

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2529 - L2 Version 3  
Chandra X-Ray Center

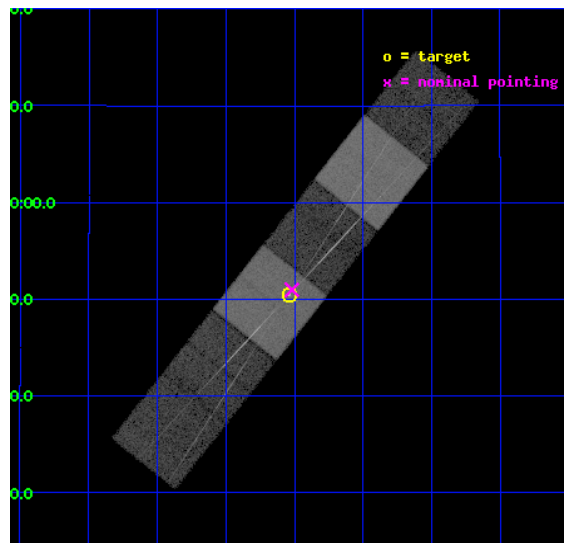
L2 Processing Date : Oct 11 2012

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

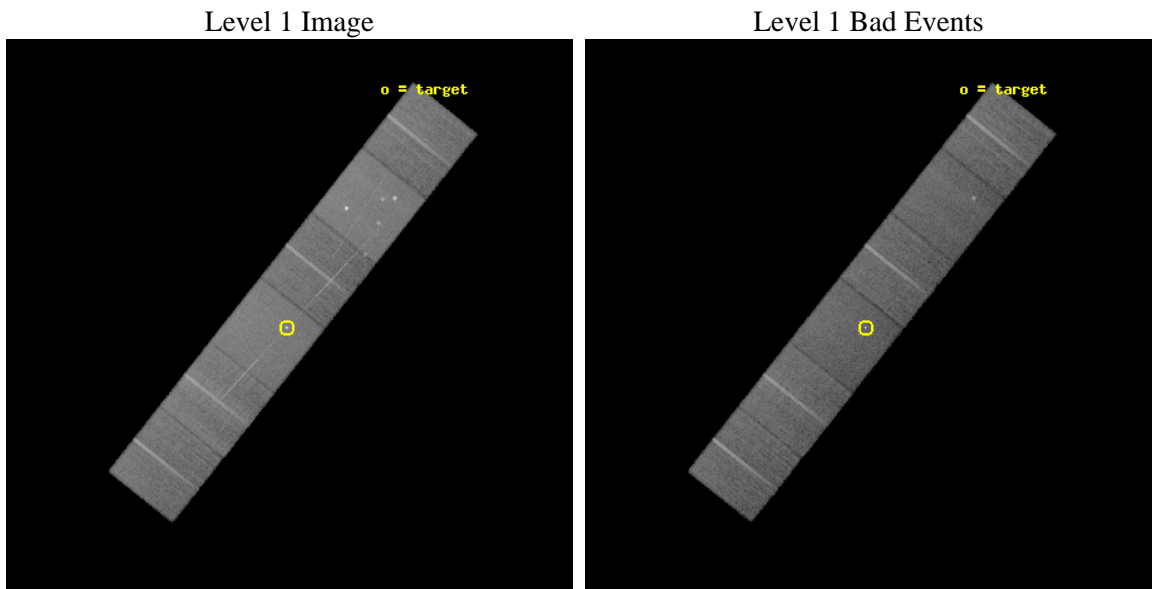
seq_num	200137	Sequence number
obs_id	2529	Observation id
title	HETGS SPECTROSCOPY OF THE LONG-PERIOD ACTIVE BINARY, IM PEGASI.	Pr
observer	Dr. David Huenemoerder	Principal investigator
object	IM PEG	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	343.259583	Observer's specified target RA [deg]
dec_targ	16.841194	Observer's specified target Dec [deg]
ra_nom	343.2547908301	Nominal RA [deg]
dec_nom	16.849748919691	Nominal Dec [deg]
roll_nom	128.39055364093	Nominal Roll [deg]
revision	3	Processing version of data
ontime	25145.599906325	Sum of GTIs [s]
livetime	24827.191179449	Livetime [s]
ontime4	25145.599906325	Sum of GTIs [s]
ontime5	25145.599906325	Sum of GTIs [s]
ontime6	25145.599906325	Sum of GTIs [s]
ontime7	25145.599906325	Sum of GTIs [s]
ontime8	25145.599906325	Sum of GTIs [s]
ontime9	25145.599906325	Sum of GTIs [s]
l2events	274759	Number of level 2 events



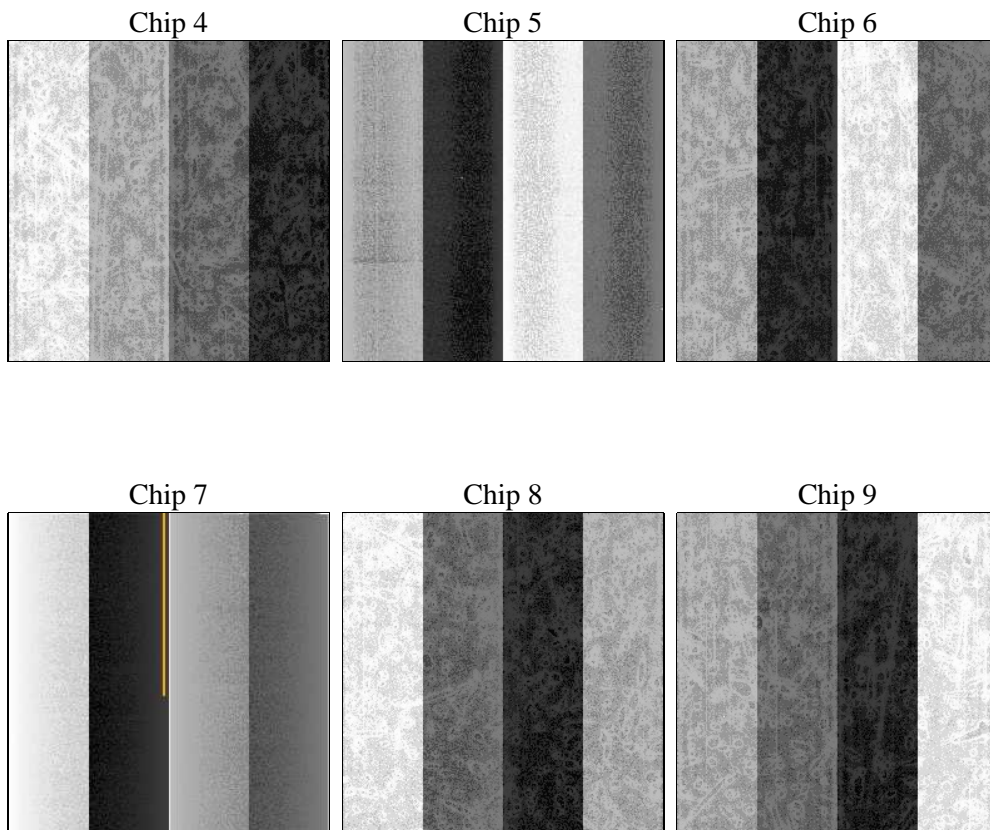
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	25000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	25145.599906325	Sum of GTIs [s]
caldbver	4.5.2	&#160	ontime4	25145.599906325	Sum of GTIs [s]
date	2012-10-11T13:31:22	Date and time of file creation	ontime5	25145.599906325	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	25145.599906325	Sum of GTIs [s]
			ontime7	25145.599906325	Sum of GTIs [s]
			ontime8	25145.599906325	Sum of GTIs [s]
			ontime9	25145.599906325	Sum of GTIs [s]
			l1events	1286255	Number of level 1 events

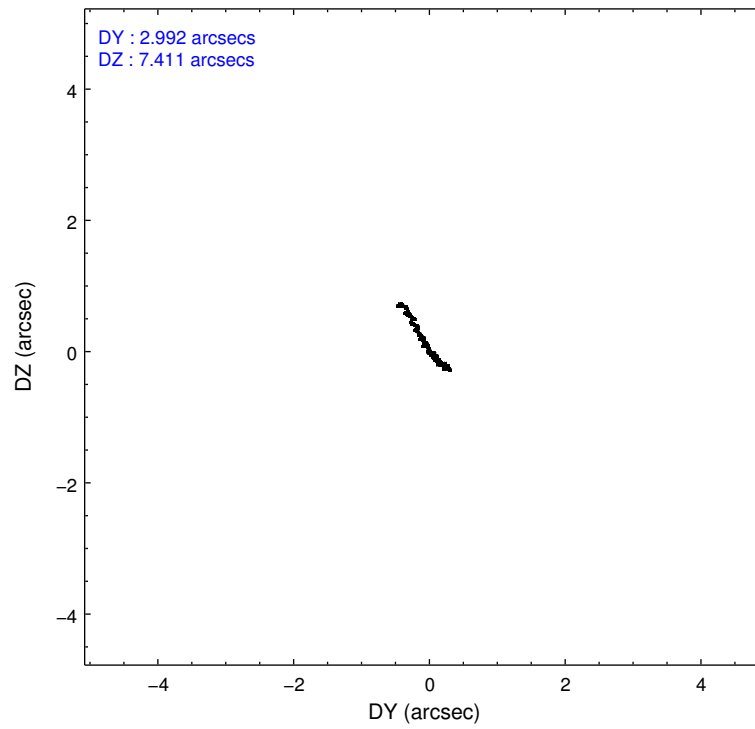
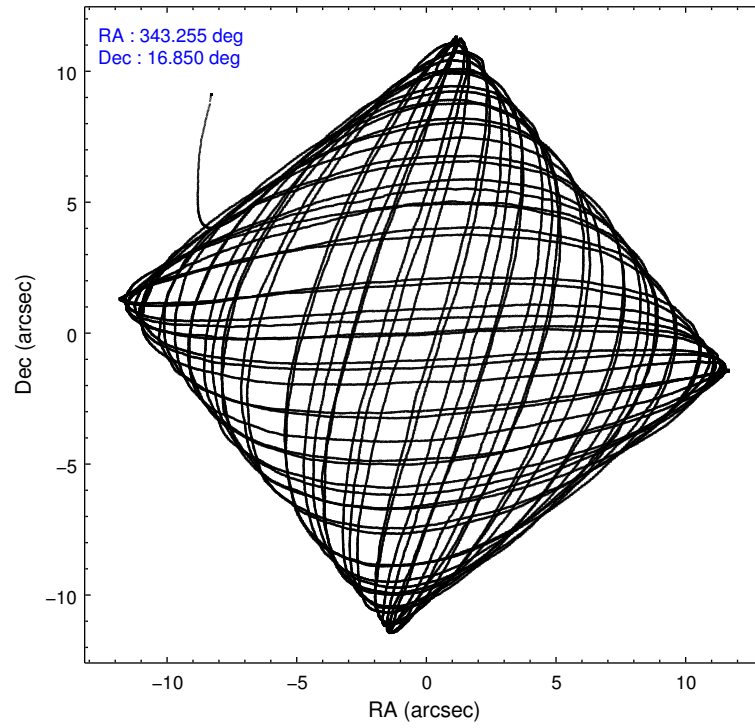
### 2.1.4 Events

