

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 6613 - L2 Version 2  
Chandra X-Ray Center

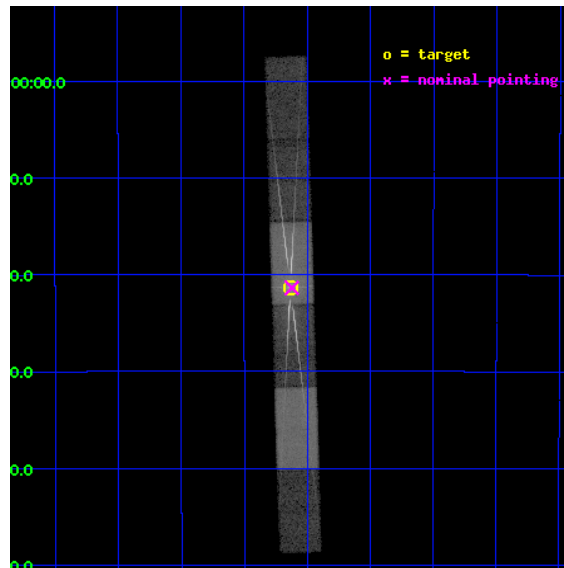
L2 Processing Date : Apr 11 2012

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# 1 Front

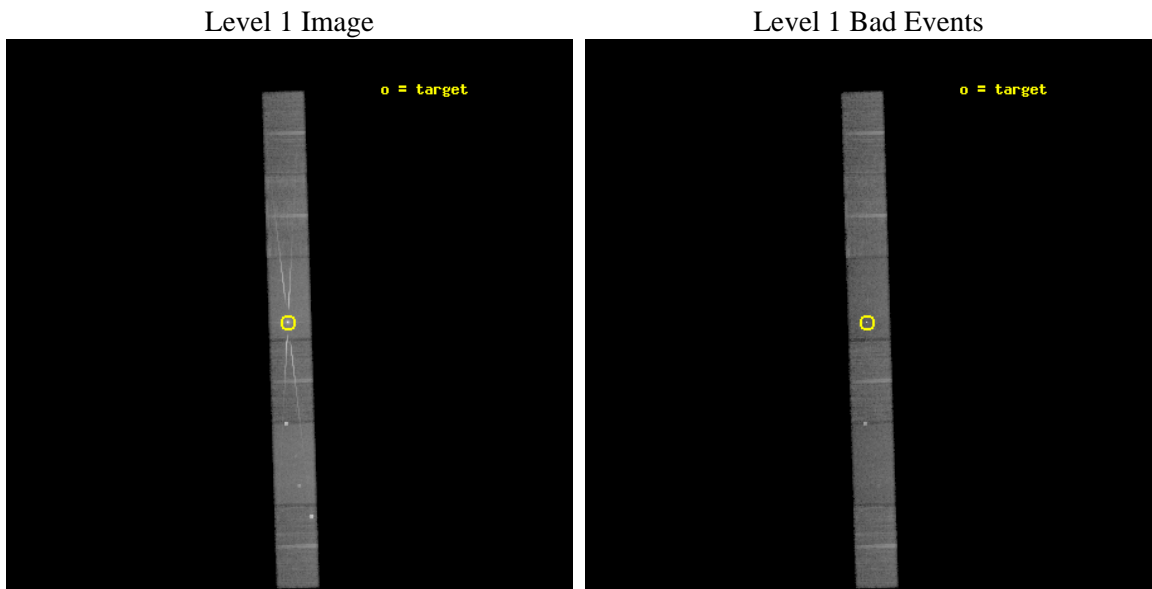
seq_num	400518	Sequence number
obs_id	6613	Observation id
title	INVESTIGATING NEW INTEGRAL SOURCES WITH CHANDRA	Proposal title
observer	Dr Adamantia Paizis	Principal investigator
object	IGR J17497-2821	Source name
dtycycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	267.4075	Observer's specified target RA [deg]
dec_targ	-28.355	Observer's specified target Dec [deg]
ra_nom	267.40553118945	Nominal RA [deg]
dec_nom	-28.356215225043	Nominal Dec [deg]
roll_nom	268.24568969462	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20177.29985857	Sum of GTIs [s]
livetime	19701.678169123	Livetime [s]
ontime4	20177.29985857	Sum of GTIs [s]
ontime5	20177.29985857	Sum of GTIs [s]
ontime6	20175.558848441	Sum of GTIs [s]
ontime7	20177.29985857	Sum of GTIs [s]
ontime8	20177.29985857	Sum of GTIs [s]
ontime9	20177.29985857	Sum of GTIs [s]
l2events	242126	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	20000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3.1	Processing system revision	ontime	20177.29985857	Sum of GTIs [s]
caldbver	4.4.9	&#160	ontime4	20177.29985857	Sum of GTIs [s]
date	2012-04-11T00:02:47	Date and time of file creation	ontime5	20177.29985857	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	20175.558848441	Sum of GTIs [s]
			ontime7	20177.29985857	Sum of GTIs [s]
			ontime8	20177.29985857	Sum of GTIs [s]
			ontime9	20177.29985857	Sum of GTIs [s]
			l1events	805115	Number of level 1 events

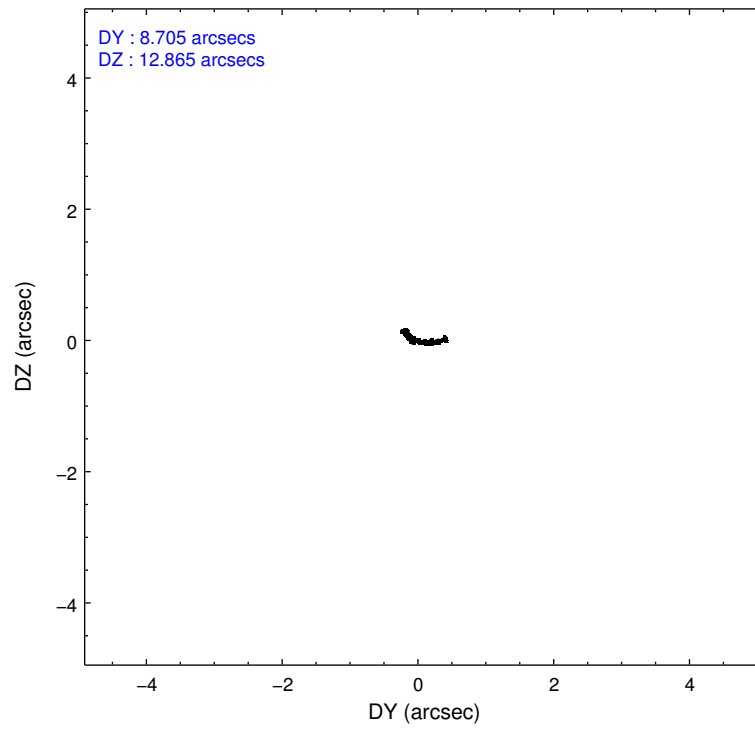
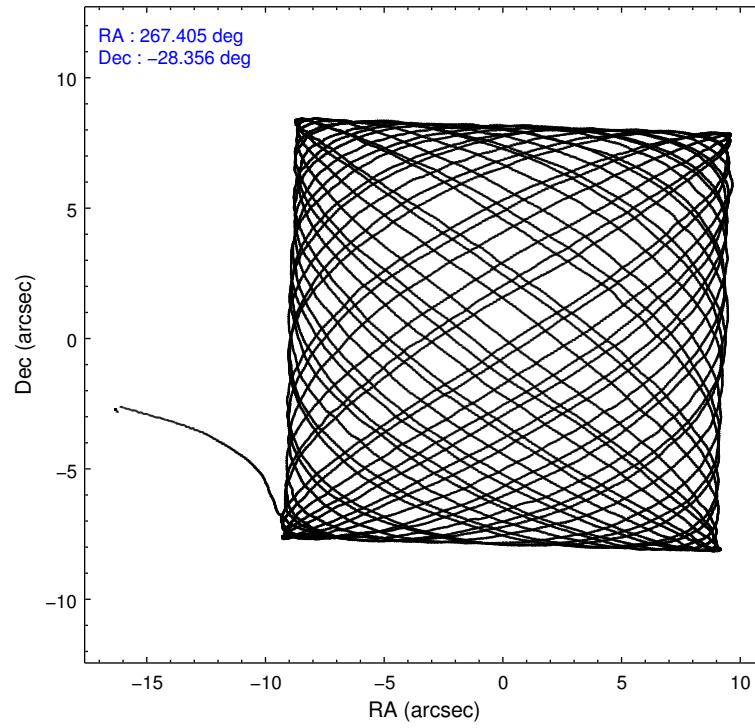
### 2.1.3 Events

