

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 6360 - L2 Version 002  
Chandra X-Ray Center

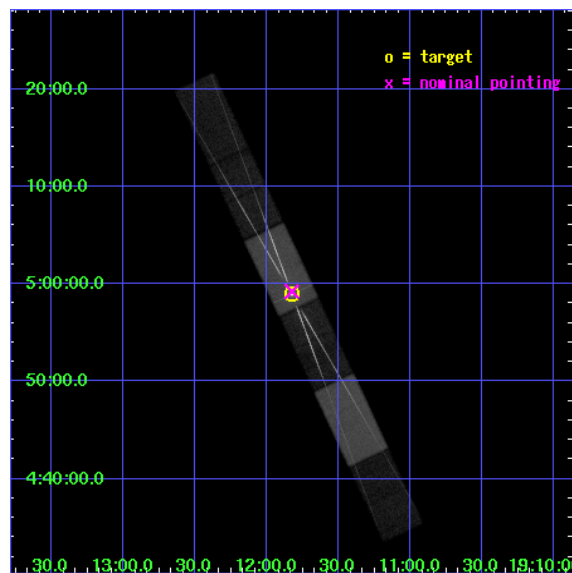
L2 Processing Date : Mar 20 2006

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Gratings</b>	<b>17</b>
3.1	HEG Arm . . . . .	17
3.2	MEG Arm . . . . .	19
<b>A</b>	<b>Summary</b>	<b>21</b>
A.1	Status . . . . .	21
A.2	Comments . . . . .	21

# 1 Front

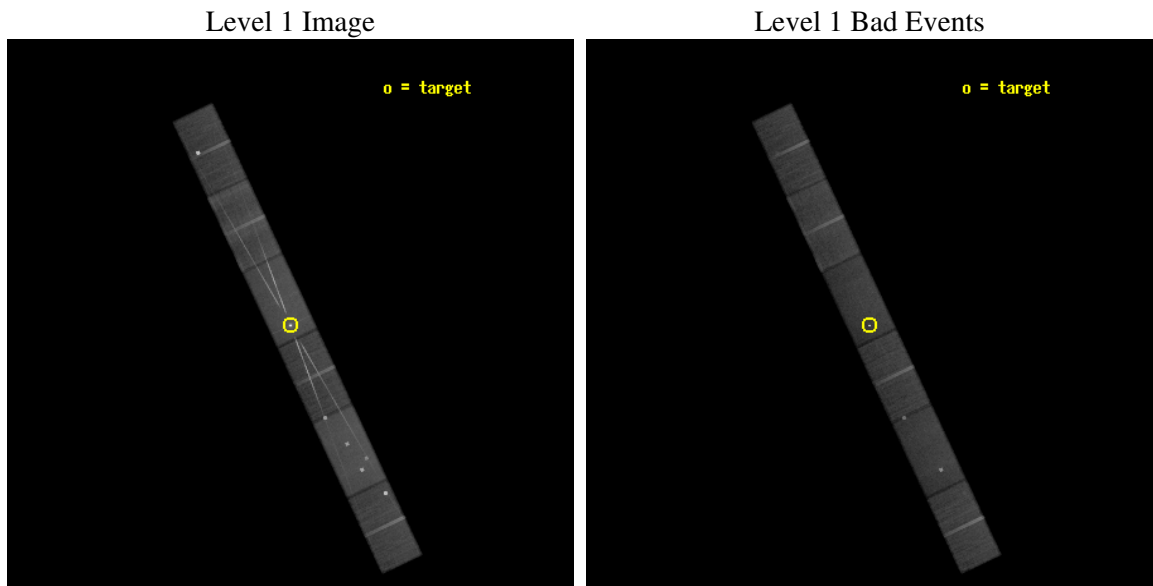
seq_num	400444
obs_id	6360
title	Detailed Studies of the Jets in SS 433
observer	Dr. Claude Canizares
object	SS 433
dtcycle	0
cycle	P
ra_targ	287.95625
dec_targ	4.982778
ra_nom	287.95660626716
dec_nom	4.9874070497955
roll_nom	244.75658735444
revision	2
ontime	58656.600388467
livetime	57349.042225721
ontime4	58654.759378314
ontime5	58656.600388467
ontime6	58656.600388467
ontime7	58656.600388467
ontime8	58656.600388467
ontime9	58656.600388467
l2events	578929



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

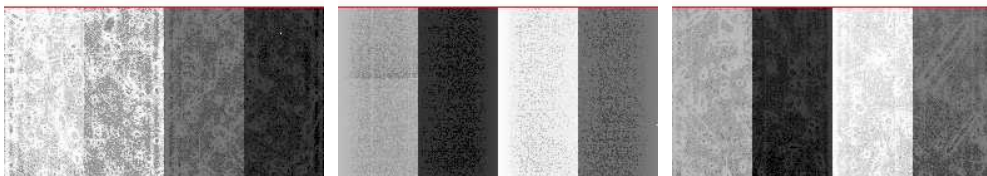


#### 2.1.2 Bias

Chip 4

Chip 5

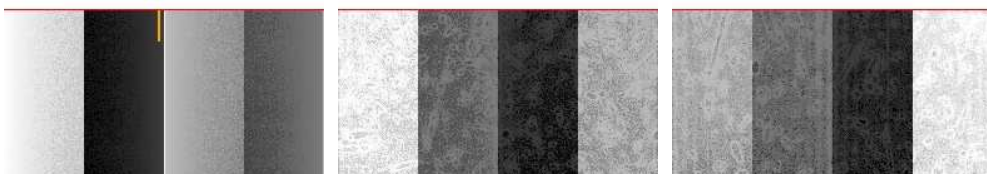
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-03-20T11:42:11
revision	2

sched_exp_time	58500.000000
ontime	60405.856520981
ontime4	60404.015510827
ontime5	60405.856520981
ontime6	60405.856520981
ontime7	60405.856520981
ontime8	60405.856520981
ontime9	60405.856520981
l1events	2123086

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	312194	409481	322973	449041	343144	286253
rejected events	249542	219438	225258	218556	256110	221131
rejected %	79%	53%	69%	48%	74%	77%

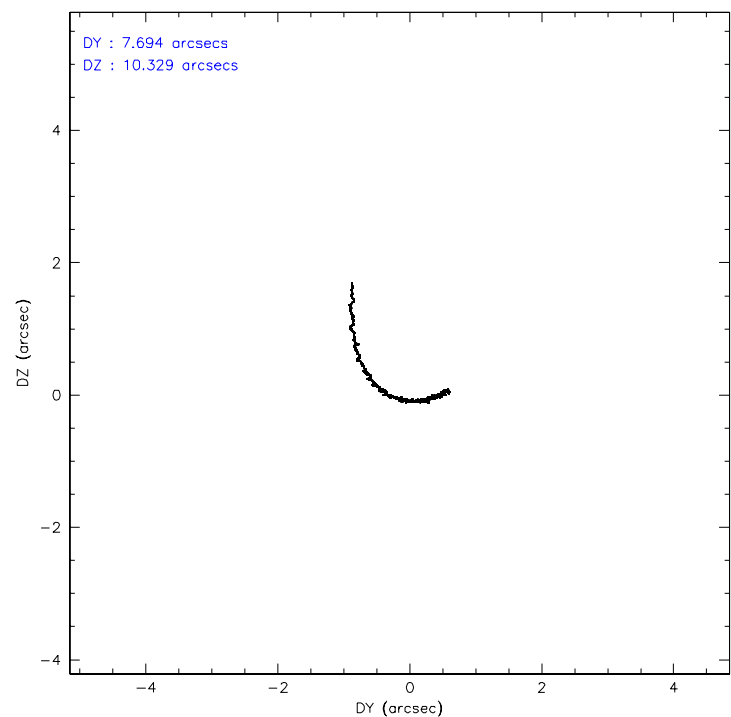
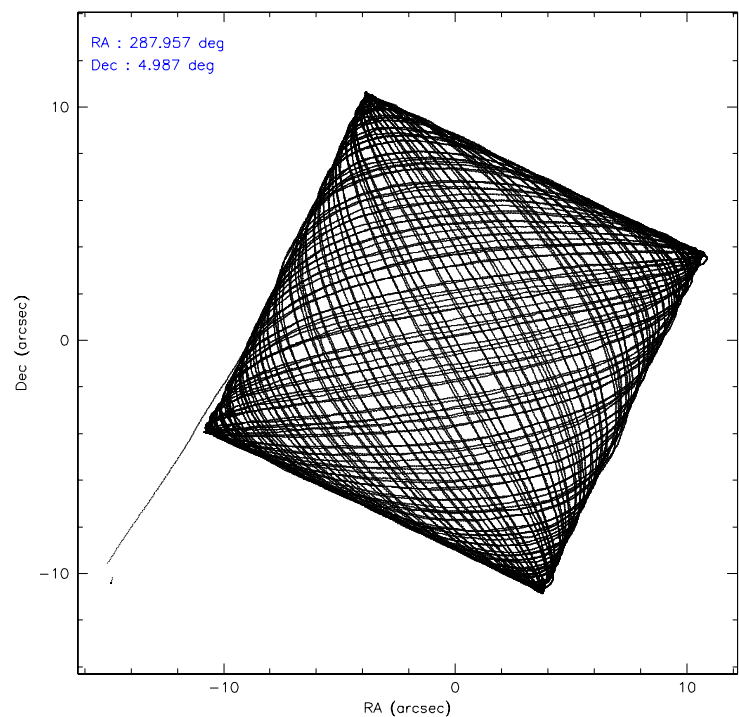
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	44418	27955	60810	26393	35747	40000
	14%	6%	18%	5%	10%	13%
grade 1 events	249	2145	281	800	217	158
	0%	0%	0%	0%	0%	0%
grade 2 events	7277	57800	15197	56923	17299	11084
	2%	14%	4%	12%	5%	3%
grade 3 events	3731	8308	6477	18290	8496	3589
	1%	2%	2%	4%	2%	1%
grade 4 events	3604	6401	6260	18010	7953	5430
	1%	1%	1%	4%	2%	1%
grade 5 events	10300	25655	11262	28956	14197	11705
	3%	6%	3%	6%	4%	4%
grade 6 events	5333	94800	10154	114892	19739	6851
	1%	23%	3%	25%	5%	2%
grade 7 events	237282	186417	212532	184777	239496	207436
	76%	45%	65%	41%	69%	72%

