

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 1895 - L2 Version 002  
Chandra X-Ray Center

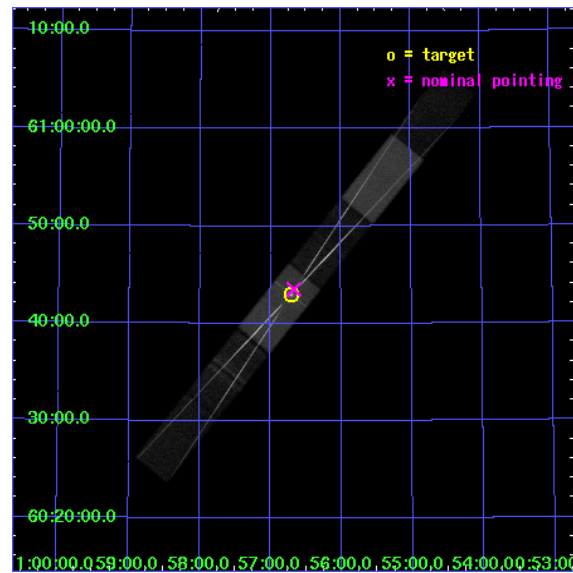
L2 Processing Date : Dec 19 2006

## 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

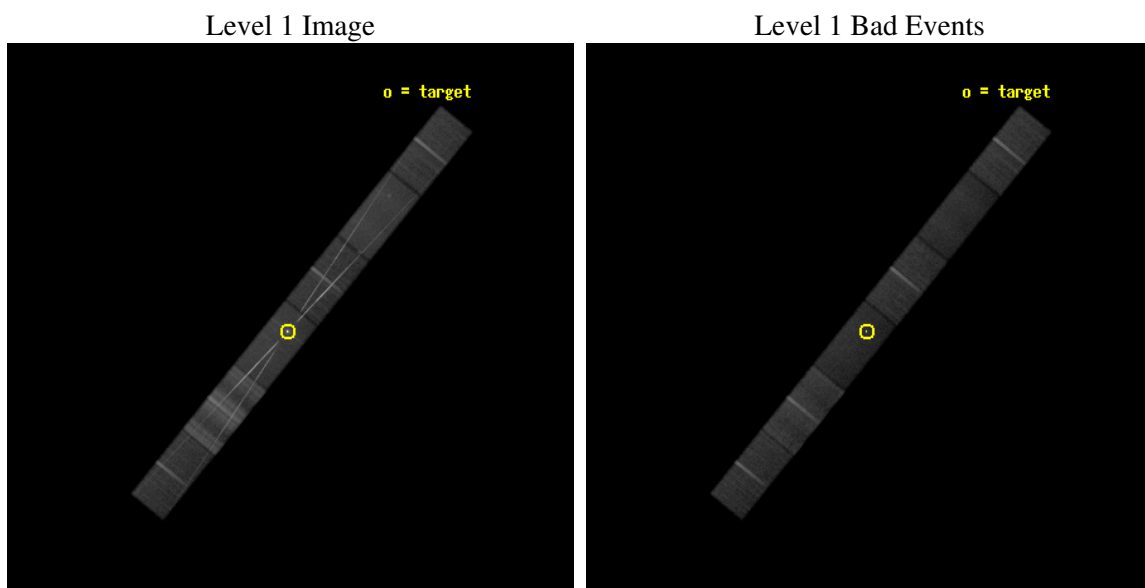
seq_num	200123
obs_id	1895
title	HIGH RESOLUTION X-RAY SPECTROSCOPY OF GAMMA CASSIOPEIA
observer	Dr. Myron Smith
object	GAMMA CAS
dtcycle	0
cycle	P
ra_targ	14.177083
dec_targ	60.71675
ra_nom	14.167536008801
dec_nom	60.72529704197
roll_nom	128.89870168287
revision	3
ontime	52473.039169073
livetime	51236.138507687
ontime4	52490.449130505
ontime5	52473.039119214
ontime6	52485.226130083
ontime7	52473.039169073
ontime8	52485.226080254
ontime9	52486.967100382
l2events	498649



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

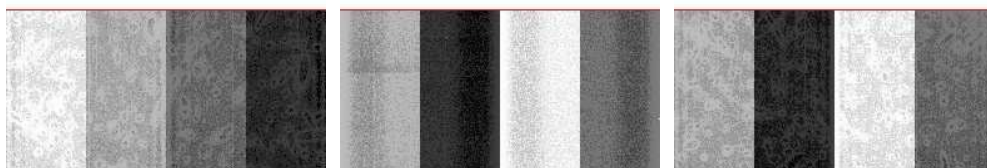


#### 2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.4
date	2006-12-19T14:01:52
revision	3

sched_exp_time	52351.000000
ontime	52711.054514676
ontime4	52728.464476109
ontime5	52711.054464817
ontime6	52723.241475686
ontime7	52711.054514676
ontime8	52723.241425857
ontime9	52724.982445985
l1events	1755627

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	238829	271747	288376	337437	414160	205078
rejected events	206259	144371	190728	156504	222252	173780
rejected %	86%	53%	66%	46%	53%	84%

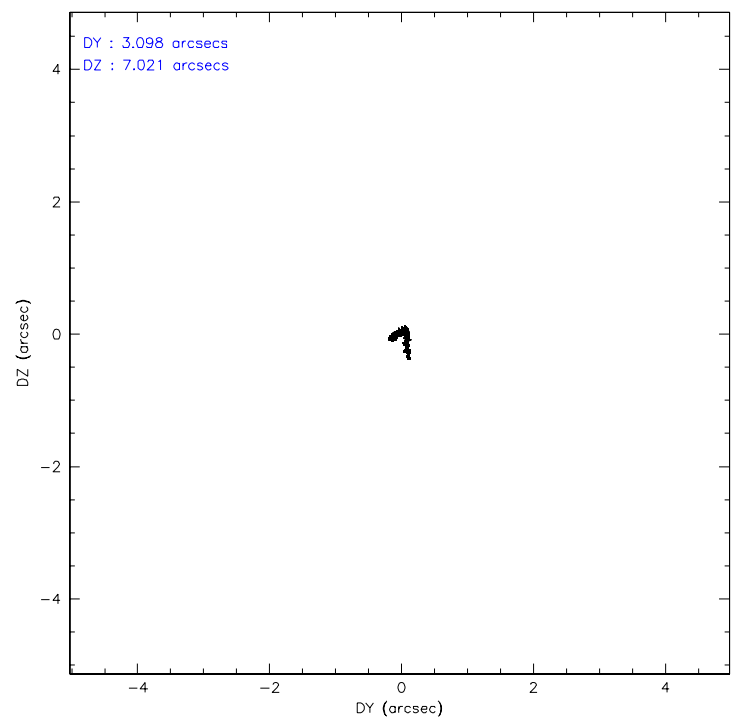
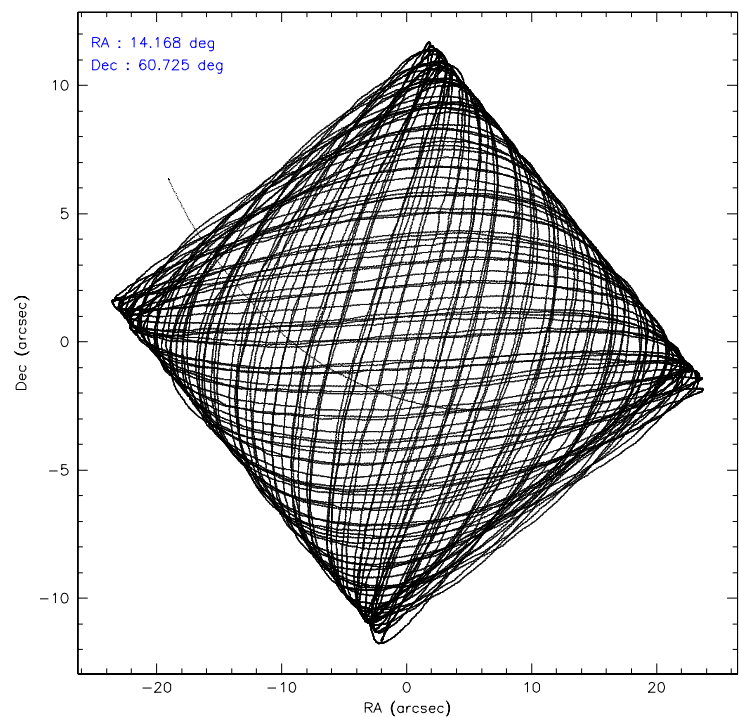
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	13877	12333	66086	22405	75882	14742
	5%	4%	22%	6%	18%	7%
grade 1 events	80	223	250	724	438	95
	0%	0%	0%	0%	0%	0%
grade 2 events	8353	39274	14120	43972	24905	6086
	3%	14%	4%	13%	6%	2%
grade 3 events	2877	5968	5257	15635	30506	2937
	1%	2%	1%	4%	7%	1%
grade 4 events	2843	5784	5414	15594	27114	2821
	1%	2%	1%	4%	6%	1%
grade 5 events	6280	14088	7261	21826	10463	7257
	2%	5%	2%	6%	2%	3%
grade 6 events	4758	64667	7114	84035	34432	4845
	1%	23%	2%	24%	8%	2%
grade 7 events	199761	129410	182874	133246	210420	166295
	83%	47%	63%	39%	50%	81%

