

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 3753 - L2 Version 001  
Chandra X-Ray Center

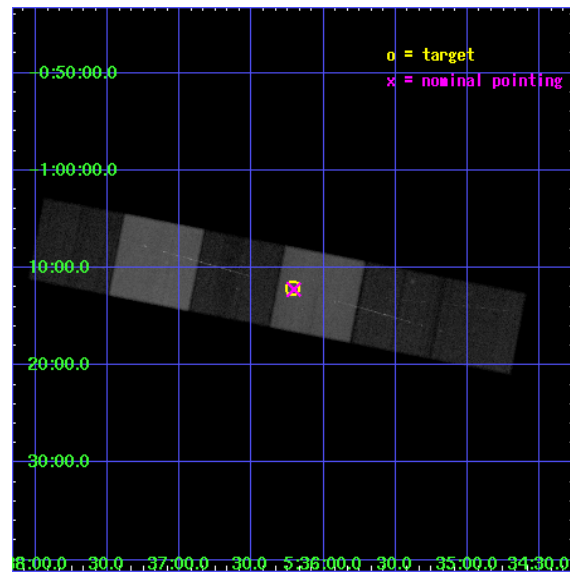
L2 Processing Date : Jun 23 2006

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# 1 Front

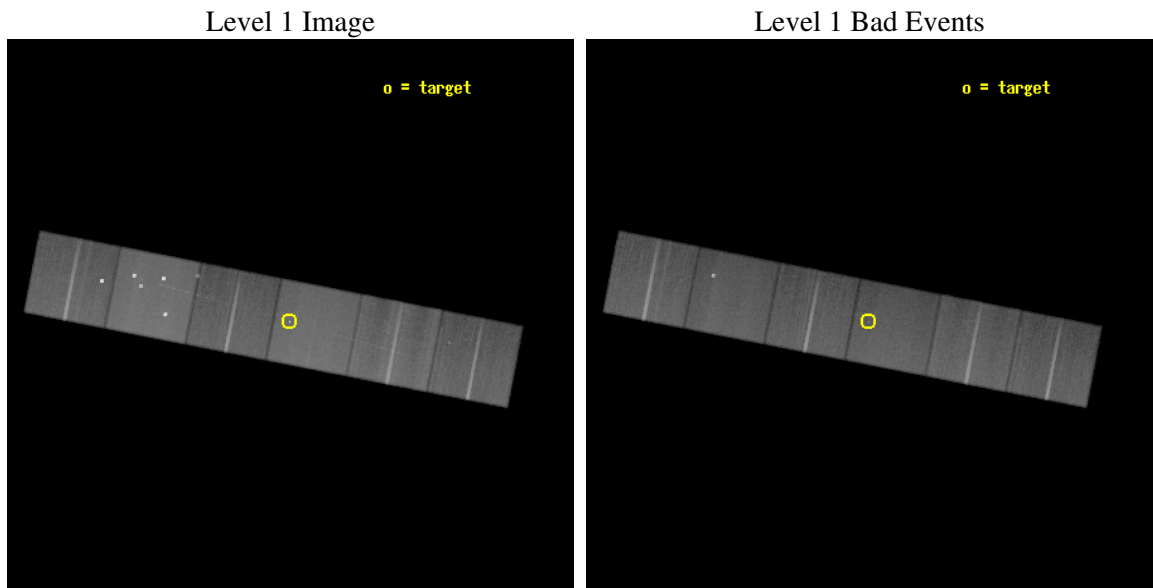
seq_num	200223
obs_id	3753
title	CHANDRA HETGS OBSERVATIONS OF EARLY B SUPERGIANTS
observer	Dr. Wayne Waldron
object	EPSILON ORI
dtcycle	0
cycle	P
ra_targ	84.052917
dec_targ	-1.201944
ra_nom	84.051764890644
dec_nom	-1.2038576708442
roll_nom	10.993519723541
revision	2
ontime	92822.39965421
livetime	91647.026538849
ontime4	92822.39965421
ontime5	92822.39965421
ontime6	92819.158663929
ontime7	92822.39965421
ontime8	92822.39965421
ontime9	92819.158654034
l2events	835977



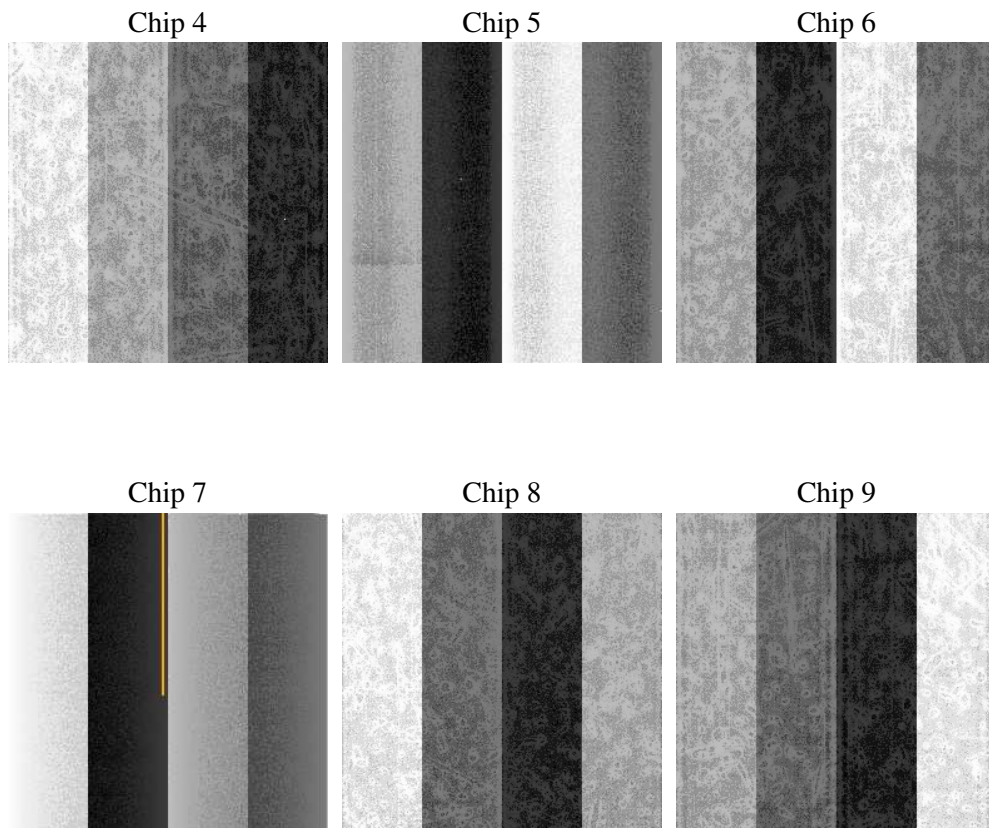
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-06-23T17:18:22
revision	2

sched_exp_time	93000.000000
ontime	92825.807569593
ontime4	92825.807569593
ontime5	92825.807569593
ontime6	92822.566579312
ontime7	92825.807569593
ontime8	92825.807569593
ontime9	92822.566569418
l1events	3972019

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	612798	865671	541837	734270	680903	536540
rejected events	517206	454904	476232	454807	538464	469830
rejected %	84%	52%	87%	61%	79%	87%

