

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 7280 - L2 Version 2  
Chandra X-Ray Center

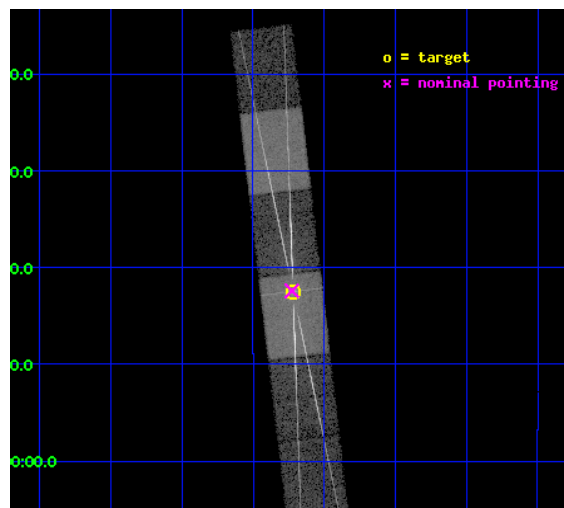
L2 Processing Date : Mar 26 2012

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# 1 Front

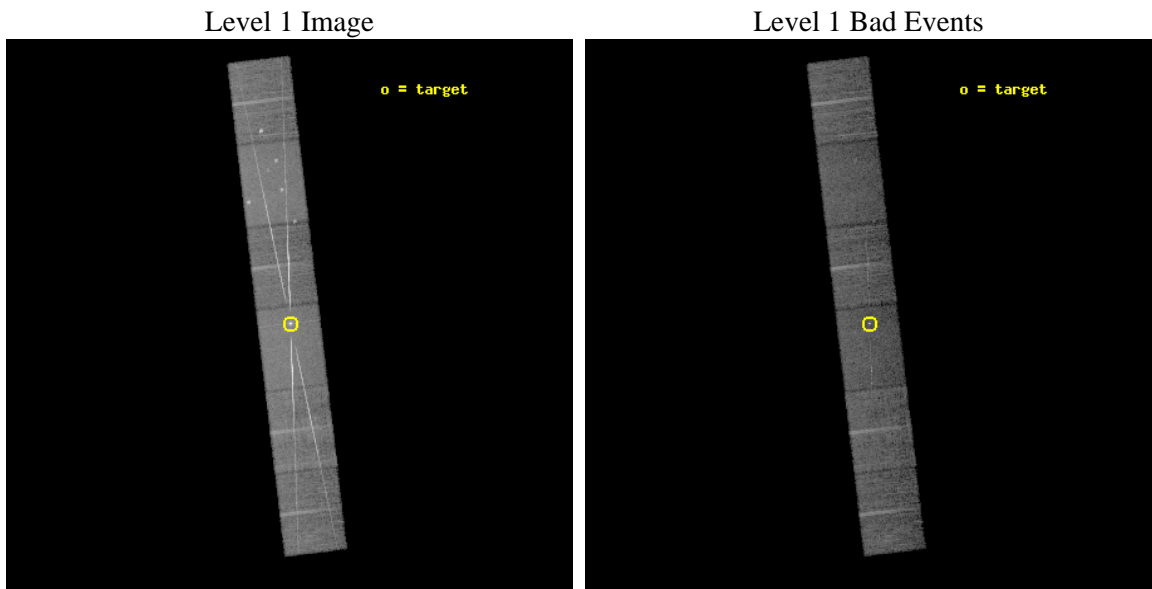
seq_num	300172	Sequence number
obs_id	7280	Observation id
title	CHANDRA Observations of RS Oph a Recurrent Symbiotic Nova in Outburst	Proposal title
observer	Regents' Professor Sumner Starrfield	Principal investigator
object	RS Oph	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.555	Observer's specified target RA [deg]
dec_targ	-6.707917	Observer's specified target Dec [deg]
ra_nom	267.55680390866	Nominal RA [deg]
dec_nom	-6.7068428472594	Nominal Dec [deg]
roll_nom	83.241889236247	Nominal Roll [deg]
revision	2	Processing version of data
ontime	10075.0	Sum of GTIs [s]
livetime	9912.2800113339	Livetime [s]
ontime4	10075.0	Sum of GTIs [s]
ontime5	10075.0	Sum of GTIs [s]
ontime6	10075.0	Sum of GTIs [s]
ontime7	10075.0	Sum of GTIs [s]
ontime8	10075.0	Sum of GTIs [s]
ontime9	10075.0	Sum of GTIs [s]
l2events	241167	Number of level 2 events



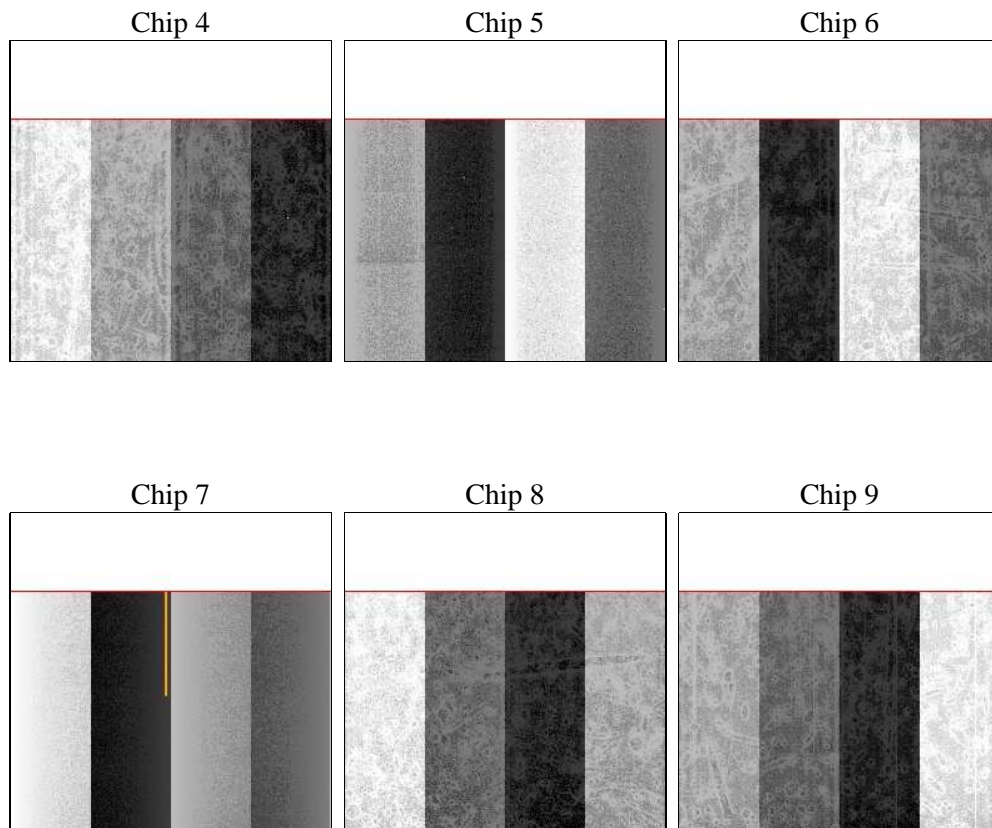
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	10075.0	Sum of GTIs [s]
caldsver	4.4.8	&#160	ontime4	10075.0	Sum of GTIs [s]
date	2012-03-26T06:34:59	Date and time of file creation	ontime5	10075.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	10075.0	Sum of GTIs [s]
			ontime7	10075.0	Sum of GTIs [s]
			ontime8	10075.0	Sum of GTIs [s]
			ontime9	10075.0	Sum of GTIs [s]
			l1events	630590	Number of level 1 events

### 2.1.4 Events

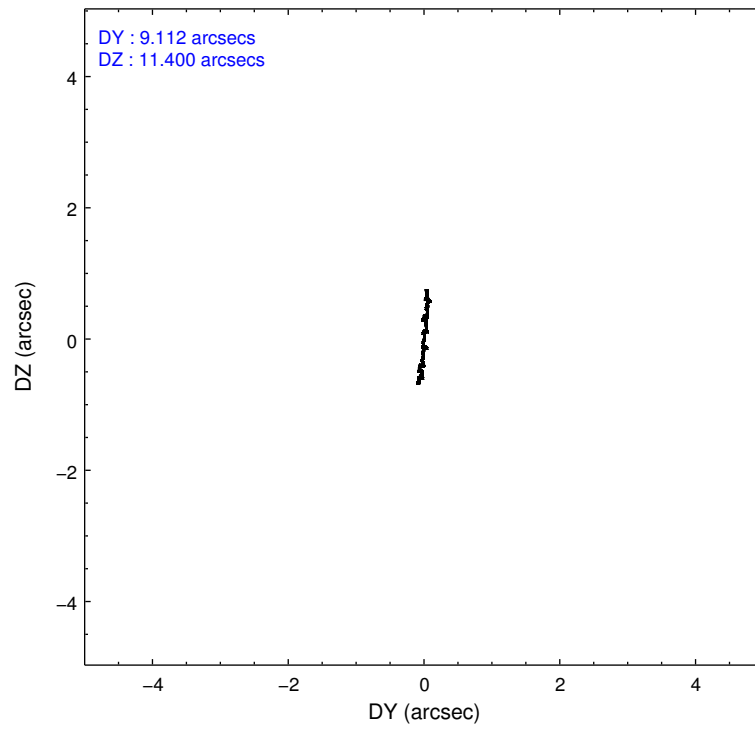
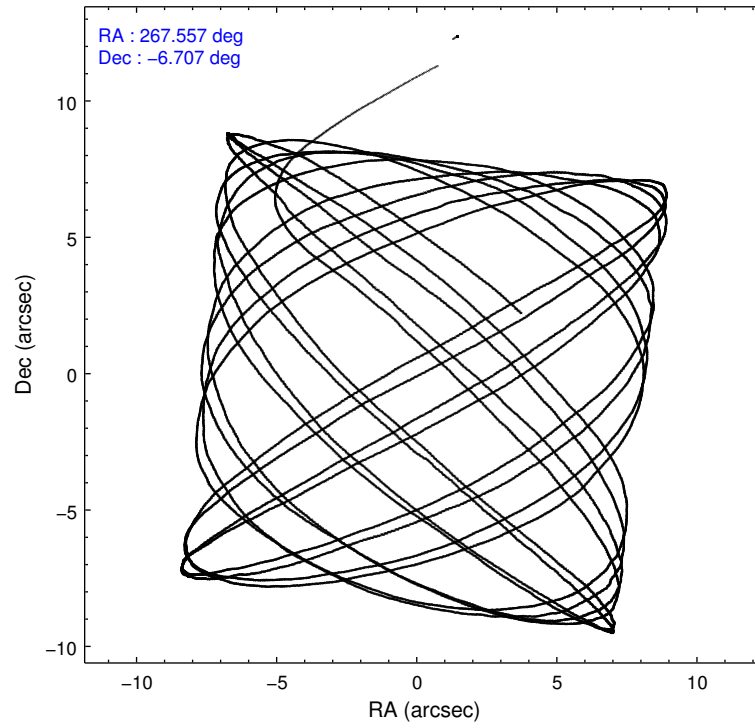
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	80645	114851	116241	141823	107803	69227	grade 0 events	8414	11910	40966	14861	23156	7021
rejected events	66909	53788	60357	54349	67746	56594		10%	10%	35%	10%	21%	10%
rejected %	82%	46%	51%	38%	62%	81%	grade 1 events	79	259	386	332	154	51
								0%	0%	0%	0%	0%	0%
							grade 2 events	2084	16968	6950	20209	6333	2083
								2%	14%	5%	14%	5%	3%
							grade 3 events	980	3306	2579	9286	2581	973
								1%	2%	2%	6%	2%	1%
							grade 4 events	934	3158	2530	9207	2566	957
								1%	2%	2%	6%	2%	1%
							grade 5 events	2959	7803	3304	9529	4052	3252
								3%	6%	2%	6%	3%	4%
							grade 6 events	1334	25753	2893	33952	5429	1605
								1%	22%	2%	23%	5%	2%
							grade 7 events	63861	45694	56633	44447	63532	53285
								79%	39%	48%	31%	58%	76%

