

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3670 - L2 Version 3  
Chandra X-Ray Center

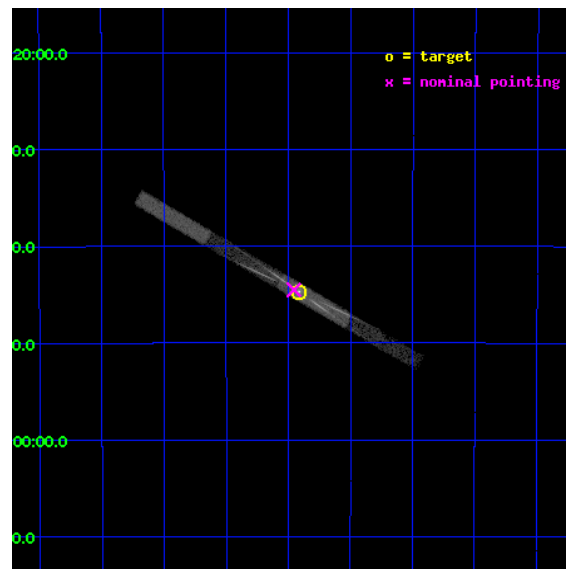
L2 Processing Date : Oct 9 2012

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# 1 Front

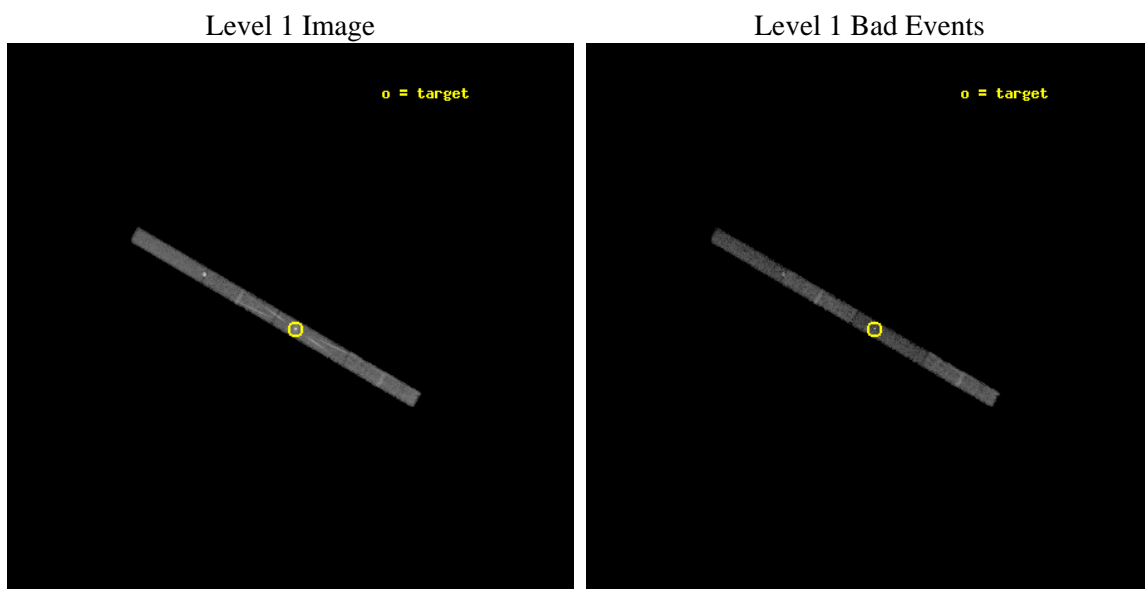
seq_num	400266	Sequence number
obs_id	3670	Observation id
title	THE LOW/SOFT STATE IN THE MICROQUASAR 1E1740.7-2942	Proposal title
observer	Dr. William Heindl	Principal investigator
object	1E 1740.7-2942	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	265.978333	Observer's specified target RA [deg]
dec_targ	-29.745222	Observer's specified target Dec [deg]
ra_nom	265.98882084142	Nominal RA [deg]
dec_nom	-29.741945809361	Nominal Dec [deg]
roll_nom	30.138128249455	Nominal Roll [deg]
revision	3	Processing version of data
ontime	10140.199827313	Sum of GTIs [s]
livetime	9578.619074705	Livetime [s]
ontime5	10140.199827313	Sum of GTIs [s]
ontime6	10139.4588072	Sum of GTIs [s]
ontime7	10140.199827313	Sum of GTIs [s]
ontime8	10140.199827313	Sum of GTIs [s]
l2events	35620	Number of level 2 events



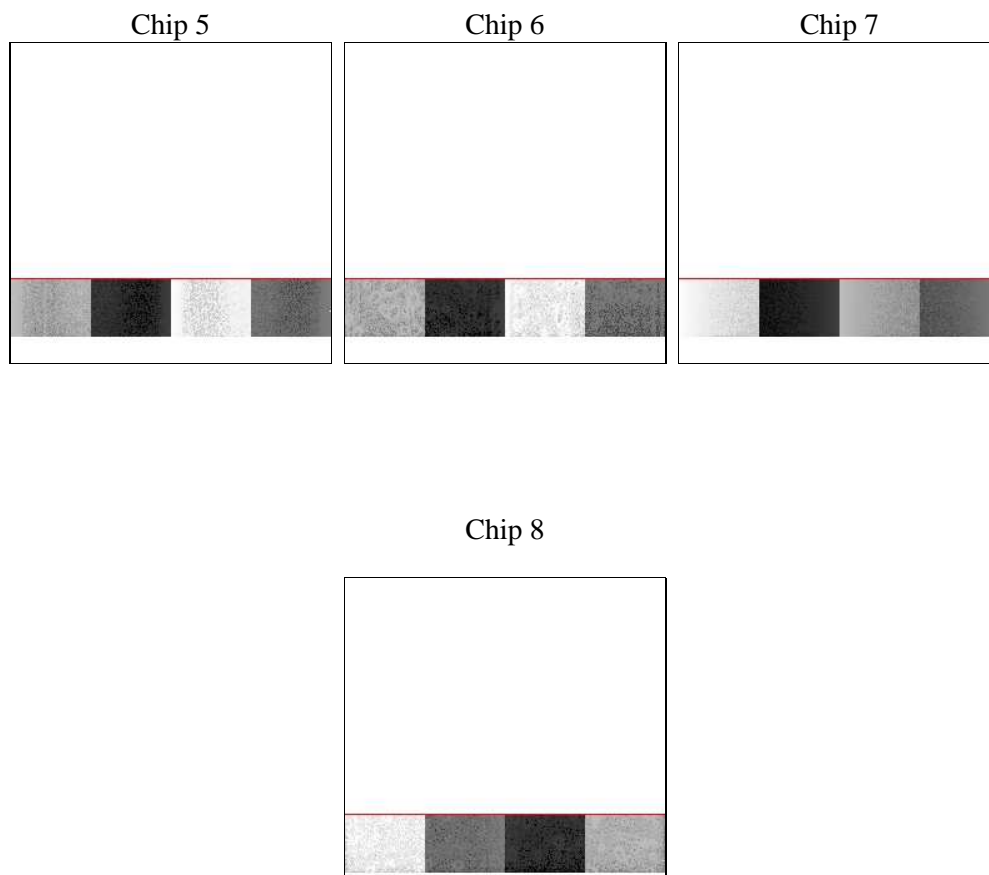
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	10140.199827313	Sum of GTIs [s]
caldsver	4.5.2	&#160	ontime5	10140.199827313	Sum of GTIs [s]
date	2012-10-09T03:55:59	Date and time of file creation	ontime6	10139.4588072	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	10140.199827313	Sum of GTIs [s]
			ontime8	10140.199827313	Sum of GTIs [s]
			l1events	100081	Number of level 1 events

### 2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	22451	20862	32849	23919
rejected events	11723	15686	11533	19714
rejected %	52%	75%	35%	82%

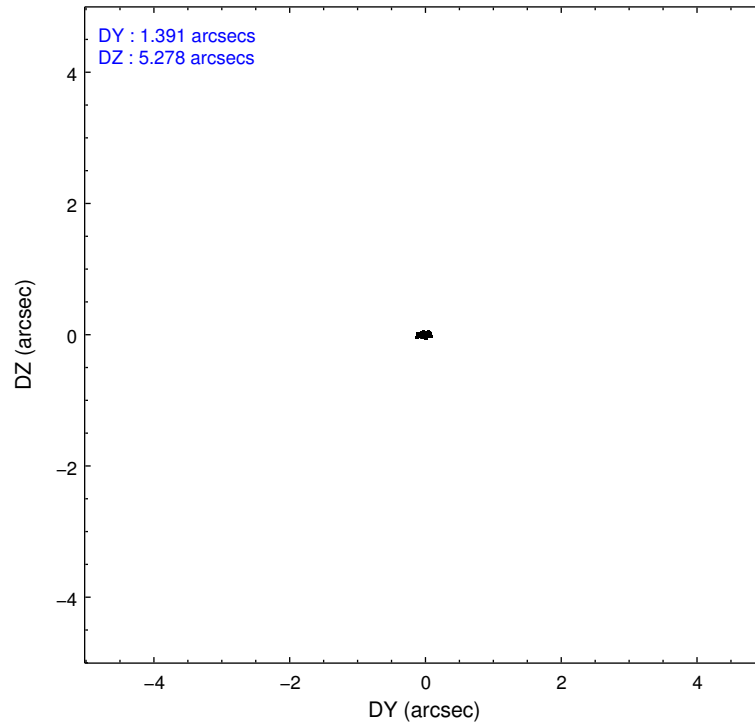
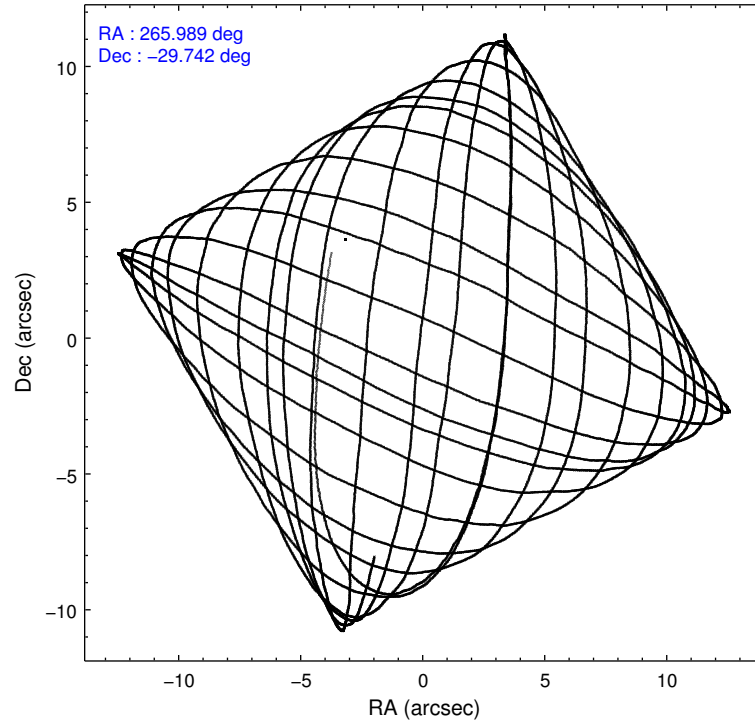
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	2879	3117	3250	1438
	12%	14%	9%	6%
grade 1 events	403	12	72	11
	1%	0%	0%	0%
grade 2 events	2511	811	4959	809
	11%	3%	15%	3%
grade 3 events	1108	470	2452	610
	4%	2%	7%	2%
grade 4 events	1100	461	2374	565
	4%	2%	7%	2%
grade 5 events	1724	555	1944	655
	7%	2%	5%	2%
grade 6 events	4398	512	9207	1247
	19%	2%	28%	5%
grade 7 events	8328	14924	8591	18584
	37%	71%	26%	77%

