

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5933 - L2 Version 002  
Chandra X-Ray Center

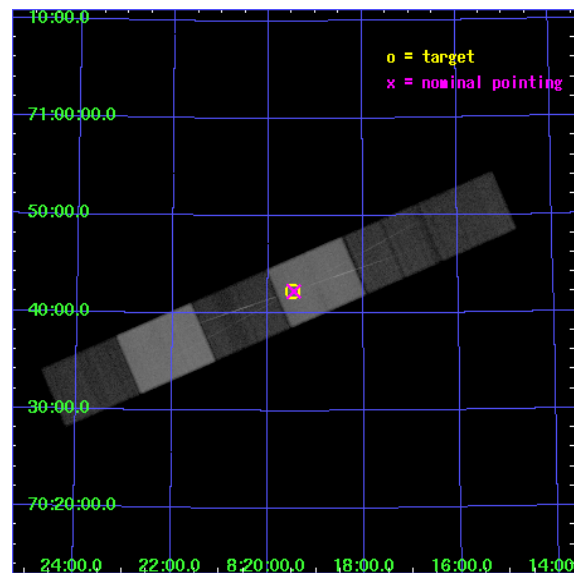
L2 Processing Date : Mar 14 2006

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# 1 Front

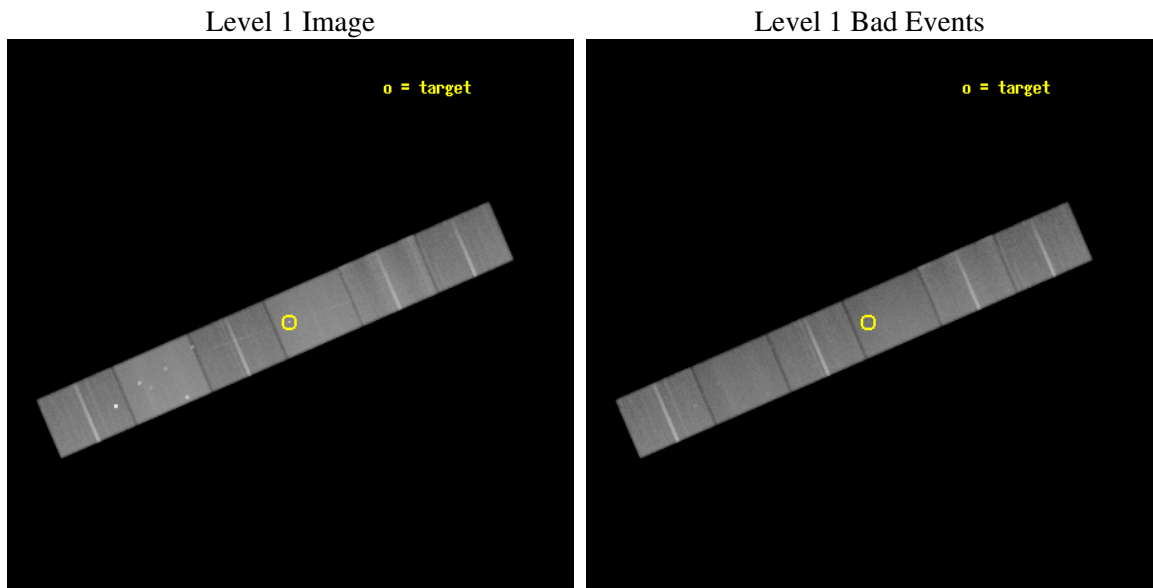
seq_num	600452
obs_id	5933
title	Chandra HETG View of an ULX Associated with an SNR in Holmberg II
observer	Dr. Gulab Dewangan
object	Holmberg II X-1
dtcycle	0
cycle	P
ra_targ	124.870833
dec_targ	70.705444
ra_nom	124.86465811617
dec_nom	70.704467662772
roll_nom	336.56147455305
revision	2
ontime	98555.0
livetime	96963.251267197
ontime4	98555.0
ontime5	98555.0
ontime6	98555.0
ontime7	98555.0
ontime8	98555.0
ontime9	98555.0
l2events	967520



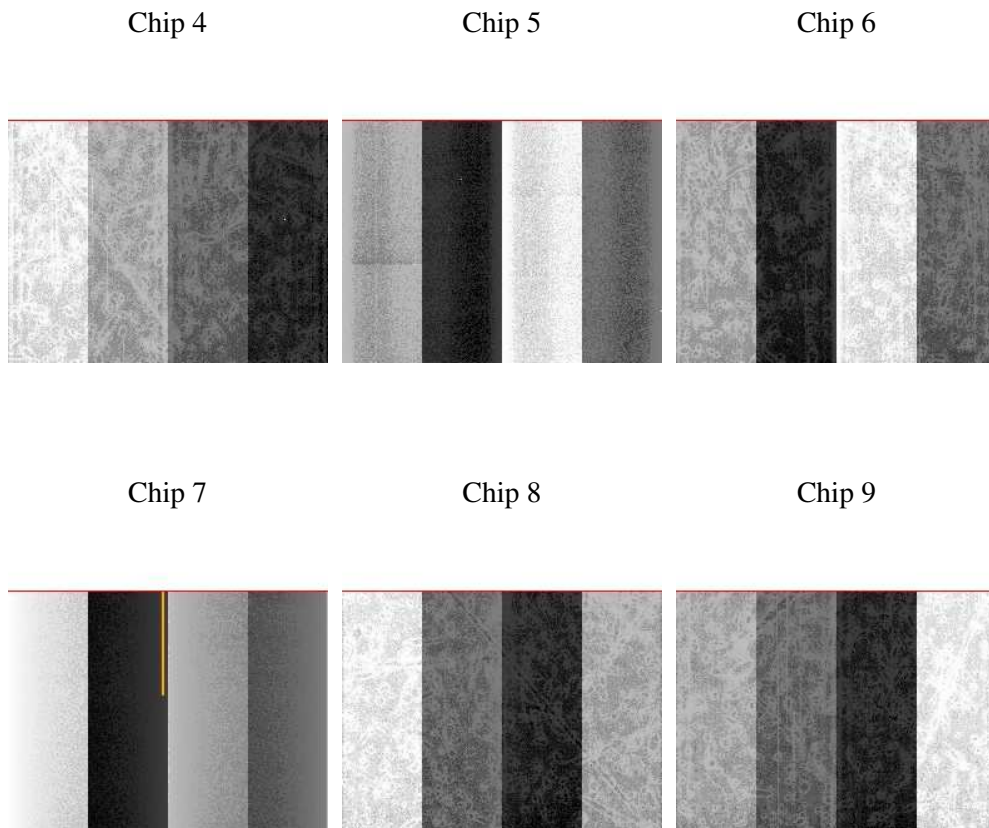
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-03-14T12:14:50
revision	2

sched_exp_time	98511.109000
ontime	98558.101988554
ontime4	98558.101988554
ontime5	98558.101988554
ontime6	98558.101988554
ontime7	98558.101988554
ontime8	98558.101988554
ontime9	98558.101988554
l1events	4418557

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	705226	905764	611174	823011	772168	601214
rejected events	599337	501735	535139	494401	601514	525681
rejected %	84%	55%	87%	60%	77%	87%

