

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 3403 - L2 Version 001
Chandra X-Ray Center

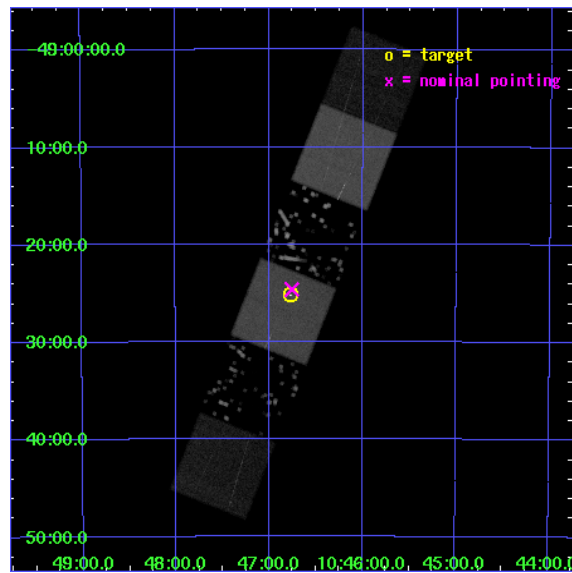
L2 Processing Date : Jan 13 2007

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1 Front

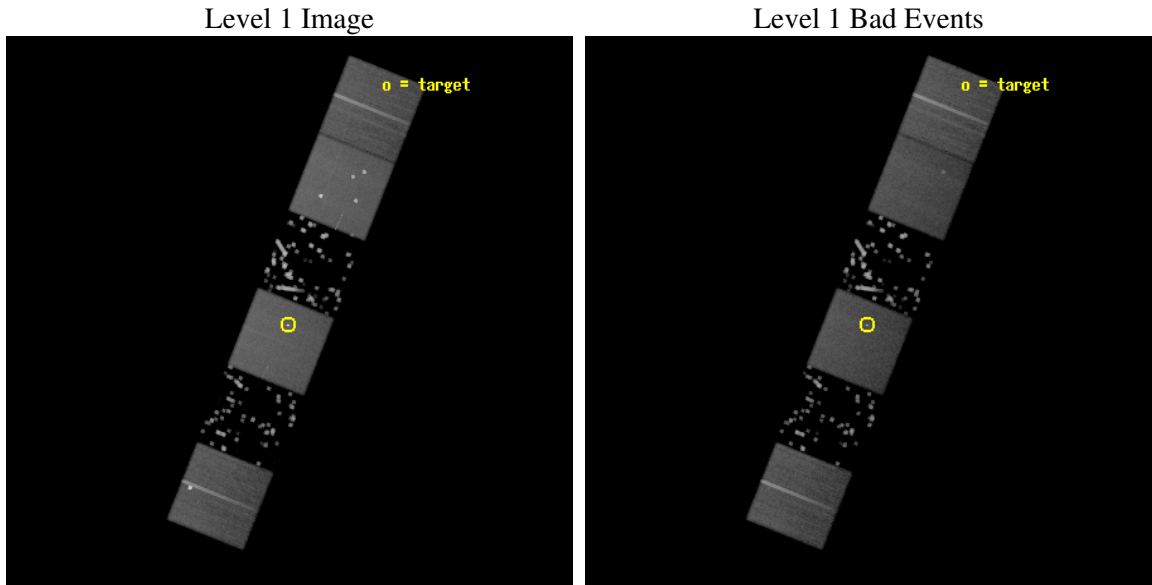
seq_num	200118
obs_id	3403
title	TORTURED CORONAE IN THE RAPID BRAKING ZONE
observer	Dr. Thomas Ayres
object	HD 93497
dtcycle	0
cycle	P
ra_targ	161.692083
dec_targ	-49.42
ra_nom	161.68910030705
dec_nom	-49.410459619093
roll_nom	111.70175905948
revision	2
ontime	58134.400054142
livetime	57398.267276323
ontime4	58131.159093887
ontime5	58134.400054142
ontime6	58134.400054142
ontime7	58134.400054142
ontime8	58134.400054142
ontime9	58134.400054142
l2events	536754



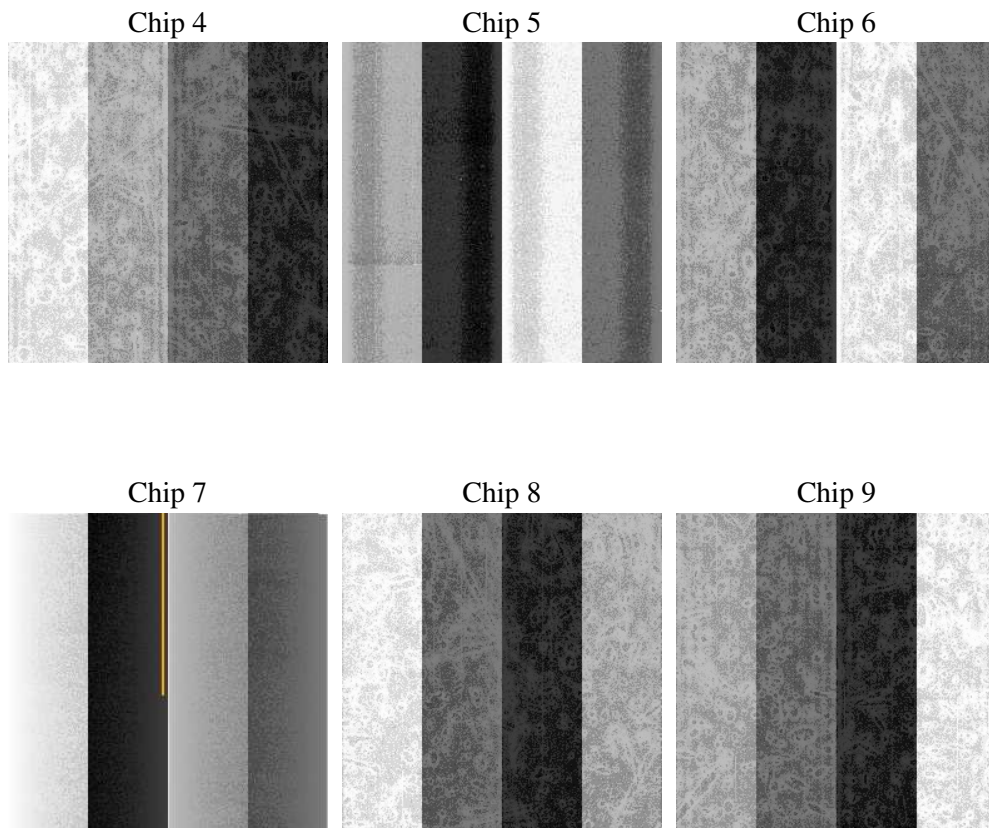
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.3.0
date	2007-01-13T13:14:32
revision	2

sched_exp_time	58000.000000
ontime	58134.400054142
ontime4	58131.159093887
ontime5	58134.400054142
ontime6	58134.400054142
ontime7	58134.400054142
ontime8	58134.400054142
ontime9	58134.400054142
l1events	2047738

2.1.4 Events

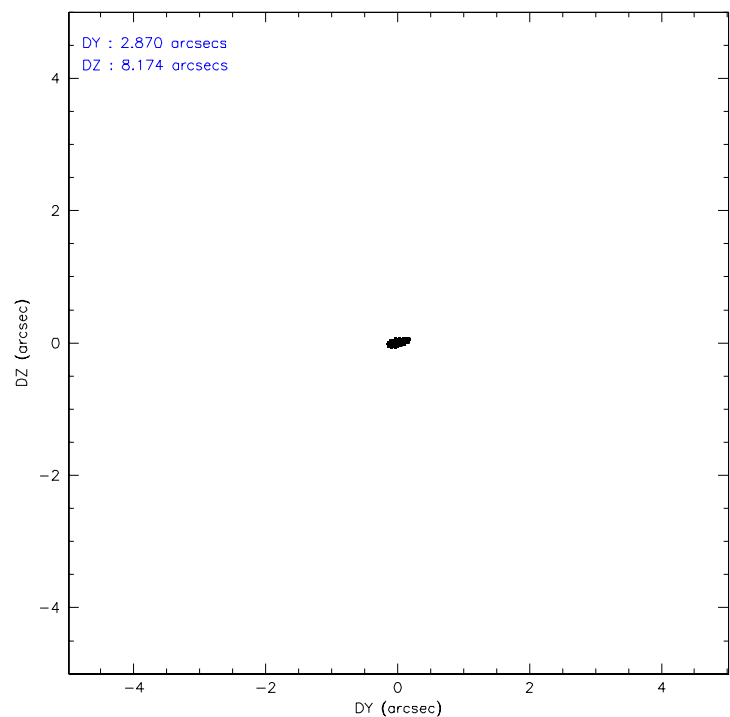
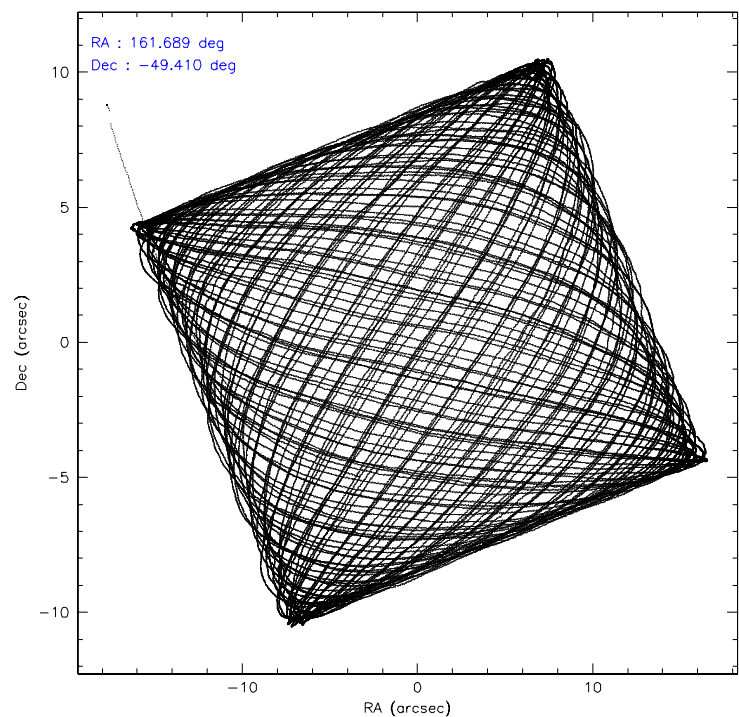
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	397407	525823	189199	468071	93003	374235
rejected events	353837	276446	141634	271711	71028	314635
rejected %	89%	52%	74%	58%	76%	84%