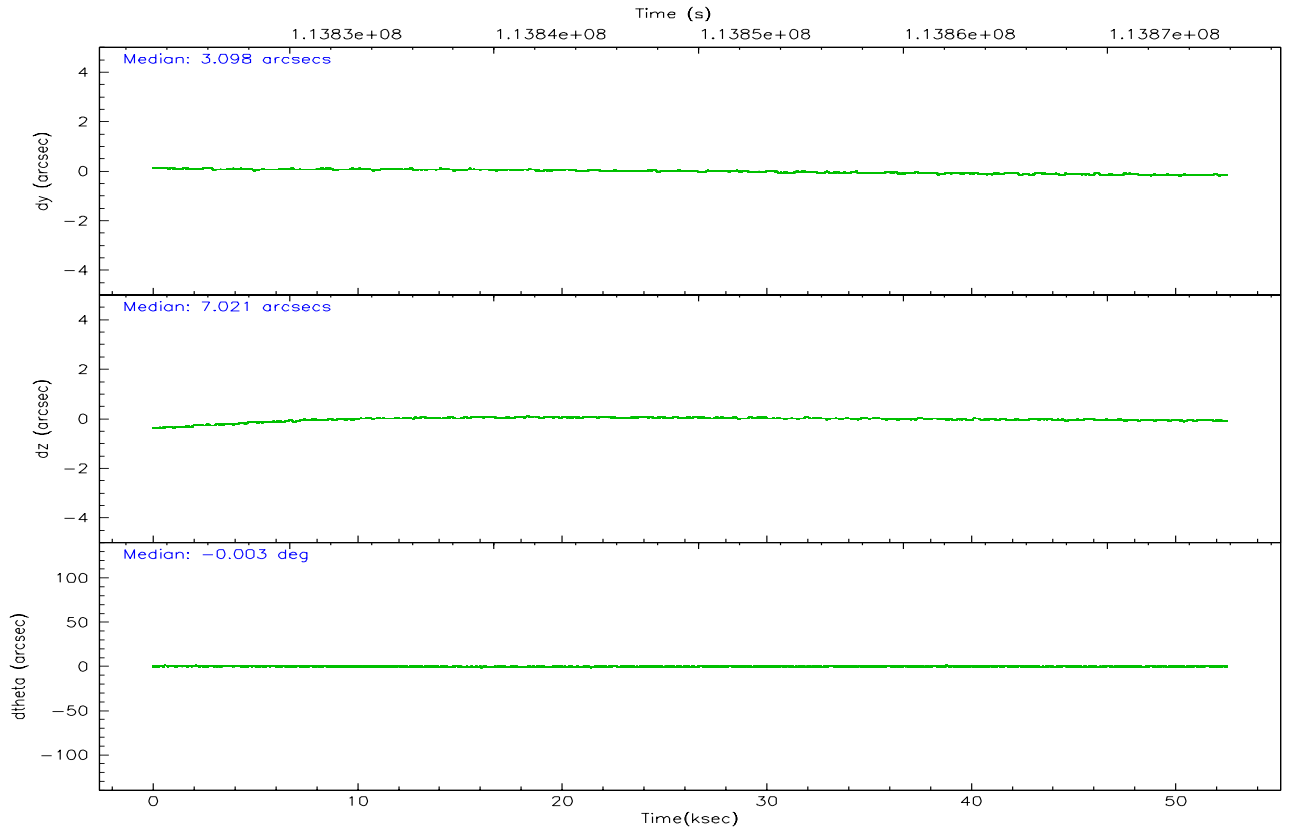
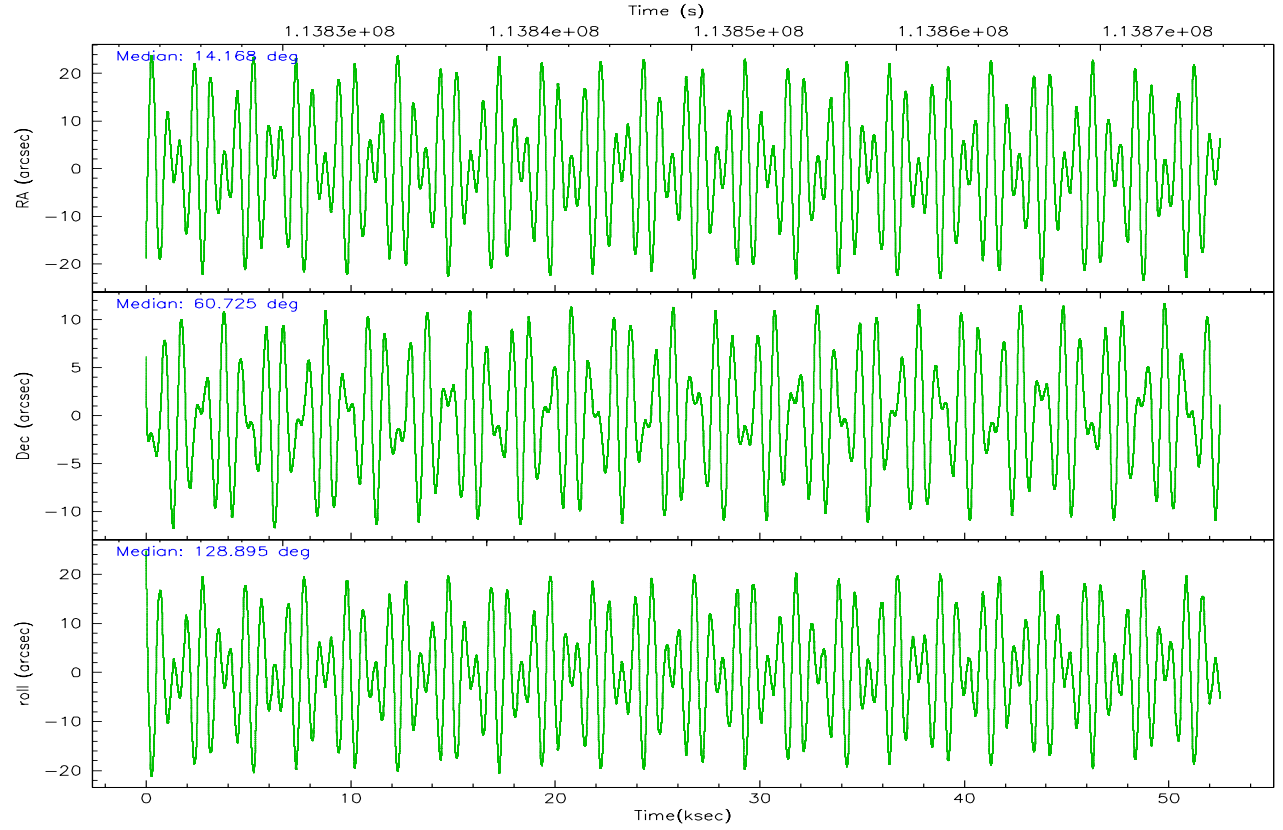


## 2.2 Compared Parameters

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	14.219763	14.16753600880097	Subarray requested	CUSTOM	1/2
Pointing Dec	60.715763	60.72529704197047	Subarray start row	1	1
Pointing Roll	128.696517	128.8987016828736	Subarray row count	512	512
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	0.000000	1.7
SIM translation stage pos (mm)	-184.032523	-184.025251236478			
SIM translation stage offset (mm)	-6.1	-6.107271346529842			
Observation start time	113823486.184000	113822517.381			
Observation start date	2001-08-10T09:37:02	2001-08-10T09:21:57			
Observation end time	113875837.184000	113876344.23312			
Observation end date	2001-08-11T00:09:33	2001-08-11T00:19:04			
Read mode	TIMED	TIMED			