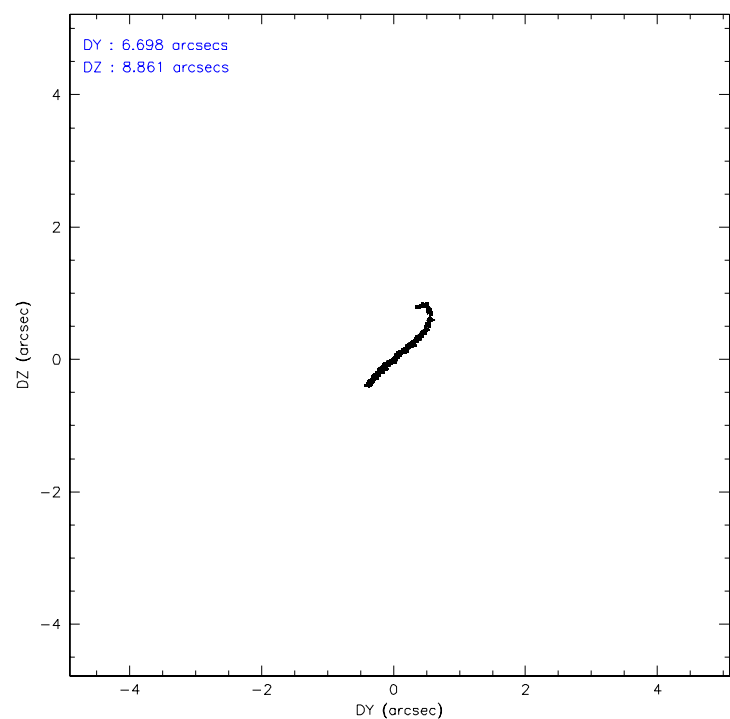
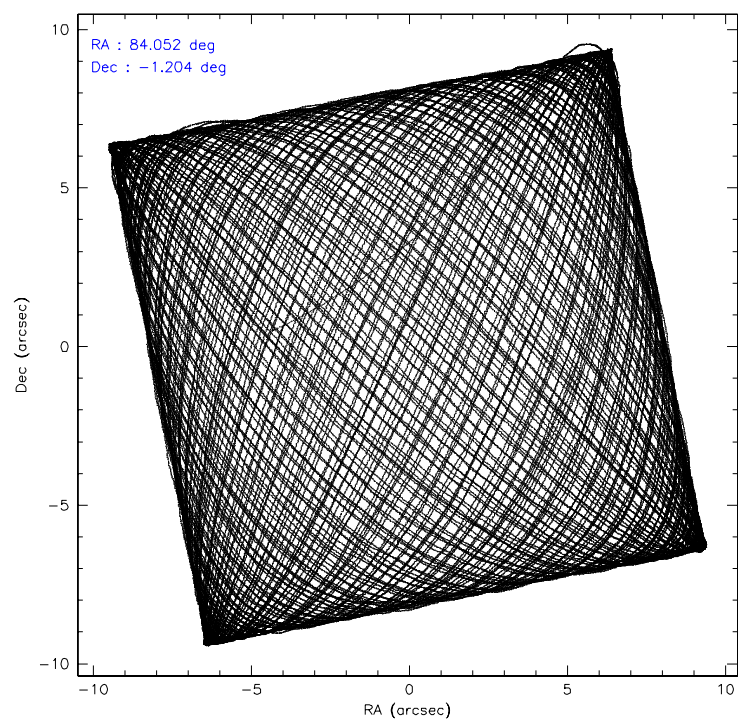
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	57694	86303	26197	17067	46160	27817
	9%	9%	4%	2%	6%	5%
grade 1 events	663	6765	237	462	428	290
	0%	0%	0%	0%	0%	0%
grade 2 events	13879	107918	13632	69410	30544	12767
	2%	12%	2%	9%	4%	2%
grade 3 events	6856	8293	6260	14402	15223	6614
	1%	0%	1%	1%	2%	1%
grade 4 events	6521	8405	6279	13935	14539	6384
	1%	0%	1%	1%	2%	1%
grade 5 events	24338	38495	25686	48309	33033	26992
	3%	4%	4%	6%	4%	5%
grade 6 events	10645	199870	13239	164654	35974	13130
	1%	23%	2%	22%	5%	2%
grade 7 events	492202	409622	450307	406031	505002	442546
	80%	47%	83%	55%	74%	82%

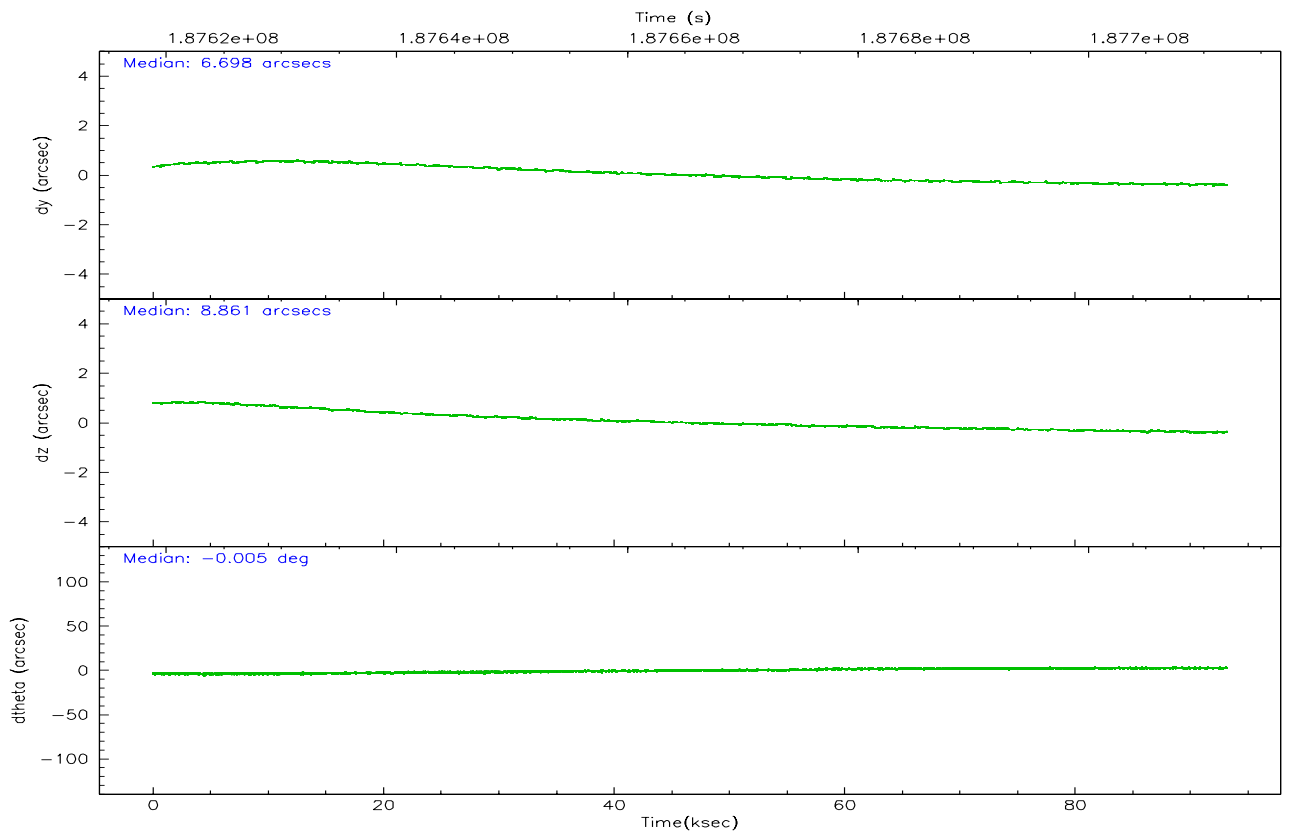
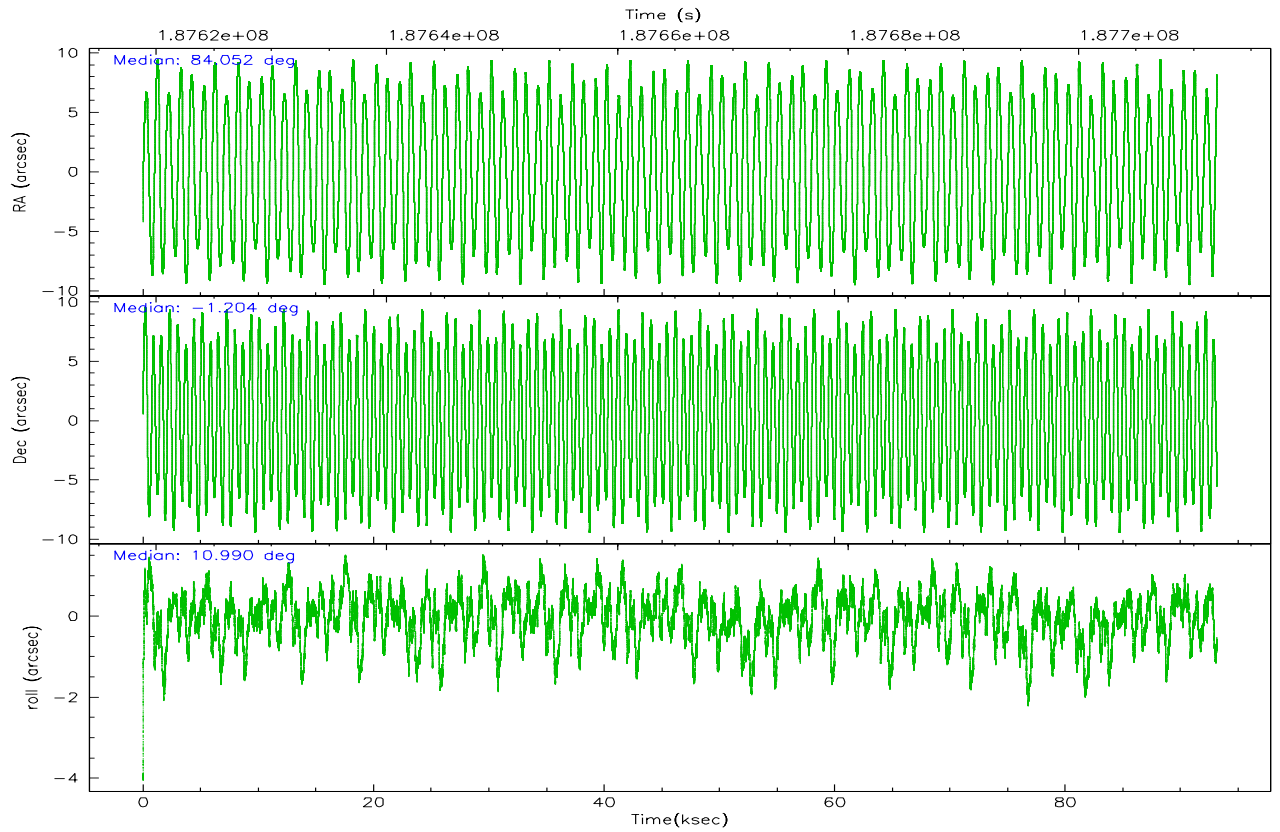


