

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 5888 - L2 Version 003  
Chandra X-Ray Center

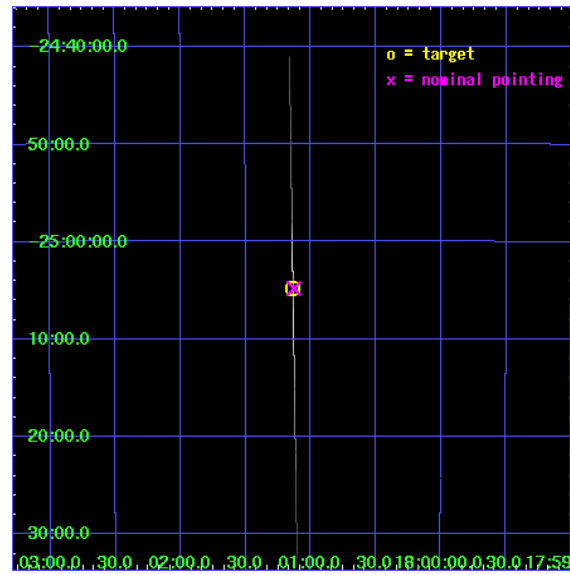
L2 Processing Date : Sep 16 2006

## 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	Parameters . . . . .	4
2.1.3	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

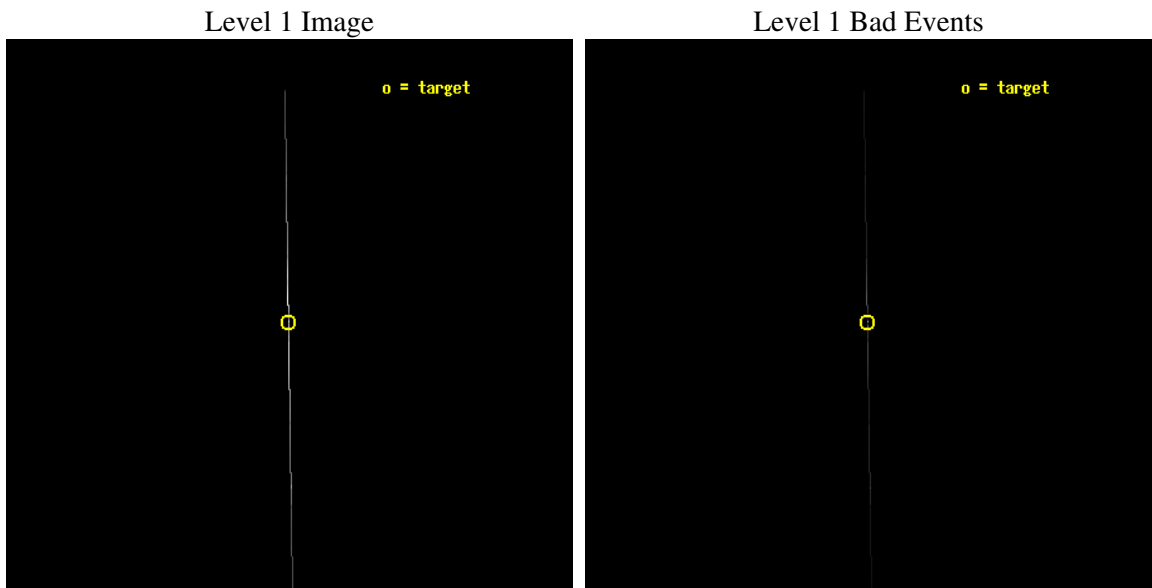
seq_num	900388
obs_id	5888
title	Measuring X-ray Absorption Fine Structures of Interstellar Grains
observer	Prof. Claude Canizares
object	GX 5-1
ra_targ	270.284167
dec_targ	-25.079167
ra_nom	270.28230234177
dec_nom	-25.080363883129
roll_nom	269.08929523301
revision	3
ontime	45157.0
livetime	44980.60546875
ontime4	45157.0
ontime5	45157.0
ontime6	45157.0
ontime7	45157.0
ontime8	45157.0
ontime9	45157.0
l2events	8973156



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



## 2.1.2 Parameters

obi_num	1
ascdsver	7.6.9
caldsver	3.2.3
date	2006-09-15T23:36:14
revision	3

sched_exp_time	45000.000000
ontime	46012.43618843
ontime4	46013.896395713
ontime5	46012.436879724
ontime6	46013.895262986
ontime7	46012.43618843
ontime8	46015.35374999
ontime9	46013.894244701
l1events	9836978

## 2.1.3 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	170518	648025	3378258	4858858	582133	199186
rejected events	15447	40695	62347	146371	28772	18817
rejected %	9%	6%	1%	3%	4%	9%

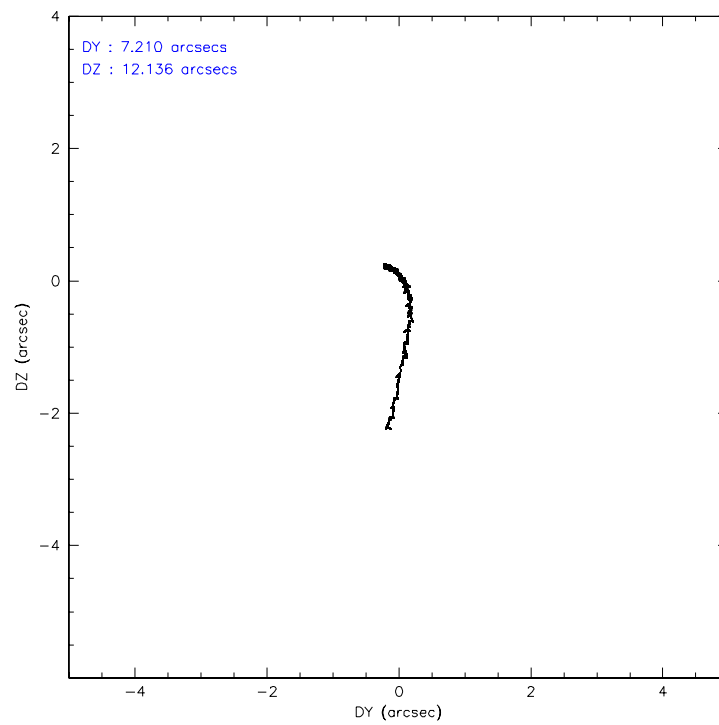
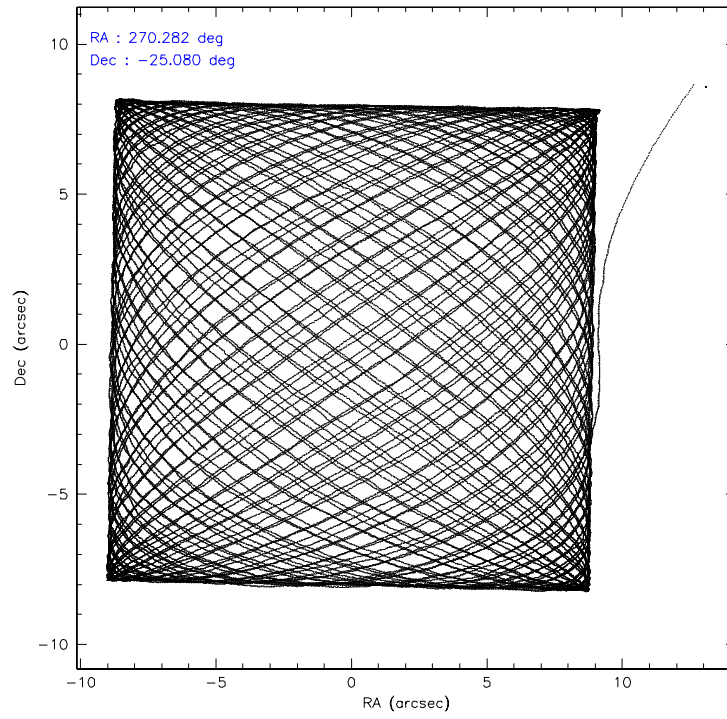
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	10931	84612	1749595	694110	247434	28532
	6%	13%	51%	14%	42%	14%
grade 1 events	262	408	7530	11395	1080	317
	0%	0%	0%	0%	0%	0%
grade 2 events	104000	235676	987457	1328554	194743	107738
	60%	36%	29%	27%	33%	54%
grade 3 events	9154	17898	137927	419576	27339	8997
	5%	2%	4%	8%	4%	4%
grade 4 events	9302	17333	136823	418641	26604	9842
	5%	2%	4%	8%	4%	4%
grade 5 events	13600	32955	33874	104038	23149	16646
	7%	5%	1%	2%	3%	8%
grade 6 events	23269	259143	325052	1882544	61784	27114
	13%	39%	9%	38%	10%	13%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

