

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2150 - L2 Version 001  
Chandra X-Ray Center

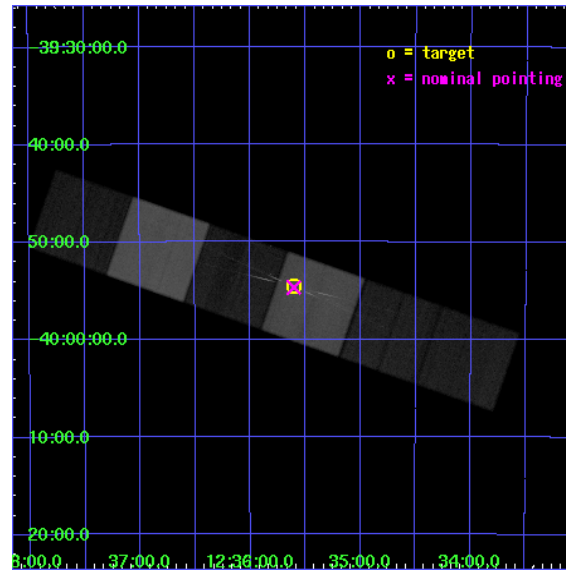
L2 Processing Date : Nov 16 2006

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# 1 Front

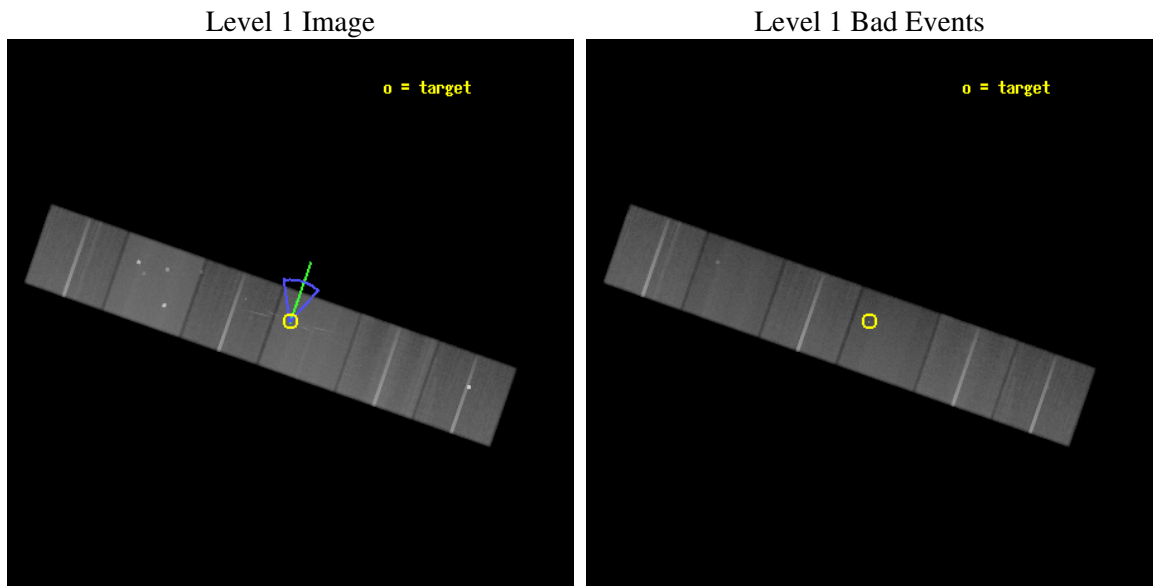
seq_num	700340
obs_id	2150
title	HIGH RESOLUTION IMAGING SPECTROSCOPY OF THE SEYFERT 2 GALAXY NGC 4507
observer	PROF. STEVEN KAHN
object	NGC 4507
dtcycle	0
cycle	P
ra_targ	188.902083
dec_targ	-39.90925
ra_nom	188.90113899917
dec_nom	-39.911325989637
roll_nom	19.146026249398
revision	2
ontime	139967.91818985
livetime	138195.56013117
ontime4	139967.91815002
ontime5	139967.91818985
ontime6	139967.9182298
ontime7	139967.91818985
ontime8	139971.15919004
ontime9	139971.15919004
l2events	1360179



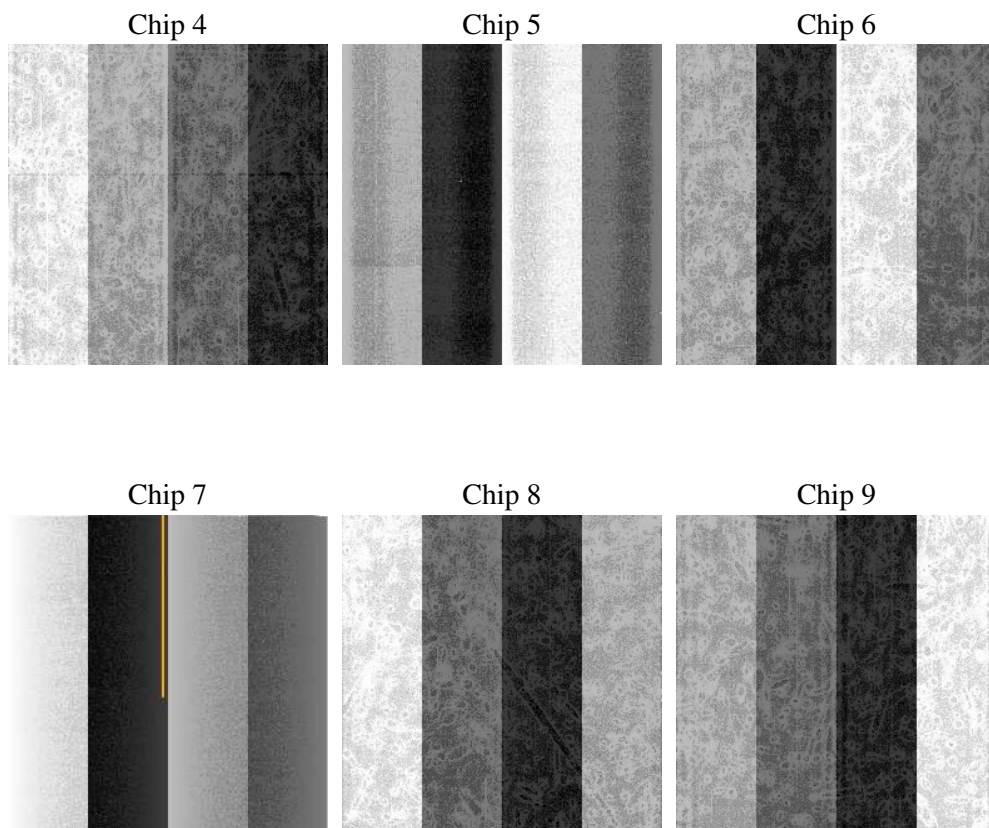
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.9
caldsver	3.2.4
date	2006-11-16T00:37:01
revision	2

sched_exp_time	140000.000000
ontime	139972.45071124
ontime4	139972.45064148
ontime5	139972.45068131
ontime6	139972.45072126
ontime7	139972.45071124
ontime8	139975.6916815
ontime9	139975.6916815
l1events	6695671

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	1046189	1321163	948718	1204566	1182416	992619
rejected events	938471	729523	839071	736166	955386	846055
rejected %	89%	55%	88%	61%	80%	85%

