

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9705 - L2 Version 2  
Chandra X-Ray Center

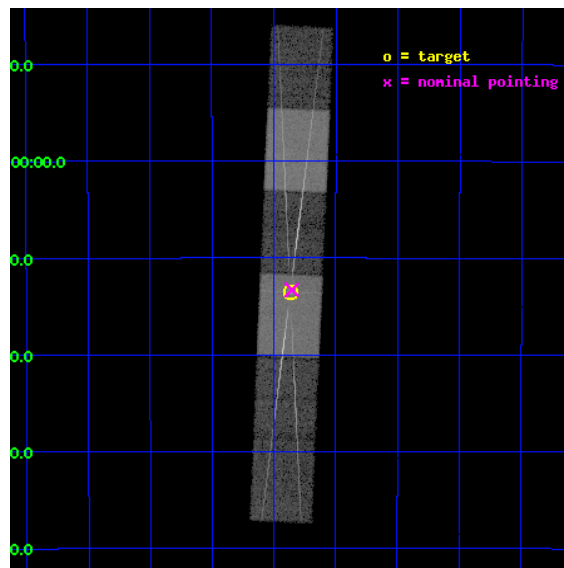
L2 Processing Date : May 17 2012

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# 1 Front

seq_num	790182	Sequence number
obs_id	9705	Observation id
title	AO9 Calibration Observations of PKS2155-304	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	PKS2155-304	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	329.716667	Observer's specified target RA [deg]
dec_targ	-30.225556	Observer's specified target Dec [deg]
ra_nom	329.7135437359	Nominal RA [deg]
dec_nom	-30.221565433645	Nominal Dec [deg]
roll_nom	92.492854535935	Nominal Roll [deg]
revision	2	Processing version of data
ontime	15172.5	Sum of GTIs [s]
livetime	14927.450964959	Livetime [s]
ontime4	15172.5	Sum of GTIs [s]
ontime5	15172.5	Sum of GTIs [s]
ontime6	15172.5	Sum of GTIs [s]
ontime7	15172.5	Sum of GTIs [s]
ontime8	15169.958979845	Sum of GTIs [s]
ontime9	15172.5	Sum of GTIs [s]
l2events	240996	Number of level 2 events

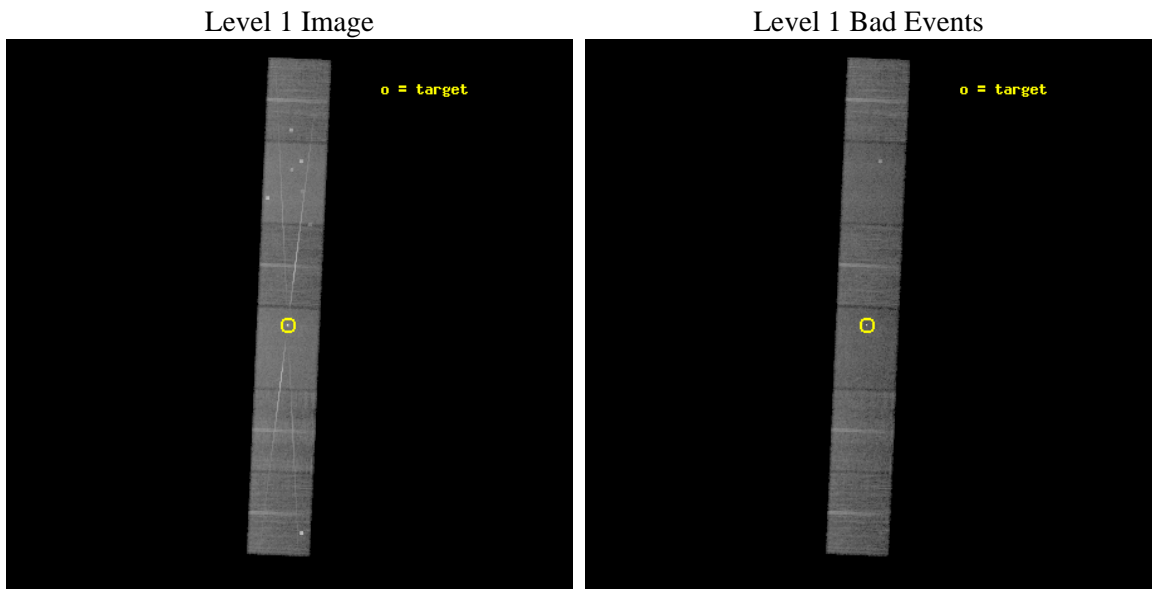




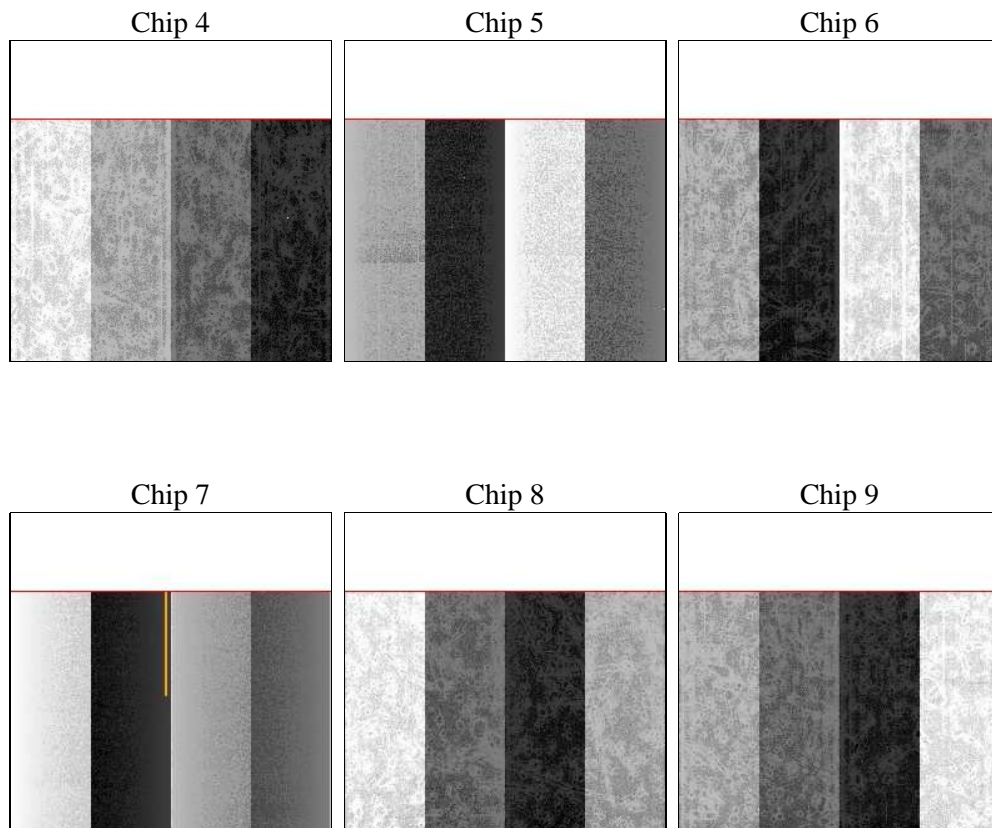
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14820.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	15172.5	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime4	15172.5	Sum of GTIs [s]
date	2012-05-17T15:41:25	Date and time of file creation	ontime5	15172.5	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	15172.5	Sum of GTIs [s]
			ontime7	15172.5	Sum of GTIs [s]
			ontime8	15169.958979845	Sum of GTIs [s]
			ontime9	15172.5	Sum of GTIs [s]
			l1events	905469	Number of level 1 events

### 2.1.4 Events

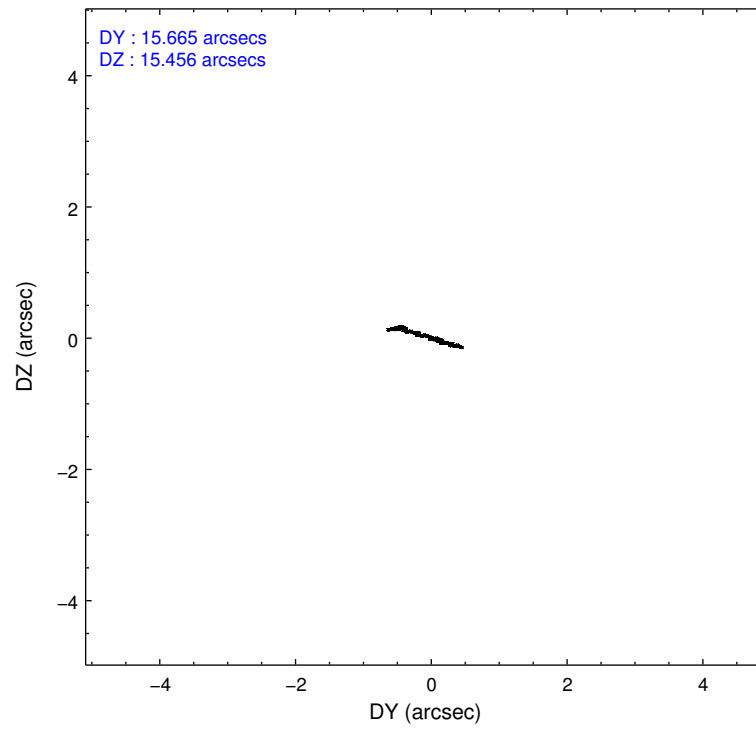
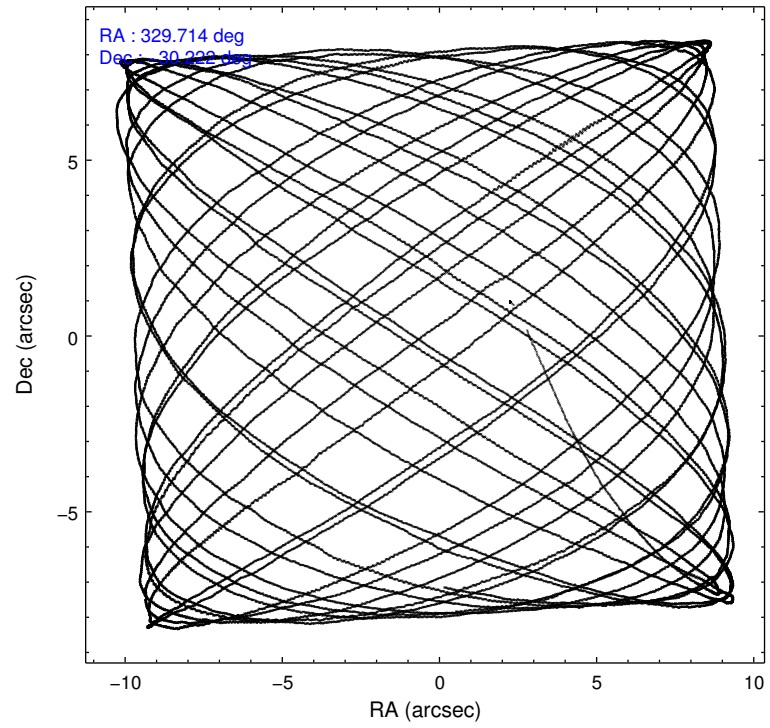
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	129739	189696	131899	177642	156654	119839	grade 0 events	9789	15776	18559	9849	19695	13819
rejected events	111255	95805	102252	96853	112418	97423		7%	8%	14%	5%	12%	11%
rejected %	85%	50%	77%	54%	71%	81%	grade 1 events	113	413	128	336	124	97
								0%	0%	0%	0%	0%	0%
							grade 2 events	3468	27645	4765	17364	8648	3131
								2%	14%	3%	9%	5%	2%
							grade 3 events	1531	4488	1867	7356	3972	1507
								1%	2%	1%	4%	2%	1%
							grade 4 events	1535	4180	1795	7494	3664	1514
								1%	2%	1%	4%	2%	1%
							grade 5 events	5080	13488	5375	15508	7218	5730
								3%	7%	4%	8%	4%	4%
							grade 6 events	2405	43322	3081	40020	8929	2832
								1%	22%	2%	22%	5%	2%
							grade 7 events	105818	80384	96329	79715	104404	91209
								81%	42%	73%	44%	66%	76%

