

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 5470 - L2 Version 3  
Chandra X-Ray Center

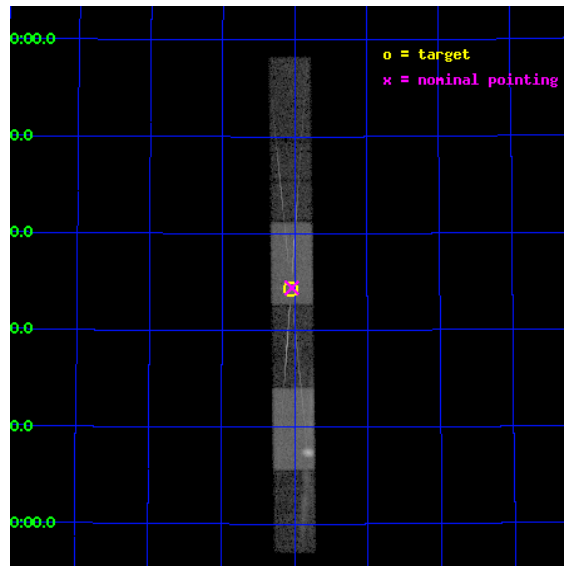
L2 Processing Date : Dec 14 2012

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# 1 Front

seq_num	400400	Sequence number
obs_id	5470	Observation id
title	INVESTIGATING NEW INTEGRAL SOURCES WITH CHANDRA	Proposal title
observer	Dr Adamantia Paizis	Principal investigator
object	IGR J00291+5934	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	7.26275	Observer's specified target RA [deg]
dec_targ	59.571944	Observer's specified target Dec [deg]
ra_nom	7.2595237101379	Nominal RA [deg]
dec_nom	59.573421586848	Nominal Dec [deg]
roll_nom	269.34298974755	Nominal Roll [deg]
revision	3	Processing version of data
ontime	18070.999873281	Sum of GTIs [s]
livetime	17645.028135239	Livetime [s]
ontime4	18070.999873281	Sum of GTIs [s]
ontime5	18070.999873281	Sum of GTIs [s]
ontime6	18070.989845783	Sum of GTIs [s]
ontime7	18070.999873281	Sum of GTIs [s]
ontime8	18070.948805779	Sum of GTIs [s]
ontime9	18070.907765806	Sum of GTIs [s]
l2events	143007	Number of level 2 events

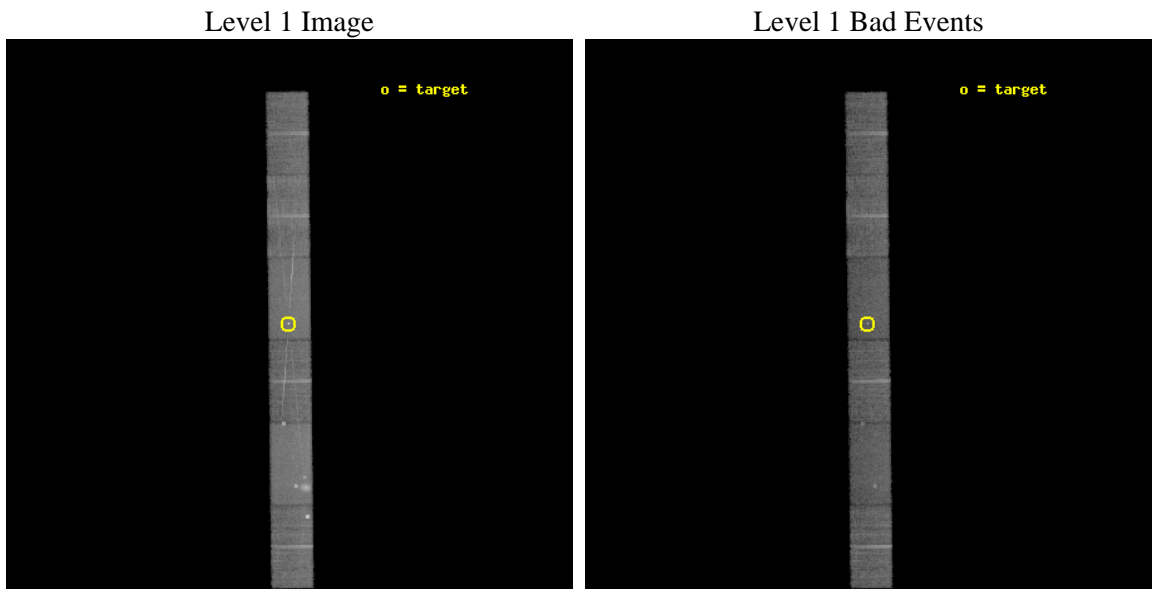




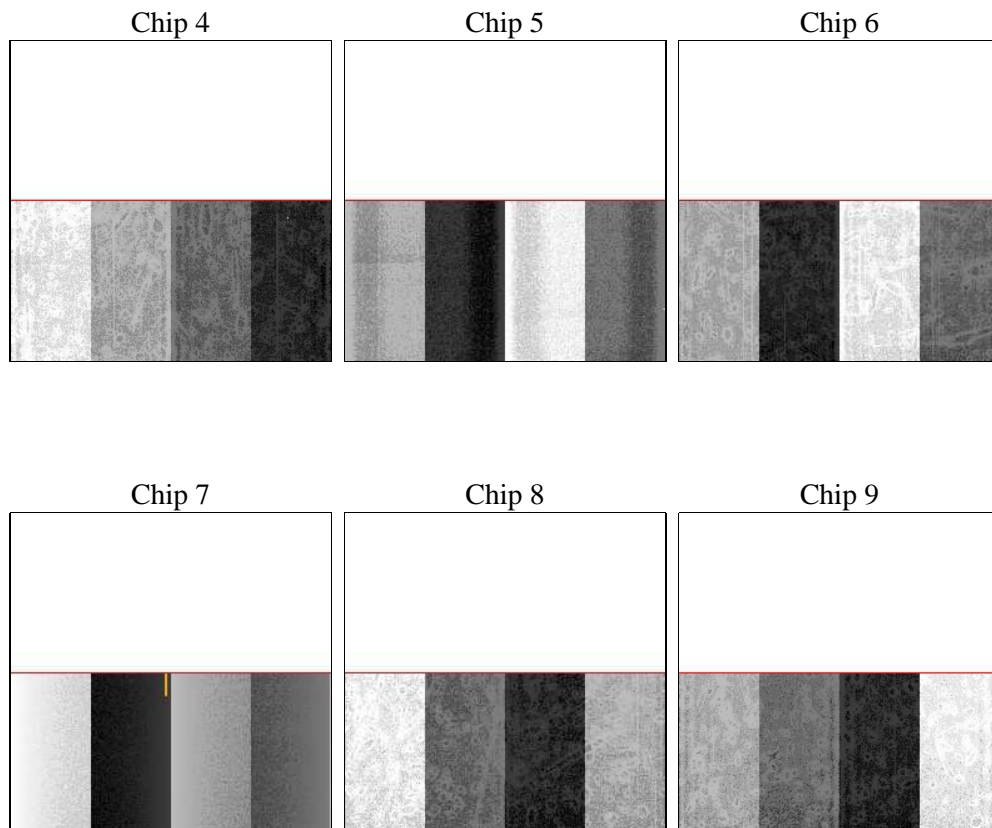
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	8.5	Processing system revision	ontime	18070.999873281	Sum of GTIs [s]
caldsver	4.5.4	&#160	ontime4	18070.999873281	Sum of GTIs [s]
date	2012-12-12T15:03:20	Date and time of file creation	ontime5	18070.999873281	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	18070.989845783	Sum of GTIs [s]
			ontime7	18070.999873281	Sum of GTIs [s]
			ontime8	18070.948805779	Sum of GTIs [s]
			ontime9	18070.907765806	Sum of GTIs [s]
			l1events	547904	Number of level 1 events

