

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 657 - L2 Version 3
Chandra X-Ray Center

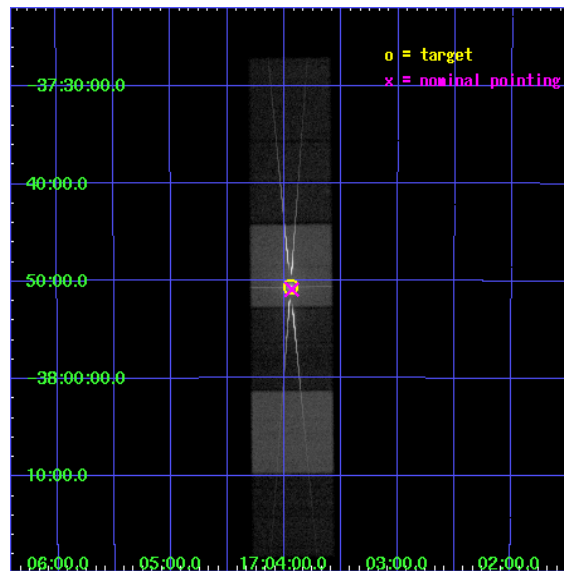
L2 Processing Date : Jul 27 2007

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1 Front

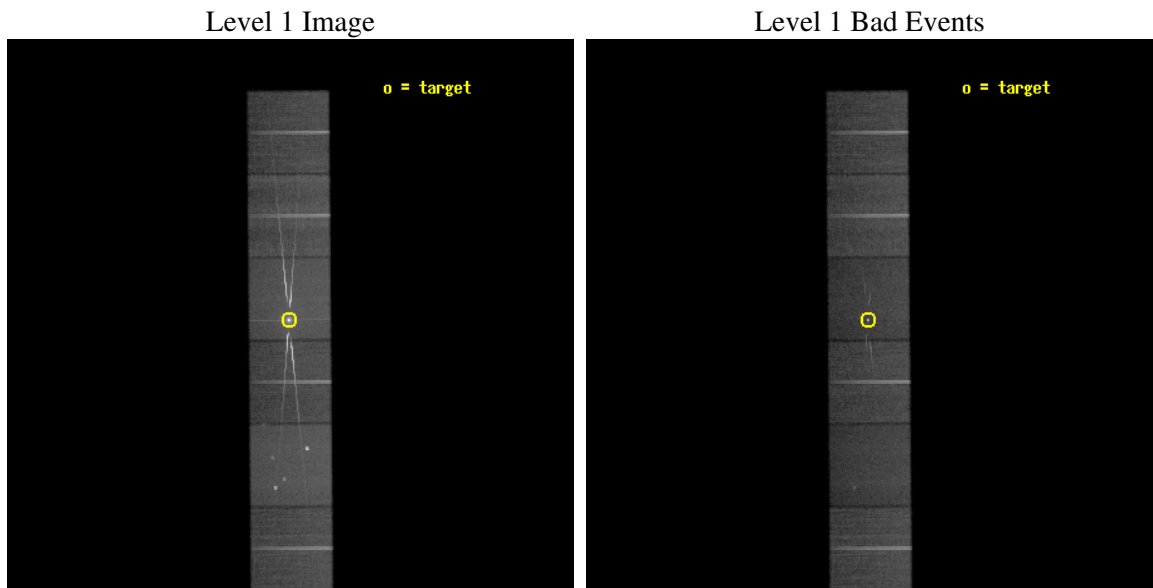
seq_num	400024
obs_id	657
title	SPECTRAL VARIABILITY IN A SUPERGIANT X-RAY BINARY
observer	Bram Boroson
object	4U 1700-37
dtcycle	0
cycle	P
ra_targ	255.9858
dec_targ	-37.84414
ra_nom	255.98349569294
dec_nom	-37.848390306678
roll_nom	269.52256048523
revision	3
ontime	42950.359079763
livetime	42406.495771494
ontime4	42953.600040004
ontime5	42953.600040004
ontime6	42953.600040004
ontime7	42950.359079763
ontime8	42950.334864527
ontime9	42953.534784764
l2events	606991



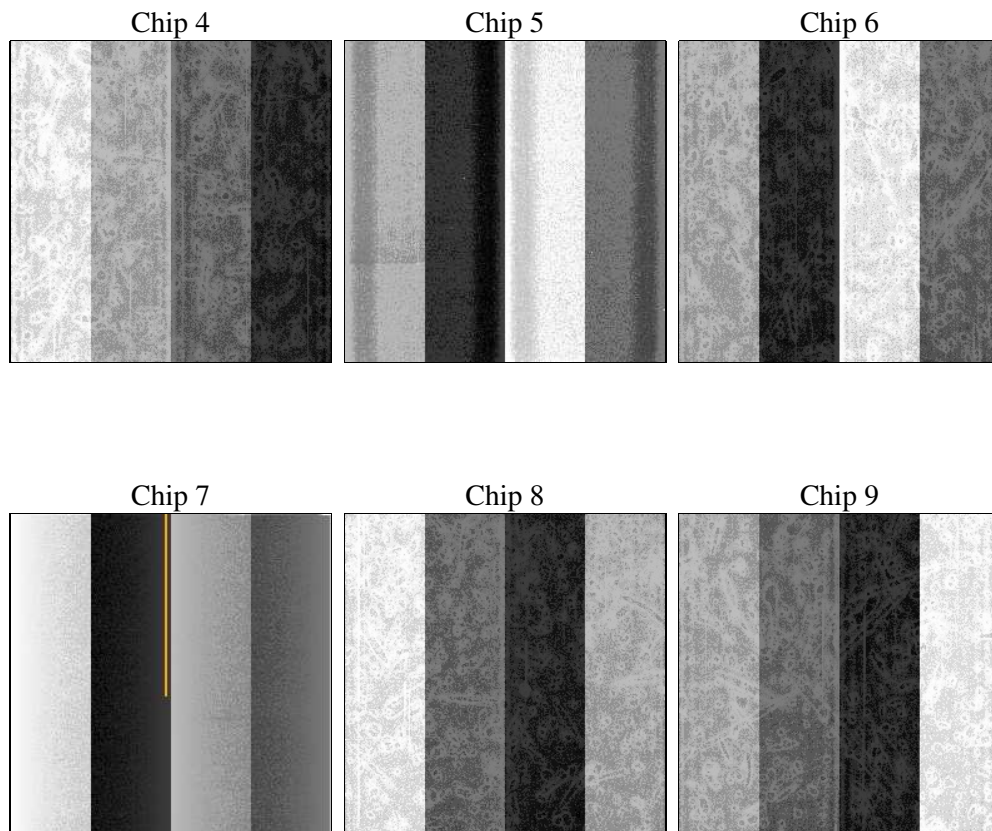
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-05T08:48:35
revision	2

sched_exp_time	43000.000000
ontime	42950.359079763
ontime4	42953.600040004
ontime5	42953.600040004
ontime6	42953.600040004
ontime7	42950.359079763
ontime8	42950.334864527
ontime9	42953.534784764
l1events	2054379

2.1.4 Events

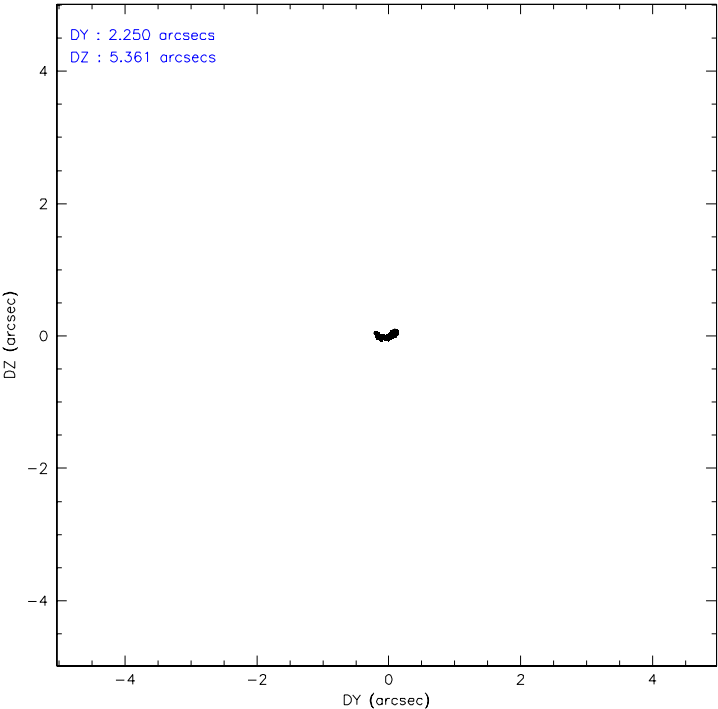
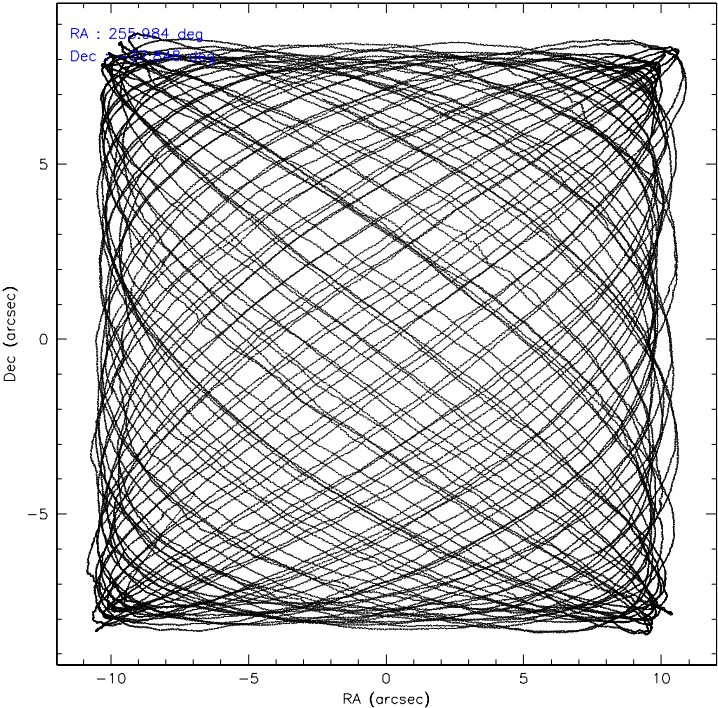
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	291037	361245	337731	464872	339127	260367
rejected events	259522	188606	238755	192333	265317	228069
rejected %	89%	52%	70%	41%	78%	87%

