

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2531 - L2 Version 3  
Chandra X-Ray Center

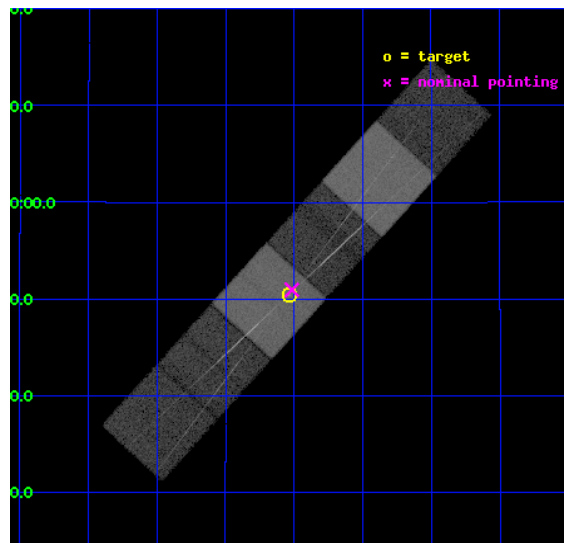
L2 Processing Date : Oct 11 2012

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# 1 Front

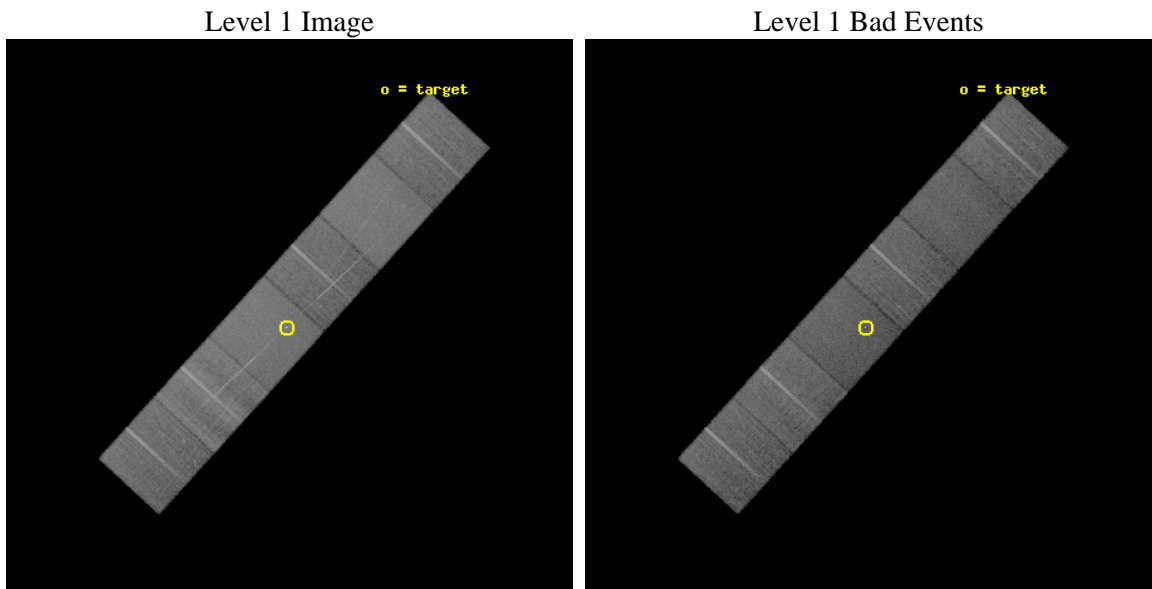
seq_num	200139	Sequence number
obs_id	2531	Observation id
title	HETGS SPECTROSCOPY OF THE LONG-PERIOD ACTIVE BINARY, IM PEGASI.	Pr
observer	Dr. David Huenemoerder	Principal investigator
object	IM PEG	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	343.259583	Observer's specified target RA [deg]
dec_targ	16.841194	Observer's specified target Dec [deg]
ra_nom	343.25416551446	Nominal RA [deg]
dec_nom	16.849393139636	Nominal Dec [deg]
roll_nom	132.37310851961	Nominal Roll [deg]
revision	3	Processing version of data
ontime	24169.599909961	Sum of GTIs [s]
livetime	23863.549882715	Livetime [s]
ontime4	24169.599909961	Sum of GTIs [s]
ontime5	24169.599909961	Sum of GTIs [s]
ontime6	24169.599909961	Sum of GTIs [s]
ontime7	24169.599909961	Sum of GTIs [s]
ontime8	24163.117919594	Sum of GTIs [s]
ontime9	24166.358959615	Sum of GTIs [s]
l2events	277556	Number of level 2 events



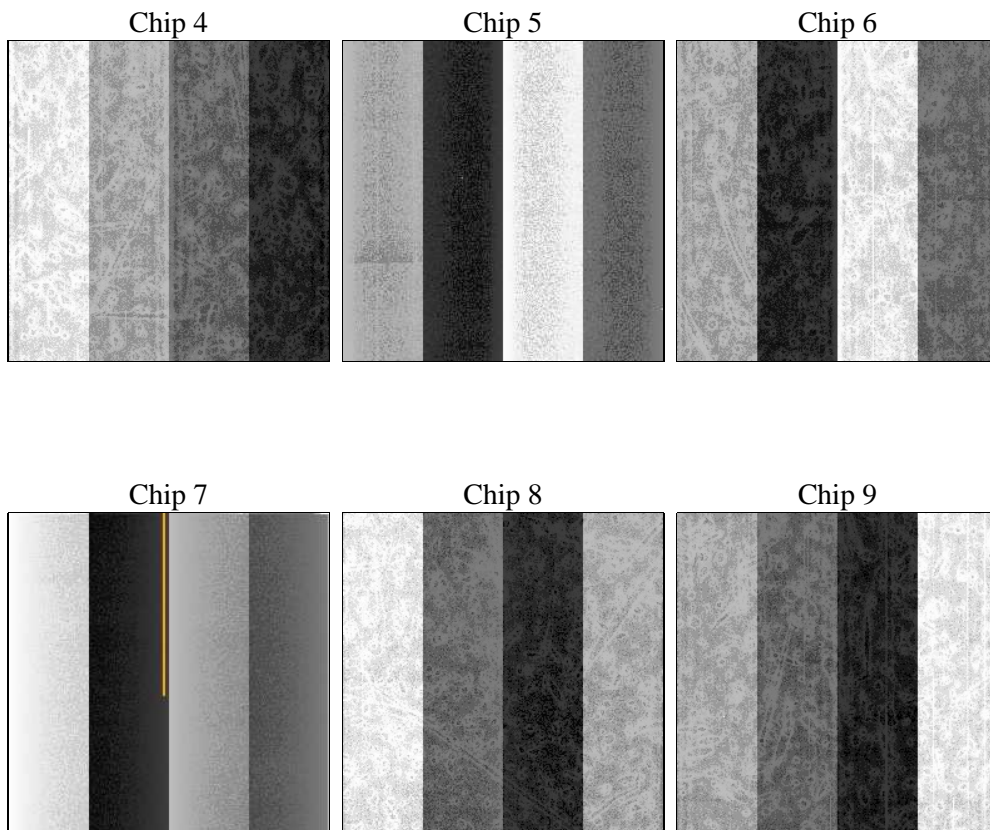
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	24169.599909961	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	24169.599909961	Sum of GTIs [s]
date	2012-10-11T21:03:01	Date and time of file creation	ontime5	24169.599909961	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	24169.599909961	Sum of GTIs [s]
			ontime7	24169.599909961	Sum of GTIs [s]
			ontime8	24163.117919594	Sum of GTIs [s]
			ontime9	24166.358959615	Sum of GTIs [s]
			l1events	1446749	Number of level 1 events

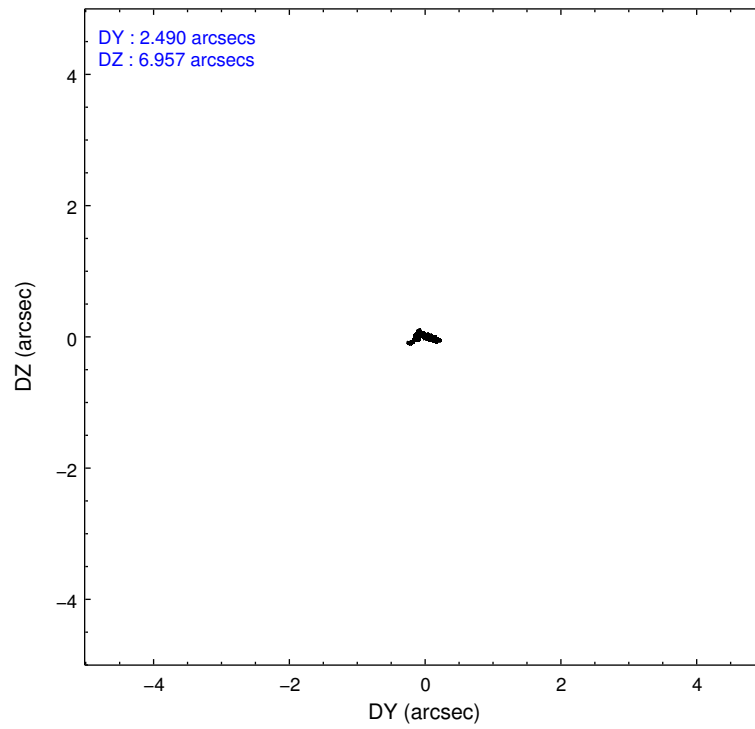
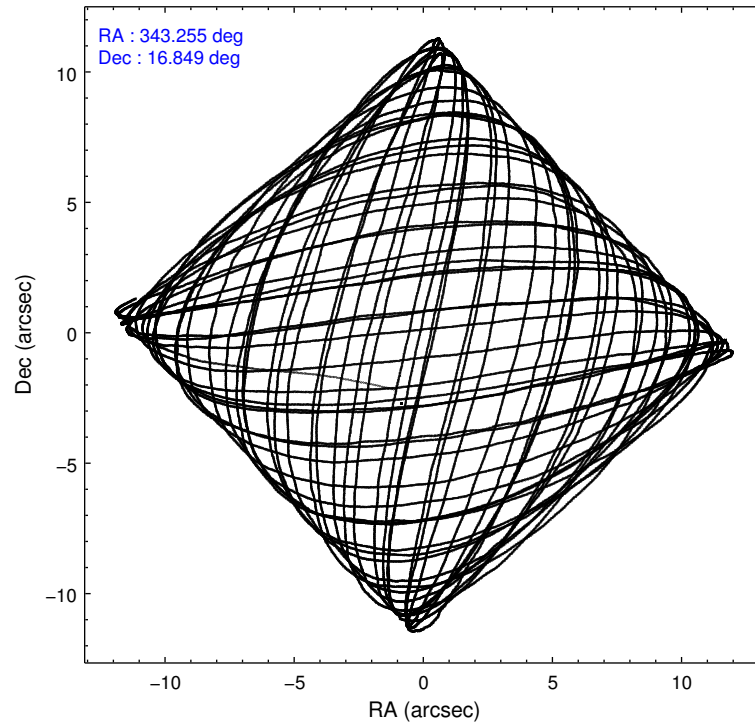
### 2.1.4 Events

