

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1945 - L2 Version 5  
Chandra X-Ray Center

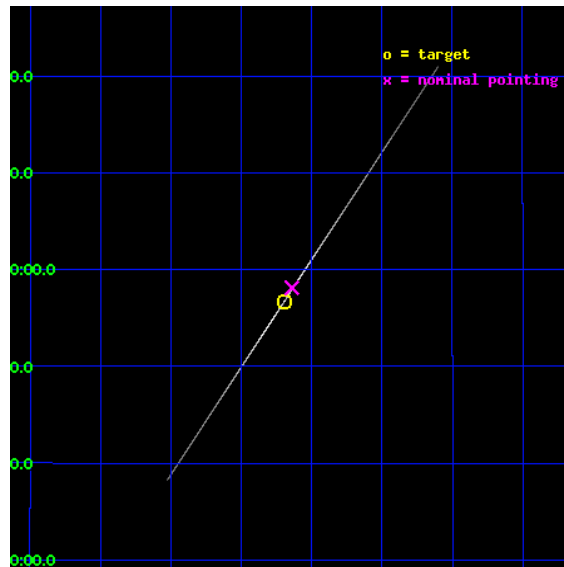
L2 Processing Date : Sep 17 2012

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# 1 Front

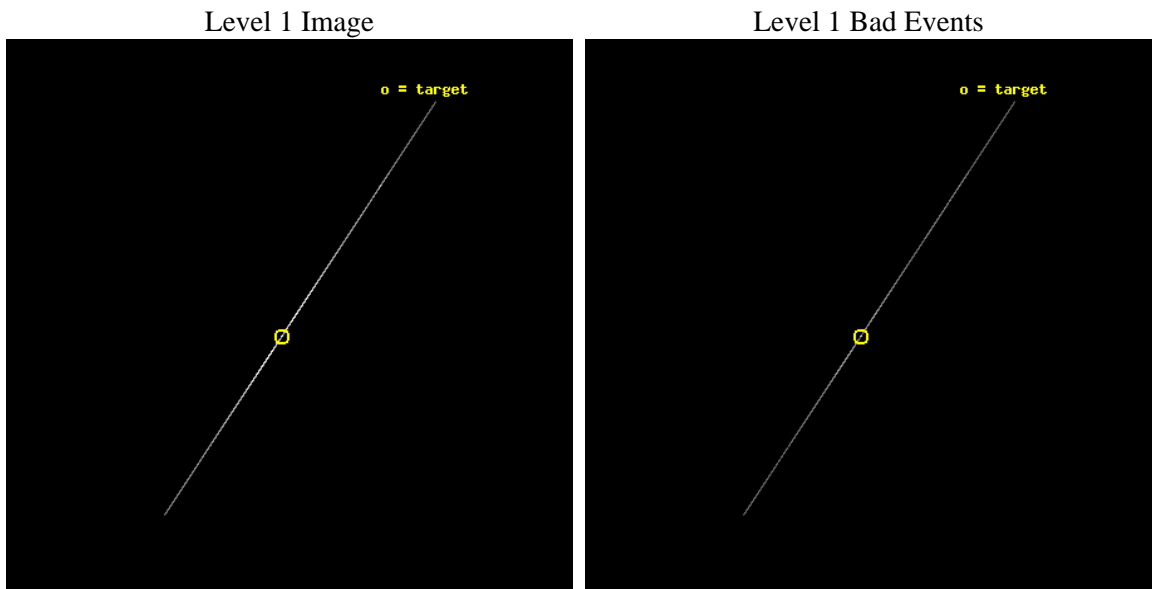
seq_num	400158	Sequence number
obs_id	1945	Observation id
title	ACCRETION DISK STRUCTURE IN VARIOUS SPECTRAL STATES OF GRS 1915+105	&#160
observer	Dr. Ronald Remillard	Principal investigator
object	GRS 1915+105	Source name
ra_targ	288.798333	Observer's specified target RA [deg]
dec_targ	10.945806	Observer's specified target Dec [deg]
ra_nom	288.78506910517	Nominal RA [deg]
dec_nom	10.968704873583	Nominal Dec [deg]
roll_nom	123.52561119397	Nominal Roll [deg]
revision	5	Processing version of data
ontime	30153.791895568	Sum of GTIs [s]
livetime	30036.003645976	Livetime [s]
ontime4	30155.25	Sum of GTIs [s]
ontime5	30155.25	Sum of GTIs [s]
ontime6	30155.25	Sum of GTIs [s]
ontime7	30153.791895568	Sum of GTIs [s]
ontime8	30155.25	Sum of GTIs [s]
ontime9	30155.25	Sum of GTIs [s]
l2events	7558773	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	30153.791895568	Sum of GTIs [s]
caldbver	4.5.1.1	&#160	ontime4	30155.25	Sum of GTIs [s]
date	2012-09-16T23:55:44	Date and time of file creation	ontime5	30155.25	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	30155.25	Sum of GTIs [s]
			ontime7	30153.791895568	Sum of GTIs [s]
			ontime8	30155.25	Sum of GTIs [s]
			ontime9	30155.25	Sum of GTIs [s]
			l1events	8184633	Number of level 1 events

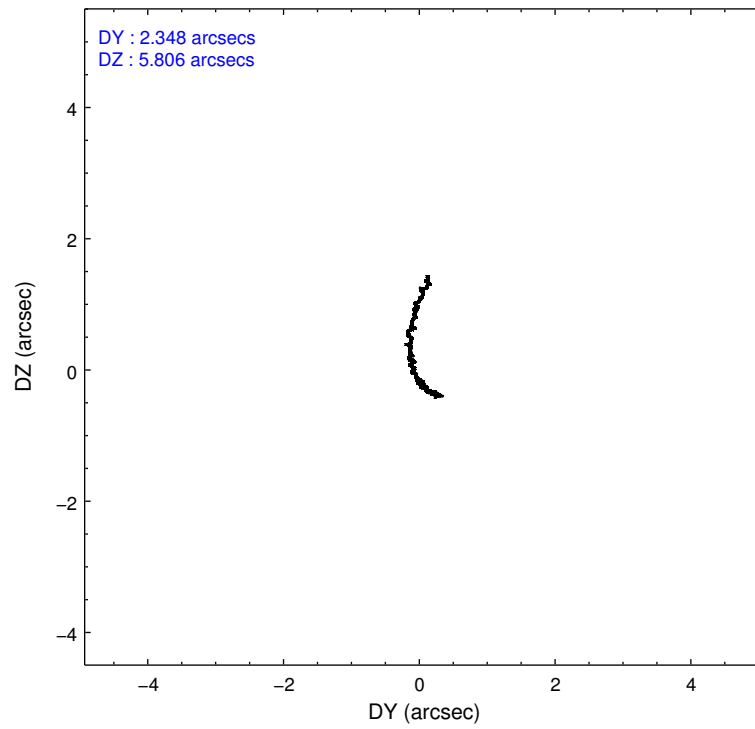
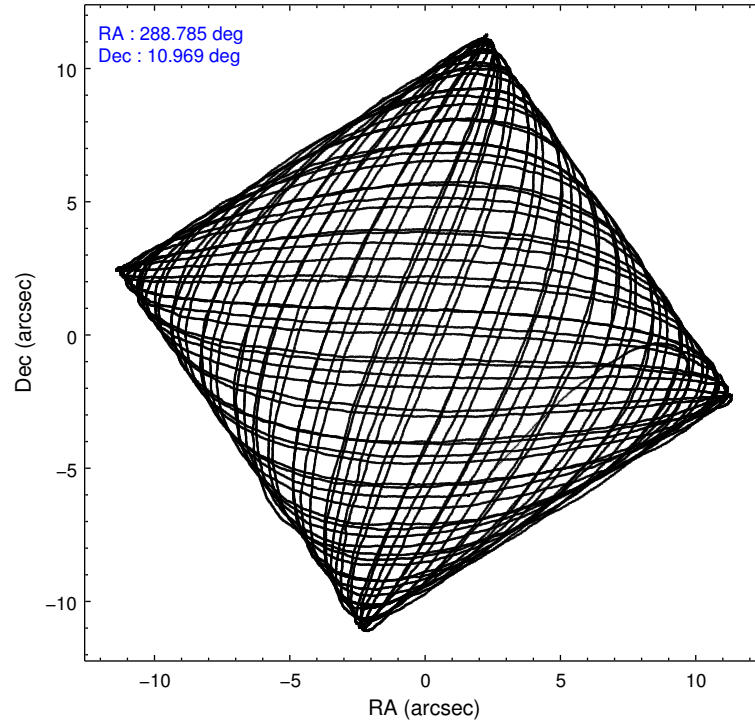
### 2.1.3 Events

