

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2532 - L2 Version 3  
Chandra X-Ray Center

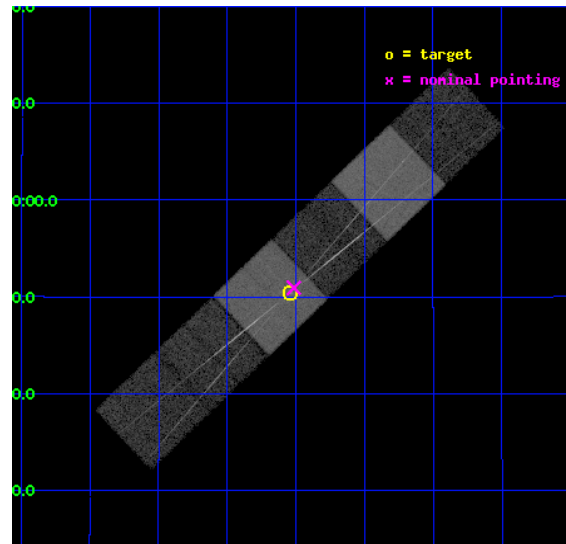
L2 Processing Date : Oct 12 2012

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# 1 Front

seq_num	200140	Sequence number
obs_id	2532	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	343.25362449586	Nominal RA [deg]
dec_nom	16.849006604797	Nominal Dec [deg]
roll_nom	136.26423704162	Nominal Roll [deg]
revision	3	Processing version of data
ontime	22751.999915242	Sum of GTIs [s]
livetime	22463.900392706	Livetime [s]
ontime4	22751.999915242	Sum of GTIs [s]
ontime5	22751.999915242	Sum of GTIs [s]
ontime6	22751.999915242	Sum of GTIs [s]
ontime7	22751.999915242	Sum of GTIs [s]
ontime8	22751.999915242	Sum of GTIs [s]
ontime9	22751.999915242	Sum of GTIs [s]
l2events	219788	Number of level 2 events

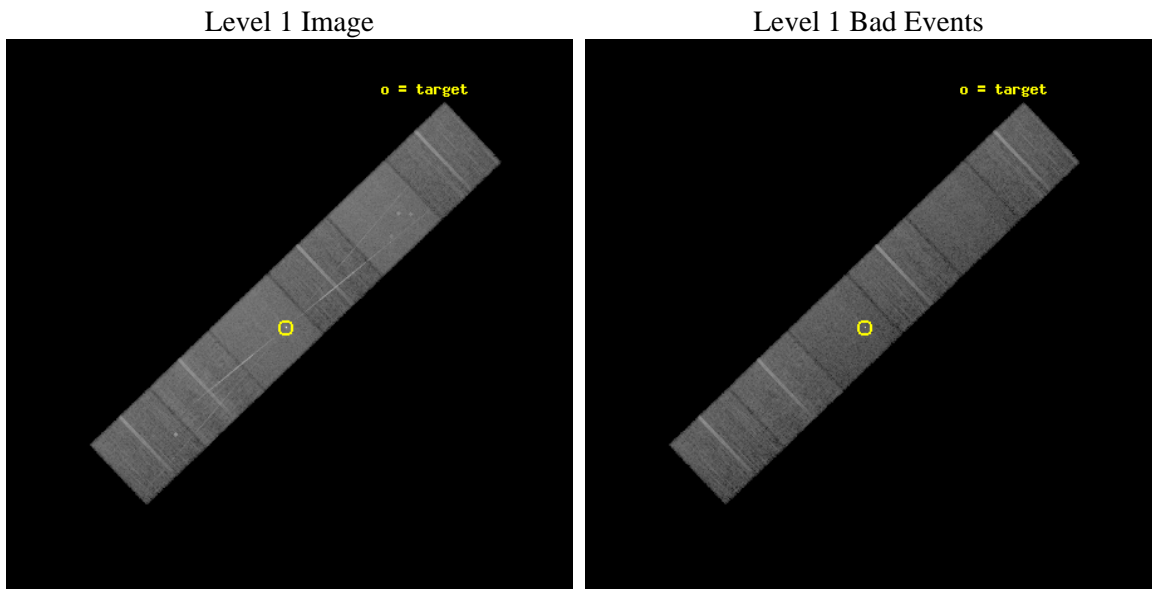




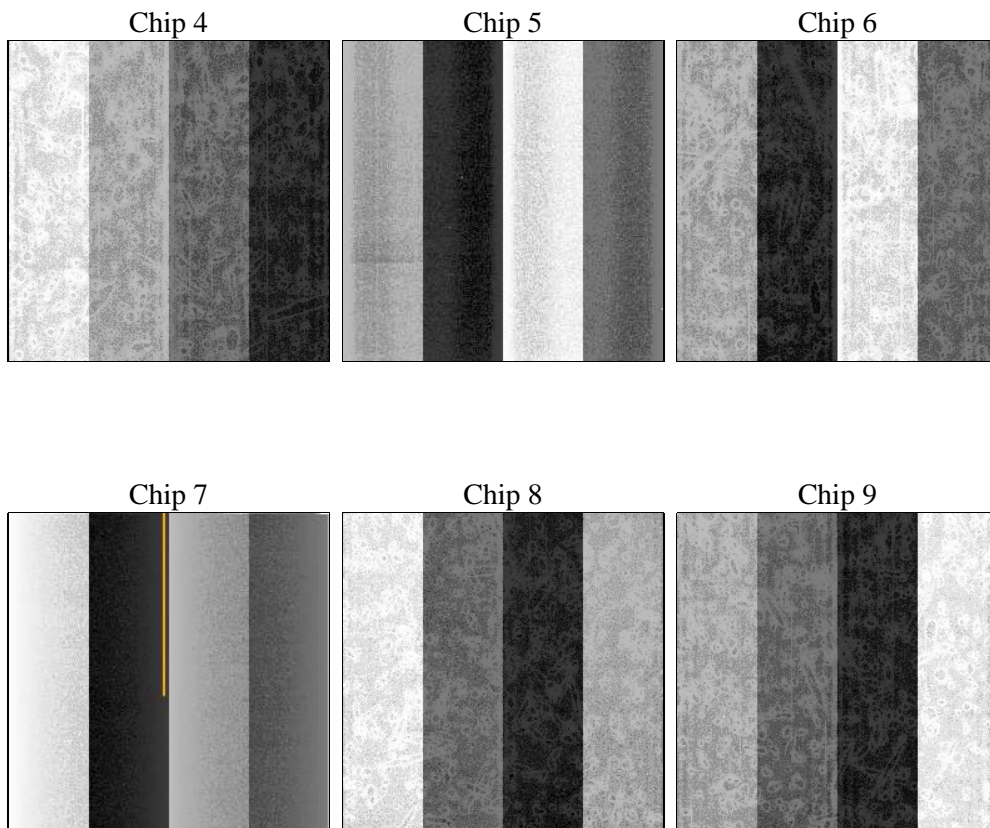
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	22751.999915242	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime4	22751.999915242	Sum of GTIs [s]
date	2012-10-11T21:38:53	Date and time of file creation	ontime5	22751.999915242	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	22751.999915242	Sum of GTIs [s]
			ontime7	22751.999915242	Sum of GTIs [s]
			ontime8	22751.999915242	Sum of GTIs [s]
			ontime9	22751.999915242	Sum of GTIs [s]
			l1events	920610	Number of level 1 events

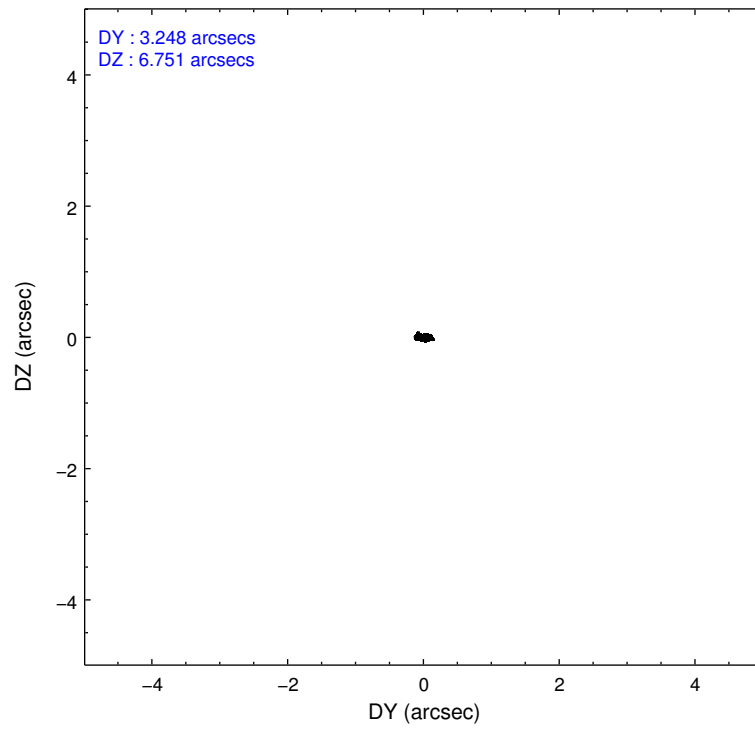
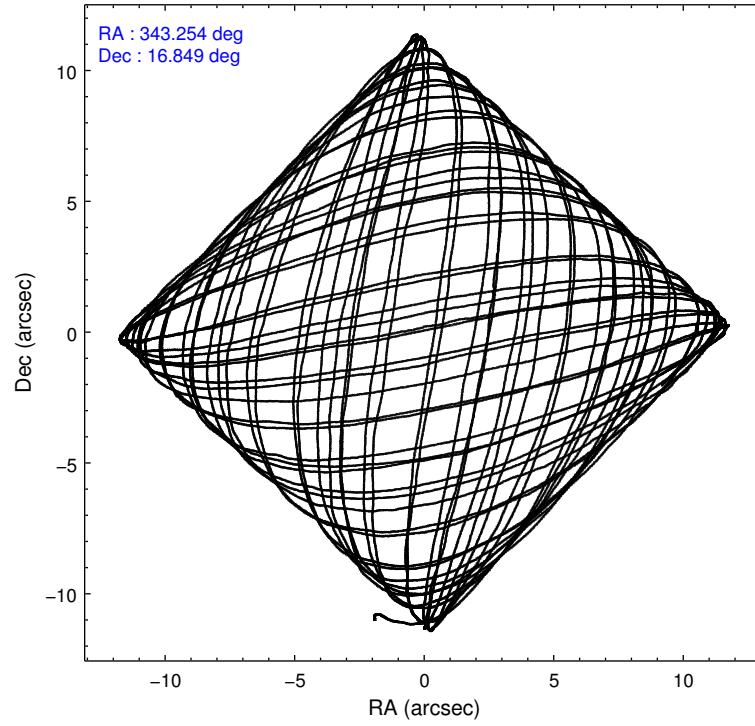
### 2.1.4 Events

