

# V&V Reference Report

## L2 ASCDS Version : 7.6.8.1

Observation 2680 - L2 Version 001  
Chandra X-Ray Center

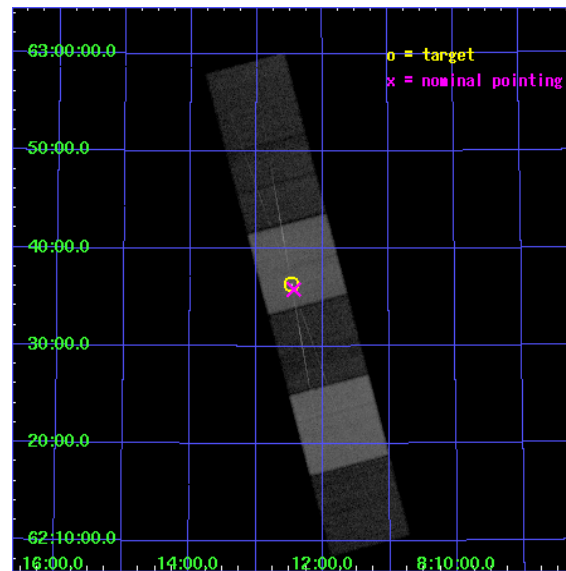
L2 Processing Date : Sep 11 2006

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

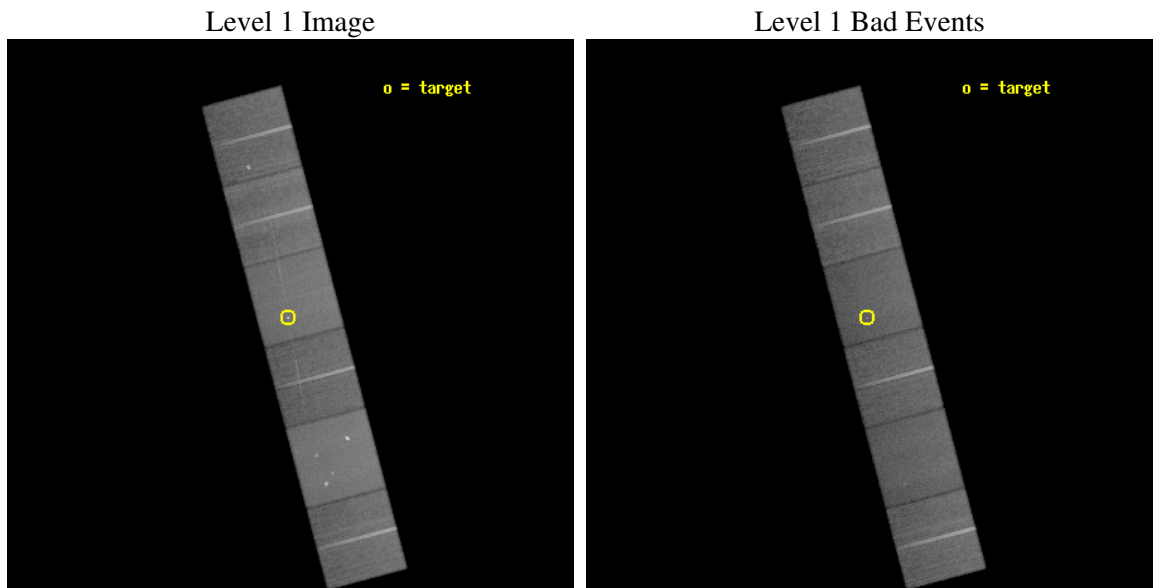
seq_num	300081
obs_id	2680
title	CHANDRA GRATING SPECTROSCOPY OF DWARF NOVAE
observer	Dr Peter Wheatley
object	SU UMA
dtcycle	0
cycle	P
ra_targ	123.1175
dec_targ	62.606389
ra_nom	123.10859998097
dec_nom	62.59759294807
roll_nom	255.16452669723
revision	2
ontime	49529.599815488
livetime	48902.42619948
ontime4	49529.599815488
ontime5	49529.599815488
ontime6	49529.599815488
ontime7	49529.599815488
ontime8	49529.599815488
ontime9	49529.599815488
l2events	476347



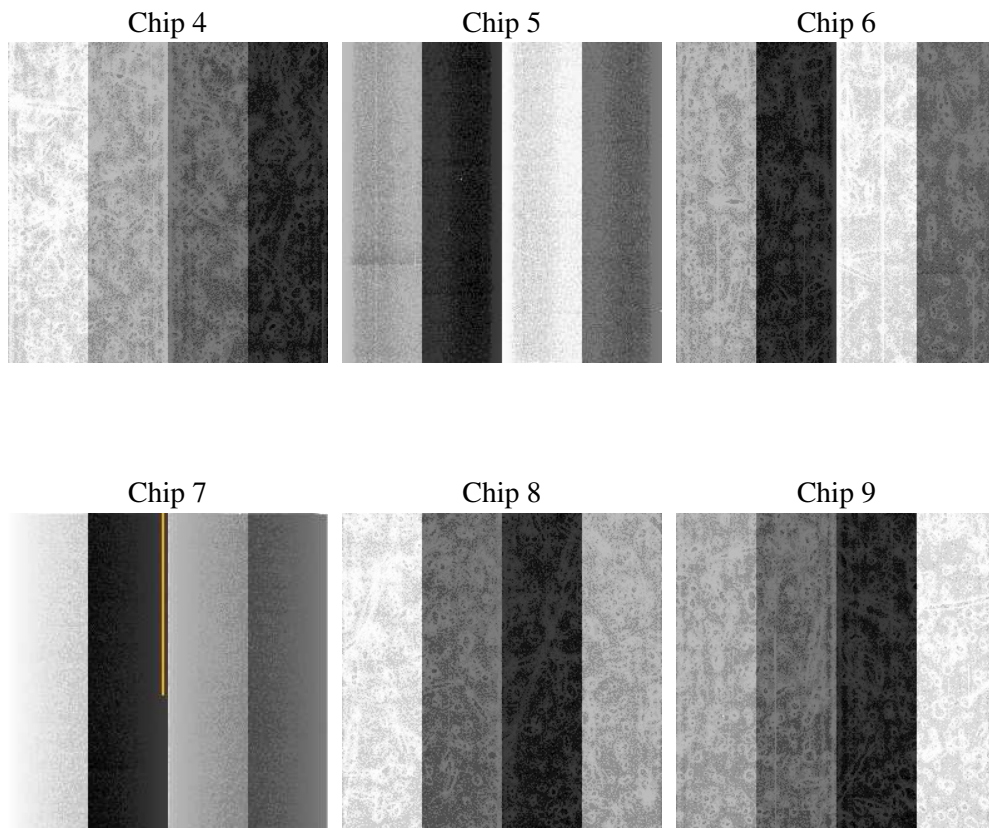
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	2
ascdsver	7.6.8.1
caldsver	3.2.3
date	2006-09-11T07:03:34
revision	2

sched_exp_time	49574.000000
ontime	49535.423104048
ontime4	49535.423104048
ontime5	49535.423104048
ontime6	49535.423104048
ontime7	49535.423104048
ontime8	49535.423104048
ontime9	49535.423104048
l1events	2261447

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	351083	452870	322824	416392	398167	320111
rejected events	313211	253236	283737	254640	317752	280269
rejected %	89%	55%	87%	61%	79%	87%