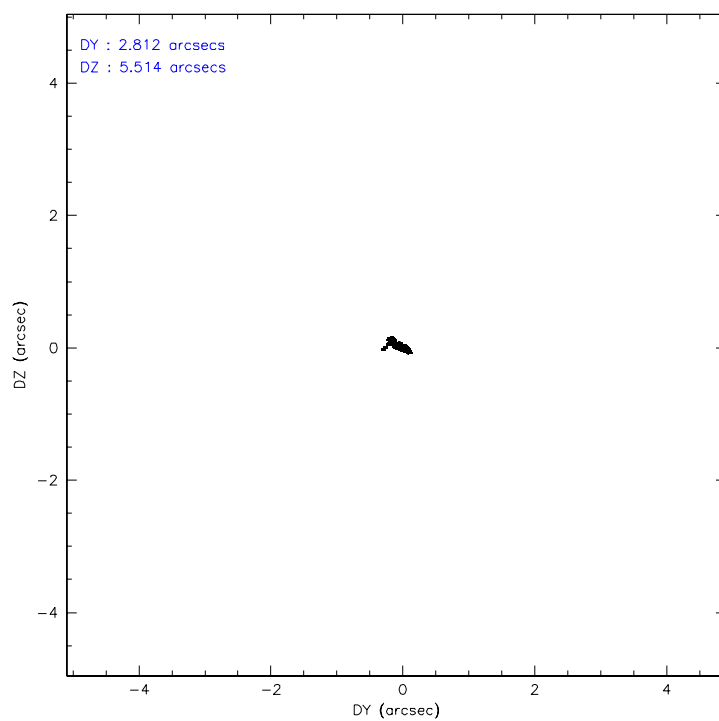
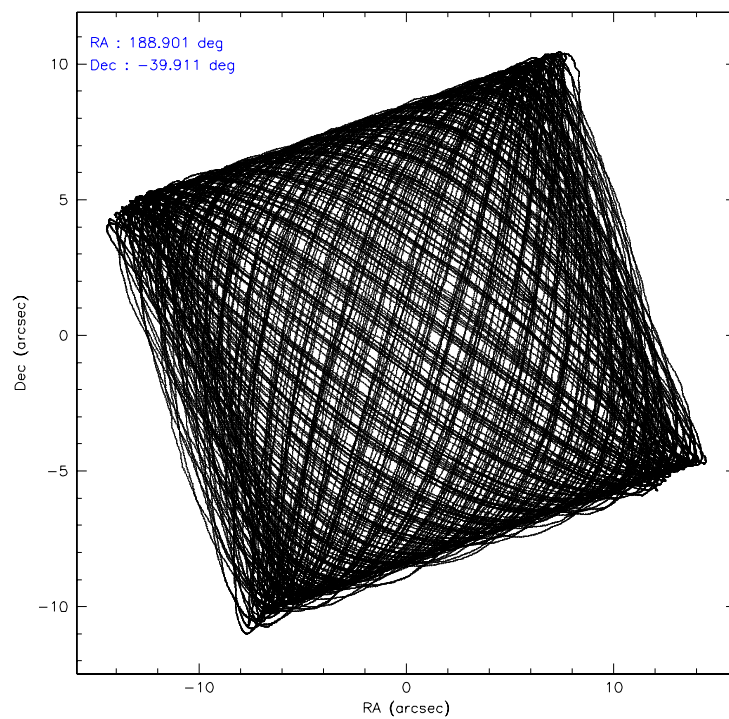
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	42435	70444	44128	29194	69727	82211
	4%	5%	4%	2%	5%	8%
grade 1 events	507	2672	433	818	666	567
	0%	0%	0%	0%	0%	0%
grade 2 events	26103	172438	21940	114436	49687	21659
	2%	13%	2%	9%	4%	2%
grade 3 events	10285	12618	11106	25348	24712	10801
	0%	0%	1%	2%	2%	1%
grade 4 events	9908	12375	10778	24443	23428	10429
	0%	0%	1%	2%	1%	1%
grade 5 events	33707	63784	39301	80851	49749	40047
	3%	4%	4%	6%	4%	4%
grade 6 events	18990	323791	21696	275000	59482	21471
	1%	24%	2%	22%	5%	2%
grade 7 events	904254	663041	799336	654476	904965	805434
	86%	50%	84%	54%	76%	81%

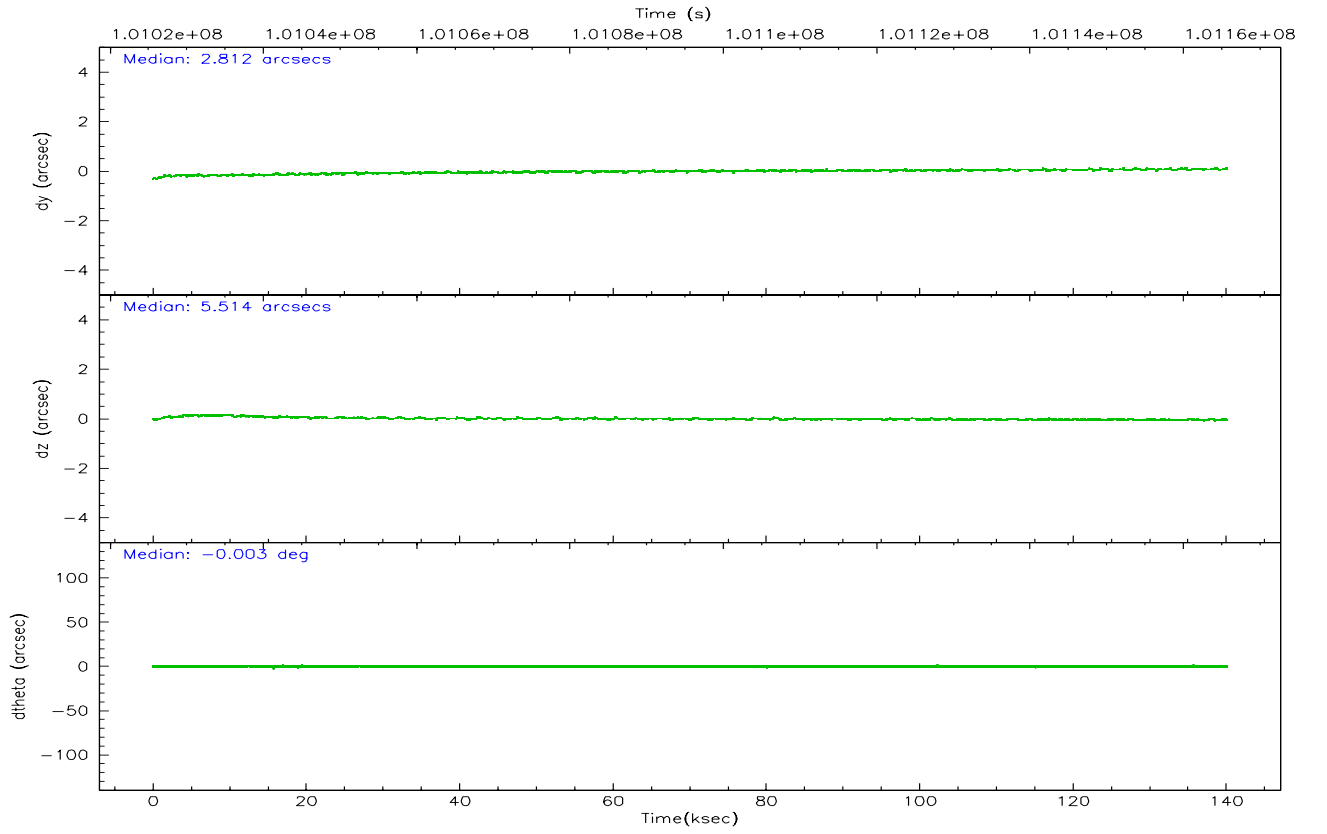
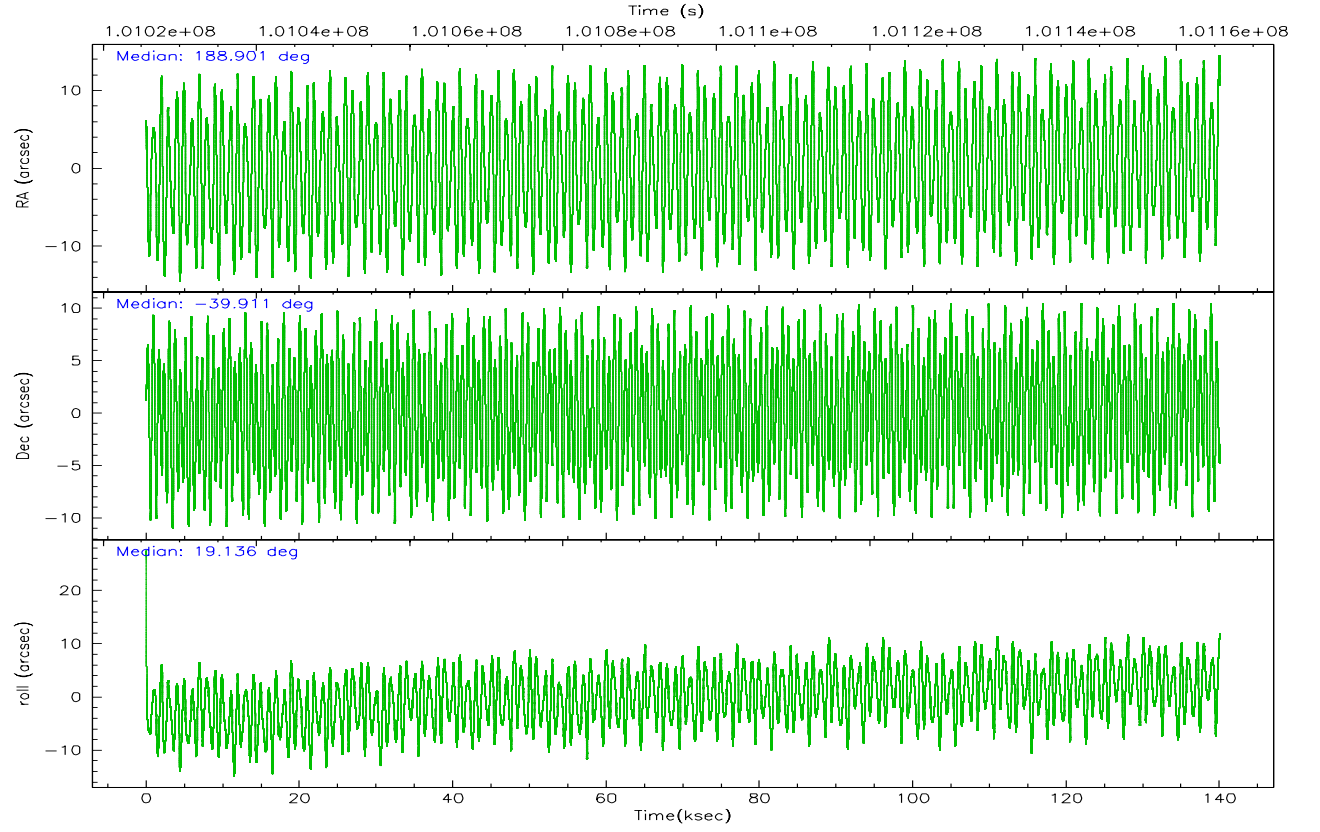


