

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 1904 - L2 Version 001  
Chandra X-Ray Center

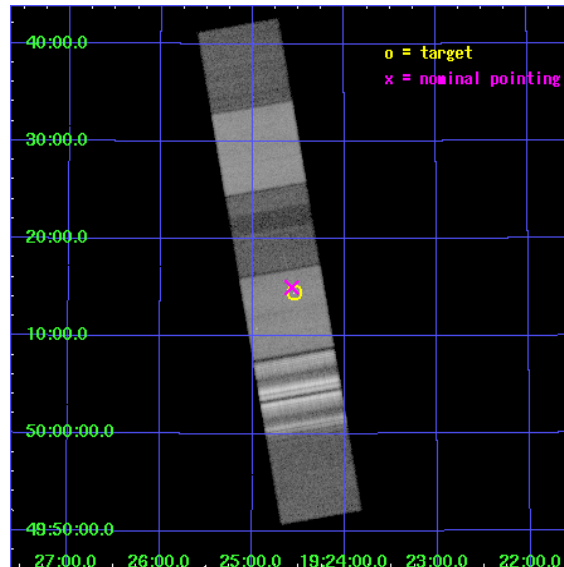
L2 Processing Date : Nov 20 2006

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# 1 Front

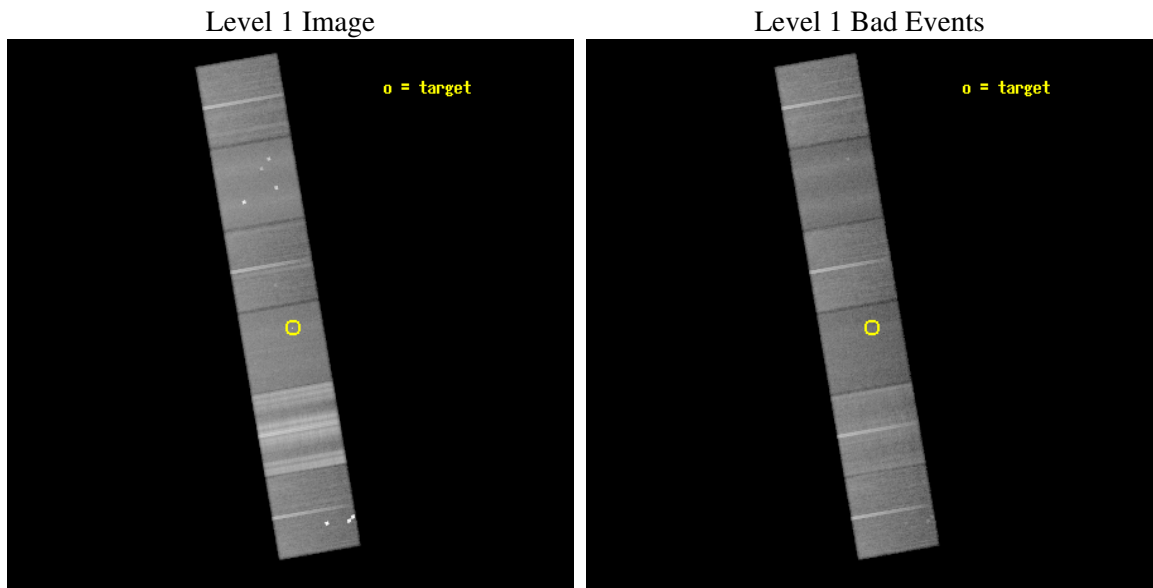
seq_num	300052
obs_id	1904
title	HIGH-RESOLUTION X-RAY SPECTROSCOPY OF THE SYMBIOTIC STAR CH CYG: ANY NEED FOR COLLIDING WINDS IN SYMBIOTICS?
observer	Dr Peter Wheatley
object	CH CYG
dtcycle	0
cycle	P
ra_targ	291.137917
dec_targ	50.241389
ra_nom	291.14317602804
dec_nom	50.250590710779
roll_nom	80.183092723147
revision	2
ontime	47683.159084156
livetime	47079.366212481
ontime4	47683.159084156
ontime5	47683.159084156
ontime6	47683.159064233
ontime7	47683.159084156
ontime8	47683.159064248
ontime9	47686.400044411
l2events	728239



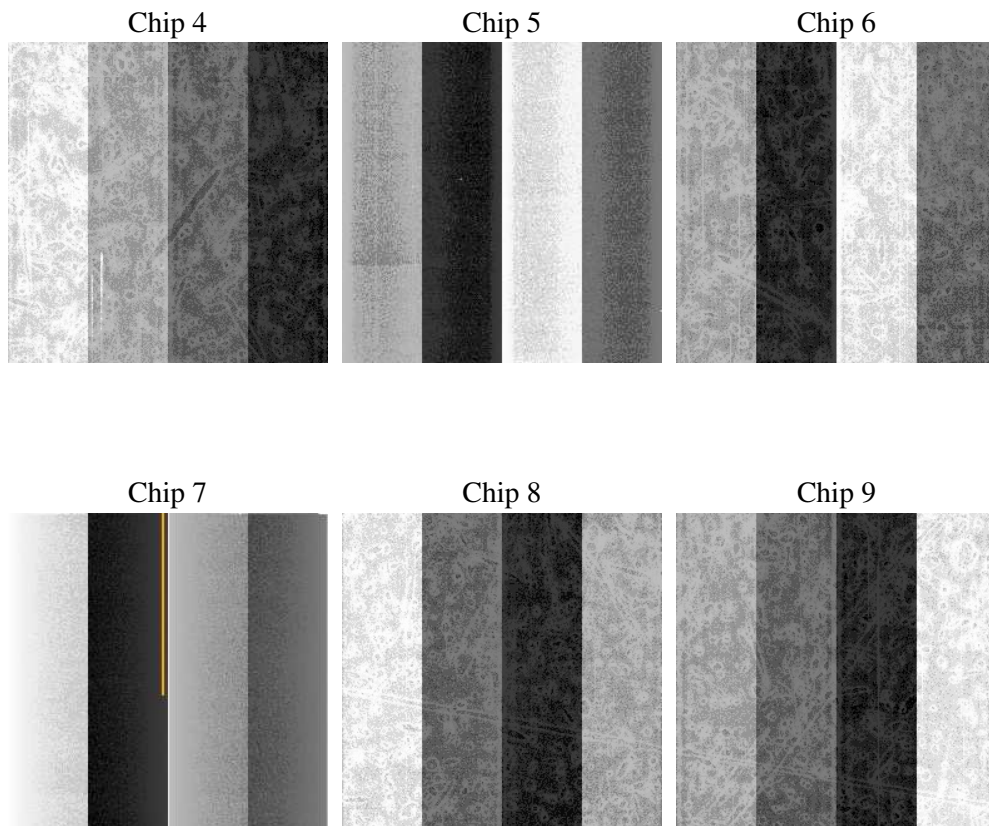
## 2 OBI

### 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	2006-11-20T14:30:37
revision	2

sched_exp_time	47724.418000
ontime	47688.035977527
ontime4	47688.035977527
ontime5	47688.035977527
ontime6	47688.035937682
ontime7	47688.035977527
ontime8	47688.035937697
ontime9	47691.276937783
l1events	3048748

### 2.1.4 Events

	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	448953	475914	404793	405781	881755	431552
rejected events	371064	266402	347588	247954	407010	332328
rejected %	82%	55%	85%	61%	46%	77%