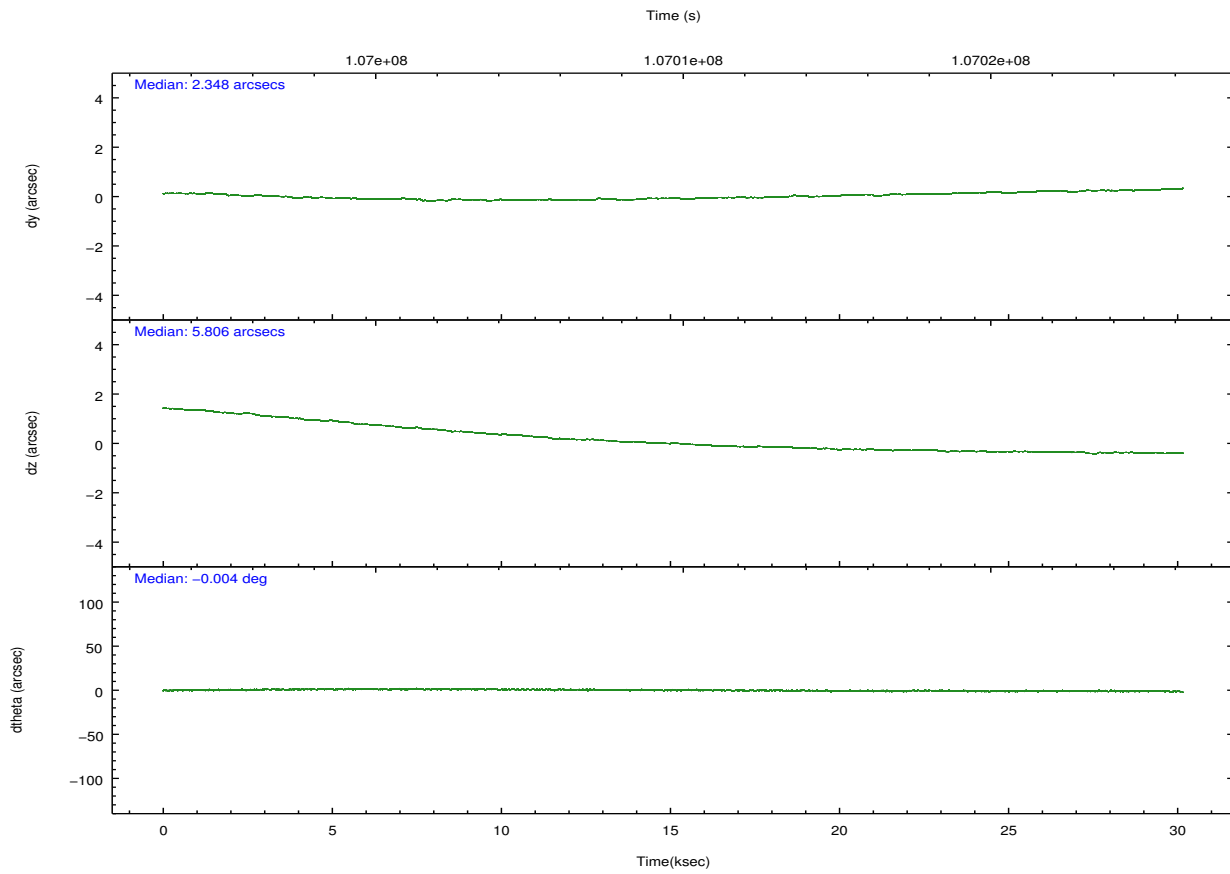
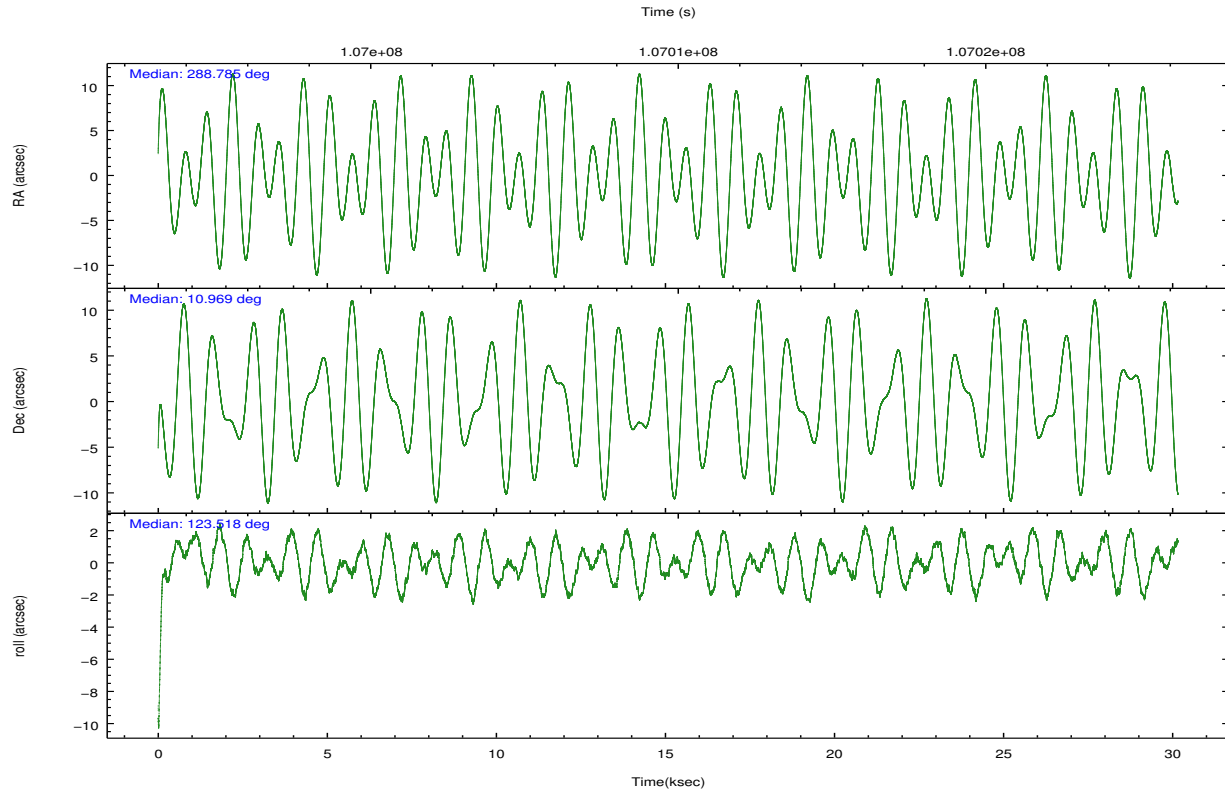
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	88956	376150	1685284	4896857	969699	167687	grade 0 events	12252	71642	139837	693510	400139	45005
rejected events	8259	24178	25631	121192	22048	10487		13%	19%	8%	14%	41%	26%
rejected %	9%	6%	1%	2%	2%	6%	grade 1 events	151	250	576	8255	1239	276
								0%	0%	0%	0%	0%	0%
							grade 2 events	47180	128596	1315902	1381865	426329	81131
								53%	34%	78%	28%	43%	48%
							grade 3 events	5696	9795	12546	401519	27962	7087
								6%	2%	0%	8%	2%	4%
							grade 4 events	5934	9656	12423	399851	27490	7555
								6%	2%	0%	8%	2%	4%
							grade 5 events	6747	17411	15197	84482	14147	8429
								7%	4%	0%	1%	1%	5%
							grade 6 events	10996	138800	188803	1927375	72393	18204
								12%	36%	11%	39%	7%	10%
							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	7	7
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
[deg] Pointing RA	288.810073	288.7850691051668	Subarray requested	NONE	NONE
[deg] Pointing Dec	10.956782	10.9687048735828	Alternating exposures requested	N	N
[deg] Pointing Roll	123.364232	123.5256111939723	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-184.032523	-184.0277655517795			
[mm] SIM translation stage offset	-6.1	-6.104757031228274			
[s] Observation start time (MET)	106994749.184000	106993601.70151			
Observation start date	2001-05-23T08:44:45	2001-05-23T08:26:41			
[s] Observation end time (MET)	107024749.184000	107025472.54025			
Observation end date	2001-05-23T17:04:45	2001-05-23T17:17:52			
Read mode	CONTINUOUS	CONTINUOUS			

## 2.3 Aspect



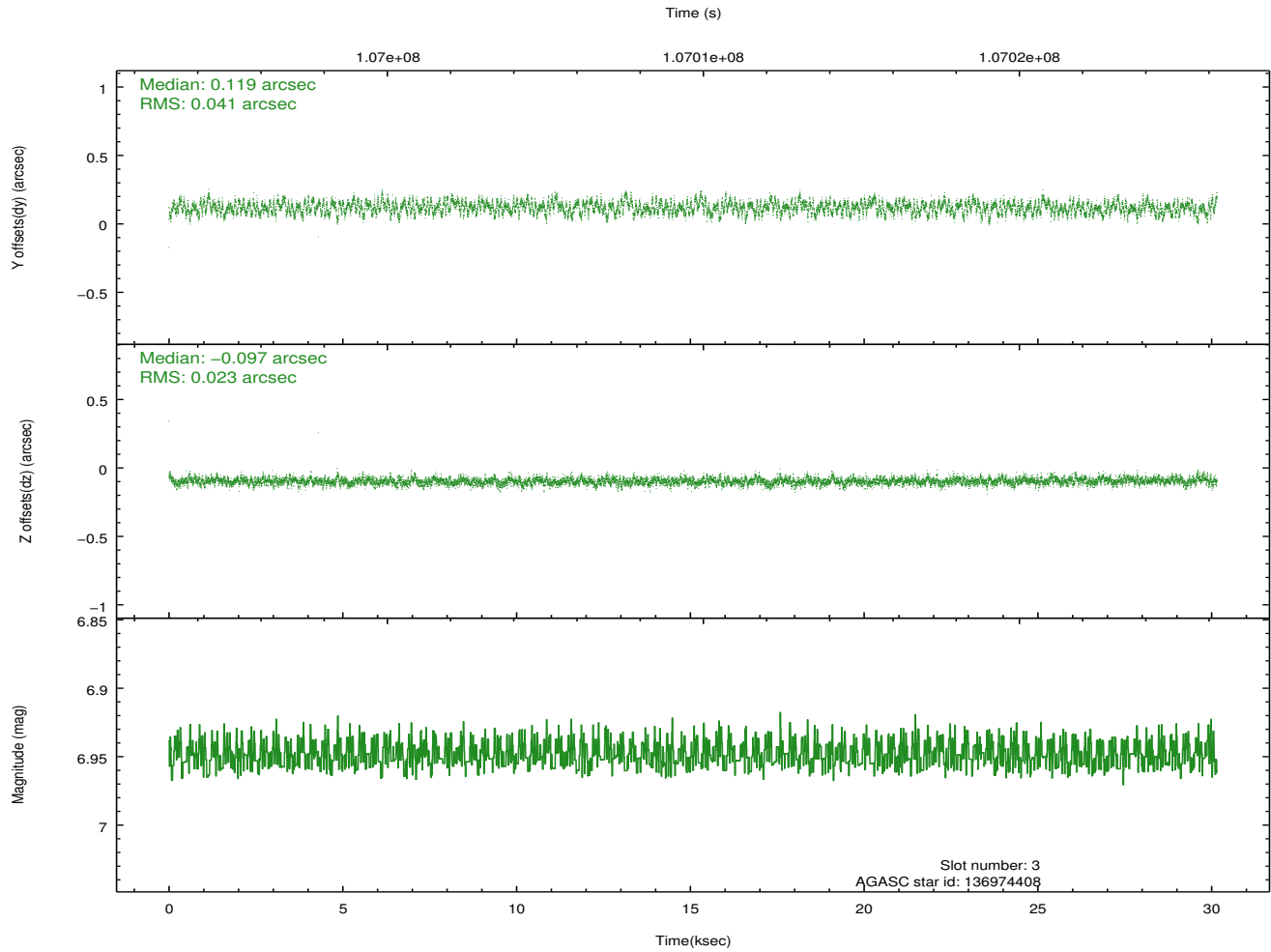
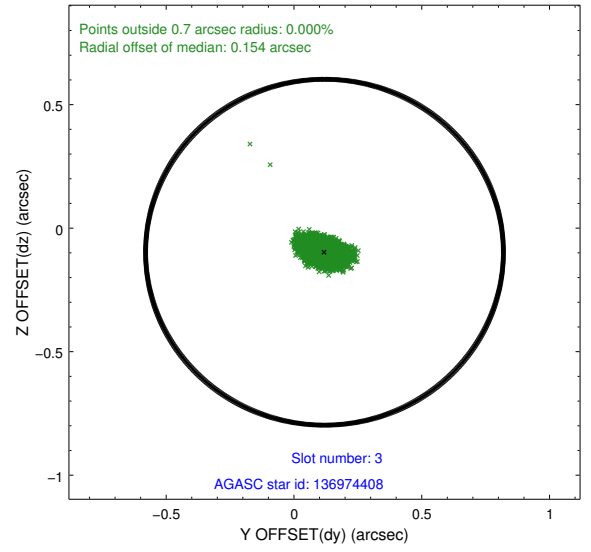
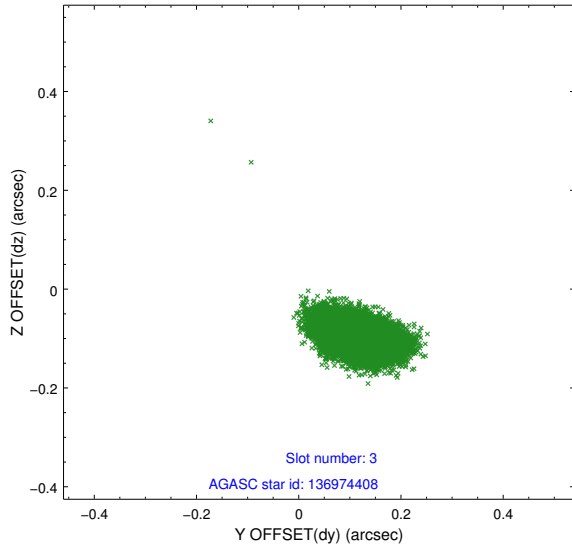