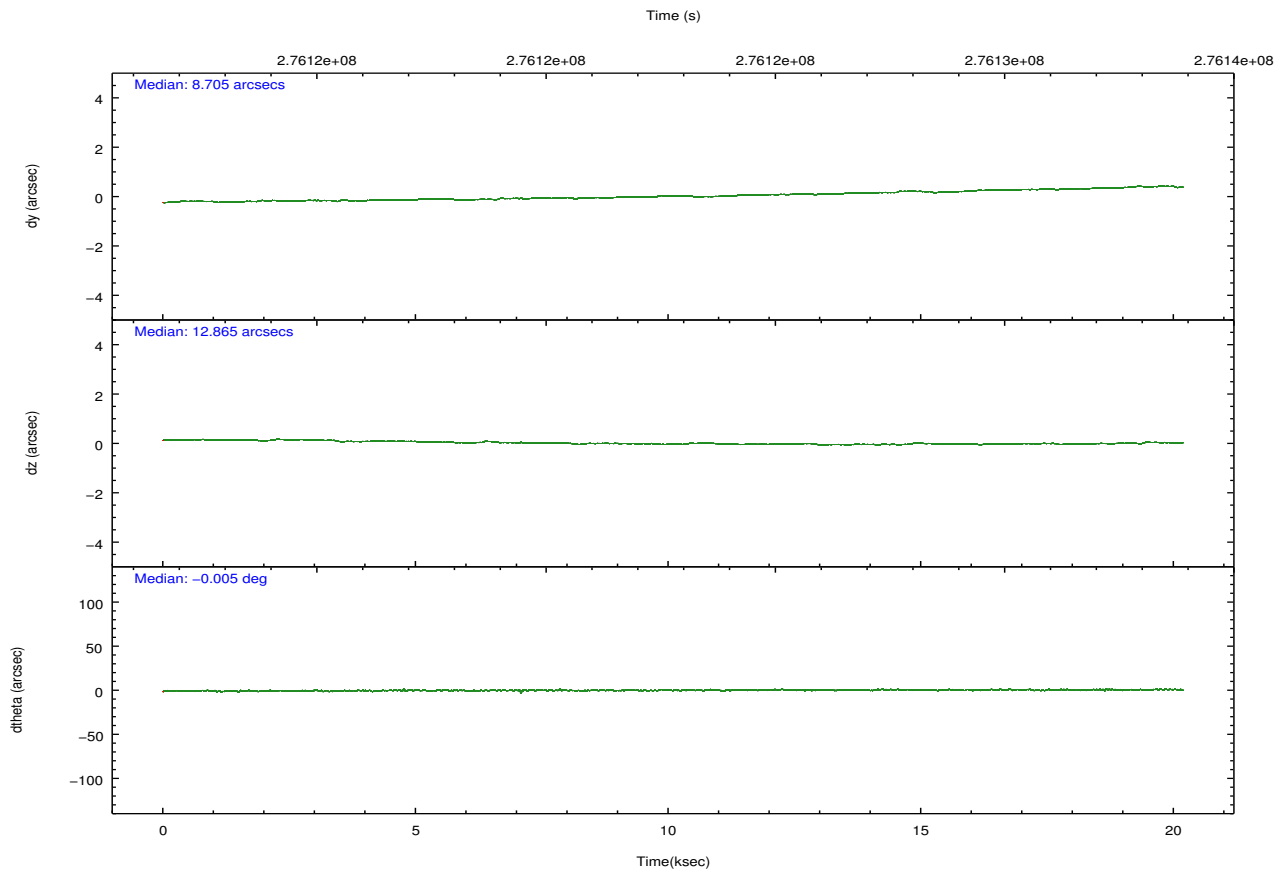
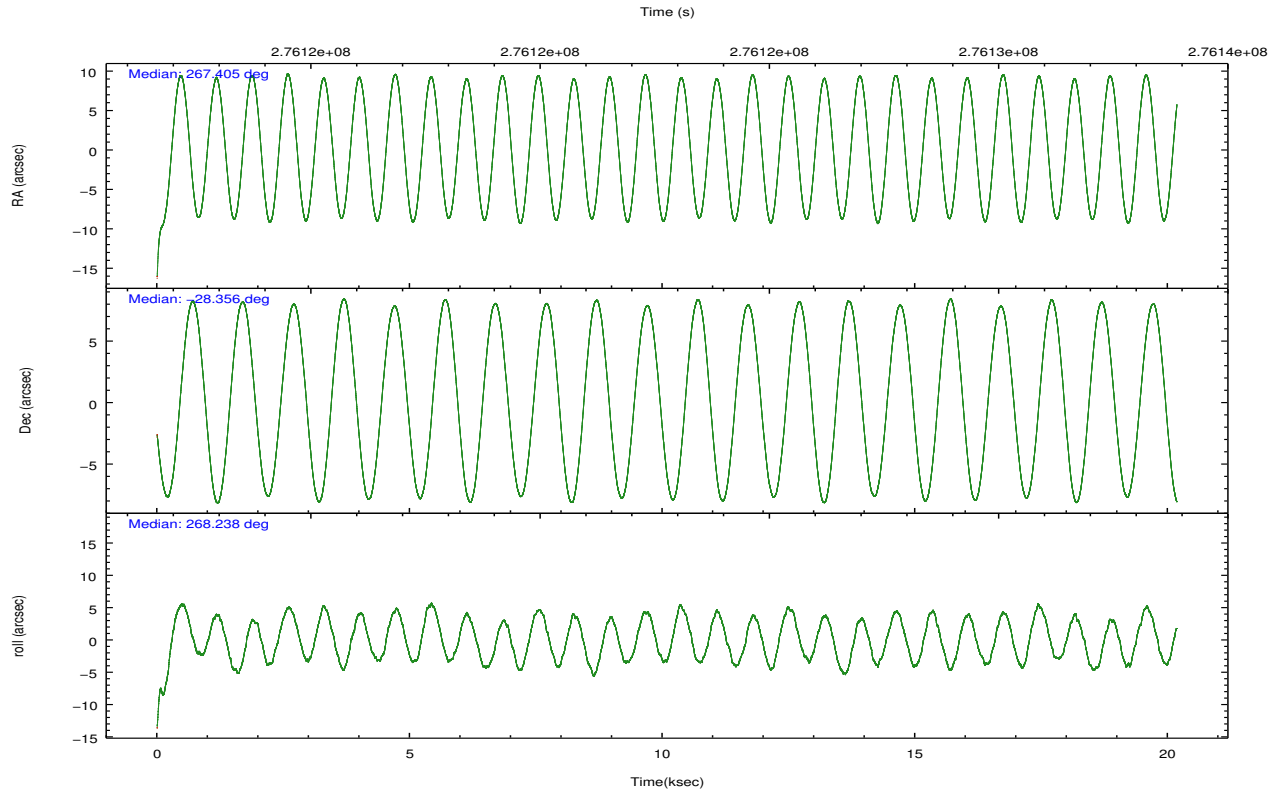
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	116677	149351	128688	187150	129913	93336	grade 0 events	13971	7062	25184	11952	11833	4939
rejected events	94192	80577	86407	82630	97389	80525		11%	4%	19%	6%	9%	5%
rejected %	80%	53%	67%	44%	74%	86%	grade 1 events	82	1475	111	296	58	30
								0%	0%	0%	0%	0%	0%
							grade 2 events	3860	21118	7269	25983	7076	3023
								3%	14%	5%	13%	5%	3%
							grade 3 events	1270	2433	2720	8394	3229	1269
								1%	1%	2%	4%	2%	1%
							grade 4 events	1186	2357	2767	8363	3012	1280
								1%	1%	2%	4%	2%	1%
							grade 5 events	3427	8612	3959	10763	5198	4068
								2%	5%	3%	5%	4%	4%
							grade 6 events	2478	36633	4852	50882	7788	2478
								2%	24%	3%	27%	5%	2%
							grade 7 events	90403	69661	81826	70517	91719	76249
								77%	46%	63%	37%	70%	81%

## 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	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	267.390544	267.4055311894533	Subarray requested	CUSTOM	1/2
[deg] Pointing Dec	-28.332378	-28.35621522504308	Subarray start row	1	1
[deg] Pointing Roll	268.081953	268.2456896946215	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	-183.9875365069546			
[mm] SIM translation stage offset	-6.14	-6.144986076053243			
[s] Observation start time (MET)	276112861.184000	276111746.67017			
Observation start date	2006-10-01T17:59:56	2006-10-01T17:42:26			
[s] Observation end time (MET)	276132861.184000	276133327.02118			
Observation end date	2006-10-01T23:33:16	2006-10-01T23:42:07			
Read mode	TIMED	TIMED			

## 2.3 Aspect





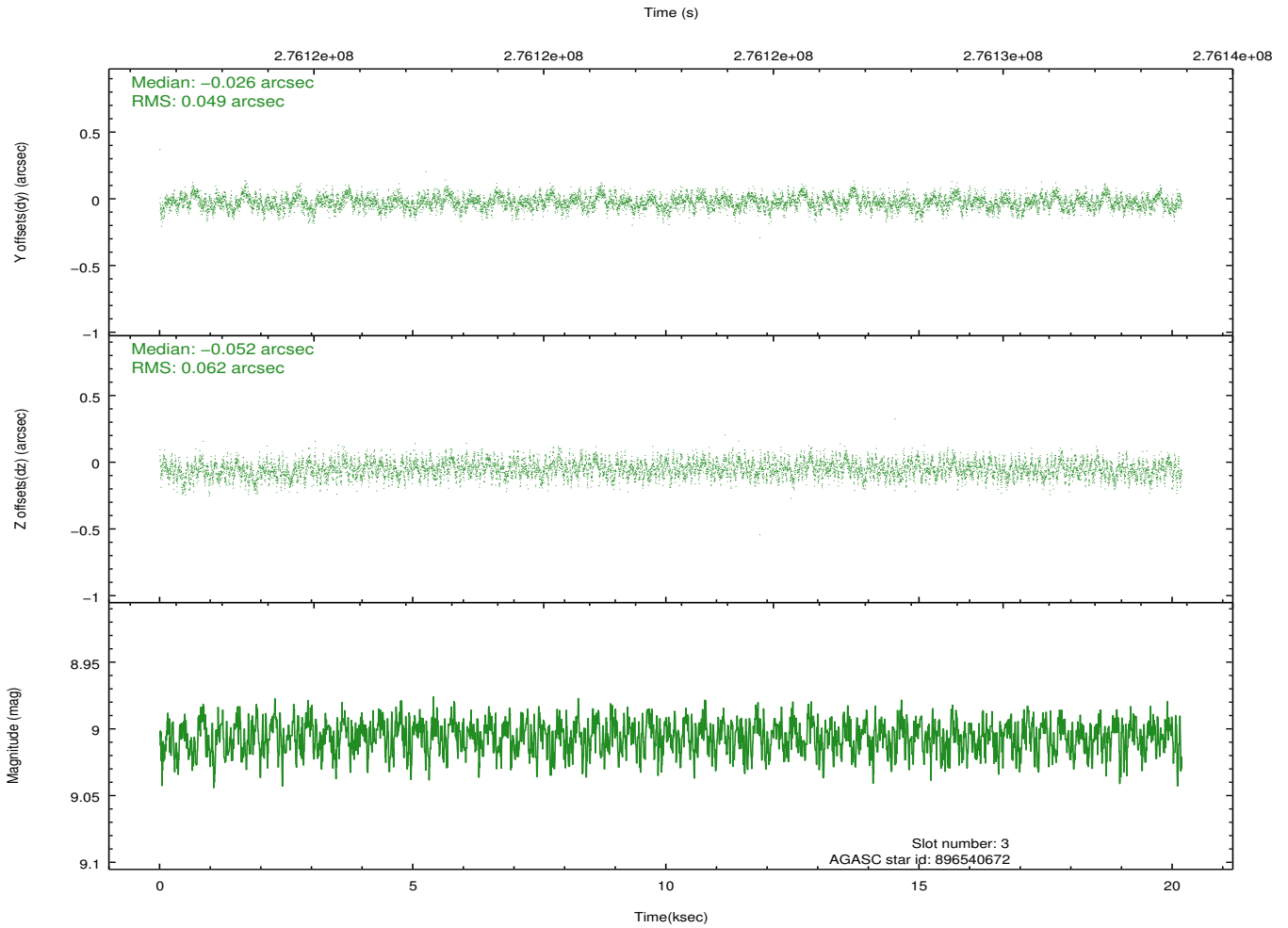
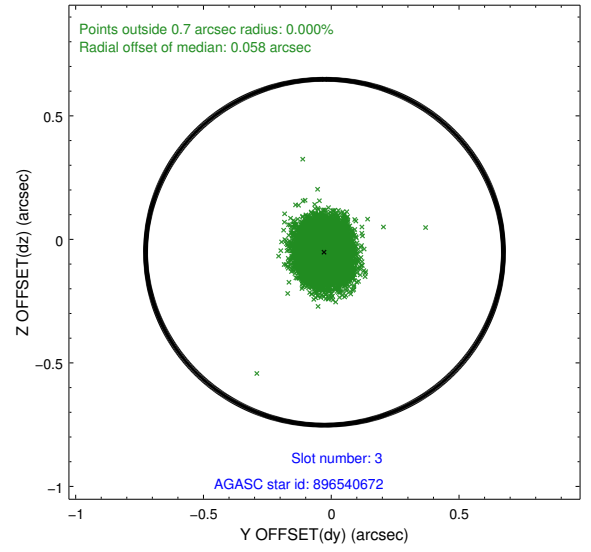
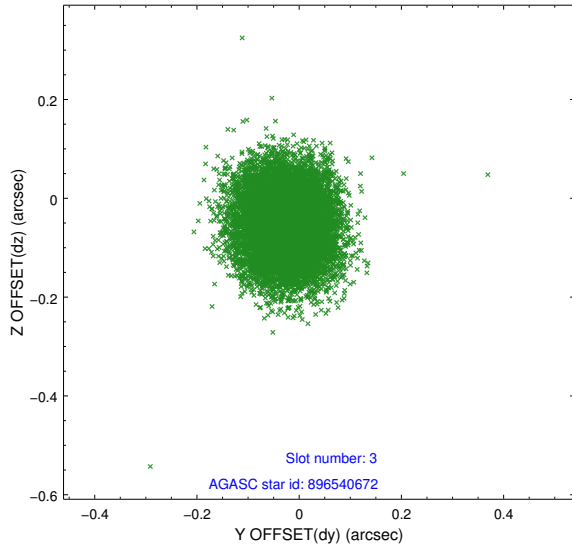
### Slot Statistics

