

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 1947 - L2 Version 001  
Chandra X-Ray Center

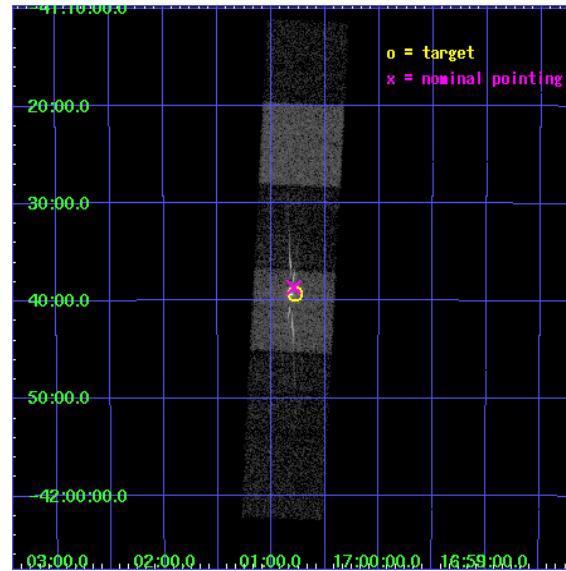
L2 Processing Date : Nov 6 2006

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# 1 Front

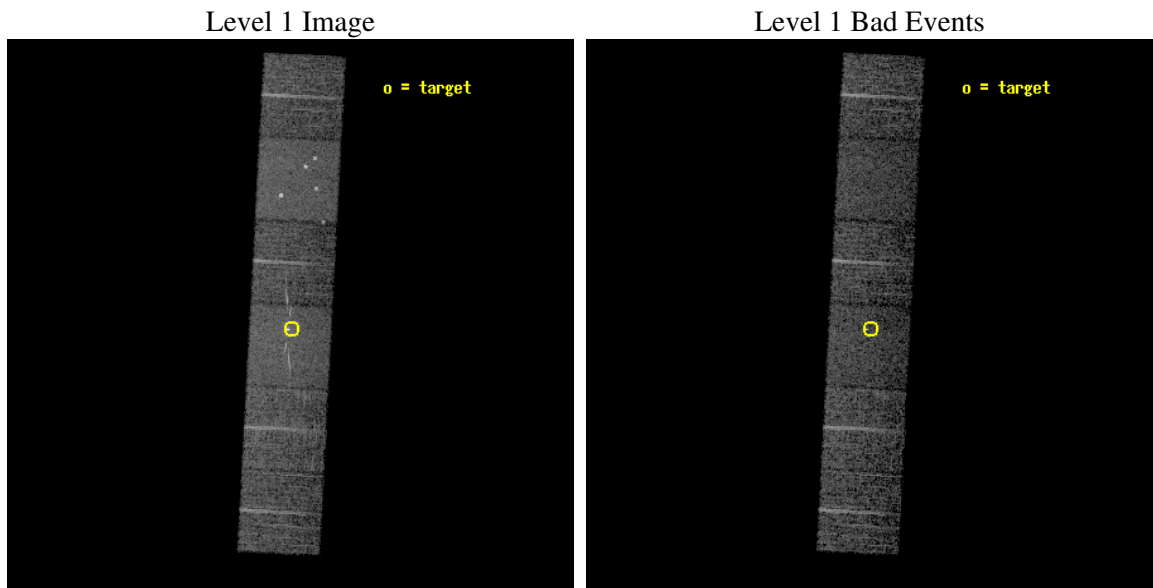
seq_num	400160
obs_id	1947
title	WHERE IS OAO 1657-415?
observer	Prof. Deepto Chakrabarty
object	OAO 1657-415
dtcycle	0
cycle	P
ra_targ	255.19625
dec_targ	-41.654056
ra_nom	255.1979036586
dec_nom	-41.64425839398
roll_nom	93.021206531403
revision	2
ontime	5196.8000048399
livetime	5130.9949940413
ontime4	5196.8000048399
ontime5	5196.8000048399
ontime6	5196.8000048399
ontime7	5196.8000048399
ontime8	5193.559014678
ontime9	5196.8000048399
l2events	51705



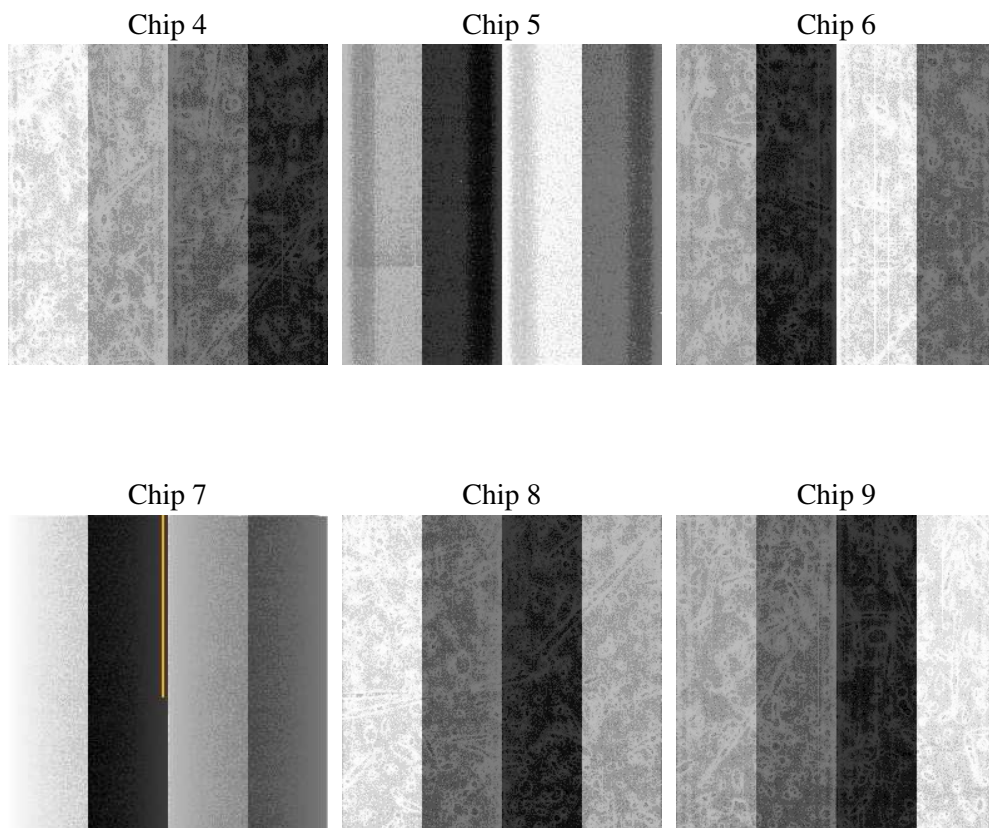
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.3
date	2006-11-06T15:39:04
revision	2

sched_exp_time	5057.660000
ontime	5730.0826808363
ontime4	5730.0826808363
ontime5	5730.0826808363
ontime6	5730.0826808363
ontime7	5730.0826808363
ontime8	5726.8416906744
ontime9	5730.0826808363
l1events	259051

### 2.1.4 Events

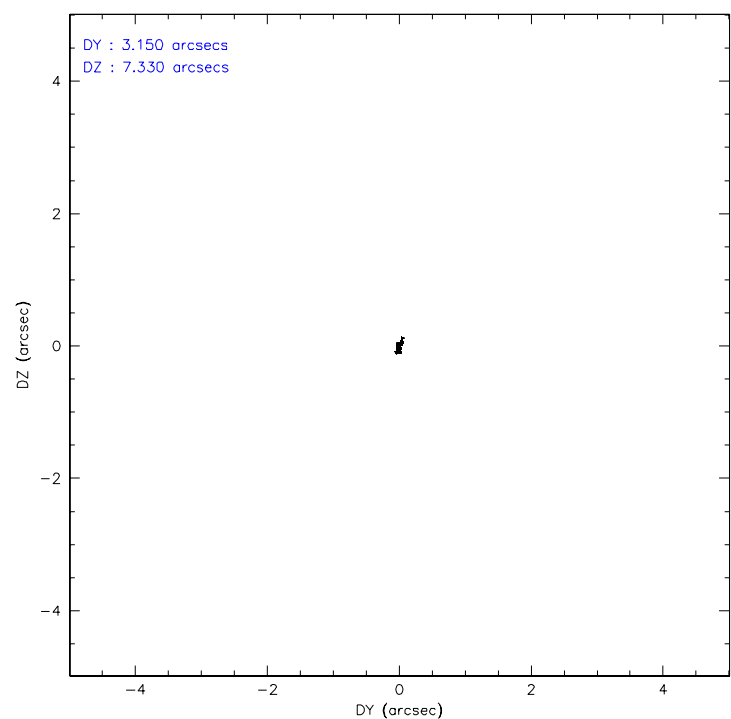
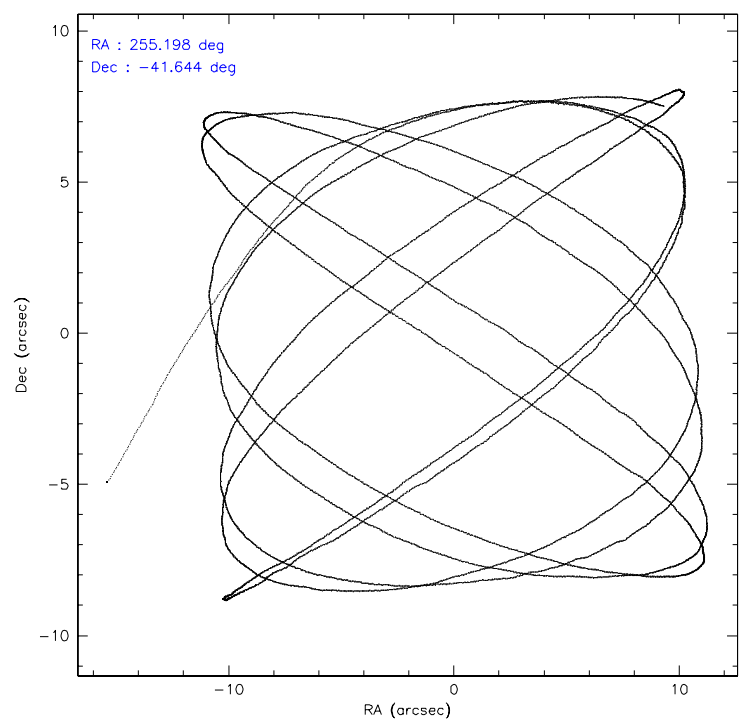
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	38232	52195	36662	50850	44562	36550
rejected events	34555	29840	31863	30716	36618	32764
rejected %	90%	57%	86%	60%	82%	89%