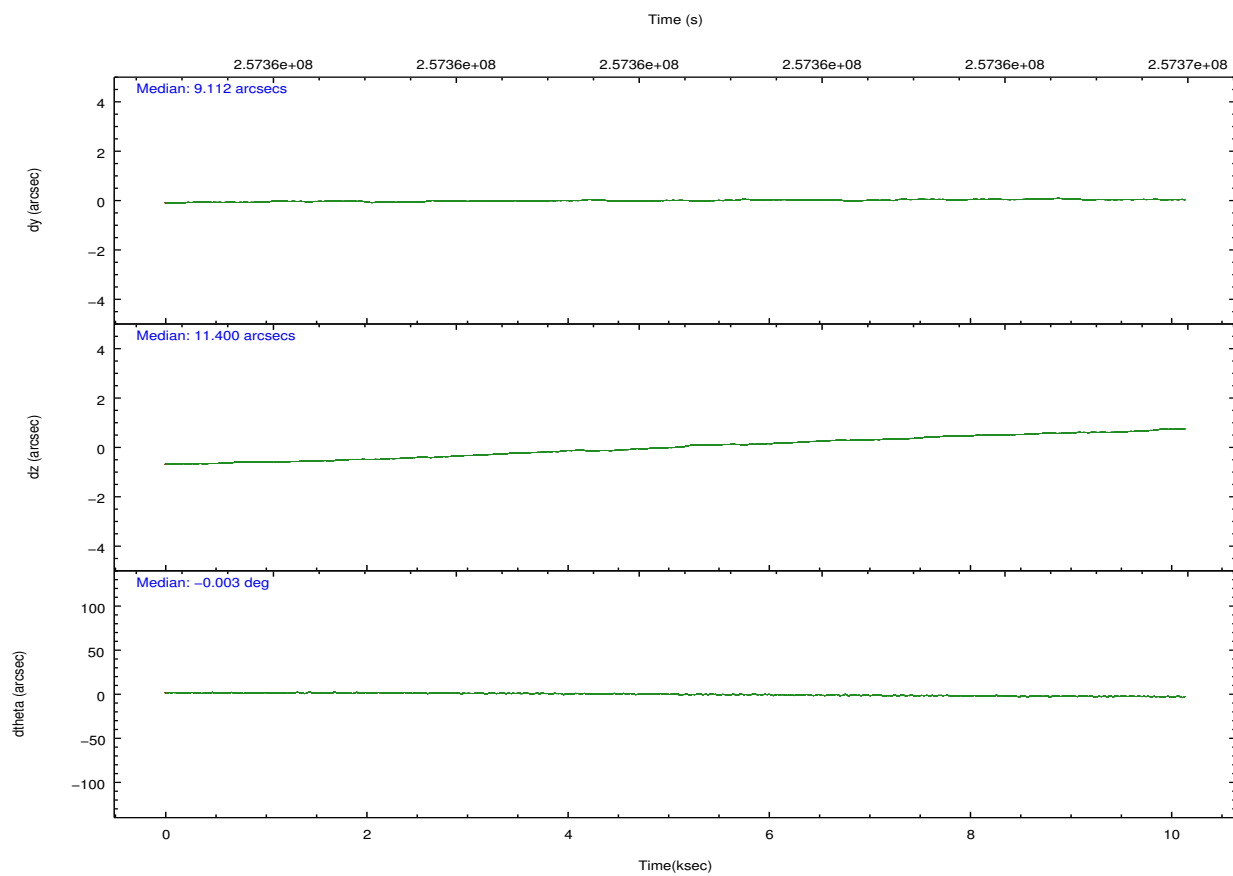
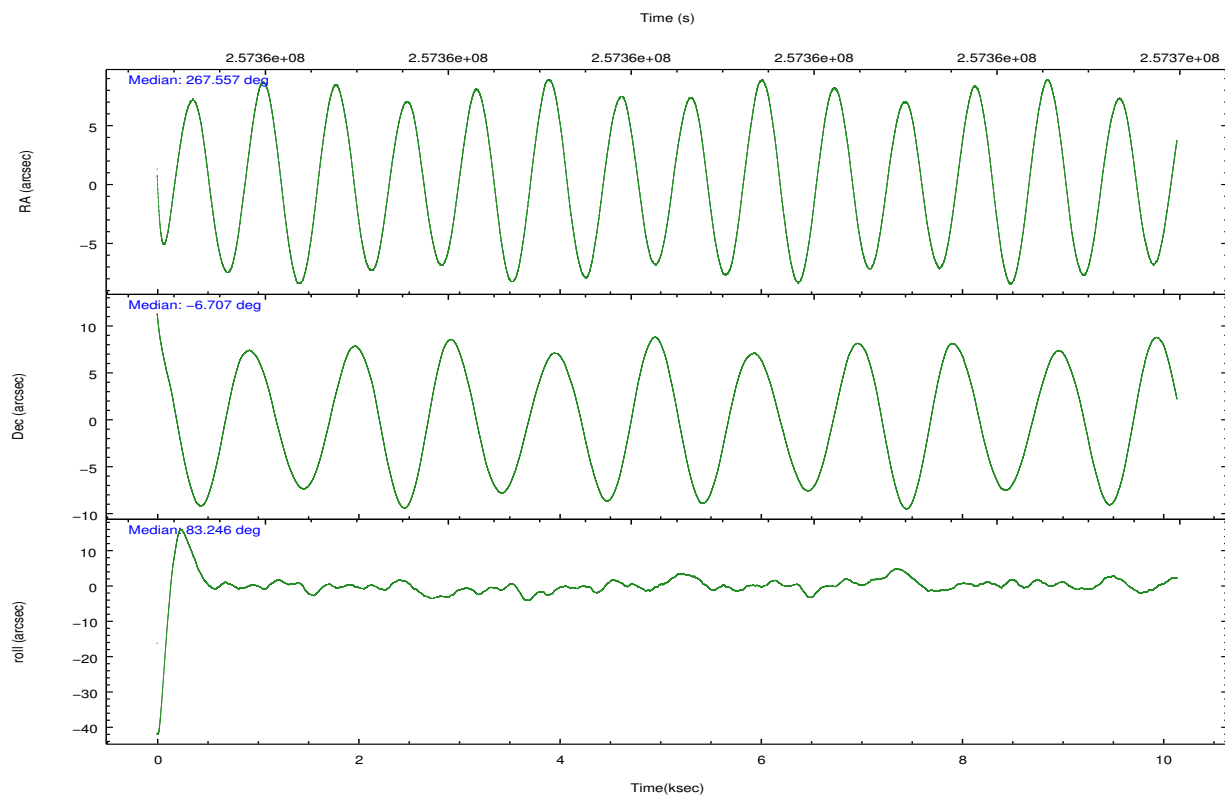


## 2.2 Compared Parameters

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	267.567982	267.5568039086646	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-6.731751	-6.706842847259427	Subarray start row	1	1
[deg] Pointing Roll	83.086644	83.24188923624695	Subarray row count	774	774
[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	2.5
[mm] SIM translation stage pos	-187.132523	-187.1254020033014			
[mm] SIM translation stage offset	-3	-3.007120579706367			
[s] Observation start time (MET)	257355460.184000	257354394.41798			
Observation start date	2006-02-26T15:36:35	2006-02-26T15:19:54			
[s] Observation end time (MET)	257365460.184000	257366896.85606			
Observation end date	2006-02-26T18:23:15	2006-02-26T18:48:16			
Read mode	TIMED	TIMED			

