

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.2

Observation 4760 - L2 Version 001  
Chandra X-Ray Center

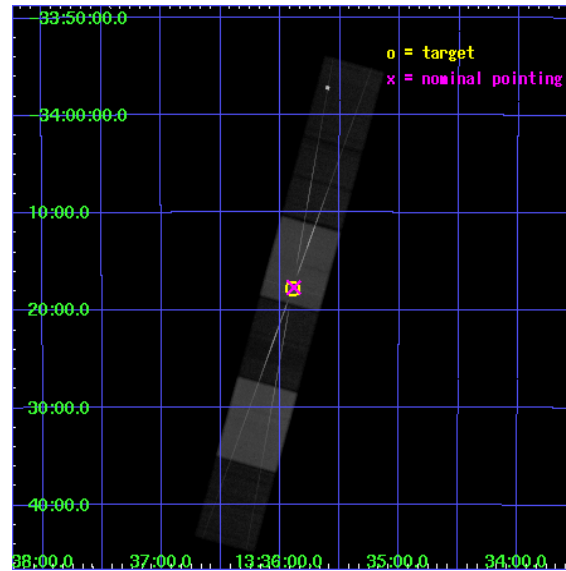
L2 Processing Date : May 18 2006

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# 1 Front

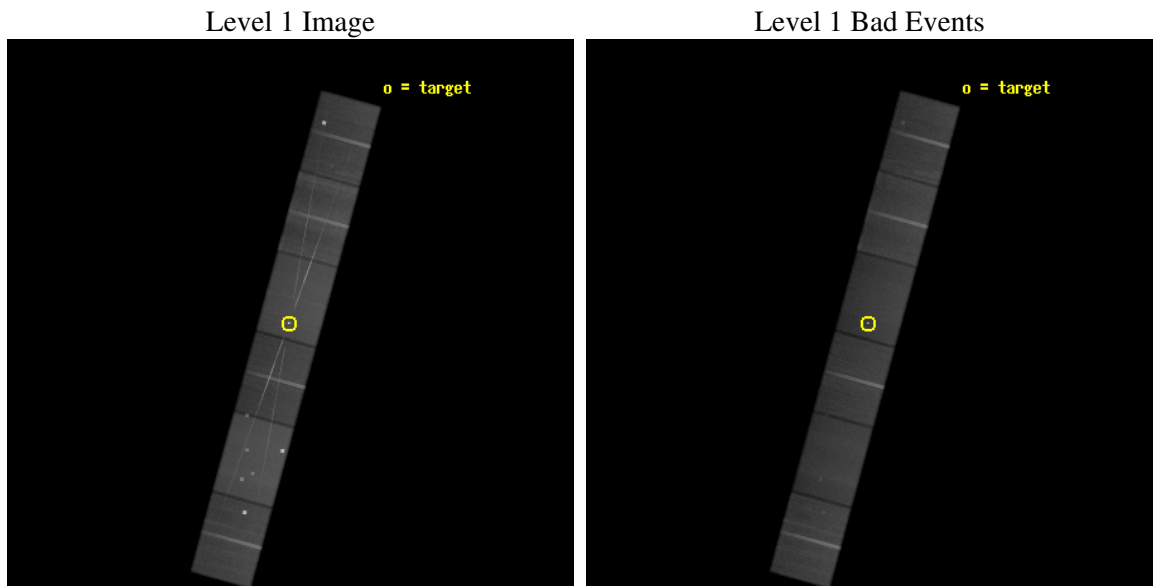
seq_num	700845
obs_id	4760
title	DISSECTING THE ENVIRONMENT OF MCG--6-30-15 WITH THE HETGS
observer	Prof. Claude Canizares
object	MCG--6-30-15
dtcycle	0
cycle	P
ra_targ	203.97375
dec_targ	-34.295833
ra_nom	203.9713233207
dec_nom	-34.294827645701
roll_nom	285.35526422259
revision	2
ontime	172272.5
livetime	169490.14970248
ontime4	172267.41798961
ontime5	172272.5
ontime6	172272.5
ontime7	172272.5
ontime8	172272.5
ontime9	172272.5
l2events	1805468



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

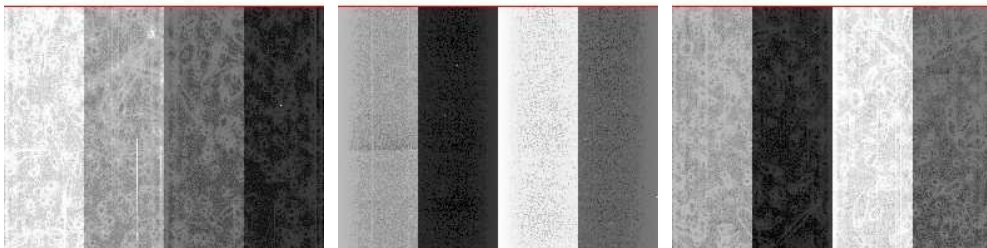


#### 2.1.2 Bias

Chip 4

Chip 5

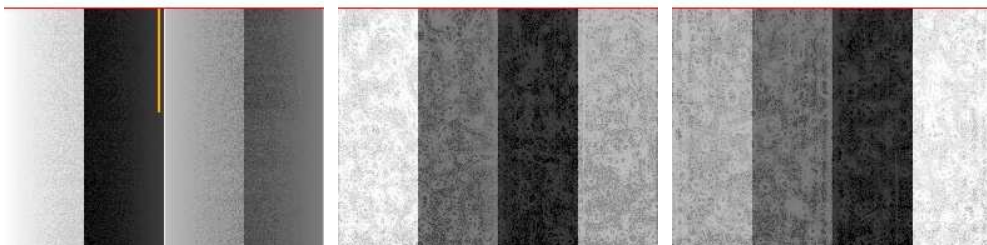
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.2
caldbver	3.2.2
date	2006-05-18T08:46:11
revision	2

sched_exp_time	172107.314000
ontime	172687.44461599
ontime4	172557.85164559
ontime5	172687.4446359
ontime6	172568.01576594
ontime7	172687.44461599
ontime8	172570.55675611
ontime9	172578.17987612
l1events	7413116

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	1142013	1509080	1050261	1426596	1263827	1021339
rejected events	948217	794378	856554	806869	964179	846724
rejected %	83%	52%	81%	56%	76%	82%

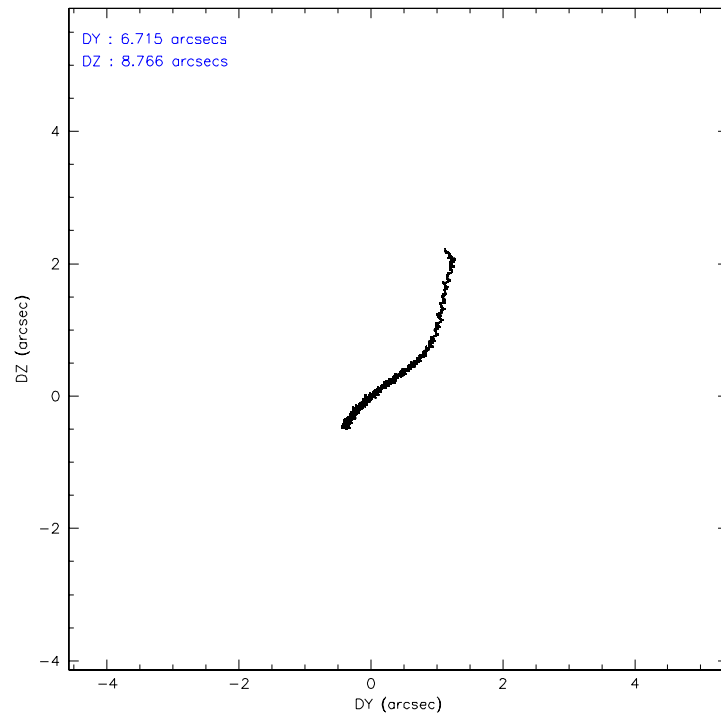
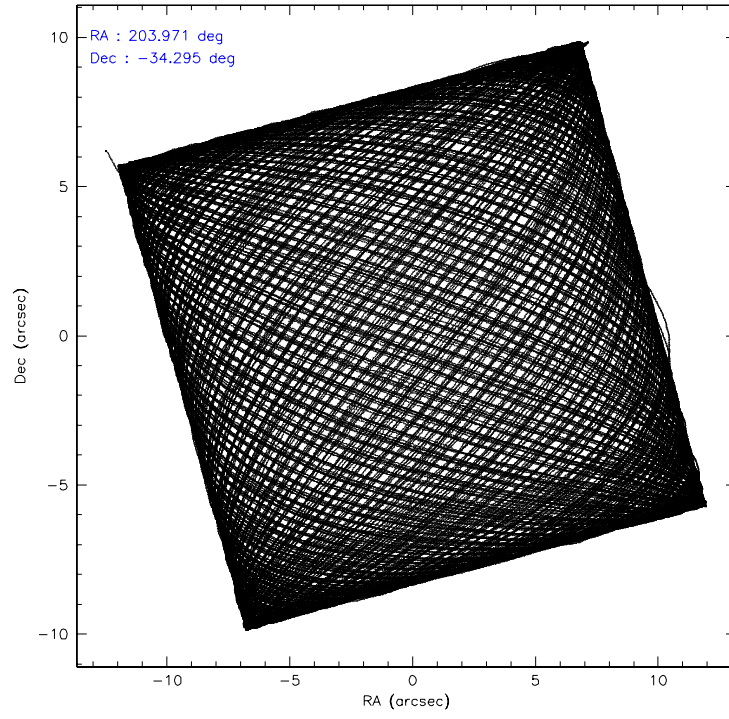
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	121157	116718	105036	51219	111106	99786
	10%	7%	10%	3%	8%	9%
grade 1 events	978	1478	616	1711	829	864
	0%	0%	0%	0%	0%	0%
grade 2 events	26787	202317	32633	151662	60834	25314
	2%	13%	3%	10%	4%	2%
grade 3 events	13246	18942	14787	40076	29571	13177
	1%	1%	1%	2%	2%	1%
grade 4 events	12520	17792	14763	39354	27814	12579
	1%	1%	1%	2%	2%	1%
grade 5 events	40771	72415	42894	97646	56684	45758
	3%	4%	4%	6%	4%	4%
grade 6 events	20442	360717	26773	338742	70888	24133
	1%	23%	2%	23%	5%	2%
grade 7 events	906112	718701	812759	706186	906101	799728
	79%	47%	77%	49%	71%	78%