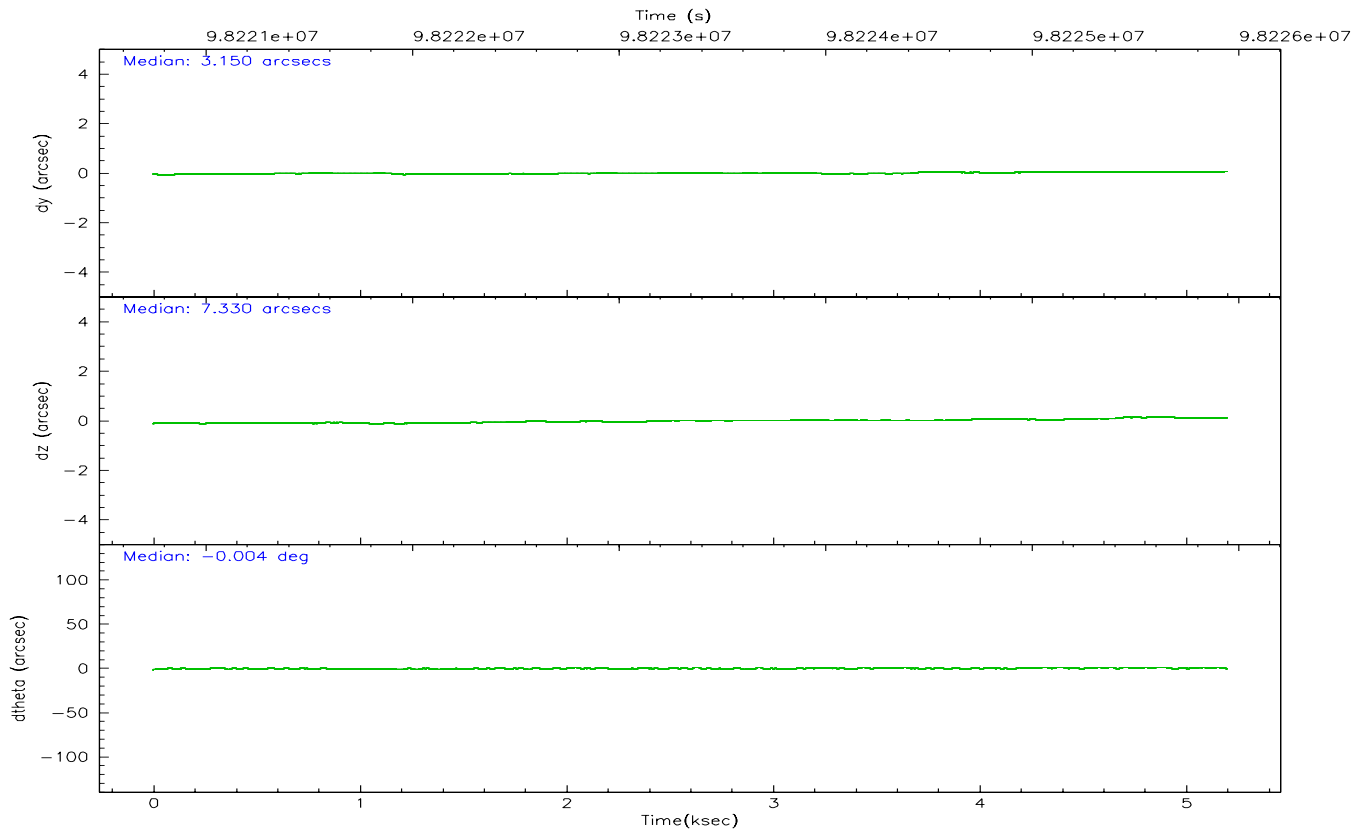
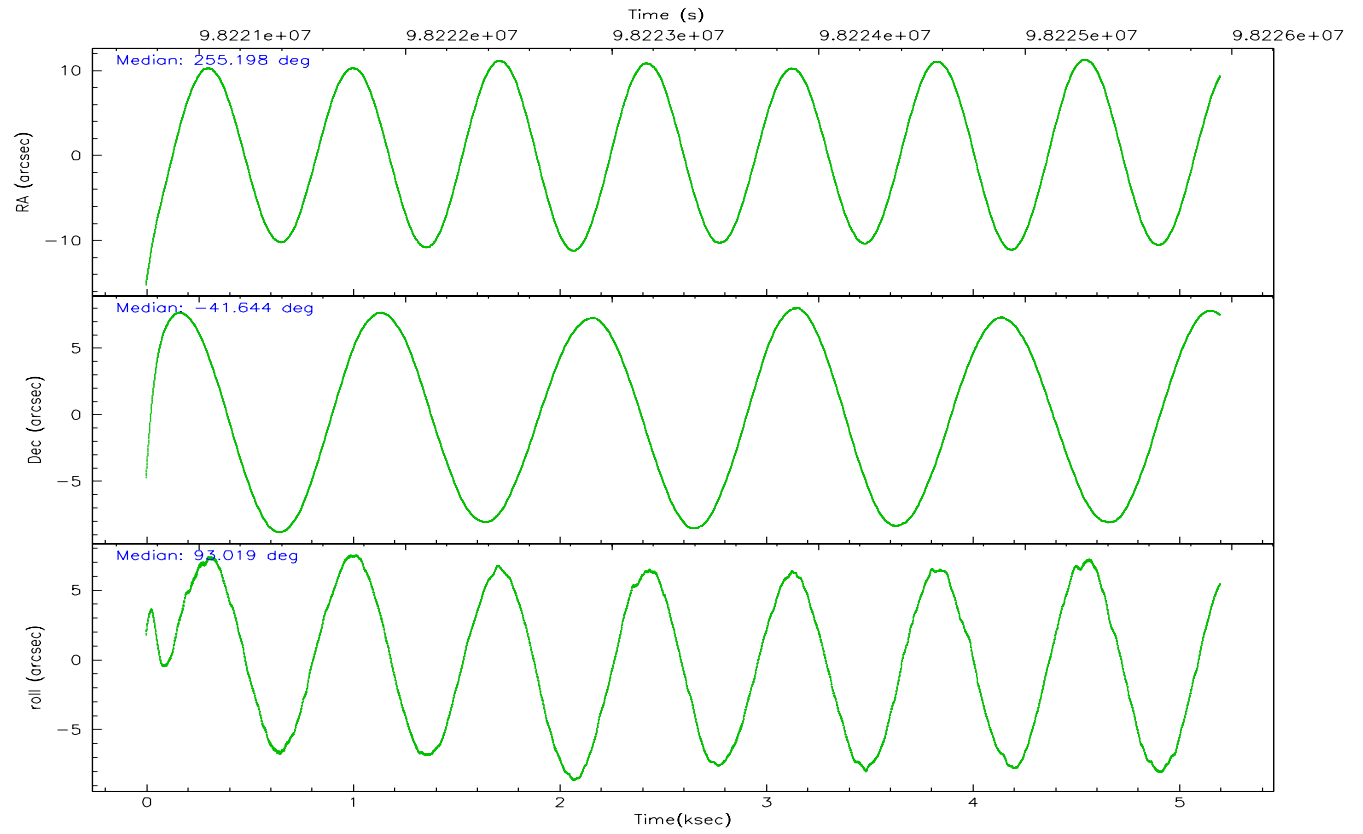
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	1586	4816	2261	1880	2872	1702
	4%	9%	6%	3%	6%	4%
grade 1 events	18	91	22	43	32	18
	0%	0%	0%	0%	0%	0%
grade 2 events	962	6871	1046	5545	1835	890
	2%	13%	2%	10%	4%	2%
grade 3 events	383	479	458	1296	1009	398
	1%	0%	1%	2%	2%	1%
grade 4 events	415	479	487	1201	923	400
	1%	0%	1%	2%	2%	1%
grade 5 events	1227	2419	1456	3277	1891	1545
	3%	4%	3%	6%	4%	4%
grade 6 events	734	12145	968	11960	2213	843
	1%	23%	2%	23%	4%	2%
grade 7 events	32907	24895	29964	25648	33787	30754
	86%	47%	81%	50%	75%	84%