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	4923	-0.086	-0.073	0.011	0.018	0.000000	0.000000	-761.16	-1860.95
1	FID	ACIS-S-4	7.18	4923	0.137	0.061	0.014	0.023	0.000000	0.000000	2152.22	47.48
2	FID	ACIS-S-5	7.23	4923	-0.081	0.020	0.010	0.018	0.000000	0.000000	-1813.79	41.26
3	GUIDE	896540672	9.01	9838	-0.026	-0.052	0.085	0.135	266.662941	-28.185372	-444.19	-2324.82
4	GUIDE	896543712	8.22	9839	0.386	-0.037	0.058	0.092	267.764551	-28.659720	1140.51	1220.45
5	GUIDE	897717672	8.78	9845	-0.148	0.138	0.067	0.108	268.052891	-27.822138	-1900.77	2046.67
6	GUIDE	896538208	7.96	9840	0.027	-0.008	0.054	0.086	267.176969	-28.671626	1243.96	-632.72
7	GUIDE	897712584	6.54	9845	-0.239	-0.042	0.048	0.074	268.003029	-28.022394	-1175.69	1908.18

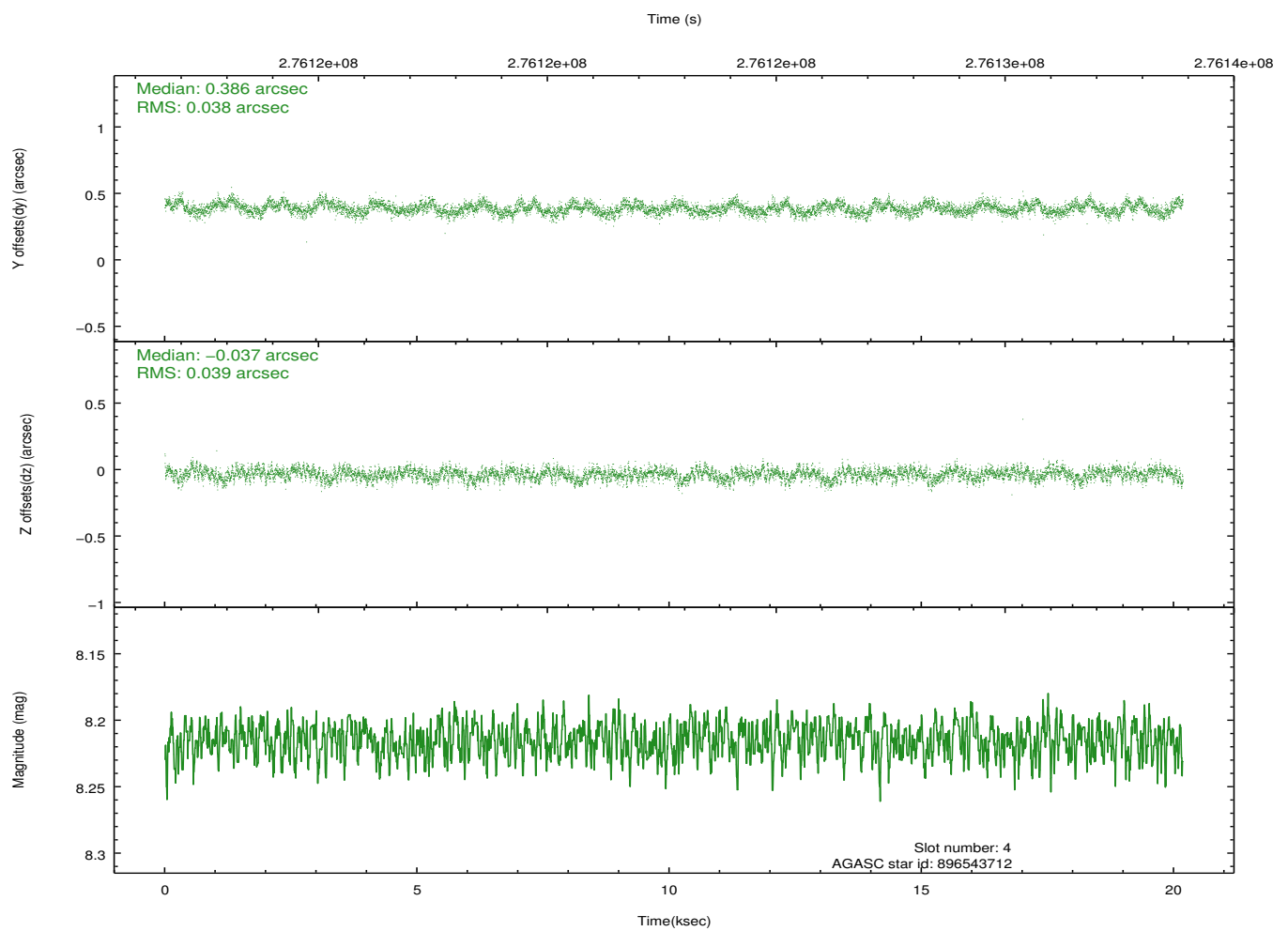
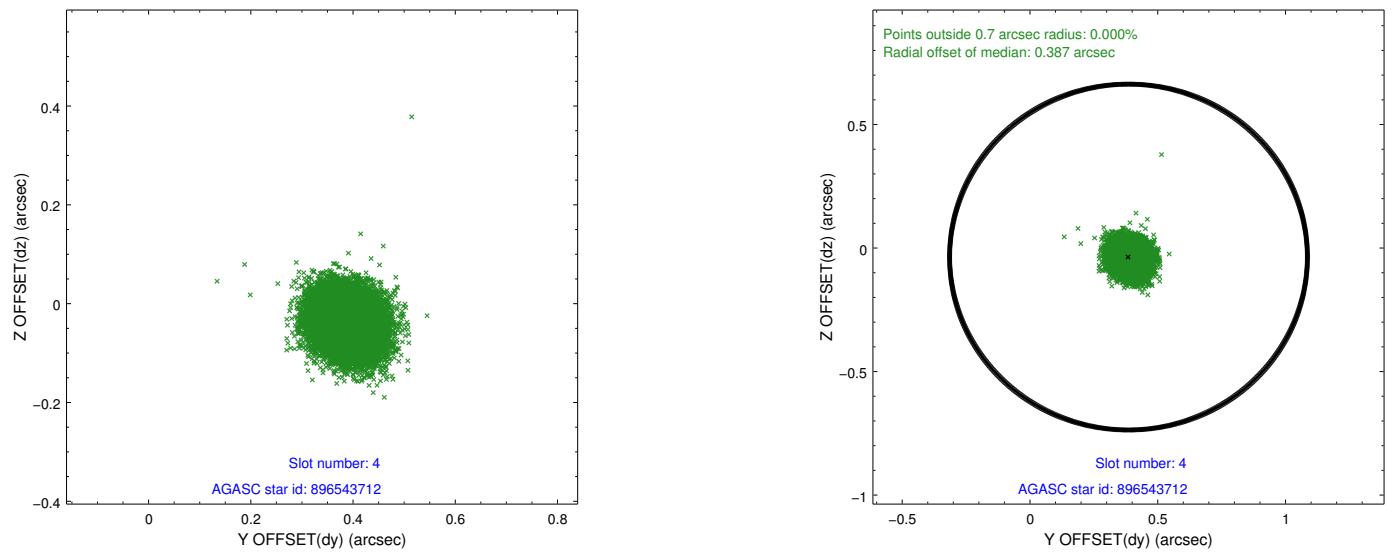
∞

