

# V&V Reference Report

## L2 ASCDS Version : 7.6.8.1

Observation 3433 - L2 Version 001  
Chandra X-Ray Center

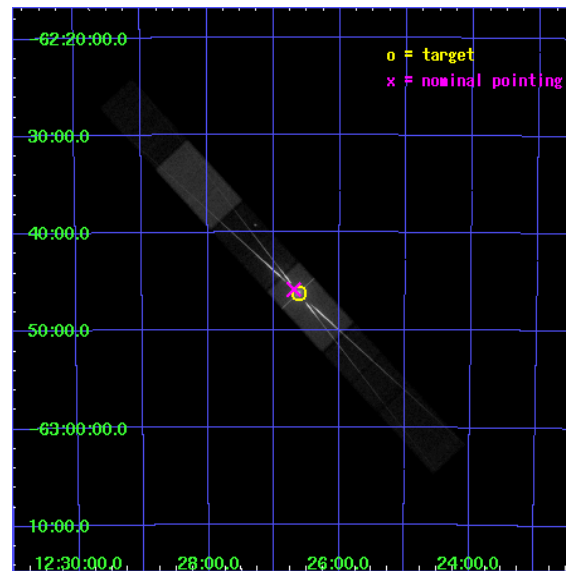
L2 Processing Date : Aug 31 2006

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# 1 Front

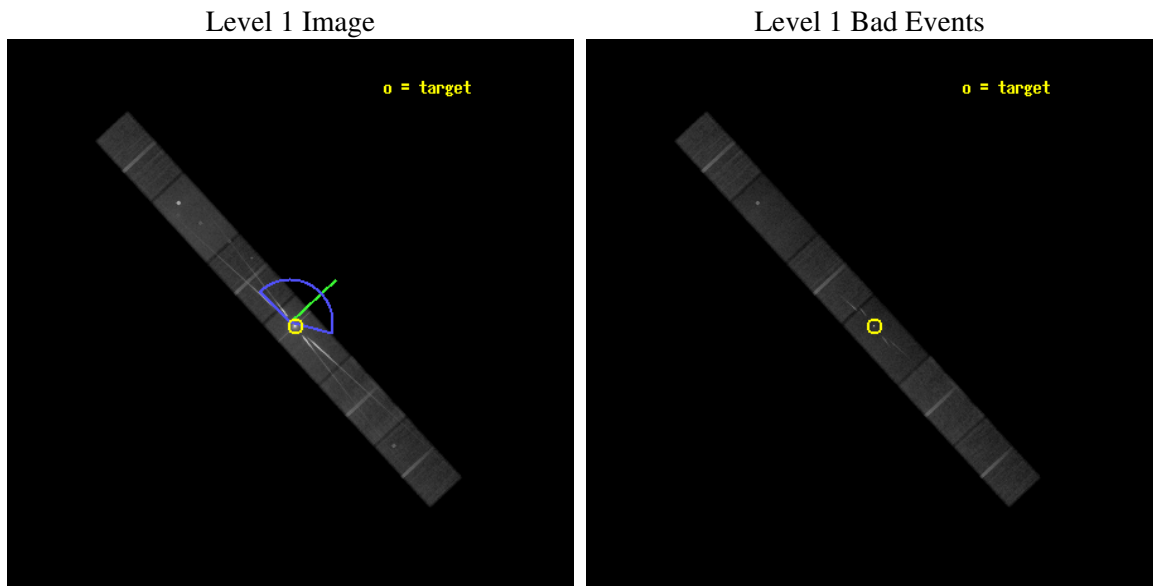
seq_num	400235
obs_id	3433
title	PROBING THE CIRCUMSTELLAR MATERIAL IN GX 301-2
observer	Dr. Masao Sako
object	GX 301-2
dtcycle	0
cycle	P
ra_targ	186.656667
dec_targ	-62.770278
ra_nom	186.67359523475
dec_nom	-62.764435960061
roll_nom	47.19314457511
revision	2
ontime	60379.199900031
livetime	59033.241982823
ontime4	60379.199900031
ontime5	60379.199900031
ontime6	60379.199900031
ontime7	60379.199900031
ontime8	60379.199900031
ontime9	60379.199900031
l2events	717501



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

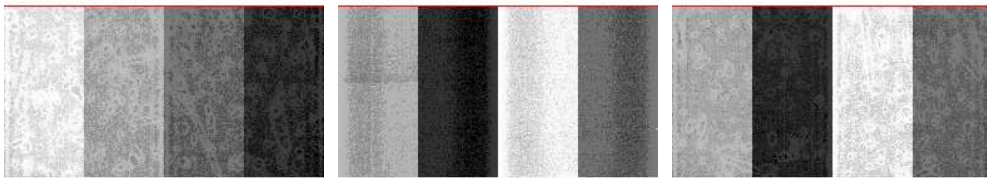


#### 2.1.2 Bias

Chip 4

Chip 5

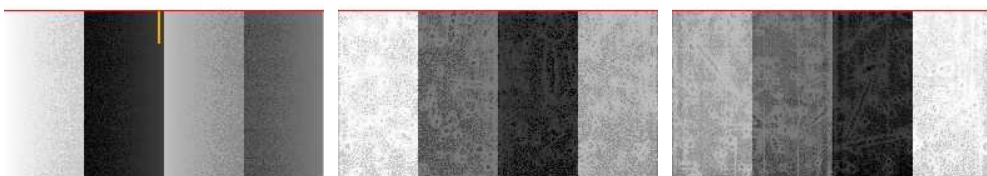
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	1
ascdsver	7.6.8.1
caldsver	3.2.3
date	2006-08-31T04:46:31
revision	2

sched_exp_time	60000.000000
ontime	60381.680134743
ontime4	60381.680134743
ontime5	60381.680134743
ontime6	60381.680134743
ontime7	60381.680134743
ontime8	60381.680134743
ontime9	60381.680134743
l1events	1935636

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	238876	310929	328335	558716	287605	211175
rejected events	211953	163243	196316	169851	218653	180825
rejected %	88%	52%	59%	30%	76%	85%

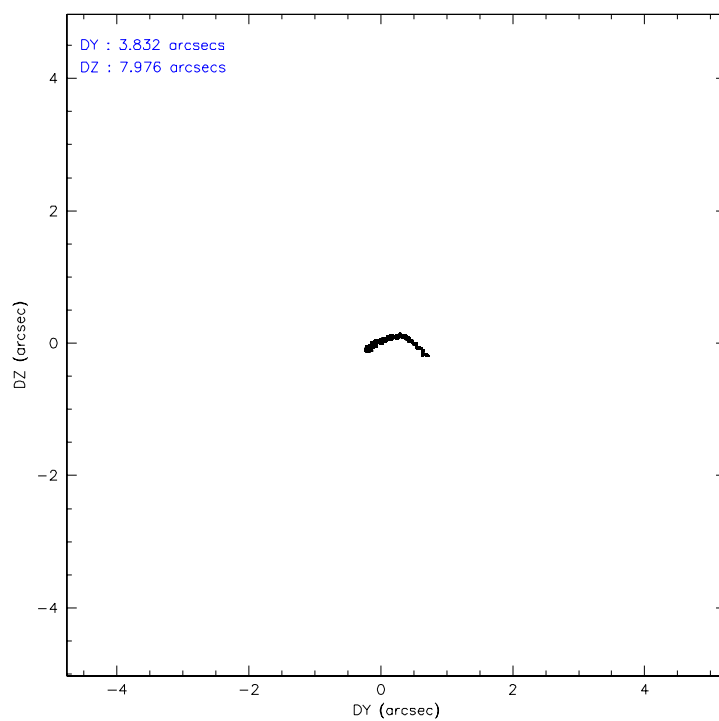
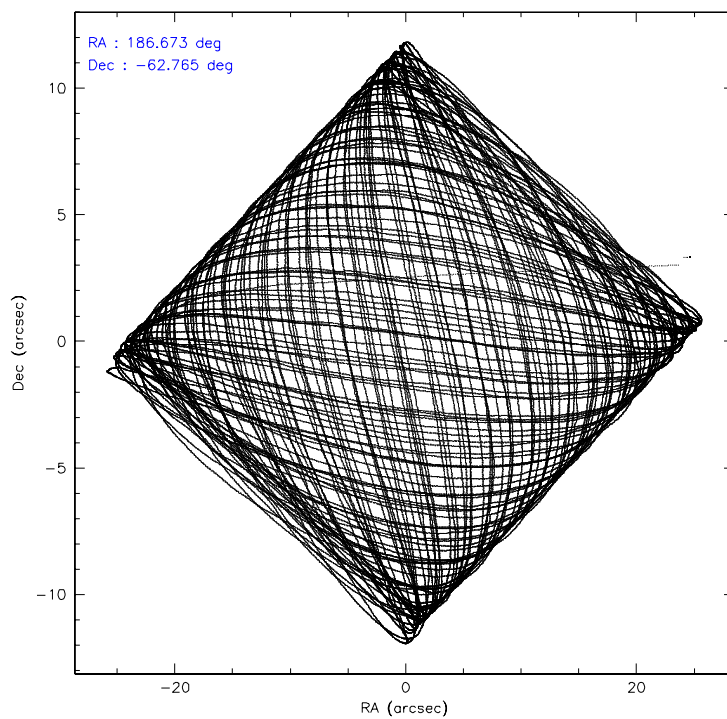
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	10809	20377	68492	64167	24764	13635
	4%	6%	20%	11%	8%	6%
grade 1 events	81	3501	481	1222	146	79
	0%	1%	0%	0%	0%	0%
grade 2 events	6038	45607	23098	96412	13648	5475
	2%	14%	7%	17%	4%	2%
grade 3 events	2857	4507	9505	32223	7432	3133
	1%	1%	2%	5%	2%	1%
grade 4 events	2837	4259	9361	31316	6882	2990
	1%	1%	2%	5%	2%	1%
grade 5 events	7274	15714	9291	24924	10891	8668
	3%	5%	2%	4%	3%	4%
grade 6 events	4382	72941	21574	164772	16269	5117
	1%	23%	6%	29%	5%	2%
grade 7 events	204598	144023	186533	143680	207573	172078
	85%	46%	56%	25%	72%	81%