## 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	255.218125	255.1979036585958	Subarray requested	NONE	NONE
Pointing Dec	-41.667086	-41.64425839397961	Alternating exposures requested	N	N
Pointing Roll	92.878007	93.02120653140292	Primary exposure time	0.000000	3.2
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			
Phase constraints	Y	Y			
Phase period	10.448090	10.448090			
Phase epoch	50605.509988	50605.509988			
Phase start	0.400000	0.400000			
Phase end	0.100000	0.100000			
Phase start error	0.050000	0.050000			
Phase end error	0.050000	0.050000			
Observation start time	98220883.184000	98219549.08677401			
Observation start date	2001-02-10T19:33:39	2001-02-10T19:12:29			
Observation end time	98225941.184000	98226255.66203199			
Observation end date	2001-02-10T20:57:57	2001-02-10T21:04:15			
Read mode	TIMED	TIMED			

2.3 Aspect





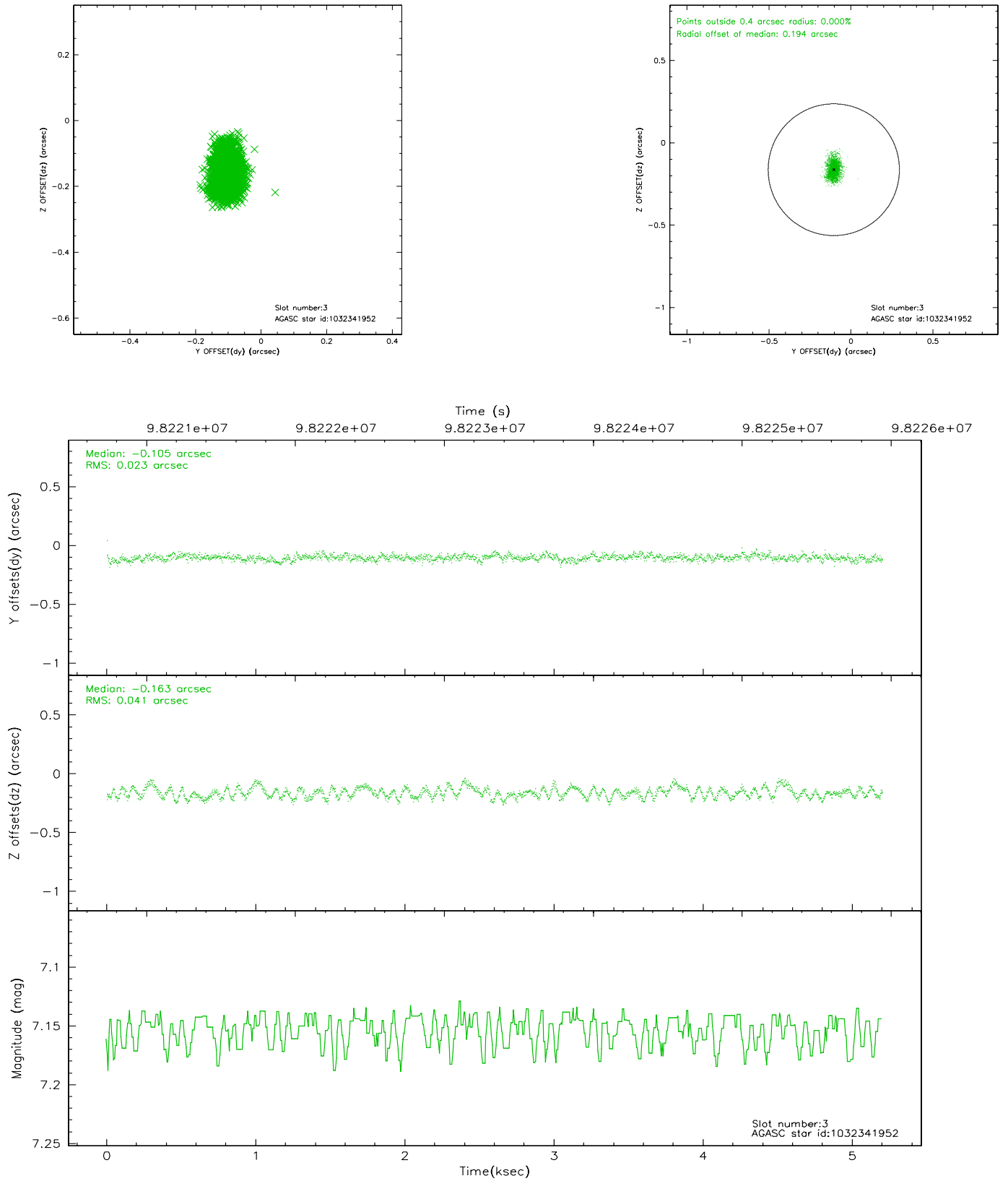
### Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	1269	0.016	0.030	0.007	0.011	0.000000	0.000000	-755.79	-1728.46
1	FID	ACIS-S-4	7.19	1269	-0.097	-0.016	0.005	0.009	0.000000	0.000000	2156.86	178.76
2	FID	ACIS-S-5	7.24	1269	0.050	-0.005	0.006	0.011	0.000000	0.000000	-1807.09	173.79
3	GUIDE	1032341952	7.15	2538	-0.105	-0.163	0.050	0.082	254.946907	-41.627000	178.17	721.87
4	GUIDE	1032454880	7.81	2538	0.193	0.160	0.051	0.080	255.805803	-42.215139	-2055.56	-1464.99
5	GUIDE	1032456032	8.37	2538	0.135	0.201	0.061	0.096	256.011351	-42.138769	-1813.97	-2029.27
6	GUIDE	1032340744	7.89	2538	-0.177	-0.120	0.056	0.090	254.712738	-41.416040	964.89	1316.93
7	GUIDE	1032338512	8.40	2537	-0.045	-0.072	0.074	0.113	254.833160	-41.405214	990.39	991.74