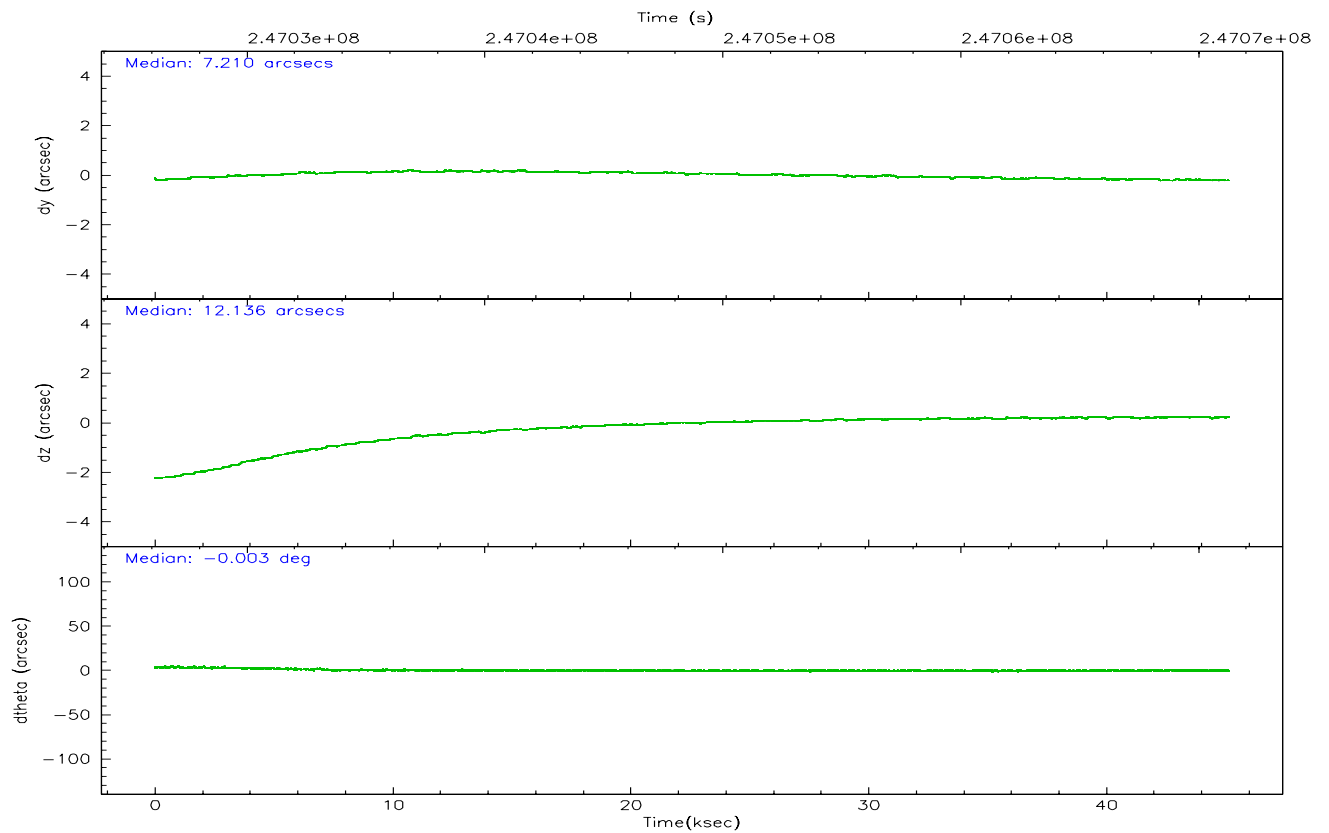
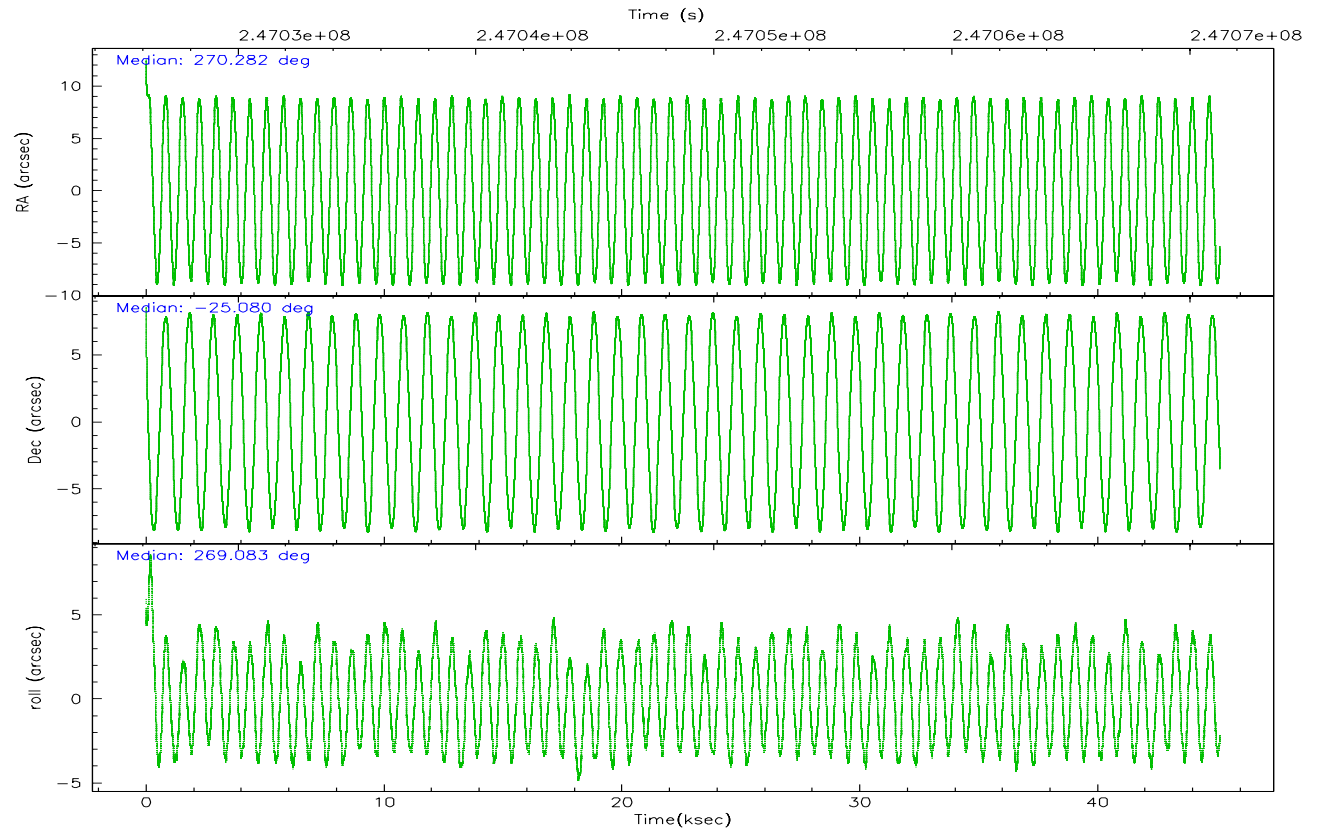


## 2.2 Compared Parameters

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	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	270.267333	270.2823023417674	Subarray requested	NONE	NONE
Pointing Dec	-25.056769	-25.08036388312929	Alternating exposures requested	N	N
Pointing Roll	268.926332	269.0892952330123	Primary exposure time	0.000000	0
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-178.832523	-178.8357044540581			
SIM translation stage offset (mm)	-11.3	-11.2968181289497			
Observation start time	247026283.184000	247025271.11474			
Observation start date	2005-10-30T02:23:39	2005-10-30T02:07:51			
Observation end time	247071283.184000	247072465.70441			
Observation end date	2005-10-30T14:53:39	2005-10-30T15:14:25			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



