

V&V Reference Report

L2 ASCDS Version : 8.5

Observation 4622 - L2 Version 3
Chandra X-Ray Center

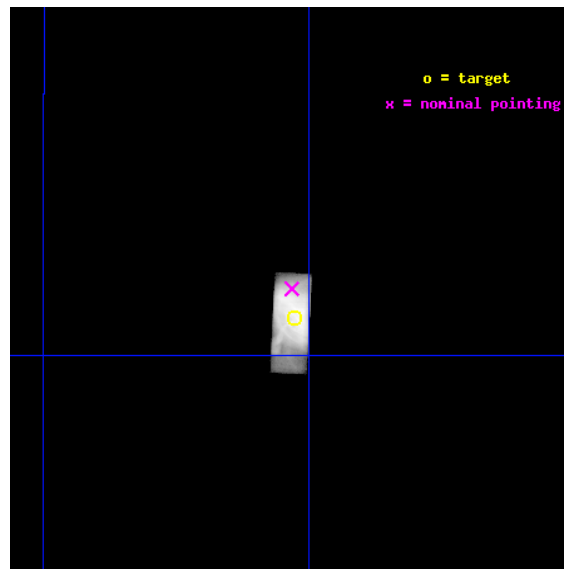
L2 Processing Date : Dec 8 2012

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1 Front

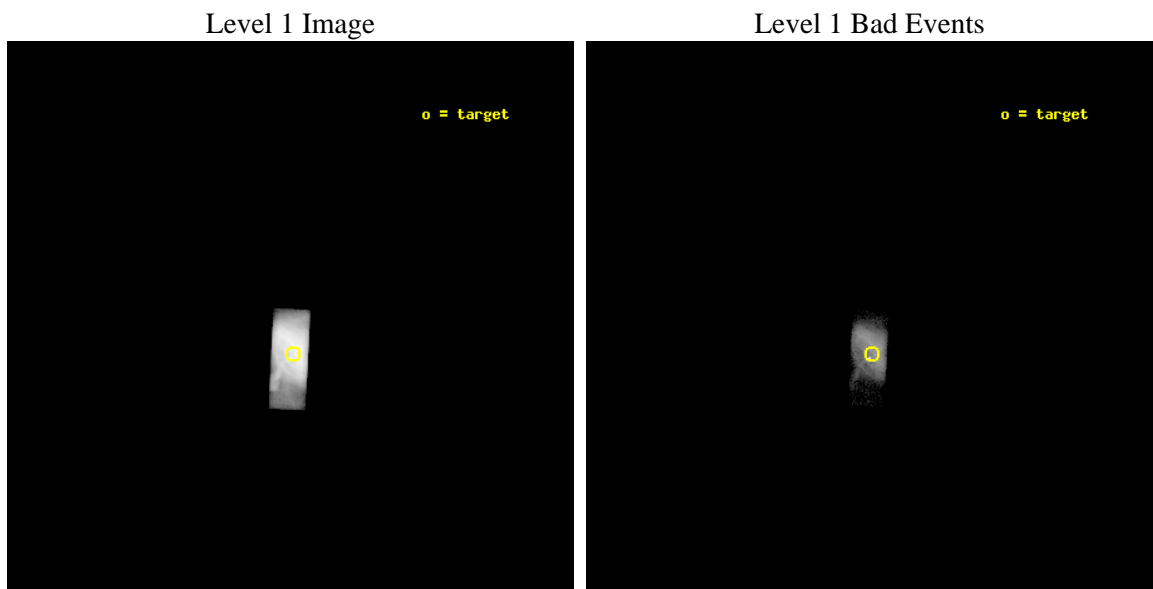
seq_num	500447	Sequence number
obs_id	4622	Observation id
title	Spectroscopic Study of the Dynamic Shock in the Pulsar Wind of the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	The Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.632083	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.633217078132	Nominal RA [deg]
dec_nom	22.028905212285	Nominal Dec [deg]
roll_nom	92.921497978459	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10152.90040344	Sum of GTIs [s]
livetime	8931.1228038705	Livetime [s]
ontime7	10152.90040344	Sum of GTIs [s]
l2events	2487090	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.5	Processing system revision	ontime	10152.90040344	Sum of GTIs [s]
caldsver	4.5.4	 	ontime7	10152.90040344	Sum of GTIs [s]
date	2012-12-08T10:39:56	Date and time of file creation	l1events	2648046	Number of level 1 events
revision	3	Processing version of data			

2.1.3 Events

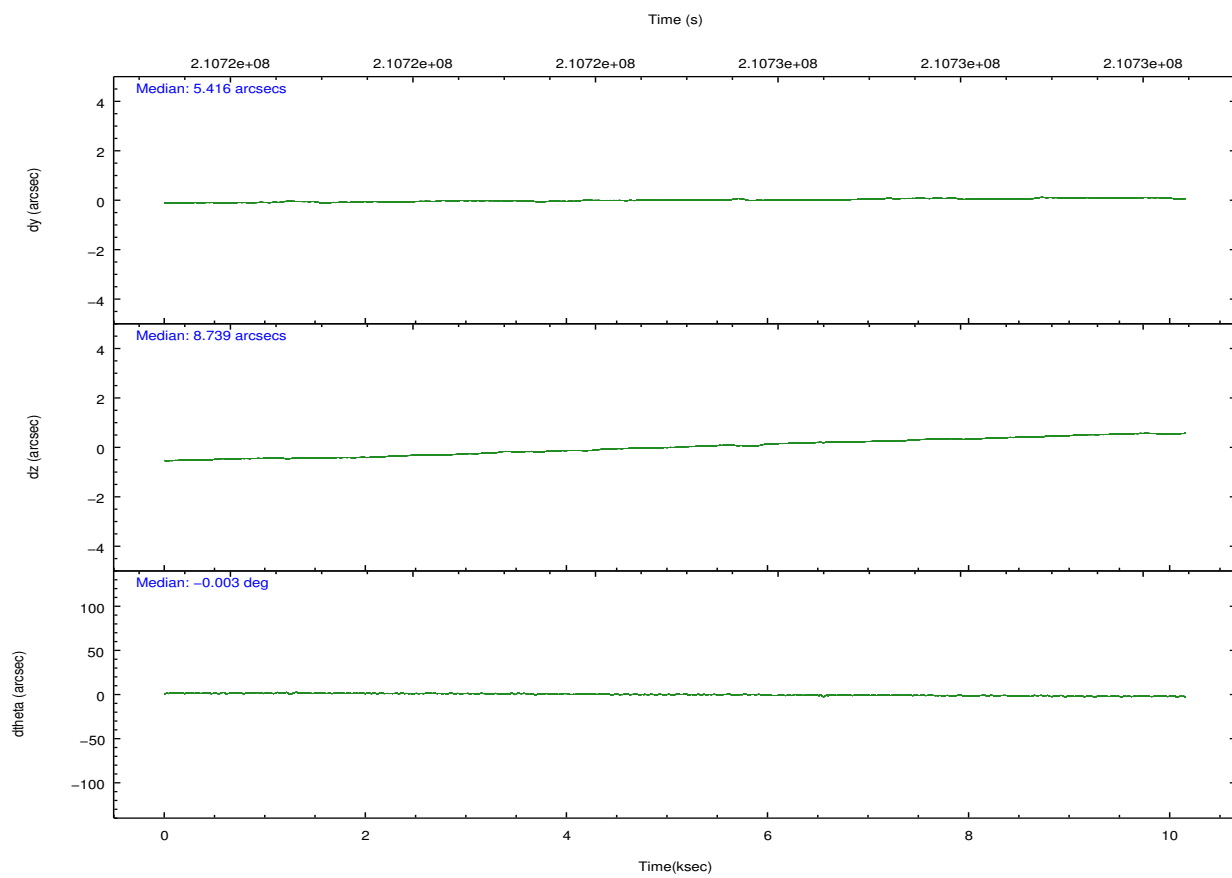
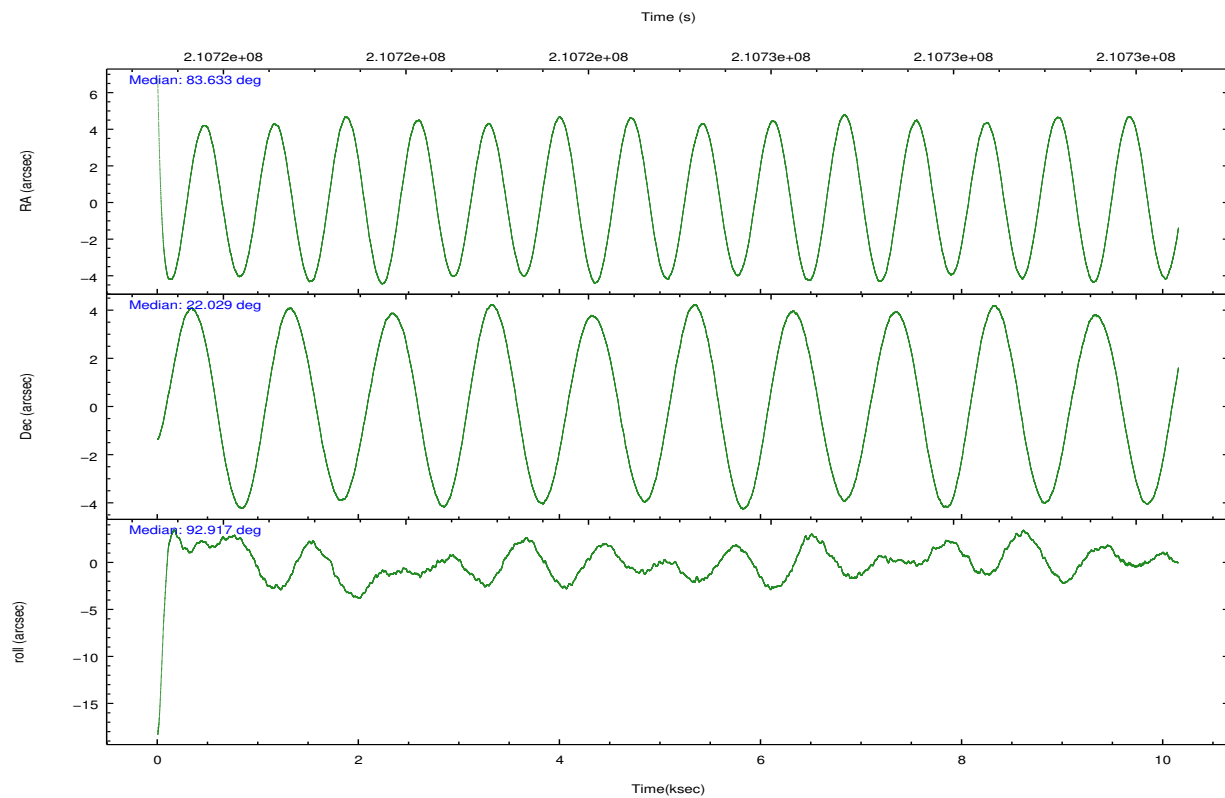
	ccd 7
level 1 events	2648046
rejected events	123431
rejected %	4%

