

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 4552 - L2 Version 001  
Chandra X-Ray Center

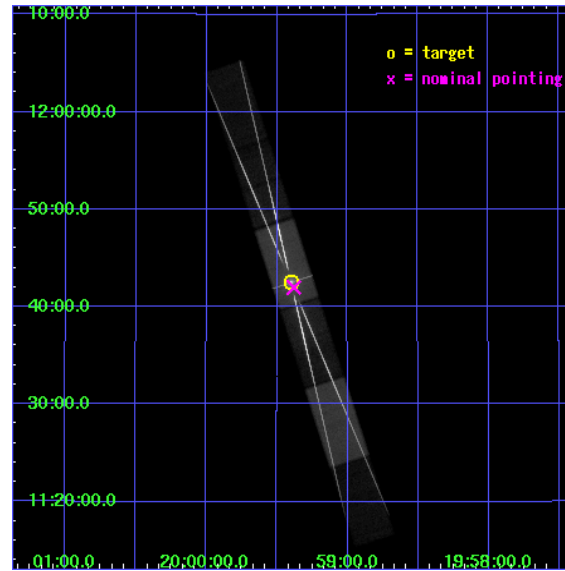
L2 Processing Date : Apr 19 2006

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# 1 Front

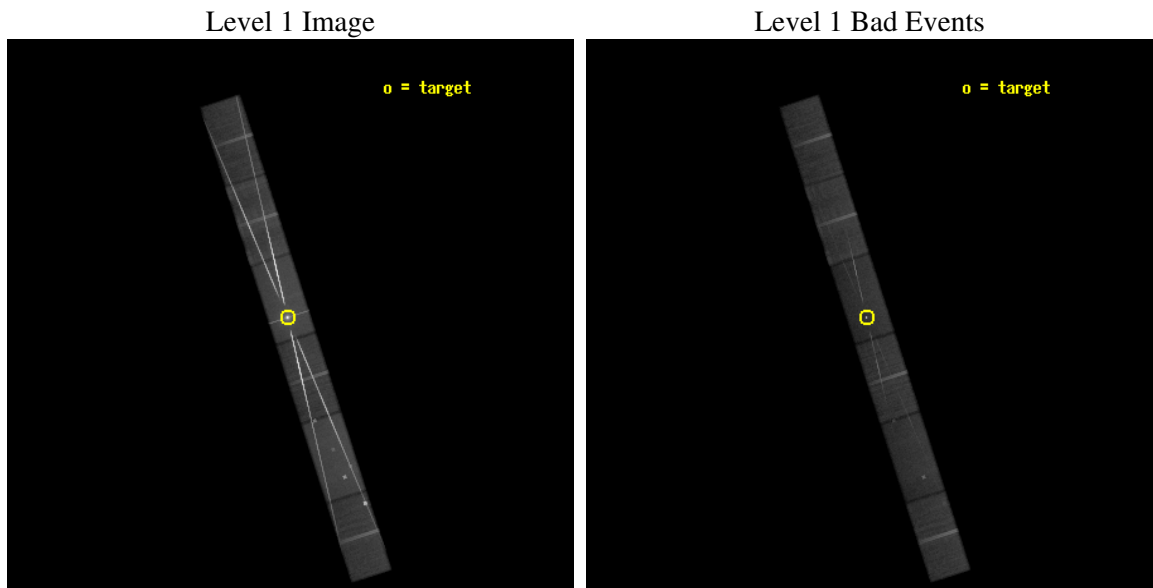
seq_num	400335
obs_id	4552
title	The Winds of Warps
observer	Prof. Claude Canizares
object	4U 1957+11 (=V1408 Aql)
dtcycle	0
cycle	P
ra_targ	299.849583
dec_targ	11.708333
ra_nom	299.8449434162
dec_nom	11.699812203431
roll_nom	252.02721902523
revision	2
ontime	67182.299528897
livetime	65598.670449343
ontime4	67182.299528897
ontime5	67182.299528897
ontime6	67180.558508784
ontime7	67182.299528897
ontime8	67182.299528897
ontime9	67180.558508784
l2events	2257818



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

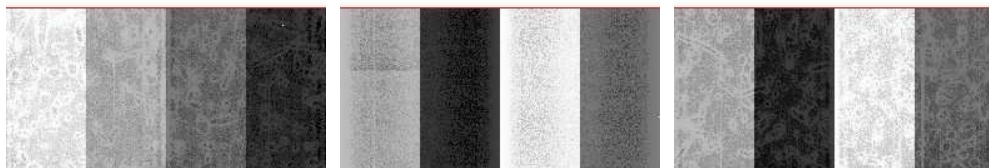


#### 2.1.2 Bias

Chip 4

Chip 5

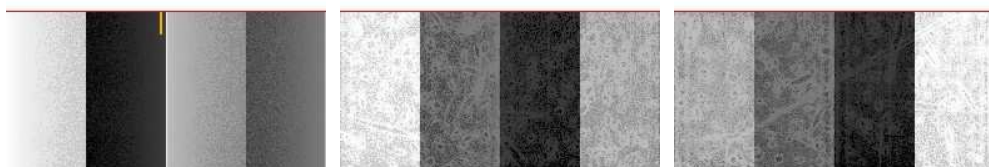
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	2
ascdsver	7.6.7.1
caldbver	3.2.1
date	2006-04-19T15:22:01
revision	2

sched_exp_time	67000.000000
ontime	67200.023917317
ontime4	67200.023917317
ontime5	67200.023917317
ontime6	67198.282897204
ontime7	67200.023917317
ontime8	67200.023917317
ontime9	67198.282897204
l1events	3986615

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	356360	562003	976925	1055805	700989	334533
rejected events	268681	222938	268696	239077	283282	241960
rejected %	75%	39%	27%	22%	40%	72%

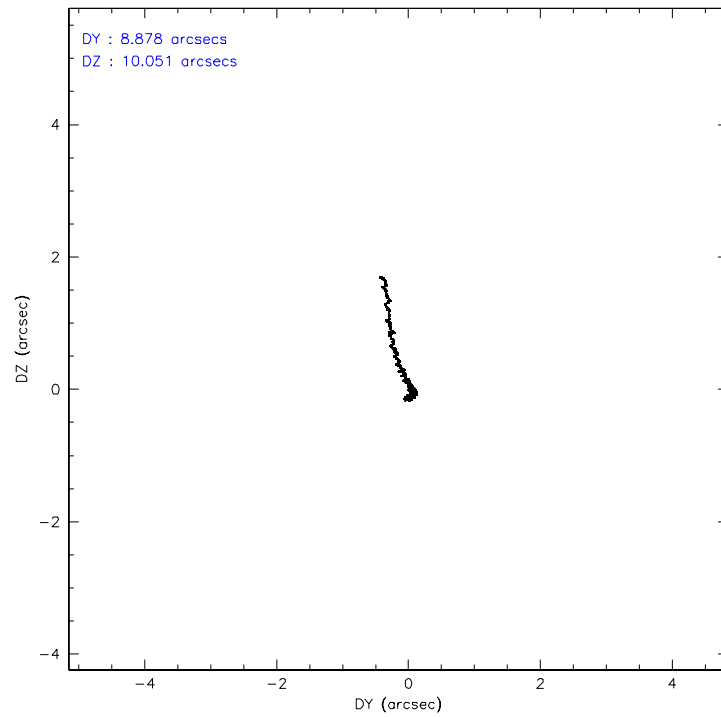
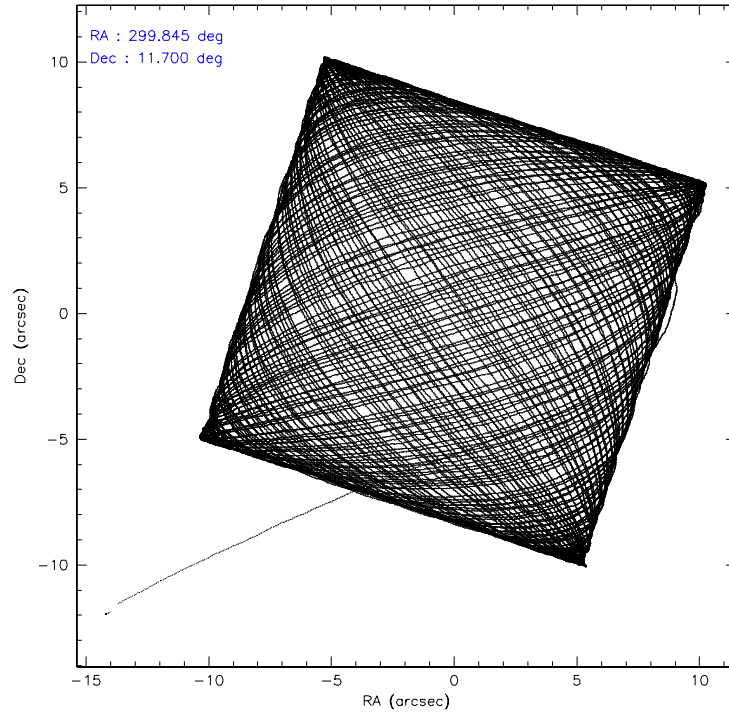
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	62922	68030	538109	140019	304585	61404
	17%	12%	55%	13%	43%	18%
grade 1 events	381	845	4726	2369	1740	276
	0%	0%	0%	0%	0%	0%
grade 2 events	9696	108263	84414	213387	49737	12490
	2%	19%	8%	20%	7%	3%
grade 3 events	4549	20228	29424	80264	18883	5688
	1%	3%	3%	7%	2%	1%
grade 4 events	4602	19286	29138	78680	18392	5518
	1%	3%	2%	7%	2%	1%
grade 5 events	11004	24021	14965	38400	16230	12326
	3%	4%	1%	3%	2%	3%
grade 6 events	5936	123361	27340	304585	26234	7504
	1%	21%	2%	28%	3%	2%
grade 7 events	257270	197969	248809	198101	265188	229327
	72%	35%	25%	18%	37%	68%

