

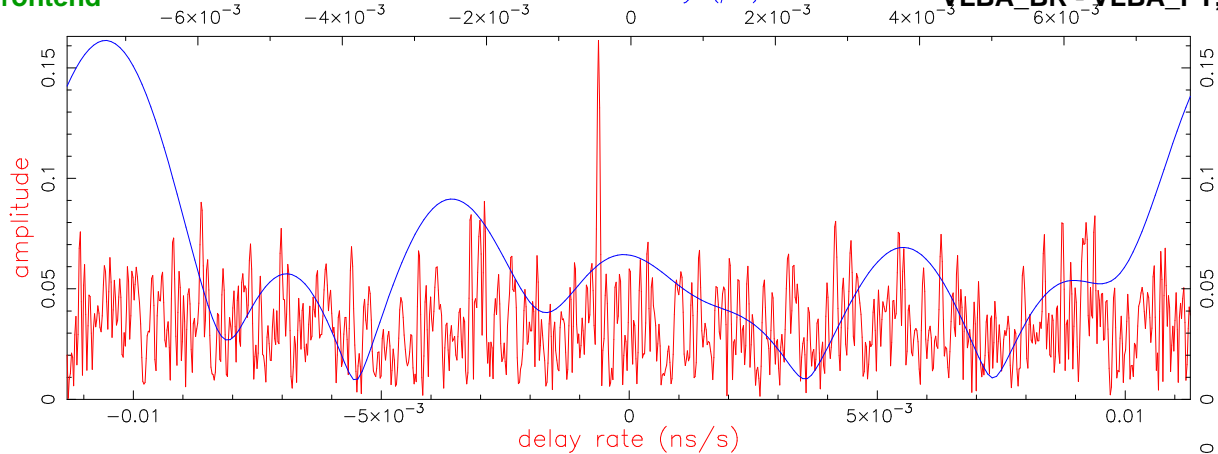
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, bp

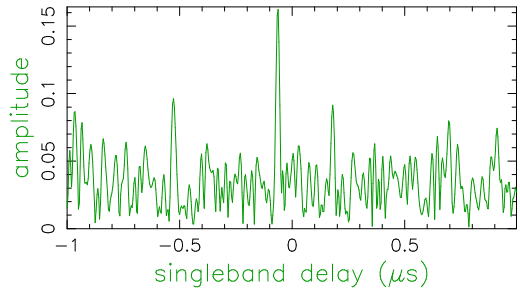
VLBA_BR - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

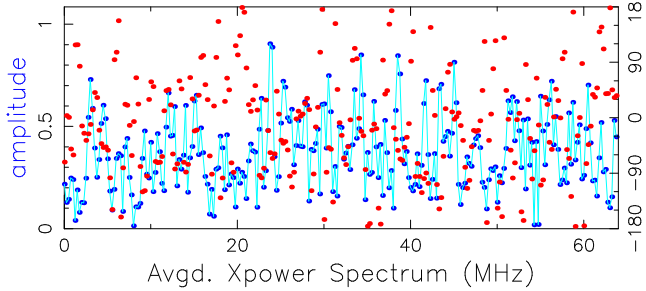


Fringe quality 0

SNR 6.0
 Int time 179.171
 Amp 0.164
 Phase 42.3
 PFD 2.2e-01
 Delays (us)
 SBD -0.063800
 MBD -0.007284
 Fringe rate (Hz)
 -0.053051
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

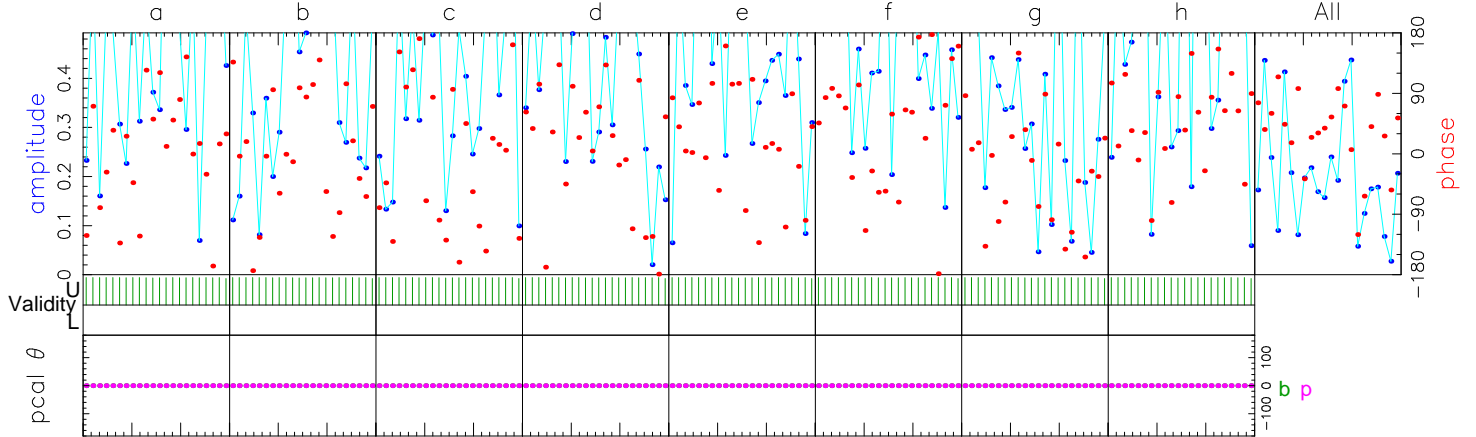


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133700
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.02192032385E+03									
Sband delay (usec)	-1.02191433937E+03									
Phase delay (usec)	-1.02185053825E+03									
Delay rate (us/s)	1.16189442617E-01									
Total phase (deg)			-131.4							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									42.3	+/- 19.1
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

b: az 112.6 el 69.2 pa -50.6 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -820.060 2340.444 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/bp.W.105.127MDW

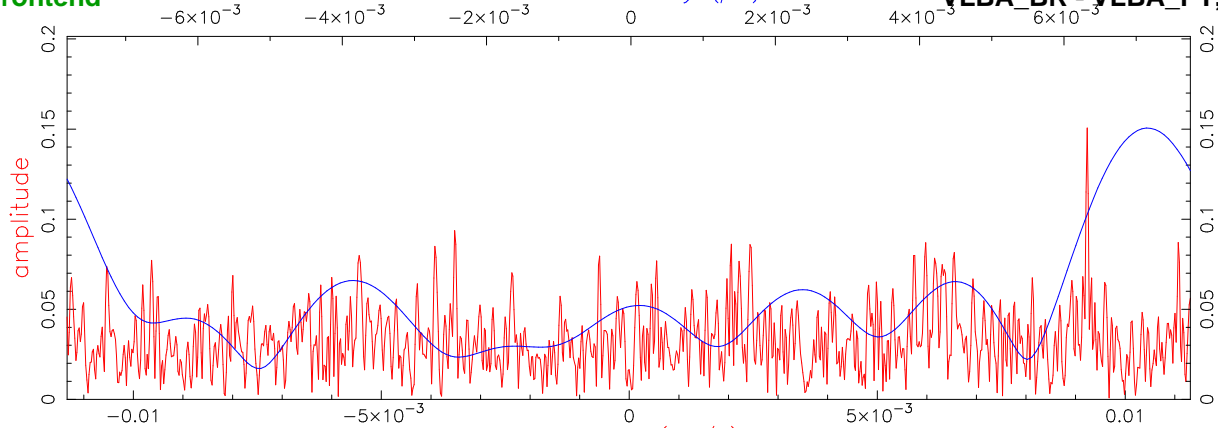
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, bp

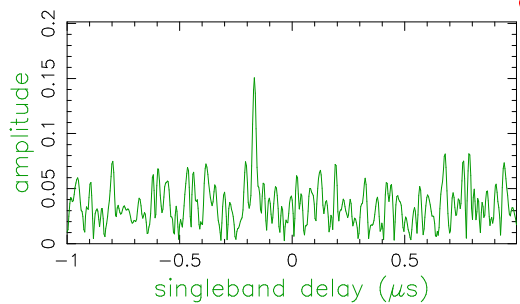
VLBA_BR - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

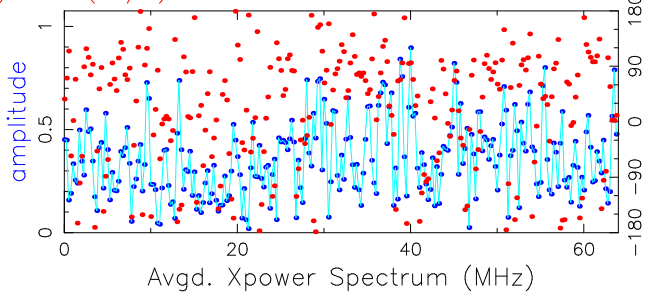


Fringe quality 0

SNR 5.5
 Int time 179.170
 Amp 0.201
 Phase -143.7
 PFD 9.9e-01
 Delays (us)
 SBD -0.168228
 MBD 0.007147
 Fringe rate (Hz) 0.797071
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512

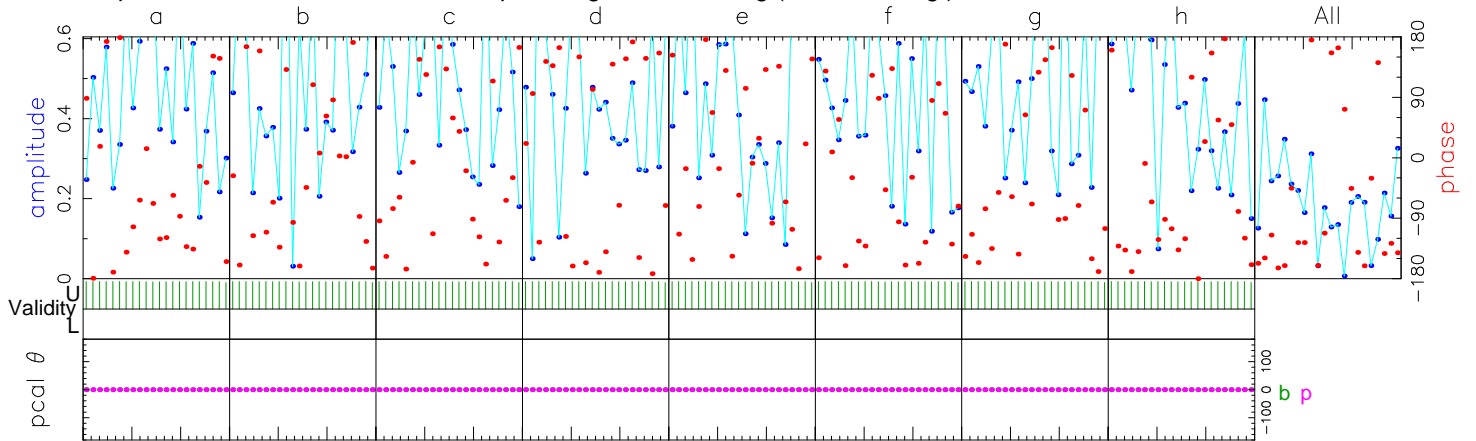


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133705
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-113.3	-171.9	-127.7	-174.6	-152.4	-179.9	-136.4	-127.9	Phase	-143.7
	0.3	0.1	0.1	0.3	0.1	0.1	0.3	0.3	Ampl.	0.2
	182.6	142.0	94.1	336.7	29.8	457.9	215.0	464.7	Sbd box	213.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.02201526736E+03	Apriori delay (usec)	-1.02185053962E+03	Resid mbdelay (usec)	7.14725E-03	+/-	2.0E-04
Sband delay (usec)	-1.02201876762E+03	Apriori clock (usec)	-1.2609180E+01	Resid sbdelay (usec)	-1.68228E-01	+/-	1.6E-03
Phase delay (usec)	-1.02185054425E+03	Apriori clockrate (us/s)	-4.4628166E-07	Resid phdelay (usec)	-4.63315E-06	+/-	6.7E-07
Delay rate (us/s)	1.16199311689E-01	Apriori rate (us/s)	1.16190058481E-01	Resid rate (us/s)	9.25321E-06	+/-	6.4E-09
Total phase (deg)	-317.4	Apriori accel (us/s/s)	1.77279890976E-05	Resid phase (deg)	-143.7	+/-	20.8

ph/seg (deg)	56.7	Theor.	48.7	Search (1024X32)	0.149	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.9		85.1	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	27.8		29.4	Inc. seg. avg.	0.190	Bits/sample: 2x2	Sample rate(MSamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.0		51.3	Inc. frq. avg.	0.193	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

b: az 112.6 el 69.2 pa -50.6 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -820.060 2340.444 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/bp.W.118.127MDW

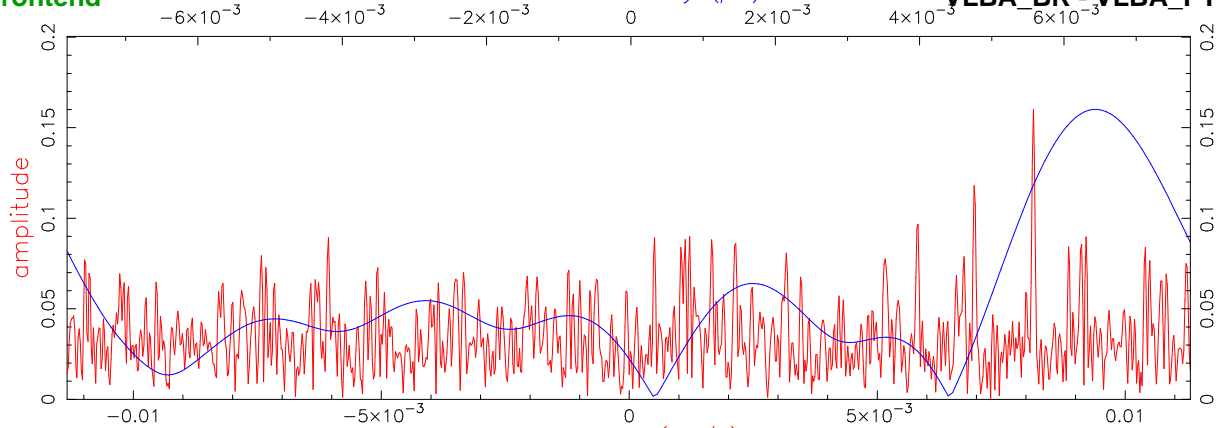
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, bp

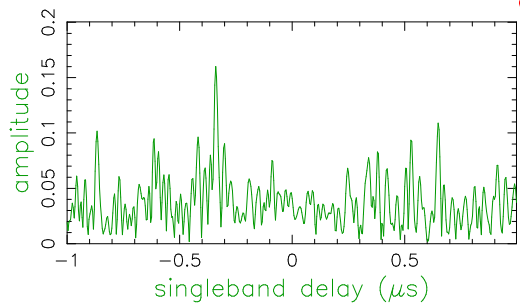
VLBA_BR - VLBA_PT, fgroup W, pol LL

multiband delay (μs)

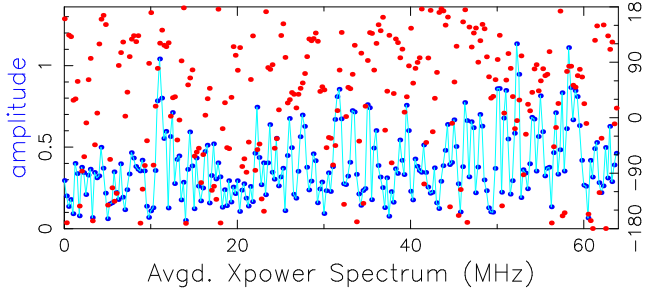


Fringe quality 0

SNR 5.9
 Int time 179.170
 Amp 0.200
 Phase 61.5
 PFD 4.3e-01
 Delays (us)
 SBD -0.339373
 MBD 0.006443
 Fringe rate (Hz)
 0.703392
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

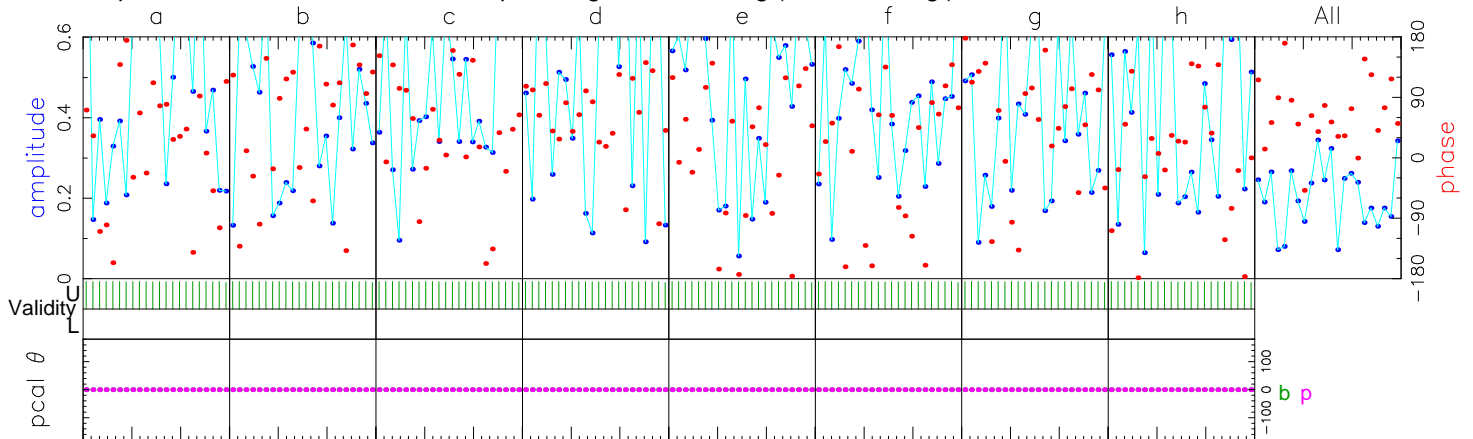


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133635
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	-1.02218784623E+03		Apriori delay (usec)		-1.02185053962E+03		Resid mbdelay (usec)		6.44338E-03	+/- 1.8E-04
Sband delay (usec)	-1.02218991287E+03		Apriori clock (usec)		-1.2609180E+01		Resid sbdelay (usec)		-3.39373E-01	+/- 1.5E-03
Phase delay (usec)	-1.02185053764E+03		Apriori clockrate (us/s)		-4.4628166E-07		Resid phdelay (usec)		1.98176E-06	+/- 6.3E-07
Delay rate (us/s)	1.16198224163E-01		Apriori rate (us/s)		1.16190058481E-01		Resid rate (us/s)		8.16568E-06	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		1.77279890976E-05		Resid phase (deg)		61.5	+/- 19.5

ph/seg (deg) 48.8 45.8 Amplitude 0.200 +/- 0.034 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.5 79.9 Search (1024X32) 0.156 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.0 27.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.6 48.2 Inc. seg. avg. 0.196 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 b: az 112.6 el 69.2 pa -50.6 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -820.060 2340.444 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/bp.W.26.127MDW

Mk4/DiFX fourfit 3.20 rev 0

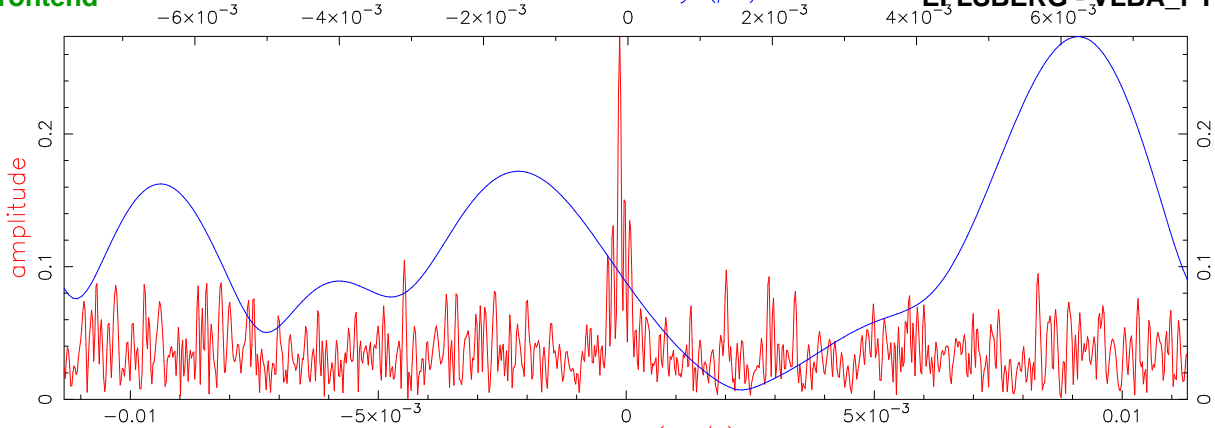
frontend

2013+370.127MDW, No0077, Bp

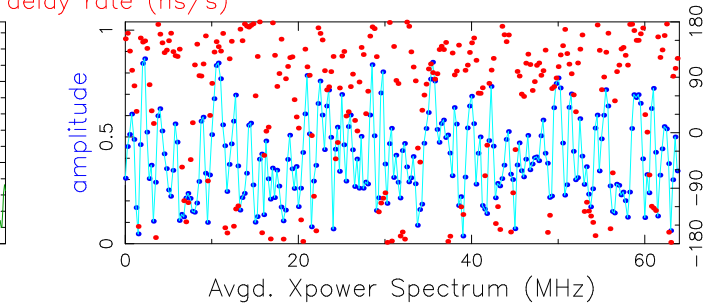
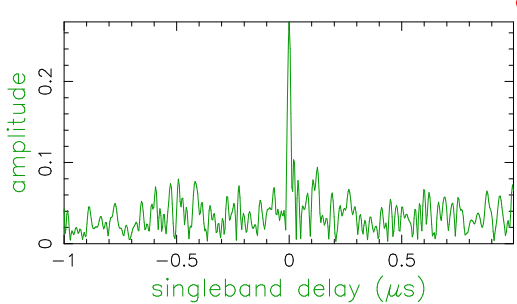
EFLSBERG - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 9

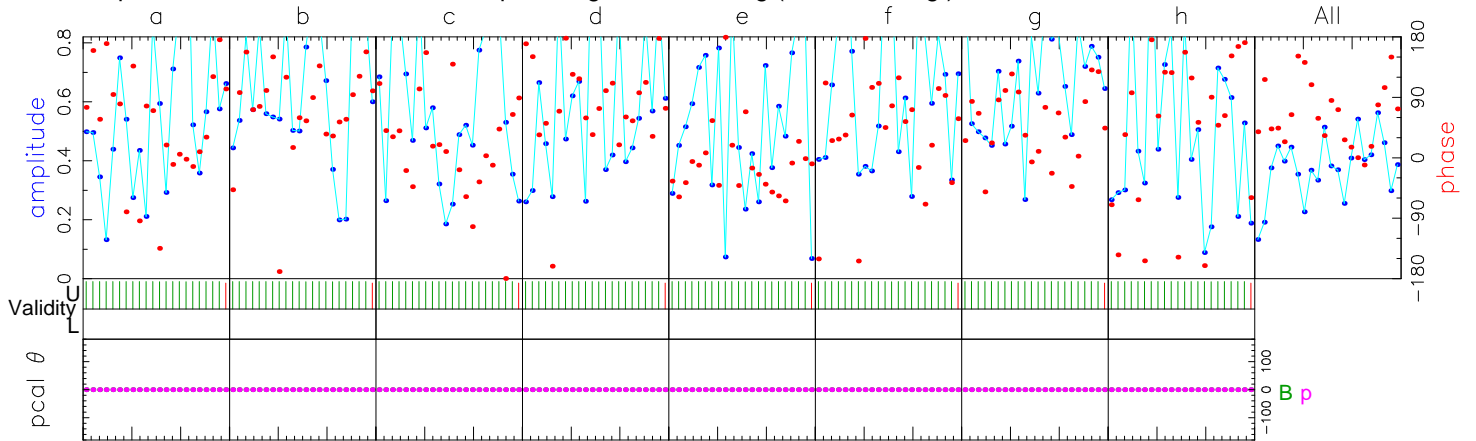


SNR 10.0
 Int time 179.565
 Amp 0.274
 Phase 58.6
 PFD 2.5e-15
 Delays (us)
 SBD -0.000269
 MBD 0.006226
 Fringe rate (Hz)
 -0.012211
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Yr:day 16383
 Start 2020:070:114832
 Stop 2020:071:133635
 FRT 2019:280:115849
 Corr/FF/build
 2020:070:114832
 2020:071:133635
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	325.4	257.1	258.1	256.8	257.4	256.9	256.8	286.3		256.9
B	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.33663644596E+04				-1.33663706861E+04				6.22642E-03	+/- 1.1E-04
Sband delay (usec)	-1.33663709548E+04				4.8129950E+00				-2.68750E-04	+/- 8.6E-04
Phase delay (usec)	-1.33663706842E+04				-4.0388659E-07				1.88813E-06	+/- 3.7E-07
Delay rate (us/s)	-9.86388269848E-01				-9.86388128089E-01				-1.41758E-07	+/- 3.5E-09
Total phase (deg)			-264.8		8.53260687780E-05				58.6	+/- 11.4
	RMS	Theor.	Amplitude	0.274 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			sb window (us)	-1.000 1.000
ph/seg (deg)	47.2	26.8	Search (1024X32)	0.264	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				mb window (us)	-0.008 0.008
amp/seg (%)	53.8	46.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled			dr window (ns/s)	-0.011 0.011
ph/frq (deg)	48.1	16.2	Inc. seg. avg.	0.340	Sample rate(MISamp/s): 128				ion window (TEC)	0.00 0.00
amp/frq (%)	44.3	28.2	Inc. frq. avg.	0.346	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite			

B: az 303.5 el 21.1 pa 41.7 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 7164.152 6523.198 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Bp.W.28.127MDW

Mk4/DiFX fourfit 3.20 rev 0

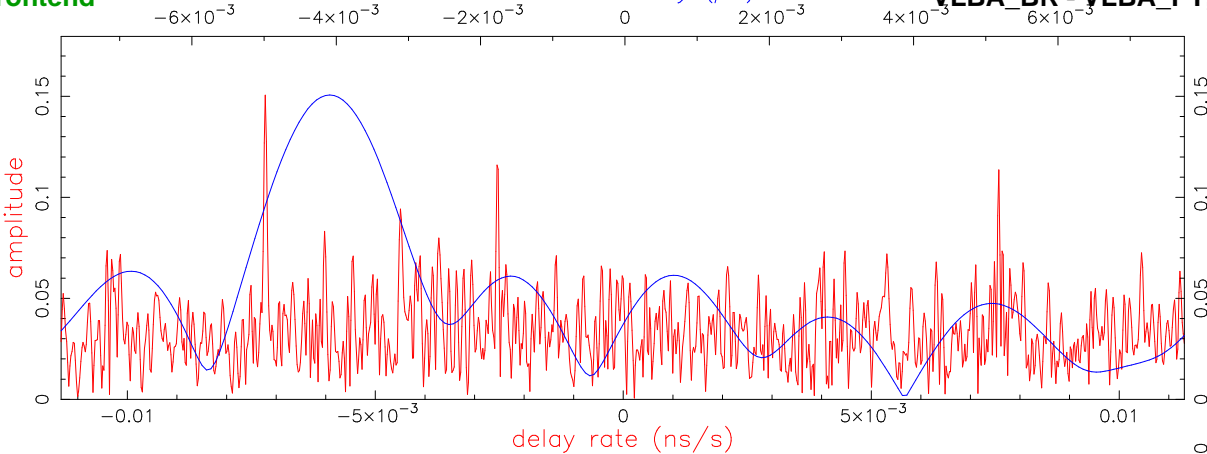
frontend

2013+370.127MDW, No0077, bp

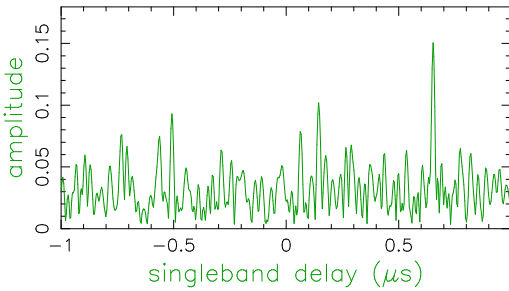
VLBA_BR - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

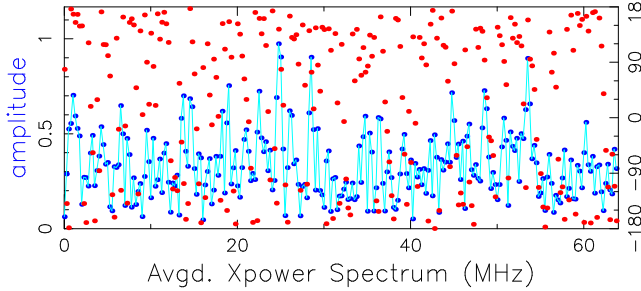
Fringe quality 0



SNR 5.5
 Int time 179.170
 Amp 0.180
 Phase 161.9
 PFD 9.8e-01
 Delays (us)
 SBD 0.652997
 MBD -0.004059
 Fringe rate (Hz)
 -0.623355
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

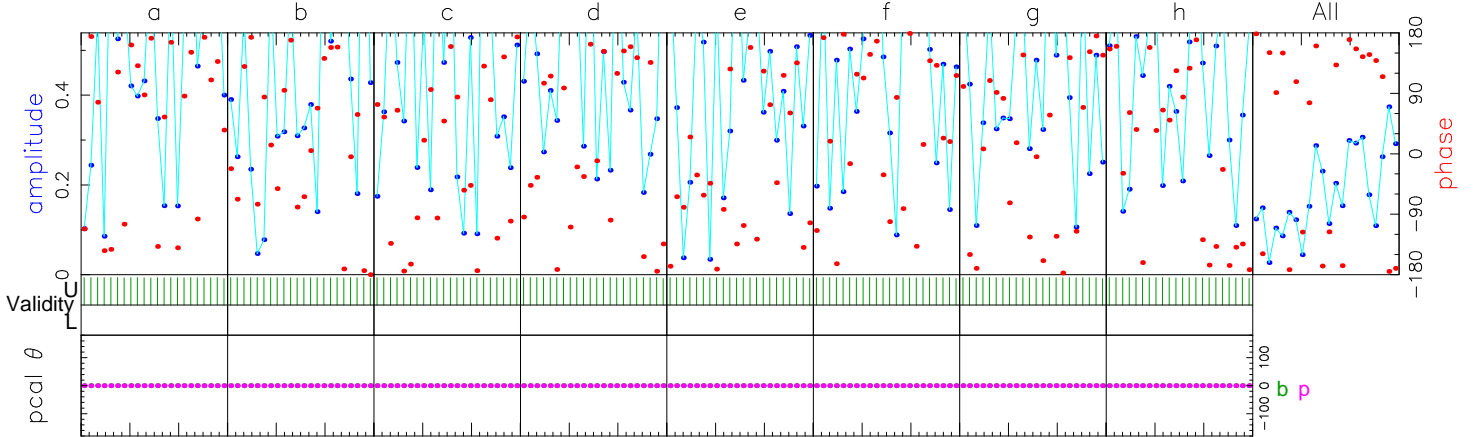


delay rate (ns/s)



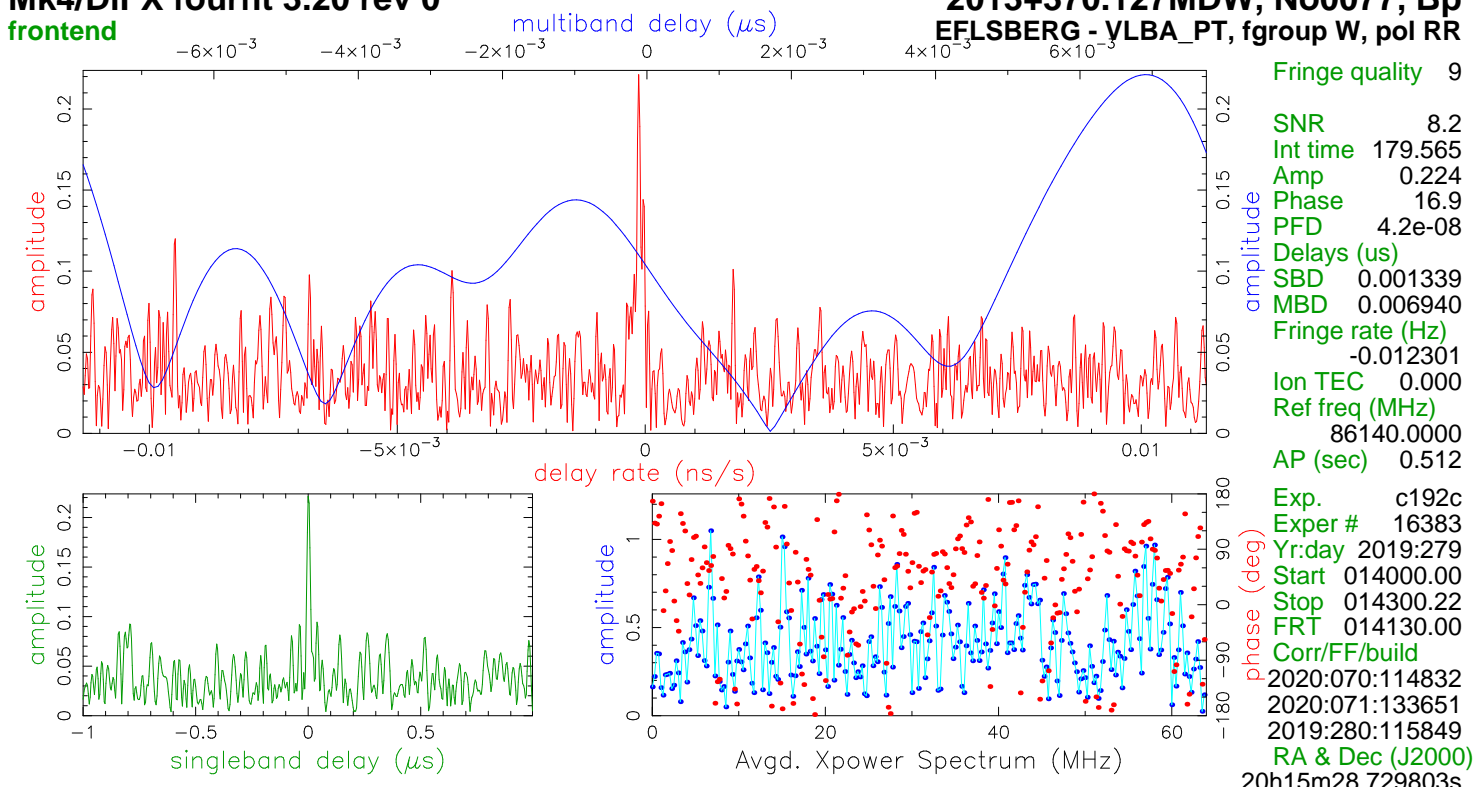
Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133650
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

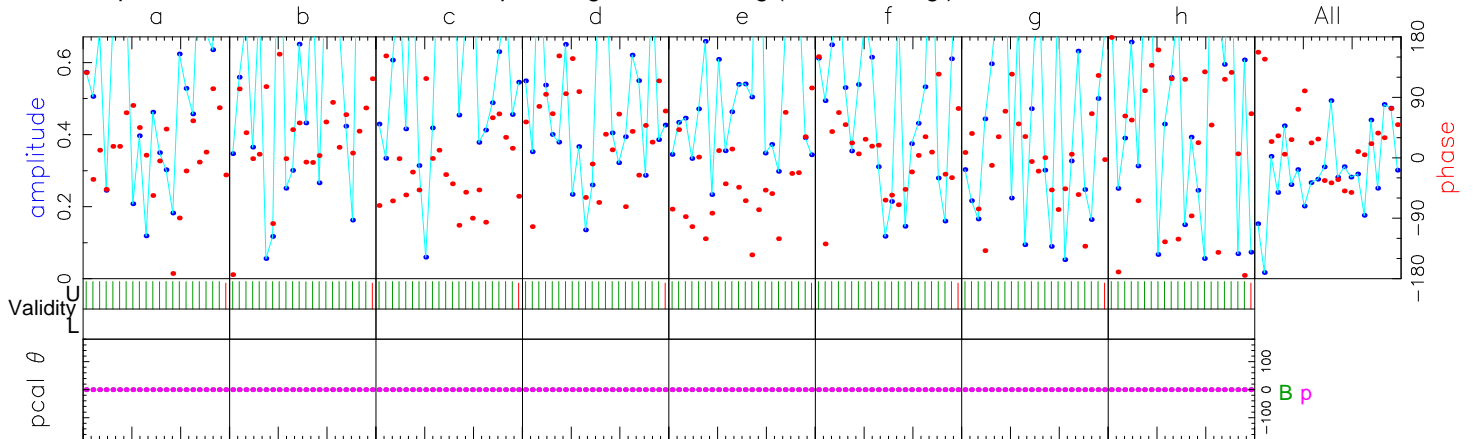


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.02119834829E+03									
Sband delay (usec)	-1.02119754212E+03									
Phase delay (usec)	-1.02185053440E+03									
Delay rate (us/s)	1.16182821942E-01									
Total phase (deg)			-11.8							
Apriori delay (usec)					-1.02185053962E+03					
Apriori clock (usec)					-1.2609180E+01					
Apriori clockrate (us/s)					-4.4628166E-07					
Apriori rate (us/s)					1.16190058481E-01					
Apriori accel (us/s/s)					1.77279890976E-05					
Resid mbdelay (usec)									-4.05867E-03	+/- 2.0E-04
Resid sbdelay (usec)									6.52997E-01	+/- 1.6E-03
Resid phdelay (usec)									5.22156E-06	+/- 6.7E-07
Resid rate (us/s)									-7.23654E-06	+/- 6.4E-09
Resid phase (deg)									161.9	+/- 20.7
Pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
Pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000		1.000			
Bits/sample:	2x2		SampCntNorm: enabled		mb window (us)		-0.008		0.008	
Sample rate (MSamp/s):	128		dr window (ns/s)		-0.011		0.011			
Data rate (Mb/s):	2048		nlags: 256		t_cohere infinite		ion window (TEC)		0.00 0.00	

b: az 112.6 el 69.2 pa -50.6 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -820.060 2340.444 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/bp.W.65.127MDW



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

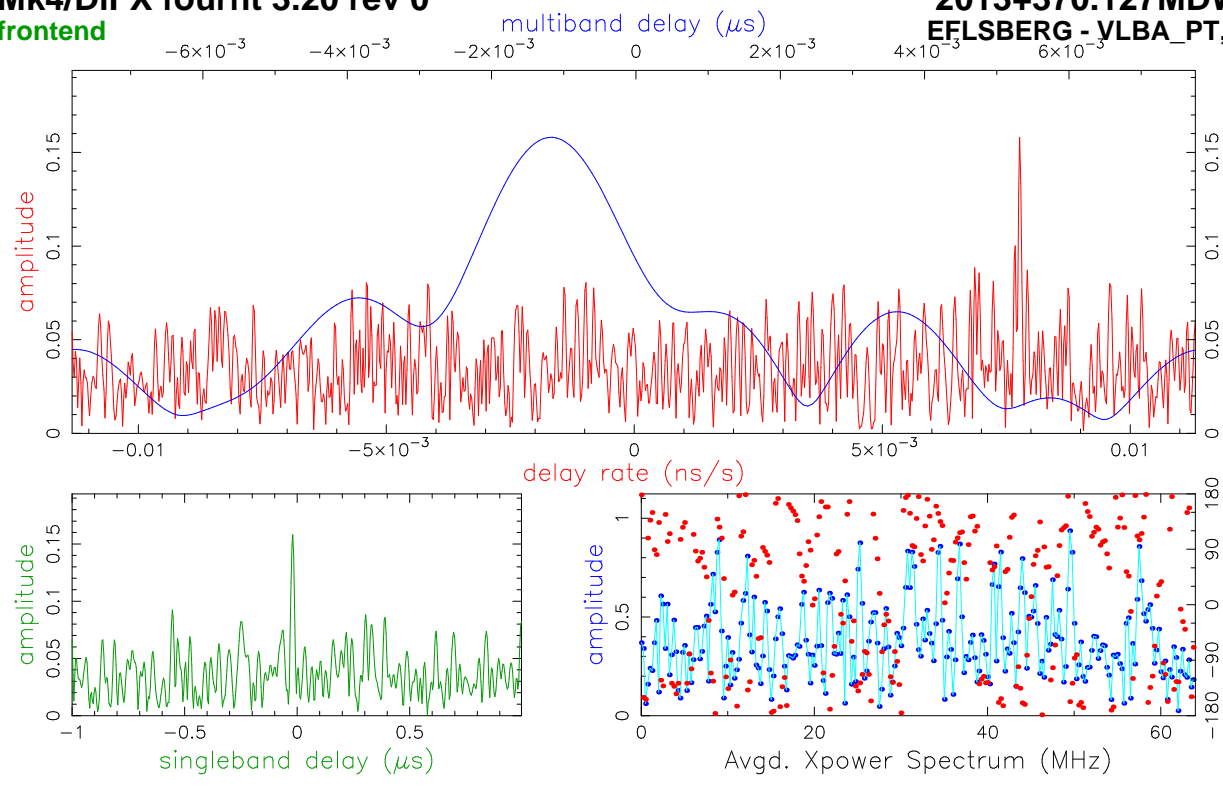


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
24.4	54.9	-28.4	47.3	-41.4	19.3	3.6	137.9	137.9	Phase	16.9
0.4	0.4	0.4	0.3	0.3	0.3	0.2	0.2	0.2	Ampl.	0.3
257.4	257.2	258.1	42.3	257.7	258.4	259.3	259.3	259.3	Sbd box	257.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.33663637456E+04		Apriori delay (usec)	-1.33663706861E+04	Resid mbdelay (usec)	6.94045E-03	+/-	1.3E-04		
Sband delay (usec)	-1.33663693473E+04		Apriori clock (usec)	4.8129950E+00	Resid sbdelay (usec)	1.33875E-03	+/-	1.1E-03		
Phase delay (usec)	-1.33663706855E+04		Apriori clockrate (us/s)	-4.0388659E-07	Resid phdelay (usec)	5.46069E-07	+/-	4.5E-07		
Delay rate (us/s)	-9.86388270893E-01		Apriori rate (us/s)	-9.86388128089E-01	Resid rate (us/s)	-1.42804E-07	+/-	4.3E-09		
Total phase (deg)		-306.4	Apriori accel (us/s/s)	8.53260687780E-05	Resid phase (deg)	16.9	+/-	14.0		

ph/seg (deg) 56.1 32.8 Amplitude 0.224 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 60.3 57.2 Search (1024X32) 0.214 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 61.5 19.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 48.3 34.5 Inc. seg. avg. 0.257 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 B: az 303.5 el 21.1 pa 41.7 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 7164.152 6523.198 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Bp.W.69.127MDW simultaneous interpolator

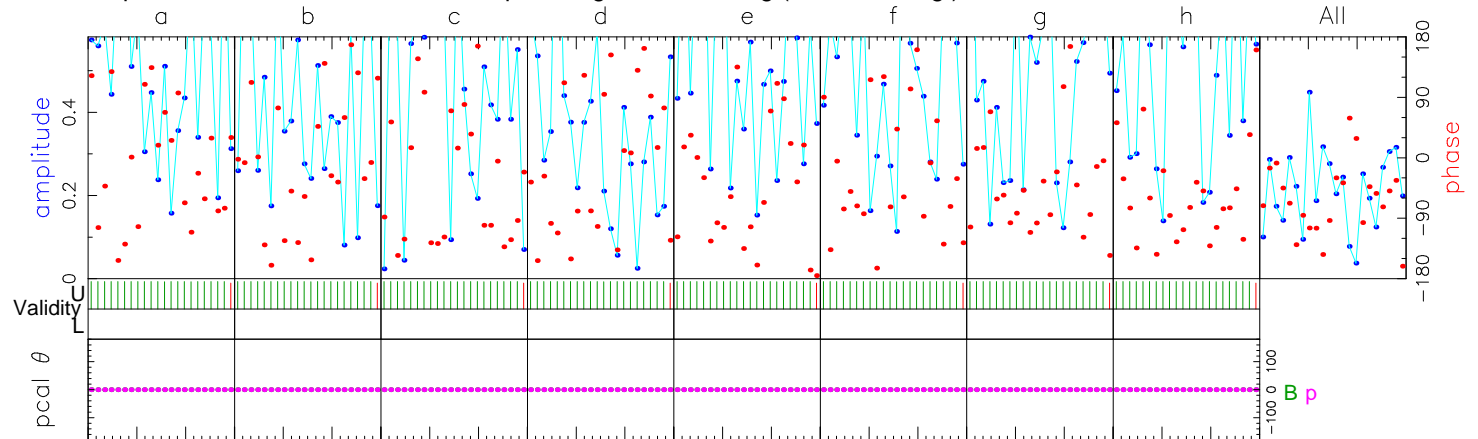
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127MDW, No0077, Bp
 EFLSBERG - VLBA_PT, fgroup W, pol LR



Fringe quality 0
 SNR 5.8
 Int time 179.565
 Amp 0.194
 Phase -71.1
 PFD 5.5e-01
 Delays (us)
 SBD -0.020235
 MBD -0.001217
 Fringe rate (Hz)
 0.669673
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133653
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

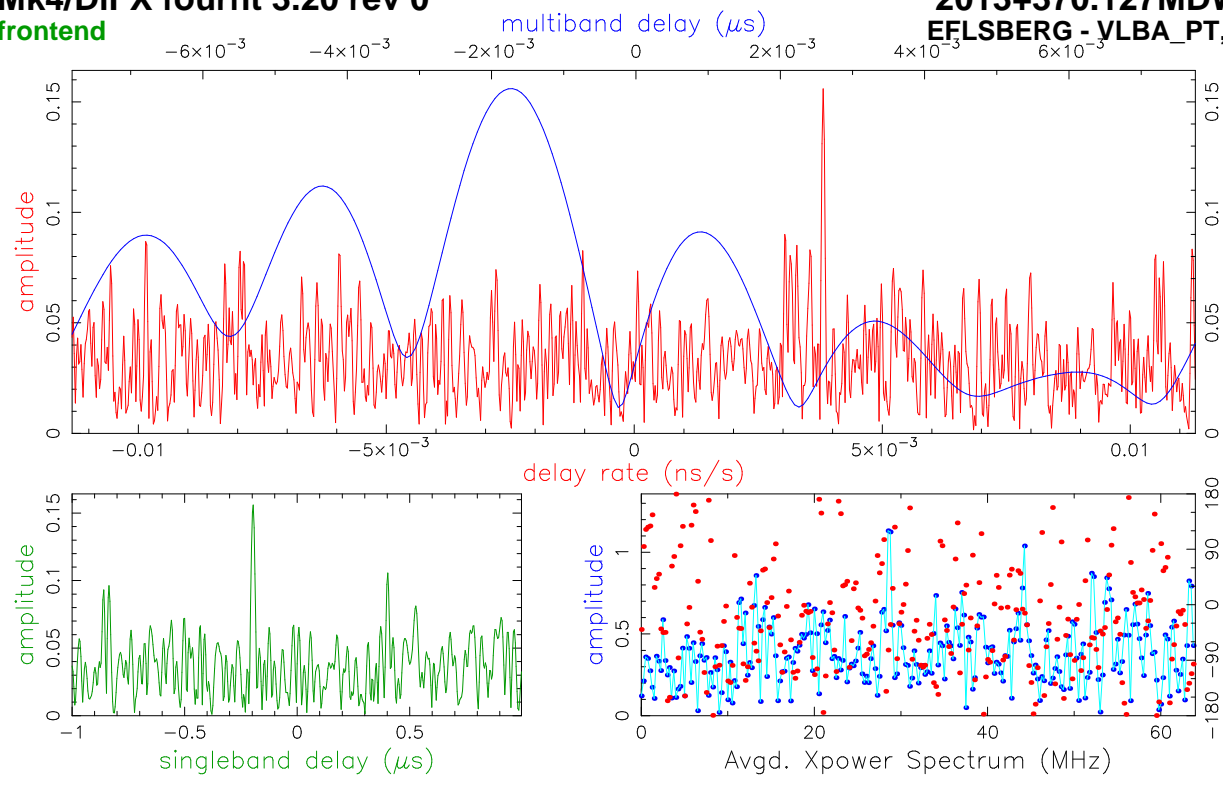


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-80.0	-12.8	-114.6	-108.4	-43.1	-77.5	-67.5	-69.6	Phase	-71.1
	0.2	0.1	0.1	0.1	0.2	0.2	0.4	0.3	Ampl.	0.2
	263.8	298.4	497.0	72.2	37.5	62.1	251.1	426.7	Sbd box	251.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.33663875277E+04		Apriori delay (usec)		-1.33663706861E+04		Resid mbdelay (usec)		-1.21664E-03	+/- 1.9E-04
Sband delay (usec)	-1.33663909211E+04		Apriori clock (usec)		4.8129950E+00		Resid sbdelay (usec)		-2.02350E-02	+/- 1.5E-03
Phase delay (usec)	-1.33663706884E+04		Apriori clockrate (us/s)		-4.0388659E-07		Resid phdelay (usec)		-2.29328E-06	+/- 6.4E-07
Delay rate (us/s)	-9.86380353855E-01		Apriori rate (us/s)		-9.86388128089E-01		Resid rate (us/s)		7.77423E-06	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		8.53260687780E-05		Resid phase (deg)		-71.1	+/- 19.7

ph/seg (deg) 52.5 46.3 Amplitude 0.194 +/- 0.033 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 70.3 80.8 Search (1024X32) 0.157 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 35.6 27.9 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 52.6 48.7 Inc. seg. avg. 0.200 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 B: az 303.5 el 21.1 pa 41.7 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 7164.152 6523.198 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Bp.W.78.127MDW simultaneous interpolator

