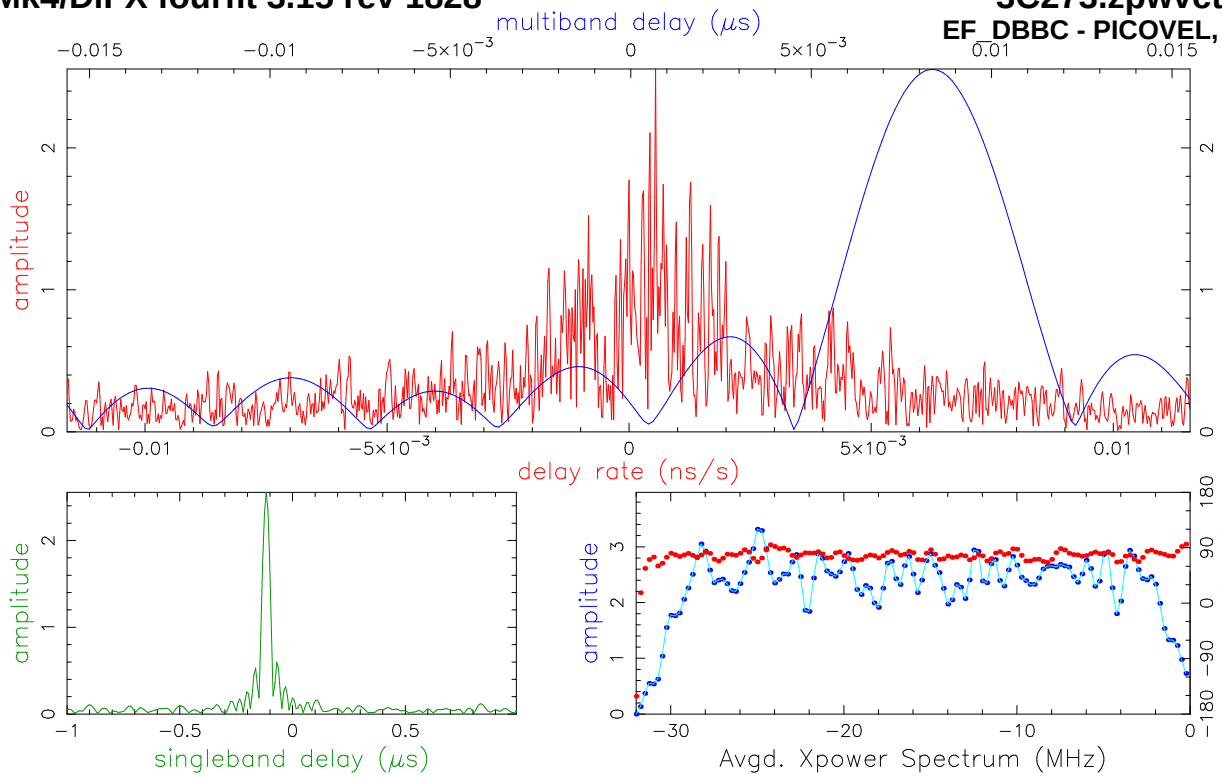
F: az 262.0 el 9.0 pa 39.1 P: az 257.8 el 18.7 pa 51.3 u,v (fr/asec) -1038.244 1549.189 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FP..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FP.W.105.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FP

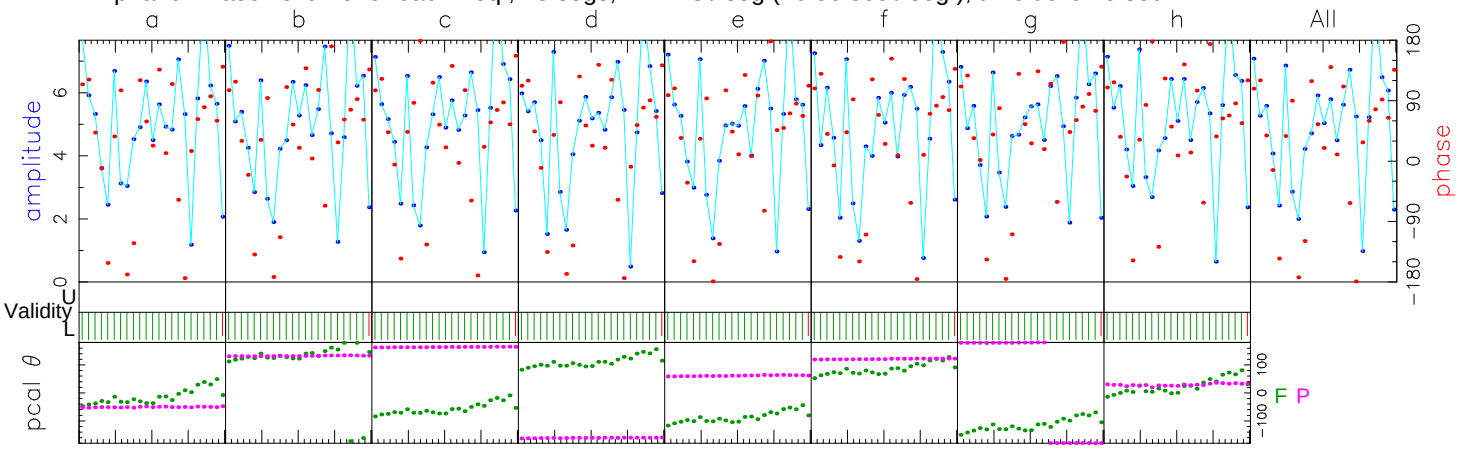
EF_DBBC - PICOVEL, fgroup W, pol RR



Fringe quality 5

SNR	76.4
Int time	239.491
Amp	2.556
Phase	798.8
PFD	0.0e+00
Delays (us)	
SBD	-0.116765
MBD	0.008358
Fringe rate (Hz)	
	0.046560
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022701
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	83.5	75.0	77.0	79.6	72.9	84.6	81.3	76.5	Phase	78.8
	2.5	2.5	2.6	2.5	2.5	2.5	2.7	2.6	Ampl.	2.6
	113.9	114.1	114.2	114.1	114.0	114.2	113.7	114.2	Sbd box	114.1
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
P	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
P	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-3.44811484290E+03	Apriori delay (usec)	-3.44799820063E+03	Resid mbdelay (usec)	8.35773E-03	+/-	2.8E-05
Sband delay (usec)	-3.44811496563E+03	Apriori clock (usec)	2.7882486E+01	Resid sbdelay (usec)	-1.16765E-01	+/-	2.3E-04
Phase delay (usec)	-3.44799819809E+03	Apriori clockrate (us/s)	-5.4640006E-07	Resid phdelay (usec)	2.54164E-06	+/-	4.8E-08
Delay rate (us/s)	1.83529279186E-01	Apriori rate (us/s)	1.83528738668E-01	Resid rate (us/s)	5.40518E-07	+/-	3.5E-10
Total phase (deg)	797.9	Apriori accel (us/s/s)	1.91278894966E-05	Resid phase (deg)	798.8	+/-	1.5