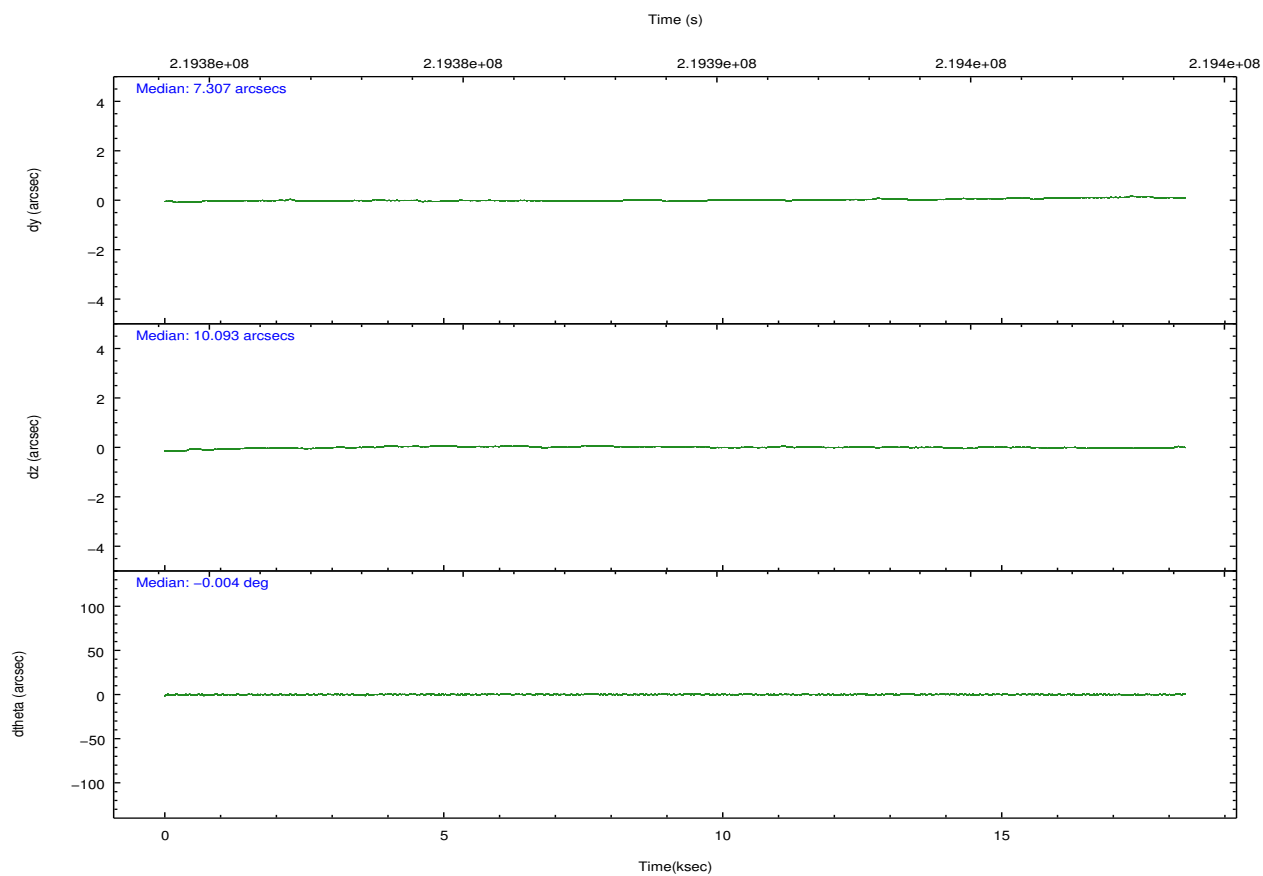
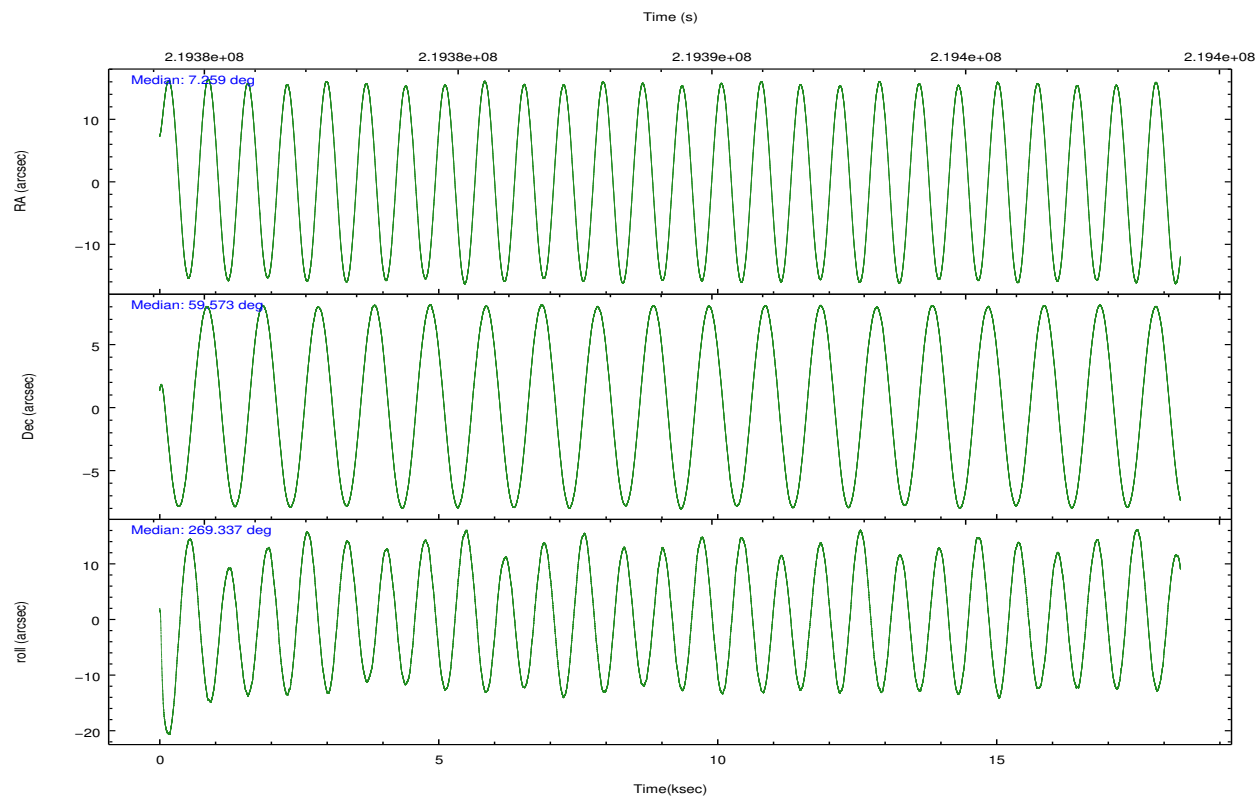
### 2.1.4 Events

	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	88383	114443	77880	102981	92726	71491	grade 0 events	12243	10032	7992	5470	7594	3818
rejected events	70168	54844	63317	53896	71418	62217		13%	8%	10%	5%	8%	5%
rejected %	79%	47%	81%	52%	77%	87%	grade 1 events	98	833	35	164	48	42
								0%	0%	0%	0%	0%	0%
							grade 2 events	2244	16247	2329	10238	4350	1678
								2%	14%	2%	9%	4%	2%
							grade 3 events	1151	3695	1211	4809	2190	1074
								1%	3%	1%	4%	2%	1%
							grade 4 events	1098	3643	1156	4733	1958	1017
								1%	3%	1%	4%	2%	1%
							grade 5 events	2860	8318	2995	8948	3809	3205
								3%	7%	3%	8%	4%	4%
							grade 6 events	1482	25988	1877	23838	5219	1688
								1%	22%	2%	23%	5%	2%
							grade 7 events	67207	45687	60285	44781	67558	58969
								76%	39%	77%	43%	72%	82%

## 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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	7.232497	7.259523710137863	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	59.597003	59.57342158684774	Subarray start row	1	1
[deg] Pointing Roll	269.209654	269.3429897475516	Subarray row count	512	512
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.7
[mm] SIM translation stage pos	-183.992523	-183.985022191653			
[mm] SIM translation stage offset	-6.14	-6.147500391354811			
[s] Observation start time (MET)	219380326.184000	219379421.36739			
Observation start date	2004-12-14T02:57:42	2004-12-14T02:43:41			
[s] Observation end time (MET)	219398326.184000	219398558.63076			
Observation end date	2004-12-14T07:57:42	2004-12-14T08:02:38			
Read mode	TIMED	TIMED			