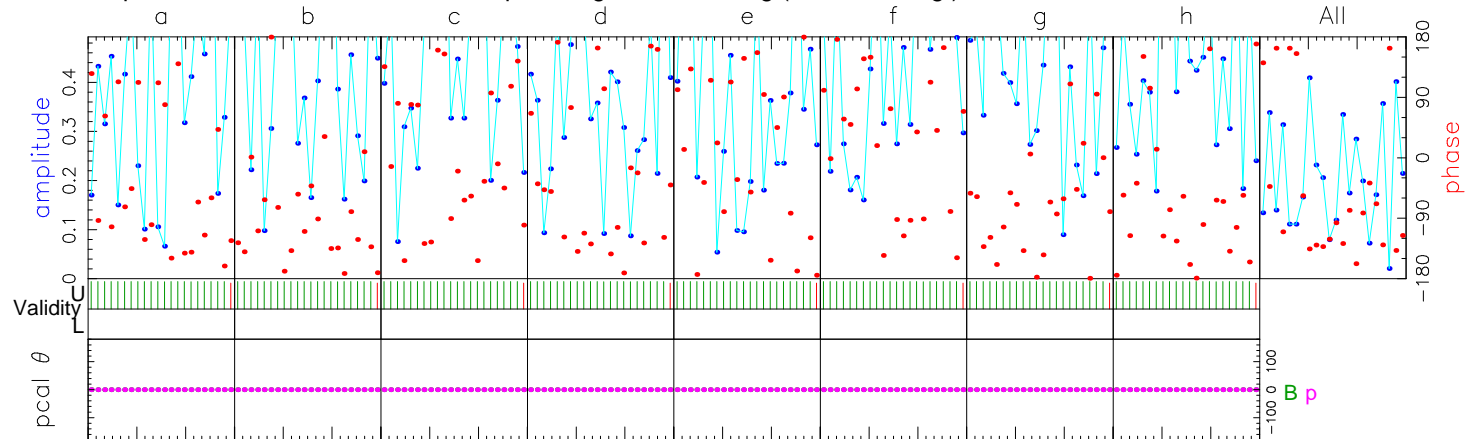
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127MDW, No0077, Bp
 EFLSBERG - VLBA_PT, fgroup W, pol RL



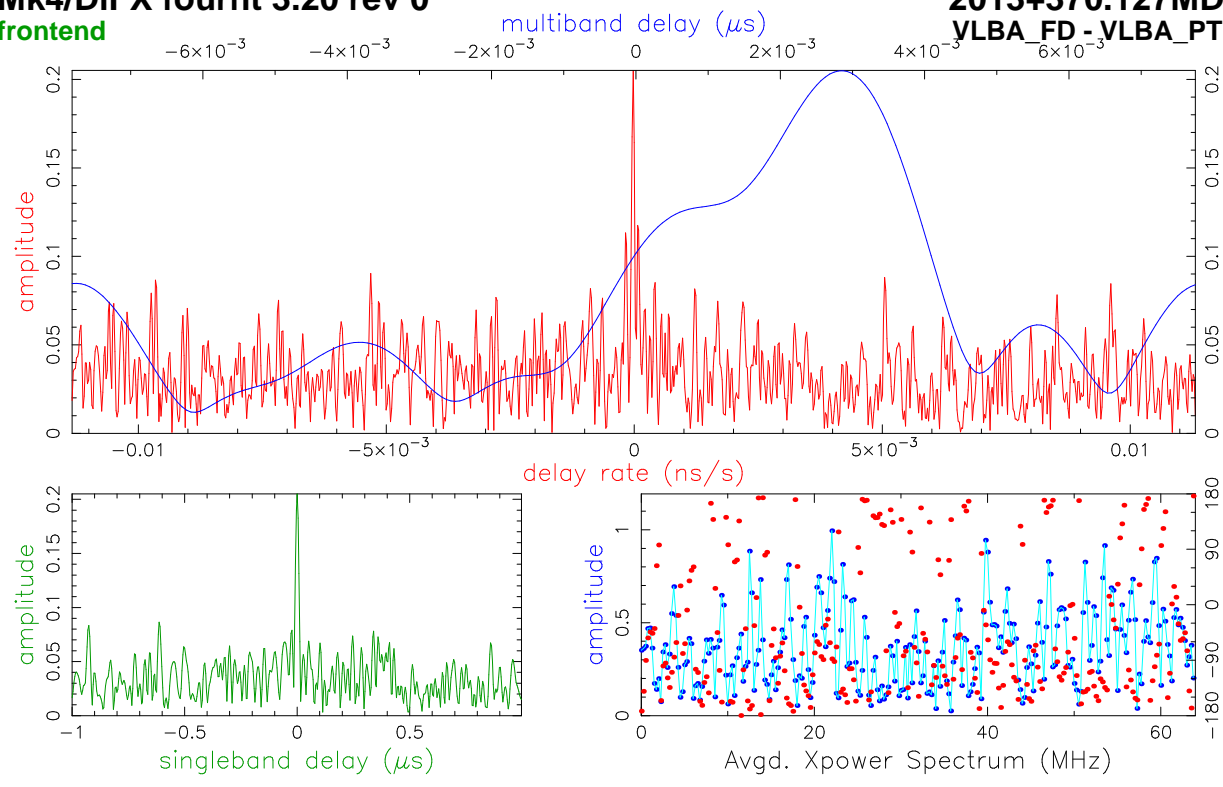
Fringe quality 0
 SNR 5.7
 Int time 179.565
 Amp 0.164
 Phase -121.1
 PFD 6.8e-01
 Delays (us)
 SBD -0.196371
 MBD -0.001772
 Fringe rate (Hz) 0.327628
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133656
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



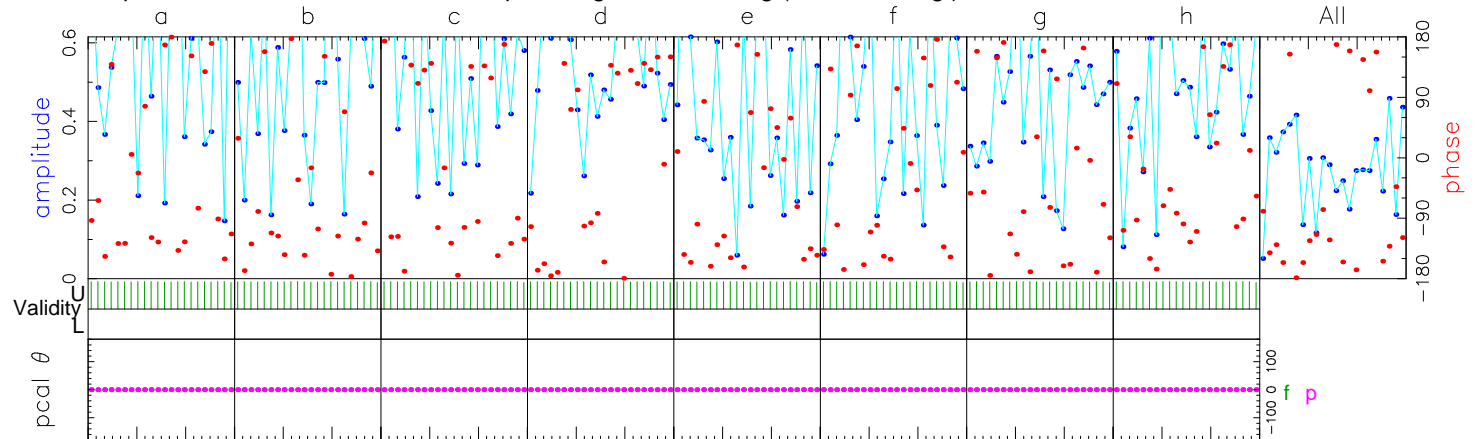
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-109.5	-119.2	-128.0	-133.5	152.3	114.5	-97.8	-114.7	Phase	-121.1
	0.2	0.3	0.1	0.2	0.1	0.0	0.3	0.3	Ampl.	0.2
	28.4	205.8	408.0	34.9	189.5	114.2	207.0	86.3	Sbd box	206.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
B:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
B	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.33665599583E+04		Apriori delay (usec)		-1.33663706861E+04		Resid mbdelay (usec)		-1.77227E-03	+/- 1.9E-04
Sband delay (usec)	-1.33665670573E+04		Apriori clock (usec)		4.8129950E+00		Resid sbdelay (usec)		-1.96371E-01	+/- 1.5E-03
Phase delay (usec)	-1.33663706900E+04		Apriori clockrate (us/s)		-4.0388659E-07		Resid phdelay (usec)		-3.90437E-06	+/- 6.4E-07
Delay rate (us/s)	-9.86384324653E-01		Apriori rate (us/s)		-9.86388128089E-01		Resid rate (us/s)		3.80344E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		8.53260687780E-05		Resid phase (deg)		-121.1	+/- 19.9

ph/seg (deg) 52.3 46.8 Search (1024X32) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 77.2 81.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 63.1 28.2 Inc. seg. avg. 0.164 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 61.5 49.2 Inc. frq. avg. 0.168 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 B: az 303.5 el 21.1 pa 41.7 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 7164.152 6523.198 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Bp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Bp.W.88.127MDW



Fringe quality 9
 SNR 7.5
 Int time 178.622
 Amp 0.205
 Phase -154.9
 PFD 1.1e-05
 Delays (us)
 SBD -0.000391
 MBD 0.002840
 Fringe rate (Hz) -0.001046
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133711
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

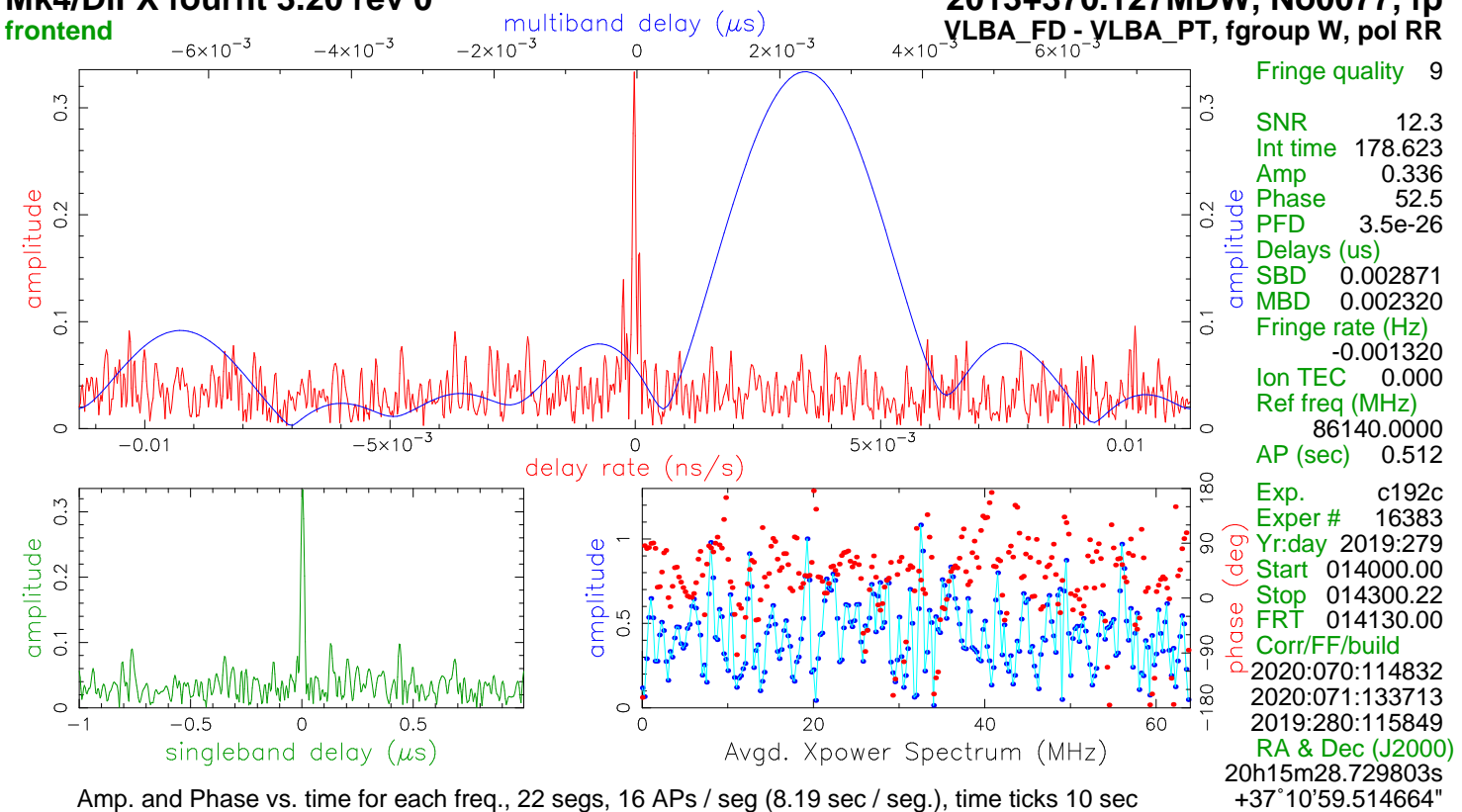


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-129.0	-133.6	-174.7	159.0	-150.3	172.4	-136.3	-95.9	Phase	-154.9
	0.3	0.3	0.3	0.4	0.2	0.2	0.2	0.2	Ampl.	0.2
	257.8	256.2	257.1	257.6	233.4	62.1	243.1	228.0	Sbd box	256.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	4.90845524668E+01		Apriori delay (usec)		4.90817120165E+01		Resid mbdelay (usec)		2.84045E-03	+/- 1.4E-04
Sband delay (usec)	4.90813212665E+01		Apriori clock (usec)		-1.1512643E+01		Resid sbdelay (usec)		-3.90750E-04	+/- 1.1E-03
Phase delay (usec)	4.90817070204E+01		Apriori clockrate (us/s)		-2.9483610E-07		Resid phdelay (usec)		-4.99612E-06	+/- 4.9E-07
Delay rate (us/s)	-6.72221980644E-02		Apriori rate (us/s)		-6.72221859197E-02		Resid rate (us/s)		-1.21447E-08	+/- 4.7E-09
Total phase (deg)			Apriori accel (us/s/s)		-4.00940165300E-06		Resid phase (deg)		-154.9	+/- 15.3

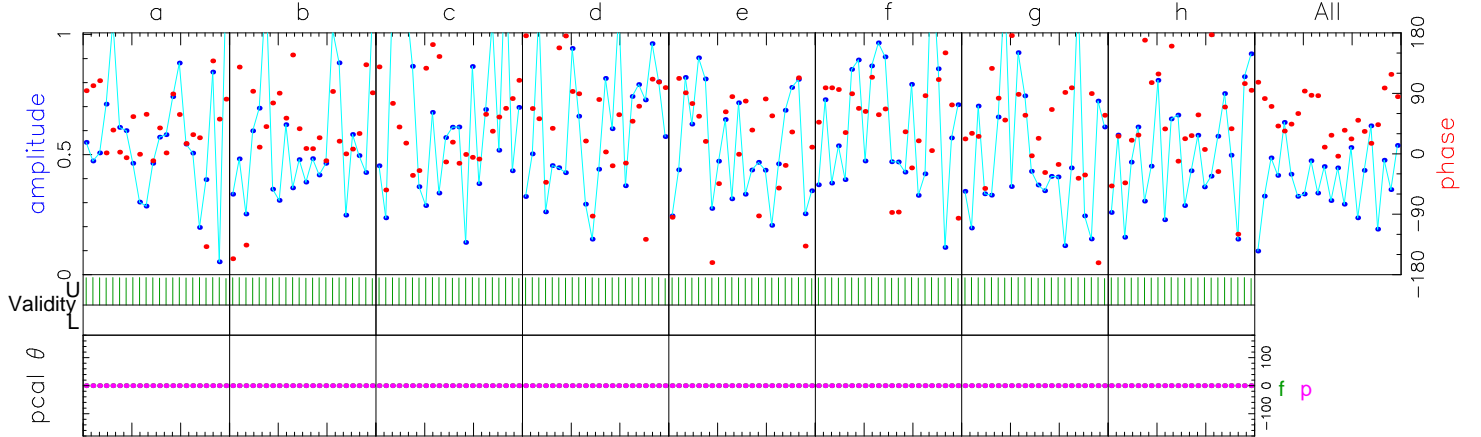
ph/seg (deg) 49.8 35.9 Search (1024X32) 0.195 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 63.2 62.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 37.8 21.6 Inc. seg. avg. 0.235 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.4 37.7 Inc. frq. avg. 0.226 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 44.7 el 80.3 pa -129.5 p: az 70.4 el 79.3 pa -102.4 u, v (fr/asec) 479.867 -623.150 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/fp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/fp.W.141.127MDW

Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127MDW, No0077, fp
VLBA_FD - VLBA_PT, fgroup W, pol RR

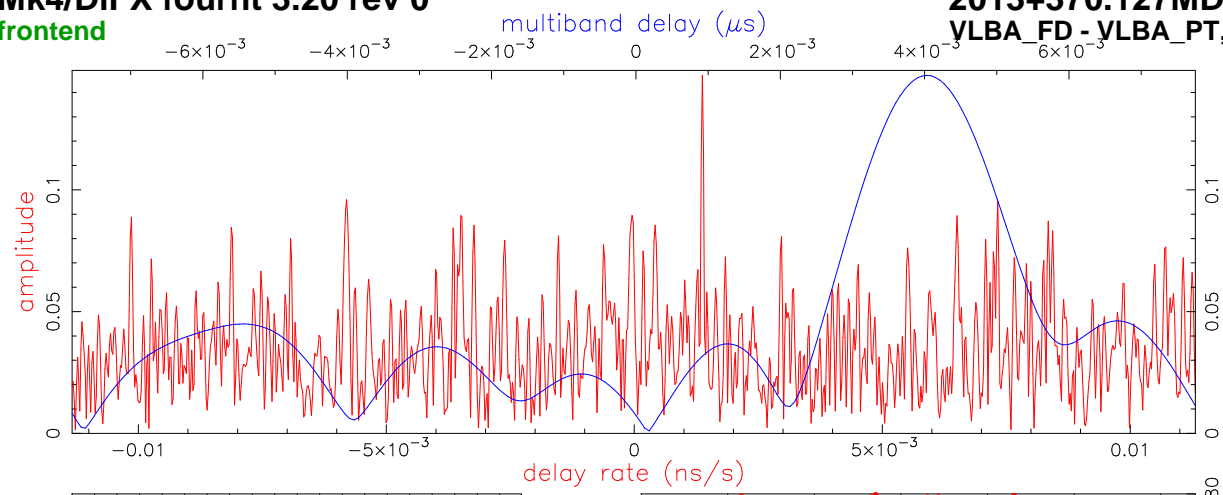


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

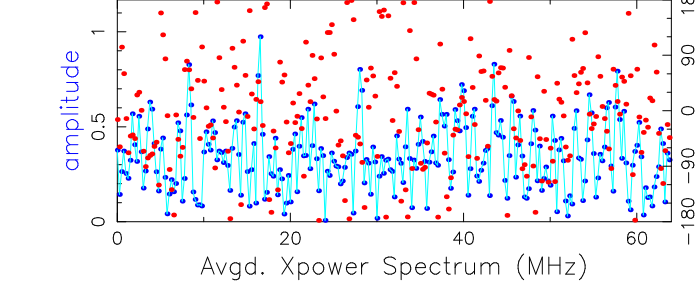
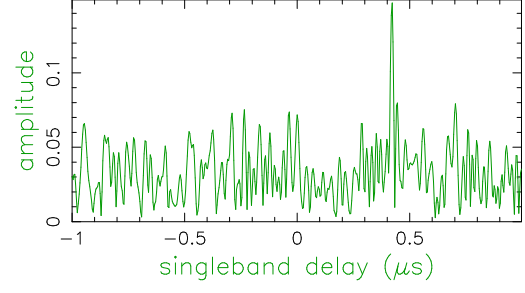


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	4.90840319356E+01		Apriori delay (usec)		4.90817120165E+01		Resid mbdelay (usec)		2.31992E-03	+/- 8.8E-05
Sband delay (usec)	4.90845832665E+01		Apriori clock (usec)		-1.1512643E+01		Resid sbdelay (usec)		2.87125E-03	+/- 7.0E-04
Phase delay (usec)	4.90817137108E+01		Apriori clockrate (us/s)		-2.9483610E-07		Resid phdelay (usec)		1.69431E-06	+/- 3.0E-07
Delay rate (us/s)	-6.72222012444E-02		Apriori rate (us/s)		-6.72221859197E-02		Resid rate (us/s)		-1.53247E-08	+/- 2.9E-09
Total phase (deg)	294.9		Apriori accel (us/s/s)		-4.00940165300E-06		Resid phase (deg)		52.5	+/- 9.3

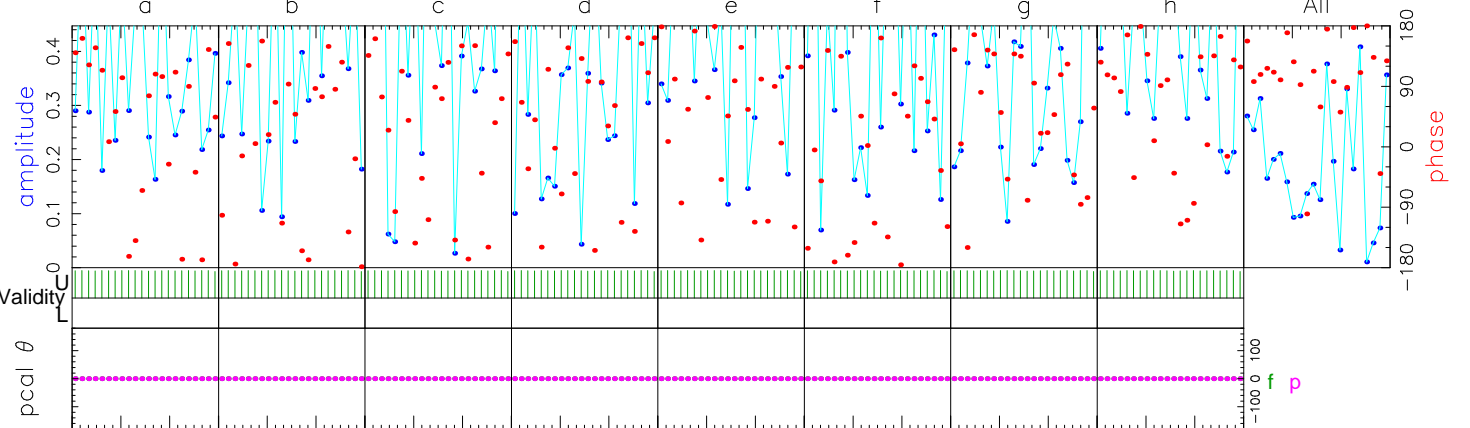
ph/seg (deg) 33.6 21.9 Search (1024X32) 0.326 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 42.5 38.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 11.3 13.2 Inc. seg. avg. 0.370 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 16.5 23.1 Inc. frq. avg. 0.330 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
f: az 44.7 el 80.3 pa -129.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 479.867 -623.150 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/fp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/fp.W.150.127MDW



Fringe quality 0
 SNR 5.4
 Int time 178.623
 Amp 0.149
 Phase 121.5
 PFD 1.0e+00
 Delays (us)
 SBD 0.420875
 MBD 0.004004
 Fringe rate (Hz)
 0.117949
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133716
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

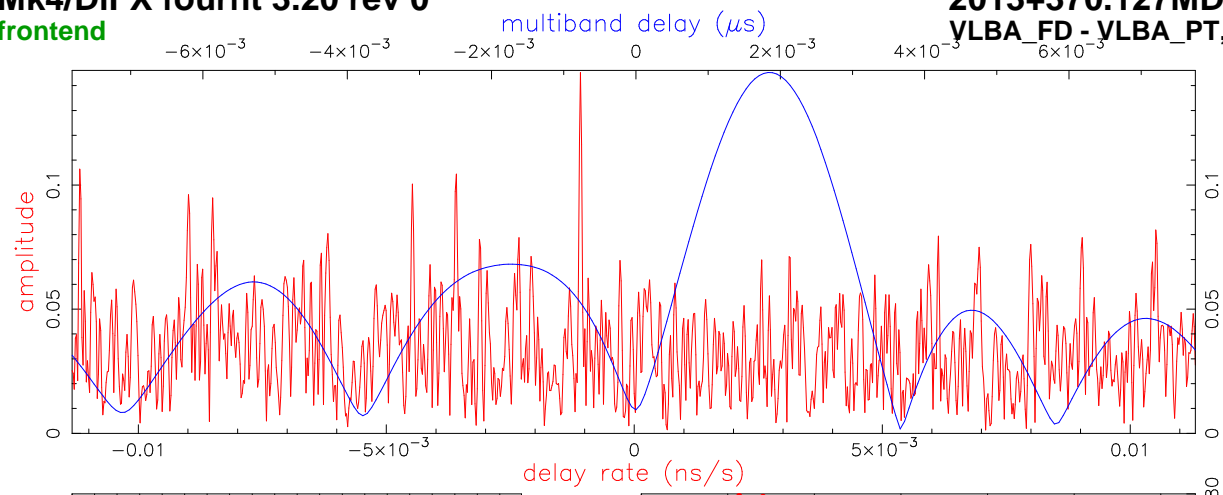


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

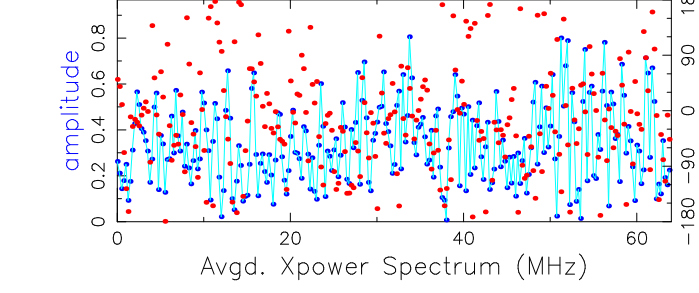
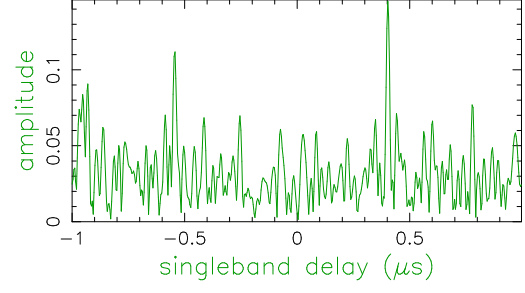


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
Group delay (usec)(sbd)	4.95075914698E+01								4.00445E-03	+/- 2.0E-04
Sband delay (usec)	4.95025872665E+01								4.20875E-01	+/- 1.6E-03
Phase delay (usec)	4.90817159357E+01								3.91926E-06	+/- 6.8E-07
Delay rate (us/s)	-6.72208166434E-02								1.36928E-06	+/- 6.6E-09
Total phase (deg)			3.9						121.5	+/- 21.2
Apriori delay (usec)					4.90817120165E+01				Resid mbdelay (usec)	
Apriori clock (usec)					-1.1512643E+01				Resid sbdelay (usec)	
Apriori clockrate (us/s)					-2.9483610E-07				Resid phdelay (usec)	
Apriori rate (us/s)					-6.72221859197E-02				Resid rate (us/s)	
Apriori accel (us/s/s)					-4.00940165300E-06				Resid phase (deg)	
ph/seg (deg)	57.1	49.6							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	81.0	86.6							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	12.9	29.9							Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%)	36.8	52.2							Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
									Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

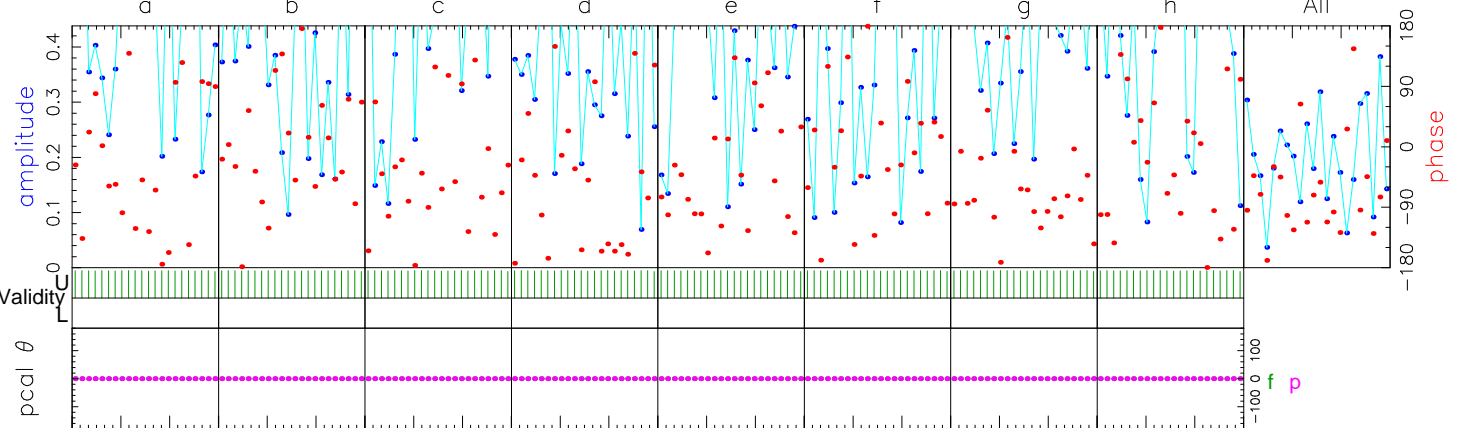
f: az 44.7 el 80.3 pa -129.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 479.867 -623.150 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/fp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/fp.W.163.127MDW



Fringe quality 0
 SNR 5.3
 Int time 178.623
 Amp 0.146
 Phase -78.3
 PFD 1.0e+00
 Delays (us)
 SBD 0.402928
 MBD 0.001882
 Fringe rate (Hz) -0.093278
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133720
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



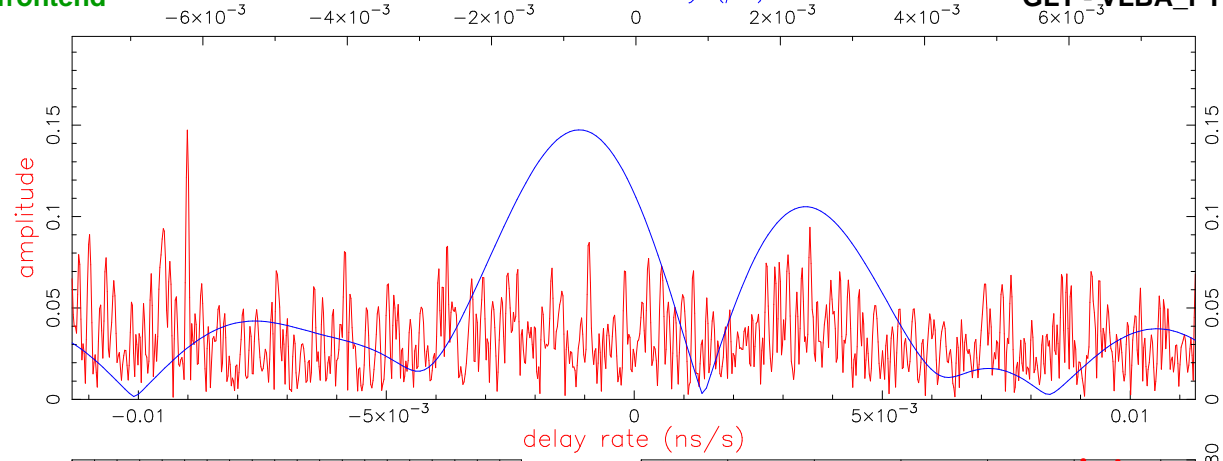
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



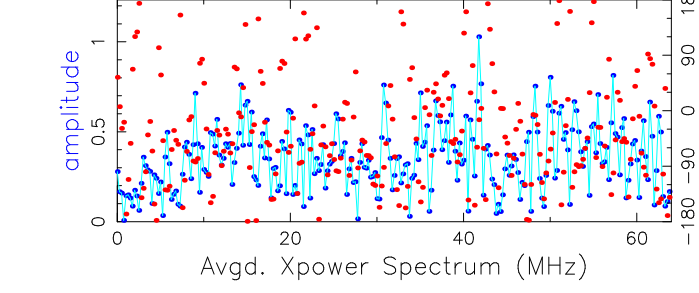
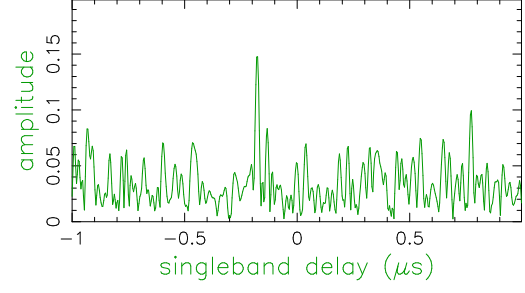
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-106.2	-33.7	-73.5	-120.5	-64.1	-49.5	-76.8	-99.4	Phase	-78.3
	0.2	0.2	0.2	0.1	0.1	0.1	0.3	0.1	Ampl.	0.1
	17.3	500.3	410.2	431.9	439.0	19.2	359.7	348.0	Sbd box	360.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	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	
fp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	4.94898438649E+01		Apriori delay (usec)		4.90817120165E+01		Resid mbdelay (usec)		1.88185E-03	+/- 2.0E-04
Sband delay (usec)	4.94846400165E+01		Apriori clock (usec)		-1.1512643E+01		Resid sbdelay (usec)		4.02928E-01	+/- 1.6E-03
Phase delay (usec)	4.90817094918E+01		Apriori clockrate (us/s)		-2.9483610E-07		Resid phdelay (usec)		-2.52465E-06	+/- 6.9E-07
Delay rate (us/s)	-6.72232687899E-02		Apriori rate (us/s)		-6.72221859197E-02		Resid rate (us/s)		-1.08287E-06	+/- 6.7E-09
Total phase (deg)	164.0		Apriori accel (us/s/s)		-4.00940165300E-06		Resid phase (deg)		-78.3	+/- 21.5

ph/seg (deg) 61.3 50.5 Search (1024X32) 0.144 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 71.0 88.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.8 30.5 Inc. seg. avg. 0.146 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 46.5 53.2 Inc. frq. avg. 0.140 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 f: az 44.7 el 80.3 pa -129.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 479.867 -623.150 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/fp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/fp.W.178.127MDW

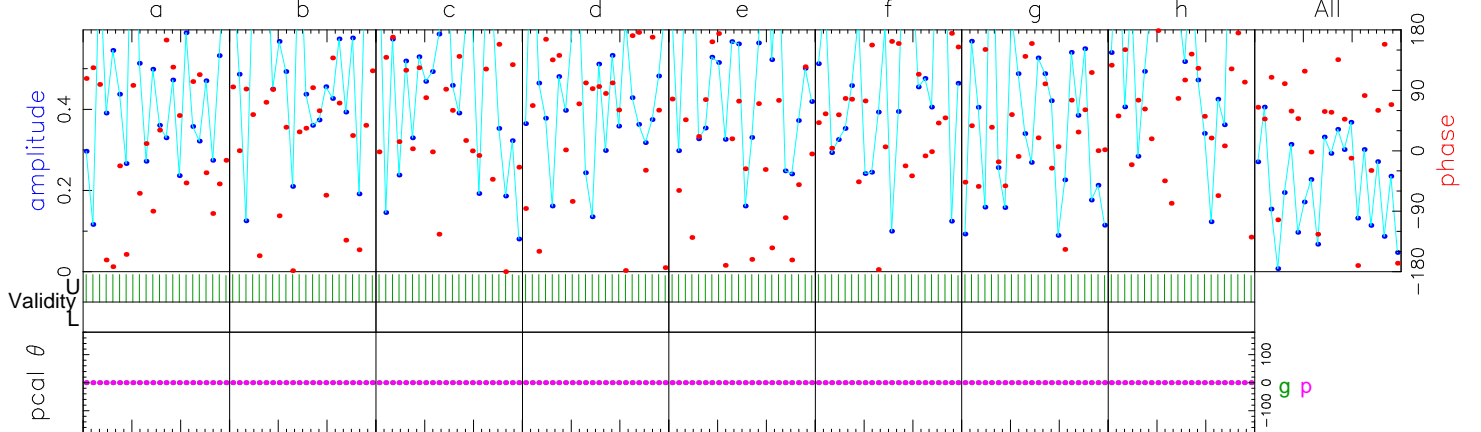
multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 179.736
 Amp 0.199
 Phase 64.6
 PFD 9.8e-01
 Delays (us)
 SBD -0.177675
 MBD -0.000729
 Fringe rate (Hz) -0.777708
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133711
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



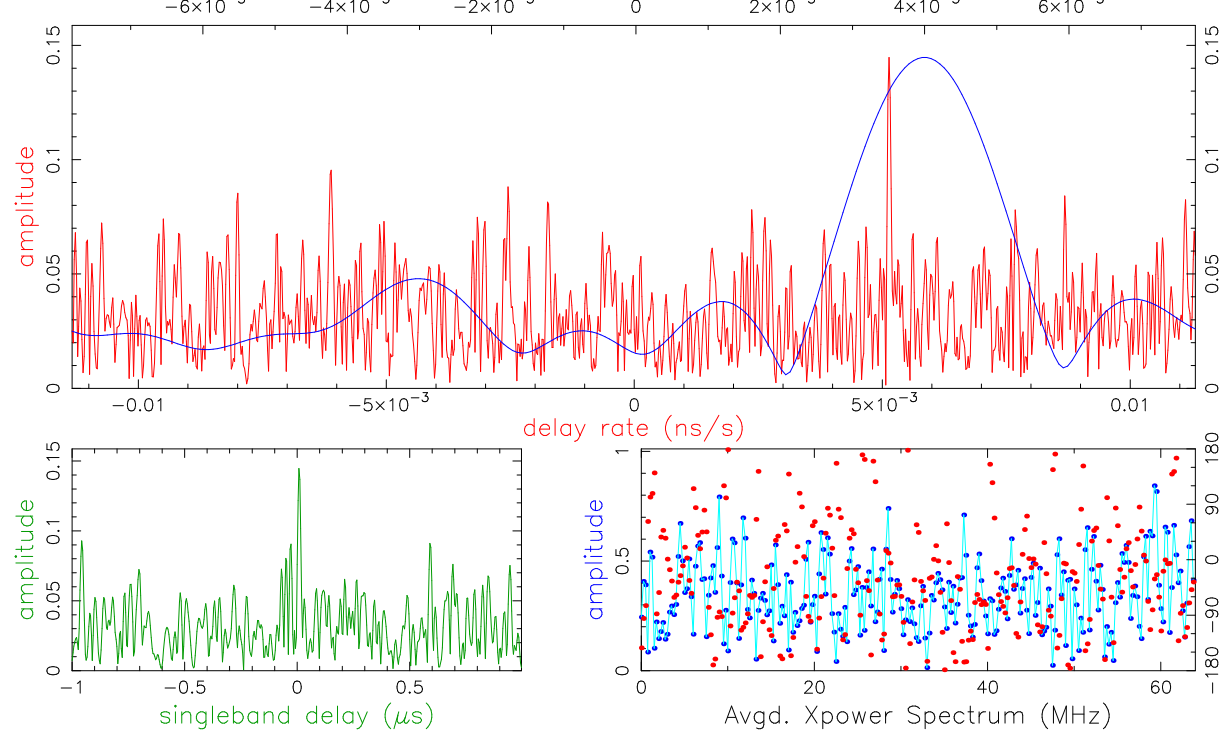
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-4.91307143195E+03									
Sband delay (usec)	-4.91307650282E+03									
Phase delay (usec)	-4.91289882624E+03									
Delay rate (us/s)	-3.50015601091E-01									
Total phase (deg)			38.8							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									64.6	+/- 20.7
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

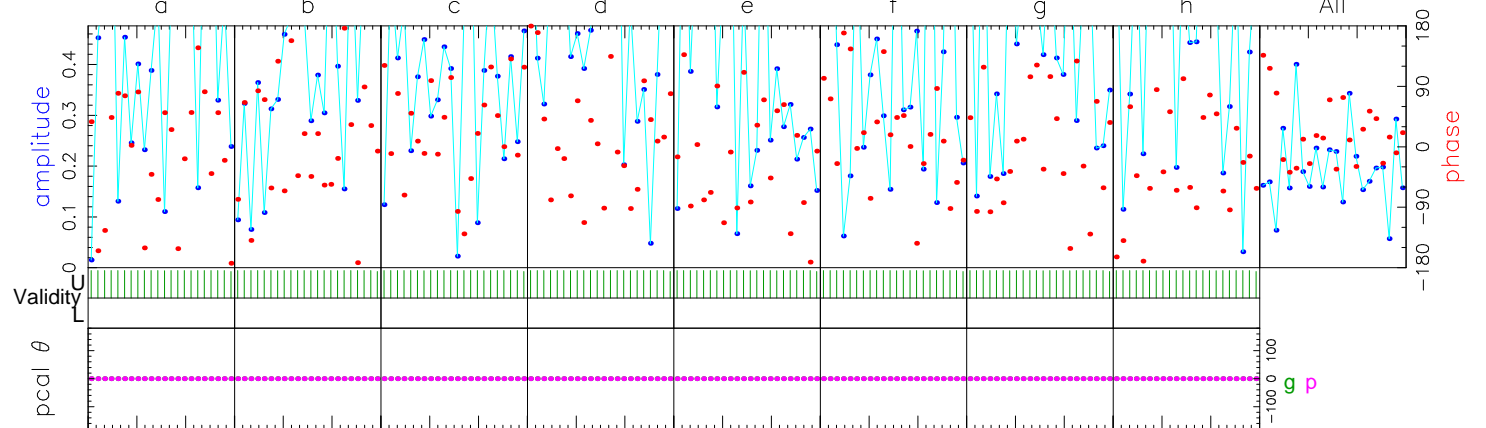
ph/seg (deg) 76.7 48.6 Search (1024X32) 0.145 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 85.8 84.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 32.9 29.3 Inc. seg. avg. 0.209 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 45.2 51.2 Inc. frq. avg. 0.196 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 213.0 el 49.0 pa 8.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2564.681 6101.780 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/gp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/gp.W.143.127MDW

multiband delay (μs)



Fringe quality 0
SNR 5.3
Int time 179.670
Amp 0.159
Phase 8.3
PFD 1.0e+00
Delays (us)
SBD 0.008759
MBD 0.004015
Fringe rate (Hz) 0.442779
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133714
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



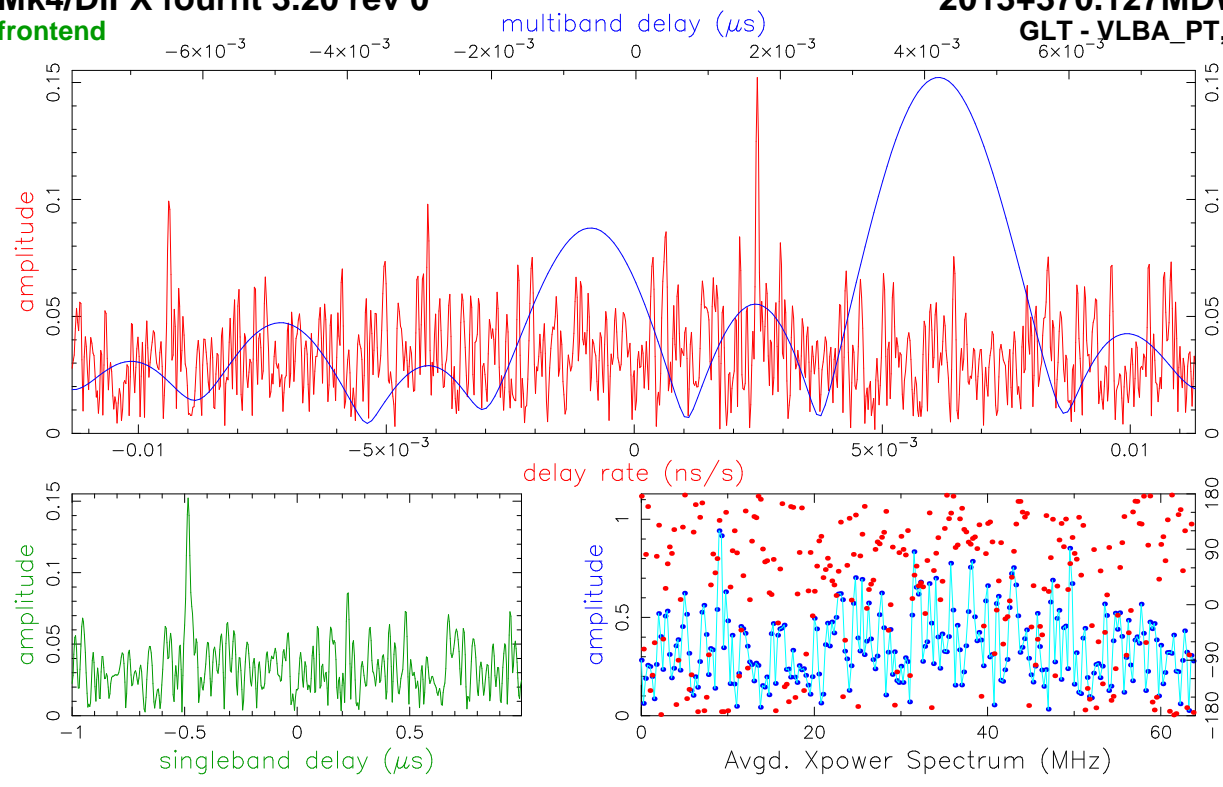
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd) -4.91289481349E+03 Apriori delay (usec) -4.91289882832E+03 Resid mbdelay (usec) 4.01483E-03 +/- 2.0E-04
 Sband delay (usec) -4.91289006957E+03 Apriori clock (usec) -1.0681365E+01 Resid sbdelay (usec) 8.75875E-03 +/- 1.6E-03
 Phase delay (usec) -4.91289882806E+03 Apriori clockrate (us/s) -1.2888659E-07 Resid phdelay (usec) 2.66904E-07 +/- 6.9E-07
 Delay rate (us/s) -3.50001432445E-01 Apriori rate (us/s) -3.50006572667E-01 Resid rate (us/s) 5.14022E-06 +/- 6.7E-09
 Total phase (deg) -17.5 Apriori accel (us/s/s) 5.40406445101E-05 Resid phase (deg) 8.3 +/- 21.5

ph/seg (deg) 50.1 50.3 Search (1024X32) 0.142 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 64.3 87.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.5 30.4 Inc. seg. avg. 0.156 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 24.4 53.0 Inc. frq. avg. 0.144 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 213.0 el 49.0 pa 8.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2564.681 6101.780 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/gp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/gp.W.153.127MDW