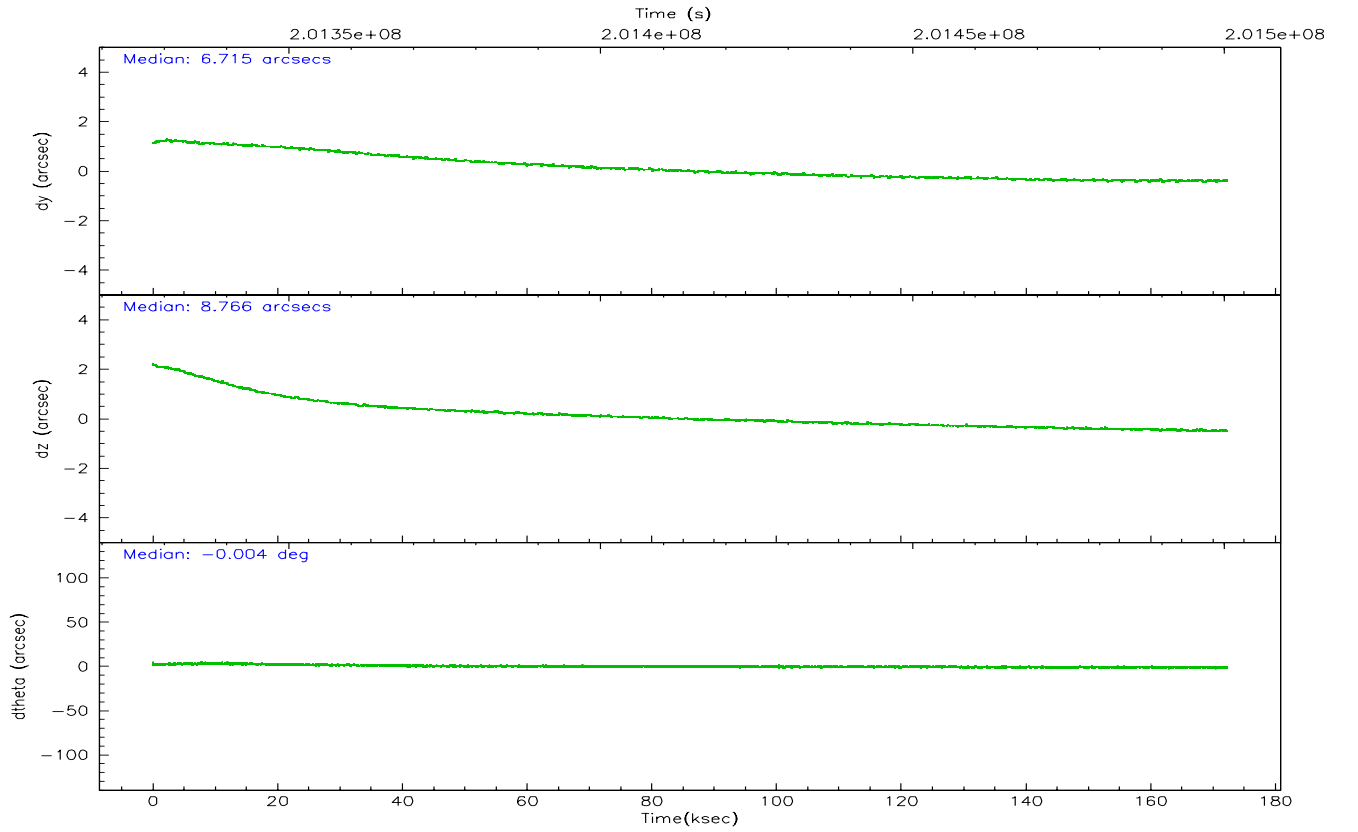
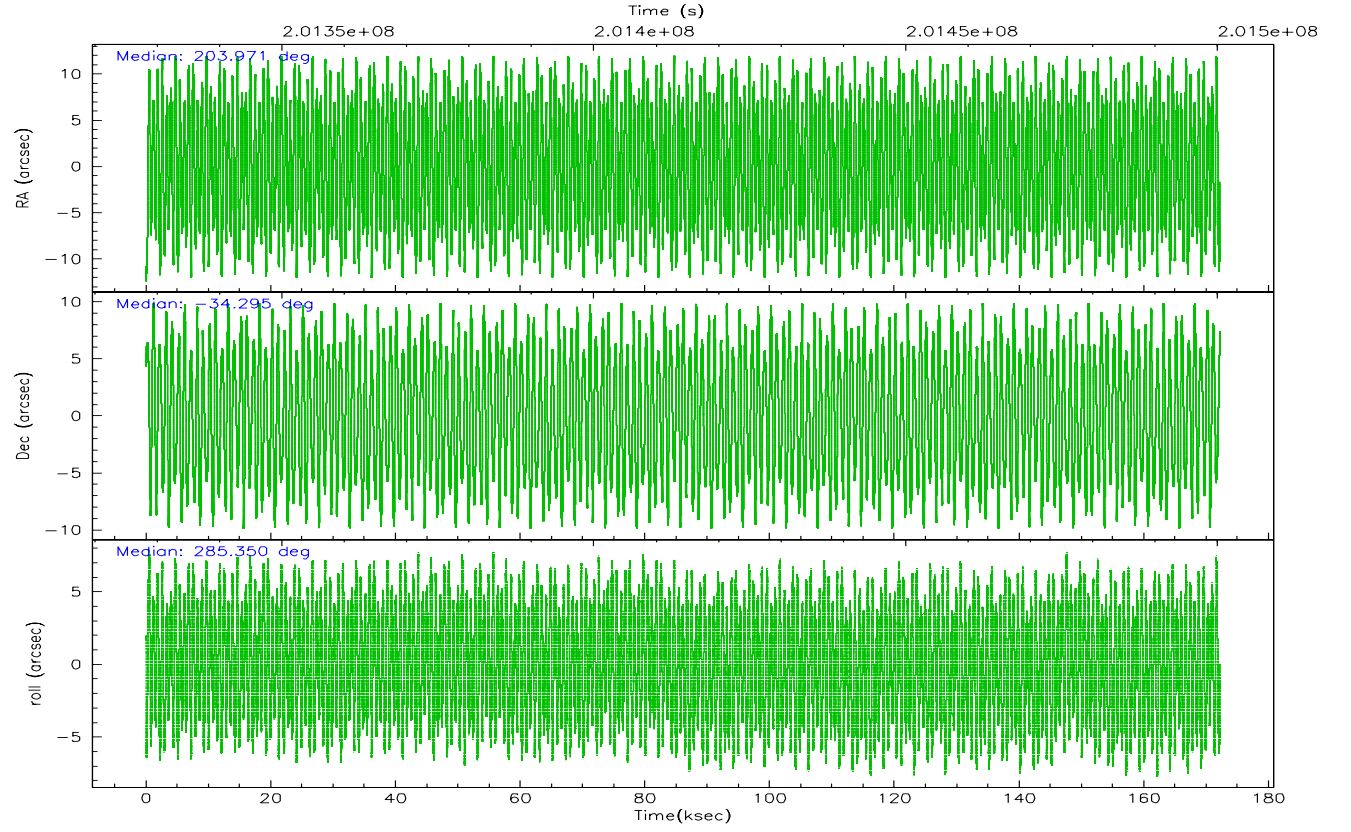


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	CUSTOM
Pointing RA	203.947580	203.9713233207032	Subarray start row	1	1
Pointing Dec	-34.275978	-34.29482764570147	Subarray row count	774	774
Pointing Roll	285.185264	285.3552642225943	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	2.5
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	201328351.184000	201327186.1628			
Observation start date	2004-05-19T04:31:27	2004-05-19T04:13:06			
Observation end time	201500458.184000	201500772.99547			
Observation end date	2004-05-21T04:19:54	2004-05-21T04:26:12			
Read mode	TIMED	TIMED			

