

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 6088 - L2 Version 002  
Chandra X-Ray Center

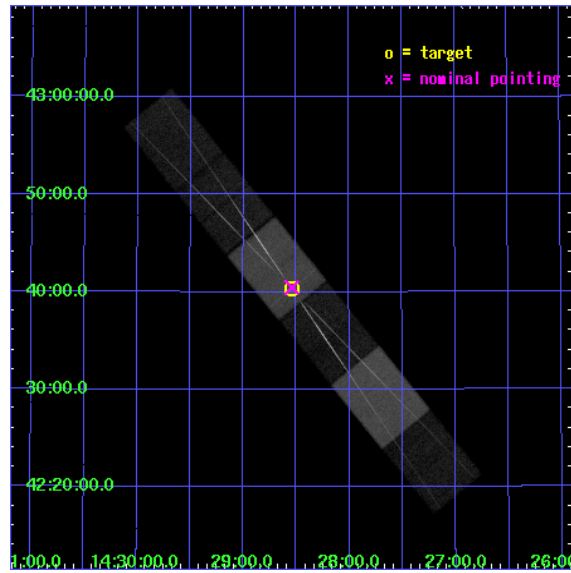
L2 Processing Date : Mar 11 2006

## 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

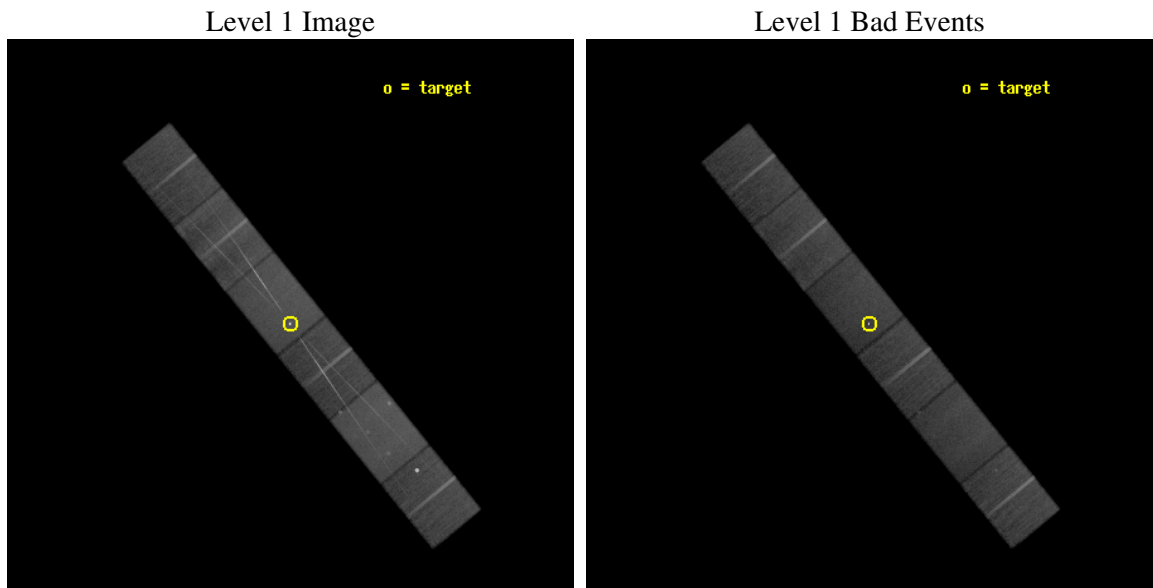
seq_num	790097
obs_id	6088
title	AO6 Calibration Observations of 3C273
observer	Dr. CXC Calibration
object	1H1426+428
dtcycle	0
cycle	P
ra_targ	217.135833
dec_targ	42.6725
ra_nom	217.13536743518
dec_nom	42.674702277778
roll_nom	230.75065201519
revision	2
ontime	41042.5
liveltime	40379.62802632
ontime4	41039.959009826
ontime5	41042.5
ontime6	41042.5
ontime7	41042.5
ontime8	41039.958999813
ontime9	41042.5
l2events	453583



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

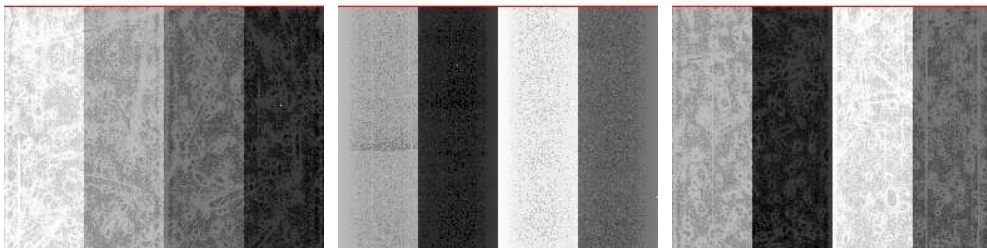


#### 2.1.2 Bias

Chip 4

Chip 5

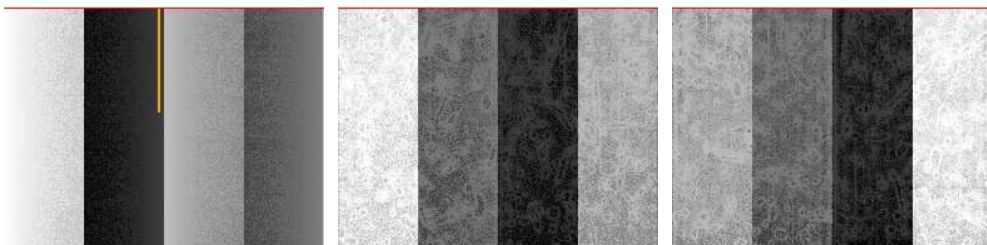
Chip 6



Chip 7

Chip 8

Chip 9



### 2.1.3 Parameters

obi_num	0
ascdsver	7.6.7.1
caldsver	3.2.1
date	2006-03-11T19:30:19
revision	2

sched_exp_time	41000.000000
ontime	41047.501805663
ontime4	41044.960795581
ontime5	41047.501805663
ontime6	41047.501805663
ontime7	41047.501805663
ontime8	41044.960785568
ontime9	41047.501785755
l1events	1831007

### 2.1.4 Events

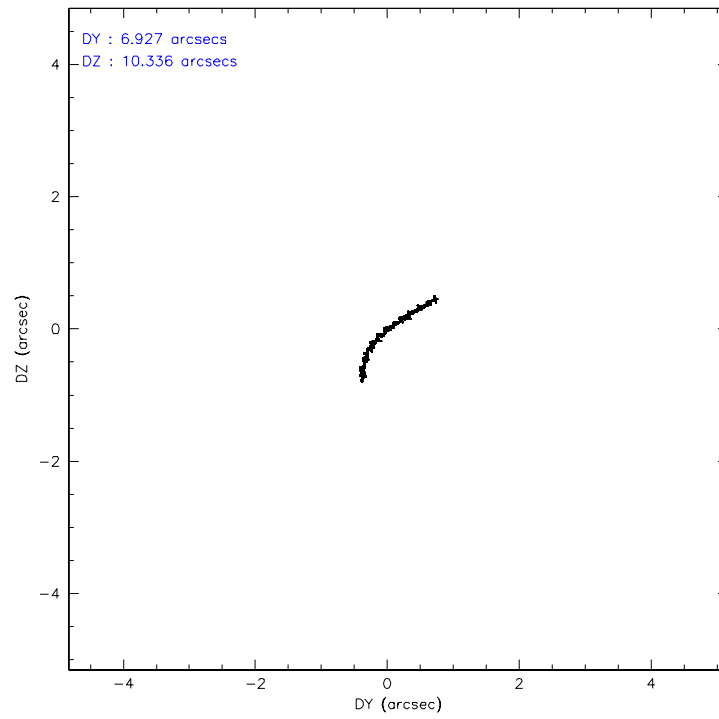
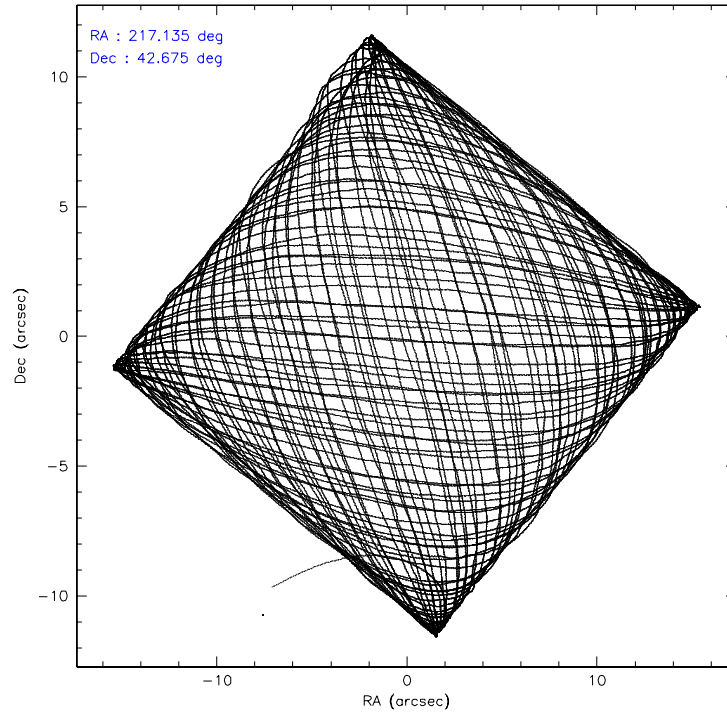
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	283680	362289	266285	362549	314575	241629
rejected events	236434	199189	213339	204538	237776	209056
rejected %	83%	54%	80%	56%	75%	86%