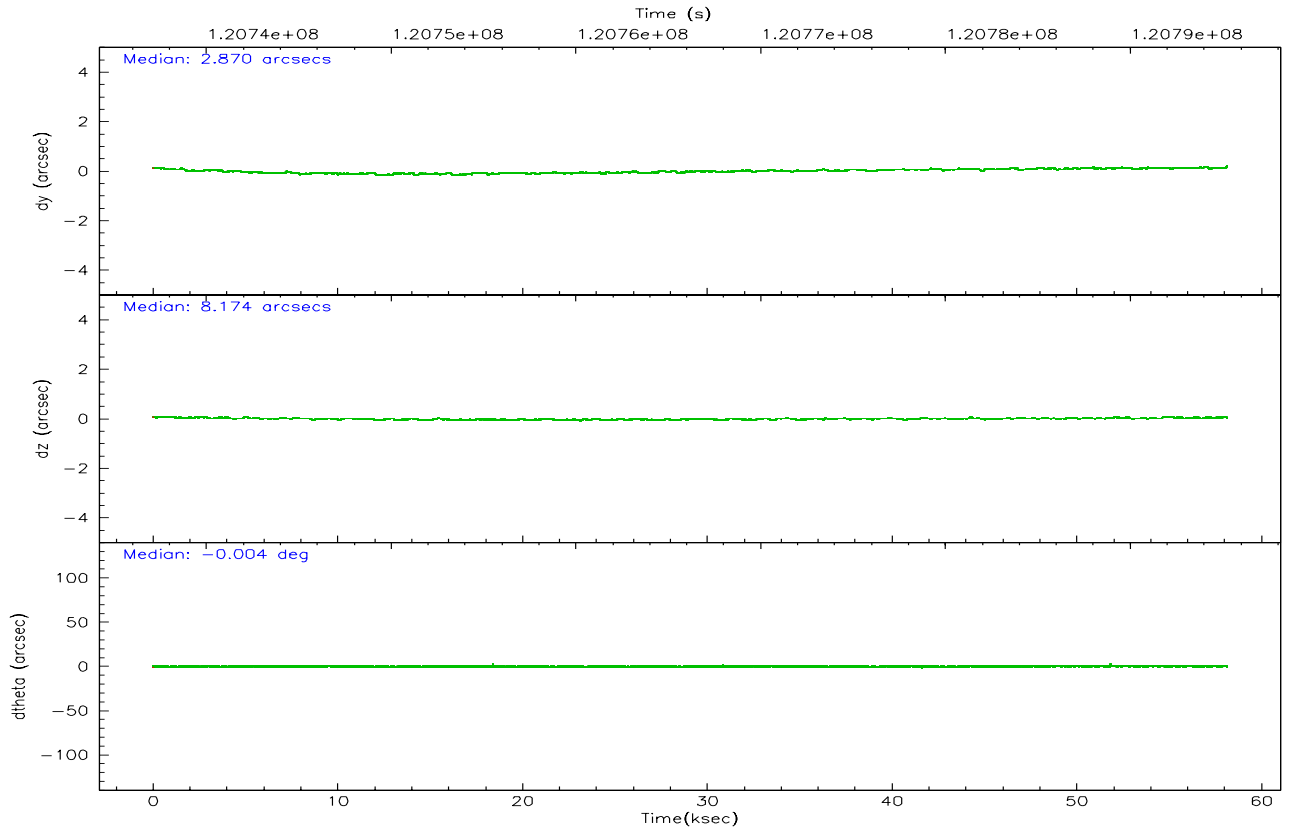
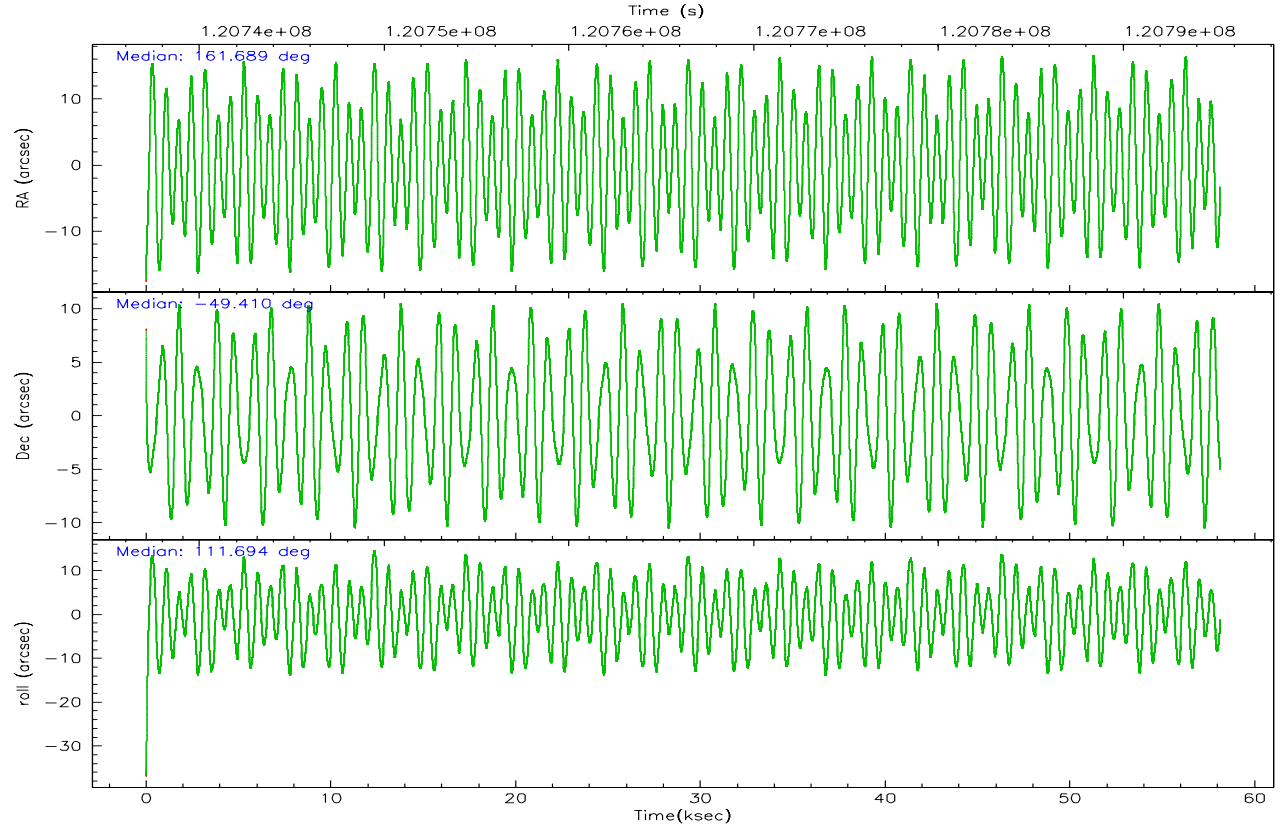
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	17823	47609	6188	19823	3160	34395
	4%	9%	3%	4%	3%	9%
grade 1 events	191	1486	9542	648	4042	236
	0%	0%	5%	0%	4%	0%
grade 2 events	10701	65376	13752	39541	6373	8813
	2%	12%	7%	8%	6%	2%
grade 3 events	4005	10337	10438	18228	5046	4312
	1%	1%	5%	3%	5%	1%
grade 4 events	3933	10148	7472	17975	3564	4064
	0%	1%	3%	3%	3%	1%
grade 5 events	13107	38861	22793	45109	10805	15632
	3%	7%	12%	9%	11%	4%
grade 6 events	7604	118753	10176	102874	5288	8665
	1%	22%	5%	21%	5%	2%
grade 7 events	340043	233253	108838	223873	54725	298118
	85%	44%	57%	47%	58%	79%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
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
Pointing RA	161.722301	161.6891003070468	Subarray requested	NONE	NONE
Pointing Dec	-49.427097	-49.41045961909324	Alternating exposures requested	N	N
Pointing Roll	111.570356	111.7017590594823	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1425803651734			
SIM translation stage offset (mm)	0	0.01005778216563158			
Observation start time	120737251.184000	120736186.72964			
Observation start date	2001-10-29T10:06:27	2001-10-29T09:49:46			
Observation end time	120795251.184000	120795832.50701			
Observation end date	2001-10-30T02:13:07	2001-10-30T02:23:52			
Read mode	TIMED	TIMED			