## 2.3 Aspect



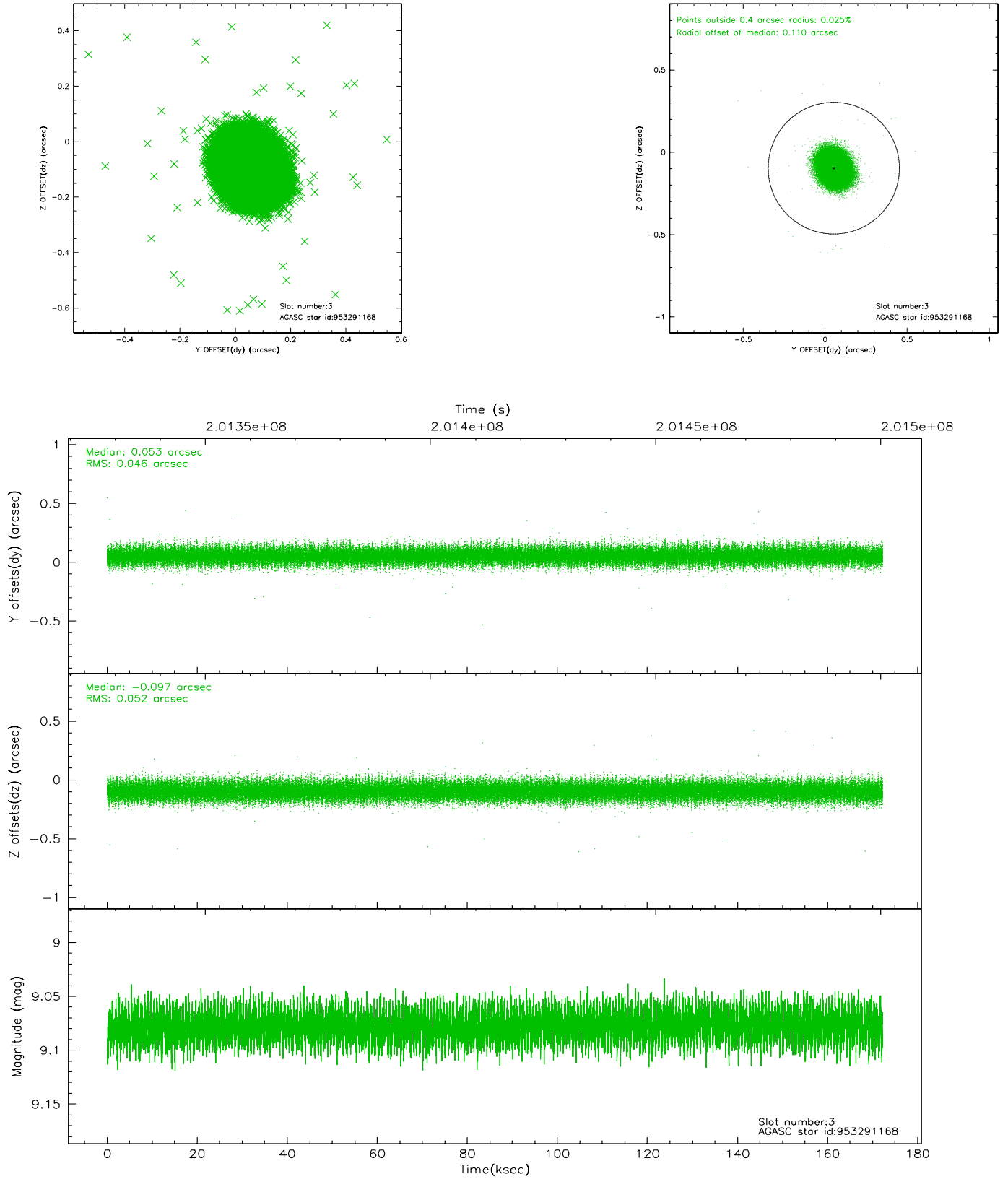


### Slot Statistics

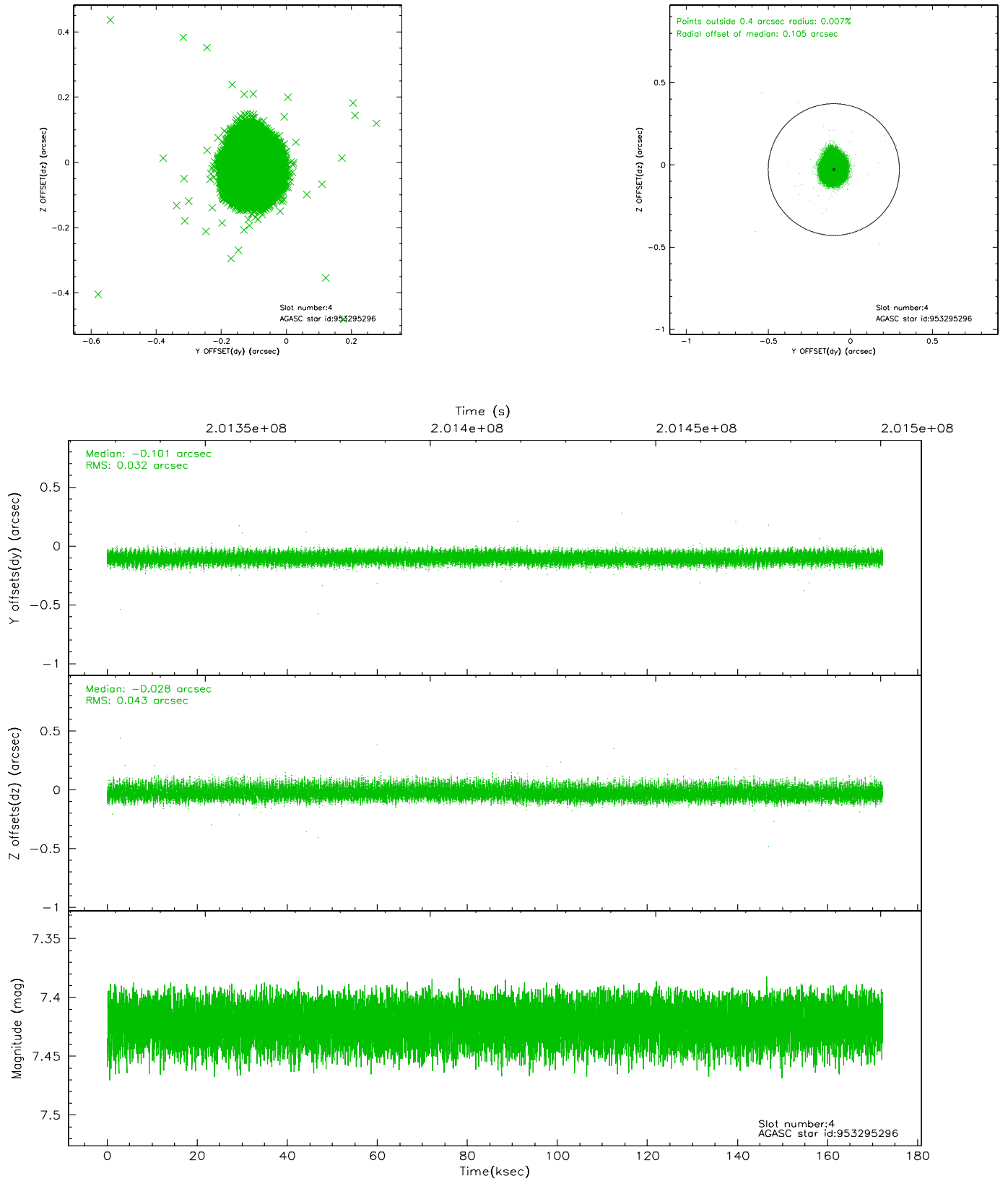
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	42018	-0.069	-0.030	0.018	0.051	0.000000	0.000000	-759.48	-1792.33
1	FID	ACIS-S-4	7.20	42016	0.062	0.039	0.024	0.031	0.000000	0.000000	2153.98	116.35
2	FID	ACIS-S-5	7.23	42018	-0.034	-0.006	0.014	0.051	0.000000	0.000000	-1812.45	109.83
3	GUIDE	953291168	9.08	83976	0.053	-0.097	0.073	0.118	204.023430	-34.374021	400.28	124.87
4	GUIDE	953295296	7.43	84029	-0.101	-0.028	0.057	0.092	203.563852	-34.387568	91.63	-1205.94
5	GUIDE	953296432	8.99	83999	-0.014	0.152	0.090	0.149	204.411860	-34.306423	470.79	1302.87
6	GUIDE	953297000	9.48	83907	0.080	-0.071	0.119	0.201	203.651481	-34.967131	2174.41	-1494.96
7	GUIDE	953294840	8.48	83936	-0.016	0.042	0.055	0.090	204.478170	-34.846425	2396.88	974.25

