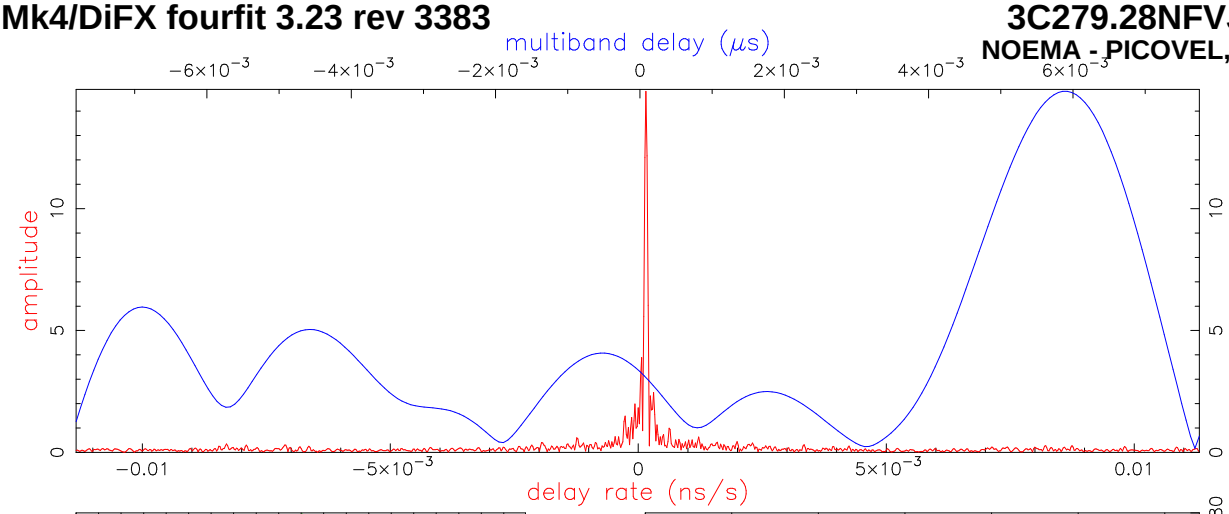
Mk4/DiFX fourfit 3.23 rev 3383

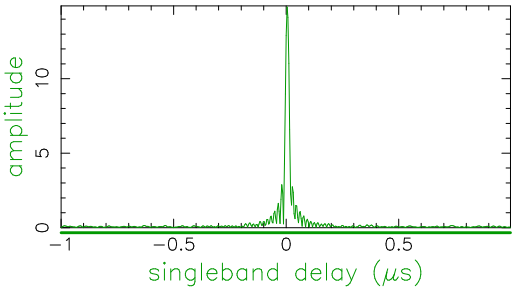
3C279.28NFVJ, No0056, NP

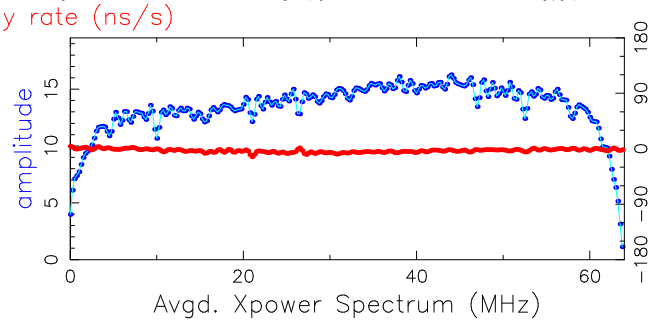
NOEMA - PICOVEL, fgroup W, pol RL



Fringe quality 7

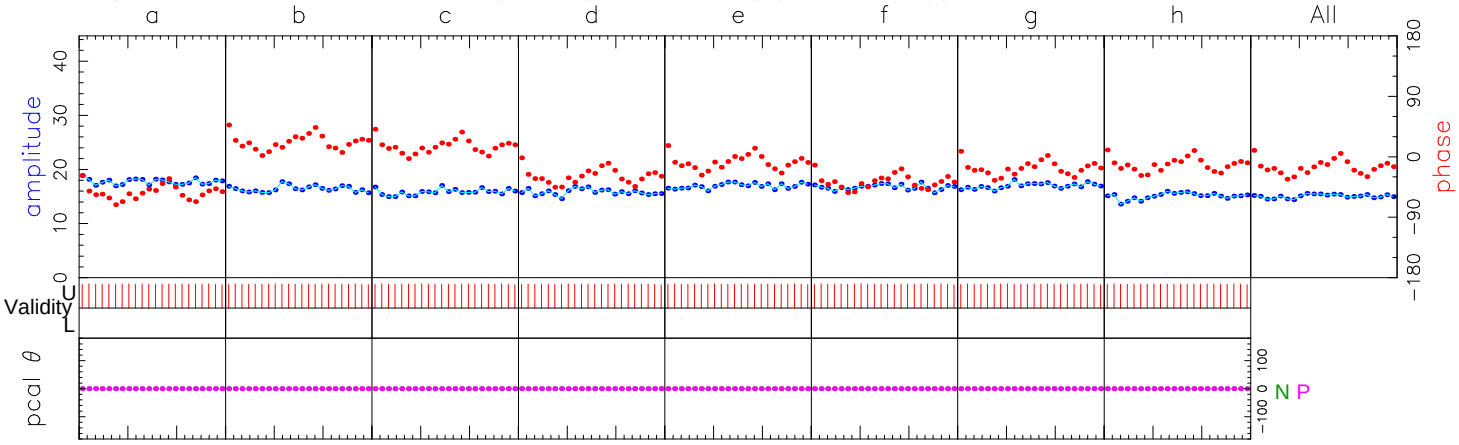
SNR 509.5
Int time 156.514
Amp 14.895
Phase -15.4
PFD 0.0e+00
Delays (us)
SBD 0.004827
MBD 0.005903
Fringe rate (Hz)
0.014009
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512





Exp. mk013b
Exper # 16383
Yr:day 2021:113
Start 022000.00
Stop 022300.22
FRT 022130.00
Corr/FF/build
2022:164:113250
2022:164:132732
2022:109:102128
RA & Dec (J2000)
12h56m11.166577s
--5°47'21.525129"

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
	-53.2	21.8	15.5	-28.8	-8.1	-37.0	-17.0	-11.4	Phase	-15.4
	17.5	16.1	15.6	15.6	16.7	16.5	16.7	14.9	Ampl.	16.2
	258.5	258.1	257.8	258.2	258.3	258.4	258.8	258.1	Sbd box	258.2
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
N	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	

Group delay (usec) (SBD)	-3.39772531750E+03	Apriori delay (usec)	-3.39773122041E+03	Resid mbdelay (usec)	5.90291E-03	+/-	2.1E-06
Sband delay (usec)	-3.39772639341E+03	Apriori clock (usec)	-1.2437512E+01	Resid sbdelay (usec)	4.82700E-03	+/-	1.7E-05
Phase delay (usec)	-3.39773122091E+03	Apriori clockrate (us/s)	4.1500001E-07	Resid phdelay (usec)	-4.96096E-07	+/-	7.3E-09
Delay rate (us/s)	-5.29946479132E-03	Apriori rate (us/s)	-5.29962742513E-03	Resid rate (us/s)	1.62634E-07	+/-	7.0E-11
Total phase (deg)	-132.9	Apriori accel (us/s/s)	1.68413460890E-05	Resid phase (deg)	-15.4	+/-	0.2

	RMS	Theor.	Amplitude	14.895 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	10.4	0.5	Search (1024X32)	14.446	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	2.5	0.9	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	27.4	0.3	Inc. seg. avg.	15.066	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	10.1	0.6	Inc. frq. avg.	16.186	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