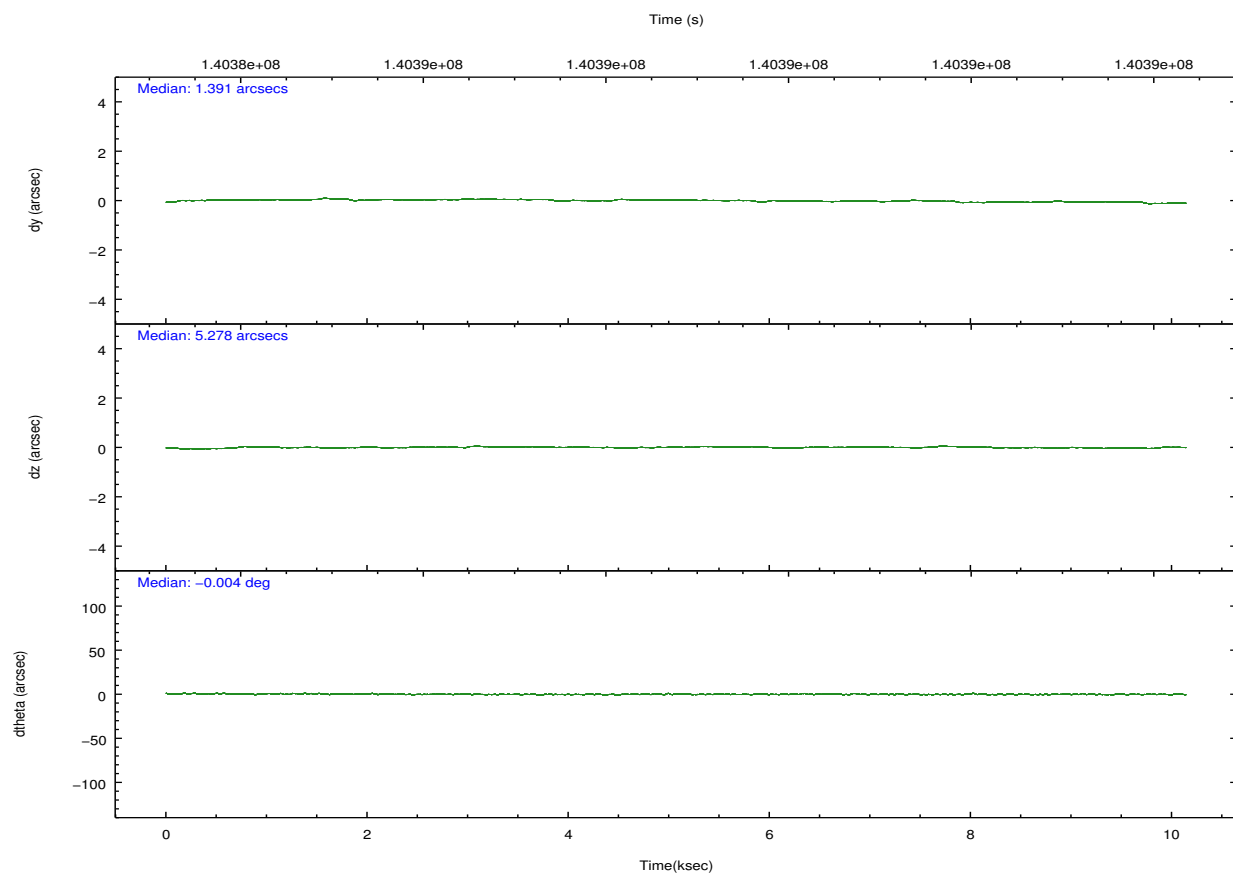
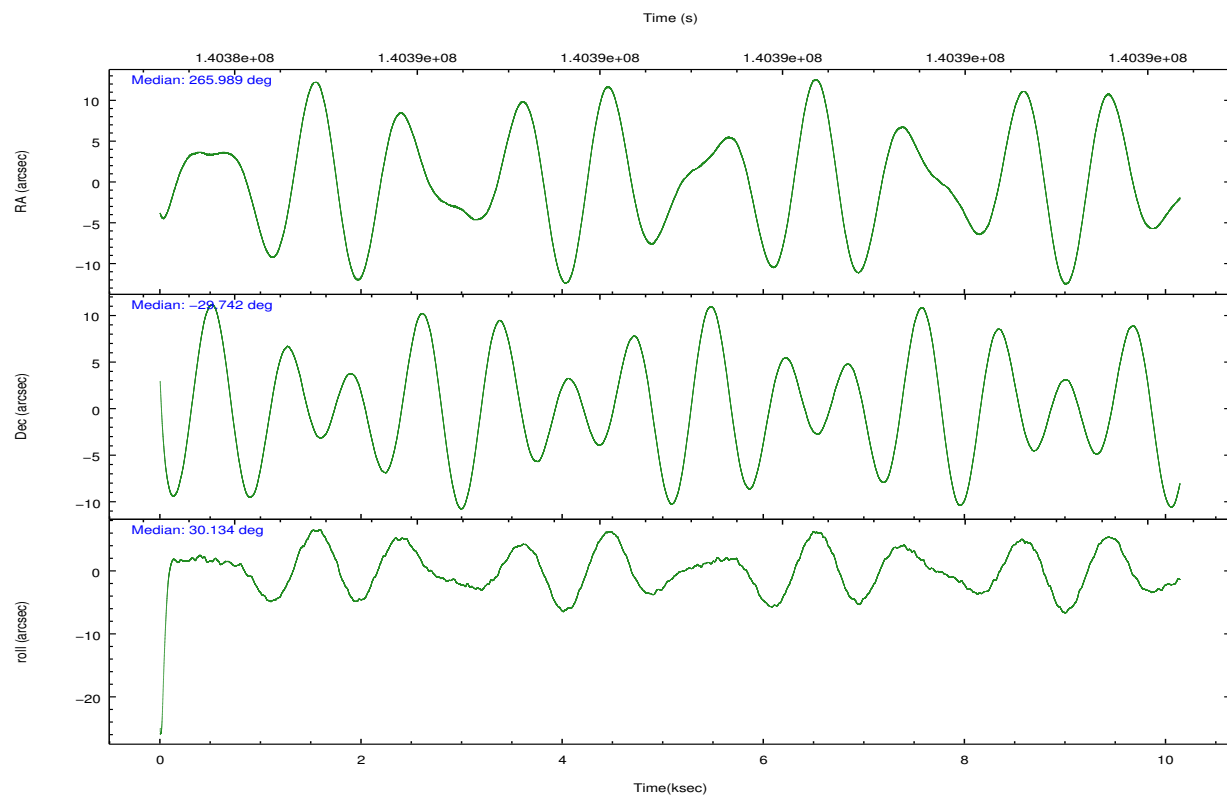


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-5678	ACIS-5678	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
[deg] Pointing RA	265.973549	265.9888208414199	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-29.765708	-29.74194580936135	Subarray start row	87	87
[deg] Pointing Roll	29.973949	30.13812824945489	Subarray row count	184	184
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.7
[mm] SIM translation stage pos	-182.132523	-182.1370004450064			
[mm] SIM translation stage offset	-8	-7.995522138001405			
[s] Observation start time (MET)	140383841.184000	140382765.86061			
Observation start date	2002-06-13T19:29:37	2002-06-13T19:12:45			
[s] Observation end time (MET)	140393841.184000	140394970.02361			
Observation end date	2002-06-13T22:16:17	2002-06-13T22:36:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