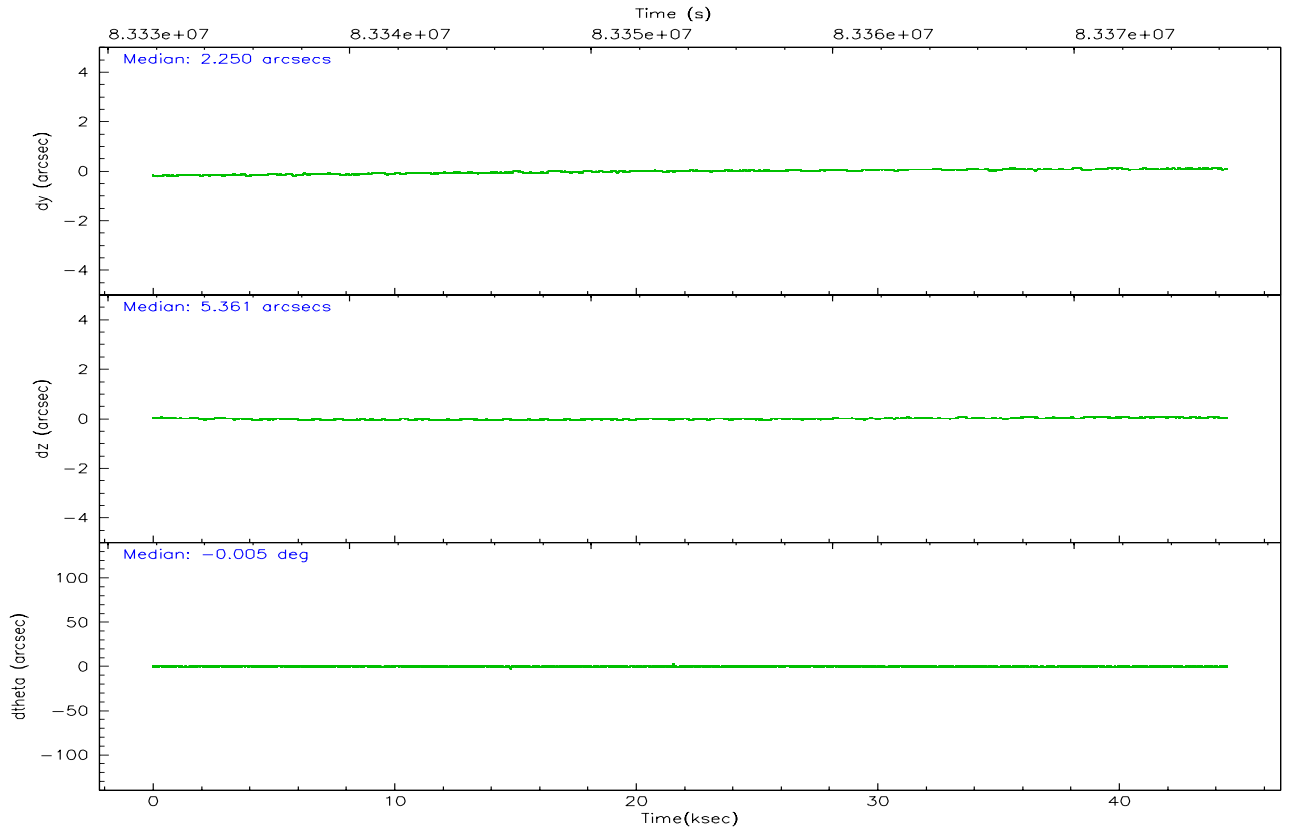
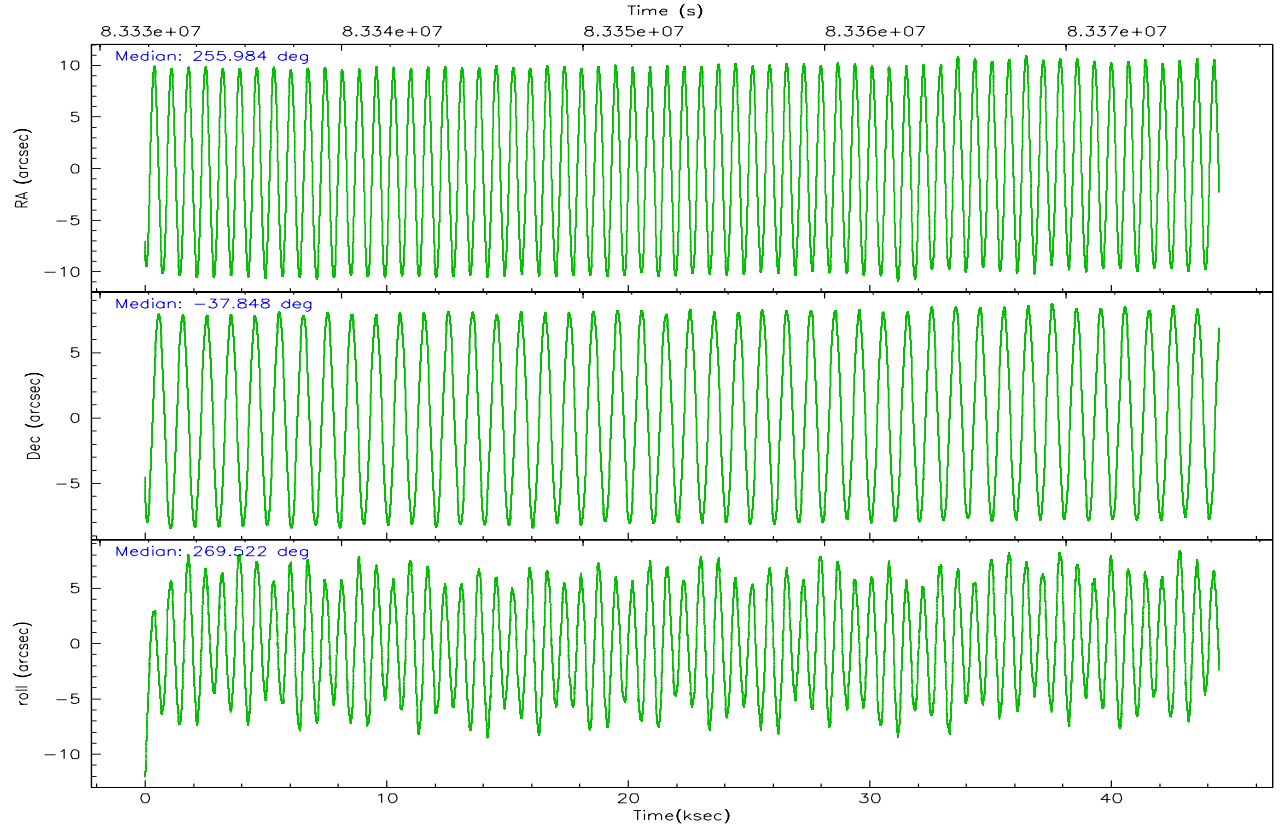
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	13234	26561	55326	44381	27681	13833
	4%	7%	16%	9%	8%	5%
grade 1 events	129	773	581	1001	227	106
	0%	0%	0%	0%	0%	0%
grade 2 events	7150	46609	16583	57502	14920	6250
	2%	12%	4%	12%	4%	2%
grade 3 events	3013	7732	6826	26679	7378	3222
	1%	2%	2%	5%	2%	1%
grade 4 events	2836	7315	6689	26577	7000	3053
	0%	2%	1%	5%	2%	1%
grade 5 events	8765	27543	10910	33845	13578	10798
	3%	7%	3%	7%	4%	4%
grade 6 events	5286	84433	13555	117418	16853	5943
	1%	23%	4%	25%	4%	2%
grade 7 events	250624	160279	227261	157469	251490	217162
	86%	44%	67%	33%	74%	83%