2.3 Aspect



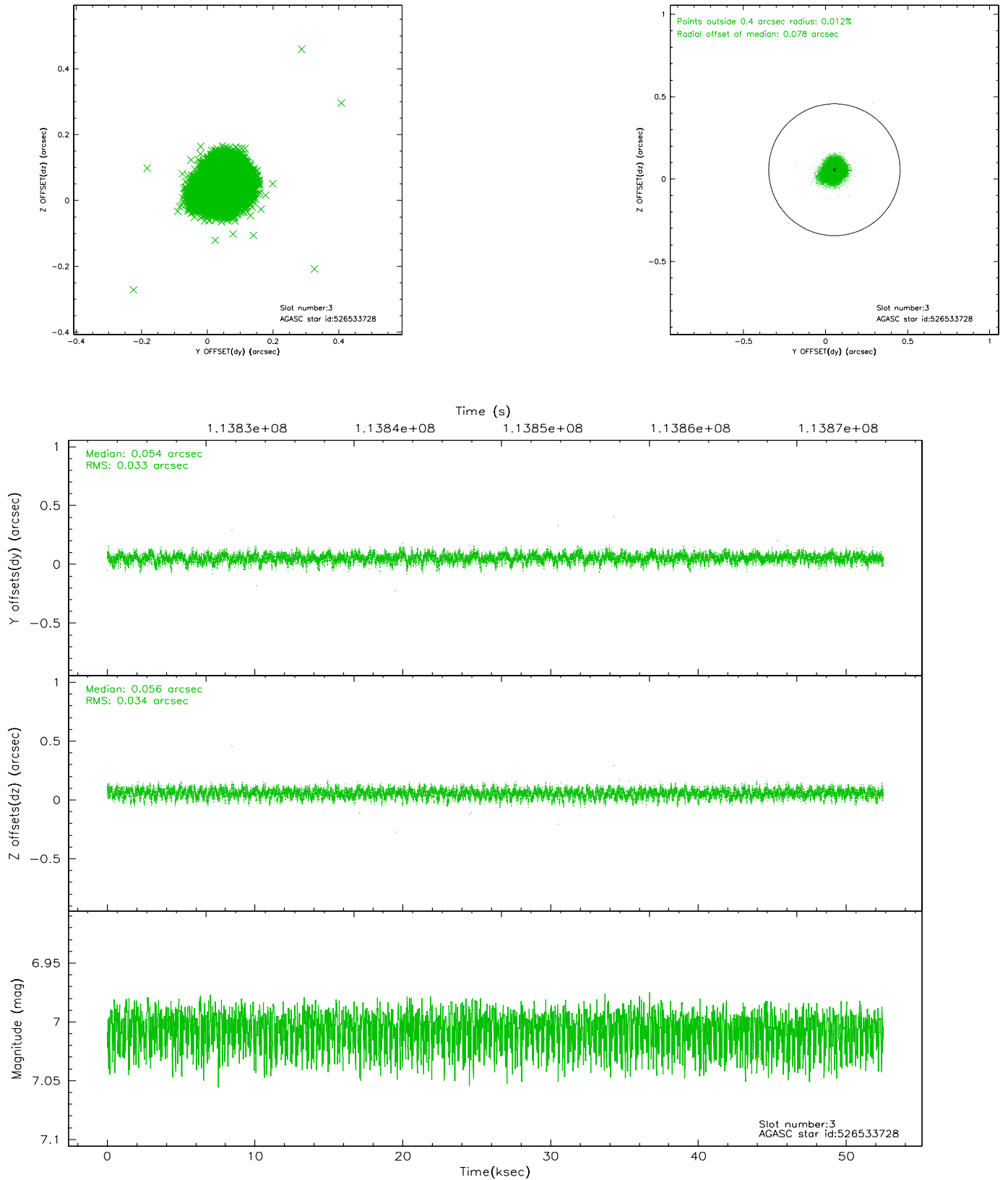


### Slot Statistics

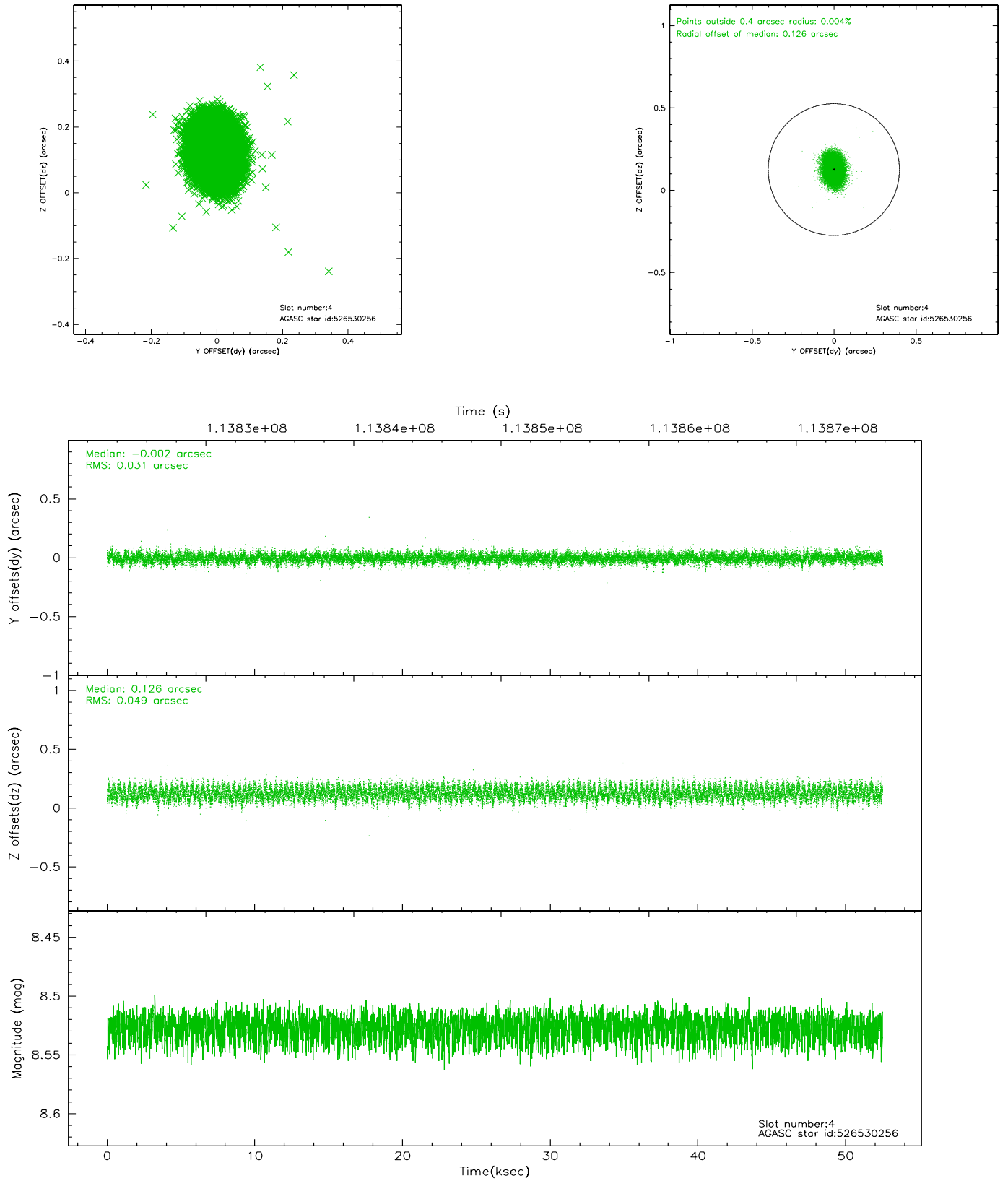
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	12805	-0.014	-0.083	0.007	0.011	0.000000	0.000000	-755.33	-1854.12
1	FID	ACIS-S-4	7.18	12797	-0.073	0.029	0.006	0.010	0.000000	0.000000	2157.92	54.45
2	FID	ACIS-S-5	7.23	12799	0.056	0.062	0.007	0.011	0.000000	0.000000	-1808.12	48.17
3	GUIDE	526533728	7.01	25601	0.054	0.056	0.050	0.083	15.011612	60.509959	-1448.01	-636.44
4	GUIDE	526530256	8.53	25604	-0.002	0.126	0.062	0.100	15.339794	60.792101	-1001.56	-1716.94
5	GUIDE	526388264	8.18	25598	-0.194	-0.131	0.045	0.076	12.414712	60.759043	2140.51	2353.32
6	GUIDE	526531856	8.30	25602	0.196	-0.126	0.063	0.102	14.179474	60.098021	-1689.36	1447.57
7	GUIDE	526522360	8.39	25605	-0.051	0.078	0.069	0.110	14.054570	61.254010	1692.26	-987.33