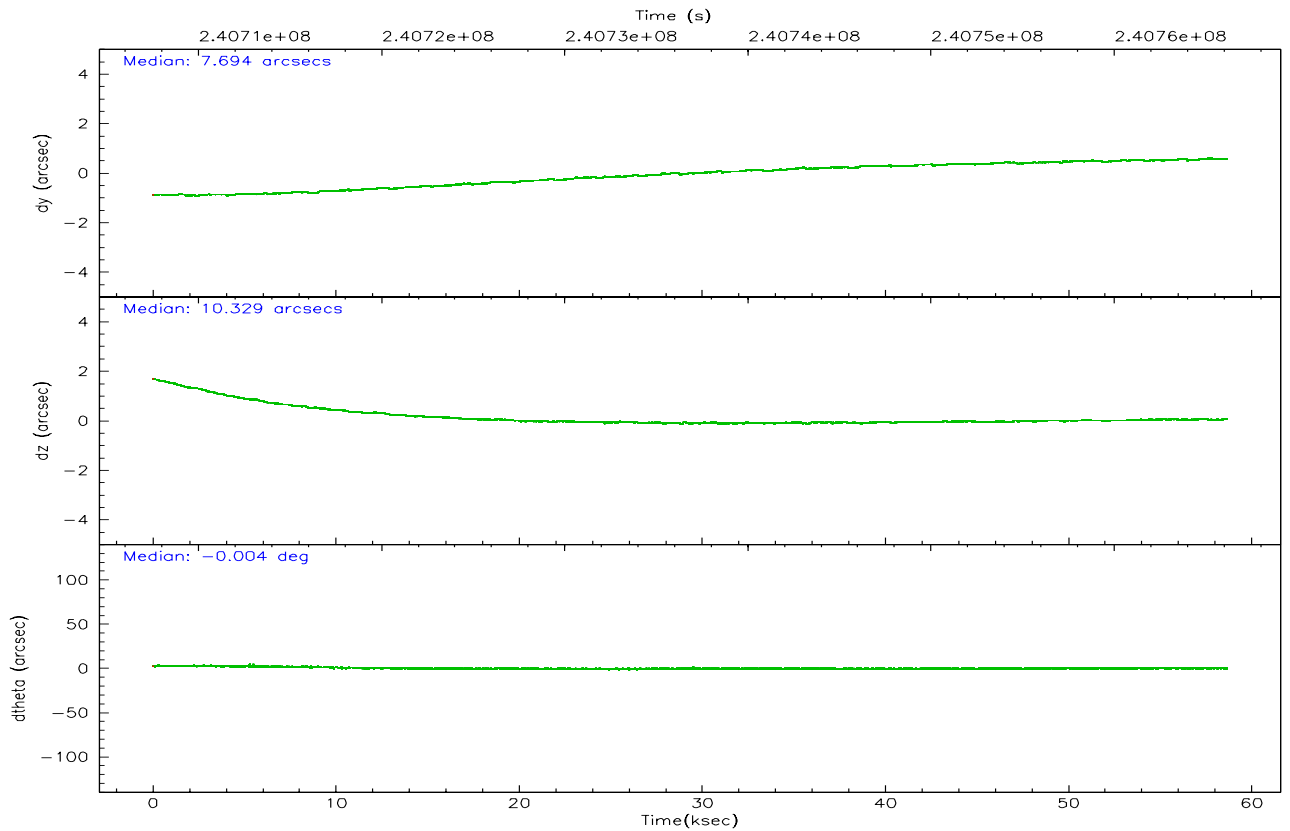
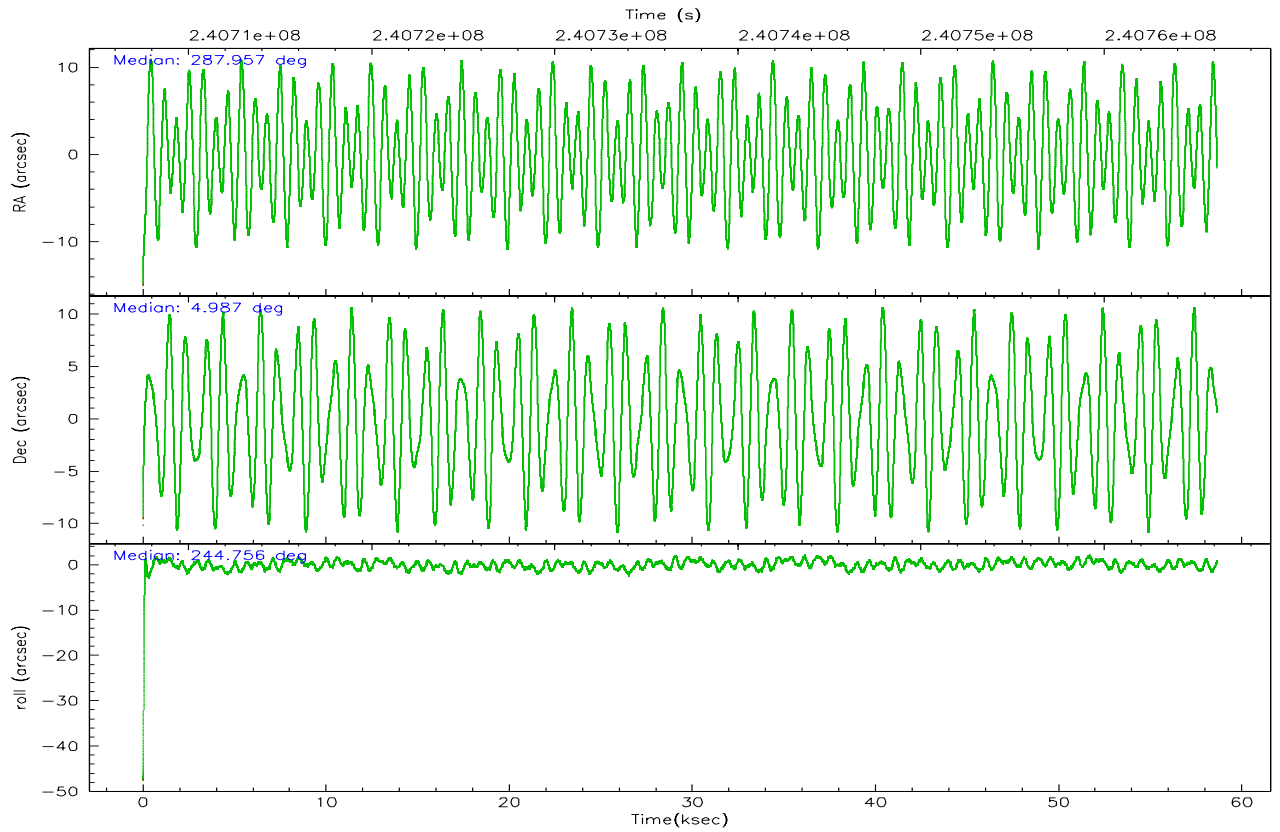


## 2.2 Compared Parameters

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	287.953957	287.9566062671587	Subarray start row	1	1
Pointing Dec	5.014495	4.987407049795489	Subarray row count	542	542
Pointing Roll	244.600205	244.7565873544445	Alternating exposures requested	N	N
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Primary exposure time	0.000000	1.8
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-184.532523	-184.5306286120915			
SIM translation stage offset (mm)	-5.6	-5.601893970916279			
Phase constraints	Y	Y			
Phase period	13.082110	13.082110			
Phase epoch	52377.900000	52377.900000			
Phase start	0.200000	0.200000			
Phase end	0.800000	0.800000			
Phase start error	0.050000	0.050000			
Phase end error	0.050000	0.050000			
Observation start time	240707681.184000	240705777.33665			
Observation start date	2005-08-17T23:13:37	2005-08-17T22:42:57			
Observation end time	240766181.184000	240767756.52699			
Observation end date	2005-08-18T15:28:37	2005-08-18T15:55:56			
Read mode	TIMED	TIMED			

