

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2389 - L2 Version 001  
Chandra X-Ray Center

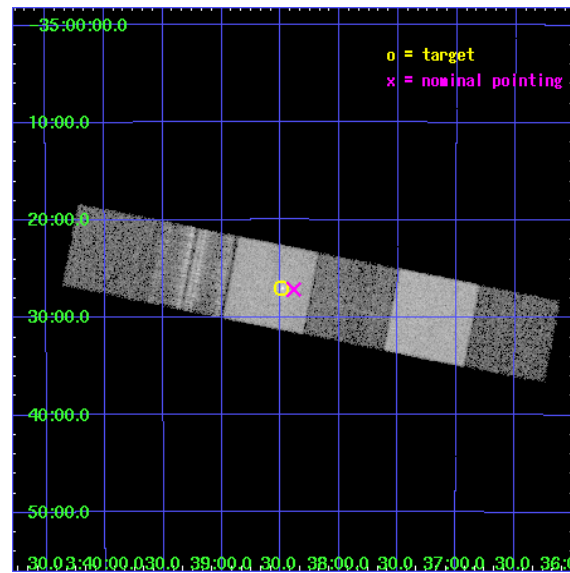
L2 Processing Date : Dec 28 2006

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# 1 Front

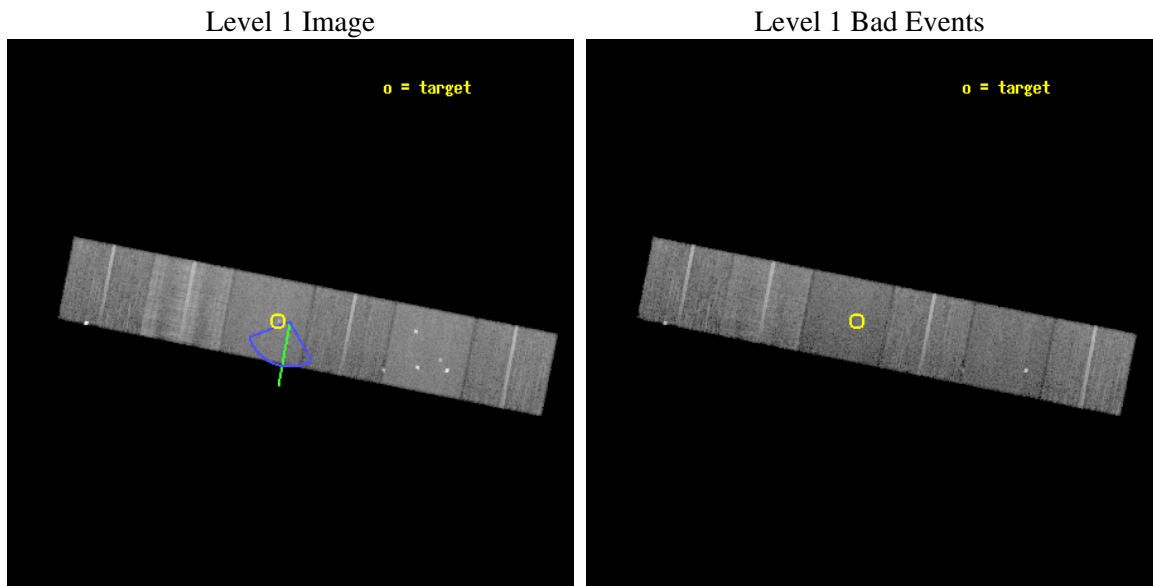
seq_num	600000
obs_id	2389
title	THE DETAILED X-RAY SPECTRA OF ELLIPTICAL GALAXIES
observer	Prof. Claude Canizares
object	NGC 1399
dtcycle	0
cycle	P
ra_targ	54.622083
dec_targ	-35.450278
ra_nom	54.596652417505
dec_nom	-35.452580526063
roll_nom	191.19964330929
revision	2
ontime	14854.400013834
livetime	14666.304656613
ontime4	14854.400013834
ontime5	14854.400013834
ontime6	14854.400013834
ontime7	14854.400013834
ontime8	14854.400013834
ontime9	14854.400013834
l2events	161535



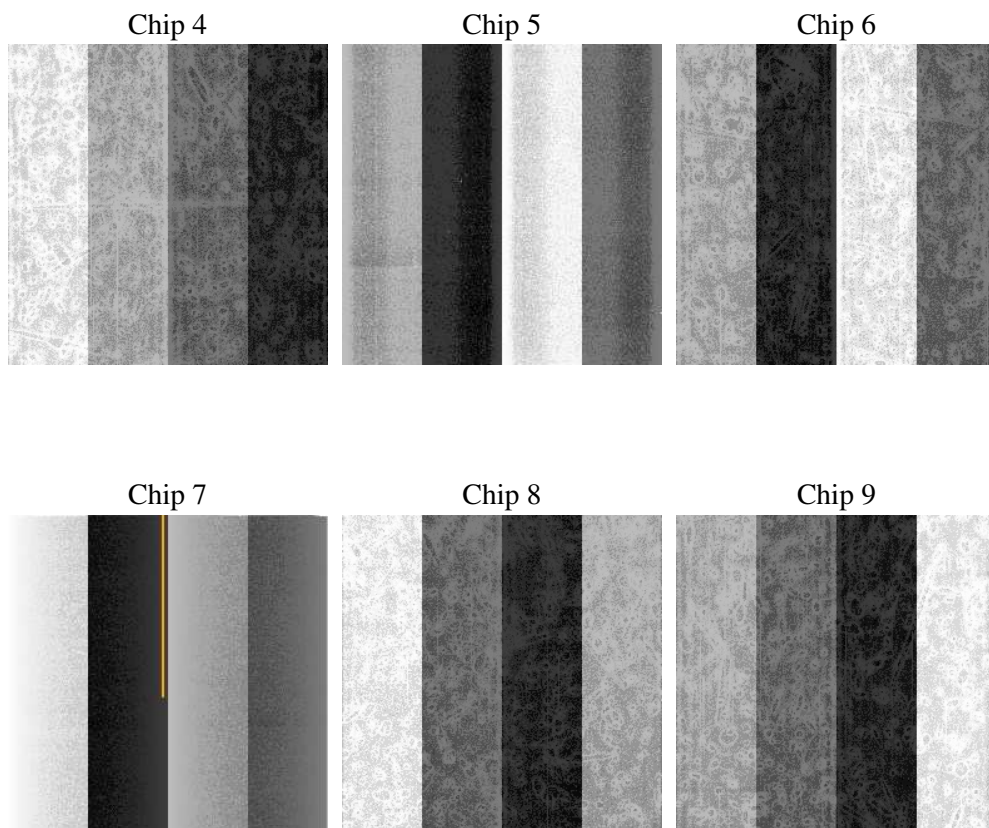
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldbver	3.2.4
date	2006-11-29T20:34:16
revision	2

sched_exp_time	15100.000000
ontime	14859.971416652
ontime4	14859.971416652
ontime5	14859.971416652
ontime6	14859.971416652
ontime7	14859.971416652
ontime8	14859.971287042
ontime9	14859.971416652
l1events	773691

### 2.1.4 Events

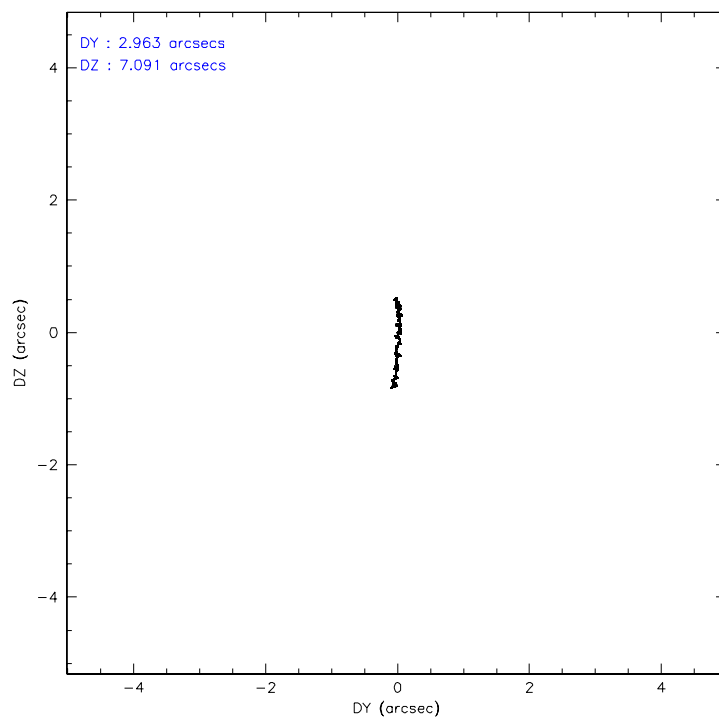
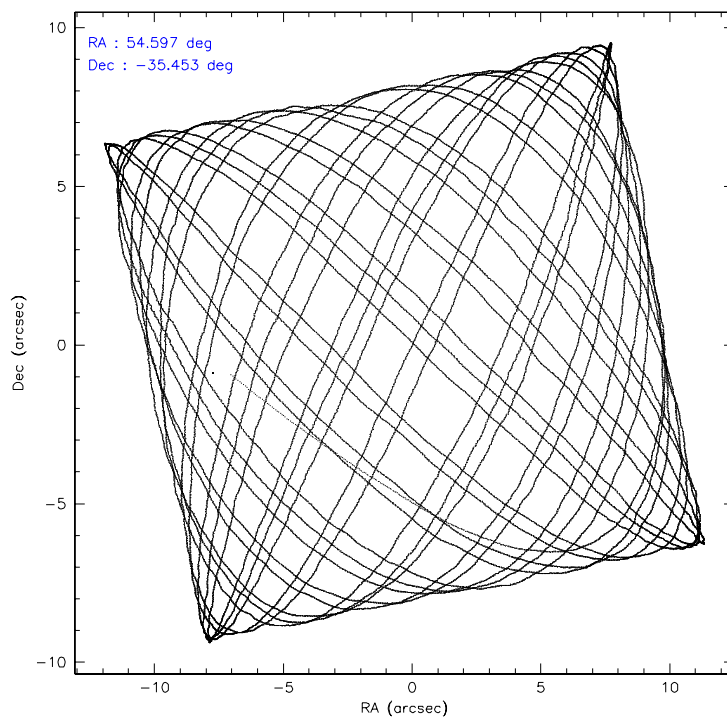
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	117125	141155	109092	126663	167232	112424
rejected events	103264	76407	94886	75216	113670	96206
rejected %	88%	54%	86%	59%	67%	85%

