

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 5554 - L2 Version 3
Chandra X-Ray Center

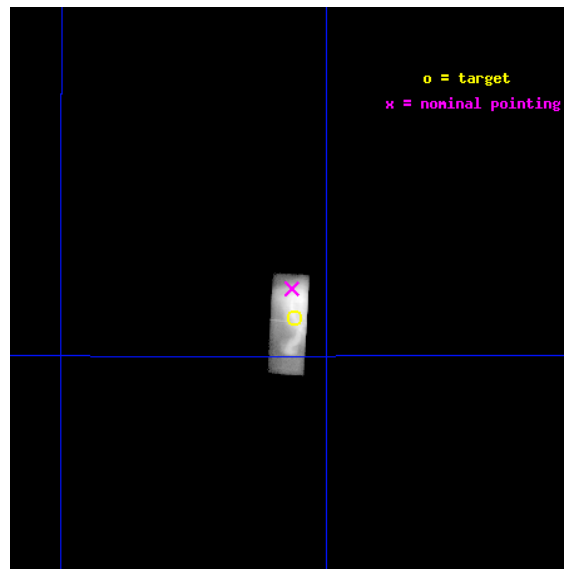
L2 Processing Date : Dec 27 2012

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1 Front

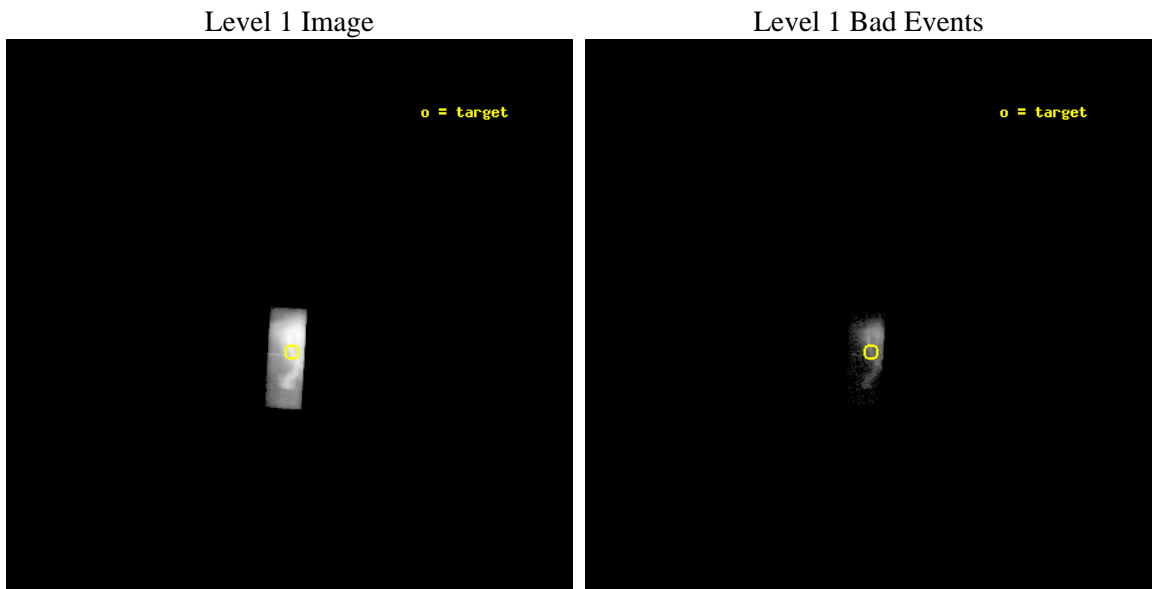
seq_num	500543	Sequence number
obs_id	5554	Observation id
title	Monitoring of the Relativistic Magnetohydrodynamic Shock in the Crab Nebula	Proposal title
observer	Dr Koji Mori	Principal investigator
object	The Crab Nebula	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	83.640417	Observer's specified target RA [deg]
dec_targ	22.016472	Observer's specified target Dec [deg]
ra_nom	83.641480825975	Nominal RA [deg]
dec_nom	22.028915104491	Nominal Dec [deg]
roll_nom	93.279411638221	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10181.400404572	Sum of GTIs [s]
livetime	8956.1931778435	Livetime [s]
ontime7	10181.400404572	Sum of GTIs [s]
l2events	1118217	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	10181.400404572	Sum of GTIs [s]
caldbver	4.5.5	 	ontime7	10181.400404572	Sum of GTIs [s]
date	2012-12-27T22:29:58	Date and time of file creation	l1events	1170185	Number of level 1 events
revision	3	Processing version of data			

2.1.3 Events

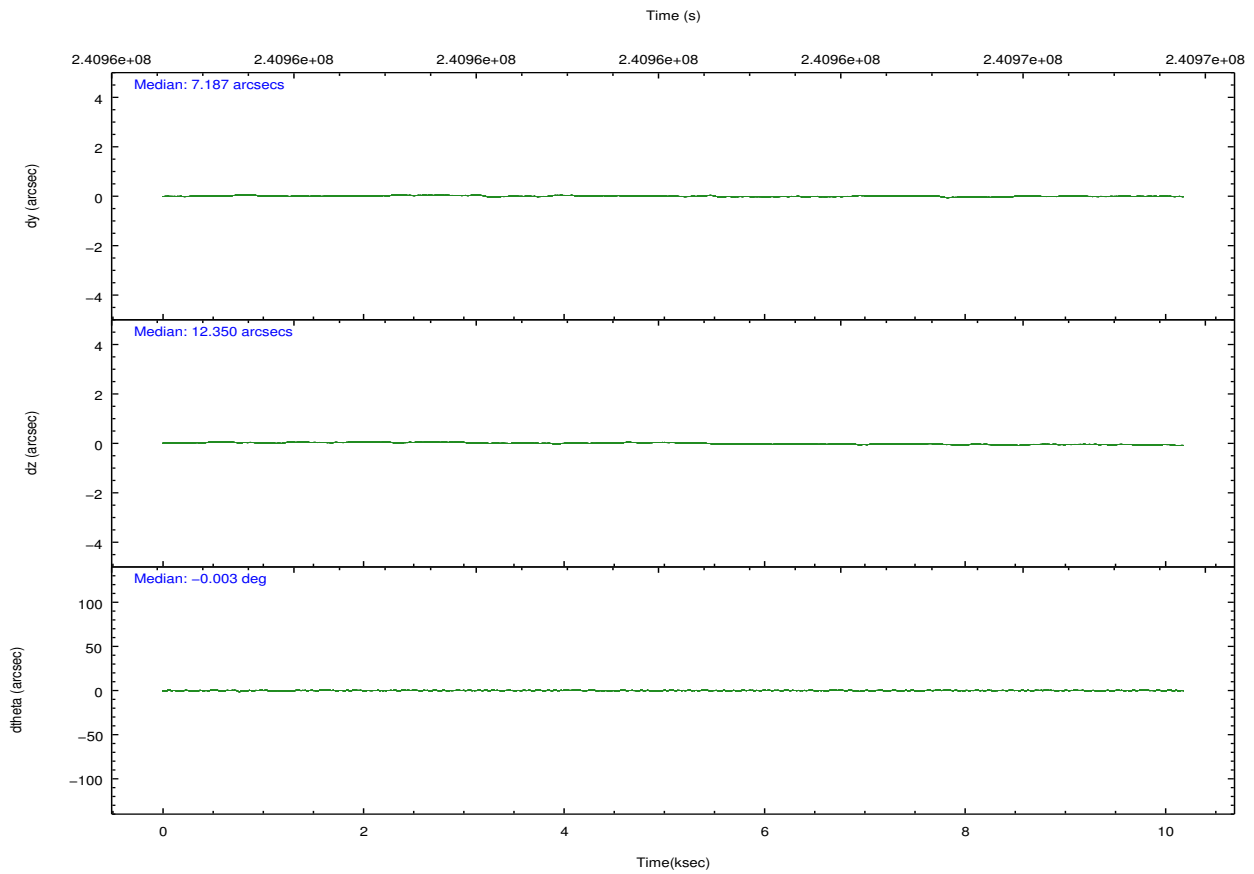
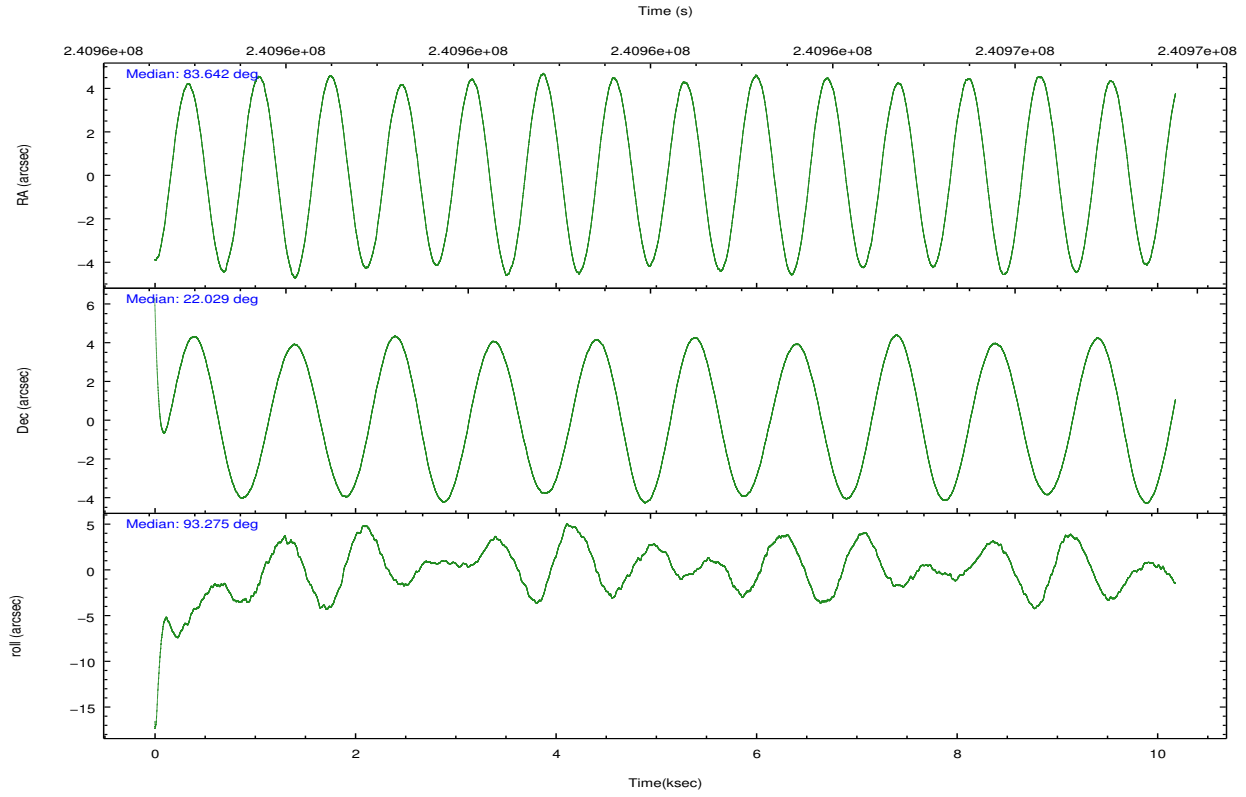
	ccd 7
level 1 events	1170185
rejected events	31584
rejected %	2%