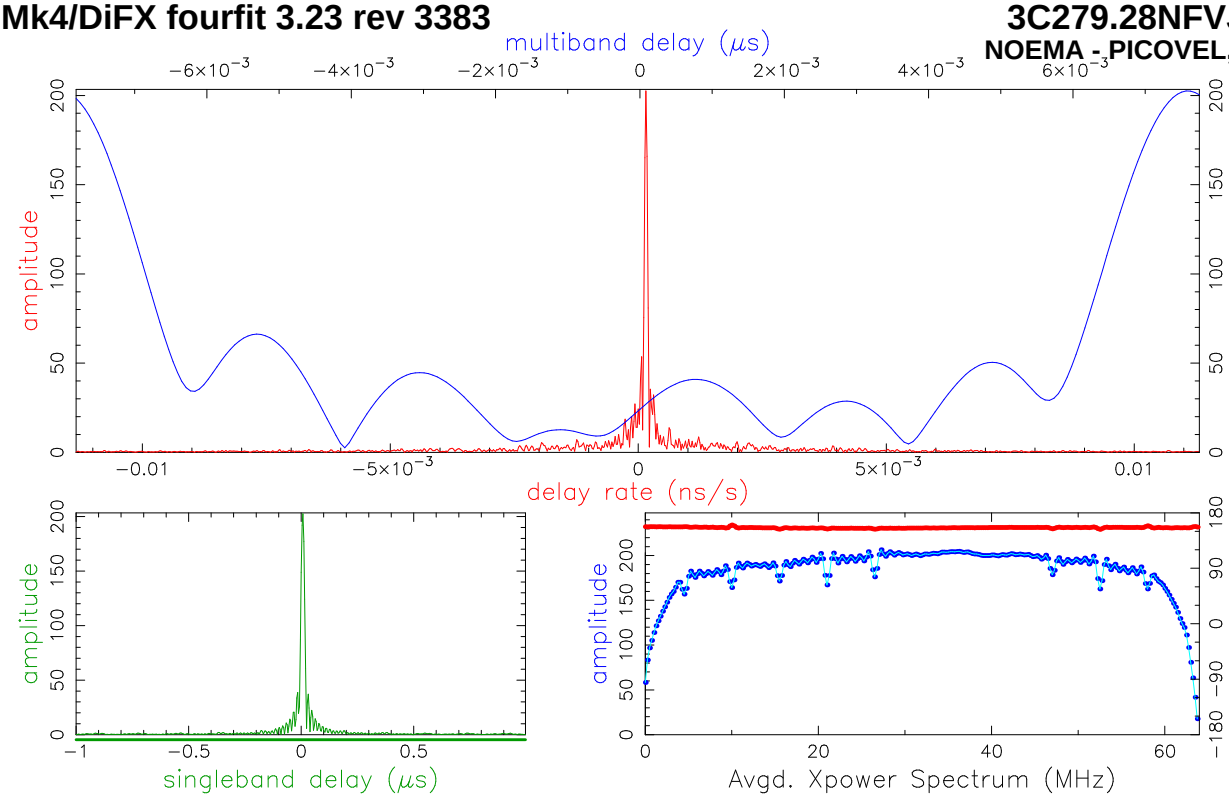
N: az 242.2 el 17.7 pa 39.3 P: az 237.4 el 27.5 pa 42.5 u,v (fr/asec) 39.536 743.661 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/mk013b/v1_pc1/5099/No0056/NP..28NFVJ Output file: /Exps/mk013b/v1_pc1/5099/No0056/NP.W.142.28NFVJ

