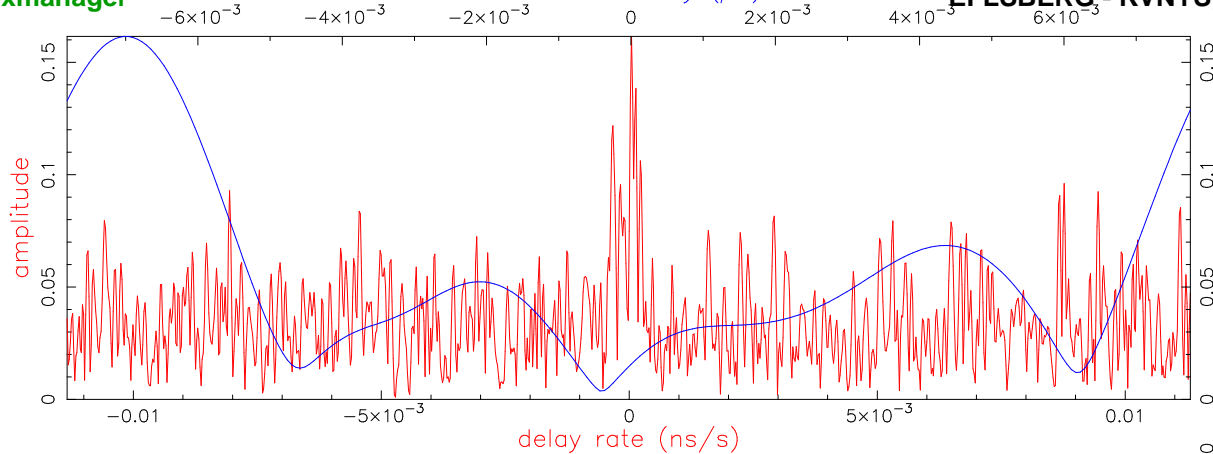
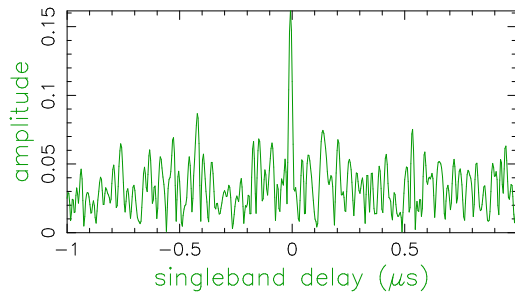


multiband delay ( $\mu$ s)

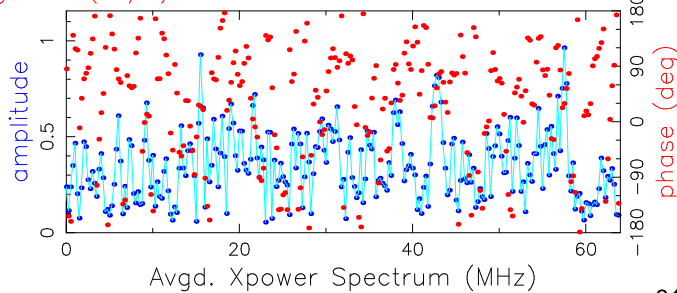


Fringe quality 0

SNR 5.9  
Int time 179.778  
Amp 0.162  
Phase 59.0  
PFD 3.3e-01  
Delays (us)  
SBD -0.007718  
MBD -0.006994  
Fringe rate (Hz)  
0.003726  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

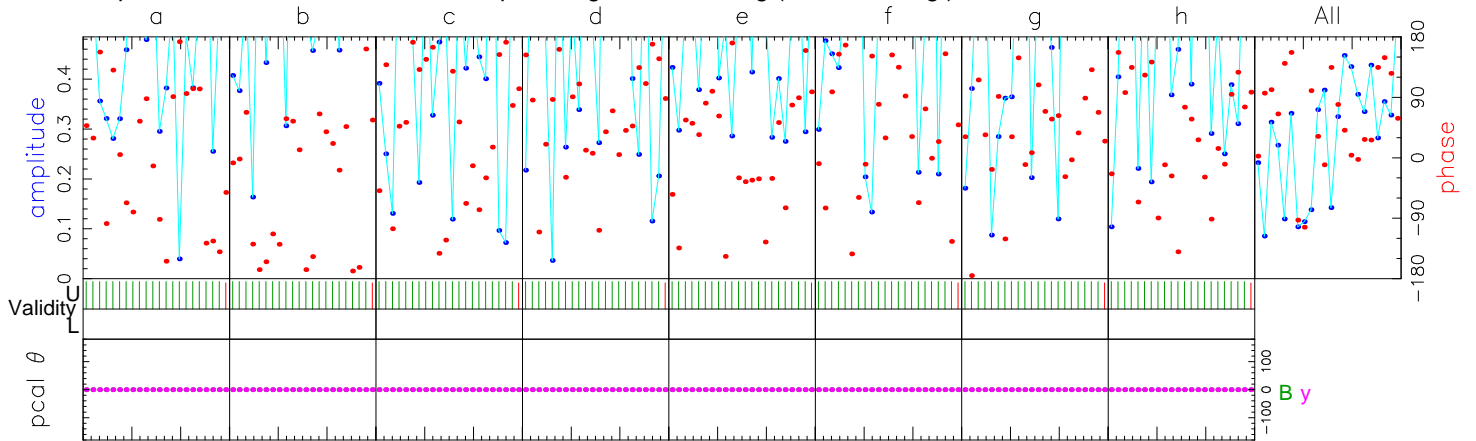


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133223  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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

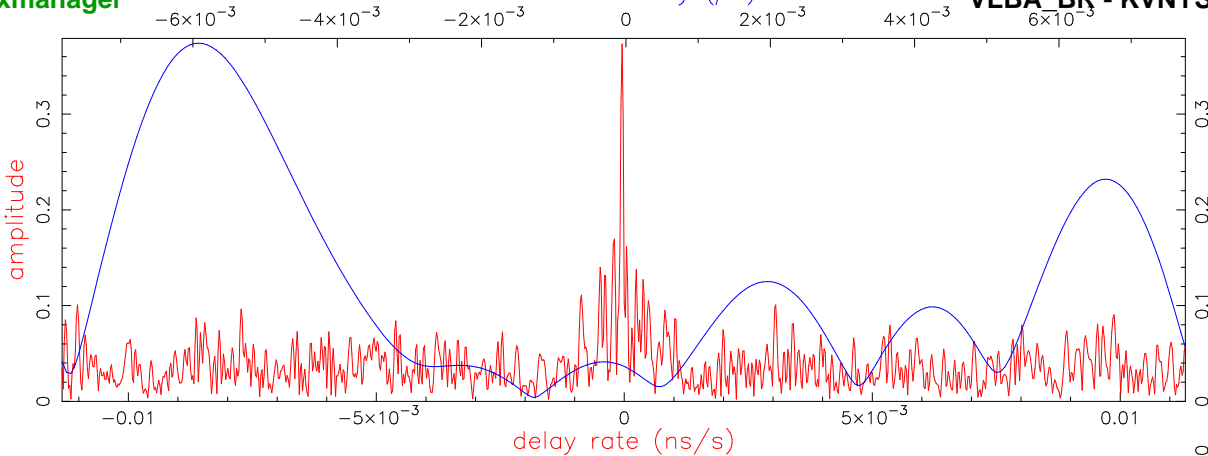


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	354.7	492.9	150.5	254.9	492.7	289.7	255.2	46.6				
B	1000	1000	1000	1000	1000	1000	1000	1000				
y	1000	1000	1000	1000	1000	1000	1000	1000				
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0				
B	1000	1000	1000	1000	1000	1000	1000	1000				
y	1000	1000	1000	1000	1000	1000	1000	1000				
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR				
Group delay (usec)(sbd)	3.29876438749E+03		Apriori delay (usec)		3.29877138105E+03		Resid mbdelay (usec)		-6.99356E-03	+/- 1.8E-04		
Sband delay (usec)	3.29876366330E+03		Apriori clock (usec)		8.8843927E+00		Resid sbdelay (usec)		-7.71775E-03	+/- 1.5E-03		
Phase delay (usec)	3.29877138295E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		1.90389E-06	+/- 6.2E-07		
Delay rate (us/s)	-1.00594608203E+00		Apriori rate (us/s)		-1.00594612528E+00		Resid rate (us/s)		4.32574E-08	+/- 6.0E-09		
Total phase (deg)			333.8		Apriori accel (us/s/s)		-1.86764822046E-06		59.0	+/- 19.3		
RMS	71.7	45.4	Amplitude		0.162 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	71.7	45.4	Search (1024X32)		0.160		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	110.1	79.2	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	29.9	27.4	Inc. seg. avg.		0.221		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)	62.4	47.8	Inc. frq. avg.		0.152		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

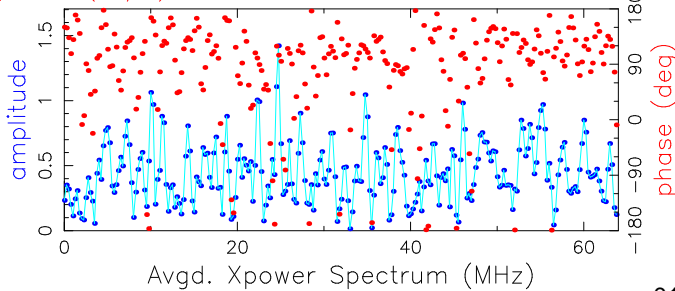
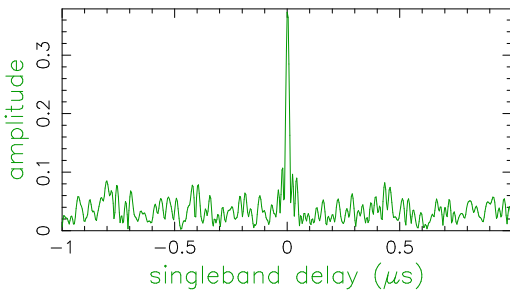
B: az 329.5 el 28.9 pa 39.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 11027.367 463.211 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By.W.108.1HR3TY

multiband delay ( $\mu$ s)

Fringe quality 9

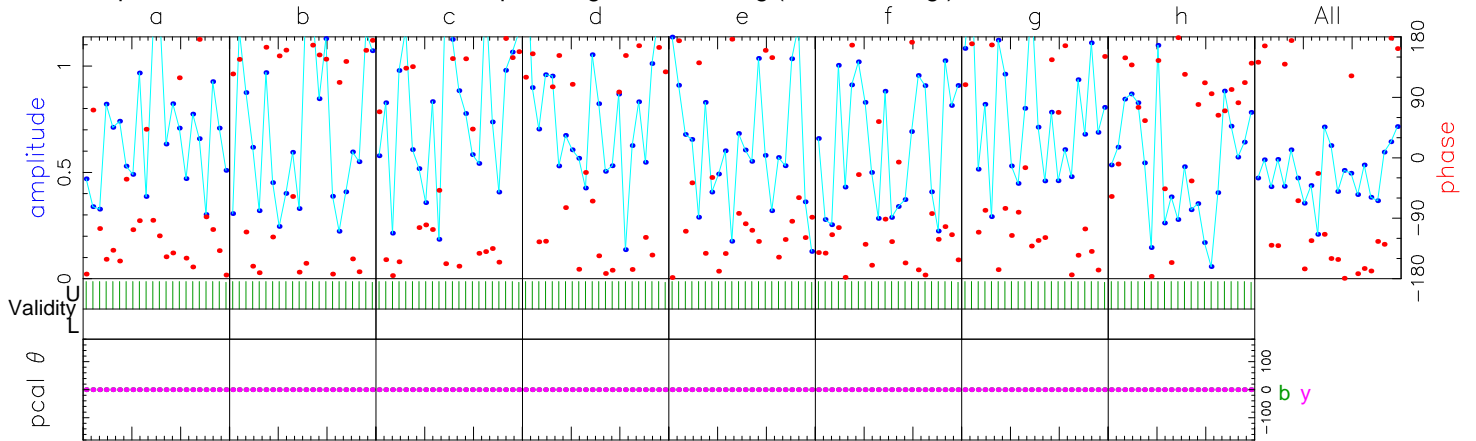


SNR 13.9  
Int time 179.973  
Amp 0.379  
Phase -162.2  
PFD 1.7e-35  
Delays (us)  
SBD 0.001507  
MBD -0.005842  
Fringe rate (Hz)  
-0.003051  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133224  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-133.7	177.0	-174.7	175.2	-125.7	-132.9	-149.6	106.4		
Sband delay (usec)	0.5	0.6	0.5	0.4	0.4	0.4	0.4	0.3		
Phase delay (usec)	255.8	257.6	257.9	258.2	257.5	257.4	256.2	254.2		
Delay rate (us/s)										
Total phase (deg)			37.9							
Apriori delay (usec)		1.39654741040E+04			1.39654799461E+04					
Apriori clock (usec)		1.39654814536E+04			-2.9488688E+00					
Apriori clockrate (us/s)		1.39654799409E+04			-9.9999991E-08					
Apriori rate (us/s)		-5.26808788993E-01			-5.26808753576E-01					
Apriori accel (us/s/s)					-6.12767375246E-05					
Resid mbdelay (usec)										
Resid sbdelay (usec)										
Resid phdelay (usec)										
Resid rate (us/s)										
Resid phase (deg)										
PCal mode:										
PCal rate:										
Bits/sample:										
Sample rate (MSamp/s):										
Data rate (Mb/s):										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal theta										
ph/seg (deg)	49.4	19.3								
amp/seg (%)	44.7	33.7								
ph/frq (deg)	45.9	11.7								
amp/frq (%)	26.5	20.3								
b: az 13.6 el 79.2 pa -162.5										
y: az 29.1 el 18.9 pa -48.0										
u,v (fr/asec)										
Control file:										
Input file:										
Output file:										

simultaneous interpolator

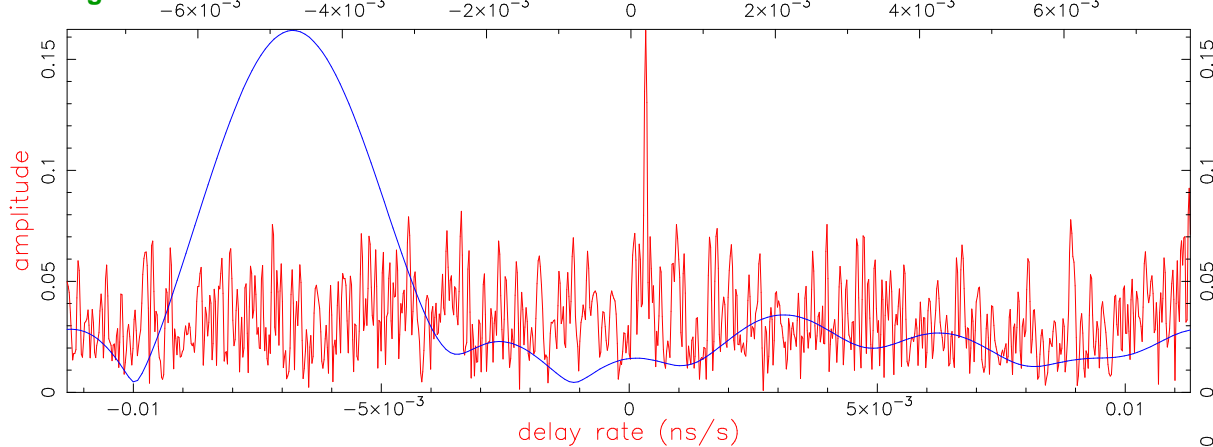
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, By

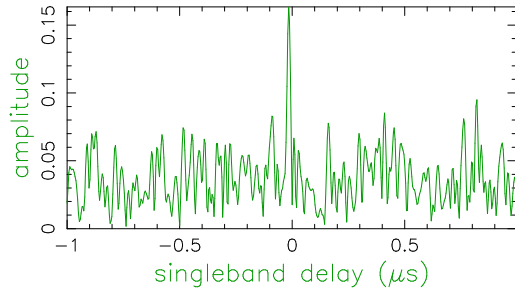
EFLSBERG - KVNYS, fgroup W, pol LR

multiband delay ( $\mu$ s)

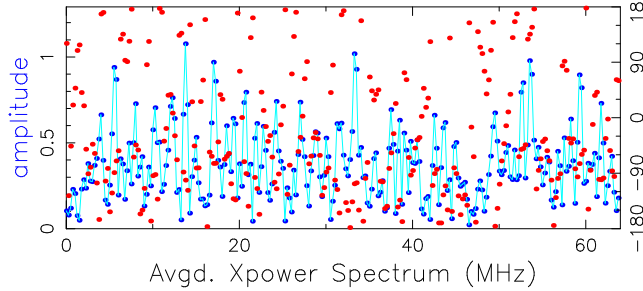


Fringe quality 0

SNR 6.0  
 Int time 179.778  
 Amp 0.163  
 Phase 153.6  
 PFD 2.4e-01  
 Delays (us)  
 SBD -0.014987  
 MBD -0.004683  
 Fringe rate (Hz)  
 0.029116  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

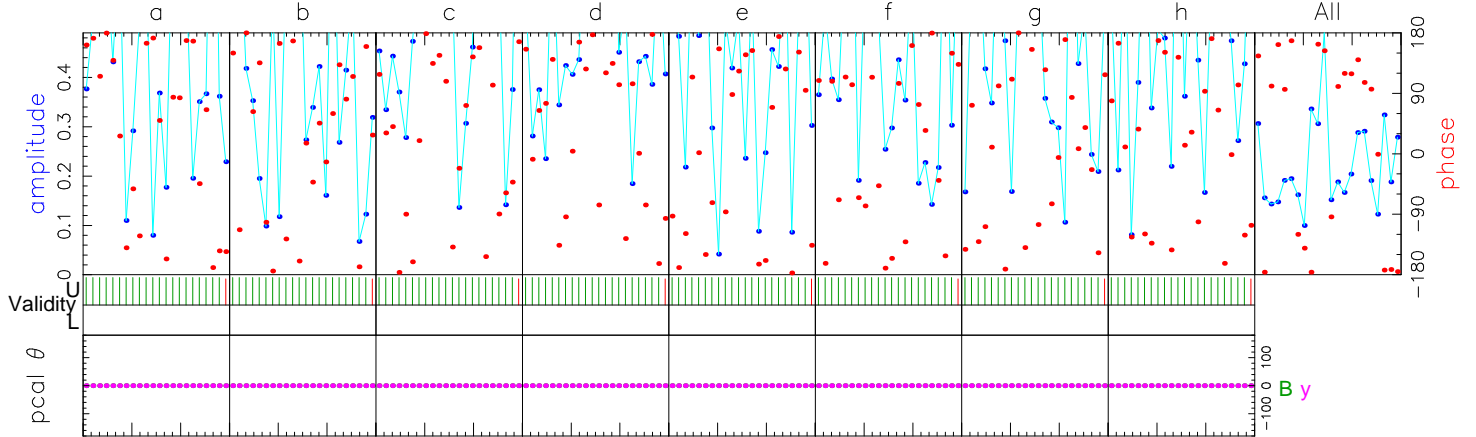


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133226  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	3.29875107276E+03		Apriori delay (usec)		3.29877138105E+03		Resid mbdelay (usec)		-4.68329E-03	+/- 1.8E-04
Sband delay (usec)	3.29875639430E+03		Apriori clock (usec)		8.8843927E+00		Resid sbdelay (usec)		-1.49867E-02	+/- 1.4E-03
Phase delay (usec)	3.29877138600E+03		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		4.95478E-06	+/- 6.2E-07
Delay rate (us/s)	-1.00594578728E+00		Apriori rate (us/s)		-1.00594612528E+00		Resid rate (us/s)		3.38003E-07	+/- 5.9E-09
Total phase (deg)	68.4		Apriori accel (us/s/s)		-1.86764822046E-06		Resid phase (deg)		153.6	+/- 19.1

	RMS	Theor.	Amplitude	0.163 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	56.8	44.9	Search (1024X32)	0.158	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	66.7	78.3	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	6.4	27.0	Inc. seg. avg.	0.171	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	29.4	47.2	Inc. frq. avg.	0.147	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

B: az 329.5 el 28.9 pa 39.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 11027.367 463.211 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By.W.128.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

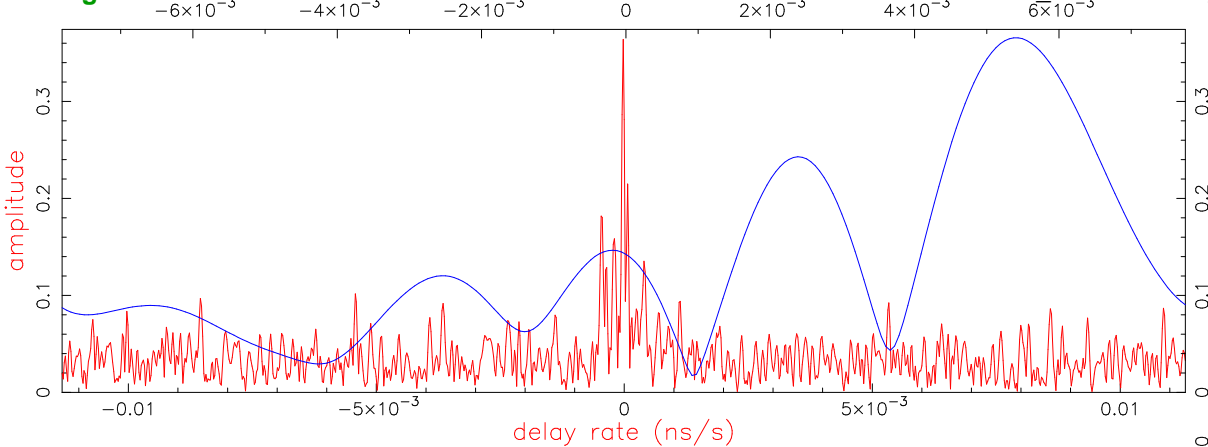
fxmanager

0102+584.1HR3TY, No0103, by

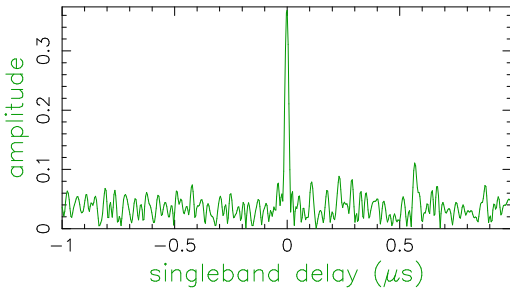
VLBA\_BR - KVNYS, fgroup W, pol RR

multiband delay ( $\mu$ s)

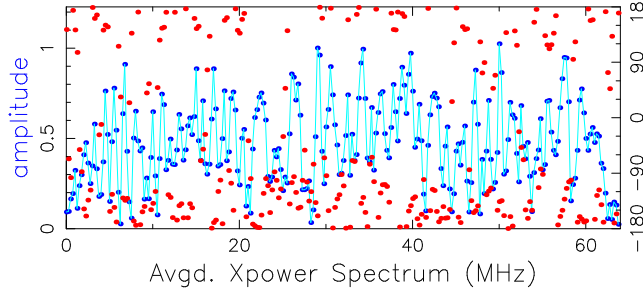
Fringe quality 9



SNR 13.7  
 Int time 179.973  
 Amp 0.374  
 Phase 120.4  
 PFD 1.9e-34  
 Delays (us)  
 SBD -0.001692  
 MBD 0.005520  
 Fringe rate (Hz)  
 -0.002607  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

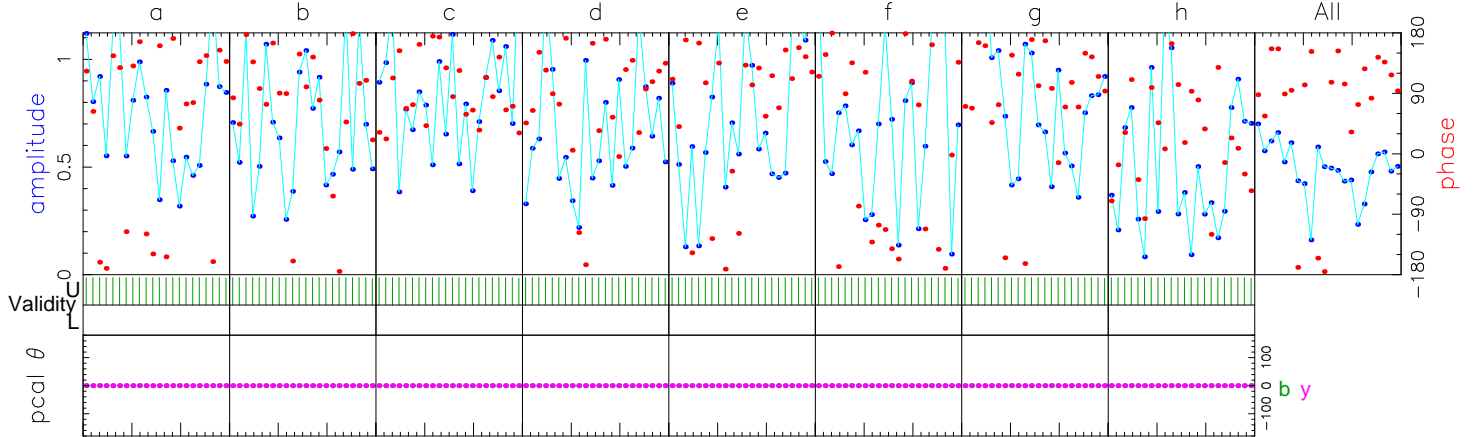


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133227  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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

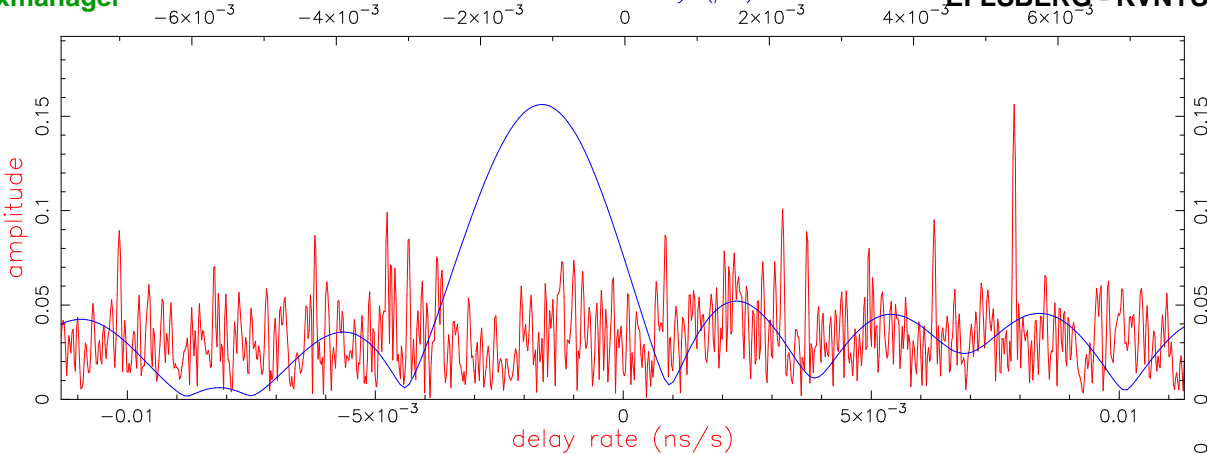


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
b	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.39654854661E+04			1.39654799461E+04				5.52001E-03	+/- 7.9E-05
Sband delay (usec)		1.39654782536E+04			-2.9488688E+00				-1.69250E-03	+/- 6.3E-04
Phase delay (usec)		1.39654799500E+04			-9.9999991E-08				3.88225E-06	+/- 2.7E-07
Delay rate (us/s)		-5.26808783837E-01			-5.26808753576E-01				-3.02611E-08	+/- 2.6E-09
Total phase (deg)			320.5						120.4	+/- 8.3
	RMS	Theor.	Amplitude	0.374 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	43.4	19.6	Search (1024X32)	0.353	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	46.0	34.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	50.0	11.8	Inc. seg. avg.	0.465	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	34.9	20.6	Inc. frq. avg.	0.441	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

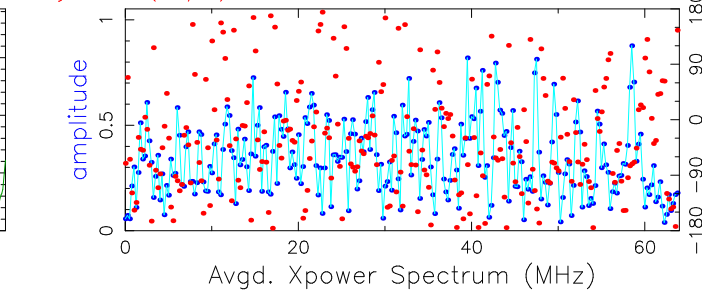
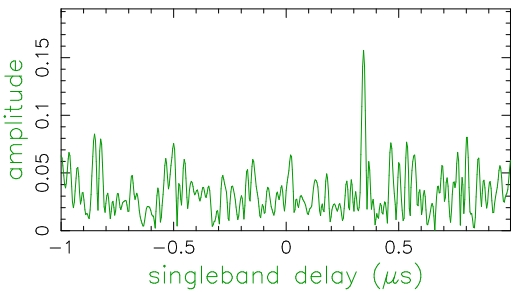
b: az 13.6 el 79.2 pa -162.5 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 5725.115 -7257.783 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/by..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/by.W.139.1HR3TY

multiband delay ( $\mu$ s)

Fringe quality 0

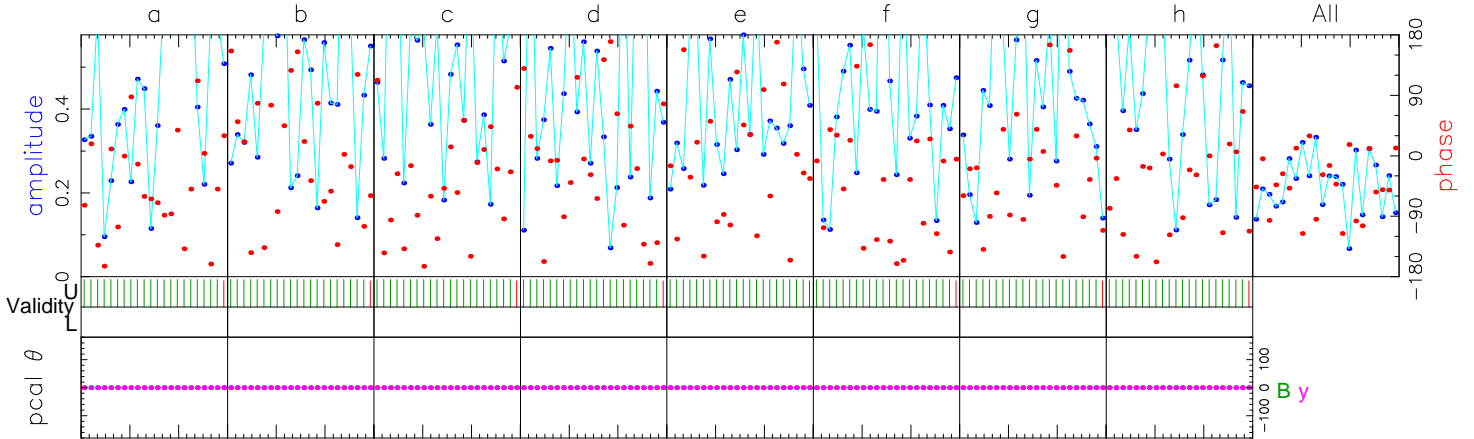


SNR 5.7  
Int time 179.778  
Amp 0.192  
Phase -47.3  
PFD 7.1e-01  
Delays (us)  
SBD 0.343822  
MBD -0.001149  
Fringe rate (Hz)  
0.679287  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



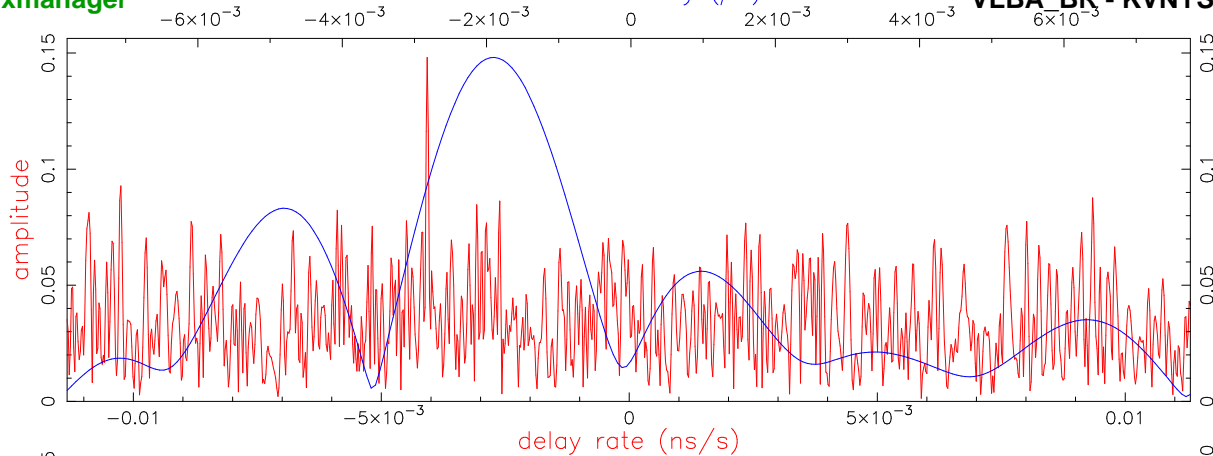
Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133227  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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



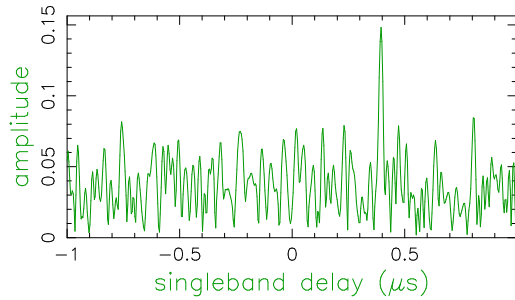
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
y	1000	1000	1000	1000	1000	1000	1000	1000			
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
B	1000	1000	1000	1000	1000	1000	1000	1000			
y	1000	1000	1000	1000	1000	1000	1000	1000			
B	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
Group delay (usec)(sbd)		3.29911398253E+03			3.29877138105E+03						
Sband delay (usec)		3.29911520280E+03			8.8843927E+00						
Phase delay (usec)		3.29877137952E+03			-2.9999999E-07						
Delay rate (us/s)		-1.00593823944E+00			-1.00594612528E+00						
Total phase (deg)			227.5		-1.86764822046E-06						
				Apriori delay (usec)					Resid mbdelay (usec)	-1.14851E-03	+/- 1.9E-04
				Apriori clock (usec)	0.155				Resid sbdelay (usec)	3.43822E-01	+/- 1.5E-03
				Apriori clockrate (us/s)	0.000				Resid phdelay (usec)	-1.52513E-06	+/- 6.4E-07
				Apriori rate (us/s)	0.201				Resid rate (us/s)	7.88585E-06	+/- 6.2E-09
				Apriori accel (us/s/s)	0.177				Resid phase (deg)	-47.3	+/- 20.0
ph/seg (deg)	44.6	46.9		Amplitude	0.192 +/- 0.034				Pcal mode: MANUAL, MANUAL		
amp/seg (%)	58.2	81.8		Search (1024X32)	0.155				Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	17.5	28.3		Interp.	0.000				Bits/sample: 2x2	mb window (us)	-0.008 0.008
amp/frq (%)	20.9	49.3		Inc. seg. avg.	0.201				Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011
				Inc. frq. avg.	0.177				Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00
									nlags: 256	t_cohere infinite	

multiband delay ( $\mu\text{s}$ )

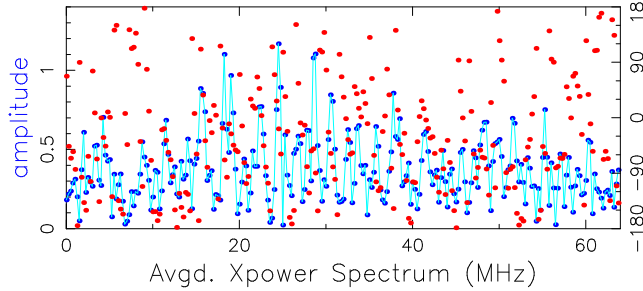


Fringe quality 0

SNR 5.4  
Int time 179.973  
Amp 0.156  
Phase -164.9  
PFD 1.0e+00  
Delays (us)  
SBD 0.394599  
MBD -0.001905  
Fringe rate (Hz)  
-0.351266  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

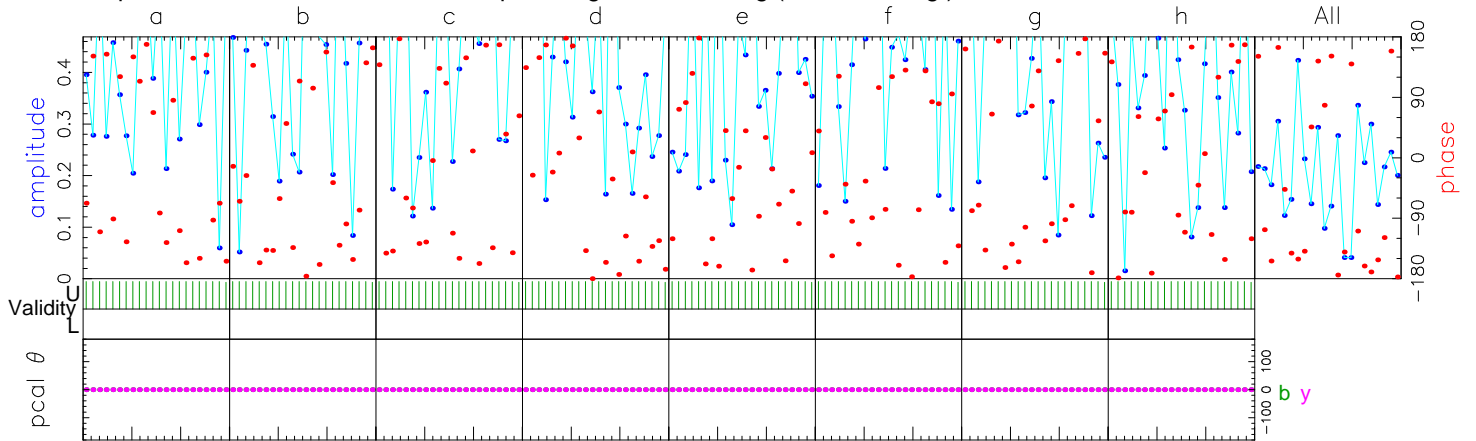


delay rate (ns/s)



Exp. c202a  
Yr:day 16383  
Start 2020:283  
Stop 2020:283  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133228  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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			
y	1000	1000	1000	1000	1000	1000	1000	1000			
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0			
b	1000	1000	1000	1000	1000	1000	1000	1000			
y	1000	1000	1000	1000	1000	1000	1000	1000			
b	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL			
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR			
Group delay (usec)(sbd)		1.39658686666E+04			1.39654799461E+04						
Sband delay (usec)		1.39658745453E+04			-2.9488688E+00						
Phase delay (usec)		1.39654799408E+04			-9.9999991E-08						
Delay rate (us/s)		-5.26812831432E-01			-5.26808753576E-01						
Total phase (deg)			35.3		-6.12767375246E-05						
				Apriori delay (usec)					Resid mbdelay (usec)	-1.90451E-03	+/- 2.0E-04
				Apriori clock (usec)					Resid sbdelay (usec)	3.94599E-01	+/- 1.6E-03
				Apriori clockrate (us/s)					Resid phdelay (usec)	-5.31655E-06	+/- 6.8E-07
				Apriori rate (us/s)					Resid rate (us/s)	-4.07786E-06	+/- 6.5E-09
				Apriori accel (us/s/s)					Resid phase (deg)	-164.9	+/- 21.1
ph/seg (deg)	RMS 57.6	Theor. 49.4	Amplitude 57.6	0.156 +/- 0.029					PCal mode: MANUAL, MANUAL		
amp/seg (%)	73.8	86.3	Search (1024X32)	0.146					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000
ph/frq (deg)	20.0	29.8	Interp.	0.000					Bits/sample: 2x2	mb window (us)	-0.008 0.008
amp/frq (%)	43.4	52.0	Inc. seg. avg.	0.159					SampCntNorm: enabled	dr window (ns/s)	-0.011 0.011
			Inc. frq. avg.	0.141					Sample rate(MISamp/s): 128	ion window (TEC)	0.00 0.00
									Data rate(Mb/s): 2048		
									nlags: 256		
									t_cohere infinite		

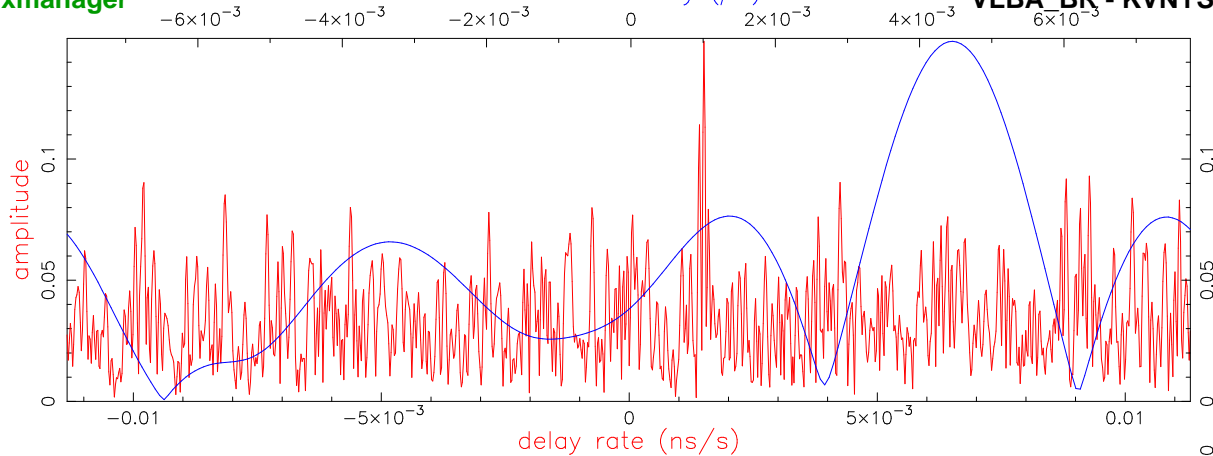
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, by

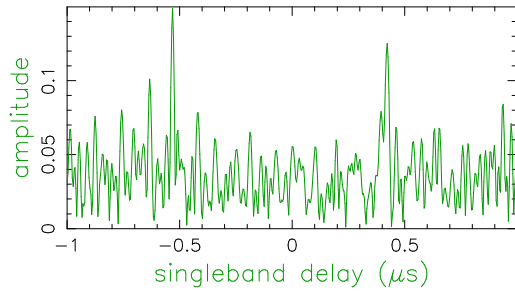
VLBA\_BR - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)

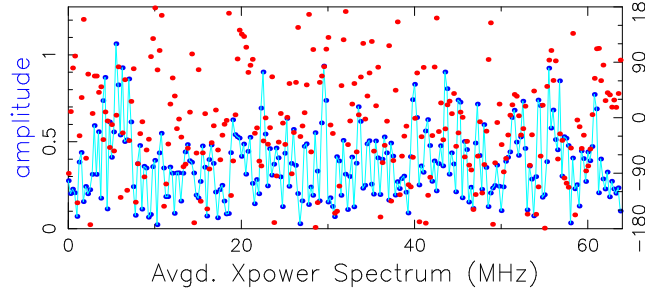


Fringe quality 0

SNR 5.5  
 Int time 179.973  
 Amp 0.150  
 Phase -63.7  
 PFD 1.0e+00  
 Delays (us)  
 SBD -0.531594  
 MBD 0.004451  
 Fringe rate (Hz)  
 0.129866  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

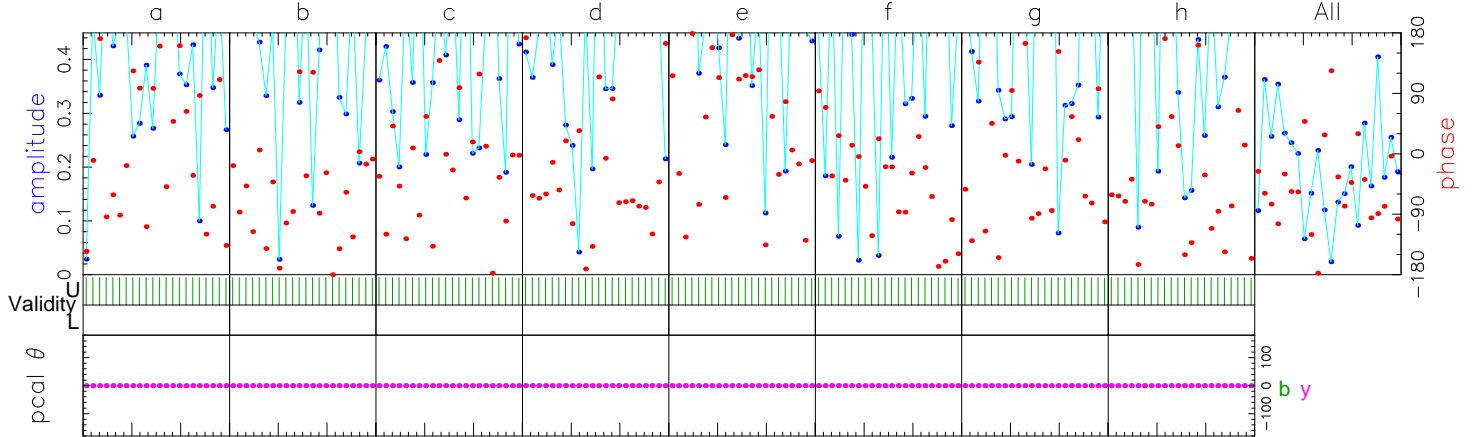


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133231  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

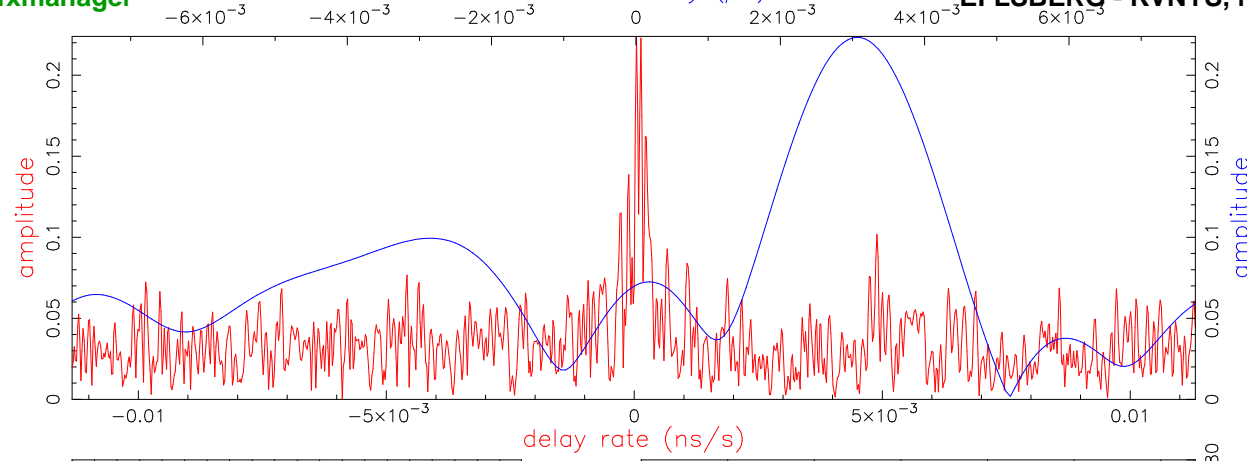
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



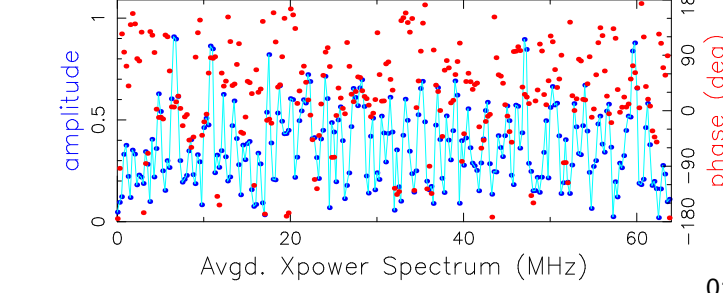
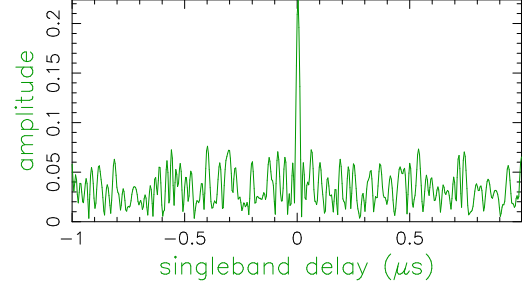
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-85.7	-65.6	-41.7	-74.5	111.0	-57.6	-62.7	-69.9	Phase	-63.7
	0.1	0.3	0.2	0.2	0.1	0.2	0.2	0.2	Ampl.	0.2
	111.3	45.0	263.9	354.4	423.7	494.7	505.2	473.9	Sbd box	120.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
b:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
b	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
b	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.39649531473E+04		Apriori delay (usec)		1.39654799461E+04		Resid mbdelay (usec)		4.45119E-03	+/- 2.0E-04
Sband delay (usec)	1.39649483523E+04		Apriori clock (usec)		-2.9488688E+00		Resid sbdelay (usec)		-5.31594E-01	+/- 1.6E-03
Phase delay (usec)	1.39654799440E+04		Apriori clockrate (us/s)		-9.9999991E-08		Resid phdelay (usec)		-2.05474E-06	+/- 6.8E-07
Delay rate (us/s)	-5.26807245964E-01		Apriori rate (us/s)		-5.26808753576E-01		Resid rate (us/s)		1.50761E-06	+/- 6.5E-09
Total phase (deg)	136.4		Apriori accel (us/s/s)		-6.12767375246E-05		Resid phase (deg)		-63.7	+/- 21.0

ph/seg (deg) 63.6 49.2 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 73.5 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) 72.7 29.7 Inc. seg. avg. 0.150 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 46.0 51.8 Inc. frq. avg. 0.152 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 13.6 el 79.2 pa -162.5 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 5725.115 -7257.783 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/by..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/by.W.161.1HR3TY

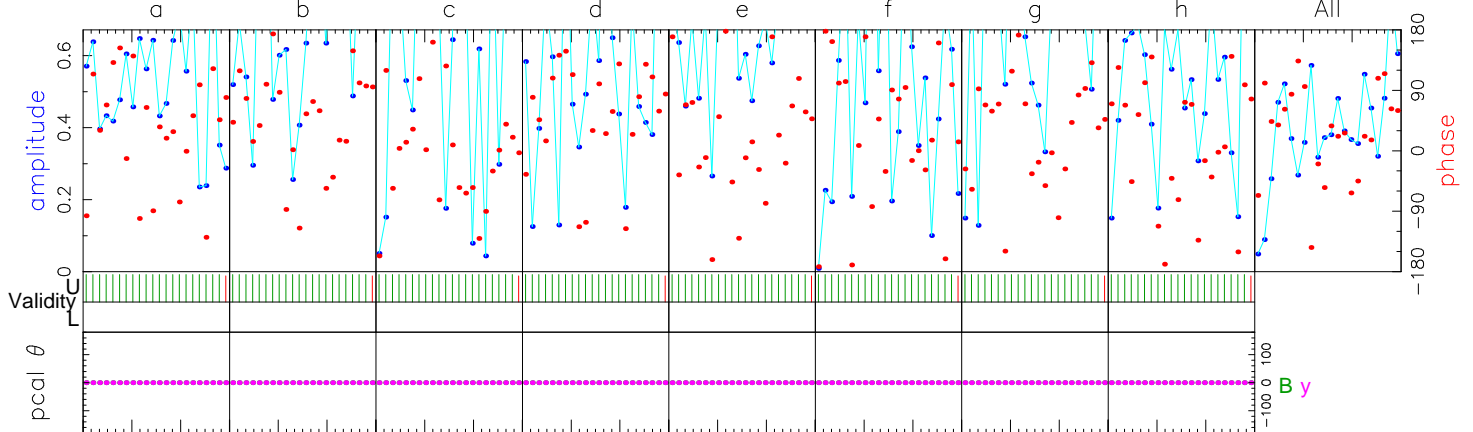
multiband delay ( $\mu$ s)



Fringe quality 9  
SNR 8.2  
Int time 179.778  
Amp 0.224  
Phase 44.4  
PFD 3.9e-08  
Delays (us)  
SBD 0.003271  
MBD 0.003064  
Fringe rate (Hz) 0.003336  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133221  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"



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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
B	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
B	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	3.29877444455E+03	Apriori delay (usec)		3.29877138105E+03	Resid mbdelay (usec)		3.06351E-03	+/-	1.3E-04
Sband delay (usec)	3.29877465155E+03	Apriori clock (usec)		8.8843927E+00	Resid sbdelay (usec)		3.27050E-03	+/-	1.0E-03
Phase delay (usec)	3.29877138248E+03	Apriori clockrate (us/s)		-2.9999999E-07	Resid phdelay (usec)		1.43149E-06	+/-	4.5E-07
Delay rate (us/s)	-1.00594608656E+00	Apriori rate (us/s)		-1.00594612528E+00	Resid rate (us/s)		3.87269E-08	+/-	4.3E-09
Total phase (deg)	319.2	Apriori accel (us/s/s)		-1.86764822046E-06	Resid phase (deg)		44.4	+/-	14.0

ph/seg (deg)	68.3	RMS	32.7	Theor.	0.224 +/- 0.027	Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
amp/seg (%)	106.9	68.3	32.7	Search (1024X32)	0.219	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
ph/frq (deg)	27.6	106.9	57.1	Interp.	0.000	Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	43.1	27.6	19.7	Inc. seg. avg.	0.345	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011		
		43.1	34.5	Inc. frq. avg.	0.235	Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