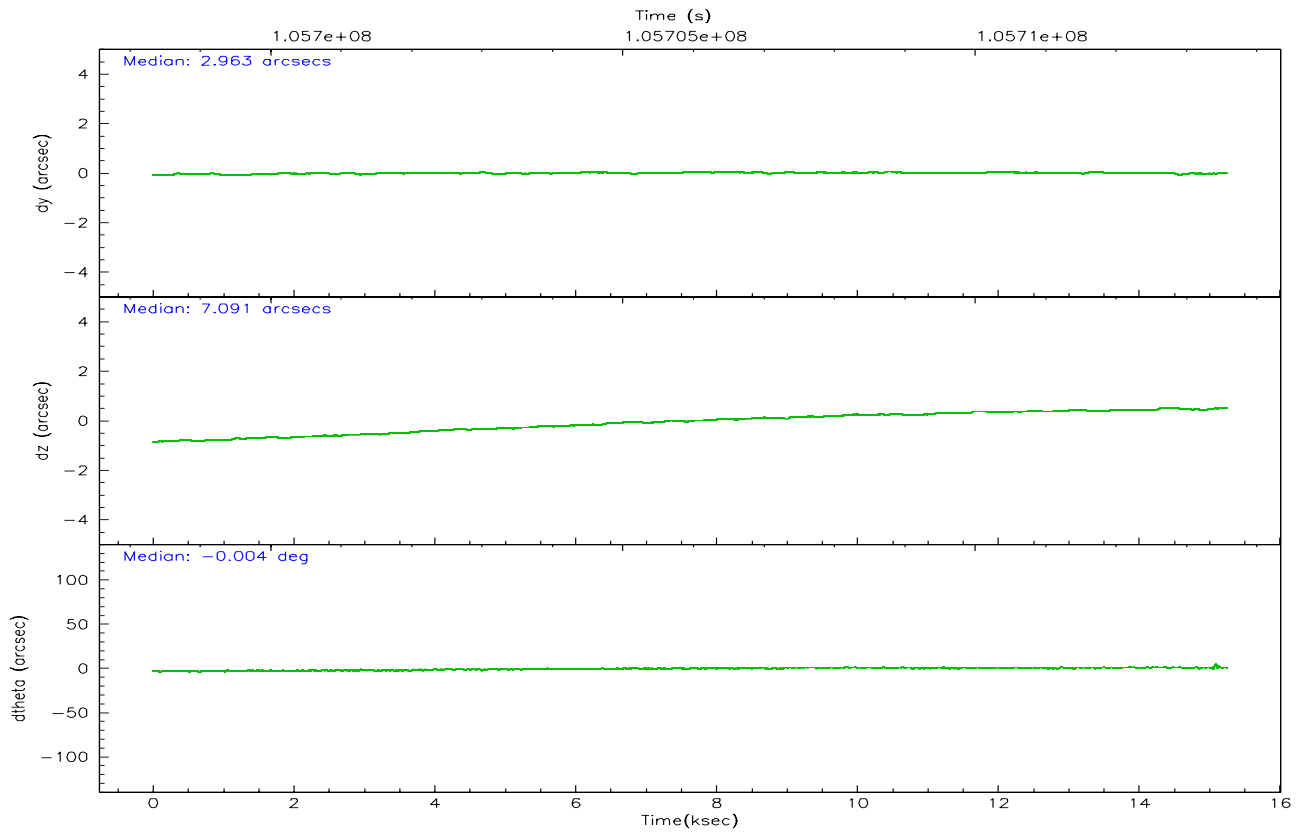
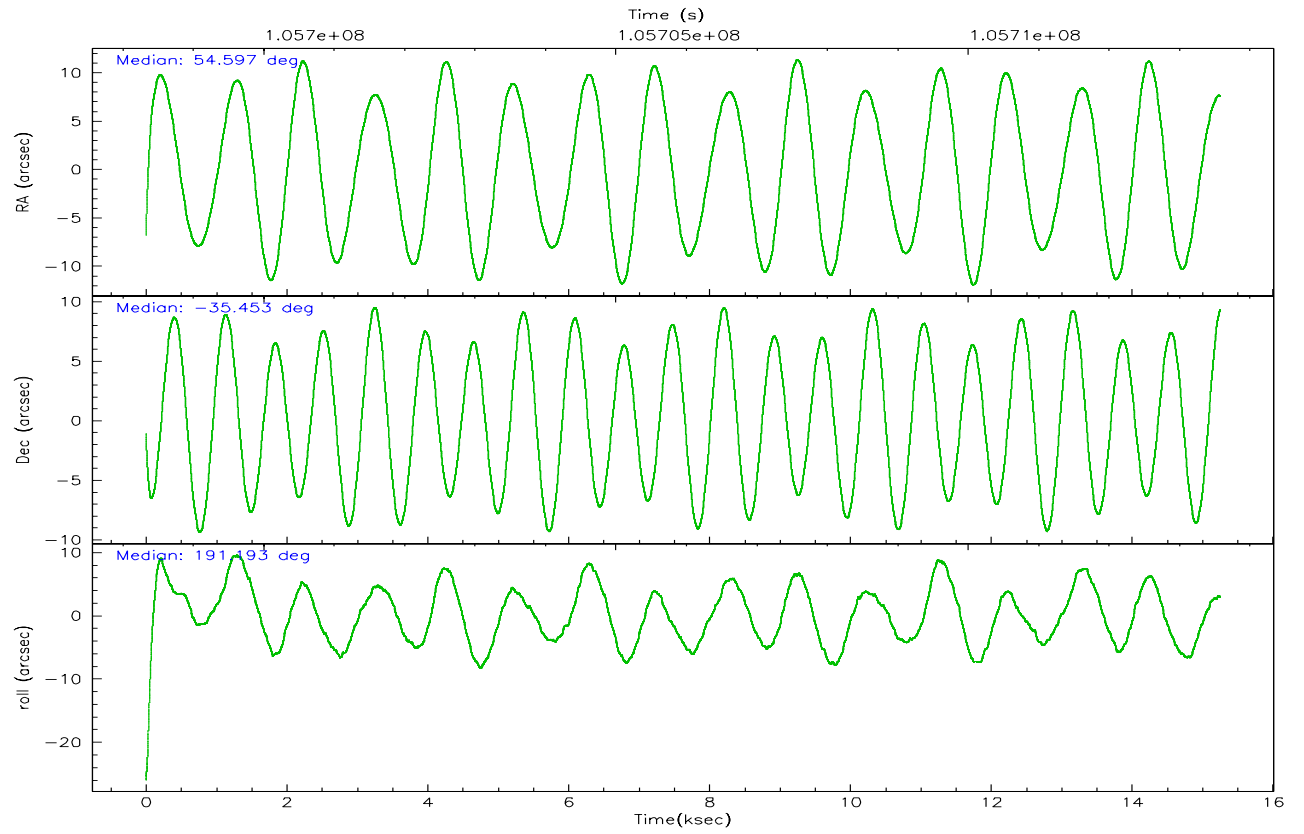
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	5677	8858	6689	3983	14585	9006
	4%	6%	6%	3%	8%	8%
grade 1 events	55	1421	64	80	127	802
	0%	1%	0%	0%	0%	0%
grade 2 events	3852	18839	2888	13076	10519	2674
	3%	13%	2%	10%	6%	2%
grade 3 events	1116	1693	1199	3119	6703	1135
	0%	1%	1%	2%	4%	1%
grade 4 events	1094	1724	1193	3014	6139	1100
	0%	1%	1%	2%	3%	0%
grade 5 events	3453	6625	3889	8206	5834	4239
	2%	4%	3%	6%	3%	3%
grade 6 events	2123	33652	2238	28266	15617	2305
	1%	23%	2%	22%	9%	2%
grade 7 events	99755	68343	90932	66919	107708	91163
	85%	48%	83%	52%	64%	81%