## 2.2 Compared Parameters

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	84.031472	84.05176489064429	Alternating exposures requested	N	N
Pointing Dec	-1.222007	-1.203857670844222	Primary exposure time	0.000000	3.2
Pointing Roll	10.836462	10.99351972354114			
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			
Observation start time	187619033.184000	187618010.43724			
Observation start date	2003-12-12T12:22:49	2003-12-12T12:06:50			
Observation end time	187712033.184000	187713701.36639			
Observation end date	2003-12-13T14:12:49	2003-12-13T14:41:41			
Read mode	TIMED	TIMED			

2.3 Aspect



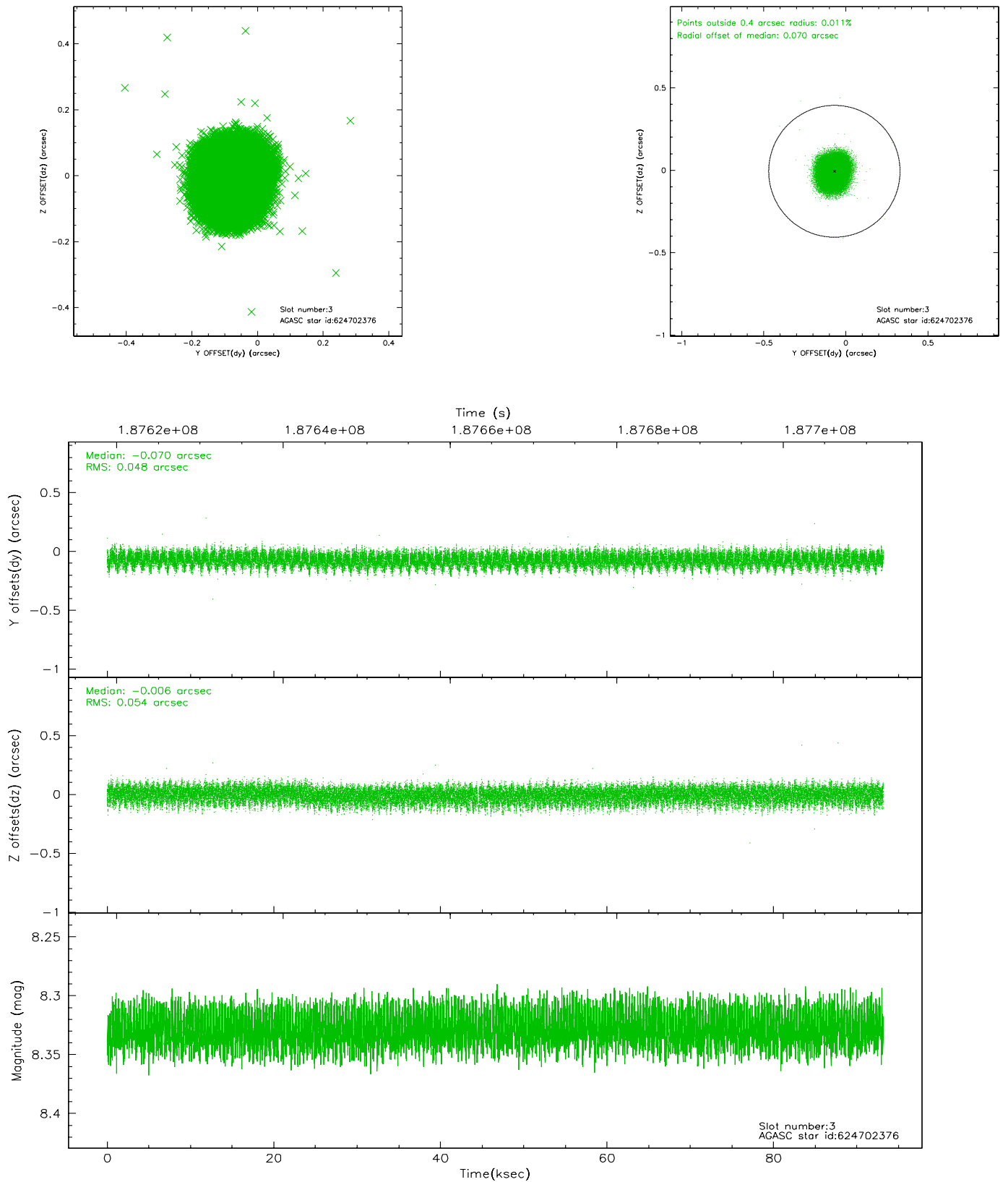


### Slot Statistics

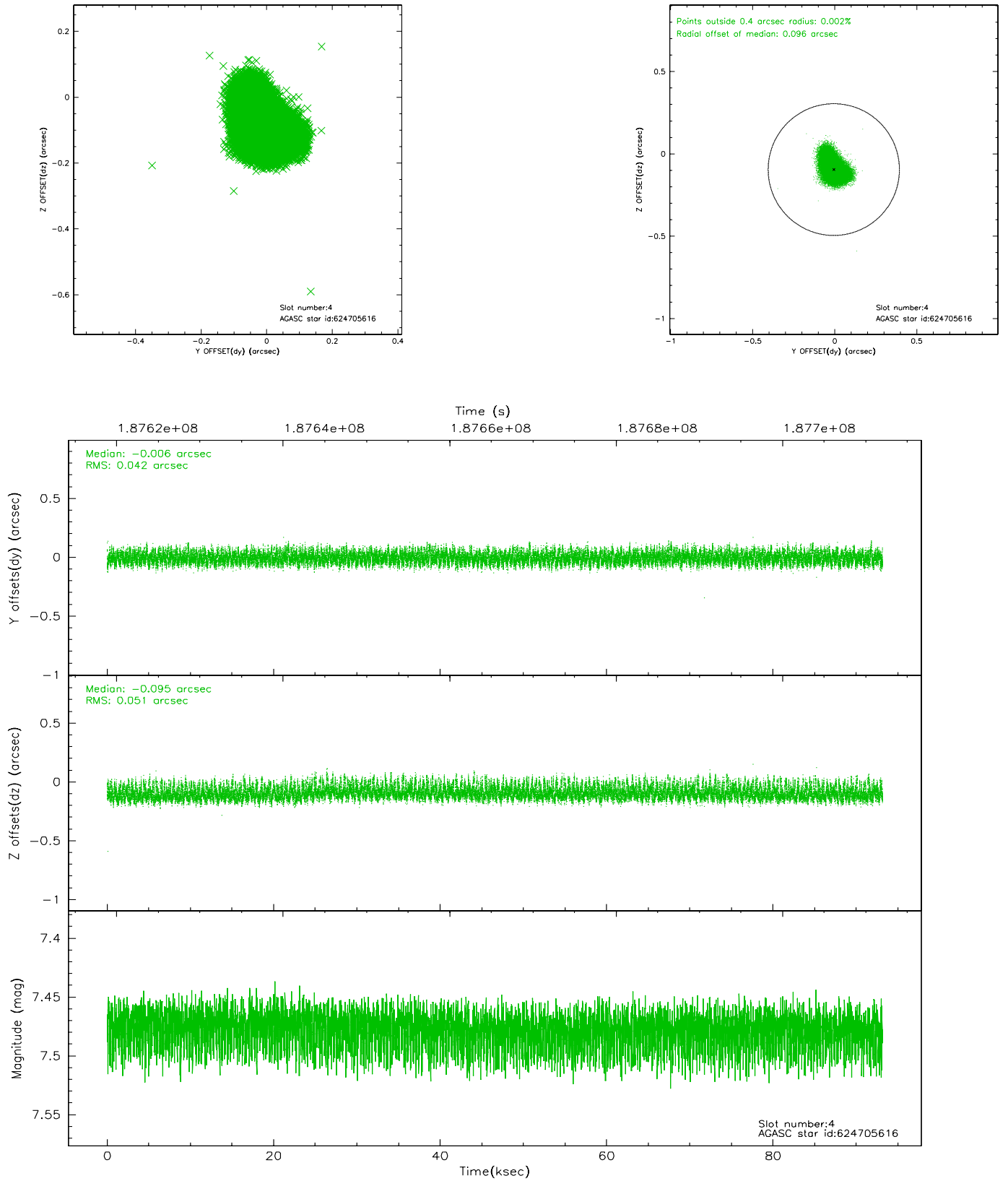
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	22728	0.023	0.009	0.010	0.023	0.000000	0.000000	936.54	-1725.80
1	FID	ACIS-S-5	7.24	22728	-0.033	0.032	0.010	0.025	0.000000	0.000000	-1812.53	171.90
2	FID	ACIS-S-6	7.35	22728	-0.012	-0.028	0.007	0.013	0.000000	0.000000	402.18	815.68
3	GUIDE	624702376	8.33	45372	-0.070	-0.006	0.078	0.121	83.886945	-1.846151	-932.88	-2109.07
4	GUIDE	624705616	7.48	45451	-0.006	-0.095	0.071	0.116	83.803284	-0.735354	-477.28	1875.04
5	GUIDE	624825416	8.10	45443	0.031	-0.052	0.056	0.088	84.441218	-0.778257	1749.23	1291.84
6	GUIDE	624827192	7.38	45454	0.051	0.141	0.070	0.115	84.557233	-1.169177	1894.70	-168.78
7	GUIDE	624691512	8.64	45454	-0.009	0.015	0.062	0.102	83.454645	-1.721197	-2376.17	-1375.24