2.3 Aspect



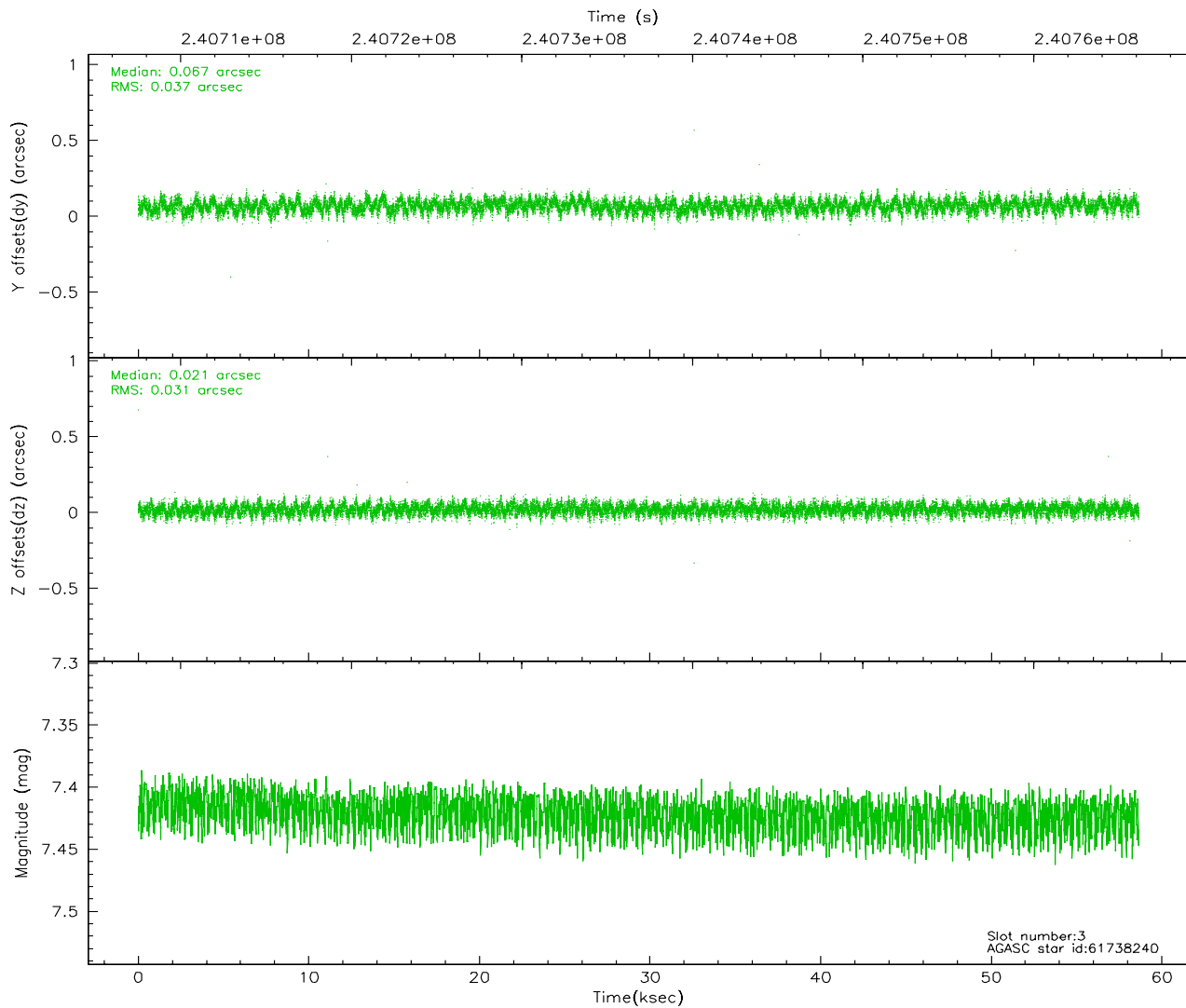
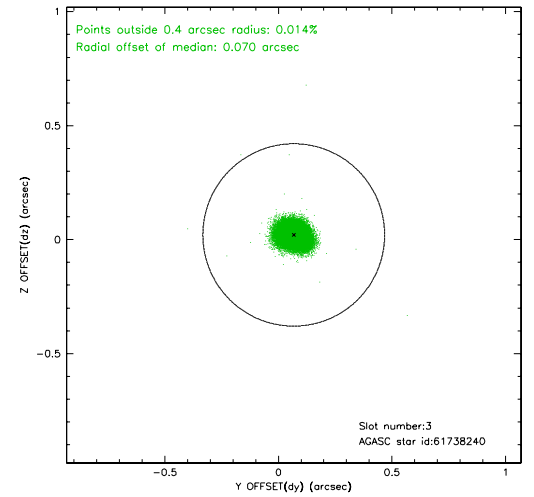
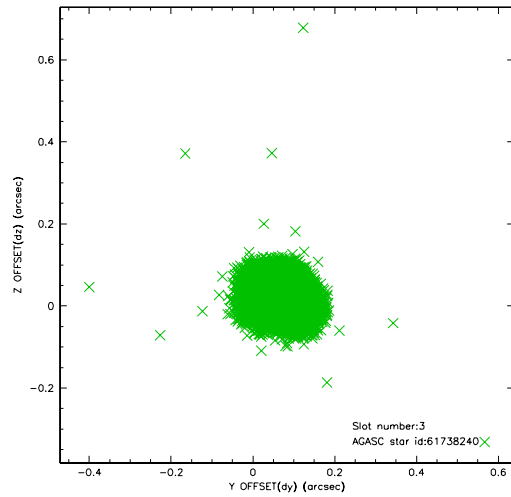


### Slot Statistics

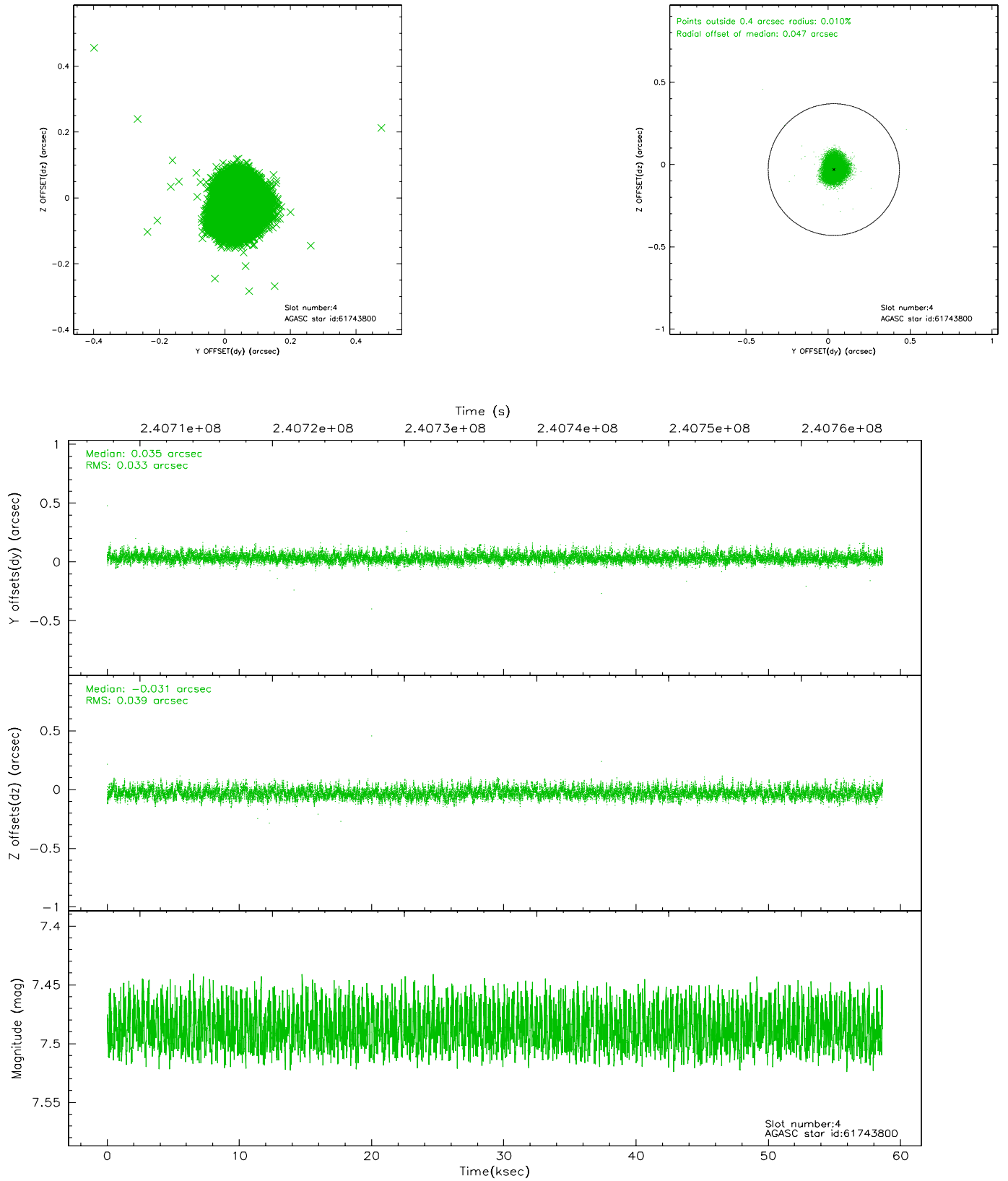
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	14308	-0.056	-0.096	0.013	0.029	0.000000	0.000000	-760.04	-1847.34
1	FID	ACIS-S-4	7.19	14307	0.078	0.054	0.014	0.025	0.000000	0.000000	2153.39	61.31
2	FID	ACIS-S-5	7.22	14307	-0.052	0.051	0.018	0.033	0.000000	0.000000	-1812.92	54.94
3	GUIDE	61738240	7.42	28611	0.067	0.021	0.051	0.082	287.996556	4.354861	2079.69	1156.89
4	GUIDE	61743800	7.49	28614	0.035	-0.031	0.053	0.089	287.776811	5.274666	-573.60	-975.31
5	GUIDE	61744976	7.59	28614	-0.036	0.103	0.048	0.079	288.430364	5.306675	-1683.26	1091.40
6	GUIDE	61745024	7.60	28607	-0.258	-0.170	0.065	0.102	288.156168	5.297362	-1231.16	217.92
7	GUIDE	61745016	8.64	28606	0.187	0.075	0.055	0.089	288.113628	4.368816	1854.13	1515.25