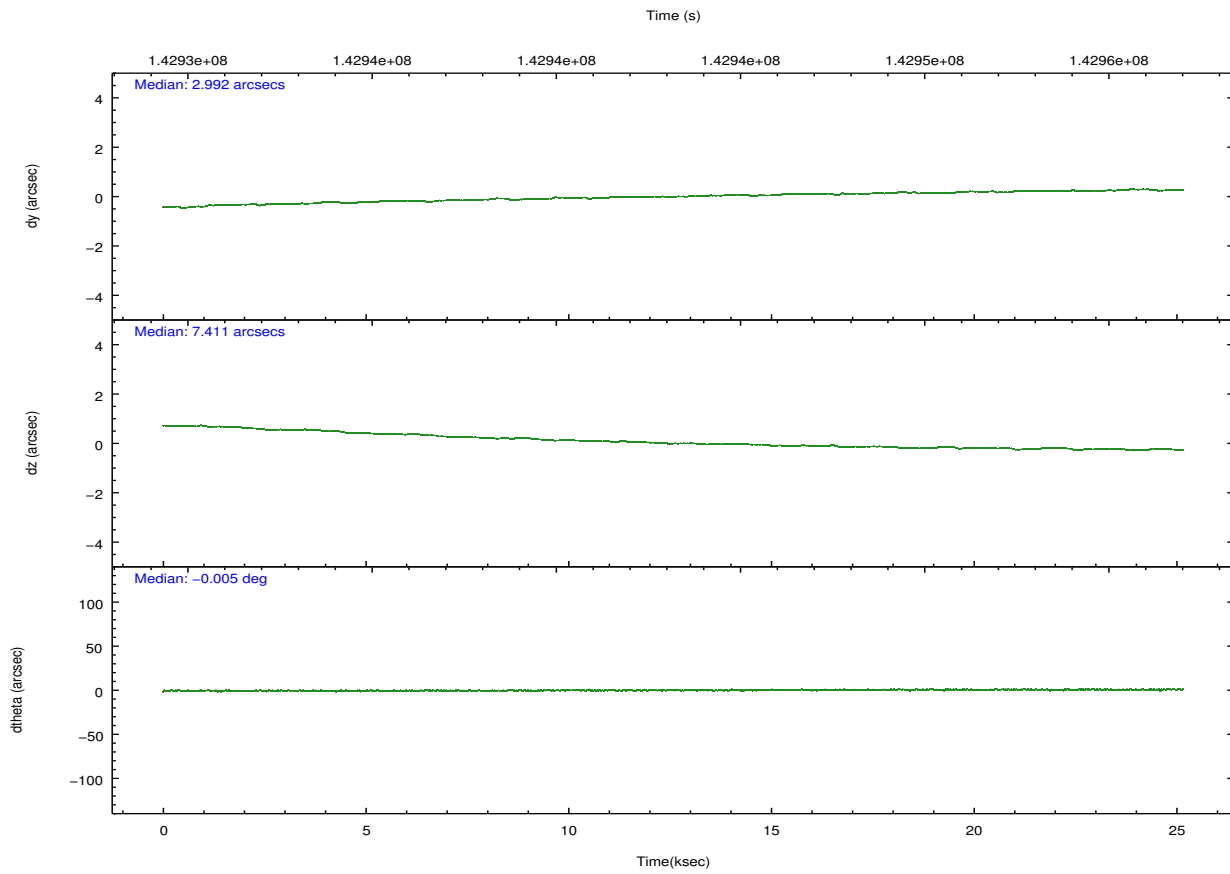
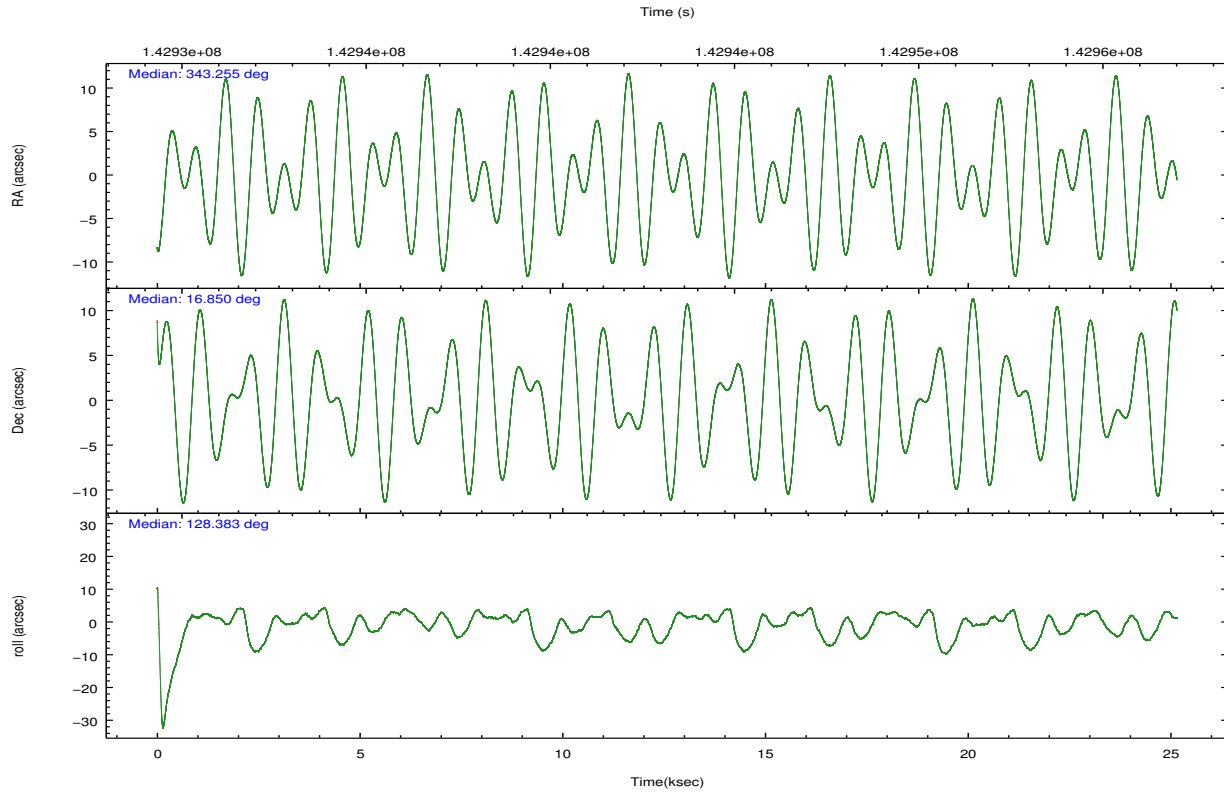
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	196479	265442	183872	240132	224023	176307	grade 0 events	8720	20025	12601	9855	17505	8941
rejected events	175987	147389	159241	143796	178359	156070		4%	7%	6%	4%	7%	5%
rejected %	89%	55%	86%	59%	79%	88%	grade 1 events	107	316	98	346	128	94
								0%	0%	0%	0%	0%	0%
							grade 2 events	5366	35331	4683	20298	9862	4319
								2%	13%	2%	8%	4%	2%
							grade 3 events	1956	5012	2258	9534	4709	2058
								0%	1%	1%	3%	2%	1%
							grade 4 events	1914	4895	2169	9300	4362	2016
								0%	1%	1%	3%	1%	1%
							grade 5 events	6477	19200	7628	22822	9676	7686
								3%	7%	4%	9%	4%	4%
							grade 6 events	3795	60753	4118	53286	11603	4140
								1%	22%	2%	22%	5%	2%
							grade 7 events	168144	119910	150317	114691	166178	147053
								85%	45%	81%	47%	74%	83%

## 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	343.281389	343.2547908300986	Subarray requested	NONE	NONE
[deg] Pointing Dec	16.840022	16.84974891969076	Alternating exposures requested	N	N
[deg] Pointing Roll	128.226194	128.390553640931	[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)	142930739.184000	142928854.68996			
Observation start date	2002-07-13T06:57:55	2002-07-13T06:27:34			
[s] Observation end time (MET)	142955739.184000	142956551.7286			
Observation end date	2002-07-13T13:54:35	2002-07-13T14:09:11			
Read mode	TIMED	TIMED			