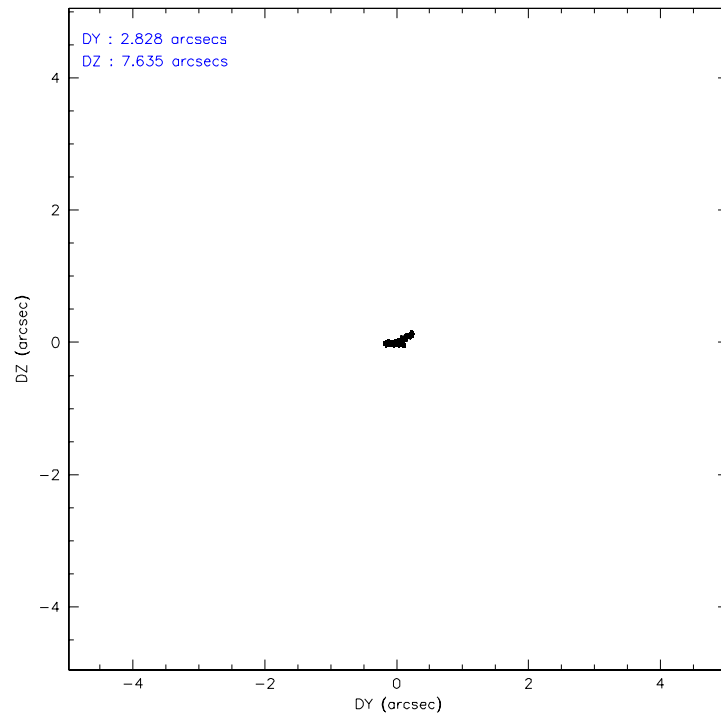
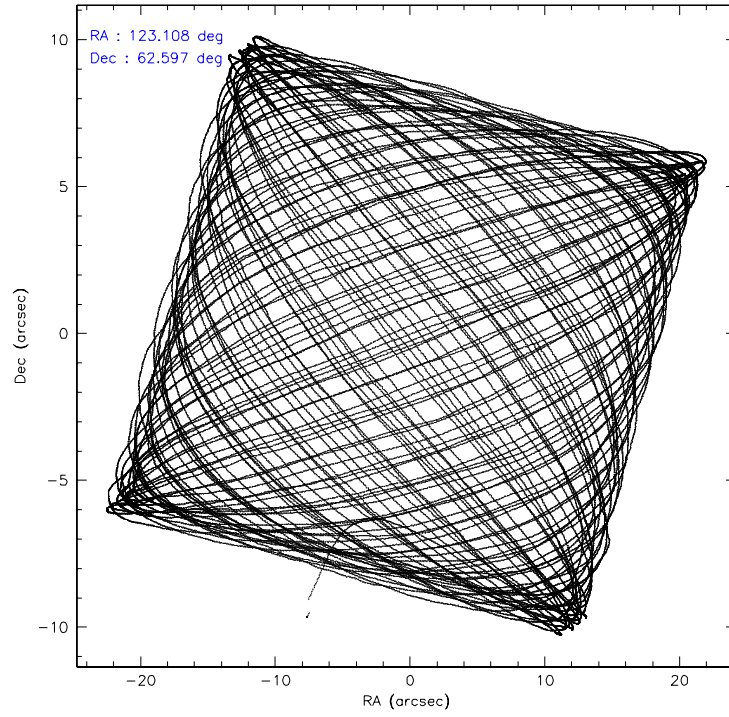
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	14972	18424	16151	9860	25617	16933
	4%	4%	5%	2%	6%	5%
grade 1 events	159	584	164	290	215	138
	0%	0%	0%	0%	0%	0%
grade 2 events	9440	60101	7850	40168	17847	7940
	2%	13%	2%	9%	4%	2%
grade 3 events	3473	4456	3892	8802	8476	3746
	0%	0%	1%	2%	2%	1%
grade 4 events	3312	4167	3583	8617	7979	3457
	0%	0%	1%	2%	2%	1%
grade 5 events	11701	22017	14078	28046	17799	14433
	3%	4%	4%	6%	4%	4%
grade 6 events	6678	112500	7614	94319	20498	7768
	1%	24%	2%	22%	5%	2%
grade 7 events	301348	230621	269492	226290	299736	265696
	85%	50%	83%	54%	75%	83%

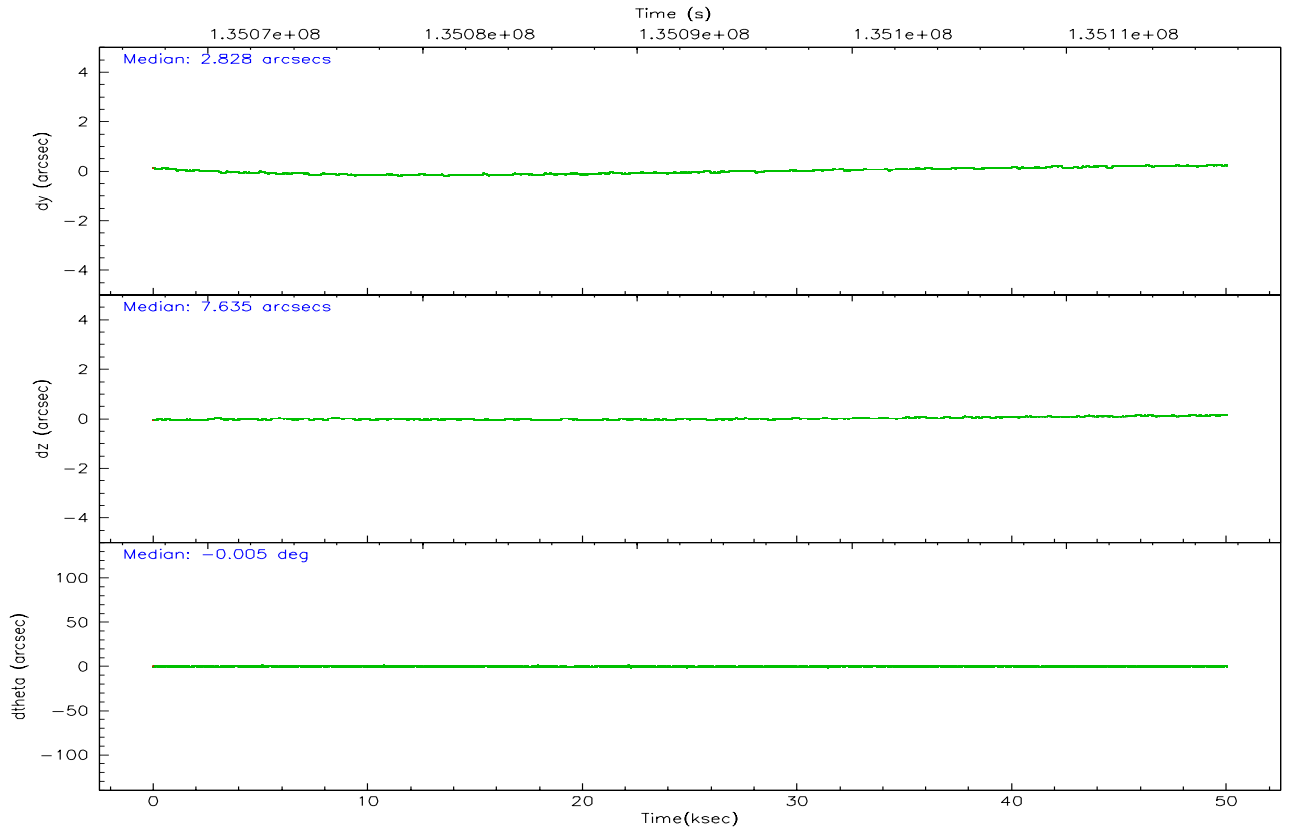
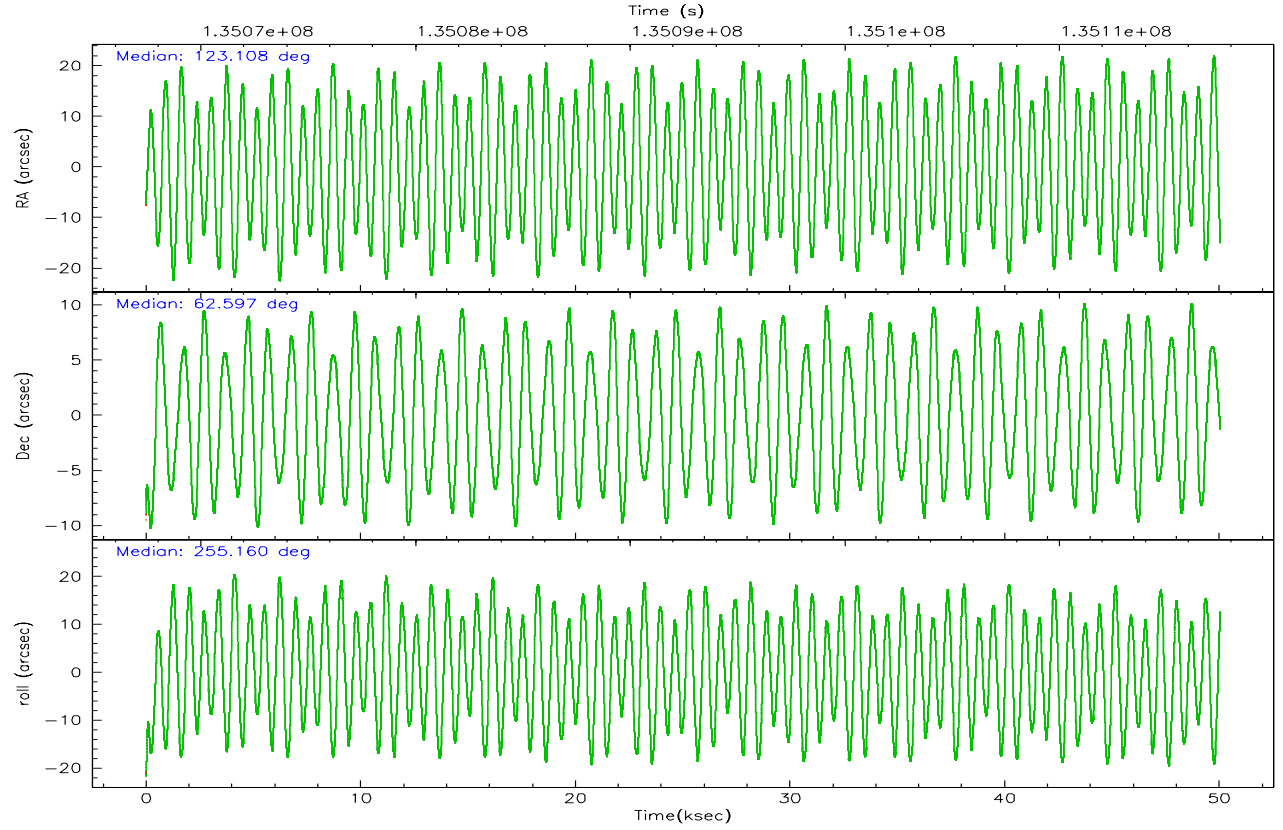