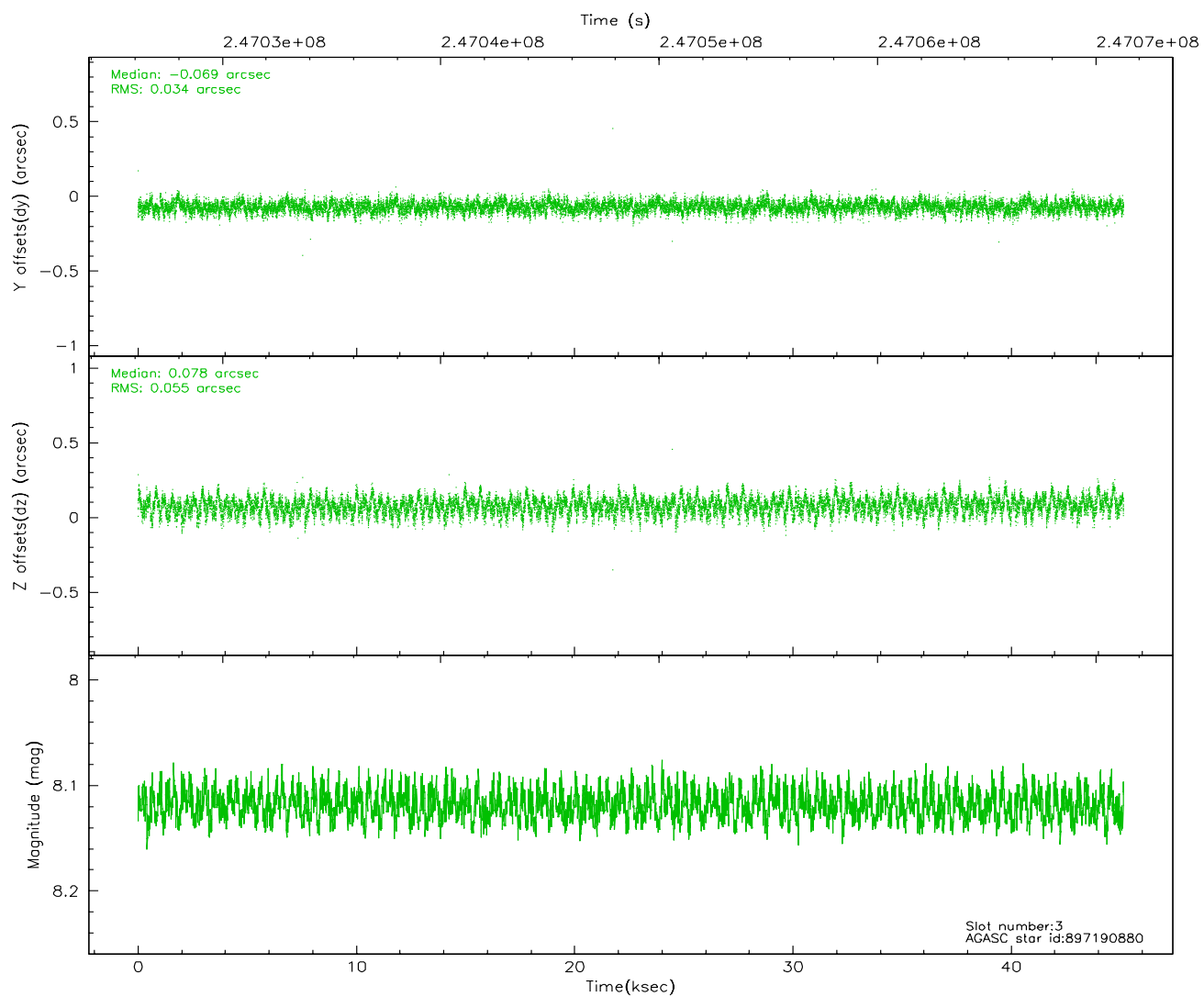
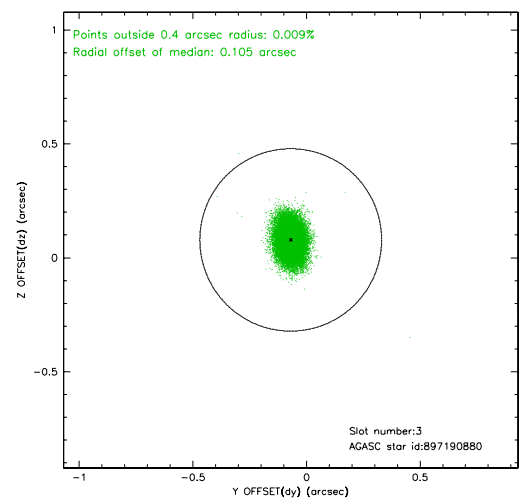
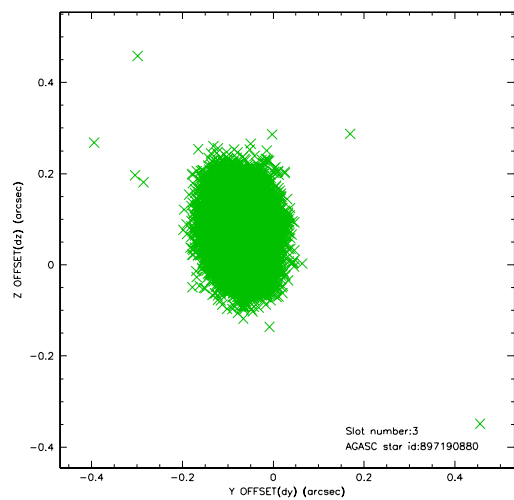


### Slot Statistics

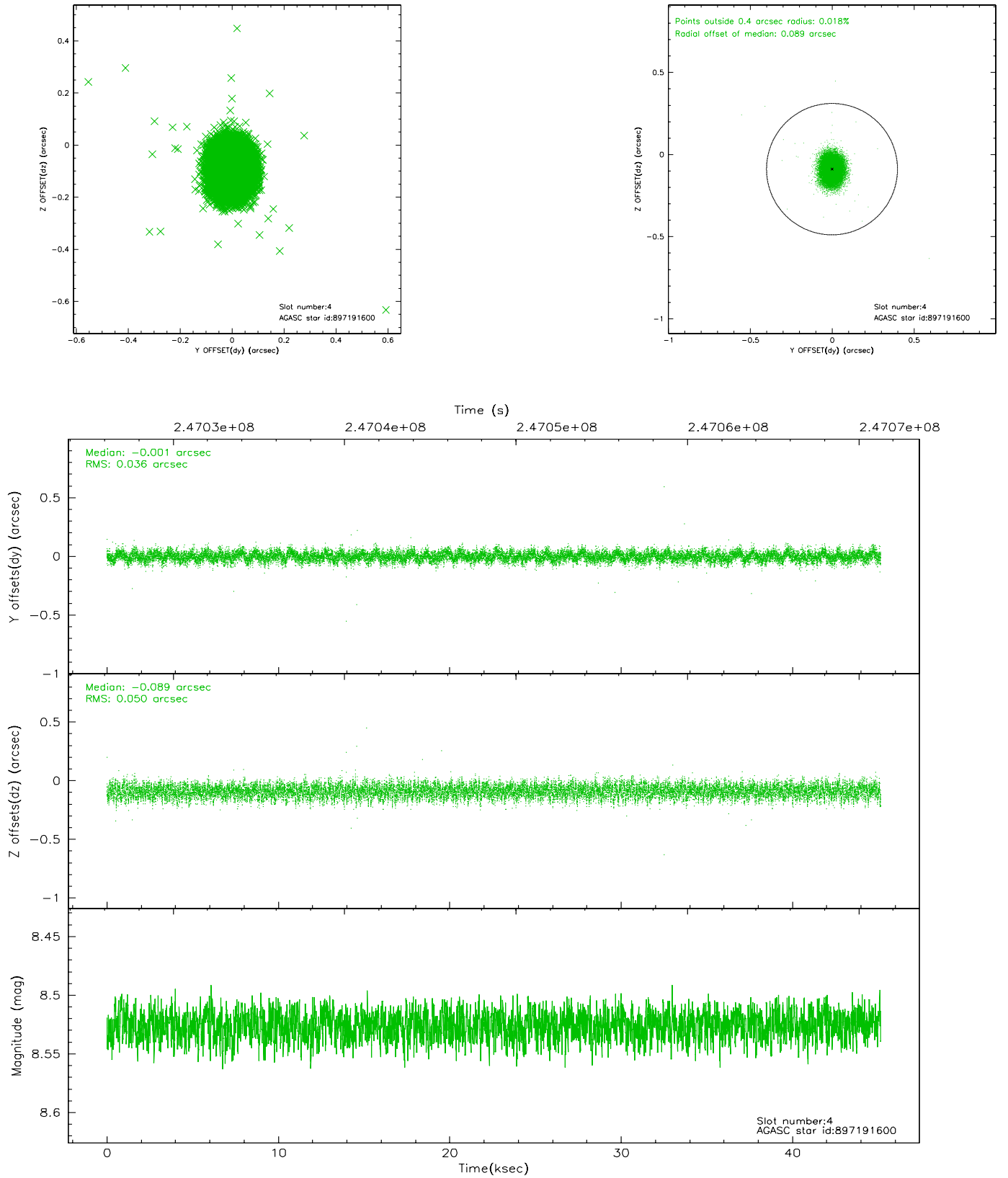
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	11015	0.081	0.115	0.010	0.028	0.000000	0.000000	936.91	-1961.24
1	FID	ACIS-S-5	7.24	11015	-0.074	0.112	0.009	0.039	0.000000	0.000000	-1812.17	-63.60
2	FID	ACIS-S-6	7.42	11015	-0.027	-0.216	0.009	0.031	0.000000	0.000000	402.47	579.93
3	GUIDE	897190880	8.12	22027	-0.069	0.078	0.067	0.115	269.584058	-25.142408	356.11	-2220.29
4	GUIDE	897191600	8.53	22010	-0.001	-0.089	0.064	0.104	269.999842	-25.086611	125.10	-870.11
5	GUIDE	897323472	8.48	22021	-0.053	0.007	0.078	0.120	270.860121	-25.266503	723.10	1943.92
6	GUIDE	897324960	7.64	22027	-0.190	-0.199	0.059	0.092	270.333871	-24.632185	-1532.13	188.83
7	GUIDE	897322760	8.56	22024	0.312	0.201	0.059	0.096	270.988015	-25.669699	2169.69	2379.80