	RMS	Theor.					
			Amplitude	2.556 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	73.3	3.6	Search (1024X32)	2.427	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	120.0	6.3	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	4.5	2.1	Inc. seg. avg.	4.980	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	2.4	3.7	Inc. frq. avg.	2.559	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

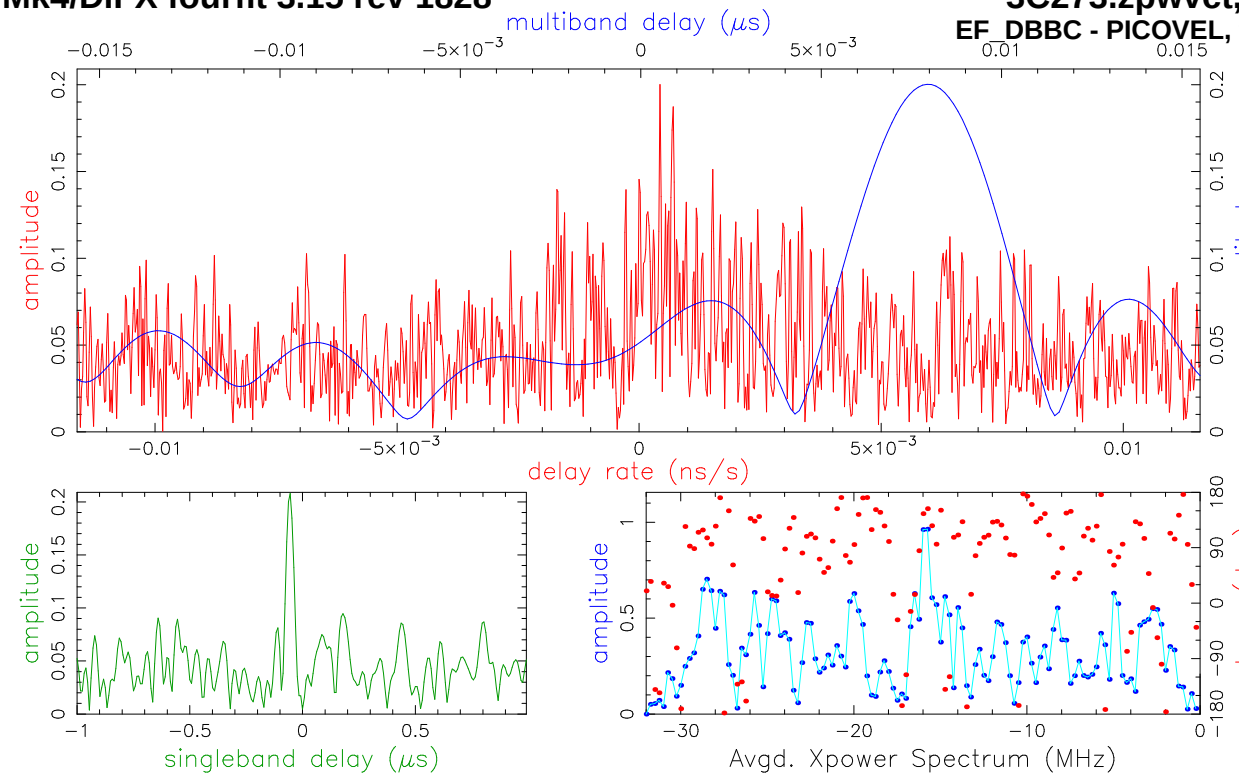
F: az 262.0 el 9.0 pa 39.1 P: az 257.8 el 18.7 pa 51.3 u,v (fr/asec) -1038.244 1549.189 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FP..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FP.W.106.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

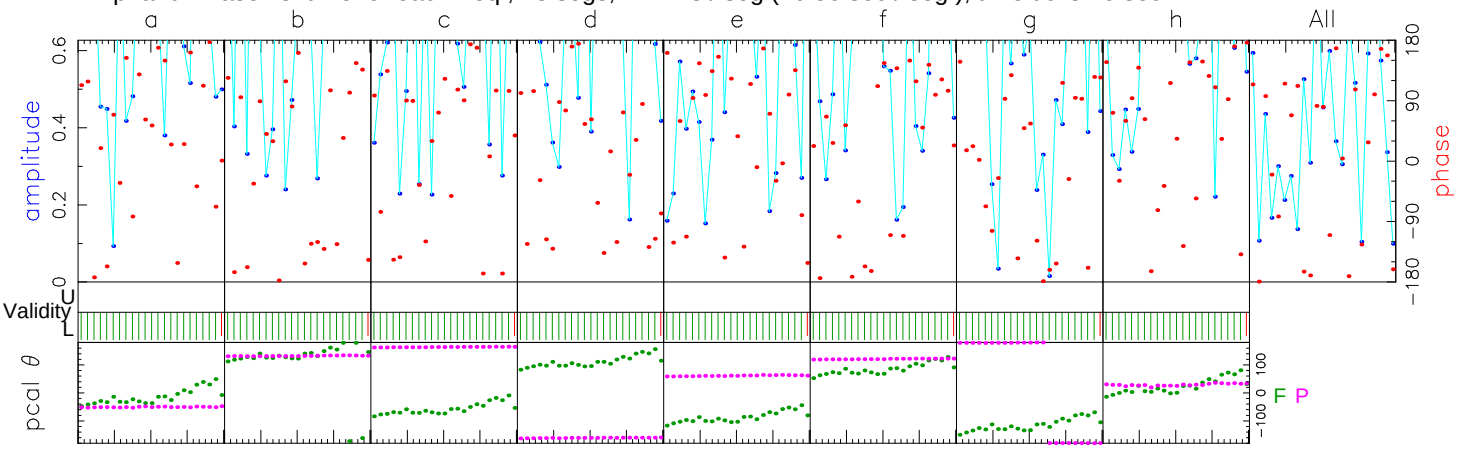
3C273.zpwvct, No0577, FP

EF_DBBC - PICOVEL, fgroup W, pol LR



Fringe quality	0
SNR	6.3
Int time	239.491
Amp	0.209
Phase	484.9
PFD	2.7e-02
Delays (us)	
SBD	-0.056669
MBD	0.008051
Fringe rate (Hz)	
	0.036245
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022702
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	110.6	143.0	122.5	88.6	136.8	134.3	93.2	128.3	Phase	124.9
	0.2	0.3	0.2	0.0	0.2	0.3	0.2	0.2	Ampl.	0.2
	153.0	31.4	188.7	25.5	140.4	120.0	219.1	83.1	Sbd box	121.7
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
P	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
P	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-3.44805265004E+03	Apriori delay (usec)	-3.44799820063E+03	Resid mbdelay (usec)	8.05059E-03	+/-	3.5E-04
Sband delay (usec)	-3.44805486913E+03	Apriori clock (usec)	2.7882486E+01	Resid sbdelay (usec)	-5.66685E-02	+/-	2.8E-03
Phase delay (usec)	-3.44799819660E+03	Apriori clockrate (us/s)	-5.4640006E-07	Resid phdelay (usec)	4.02844E-06	+/-	5.9E-07
Delay rate (us/s)	1.83529159432E-01	Apriori rate (us/s)	1.83528738668E-01	Resid rate (us/s)	4.20764E-07	+/-	4.3E-09
Total phase (deg)	484.1	Apriori accel (us/s/s)	1.91278894966E-05	Resid phase (deg)	484.9	+/-	18.3

