

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 1560 - L2 Version 001
Chandra X-Ray Center

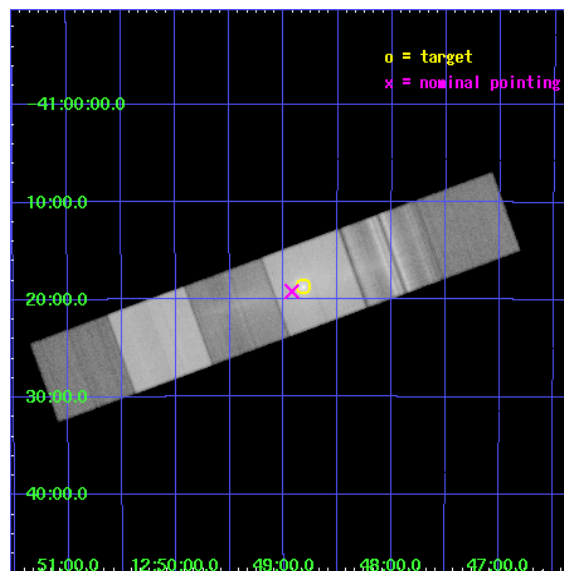
L2 Processing Date : Dec 14 2006

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1 Front

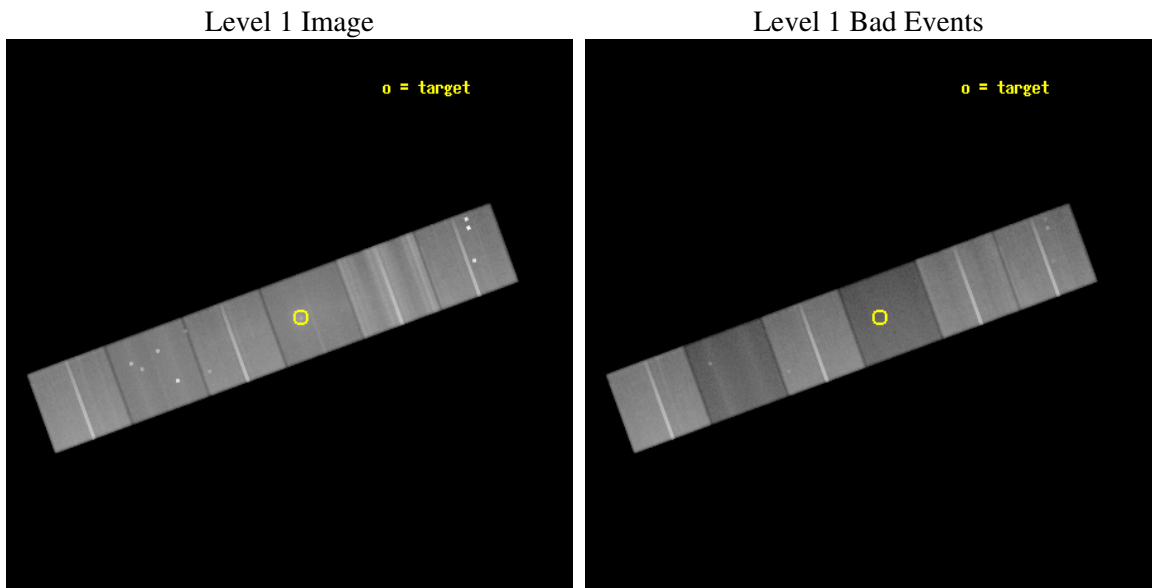
seq_num	600117
obs_id	1560
title	HETG OBSERVATIONS OF THE CENTRAL CLUSTER ELLIPTICAL NGC4696
observer	Prof. Claude Canizares
object	NGC4696
dtcycle	0
cycle	P
ra_targ	192.205833
dec_targ	-41.31125
ra_nom	192.23102885367
dec_nom	-41.320085085106
roll_nom	339.87325944109
revision	2
ontime	85839.95909971
livetime	84753.001850971
ontime4	85820.513308242
ontime5	85839.95909971
ontime6	85836.718119442
ontime7	85839.95909971
ontime8	85836.71813944
ontime9	85830.236188963
l2events	2053831