## 2.3 Aspect

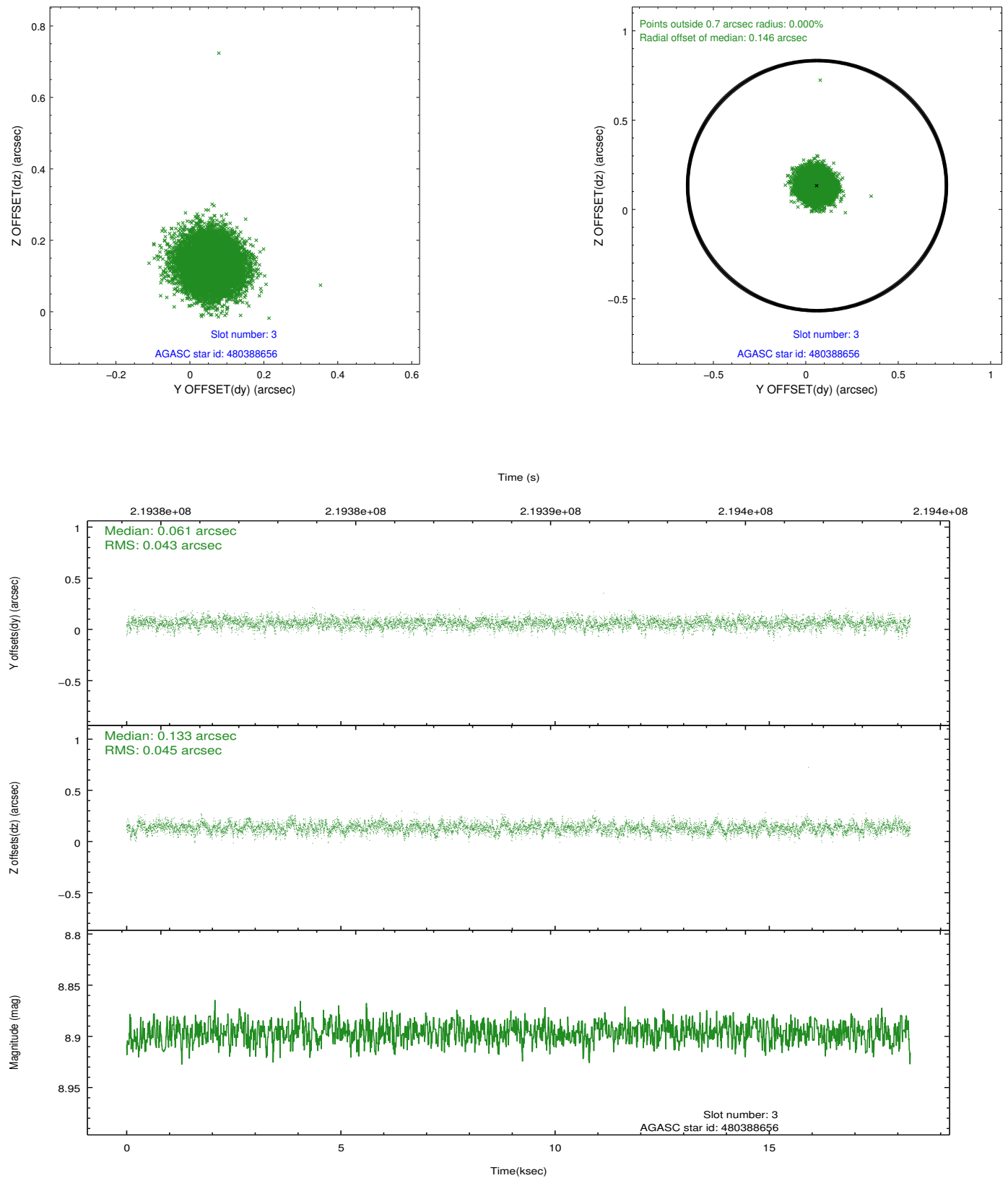


### Slot Statistics

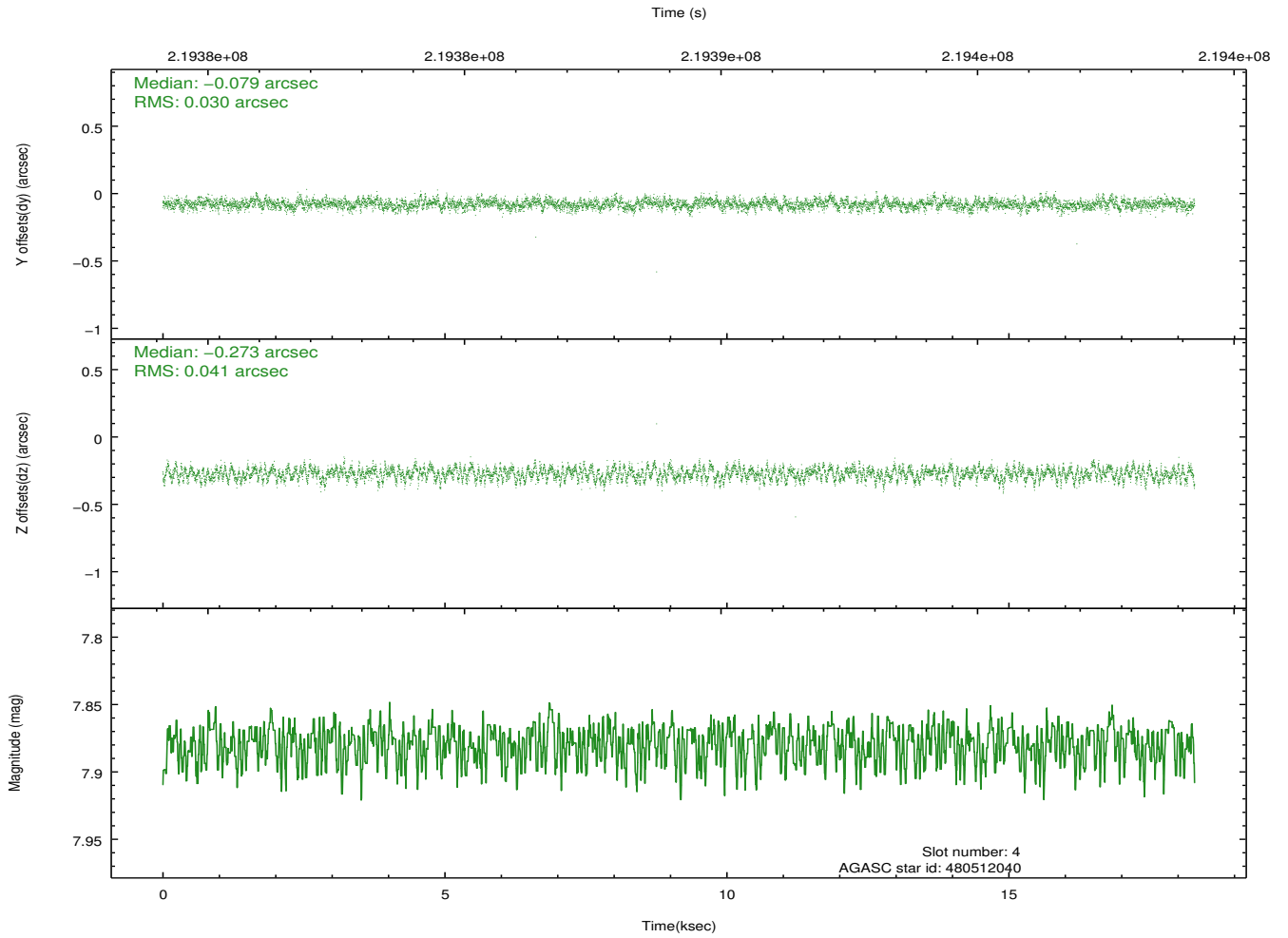
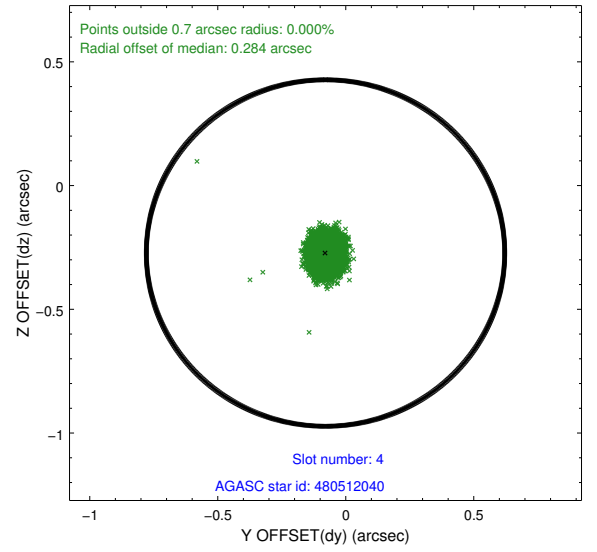
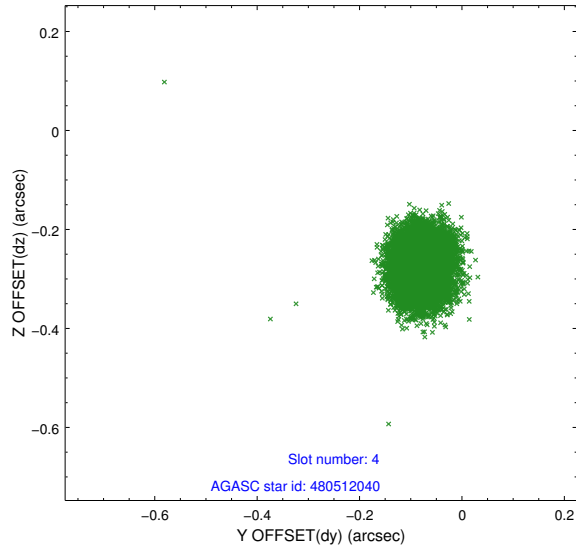
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.08	4463	-0.059	-0.123	0.007	0.011	0.000000	0.000000	-759.72	-1858.16
1	FID	ACIS-S-4	7.18	4462	0.101	0.061	0.005	0.010	0.000000	0.000000	2153.63	50.22
2	FID	ACIS-S-5	7.22	4463	-0.073	0.069	0.007	0.011	0.000000	0.000000	-1812.28	44.18
3	GUIDE	480388656	8.90	8922	0.061	0.133	0.067	0.106	6.593066	59.181927	1505.09	-1158.25
4	GUIDE	480512040	7.88	8919	-0.079	-0.273	0.054	0.086	7.309429	59.469475	457.27	146.81
5	GUIDE	480513376	8.58	8922	0.214	0.005	0.059	0.093	7.508901	59.105688	1760.83	535.63
6	GUIDE	480518776	8.14	8926	-0.067	0.001	0.066	0.104	8.537557	59.899306	-1143.78	2340.22
7	GUIDE	526276608	8.59	8924	-0.127	0.134	0.060	0.099	7.524994	60.151139	-2003.23	496.85

