

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 679 - L2 Version <sub>e</sub>1  
Chandra X-Ray Center

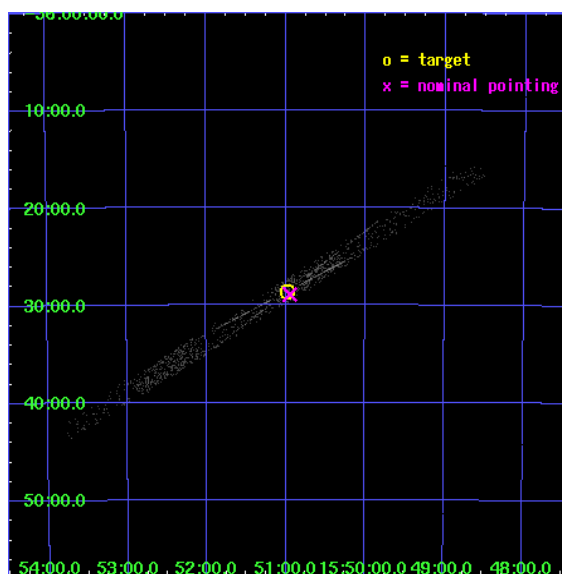
L2 Processing Date : May 25 2007

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# 1 Front

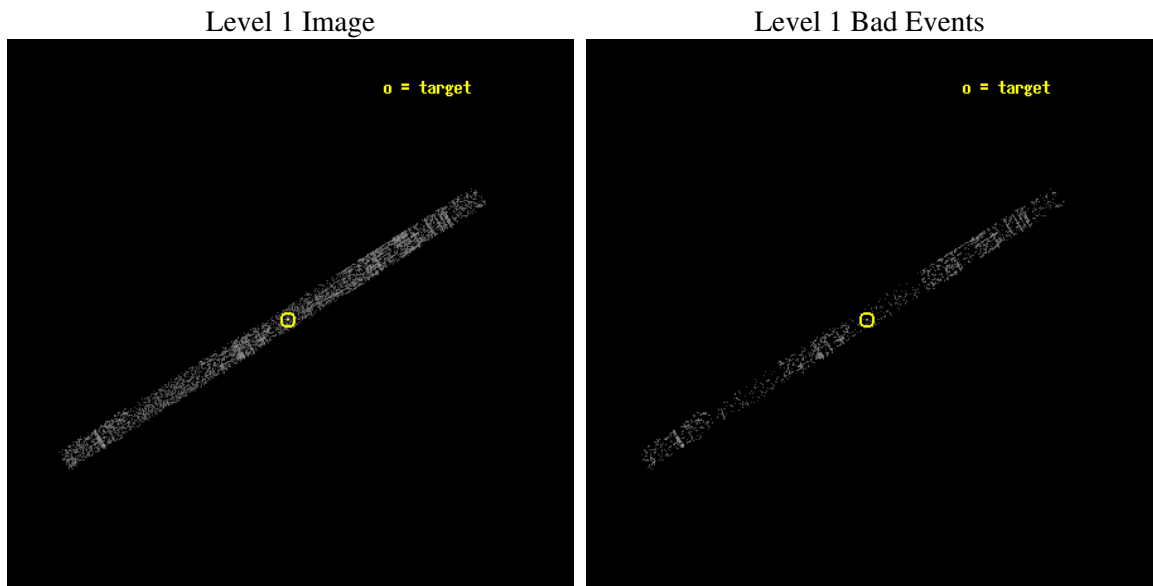
seq_num	400046
obs_id	679
title	AXAF OBSERVATIONS OF A BRIGHT BLACK HOLE X-RAY BINARY IN OUTBURST
observer	Prof. Walter Lewin
object	XTE J1550-564 (0.05 CRAB)
dtcycle	0
cycle	P
ra_targ	237.745417
dec_targ	-56.476472
ra_nom	237.736577433
dec_nom	-56.481952844418
roll_nom	327.8212910218
revision	4
ontime	1166.6921179295
livetime	264.64405046186
ontime4	1166.6921179295
ontime5	1166.692087993
ontime6	1166.6921179295
ontime7	1166.6921179295
ontime8	1166.6921179295
ontime9	1166.692087993
l2events	1815



## 2 OBI Primary

### 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	1
ascdsver	7.6.10
caldbver	3.4.0
date	2007-05-25T09:43:19
revision	4

sched_exp_time	6000.000000
ontime	1166.6921179295
ontime4	1166.6921179295
ontime5	1166.692087993
ontime6	1166.6921179295
ontime7	1166.6921179295
ontime8	1166.6921179295
ontime9	1166.692087993
l1events	10094

### 2.1.4 Events

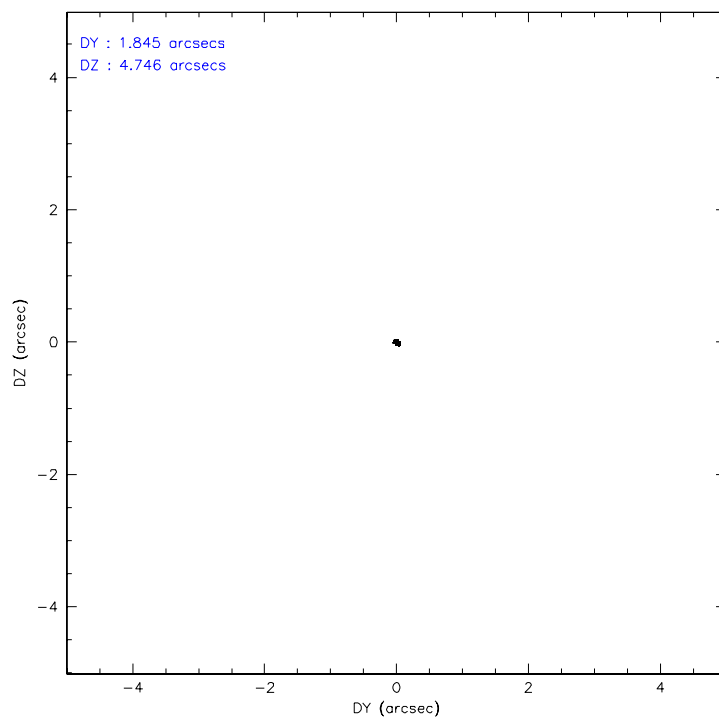
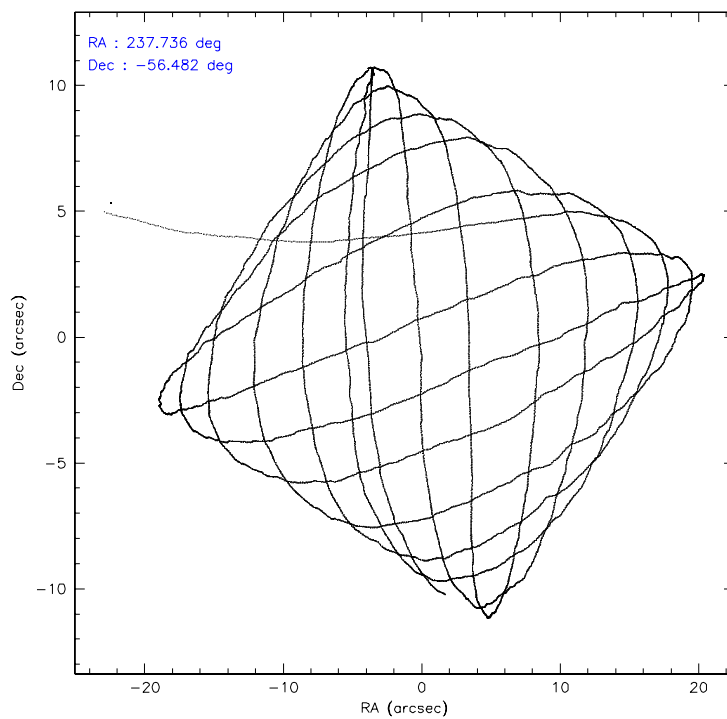
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	1501	1009	1879	1545	2548	1612
rejected events	1366	636	1570	635	1826	1488
rejected %	91%	63%	83%	41%	71%	92%