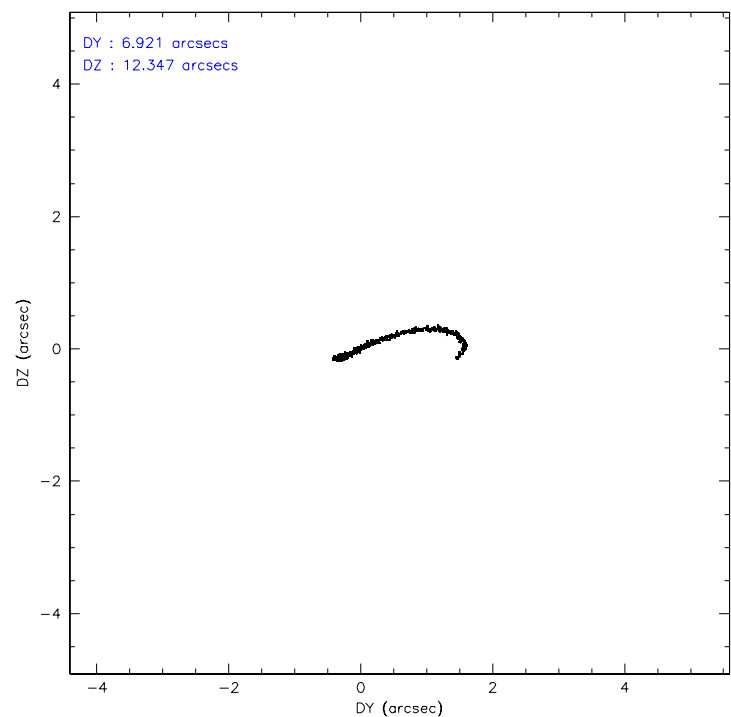
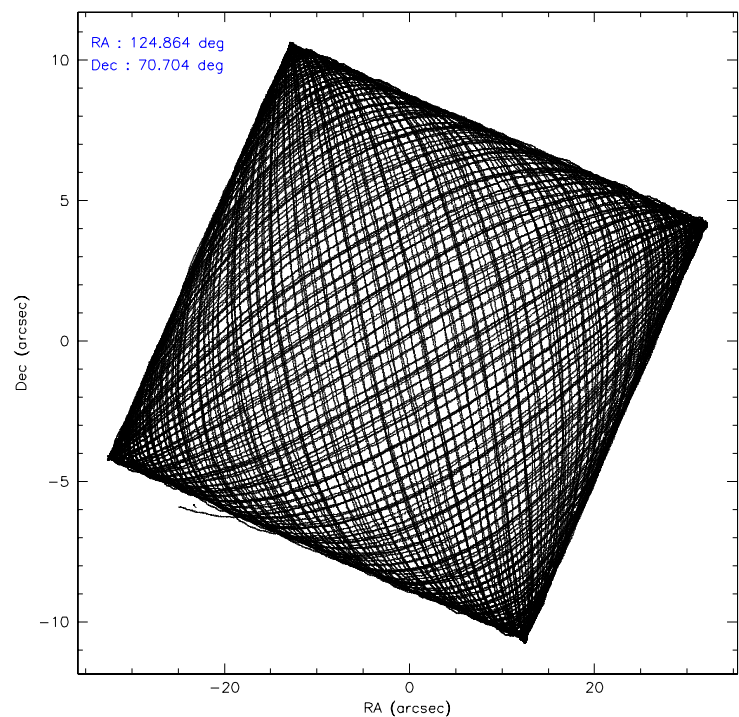
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	61572	33596	30448	20135	53060	30540
	8%	3%	4%	2%	6%	5%
grade 1 events	619	1153	265	549	494	342
	0%	0%	0%	0%	0%	0%
grade 2 events	16541	121380	15723	80351	37718	14882
	2%	13%	2%	9%	4%	2%
grade 3 events	7854	10383	7634	19742	18275	7868
	1%	1%	1%	2%	2%	1%
grade 4 events	7747	9850	7514	19017	17062	7720
	1%	1%	1%	2%	2%	1%
grade 5 events	26428	45858	27394	58797	36609	29199
	3%	5%	4%	7%	4%	4%
grade 6 events	12180	228829	14722	189387	44545	14526
	1%	25%	2%	23%	5%	2%
grade 7 events	572285	454715	507474	435033	564405	496137
	81%	50%	83%	52%	73%	82%

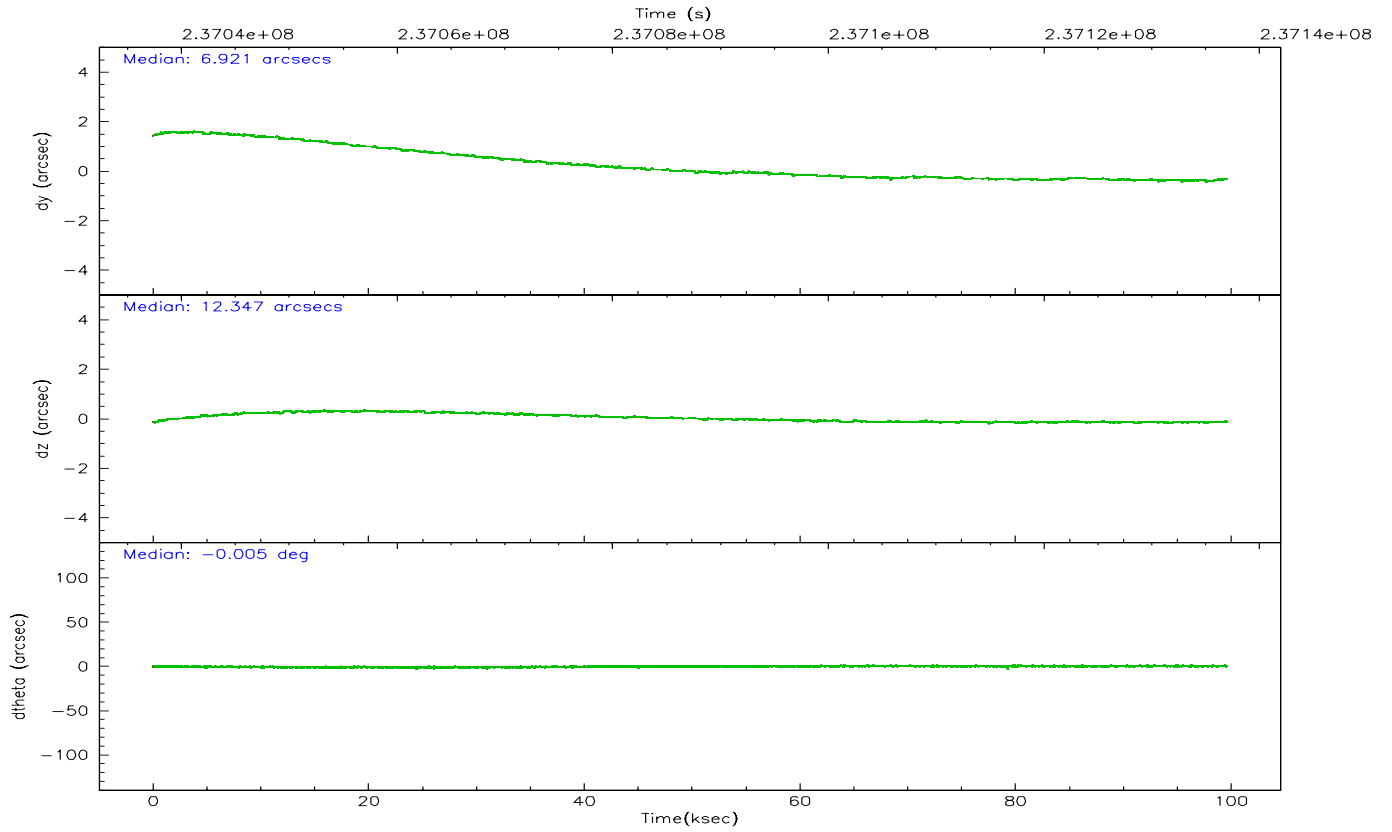
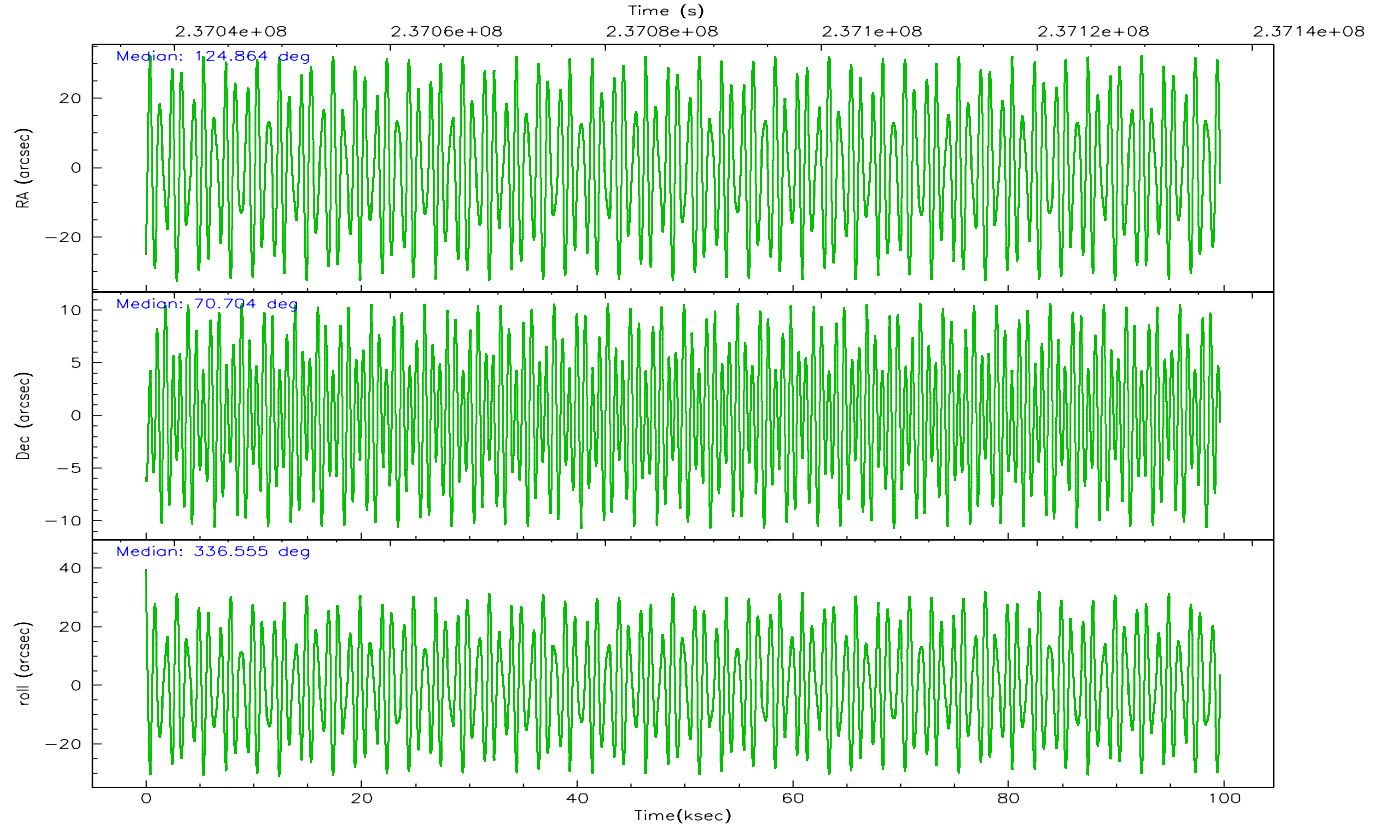