## 2.4 Star Slots

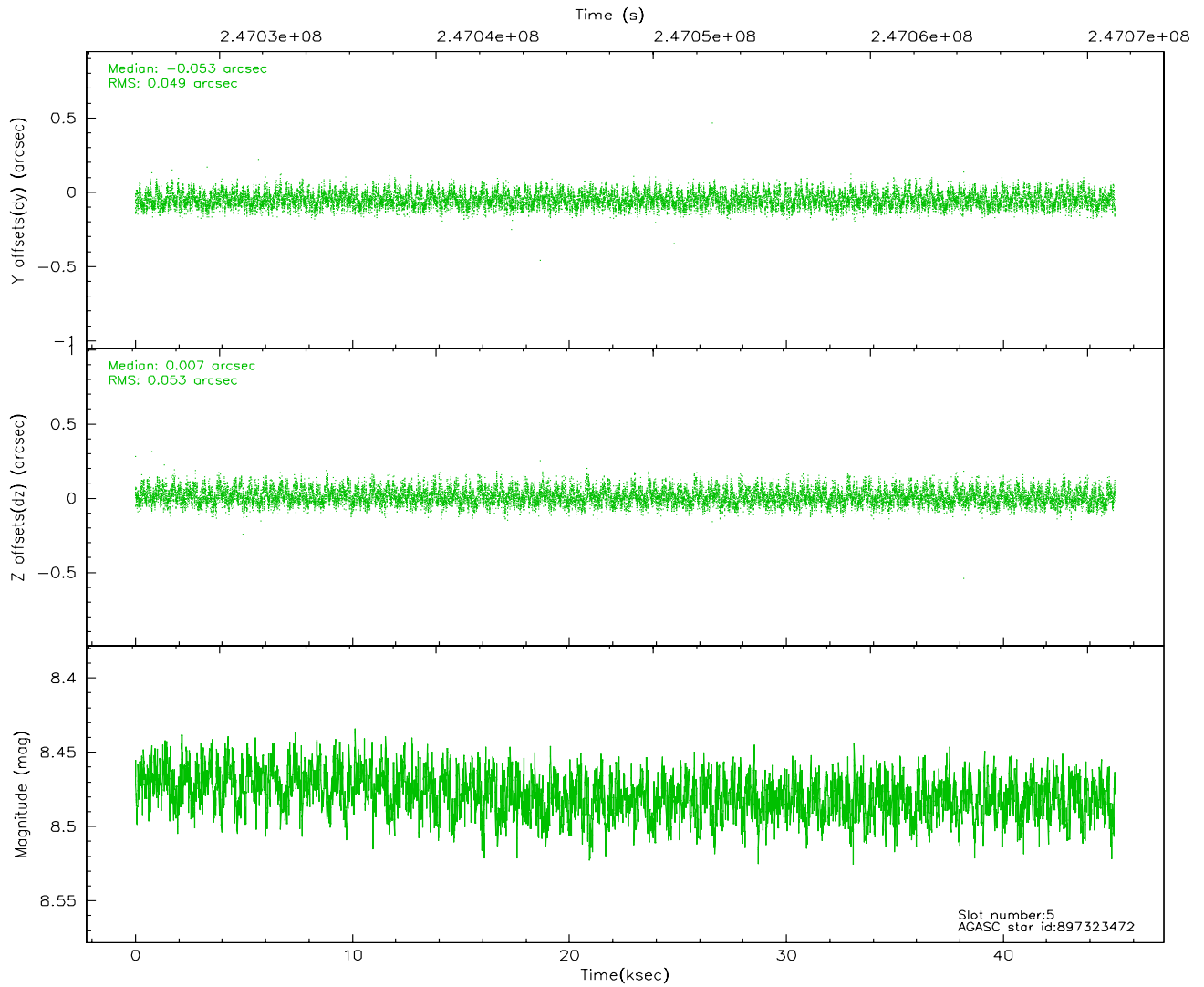
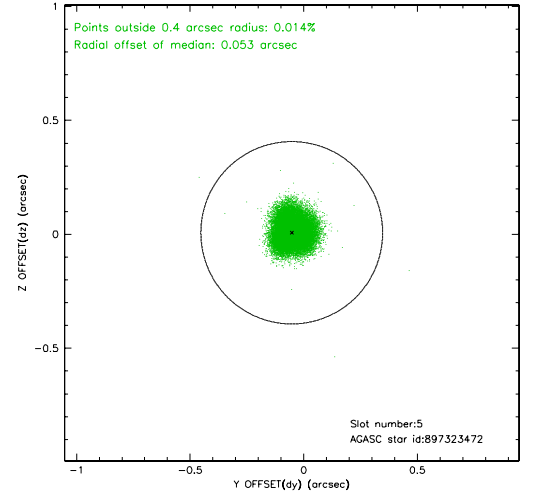
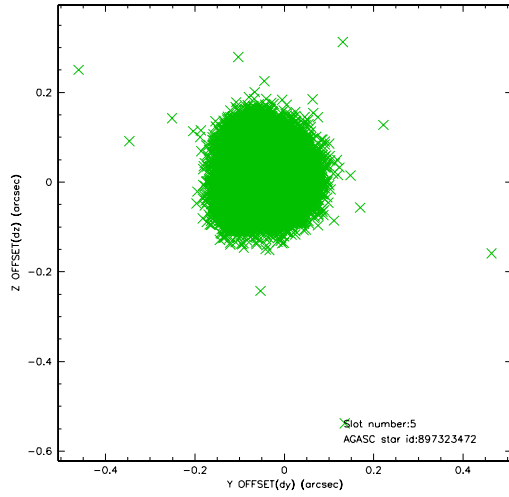
### 2.4.1 Slot 3