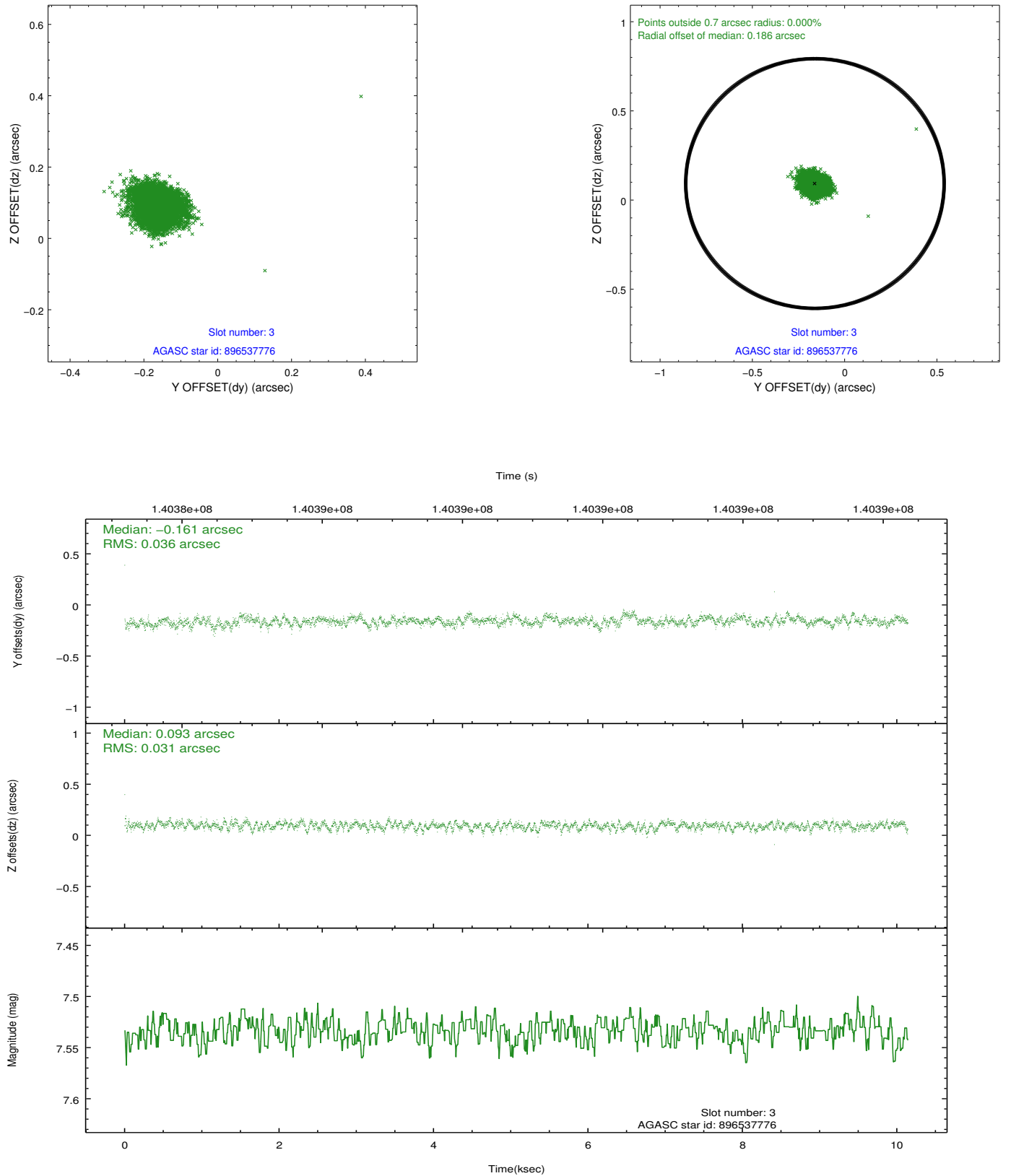


### Slot Statistics

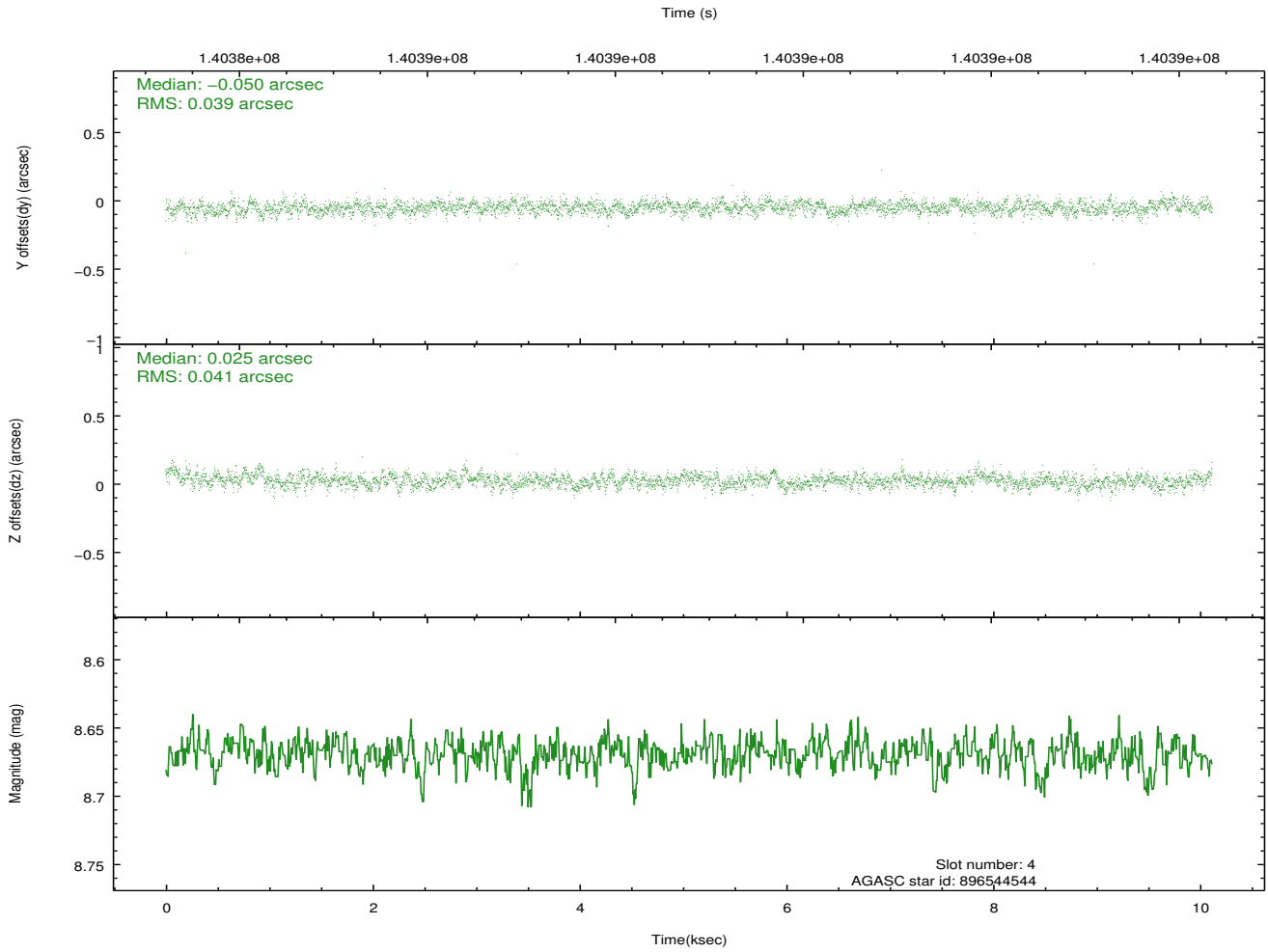
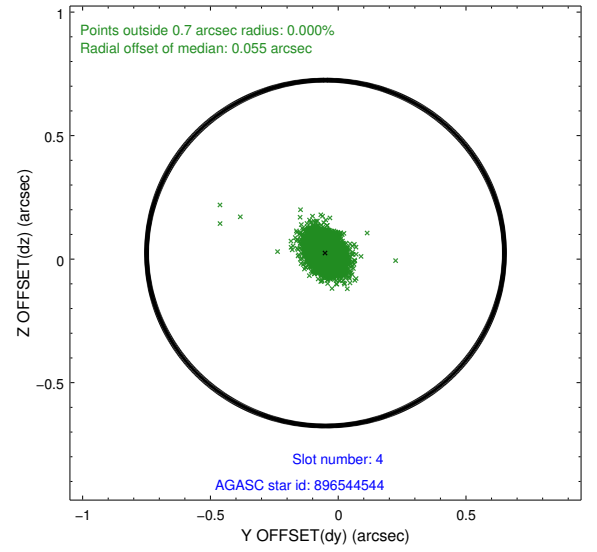
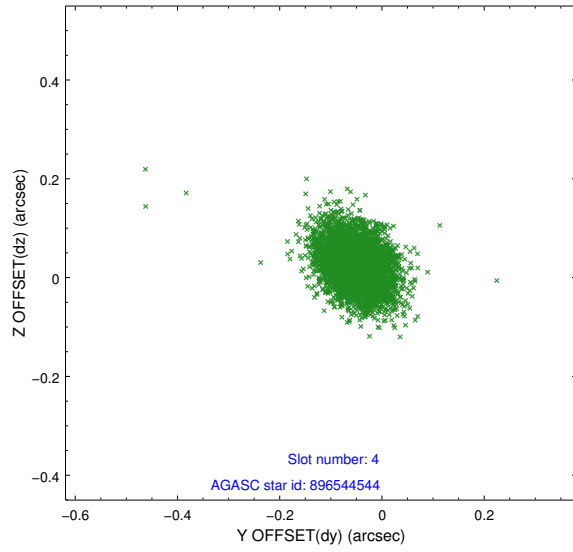
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	2474	-0.083	-0.084	0.009	0.018	0.000000	0.000000	-753.50	-1891.19
1	FID	ACIS-S-4	7.18	2474	0.121	0.062	0.008	0.023	0.000000	0.000000	2159.75	16.81
2	FID	ACIS-S-5	7.23	2474	-0.069	0.029	0.008	0.018	0.000000	0.000000	-1805.65	11.06
3	GUIDE	896537776	7.53	4948	-0.161	0.093	0.049	0.080	266.655684	-29.665673	2025.97	-759.36
4	GUIDE	896544544	8.67	4936	-0.050	0.025	0.059	0.096	266.707391	-29.885740	1766.01	-1525.04
5	GUIDE	896405480	8.24	4947	0.182	-0.011	0.055	0.092	265.220460	-29.599691	-1745.98	1688.39
6	GUIDE	896538920	8.92	4947	-0.112	-0.032	0.060	0.098	266.278728	-29.143592	1949.88	1460.05
7	GUIDE	966787648	8.88	4944	0.141	-0.070	0.058	0.095	265.297931	-30.077843	-2386.28	72.84