B: az 329.5 el 28.9 pa 39.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 11027.367 463.211 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/By.W.88.1HR3TY



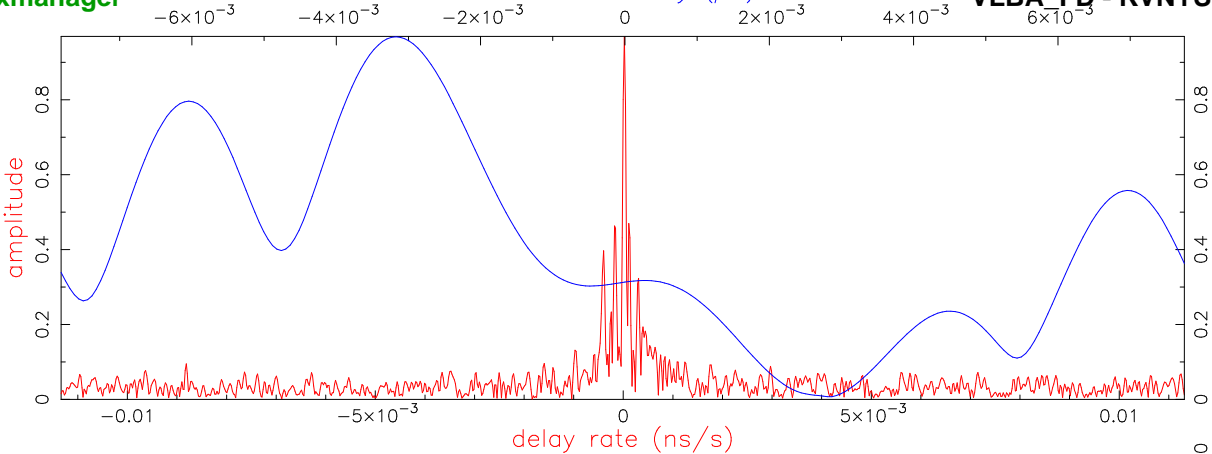
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, fy

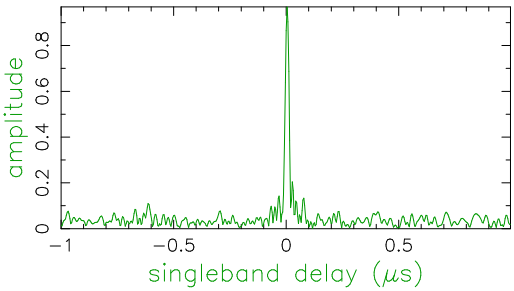
VLBA\_FD - KVNYS, fgroup W, pol LL

multiband delay ( $\mu$ s)

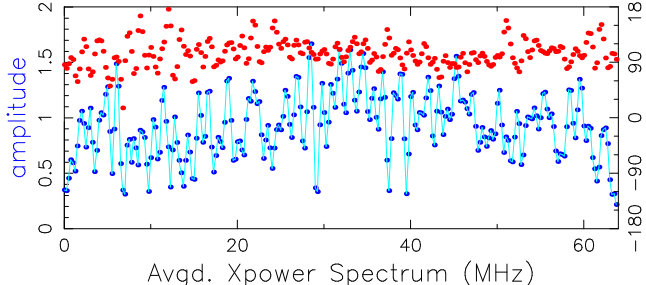


Fringe quality 4

SNR 35.5  
 Int time 179.975  
 Amp 0.969  
 Phase -168.5  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.004397  
 MBD -0.003147  
 Fringe rate (Hz) 0.001201  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

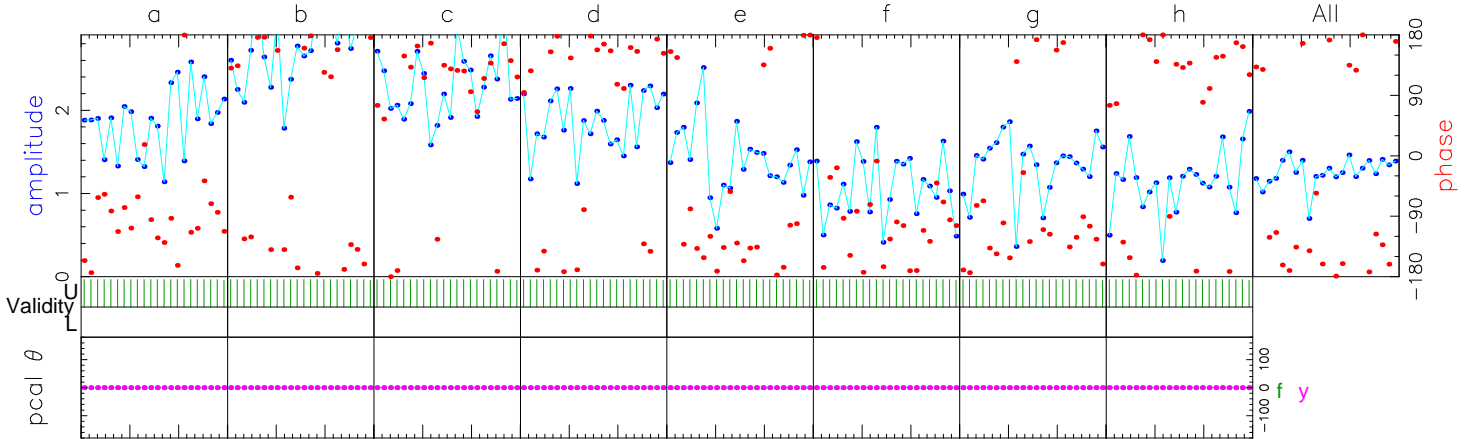


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133232  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	1.17010609113E+04	Apriori delay (usec)	1.17010640584E+04	Resid mbdelay (usec)	-3.14711E-03	+/-	3.1E-05
Sband delay (usec)	1.17010684557E+04	Apriori clock (usec)	6.5946064E+00	Resid sbdelay (usec)	4.39725E-03	+/-	2.4E-04
Phase delay (usec)	1.17010640530E+04	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-5.43272E-06	+/-	1.0E-07
Delay rate (us/s)	-7.05496925869E-01	Apriori rate (us/s)	-7.05496939806E-01	Resid rate (us/s)	1.39373E-08	+/-	1.0E-09
Total phase (deg)	188.5	Apriori accel (us/s/s)	-7.17956973652E-05	Resid phase (deg)	-168.5	+/-	3.2

ph/seg (deg)	42.9	RMS	Theor.	Amplitude	0.969 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	34.6	42.9	7.6	Search (1024X32)	0.923	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	50.9	34.6	13.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	58.9	50.9	4.6	Inc. seg. avg.	1.249	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
		58.9	8.0	Inc. frq. avg.	1.290	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

f: az 348.2 el 61.1 pa 160.4 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 7676.990 -9702.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy.W.171.1HR3TY

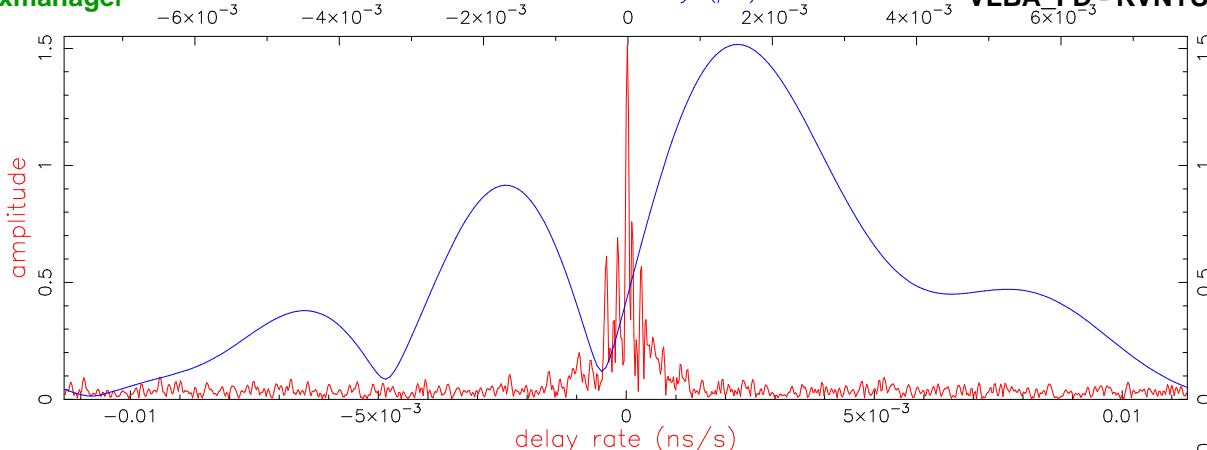
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

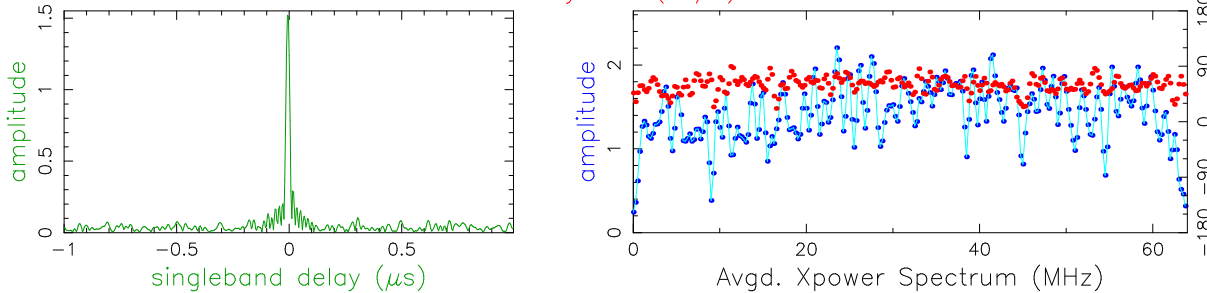
0102+584.1HR3TY, No0103, fy

VLBA\_FD - KVNYS, fgroup W, pol RR

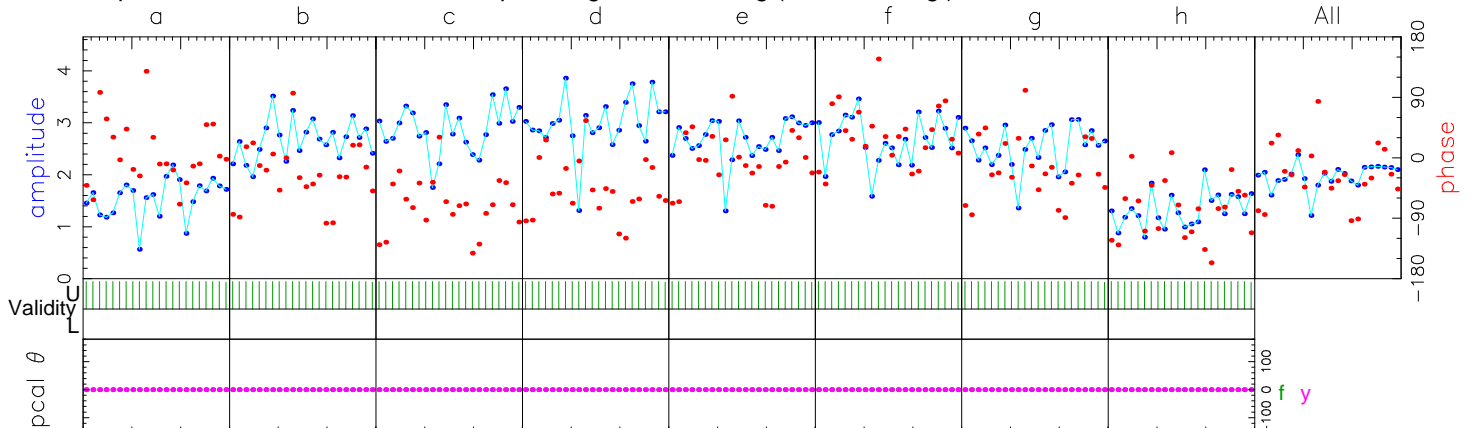
multiband delay ( $\mu$ s)



Fringe quality 3  
 SNR 56.9  
 Int time 179.975  
 Amp 1.551  
 Phase -25.3  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.005961  
 MBD 0.001417  
 Fringe rate (Hz) 0.001331  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133235  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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

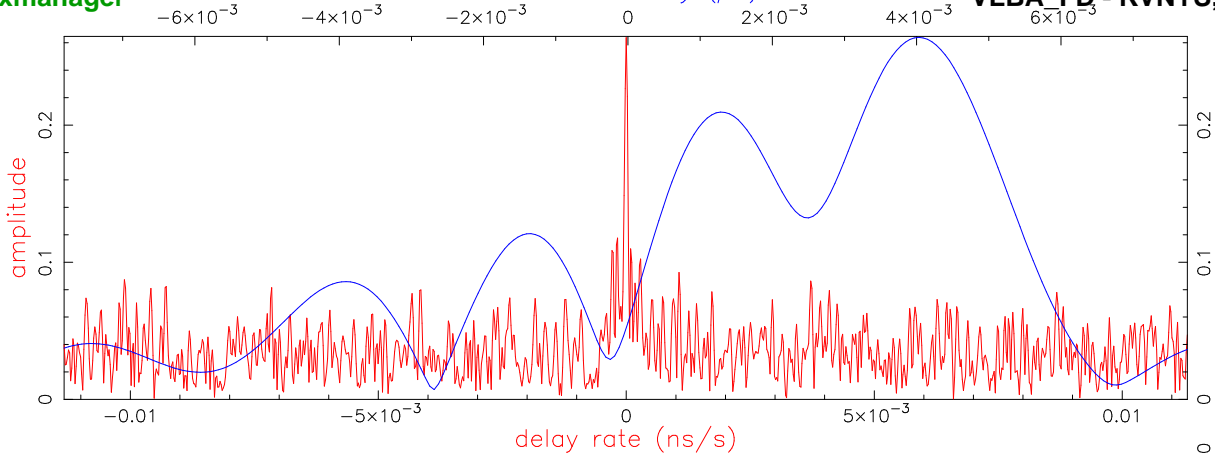


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
f	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
f	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)		1.17010654758E+04			1.17010640584E+04				Resid mbdelay (usec)	1.41736E-03 +/- 1.9E-05
Sband delay (usec)		1.17010580972E+04			6.5946064E+00				Resid sbdelay (usec)	-5.96125E-03 +/- 1.5E-04
Phase delay (usec)		1.17010640576E+04			2.9999999E-07				Resid phdelay (usec)	-8.16500E-07 +/- 6.5E-08
Delay rate (us/s)		-7.05496924357E-01			-7.05496939806E-01				Resid rate (us/s)	1.54494E-08 +/- 6.2E-10
Total phase (deg)			331.7		-7.17956973652E-05				Resid phase (deg)	-25.3 +/- 2.0

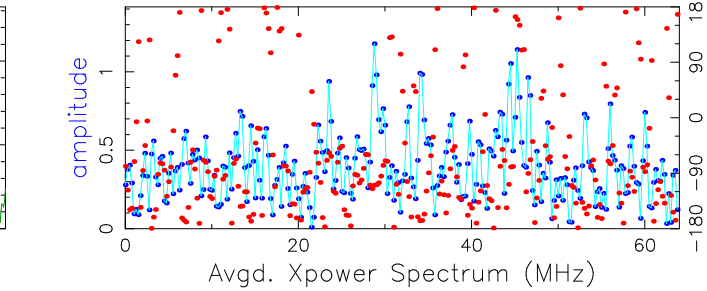
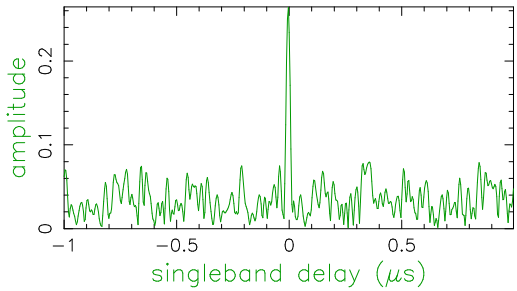
ph/seg (deg) 42.8 4.7 Search (1024X32) 1.487 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 30.9 8.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 41.1 2.8 Inc. seg. avg. 1.964 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 35.8 5.0 Inc. frq. avg. 1.827 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 348.2 el 61.1 pa 160.4 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 7676.990 -9702.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy.W.198.1HR3TY

multiband delay ( $\mu$ s)

Fringe quality 9

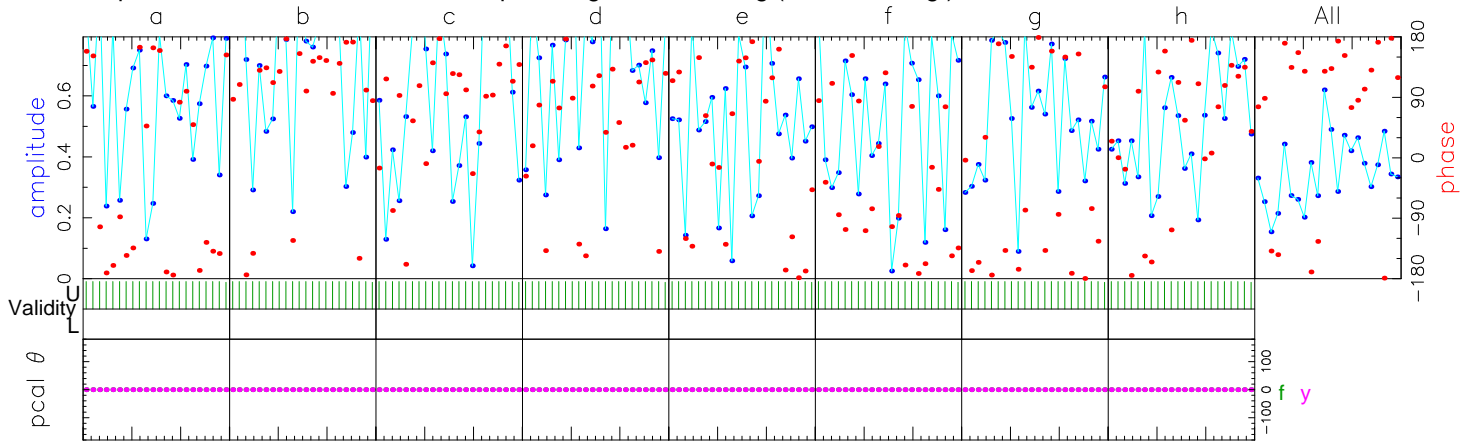


SNR 9.7  
Int time 179.975  
Amp 0.265  
Phase 143.0  
PFD 5.7e-14  
Delays (us)  
SBD -0.004634  
MBD 0.004015  
Fringe rate (Hz)  
0.000880  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133237  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.17010524482E+04			1.17010640584E+04				4.01478E-03	+/- 1.1E-04
Sband delay (usec)		1.17010594242E+04			6.5946064E+00				-4.63425E-03	+/- 8.9E-04
Phase delay (usec)		1.17010640630E+04			2.9999999E-07				4.61210E-06	+/- 3.8E-07
Delay rate (us/s)		-7.05496929592E-01			-7.05496939806E-01				1.02146E-08	+/- 3.7E-09
Total phase (deg)			140.0						143.0	+/- 11.8
RMS	45.8	27.7		0.265 +/- 0.027						
ph/seg (deg)	45.8	27.7		0.252						
amp/seg (%)	53.3	48.3		0.000						
ph/frq (deg)	46.6	16.7		0.316						
amp/frq (%)	58.8	29.1		0.306						
Apriori delay (usec)				0.252						
Apriori clock (usec)				0.252						
Apriori clockrate (us/s)				0.000						
Apriori rate (us/s)				0.000						
Apriori accel (us/s/s)				0.000						
Resid mbdelay (usec)				0.252						
Resid sbdelay (usec)				0.252						
Resid phdelay (usec)				0.000						
Resid rate (us/s)				0.000						
Resid phase (deg)				0.000						
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										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
PC period (AP's) 5, 5										
SampCntNorm: enabled										
nlags: 256										
t_cohere infinite										

Mk4/DiFX fourfit 3.21 rev 2937

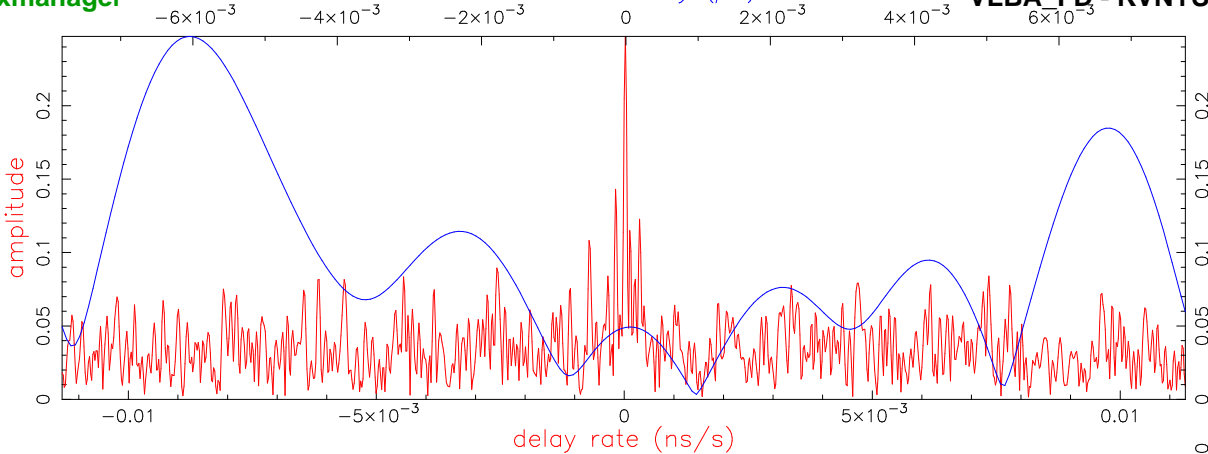
fxmanager

0102+584.1HR3TY, No0103, fy

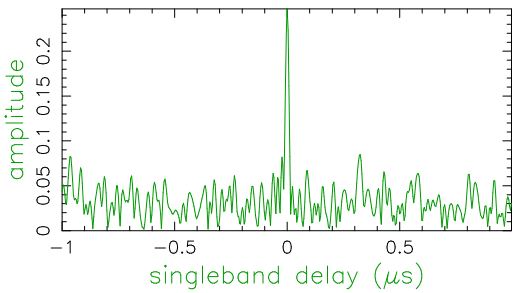
VLBA\_FD - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)

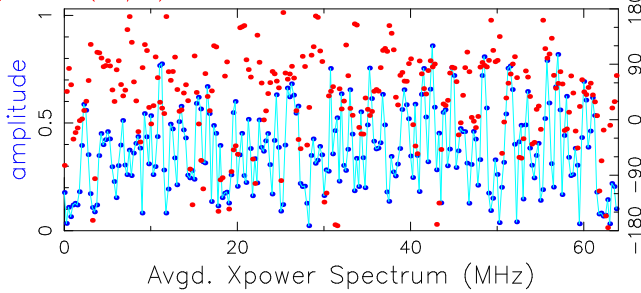
Fringe quality 9



SNR 9.1  
 Int time 179.975  
 Amp 0.247  
 Phase 123.5  
 PFD 2.3e-11  
 Delays (us)  
 SBD -0.000086  
 MBD -0.006046  
 Fringe rate (Hz)  
 0.001088  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

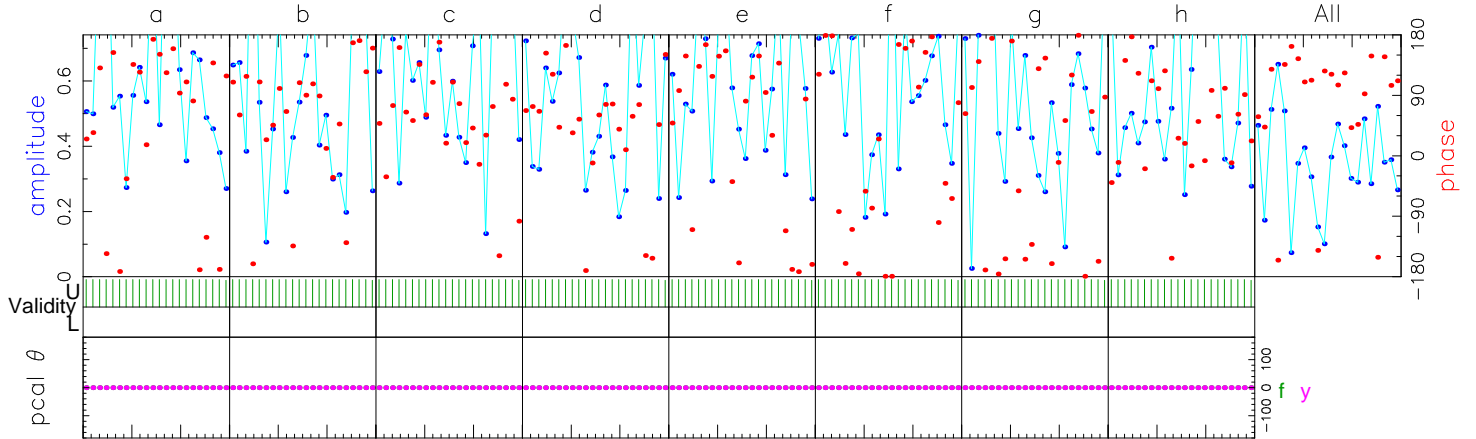


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133239  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
f	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
f	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)		1.17010580127E+04			1.17010640584E+04				Resid mbdelay (usec)	-6.04570E-03 +/- 1.2E-04
Sband delay (usec)		1.17010639719E+04			6.5946064E+00				Resid sbdelay (usec)	-8.65000E-05 +/- 9.5E-04
Phase delay (usec)		1.17010640624E+04			2.9999999E-07				Resid phdelay (usec)	3.98368E-06 +/- 4.1E-07
Delay rate (us/s)		-7.05496927178E-01			-7.05496939806E-01				Resid rate (us/s)	1.26279E-08 +/- 3.9E-09
Total phase (deg)			120.5		-7.17956973652E-05				Resid phase (deg)	123.5 +/- 12.6

ph/seg (deg) 48.6 29.6 Search (1024X32) 0.235 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 72.1 51.7 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 48.6 17.9 Inc. seg. avg. 0.312 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 34.5 31.2 Inc. frq. avg. 0.310 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 348.2 el 61.1 pa 160.4 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 7676.990 -9702.755 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/fy.W.233.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

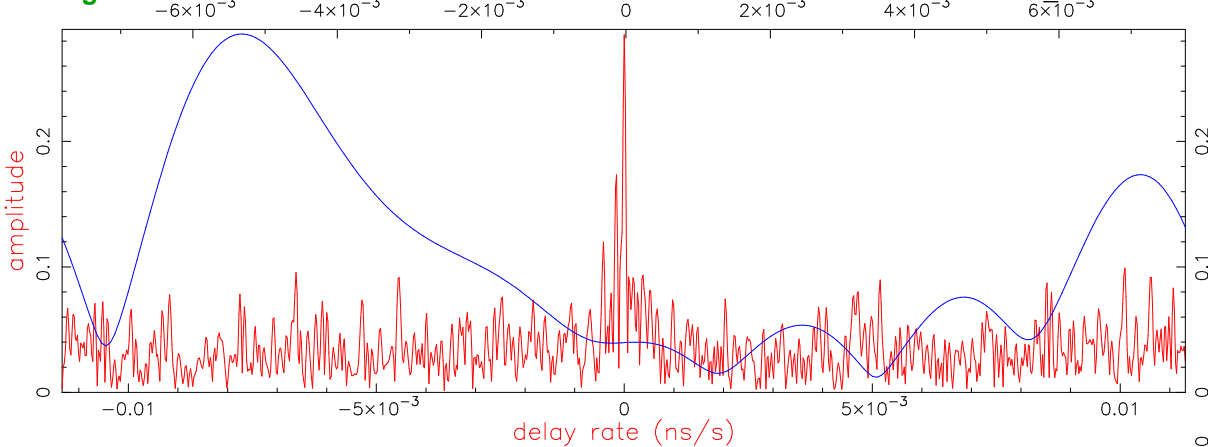
fxmanager

0102+584.1HR3TY, No0103, ky

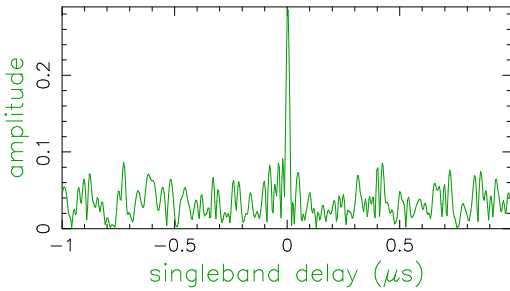
VLBA\_KP - KVNYS, fgroup W, pol LL

multiband delay ( $\mu$ s)

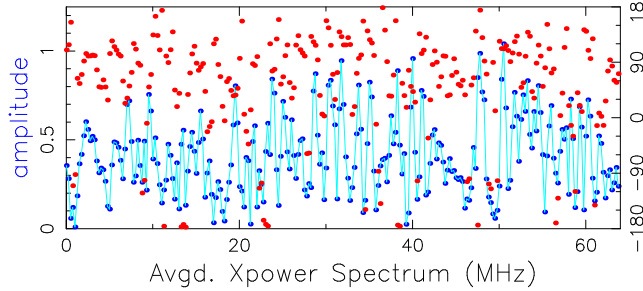
Fringe quality 9



SNR 10.6  
 Int time 179.854  
 Amp 0.289  
 Phase -179.3  
 PFD 6.0e-18  
 Delays (us)  
 SBD 0.002397  
 MBD -0.005412  
 Fringe rate (Hz) 0.000136  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

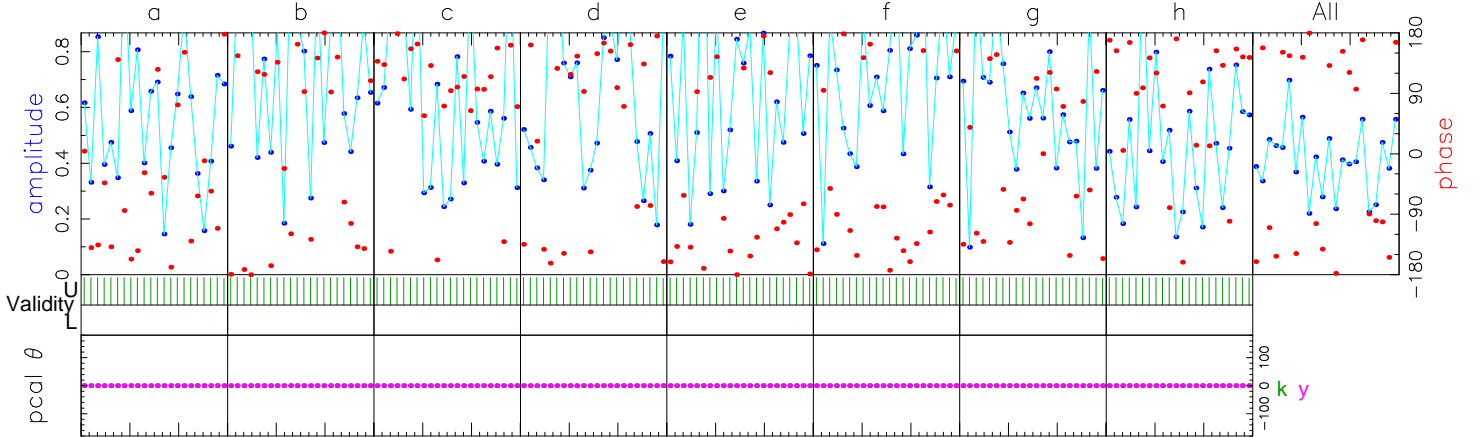


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133234  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-127.2	165.4	139.0	160.1	-155.5	-134.1	-138.9	127.5	Phase	-179.3
	0.2	0.5	0.5	0.4	0.4	0.4	0.2	0.3	Ampl.	0.3
	255.6	258.2	258.3	258.3	257.4	257.9	288.1	256.2	Sbd box	257.6
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	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ky	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	
y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Tracks	
Group delay (usec)(sbd)	1.20844839840E+04		Apriori delay (usec)		1.20844893955E+04		Resid mbdelay (usec)		-5.41150E-03	+/- 1.0E-04
Sband delay (usec)	1.20844917925E+04		Apriori clock (usec)		-9.1100025E-01		Resid sbdelay (usec)		2.39700E-03	+/- 8.1E-04
Phase delay (usec)	1.20844893897E+04		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-5.78280E-06	+/- 3.5E-07
Delay rate (us/s)	-6.12340359353E-01		Apriori rate (us/s)		-6.12340360936E-01		Resid rate (us/s)		1.58292E-09	+/- 3.3E-09
Total phase (deg)	10.7		Apriori accel (us/s/s)		-7.19782218327E-05		Resid phase (deg)		-179.3	+/- 10.8

	RMS	Theor.	Amplitude	0.289 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	49.3	25.3	Search (1024X32)	0.285	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	59.6	44.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled
ph/frq (deg)	45.1	15.3	Inc. seg. avg.	0.375	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	43.6	26.7	Inc. frq. avg.	0.342	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite
						ion window (TEC) 0.00 0.00

k: az 356.2 el 63.4 pa 173.2 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 6655.304 -9630.441 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky.W.186.1HR3TY

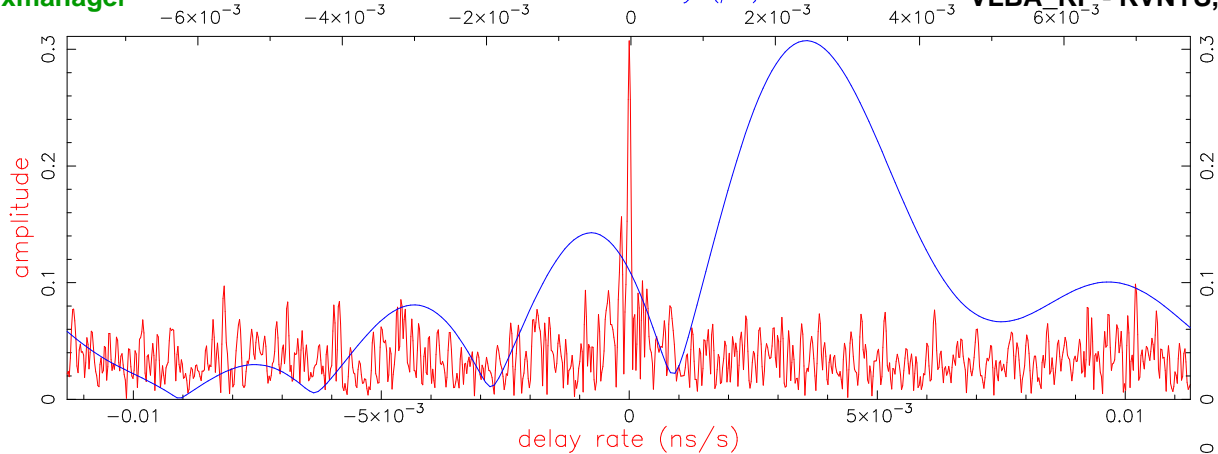
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ky

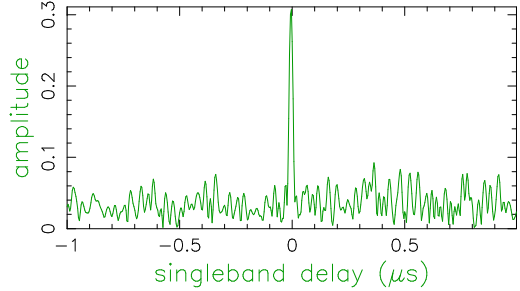
VLBA\_KP - KVNYS, fgroup W, pol RR

multiband delay ( $\mu$ s)

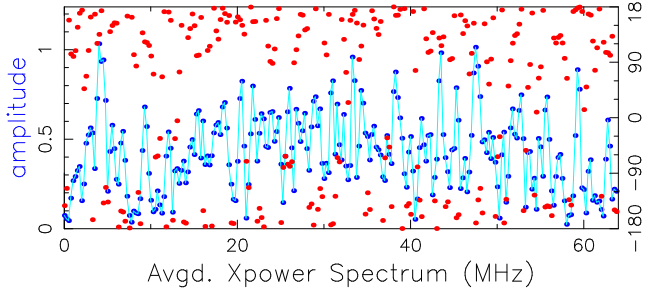


Fringe quality 9

SNR 11.4  
 Int time 179.854  
 Amp 0.311  
 Phase 74.7  
 PFD 9.3e-22  
 Delays (us)  
 SBD -0.005372  
 MBD 0.002388  
 Fringe rate (Hz)  
 -0.000220  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

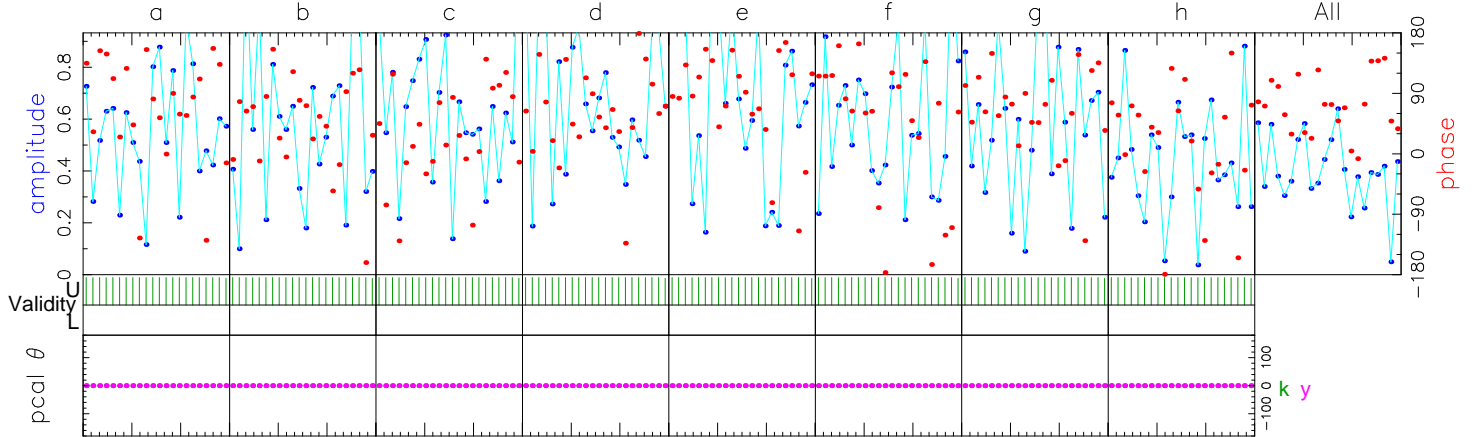


delay rate (ns/s)



Exp. c202a  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133236  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
k:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ky	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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.20844917834E+04				1.20844893955E+04			2.38791E-03	+/- 9.5E-05
Sband delay (usec)		1.20844840235E+04				-9.1100025E-01			-5.37200E-03	+/- 7.6E-04
Phase delay (usec)		1.20844893979E+04				0.0000000E+00			2.40879E-06	+/- 3.2E-07
Delay rate (us/s)		-6.12340363486E-01				-6.12340360936E-01			-2.54939E-09	+/- 3.1E-09
Total phase (deg)			264.7			-7.19782218327E-05			74.7	+/- 10.0
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) 42.8 23.6 Search (1024X32) 0.307 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 52.2 41.1 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.7 14.2 Inc. seg. avg. 0.373 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 26.6 24.8 Inc. frq. avg. 0.337 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 k: az 356.2 el 63.4 pa 173.2 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 6655.304 -9630.441 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky.W.207.1HR3TY simultaneous interpolator

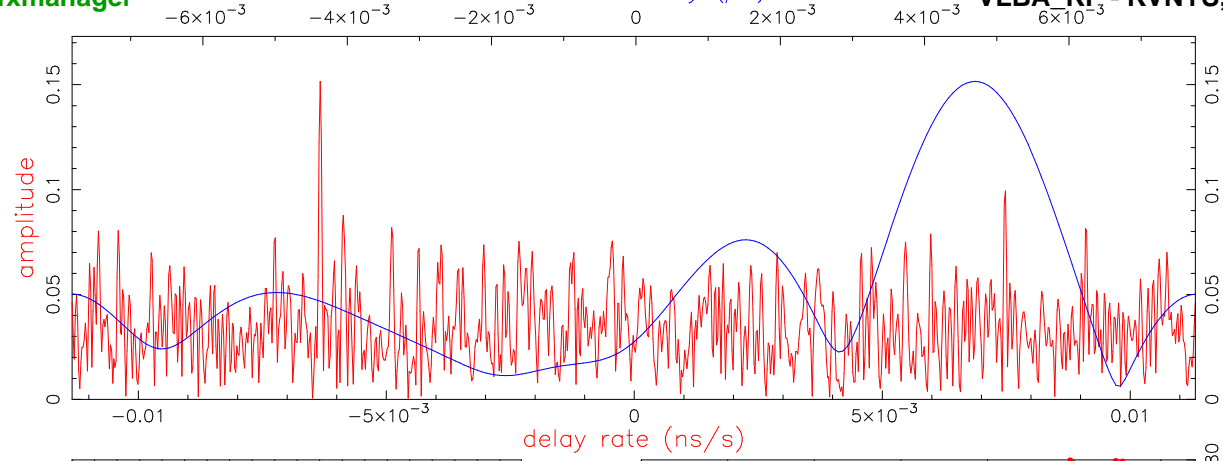
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ky

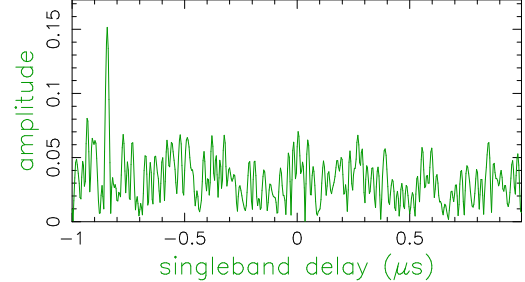
VLBA\_KP - KVNYS, fgroup W, pol LR

multiband delay ( $\mu$ s)

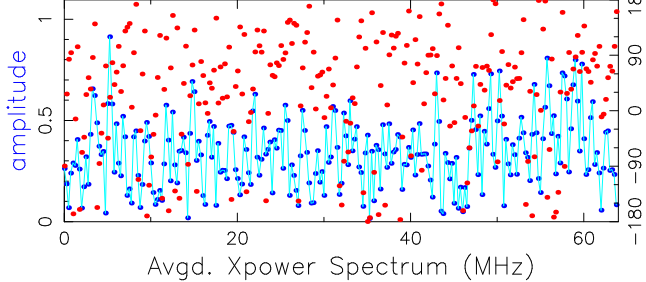


Fringe quality 0

SNR 5.6  
 Int time 179.854  
 Amp 0.173  
 Phase 21.4  
 PFD 9.6e-01  
 Delays (us)  
 SBD -0.844053  
 MBD 0.004693  
 Fringe rate (Hz)  
 -0.545613  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

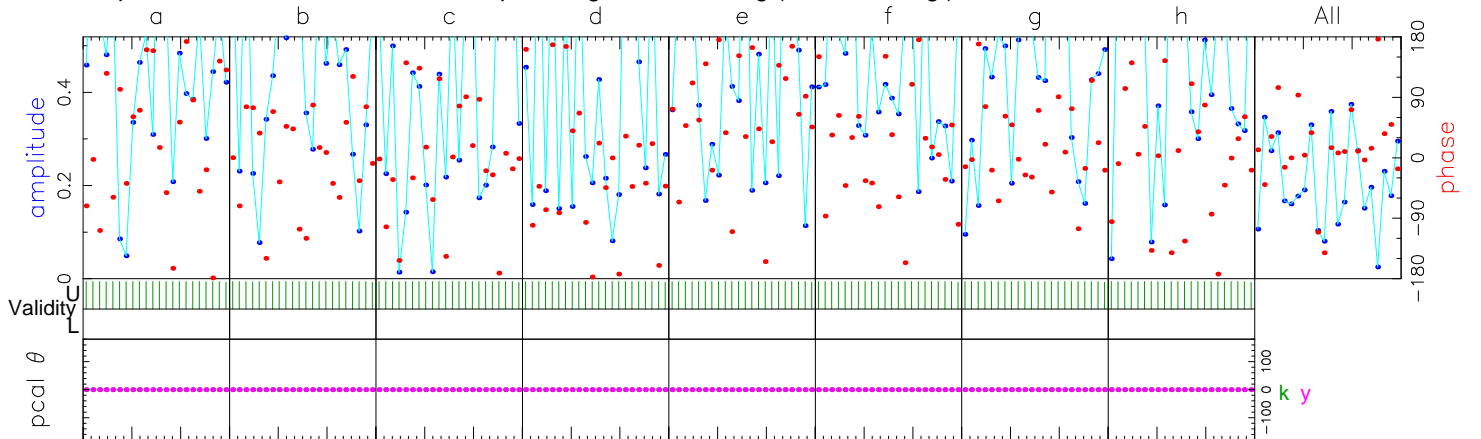


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133238  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
k:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ky	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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)		1.20836503381E+04				1.20844893955E+04			4.69258E-03	+/- 2.0E-04
Sband delay (usec)		1.20836453425E+04				-9.1100025E-01			-8.44053E-01	+/- 1.5E-03
Phase delay (usec)		1.20844893962E+04				0.0000000E+00			6.89143E-07	+/- 6.6E-07
Delay rate (us/s)		-6.12346694967E-01				-6.12340360936E-01			-6.33403E-06	+/- 6.4E-09
Total phase (deg)			211.4			-7.19782218327E-05			21.4	+/- 20.6
	RMS	Theor.	Amplitude	0.173 +/- 0.031		Pcal mode: MANUAL, MANUAL			PC period (AP's) 5, 5	
ph/seg (deg)	64.8	48.3	Search (1024X32)	0.150		Pcal rate: 0.000E+00, 0.000E+00 (us/s)			sb window (us)	-1.000 1.000
amp/seg (%)	74.0	84.3	Interp.	0.000		Bits/sample: 2x2			SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	25.4	29.1	Inc. seg. avg.	0.176		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011
amp/frq (%)	45.8	50.9	Inc. frq. avg.	0.166		Data rate(Mb/s): 2048			nlags: 256 t_cohere infinite	ion window (TEC) 0.00 0.00

k: az 356.2 el 63.4 pa 173.2 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 6655.304 -9630.441 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky.W.222.1HR3TY

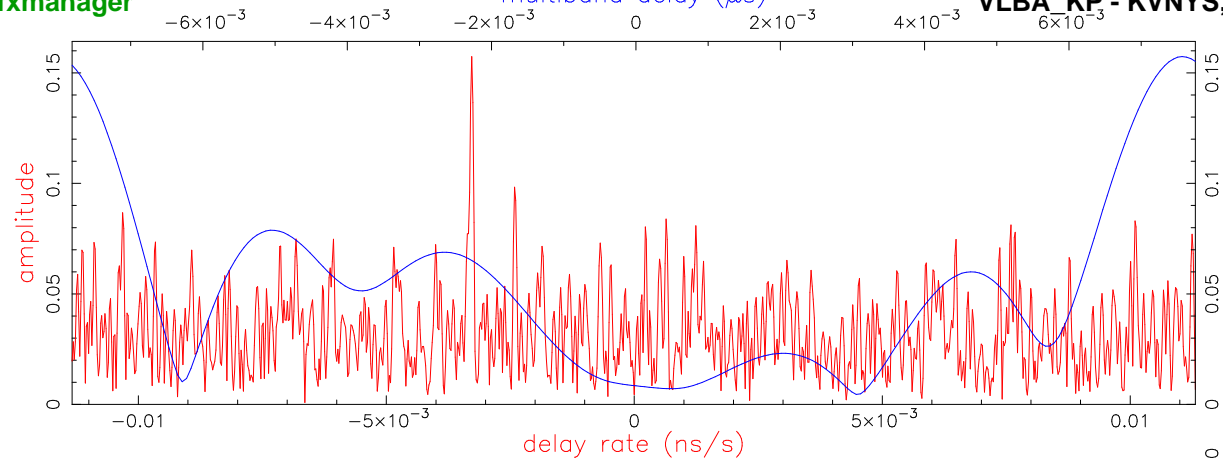
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ky

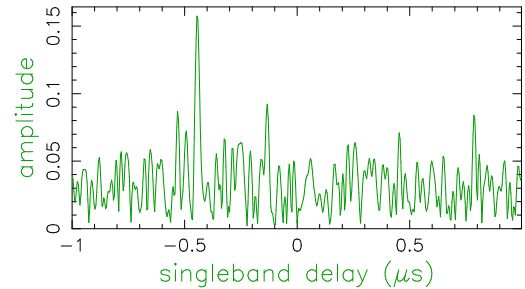
VLBA\_KP - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)

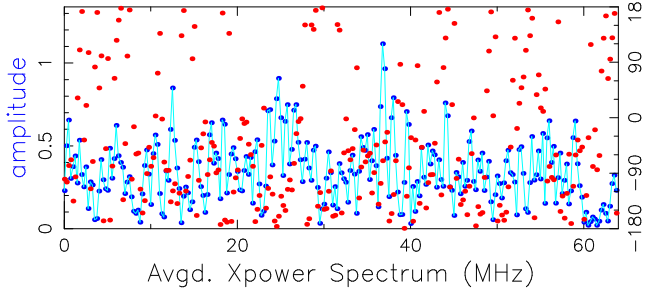


Fringe quality 0

SNR 5.8  
 Int time 179.854  
 Amp 0.164  
 Phase -95.2  
 PFD 5.2e-01  
 Delays (us)  
 SBD -0.443915  
 MBD -0.008068  
 Fringe rate (Hz)  
 -0.282444  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

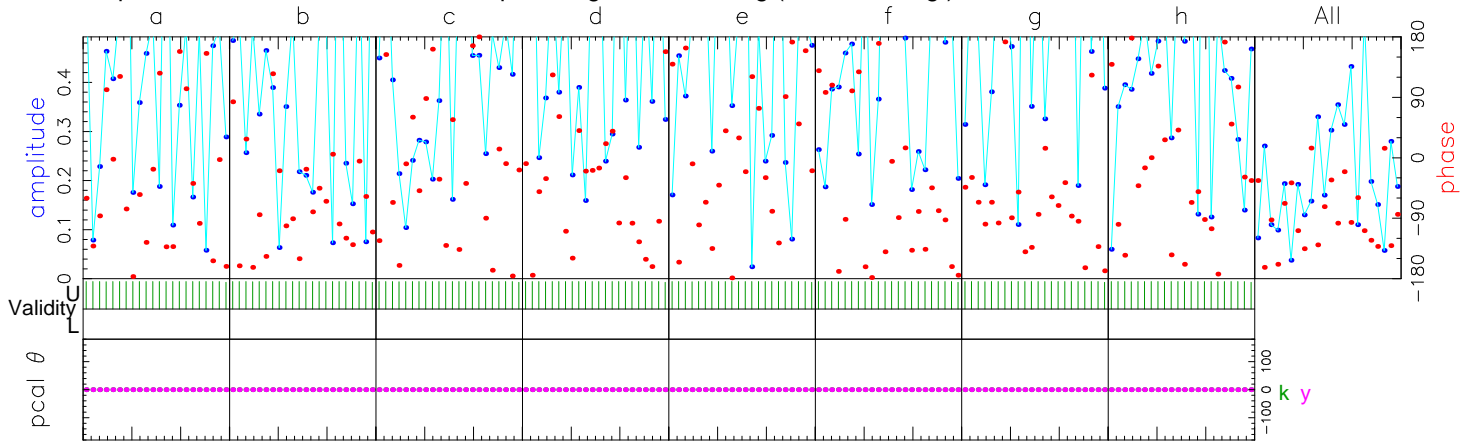


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133239  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-103.7	-96.2	-106.3	-80.6	-40.1	-126.6	-98.0	-78.7	Phase	-95.2
	0.1	0.2	0.1	0.2	0.1	0.2	0.4	0.1	Ampl.	0.2
	63.0	339.3	118.4	393.0	480.2	15.4	143.1	97.3	Sbd box	143.4
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	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
k:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
ky	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
k	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
k	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	1.20840438279E+04	Apriori delay (usec)	1.20844893955E+04	Resid mbdelay (usec)	-8.06759E-03	+/-	1.9E-04
Sband delay (usec)	1.20840454807E+04	Apriori clock (usec)	-9.1100025E-01	Resid sbdelay (usec)	-4.43915E-01	+/-	1.5E-03
Phase delay (usec)	1.20844893924E+04	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-3.07051E-06	+/-	6.3E-07
Delay rate (us/s)	-6.12343639836E-01	Apriori rate (us/s)	-6.12340360936E-01	Resid rate (us/s)	-3.27890E-06	+/-	6.1E-09
Total phase (deg)	94.8	Apriori accel (us/s/s)	-7.19782218327E-05	Resid phase (deg)	-95.2	+/-	19.7

ph/seg (deg)	51.5	Theor.	46.2	Amplitude	0.164 +/- 0.028	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	85.0		80.6	Search (1024X32)	0.155	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	28.0		27.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	50.9		48.6	Inc. seg. avg.	0.167	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.155	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

k: az 356.2 el 63.4 pa 173.2 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) 6655.304 -9630.441 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ky.W.239.1HR3TY