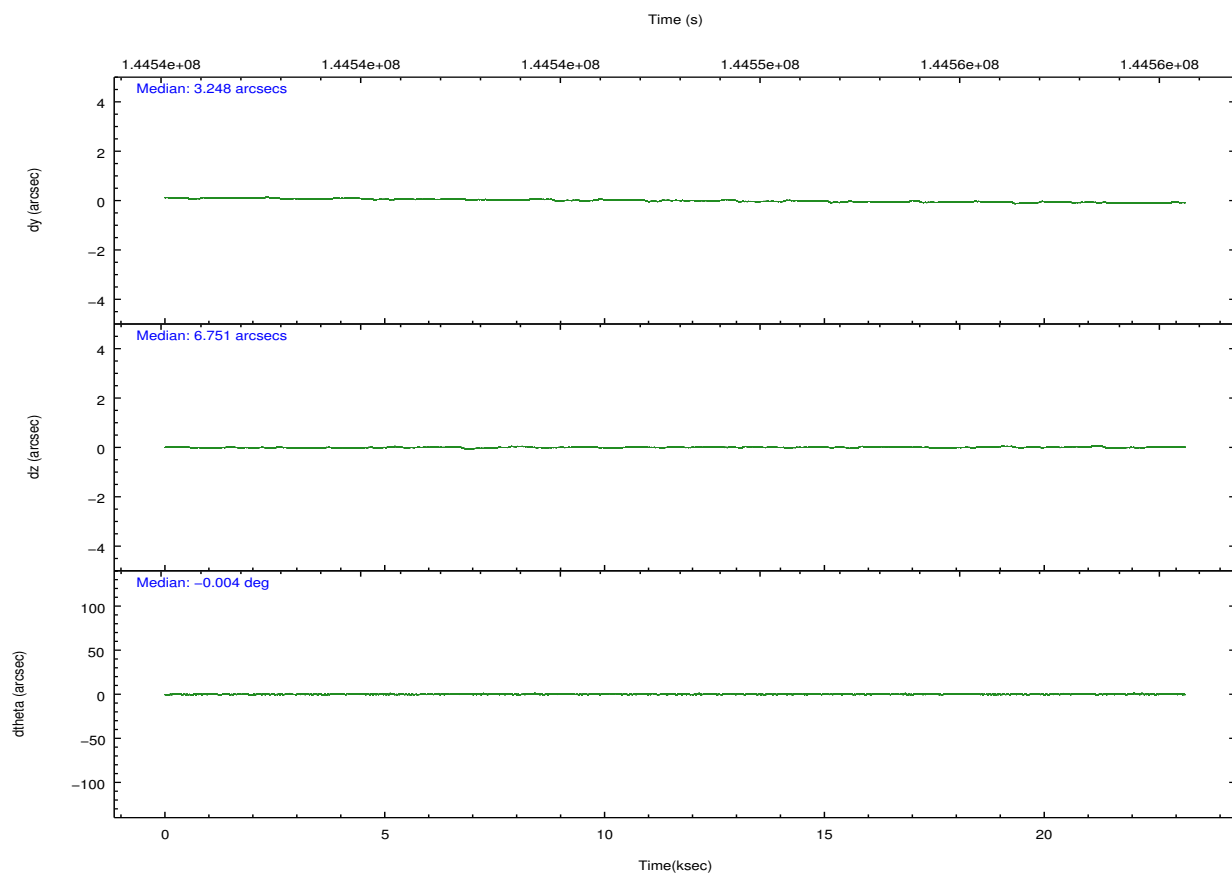
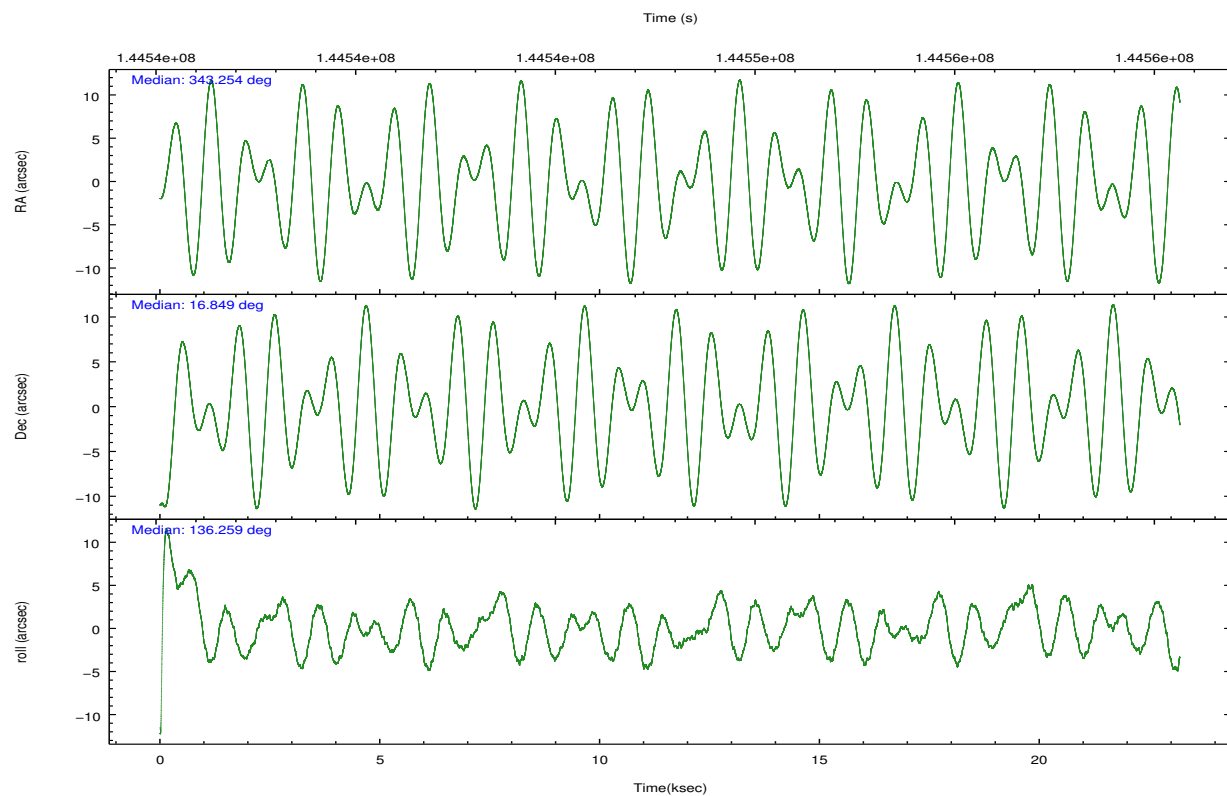
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	136251	179639	136241	175760	164345	128374	grade 0 events	6707	7301	12237	7790	14947	7603
rejected events	120331	98280	113657	99397	126927	111375		4%	4%	8%	4%	9%	5%
rejected %	88%	54%	83%	56%	77%	86%	grade 1 events	61	206	92	318	109	57
								0%	0%	0%	0%	0%	0%
							grade 2 events	3840	23874	3820	15355	7456	3311
								2%	13%	2%	8%	4%	2%
							grade 3 events	1436	3594	1691	7051	3445	1543
								1%	2%	1%	4%	2%	1%
							grade 4 events	1324	3516	1661	7110	3240	1459
								0%	1%	1%	4%	1%	1%
							grade 5 events	4674	13516	5681	16570	7046	5801
								3%	7%	4%	9%	4%	4%
							grade 6 events	2619	43094	3177	39072	8336	3091
								1%	23%	2%	22%	5%	2%
							grade 7 events	115590	84538	107882	82494	119766	105509
								84%	47%	79%	46%	72%	82%

## 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	343.281353	343.2536244958608	Subarray requested	NONE	NONE
[deg] Pointing Dec	16.842895	16.84900660479707	Alternating exposures requested	N	N
[deg] Pointing Roll	136.099590	136.2642370416229	[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	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	144536472.184000	144535559.16851			
Observation start date	2002-07-31T21:00:08	2002-07-31T20:45:59			
[s] Observation end time (MET)	144559472.184000	144560361.09453			
Observation end date	2002-08-01T03:23:28	2002-08-01T03:39:21			
Read mode	TIMED	TIMED			