## 2.3 Aspect



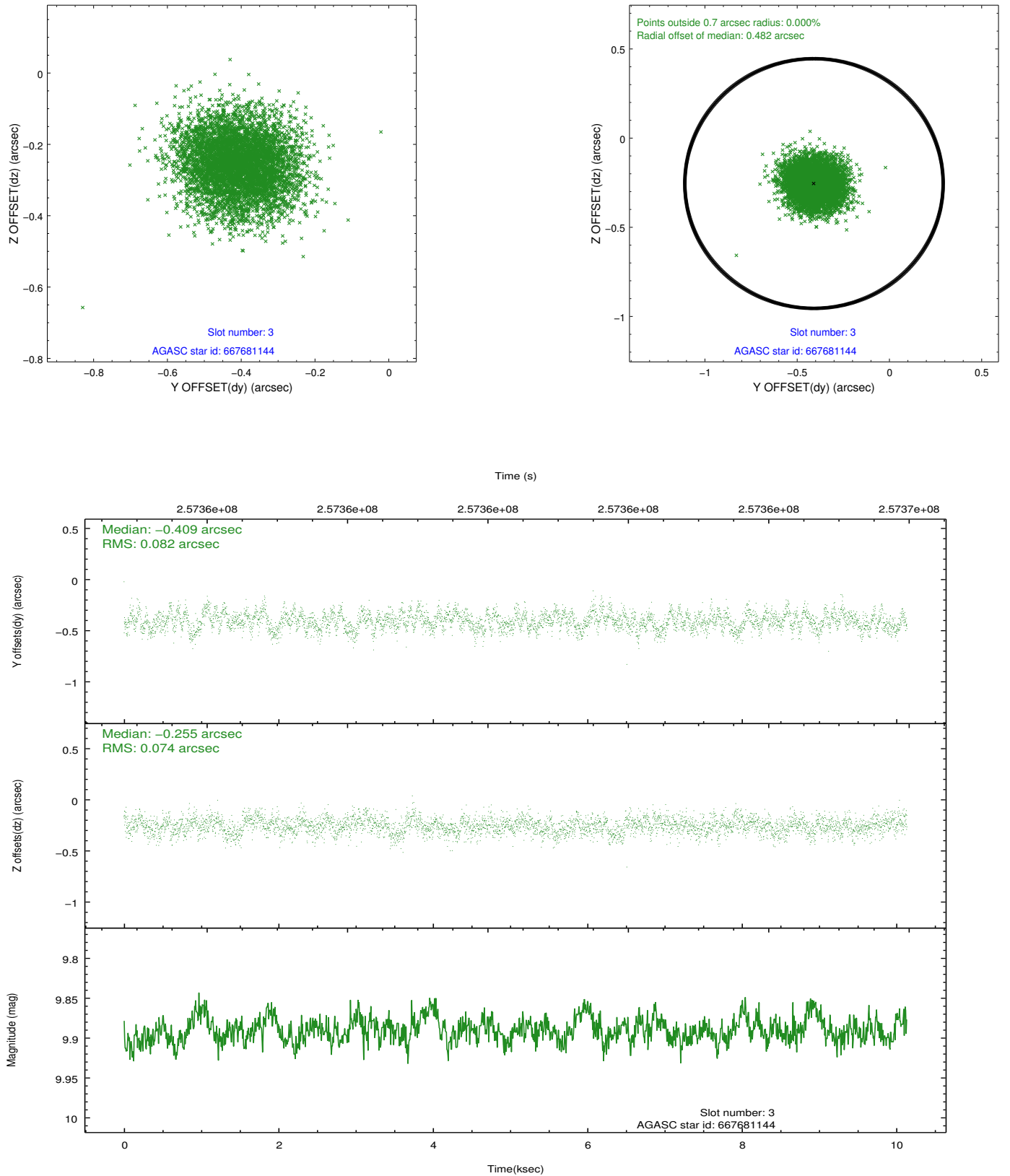


### Slot Statistics

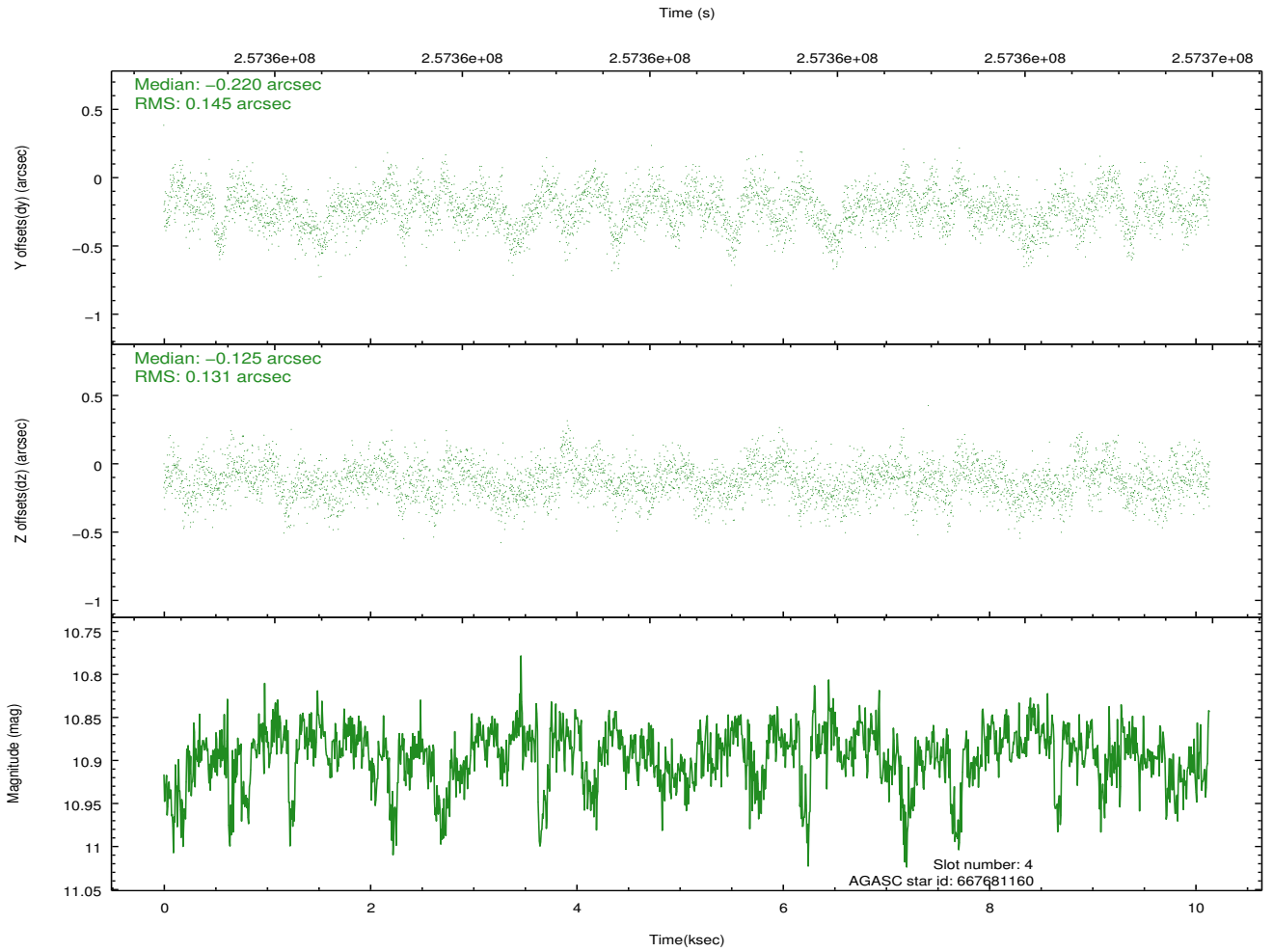
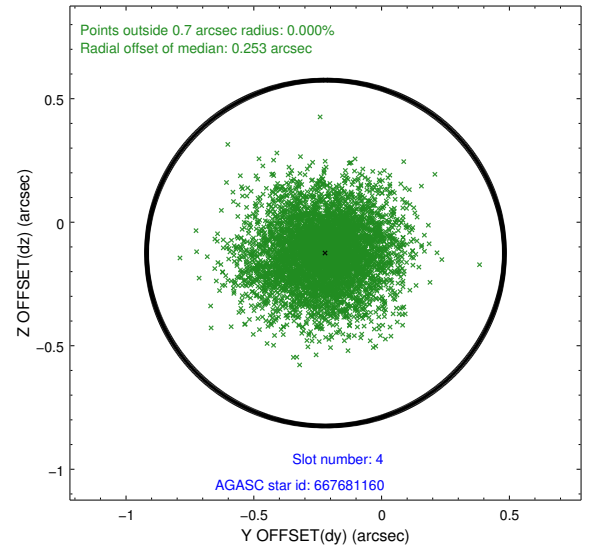
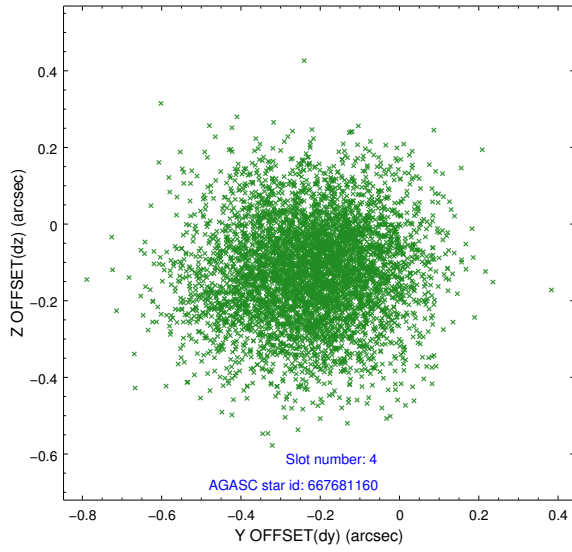
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	2473	-0.065	-0.103	0.016	0.024	0.000000	0.000000	-761.79	-1794.87
1	FID	ACIS-S-4	7.20	2473	0.173	0.059	0.012	0.019	0.000000	0.000000	2151.50	113.18
2	FID	ACIS-S-5	7.23	2473	-0.139	0.053	0.013	0.022	0.000000	0.000000	-1814.03	107.47
3	GUIDE	667681144	9.89	4939	-0.409	-0.255	0.119	0.189	267.013326	-6.291734	1332.37	2160.53
4	GUIDE	667681160	10.89	4932	-0.220	-0.125	0.208	0.339	267.471640	-6.307558	1474.56	526.24
5	GUIDE	667681352	10.48	4937	0.233	-0.140	0.176	0.291	267.279458	-7.168186	-1683.49	834.04
6	GUIDE	667681504	9.64	4942	0.197	0.191	0.135	0.215	267.752861	-6.895149	-505.02	-726.81
7	GUIDE	667683168	9.34	4943	0.200	0.338	0.094	0.162	267.624316	-7.281951	-1942.23	-437.78