## 2.4 Star Slots

### 2.4.1 Slot 3

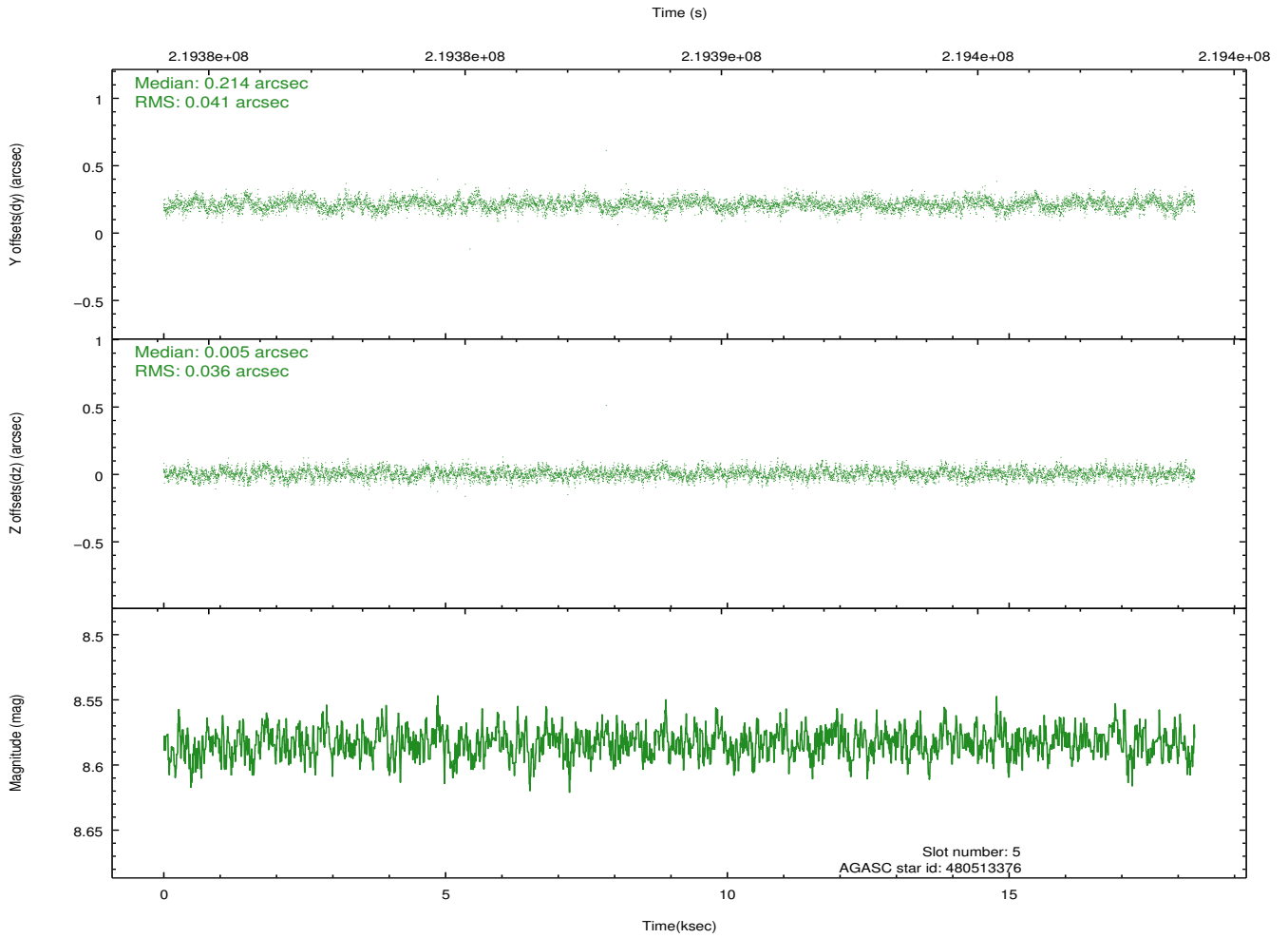
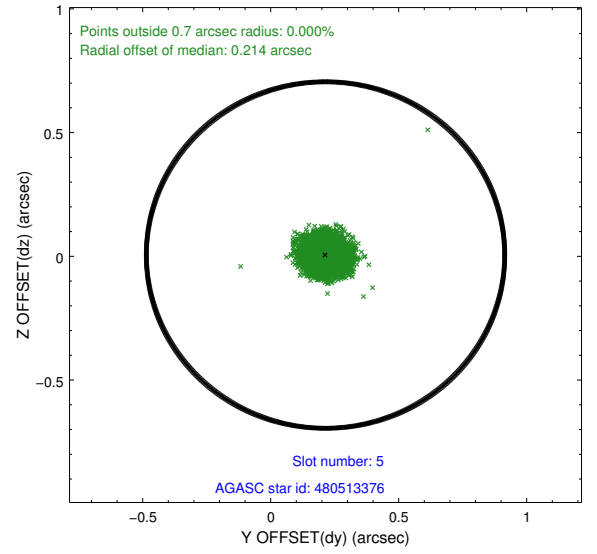
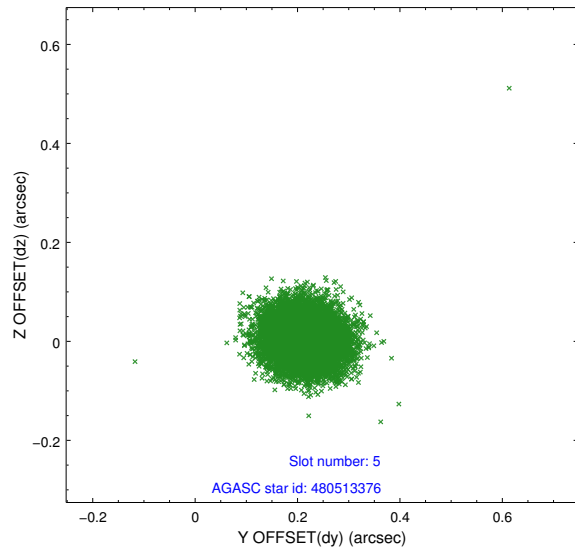


## 2.4.2 Slot 4

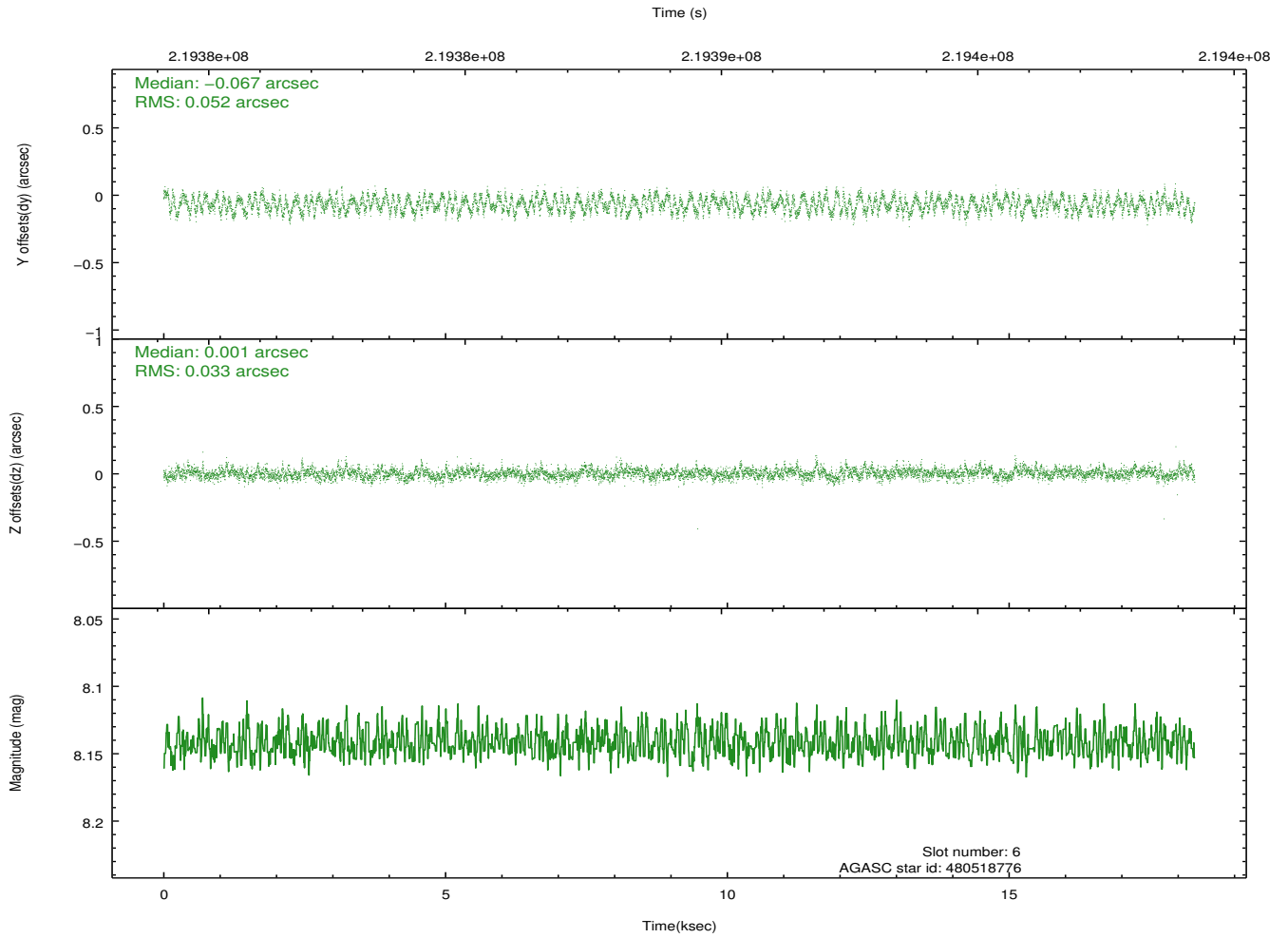
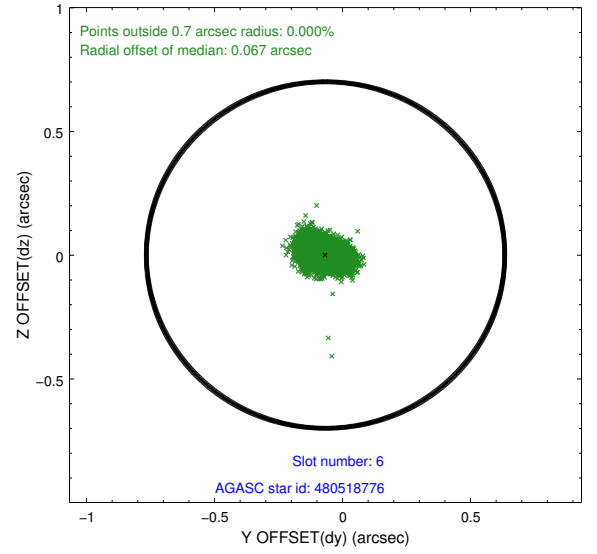
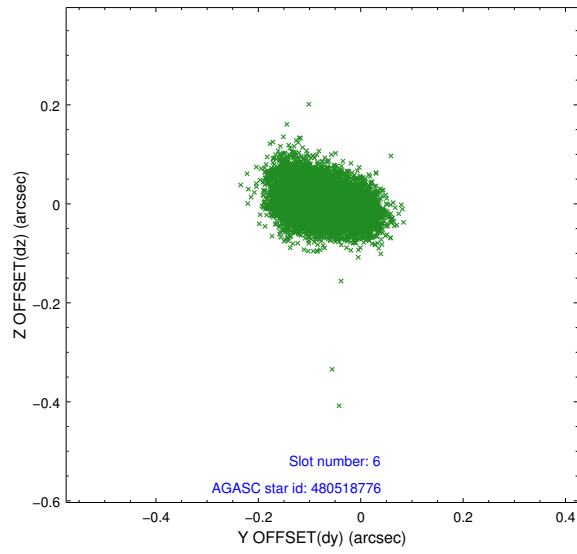