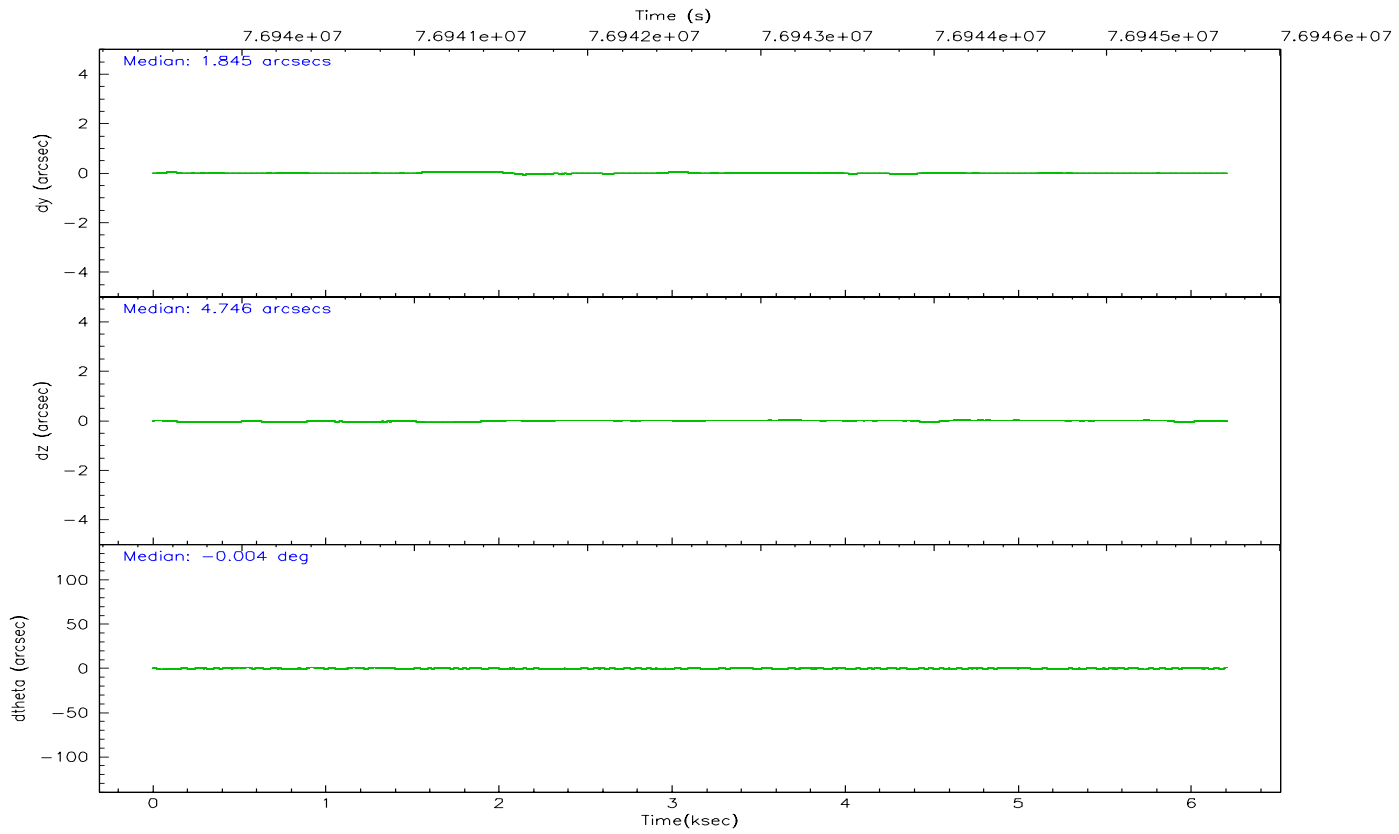
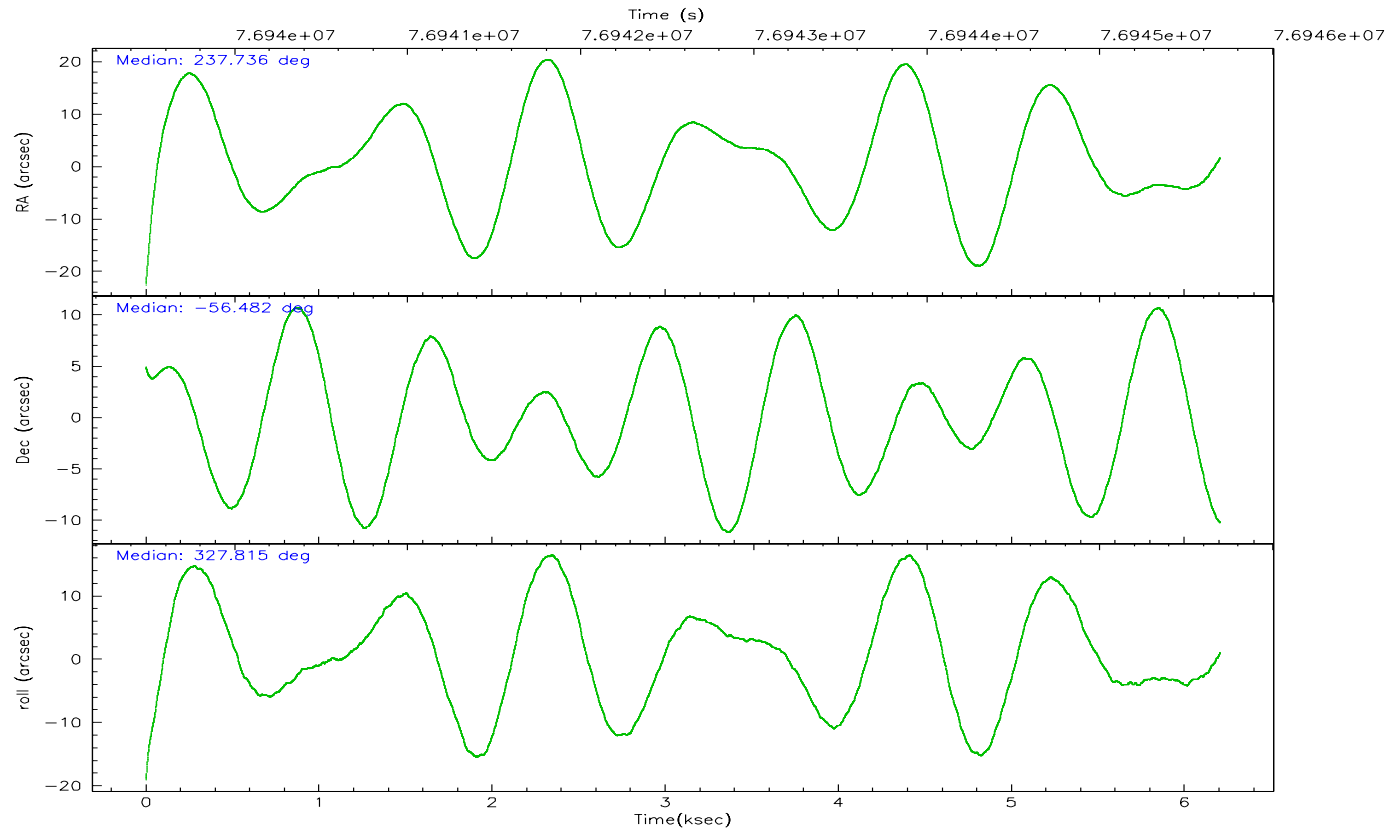
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	37	40	187	151	223	44
	2%	3%	9%	9%	8%	2%
grade 1 events	0	1	1	1	2	0
	0%	0%	0%	0%	0%	0%
grade 2 events	35	99	48	230	67	18
	2%	9%	2%	14%	2%	1%
grade 3 events	27	46	25	113	154	22
	1%	4%	1%	7%	6%	1%
grade 4 events	20	37	30	97	145	24
	1%	3%	1%	6%	5%	1%
grade 5 events	27	69	25	89	42	20
	1%	6%	1%	5%	1%	1%
grade 6 events	19	171	26	350	154	24
	1%	16%	1%	22%	6%	1%
grade 7 events	1336	546	1537	514	1761	1460
	89%	54%	81%	33%	69%	90%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	237.686930	237.7365774329976	Subarray requested	CUSTOM	1/4
Pointing Dec	-56.481069	-56.48195284441785	Subarray start row	1	1
Pointing Roll	327.623251	327.8212910217966	Subarray row count	256	256
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	Y	Y
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	0.300000	0.3
SIM translation stage pos (mm)	-182.132523	-182.1344861297048	Secondary exposure time	1.100000	1.1
SIM translation stage offset (mm)	-8	-7.998036453302973	Duty cycle	5	5
Observation start time	76939696.184000	76938728.396274			
Observation start date	2000-06-09T12:07:12	2000-06-09T11:52:08			
Observation end time	76945696.184000	76946266.24655201			
Observation end date	2000-06-09T13:47:12	2000-06-09T13:57:46			
Read mode	TIMED	TIMED			