## 2.4 Star Slots

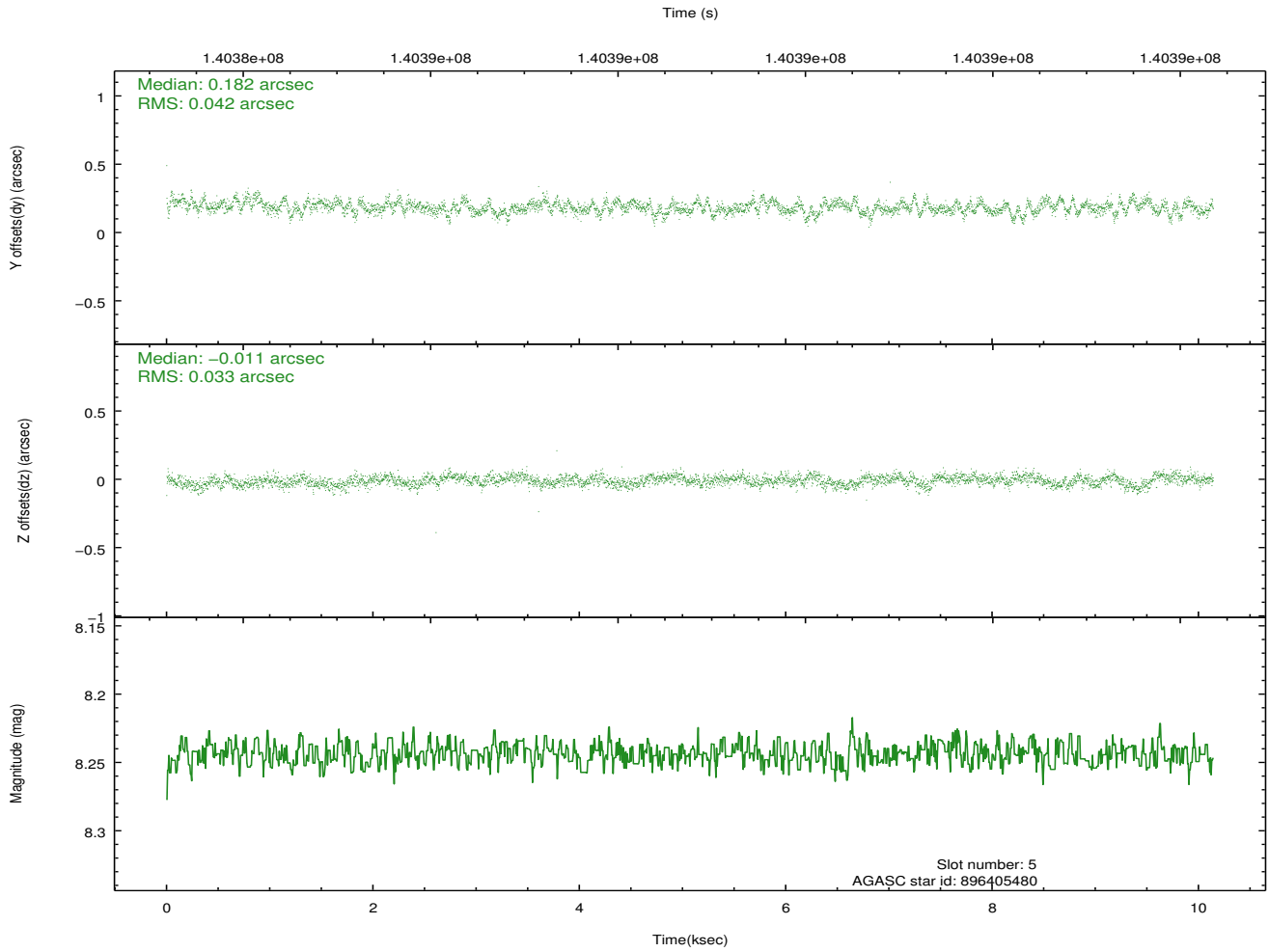
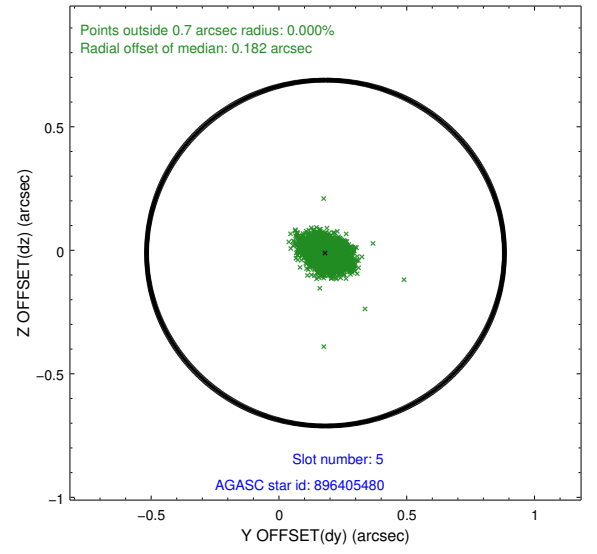
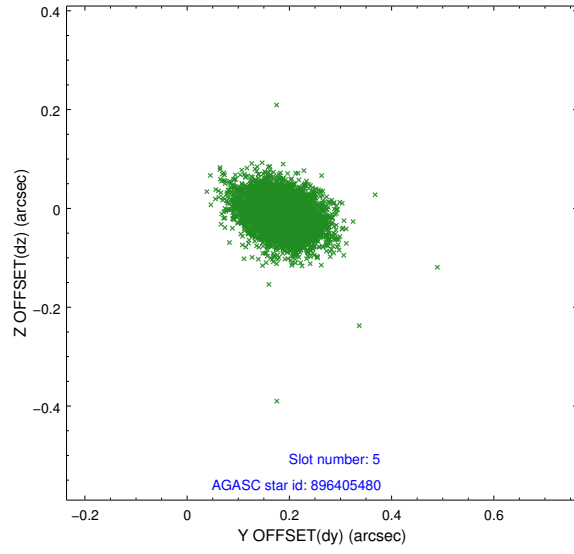
### 2.4.1 Slot 3



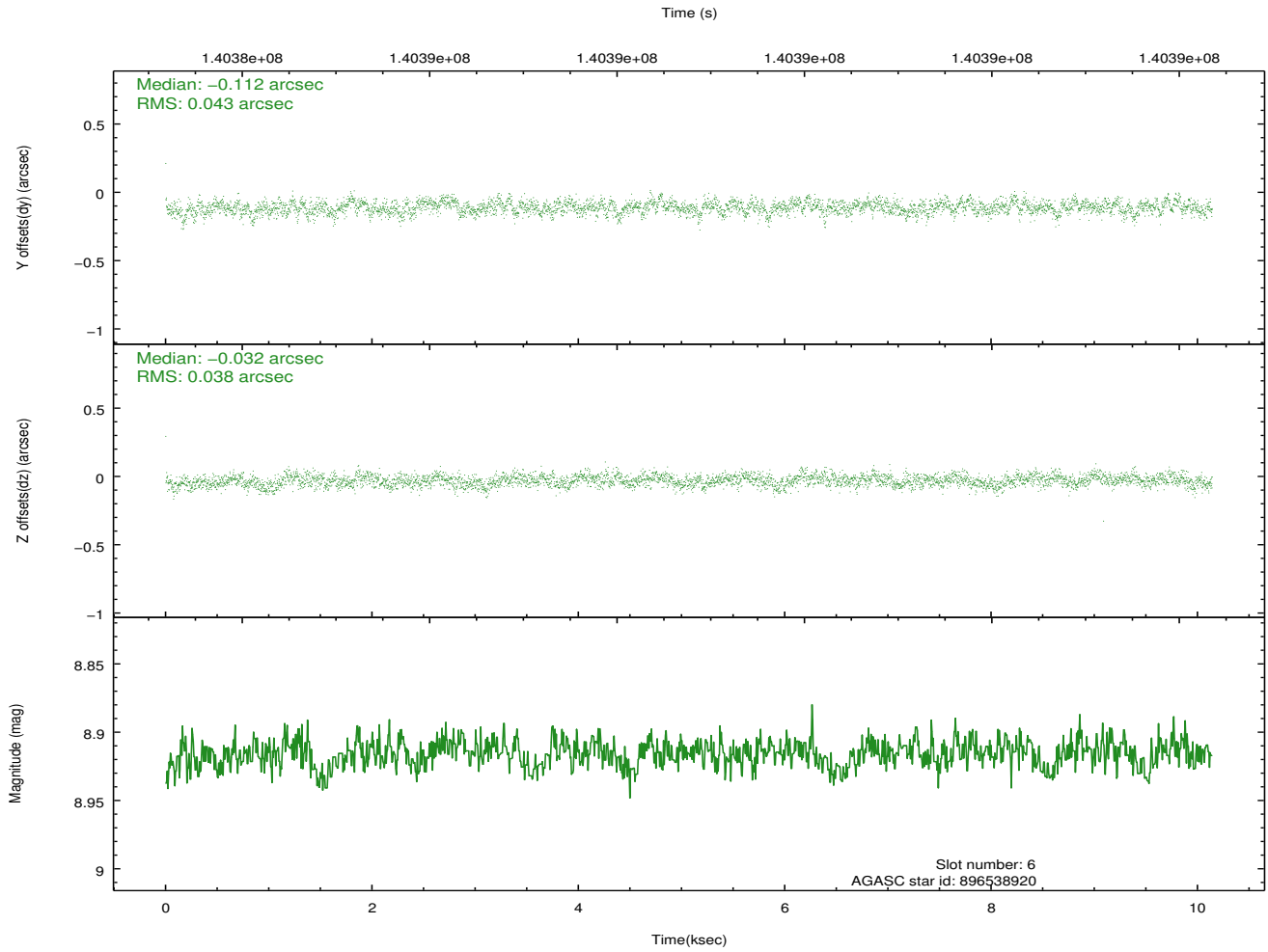
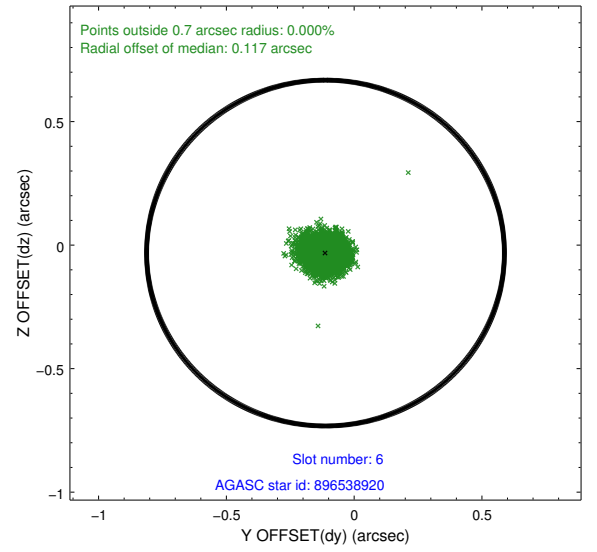
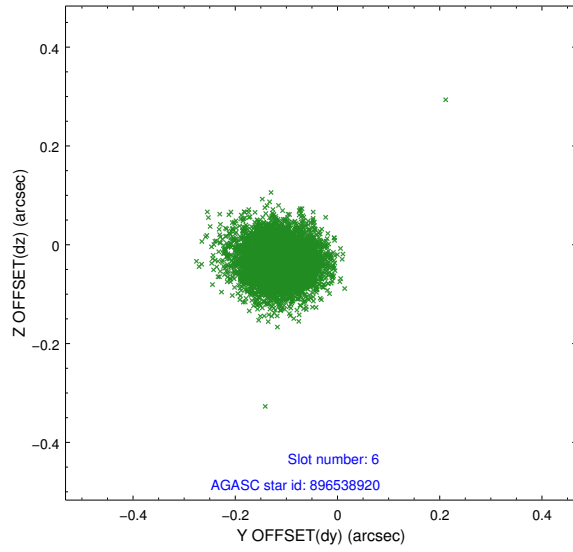
## 2.4.2 Slot 4