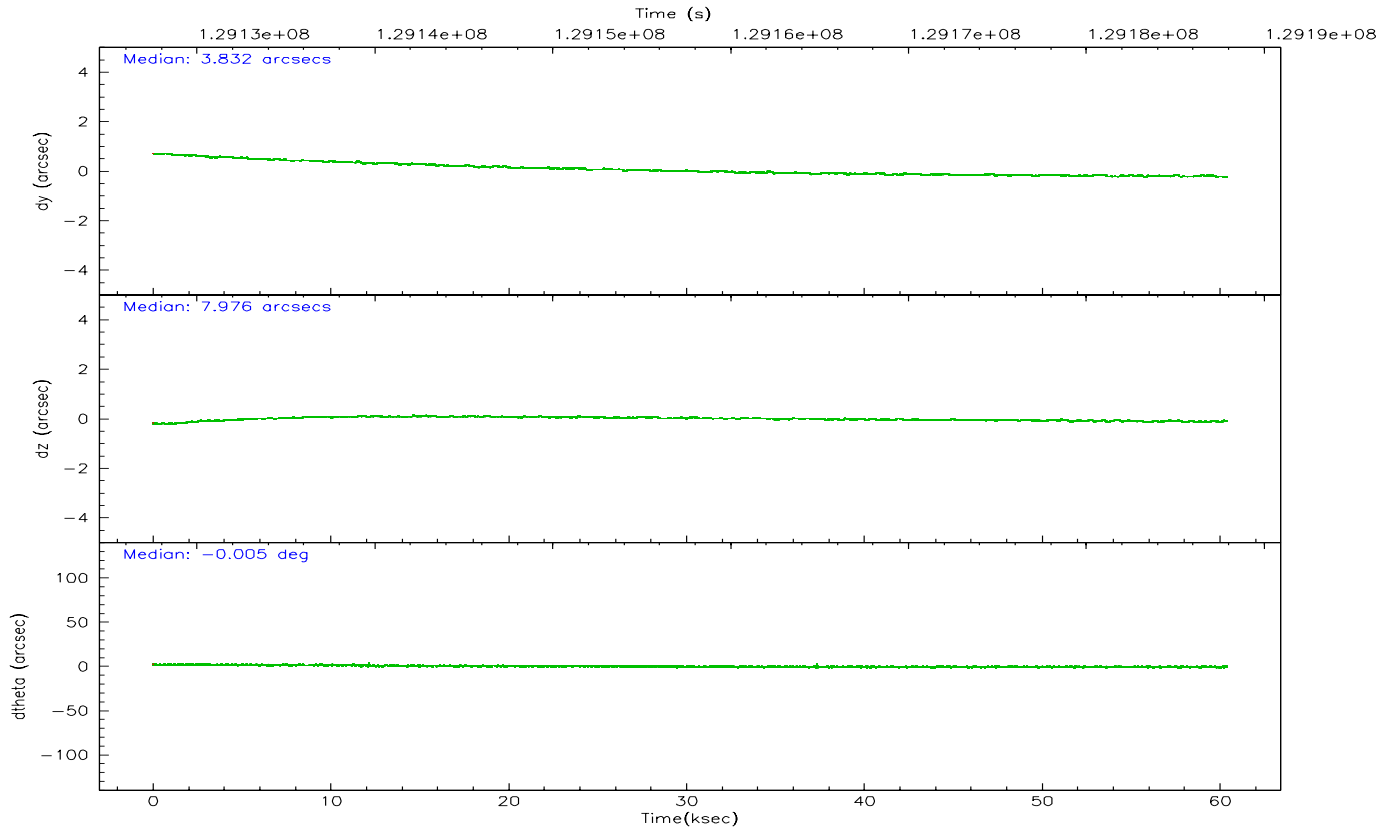
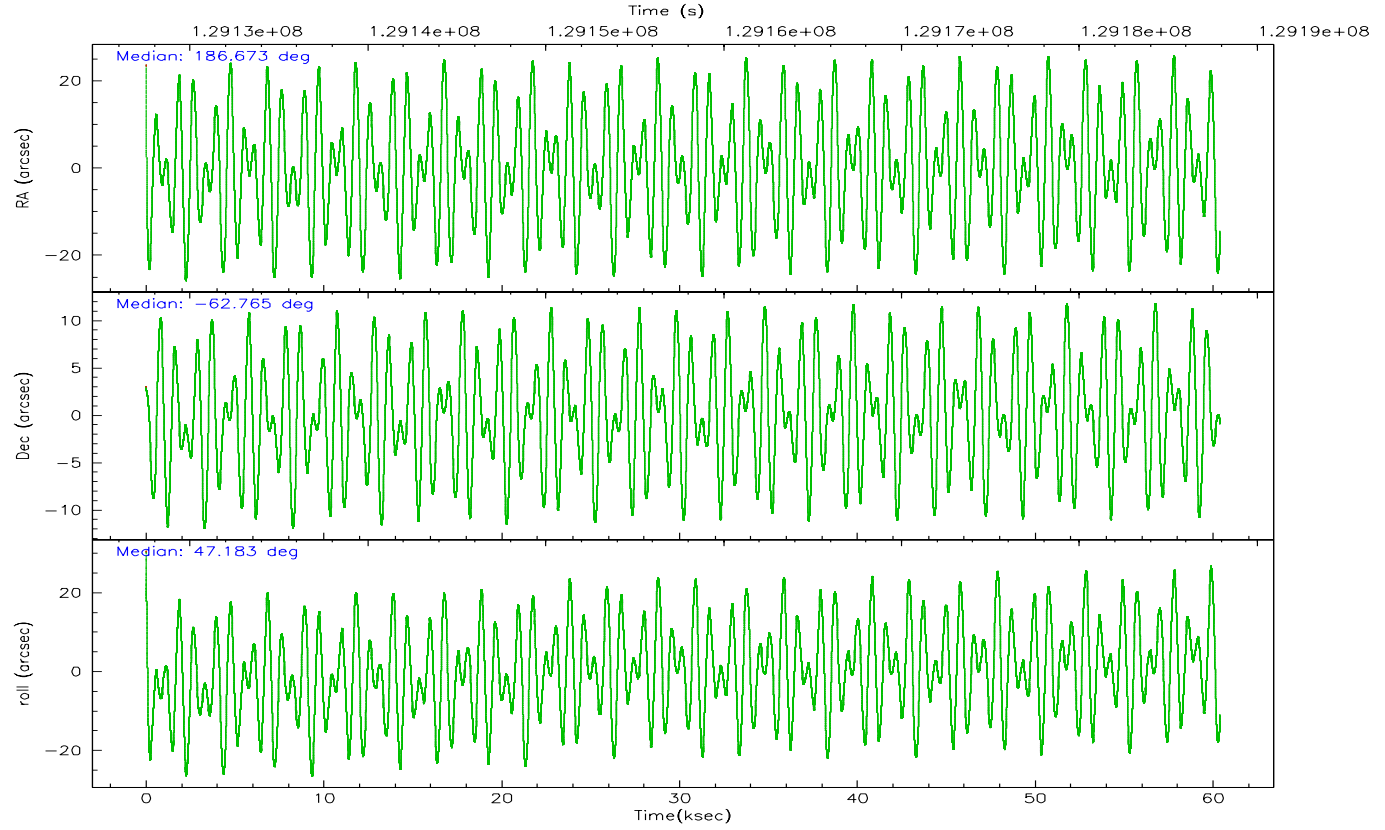