## 2.4 Star Slots

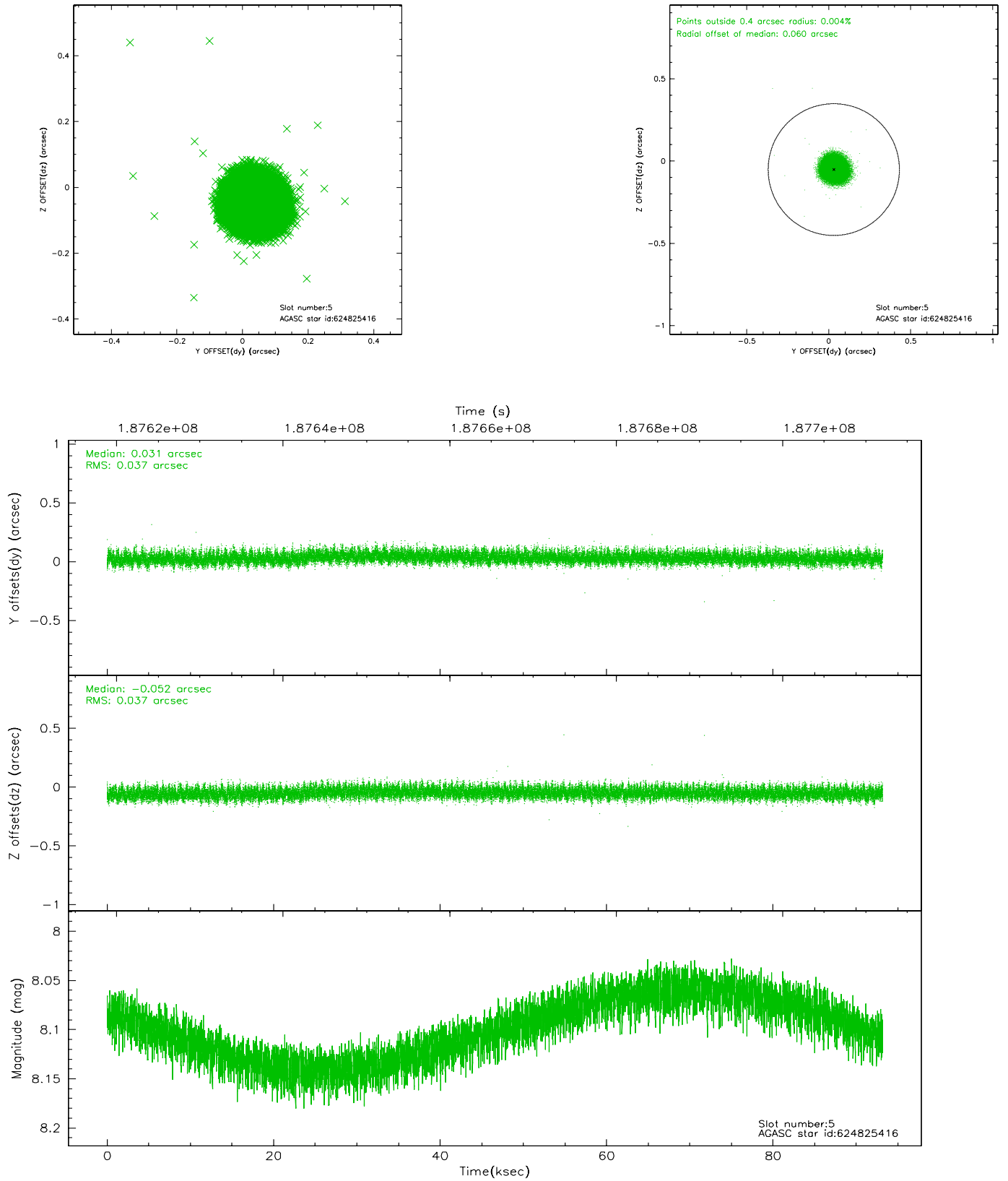
### 2.4.1 Slot 3



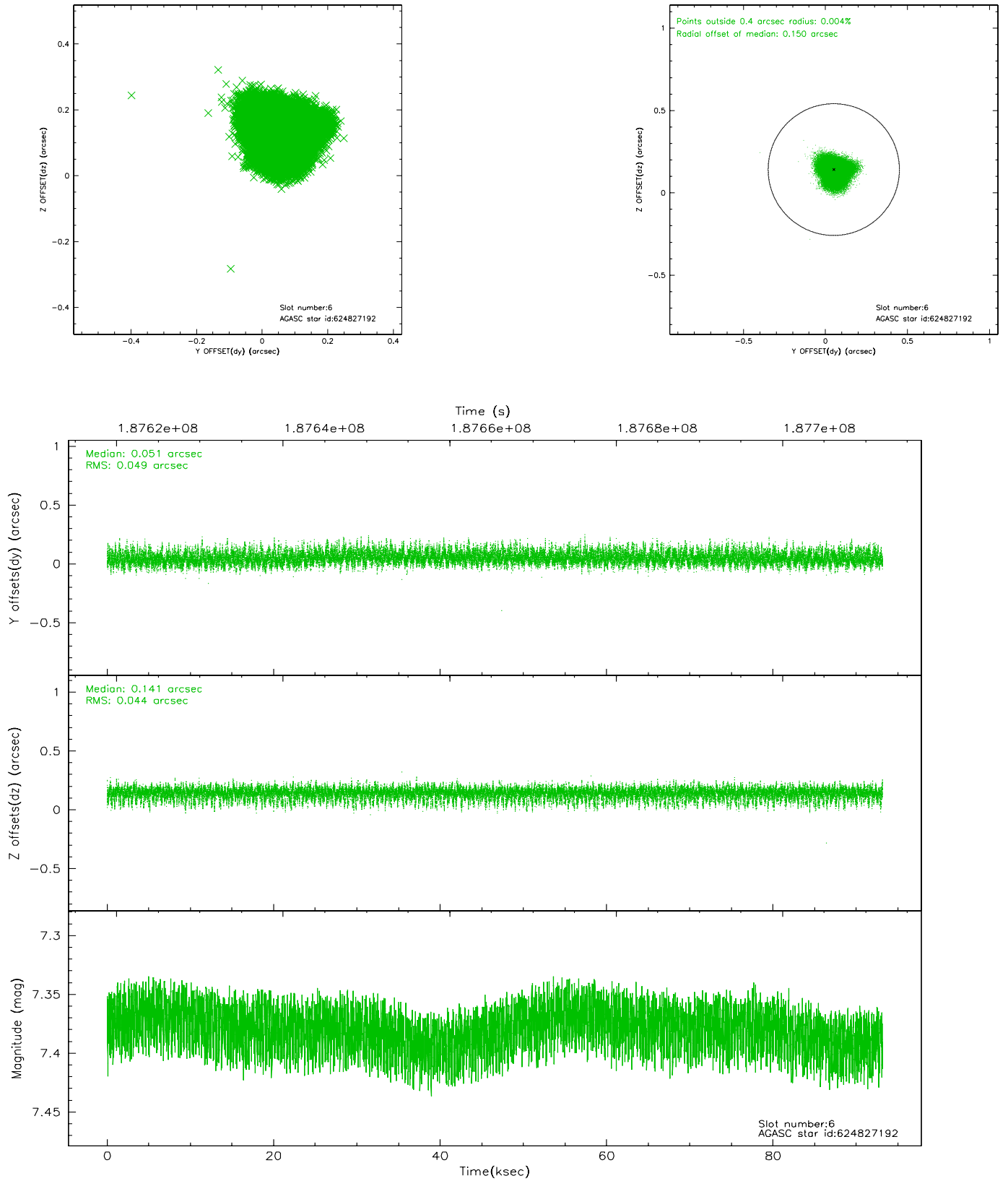
## 2.4.2 Slot 4



### 2.4.3 Slot 5

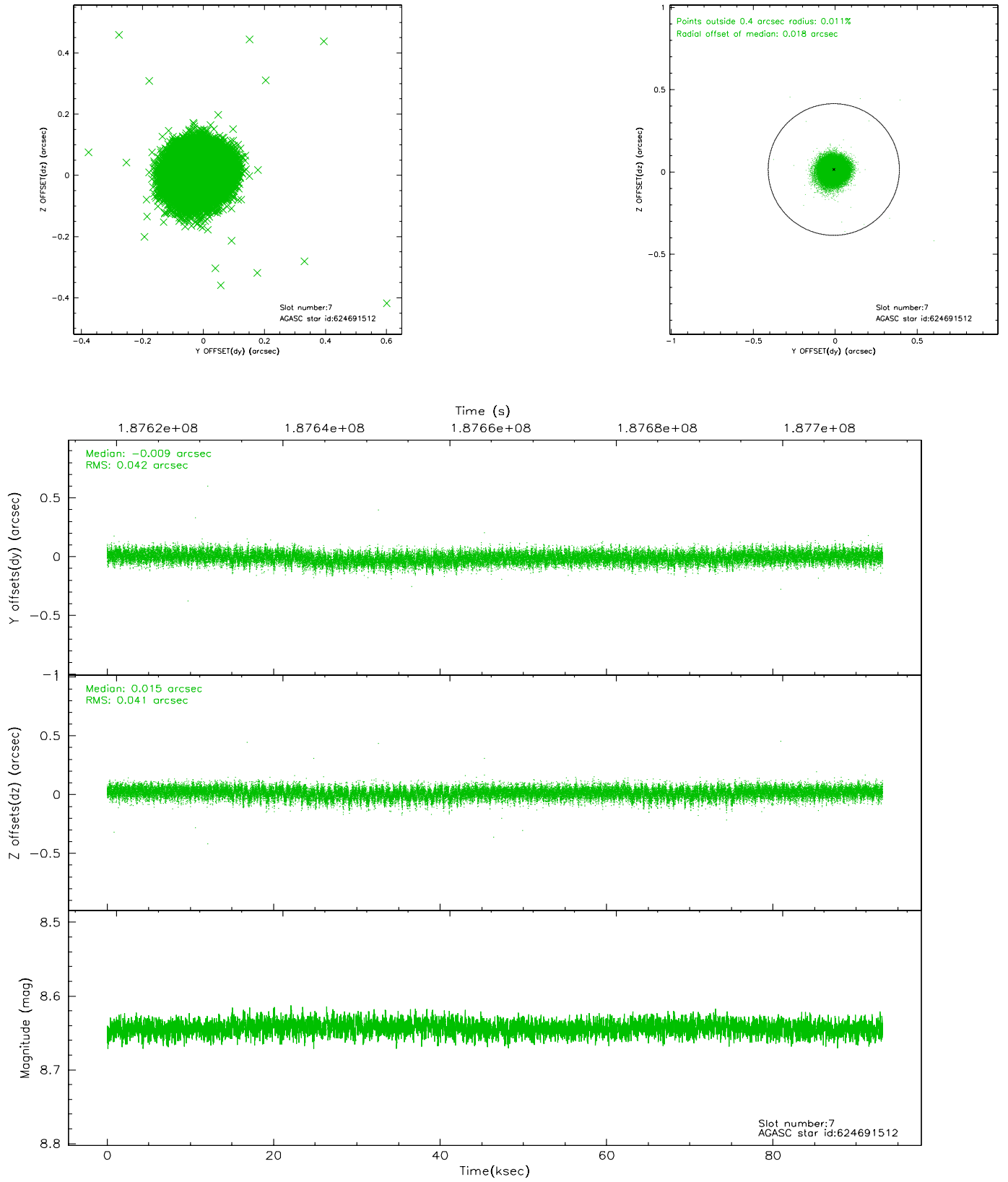


## 2.4.4 Slot 6



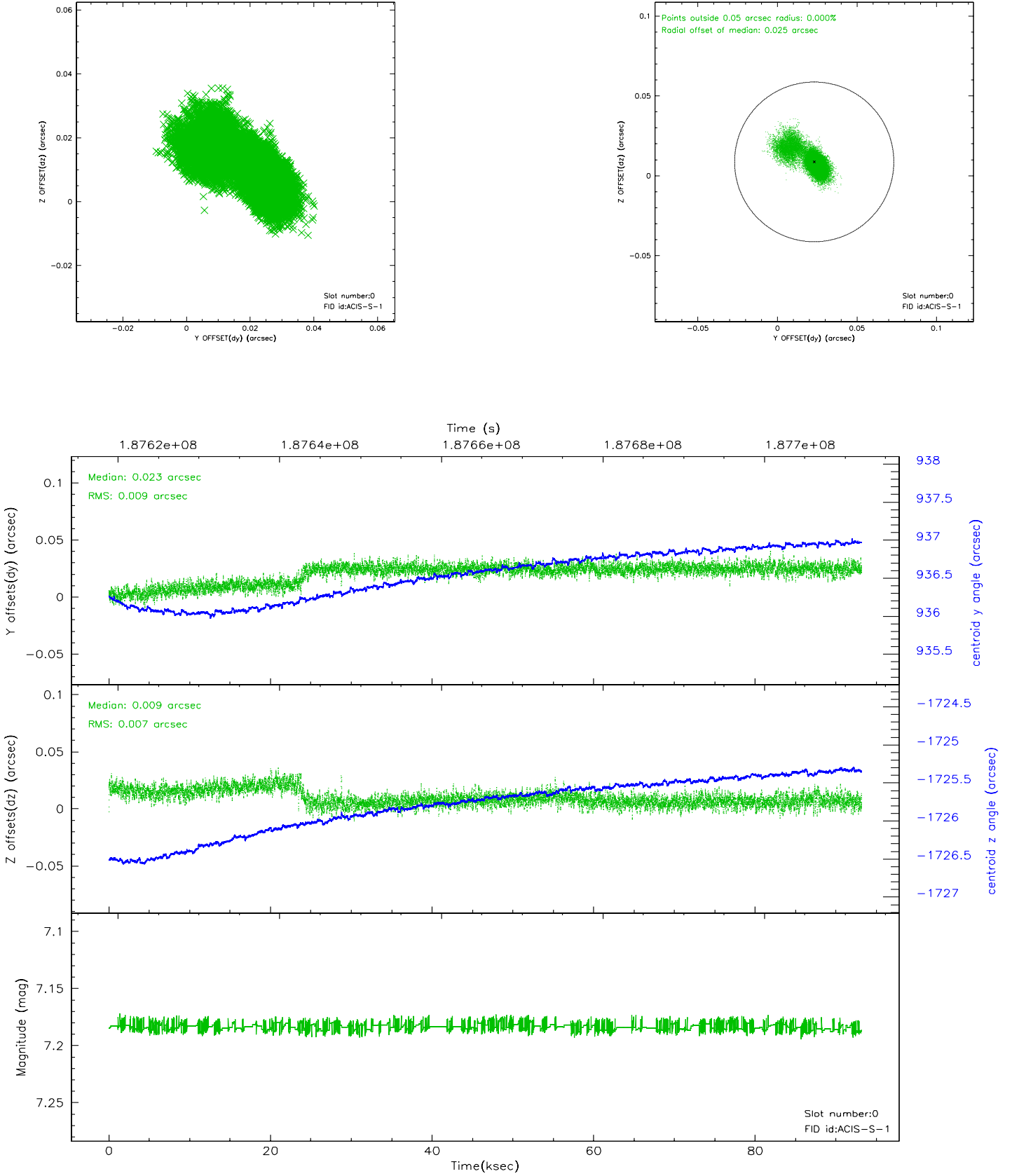