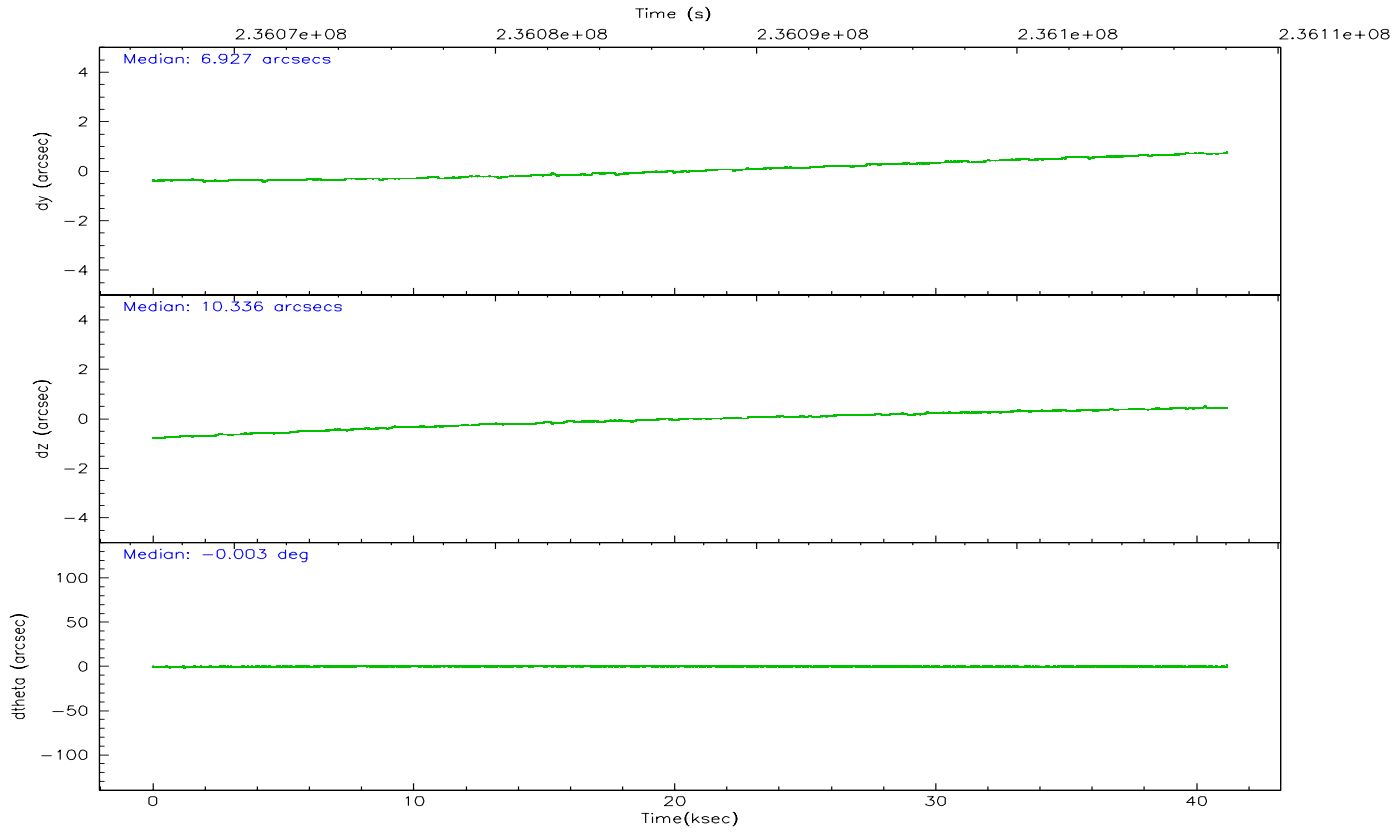
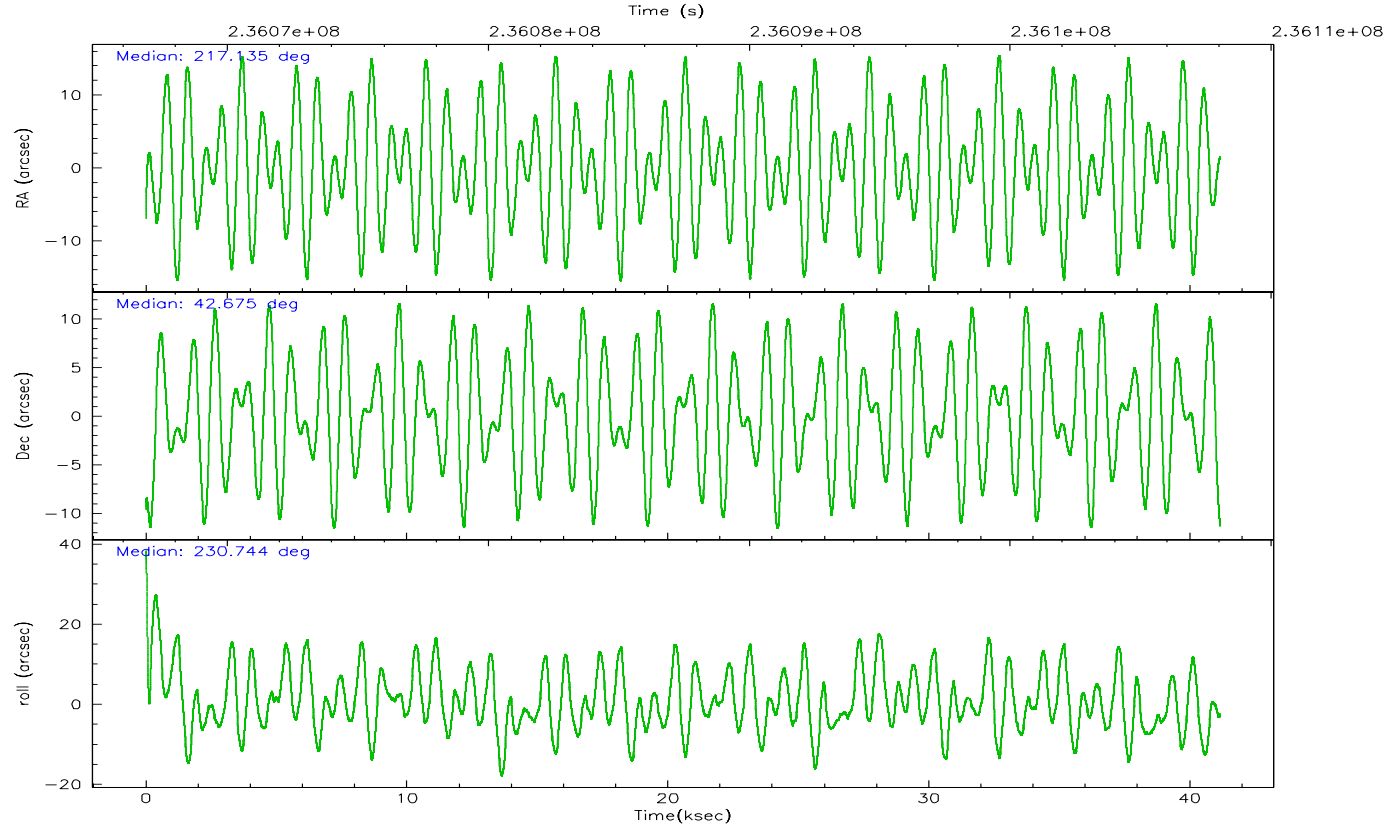
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	29500	12144	30465	13514	30216	14299
	10%	3%	11%	3%	9%	5%
grade 1 events	359	555	174	456	209	108
	0%	0%	0%	0%	0%	0%
grade 2 events	6604	50865	8526	38608	15676	6078
	2%	14%	3%	10%	4%	2%
grade 3 events	3342	4742	3795	10272	6869	3236
	1%	1%	1%	2%	2%	1%
grade 4 events	3033	4454	3718	10108	6503	3114
	1%	1%	1%	2%	2%	1%
grade 5 events	10247	17798	11036	24575	14339	11542
	3%	4%	4%	6%	4%	4%
grade 6 events	4772	90920	6444	85525	17539	5849
	1%	25%	2%	23%	5%	2%
grade 7 events	225823	180811	202127	179491	223224	197403
	79%	49%	75%	49%	70%	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	217.140811	217.1353674351826	Subarray start row	1	1
Pointing Dec	42.701628	42.67470227777764	Subarray row count	774	774
Pointing Roll	230.590318	230.7506520151926	Alternating exposures requested	N	N
Window start time	233971264.184000	233971264.184000	Primary exposure time	0.000000	2.5
Window stop time	241833664.184000	241833664.184000			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
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	236067053.184000	236066085.41174			
Observation start date	2005-06-25T06:09:49	2005-06-25T05:54:45			
Observation end time	236108053.184000	236108761.28869			
Observation end date	2005-06-25T17:33:09	2005-06-25T17:46:01			
Read mode	TIMED	TIMED			