## 2.2 Compared Parameters

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	123.092374	123.1085999809728	Alternating exposures requested	N	N
Pointing Dec	62.623804	62.59759294806969	Primary exposure time	0.000000	3.2
Pointing Roll	255.022309	255.1645266972336			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
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	135067910.184000	135066803.01881			
Observation start date	2002-04-13T06:50:46	2002-04-13T06:33:23			
Observation end time	135117484.184000	135118382.0459			
Observation end date	2002-04-13T20:37:00	2002-04-13T20:53:02			
Read mode	TIMED	TIMED			

## 2.3 Aspect



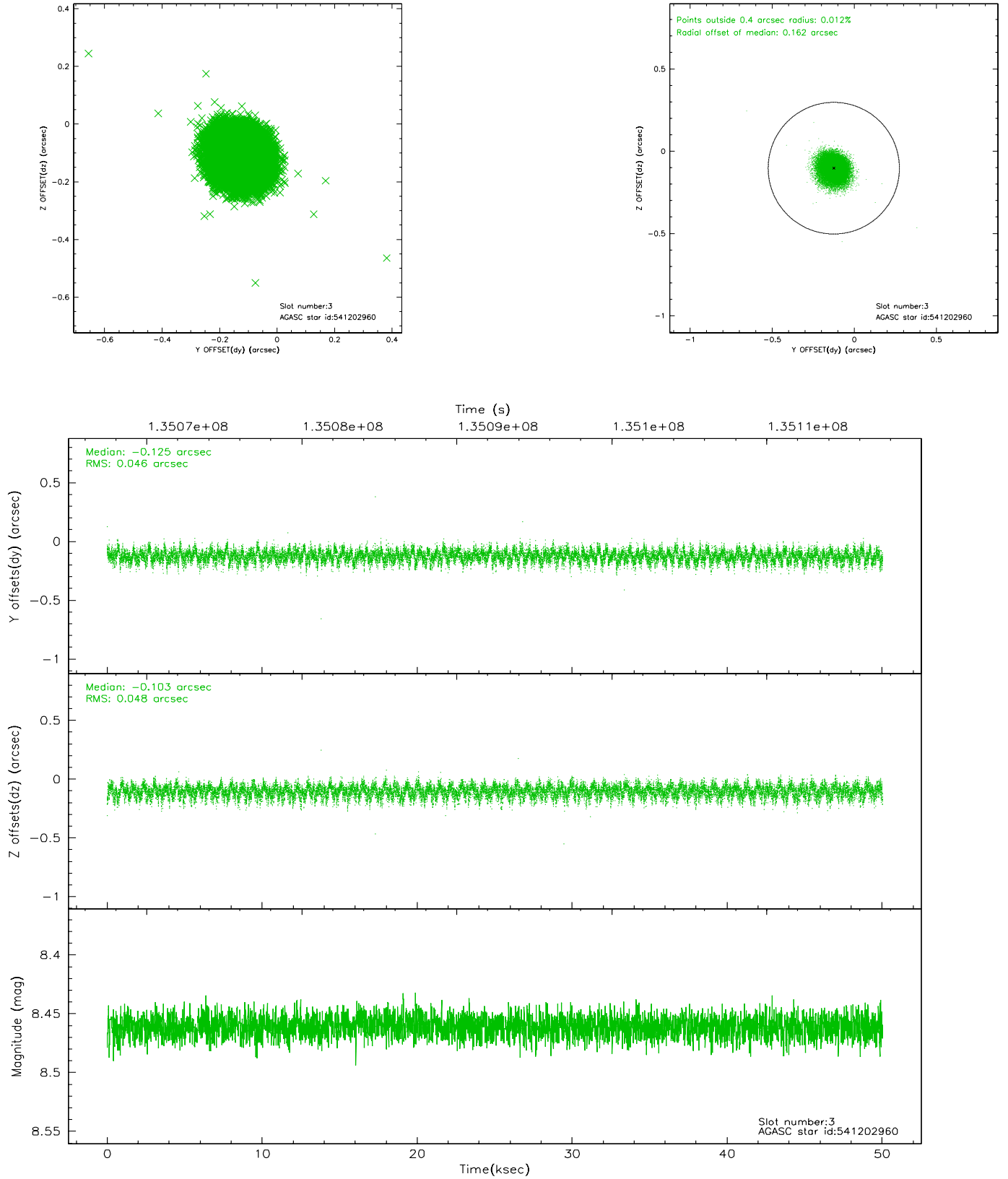


# Slot Statistics

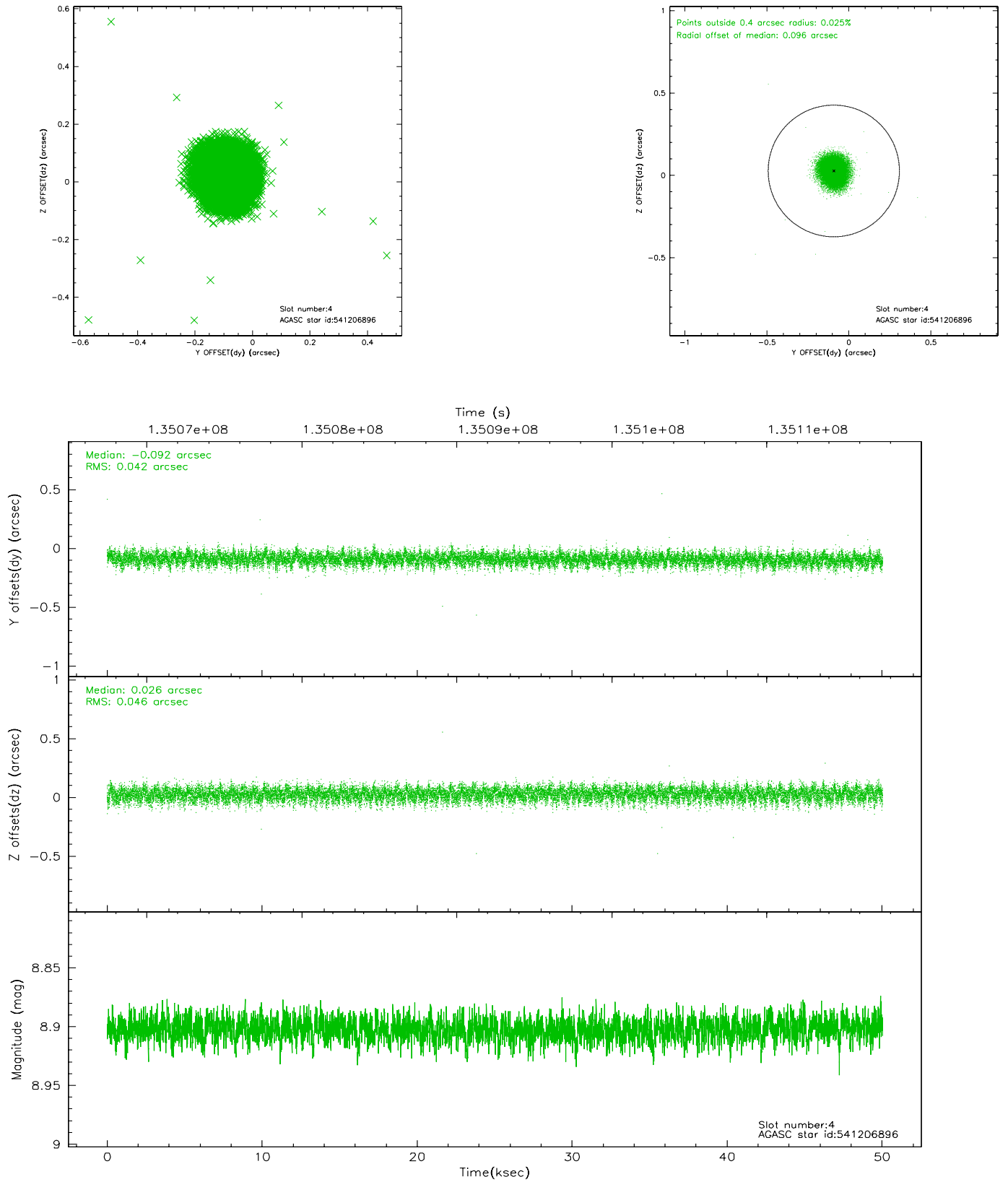
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	12206	-0.019	0.003	0.006	0.011	0.000000	0.000000	-755.25	-1790.98
1	FID	ACIS-S-4	7.19	12206	-0.020	0.025	0.007	0.011	0.000000	0.000000	2158.00	117.59
2	FID	ACIS-S-6	7.38	12207	0.011	-0.022	0.007	0.012	0.000000	0.000000	406.69	754.88
3	GUIDE	541202960	8.46	24403	-0.125	-0.103	0.071	0.114	123.440669	63.103953	-1819.23	101.07
4	GUIDE	541206896	8.90	24408	-0.092	0.026	0.066	0.106	122.742968	63.137211	-1640.99	-1027.04
5	GUIDE	540805584	9.06	24403	0.038	-0.069	0.089	0.141	121.852449	62.486103	991.95	-1868.66
6	GUIDE	540816416	9.07	24406	0.157	0.090	0.071	0.114	123.696049	62.036637	1773.24	1529.99
7	GUIDE	540804688	9.50	24396	0.022	0.059	0.122	0.191	124.194446	62.208412	950.49	2169.79