## 2.4 Star Slots

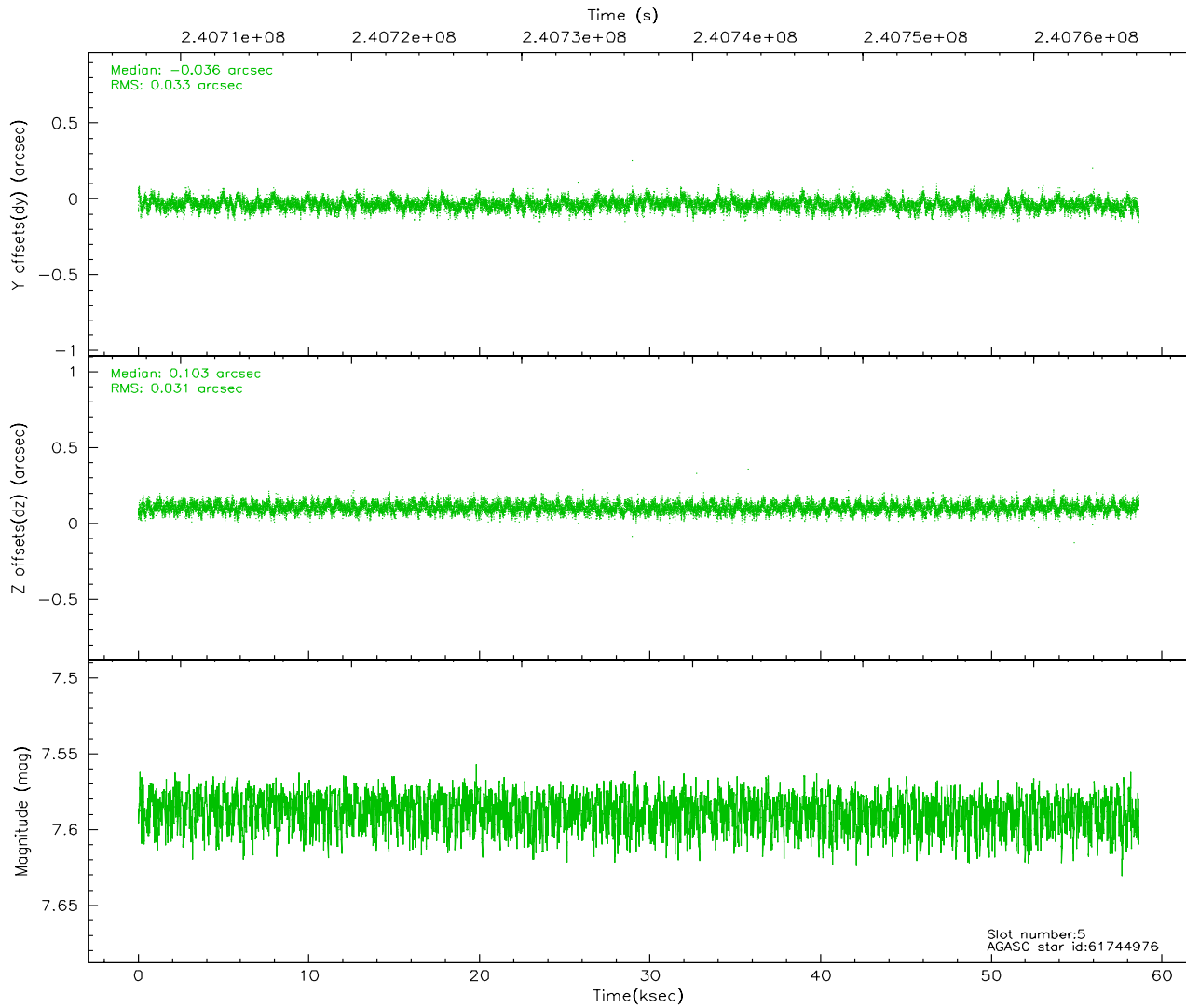
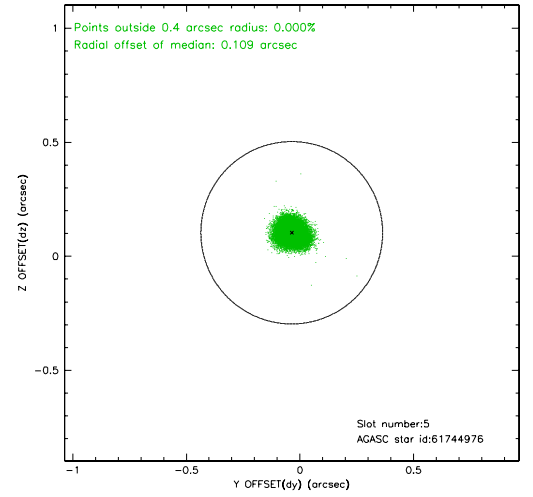
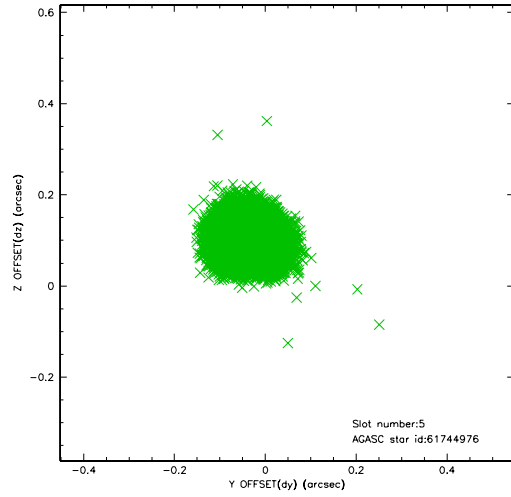
### 2.4.1 Slot 3