## 2.2 Compared Parameters

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	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	CUSTOM
Pointing RA	186.661122	186.6735952347533	Subarray start row	15	15
Pointing Dec	-62.791083	-62.76443596006096	Subarray row count	542	542
Pointing Roll	47.025422	47.19314457510959	Alternating exposures requested	N	N
Roll angle	30.000000	30.000000	Primary exposure time	0.000000	1.8
Roll tolerance	75.000000	75.000000			
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)	-184.708523	-184.7091449985023			
SIM translation stage offset (mm)	-5.424	-5.423377584505516			
Phase constraints	Y	Y			
Phase period	41.498000	41.498000			
Phase epoch	50130.726000	50130.726000			
Phase start	0.470000	0.470000			
Phase end	0.480000	0.480000			
Phase start error	0.020000	0.020000			
Phase end error	0.020000	0.020000			
Observation start time	129127913.184000	129126850.3909			
Observation start date	2002-02-03T12:50:49	2002-02-03T12:34:10			
Observation end time	129187913.184000	129188541.04339			
Observation end date	2002-02-04T05:30:49	2002-02-04T05:42:21			

## 2.3 Aspect



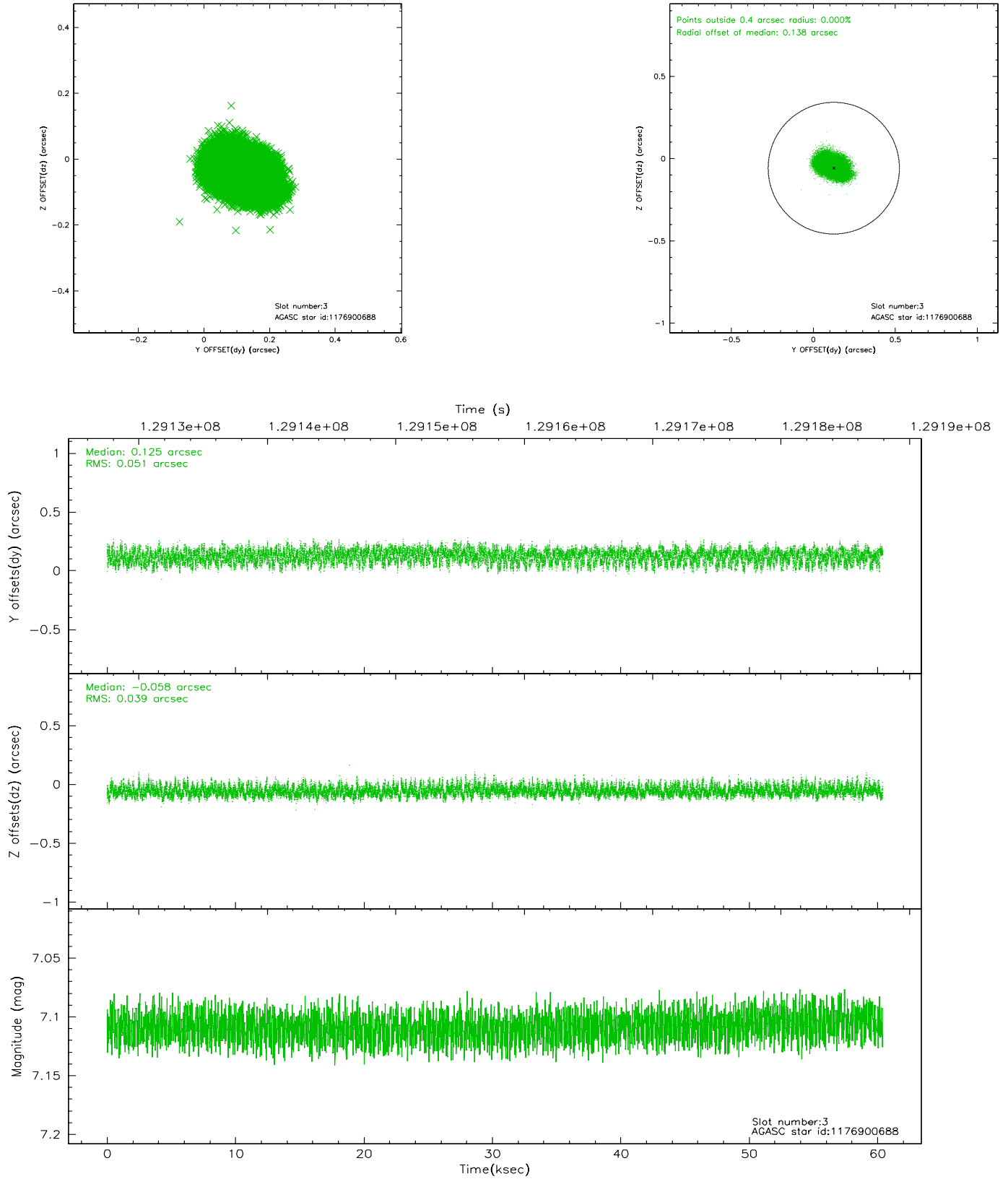


### Slot Statistics

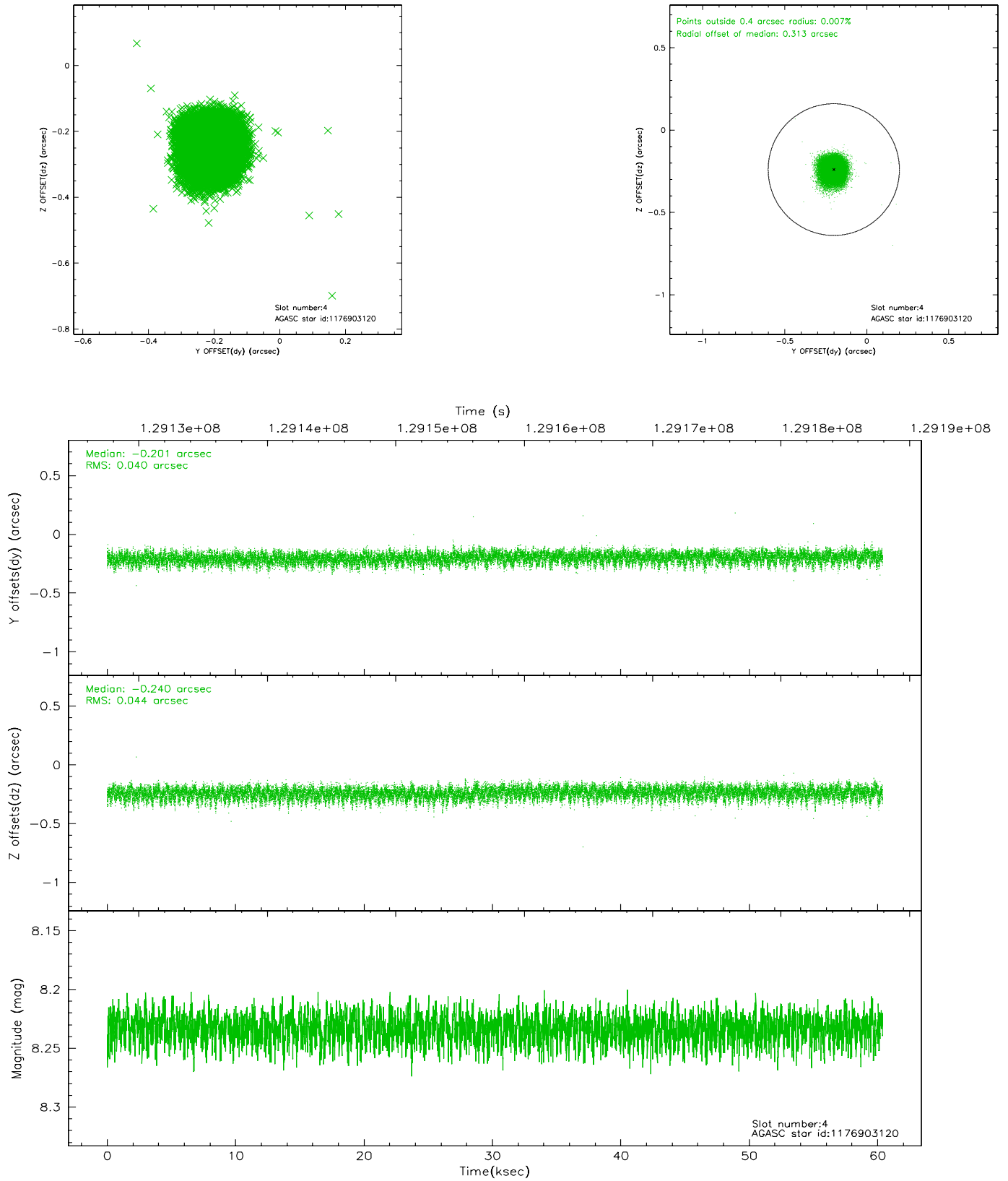
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	14732	-0.041	-0.011	0.010	0.018	0.000000	0.000000	-756.21	-1841.00
1	FID	ACIS-S-4	7.19	14731	-0.004	0.041	0.009	0.015	0.000000	0.000000	2157.09	67.61
2	FID	ACIS-S-6	7.39	14731	0.017	-0.024	0.010	0.016	0.000000	0.000000	405.74	704.86
3	GUIDE	1176900688	7.11	29459	0.125	-0.058	0.069	0.111	184.973775	-62.854186	-2081.10	1847.13
4	GUIDE	1176903120	8.23	29458	-0.201	-0.240	0.063	0.102	186.056854	-62.258063	710.58	2045.14
5	GUIDE	1176904752	8.82	29395	0.016	0.120	0.066	0.108	187.035955	-62.645951	804.63	-98.87
6	GUIDE	1176903016	8.65	29458	0.102	-0.119	0.091	0.154	184.936450	-62.772259	-1913.76	2097.58
7	GUIDE	1176910784	9.26	29452	-0.046	0.298	0.086	0.143	187.406095	-63.272390	-449.47	-2068.61

