

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5600 - L2 Version 002  
Chandra X-Ray Center

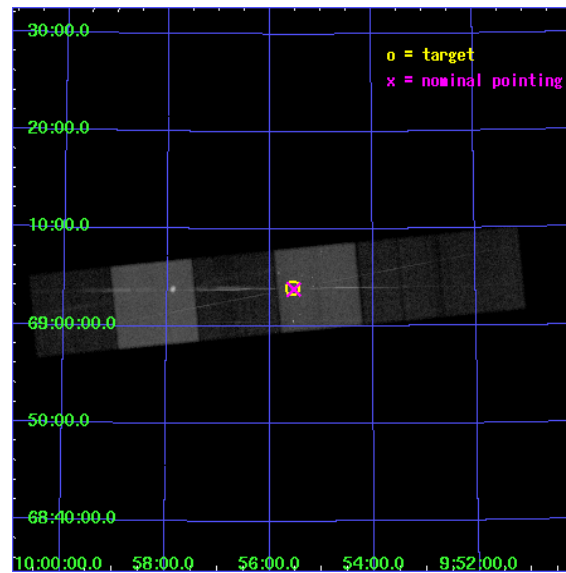
L2 Processing Date : Mar 19 2006

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# 1 Front

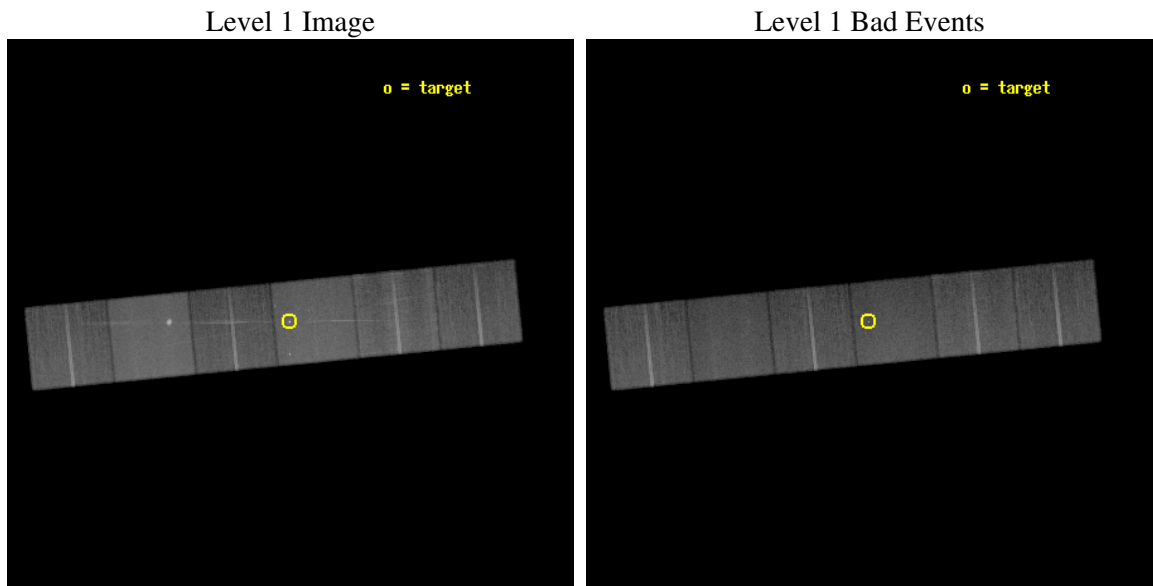
seq_num	701024
obs_id	5600
title	Understanding the accretion process in a Low-Luminosity AGN: is M81* a starved black hole?
observer	Dr. Claude Canizares
object	M81*
dtcycle	0
cycle	P
ra_targ	148.888333
dec_targ	69.065306
ra_nom	148.88376521105
dec_nom	69.063801491969
roll_nom	354.37602084948
revision	2
ontime	36422.399864316
livetime	35961.197506298
ontime4	36422.399864316
ontime5	36422.399864316
ontime6	36422.399864316
ontime7	36422.399864316
ontime8	36422.399864316
ontime9	36422.399864316
l2events	447458



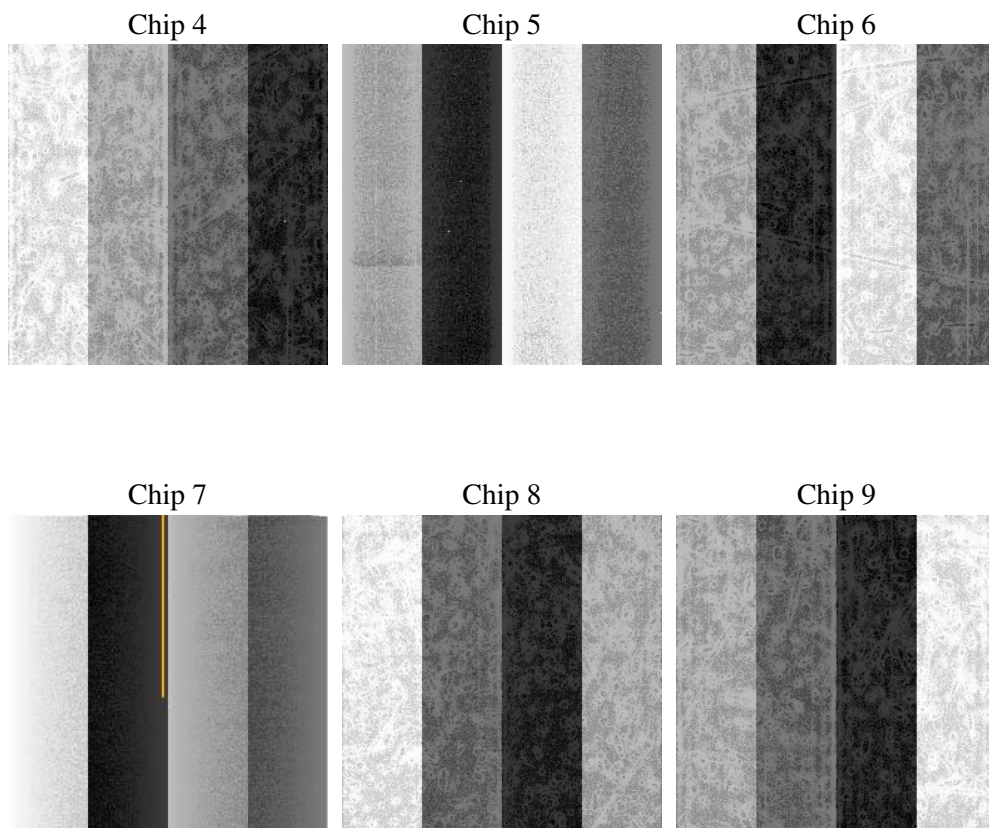
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-03-19T11:16:23
revision	2

sched_exp_time	36300.000000
ontime	38211.407372862
ontime4	38211.407372862
ontime5	38211.407372862
ontime6	38211.407372862
ontime7	38211.407372862
ontime8	38211.407372862
ontime9	38211.407372862
l1events	2045175

### 2.1.4 Events

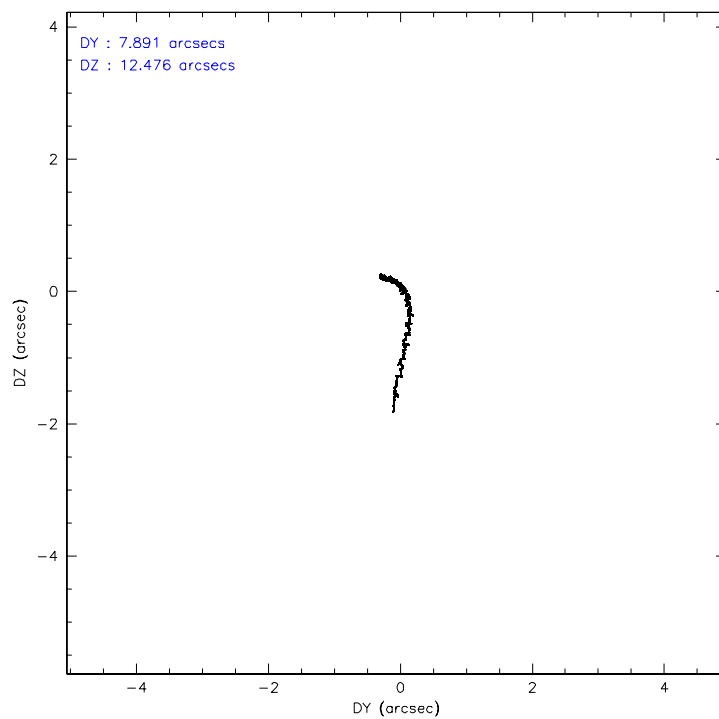
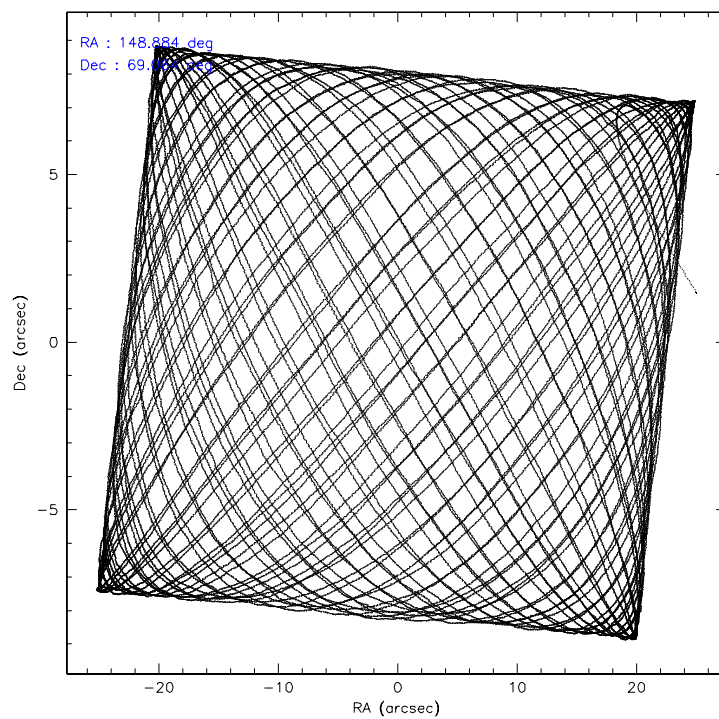
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	314962	421125	287342	390895	353269	277582
rejected events	279304	243126	247120	241878	279709	244829
rejected %	88%	57%	86%	61%	79%	88%