## 2.4 Star Slots

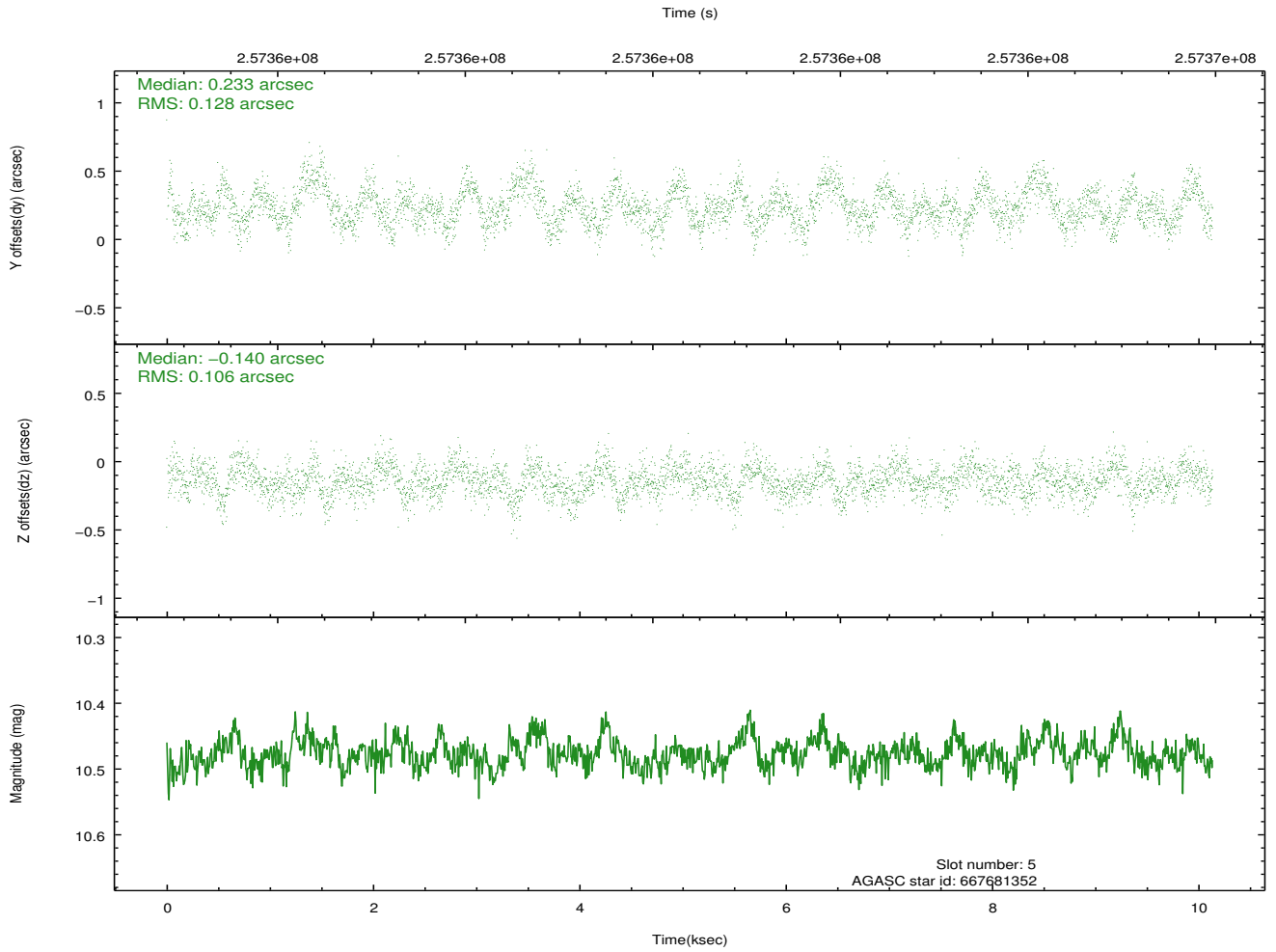
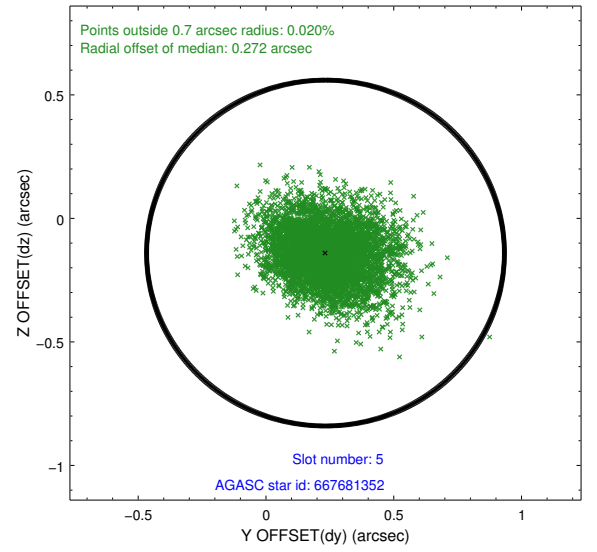
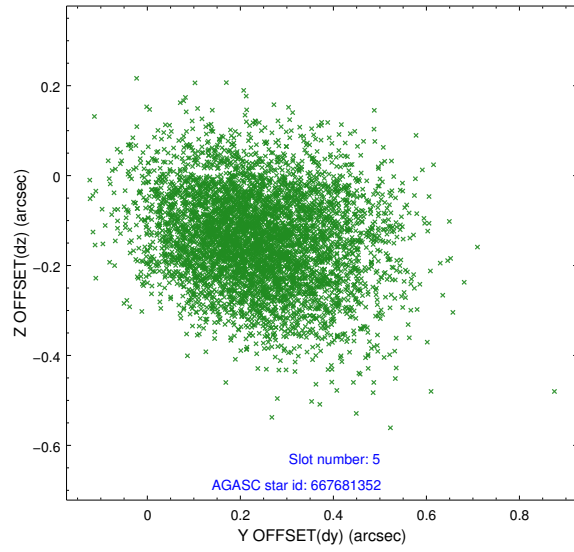
### 2.4.1 Slot 3



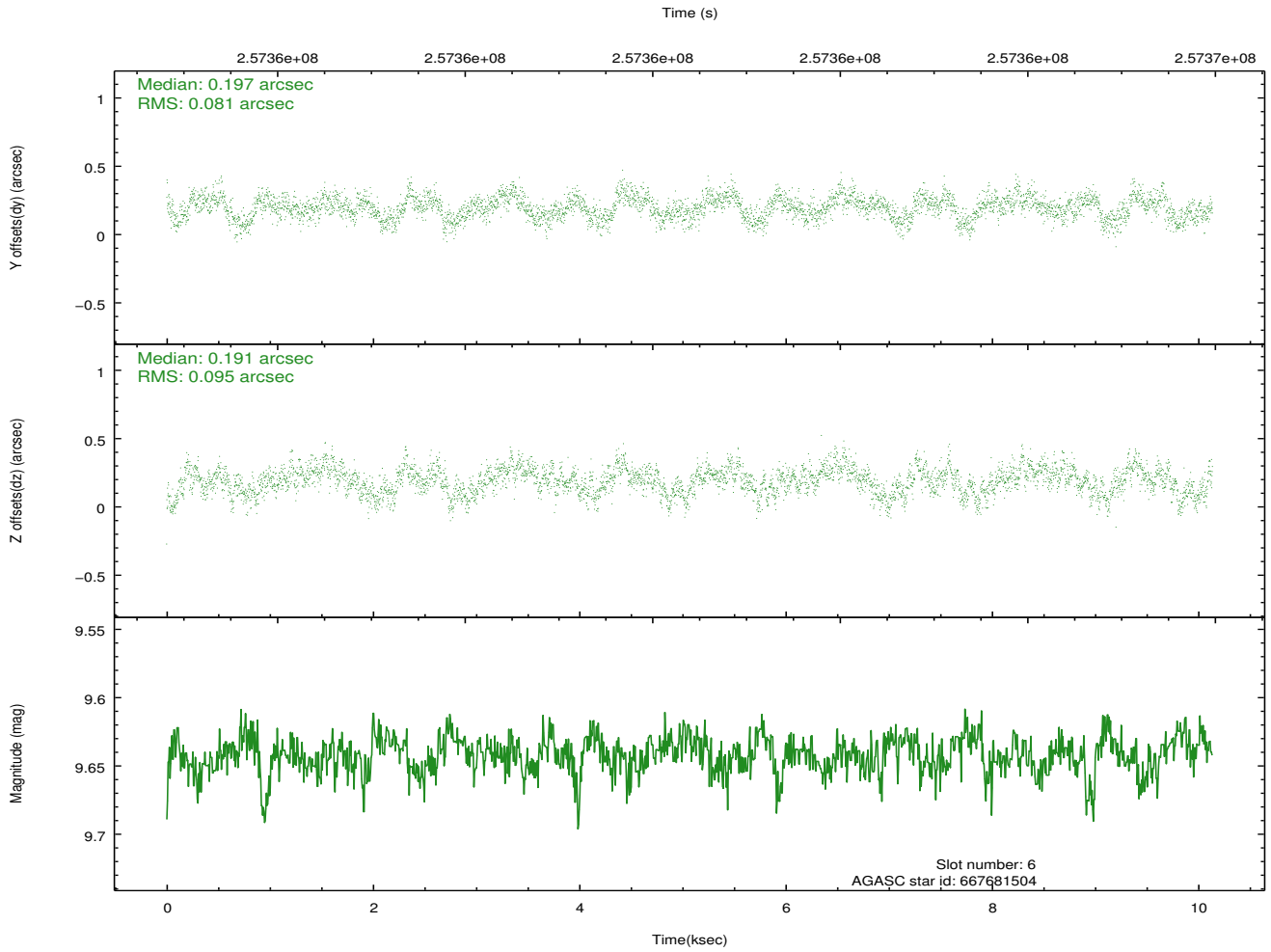
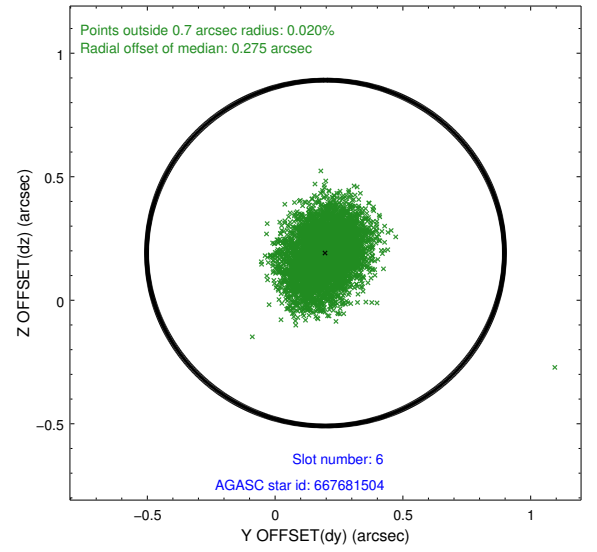
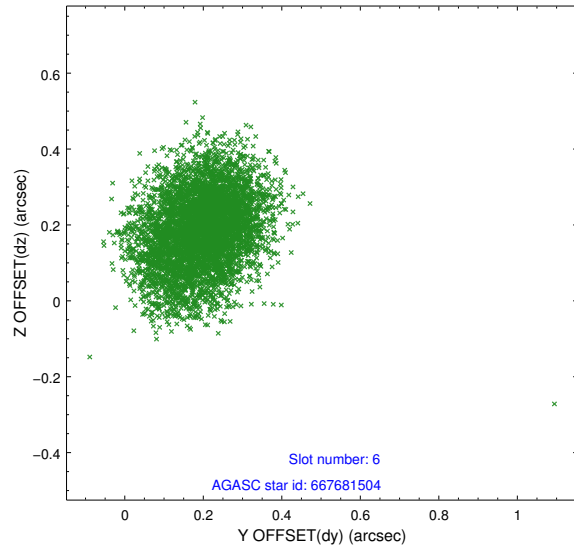
## 2.4.2 Slot 4