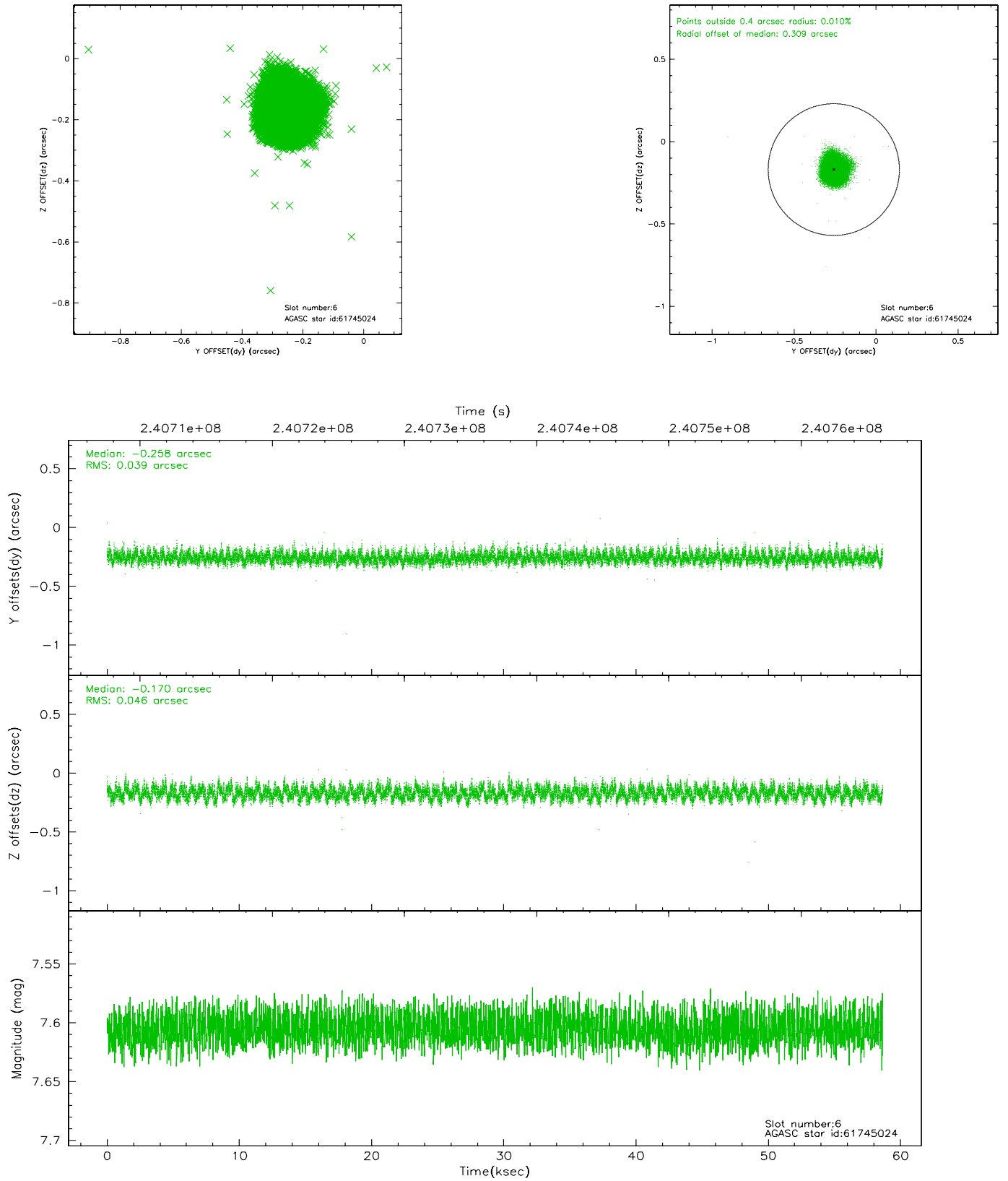
## 2.4.2 Slot 4



### 2.4.3 Slot 5

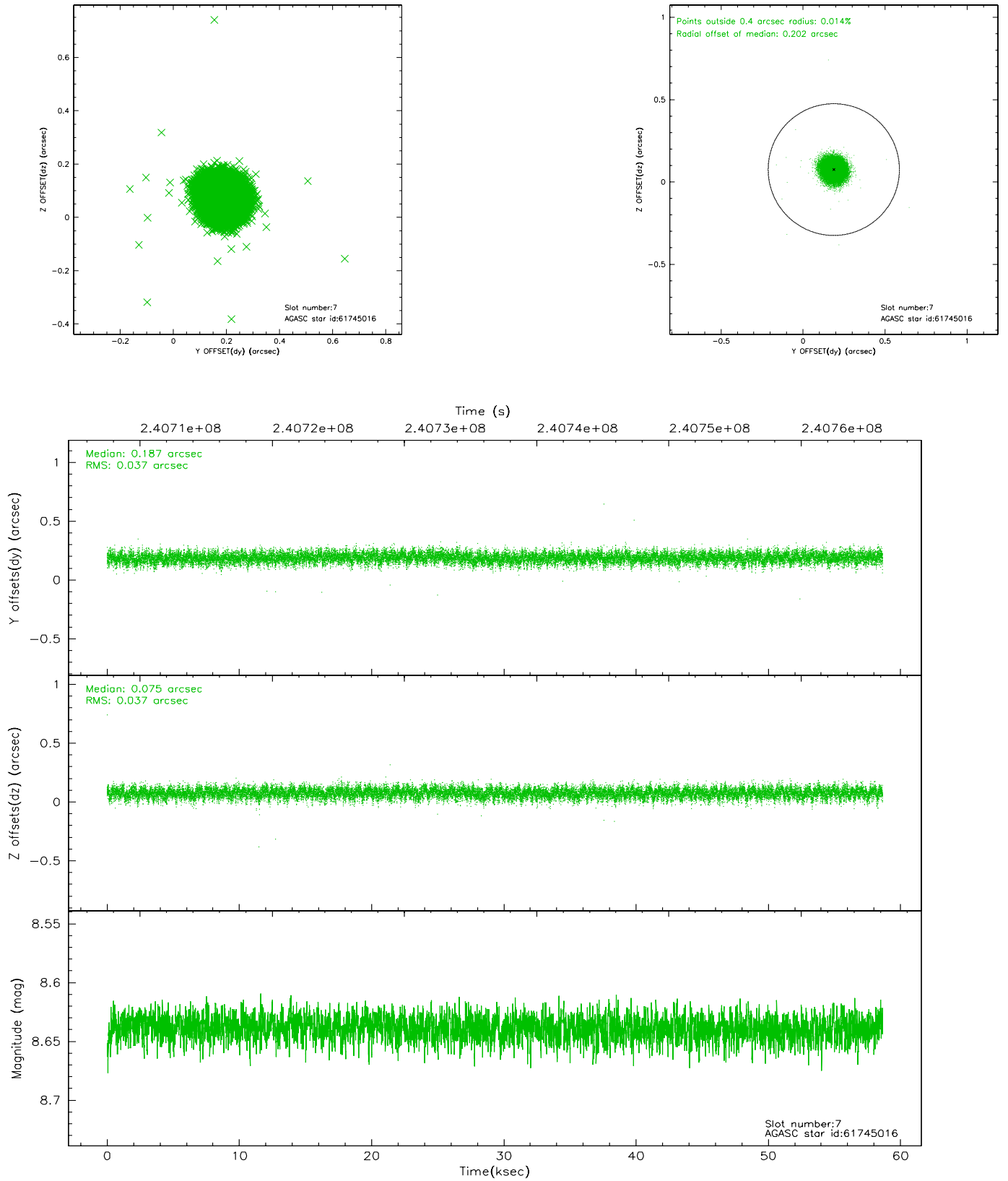


## 2.4.4 Slot 6



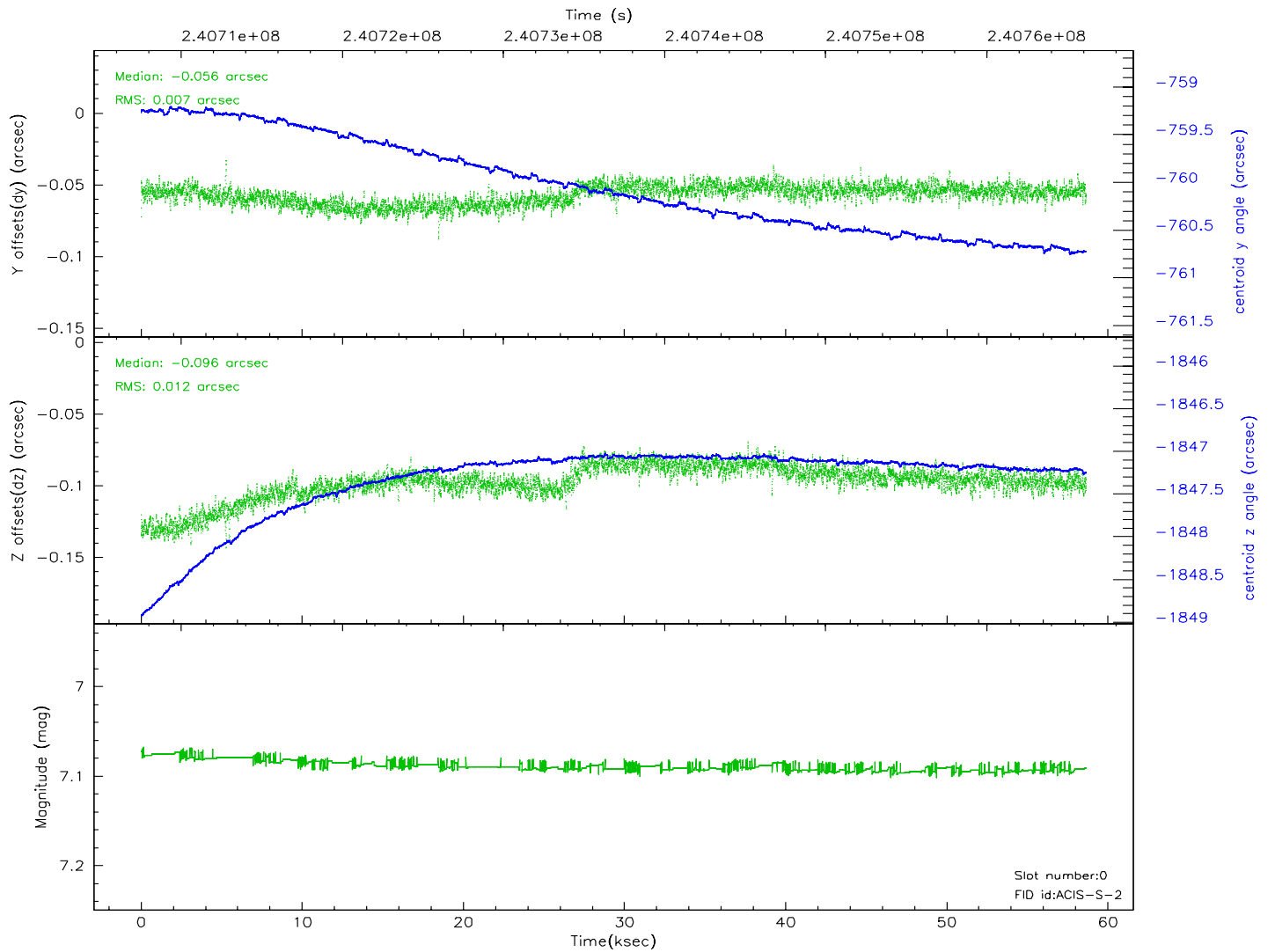
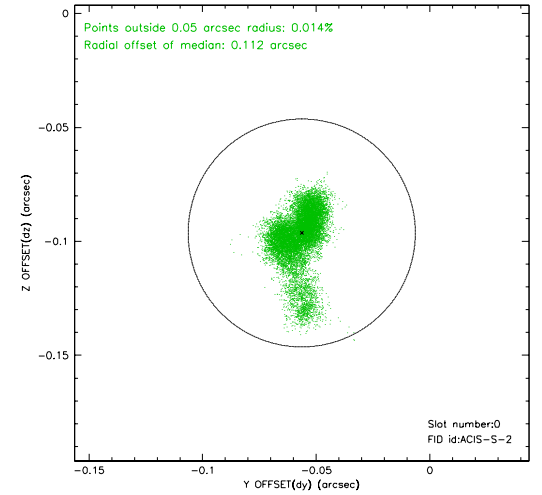
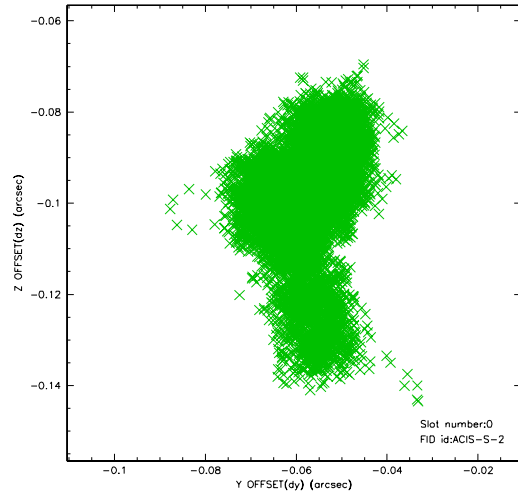