## 2.4 Star Slots

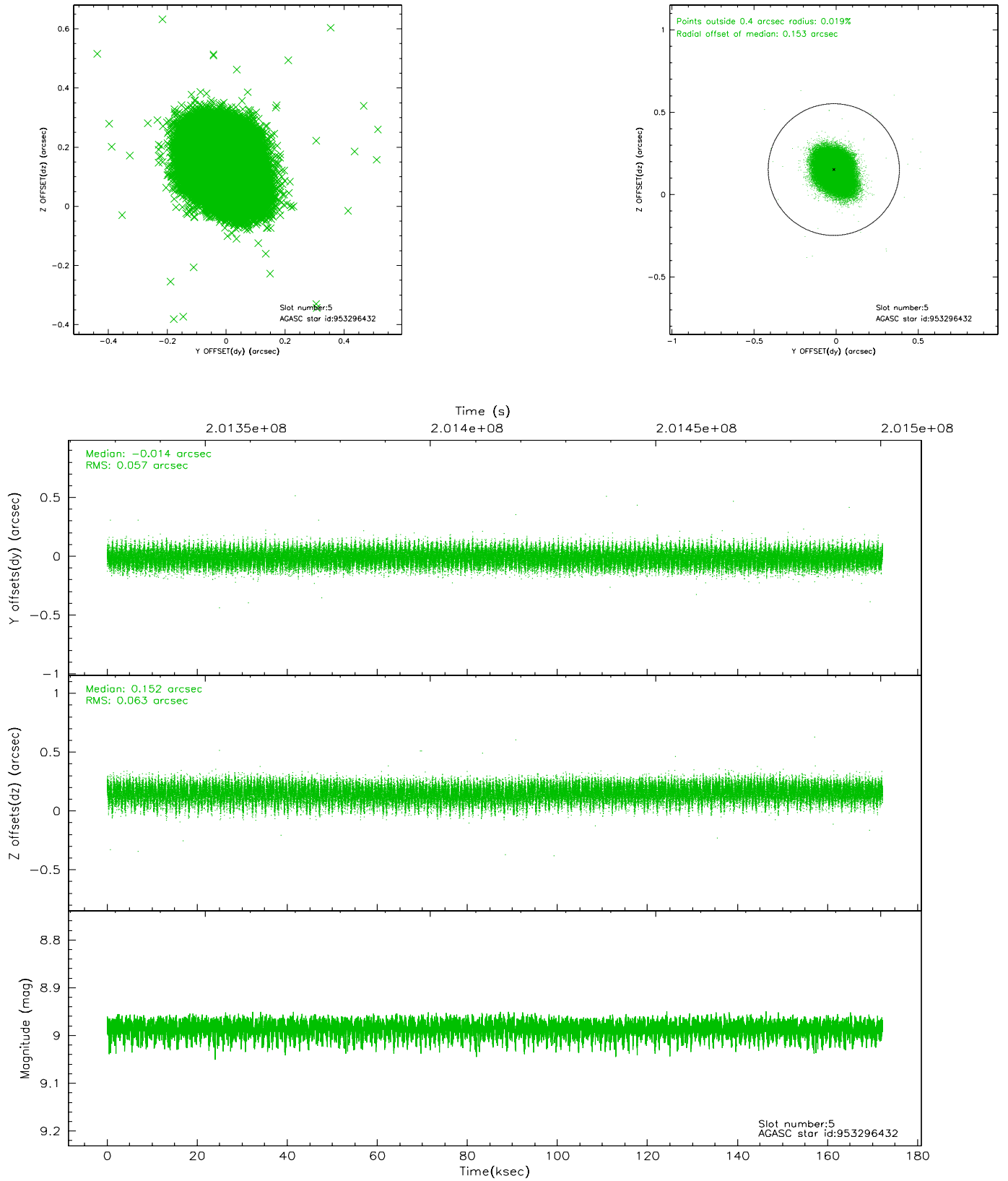
### 2.4.1 Slot 3



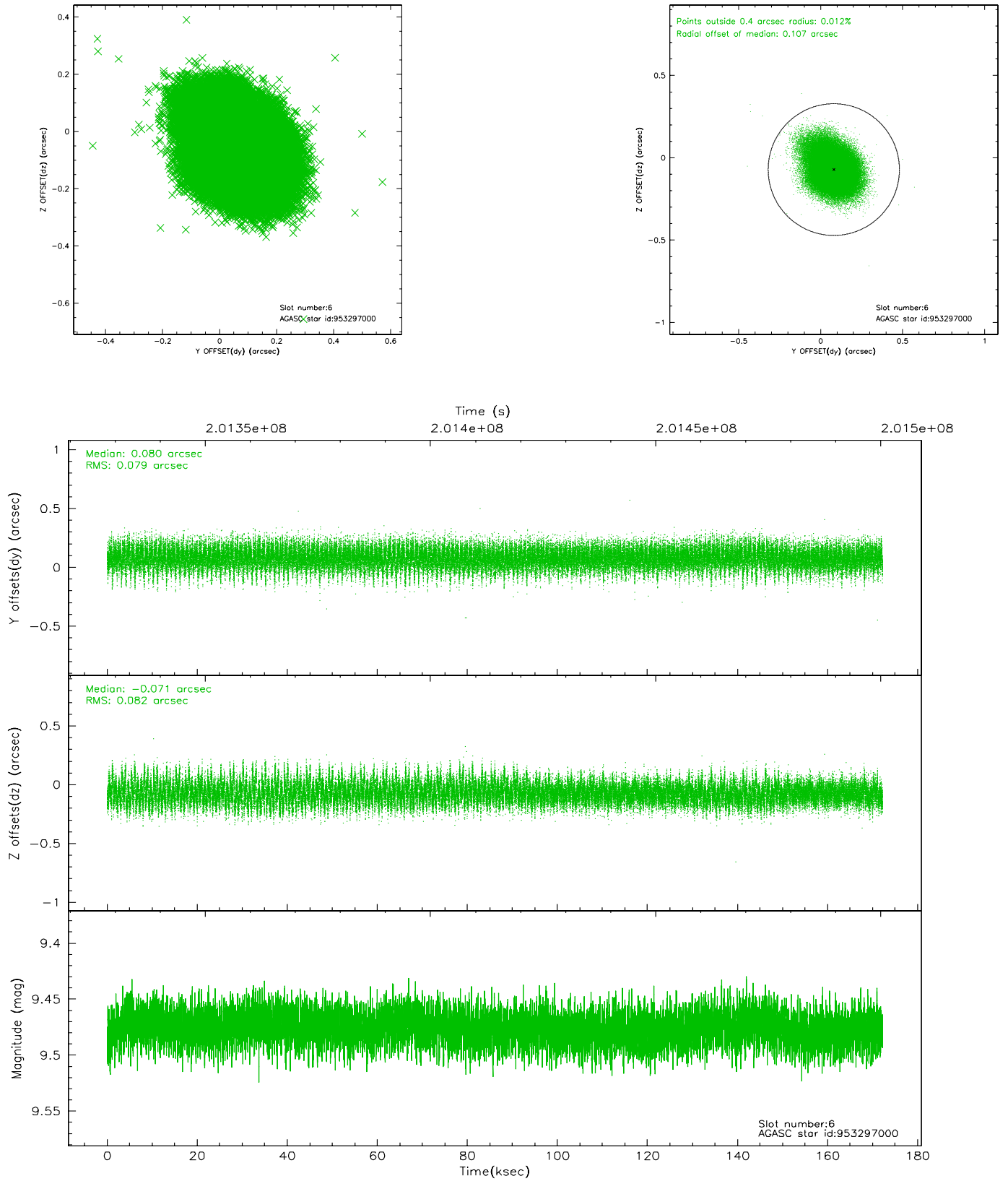
## 2.4.2 Slot 4



### 2.4.3 Slot 5

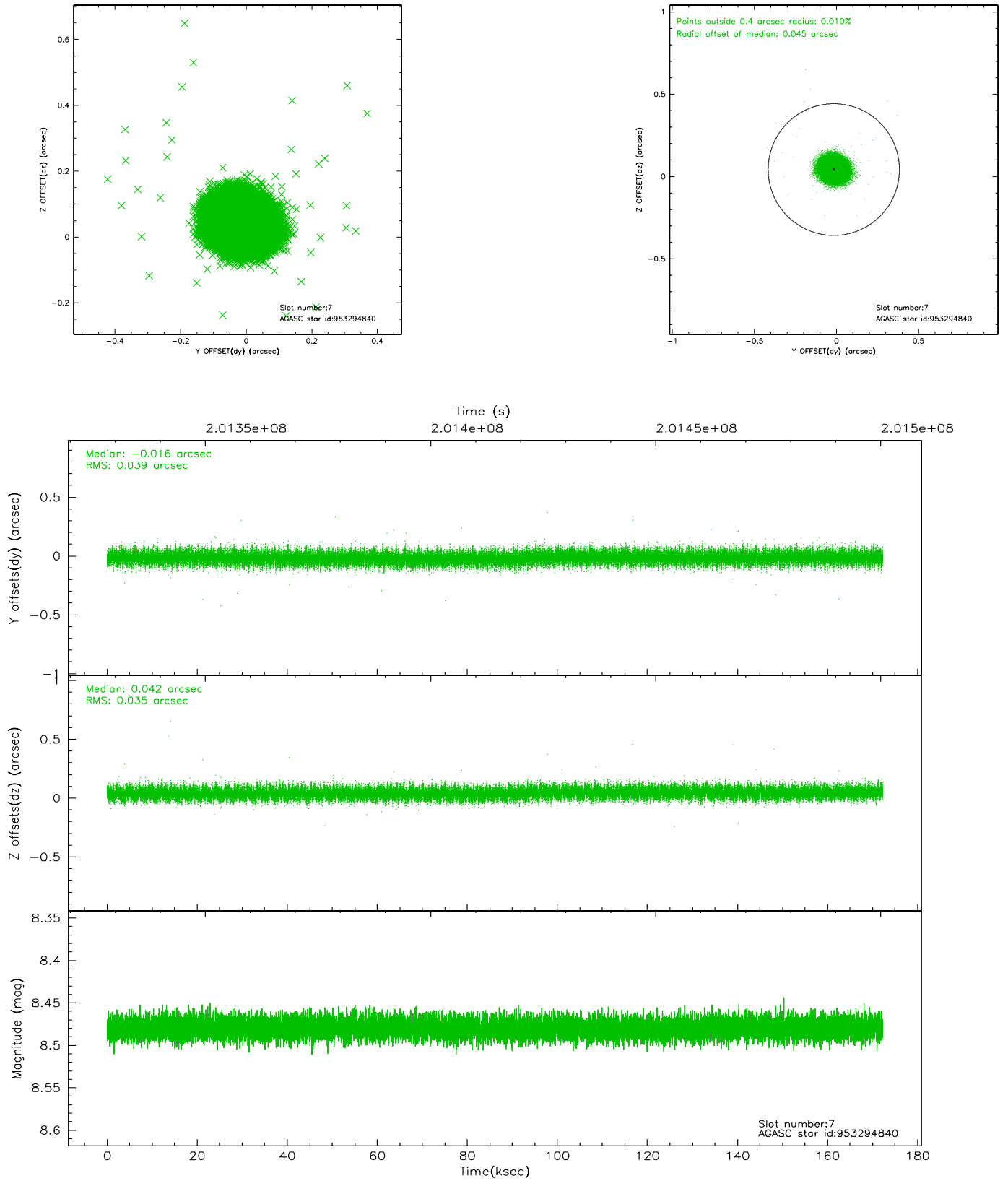