	ccd 7
grade 0 events	513436
	19%
grade 1 events	9706
	0%
grade 2 events	651230
	24%
grade 3 events	288936
	10%
grade 4 events	278967
	10%
grade 5 events	39853
	1%
grade 6 events	818613
	30%
grade 7 events	47305
	1%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-7	ACIS-7	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	83.649532	83.63321707813188	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.006236	22.0289052122849	Subarray start row	127	127
[deg] Pointing Roll	92.758766	92.92149797845947	Subarray row count	101	101
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.3
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	210719950.184000	210718832.61697			
Observation start date	2004-09-04T21:18:06	2004-09-04T21:00:32			
[s] Observation end time (MET)	210729950.184000	210730907.11751			
Observation end date	2004-09-05T00:04:46	2004-09-05T00:21:47			
Read mode	TIMED	TIMED			

2.3 Aspect

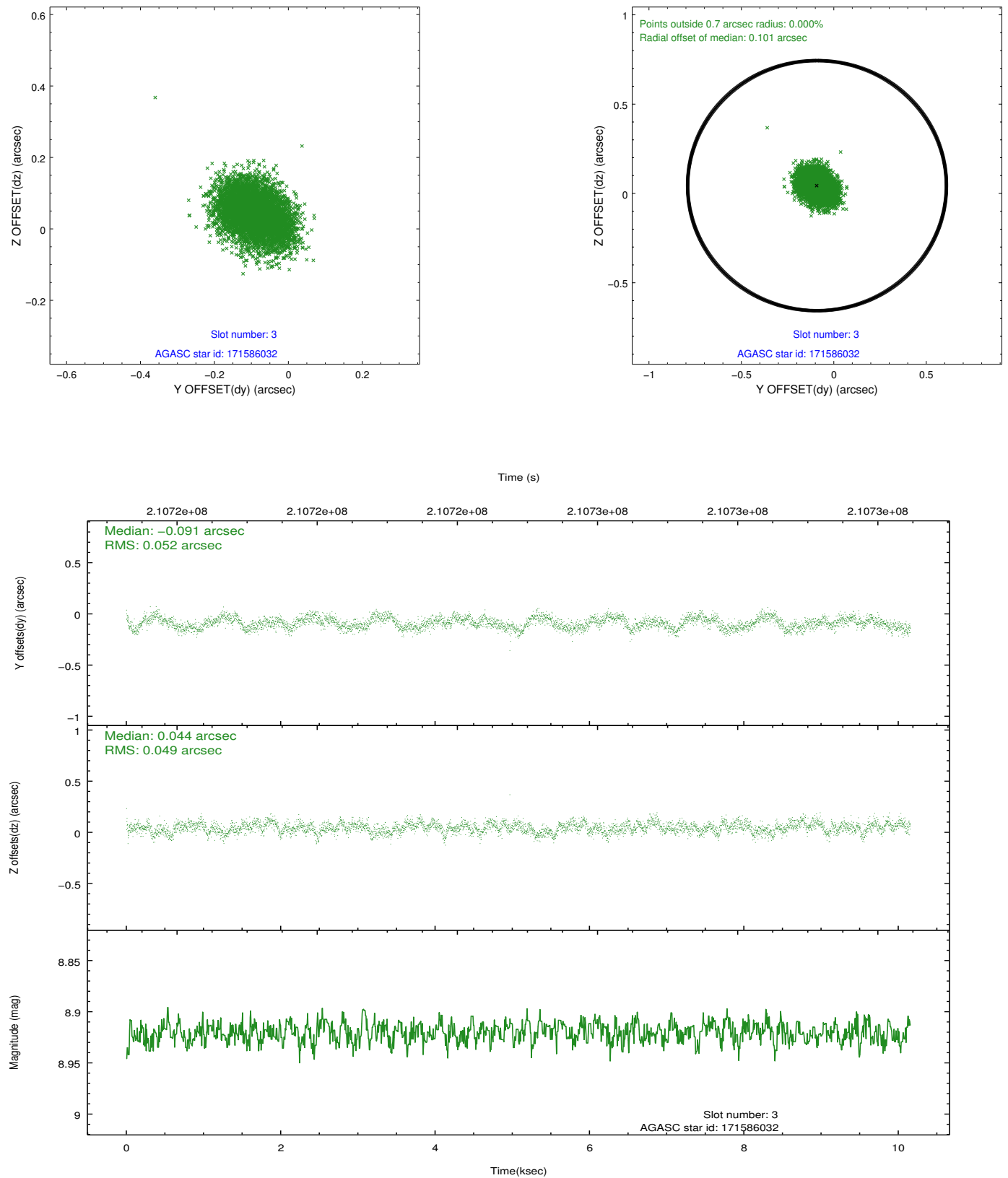


Slot Statistics