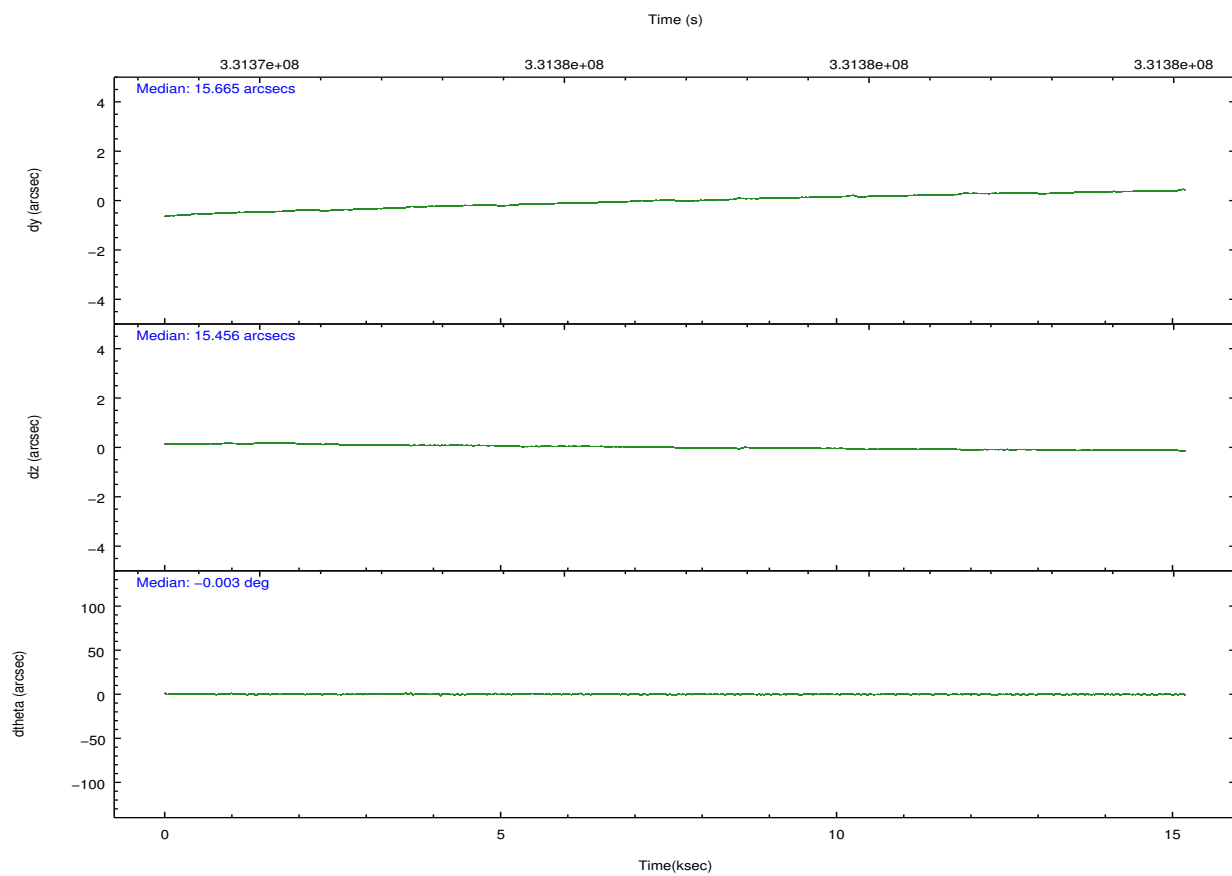
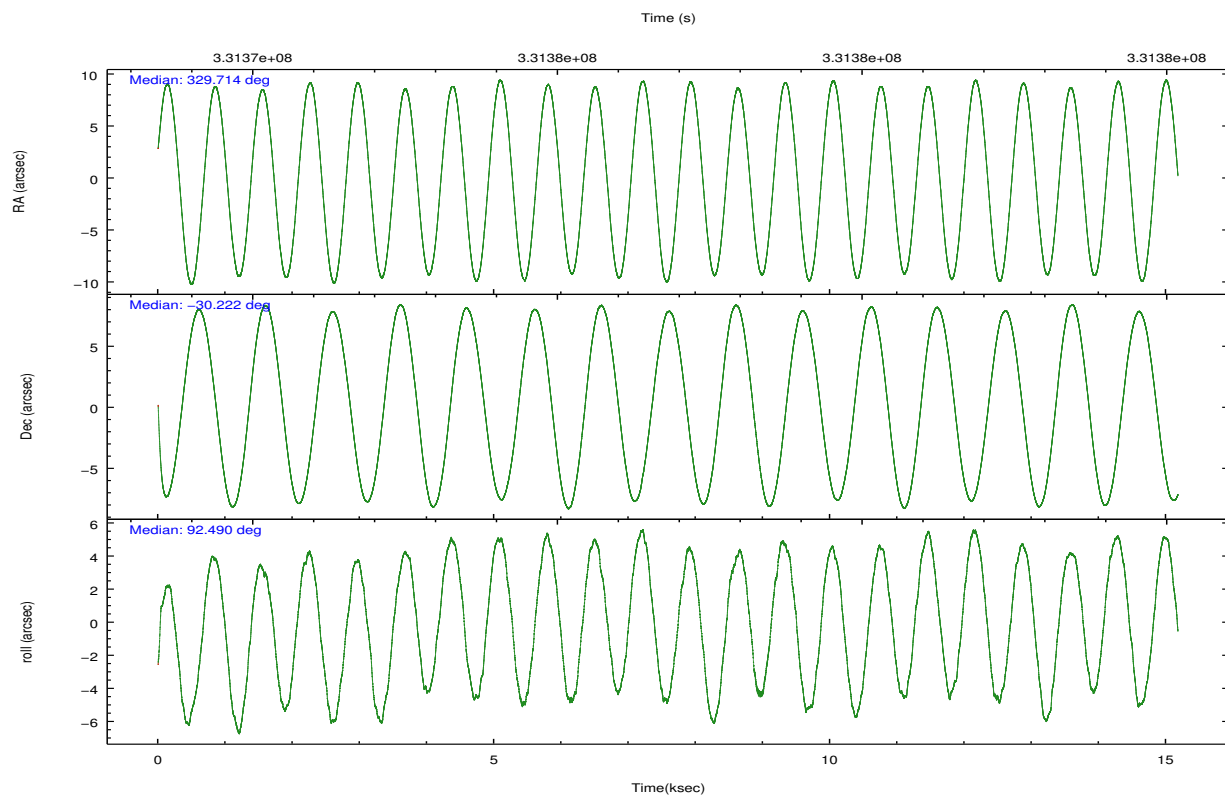
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	329.730877	329.713543735898
[deg] Pointing Dec	-30.244408	-30.22156543364547
[deg] Pointing Roll	92.344949	92.49285453593527
[s] Window start time (MET)	328665665.184000	328665665.184000
[s] Window stop time (MET)	336528065.184000	336528065.184000
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-187.132523	-187.1254020033014
[mm] SIM translation stage offset	-3	-3.007120579706367
[s] Observation start time (MET)	331369402.184000	331368313.3985
Observation start date	2008-07-02T07:02:17	2008-07-02T06:45:13
[s] Observation end time (MET)	331384222.184000	331384658.0493
Observation end date	2008-07-02T11:09:17	2008-07-02T11:17:38
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	CUSTOM	CUSTOM
Subarray start row	1	1
Subarray row count	774	774
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	2.5