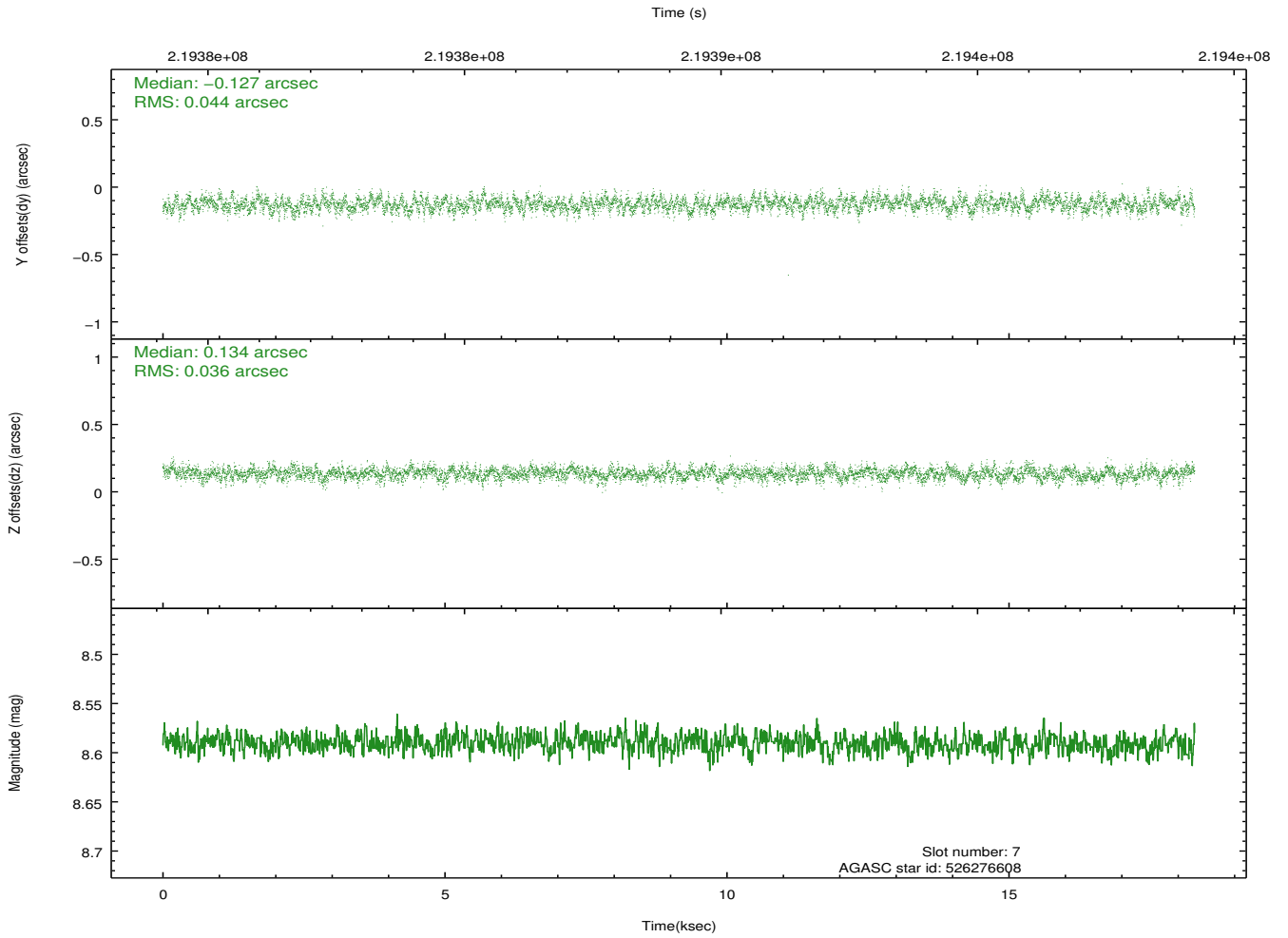
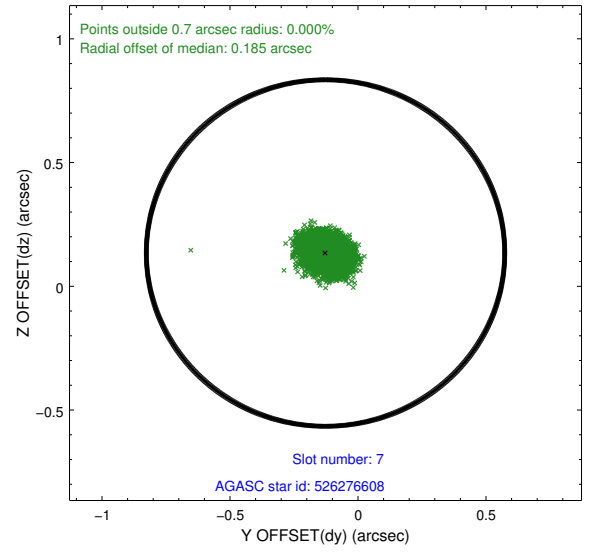
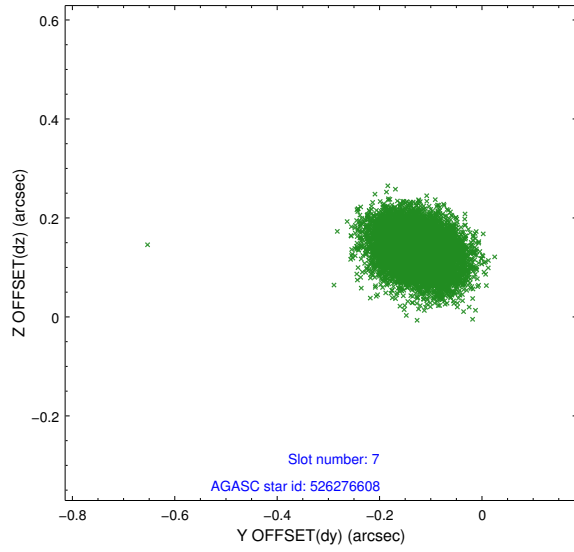
### 2.4.3 Slot 5