## 2.4 Star Slots

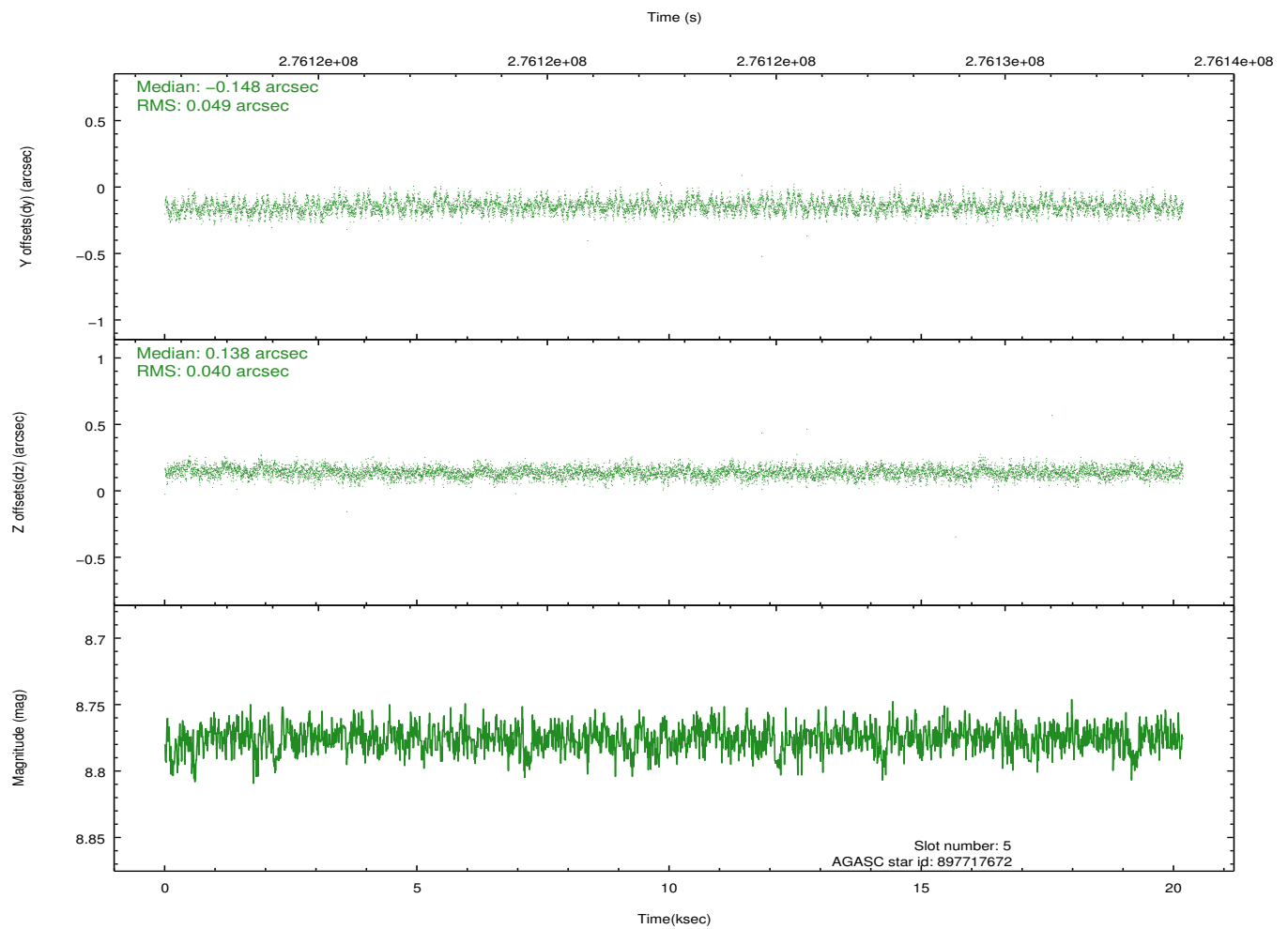
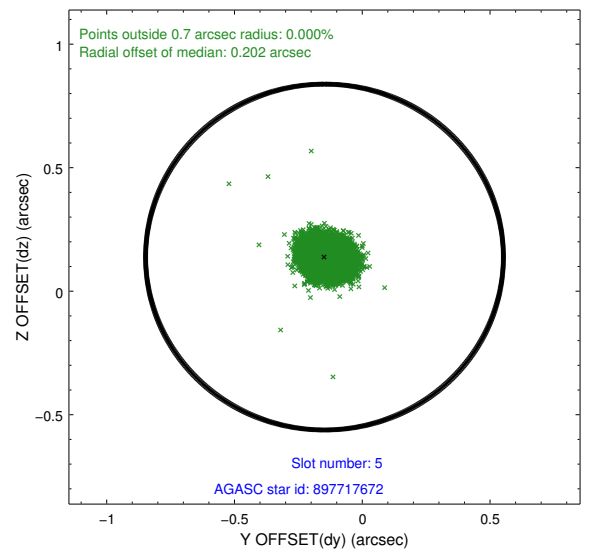
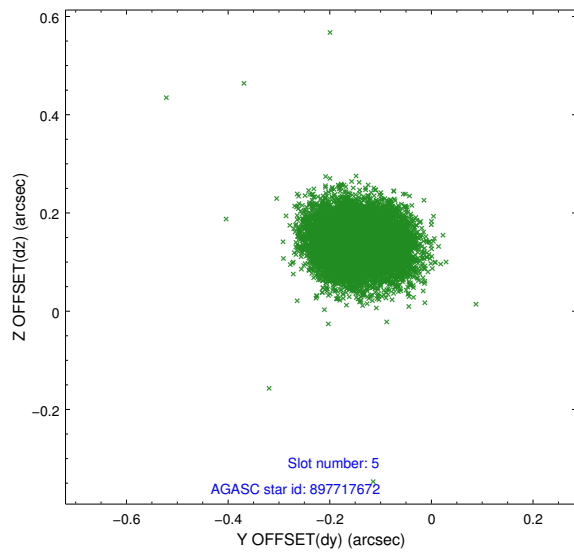
### 2.4.1 Slot 3



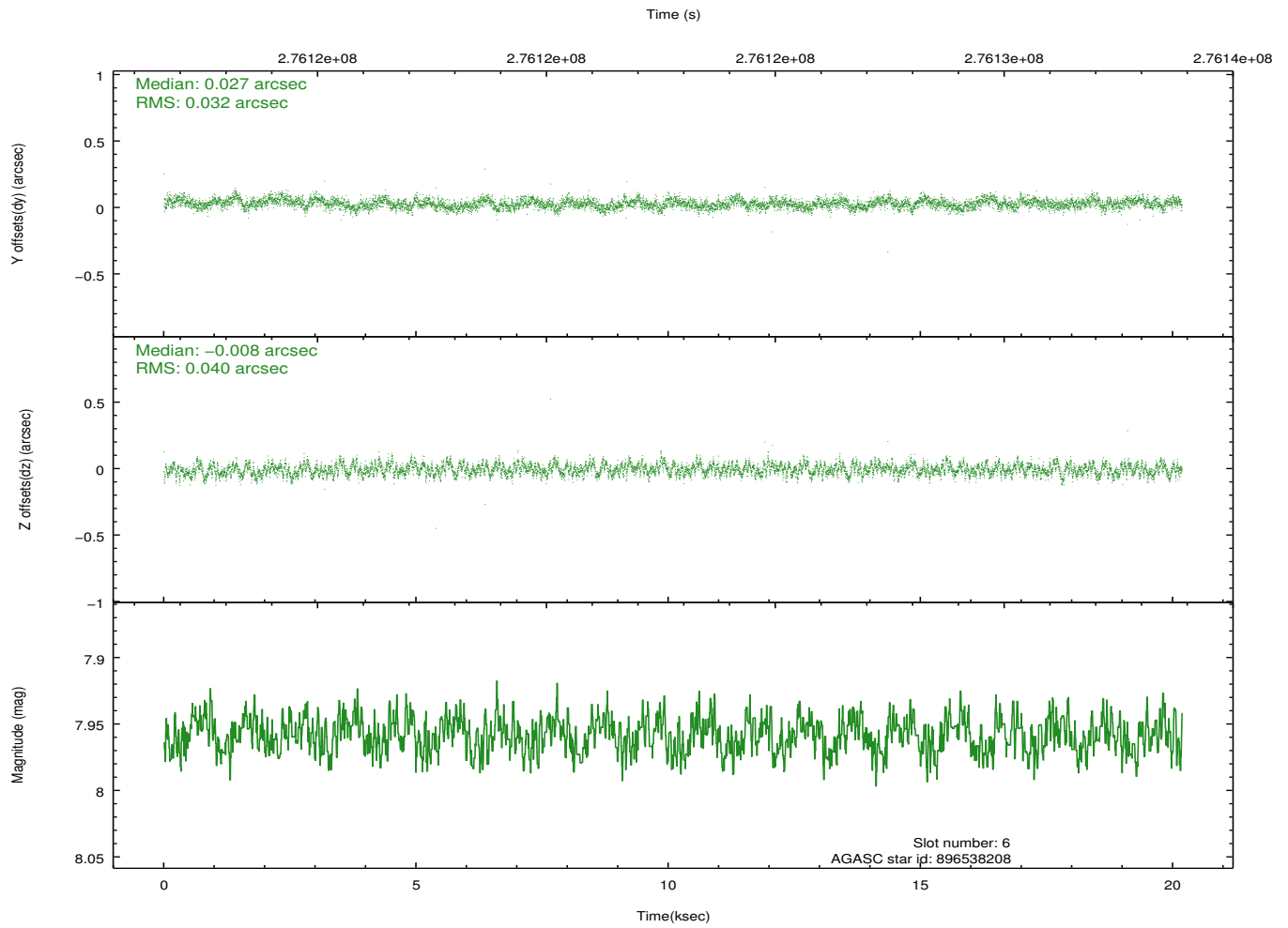
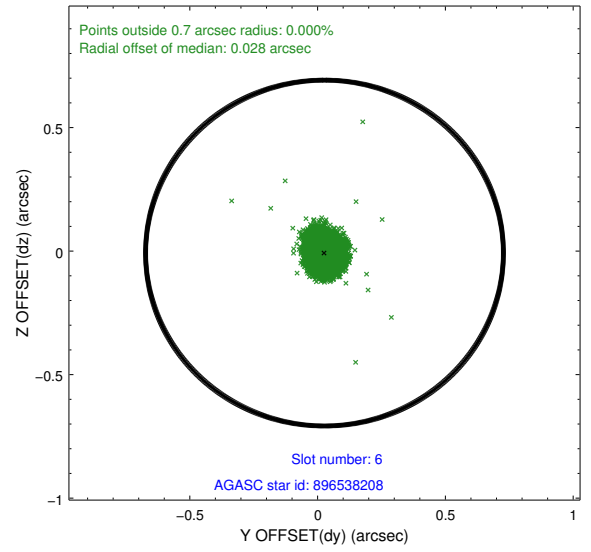
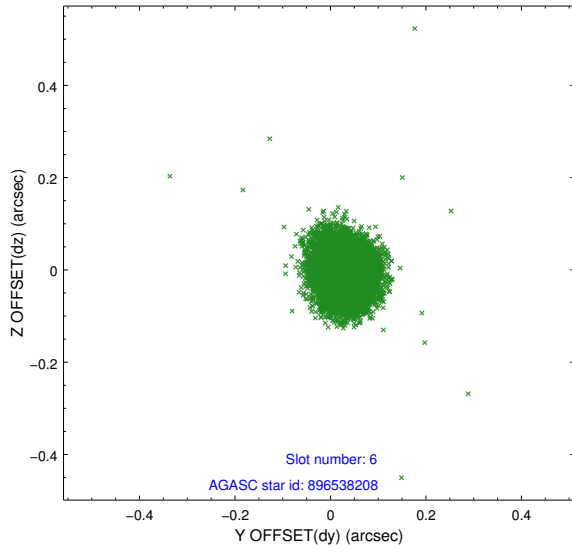
## 2.4.2 Slot 4