	RMS	Theor.							
			Amplitude	0.209 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	75.8	44.0	Search (1024X32)	0.191	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	157.8	76.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	22.7	25.9	Inc. seg. avg.	0.327	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	35.2	45.2	Inc. frq. avg.	0.189	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

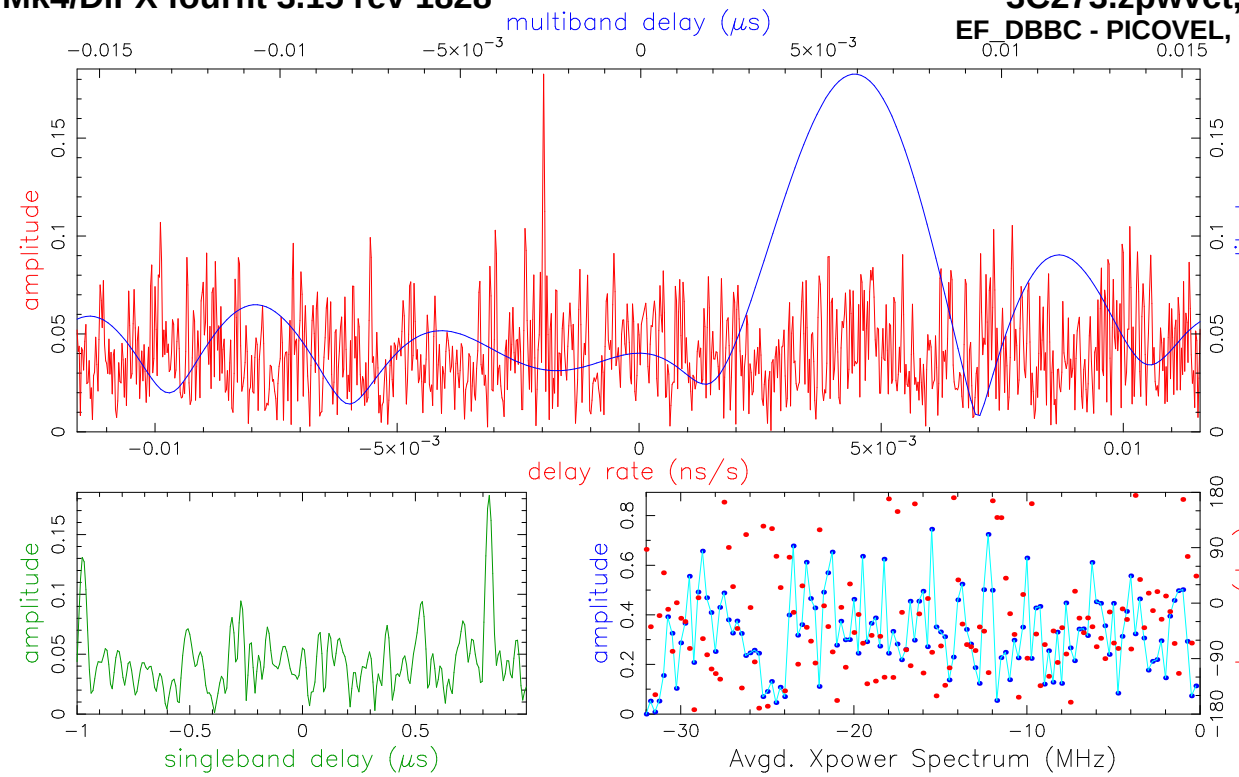
F: az 262.0 el 9.0 pa 39.1 P: az 257.8 el 18.7 pa 51.3 u,v (fr/asec) -1038.244 1549.189 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FP..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FP.W.107.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FP