## 2.4.4 Slot 6



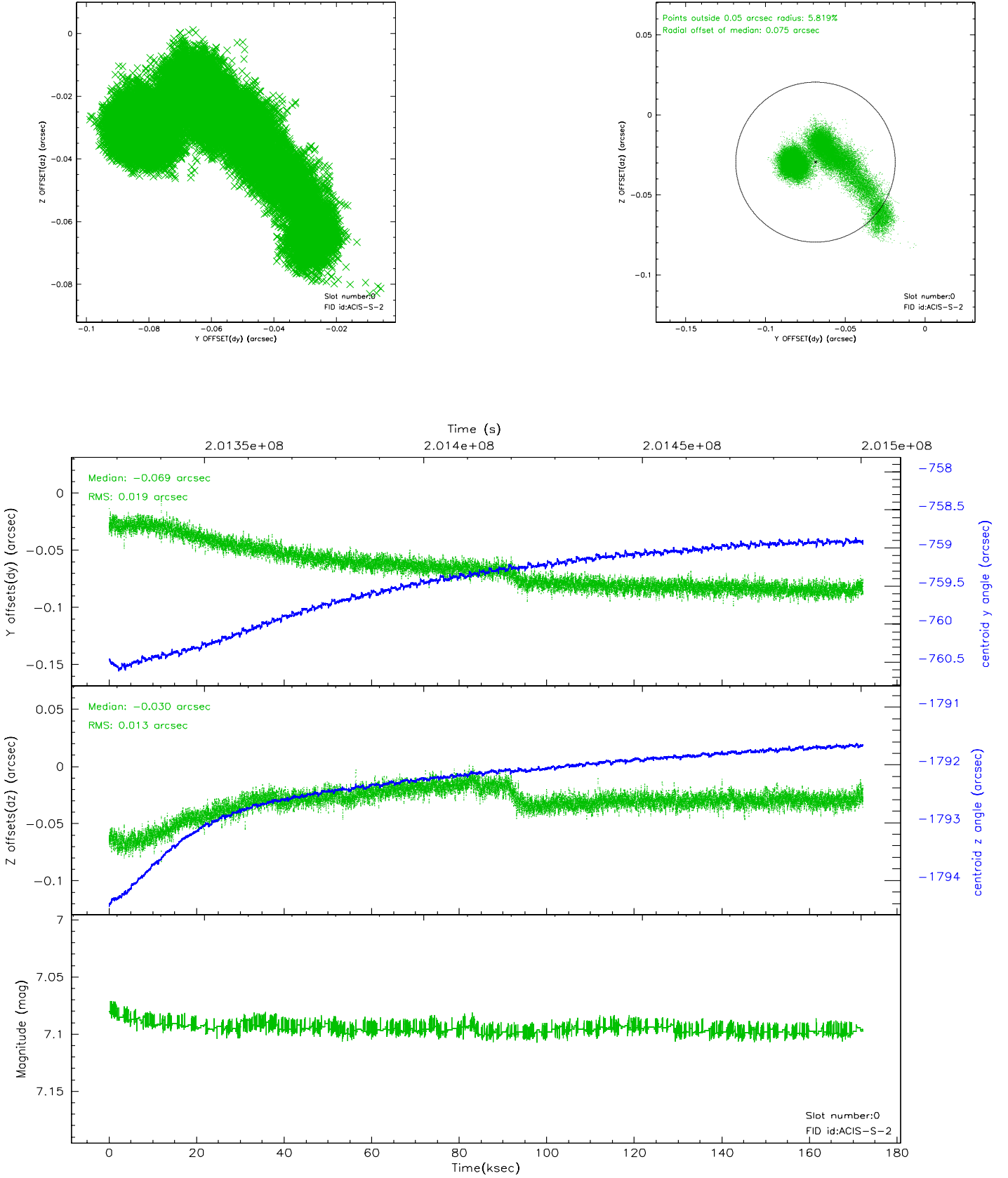


## 2.4.5 Slot 7

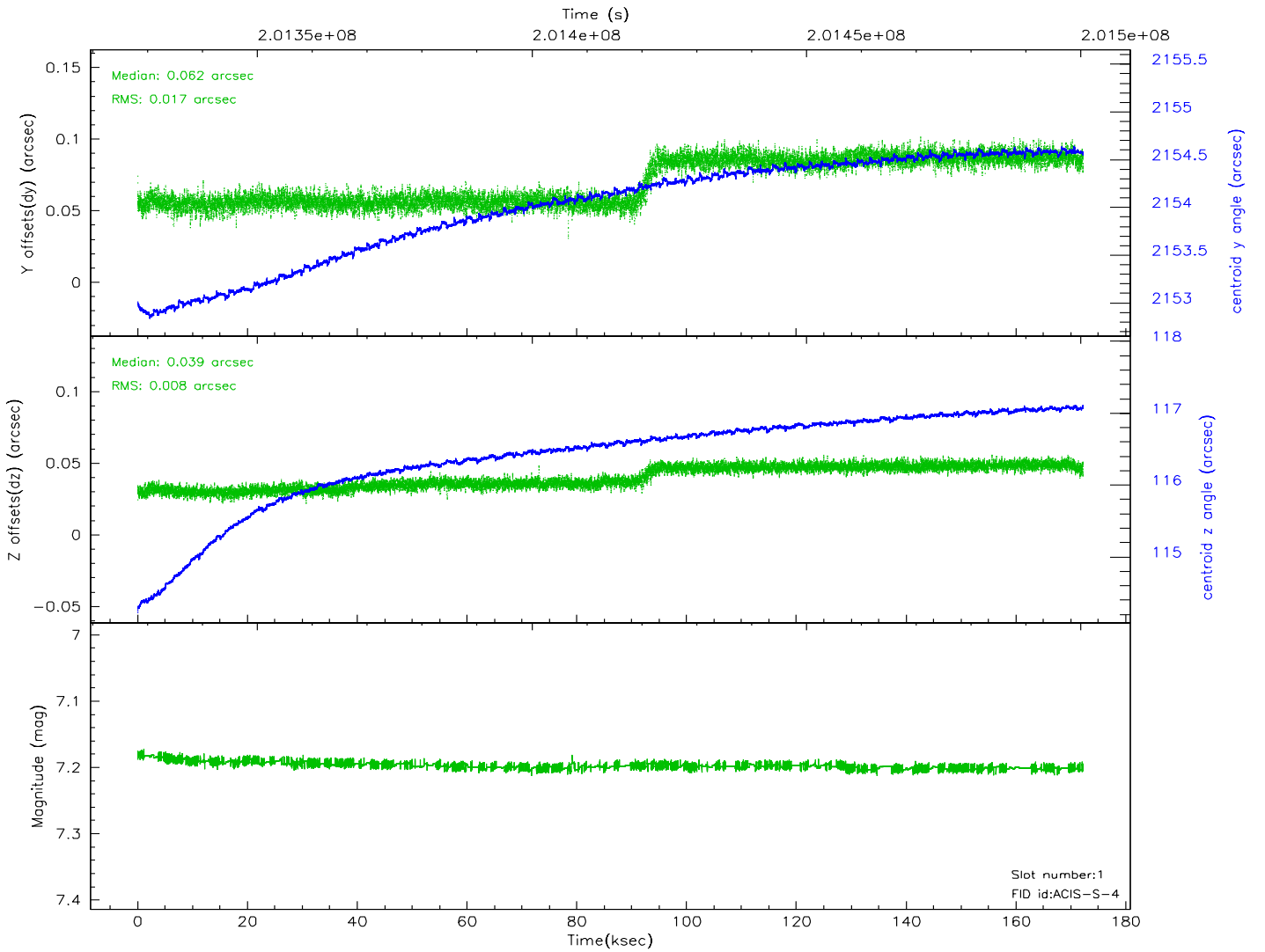
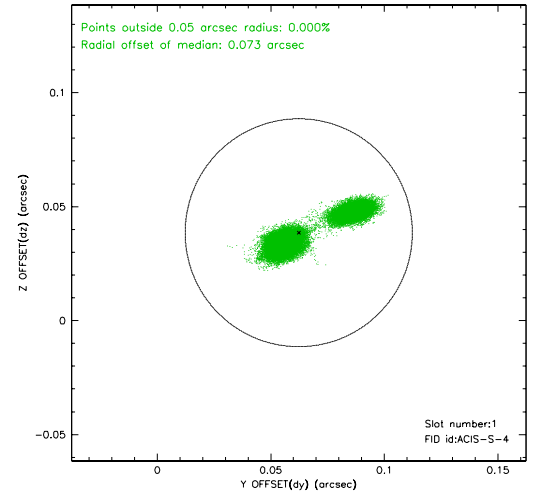
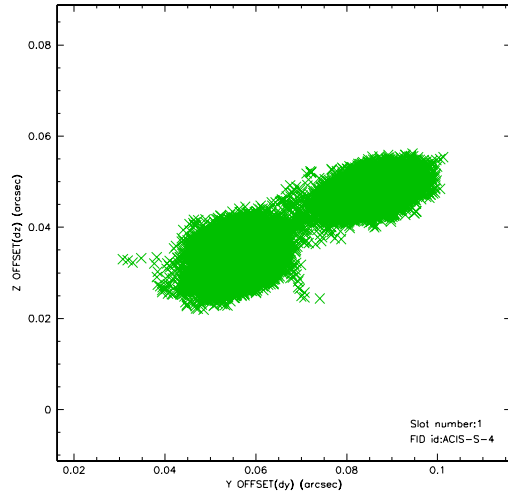