## 2.3 Aspect





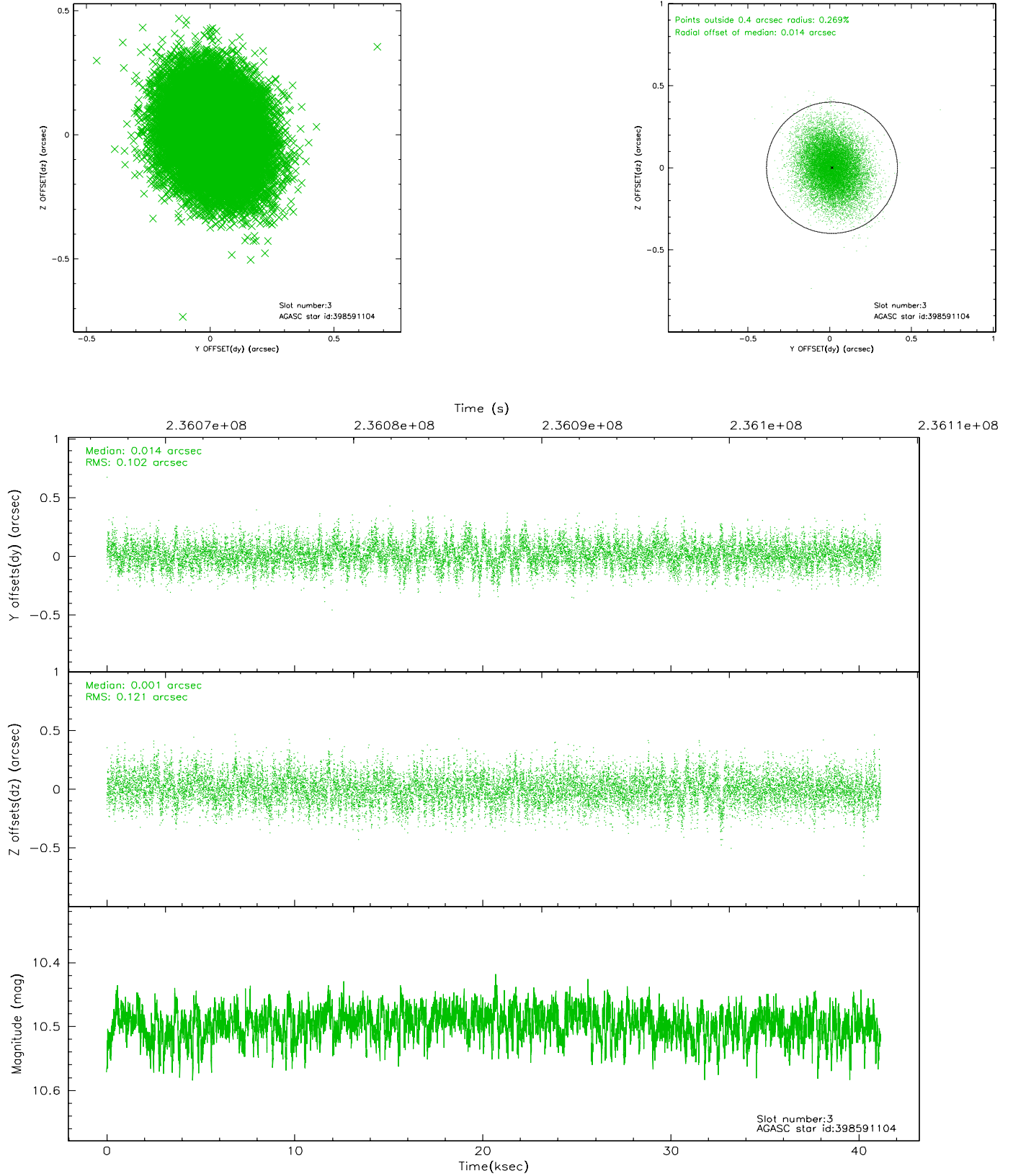
### Slot Statistics

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	10041	-0.043	-0.072	0.015	0.023	0.000000	0.000000	-759.60	-1793.68
1	FID	ACIS-S-4	7.19	10041	0.069	0.041	0.007	0.020	0.000000	0.000000	2153.81	114.85
2	FID	ACIS-S-5	7.23	10040	-0.055	0.042	0.014	0.024	0.000000	0.000000	-1812.42	108.59
3	GUIDE	398591104	10.50	20050	0.014	0.001	0.167	0.277	216.266610	42.893718	920.76	-2227.69
4	GUIDE	398592080	8.21	20079	0.113	0.004	0.079	0.130	216.056075	42.661607	1920.81	-2138.86
5	GUIDE	398592952	10.09	19595	-0.117	-0.022	0.183	0.314	216.343106	43.029643	413.06	-2378.12
6	GUIDE	398723464	9.05	20069	0.057	-0.057	0.093	0.147	217.255519	42.514001	329.06	663.96
7	GUIDE	398725424	8.79	20072	-0.067	0.078	0.085	0.138	217.673023	42.542871	-458.10	1450.99