## 2.3 Aspect



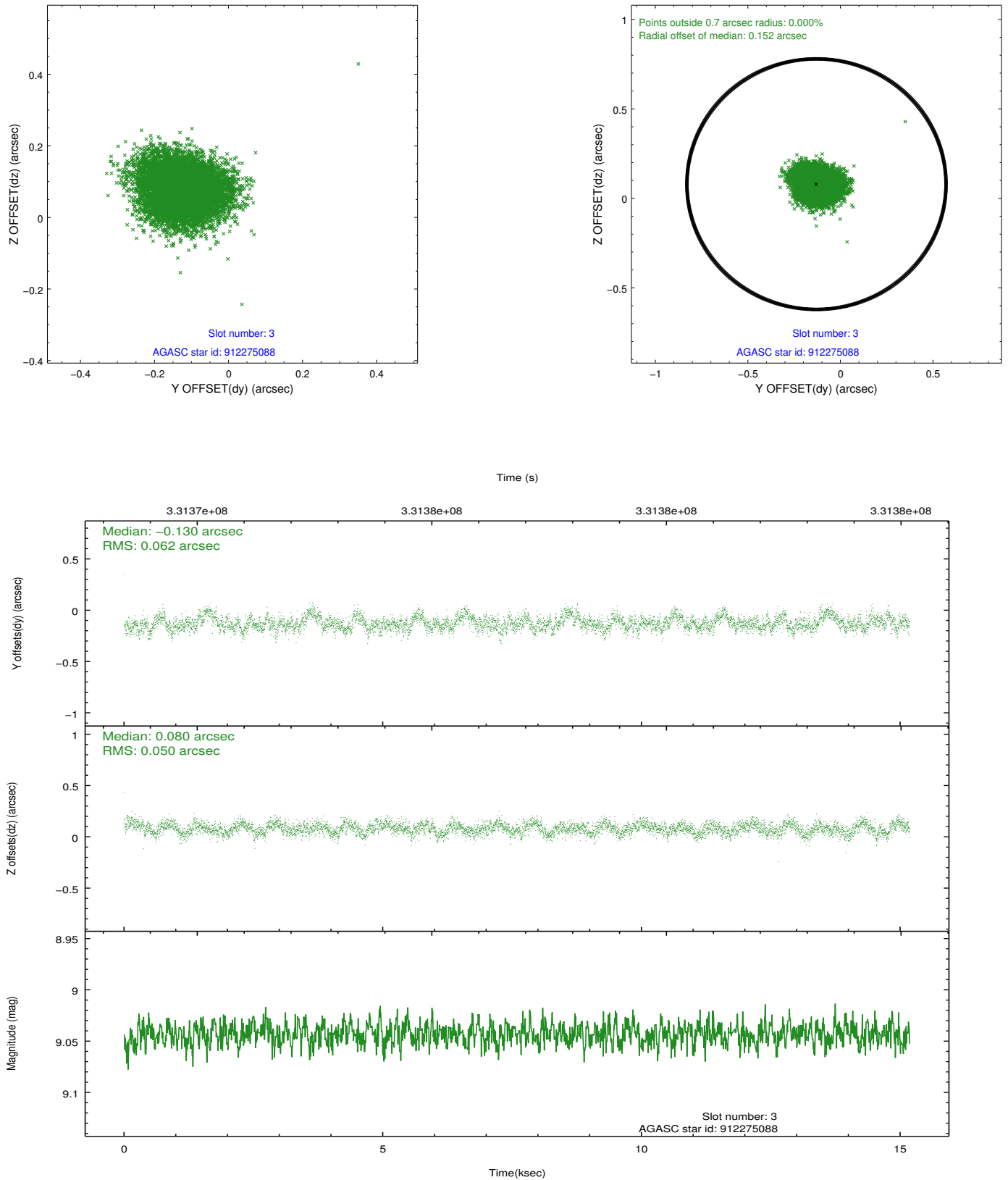


### Slot Statistics

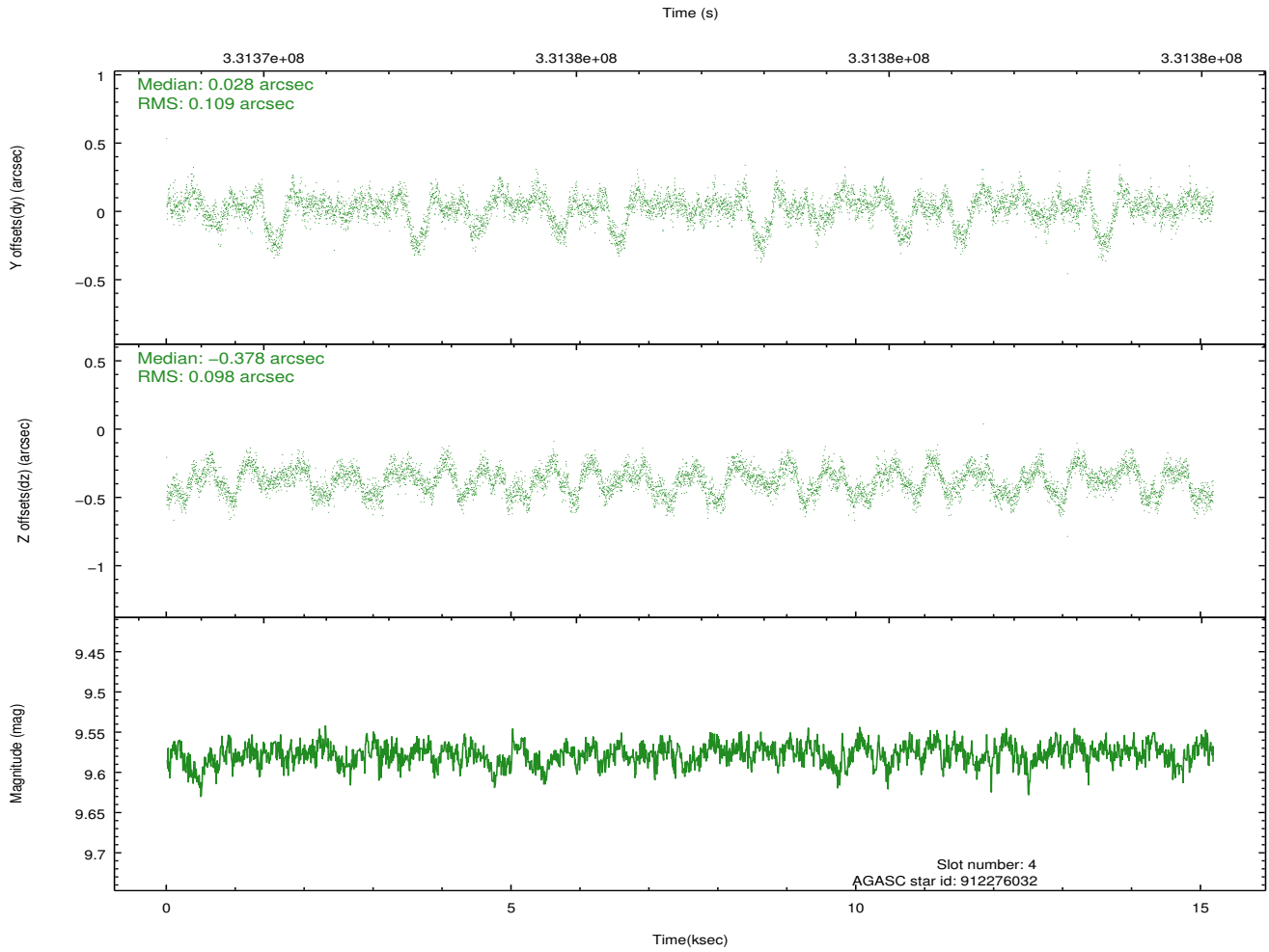
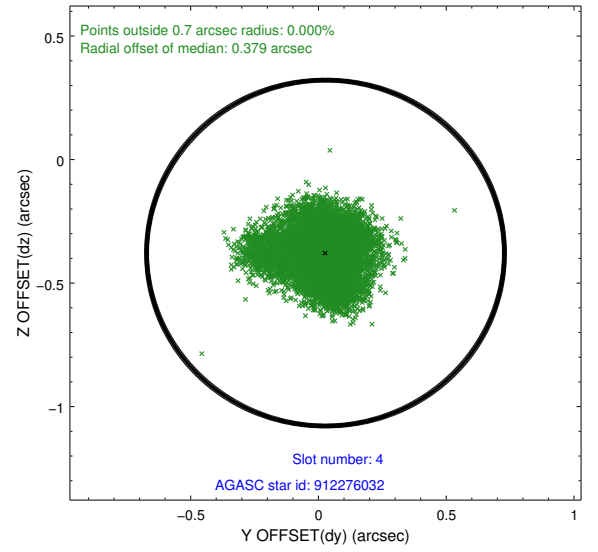
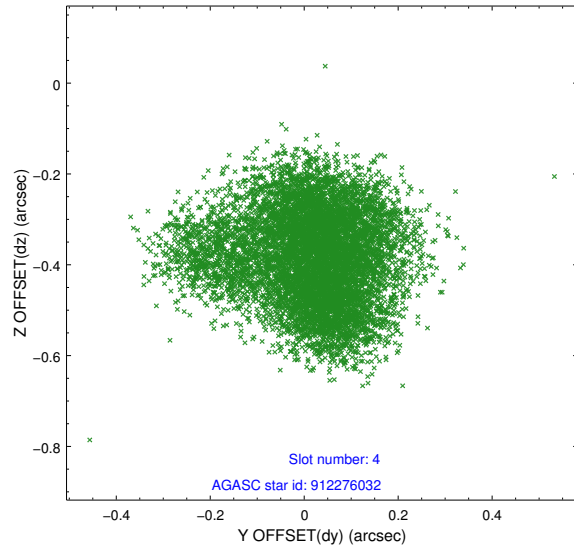
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.87	3703	-0.085	-0.091	0.006	0.010	0.000000	0.000000	-768.55	-1799.01
1	FID	ACIS-S-4	6.96	3703	0.179	0.065	0.006	0.011	0.000000	0.000000	2144.90	109.23
2	FID	ACIS-S-5	7.00	3702	-0.124	0.034	0.007	0.011	0.000000	0.000000	-1821.00	103.30
3	GUIDE	912275088	9.04	7403	-0.130	0.080	0.085	0.136	329.619228	-29.738698	1833.07	274.70
4	GUIDE	912276032	9.58	7394	0.028	-0.378	0.157	0.251	329.395967	-29.803466	1627.62	980.51
5	GUIDE	981468128	9.35	7399	0.131	0.531	0.094	0.153	329.756350	-30.158334	306.64	-91.11
6	GUIDE	981475568	8.18	7401	0.018	0.038	0.071	0.125	328.999408	-30.923402	-2357.04	2357.75
7	GUIDE	981471664	6.35	7404	-0.031	-0.269	0.087	0.135	328.981826	-30.605916	-1213.69	2372.40