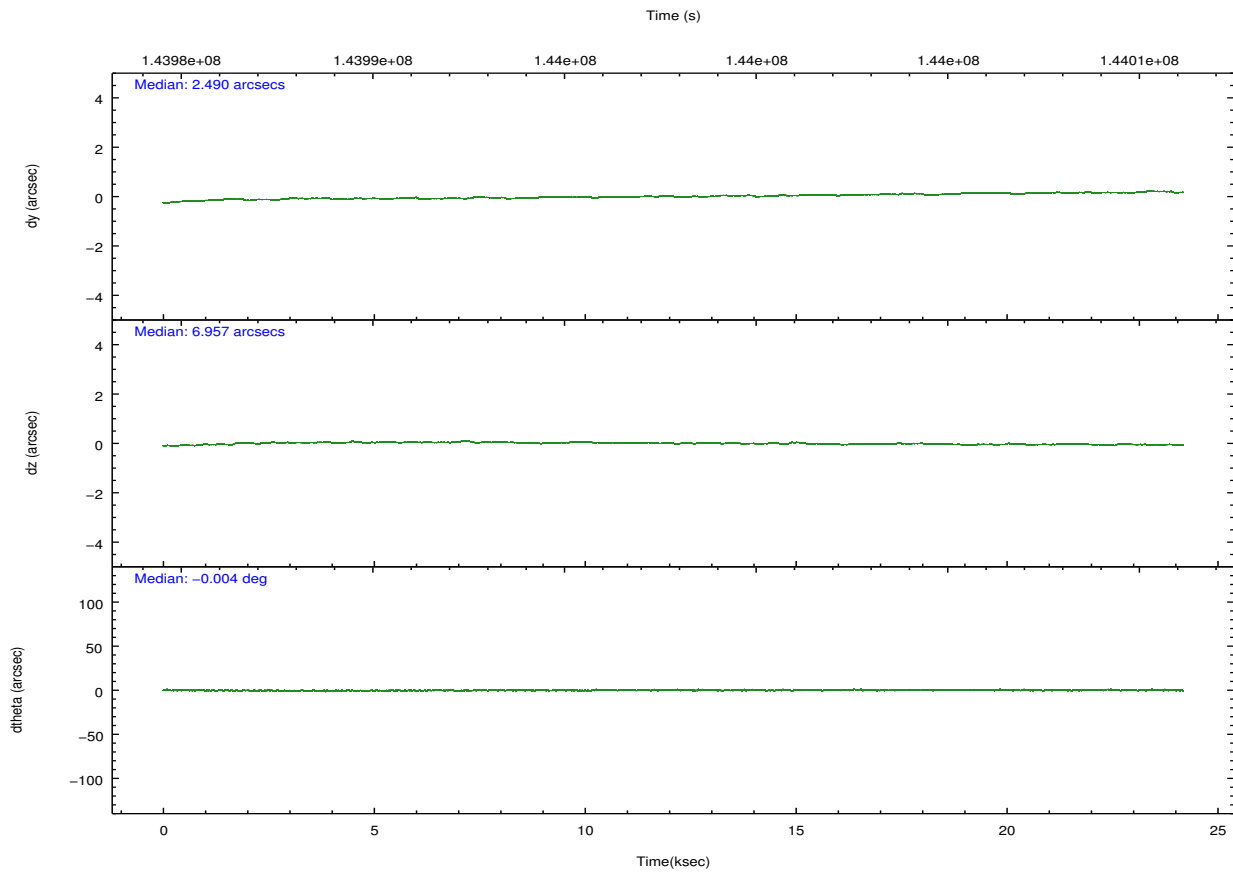
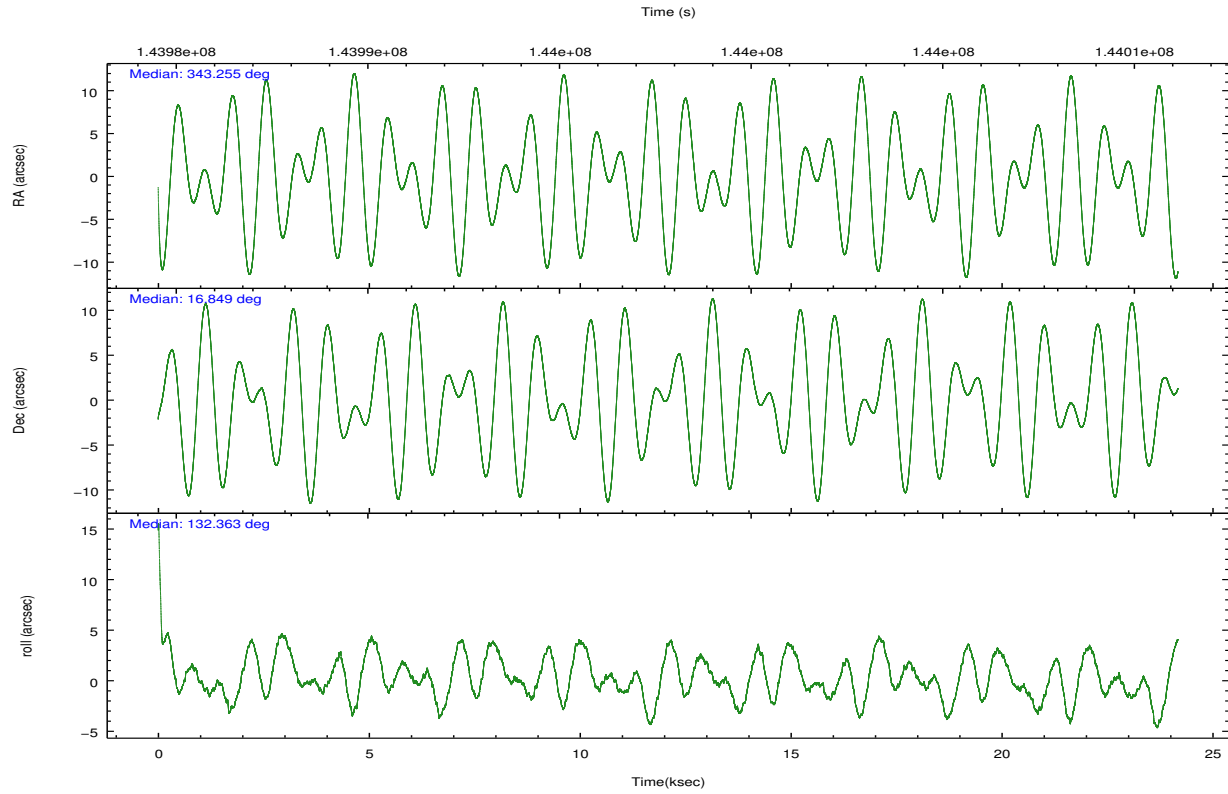
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	203148	295886	199294	295430	262206	190785	grade 0 events	22560	21696	28122	28098	38067	24000
rejected events	179559	194448	172782	199475	193770	168466		11%	7%	14%	9%	14%	12%
rejected %	88%	65%	86%	67%	73%	88%	grade 1 events	156	309	188	411	282	151
								0%	0%	0%	0%	0%	0%
							grade 2 events	9870	54128	9871	35530	17850	9197
								4%	18%	4%	12%	6%	4%
							grade 3 events	3285	8246	3804	16210	10100	3564
								1%	2%	1%	5%	3%	1%
							grade 4 events	3140	8249	3691	16000	9355	3499
								1%	2%	1%	5%	3%	1%
							grade 5 events	5950	18388	6966	21642	9234	7097
								2%	6%	3%	7%	3%	3%
							grade 6 events	7124	72644	8617	72089	21193	8183
								3%	24%	4%	24%	8%	4%
							grade 7 events	151063	112226	138035	105450	156125	135094
								74%	37%	69%	35%	59%	70%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	343.281420	343.2541655144622	Subarray requested	NONE	NONE
[deg] Pointing Dec	16.841472	16.84939313963564	Alternating exposures requested	N	N
[deg] Pointing Roll	132.208578	132.3731085196051	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-187.132523	-187.1228876879999			
[mm] SIM translation stage offset	-3	-3.009634895007935			
[s] Observation start time (MET)	143985912.184000	143983811.89582			
Observation start date	2002-07-25T12:04:08	2002-07-25T11:30:11			
[s] Observation end time (MET)	144009912.184000	144010951.84693			
Observation end date	2002-07-25T18:44:08	2002-07-25T19:02:31			
Read mode	TIMED	TIMED			