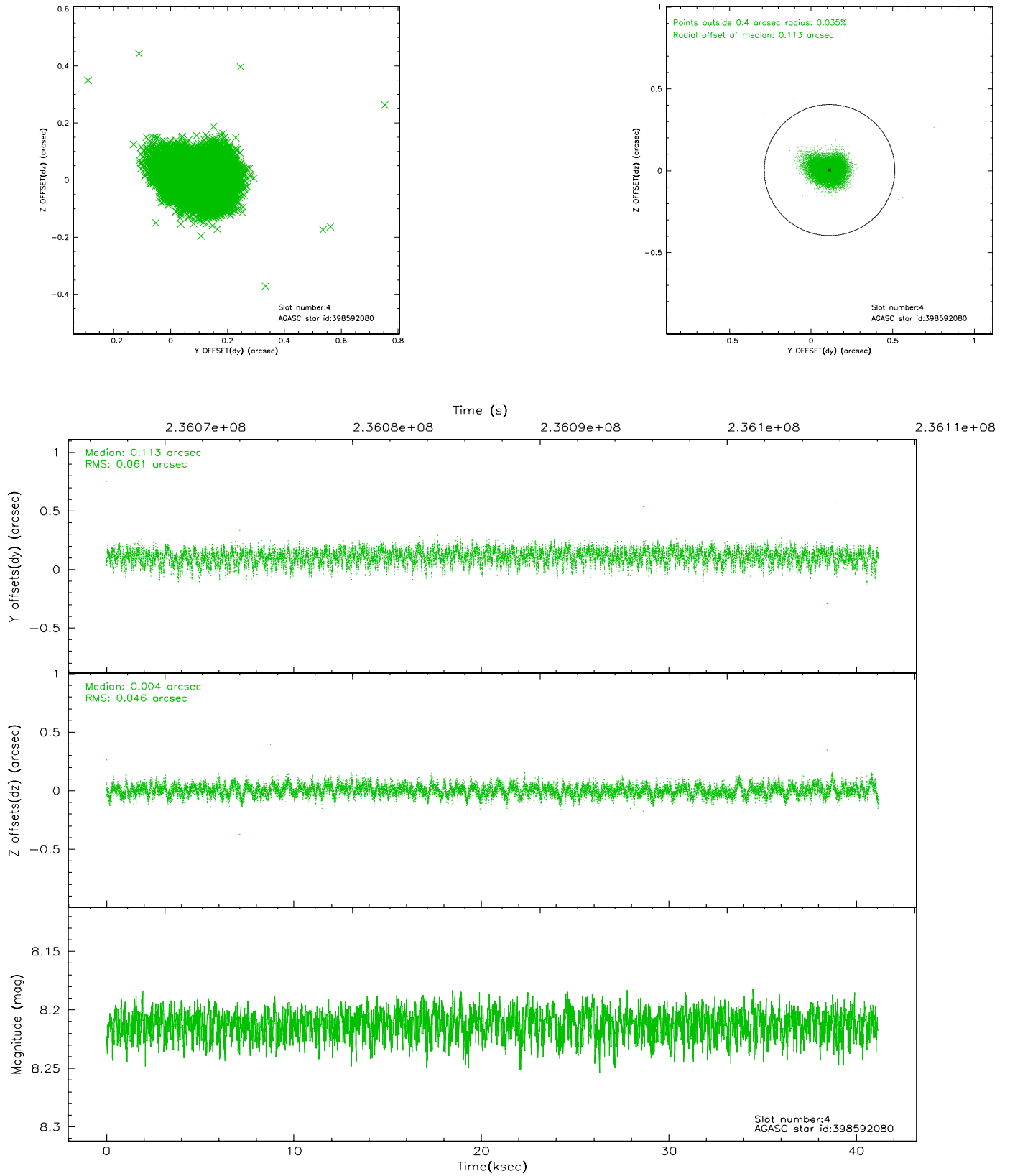


## 2.4 Star Slots

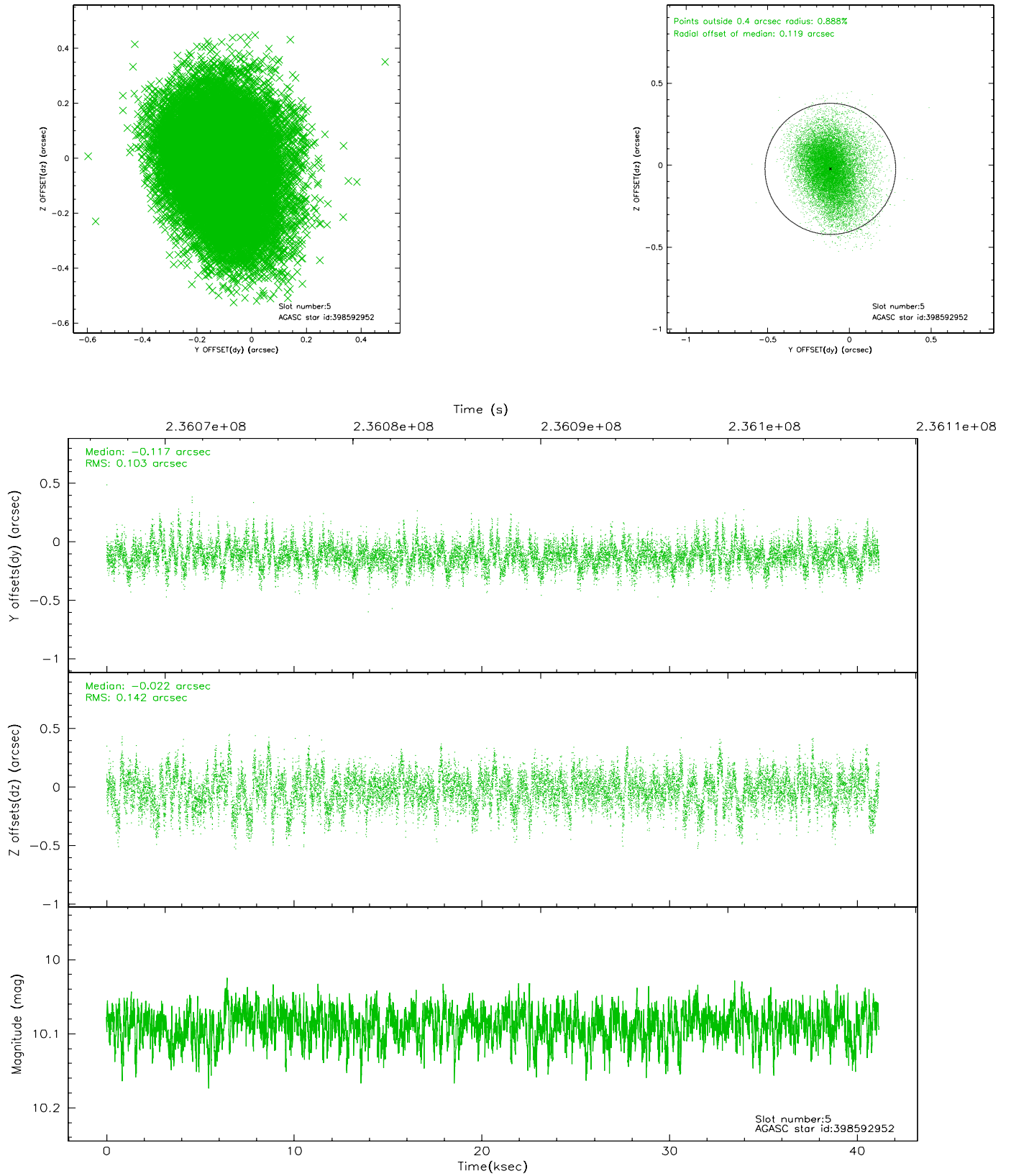
### 2.4.1 Slot 3



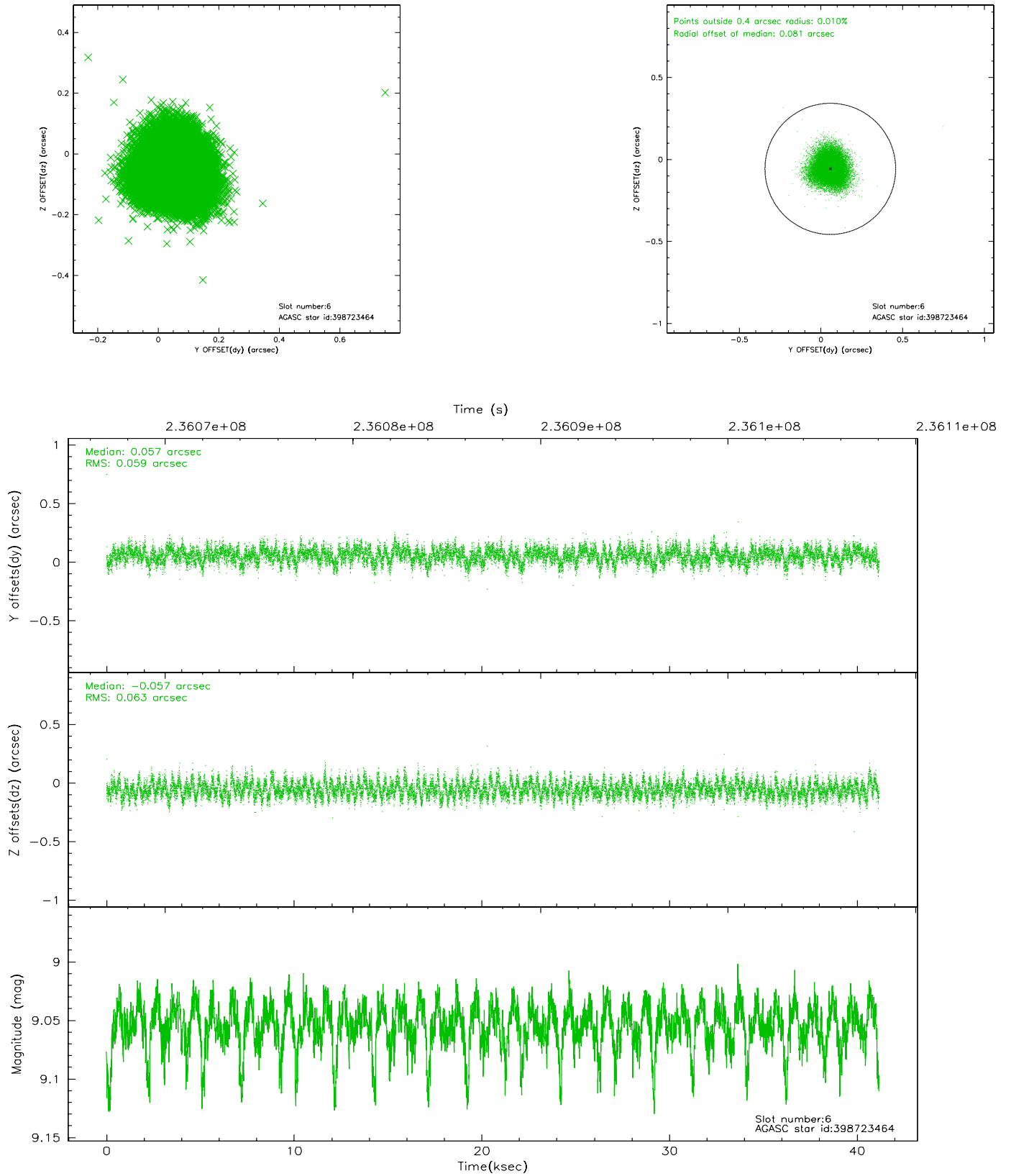
## 2.4.2 Slot 4