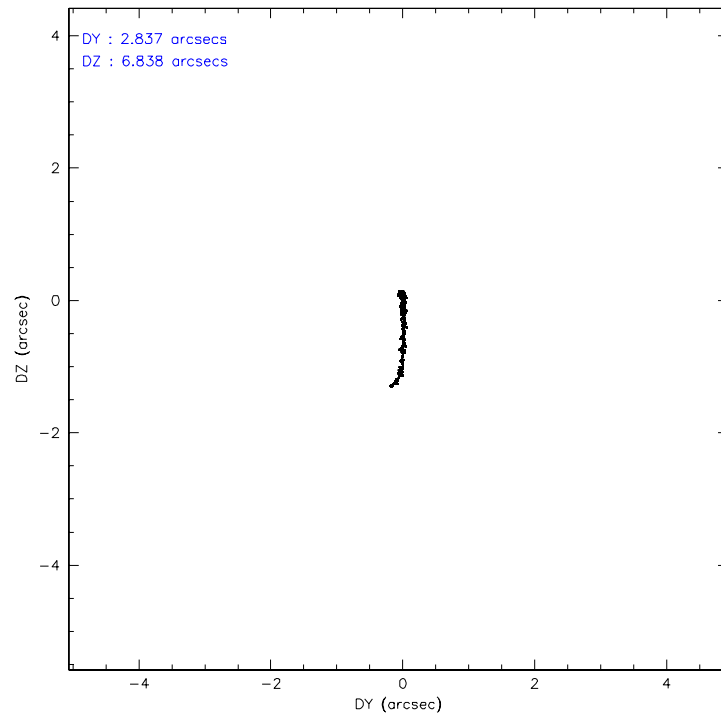
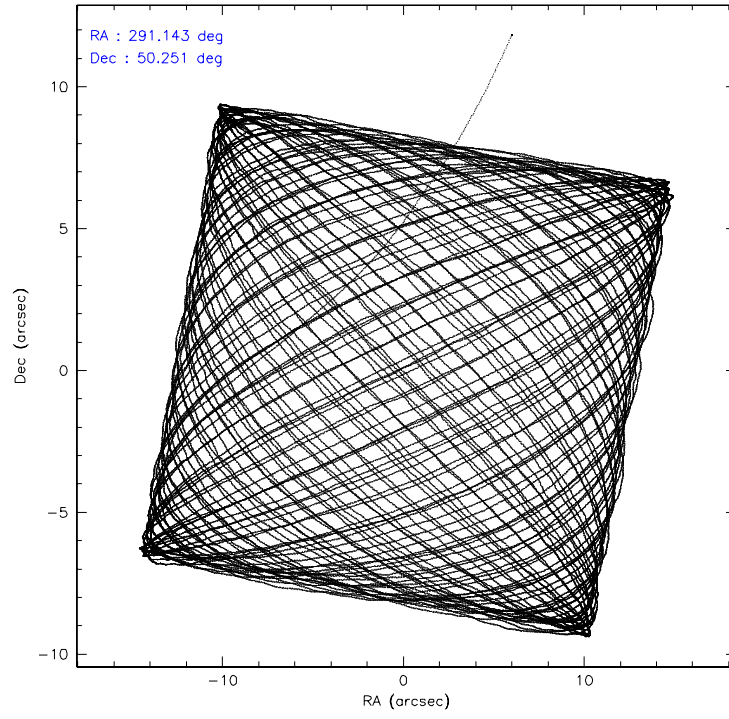
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	31431	24832	22373	9534	155355	48305
	7%	5%	5%	2%	17%	11%
grade 1 events	382	575	225	339	1378	314
	0%	0%	0%	0%	0%	0%
grade 2 events	24437	62251	15523	40273	58799	29933
	5%	13%	3%	9%	6%	6%
grade 3 events	4161	7239	3692	9351	92067	3983
	0%	1%	0%	2%	10%	0%
grade 4 events	4438	6664	3729	8987	81532	3948
	0%	1%	0%	2%	9%	0%
grade 5 events	11017	21775	12700	27291	20886	13244
	2%	4%	3%	6%	2%	3%
grade 6 events	13425	108548	11891	89697	87024	13066
	2%	22%	2%	22%	9%	3%
grade 7 events	359662	244030	334660	220309	384714	318759
	80%	51%	82%	54%	43%	73%

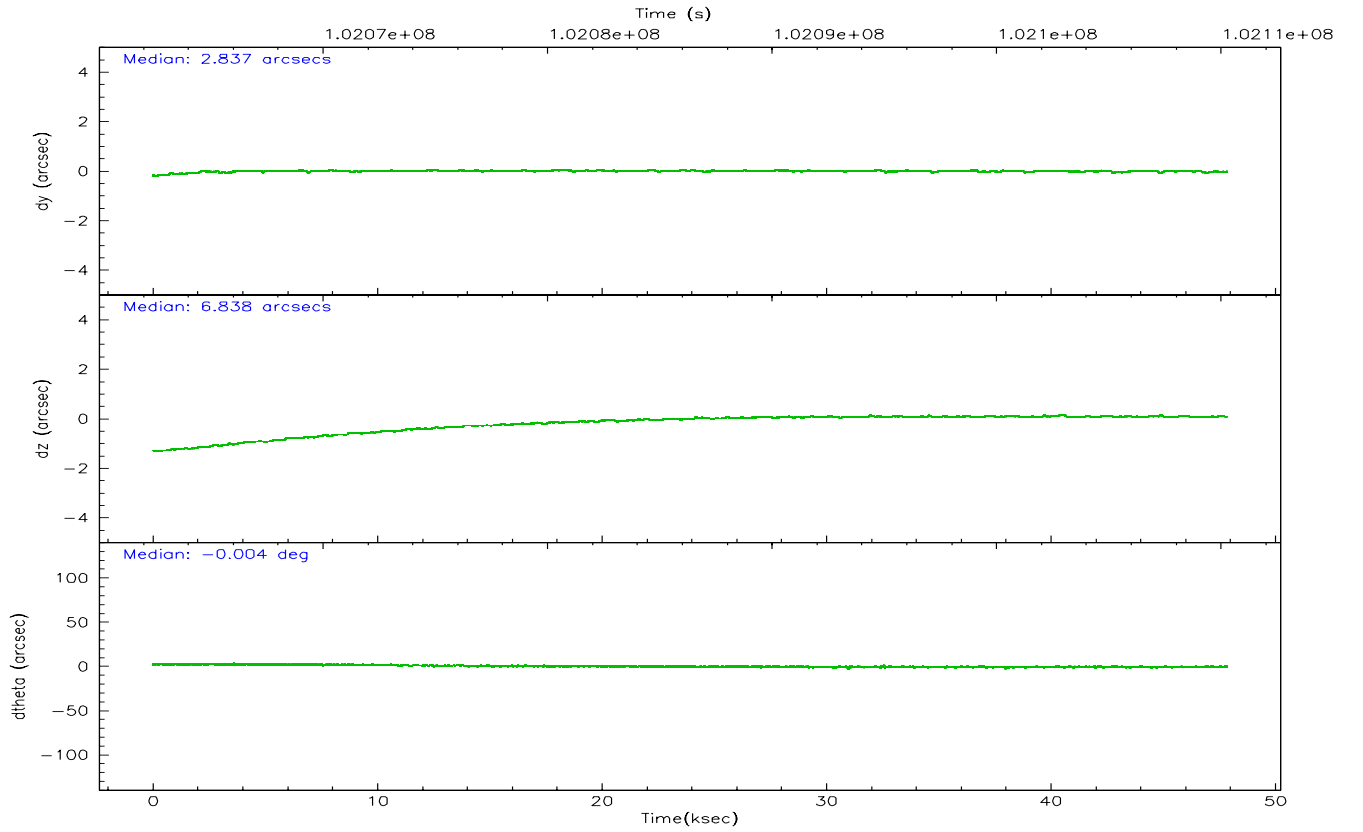
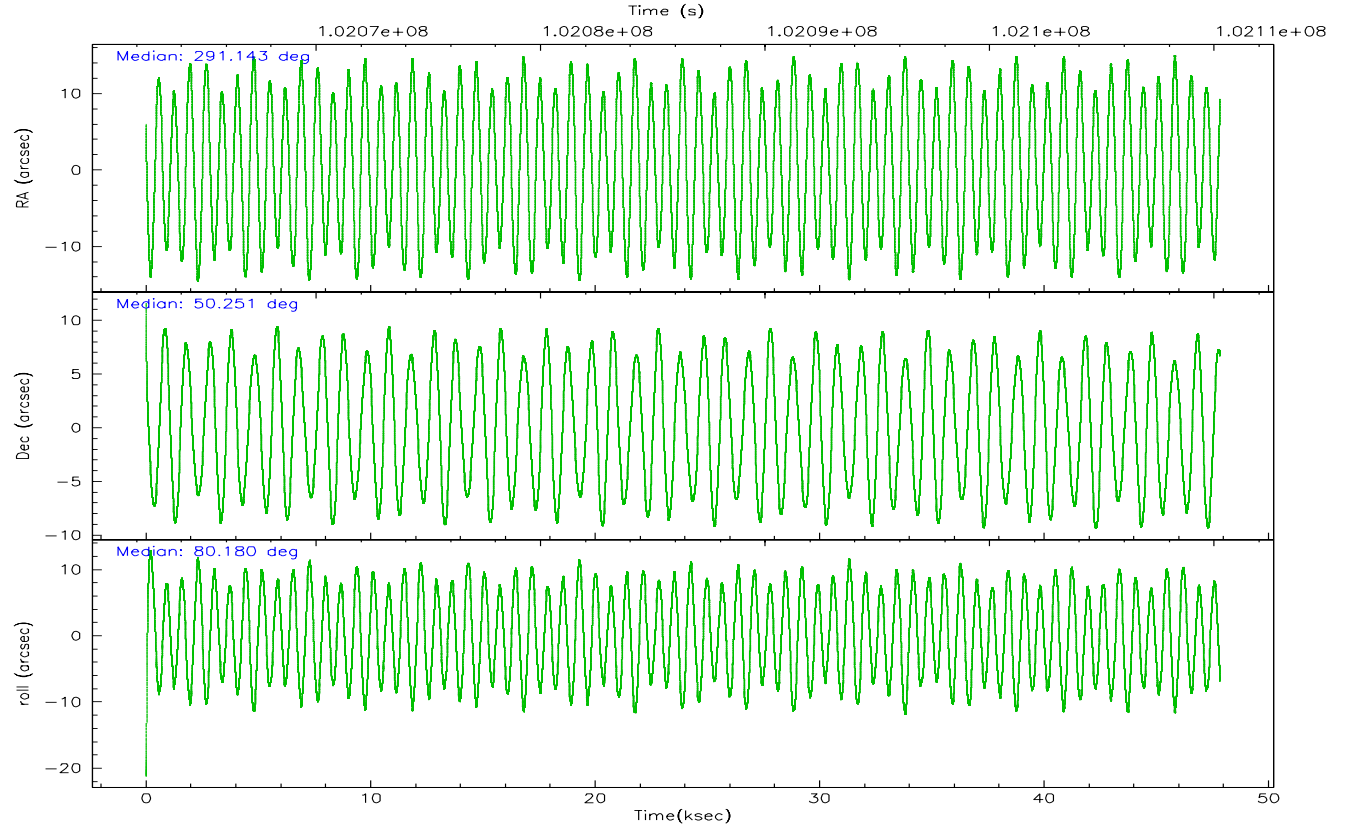