Mk4/DiFX fourfit 3.23 rev 3383

3C279.28NFVJ, No0056, NP

NOEMA -PICOVEL, fgroup W, pol LL

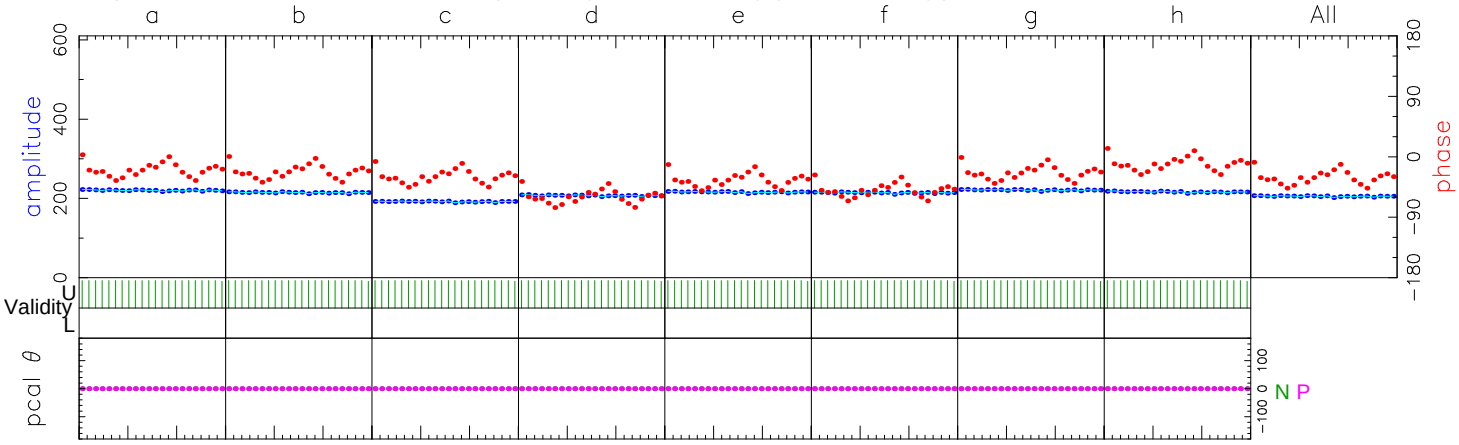


Fringe quality 8

SNR 7461.4
Int time 179.984
Amp 203.397
Phase -30.9
PFD 0.0e+00
Delays (us)
SBD 0.006988
MBD -0.008041
Fringe rate (Hz)
0.013999
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. mk013b
Exper # 16383
Yr:day 2021:113
Start 022000.00
Stop 022300.22
FRT 022130.00
Corr/FF/build
2022:164:113250
2022:164:132720
2022:109:102128
RA & Dec (J2000)
12h56m11.166577s
--5°47'21.525129"

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
	-19.7	-22.3	-29.5	-59.7	-34.5	-49.8	-23.9	-10.7	Phase	-30.9
	217.3	211.9	189.4	204.4	213.0	211.4	218.1	213.5	Ampl.	209.9
	258.9	258.9	258.2	258.8	258.9	258.7	259.1	259.0	Sbd box	258.8
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
N	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids Tracks	
P	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids Tracks	

Group delay (usec) (SBD)	-3.39772363663E+03	Apriori delay (usec)	-3.39773122041E+03	Resid mbdelay (usec)	-8.04122E-03	+/-	1.5E-07
Sband delay (usec)	-3.39772423241E+03	Apriori clock (usec)	-1.2437512E+01	Resid sbdelay (usec)	6.98800E-03	+/-	1.2E-06
Phase delay (usec)	-3.39773122141E+03	Apriori clockrate (us/s)	4.1500001E-07	Resid phdelay (usec)	-9.97876E-07	+/-	5.0E-10
Delay rate (us/s)	-5.29946491035E-03	Apriori rate (us/s)	-5.29962742513E-03	Resid rate (us/s)	1.62515E-07	+/-	4.8E-12
Total phase (deg)	-148.4	Apriori accel (us/s/s)	1.68413460890E-05	Resid phase (deg)	-30.9	+/-	0.0

	RMS	Theor.	Amplitude	203.397 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	9.8	0.0	Search (1024X32)	192.943	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	1.2	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	17.6	0.0	Inc. seg. avg.	205.554	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	5.3	0.0	Inc. frq. avg.	209.871	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