2.3 Aspect



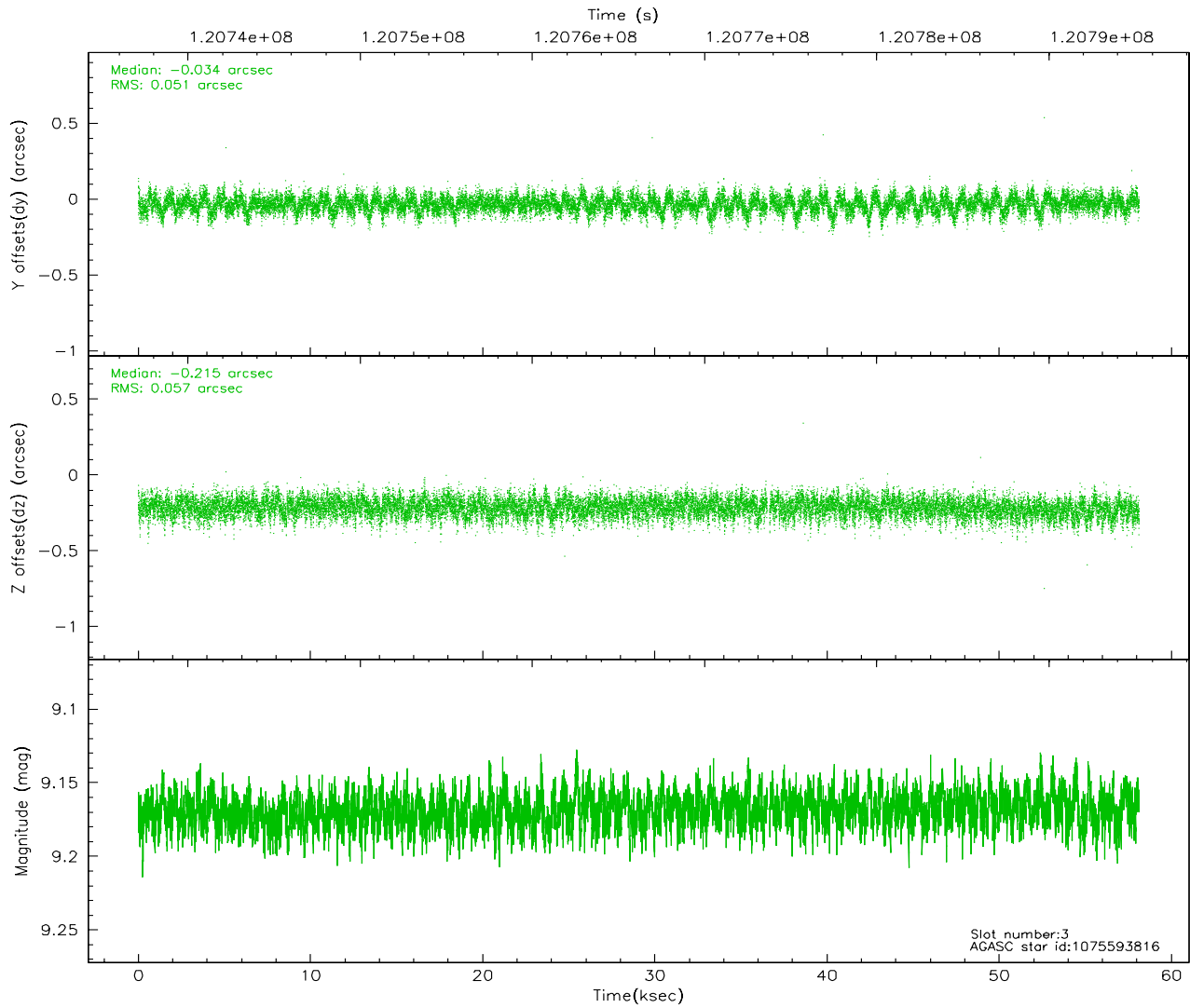
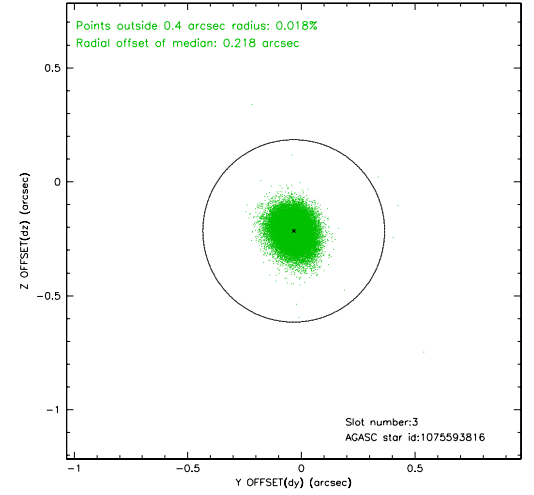
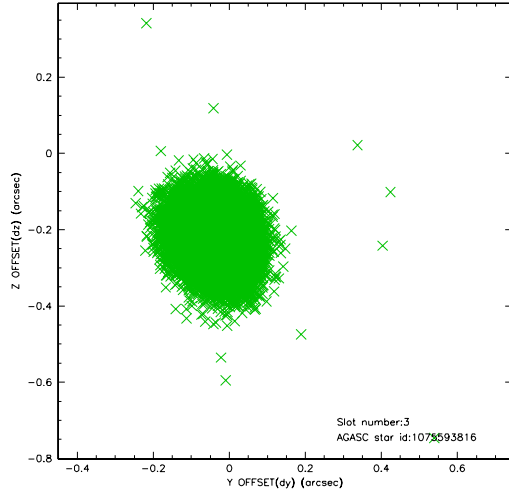


Slot Statistics

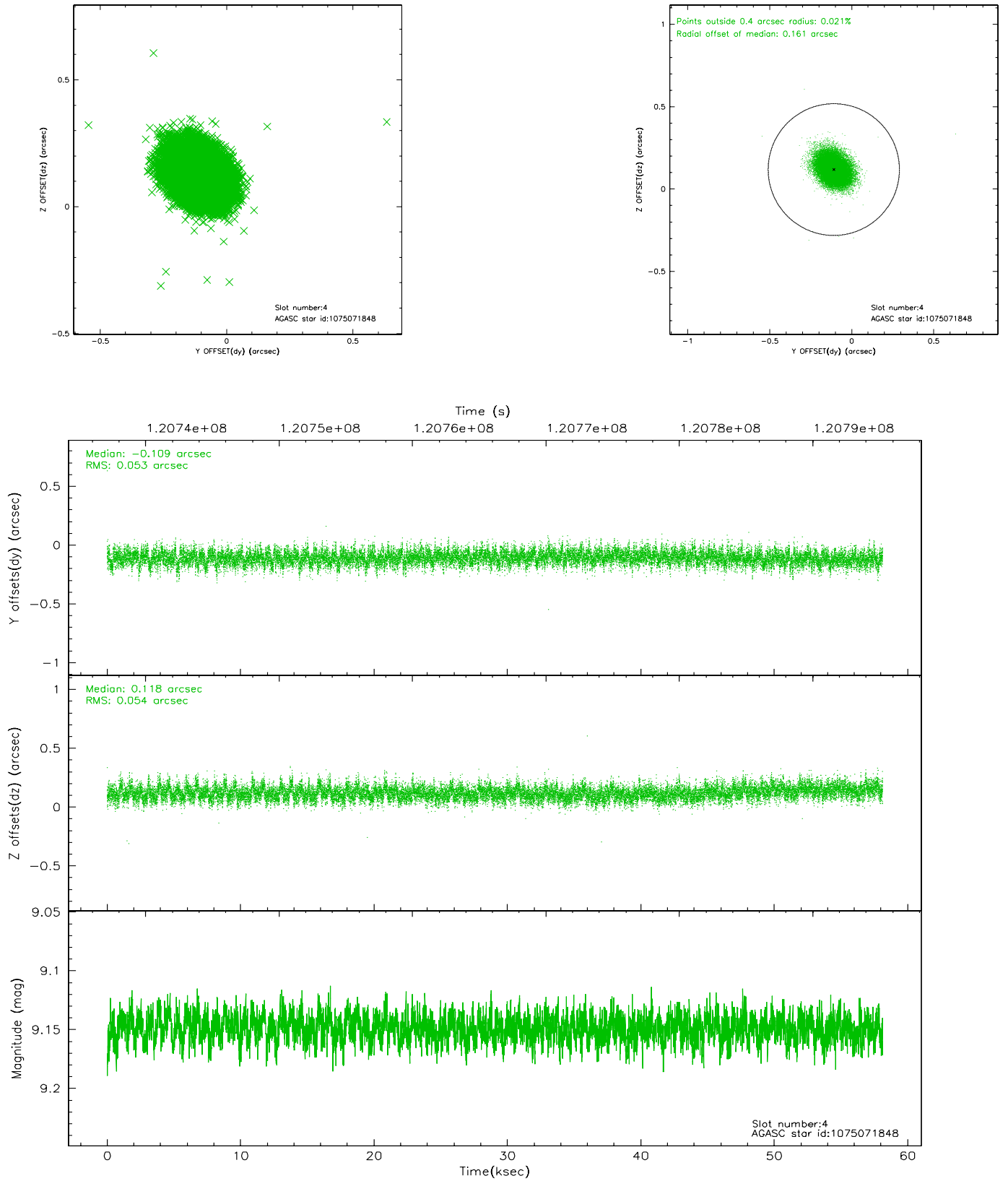
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	14182	0.006	0.009	0.009	0.023	0.000000	0.000000	-755.52	-1729.30
1	FID	ACIS-S-4	7.20	14181	-0.073	-0.005	0.008	0.031	0.000000	0.000000	2157.71	179.18
2	FID	ACIS-S-5	7.24	14181	0.037	0.005	0.008	0.018	0.000000	0.000000	-1808.36	172.85
3	GUIDE	1075593816	9.17	28284	-0.034	-0.215	0.081	0.131	160.844645	-49.710344	-208.95	2279.33
4	GUIDE	1075071848	9.15	28361	-0.109	0.118	0.079	0.131	162.283077	-48.700134	1939.18	-2198.76
5	GUIDE	1075599328	9.30	28351	-0.015	0.011	0.081	0.133	160.499028	-49.062946	2257.71	2210.66
6	GUIDE	1075589256	9.96	28269	0.094	0.018	0.133	0.208	161.267530	-49.945772	-1352.57	1667.68
7	GUIDE	1075577640	9.52	28347	0.069	0.066	0.099	0.160	162.298271	-49.598587	-1073.23	-1020.65