## 2.3 Aspect



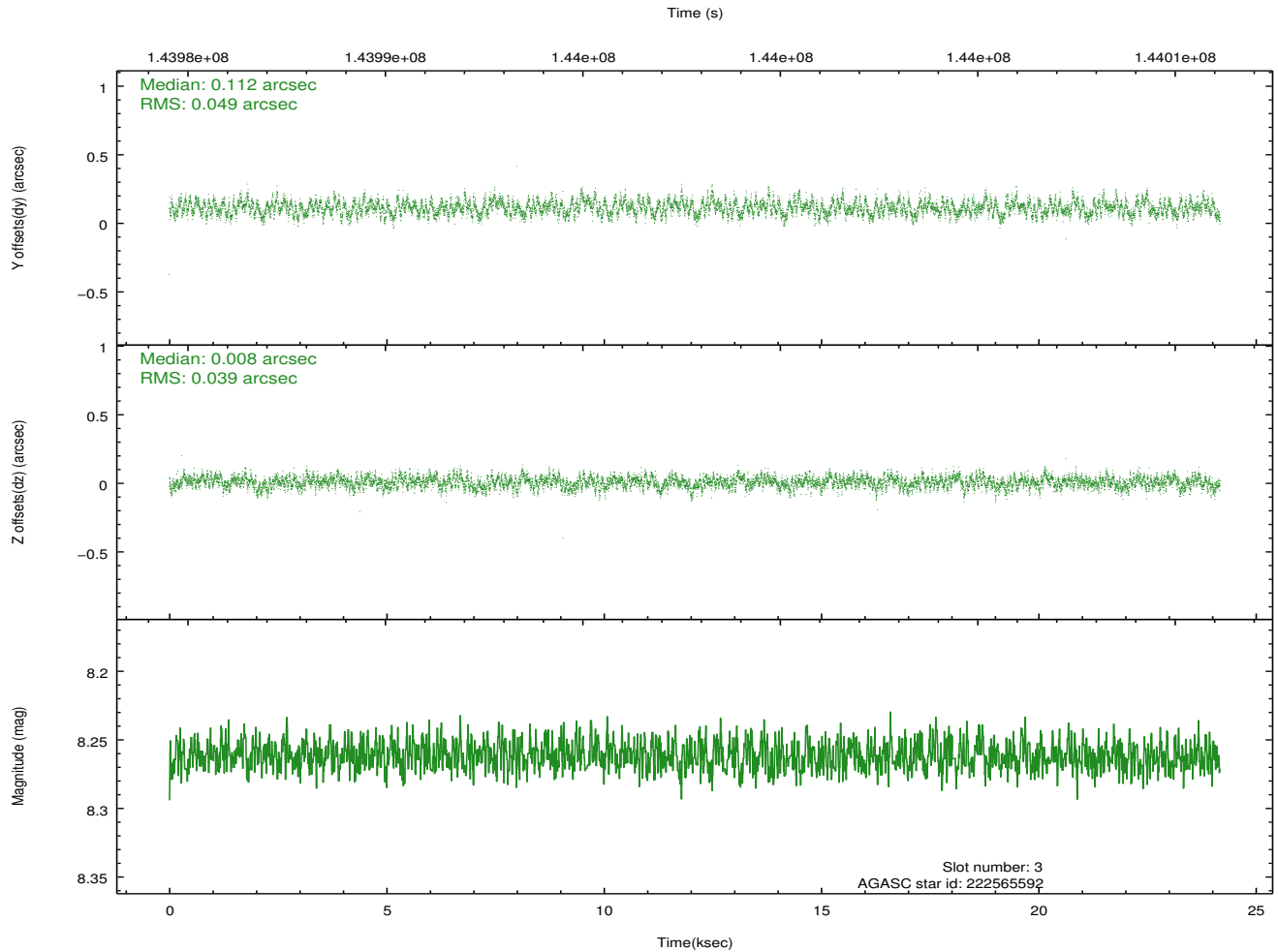
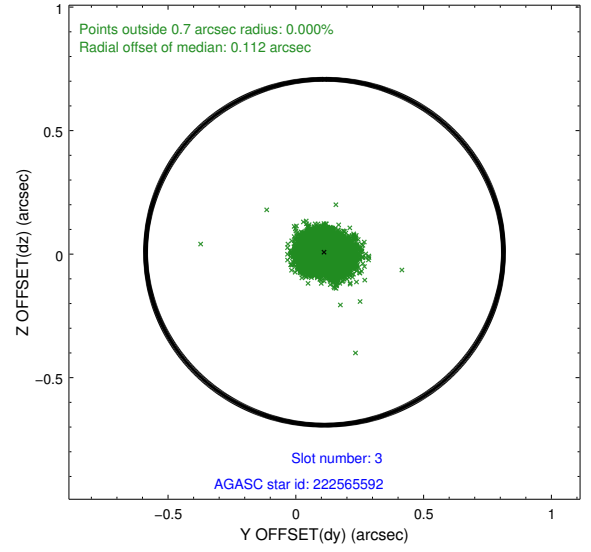
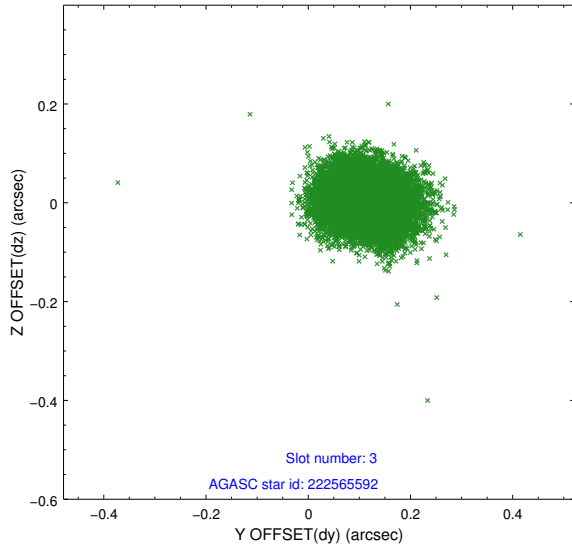


### Slot Statistics

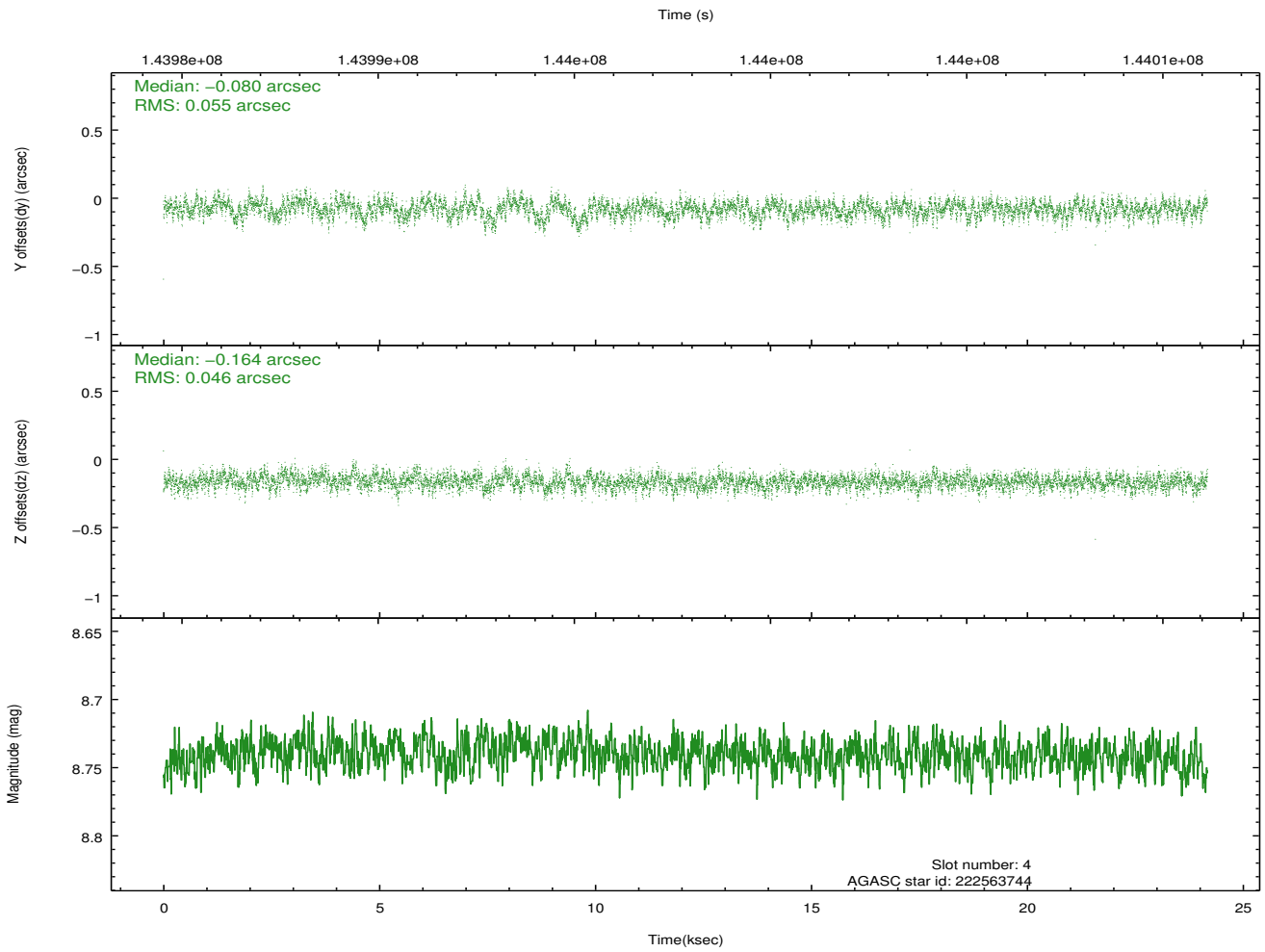
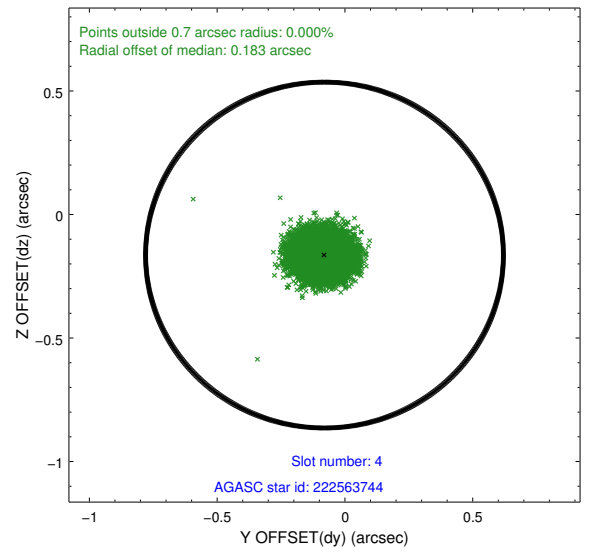
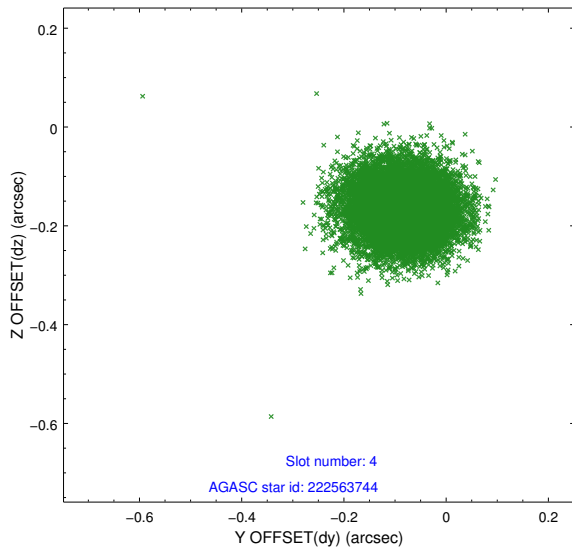
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	5896	-0.044	-0.046	0.009	0.018	0.000000	0.000000	-754.95	-1790.31
1	FID	ACIS-S-4	7.20	5897	0.001	0.033	0.010	0.032	0.000000	0.000000	2158.30	118.13
2	FID	ACIS-S-5	7.24	5897	0.011	0.021	0.010	0.021	0.000000	0.000000	-1807.59	111.90
3	GUIDE	222565592	8.26	11791	0.112	0.008	0.067	0.105	343.291662	16.508291	-911.00	780.26
4	GUIDE	222563744	8.74	11789	-0.080	-0.164	0.076	0.124	342.392259	16.776439	1891.38	2423.77
5	GUIDE	222563736	8.83	11790	0.093	-0.133	0.078	0.122	343.076284	16.308502	-943.75	1813.99
6	GUIDE	223089808	9.10	11787	-0.169	0.291	0.097	0.154	343.220223	17.508272	1920.19	-1456.13
7	GUIDE	222571232	9.55	11782	0.046	0.004	0.115	0.182	343.021766	16.540282	-199.48	1392.21