## 2.4 Star Slots

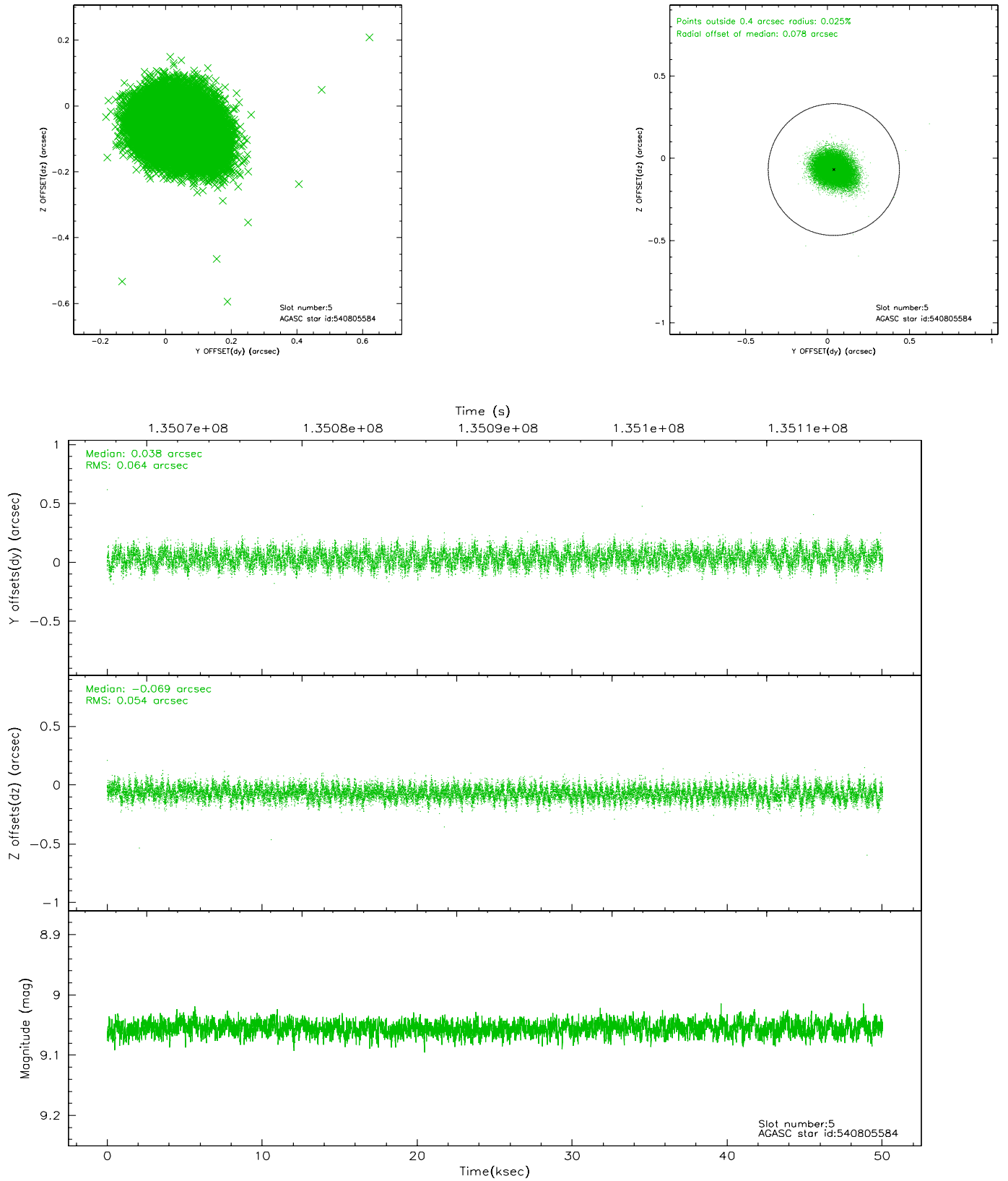
### 2.4.1 Slot 3



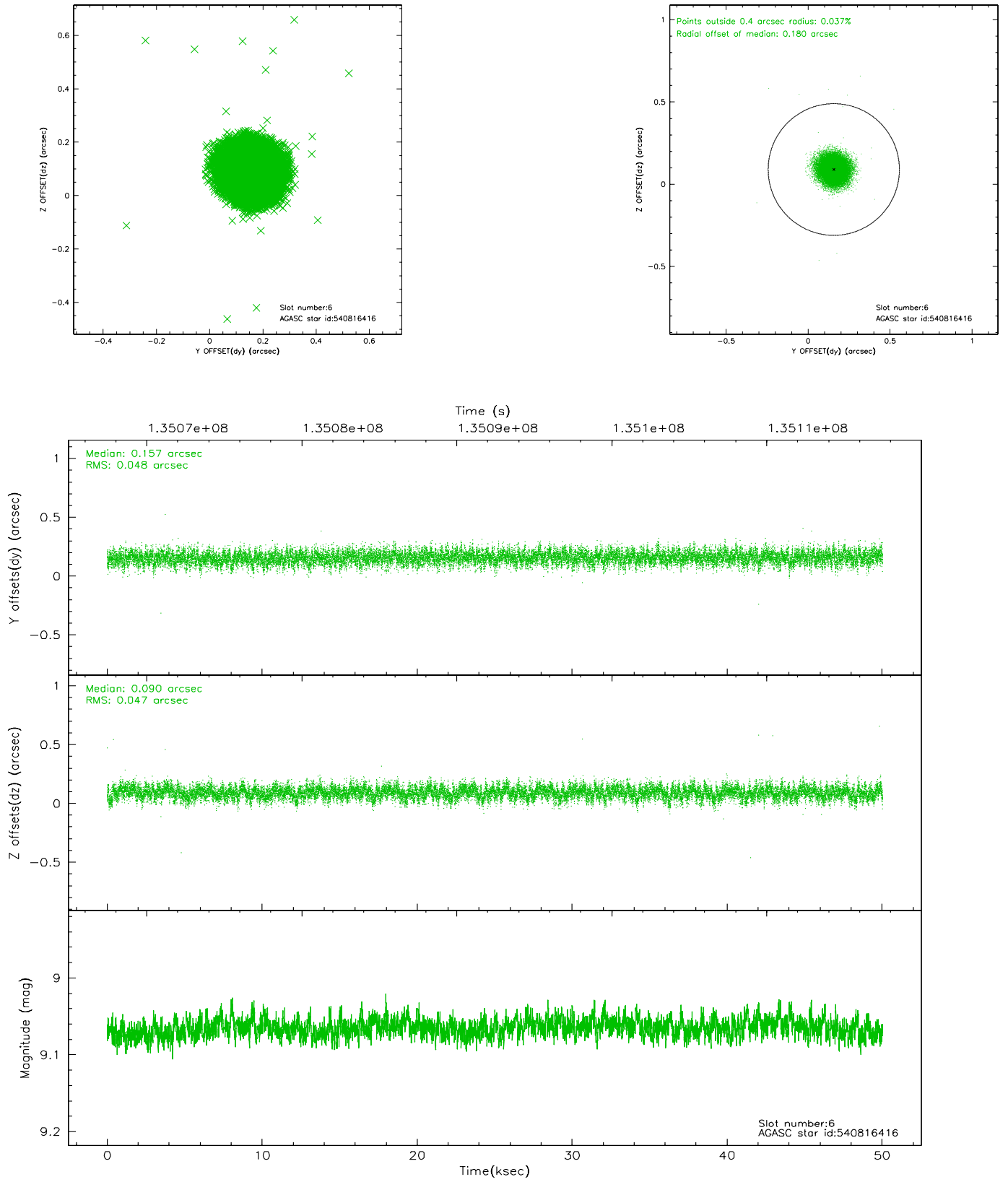
## 2.4.2 Slot 4



### 2.4.3 Slot 5

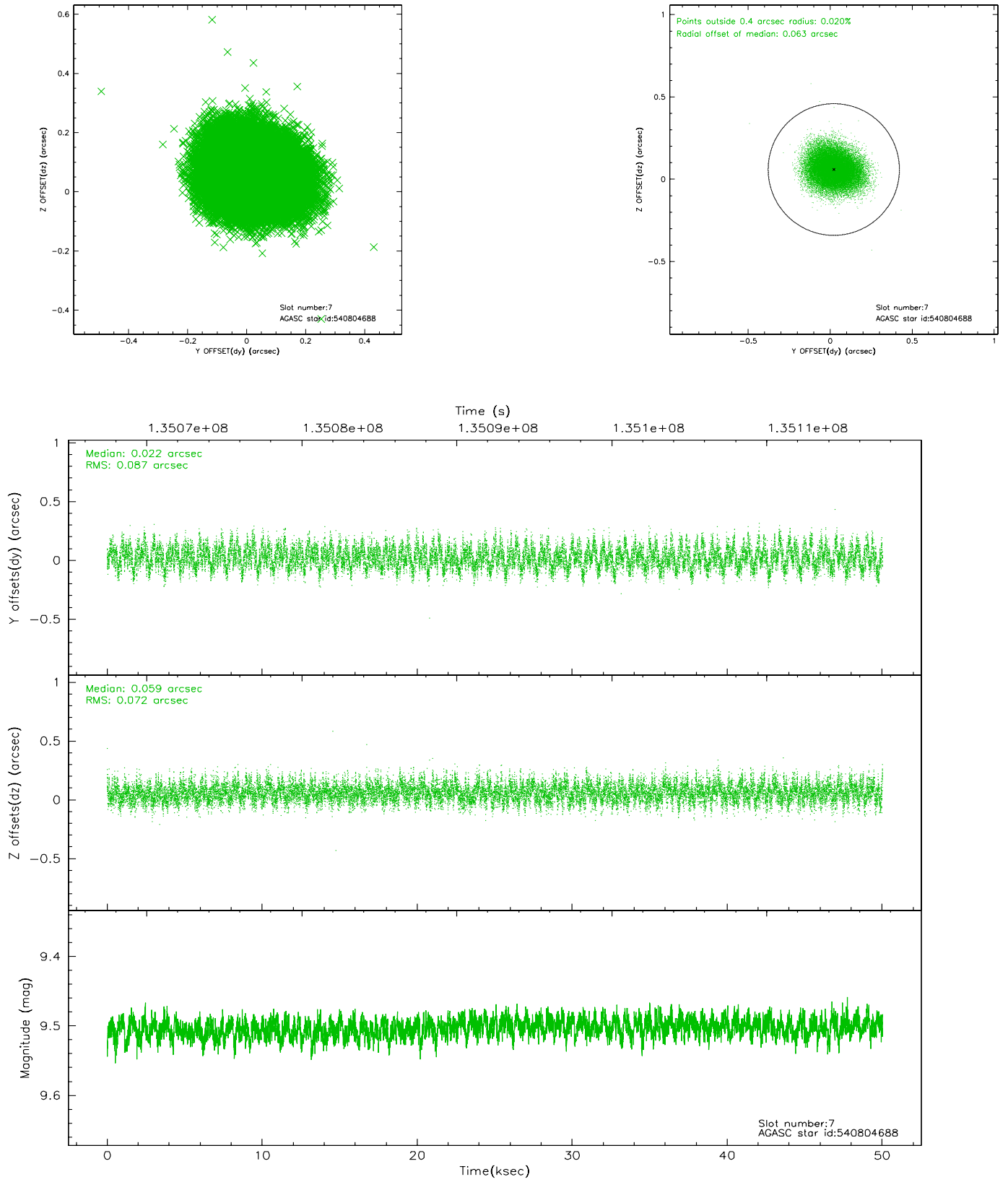