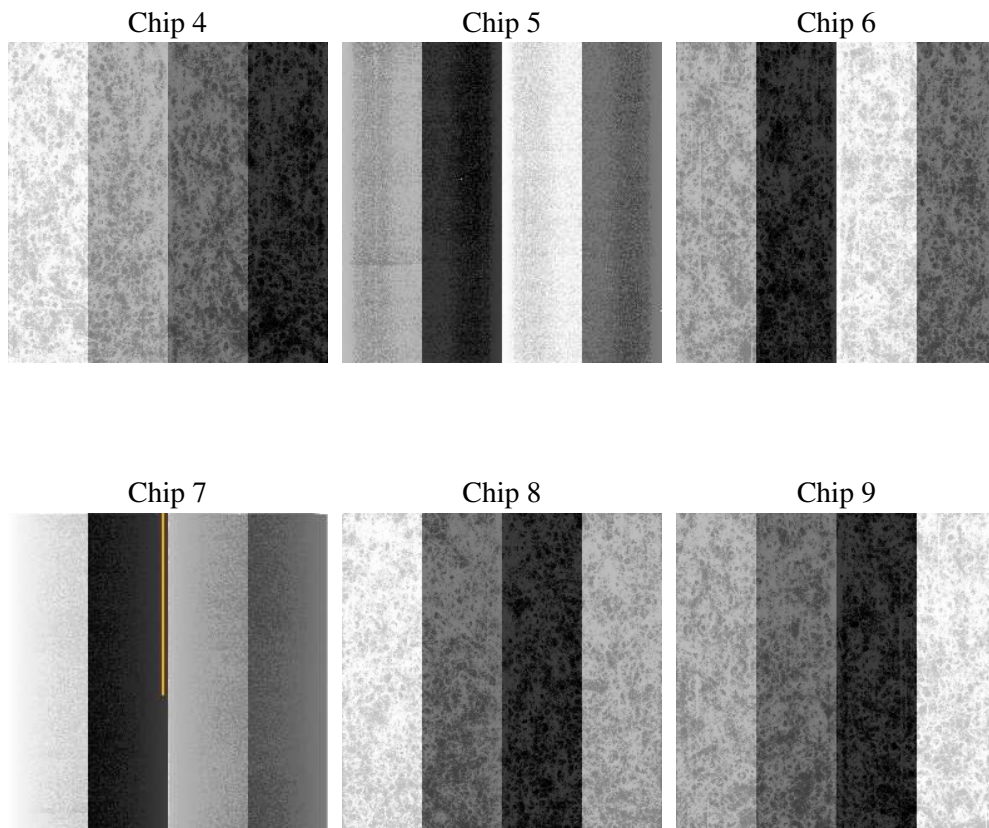
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1
ascdsver	7.6.9
caldbver	3.2.4
date	2006-12-12T16:04:18
revision	2

sched_exp_time	86000.000000
ontime	85844.532948941
ontime4	85825.087157473
ontime5	85844.532968864
ontime6	85841.291968673
ontime7	85844.532948941
ontime8	85841.291988671
ontime9	85834.810038194
l1events	8436975

2.1.4 Events

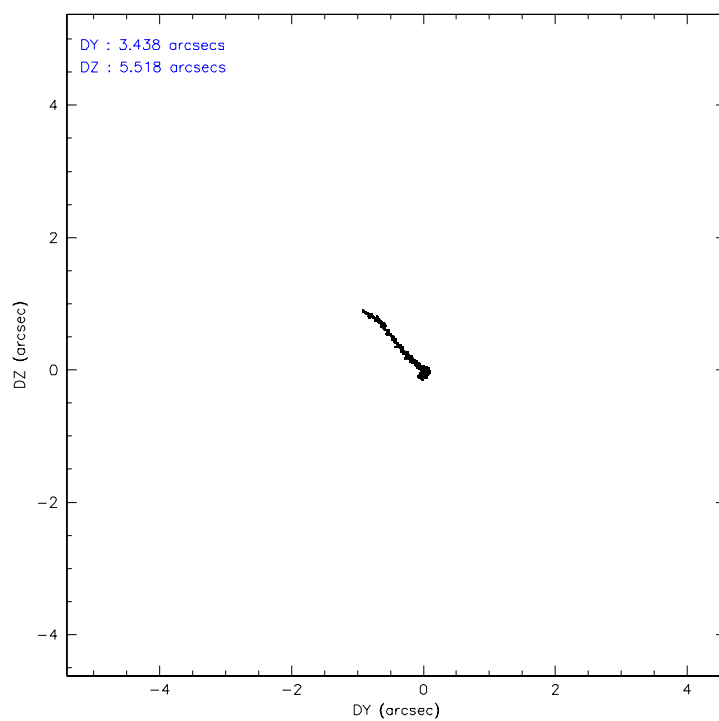
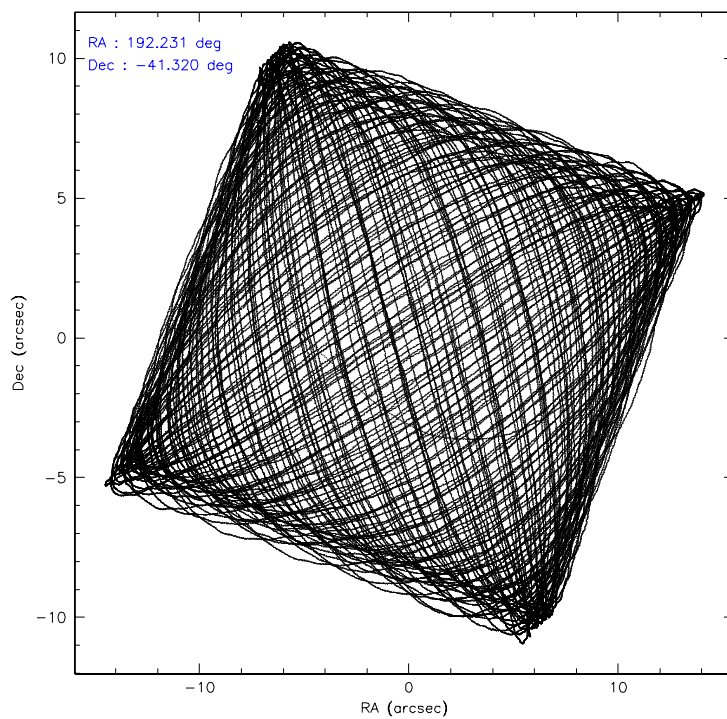
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	1568056	1154227	1425516	1145357	1795983	1347836
rejected events	1393614	510022	1178244	488127	1159459	1087393
rejected %	88%	44%	82%	42%	64%	80%