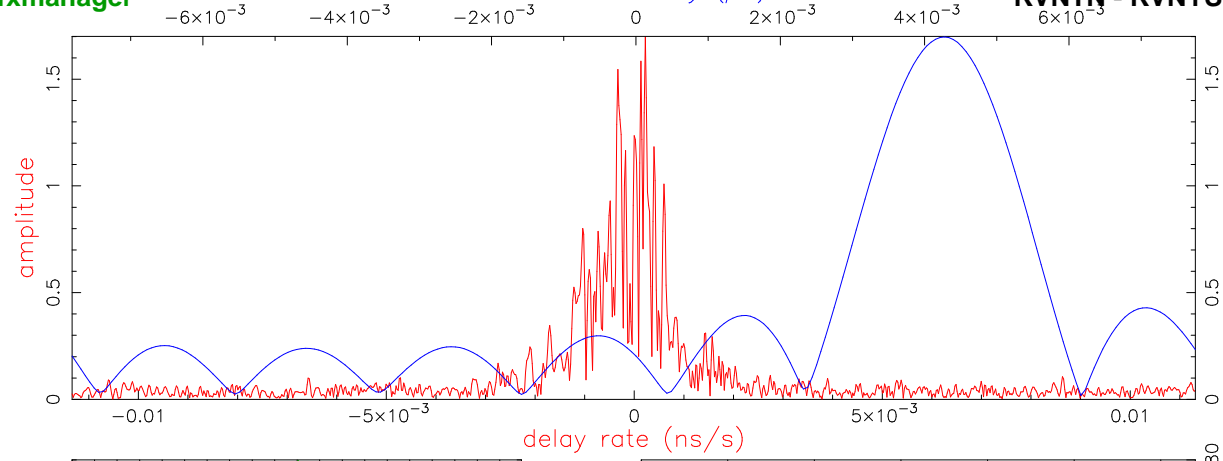
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ty

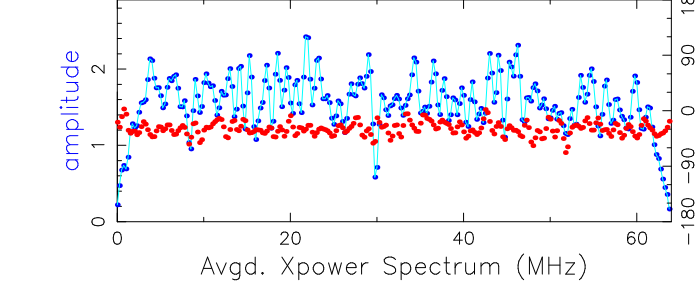
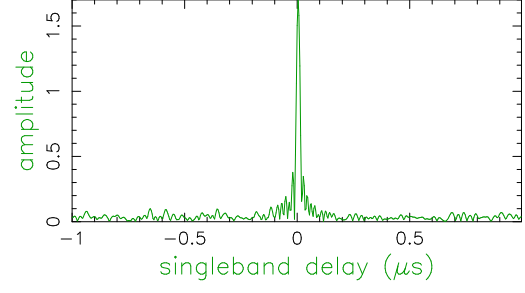
KVNTN - KVNY, fgroup W, pol LL

multiband delay ( $\mu$ s)



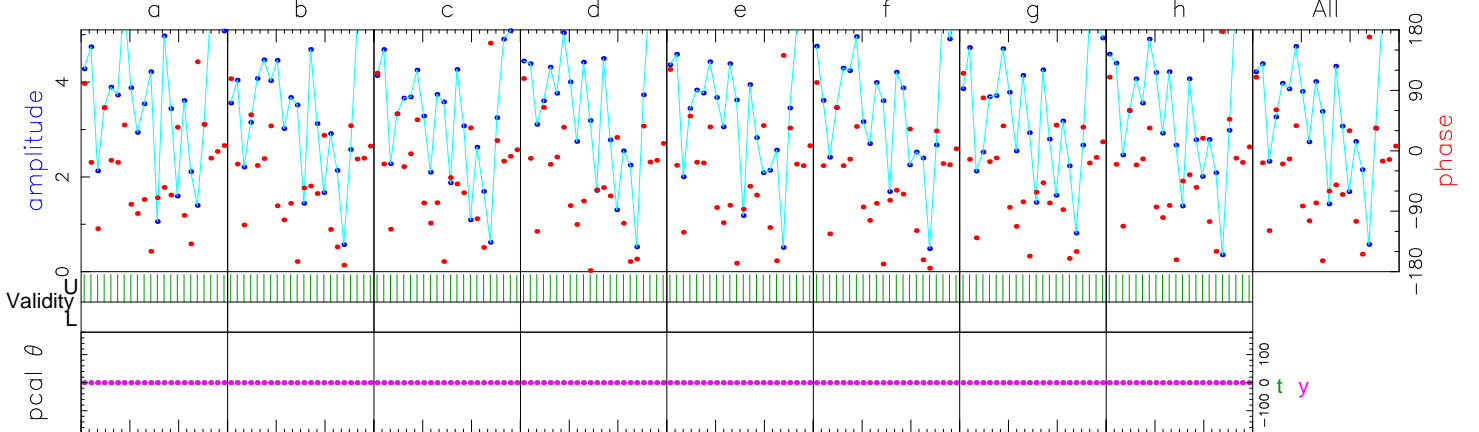
Fringe quality 5

SNR 62.4  
Int time 179.960  
Amp 1.701  
Phase -27.9  
PFD 0.0e+00  
Delays (us)  
SBD 0.004405  
MBD 0.004271  
Fringe rate (Hz)  
0.018683  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133254  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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

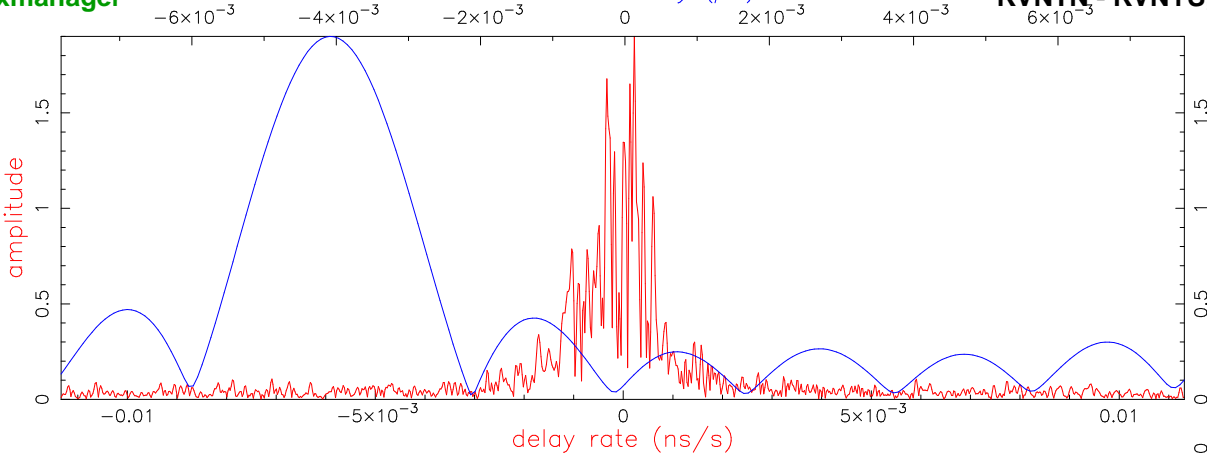


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		258.1
t	1000	1000	1000	1000	1000	1000	1000	1000		1.7
y	1000	1000	1000	1000	1000	1000	1000	1000		1.8
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		258.1
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		1.7
t	1000	1000	1000	1000	1000	1000	1000	1000		1.8
y	1000	1000	1000	1000	1000	1000	1000	1000		258.1
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		1.7
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		1.8
Group delay (usec)(sbd)	-1.39151638497E+03		Apriori delay (usec)		-1.39152065559E+03		Resid mbdelay (usec)		4.27062E-03	+/- 1.7E-05
Sband delay (usec)	-1.39151625084E+03		Apriori clock (usec)		1.3399982E-01		Resid sbdelay (usec)		4.40475E-03	+/- 1.4E-04
Phase delay (usec)	-1.39152065649E+03		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-8.98446E-07	+/- 5.9E-08
Delay rate (us/s)	2.82454079849E-02		Apriori rate (us/s)		2.82451910926E-02		Resid rate (us/s)		2.16892E-07	+/- 5.7E-10
Total phase (deg)			Apriori accel (us/s/s)		1.55620363494E-06		Resid phase (deg)		-27.9	+/- 1.8

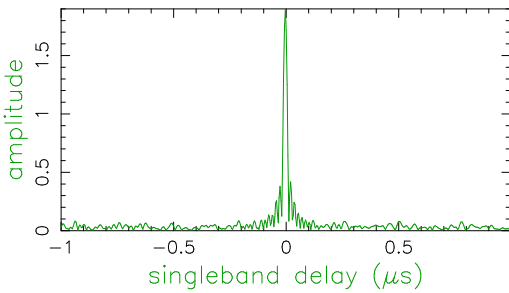
ph/seg (deg) 76.8 4.3 Search (1024X32) 1.661 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 126.6 7.5 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 2.8 2.6 Inc. seg. avg. 3.432 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 4.3 4.5 Inc. frq. avg. 1.698 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 t: az 28.3 el 15.0 pa -49.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) -308.077 -80.099 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty.W.344.1HR3TY

multiband delay ( $\mu$ s)

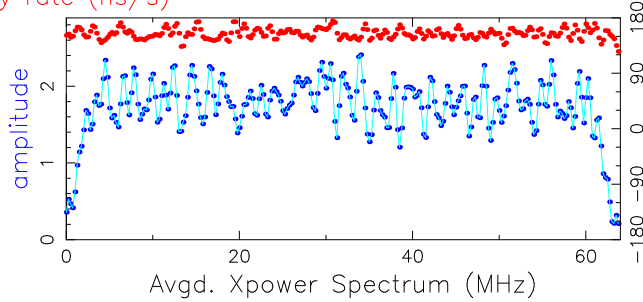
Fringe quality 5



SNR 69.7  
Int time 179.960  
Amp 1.900  
Phase 155.2  
PFD 0.0e+00  
Delays (us)  
SBD -0.004018  
MBD -0.004080  
Fringe rate (Hz)  
0.018609  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

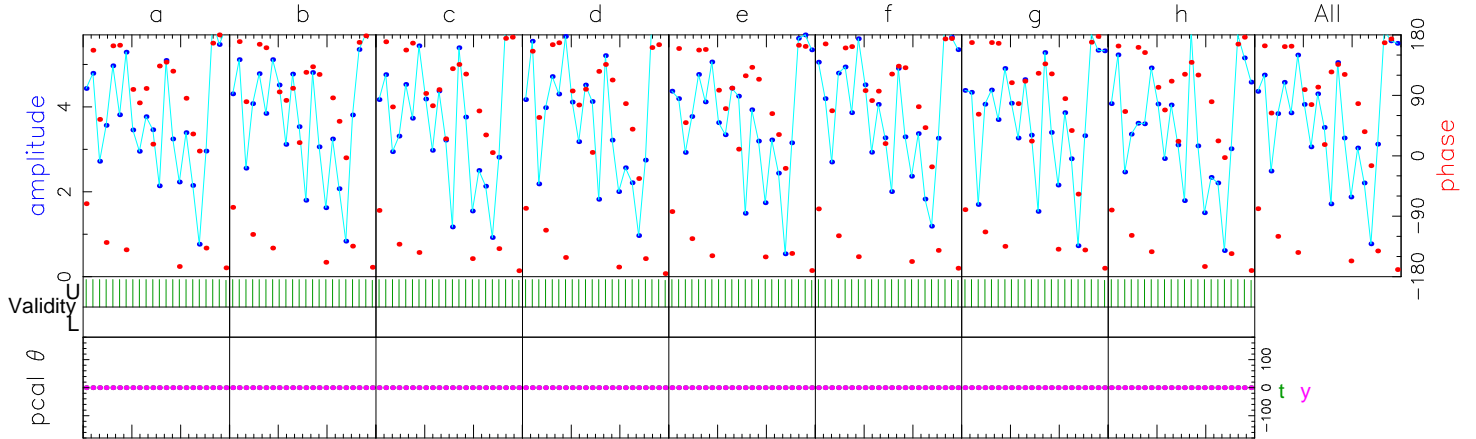


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133258  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

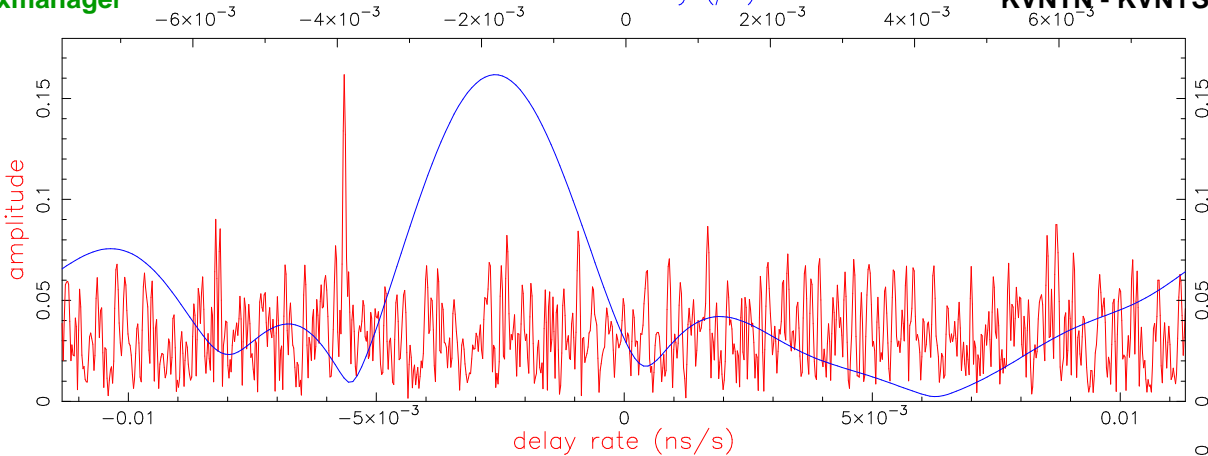
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



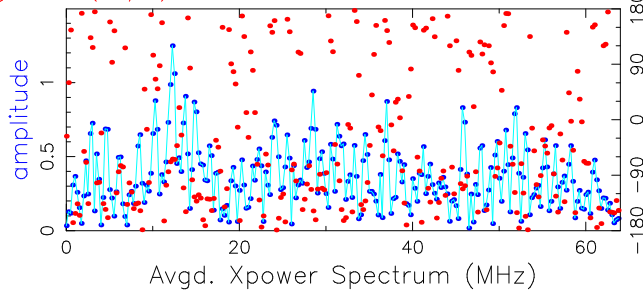
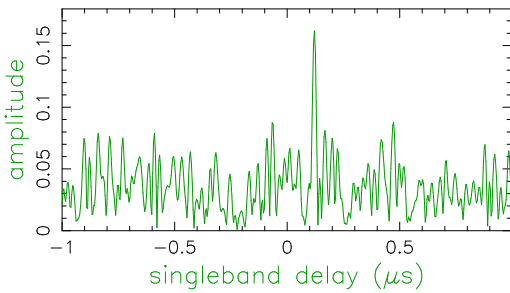
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
t:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	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)	-1.39152473510E+03								Resid mbdelay (usec)	-4.07950E-03 +/- 1.6E-05
Sband delay (usec)	-1.39152467334E+03								Resid sbdelay (usec)	-4.01775E-03 +/- 1.2E-04
Phase delay (usec)	-1.39152065059E+03								Resid phdelay (usec)	5.00419E-06 +/- 5.3E-08
Delay rate (us/s)	2.82454071290E-02								Resid rate (us/s)	2.16036E-07 +/- 5.1E-10
Total phase (deg)			57.0						Resid phase (deg)	155.2 +/- 1.6
	RMS	Theor.	Amplitude	1.900 +/- 0.027					Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	75.9	3.9	Search (1024X32)	1.840					Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	118.9	6.7	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled mb window (us) -0.008 0.008
ph/frq (deg)	3.6	2.3	Inc. seg. avg.	3.716					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	4.0	4.1	Inc. frq. avg.	1.901					Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite ion window (TEC) 0.00 0.00

multiband delay ( $\mu$ s)

Fringe quality 0

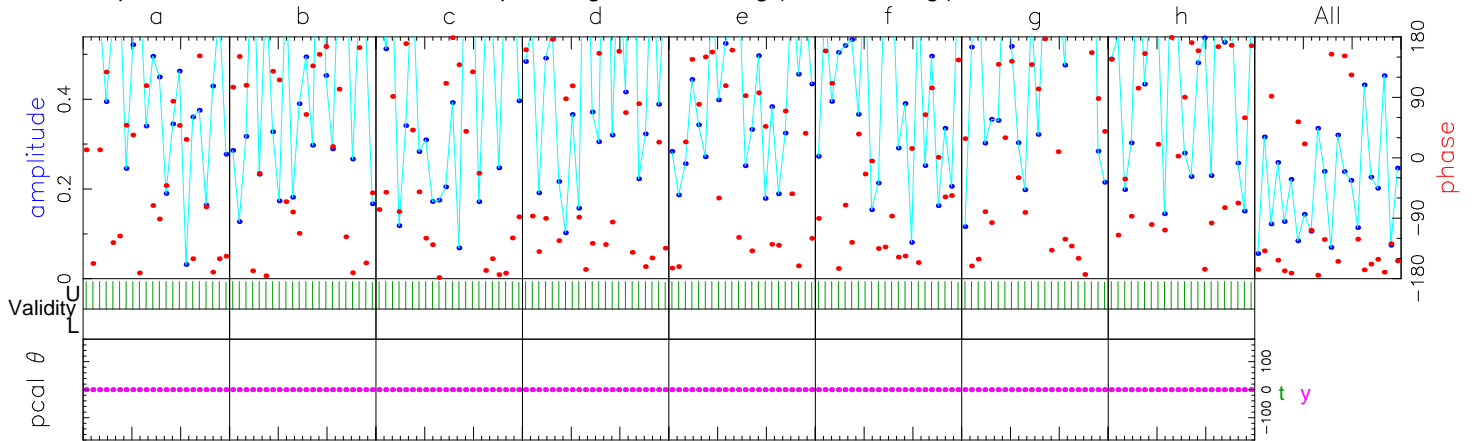


SNR 5.9  
Int time 179.960  
Amp 0.180  
Phase -164.8  
PFD 3.0e-01  
Delays (us)  
SBD 0.120623  
MBD -0.001806  
Fringe rate (Hz)  
-0.486359  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133300  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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	
	-146.4	170.9	-156.6	-152.2	167.5	-132.3	-169.4	-176.2	Phase	-164.8	
	0.1	0.2	0.1	0.4	0.1	0.2	0.3	0.2	Ampl.	0.2	
	37.3	315.0	178.5	287.9	135.2	402.9	146.8	370.1	Sbd box	287.9	
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC		
t	1000	1000	1000	1000	1000	1000	1000	1000	PC amp		
y	1000	1000	1000	1000	1000	1000	1000	1000			
t	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks		
									Chan ids		
									Tracks		
Group delay (usec)(sbd)	-1.39139746138E+03				Apriori delay (usec)	-1.39152065559E+03			Resid mbdelay (usec)	-1.80579E-03	+/- 1.8E-04
Sband delay (usec)	-1.39140003284E+03				Apriori clock (usec)	1.3399982E-01			Resid sbdelay (usec)	1.20623E-01	+/- 1.4E-03
Phase delay (usec)	-1.39152066091E+03				Apriori clockrate (us/s)	0.0000000E+00			Resid phdelay (usec)	-5.31512E-06	+/- 6.2E-07
Delay rate (us/s)	2.82395449484E-02				Apriori rate (us/s)	2.82451910926E-02			Resid rate (us/s)	-5.64614E-06	+/- 6.0E-09
Total phase (deg)			-263.0		Apriori accel (us/s/s)	1.55620363494E-06			Resid phase (deg)	-164.8	+/- 19.3

	RMS	Theor.	Amplitude	0.180 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
ph/seg (deg)	60.3	45.2	Search (1024X32)	0.159	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
amp/seg (%)	74.4	78.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
ph/frq (deg)	22.8	27.3	Inc. seg. avg.	0.177	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
amp/frq (%)	44.6	47.6	Inc. frq. avg.	0.170	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

t: az 28.3 el 15.0 pa -49.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) -308.077 -80.099 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty.W.397.1HR3TY

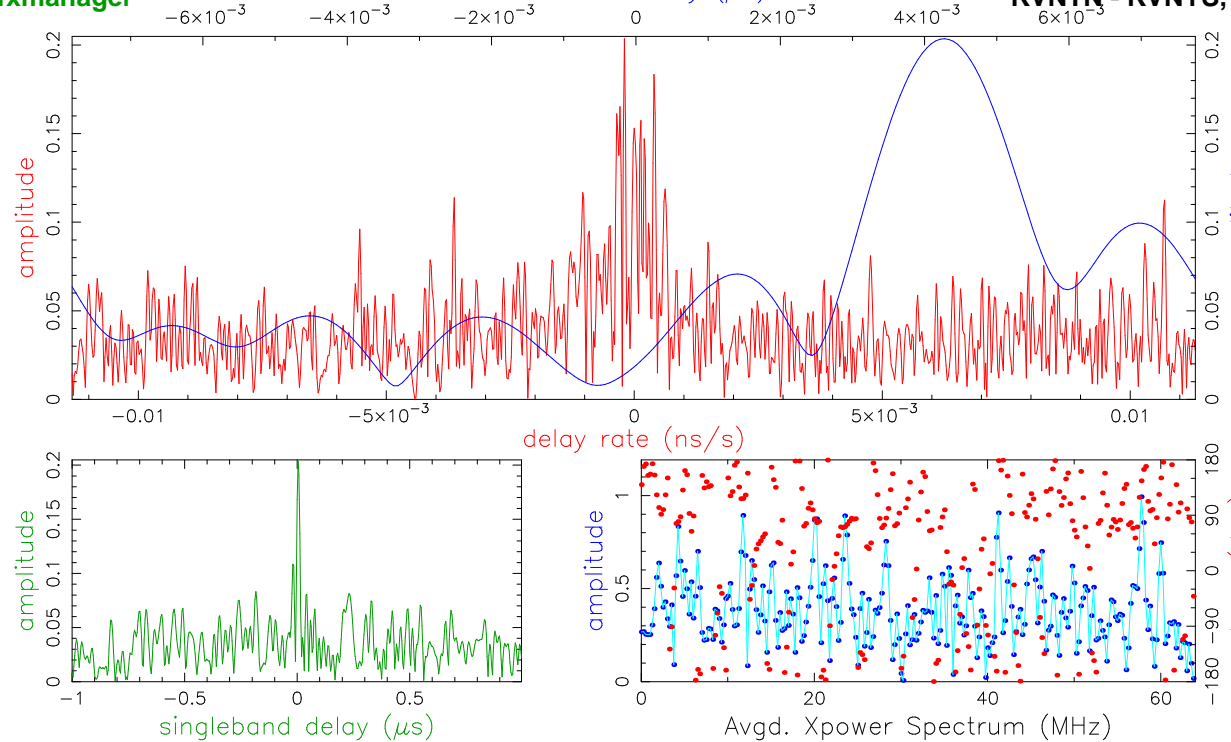
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ty

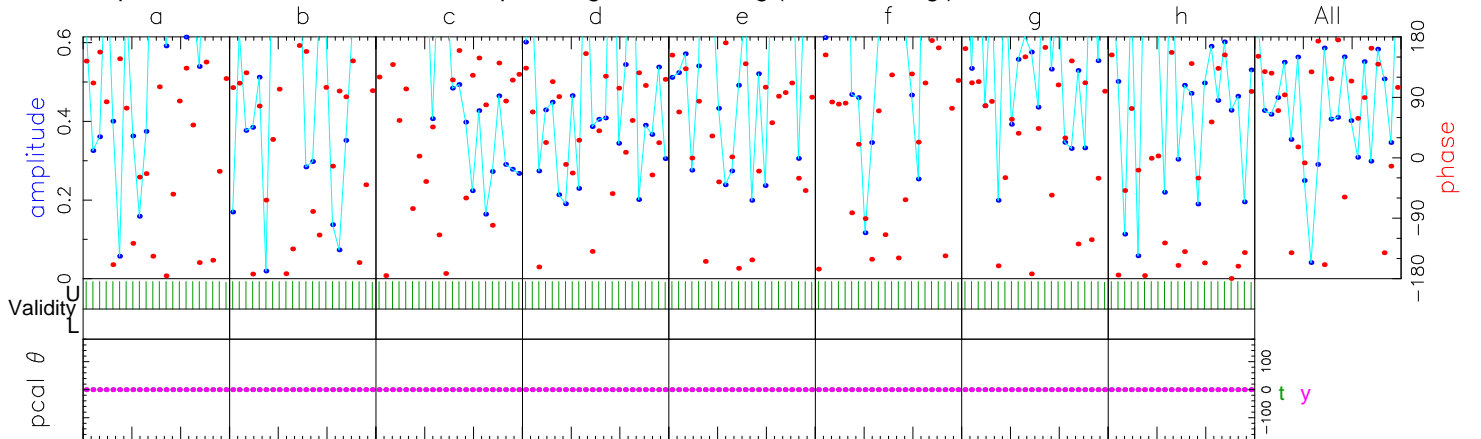
KVNTN - KVNYS, fgroup W, pol RL

multiband delay ( $\mu$ s)



Fringe quality 9  
 SNR 7.5  
 Int time 179.960  
 Amp 0.205  
 Phase 125.5  
 PFD 9.1e-06  
 Delays (us)  
 SBD 0.004806  
 MBD 0.004252  
 Fringe rate (Hz) -0.016920  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512  
 Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133302  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
ty	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
t	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
t	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

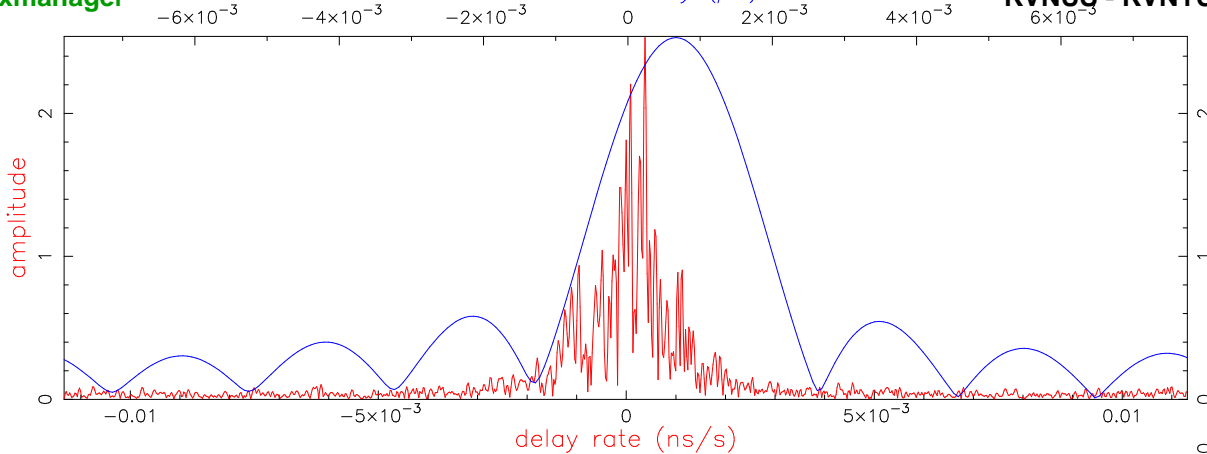
Group delay (usec)(sbd) -1.39151640354E+03 Apriori delay (usec) -1.39152065559E+03 Resid mbdelay (usec) 4.25205E-03 +/- 1.4E-04  
 Sband delay (usec) -1.39151584984E+03 Apriori clock (usec) 1.3399982E-01 Resid sbdelay (usec) 4.80575E-03 +/- 1.1E-03  
 Phase delay (usec) -1.39152065155E+03 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 4.04668E-06 +/- 4.9E-07  
 Delay rate (us/s) 2.82449946691E-02 Apriori rate (us/s) 2.82451910926E-02 Resid rate (us/s) -1.96424E-07 +/- 4.7E-09  
 Total phase (deg) 27.3 Apriori accel (us/s/s) 1.55620363494E-06 Resid phase (deg) 125.5 +/- 15.2

ph/seg (deg) 74.0 35.8 Theor. Amplitude 0.205 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 139.5 62.4 Search (1024X32) 0.201 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 32.1 21.6 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 21.5 37.6 Inc. seg. avg. 0.371 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 Inc. frq. avg. 0.211 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

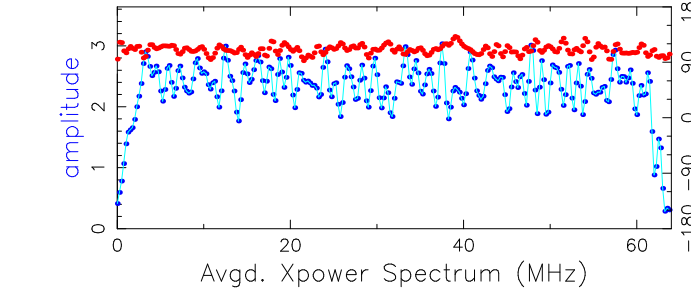
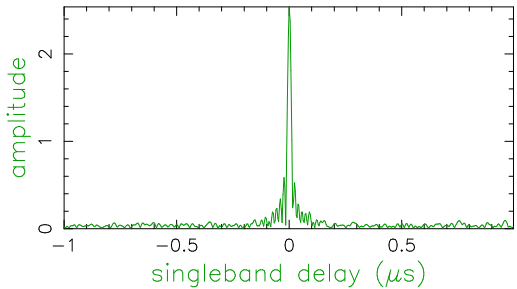
t: az 28.3 el 15.0 pa -49.1 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) -308.077 -80.099 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ty.W.406.1HR3TY

multiband delay ( $\mu$ s)

Fringe quality 5

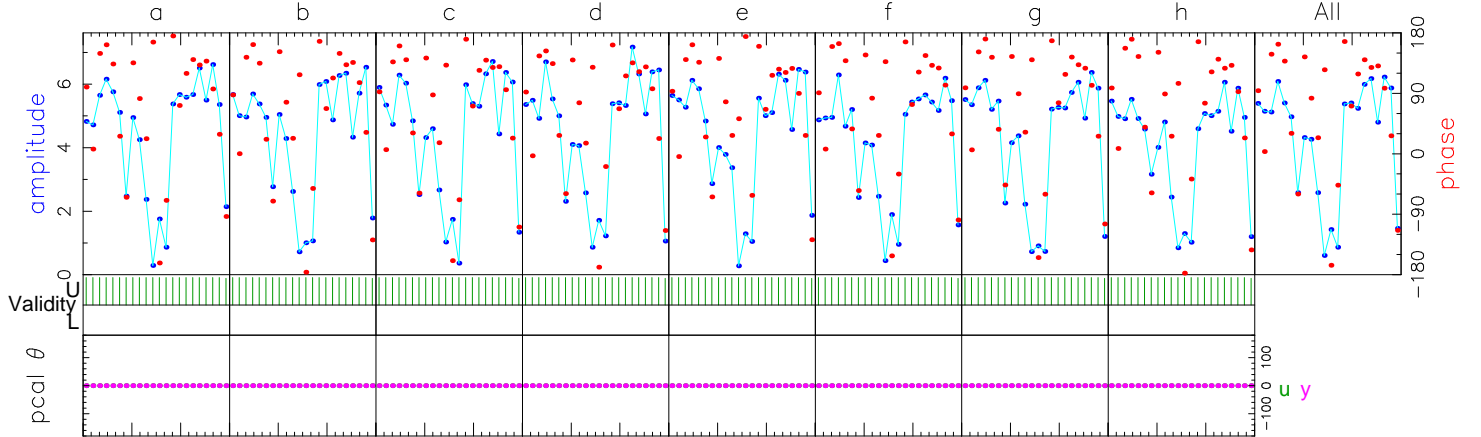


SNR 93.1  
Int time 179.987  
Amp 2.539  
Phase 110.3  
PFD 0.0e+00  
Delays (us)  
SBD 0.000681  
MBD 0.000666  
Fringe rate (Hz)  
0.032569  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133303  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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

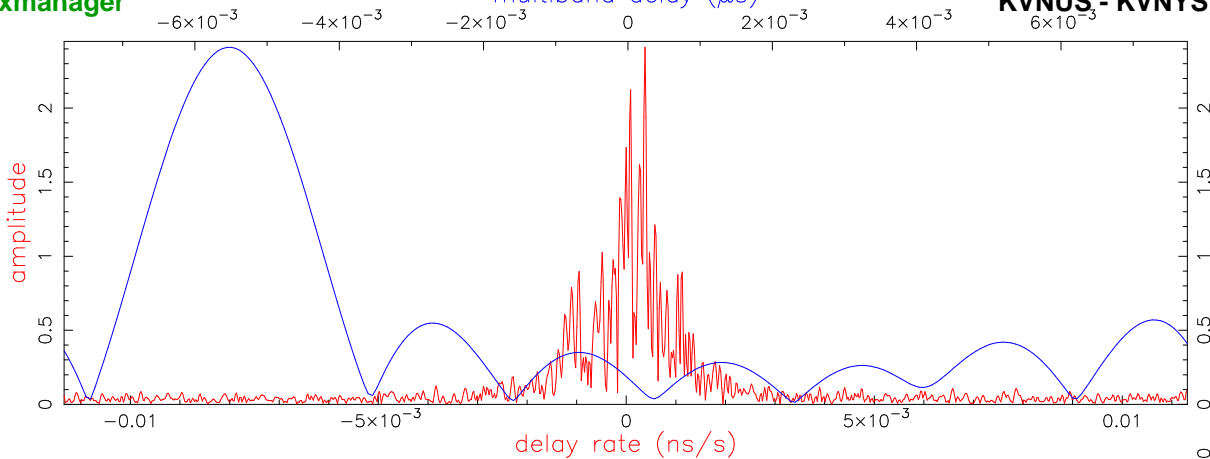


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
u	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0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

Group delay (usec)(sbd)	-2.93333046678E+02	Apriori delay (usec)	-2.93333712959E+02	Resid mbdelay (usec)	6.66282E-04	+/-	1.2E-05
Sband delay (usec)	-2.93333031959E+02	Apriori clock (usec)	1.2806067E+00	Resid sbdelay (usec)	6.81000E-04	+/-	9.3E-05
Phase delay (usec)	-2.93333709403E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	3.55593E-06	+/-	4.0E-08
Delay rate (us/s)	2.69365703635E-02	Apriori rate (us/s)	2.69361922744E-02	Resid rate (us/s)	3.78089E-07	+/-	3.8E-10
Total phase (deg)	97.9	Apriori accel (us/s/s)	-1.15601726945E-06	Resid phase (deg)	110.3	+/-	1.2

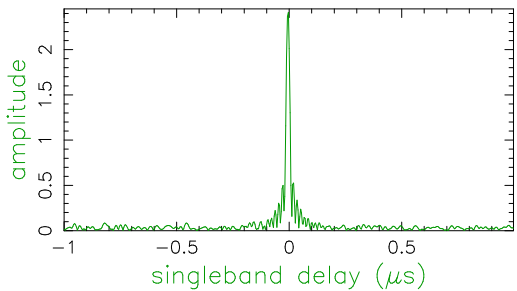
ph/seg (deg)	75.4	RMS	2.9	Theor.	2.539 +/- 0.027	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	100.2	Search (1024X32)	2.493	Interp.	0.000	PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	3.7	Inc. seg. avg.	4.334	Inc. frq. avg.	2.534	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	3.7	Inc. frq. avg.	2.534	Sample rate (MSamp/s):	128	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	dr window (ns/s)	-0.011 0.011
u:	az 29.6 el 18.1 pa -50.8	y:	az 29.1 el 18.9 pa -48.0	u,v (fr/asec)	-296.136 -277.861	ion window (TEC)	0.00	0.00	simultaneous interpolator		

multiband delay ( $\mu$ s)

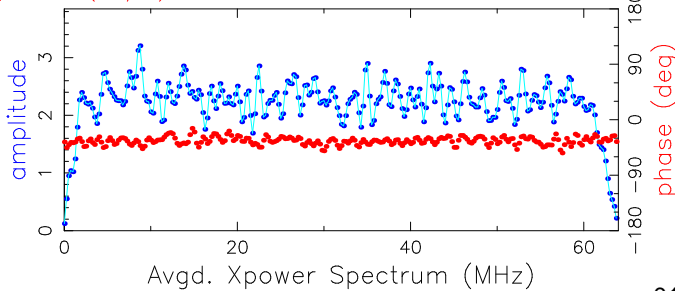


Fringe quality 5

SNR 89.9  
Int time 179.987  
Amp 2.450  
Phase -33.6  
PFD 0.0e+00  
Delays (us)  
SBD -0.005484  
MBD -0.005522  
Fringe rate (Hz)  
0.032620  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

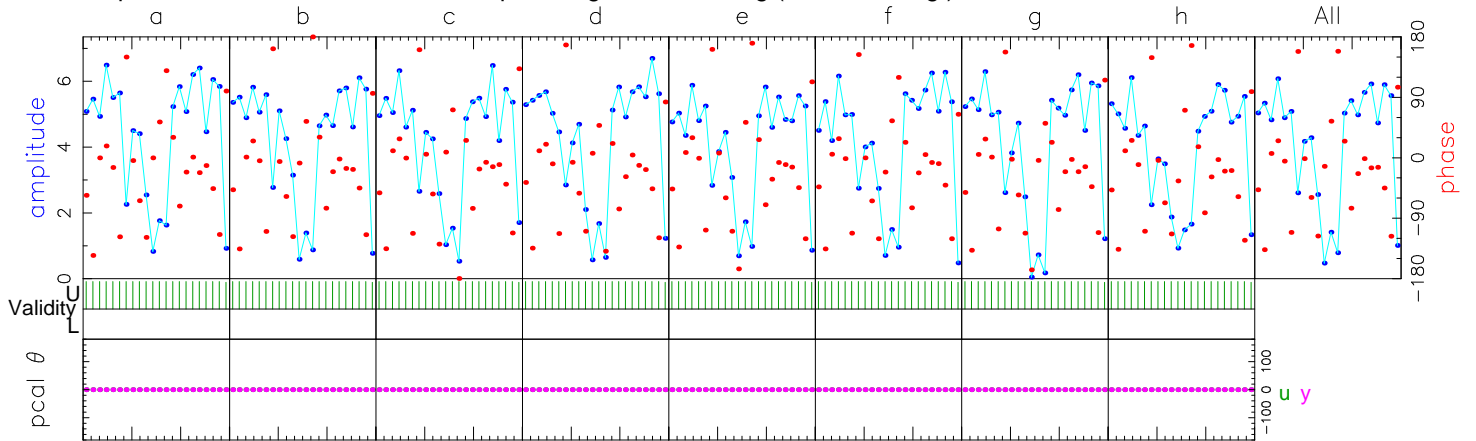


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133306  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

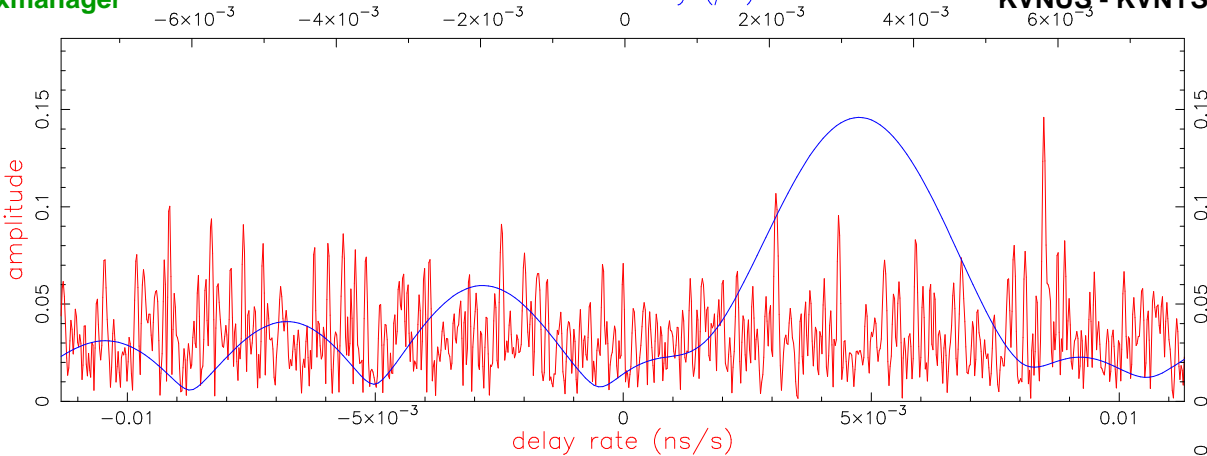
Amp. and Phase vs. time for each freq., 22 segs, 16 APs / seg (8.19 sec / seg.), time ticks 10 sec



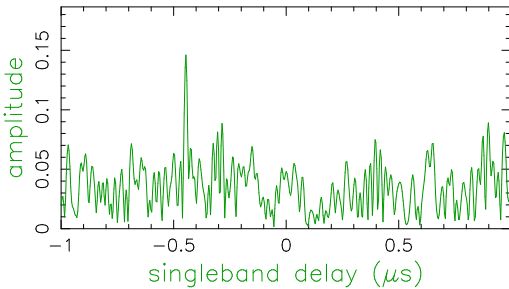
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0				
u	1000	1000	1000	1000	1000	1000	1000	1000	APs used			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
y	1000	1000	1000	1000	1000	1000	1000	1000				
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-2.93339235178E+02				-2.9333712959E+02				Resid mbdelay (usec)	-5.52222E-03 +/- 1.2E-05		
Sband delay (usec)	-2.93339196959E+02				1.2806067E+00				Resid sbdelay (usec)	-5.48400E-03 +/- 9.6E-05		
Phase delay (usec)	-2.9333714042E+02				2.9999999E-07				Resid phdelay (usec)	-1.08278E-06 +/- 4.1E-08		
Delay rate (us/s)	2.69365709601E-02				2.69361922744E-02				Resid rate (us/s)	3.78686E-07 +/- 4.0E-10		
Total phase (deg)			-45.9		-1.15601726945E-06				Resid phase (deg)	-33.6 +/- 1.3		
	RMS	Theor.	Amplitude	2.450 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	76.5	3.0	Search (1024X32)	2.360					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
amp/seg (%)	100.8	5.2	Interp.	0.000					Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
ph/frq (deg)	2.8	1.8	Inc. seg. avg.	4.172					Sample rate(MISamp/s): 128		dr window (ns/s) -0.011 0.011	
amp/frq (%)	5.4	3.1	Inc. frq. avg.	2.413					Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

multiband delay ( $\mu$ s)

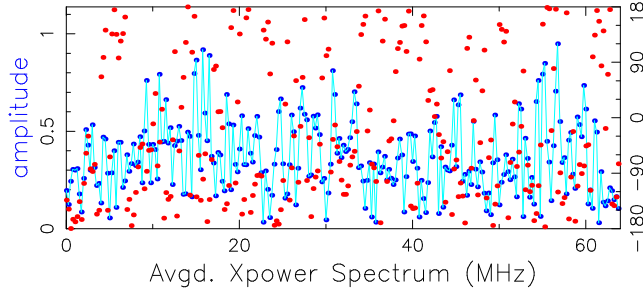
Fringe quality 0



SNR 5.4  
Int time 179.987  
Amp 0.187  
Phase 105.6  
PFD 1.0e+00  
Delays (us)  
SBD -0.446006  
MBD 0.003229  
Fringe rate (Hz) 0.730965  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512

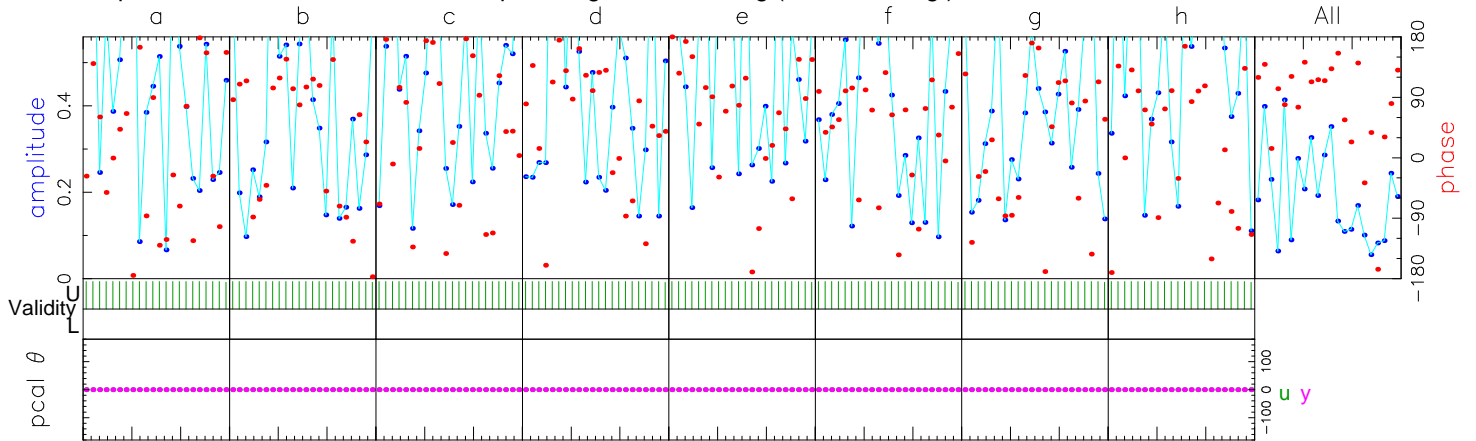


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133307  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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

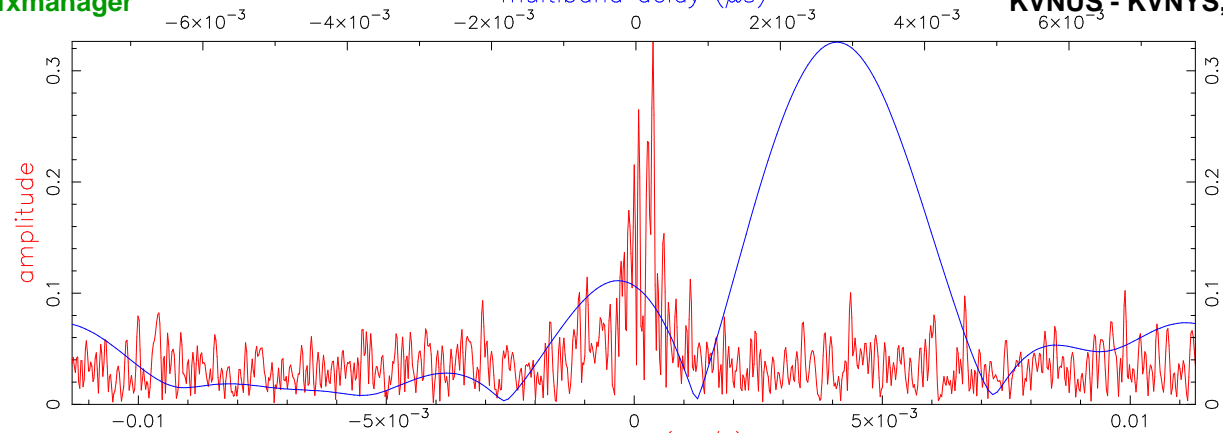


	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-170.9	115.5	99.8	100.9	99.8	84.7	138.6	118.2	Phase	105.6
	0.0	0.3	0.1	0.2	0.3	0.3	0.1	0.2	Ampl.	0.2
	326.0	110.5	364.6	480.1	164.5	26.2	242.7	129.8	Sbd box	142.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000		
u	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-2.93783608881E+02		Apriori delay (usec)		-2.93333712959E+02		Resid mbdelay (usec)		3.22908E-03	+/- 2.0E-04
Sband delay (usec)	-2.93779718959E+02		Apriori clock (usec)		1.2806067E+00		Resid sbdelay (usec)		-4.46006E-01	+/- 1.6E-03
Phase delay (usec)	-2.93333709555E+02		Apriori clockrate (us/s)		2.9999999E-07		Resid phdelay (usec)		3.40468E-06	+/- 6.9E-07
Delay rate (us/s)	2.69446780568E-02		Apriori rate (us/s)		2.69361922744E-02		Resid rate (us/s)		8.48578E-06	+/- 6.6E-09
Total phase (deg)			Apriori accel (us/s/s)		-1.15601726945E-06		Resid phase (deg)		105.6	+/- 21.3

	RMS	Theor.	Amplitude	0.187 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	55.0	50.0	Search (1024X32)	0.144	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	80.2	87.3	Interp.	0.000	Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	38.4	30.2	Inc. seg. avg.	0.181	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	51.4	52.6	Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00

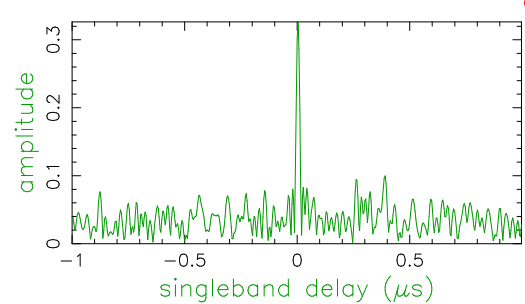
u: az 29.6 el 18.1 pa -50.8 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) -296.136 -277.861 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/uy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/uy.W.453.1HR3TY

multiband delay ( $\mu$ s)

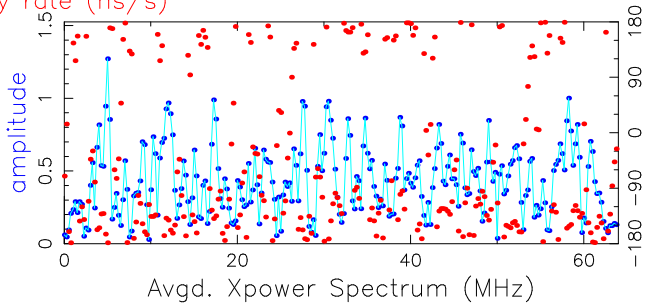


Fringe quality 9

SNR 12.0  
Int time 179.987  
Amp 0.326  
Phase -144.7  
PFD 1.3e-24  
Delays (us)  
SBD 0.003421  
MBD 0.002798  
Fringe rate (Hz)  
0.032315  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

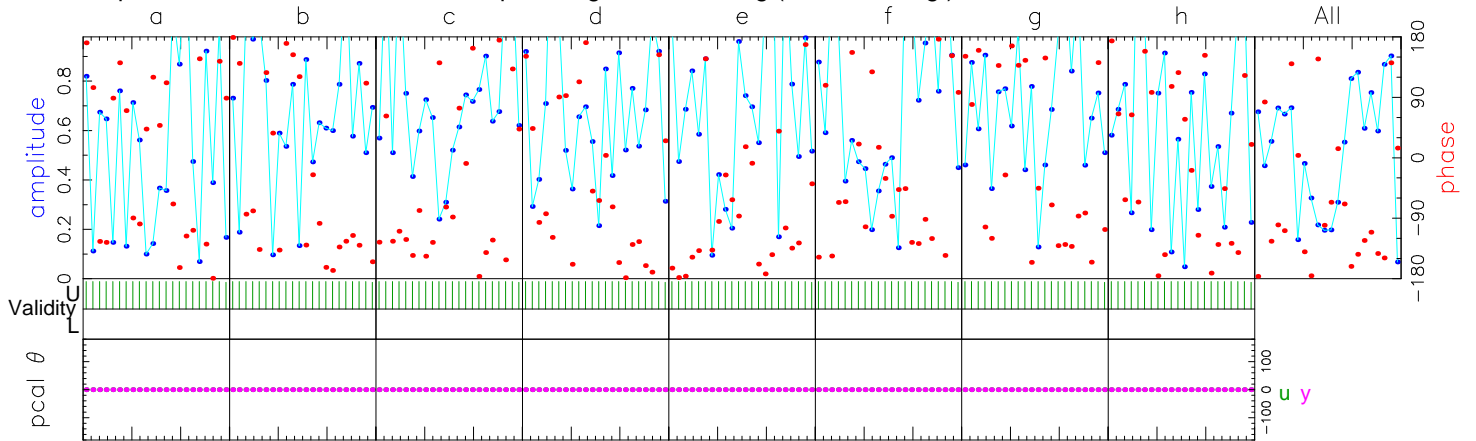


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133309  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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
	-146.2	-141.1	-148.1	-161.3	-139.6	-123.5	-150.9	-160.8	Phase	-144.7
	0.3	0.5	0.3	0.3	0.4	0.4	0.4	0.2	Ampl.	0.3
	257.7	258.3	257.7	258.9	257.8	257.8	257.5	281.6	Sbd box	257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
u:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
u	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
u	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-2.93330914740E+02	Apriori delay (usec)	-2.93333712959E+02	Resid mbdelay (usec)	2.79822E-03	+/-	9.1E-05
Sband delay (usec)	-2.93330292209E+02	Apriori clock (usec)	1.2806067E+00	Resid sbdelay (usec)	3.42075E-03	+/-	7.2E-04
Phase delay (usec)	-2.93333717627E+02	Apriori clockrate (us/s)	2.9999999E-07	Resid phdelay (usec)	-4.66740E-06	+/-	3.1E-07
Delay rate (us/s)	2.69365674159E-02	Apriori rate (us/s)	2.69361922744E-02	Resid rate (us/s)	3.75142E-07	+/-	3.0E-09
Total phase (deg)	-157.1	Apriori accel (us/s/s)	-1.15601726945E-06	Resid phase (deg)	-144.7	+/-	9.6

ph/seg (deg)	RMS 75.9	Theor. 22.4	Amplitude Search (1024X32)	0.326 +/- 0.027	0.320	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000	
amp/seg (%)	97.8	39.2	Interp.	0.000	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	13.4	13.5	Inc. seg. avg.	0.491	0.491	Bits/sample: 2x2	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011	0.011	
amp/frq (%)	22.8	23.6	Inc. frq. avg.	0.323	0.323	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

u: az 29.6 el 18.1 pa -50.8 y: az 29.1 el 18.9 pa -48.0 u,v (fr/asec) -296.136 -277.861 simultaneous interpolator  
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/uy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/uy.W.471.1HR3TY