## 2.3 Aspect



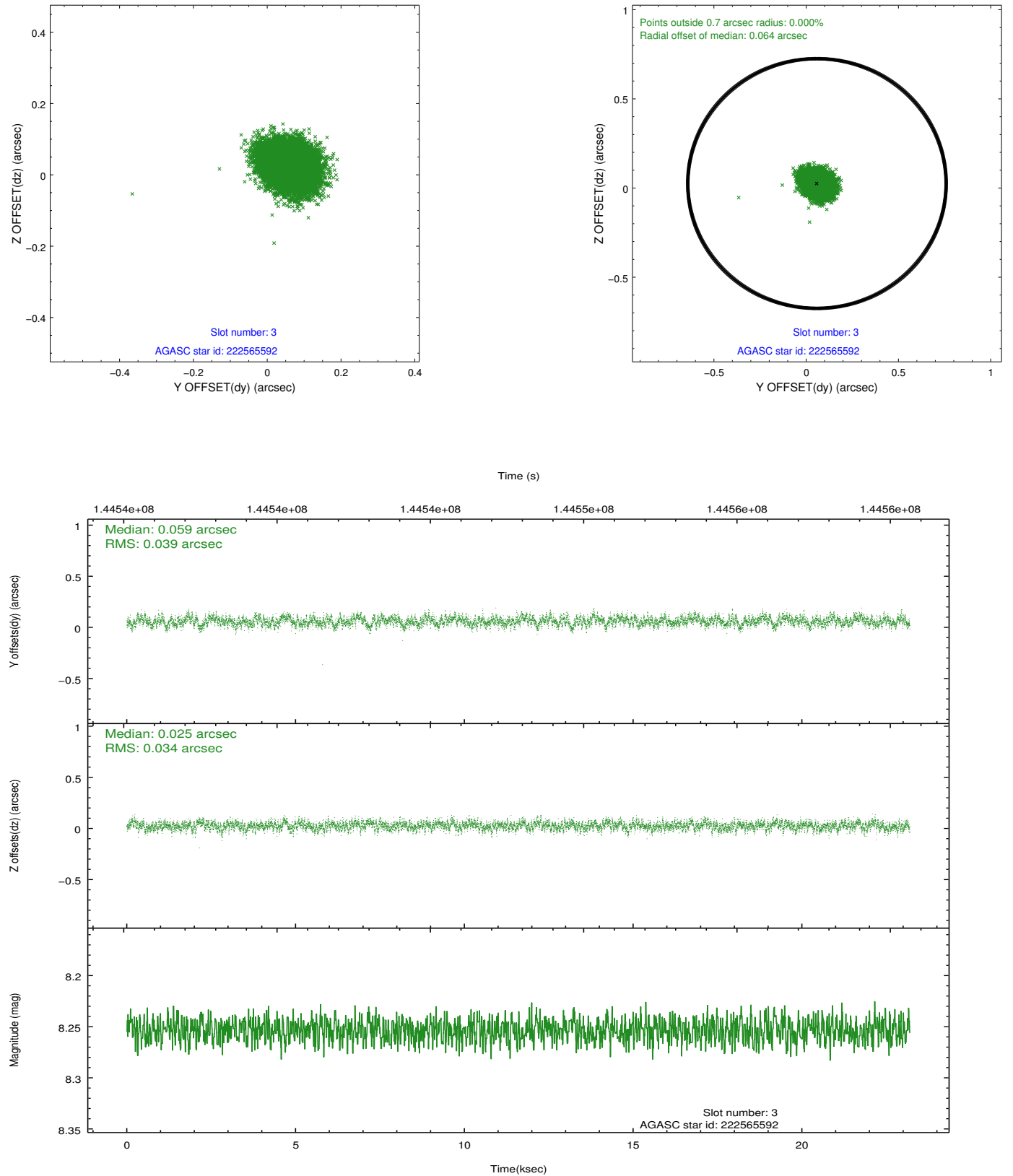


### Slot Statistics

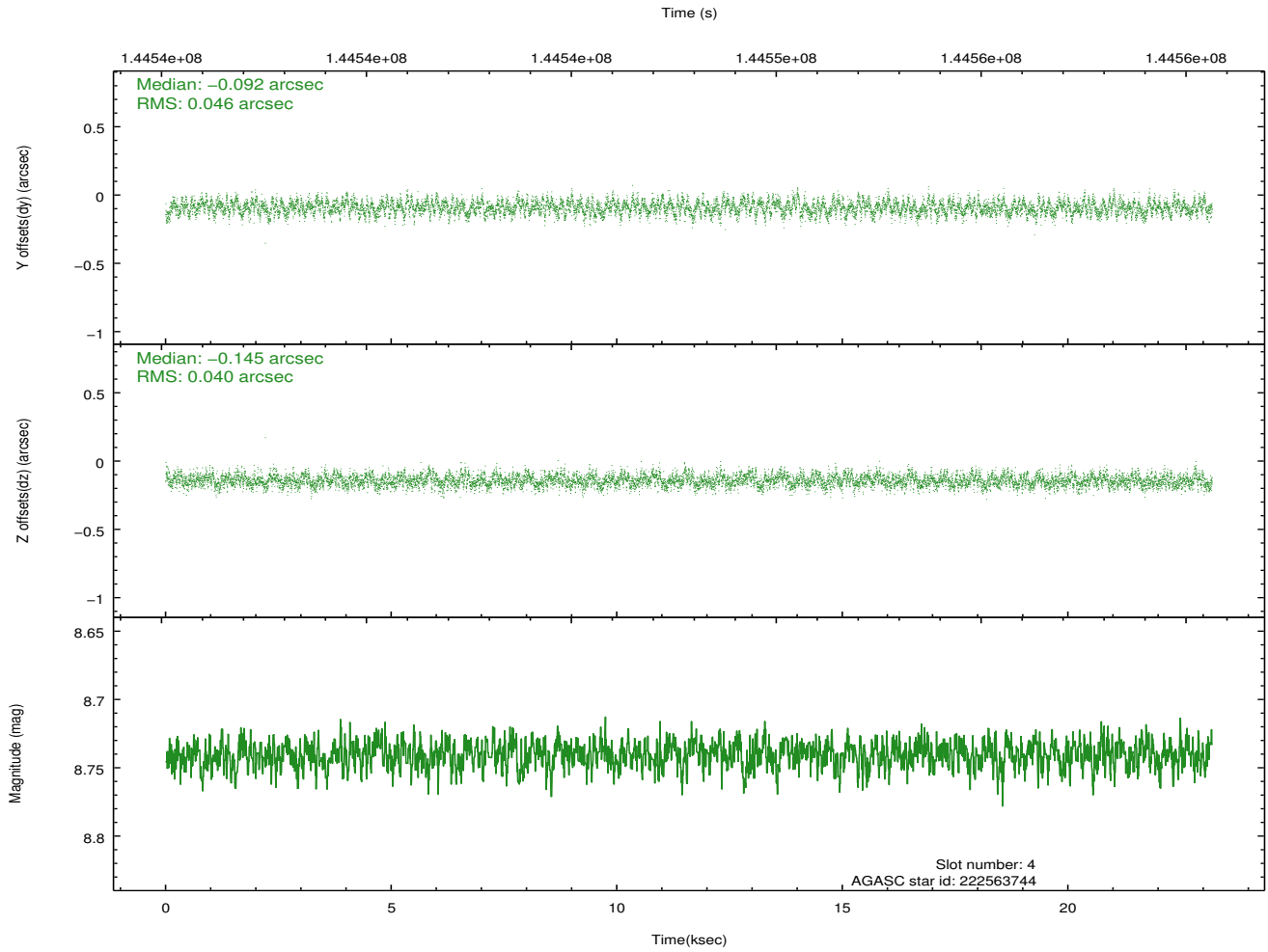
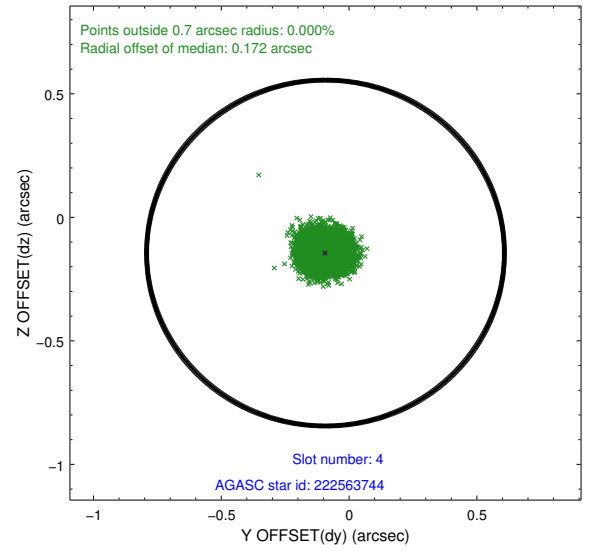
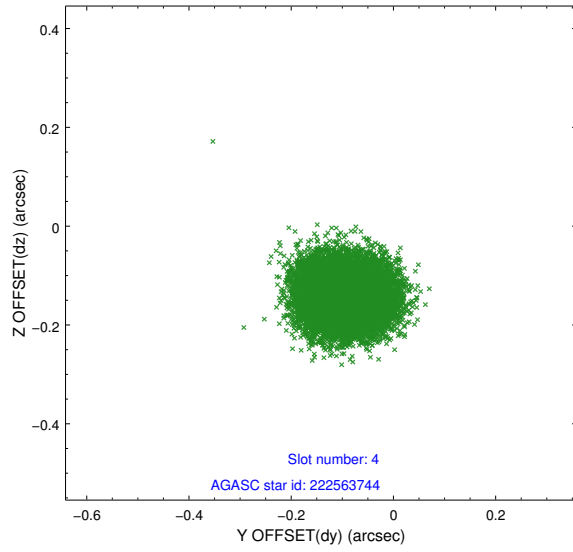
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	5658	-0.041	-0.058	0.006	0.010	0.000000	0.000000	-755.72	-1790.06
1	FID	ACIS-S-4	7.20	5657	0.023	0.035	0.006	0.012	0.000000	0.000000	2157.55	118.38
2	FID	ACIS-S-5	7.23	5657	-0.013	0.031	0.007	0.012	0.000000	0.000000	-1808.37	112.17
3	GUIDE	222565592	8.25	11313	0.059	0.025	0.055	0.088	343.291662	16.508291	-861.25	843.92
4	GUIDE	222563744	8.74	11314	-0.092	-0.145	0.065	0.104	342.392259	16.776439	2046.38	2293.21
5	GUIDE	222562432	8.94	11314	0.228	-0.002	0.062	0.102	343.698150	16.309399	-2368.48	384.68
6	GUIDE	222563736	8.83	11312	0.017	-0.145	0.074	0.120	343.076284	16.308502	-824.07	1877.29
7	GUIDE	223089808	9.09	11311	-0.210	0.266	0.070	0.113	343.220223	17.508272	1811.44	-1579.73