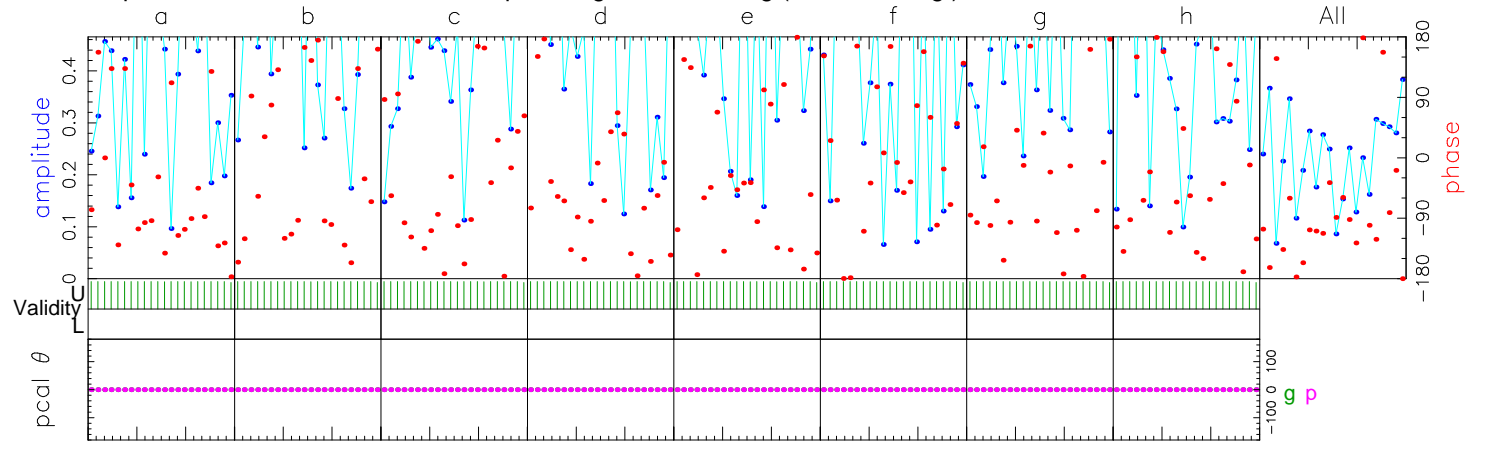
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127MDW, No0077, gp
GLT - VLBA_PT, fgroup W, pol LR



Fringe quality 0
SNR 5.6
Int time 179.736
Amp 0.155
Phase -118.3
PFD 9.5e-01
Delays (us)
SBD -0.484446
MBD 0.004190
Fringe rate (Hz) 0.213363
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133719
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
	-105.4	-158.0	-124.0	-94.6	-148.8	-114.2	-102.8	-124.9	Phase	-118.3	
	0.2	0.1	0.1	0.2	0.1	0.1	0.2	0.2	Ampl.	0.1	
	480.5	368.0	128.8	261.0	71.1	66.5	57.4	133.3	Sbd box	133.0	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
g	0	0	0	0	0	0	0	0	PC freqs		
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
g	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
p	1000	1000	1000	1000	1000	1000	1000	1000			
g	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	-4.91337901329E+03		Apriori delay (usec)		-4.91289882832E+03		Resid mbdelay (usec)		4.19003E-03	+/- 1.9E-04	
Sband delay (usec)	-4.91338327457E+03		Apriori clock (usec)		-1.0681365E+01		Resid sbdelay (usec)		-4.84446E-01	+/- 1.5E-03	
Phase delay (usec)	-4.91289883214E+03		Apriori clockrate (us/s)		-1.2888659E-07		Resid phdelay (usec)		-3.81443E-06	+/- 6.6E-07	
Delay rate (us/s)	-3.50004095740E-01		Apriori rate (us/s)		-3.50006572667E-01		Resid rate (us/s)		2.47693E-06	+/- 6.4E-09	
Total phase (deg)			Apriori accel (us/s/s)		5.40406445101E-05		Resid phase (deg)		-118.3	+/- 20.5	
	RMS	Theor.	Amplitude	0.155 +/- 0.028	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	51.5	48.2	Search (1024X32)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)		-1.000	1.000	
amp/seg (%)	77.6	84.1	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled		mb window (us)	-0.008	0.008
ph/frq (deg)	24.4	29.1	Inc. seg. avg.	0.176	Sample rate(MISamp/s): 128		dr window (ns/s)		-0.011	0.011	
amp/frq (%)	35.5	50.7	Inc. frq. avg.	0.146	Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
g: az 213.0 el 49.0 pa 8.8	p: az 70.4 el 79.3 pa -102.4		u,v (fr/asec) 2564.681 6101.780						simultaneous interpolator		
Control file: cf_1234_gmva	Input file: /Exps/c192c/v1_CygA2/1234/No0077/gp..127MDW		Output file: /Exps/c192c/v1_CygA2/1234/No0077/gp.W.176.127MDW								

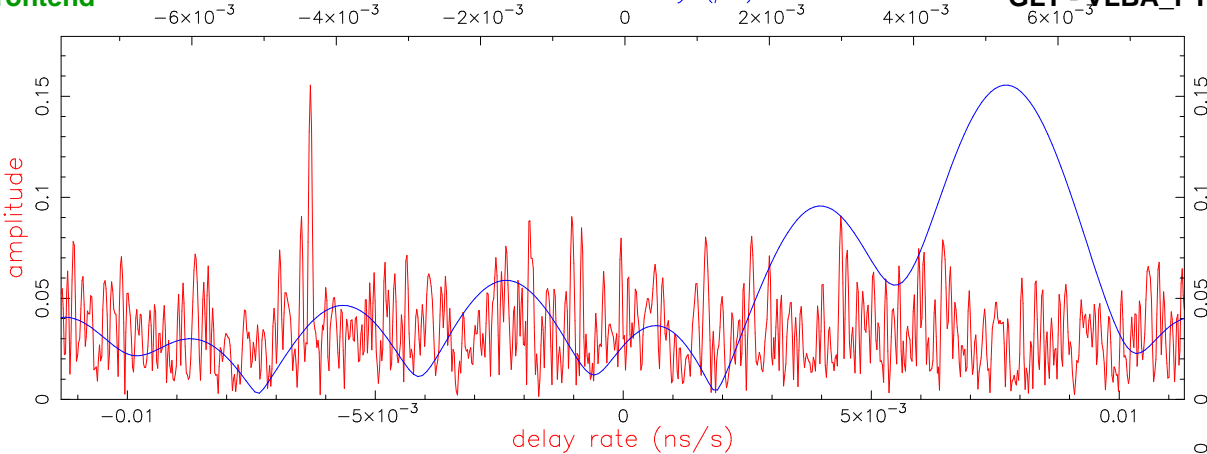
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, gp

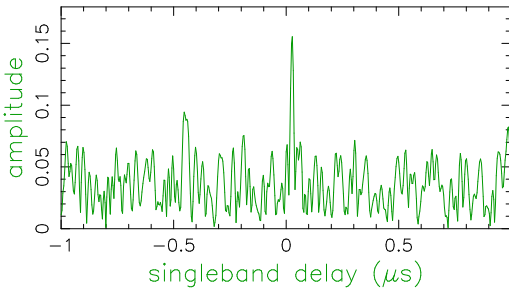
GLT - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

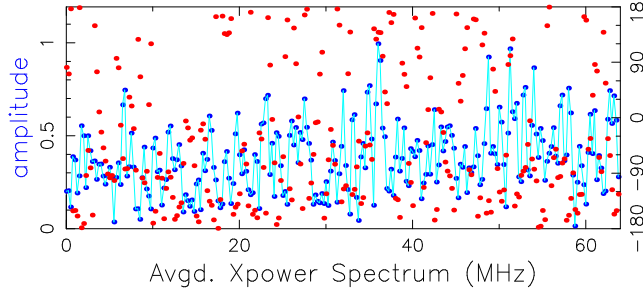


Fringe quality 0

SNR 5.8
 Int time 179.670
 Amp 0.180
 Phase 110.9
 PFD 6.2e-01
 Delays (us)
 SBD 0.026027
 MBD 0.005270
 Fringe rate (Hz)
 -0.544858
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

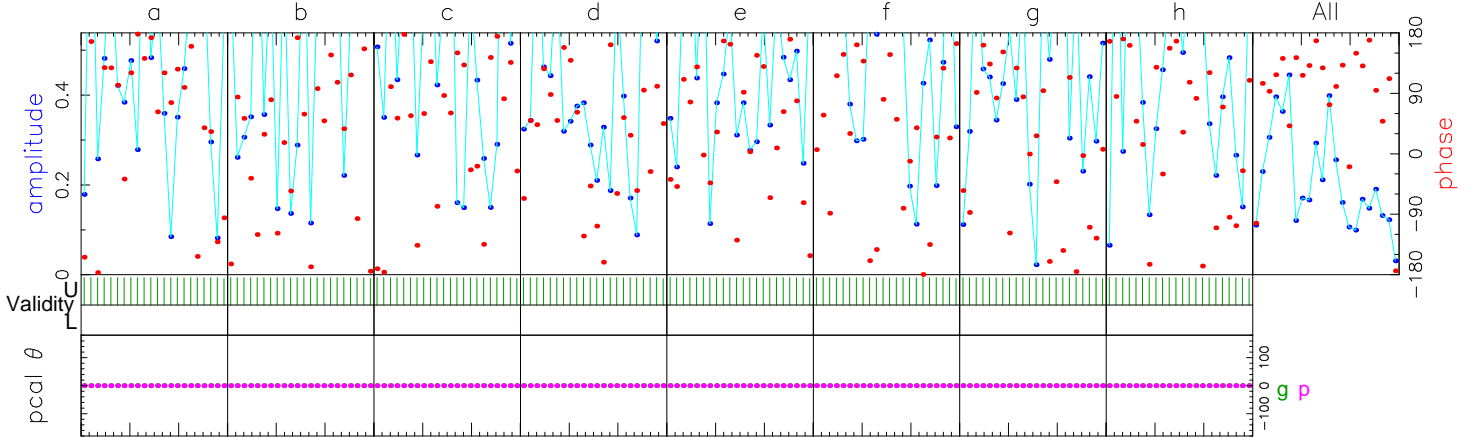


delay rate (ns/s)



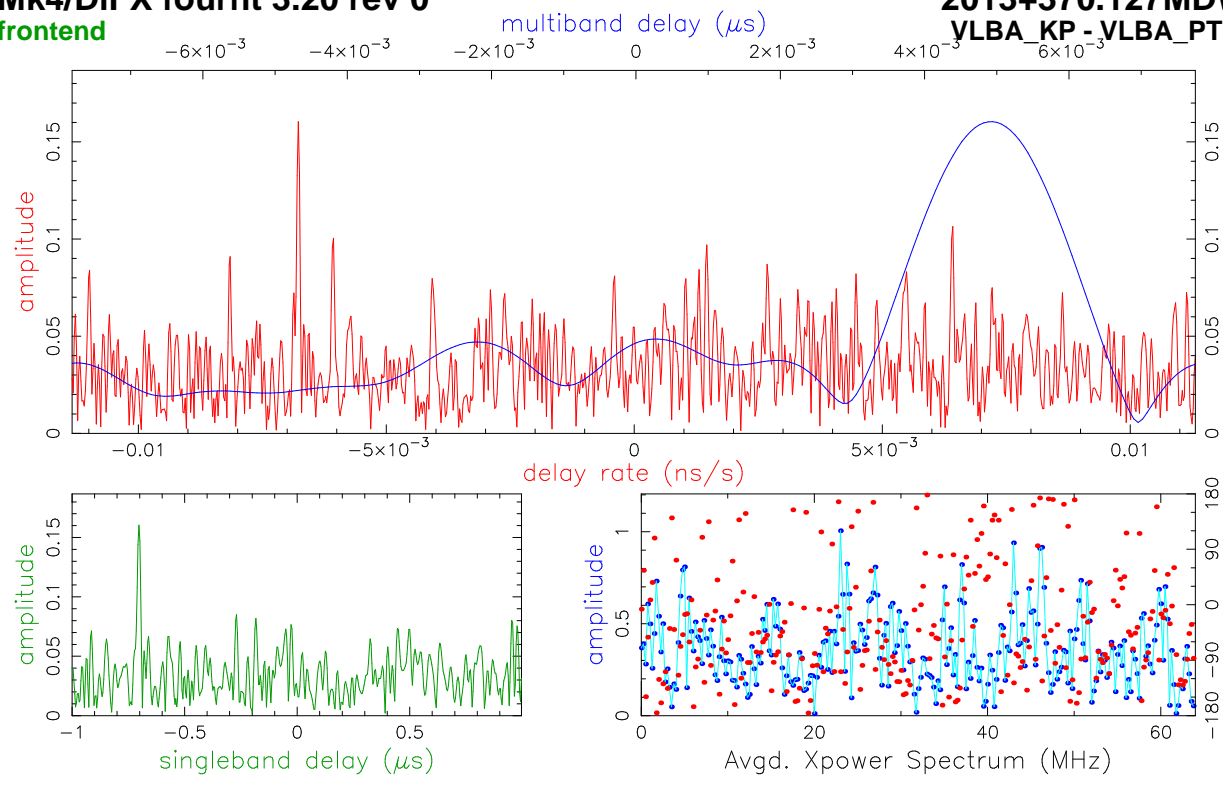
Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133722
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



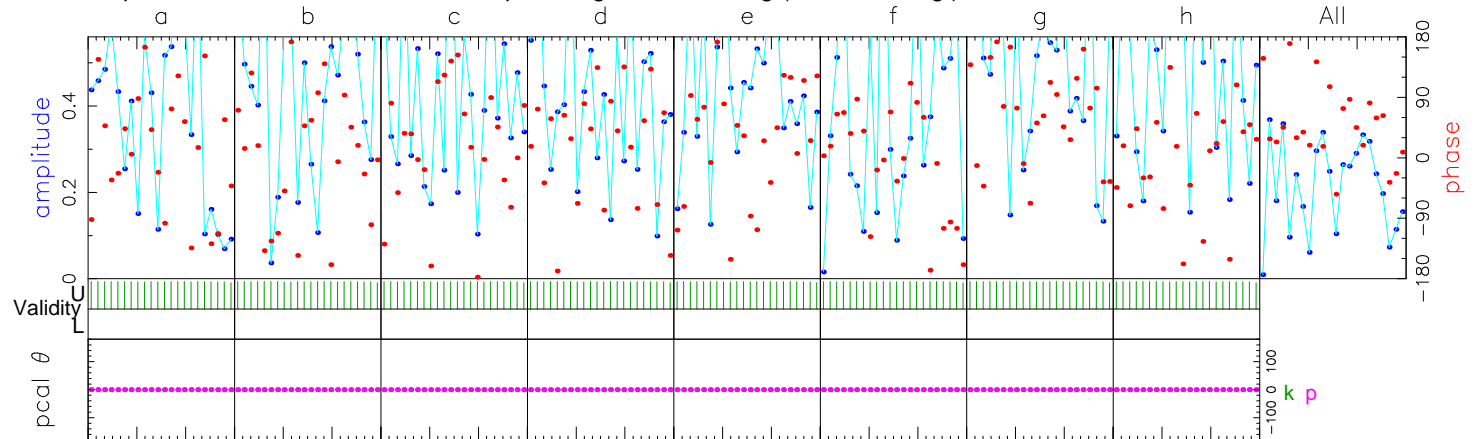
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
g	0	0	0	0	0	0	0	0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
g	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
g	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-4.91287793337E+03									
Sband delay (usec)	-4.91287280132E+03									
Phase delay (usec)	-4.91289882475E+03									
Delay rate (us/s)	-3.50012897926E-01									
Total phase (deg)			85.1							
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)									110.9	+/- 19.8
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										

ph/seg (deg) 54.9 46.6 Search (1024X32) 0.152 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 77.5 81.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 33.4 28.1 Inc. seg. avg. 0.181 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 33.0 49.0 Inc. frq. avg. 0.178 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 g: az 213.0 el 49.0 pa 8.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2564.681 6101.780 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/gp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/gp.W.186.127MDW



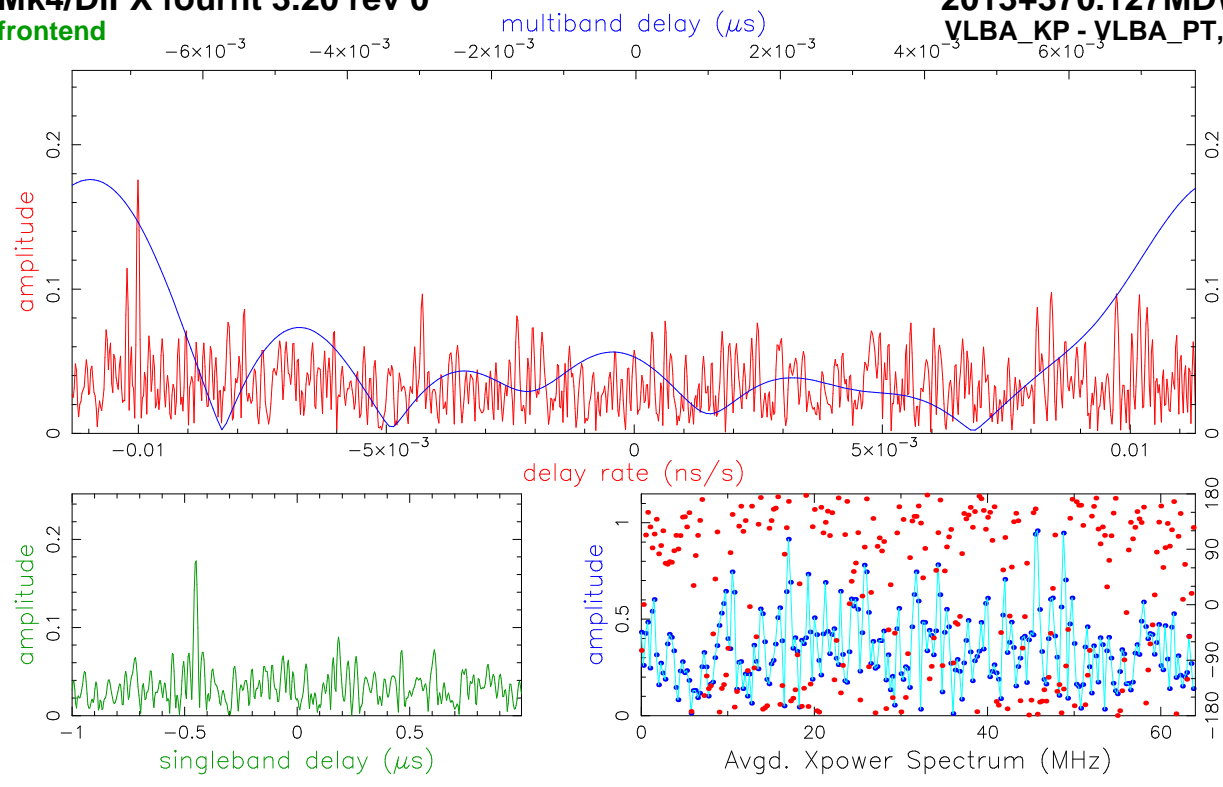
Fringe quality 0
 SNR 5.9
 Int time 178.959
 Amp 0.187
 Phase 49.0
 PFD 4.2e-01
 Delays (us)
 SBD -0.702848
 MBD 0.004928
 Fringe rate (Hz)
 -0.583880
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133726
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



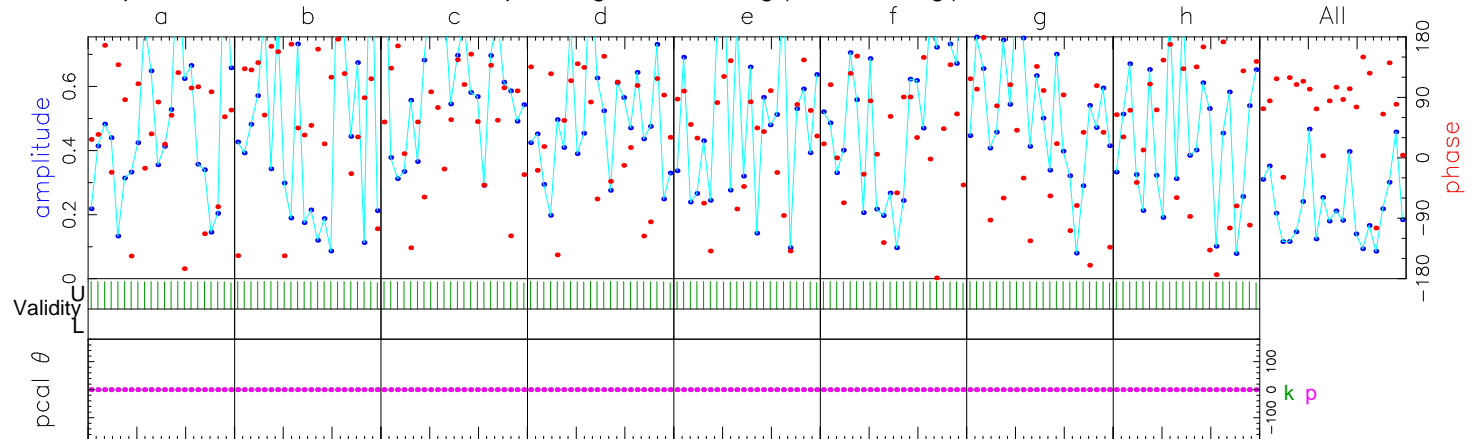
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
kp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-2.99466196141E+02				-2.98767998760E+02				4.92762E-03	+/- 1.8E-04
Sband delay (usec)	-2.99470847260E+02				-1.2386913E+01				-7.02848E-01	+/- 1.5E-03
Phase delay (usec)	-2.98767997179E+02				-3.9846558E-07				1.58153E-06	+/- 6.3E-07
Delay rate (us/s)	6.78918612119E-02				6.78986394795E-02				-6.77827E-06	+/- 6.0E-09
Total phase (deg)			-99.7		-8.18488907893E-07				49.0	+/- 19.5
Apriori delay (usec)										
Apriori clock (usec)										
Apriori clockrate (us/s)										
Apriori rate (us/s)										
Apriori accel (us/s/s)										
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
Pcal mode: MANUAL, MANUAL										
Pcal rate: 0.000E+00, 0.000E+00 (us/s)										
Bits/sample: 2x2										
Sample rate(MISamp/s): 128										
Data rate(Mb/s): 2048										
nlags: 256										
t_cohere infinite										
sb window (us)									-1.000	1.000
mb window (us)									-0.008	0.008
dr window (ns/s)									-0.011	0.011
ion window (TEC)									0.00	0.00

ph/seg (deg) 56.0 45.8 Search (1024X32) 0.157 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 72.6 79.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 19.8 27.6 Inc. seg. avg. 0.190 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 29.7 48.2 Inc. frq. avg. 0.175 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 63.9 el 75.7 pa -106.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -489.599 -287.824 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/kp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/kp.W.201.127MDW



Fringe quality 0
 SNR 6.5
 Int time 178.959
 Amp 0.252
 Phase 90.6
 PFD 1.0e-02
 Delays (us)
 SBD -0.450815
 MBD -0.007638
 Fringe rate (Hz)
 -0.863845
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133733
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
kp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
p	1000	1000	1000	1000	1000	1000	1000	1000			
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
Group delay (usec)(sbd)	-2.99213137095E+02								Resid mbdelay (usec)	-7.63834E-03 +/- 1.7E-04	
Sband delay (usec)	-2.99218813510E+02								Resid sbdelay (usec)	-4.50815E-01 +/- 1.3E-03	
Phase delay (usec)	-2.98767995839E+02								Resid phdelay (usec)	2.92164E-06 +/- 5.7E-07	
Delay rate (us/s)	6.78886110977E-02								Resid rate (us/s)	-1.00284E-05 +/- 5.5E-09	
Total phase (deg)			-58.2						Resid phase (deg)	90.6 +/- 17.6	
ph/seg (deg)	55.9	41.2							PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	
amp/seg (%)	67.1	72.0							PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000	
ph/frq (deg)	31.3	24.9							Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008	
amp/frq (%)	29.4	43.4							Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011	
									Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00	
k: az 63.9 el 75.7 pa -106.5	p: az 70.4 el 79.3 pa -102.4		u,v (fr/asec) -489.599 -287.824							simultaneous interpolator	
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/kp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/kp.W.228.127MDW											

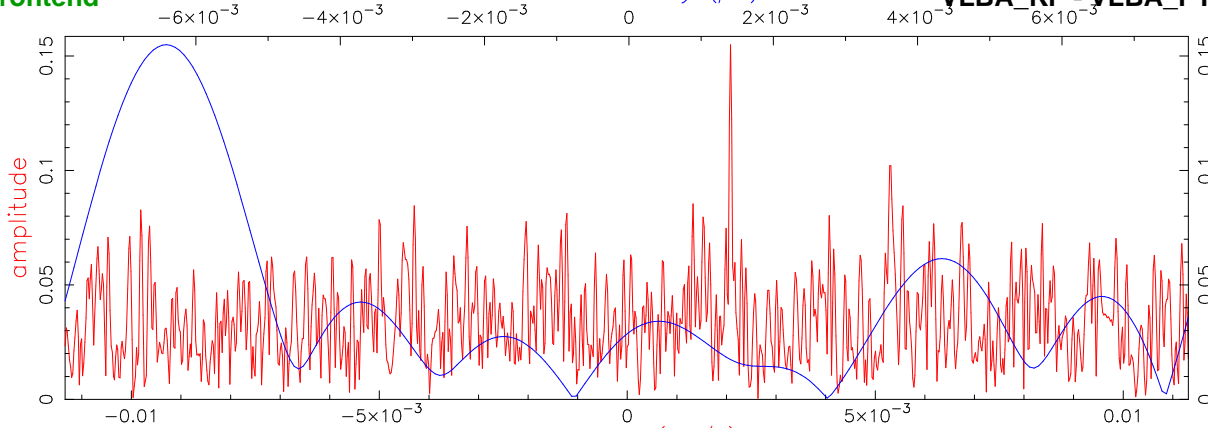
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, kp

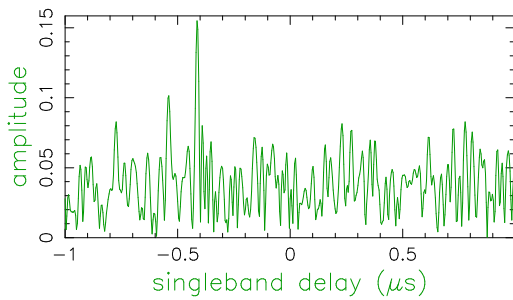
VLBA_KP - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

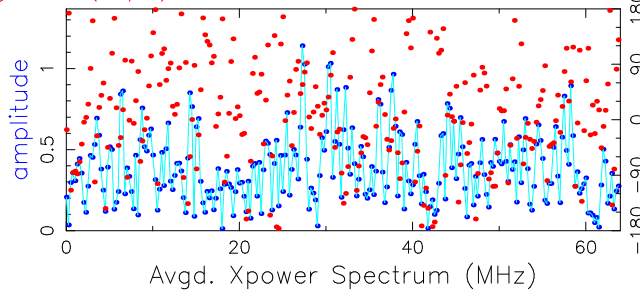


Fringe quality 0

SNR 5.7
Int time 178.959
Amp 0.159
Phase 11.7
PFD 7.3e-01
Delays (us)
SBD -0.412849
MBD -0.006394
Fringe rate (Hz) 0.178815
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

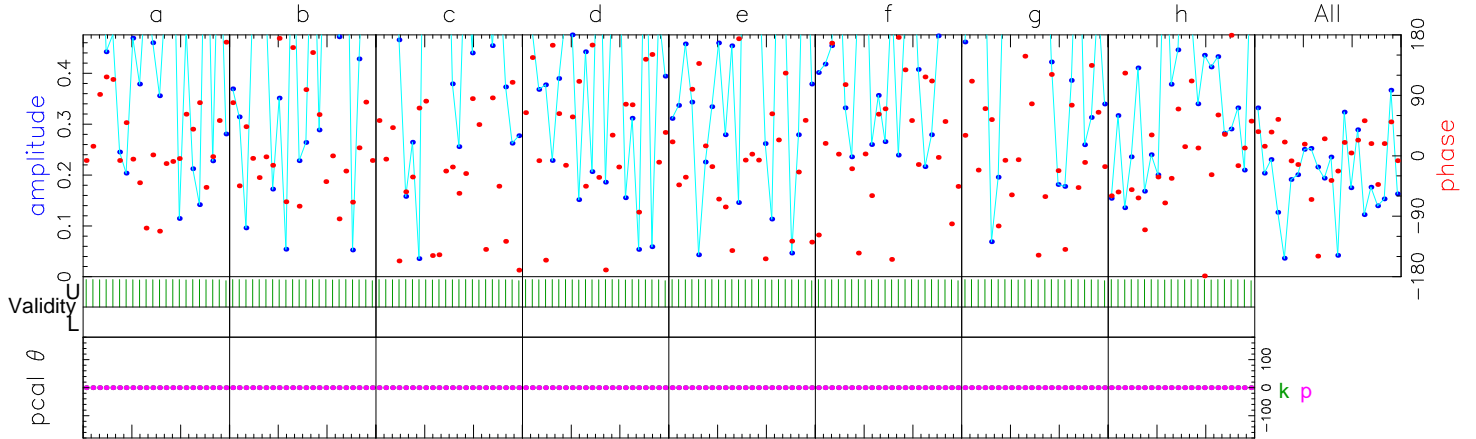


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133735
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

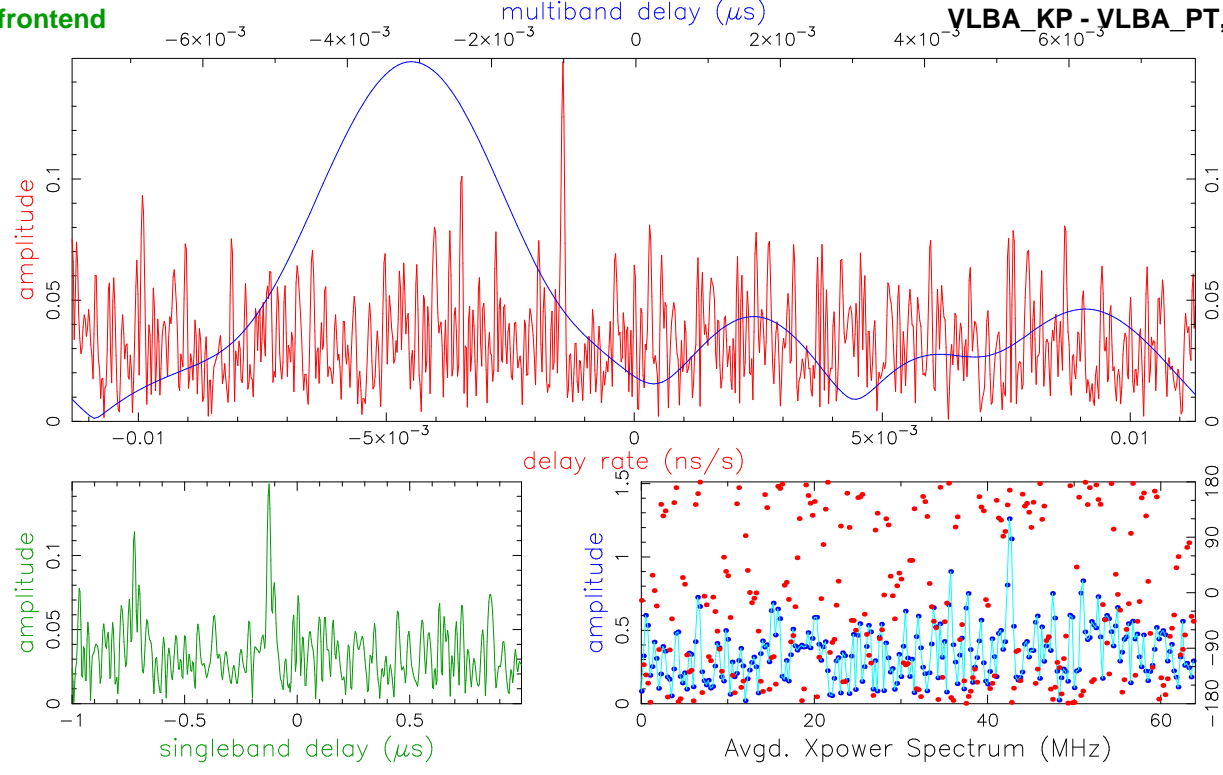


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
kp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
k	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-2.99180642406E+02									
Sband delay (usec)	-2.99180847510E+02									
Phase delay (usec)	-2.98767998384E+02									
Delay rate (us/s)	6.79007153422E-02									
Total phase (deg)			-137.1							
Apriori delay (usec)					-2.98767998760E+02					
Apriori clock (usec)					-1.2386913E+01					
Apriori clockrate (us/s)					-3.9846558E-02					
Apriori rate (us/s)					6.78986394795E-02					
Apriori accel (us/s/s)					-8.18488907893E-07					
Resid mbdelay (usec)									-6.39365E-03	+/- 1.9E-04
Resid sbdelay (usec)									-4.12849E-01	+/- 1.5E-03
Resid phdelay (usec)									3.76430E-07	+/- 6.5E-07
Resid rate (us/s)									2.07586E-06	+/- 6.2E-09
Resid phase (deg)									11.7	+/- 20.0

	RMS	Theor.	Amplitude	0.159 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	46.0	47.0	Search (1024X32)	0.147	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	59.7	82.0	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	14.4	28.3	Inc. seg. avg.	0.152	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	23.9	49.4	Inc. frq. avg.	0.143	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite			

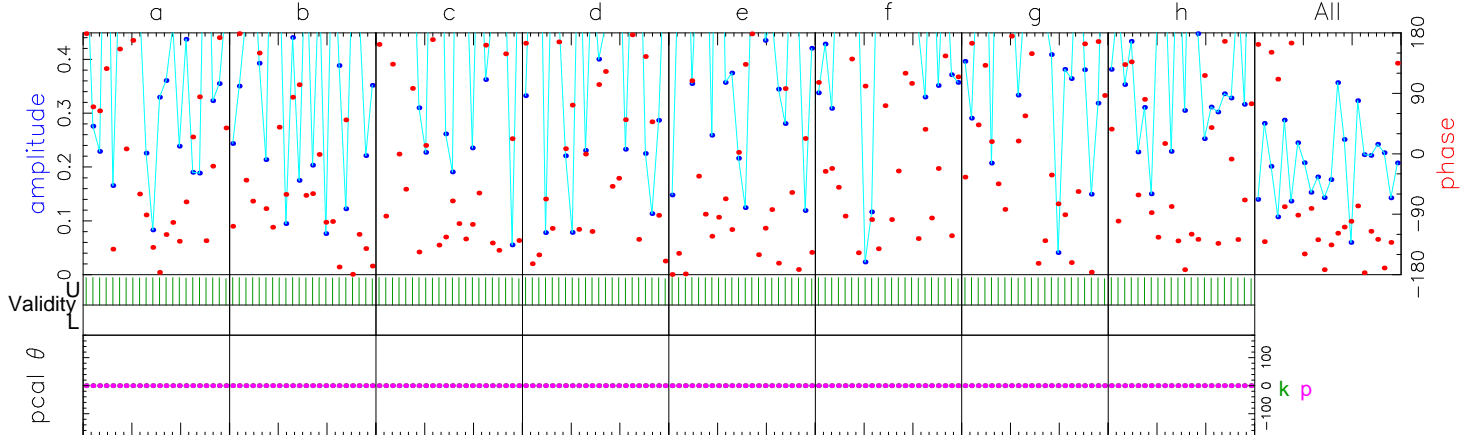
k: az 63.9 el 75.7 pa -106.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -489.599 -287.824 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/kp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/kp.W.245.127MDW



Fringe quality 0
 SNR 5.4
 Int time 178.959
 Amp 0.150
 Phase -134.0
 PFD 1.0e+00
 Delays (us)
 SBD -0.125702
 MBD -0.003142
 Fringe rate (Hz)
 -0.123756
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133737
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-166.7	-103.0	-137.4	-141.5	-124.3	-131.4	-171.5	-130.1	Phase	-134.0
	0.1	0.1	0.3	0.2	0.3	0.1	0.0	0.1	Ampl.	0.1
	203.2	300.2	253.7	420.8	224.6	162.3	333.1	114.2	Sbd box	224.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
kp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-2.98896140706E+02		Apriori delay (usec)		-2.98767998760E+02		Resid mbdelay (usec)		-3.14195E-03	+/- 2.0E-04
Sband delay (usec)	-2.98893700760E+02		Apriori clock (usec)		-1.2386913E+01		Resid sbdelay (usec)		-1.25702E-01	+/- 1.6E-03
Phase delay (usec)	-2.98768003082E+02		Apriori clockrate (us/s)		-3.9846558E-07		Resid phdelay (usec)		-4.32168E-06	+/- 6.8E-07
Delay rate (us/s)	6.78972027996E-02		Apriori rate (us/s)		6.78986394795E-02		Resid rate (us/s)		-1.43668E-06	+/- 6.5E-09
Total phase (deg)			Apriori accel (us/s/s)		-8.18488907893E-07		Resid phase (deg)		-134.0	+/- 21.1

ph/seg (deg) 49.0 49.4 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 60.4 86.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 24.6 29.8 Inc. seg. avg. 0.151 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 56.7 52.0 Inc. frq. avg. 0.138 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 k: az 63.9 el 75.7 pa -106.5 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -489.599 -287.824 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/kp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/kp.W.257.127MDW

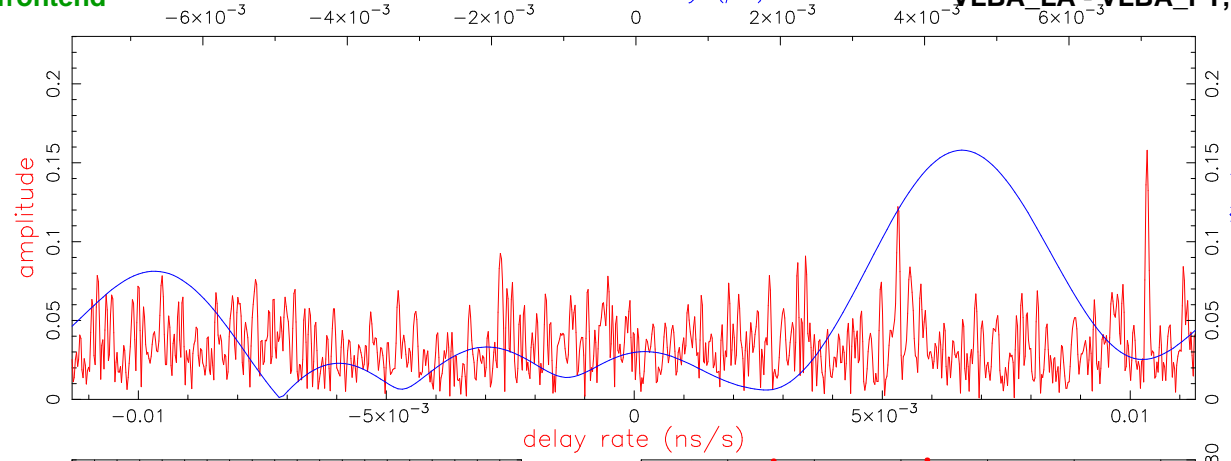
Mk4/DiFX fourfit 3.20 rev 0

frontend

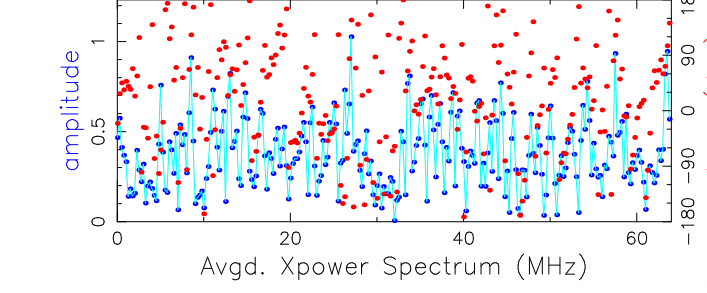
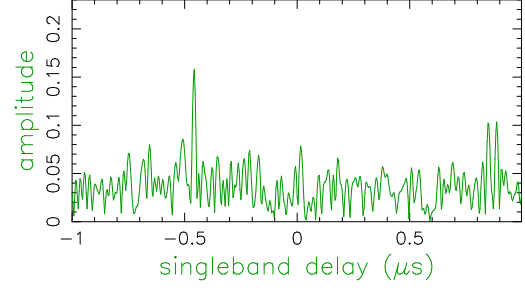
2013+370.127MDW, No0077, lp

VLBA_LA - VLBA_PT, fgroup W, pol LL

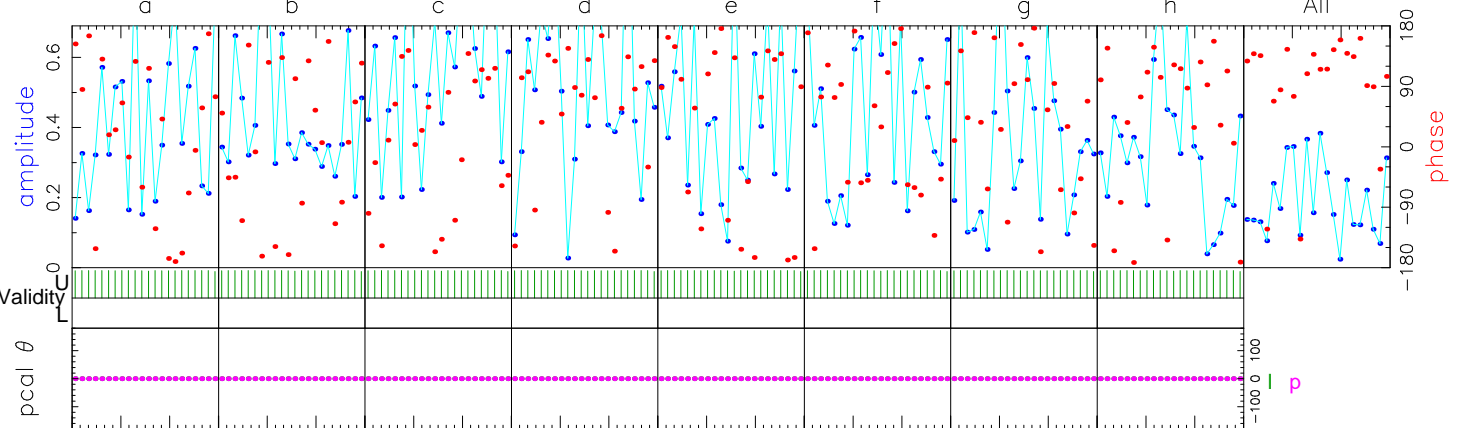
multiband delay (μ s)



Fringe quality 0
 SNR 5.8
 Int time 179.356
 Amp 0.230
 Phase 116.5
 PFD 5.2e-01
 Delays (us)
 SBD -0.458029
 MBD 0.004465
 Fringe rate (Hz)
 0.891406
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133729
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) 1.01416816269E+02 Apriori delay (usec) 1.01881101551E+02 Resid mbdelay (usec) 4.46472E-03 +/- 1.9E-04
 Sband delay (usec) 1.01423072301E+02 Apriori clock (usec) -1.2756387E+01 Resid sbdelay (usec) -4.58029E-01 +/- 1.5E-03
 Phase delay (usec) 1.01881105308E+02 Apriori clockrate (us/s) -5.5535860E-07 Resid phdelay (usec) 3.75668E-06 +/- 6.3E-07
 Delay rate (us/s) -3.60567194019E-02 Apriori rate (us/s) -3.60670677386E-02 Resid rate (us/s) 1.03483E-05 +/- 6.1E-09
 Total phase (deg) 148.0 Apriori accel (us/s/s) 8.25926360653E-07 Resid phase (deg) 116.5 +/- 19.7

ph/seg (deg) 53.5 46.2 Amplitude 0.230 +/- 0.040 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.5 80.6 Search (1024X32) 0.154 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 21.8 27.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 54.0 48.6 Inc. seg. avg. 0.210 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 Inc. frq. avg. 0.212 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

l: az 77.2 el 81.1 pa -96.3 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 260.399 196.063 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/lp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/lp.W.214.127MDW

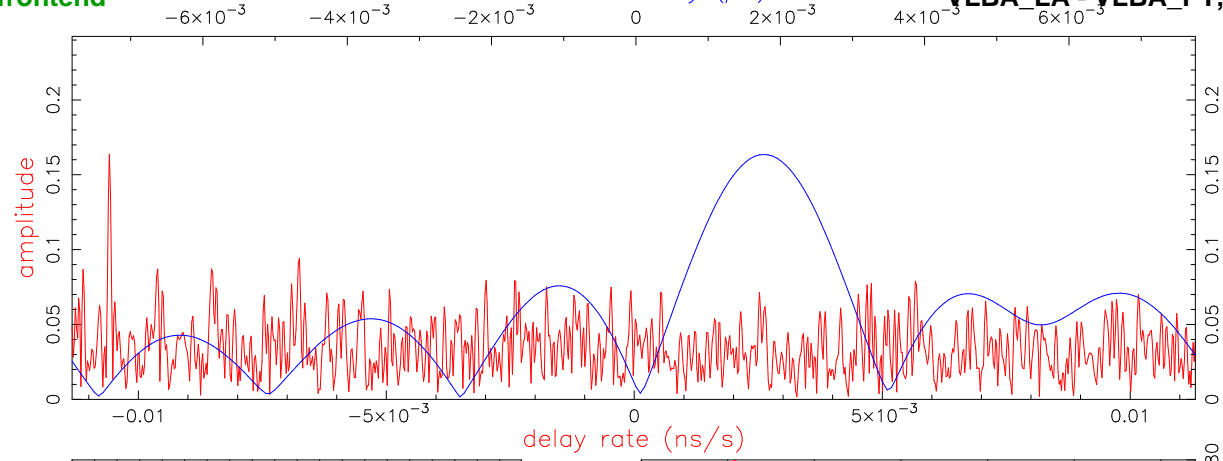
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, lp

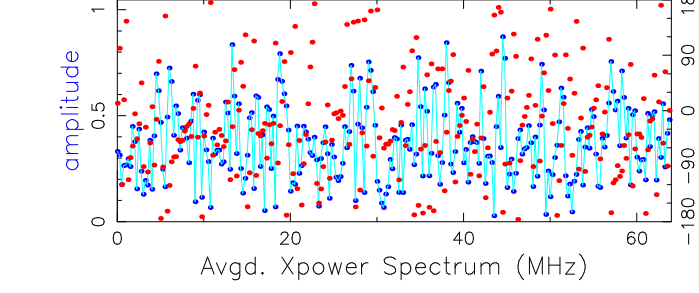
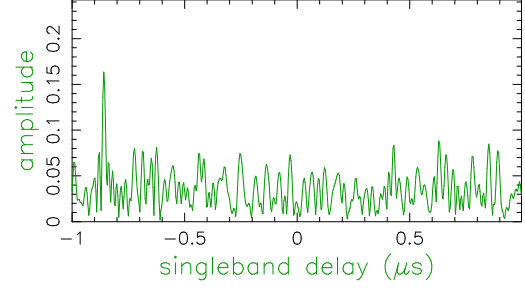
VLBA_LA - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)