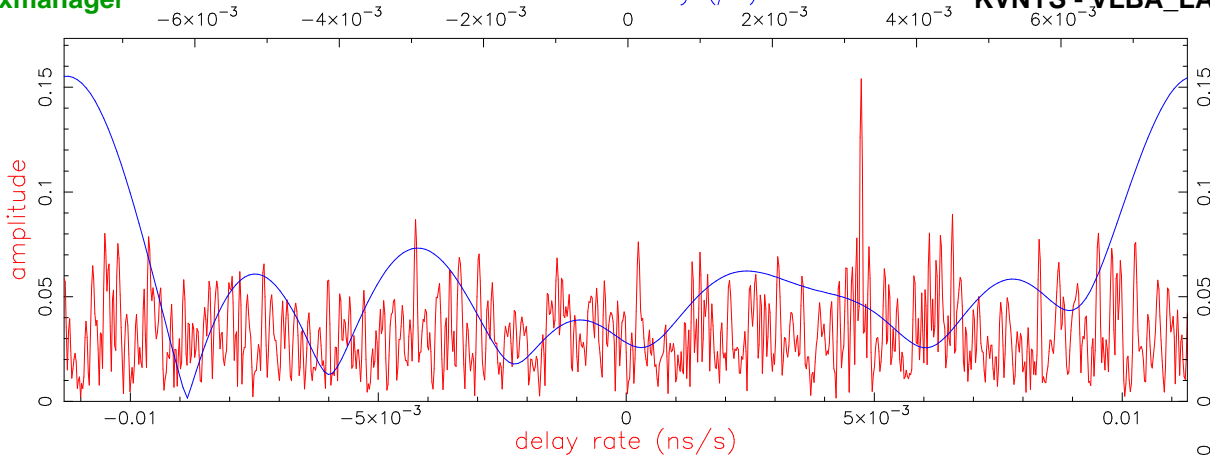
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yl

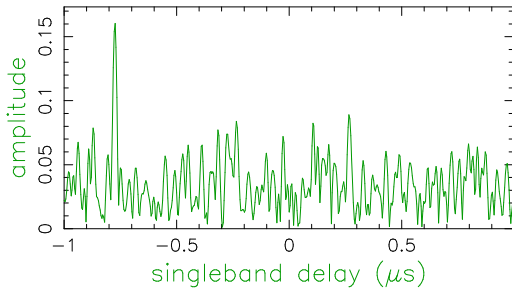
KVNYS - VLBA\_LA, fgroup W, pol LL

multiband delay ( $\mu$ s)

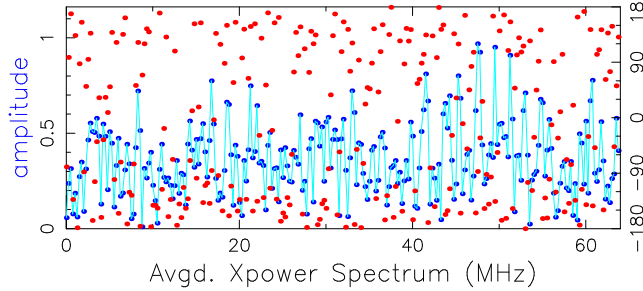


Fringe quality 0

SNR 5.9  
 Int time 179.974  
 Amp 0.173  
 Phase 164.5  
 PFD 3.5e-01  
 Delays (us)  
 SBD -0.774368  
 MBD 0.007981  
 Fringe rate (Hz)  
 0.408814  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

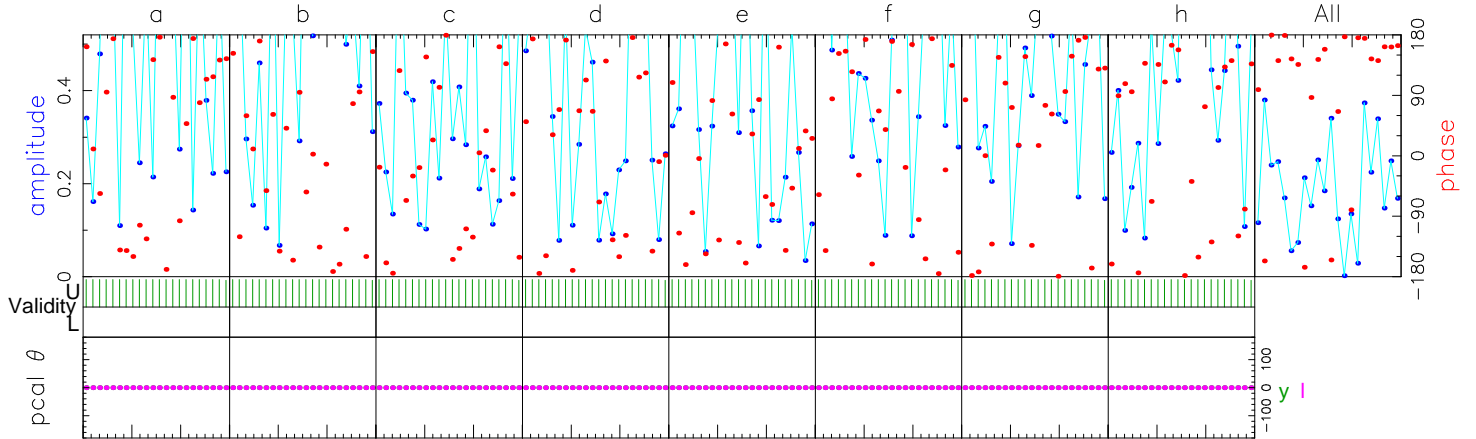


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133304  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.25819355994E+04	Apriori delay (usec)	-1.25811623304E+04	Resid mbdelay (usec)	7.98097E-03	+/-	1.8E-04
Sband delay (usec)	-1.25819366984E+04	Apriori clock (usec)	1.6257381E+00	Resid sbdelay (usec)	-7.74368E-01	+/-	1.5E-03
Phase delay (usec)	-1.25811623251E+04	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	5.30373E-06	+/-	6.3E-07
Delay rate (us/s)	6.71718913538E-01	Apriori rate (us/s)	6.71714167614E-01	Resid rate (us/s)	4.74592E-06	+/-	6.0E-09
Total phase (deg)	113.3	Apriori accel (us/s/s)	6.93019029356E-05	Resid phase (deg)	164.5	+/-	19.4

ph/seg (deg)	43.4	Theor.	45.5	Amplitude	0.173 +/- 0.029	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	67.5		79.4	Search (1024X32)	0.152	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	40.4		27.4	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	37.6		47.9	Inc. seg. avg.	0.157	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.169	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

y: az 29.1 el 18.9 pa -48.0 l: az 348.7 el 66.6 pa 162.6 u,v (fr/asec) -7308.214 9034.215 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl.W.420.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

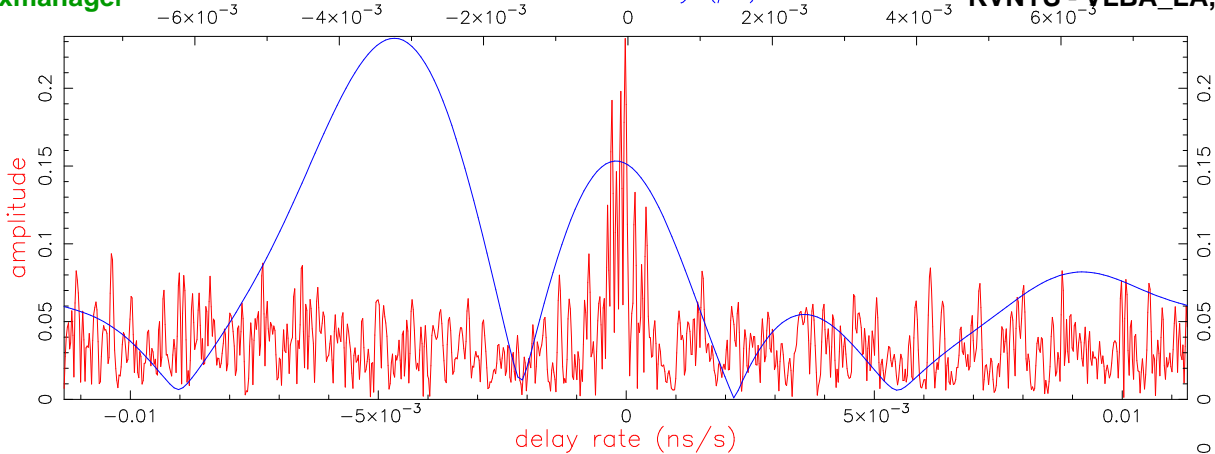
fxmanager

0102+584.1HR3TY, No0103, yl

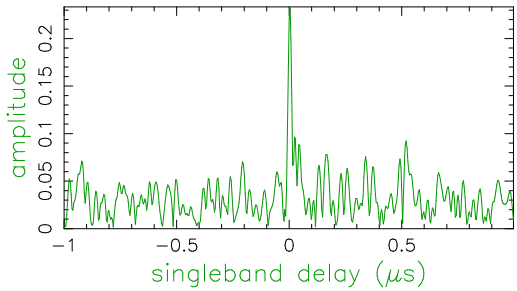
KVNYS - VLBA\_LA, fgroup W, pol RR

multiband delay ( $\mu$ s)

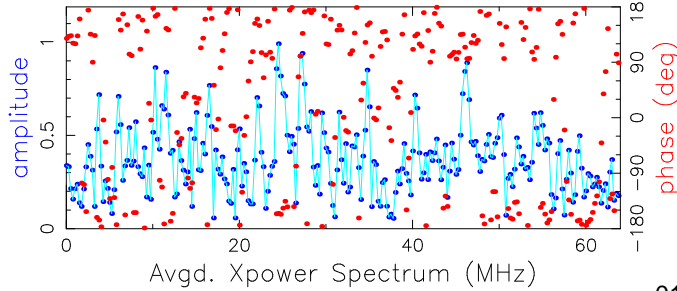
Fringe quality 9



SNR 8.6  
 Int time 179.974  
 Amp 0.233  
 Phase -128.2  
 PFD 2.0e-09  
 Delays (us)  
 SBD 0.002956  
 MBD -0.003285  
 Fringe rate (Hz)  
 -0.001342  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

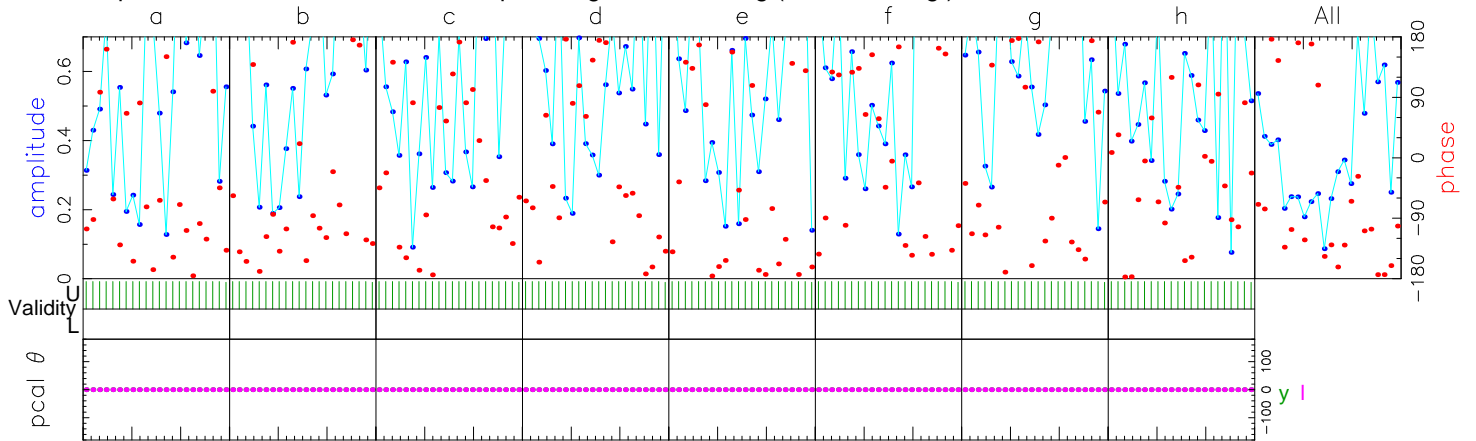


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133305  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-129.1	-126.8	-88.6	-115.3	-176.7	-151.3	-124.8	-37.1	Phase	-128.2
	0.3	0.5	0.2	0.3	0.3	0.2	0.3	0.2	Ampl.	0.3
	261.1	257.1	234.1	249.6	257.6	202.1	258.1	261.3	Sbd box	257.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
l	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
l	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.25811656151E+04				-1.25811623304E+04				Resid mbdelay (usec)	-3.28467E-03 +/- 1.3E-04
Sband delay (usec)	-1.25811593747E+04				1.6257381E+00				Resid sbdelay (usec)	2.95575E-03 +/- 1.0E-03
Phase delay (usec)	-1.25811623346E+04				1.999998E-07				Resid phdelay (usec)	-4.13370E-06 +/- 4.3E-07
Delay rate (us/s)	6.71714152035E-01				6.71714167614E-01				Resid rate (us/s)	-1.55783E-08 +/- 4.1E-09
Total phase (deg)			-179.4		6.93019029356E-05				Resid phase (deg)	-128.2 +/- 13.4
	RMS	Theor.	Amplitude	0.233 +/- 0.027					PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	53.4	31.4	Search (1024X32)	0.225					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	100.8	54.8	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	46.4	18.9	Inc. seg. avg.	0.329					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	42.1	33.0	Inc. frq. avg.	0.261					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
									nlags: 256	t_cohere infinite
y: az 29.1 el 18.9 pa -48.0			l: az 348.7 el 66.6 pa 162.6		u,v (fr/asec) -7308.214 9034.215					simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl.W.435.1HR3TY

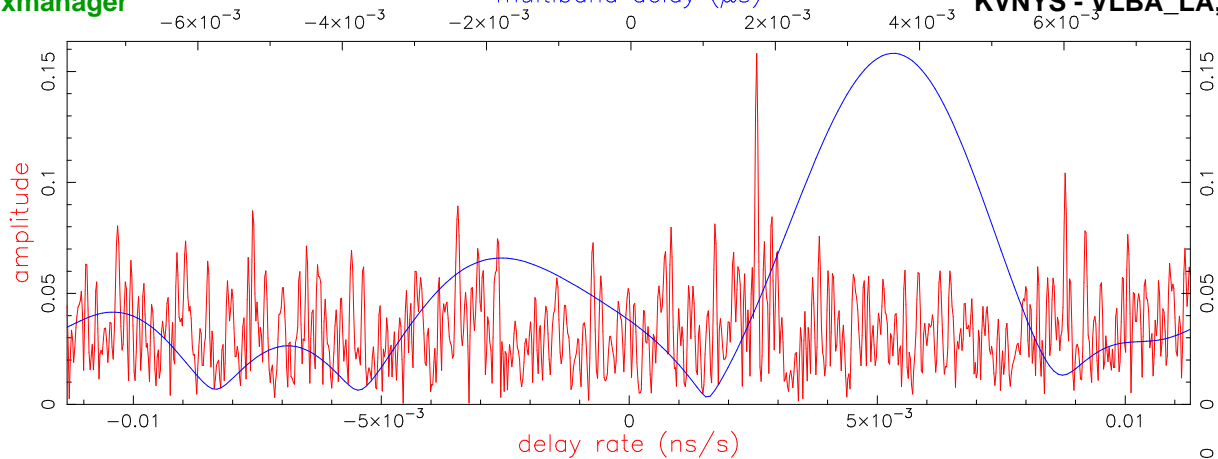
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yl

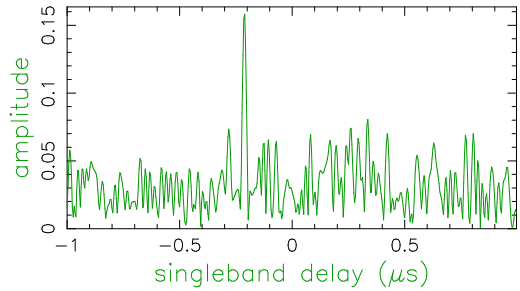
KVNYS - VLBA\_LA, fgroup W, pol LR

multiband delay ( $\mu$ s)

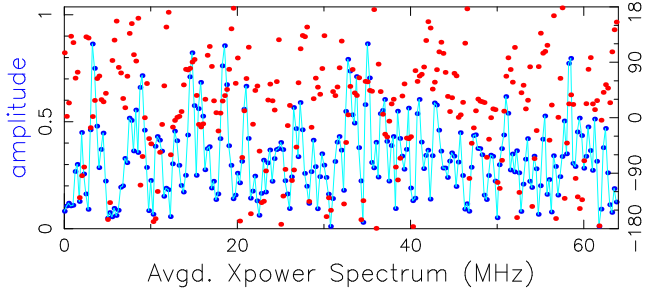


Fringe quality 0

SNR 5.9  
Int time 179.974  
Amp 0.164  
Phase 72.9  
PFD 4.2e-01  
Delays (us)  
SBD -0.212438  
MBD 0.003675  
Fringe rate (Hz)  
0.222491  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

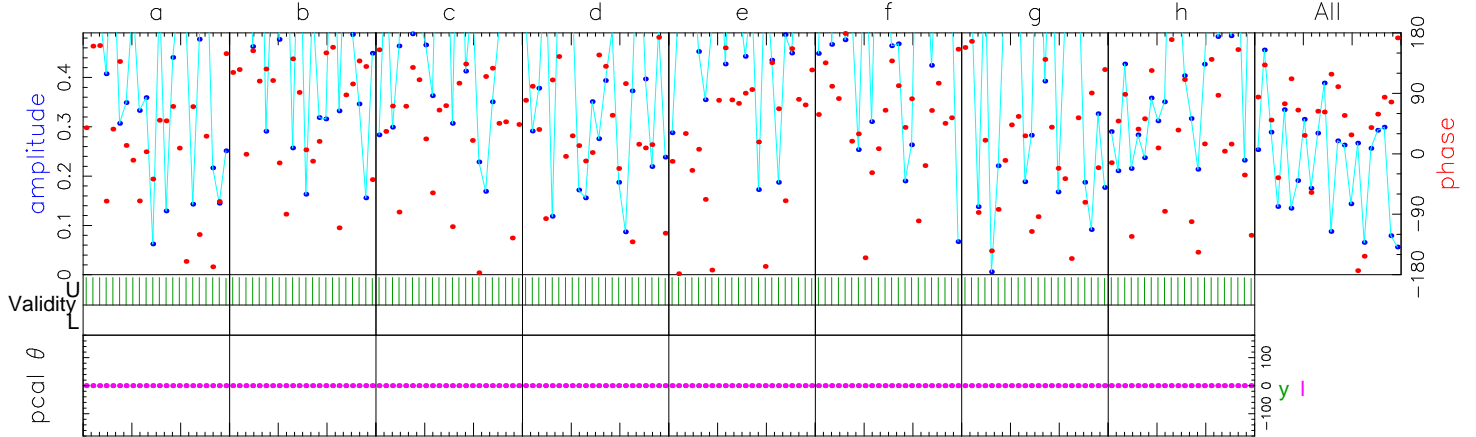


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133308  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
l	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-1.25813774054E+04	Apriori delay (usec)	-1.25811623304E+04	Resid mbdelay (usec)	3.67503E-03	+/-	1.8E-04
Sband delay (usec)	-1.25813747682E+04	Apriori clock (usec)	1.6257381E+00	Resid sbdelay (usec)	-2.12438E-01	+/-	1.5E-03
Phase delay (usec)	-1.25811623281E+04	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	2.34981E-06	+/-	6.3E-07
Delay rate (us/s)	6.71716750509E-01	Apriori rate (us/s)	6.71714167614E-01	Resid rate (us/s)	2.58290E-06	+/-	6.0E-09
Total phase (deg)	21.7	Apriori accel (us/s/s)	6.93019029356E-05	Resid phase (deg)	72.9	+/-	19.5

ph/seg (deg)	61.8	Theor.	45.8	Amplitude	0.164 +/- 0.028	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	78.9	Search (1024X32)	0.153	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	32.4	Inc. seg. avg.	0.178	Inc. frq. avg.	0.157	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	46.8	Inc. frq. avg.	0.157			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
y: az 29.1 el 18.9 pa -48.0		l: az 348.7 el 66.6 pa 162.6		u,v (fr/asec)	-7308.214 9034.215	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/c202a/v1/v1\_3mm/1234/No0103/yl..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl.W.454.1HR3TY

simultaneous interpolator

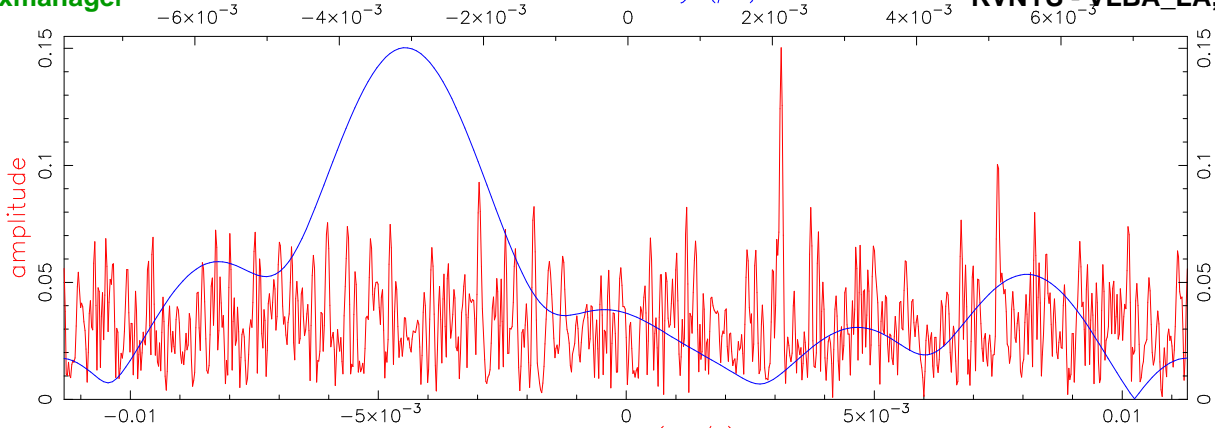
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

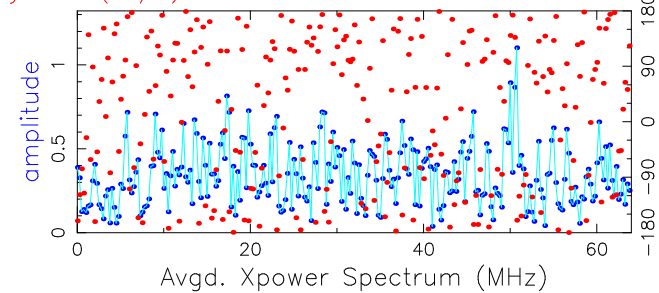
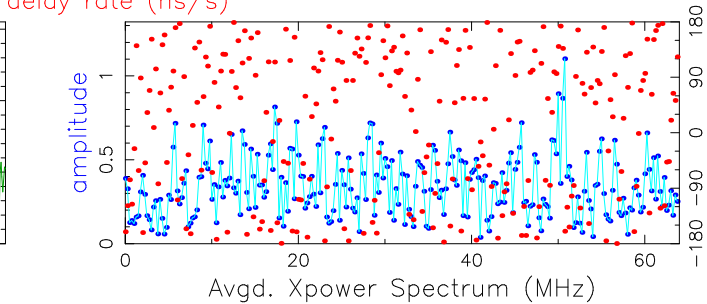
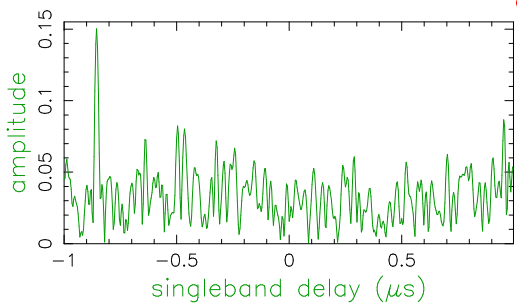
0102+584.1HR3TY, No0103, yl

KVNYS - VLBA\_LA, fgroup W, pol RL

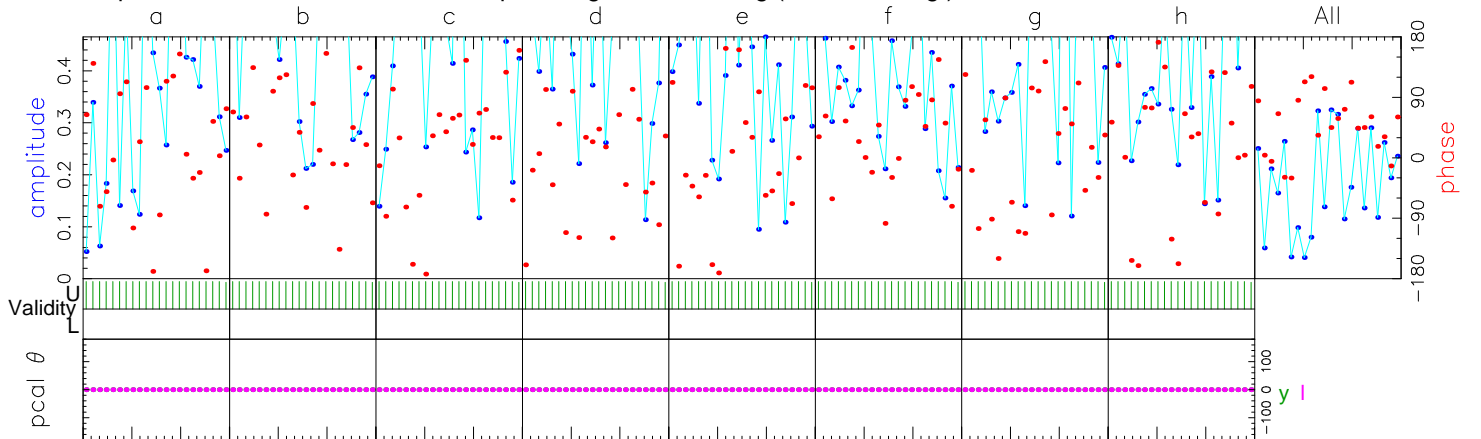
multiband delay ( $\mu$ s)



Fringe quality 0  
 SNR 5.5  
 Int time 179.974  
 Amp 0.155  
 Phase 46.7  
 PFD 9.8e-01  
 Delays (us)  
 SBD -0.855730  
 MBD -0.003086  
 Fringe rate (Hz)  
 0.268829  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133310  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:l	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
l	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
l	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.25820247913E+04	Apriori delay (usec)	-1.25811623304E+04	Resid mbdelay (usec)	-3.08584E-03	+/-	2.0E-04
Sband delay (usec)	-1.25820180602E+04	Apriori clock (usec)	1.6257381E+00	Resid sbdelay (usec)	-8.55730E-01	+/-	1.6E-03
Phase delay (usec)	-1.25811623289E+04	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.50587E-06	+/-	6.7E-07
Delay rate (us/s)	6.711717288453E-01	Apriori rate (us/s)	6.711714167614E-01	Resid rate (us/s)	3.12084E-06	+/-	6.4E-09
Total phase (deg)	-4.5	Apriori accel (us/s/s)	6.93019029356E-05	Resid phase (deg)	46.7	+/-	20.8

ph/seg (deg) 44.2 48.7 Search (1024X32) 0.149 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 66.3 85.0 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 33.0 29.4 Inc. seg. avg. 0.142 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.7 51.3 Inc. frq. avg. 0.153 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 l: az 348.7 el 66.6 pa 162.6 u,v (fr/asec) -7308.214 9034.215 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yl.W.473.1HR3TY

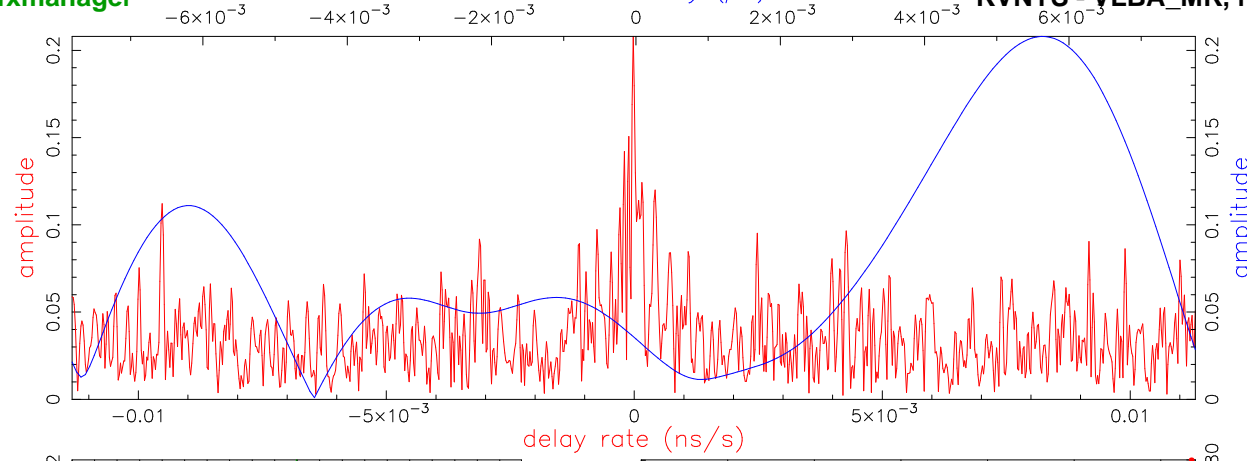
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ym

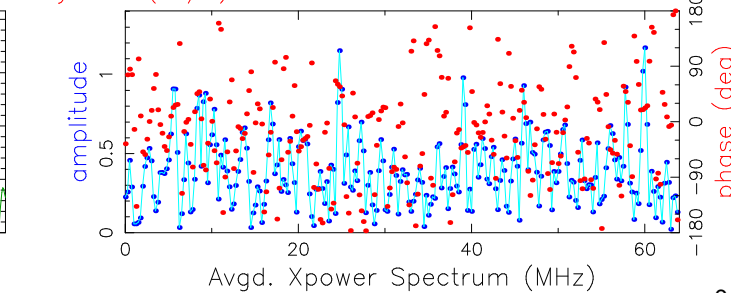
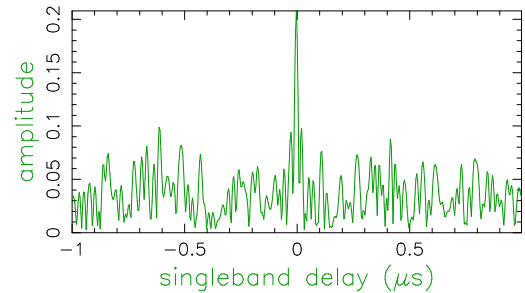
KVNYS - VLBA\_MK, fgroup W, pol LL

multiband delay ( $\mu$ s)



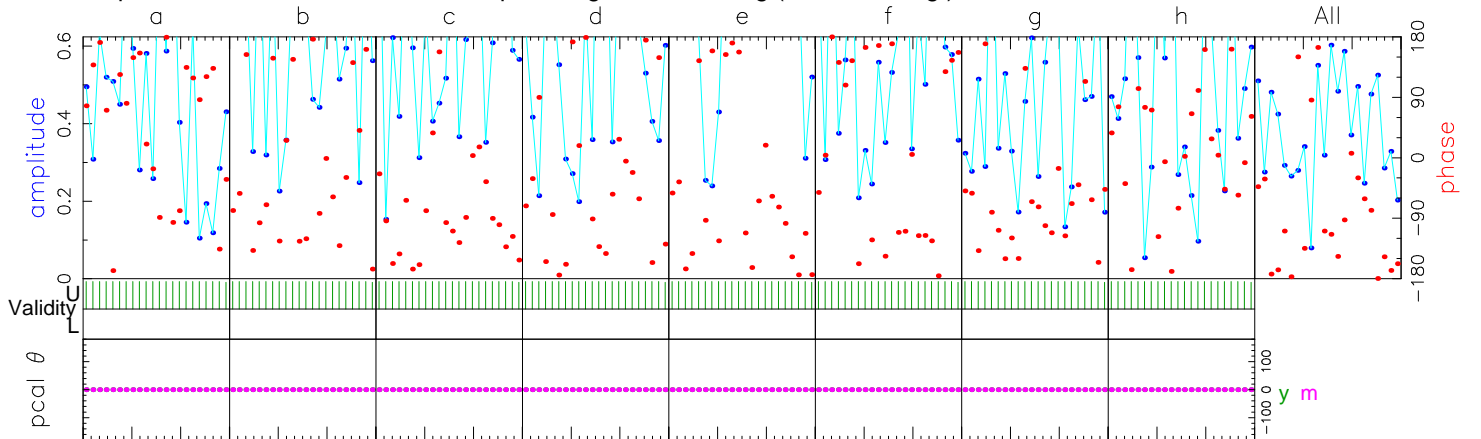
Fringe quality 9

SNR 7.6  
 Int time 179.980  
 Amp 0.208  
 Phase -125.9  
 PFD 3.8e-06  
 Delays (us)  
 SBD -0.004012  
 MBD 0.005624  
 Fringe rate (Hz)  
 -0.001474  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133304  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-7.22919612371E+03	Apriori delay (usec)	-7.22918612297E+03	Resid mbdelay (usec)	5.62426E-03	+/-	1.4E-04
Sband delay (usec)	-7.22919013497E+03	Apriori clock (usec)	-1.2118999E+01	Resid sbdelay (usec)	-4.01200E-03	+/-	1.1E-03
Phase delay (usec)	-7.22918612703E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-4.05879E-06	+/-	4.8E-07
Delay rate (us/s)	7.60670462864E-02	Apriori rate (us/s)	7.60670634009E-02	Resid rate (us/s)	-1.71145E-08	+/-	4.7E-09
Total phase (deg)	-353.6	Apriori accel (us/s/s)	6.43784800231E-05	Resid phase (deg)	-125.9	+/-	15.0

ph/seg (deg)	66.7	Theor.	35.2	Amplitude	0.208 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	106.4		61.5	Search (1024X32)	0.204	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	64.9		21.2	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	57.1		37.1	Inc. seg. avg.	0.322	Sample rate(MISamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.233	Data rate(Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

y: az 29.1 el 18.9 pa -48.0 m: az 27.0 el 41.5 pa -125.0 u,v (fr/asec) -782.555 9509.471 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym.W.423.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

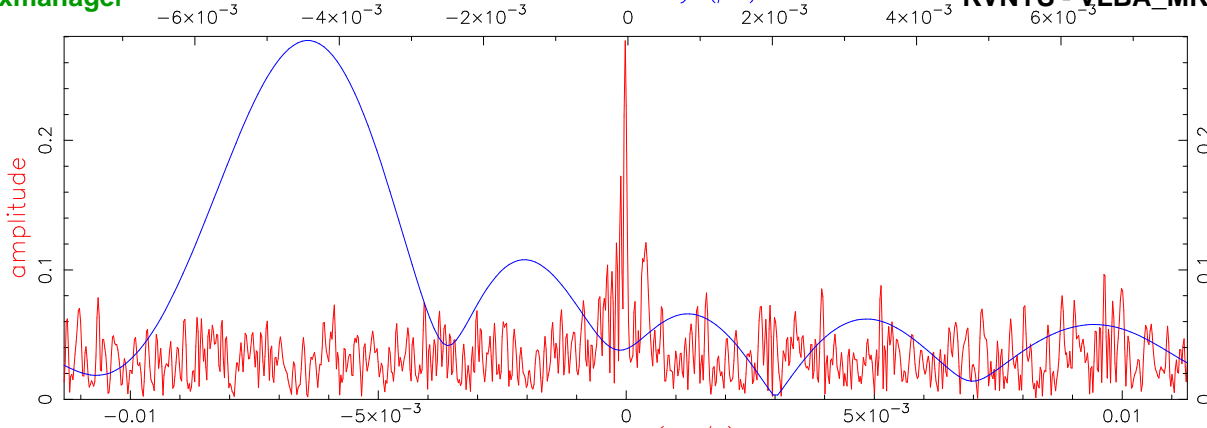
fxmanager

0102+584.1HR3TY, No0103, ym

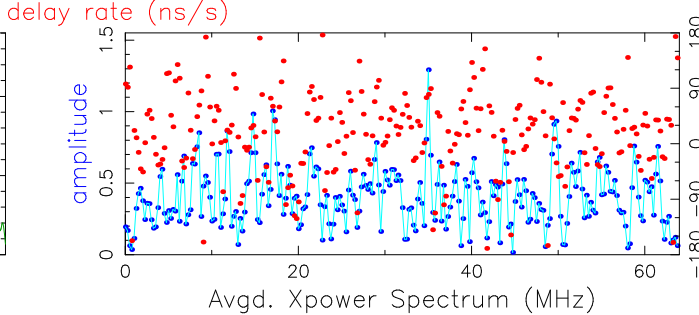
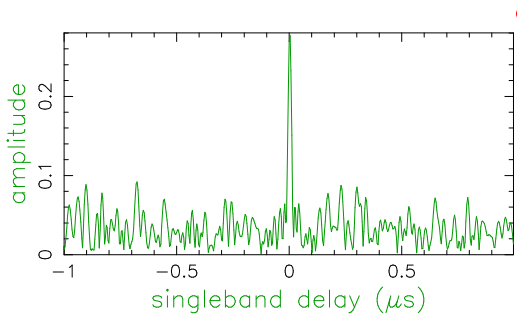
KVNS - VLBA\_MK, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 9

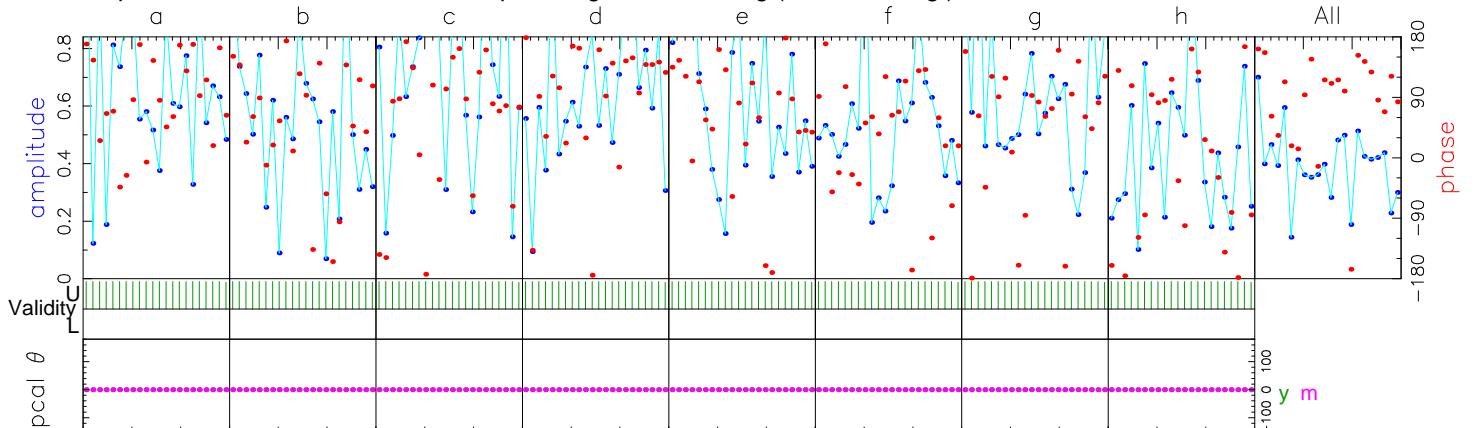


SNR 10.3  
 Int time 179.980  
 Amp 0.280  
 Phase 107.5  
 PFD 1.8e-16  
 Delays (us)  
 SBD 0.002526  
 MBD -0.004488  
 Fringe rate (Hz)  
 -0.001351  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133306  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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						
y	1000	1000	1000	1000	1000	1000	1000	1000	APs used					
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs					
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase					
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC					
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp					
m	1000	1000	1000	1000	1000	1000	1000	1000						
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids					
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks					
									Chan ids					
									Tracks					
Group delay (usec)(sbd)	-7.22919061080E+03								Apriori delay (usec)	-7.22918612297E+03	Resid mbdelay (usec)	-4.48783E-03	+/-	1.1E-04
Sband delay (usec)	-7.22918359747E+03								Apriori clock (usec)	-1.2118999E+01	Resid sbdelay (usec)	2.52550E-03	+/-	8.4E-04
Phase delay (usec)	-7.22918611950E+03								Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	3.46671E-06	+/-	3.6E-07
Delay rate (us/s)	7.60670477135E-02								Apriori rate (us/s)	7.60670634009E-02	Resid rate (us/s)	-1.56875E-08	+/-	3.5E-09
Total phase (deg)			-120.2						Apriori accel (us/s/s)	6.43784800231E-05	Resid phase (deg)	107.5	+/-	11.1

ph/seg (deg) 52.4 26.1 Amplitude 0.280 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 61.1 45.6 Search (1024X32) 0.272 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 28.8 15.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 33.6 27.5 Inc. seg. avg. 0.362 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 m: az 27.0 el 41.5 pa -125.0 u,v (fr/asec) -782.555 9509.471 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00  
 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym.W.443.1HR3TY

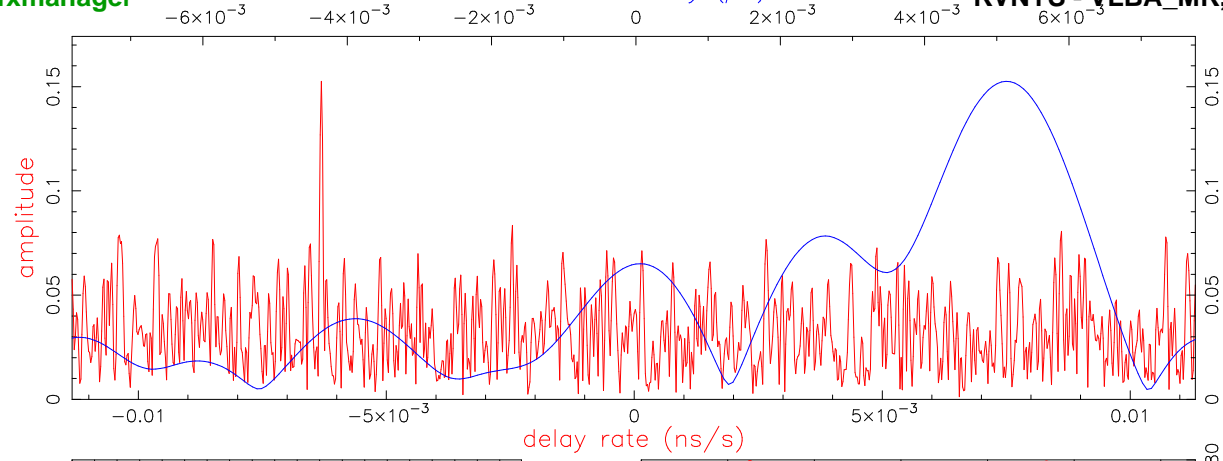
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, ym

KVNYS - VLBA\_MK, fgroup W, pol LR

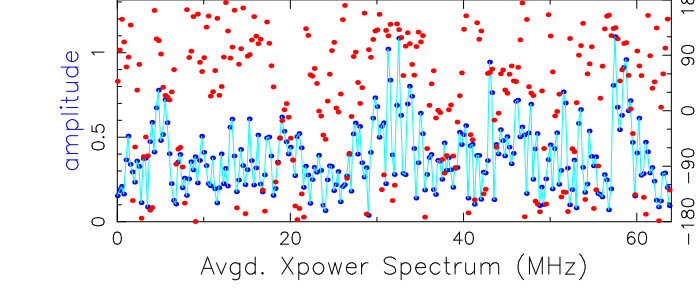
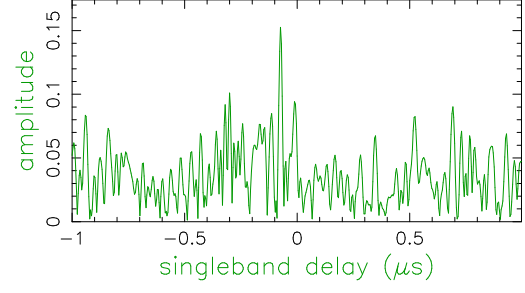
multiband delay ( $\mu$ s)



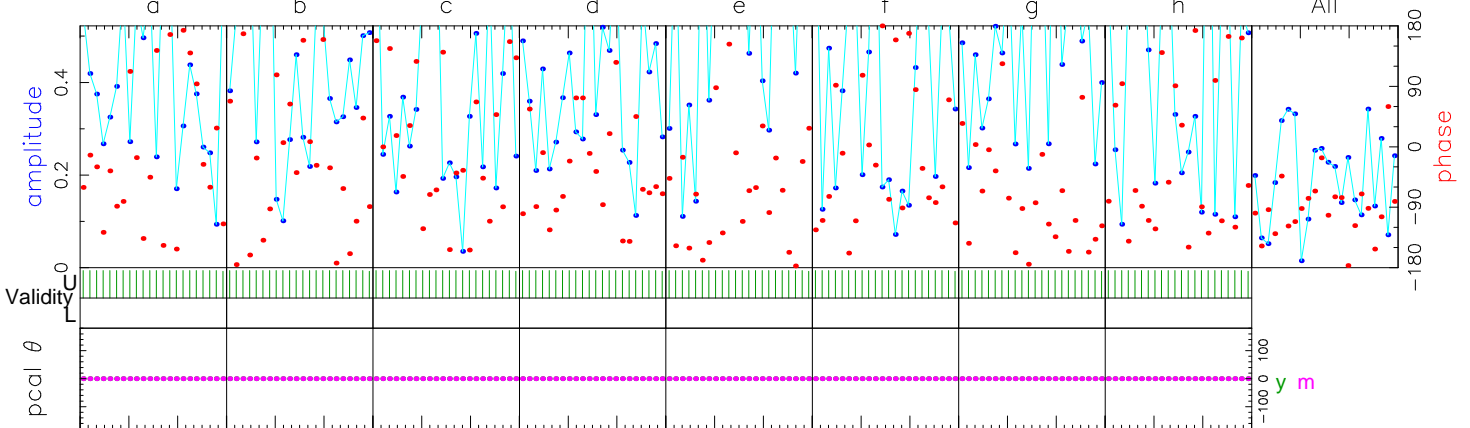
Fringe quality 0

SNR 5.6  
 Int time 179.980  
 Amp 0.174  
 Phase -93.8  
 PFD 9.2e-01  
 Delays (us)  
 SBD -0.073828  
 MBD 0.005142  
 Fringe rate (Hz) -0.543939  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512

Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133308  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"



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
	-96.1	-127.5	-126.3	-45.4	-90.1	-69.1	-93.2	-118.9	Phase	-93.8
	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	Ampl.	0.2
	1.6	189.5	16.5	408.3	379.1	453.1	114.8	220.7	Sbd box	238.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
m	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-7.22925910637E+03					-7.22918612297E+03			Resid mbdelay (usec)	5.14160E-03 +/- 1.9E-04
Sband delay (usec)	-7.22925995072E+03					-1.2118999E+01			Resid sbdelay (usec)	-7.38278E-02 +/- 1.5E-03
Phase delay (usec)	-7.22918612599E+03					0.0000000E+00			Resid phdelay (usec)	-3.02475E-06 +/- 6.6E-07
Delay rate (us/s)	7.60607488077E-02					7.60670634009E-02			Resid rate (us/s)	-6.31459E-06 +/- 6.3E-09
Total phase (deg)			-321.5			6.43784800231E-05			Resid phase (deg)	-93.8 +/- 20.5
									PCal mode: MANUAL, MANUAL	PC period (AP's) 5, 5
ph/seg (deg)	48.0	48.0	Search (1024X32)	0.174 +/- 0.031					PCal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000
amp/seg (%)	69.1	83.7	Interp.	0.000					Bits/sample: 2x2	mb window (us) -0.008 0.008
ph/frq (deg)	31.1	28.9	Inc. seg. avg.	0.164					Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011
amp/frq (%)	31.1	50.5	Inc. frq. avg.	0.171					Data rate(Mb/s): 2048	ion window (TEC) 0.00 0.00
y: az 29.1 el 18.9 pa -48.0		m: az 27.0 el 41.5 pa -125.0		u,v (fr/asec) -782.555 9509.471					nlags: 256 t_cohere infinite	simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym.W.460.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

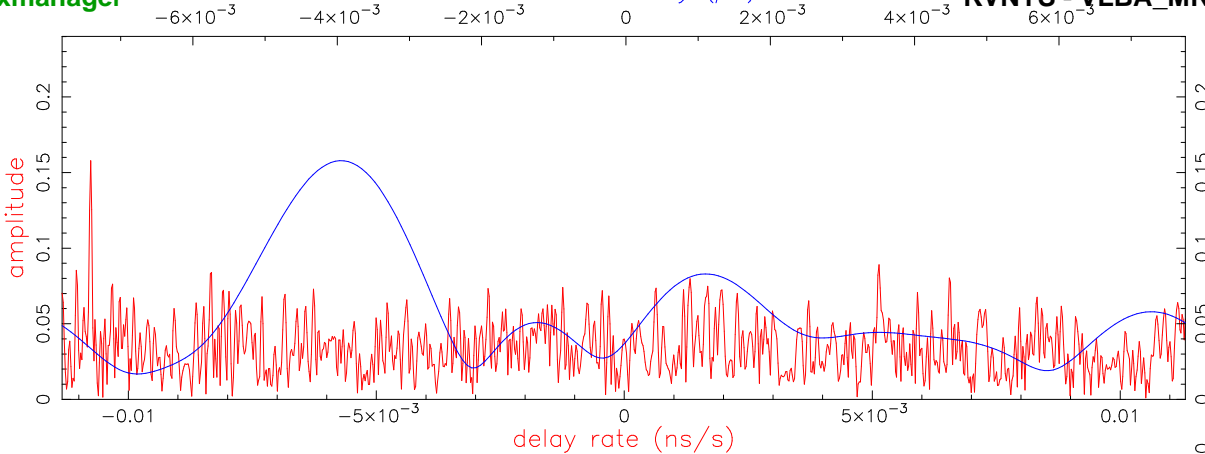
fxmanager

0102+584.1HR3TY, No0103, ym

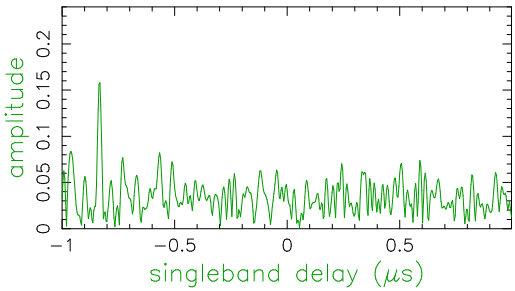
KVNYS - VLBA\_MK, fgroup W, pol RL

multiband delay ( $\mu$ s)

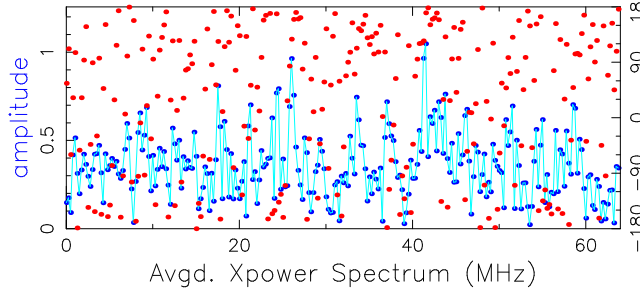
Fringe quality 0



SNR 5.9  
 Int time 179.980  
 Amp 0.240  
 Phase -64.3  
 PFD 4.0e-01  
 Delays (us)  
 SBD -0.833686  
 MBD -0.003943  
 Fringe rate (Hz)  
 -0.928121  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