## 2.4.5 Slot 7

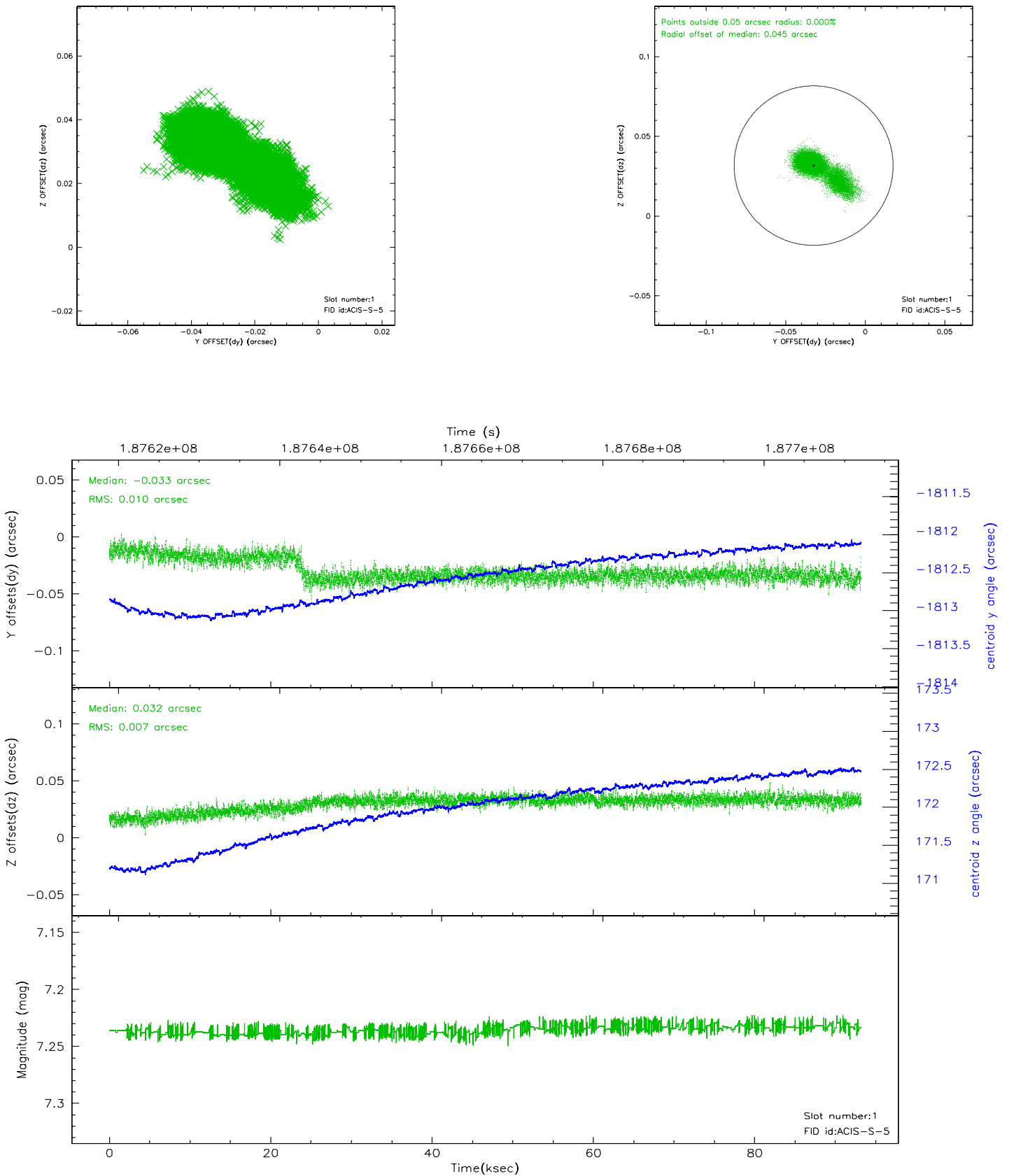


## 2.5 FID Slots

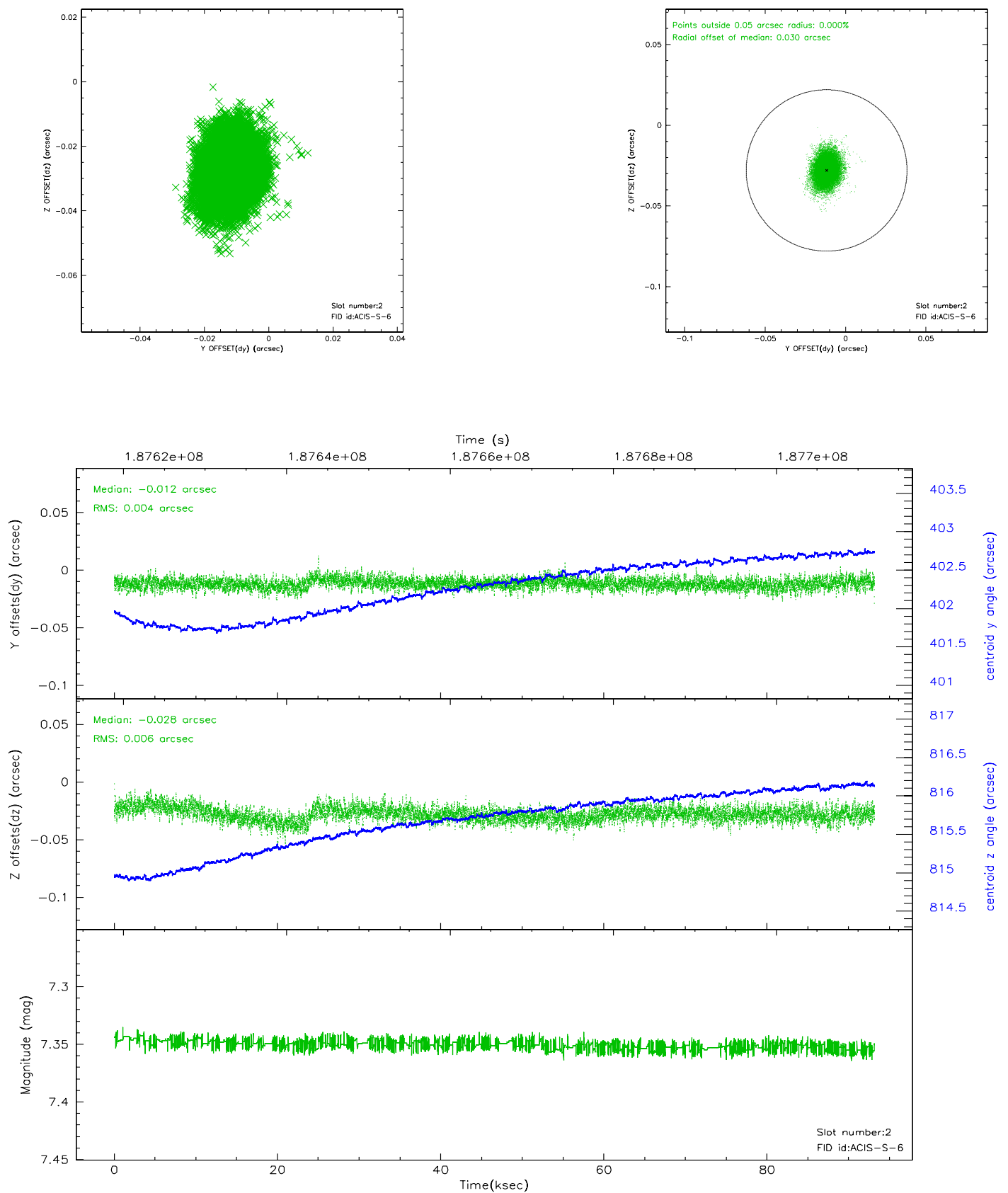
### 2.5.1 Slot 0



### 2.5.2 Slot 1



### 2.5.3 Slot 2

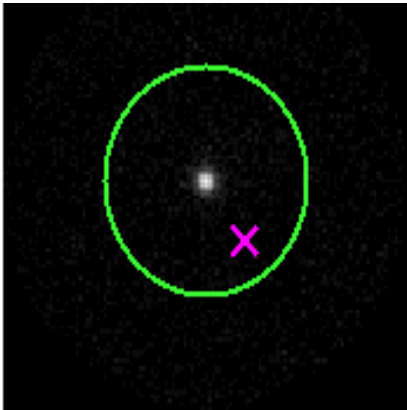