## 2.4.4 Slot 6



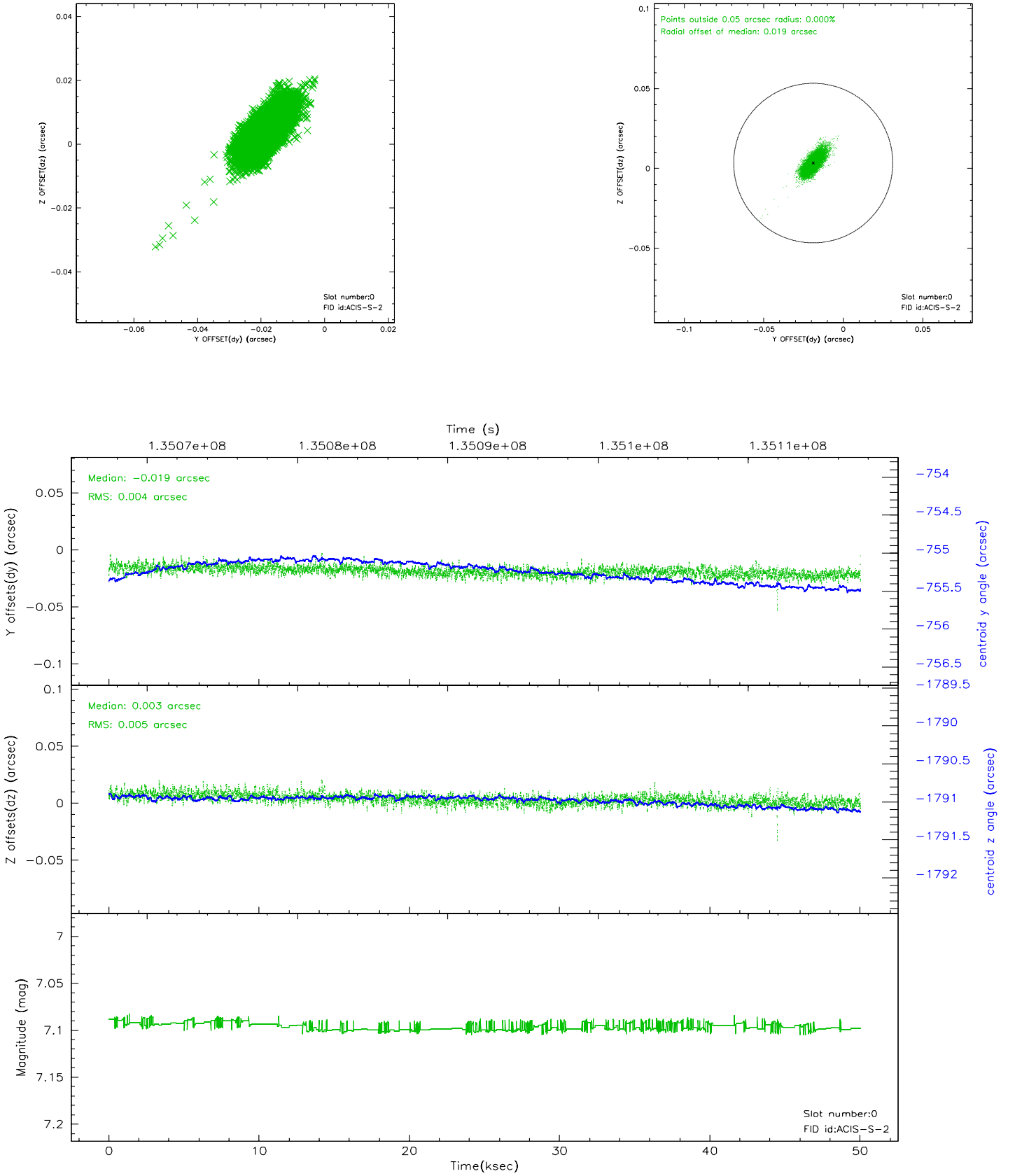


## 2.4.5 Slot 7

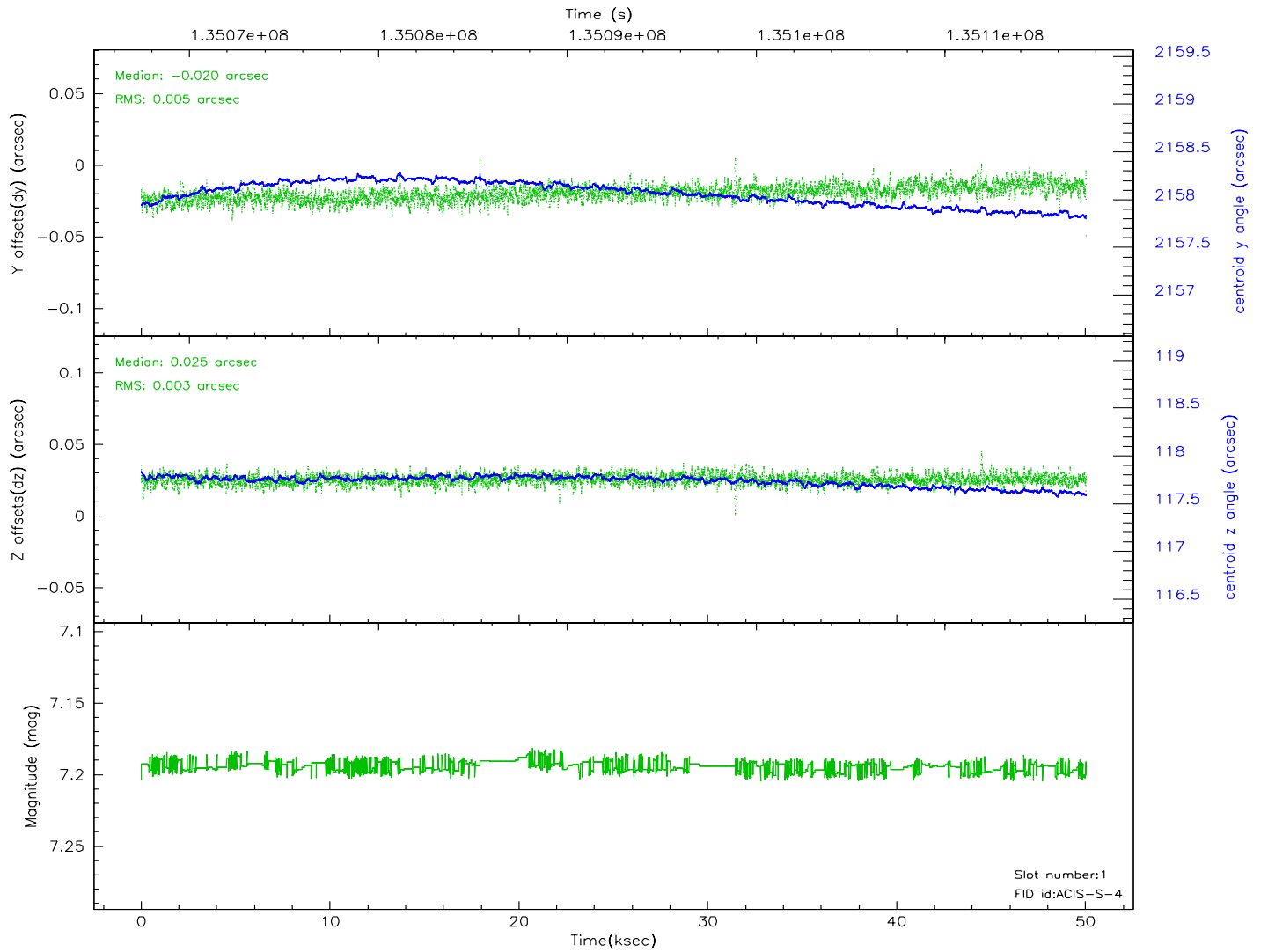
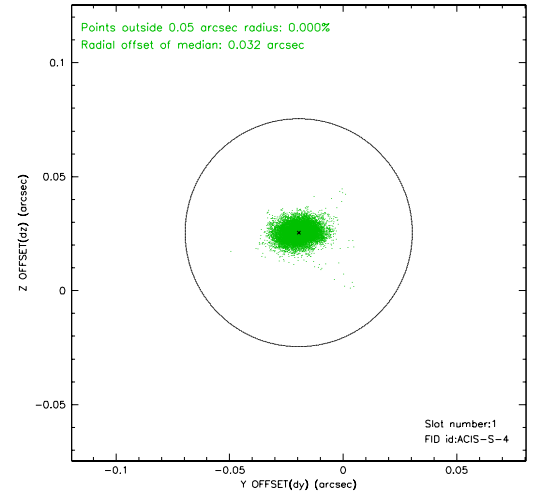
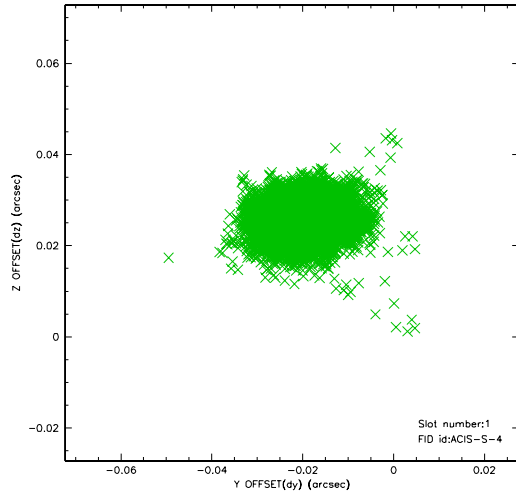