## 2.3 Aspect





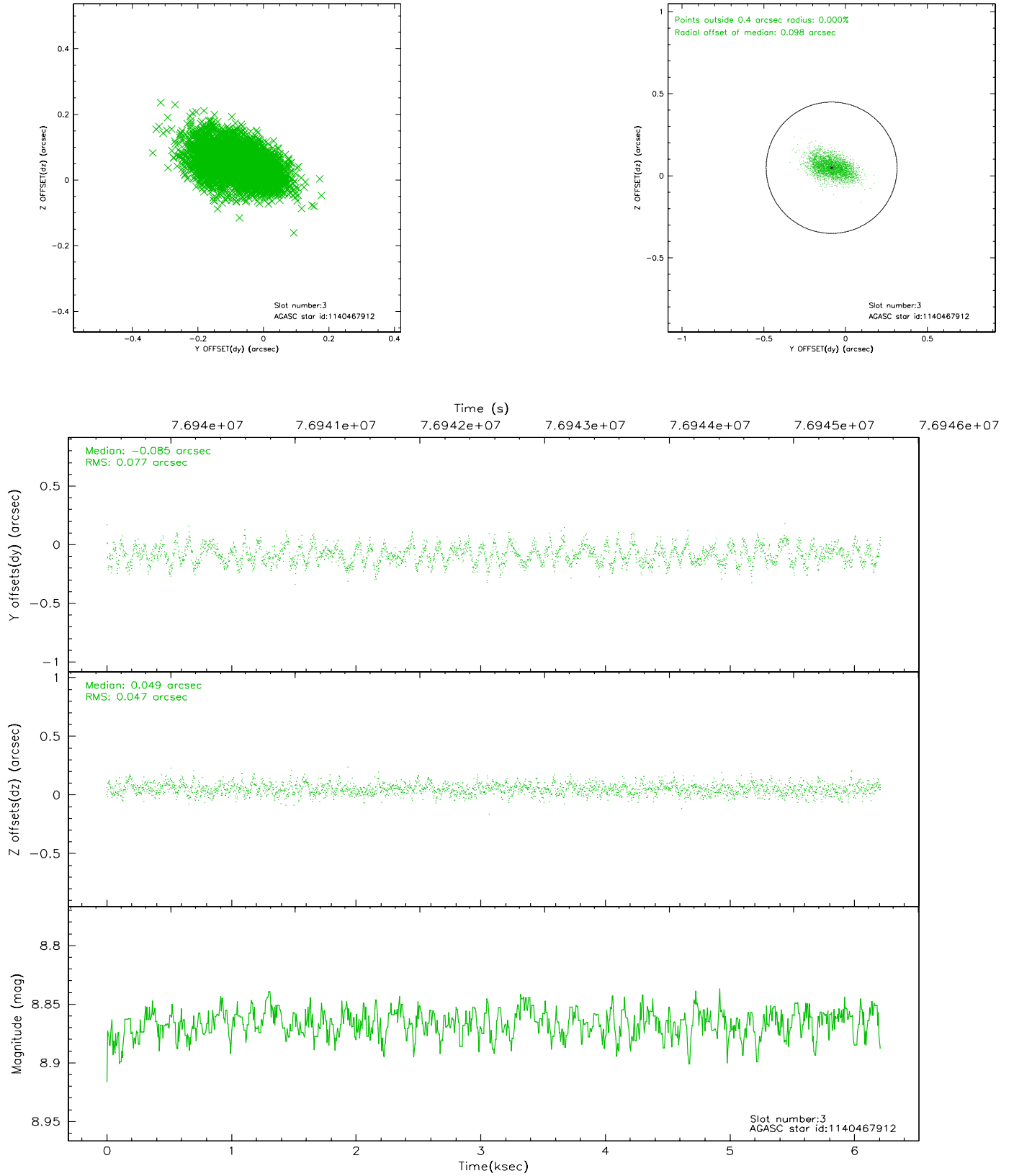
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	1512	-0.053	-0.049	0.007	0.012	0.000000	0.000000	-753.95	-1890.65
1	FID	ACIS-S-4	7.19	1509	0.019	0.039	0.005	0.010	0.000000	0.000000	2158.98	16.79
2	FID	ACIS-S-5	7.22	1511	0.003	0.018	0.007	0.012	0.000000	0.000000	-1805.49	11.56
3	GUIDE	1140467912	8.87	3022	-0.085	0.049	0.095	0.154	237.351144	-55.585312	-2302.72	2355.28
4	GUIDE	1140861088	9.06	3024	-0.050	-0.036	0.085	0.136	236.443591	-56.463656	-2110.00	-1290.35
5	GUIDE	1140986032	9.39	3021	-0.035	-0.038	0.102	0.164	237.745074	-57.277932	1631.93	-2363.34
6	GUIDE	1141000720	9.19	3025	0.032	0.013	0.084	0.138	238.678440	-56.280404	1295.28	1657.64
7	GUIDE	1141004616	9.67	3022	0.135	0.009	0.088	0.144	238.066818	-56.808784	1266.40	-597.34