## 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	54.621607	54.59665241750489	Subarray requested	NONE	NONE
Pointing Dec	-35.434400	-35.45258052606322	Alternating exposures requested	N	N
Pointing Roll	191.057499	191.1996433092856	Primary exposure time	0.000000	3.2
Roll angle	200.000000	200.000000			
Roll tolerance	50.000000	50.000000			
Roll constraint allows 180D rotation	N	N			
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	105698477.184000	105697348.21364			
Observation start date	2001-05-08T08:40:13	2001-05-08T08:22:28			
Observation end time	105713577.184000	105714671.22682			
Observation end date	2001-05-08T12:51:53	2001-05-08T13:11:11			
Read mode	TIMED	TIMED			

## 2.3 Aspect





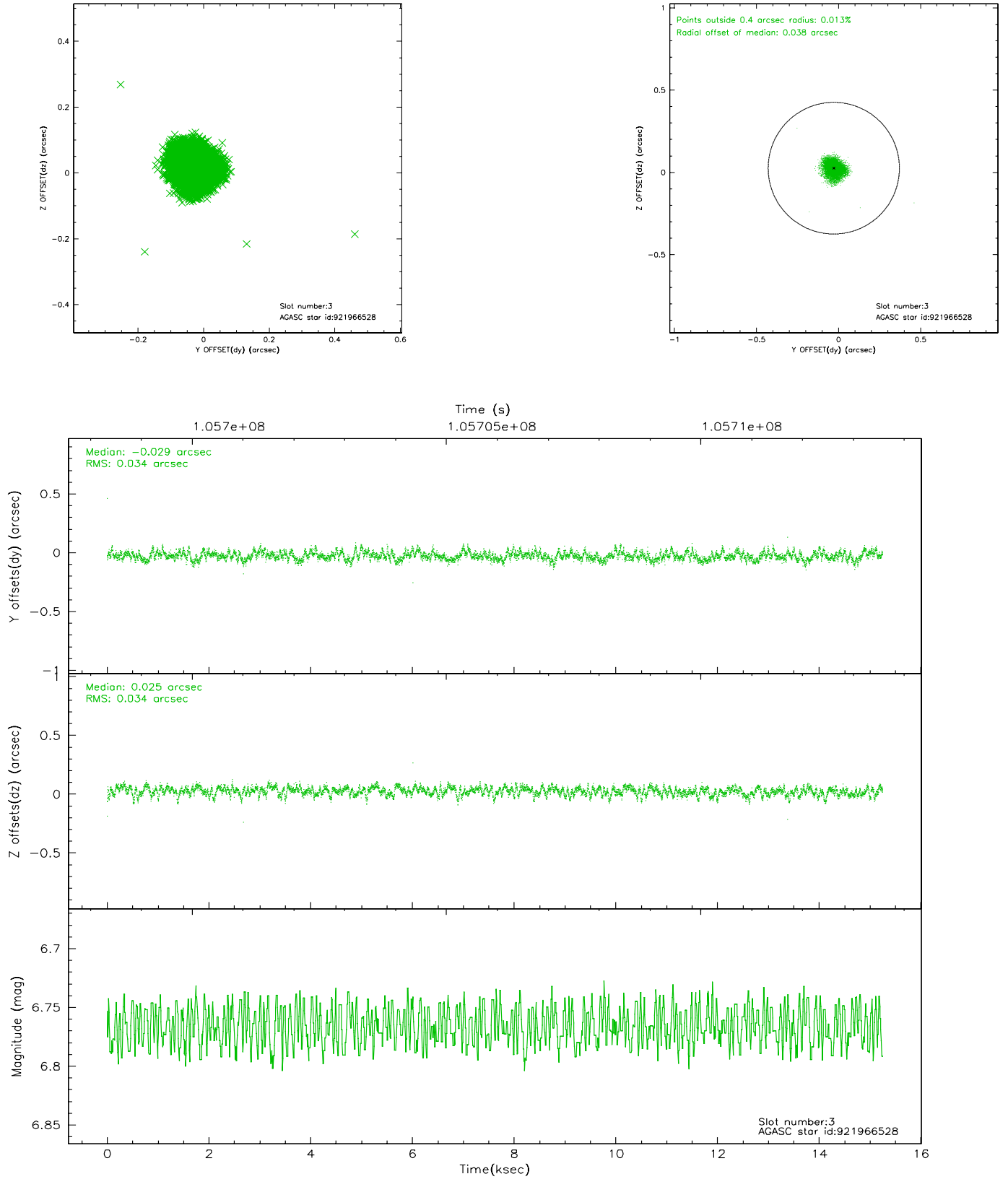
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	3720	0.006	0.033	0.016	0.026	0.000000	0.000000	-755.59	-1728.16
1	FID	ACIS-S-4	7.20	3720	-0.098	-0.010	0.013	0.022	0.000000	0.000000	2157.45	179.98
2	FID	ACIS-S-5	7.24	3720	0.063	-0.011	0.017	0.031	0.000000	0.000000	-1808.01	173.98
3	GUIDE	921966528	6.77	7441	-0.029	0.025	0.051	0.082	54.675841	-35.204254	-314.89	-782.49
4	GUIDE	921966544	7.91	7441	0.045	-0.081	0.053	0.083	54.743508	-35.636012	-210.30	780.82
5	GUIDE	921575736	8.54	7439	-0.013	0.103	0.063	0.101	54.586331	-34.827401	-316.05	-2164.40
6	GUIDE	921965624	8.64	7437	0.039	-0.089	0.075	0.118	54.900706	-35.940077	-448.74	1943.41
7	GUIDE	921048648	9.07	7436	-0.042	0.042	0.082	0.130	53.884610	-35.870023	2412.69	1135.31