## 2.2 Compared Parameters

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	188.878115	188.9011389991734	Subarray requested	NONE	NONE
Pointing Dec	-39.932145	-39.91132598963737	Alternating exposures requested	N	N
Pointing Roll	18.974616	19.14602624939756	Primary exposure time	0.000000	3.2
Roll angle	17.000000	17.000000			
Roll tolerance	25.000000	25.000000			
Roll constraint allows 180D rotation	N	N			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	101025709.184000	101024618.00754			
Observation start date	2001-03-15T06:40:45	2001-03-15T06:23:38			
Observation end time	101165709.184000	101166507.22552			
Observation end date	2001-03-16T21:34:05	2001-03-16T21:48:27			
Read mode	TIMED	TIMED			

## 2.3 Aspect



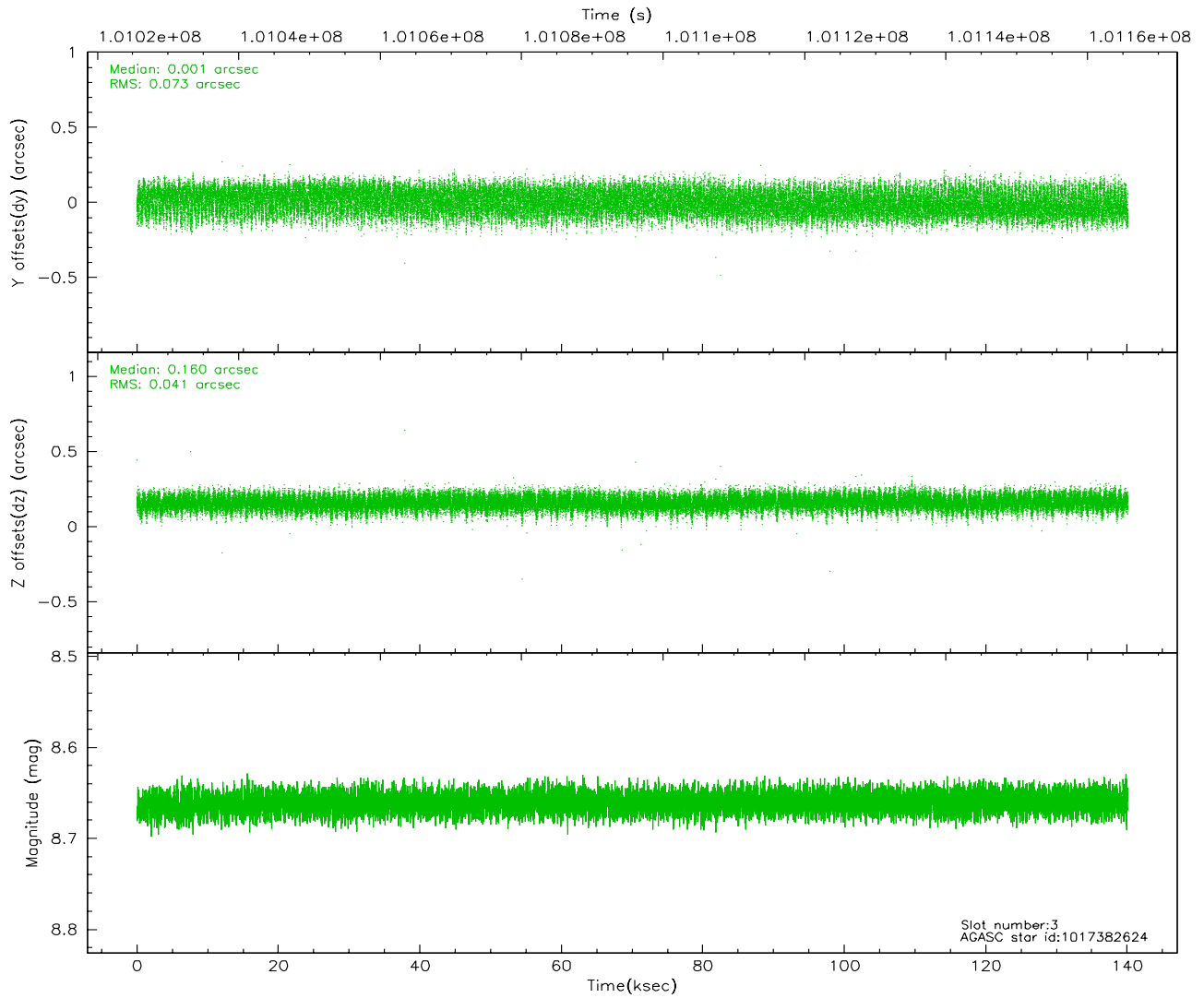
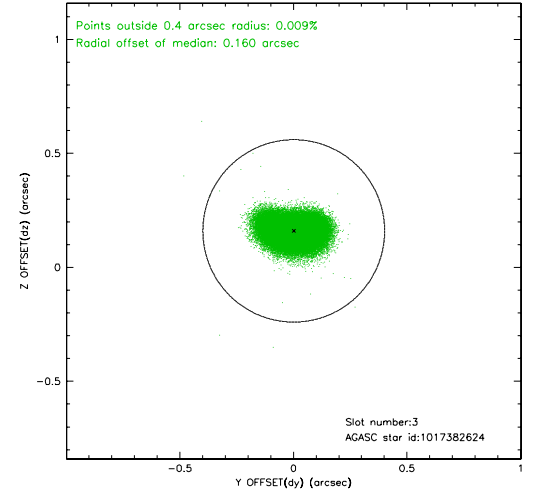
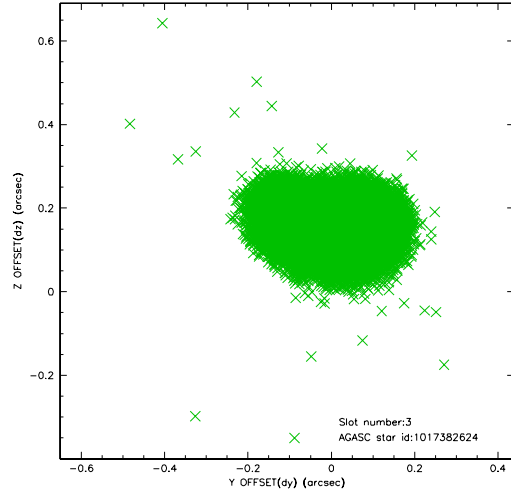