### 2.4.3 Slot 5

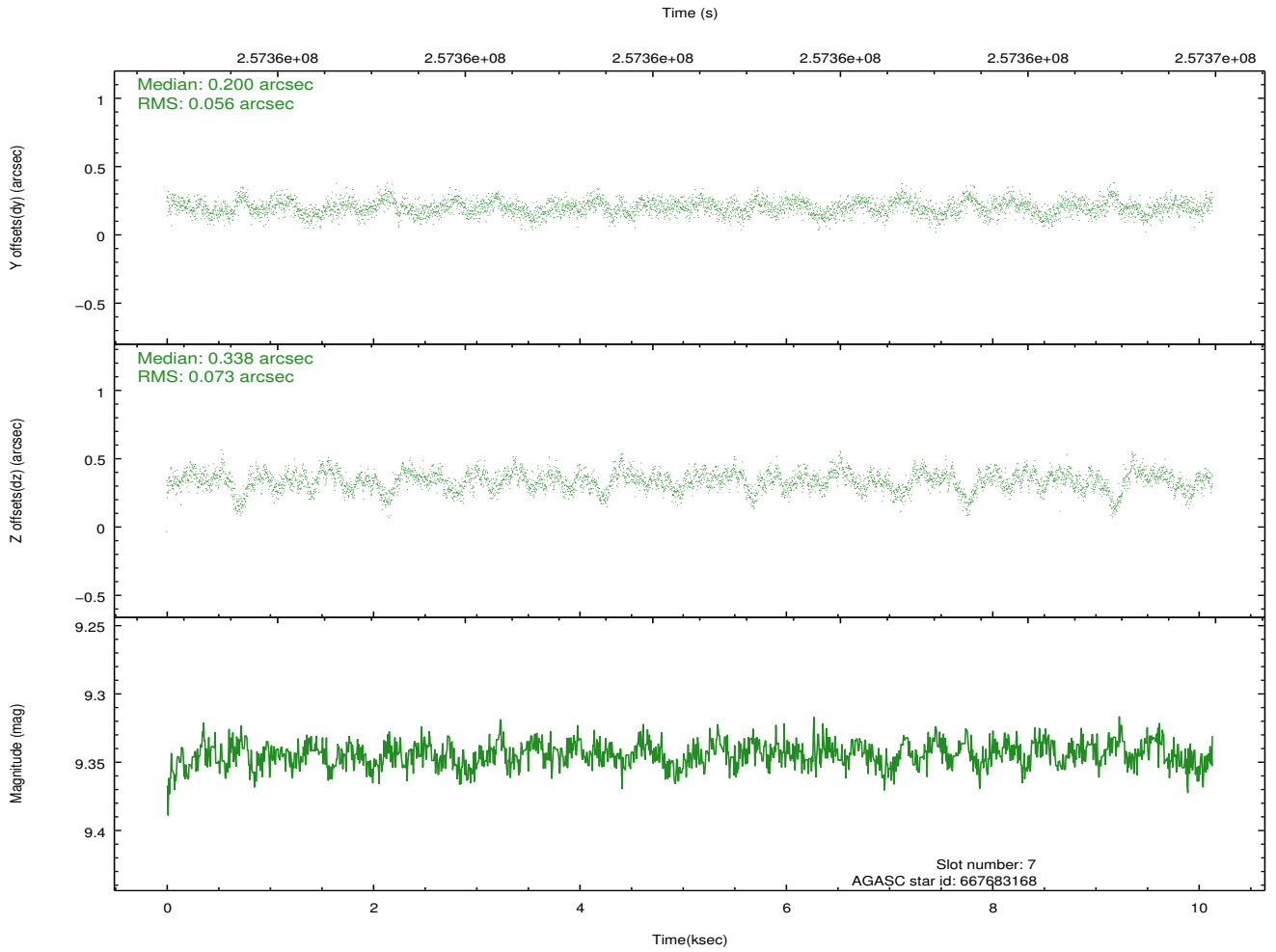
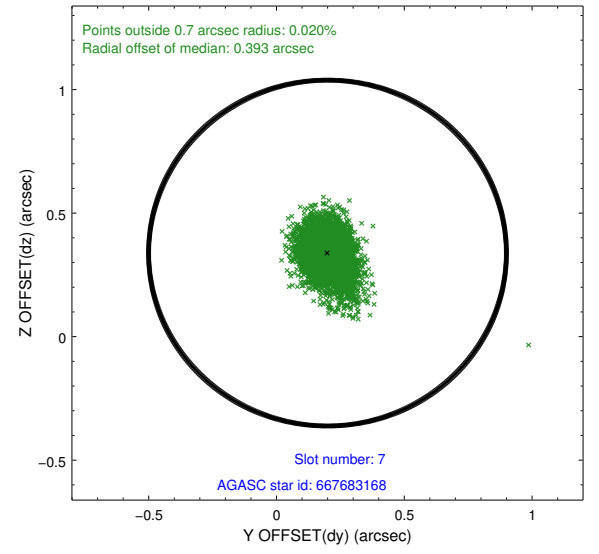
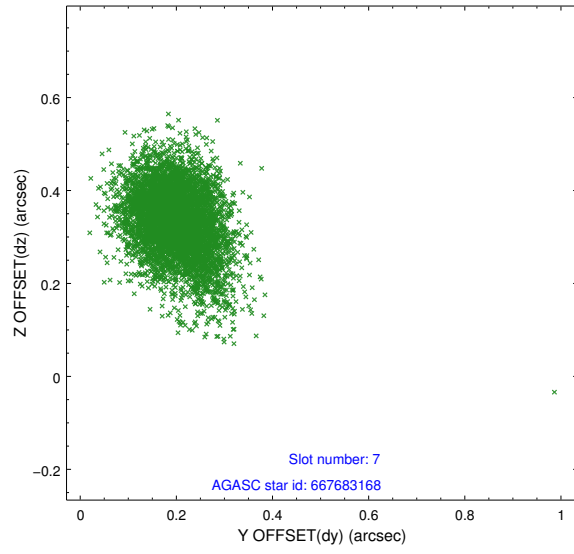