## 2.4 Star Slots

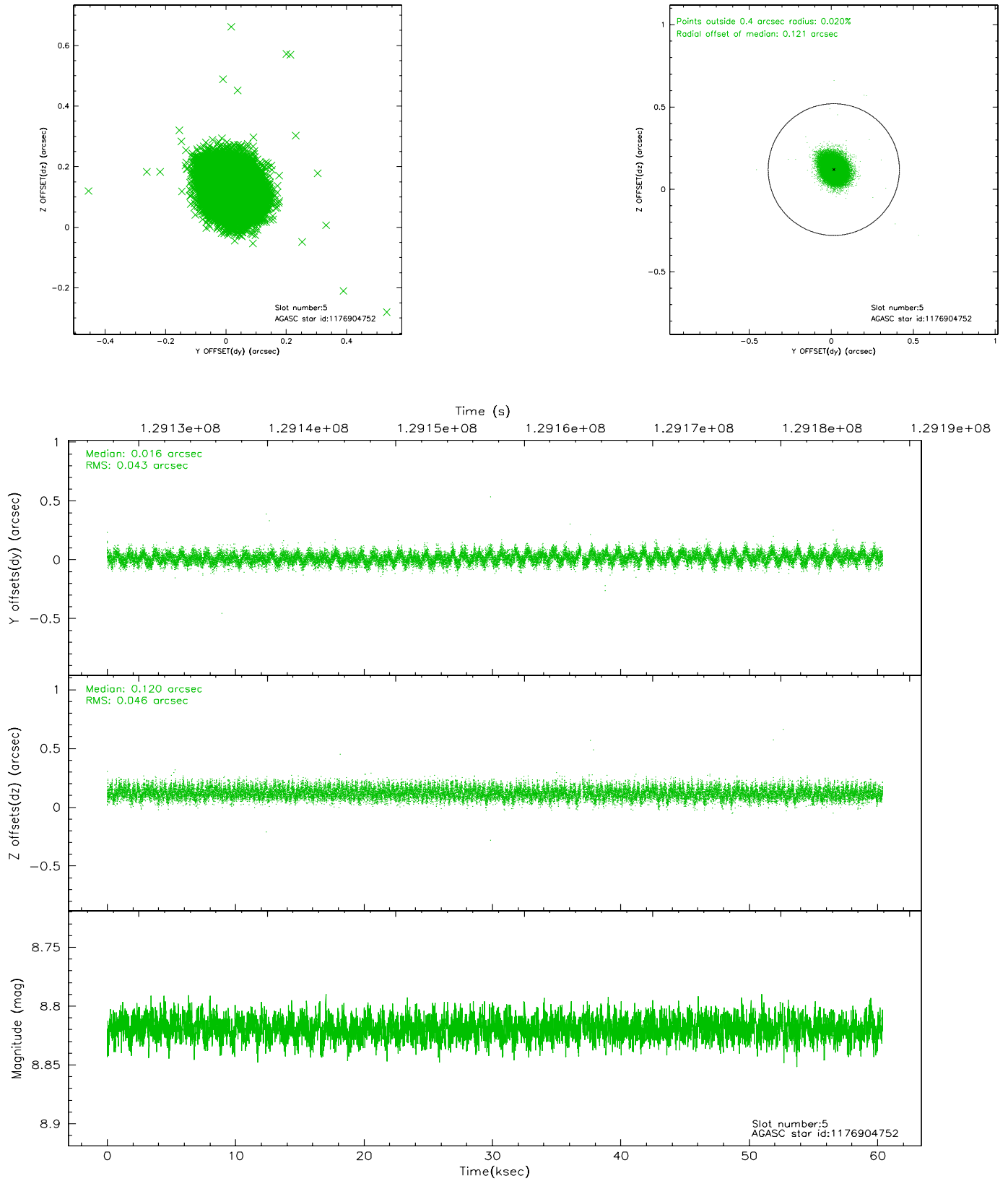
### 2.4.1 Slot 3



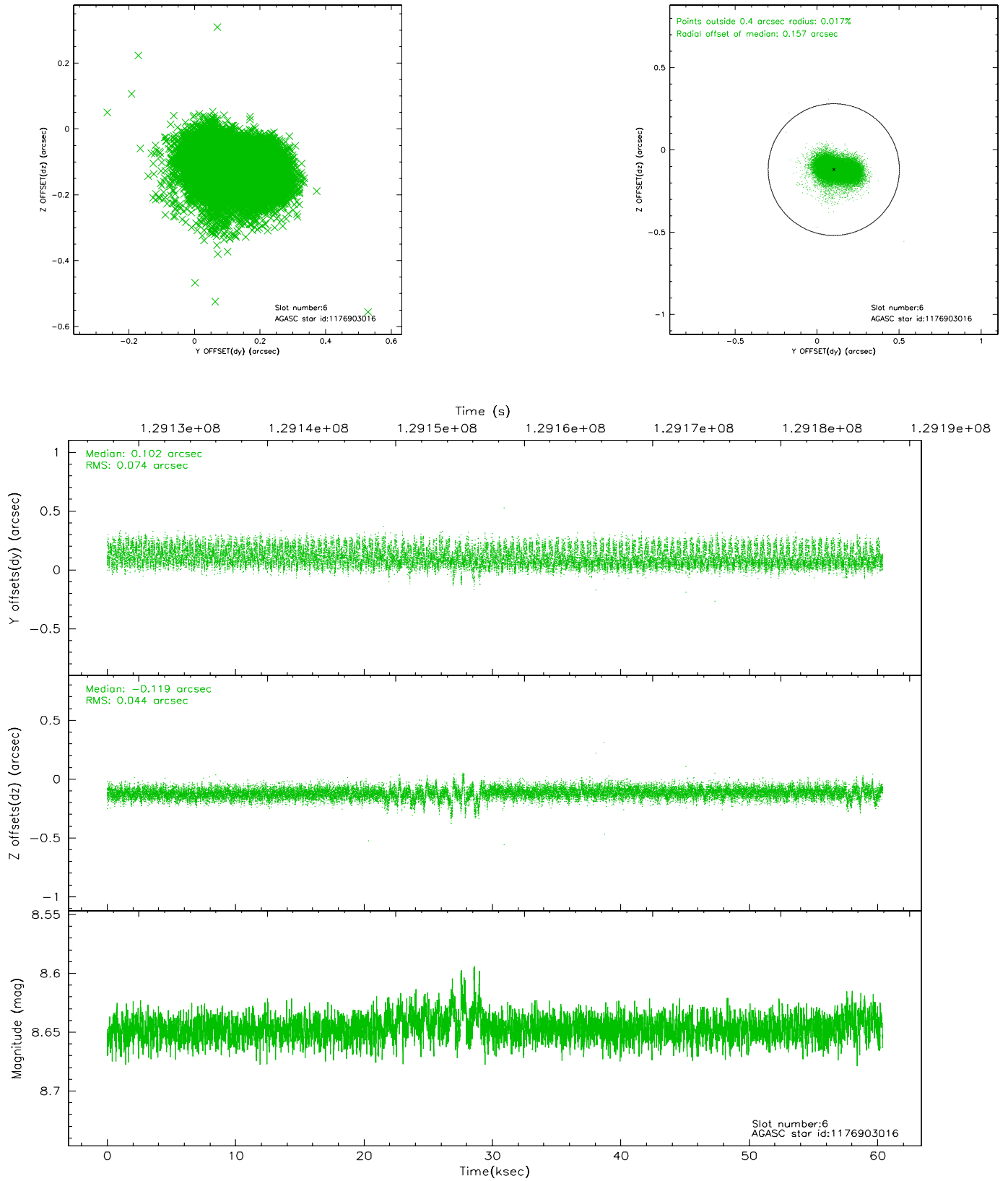
## 2.4.2 Slot 4



### 