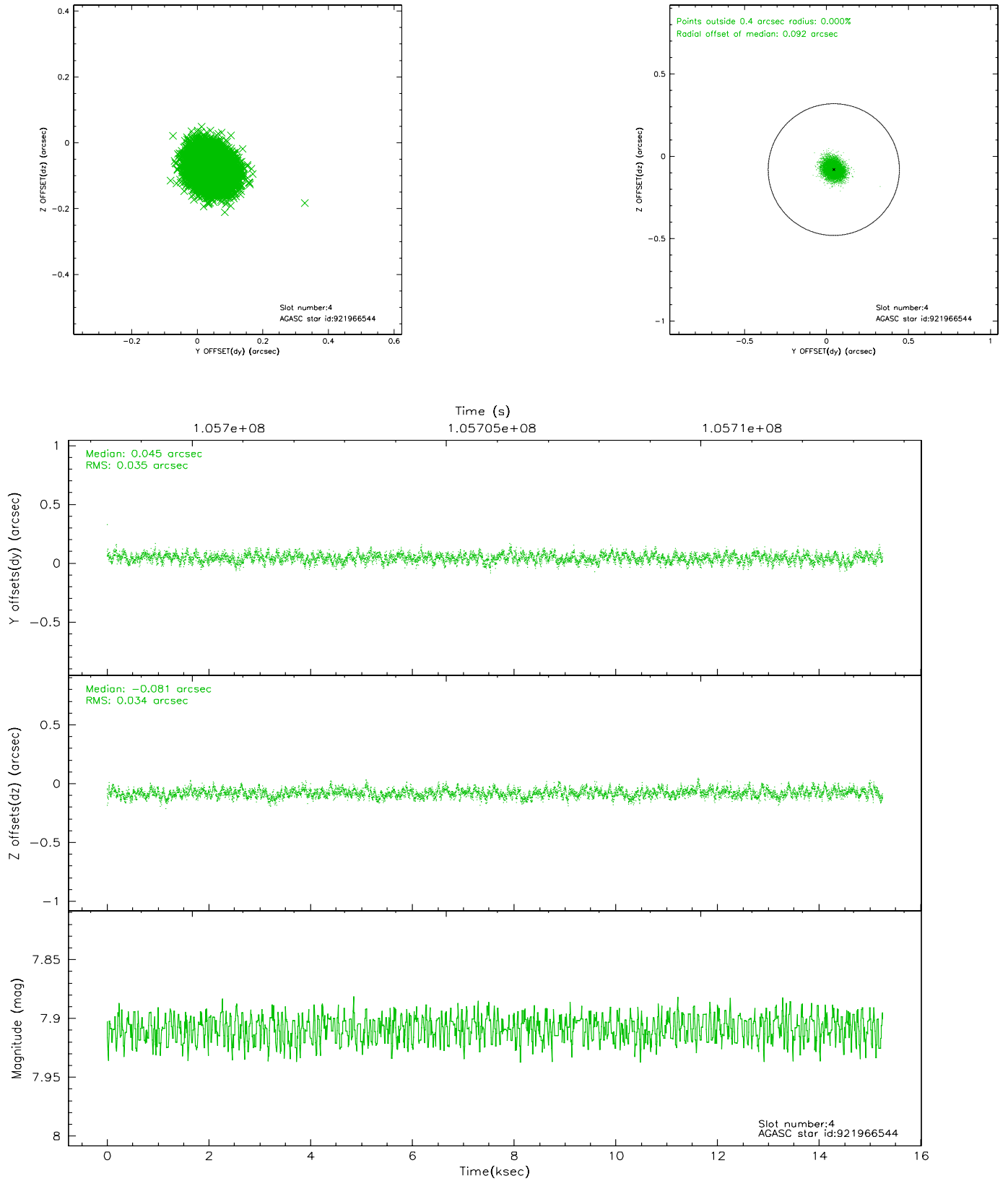


## 2.4 Star Slots

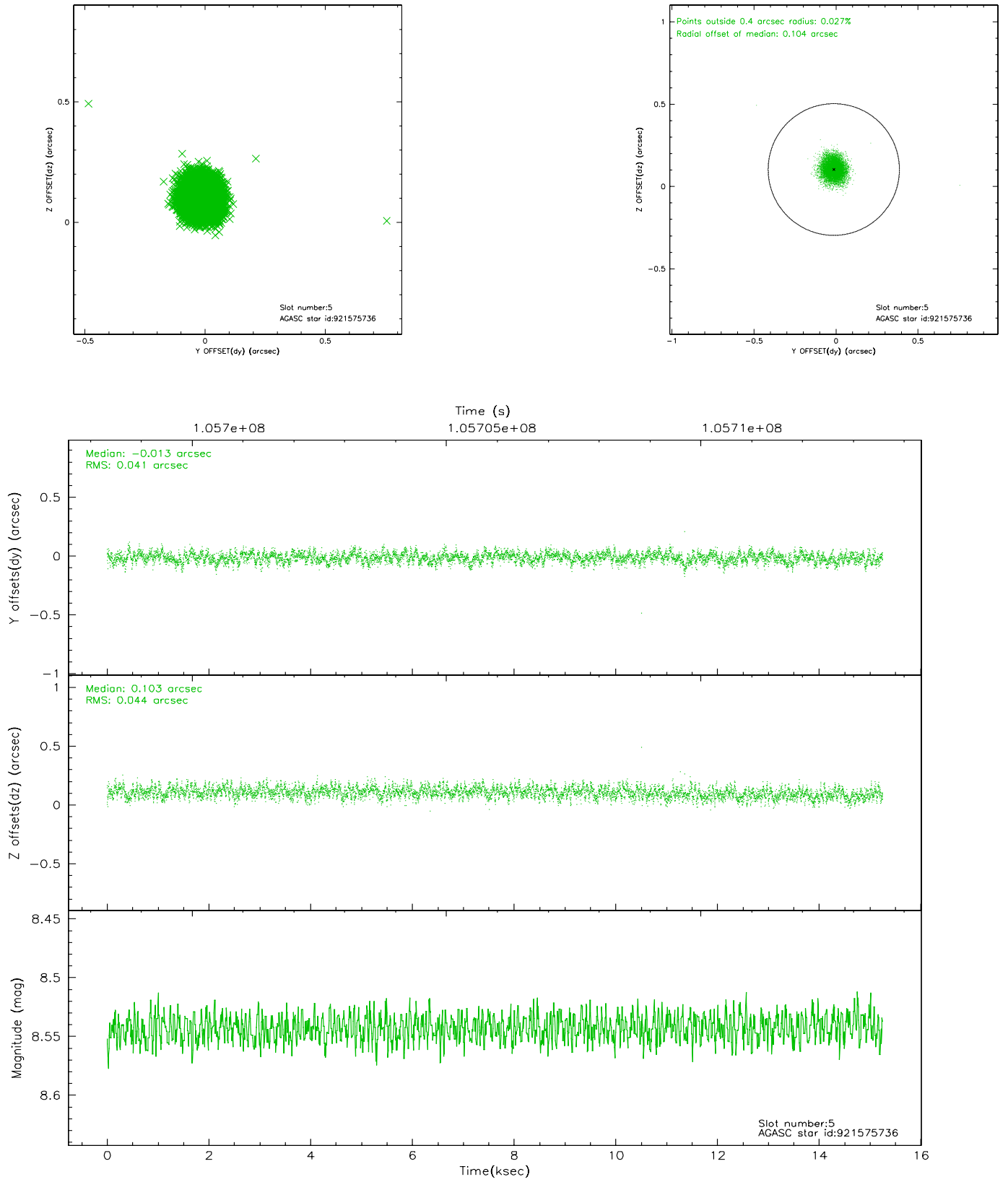
### 2.4.1 Slot 3



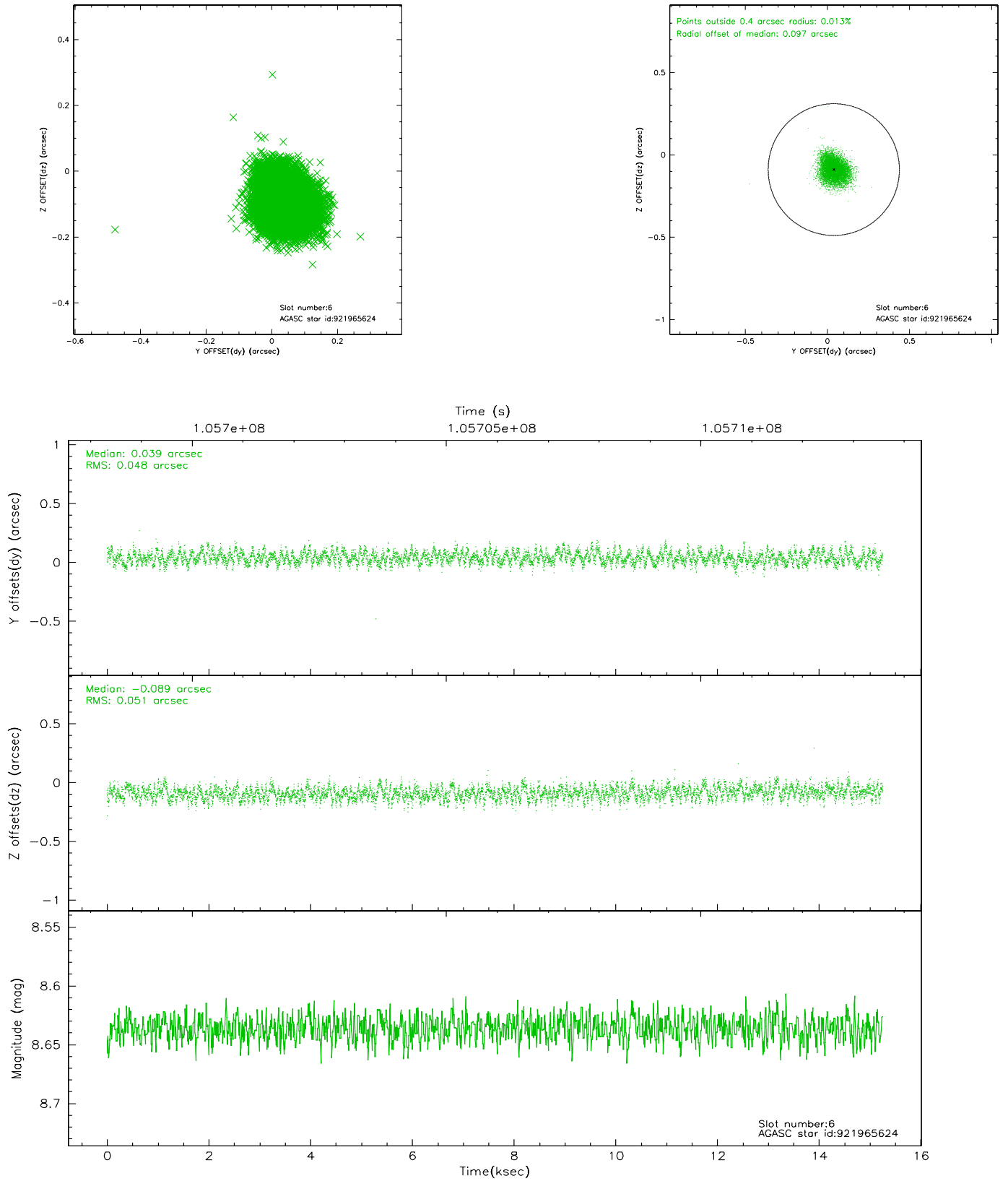
## 2.4.2 Slot 4



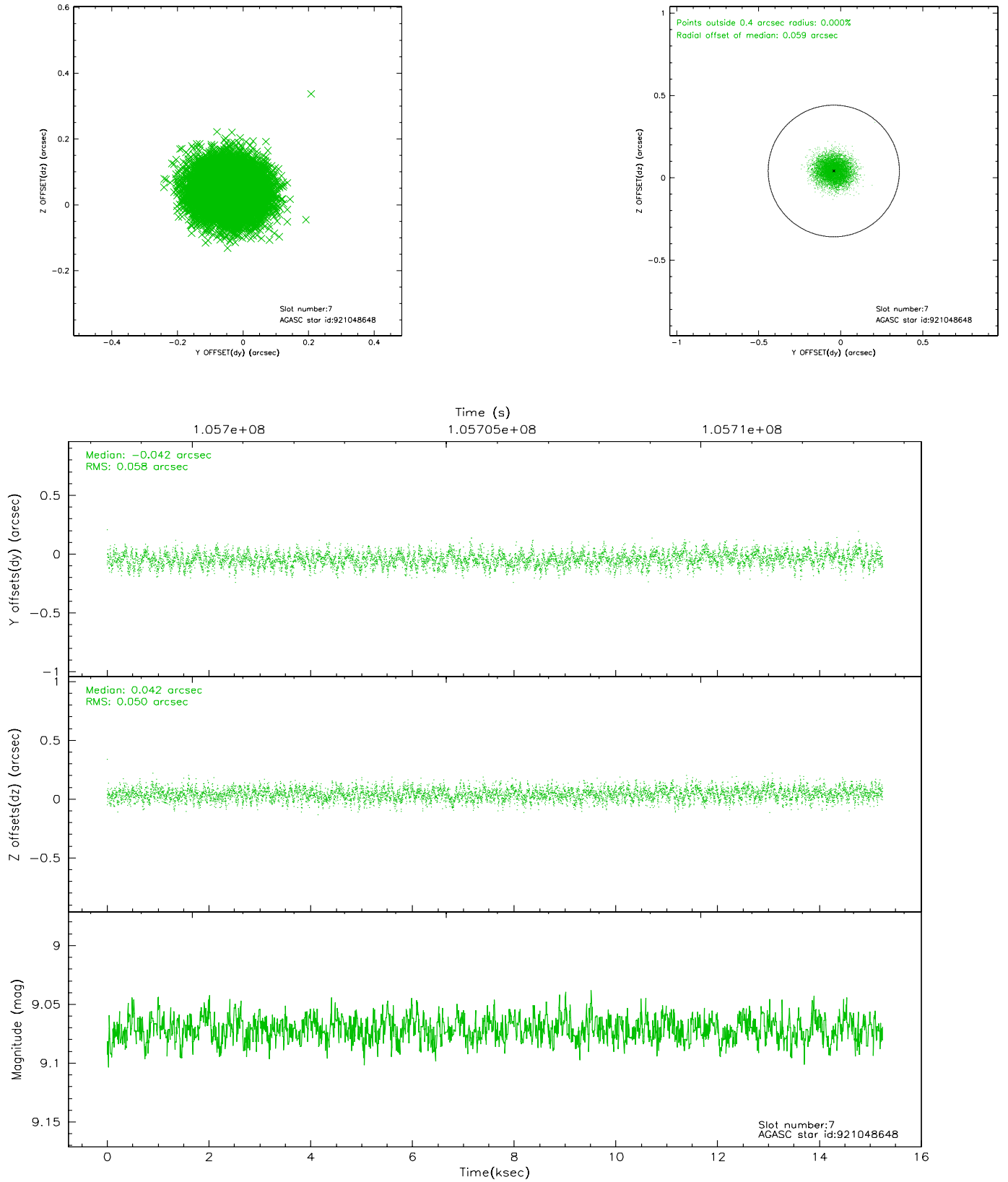