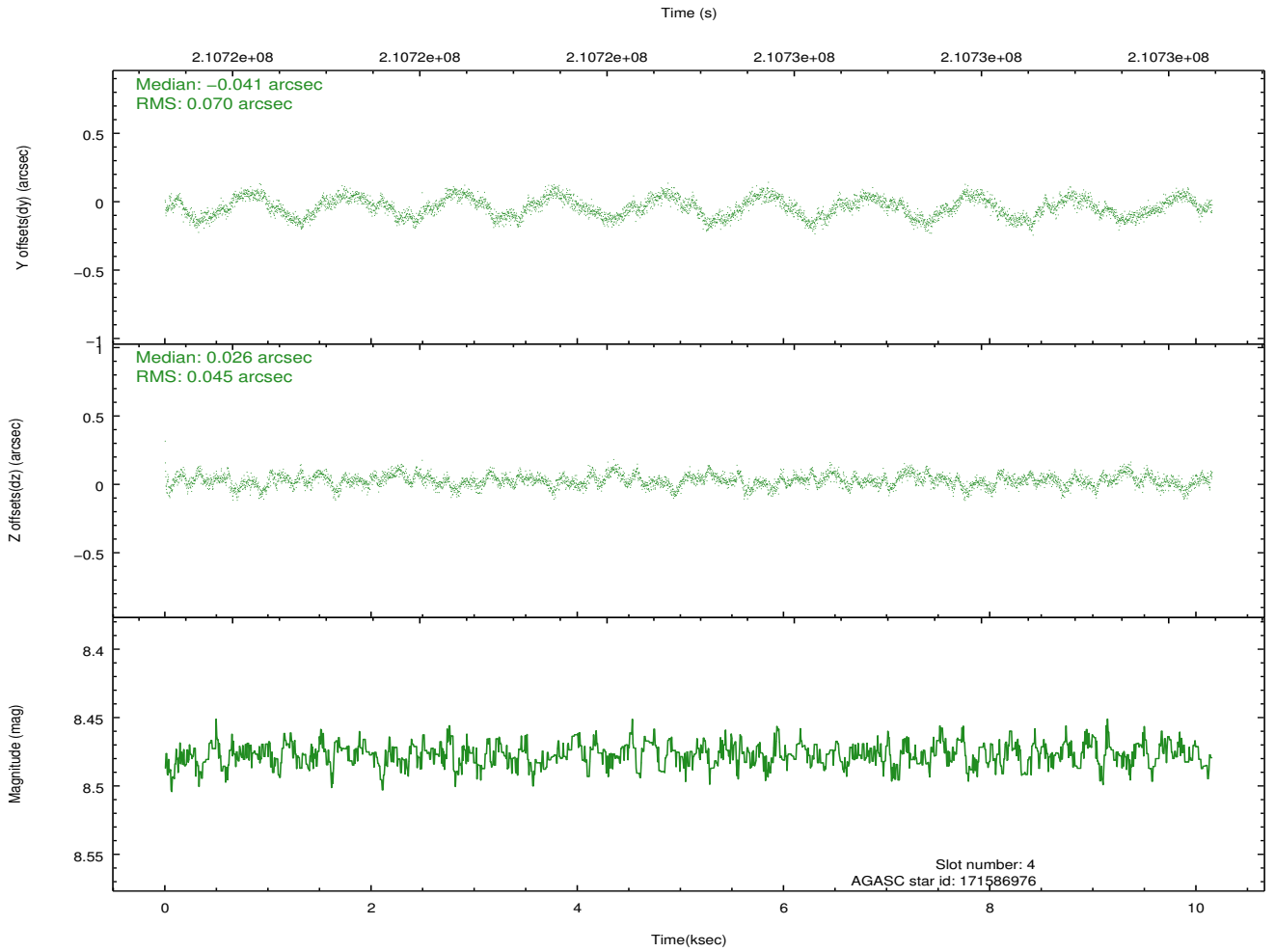
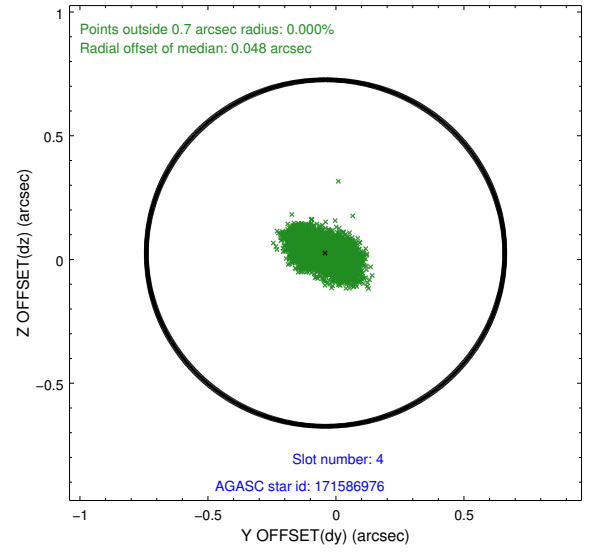
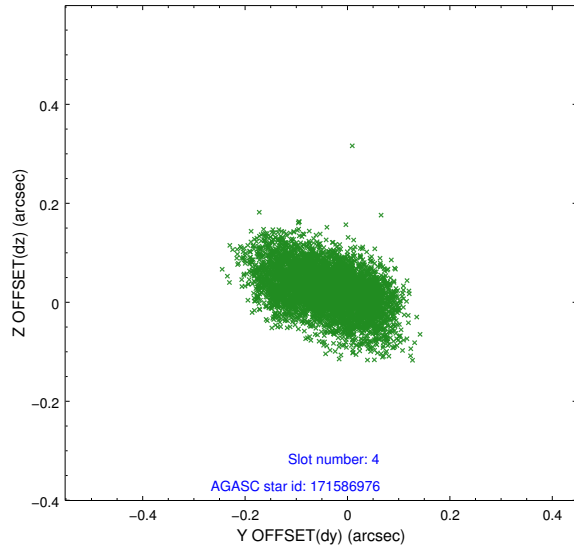
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	2477	-0.076	-0.135	0.030	0.041	0.000000	0.000000	-757.65	-1894.80
1	FID	ACIS-S-4	7.17	2477	0.177	0.073	0.017	0.023	0.000000	0.000000	2155.67	13.23
2	FID	ACIS-S-5	7.23	2477	-0.133	0.070	0.029	0.037	0.000000	0.000000	-1809.85	7.56
3	GUIDE	171586032	8.92	4953	-0.091	0.044	0.076	0.121	83.950197	22.083225	229.87	-1015.06
4	GUIDE	171586976	8.48	4952	-0.041	0.026	0.091	0.142	83.857953	22.438065	1520.16	-767.67
5	GUIDE	171597832	9.15	4950	0.288	-0.235	0.088	0.141	83.183230	21.366702	-2221.29	1671.83
6	GUIDE	171721904	9.19	4949	-0.030	0.099	0.094	0.151	84.272676	22.116922	302.24	-2094.67
7	GUIDE	243941560	8.31	4952	-0.127	0.062	0.069	0.106	83.733264	22.568598	2009.06	-375.55

2.4 Star Slots

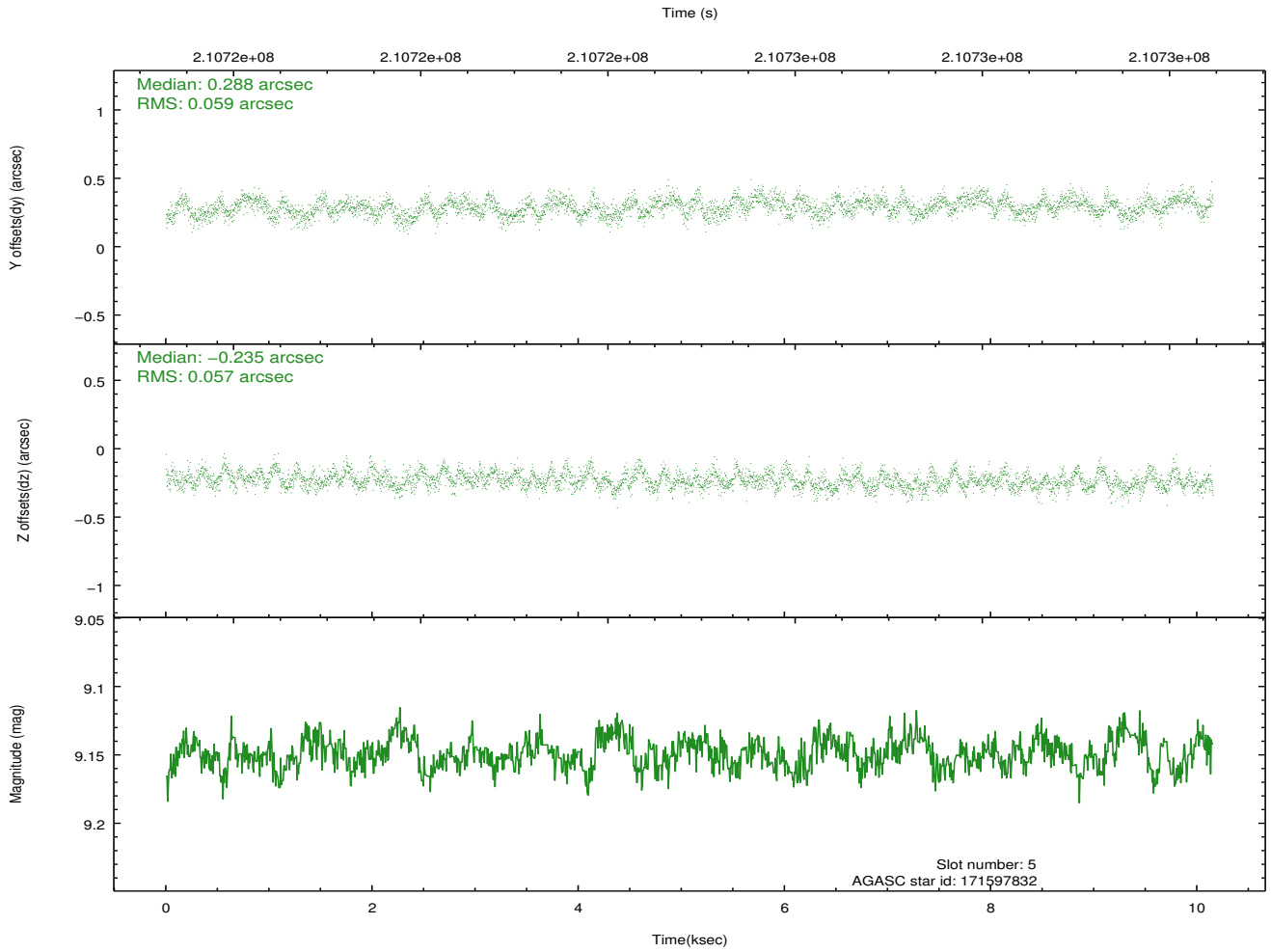
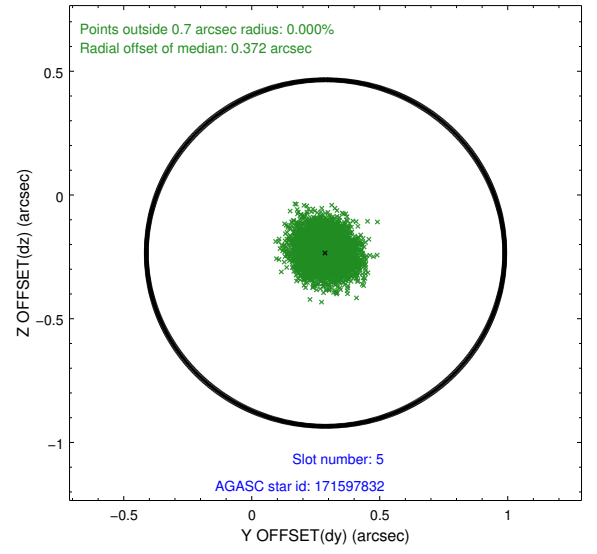
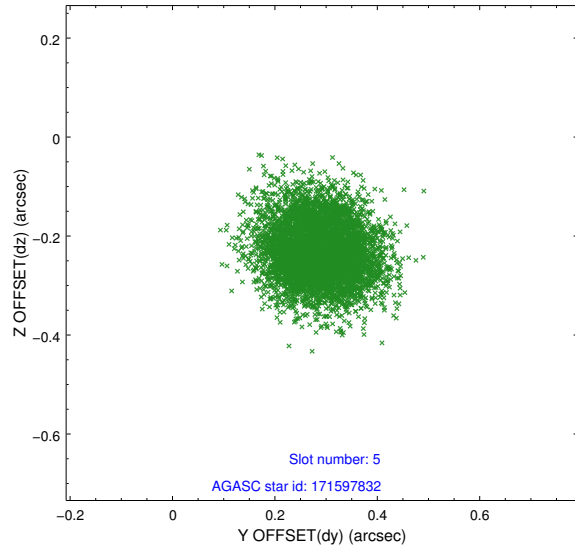
2.4.1 Slot 3