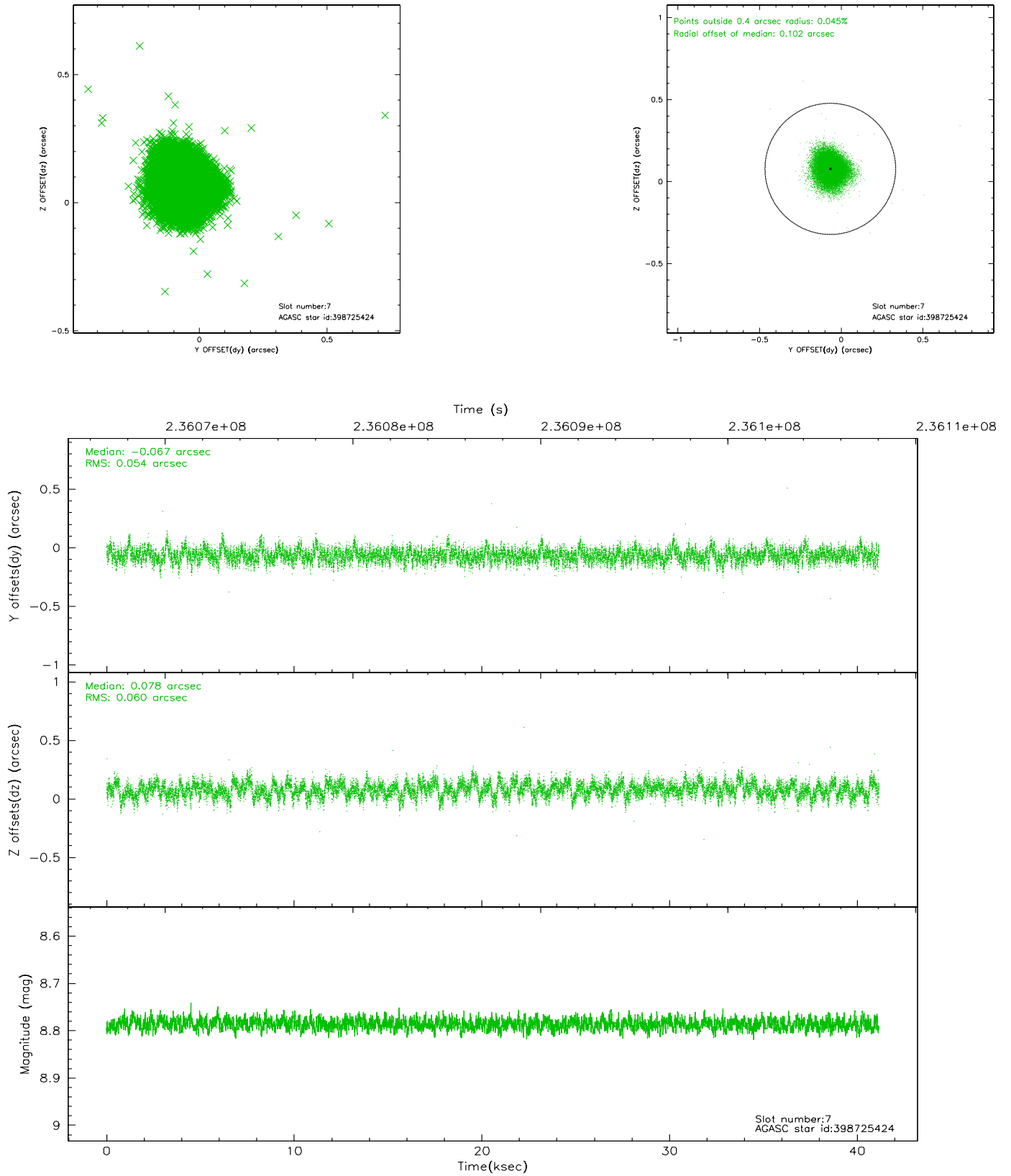
### 2.4.3 Slot 5



## 2.4.4 Slot 6

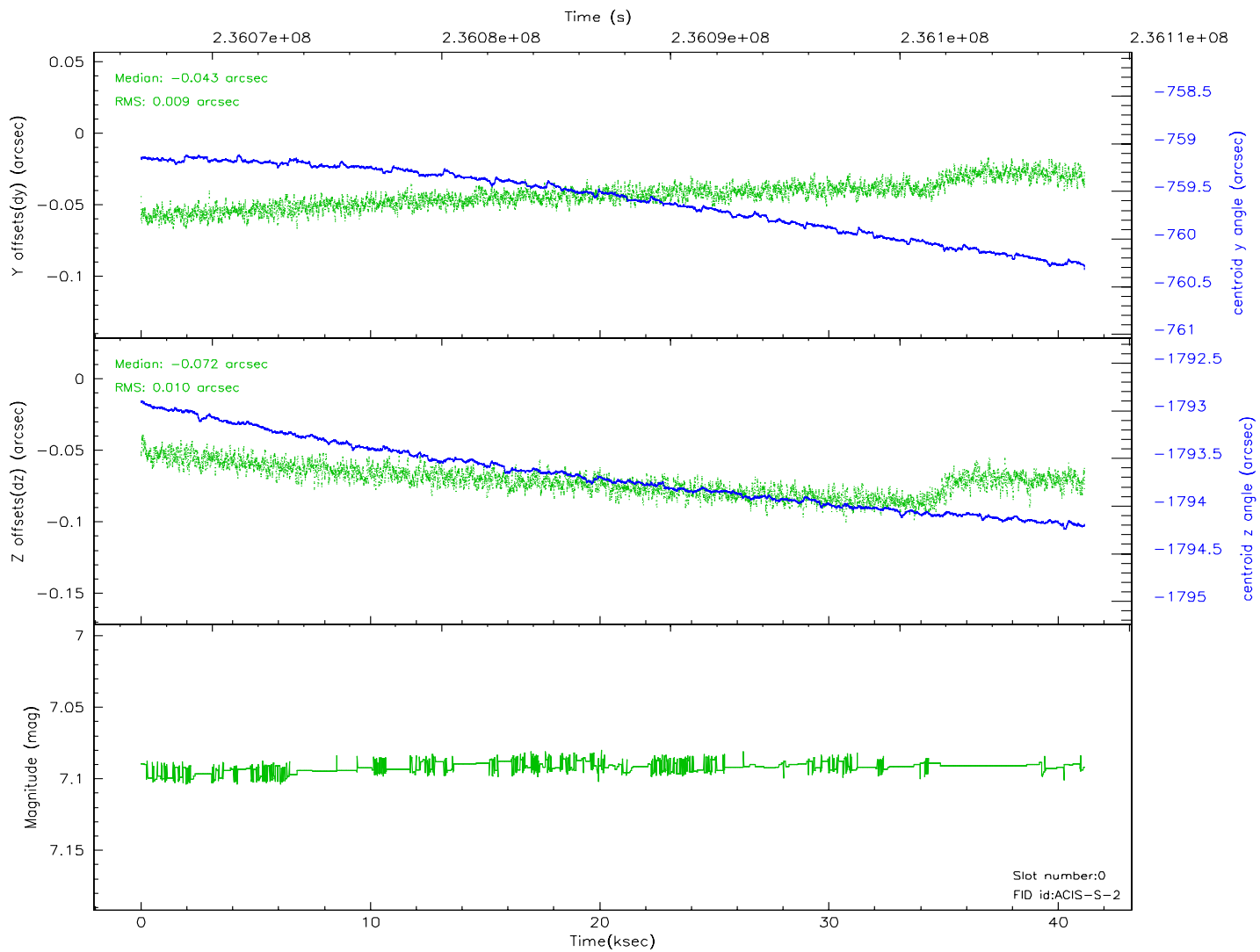
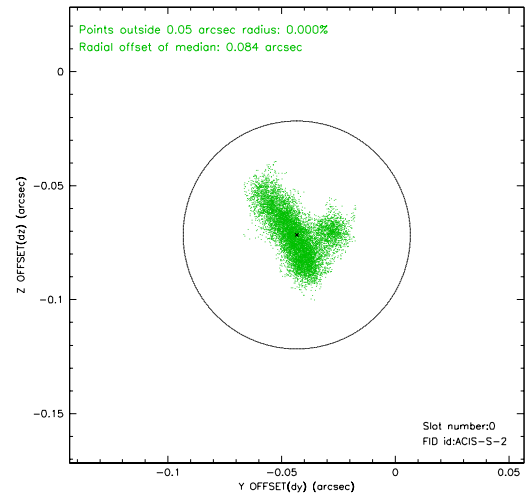
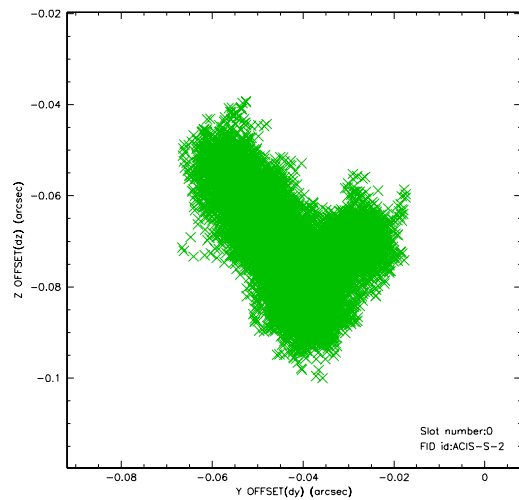