## 2.4 Star Slots

### 2.4.1 Slot 3

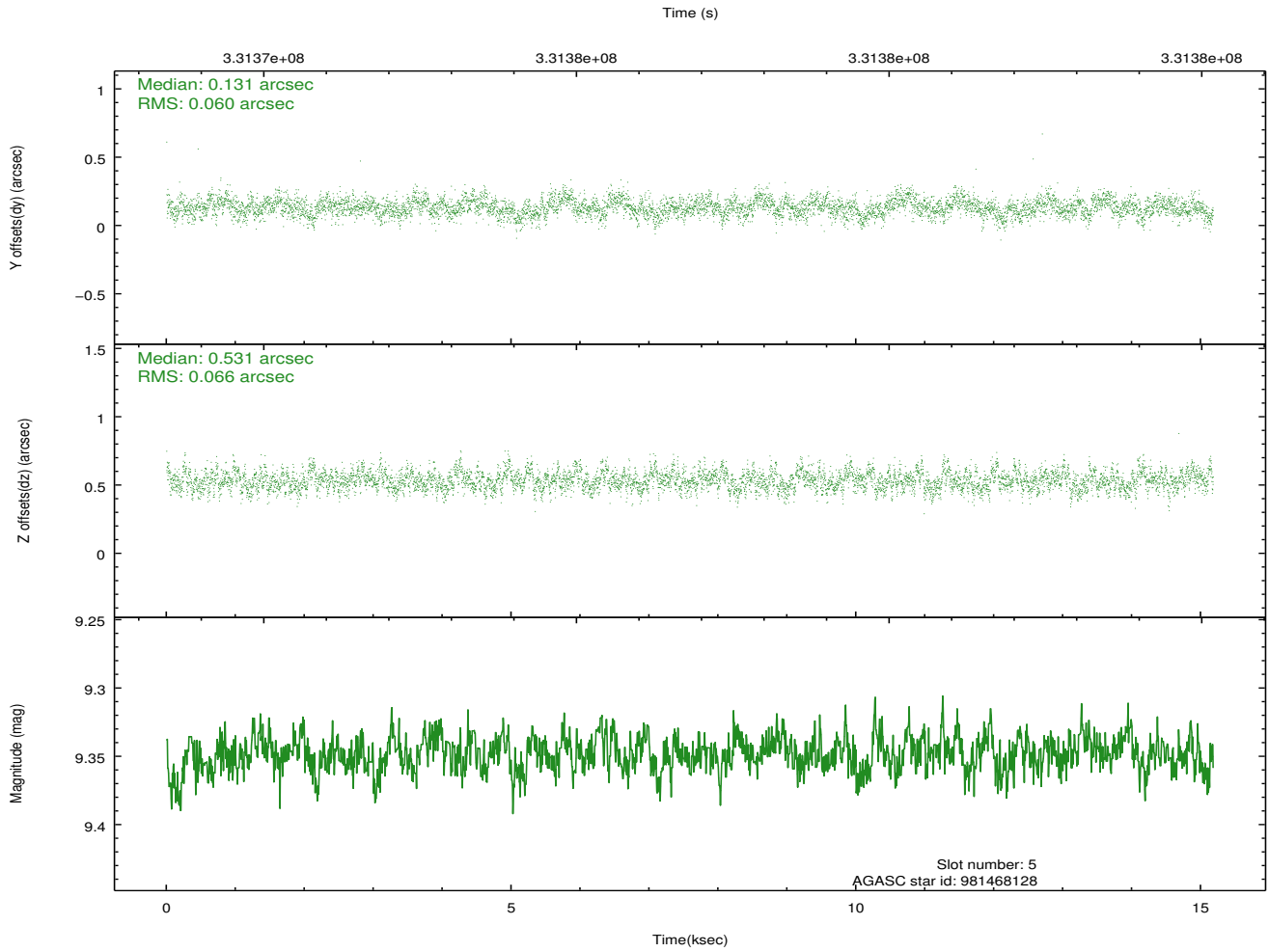
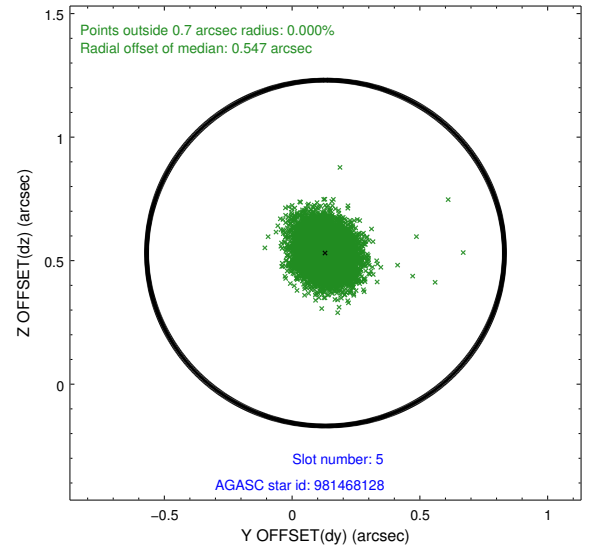
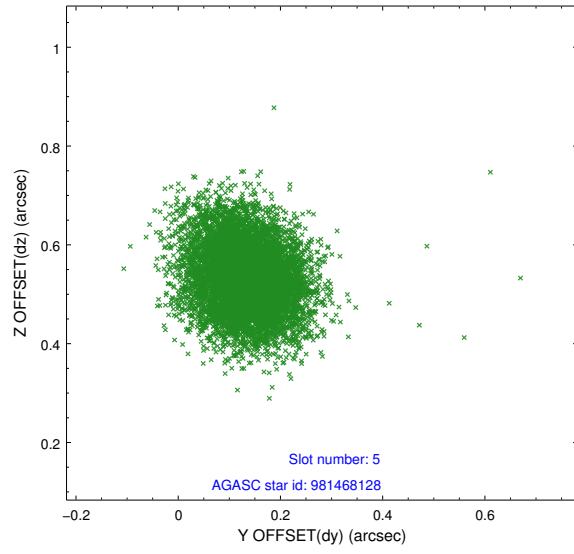


## 2.4.2 Slot 4

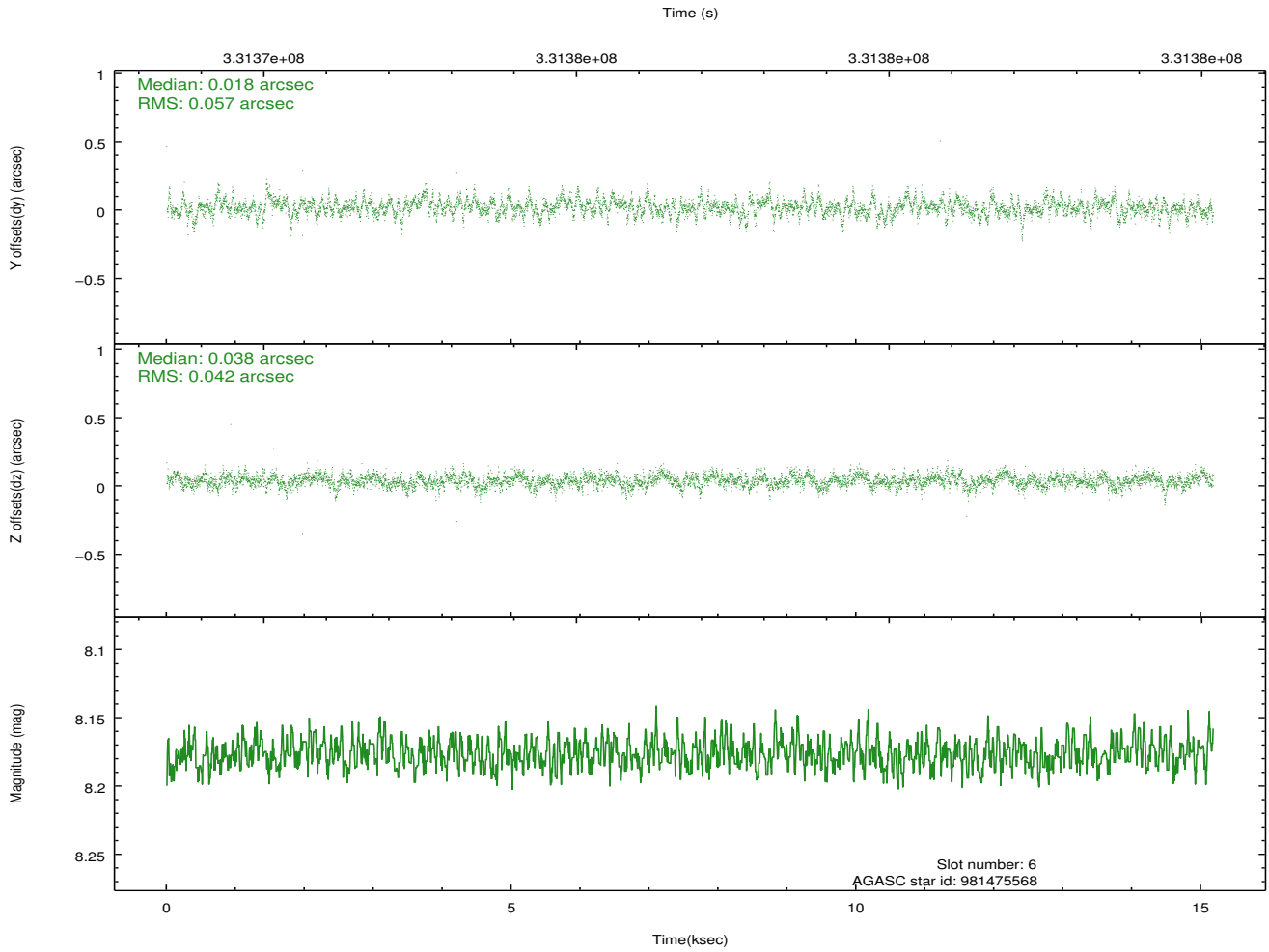
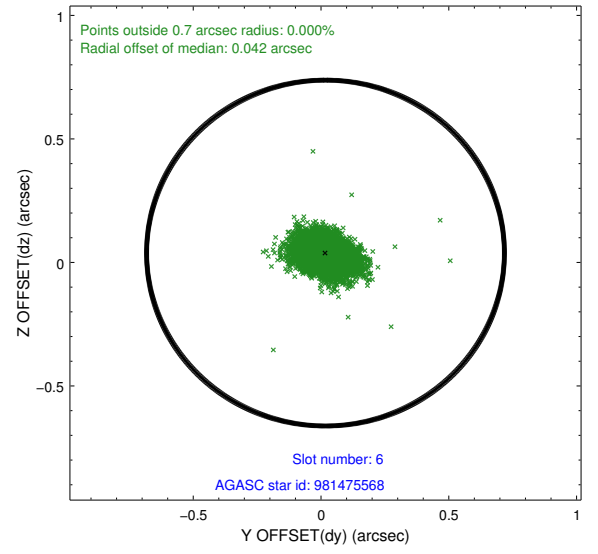
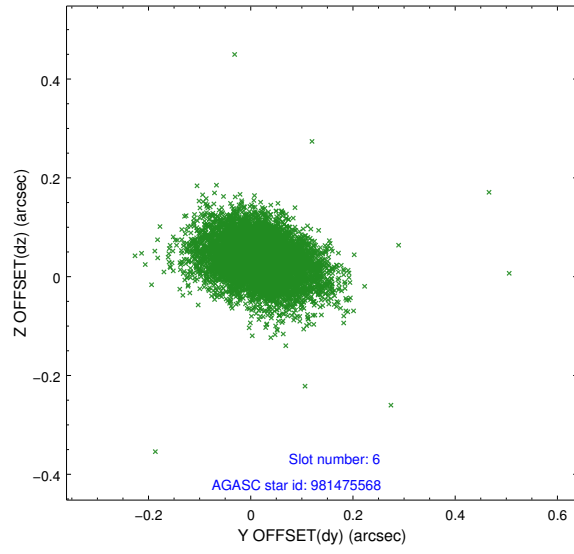