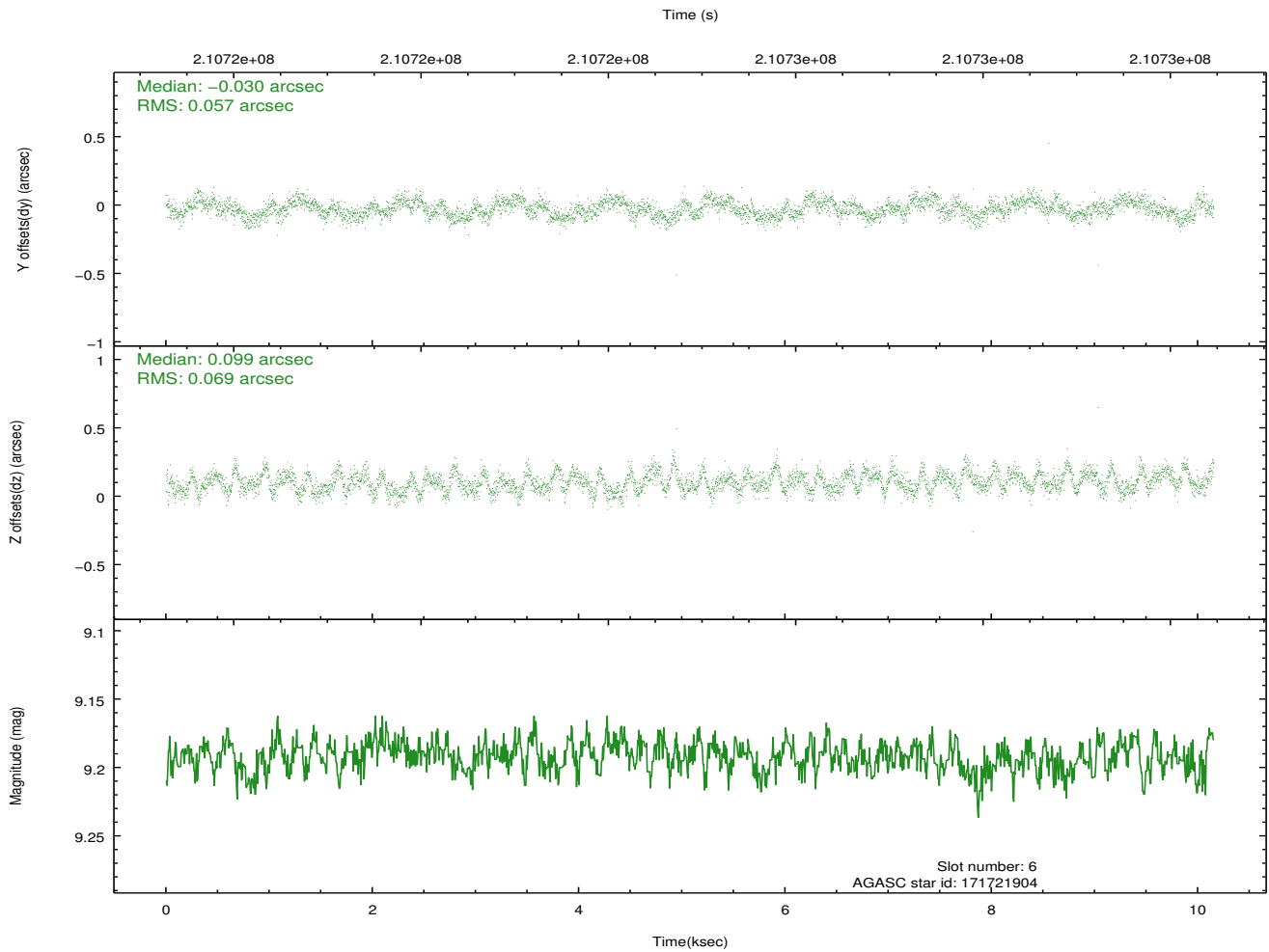
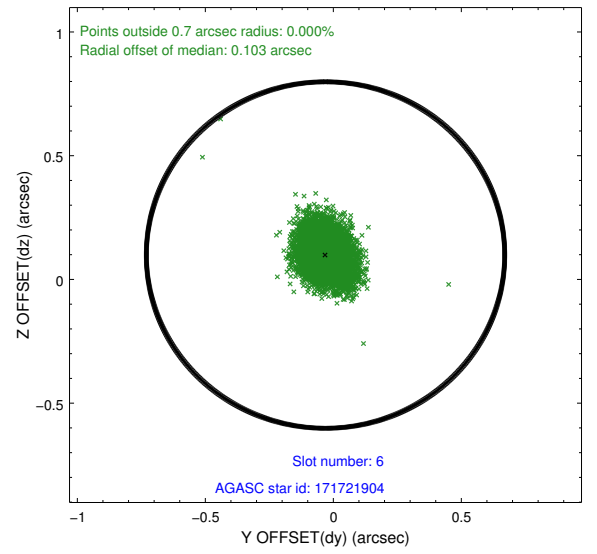
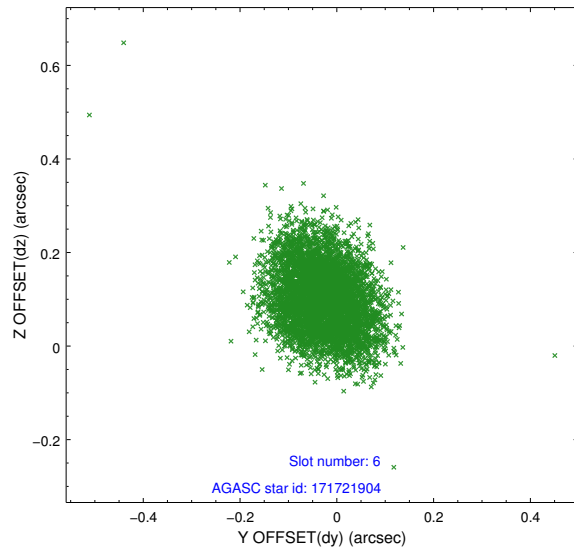
2.4.2 Slot 4