## 2.2 Compared Parameters

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	CUSTOM	CUSTOM
Pointing RA	124.782964	124.8646581161662	Subarray start row	1	1
Pointing Dec	70.700964	70.7044676627718	Subarray row count	774	774
Pointing Roll	336.481958	336.5614745530527	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	2.5
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Observation start time	237038488.184000	237036966.99363			
Observation start date	2005-07-06T12:00:24	2005-07-06T11:36:06			
Observation end time	237136999.184000	237137217.12322			
Observation end date	2005-07-07T15:22:15	2005-07-07T15:26:57			
Read mode	TIMED	TIMED			

2.3 Aspect



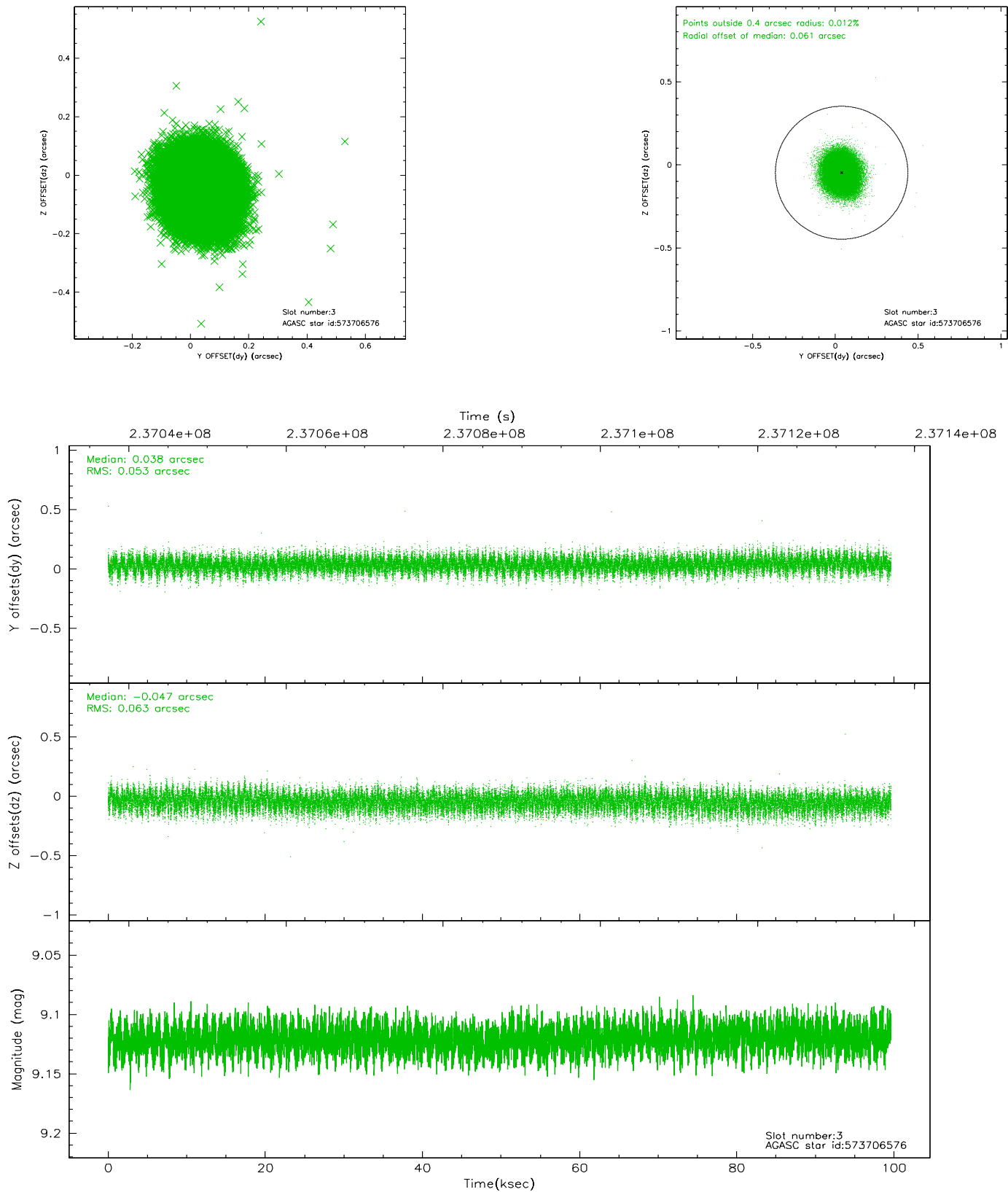


### Slot Statistics

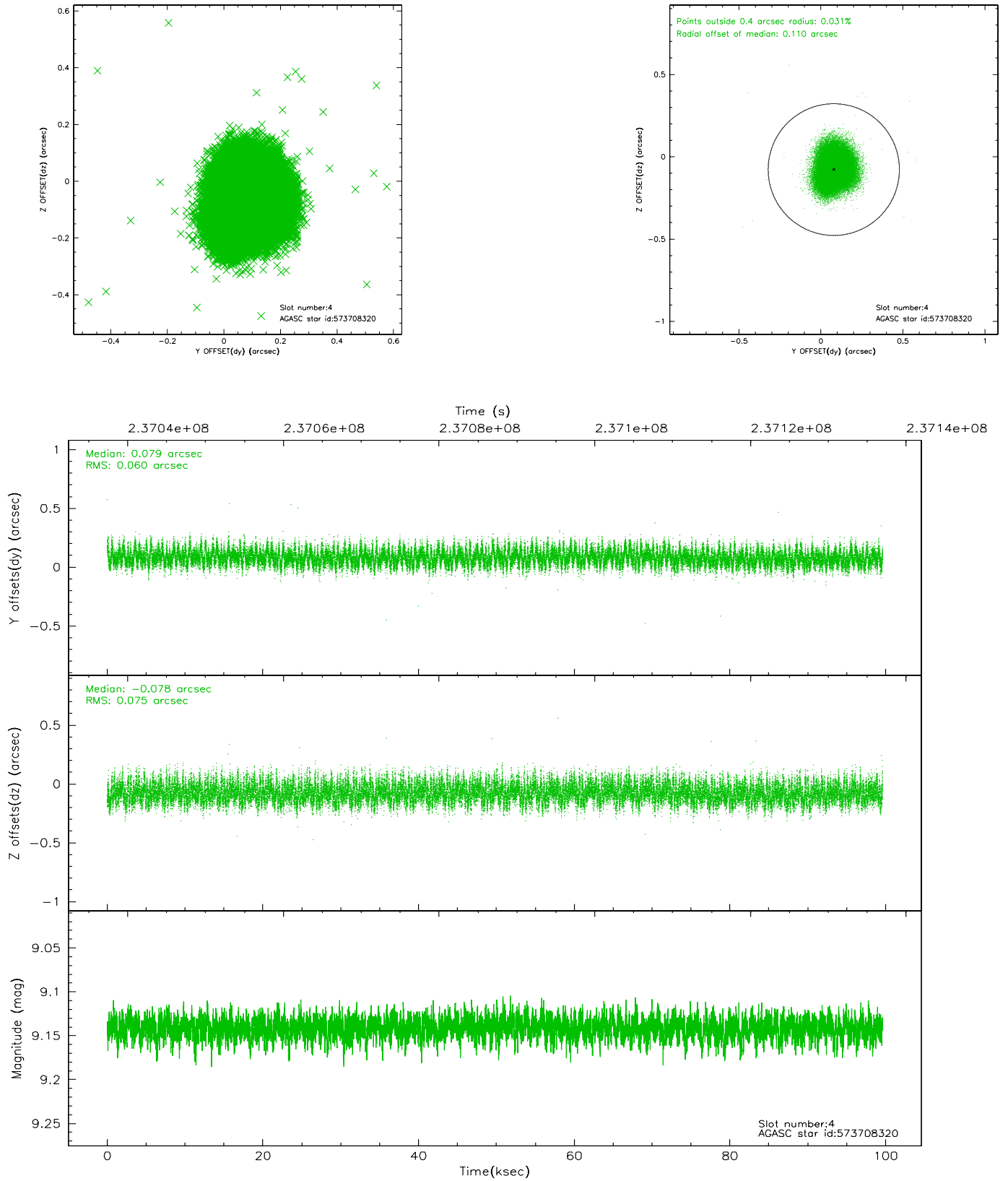
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	24303	-0.063	-0.049	0.016	0.026	0.000000	0.000000	-759.79	-1795.84
1	FID	ACIS-S-4	7.19	24302	0.085	0.043	0.017	0.024	0.000000	0.000000	2153.65	112.86
2	FID	ACIS-S-5	7.23	24303	-0.051	0.015	0.016	0.029	0.000000	0.000000	-1812.76	106.35
3	GUIDE	573706576	9.12	48579	0.038	-0.047	0.088	0.142	124.971812	70.209854	917.12	-1528.79
4	GUIDE	573708320	9.14	48564	0.079	-0.078	0.103	0.163	123.335431	70.465373	-1266.74	-1454.22
5	GUIDE	573717200	9.27	48577	0.041	0.021	0.101	0.158	126.642702	71.051410	1476.74	2054.67
6	GUIDE	573719824	8.77	48579	-0.030	0.006	0.082	0.135	124.187277	71.200735	-1352.66	1377.10
7	GUIDE	573723816	6.81	48605	-0.128	0.097	0.049	0.079	124.391876	70.177108	314.78	-1918.12