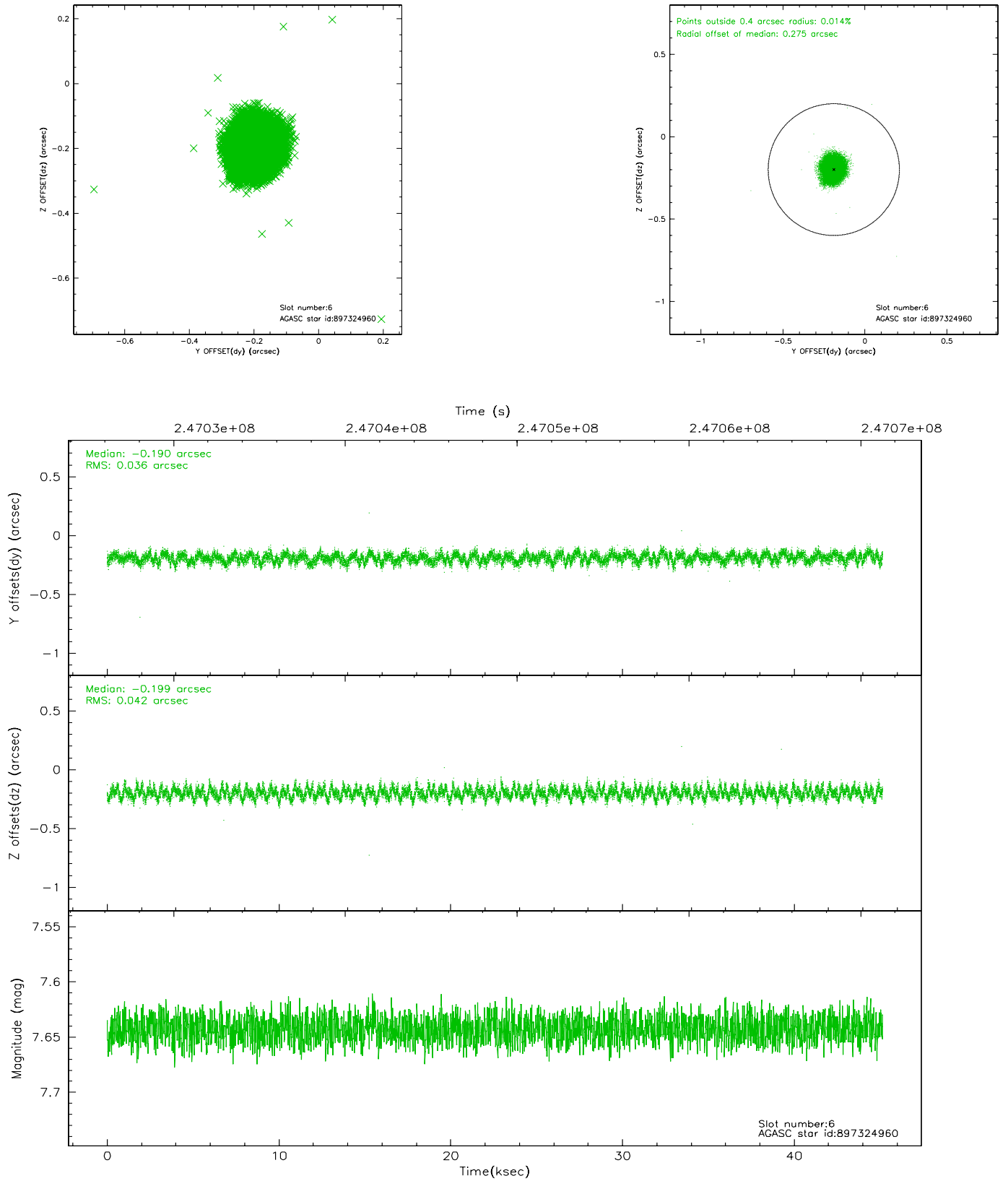
## 2.4.2 Slot 4



### 2.4.3 Slot 5

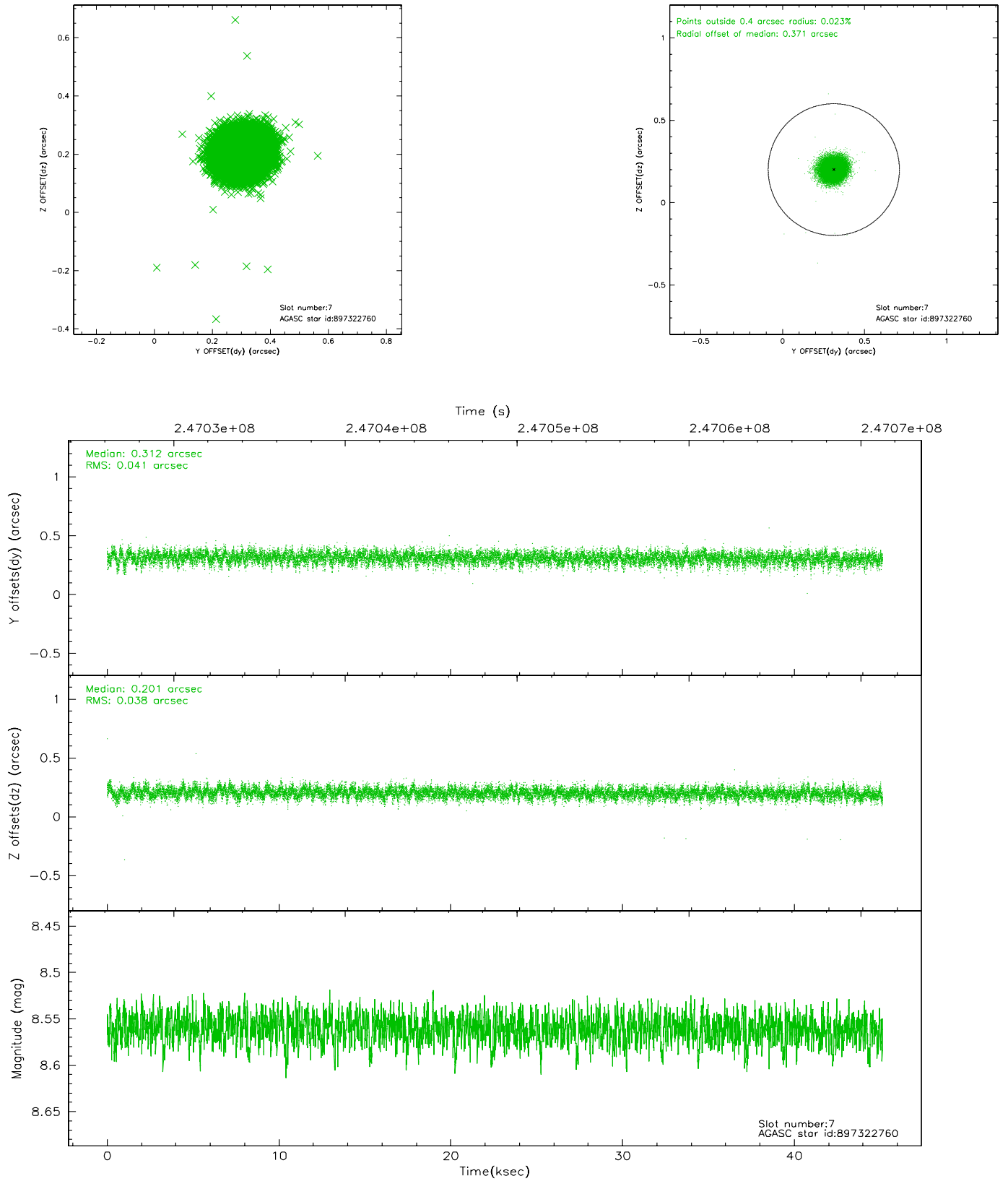


## 2.4.4 Slot 6



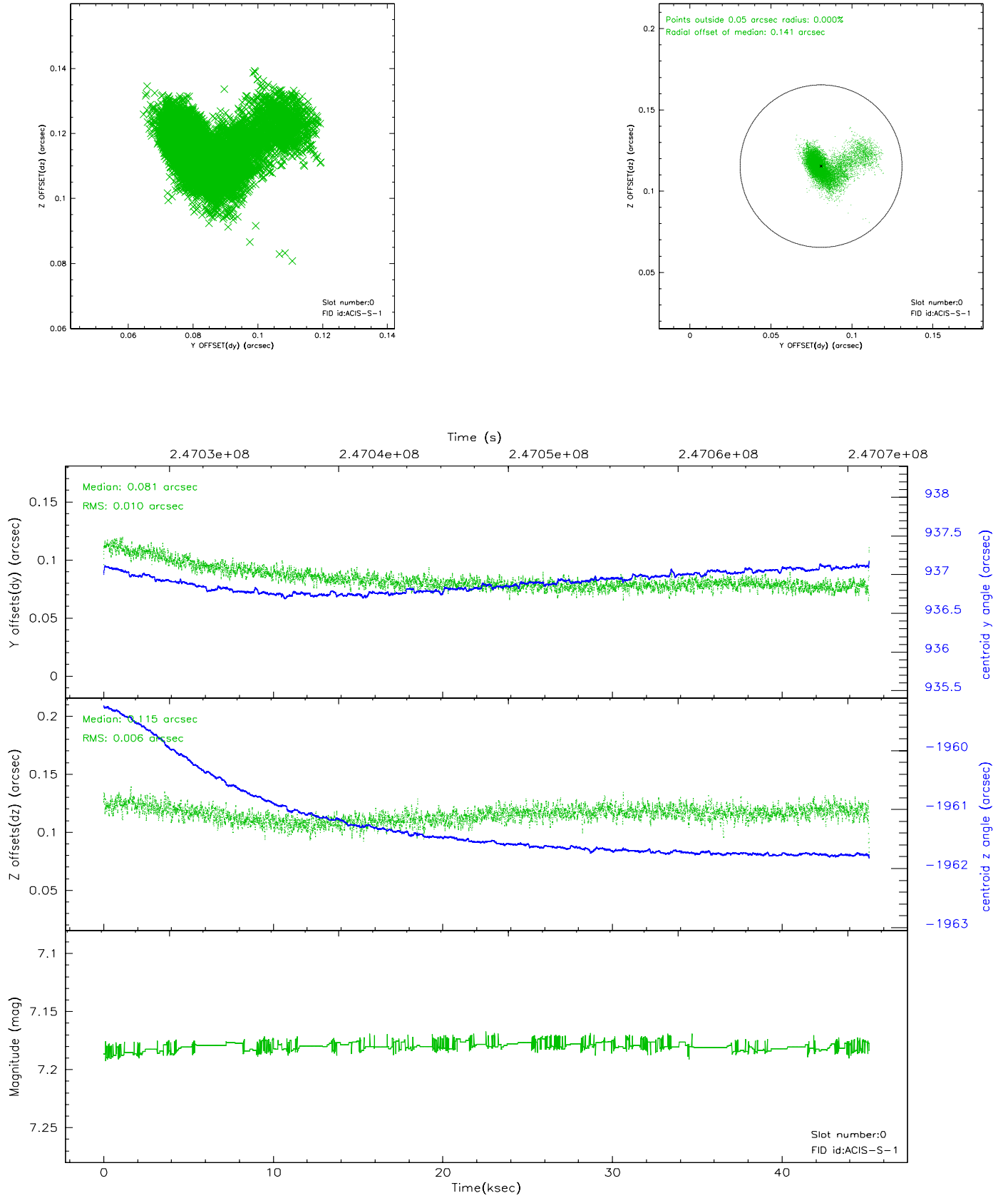