### Slot Statistics

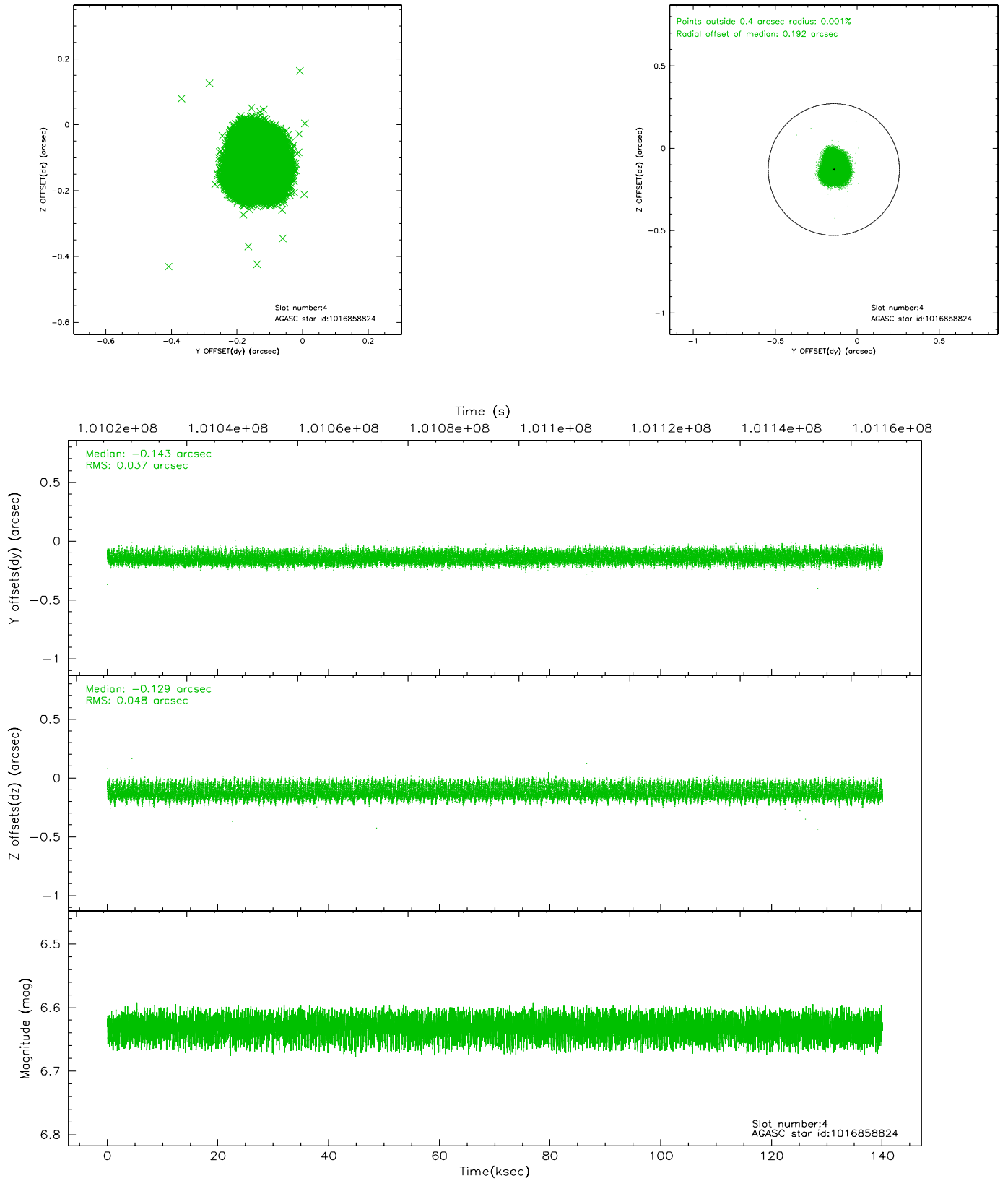
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	34168	-0.014	-0.035	0.007	0.011	0.000000	0.000000	-755.26	-1788.81
1	FID	ACIS-S-4	7.19	34163	-0.048	0.016	0.006	0.010	0.000000	0.000000	2158.05	119.79
2	FID	ACIS-S-5	7.23	34169	0.030	0.027	0.007	0.012	0.000000	0.000000	-1808.17	113.40
3	GUIDE	1017382624	8.66	68325	0.001	0.160	0.090	0.144	189.793254	-40.368687	1859.37	-2314.74
4	GUIDE	1016858824	6.63	68336	-0.143	-0.129	0.066	0.101	189.158395	-39.326292	1447.01	1807.04
5	GUIDE	1017396648	6.26	68333	0.039	-0.235	0.088	0.136	189.004306	-39.869498	403.46	98.83
6	GUIDE	1017392304	10.36	68169	0.091	0.305	0.159	0.267	188.777966	-40.602099	-1042.17	-2192.53
7	GUIDE	1016862168	9.28	68235	0.008	-0.113	0.097	0.152	189.072009	-39.184135	1387.19	2369.46