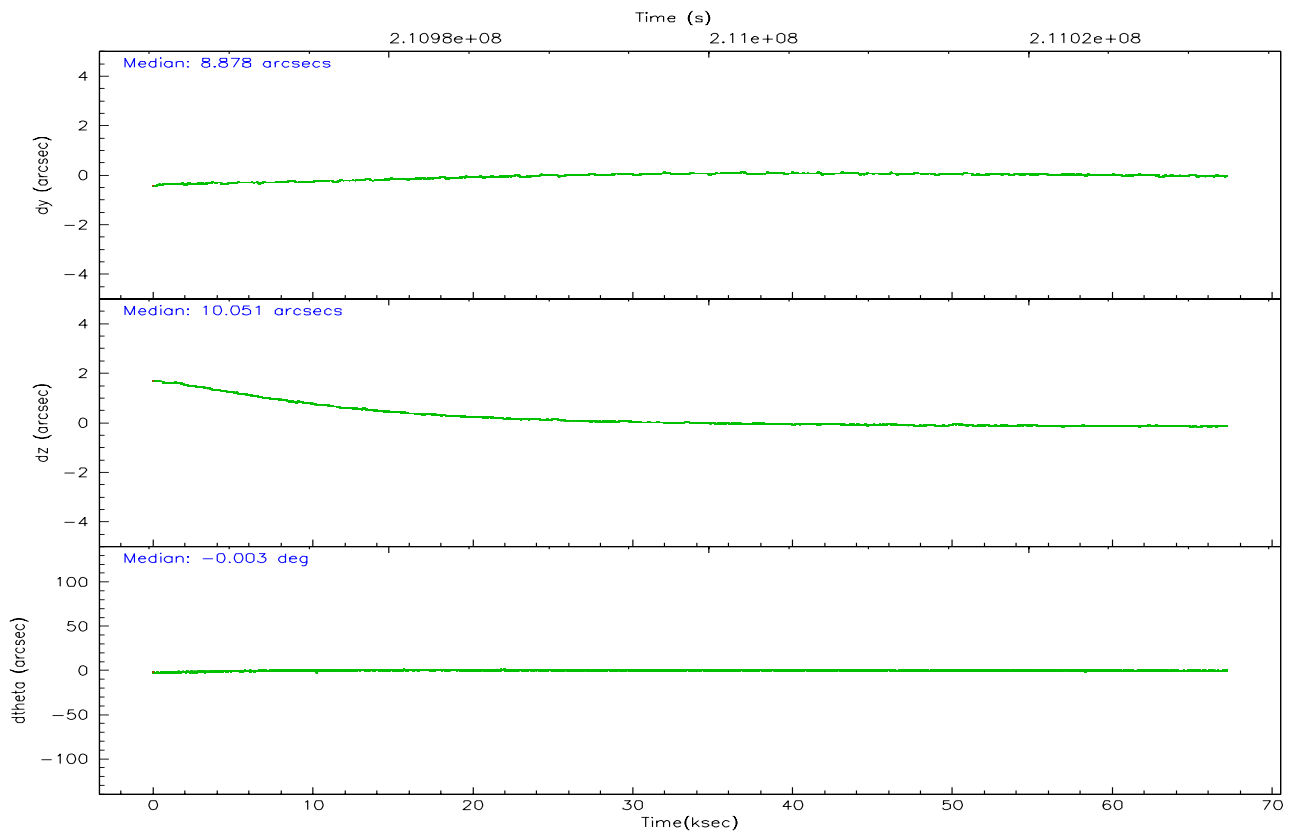
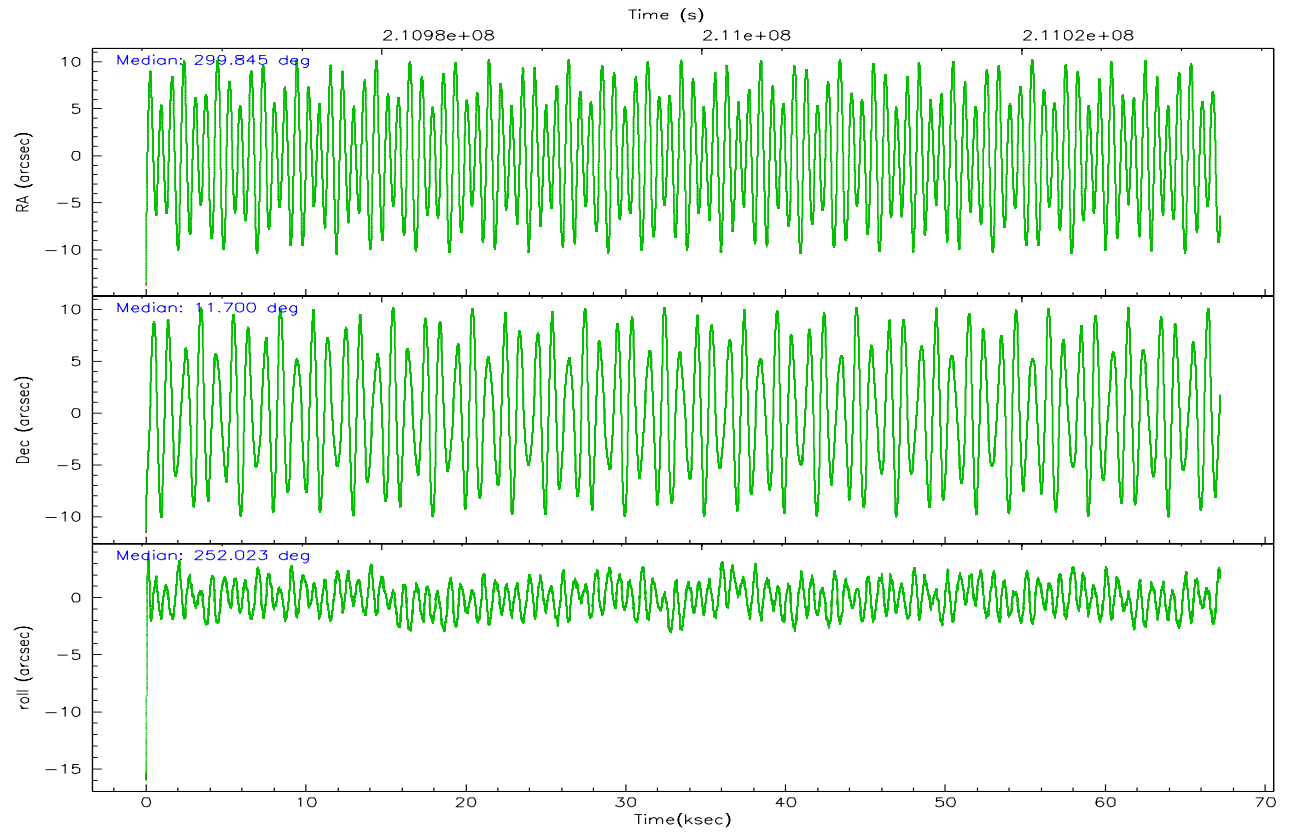


## 2.2 Compared Parameters

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	1/2
Pointing RA	299.838772	299.8449434161957	Subarray start row	1	1
Pointing Dec	11.726361	11.69981220343065	Subarray row count	512	512
Pointing Roll	251.871848	252.0272190252272	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	1.7
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-183.992523	-183.9875365069546			
SIM translation stage offset (mm)	-6.14	-6.144986076053243			
Observation start time	210965417.184000	210964413.91542			
Observation start date	2004-09-07T17:29:13	2004-09-07T17:13:33			
Observation end time	211032417.184000	211033279.05599			
Observation end date	2004-09-08T12:05:53	2004-09-08T12:21:19			
Read mode	TIMED	TIMED			