## 2.4.5 Slot 7

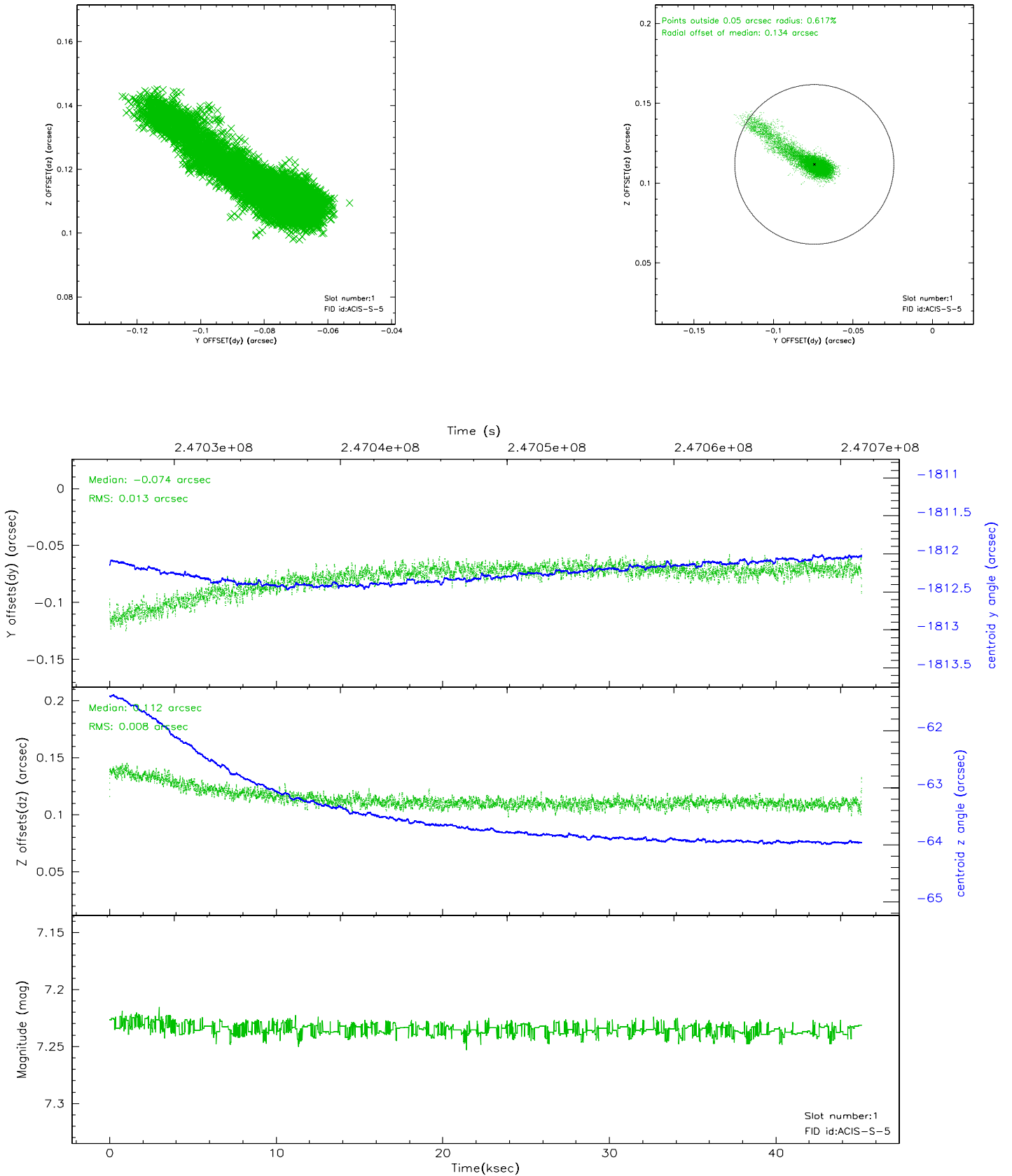


## 2.5 FID Slots

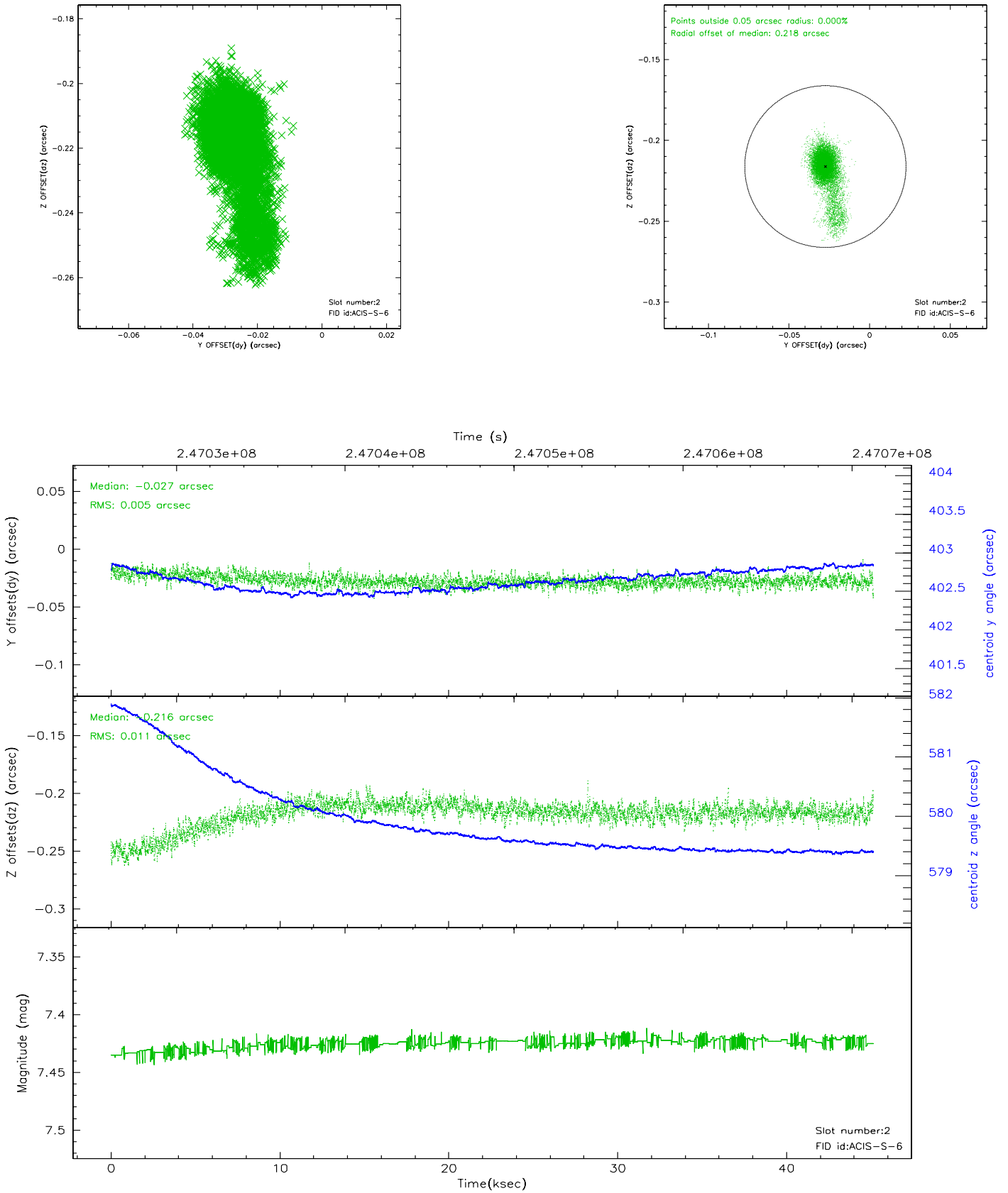
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