### 2.4.3 Slot 5



## 2.4.4 Slot 6

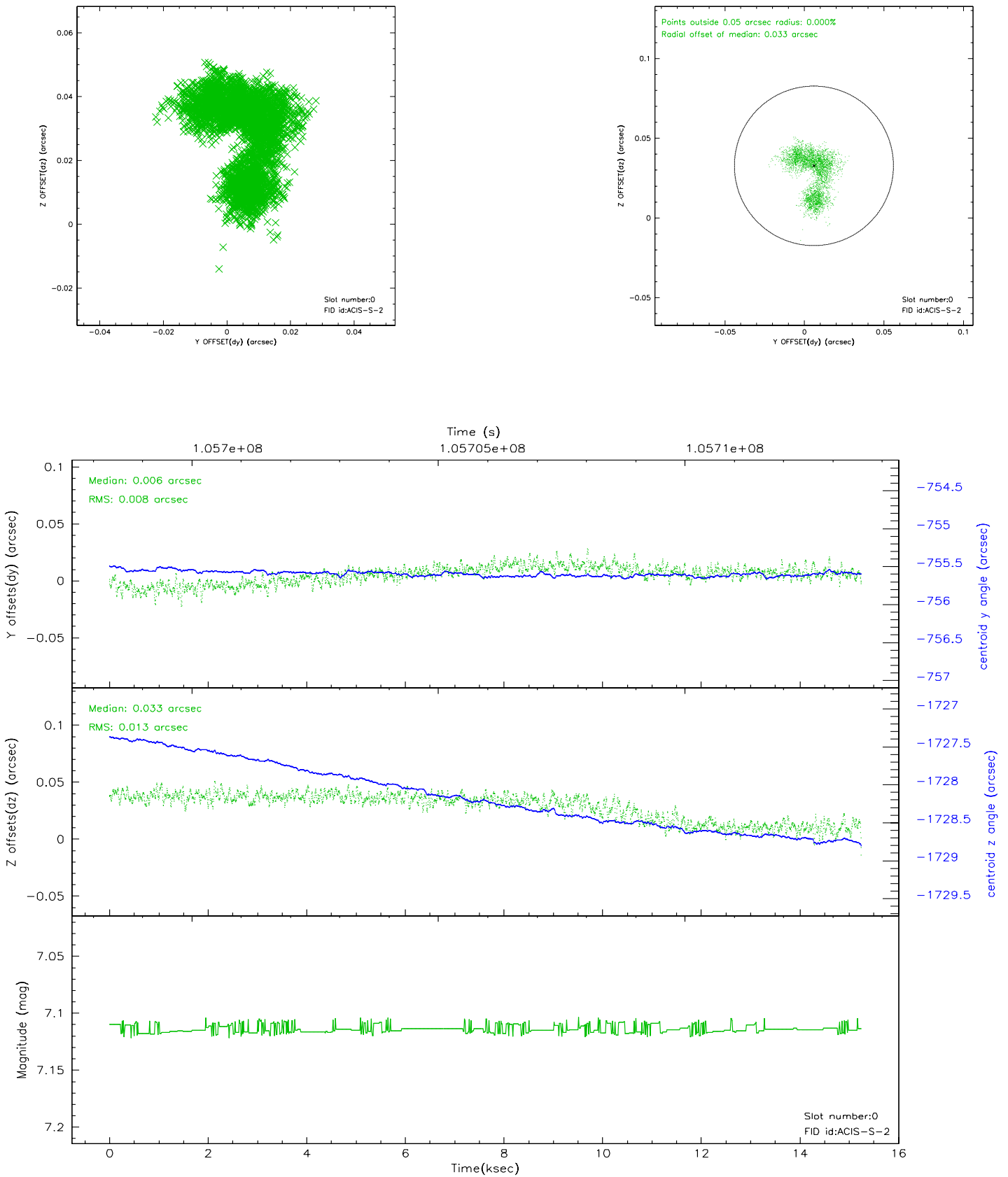


## 2.4.5 Slot 7

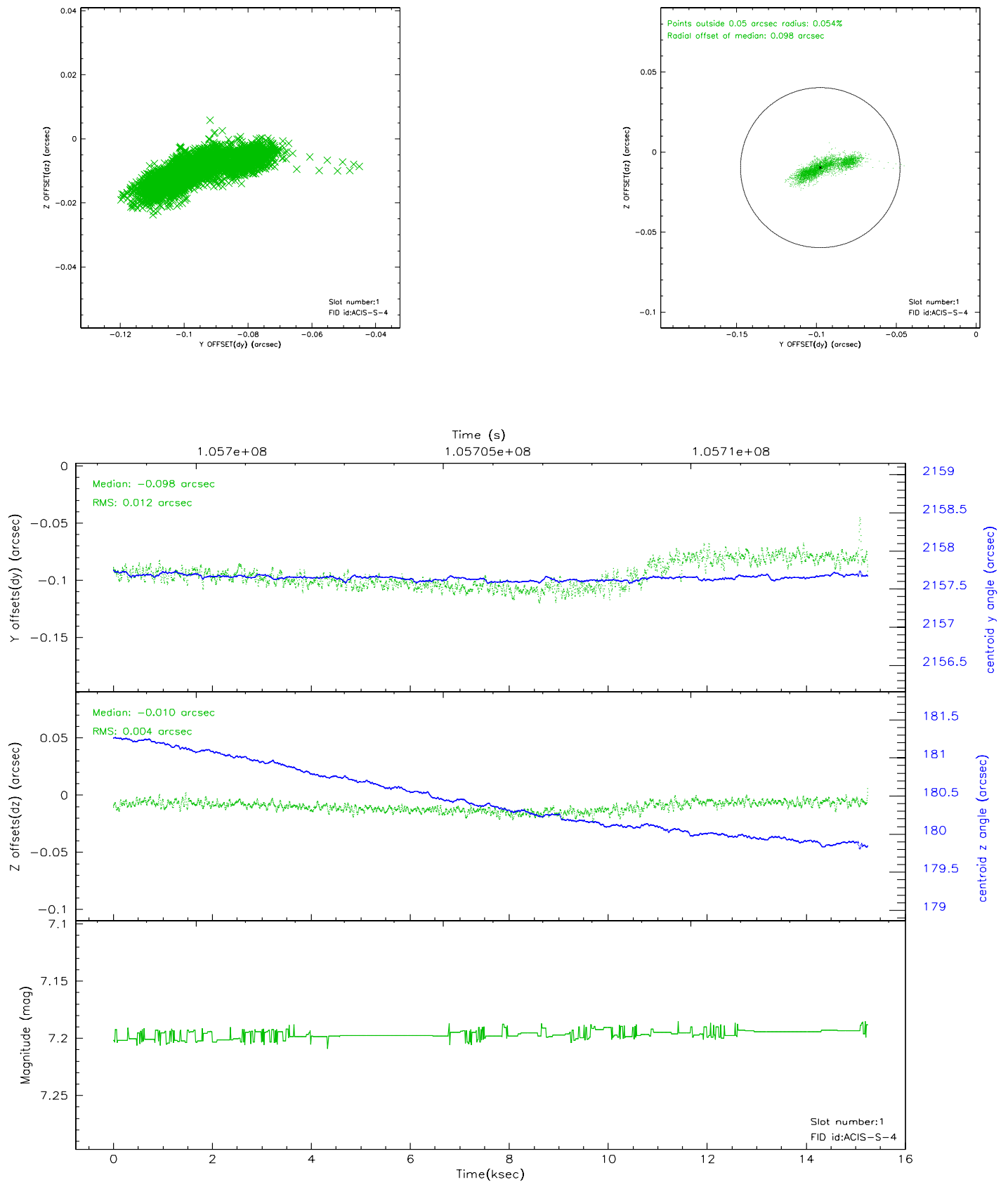


## 2.5 FID Slots

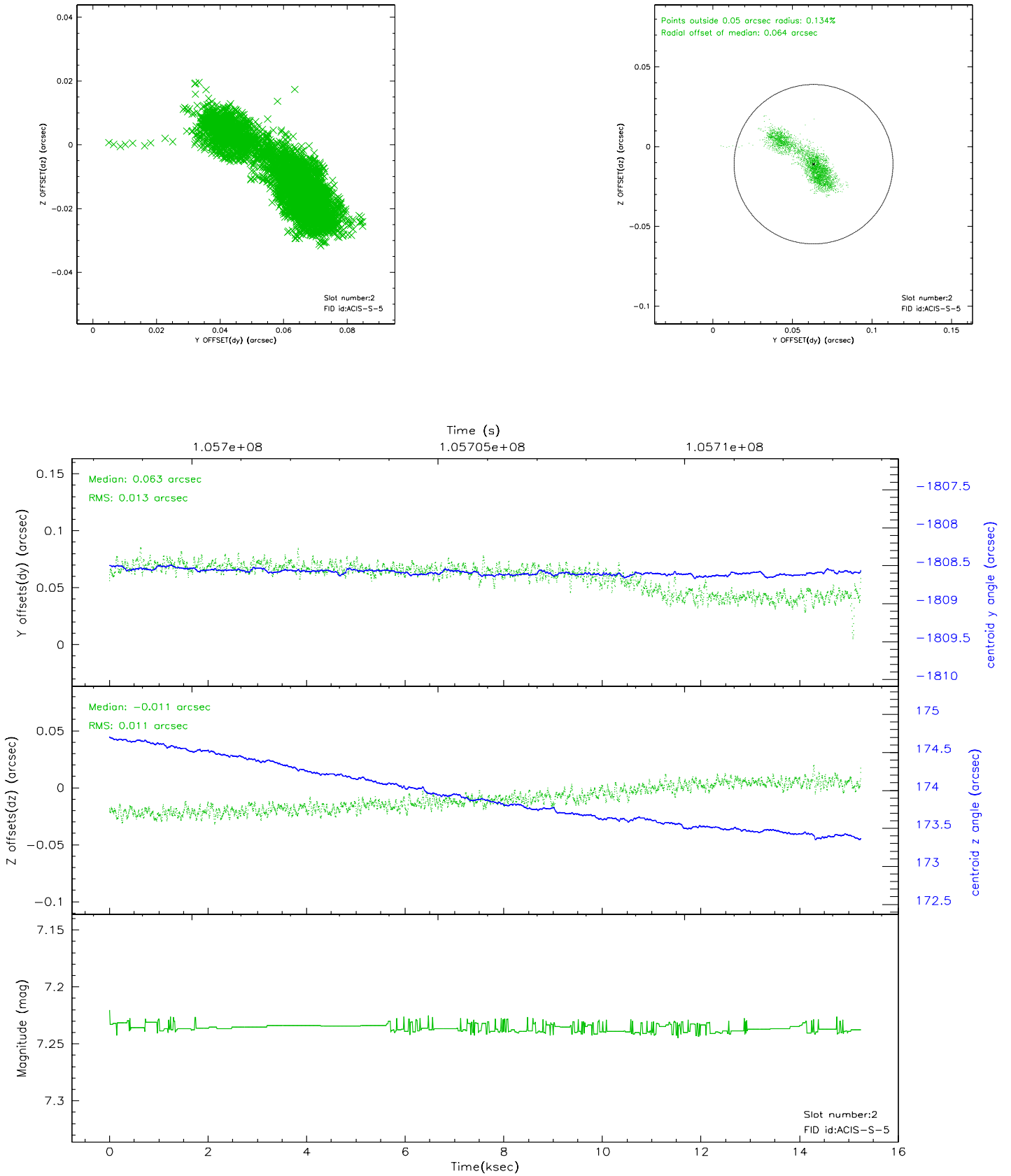
### 2.5.1 Slot 0



## 2.5.2 Slot 1



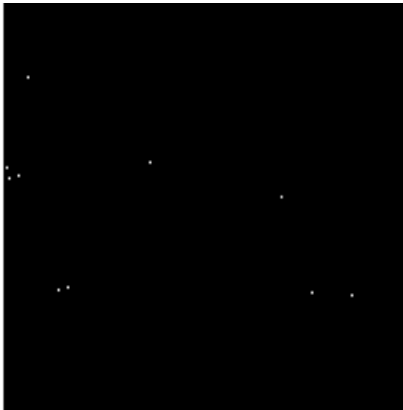