## 2.4 Star Slots

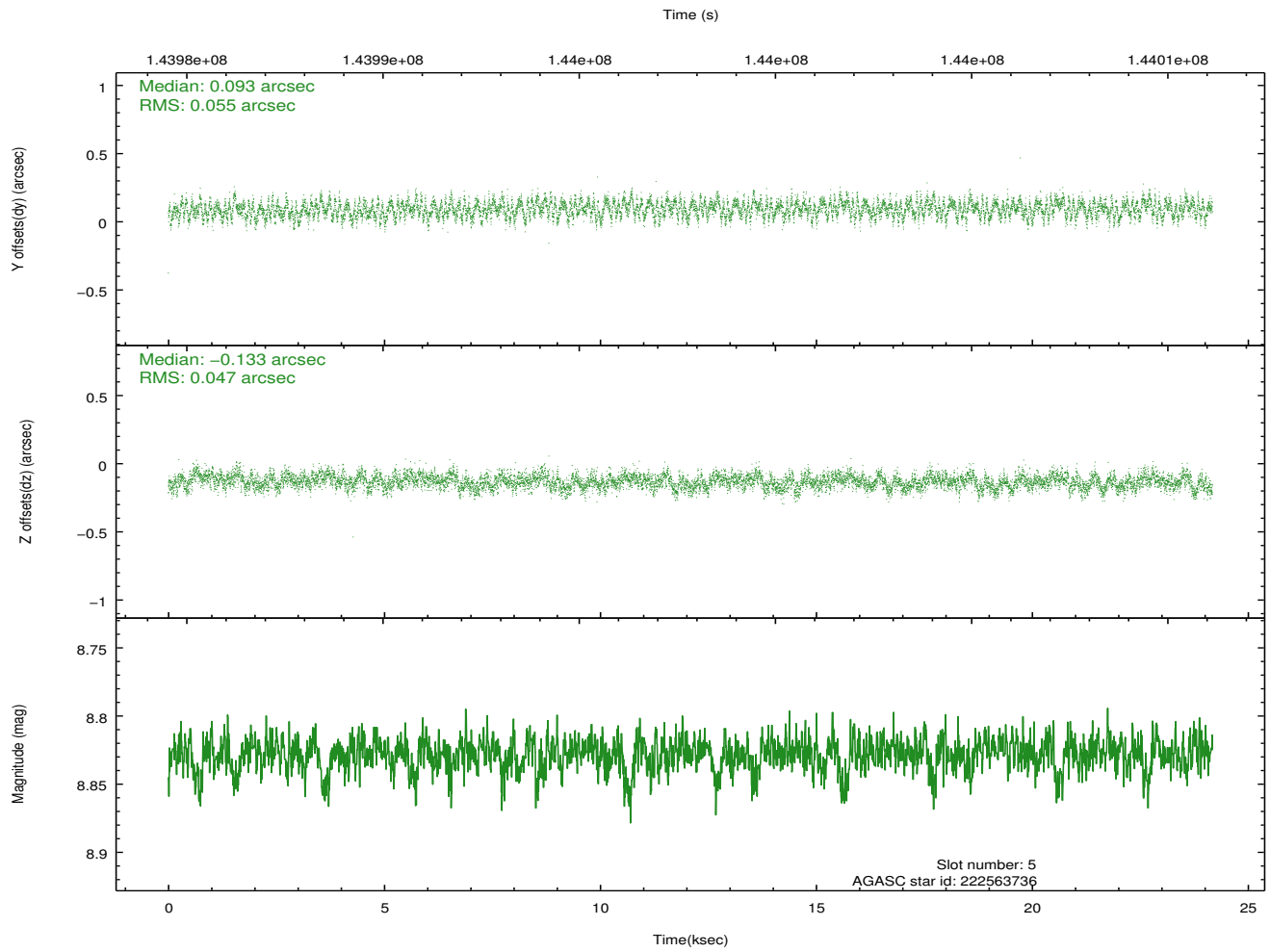
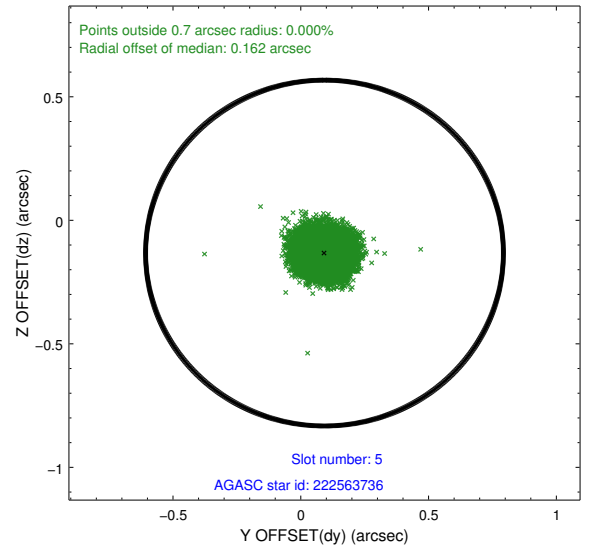
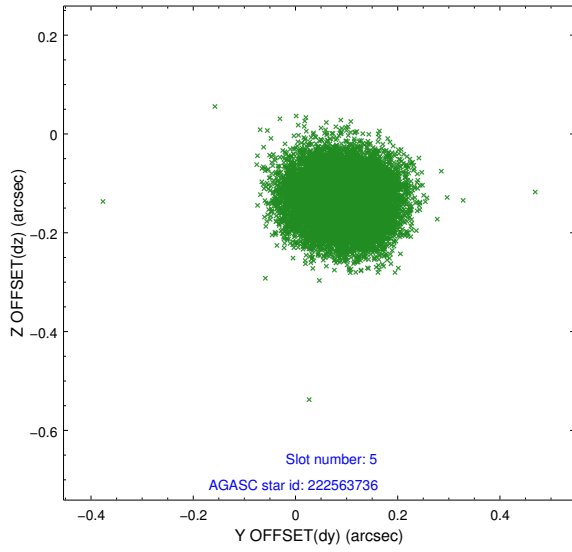
### 2.4.1 Slot 3



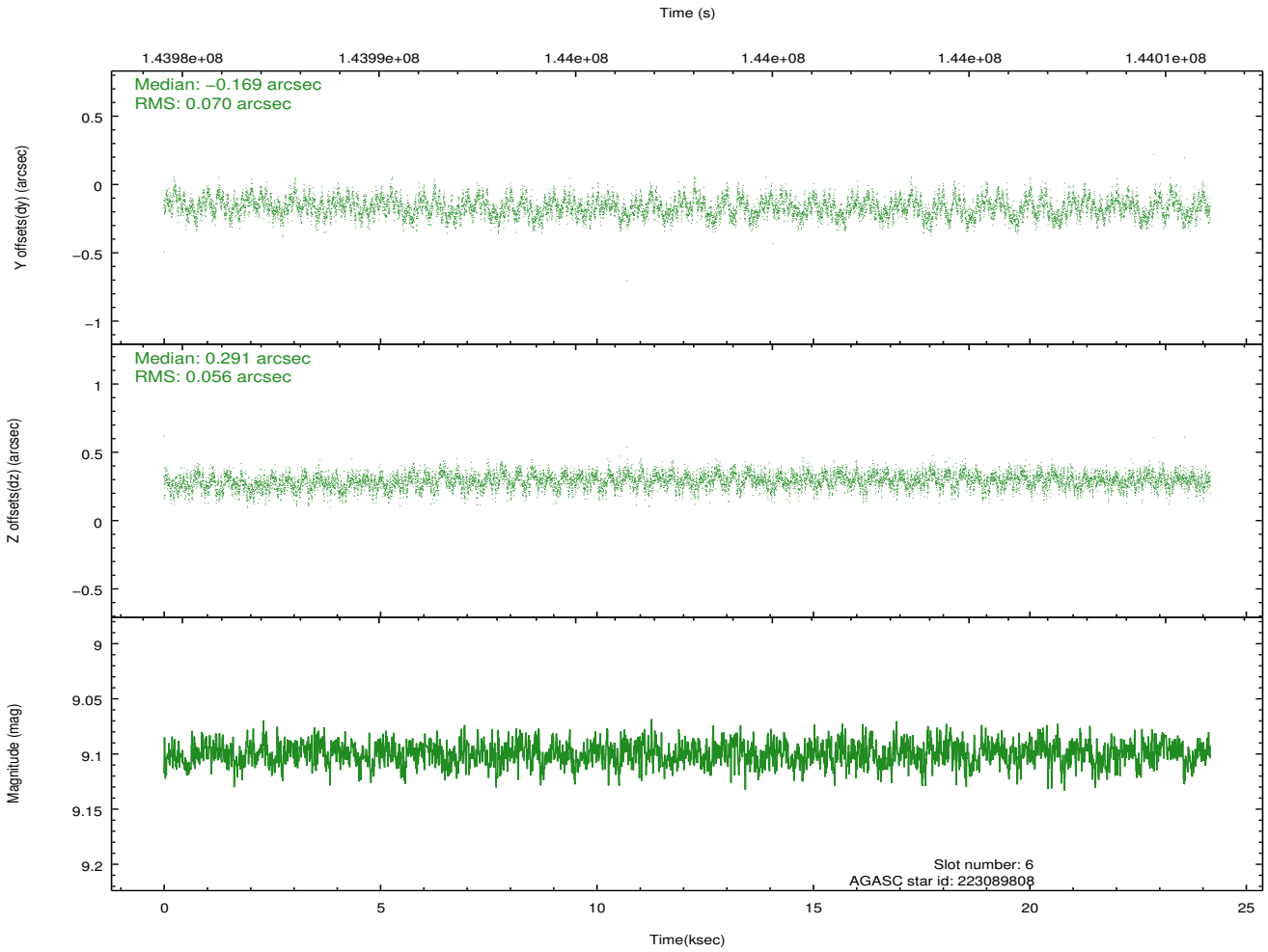
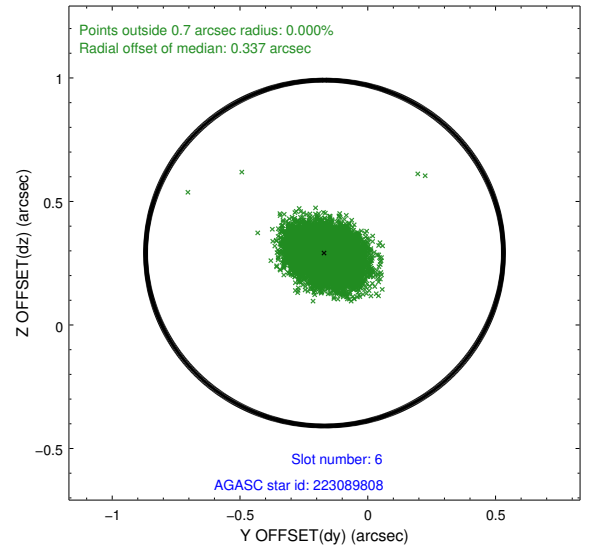
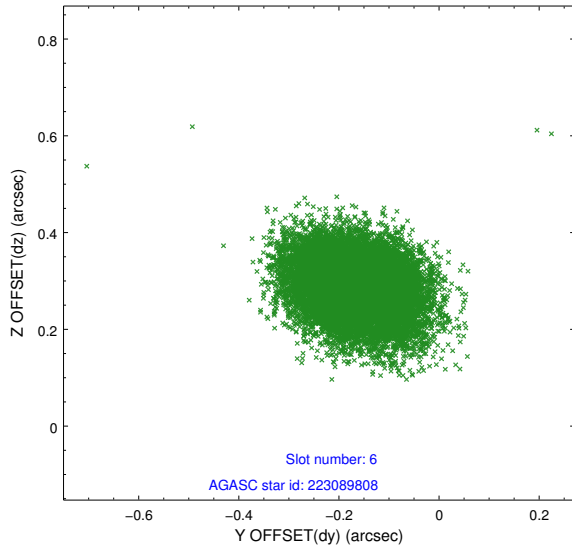
## 2.4.2 Slot 4