	ccd 7
grade 0 events	224876
	19%
grade 1 events	2685
	0%
grade 2 events	288467
	24%
grade 3 events	128651
	10%
grade 4 events	124554
	10%
grade 5 events	13284
	1%
grade 6 events	373117
	31%
grade 7 events	14551
	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	83.657933	83.64148082597491	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	22.006341	22.02891510449105	Subarray start row	127	127
[deg] Pointing Roll	93.116642	93.27941163822136	Subarray row count	101	101
[s] Window start time (MET)	240451264.184000	240451264.184000	Alternating exposures requested	N	N
[s] Window stop time (MET)	241056064.184000	241056064.184000	[s] Primary exposure time	0.000000	0.3
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	240957249.184000	240956479.53565			
Observation start date	2005-08-20T20:33:05	2005-08-20T20:21:19			
[s] Observation end time (MET)	240967249.184000	240968267.54869			
Observation end date	2005-08-20T23:19:45	2005-08-20T23:37:47			
Read mode	TIMED	TIMED			

2.3 Aspect

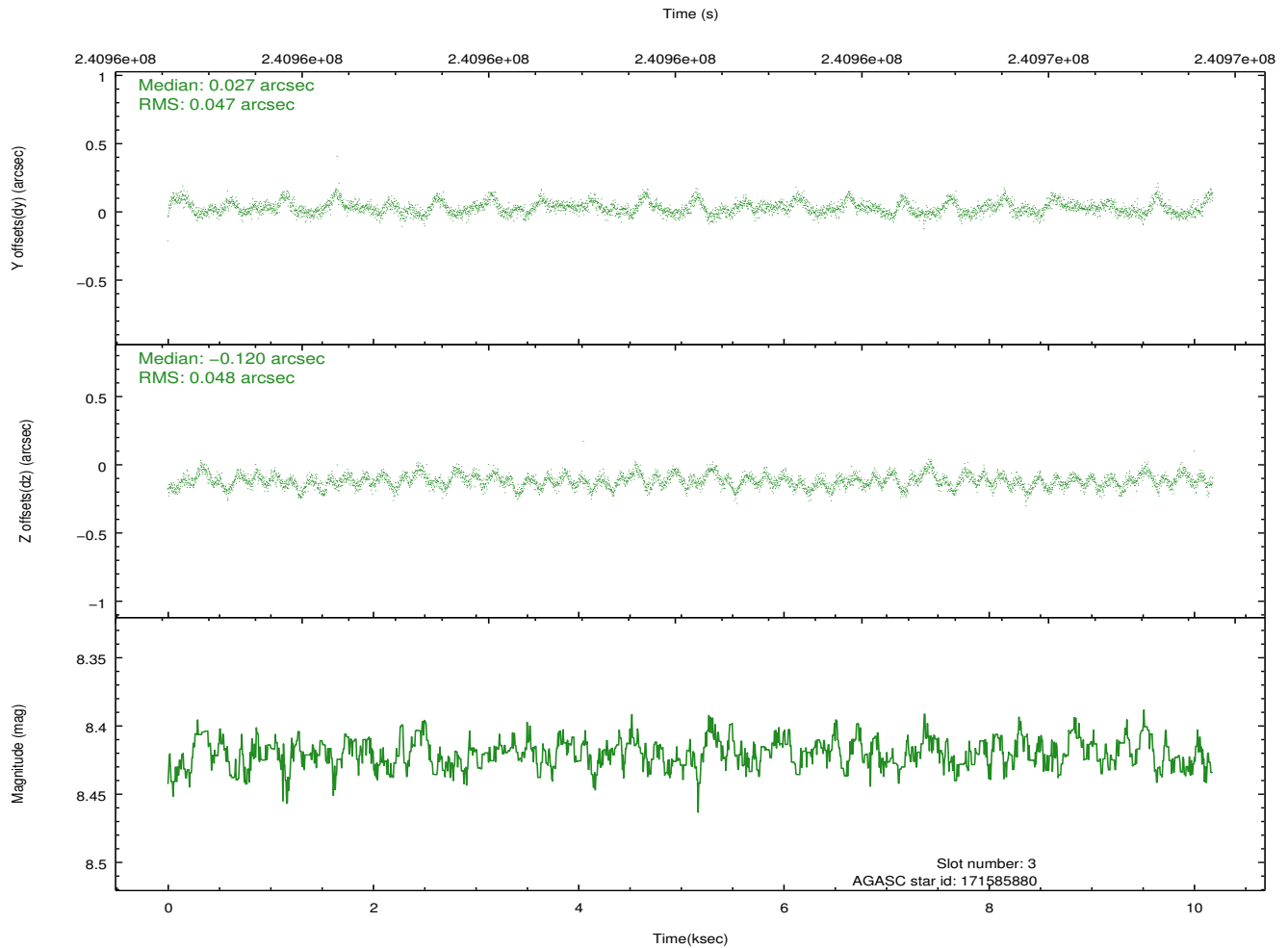
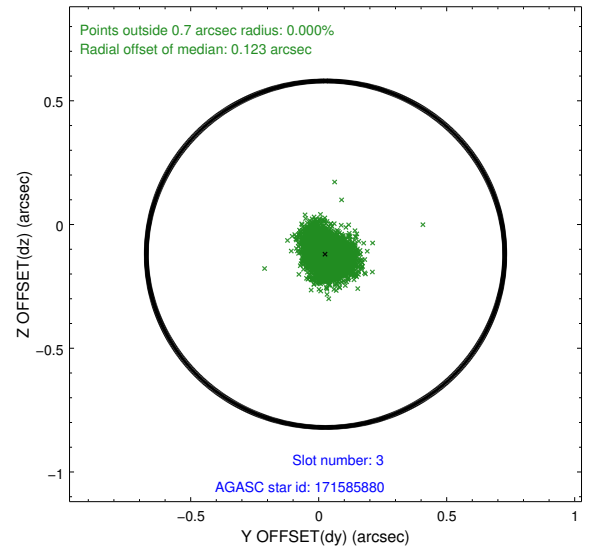
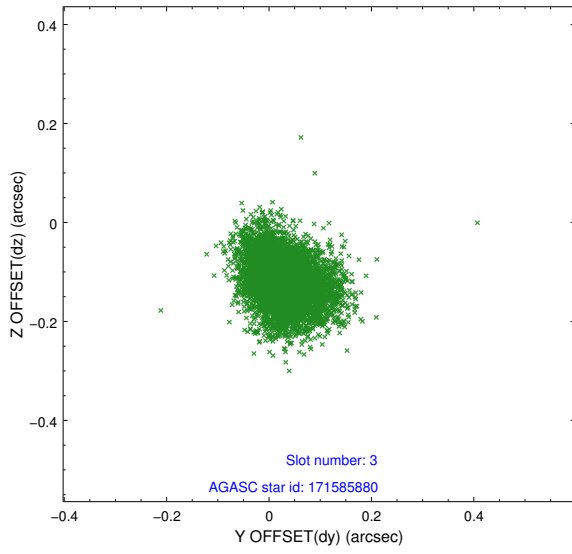