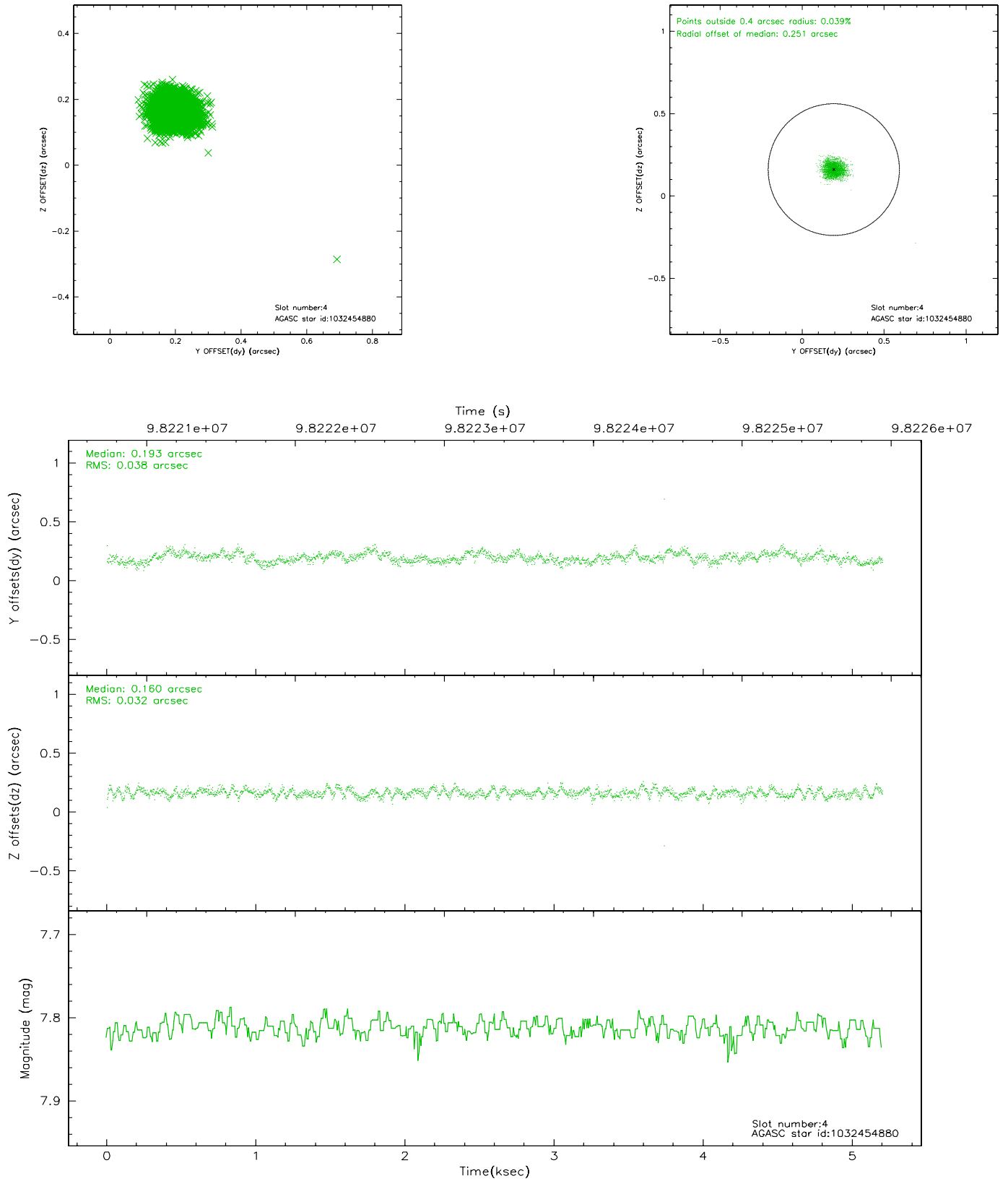


## 2.4 Star Slots

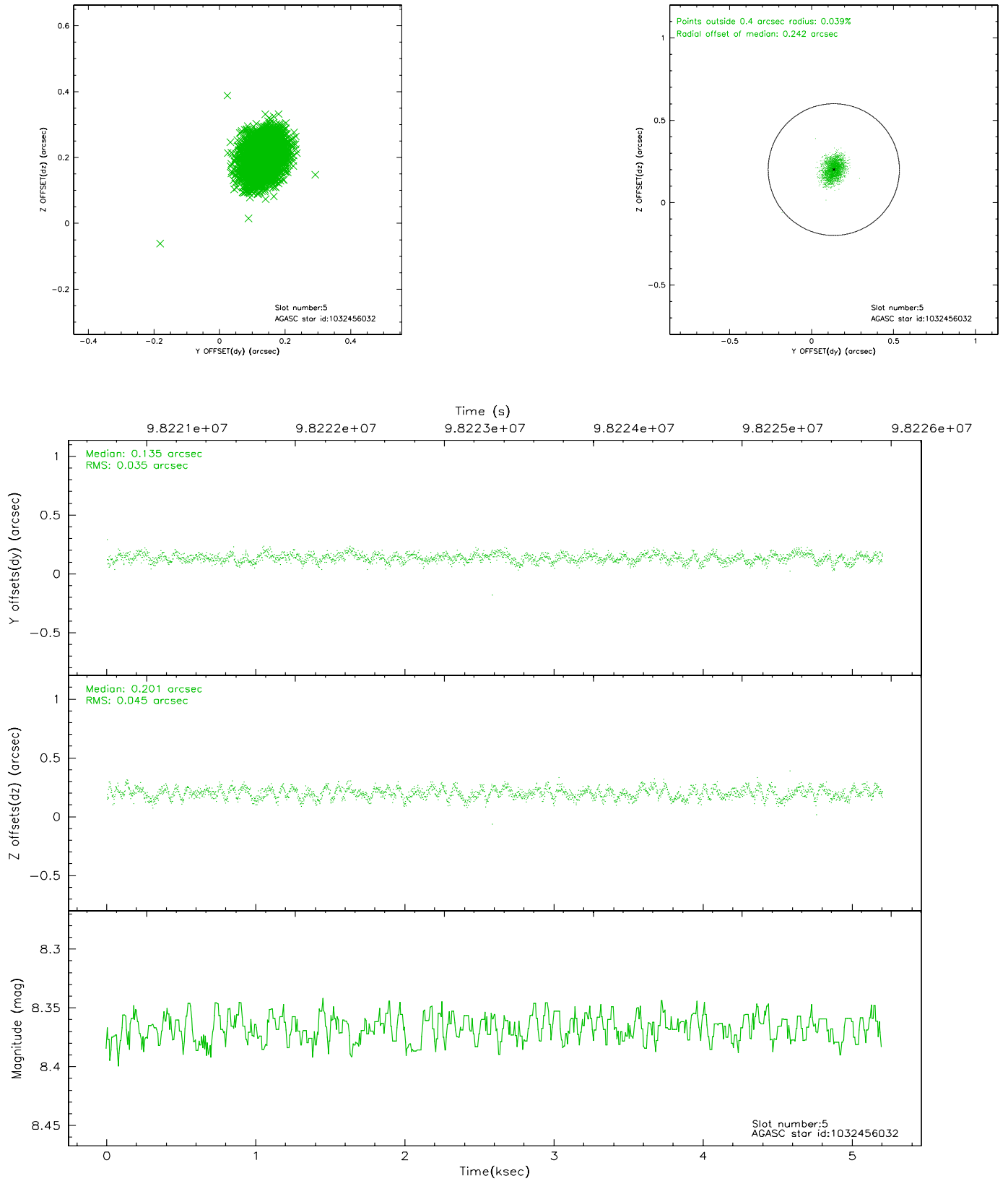
### 2.4.1 Slot 3



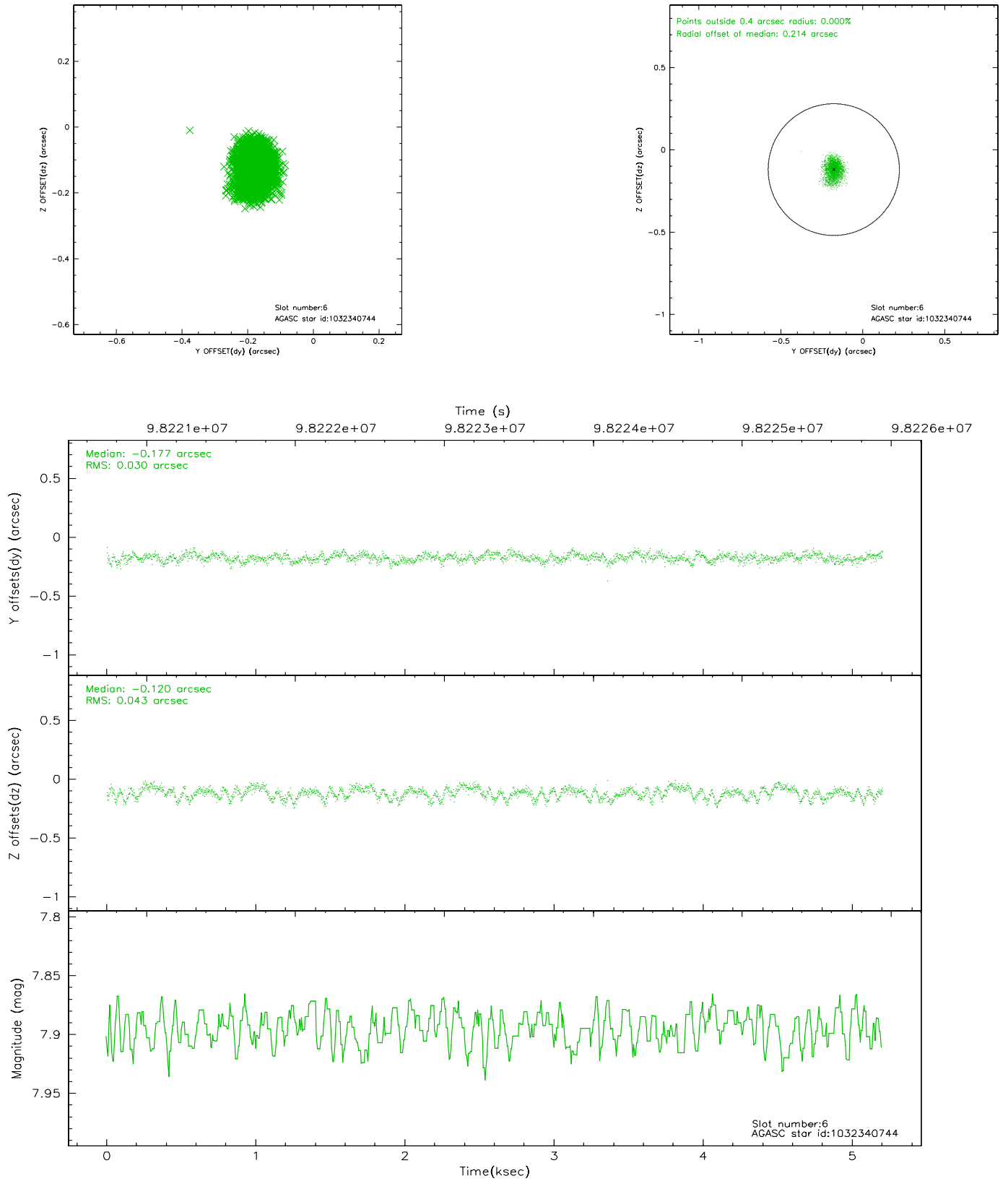
## 2.4.2 Slot 4