## 2.4 Star Slots

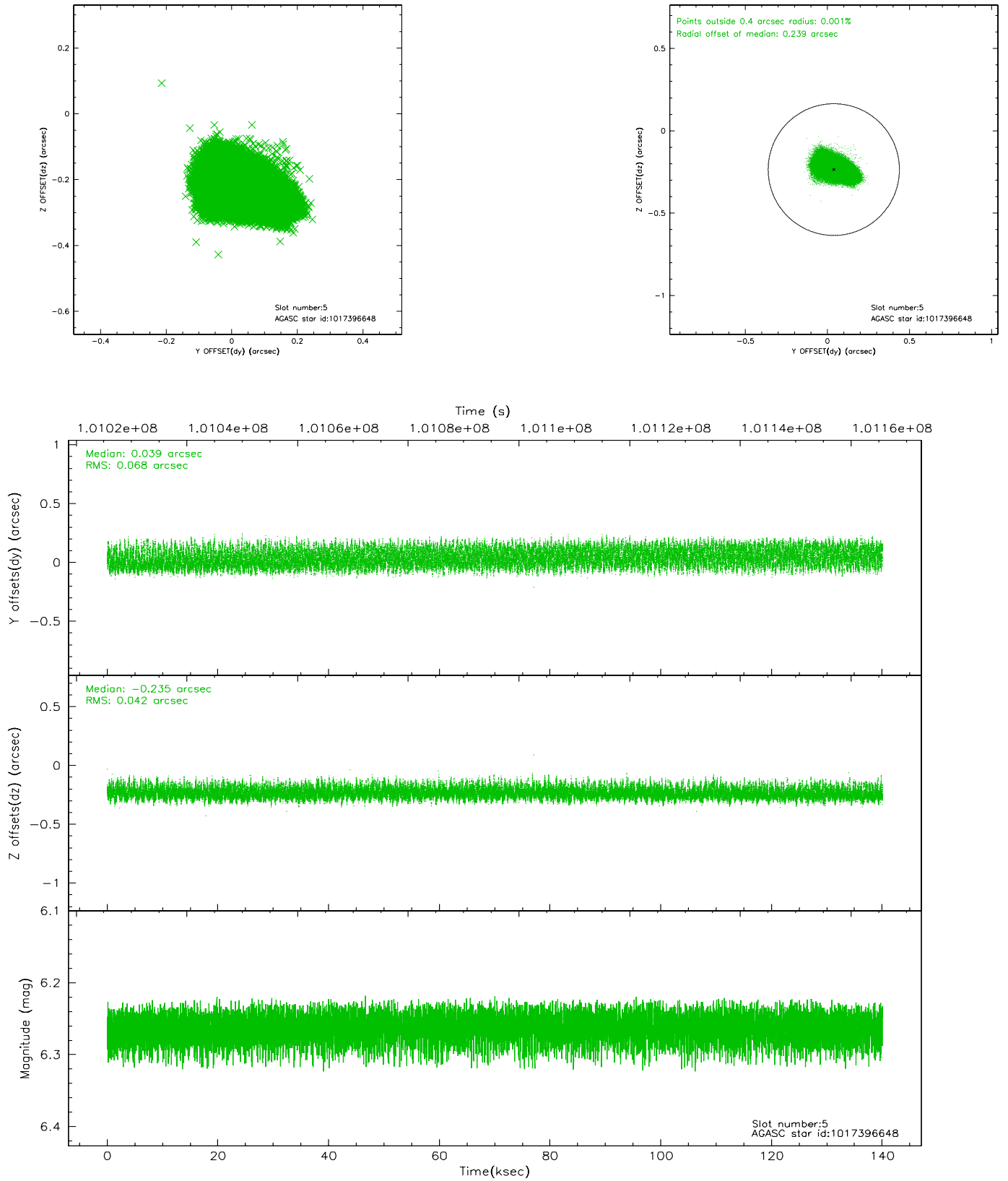
### 2.4.1 Slot 3



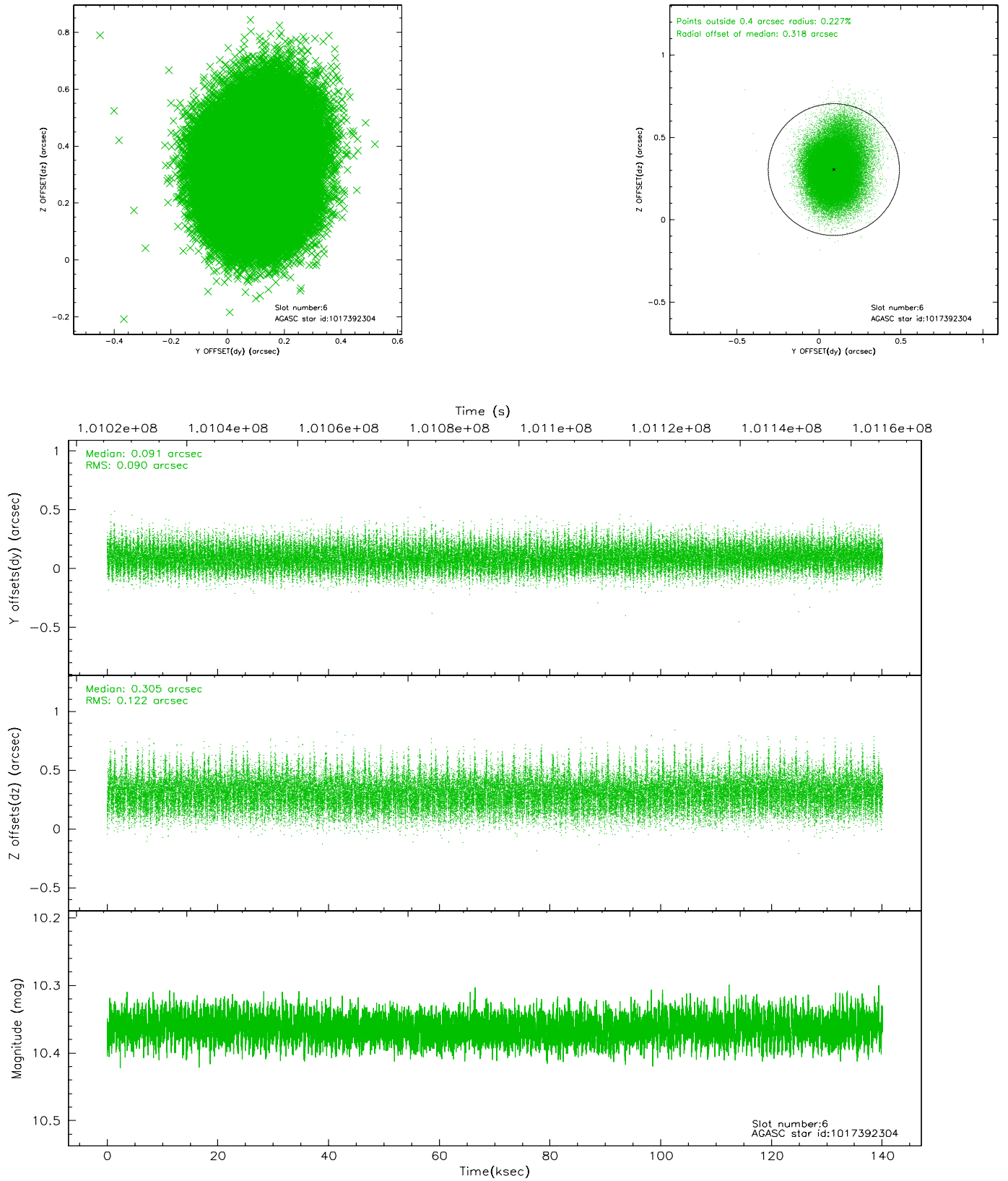
## 2.4.2 Slot 4



### 2.4.3 Slot 5

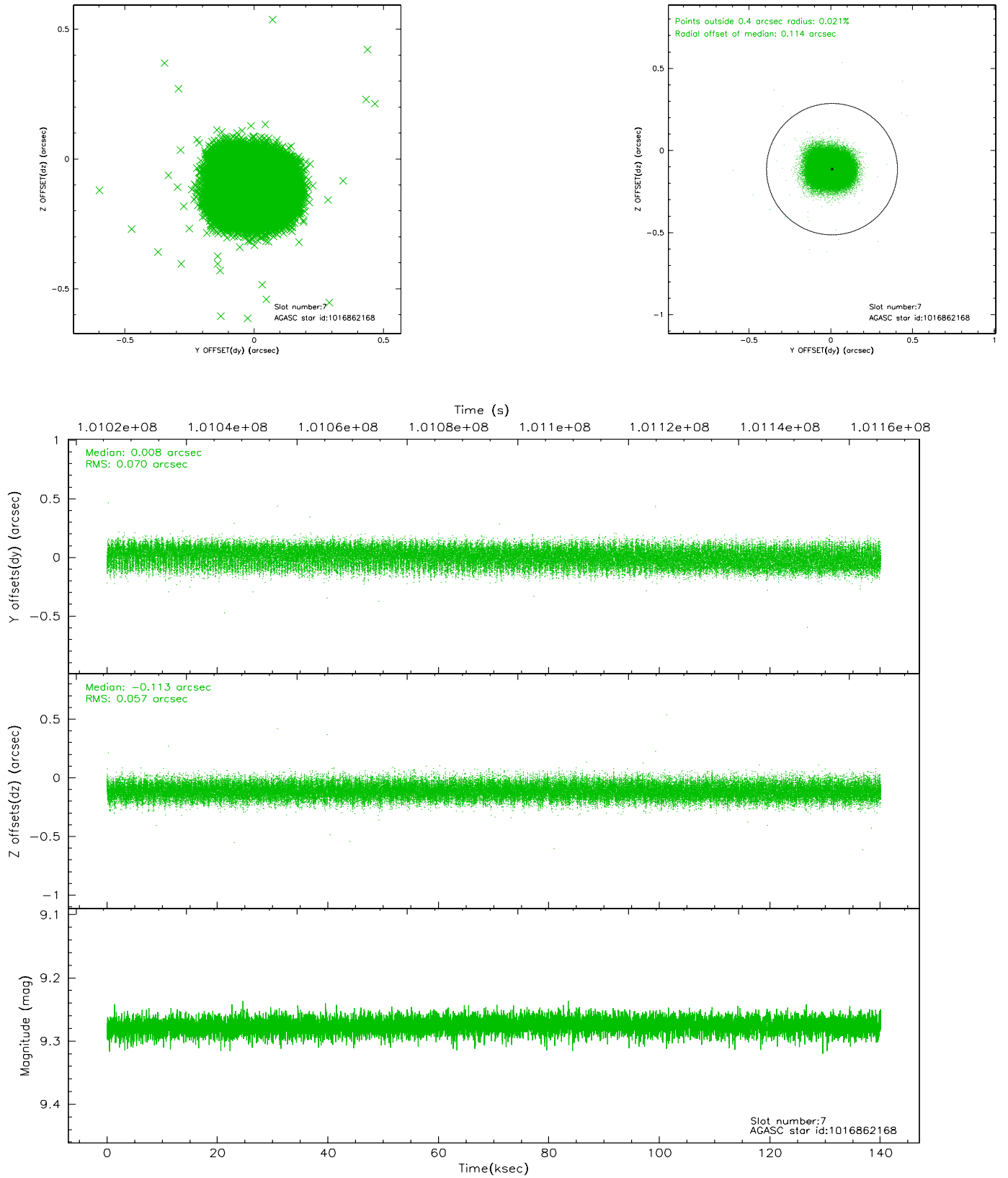


## 2.4.4 Slot 6



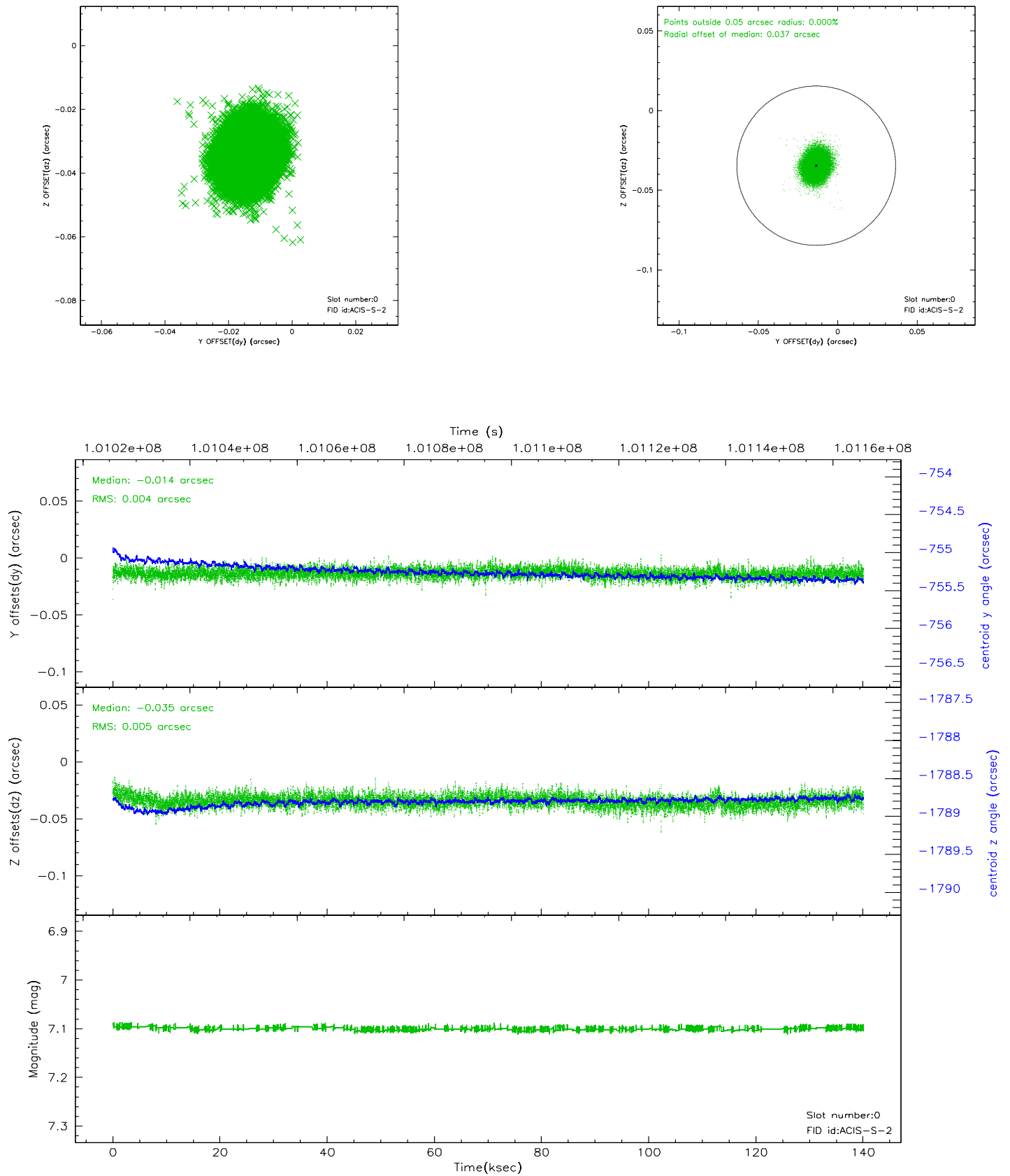


## 2.4.5 Slot 7

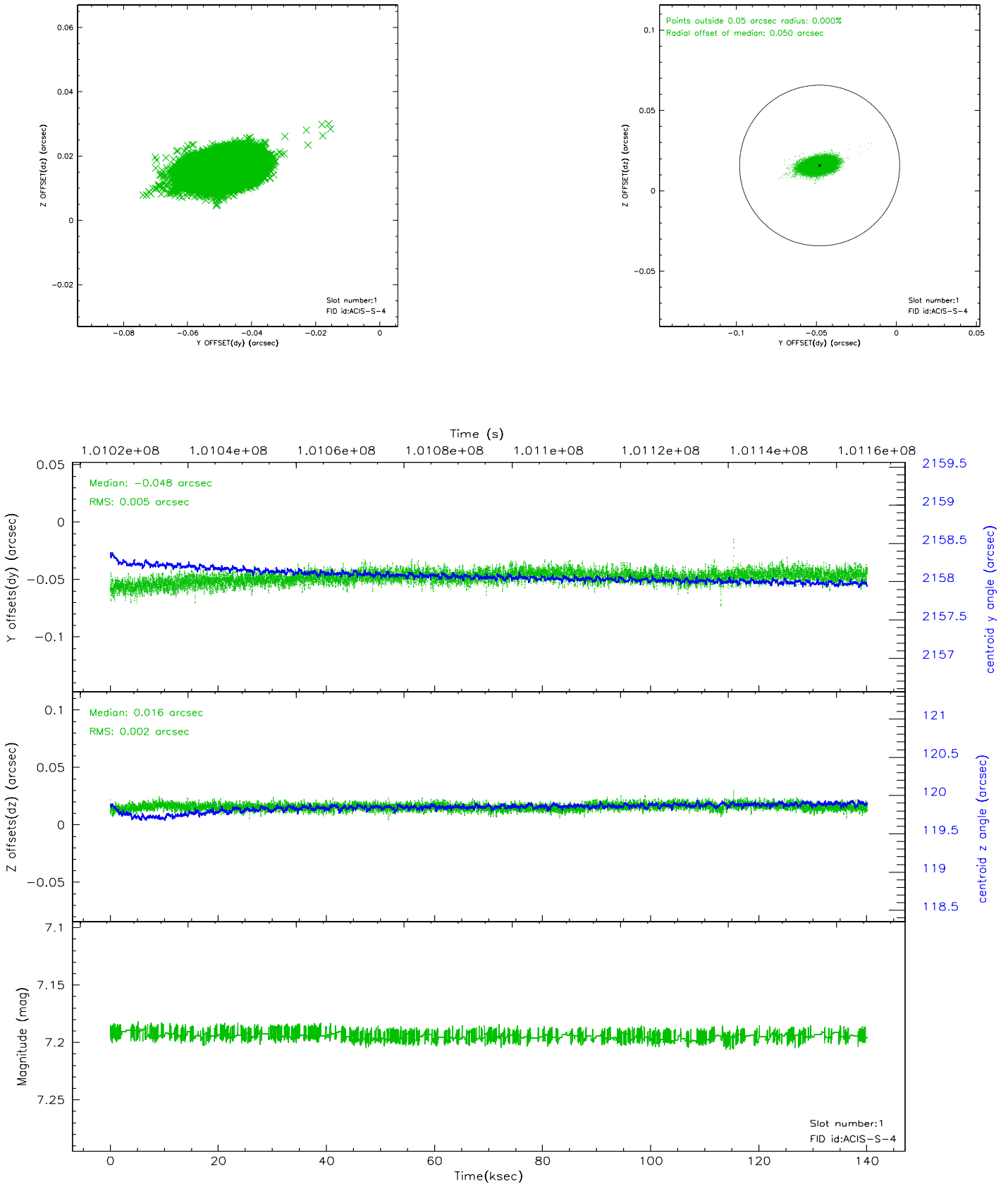