## 2.4 Star Slots

### 2.4.1 Slot 3

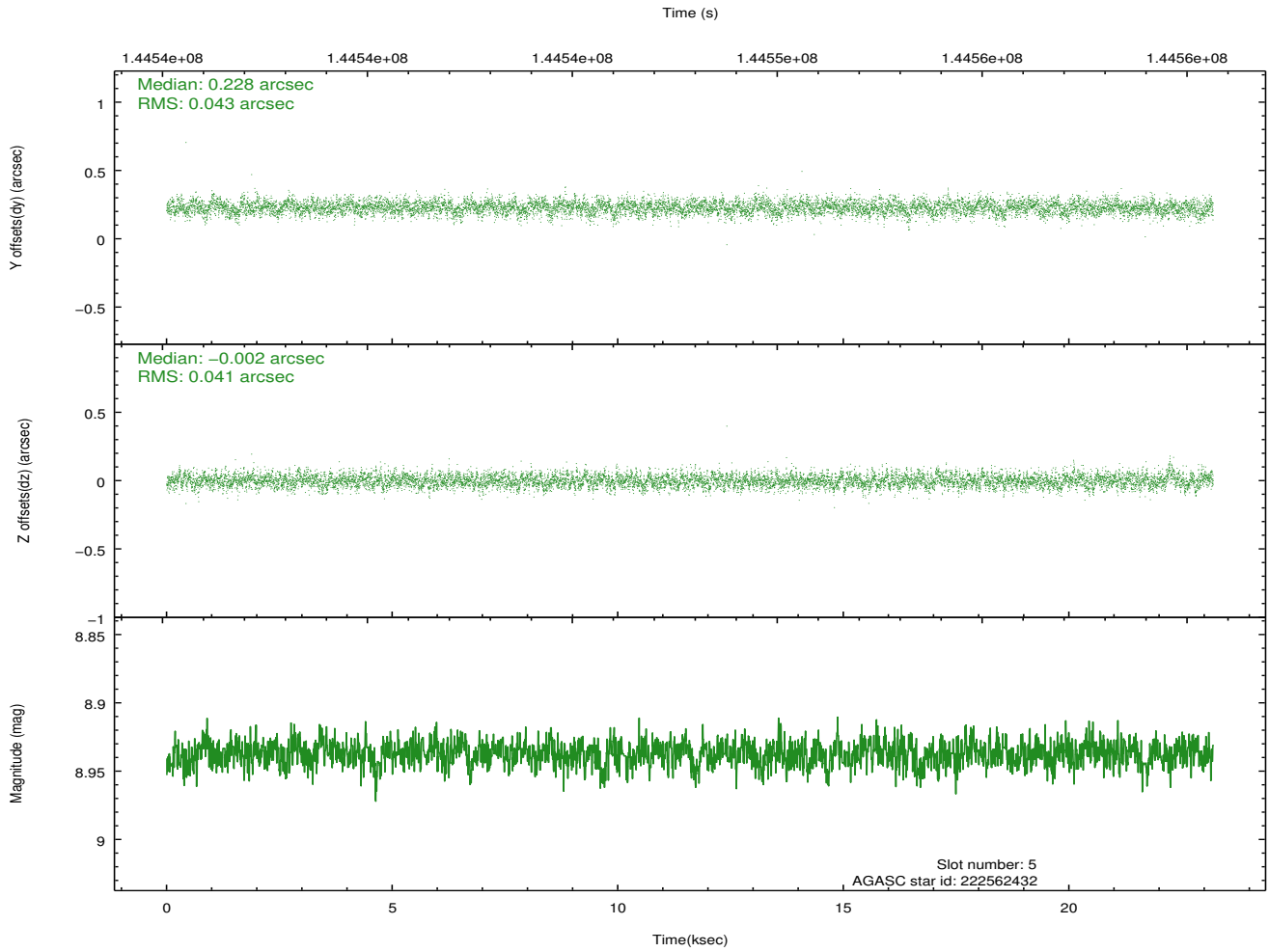
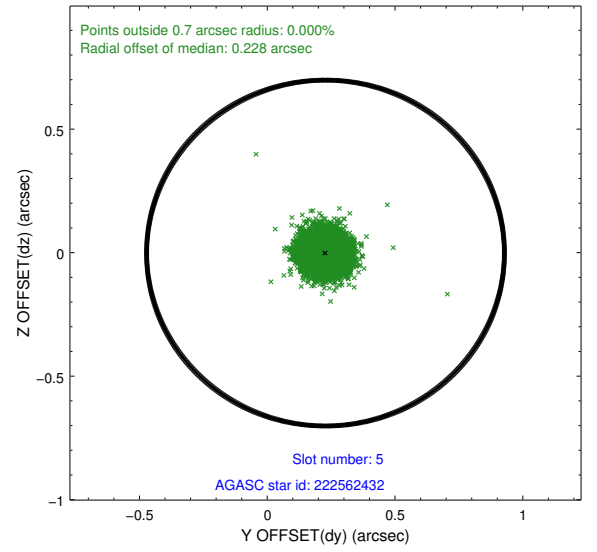
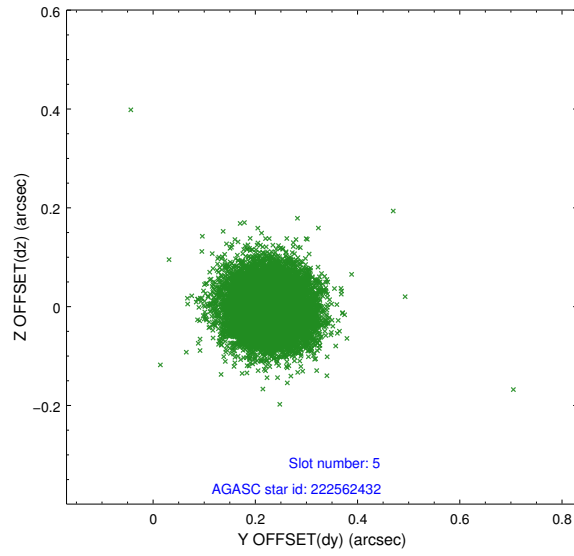


## 2.4.2 Slot 4

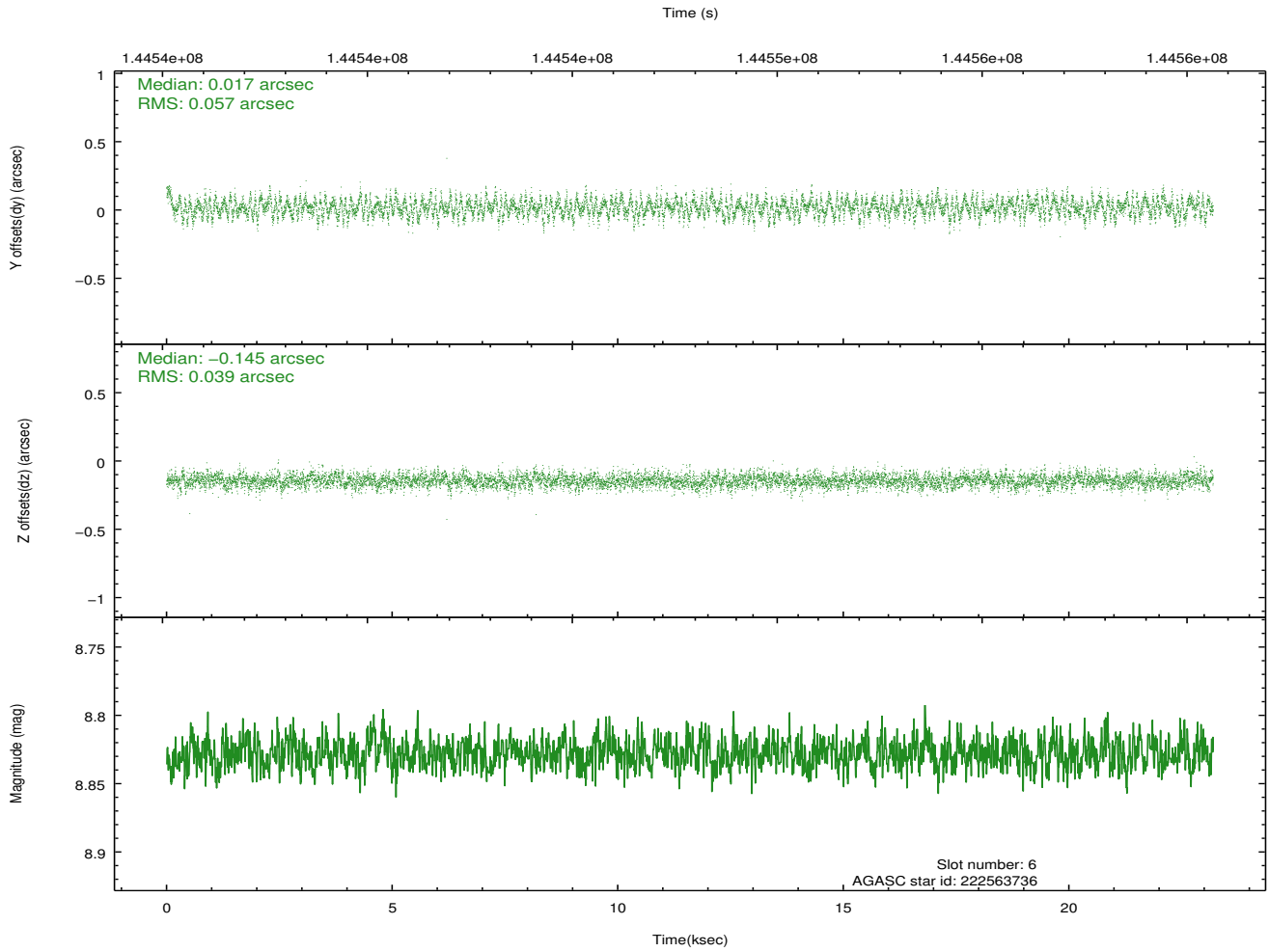
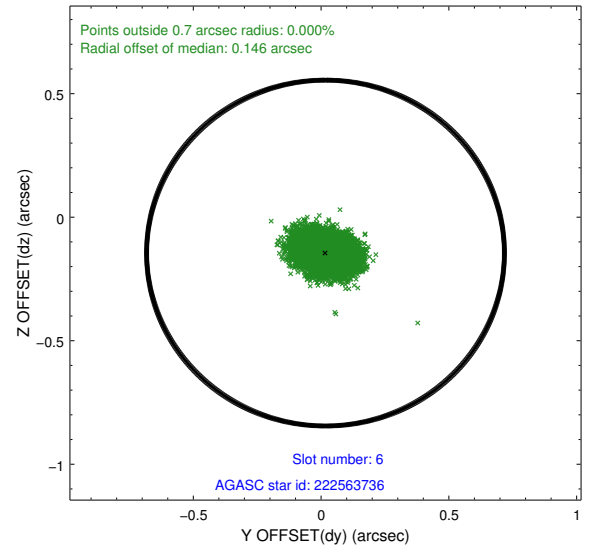
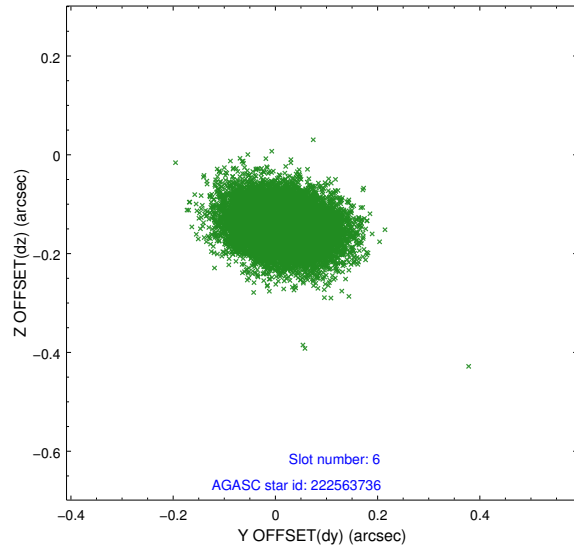