## 2.3 Aspect



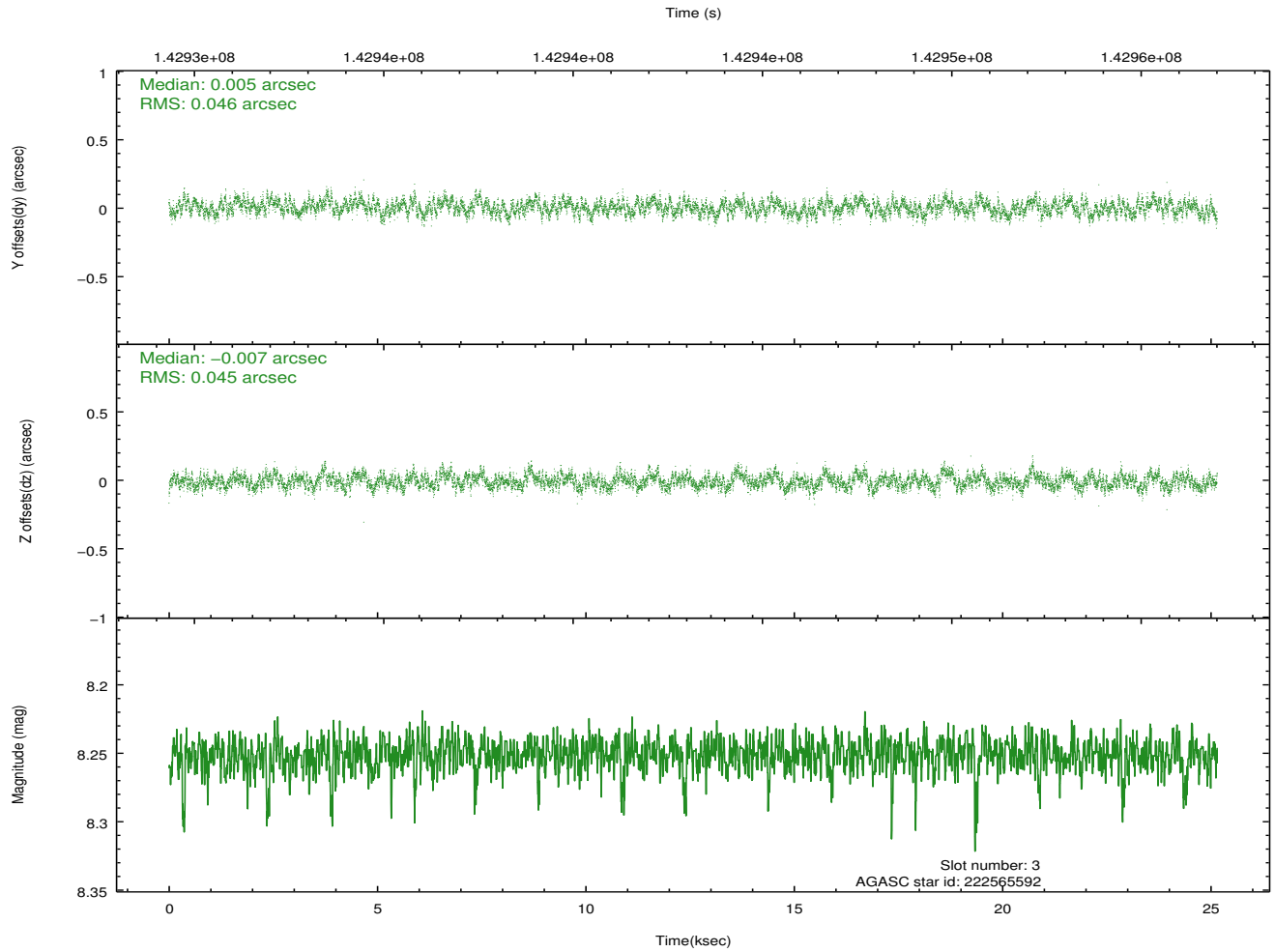
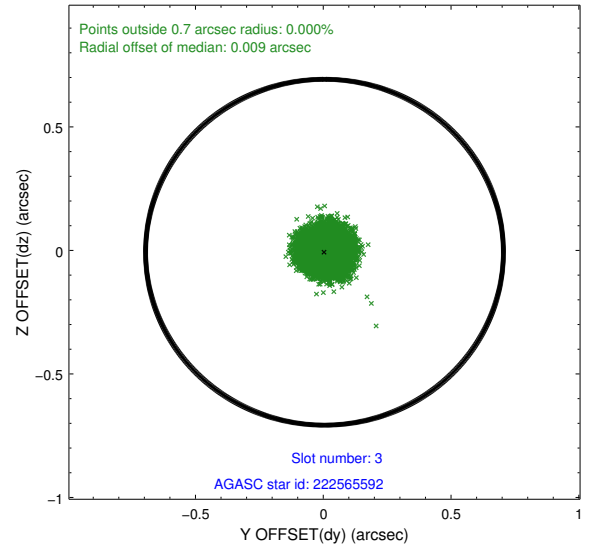
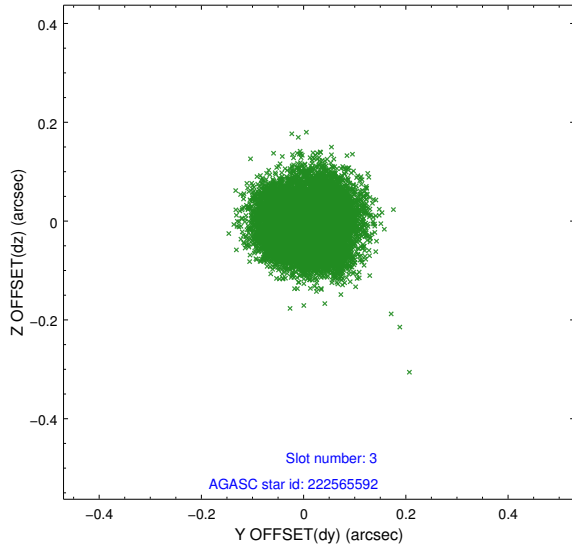


### Slot Statistics

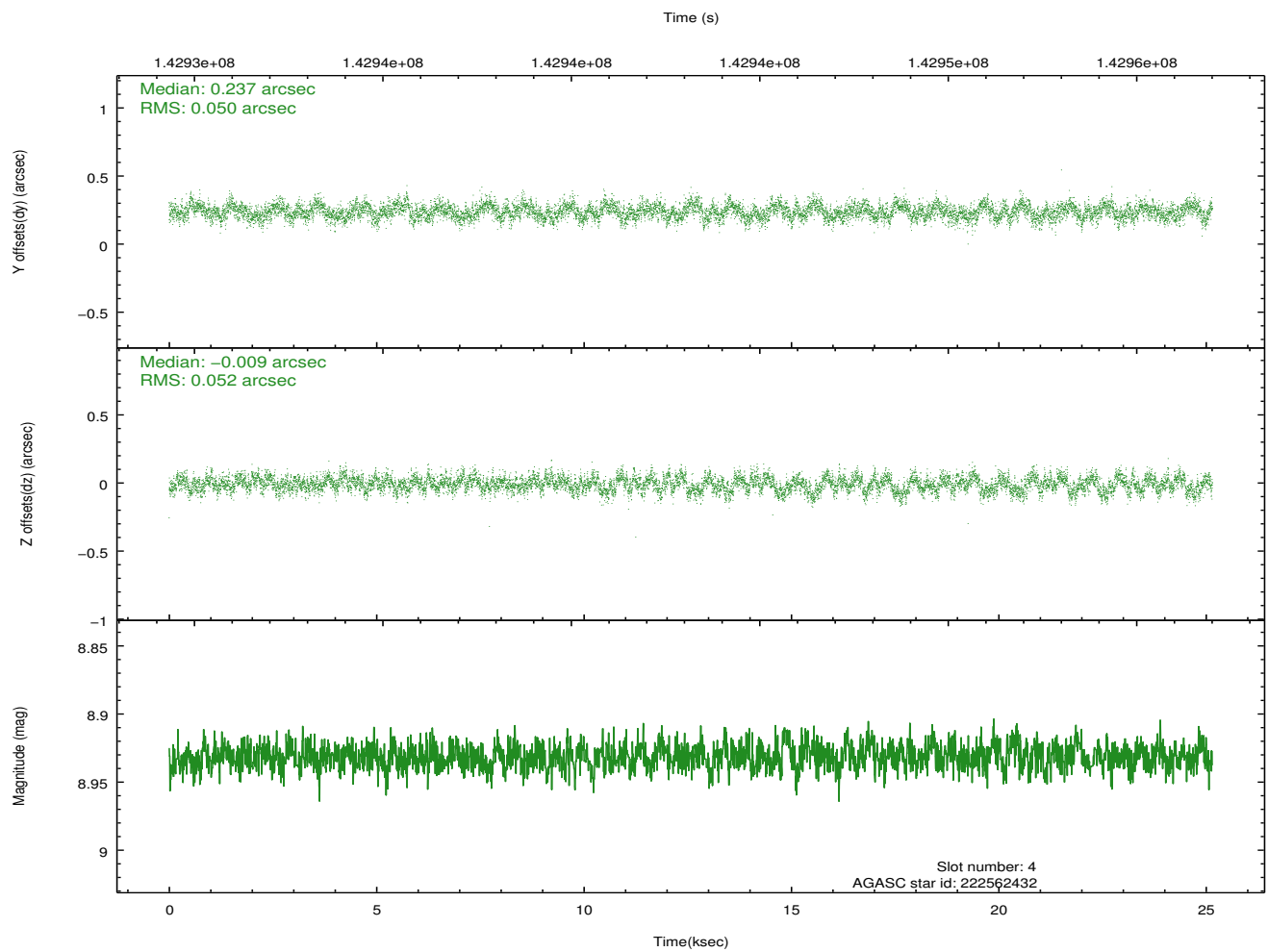
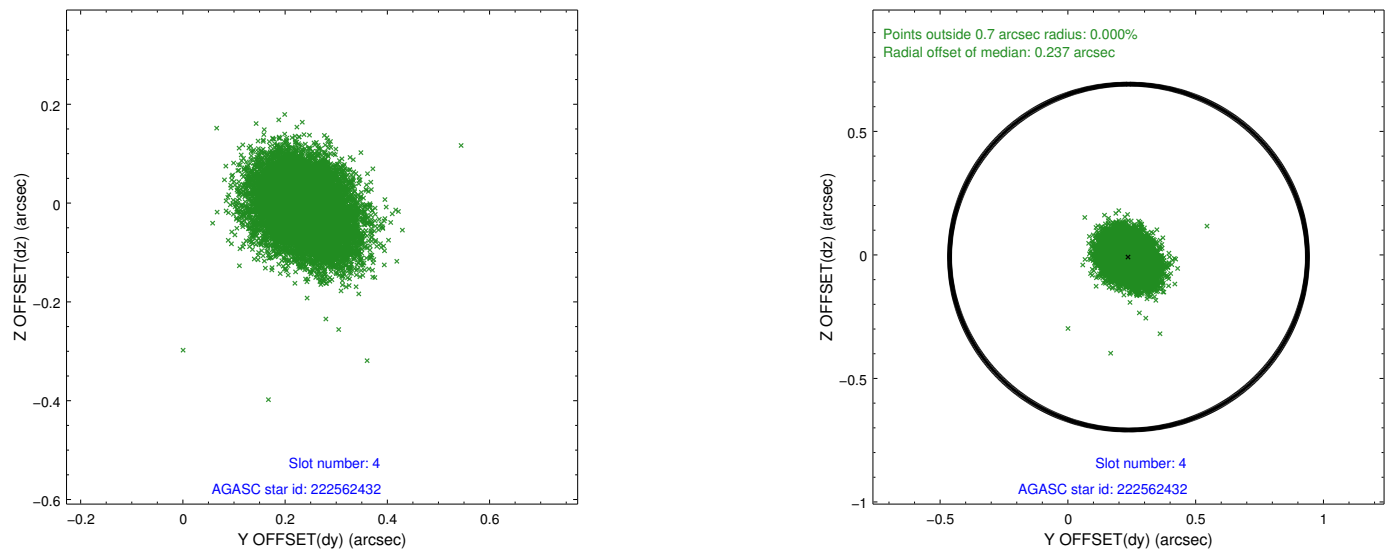
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	6134	-0.050	-0.034	0.012	0.020	0.000000	0.000000	-755.42	-1790.82
1	FID	ACIS-S-4	7.20	6134	0.012	0.033	0.010	0.018	0.000000	0.000000	2157.82	117.65
2	FID	ACIS-S-5	7.24	6134	0.006	0.009	0.015	0.028	0.000000	0.000000	-1808.09	111.35
3	GUIDE	222565592	8.25	12266	0.005	-0.007	0.070	0.108	343.291662	16.508291	-960.60	711.85
4	GUIDE	222562432	8.93	12268	0.237	-0.009	0.077	0.124	343.698150	16.309399	-2390.83	50.22
5	GUIDE	222563736	8.82	12265	0.071	-0.159	0.080	0.126	343.076284	16.308502	-1065.28	1740.60
6	GUIDE	223089808	9.09	12266	-0.346	0.216	0.078	0.126	343.220223	17.508272	2018.96	-1322.65
7	GUIDE	222571232	9.54	12265	0.037	-0.039	0.132	0.204	343.021766	16.540282	-293.18	1371.70