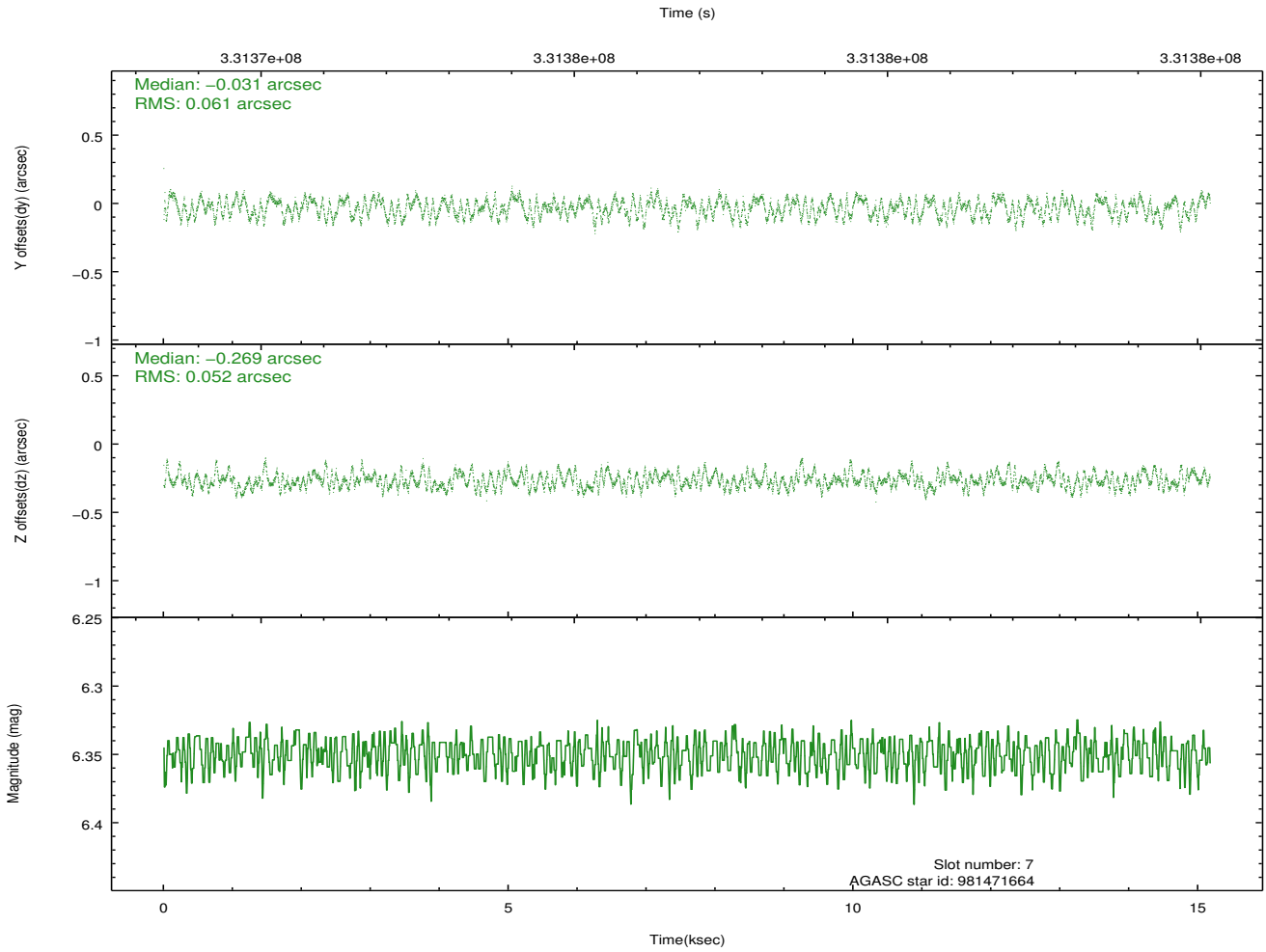
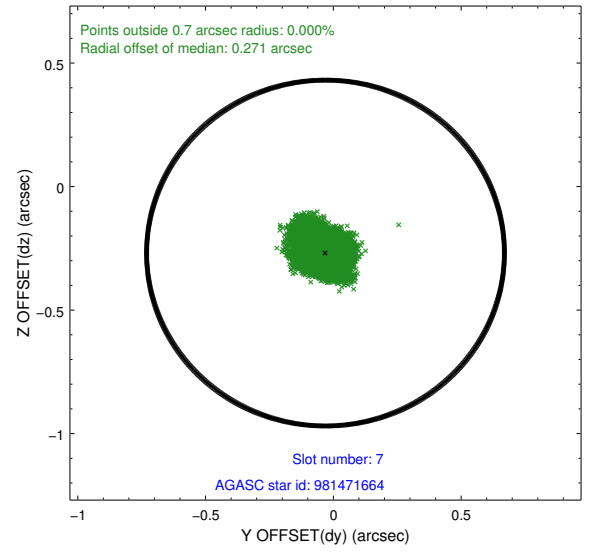
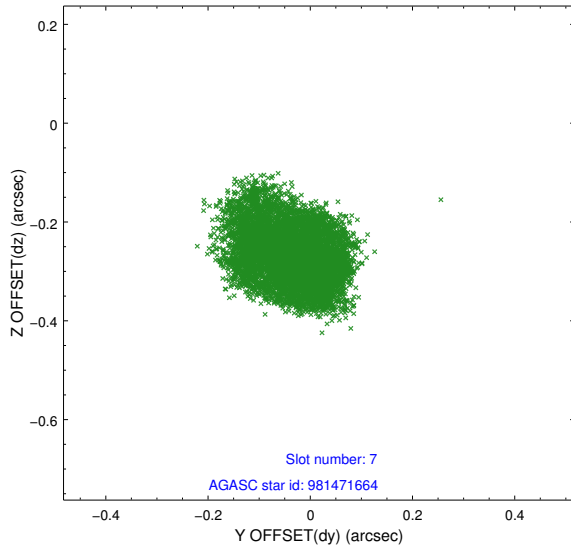
### 2.4.3 Slot 5