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	255.966230	255.9834956929373	Subarray requested	NONE	NONE
Pointing Dec	-37.824636	-37.84839030667765	Alternating exposures requested	N	N
Pointing Roll	269.355342	269.522560485227	Primary exposure time	3.200000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-190.132523	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Phase constraints	Y	Y			
Phase period	3.411500	3.411500			
Phase epoch	48722.948000	48722.948000			
Phase start	0.750000	0.750000			
Phase end	0.890000	0.890000			
Phase start error	0.050000	0.050000			
Phase end error	0.050000	0.050000			
Observation start time	83332533.184000	83331329.220741			
Observation start date	2000-08-22T11:54:29	2000-08-22T11:35:29			
Observation end time	83375533.184000	83376632.17243899			
Observation end date	2000-08-22T23:51:09	2000-08-23T00:10:32			
Read mode	TIMED	TIMED			

2.3 Aspect



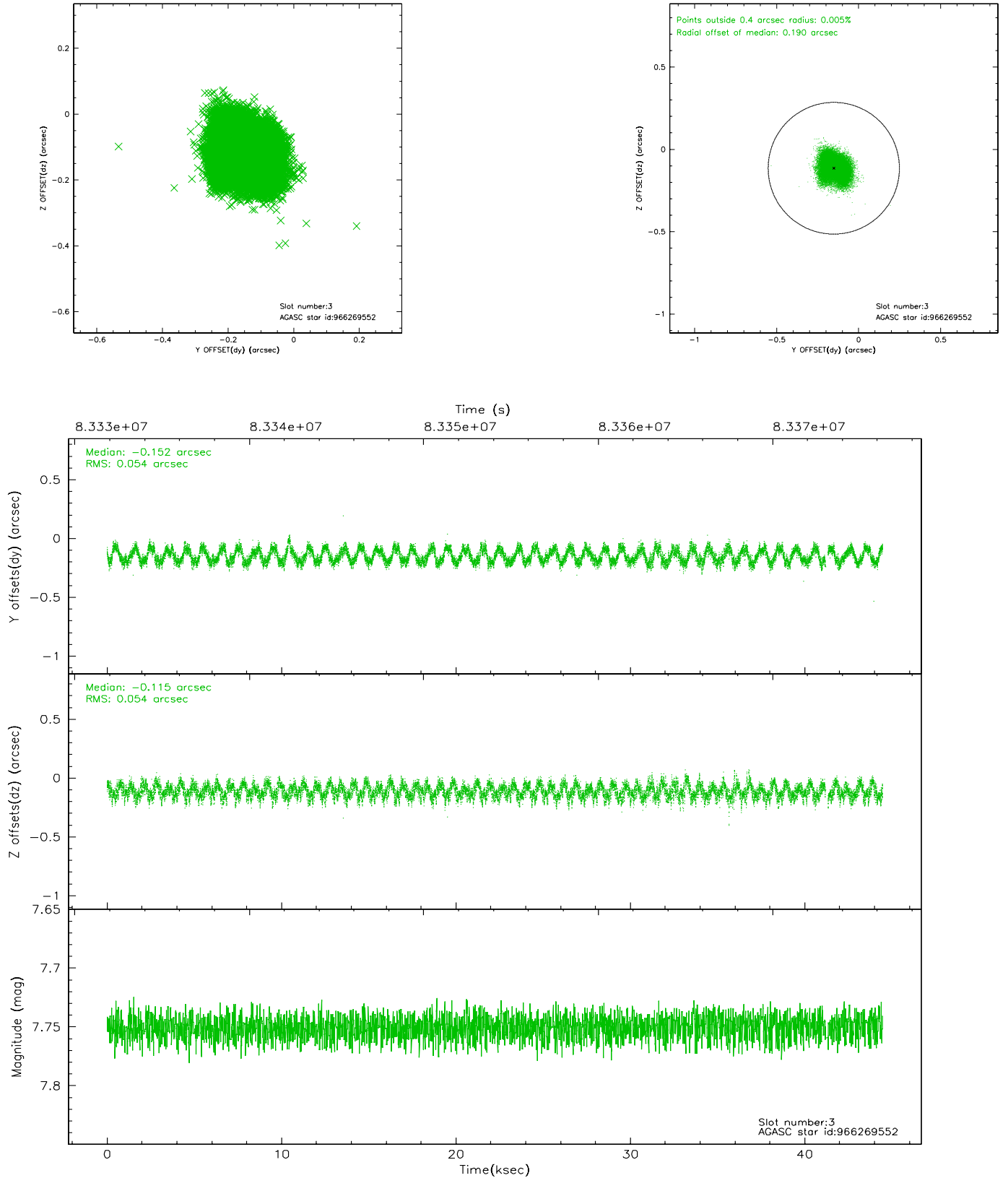


Slot Statistics

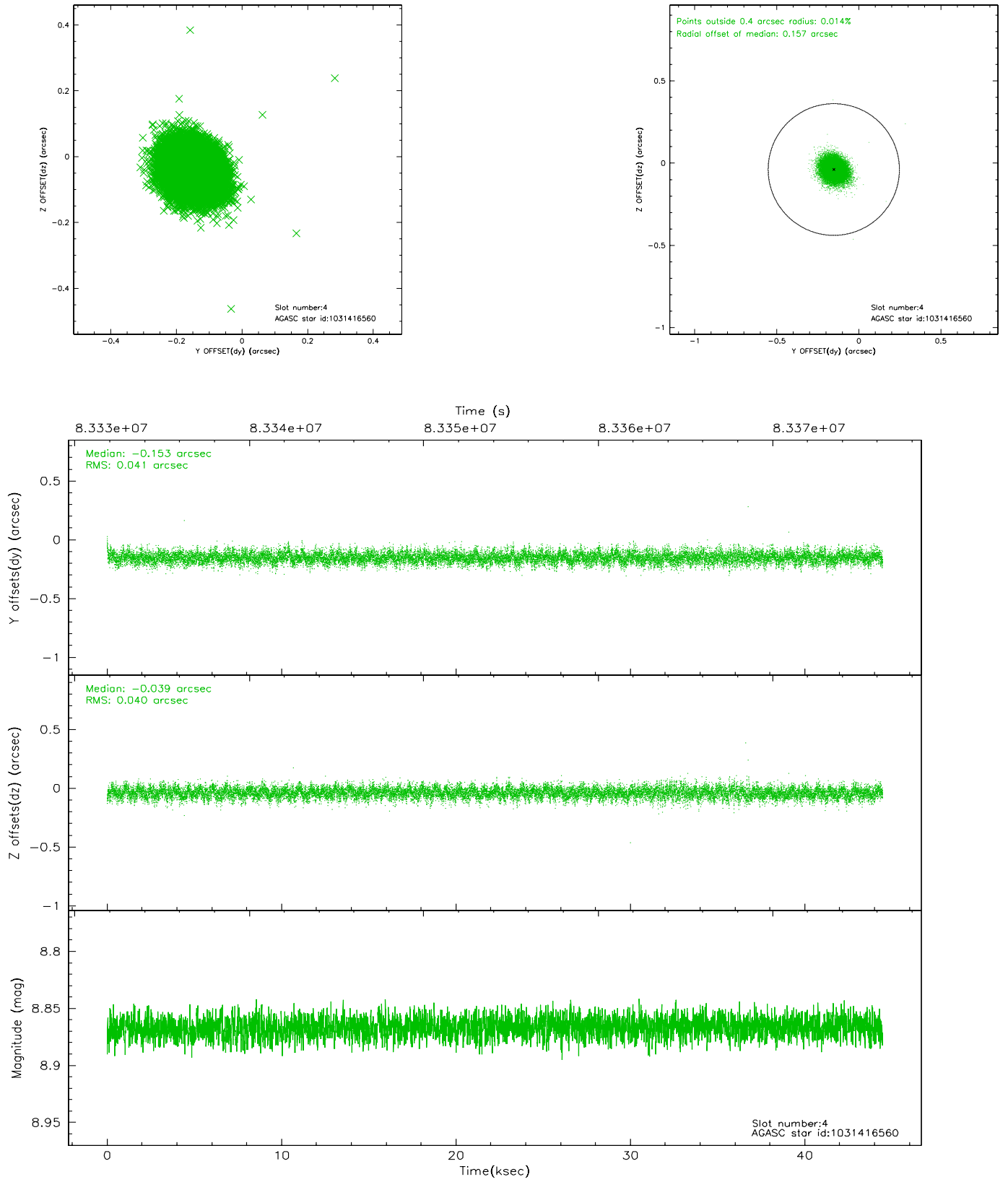
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	10845	-0.026	0.021	0.007	0.012	0.000000	0.000000	-754.86	-1726.47
1	FID	ACIS-S-4	7.21	10845	-0.046	0.007	0.006	0.011	0.000000	0.000000	2158.37	182.03
2	FID	ACIS-S-5	7.24	10845	0.041	-0.019	0.007	0.012	0.000000	0.000000	-1807.66	175.63
3	GUIDE	966269552	7.75	21617	-0.152	-0.115	0.083	0.122	255.299822	-37.331349	-1746.41	-1927.57
4	GUIDE	1031416560	8.87	21677	-0.153	-0.039	0.060	0.099	256.067748	-37.599409	-812.83	280.26
5	GUIDE	1031419480	8.98	21678	0.133	0.089	0.073	0.117	256.157608	-38.328931	1811.18	560.97
6	GUIDE	1031416256	10.52	21579	0.294	-0.060	0.137	0.225	255.994552	-38.142227	1143.99	93.01
7	GUIDE	1031416304	9.37	21680	-0.128	0.122	0.084	0.138	256.343312	-37.563103	-950.23	1065.54