## 2.4 Star Slots

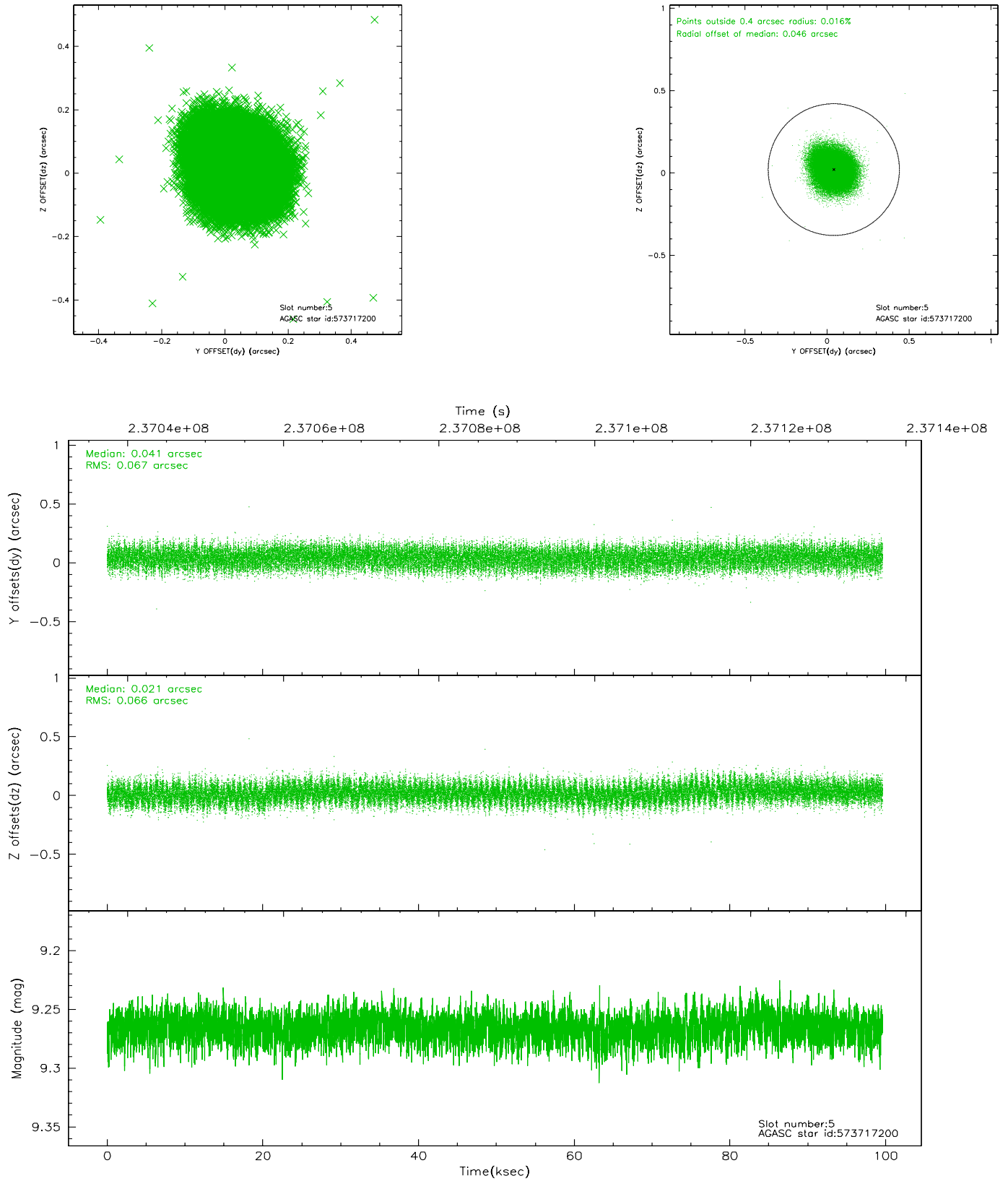
### 2.4.1 Slot 3



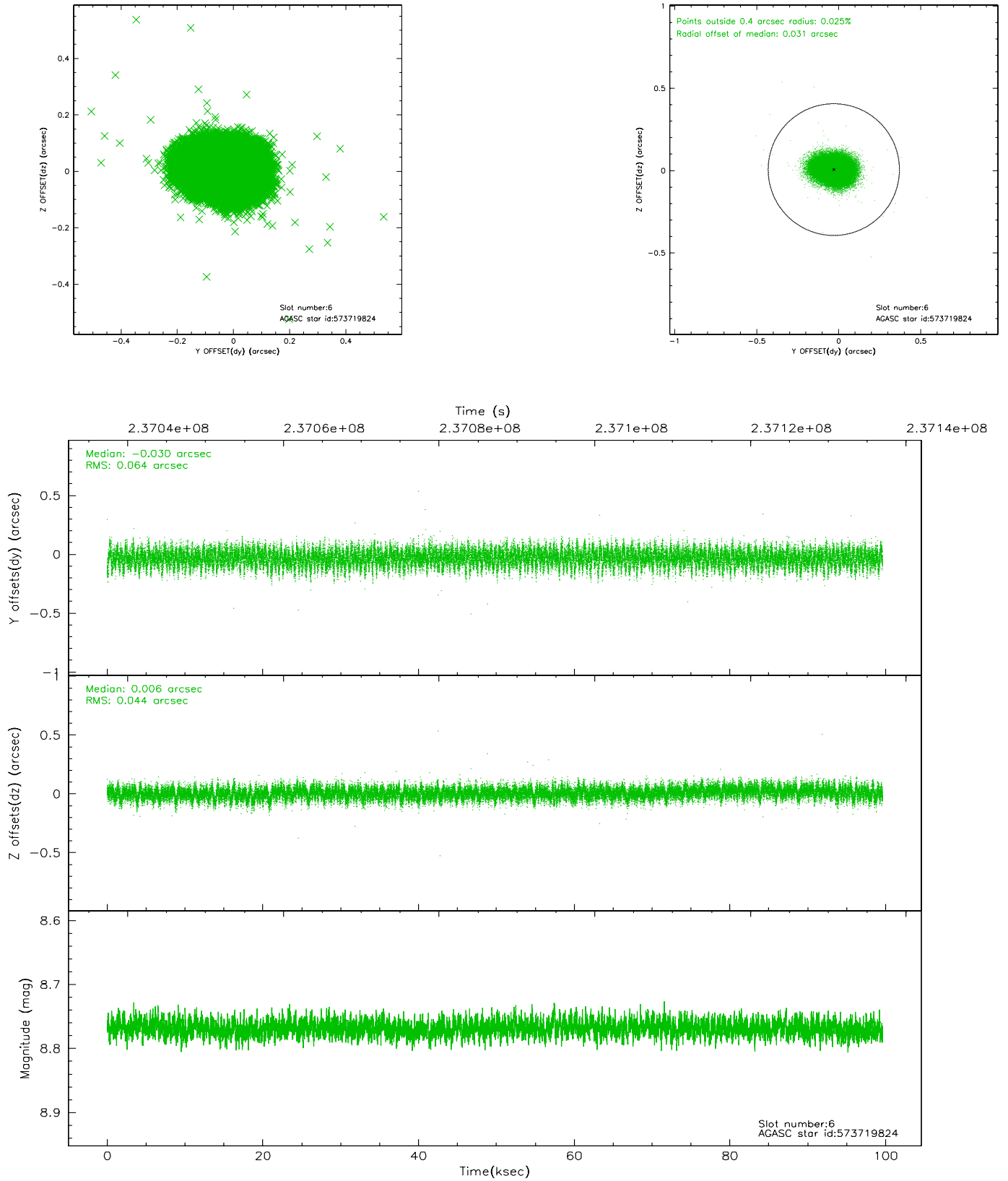
## 2.4.2 Slot 4



### 2.4.3 Slot 5

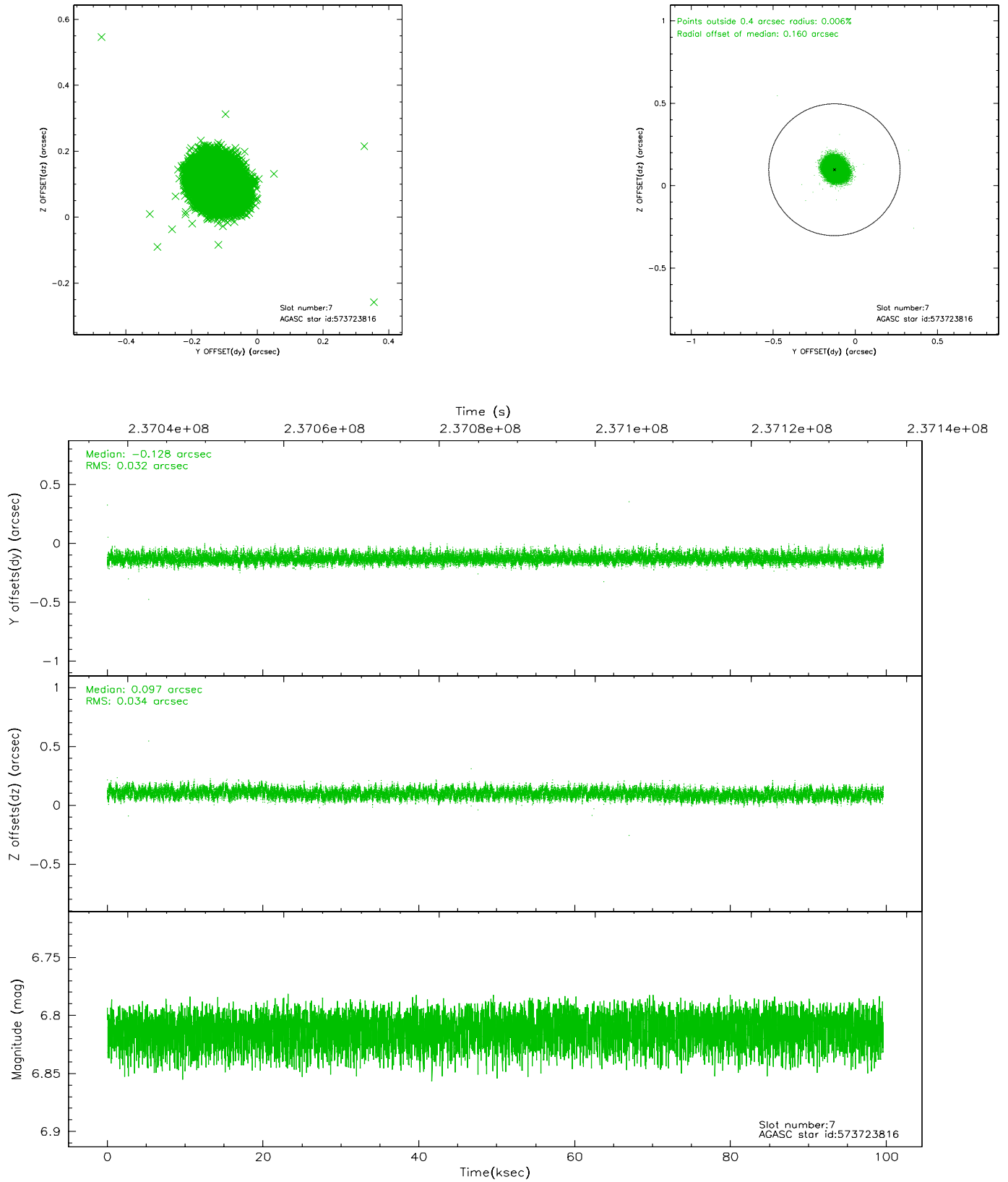


## 2.4.4 Slot 6



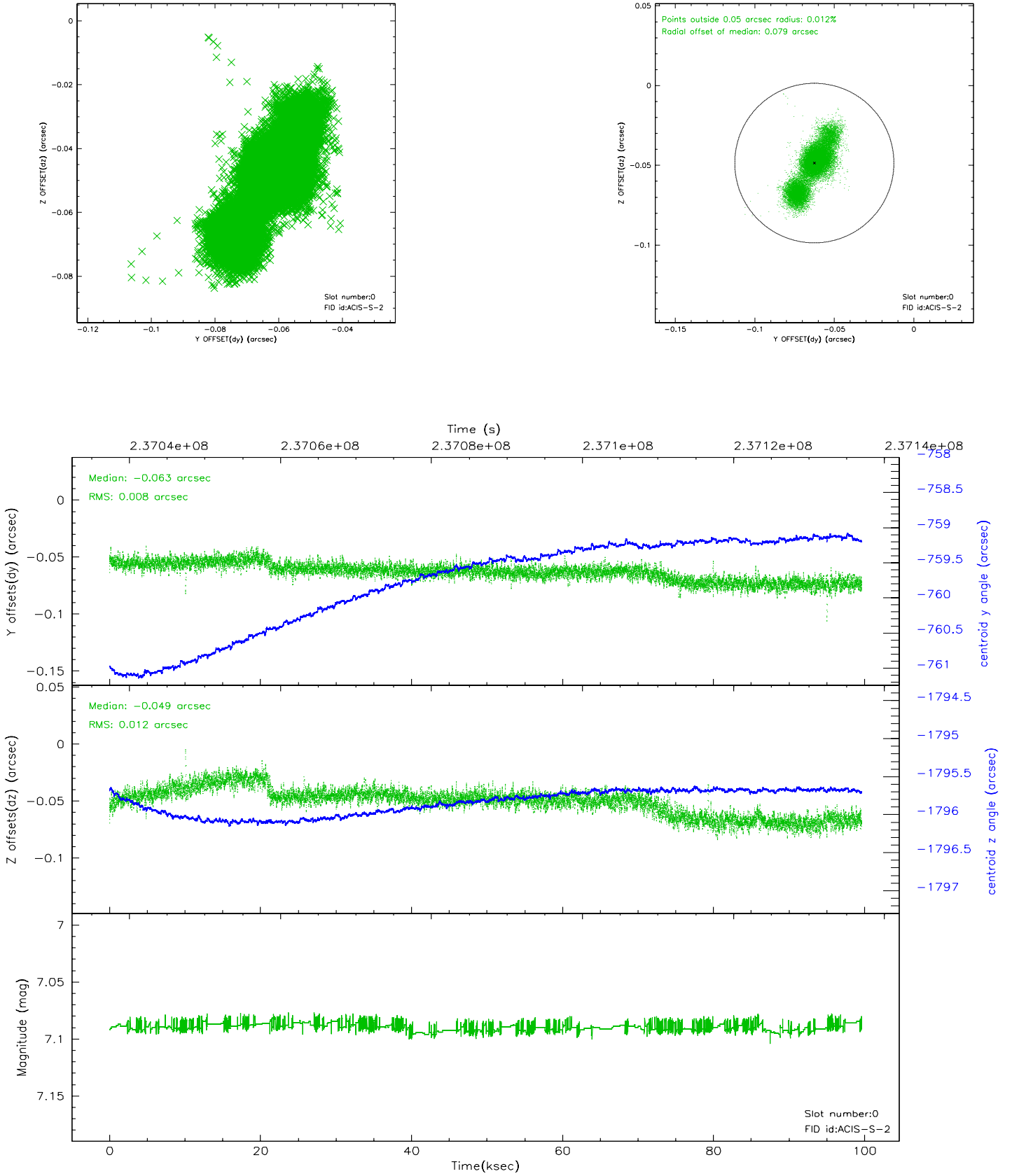