## 2.4.5 Slot 7

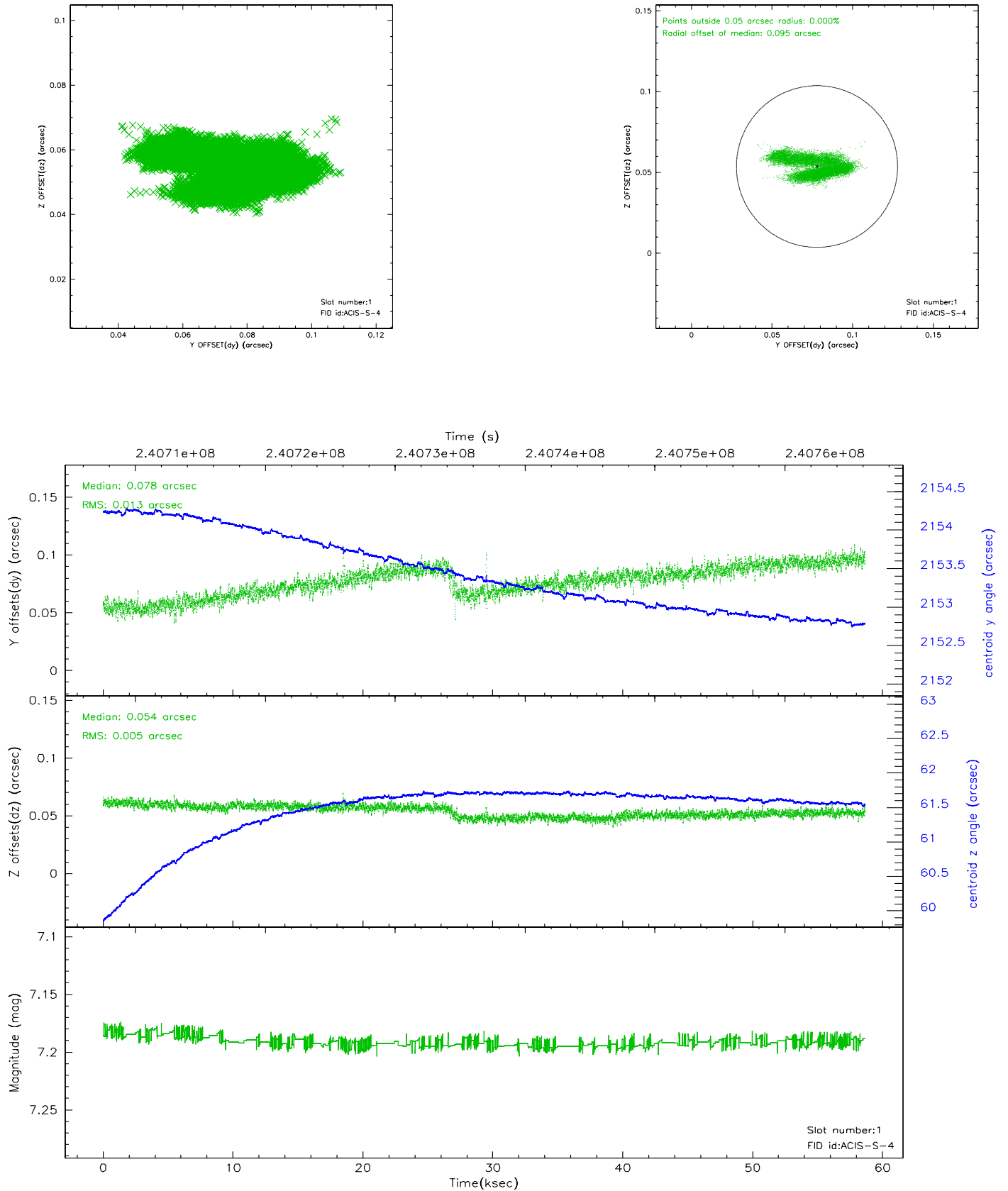


## 2.5 FID Slots

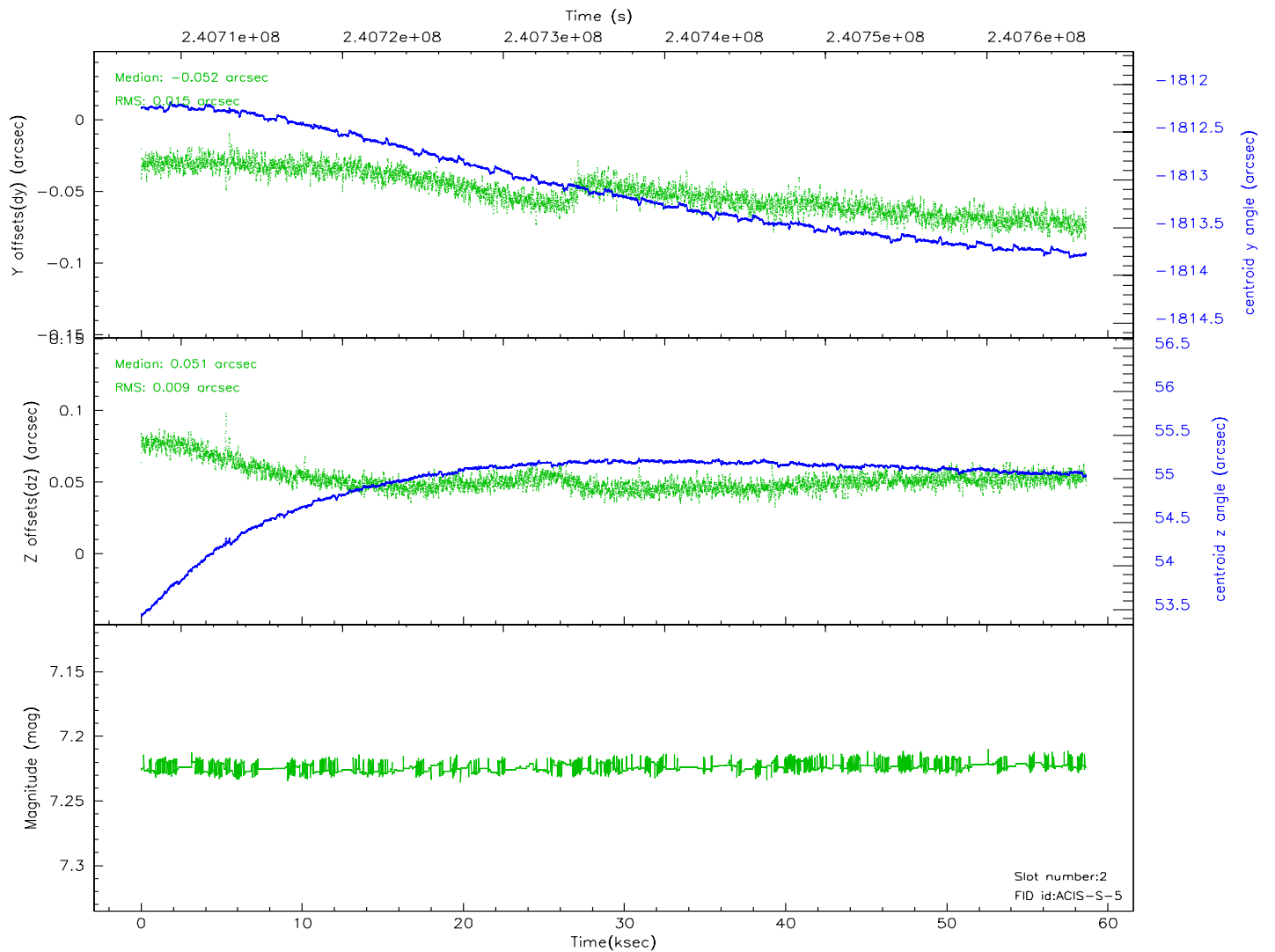
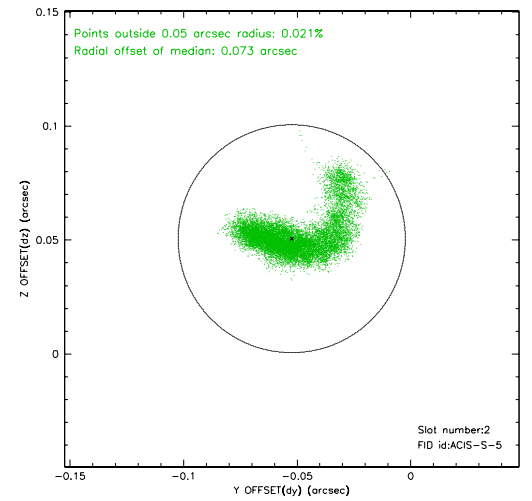
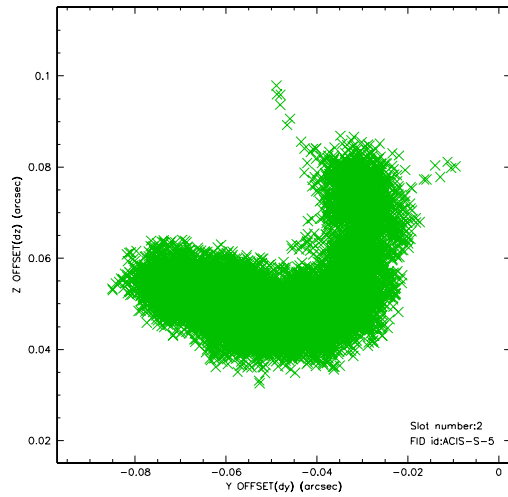
### 2.5.1 Slot 0