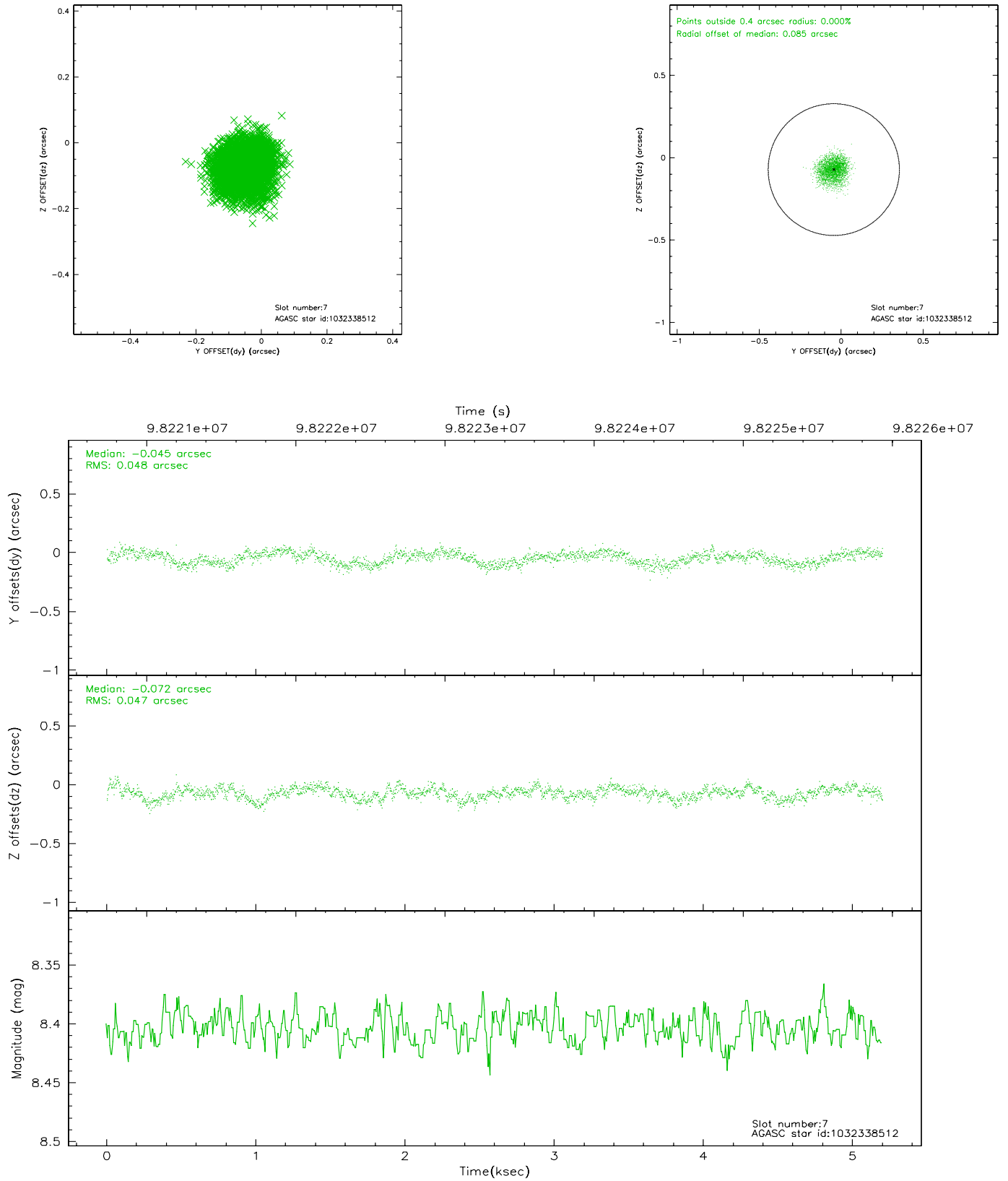
### 2.4.3 Slot 5



## 2.4.4 Slot 6

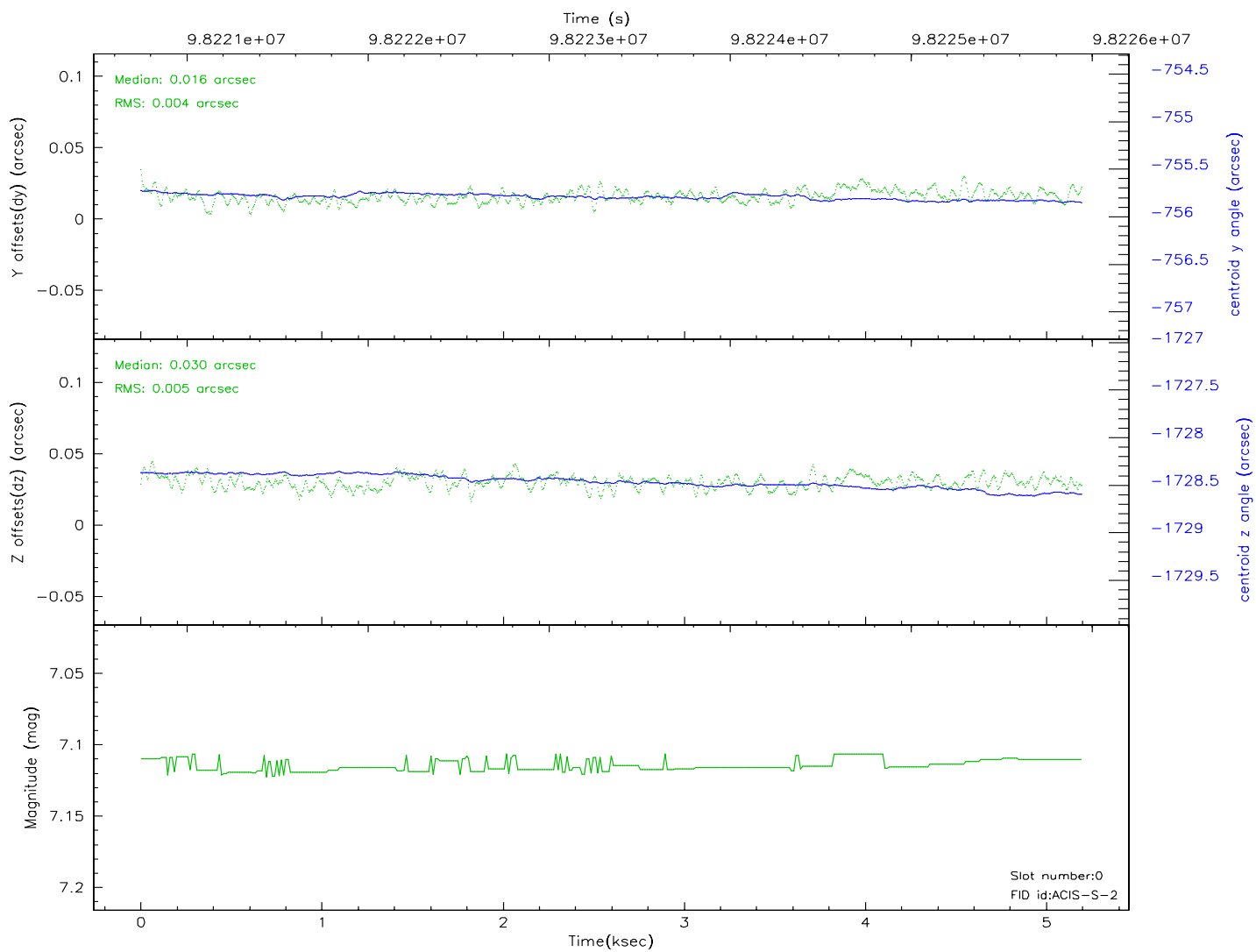
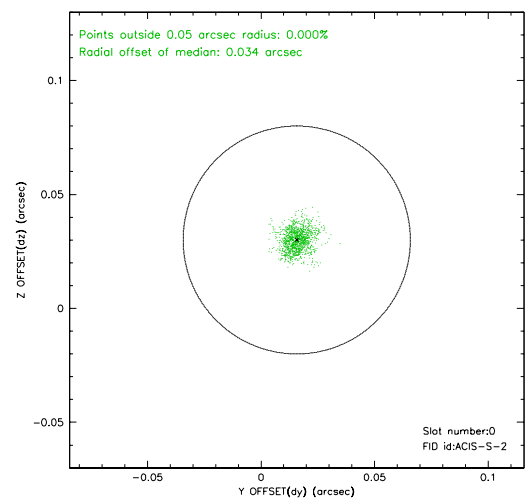
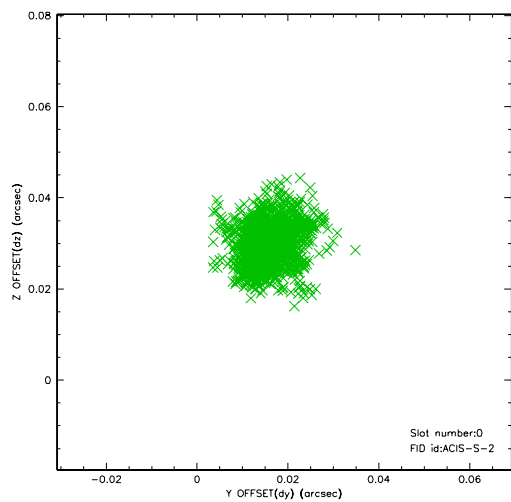