## 2.4.4 Slot 6

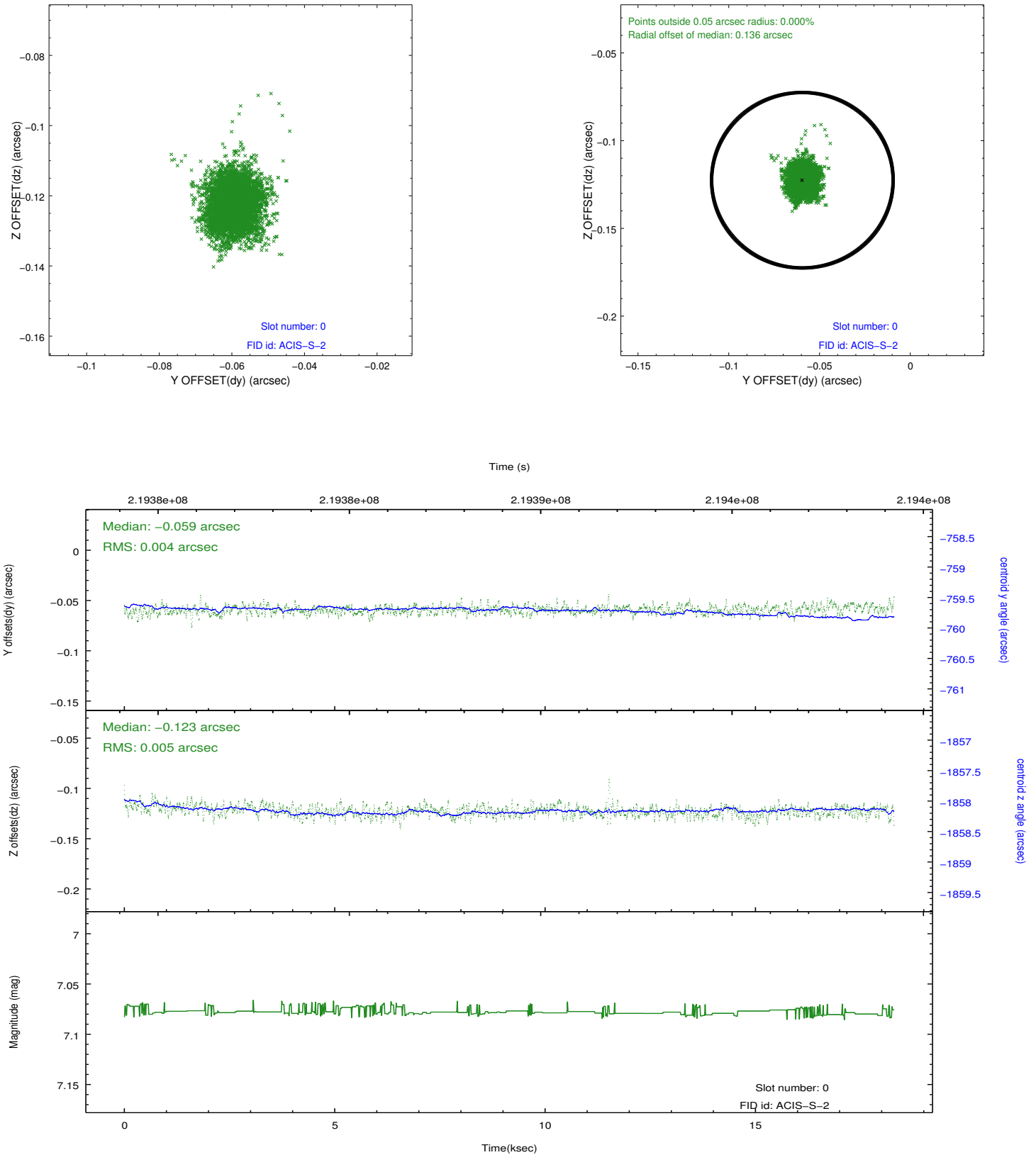


### 2.4.5 Slot 7

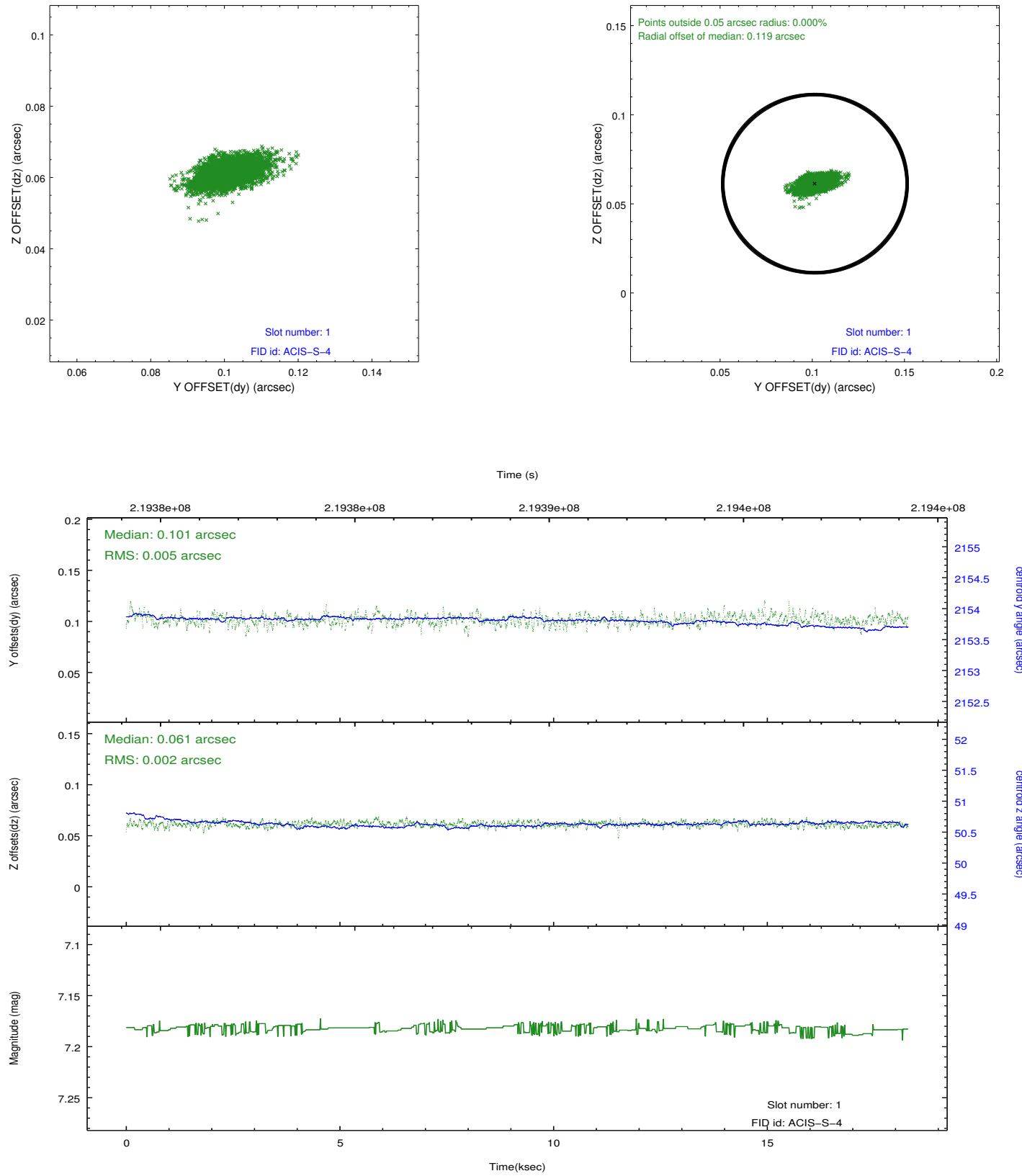


## 2.5 FID Slots

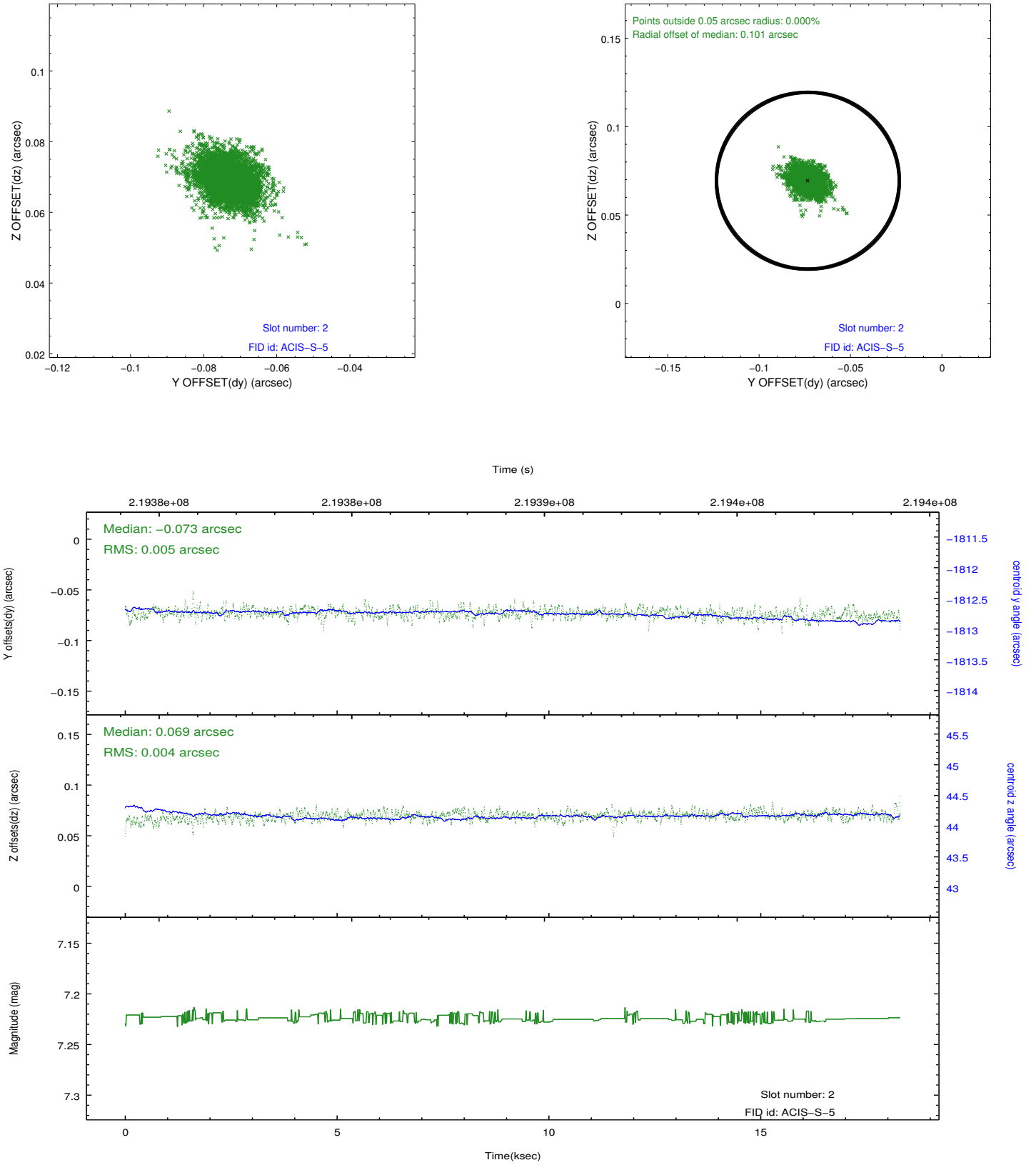
### 2.5.1 Slot 0



## 2.5.2 Slot 1

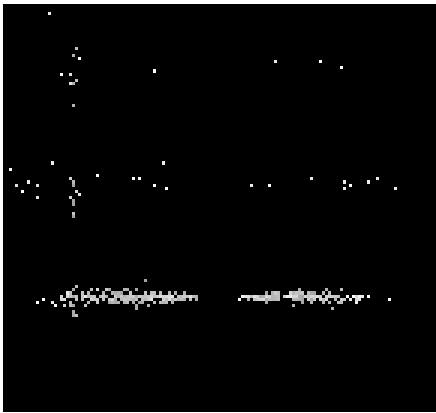


### 2.5.3 Slot 2

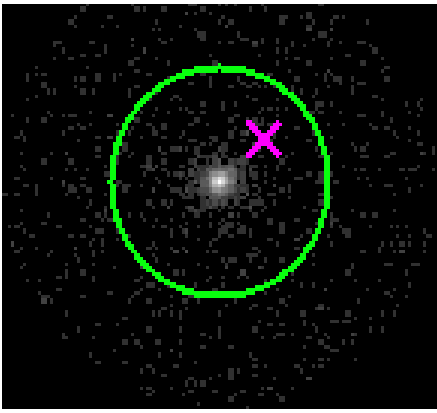


# 3 Gratings

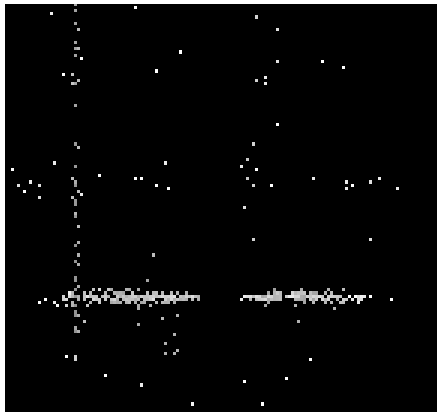