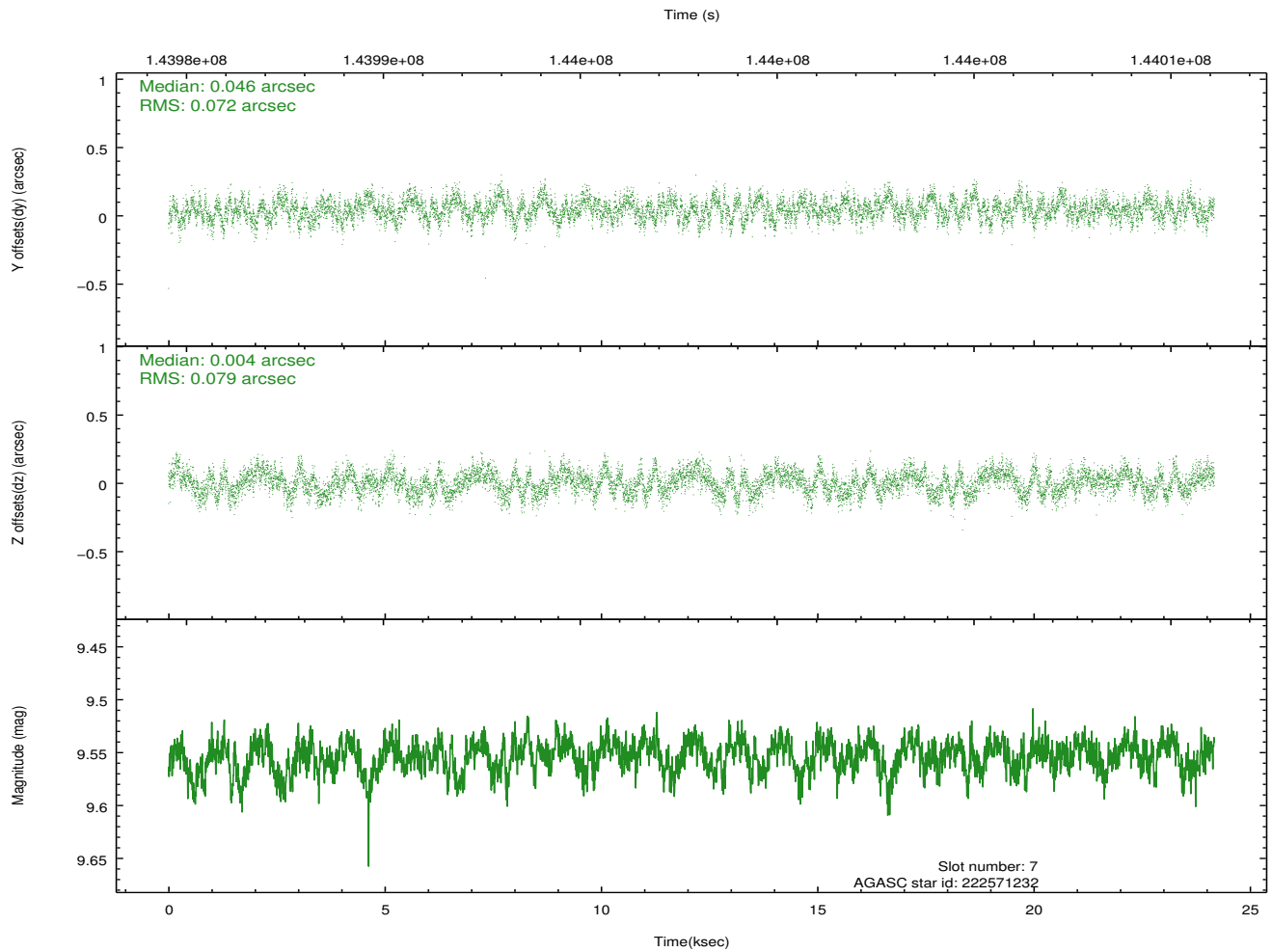
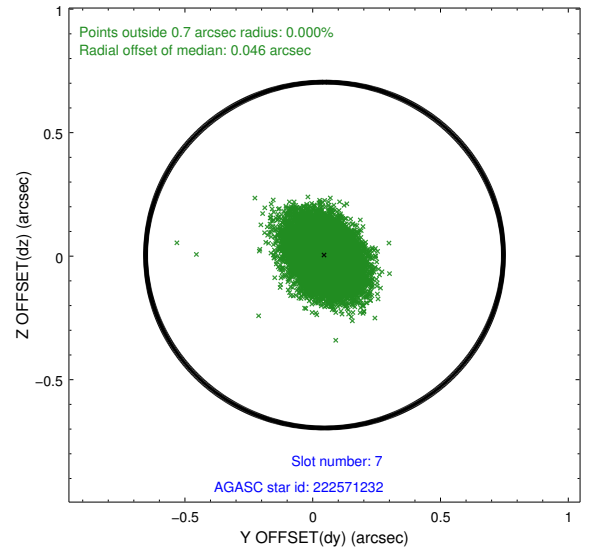
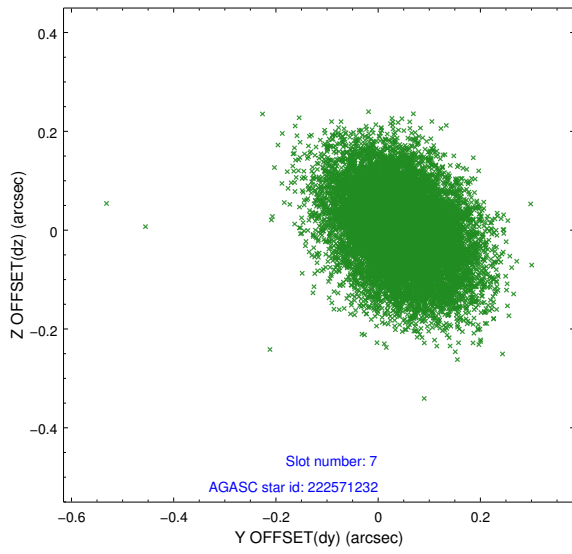
### 2.4.3 Slot 5



## 2.4.4 Slot 6

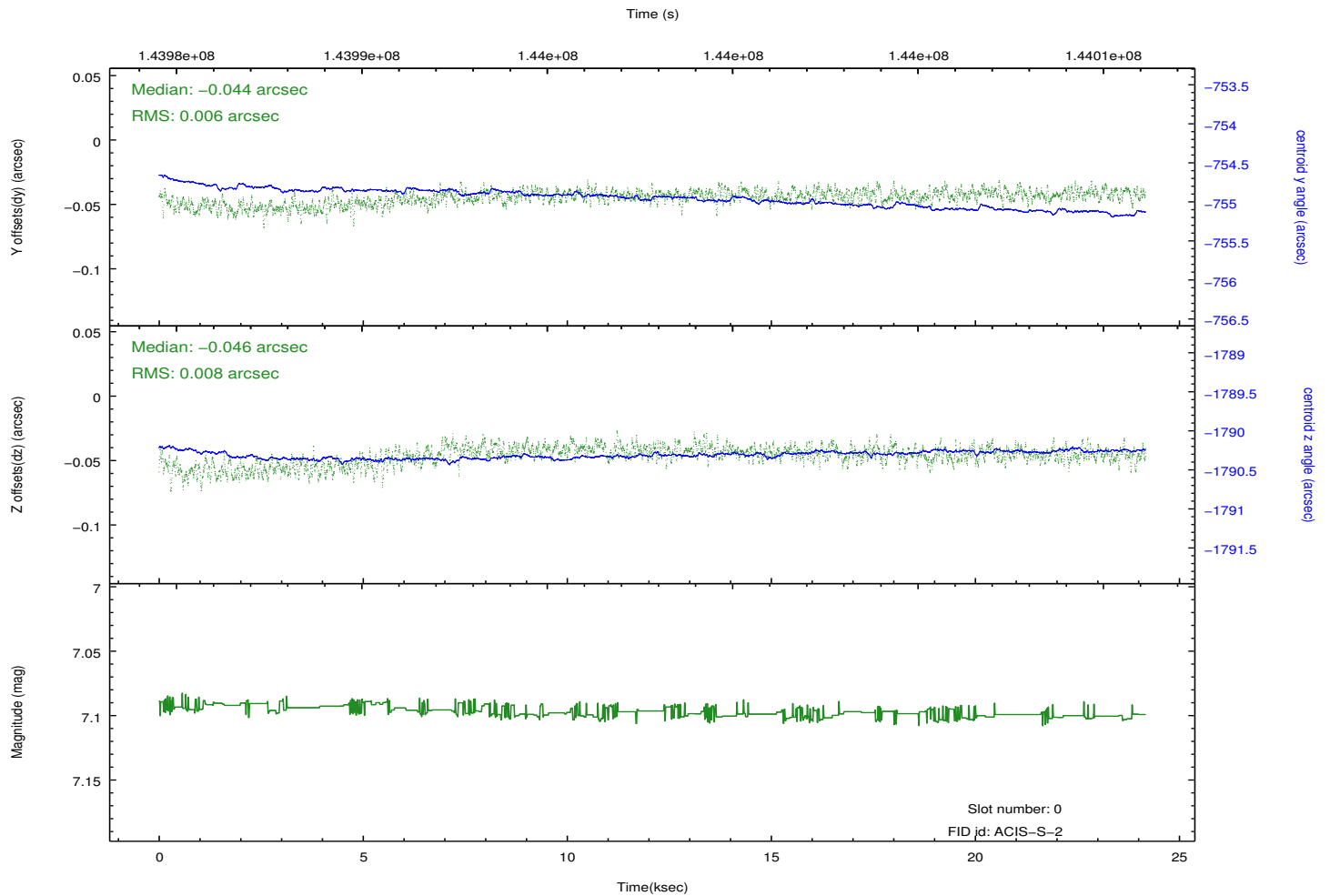
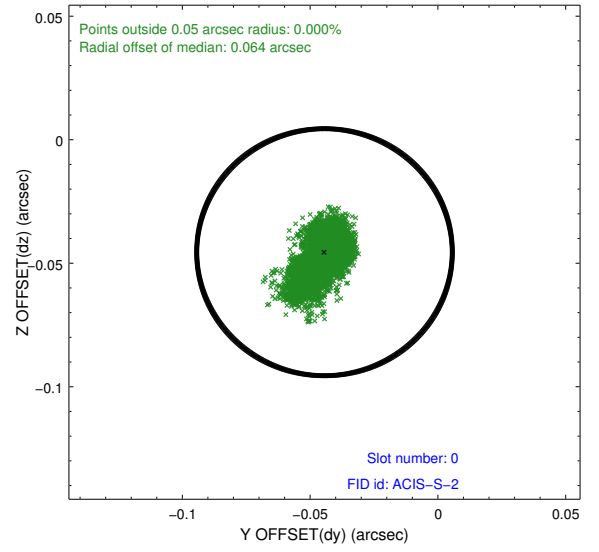
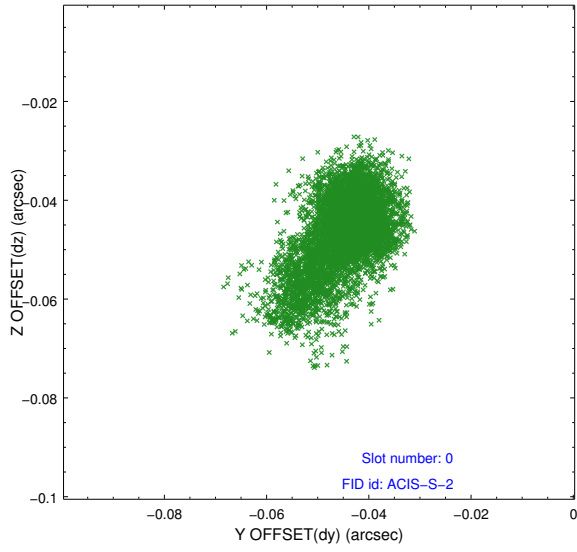