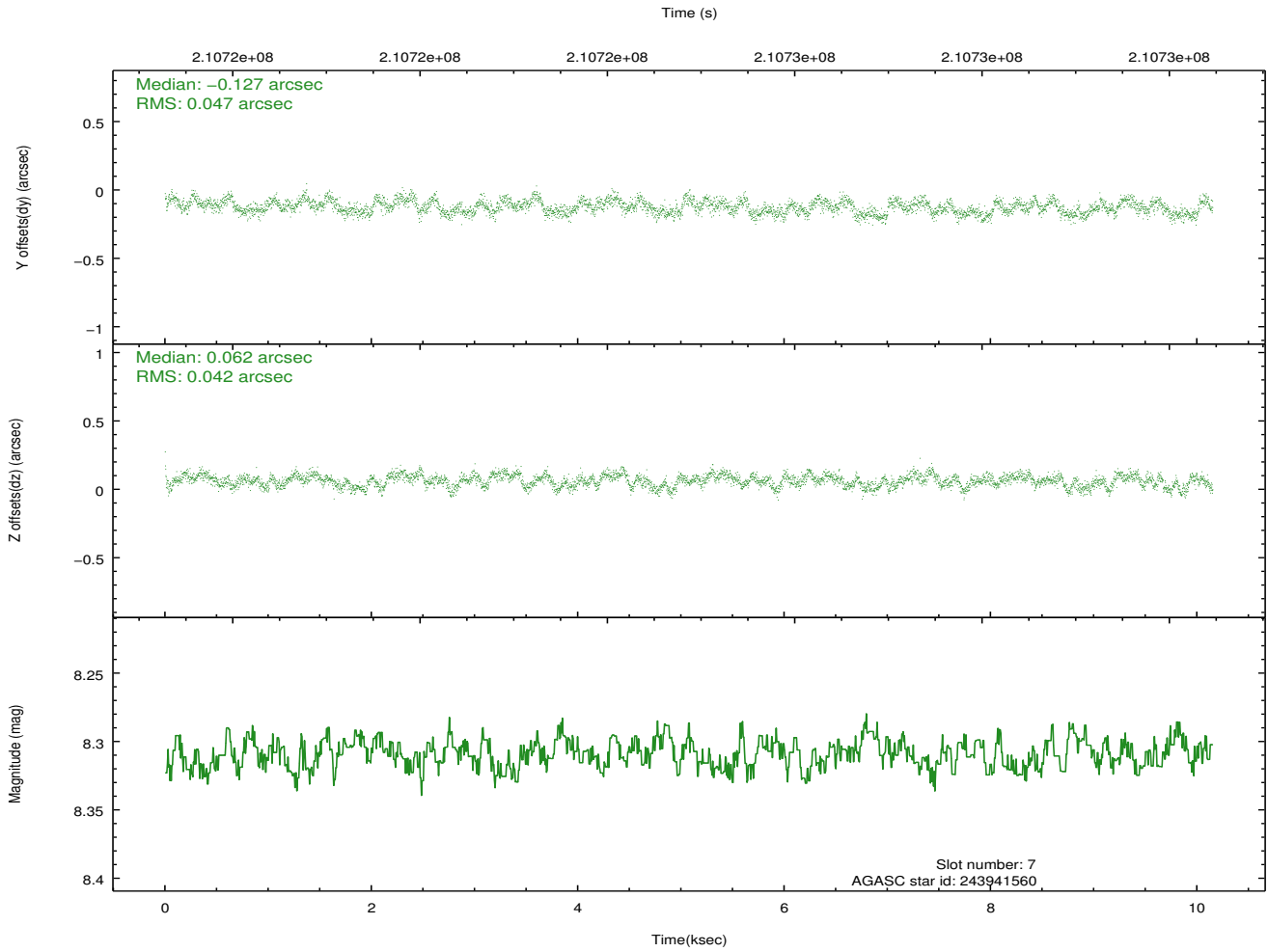
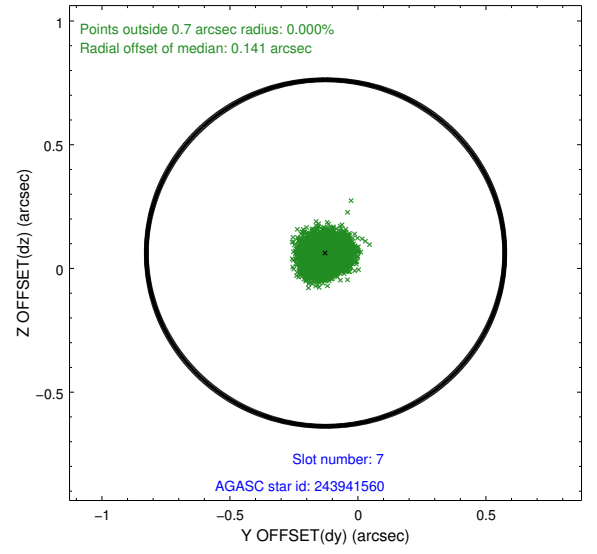
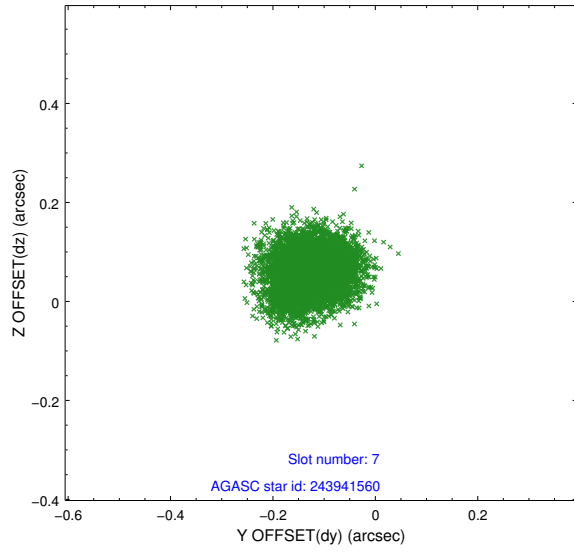
2.4.3 Slot 5