## 2.5.2 Slot 1

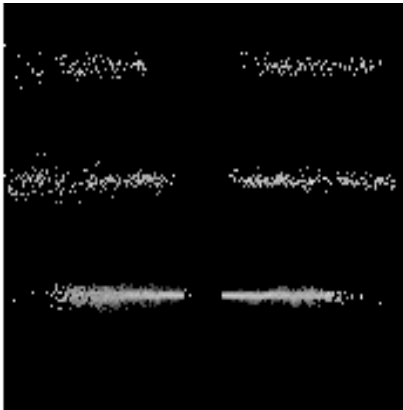


### 2.5.3 Slot 2

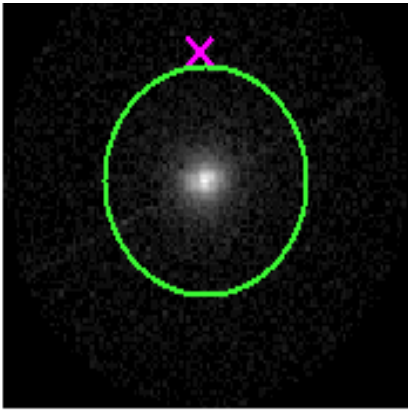


# 3 Gratings

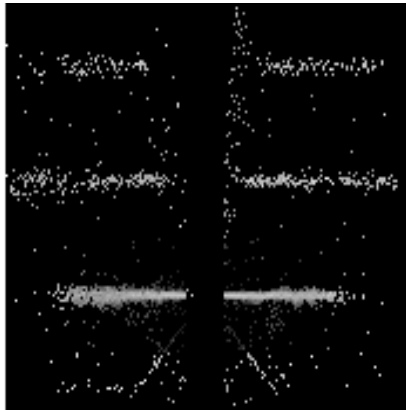
## 3.1 HEG Arm



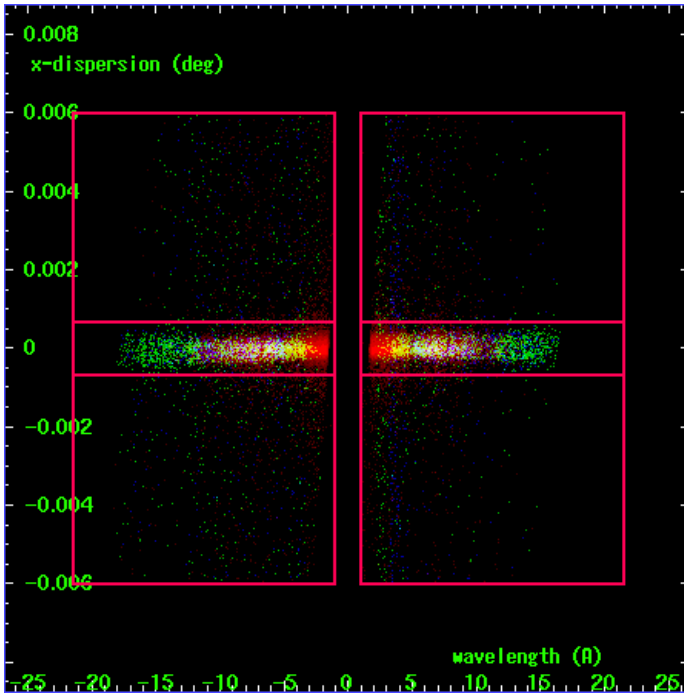
HEG Order Sort 123



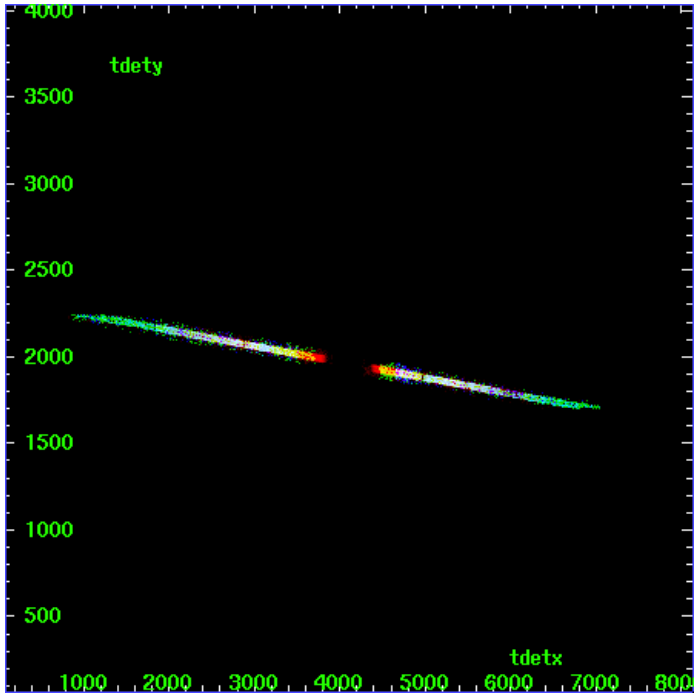
HEG Zero Order



HEG Order Sort ALL

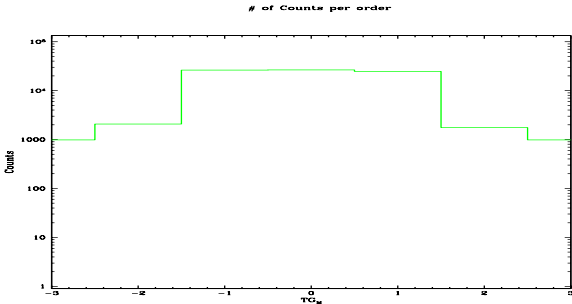


Spot Image HEG

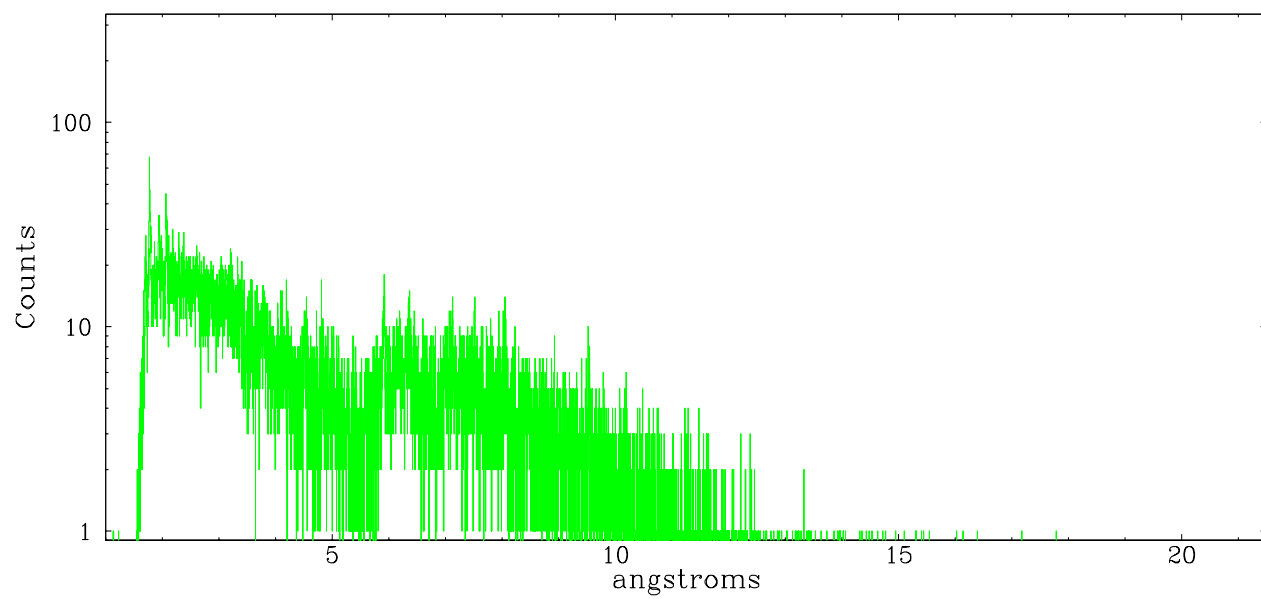


Full Detector HEG

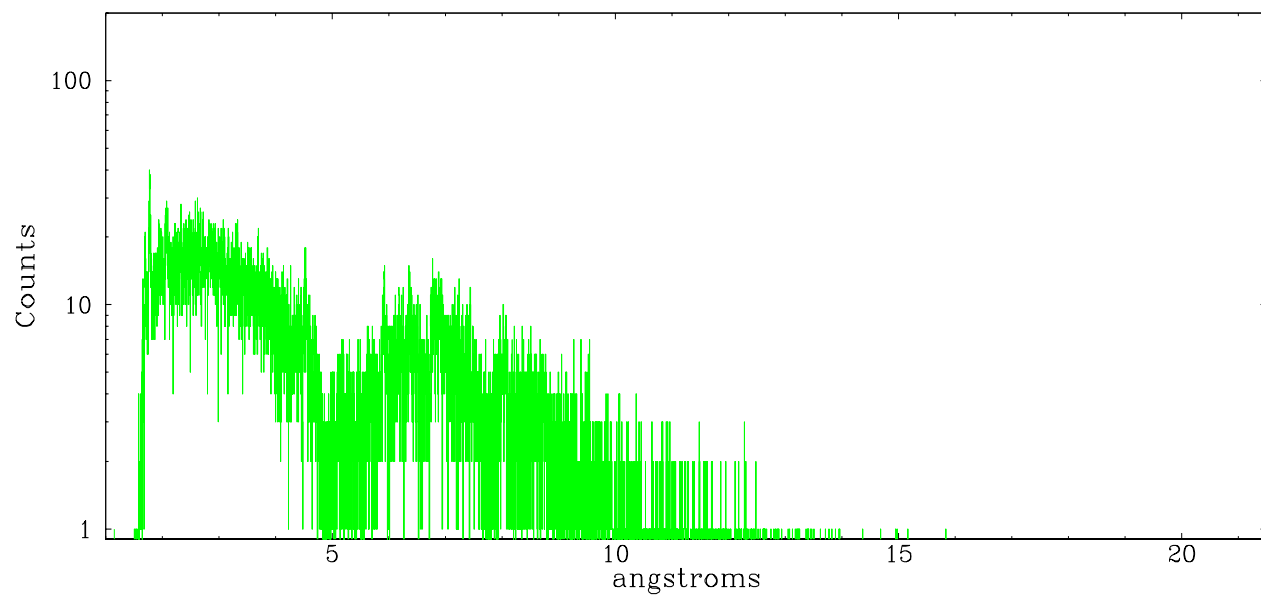
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	980	2075	26161	26504	24607	1748	986