2.4 Star Slots

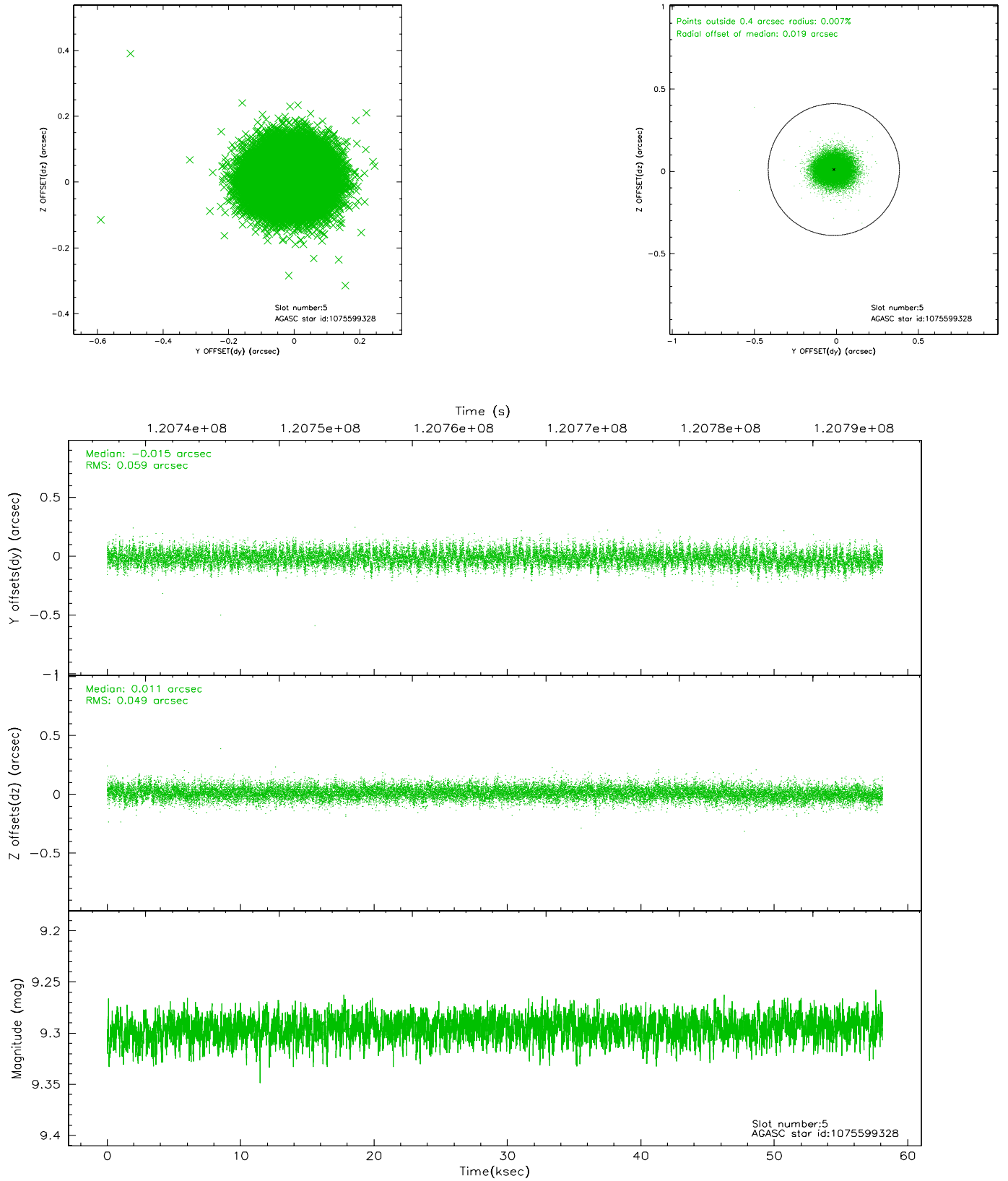
2.4.1 Slot 3



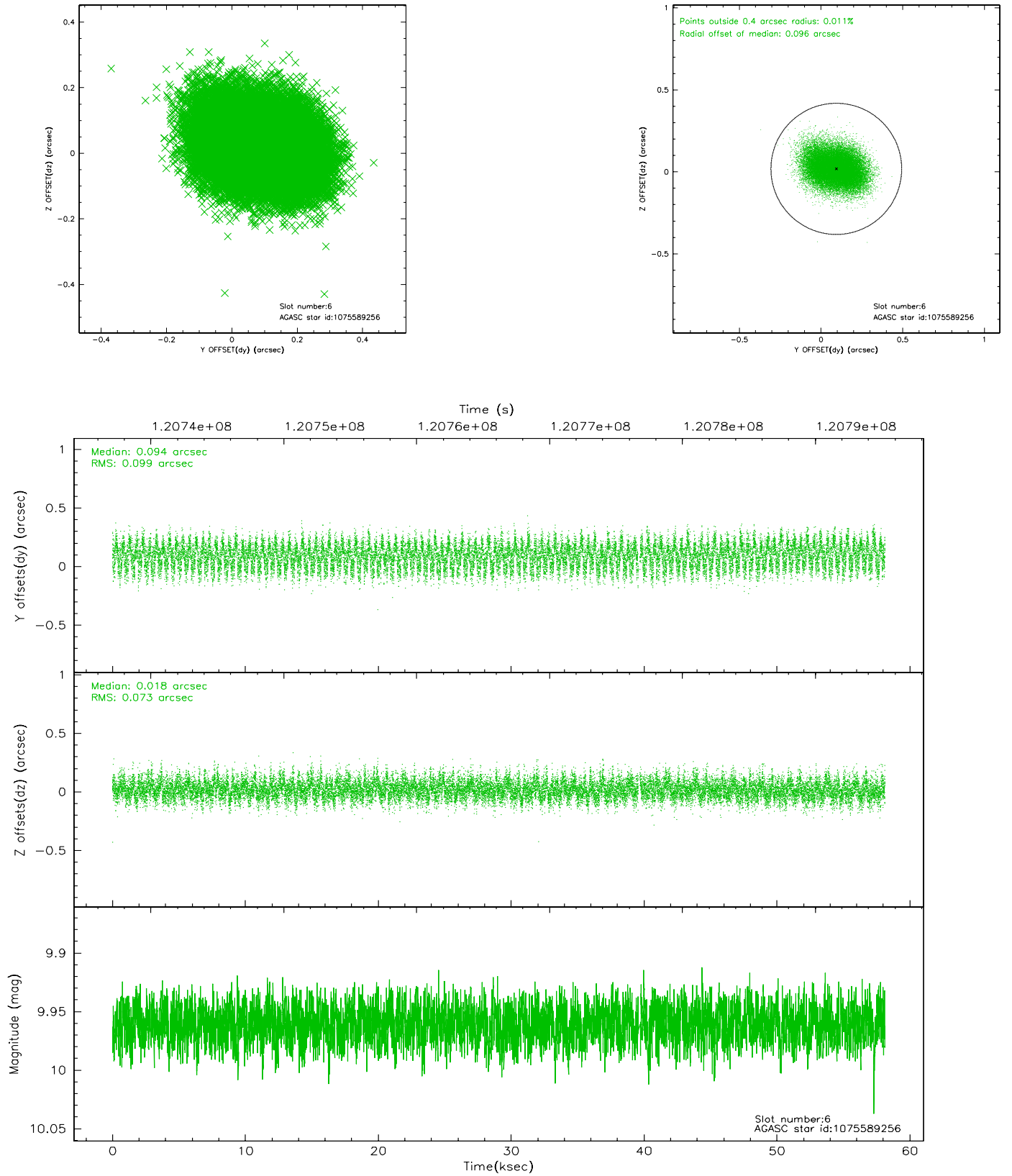
2.4.2 Slot 4



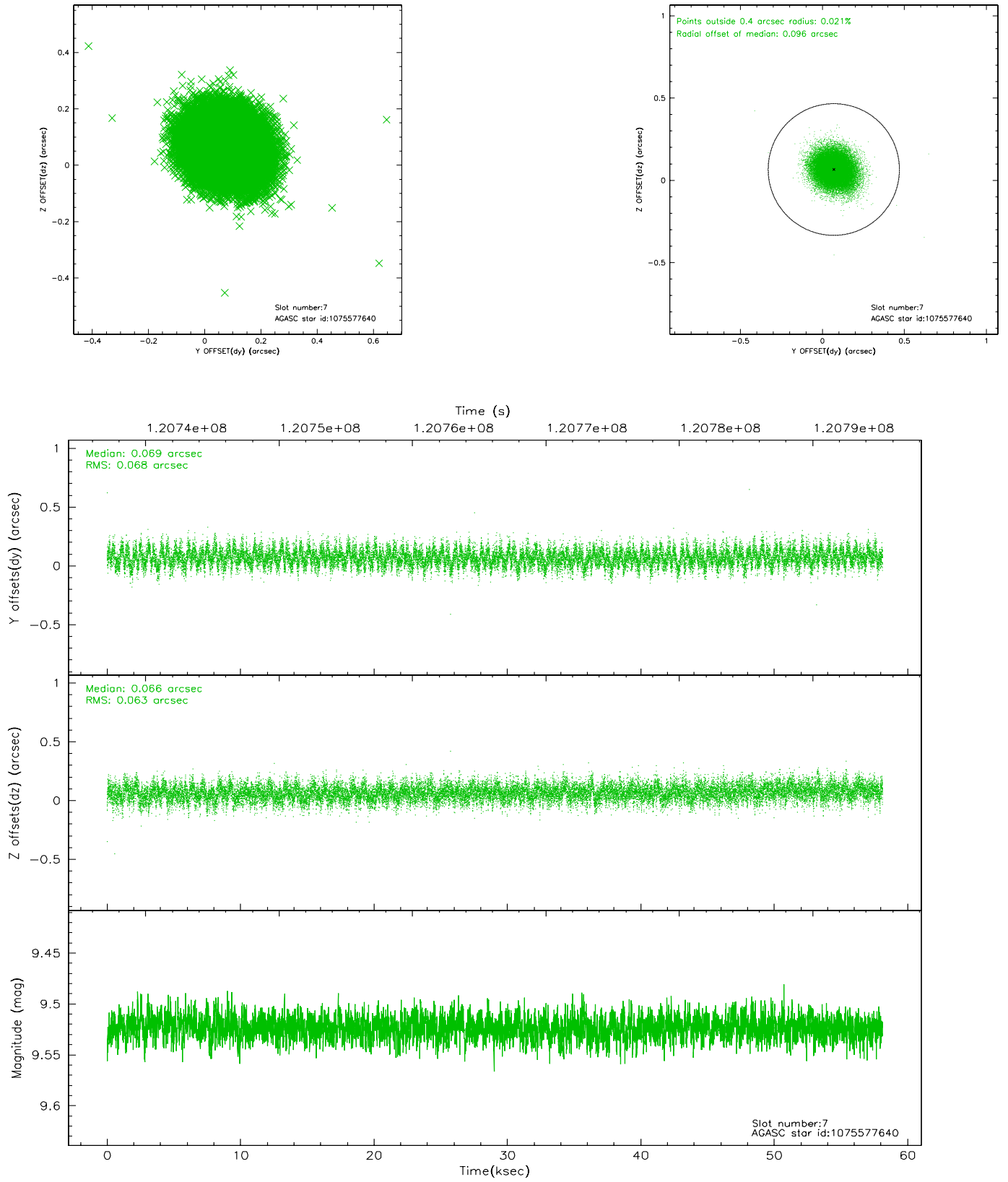