## 2.4.4 Slot 6



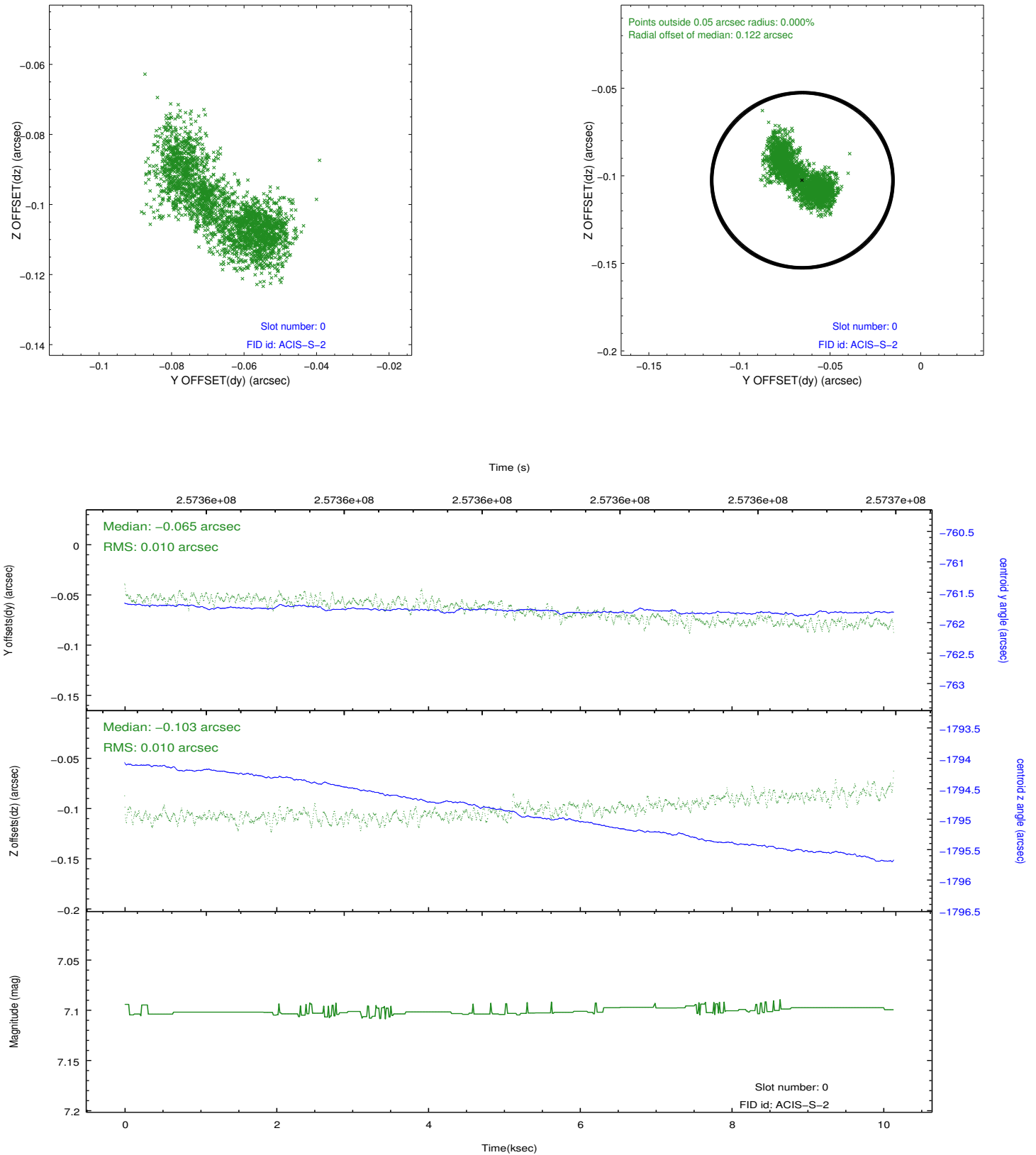


## 2.4.5 Slot 7

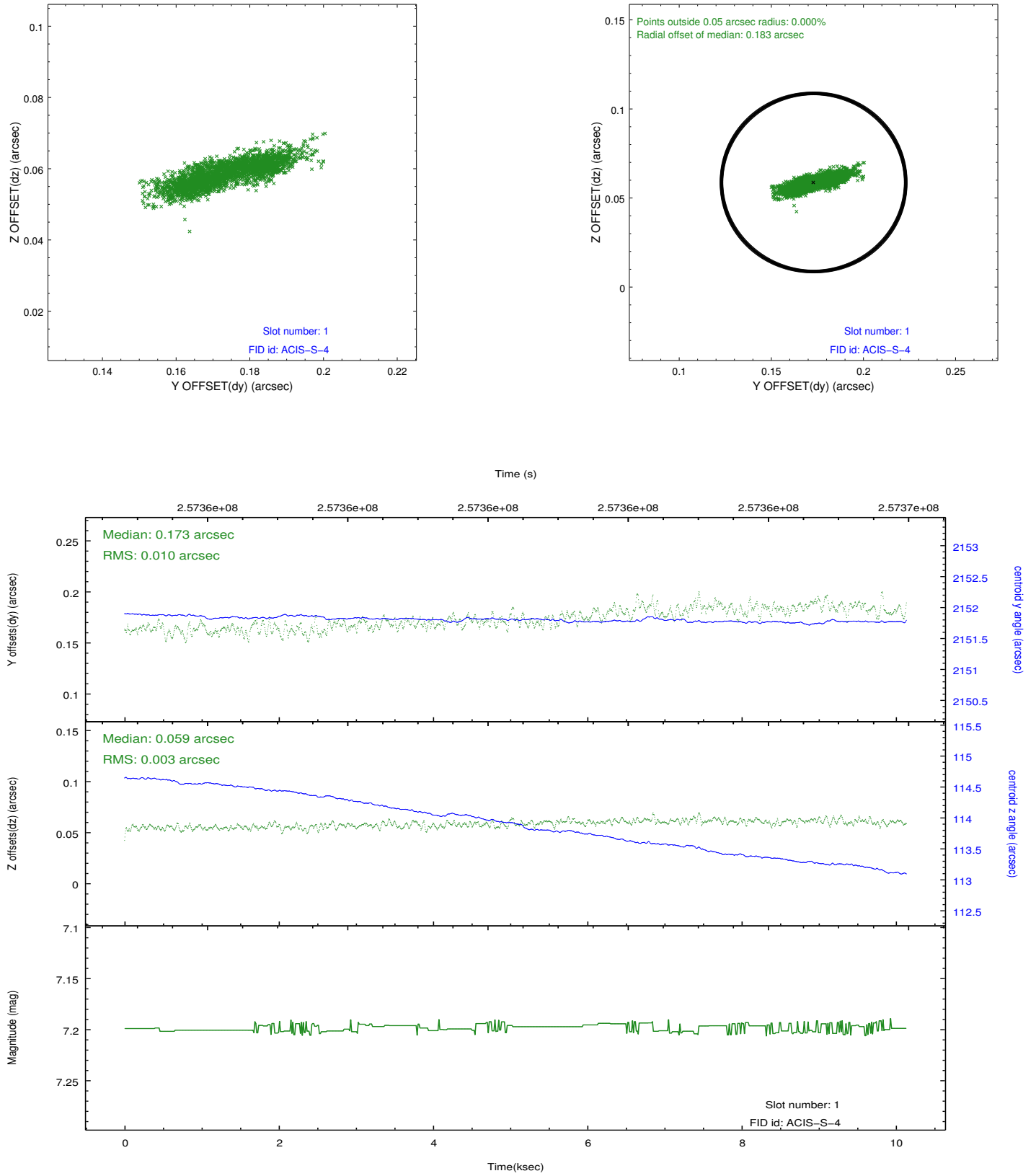


## 2.5 FID Slots

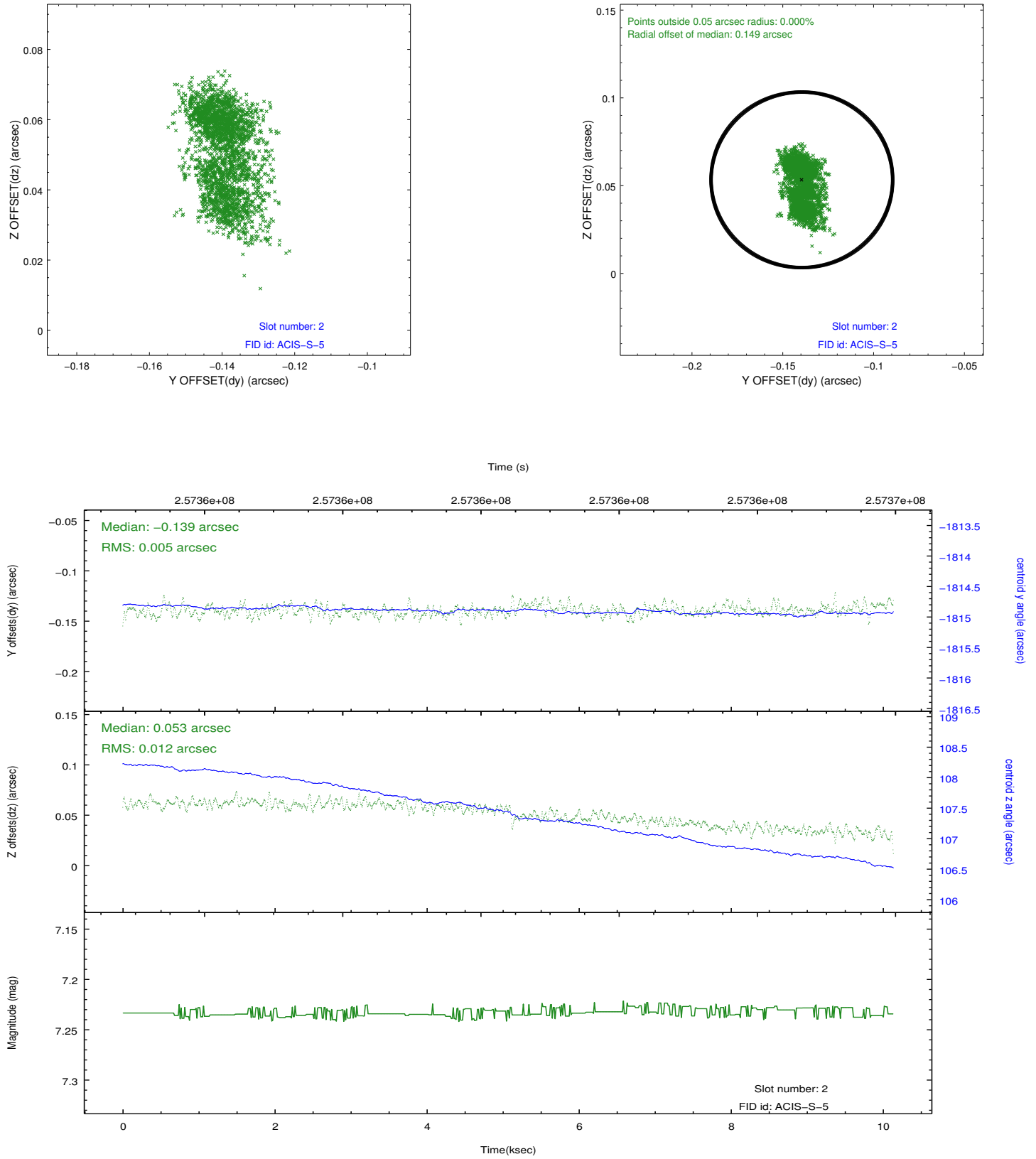
### 2.5.1 Slot 0



## 2.5.2 Slot 1

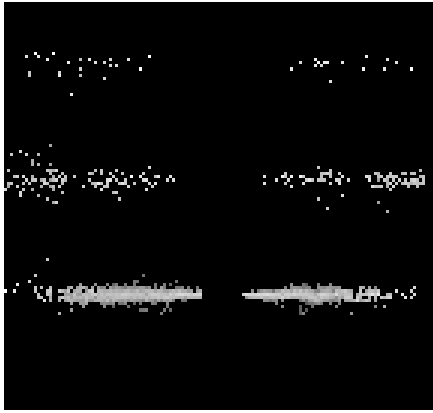


### 2.5.3 Slot 2

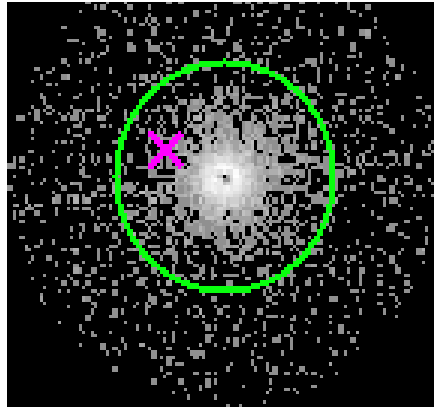


### 3 Gratings

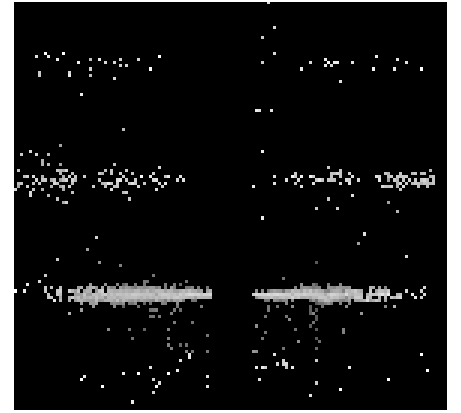