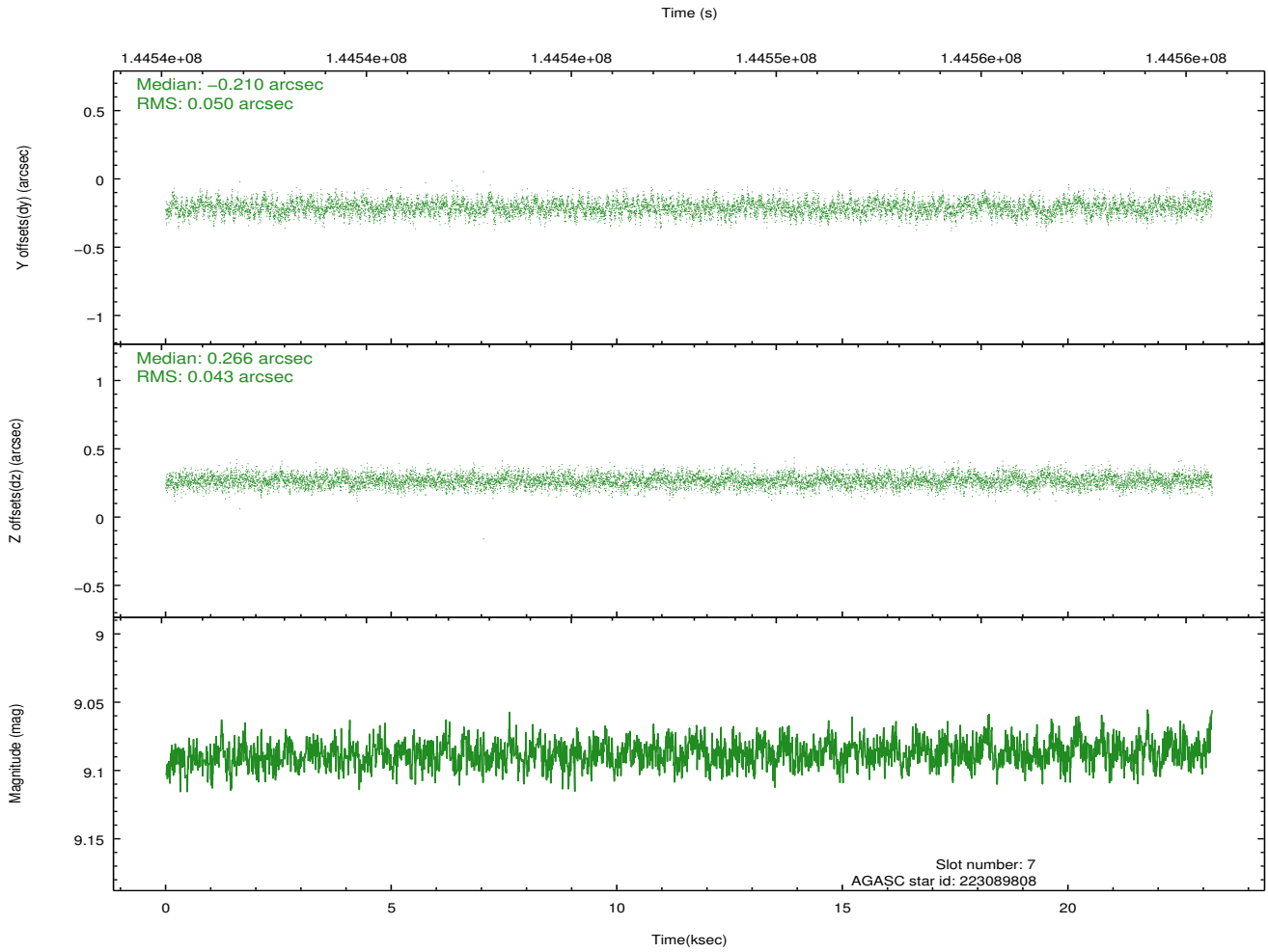
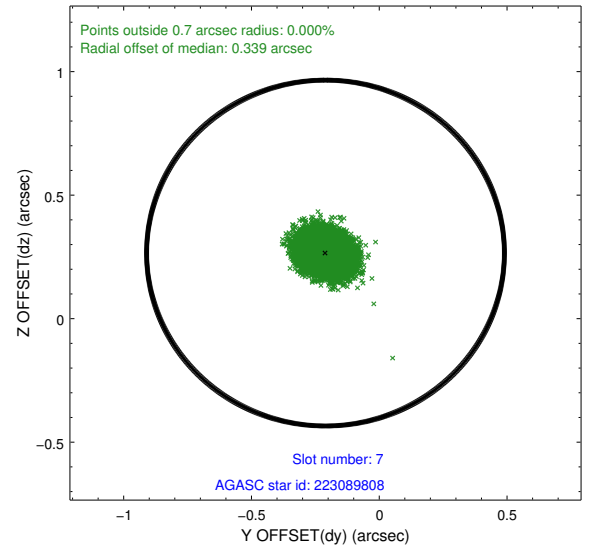
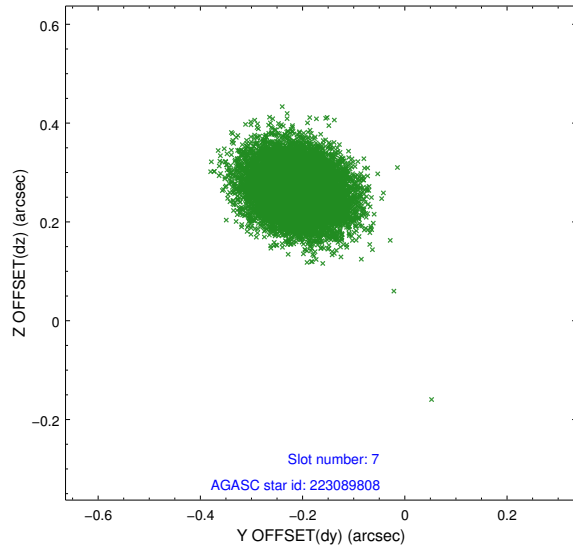
### 2.4.3 Slot 5