### 2.5.3 Slot 2



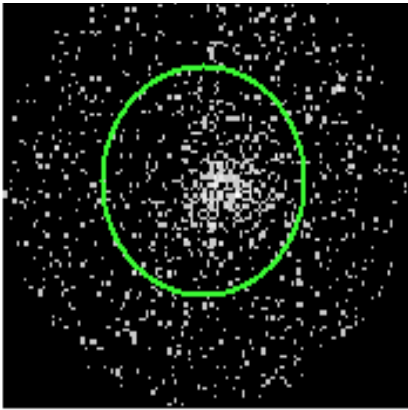


# 3 Gratings

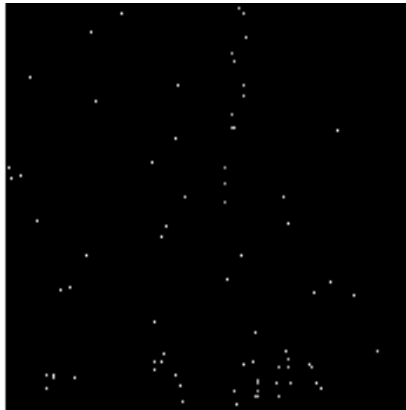
## 3.1 HEG Arm



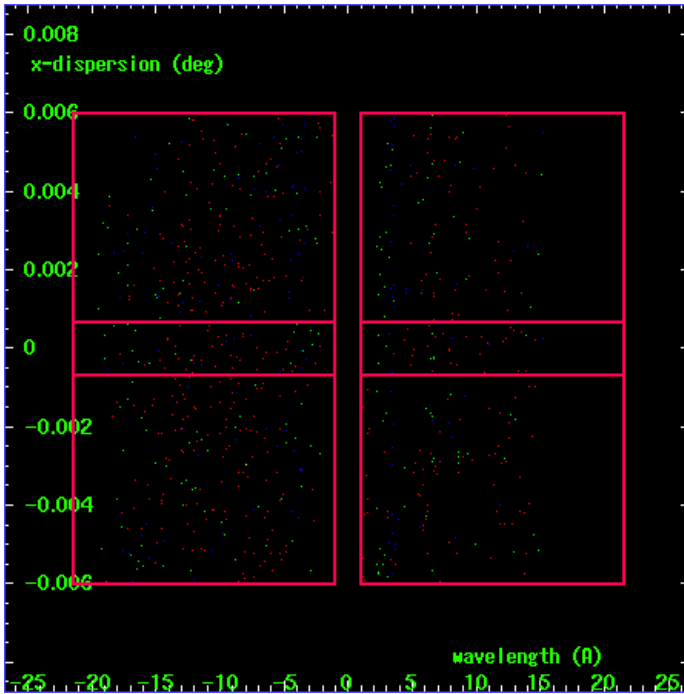
HEG Order Sort 123



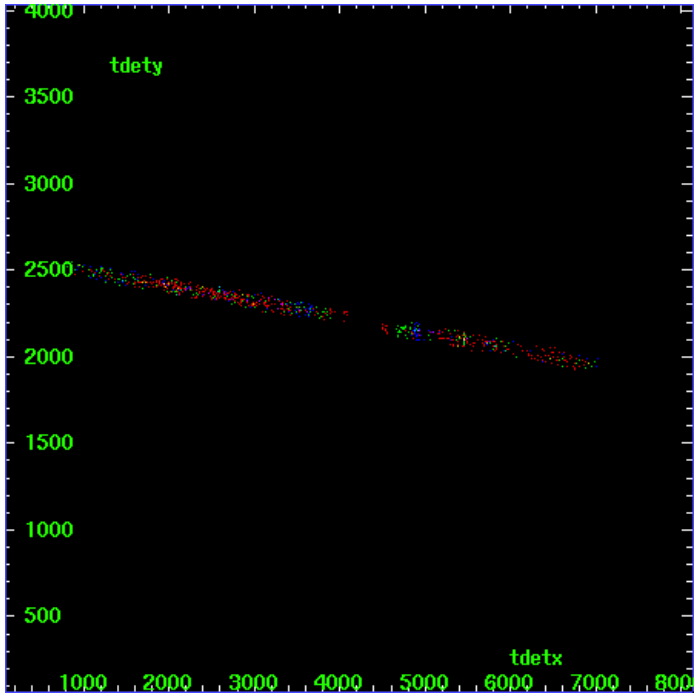