## 3.1 HEG Arm



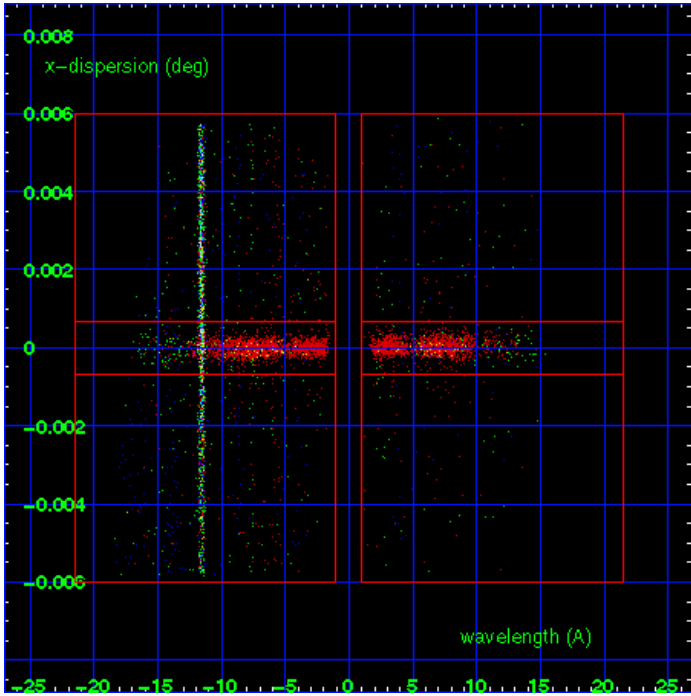
HEG Order Sort 123



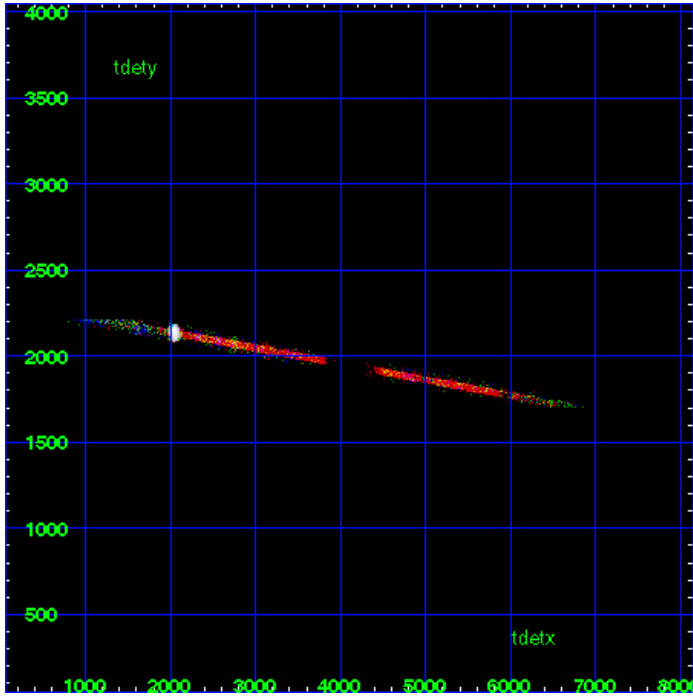
HEG Zero Order



HEG Order Sort ALL

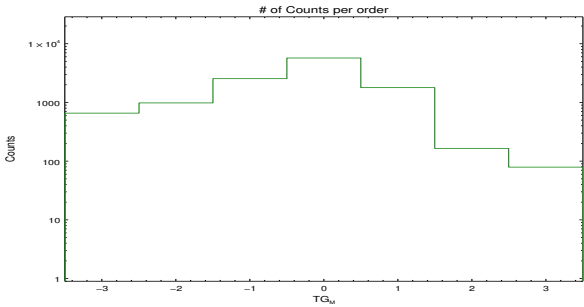


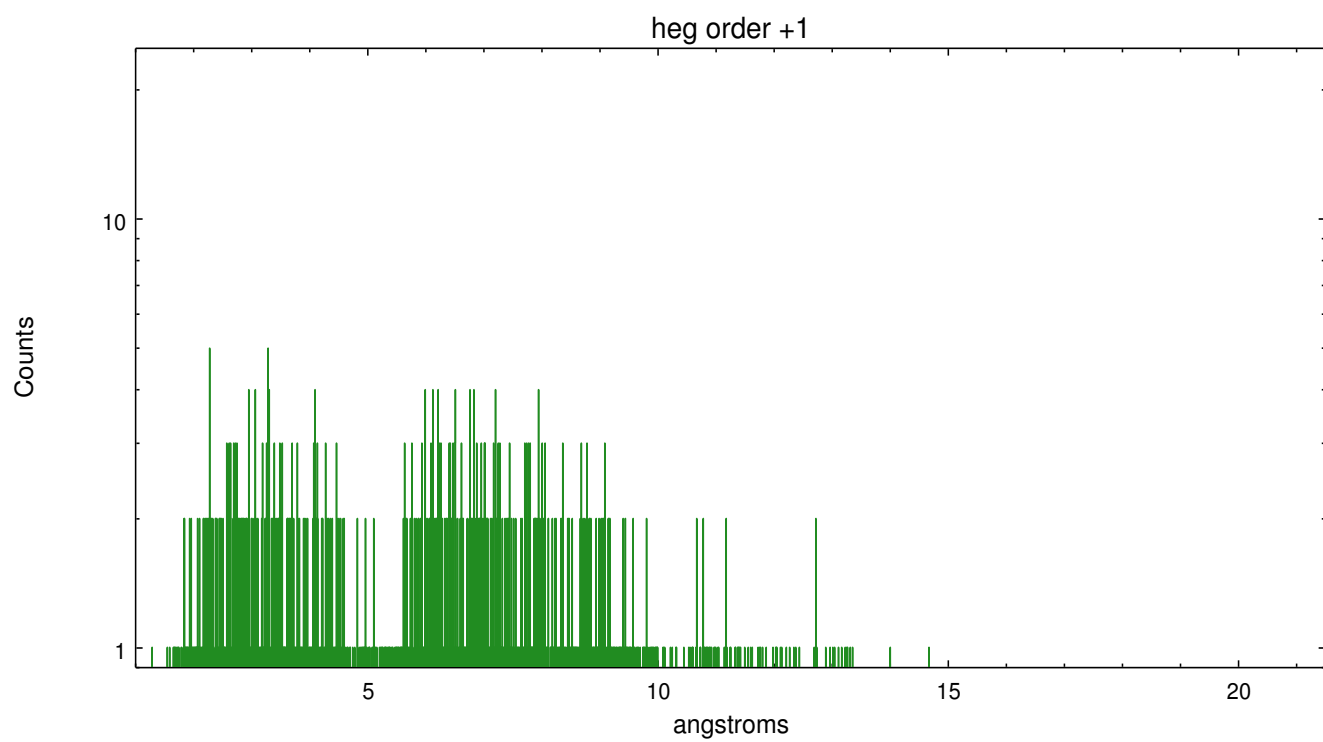
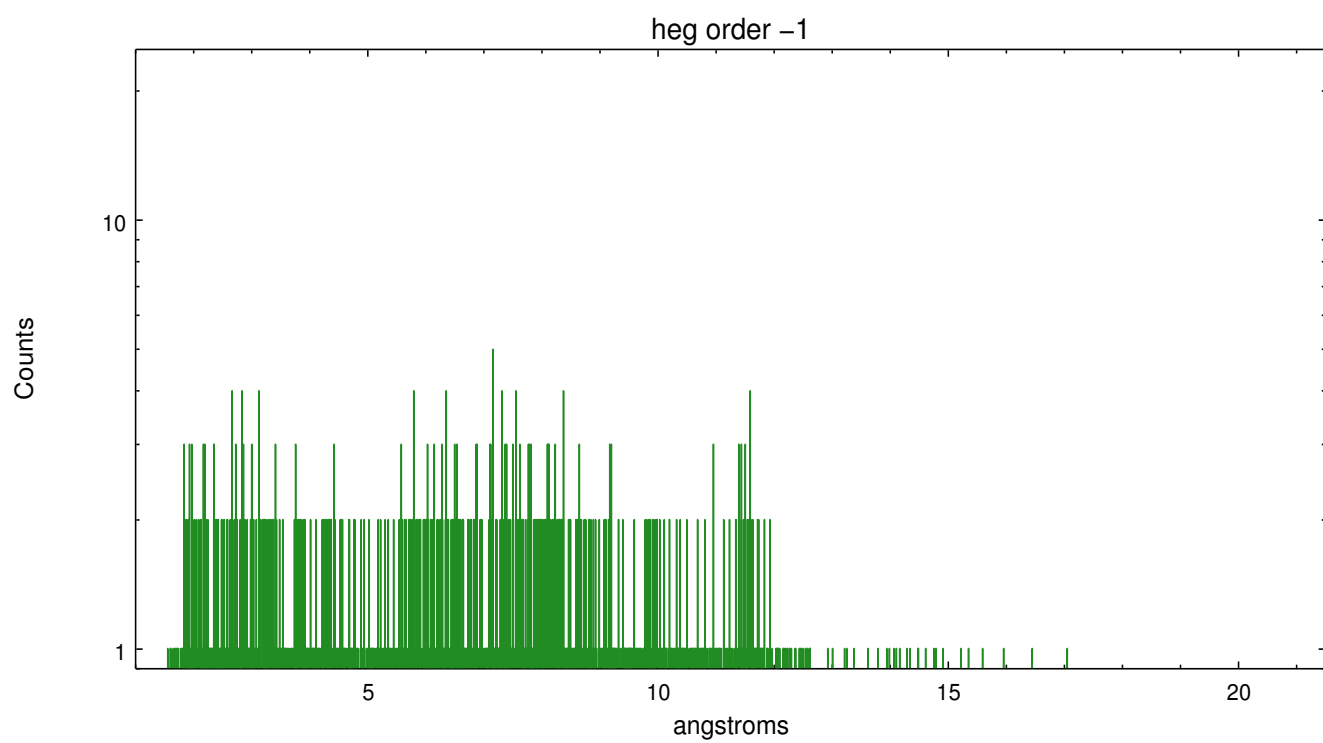
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	659	985	2555	5747	1796	165	79