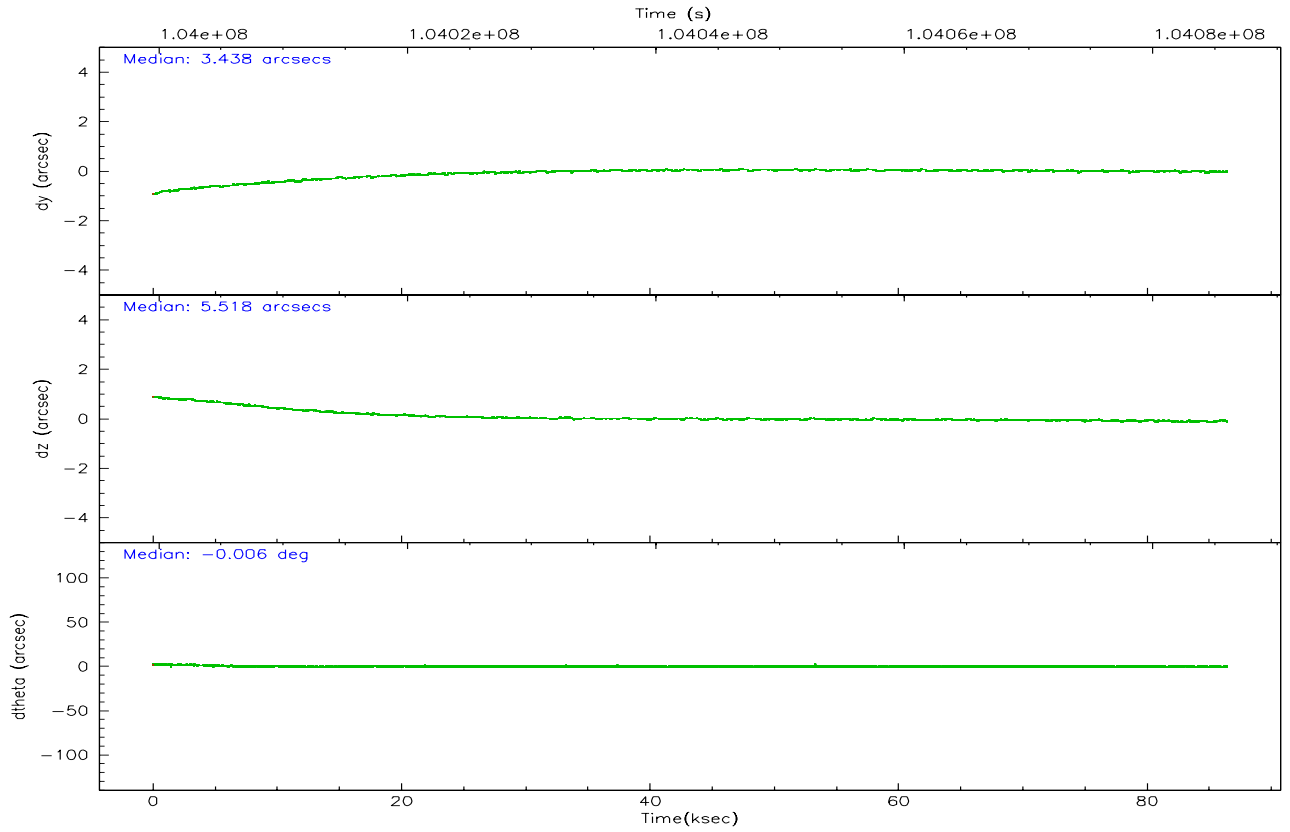
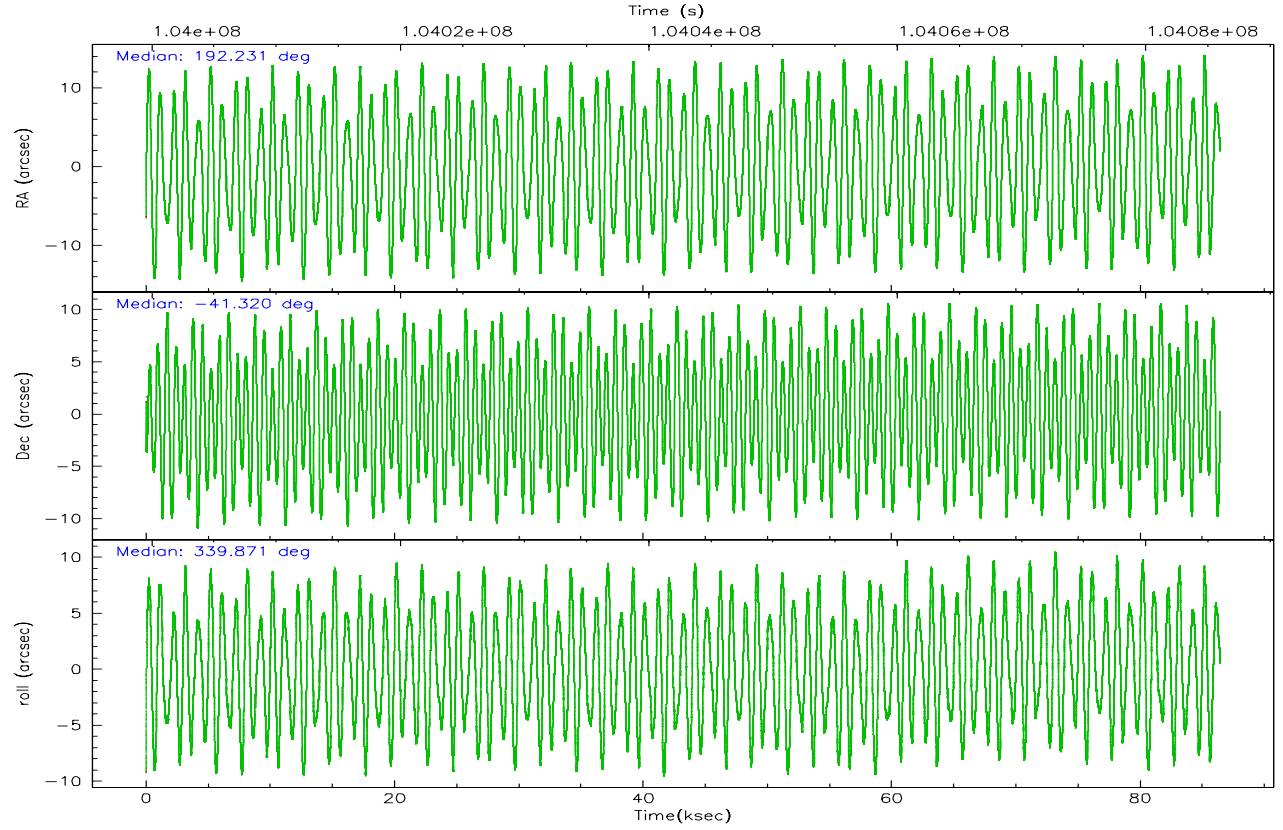
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	92694	84328	154012	73986	260182	16151
	5%	7%	10%	6%	14%	11%
grade 1 events	1274	2003	1534	1065	2836	1960
	0%	0%	0%	0%	0%	0%
grade 2 events	38343	223063	39633	185516	110091	52312
	2%	19%	2%	16%	6%	3%
grade 3 events	12399	23540	15314	46255	76834	12492
	0%	2%	1%	4%	4%	0%
grade 4 events	11942	22923	15166	44701	69344	13926
	0%	1%	1%	3%	3%	1%
grade 5 events	21574	48408	24837	54987	37237	25197
	1%	4%	1%	4%	2%	1%
grade 6 events	19068	290378	23155	306787	120084	20205
	1%	25%	1%	26%	6%	1%
grade 7 events	1370762	459584	1151865	432060	1119375	10602
	87%	39%	80%	37%	62%	78%