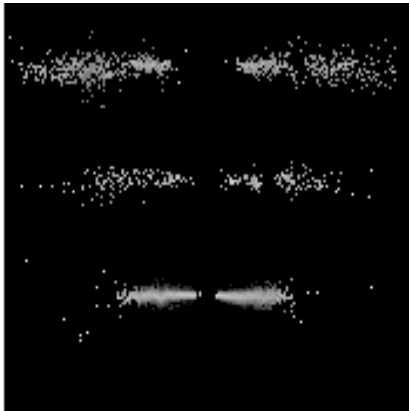
heg order -1



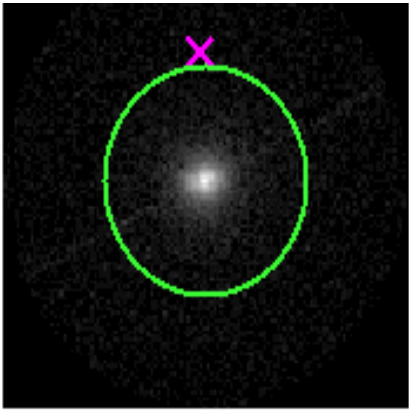
heg order +1



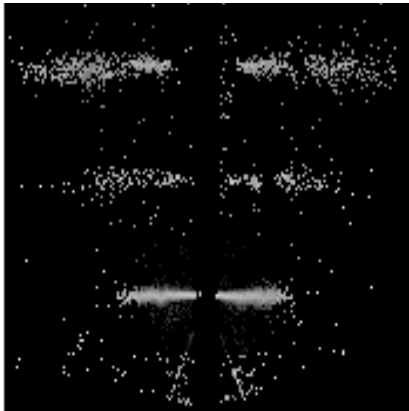
### 3.2 MEG Arm



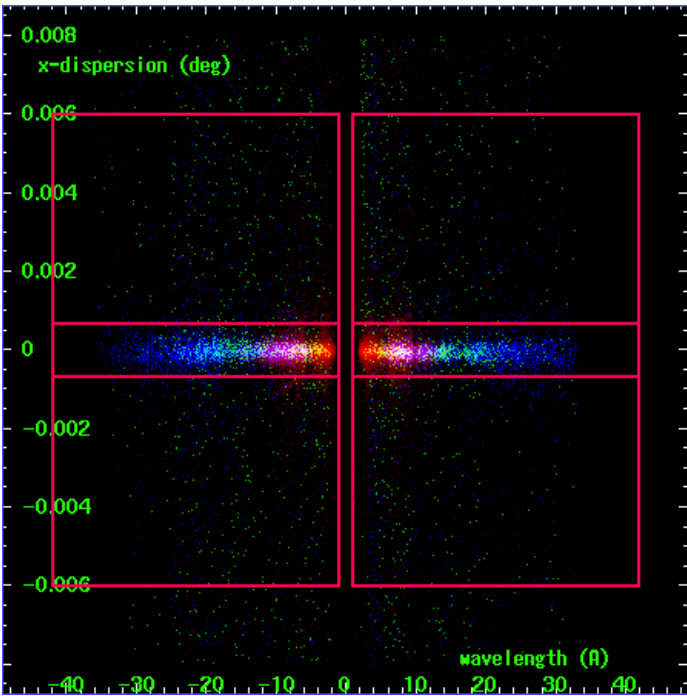
MEG Order Sort 123



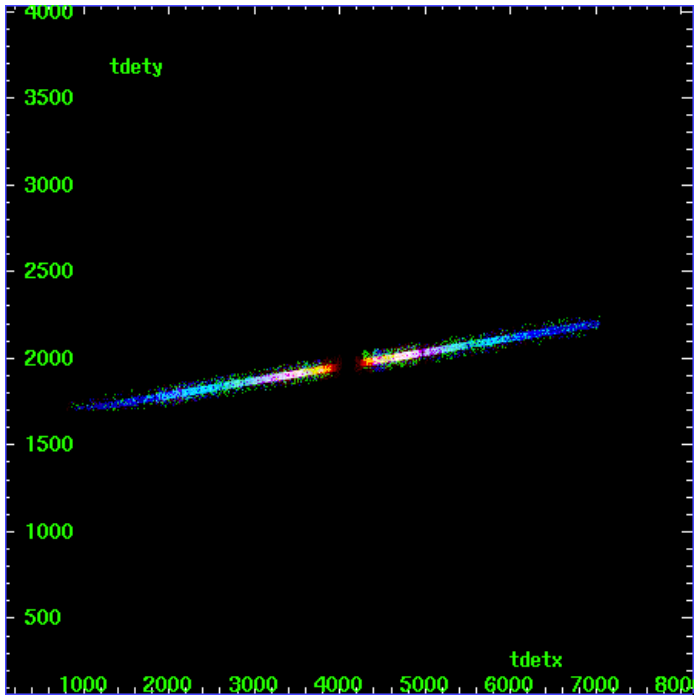
MEG Zero Order



MEG Order Sort ALL

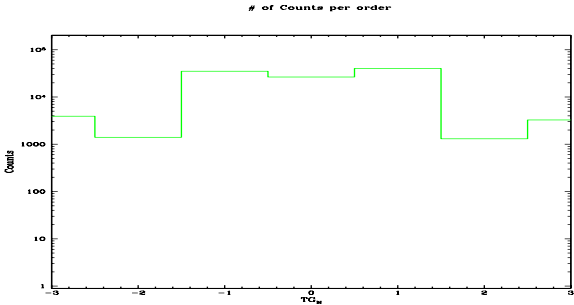


Spot Image MEG

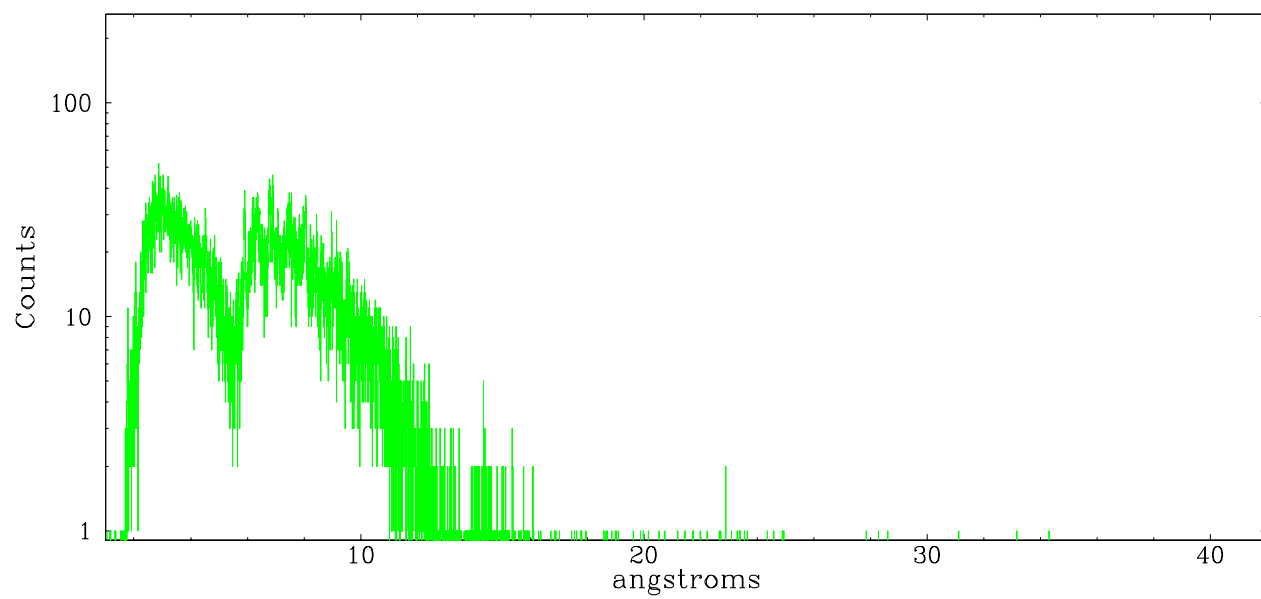


Full Detector MEG

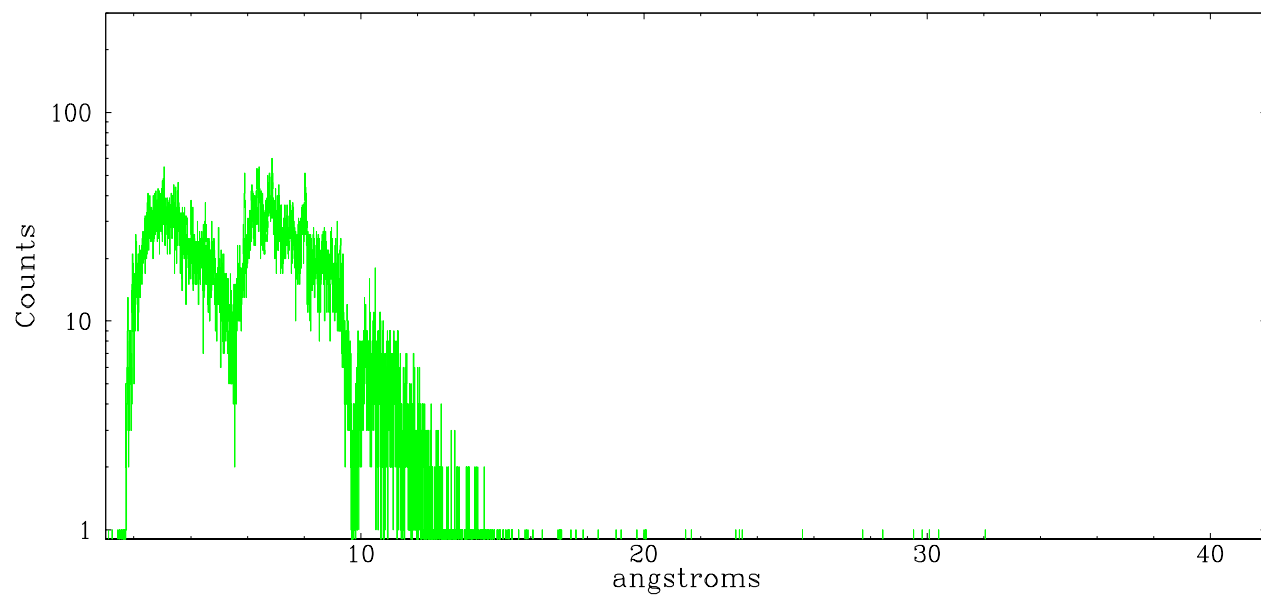
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3924	1401	34930	26504	40388	1308	3260



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2006.03.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	58.6566

### A.2 Comments

Phase constraint met.