## 2.4 Star Slots

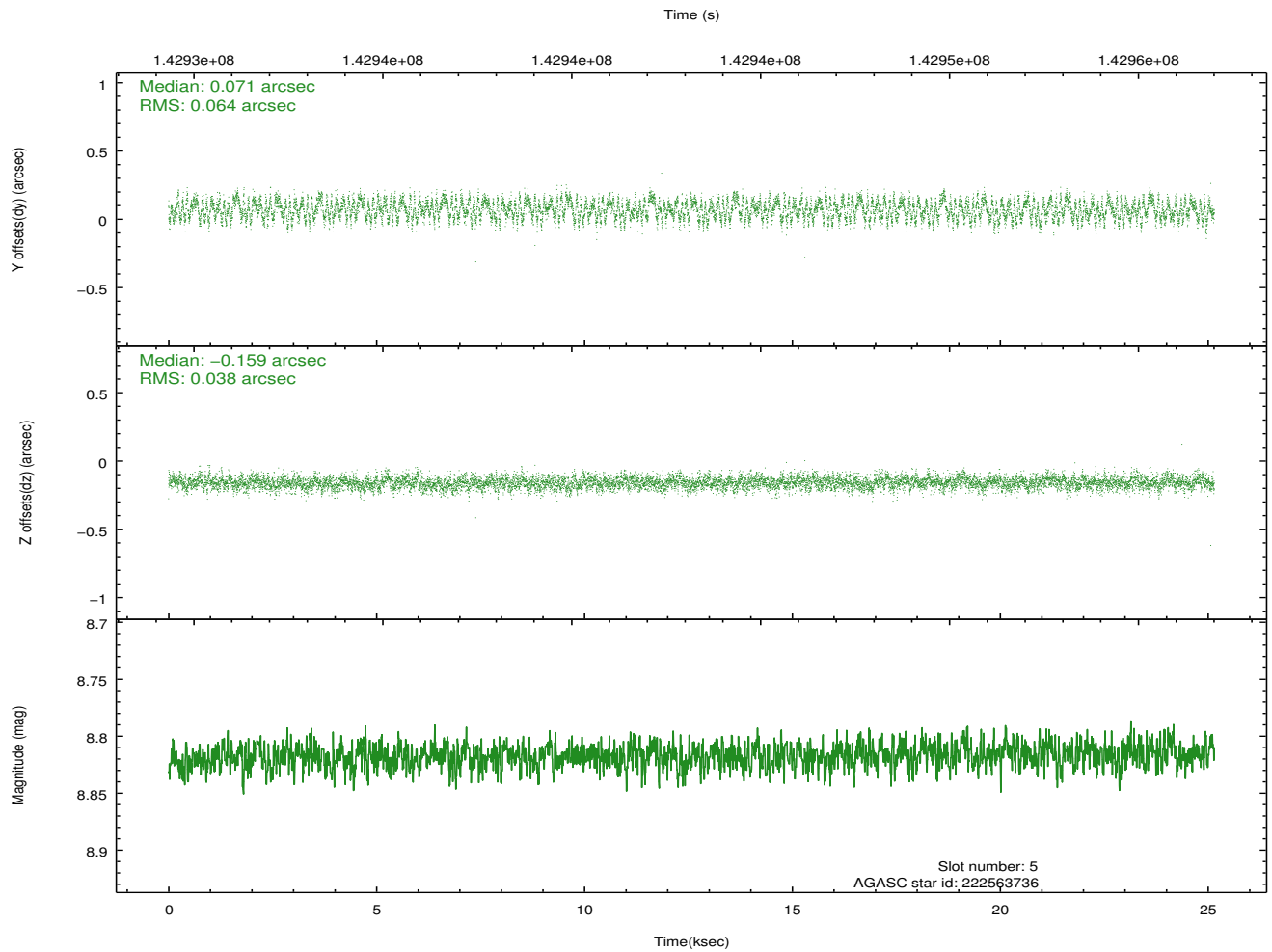
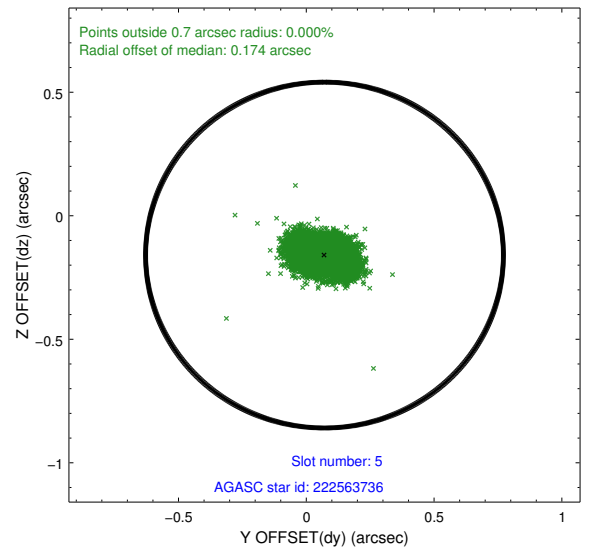
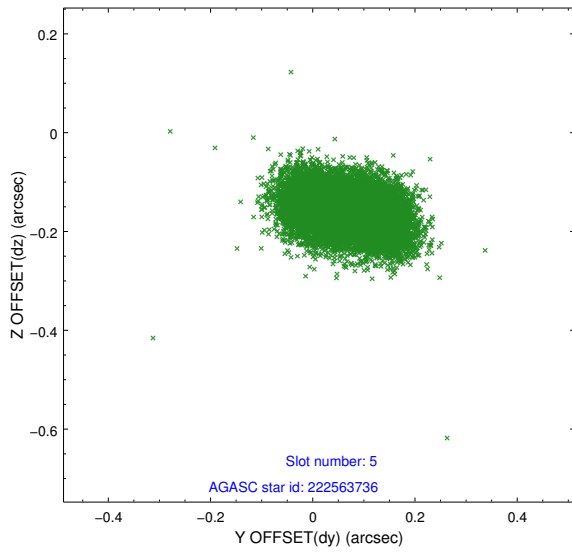
### 2.4.1 Slot 3



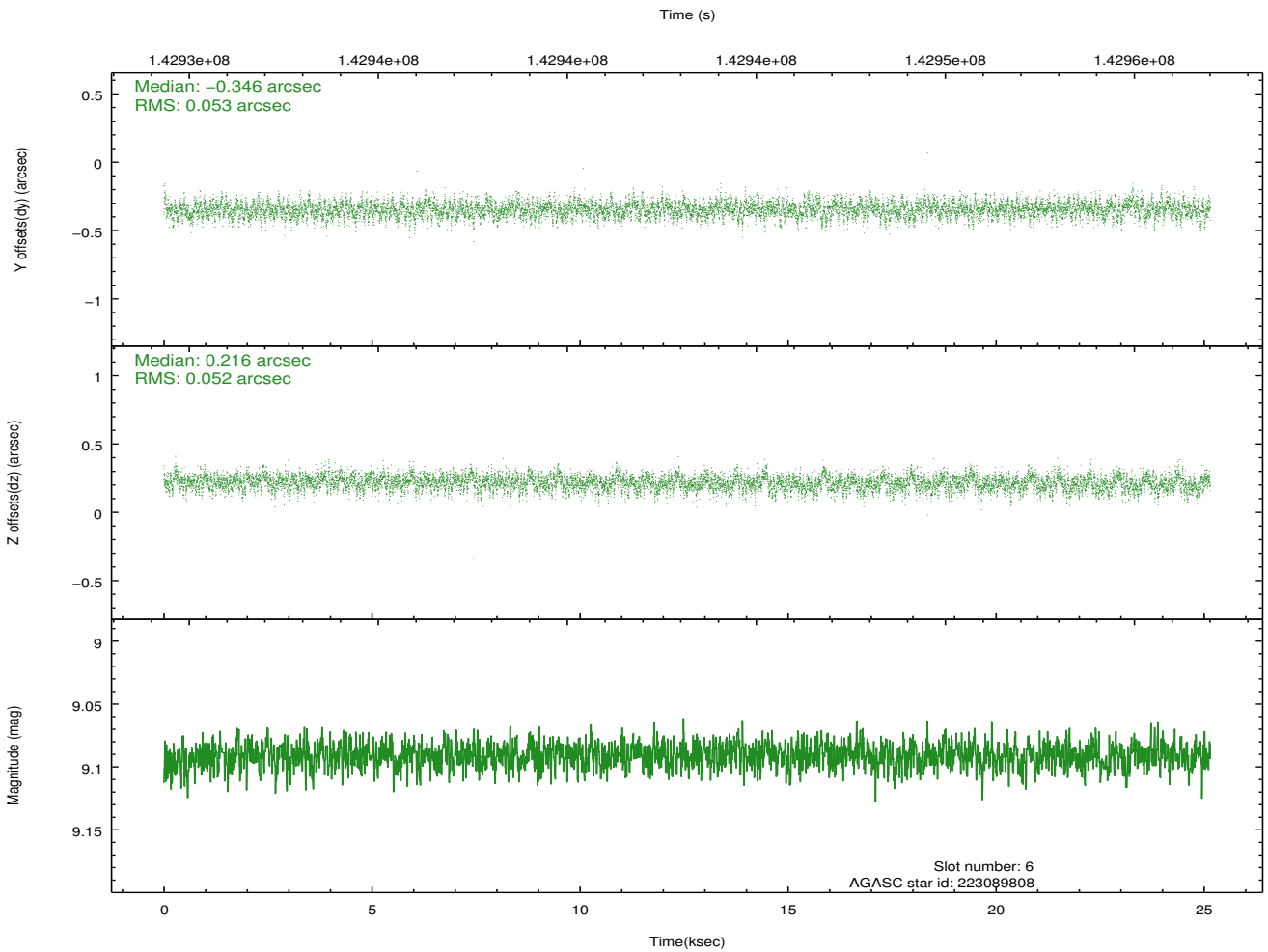
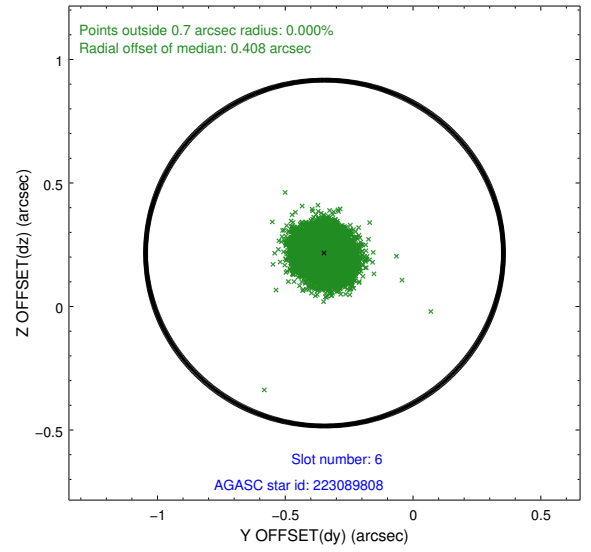
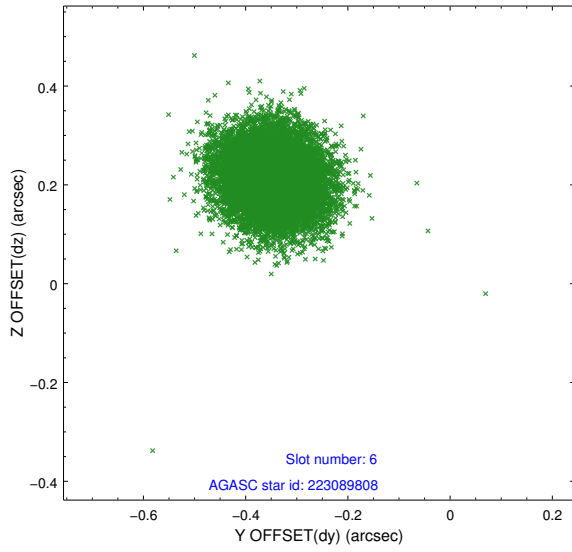
## 2.4.2 Slot 4