## 2.4.4 Slot 6

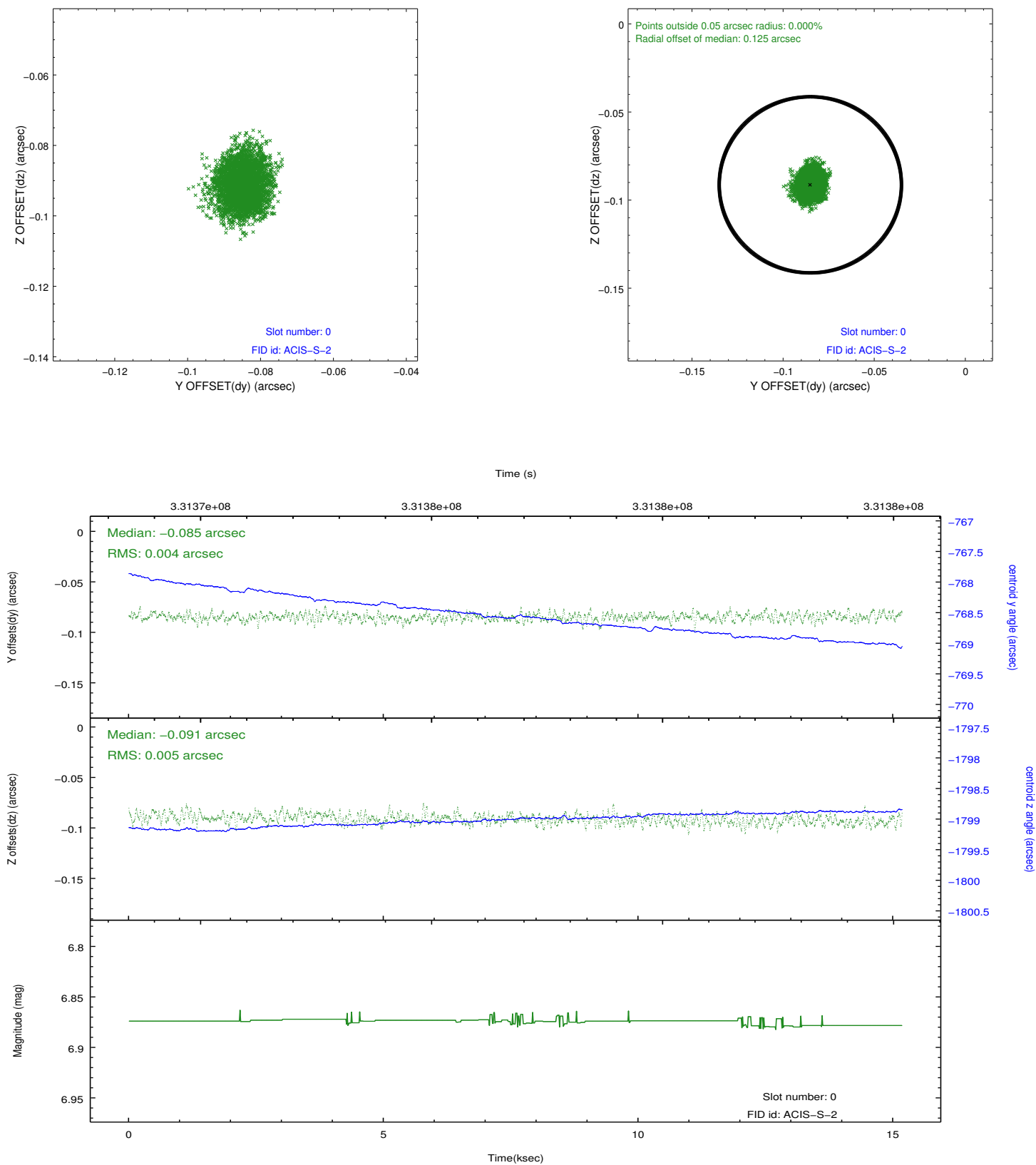


## 2.4.5 Slot 7

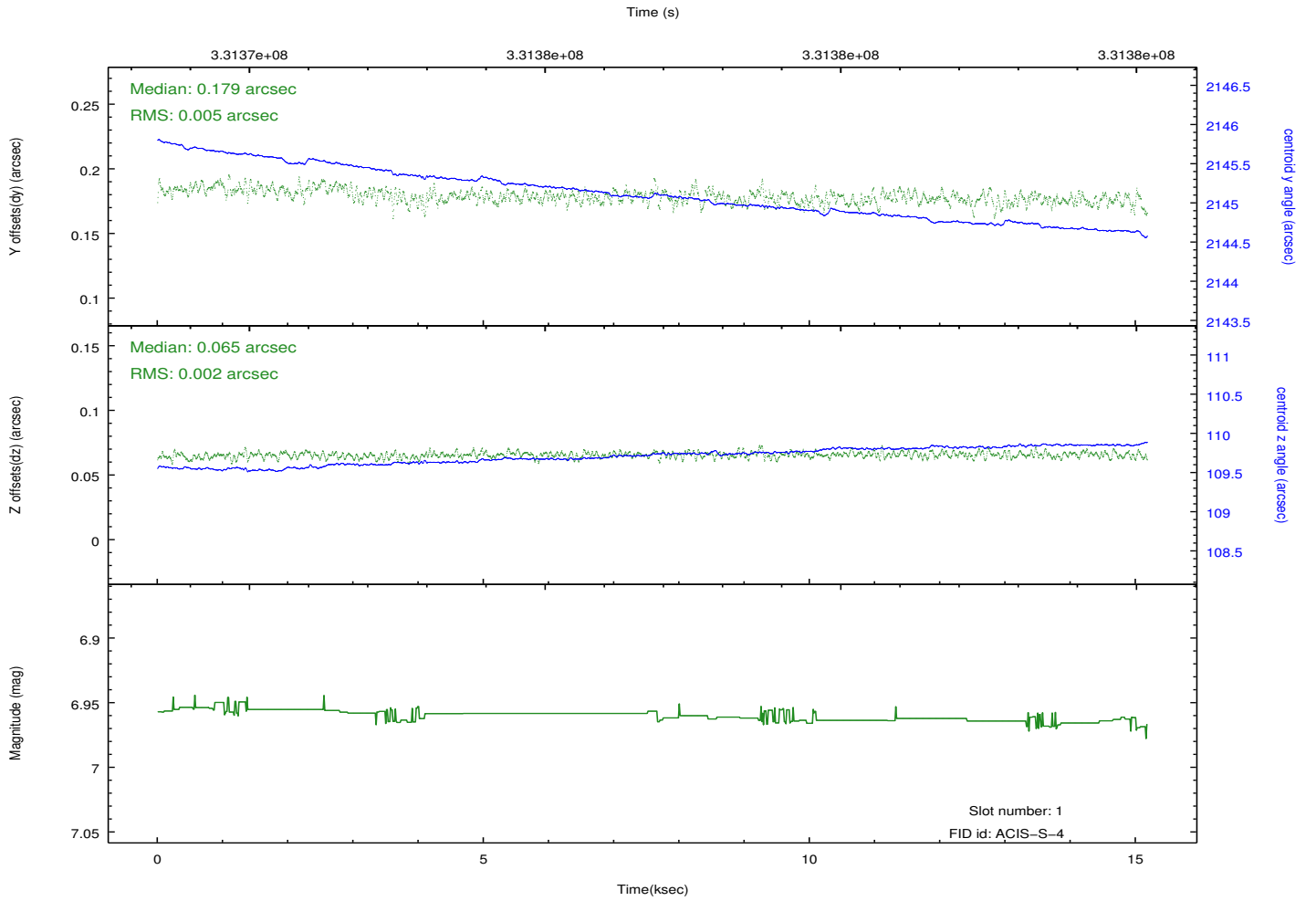
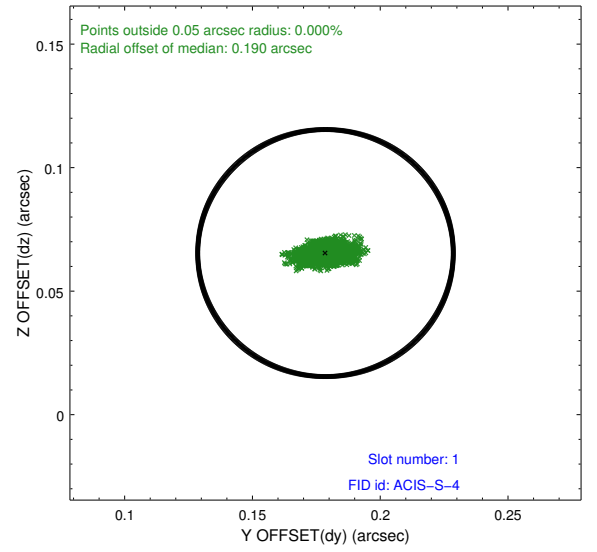
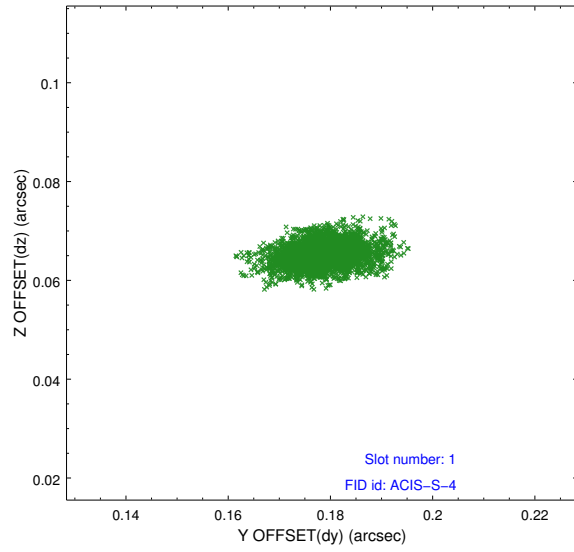