## 2.4 Star Slots

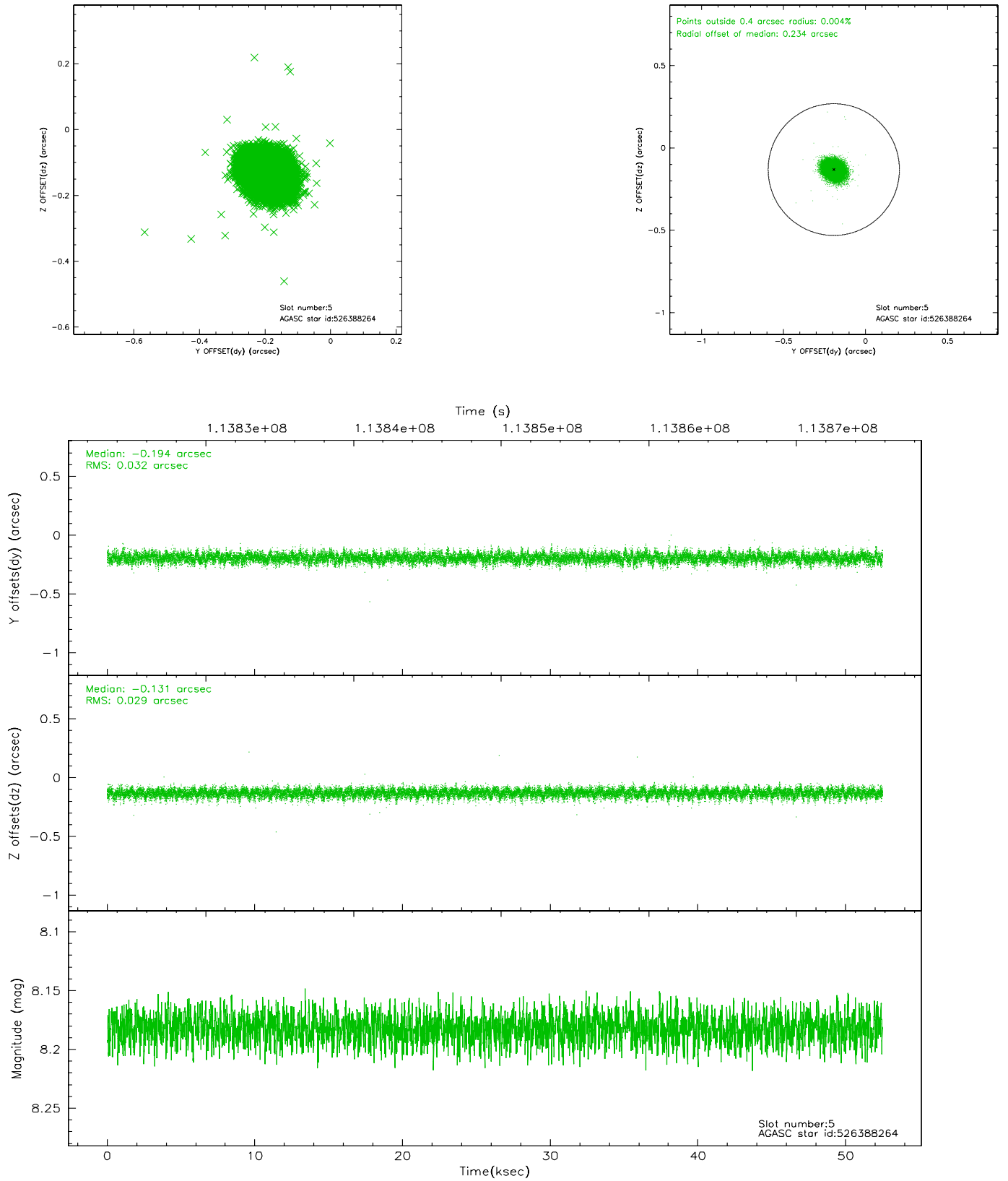
### 2.4.1 Slot 3



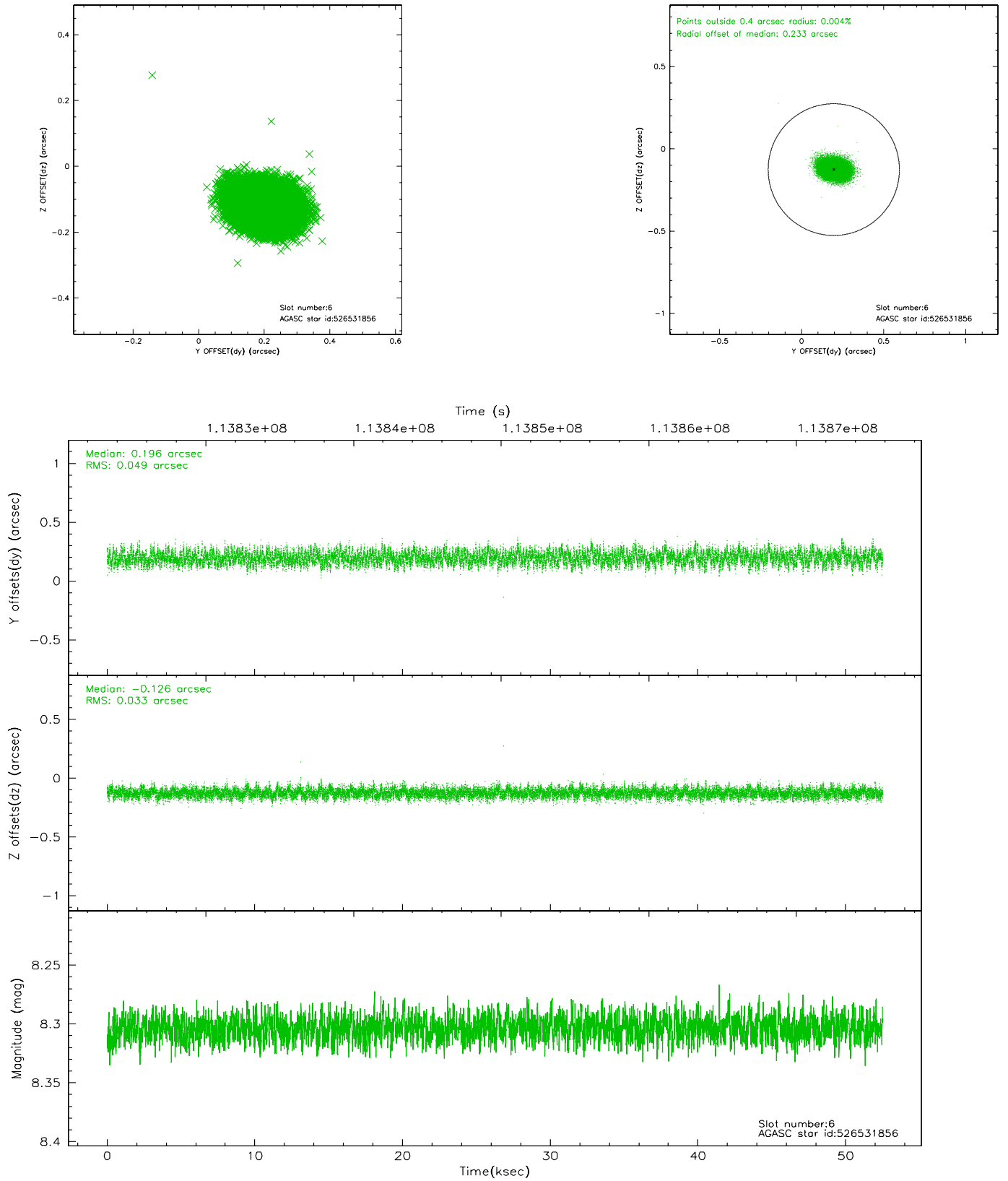
## 2.4.2 Slot 4



### 2.4.3 Slot 5

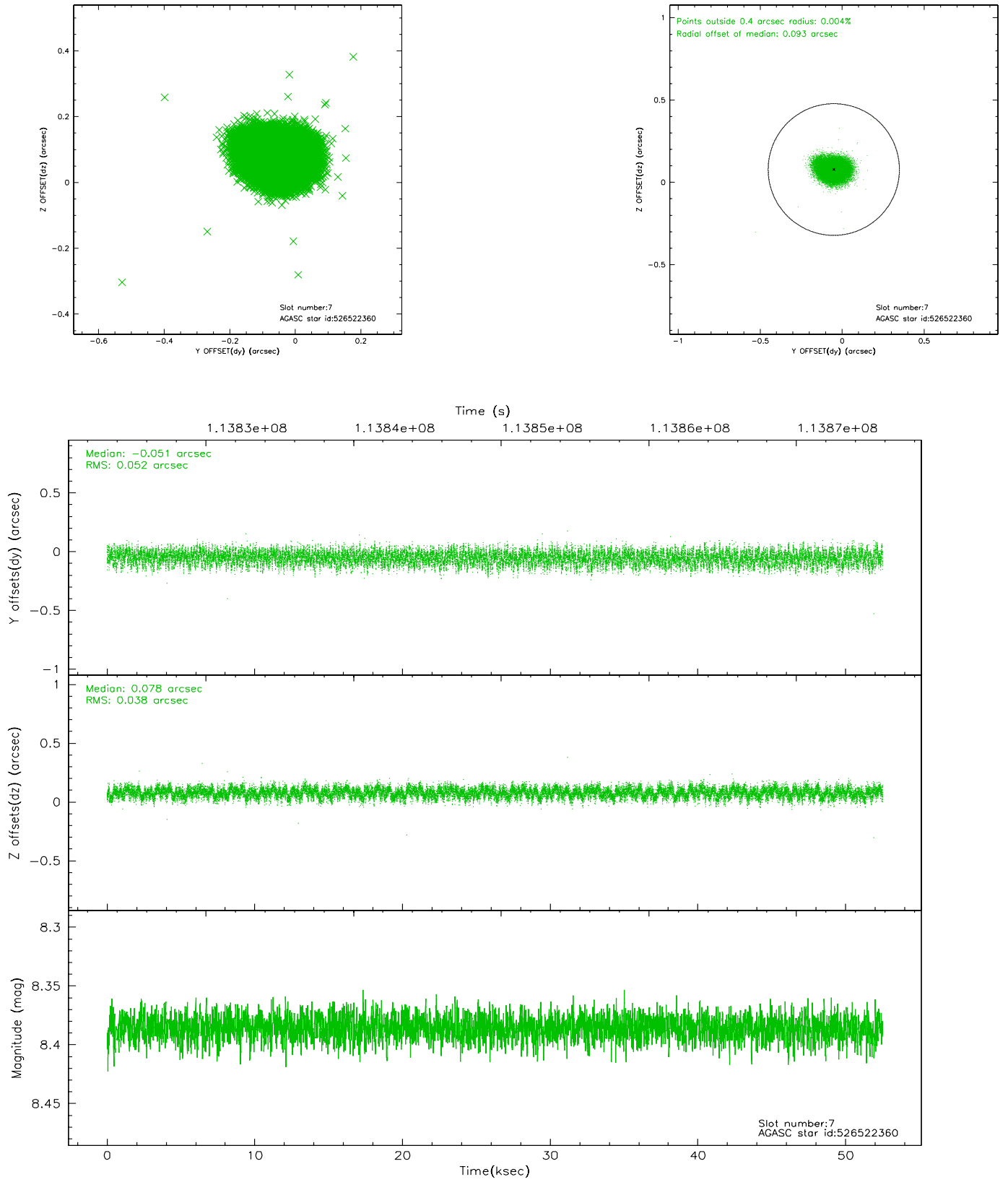


## 2.4.4 Slot 6



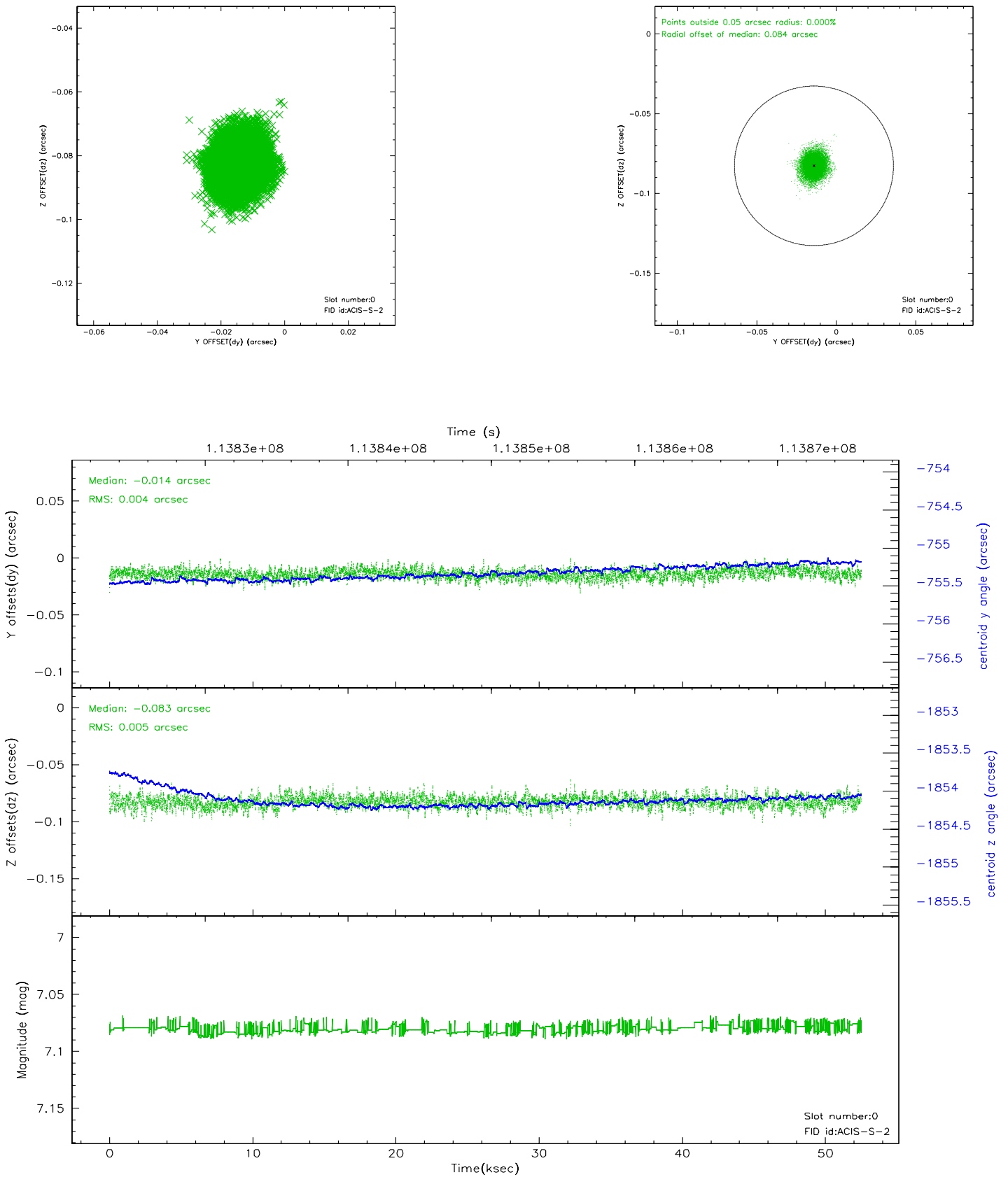