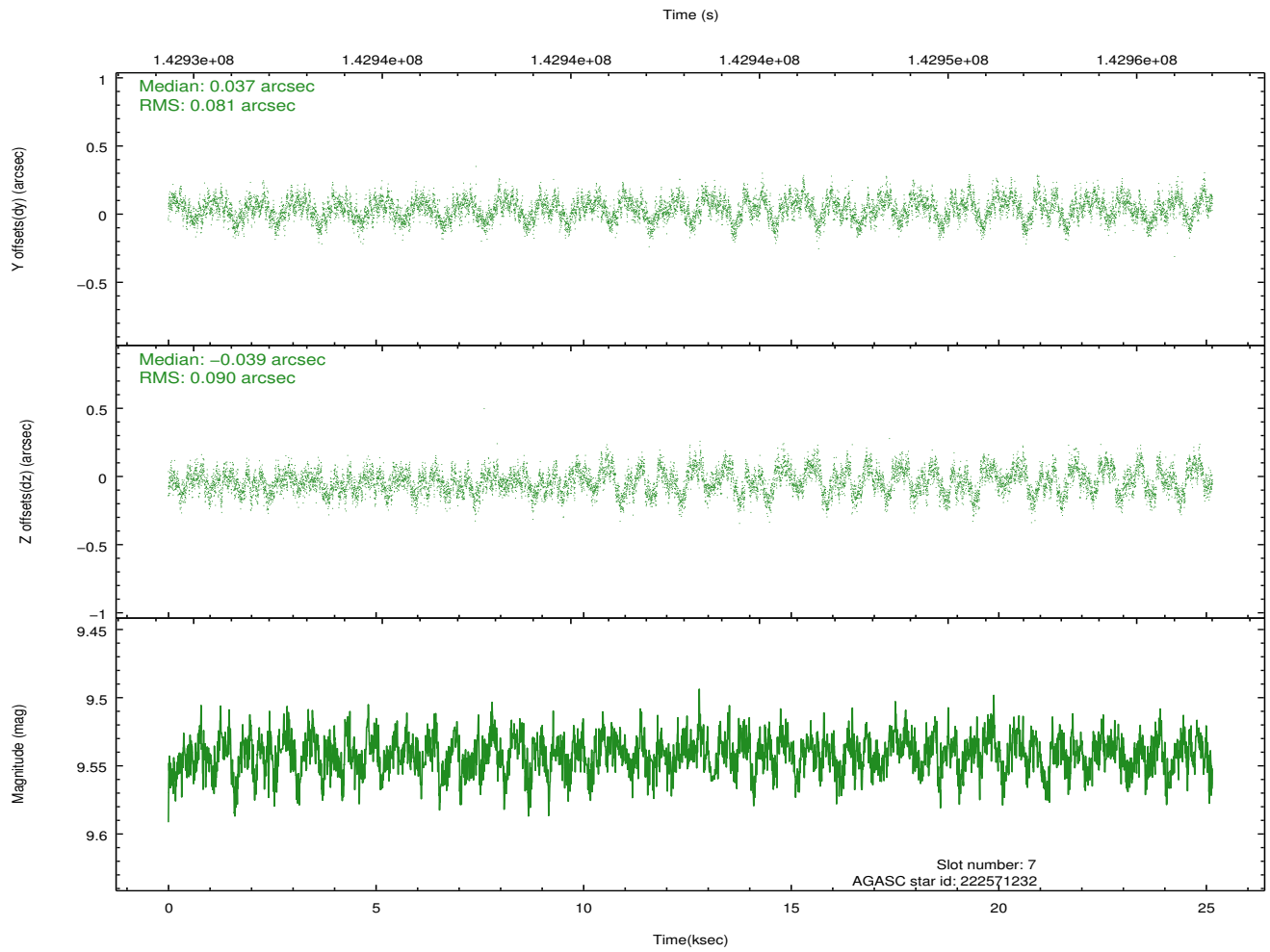
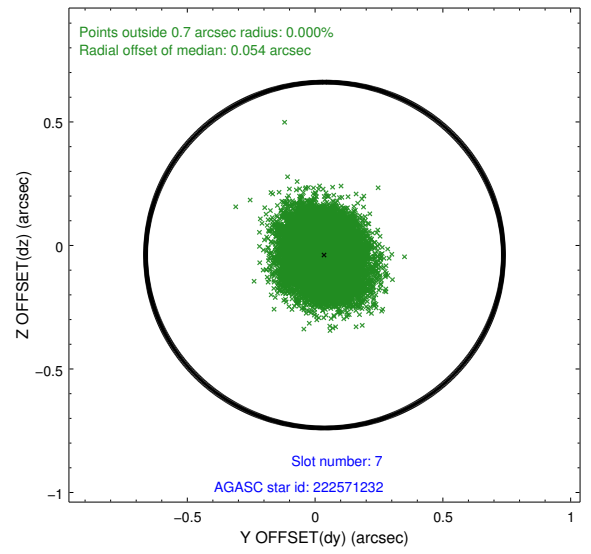
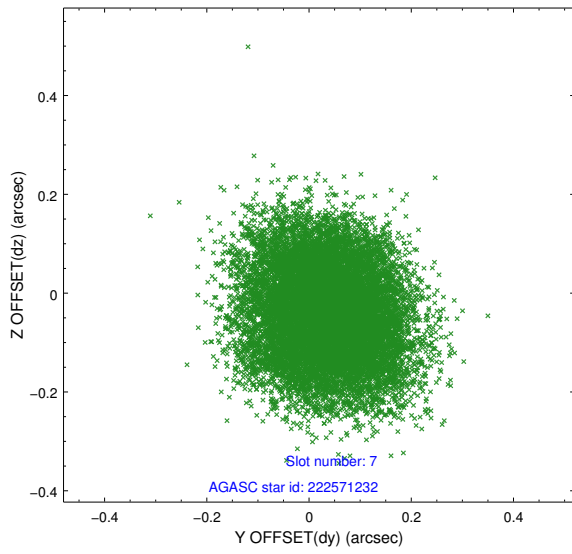
### 2.4.3 Slot 5