2.4 Star Slots

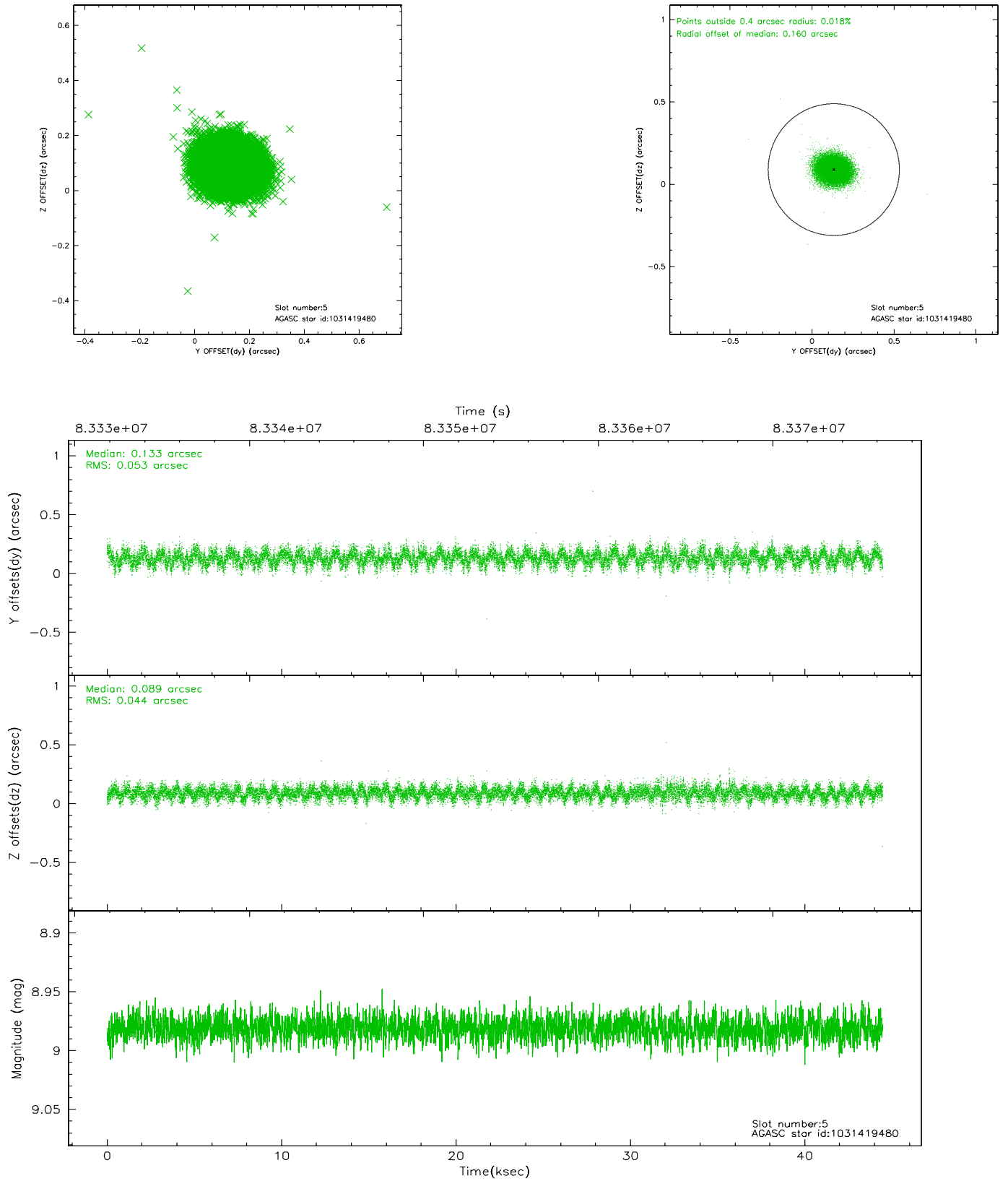
2.4.1 Slot 3



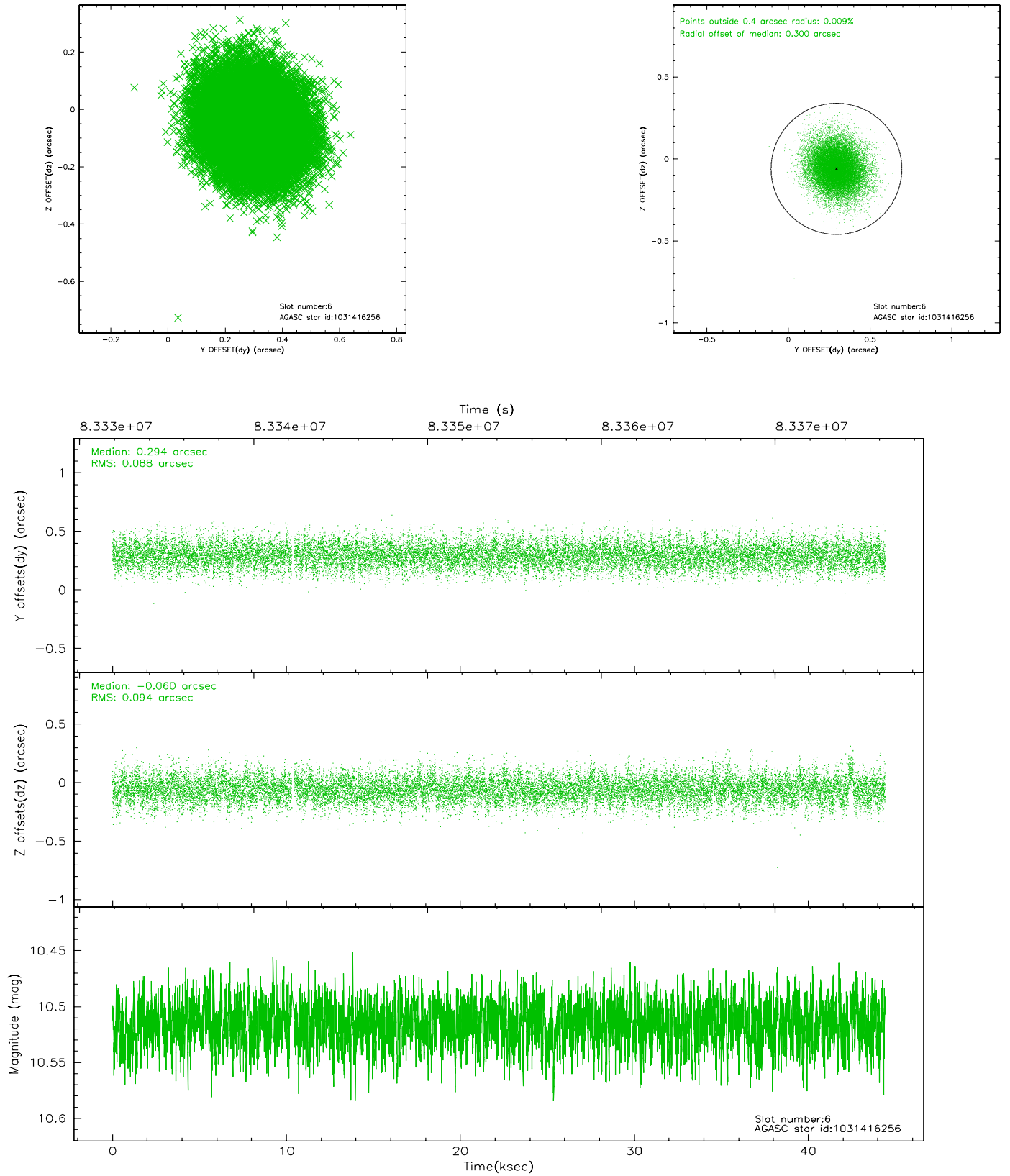
2.4.2 Slot 4



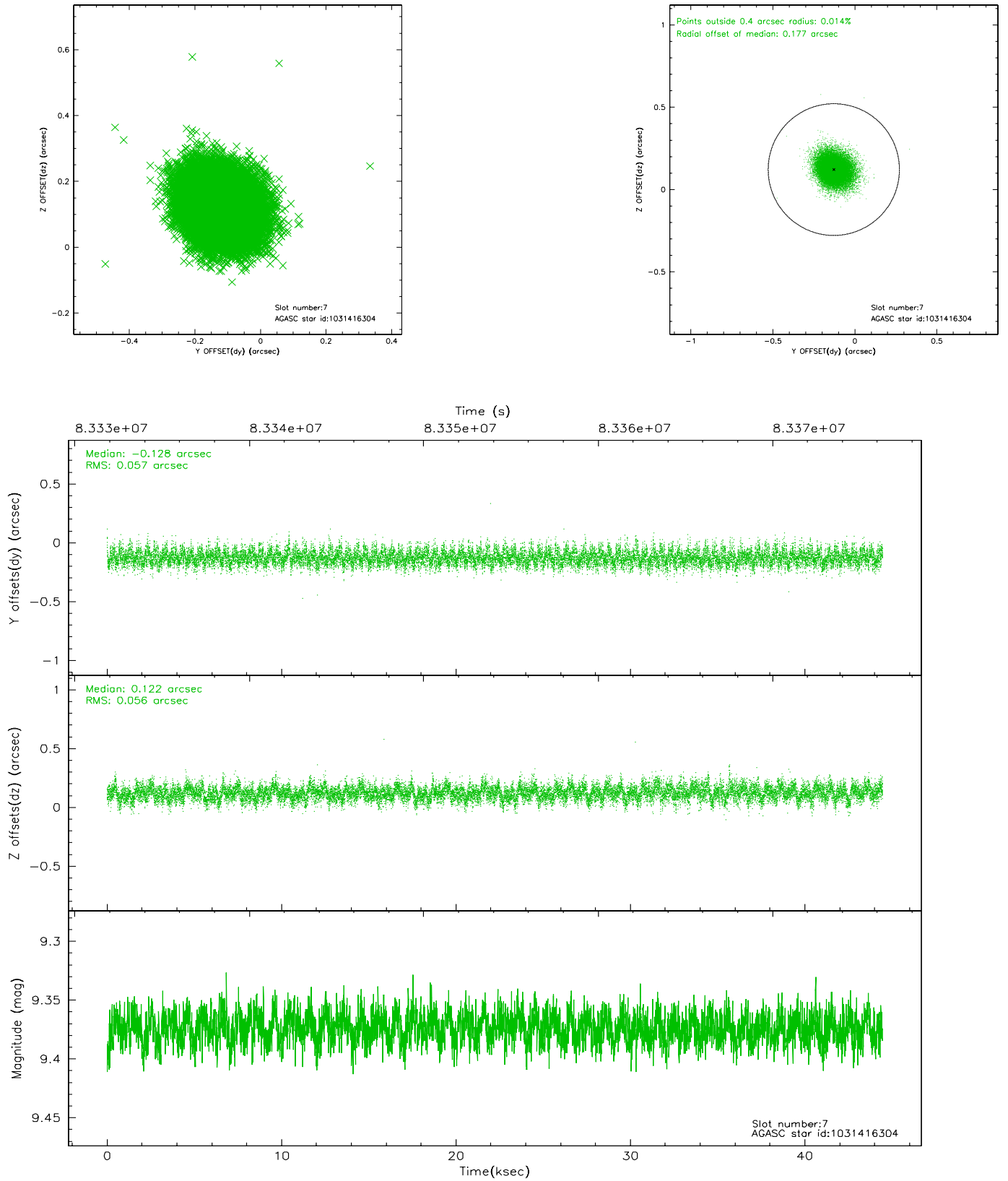