## 2.2 Compared Parameters

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	291.158297	291.1431760280361	Subarray requested	NONE	NONE
Pointing Dec	50.225059	50.2505907107787	Alternating exposures requested	N	N
Pointing Roll	80.014846	80.18309272314737	Primary exposure time	0.000000	3.2
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	102062551.184000	102061430.66017			
Observation start date	2001-03-27T06:41:27	2001-03-27T06:23:50			
Observation end time	102110275.184000	102110589.66207			
Observation end date	2001-03-27T19:56:51	2001-03-27T20:03:09			
Read mode	TIMED	TIMED			

## 2.3 Aspect



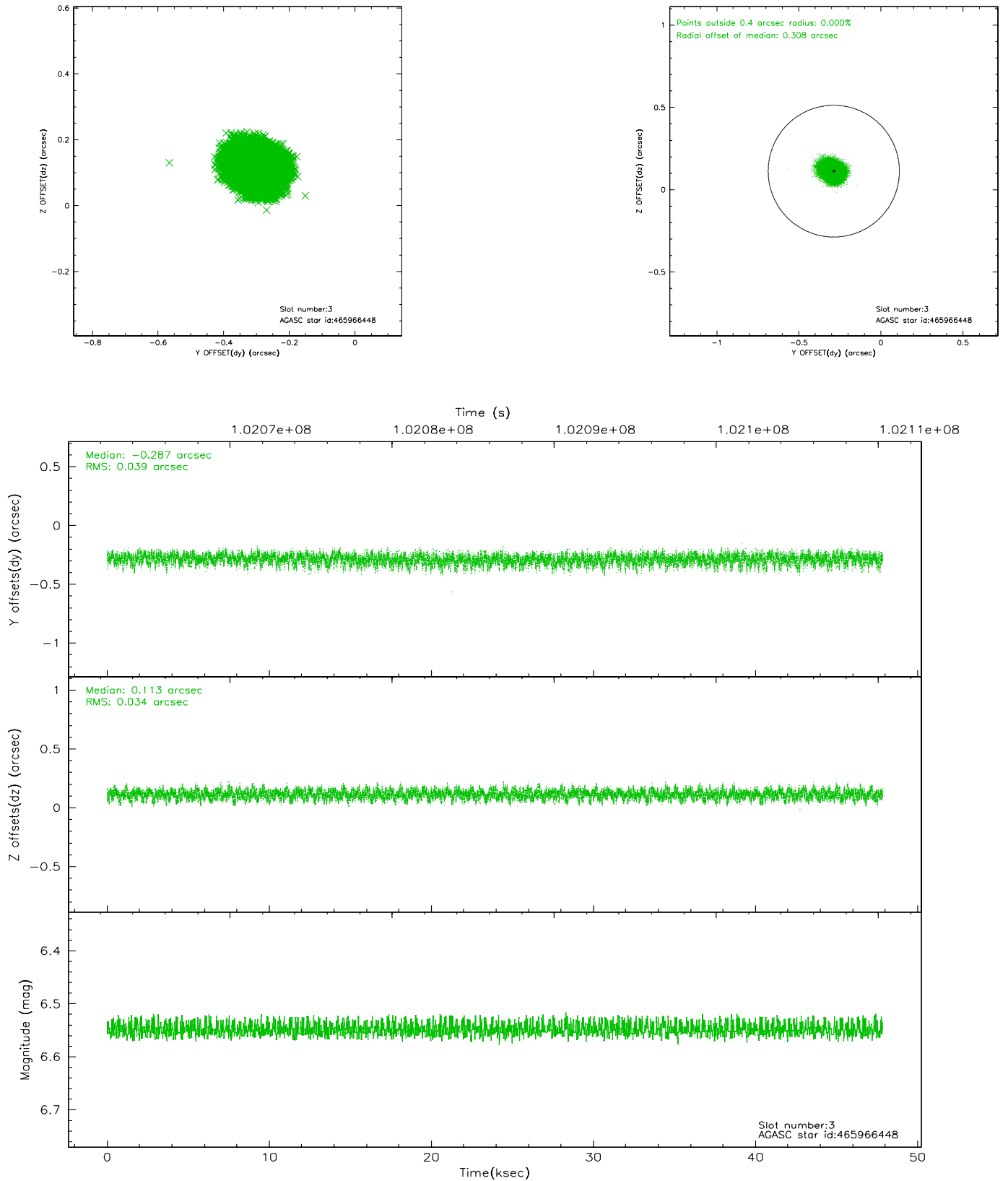


### Slot Statistics

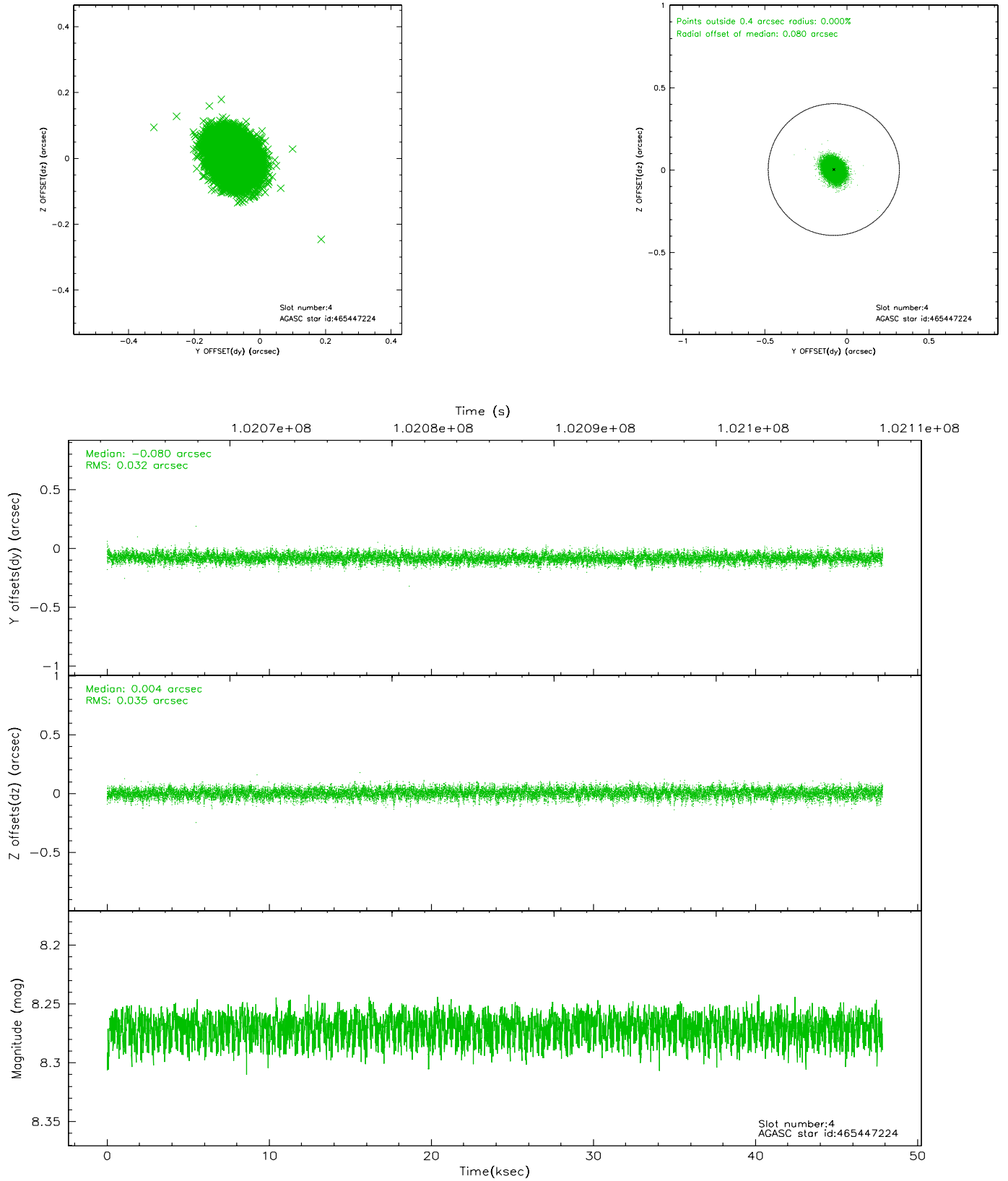
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	11669	-0.022	-0.027	0.013	0.021	0.000000	0.000000	-755.29	-1789.90
1	FID	ACIS-S-4	7.19	11668	-0.051	0.018	0.009	0.017	0.000000	0.000000	2157.97	118.63
2	FID	ACIS-S-5	7.23	11667	0.045	0.016	0.014	0.024	0.000000	0.000000	-1808.08	112.29
3	GUIDE	465966448	6.55	23340	-0.287	0.113	0.056	0.087	291.456533	50.851726	2340.70	-276.15
4	GUIDE	465447224	8.27	23336	-0.080	0.004	0.050	0.082	291.830226	50.402668	904.25	-1406.53
5	GUIDE	465451320	9.37	23327	0.112	-0.062	0.073	0.120	290.821054	49.774437	-1731.47	490.80
6	GUIDE	465455904	8.63	23333	0.120	-0.041	0.054	0.090	290.837212	49.607064	-2319.08	351.92
7	GUIDE	465447376	9.28	23329	0.135	-0.013	0.079	0.129	290.402186	49.787610	-1846.71	1458.98