### Slot Statistics

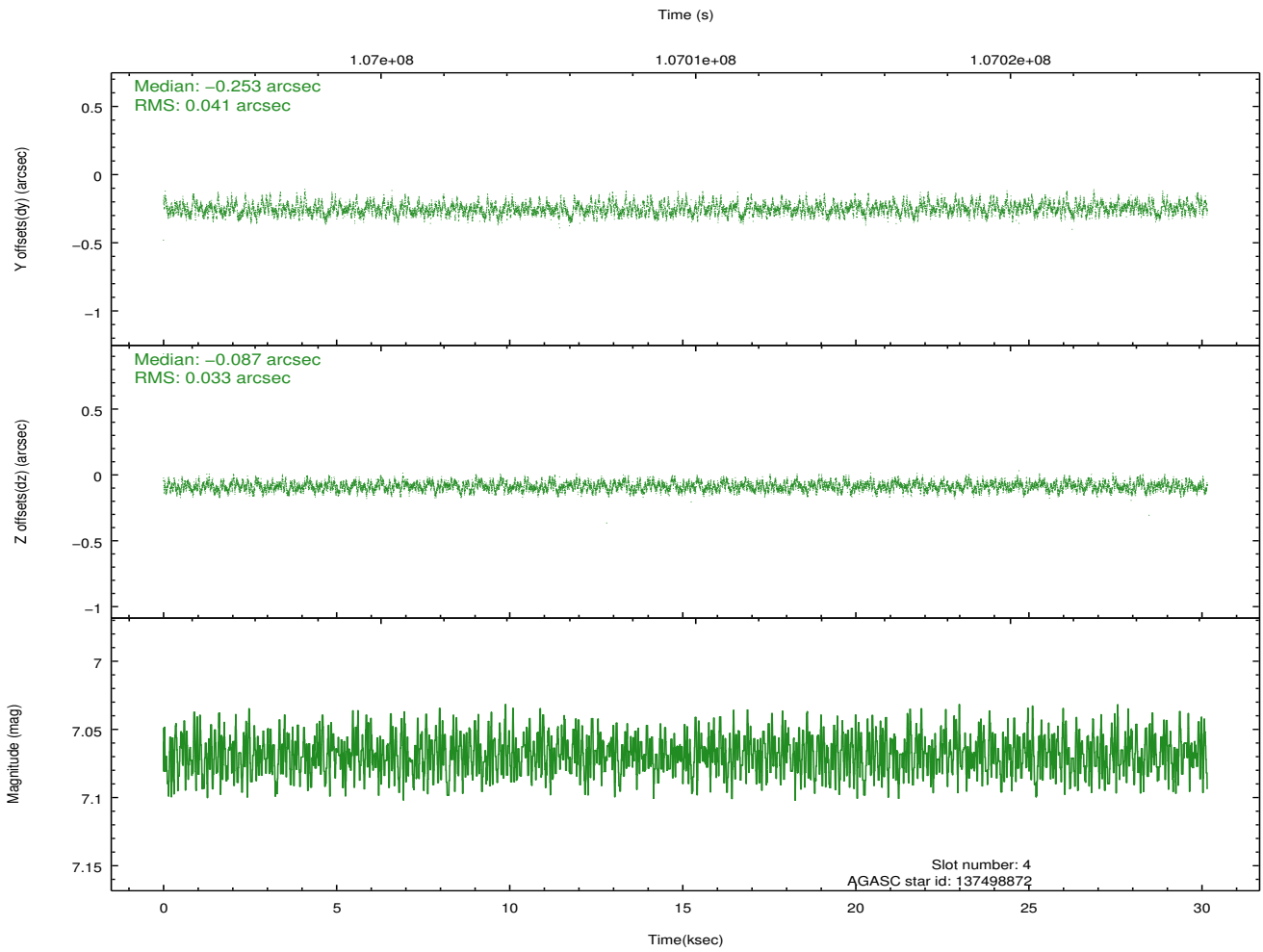
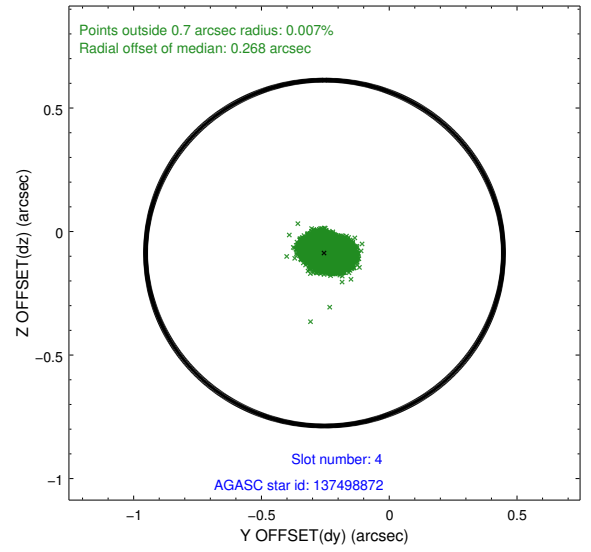
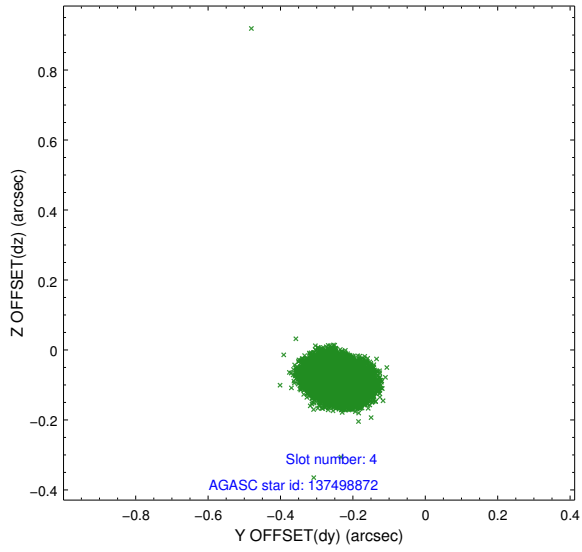
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	7355	-0.043	-0.103	0.016	0.023	0.000000	0.000000	-754.61	-1853.07
1	FID	ACIS-S-4	7.19	7355	-0.022	0.048	0.008	0.014	0.000000	0.000000	2158.66	55.46
2	FID	ACIS-S-5	7.23	7355	0.033	0.063	0.014	0.020	0.000000	0.000000	-1807.28	49.24
3	GUIDE	136974408	6.95	14712	0.119	-0.097	0.049	0.083	288.806802	10.212409	-2231.81	1483.18
4	GUIDE	137498872	7.07	14711	-0.253	-0.087	0.056	0.089	288.350862	11.344926	2058.99	584.95
5	GUIDE	136974776	7.81	14711	0.154	-0.040	0.058	0.095	288.742109	10.409402	-1513.31	1284.61
6	GUIDE	137497048	7.98	14709	-0.128	0.148	0.049	0.082	288.896055	11.554718	1630.71	-1436.74
7	GUIDE	137102976	8.51	14708	0.111	0.077	0.066	0.104	289.193436	10.979652	-675.25	-1177.35