## 2.5 FID Slots

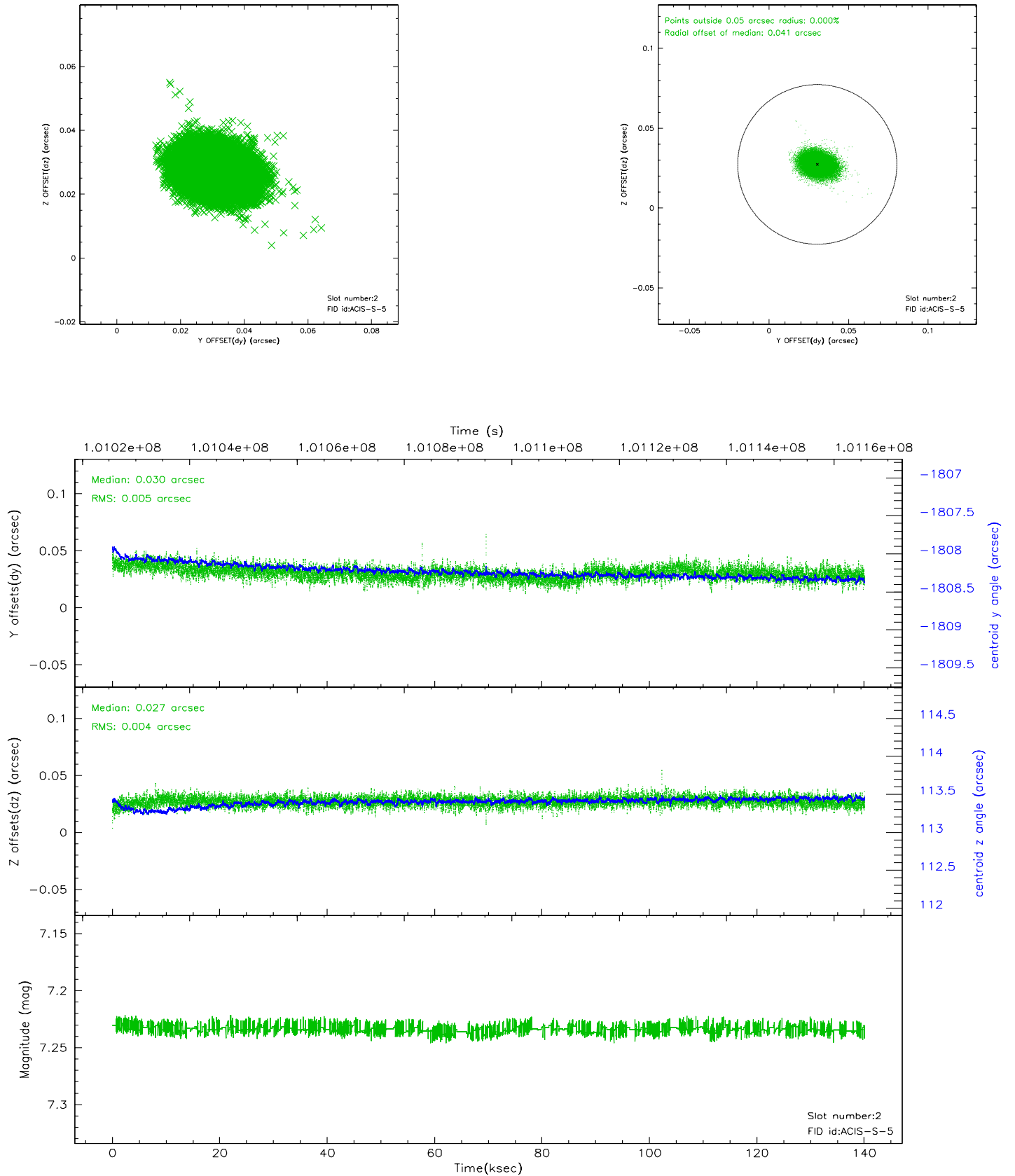
### 2.5.1 Slot 0



## 2.5.2 Slot 1

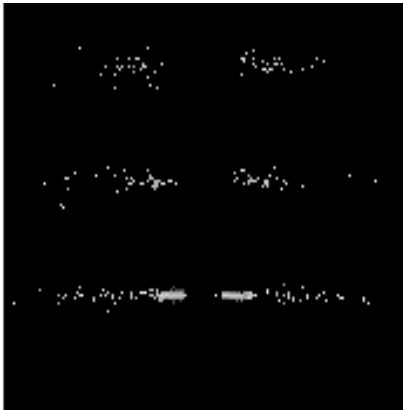


## 2.5.3 Slot 2

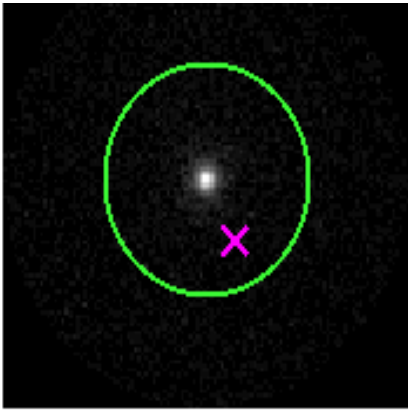


# 3 Gratings

## 3.1 HEG Arm



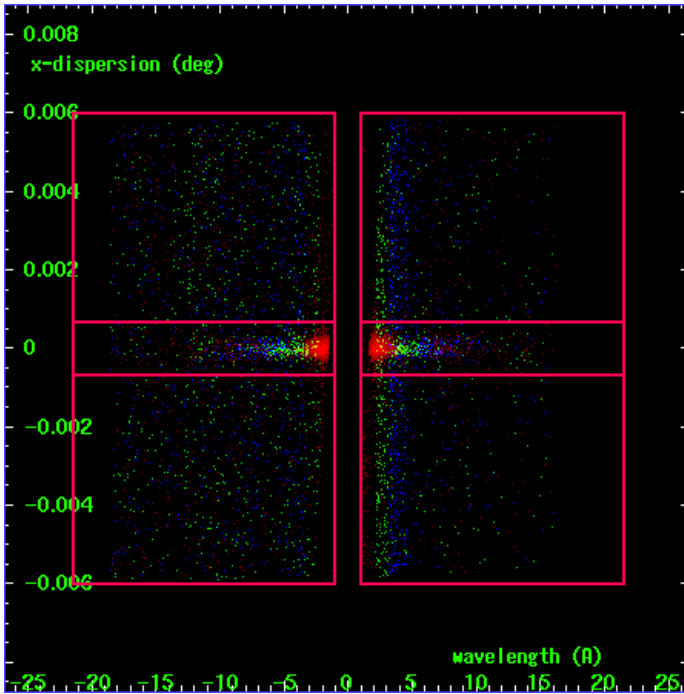