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	192.195268	192.2310288536704	Subarray requested	NONE	NONE
Pointing Dec	-41.325015	-41.32008508510599	Alternating exposures requested	N	N
Pointing Roll	339.693021	339.8732594410882	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	-190.1400660498719			
SIM translation stage offset (mm)	0	0.00754346686406393			
Observation start time	103999983.184000	103998900.59772			
Observation start date	2001-04-18T16:51:59	2001-04-18T16:35:00			
Observation end time	104085983.184000	104087053.16364			
Observation end date	2001-04-19T16:45:19	2001-04-19T17:04:13			
Read mode	TIMED	TIMED			

2.3 Aspect



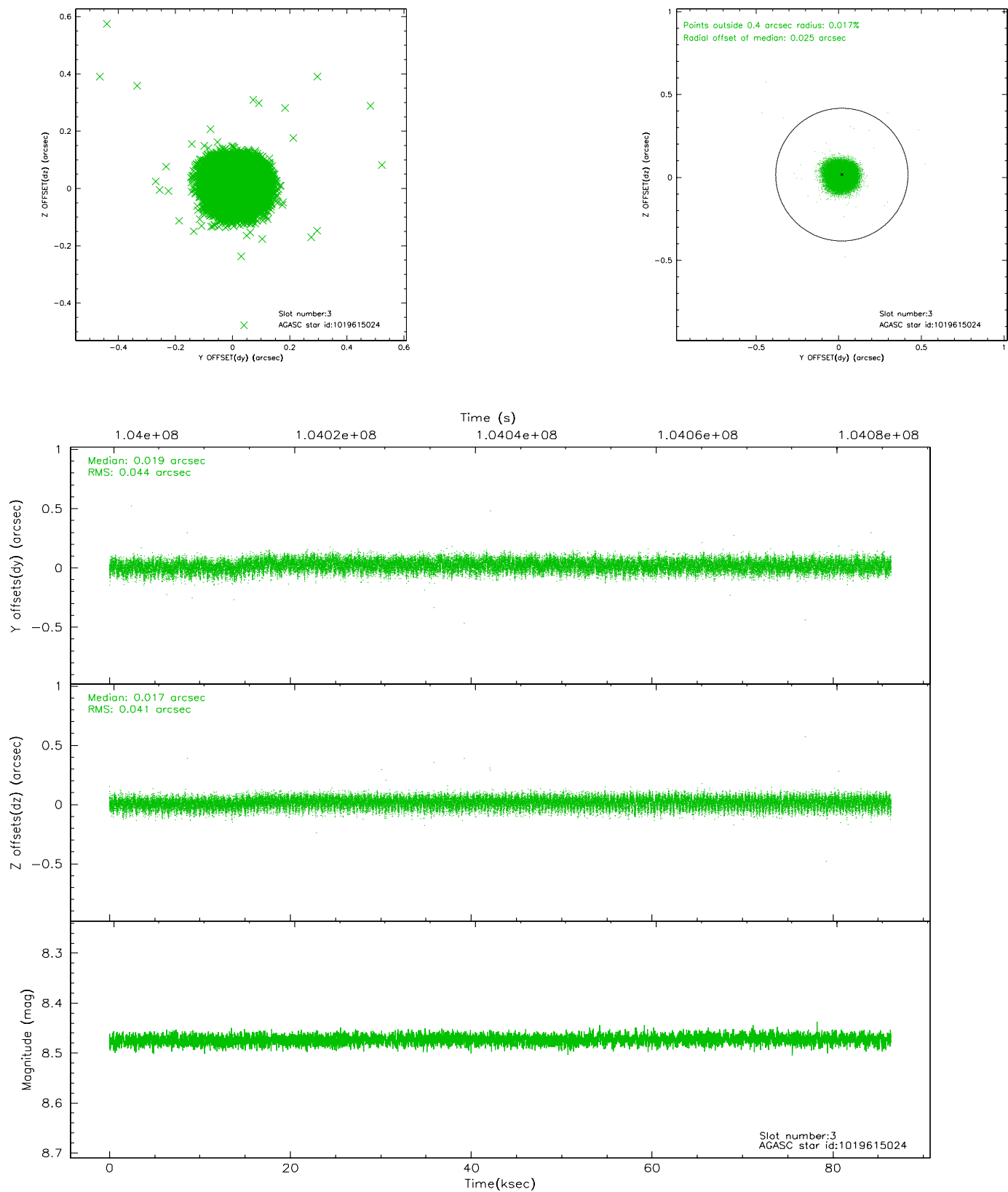


Slot Statistics

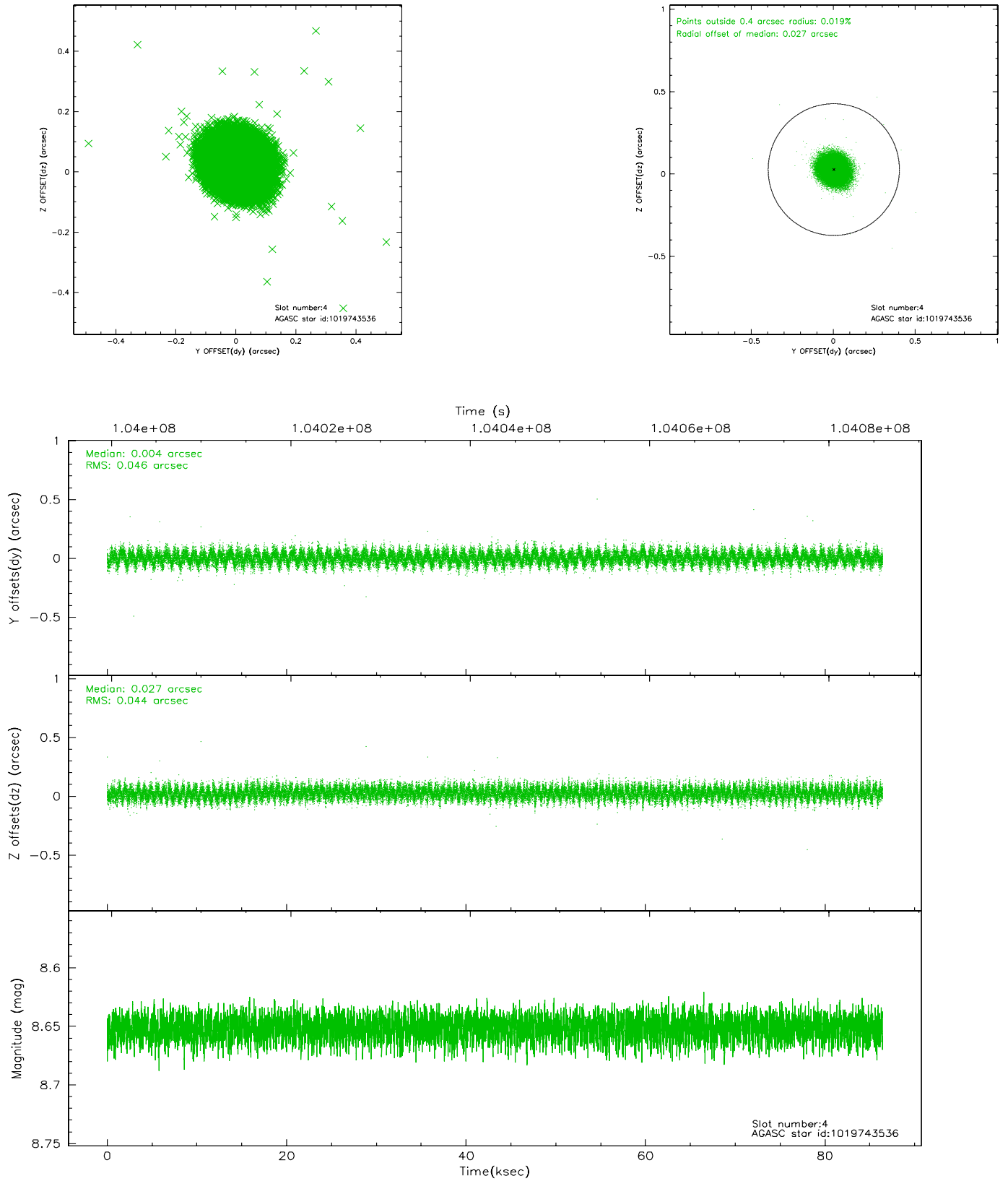
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.12	21079	-0.014	0.030	0.007	0.012	0.000000	0.000000	-755.95	-1726.73
1	FID	ACIS-S-4	7.20	21081	-0.069	-0.001	0.007	0.015	0.000000	0.000000	2157.25	181.88
2	FID	ACIS-S-5	7.24	21081	0.052	-0.020	0.008	0.015	0.000000	0.000000	-1808.88	175.33
3	GUIDE	1019615024	8.47	42137	0.019	0.017	0.064	0.103	191.349086	-41.365736	-2088.46	-941.46
4	GUIDE	1019743536	8.65	42144	0.004	0.027	0.068	0.108	192.632057	-41.696442	1567.08	-849.30
5	GUIDE	1019221280	8.70	42122	-0.065	0.021	0.069	0.111	193.186331	-41.184528	2348.78	1391.96
6	GUIDE	1019218416	8.78	42128	-0.001	-0.020	0.068	0.110	193.142850	-40.941016	1942.65	2177.73
7	GUIDE	1019221952	9.60	42039	0.049	-0.041	0.091	0.148	192.906873	-41.032646	1450.69	1650.45