## 2.4 Star Slots

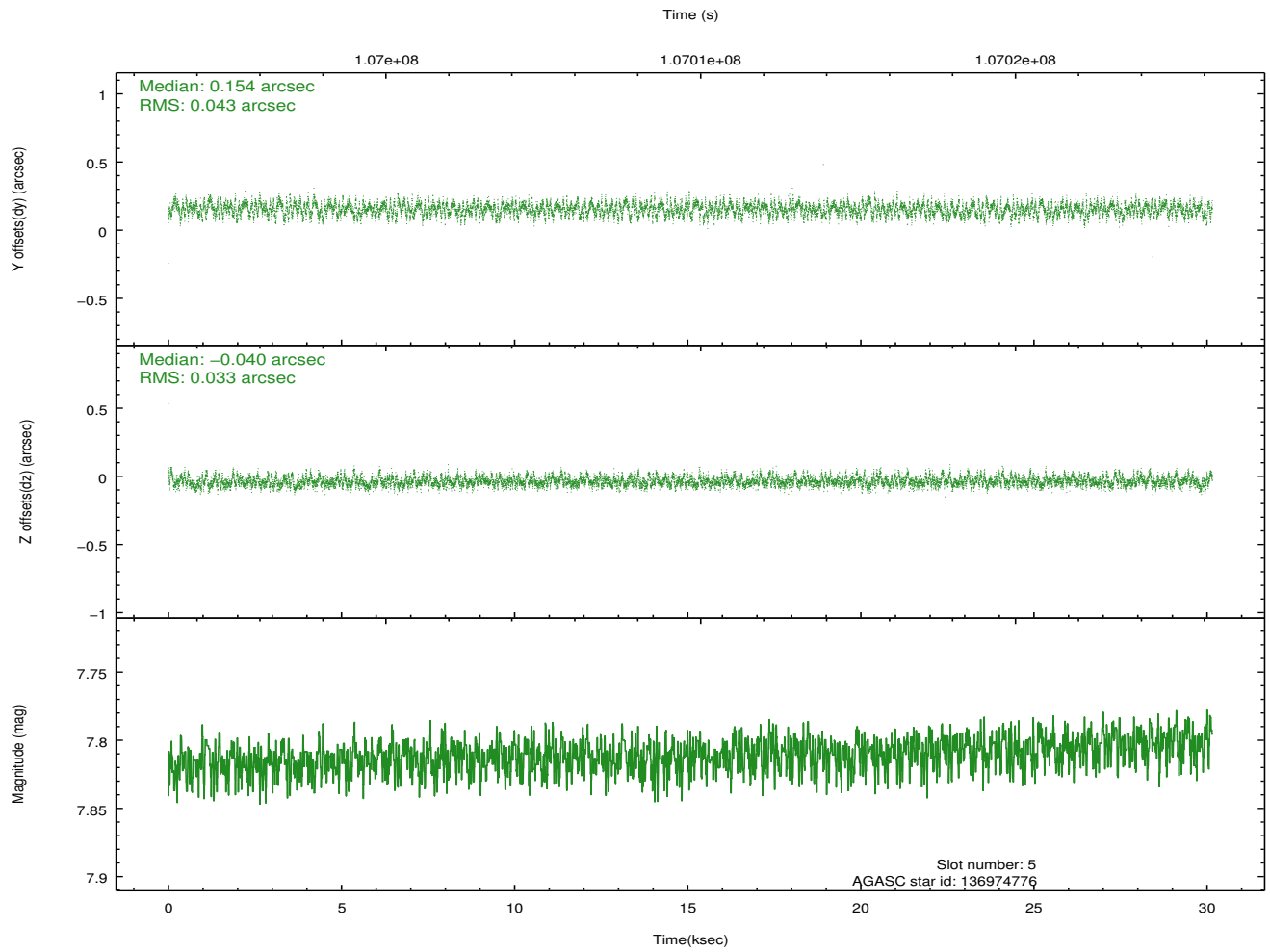
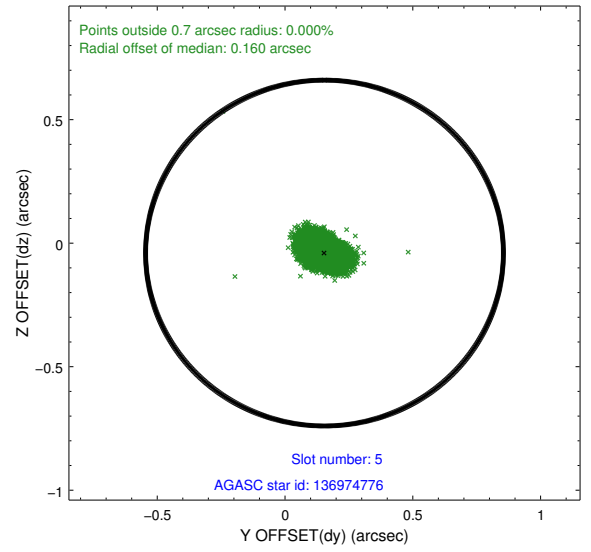
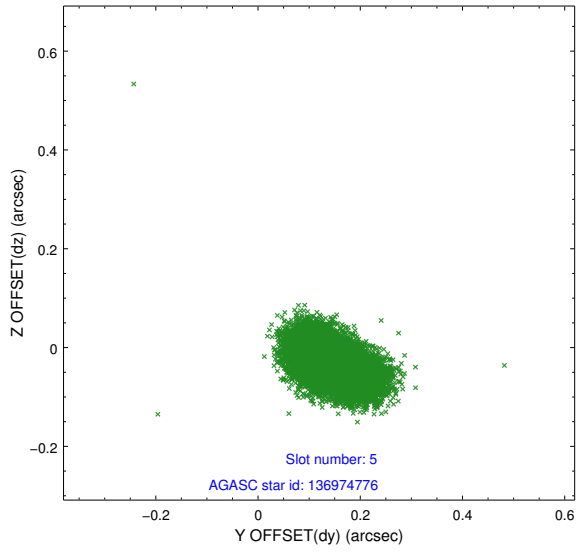
### 2.4.1 Slot 3



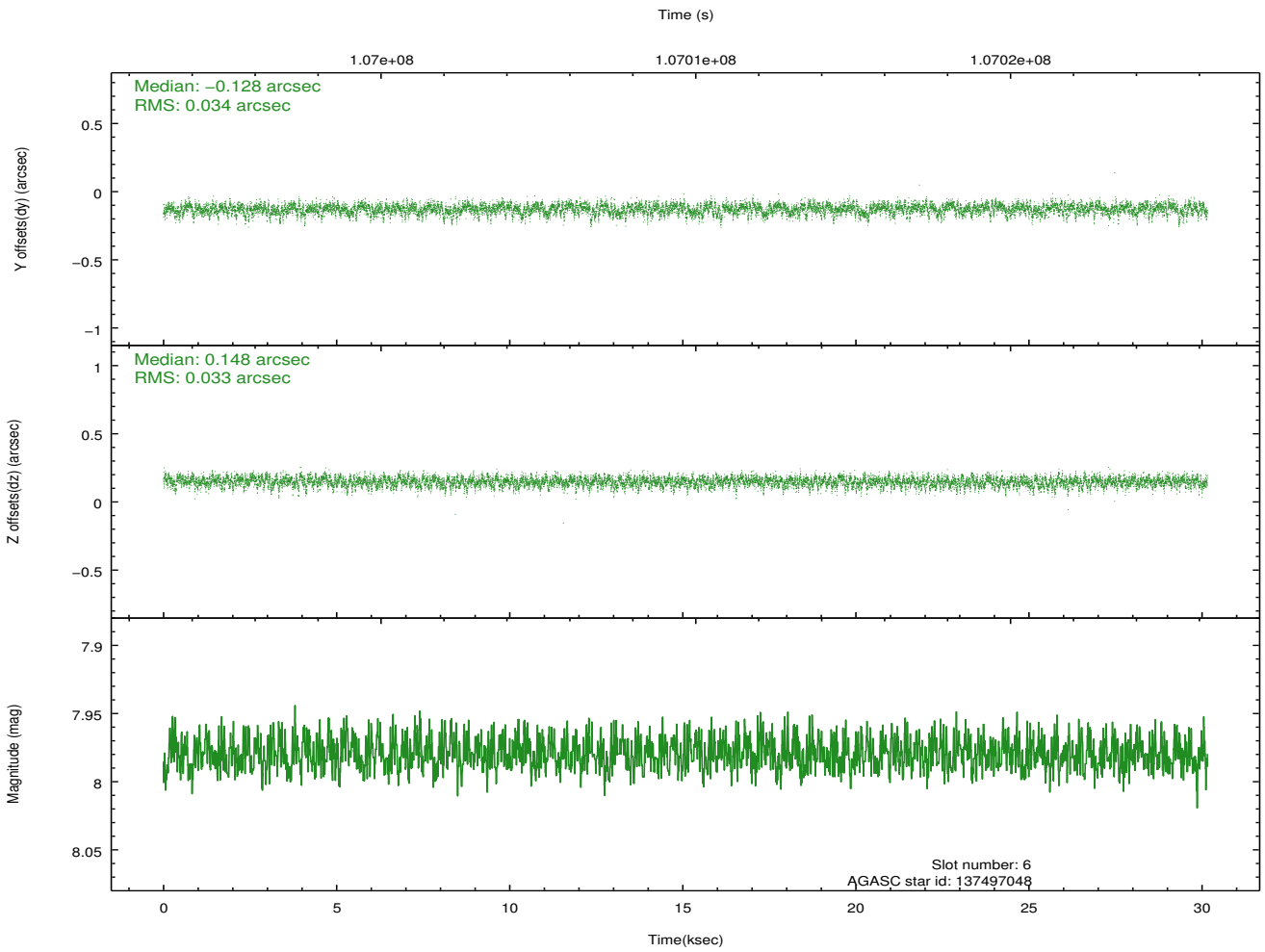
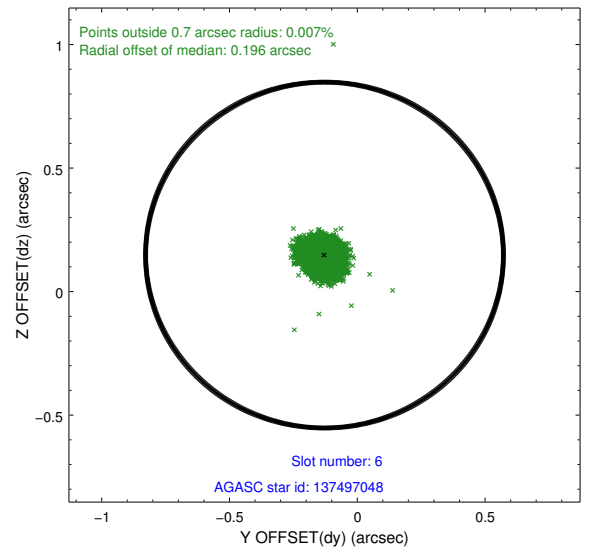
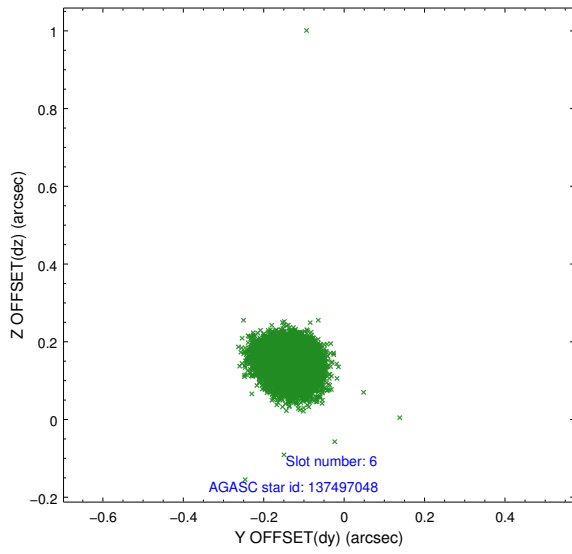
## 2.4.2 Slot 4