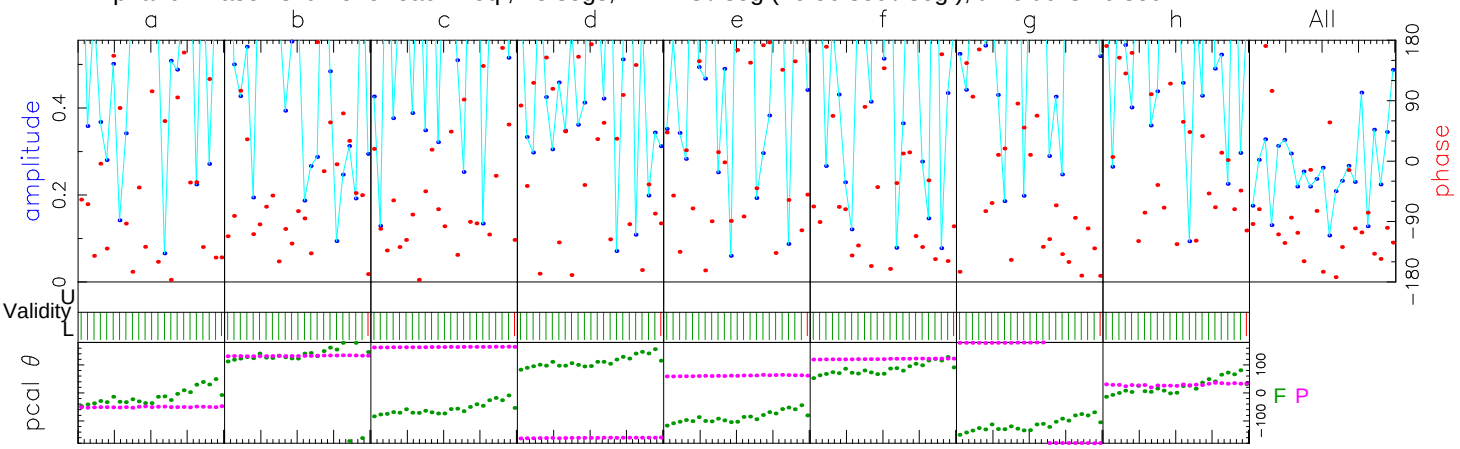
EF_DBBC - PICOVEL, fgroup W, pol RL



Fringe quality 0

SNR	5.5
Int time	239.491
Amp	0.185
Phase	-4793.5
PFD	9.2e-01
Delays (us)	
SBD	0.826843
MBD	0.005975
Fringe rate (Hz)	
	-0.169822
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044000.00
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:022703
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 21 APs / seg (10.50 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-131.8	-75.4	-101.0	-164.3	-135.7	-103.6	-141.9	-82.9	Phase	-113.5
	0.2	0.3	0.3	0.1	0.2	0.2	0.2	0.2	Ampl.	0.2
	143.4	3.4	65.8	204.5	5.2	201.6	105.6	114.7	Sbd box	234.8
U/L	0/480	0/480	0/480	0/480	0/480	0/480	0/480	0/480	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
P	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
P	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-3.44717972573E+03	Apriori delay (usec)	-3.44799820063E+03	Resid mbdelay (usec)	5.97490E-03	+/-	4.0E-04
Sband delay (usec)	-3.44717135763E+03	Apriori clock (usec)	2.7882486E+01	Resid sbdelay (usec)	8.26843E-01	+/-	3.1E-03
Phase delay (usec)	-3.44799820429E+03	Apriori clockrate (us/s)	-5.4640006E-07	Resid phdelay (usec)	-3.65856E-06	+/-	6.7E-07
Delay rate (us/s)	1.83526767204E-01	Apriori rate (us/s)	1.83528738668E-01	Resid rate (us/s)	-1.97146E-06	+/-	4.9E-09
Total phase (deg)	-4794.3	Apriori accel (us/s/s)	1.91278894966E-05	Resid phase (deg)	-4793.5	+/-	20.9

	RMS	Theor.							
			Amplitude	0.185 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	63.1	50.1	Search (1024X32)	0.177	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	64.7	87.5	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	33.8	29.6	Inc. seg. avg.	0.192	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	26.0	51.6	Inc. frq. avg.	0.183	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

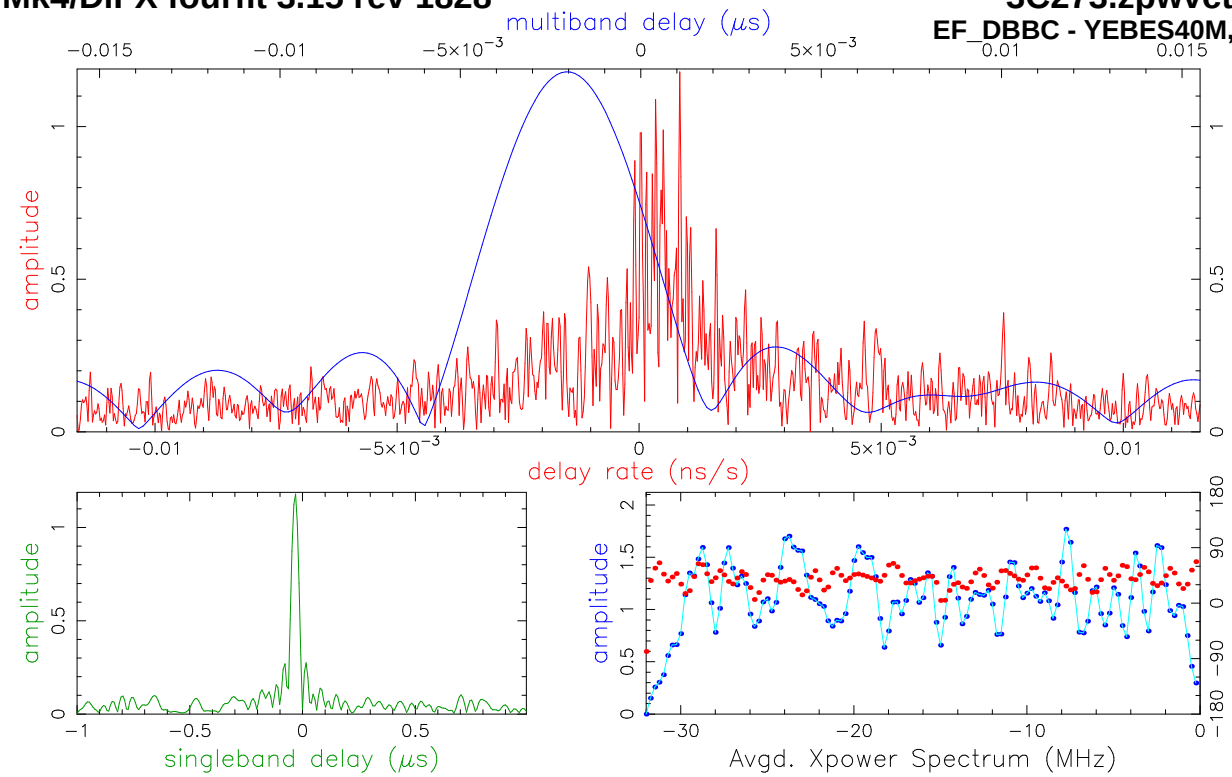
F: az 262.0 el 9.0 pa 39.1 P: az 257.8 el 18.7 pa 51.3 u,v (fr/asec) -1038.244 1549.189 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FP..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FP.W.108.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FY