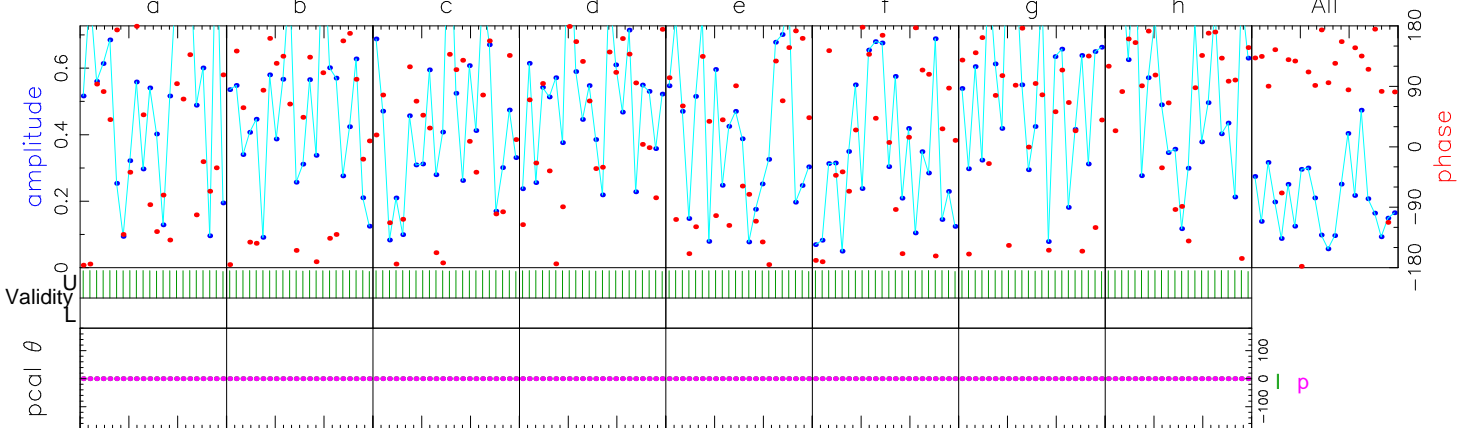
Fringe quality 0

SNR 6.0
 Int time 179.356
 Amp 0.242
 Phase 127.8
 PFD 2.1e-01
 Delays (us)
 SBD -0.858616
 MBD 0.001803
 Fringe rate (Hz)
 -0.912569
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133734
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	122.7	145.3	95.1	131.4	155.4	119.5	112.2	131.1	Phase	127.8
	0.1	0.4	0.3	0.2	0.2	0.1	0.3	0.5	Ampl.	0.2
	21.7	38.1	174.7	374.2	209.5	248.8	418.7	36.6	Sbd box	37.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
lp	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	1.01023529631E+02		Apriori delay (usec)		1.01881101551E+02		Resid mbdelay (usec)		1.80308E-03	+/- 1.8E-04
Sband delay (usec)	1.01022485051E+02		Apriori clock (usec)		-1.2756387E+01		Resid sbdelay (usec)		-8.58616E-01	+/- 1.4E-03
Phase delay (usec)	1.01881105671E+02		Apriori clockrate (us/s)		-5.5535860E-07		Resid phdelay (usec)		4.12041E-06	+/- 6.1E-07
Delay rate (us/s)	-3.60776617548E-02		Apriori rate (us/s)		-3.60670677386E-02		Resid rate (us/s)		-1.05940E-05	+/- 5.9E-09
Total phase (deg)	159.3		Apriori accel (us/s/s)		8.25926360653E-07		Resid phase (deg)		127.8	+/- 19.0

ph/seg (deg) 52.4 44.7 Search (1024X32) 0.153 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 68.8 78.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 20.4 26.9 Inc. seg. avg. 0.236 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 51.8 47.0 Inc. frq. avg. 0.228 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 l: az 77.2 el 81.1 pa -96.3 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 260.399 196.063 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/lp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/lp.W.232.127MDW

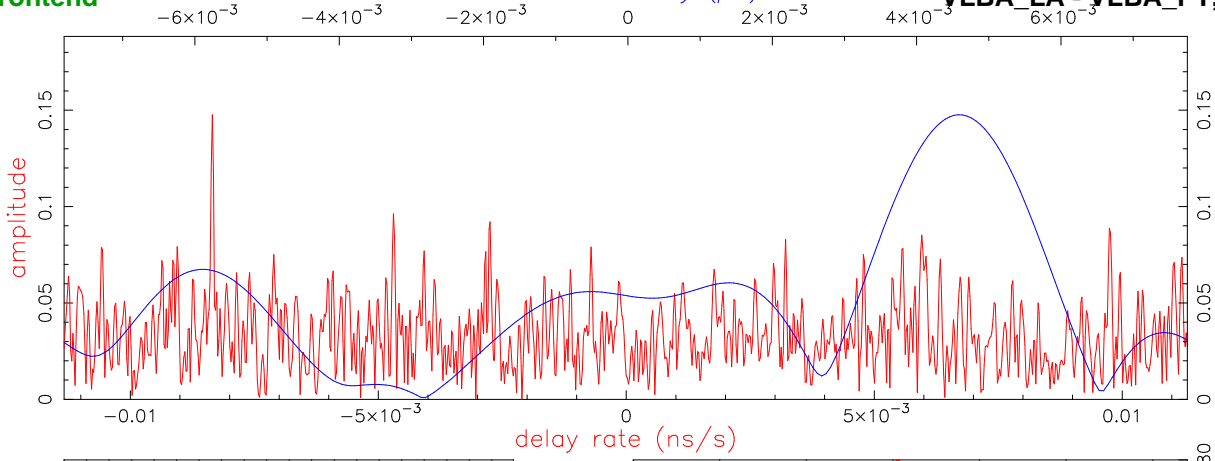
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, lp

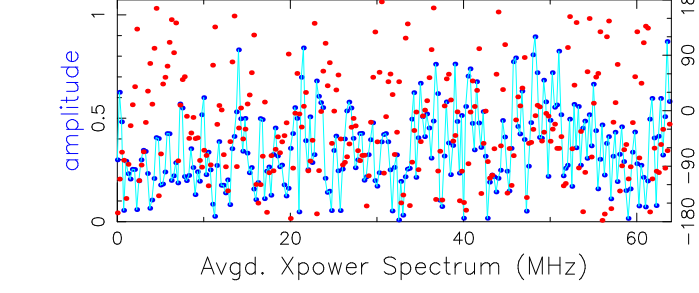
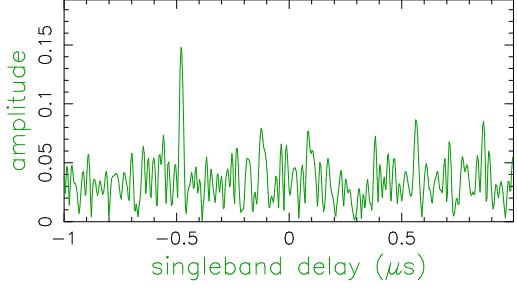
VLBA_LA - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)



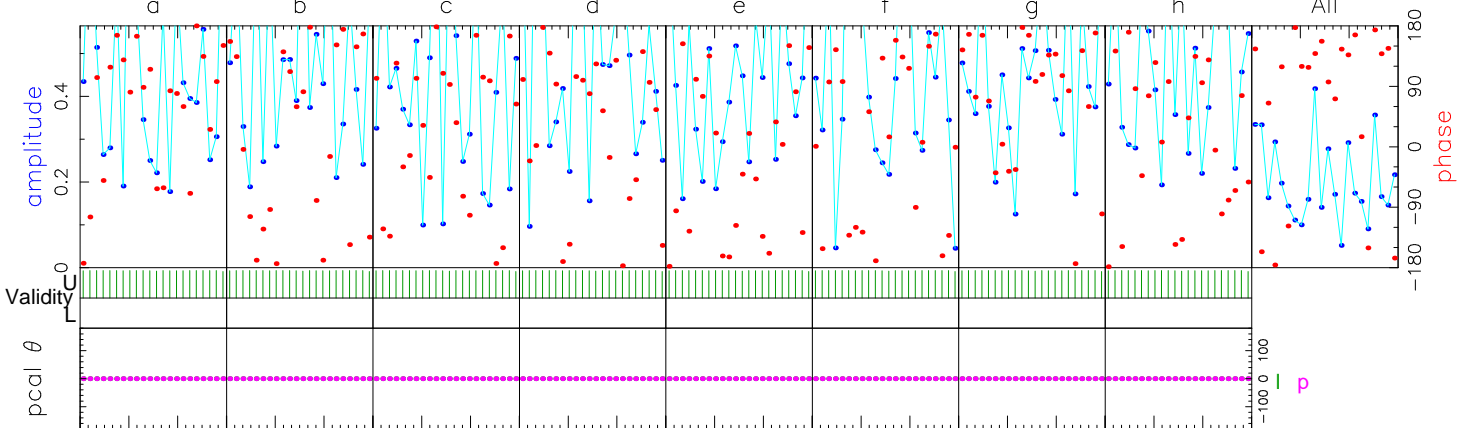
Fringe quality 0

SNR 5.5
 Int time 179.356
 Amp 0.188
 Phase 149.1
 PFD 1.0e+00
 Delays (us)
 SBD -0.479256
 MBD 0.004583
 Fringe rate (Hz)
 -0.720551
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133737
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
l	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	1.01401309783E+02	Apriori delay (usec)	1.01881101551E+02	Resid mbdelay (usec)	4.58323E-03	+/-	2.0E-04
Sband delay (usec)	1.01401845551E+02	Apriori clock (usec)	-1.2756387E+01	Resid sbdelay (usec)	-4.79256E-01	+/-	1.6E-03
Phase delay (usec)	1.01881106359E+02	Apriori clockrate (us/s)	-5.5535860E-07	Resid phdelay (usec)	4.80807E-06	+/-	6.8E-07
Delay rate (us/s)	-3.60754326156E-02	Apriori rate (us/s)	-3.60670677386E-02	Resid rate (us/s)	-8.36488E-06	+/-	6.5E-09
Total phase (deg)	180.6	Apriori accel (us/s/s)	8.25926360653E-07	Resid phase (deg)	149.1	+/-	21.0

ph/seg (deg)	51.1	RMS	51.1	Theor.	49.3	Amplitude	0.188 +/- 0.035	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	74.1		74.1		86.0	Search (1024X32)	0.145	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	31.7		31.7		29.7	Interp.	0.189	Bits/sample:	2x2	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.7		37.7		51.9	Inc. seg. avg.	0.186	Data rate (Mb/s):	2048	nlags:	256	ion window (TEC)	0.00	0.00
						Inc. frq. avg.	0.186			t_cohere:	infinite			

l: az 77.2 el 81.1 pa -96.3 p: az 70.4 el 79.3 pa -102.4 u, v (fr/asec) 260.399 196.063 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/lp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/lp.W.253.127MDW

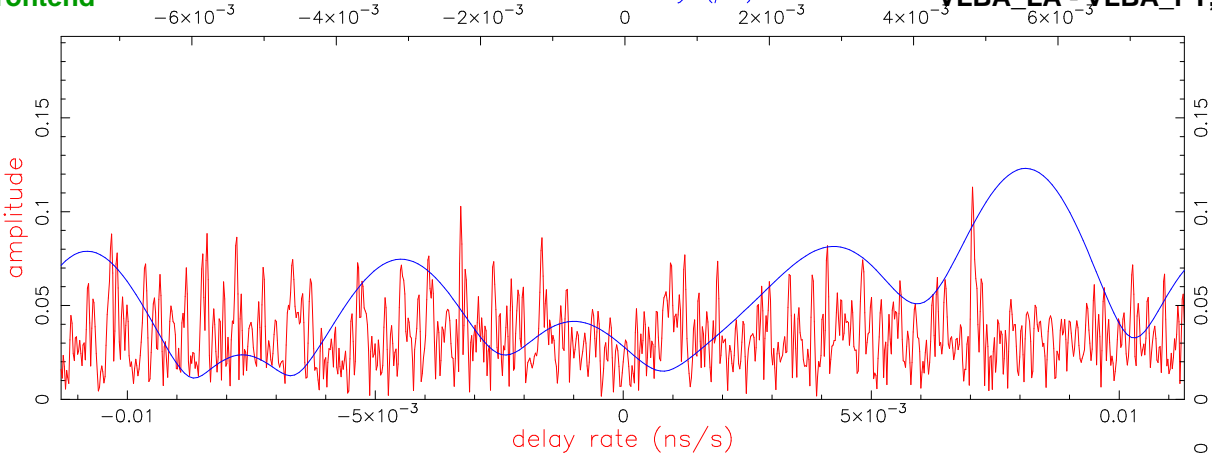
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, lp

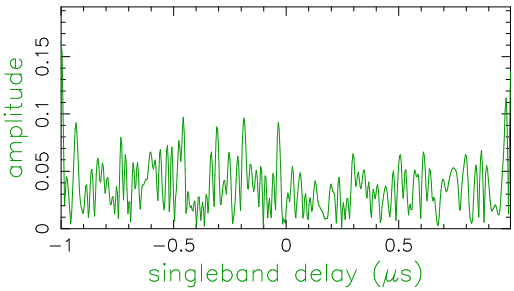
VLBA_LA - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

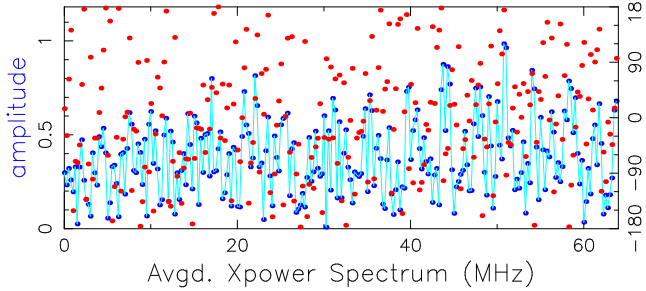


Fringe quality 0

SNR 6.0
 Int time 179.356
 Amp 0.193
 Phase -50.4
 PFD 2.2e-01
 Delays (us)
 SBD -0.999195
 MBD 0.005149
 Fringe rate (Hz)
 0.608156
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

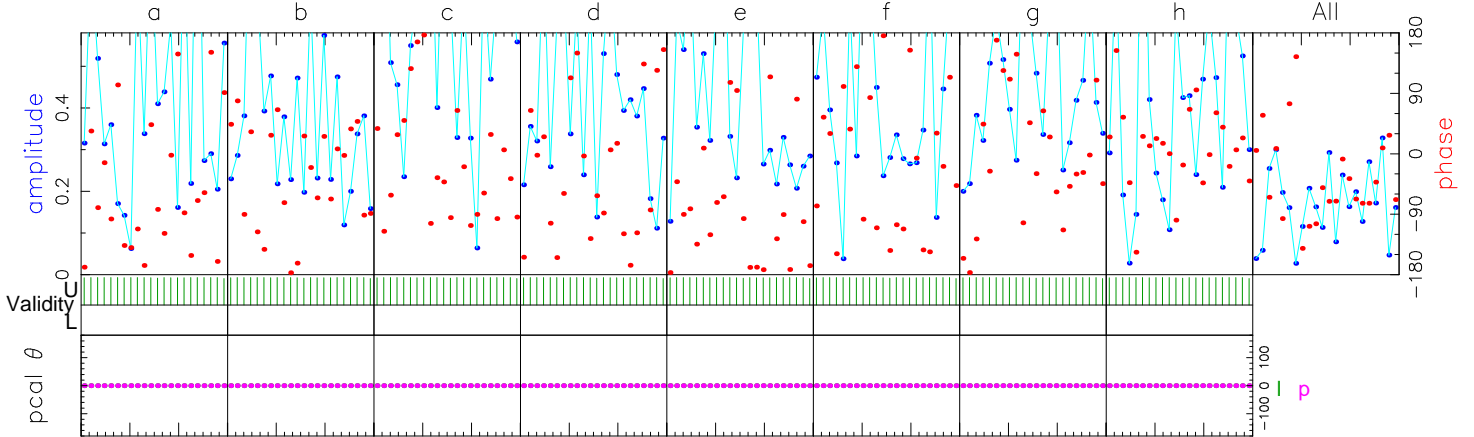


delay rate (ns/s)



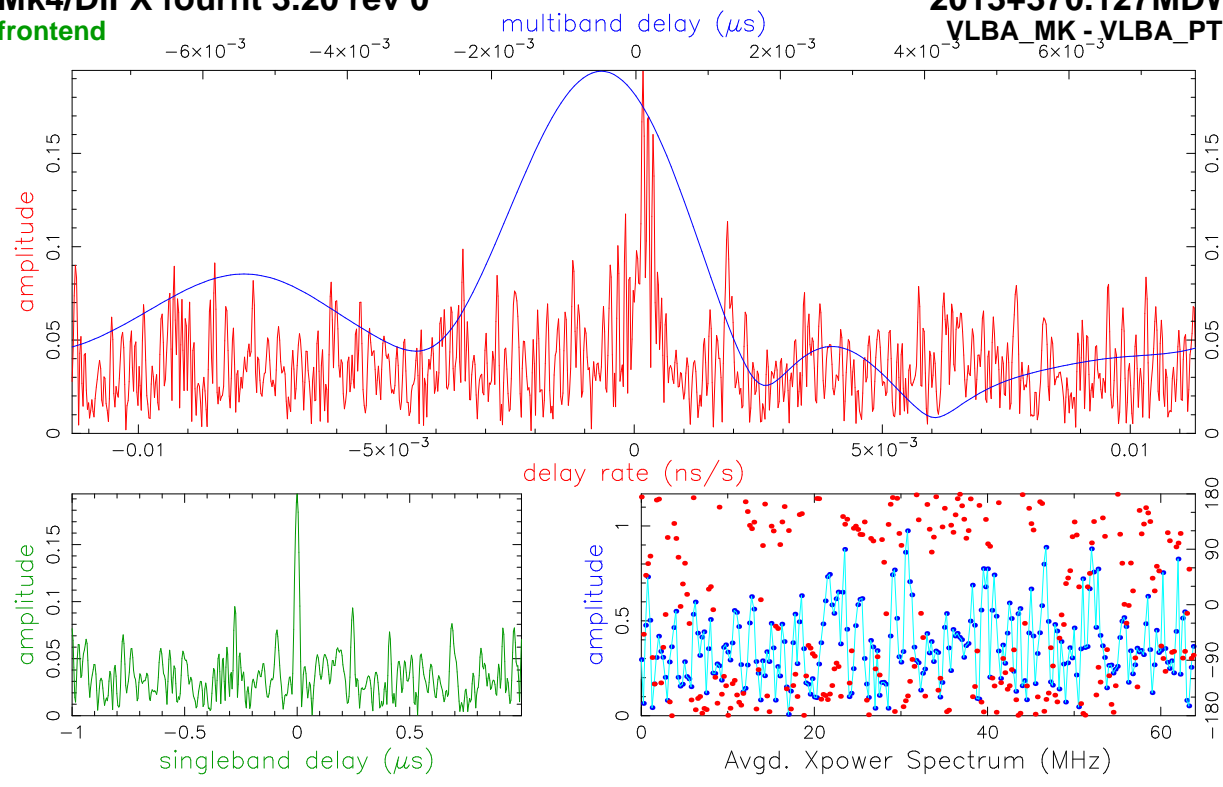
Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133739
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



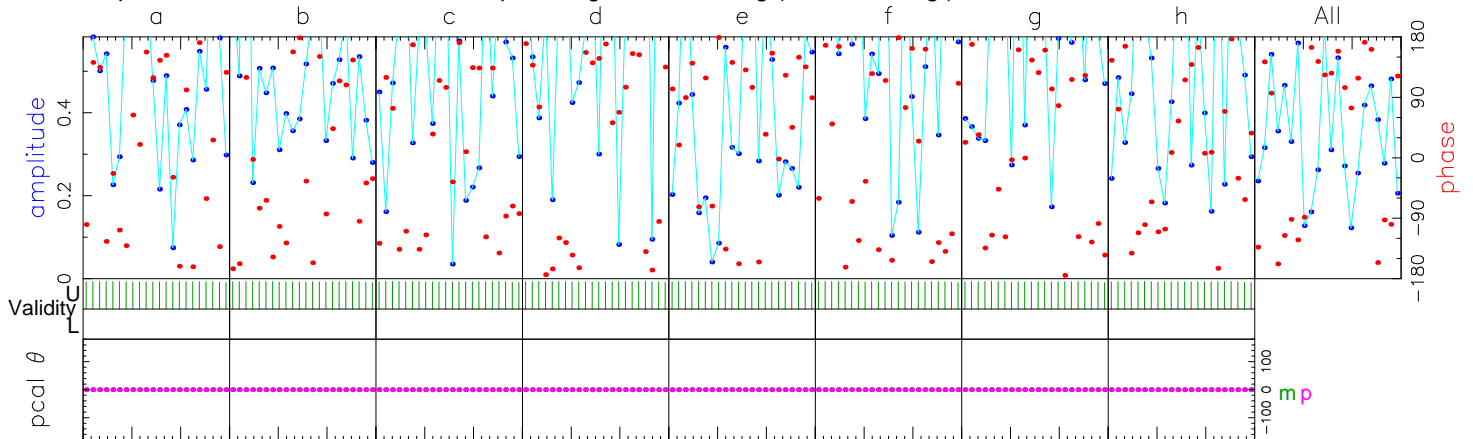
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
l:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)		1.00886250733E+02			1.01881101551E+02				5.14918E-03	+/- 1.8E-04
Sband delay (usec)		1.00881906301E+02			-1.2756387E+01				-9.99195E-01	+/- 1.4E-03
Phase delay (usec)		1.01881099925E+02			-5.5535860E-07				-1.62562E-06	+/- 6.2E-07
Delay rate (us/s)		-3.60600076534E-02			-3.60670677386E-02				7.06008E-06	+/- 5.9E-09
Total phase (deg)			-18.9		8.25926360653E-07				-50.4	+/- 19.1
	RMS	Theor.	Amplitude	0.193 +/- 0.032	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	64.6	44.7	Search (1024X32)	0.162	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	52.7	78.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	48.2	27.0	Inc. seg. avg.	0.153	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	45.5	47.1	Inc. frq. avg.	0.163	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

l: az 77.2 el 81.1 pa -96.3 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 260.399 196.063 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/lp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/lp.W.267.127MDW



Fringe quality 0
 SNR 7.1
 Int time 178.508
 Amp 0.194
 Phase 176.0
 PFD 1.9e-04
 Delays (us)
 SBD -0.000731
 MBD -0.000485
 Fringe rate (Hz) 0.014647
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133739
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	164.5	-171.1	-153.3	173.3	115.6	-172.9	-172.9	-166.9	Phase	176.0
	0.1	0.2	0.2	0.5	0.2	0.2	0.2	0.1	Ampl.	0.2
	203.6	304.3	156.9	257.3	177.2	257.4	232.7	194.2	Sbd box	256.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.52870223852E+03		Apriori delay (usec)		-8.52870175336E+03		Resid mbdelay (usec)		-4.85165E-04	+/- 1.5E-04
Sband delay (usec)	-8.52870248461E+03		Apriori clock (usec)		-9.3880596E+00		Resid sbdelay (usec)		-7.31250E-04	+/- 1.2E-03
Phase delay (usec)	-8.52870174768E+03		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		5.67599E-06	+/- 5.2E-07
Delay rate (us/s)	7.85441849427E-01		Apriori rate (us/s)		7.85441679386E-01		Resid rate (us/s)		1.70041E-07	+/- 5.0E-09
Total phase (deg)			Apriori accel (us/s/s)		2.99799067311E-05		Resid phase (deg)		176.0	+/- 16.1

ph/seg (deg) 61.0 37.8 Search (1024X32) 0.189 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 108.1 66.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 30.1 22.8 Inc. seg. avg. 0.288 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 55.9 39.8 Inc. frq. avg. 0.199 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 57.8 el 35.4 pa -90.9 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -5631.360 241.346 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/mp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/mp.W.264.127MDW

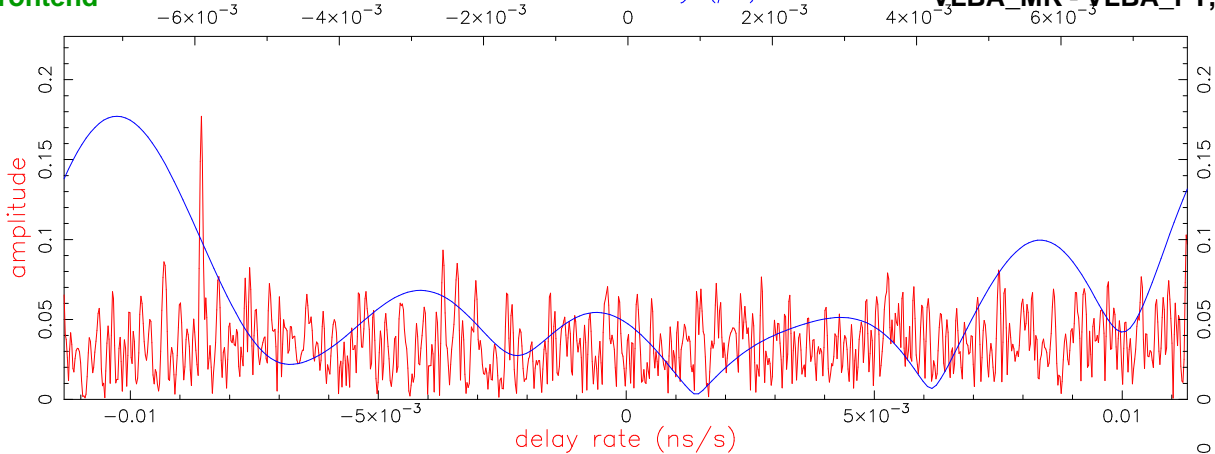
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, mp

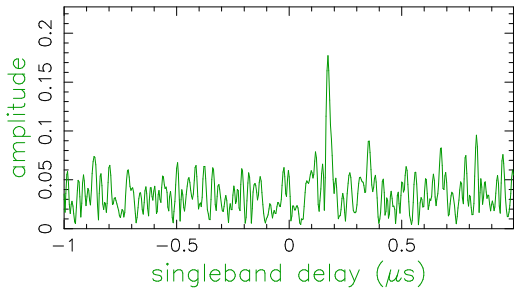
VLBA_MK - VLBA_PT, fgroup W, pol RR

multiband delay (μ s)

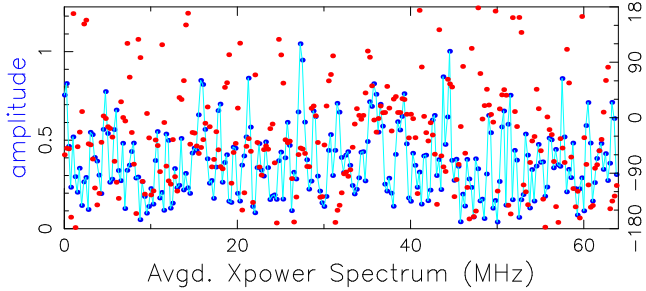


Fringe quality 0

SNR 6.5
 Int time 178.509
 Amp 0.227
 Phase -142.3
 PFD 1.3e-02
 Delays (us)
 SBD 0.171763
 MBD -0.007085
 Fringe rate (Hz)
 -0.739848
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

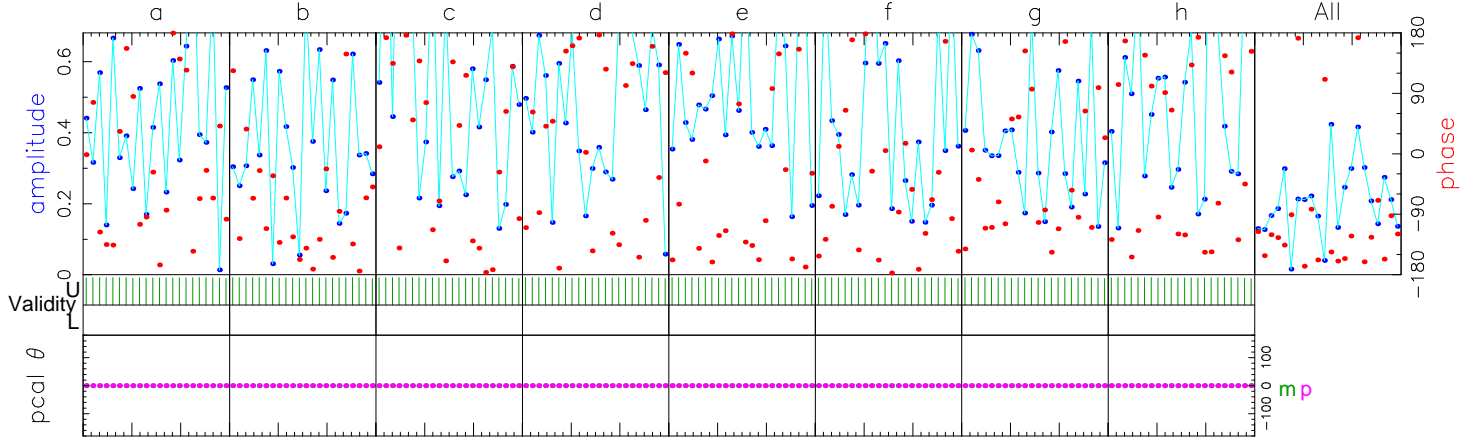


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133741
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-122.3	-117.8	-173.9	-179.9	-156.4	-95.6	-86.9	-158.1	Phase	-142.3
	0.2	0.3	0.3	0.2	0.3	0.2	0.2	0.3	Ampl.	0.2
	142.8	341.9	283.2	345.6	301.3	161.2	33.2	472.8	Sbd box	301.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-8.52853696331E+03		Apriori delay (usec)		-8.52870175336E+03		Resid mbdelay (usec)		-7.08495E-03	+/- 1.7E-04
Sband delay (usec)	-8.52852999061E+03		Apriori clock (usec)		-9.3880596E+00		Resid sbdelay (usec)		1.71763E-01	+/- 1.3E-03
Phase delay (usec)	-8.52870175795E+03		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		-4.58796E-06	+/- 5.7E-07
Delay rate (us/s)	7.85433090486E-01		Apriori rate (us/s)		7.85441679386E-01		Resid rate (us/s)		-8.58890E-06	+/- 5.5E-09
Total phase (deg)			Apriori accel (us/s/s)		2.99799067311E-05		Resid phase (deg)		-142.3	+/- 17.7

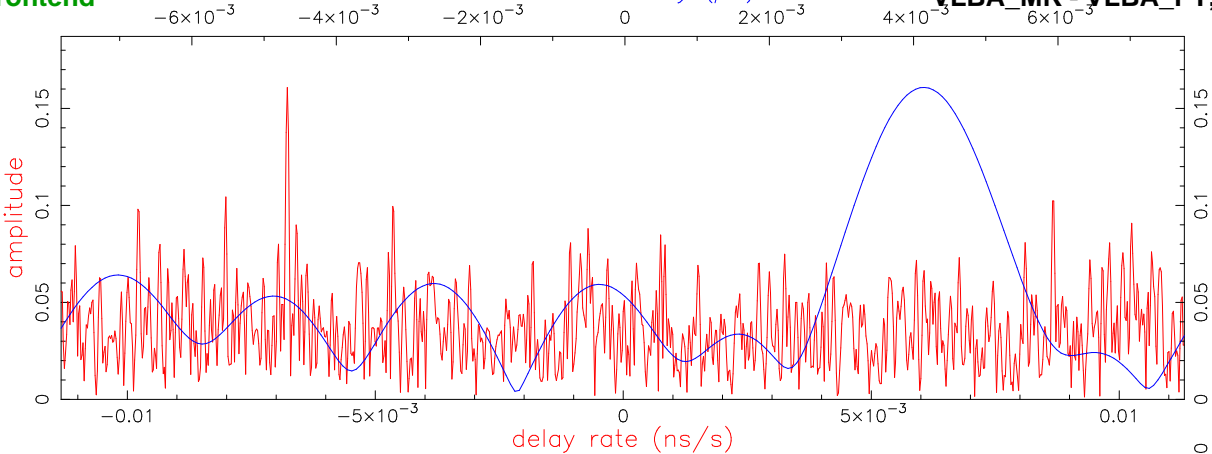
ph/seg (deg) 39.6 41.5 Search (1024X32) 0.175 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 58.7 72.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 38.9 25.0 Inc. seg. avg. 0.211 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 31.9 43.7 Inc. frq. avg. 0.242 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 m: az 57.8 el 35.4 pa -90.9 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -5631.360 241.346 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/mp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/mp.W.277.127MDW

Mk4/DiFX fourfit 3.20 rev 0
 frontend

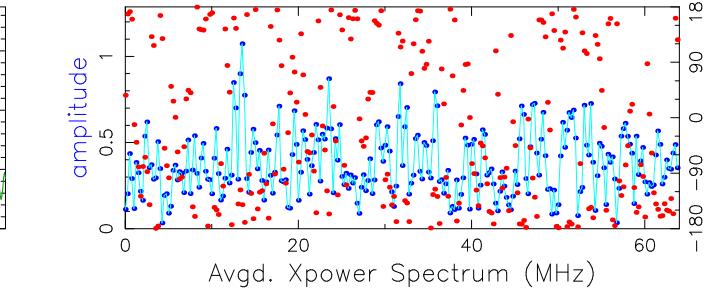
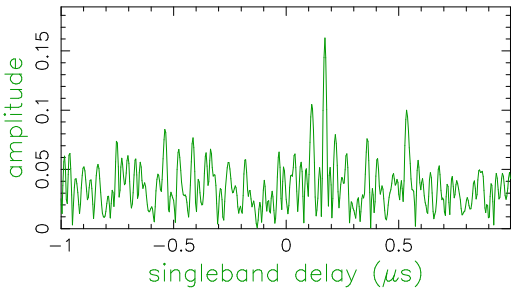
2013+370.127MDW, No0077, mp
 VLBA_MK - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 0

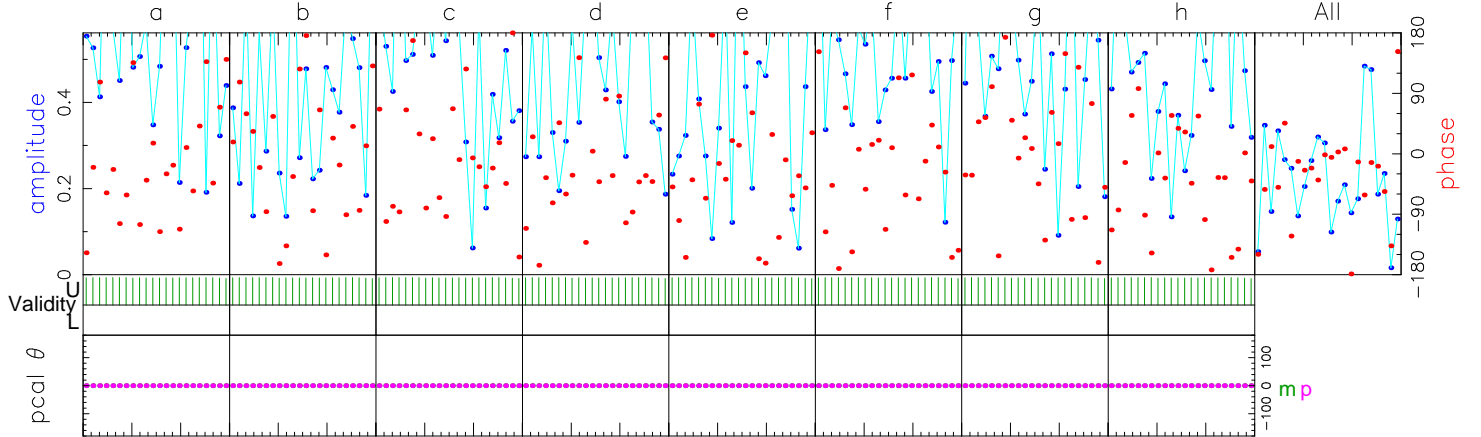


SNR 5.9
 Int time 178.508
 Amp 0.187
 Phase -29.2
 PFD 4.1e-01
 Delays (us)
 SBD 0.171858
 MBD 0.004139
 Fringe rate (Hz)
 -0.583663
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133743
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



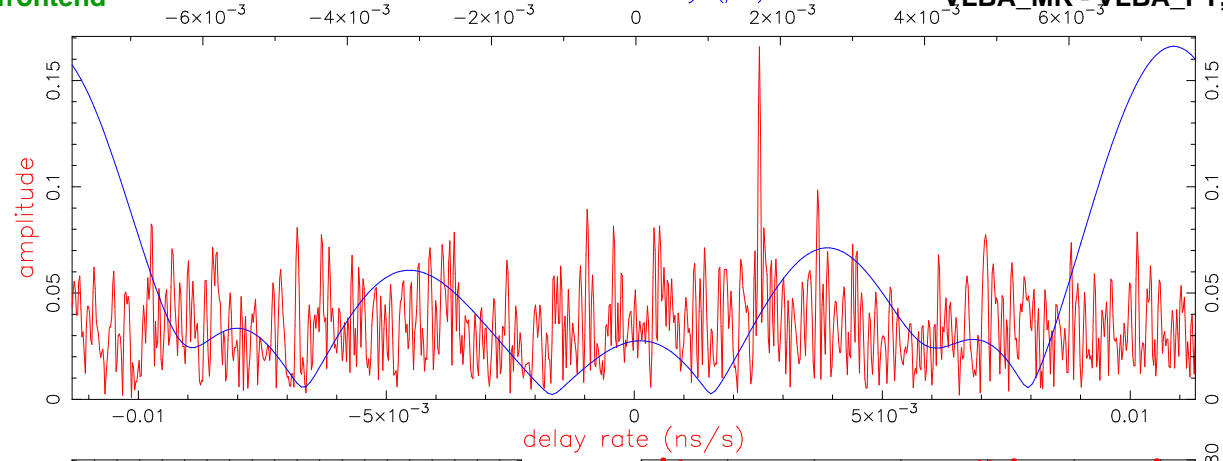
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-37.7	8.5	-33.2	-35.5	-24.8	-23.3	4.1	-44.0	Phase	-29.2
	0.3	0.1	0.2	0.3	0.2	0.1	0.1	0.2	Ampl.	0.2
	301.8	338.3	268.1	480.4	452.2	389.0	339.3	373.9	Sbd box	301.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd) -8.52852573940E+03 Apriori delay (usec) -8.52870175336E+03 Resid mbdelay (usec) 4.13896E-03 +/- 1.8E-04
 Sband delay (usec) -8.52852989561E+03 Apriori clock (usec) -9.3880596E+00 Resid sbdelay (usec) 1.71858E-01 +/- 1.5E-03
 Phase delay (usec) -8.52870175430E+03 Apriori clockrate (us/s) -2.1257888E-07 Resid phdelay (usec) -9.40572E-07 +/- 6.3E-07
 Delay rate (us/s) 7.85434903633E-01 Apriori rate (us/s) 7.85441679386E-01 Resid rate (us/s) -6.77575E-06 +/- 6.0E-09
 Total phase (deg) -41.5 Apriori accel (us/s/s) 2.99799067311E-05 Resid phase (deg) -29.2 +/- 19.5

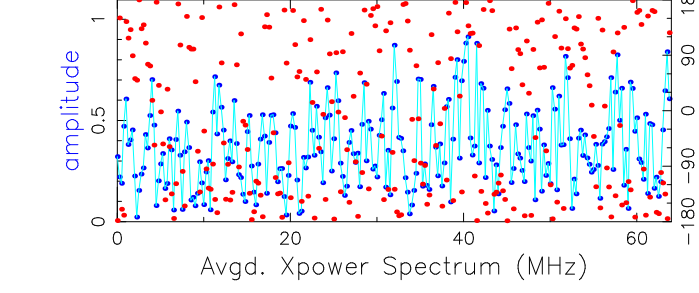
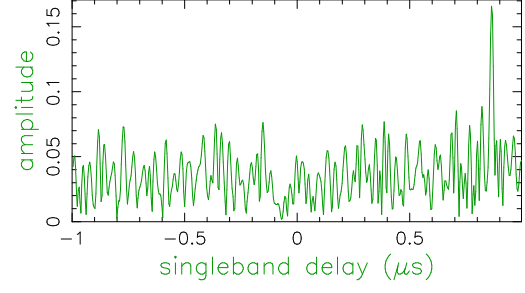
RMS Theor. Amplitude 0.187 +/- 0.032 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 68.5 45.7 Search (1024X32) 0.159 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 83.3 79.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 22.1 27.6 Inc. seg. avg. 0.199 Sample rate(MSamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 43.6 48.1 Inc. frq. avg. 0.174 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

m: az 57.8 el 35.4 pa -90.9 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -5631.360 241.346 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/mp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/mp.W.293.127MDW

multiband delay (μs)

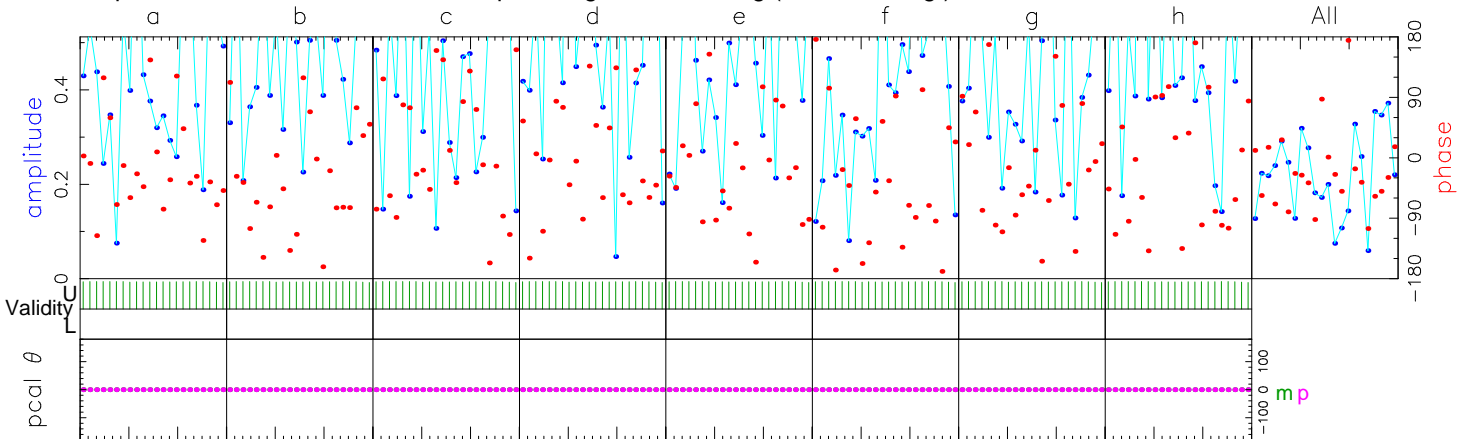


Fringe quality 0
SNR 6.1
Int time 178.509
Amp 0.171
Phase -31.3
PFD 1.2e-01
Delays (us)
SBD 0.864431
MBD 0.007511
Fringe rate (Hz) 0.217556
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133745
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-27.0	-39.4	-35.3	-19.1	-22.3	-83.7	-28.1	-43.2	Phase	-31.3
	0.3	0.2	0.1	0.3	0.2	0.1	0.2	0.1	Ampl.	0.2
	49.0	503.3	161.3	477.1	98.1	56.0	339.9	217.2	Sbd box	478.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
m:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-8.52783486761E+03		Apriori delay (usec)		-8.52870175336E+03		Resid mbdelay (usec)		7.51075E-03	+/- 1.8E-04
Sband delay (usec)	-8.52783732211E+03		Apriori clock (usec)		-9.3880596E+00		Resid sbdelay (usec)		8.64431E-01	+/- 1.4E-03
Phase delay (usec)	-8.52870175437E+03		Apriori clockrate (us/s)		-2.1257888E-07		Resid phdelay (usec)		-1.00823E-06	+/- 6.0E-07
Delay rate (us/s)	7.85444204999E-01		Apriori rate (us/s)		7.85441679386E-01		Resid rate (us/s)		2.52561E-06	+/- 5.8E-09
Total phase (deg)			Apriori accel (us/s/s)		2.99799067311E-05		Resid phase (deg)		-31.3	+/- 18.7

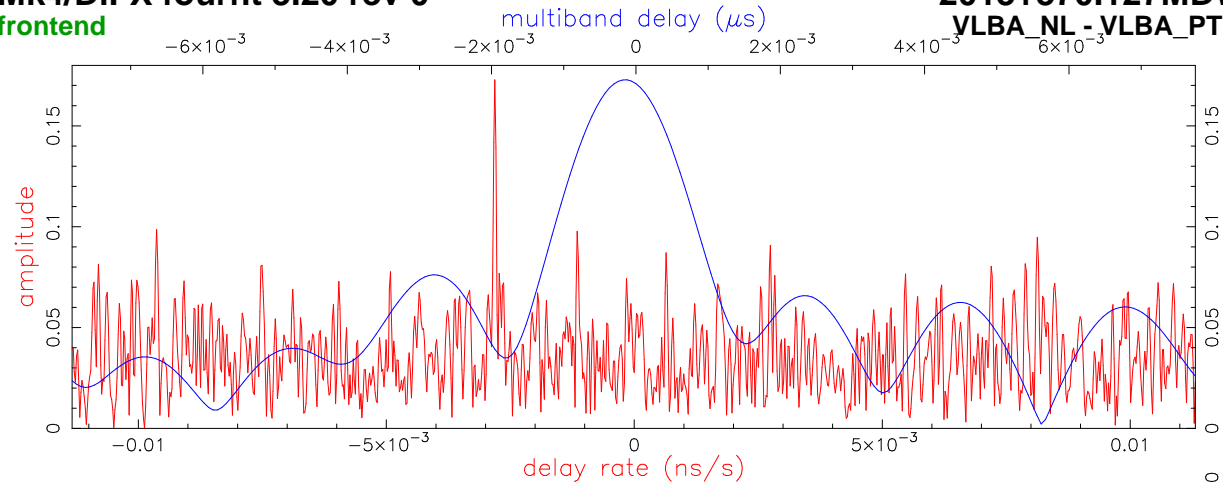
ph/seg (deg) 53.9 44.0 Search (1024X32) 0.164 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 62.7 76.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 23.2 26.5 Inc. seg. avg. 0.175 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 41.0 46.3 Inc. frq. avg. 0.158 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
m: az 57.8 el 35.4 pa -90.9 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -5631.360 241.346 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/mp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/mp.W.309.127MDW

Mk4/DiFX fourfit 3.20 rev 0

frontend

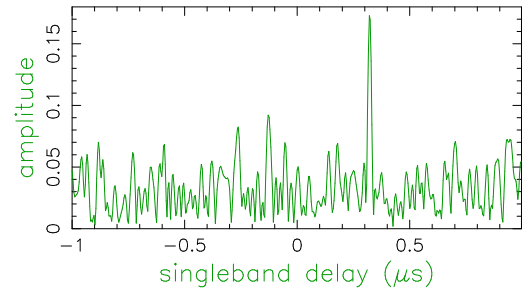
2013+370.127MDW, No0077, np

VLBA_NL - VLBA_PT, fgroup W, pol LL

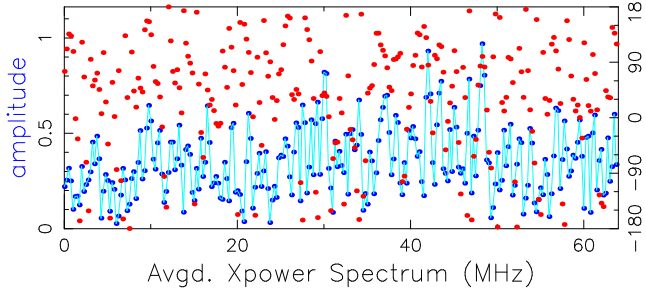


Fringe quality 0

SNR 6.4
 Int time 177.964
 Amp 0.180
 Phase -169.7
 PFD 2.1e-02
 Delays (us)
 SBD 0.321876
 MBD -0.000122
 Fringe rate (Hz)
 -0.242012
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

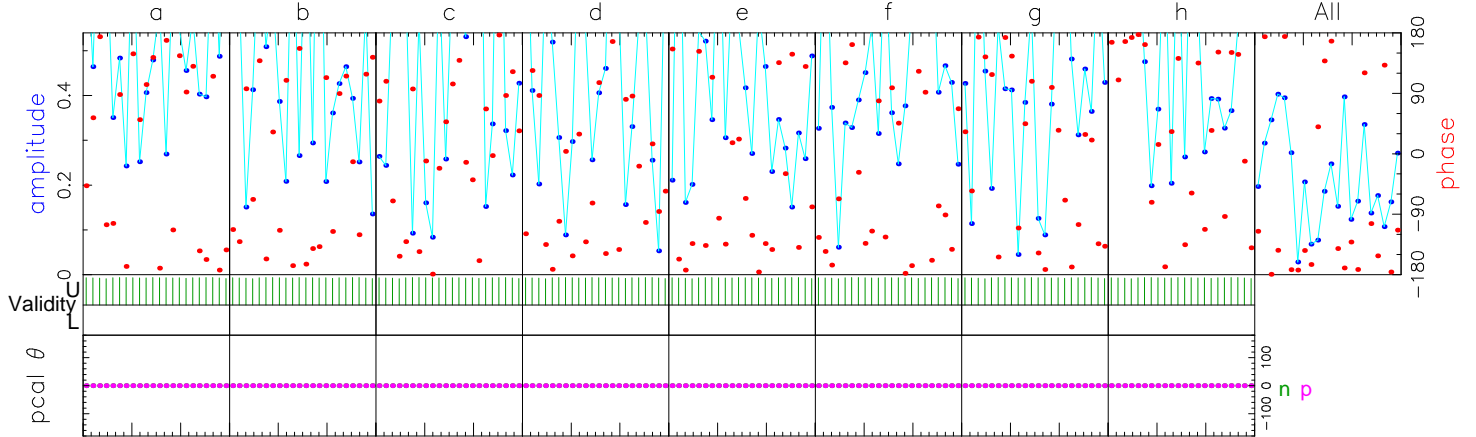


delay rate (ns/s)