Slot Statistics

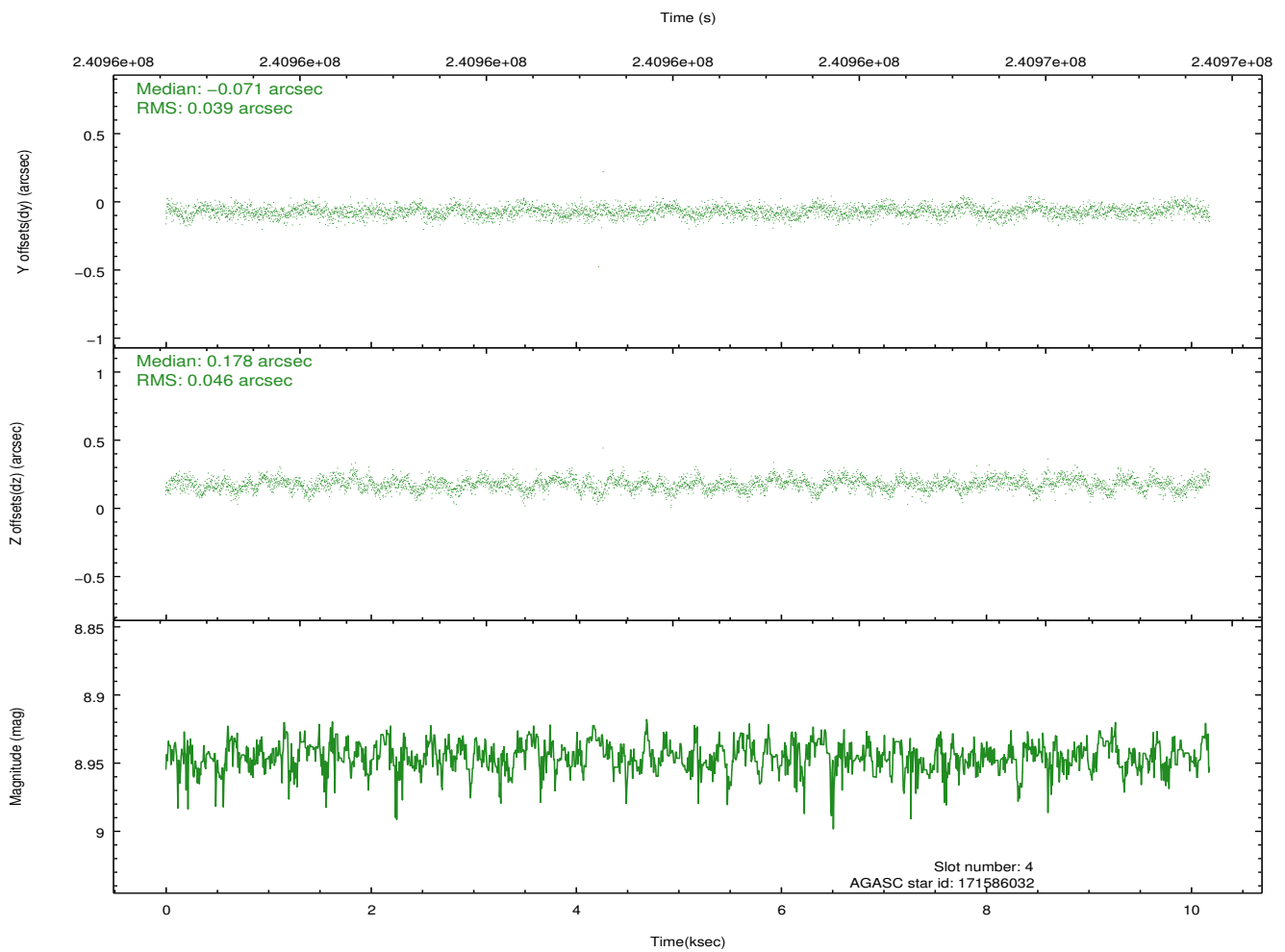
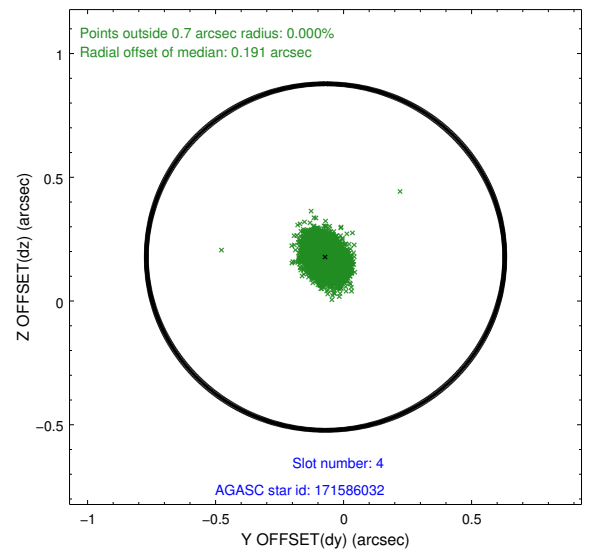
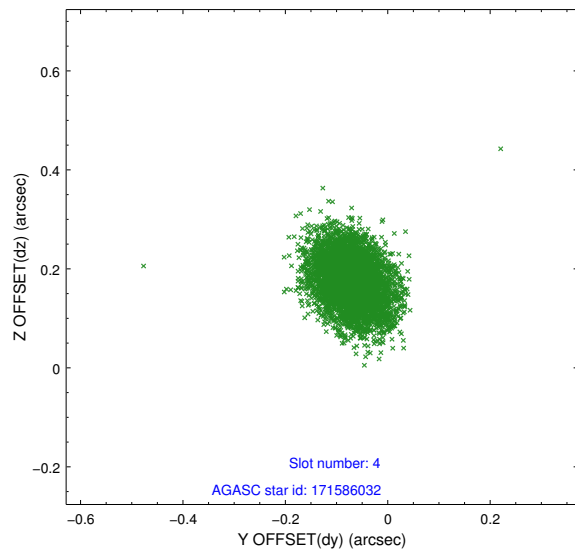
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	2484	-0.053	-0.174	0.006	0.010	0.000000	0.000000	-759.44	-1898.53
1	FID	ACIS-S-4	7.18	2484	0.103	0.072	0.006	0.010	0.000000	0.000000	2153.77	9.55
2	FID	ACIS-S-5	7.22	2484	-0.081	0.110	0.007	0.011	0.000000	0.000000	-1811.63	3.89
3	GUIDE	171585880	8.42	4967	0.027	-0.120	0.071	0.116	83.676260	22.176319	608.15	-94.12
4	GUIDE	171586032	8.95	4966	-0.071	0.178	0.064	0.105	83.950197	22.083225	224.83	-988.22
5	GUIDE	171597832	9.16	4967	0.199	-0.236	0.087	0.142	83.183230	21.366702	-2209.84	1713.92
6	GUIDE	171721904	9.20	4961	-0.093	0.124	0.088	0.139	84.272676	22.116922	290.18	-2068.34
7	GUIDE	243941560	8.32	4962	-0.067	0.054	0.052	0.087	83.733264	22.568598	2007.91	-360.04

2.4 Star Slots

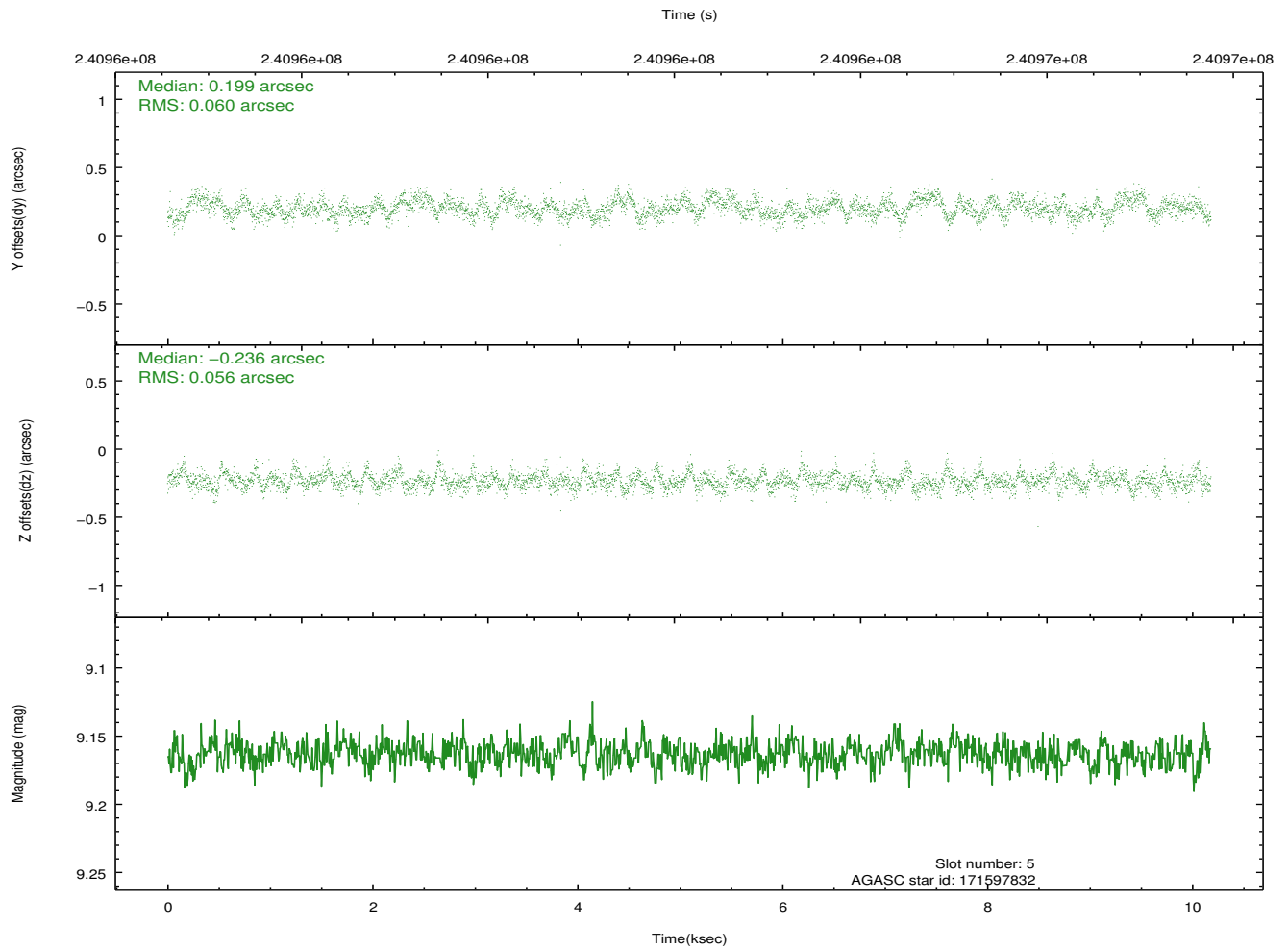
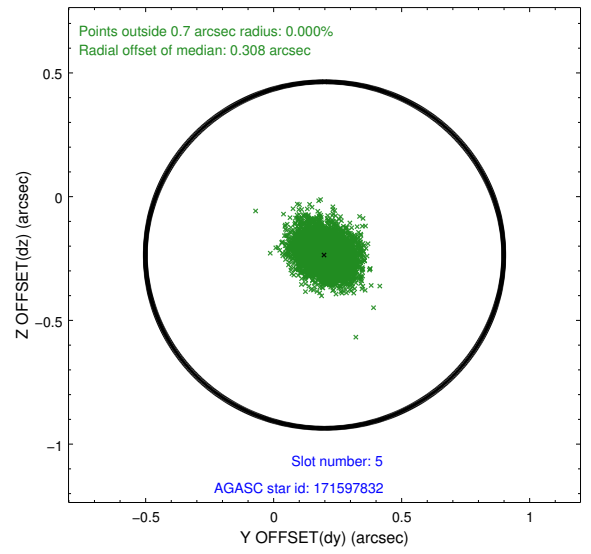
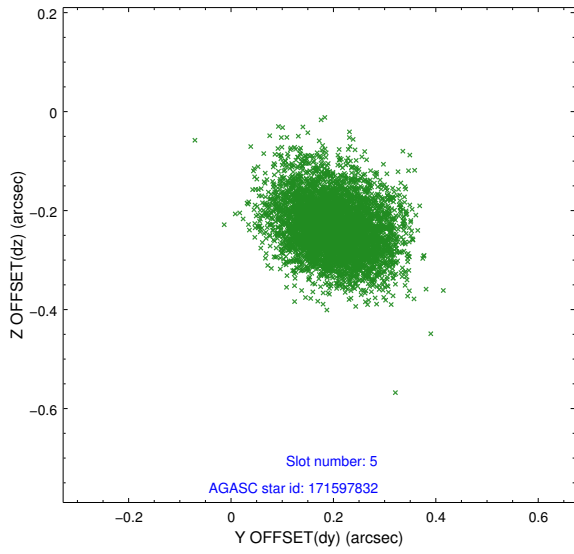
2.4.1 Slot 3