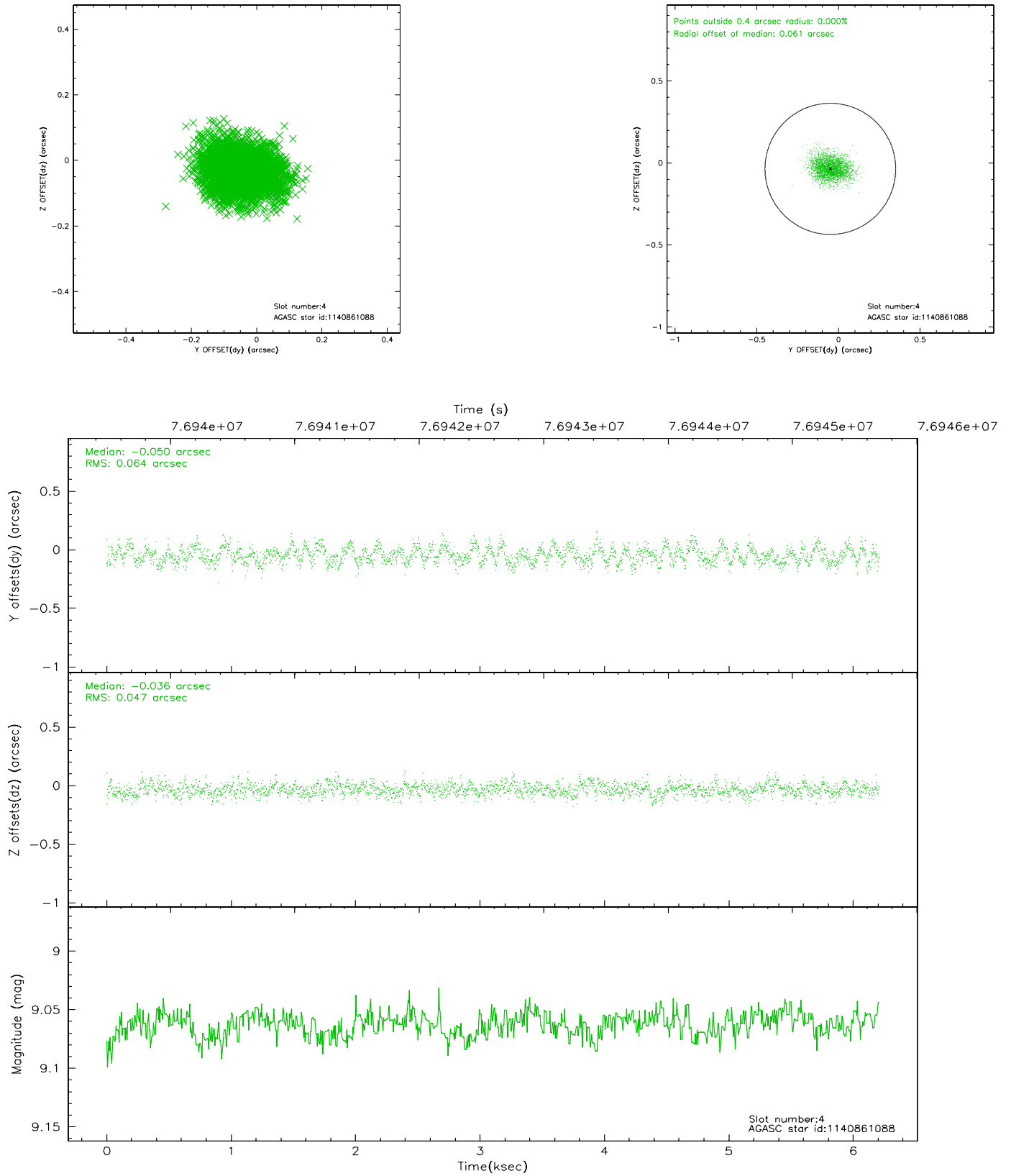


## 2.4 Star Slots

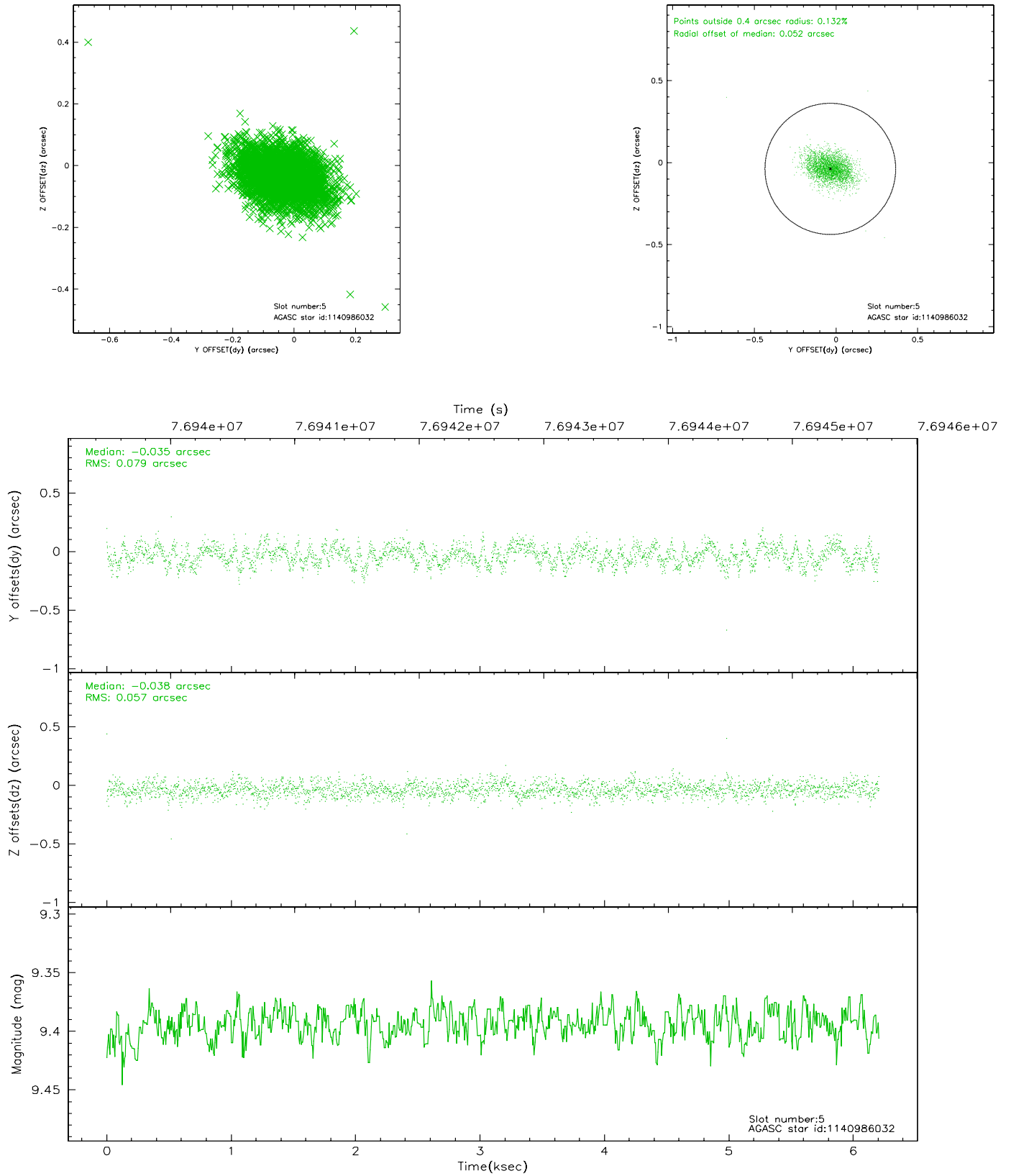
### 2.4.1 Slot 3



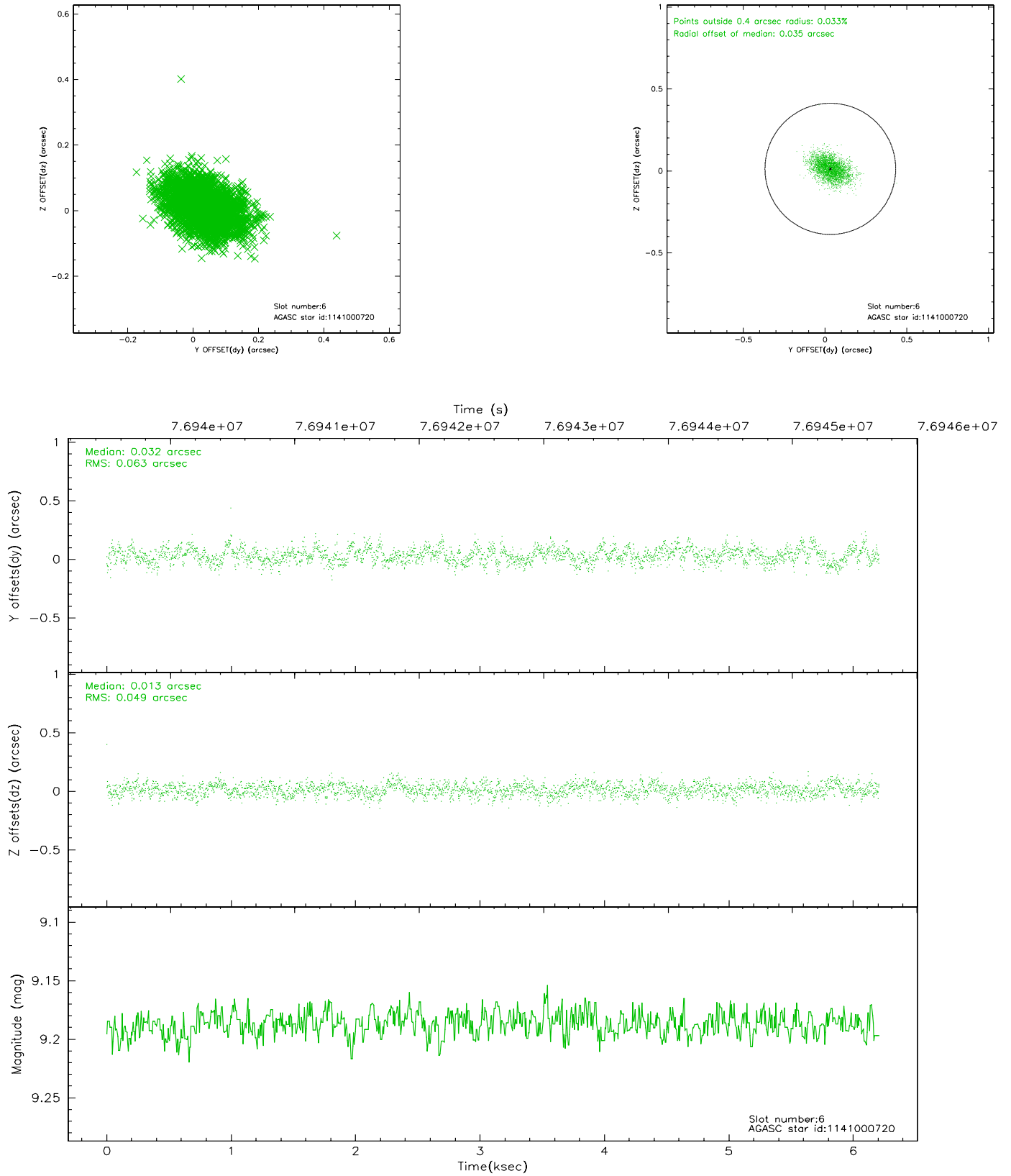
## 2.4.2 Slot 4



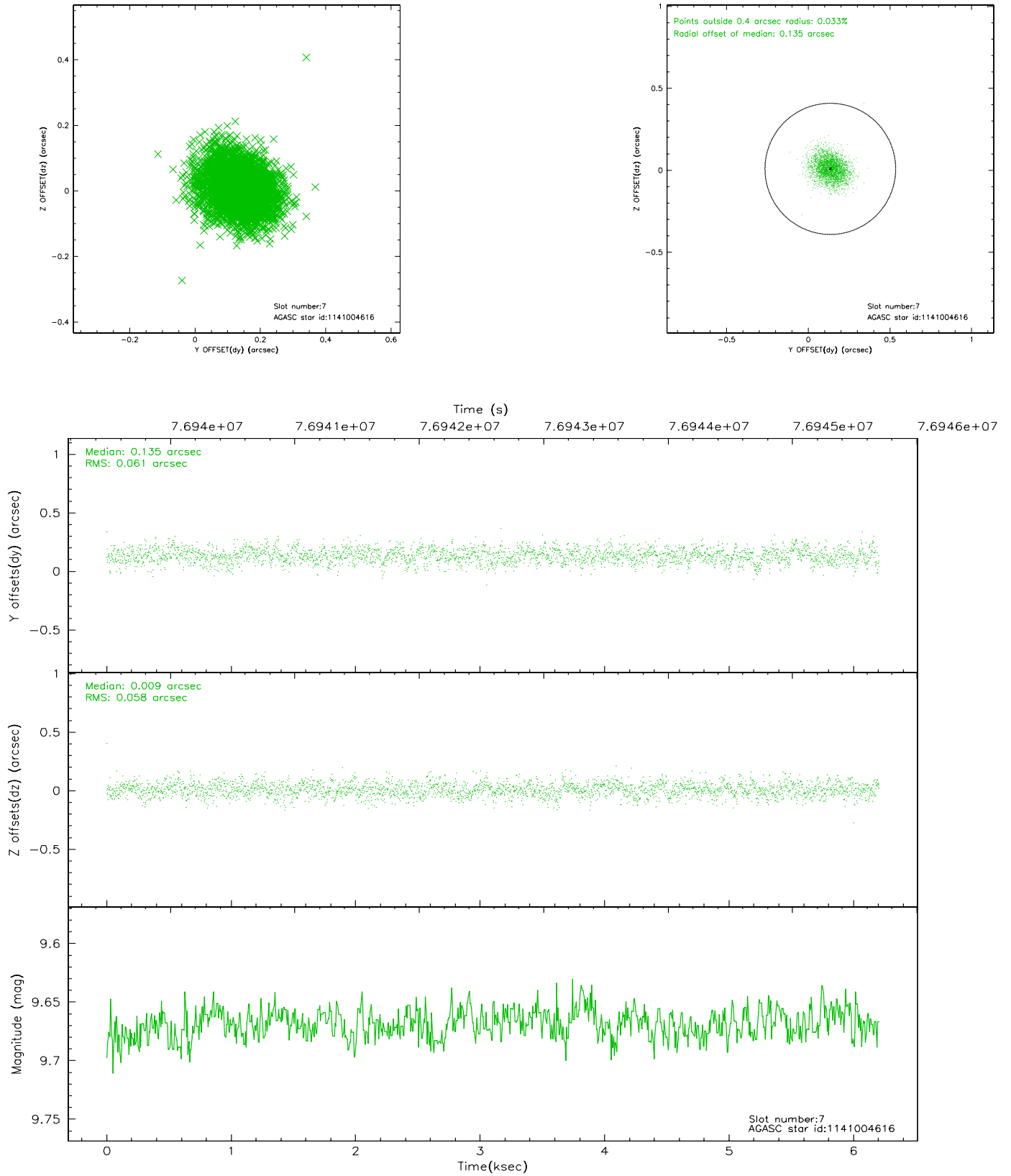
### 2.4.3 Slot 5



## 2.4.4 Slot 6

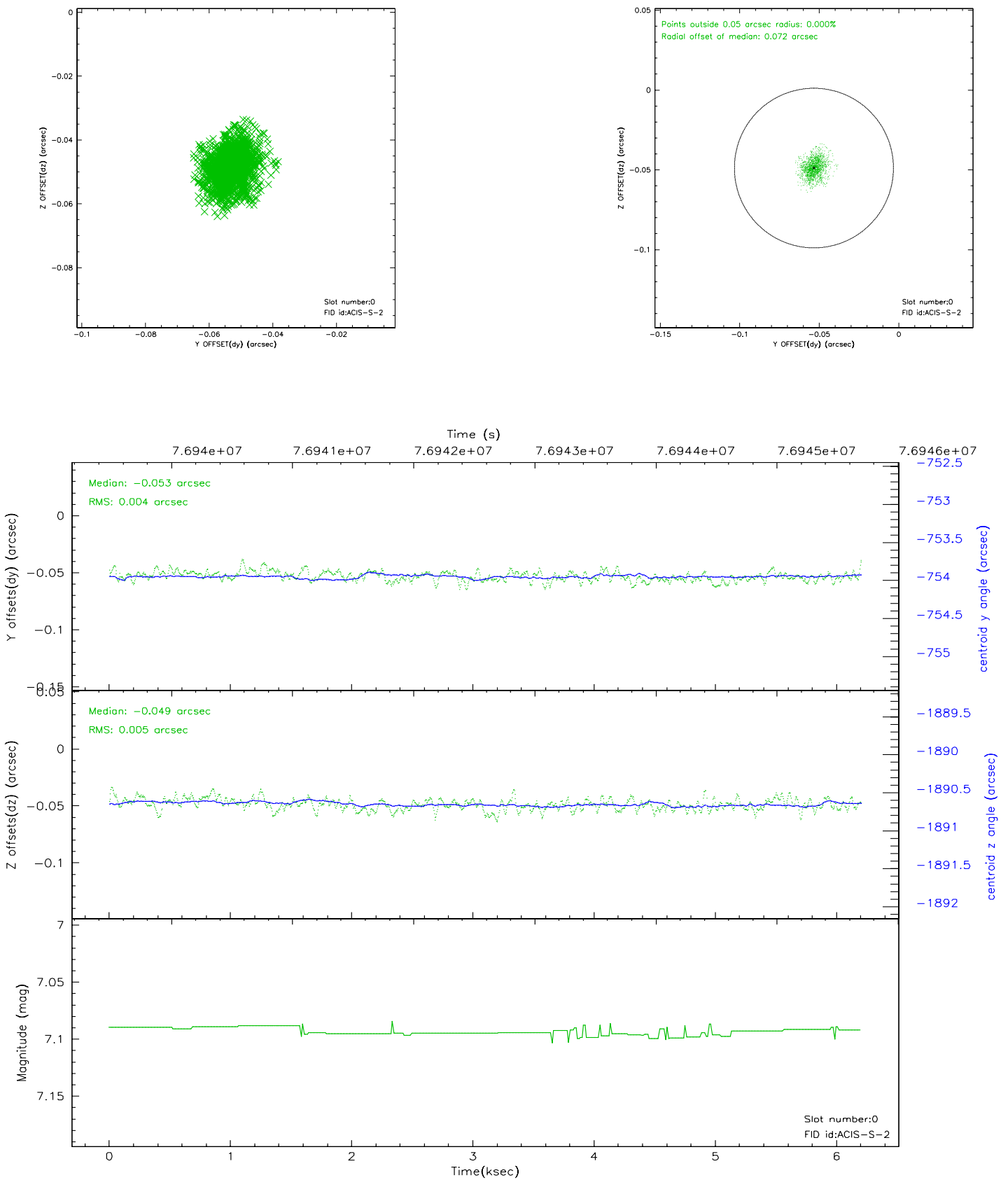


## 2.4.5 Slot 7

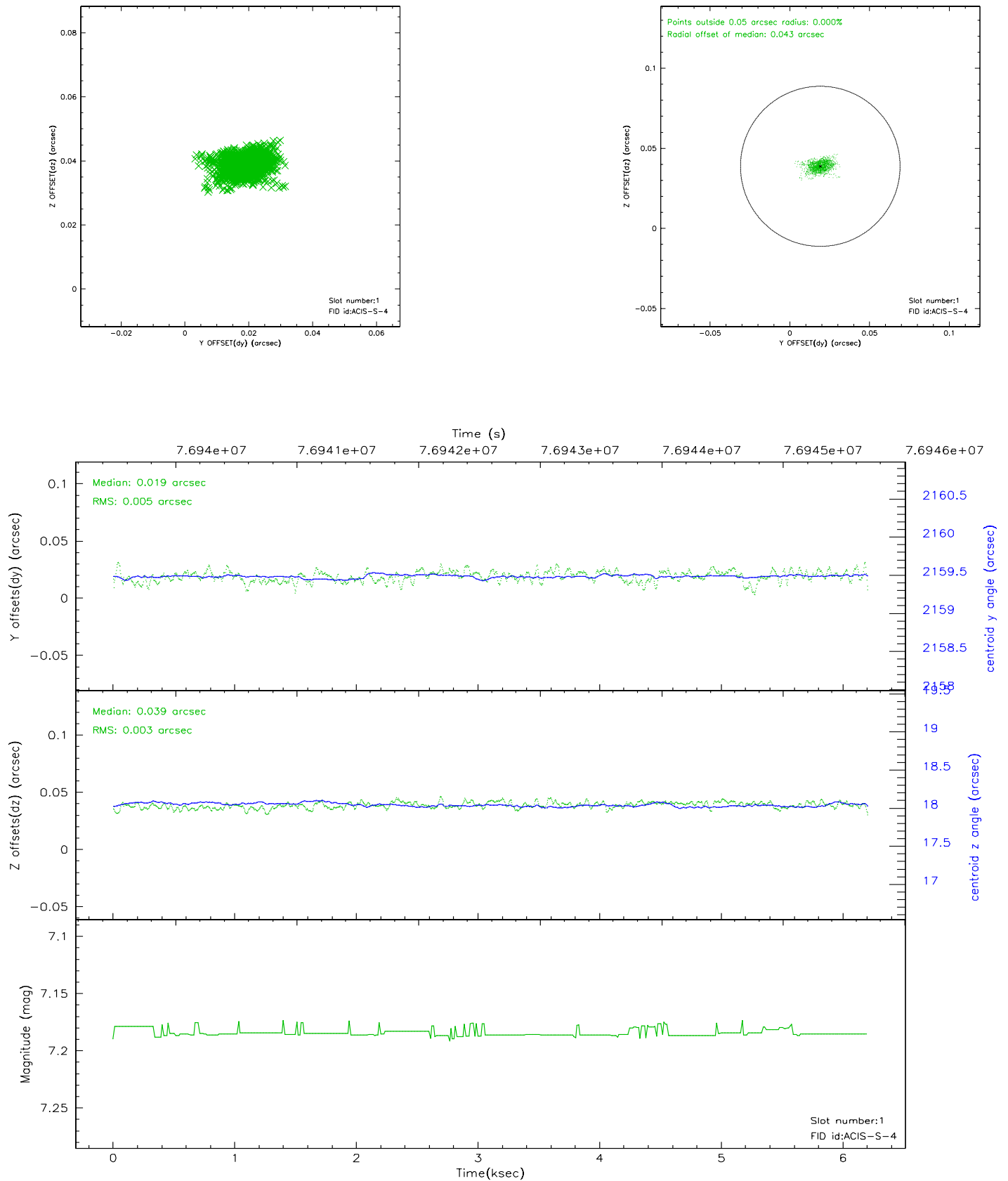


## 2.5 FID Slots

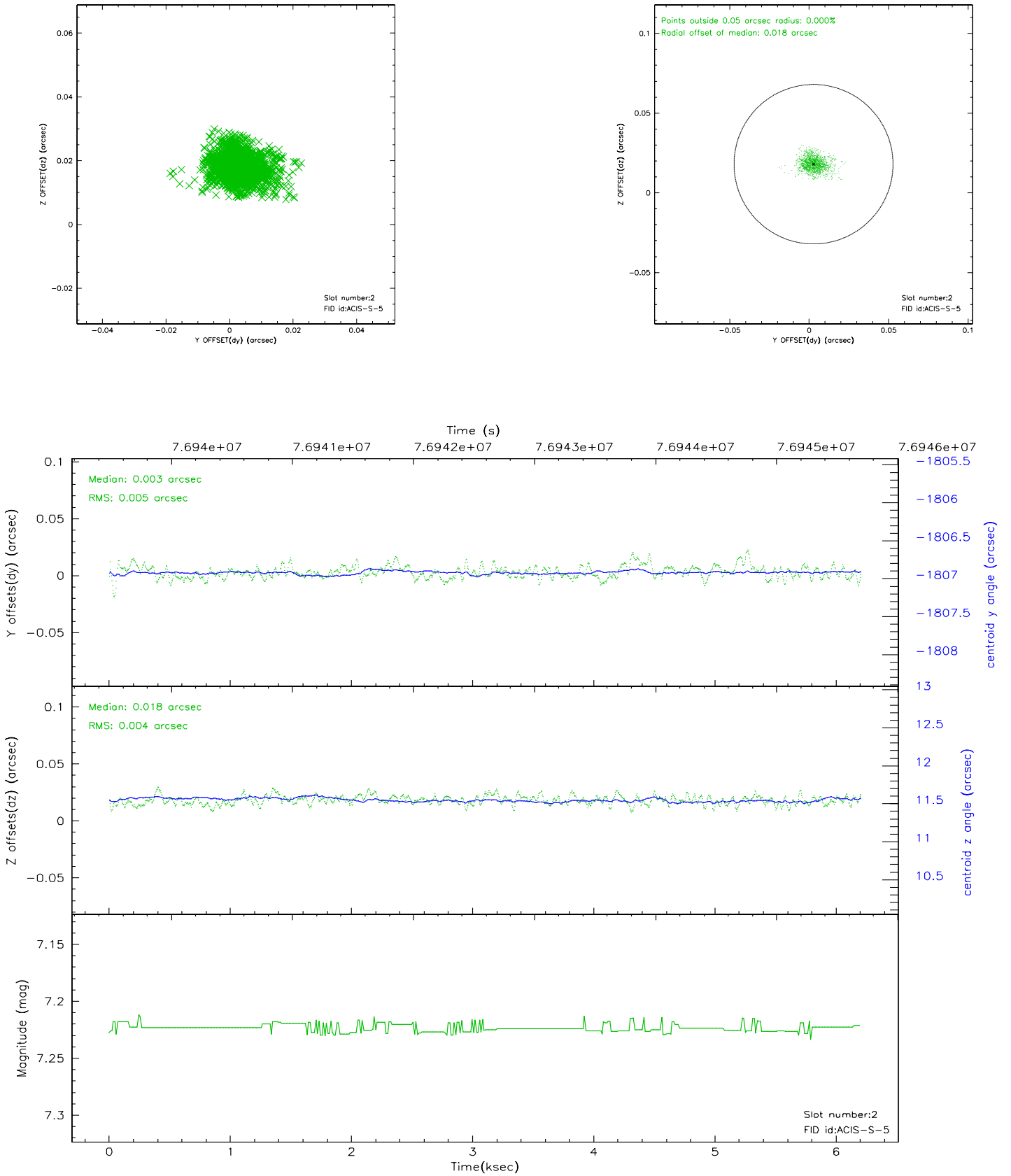
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

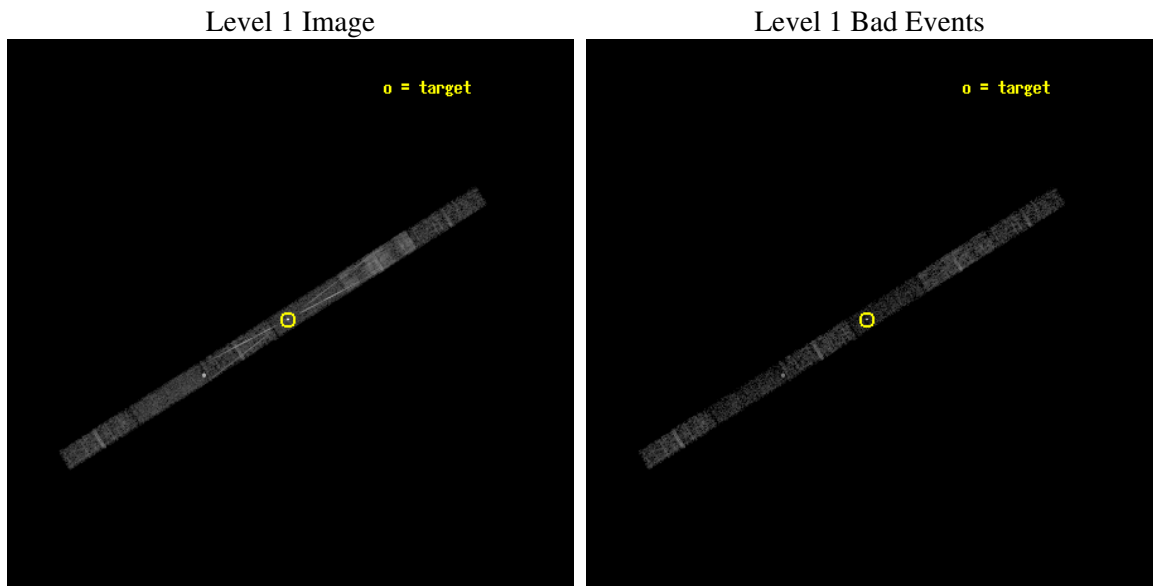