2.4 Star Slots

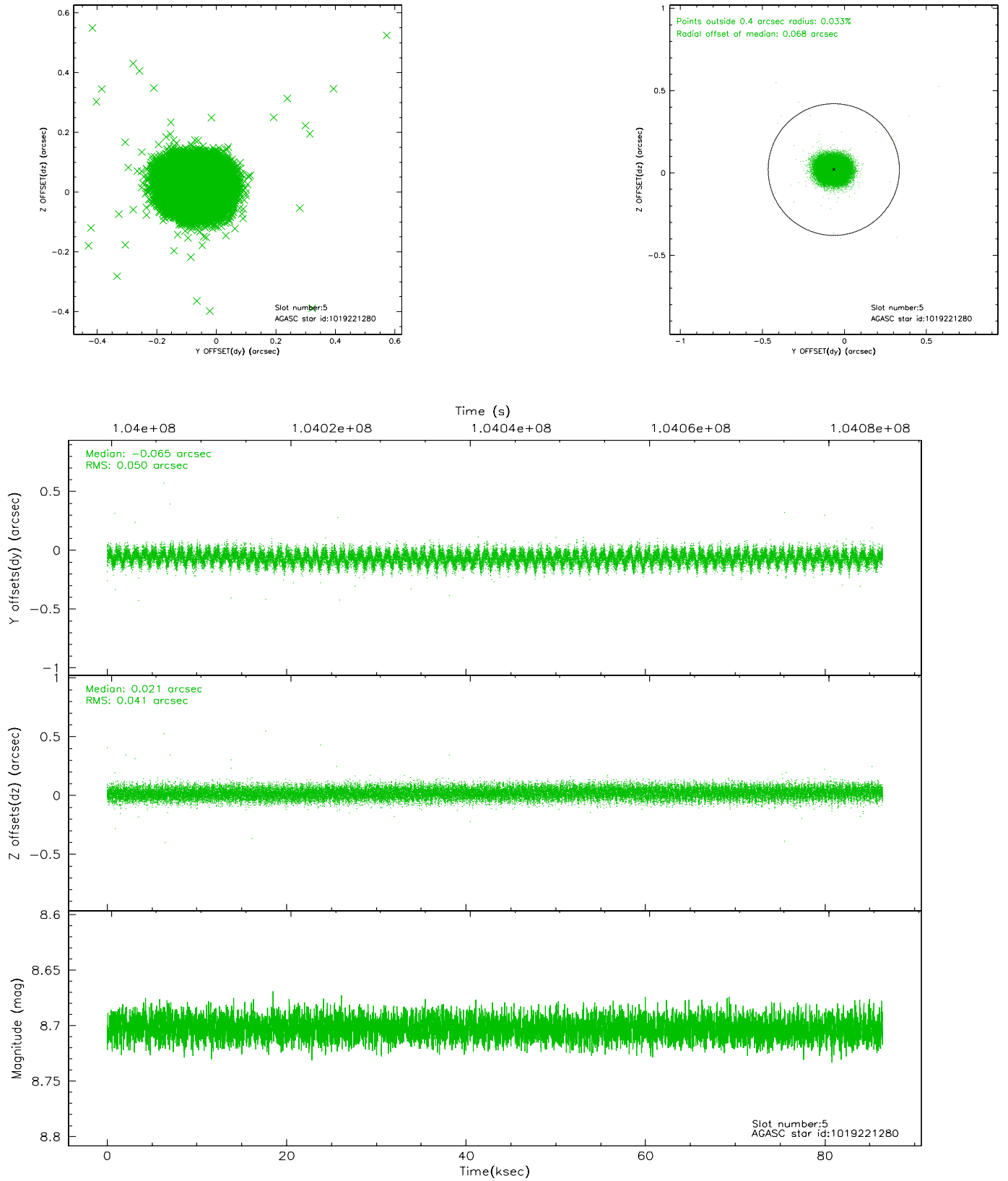
2.4.1 Slot 3



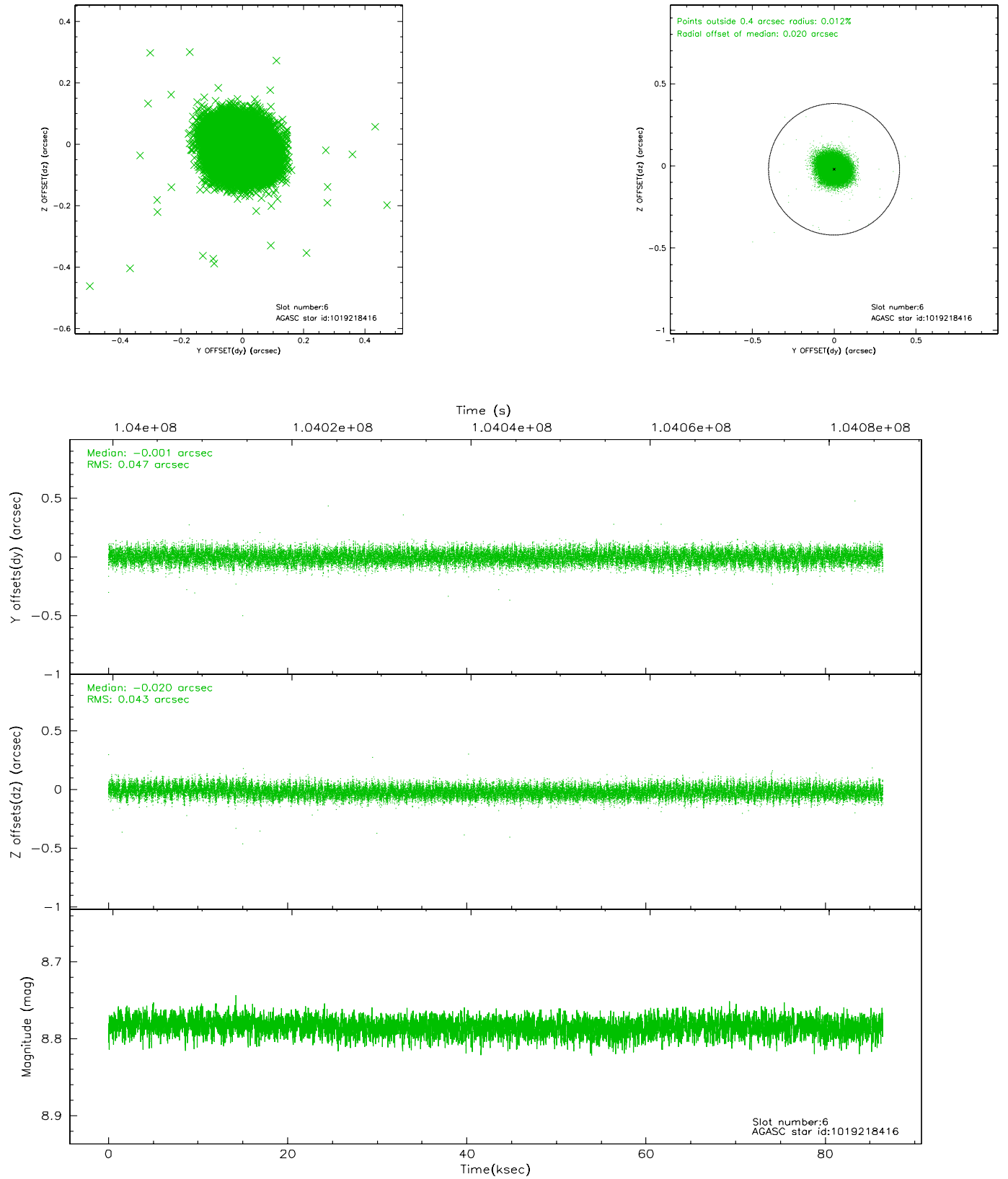