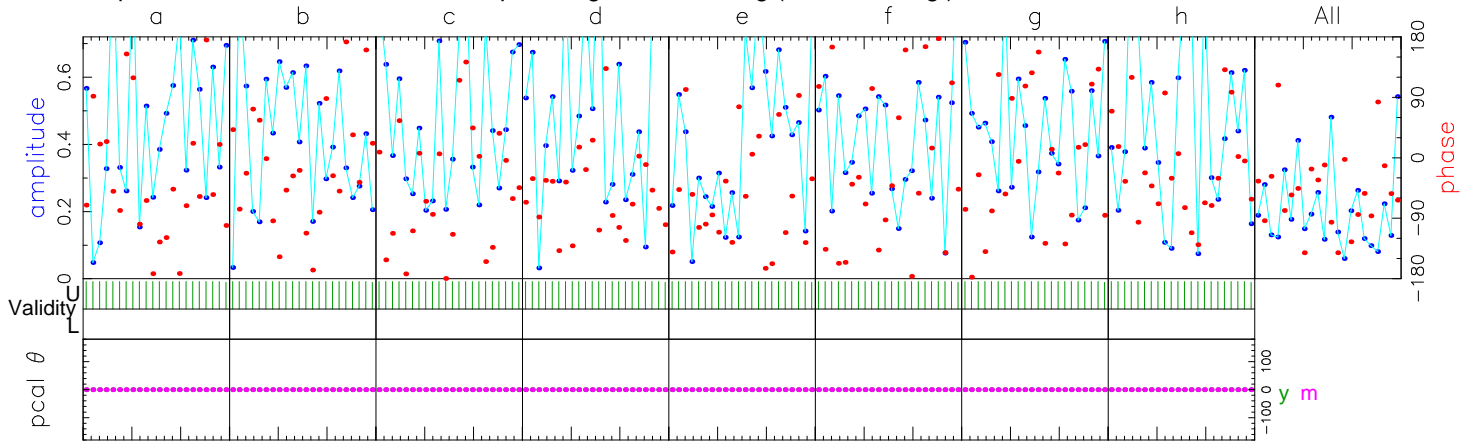


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133310  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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



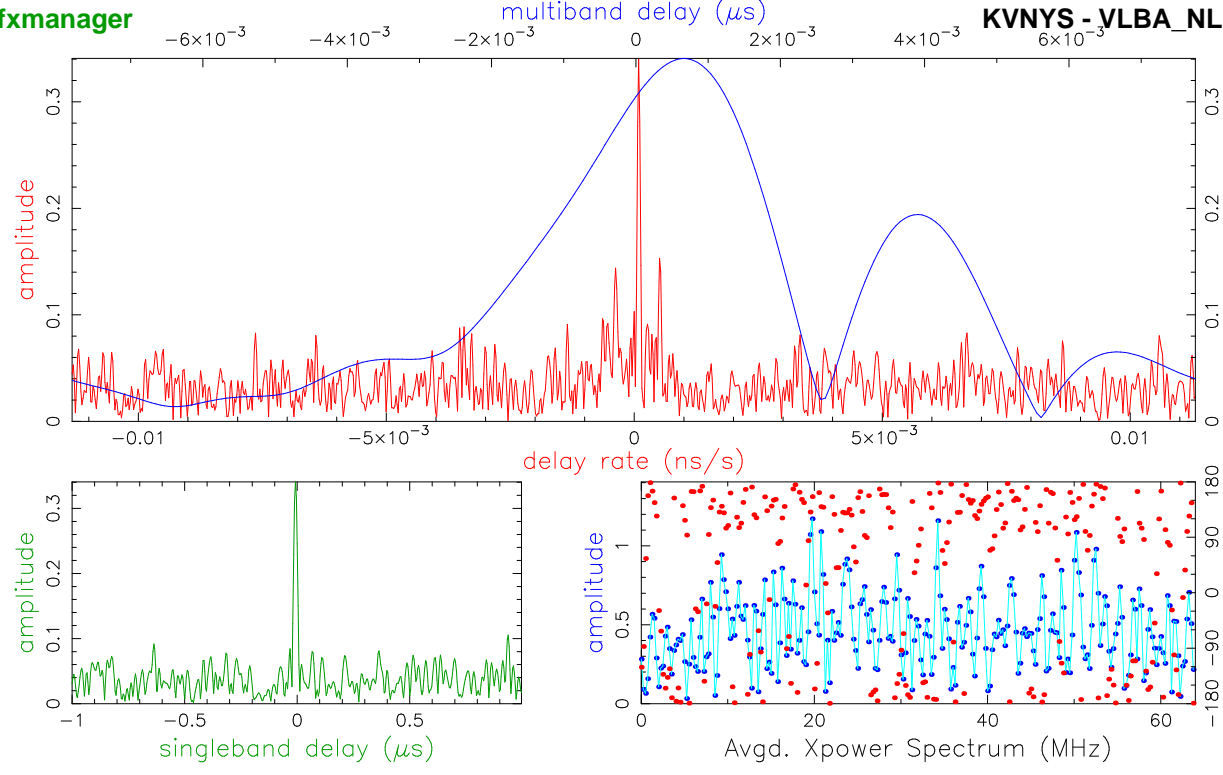
	86012.00	86076.00	86140.00	86204.00	86268.00	86332.00	86396.00	86460.00	Freq (MHz)	All
	-74.4	-54.6	-50.4	-58.7	-53.2	-121.8	-84.3	-41.3	Phase	-64.3
	0.3	0.3	0.1	0.6	0.2	0.2	0.2	0.3	Ampl.	0.2
	204.5	212.9	365.0	43.3	152.4	409.8	49.2	345.7	Sbd box	43.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
m	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:m	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
m	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
m	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-7.23001819118E+03	Apriori delay (usec)	-7.22918612297E+03	Resid mbdelay (usec)	-3.94321E-03	+/-	1.8E-04
Sband delay (usec)	-7.23001980847E+03	Apriori clock (usec)	-1.2118999E+01	Resid sbdelay (usec)	-8.33686E-01	+/-	1.5E-03
Phase delay (usec)	-7.22918612504E+03	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	-2.07390E-06	+/-	6.3E-07
Delay rate (us/s)	7.60562888414E-02	Apriori rate (us/s)	7.60670634009E-02	Resid rate (us/s)	-1.07746E-05	+/-	6.0E-09
Total phase (deg)	-292.0	Apriori accel (us/s/s)	6.43784800231E-05	Resid phase (deg)	-64.3	+/-	19.5

ph/seg (deg)	62.4	Theor.	45.7	Amplitude	0.240 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	84.6	Search (1024X32)	0.150	Interp.	0.000	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	28.2	Inc. seg. avg.	0.242	Inc. frq. avg.	0.227	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	55.5	Inc. frq. avg.	0.227			Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
y: az 29.1 el 18.9 pa -48.0		m: az 27.0 el 41.5 pa -125.0		u,v (fr/asec)	-782.555 9509.471	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

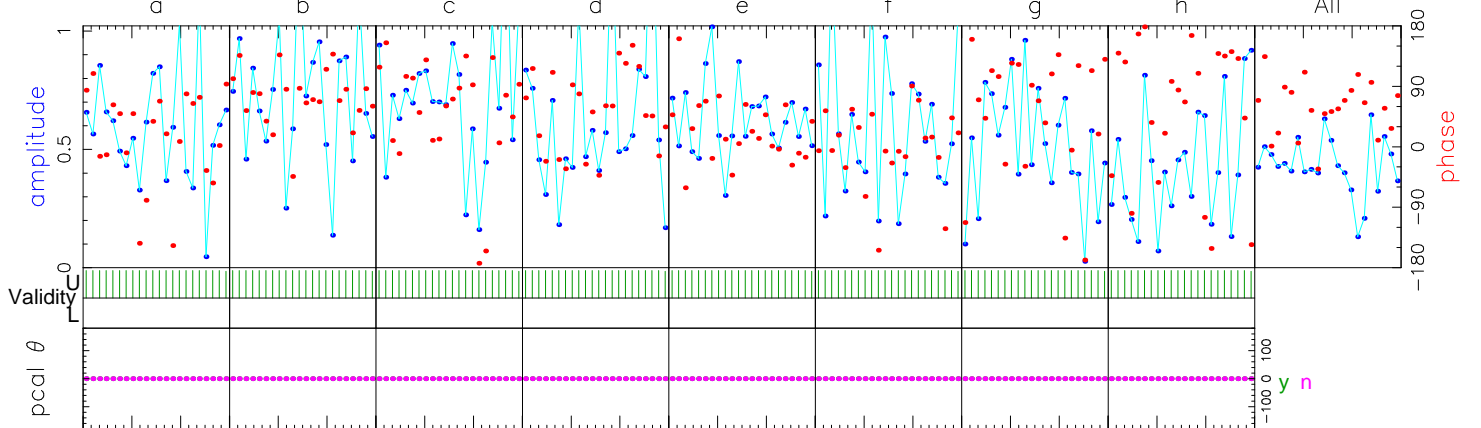
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/ym.W.479.1HR3TY simultaneous interpolator





Fringe quality 9  
SNR 12.5  
Int time 179.974  
Amp 0.341  
Phase 57.7  
PFD 1.9e-27  
Delays (us)  
SBD -0.007592  
MBD 0.000676  
Fringe rate (Hz) 0.007891  
Ion TEC 0.000  
Ref freq (MHz) 86140.0000  
AP (sec) 0.512  
Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133304  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000	Ampl.	0.4
n	1000	1000	1000	1000	1000	1000	1000	1000	Sbd box	255.1
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	APs used	
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC phase	
n	1000	1000	1000	1000	1000	1000	1000	1000	Mani PC	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	PC amp	
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
									Tracks	
Group delay (usec)(sbd)	-1.27389501996E+04				-1.27389352502E+04				Resid mbdelay (usec)	6.75605E-04 +/- 8.7E-05
Sband delay (usec)	-1.27389428420E+04				1.1105242E+00				Resid sbdelay (usec)	-7.59175E-03 +/- 6.9E-04
Phase delay (usec)	-1.27389352483E+04				-4.0000002E-07				Resid phdelay (usec)	1.86102E-06 +/- 3.0E-07
Delay rate (us/s)	8.11730847609E-01				8.11730755998E-01				Resid rate (us/s)	9.16108E-08 +/- 2.8E-09
Total phase (deg)			-105.3		6.23071375555E-05				Resid phase (deg)	57.7 +/- 9.2
	RMS	Theor.	Amplitude	0.341 +/- 0.027	Pcal mode: MANUAL, MANUAL				PC period (AP's)	5, 5
ph/seg (deg)	39.5	21.5	Search (1024X32)	0.337	Pcal rate: 0.000E+00, 0.000E+00 (us/s)				sb window (us)	-1.000 1.000
amp/seg (%)	43.8	37.5	Interp.	0.000	Bits/sample: 2x2				SampCntNorm: enabled	mb window (us) -0.008 0.008
ph/frq (deg)	42.5	13.0	Inc. seg. avg.	0.404	Sample rate(MISamp/s): 128				dr window (ns/s)	-0.011 0.011
amp/frq (%)	41.5	22.6	Inc. frq. avg.	0.390	Data rate(Mb/s): 2048				ion window (TEC)	0.00 0.00
y: az 29.1 el 18.9 pa -48.0			n: az 326.9 el 67.8 pa 129.0		u,v (fr/asec) -8848.759 7767.439					simultaneous interpolator
Control file: cf_1234_gmva			Input file: /Exps/c202a/v1/v1_3mm/1234/No0103/yn..1HR3TY		Output file: /Exps/c202a/v1/v1_3mm/1234/No0103/yn.W.421.1HR3TY					

Mk4/DiFX fourfit 3.21 rev 2937

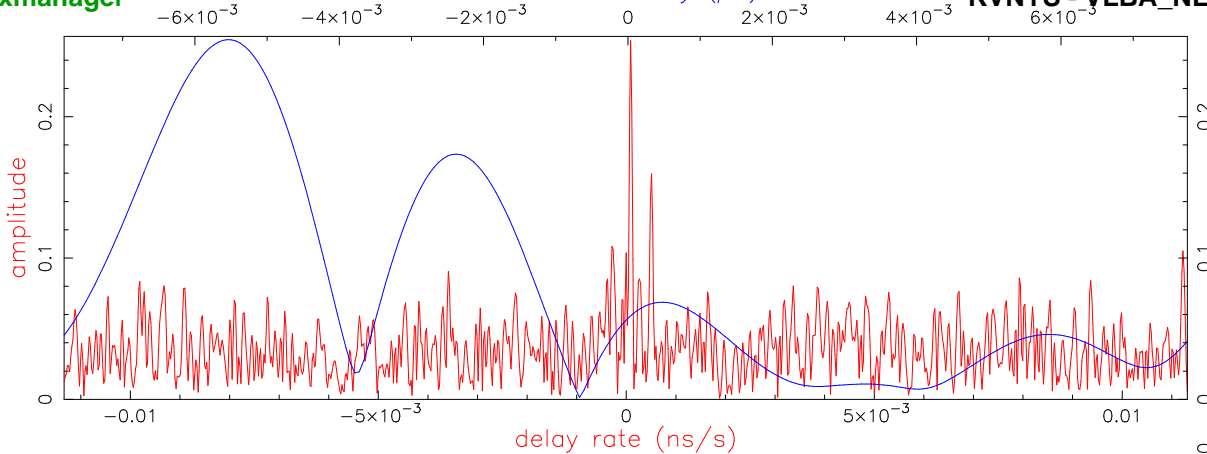
fxmanager

0102+584.1HR3TY, No0103, yn

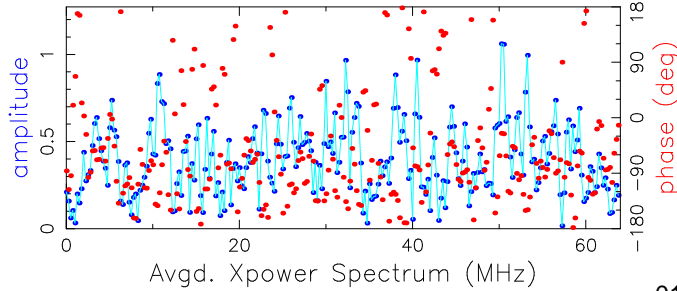
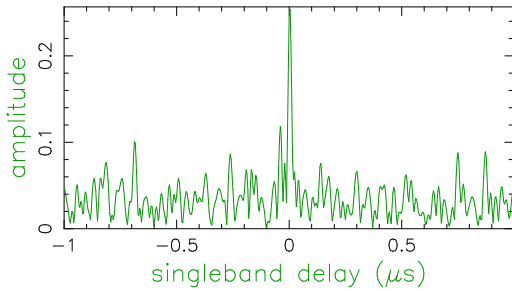
KVNYS - VLBA\_NL, fgroup W, pol RR

multiband delay ( $\mu$ s)

Fringe quality 9

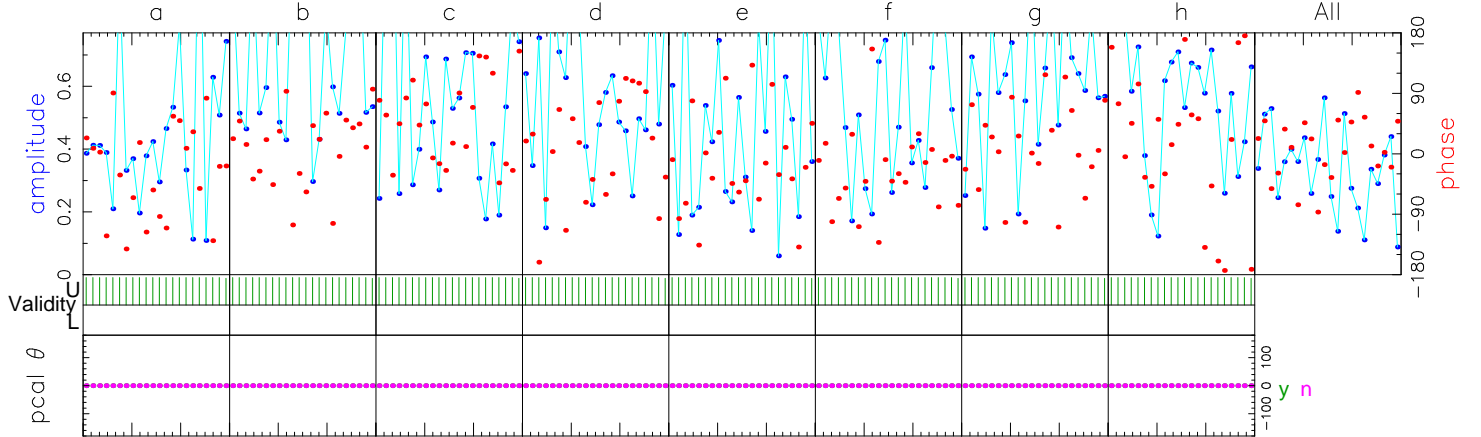


SNR 9.4  
 Int time 179.974  
 Amp 0.257  
 Phase 2.0  
 PFD 8.9e-13  
 Delays (us)  
 SBD 0.002570  
 MBD -0.005624  
 Fringe rate (Hz) 0.007521  
 Ion TEC 0.000  
 Ref freq (MHz) 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133307  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.27389252494E+04				-1.27389352502E+04				-5.62421E-03	+/- 1.2E-04
Sband delay (usec)	-1.27389326797E+04				1.1105242E+00				2.57050E-03	+/- 9.1E-04
Phase delay (usec)	-1.27389352501E+04				-4.0000002E-07				6.40490E-08	+/- 3.9E-07
Delay rate (us/s)	8.11730843310E-01				8.11730755998E-01				8.73113E-08	+/- 3.8E-09
Total phase (deg)			-161.0		6.23071375555E-05				2.0	+/- 12.2
	RMS	Theor.	Amplitude	0.257 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
ph/seg (deg)	44.7	28.5	Search (1024X32)	0.251	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
amp/seg (%)	59.5	49.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	39.2	17.2	Inc. seg. avg.	0.300	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
amp/frq (%)	37.3	30.0	Inc. frq. avg.	0.281	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
y: az 29.1 el 18.9 pa -48.0		n: az 326.9 el 67.8 pa 129.0		u,v (fr/asec) -8848.759 7767.439						simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yn..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yn.W.450.1HR3TY

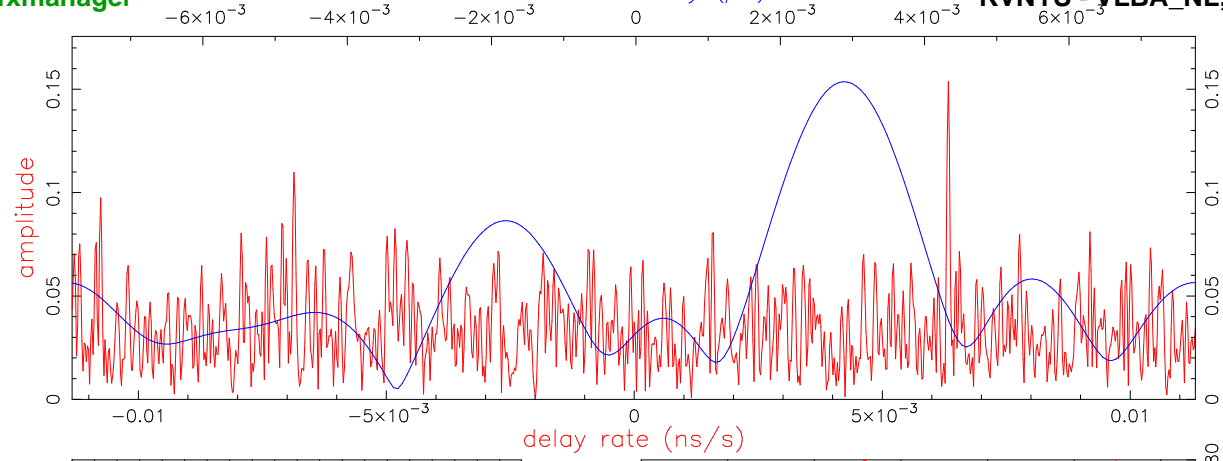
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yn

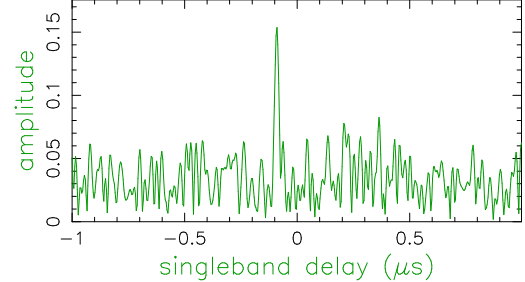
KVNYS - VLBA\_NL, fgroup W, pol LR

multiband delay ( $\mu$ s)

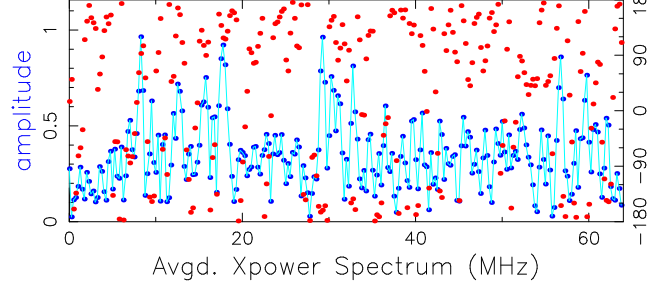


Fringe quality 0

SNR 5.6  
 Int time 179.974  
 Amp 0.176  
 Phase 145.8  
 PFD 8.7e-01  
 Delays (us)  
 SBD -0.090484  
 MBD 0.002868  
 Fringe rate (Hz)  
 0.545925  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

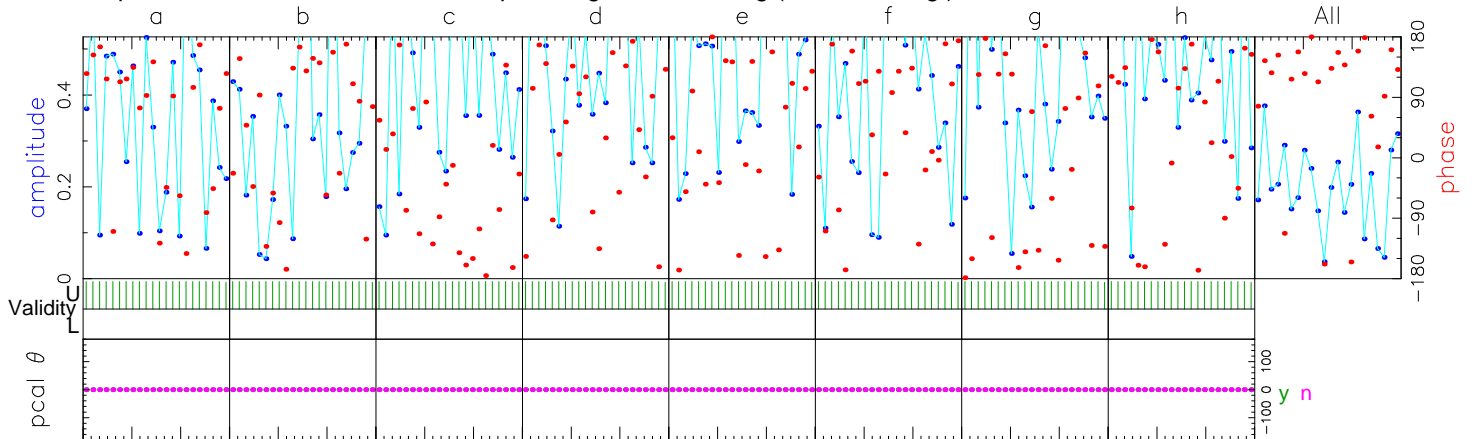


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133309  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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	146.9	-111.1	133.8	135.3	119.8	172.8	139.0	Phase	145.8
y	0.2	0.2	0.1	0.2	0.2	0.1	0.3	0.3	Ampl.	0.2
n	86.1	369.0	179.8	44.5	299.9	268.2	24.2	233.5	Sbd box	233.8
y	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	
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
n	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
n	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.27390261323E+04		Apriori delay (usec)		-1.27389352502E+04		Resid mbdelay (usec)		2.86789E-03	+/- 1.9E-04
Sband delay (usec)	-1.27390257347E+04		Apriori clock (usec)		1.1105242E+00		Resid sbdelay (usec)		-9.04845E-02	+/- 1.5E-03
Phase delay (usec)	-1.27389352455E+04		Apriori clockrate (us/s)		-4.0000002E-07		Resid phdelay (usec)		4.70027E-06	+/- 6.5E-07
Delay rate (us/s)	8.11737093641E-01		Apriori rate (us/s)		8.11730755998E-01		Resid rate (us/s)		6.33764E-06	+/- 6.3E-09
Total phase (deg)			Apriori accel (us/s/s)		6.23071375555E-05		Resid phase (deg)		145.8	+/- 20.3

ph/seg (deg) 49.8 47.6 Search (1024X32) 0.176 +/- 0.031 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 67.9 83.1 Interp. 0.149 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 45.5 28.7 Inc. seg. avg. 0.172 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 38.2 50.1 Inc. frq. avg. 0.173 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 n: az 326.9 el 67.8 pa 129.0 u,v (fr/asec) -8848.759 7767.439 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yn..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yn.W.463.1HR3TY

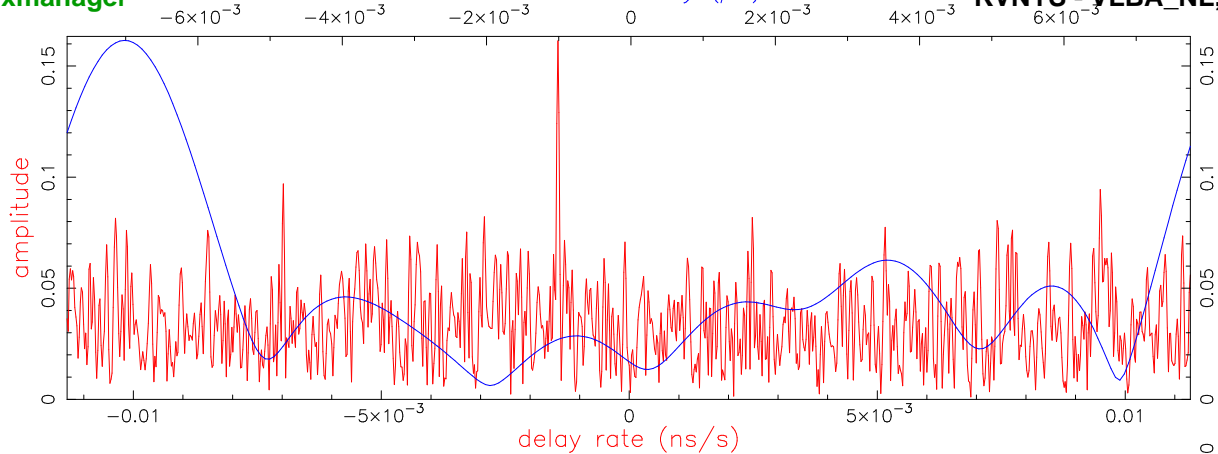
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yn

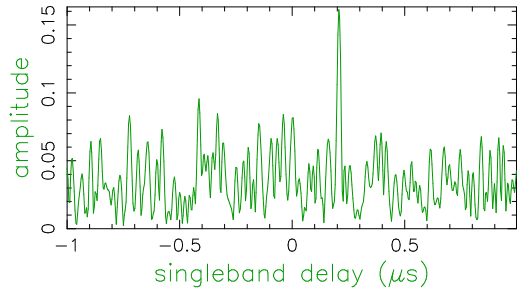
KVNYS - VLBA\_NL, fgroup W, pol RL

multiband delay ( $\mu$ s)

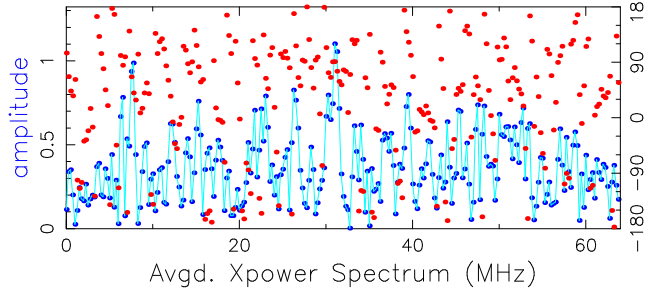


Fringe quality 0

SNR 6.0  
 Int time 179.974  
 Amp 0.163  
 Phase 40.2  
 PFD 2.9e-01  
 Delays (us)  
 SBD 0.208078  
 MBD -0.006960  
 Fringe rate (Hz)  
 -0.124337  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

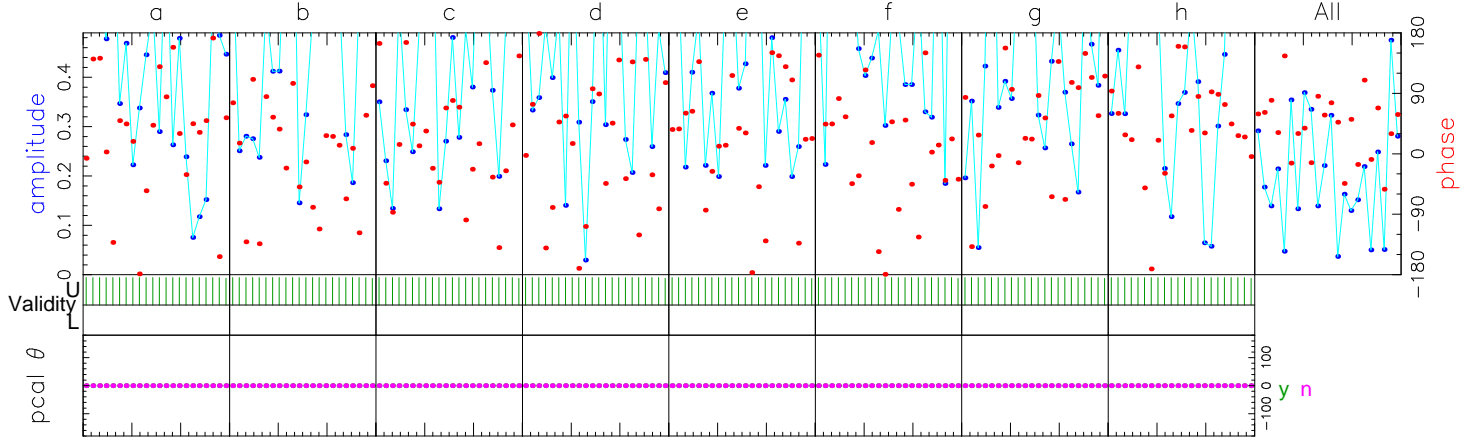


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133311  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:n	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
n	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
n	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Group delay (usec)(sbd)	-1.27387234599E+04									
Sband delay (usec)	-1.27387271725E+04									
Phase delay (usec)	-1.27389352489E+04									
Delay rate (us/s)	8.11729312567E-01									
Total phase (deg)			-122.8							
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)										
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)										
pcal $\theta$										
Chan ids										
Tracks										
Chan ids										
Tracks										
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								
simultaneous interpolator										

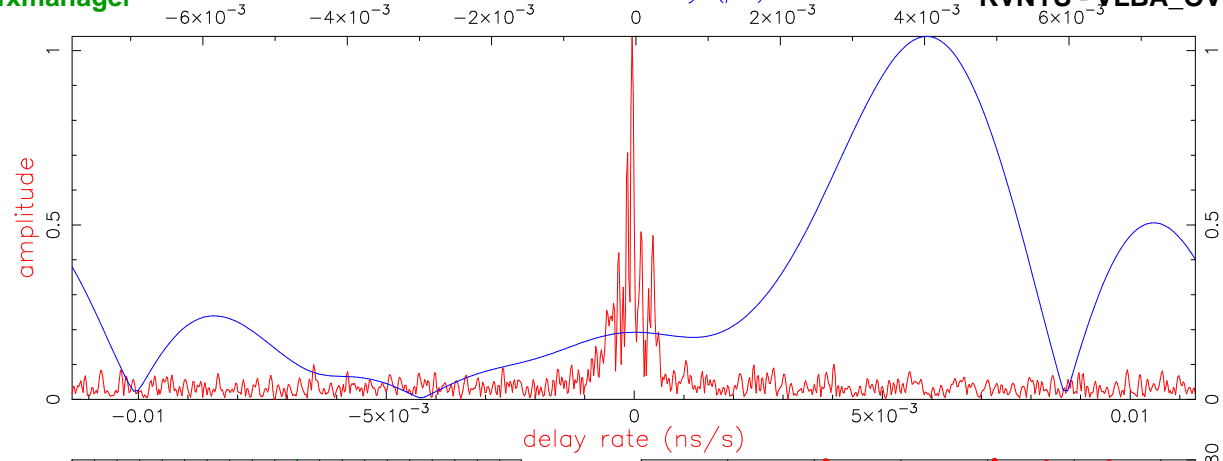
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yo

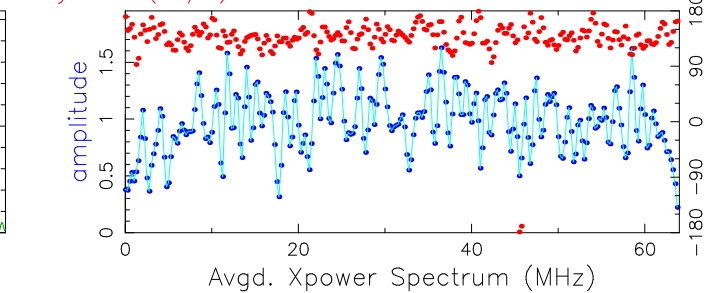
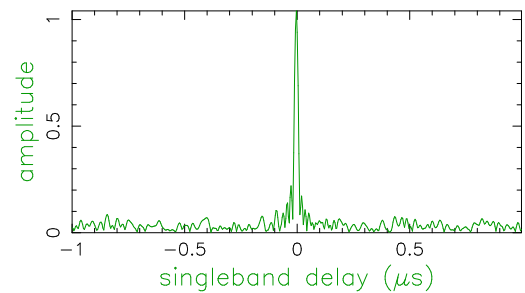
KVNYS - VLBA\_OV, fgroup W, pol LL

multiband delay ( $\mu$ s)



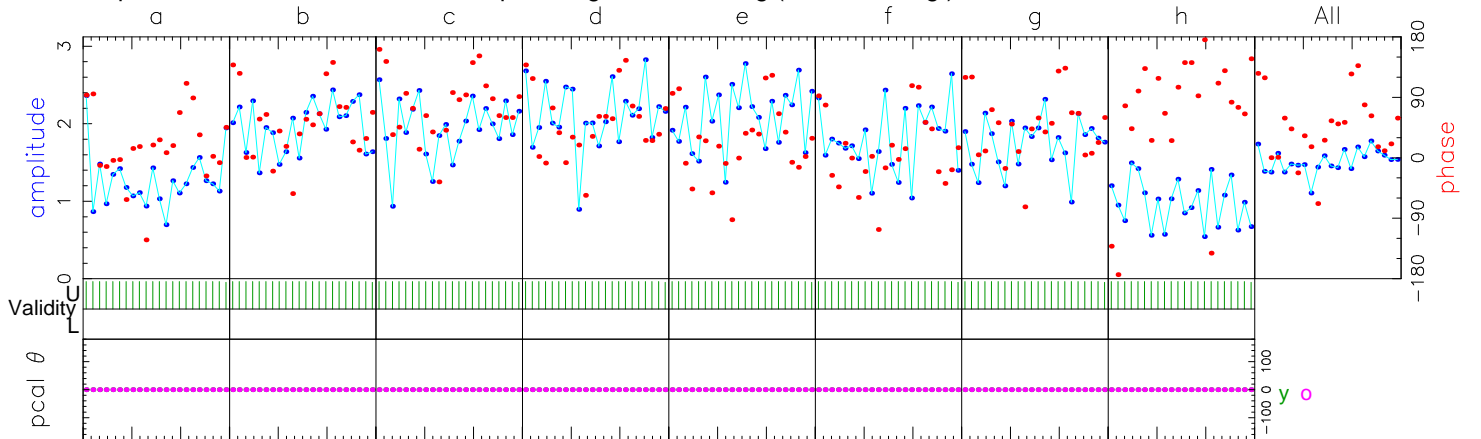
Fringe quality 4

SNR 38.2  
 Int time 179.974  
 Amp 1.041  
 Phase 45.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.004048  
 MBD 0.004021  
 Fringe rate (Hz)  
 -0.003206  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Yr:day 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133306  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
y:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.29012909993E+04	Apriori delay (usec)	-1.29012793958E+04	Resid mbdelay (usec)	4.02149E-03	+/-	2.8E-05
Sband delay (usec)	-1.29012834438E+04	Apriori clock (usec)	-2.0167263E+01	Resid sbdelay (usec)	-4.04800E-03	+/-	2.3E-04
Phase delay (usec)	-1.29012793943E+04	Apriori clockrate (us/s)	1.9999998E-07	Resid phdelay (usec)	1.47834E-06	+/-	9.7E-08
Delay rate (us/s)	5.34558282827E-01	Apriori rate (us/s)	5.34558320040E-01	Resid rate (us/s)	-3.72134E-08	+/-	9.3E-10
Total phase (deg)	-9.0	Apriori accel (us/s/s)	6.89295670372E-05	Resid phase (deg)	45.8	+/-	3.0

ph/seg (deg)	49.6	RMS	7.0	Theor.	4.2	Amplitude	1.041 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5
amp/seg (%)	48.0	Search (1024X32)	1.014	Interp.	0.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	1.014	SampCntNorm: enabled	sb window (us)	-1.000 1.000
ph/frq (deg)	36.3	Inc. seg. avg.	1.507	Inc. frq. avg.	1.167	Bits/sample: 2x2	0.000	Sample rate(MISamp/s): 128	mb window (us)	-0.008 0.008
amp/frq (%)	29.0	Inc. frq. avg.	1.167			Sample rate(MISamp/s): 128	1.507	Data rate(Mb/s): 2048	dr window (ns/s)	-0.011 0.011
y: az 29.1 el 18.9 pa -48.0		o: az 4.9 el 68.6 pa -172.2		u,v (fr/asec)	-5804.549 8885.614	Data rate(Mb/s): 2048	1.167	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo.W.436.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

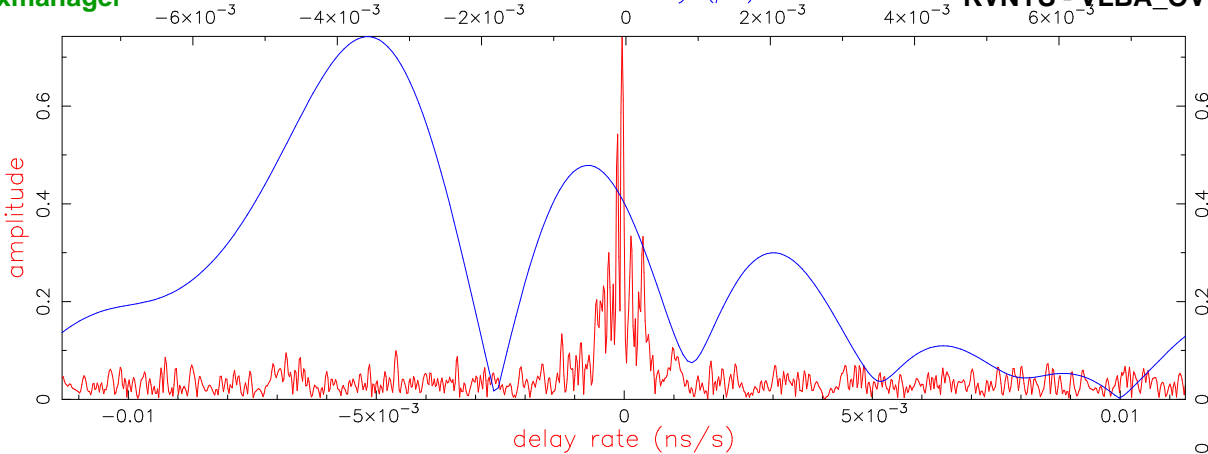
fxmanager

0102+584.1HR3TY, No0103, yo

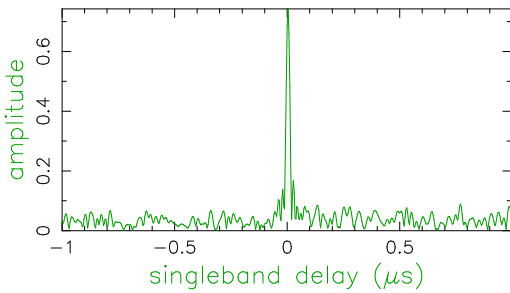
KVNYS - VLBA\_OV, fgroup W, pol RR

multiband delay ( $\mu$ s)

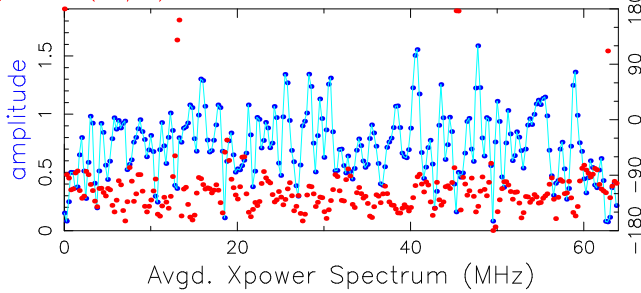
Fringe quality 6



SNR 27.2  
 Int time 179.974  
 Amp 0.743  
 Phase -39.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.003571  
 MBD -0.003596  
 Fringe rate (Hz)  
 -0.003194  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

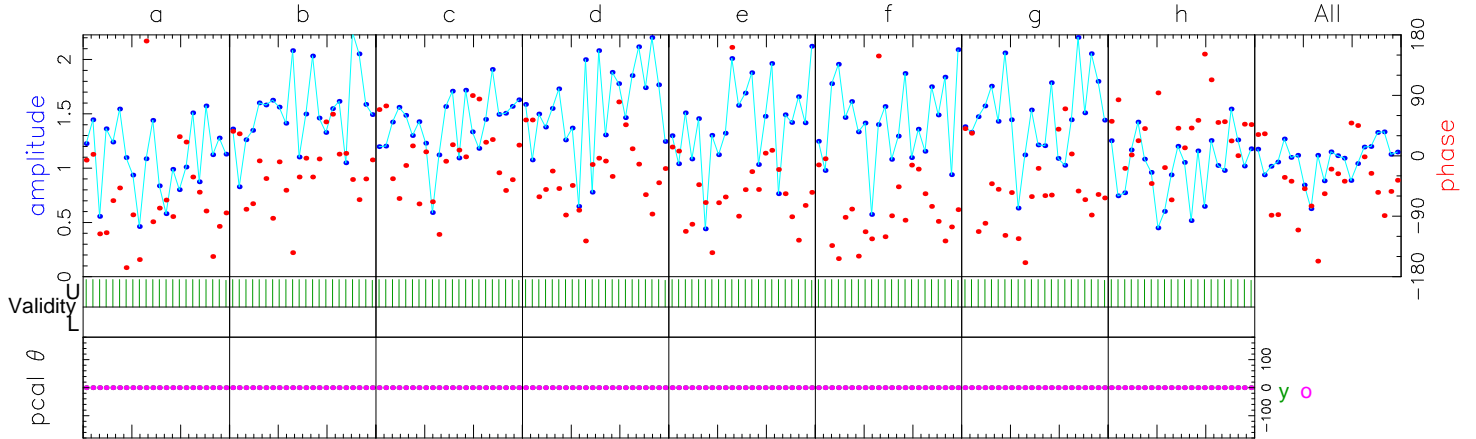


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133308  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-76.2	-25.3	-2.4	-27.6	-60.2	-94.1	-56.8	32.6	Phase	-39.9
	0.7	1.1	1.0	1.0	0.9	1.0	1.0	0.8	Ampl.	0.9
	260.3	257.8	257.9	257.7	258.1	257.4	258.5	260.3	Sbd box	257.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
o	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
o	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	-1.29012829916E+04		Apriori delay (usec)		-1.29012793958E+04		Resid mbdelay (usec)		-3.59585E-03	+/- 4.0E-05
Sband delay (usec)	-1.29012758250E+04		Apriori clock (usec)		-2.0167263E+01		Resid sbdelay (usec)		3.57075E-03	+/- 3.2E-04
Phase delay (usec)	-1.29012793971E+04		Apriori clockrate (us/s)		1.9999998E-07		Resid phdelay (usec)		-1.28767E-06	+/- 1.4E-07
Delay rate (us/s)	5.34558282962E-01		Apriori rate (us/s)		5.34558320040E-01		Resid rate (us/s)		-3.70788E-08	+/- 1.3E-09
Total phase (deg)			Apriori accel (us/s/s)		6.89295670372E-05		Resid phase (deg)		-39.9	+/- 4.2

ph/seg (deg) 50.2 9.9 Search (1024X32) 0.720 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 50.4 17.2 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 44.7 5.9 Inc. seg. avg. 1.064 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 29.7 10.4 Inc. frq. avg. 0.916 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 o: az 4.9 el 68.6 pa -172.2 u,v (fr/asec) -5804.549 8885.614 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo.W.458.1HR3TY

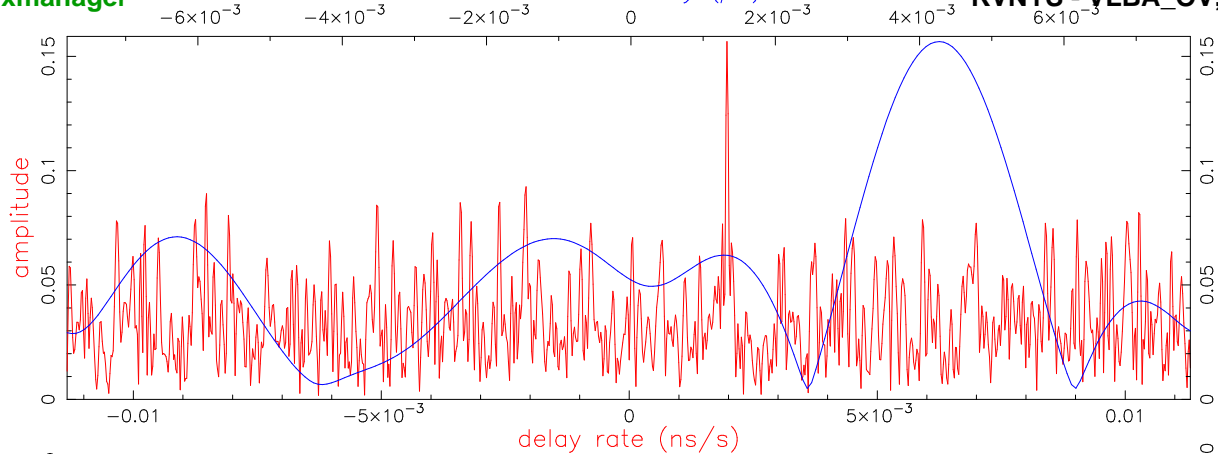
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yo

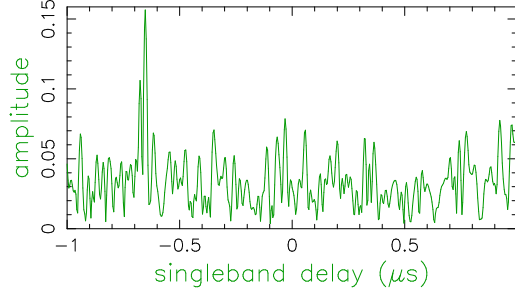
KVNYS - VLBA\_OV, fgroup W, pol LR

multiband delay ( $\mu$ s)

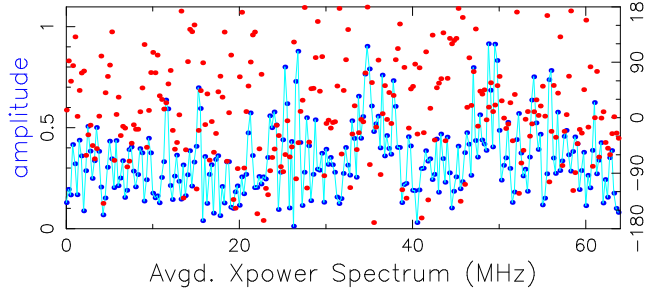


Fringe quality 0

SNR 5.8  
 Int time 179.974  
 Amp 0.159  
 Phase -2.4  
 PFD 6.7e-01  
 Delays (us)  
 SBD -0.652845  
 MBD 0.004266  
 Fringe rate (Hz)  
 0.169877  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

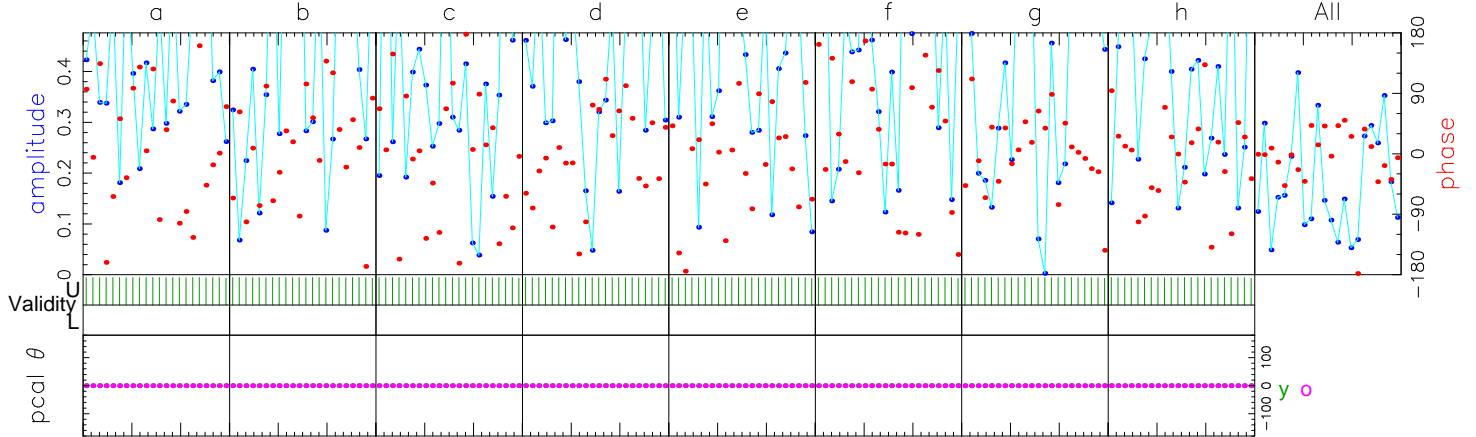


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133310  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
y:o	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
o	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
o	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-1.29019313796E+04									
Sband delay (usec)	-1.29019322405E+04									
Phase delay (usec)	-1.29012793959E+04									
Delay rate (us/s)	5.34560292143E-01									
Total phase (deg)			-57.3							
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)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal theta										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

y: az 29.1 el 18.9 pa -48.0 o: az 4.9 el 68.6 pa -172.2 u,v (fr/asec) -5804.549 8885.614 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yo.W.475.1HR3TY





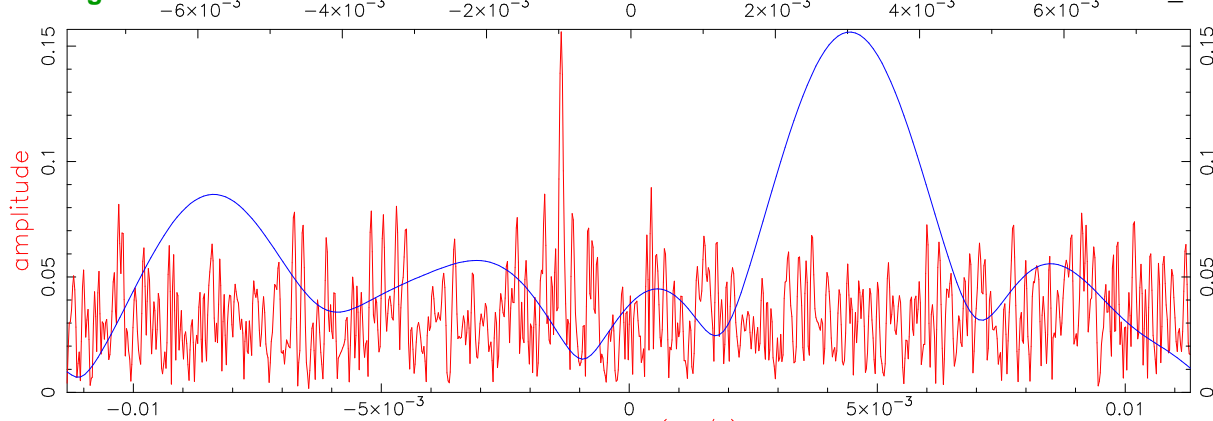
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yp

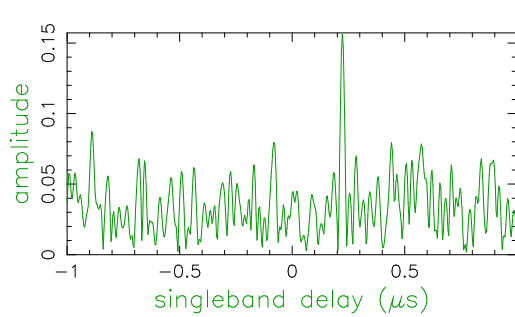
KVNYS - VLBA\_PT, fgroup W, pol LL

multiband delay ( $\mu$ s)

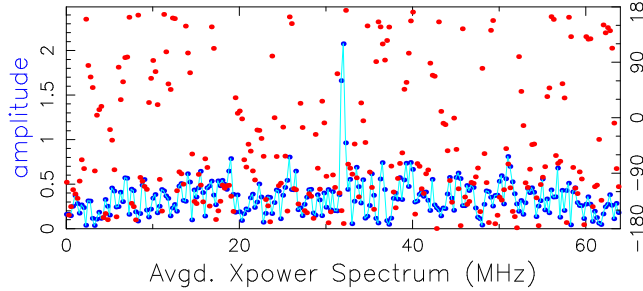


Fringe quality 0

SNR 5.7  
 Int time 179.974  
 Amp 0.157  
 Phase -111.0  
 PFD 7.1e-01  
 Delays (us)  
 SBD 0.223129  
 MBD 0.003028  
 Fringe rate (Hz)  
 -0.118903  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