## 2.4.4 Slot 6

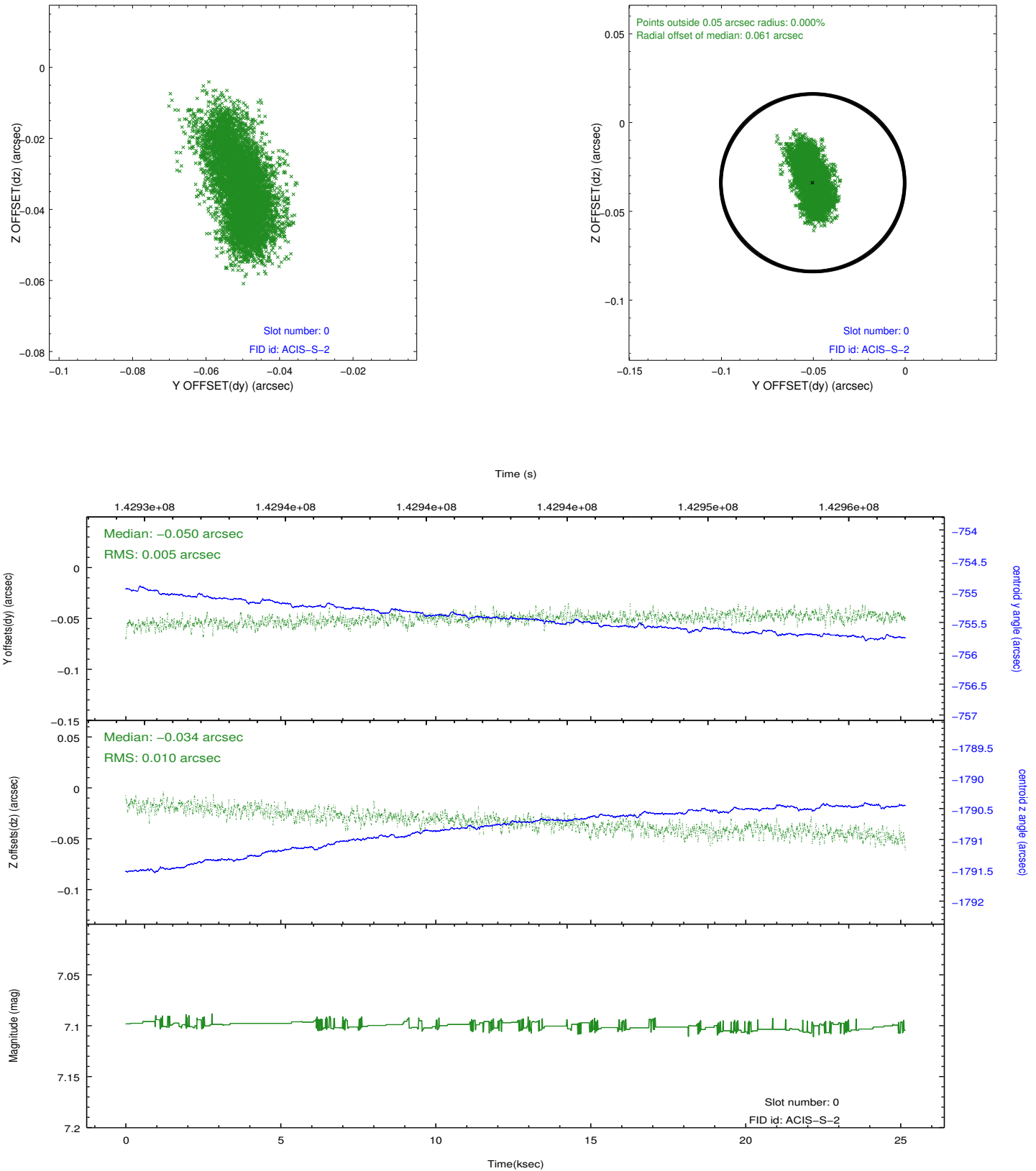


## 2.4.5 Slot 7

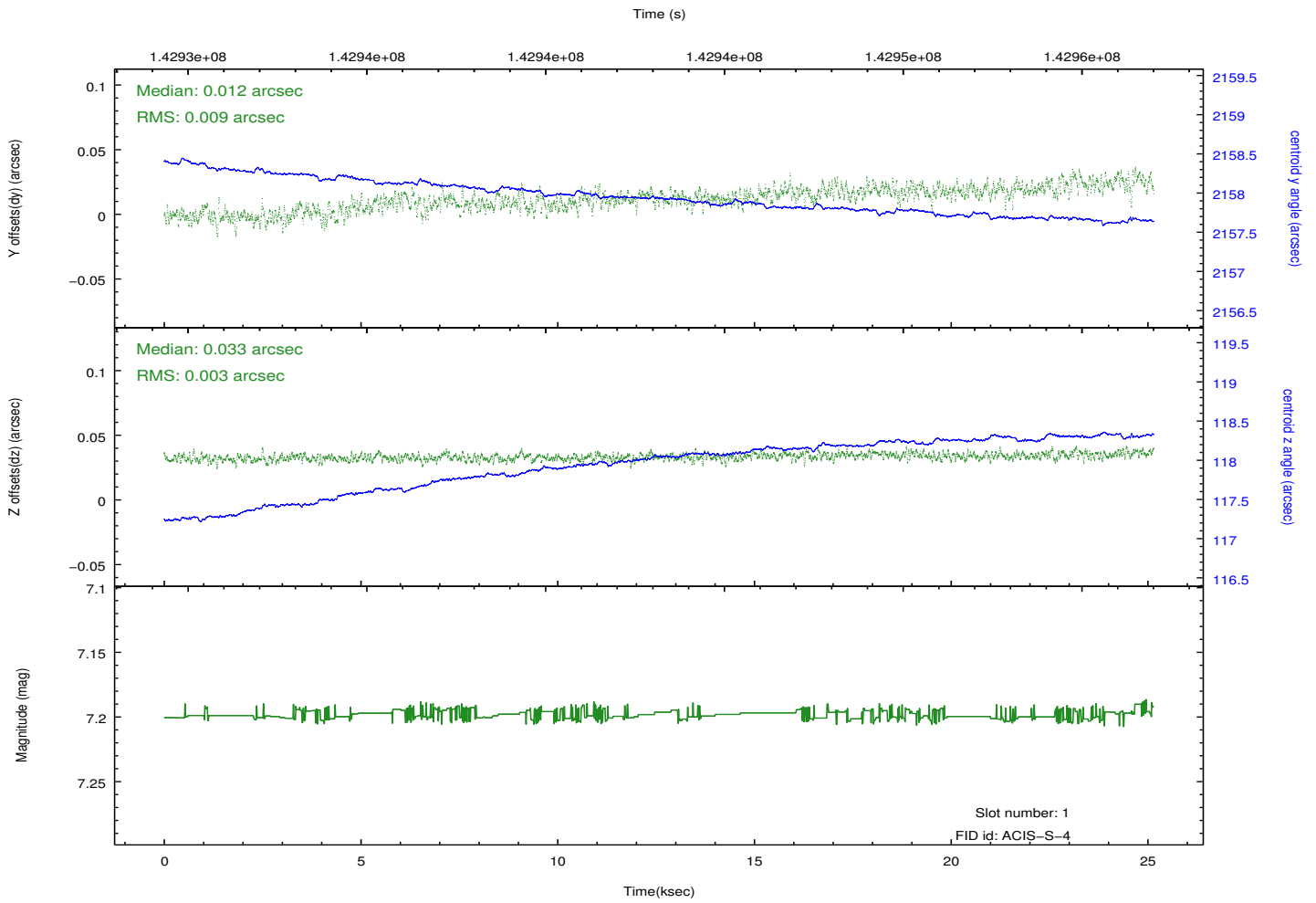
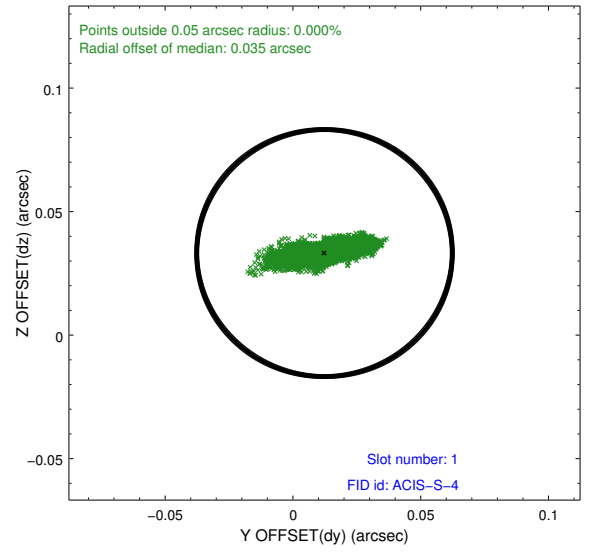
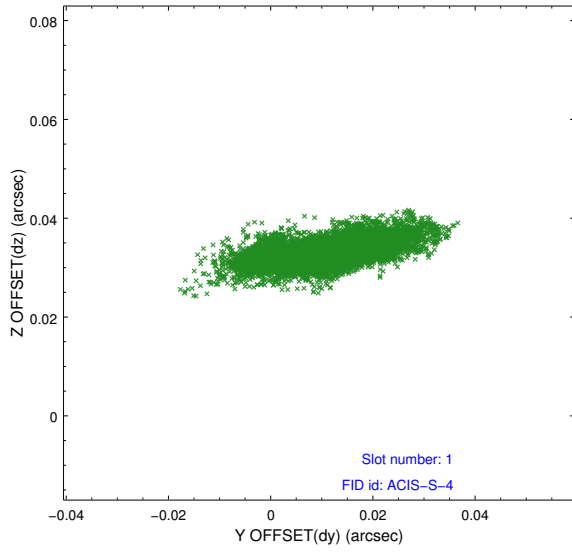


## 2.5 FID Slots

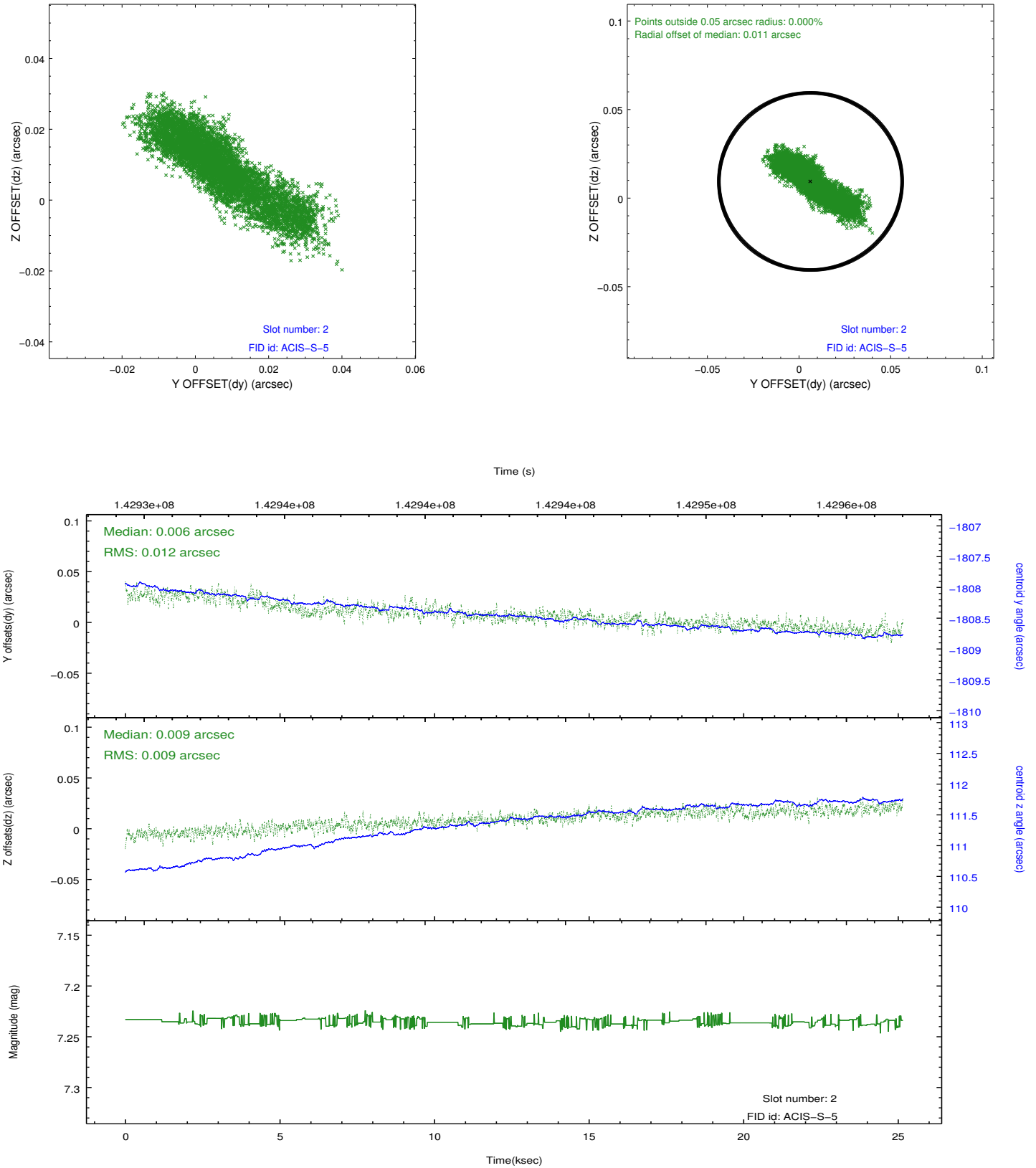
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