## 2.4.5 Slot 7

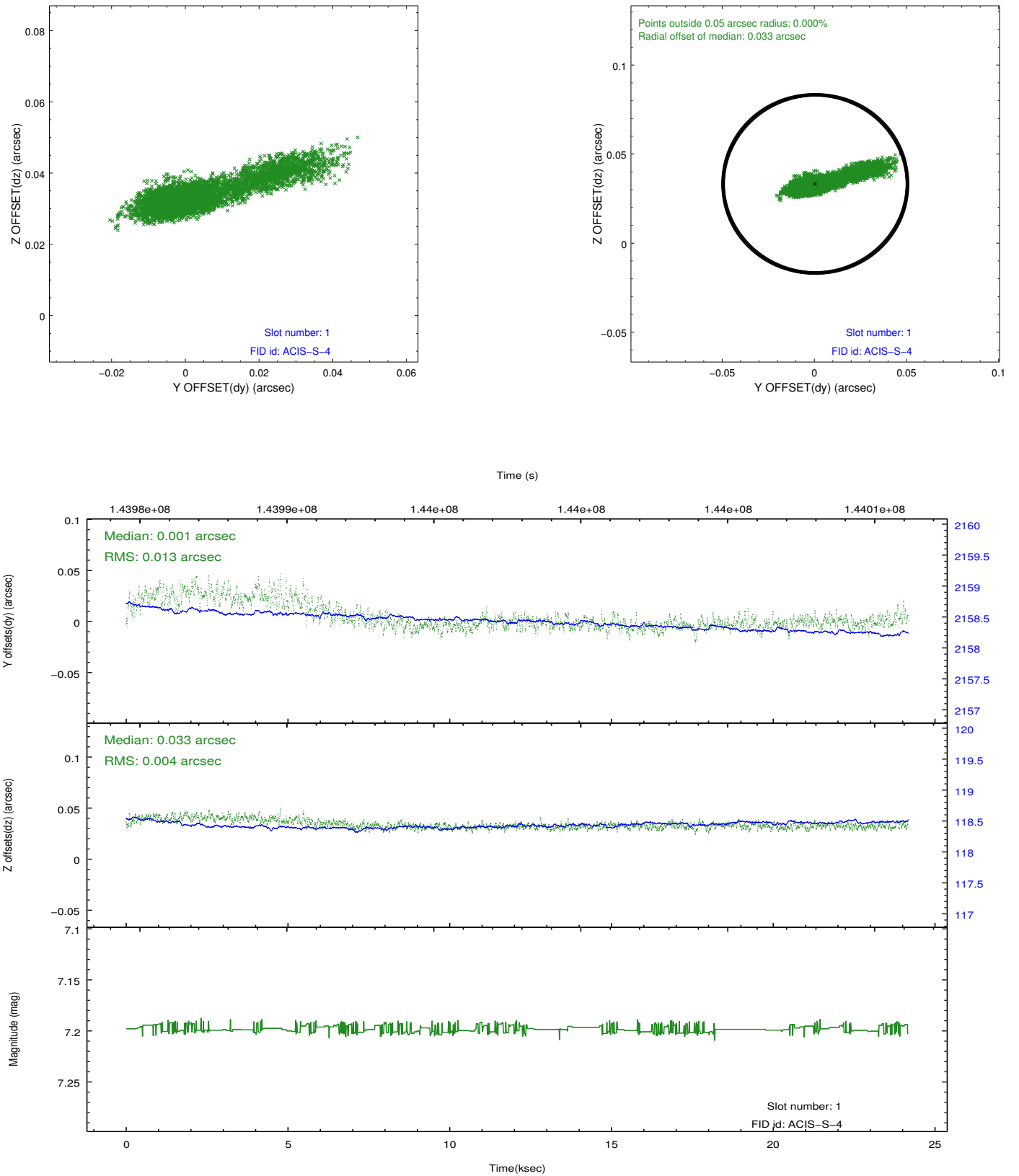


## 2.5 FID Slots

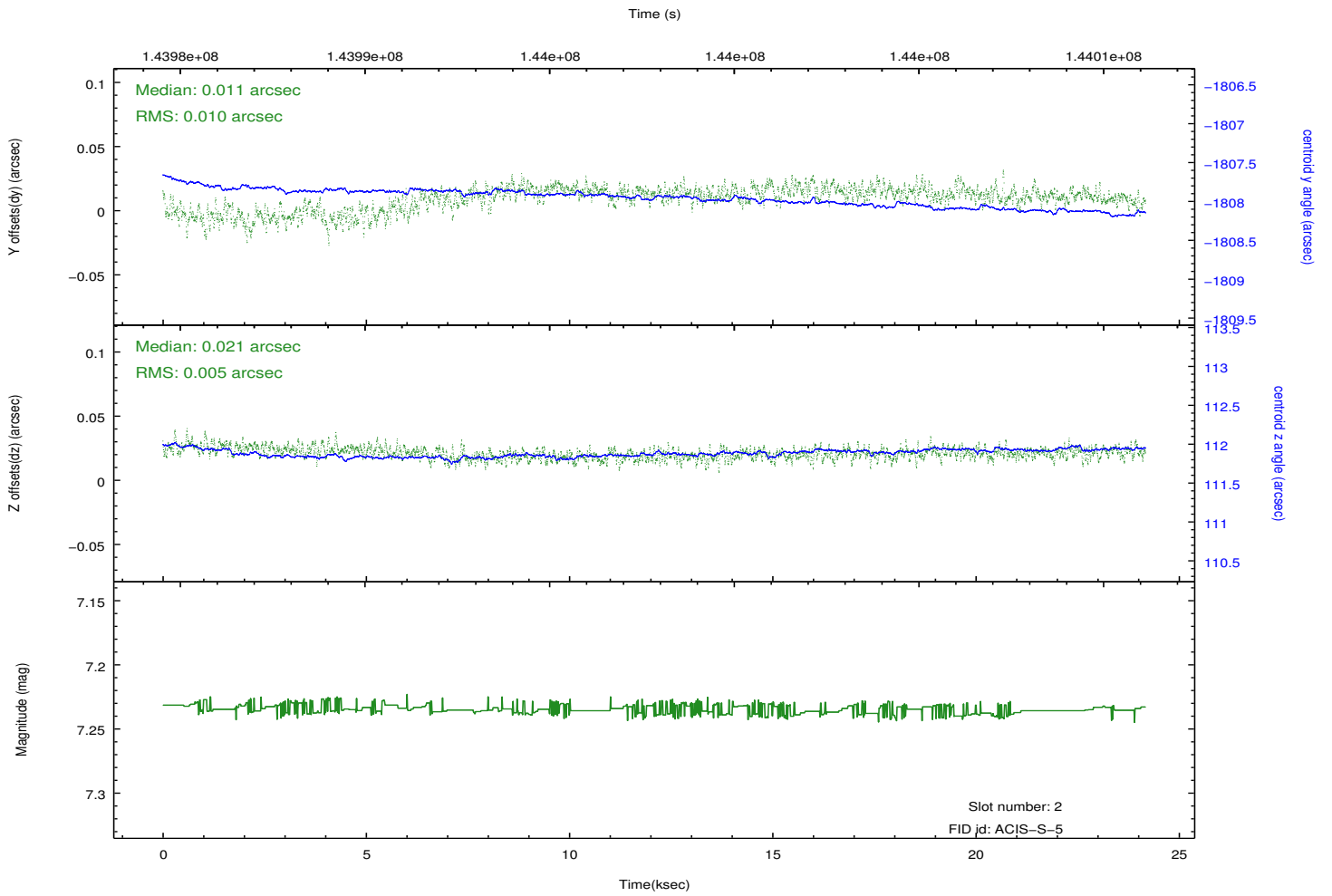
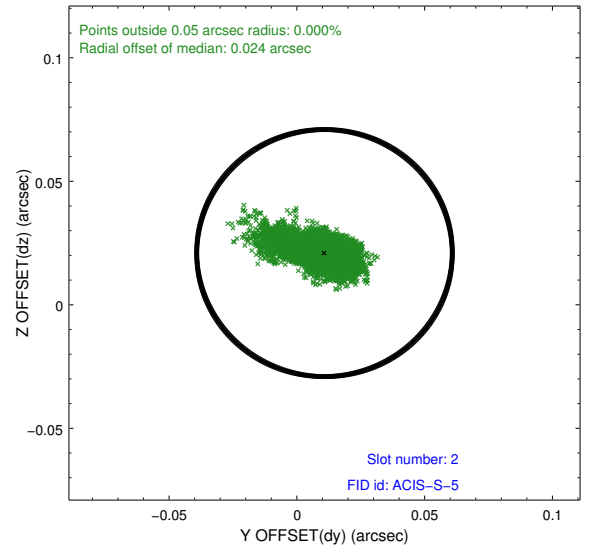
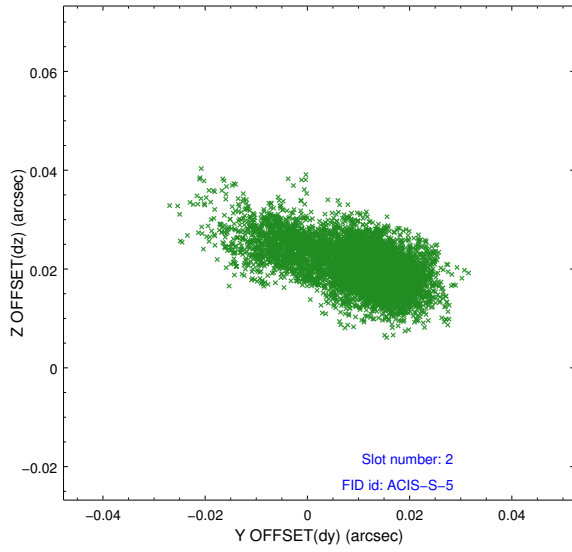
### 2.5.1 Slot 0