## 2.4.5 Slot 7

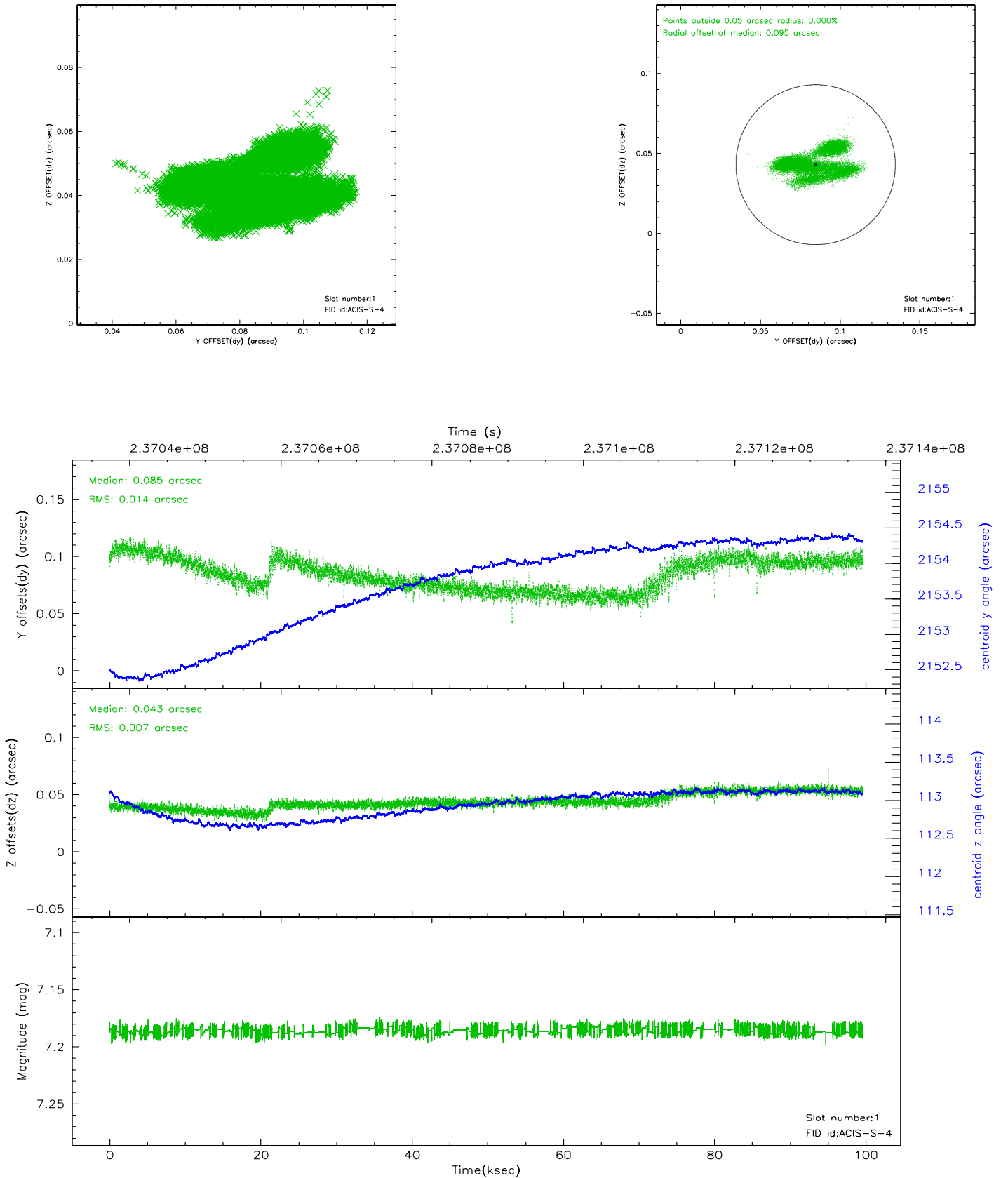


## 2.5 FID Slots

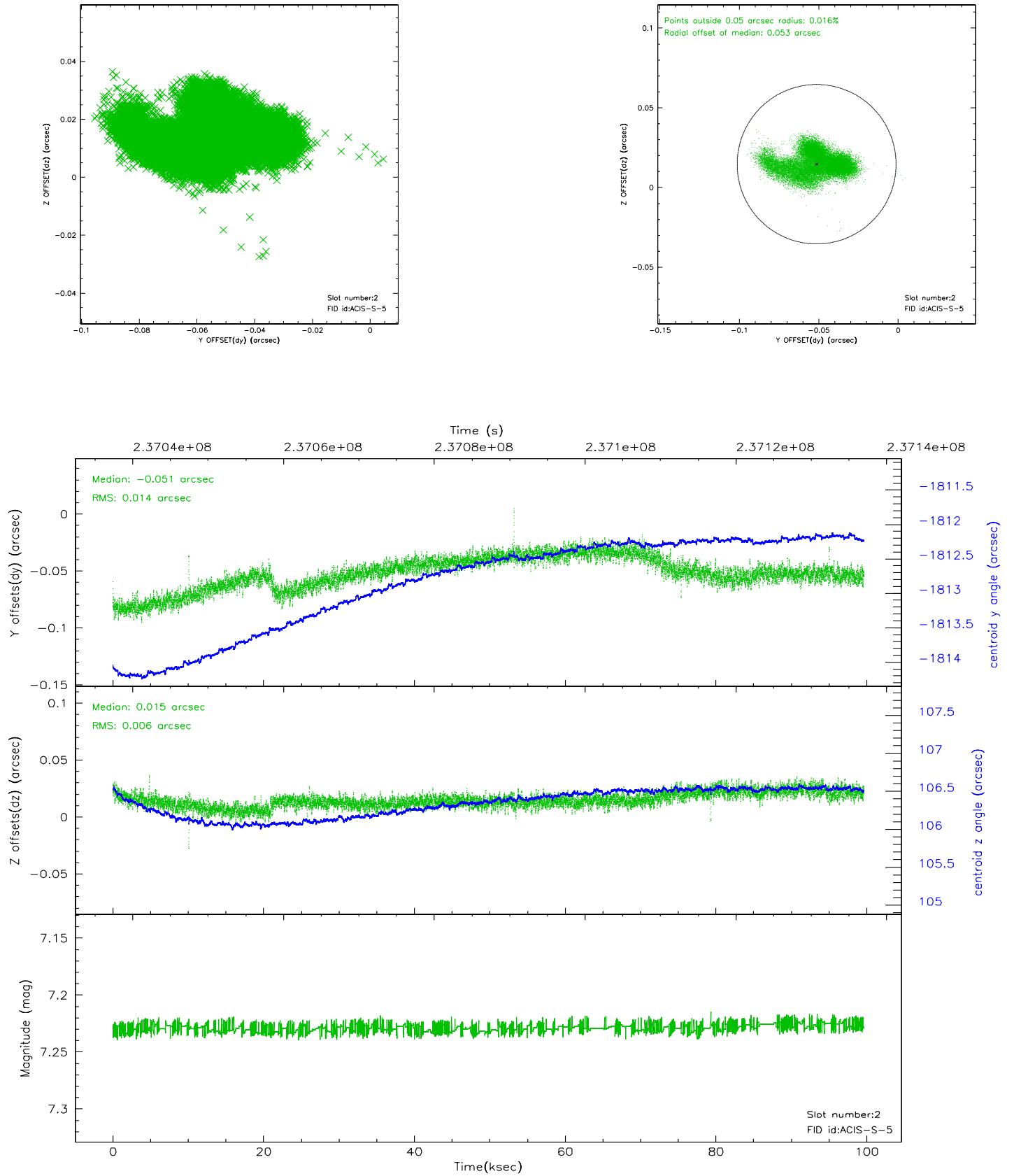
### 2.5.1 Slot 0



## 2.5.2 Slot 1

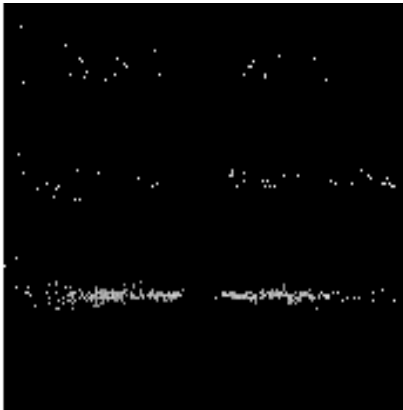