## 2.4.5 Slot 7

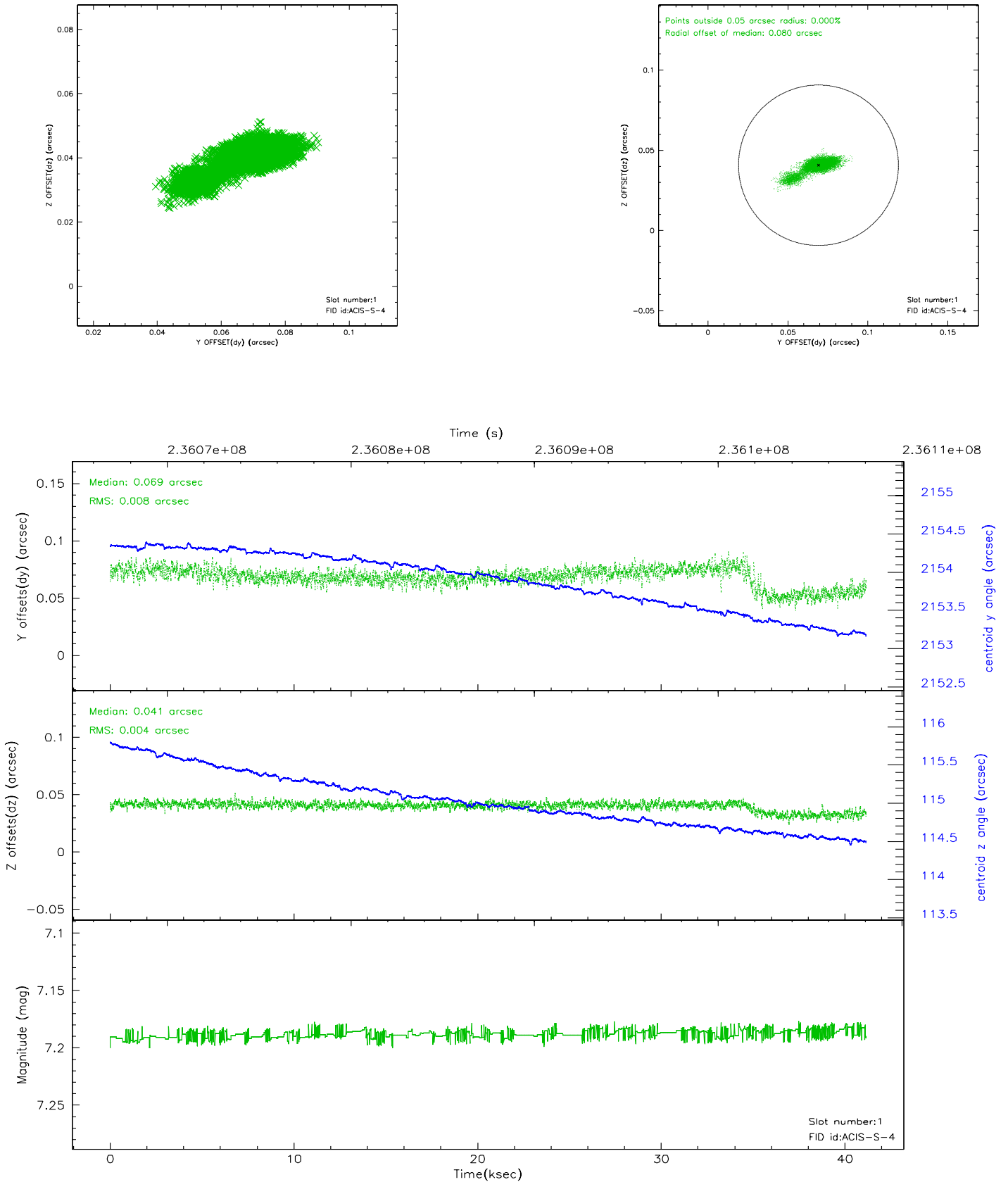


## 2.5 FID Slots

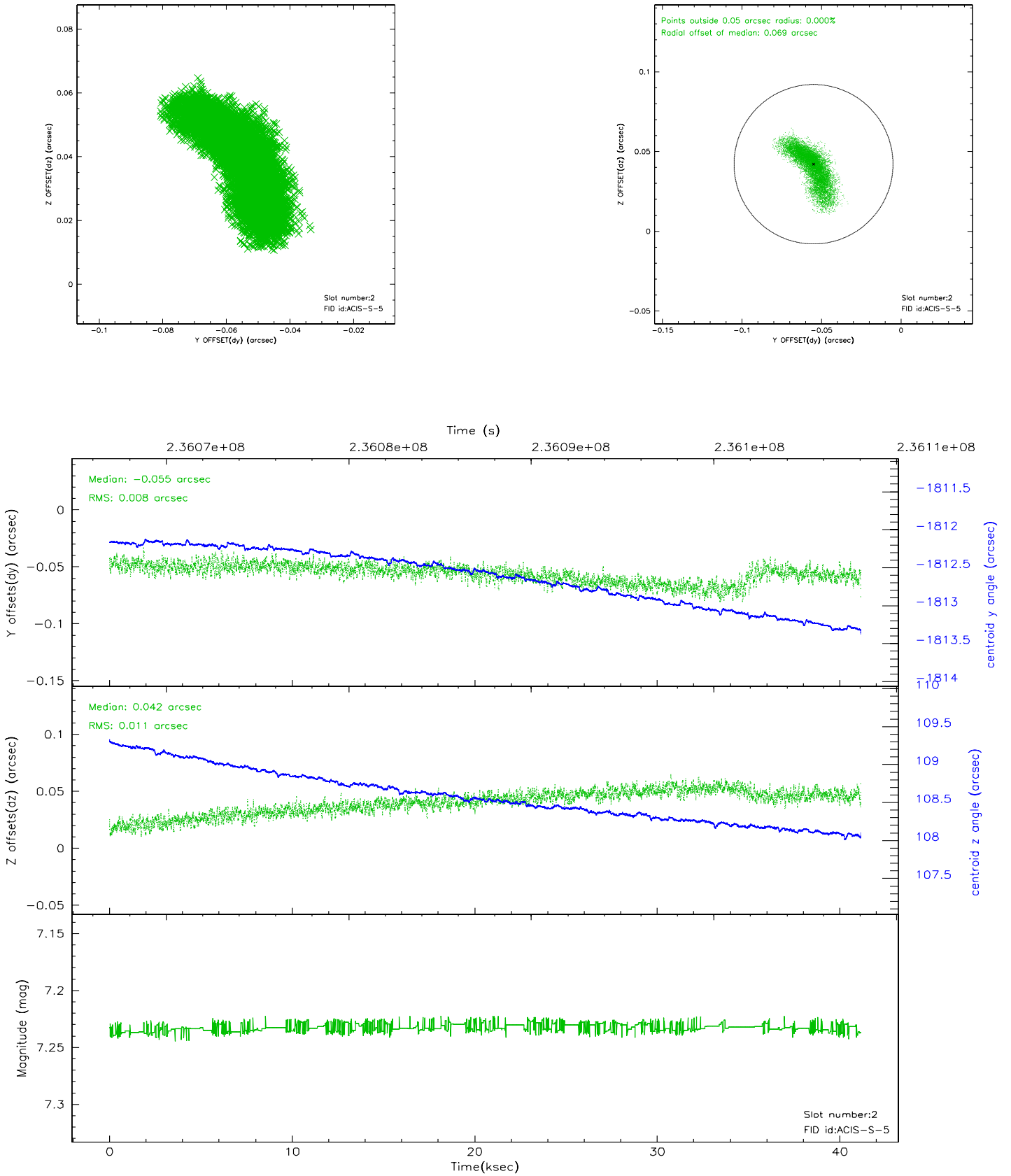
### 2.5.1 Slot 0



## 2.5.2 Slot 1



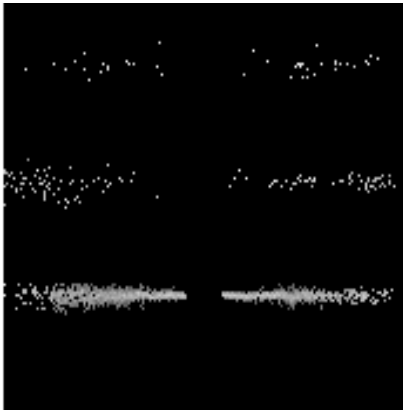
### 2.5.3 Slot 2



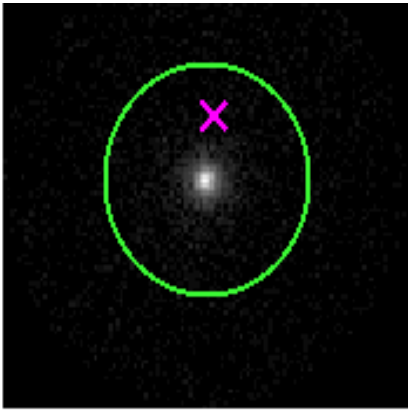


# 3 Gratings

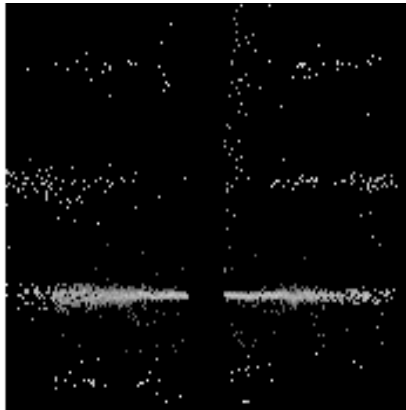
## 3.1 HEG Arm



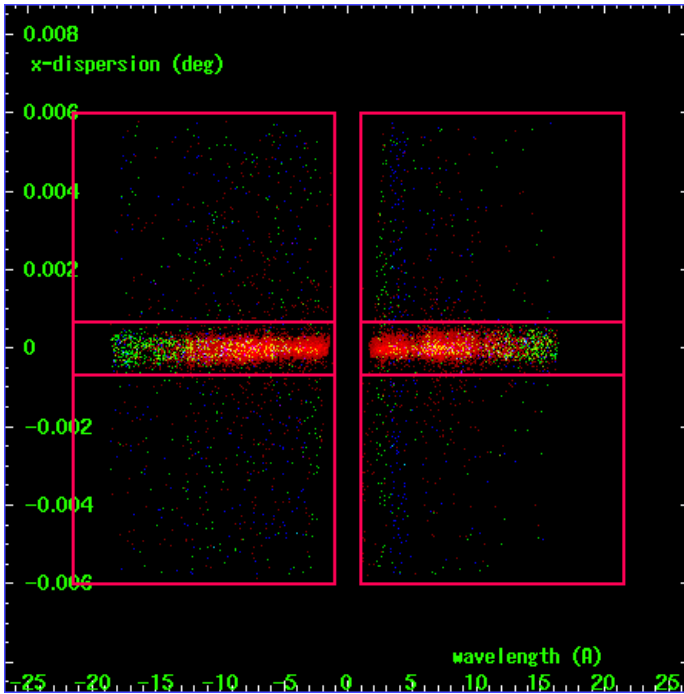