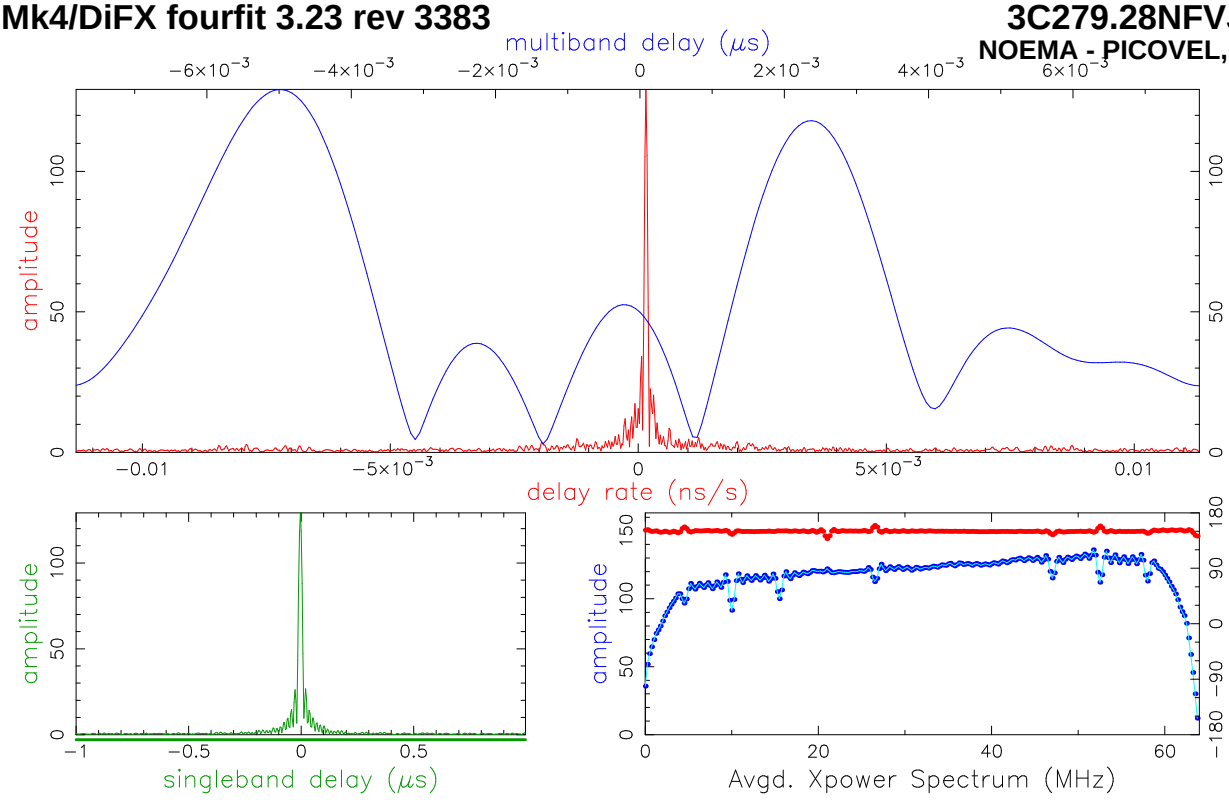
N: az 242.2 el 17.7 pa 39.3 P: az 237.4 el 27.5 pa 42.5 u,v (fr/asec) 39.536 743.661 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/mk013b/v1_pc1/5099/No0056/NP..28NFVJ Output file: /Exps/mk013b/v1_pc1/5099/No0056/NP.W.30.28NFVJ