## 2.3 Aspect



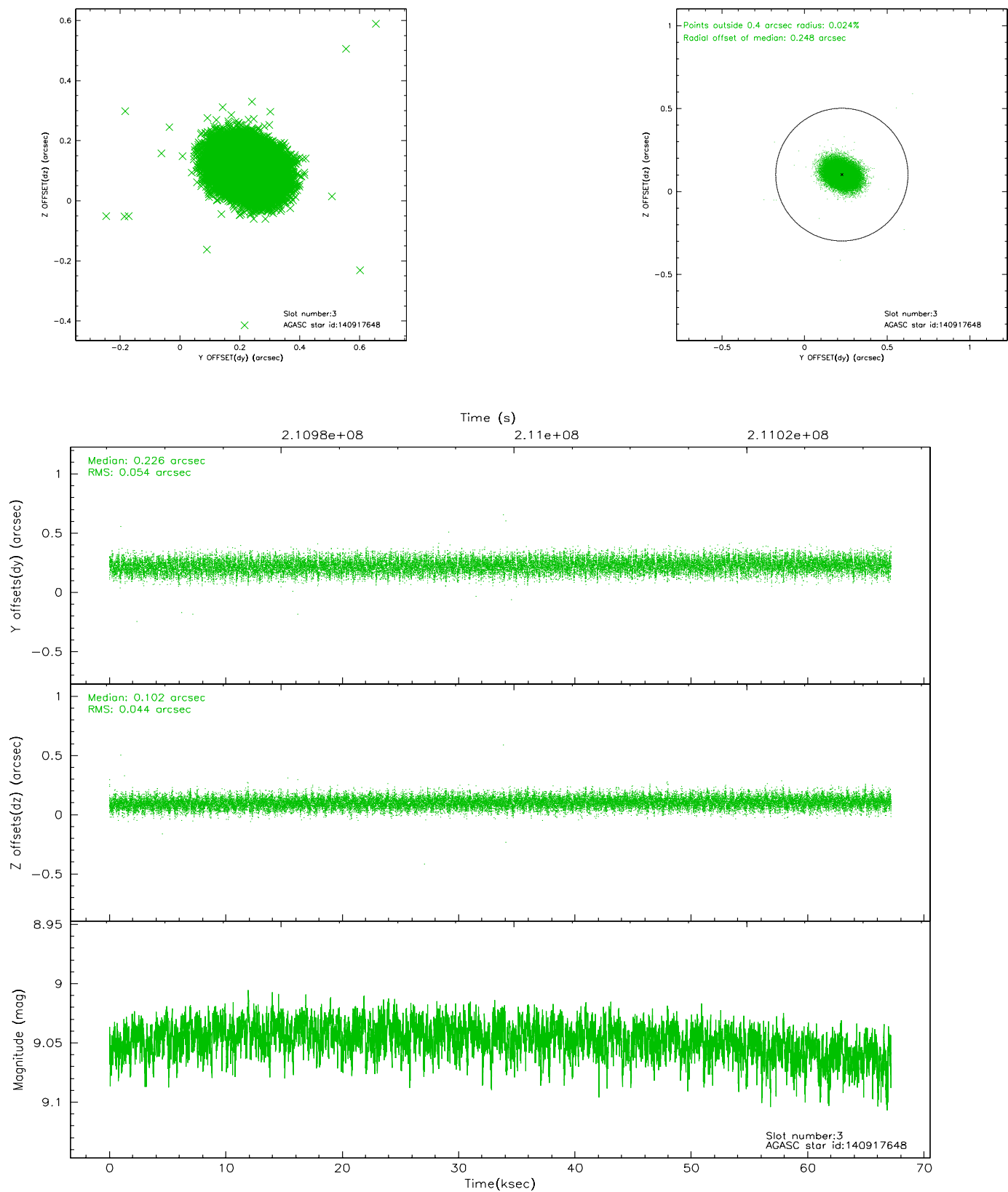


### Slot Statistics

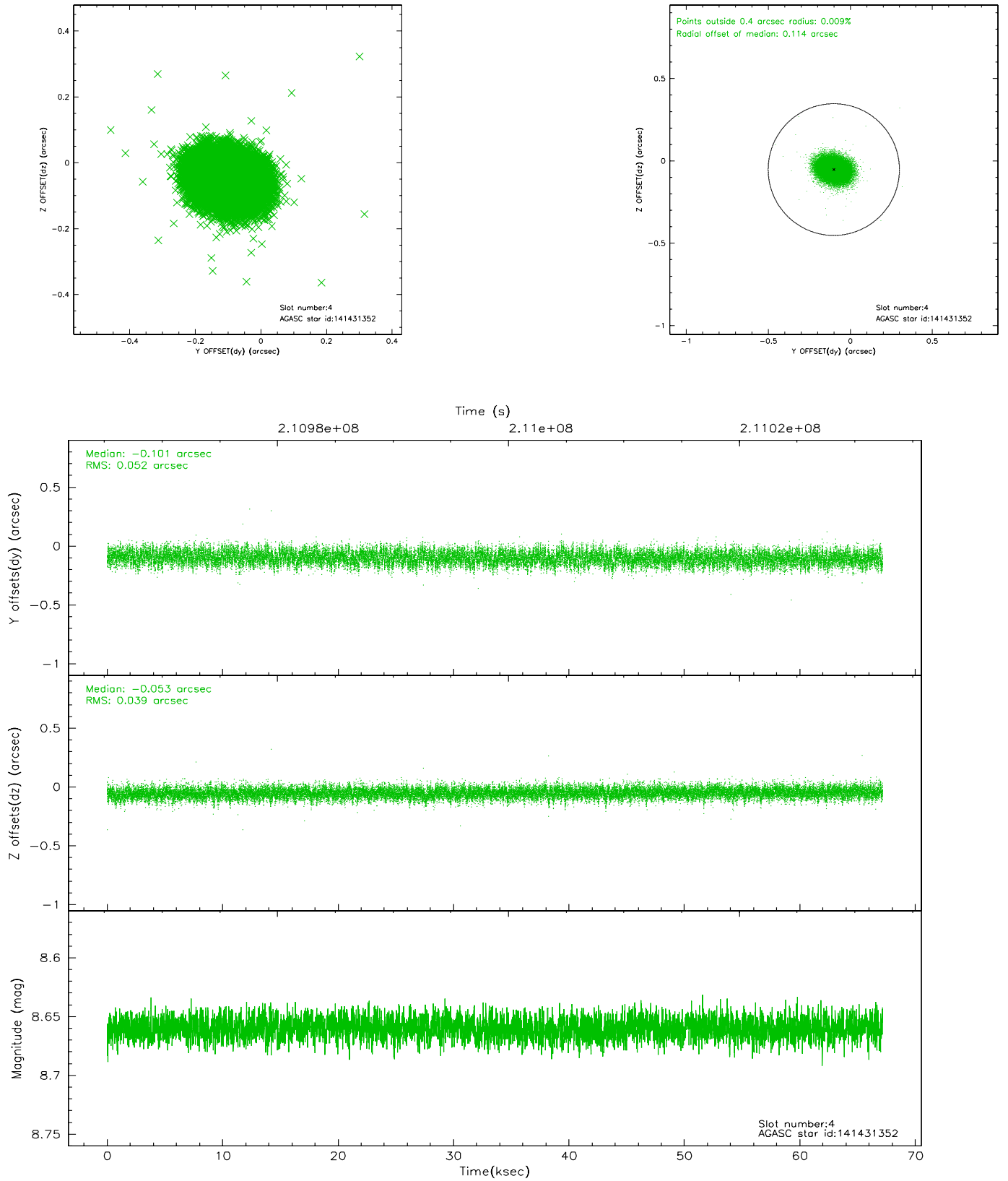
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	16388	-0.041	-0.103	0.009	0.017	0.000000	0.000000	-761.25	-1858.28
1	FID	ACIS-S-4	7.18	16387	0.084	0.047	0.013	0.033	0.000000	0.000000	2152.19	50.36
2	FID	ACIS-S-5	7.23	16387	-0.073	0.063	0.011	0.034	0.000000	0.000000	-1814.17	44.03
3	GUIDE	140917648	9.05	32753	0.226	0.102	0.074	0.120	300.185586	11.031854	1994.45	1942.89
4	GUIDE	141431352	8.66	32762	-0.101	-0.053	0.068	0.111	300.478891	12.146567	-2141.09	1669.69
5	GUIDE	141453064	7.91	32769	0.117	0.056	0.058	0.093	299.483987	11.414705	1455.38	-840.55
6	GUIDE	141446792	8.92	32756	-0.096	-0.088	0.080	0.128	299.284509	11.937274	-115.67	-2092.05
7	GUIDE	141453280	8.53	32761	-0.145	-0.014	0.062	0.098	299.888387	12.264129	-1894.12	-436.49