2.4.4 Slot 6

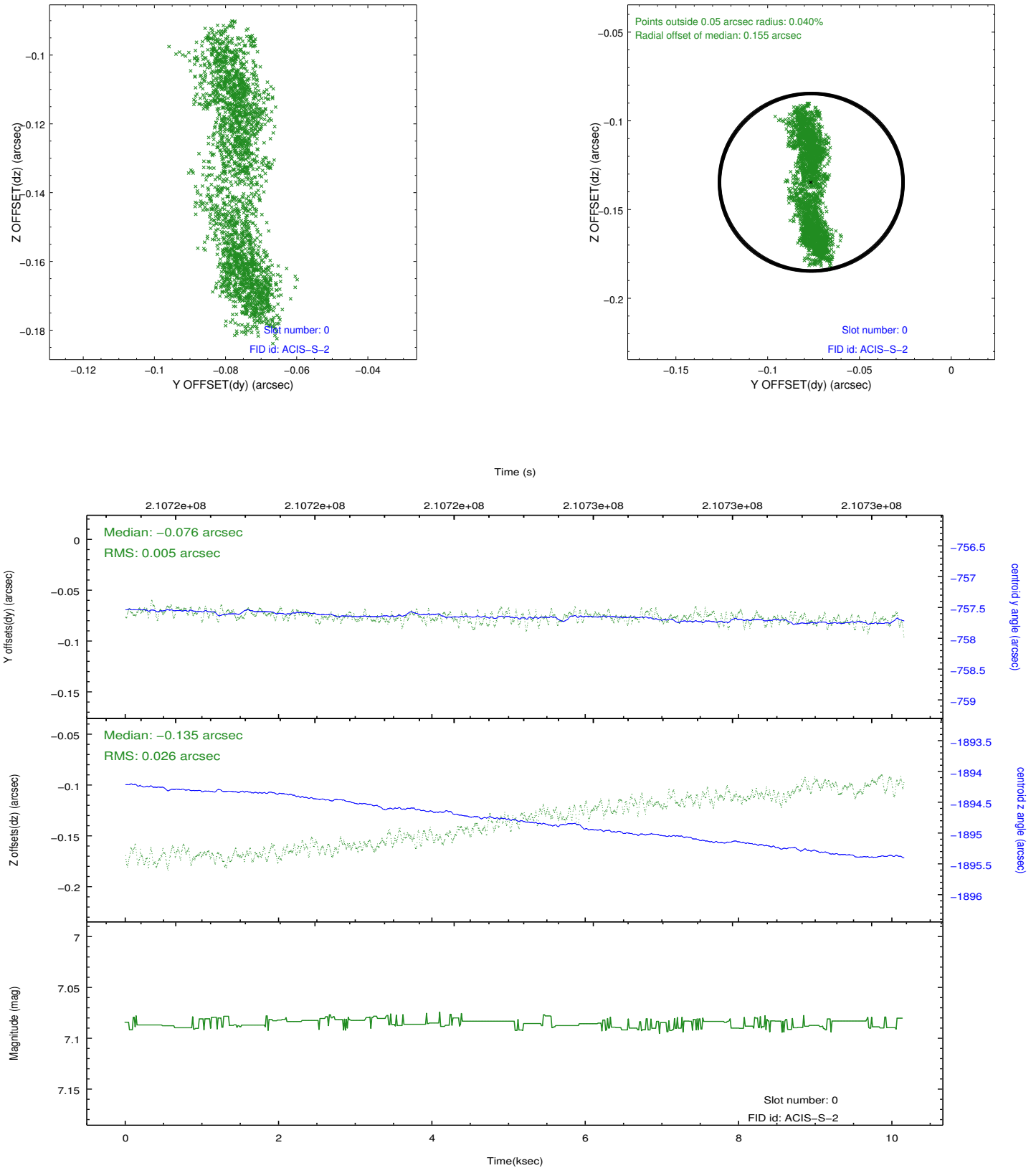


2.4.5 Slot 7

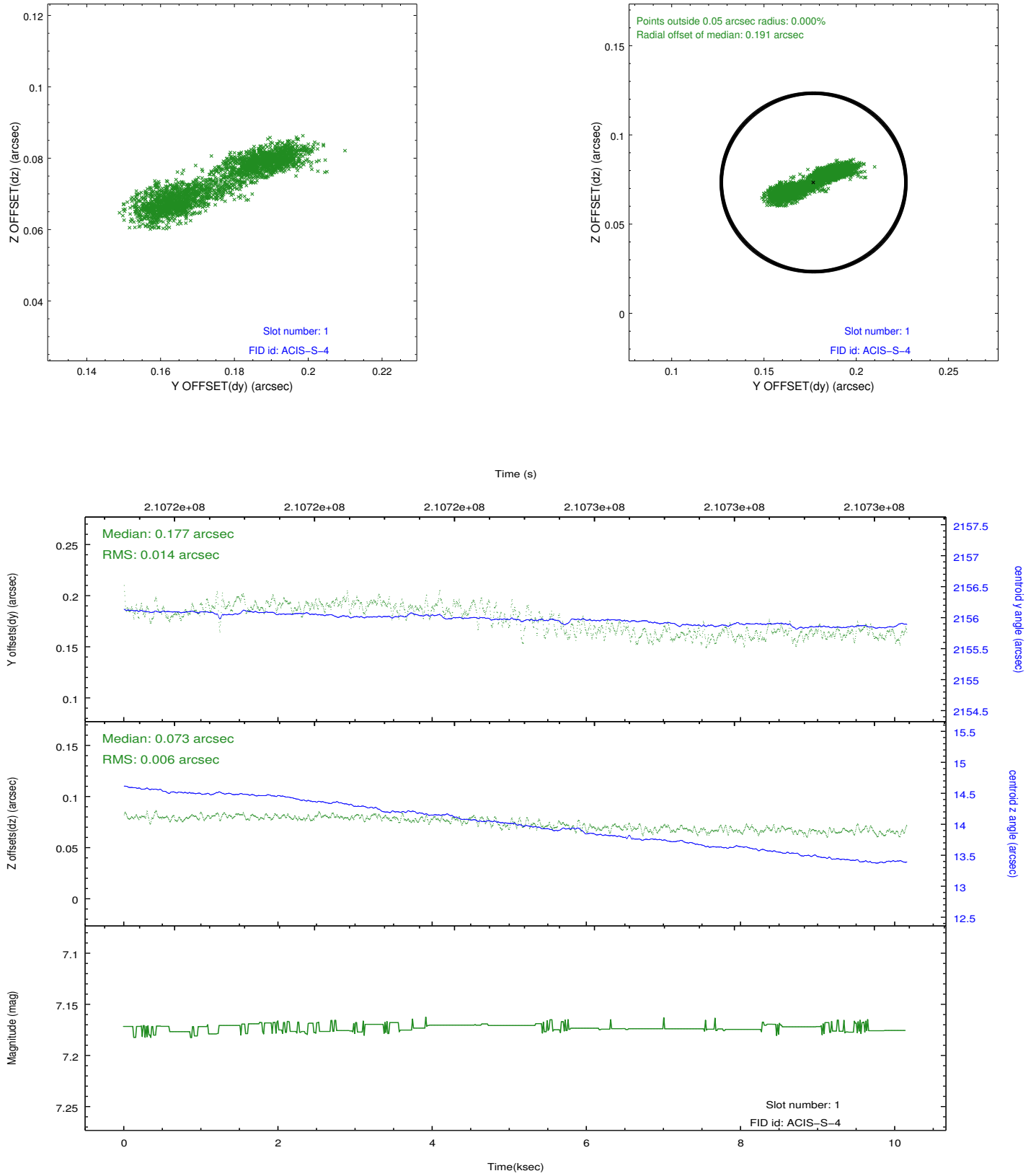


2.5 FID Slots

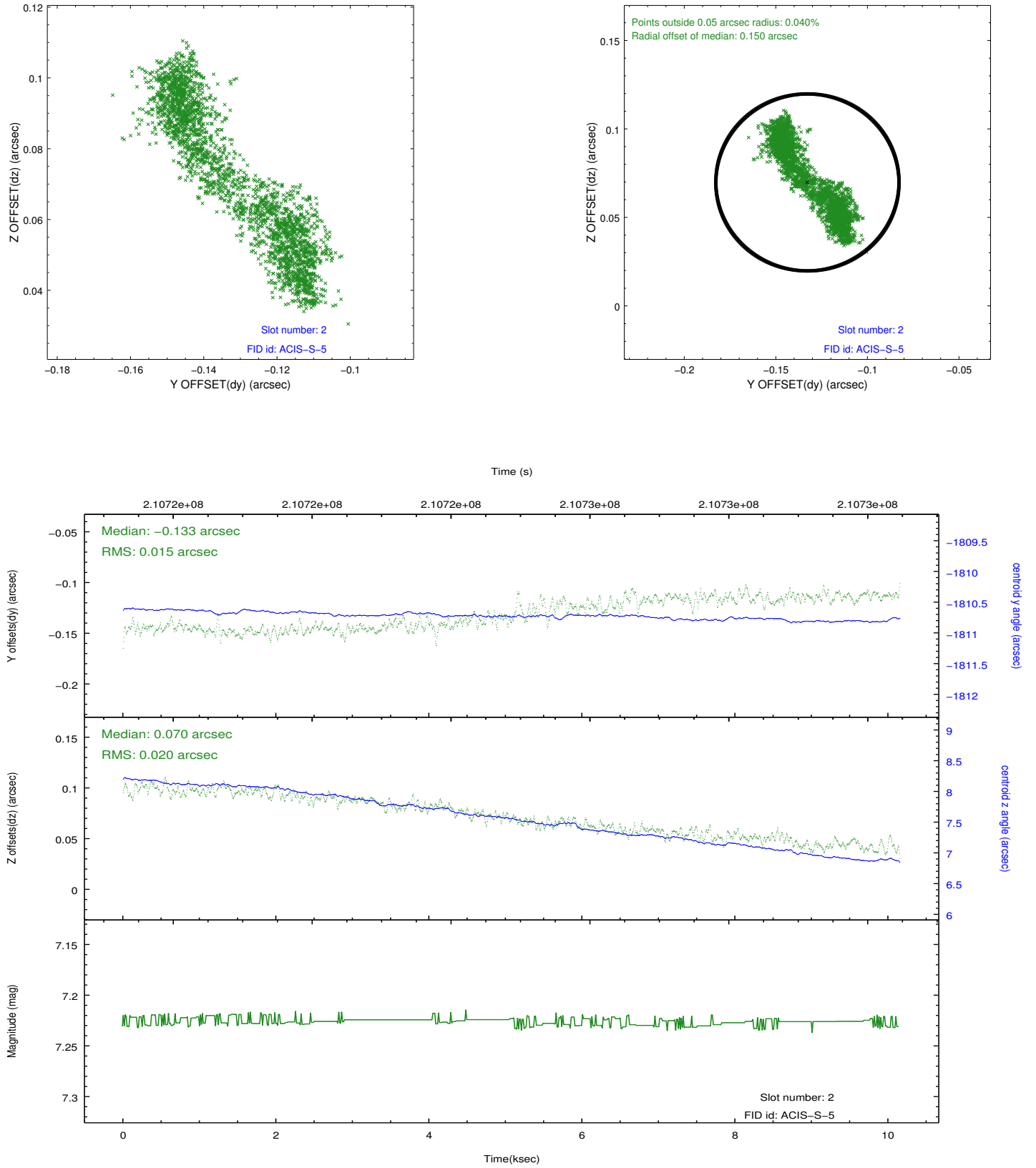
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