## 2.4.5 Slot 7

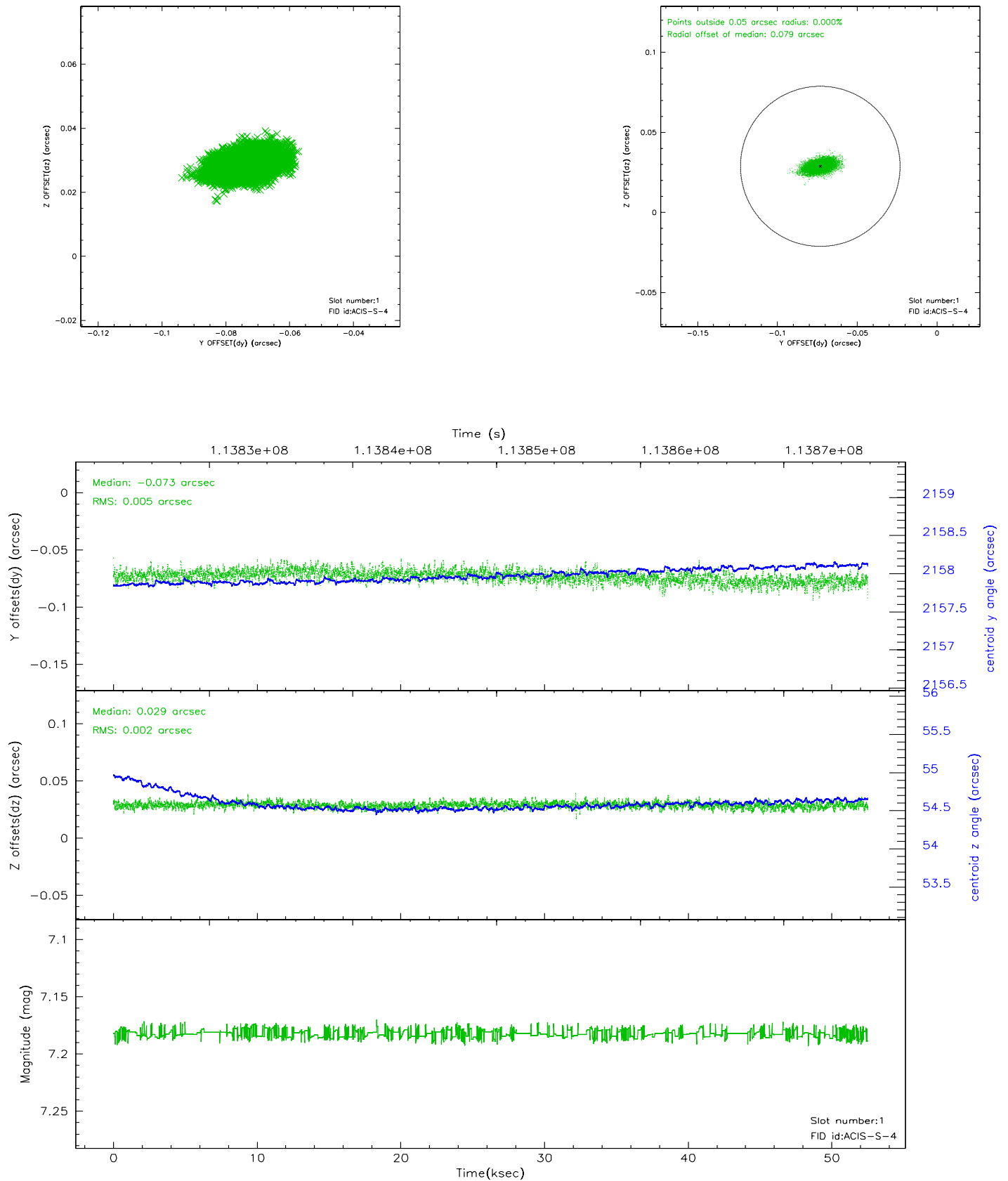


## 2.5 FID Slots

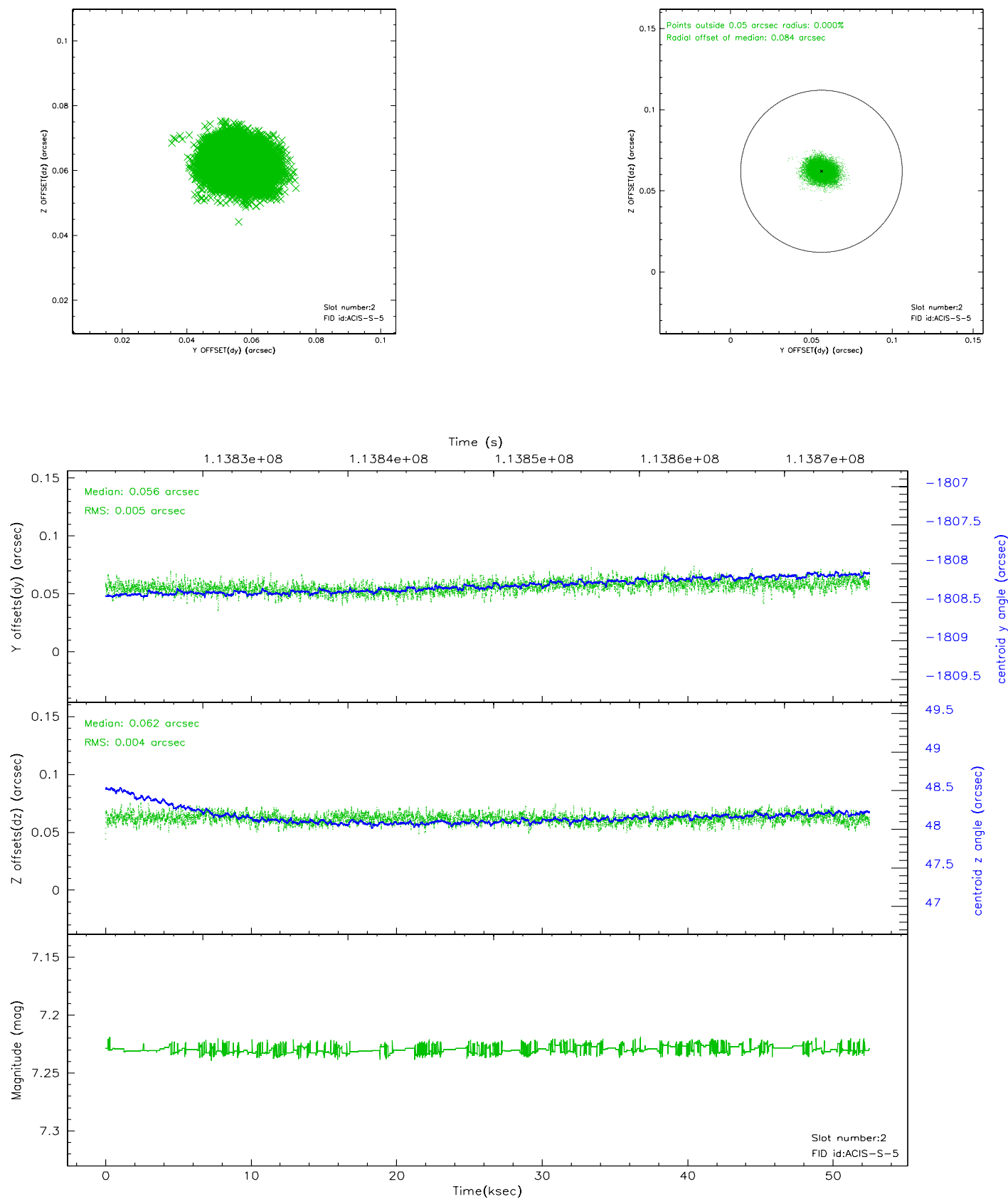
### 2.5.1 Slot 0



## 2.5.2 Slot 1

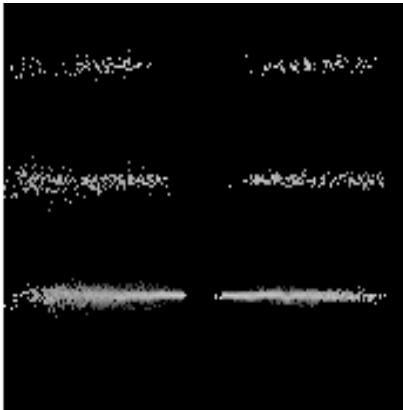


2.5.3 Slot 2