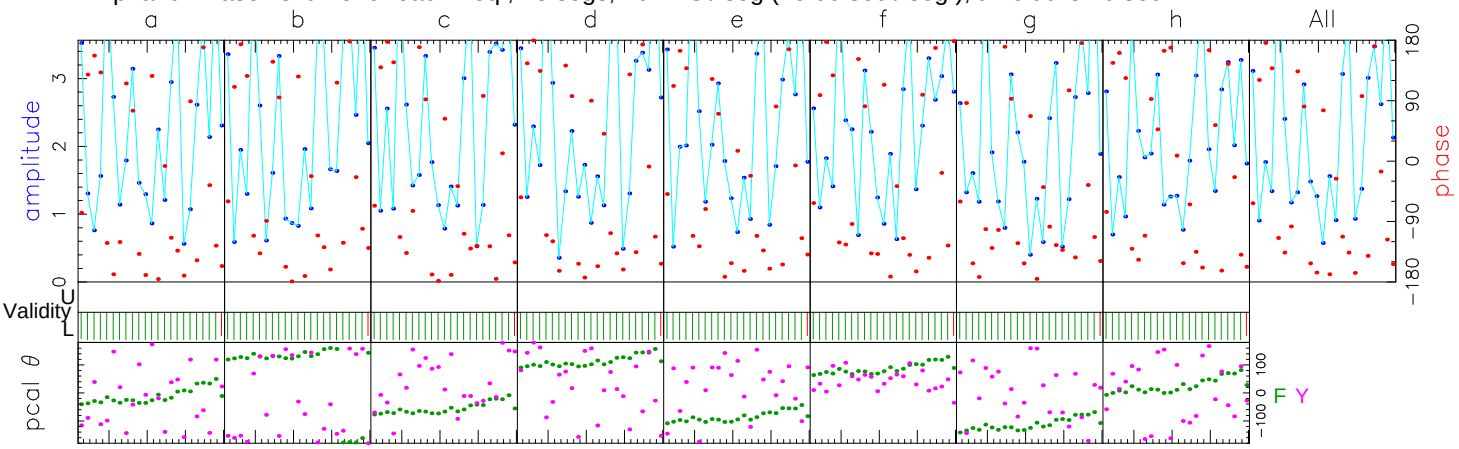
EF_DBBC - YEBES40M, fgroup W, pol LL



Fringe quality 7

SNR	34.6
Int time	228.080
Amp	1.189
Phase	38.0
PFD	0.0e+00
Delays (us)	
SBD	-0.033163
MBD	-0.002043
Fringe rate (Hz)	
	0.073138
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044011.50
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023055
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 20 APs / seg (10.00 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-151.0	-138.1	-137.3	-140.4	-139.9	-145.8	-129.0	-157.5	Phase	-142.0
	1.2	1.2	1.2	1.3	1.1	1.2	1.3	1.0	Ampl.	1.2
	124.5	124.8	124.9	125.0	124.7	125.0	124.6	124.4	Sbd box	124.8
U/L	0/457	0/457	0/457	0/457	0/457	0/457	0/457	0/457	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
Y	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
Y	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-3.10730400429E+03	Apriori delay (usec)	-3.10727071167E+03	Resid mbdelay (usec)	-2.04262E-03	+/-	6.3E-05
Sband delay (usec)	-3.10730387417E+03	Apriori clock (usec)	2.4534796E+01	Resid sbdelay (usec)	-3.31625E-02	+/-	5.0E-04
Phase delay (usec)	-3.10727071625E+03	Apriori clockrate (us/s)	-4.8640009E-07	Resid phdelay (usec)	-4.57765E-06	+/-	1.1E-07
Delay rate (us/s)	1.31133649309E-01	Apriori rate (us/s)	1.31132800252E-01	Resid rate (us/s)	8.49057E-07	+/-	8.1E-10
Total phase (deg)	0.8	Apriori accel (us/s/s)	1.71181766968E-05	Resid phase (deg)	38.0	+/-	3.3

	RMS	Theor.					
			Amplitude	1.189 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	73.3	7.9	Search (1024X32)	1.073	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	130.9	13.8	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	9.6	4.7	Inc. seg. avg.	2.177	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	9.3	8.2	Inc. frq. avg.	1.190	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

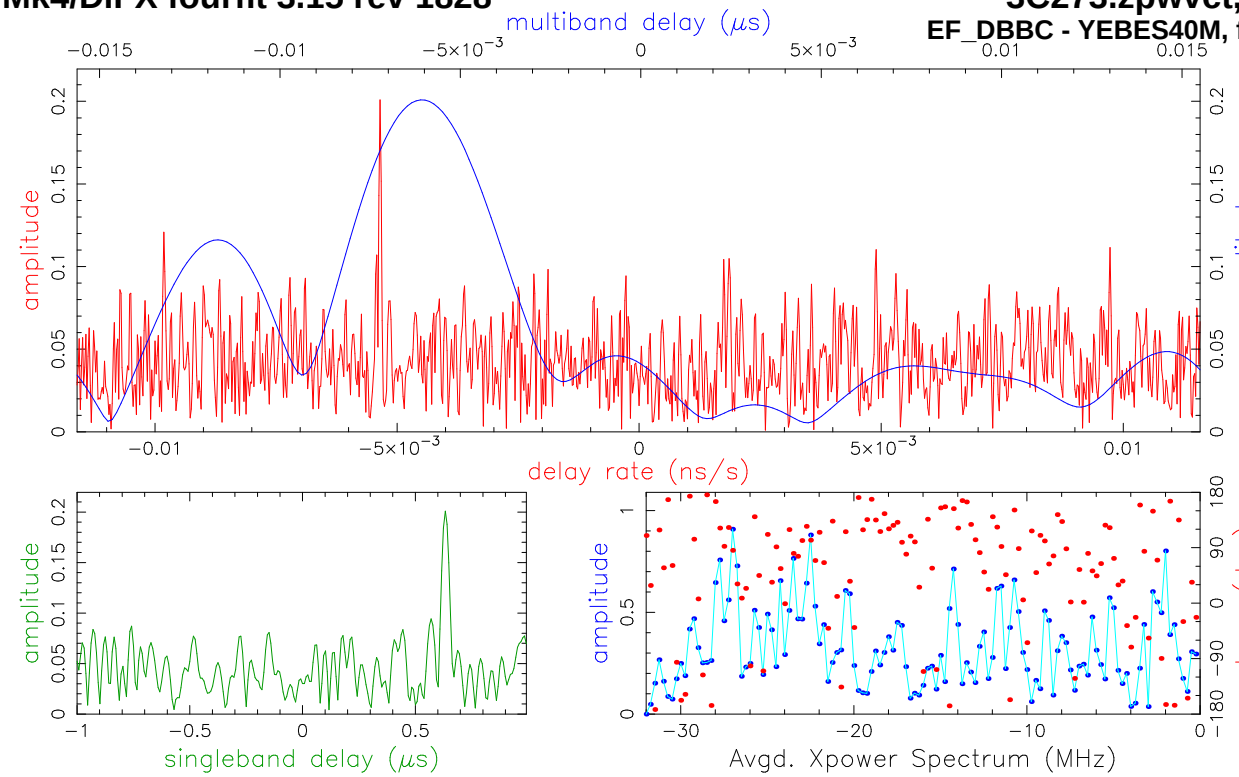
F: az 262.0 el 9.0 pa 39.1 Y: az 256.9 el 17.7 pa 47.9 u,v (fr/asec) -739.480 1128.643 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FY..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FY.W.321.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