2.4.3 Slot 5



2.4.4 Slot 6

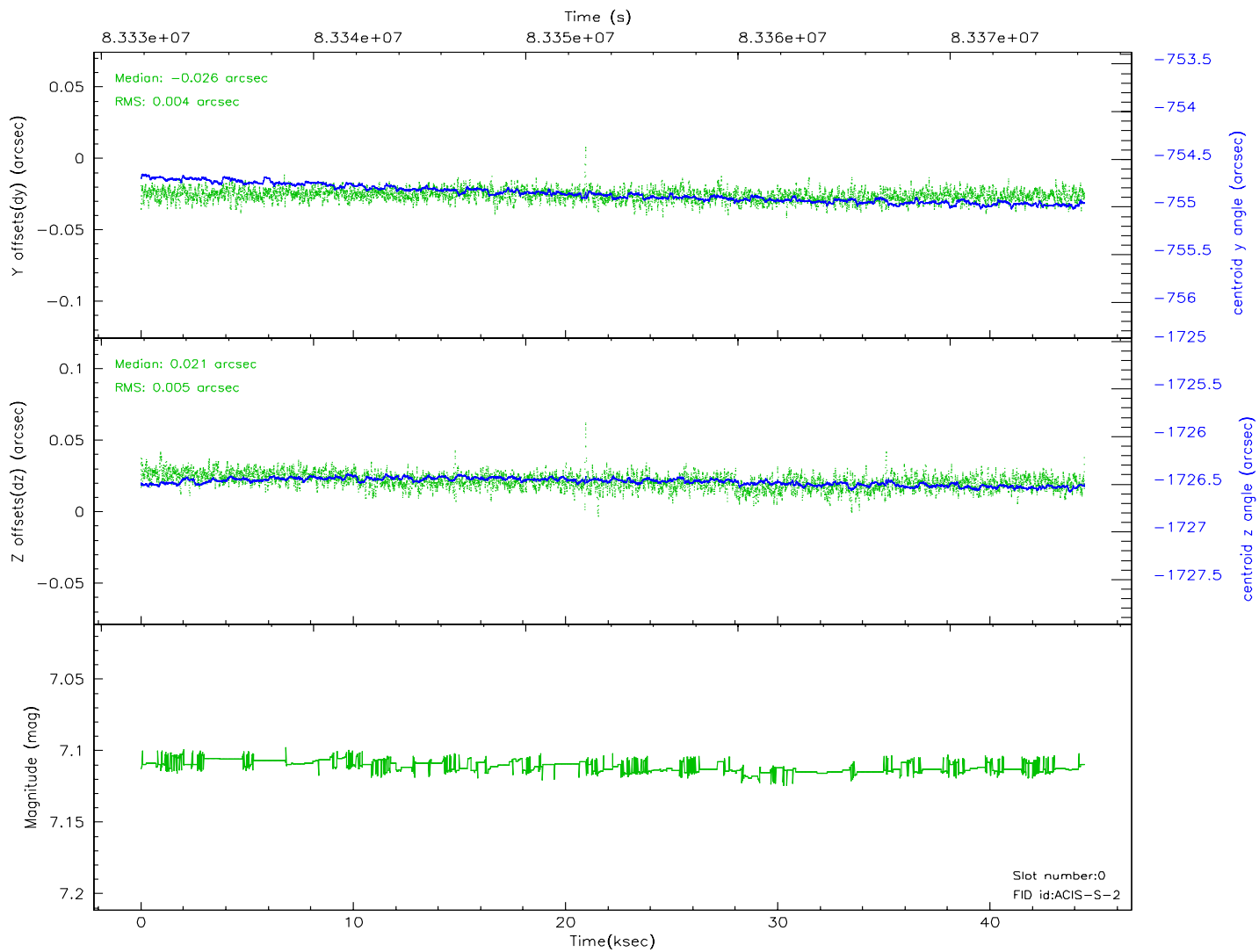
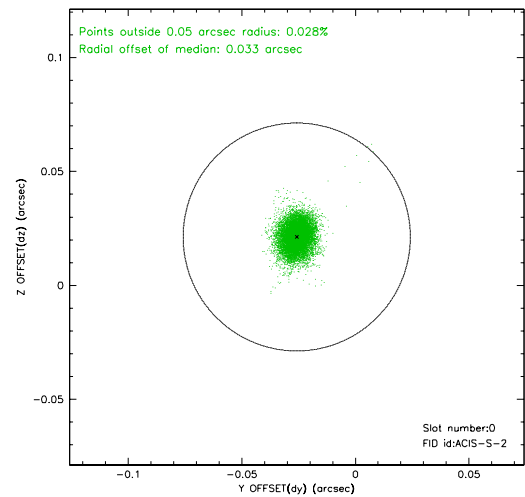
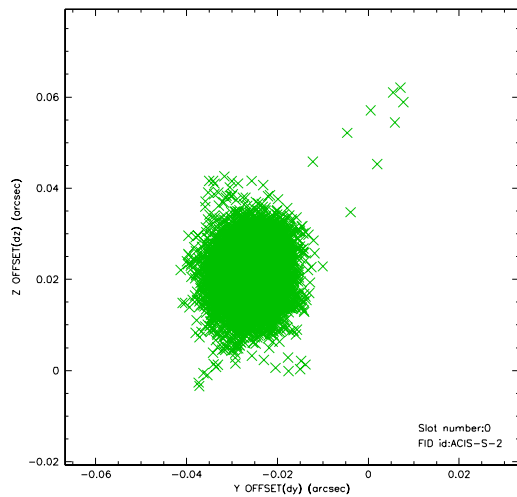