## 2.4.4 Slot 6

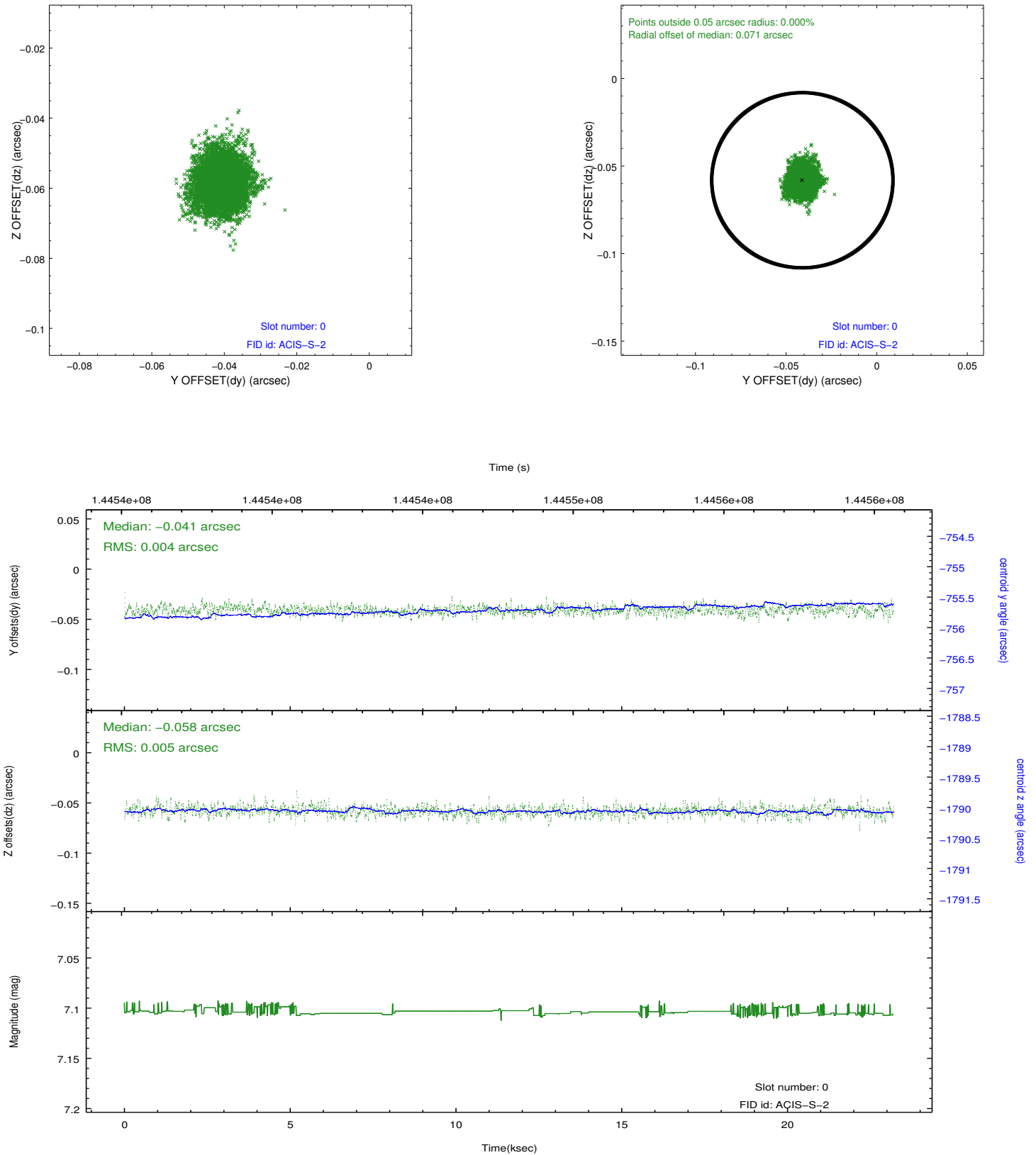


## 2.4.5 Slot 7

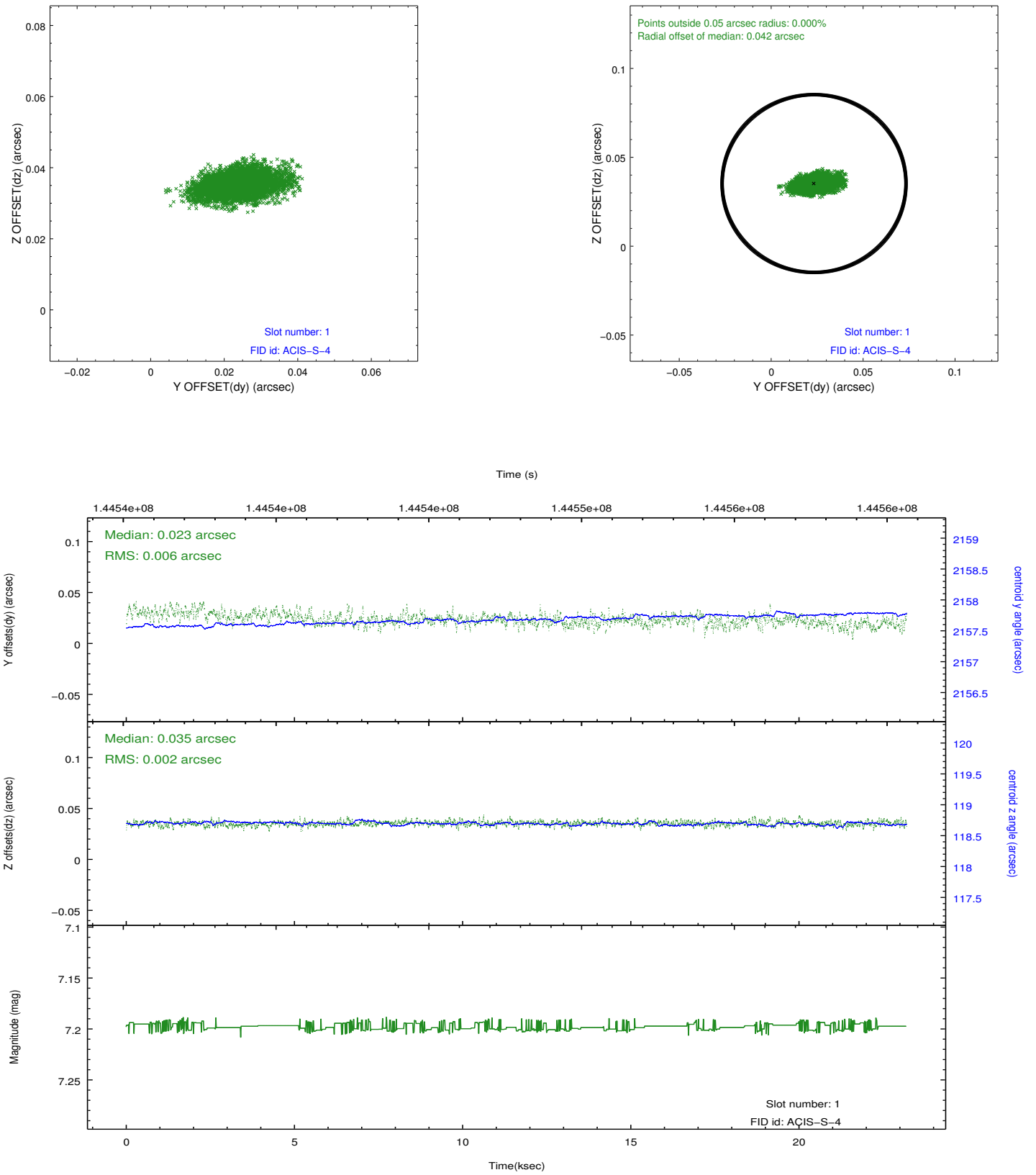


## 2.5 FID Slots

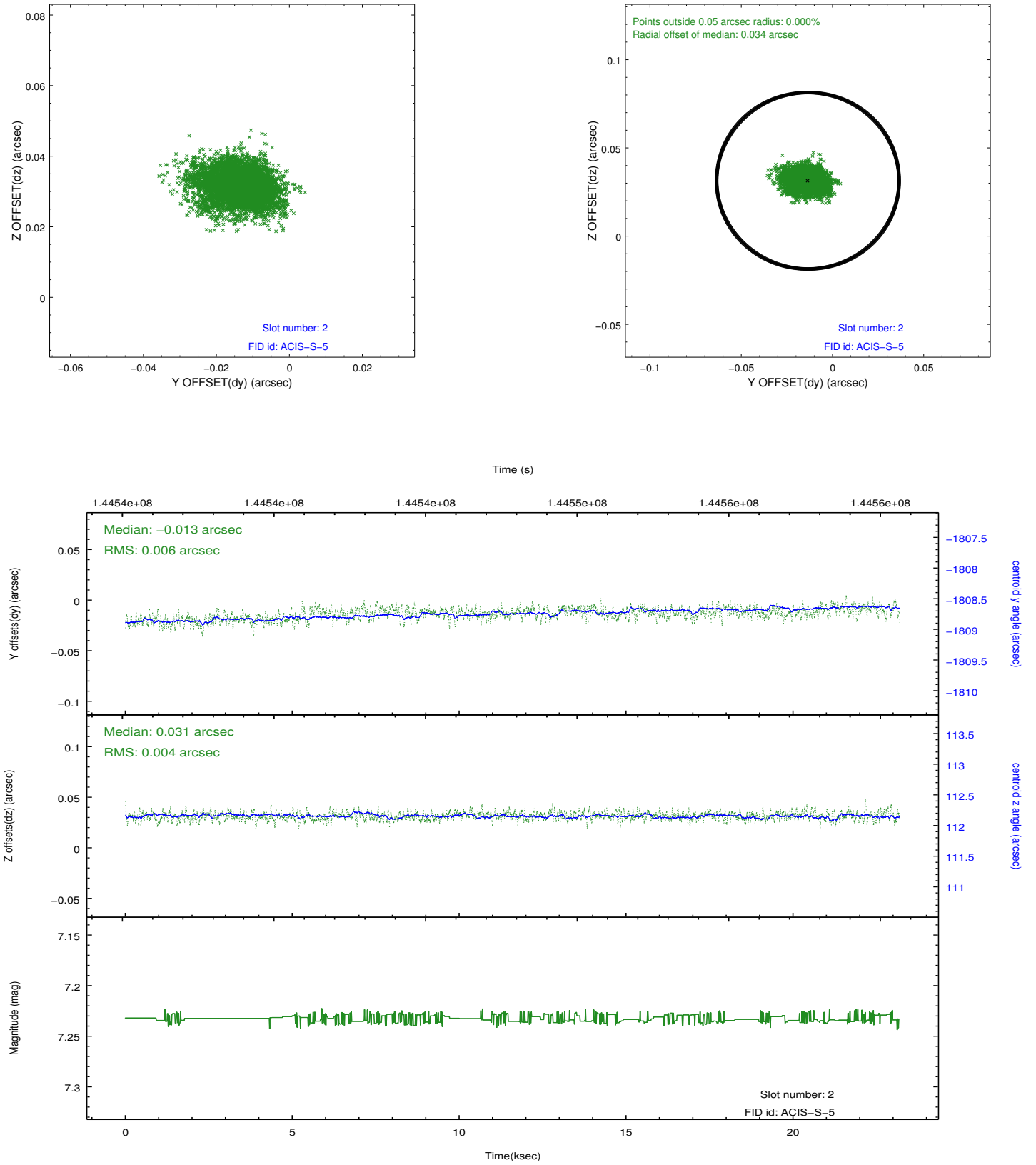
### 2.5.1 Slot 0



## 2.5.2 Slot 1

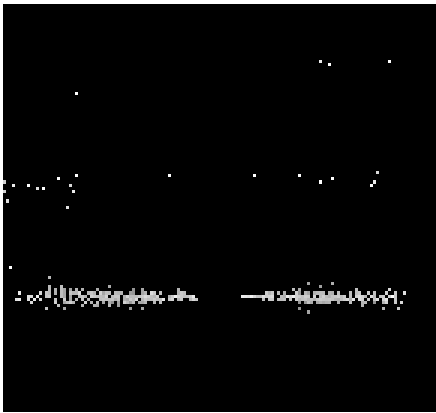


### 2.5.3 Slot 2

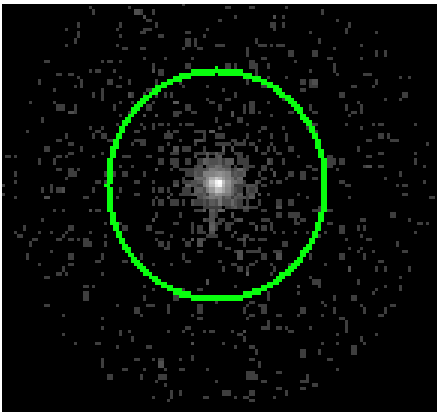


# 3 Gratings

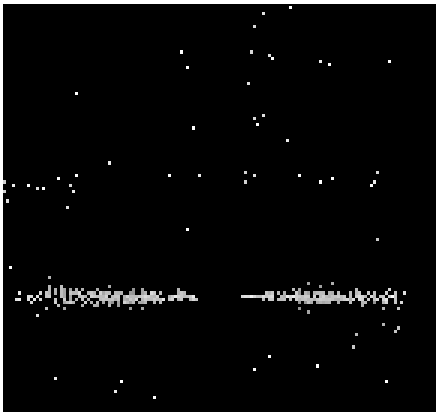
## 3.1 HEG Arm



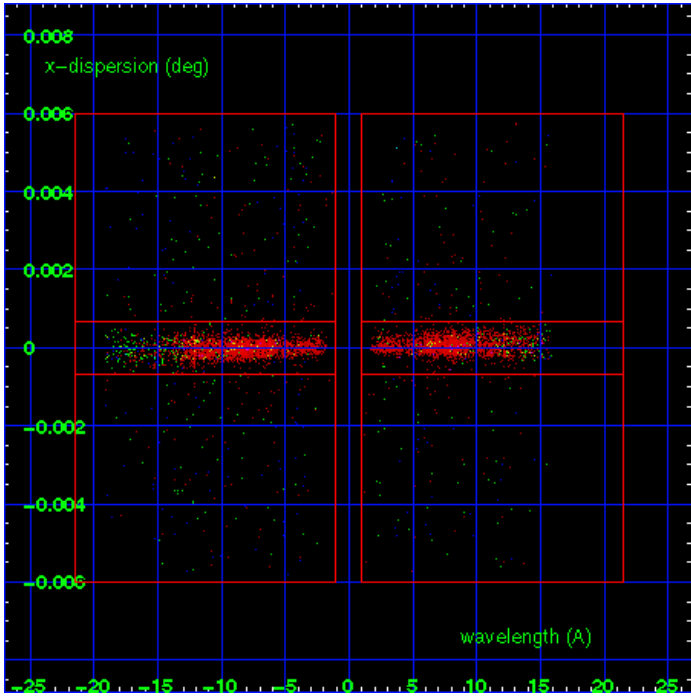