## 2.4 Star Slots

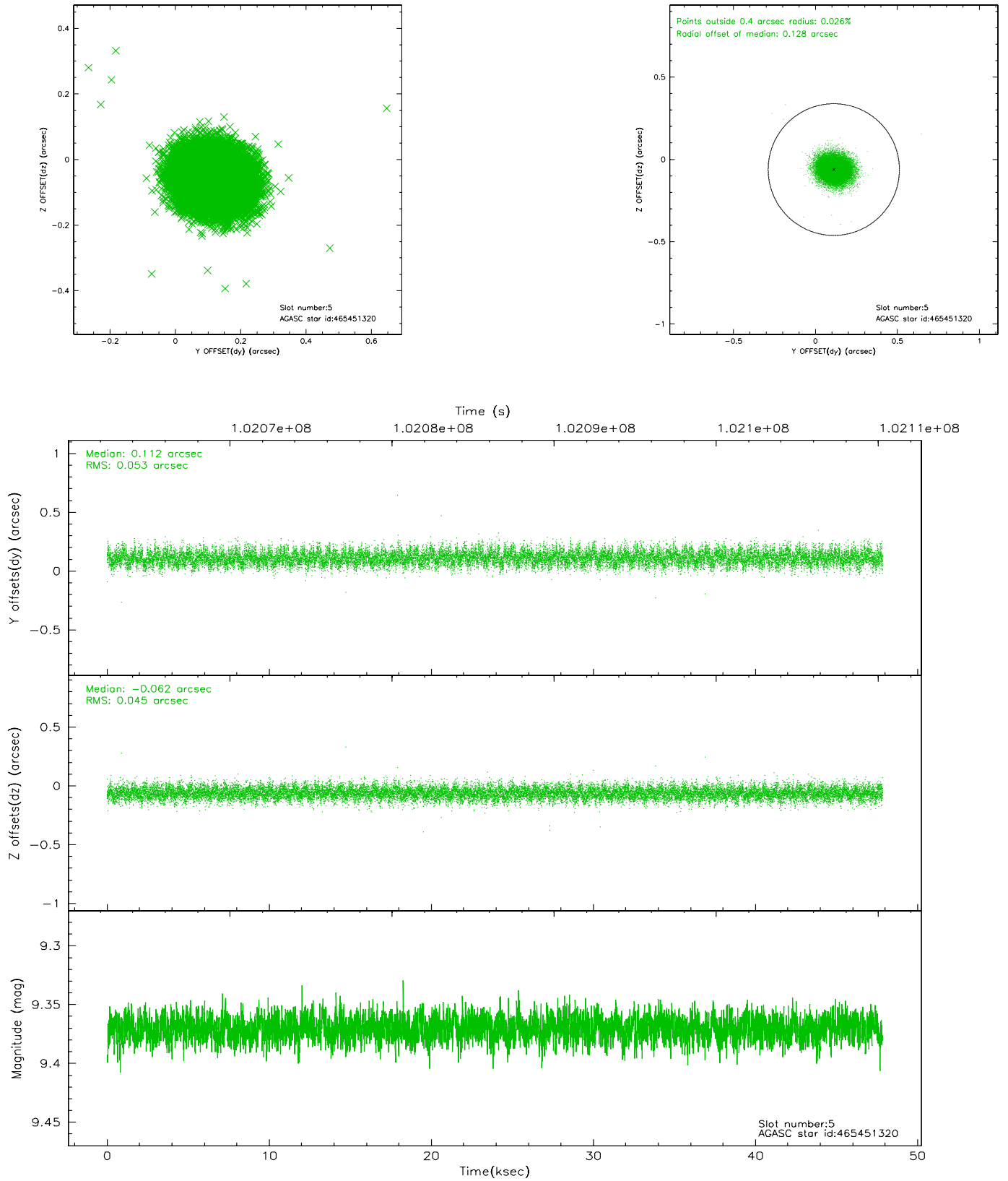
### 2.4.1 Slot 3



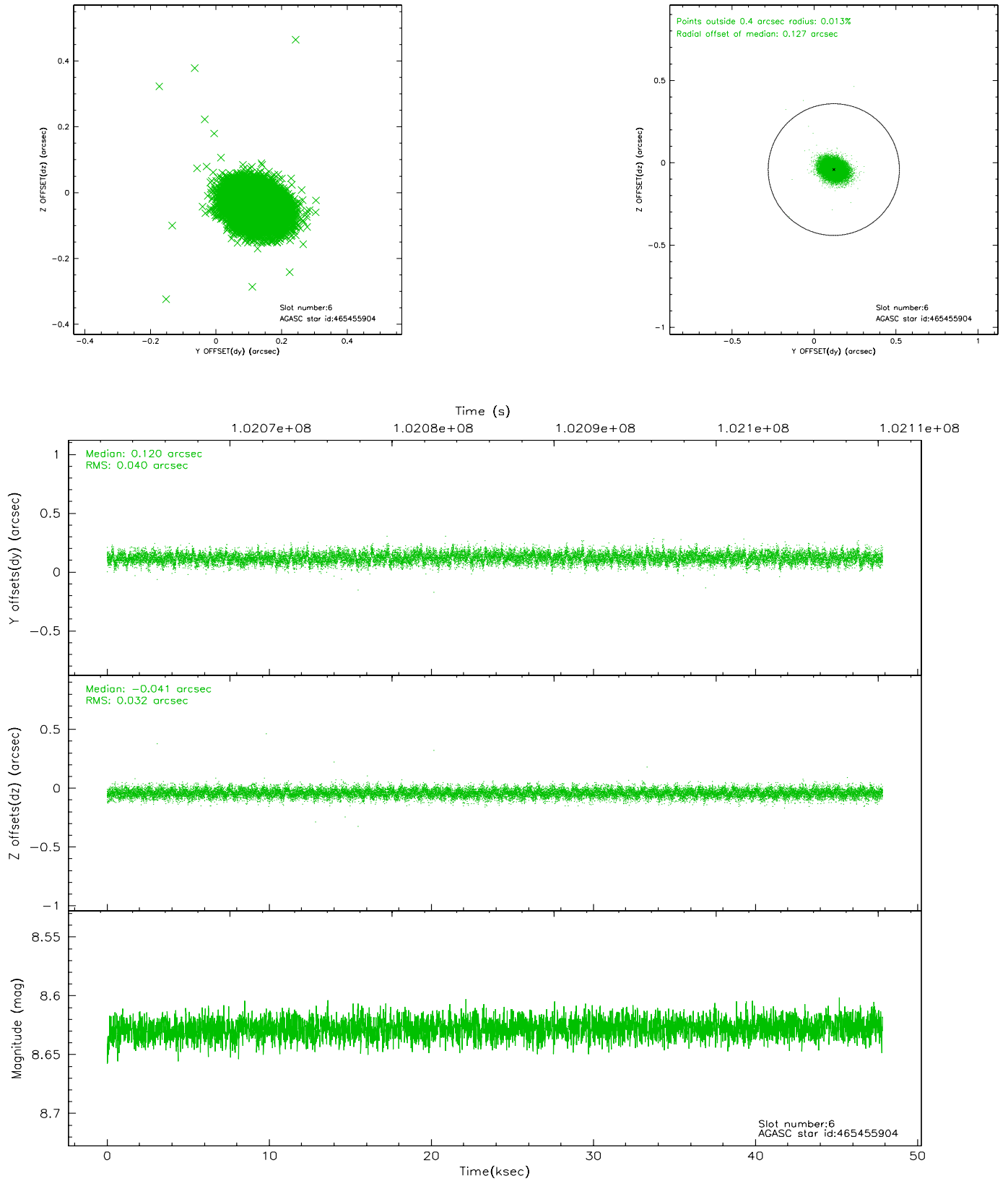
## 2.4.2 Slot 4



### 2.4.3 Slot 5