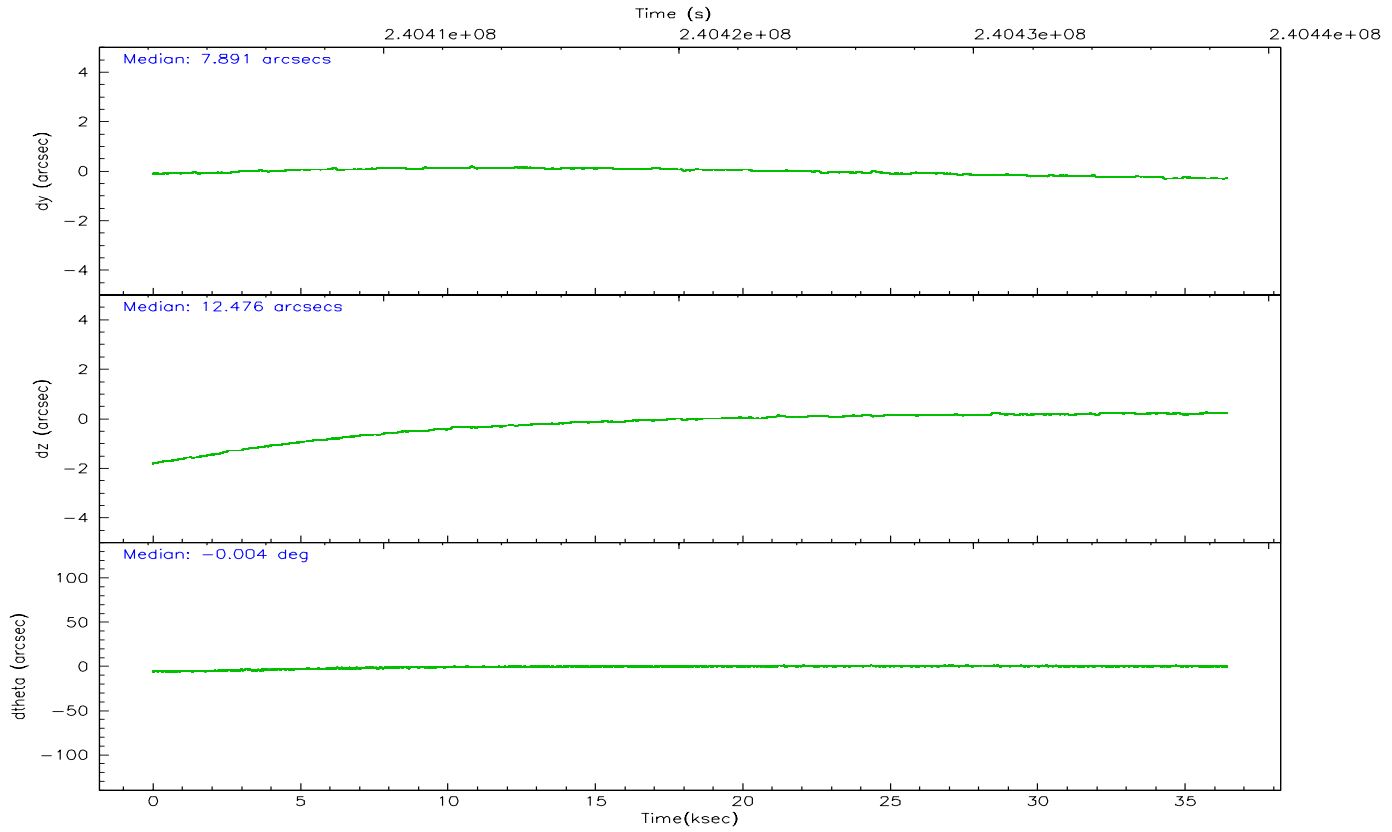
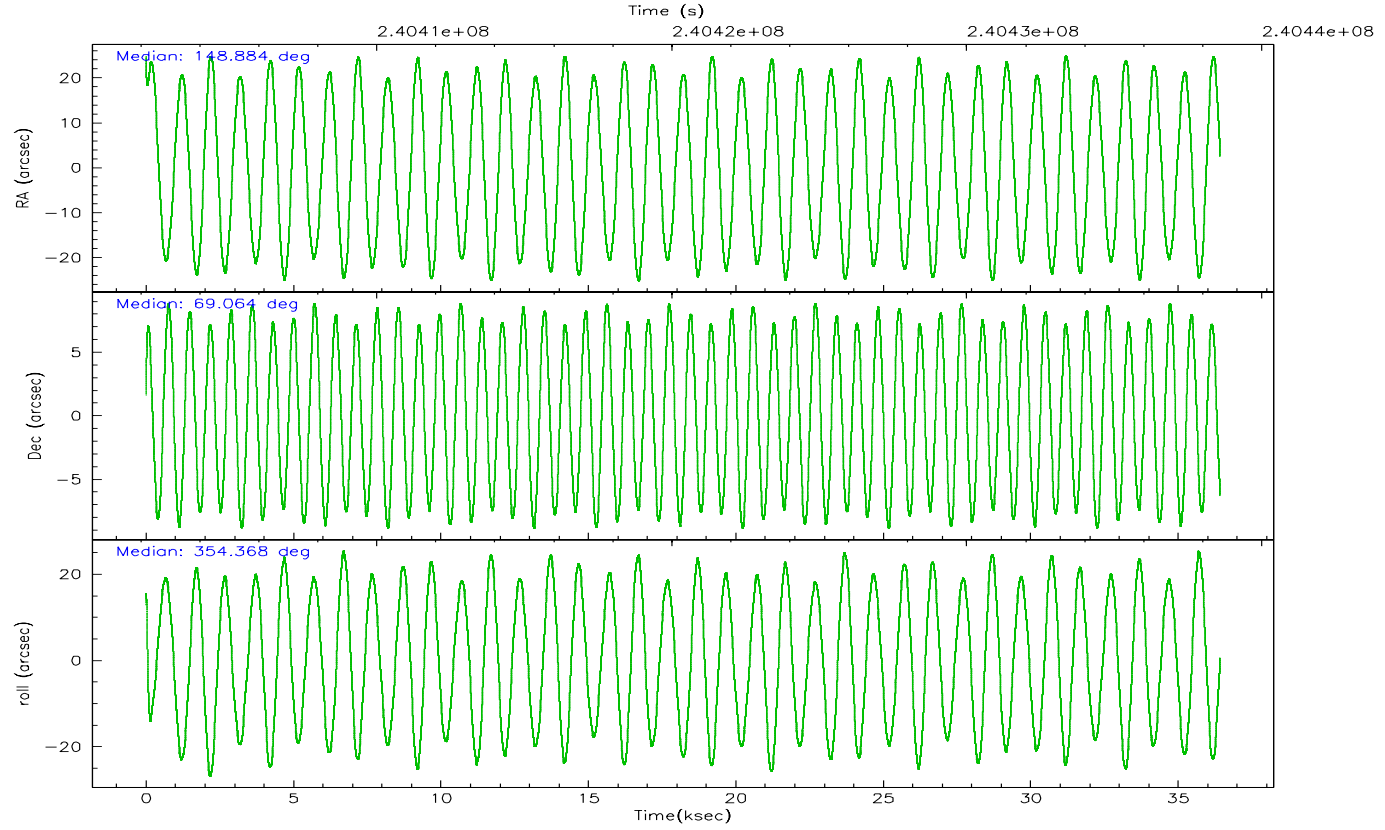
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	17221	9407	19583	10132	25338	14075
	5%	2%	6%	2%	7%	5%
grade 1 events	278	380	146	274	233	162
	0%	0%	0%	0%	0%	0%
grade 2 events	7513	59590	8156	38872	16892	6740
	2%	14%	2%	9%	4%	2%
grade 3 events	3524	4772	3442	8375	7907	3350
	1%	1%	1%	2%	2%	1%
grade 4 events	3465	4572	3529	8111	7347	3337
	1%	1%	1%	2%	2%	1%
grade 5 events	12646	19948	13159	25057	17316	14087
	4%	4%	4%	6%	4%	5%
grade 6 events	5600	108141	7143	90211	19418	6799
	1%	25%	2%	23%	5%	2%
grade 7 events	264715	214315	232184	209863	258818	229032
	84%	50%	80%	53%	73%	82%