# 3 Gratings

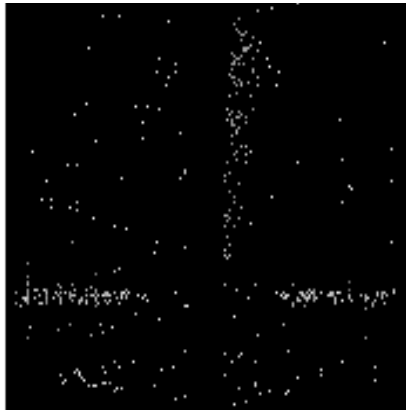
## 3.1 HEG Arm



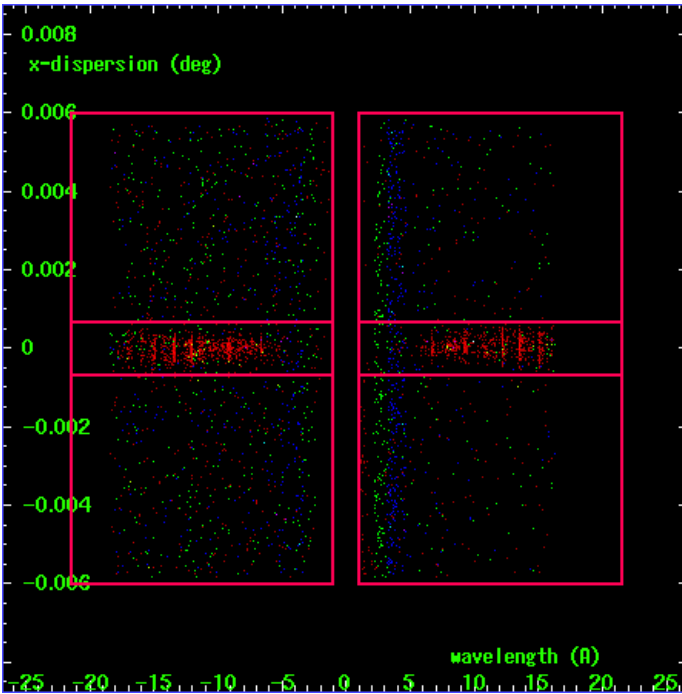
HEG Order Sort 123



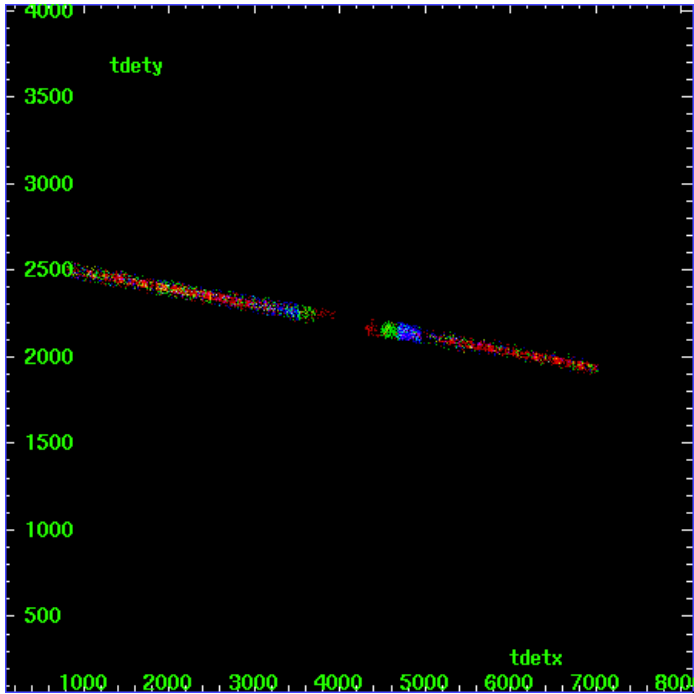
HEG Zero Order



HEG Order Sort ALL

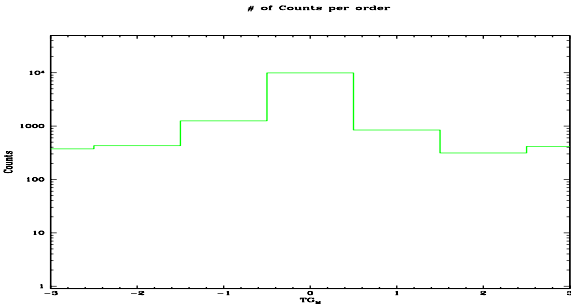