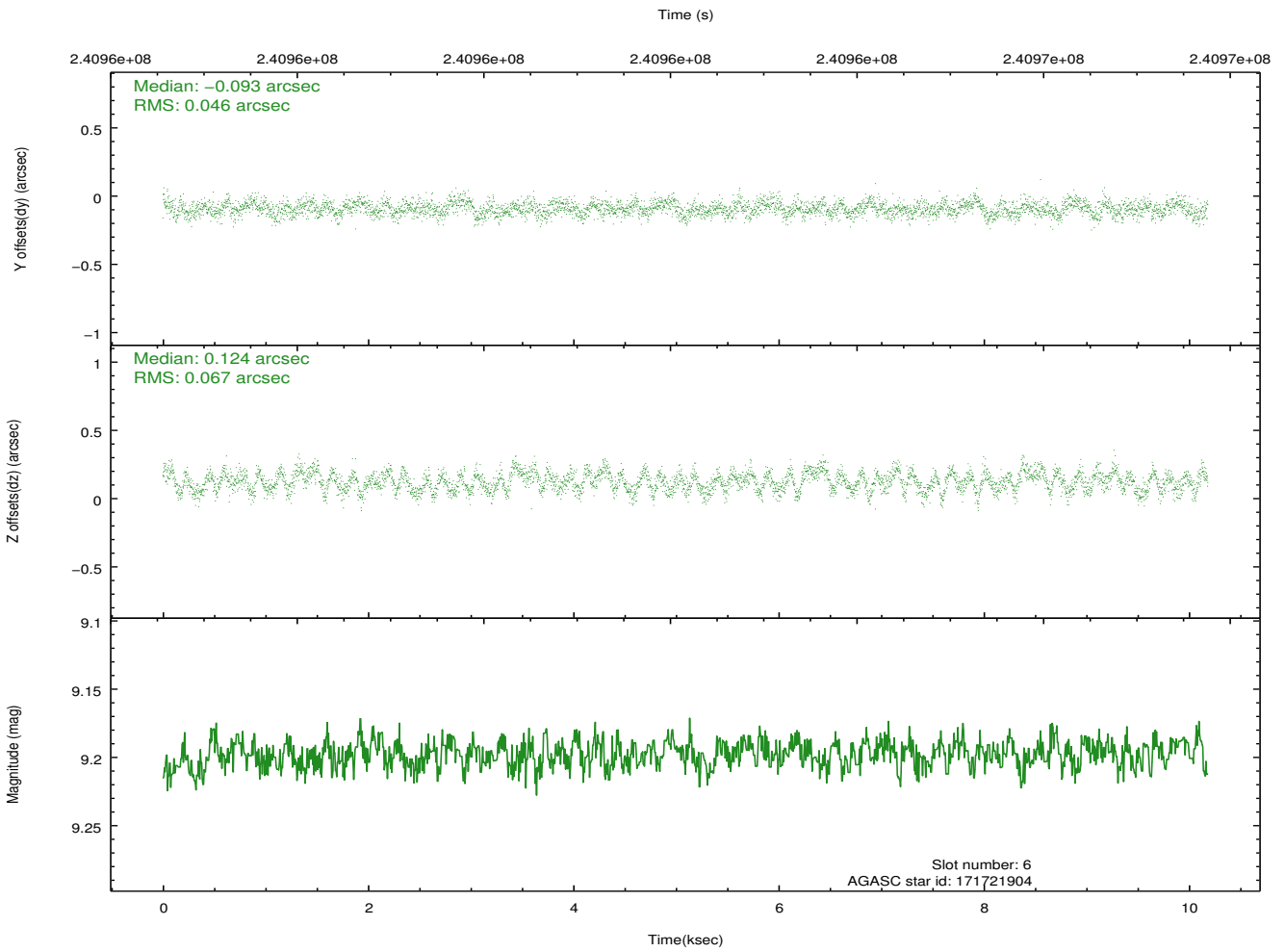
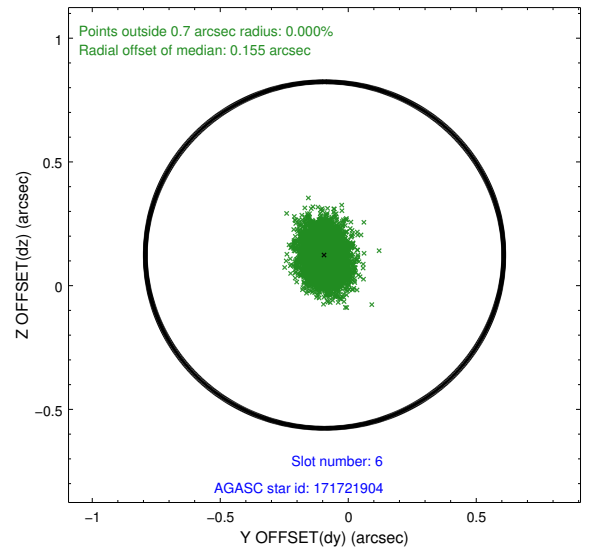
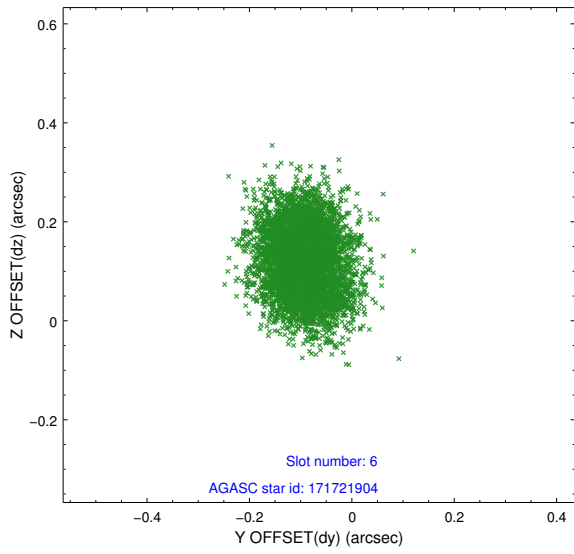
2.4.2 Slot 4



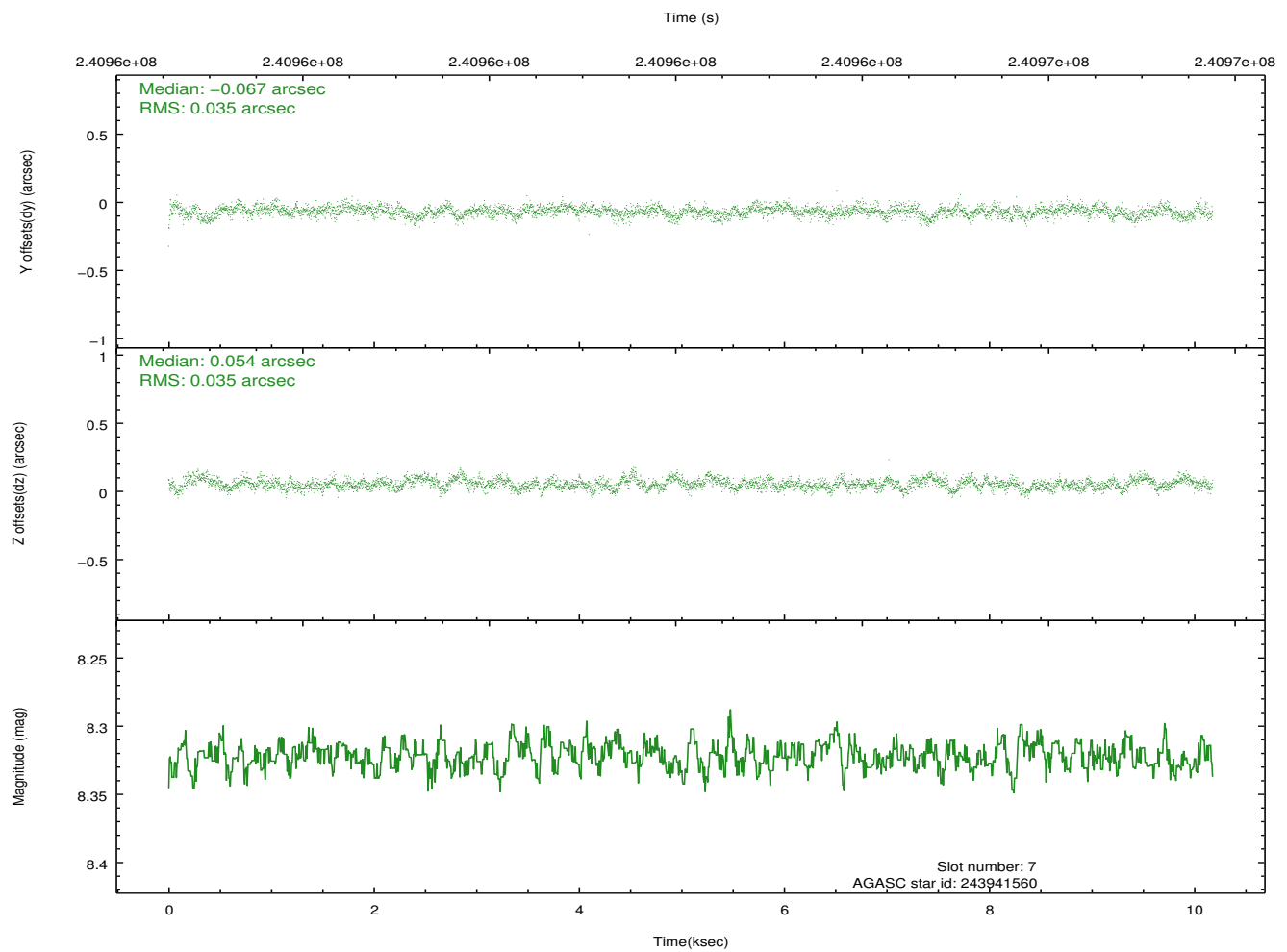
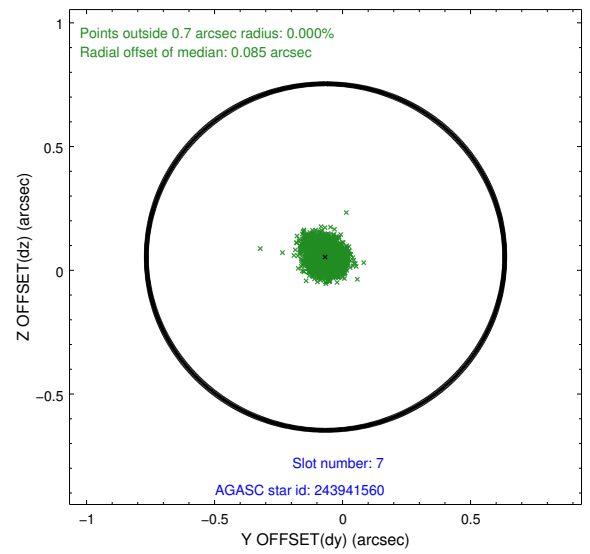
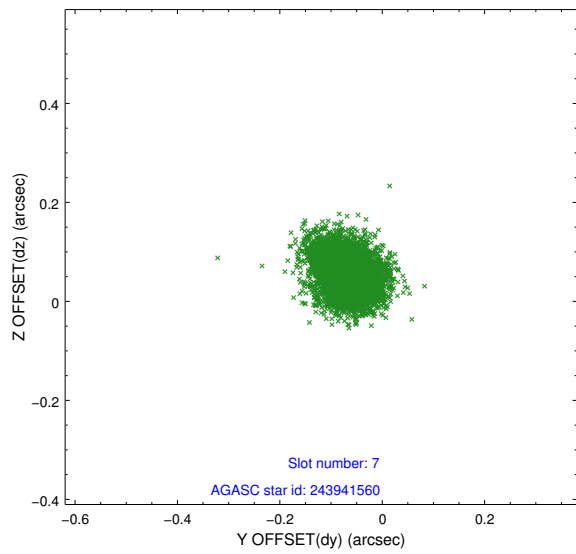
2.4.3 Slot 5