## 2.4 Star Slots

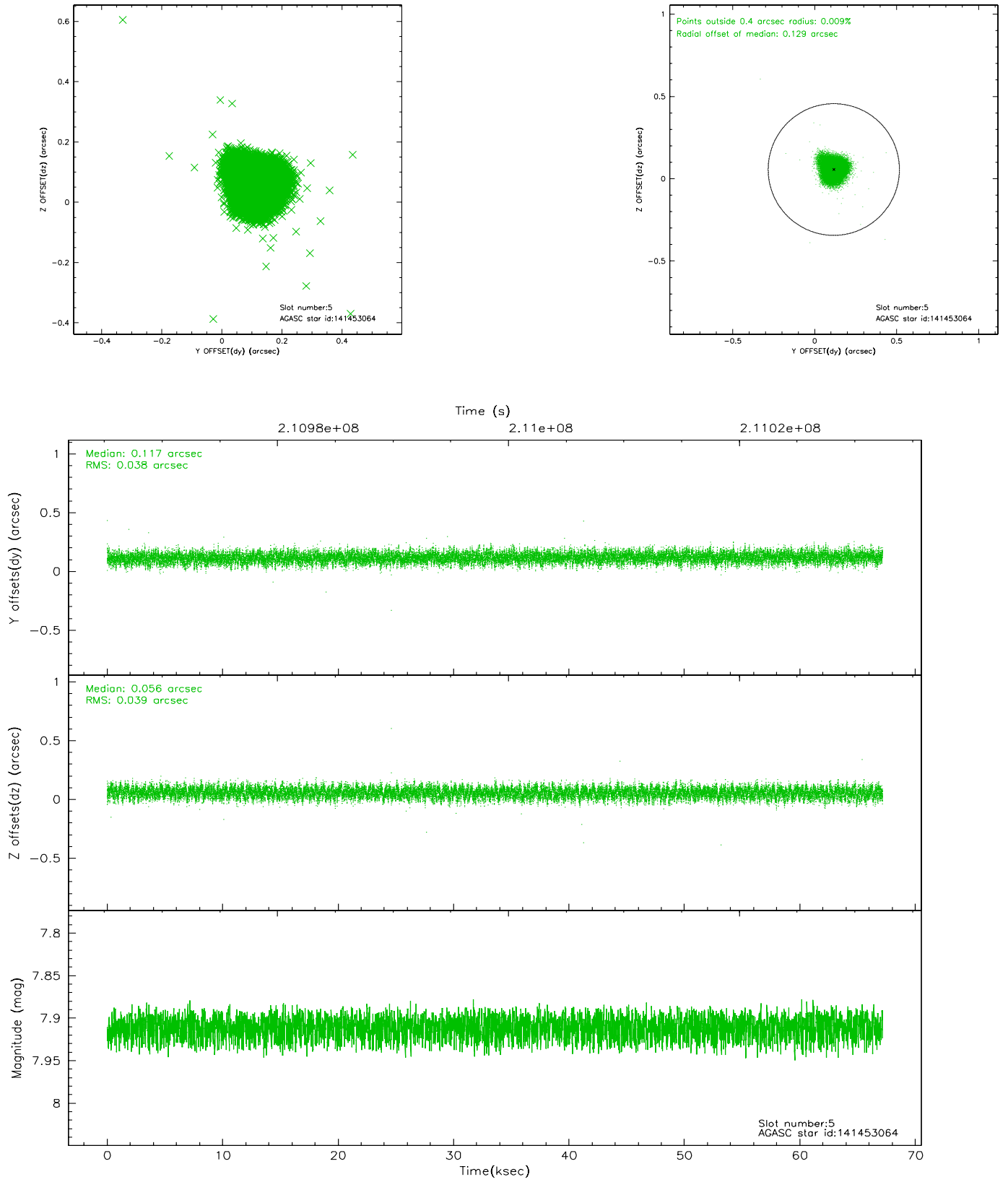
### 2.4.1 Slot 3



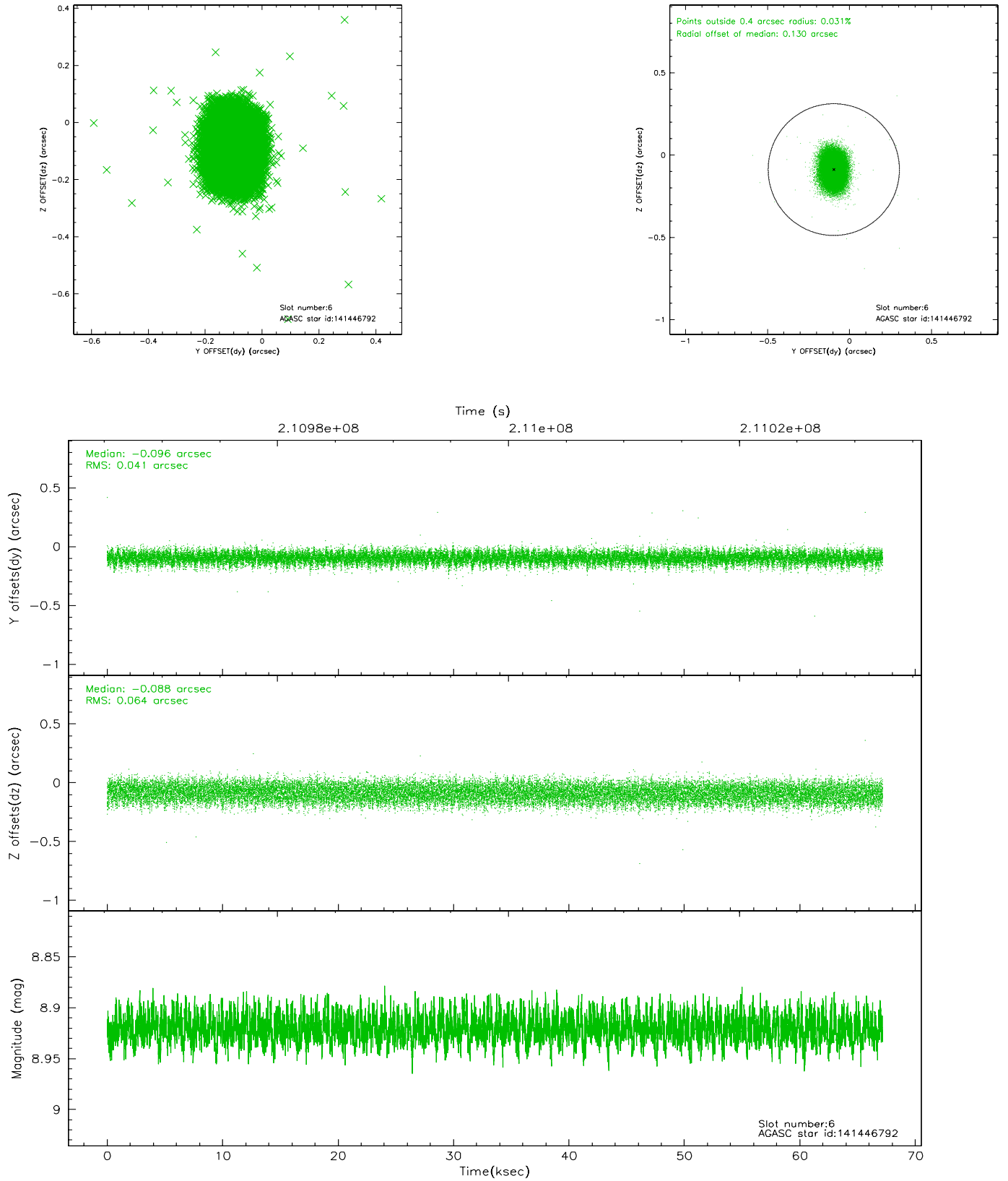
## 2.4.2 Slot 4



### 2.4.3 Slot 5

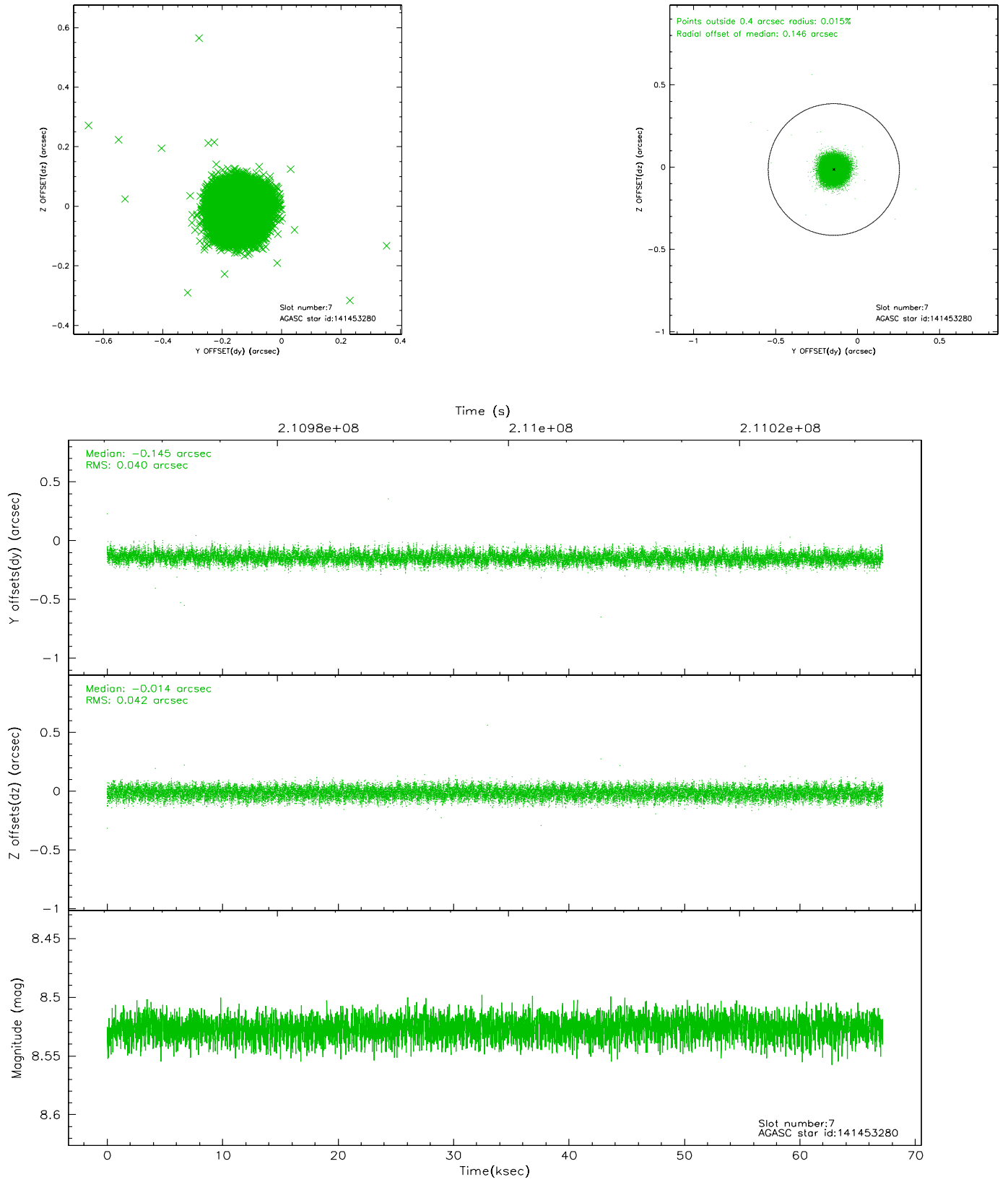


## 2.4.4 Slot 6



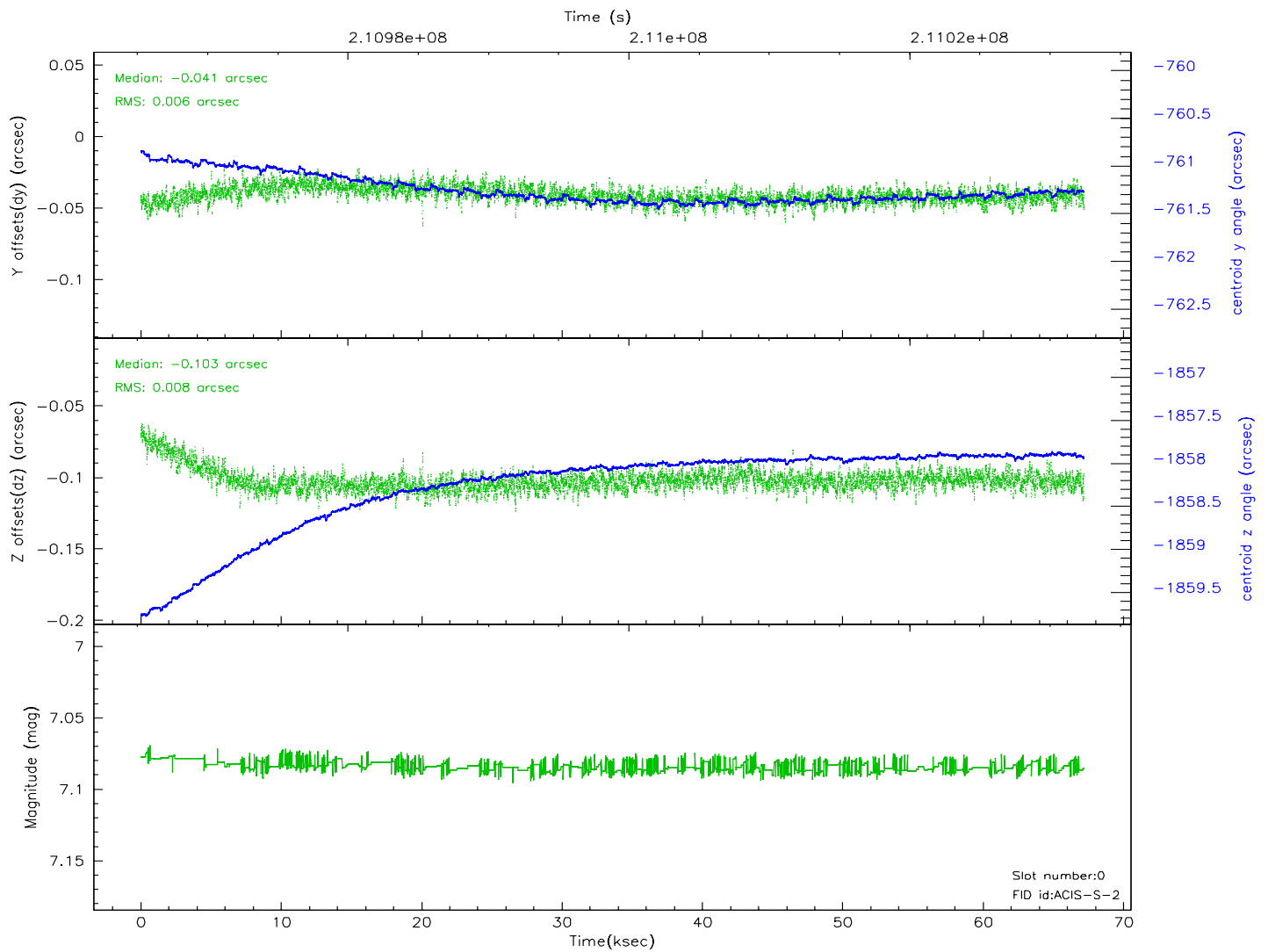