## 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	NONE	NONE
Pointing RA	148.814813	148.8837652110549	Alternating exposures requested	N	N
Pointing Dec	69.052214	69.06380149196858	Primary exposure time	0.000000	3.2
Pointing Roll	354.283780	354.3760208494765			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	240402300.184000	240400306.82264			
Observation start date	2005-08-14T10:23:56	2005-08-14T09:51:46			
Observation end time	240438600.184000	240440380.22447			
Observation end date	2005-08-14T20:28:56	2005-08-14T20:59:40			
Read mode	TIMED	TIMED			

## 2.3 Aspect





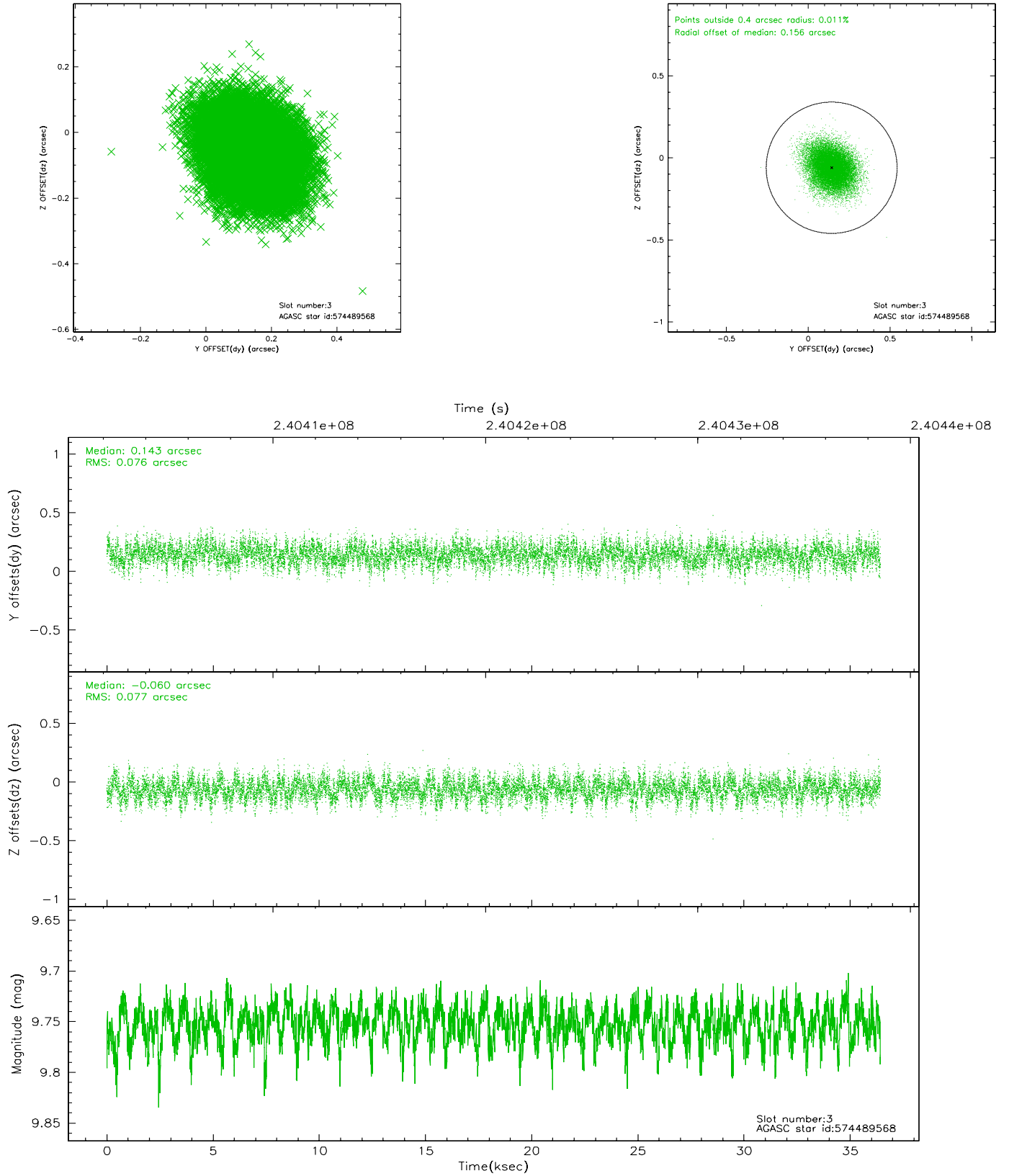
### Slot Statistics

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	8884	0.004	-0.003	0.015	0.033	0.000000	0.000000	-760.64	-1733.54
1	FID	ACIS-S-4	7.20	8885	0.037	-0.001	0.013	0.023	0.000000	0.000000	2152.66	174.91
2	FID	ACIS-S-5	7.23	8885	-0.068	0.015	0.013	0.028	0.000000	0.000000	-1813.51	168.63
3	GUIDE	574489568	9.75	17757	0.143	-0.060	0.115	0.187	147.223974	69.438157	-2142.16	1208.24
4	GUIDE	574490960	9.77	17752	-0.010	-0.109	0.132	0.212	148.185918	69.658768	-1001.44	2098.44
5	GUIDE	574491280	9.33	17751	-0.013	0.049	0.198	0.285	148.611567	69.450135	-399.08	1400.15
6	GUIDE	574498696	9.03	17761	-0.026	0.217	0.090	0.143	146.881317	68.486979	-2340.55	-2238.59
7	GUIDE	574491872	9.27	17763	-0.107	-0.110	0.111	0.177	147.207613	69.765453	-2249.96	2379.84