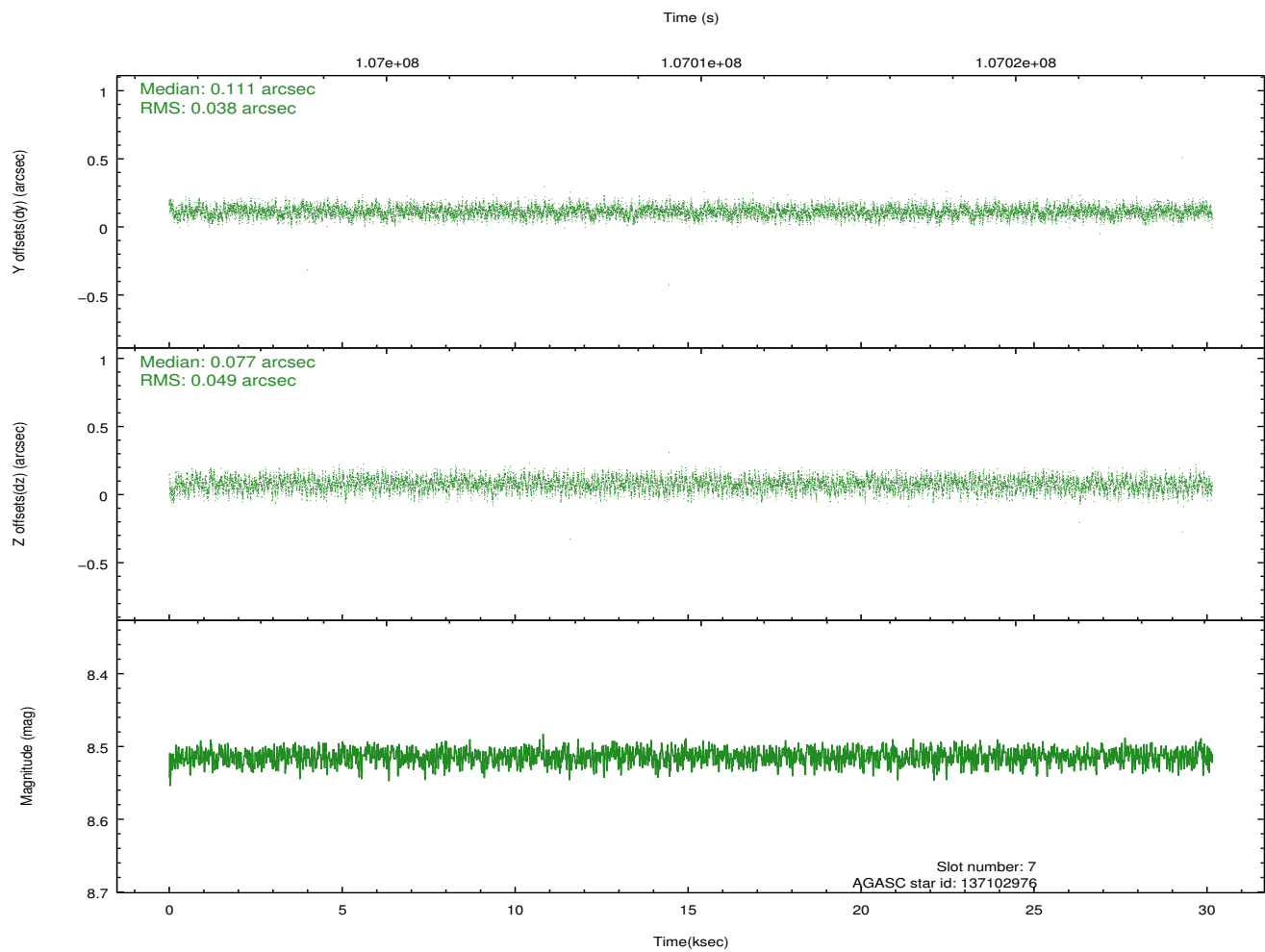
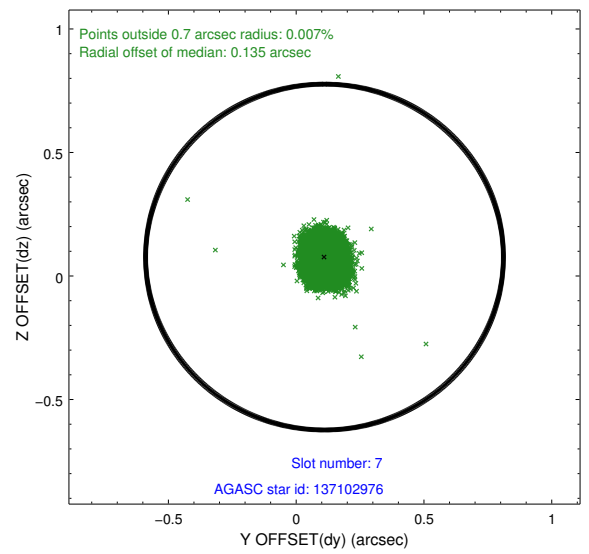
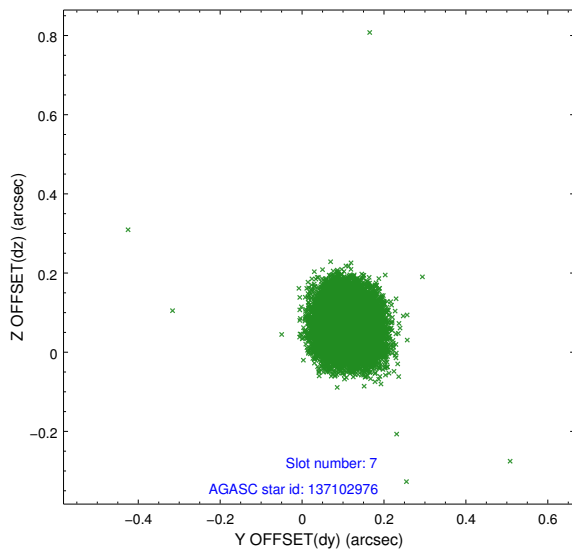
### 2.4.3 Slot 5



### 2.4.4 Slot 6

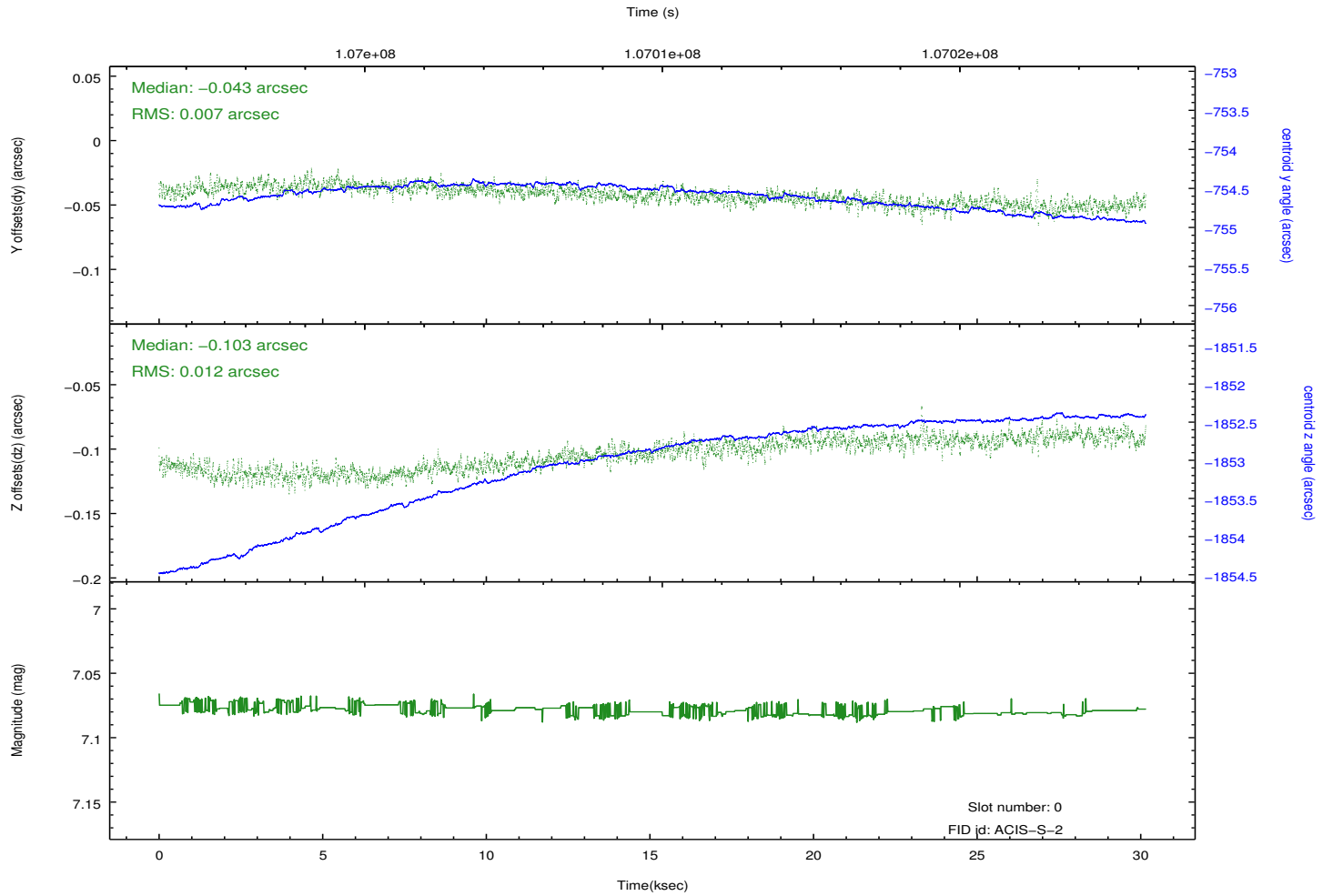
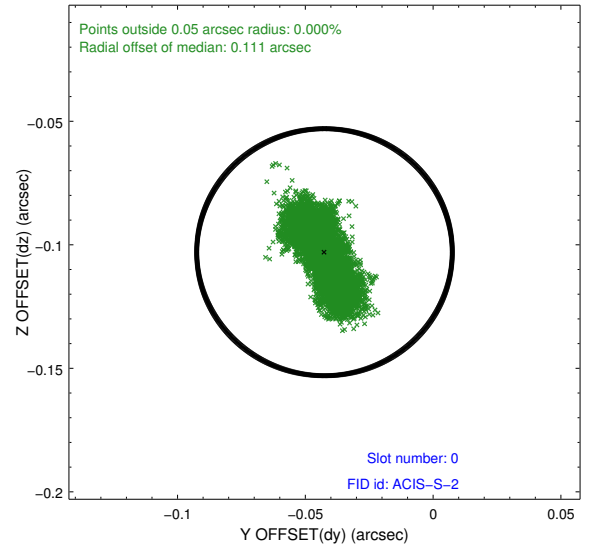
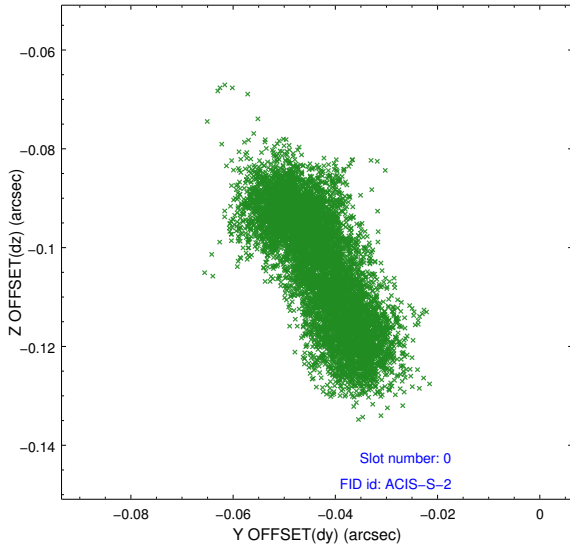