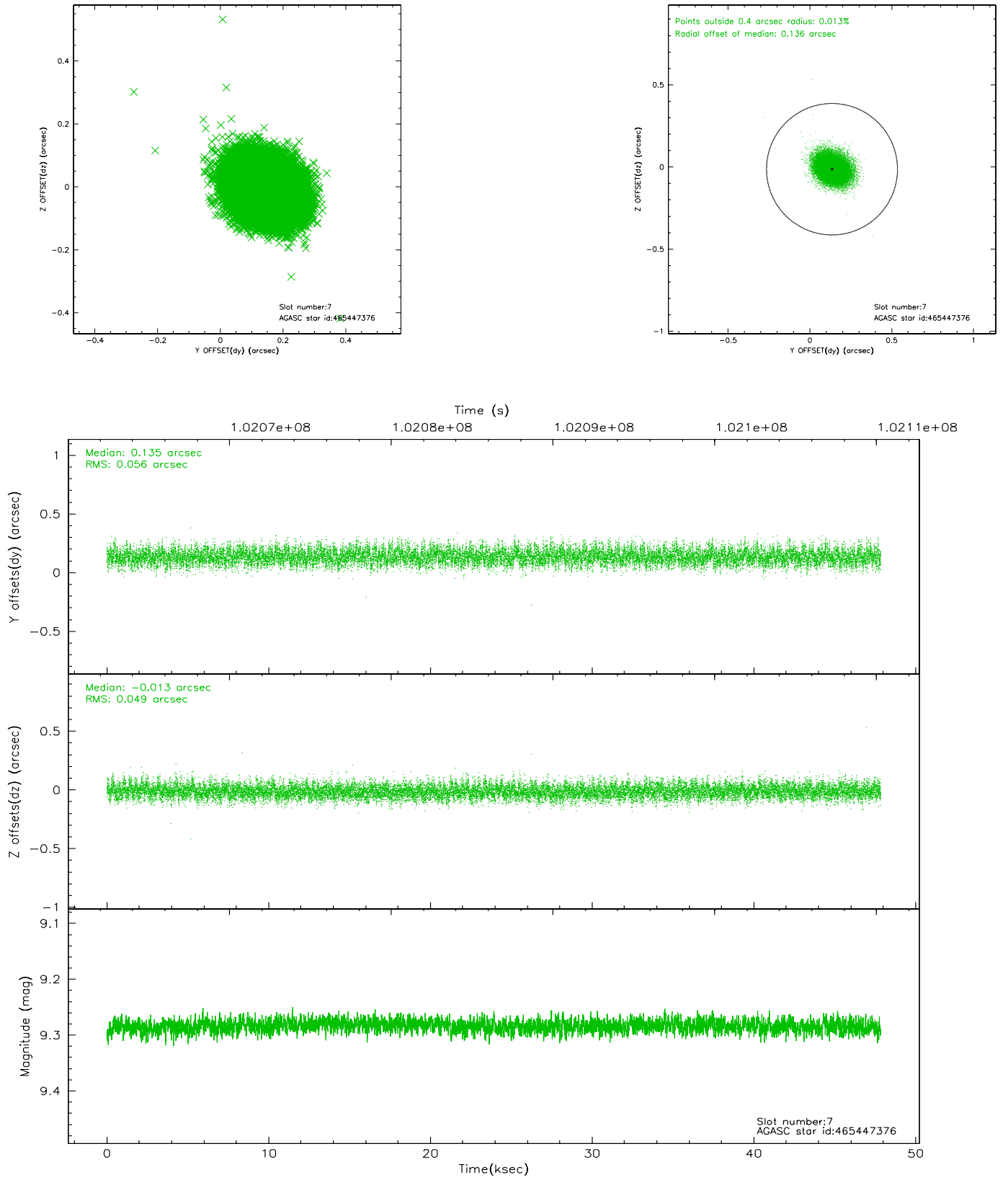


## 2.4.4 Slot 6



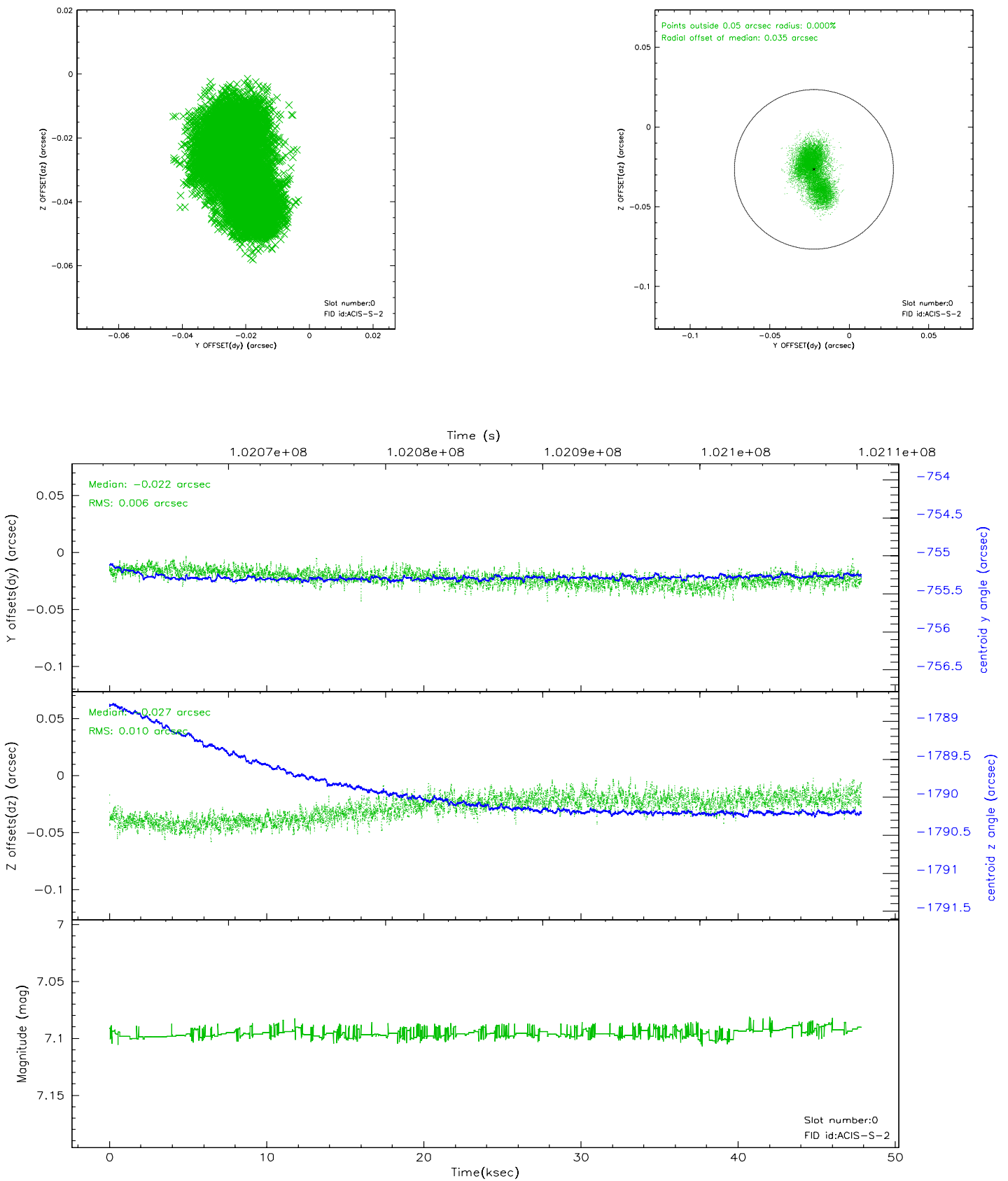


## 2.4.5 Slot 7

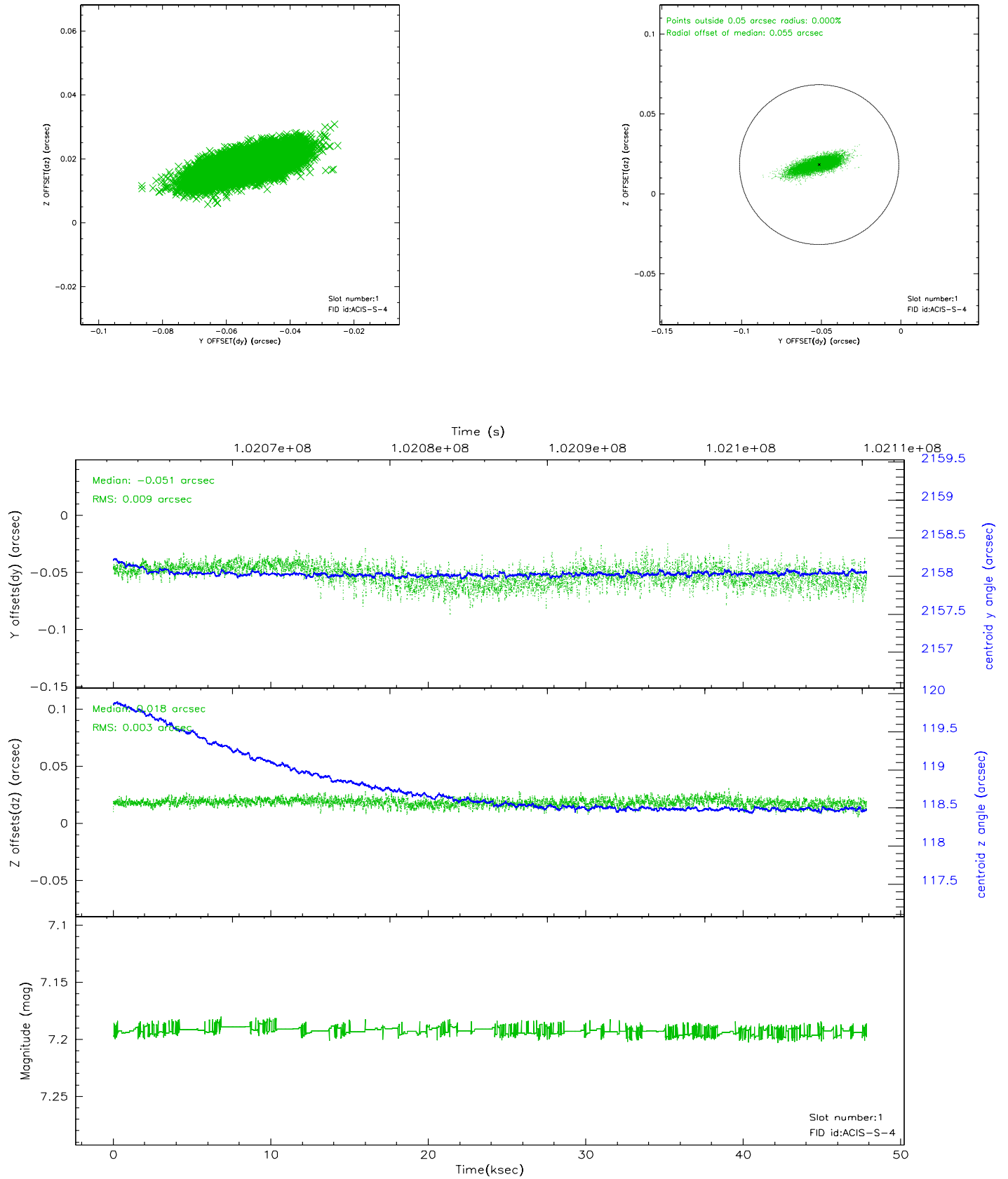