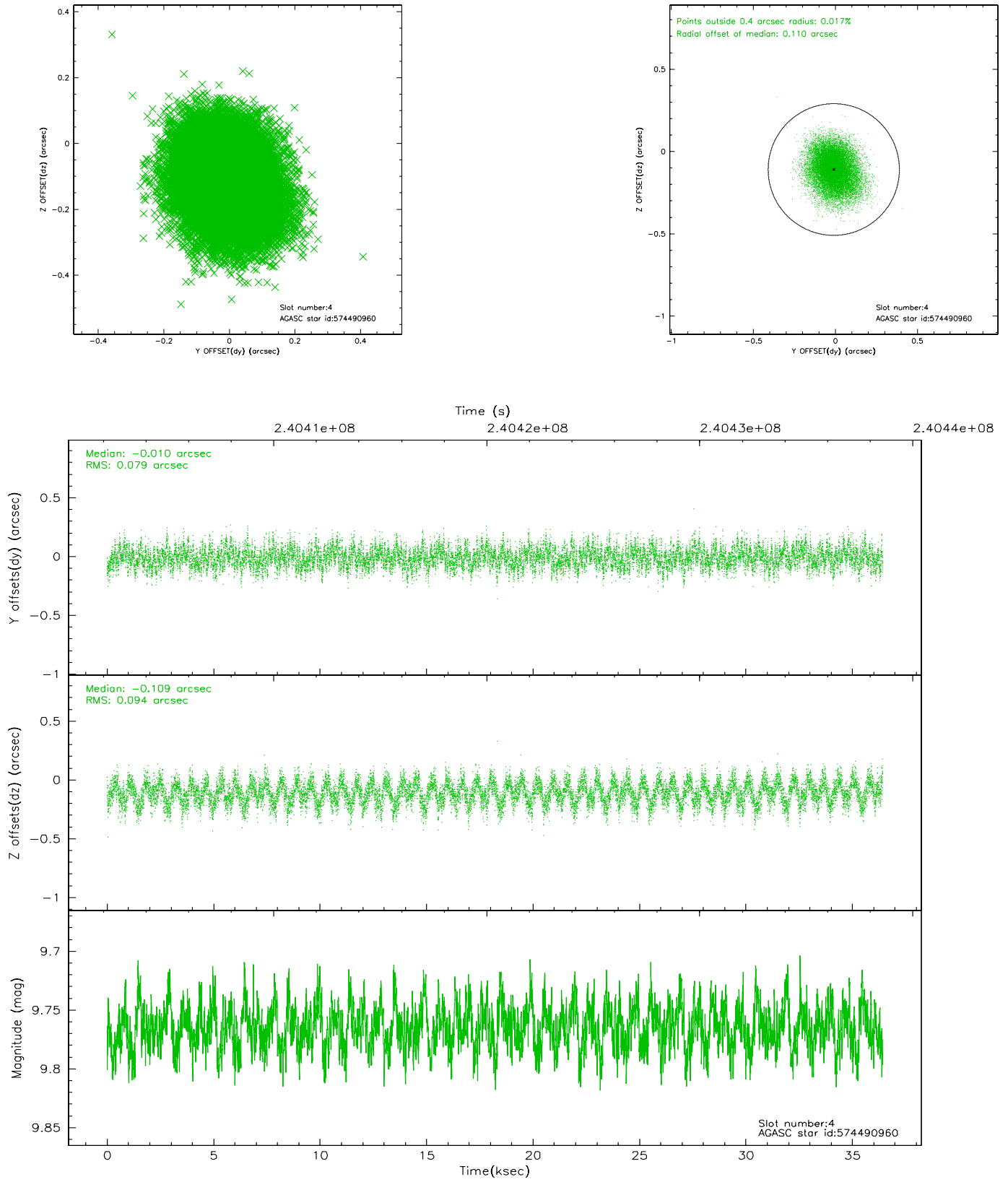


## 2.4 Star Slots

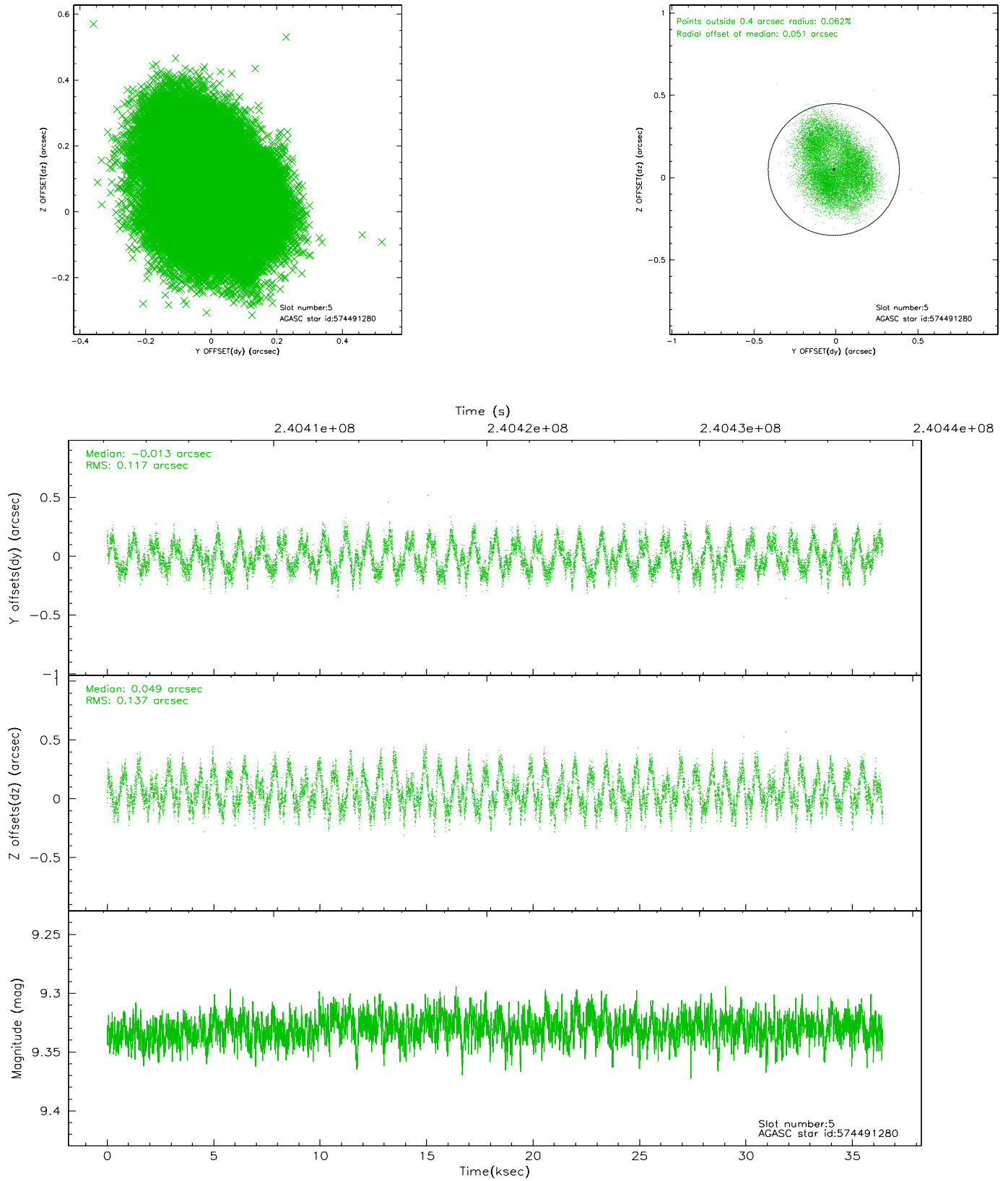
### 2.4.1 Slot 3



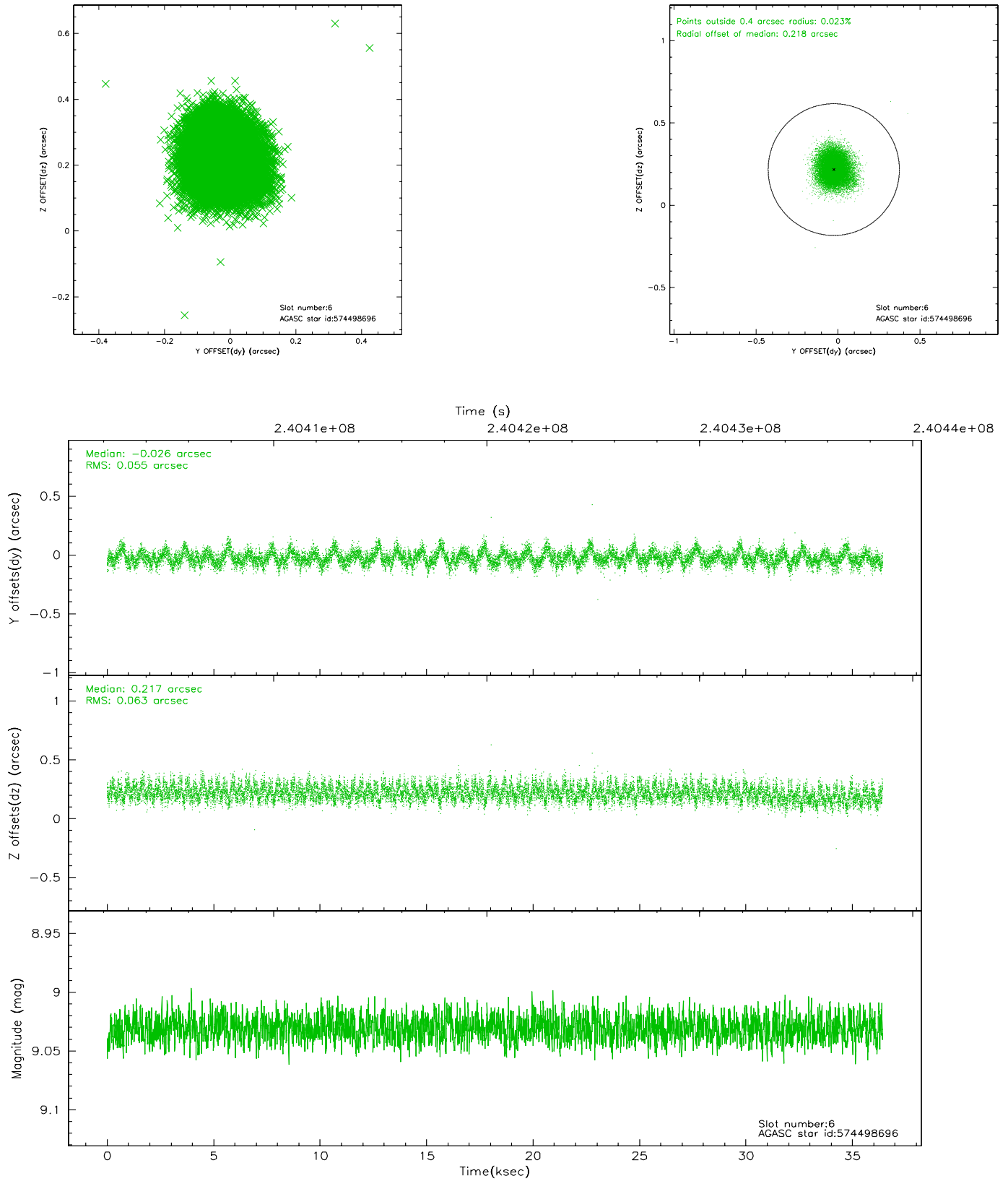
## 2.4.2 Slot 4



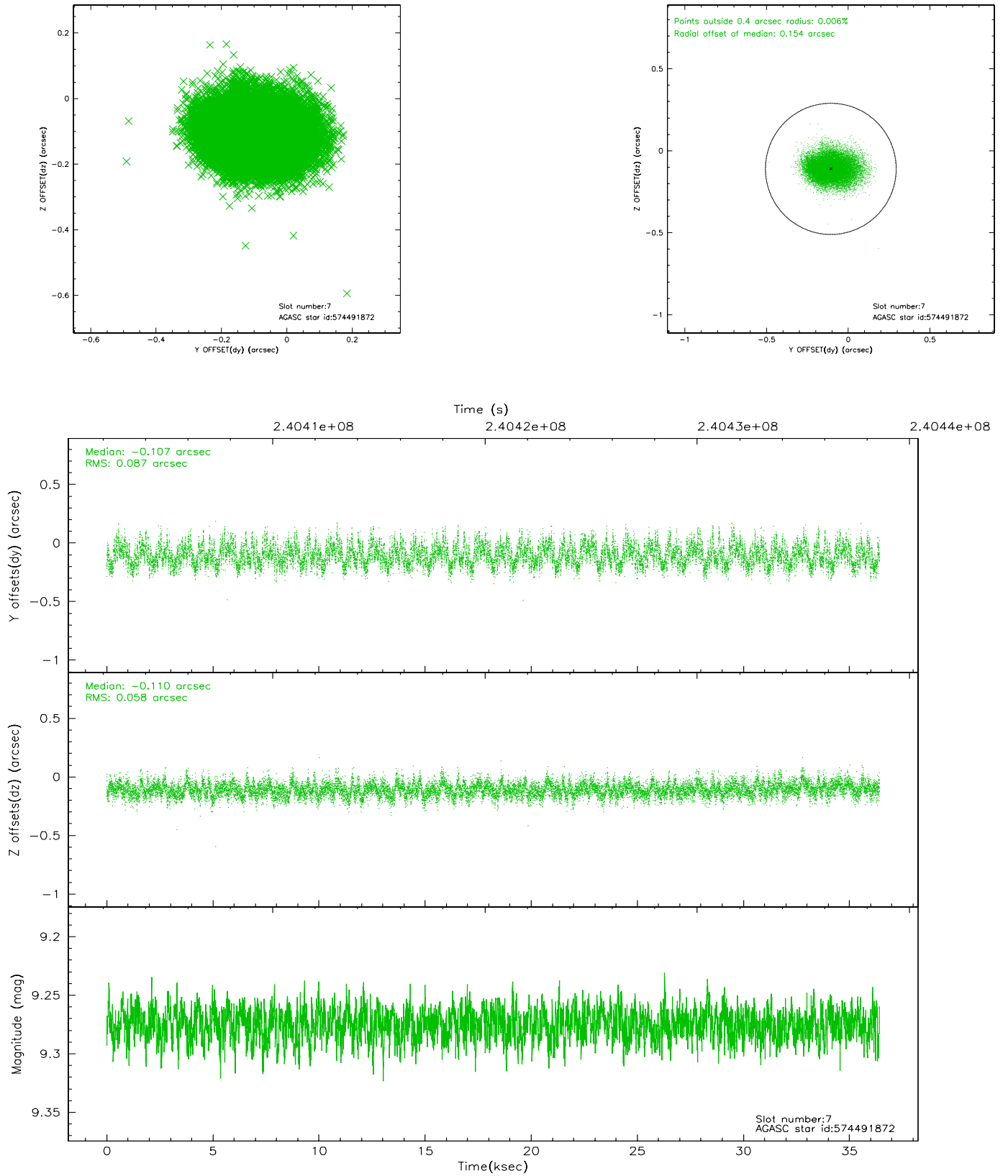