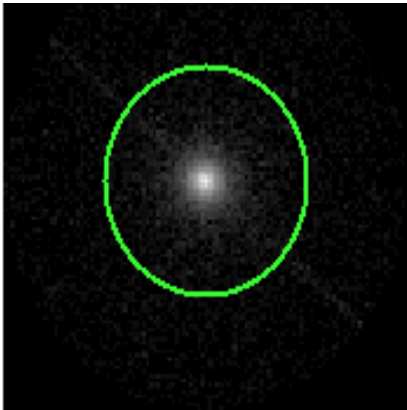


# 3 Gratings

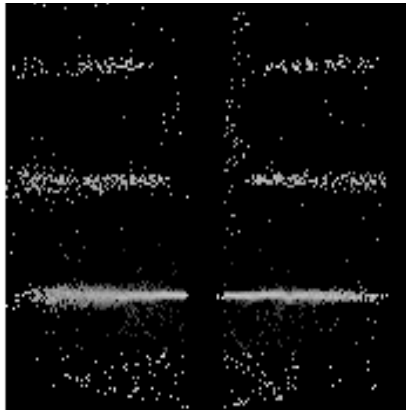
## 3.1 HEG Arm



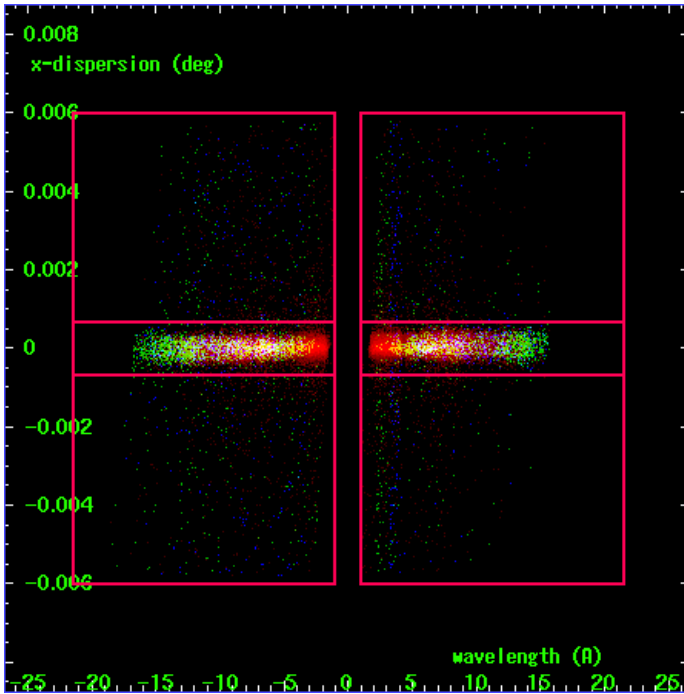
HEG Order Sort 123



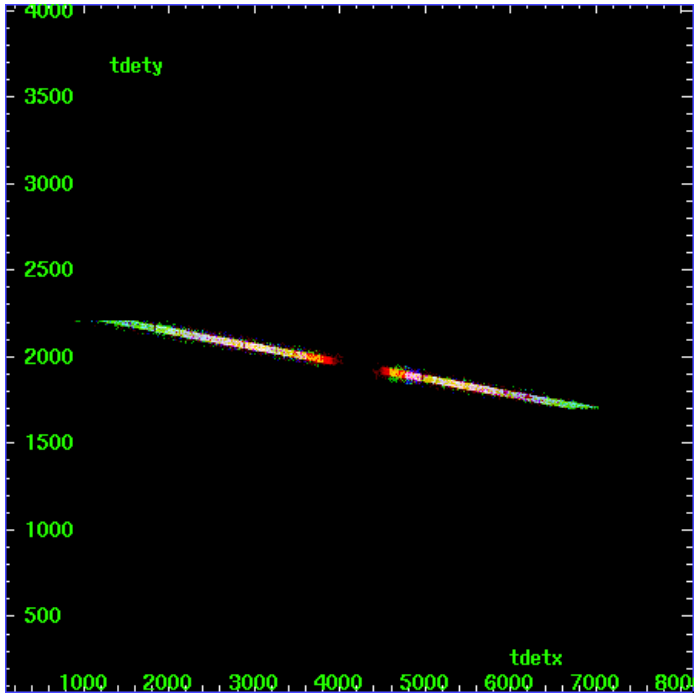
HEG Zero Order



HEG Order Sort ALL