2.4.4 Slot 6

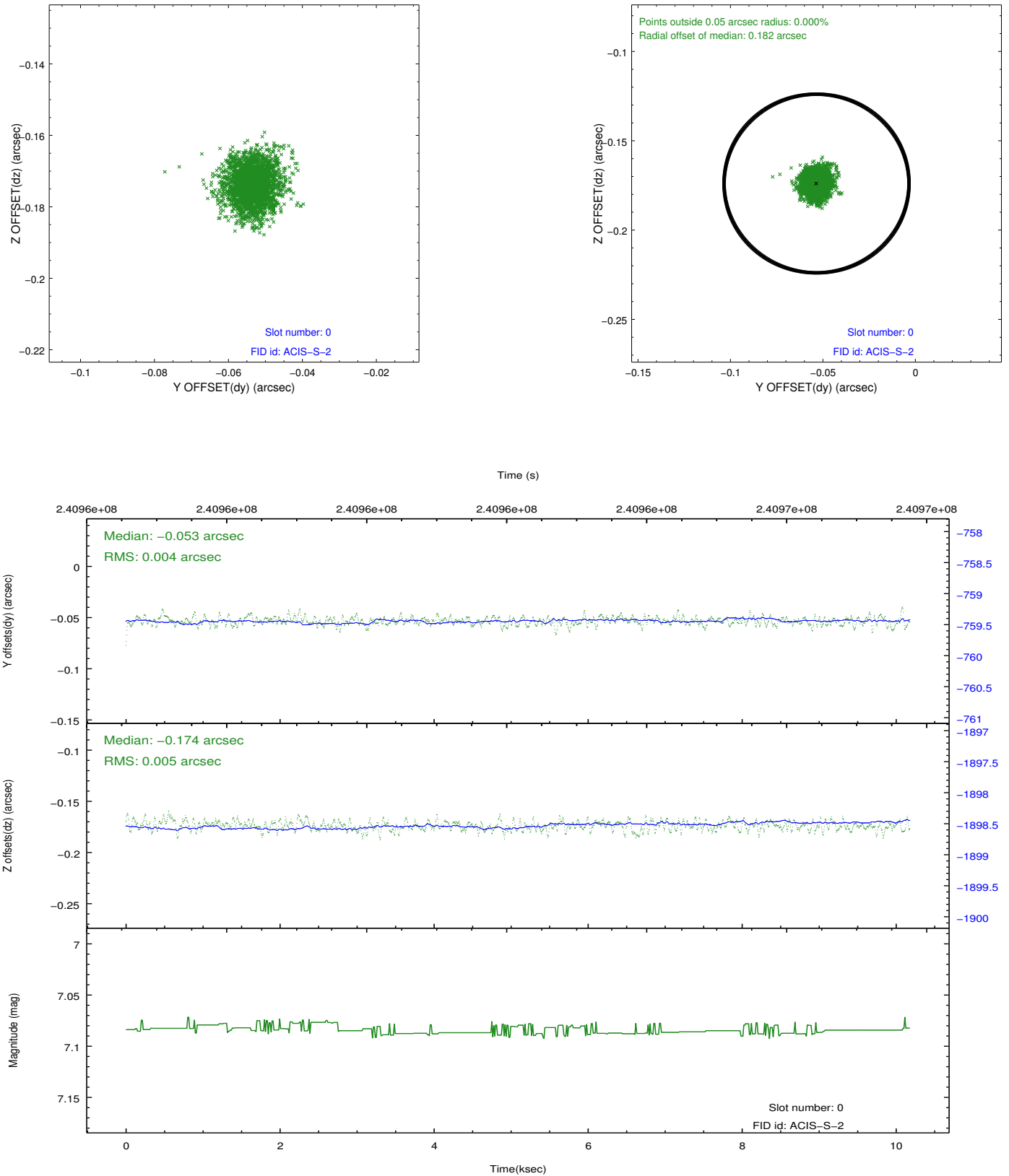


2.4.5 Slot 7

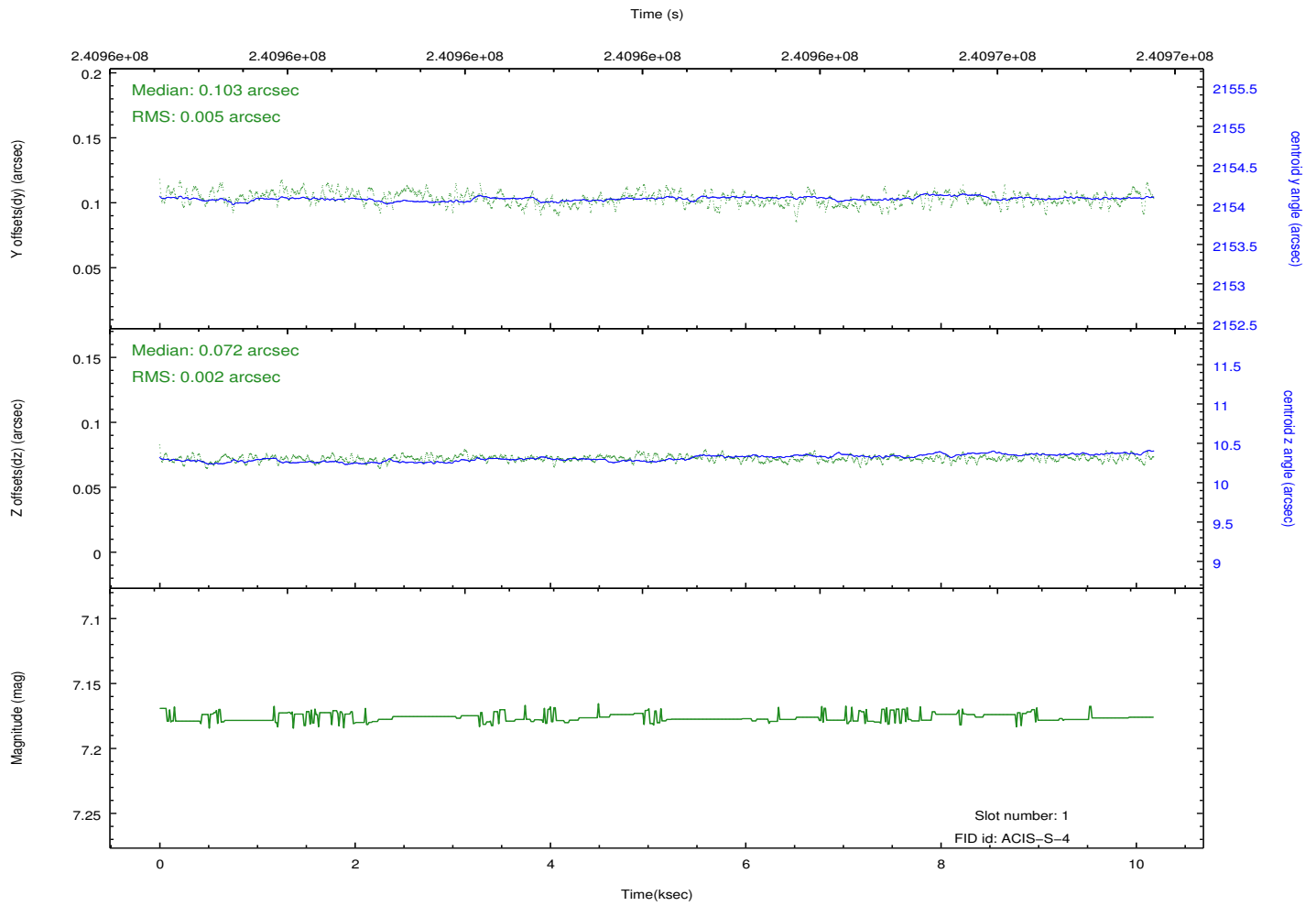
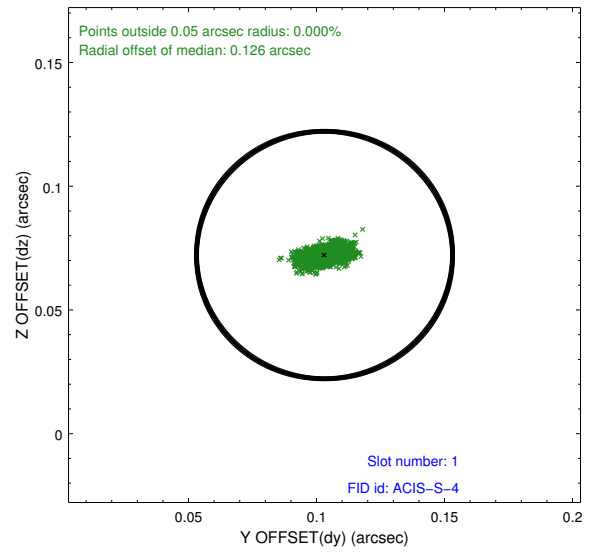
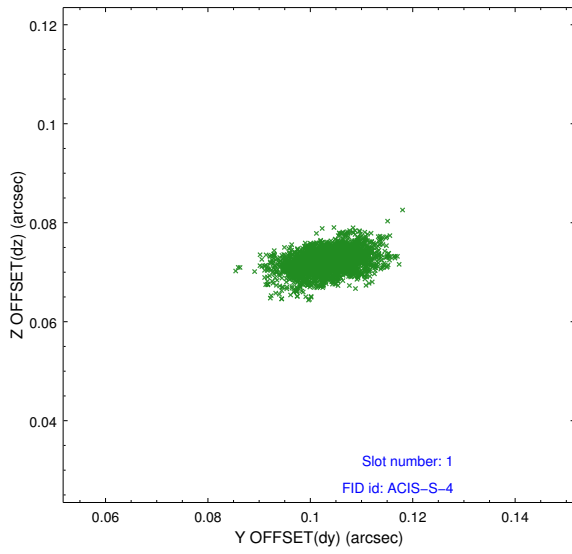