## 2.5 FID Slots

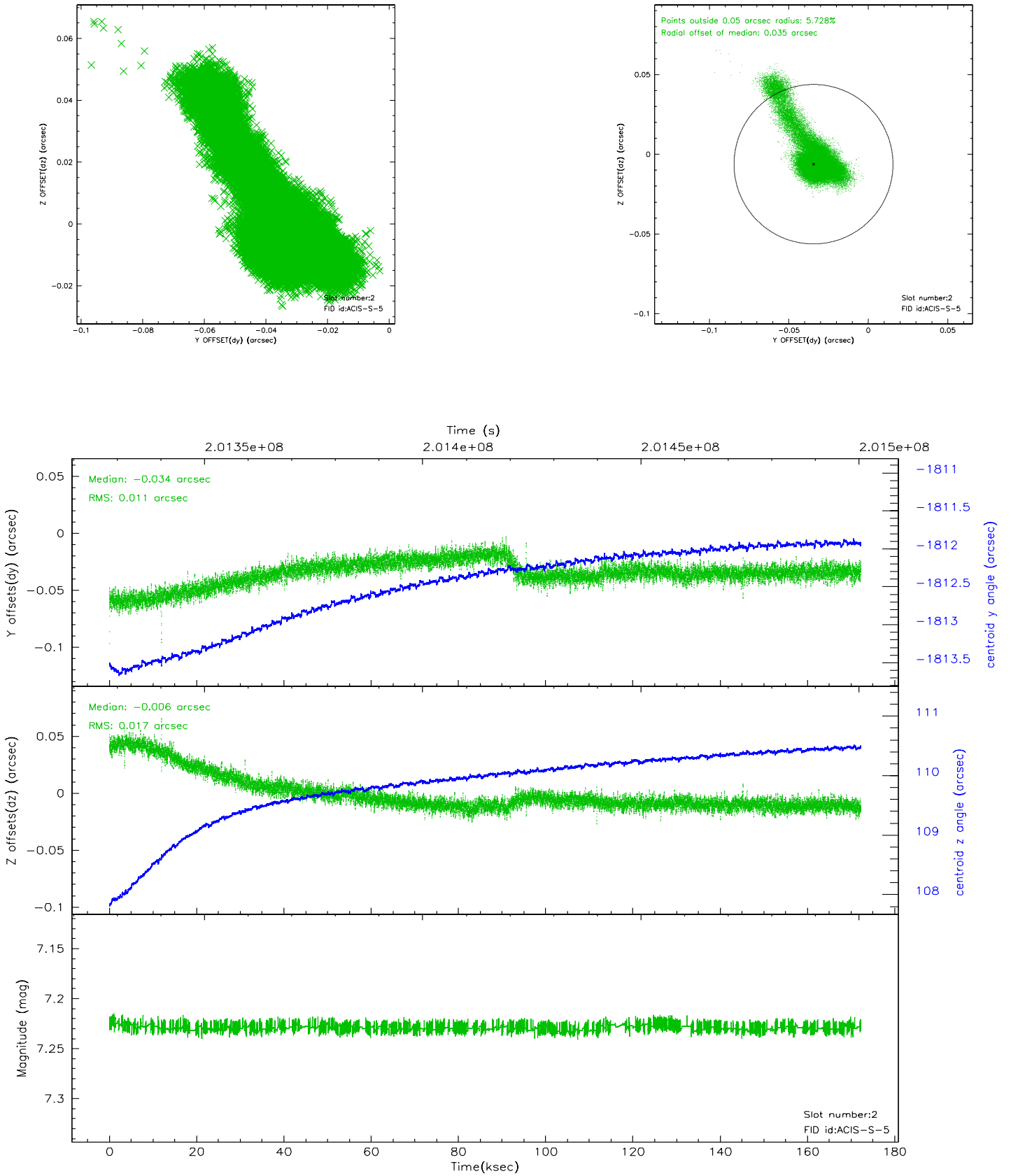
### 2.5.1 Slot 0



## 2.5.2 Slot 1

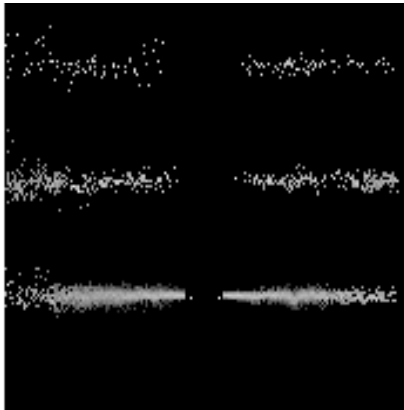


### 2.5.3 Slot 2

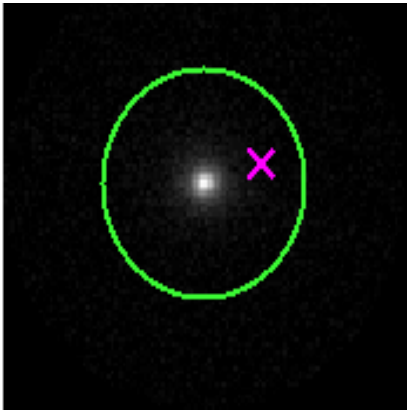


# 3 Gratings

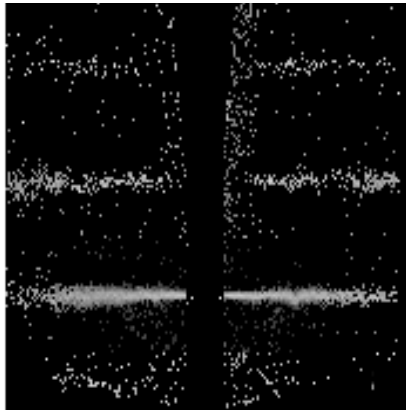
## 3.1 HEG Arm



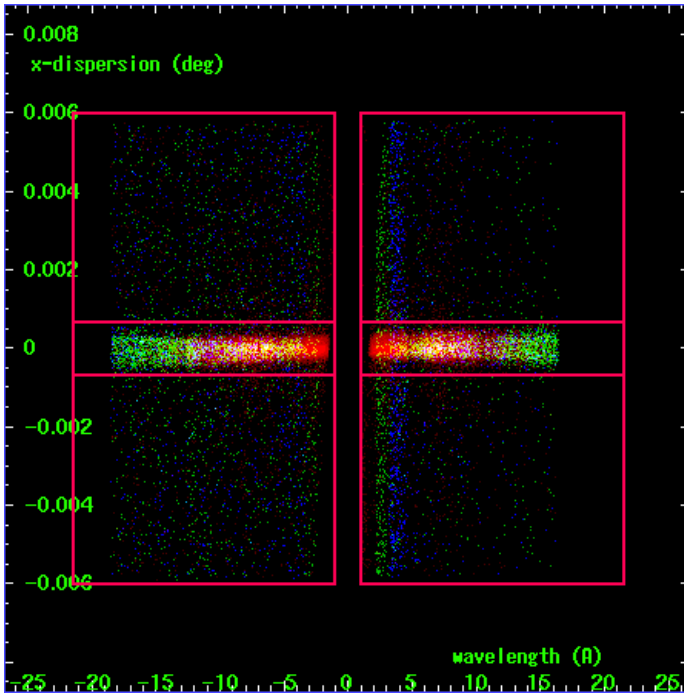
HEG Order Sort 123