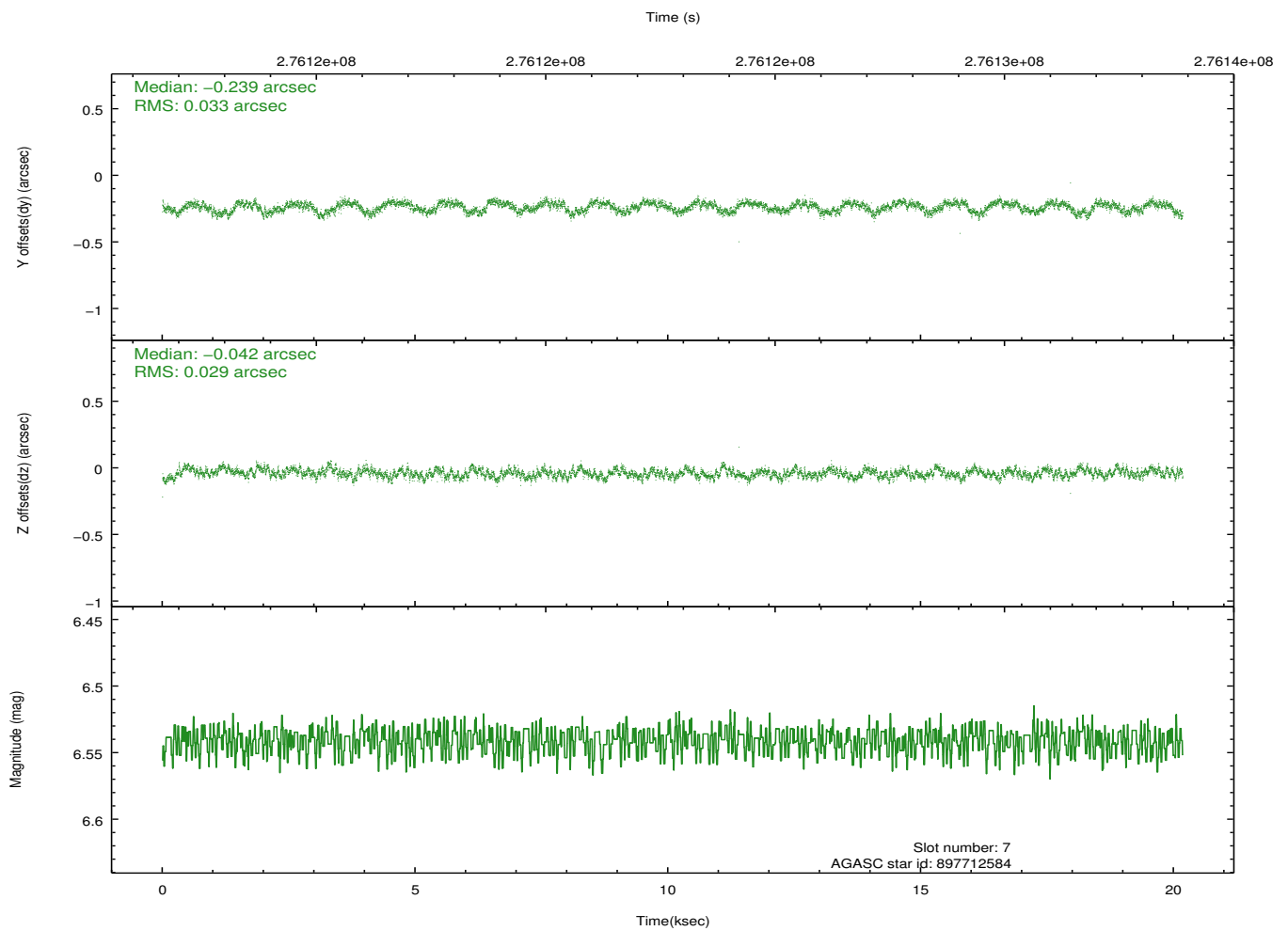
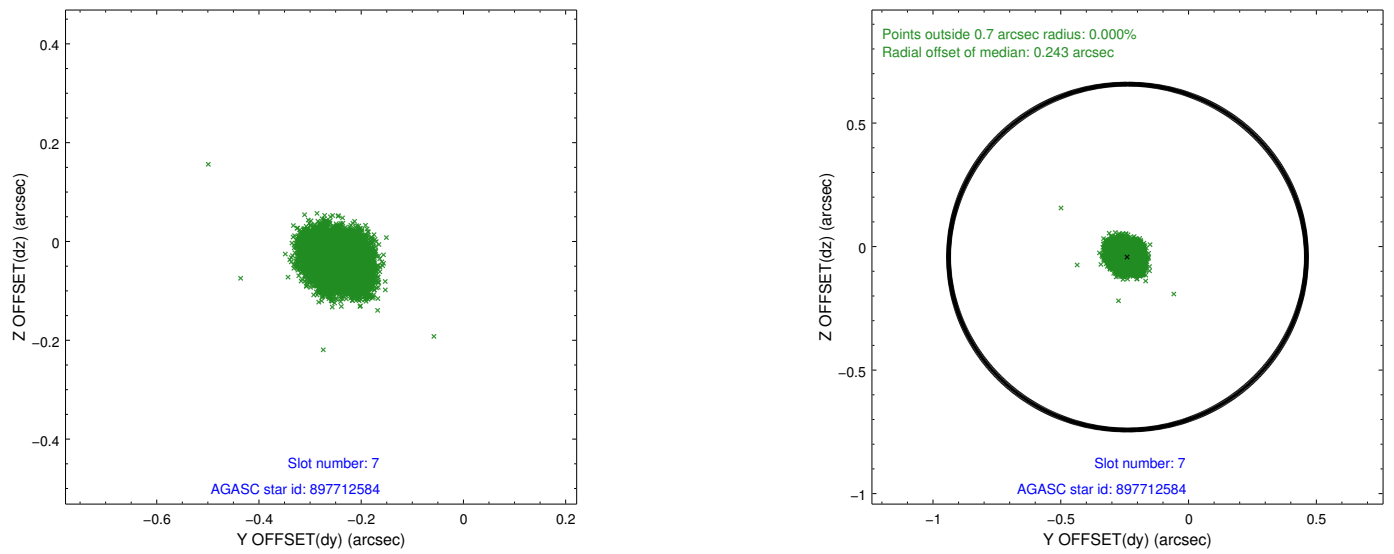
### 2.4.3 Slot 5