## 2.5 FID Slots

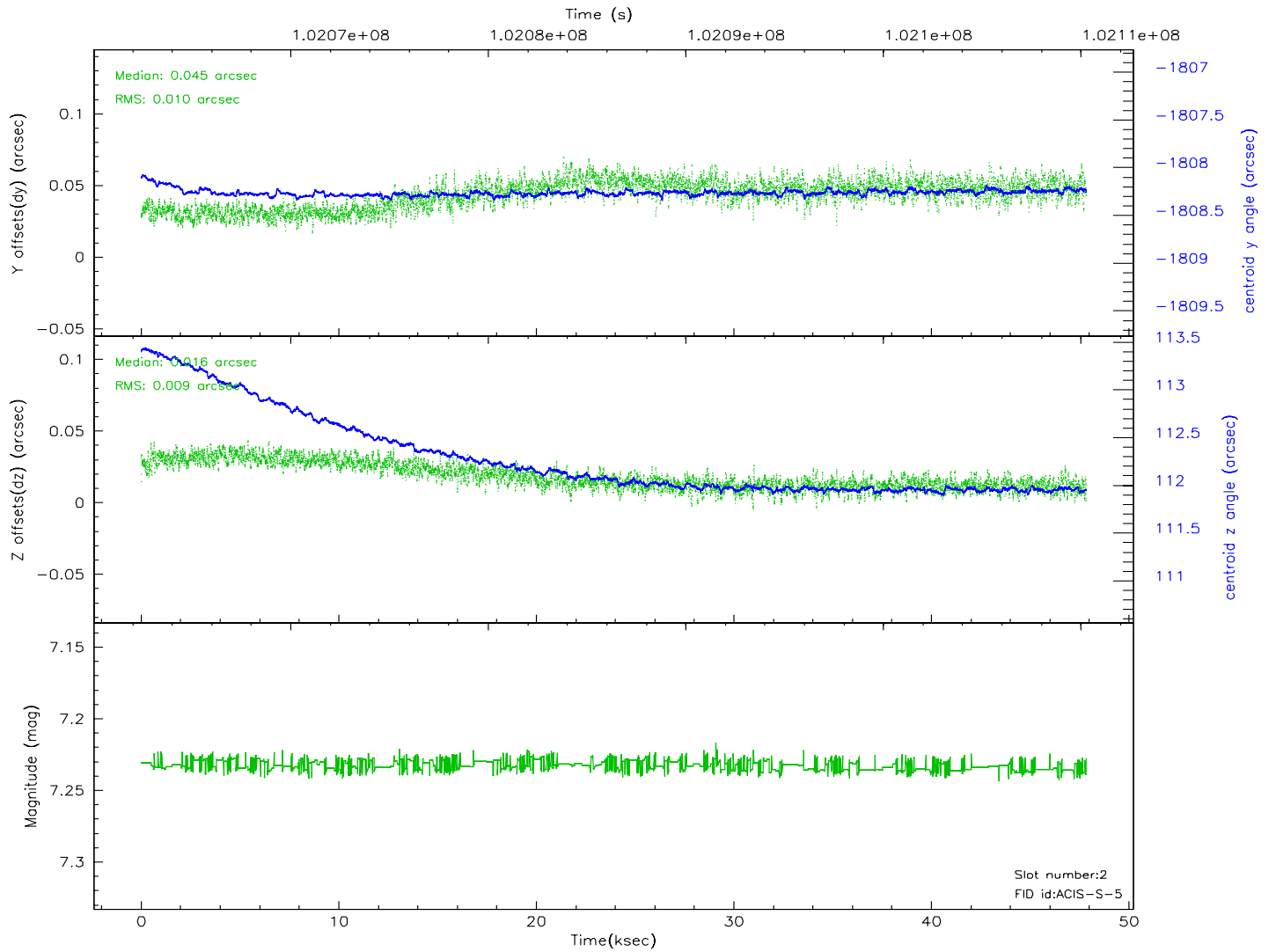
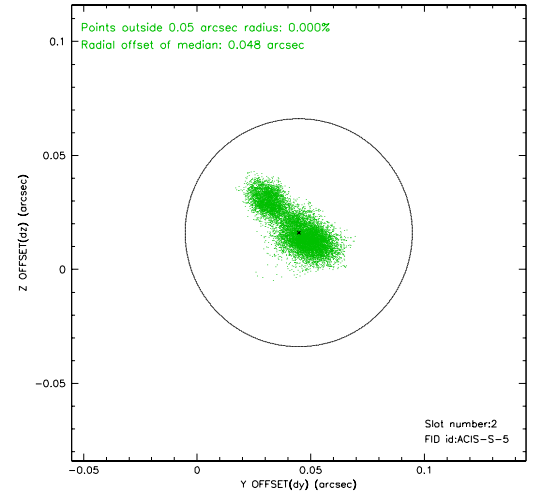
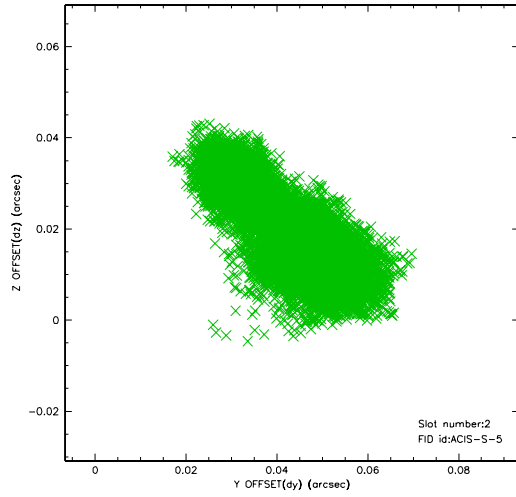
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