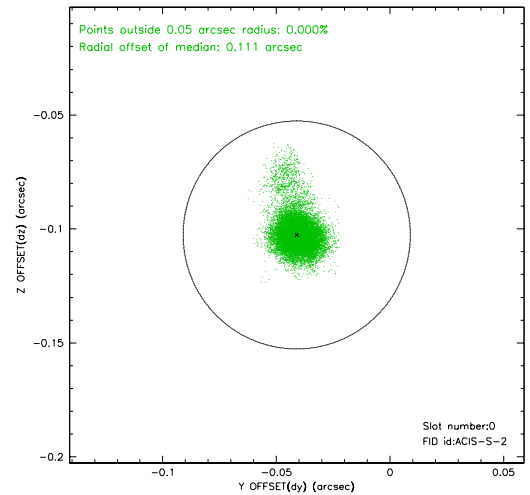
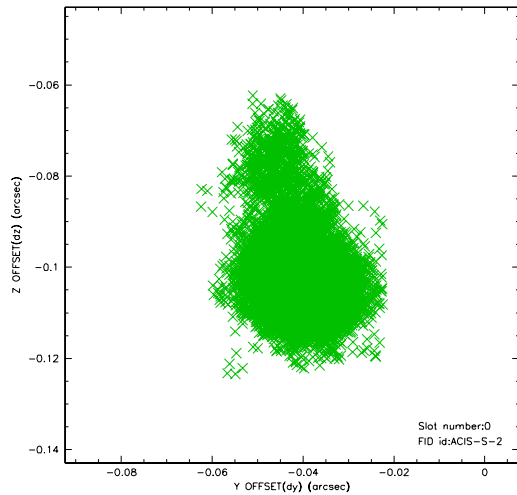


## 2.4.5 Slot 7

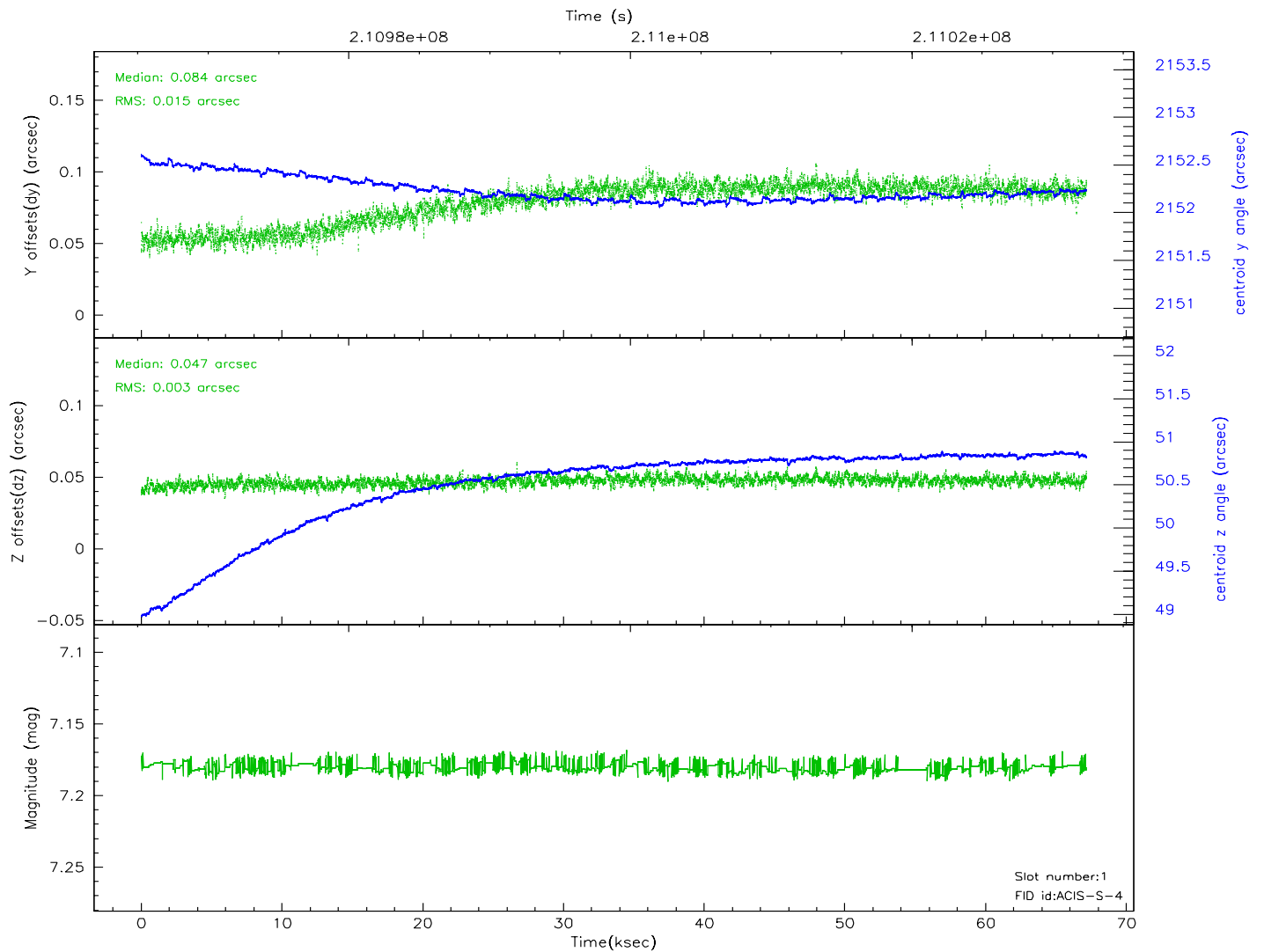
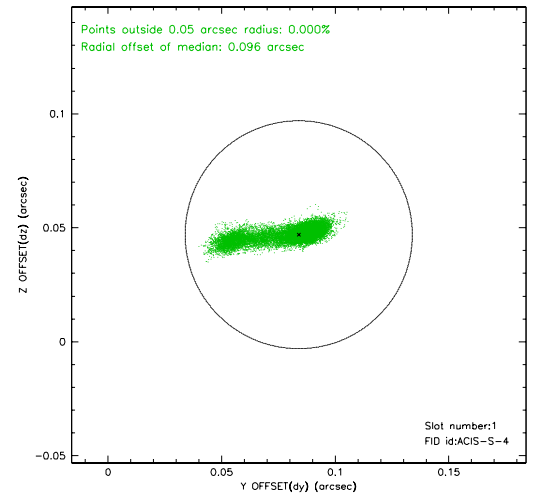
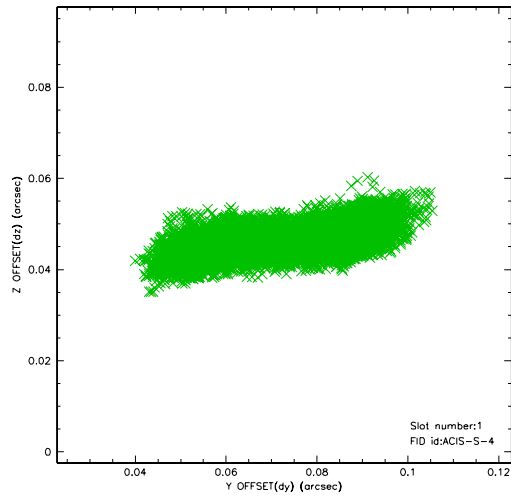