Mk4/DiFX fourfit 3.23 rev 3383

3C279.28NFVJ, No0056, NP

NOEMA - PICOVEL, fgroup W, pol RR

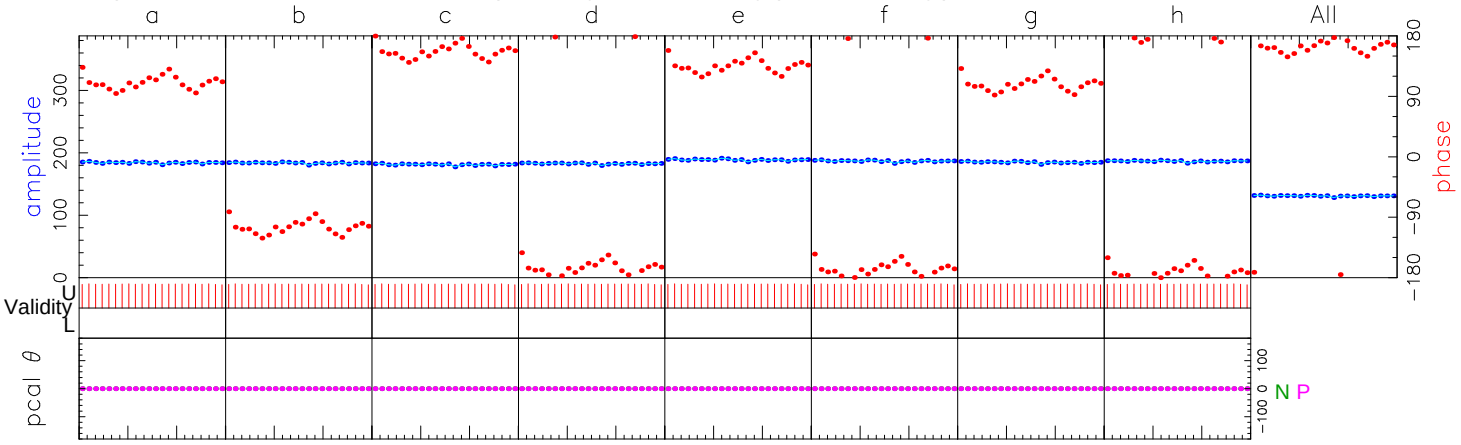


Fringe quality 5

SNR 4419.9
Int time 156.514
Amp 129.203
Phase 165.0
PFD 0.0e+00
Delays (us)
SBD -0.003700
MBD -0.004982
Fringe rate (Hz)
0.014015
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. mk013b
Exper # 16383
Yr:day 2021:113
Start 022000.00
Stop 022300.22
FRT 022130.00
Corr/FF/build
2022:164:113250
2022:164:132723
2022:109:102128
RA & Dec (J2000)
12h56m11.166577s
--5°47'21.525129"

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
	110.3	-104.6	156.4	-165.7	135.0	-167.9	107.9	-173.6	Phase	165.0
	181.7	181.2	178.7	180.2	186.2	184.2	182.3	184.0	Ampl.	182.3
	256.4	256.2	256.0	256.3	256.6	256.1	256.6	256.6	Sbd box	256.1
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
N	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	

Group delay (usec) (SBD)	-3.39773620210E+03	Apriori delay (usec)	-3.39773122041E+03	Resid mbdelay (usec)	-4.98168E-03	+/-	2.5E-07
Sband delay (usec)	-3.39773491991E+03	Apriori clock (usec)	-1.2437512E+01	Resid sbdelay (usec)	-3.69950E-03	+/-	1.9E-06
Phase delay (usec)	-3.39773121509E+03	Apriori clockrate (us/s)	4.1500001E-07	Resid phdelay (usec)	5.32006E-06	+/-	8.4E-10
Delay rate (us/s)	-5.29946472329E-03	Apriori rate (us/s)	-5.29962742513E-03	Resid rate (us/s)	1.62702E-07	+/-	8.0E-12
Total phase (deg)	47.5	Apriori accel (us/s/s)	1.68413460890E-05	Resid phase (deg)	165.0	+/-	0.0

	RMS	Theor.	Amplitude	129.203 +/- 0.029	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	9.9	0.1	Search (1024X32)	125.222	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	1.6	0.1	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	53.9	0.0	Inc. seg. avg.	131.111	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	41.1	0.1	Inc. frq. avg.	182.308	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