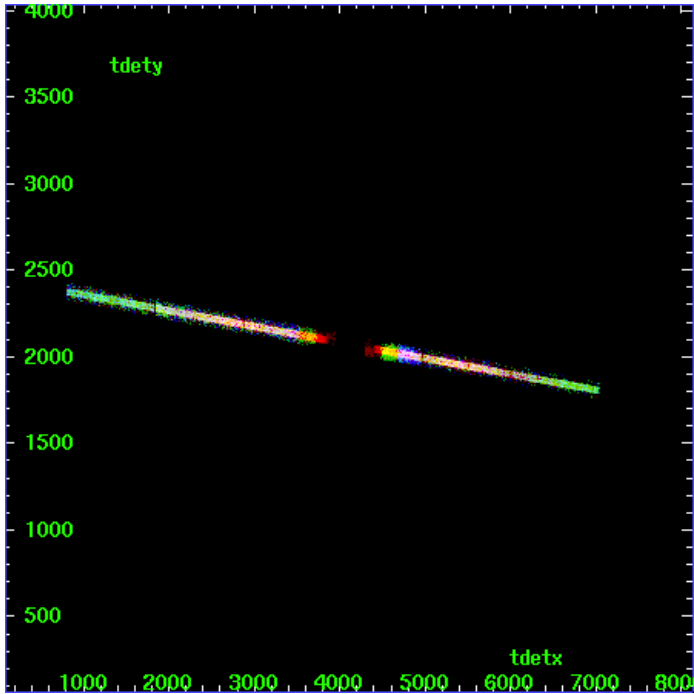
HEG Zero Order



HEG Order Sort ALL

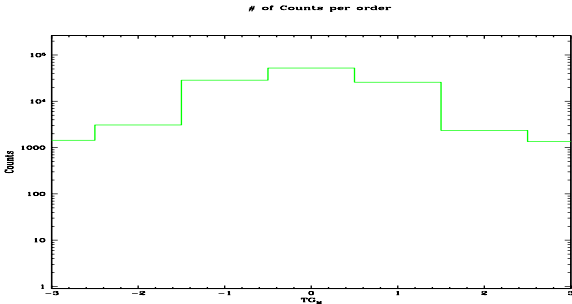


Spot Image HEG

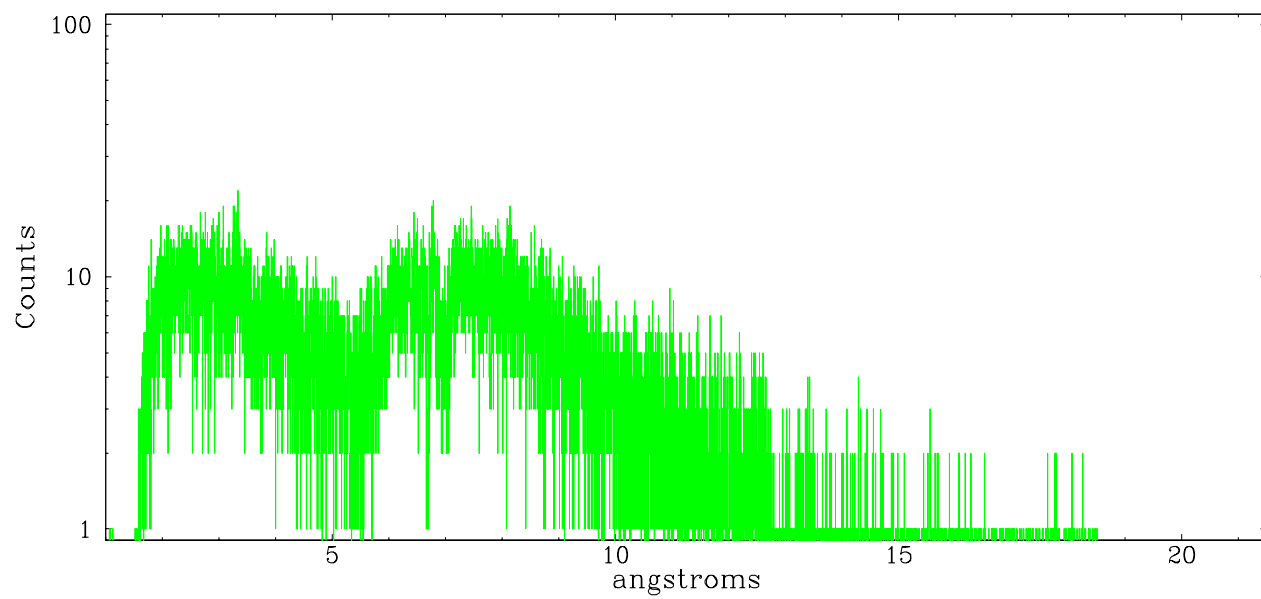


Full Detector HEG

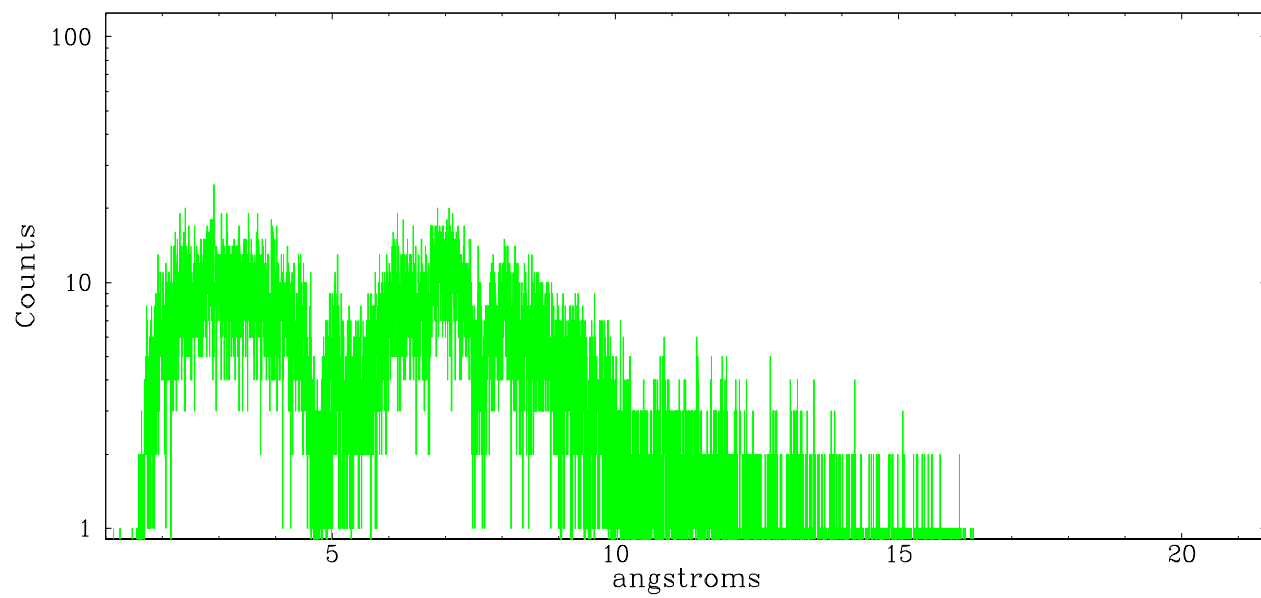
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1441	3100	28594	52515	25966	2350	1349