## 2.4.5 Slot 7

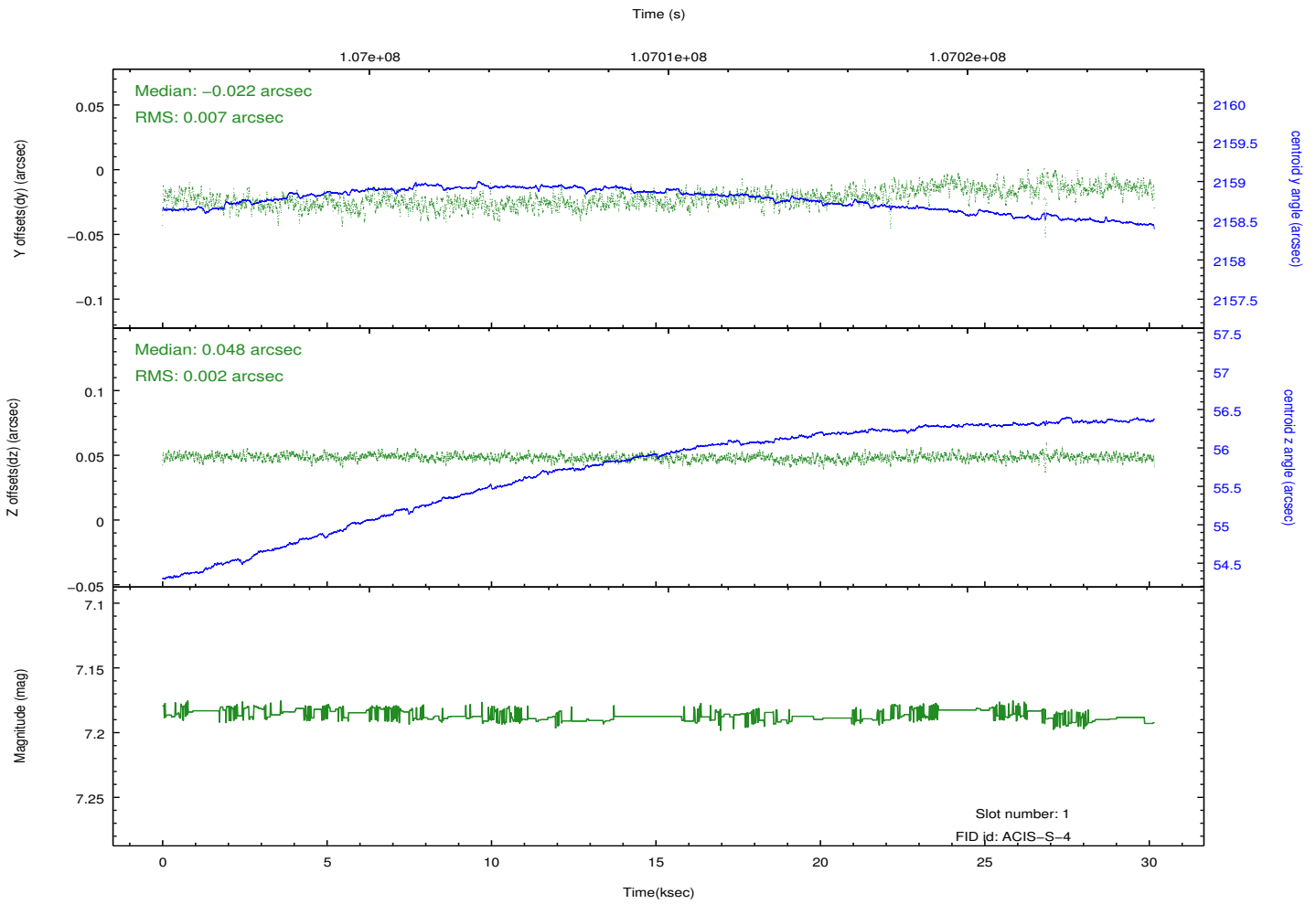
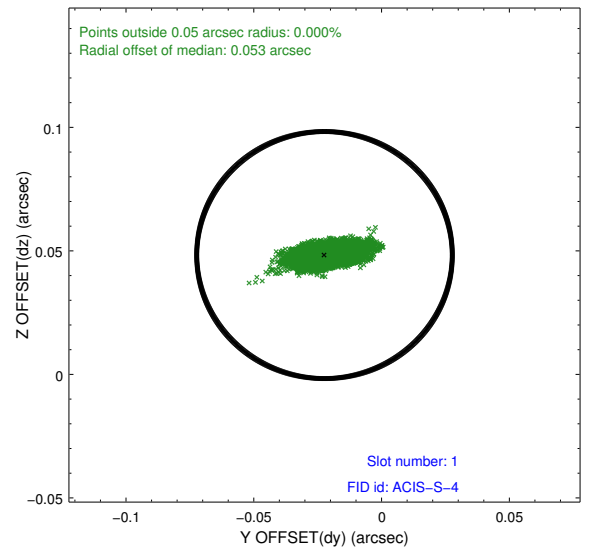
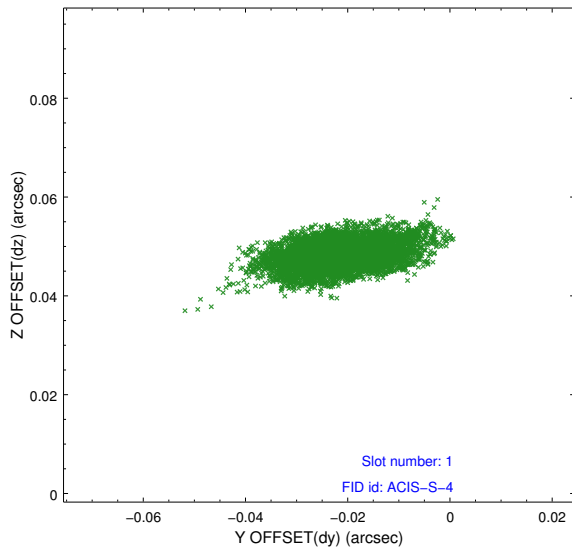


## 2.5 FID Slots

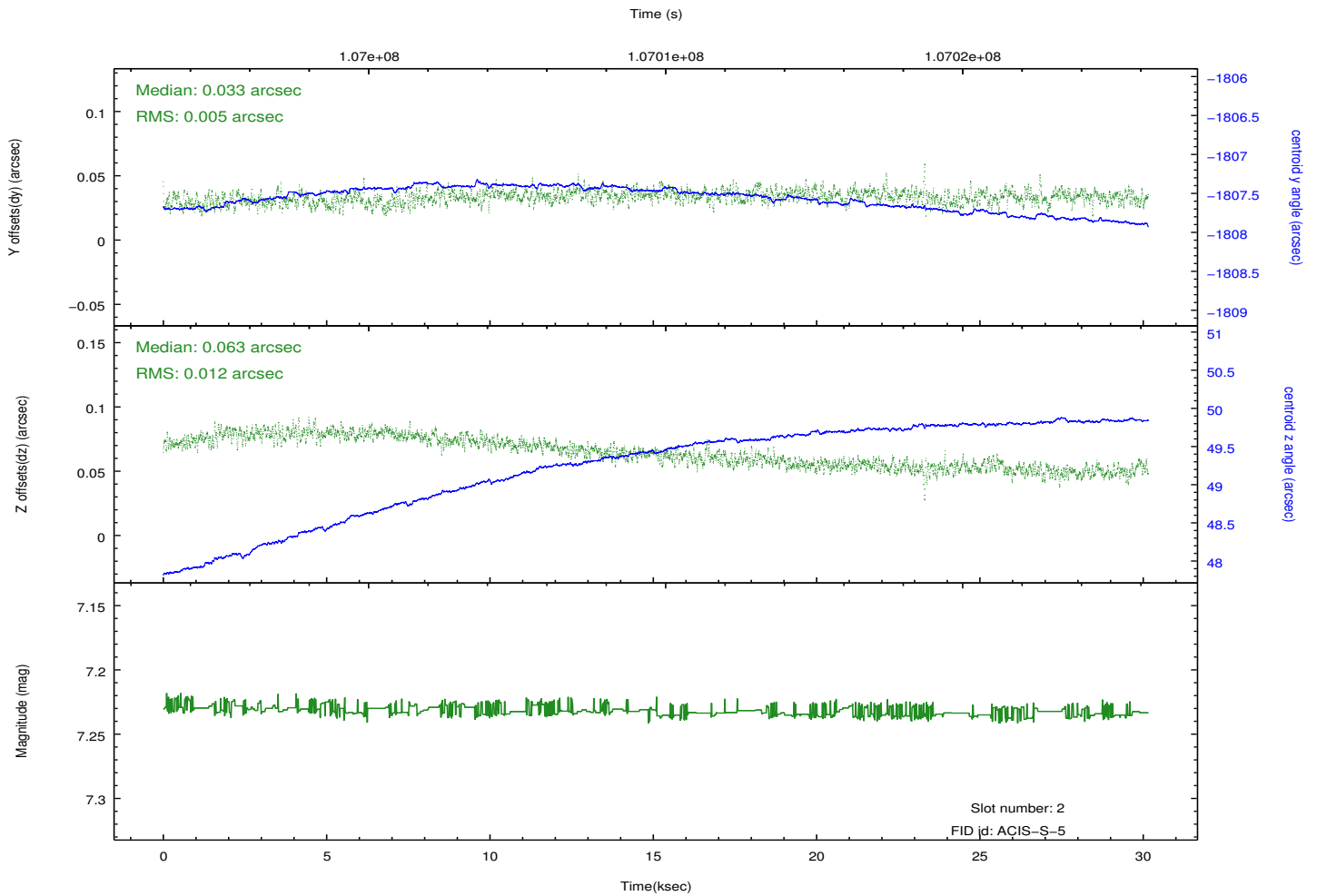
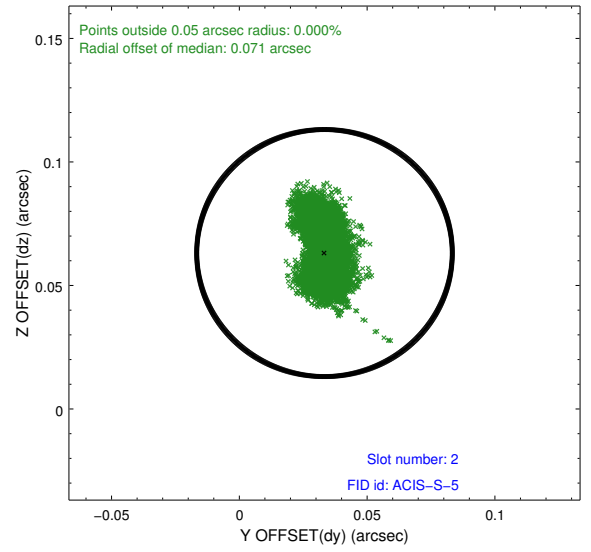
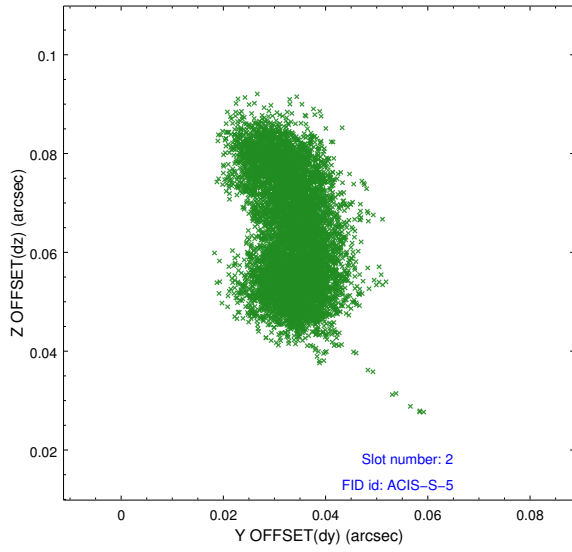
### 2.5.1 Slot 0