HEG Order Sort 123



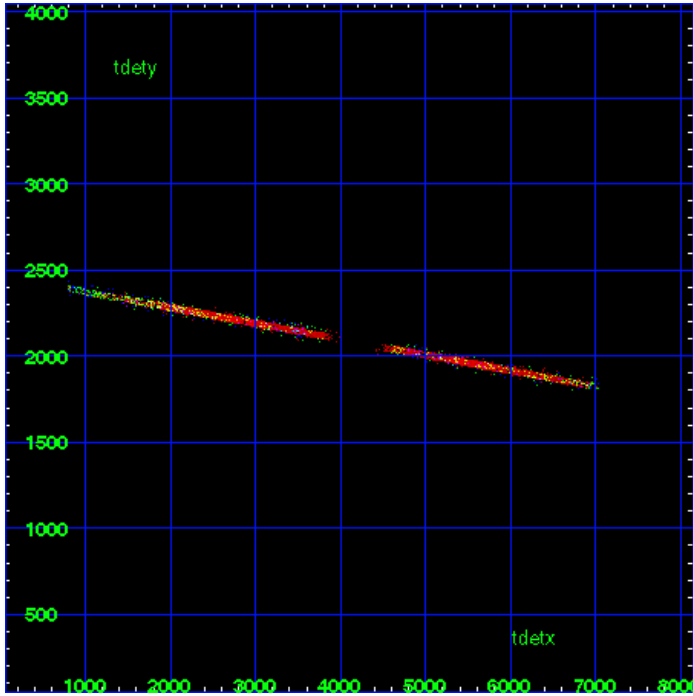
HEG Zero Order



HEG Order Sort ALL

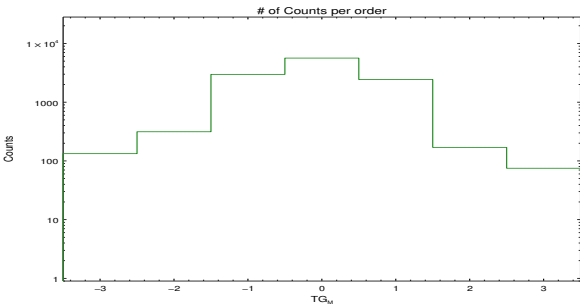


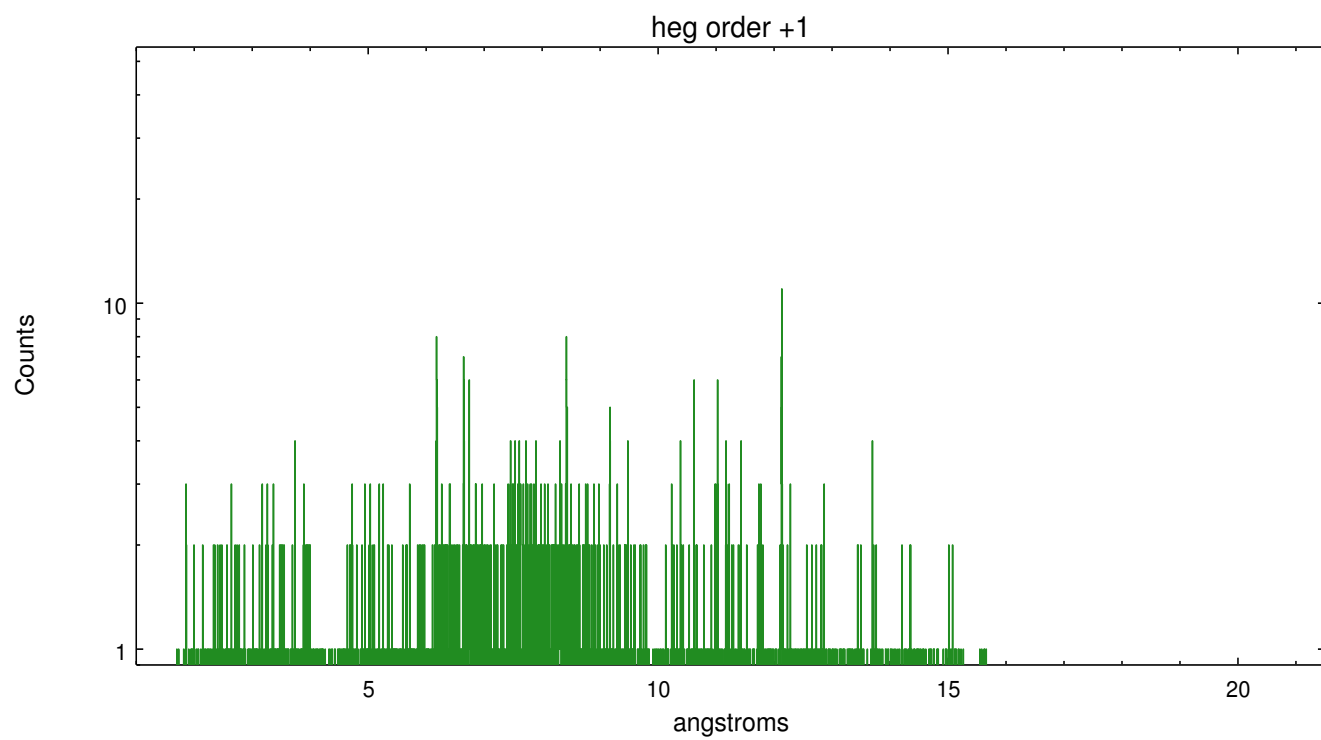
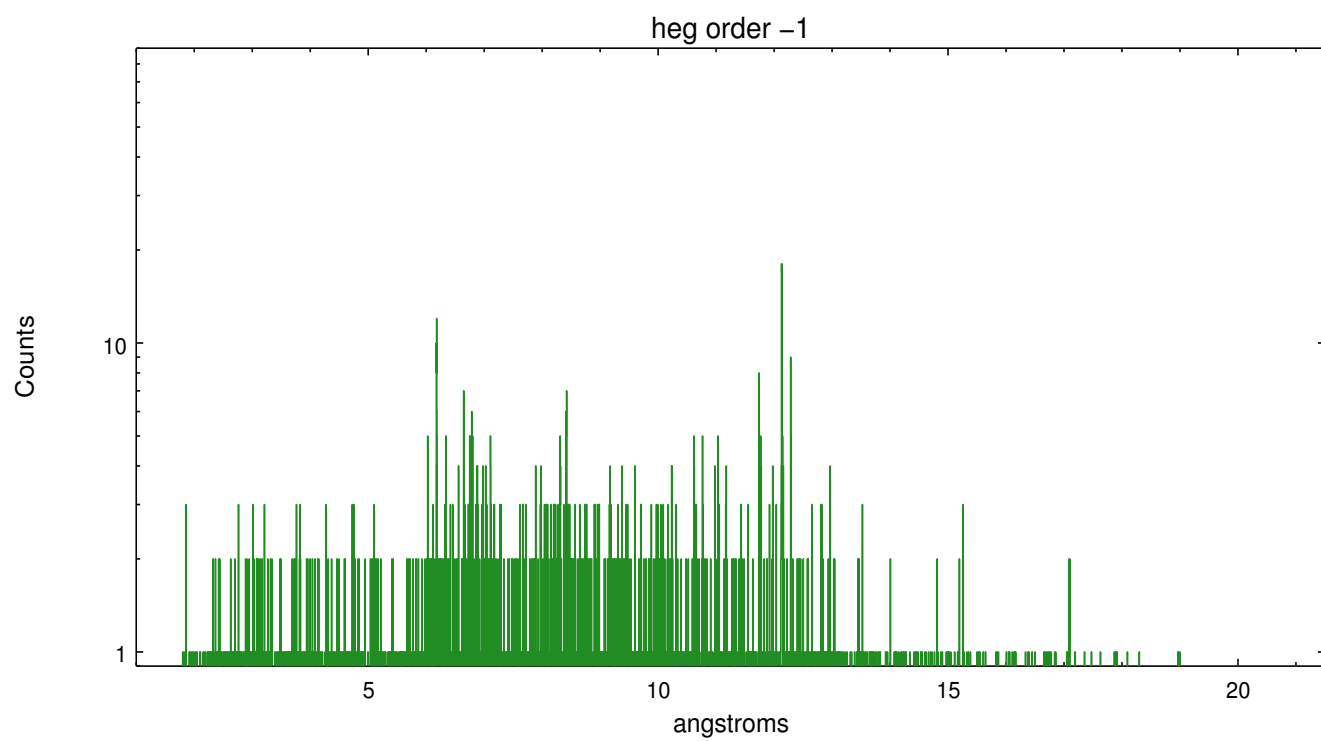
Spot Image HEG



Full Detector HEG

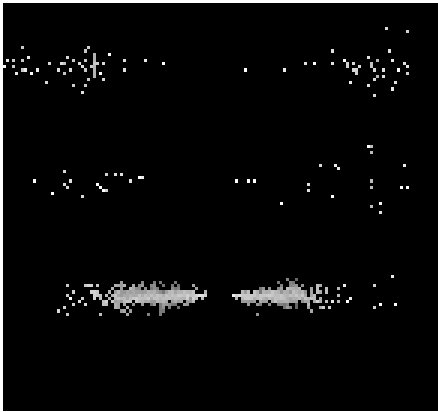
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	133	314	2977	5639	2434	170	75