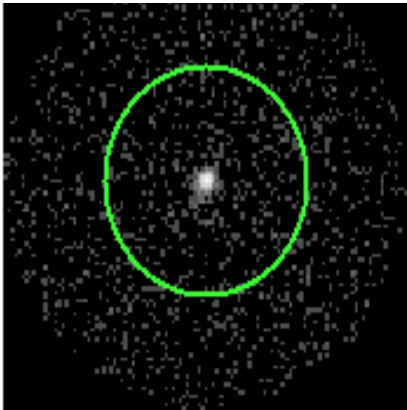


# 3 Gratings

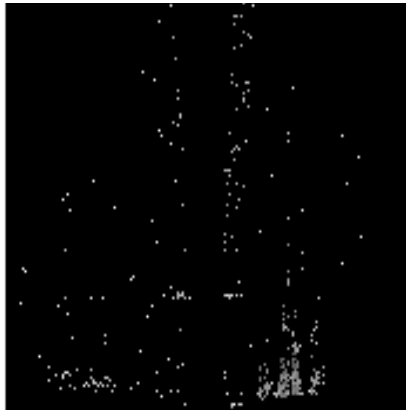
## 3.1 HEG Arm



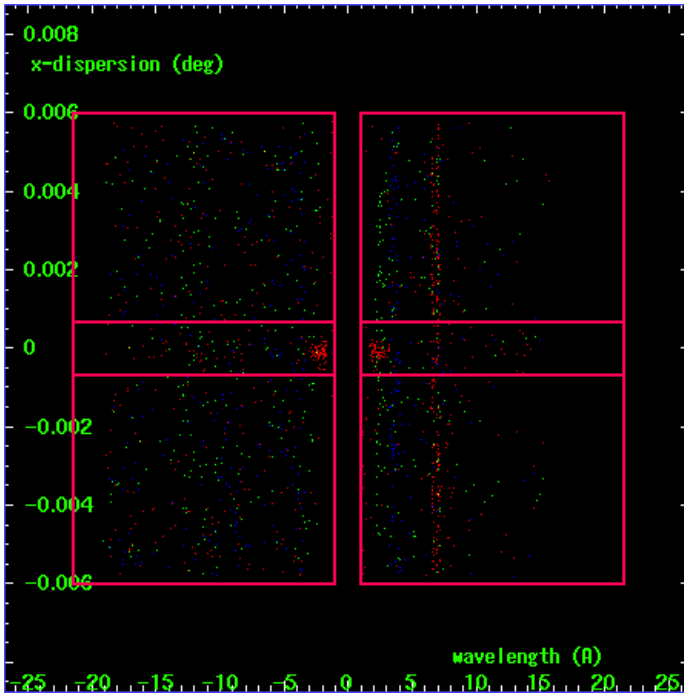
HEG Order Sort 123



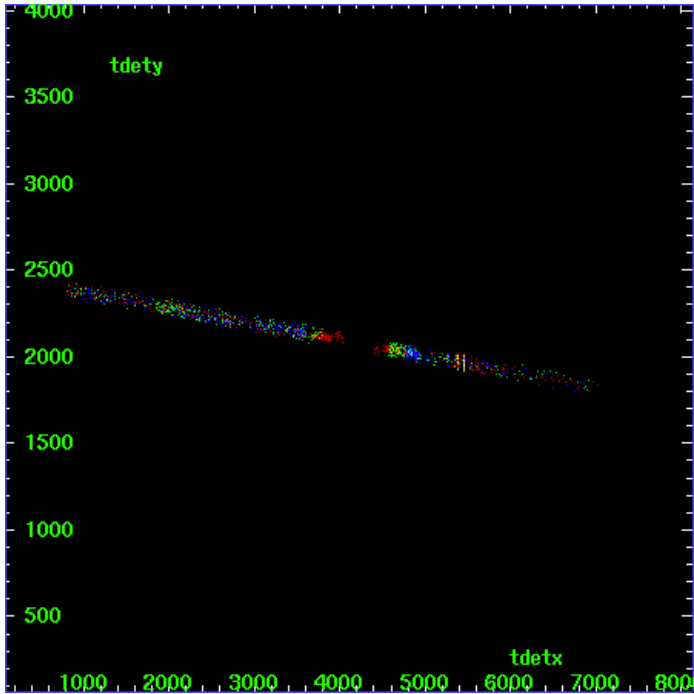
HEG Zero Order



HEG Order Sort ALL

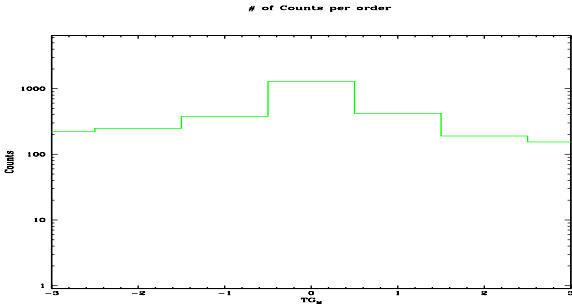


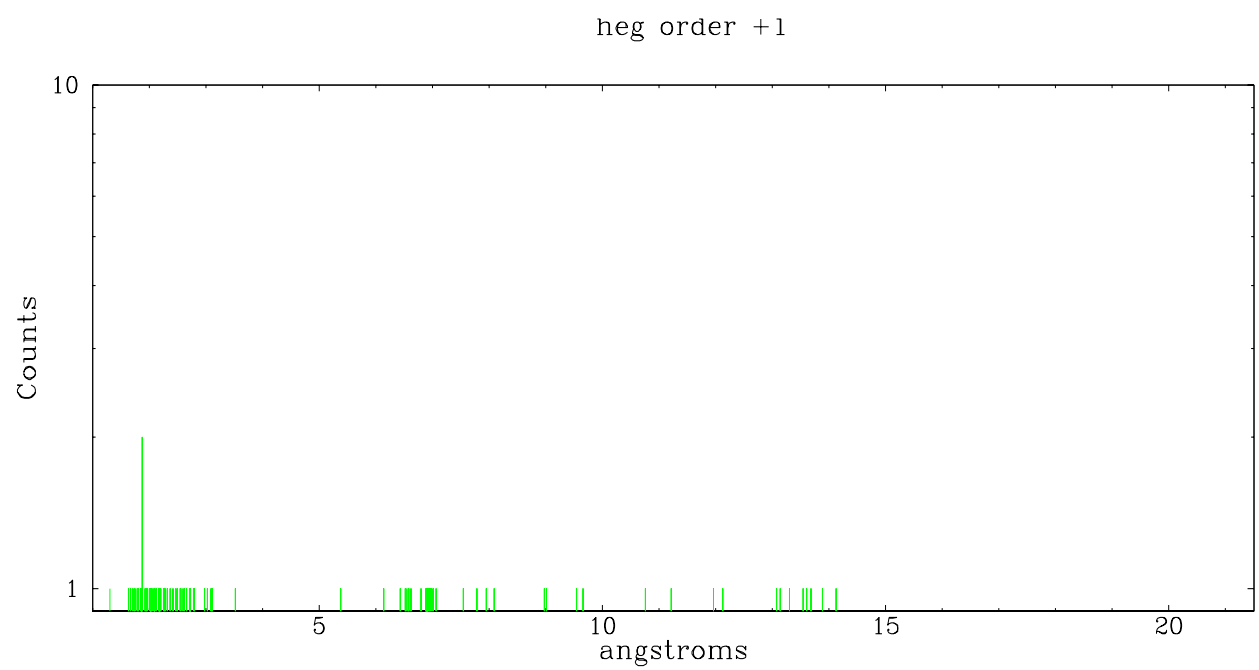
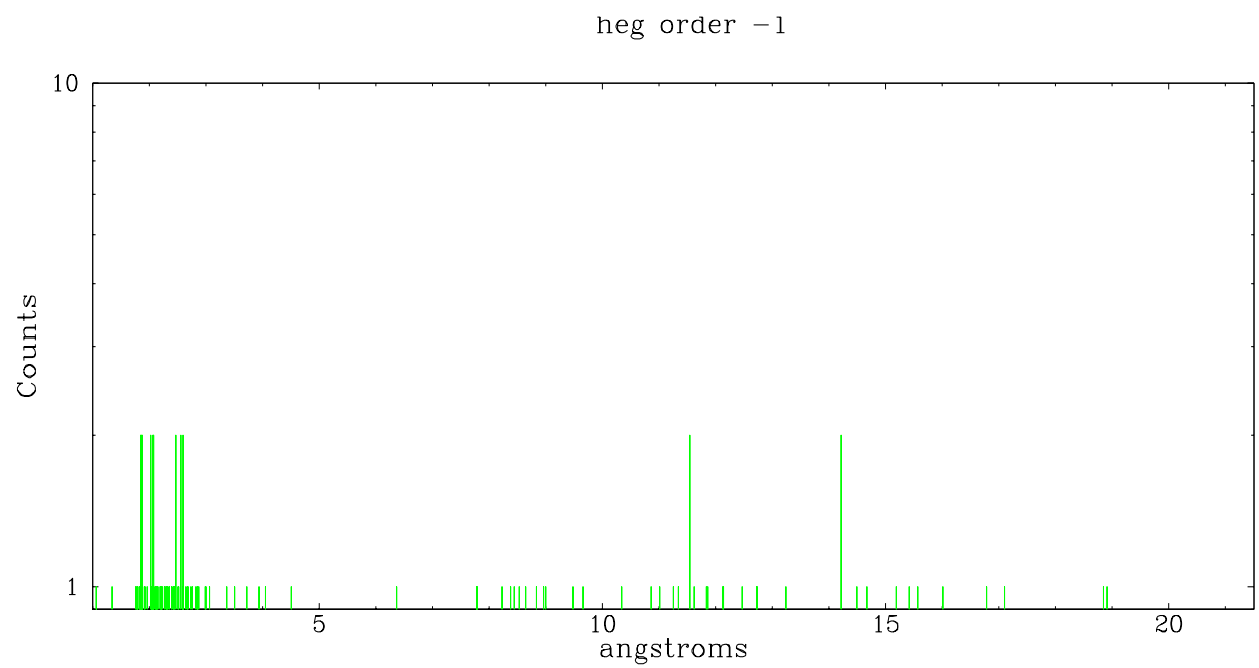
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	222	248	377	1283	420	190	154