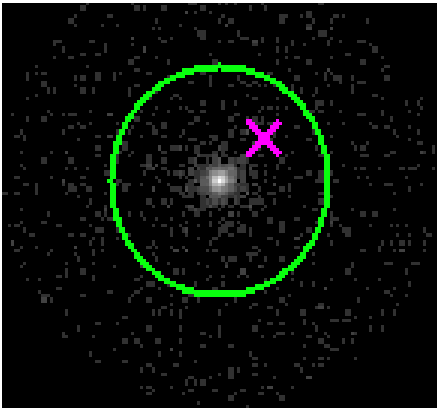




3.2 MEG Arm



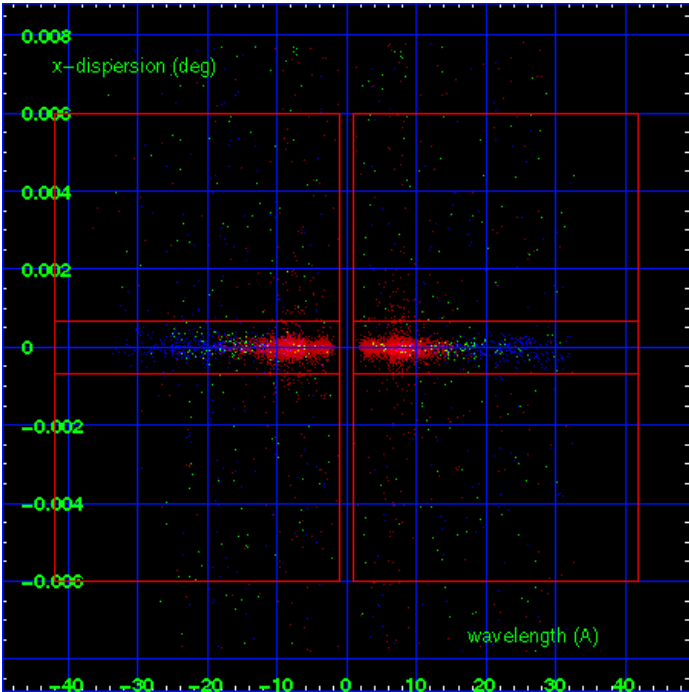
MEG Order Sort 123



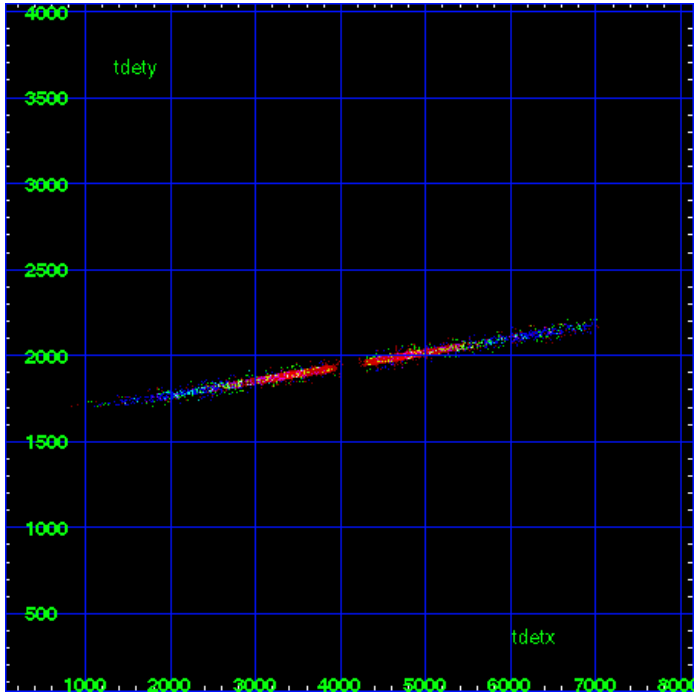
MEG Zero Order



MEG Order Sort ALL

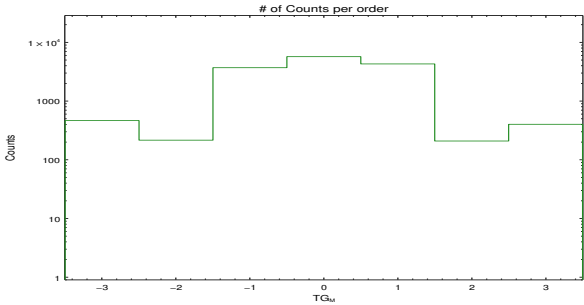


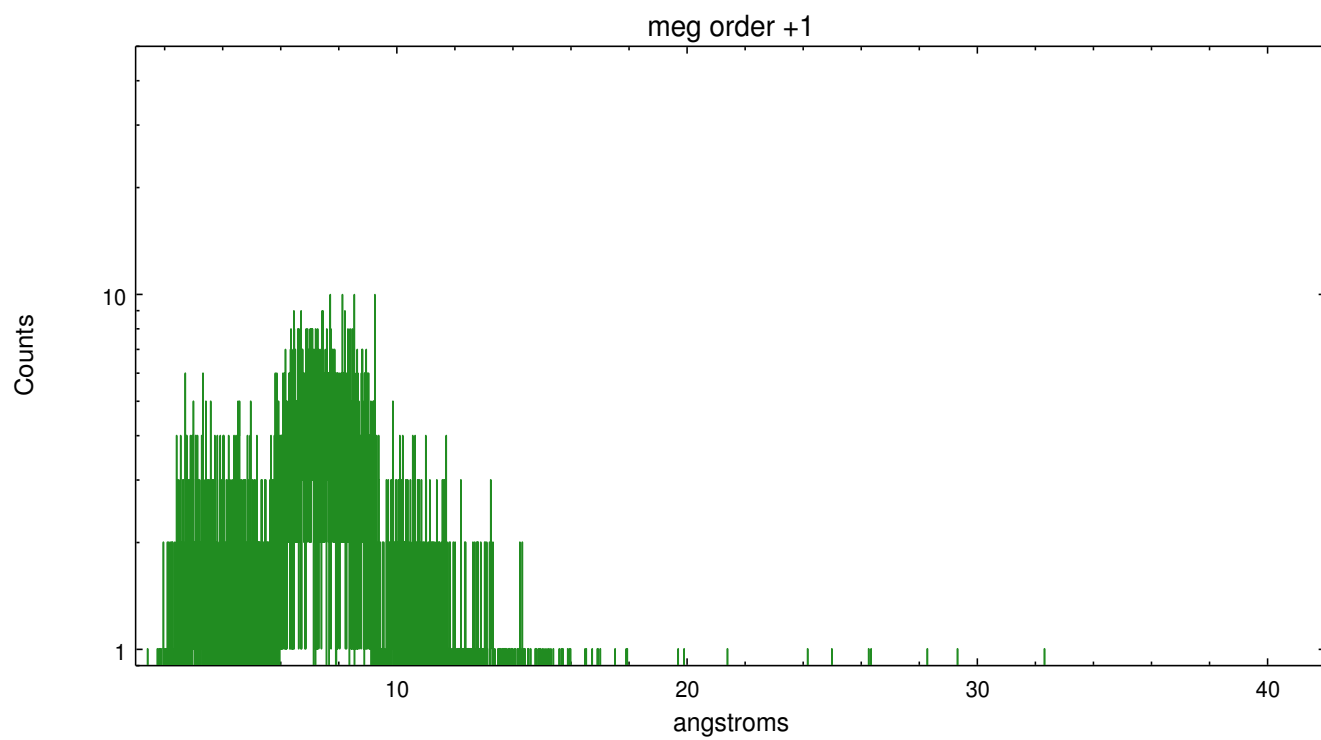
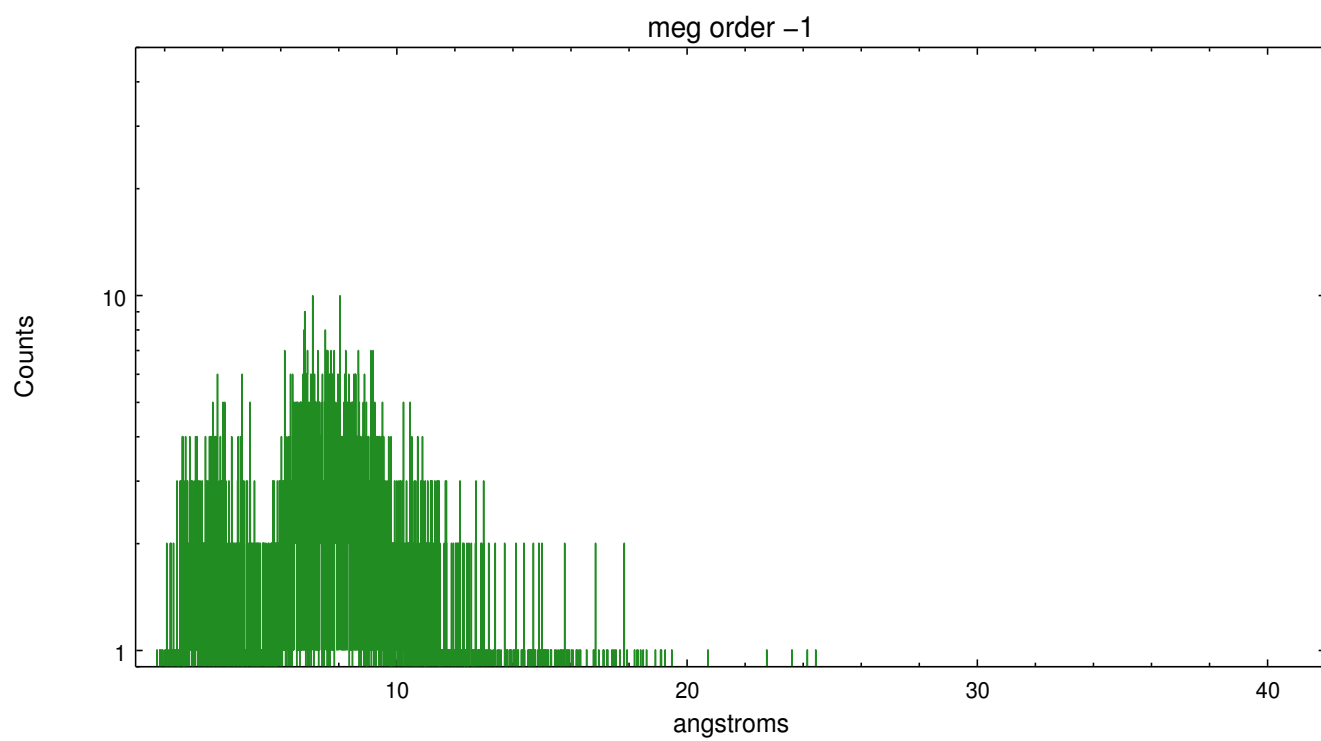
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	466	216	3725	5747	4320	209	403





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.07099

## A.2 Comments

Very off-axis serendipitous source falls on minus side of the HEG grating arms. There is contamination from this source in the extracted spectrum for the minus HEG orders. There may also be background contamination in the HEG minus arm.