## 2.5 FID Slots

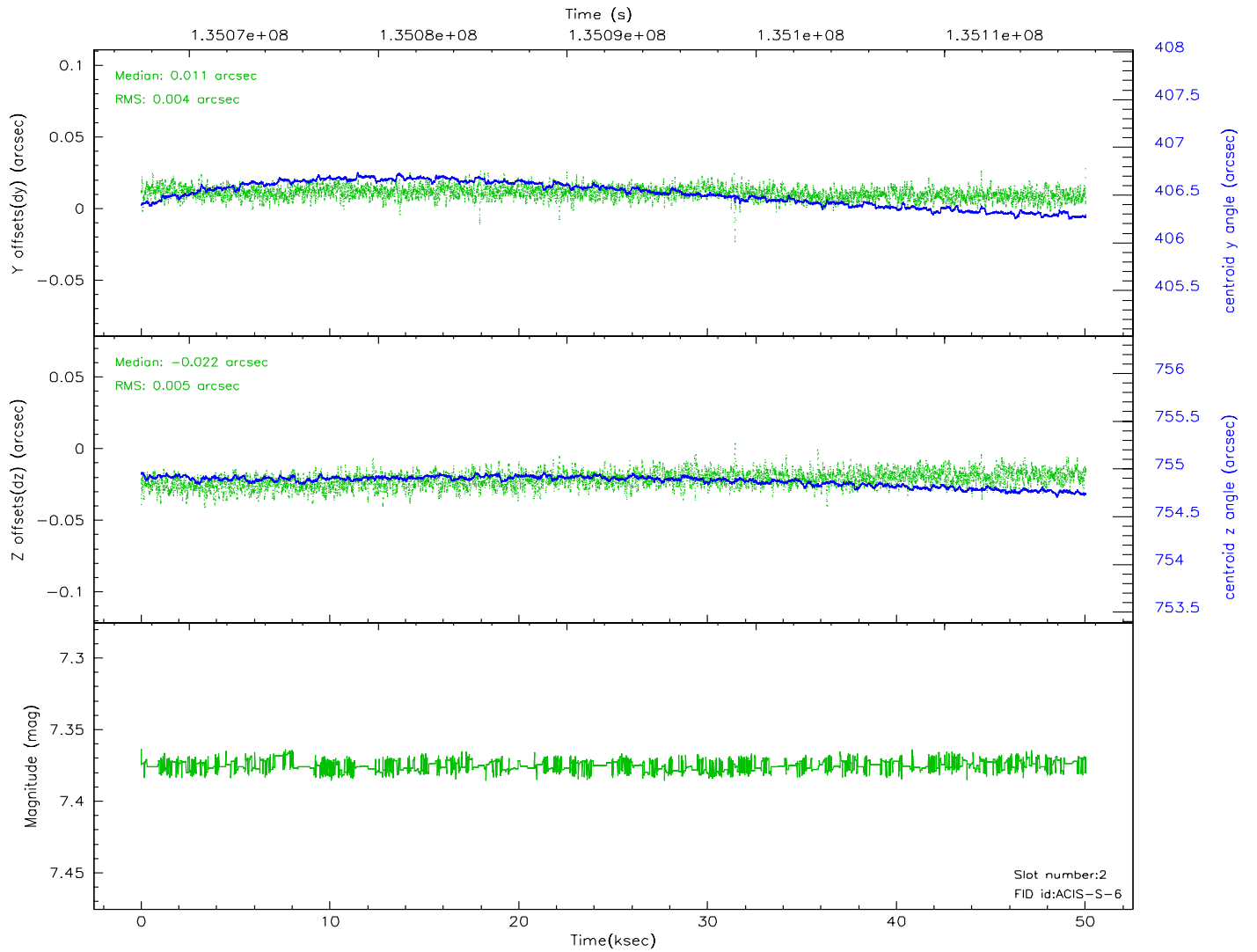
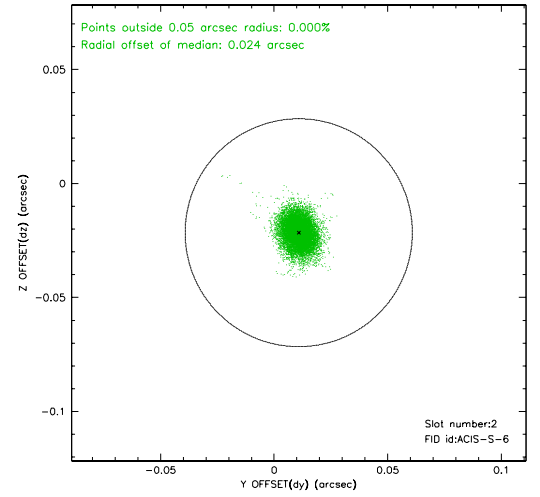
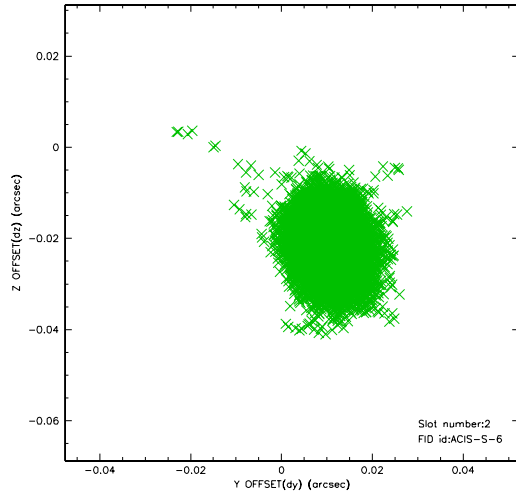
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# 3 Gratings