### 2.4.3 Slot 5



## 2.4.4 Slot 6

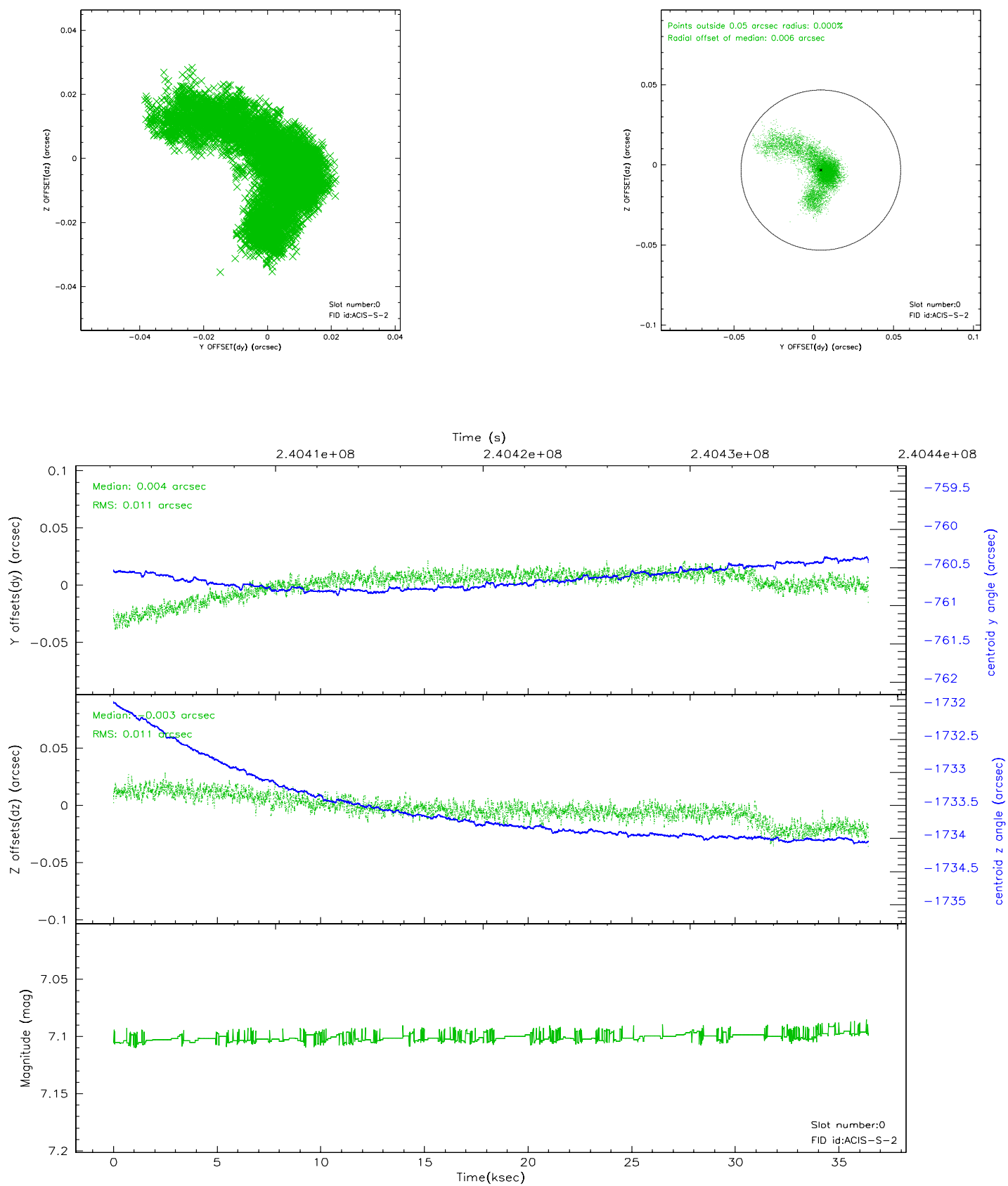


## 2.4.5 Slot 7

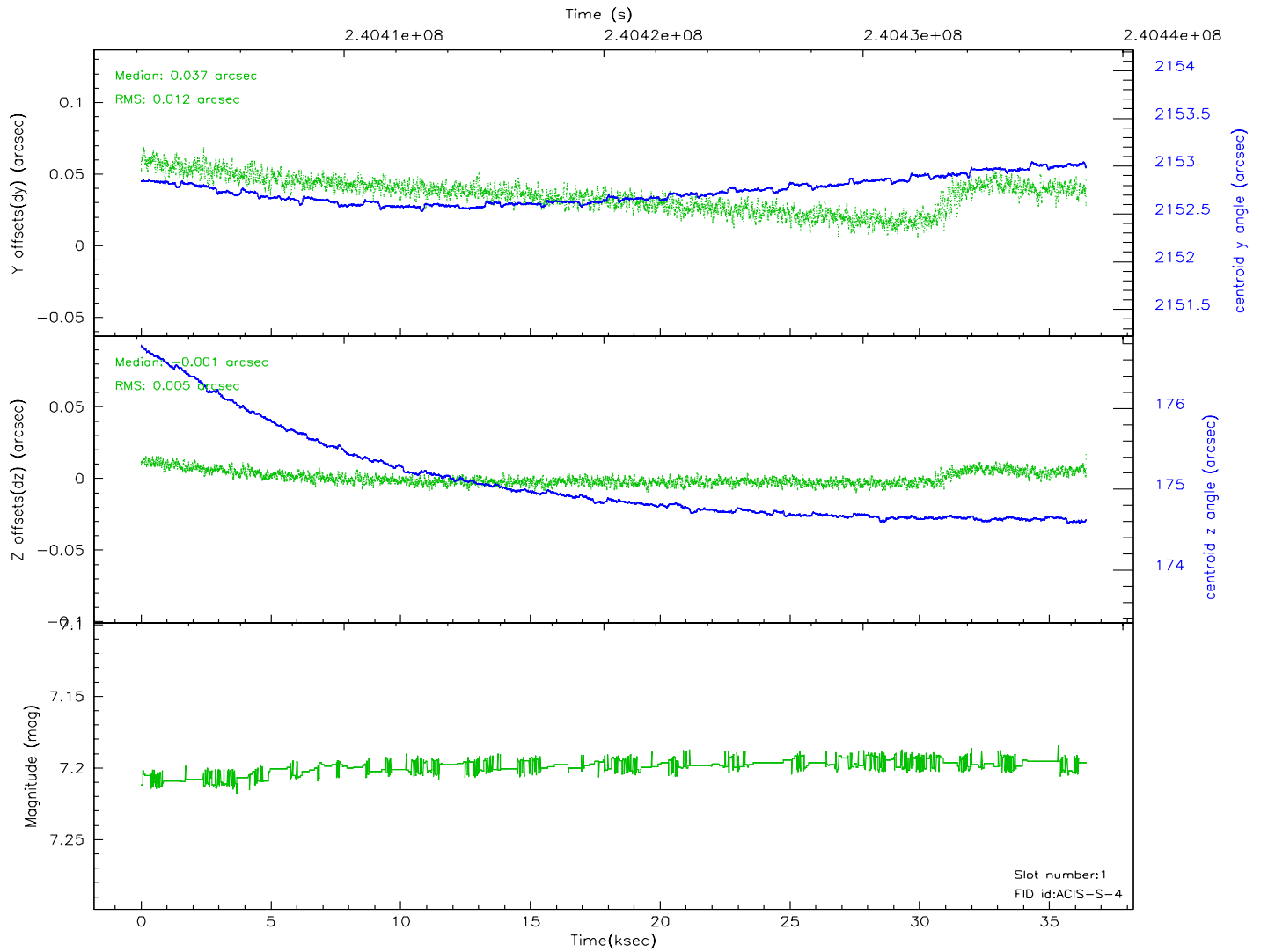
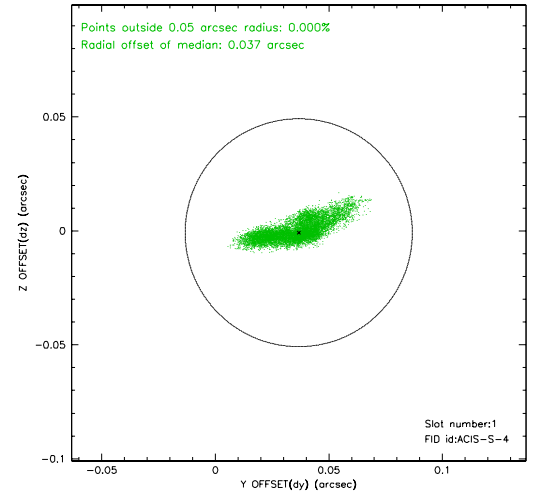
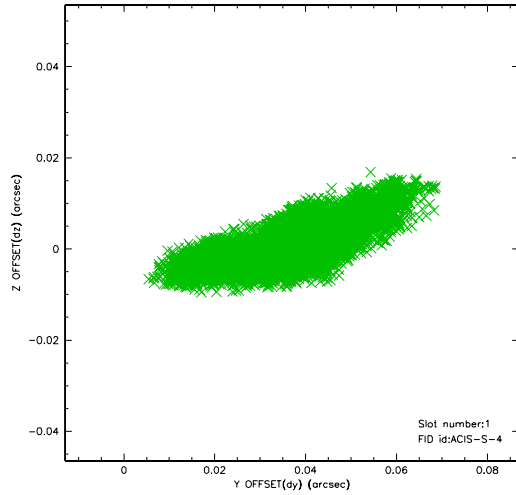