### 2.4.3 Slot 5

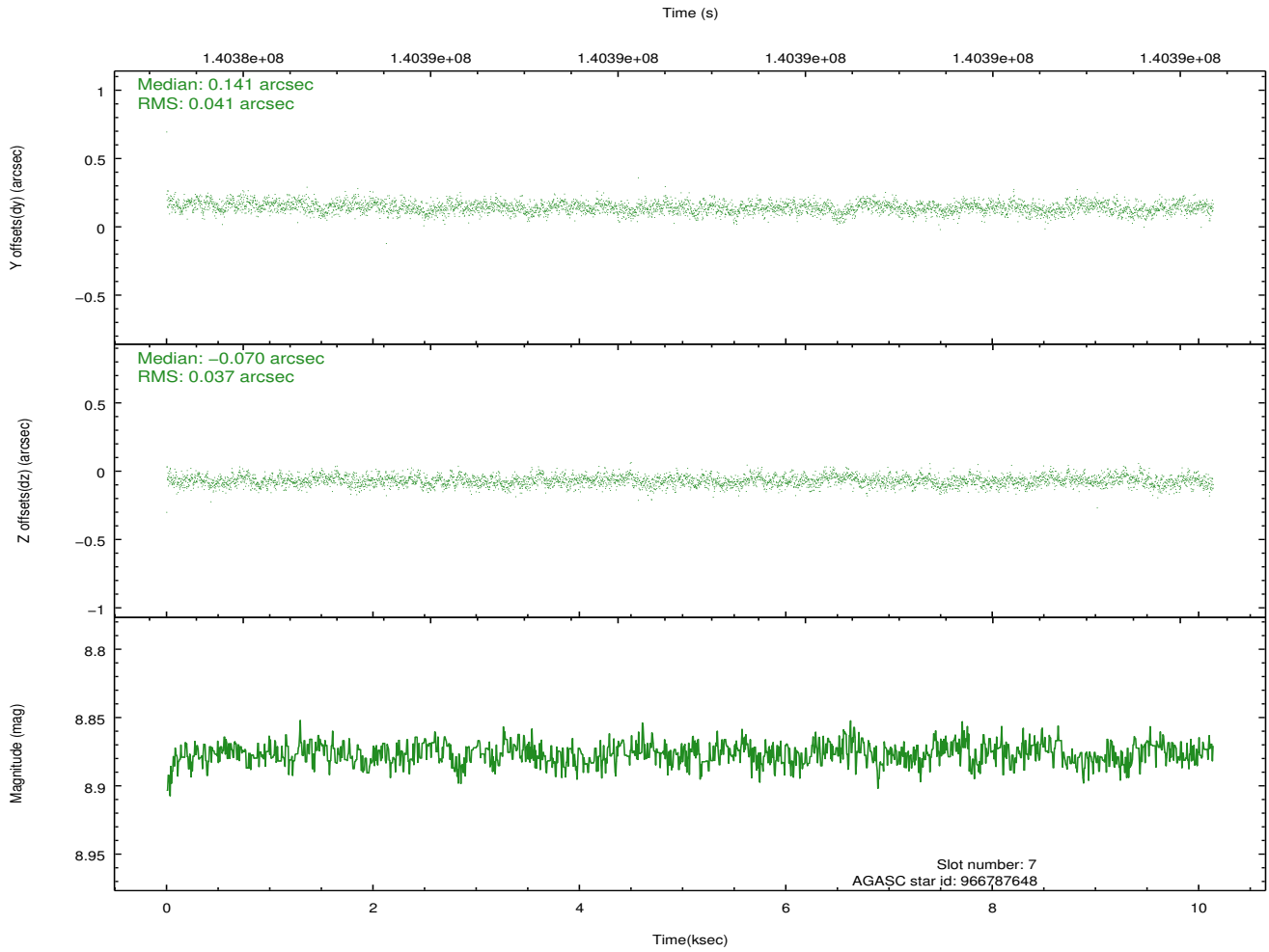
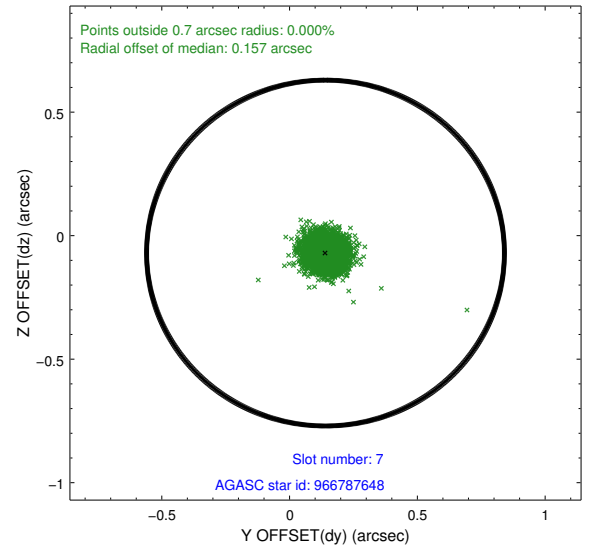
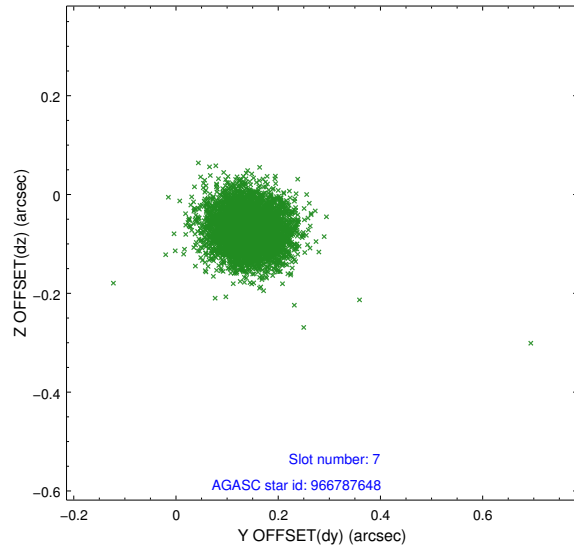