2.4.5 Slot 7

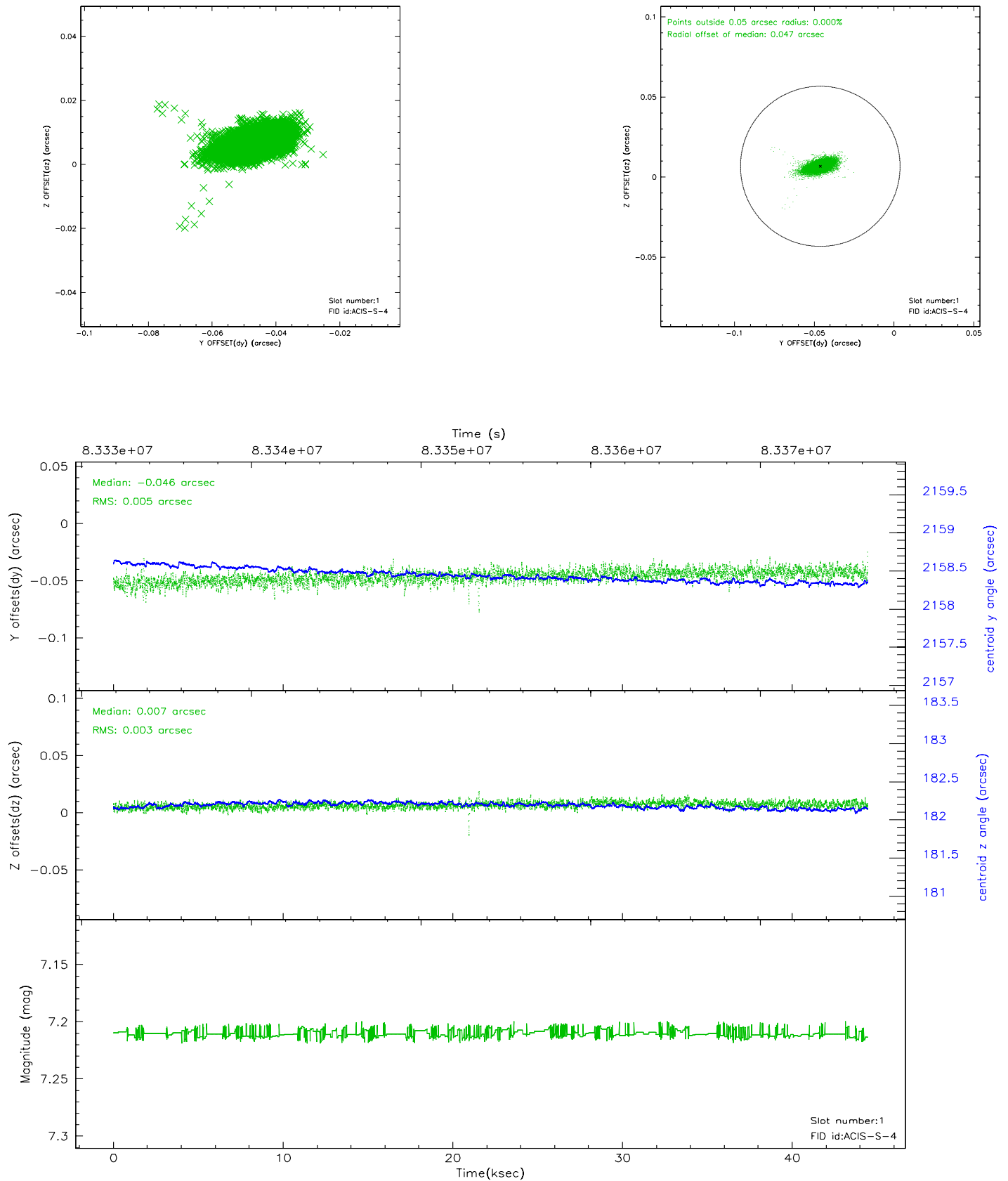


2.5 FID Slots

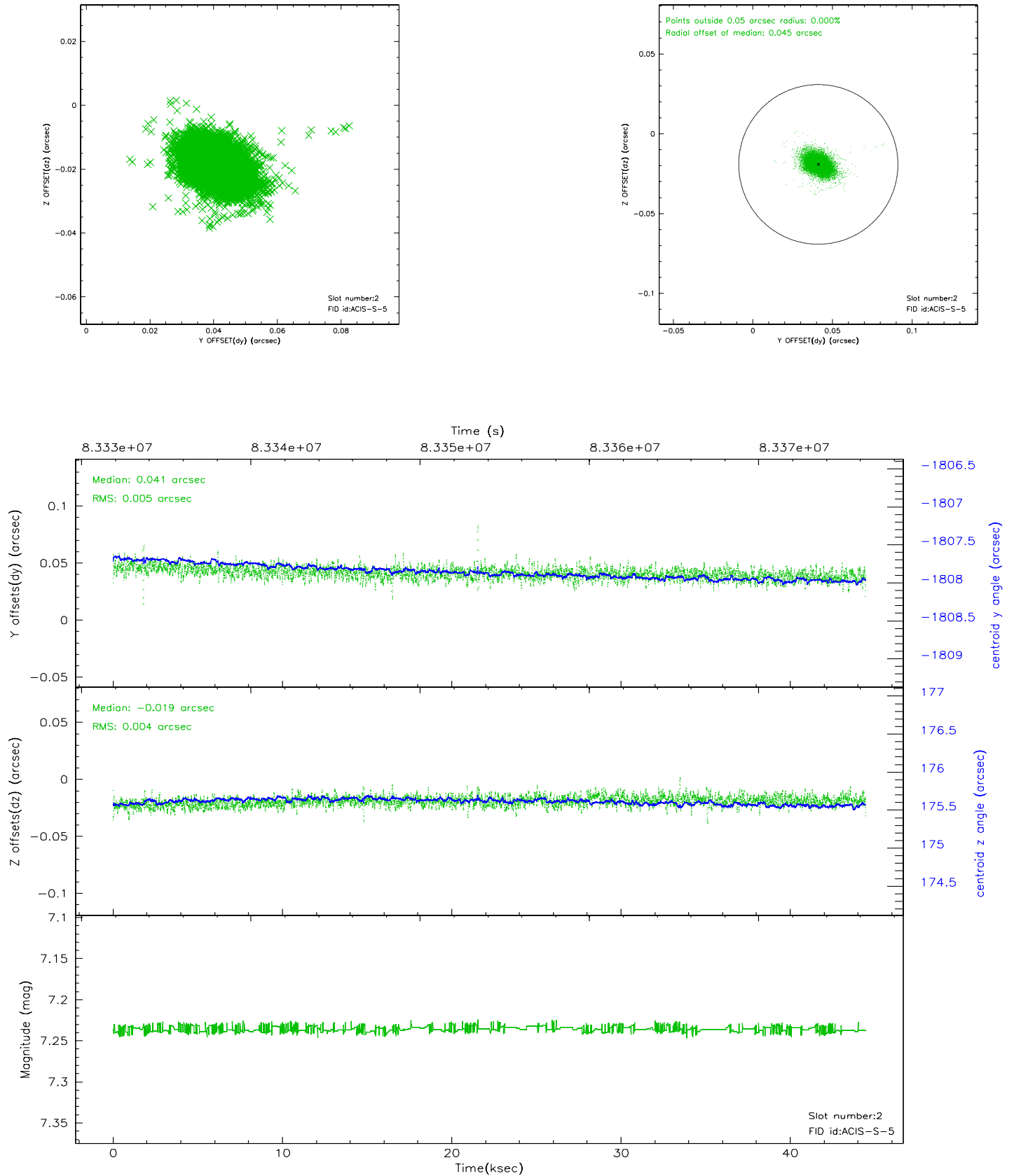
2.5.1 Slot 0



2.5.2 Slot 1

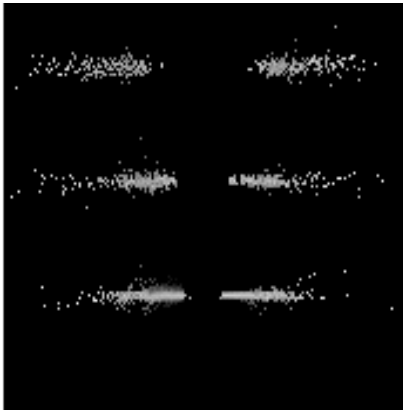


2.5.3 Slot 2

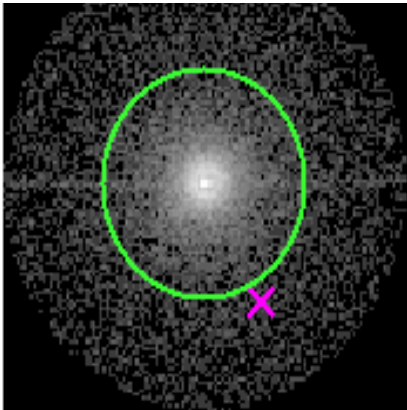


3 Gratings

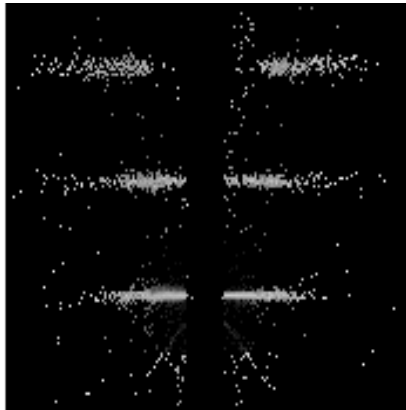
3.1 HEG Arm



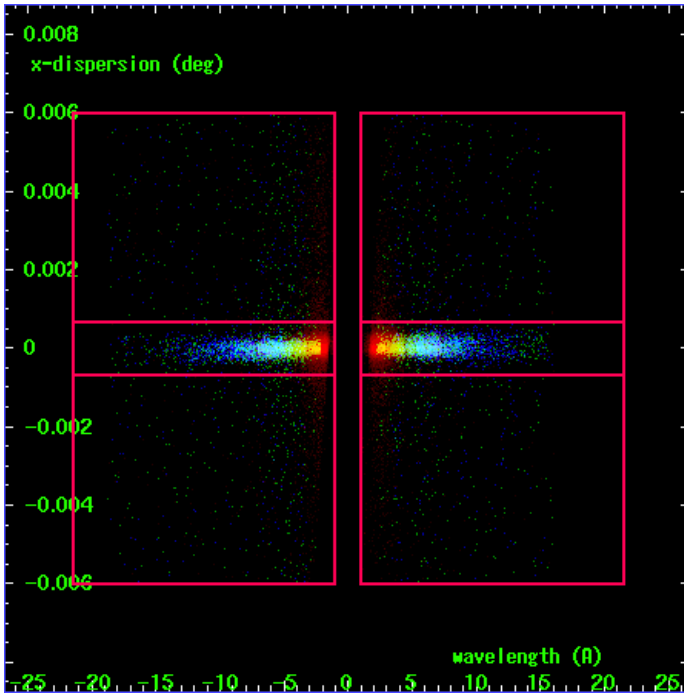