HEG Order Sort 123



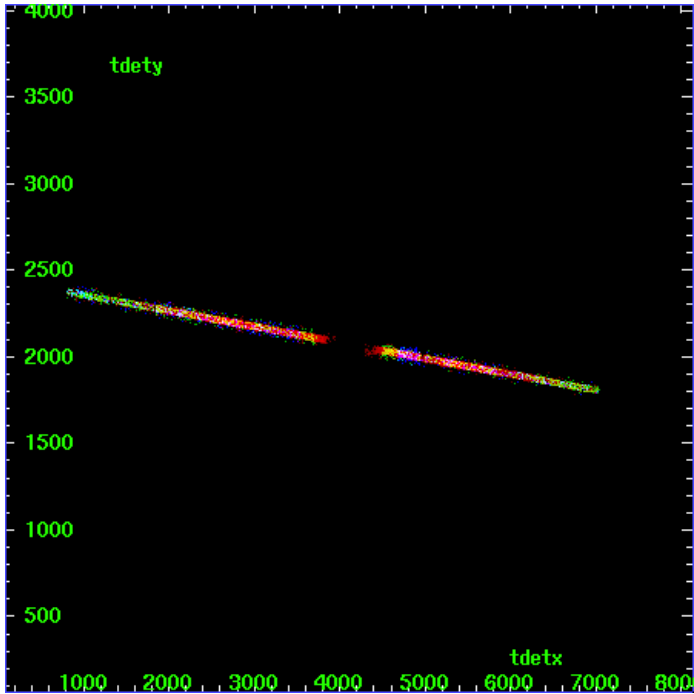
HEG Zero Order



HEG Order Sort ALL

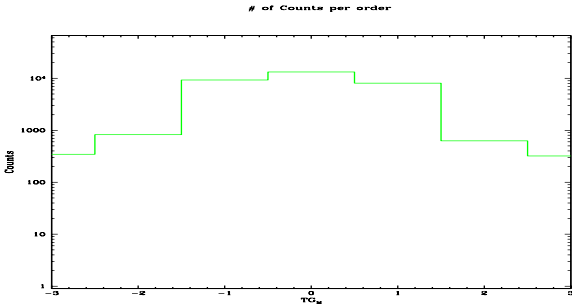


Spot Image HEG

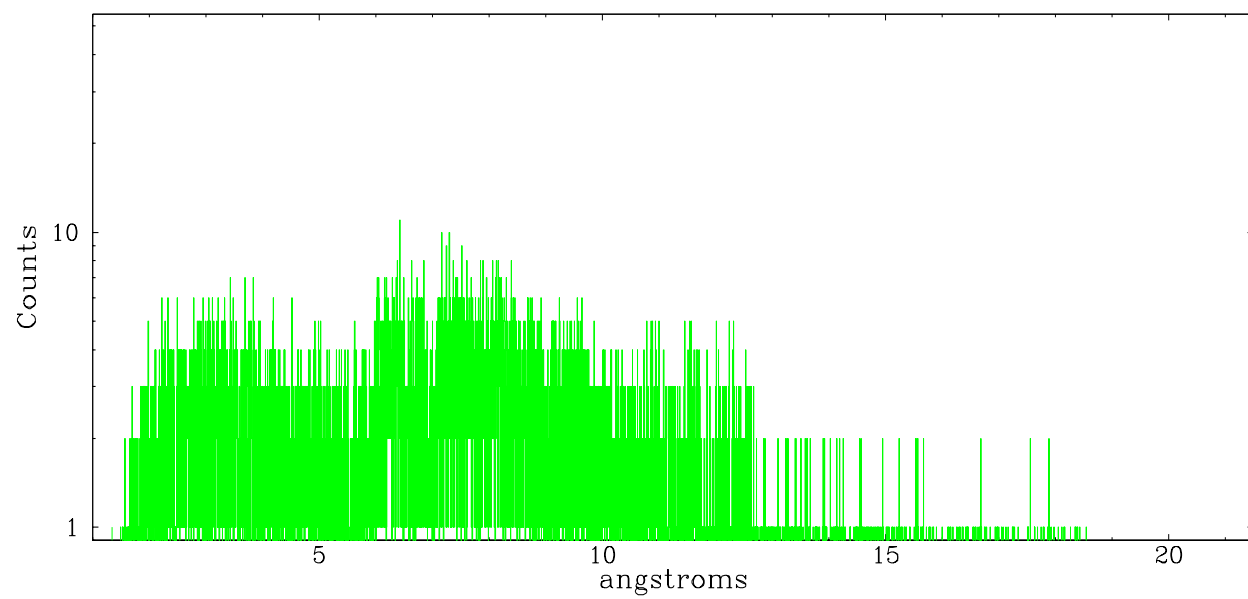


Full Detector HEG

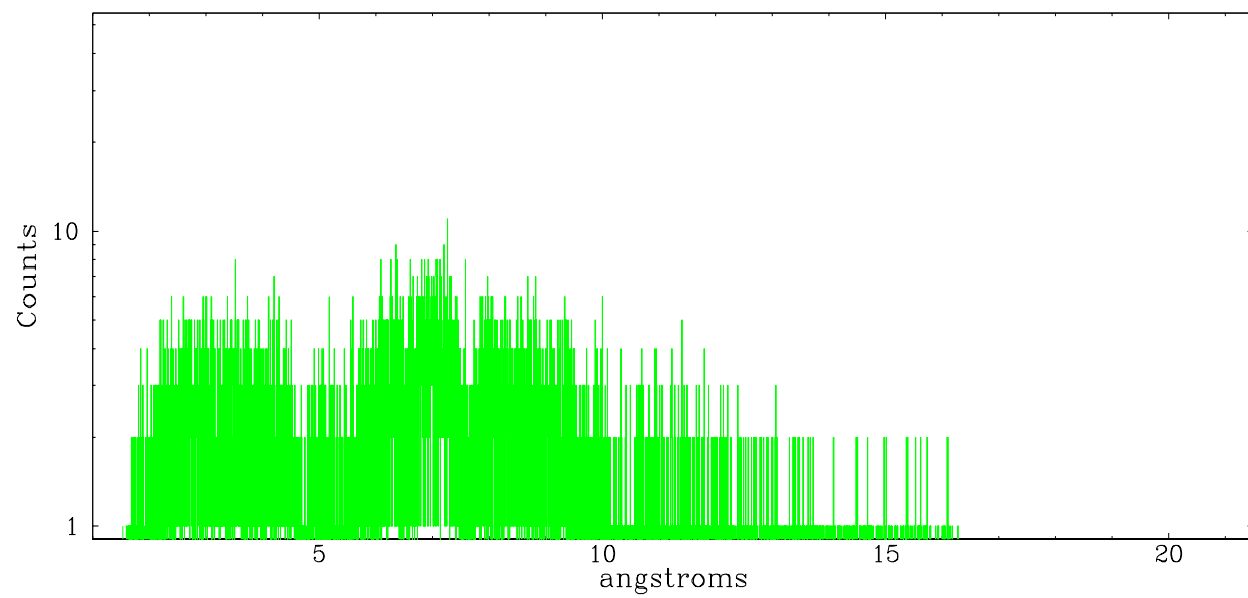
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	345	825	9294	13233	8058	629	322