## 2.4.4 Slot 6



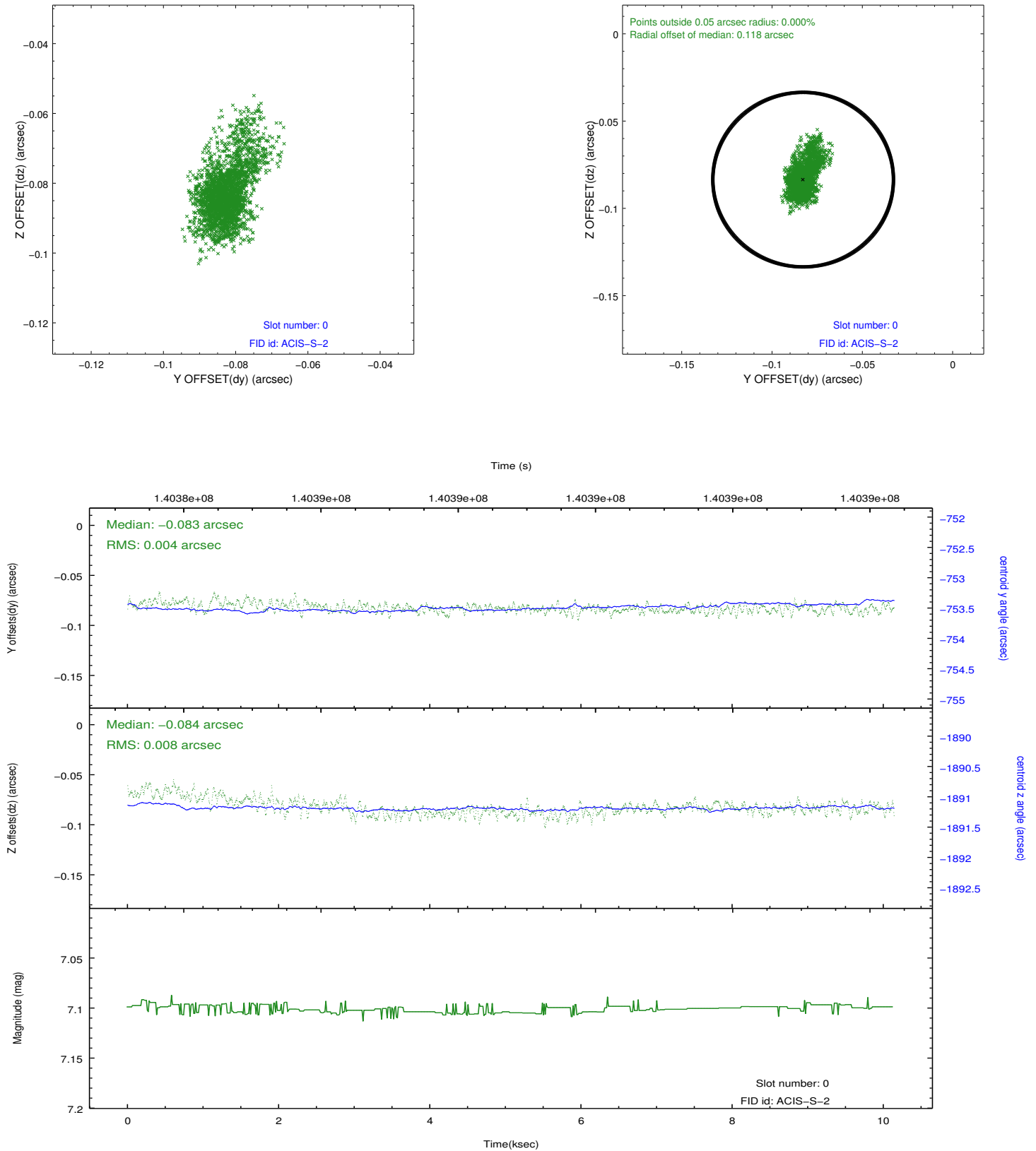


## 2.4.5 Slot 7

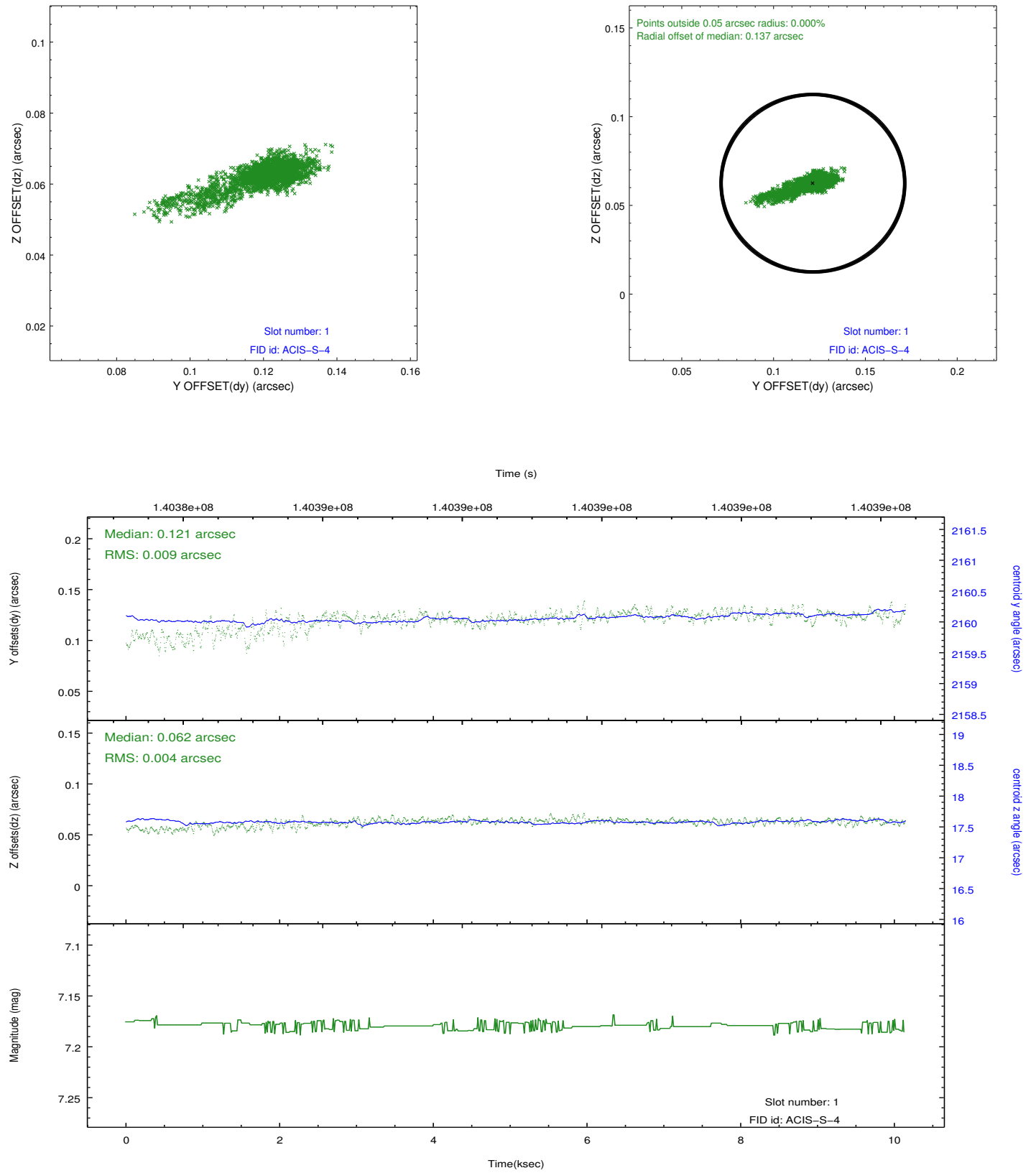


## 2.5 FID Slots

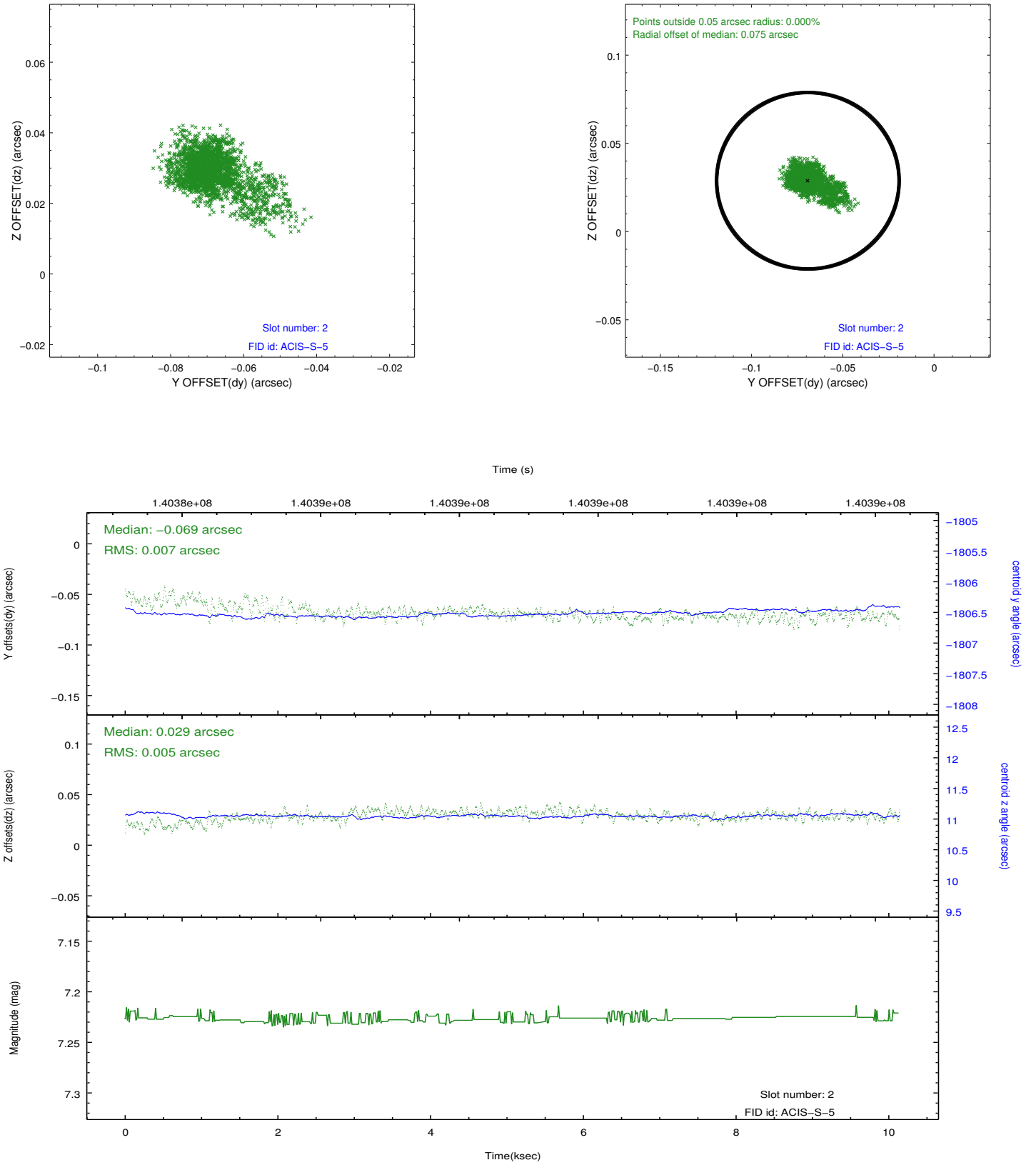
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