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133741
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



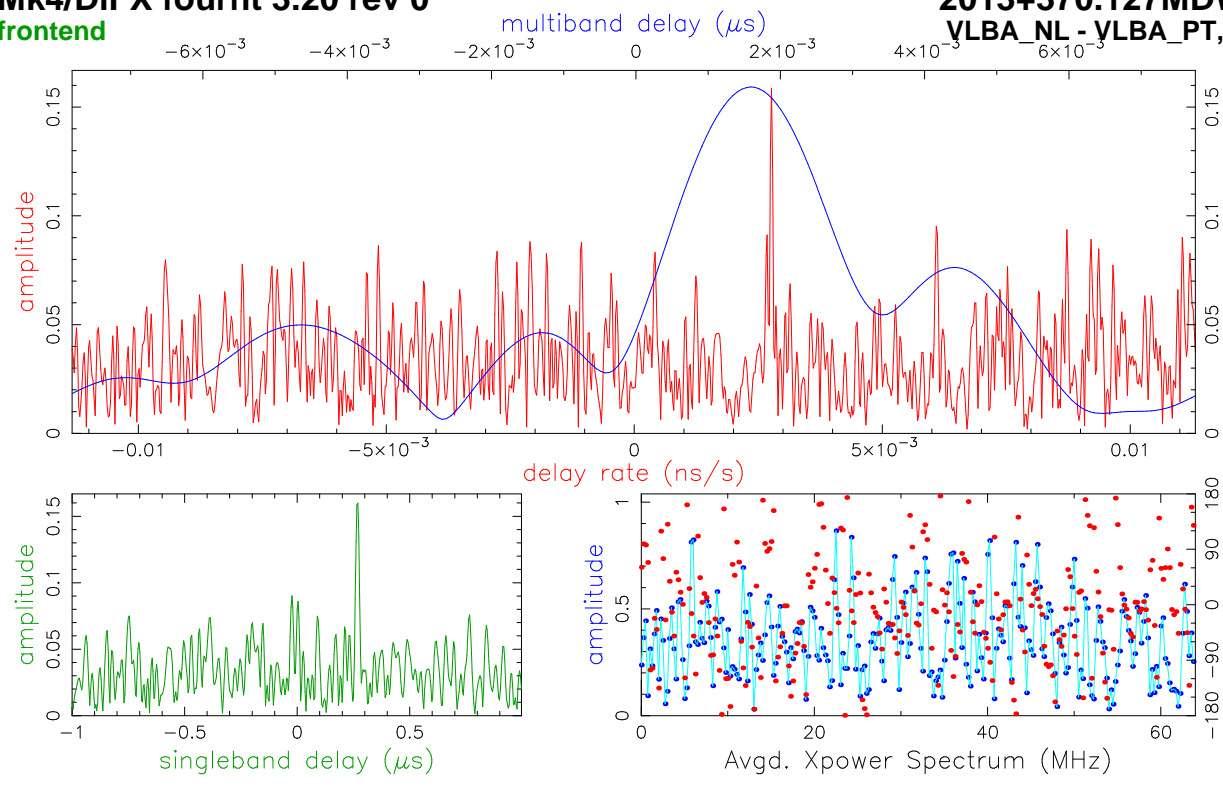
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
n	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	2.60858317052E+02	Apriori delay (usec)	2.60530313608E+02	Resid mbdelay (usec)	-1.21556E-04	+/-	1.7E-04
Sband delay (usec)	2.60852190108E+02	Apriori clock (usec)	1.4553605E+01	Resid sbdelay (usec)	3.21876E-01	+/-	1.3E-03
Phase delay (usec)	2.60530308137E+02	Apriori clockrate (us/s)	-6.9663080E-08	Resid phdelay (usec)	-5.47085E-06	+/-	5.8E-07
Delay rate (us/s)	-2.86008308634E-01	Apriori rate (us/s)	-2.86005499117E-01	Resid rate (us/s)	-2.80952E-06	+/-	5.5E-09
Total phase (deg)	-92.6	Apriori accel (us/s/s)	5.68591158132E-06	Resid phase (deg)	-169.7	+/-	17.9

ph/seg (deg)	47.2	Theor.	42.0	Amplitude	0.180 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	65.8		73.3	Search (1024X32)	0.171	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	SampCntNorm:	enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	24.3		25.3	Inc. seg. avg.	0.174	Sample rate (MSamp/s):	128	nlags:	256	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.2		44.2	Inc. frq. avg.	0.172	Data rate (Mb/s):	2048	t_cohere	infinite	ion window (TEC)	0.00	0.00

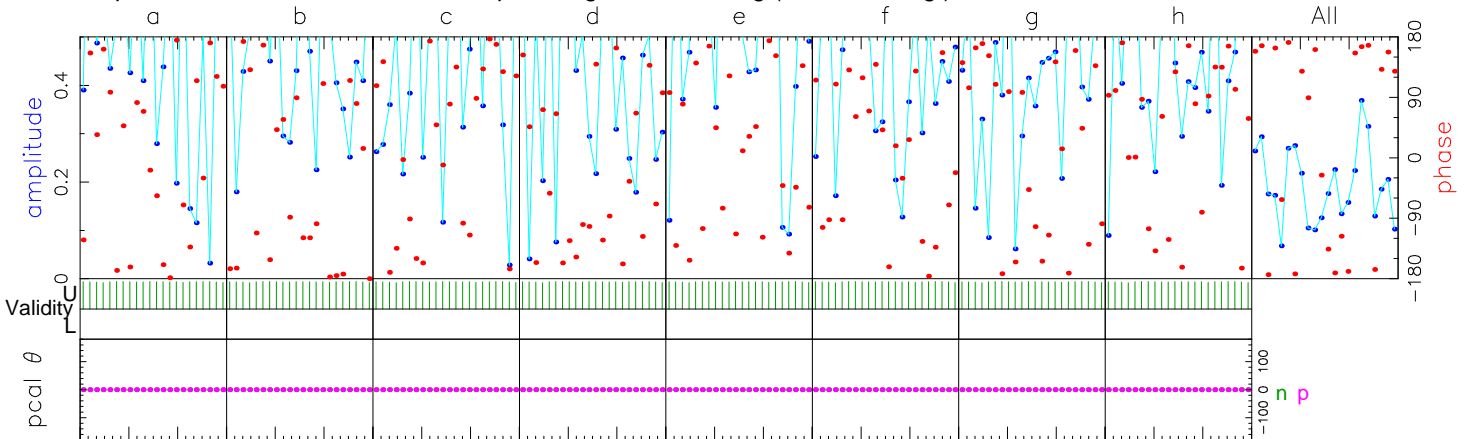
n: az 214.2 el 84.6 pa 30.1 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2063.416 1049.773 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/np..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/np.W.282.127MDW



Fringe quality 0
 SNR 5.9
 Int time 177.964
 Amp 0.167
 Phase 170.0
 PFD 3.1e-01
 Delays (us)
 SBD 0.267749
 MBD 0.001693
 Fringe rate (Hz)
 0.239270
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133744
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	137.6	175.6	157.4	-137.6	-167.0	156.3	159.4	134.9	Phase	170.0	
n	0.1	0.2	0.2	0.2	0.2	0.1	0.2	0.2	Ampl.	0.2	
p	99.7	326.5	326.7	340.7	48.4	299.9	299.5	259.9	Sbd box	325.5	
n	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC		
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
p	1000	1000	1000	1000	1000	1000	1000	1000			
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	2.60797631970E+02		Apriori delay (usec)		2.60530313608E+02		Resid mbdelay (usec)		1.69336E-03	+/- 1.8E-04	
Sband delay (usec)	2.60798062108E+02		Apriori clock (usec)		1.4553605E+01		Resid sbdelay (usec)		2.67749E-01	+/- 1.5E-03	
Phase delay (usec)	2.60530319090E+02		Apriori clockrate (us/s)		-6.9663080E-08		Resid phdelay (usec)		5.48282E-06	+/- 6.2E-07	
Delay rate (us/s)	-2.86002721426E-01		Apriori rate (us/s)		-2.86005499117E-01		Resid rate (us/s)		2.77769E-06	+/- 6.0E-09	
Total phase (deg)	247.1		Apriori accel (us/s/s)		5.68591158132E-06		Resid phase (deg)		170.0	+/- 19.3	
ph/seg (deg)	RMS	Theor.	Amplitude	0.167 +/- 0.028		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	54.7	45.3	Search (1024X32)	0.152		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000	
ph/frq (deg)	31.7	27.3	Inc. seg. avg.	0.153		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008
amp/frq (%)	30.4	47.6	Inc. frq. avg.	0.164		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
n: az 214.2 el 84.6 pa 30.1	p: az 70.4 el 79.3 pa -102.4		u, v (fr/asec) 2063.416 1049.773		Data rate(Mb/s): 2048		nlags: 256 t_cohere infinite		ion window (TEC)	0.00	0.00
simultaneous interpolator											
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/np..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/np.W.300.127MDW											

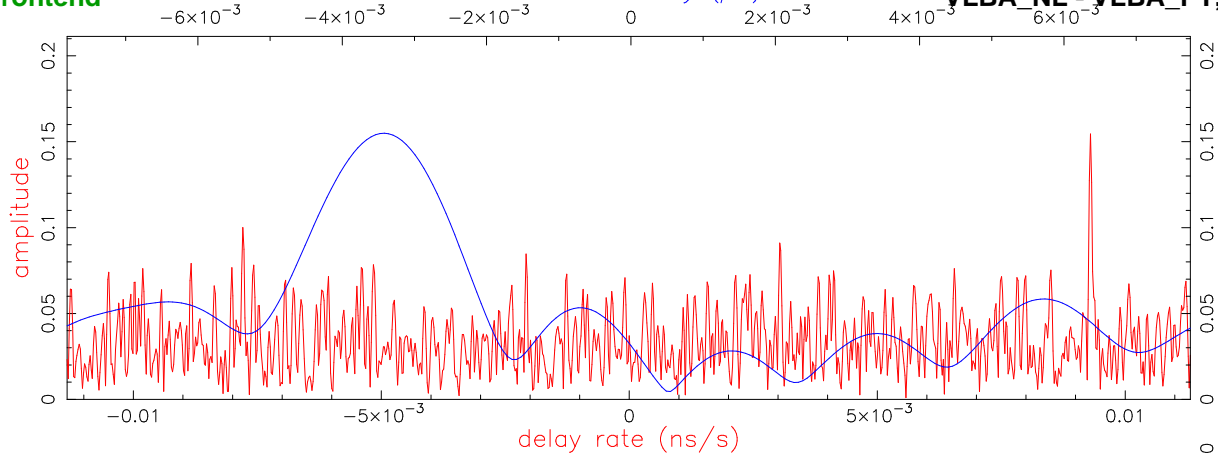
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, np

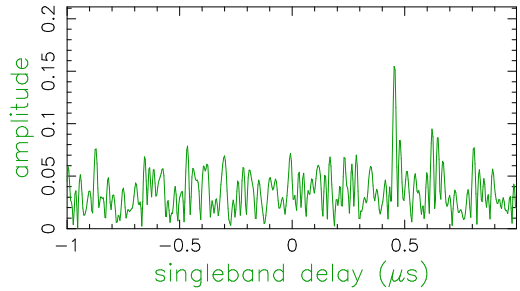
VLBA_NL - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

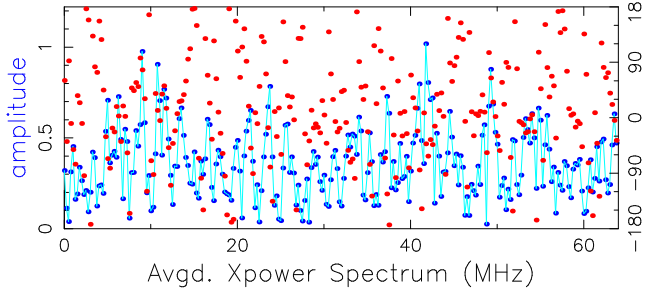


Fringe quality 0

SNR 5.7
Int time 177.964
Amp 0.211
Phase -108.3
PFD 7.0e-01
Delays (us)
SBD 0.454689
MBD -0.003343
Fringe rate (Hz)
0.803149
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

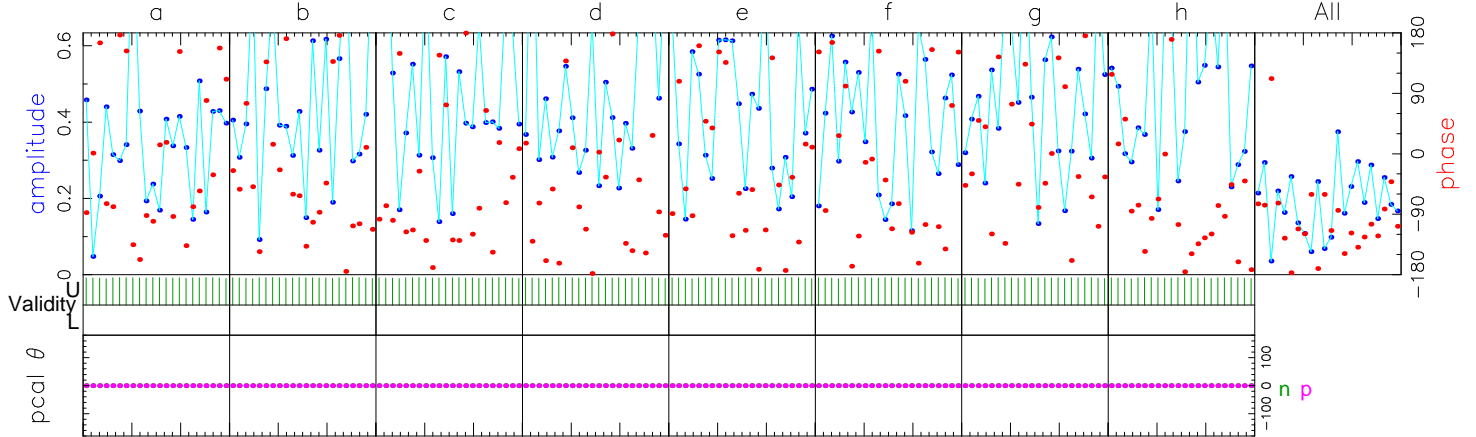


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133746
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-121.9	-85.2	-95.6	-111.2	-122.6	-151.0	-53.6	-115.8	Phase	-108.3
	0.2	0.2	0.3	0.3	0.2	0.1	0.1	0.3	Ampl.	0.2
	95.2	365.9	415.4	431.8	295.8	139.0	287.8	35.6	Sbd box	373.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	2.60980095854E+02		Apriori delay (usec)		2.60530313608E+02		Resid mbdelay (usec)		-3.34275E-03	+/- 1.9E-04
Sband delay (usec)	2.60985002608E+02		Apriori clock (usec)		1.4553605E+01		Resid sbdelay (usec)		4.54689E-01	+/- 1.5E-03
Phase delay (usec)	2.60530310116E+02		Apriori clockrate (us/s)		-6.9663080E-08		Resid phdelay (usec)		-3.49104E-06	+/- 6.4E-07
Delay rate (us/s)	-2.85996175354E-01		Apriori rate (us/s)		-2.86005499117E-01		Resid rate (us/s)		9.32376E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		5.68591158132E-06		Resid phase (deg)		-108.3	+/- 20.0

ph/seg (deg) 45.4 46.8 Amplitude 0.211 +/- 0.037 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 57.9 81.8 Search (1024X32) 0.152 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 31.5 28.2 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 40.2 49.3 Inc. seg. avg. 0.192 Sample rate(MSamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 214.2 el 84.6 pa 30.1 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2063.416 1049.773 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/np..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/np.W.316.127MDW

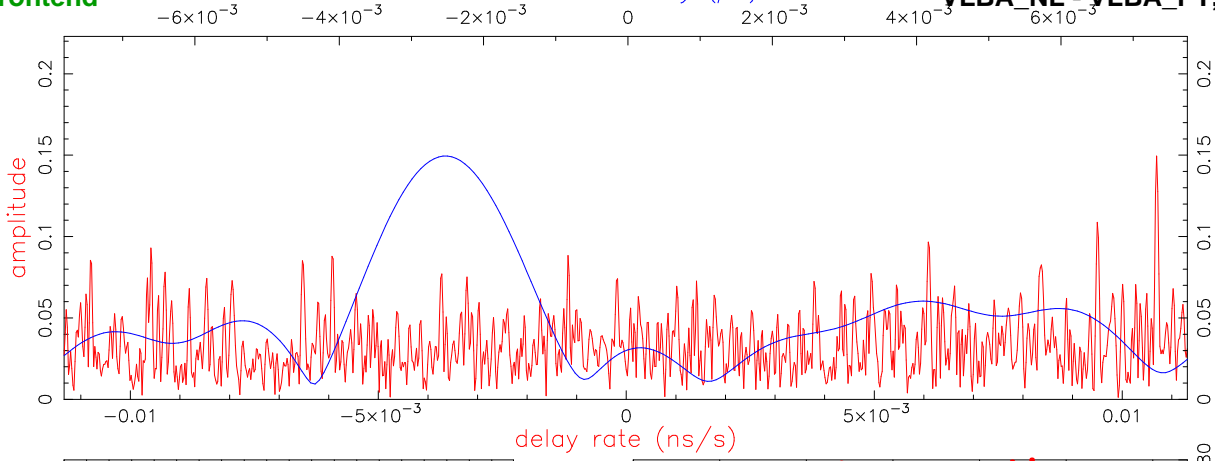
Mk4/DiFX fourfit 3.20 rev 0

frontend

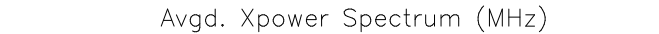
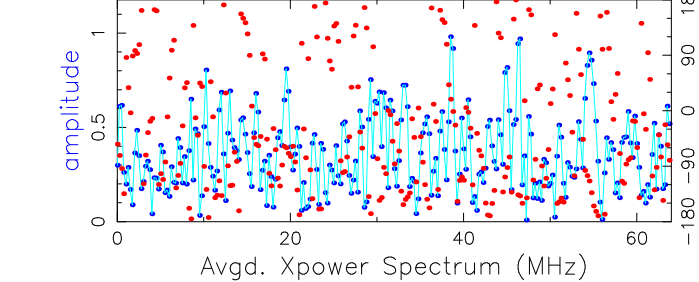
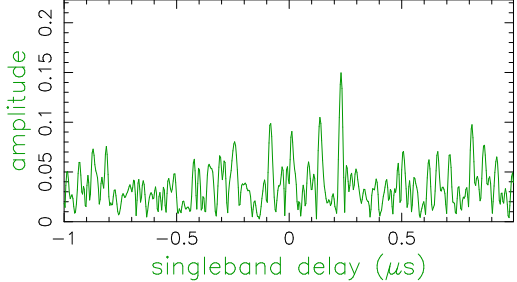
2013+370.127MDW, No0077, np

VLBA_NL - VLBA_PT, fgroup W, pol RL

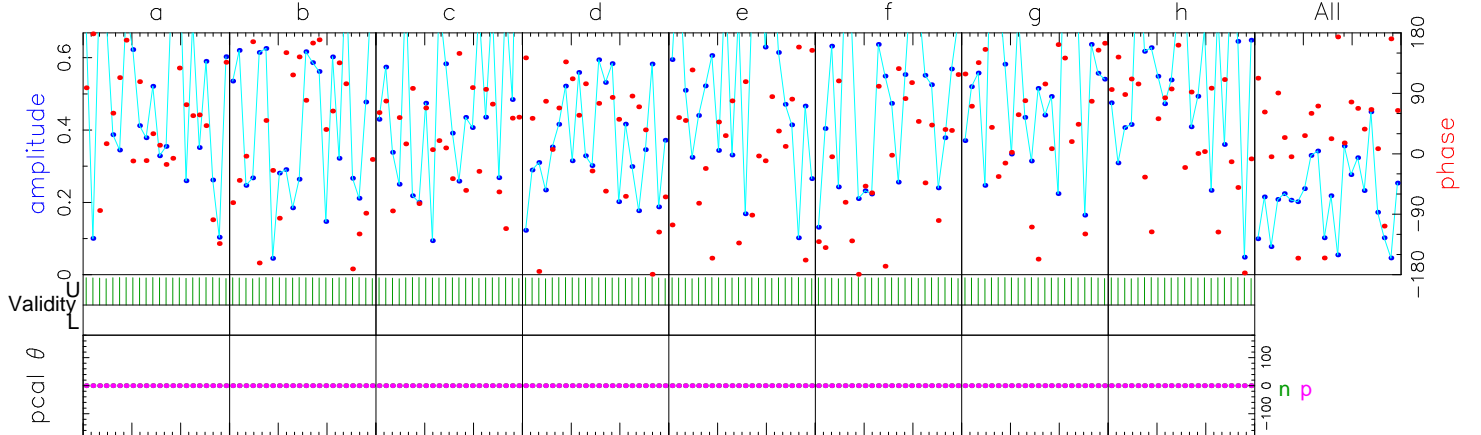
multiband delay (μ s)



Fringe quality 0
 SNR 5.5
 Int time 177.964
 Amp 0.223
 Phase 52.3
 PFD 1.0e+00
 Delays (us)
 SBD 0.230195
 MBD -0.002545
 Fringe rate (Hz) 0.923438
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133748
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

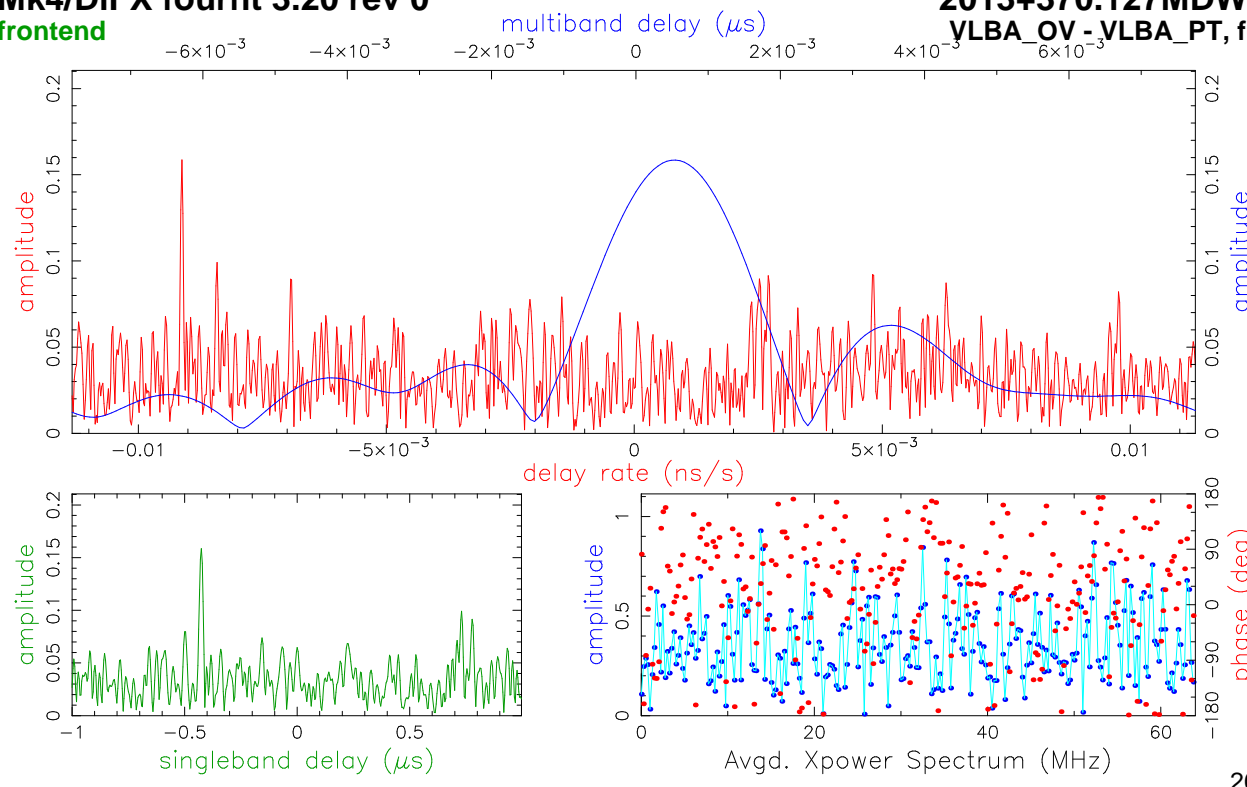


Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



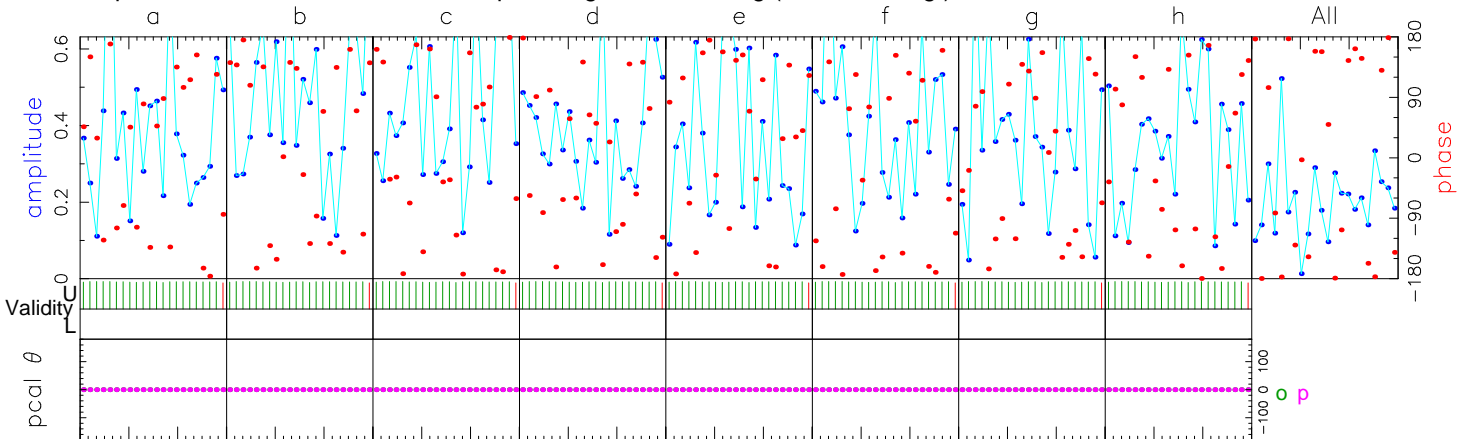
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
n	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
n:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
n	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
Group delay (usec)(sbd)	52.0	117.9	32.5	71.0	22.7	53.0	73.5	44.1	Resid mbdelay (usec)	-2.54500E-03 +/- 2.0E-04
Sband delay (usec)	0.3	0.1	0.4	0.2	0.2	0.1	0.3	0.2	Resid sbdelay (usec)	2.30195E-01 +/- 1.6E-03
Phase delay (usec)	295.5	34.8	316.4	235.4	467.0	511.6	193.9	4.2	Resid phdelay (usec)	1.68781E-06 +/- 6.8E-07
Delay rate (us/s)		-2.85994778921E-01				-2.86005499117E-01			Resid rate (us/s)	1.07202E-05 +/- 6.5E-09
Total phase (deg)			129.4			52.3			Resid phase (deg)	52.3 +/- 21.0

ph/seg (deg) 74.1 49.3 Search (1024X32) 0.148 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 82.0 86.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 32.7 29.7 Inc. seg. avg. 0.234 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 41.1 51.8 Inc. frq. avg. 0.213 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 n: az 214.2 el 84.6 pa 30.1 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 2063.416 1049.773 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/np..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/np.W.332.127MDW



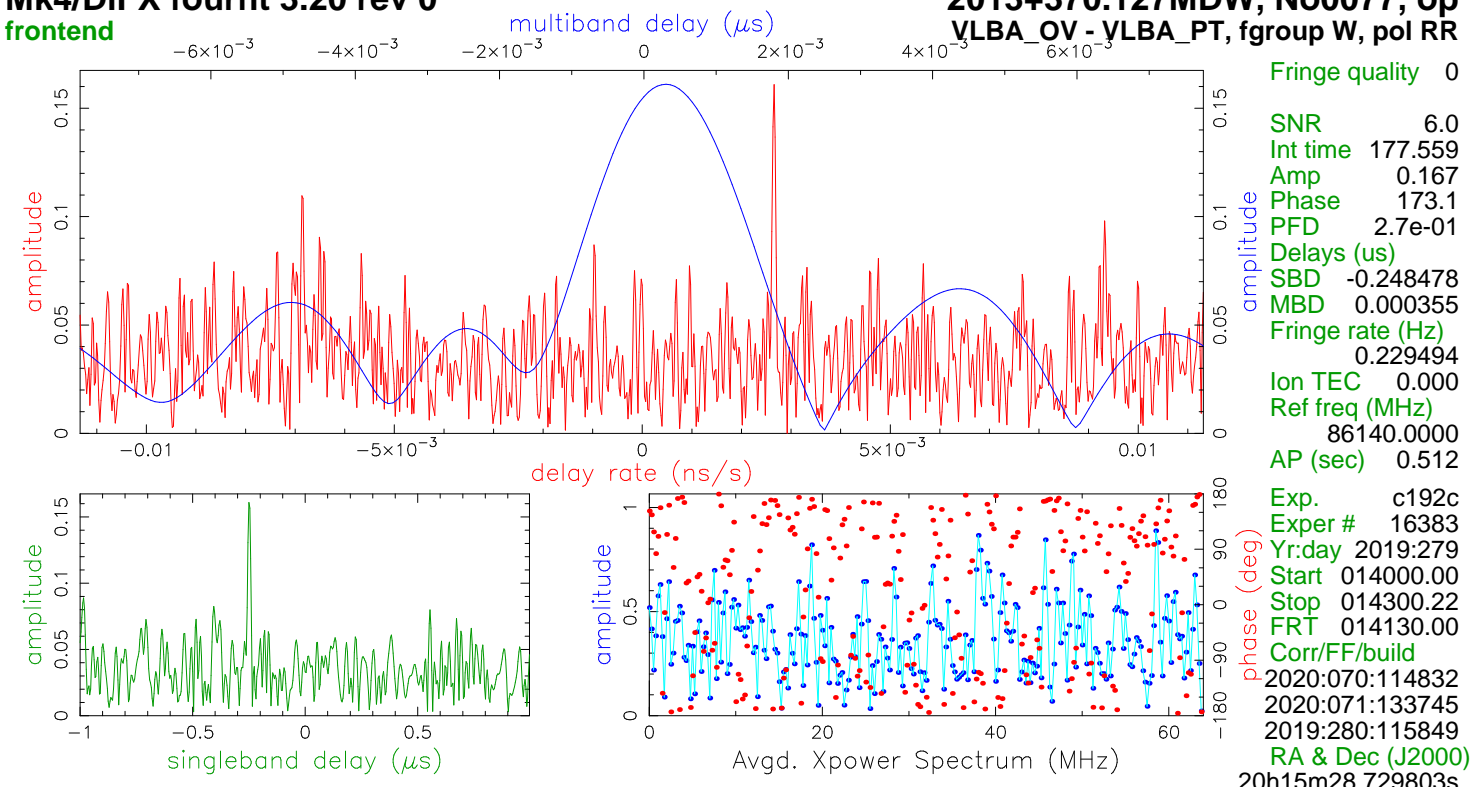
Fringe quality 0
SNR 5.8
Int time 177.559
Amp 0.211
Phase 175.6
PFD 6.1e-01
Delays (us)
SBD -0.426021
MBD 0.000530
Fringe rate (Hz)
-0.787237
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133743
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

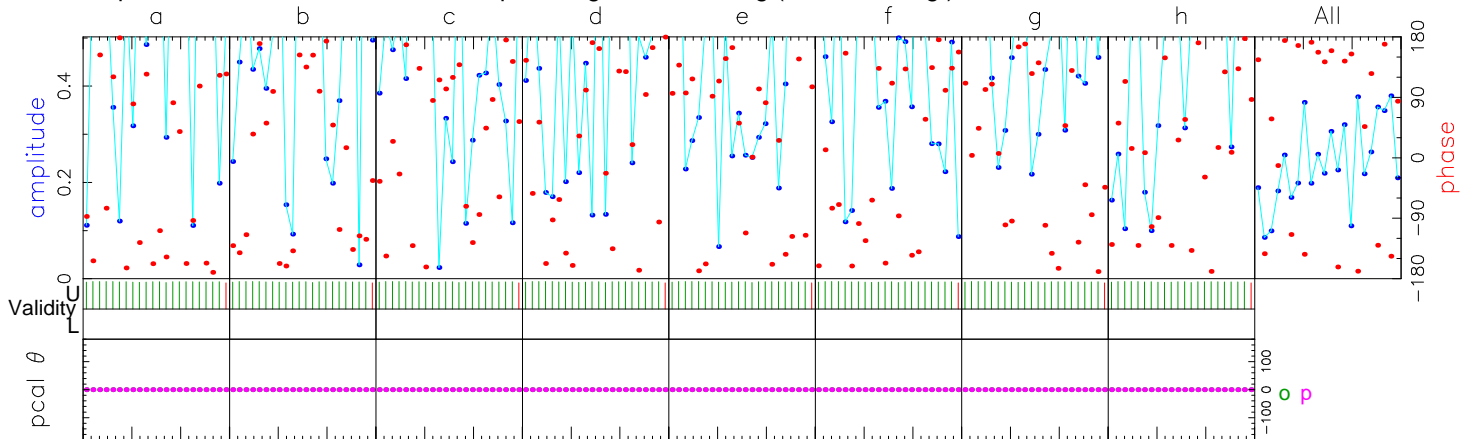


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-178.1	168.2	-173.0	-168.7	158.0	170.1	-178.7	-176.7	Phase	175.6
	0.2	0.3	0.2	0.1	0.2	0.3	0.2	0.2	Ampl.	0.2
	169.9	148.1	187.9	460.7	442.6	146.3	438.1	94.1	Sbd box	147.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-6.76390708649E+02		Apriori delay (usec)		-6.75969363175E+02		Resid mbdelay (usec)		5.29526E-04	+/- 1.9E-04
Sband delay (usec)	-6.76395384675E+02		Apriori clock (usec)		4.6836004E+00		Resid sbdelay (usec)		-4.26021E-01	+/- 1.5E-03
Phase delay (usec)	-6.75969357512E+02		Apriori clockrate (us/s)		-2.0290559E-07		Resid phdelay (usec)		5.66333E-06	+/- 6.4E-07
Delay rate (us/s)	1.58395296958E-01		Apriori rate (us/s)		1.58404435998E-01		Resid rate (us/s)		-9.13904E-06	+/- 6.1E-09
Total phase (deg)			Apriori accel (us/s/s)		6.44511857354E-06		Resid phase (deg)		175.6	+/- 19.8

ph/seg (deg) 60.7 46.5 Search (1024X32) 0.154 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 71.3 81.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 12.3 28.0 Inc. seg. avg. 0.206 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 29.8 48.9 Inc. frq. avg. 0.191 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
o: az 83.0 el 71.8 pa -82.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -1134.224 683.508 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/op..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/op.W.291.127MDW



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
179.3	-178.3	148.5	172.0	147.3	-140.9	174.8	141.7	141.7	Phase	173.1
0.3	0.2	0.1	0.2	0.2	0.2	0.1	0.1	0.1	Ampl.	0.2
136.9	469.7	19.3	416.3	33.7	223.1	501.5	326.3	326.3	Sbd box	193.4
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-6.76219008655E+02		Apriori delay (usec)	-6.75969363175E+02	Resid mbdelay (usec)	3.54520E-04	+/-	1.8E-04		
Sband delay (usec)	-6.76217841425E+02		Apriori clock (usec)	4.6836004E+00	Resid sbdelay (usec)	-2.48478E-01	+/-	1.4E-03		
Phase delay (usec)	-6.75969357593E+02		Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	5.58250E-06	+/-	6.2E-07		
Delay rate (us/s)	1.58407100198E-01		Apriori rate (us/s)	1.58404435998E-01	Resid rate (us/s)	2.66420E-06	+/-	6.0E-09		
Total phase (deg)		-166.7	Apriori accel (us/s/s)	6.44511857354E-06	Resid phase (deg)	173.1	+/-	19.2		
RMS	63.6	45.1	Amplitude	0.167 +/- 0.028	PCal mode: MANUAL, MANUAL	PC period (AP's)	5, 5			
ph/seg (deg)	63.6	45.1	Search (1024X32)	0.157	PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	72.1	78.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	27.4	27.2	Inc. seg. avg.	0.190	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011		
amp/frq (%)	42.6	47.4	Inc. frq. avg.	0.160	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
o: az 83.0 el 71.8 pa -82.8			p: az 70.4 el 79.3 pa -102.4			u,v (fr/asec)	-1134.224 683.508			simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c192c/v1_CygA2/1234/No0077/op..127MDW			Output file: /Exps/c192c/v1_CygA2/1234/No0077/op.W.310.127MDW				

Mk4/DiFX fourfit 3.20 rev 0

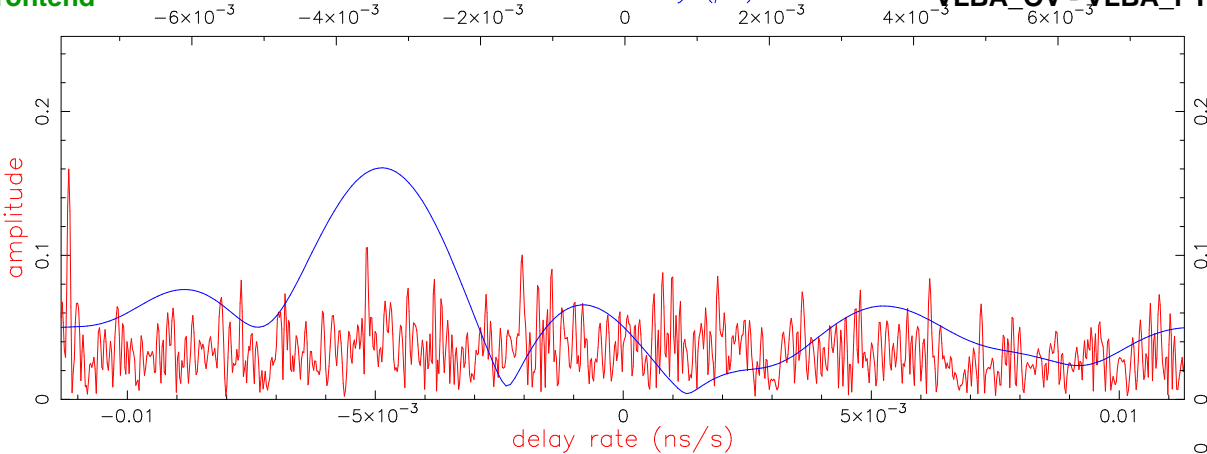
frontend

2013+370.127MDW, No0077, op

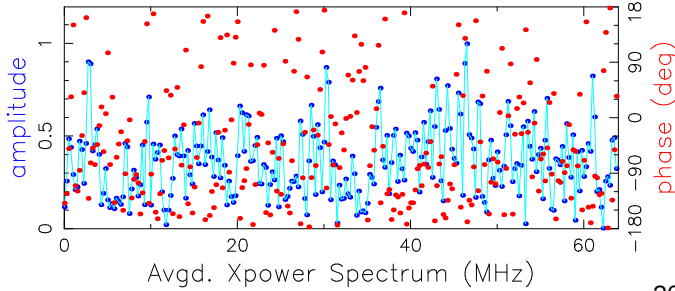
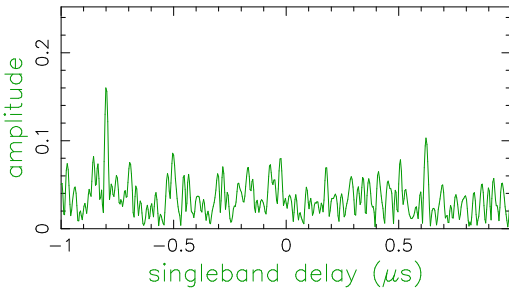
VLBA_OV - VLBA_PT, fgroup W, pol LR

multiband delay (μ s)

Fringe quality 0

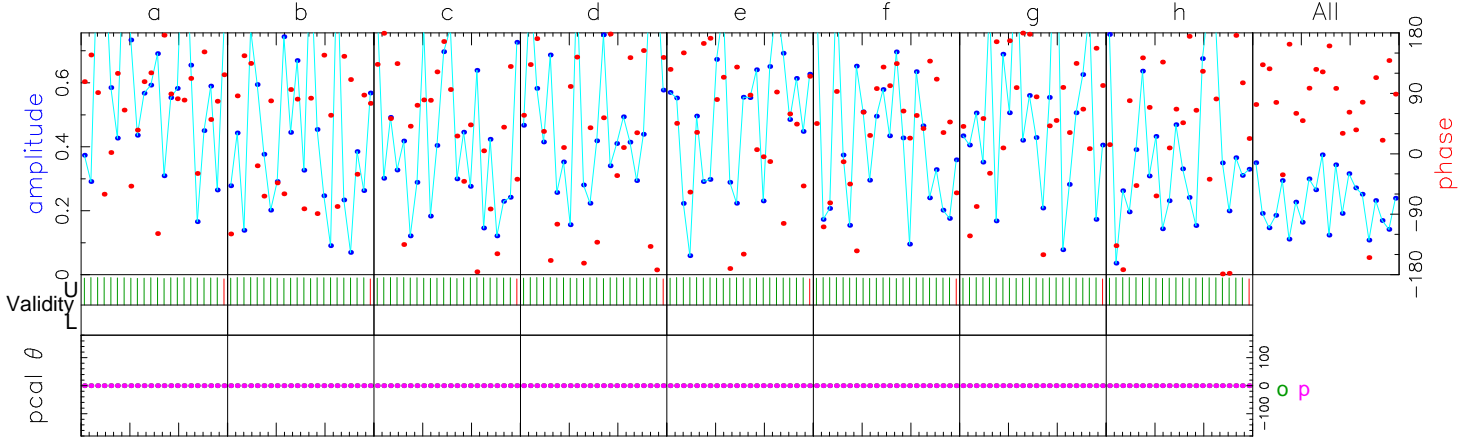


SNR 5.9
 Int time 177.559
 Amp 0.252
 Phase 86.6
 PFD 3.4e-01
 Delays (us)
 SBD -0.799277
 MBD -0.003254
 Fringe rate (Hz)
 -0.964544
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133748
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
o	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-6.76769492235E+02	Apriori delay (usec)	-6.75969363175E+02	Resid mbdelay (usec)	-3.25406E-03	+/-	1.8E-04
Sband delay (usec)	-6.76768640425E+02	Apriori clock (usec)	4.6836004E+00	Resid sbdelay (usec)	-7.99277E-01	+/-	1.5E-03
Phase delay (usec)	-6.75969360382E+02	Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	2.79306E-06	+/-	6.2E-07
Delay rate (us/s)	1.58393238603E-01	Apriori rate (us/s)	1.58404435998E-01	Resid rate (us/s)	-1.11974E-05	+/-	6.0E-09
Total phase (deg)	-253.2	Apriori accel (us/s/s)	6.44511857354E-06	Resid phase (deg)	86.6	+/-	19.4

ph/seg (deg)	RMS 53.5	Theor. 45.4	Amplitude Search (1024X32)	0.252 +/- 0.043	0.157	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	62.6	79.2	Interp.	0.000		Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	35.1	27.4	Inc. seg. avg.	0.268		Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	42.3	47.8	Inc. frq. avg.	0.251		Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

o: az 83.0 el 71.8 pa -82.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -1134.224 683.508 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/op..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/op.W.328.127MDW

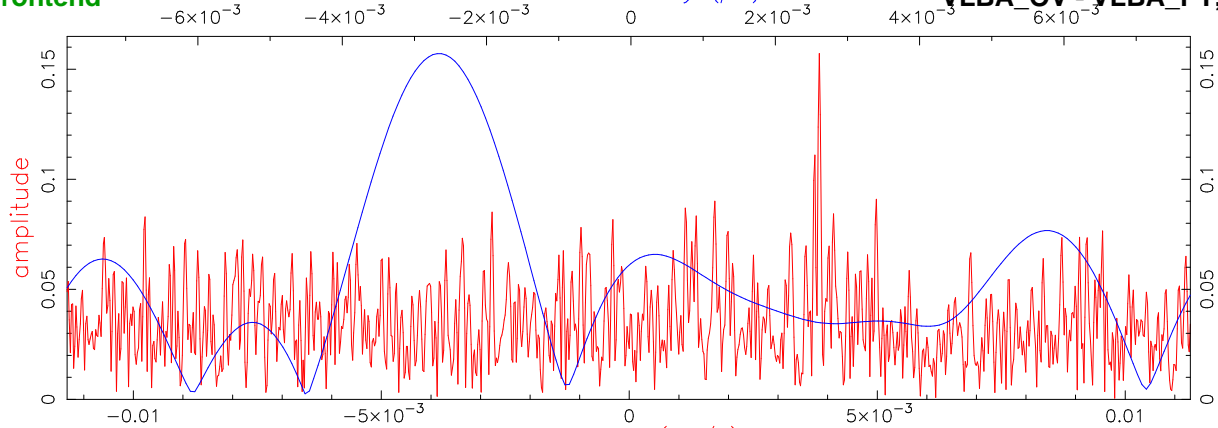
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, op

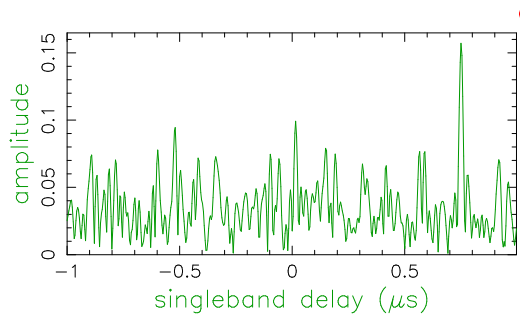
VLBA_OV - VLBA_PT, fgroup W, pol RL

multiband delay (μ s)

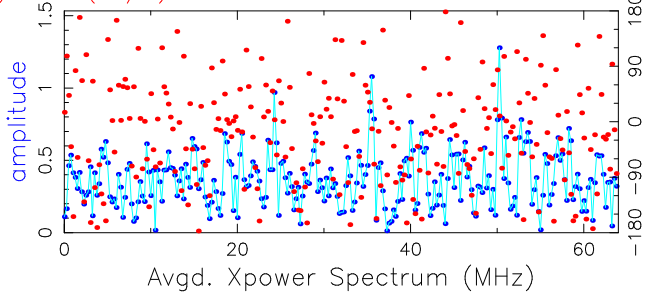


Fringe quality 0

SNR 5.7
Int time 177.559
Amp 0.165
Phase 17.9
PFD 7.1e-01
Delays (us)
SBD 0.750444
MBD -0.002642
Fringe rate (Hz)
0.329914
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