2.4.3 Slot 5



2.4.4 Slot 6

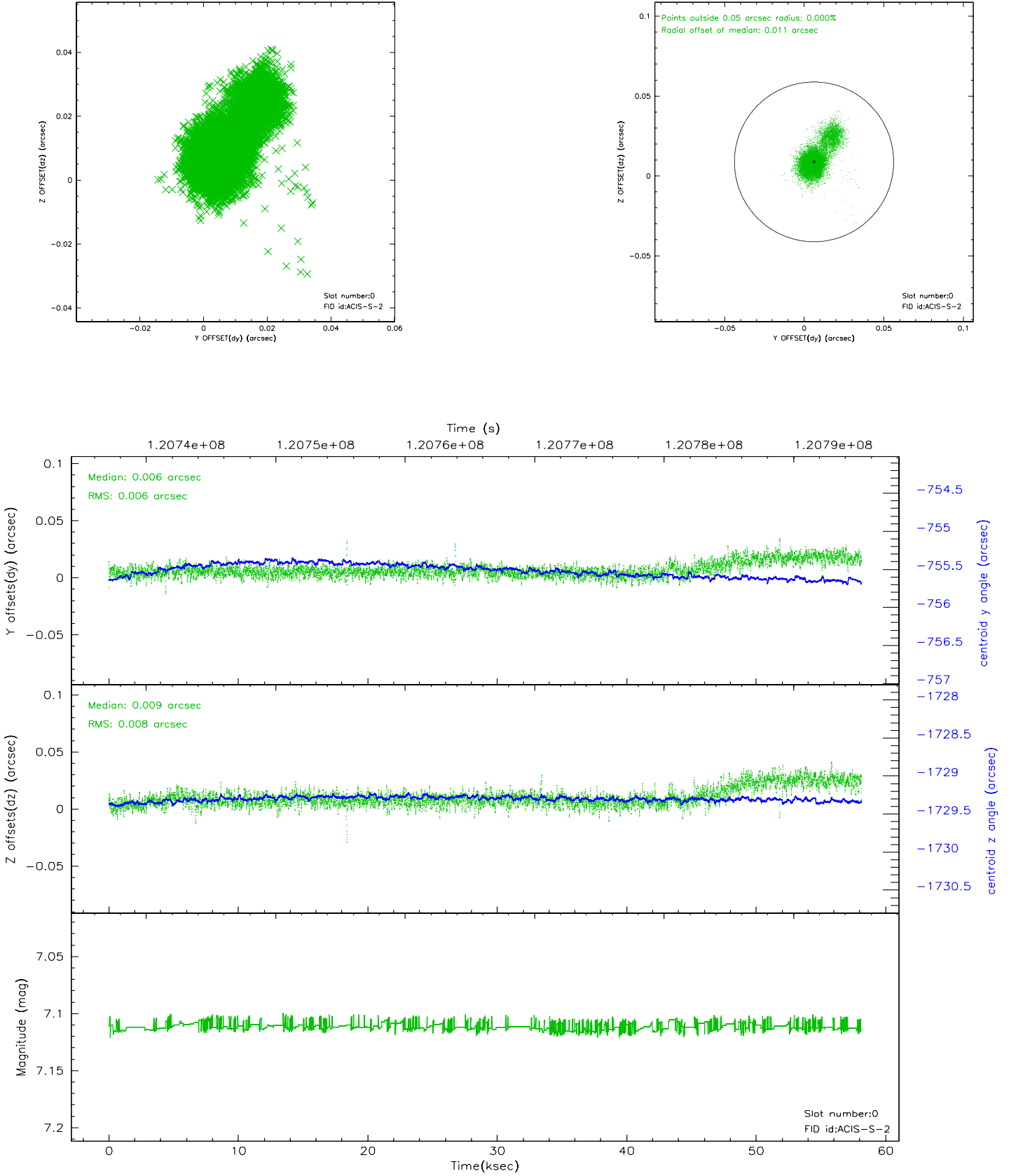


2.4.5 Slot 7

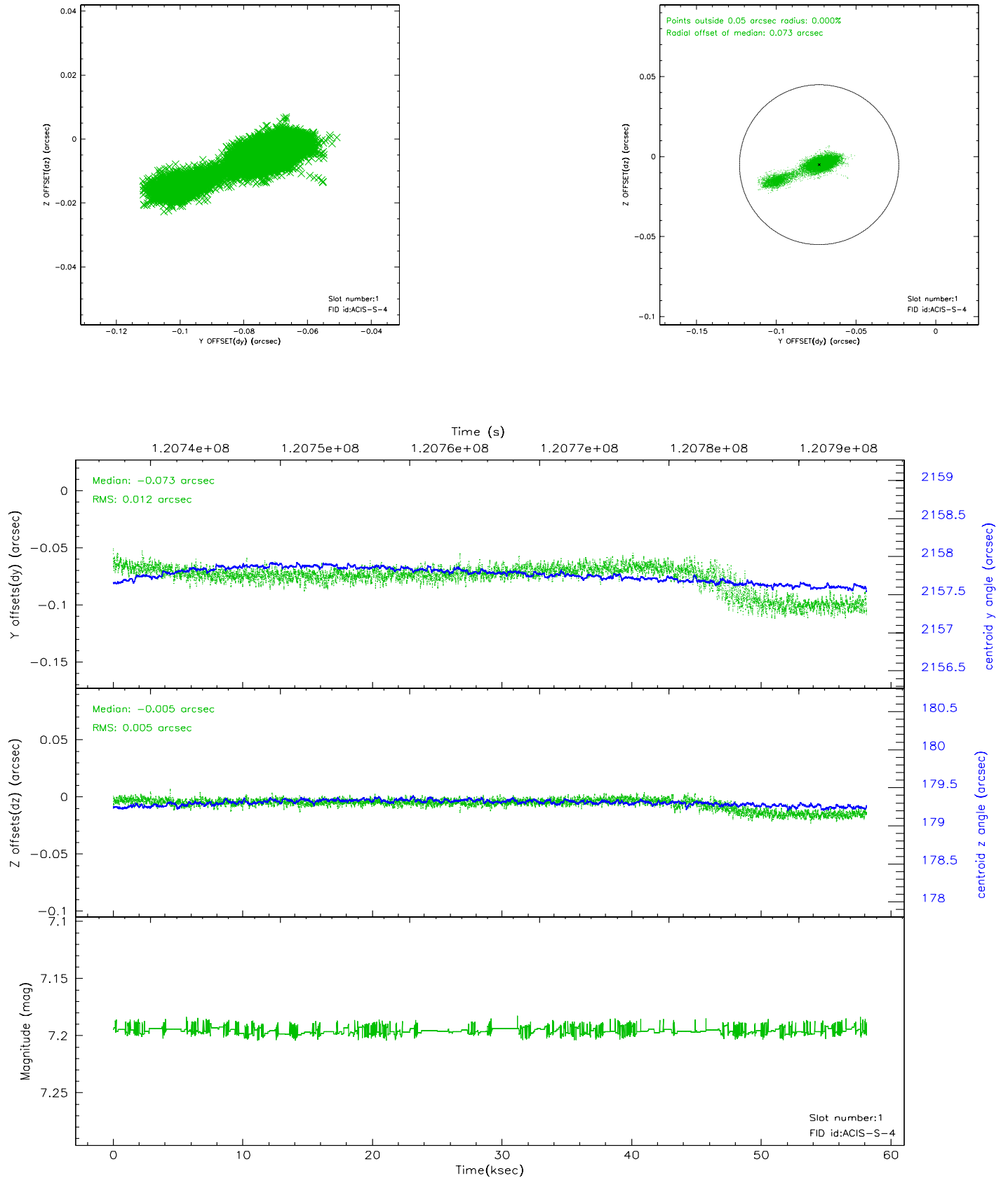


2.5 FID Slots