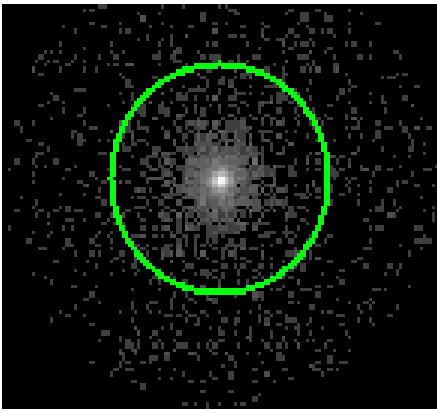


# 3 Gratings

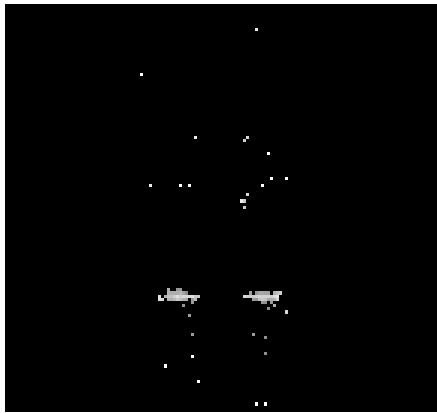
## 3.1 HEG Arm



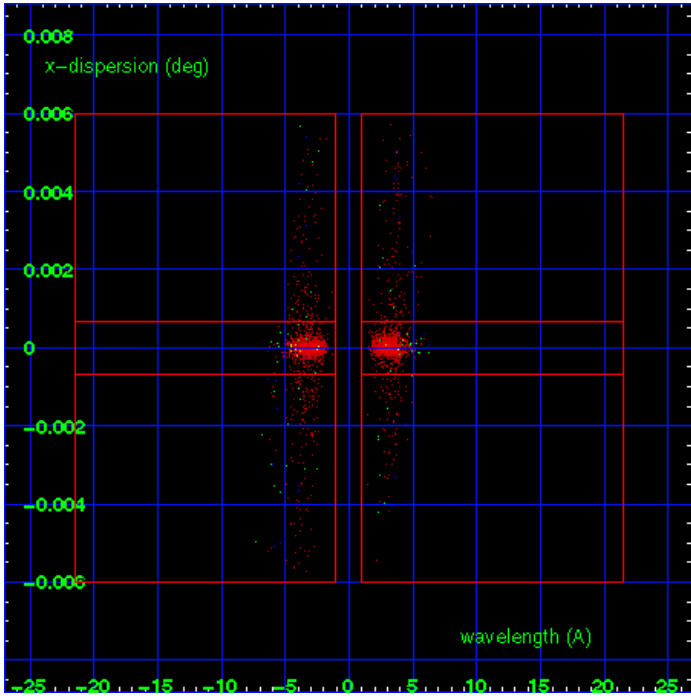
HEG Order Sort 123



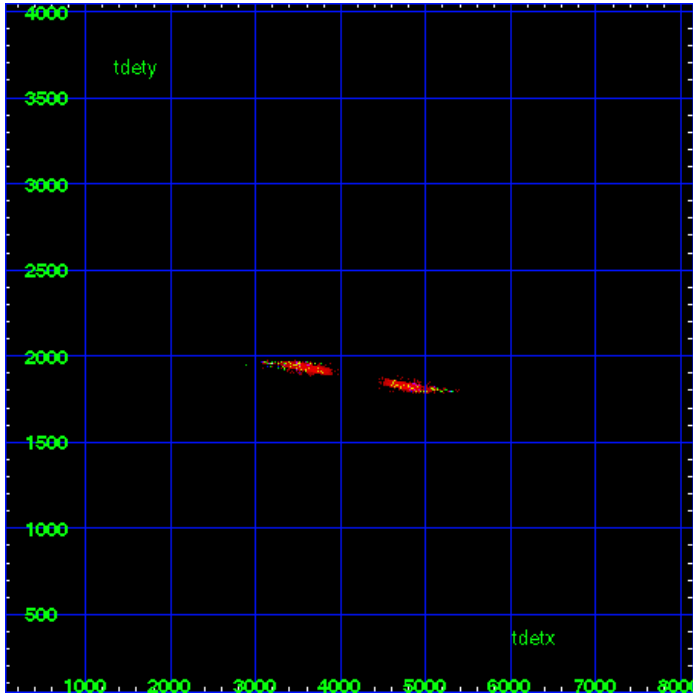
HEG Zero Order



HEG Order Sort ALL

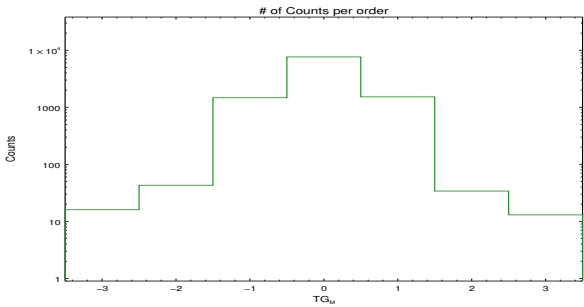


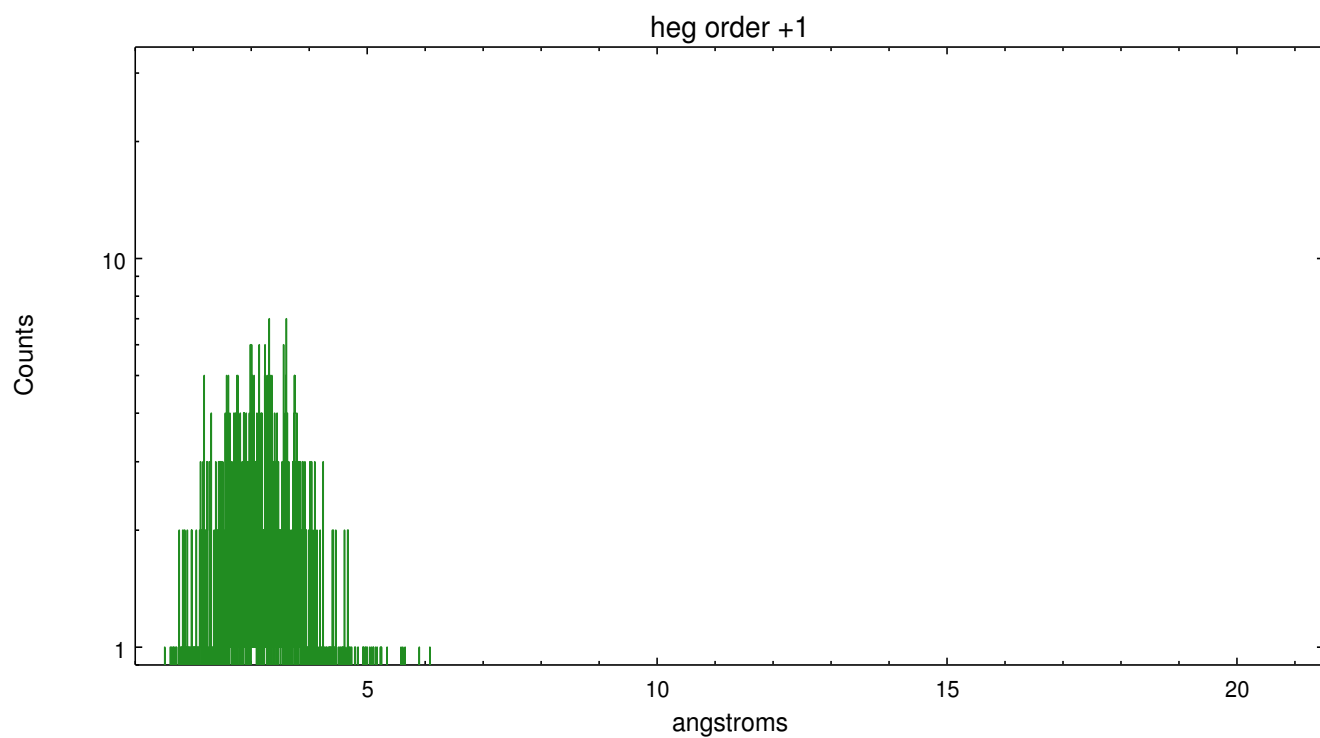
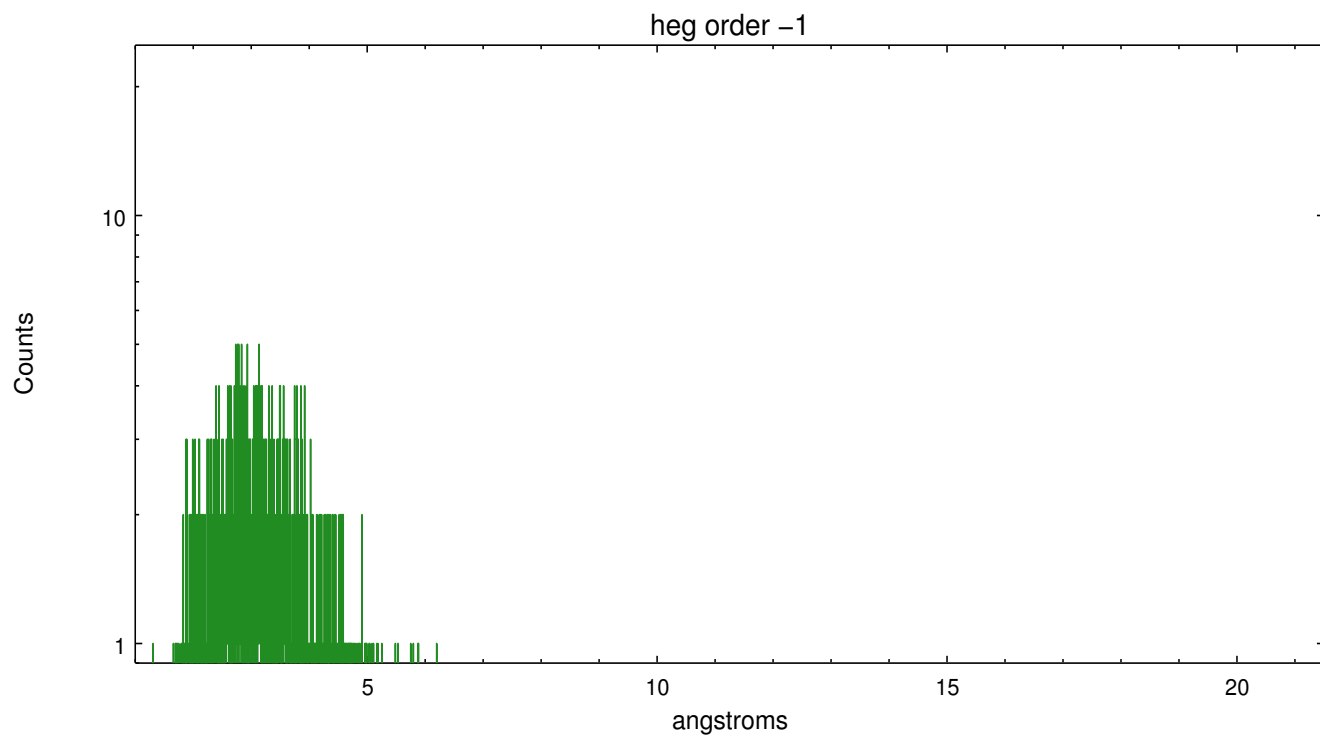
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	16	43	1470	7645	1525	34	13