## 2.5 FID Slots

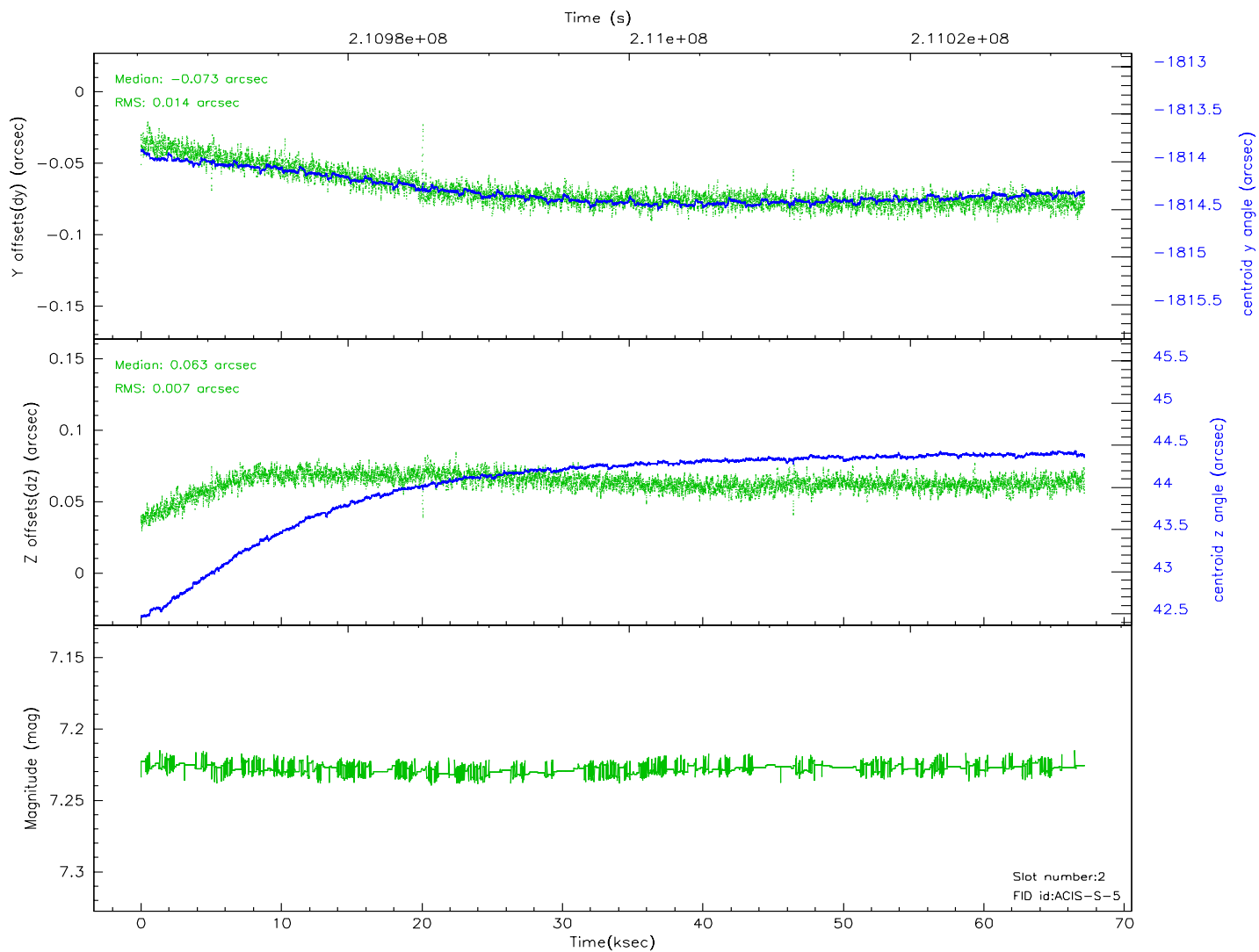
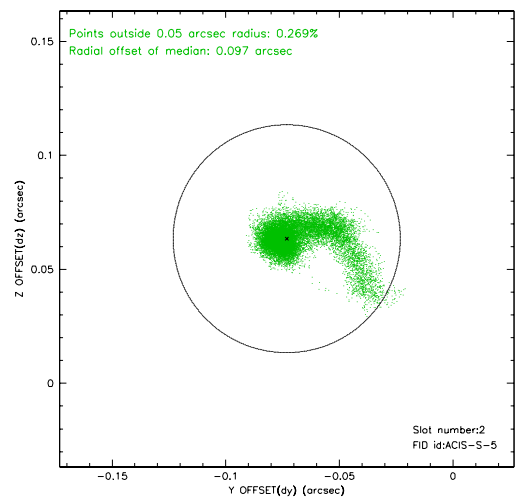
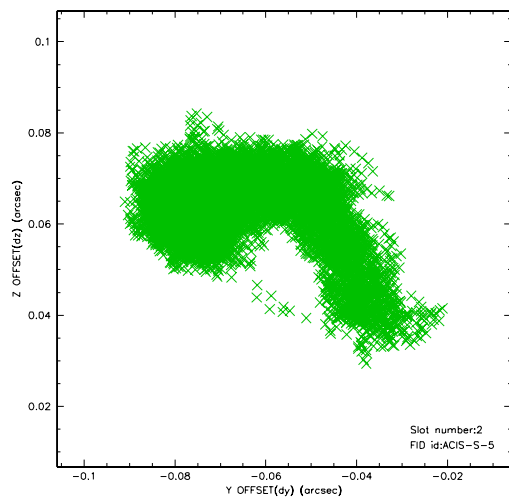
### 2.5.1 Slot 0