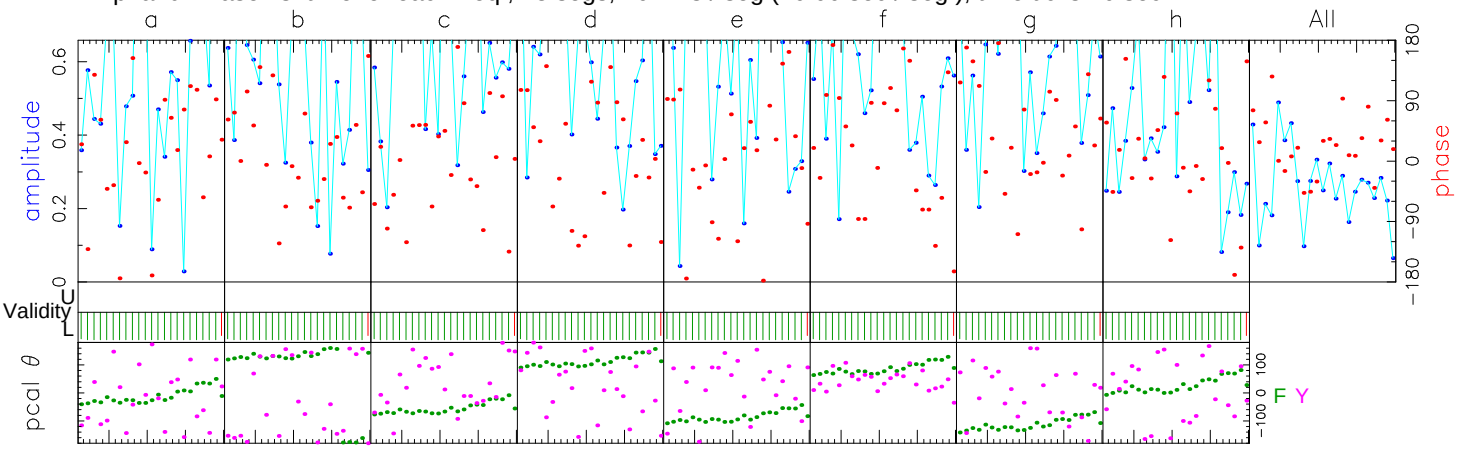
3C273.zpwvct, No0577, FY

EF_DBBC - YEBES40M, fgroup W, pol RR



Fringe quality	0
SNR	5.9
Int time	228.080
Amp	0.220
Phase	-3577.4
PFD	2.4e-01
Delays (us)	
SBD	0.633282
MBD	-0.006075
Fringe rate (Hz)	
	-0.460126
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044011.50
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023057
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 20 APs / seg (10.00 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	38.2	13.9	3.0	30.7	24.1	61.1	28.8	4.5	Phase	22.6
	0.3	0.3	0.3	0.1	0.2	0.1	0.3	0.2	Ampl.	0.2
	70.4	211.2	210.5	182.0	17.3	179.0	149.6	80.0	Sbd box	210.1
U/L	0/457	0/457	0/457	0/457	0/457	0/457	0/457	0/457	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
Y	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
Y	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-3.10665178661E+03	Apriori delay (usec)	-3.10727071167E+03	Resid mbdelay (usec)	-6.07494E-03	+/-	3.7E-04
Sband delay (usec)	-3.10663742967E+03	Apriori clock (usec)	2.4534796E+01	Resid sbdelay (usec)	6.33282E-01	+/-	2.9E-03
Phase delay (usec)	-3.10727071094E+03	Apriori clockrate (us/s)	-4.8640009E-07	Resid phdelay (usec)	7.29713E-07	+/-	6.3E-07
Delay rate (us/s)	1.31127458643E-01	Apriori rate (us/s)	1.31132800252E-01	Resid rate (us/s)	-5.34161E-06	+/-	4.8E-09
Total phase (deg)	-3614.6	Apriori accel (us/s/s)	1.71181766968E-05	Resid phase (deg)	-3577.4	+/-	19.5

	RMS	Theor.							
			Amplitude	0.220 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	43.8	46.8	Search (1024X32)	0.186	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	60.3	81.7	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	20.9	27.6	Inc. seg. avg.	0.217	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	37.2	48.2	Inc. frq. avg.	0.205	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

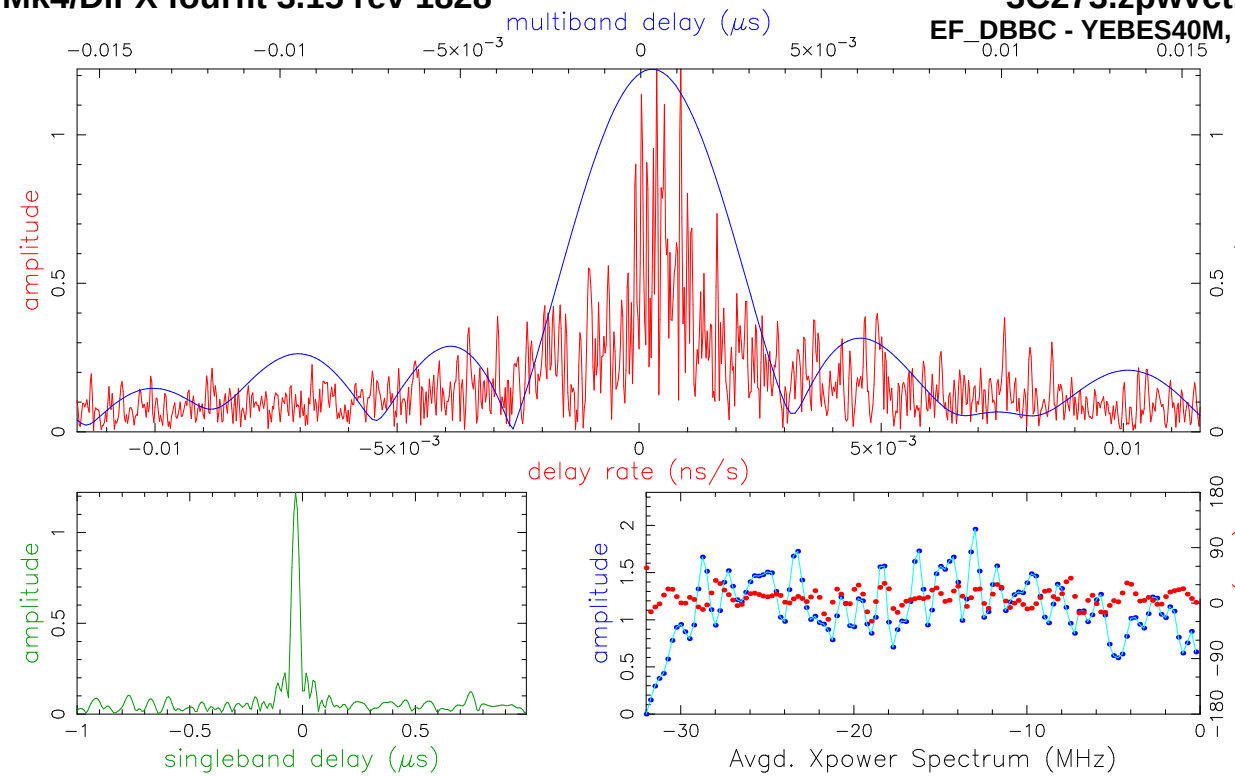
F: az 262.0 el 9.0 pa 39.1 Y: az 256.9 el 17.7 pa 47.9 u,v (fr/asec) -739.480 1128.643 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FY..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FY.W.322.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