2.4.3 Slot 5

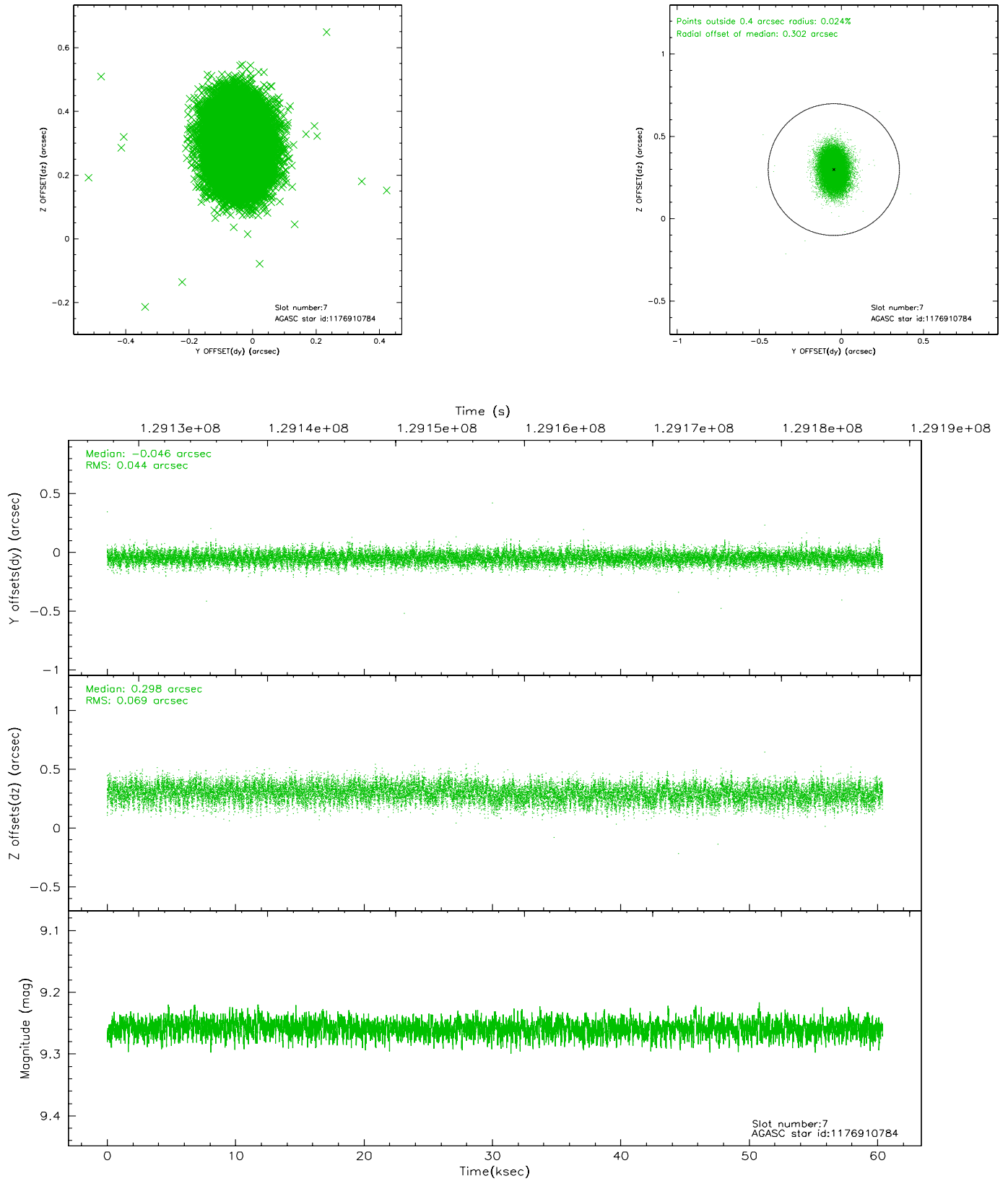


## 2.4.4 Slot 6



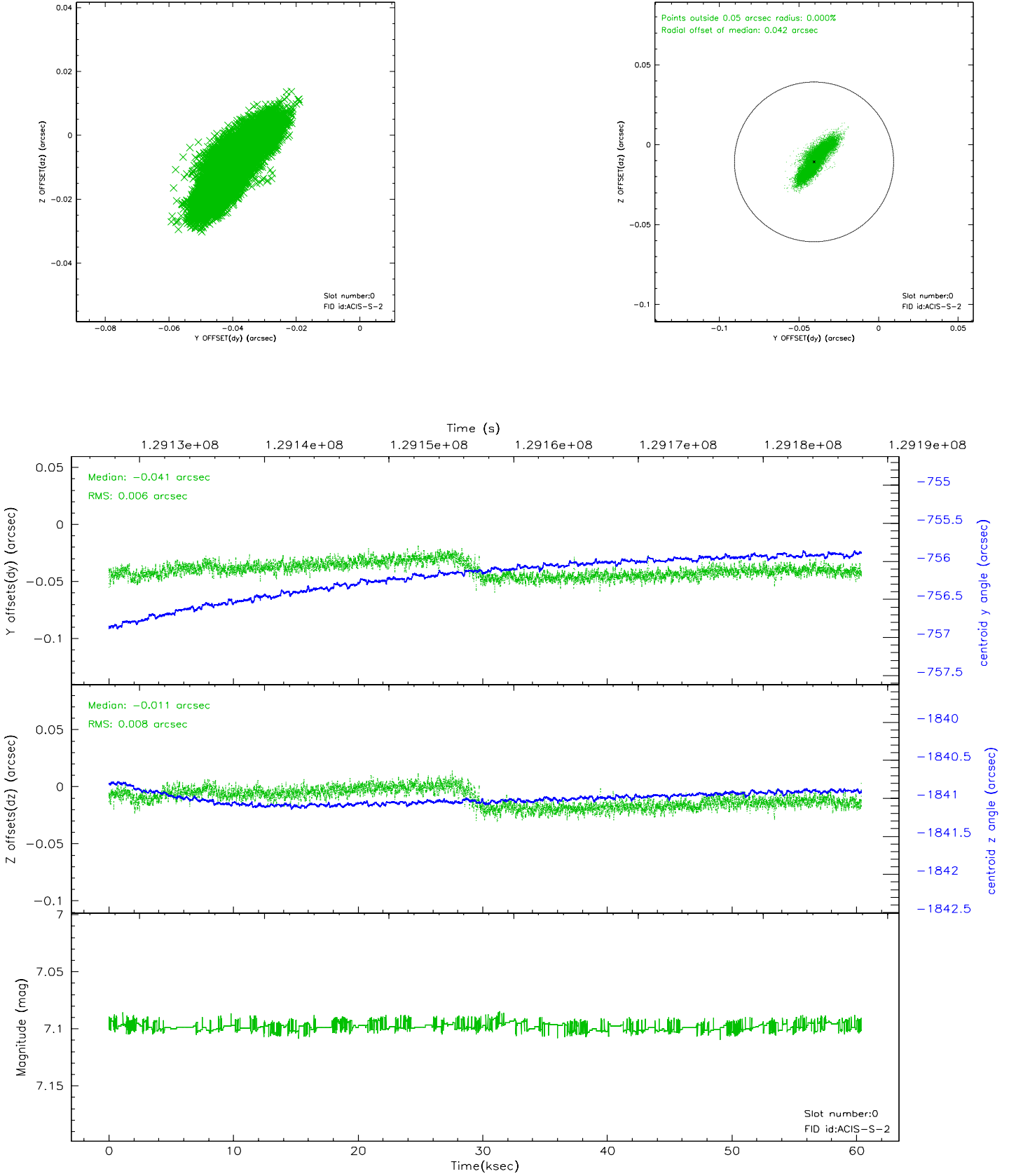


## 2.4.5 Slot 7