## 2.5 FID Slots

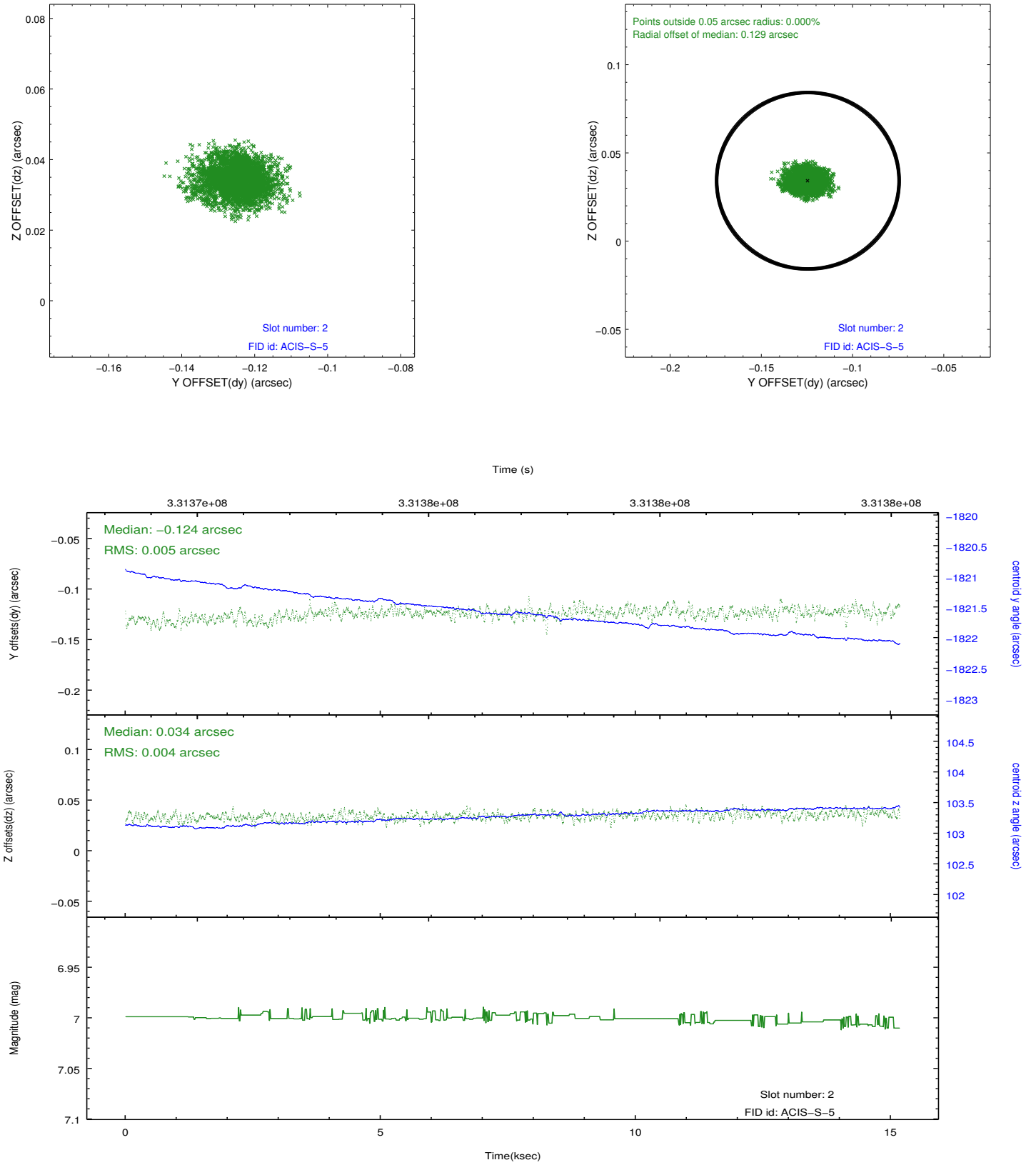
### 2.5.1 Slot 0



## 2.5.2 Slot 1

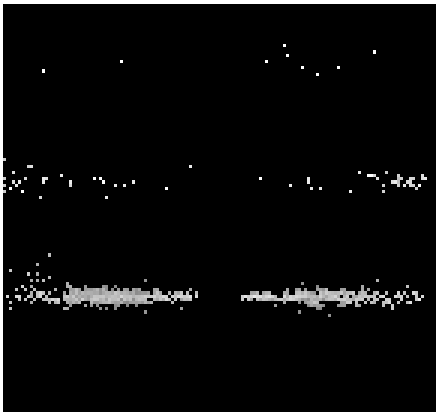


### 2.5.3 Slot 2

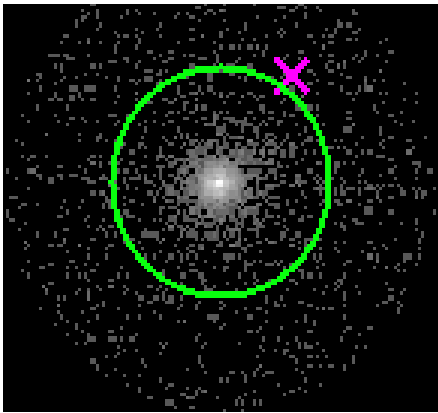


# 3 Gratings

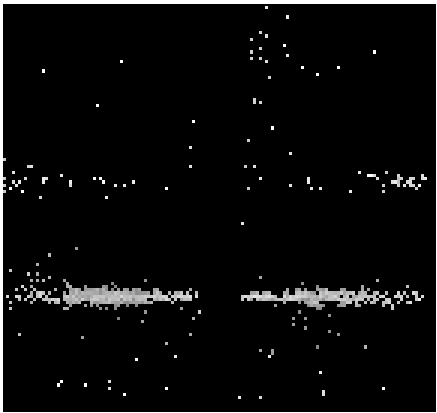
## 3.1 HEG Arm



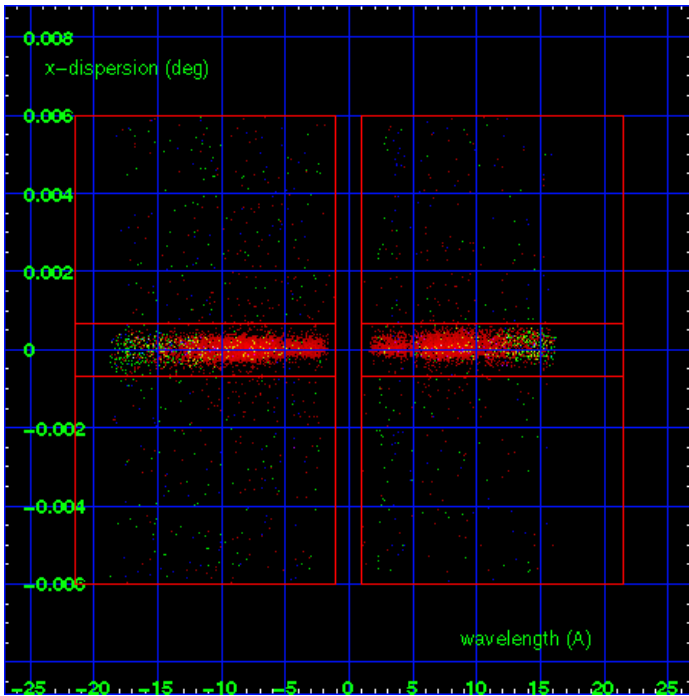
HEG Order Sort 123



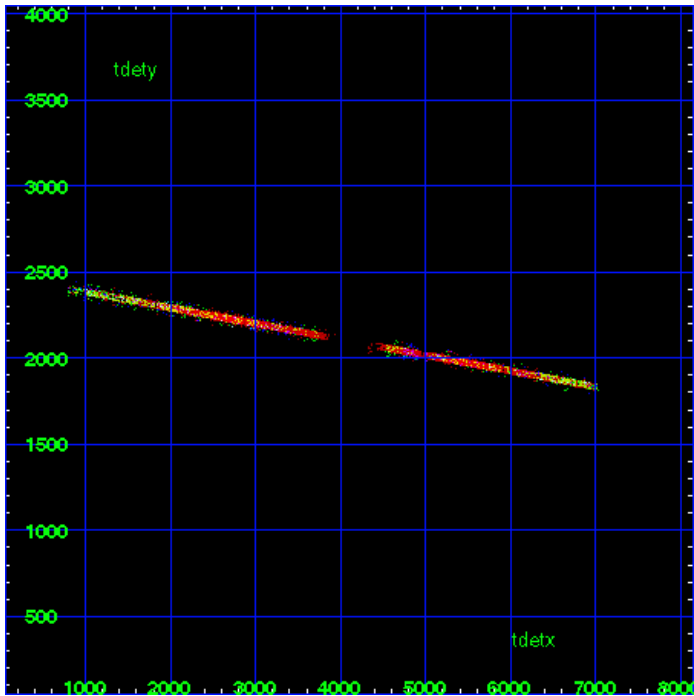
HEG Zero Order



HEG Order Sort ALL

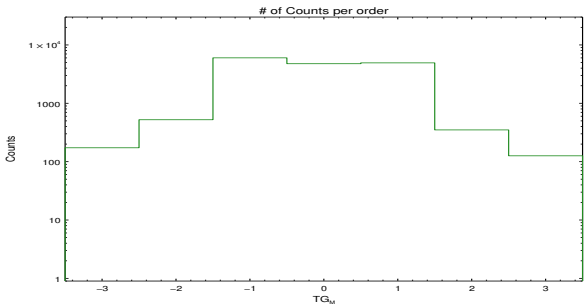


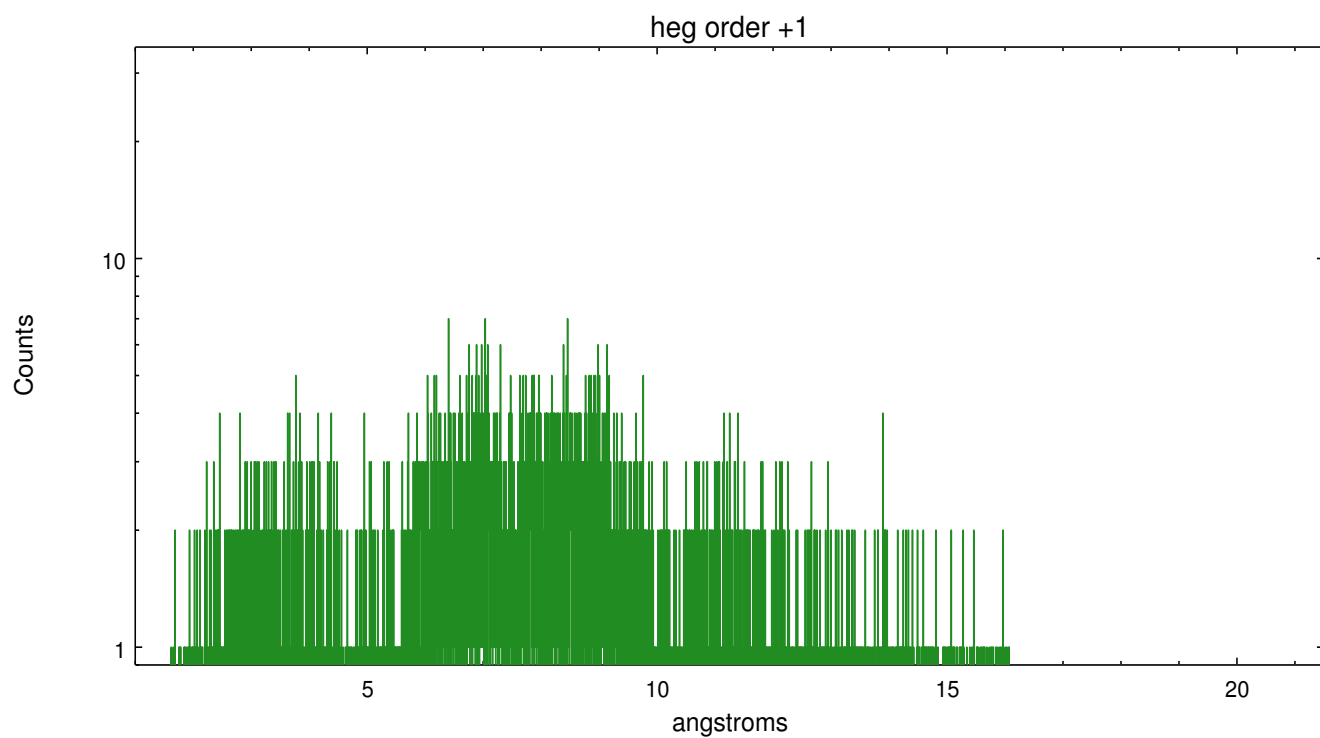
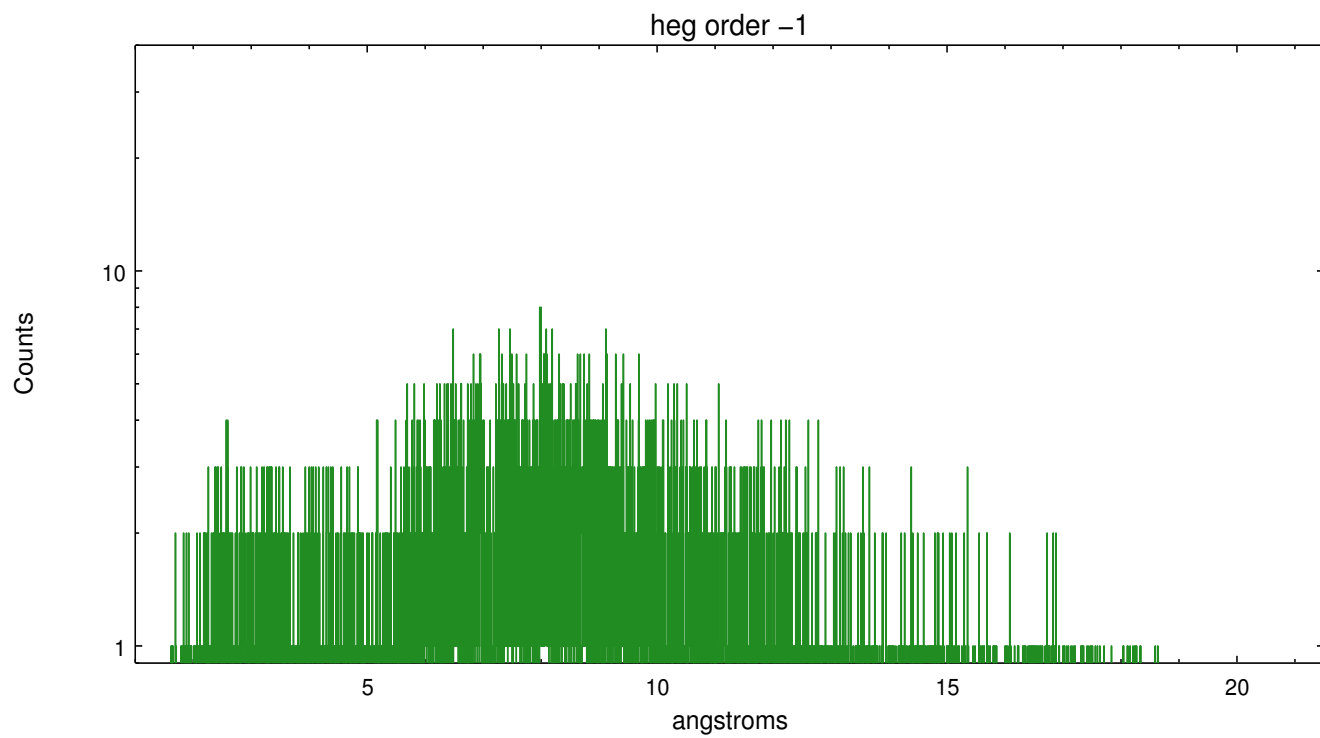
Spot Image HEG



Full Detector HEG

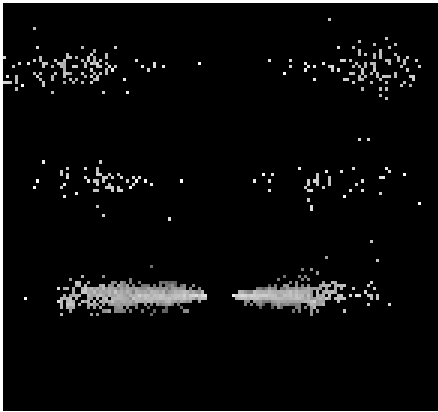
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	173	523	6012	4771	4931	350	126