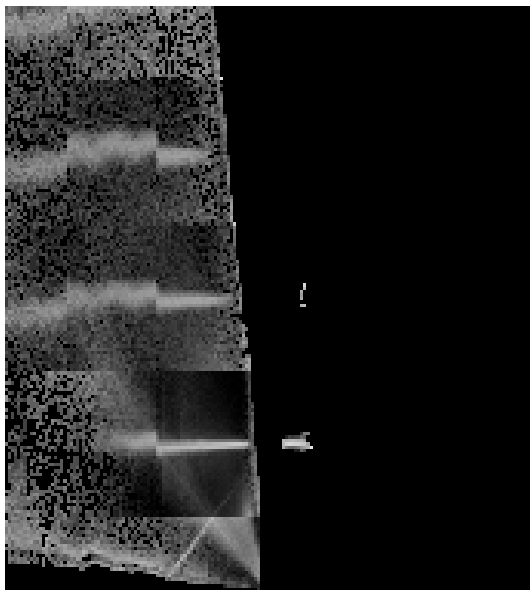


# 3 Gratings

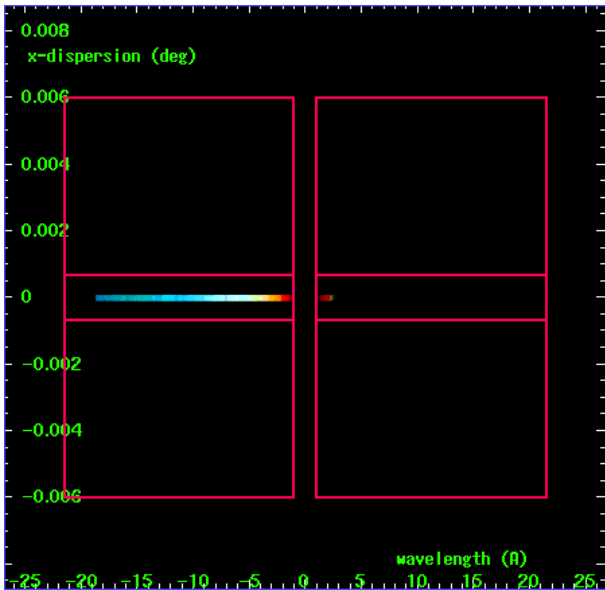
## 3.1 HEG Arm



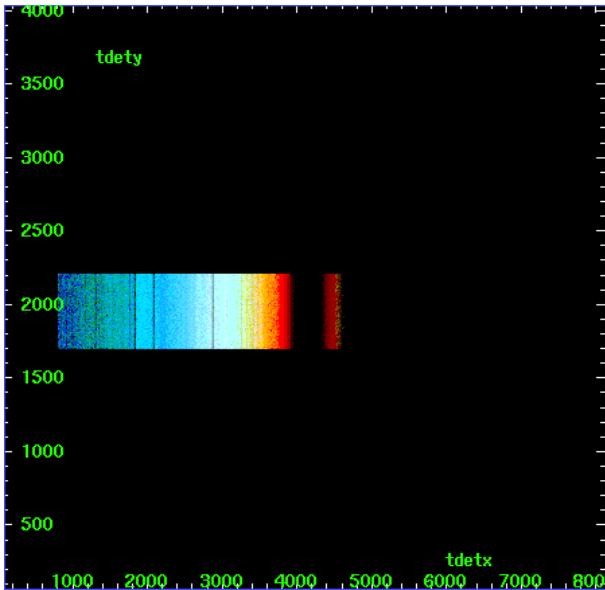
HEG Order Sort 123



HEG Order Sort ALL

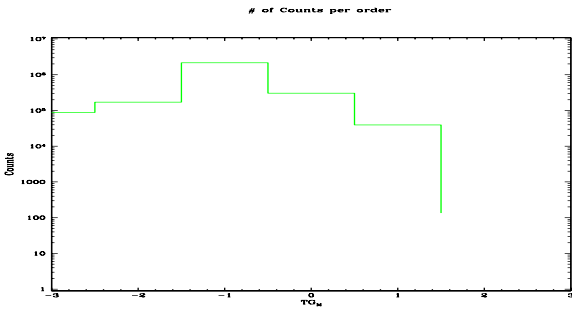


Spot Image HEG

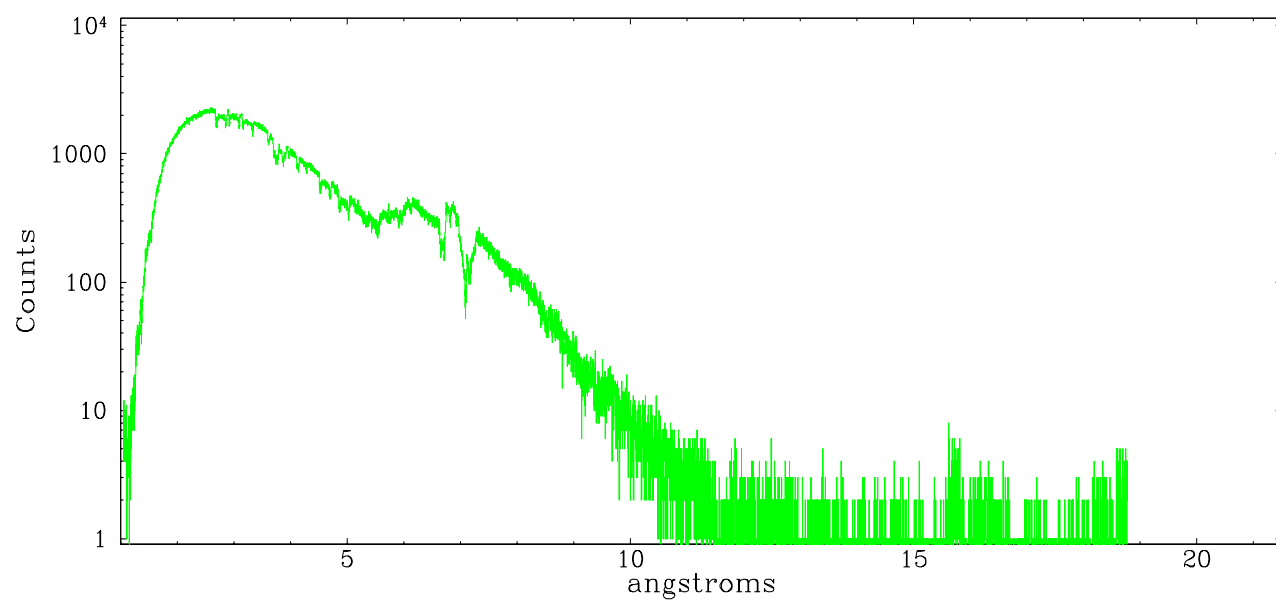


Full Detector HEG

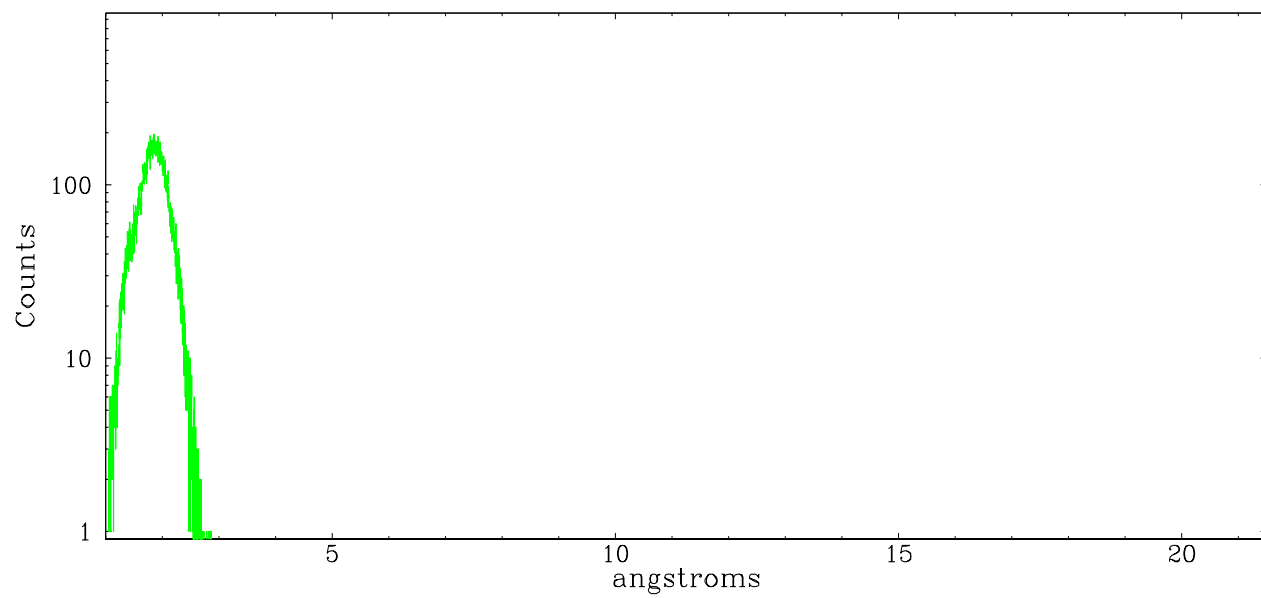
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	88042	171211	2149251	303911	39508	135	0