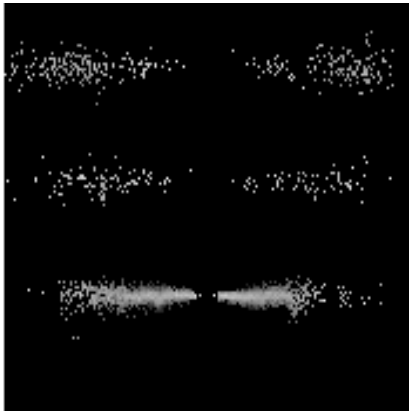
heg order -1



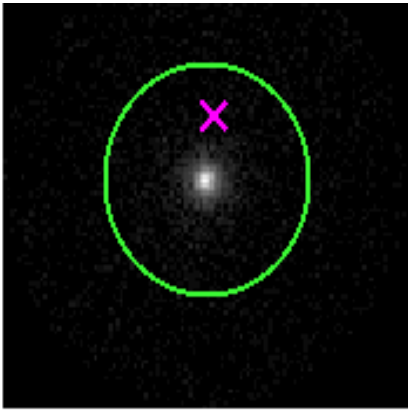
heg order +1



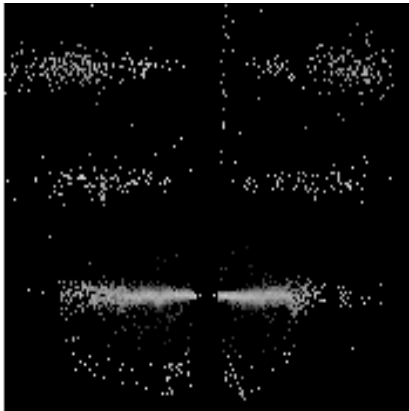
### 3.2 MEG Arm



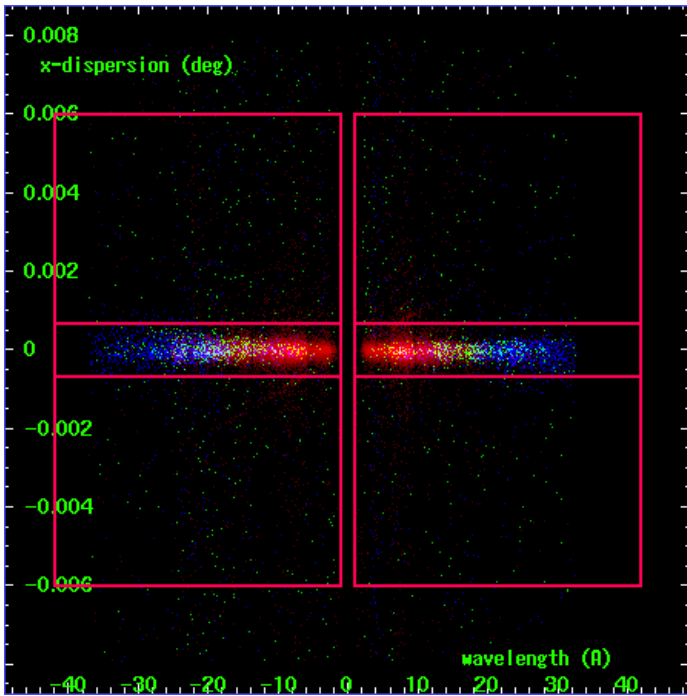
MEG Order Sort 123



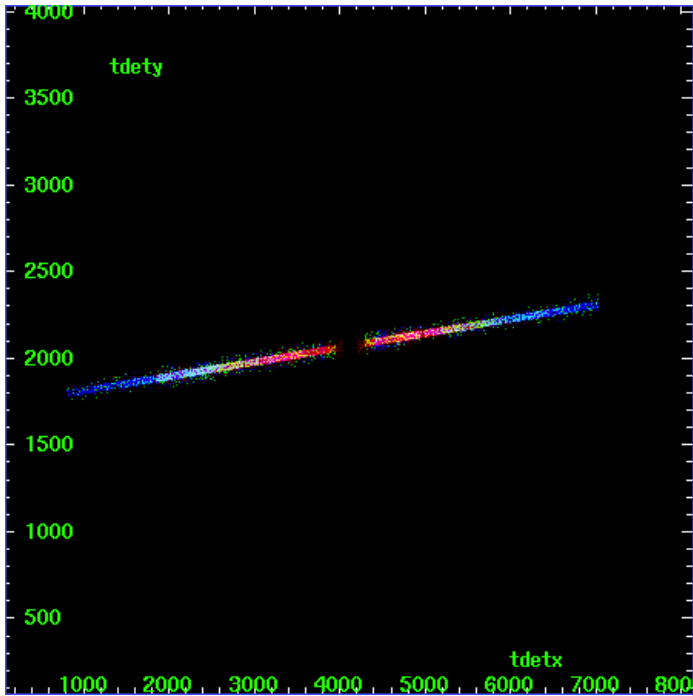
MEG Zero Order



MEG Order Sort ALL

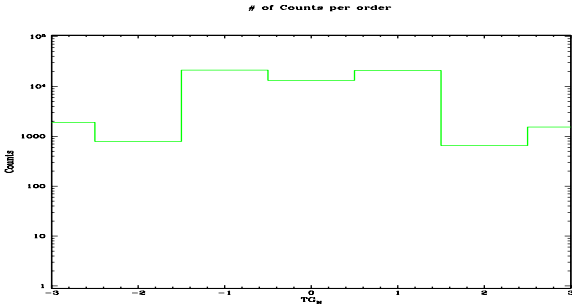


Spot Image MEG

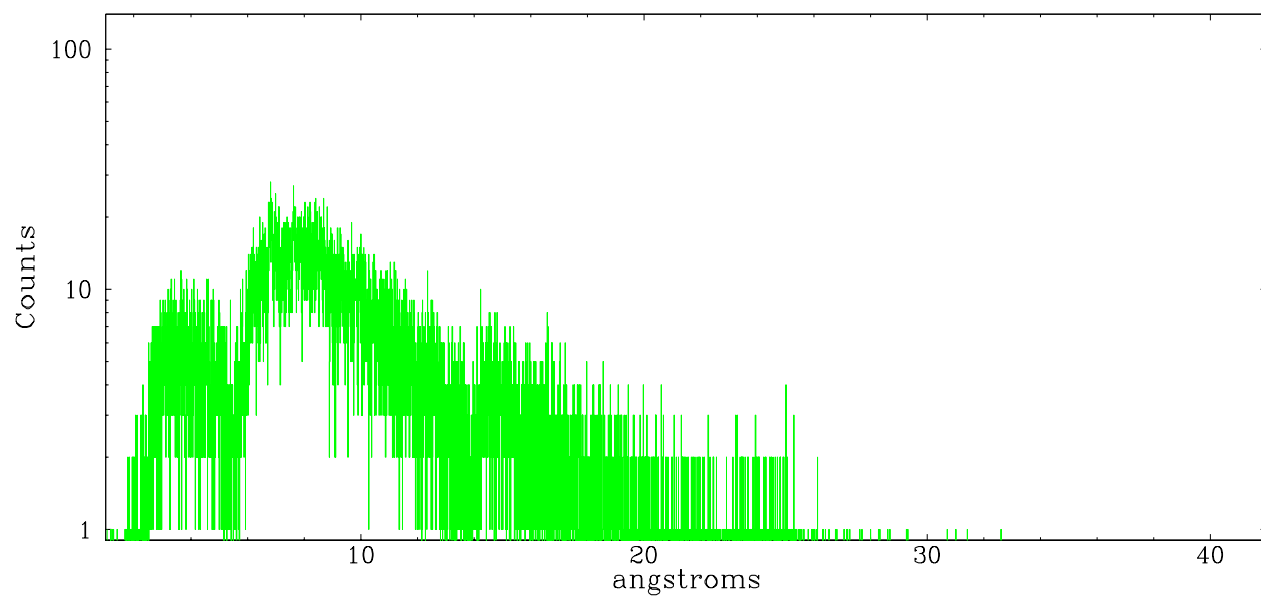


Full Detector MEG

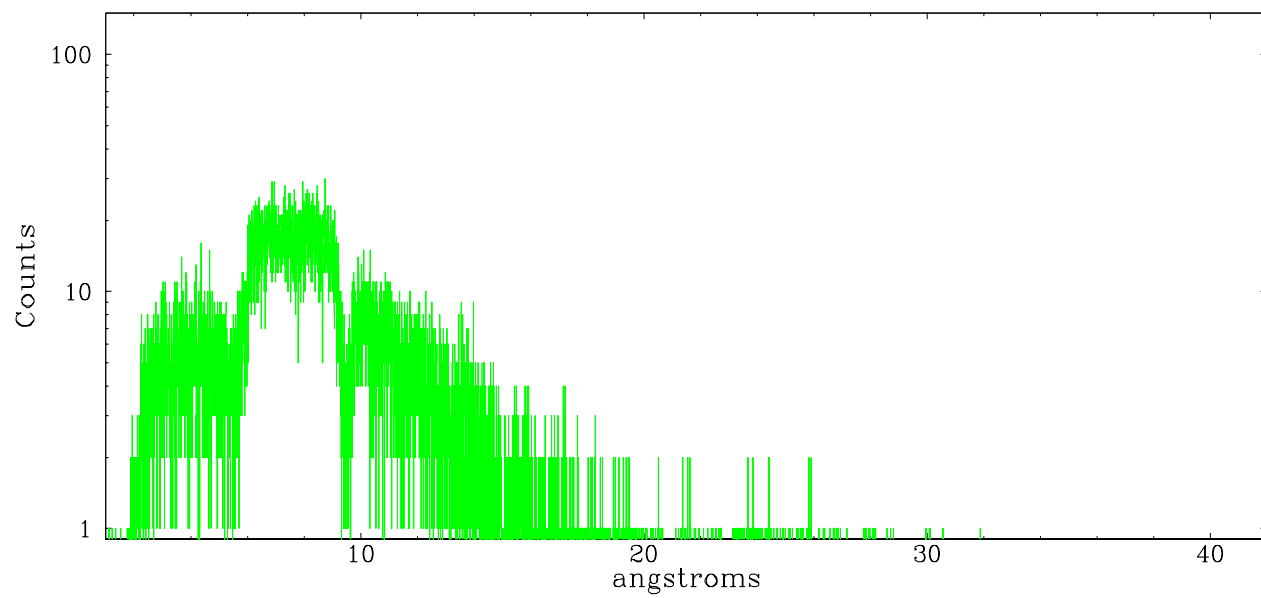
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1895	786	21149	13233	20930	651	1529



meg order -1



meg order +1



## A Summary

### A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2006.03.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	41.0425

### A.2 Comments