#### 3.1 HEG Arm



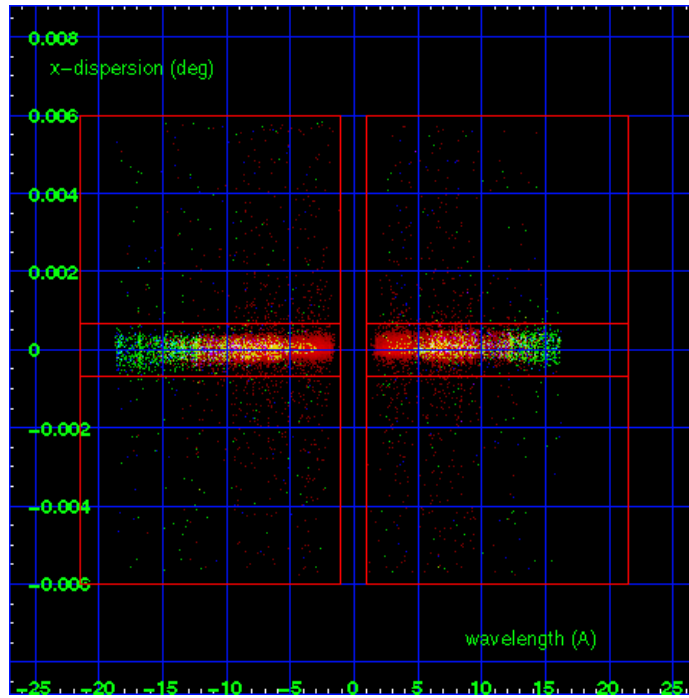
HEG Order Sort 123



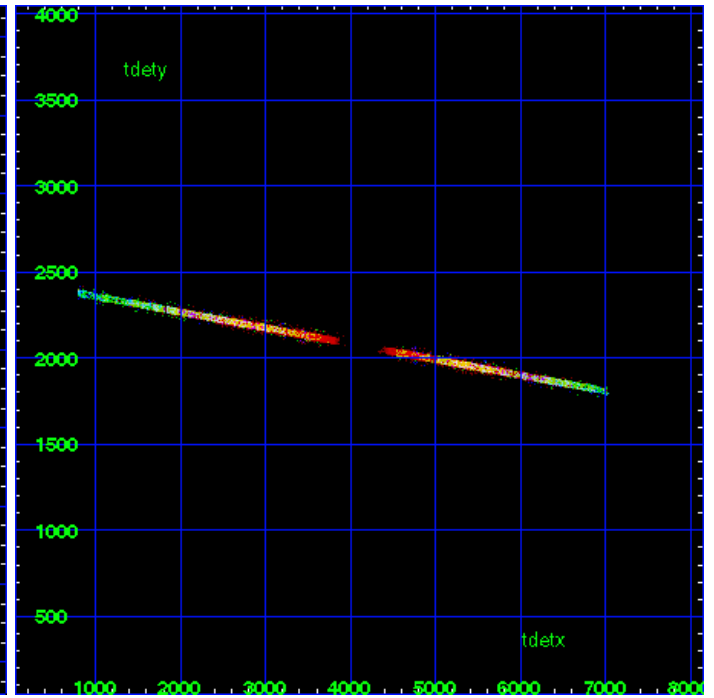
HEG Zero Order



HEG Order Sort ALL

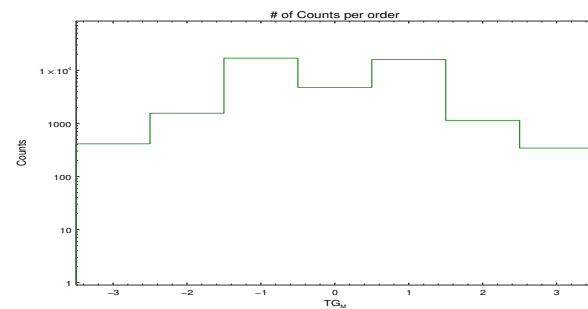


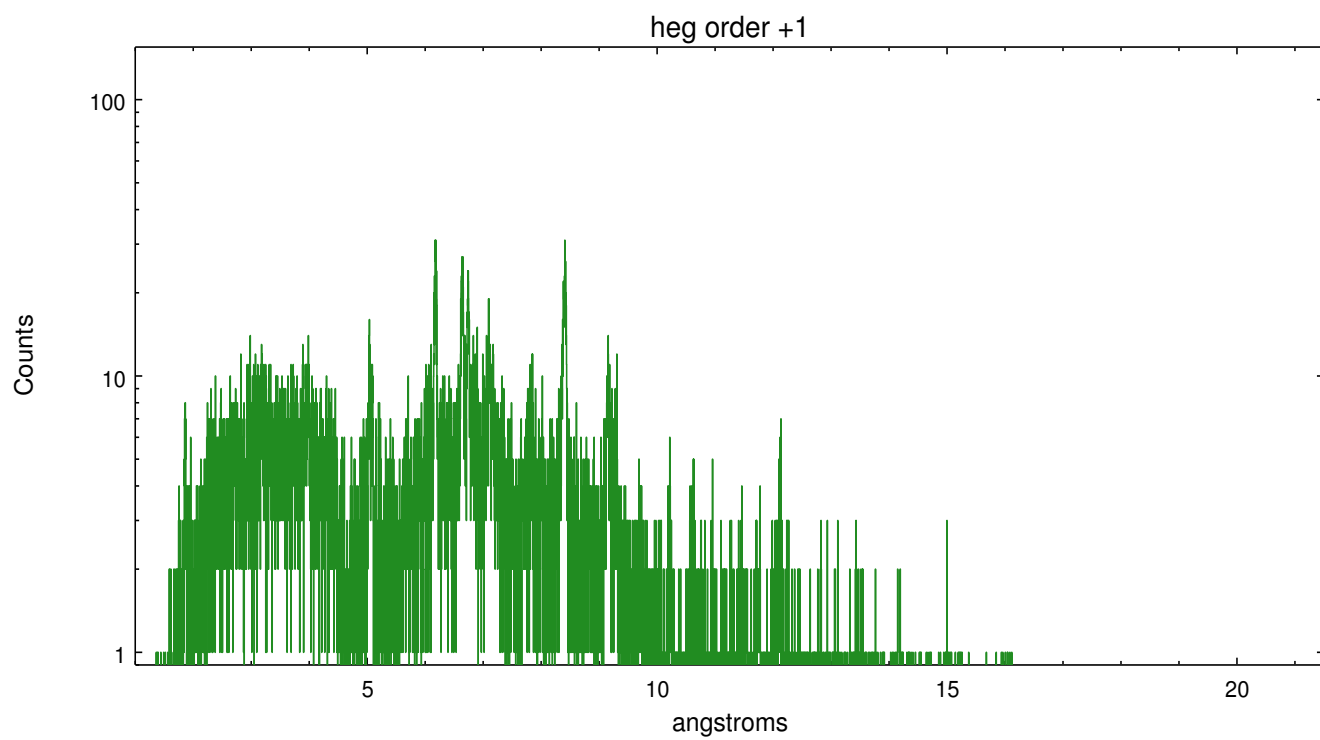
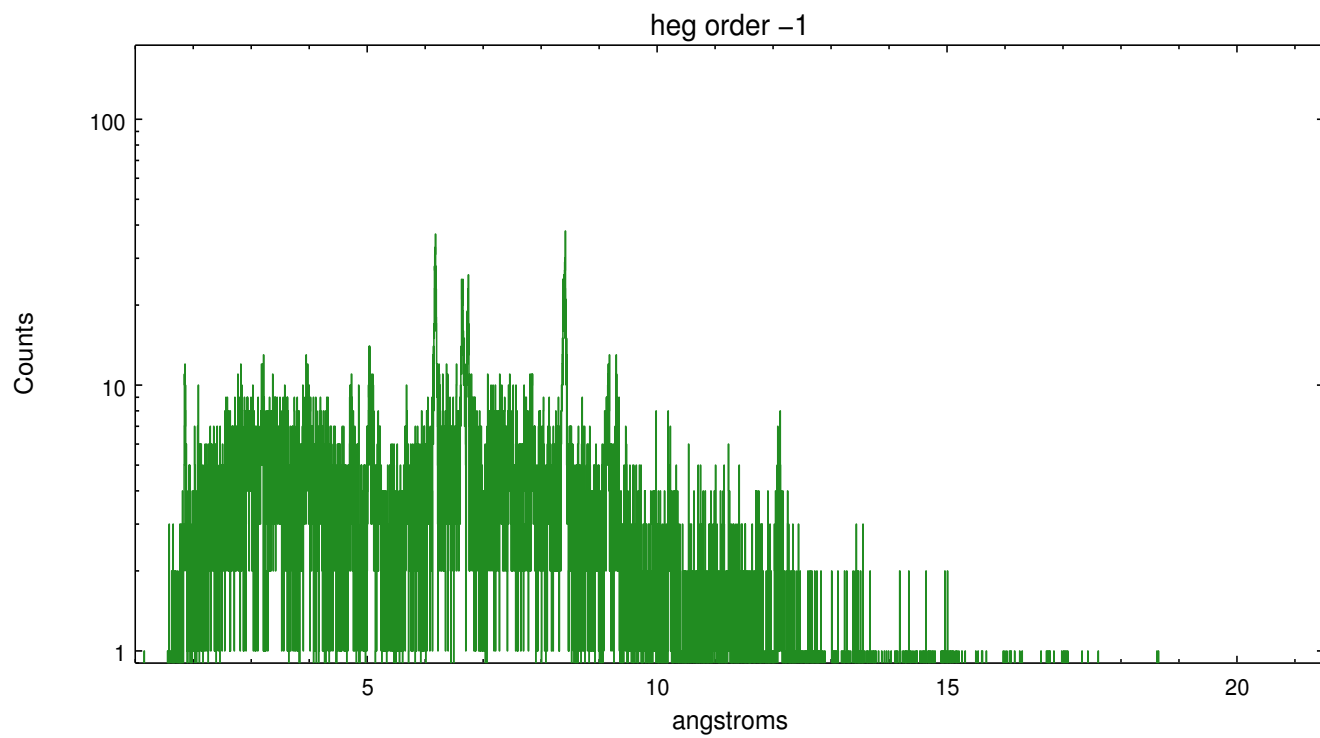
Spot Image HEG



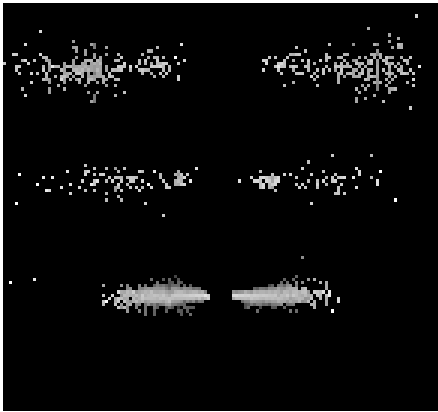
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	411	1550	16882	4759	15848	1138	342