2.5 FID Slots

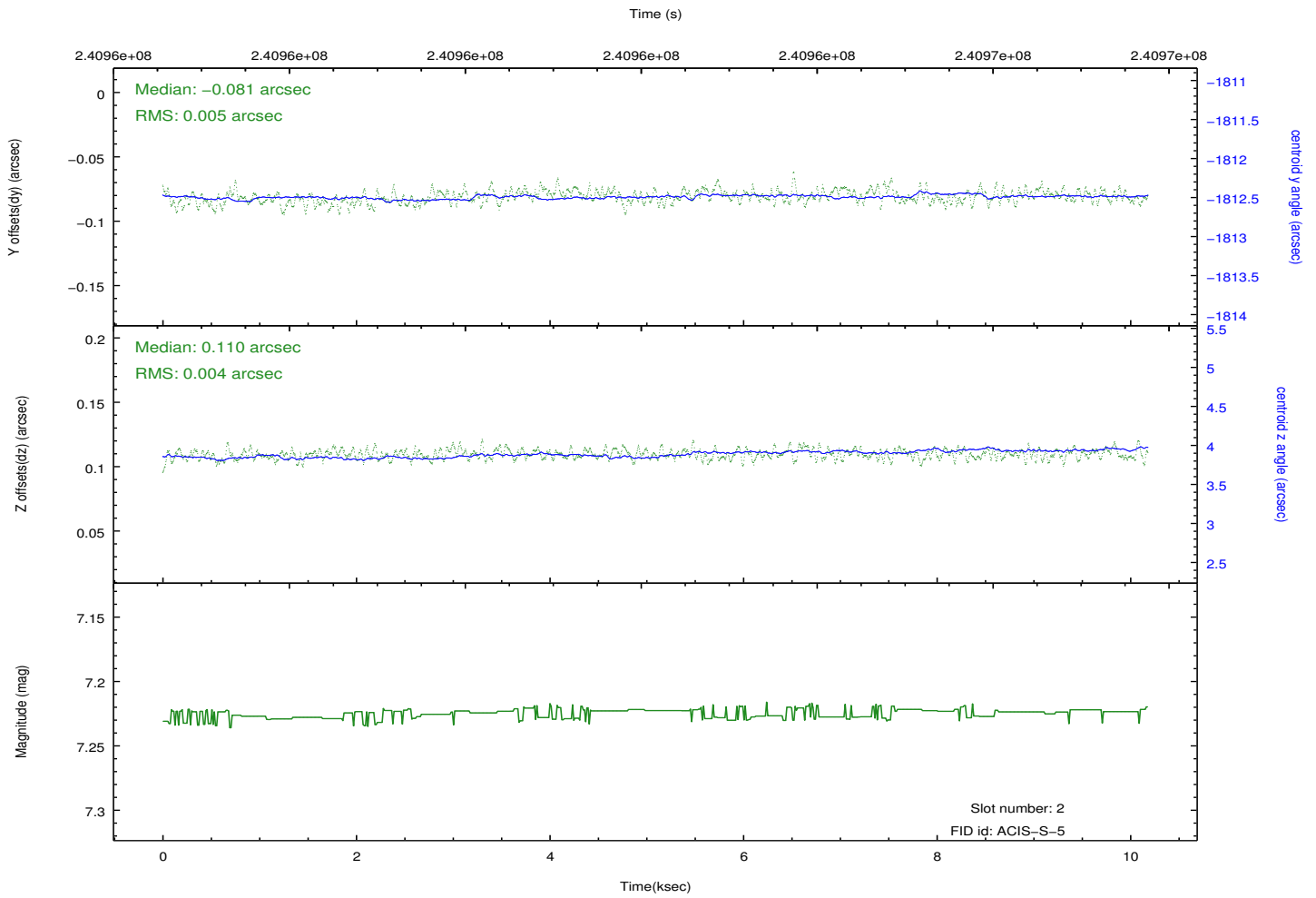
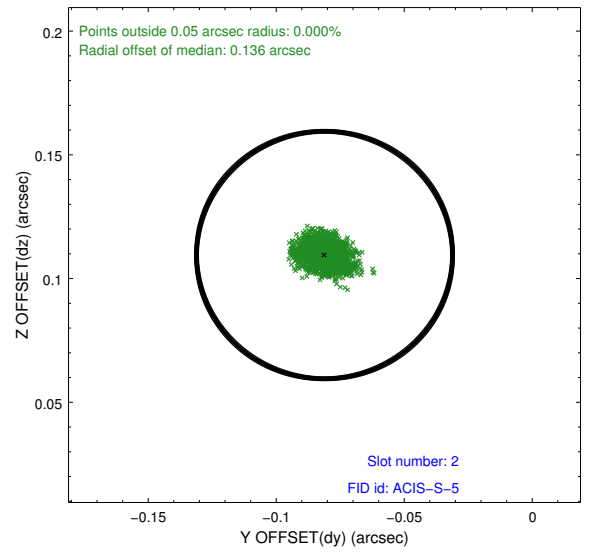
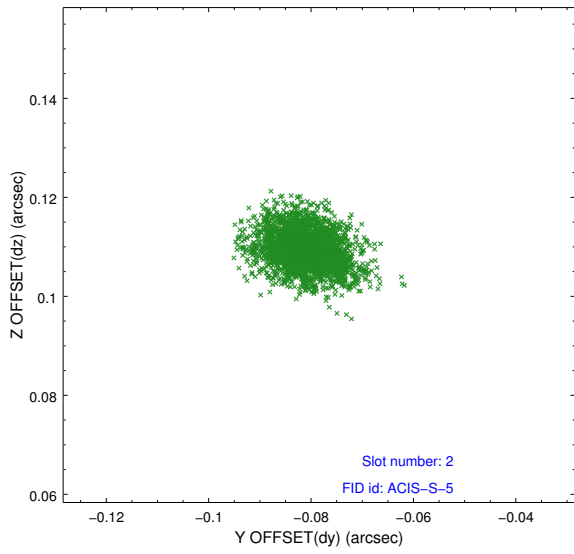
2.5.1 Slot 0