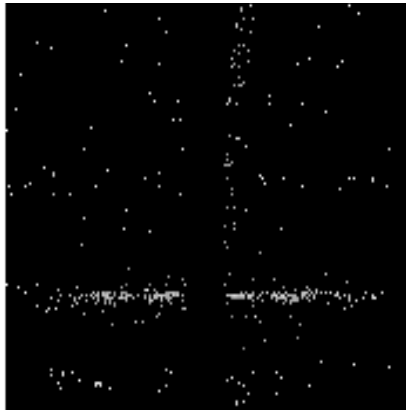
## 3.1 HEG Arm



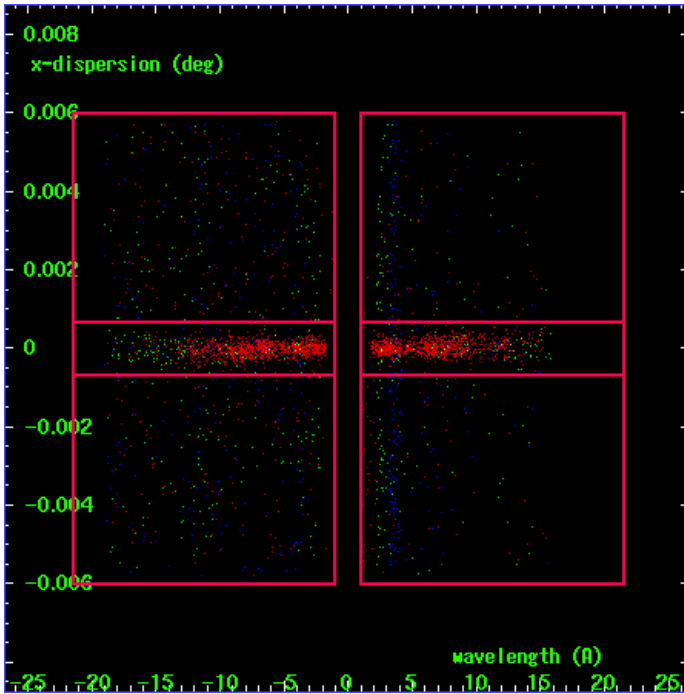
HEG Order Sort 123



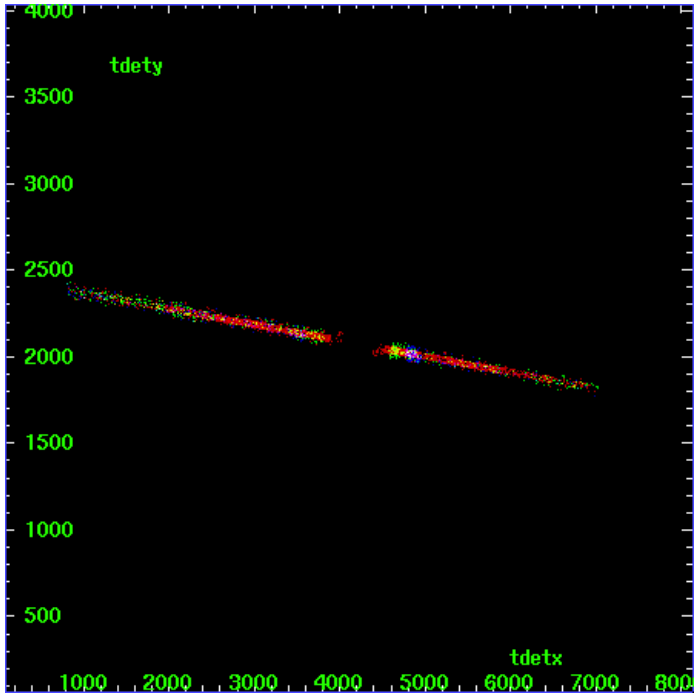
HEG Zero Order



HEG Order Sort ALL

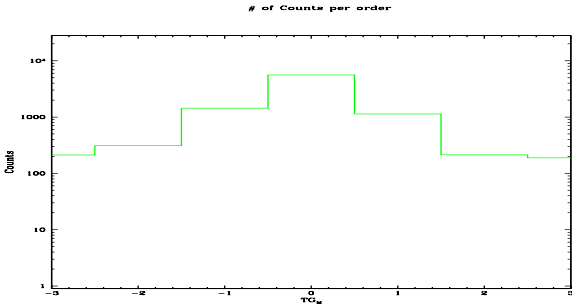


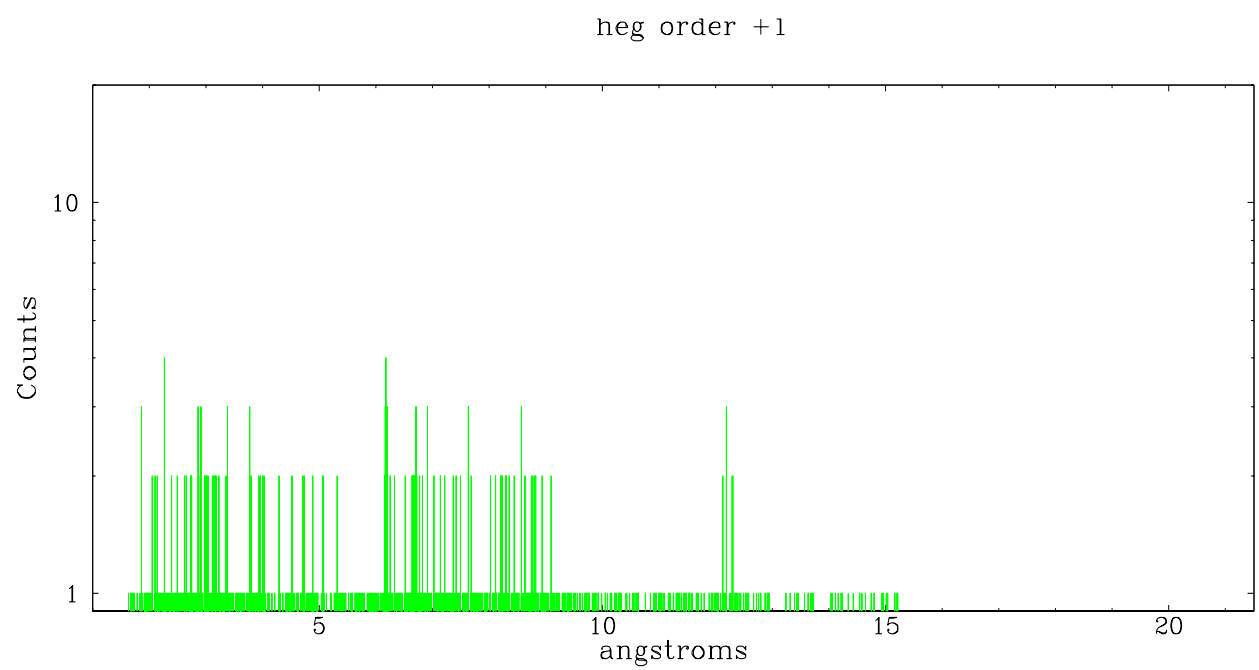
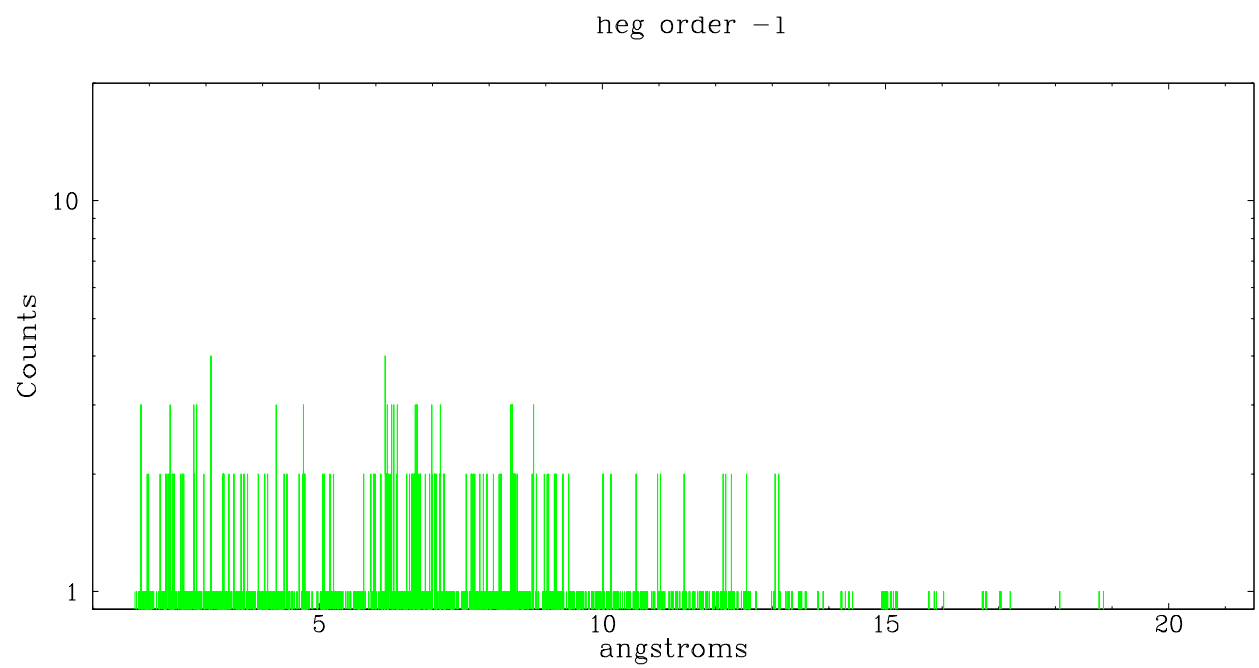
Spot Image HEG



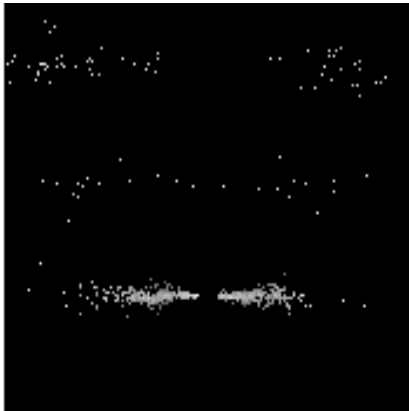
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	211	309	1437	5570	1136	214	189