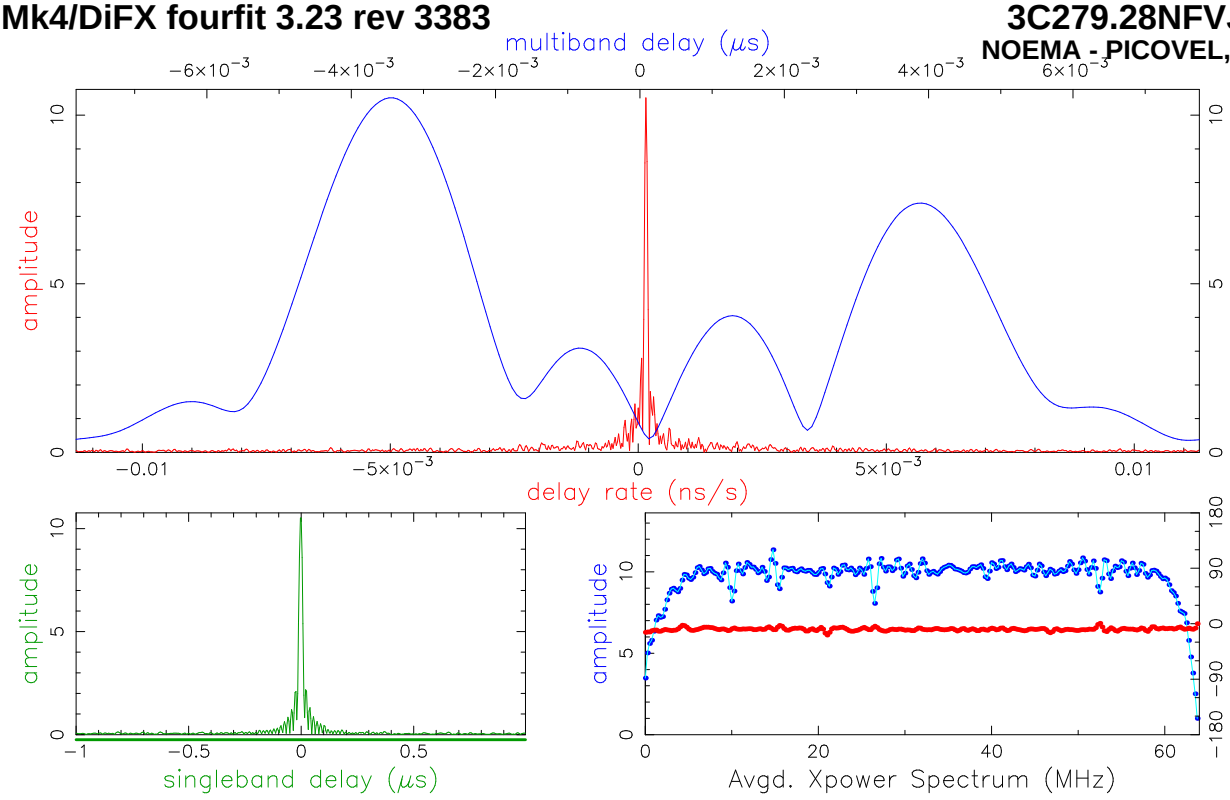
N: az 242.2 el 17.7 pa 39.3 P: az 237.4 el 27.5 pa 42.5 u,v (fr/asec) 39.536 743.661 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/mk013b/v1_pc1/5099/No0056/NP..28NFVJ Output file: /Exps/mk013b/v1_pc1/5099/No0056/NP.W.60.28NFVJ

Mk4/DiFX fourfit 3.23 rev 3383

3C279.28NFVJ, No0056, NP

NOEMA - PICOVEL, fgroup W, pol LR

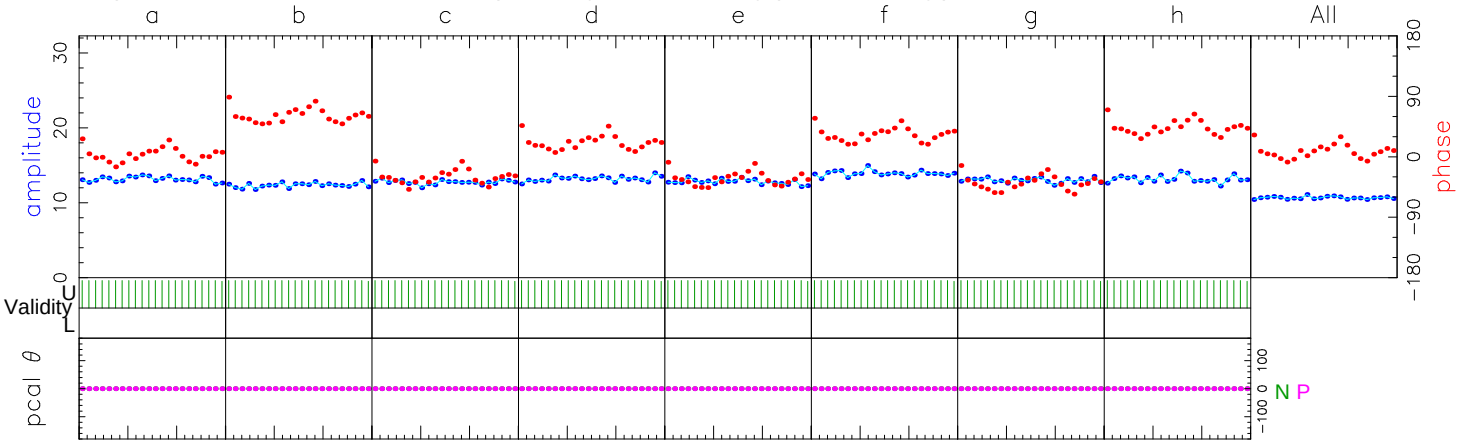


Fringe quality 7

SNR 394.9
Int time 179.984
Amp 10.764
Phase 7.9
PFD 0.0e+00
Delays (us)
SBD -0.001970
MBD -0.003433
Fringe rate (Hz)
0.014048
Ion TEC 0.000
Ref freq (MHz)
86140.0000
AP (sec) 0.512