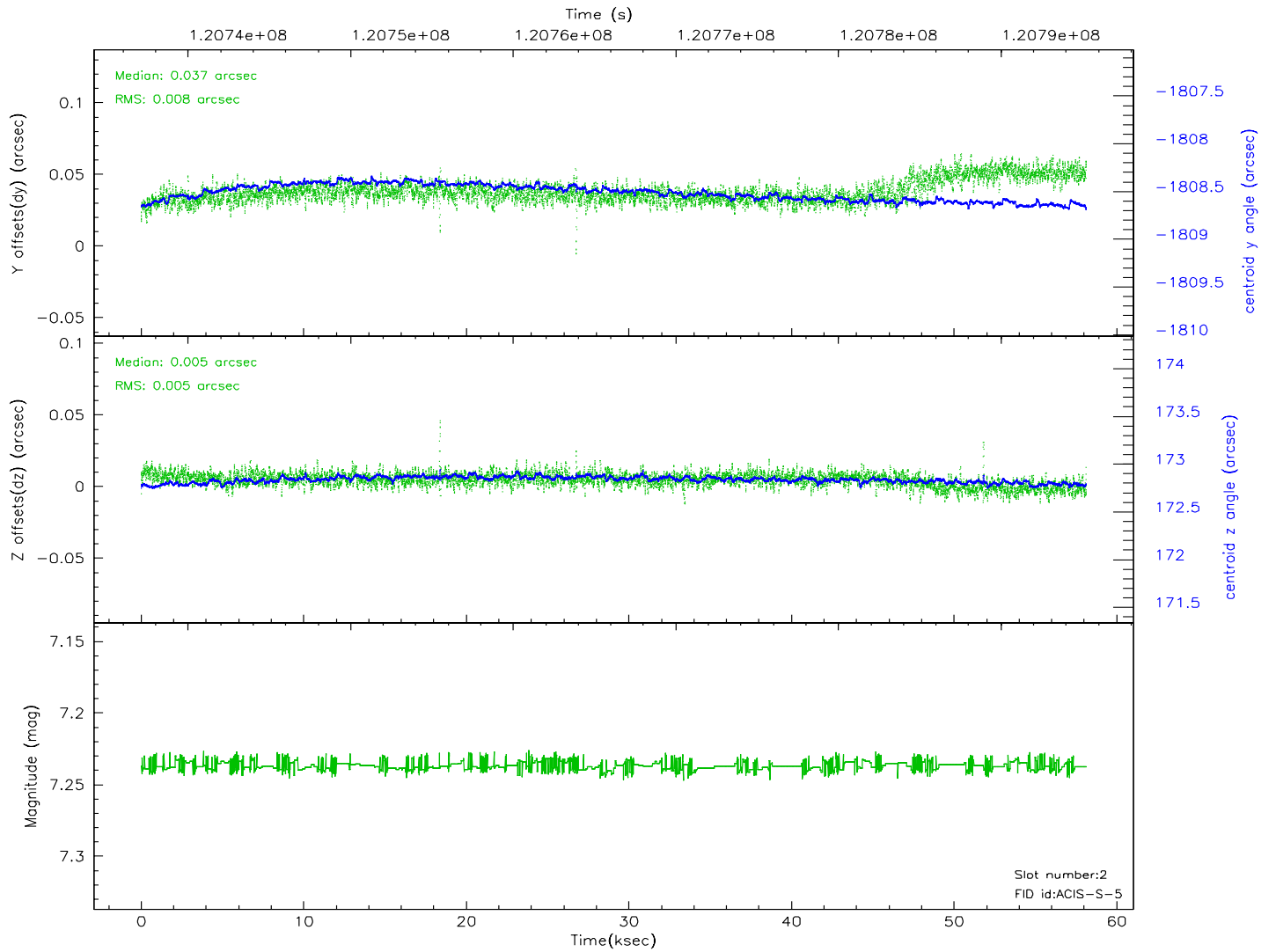
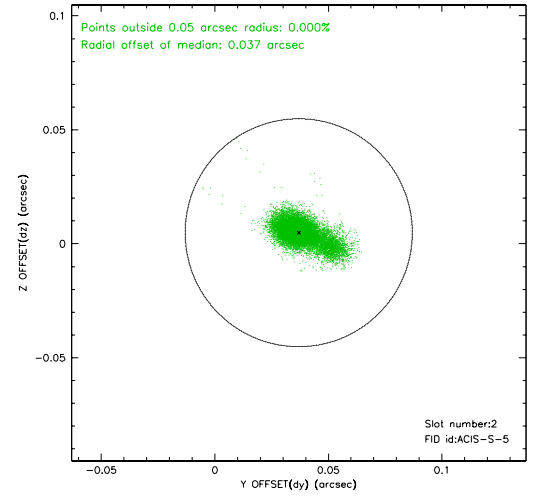
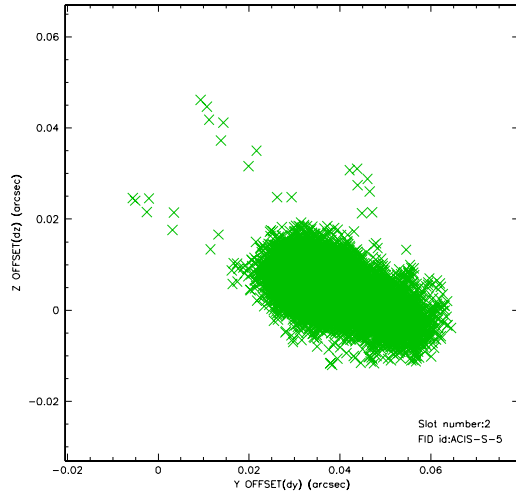
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