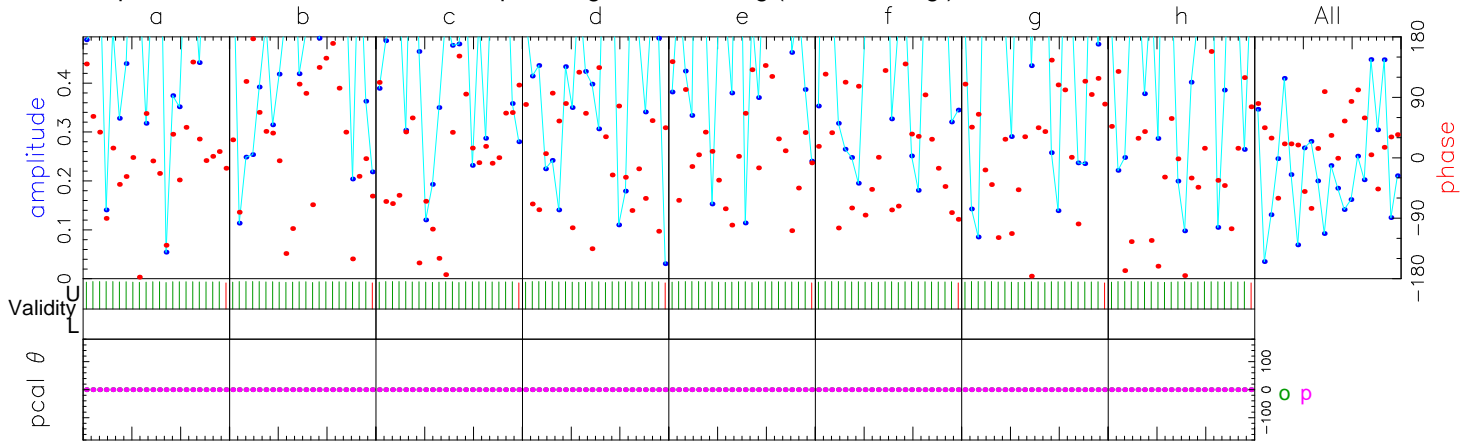


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133750
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
o	1000	1000	1000	1000	1000	1000	1000	1000	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
o:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-6.75222005429E+02	Apriori delay (usec)	-6.75969363175E+02	Resid mbdelay (usec)	-2.64225E-03	+/-	1.9E-04
Sband delay (usec)	-6.75218919175E+02	Apriori clock (usec)	4.6836004E+00	Resid sbdelay (usec)	7.50444E-01	+/-	1.5E-03
Phase delay (usec)	-6.75969362597E+02	Apriori clockrate (us/s)	-2.0290559E-07	Resid phdelay (usec)	5.78211E-07	+/-	6.4E-07
Delay rate (us/s)	1.58408265975E-01	Apriori rate (us/s)	1.58404435998E-01	Resid rate (us/s)	3.82998E-06	+/-	6.2E-09
Total phase (deg)		Apriori accel (us/s/s)	6.44511857354E-06	Resid phase (deg)	17.9	+/-	20.0

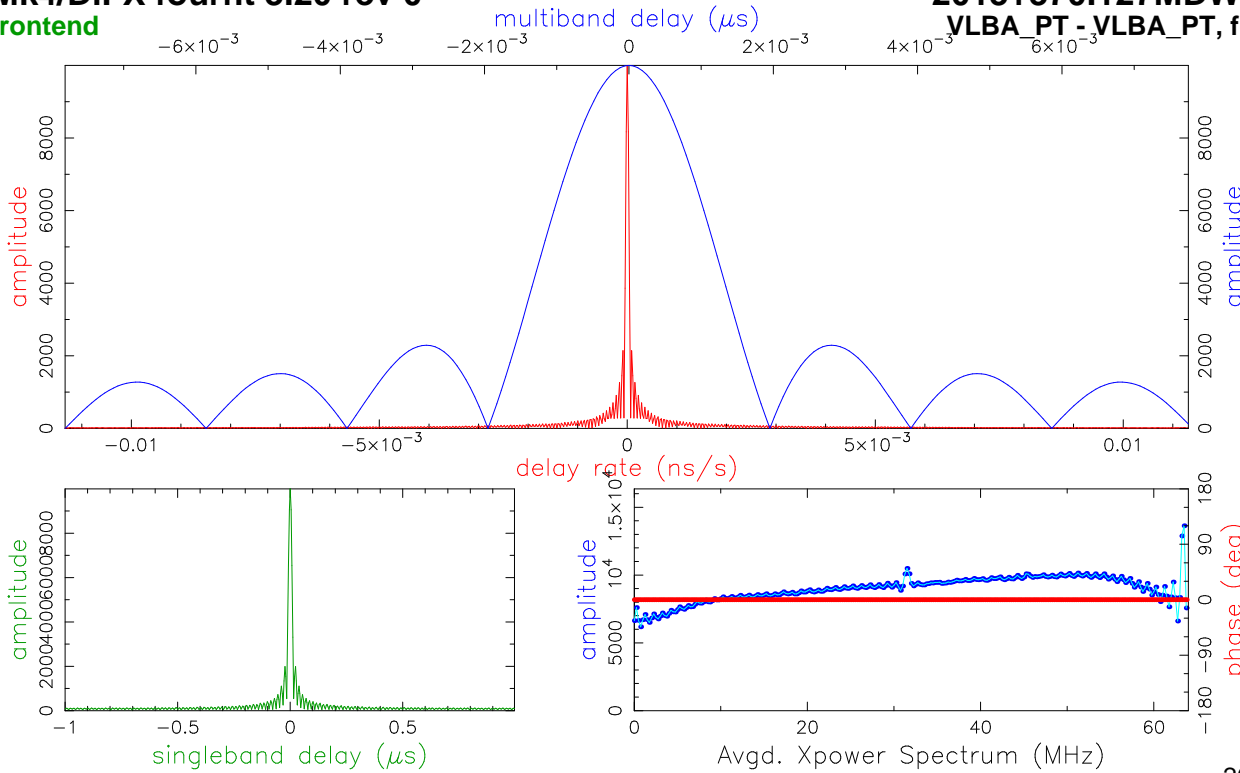
ph/seg (deg)	47.8	Theor.	46.9	Amplitude	0.165 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	83.5		81.9	Search (1024X32)	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	27.3		28.3	Inc. seg. avg.	0.178	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	51.3		49.4	Inc. frq. avg.	0.156	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

o: az 83.0 el 71.8 pa -82.8 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) -1134.224 683.508 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/op..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/op.W.344.127MDW

Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127MDW, No0077, pp
VLBA_PT - VLBA_PT, fgroup W, pol LL



Fringe quality 9

SNR 366650.2

Int time 179.767

Amp 9999.994

Phase -0.0

PFD 0.0e+00

Delays (us)

SBD 0.000000

MBD 0.000000

Fringe rate (Hz)

0.000000

Ion TEC 0.000

Ref freq (MHz)

86140.0000

AP (sec) 0.512

Exp. c192c

Exper # 16383

Yr:day 2019:279

Start 014000.00

Stop 014300.22

FRT 014130.00

Corr/FF/build

2020:070:114832

2020:071:133747

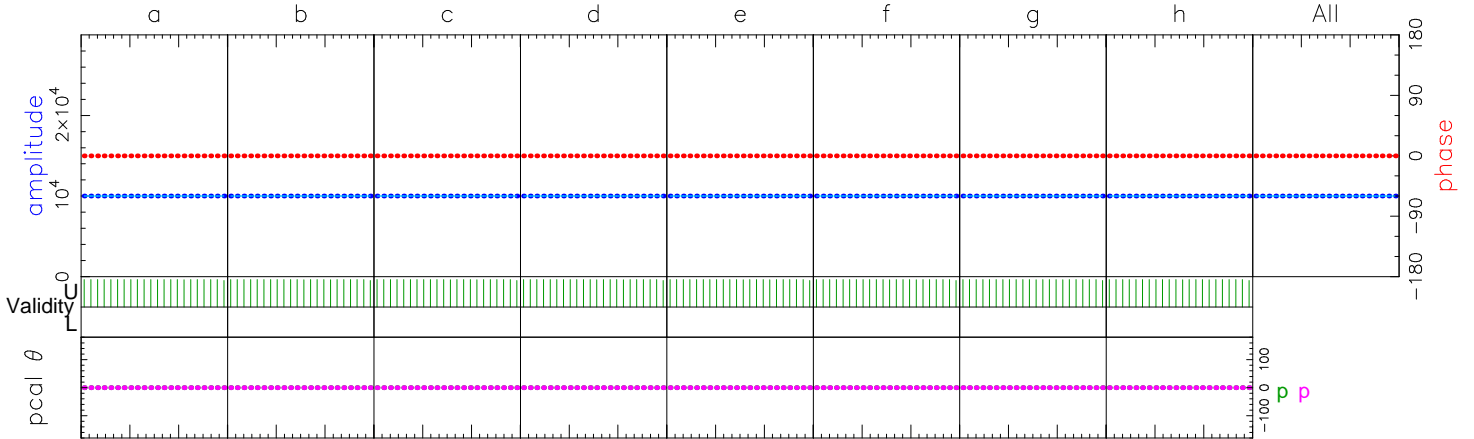
2019:280:115849

RA & Dec (J2000)

20h15m28.729803s

+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Phase delay (usec)	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20	-7.38049356880E-20		
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00		
Total phase (deg)			-0.0							
			Apriori delay (usec)						Resid mbdelay (usec)	0.00000E+00 +/- 3.0E-09
			Apriori clock (usec)						Resid sbdelay (usec)	0.00000E+00 +/- 2.3E-08
			Apriori clockrate (us/s)						Resid phdelay (usec)	-7.38049E-20 +/- 1.0E-11
			Apriori rate (us/s)						Resid rate (us/s)	0.00000E+00 +/- 9.7E-14
			Apriori accel (us/s/s)						Resid phase (deg)	-0.0 +/- 0.0

ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 9999.994 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5

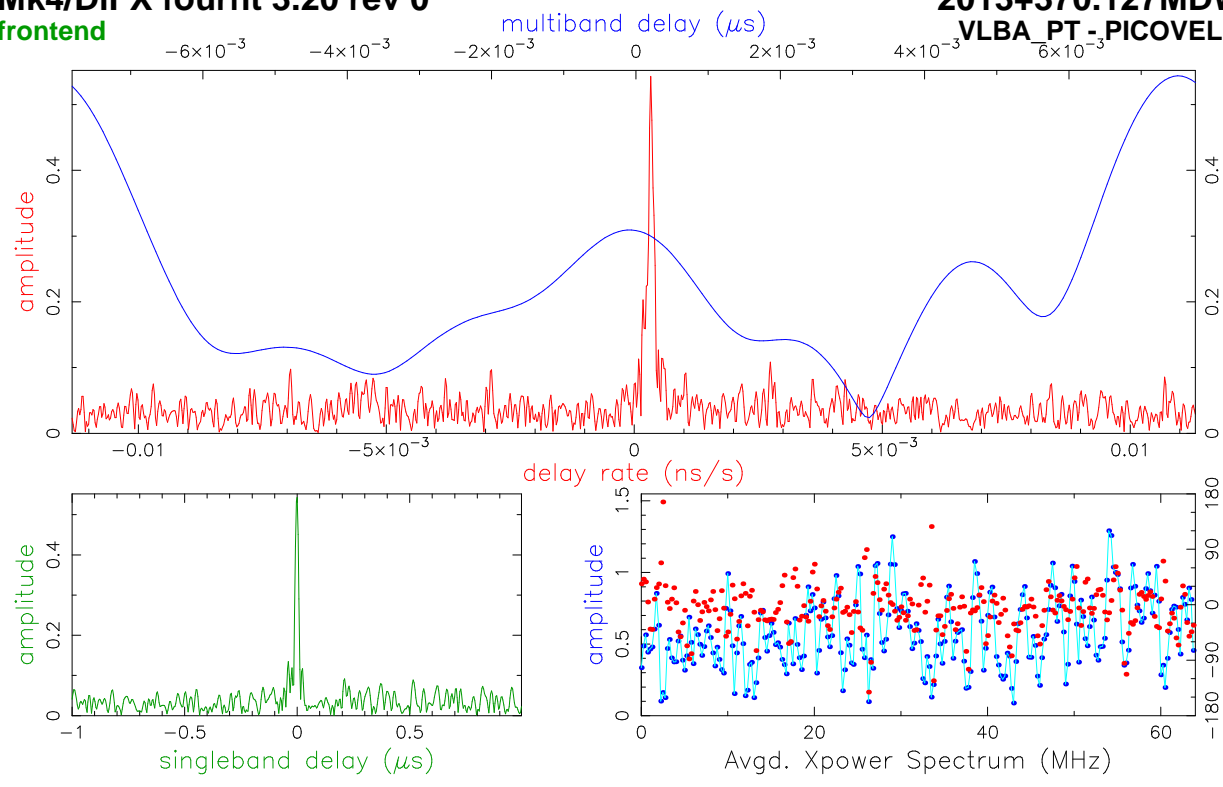
amp/seg (%) 0.0 0.0 Search (1024X32) 9999.994 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000

ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008

amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011

p: az 70.4 el 79.3 pa -102.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pp.W.323.127MDW simultaneous interpolator

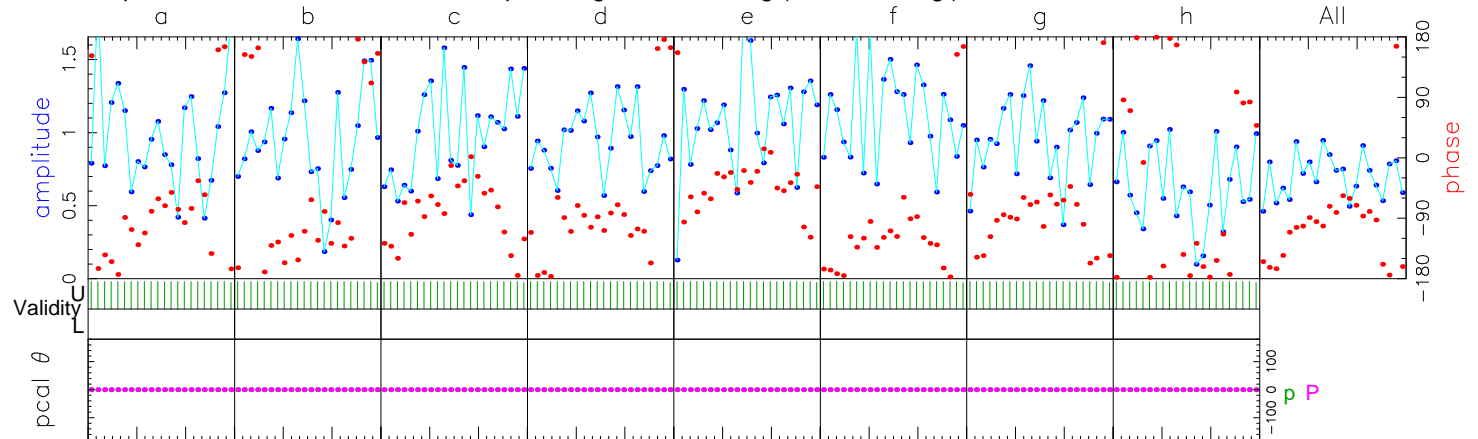


Fringe quality 7

SNR 20.2
 Int time 179.576
 Amp 0.552
 Phase -110.6
 PFD 0.0e+00
 Delays (us)
 SBD -0.001576
 MBD 0.007452
 Fringe rate (Hz)
 0.029385
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133748
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

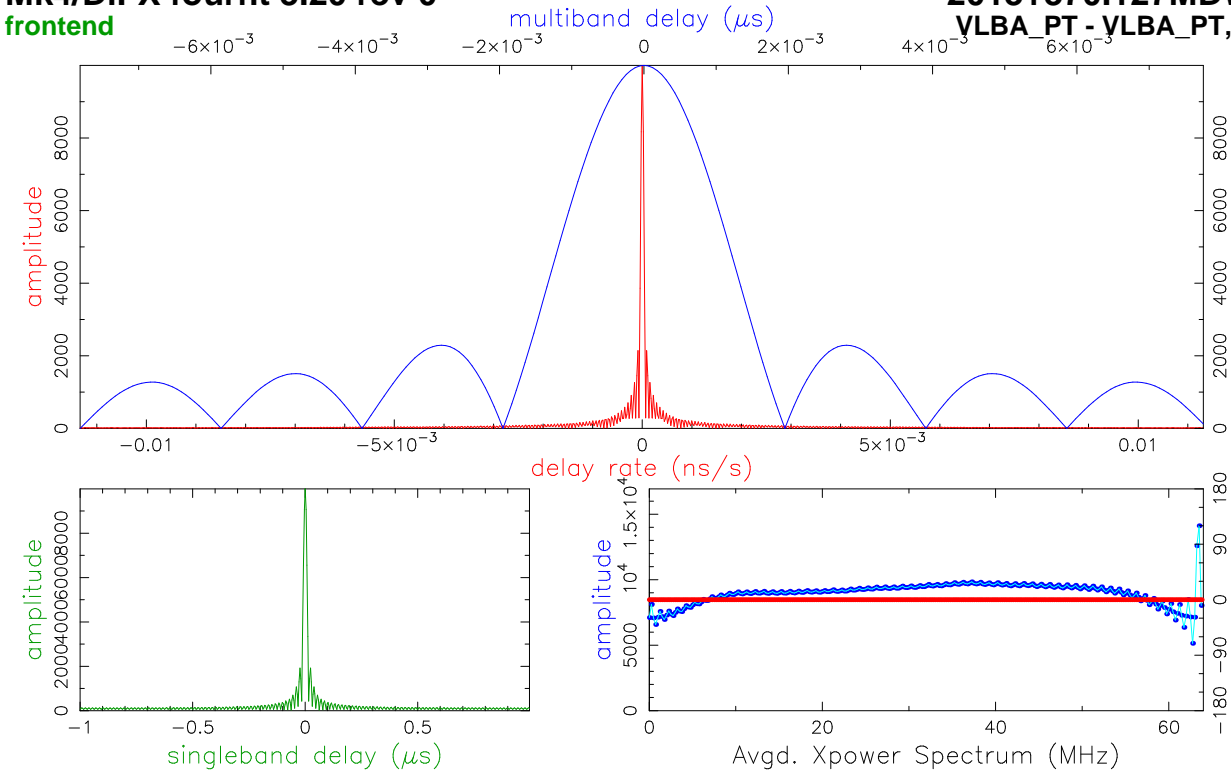
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-126.1	-157.7	-80.7	-114.0	-45.3	-131.6	-96.3	159.5	Phase	-110.6		
	0.6	0.7	0.7	0.7	0.9	0.9	0.8	0.3	Ampl.	0.7		
	255.8	256.3	256.6	256.0	256.0	256.2	256.1	253.8	Sbd box	256.6		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
P	1000	1000	1000	1000	1000	1000	1000	1000				
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Tracks			
Group delay (usec)(sbd)	1.37520182605E+04		Apriori delay (usec)		1.37520264331E+04		Resid mbdelay (usec)		7.45234E-03	+/- 5.4E-05		
Sband delay (usec)	1.37520248574E+04		Apriori clock (usec)		1.2138404E+01		Resid sbdelay (usec)		-1.57575E-03	+/- 4.3E-04		
Phase delay (usec)	1.37520264296E+04		Apriori clockrate (us/s)		5.5688657E-07		Resid phdelay (usec)		-3.56618E-06	+/- 1.8E-07		
Delay rate (us/s)	1.20495217585E+00		Apriori rate (us/s)		1.20495183472E+00		Resid rate (us/s)		3.41135E-07	+/- 1.8E-09		
Total phase (deg)	231.1		Apriori accel (us/s/s)		-7.57408723013E-05		Resid phase (deg)		-110.6	+/- 5.7		
	RMS	Theor.	Amplitude	0.552 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	40.9	13.3	Search (1024X32)	0.524		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	37.7	23.2	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	52.2	8.0	Inc. seg. avg.	0.686		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	40.6	14.0	Inc. frq. avg.	0.697		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
p: az 70.4 el 79.3 pa -102.4	P: az 302.1 el 20.0 pa 58.4		u,v (fr/asec) -8727.079 -4748.969						simultaneous interpolator			
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pP..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pP.W.326.127MDW												

Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127MDW, No0077, pp
VLBA_PT - VLBA_PT, fgroup W, pol RR

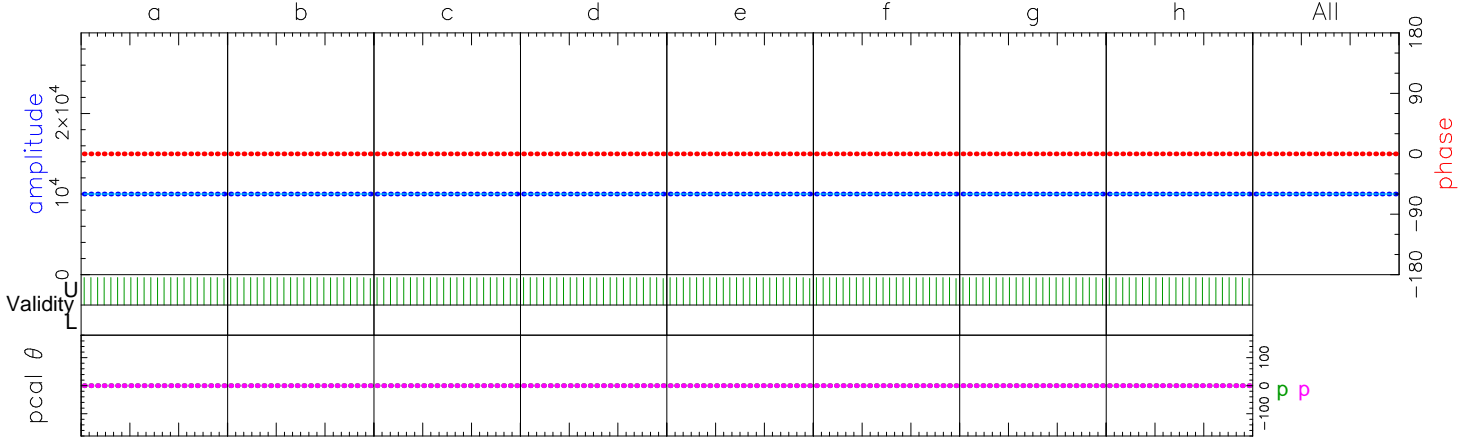


Fringe quality 9

SNR 366650.4
Int time 179.767
Amp 9999.998
Phase 0.0
PFD 0.0e+00
Delays (us)
SBD 0.000000
MBD 0.000000
Fringe rate (Hz) 0.000000
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133749
2019:280:115849
RA & Dec (J2000) 20h15m28.729803s +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	10000.0	10000.0
p	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
p	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
p	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	Tracks
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	Tracks
Group delay (usec)(sbd)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 3.0E-09
Sband delay (usec)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 2.3E-08
Phase delay (usec)	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10051694648E-20	8.10052E-20	+/- 1.0E-11
Delay rate (us/s)	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.0000000000E+00	0.00000E+00	+/- 9.7E-14
Total phase (deg)			0.0						0.0	+/- 0.0

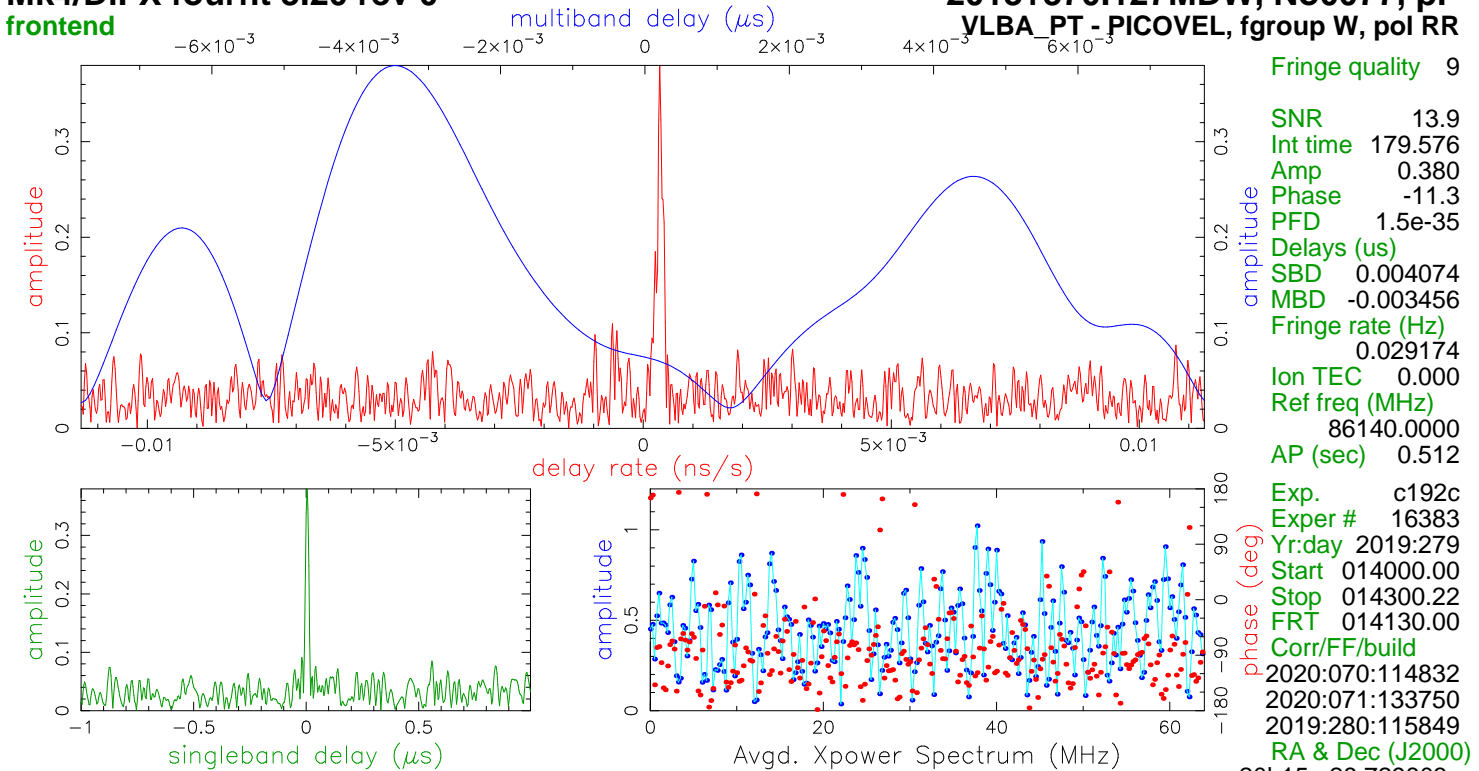
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 9999.998 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 0.0 0.0 Search (1024X32) 9999.998 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 0.0 0.0 Inc. seg. avg. 10000.000 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
p: az 70.4 el 79.3 pa -102.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 0.000 0.000 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pp.W.338.127MDW simultaneous interpolator

Mk4/DiFX fourfit 3.20 rev 0

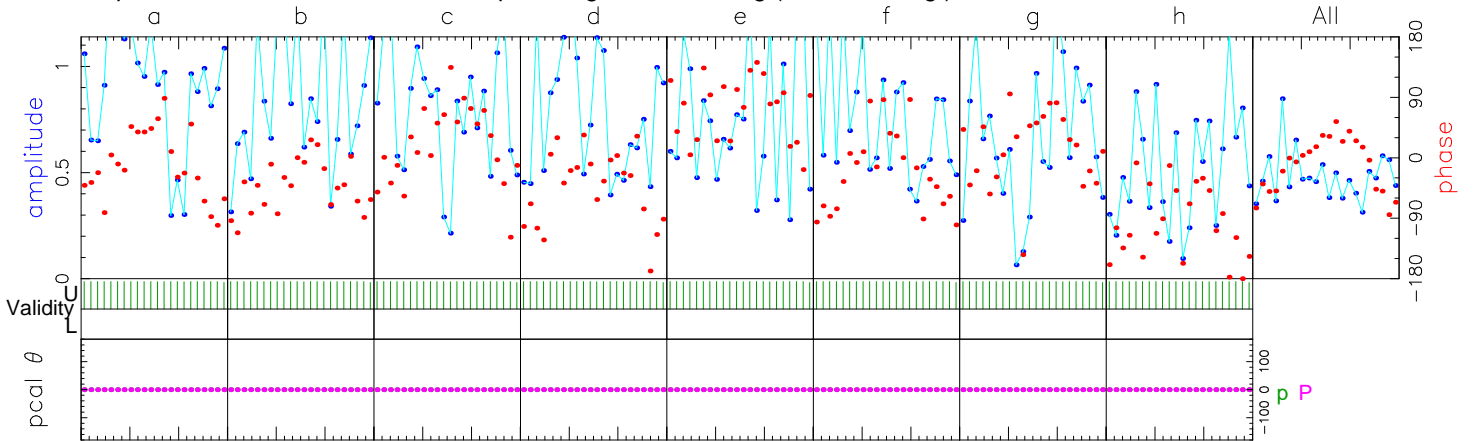
frontend

2013+370.127MDW, No0077, pP

VLBA_PT - PICOVEL, fgroup W, pol RR



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
-6.8	-39.7	15.4	-41.0	73.2	-29.2	18.5	-98.9	Phase	-11.3
0.6	0.7	0.5	0.5	0.5	0.5	0.4	0.3	Ampl.	0.5
258.1	257.5	257.0	257.3	257.3	258.1	257.2	255.7	Sbd box	258.0
U/L 352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P 1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P 0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p 1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P 1000	1000	1000	1000	1000	1000	1000	1000		
p W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.37520229769E+04	Apriori delay (usec)	1.37520264331E+04	Resid mbdelay (usec)	-3.45626E-03	+/-	7.8E-05
Sband delay (usec)	1.37520305066E+04	Apriori clock (usec)	1.2138404E+01	Resid sbdelay (usec)	4.07350E-03	+/-	6.2E-04
Phase delay (usec)	1.37520264328E+04	Apriori clockrate (us/s)	5.5688657E-07	Resid phdelay (usec)	-3.64717E-07	+/-	2.7E-07
Delay rate (us/s)	1.20495217340E+00	Apriori rate (us/s)	1.20495183472E+00	Resid rate (us/s)	3.38683E-07	+/-	2.6E-09
Total phase (deg)	330.4	Apriori accel (us/s/s)	-7.57408723013E-05	Resid phase (deg)	-11.3	+/-	8.2

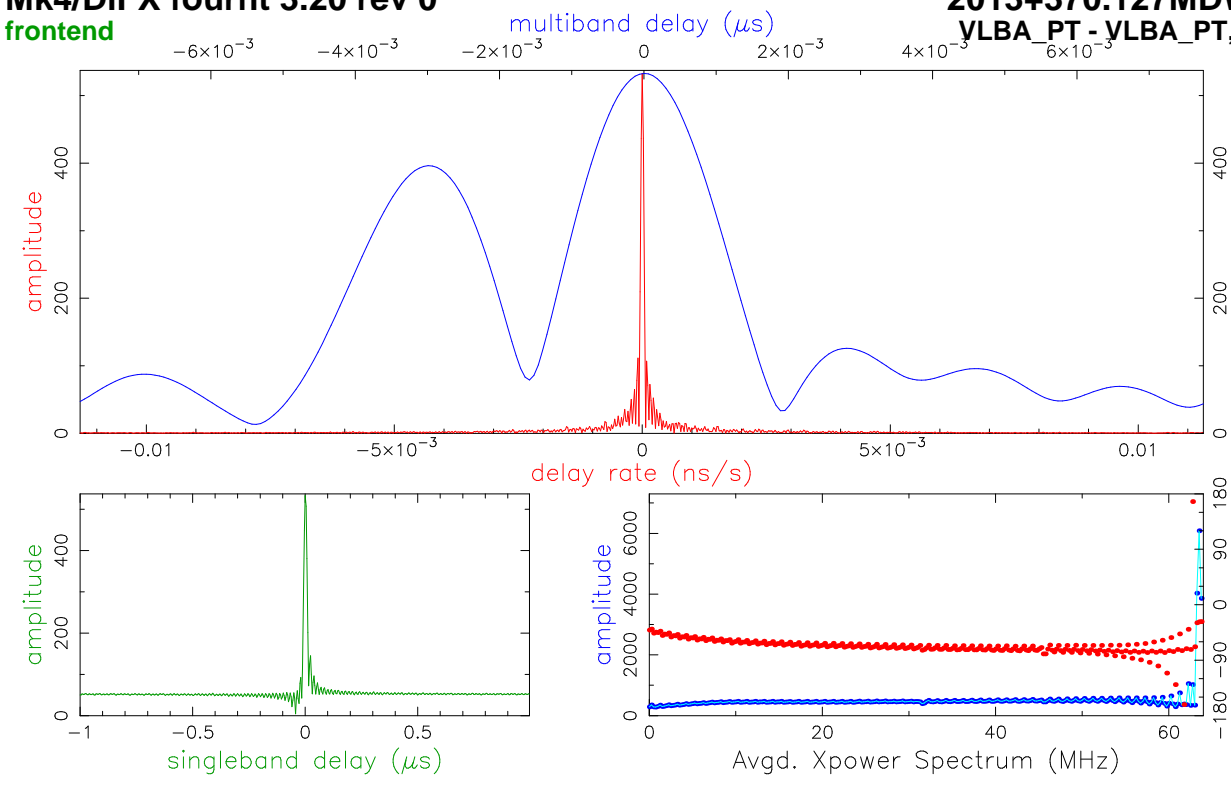
ph/seg (deg)	RMS 39.6	Theor. 19.3	Amplitude Search (1024X32)	0.380 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	40.4	33.7	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	55.4	11.6	Inc. seg. avg.	0.457	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	45.3	20.3	Inc. frq. avg.	0.503	Data rate(Mb/s): 2048	nlags: 256	ion window (TEC)	0.00	0.00

p: az 70.4 el 79.3 pa -102.4 P: az 302.1 el 20.0 pa 58.4 u,v (fr/asec) -8727.079 -4748.969 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pP..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pP.W.343.127MDW

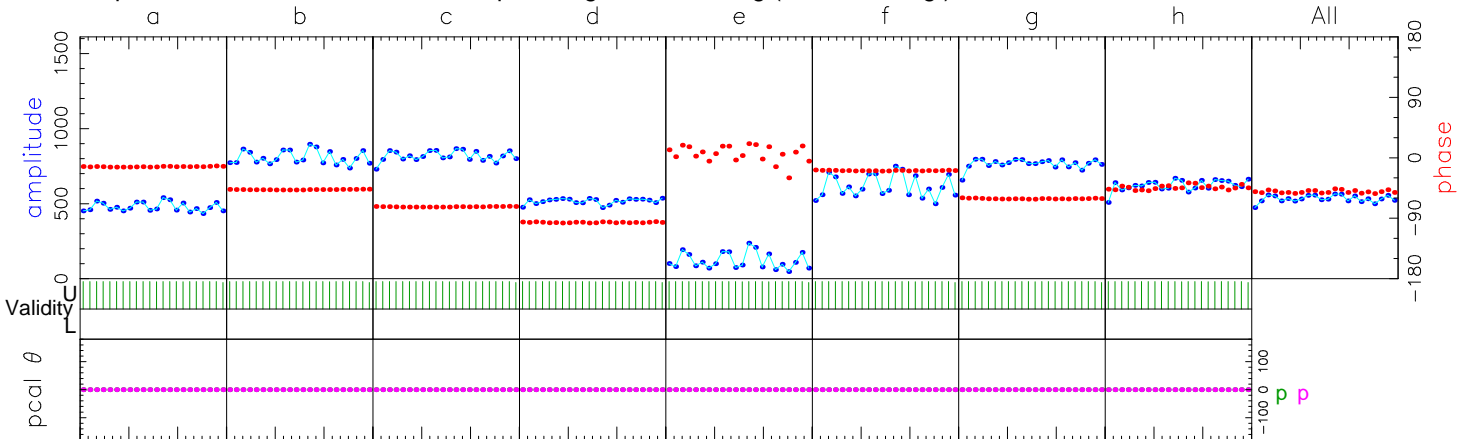
Mk4/DiFX fourfit 3.20 rev 0
frontend

2013+370.127MDW, No0077, pp
VLBA_PT - VLBA_PT, fgroup W, pol LR



Fringe quality 5
SNR 19698.4
Int time 179.767
Amp 537.253
Phase -50.4
PFD 0.0e+00
Delays (us)
SBD 0.001084
MBD 0.000011
Fringe rate (Hz)
-0.000047
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133752
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-13.3	-47.4	-72.9	-96.1	10.9	-19.0	-60.8	-44.3	Phase	-50.4
	479.5	808.6	817.7	516.8	120.2	617.0	766.3	621.9	Ampl.	593.5
	256.8	256.7	256.7	256.6	258.7	256.5	256.6	258.1	Sbd box	257.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.10625000000E-05		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		1.10625E-05	+/- 5.5E-08
Sband delay (usec)	1.08375000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		1.08375E-03	+/- 4.4E-07
Phase delay (usec)	-1.62376774181E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-1.62377E-06	+/- 1.9E-10
Delay rate (us/s)	-5.45589367080E-10		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		-5.45589E-10	+/- 1.8E-12
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-50.4	+/- 0.0

ph/seg (deg) 2.0 0.0 Search (1024X32) 532.769 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 4.2 0.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 38.4 0.0 Inc. seg. avg. 533.158 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 41.4 0.0 Inc. frq. avg. 593.475 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
p: az 70.4 el 79.3 pa -102.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 0.000 0.000 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pp.W.350.127MDW

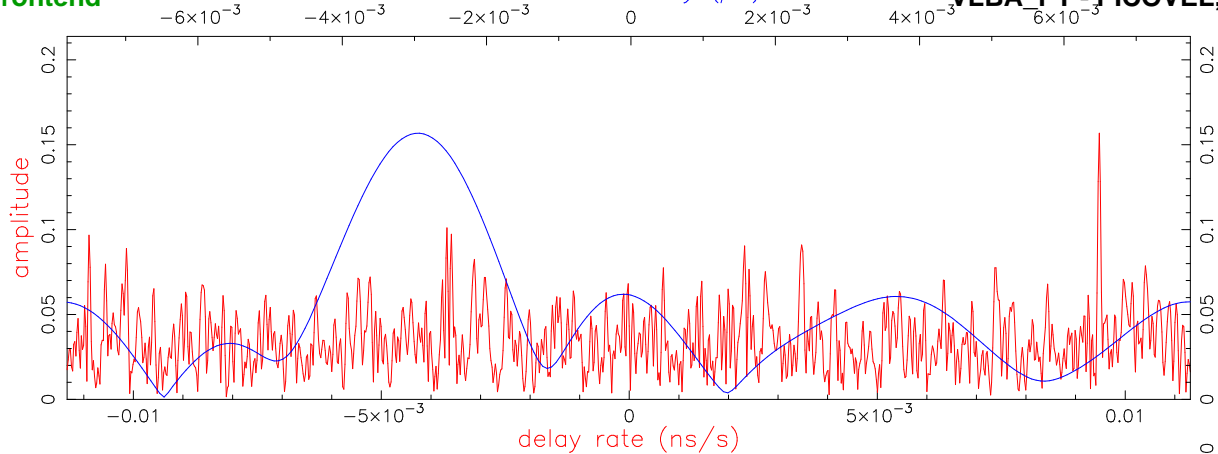
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, pP

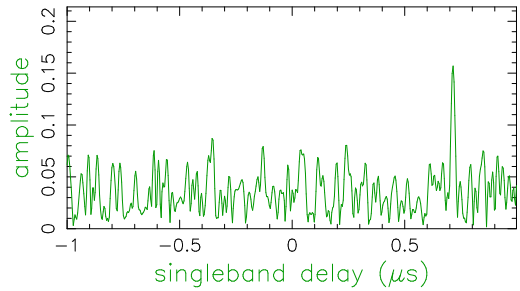
VLBA_PT - PICOVEL, fgroup W, pol LR

multiband delay (μ s)

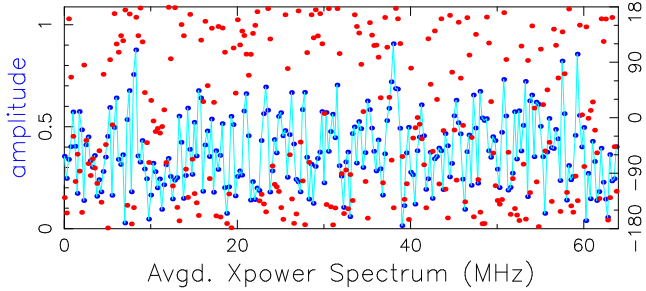


Fringe quality 0

SNR 5.8
Int time 179.576
Amp 0.214
Phase 169.0
PFD 6.4e-01
Delays (us)
SBD 0.714100
MBD -0.002958
Fringe rate (Hz)
0.818259
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

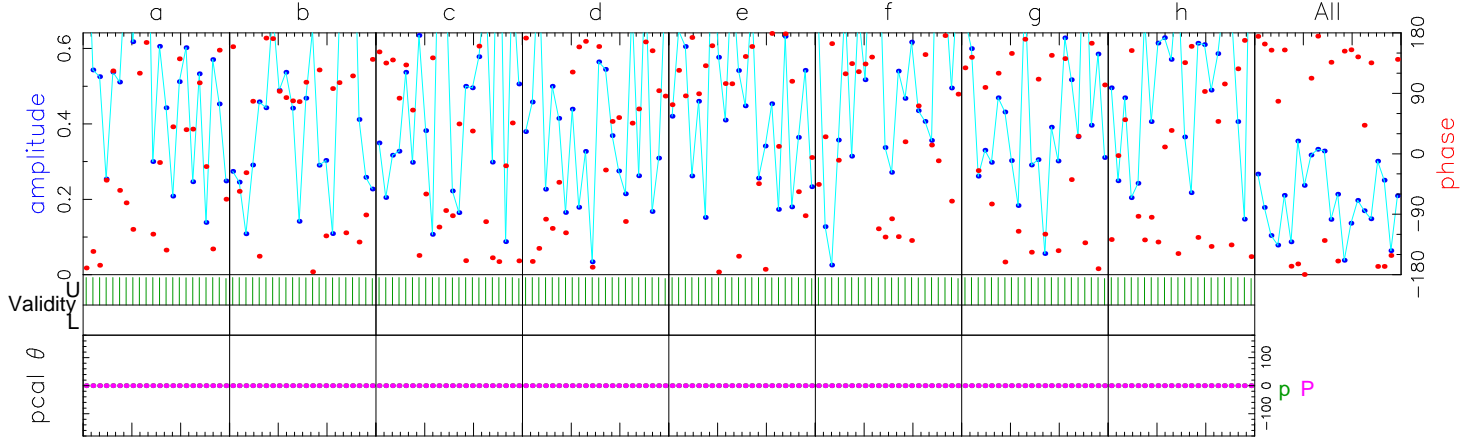


delay rate (ns/s)



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133752
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-170.6	147.0	-156.4	153.4	146.6	158.3	166.8	-163.9	Phase	169.0
	0.2	0.3	0.2	0.1	0.3	0.1	0.3	0.2	Ampl.	0.2
	54.7	203.2	3.5	429.0	440.7	250.2	26.0	204.8	Sbd box	439.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.37527422248E+04	Apriori delay (usec)	1.37520264331E+04	Resid mbdelay (usec)	-2.95829E-03	+/-	1.9E-04
Sband delay (usec)	1.37527405331E+04	Apriori clock (usec)	1.2138404E+01	Resid sbdelay (usec)	7.14100E-01	+/-	1.5E-03
Phase delay (usec)	1.37520264386E+04	Apriori clockrate (us/s)	5.5688657E-07	Resid phdelay (usec)	5.45136E-06	+/-	6.4E-07
Delay rate (us/s)	1.20496133390E+00	Apriori rate (us/s)	1.20495183472E+00	Resid rate (us/s)	9.49918E-06	+/-	6.2E-09
Total phase (deg)	150.8	Apriori accel (us/s/s)	-7.57408723013E-05	Resid phase (deg)	169.0	+/-	19.9

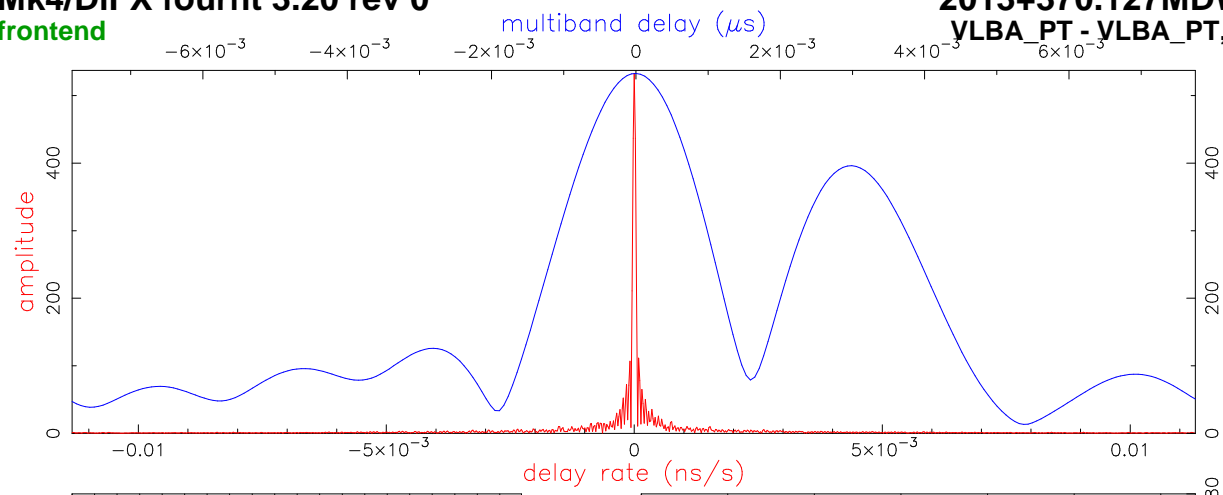
ph/seg (deg)	43.2	Theor.	46.6	Amplitude	0.214 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	63.8	Search (1024X32)	0.155	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	24.8	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	36.9	Inc. seg. avg.	0.203	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
		Inc. frq. avg.	0.205	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

p: az 70.4 el 79.3 pa -102.4 P: az 302.1 el 20.0 pa 58.4 u,v (fr/asec) -8727.079 -4748.969 simultaneous interpolator

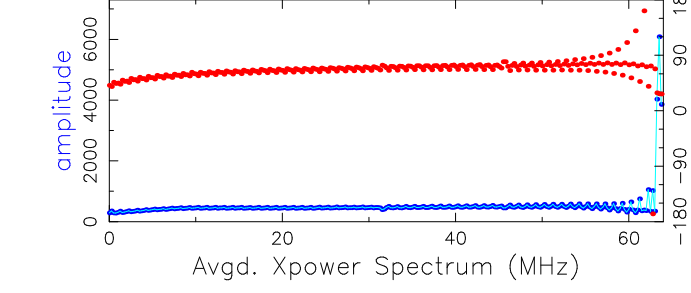
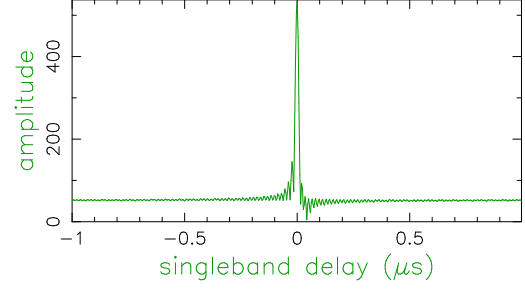
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pP..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pP.W.355.127MDW

Mk4/DiFX fourfit 3.20 rev 0
frontend

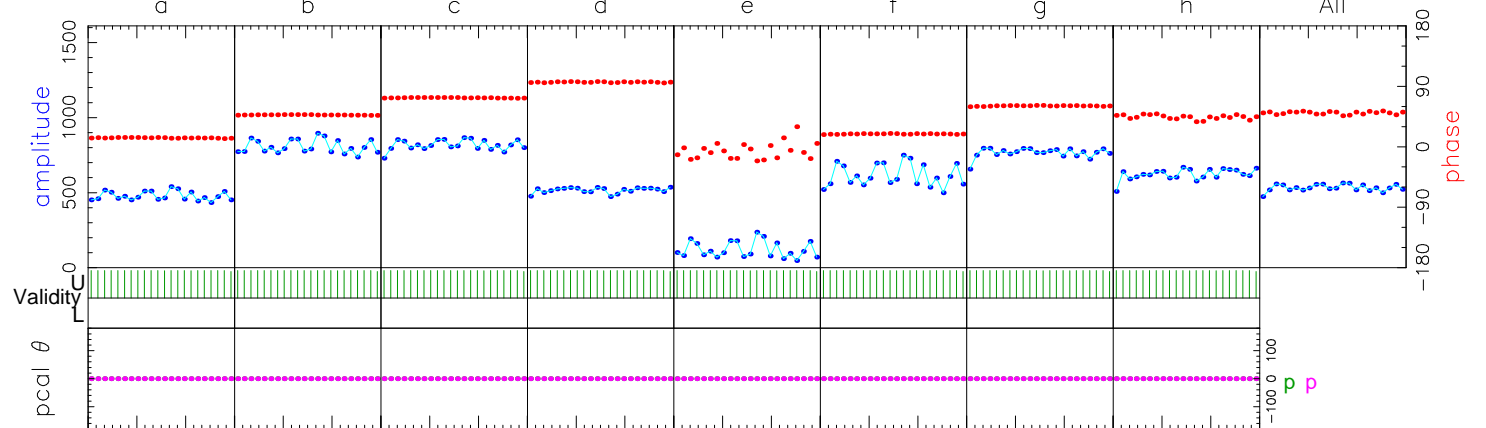
2013+370.127MDW, No0077, pp
VLBA_PT - VLBA_PT, fgroup W, pol RL