## 2.5.2 Slot 1

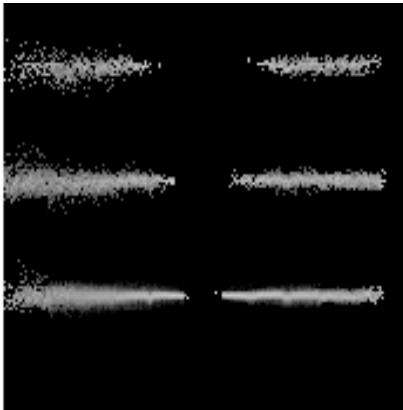


### 2.5.3 Slot 2

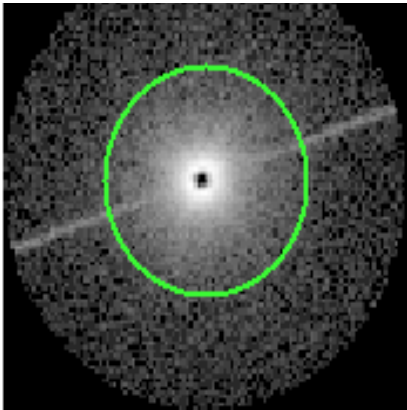


# 3 Gratings

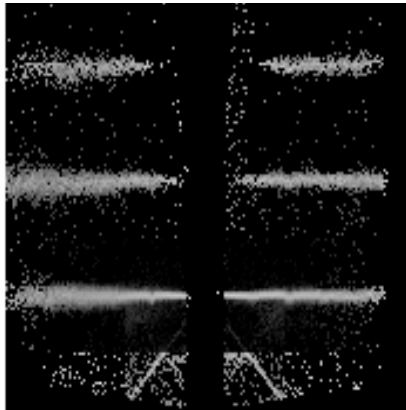
## 3.1 HEG Arm



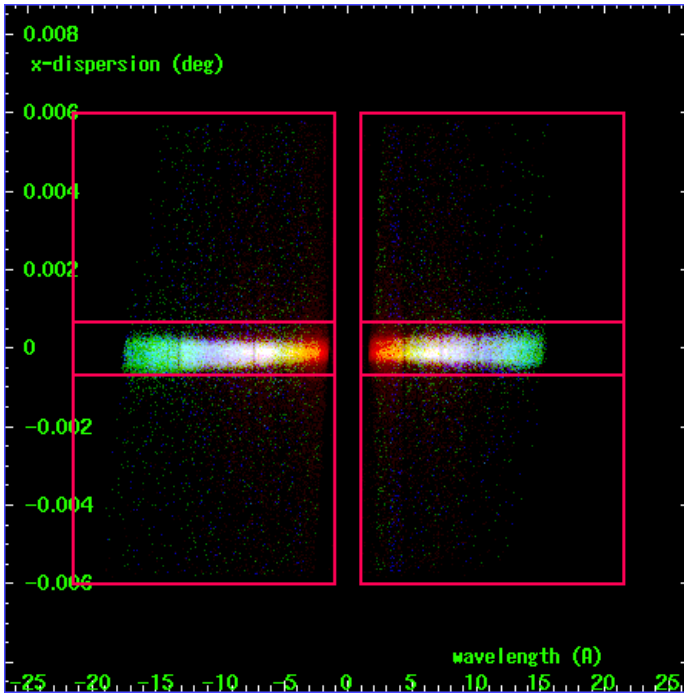
HEG Order Sort 123



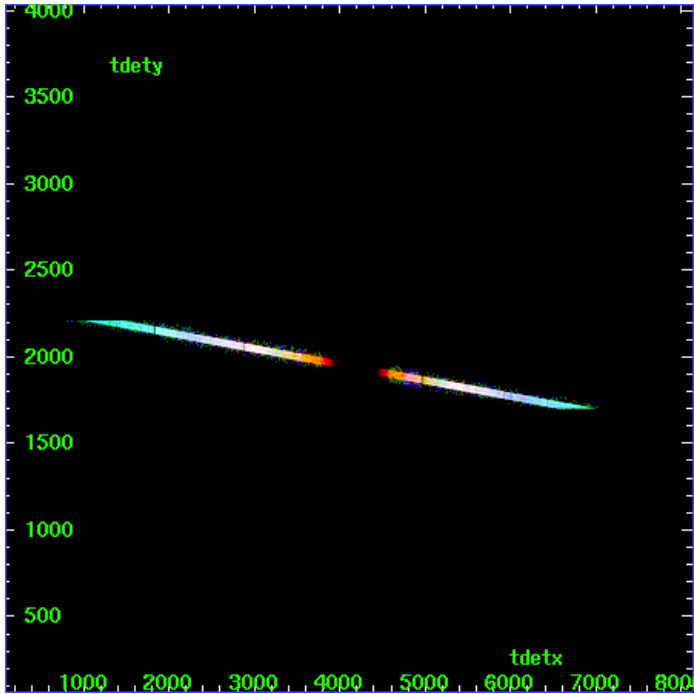
HEG Zero Order



HEG Order Sort ALL

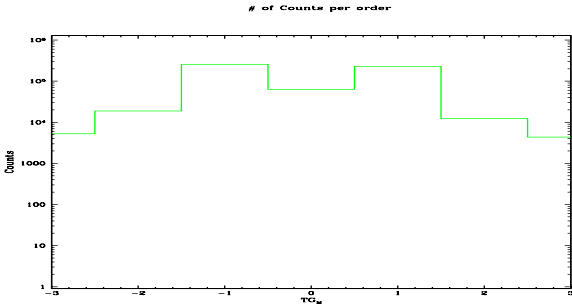


Spot Image HEG

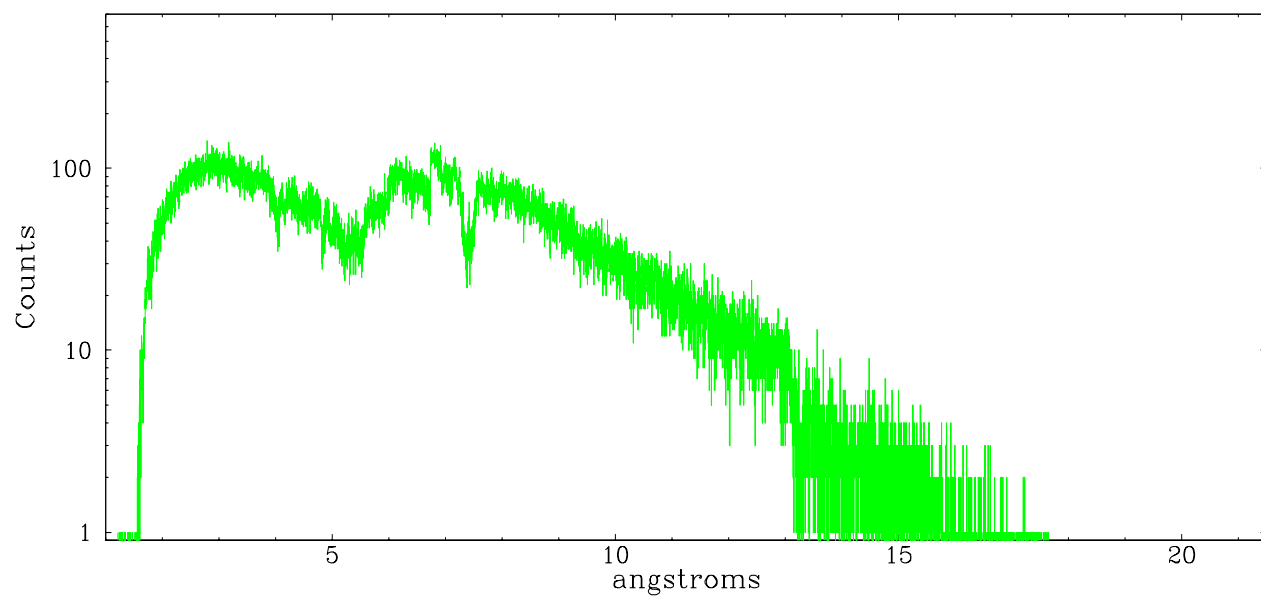


Full Detector HEG

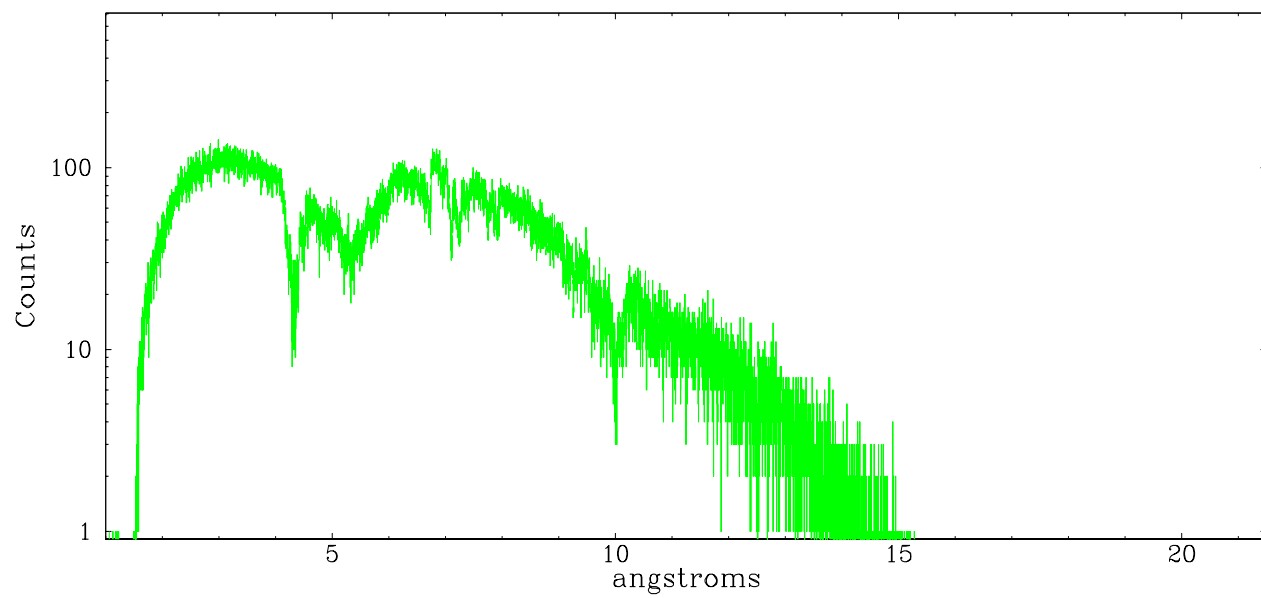
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5271	18904	255771	63009	228878	12232	4357