HEG Order Sort 123



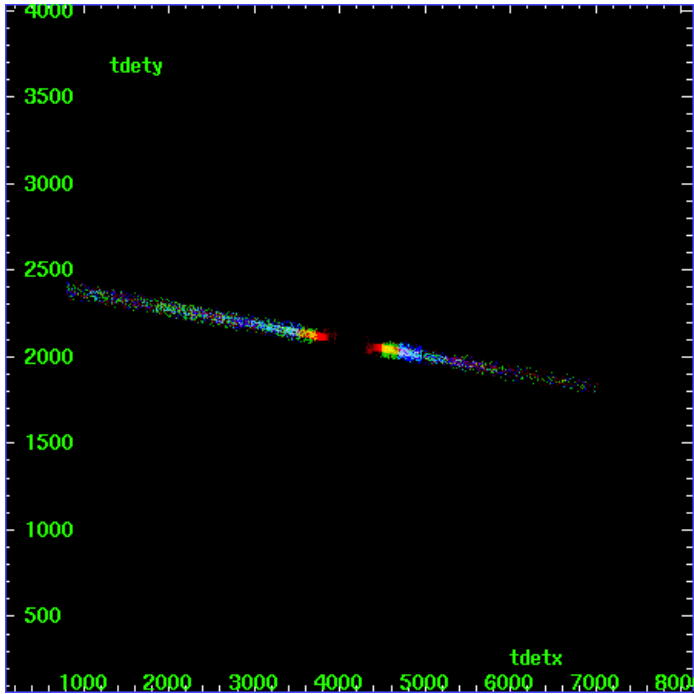
HEG Zero Order



HEG Order Sort ALL

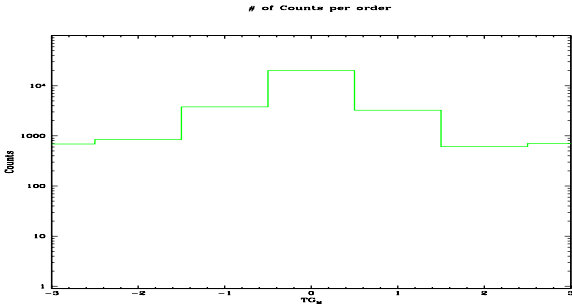


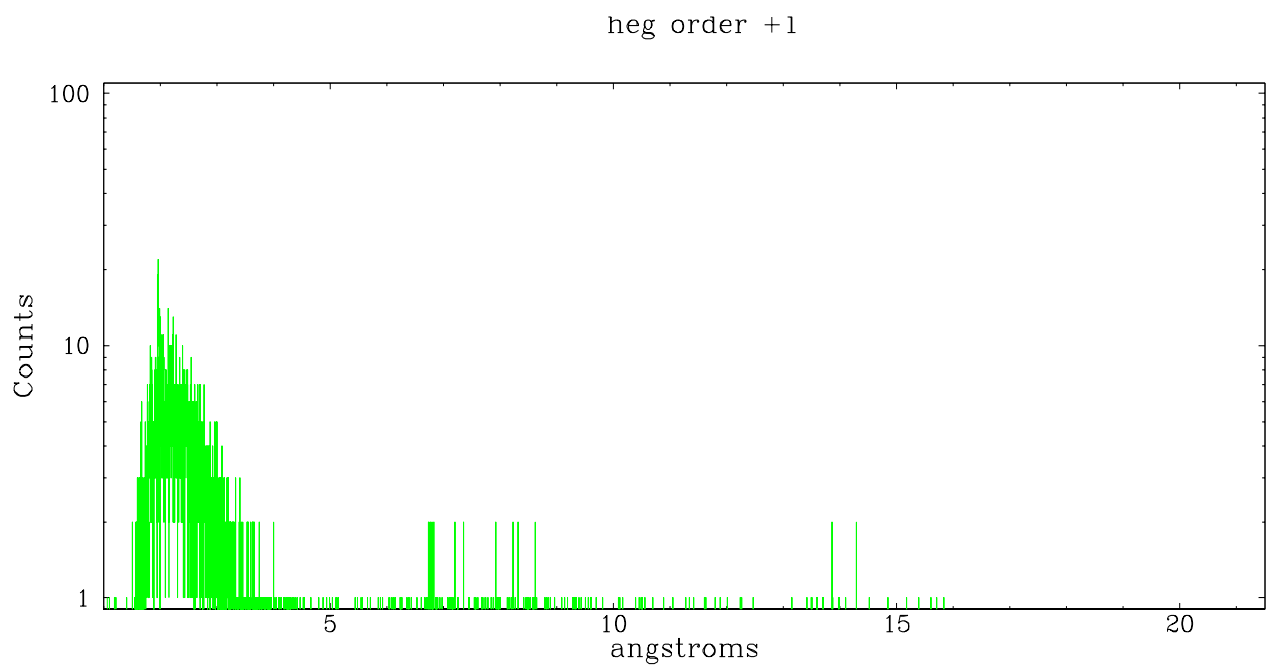
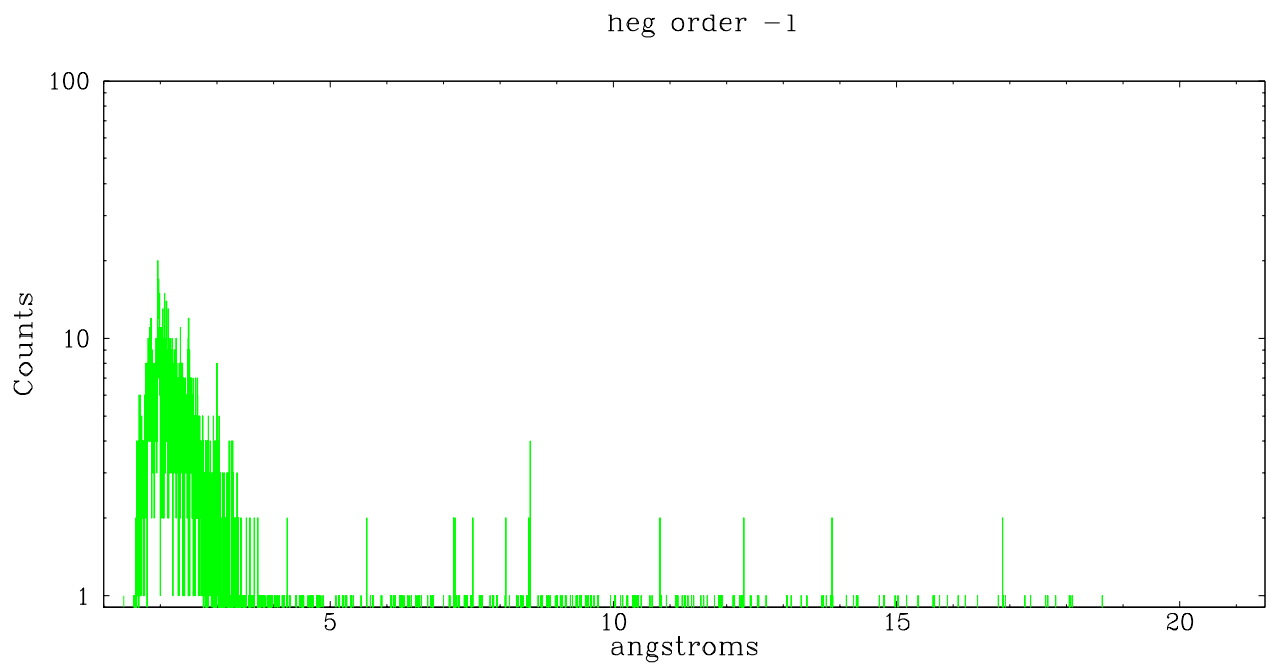
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	690	847	3802	19917	3239	611	707