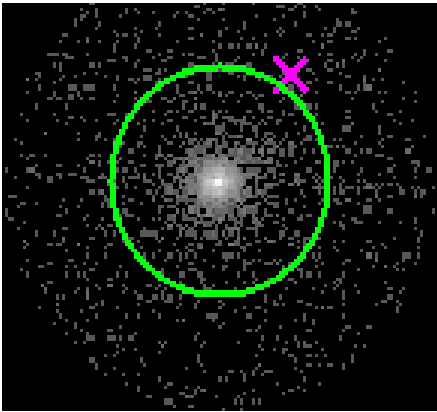




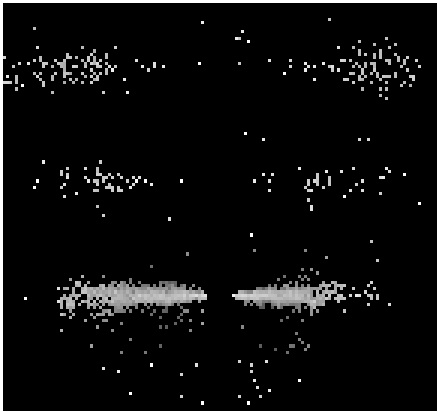
3.2 MEG Arm



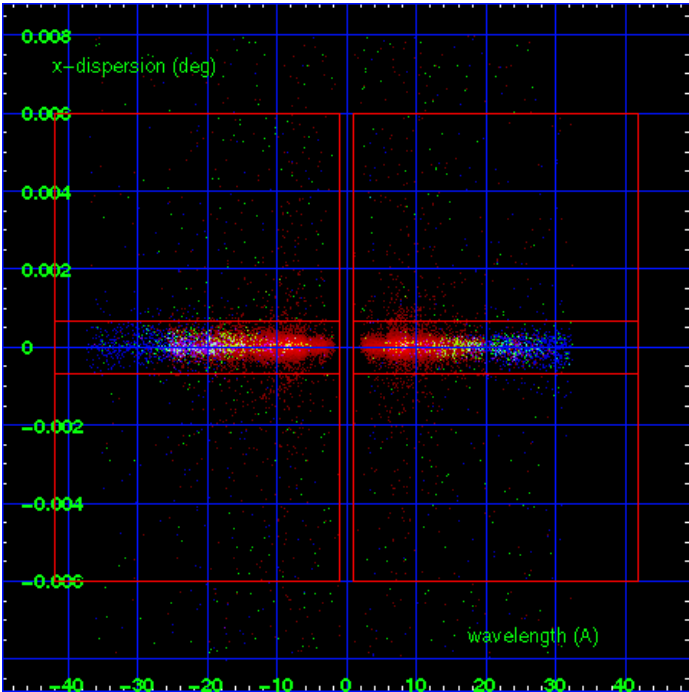
MEG Order Sort 123



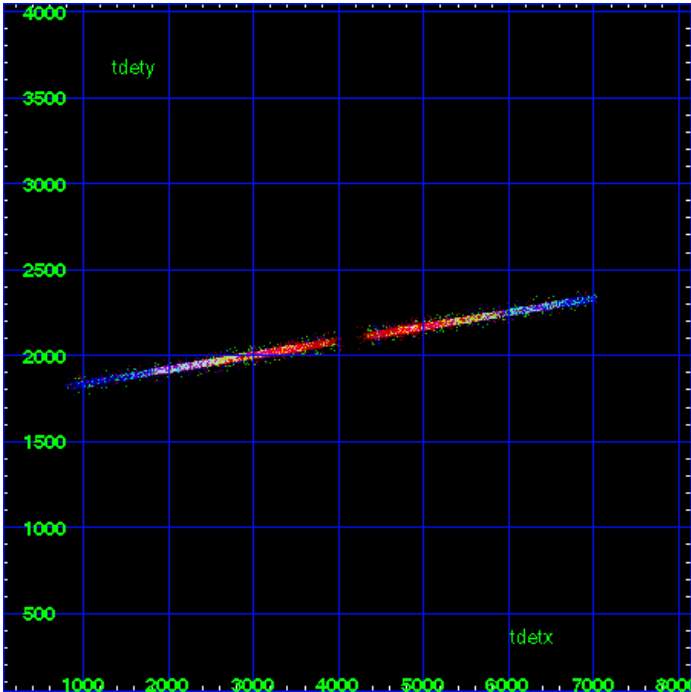
MEG Zero Order



MEG Order Sort ALL

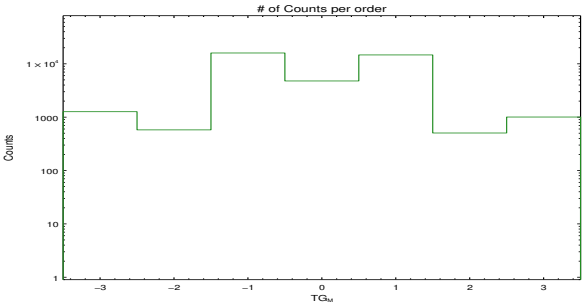


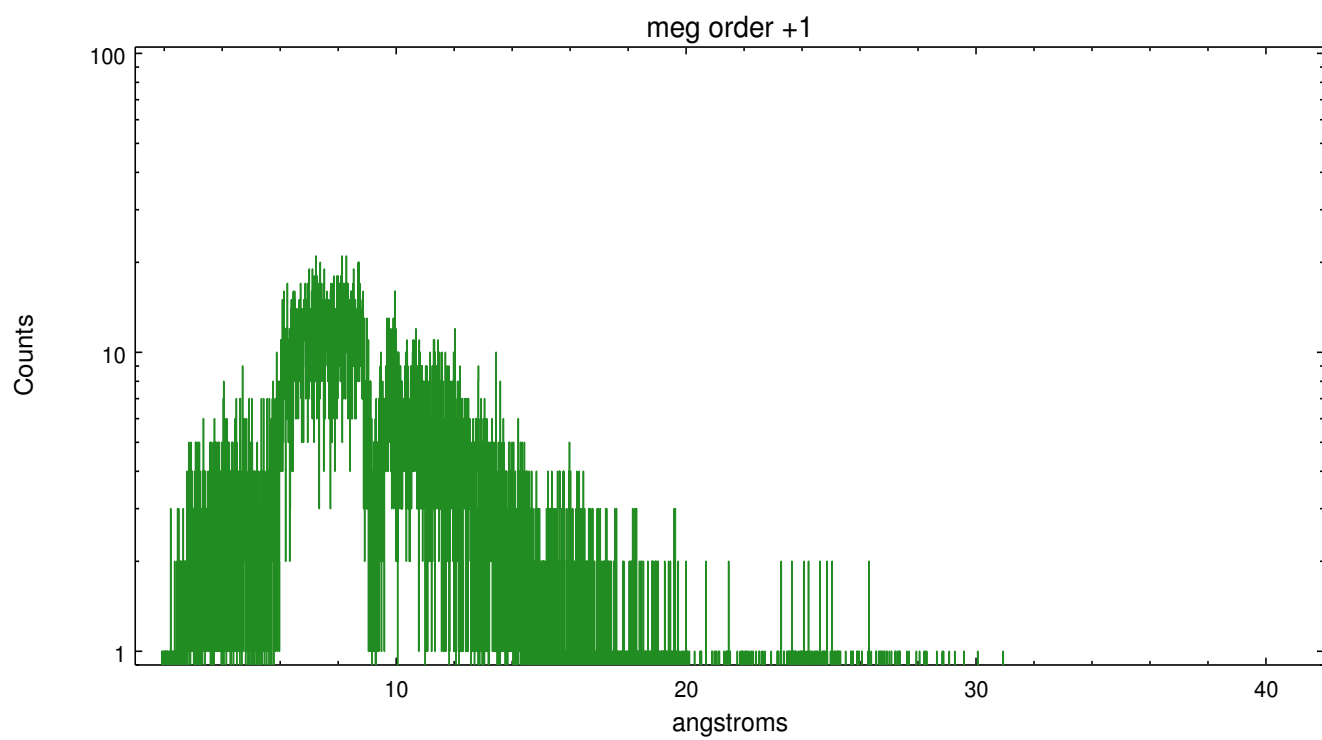
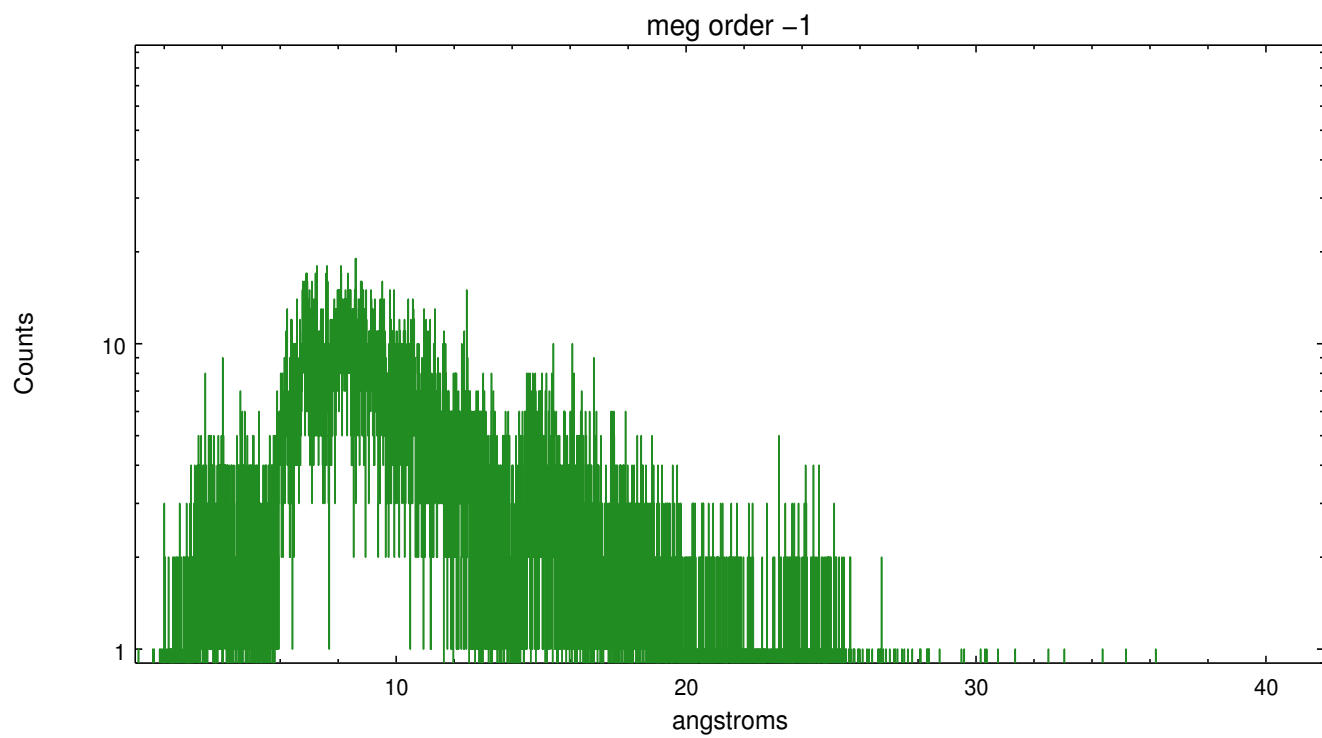
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1267	578	15957	4771	14674	505	1006





## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.05.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.1725

### A.2 Comments

Zeroth order piled up.