### 2.4.4 Slot 6

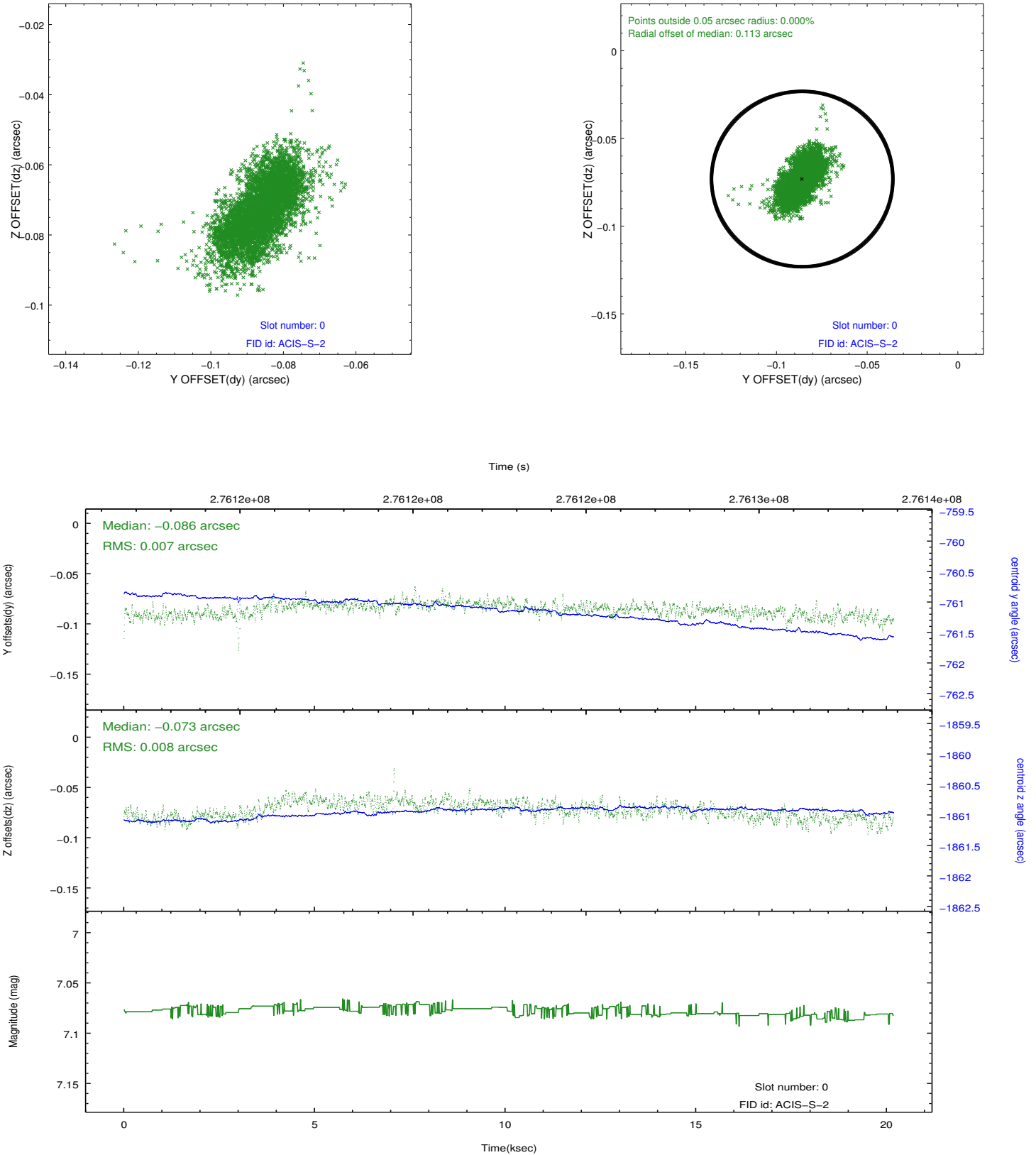


## 2.4.5 Slot 7

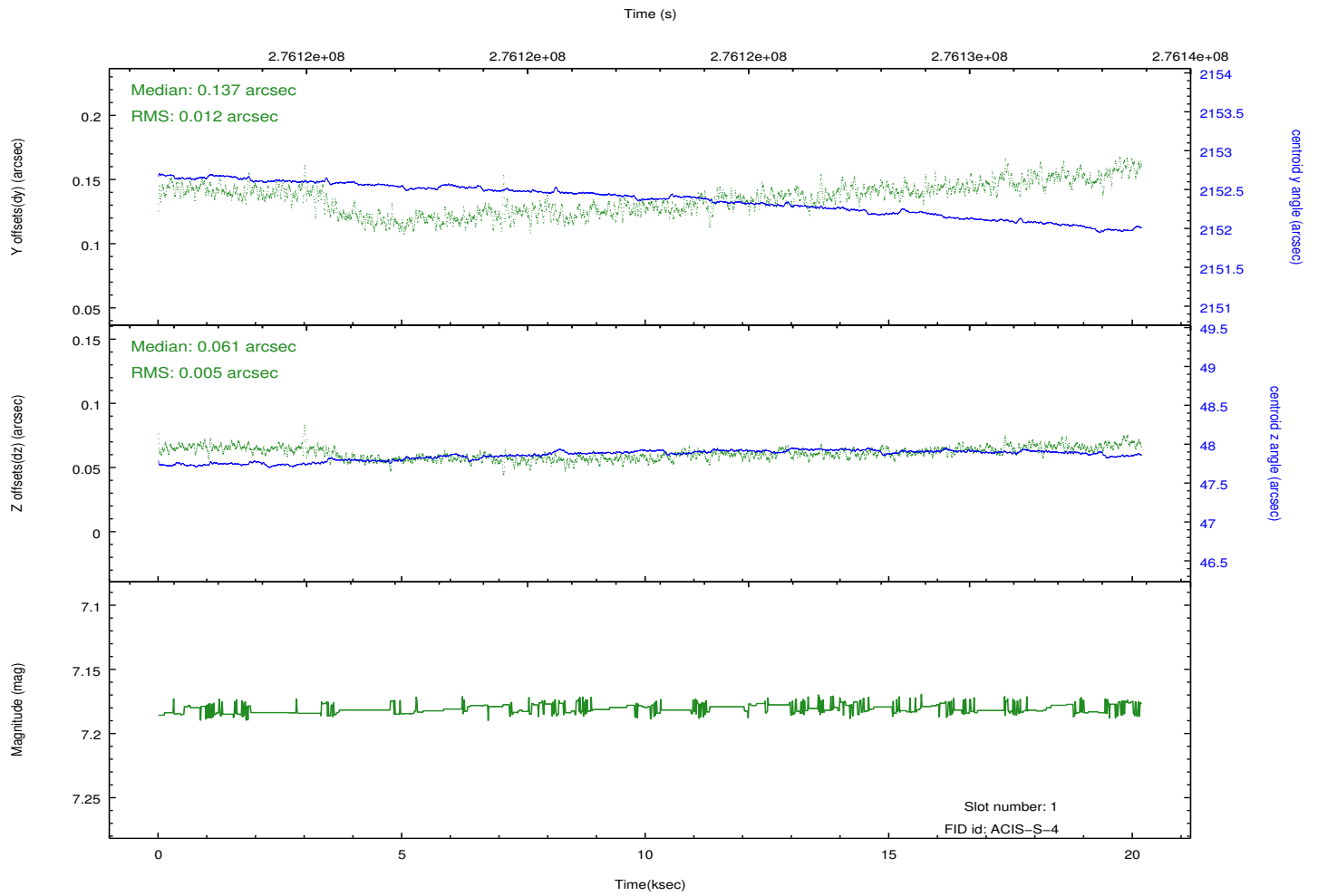
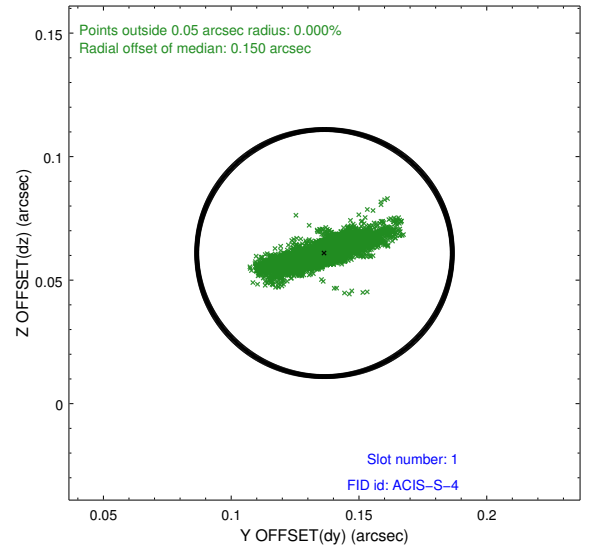
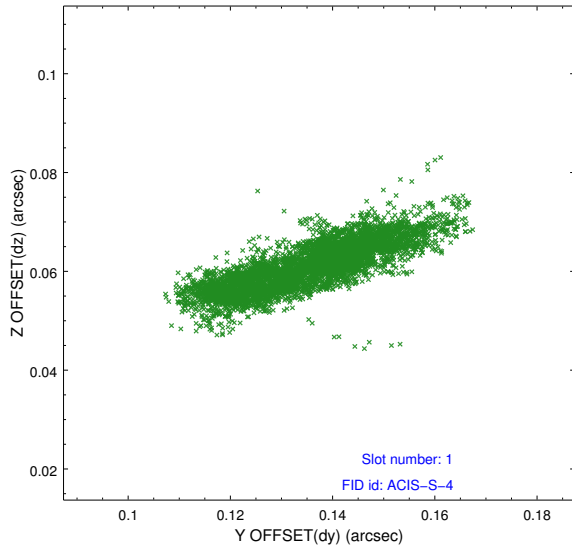


## 2.5 FID Slots

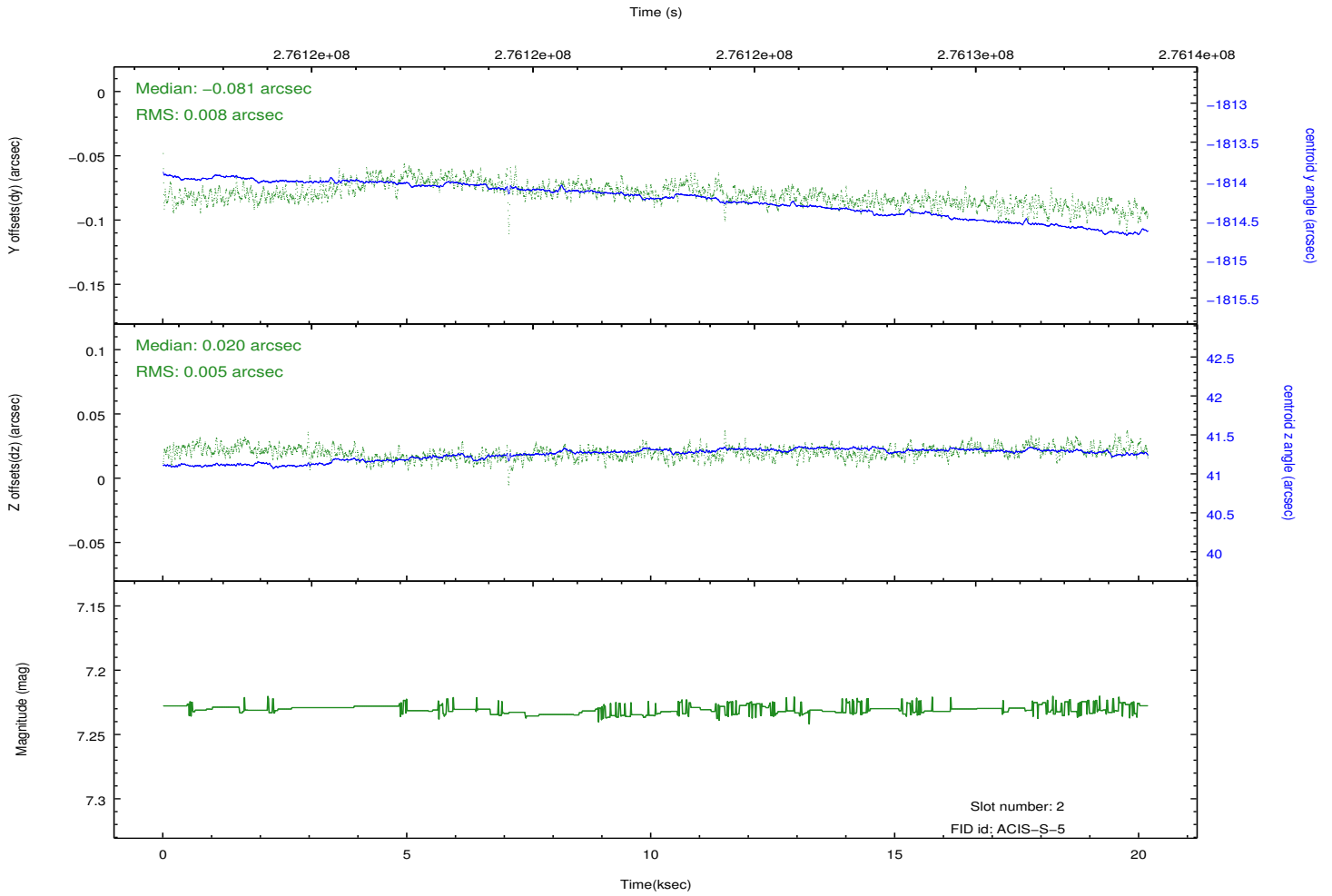
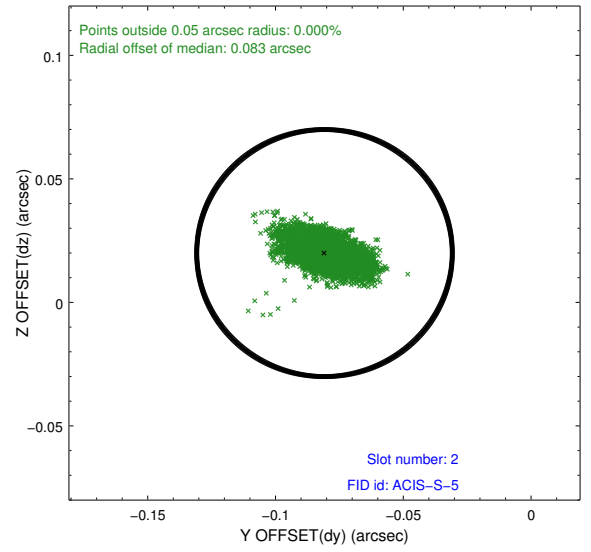
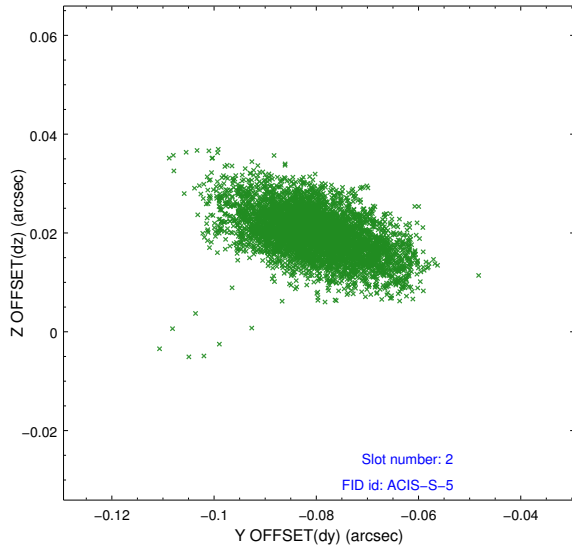
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2