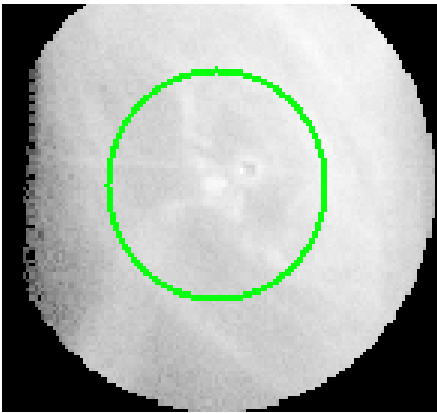


3 Gratings

3.1 HEG Arm



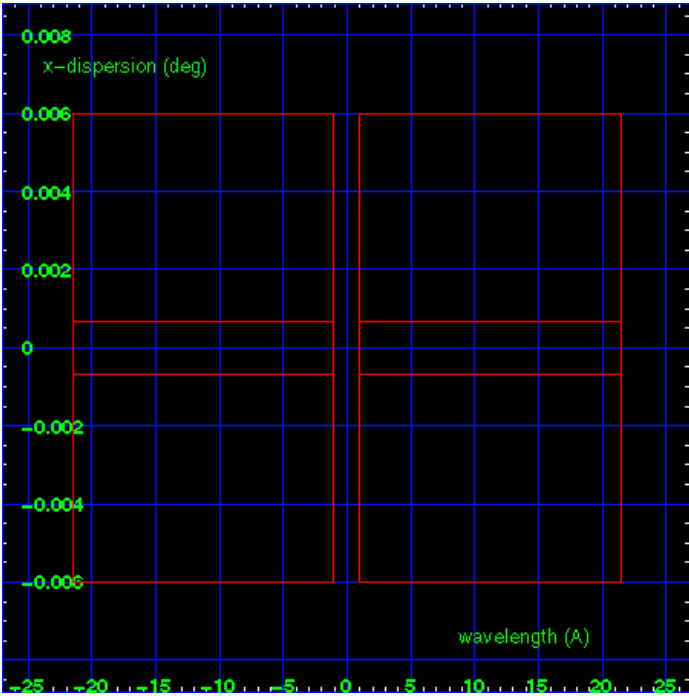
HEG Order Sort 123



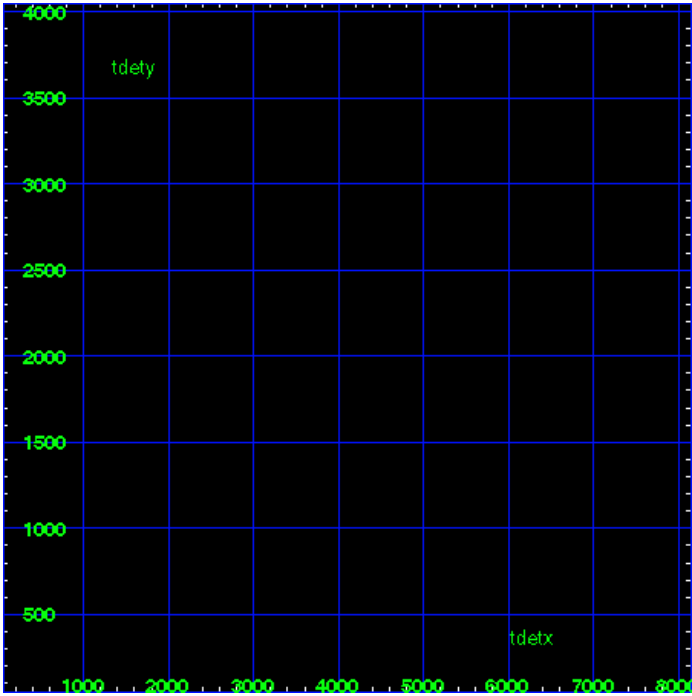
HEG Zero Order



HEG Order Sort ALL

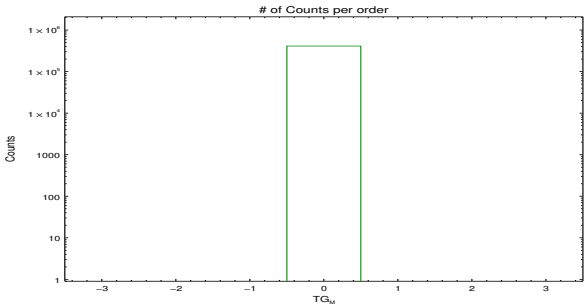


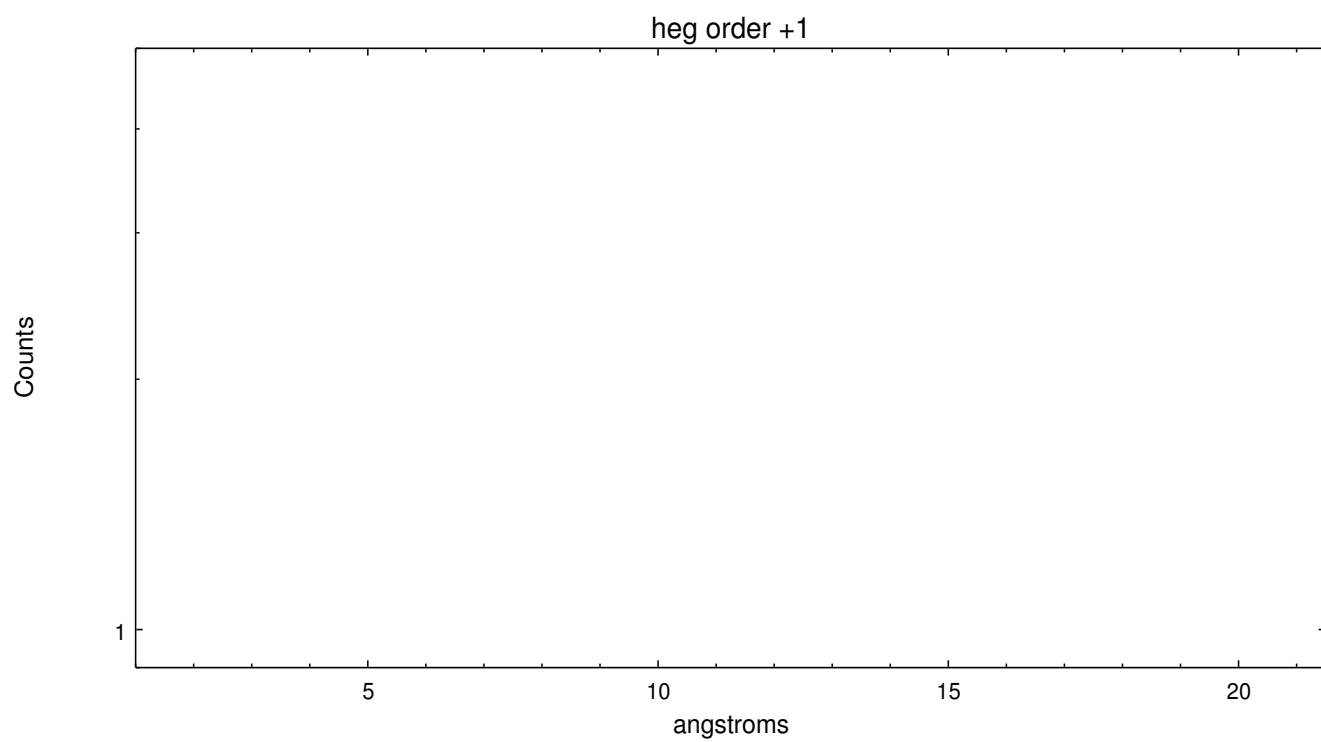
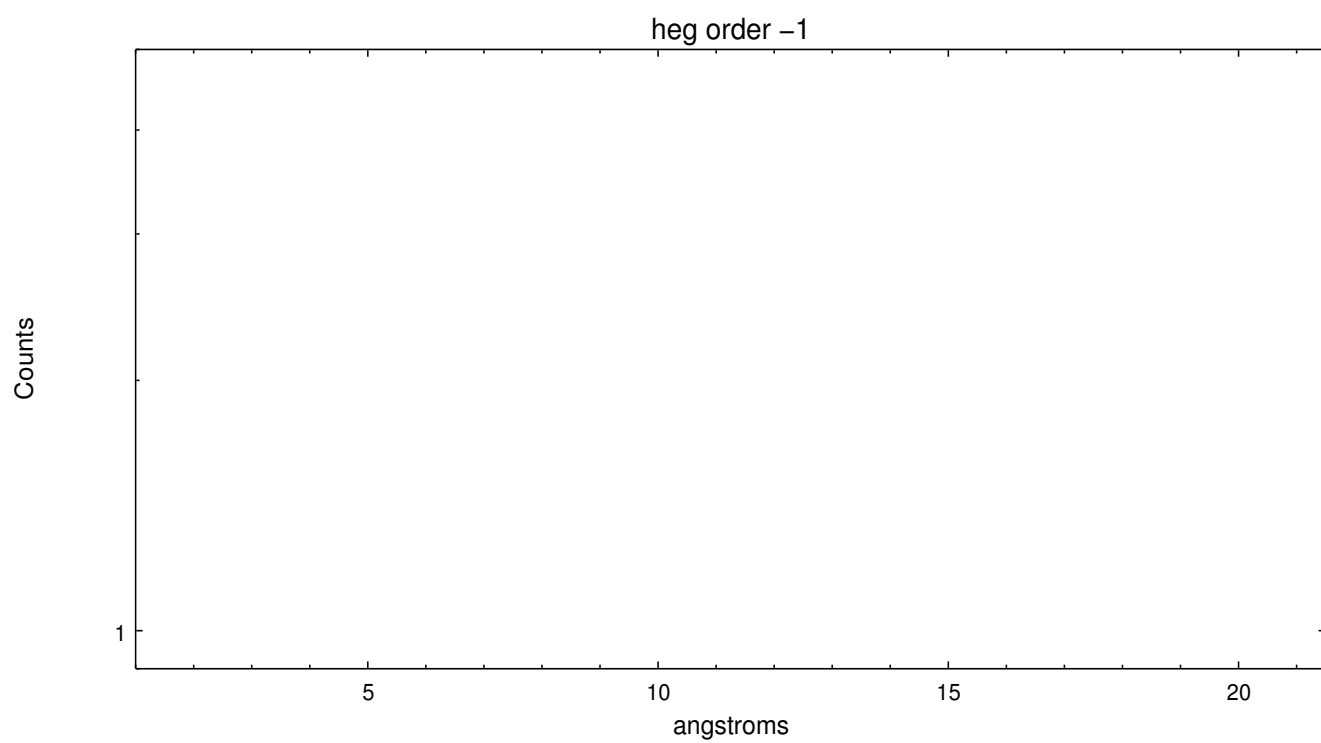
Spot Image HEG



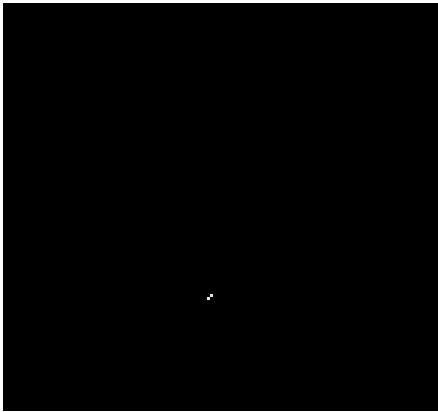
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	416405	0	0	0