## 3 OBI Secondary

### 3.1 OBI

#### 3.1.1 Images



#### 3.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



### 3.1.3 Parameters

obi_num	1
ascdsver	7.6.10
caldbver	3.4.0
date	2007-05-25T09:47:12
revision	4

sched_exp_time	6000.000000
ontime	5037.136860624
ontime4	5037.1779306084
ontime5	5035.9549302906
ontime6	5037.0548702925
ontime7	5037.136860624
ontime8	5037.0138602555
ontime9	5038.1138003767
l1events	89682

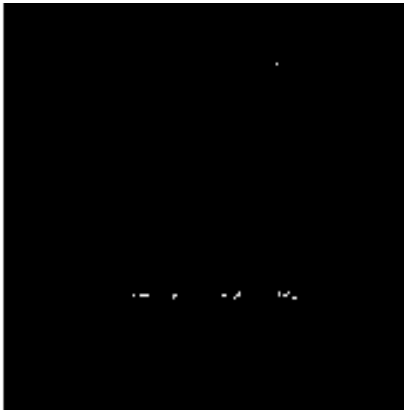
### 3.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	11705	12936	14368	18104	23283	9286
rejected events	10200	6389	9174	6722	12407	8037
rejected %	87%	49%	63%	37%	53%	86%

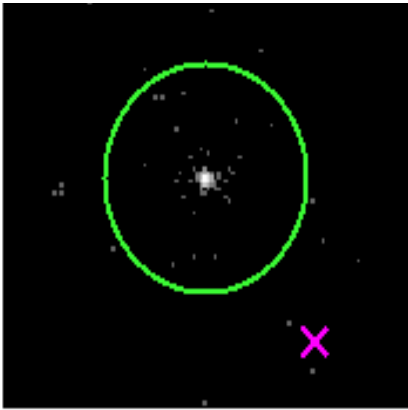
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	619	1322	3561	1747	3956	524
	5%	10%	24%	9%	16%	5%
grade 1 events	2	284	13	65	31	5
	0%	2%	0%	0%	0%	0%
grade 2 events	427	1723	740	2607	1244	225
	3%	13%	5%	14%	5%	2%
grade 3 events	162	613	305	1154	2261	161
	1%	4%	2%	6%	9%	1%
grade 4 events	170	577	320	1237	2000	178
	1%	4%	2%	6%	8%	1%
grade 5 events	208	1101	315	1191	446	266
	1%	8%	2%	6%	1%	2%
grade 6 events	209	2671	390	4958	1929	223
	1%	20%	2%	27%	8%	2%
grade 7 events	9908	4645	8724	5145	11416	7704
	84%	35%	60%	28%	49%	82%