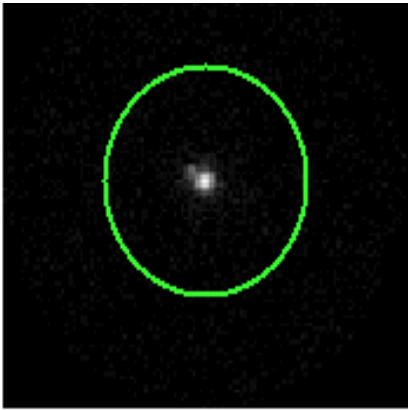


3 Gratings

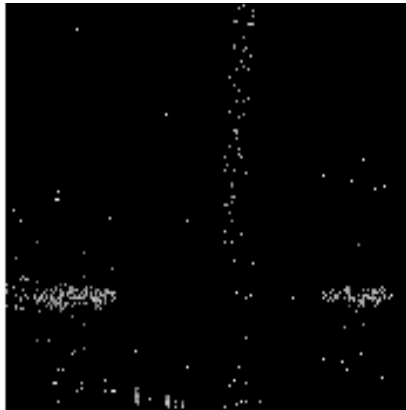
3.1 HEG Arm



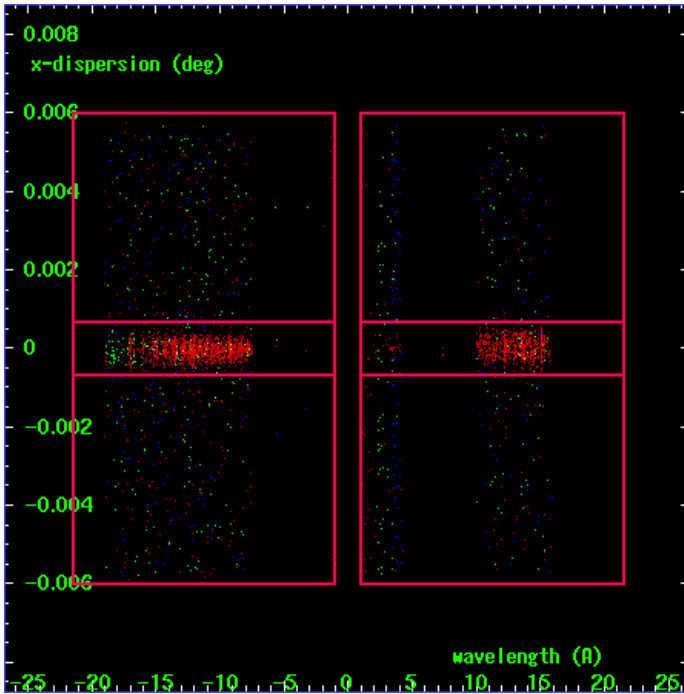
HEG Order Sort 123



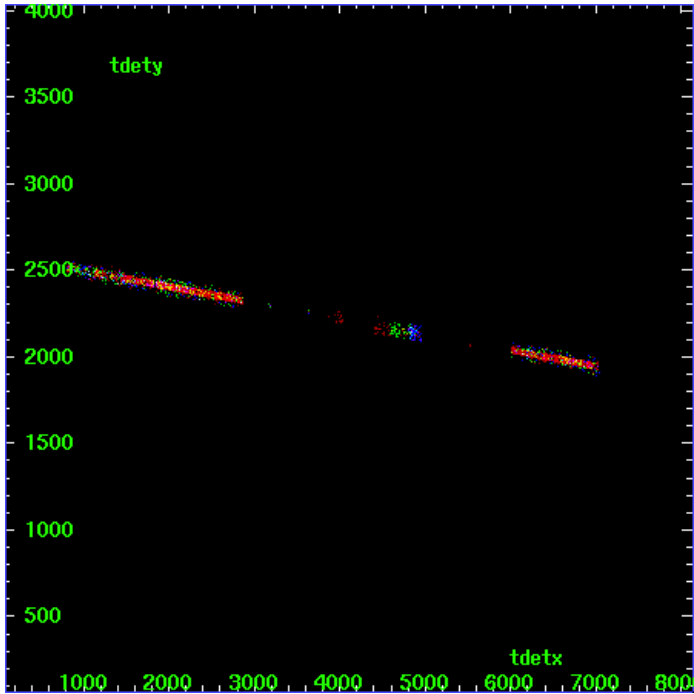
HEG Zero Order



HEG Order Sort ALL

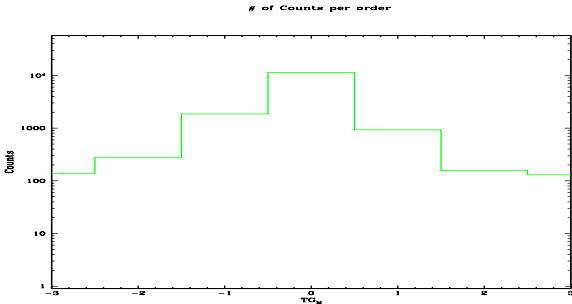


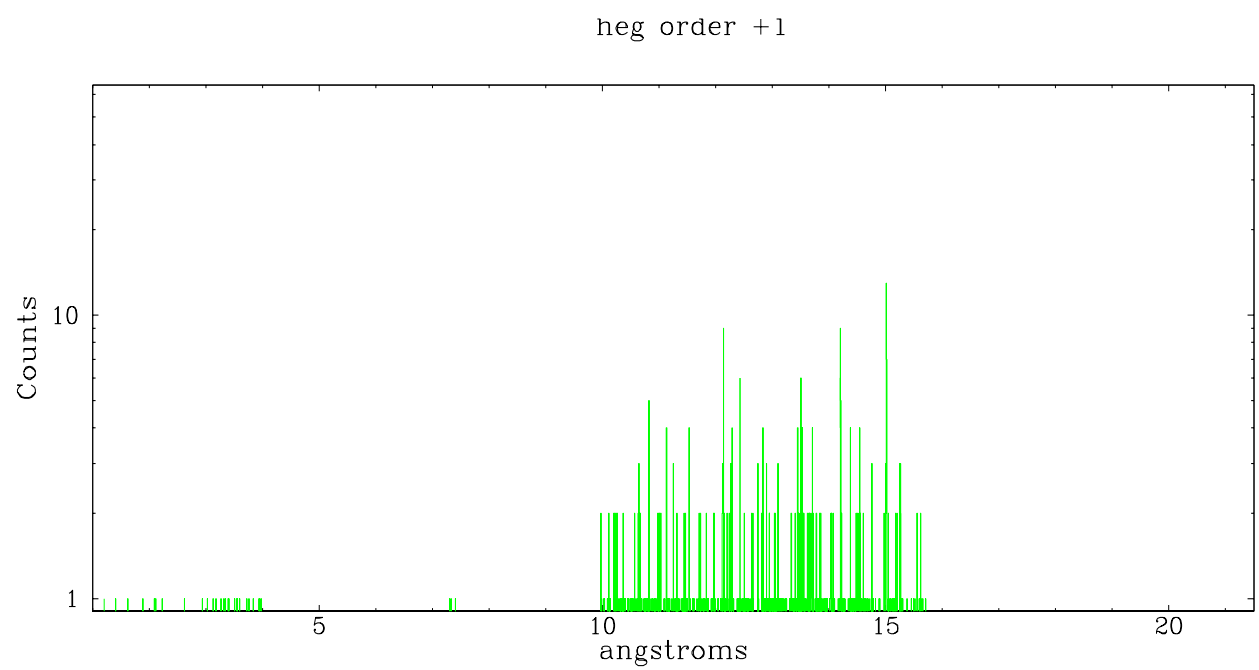
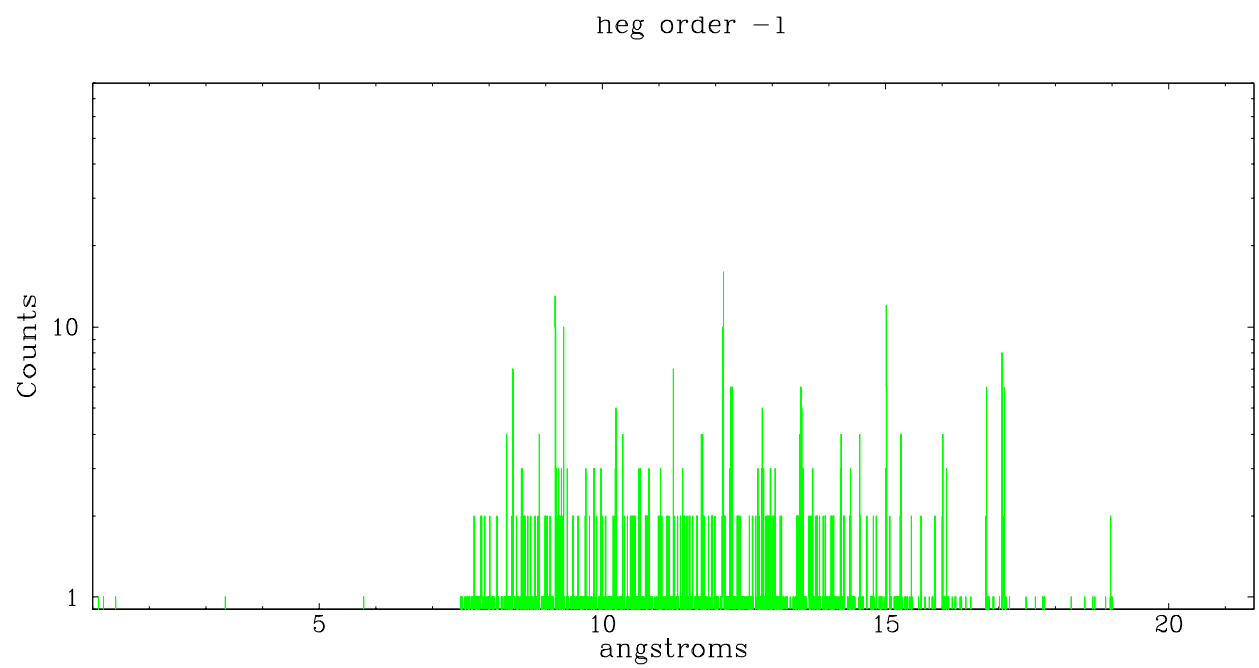
Spot Image HEG



Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	138	277	1850	11380	928	158	130