## 2.5.2 Slot 1

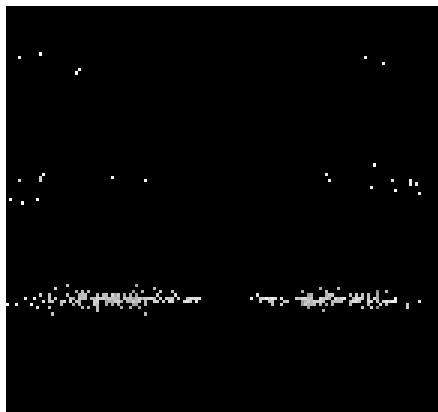


### 2.5.3 Slot 2

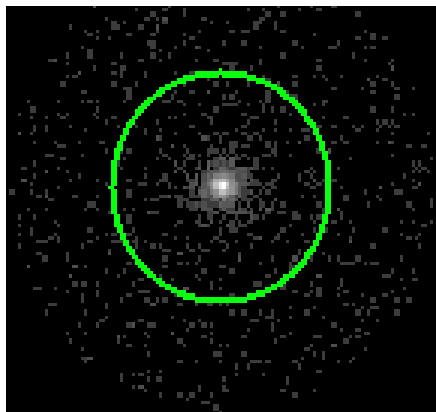


### 3 Gratings

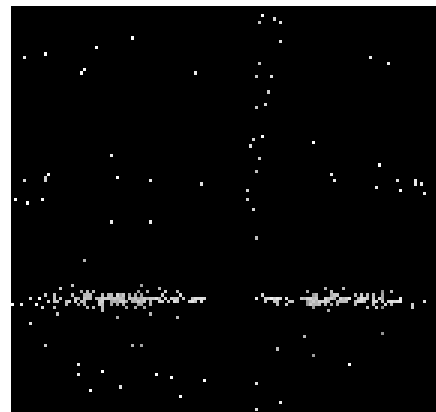
#### 3.1 HEG Arm



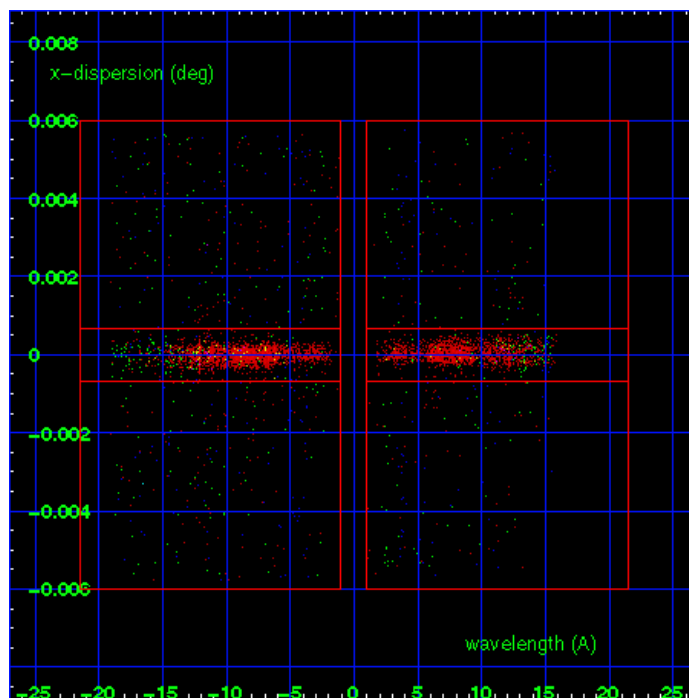
HEG Order Sort 123



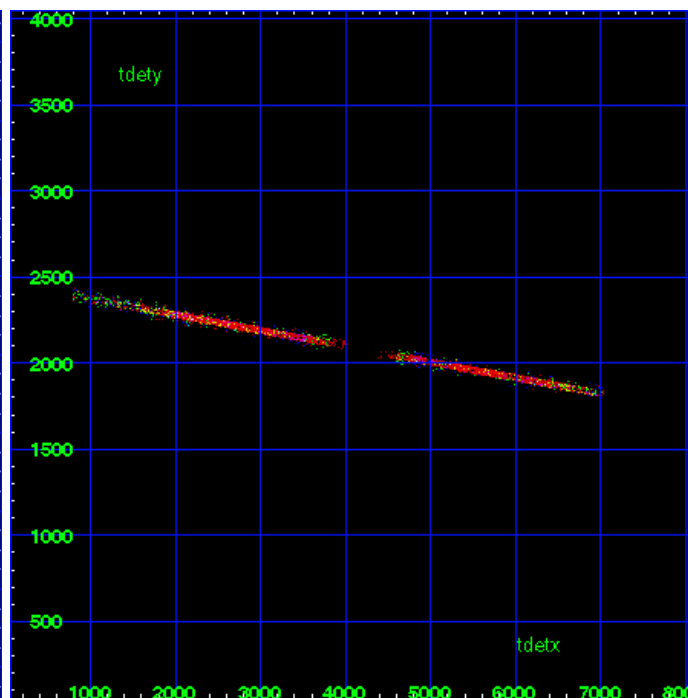
HEG Zero Order



HEG Order Sort ALL

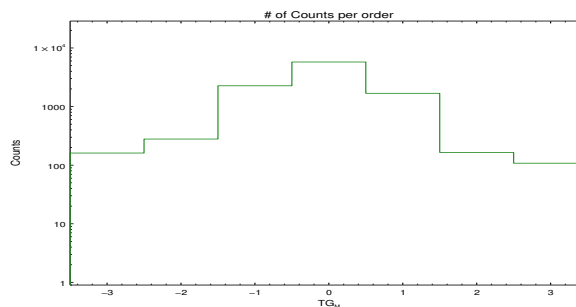


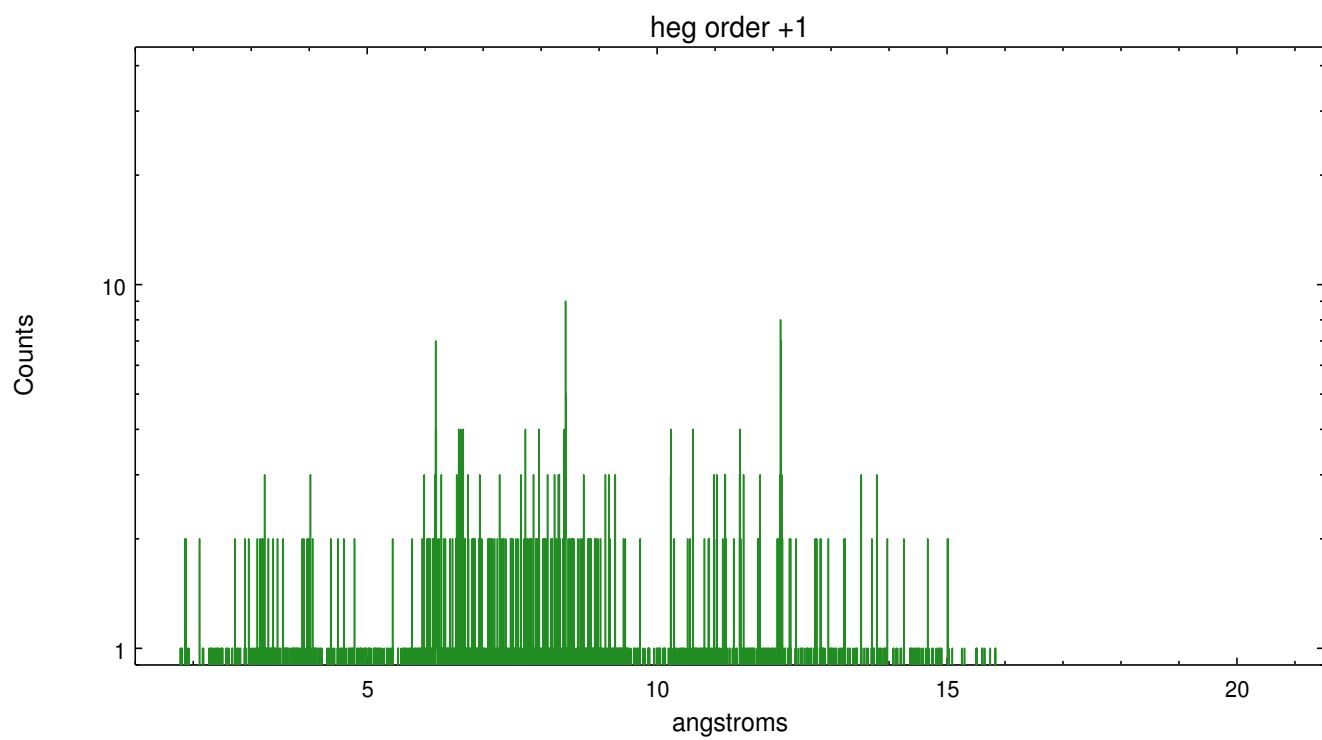
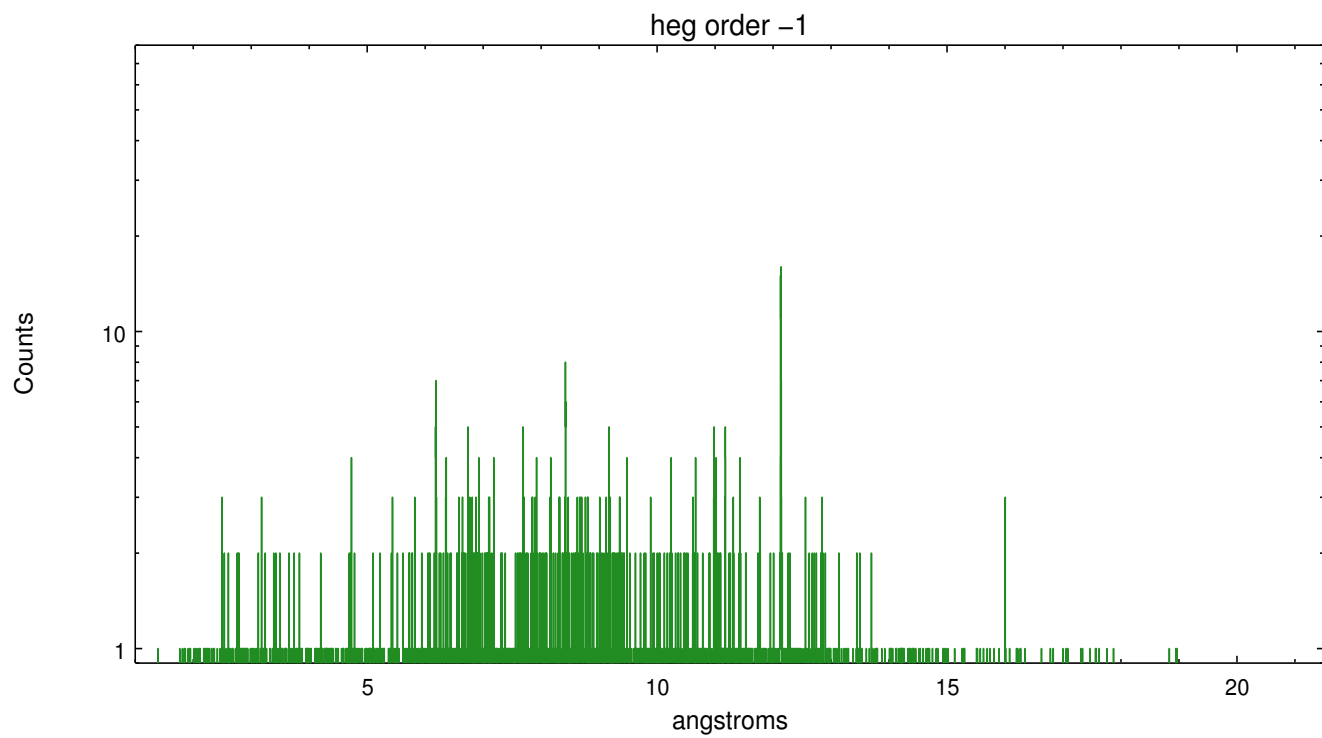
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	161	279	2263	5761	1683	165	108