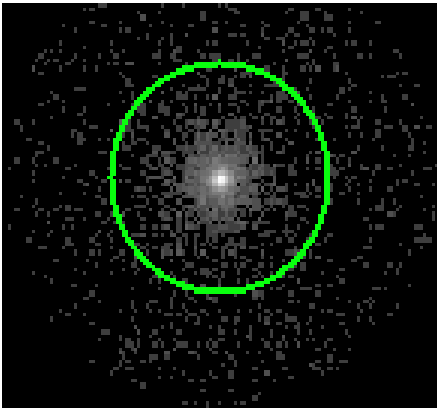




3.2 MEG Arm



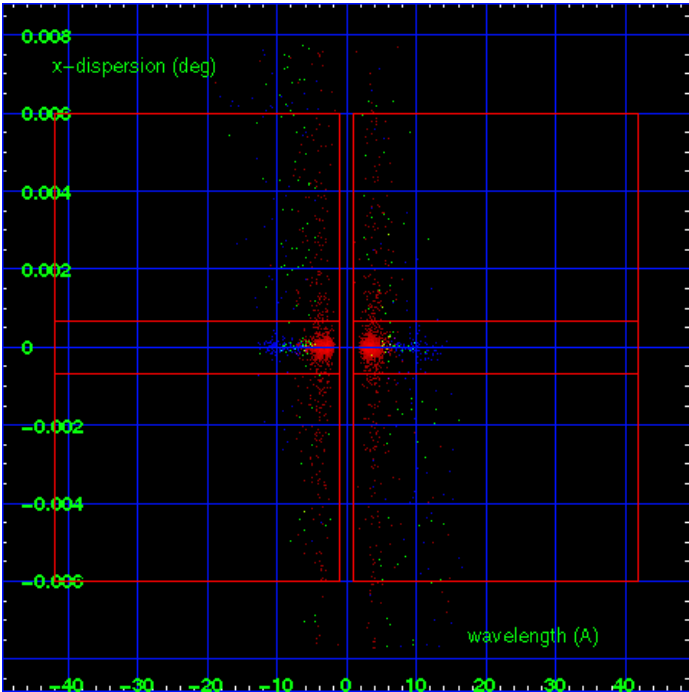
MEG Order Sort 123



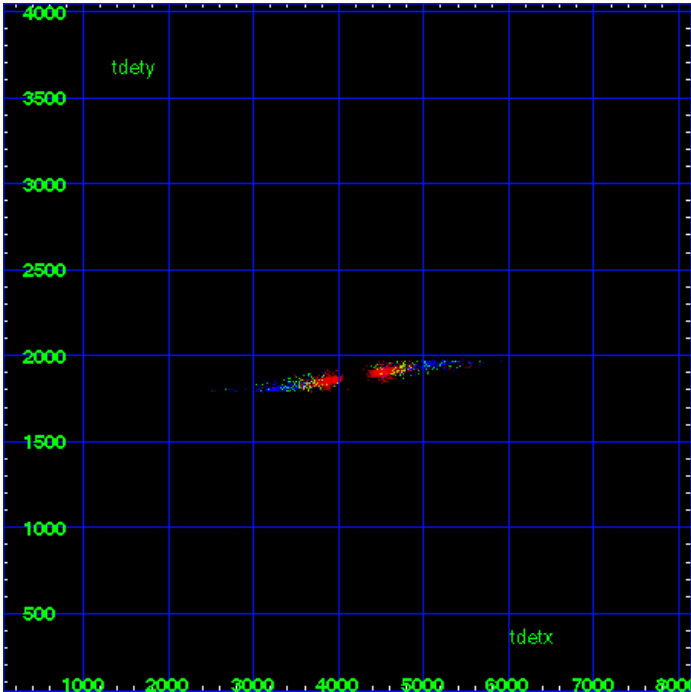
MEG Zero Order



MEG Order Sort ALL

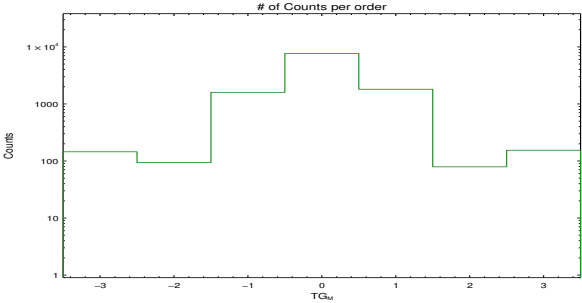


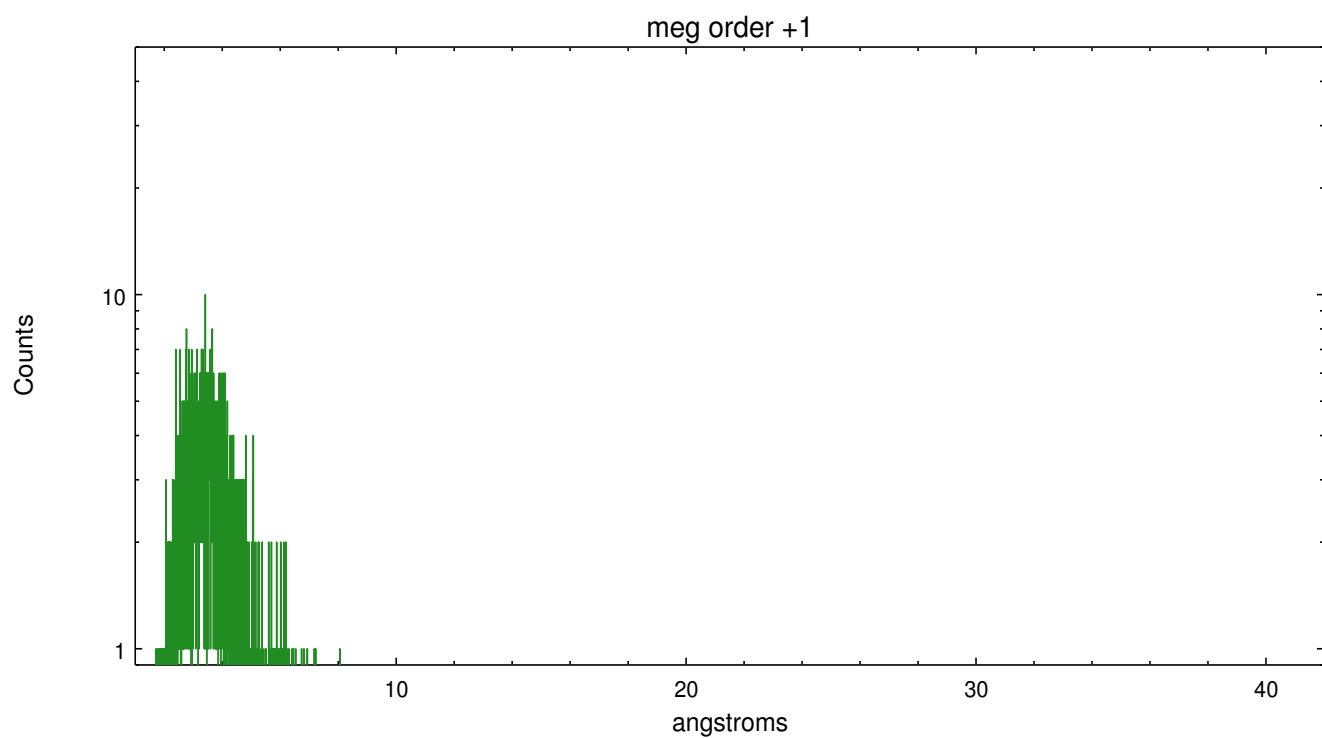
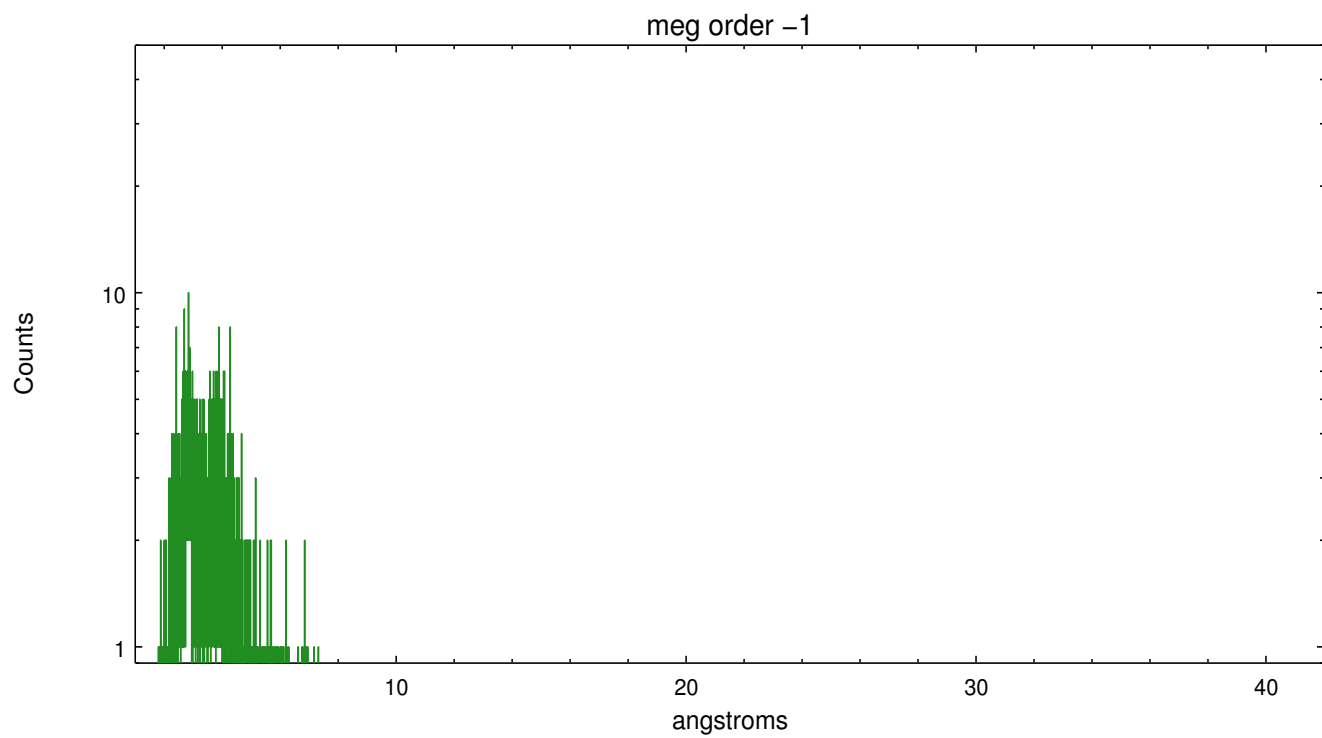
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	145	94	1599	7645	1809	79	154







# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.10.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.14

## A.2 Comments

This grating observation was taken with a subarray of 184 rows. Therefore the spectral arms are truncated and only the higher energies are available in the dispersed spectrum.