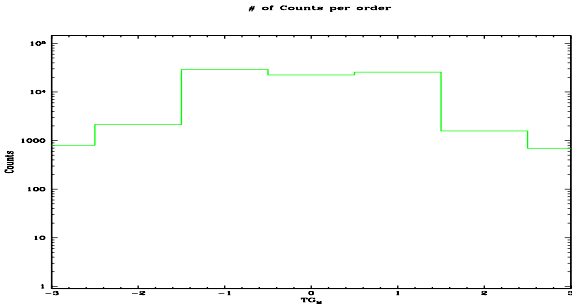


Spot Image HEG

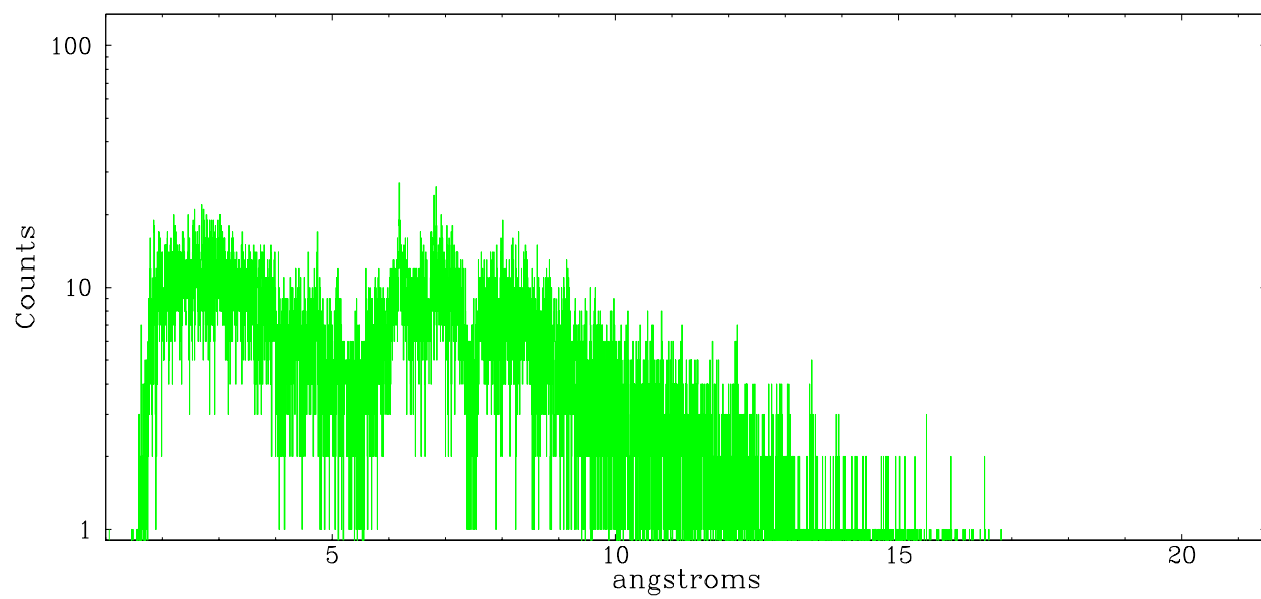


Full Detector HEG

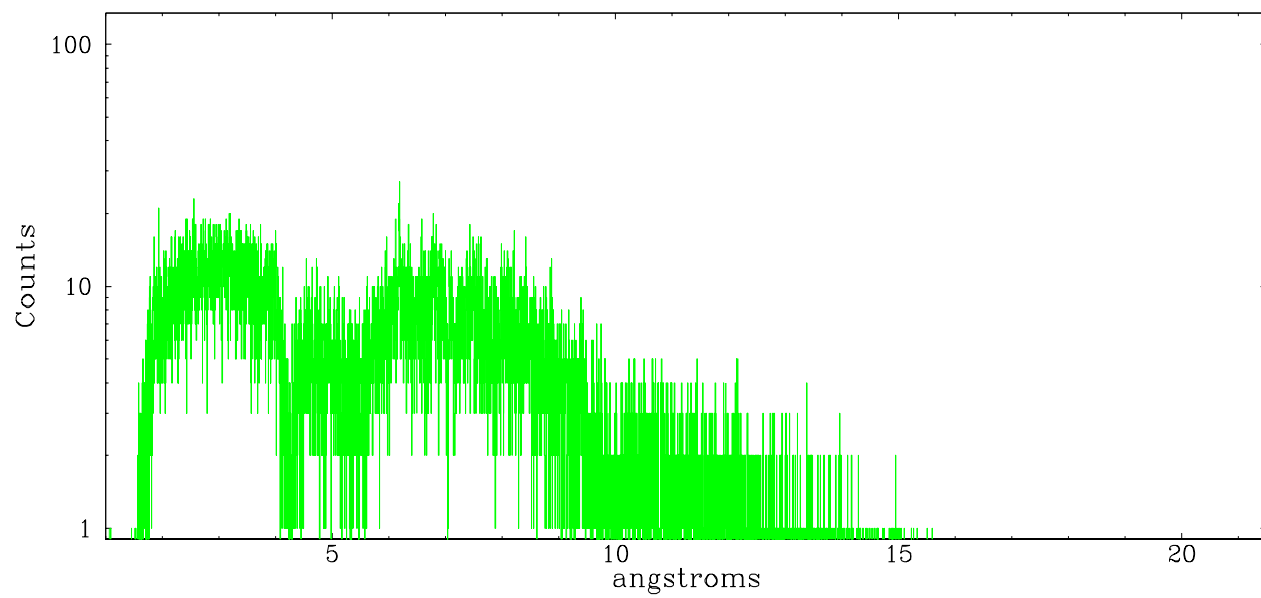
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	800	2139	28852	22487	25593	1585	691