# 4 Gratings

## 4.1 HEG Arm



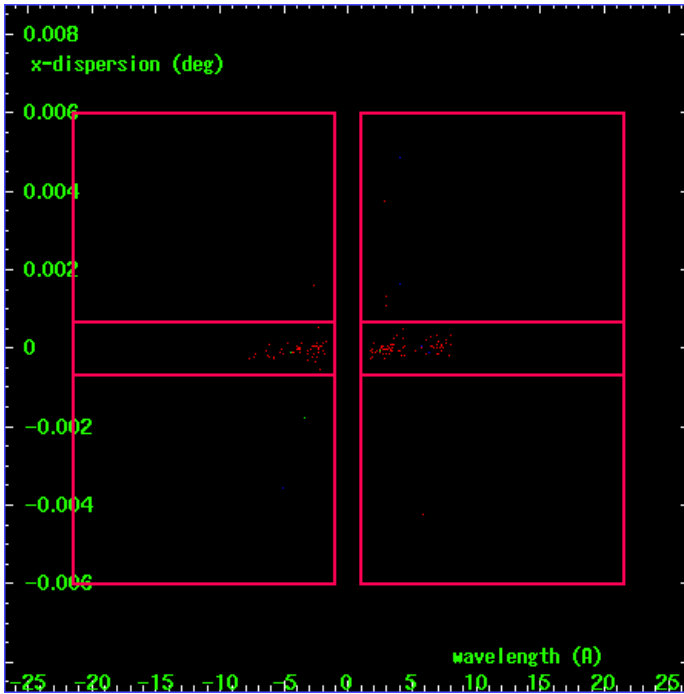
HEG Order Sort 123



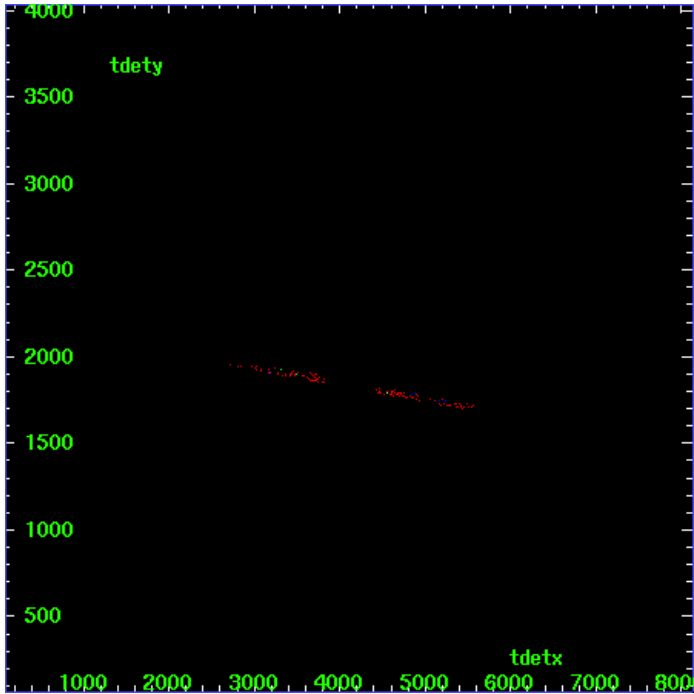
HEG Zero Order



HEG Order Sort ALL

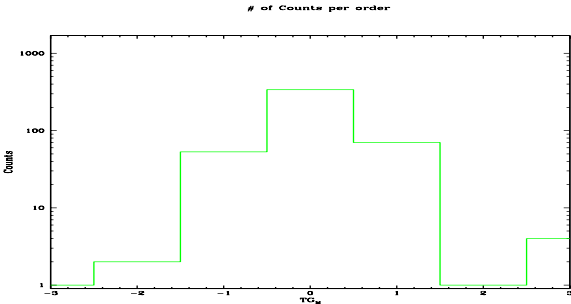


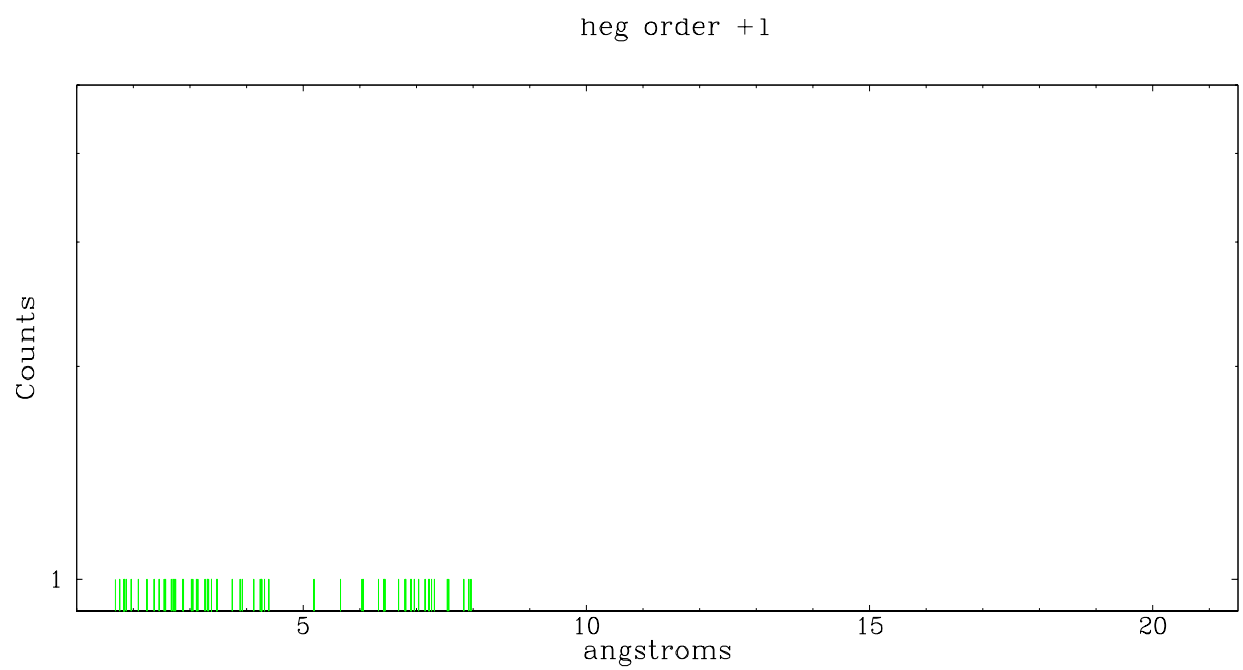
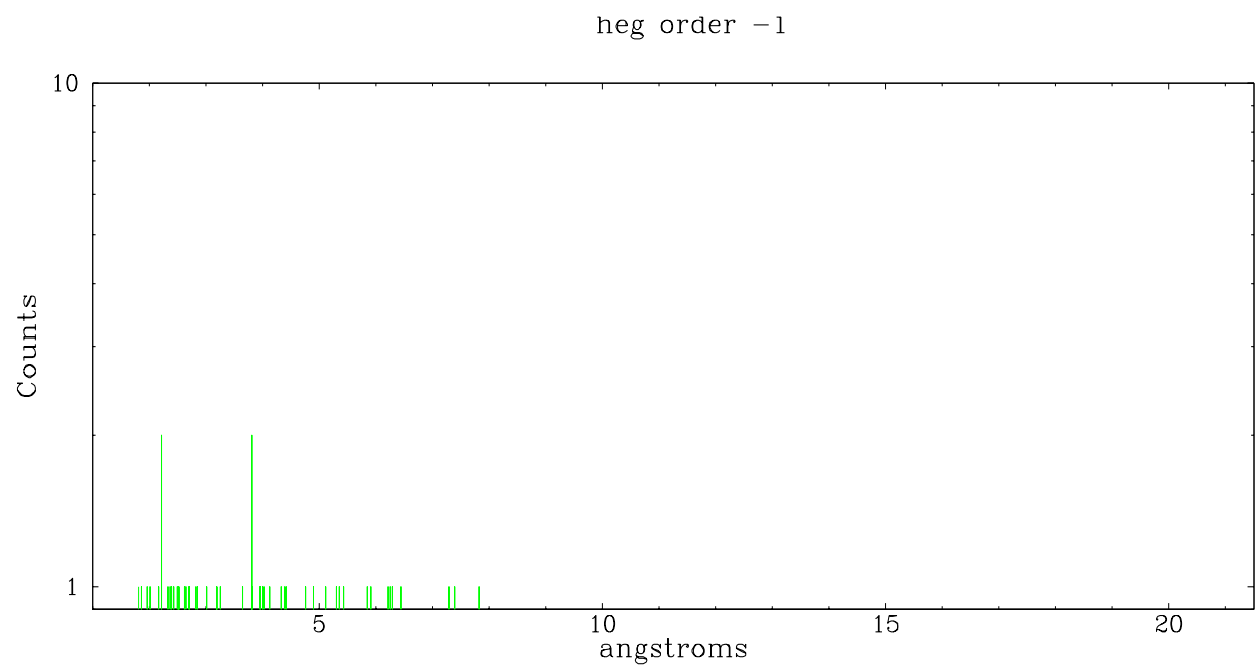
Spot Image HEG



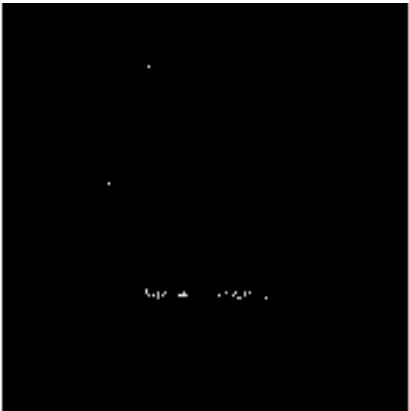
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1	2	53	339	70	1	4