HEG Order Sort 123



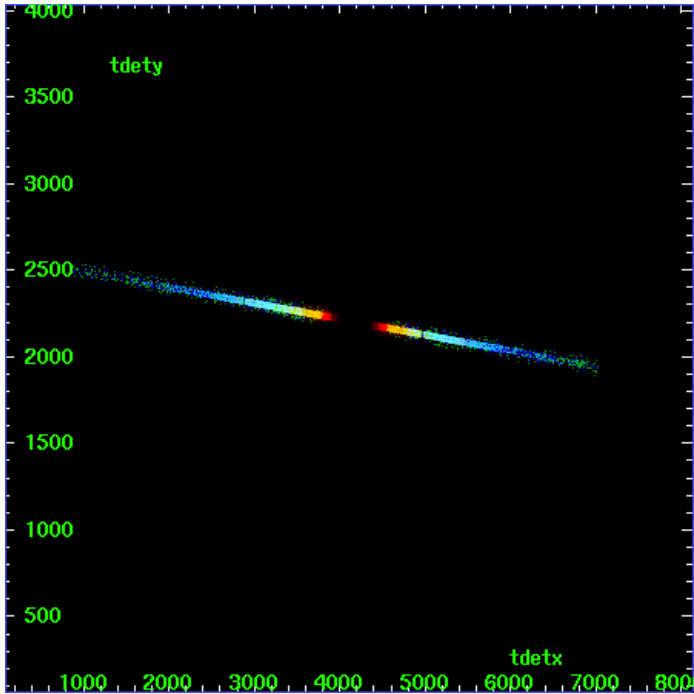
HEG Zero Order



HEG Order Sort ALL

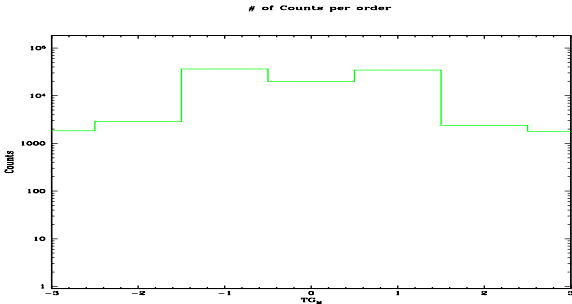


Spot Image HEG

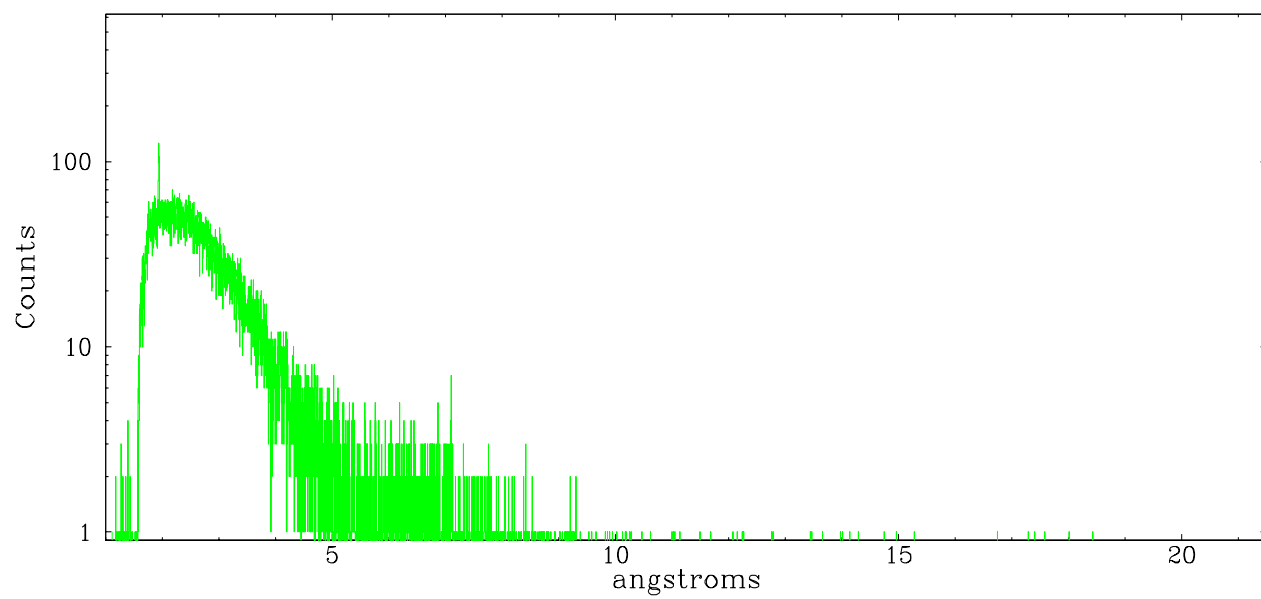


Full Detector HEG

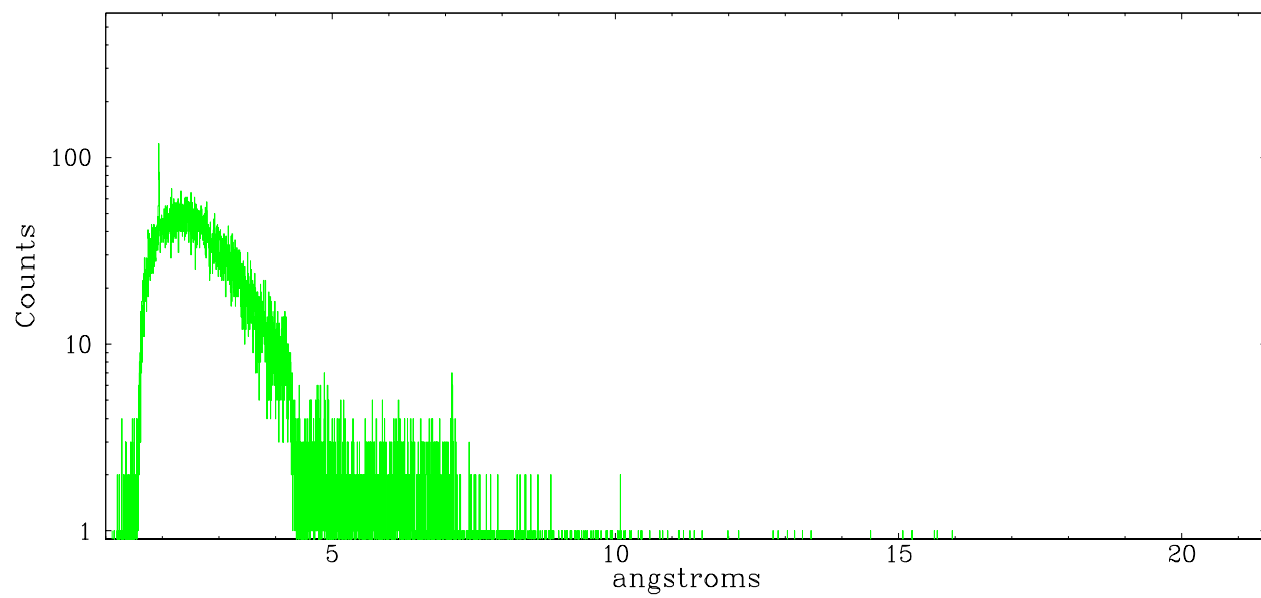
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1833	2885	36346	19769	34420	2393	1790