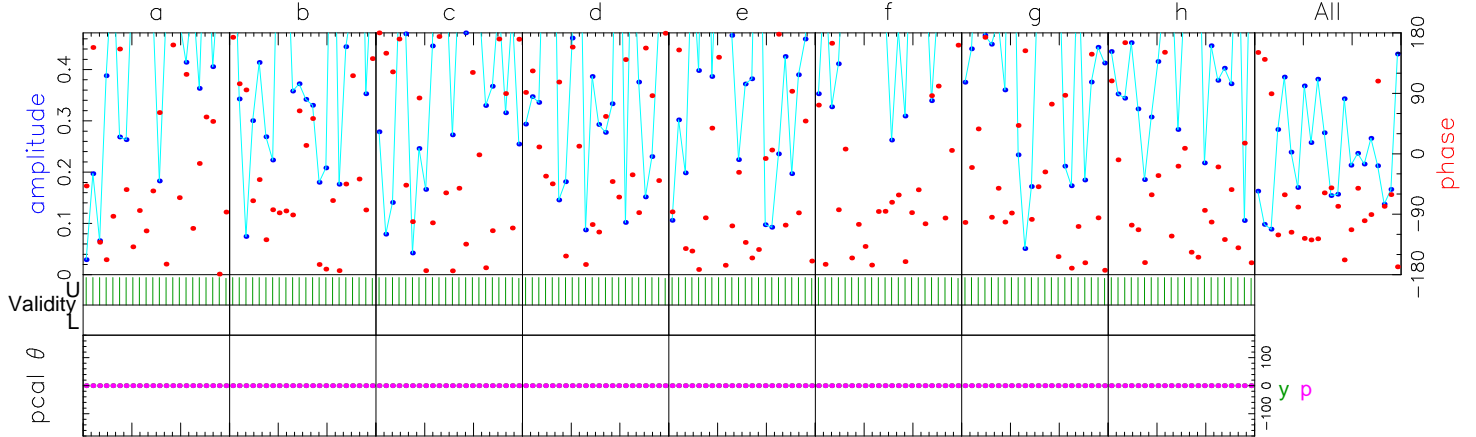


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133309  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-118.1	-80.9	-162.4	-42.2	-144.0	-106.0	-90.4	-118.8	Phase	-111.0
	0.2	0.1	0.2	0.2	0.3	0.2	0.2	0.2	Ampl.	0.2
	387.0	335.5	322.8	2.1	315.2	84.3	89.1	104.5	Sbd box	314.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	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)	-1.24053430166E+04	Apriori delay (usec)	-1.24055647945E+04	Resid mbdelay (usec)	3.02795E-03	+/-	1.9E-04
Sband delay (usec)	-1.24053416655E+04	Apriori clock (usec)	1.1943941E+00	Resid sbdelay (usec)	2.23129E-01	+/-	1.5E-03
Phase delay (usec)	-1.24055647981E+04	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	-3.58062E-06	+/-	6.4E-07
Delay rate (us/s)	6.51881787261E-01	Apriori rate (us/s)	6.51883167603E-01	Resid rate (us/s)	-1.38034E-06	+/-	6.2E-09
Total phase (deg)	-255.2	Apriori accel (us/s/s)	7.03883615881E-05	Resid phase (deg)	-111.0	+/-	20.0

ph/seg (deg)	64.6	Theor.	46.9	Amplitude	0.157 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	79.7		81.8	Search (1024X32)	0.150	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	40.7		28.3	Inc. seg. avg.	0.180	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.2		49.3	Inc. frq. avg.	0.166	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

y: az 29.1 el 18.9 pa -48.0 p: az 351.5 el 65.4 pa 165.7 u,v (fr/asec) -7090.001 9269.841 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp.W.470.1HR3TY

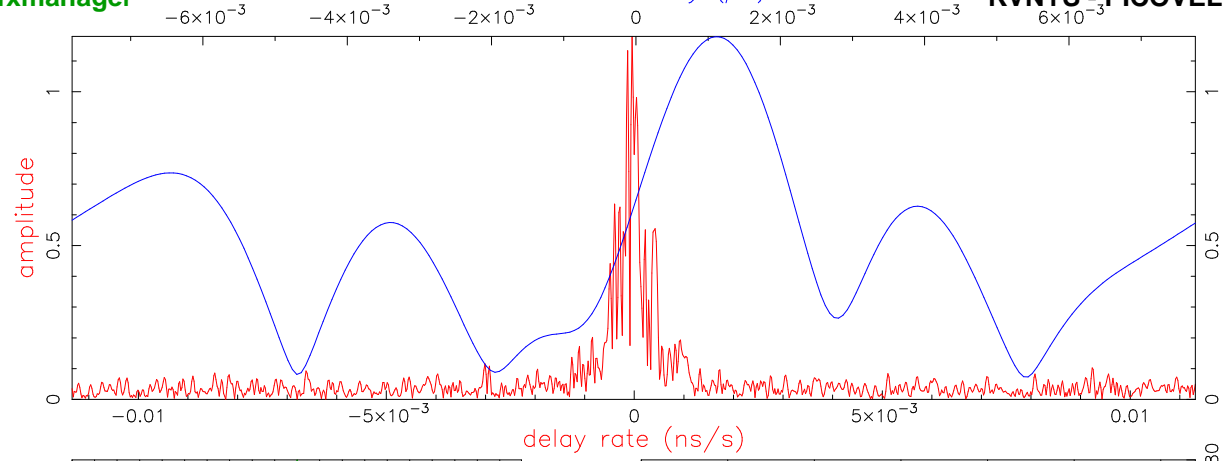
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yP

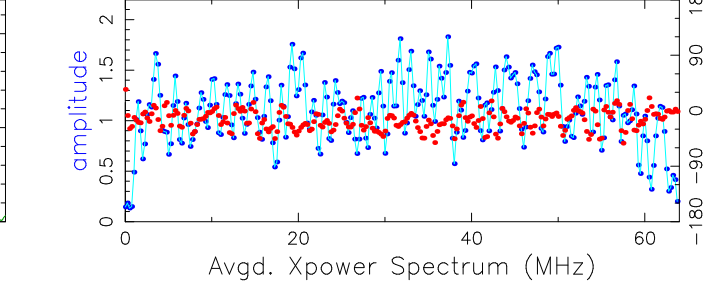
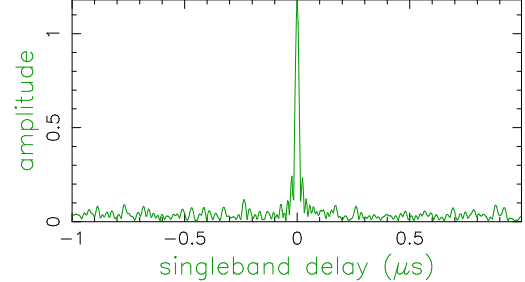
KVNYS - PICOVEL, fgroup W, pol LL

multiband delay ( $\mu$ s)



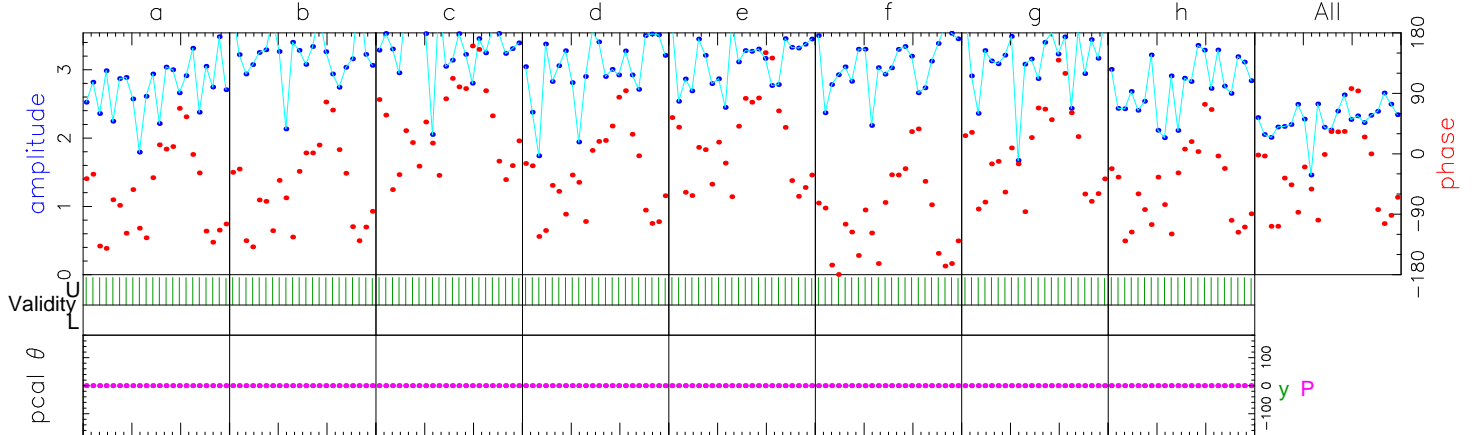
Fringe quality 4

SNR 43.3  
 Int time 179.795  
 Amp 1.180  
 Phase -32.9  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.000397  
 MBD 0.001110  
 Fringe rate (Hz)  
 -0.003178  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133310  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-63.6	-57.3	36.5	-37.4	9.8	-102.5	-2.1	-53.8	Phase	-32.9
	1.4	1.7	1.8	1.6	1.6	1.5	1.6	1.5	Ampl.	1.6
	257.9	256.8	256.5	256.2	256.0	256.4	257.0	256.5	Sbd box	256.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd) -6.88462305373E+02 Apriori delay (usec) -6.88463415617E+02 Resid mbdelay (usec) 1.11024E-03 +/- 2.5E-05  
 Sband delay (usec) -6.88463813117E+02 Apriori clock (usec) 1.4146652E+00 Resid sbdelay (usec) -3.97500E-04 +/- 2.0E-04  
 Phase delay (usec) -6.88463416677E+02 Apriori clockrate (us/s) 5.0000000E-07 Resid phdelay (usec) -1.05990E-06 +/- 8.5E-08  
 Delay rate (us/s) 1.16990705719E+00 Apriori rate (us/s) 1.16990709409E+00 Resid rate (us/s) -3.68974E-08 +/- 8.2E-10  
 Total phase (deg) -256.5 Apriori accel (us/s/s) 4.30868845652E-06 Resid phase (deg) -32.9 +/- 2.6

RMS Theor. Amplitude 1.180 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 ph/seg (deg) 62.0 6.2 Search (1024X32) 1.136 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 amp/seg (%) 94.8 10.8 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 ph/frq (deg) 49.0 3.7 Inc. seg. avg. 2.259 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 amp/frq (%) 36.6 6.5 Inc. frq. avg. 1.590 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite ion window (TEC) 0.00 0.00

y: az 29.1 el 18.9 pa -48.0 P: az 328.6 el 21.2 pa 53.3 u,v (fr/asec) -12824.037 640.090 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yP..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yP.W.472.1HR3TY

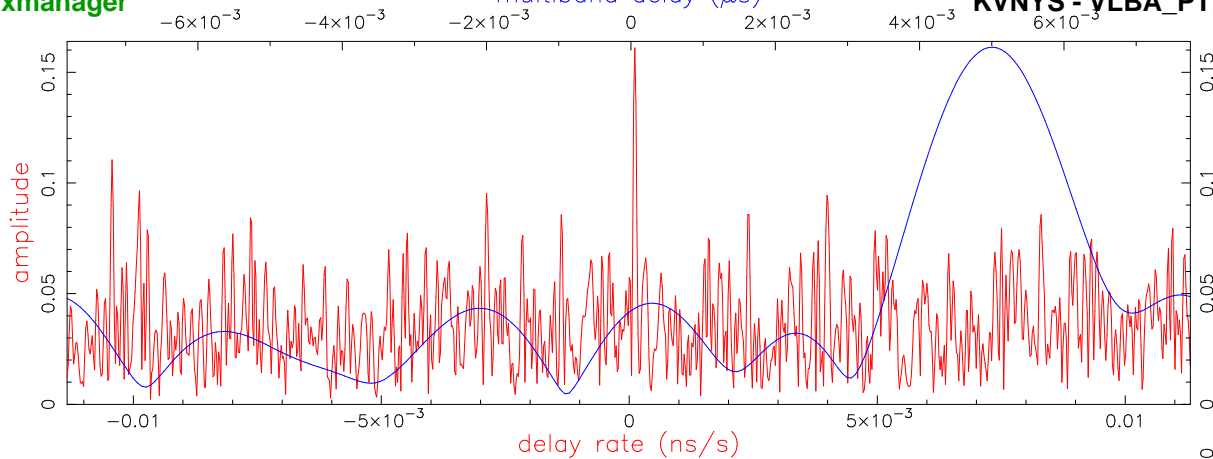
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yp

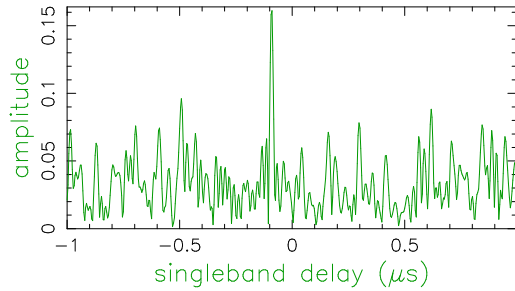
KVNYS - VLBA\_PT, fgroup W, pol RR

multiband delay ( $\mu$ s)

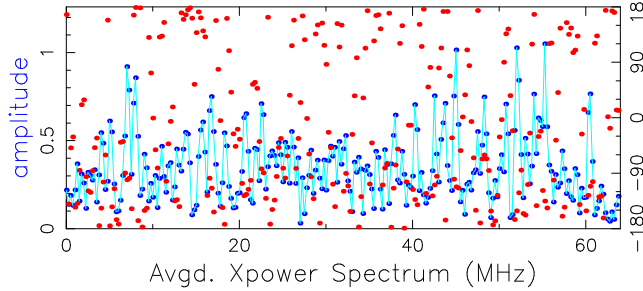


Fringe quality 0

SNR 6.0  
 Int time 179.974  
 Amp 0.164  
 Phase -170.1  
 PFD 2.1e-01  
 Delays (us)  
 SBD -0.091461  
 MBD 0.004936  
 Fringe rate (Hz)  
 0.009725  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

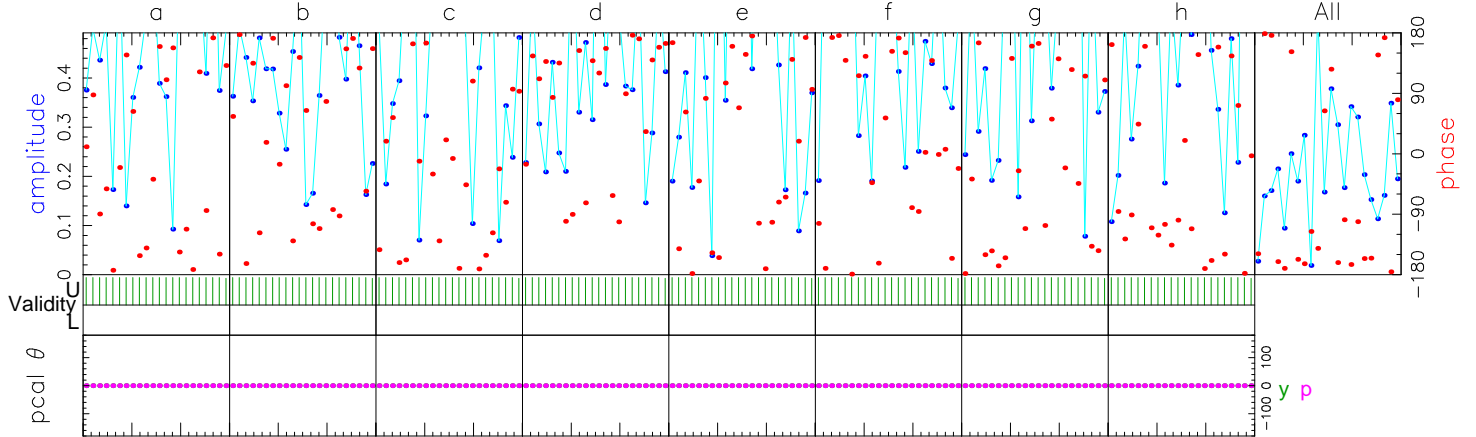


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133311  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-157.2	-179.6	-144.7	160.4	-179.8	172.6	-149.6	-154.6	Phase	-170.1
	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	Ampl.	0.2
	379.0	470.2	404.0	476.5	232.2	430.9	296.8	233.3	Sbd box	233.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
y	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)	-1.24056536088E+04		Apriori delay (usec)		-1.24055647945E+04		Resid mbdelay (usec)		4.93575E-03	+/- 1.8E-04
Sband delay (usec)	-1.24056562558E+04		Apriori clock (usec)		1.1943941E+00		Resid sbdelay (usec)		-9.14612E-02	+/- 1.4E-03
Phase delay (usec)	-1.24055648000E+04		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		-5.48676E-06	+/- 6.1E-07
Delay rate (us/s)	6.51883280496E-01		Apriori rate (us/s)		6.51883167603E-01		Resid rate (us/s)		1.12893E-07	+/- 5.9E-09
Total phase (deg)			Apriori accel (us/s/s)		7.03883615881E-05		Resid phase (deg)		-170.1	+/- 19.1

ph/seg (deg) 48.0 44.7 Search (1024X32) 0.160 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 78.8 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) 21.7 26.9 Inc. seg. avg. 0.168 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 20.3 47.0 Inc. frq. avg. 0.153 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 p: az 351.5 el 65.4 pa 165.7 u,v (fr/asec) -7090.001 9269.841 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp.W.483.1HR3TY

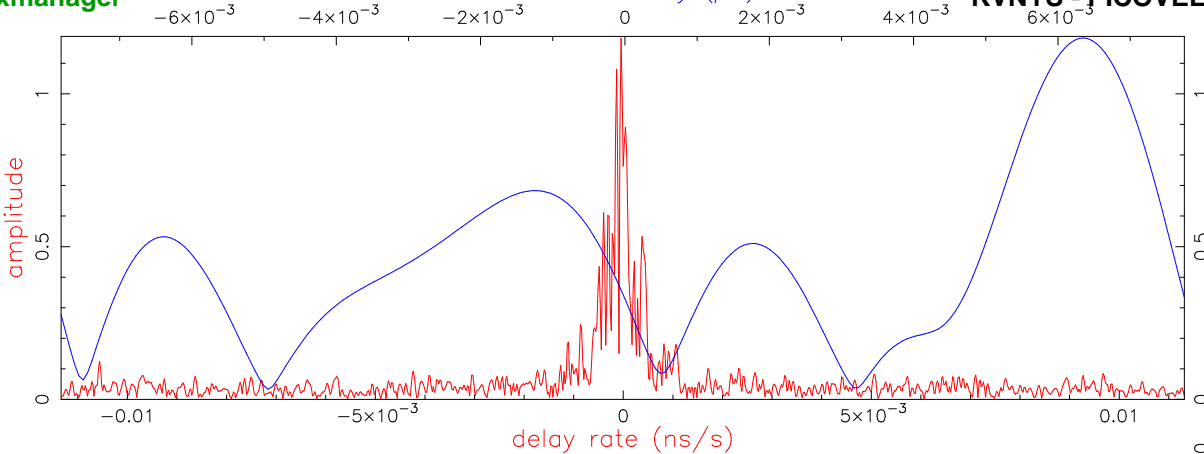
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yP

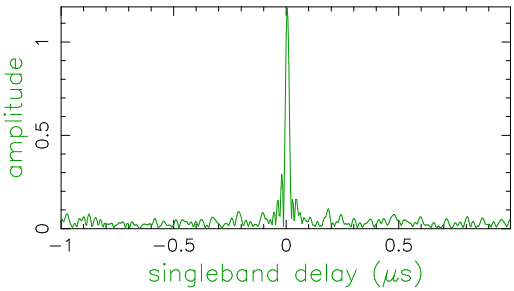
KVNYS - PICOVEL, fgroup W, pol RR

multiband delay ( $\mu$ s)

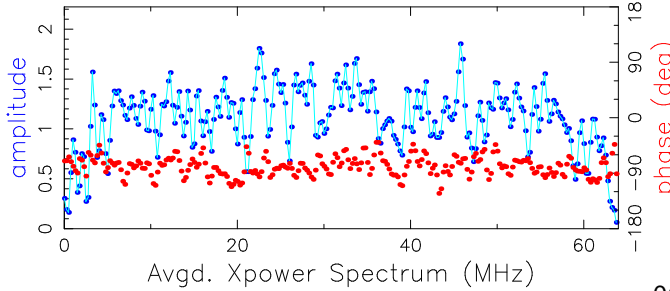


Fringe quality 4

SNR 43.6  
Int time 179.795  
Amp 1.188  
Phase -97.2  
PFD 0.0e+00  
Delays (us)  
SBD 0.004793  
MBD 0.006369  
Fringe rate (Hz)  
-0.003173  
Ion TEC 0.000  
Ref freq (MHz)  
86140.0000  
AP (sec) 0.512

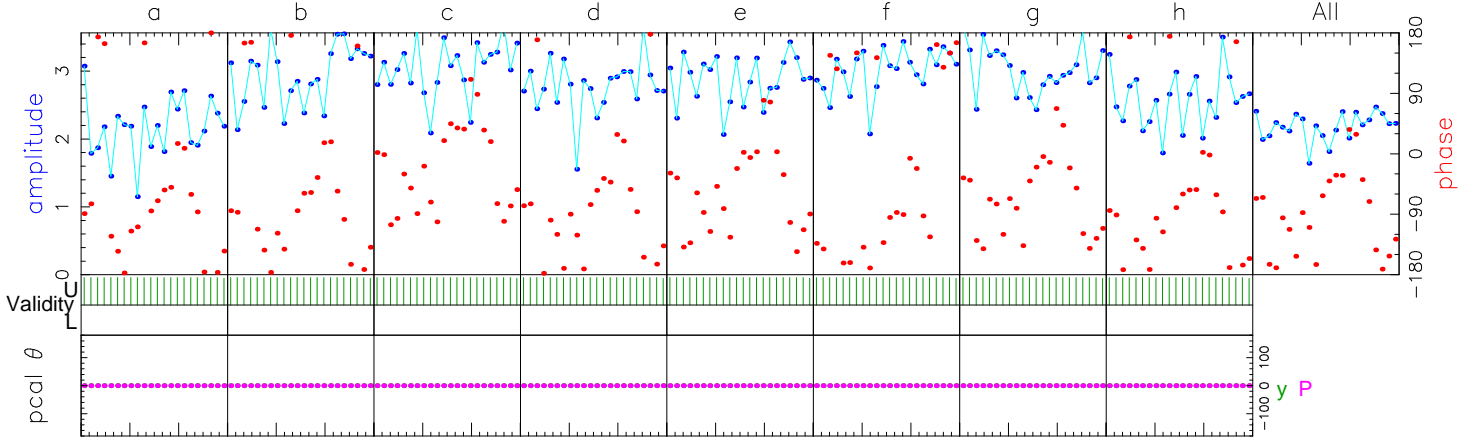


delay rate (ns/s)



Exp. c202a  
Exper # 16383  
Yr:day 2020:283  
Start 073000.00  
Stop 073300.22  
FRT 073130.00  
Corr/FF/build  
2021:006:144348  
2021:010:133311  
2020:247:085004  
RA & Dec (J2000)  
01h02m45.762375s  
+58°24'11.136621"

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
	-118.1	-121.6	-27.5	-107.3	-63.8	-156.5	-71.7	-114.4	Phase	-97.2
	1.1	1.5	1.6	1.4	1.5	1.6	1.8	1.5	Ampl.	1.5
	260.0	258.1	257.9	257.4	257.7	257.7	258.2	258.4	Sbd box	258.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-6.88457046654E+02	Apriori delay (usec)	-6.88463415617E+02	Resid mbdelay (usec)	6.36896E-03	+/-	2.5E-05
Sband delay (usec)	-6.88458622367E+02	Apriori clock (usec)	1.4146652E+00	Resid sbdelay (usec)	4.79325E-03	+/-	2.0E-04
Phase delay (usec)	-6.88463418753E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-3.13601E-06	+/-	8.5E-08
Delay rate (us/s)	1.16990705726E+00	Apriori rate (us/s)	1.16990709409E+00	Resid rate (us/s)	-3.68308E-08	+/-	8.2E-10
Total phase (deg)	-320.9	Apriori accel (us/s/s)	4.30868845652E-06	Resid phase (deg)	-97.2	+/-	2.6

ph/seg (deg)	61.2	Theor.	6.2	Search (1024X32)	1.150	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	85.6		10.8	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)	43.9		3.7	Inc. seg. avg.	2.173	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011
amp/frq (%)	30.5		6.5	Inc. frq. avg.	1.494	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 29.1 el 18.9 pa -48.0 P: az 328.6 el 21.2 pa 53.3 u,v (fr/asec) -12824.037 640.090 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yP..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yP.W.488.1HR3TY

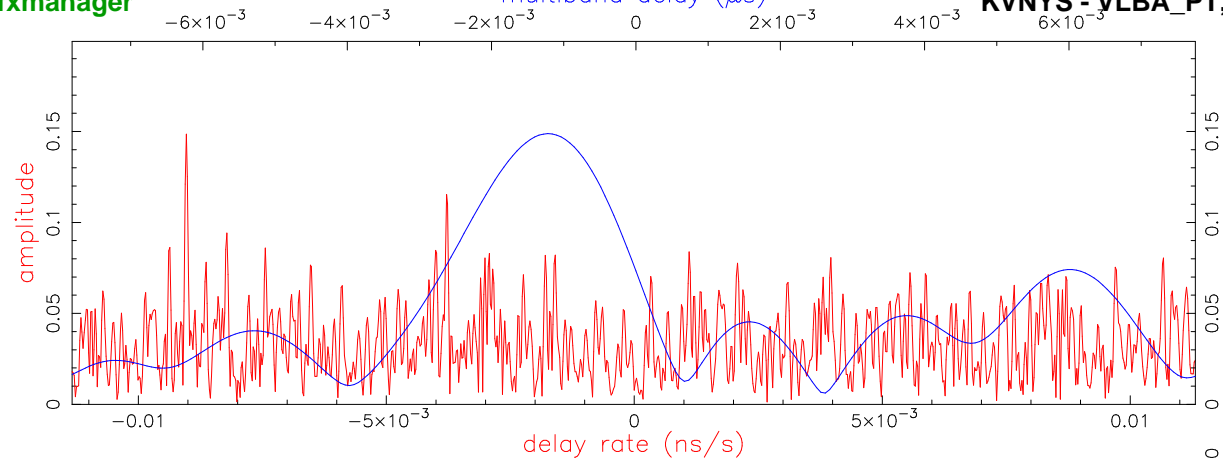
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yp

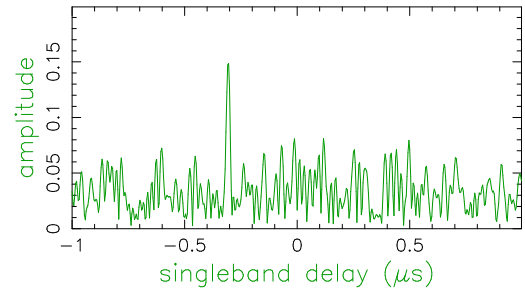
KVNYS - VLBA\_PT, fgroup W, pol LR

multiband delay ( $\mu$ s)

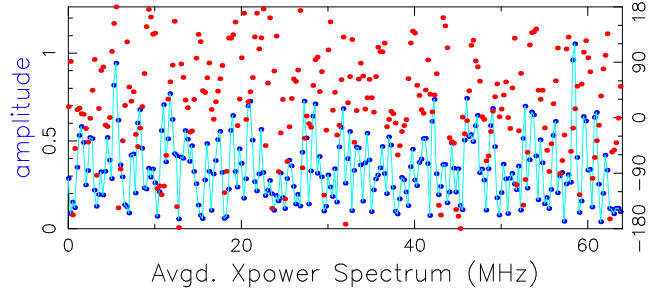


Fringe quality 0

SNR 5.5  
 Int time 179.974  
 Amp 0.200  
 Phase 127.7  
 PFD 9.7e-01  
 Delays (us)  
 SBD -0.306415  
 MBD -0.001283  
 Fringe rate (Hz)  
 -0.779854  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

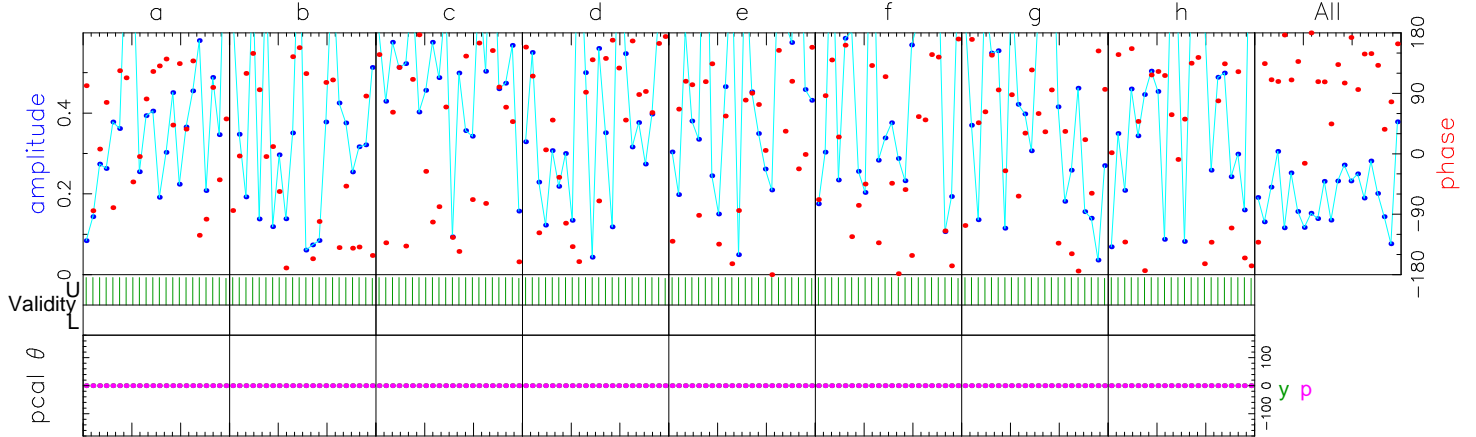


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133312  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	73.5	167.2	152.2	140.8	96.8	151.3	91.0	141.9	Phase	127.7
	0.2	0.1	0.2	0.2	0.3	0.3	0.2	0.3	Ampl.	0.2
	40.2	248.3	238.4	148.6	188.0	63.7	196.1	147.2	Sbd box	178.6
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
y	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)	-1.24058785774E+04		Apriori delay (usec)		-1.24055647945E+04		Resid mbdelay (usec)		-1.28287E-03	+/- 2.0E-04
Sband delay (usec)	-1.24058712095E+04		Apriori clock (usec)		1.1943941E+00		Resid sbdelay (usec)		-3.06415E-01	+/- 1.6E-03
Phase delay (usec)	-1.24055647904E+04		Apriori clockrate (us/s)		-2.9999999E-07		Resid phdelay (usec)		4.11713E-06	+/- 6.7E-07
Delay rate (us/s)	6.51874114273E-01		Apriori rate (us/s)		6.51883167603E-01		Resid rate (us/s)		-9.05333E-06	+/- 6.4E-09
Total phase (deg)			Apriori accel (us/s/s)		7.03883615881E-05		Resid phase (deg)		127.7	+/- 20.7

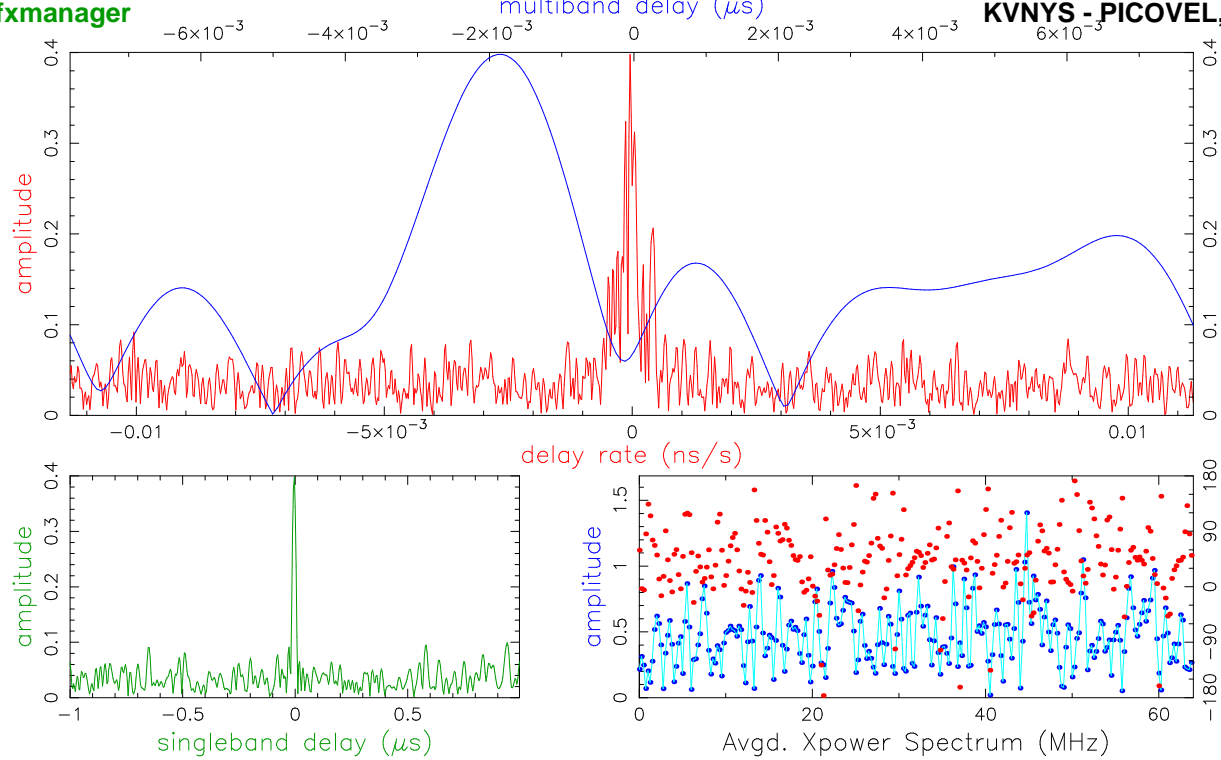
ph/seg (deg) 52.6 48.5 Search (1024X32) 0.147 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 57.1 84.6 Interp. 0.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 37.3 29.2 Inc. seg. avg. 0.194 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 31.5 51.0 Inc. frq. avg. 0.200 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 p: az 351.5 el 65.4 pa 165.7 u,v (fr/asec) -7090.001 9269.841 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp.W.492.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yP

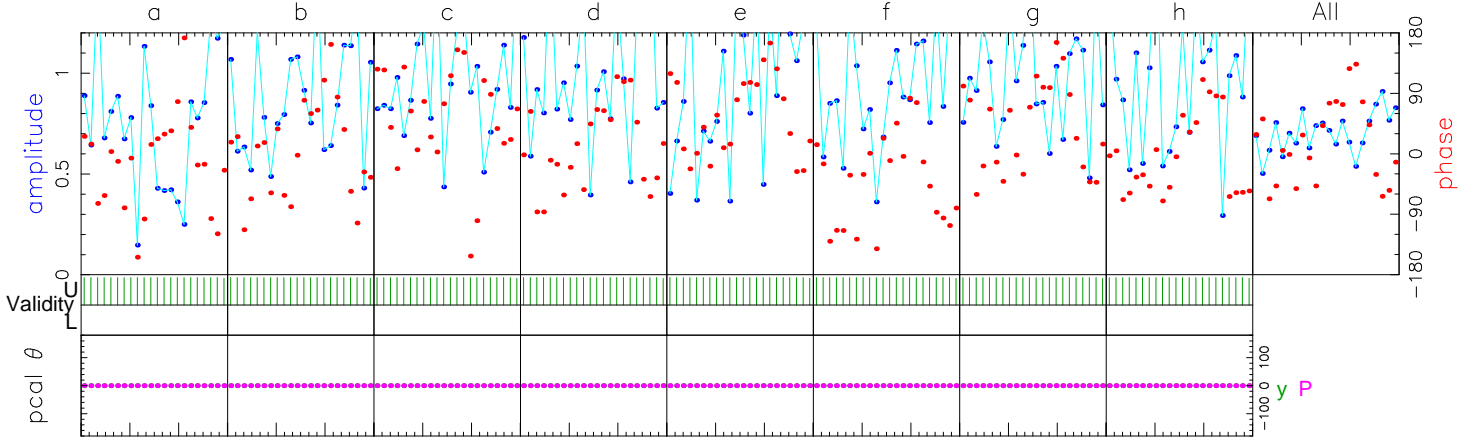
KVNYS - PICOVEL, fgroup W, pol LR



Fringe quality 8

SNR 14.7  
 Int time 179.795  
 Amp 0.400  
 Phase 9.8  
 PFD 2.8e-40  
 Delays (us)  
 SBD -0.004859  
 MBD -0.001887  
 Fringe rate (Hz)  
 -0.003069  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512  
 Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133313  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
	-29.8	2.6	67.8	-0.6	53.8	-41.9	34.5	-7.0	Phase	9.8		
	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.6	Ampl.	0.5		
	256.9	255.4	254.9	255.1	255.9	255.1	255.6	256.2	Sbd box	255.8		
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
P	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
P	1000	1000	1000	1000	1000	1000	1000	1000				
y	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)	-6.88465302123E+02		Apriori delay (usec)		-6.88463415617E+02		Resid mbdelay (usec)		-1.88651E-03	+/- 7.4E-05		
Sband delay (usec)	-6.88468274867E+02		Apriori clock (usec)		1.4146652E+00		Resid sbdelay (usec)		-4.85925E-03	+/- 5.9E-04		
Phase delay (usec)	-6.88463415300E+02		Apriori clockrate (us/s)		5.0000000E-07		Resid phdelay (usec)		3.16999E-07	+/- 2.5E-07		
Delay rate (us/s)	1.16990705846E+00		Apriori rate (us/s)		1.16990709409E+00		Resid rate (us/s)		-3.56234E-08	+/- 2.4E-09		
Total phase (deg)			Apriori accel (us/s/s)		4.30868845652E-06		Resid phase (deg)		9.8	+/- 7.8		
	RMS	Theor.	Amplitude	0.400 +/- 0.027		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5				
ph/seg (deg)	60.1	18.3	Search (1024X32)	0.382		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000	1.000		
amp/seg (%)	80.4	32.0	Interp.	0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008	0.008	
ph/frq (deg)	42.0	11.0	Inc. seg. avg.	0.672		Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011		
amp/frq (%)	25.7	19.3	Inc. frq. avg.	0.480		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00
y: az 29.1 el 18.9 pa -48.0	P: az 328.6 el 21.2 pa 53.3		u, v (fr/asec)		-12824.037 640.090				simultaneous interpolator			
Control file: cf_1234_gmva	Input file: /Exps/c202a/v1/v1_3mm/1234/No0103/yP..1HR3TY		Output file: /Exps/c202a/v1/v1_3mm/1234/No0103/yP.W.497.1HR3TY									

Mk4/DiFX fourfit 3.21 rev 2937

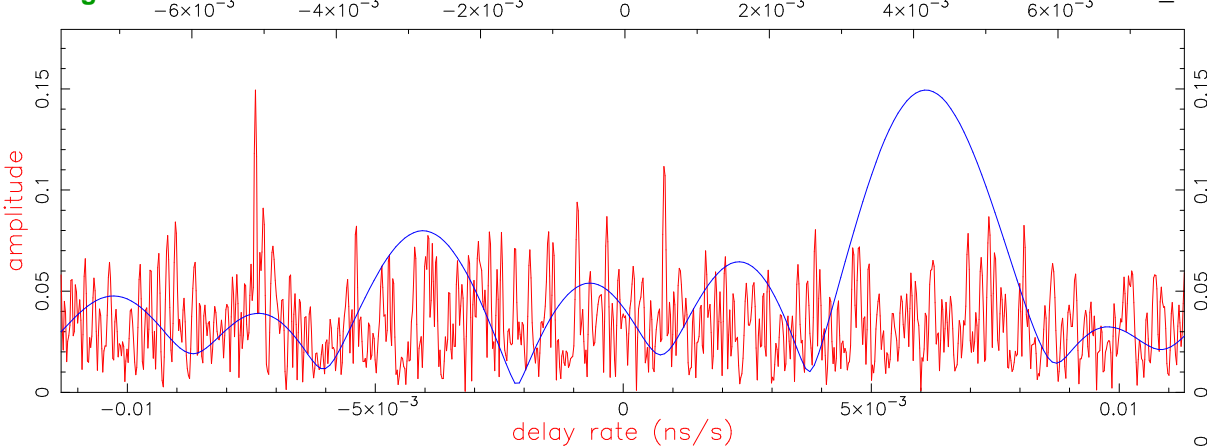
fxmanager

0102+584.1HR3TY, No0103, yp

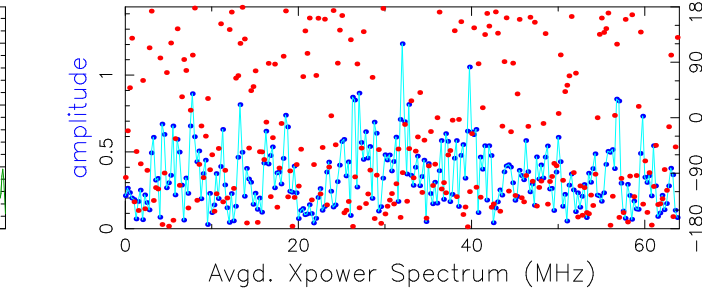
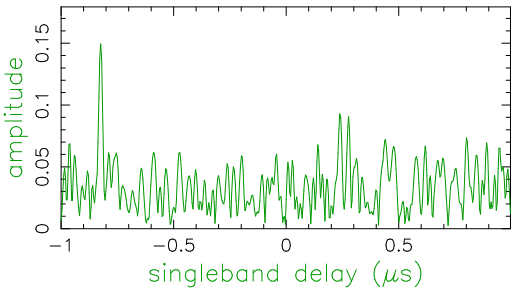
KVNYS - VLBA\_PT, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

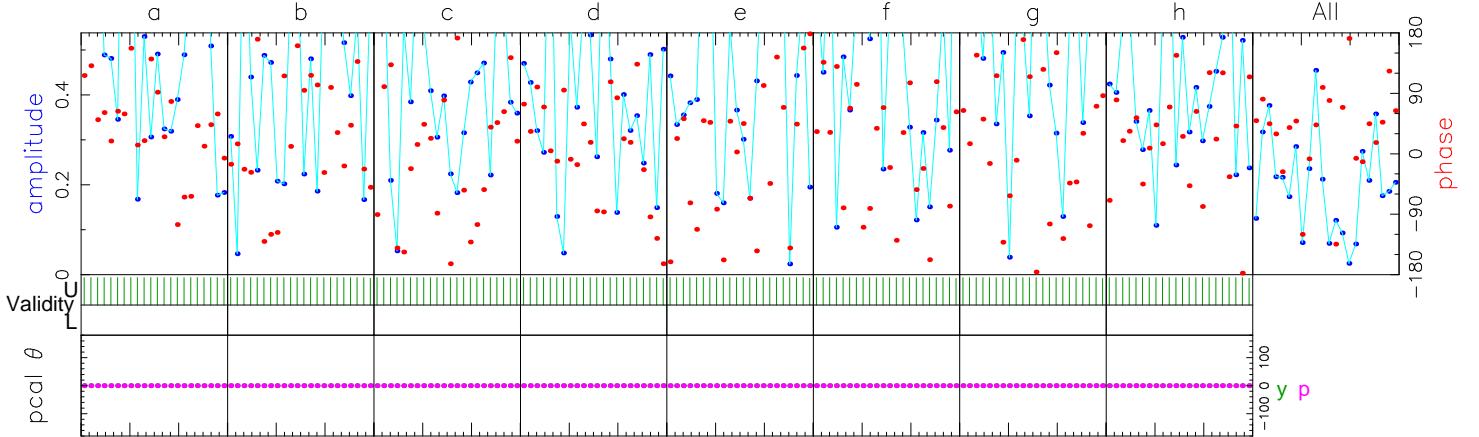


SNR 5.5  
 Int time 179.974  
 Amp 0.179  
 Phase 41.1  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.824223  
 MBD 0.004168  
 Fringe rate (Hz)  
 -0.639381  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133315  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
p	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:p	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
p	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-1.24063887514E+04	Apriori delay (usec)	-1.24055647945E+04	Resid mbdelay (usec)	4.16809E-03	+/-	2.0E-04
Sband delay (usec)	-1.24063890178E+04	Apriori clock (usec)	1.1943941E+00	Resid sbdelay (usec)	-8.24223E-01	+/-	1.6E-03
Phase delay (usec)	-1.24055647932E+04	Apriori clockrate (us/s)	-2.9999999E-07	Resid phdelay (usec)	1.32499E-06	+/-	6.7E-07
Delay rate (us/s)	6.51875745029E-01	Apriori rate (us/s)	6.51883167603E-01	Resid rate (us/s)	-7.42257E-06	+/-	6.5E-09
Total phase (deg)	-103.1	Apriori accel (us/s/s)	7.03883615881E-05	Resid phase (deg)	41.1	+/-	20.9

ph/seg (deg)	67.9	Theor.	49.0	Amplitude	0.179 +/- 0.033	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.7		85.6	Search (1024X32)	0.148	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	26.7		29.6	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	41.8		51.6	Inc. seg. avg.	0.179	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.169	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

y: az 29.1 el 18.9 pa -48.0 p: az 351.5 el 65.4 pa 165.7 u,v (fr/asec) -7090.001 9269.841 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yp.W.509.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

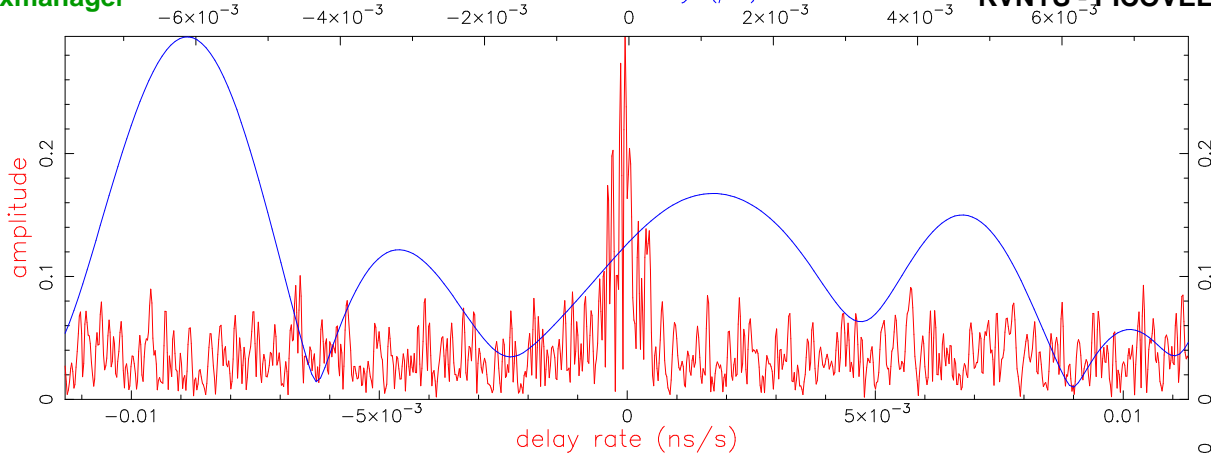
fxmanager

0102+584.1HR3TY, No0103, yP

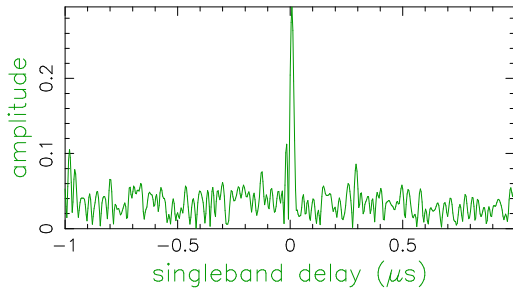
KVNYS - PICOVEL, fgroup W, pol RL

multiband delay ( $\mu$ s)

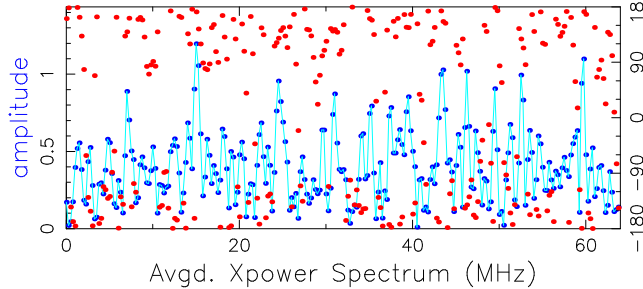
Fringe quality 9



SNR 10.8  
 Int time 179.795  
 Amp 0.295  
 Phase -39.1  
 PFD 5.9e-19  
 Delays (us)  
 SBD 0.007350  
 MBD -0.006121  
 Fringe rate (Hz)  
 -0.003213  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

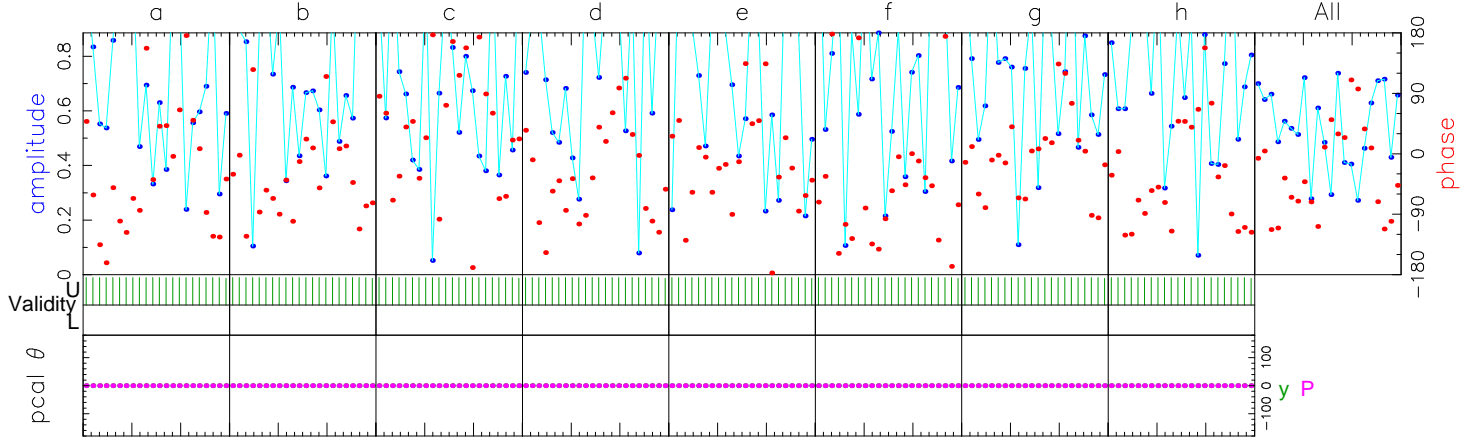


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133315  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-57.4	-49.0	42.7	-41.5	-14.4	-97.2	1.5	-63.9		-39.1
	0.3	0.5	0.2	0.3	0.4	0.4	0.5	0.3		0.4
	259.8	258.7	194.4	257.7	258.7	257.8	258.8	259.2		258.9
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
P	1000	1000	1000	1000	1000	1000	1000	1000		PC freqs
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		PC phase
y:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		Mani PC
y	1000	1000	1000	1000	1000	1000	1000	1000		PC amp
P	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		Chan ids
p	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		Tracks

Group delay (usec)(sbd)	-6.88453911811E+02	Apriori delay (usec)	-6.88463415617E+02	Resid mbdelay (usec)	-6.12119E-03	+/-	1.0E-04
Sband delay (usec)	-6.88456065867E+02	Apriori clock (usec)	1.4146652E+00	Resid sbdelay (usec)	7.34975E-03	+/-	8.0E-04
Phase delay (usec)	-6.88463416879E+02	Apriori clockrate (us/s)	5.0000000E-07	Resid phdelay (usec)	-1.26184E-06	+/-	3.4E-07
Delay rate (us/s)	1.16990705679E+00	Apriori rate (us/s)	1.16990709409E+00	Resid rate (us/s)	-3.72985E-08	+/-	3.3E-09
Total phase (deg)	-262.8	Apriori accel (us/s/s)	4.30868845652E-06	Resid phase (deg)	-39.1	+/-	10.6

ph/seg (deg)	67.1	Theor.	24.8	Amplitude	0.295 +/- 0.027	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	97.1		43.3	Search (1024X32)	0.281	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	47.2		15.0	Inc. seg. avg.	0.495	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	40.6		26.1	Inc. frq. avg.	0.356	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
y: az 29.1 el 18.9 pa -48.0		P: az 328.6 el 21.2 pa 53.3		u, v (fr/asec)	-12824.037 640.090	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/c202a/v1/v1\_3mm/1234/No0103/yP..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yP.W.512.1HR3TY simultaneous interpolator