## 2.4.5 Slot 7

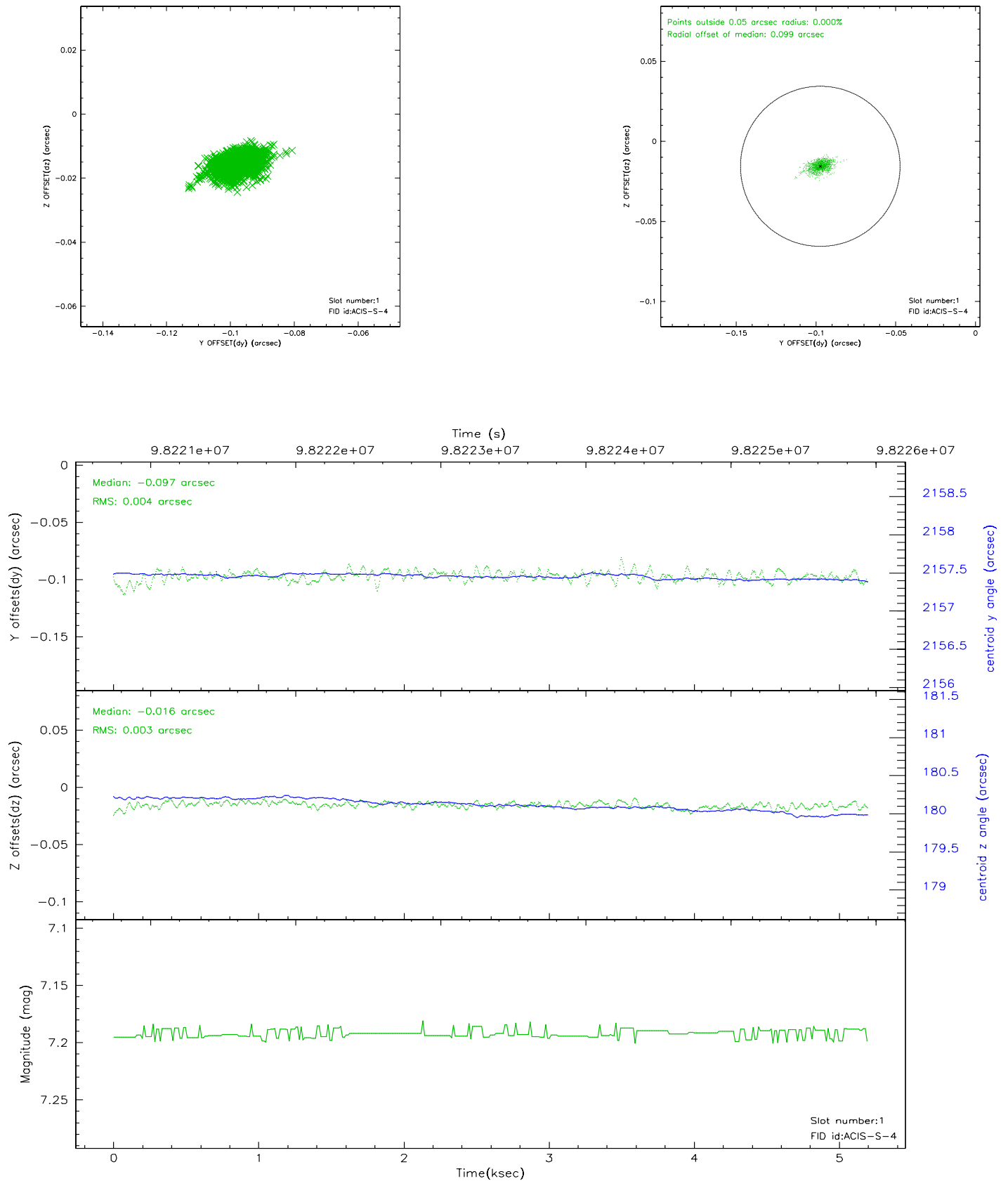


## 2.5 FID Slots

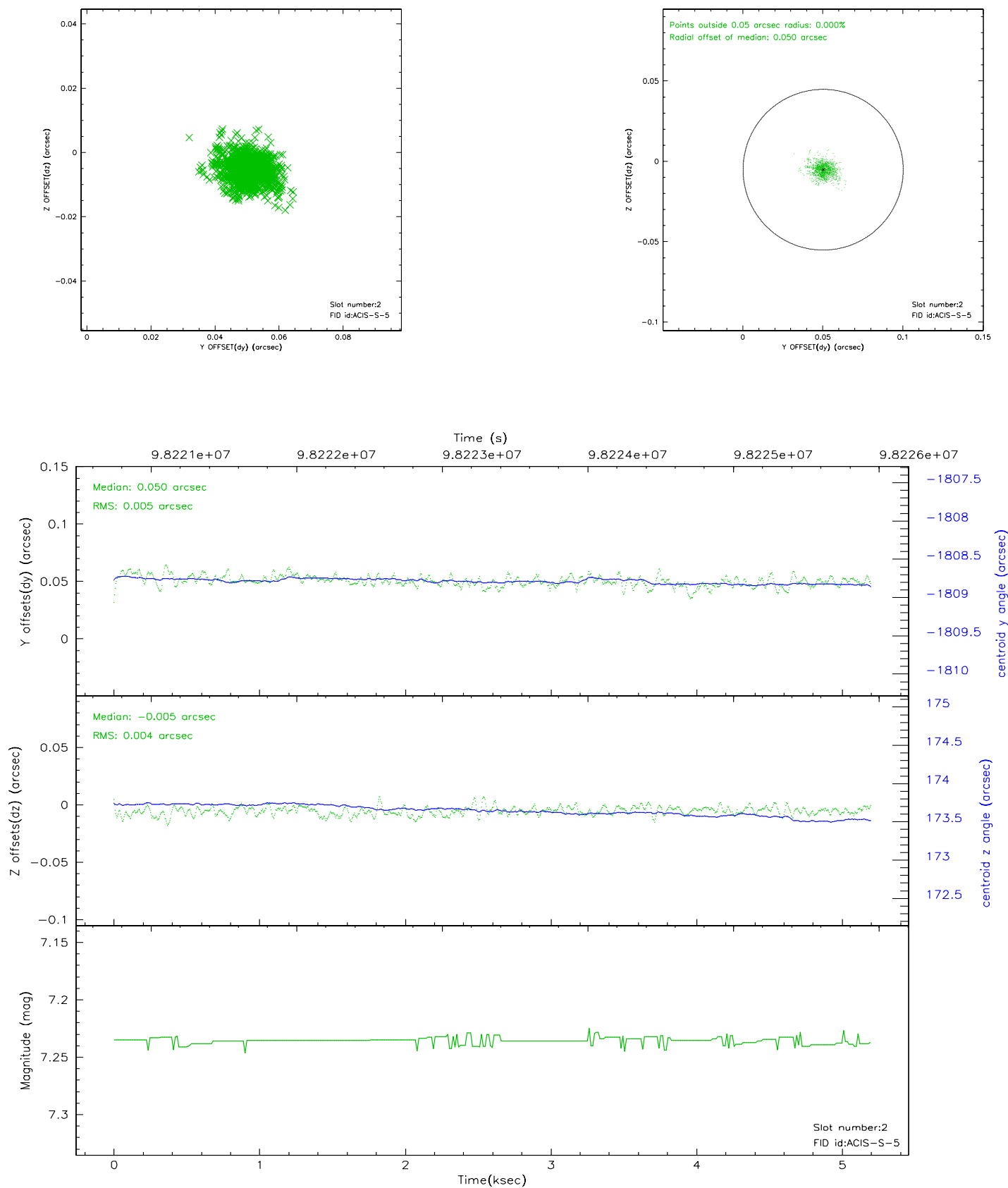
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