## 2.5.2 Slot 1

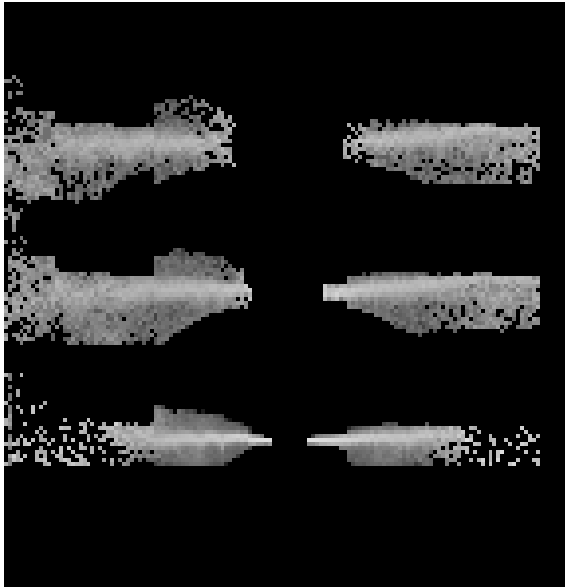


### 2.5.3 Slot 2



# 3 Gratings

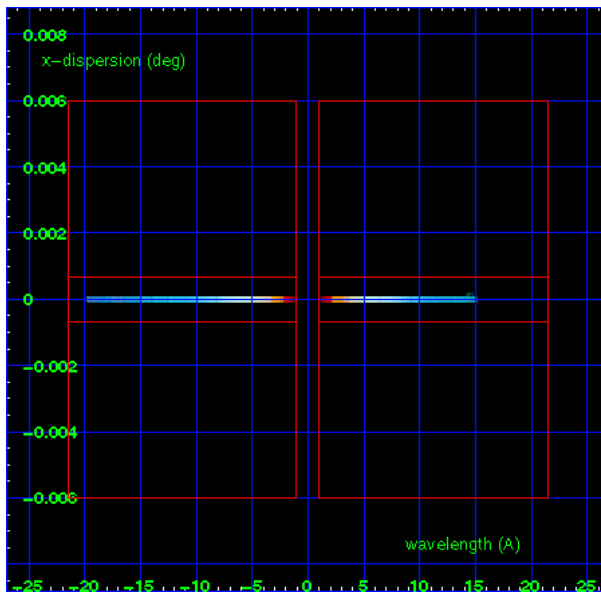
## 3.1 HEG Arm



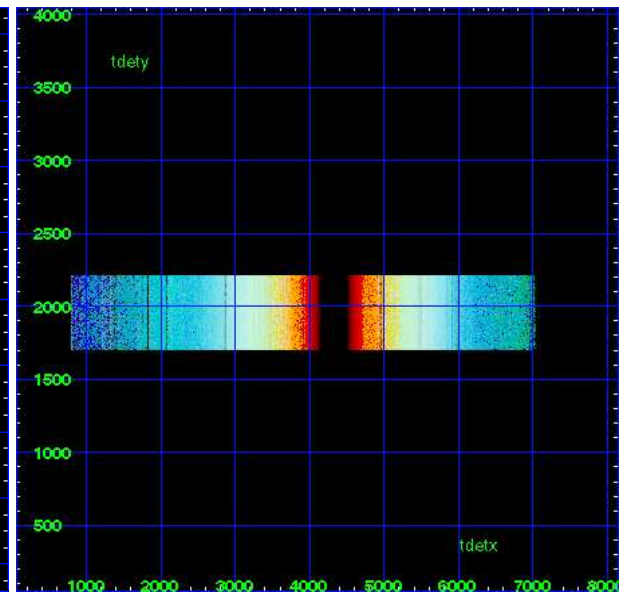
HEG Order Sort 123



HEG Order Sort ALL

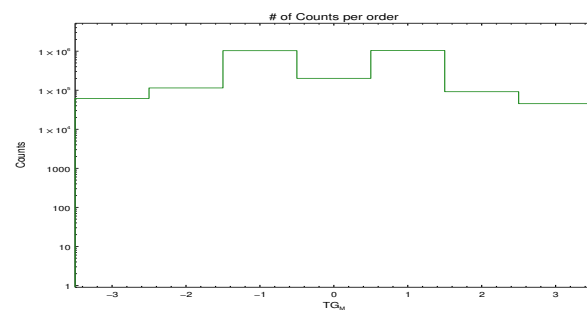


Spot Image HEG

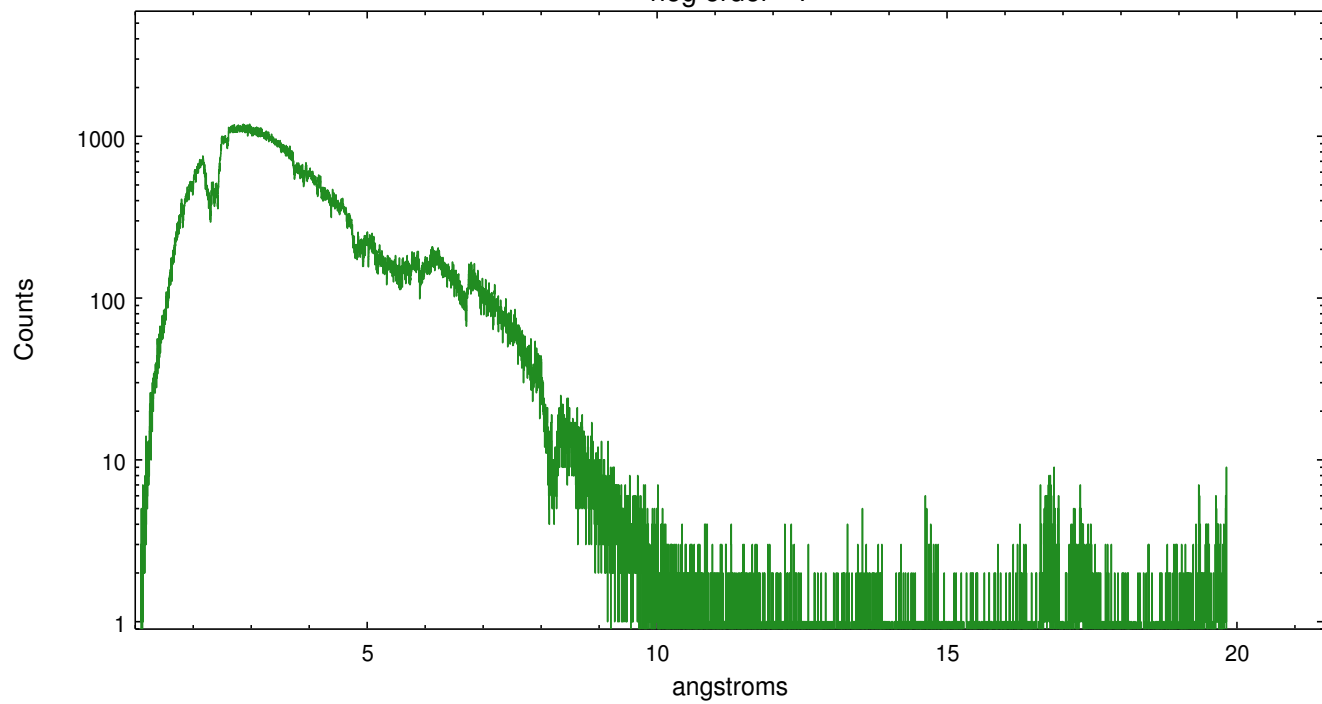


Full Detector HEG

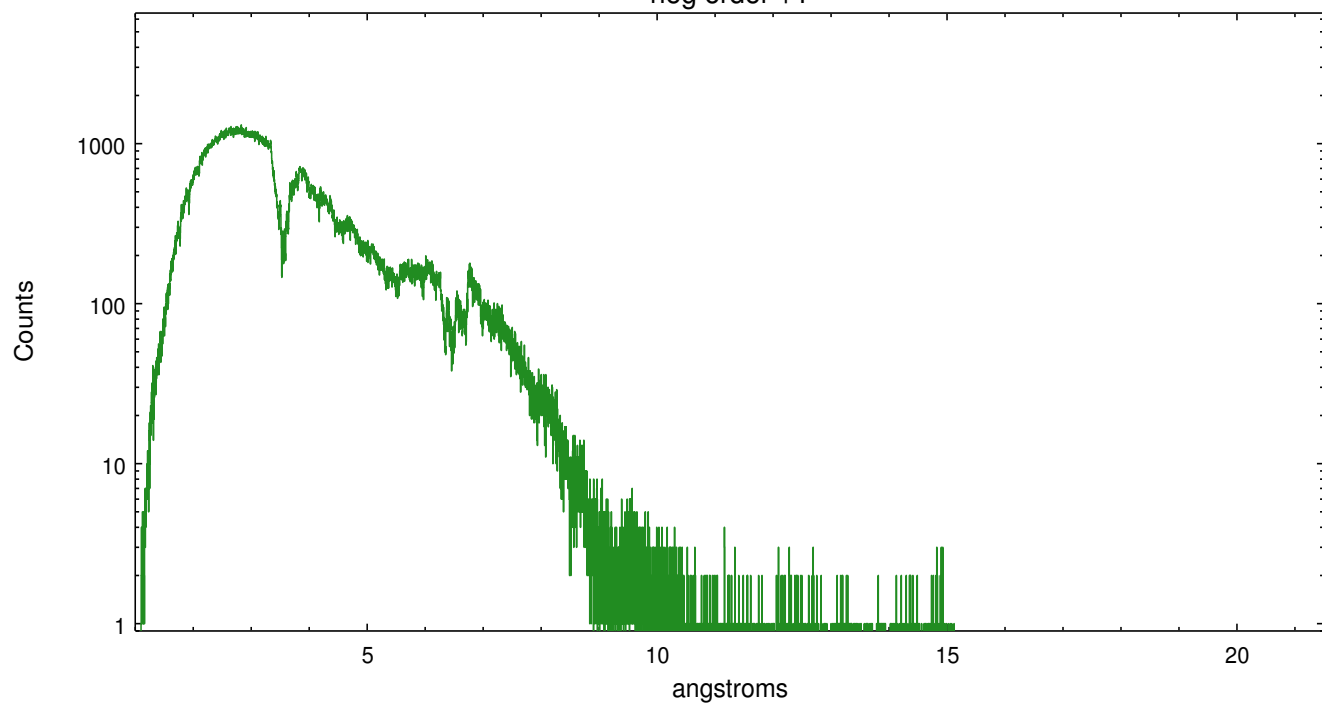
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	61694	114451	1030681	201360	1038649	91734	45301