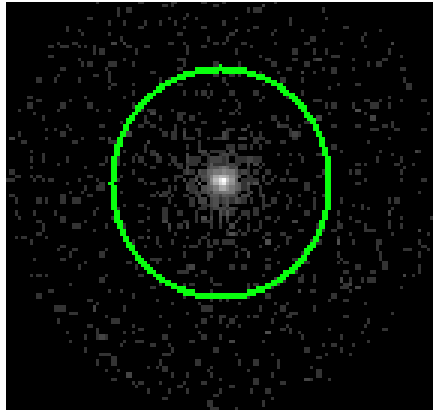


### 3 Gratings

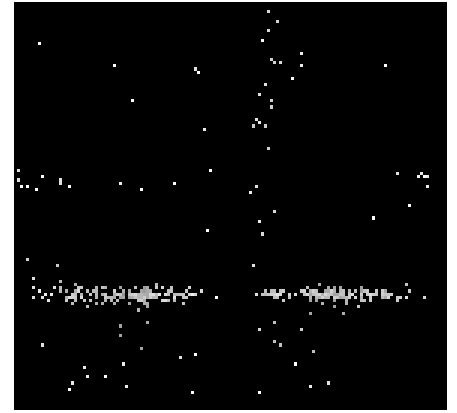
#### 3.1 HEG Arm



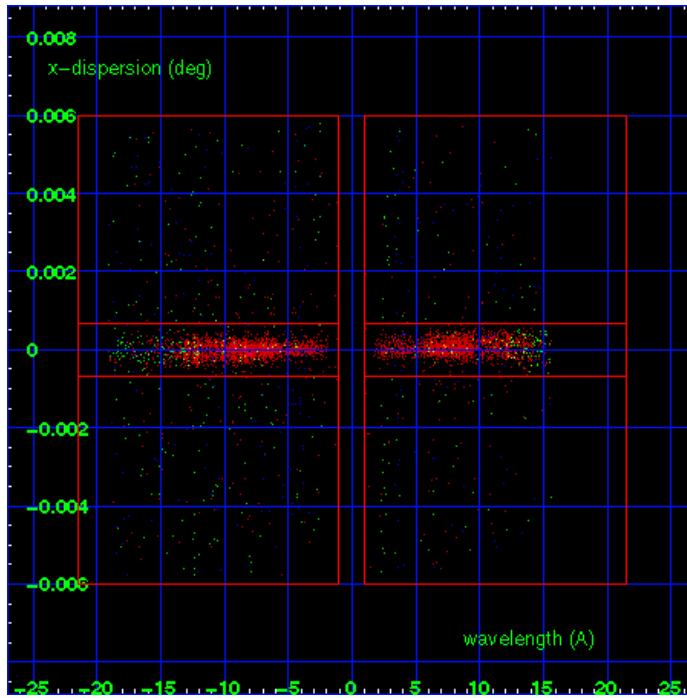
HEG Order Sort 123



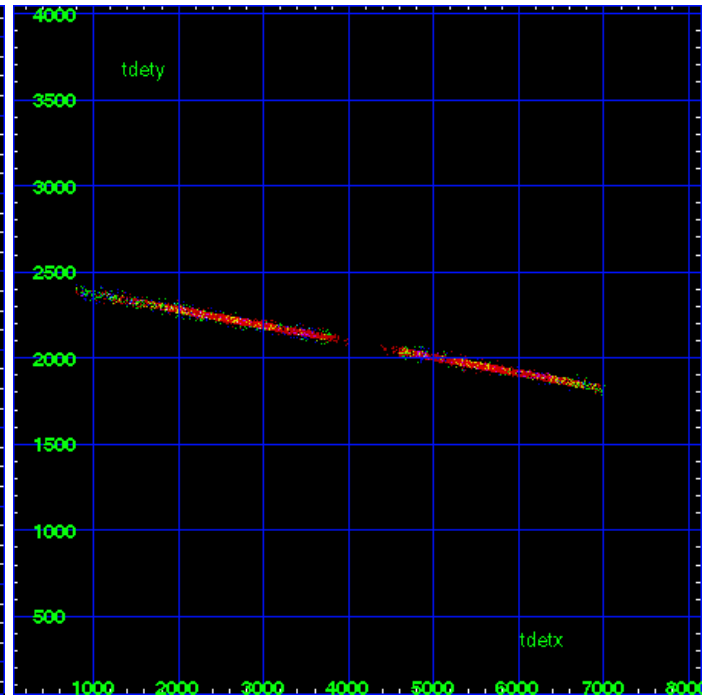
HEG Zero Order



HEG Order Sort ALL

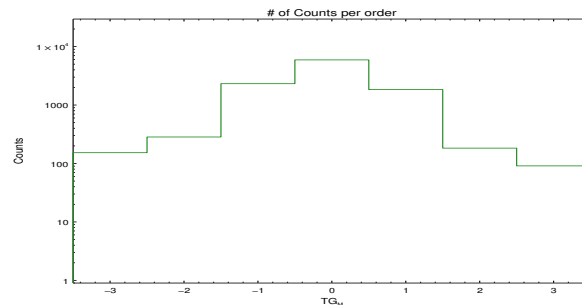


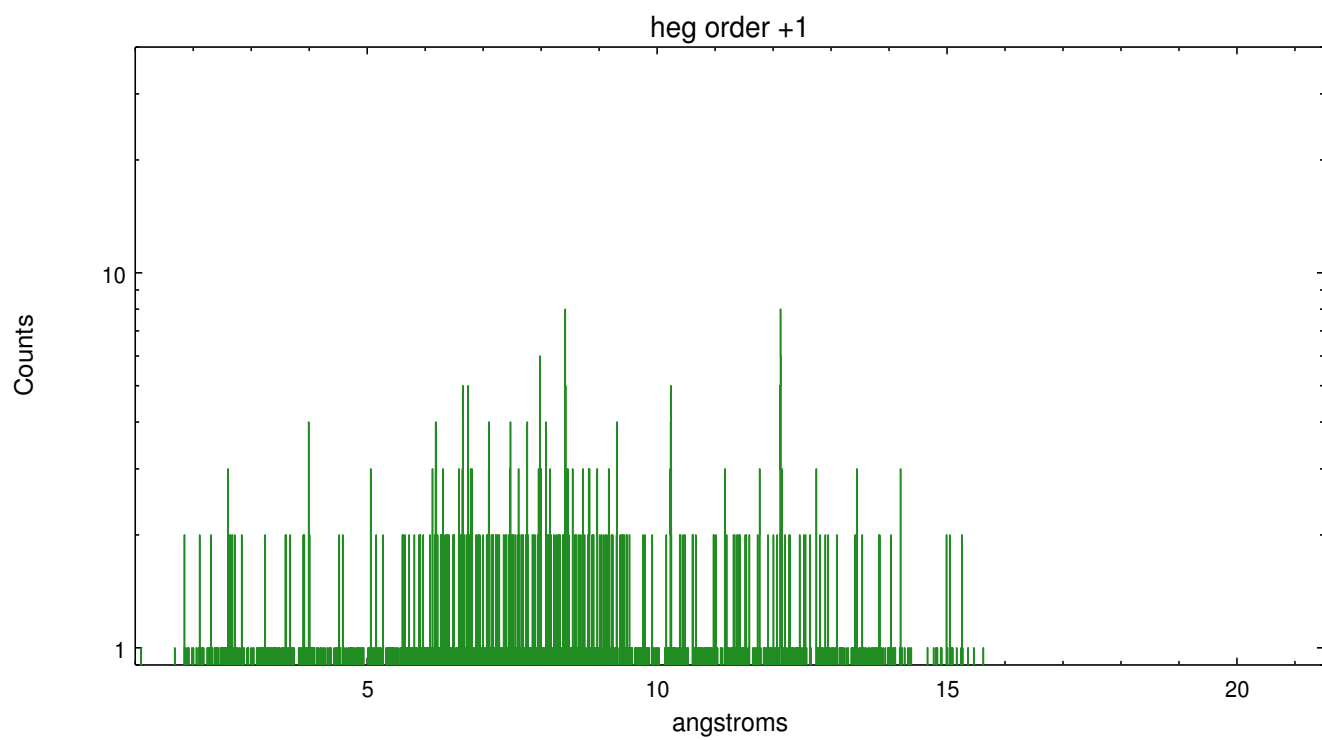
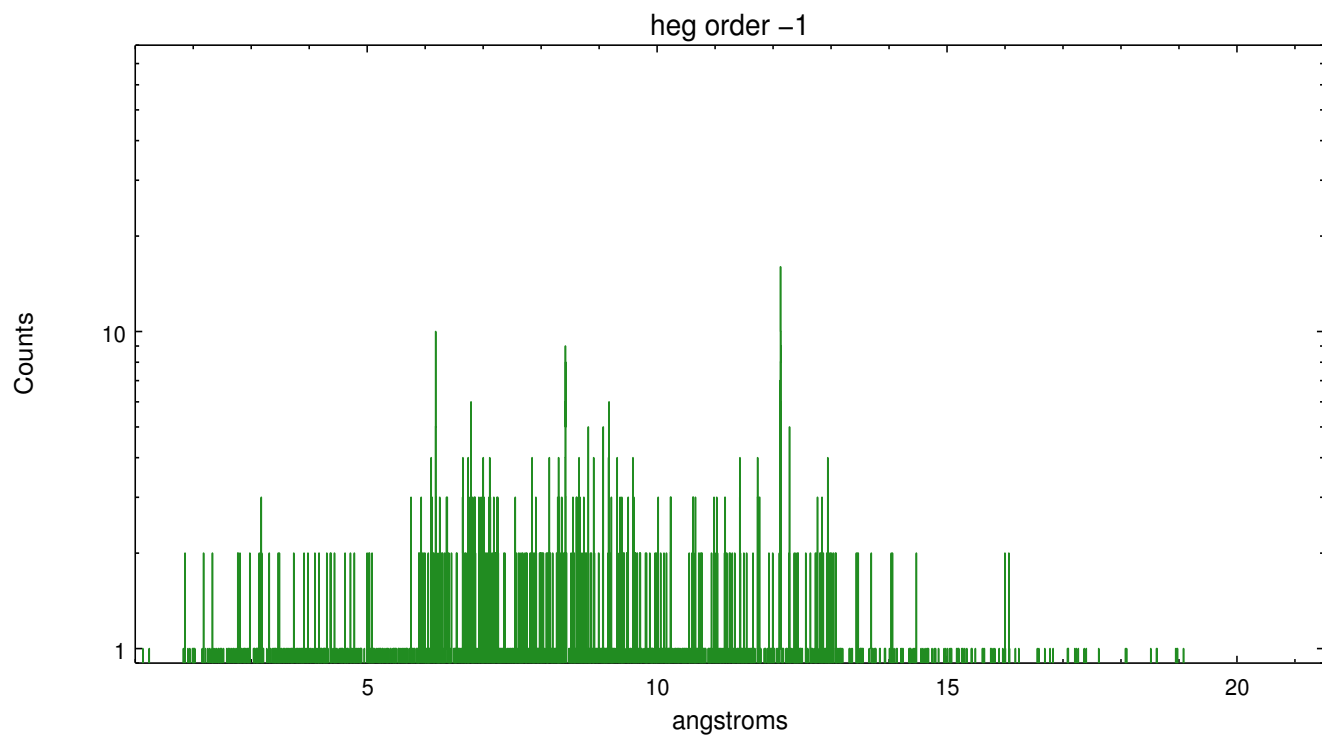
Spot Image HEG



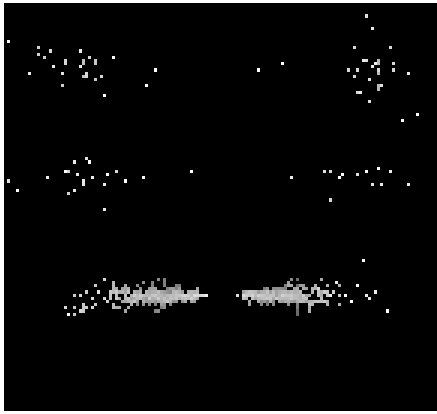
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	153	284	2321	5922	1839	183	91