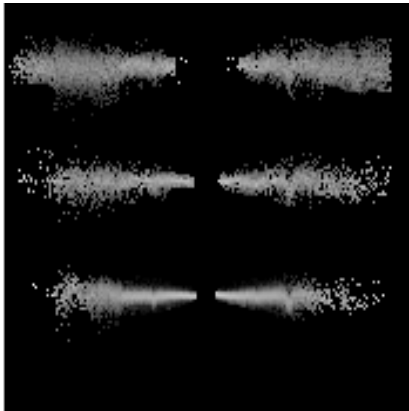
heg order -1



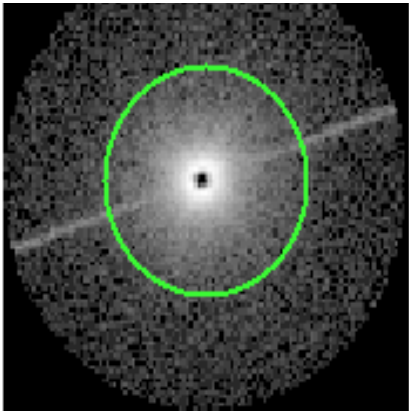
heg order +1



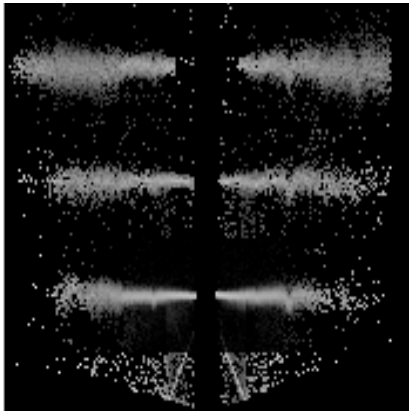
### 3.2 MEG Arm



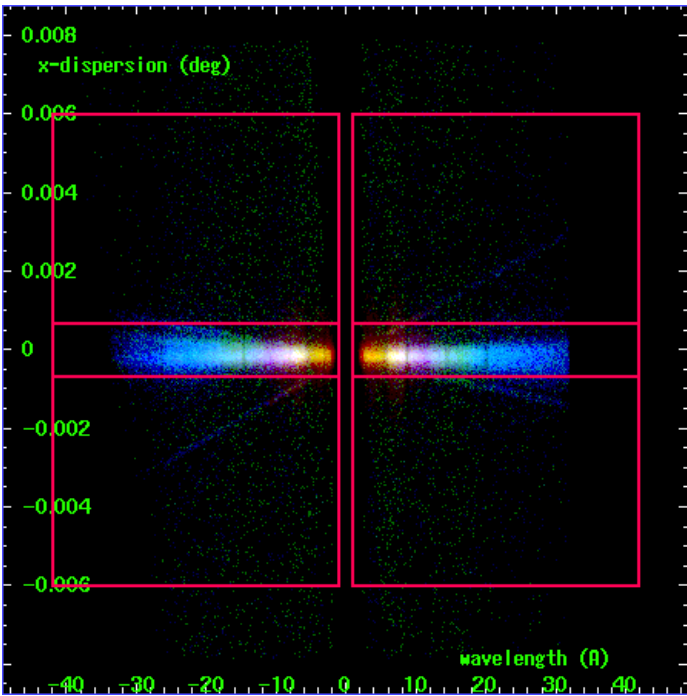
MEG Order Sort 123



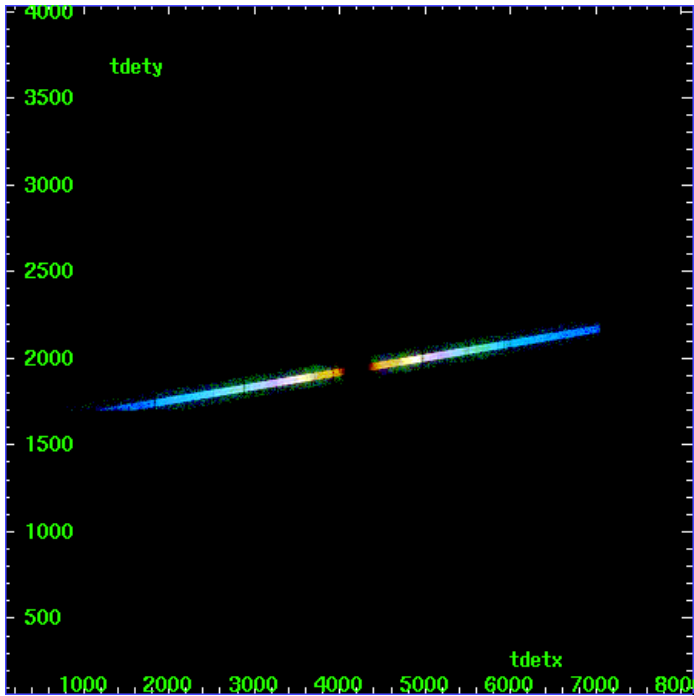
MEG Zero Order



MEG Order Sort ALL

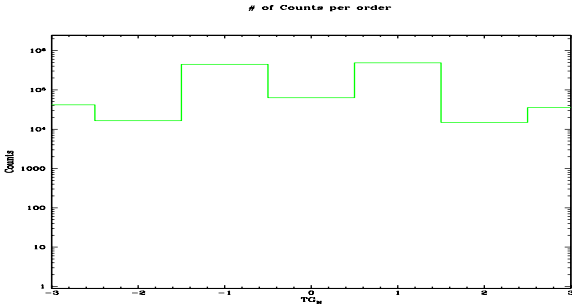


Spot Image MEG

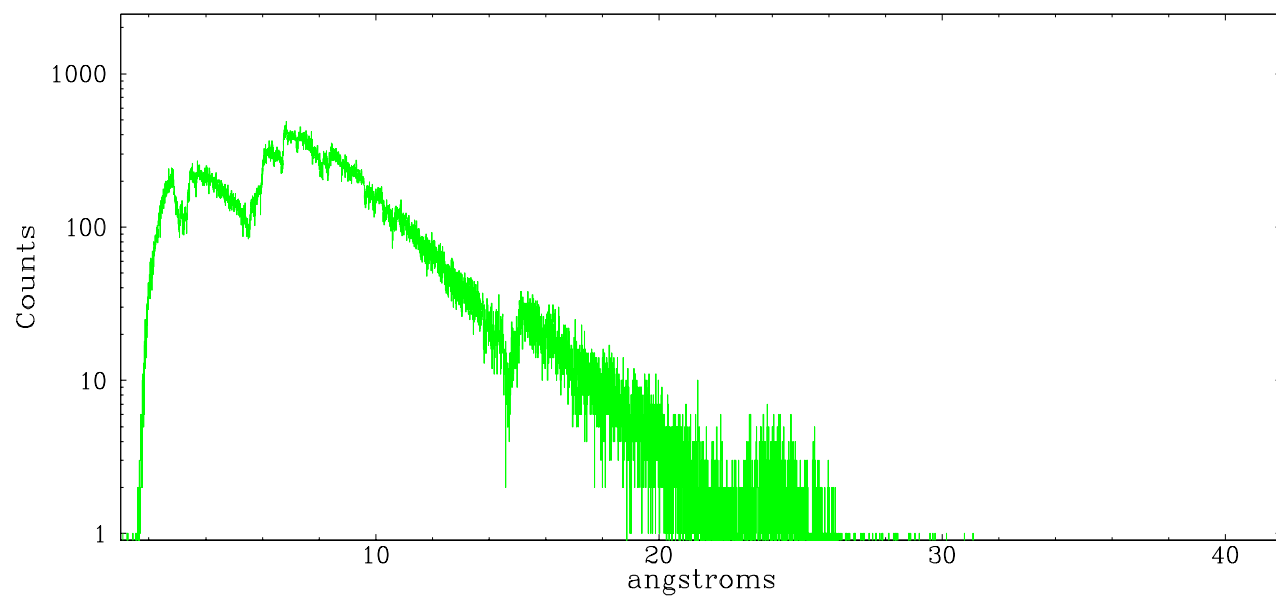


Full Detector MEG

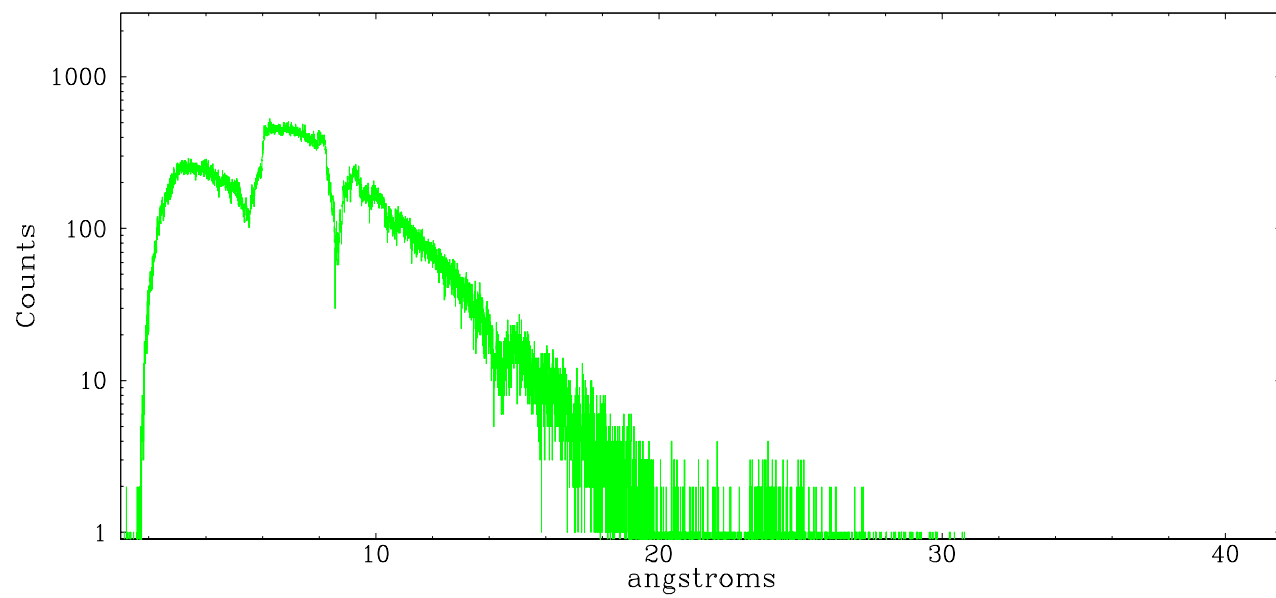
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	41497	16465	448391	63009	488916	14983	35313



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.04.21
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	67.182

### A.2 Comments

Zeroth order piled up.