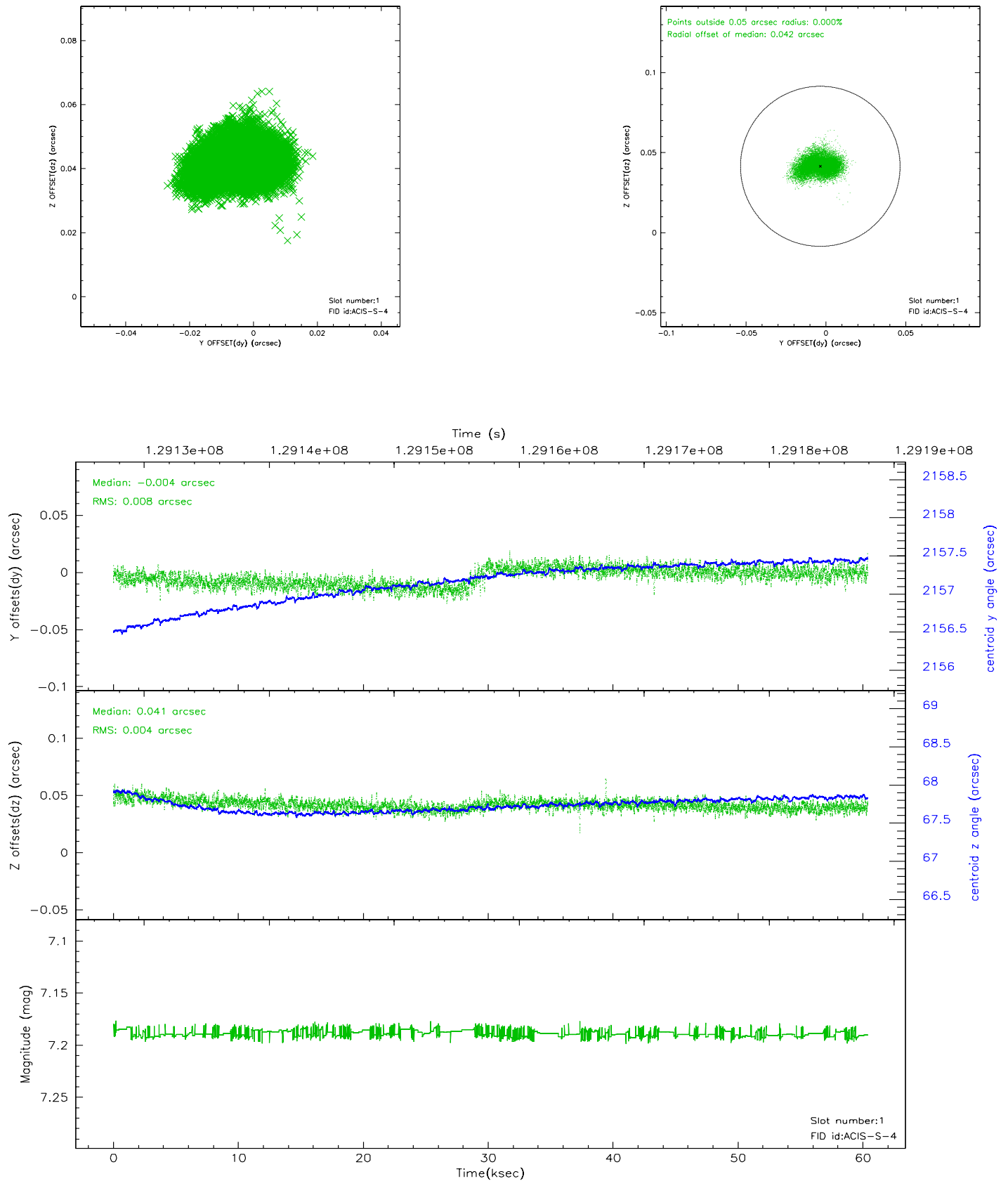


## 2.5 FID Slots

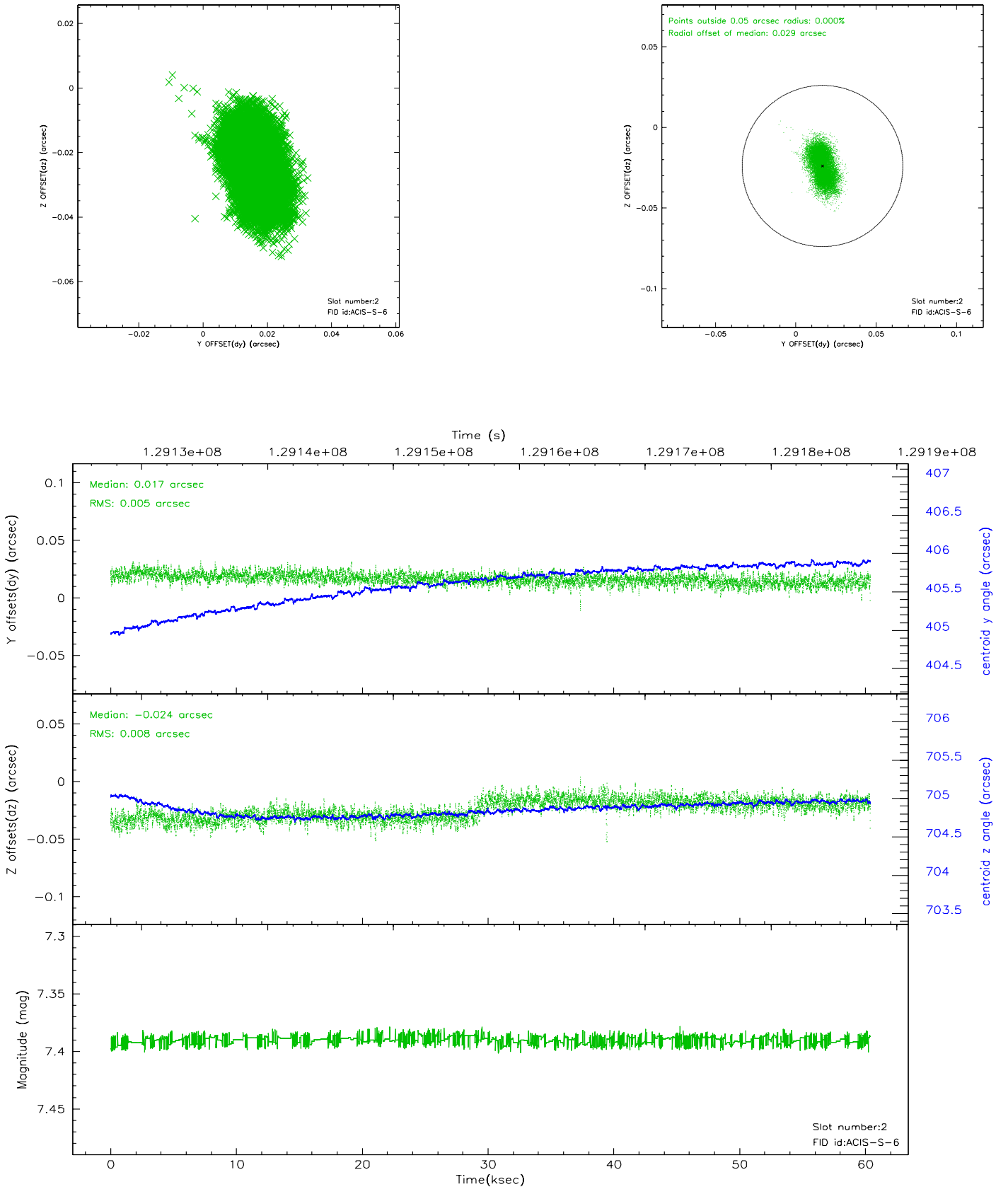
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