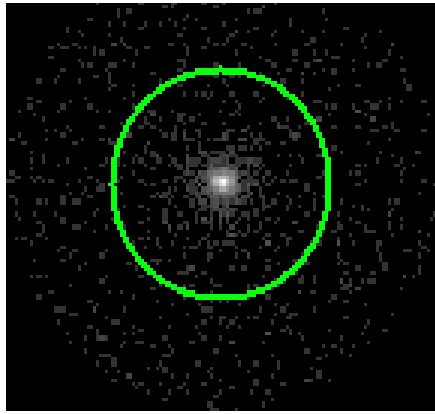




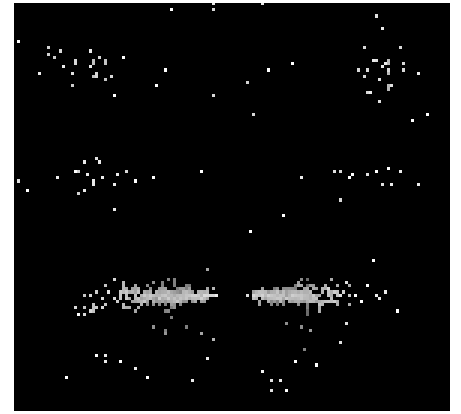
### 3.2 MEG Arm



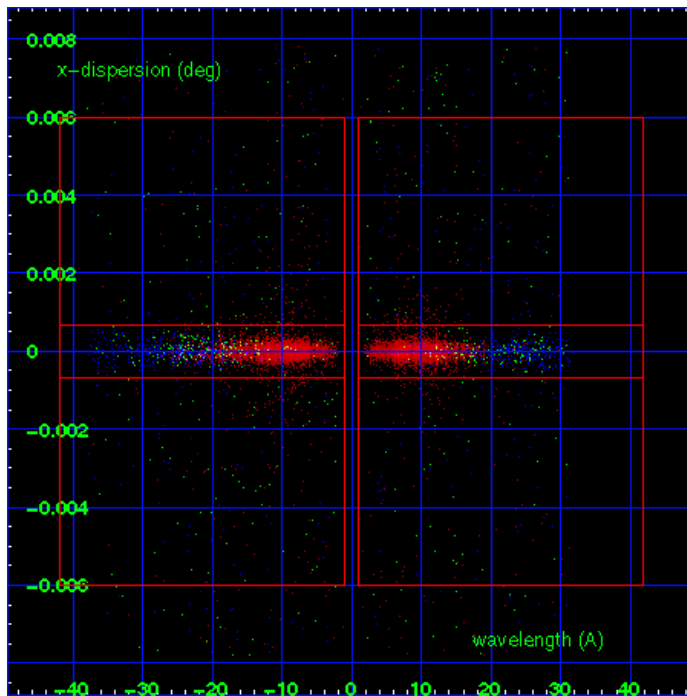
MEG Order Sort 123



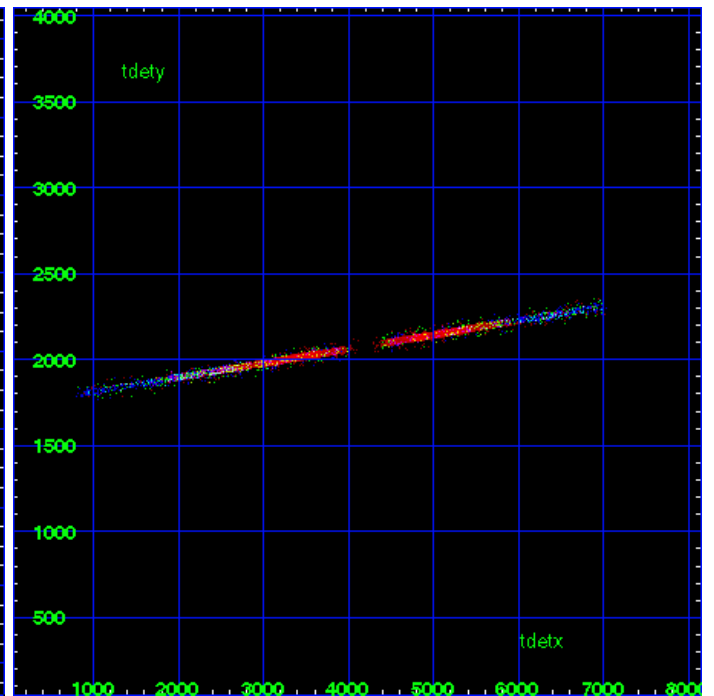
MEG Zero Order



MEG Order Sort ALL

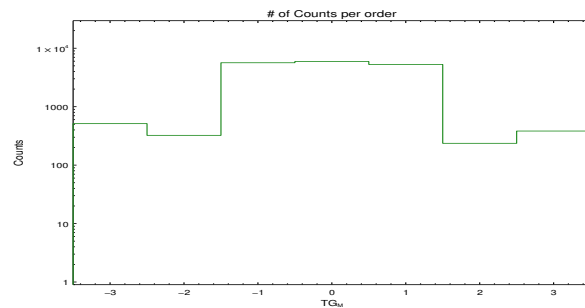


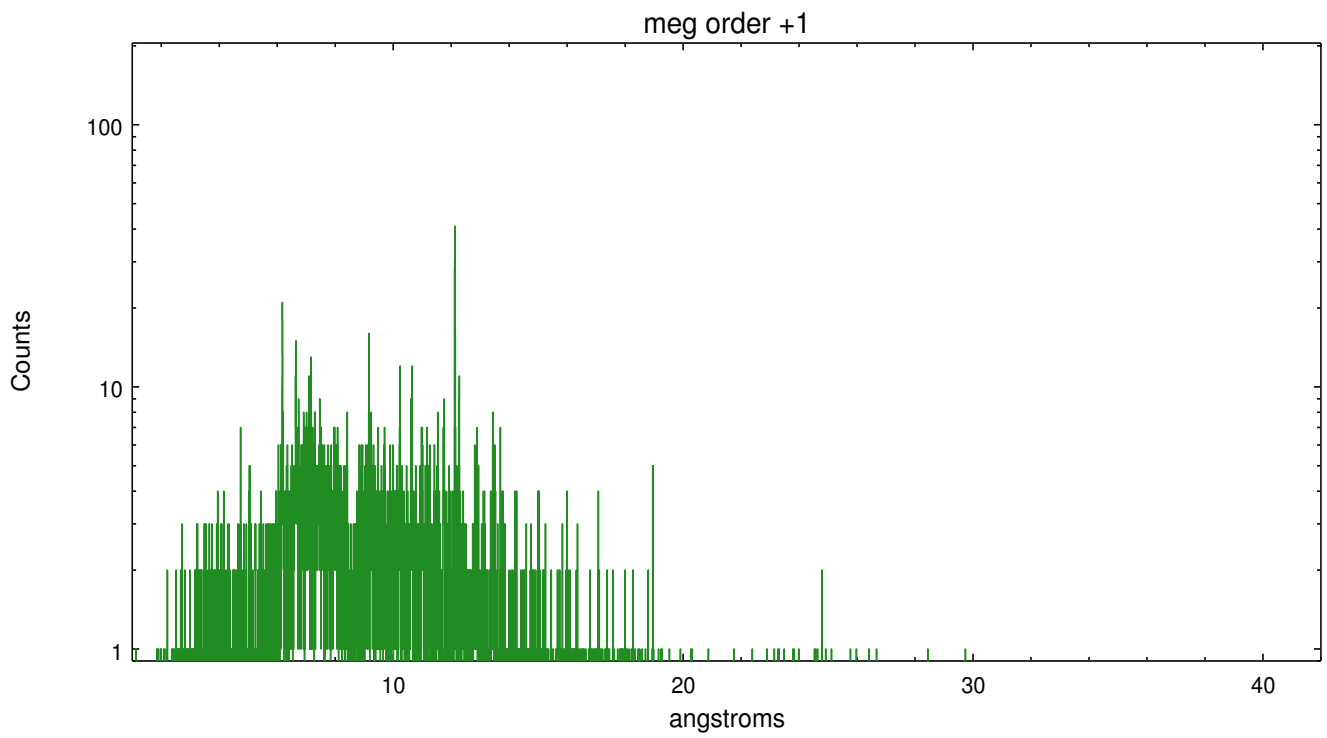
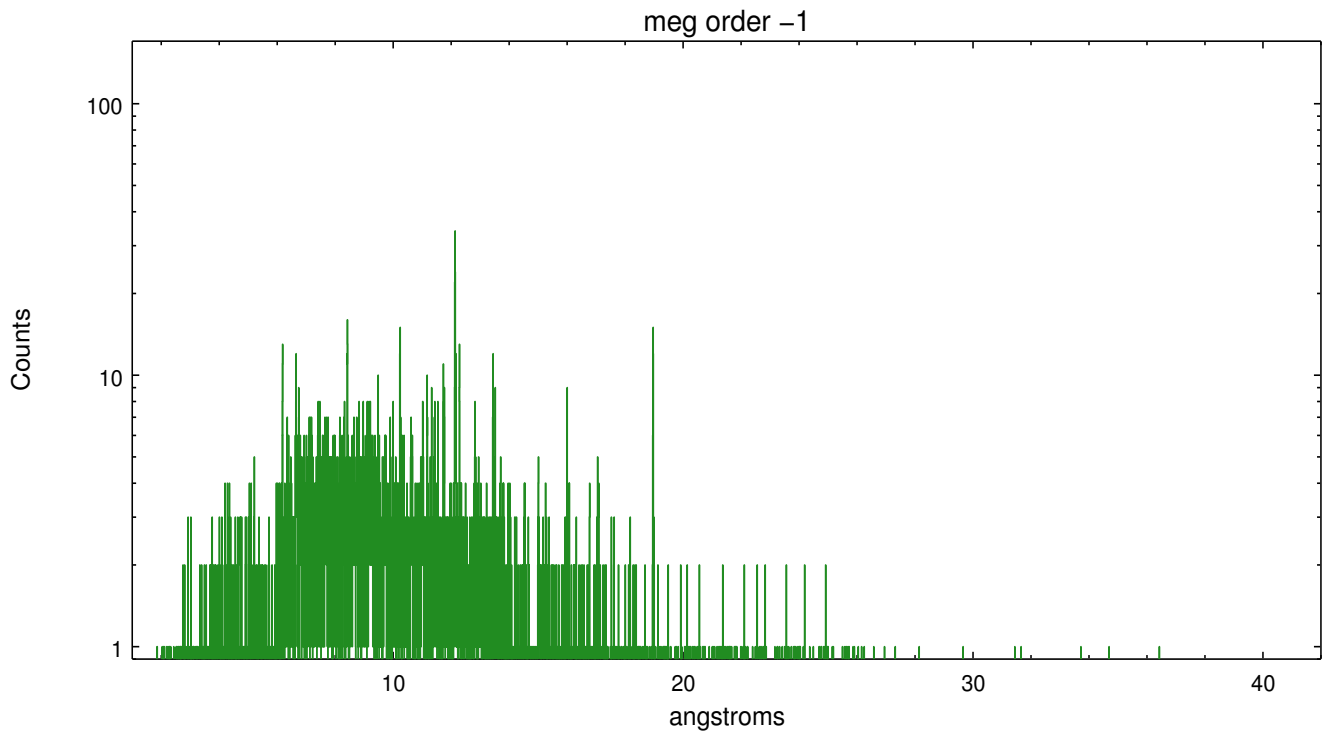
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	513	323	5648	5922	5277	236	383





# 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	25.145

## A.2 Comments