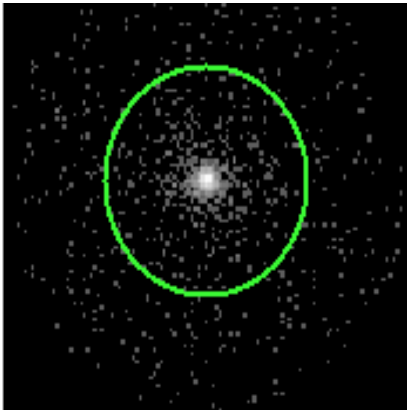


# 3 Gratings

## 3.1 HEG Arm



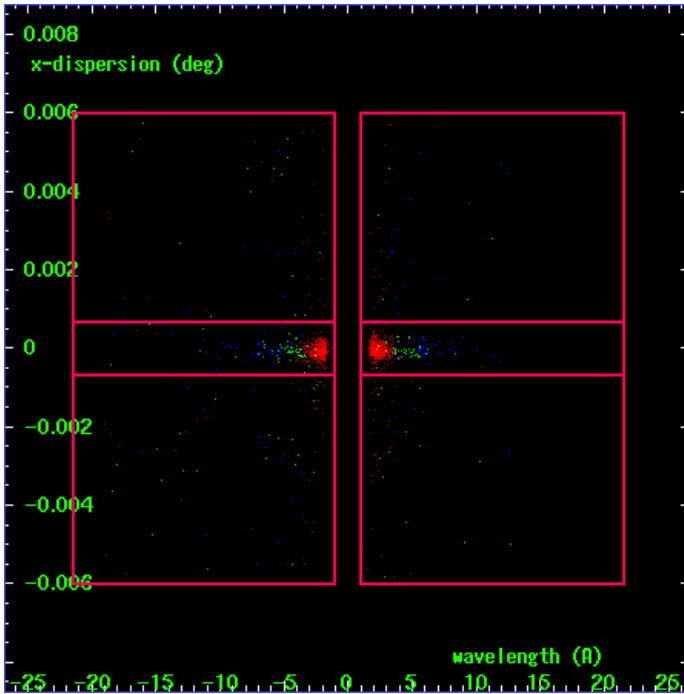
HEG Order Sort 123



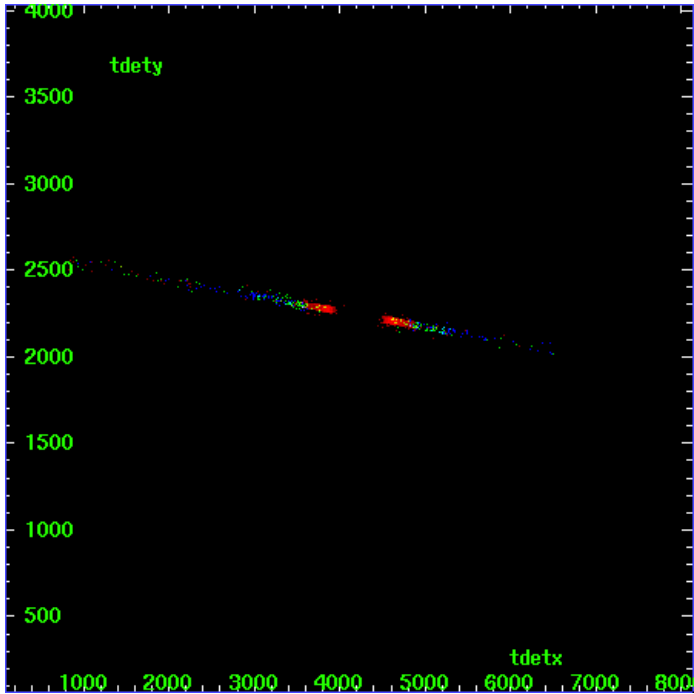
HEG Zero Order



HEG Order Sort ALL

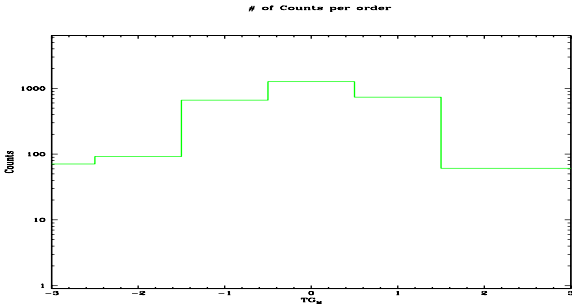


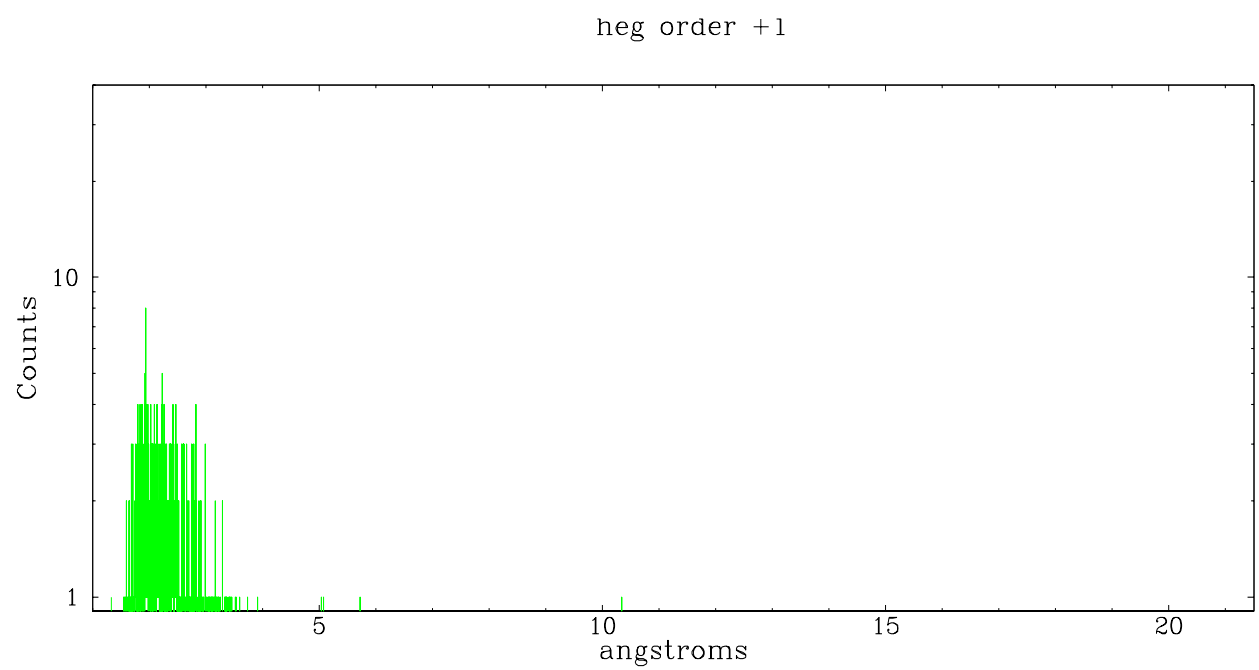
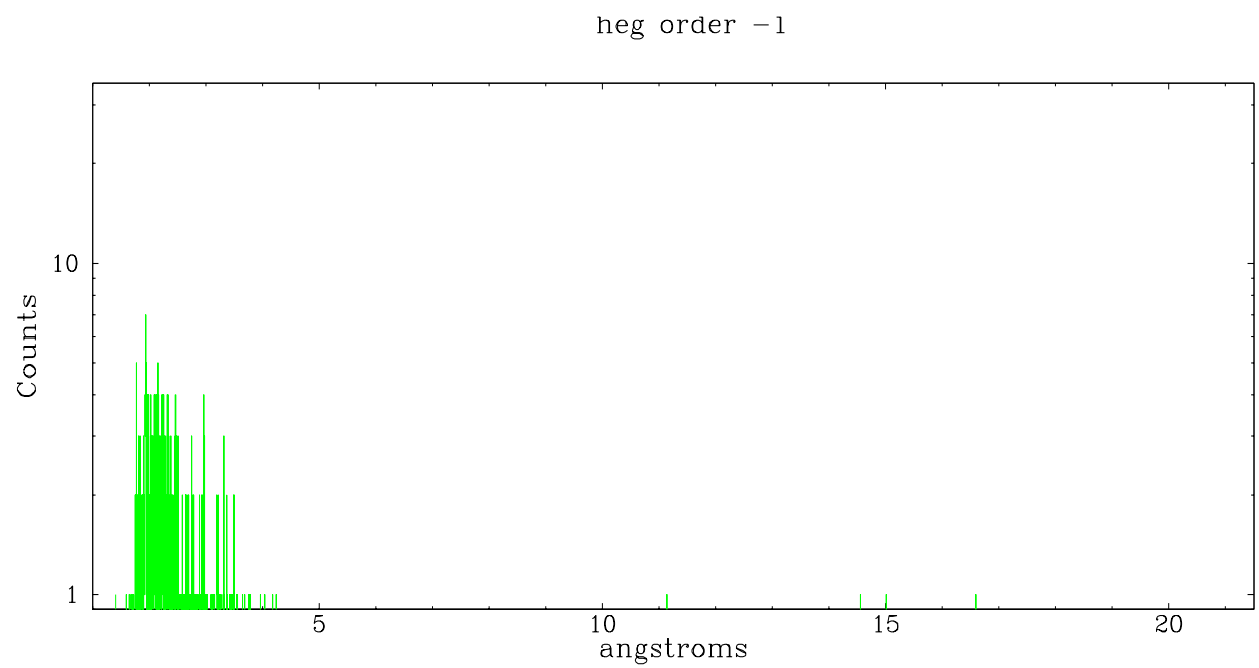
Spot Image HEG



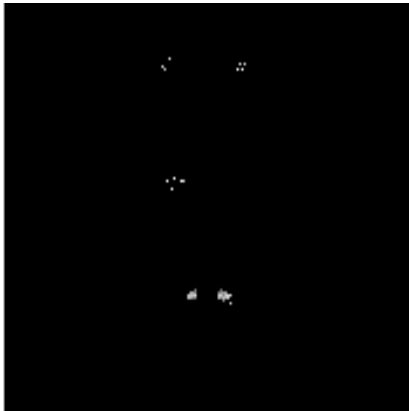
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	71	92	662	1272	739	61	61