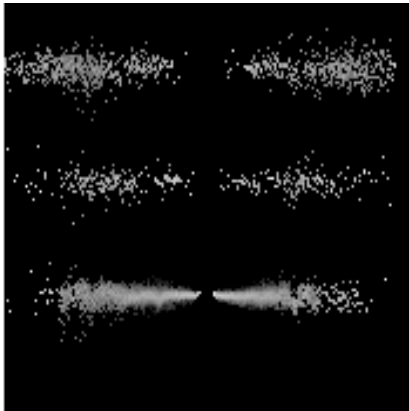
heg order -1



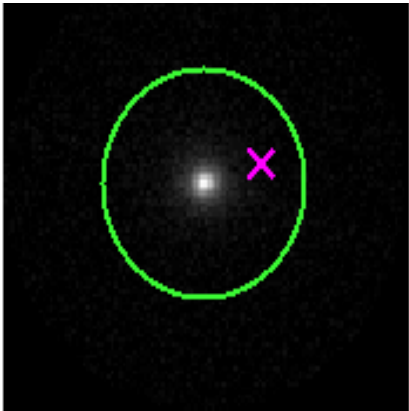
heg order +1



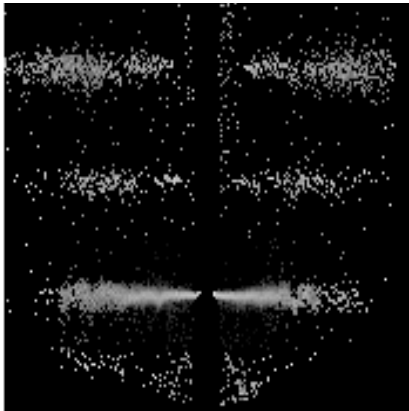
### 3.2 MEG Arm



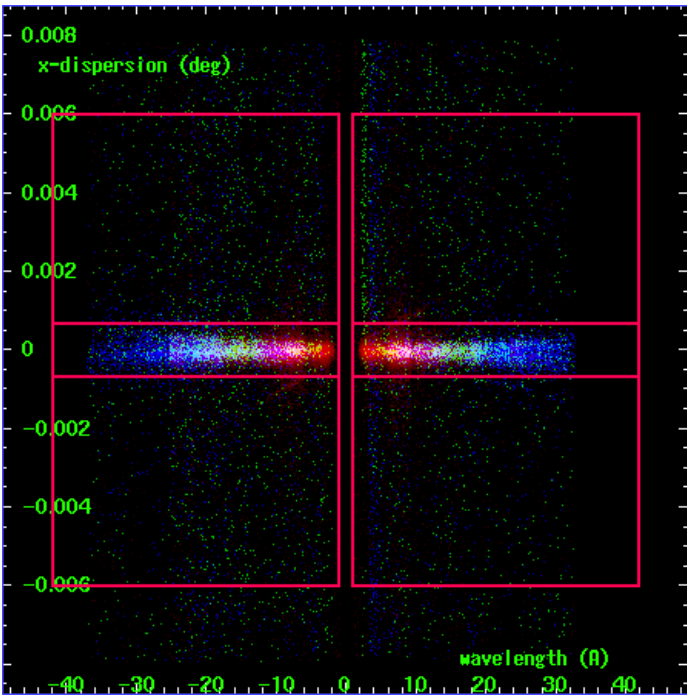
MEG Order Sort 123



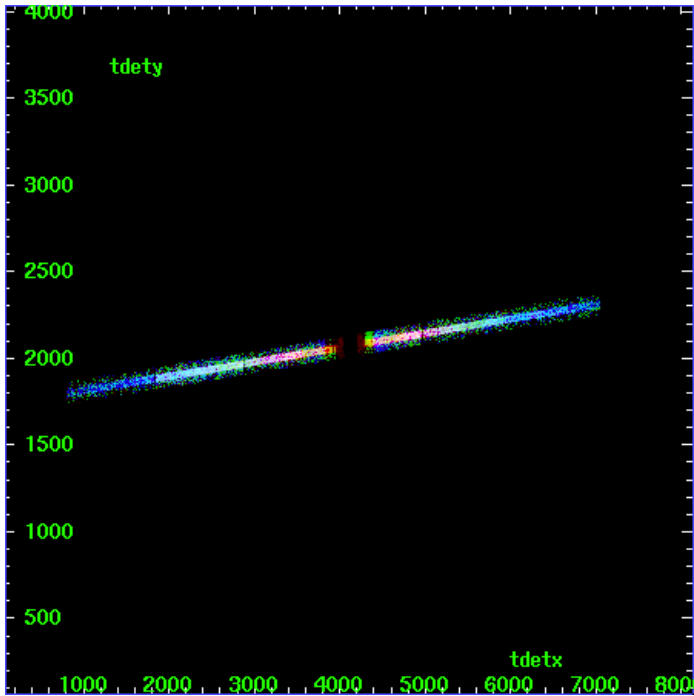
MEG Zero Order



MEG Order Sort ALL

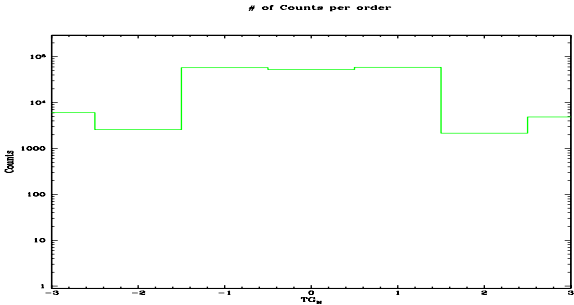


Spot Image MEG

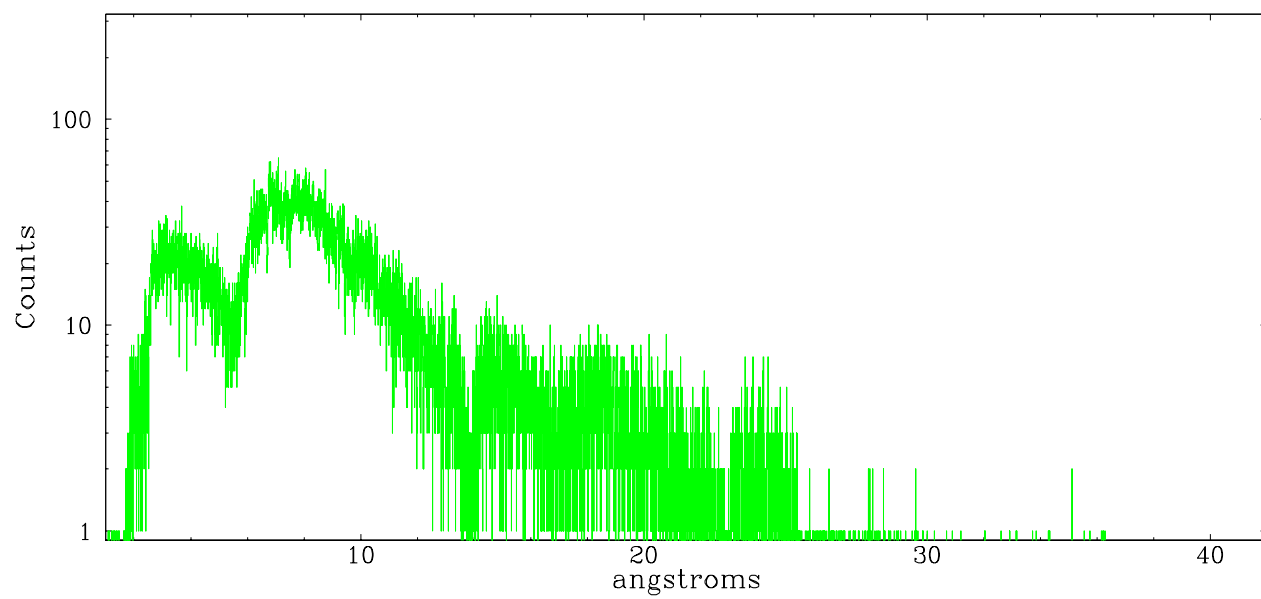


Full Detector MEG

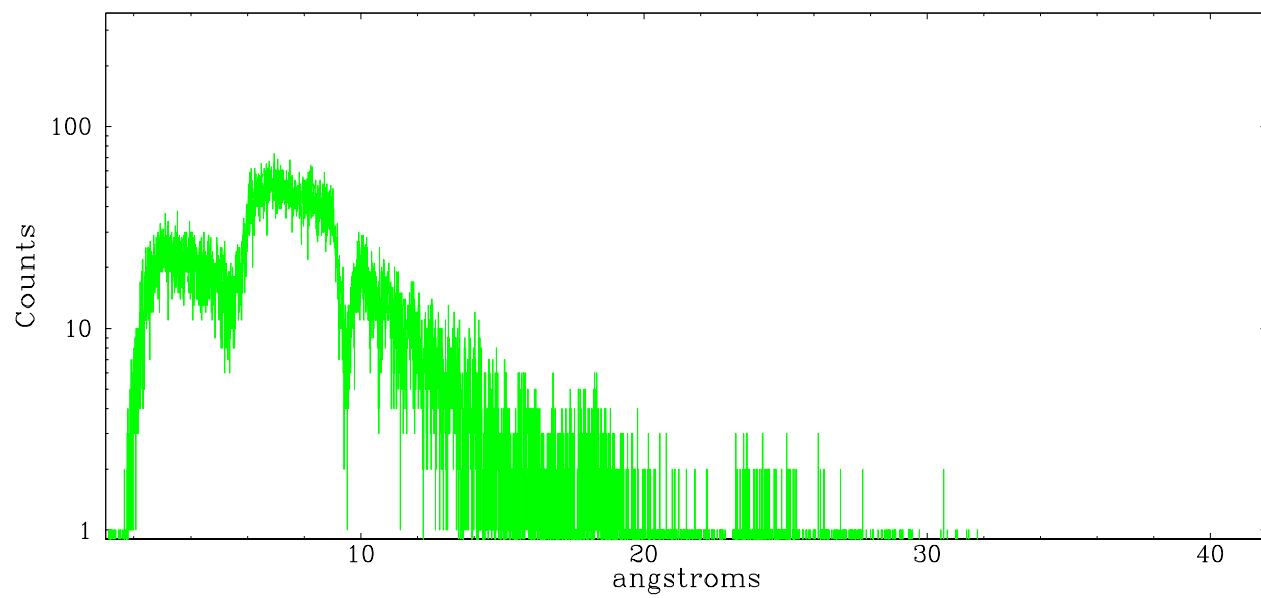
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	6028	2575	57554	52515	58515	2151	4875



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	172.25

### A.2 Comments