### 2.5.3 Slot 2

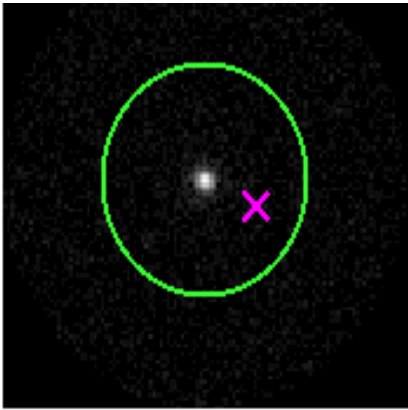


# 3 Gratings

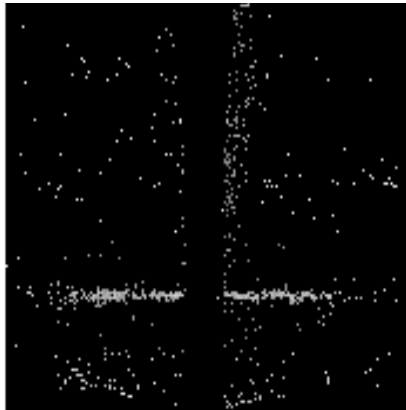
## 3.1 HEG Arm



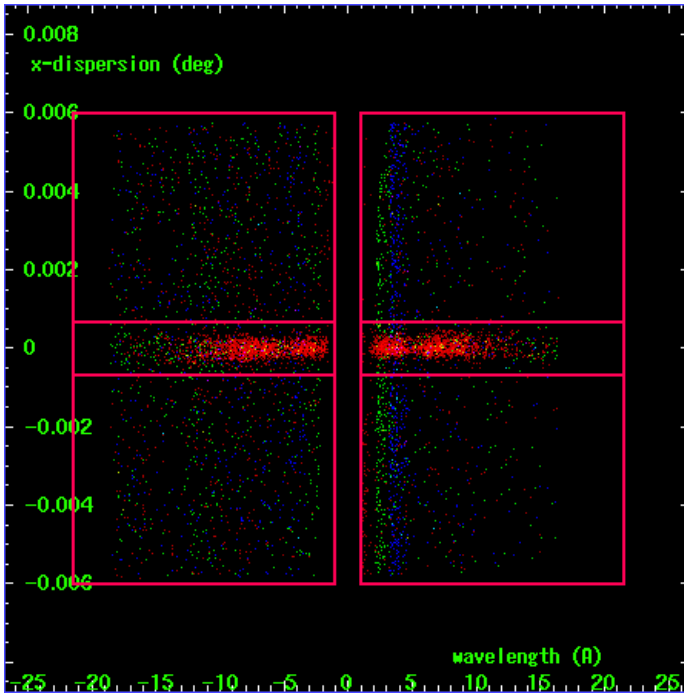
HEG Order Sort 123



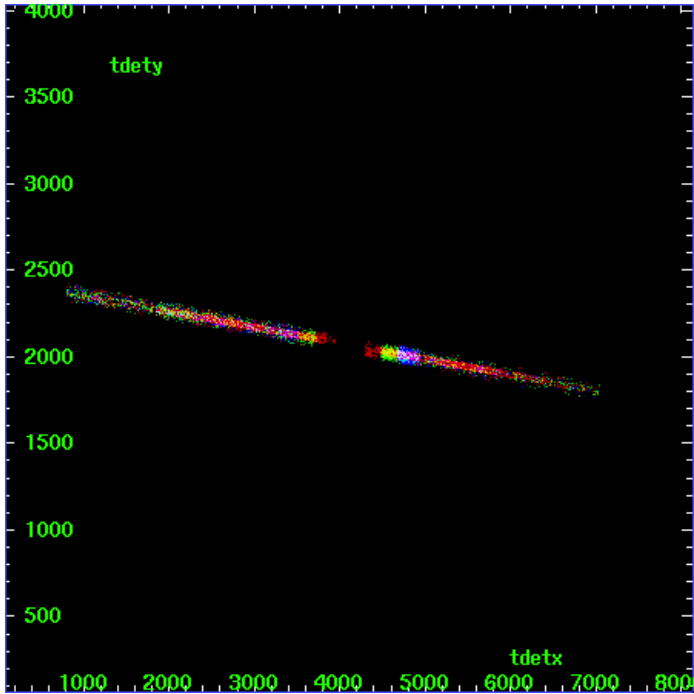
HEG Zero Order