2.5.2 Slot 1

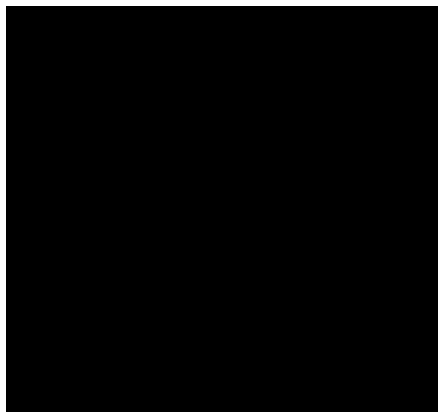


2.5.3 Slot 2

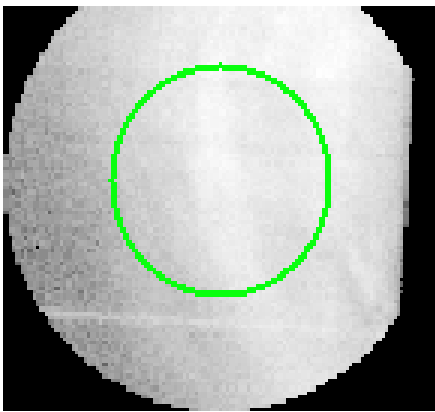


3 Gratings

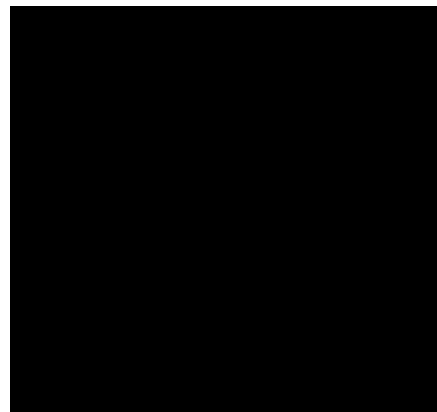
3.1 HEG Arm



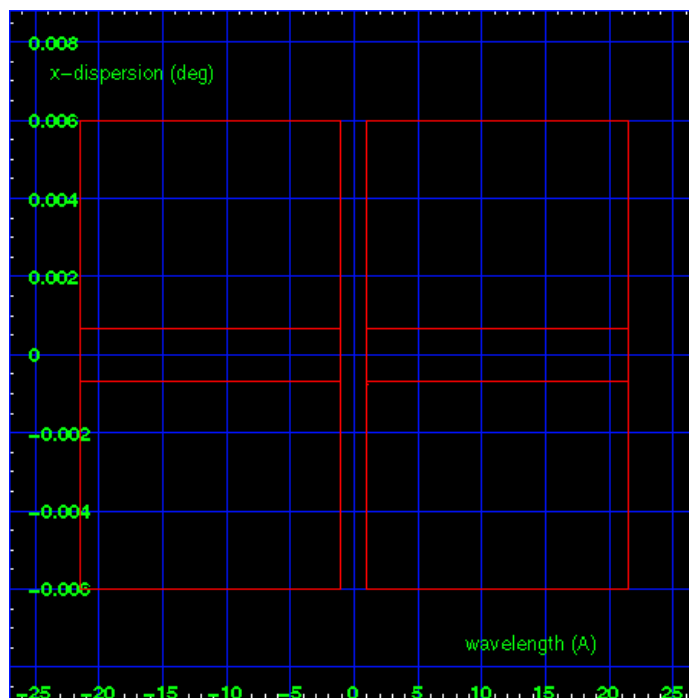
HEG Order Sort 123



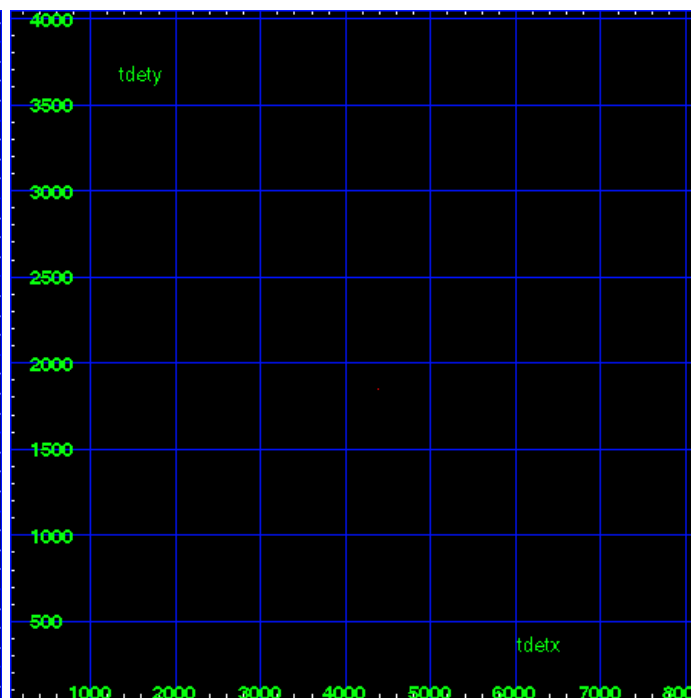
HEG Zero Order



HEG Order Sort ALL

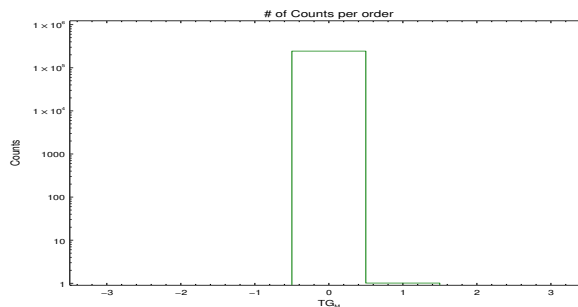


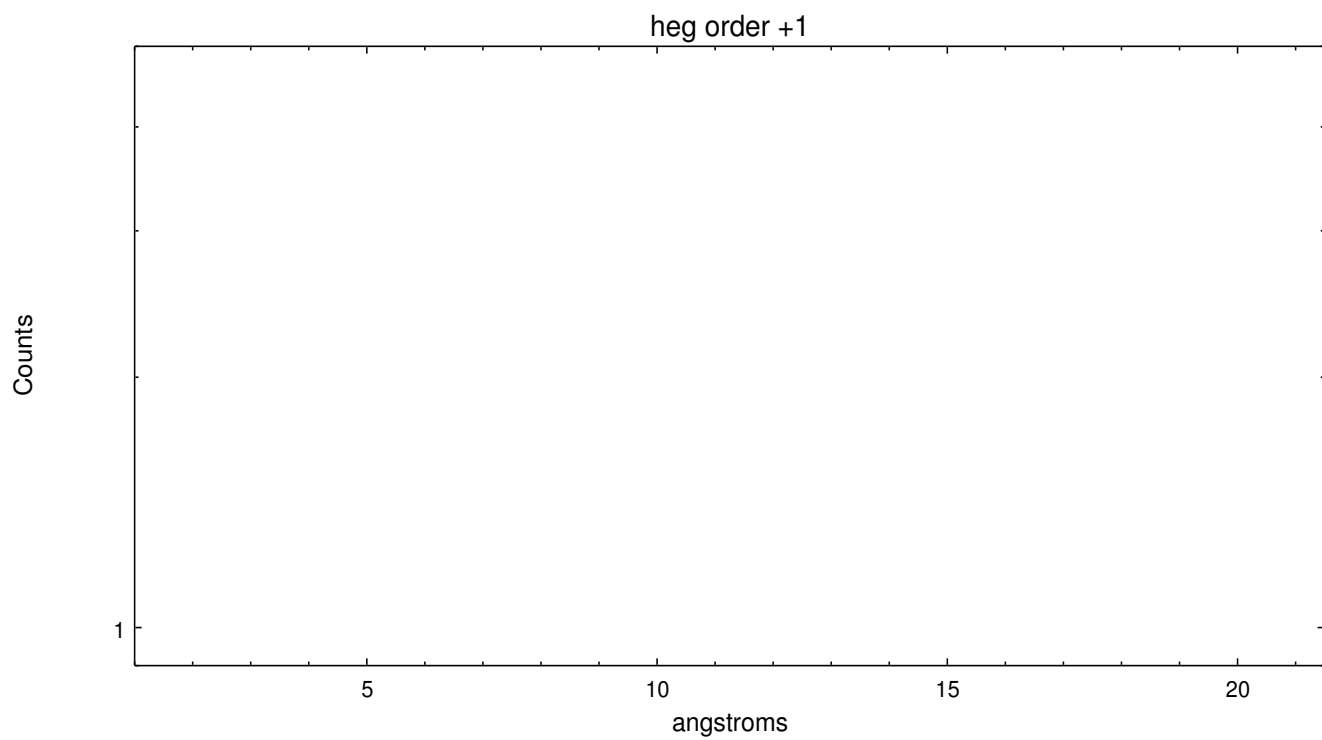
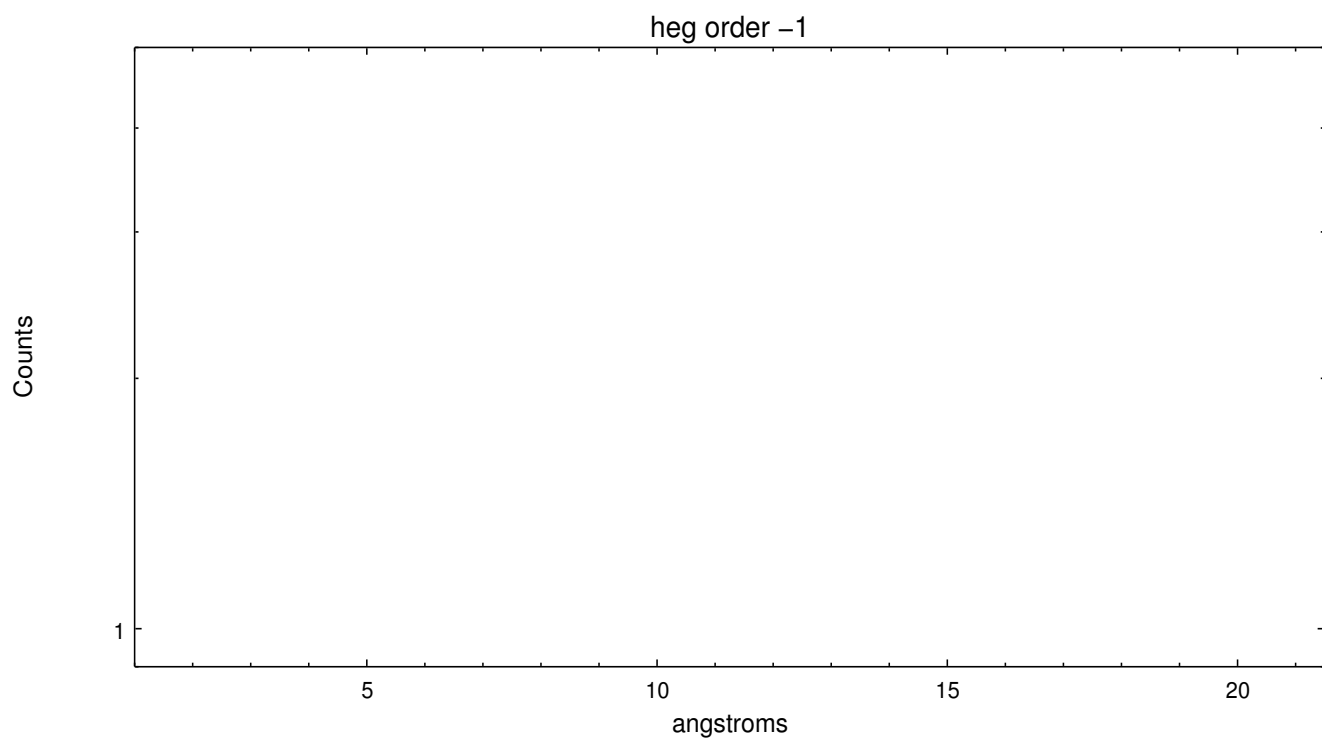
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	0	245979	1	0	0