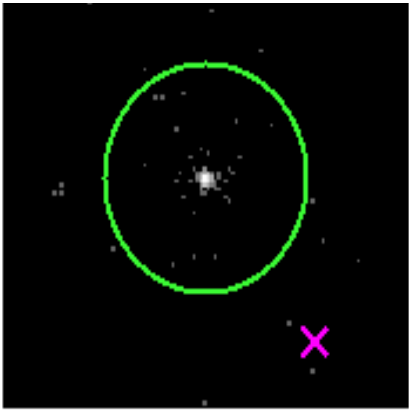




4.2 MEG Arm



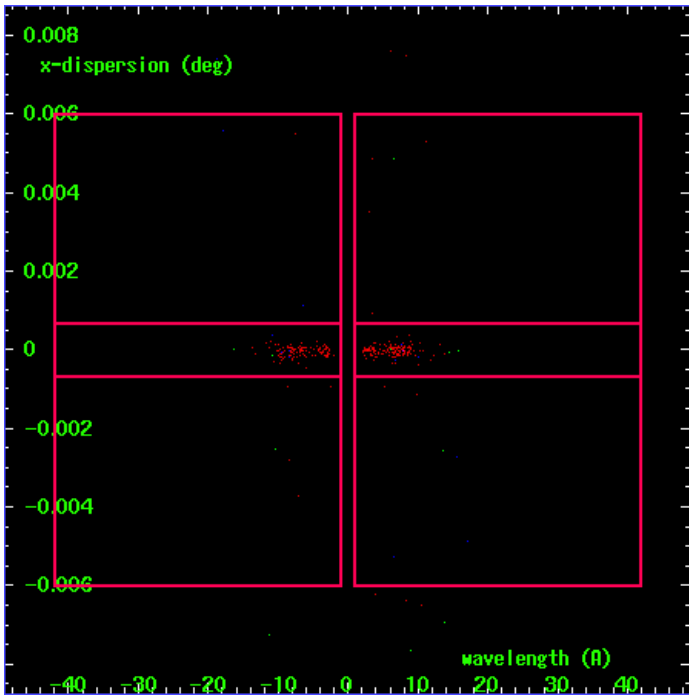
MEG Order Sort 123



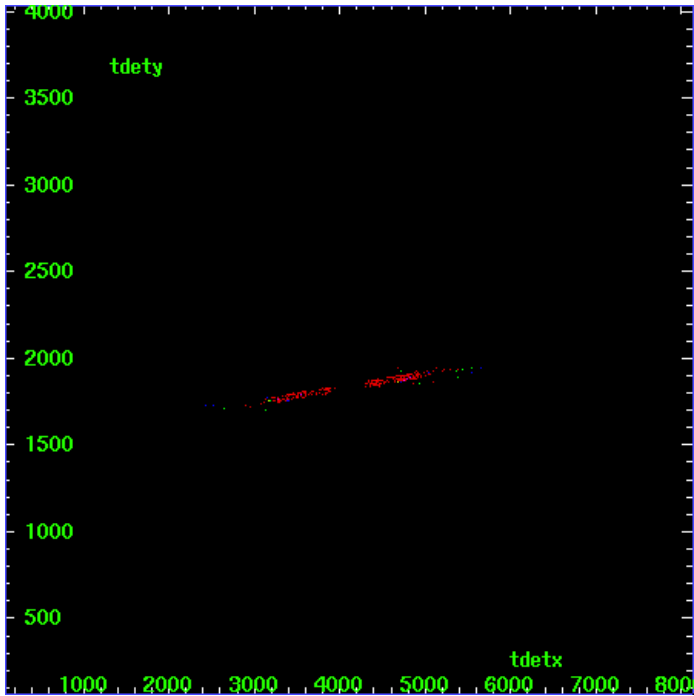
MEG Zero Order



MEG Order Sort ALL

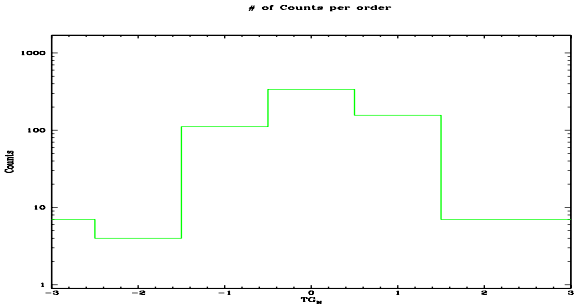


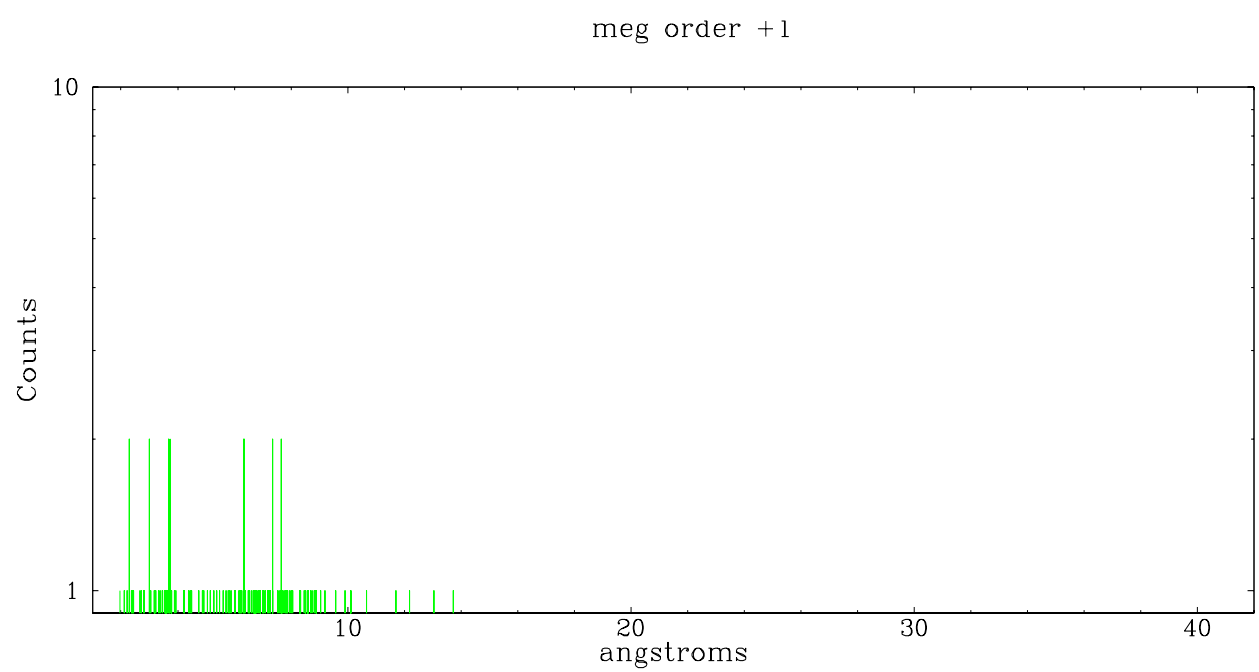
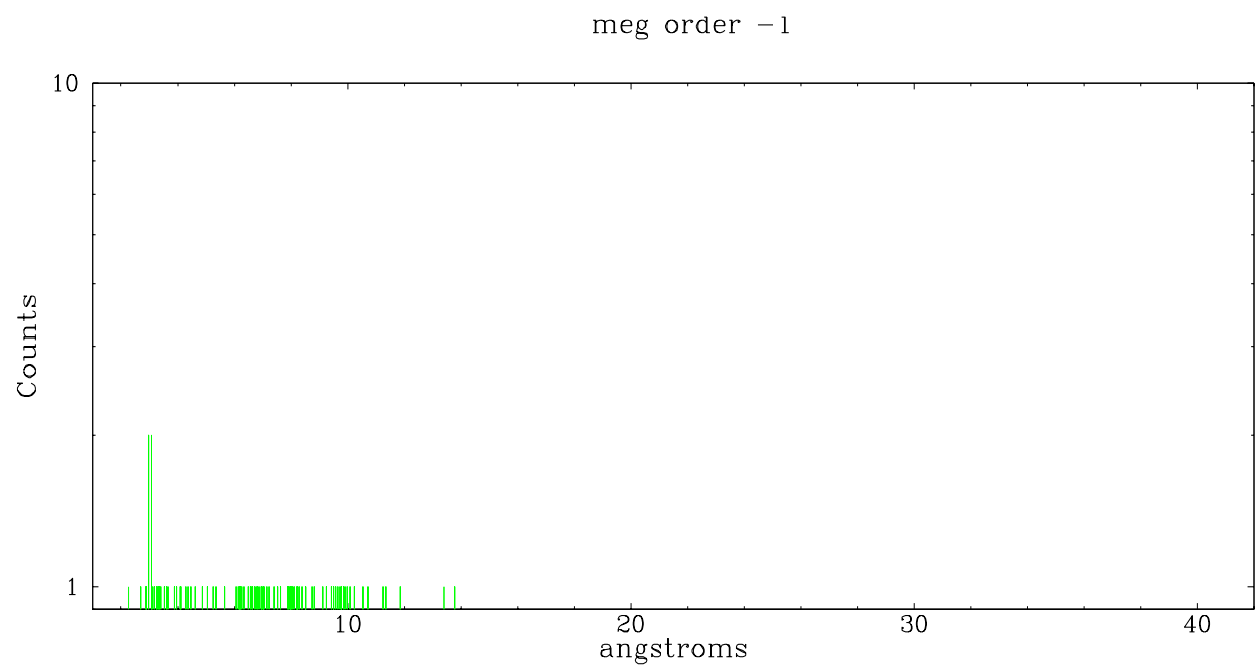
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	7	4	111	339	156	7	7





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.06.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	6.006

## A.2 Comments

Charge time for this ObsId remains at original value of 6.006 ks, although with the current processing the charge time would have been 6.204 ksec. Subarray is too narrow to include softer X-ray events in the dispersed spectra.