HEG Order Sort ALL

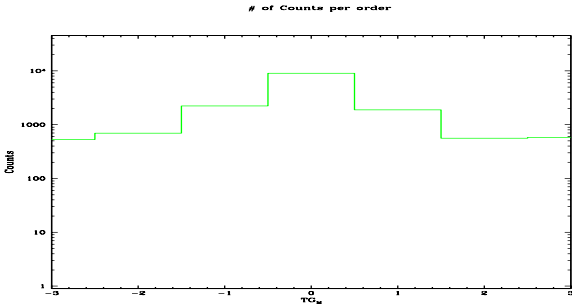


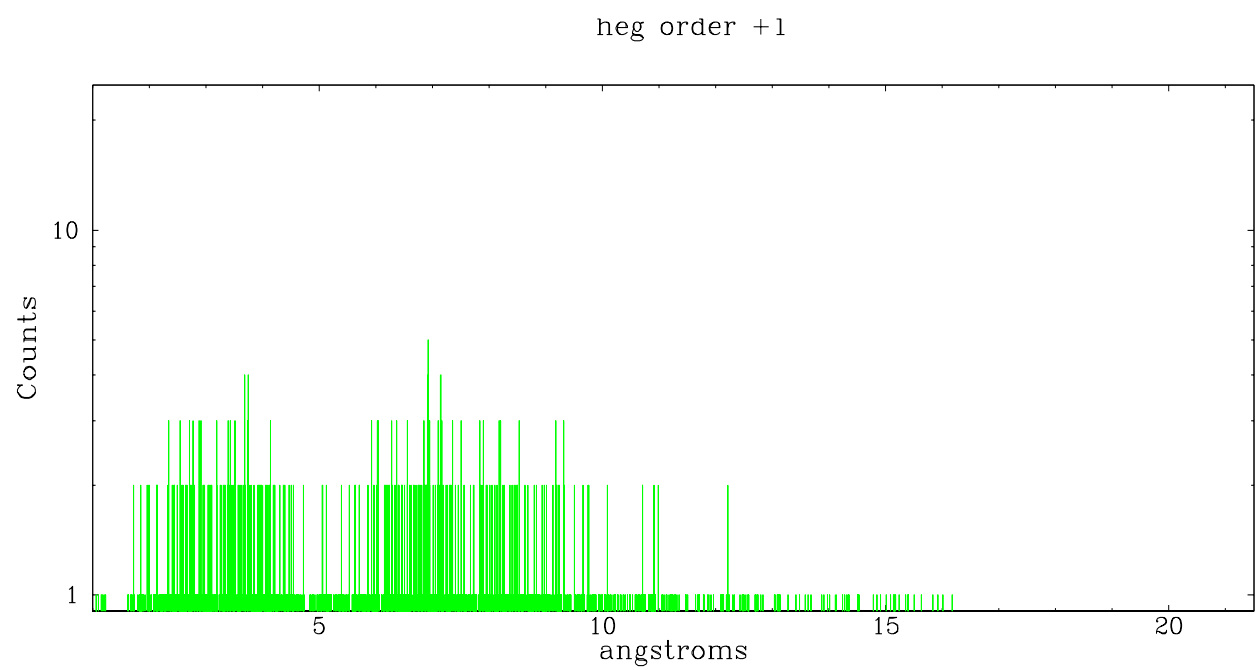
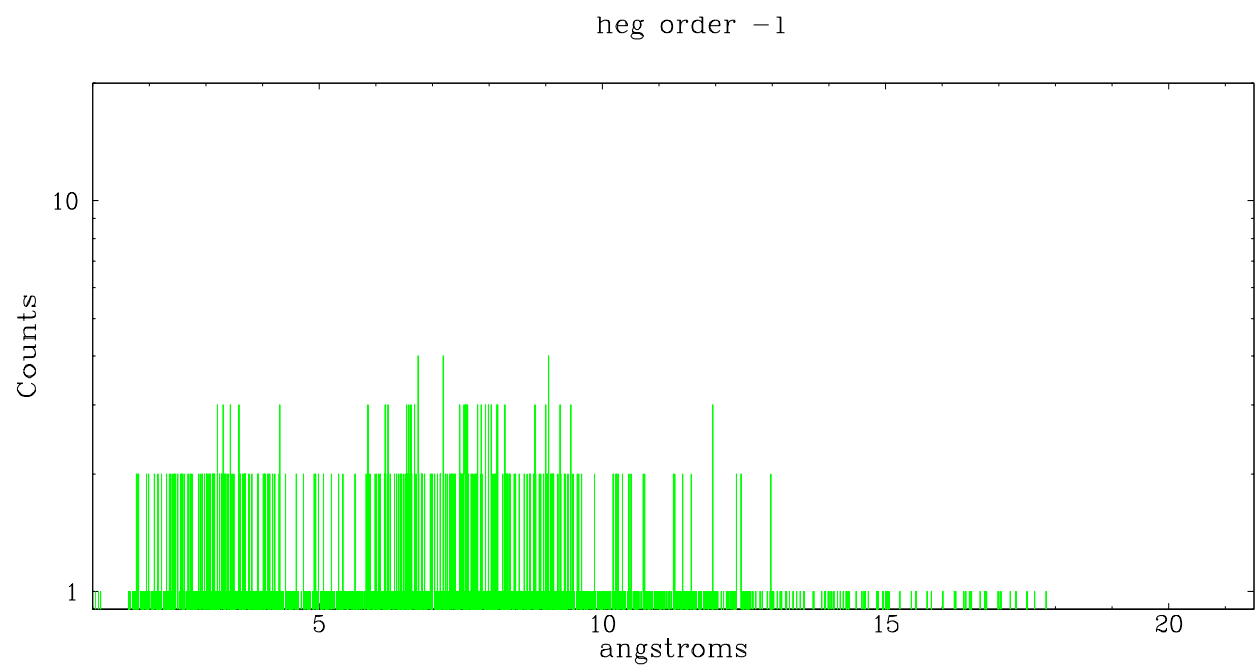
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	529	696	2235	9011	1886	560	580