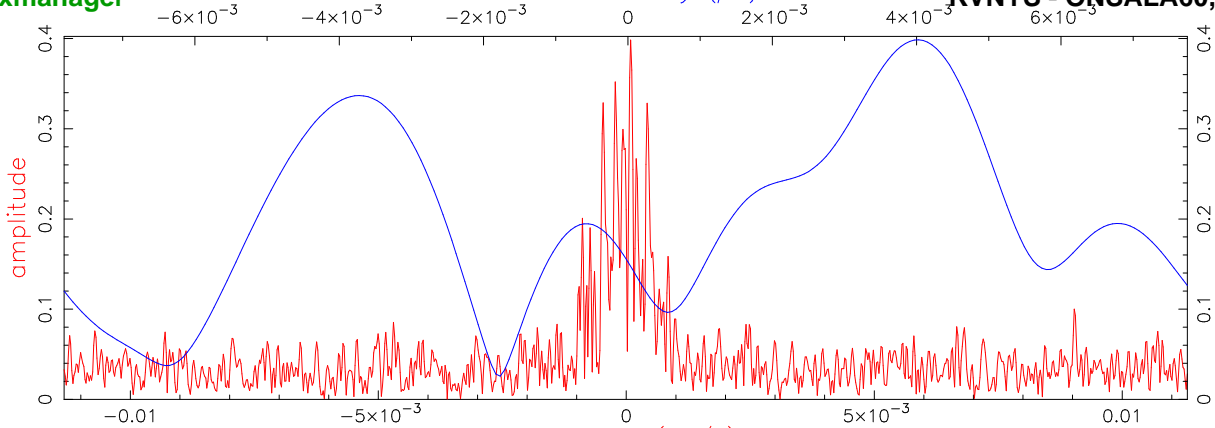
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yX

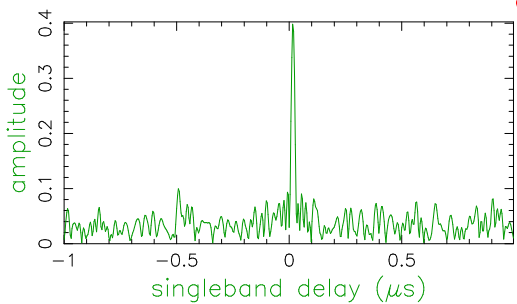
KVNYS - ONSALA60, fgroup W, pol RR

multiband delay ( $\mu$ s)

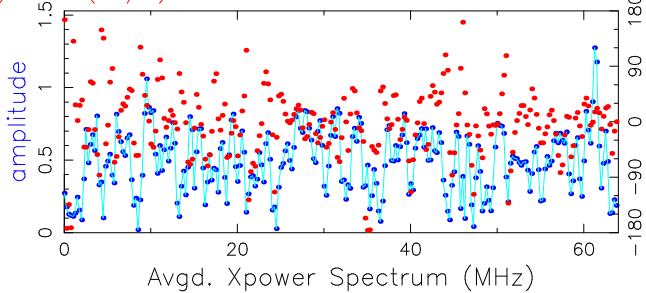


Fringe quality 7

SNR 14.8  
 Int time 179.962  
 Amp 0.402  
 Phase 150.1  
 PFD 8.0e-41  
 Delays (us)  
 SBD 0.016905  
 MBD 0.004069  
 Fringe rate (Hz)  
 0.007020  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

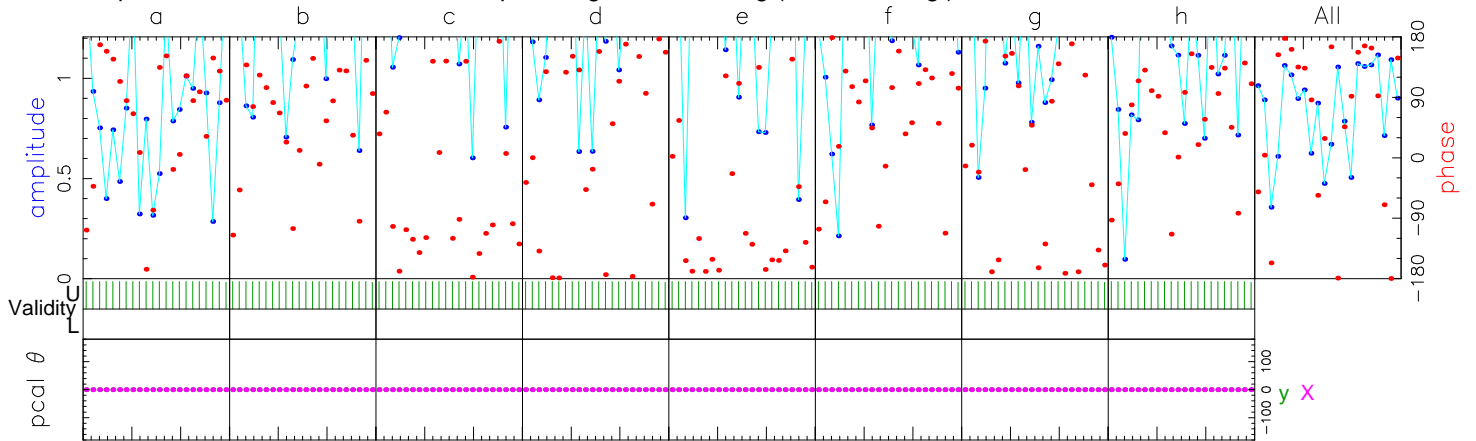


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133311  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-4.75359634633E+03	Apriori delay (usec)	-4.75361604009E+03	Resid mbdelay (usec)	4.06876E-03	+/-	7.4E-05
Sband delay (usec)	-4.75359913534E+03	Apriori clock (usec)	-4.7049629E+01	Resid sbdelay (usec)	1.69048E-02	+/-	5.8E-04
Phase delay (usec)	-4.75361603525E+03	Apriori clockrate (us/s)	-4.2800003E-07	Resid phdelay (usec)	4.84052E-06	+/-	2.5E-07
Delay rate (us/s)	9.17534032579E-01	Apriori rate (us/s)	9.17533951089E-01	Resid rate (us/s)	8.14898E-08	+/-	2.4E-09
Total phase (deg)	-99.7	Apriori accel (us/s/s)	2.60332292411E-06	Resid phase (deg)	150.1	+/-	7.8

ph/seg (deg)	77.9	RMS	18.2	Theor.	0.402 +/- 0.027	PCal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	124.8	Search (1024X32)	0.394	Amplitude		PCal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	56.9	Interp.	0.000	Search		Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	60.4	Inc. seg. avg.	0.812	Inc. seg. avg.		Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
		Inc. frq. avg.	0.606	Inc. frq. avg.		Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

y: az 29.1 el 18.9 pa -48.0 X: az 330.0 el 33.4 pa 31.3 u,v (fr/asec) -10056.984 -700.095 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX.W.482.1HR3TY

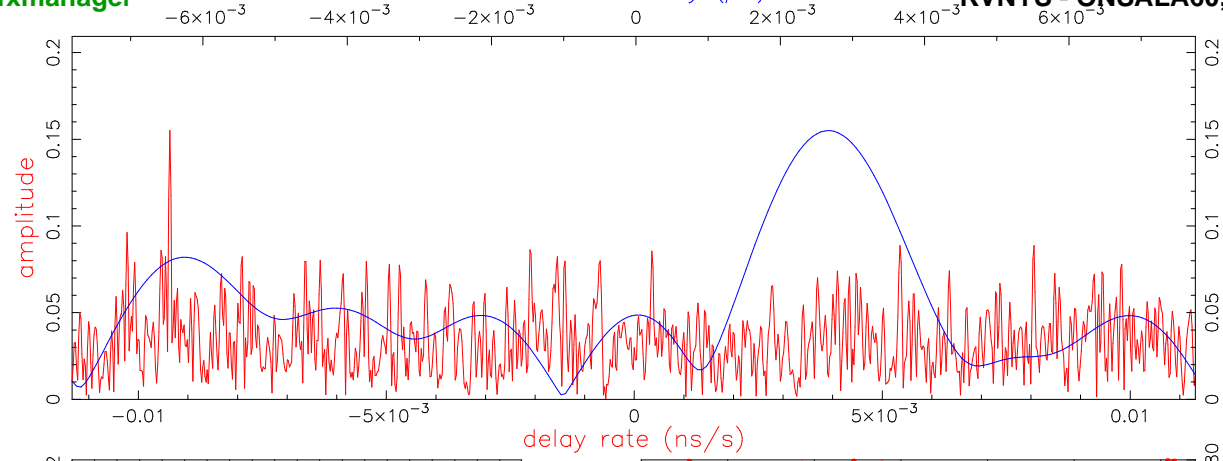
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yX

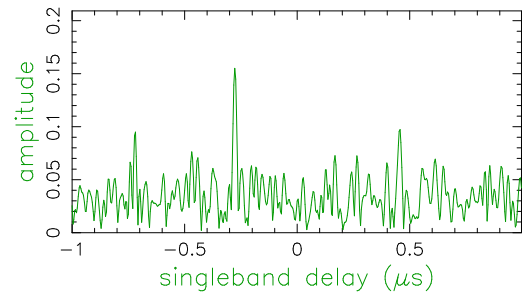
KVNYS - ONSALA60, fgroup W, pol LR

multiband delay ( $\mu$ s)

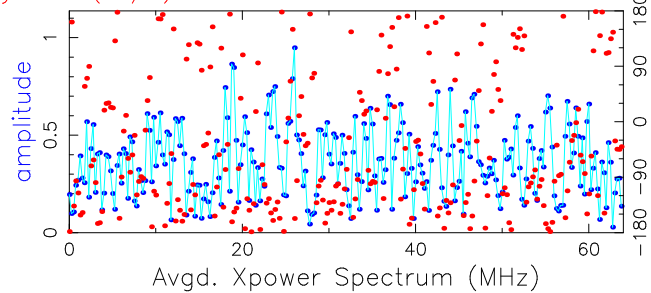


Fringe quality 0

SNR 5.7  
 Int time 179.962  
 Amp 0.209  
 Phase -113.4  
 PFD 7.9e-01  
 Delays (us)  
 SBD -0.276903  
 MBD 0.002682  
 Fringe rate (Hz)  
 -0.808100  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

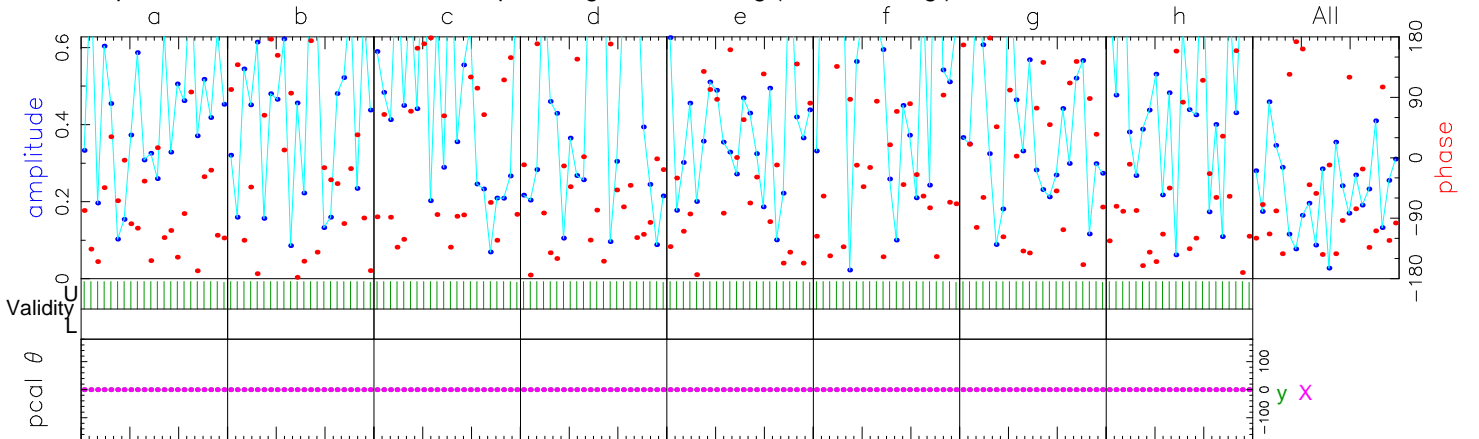


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133313  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-96.7	-132.9	-141.3	-100.8	-150.8	-79.7	-161.1	-115.8	Phase	-113.4
	0.3	0.2	0.2	0.4	0.1	0.3	0.1	0.3	Ampl.	0.2
	272.0	406.6	25.5	186.1	414.6	445.7	93.7	187.8	Sbd box	186.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
X	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	
									Tracks	
Group delay (usec)(sbd)	-4.75389460855E+03		Apriori delay (usec)		-4.75361604009E+03		Resid mbdelay (usec)		2.68154E-03	+/- 1.9E-04
Sband delay (usec)	-4.75389294284E+03		Apriori clock (usec)		-4.7049629E+01		Resid sbdelay (usec)		-2.76903E-01	+/- 1.5E-03
Phase delay (usec)	-4.75361604375E+03		Apriori clockrate (us/s)		-4.2800003E-07		Resid phdelay (usec)		-3.65718E-06	+/- 6.5E-07
Delay rate (us/s)	9.17524569853E-01		Apriori rate (us/s)		9.17533951089E-01		Resid rate (us/s)		-9.38124E-06	+/- 6.2E-09
Total phase (deg)			Apriori accel (us/s/s)		2.60332292411E-06		Resid phase (deg)		-113.4	+/- 20.1

ph/seg (deg) 67.8 47.2 Search (1024X32) 0.149 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 84.4 82.4 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 28.5 Inc. seg. avg. 0.232 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 45.8 49.7 Inc. frq. avg. 0.203 Sample rate(MISamp/s): 128 Data rate(Mb/s): 2048 nlags: 256 t\_cohere infinite dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 X: az 330.0 el 33.4 pa 31.3 u,v (fr/asec) -10056.984 -700.095 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX.W.494.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

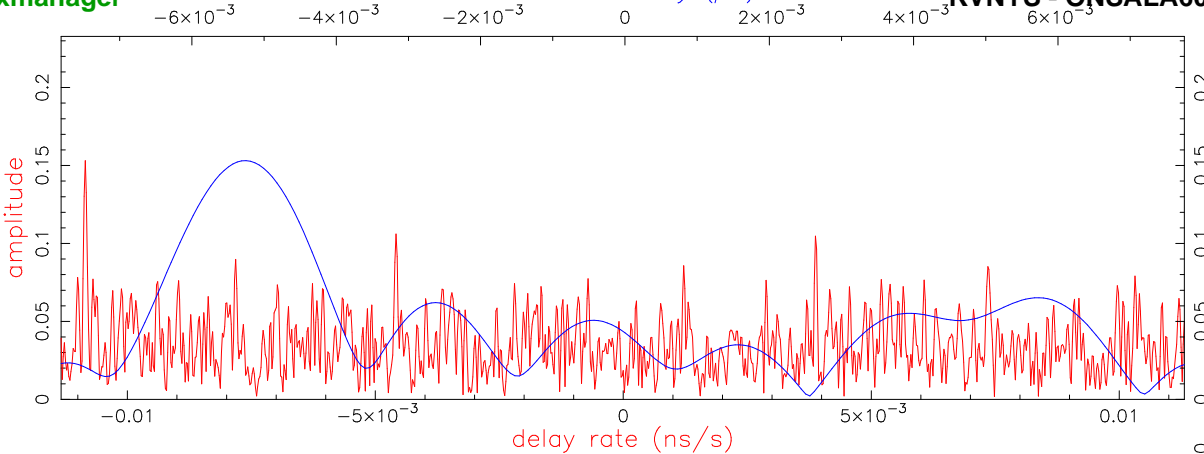
fxmanager

0102+584.1HR3TY, No0103, yX

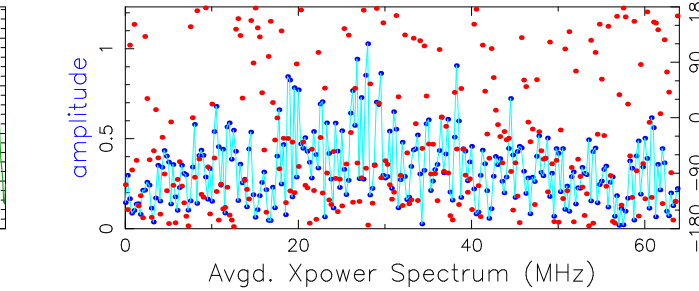
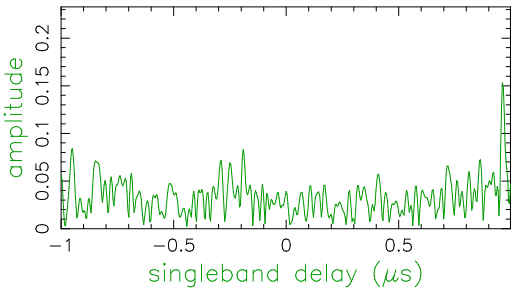
KVNYS - ONSALA60, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 0

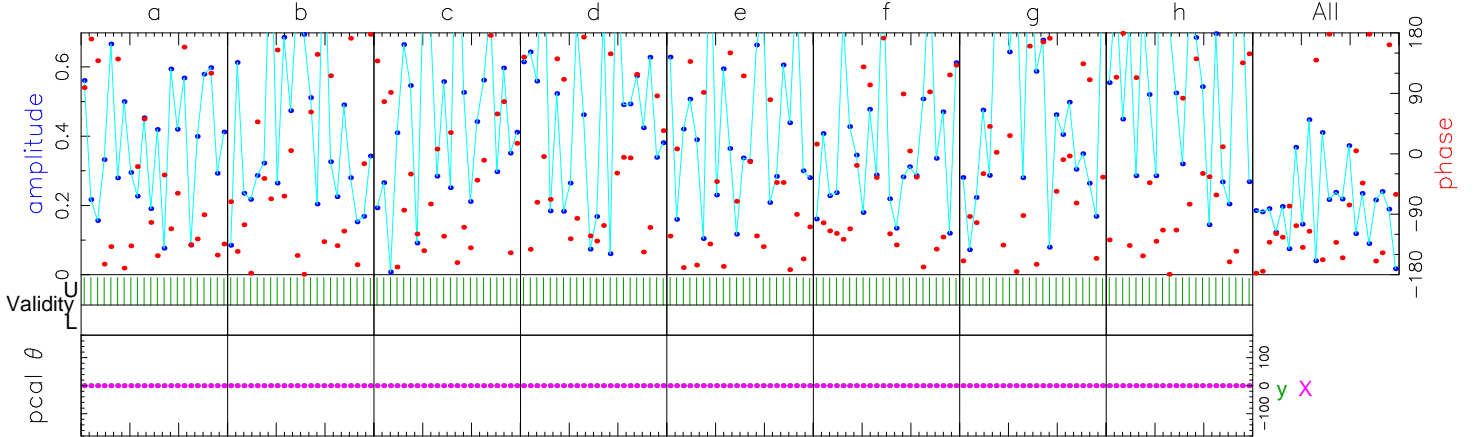


SNR 5.7  
 Int time 179.962  
 Amp 0.233  
 Phase -133.8  
 PFD 8.5e-01  
 Delays (us)  
 SBD 0.962030  
 MBD -0.005239  
 Fringe rate (Hz)  
 -0.936543  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133314  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-155.4	-129.1	-114.4	-88.8	-134.2	-163.9	-108.8	-143.3	Phase	-133.8
	0.3	0.3	0.2	0.2	0.4	0.2	0.1	0.4	Ampl.	0.2
	504.4	431.7	408.9	193.8	503.0	42.9	16.8	502.8	Sbd box	503.3
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
X	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:X	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
X	1000	1000	1000	1000	1000	1000	1000	1000		
	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y									Tracks	
X	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	

Group delay (usec)(sbd)	-4.75265252860E+03	Apriori delay (usec)	-4.75361604009E+03	Resid mbdelay (usec)	-5.23850E-03	+/-	1.9E-04
Sband delay (usec)	-4.75265400959E+03	Apriori clock (usec)	-4.7049629E+01	Resid sbdelay (usec)	9.62030E-01	+/-	1.5E-03
Phase delay (usec)	-4.75361604441E+03	Apriori clockrate (us/s)	-4.2800003E-07	Resid phdelay (usec)	-4.31338E-06	+/-	6.5E-07
Delay rate (us/s)	9.17523078750E-01	Apriori rate (us/s)	9.17533951089E-01	Resid rate (us/s)	-1.08723E-05	+/-	6.3E-09
Total phase (deg)	-23.5	Apriori accel (us/s/s)	2.60332292411E-06	Resid phase (deg)	-133.8	+/-	20.3

ph/seg (deg)	53.2	Theor.	47.5	Amplitude	0.233 +/- 0.041	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5		
amp/seg (%)	79.2		82.9	Search (1024X32)	0.151	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	27.4		28.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	39.3		50.0	Inc. seg. avg.	0.231	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011		
				Inc. frq. avg.	0.219	Data rate (Mb/s):	2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

y: az 29.1 el 18.9 pa -48.0 X: az 330.0 el 33.4 pa 31.3 u,v (fr/asec) -10056.984 -700.095 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yX.W.507.1HR3TY

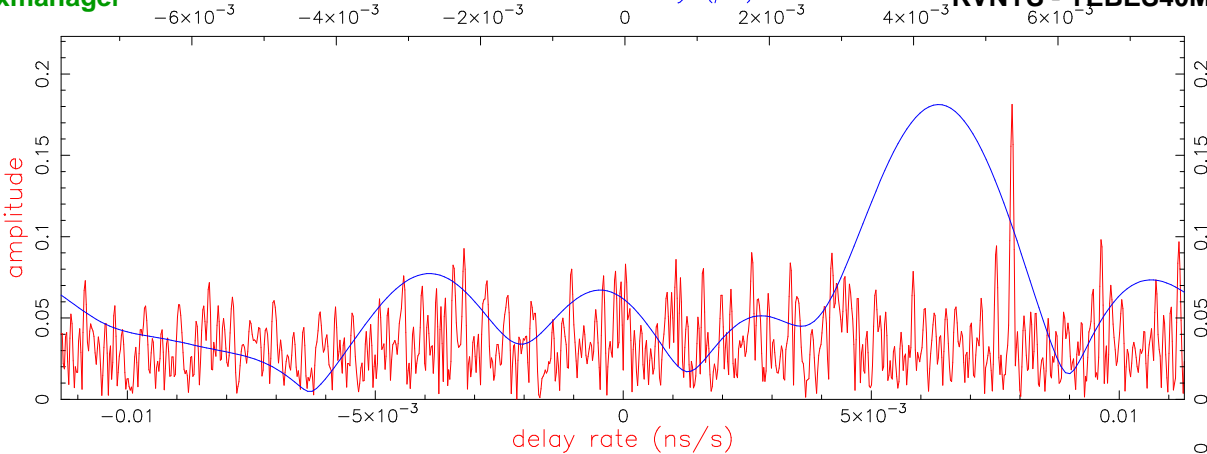
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yY

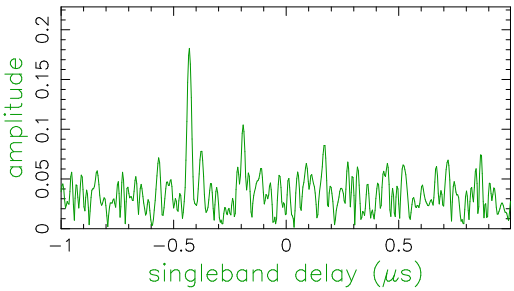
KVNYS - YEBES40M, fgroup W, pol LL

multiband delay ( $\mu\text{s}$ )

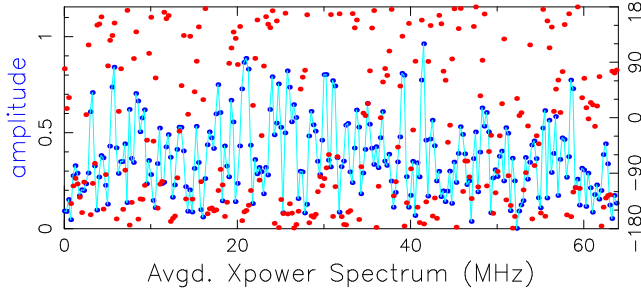


Fringe quality 0

SNR 6.3  
 Int time 162.149  
 Amp 0.223  
 Phase -132.8  
 PFD 3.3e-02  
 Delays (us)  
 SBD -0.430462  
 MBD 0.004342  
 Fringe rate (Hz)  
 0.675664  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

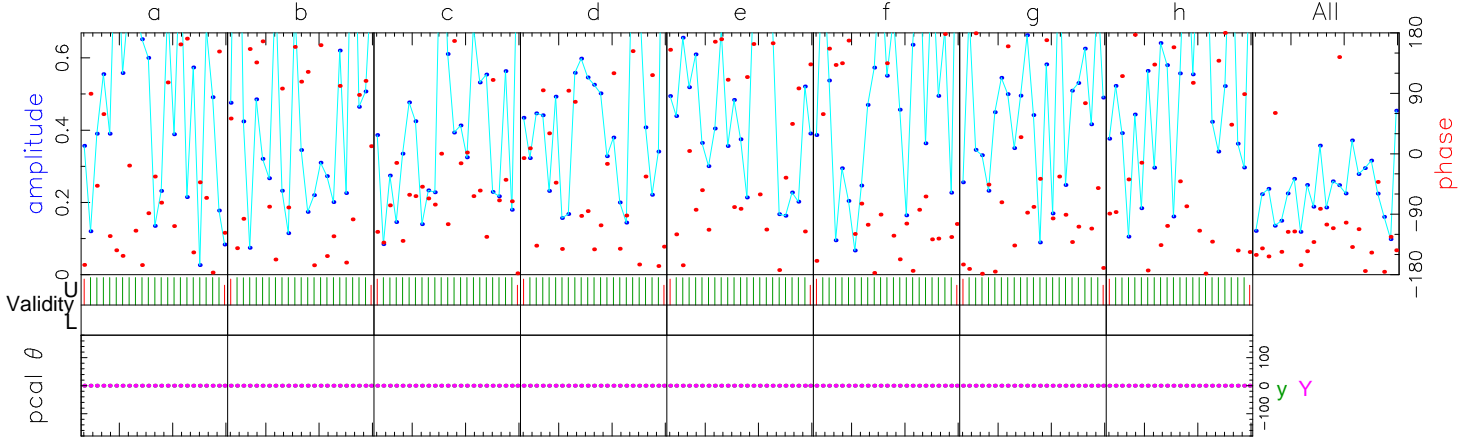


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073016.90  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133311  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.66373426128E+03	Apriori delay (usec)	-1.66330110357E+03	Resid mbdelay (usec)	4.34229E-03	+/-	1.7E-04
Sband delay (usec)	-1.66373156582E+03	Apriori clock (usec)	-1.0437750E+01	Resid sbdelay (usec)	-4.30462E-01	+/-	1.4E-03
Phase delay (usec)	-1.66330110785E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-4.28106E-06	+/-	5.8E-07
Delay rate (us/s)	1.14013403675E+00	Apriori rate (us/s)	1.14012619296E+00	Resid rate (us/s)	7.84379E-06	+/-	6.2E-09
Total phase (deg)	-155.0	Apriori accel (us/s/s)	4.92074923654E-06	Resid phase (deg)	-132.8	+/-	18.1

ph/seg (deg)	49.2	Theor.	43.4	Amplitude	0.223 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5			
amp/seg (%)	53.0		75.8	Search (1024X32)	0.177	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000		
ph/frq (deg)	33.0		25.6	Inc. seg. avg.	0.221	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008	
amp/frq (%)	27.2		44.7	Inc. frq. avg.	0.230	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011 0.011	
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00

y: az 29.1 el 18.9 pa -48.0 Y: az 327.9 el 24.0 pa 50.5 u,v (fr/asec) -12496.750 500.288 simultaneous interpolator

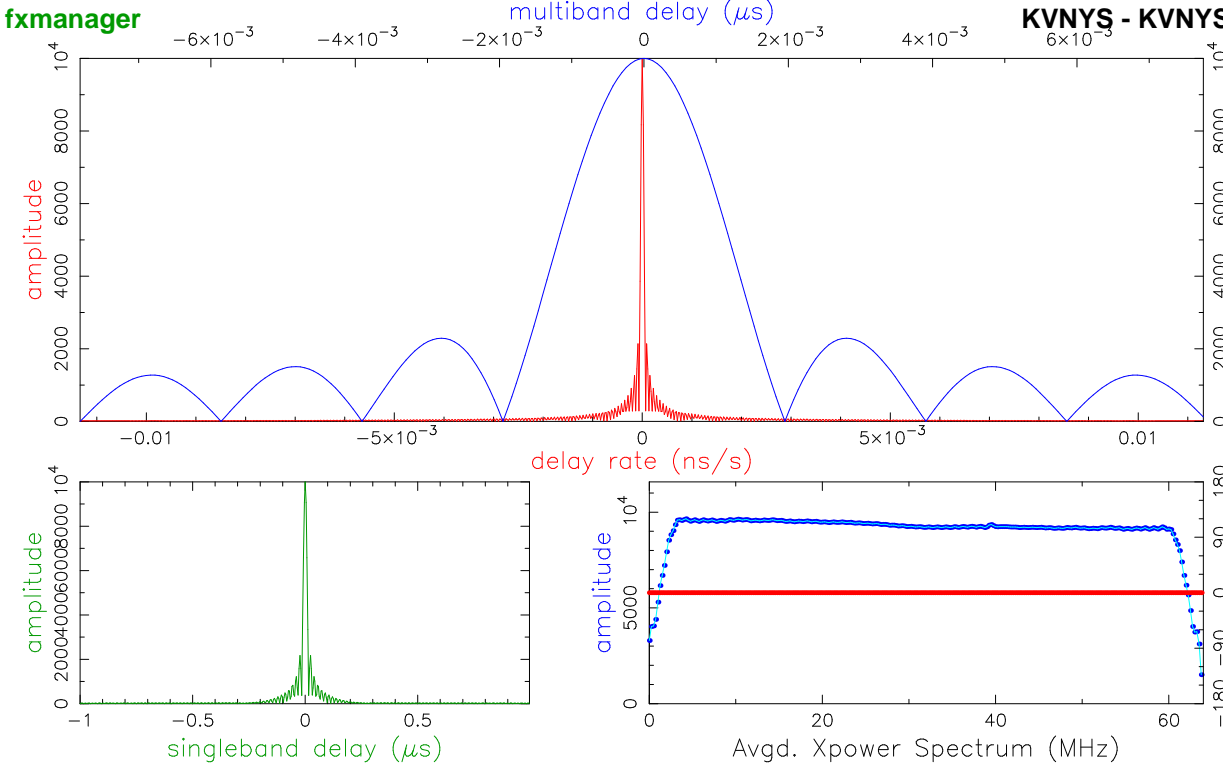
Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY.W.487.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yy

KVNY<sub>3</sub> - KVNY<sub>5</sub>, fgroup W, pol LL

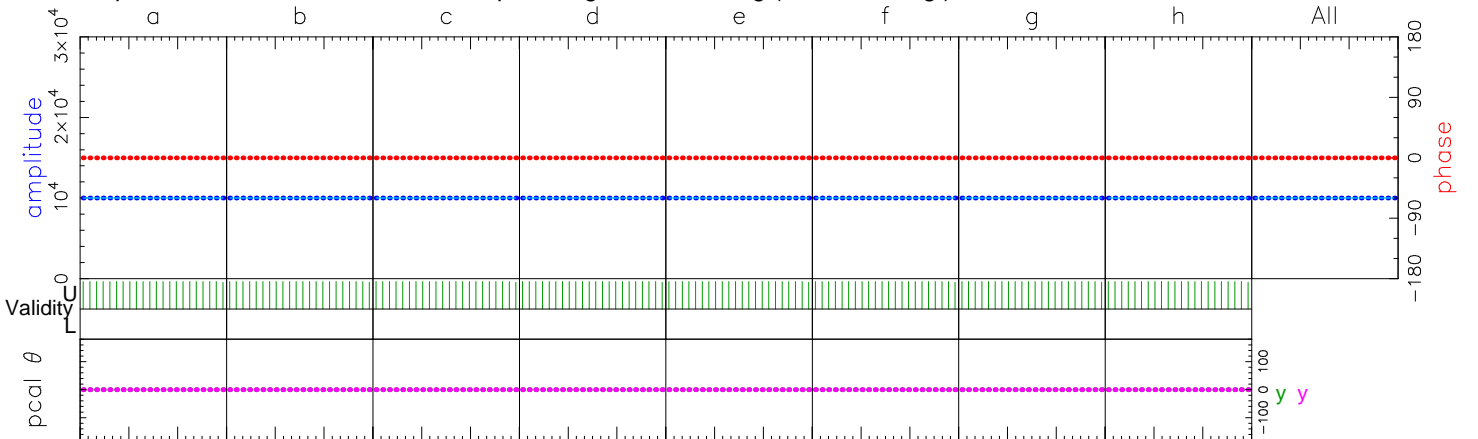


Fringe quality 9

SNR 366874.8  
 Int time 179.987  
 Amp 10000.000  
 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. c202a  
 Yr:day 16383  
 Start 2020:283  
 Stop 2020:283  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133311  
 2020:247:085004  
 RA & Dec (J2000) 01h02m45.762375s +58°24'11.136621"

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
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	257.0	257.0
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	257.0	257.0
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	10000.0	10000.0

Group delay (usec)(sbd) 0.0000000000E+00 Apriori delay (usec) 0.0000000000E+00 Resid mbdelay (usec) 0.00000E+00 +/- 3.0E-09  
 Sband delay (usec) 0.0000000000E+00 Apriori clock (usec) 0.0000000E+00 Resid sbdelay (usec) 0.00000E+00 +/- 2.3E-08  
 Phase delay (usec) 0.0000000000E+00 Apriori clockrate (us/s) 0.0000000E+00 Resid phdelay (usec) 0.00000E+00 +/- 1.0E-11  
 Delay rate (us/s) 0.0000000000E+00 Apriori rate (us/s) 0.0000000000E+00 Resid rate (us/s) 0.00000E+00 +/- 9.7E-14  
 Total phase (deg) 0.0 Apriori accel (us/s/s) 0.0000000000E+00 Resid phase (deg) 0.0 +/- 0.0

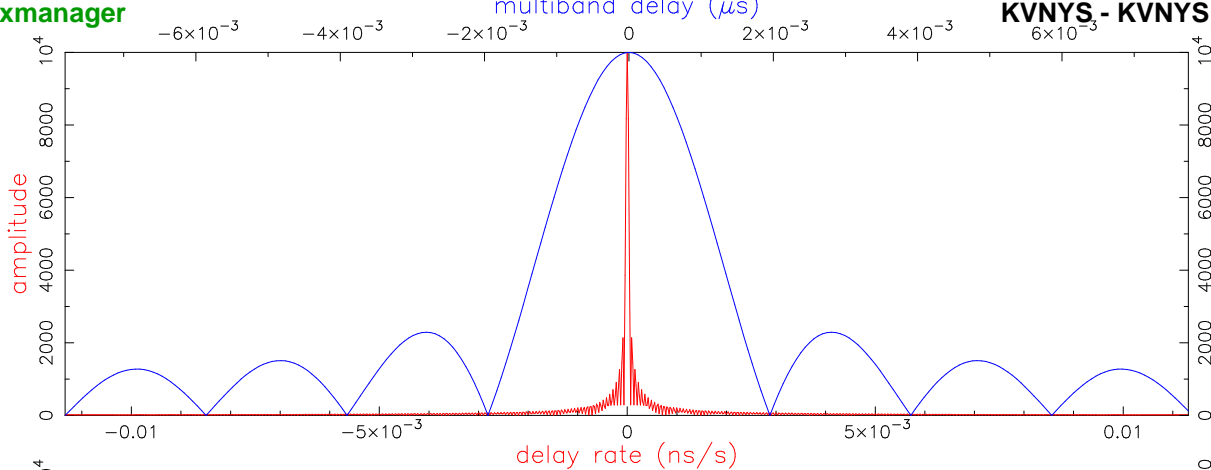
ph/seg (deg) 0.0 0.0 RMS Theor. Amplitude 10000.000 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.0 0.0 Search (1024X32) 10000.000 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 0.0 0.0 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled 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  
 y: az 29.1 el 18.9 pa -48.0 y: az 29.1 el 18.9 pa -48.0 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/c202a/v1/v1\_3mm/1234/No0103/yy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy.W.489.1HR3TY simultaneous interpolator

Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

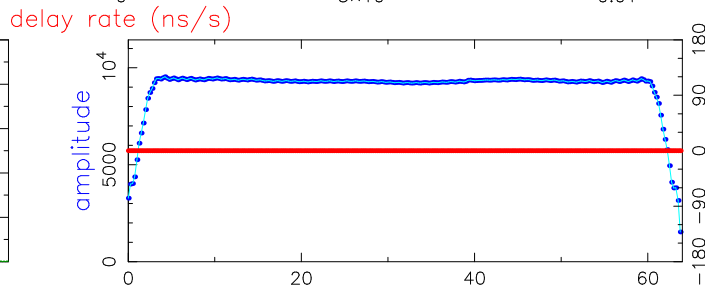
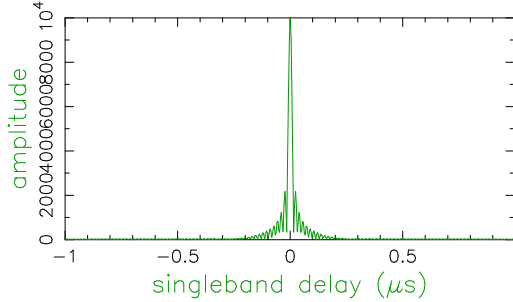
0102+584.1HR3TY, No0103, yy

KVNYS - KVNYS, fgroup W, pol RR



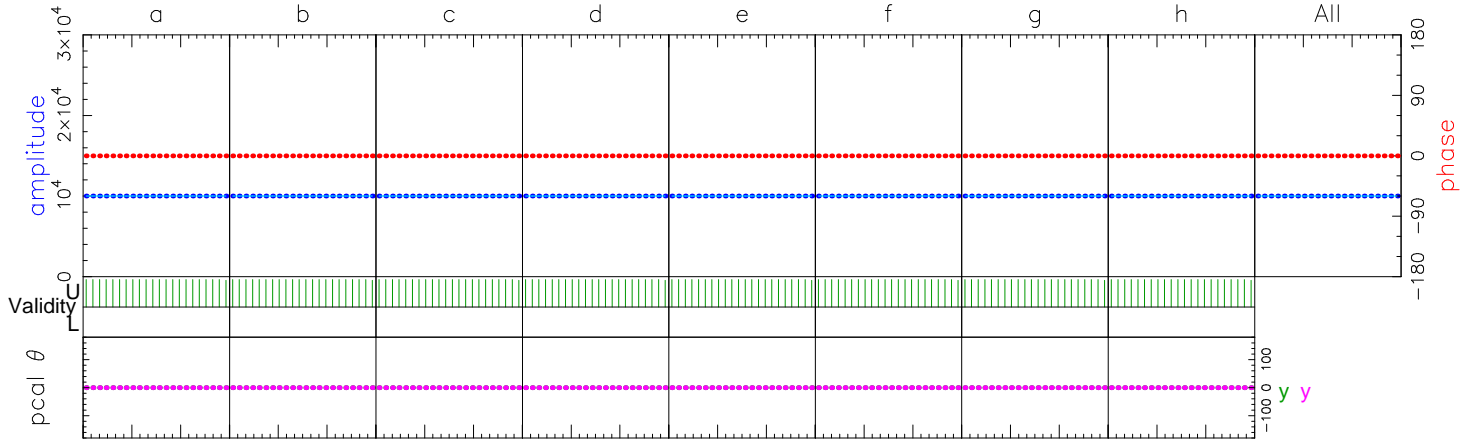
Fringe quality 9

SNR 366874.8  
 Int time 179.987  
 Amp 10000.000  
 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. c202a  
 Yr:day 16383  
 Start 2020:283  
 Stop 2020:283  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133313  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0.0	0.0
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y	1000	1000	1000	1000	1000	1000	1000	1000	10000.0	10000.0
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	Tracks
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	Tracks

Group delay (usec)(sbd)	0.0000000000E+00	Apriori delay (usec)	0.0000000000E+00	Resid mbdelay (usec)	0.00000E+00	+/-	3.0E-09
Sband delay (usec)	0.0000000000E+00	Apriori clock (usec)	0.0000000E+00	Resid sbdelay (usec)	0.00000E+00	+/-	2.3E-08
Phase delay (usec)	0.0000000000E+00	Apriori clockrate (us/s)	0.0000000E+00	Resid phdelay (usec)	0.00000E+00	+/-	1.0E-11
Delay rate (us/s)	0.0000000000E+00	Apriori rate (us/s)	0.0000000000E+00	Resid rate (us/s)	0.00000E+00	+/-	9.7E-14
Total phase (deg)	0.0	Apriori accel (us/s/s)	0.0000000000E+00	Resid phase (deg)	0.0	+/-	0.0

ph/seg (deg)	0.0	RMS	Theor.	Amplitude	10000.000 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	0.0	0.0	0.0	Search (1024X32)	10000.000	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	0.0	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	0.0	Inc. seg. avg.	10000.000	Sample rate(MISamp/s): 128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	10000.000	Data rate(Mb/s): 2048	ion window (TEC)	0.00 0.00	

y: az 29.1 el 18.9 pa -48.0      y: az 29.1 el 18.9 pa -48.0      u,v (fr/asec) 0.000 0.000      simultaneous interpolator

Control file: cf\_1234\_gmva    Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy..1HR3TY    Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy.W.496.1HR3TY

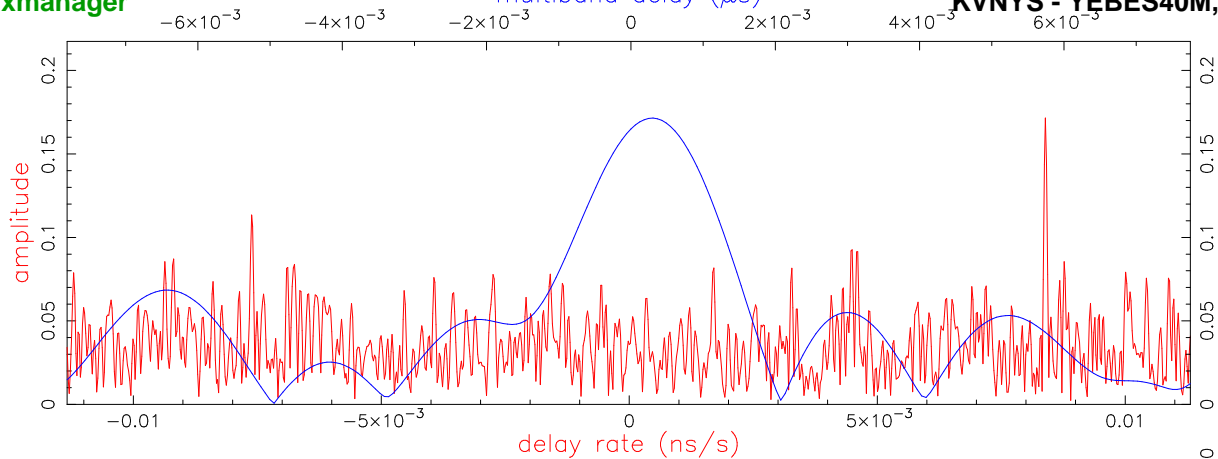
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yY

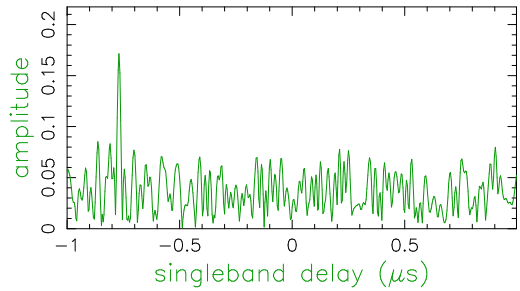
KVNYS - YEBES40M, fgroup W, pol RR

multiband delay ( $\mu$ s)

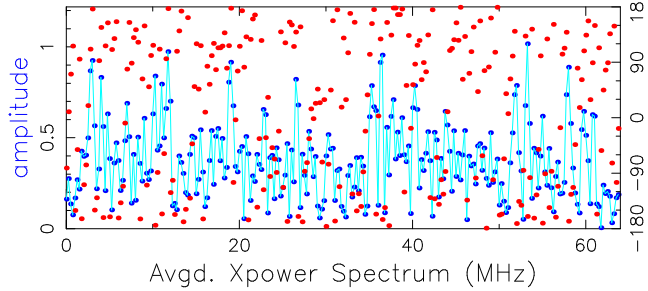


Fringe quality 0

SNR 6.0  
 Int time 162.149  
 Amp 0.217  
 Phase -72.3  
 PFD 2.6e-01  
 Delays (us)  
 SBD -0.769683  
 MBD 0.000291  
 Fringe rate (Hz)  
 0.724053  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

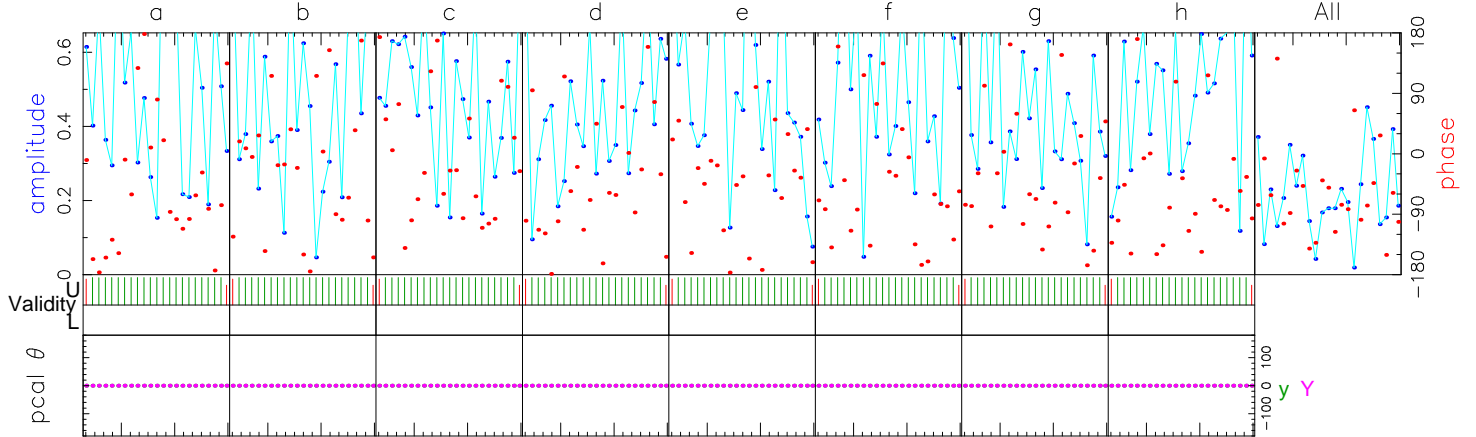


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073016.90  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133313  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
	-95.7	-64.2	-41.5	-85.0	-39.6	-90.7	-72.2	-80.4	Phase	-72.3		
	0.3	0.1	0.2	0.2	0.3	0.3	0.3	0.3	Ampl.	0.2		
	436.7	268.7	269.9	355.4	350.4	232.3	487.5	151.8	Sbd box	60.0		
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs			
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase			
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC			
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp			
Y	1000	1000	1000	1000	1000	1000	1000	1000				
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids			
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks			
									Chan ids			
									Tracks			
Group delay (usec)(sbd)	-1.66406643768E+03		Apriori delay (usec)		-1.66330110357E+03		Resid mbdelay (usec)		2.90889E-04	+/- 1.8E-04		
Sband delay (usec)	-1.66407078682E+03		Apriori clock (usec)		-1.0437750E+01		Resid sbdelay (usec)		-7.69683E-01	+/- 1.4E-03		
Phase delay (usec)	-1.66330110590E+03		Apriori clockrate (us/s)		-2.0000006E-08		Resid phdelay (usec)		-2.33044E-06	+/- 6.2E-07		
Delay rate (us/s)	1.14013459850E+00		Apriori rate (us/s)		1.14012619296E+00		Resid rate (us/s)		8.40553E-06	+/- 6.6E-09		
Total phase (deg)			Apriori accel (us/s/s)		4.92074923654E-06		Resid phase (deg)		-72.3	+/- 19.2		
	RMS	Theor.	Amplitude		0.217 +/- 0.036		Pcal mode: MANUAL, MANUAL		PC period (AP's) 5, 5			
ph/seg (deg)	59.0	46.0	Search (1024X32)		0.164		Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000		
amp/seg (%)	70.1	80.3	Interp.		0.000		Bits/sample: 2x2		SampCntNorm: enabled	mb window (us)	-0.008 0.008	
ph/frq (deg)	23.1	27.1	Inc. seg. avg.		0.209		Sample rate(MISamp/s): 128			dr window (ns/s)	-0.011 0.011	
amp/frq (%)	26.3	47.4	Inc. frq. avg.		0.208		Data rate(Mb/s): 2048		nlags: 256	t_cohere infinite	ion window (TEC)	0.00 0.00
y: az 29.1 el 18.9 pa -48.0	Y: az 327.9 el 24.0 pa 50.5		u, v (fr/asec)		-12496.750 500.288						simultaneous interpolator	
Control file: cf_1234_gmva	Input file: /Exps/c202a/v1/v1_3mm/1234/No0103/yY..1HR3TY		Output file: /Exps/c202a/v1/v1_3mm/1234/No0103/yY.W.499.1HR3TY									



Mk4/DiFX fourfit 3.21 rev 2937

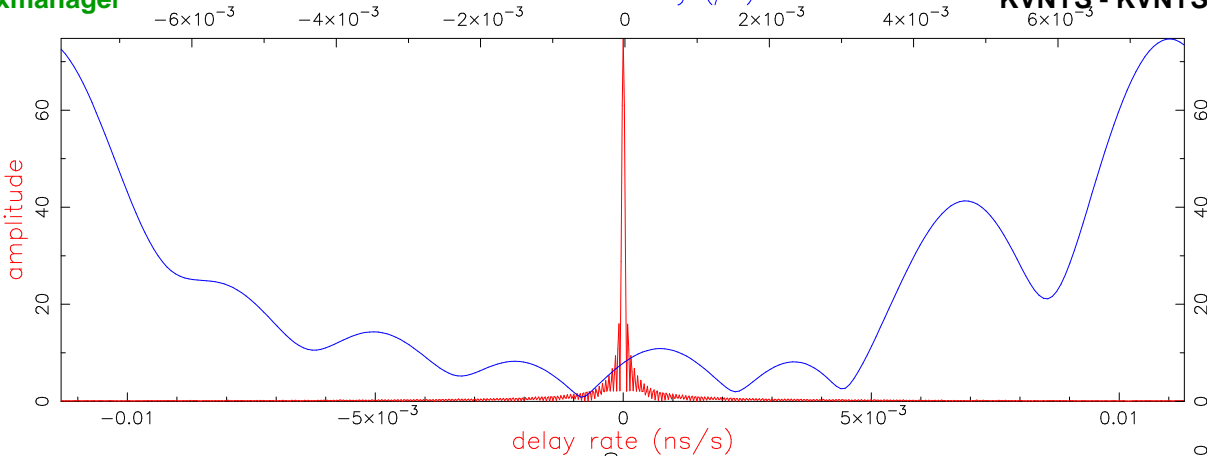
fxmanager

0102+584.1HR3TY, No0103, yy

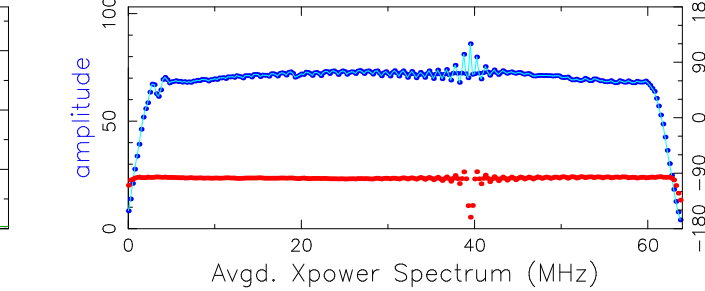
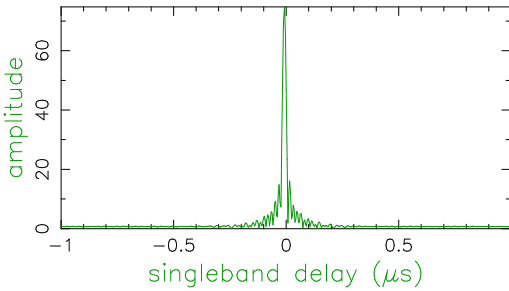
KVNY - KVNY, fgroup W, pol LR

multiband delay ( $\mu$ s)