Fringe quality 5
SNR 19698.4
Int time 179.767
Amp 537.252
Phase 50.4
PFD 0.0e+00
Delays (us)
SBD -0.001084
MBD -0.000011
Fringe rate (Hz)
0.000047
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133754
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



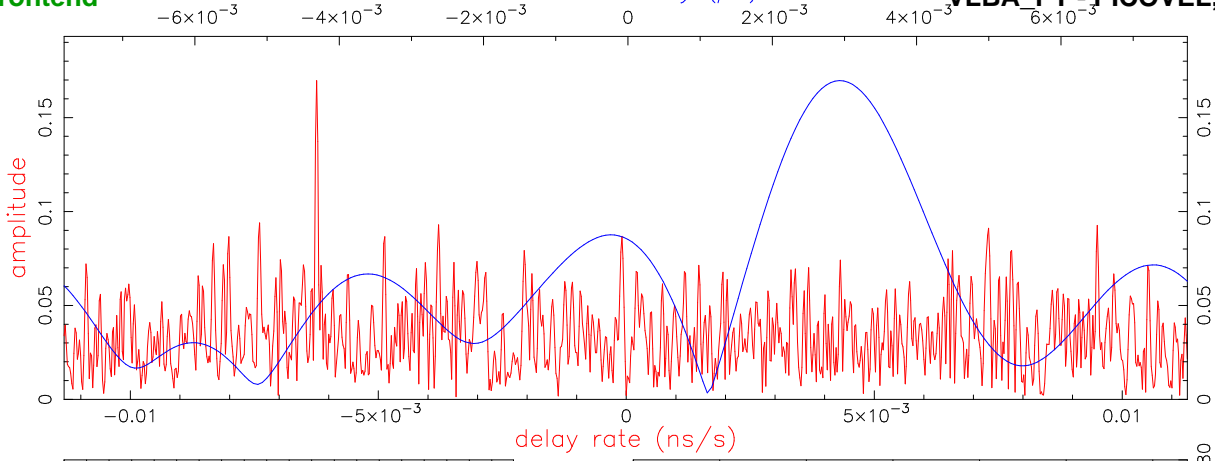
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



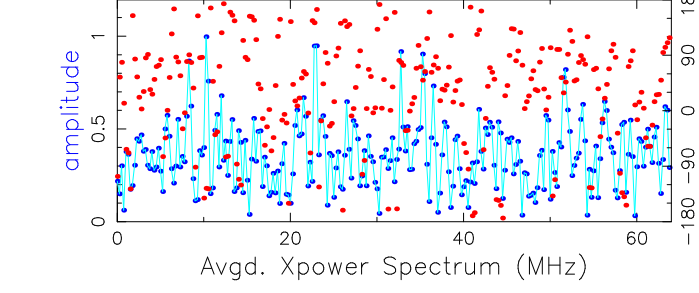
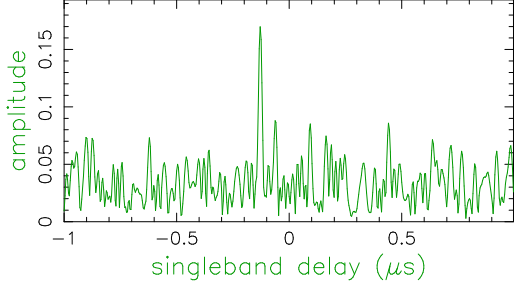
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	13.3	47.4	72.9	96.1	-10.9	19.0	60.8	44.3	Phase	50.4
	479.5	808.6	817.7	516.8	120.2	617.0	766.3	621.9	Ampl.	593.5
	257.2	257.3	257.3	257.4	255.3	257.5	257.4	255.9	Sbd box	256.7
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.10625000000E-05		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-1.10625E-05	+/- 5.5E-08
Sband delay (usec)	-1.08375000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		-1.08375E-03	+/- 4.4E-07
Phase delay (usec)	1.62376774159E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		1.62377E-06	+/- 1.9E-10
Delay rate (us/s)	5.45589367080E-10		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		5.45589E-10	+/- 1.8E-12
Total phase (deg)	50.4		Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		50.4	+/- 0.0

ph/seg (deg) 2.0 0.0 Theor. Amplitude 537.252 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 4.2 0.0 Search (1024X32) 532.769 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 38.4 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 41.4 0.0 Inc. seg. avg. 533.157 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
p: az 70.4 el 79.3 pa -102.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 0.000 0.000 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pp.W.367.127MDW simultaneous interpolator

multiband delay (μ s)

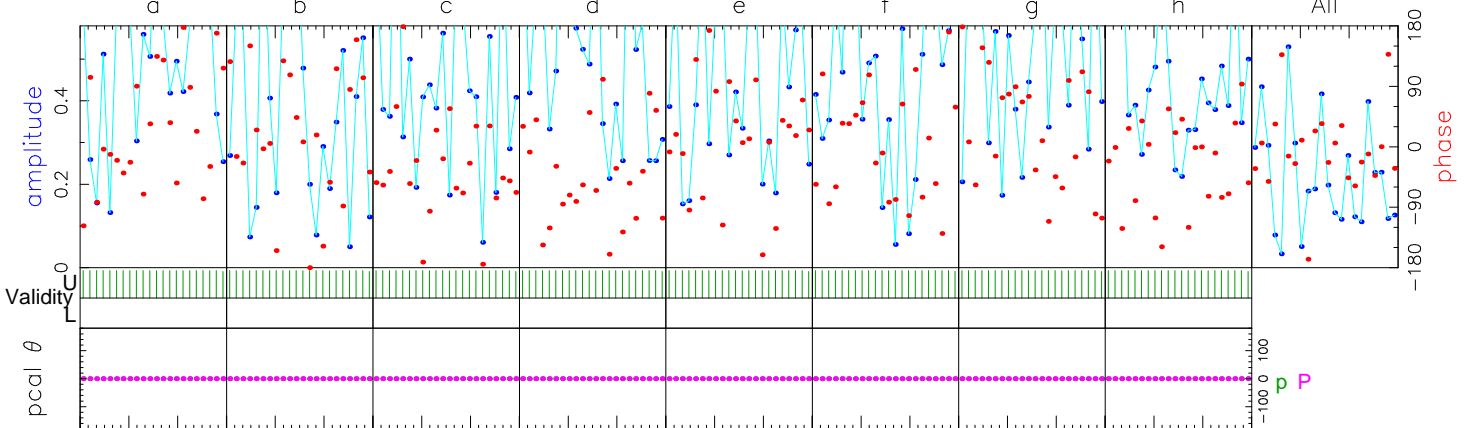


Fringe quality 0
SNR 6.2
Int time 179.576
Amp 0.193
Phase -12.5
PFD 6.1e-02
Delays (us)
SBD -0.128351
MBD 0.002946
Fringe rate (Hz)
-0.537869
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133754
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-8.1	44.5	-34.4	-54.0	31.5	10.8	-2.7	-27.9		-12.5
	0.1	0.1	0.3	0.3	0.2	0.2	0.2	0.3		0.2
	410.7	174.2	280.8	223.6	222.9	166.9	440.7	225.2		224.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
p:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
P:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
p	1000	1000	1000	1000	1000	1000	1000	1000		
P	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.37519043793E+04	Apriori delay (usec)	1.37520264331E+04	Resid mbdelay (usec)	2.94619E-03	+/-	1.7E-04
Sband delay (usec)	1.37518980821E+04	Apriori clock (usec)	1.2138404E+01	Resid sbdelay (usec)	-1.28351E-01	+/-	1.4E-03
Phase delay (usec)	1.37520264327E+04	Apriori clockrate (us/s)	5.5688657E-07	Resid phdelay (usec)	-4.03257E-07	+/-	5.9E-07
Delay rate (us/s)	1.20494559059E+00	Apriori rate (us/s)	1.20495183472E+00	Resid rate (us/s)	-6.24412E-06	+/-	5.7E-09
Total phase (deg)	329.2	Apriori accel (us/s/s)	-7.57408723013E-05	Resid phase (deg)	-12.5	+/-	18.4

ph/seg (deg)	62.1	Theor.	43.1	Amplitude	0.193 +/- 0.031	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	82.4		75.3	Search (1024X32)	0.168	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	37.1		26.0	Inc. seg. avg.	0.195	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	37.6		45.4	Inc. frq. avg.	0.205	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

Mk4/DiFX fourfit 3.20 rev 0

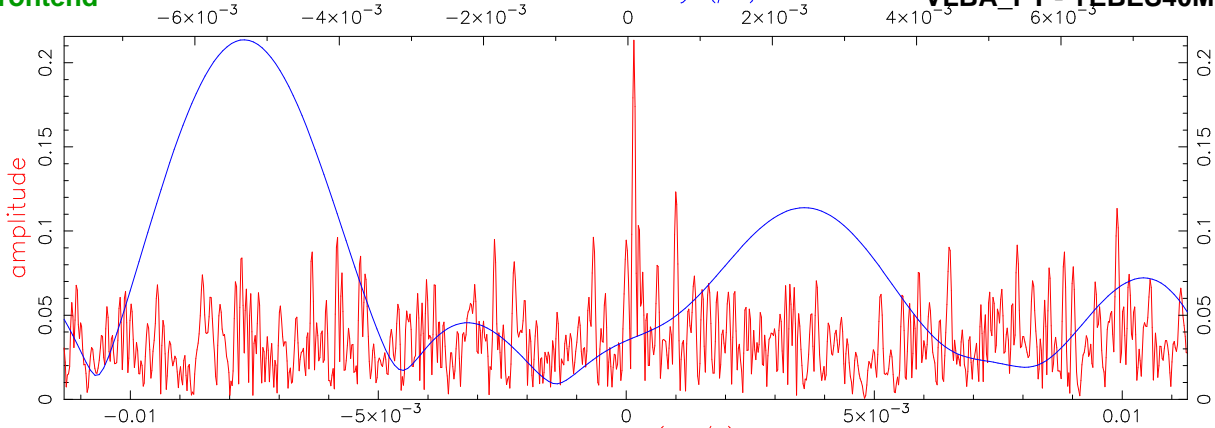
frontend

2013+370.127MDW, No0077, pY

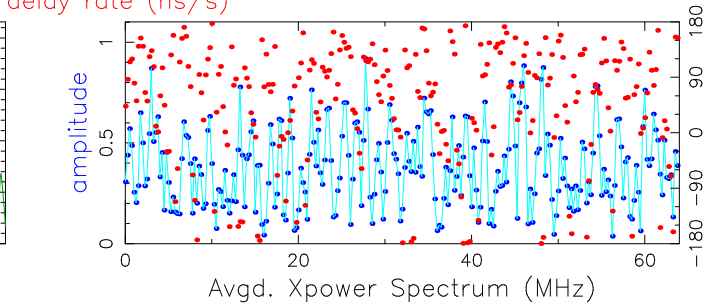
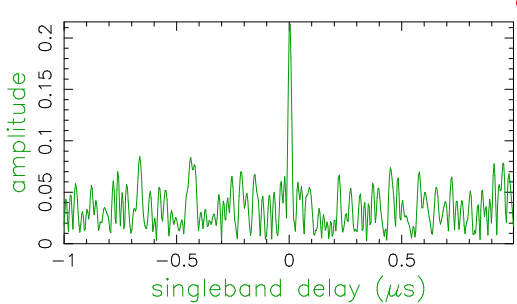
VLBA_PT - YEBES40M, fgroup W, pol LL

multiband delay (μ s)

Fringe quality 9

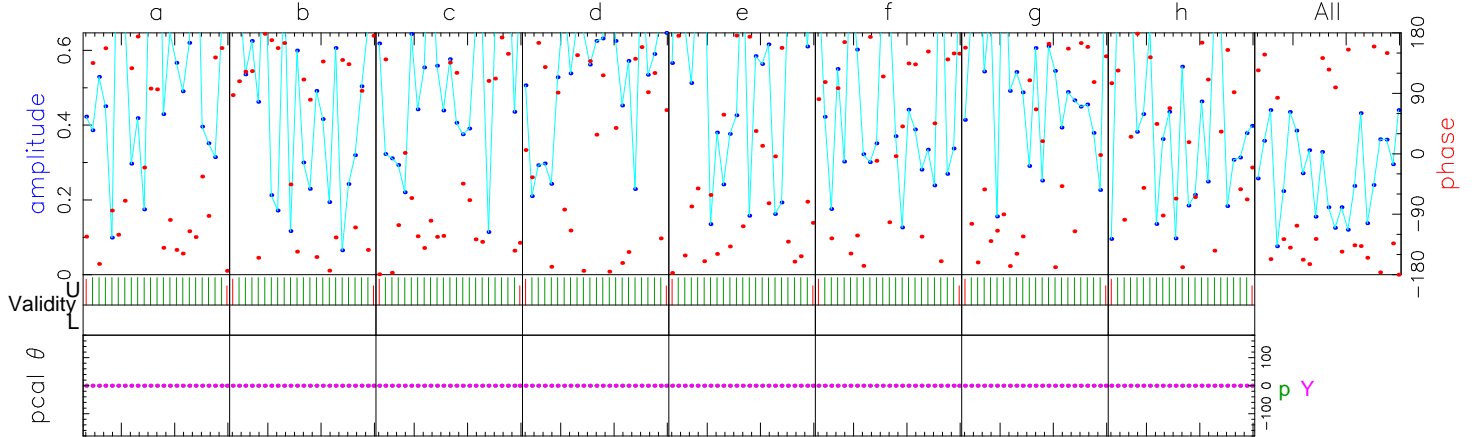


SNR 7.5
 Int time 162.113
 Amp 0.216
 Phase -169.0
 PFD 9.7e-06
 Delays (us)
 SBD 0.002614
 MBD -0.005386
 Fringe rate (Hz)
 0.013832
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512



Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014016.90
 Stop 014259.71
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133749
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-157.6	159.5	-148.3	153.5	-130.9	161.1	-156.4	-178.6	Phase	-169.0
	0.3	0.3	0.3	0.2	0.3	0.2	0.3	0.0	Ampl.	0.2
	256.2	461.7	257.9	255.8	256.4	256.3	256.4	7.6	Sbd box	257.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.31826092569E+04	Apriori delay (usec)	1.31825990178E+04	Resid mbdelay (usec)	-5.38583E-03	+/-	1.4E-04
Sband delay (usec)	1.31826016315E+04	Apriori clock (usec)	2.3017273E+08	Resid sbdelay (usec)	2.61375E-03	+/-	1.1E-03
Phase delay (usec)	1.31825990123E+04	Apriori clockrate (us/s)	-1.6113413E-08	Resid phdelay (usec)	-5.44927E-06	+/-	4.9E-07
Delay rate (us/s)	1.15789597568E+00	Apriori rate (us/s)	1.15789581511E+00	Resid rate (us/s)	1.60570E-07	+/-	5.2E-09
Total phase (deg)	-28.9	Apriori accel (us/s/s)	-7.59653739125E-05	Resid phase (deg)	-169.0	+/-	15.3

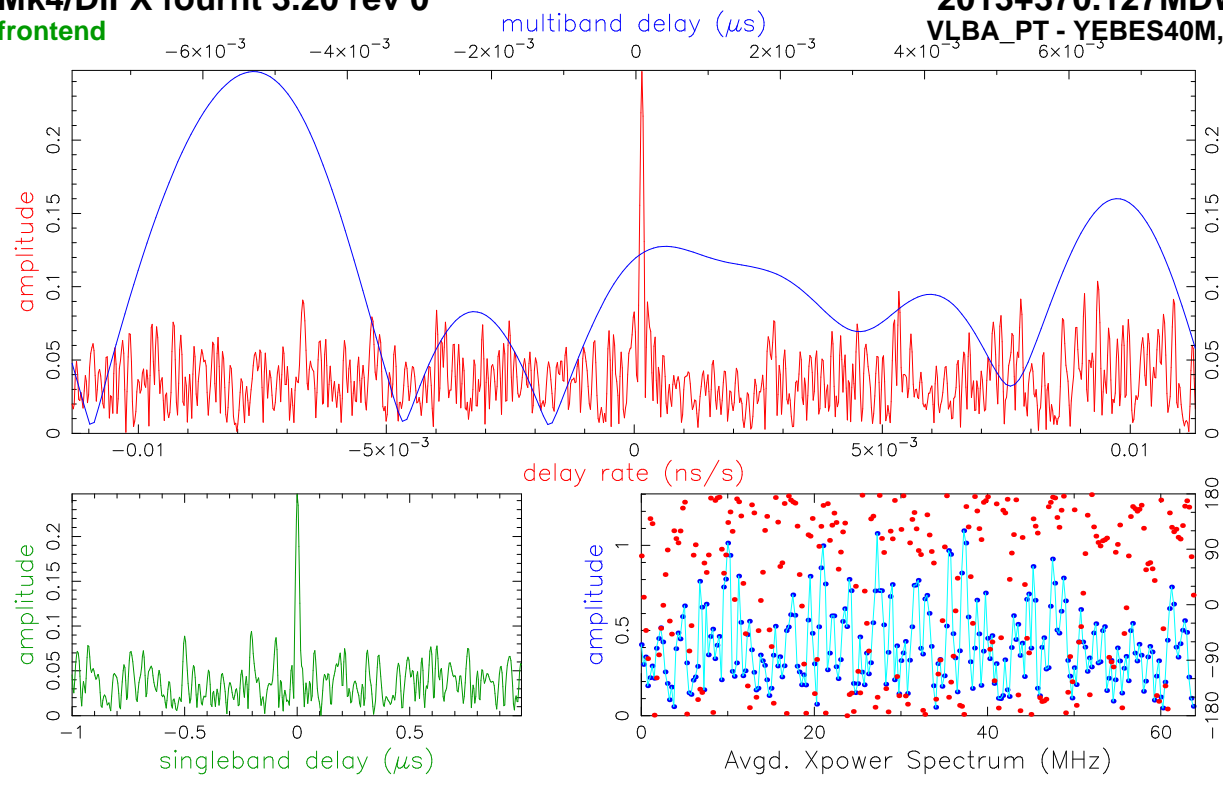
ph/seg (deg)	46.8	Theor.	36.6	Search (1024X32)	0.211	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	58.5		63.9	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008
ph/frq (deg)	30.4		21.6	Inc. seg. avg.	0.229	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011
amp/frq (%)	42.8		37.7	Inc. frq. avg.	0.225	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

p: az 70.4 el 79.3 pa -102.4 Y: az 301.2 el 21.7 pa 54.7 u,v (fr/asec) -8389.339 -5094.901 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pY..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pY.W.340.127MDW

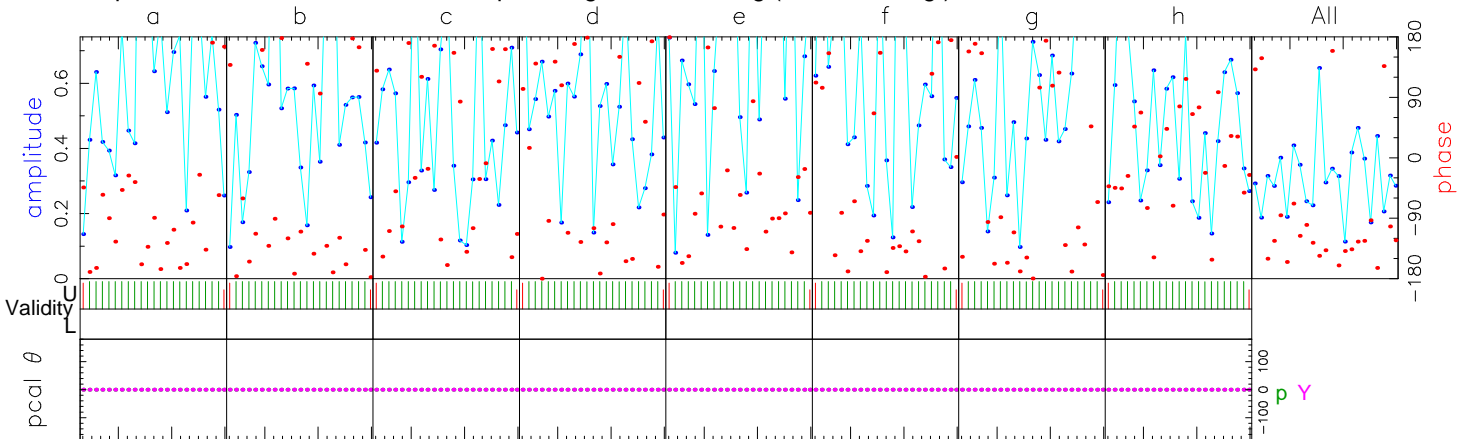
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127MDW, No0077, pY
 VLBA_PT - YEBES40M, fgroup W, pol RR



Fringe quality 9
 SNR 8.6
 Int time 162.113
 Amp 0.248
 Phase -136.4
 PFD 1.2e-09
 Delays (us)
 SBD 0.000784
 MBD -0.005288
 Fringe rate (Hz)
 0.012619
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014016.90
 Stop 014259.71
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133752
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-119.8	-148.1	-120.1	-173.6	-90.3	-168.1	-159.7	-2.3	Phase	-136.4
	0.4	0.4	0.2	0.3	0.4	0.4	0.3	0.2	Ampl.	0.3
	257.5	256.8	334.0	256.9	257.2	257.2	255.6	301.8	Sbd box	257.2
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)		1.31825937299E+04		Apriori delay (usec)	1.31825990178E+04		Resid mbdelay (usec)	-5.28787E-03		+/- 1.3E-04
Sband delay (usec)		1.31825998013E+04		Apriori clock (usec)	2.3017273E+00		Resid sbdelay (usec)	7.83500E-04		+/- 1.0E-03
Phase delay (usec)		1.31825990134E+04		Apriori clockrate (us/s)	-1.6113413E-08		Resid phdelay (usec)	-4.39756E-06		+/- 4.3E-07
Delay rate (us/s)		1.15789596160E+00		Apriori rate (us/s)	1.15789581511E+00		Resid rate (us/s)	1.46489E-07		+/- 4.6E-09
Total phase (deg)			3.8	Apriori accel (us/s/s)	-7.59653739125E-05		Resid phase (deg)	-136.4		+/- 13.3

ph/seg (deg) 42.1 31.9 Search (1024X32) 0.242 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 amp/seg (%) 52.9 55.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 ph/frq (deg) 62.9 18.8 Inc. seg. avg. 0.272 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 amp/frq (%) 50.0 32.8 Inc. frq. avg. 0.317 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
 p: az 70.4 el 79.3 pa -102.4 Y: az 301.2 el 21.7 pa 54.7 u,v (fr/asec) -8389.339 -5094.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pY..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pY.W.352.127MDW

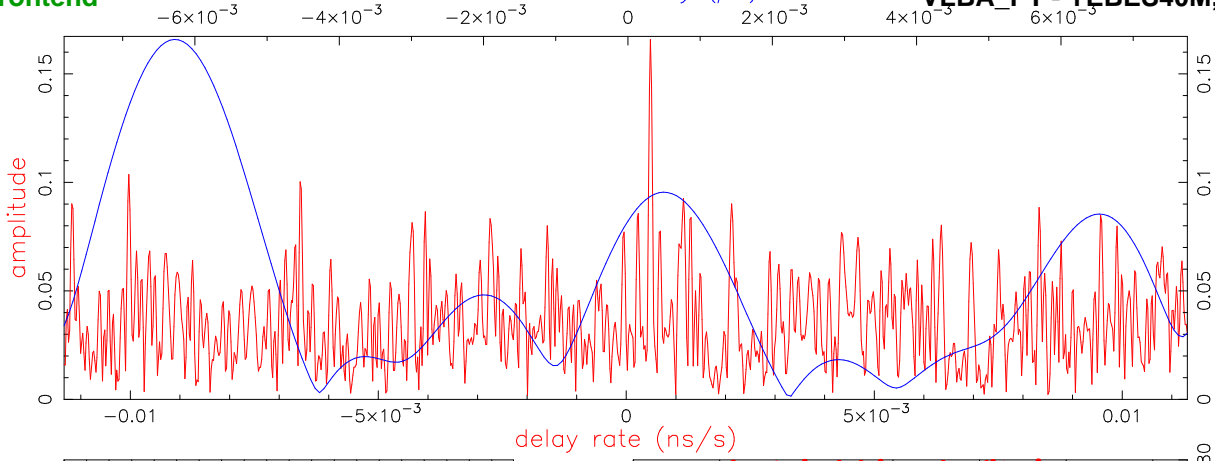
Mk4/DiFX fourfit 3.20 rev 0

frontend

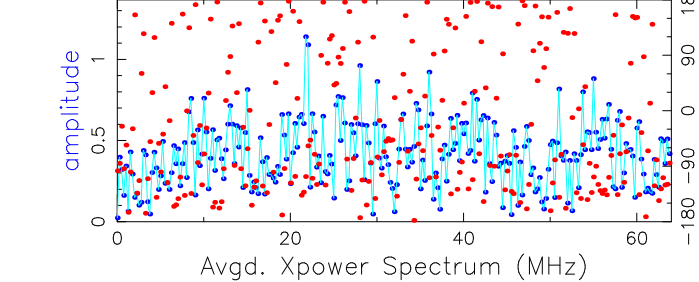
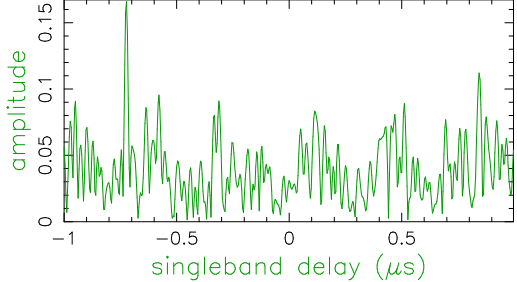
2013+370.127MDW, No0077, pY

VLBA_PT - YEBES40M, fgroup W, pol LR

multiband delay (μ s)

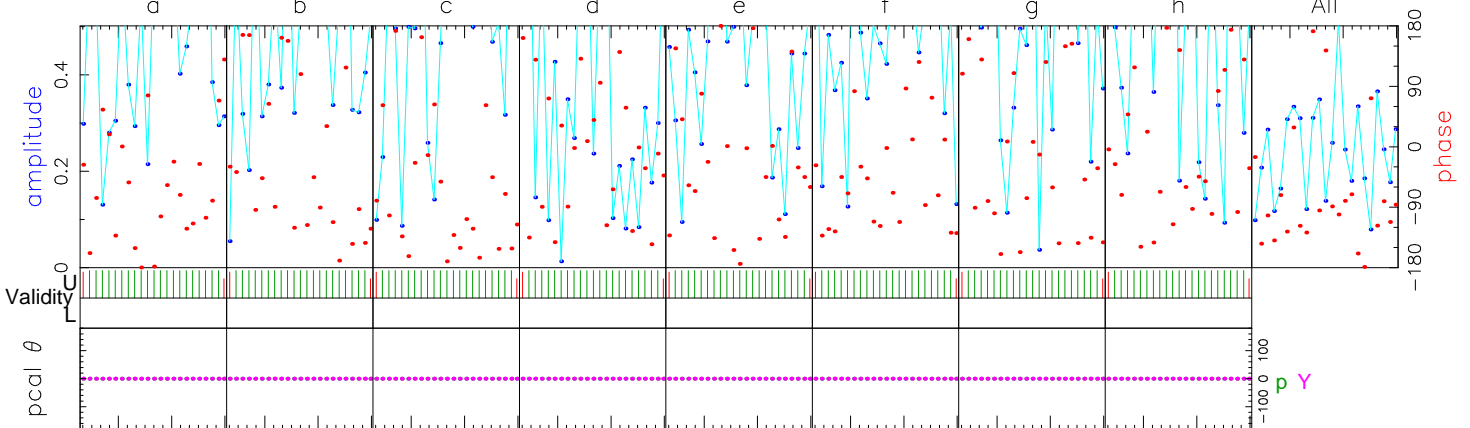


Fringe quality 0
 SNR 5.8
 Int time 162.113
 Amp 0.167
 Phase -111.5
 PFD 5.3e-01
 Delays (us)
 SBD -0.723713
 MBD -0.006281
 Fringe rate (Hz)
 0.042074
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014016.90
 Stop 014259.71
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133755
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-86.2	-123.0	-138.9	-112.7	-116.0	-62.7	-150.6	-97.9	Phase	-111.5
	0.2	0.2	0.3	0.1	0.2	0.2	0.2	0.2	Ampl.	0.2
	356.2	203.1	71.5	165.3	272.9	311.8	291.6	116.6	Sbd box	71.7
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	1.31818739872E+04	Apriori delay (usec)	1.31825990178E+04	Resid mbdelay (usec)	-6.28054E-03	+/-	1.9E-04
Sband delay (usec)	1.31818753048E+04	Apriori clock (usec)	2.3017273E+08	Resid sbdelay (usec)	-7.23713E-01	+/-	1.5E-03
Phase delay (usec)	1.31825990142E+04	Apriori clockrate (us/s)	-1.6113413E-08	Resid phdelay (usec)	-3.59570E-06	+/-	6.4E-07
Delay rate (us/s)	1.15789630355E+00	Apriori rate (us/s)	1.15789581511E+00	Resid rate (us/s)	4.88439E-07	+/-	6.8E-09
Total phase (deg)	28.6	Apriori accel (us/s/s)	-7.59653739125E-05	Resid phase (deg)	-111.5	+/-	19.7

ph/seg (deg)	63.8	Theor.	47.2	Amplitude	0.167 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5			
amp/seg (%)	76.8	Search (1024X32)	0.165	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000			
ph/frq (deg)	30.7	Inc. seg. avg.	0.182	Inc. frq. avg.	0.167	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008		
amp/frq (%)	37.5	Inc. frq. avg.	0.167			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011			
						Data rate (Mb/s):	2048	nlags:	256	t_cohere infinite	ion window (TEC)	0.00 0.00

p: az 70.4 el 79.3 pa -102.4 Y: az 301.2 el 21.7 pa 54.7 u,v (fr/asec) -8389.339 -5094.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pY..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pY.W.374.127MDW

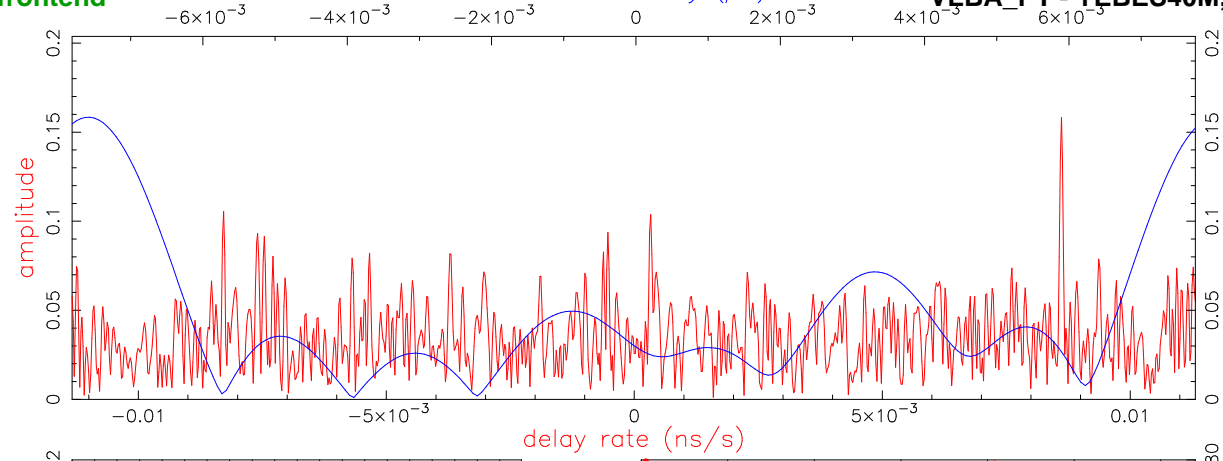
Mk4/DiFX fourfit 3.20 rev 0

frontend

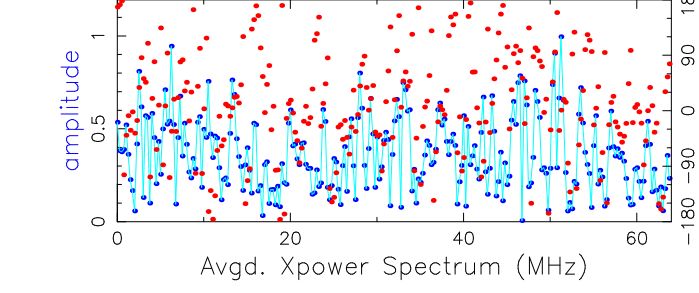
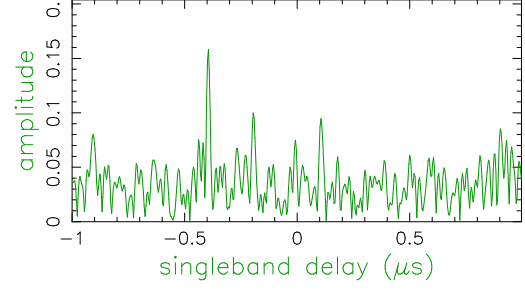
2013+370.127MDW, No0077, pY

VLBA_PT - YEBES40M, fgroup W, pol RL

multiband delay (μ s)

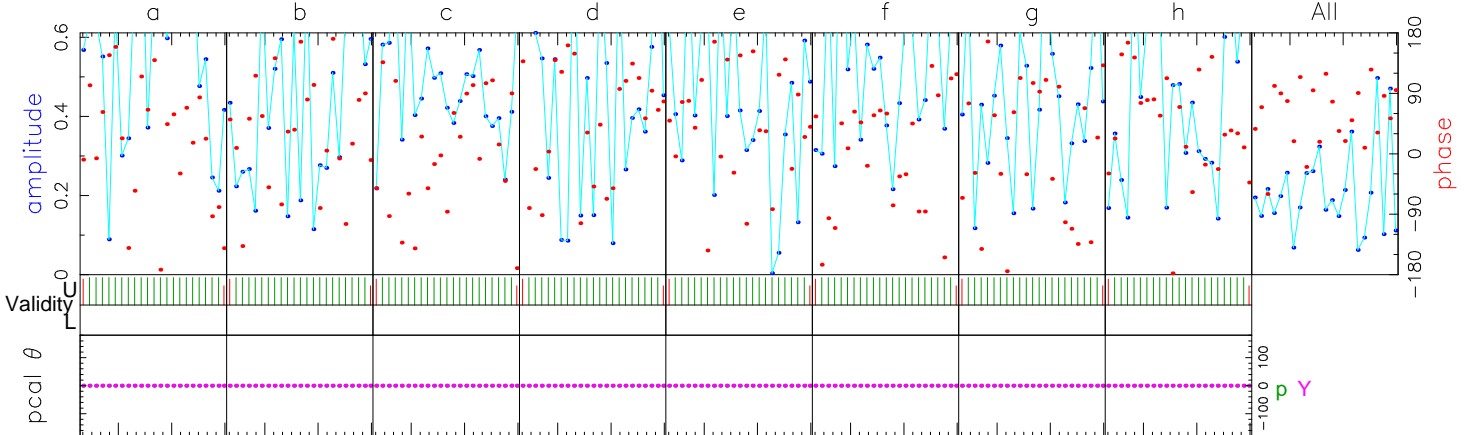


Fringe quality 0
 SNR 5.5
 Int time 162.113
 Amp 0.204
 Phase 55.1
 PFD 9.8e-01
 Delays (us)
 SBD -0.395151
 MBD 0.008001
 Fringe rate (Hz) 0.742507
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014016.90
 Stop 014259.71
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133757
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"



Avgd. Xpower Spectrum (MHz)

Amp. and Phase vs. time for each freq., 23 segs, 14 APs / seg (7.17 sec / seg.), time ticks 10 sec

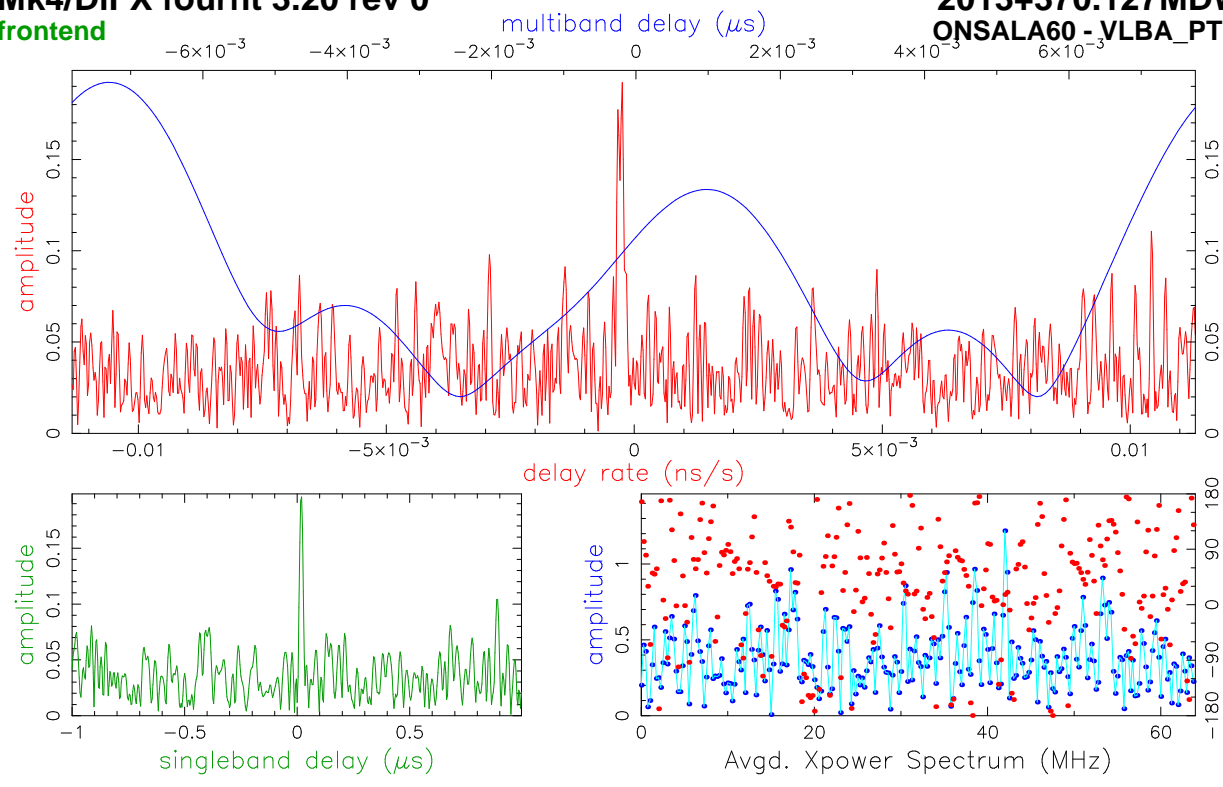


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	59.2	42.9	22.7	85.0	50.8	45.9	76.9	55.1	Phase	55.1
	0.2	0.2	0.1	0.2	0.2	0.2	0.1	0.3	Ampl.	0.2
	170.9	44.7	246.7	173.2	343.3	500.3	313.1	5.4	Sbd box	155.8
U/L	318/0	318/0	318/0	318/0	318/0	318/0	318/0	318/0	APs used	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
p:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.31822007689E+04	Apriori delay (usec)	1.31825990178E+04	Resid mbdelay (usec)	8.00116E-03	+/-	2.0E-04
Sband delay (usec)	1.31822038673E+04	Apriori clock (usec)	2.3017273E+00	Resid sbdelay (usec)	-3.95151E-01	+/-	1.6E-03
Phase delay (usec)	1.31825990195E+04	Apriori clockrate (us/s)	-1.6113413E-08	Resid phdelay (usec)	1.77545E-06	+/-	6.7E-07
Delay rate (us/s)	1.15790443489E+00	Apriori rate (us/s)	1.15789581511E+00	Resid rate (us/s)	8.61978E-06	+/-	7.1E-09
Total phase (deg)	195.2	Apriori accel (us/s/s)	-7.59653739125E-05	Resid phase (deg)	55.1	+/-	20.7

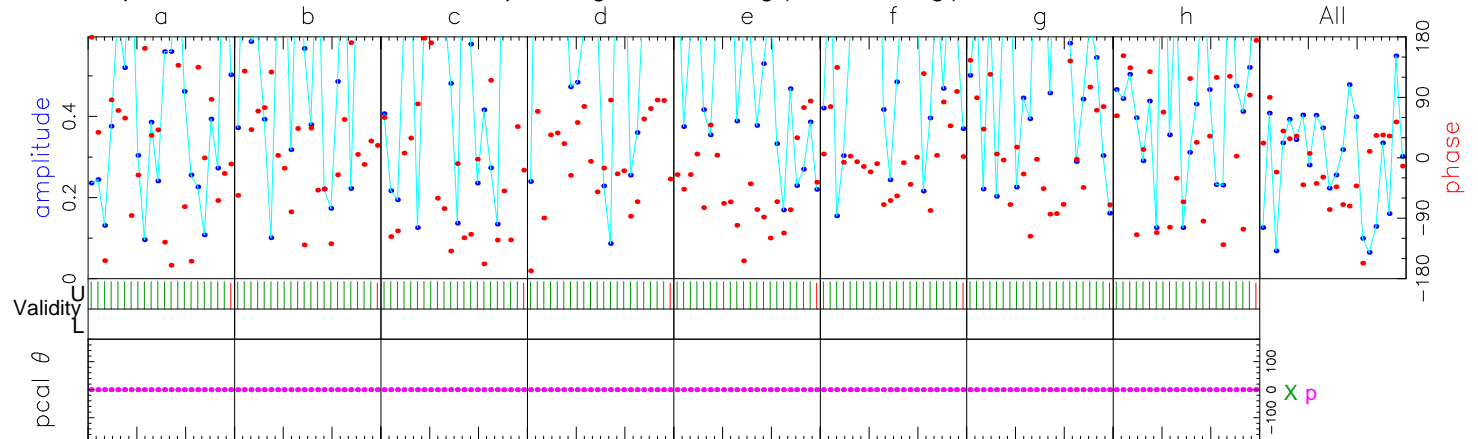
ph/seg (deg)	46.2	Theor.	49.7	Amplitude	0.204 +/- 0.037	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
amp/seg (%)	78.3	Search (1024X32)	0.155	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
ph/frq (deg)	21.2	Inc. seg. avg.	0.199	Inc. frq. avg.	0.187	Bits/sample: 2x2	SampCntNorm: enabled
amp/frq (%)	29.5	Inc. frq. avg.	0.187			Sample rate(MSamp/s): 128	mb window (us) -0.008 0.008
						Data rate(Mb/s): 2048	dr window (ns/s) -0.011 0.011
						nlags: 256	t_cohere infinite
							ion window (TEC) 0.00 0.00

p: az 70.4 el 79.3 pa -102.4 Y: az 301.2 el 21.7 pa 54.7 u,v (fr/asec) -8389.339 -5094.901 simultaneous interpolator
 Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/pY..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/pY.W.391.127MDW



Fringe quality 9
 SNR 7.3
 Int time 179.572
 Amp 0.199
 Phase -4.9
 PFD 5.1e-05
 Delays (us)
 SBD 0.017985
 MBD -0.007264
 Fringe rate (Hz)
 -0.020602
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133751
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

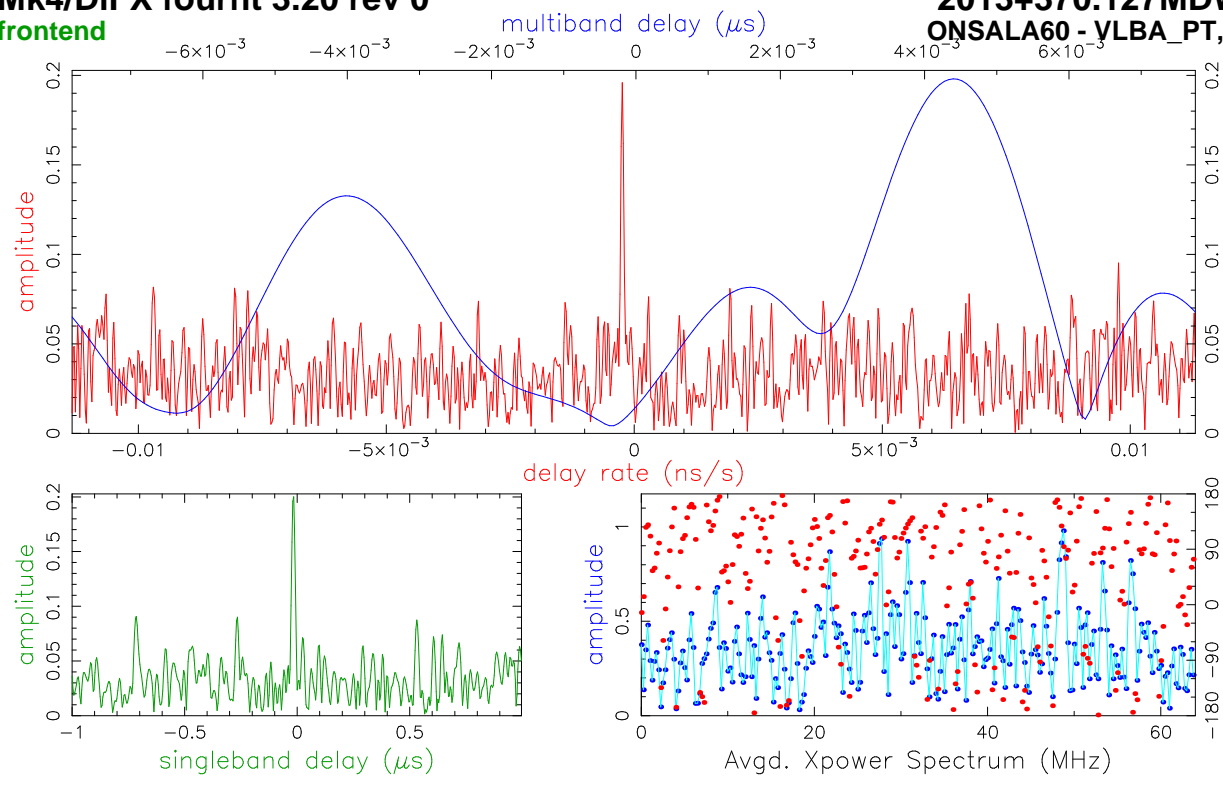
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	8.1	16.5	-77.1	21.1	-50.6	-0.9	-21.2	99.1	Phase	-4.9		
	0.0	0.3	0.2	0.4	0.3	0.4	0.2	0.1	Ampl.	0.2		
	8.3	261.7	486.1	262.2	262.2	261.3	203.4	409.3	Sbd box	261.6		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000	1000	1000	1000	1000				
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-1.28609389468E+04		Apriori delay (usec)		-1.28609629329E+04		Resid mbdelay (usec)		-7.26389E-03	+/- 1.5E-04		
Sband delay (usec)	-1.28609449484E+04		Apriori clock (usec)		2.0431679E+01		Resid sbdelay (usec)		1.79845E-02	+/- 1.2E-03		
Phase delay (usec)	-1.28609629330E+04		Apriori clockrate (us/s)		3.2411343E-07		Resid phdelay (usec)		-1.56725E-07	+/- 5.1E-07		
Delay rate (us/s)	-8.54228531565E-01		Apriori rate (us/s)		-8.54228292401E-01		Resid rate (us/s)		-2.39164E-07	+/- 4.9E-09		
Total phase (deg)			Apriori accel (us/s/s)		8.75465038376E-05		Resid phase (deg)		-4.9	+/- 15.7		
	RMS	Theor.	Amplitude	0.199 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	54.5	36.9	Search (1024X32)	0.193		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	82.2	64.4	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	57.3	22.3	Inc. seg. avg.	0.243		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	71.0	38.8	Inc. frq. avg.	0.224		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
X: az 304.7 el 22.5 pa 33.0	p: az 70.4 el 79.3 pa -102.4		u, v (fr/asec) 6215.960 7159.743						simultaneous interpolator			
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Xp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Xp.W.349.127MDW												

Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127MDW, No0077, Xp
 ONSALA60 - VLBA_PT, fgroup W, pol RR

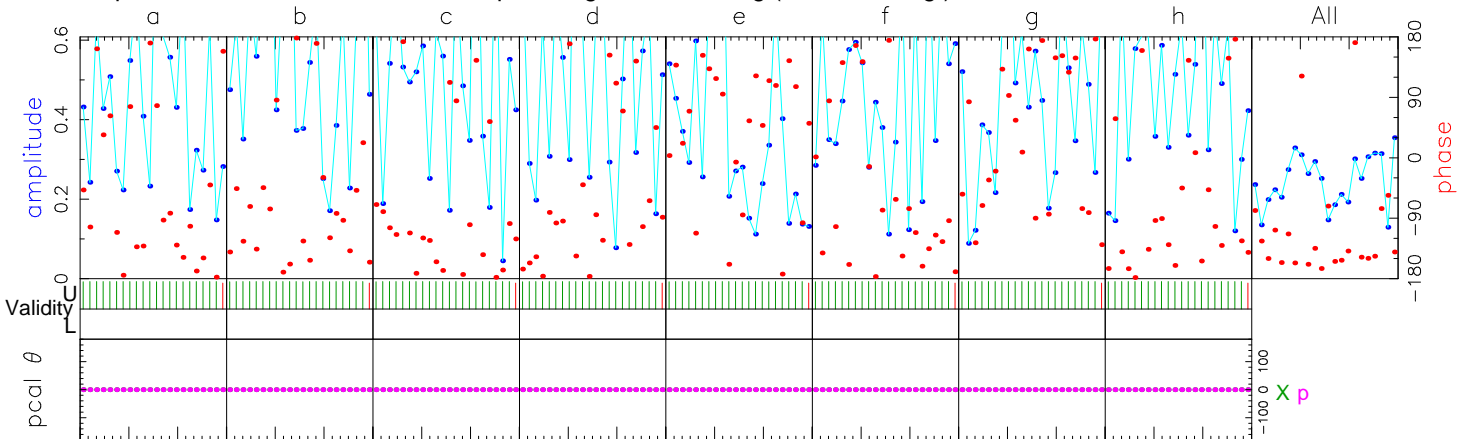


Fringe quality 9

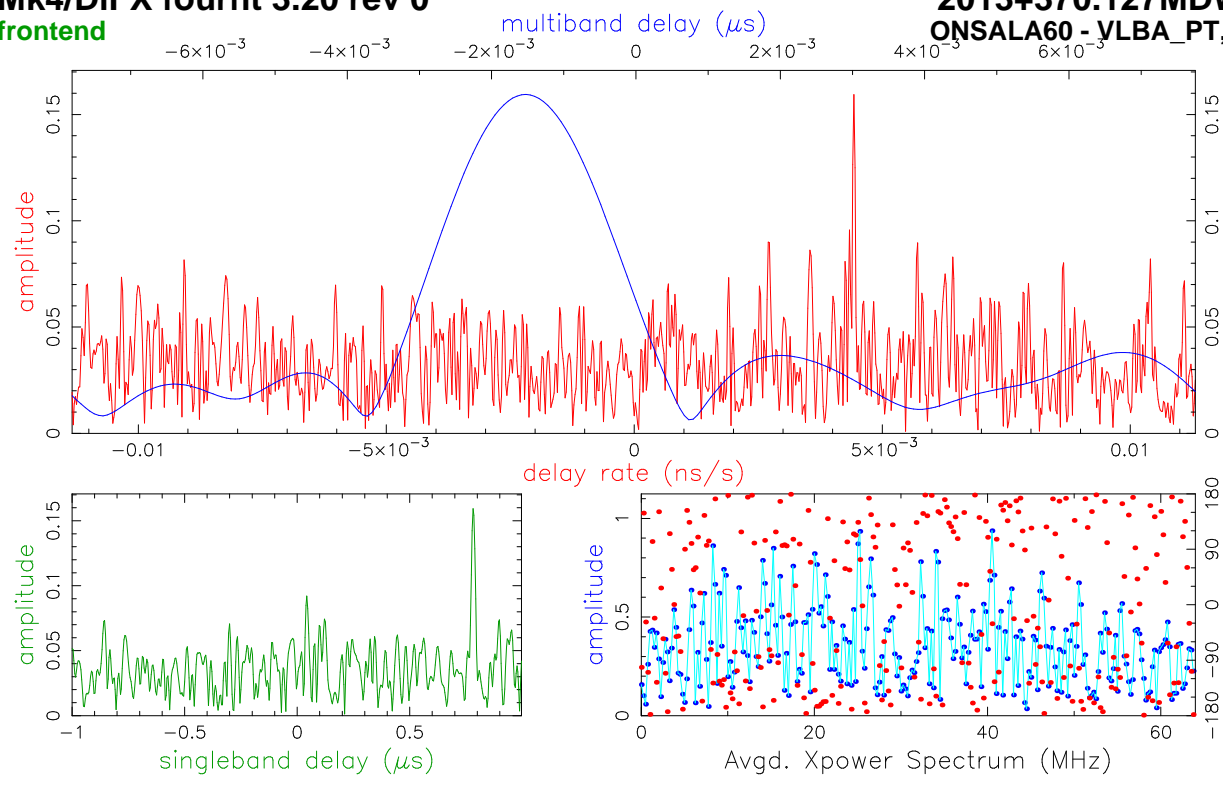
SNR 7.4
 Int time 179.572
 Amp 0.203
 Phase -140.7
 PFD 1.7e-05
 Delays (us)
 SBD -0.017111
 MBD 0.004562
 Fringe rate (Hz)
 -0.021792
 Ion TEC 0.000
 Ref freq (MHz)
 86140.0000
 AP (sec) 0.512

Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133754
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec

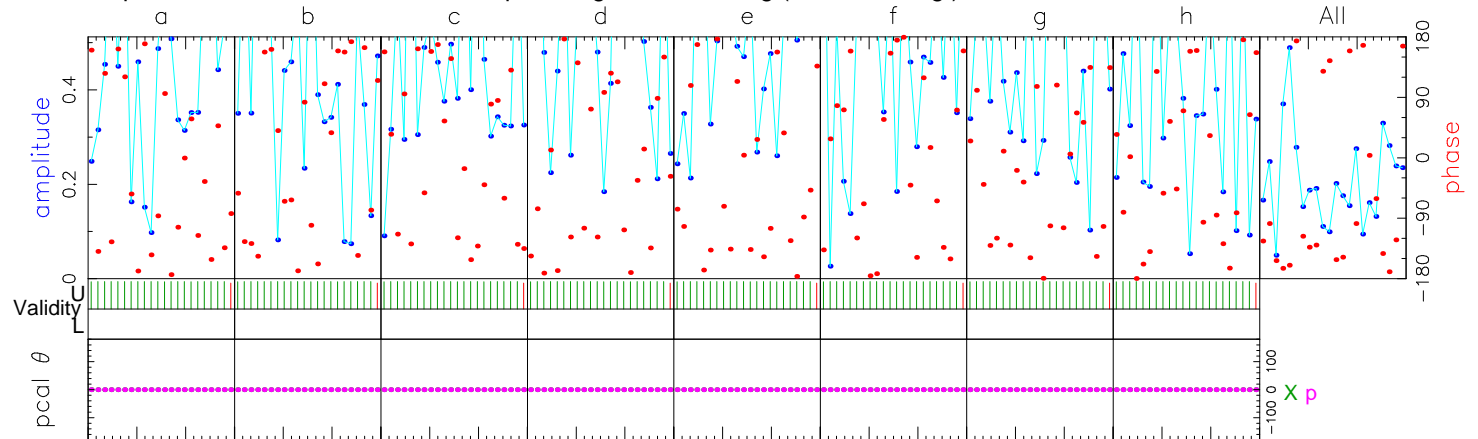


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-139.5	-106.3	-150.1	-124.7	109.3	-141.1	-169.7	-139.7	Phase	-140.7		
	0.1	0.3	0.3	0.3	0.2	0.3	0.1	0.3	Ampl.	0.2		
	98.4	251.8	253.1	252.4	76.7	253.7	247.8	250.2	Sbd box	252.6		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000	1000	1000	1000	1000				
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-1.28609739960E+04		Apriori delay (usec)		-1.28609629329E+04		Resid mbdelay (usec)		4.56183E-03	+/- 1.5E-04		
Sband delay (usec)	-1.28609800439E+04		Apriori clock (usec)		2.0431679E+01		Resid sbdelay (usec)		-1.71110E-02	+/- 1.2E-03		
Phase delay (usec)	-1.28609629374E+04		Apriori clockrate (us/s)		3.2411343E-07		Resid phdelay (usec)		-4.53795E-06	+/- 5.0E-07		
Delay rate (us/s)	-8.54228545389E-01		Apriori rate (us/s)		-8.54228292401E-01		Resid rate (us/s)		-2.52988E-07	+/- 4.8E-09		
Total phase (deg)			Apriori accel (us/s/s)		8.75465038376E-05		Resid phase (deg)		-140.7	+/- 15.4		
	RMS	Theor.	Amplitude	0.203 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	40.5	36.2	Search (1024X32)	0.192		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	38.4	63.1	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	49.1	21.8	Inc. seg. avg.	0.206		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	47.1	38.1	Inc. frq. avg.	0.220		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
X: az 304.7 el 22.5 pa 33.0	p: az 70.4 el 79.3 pa -102.4		u, v (fr/asec) 6215.960 7159.743						simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c192c/v1_CygA2/1234/No0077/Xp..127MDW		Output file: /Exps/c192c/v1_CygA2/1234/No0077/Xp.W.366.127MDW									



Fringe quality 0
 SNR 5.9
 Int time 179.572
 Amp 0.171
 Phase -148.7
 PFD 4.2e-01
 Delays (us)
 SBD 0.782321
 MBD -0.001562
 Fringe rate (Hz) 0.381223
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133756
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

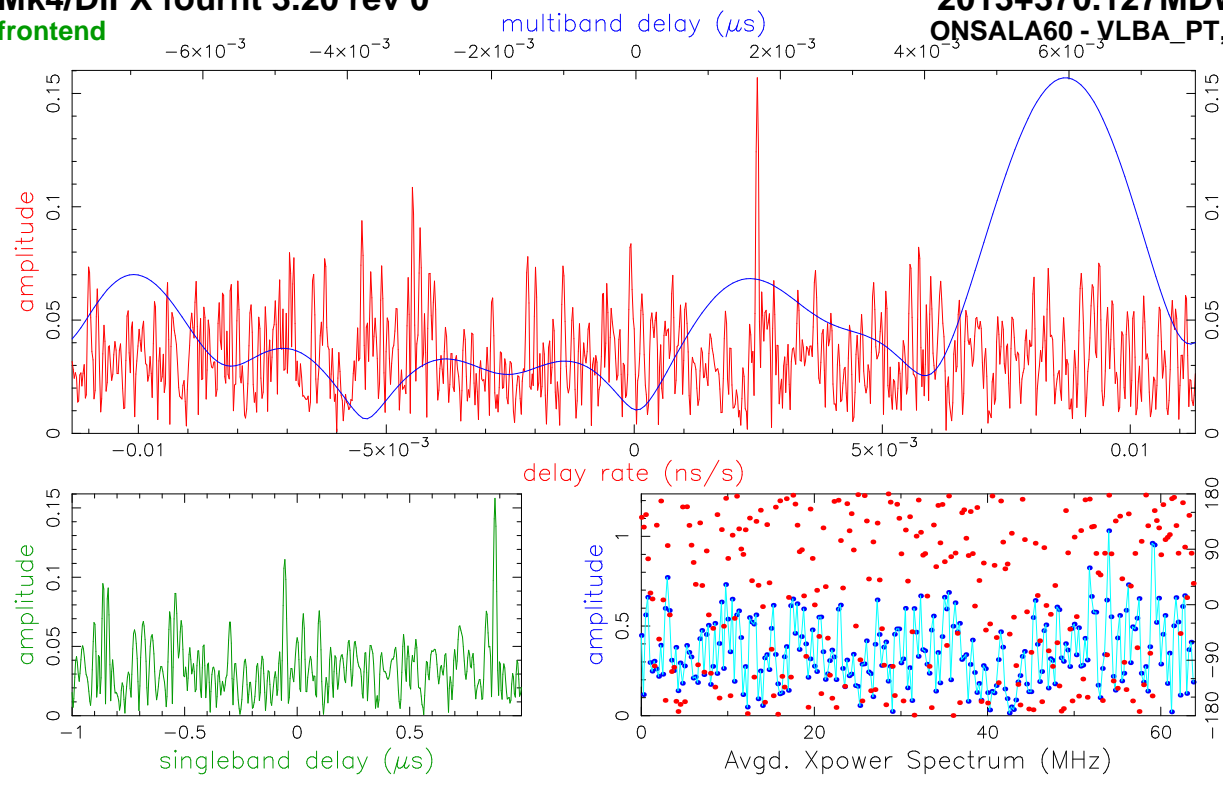
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
	-152.1	-153.7	-136.5	-163.5	-137.8	-160.9	-114.2	-174.8	Phase	-148.7		
	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1	Ampl.	0.2		
	394.8	201.3	84.7	236.6	130.8	391.1	502.1	198.7	Sbd box	457.3		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC			
X	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
p	1000	1000	1000	1000	1000	1000	1000	1000				
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids			
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-1.28601832444E+04		Apriori delay (usec)		-1.28609629329E+04		Resid mbdelay (usec)		-1.56157E-03	+/- 1.8E-04		
Sband delay (usec)	-1.28601806121E+04		Apriori clock (usec)		2.0431679E+01		Resid sbdelay (usec)		7.82321E-01	+/- 1.5E-03		
Phase delay (usec)	-1.28609629377E+04		Apriori clockrate (us/s)		3.2411343E-07		Resid phdelay (usec)		-4.79668E-06	+/- 6.3E-07		
Delay rate (us/s)	-8.54223866776E-01		Apriori rate (us/s)		-8.54228292401E-01		Resid rate (us/s)		4.42563E-06	+/- 6.0E-09		
Total phase (deg)			Apriori accel (us/s/s)		8.75465038376E-05		Resid phase (deg)		-148.7	+/- 19.5		
	RMS	Theor.	Amplitude	0.171 +/- 0.029		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	52.0	45.8	Search (1024X32)	0.157		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	69.2	79.9	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	20.6	27.6	Inc. seg. avg.	0.170		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	28.6	48.2	Inc. frq. avg.	0.158		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
X: az 304.7 el 22.5 pa 33.0	p: az 70.4 el 79.3 pa -102.4		u,v (fr/asec) 6215.960 7159.743						simultaneous interpolator			
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Xp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Xp.W.384.127MDW												

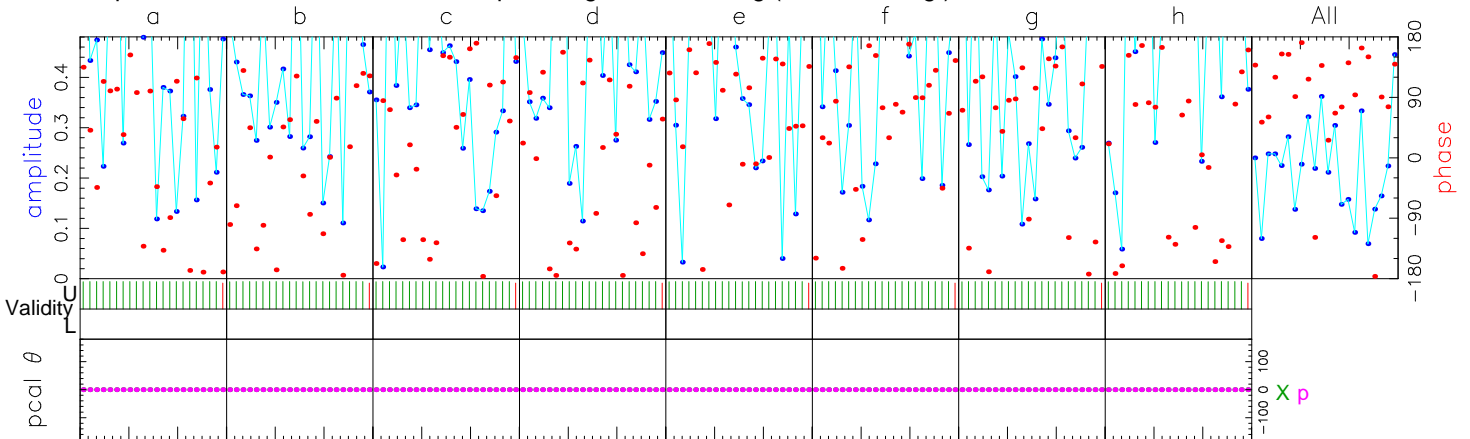
Mk4/DiFX fourfit 3.20 rev 0
 frontend

2013+370.127MDW, No0077, Xp
 ONSALA60 - VLBA_PT, fgroup W, pol RL



Fringe quality 0
 SNR 5.8
 Int time 179.572
 Amp 0.160
 Phase 123.4
 PFD 6.6e-01
 Delays (us)
 SBD 0.878599
 MBD 0.005936
 Fringe rate (Hz) 0.213329
 Ion TEC 0.000
 Ref freq (MHz) 86140.0000
 AP (sec) 0.512
 Exp. c192c
 Exper # 16383
 Yr:day 2019:279
 Start 014000.00
 Stop 014300.22
 FRT 014130.00
 Corr/FF/build
 2020:070:114832
 2020:071:133758
 2019:280:115849
 RA & Dec (J2000)
 20h15m28.729803s
 +37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
X	1000	1000	1000	1000	1000	1000	1000	1000		
p	1000	1000	1000	1000	1000	1000	1000	1000		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.28600819965E+04				-1.28609629329E+04				5.93634E-03	+/- 1.9E-04
Sband delay (usec)	-1.28600843344E+04				2.0431679E+01				8.78599E-01	+/- 1.5E-03
Phase delay (usec)	-1.28609629289E+04				3.2411343E-07				3.98026E-06	+/- 6.4E-07
Delay rate (us/s)	-8.54225815859E-01				-8.54228292401E-01				2.47654E-06	+/- 6.2E-09
Total phase (deg)			110.2		8.75465038376E-05				123.4	+/- 19.9
pcal mode:	MANUAL, MANUAL		PC period (AP's) 5, 5							
pcal rate:	0.000E+00, 0.000E+00 (us/s)		sb window (us) -1.000 1.000							
Bits/sample:	2x2		SampCntNorm: enabled							
Sample rate (MSamp/s):	128		dr window (ns/s) -0.011 0.011							
Data rate (Mb/s):	2048		nlags: 256 t_cohere infinite							
X:	az 304.7 el 22.5 pa 33.0		p: az 70.4 el 79.3 pa -102.4		u,v (fr/asec) 6215.960 7159.743				simultaneous interpolator	
Control file:	cf_1234_gmva		Input file: /Exps/c192c/v1_CygA2/1234/No0077/Xp..127MDW		Output file: /Exps/c192c/v1_CygA2/1234/No0077/Xp.W.399.127MDW					

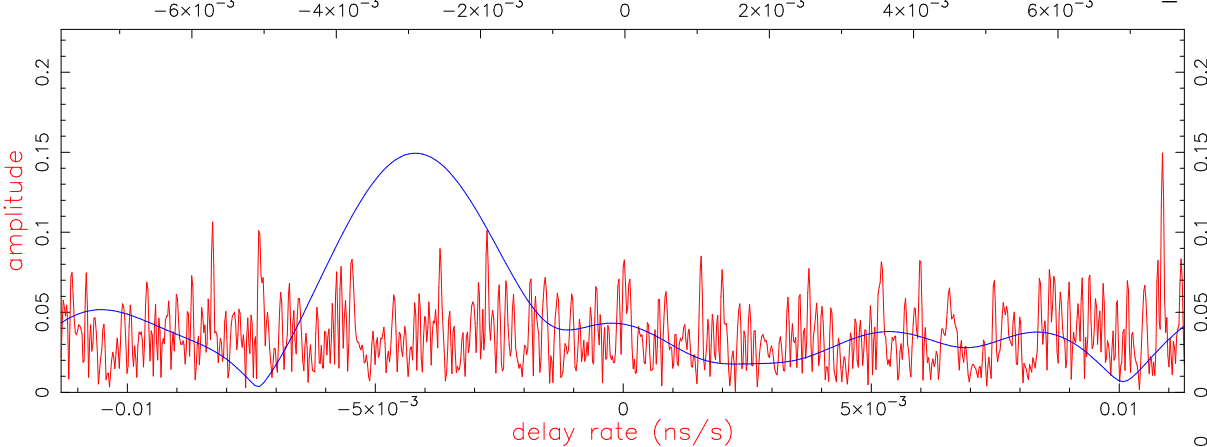
Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, Zp

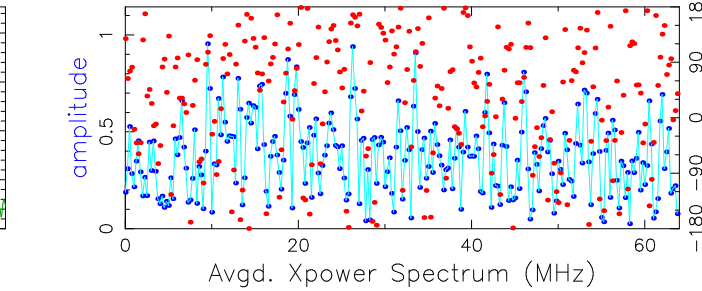
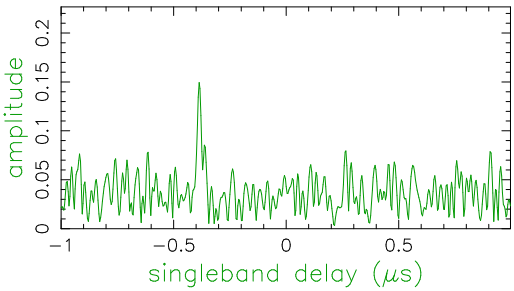
MEṬSAHOV - VLBA_PT, fgroup W, pol LL

multiband delay (μ s)



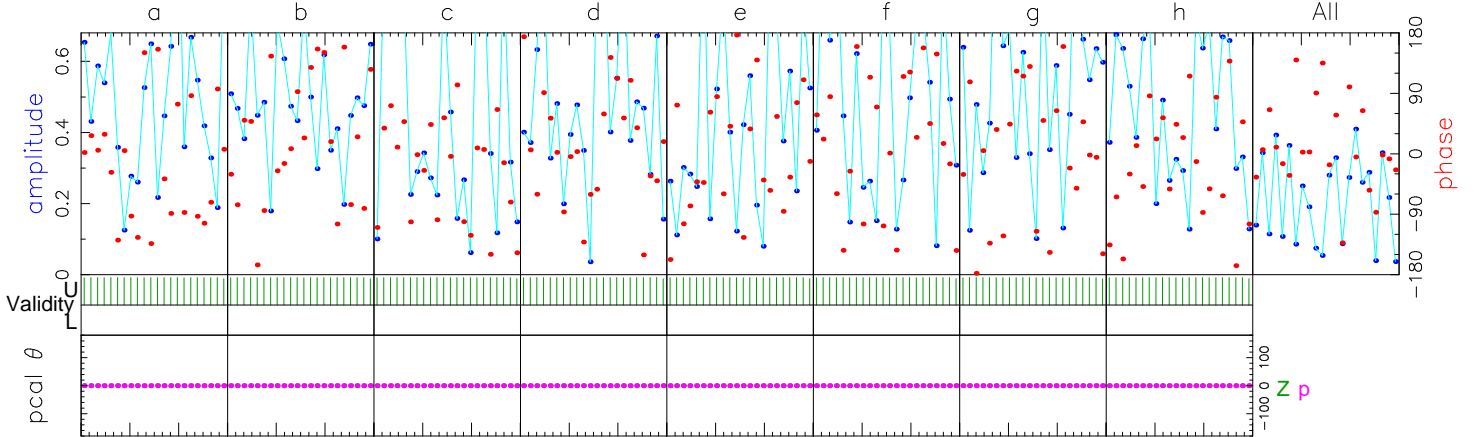
Fringe quality 0

SNR 5.5
Int time 179.487
Amp 0.227
Phase 6.6
PFD 9.9e-01
Delays (us)
SBD -0.385848
MBD -0.002891
Fringe rate (Hz)
0.938059
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133753
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



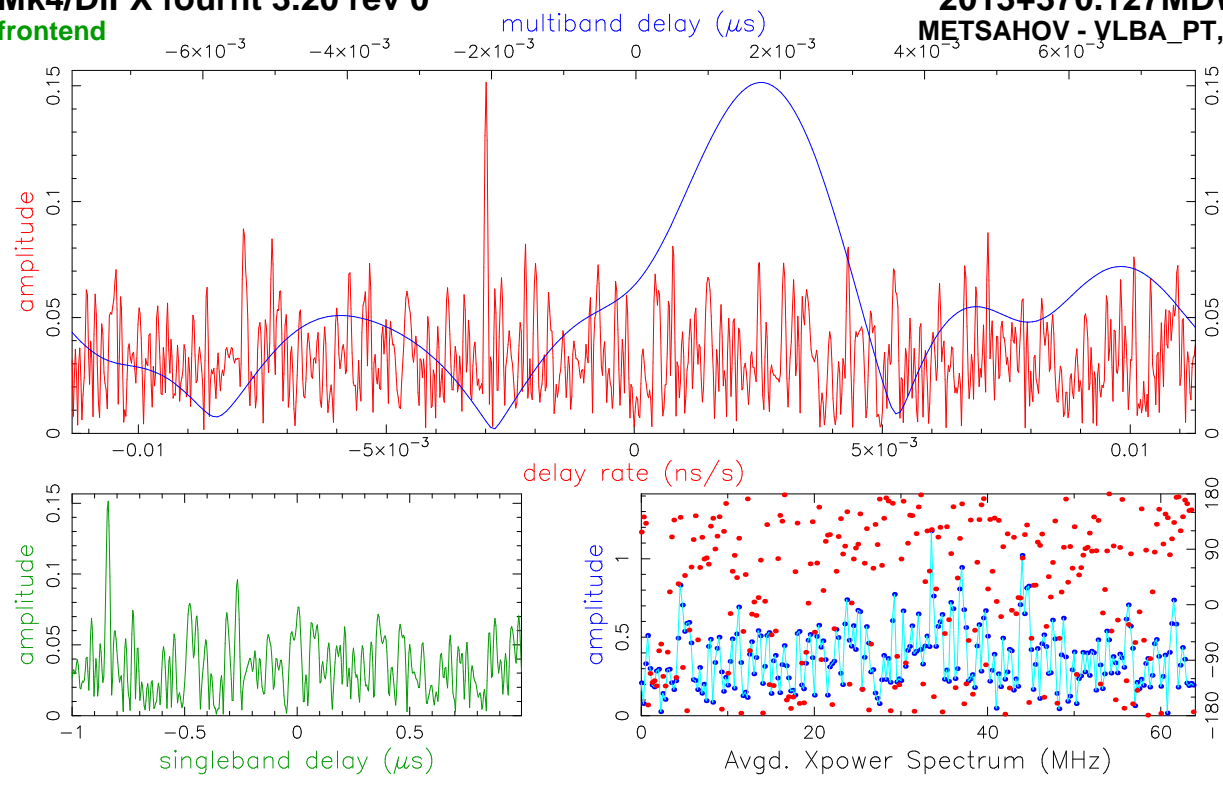
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-21.0	10.2	16.1	27.9	-17.5	33.1	20.8	-26.3	Phase	6.6
	0.2	0.2	0.4	0.3	0.2	0.2	0.2	0.2	Ampl.	0.2
	228.0	341.0	159.2	144.7	359.5	382.6	343.4	254.5	Sbd box	158.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -1.40221319514E+04 Apriori delay (usec) -1.40217384359E+04 Resid mbdelay (usec) -2.89057E-03 +/- 2.0E-04
 Sband delay (usec) -1.40221242836E+04 Apriori clock (usec) -1.1801929E+01 Resid sbdelay (usec) -3.85848E-01 +/- 1.6E-03
 Phase delay (usec) -1.40217384357E+04 Apriori clockrate (us/s) -1.8759378E-07 Resid phdelay (usec) 2.12236E-07 +/- 6.7E-07
 Delay rate (us/s) -7.50479790742E-01 Apriori rate (us/s) -7.50490680676E-01 Resid rate (us/s) 1.08899E-05 +/- 6.5E-09
 Total phase (deg) -305.3 Apriori accel (us/s/s) 9.52954295641E-05 Resid phase (deg) 6.6 +/- 20.9

RMS Theor. Amplitude 0.227 +/- 0.041 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
 ph/seg (deg) 66.3 48.9 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
 amp/seg (%) 90.9 85.3 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
 ph/frq (deg) 25.4 29.5 Inc. seg. avg. 0.236 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011
 amp/frq (%) 37.6 51.5 Inc. frq. avg. 0.214 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

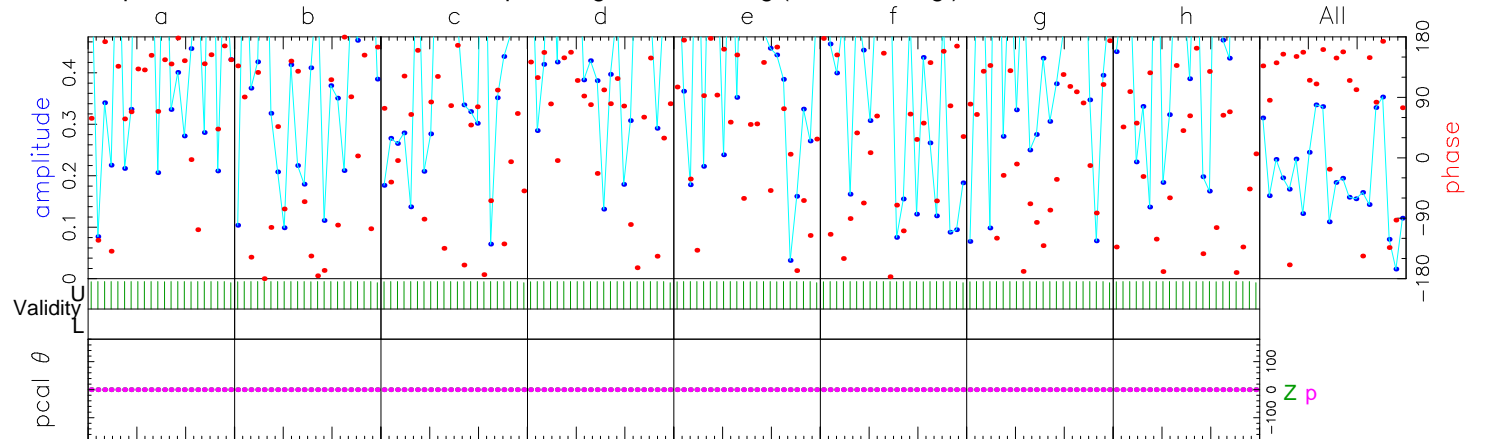
Z: az 313.0 el 19.2 pa 27.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 5475.812 7807.465 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Zp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Zp.W.362.127MDW



Fringe quality 0
SNR 5.6
Int time 179.487
Amp 0.157
Phase 139.1
PFD 9.5e-01
Delays (us)
SBD -0.840803
MBD 0.001737
Fringe rate (Hz)
-0.257986
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512
Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133756
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	139.8	167.8	137.7	113.4	116.3	149.8	139.9	-179.7	Phase	139.1
	0.3	0.2	0.1	0.3	0.1	0.1	0.1	0.1	Ampl.	0.1
	3.4	191.7	347.5	338.3	377.3	222.0	251.4	144.7	Sbd box	41.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.40225804488E+04		Apriori delay (usec)		-1.40217384359E+04		Resid mbdelay (usec)		1.73705E-03	+/- 1.9E-04
Sband delay (usec)	-1.40225792389E+04		Apriori clock (usec)		-1.1801929E+01		Resid sbdelay (usec)		-8.40803E-01	+/- 1.5E-03
Phase delay (usec)	-1.40217384314E+04		Apriori clockrate (us/s)		-1.8759378E-07		Resid phdelay (usec)		4.48604E-06	+/- 6.6E-07
Delay rate (us/s)	-7.50493675642E-01		Apriori rate (us/s)		-7.50490680676E-01		Resid rate (us/s)		-2.99497E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		9.52954295641E-05		Resid phase (deg)		139.1	+/- 20.6

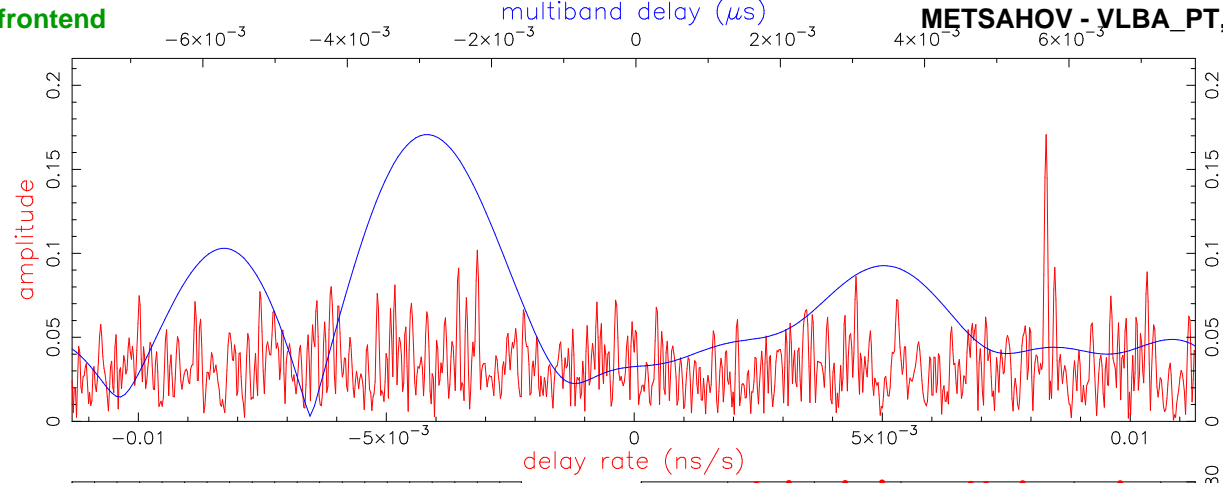
ph/seg (deg) RMS Theor. Amplitude 0.157 +/- 0.028 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 58.2 48.2 Search (1024X32) 0.148 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 65.9 84.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 25.2 29.1 Inc. seg. avg. 0.151 Sample rate(MISamp/s): 128 Data rate (Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
amp/frq (%) 60.7 50.7 Inc. frq. avg. 0.147 Data rate (Data rate (Mb/s): 2048 nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00
Z: az 313.0 el 19.2 pa 27.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 5475.812 7807.465 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Zp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Zp.W.382.127MDW

Mk4/DiFX fourfit 3.20 rev 0

frontend

2013+370.127MDW, No0077, Zp

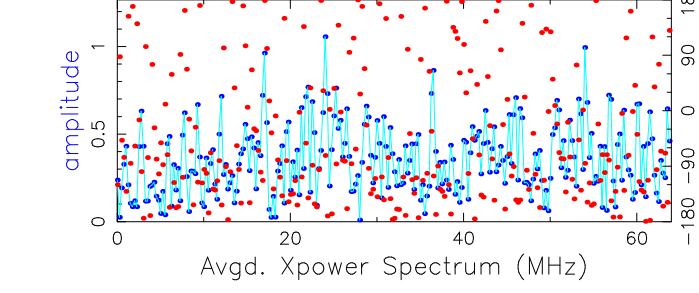
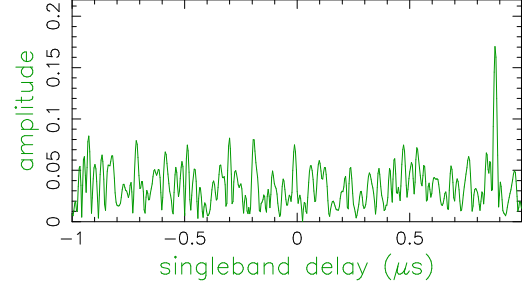
MEṬSAHOV - VLBA_PT, fgroup W, pol LR



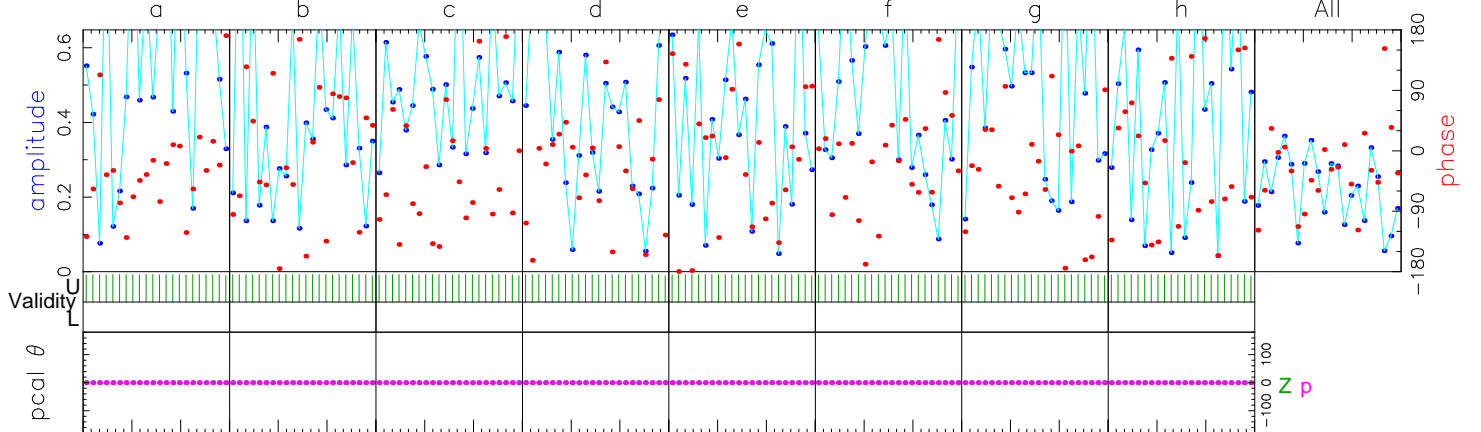
Fringe quality 0

SNR 6.3
Int time 179.487
Amp 0.216
Phase -34.6
PFD 4.5e-02
Delays (us)
SBD 0.879715
MBD -0.002858
Fringe rate (Hz) 0.715791
Ion TEC 0.000
Ref freq (MHz) 86140.0000
AP (sec) 0.512

Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133758
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"



Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-35.7	2.7	-68.5	-27.9	13.2	-13.5	-38.2	-83.6	Phase	-34.6
	0.5	0.1	0.3	0.2	0.1	0.3	0.2	0.1	Ampl.	0.2
	481.9	17.8	225.0	74.2	229.9	489.1	265.4	25.7	Sbd box	482.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.40208662943E+04		Apriori delay (usec)		-1.40217384359E+04		Resid mbdelay (usec)		-2.85838E-03	+/- 1.7E-04
Sband delay (usec)	-1.40208587206E+04		Apriori clock (usec)		-1.1801929E+01		Resid sbdelay (usec)		8.79715E-01	+/- 1.4E-03
Phase delay (usec)	-1.40217384370E+04		Apriori clockrate (us/s)		-1.8759378E-07		Resid phdelay (usec)		-1.11531E-06	+/- 5.9E-07
Delay rate (us/s)	-7.50482371053E-01		Apriori rate (us/s)		-7.50490680676E-01		Resid rate (us/s)		8.30962E-06	+/- 5.7E-09
Total phase (deg)			Apriori accel (us/s/s)		9.52954295641E-05		Resid phase (deg)		-34.6	+/- 18.3

ph/seg (deg) 58.2 42.8 Search (1024X32) 0.163 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 60.7 74.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 35.9 25.8 Inc. seg. avg. 0.223 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 59.7 45.1 Inc. frq. avg. 0.216 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
Z: az 313.0 el 19.2 pa 27.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 5475.812 7807.465 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Zp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Zp.W.400.127MDW

Mk4/DiFX fourfit 3.20 rev 0

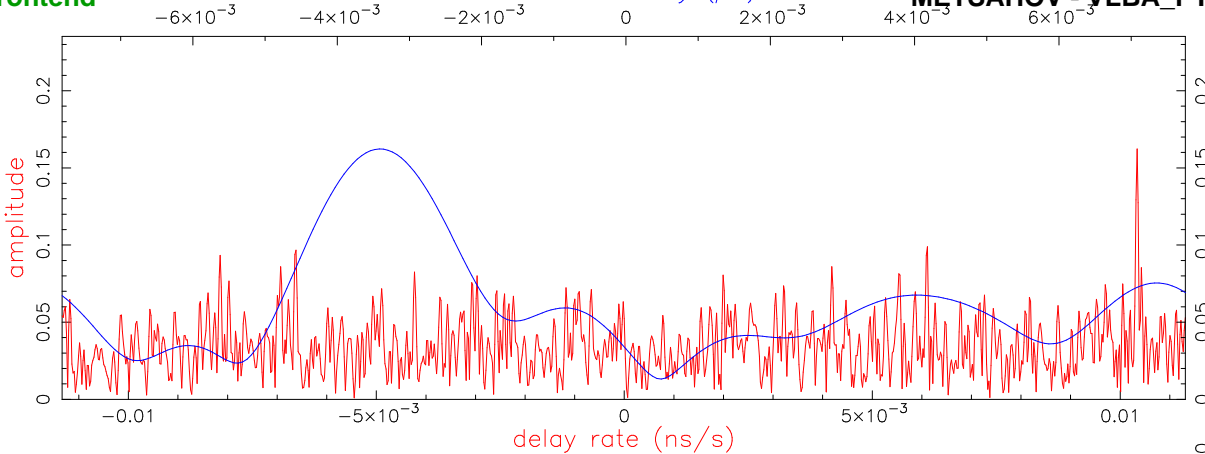
frontend

2013+370.127MDW, No0077, Zp

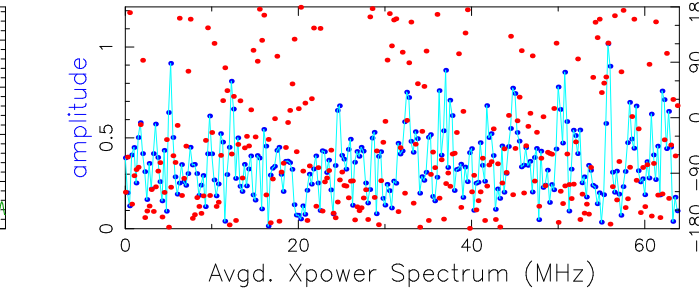
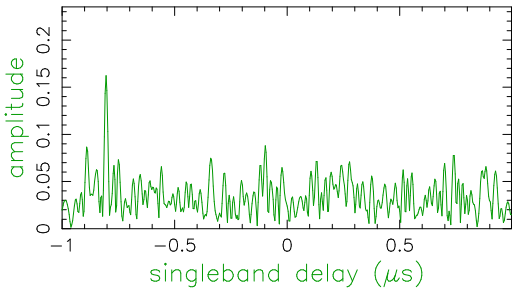
MEṬSAHOV - VLBA_PT, fgroup W, pol RL

multiband delay (μs)

Fringe quality 0

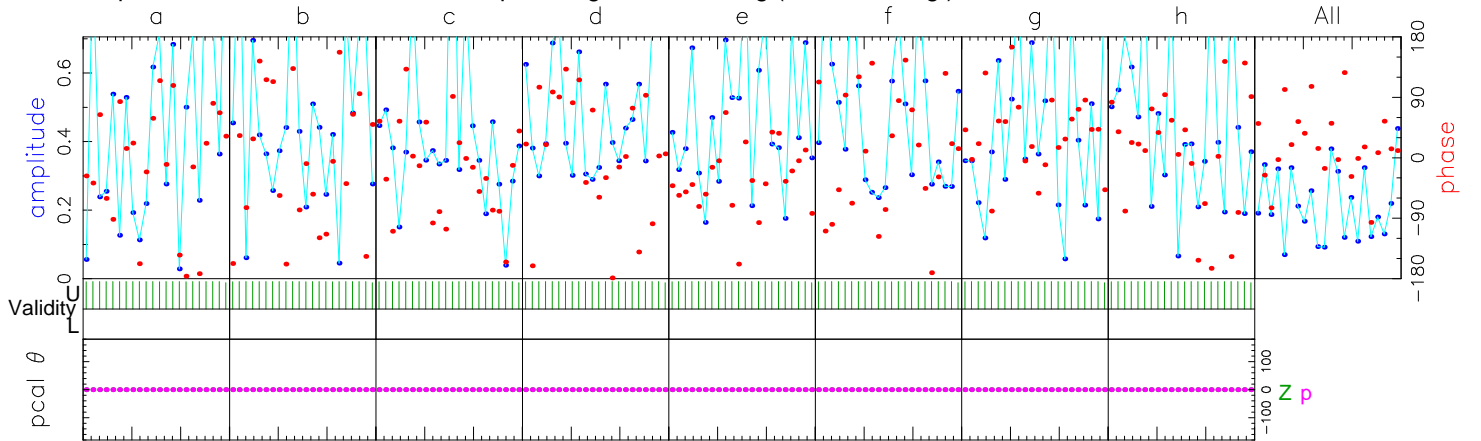


SNR 5.9
Int time 179.487
Amp 0.235
Phase 16.1
PFD 3.0e-01
Delays (us)
SBD -0.804526
MBD -0.003404
Fringe rate (Hz)
0.892734
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512



Exp. c192c
Exper # 16383
Yr:day 2019:279
Start 014000.00
Stop 014300.22
FRT 014130.00
Corr/FF/build
2020:070:114832
2020:071:133800
2019:280:115849
RA & Dec (J2000)
20h15m28.729803s
+37°10'59.514664"

Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	33.4	51.3	-3.0	41.9	-24.3	-2.0	38.0	29.0	Phase	16.1
	0.3	0.1	0.3	0.2	0.5	0.1	0.4	0.2	Ampl.	0.2
	192.7	240.9	306.1	108.4	51.0	257.2	51.0	503.0	Sbd box	51.0
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
Z:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.40225387151E+04		Apriori delay (usec)		-1.40217384359E+04		Resid mbdelay (usec)		-3.40423E-03	+/- 1.8E-04
Sband delay (usec)	-1.40225429621E+04		Apriori clock (usec)		-1.1801929E+01		Resid sbdelay (usec)		-8.04526E-01	+/- 1.4E-03
Phase delay (usec)	-1.40217384354E+04		Apriori clockrate (us/s)		-1.8759378E-07		Resid phdelay (usec)		5.17708E-07	+/- 6.2E-07
Delay rate (us/s)	-7.50480316921E-01		Apriori rate (us/s)		-7.50490680676E-01		Resid rate (us/s)		1.03638E-05	+/- 6.0E-09
Total phase (deg)			Apriori accel (us/s/s)		9.52954295641E-05		Resid phase (deg)		16.1	+/- 19.3

ph/seg (deg) 52.3 45.2 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5
amp/seg (%) 71.5 78.9 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000
ph/frq (deg) 29.4 27.3 Inc. seg. avg. 0.242 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008
amp/frq (%) 53.0 47.6 Inc. frq. avg. 0.235 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t_cohere infinite dr window (ns/s) -0.011 0.011
Z: az 313.0 el 19.2 pa 27.4 p: az 70.4 el 79.3 pa -102.4 u,v (fr/asec) 5475.812 7807.465 simultaneous interpolator
Control file: cf_1234_gmva Input file: /Exps/c192c/v1_CygA2/1234/No0077/Zp..127MDW Output file: /Exps/c192c/v1_CygA2/1234/No0077/Zp.W.411.127MDW