Exp. mk013b
Exper # 16383
Yr:day 2021:113
Start 022000.00
Stop 022300.22
FRT 022130.00
Corr/FF/build
2022:164:113250
2022:164:132725
2022:109:102128
RA & Dec (J2000)
12h56m11.166577s
--5°47'21.525129"

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
	3.1	61.6	-29.8	21.1	-32.1	33.0	-38.7	43.6	Phase	7.9
	12.9	12.2	12.6	13.0	12.6	13.7	12.8	13.0	Ampl.	12.8
	256.9	256.7	256.3	256.9	257.2	256.5	257.1	257.0	Sbd box	256.5
U/L	352/0	352/0	352/0	352/0	352/0	352/0	352/0	352/0	APs used	
N	0	0	0	0	0	0	0	0	PC freqs	
P	0	0	0	0	0	0	0	0	PC freqs	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	PC phase	
N:P	0:0	0:0	0:0	0:0	0:0	0:0	0:0	0:0	Manl PC	
N	1000	1000	1000	1000	1000	1000	1000	1000	PC amp	
P	1000	1000	1000	1000	1000	1000	1000	1000		
N	W00UL	W01UL	W02UL	W03UL	W04UL	W05UL	W06UL	W07UL	Chan ids	
									Tracks	
P	W00UR	W01UR	W02UR	W03UR	W04UR	W05UR	W06UR	W07UR	Chan ids	
									Tracks	

Group delay (usec) (SBD)	-3.39773465310E+03	Apriori delay (usec)	-3.39773122041E+03	Resid mbdelay (usec)	-3.43268E-03	+/-	2.7E-06
Sband delay (usec)	-3.39773319016E+03	Apriori clock (usec)	-1.2437512E+01	Resid sbdelay (usec)	-1.96975E-03	+/-	2.2E-05
Phase delay (usec)	-3.39773122016E+03	Apriori clockrate (us/s)	4.1500001E-07	Resid phdelay (usec)	2.54440E-07	+/-	9.4E-09
Delay rate (us/s)	-5.29946434351E-03	Apriori rate (us/s)	-5.29962742513E-03	Resid rate (us/s)	1.63082E-07	+/-	9.0E-11
Total phase (deg)	-109.6	Apriori accel (us/s/s)	1.68413460890E-05	Resid phase (deg)	7.9	+/-	0.3

	RMS	Theor.	Amplitude	10.764 +/- 0.027	Pcal mode: MANUAL, MANUAL	PC period (AP's) 5, 5		
ph/seg (deg)	10.2	0.7	Search (1024X32)	10.217	Pcal rate: 0.000E+00, 0.000E+00 (us/s)		sb window (us)	-1.000 1.000
amp/seg (%)	1.8	1.2	Interp.	0.000	Bits/sample: 2x2	SampCntNorm: enabled	mb window (us)	-0.008 0.008
ph/frq (deg)	41.2	0.4	Inc. seg. avg.	10.681	Data rate(MSamp/s): 128 MBpts 32 Amb 0.016 us		dr window (ns/s)	-0.011 0.011
amp/frq (%)	19.8	0.7	Inc. frq. avg.	12.848	Data rate(Mb/s): 2048	nlags: 256 t_cohere infinite	ion window (TEC)	0.00 0.00

N: az 242.2 el 17.7 pa 39.3 P: az 237.4 el 27.5 pa 42.5 u,v (fr/asec) 39.536 743.661 simultaneous interpolator

Control file: cf_1234_gmva Input file: /Exps/mk013b/v1_pc1/5099/No0056/NP..28NFVJ Output file: /Exps/mk013b/v1_pc1/5099/No0056/NP.W.80.28NFVJ