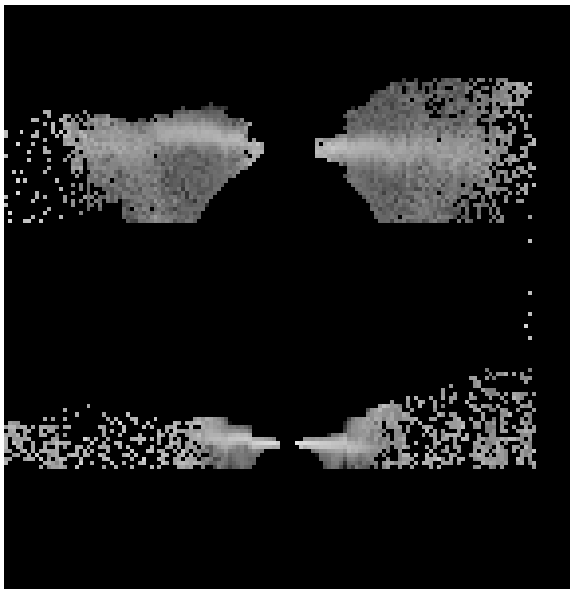
heg order -1



heg order +1



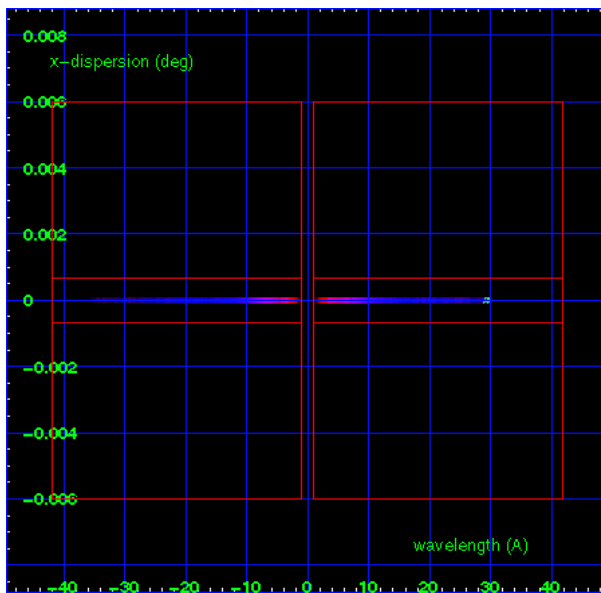
### 3.2 MEG Arm



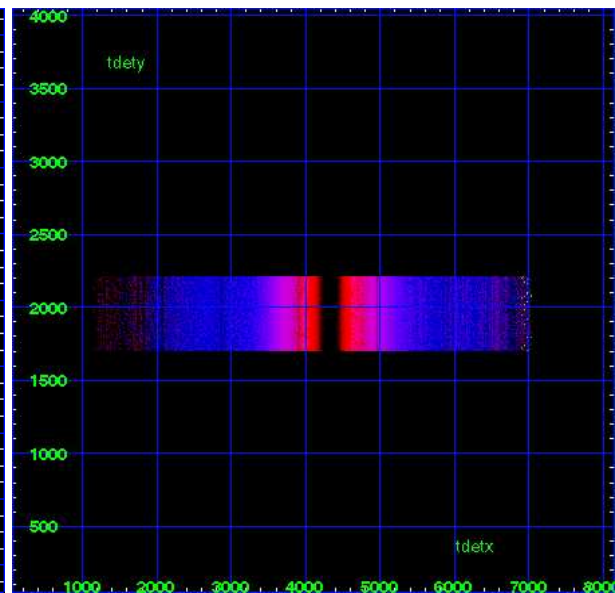
MEG Order Sort 123



MEG Order Sort ALL

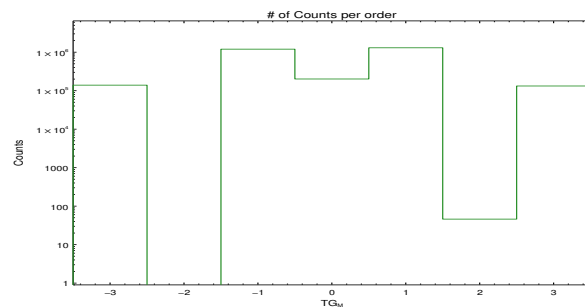


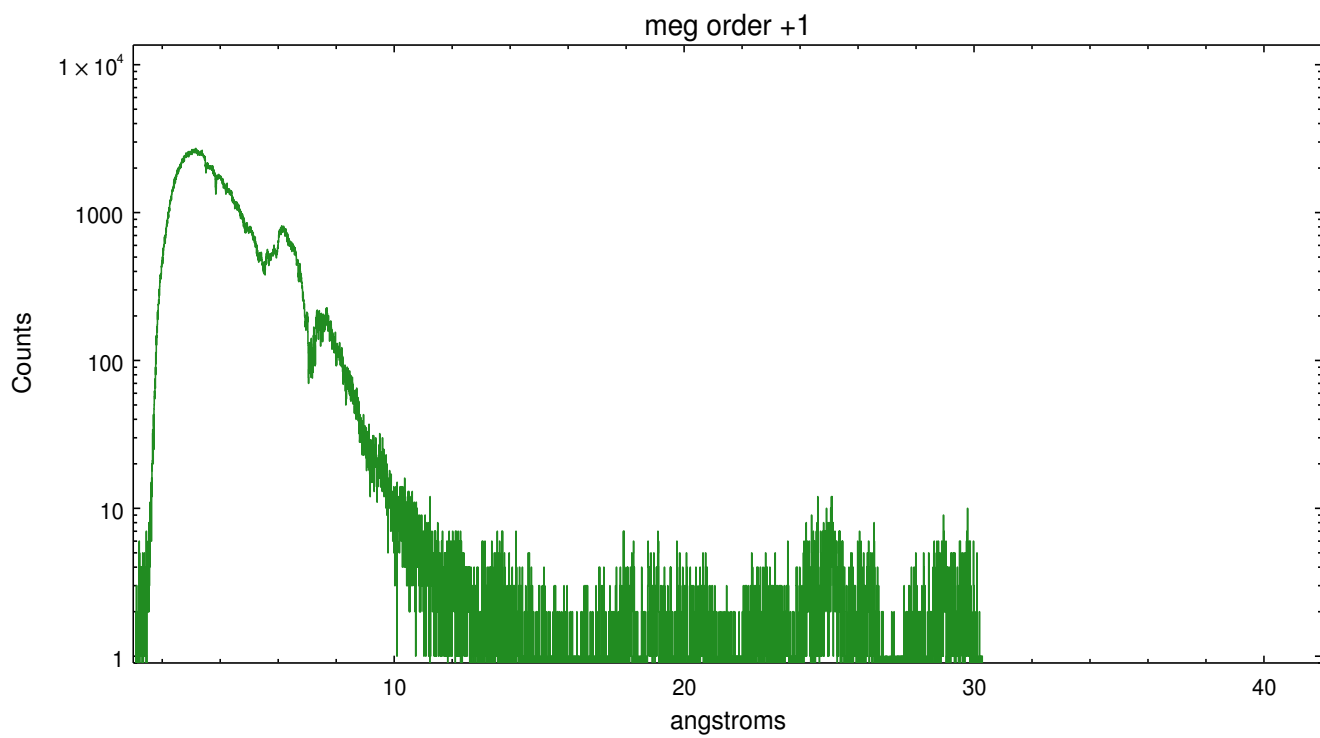
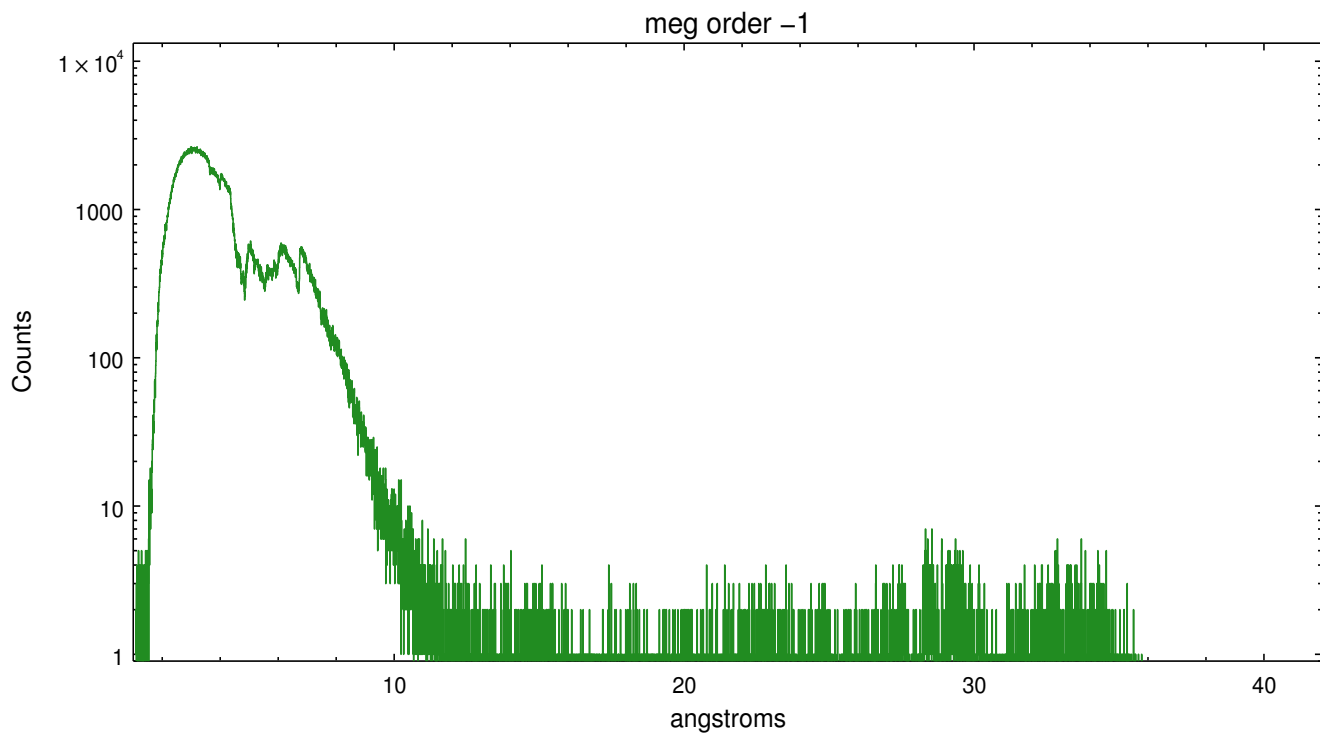
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	139260	0	1199206	201360	1302233	46	132429





# A Summary

## A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2012.10.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.155

## A.2 Comments