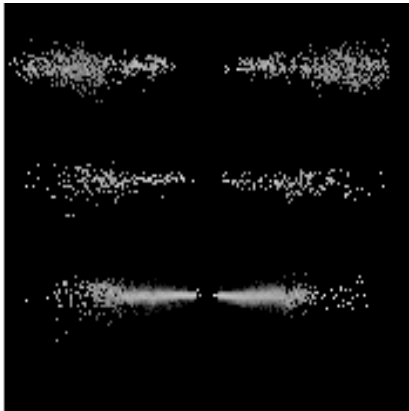
heg order -1



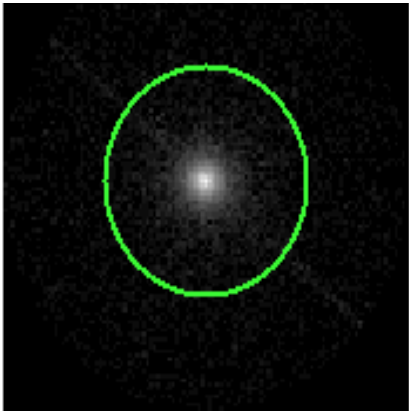
heg order +1



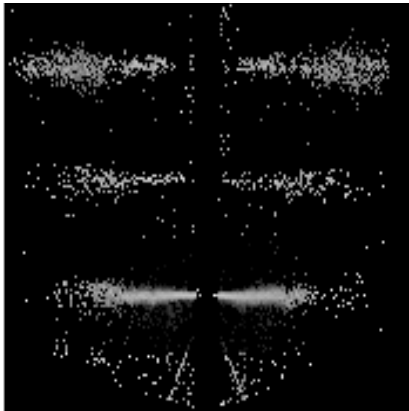
### 3.2 MEG Arm



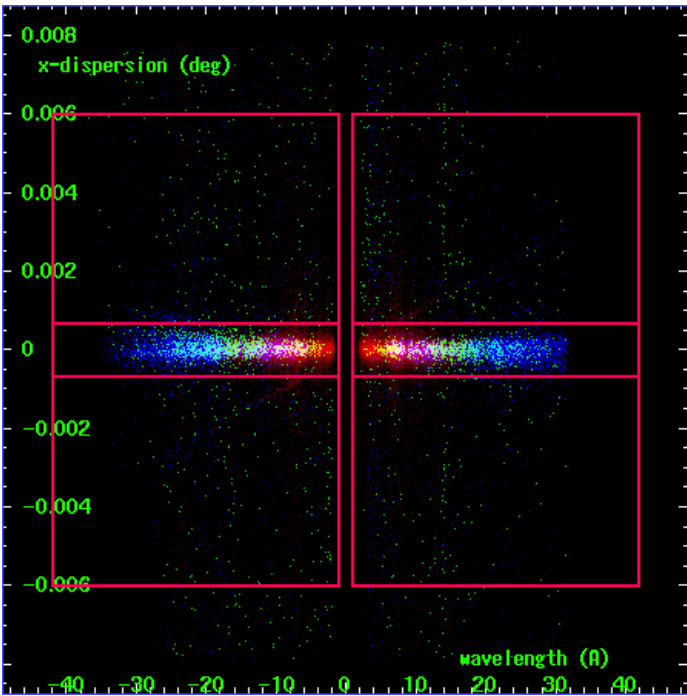
MEG Order Sort 123



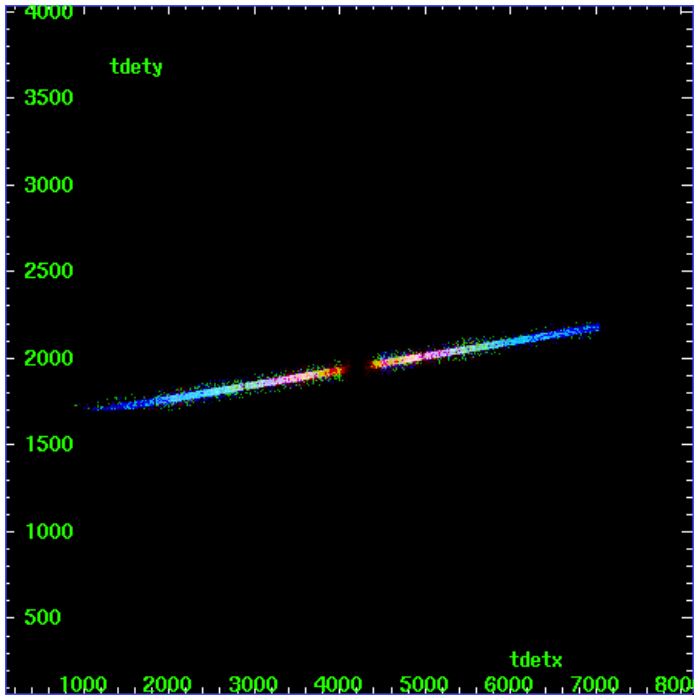
MEG Zero Order



MEG Order Sort ALL

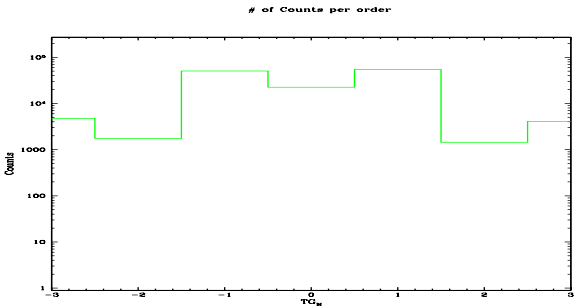


Spot Image MEG

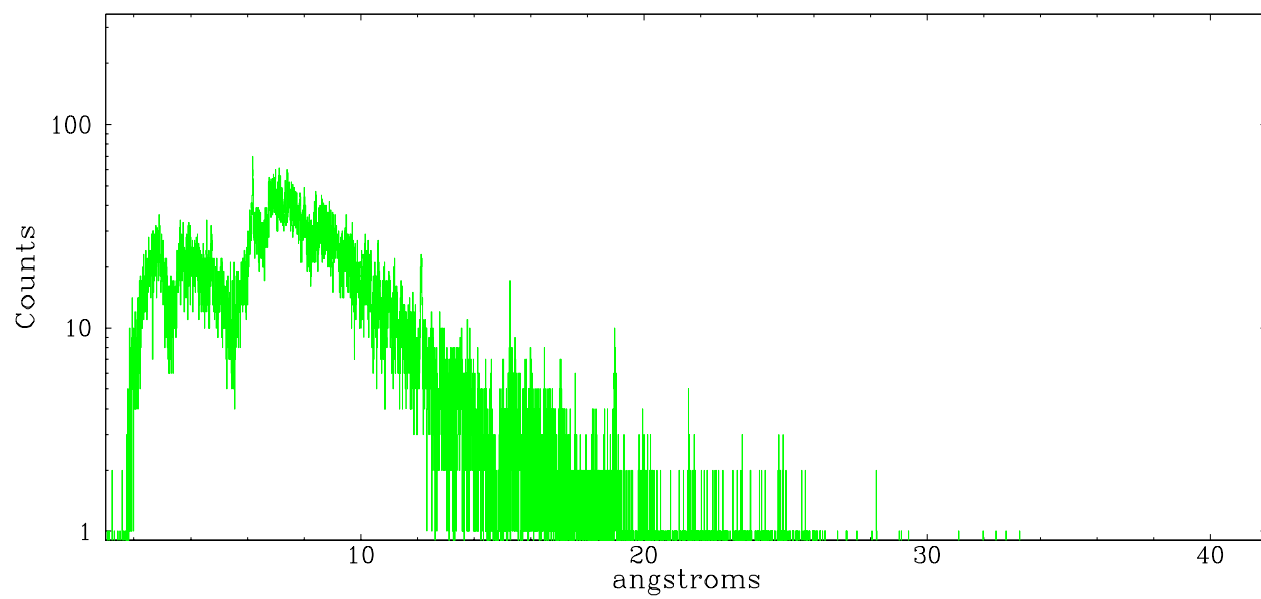


Full Detector MEG

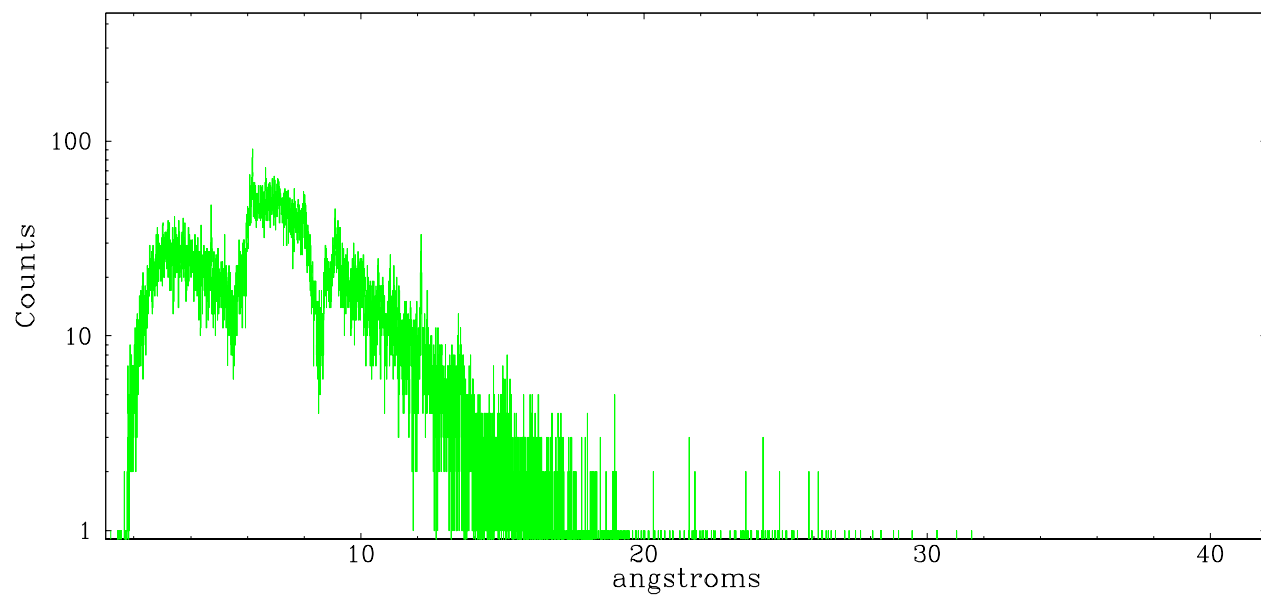
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4761	1754	50610	22487	54213	1435	4072



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.12.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	52.473

### A.2 Comments