## 2.5 FID Slots

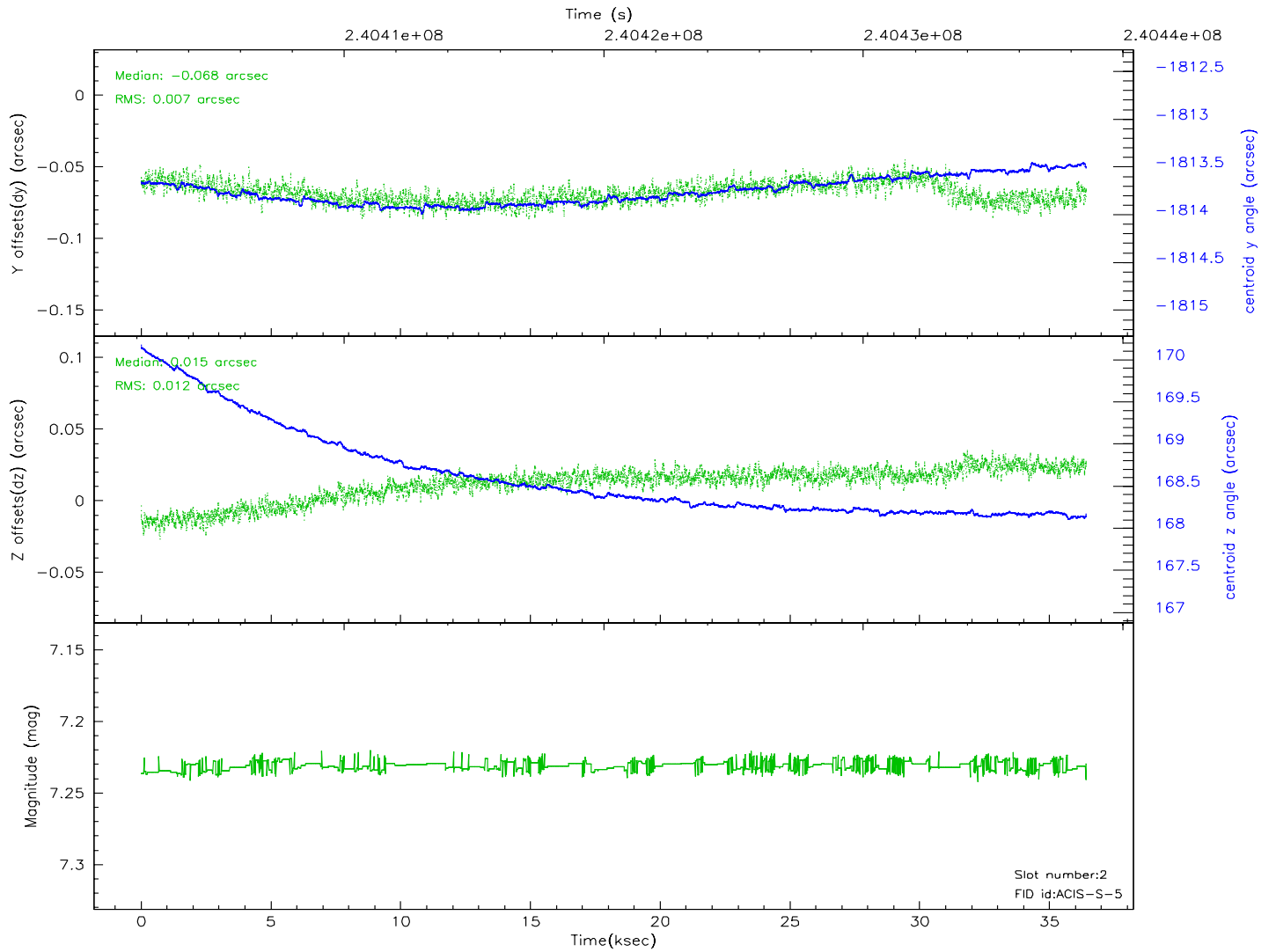
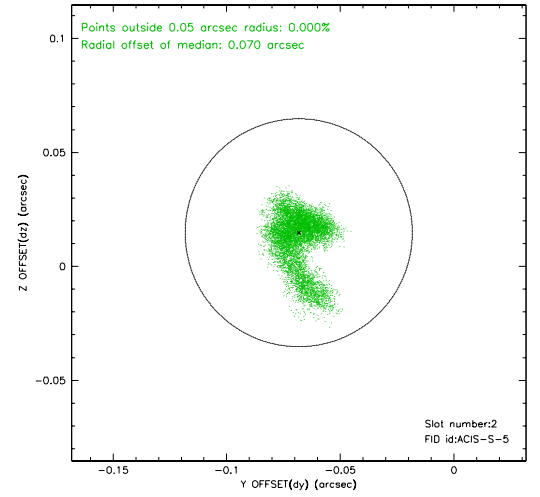
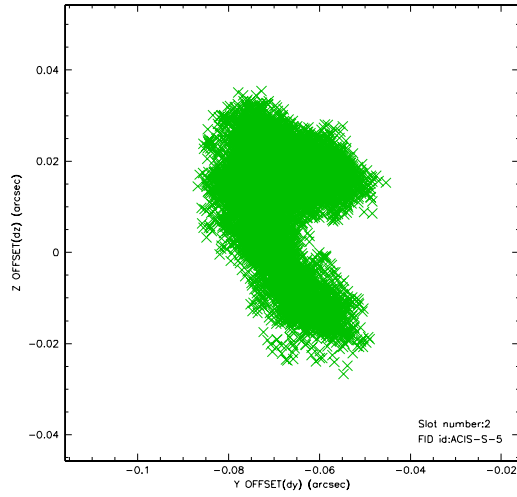
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