HEG Zero Order



HEG Order Sort ALL

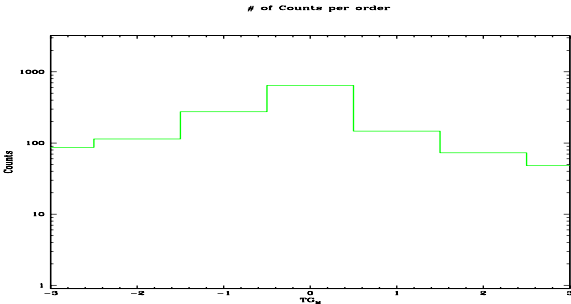


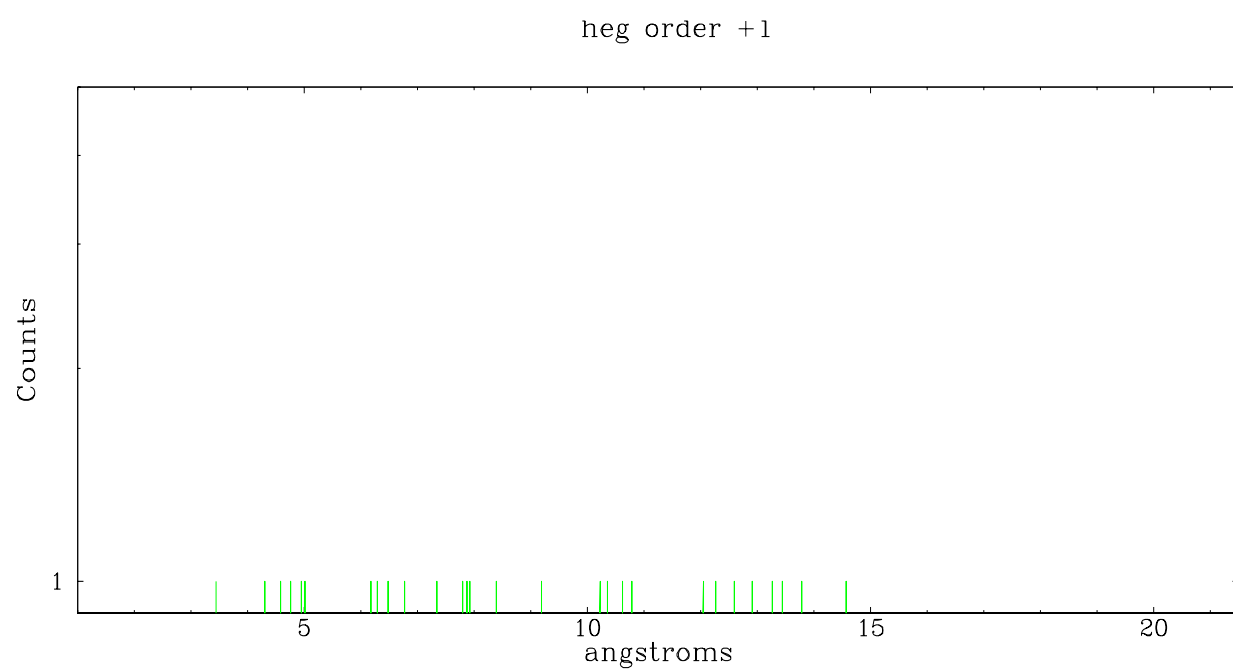
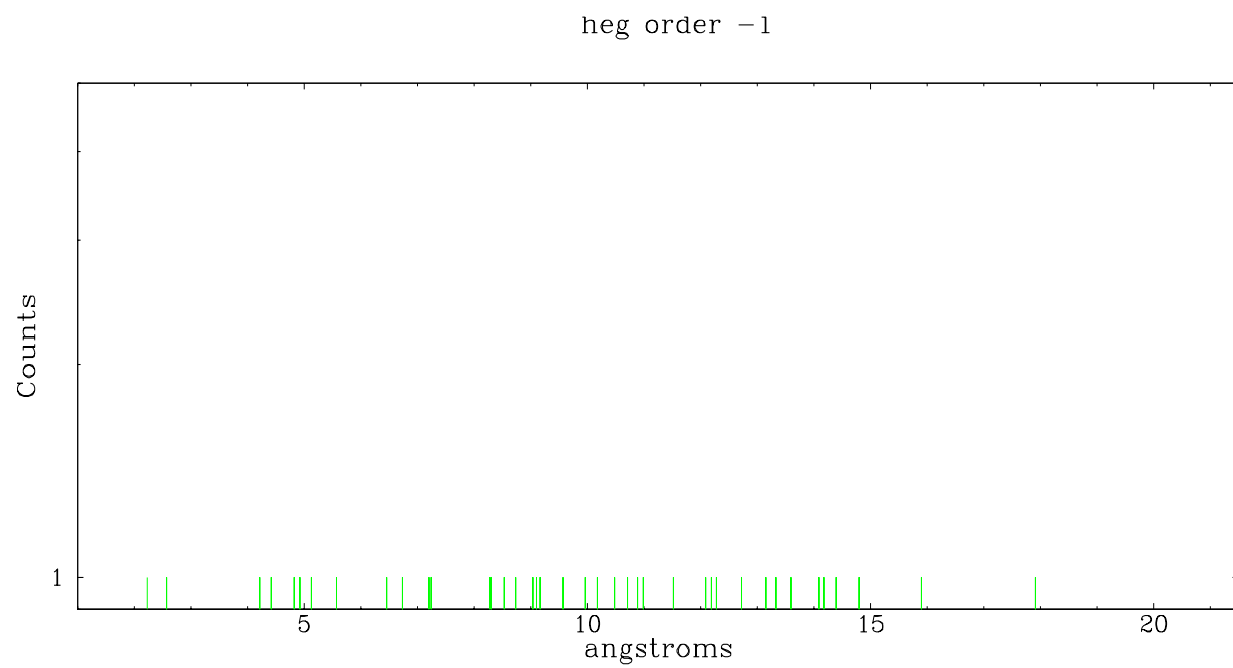
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	87	114	275	645	147	73	48