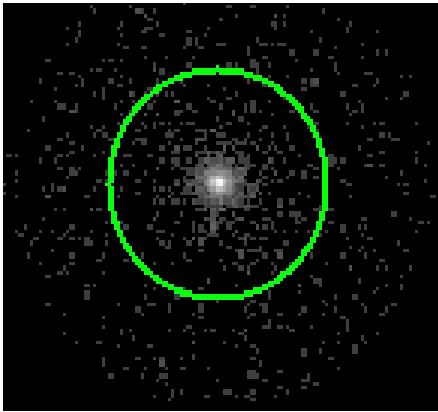




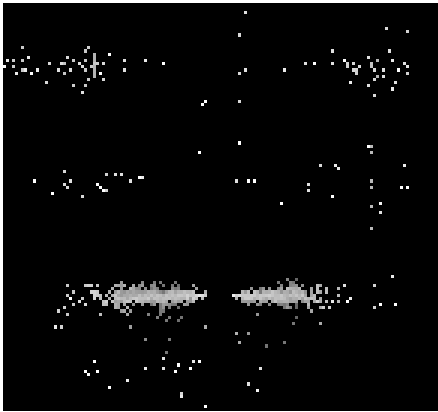
3.2 MEG Arm



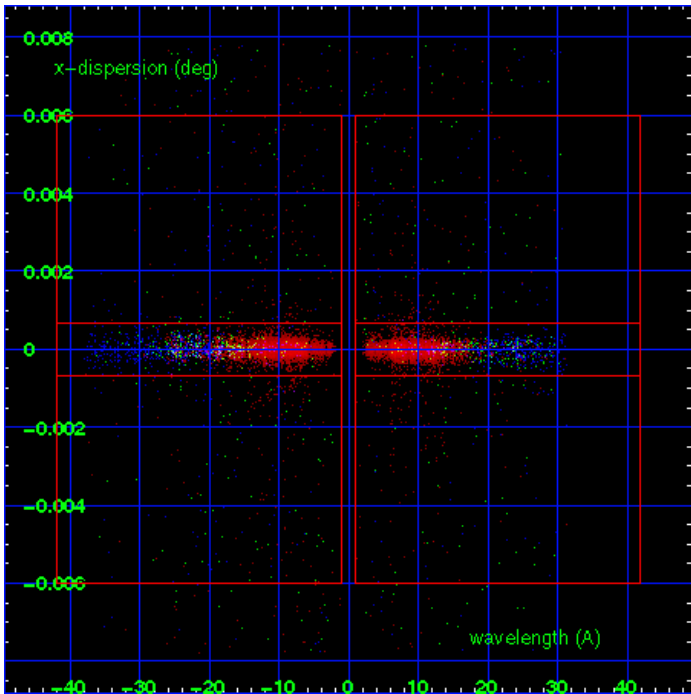
MEG Order Sort 123



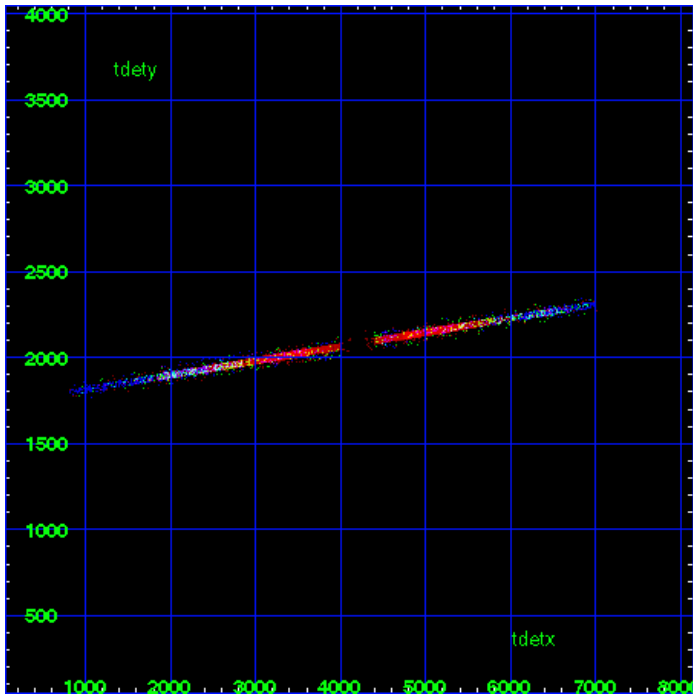
MEG Zero Order



MEG Order Sort ALL

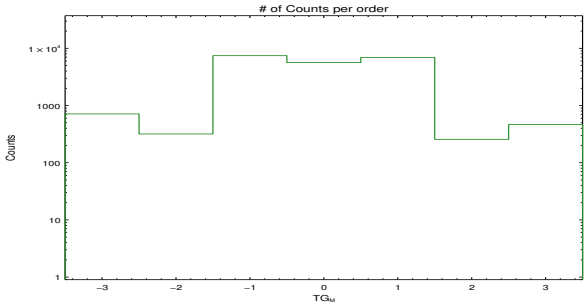


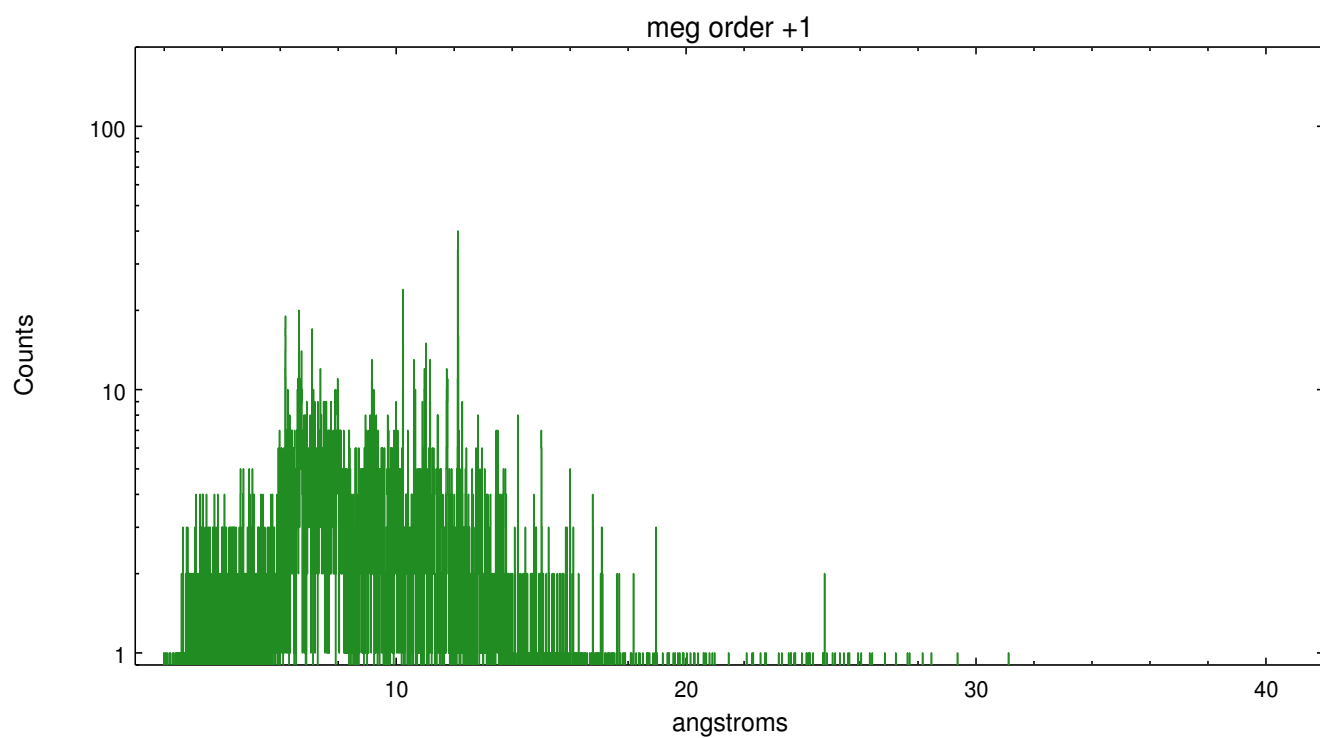
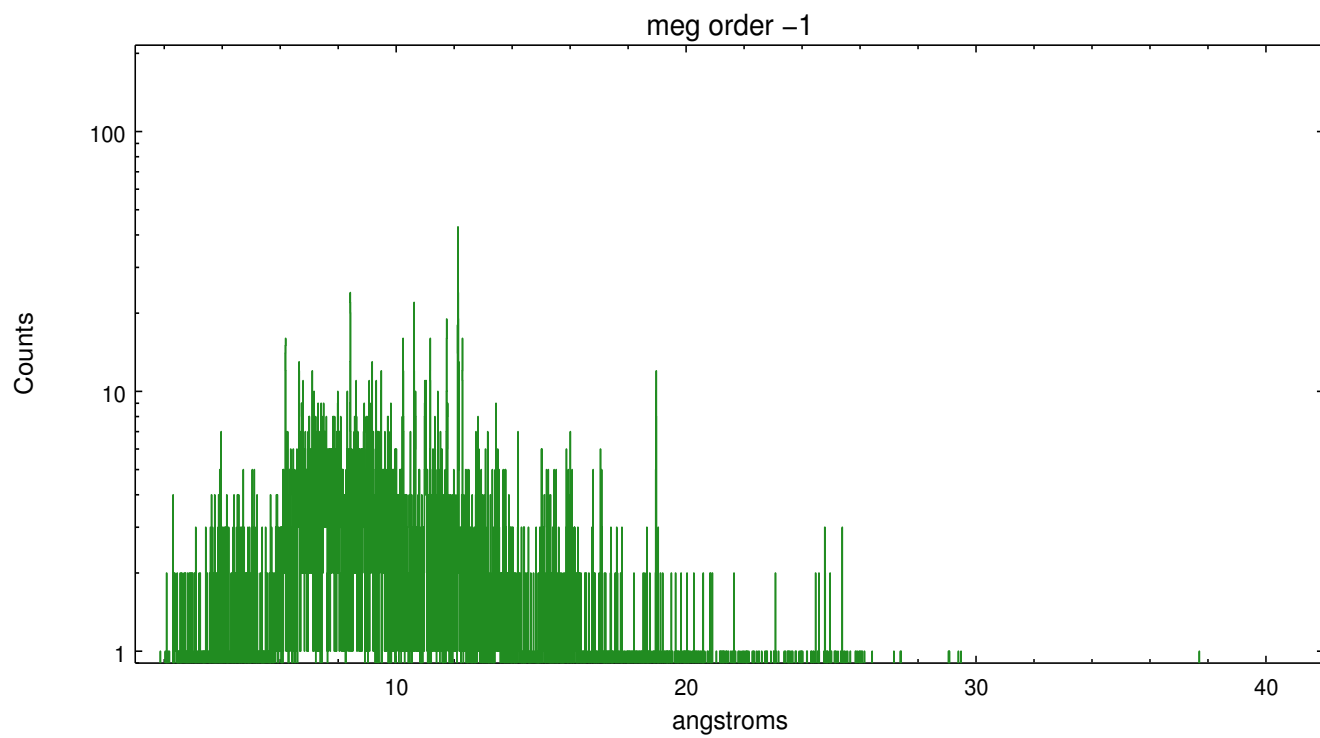
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	713	318	7443	5639	6910	256	465





## 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	22.755

### A.2 Comments

Observation taken 6 days after Obsid 2531, within time interval constraints provided by PI.