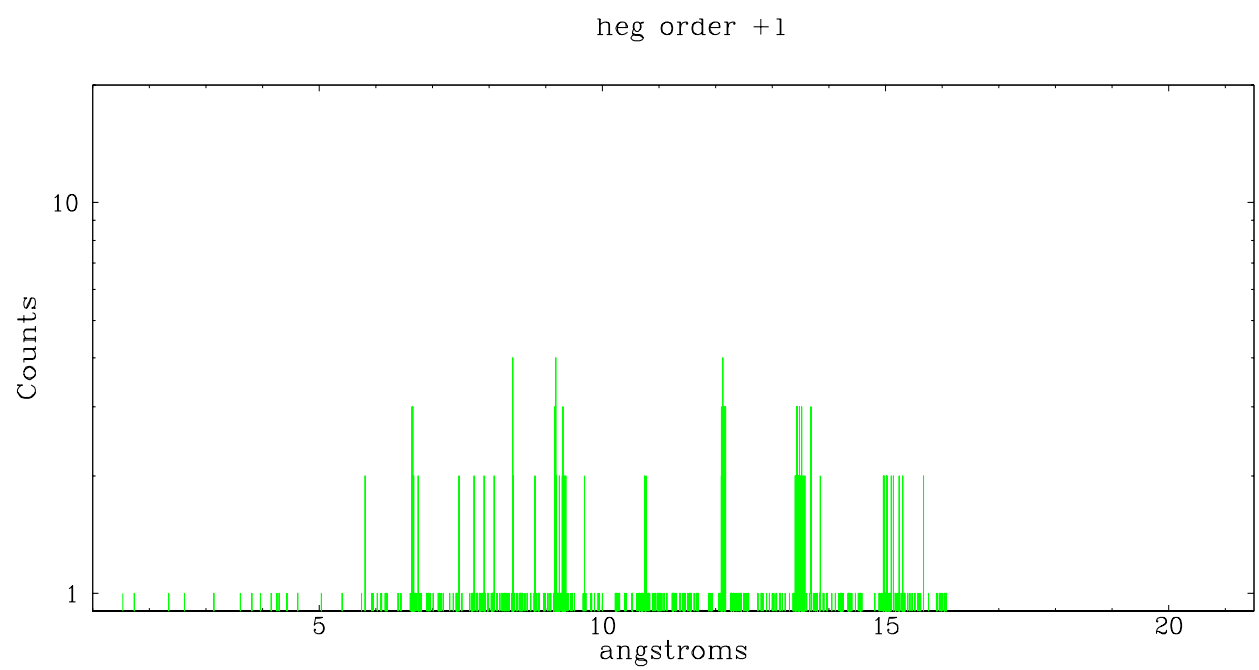
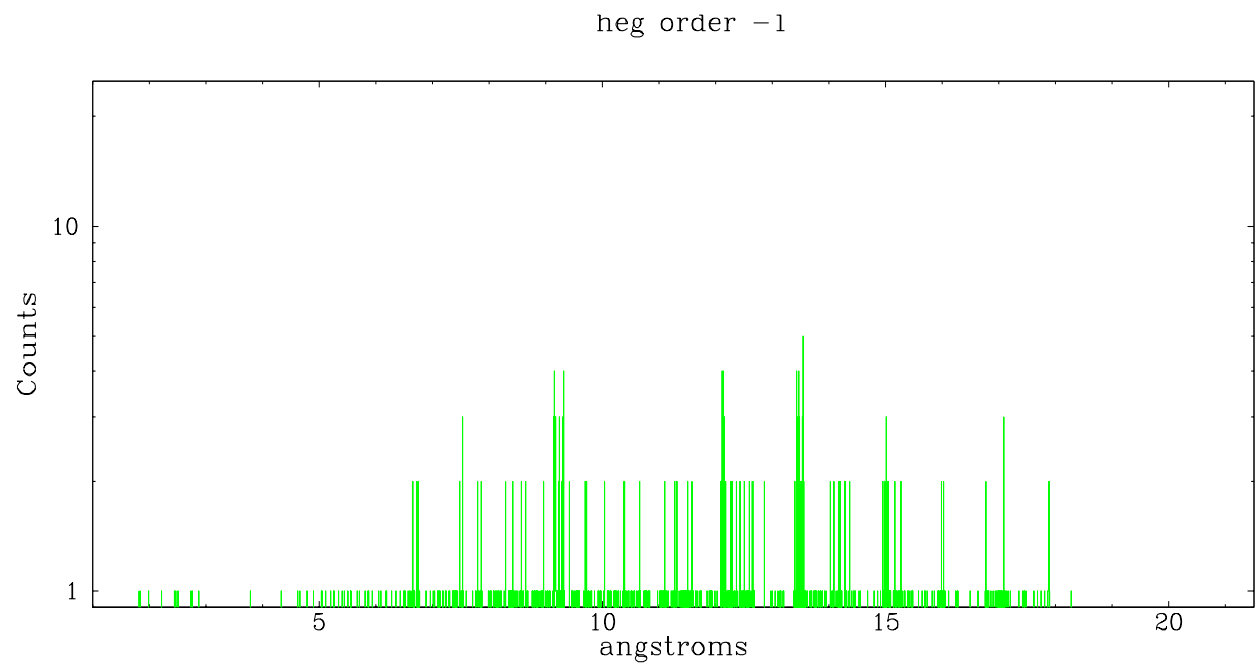
Spot Image HEG



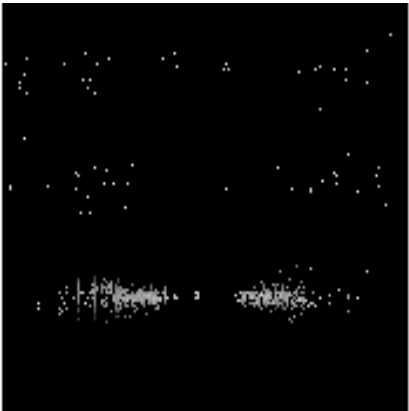
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	373	429	1248	9859	843	312	416