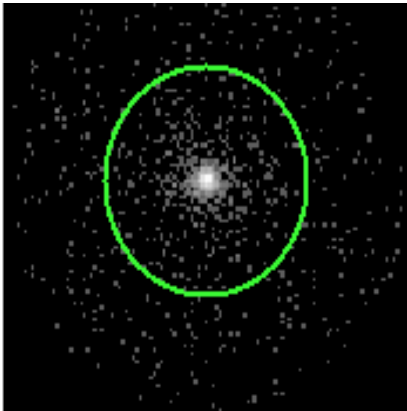




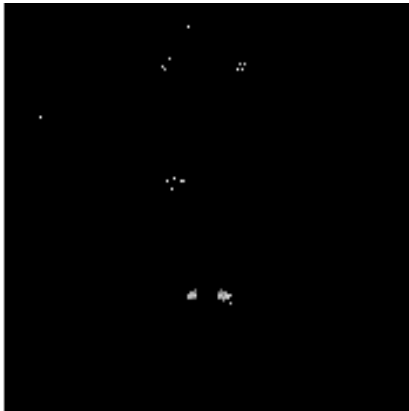
3.2 MEG Arm



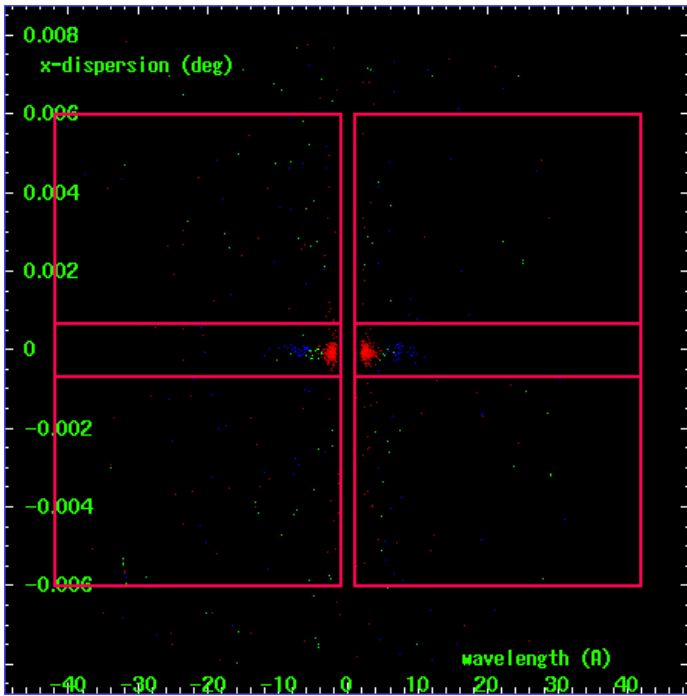
MEG Order Sort 123



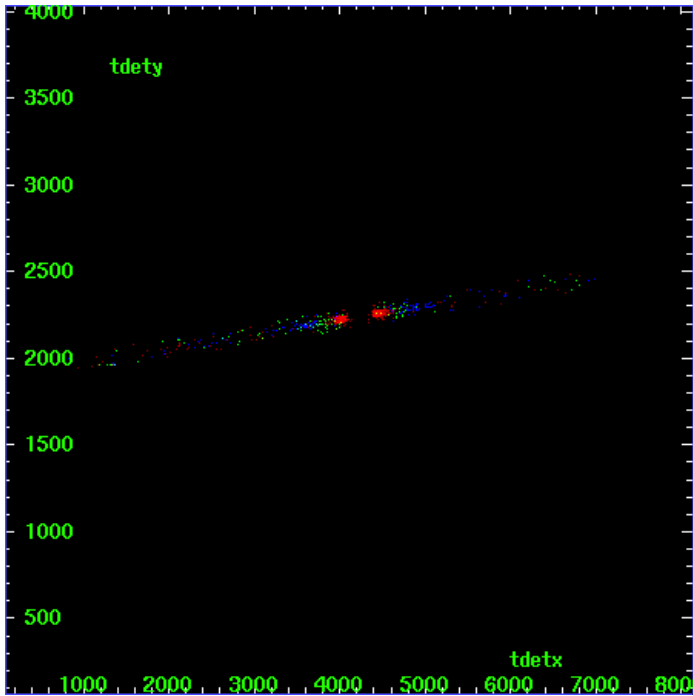
MEG Zero Order



MEG Order Sort ALL

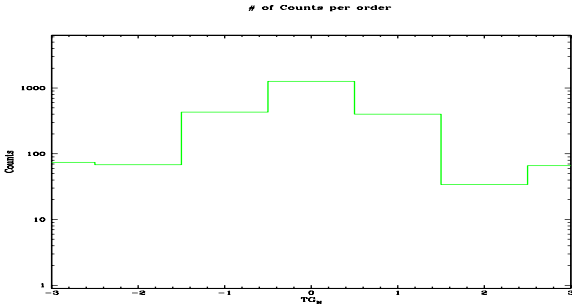


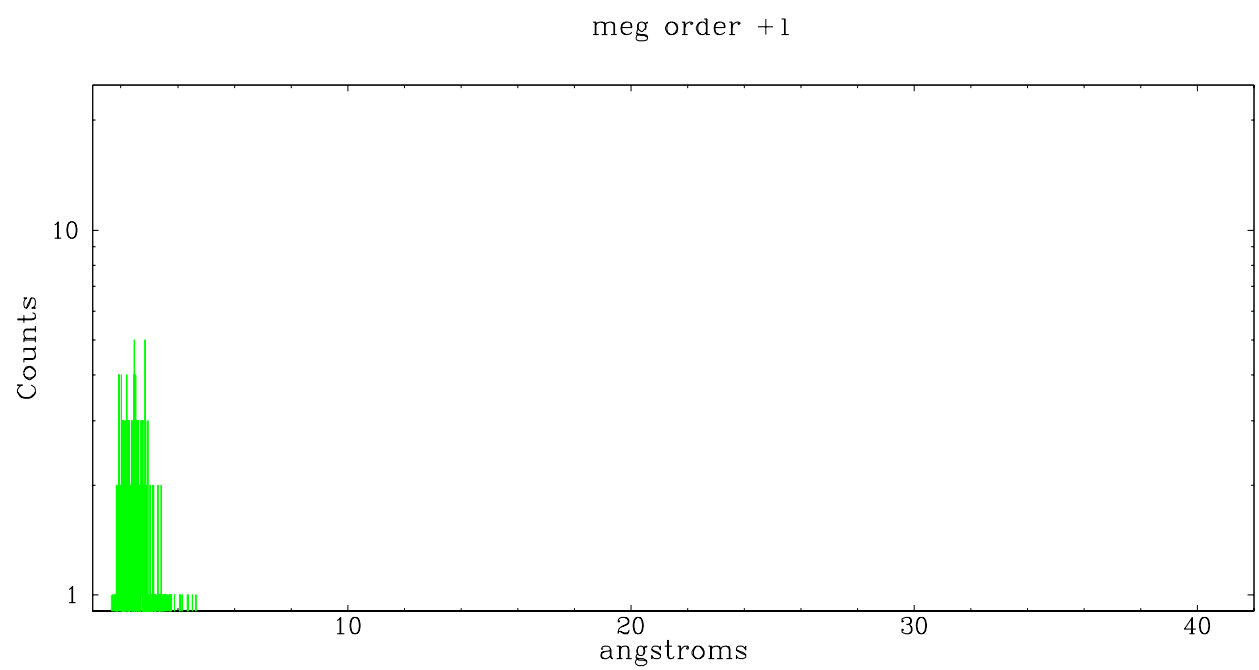
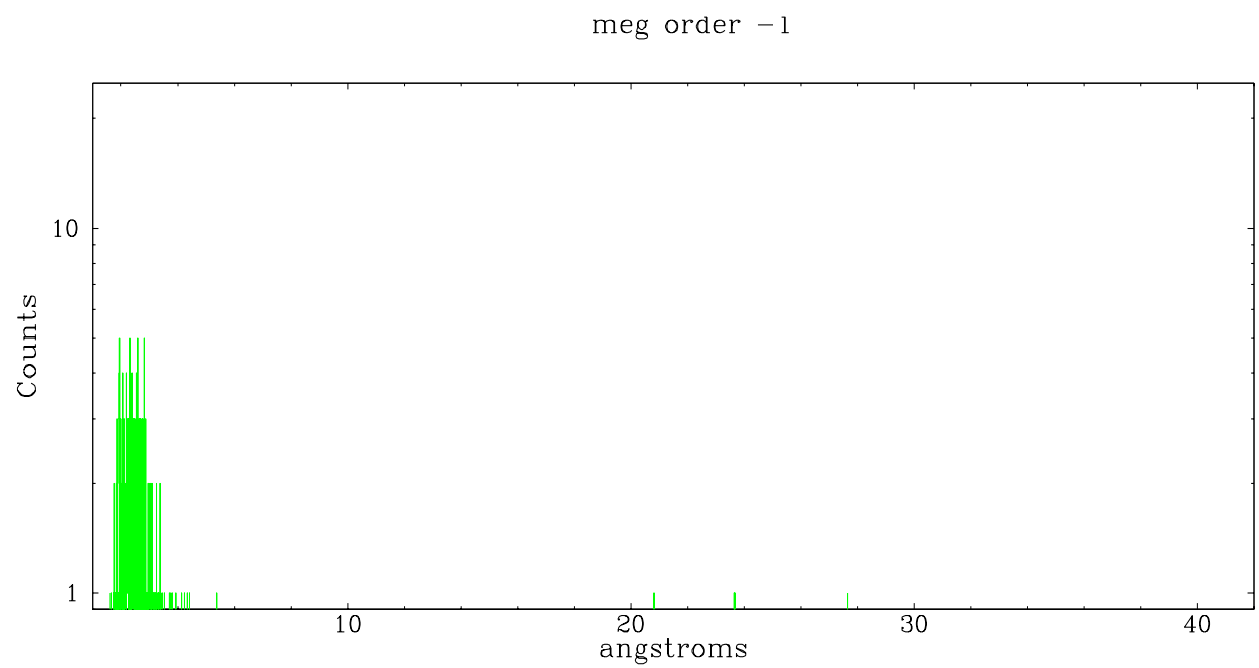
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	74	68	430	1272	401	34	66





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.11.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.196

### A.2 Comments

Phase constraint OK per previous V&V report.