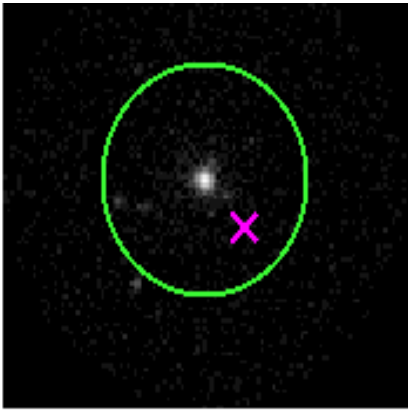


# 3 Gratings

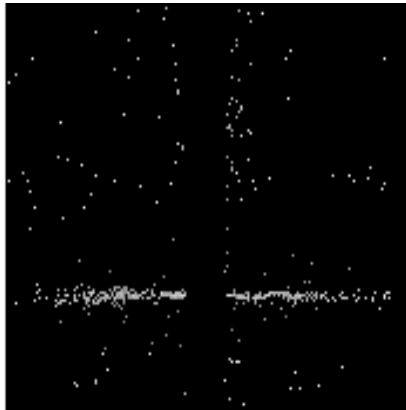
## 3.1 HEG Arm



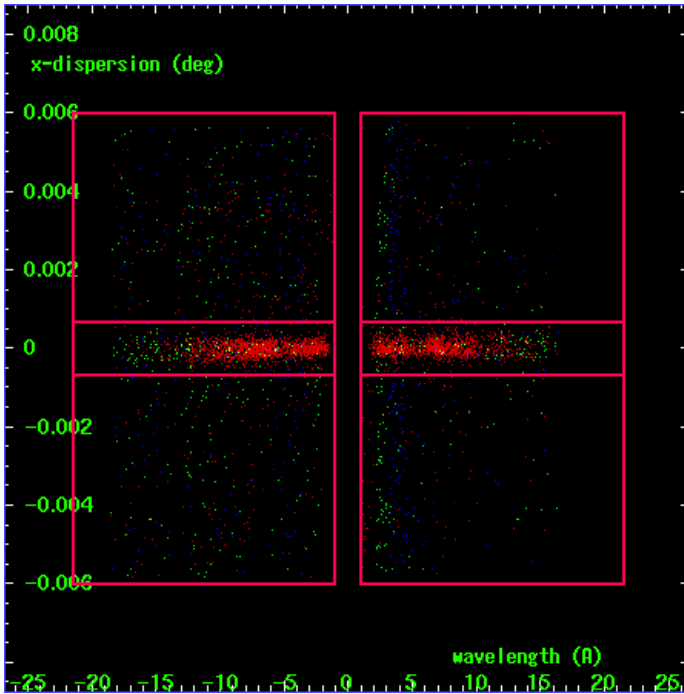
HEG Order Sort 123



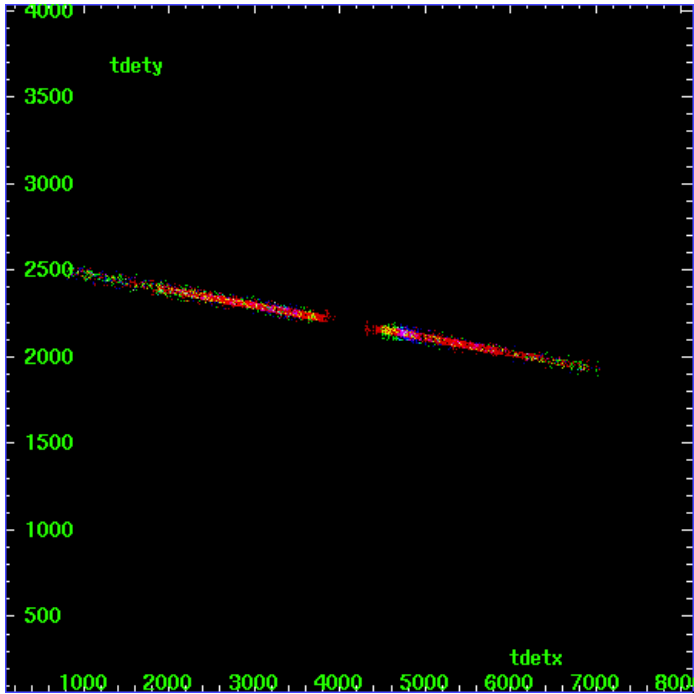
HEG Zero Order



HEG Order Sort ALL

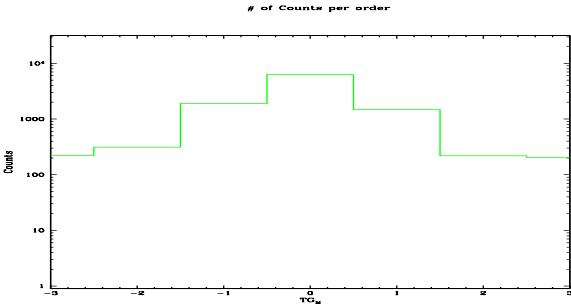


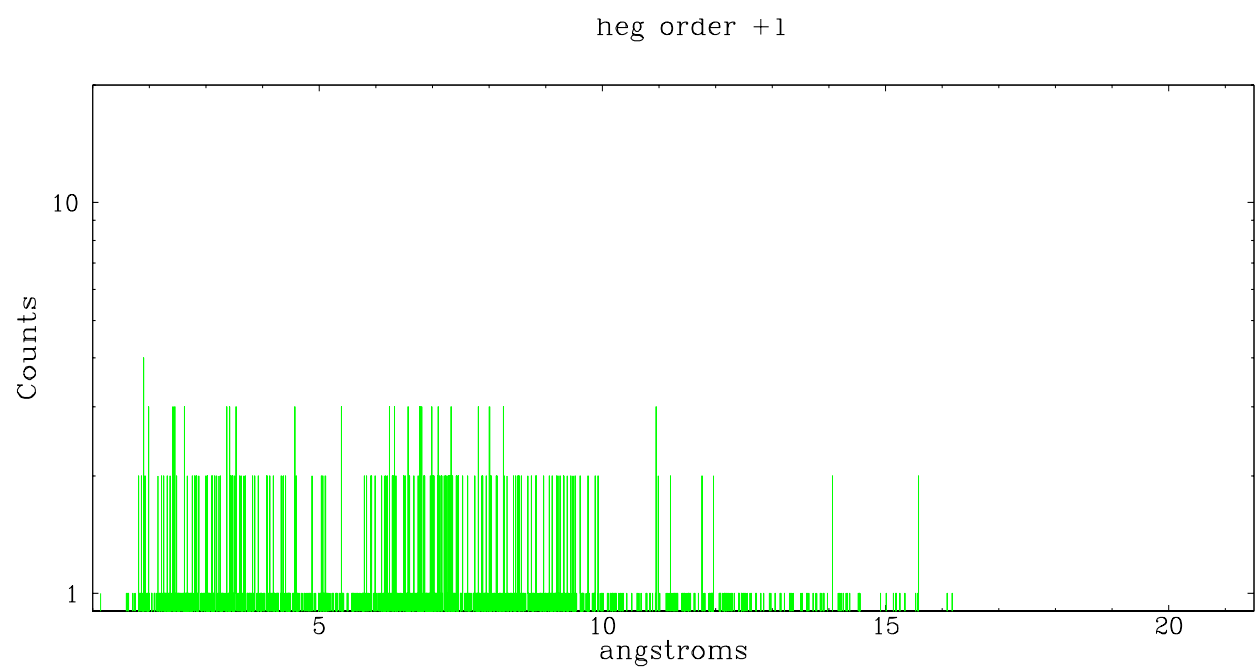
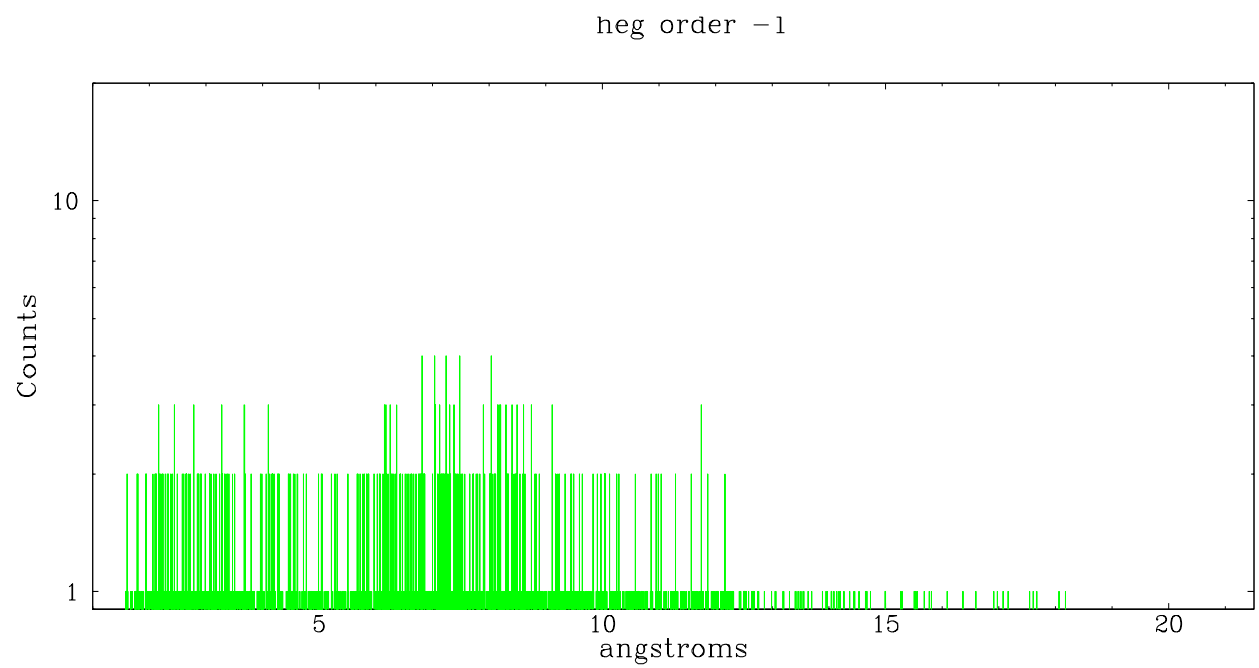
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	223	311	1893	6285	1472	219	204