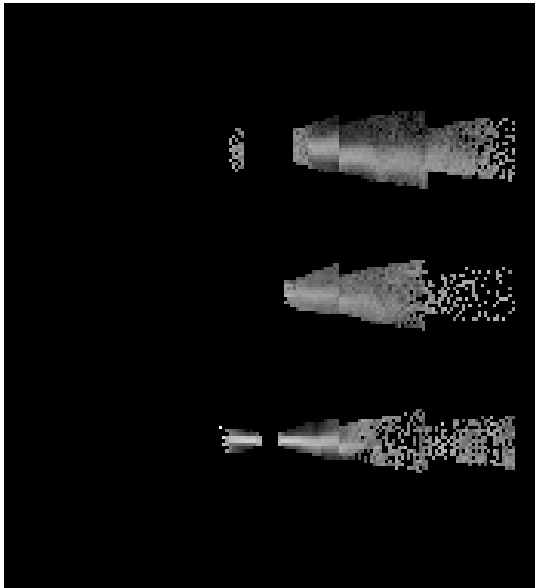
heg order -1



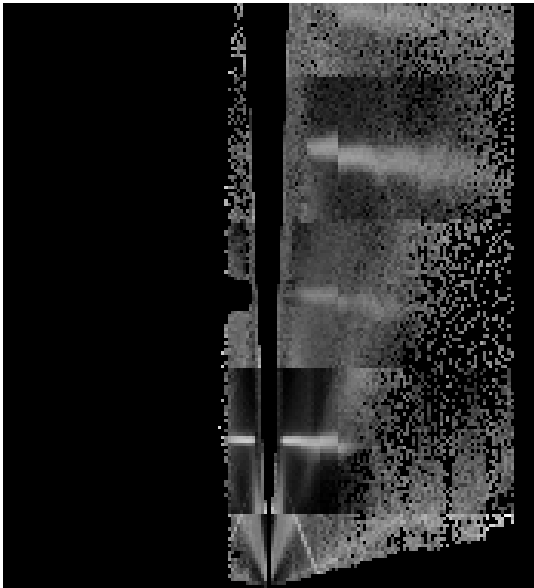
heg order +1



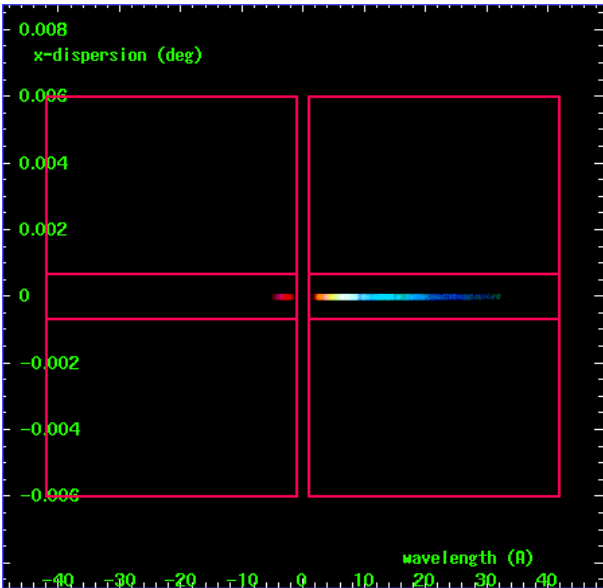
3.2 MEG Arm



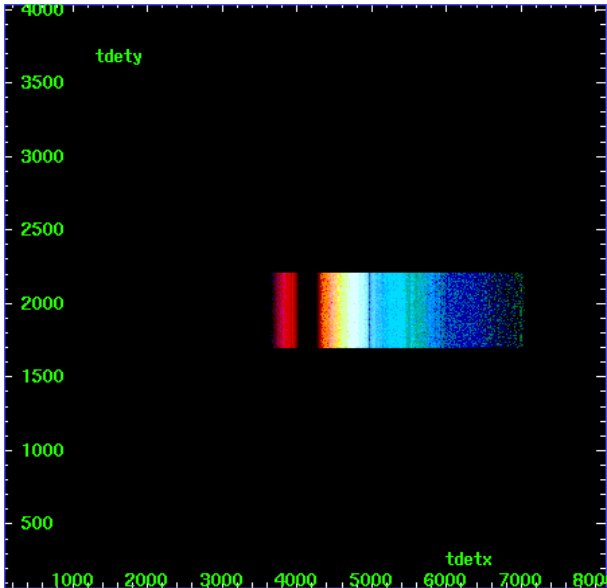
MEG Order Sort 123



MEG Order Sort ALL

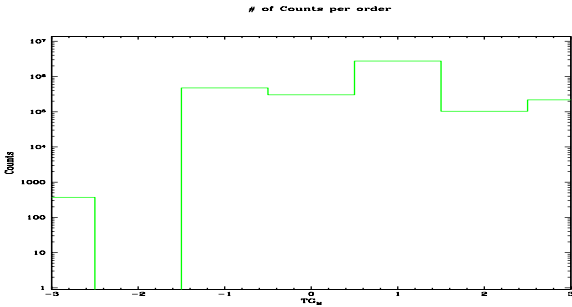


Spot Image MEG

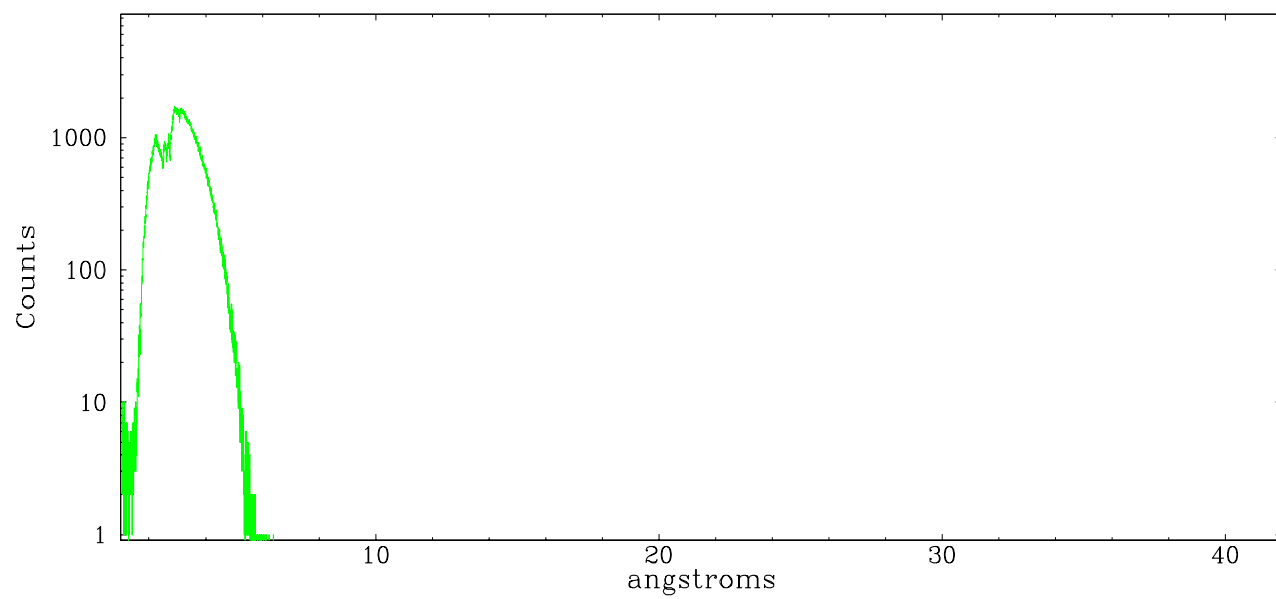


Full Detector MEG

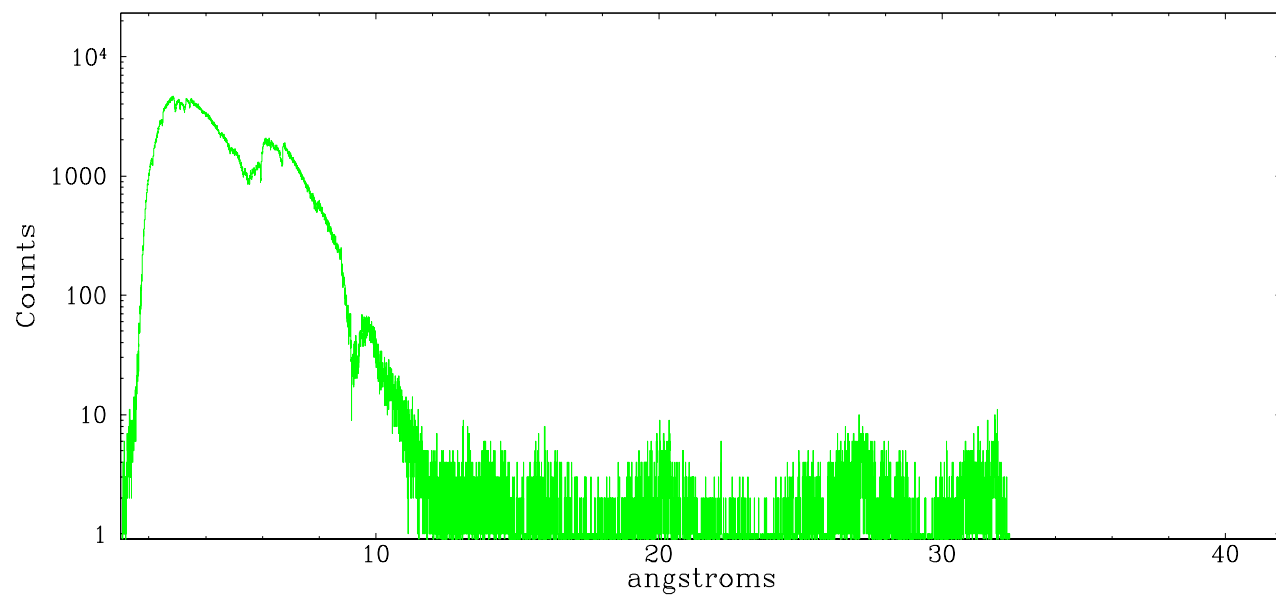
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	374	0	477235	303911	2737917	103058	216117



meg order -1



meg order +1





## A Summary

### A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.09.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.157

### A.2 Comments