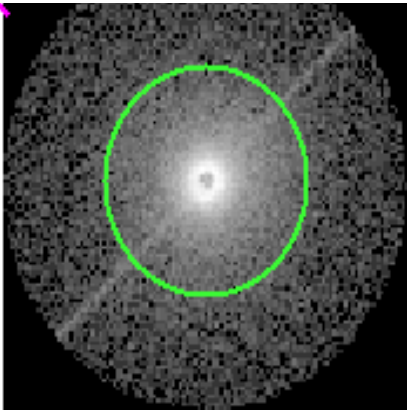


# 3 Gratings

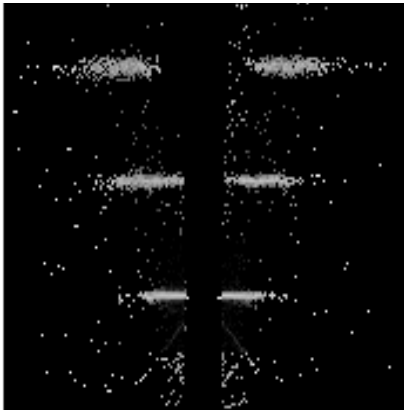
## 3.1 HEG Arm



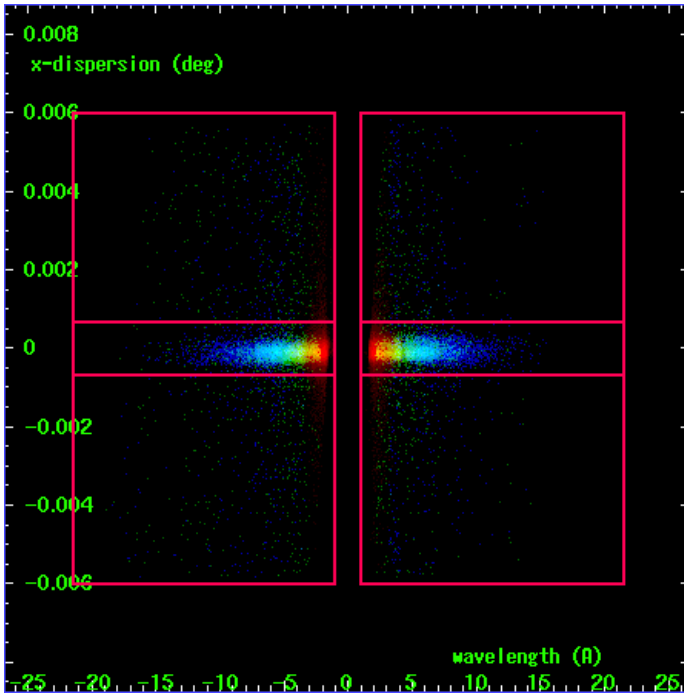
HEG Order Sort 123



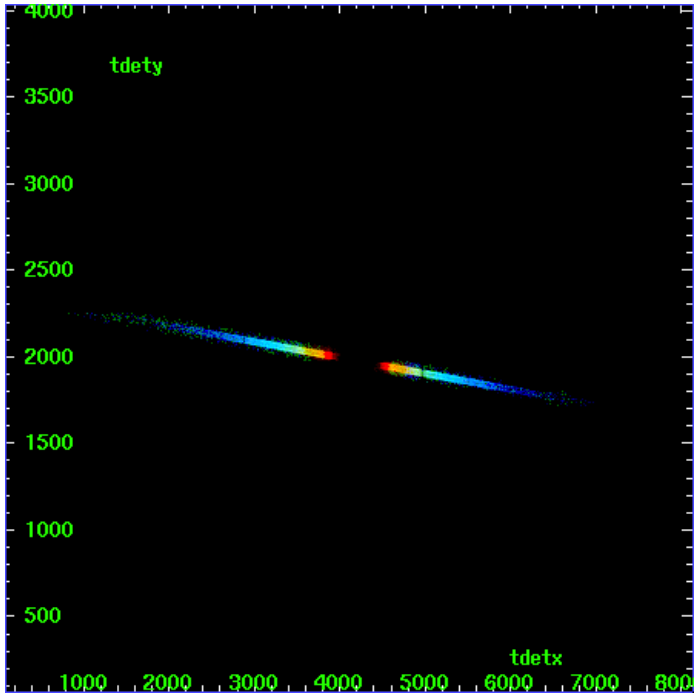
HEG Zero Order



HEG Order Sort ALL

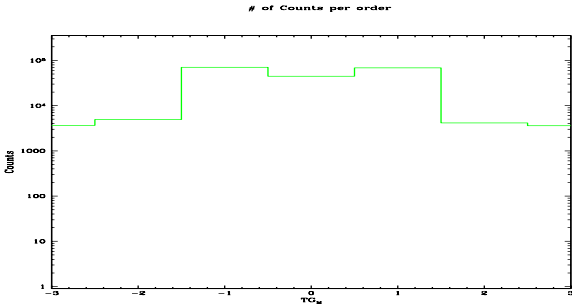


Spot Image HEG

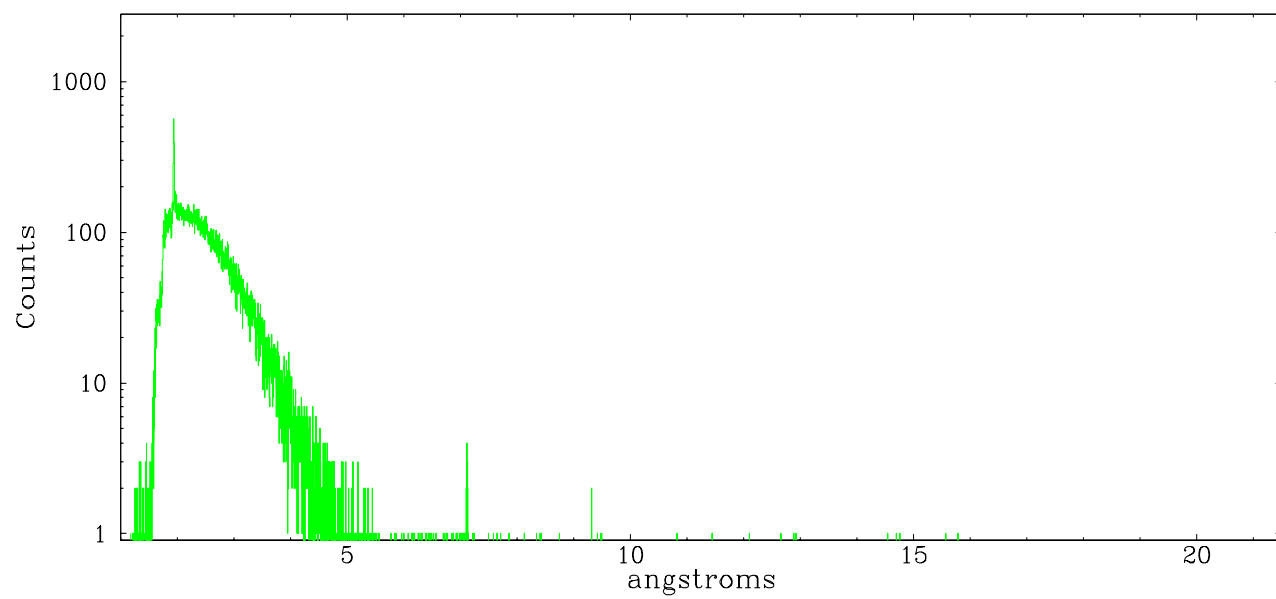


Full Detector HEG

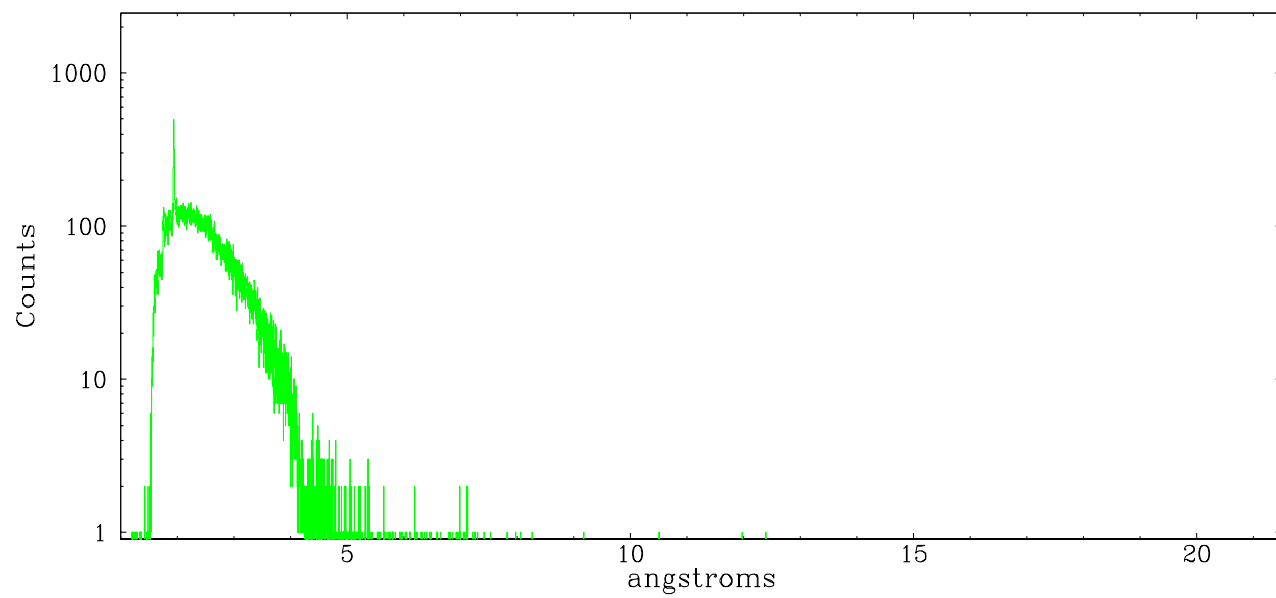
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3678	4918	70600	44719	68781	4141	3588