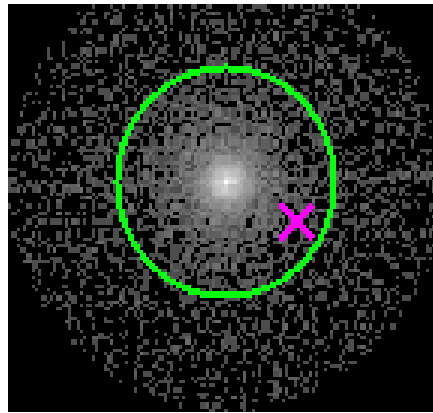


# 3 Gratings

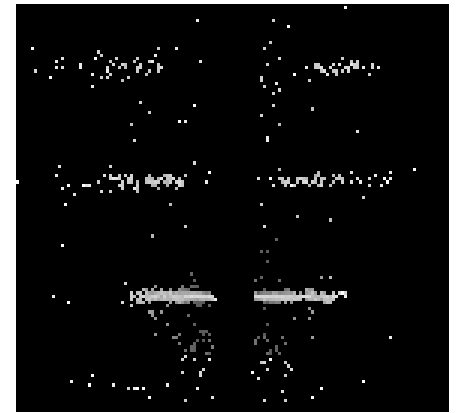
## 3.1 HEG Arm



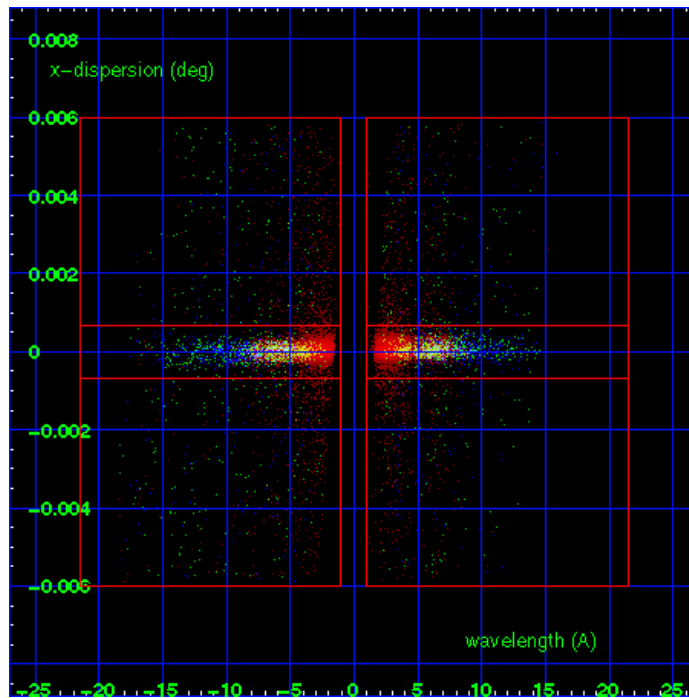
HEG Order Sort 123



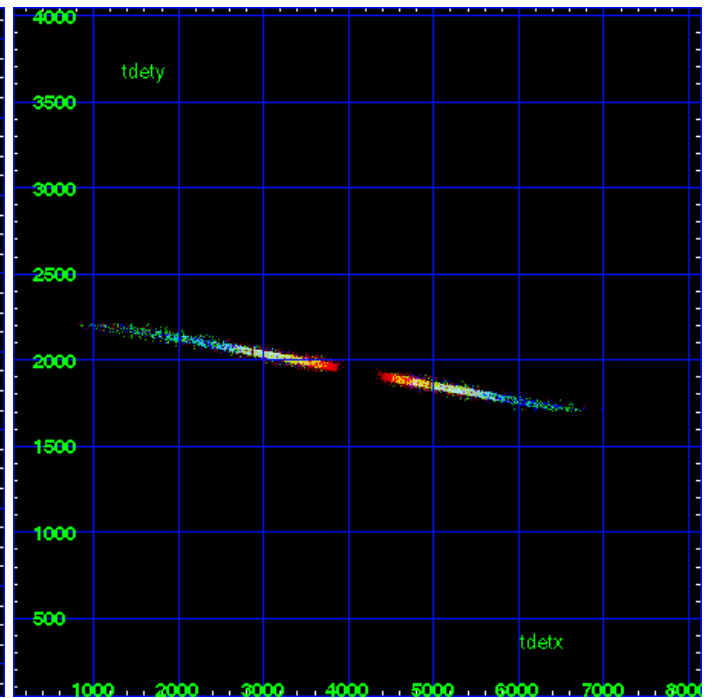
HEG Zero Order



HEG Order Sort ALL

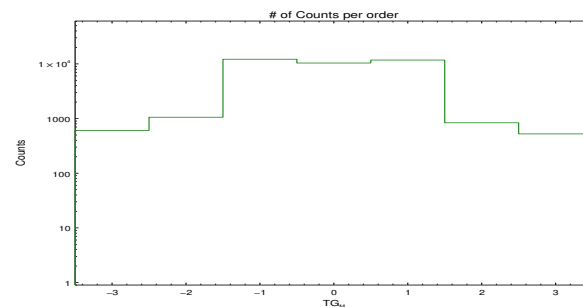


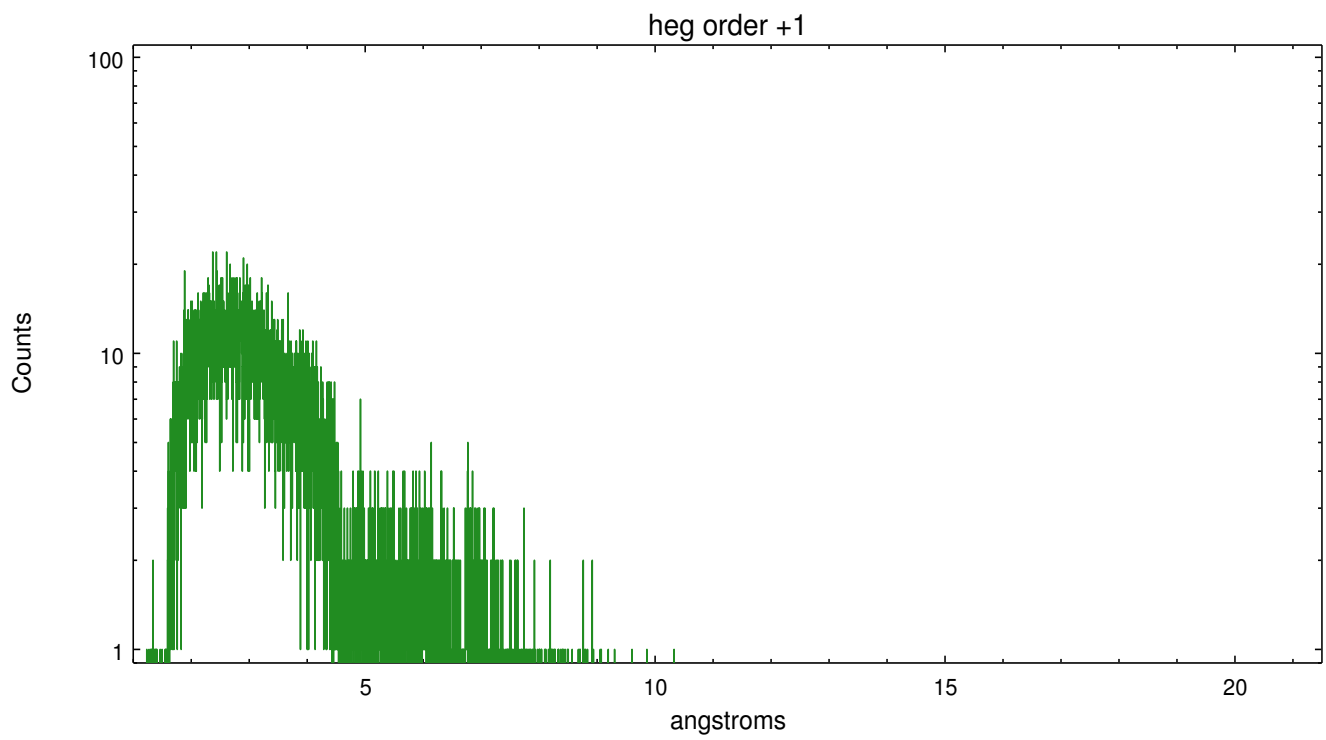
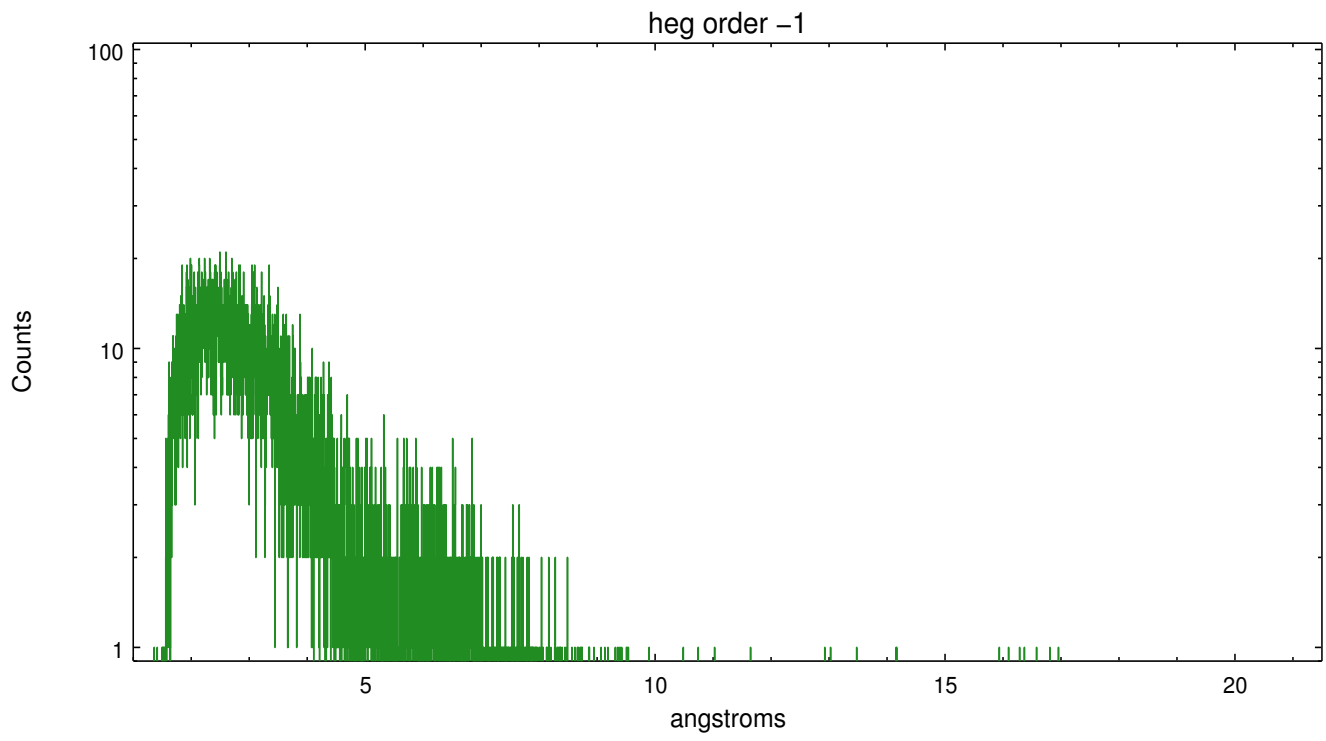
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	606	1056	12154	10364	11756	837	524