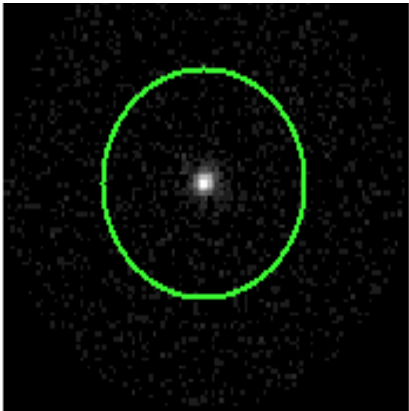




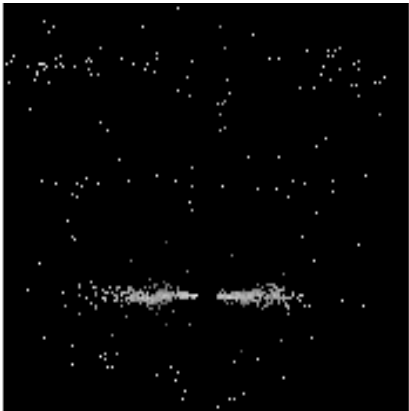
### 3.2 MEG Arm



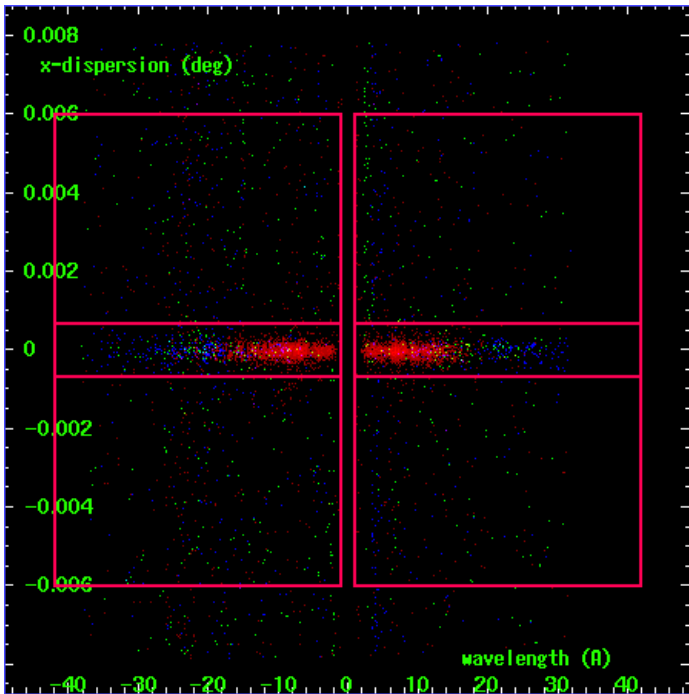
MEG Order Sort 123



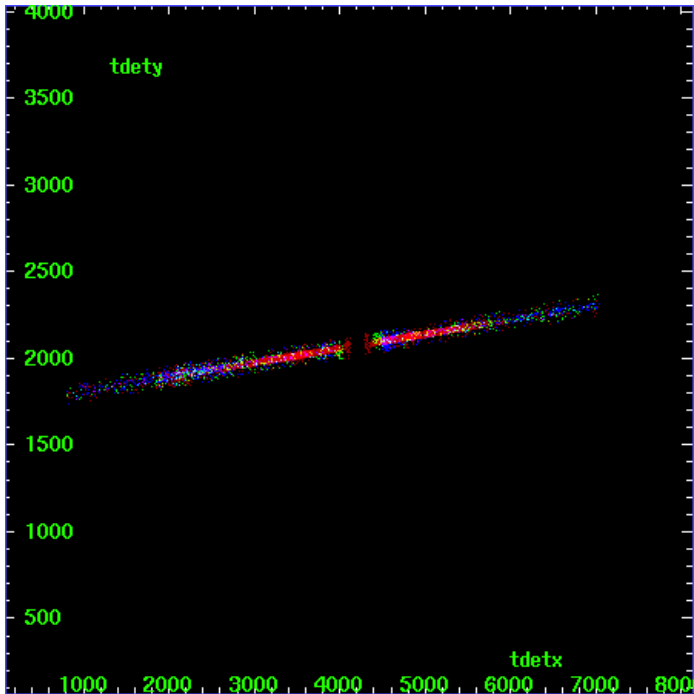
MEG Zero Order



MEG Order Sort ALL

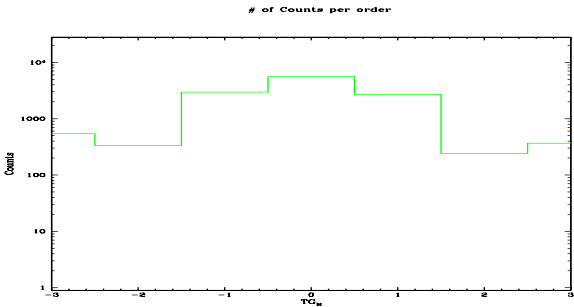


Spot Image MEG

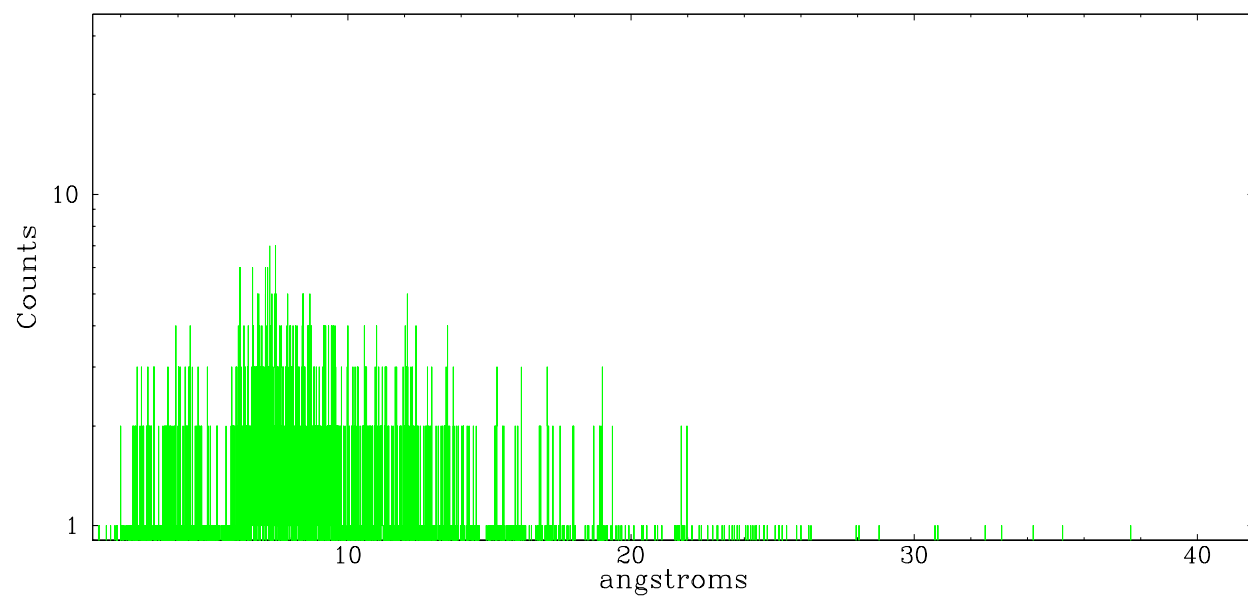


Full Detector MEG

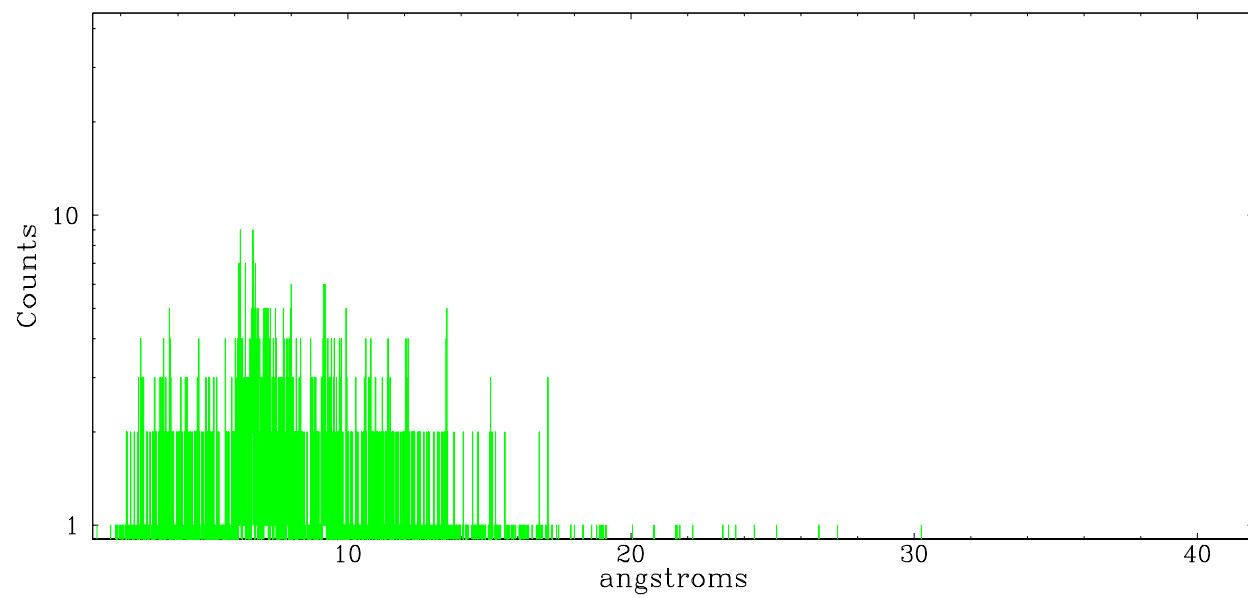
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	542	331	2958	5570	2701	242	367



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.09.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	49.529

### A.2 Comments

Target is offset toward the edge of the chip due to a 3mm offset of the detector. The offset was deliberate.