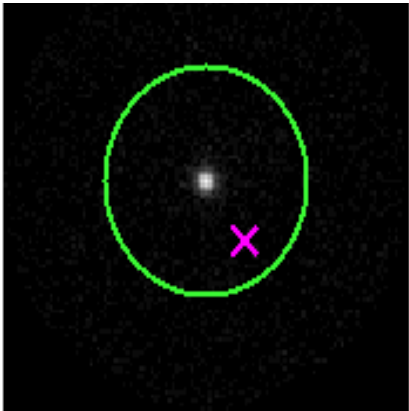




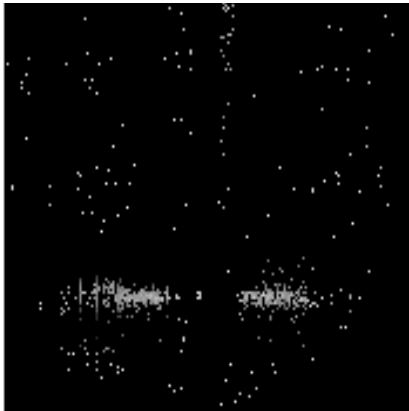
### 3.2 MEG Arm



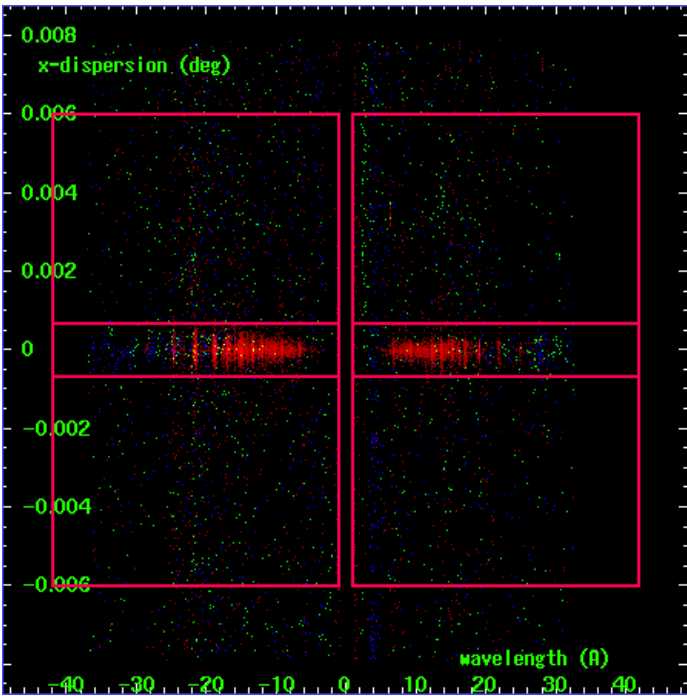
MEG Order Sort 123



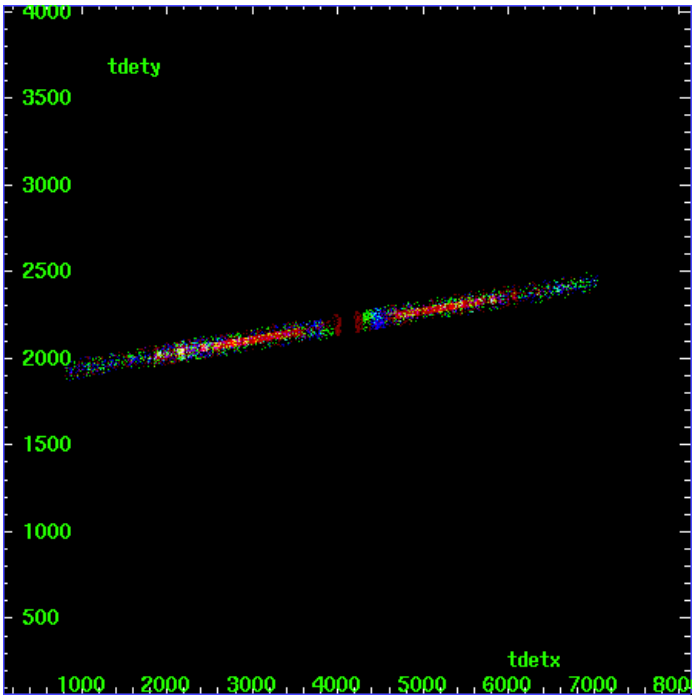
MEG Zero Order



MEG Order Sort ALL

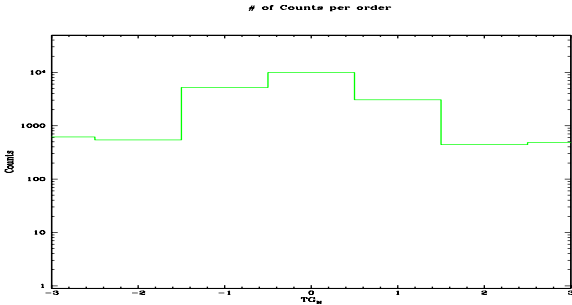


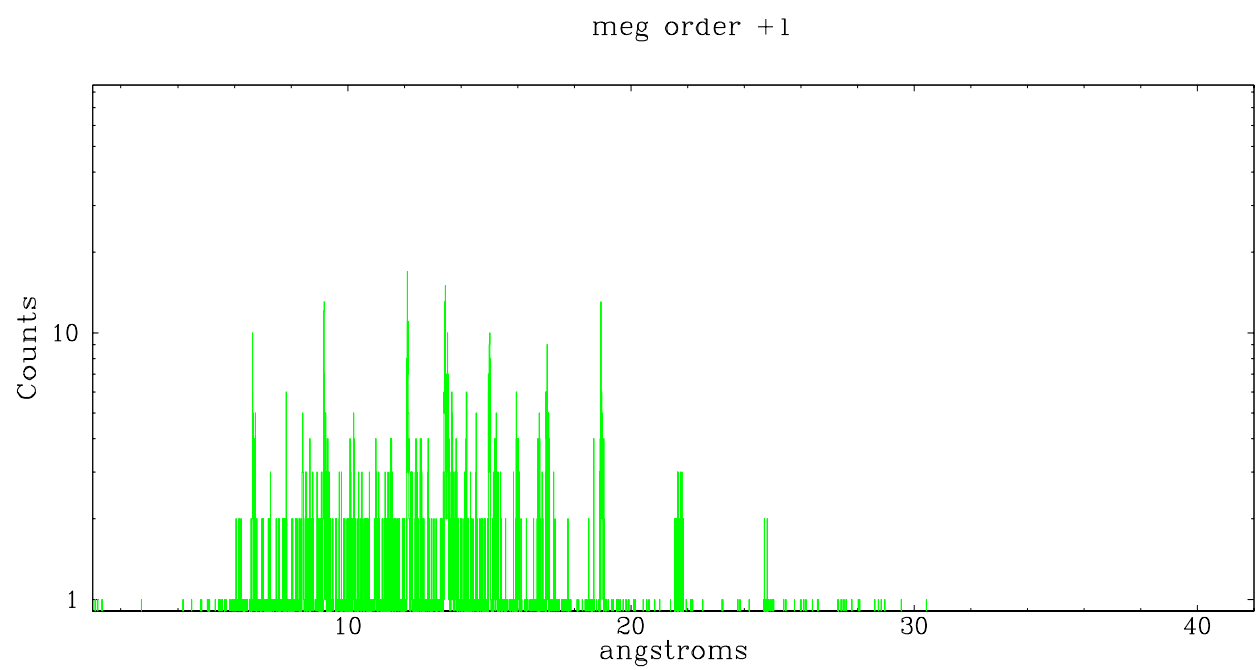
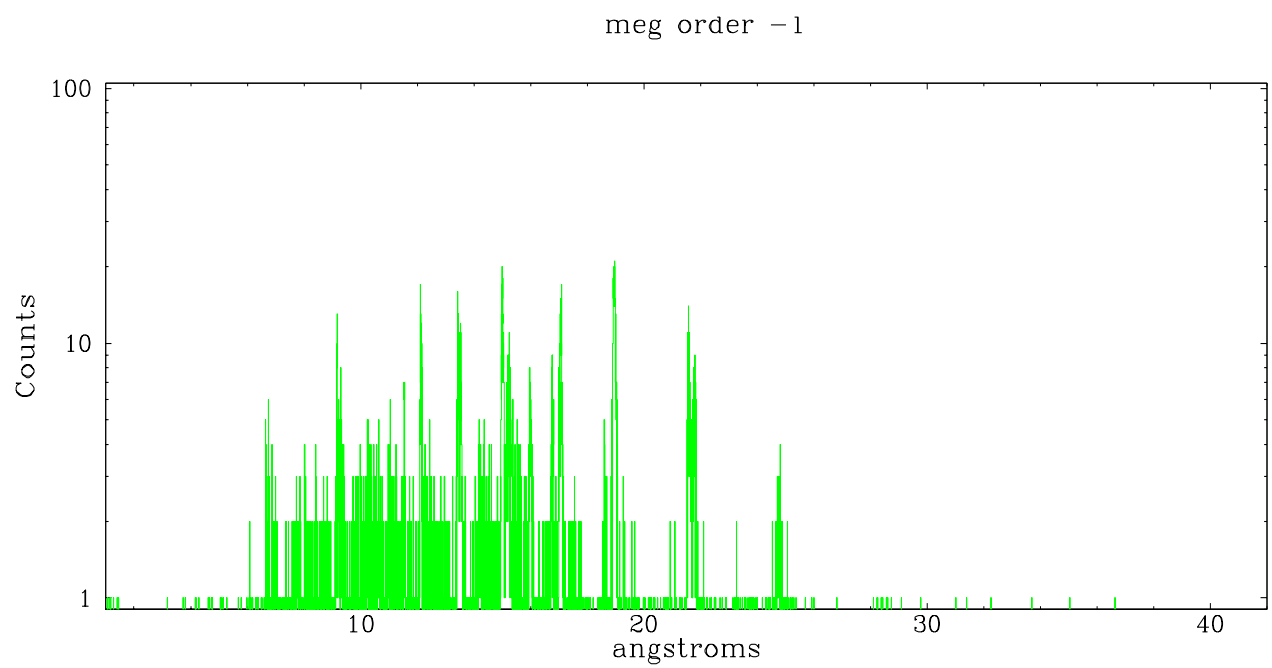
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	617	541	5186	9859	3045	442	484







## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.06.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	92.822

### A.2 Comments