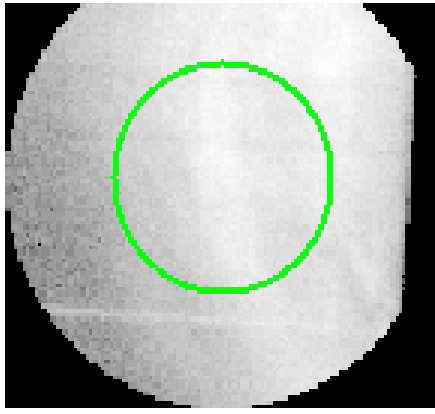




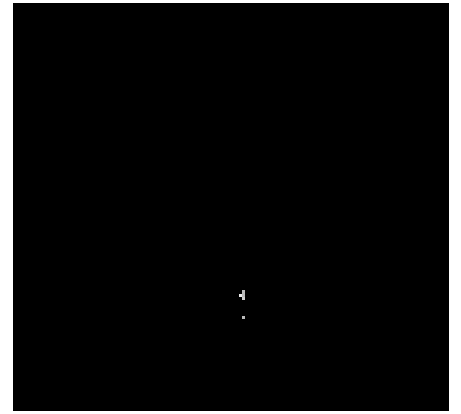
3.2 MEG Arm



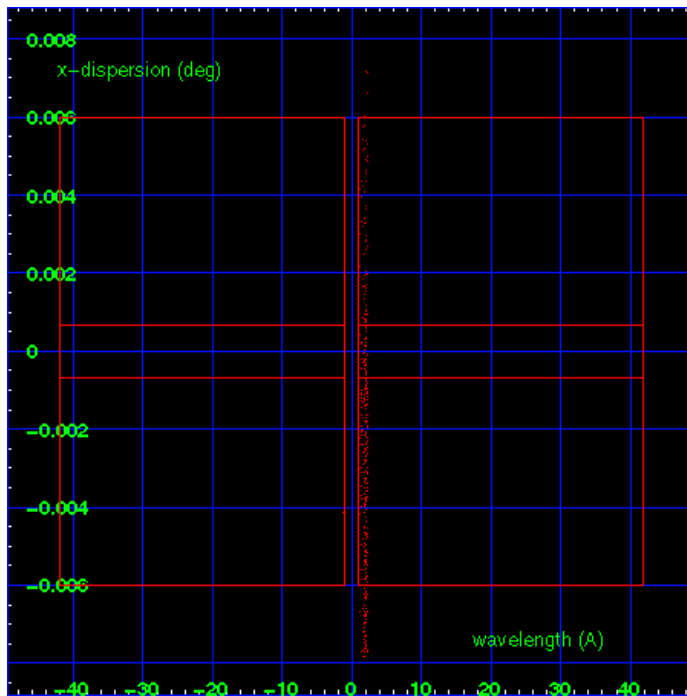
MEG Order Sort 123



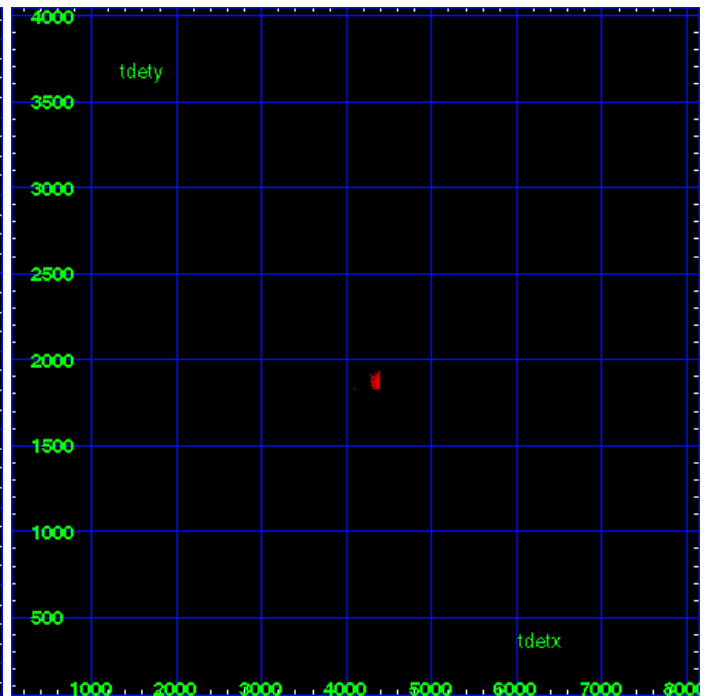
MEG Zero Order



MEG Order Sort ALL

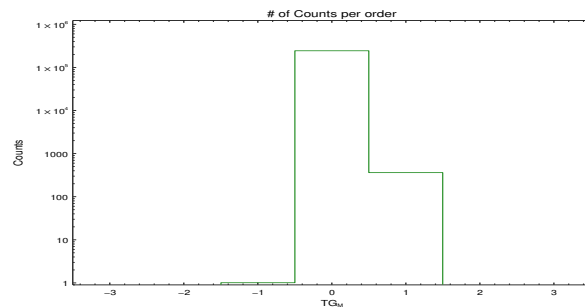


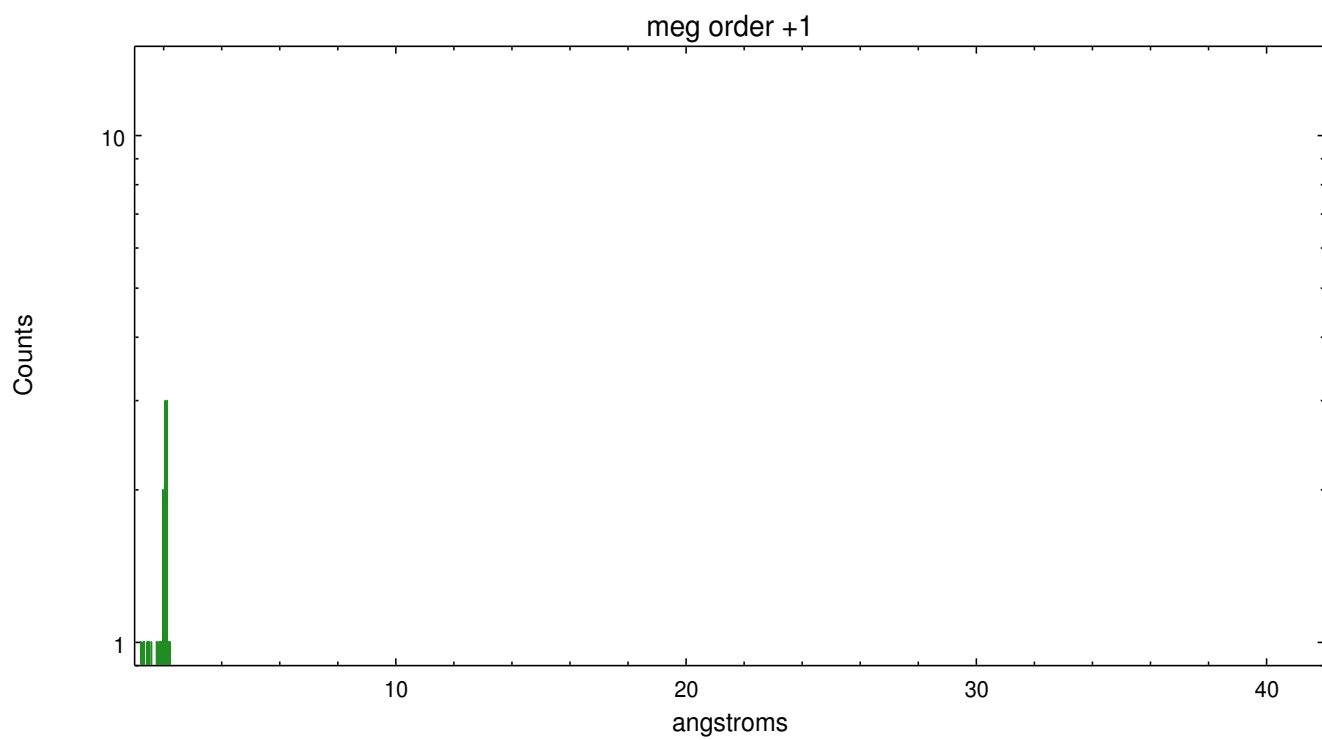
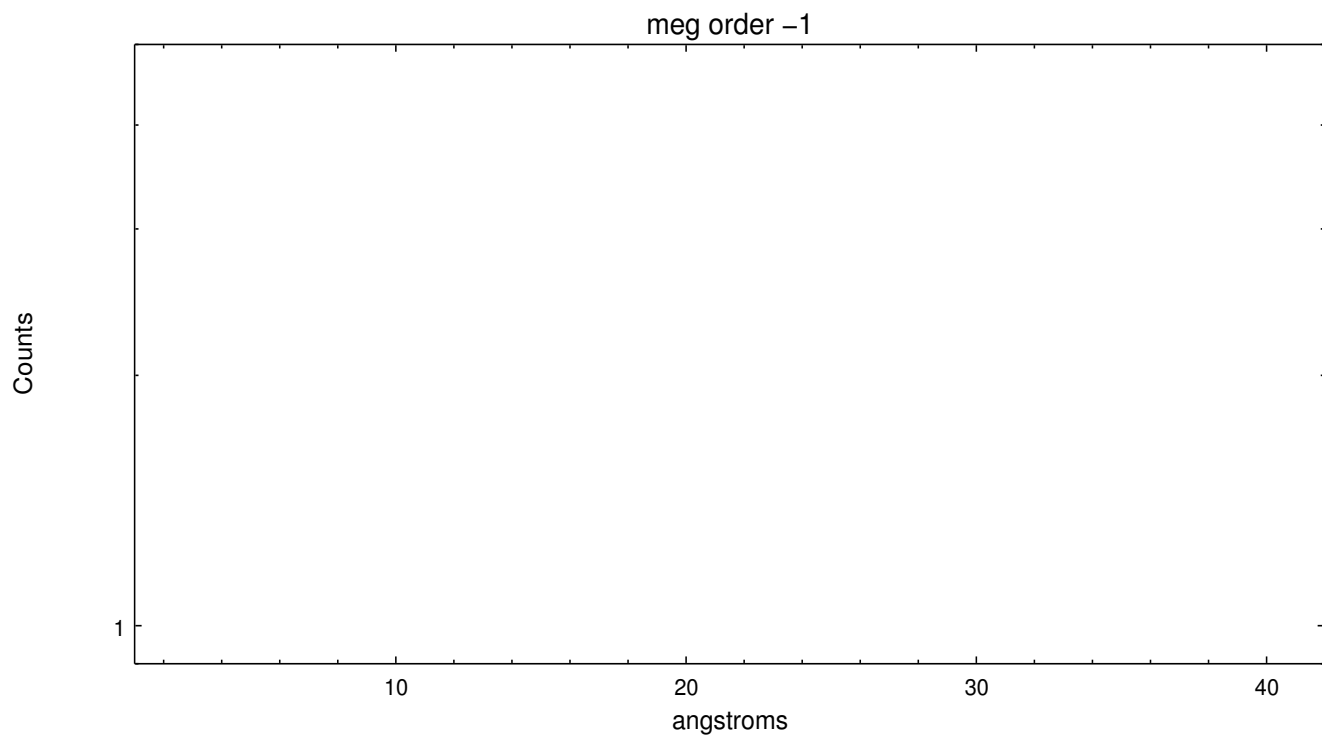
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	0	0	1	245979	362	0	0





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.1814004

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 NE, on the outer ring circumscribing the pulsar. The dispersed spectrum only contains data for the meg +1 order between 1-2 A. The pulsar is near the edge of the read portion of the detector. Broad east/west streak in Level 2 data is instrumental, due to the fact that the spacecraft dither during this observation was only 1 arcsec. Aim point located 30 arcsec east of the pusar, as requested by the observer.