3C273.zpwvct, No0577, FY

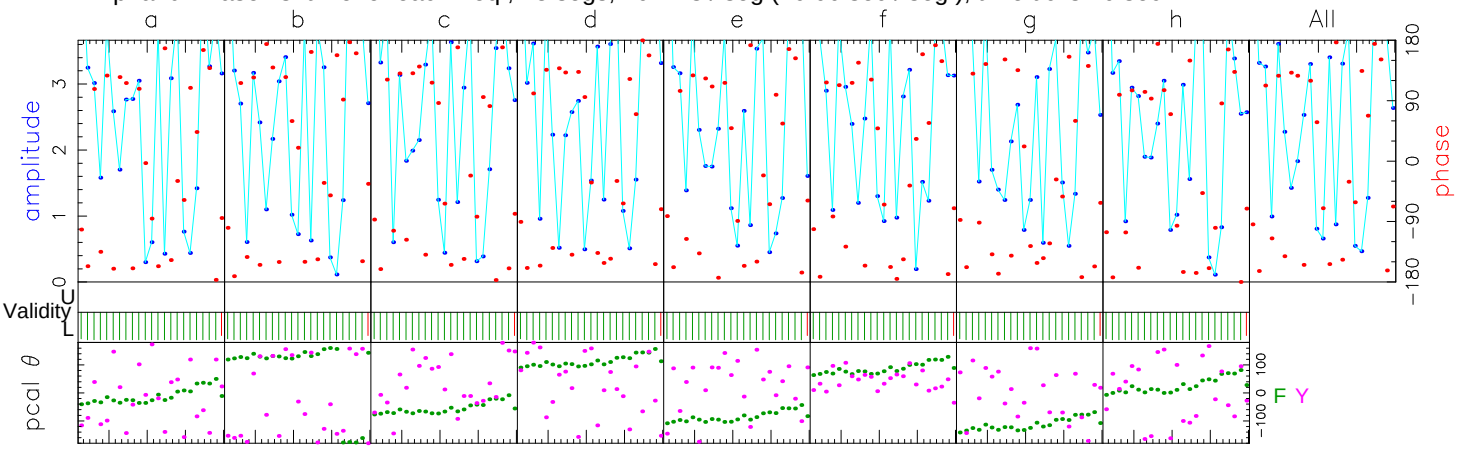
EF_DBBC - YEBES40M, fgroup W, pol LR



Fringe quality 7

SNR	35.7
Int time	228.080
Amp	1.222
Phase	7.3
PFD	0.0e+00
Delays (us)	
SBD	-0.030679
MBD	0.000310
Fringe rate (Hz)	
	0.030691
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044011.50
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023057
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 20 APs / seg (10.00 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	-178.1	-171.3	-173.4	-160.8	178.5	-177.3	-155.8	174.0	Phase	-172.7
	1.3	1.4	1.3	1.3	1.1	1.3	1.3	1.1	Ampl.	1.2
	125.0	125.4	124.9	125.3	125.2	125.1	125.0	124.7	Sbd box	125.1
U/L	0/457	0/457	0/457	0/457	0/457	0/457	0/457	0/457	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
Y	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	
Y	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	

Group delay (usec)(sbd)	-3.10730165121E+03	Apriori delay (usec)	-3.10727071167E+03	Resid mbdelay (usec)	3.10459E-04	+/-	6.1E-05
Sband delay (usec)	-3.10730139067E+03	Apriori clock (usec)	2.4534796E+01	Resid sbdelay (usec)	-3.06790E-02	+/-	4.8E-04
Phase delay (usec)	-3.10727071724E+03	Apriori clockrate (us/s)	-4.8640009E-07	Resid phdelay (usec)	-5.57040E-06	+/-	1.0E-07
Delay rate (us/s)	1.31133156549E-01	Apriori rate (us/s)	1.31132800252E-01	Resid rate (us/s)	3.56296E-07	+/-	7.9E-10
Total phase (deg)	-29.9	Apriori accel (us/s/s)	1.71181766968E-05	Resid phase (deg)	7.3	+/-	3.2

	RMS	Theor.					
			Amplitude	1.222 +/- 0.034	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
ph/seg (deg)	72.6	7.7	Search (1024X32)	1.163	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
amp/seg (%)	154.1	13.4	Interp.	0.000	Bits/sample: 2x2 SampCntNorm: enabled	mb window (us)	-0.016 0.016
ph/frq (deg)	11.1	4.5	Inc. seg. avg.	2.476	Sample rate(MSamp/s): 64	dr window (ns/s)	-0.012 0.012
amp/frq (%)	5.8	7.9	Inc. frq. avg.	1.235	Data rate(Mb/s): 1024 nlags: 128 t_cohere infinite	ion window (TEC)	0.00 0.00

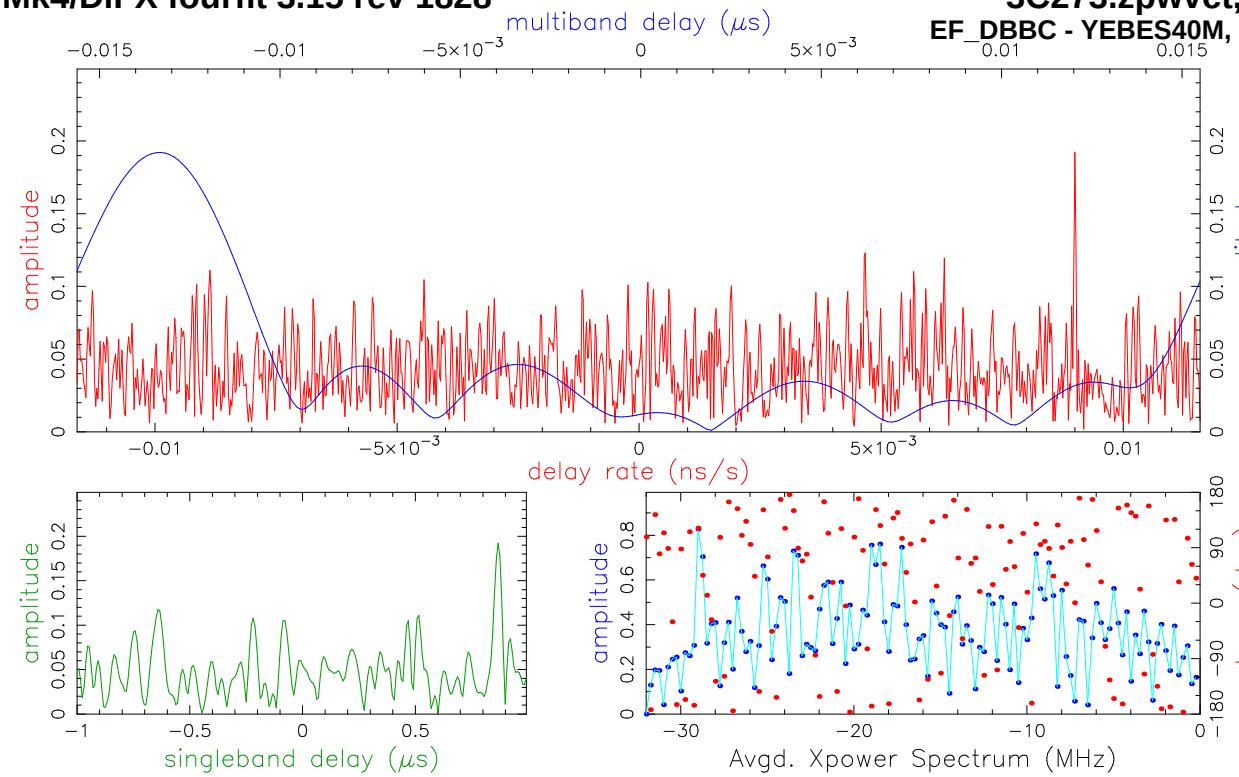
F: az 262.0 el 9.0 pa 39.1 Y: az 256.9 el 17.7 pa 47.9 u,v (fr/asec) -739.480 1128.643 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FY..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FY.W.323.zpwvct