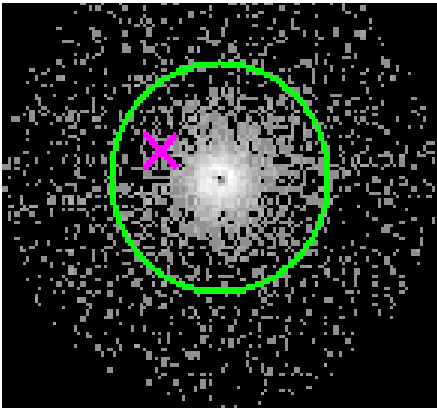




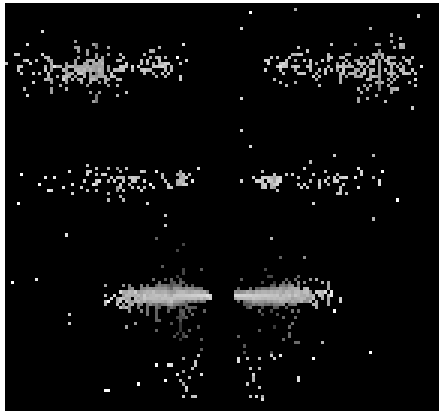
3.2 MEG Arm



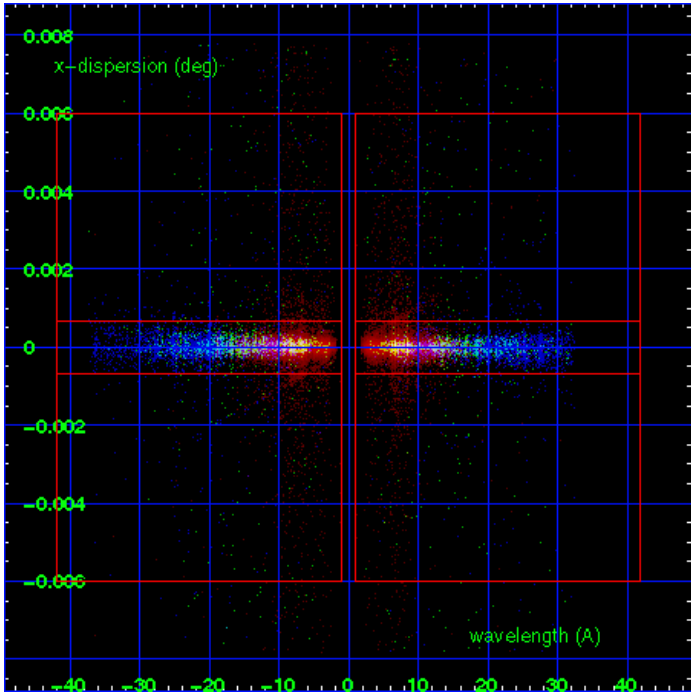
MEG Order Sort 123



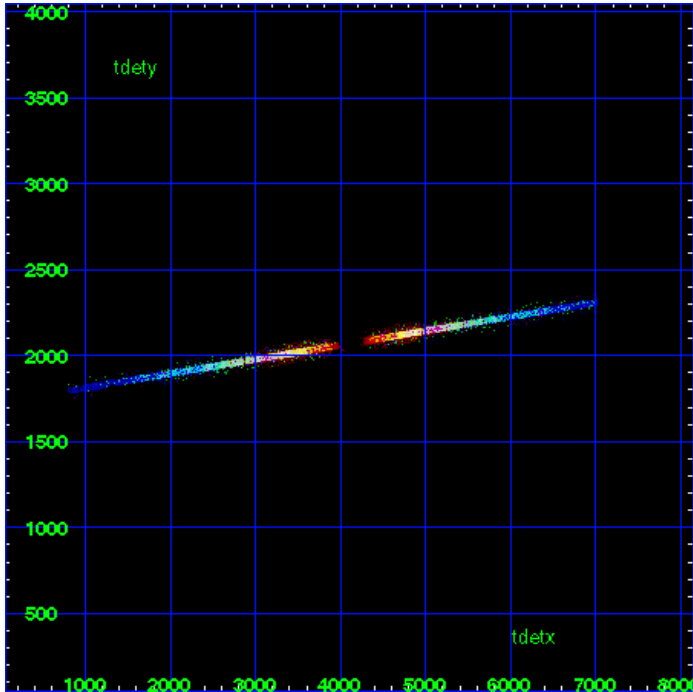
MEG Zero Order



MEG Order Sort ALL

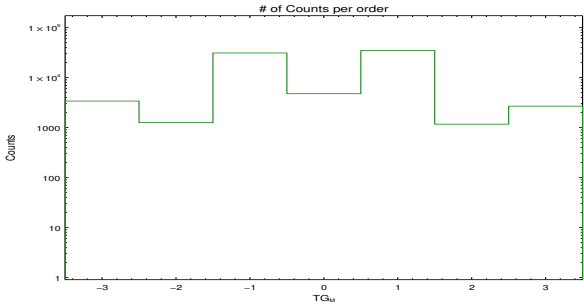


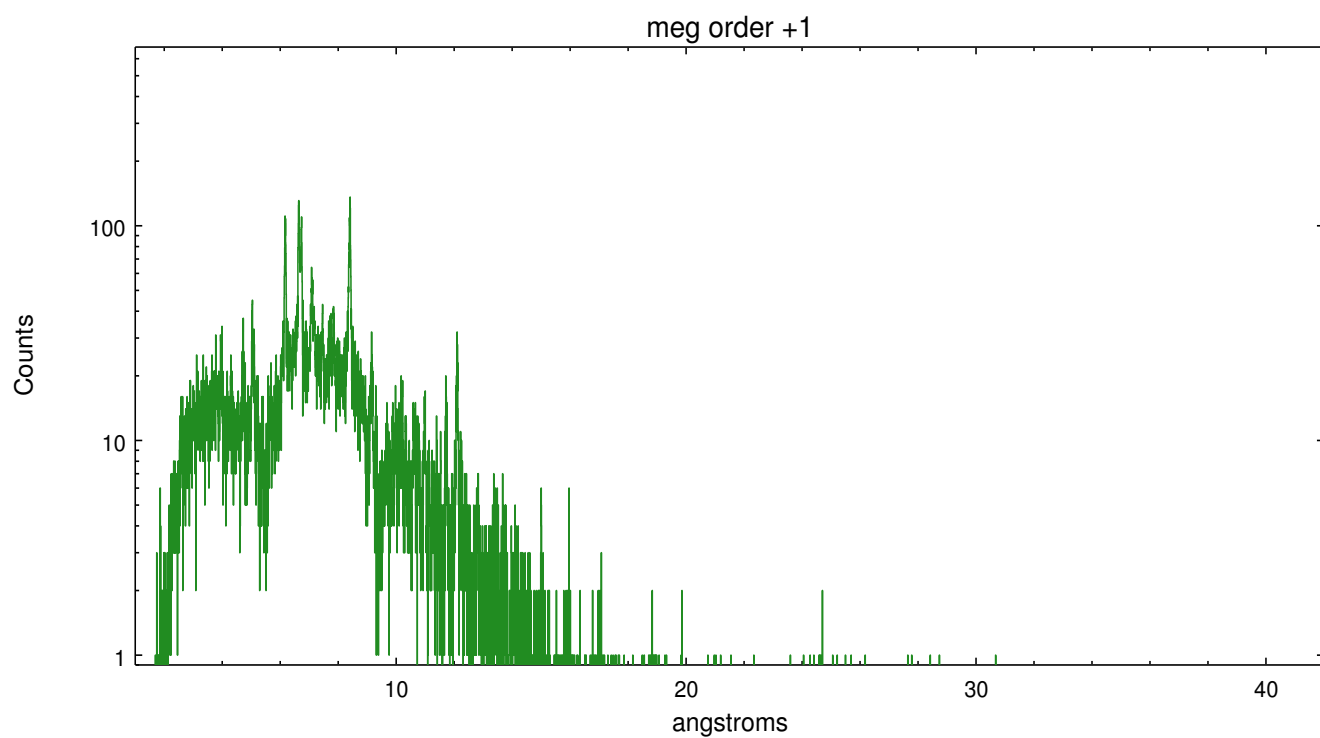
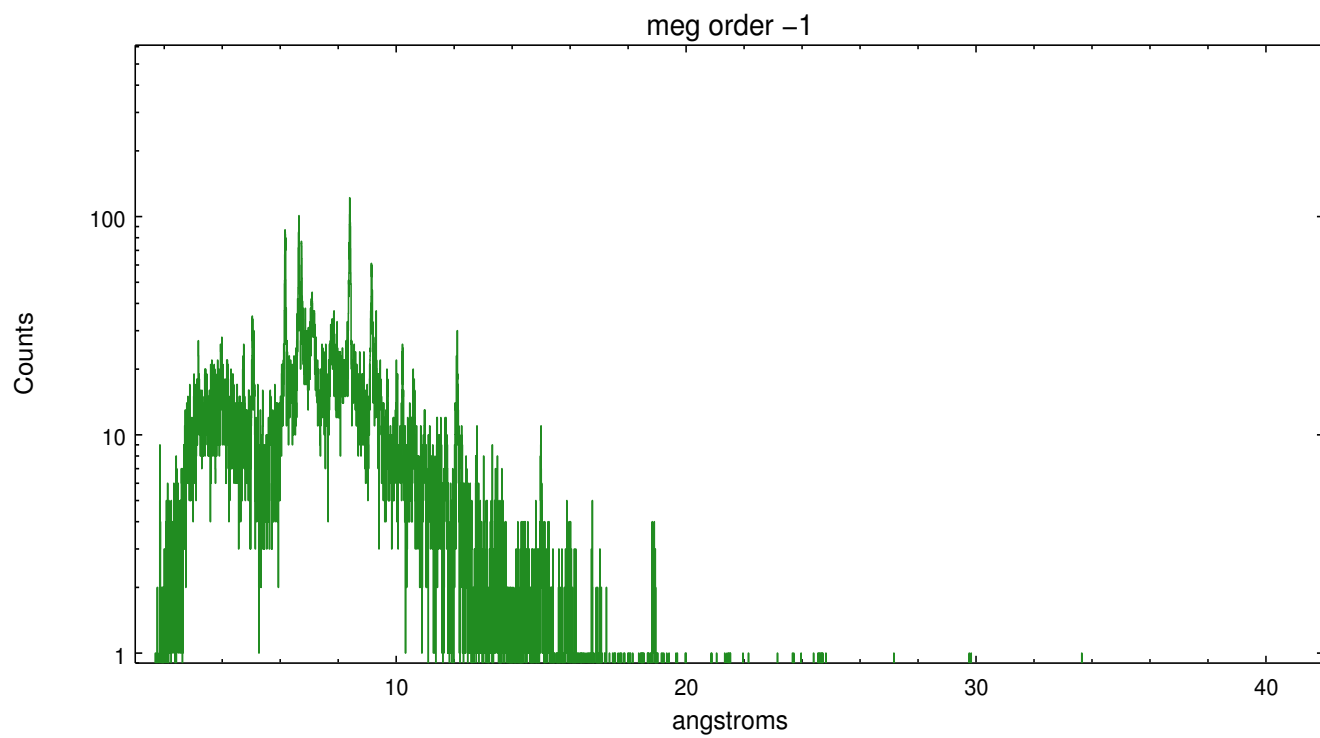
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3385	1256	31110	4759	34678	1168	2676







# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.03.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.075

## A.2 Comments

Zeroth order piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used to input the correct sky coordinates (x=4110.8, y=4088.59) into the \*src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called findzero, which is expected to be released in CIAO (currently in ISIS). The tool calculates the point of intersection of the readout streak and the meg arm (preferred position), or the readout streak and the heg arm. The zeroth order source position determined by the standard pipeline processing using the tool tgdetect was not used in this processing. The newly determined zeroth order coordinates have been placed in the \*src1a.fits file, replacing the coordinates determined by tgdetect. Note that these corrected coordinates of the zeroth order cannot be reproduced by running tgdetect on the data.