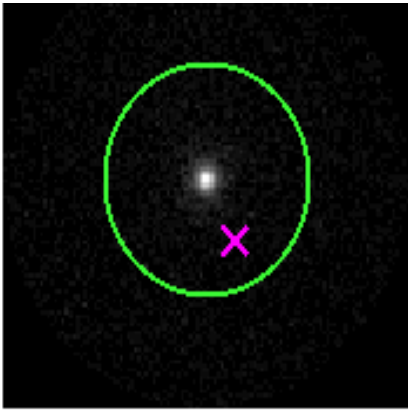




### 3.2 MEG Arm



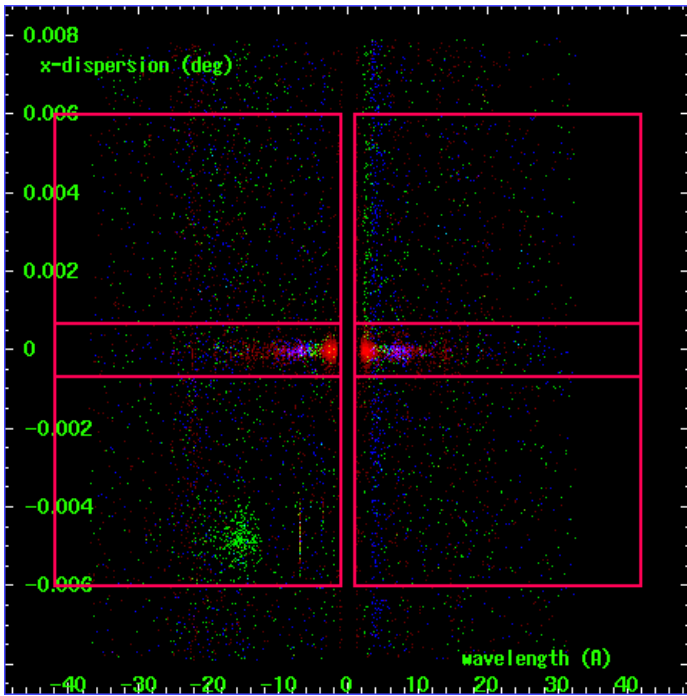
MEG Order Sort 123



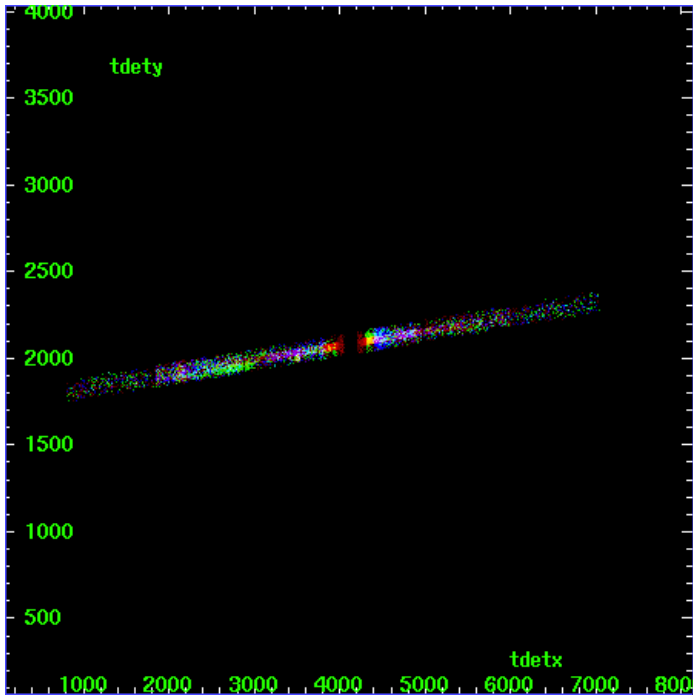
MEG Zero Order



MEG Order Sort ALL

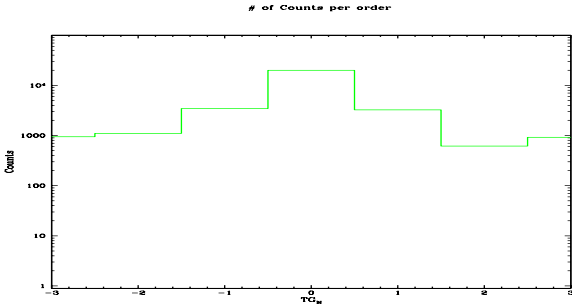


Spot Image MEG

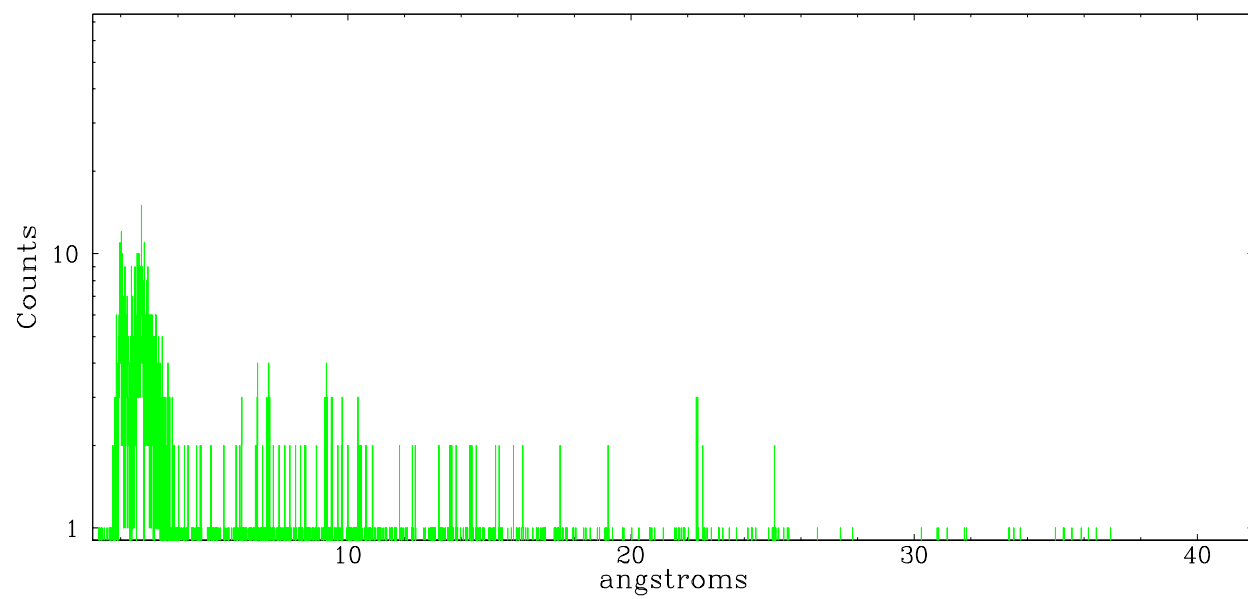


Full Detector MEG

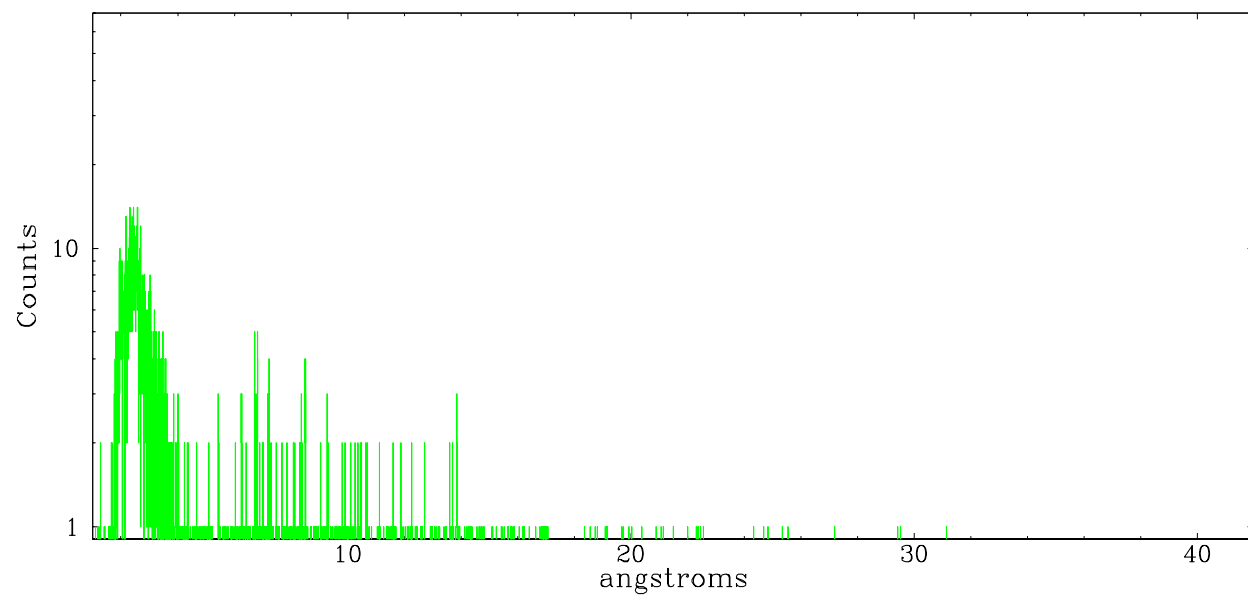
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	943	1105	3446	19917	3256	614	917



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.11.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	139.776

### A.2 Comments