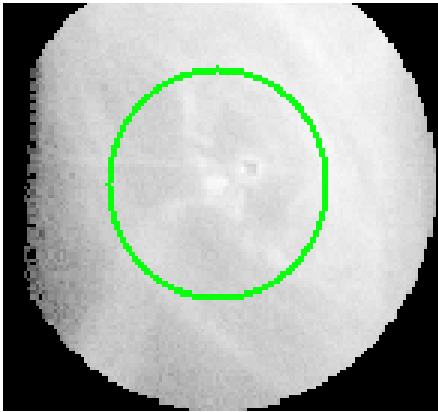




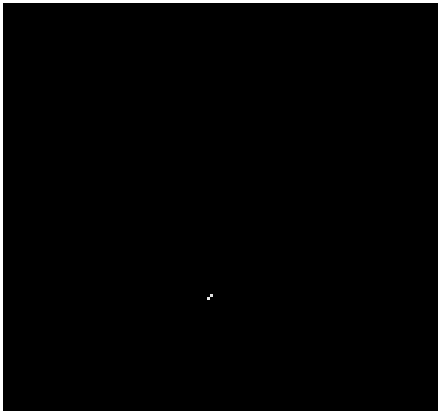
3.2 MEG Arm



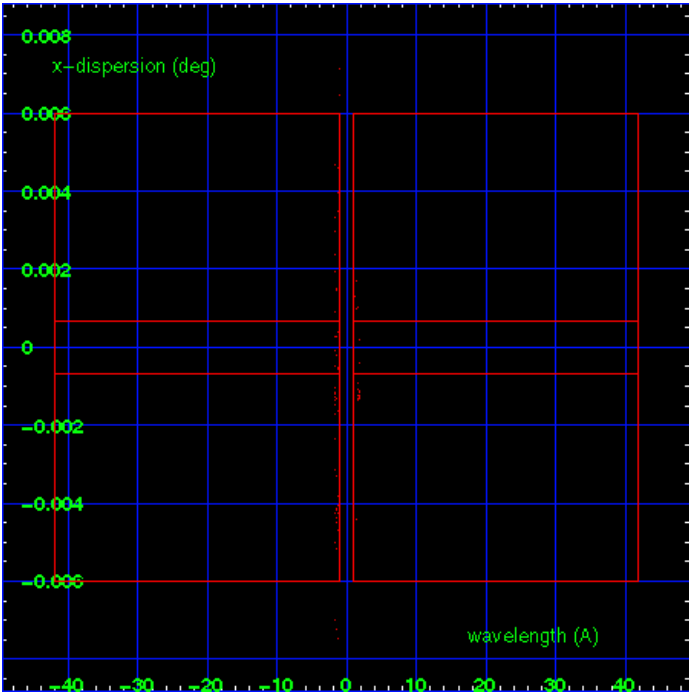
MEG Order Sort 123



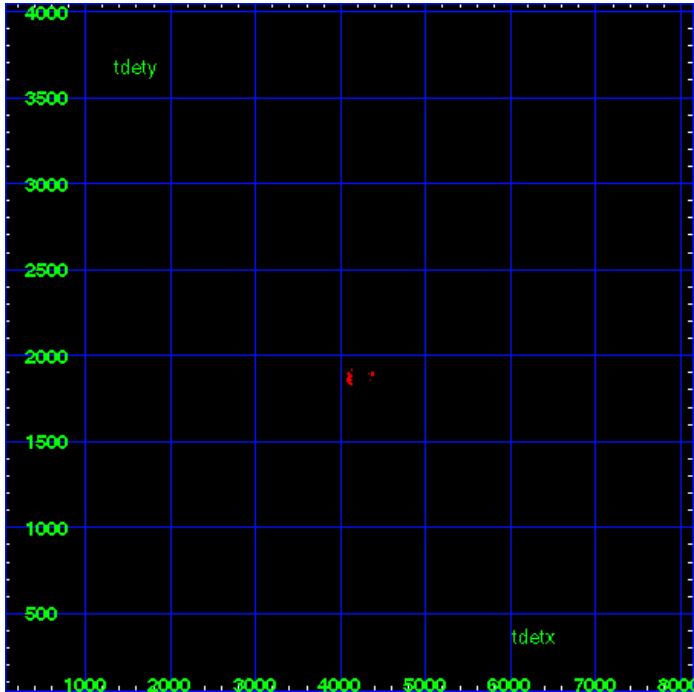
MEG Zero Order



MEG Order Sort ALL

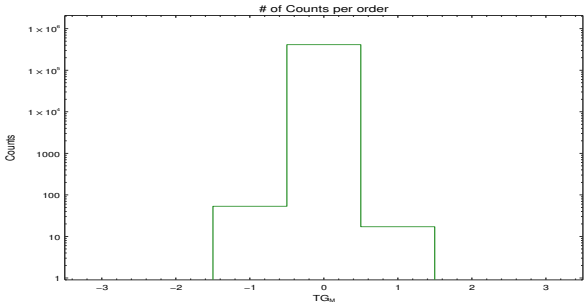


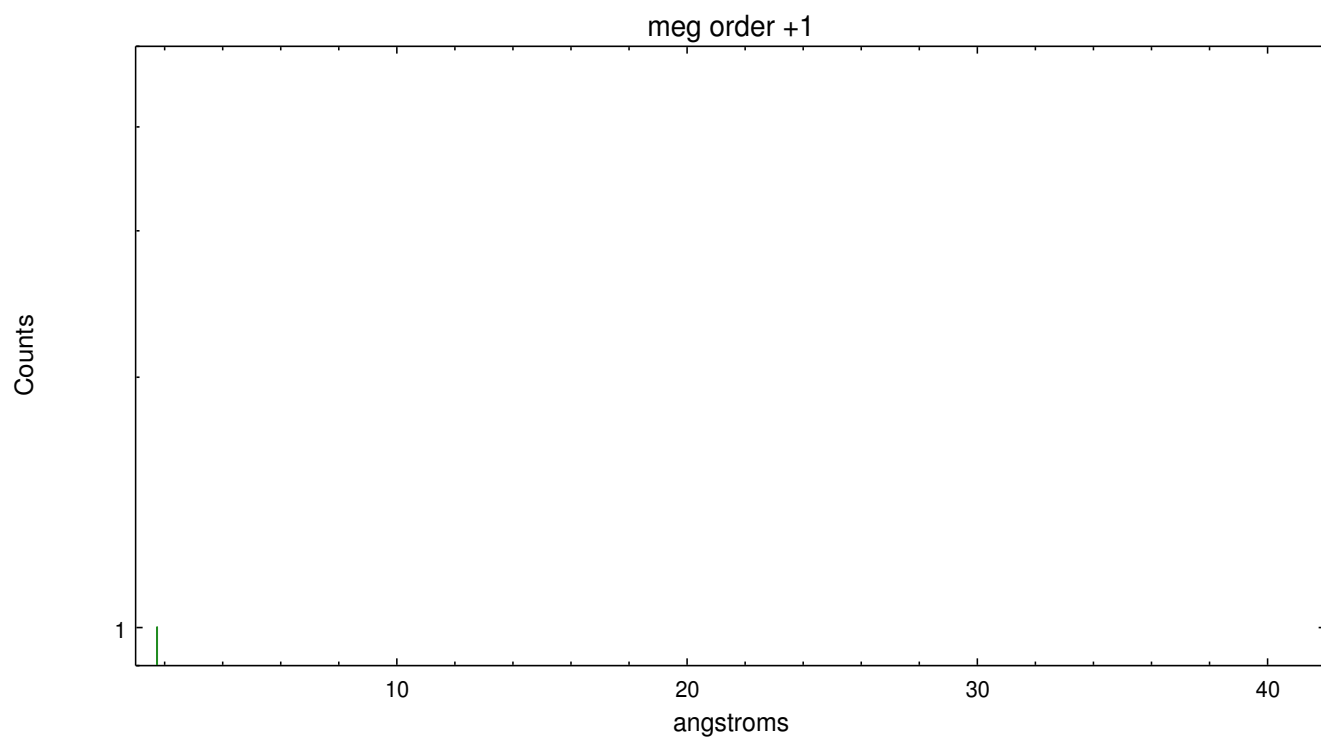
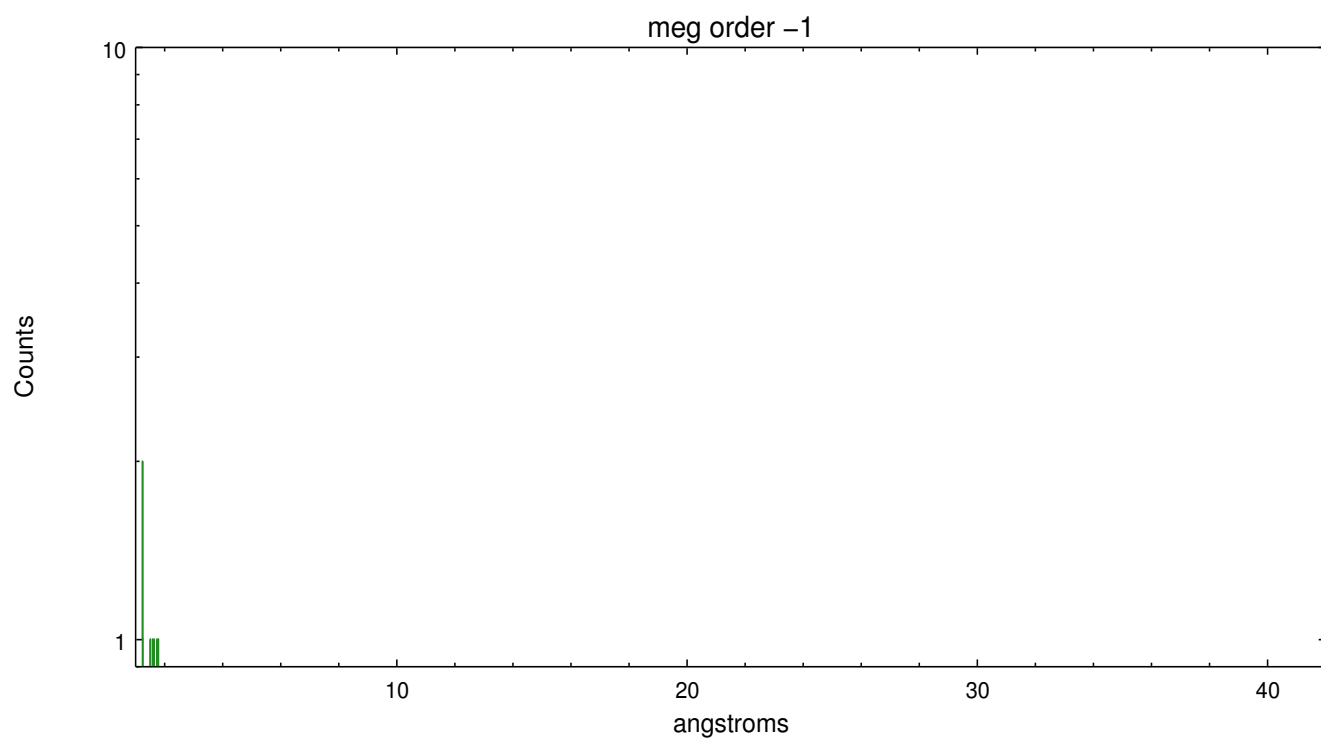
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	53	416405	17	0	0





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.152

A.2 Comments

HETG is inserted as a filter; there is very little useful gratings information in the observation. The zeroth order position used in the grating extraction is NOT at the position of the pulsar, but is near a bright emission knot to the SE. If the dispersed grating spectrum is to be analyzed, it should be re-extracted using the exact position of the pulsar as the zeroth order position. The dispersed spectrum only contains data for the meg orders between 1-2 A.