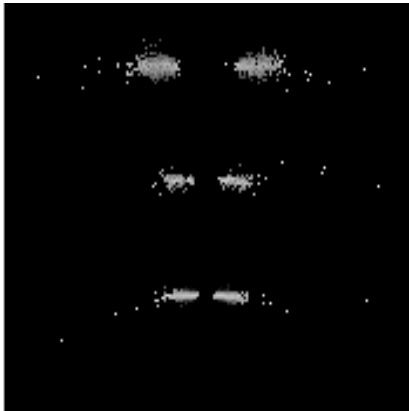
heg order -1



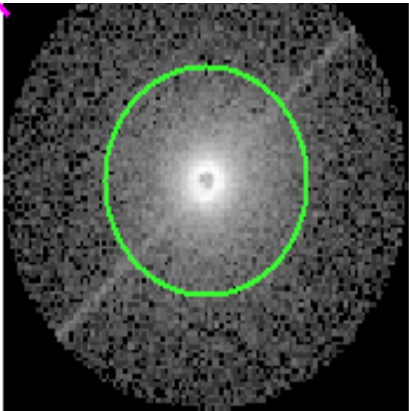
heg order +1



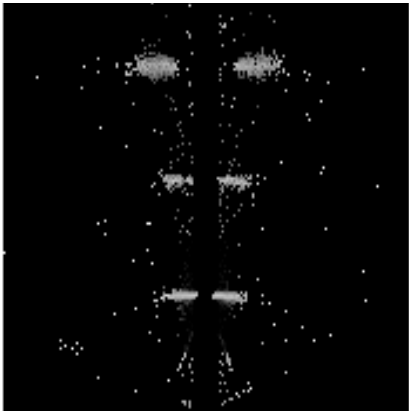
3.2 MEG Arm



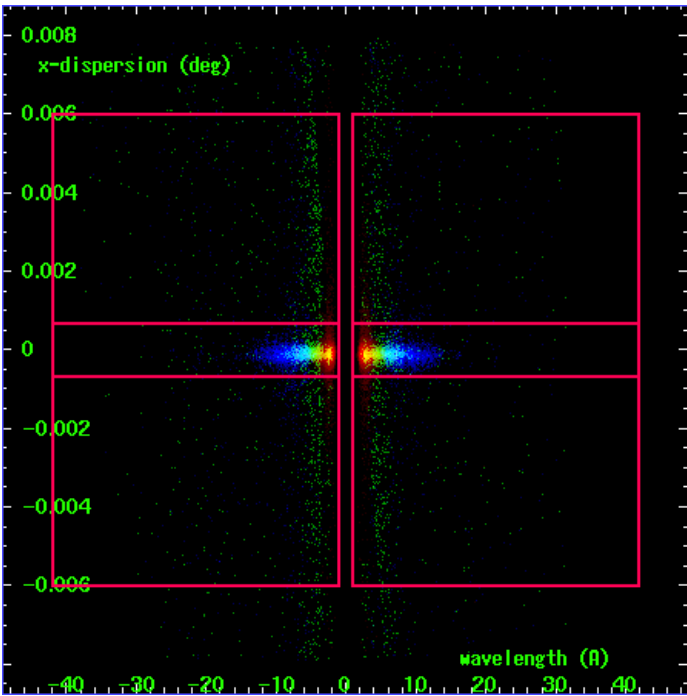
MEG Order Sort 123



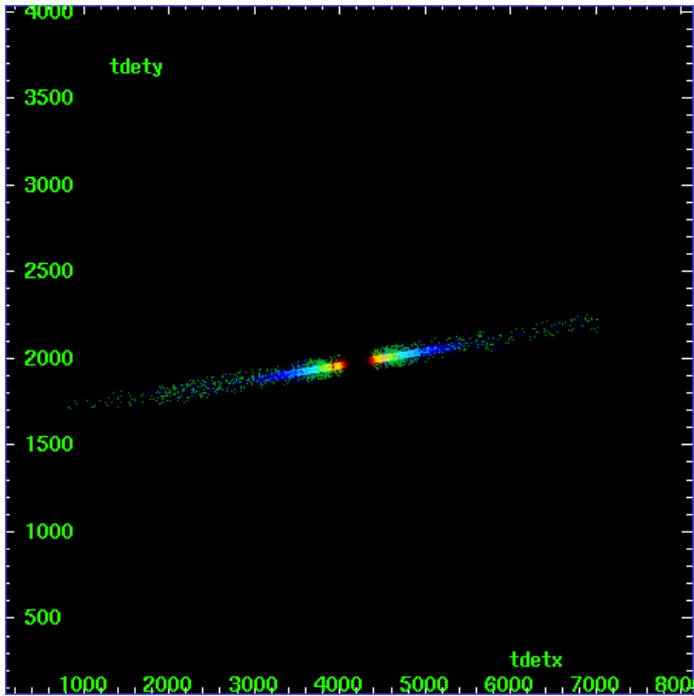
MEG Zero Order



MEG Order Sort ALL

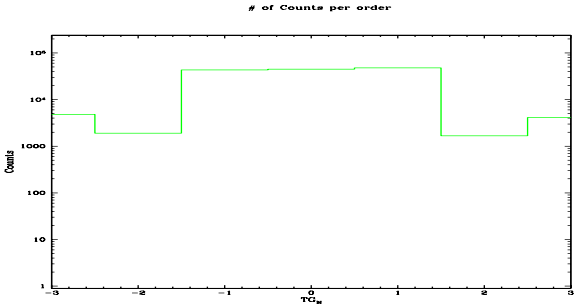


Spot Image MEG

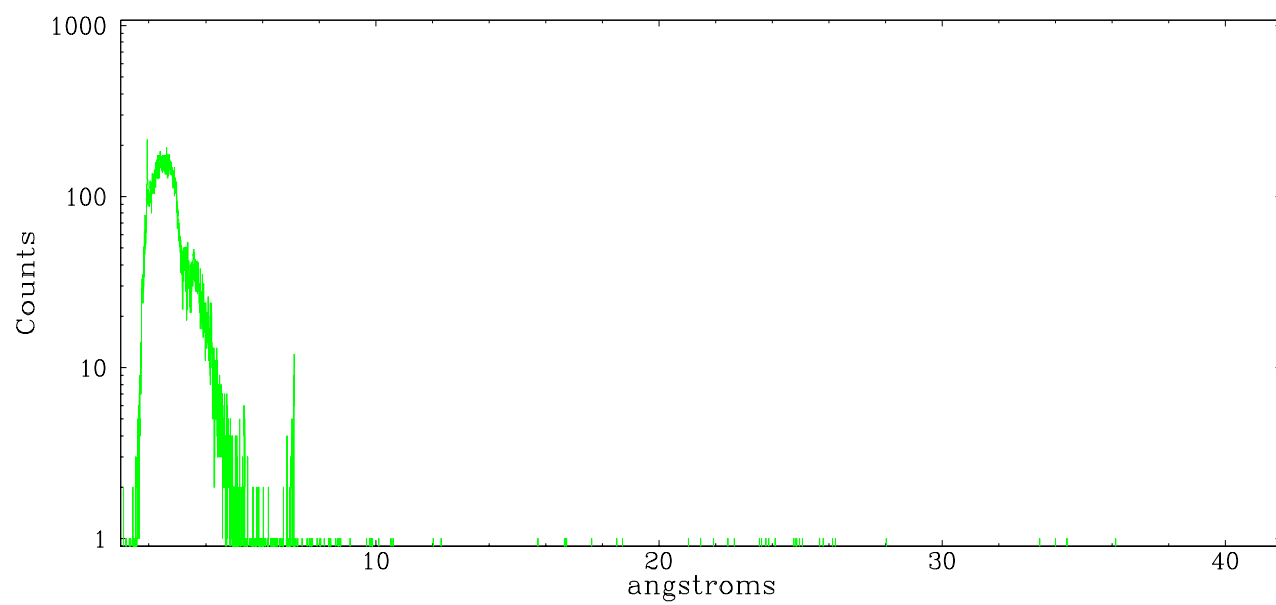


Full Detector MEG

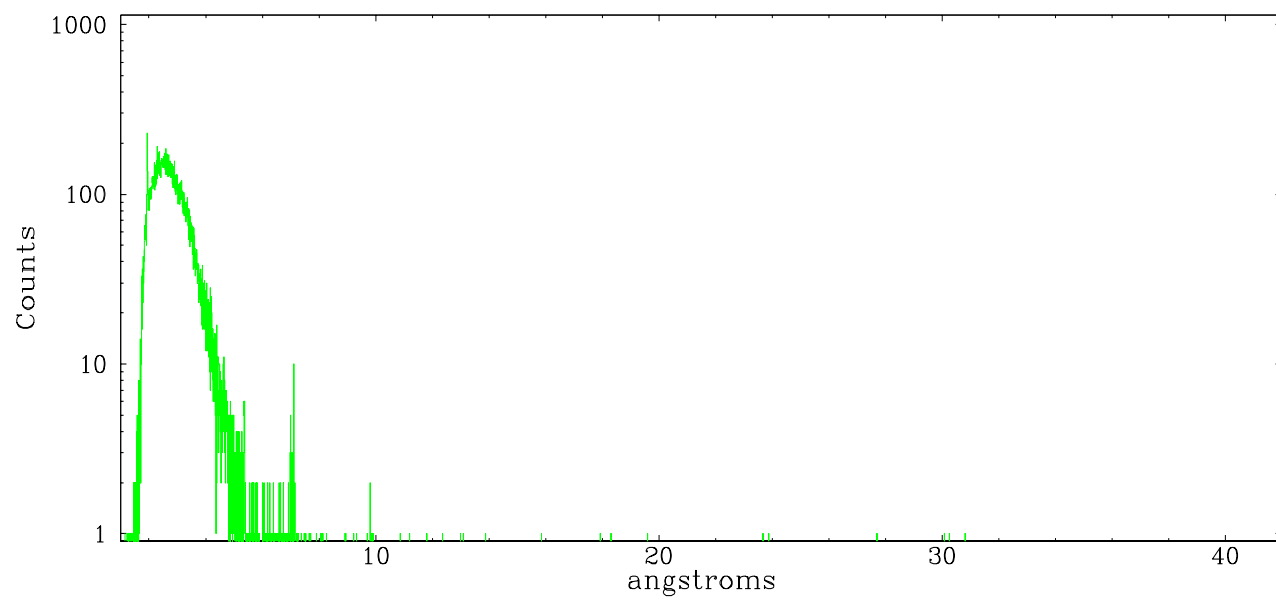
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4805	1893	43211	44719	47828	1675	4123



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.08.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	60.379

### A.2 Comments

Phase constraint met. Roll constraint met.