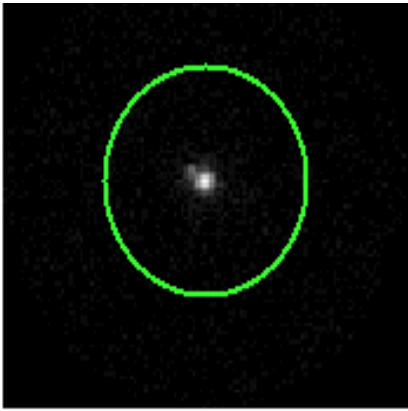




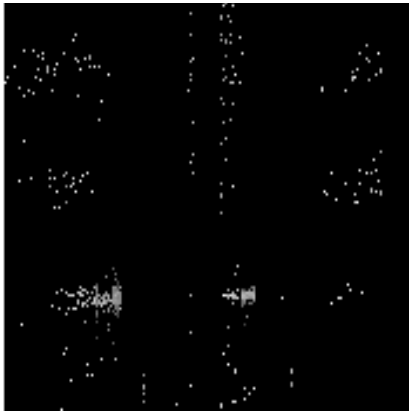
3.2 MEG Arm



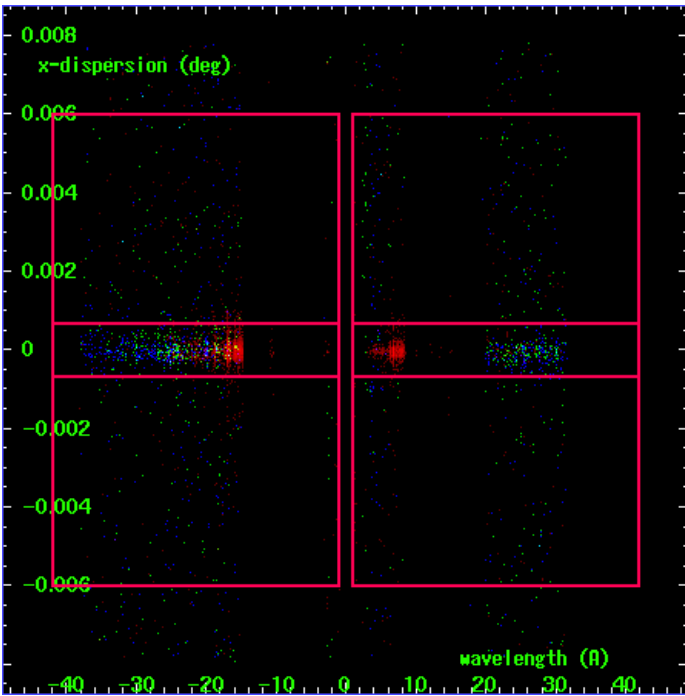
MEG Order Sort 123



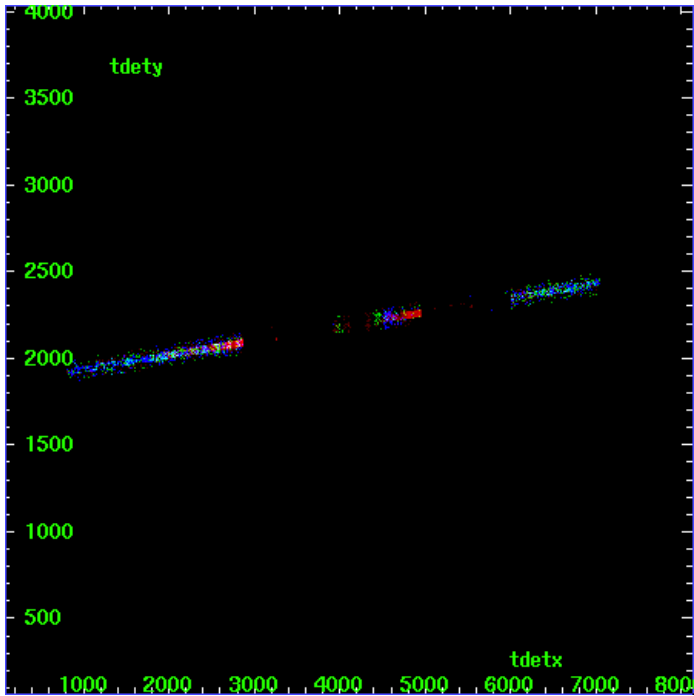
MEG Zero Order



MEG Order Sort ALL

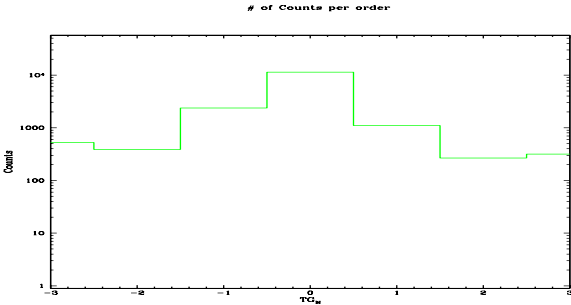


Spot Image MEG

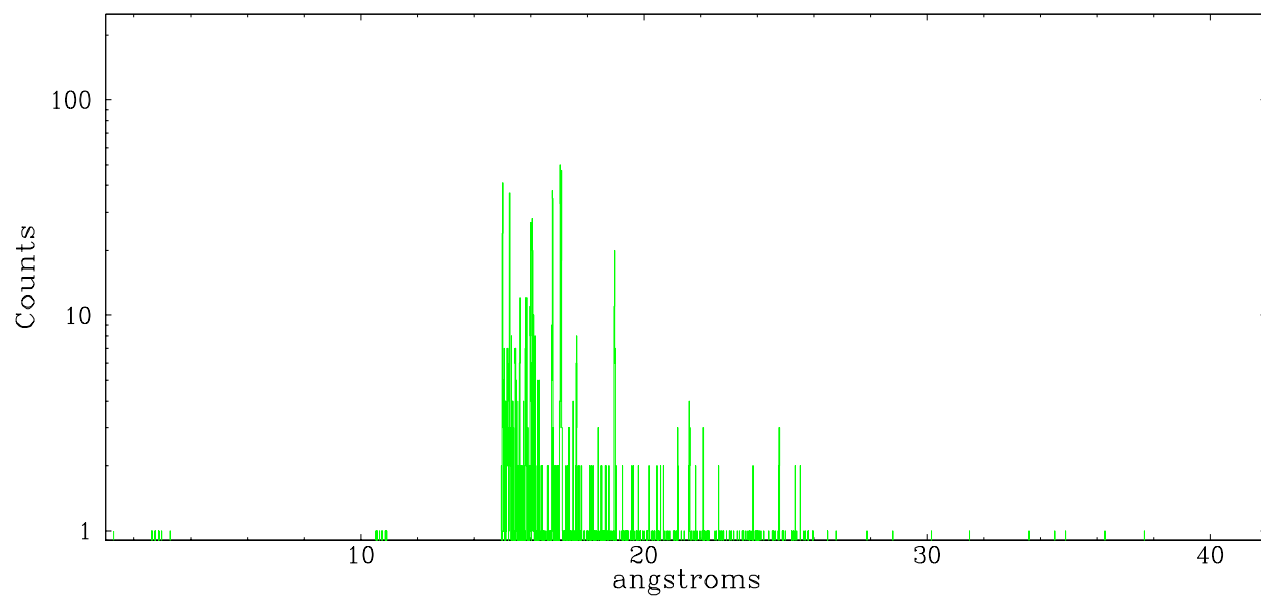


Full Detector MEG

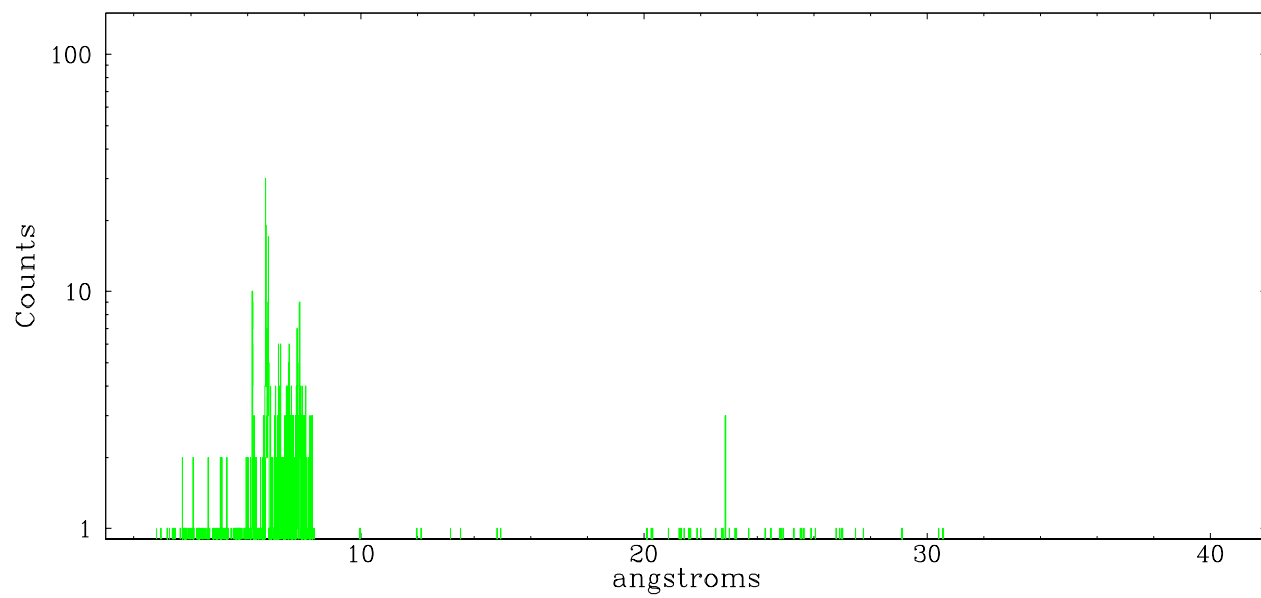
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	524	387	2368	11380	1101	267	316



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.31
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	58.134

A.2 Comments

WARNING: incomplete dispersed spectral data due to instrument anomaly.
Observation was repeated with obsid 3410

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During this observation, an ACIS Threshold-Plane Anomaly occurred. The flight s/w is intended to delay 'start events' until after 'end bias dump'. For some unknown reason, it occasionally fails to do so, and if the overlap lasts for more than a minute or so, one or more FEPs experience a firmware latch-up that renders them useless until they are power cycled. The symptom is that the CCD connected to the affected FEP starts reporting the same pixels frame after frame regardless of whether there is an X-ray event in those pixels or not. As a result, no events except hot pixels in the detector are recorded. Most, but not all, of the hot pixels on these two chips are removed in the Level 2 event list.

The anomaly occurred for chips S2 and S4 only. However, since this a grating observation, significant portions of the spectral arms are missing for both the plus and minus sides.