Fringe quality 5

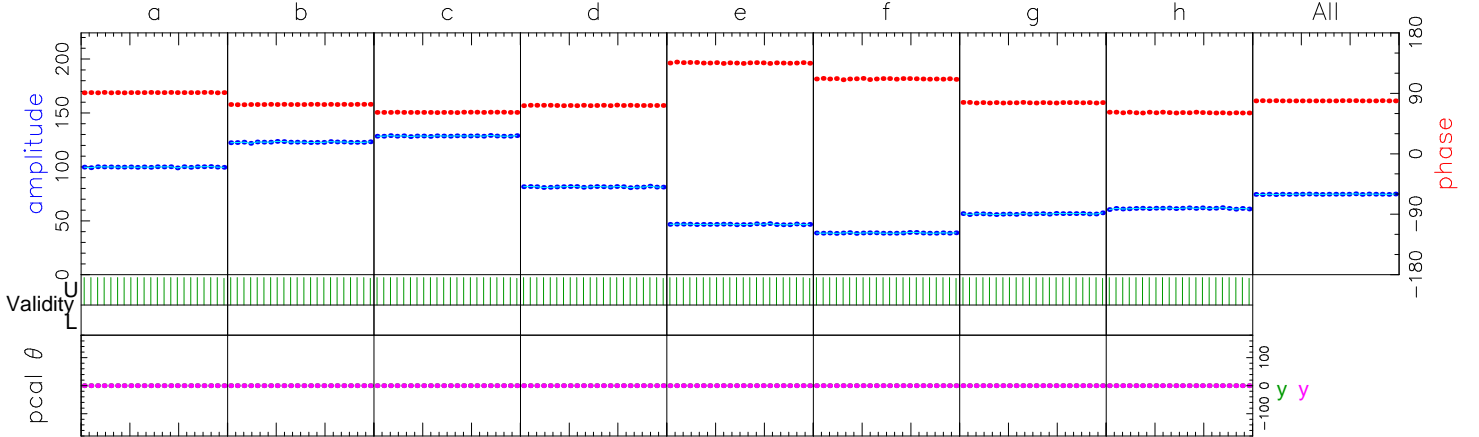


SNR 2743.9  
 Int time 179.987  
 Amp 74.791  
 Phase 78.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD -0.008319  
 MBD 0.007551  
 Fringe rate (Hz)  
 -0.000005  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133314  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-8.07381250000E-03									
Sband delay (usec)	-8.31925000000E-03									
Phase delay (usec)	2.54166341412E-06									
Delay rate (us/s)	-6.09359552842E-11									
Total phase (deg)			78.8							
Apriori delay (usec)					0.00000000000E+00				7.55119E-03	+/- 4.0E-07
Apriori clock (usec)					0.0000000E+00				-8.31925E-03	+/- 3.1E-06
Apriori clockrate (us/s)					0.0000000E+00				2.54166E-06	+/- 1.3E-09
Apriori rate (us/s)					0.00000000000E+00				-6.09360E-11	+/- 1.3E-11
Apriori accel (us/s/s)					0.00000000000E+00				78.8	+/- 0.0
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										
PC period (AP's) 5, 5										
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
simultaneous interpolator										

ph/seg (deg) 0.1 0.1  
 amp/seg (%) 0.3 0.2  
 ph/frq (deg) 29.1 0.1  
 amp/frq (%) 43.6 0.1  
 y: az 29.1 el 18.9 pa -48.0  
 Control file: cf\_1234\_gmva

Amplitude 74.791 +/- 0.027  
 Search (1024X32) 73.123  
 Intp. 0.000  
 Inc. seg. avg. 74.675  
 Inc. frq. avg. 79.554  
 u,v (fr/asec) 0.000 0.000

PC period (AP's) 5, 5  
 SampCntNorm: enabled  
 nlags: 256 t\_cohere infinite

Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy..1HR3TY  
 Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy.W.508.1HR3TY

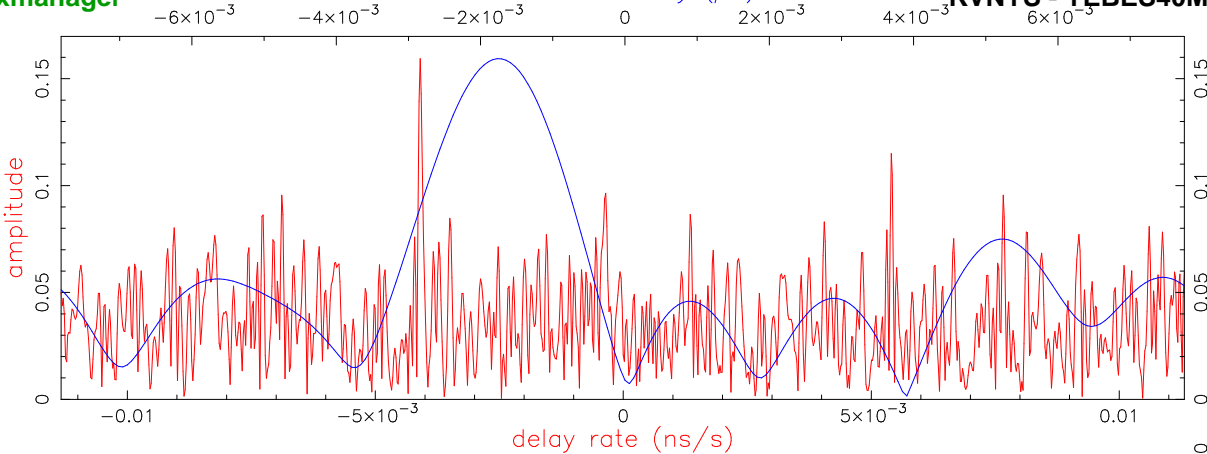
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yY

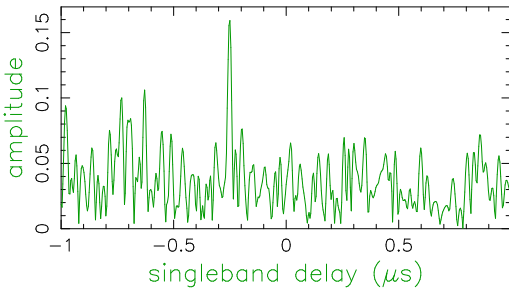
KVNYS - YEBES40M, fgroup W, pol LR

multiband delay ( $\mu$ s)

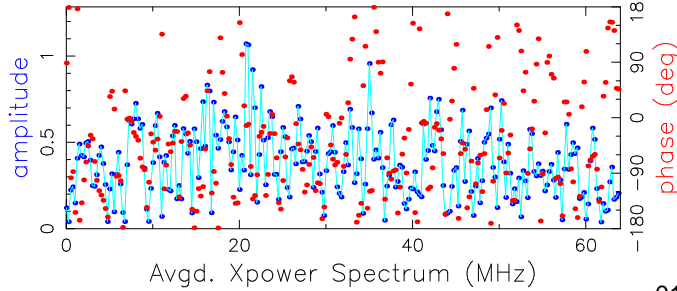


Fringe quality 0

SNR 5.6  
 Int time 162.149  
 Amp 0.170  
 Phase -55.4  
 PFD 9.3e-01  
 Delays (us)  
 SBD -0.251295  
 MBD -0.001768  
 Fringe rate (Hz)  
 -0.354221  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

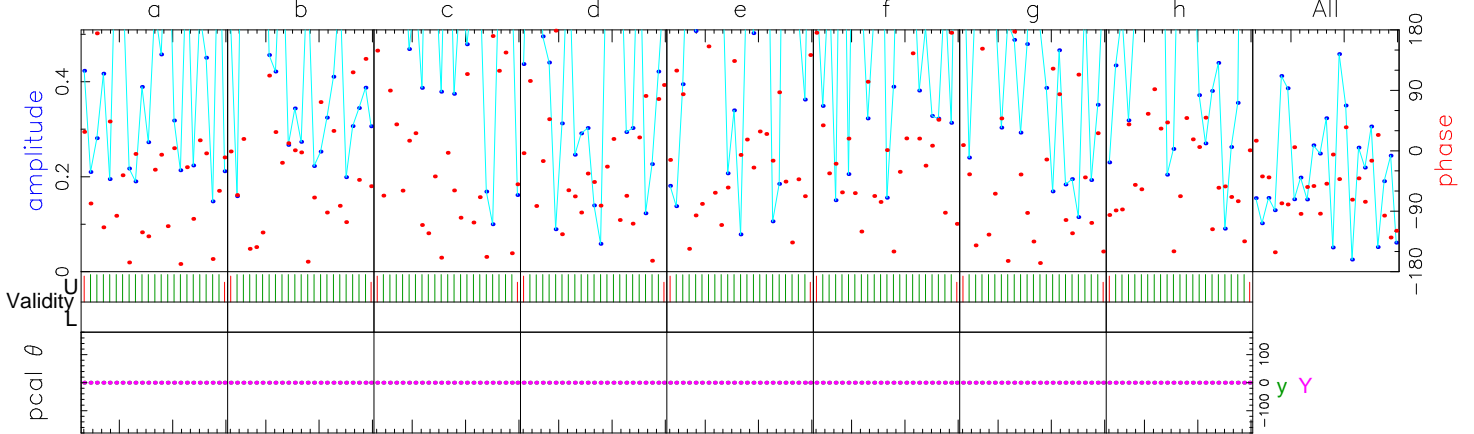


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073016.90  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133315  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-56.4	-55.9	-75.7	-30.7	-49.5	-57.1	-121.1	-26.5	Phase	-55.4
	0.2	0.1	0.1	0.2	0.2	0.3	0.2	0.2	Ampl.	0.2
	166.0	333.4	332.5	337.8	289.9	193.3	117.3	470.7	Sbd box	192.7
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Tracks	

Group delay (usec)(sbd)	-1.66355287200E+03	Apriori delay (usec)	-1.66330110357E+03	Resid mbdelay (usec)	-1.76843E-03	+/-	1.9E-04
Sband delay (usec)	-1.66355239832E+03	Apriori clock (usec)	-1.0437750E+01	Resid sbdelay (usec)	-2.51295E-01	+/-	1.5E-03
Phase delay (usec)	-1.66330110536E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	-1.78741E-06	+/-	6.6E-07
Delay rate (us/s)	1.14012208081E+00	Apriori rate (us/s)	1.14012619296E+00	Resid rate (us/s)	-4.11215E-06	+/-	7.0E-09
Total phase (deg)	-77.6	Apriori accel (us/s/s)	4.92074923654E-06	Resid phase (deg)	-55.4	+/-	20.5

ph/seg (deg)	47.9	Theor.	49.1	Amplitude	0.170 +/- 0.030	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	80.7		85.7	Search (1024X32)	0.157	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	32.2		29.0	Inc. seg. avg.	0.166	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	32.9		50.5	Inc. frq. avg.	0.166	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

y: az 29.1 el 18.9 pa -48.0 Y: az 327.9 el 24.0 pa 50.5 u,v (fr/asec) -12496.750 500.288 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY.W.511.1HR3TY

Mk4/DiFX fourfit 3.21 rev 2937

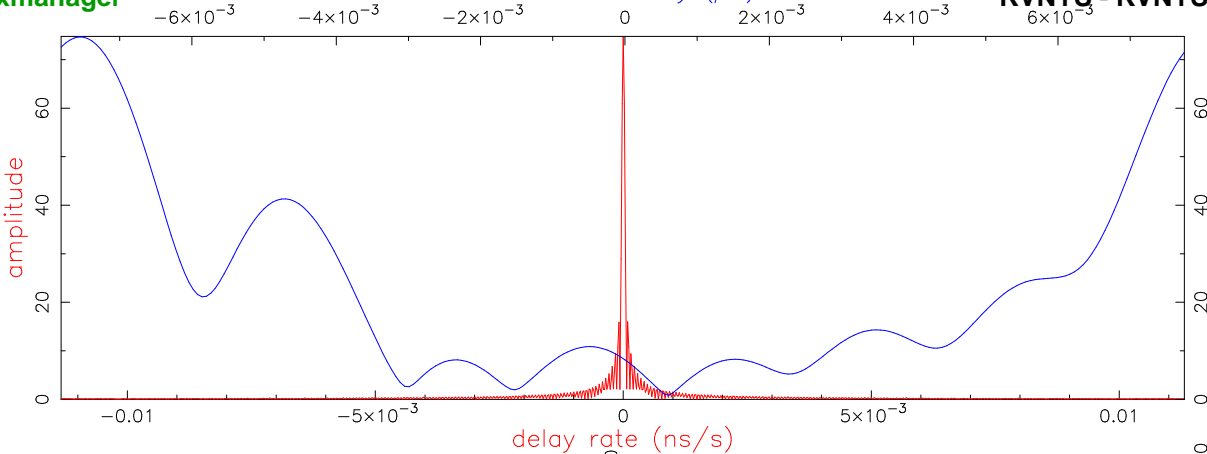
fxmanager

0102+584.1HR3TY, No0103, yy

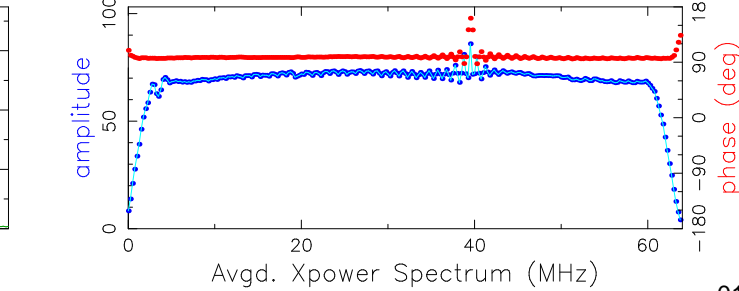
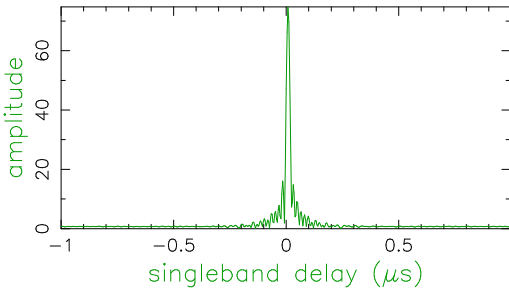
KVNY5 - KVNY5, fgroup W, pol RL

multiband delay ( $\mu$ s)

Fringe quality 5

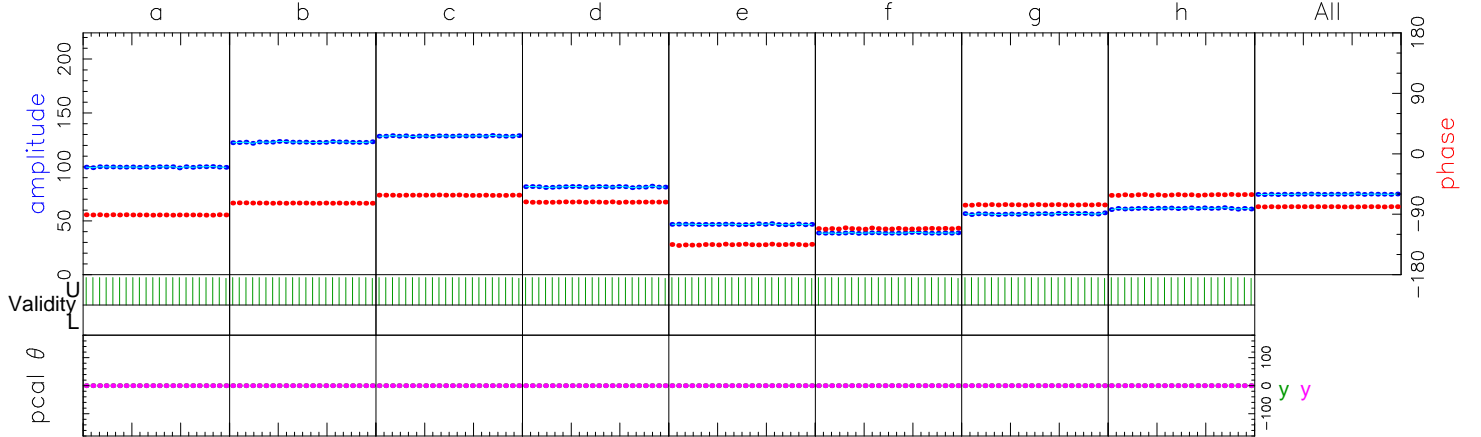


SNR 2743.9  
 Int time 179.987  
 Amp 74.791  
 Phase -78.8  
 PFD 0.0e+00  
 Delays (us)  
 SBD 0.008319  
 MBD -0.007551  
 Fringe rate (Hz)  
 0.000005  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133316  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	-91.0	-73.4	-61.7	-71.9	-135.2	-111.4	-76.0	-61.2	Phase	-78.8
	99.9	122.9	128.6	81.5	46.8	38.7	56.5	61.5	Ampl.	79.6
	259.3	259.3	259.2	258.5	258.6	259.8	259.3	259.1	Sbd box	259.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	
									Chan ids	
									Tracks	
Group delay (usec)(sbd)	8.07381250000E-03		Apriori delay (usec)		0.00000000000E+00		Resid mbdelay (usec)		-7.55119E-03	+/- 4.0E-07
Sband delay (usec)	8.31925000000E-03		Apriori clock (usec)		0.0000000E+00		Resid sbdelay (usec)		8.31925E-03	+/- 3.1E-06
Phase delay (usec)	-2.54166341439E-06		Apriori clockrate (us/s)		0.0000000E+00		Resid phdelay (usec)		-2.54166E-06	+/- 1.3E-09
Delay rate (us/s)	6.09359552842E-11		Apriori rate (us/s)		0.00000000000E+00		Resid rate (us/s)		6.09360E-11	+/- 1.3E-11
Total phase (deg)			Apriori accel (us/s/s)		0.00000000000E+00		Resid phase (deg)		-78.8	+/- 0.0

ph/seg (deg) 0.1 0.1 Theor. Amplitude 74.791 +/- 0.027 Pcal mode: MANUAL, MANUAL PC period (AP's) 5, 5  
 amp/seg (%) 0.3 0.2 Search (1024X32) 73.123 Pcal rate: 0.000E+00, 0.000E+00 (us/s) sb window (us) -1.000 1.000  
 ph/frq (deg) 29.1 0.1 Interp. 0.000 Bits/sample: 2x2 SampCntNorm: enabled mb window (us) -0.008 0.008  
 amp/frq (%) 43.6 0.1 Inc. seg. avg. 74.675 Sample rate(MISamp/s): 128 dr window (ns/s) -0.011 0.011  
 y: az 29.1 el 18.9 pa -48.0 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/c202a/v1/v1\_3mm/1234/No0103/yy..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yy.W.522.1HR3TY simultaneous interpolator

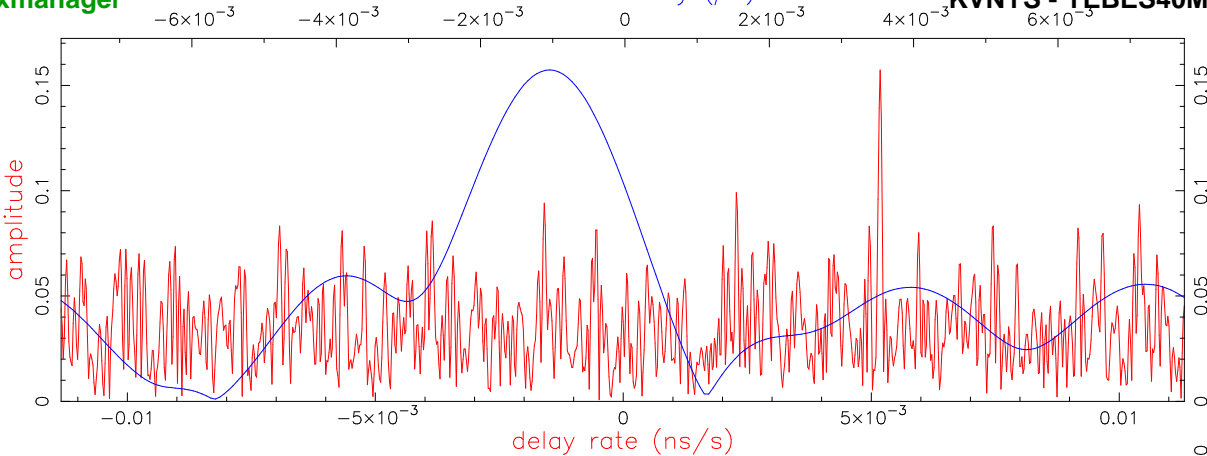
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yY

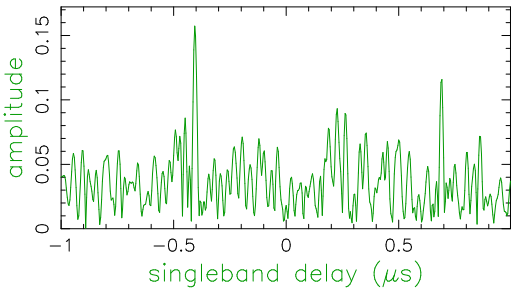
KVNYS - YEBES40M, fgroup W, pol RL

multiband delay ( $\mu$ s)

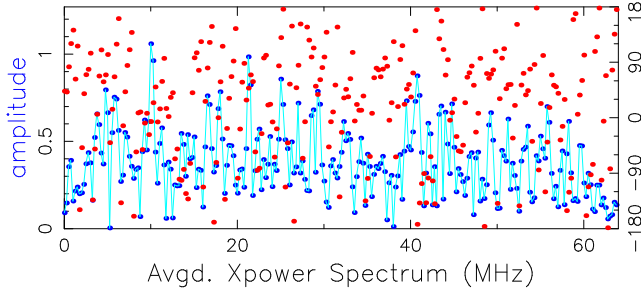


Fringe quality 0

SNR 5.5  
 Int time 162.149  
 Amp 0.172  
 Phase 71.8  
 PFD 9.9e-01  
 Delays (us)  
 SBD -0.405461  
 MBD -0.001024  
 Fringe rate (Hz)  
 0.447025  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

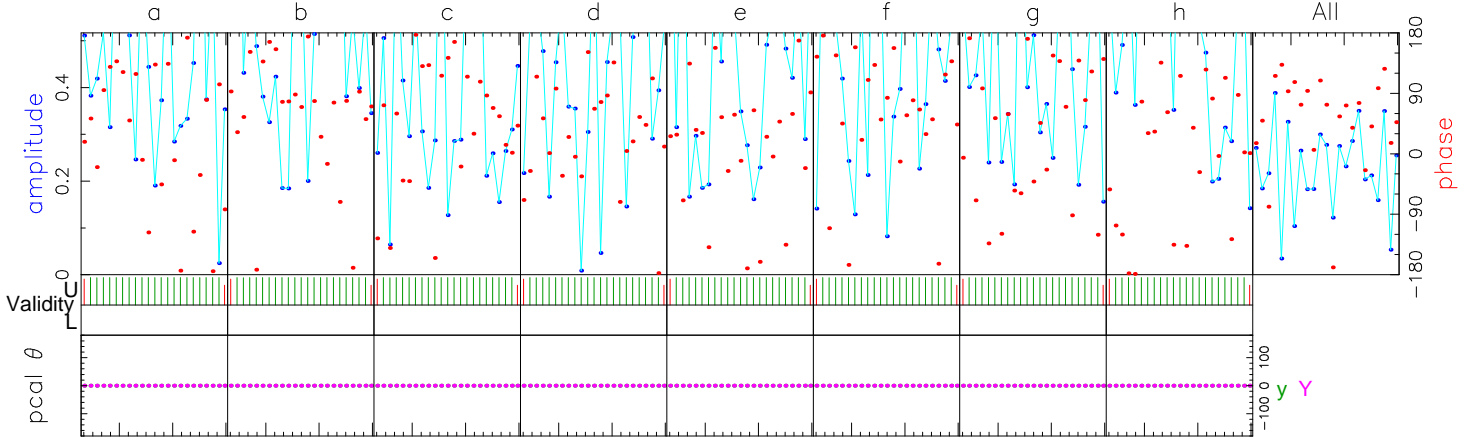


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073016.90  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133316  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
U/L	319/0	319/0	319/0	319/0	319/0	319/0	319/0	319/0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
Y:Y	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Y	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		

Group delay (usec)(sbd)	-1.66370837784E+03	Apriori delay (usec)	-1.66330110357E+03	Resid mbdelay (usec)	-1.02427E-03	+/-	2.0E-04
Sband delay (usec)	-1.66370656507E+03	Apriori clock (usec)	-1.0437750E+01	Resid sbdelay (usec)	-4.05461E-01	+/-	1.6E-03
Phase delay (usec)	-1.66330110126E+03	Apriori clockrate (us/s)	-2.0000006E-08	Resid phdelay (usec)	2.31448E-06	+/-	6.7E-07
Delay rate (us/s)	1.14013138248E+00	Apriori rate (us/s)	1.14012619296E+00	Resid rate (us/s)	5.18952E-06	+/-	7.1E-09
Total phase (deg)	49.6	Apriori accel (us/s/s)	4.92074923654E-06	Resid phase (deg)	71.8	+/-	20.8

ph/seg (deg)	RMS 56.6	Theor. 50.0	Amplitude Search (1024X32)	0.172 +/- 0.031	0.153	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5				
amp/seg (%)	72.5	87.3	Interp.	0.000	0.153	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000	1.000		
ph/frq (deg)	25.5	29.5	Inc. seg. avg.	0.179	0.153	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008	0.008	
amp/frq (%)	46.5	51.5	Inc. frq. avg.	0.163	0.153	Sample rate(MISamp/s): 128		dr window (ns/s)	-0.011	0.011	
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC)	0.00	0.00

y: az 29.1 el 18.9 pa -48.0 Y: az 327.9 el 24.0 pa 50.5 u,v (fr/asec) -12496.750 500.288 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yY.W.524.1HR3TY

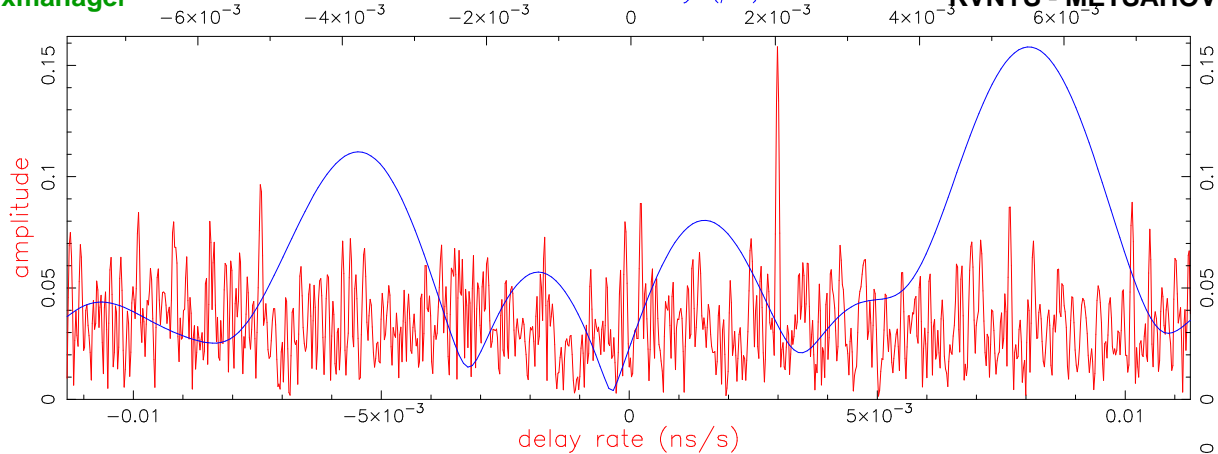
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yZ

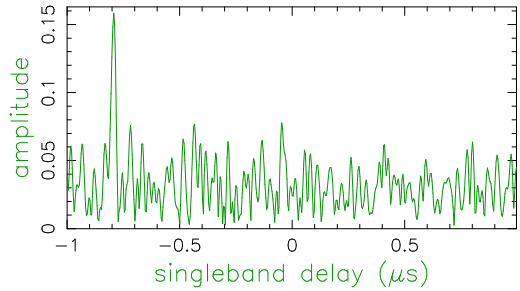
KVNYS - METSAHOV, fgroup W, pol LL

multiband delay ( $\mu$ s)

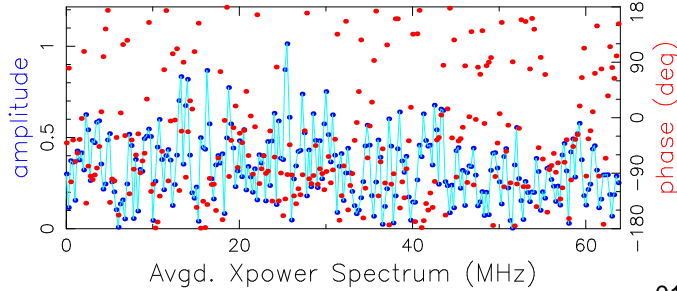


Fringe quality 0

SNR 5.8  
 Int time 179.691  
 Amp 0.163  
 Phase 71.6  
 PFD 5.5e-01  
 Delays (us)  
 SBD -0.792603  
 MBD 0.005506  
 Fringe rate (Hz)  
 0.257376  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

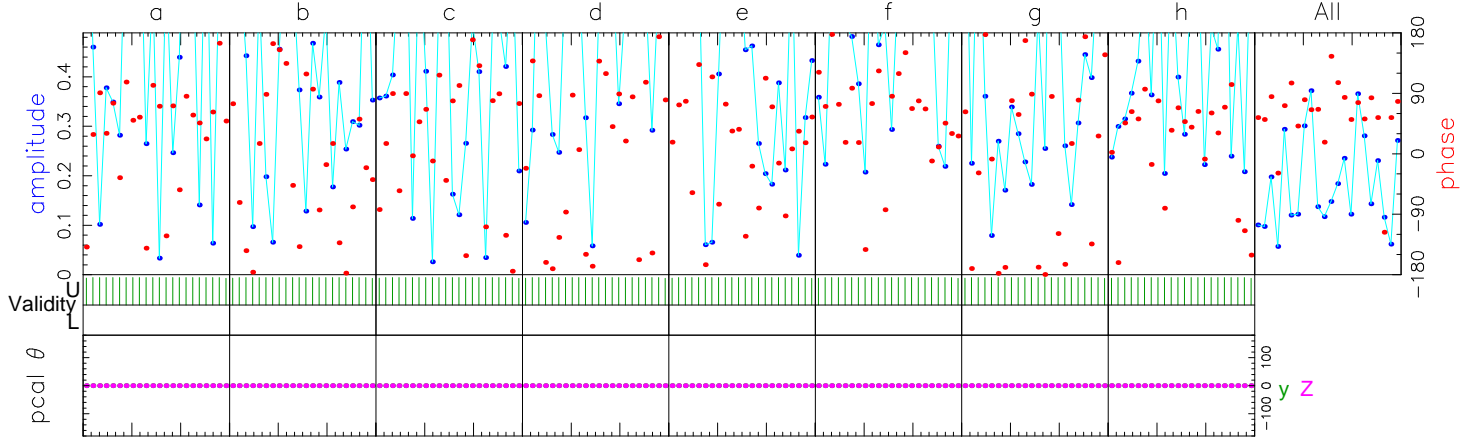


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133312  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	68.3	-38.7	87.2	116.0	31.3	71.1	128.4	56.1	Phase	71.6
	0.2	0.1	0.1	0.2	0.2	0.3	0.3	0.3	Ampl.	0.2
	260.2	138.7	496.1	39.3	92.4	54.2	352.7	55.1	Sbd box	54.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-4.57931561931E+03	Apriori delay (usec)	-4.57852424992E+03	Resid mbdelay (usec)	5.50561E-03	+/-	1.9E-04
Sband delay (usec)	-4.57931685267E+03	Apriori clock (usec)	1.0921412E+00	Resid sbdelay (usec)	-7.92603E-01	+/-	1.5E-03
Phase delay (usec)	-4.57852424761E+03	Apriori clockrate (us/s)	8.3999986E-08	Resid phdelay (usec)	2.31013E-06	+/-	6.4E-07
Delay rate (us/s)	8.30113595695E-01	Apriori rate (us/s)	8.30110607819E-01	Resid rate (us/s)	2.98788E-06	+/-	6.1E-09
Total phase (deg)	-248.1	Apriori accel (us/s/s)	-5.34328614893E-07	Resid phase (deg)	71.6	+/-	19.7

ph/seg (deg)	RMS 49.6	Theor. 46.3	Amplitude Search (1024X32)	0.163 +/- 0.028	0.156	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
amp/seg (%)	60.7	80.8	Interp.	0.000	0.156	Pcal rate: 0.000E+00, 0.000E+00 (us/s)	sb window (us) -1.000 1.000		
ph/frq (deg)	57.0	27.9	Inc. seg. avg.	0.144	0.144	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us) -0.008 0.008	
amp/frq (%)	54.5	48.7	Inc. frq. avg.	0.175	0.175	Sample rate(MISamp/s): 128	dr window (ns/s) -0.011 0.011		
						Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite	ion window (TEC) 0.00 0.00

y: az 29.1 el 18.9 pa -48.0 Z: az 336.0 el 32.9 pa 23.1 u,v (fr/asec) -9100.857 -1225.112 simultaneous interpolator

Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ.W.490.1HR3TY

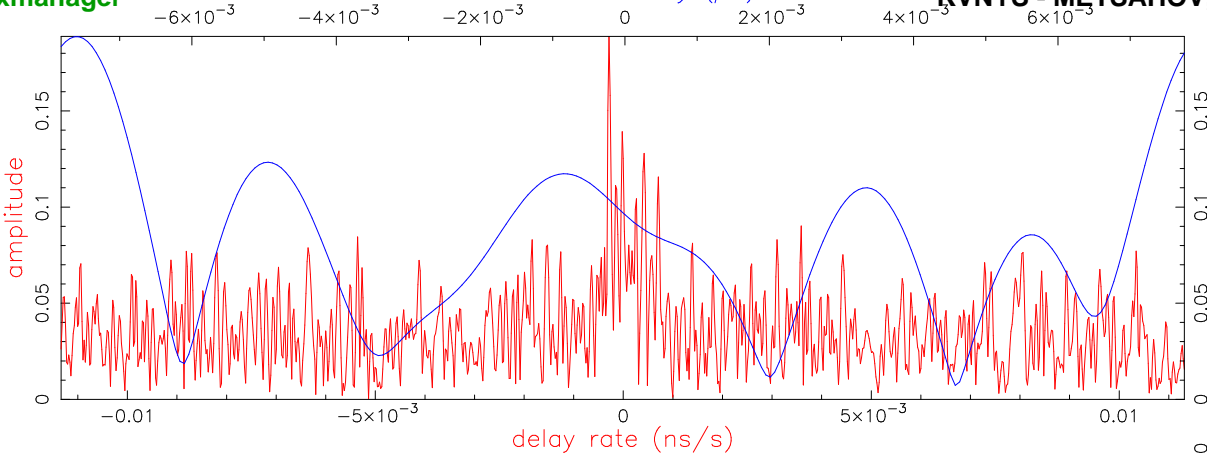
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yZ

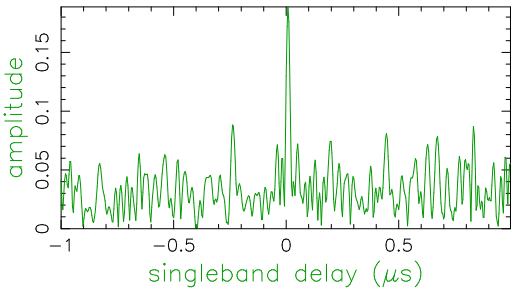
KVNYS - METSAHOV, fgroup W, pol RR

multiband delay ( $\mu$ s)

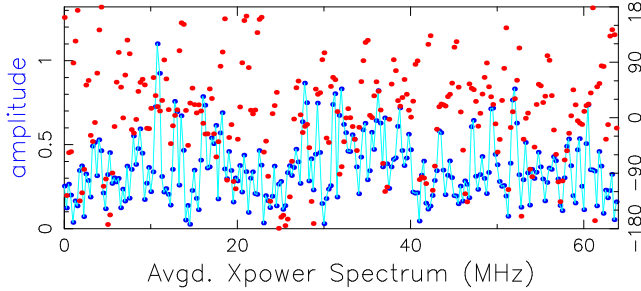


Fringe quality 0

SNR 6.9  
 Int time 179.691  
 Amp 0.189  
 Phase -161.3  
 PFD 6.8e-04  
 Delays (us)  
 SBD 0.008093  
 MBD -0.007597  
 Fringe rate (Hz)  
 -0.024230  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

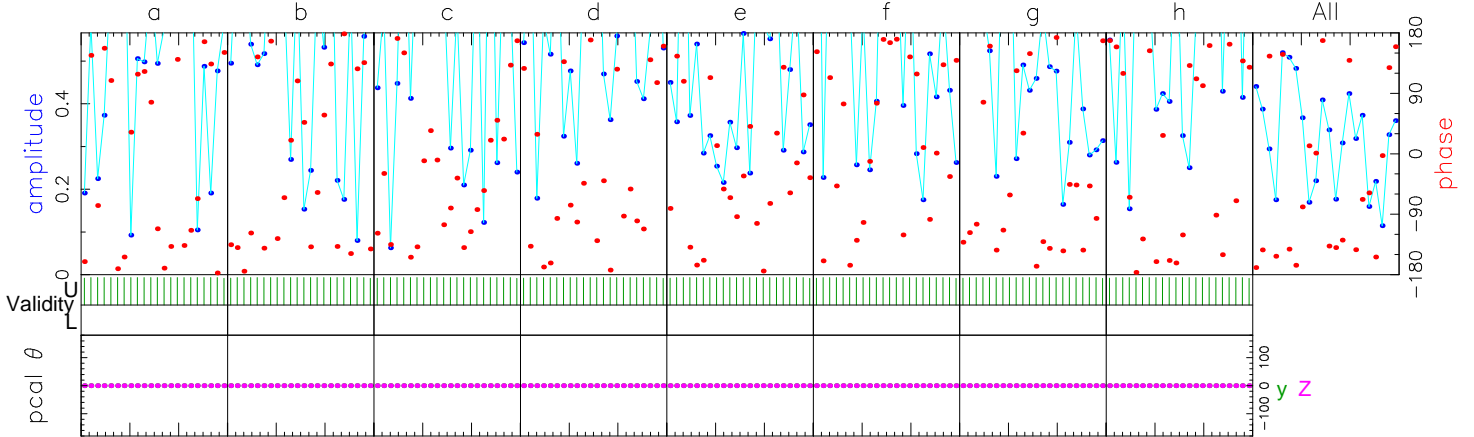


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133313  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		
Group delay (usec)(sbd)	-4.57851622233E+03	-4.57851615742E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03		
Sband delay (usec)	-4.57851622233E+03	-4.57851615742E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03		
Phase delay (usec)	-4.57851622233E+03	-4.57851615742E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03	-4.57852425512E+03		
Delay rate (us/s)	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01	8.30110326535E-01		
Total phase (deg)			-121.0							
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										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
pcal θ										
pcal mode: MANUAL, MANUAL										
PC period (AP's) 5, 5										
sb window (us)										
mb window (us)										
dr window (ns/s)										
ion window (TEC)										
simultaneous interpolator										

y: az 29.1 el 18.9 pa -48.0 Z: az 336.0 el 32.9 pa 23.1 u,v (fr/asec) -9100.857 -1225.112 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ.W.498.1HR3TY

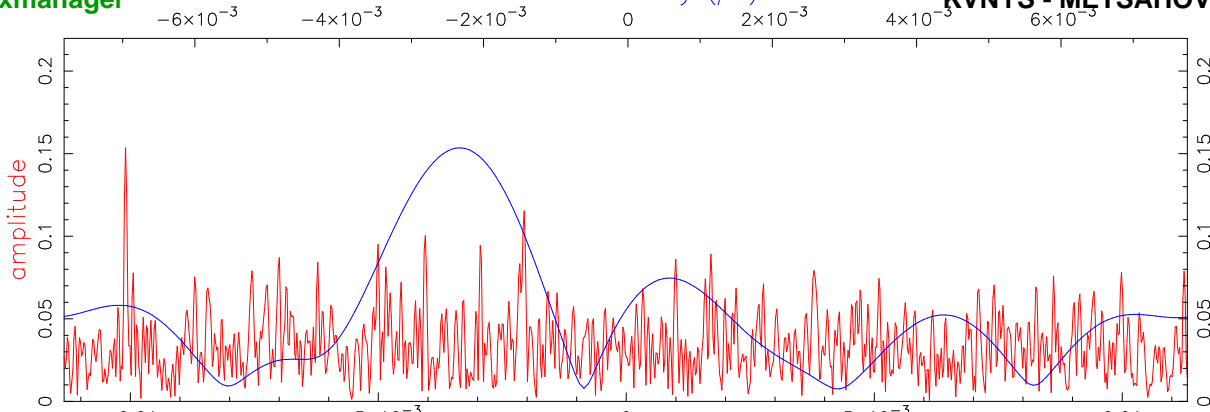
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yZ

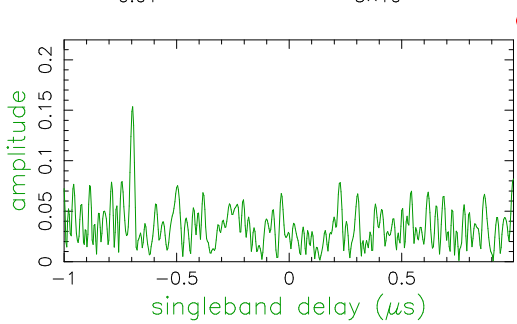
KVNYS - METSAHOV, fgroup W, pol LR

multiband delay ( $\mu$ s)

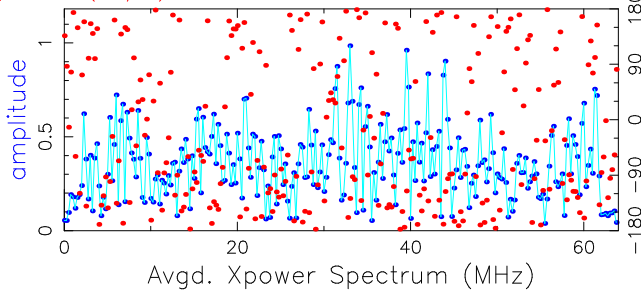


Fringe quality 0

SNR 5.7  
 Int time 179.691  
 Amp 0.220  
 Phase 129.2  
 PFD 8.4e-01  
 Delays (us)  
 SBD -0.696453  
 MBD -0.002352  
 Fringe rate (Hz)  
 -0.871591  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

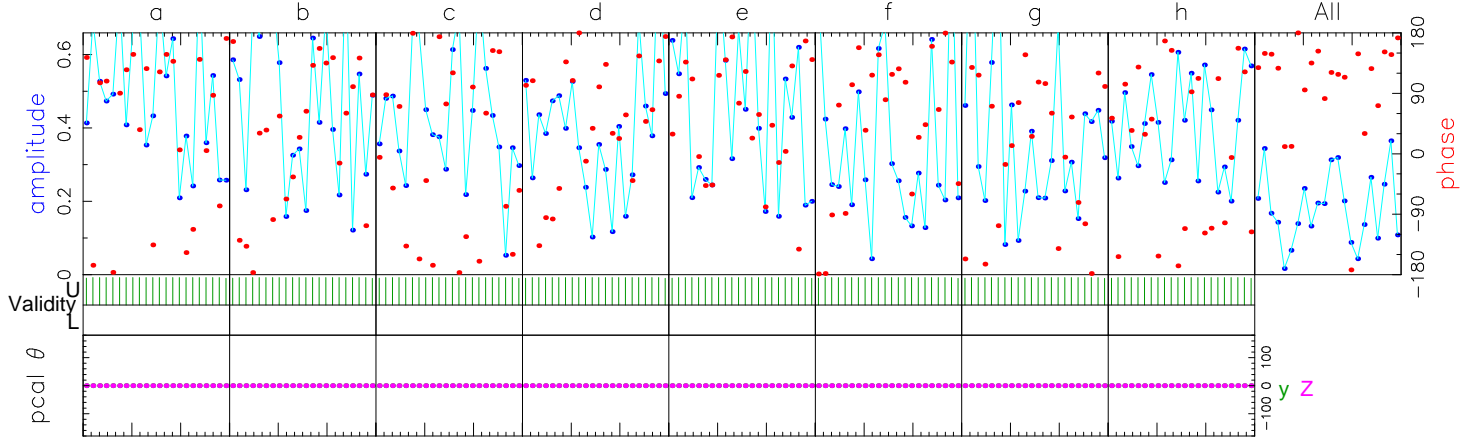


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133315  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0		
y	1000	1000	1000	1000	1000	1000	1000	1000		
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL		
Z	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR		

Group delay (usec)(sbd)	-4.57921410211E+03	Apriori delay (usec)	-4.57852424992E+03	Resid mbdelay (usec)	-2.35219E-03	+/-	1.9E-04
Sband delay (usec)	-4.57922070267E+03	Apriori clock (usec)	1.0921412E+00	Resid sbdelay (usec)	-6.96453E-01	+/-	1.5E-03
Phase delay (usec)	-4.57852424575E+03	Apriori clockrate (us/s)	8.3999986E-08	Resid phdelay (usec)	4.16538E-06	+/-	6.5E-07
Delay rate (us/s)	8.30100489507E-01	Apriori rate (us/s)	8.30110607819E-01	Resid rate (us/s)	-1.01183E-05	+/-	6.3E-09
Total phase (deg)	-190.5	Apriori accel (us/s/s)	-5.34328614893E-07	Resid phase (deg)	129.2	+/-	20.2

ph/seg (deg)	50.2	Theor.	47.4	Amplitude	0.220 +/- 0.039	Pcal mode:	MANUAL, MANUAL	PC period (AP's)	5, 5	
amp/seg (%)	64.4		82.8	Search (1024X32)	0.152	Pcal rate:	0.000E+00, 0.000E+00 (us/s)	sb window (us)	-1.000 1.000	
ph/frq (deg)	28.5		28.6	Interp.	0.000	Bits/sample:	2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
amp/frq (%)	39.4		49.9	Inc. seg. avg.	0.194	Sample rate (MSamp/s):	128	dr window (ns/s)	-0.011 0.011	
				Inc. frq. avg.	0.214	Data rate (Mb/s):	2048	ion window (TEC)	0.00 0.00	

y: az 29.1 el 18.9 pa -48.0 Z: az 336.0 el 32.9 pa 23.1 u,v (fr/asec) -9100.857 -1225.112 simultaneous interpolator  
 Control file: cf\_1234\_gmva Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ..1HR3TY Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ.W.510.1HR3TY

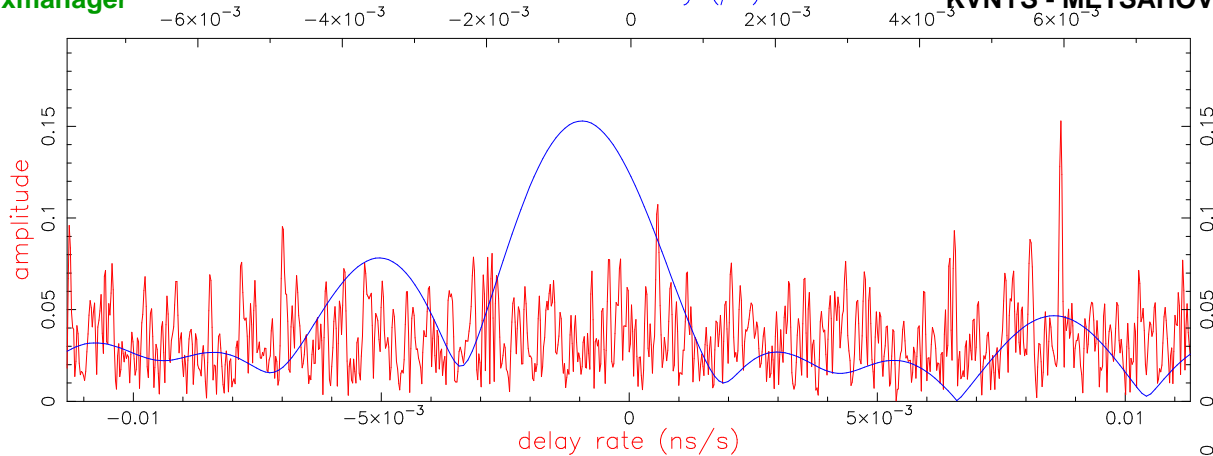
Mk4/DiFX fourfit 3.21 rev 2937

fxmanager

0102+584.1HR3TY, No0103, yZ

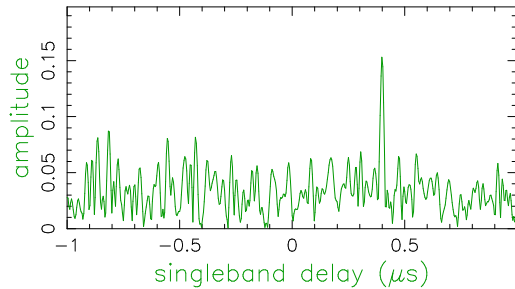
KVNYS - METSAHOV, fgroup W, pol RL

multiband delay ( $\mu$ s)

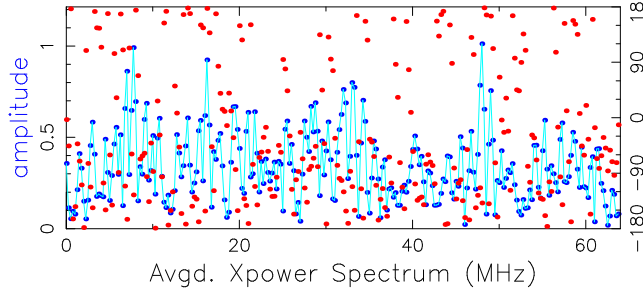


Fringe quality 0

SNR 5.6  
 Int time 179.691  
 Amp 0.198  
 Phase 159.3  
 PFD 9.0e-01  
 Delays (us)  
 SBD 0.399123  
 MBD -0.000676  
 Fringe rate (Hz)  
 0.749872  
 Ion TEC 0.000  
 Ref freq (MHz)  
 86140.0000  
 AP (sec) 0.512

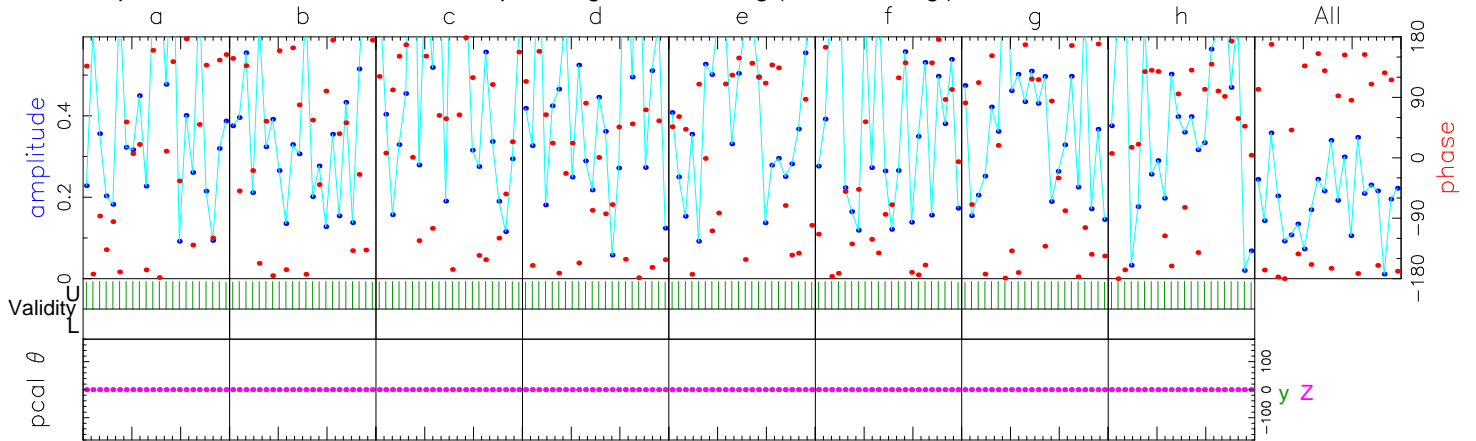


delay rate (ns/s)



Exp. c202a  
 Exper # 16383  
 Yr:day 2020:283  
 Start 073000.00  
 Stop 073300.22  
 FRT 073130.00  
 Corr/FF/build  
 2021:006:144348  
 2021:010:133316  
 2020:247:085004  
 RA & Dec (J2000)  
 01h02m45.762375s  
 +58°24'11.136621"

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
	160.2	173.9	132.3	156.2	158.1	178.4	179.9	135.1	Phase	159.3
	0.2	0.2	0.2	0.1	0.2	0.3	0.3	0.3	Ampl.	0.2
	188.2	428.2	48.8	86.7	367.2	102.7	176.7	357.6	Sbd box	359.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
Z	1000	1000	1000	1000	1000	1000	1000	1000	PC freqs	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
y:Z	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Mani PC	
y	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
Z	1000	1000	1000	1000	1000	1000	1000	1000		
y	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
Z	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Tracks	

Group delay (usec)(sbd)	-4.57811867553E+03	Apriori delay (usec)	-4.57852424992E+03	Resid mbdelay (usec)	-6.75613E-04	+/-	1.9E-04
Sband delay (usec)	-4.57812512742E+03	Apriori clock (usec)	1.0921412E+00	Resid sbdelay (usec)	3.99123E-01	+/-	1.5E-03
Phase delay (usec)	-4.57852424478E+03	Apriori clockrate (us/s)	8.3999986E-08	Resid phdelay (usec)	5.13693E-06	+/-	6.6E-07
Delay rate (us/s)	8.30119313093E-01	Apriori rate (us/s)	8.30110607819E-01	Resid rate (us/s)	8.70527E-06	+/-	6.3E-09
Total phase (deg)	-160.4	Apriori accel (us/s/s)	-5.34328614893E-07	Resid phase (deg)	159.3	+/-	20.4

ph/seg (deg)	45.8	Theor.	47.8	Amplitude	0.198 +/- 0.035	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5	sb window (us)	-1.000	1.000
amp/seg (%)	64.4		83.4	Search (1024X32)	0.151	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		mb window (us)	-0.008	0.008
ph/frq (deg)	19.7		28.8	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	dr window (ns/s)	-0.011	0.011
amp/frq (%)	26.5		50.3	Inc. seg. avg.	0.189	Sample rate(MISamp/s): 128		ion window (TEC)	0.00	0.00
				Inc. frq. avg.	0.185	Data rate(Mb/s): 2048	nlags: 256	t_cohere infinite		

y: az 29.1 el 18.9 pa -48.0      Z: az 336.0 el 32.9 pa 23.1      u,v (fr/asec) -9100.857 -1225.112      simultaneous interpolator

Control file: cf\_1234\_gmva      Input file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ..1HR3TY      Output file: /Exps/c202a/v1/v1\_3mm/1234/No0103/yZ.W.523.1HR3TY