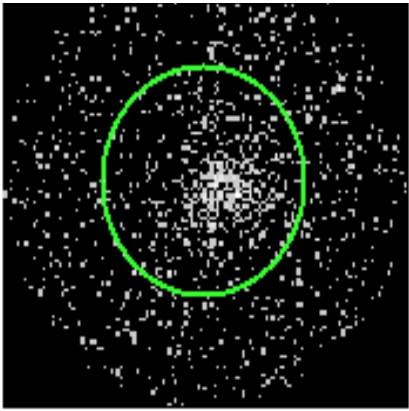




3.2 MEG Arm



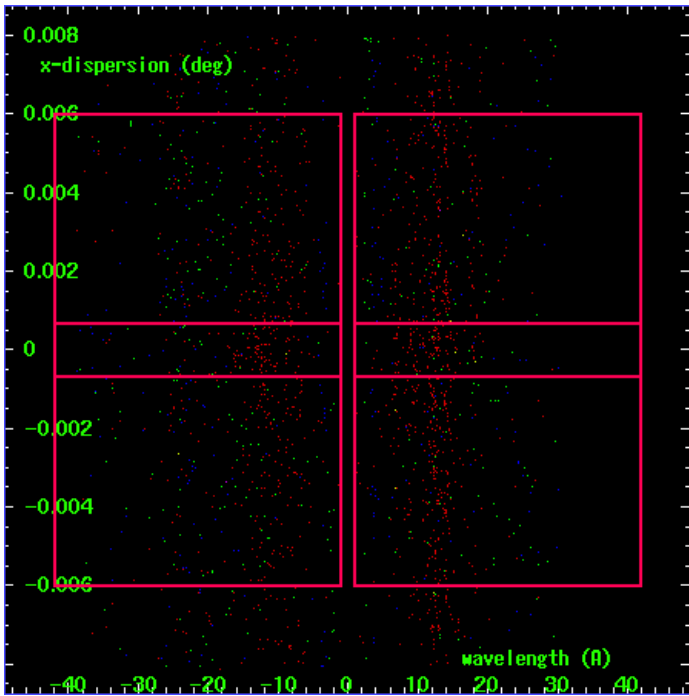
MEG Order Sort 123



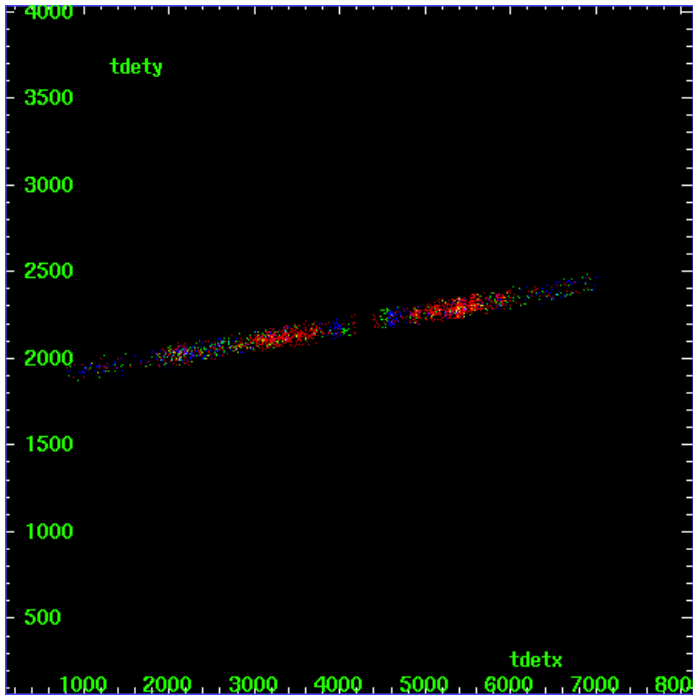
MEG Zero Order



MEG Order Sort ALL

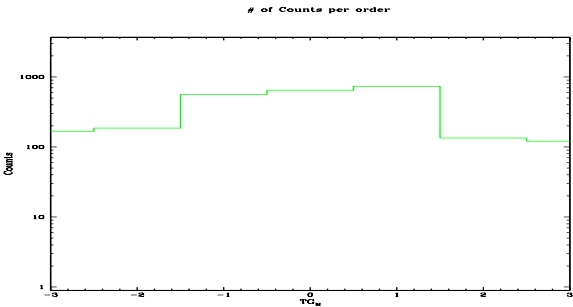


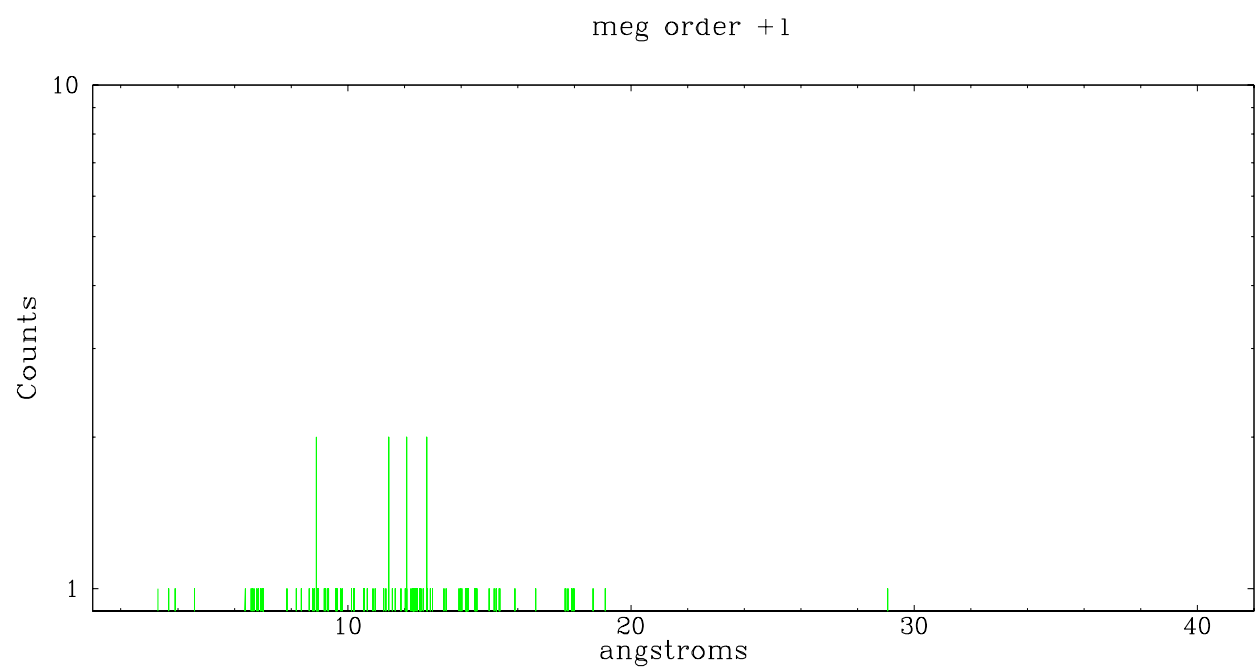
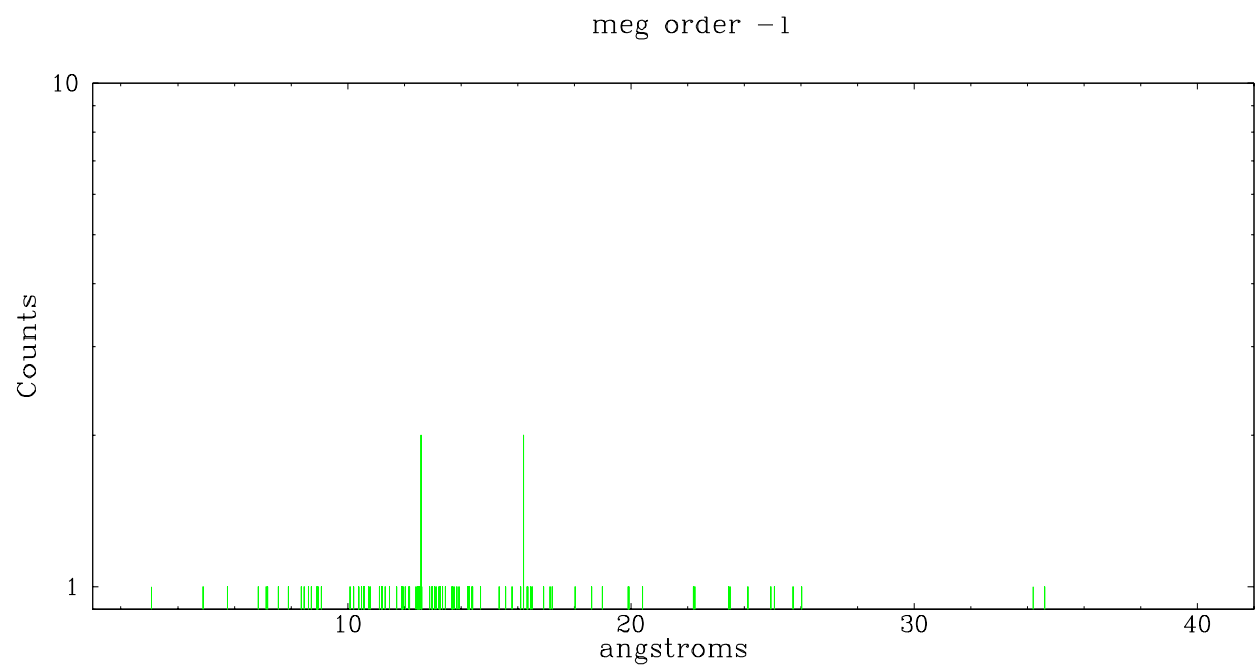
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	168	186	562	645	737	134	121





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.854

## A.2 Comments

Standard software processing technique using the tool  
tgdetect failed to determine an accurate position for the zeroth order  
for this  
observation. The source is extended and assymmetric. The processing  
software defaulted to the coordinates supplied by the user as the  
position of  
the zeroth order for the grating spectral extraction. For grating  
analysis of localized X-ray emission withing the extended emission, the  
investigator  
will need to extract one or more dispersed spectra using user-defined  
zeroth order positions for all positions of interest.