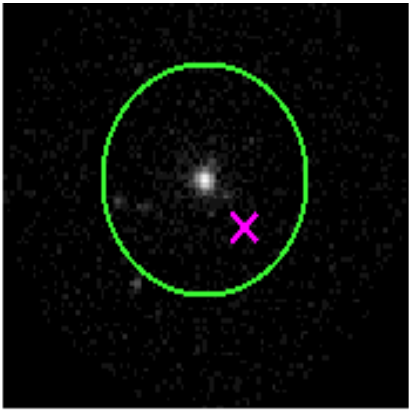




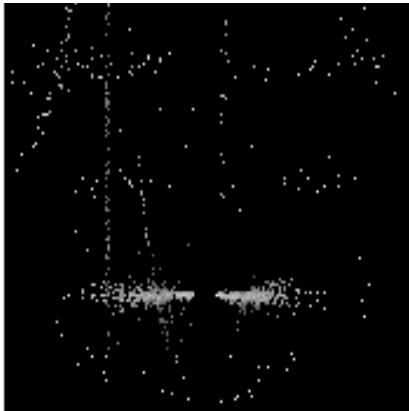
3.2 MEG Arm



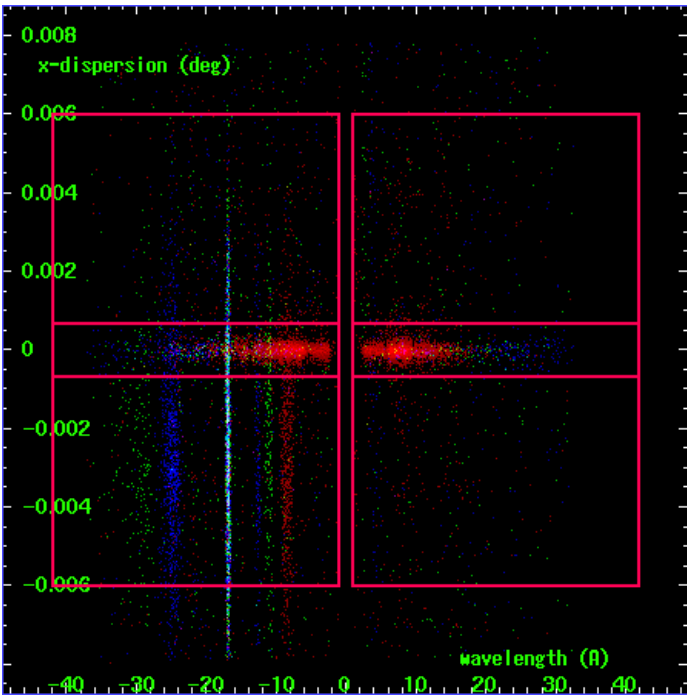
MEG Order Sort 123



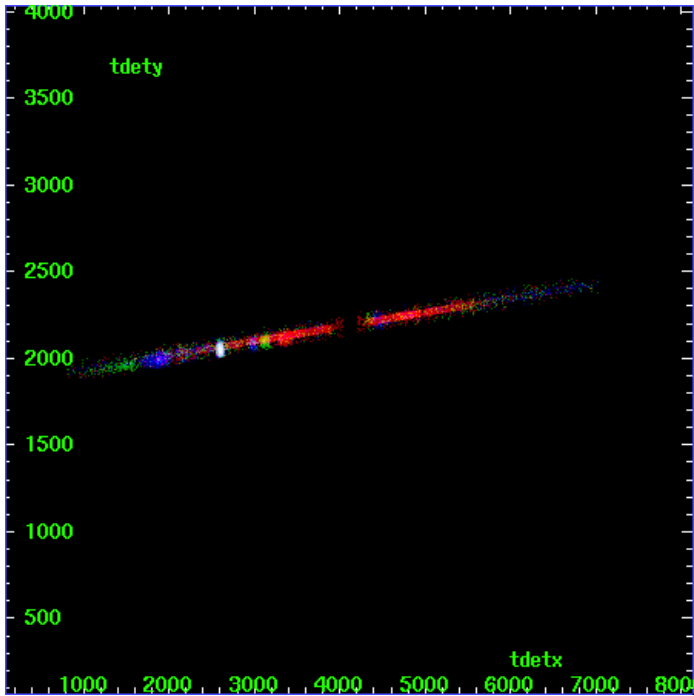
MEG Zero Order



MEG Order Sort ALL

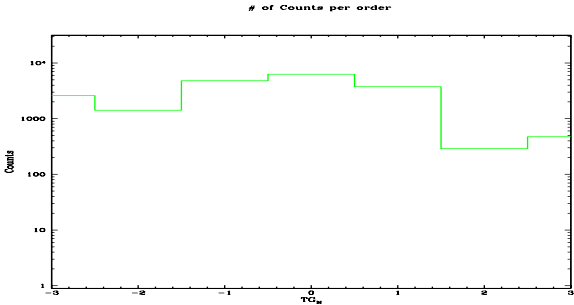


Spot Image MEG

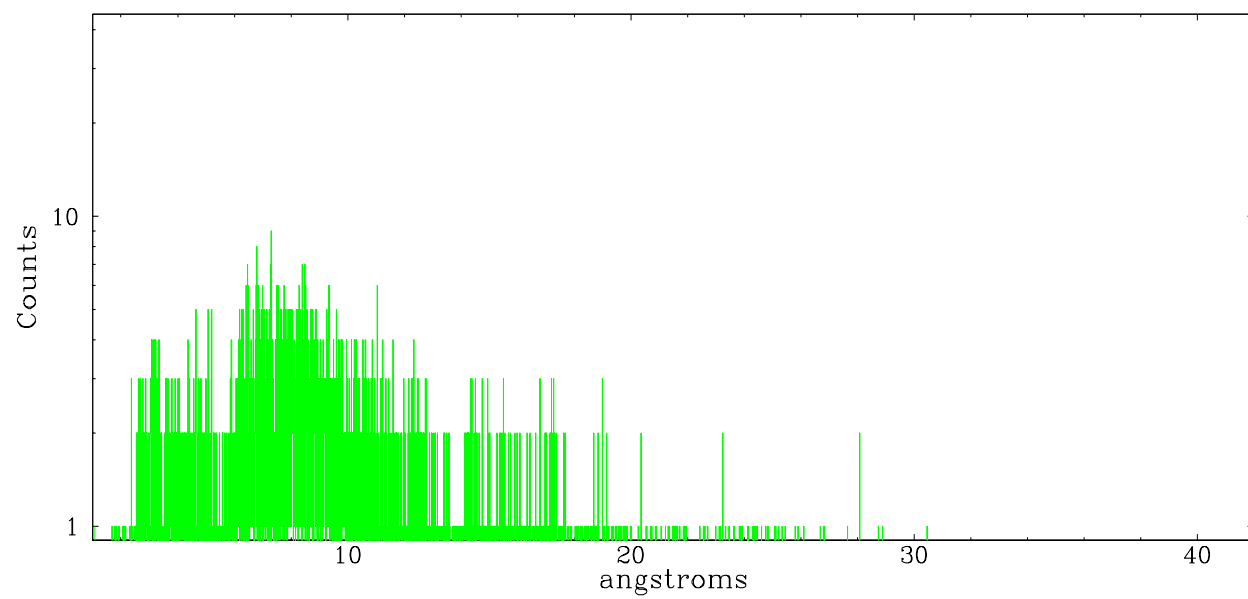


Full Detector MEG

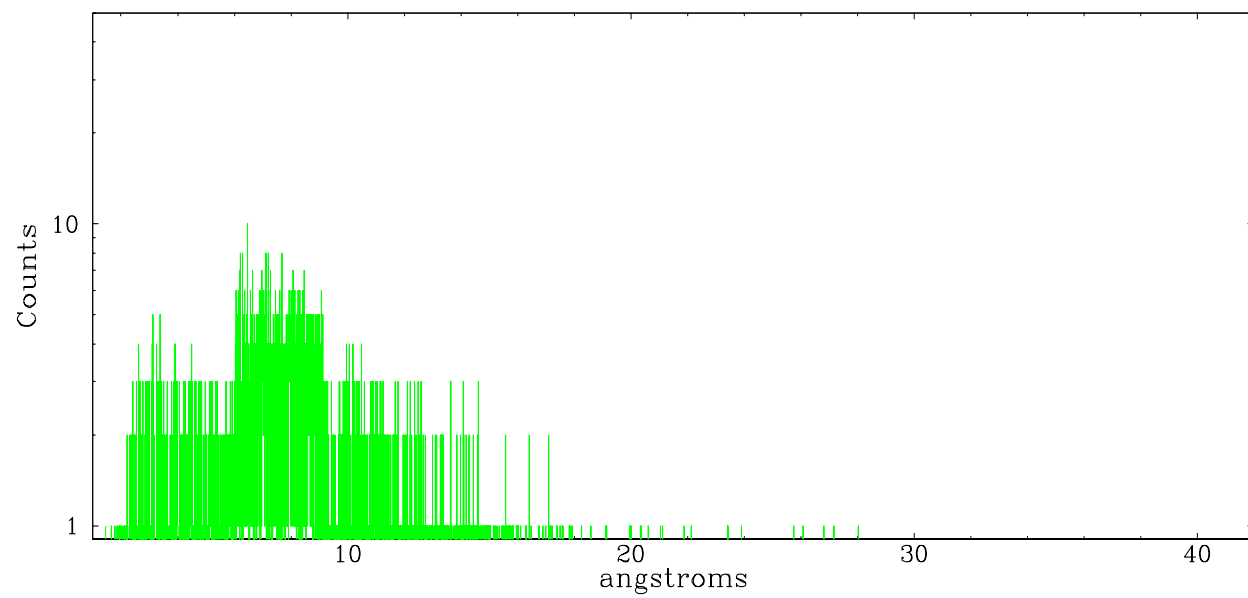
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2594	1422	4813	6285	3747	289	473



meg order -1



meg order +1



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.04.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.4223998

## A.2 Comments

Charge time:

New charge time is less than charge time used in previously distributed version

NEW CHARGE TIME = 36.422400 ks, 1 Obis

PREVIOUS CHARGE TIME = 38.422400 ks, 1 Obis.

=====

A bright X-ray source, Holmberg IX X-1, falls on the MEG -1 spectral arm. The dispersed MEG spectrum from Holmberg IX X-1 overlays the MEG spectrum of the target. Because this bright source is off axis, it is spatially large compared to the spectrum of the target, and its dispersed spectrum is also extended in the spatial direction. There is a possibility that the MEG dispersed spectrum from this bright X-ray source contaminates the zeroth order of the target, although more detailed analysis would be needed to verify this. This is the last in a series of observations of this target. Three degree change downward in FP temp during first 15 ksec of observation. In spite of this rather large change, the aspect solution is considered within spec.