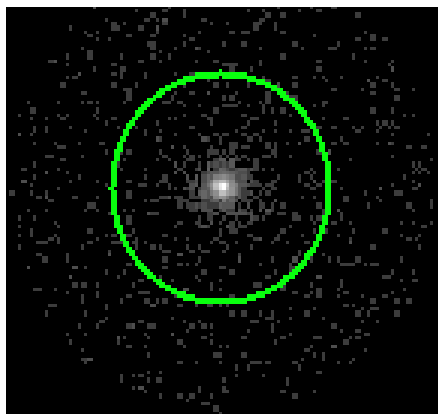




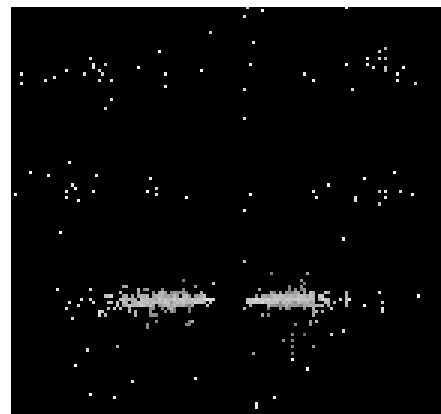
### 3.2 MEG Arm



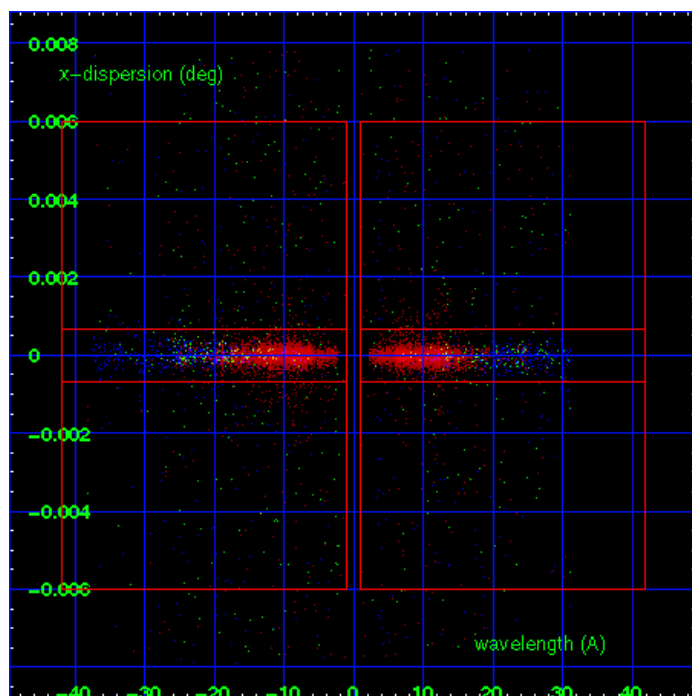
MEG Order Sort 123



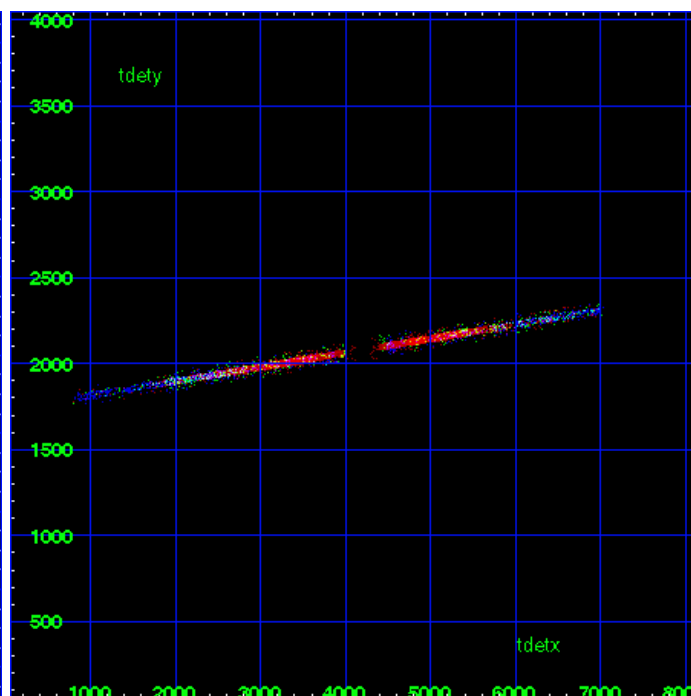
MEG Zero Order



MEG Order Sort ALL

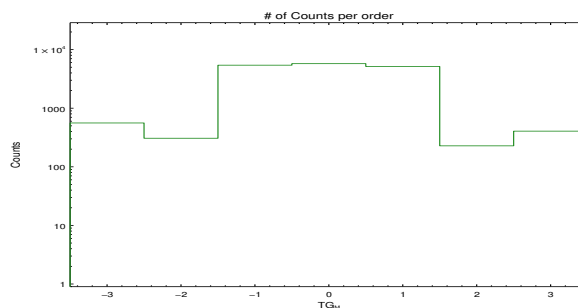


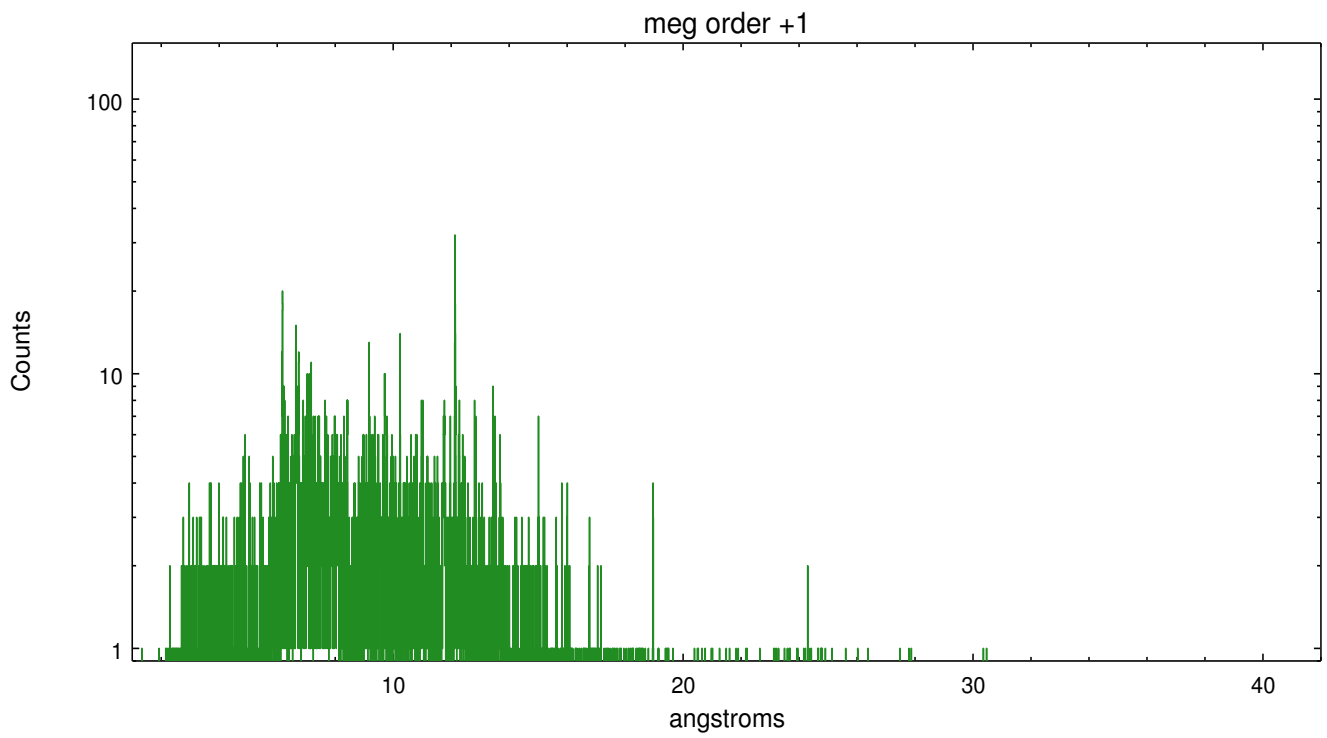
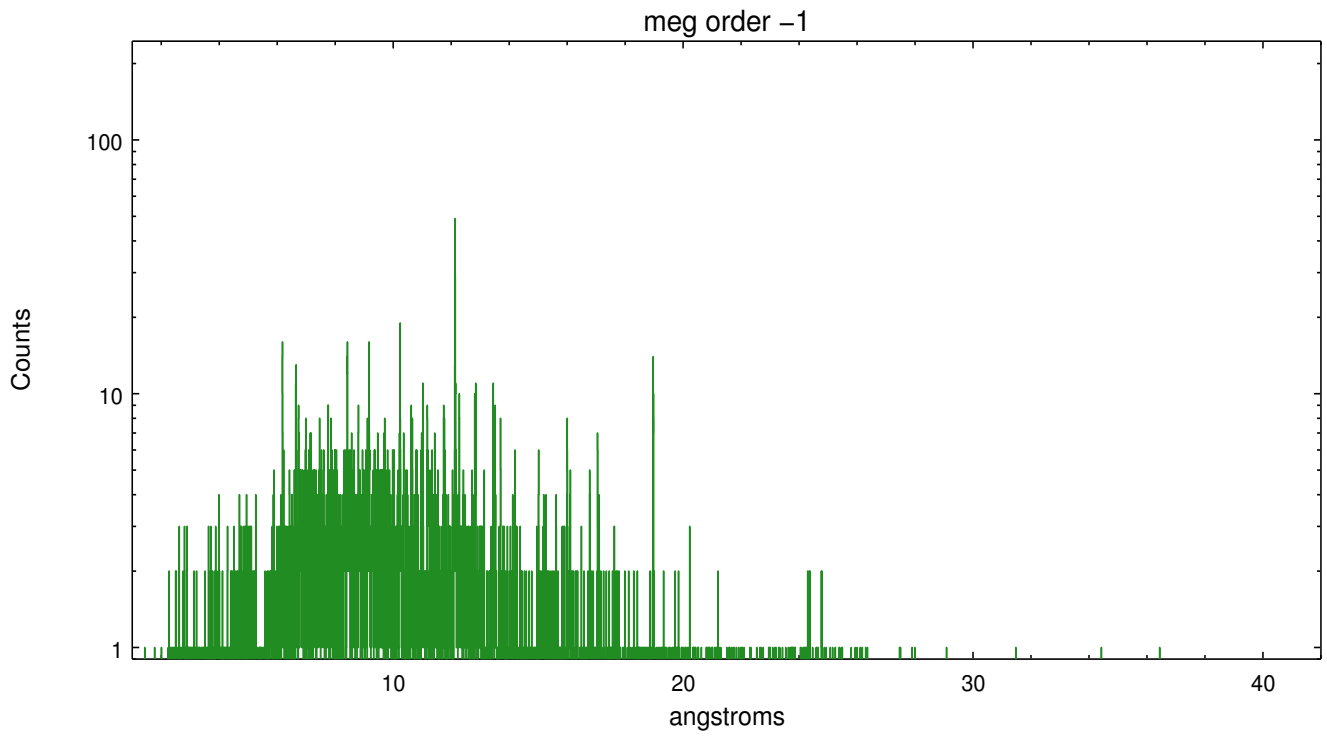
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	560	307	5422	5761	5151	228	406





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.169

## A.2 Comments

Observation started 7 days and 3 hours after obsid 2530