Mk4/DiFX fourfit 3.15 rev 1828

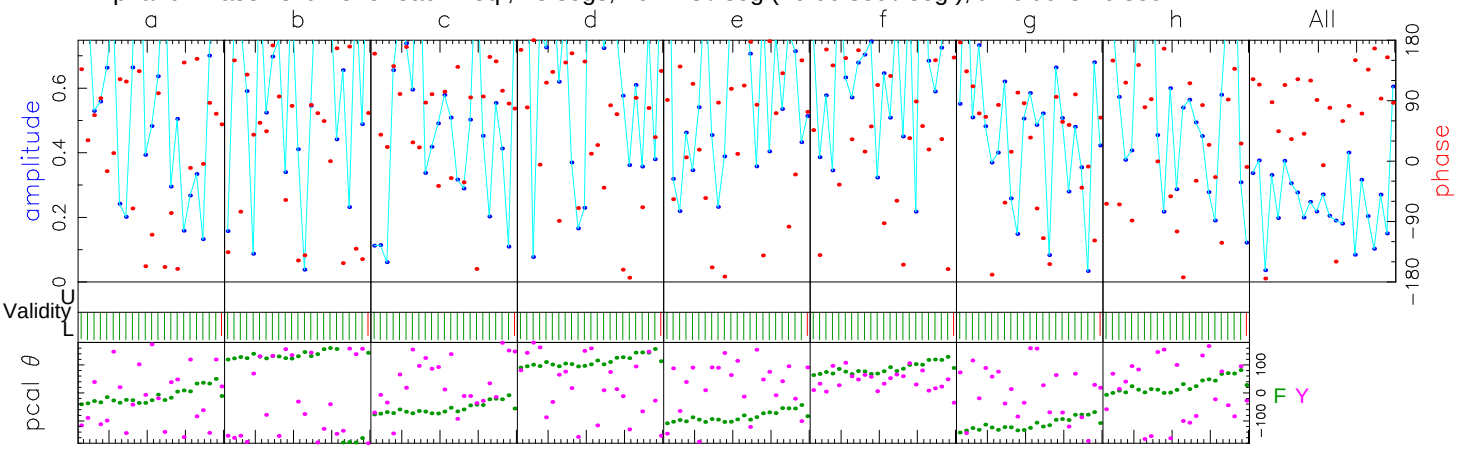
3C273.zpwvct, No0577, FY

EF_DBBC - YEBES40M, fgroup W, pol RL



Fringe quality	0
SNR	5.6
Int time	228.080
Amp	0.250
Phase	-4946.5
PFD	7.0e-01
Delays (us)	
SBD	0.867728
MBD	-0.013345
Fringe rate (Hz)	
	0.775637
Ion TEC	0.000
Ref freq (MHz)	
	86140.0000
AP (sec)	0.500
Exp.	c171a
Exper #	16383
Yr:day	2017:090
Start	044011.50
Stop	044400.00
FRT	044200.00
Corr/FF/build	
	2017:208:013416
	2017:215:023058
	2017:188:152524
RA & Dec (J2000)	
	12h29m 6.6997s
	+2°03' 8.598"

Amp. and Phase vs. time for each freq., 23 segs, 20 APs / seg (10.00 sec / seg.), time ticks 10 sec



	86156.00	86188.00	86220.00	86252.00	86284.00	86316.00	86348.00	86380.00	Freq (MHz)	All
	92.4	100.1	97.0	85.2	101.4	74.8	90.4	107.1	Phase	93.5
	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	Ampl.	0.2
	254.5	160.9	242.1	192.8	92.8	15.4	107.2	216.3	Sbd box	240.1
U/L	0/457	0/457	0/457	0/457	0/457	0/457	0/457	0/457	APs used	
F	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
Y	-1000	-1000	-1000	-1000	-1000	-1000	-1000	-1000	PC freqs	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
F:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
F	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
F	W00LR	W01LR	W02LR	W03LR	W04LR	W05LR	W06LR	W07LR	Chan ids Tracks	
Y	W00LL	W01LL	W02LL	W03LL	W04LL	W05LL	W06LL	W07LL	Chan ids Tracks	

Group delay (usec)(sbd)	-3.10640905676E+03	Apriori delay (usec)	-3.10727071167E+03	Resid mbdelay (usec)	-1.33451E-02	+/-	3.9E-04
Sband delay (usec)	-3.10640298317E+03	Apriori clock (usec)	2.4534796E+01	Resid sbdelay (usec)	8.67728E-01	+/-	3.1E-03
Phase delay (usec)	-3.10727070866E+03	Apriori clockrate (us/s)	-4.8640009E-07	Resid phdelay (usec)	3.01441E-06	+/-	6.6E-07
Delay rate (us/s)	1.31141804626E-01	Apriori rate (us/s)	1.31132800252E-01	Resid rate (us/s)	9.00437E-06	+/-	5.0E-09
Total phase (deg)	-4983.7	Apriori accel (us/s/s)	1.71181766968E-05	Resid phase (deg)	-4946.5	+/-	20.4

	RMS	Theor.							
			Amplitude	0.250 +/- 0.044	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
ph/seg (deg)	51.4	49.0	Search (1024X32)	0.186	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000
amp/seg (%)	68.2	85.4	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.016	0.016
ph/frq (deg)	11.0	28.9	Inc. seg. avg.	0.241	Sample rate(MSamp/s): 64		dr window (ns/s)	-0.012	0.012
amp/frq (%)	20.5	50.4	Inc. frq. avg.	0.224	Data rate(Mb/s): 1024	nlags: 128 t_cohere infinite	ion window (TEC)	0.00	0.00

F: az 262.0 el 9.0 pa 39.1 Y: az 256.9 el 17.7 pa 47.9 u,v (fr/asec) -739.480 1128.643 simultaneous interpolator

Control file: ../cf_1234 Input file: /Exps/c171a/gmva/1234/No0577/FY..zpwvct Output file: /Exps/c171a/gmva/1234/No0577/FY.W.324.zpwvct