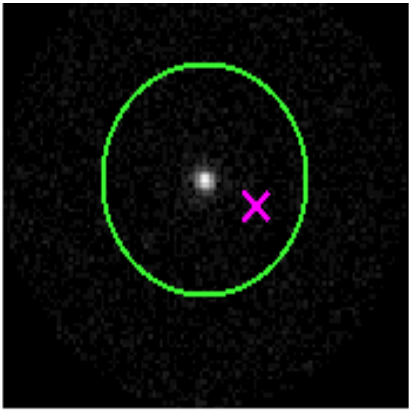




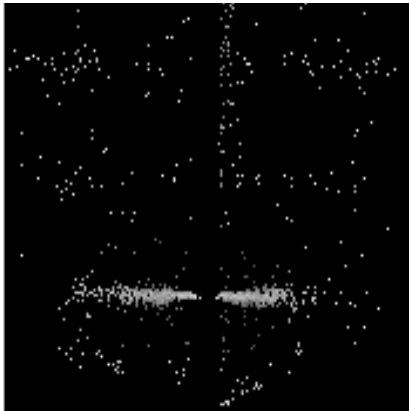
3.2 MEG Arm



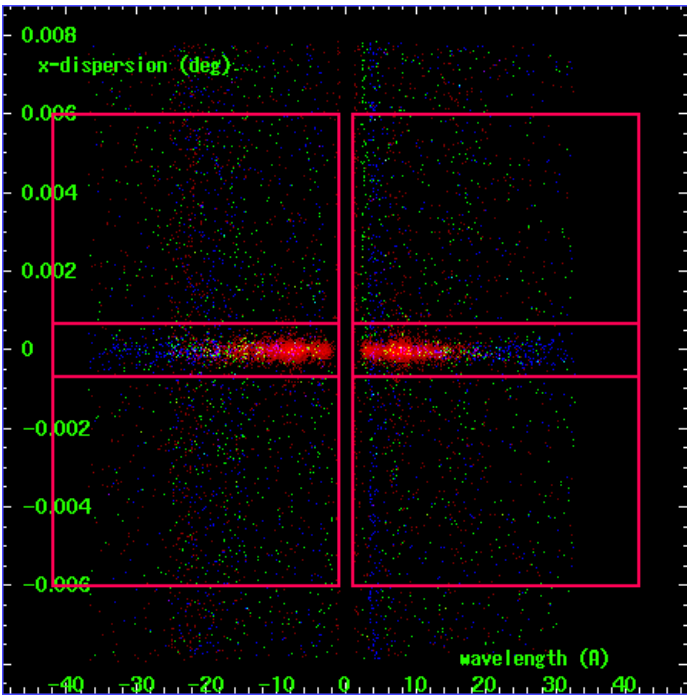
MEG Order Sort 123



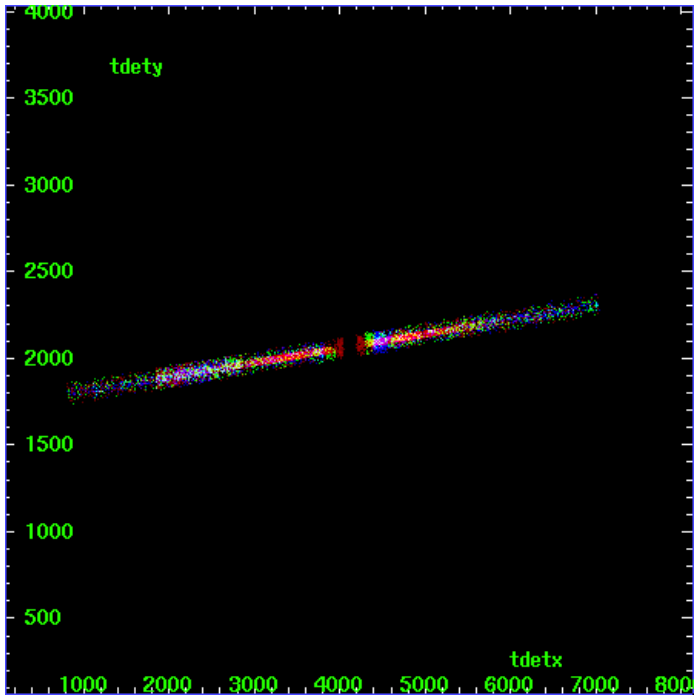
MEG Zero Order



MEG Order Sort ALL

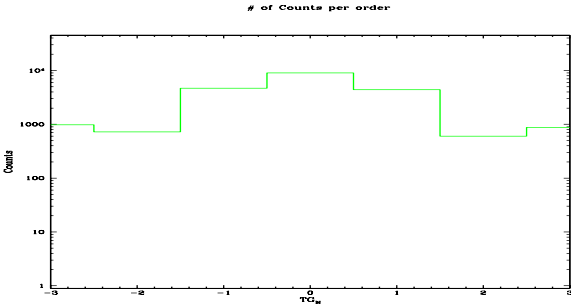


Spot Image MEG

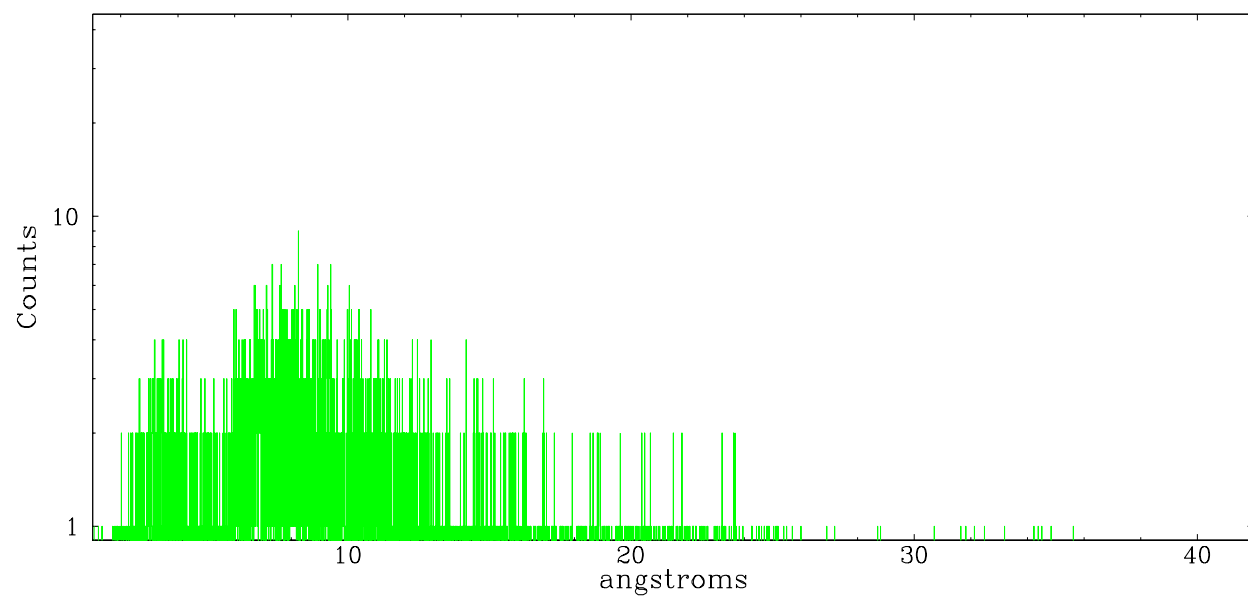


Full Detector MEG

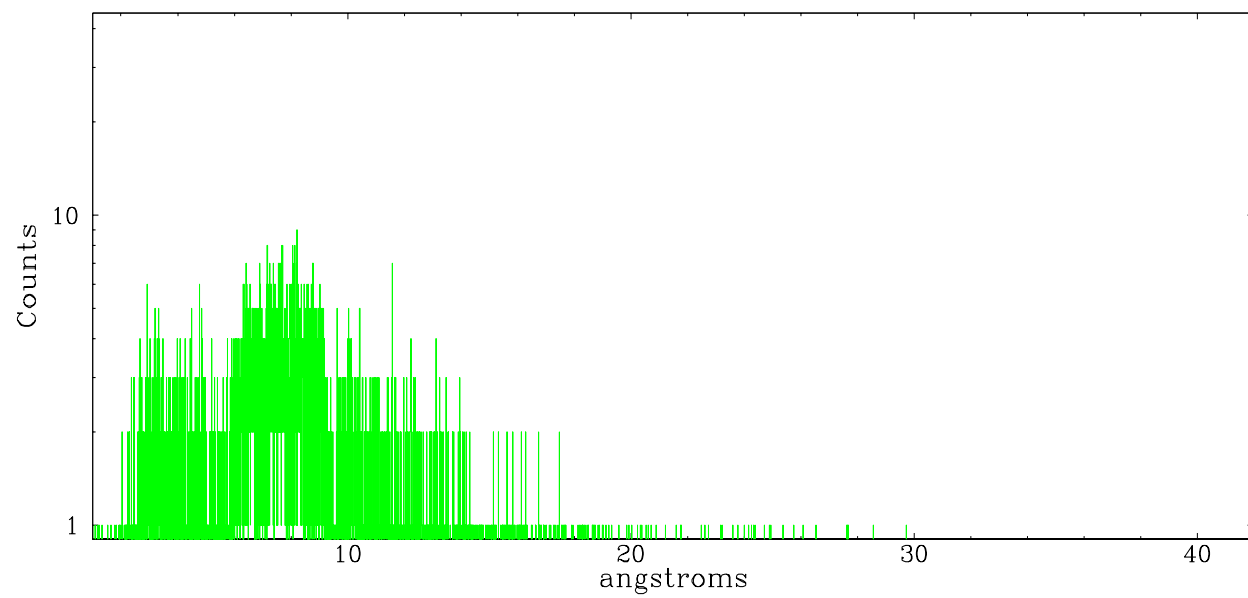
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	983	725	4689	9011	4376	603	874



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.03.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	98.555

### A.2 Comments