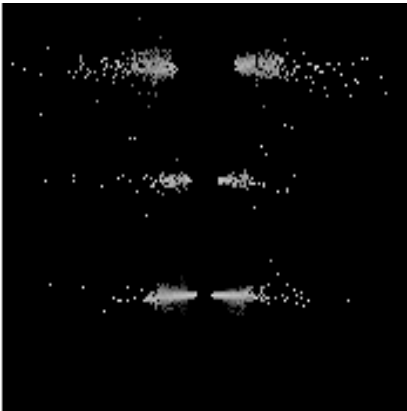
heg order -1



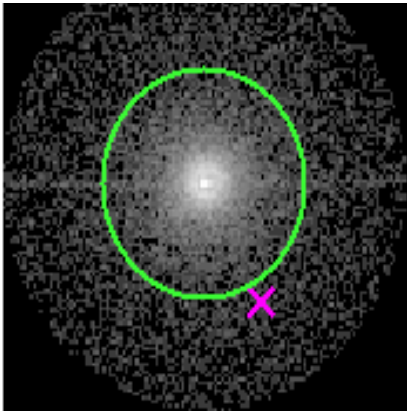
heg order +1



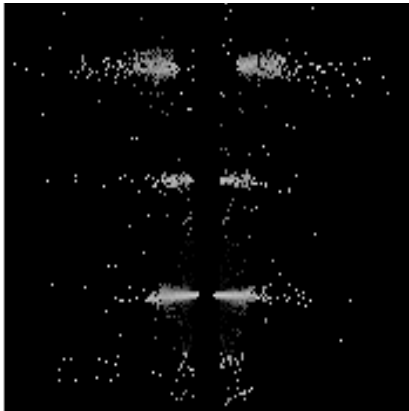
3.2 MEG Arm



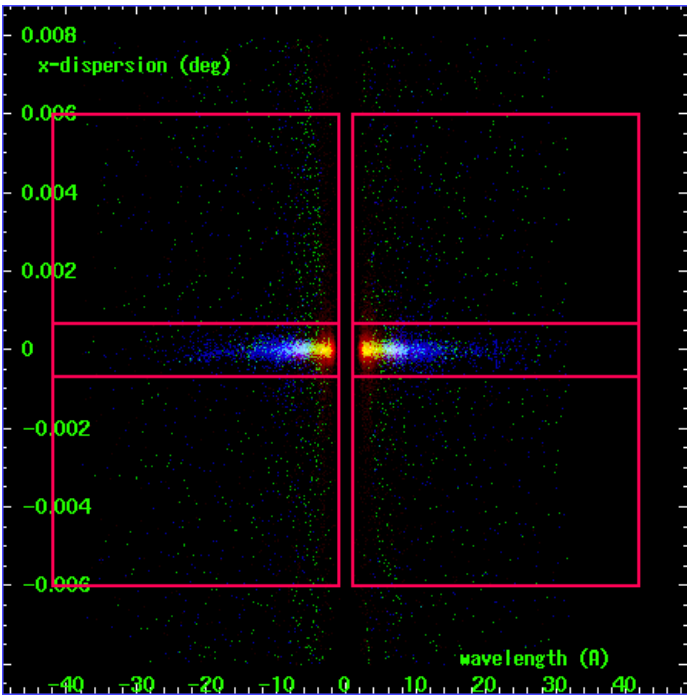
MEG Order Sort 123



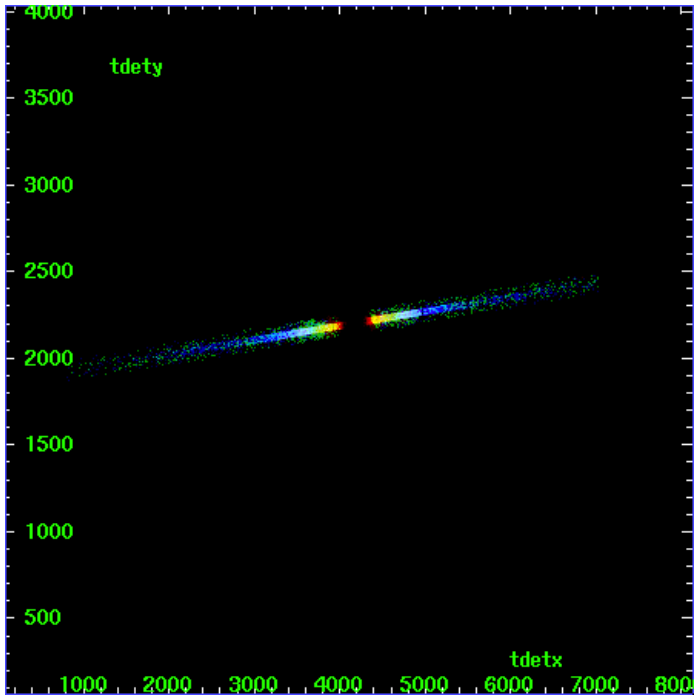
MEG Zero Order



MEG Order Sort ALL

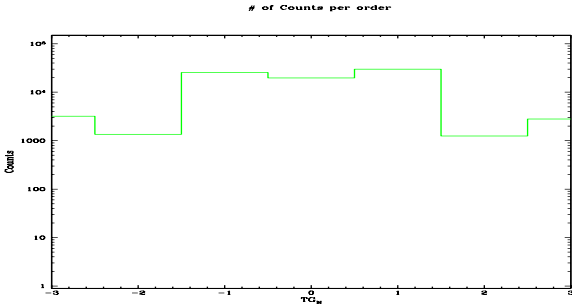


Spot Image MEG

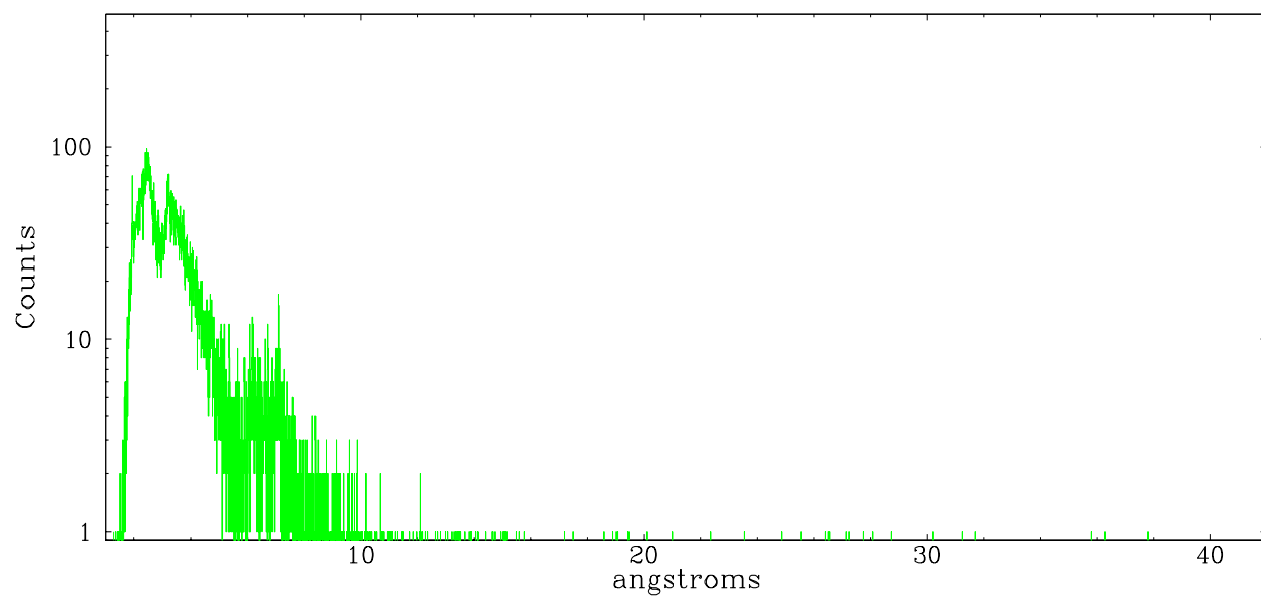


Full Detector MEG

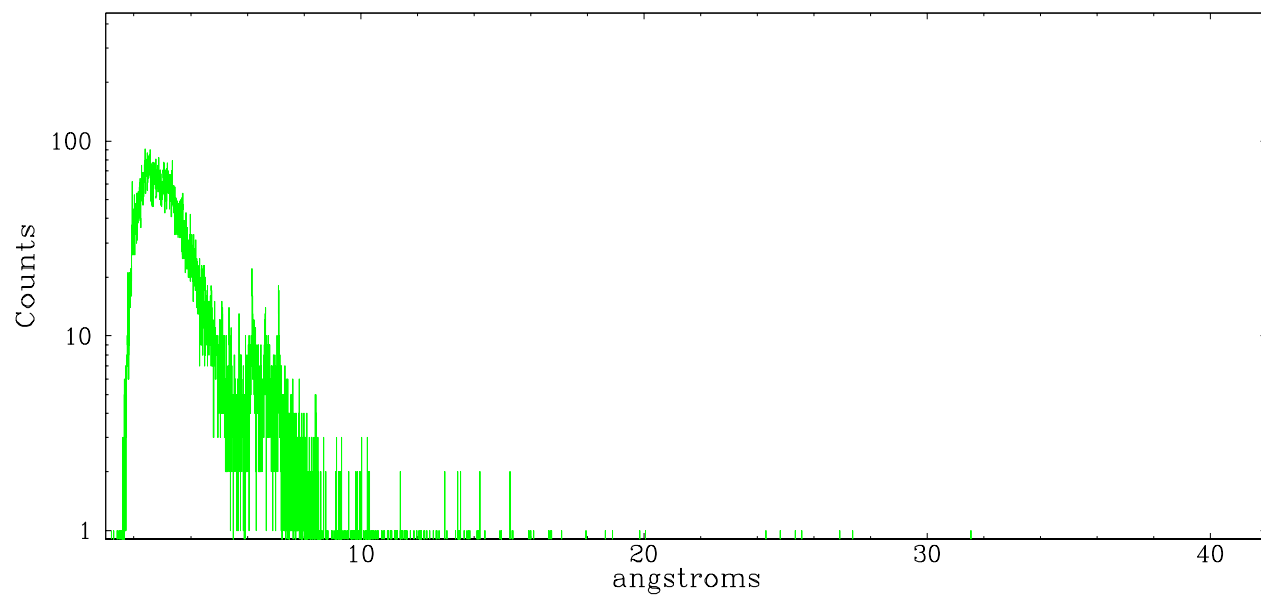
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3191	1352	25476	19769	29905	1253	2788



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.08.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	42.95

A.2 Comments

Observation phase-constrained to 0.75-0.89.===== Zeroth order moderately 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=4078.90; y=4127.79) 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.