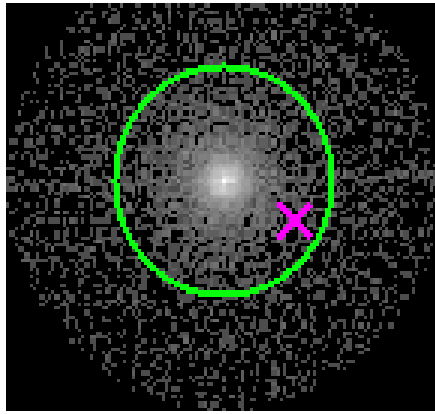




### 3.2 MEG Arm



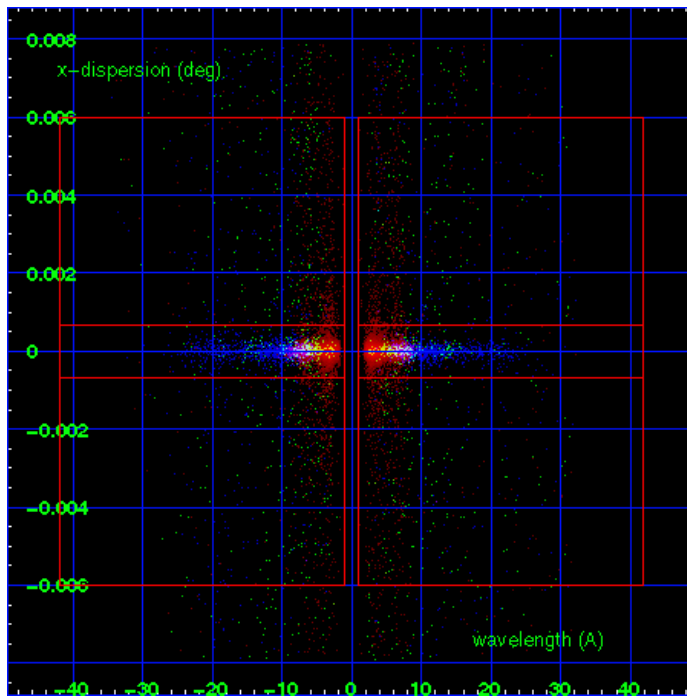
MEG Order Sort 123



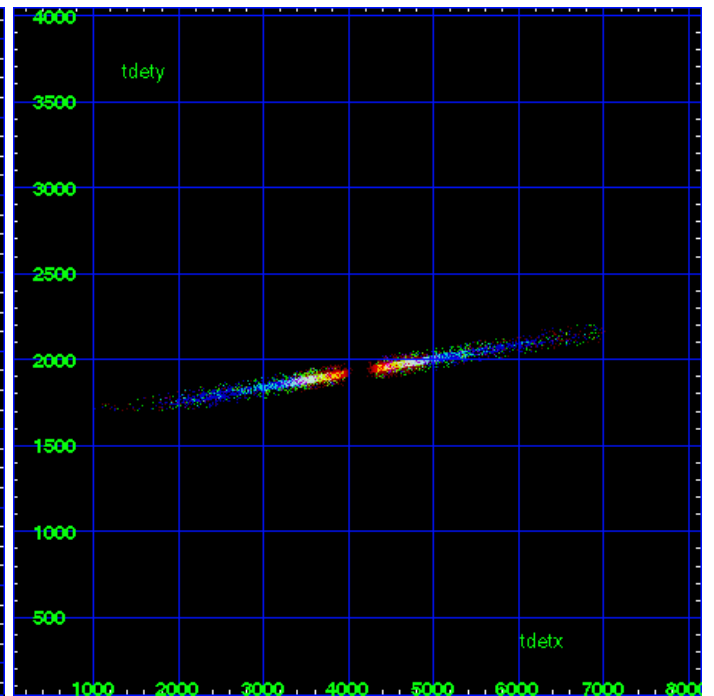
MEG Zero Order



MEG Order Sort ALL

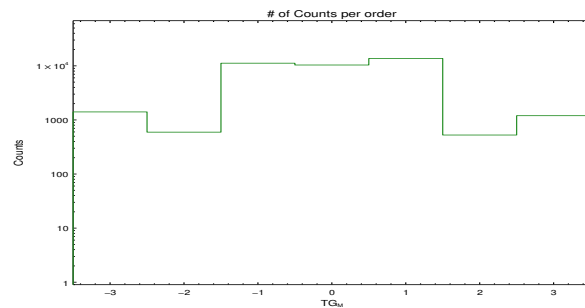


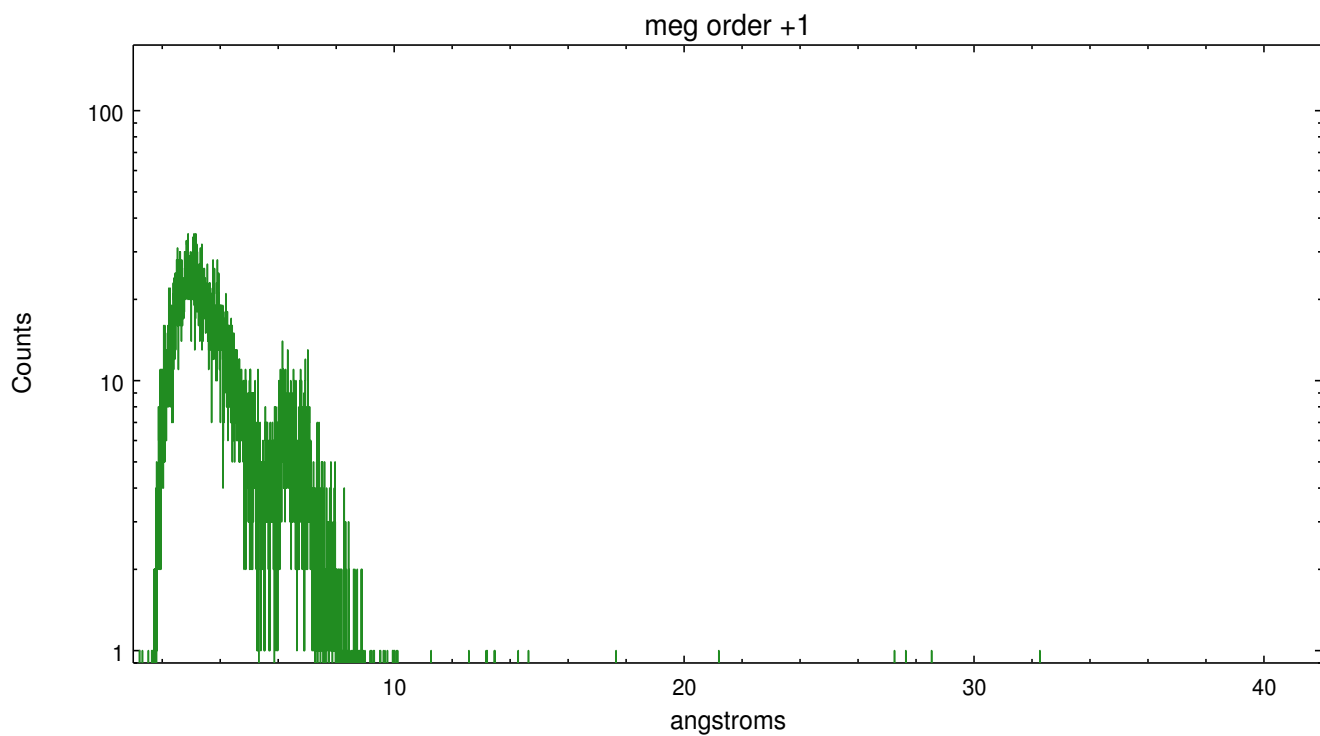
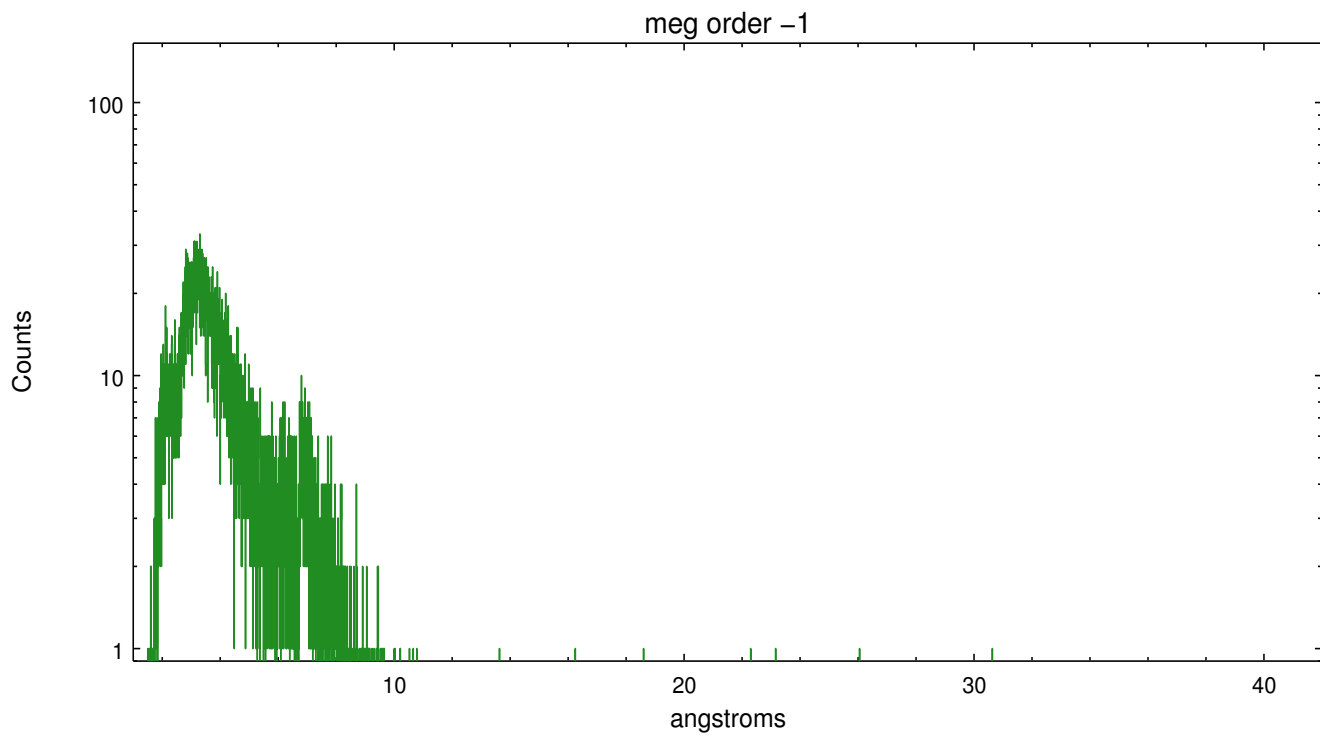
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1407	594	11191	10364	13673	526	1199





# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.1772998

## 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=4077.52, y=4106.23) 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.