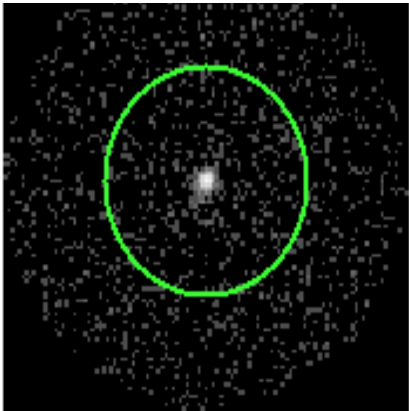




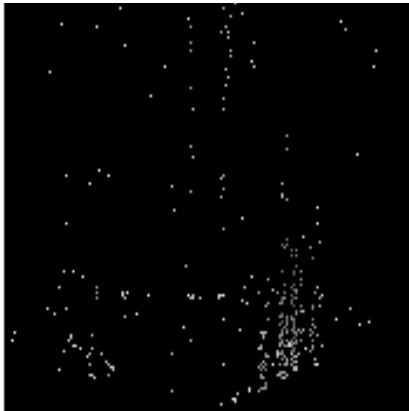
3.2 MEG Arm



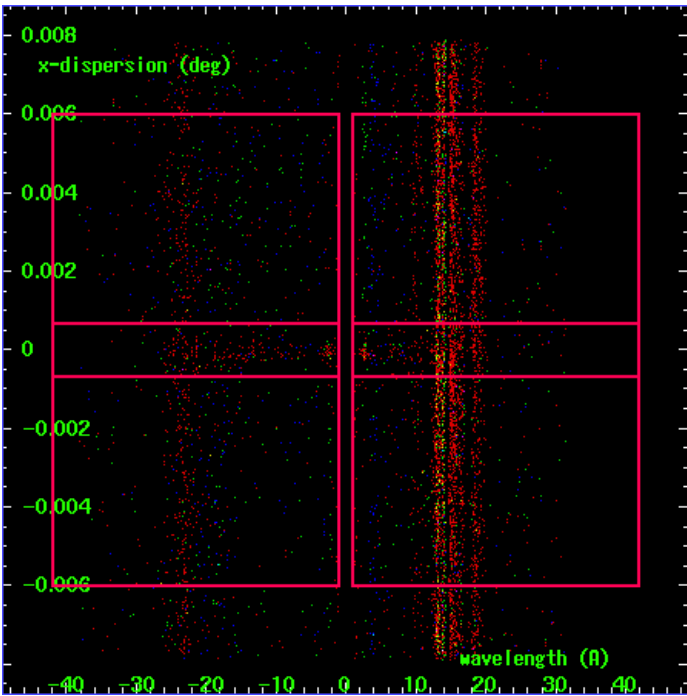
MEG Order Sort 123



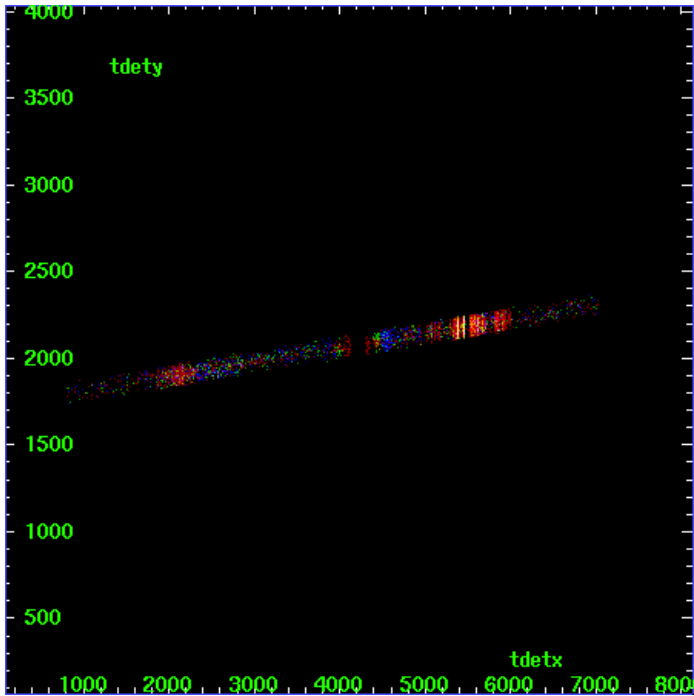
MEG Zero Order



MEG Order Sort ALL

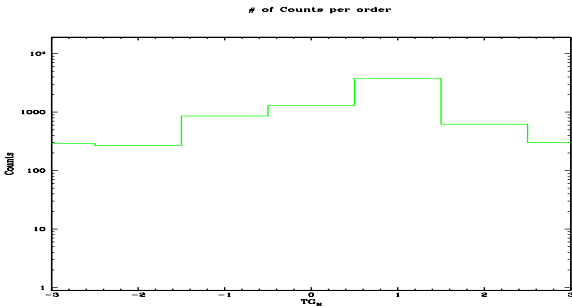


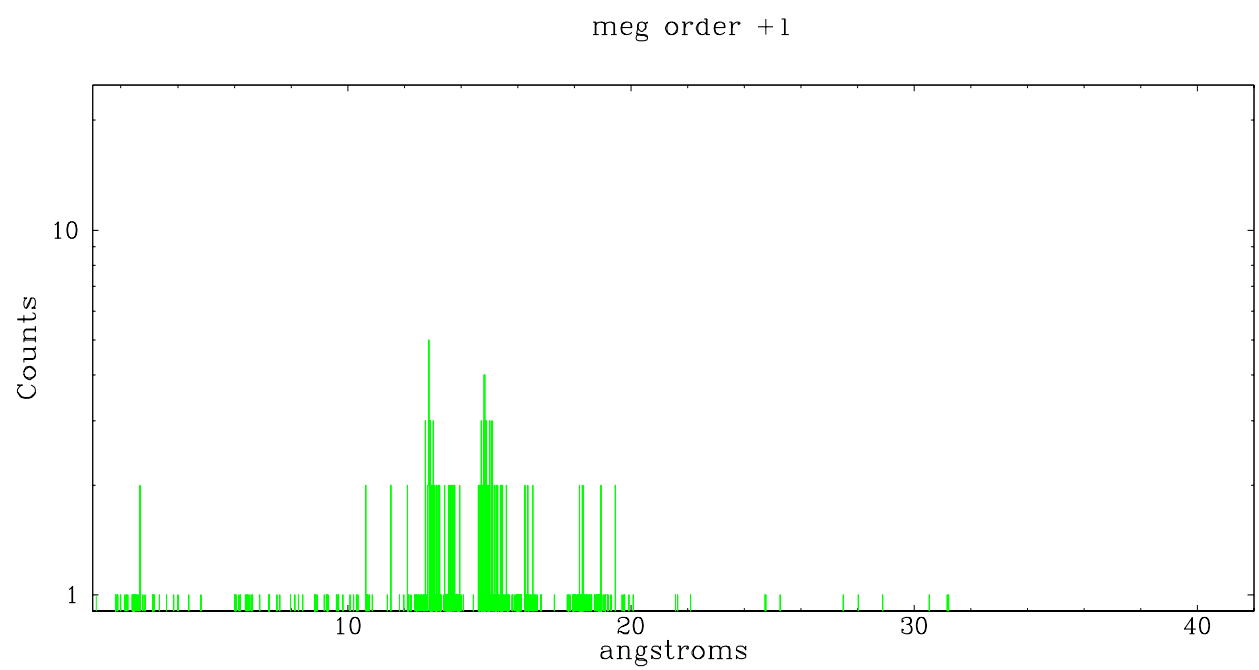
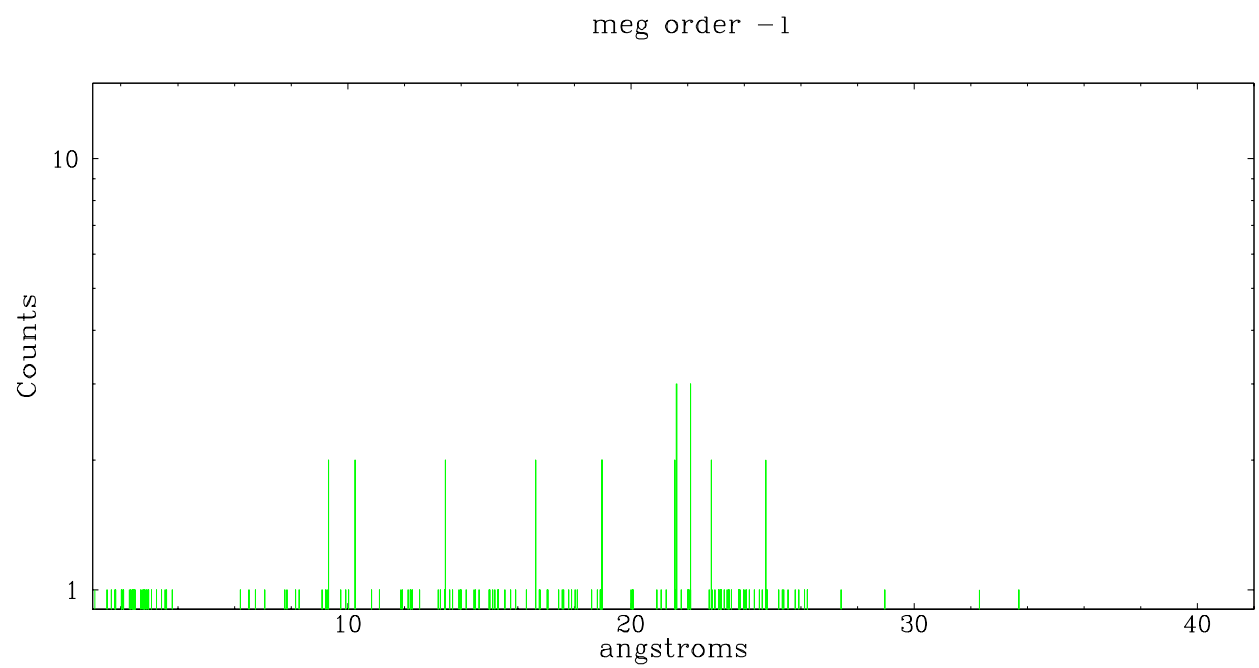
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	290	267	861	1283	3802	620	301







# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.11.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	47.686

## A.2 Comments

The CCD bias map for CCD\_ID=4 was incomplete because of data gaps in telemetry. The bias map for chip 4 was reconstructed using scaled data from a comparable bias map for another observation to fill the data gaps. Data gaps were from rows

895 - 914 and

995 - 1014