2.4.2 Slot 4



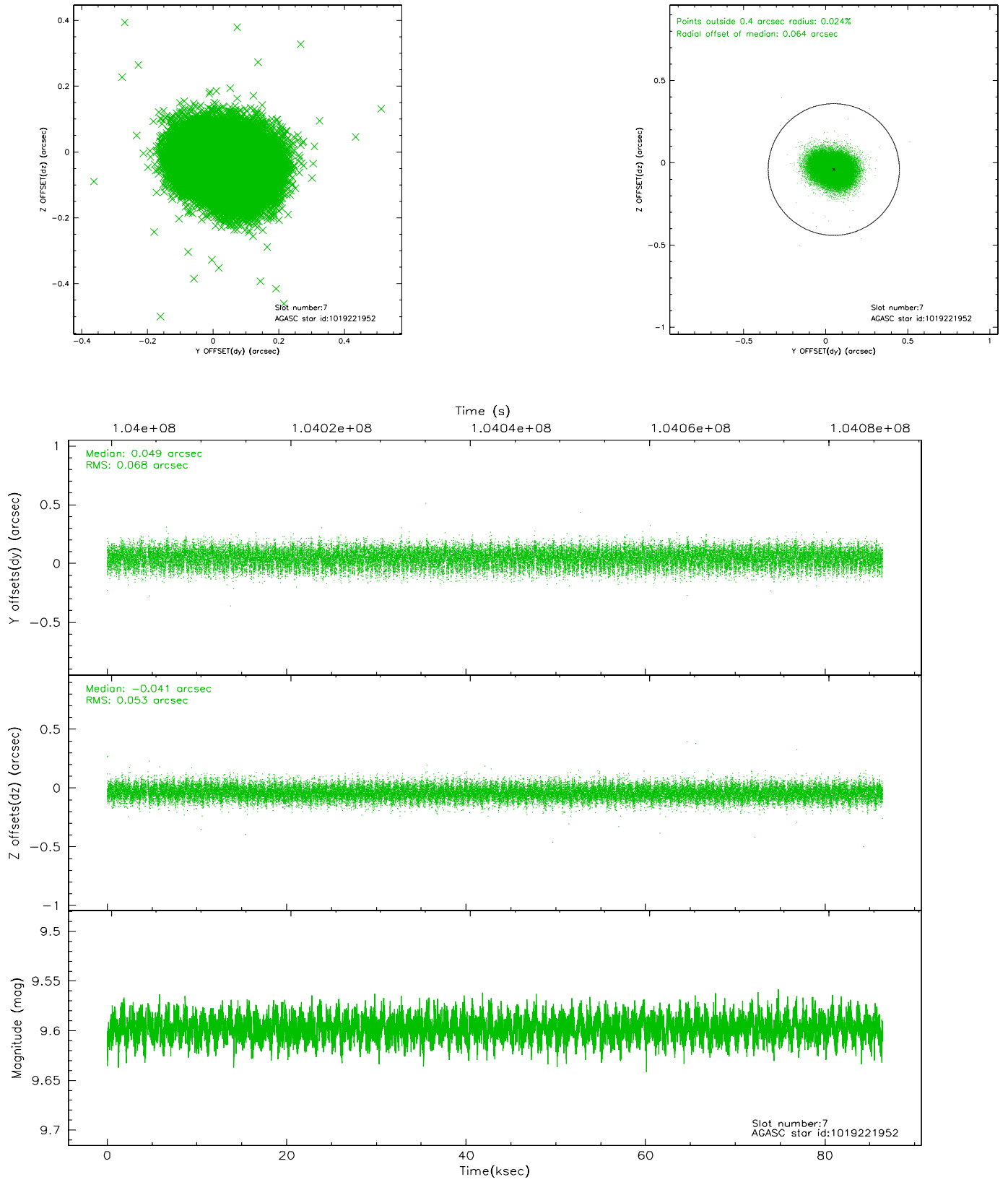
2.4.3 Slot 5



2.4.4 Slot 6

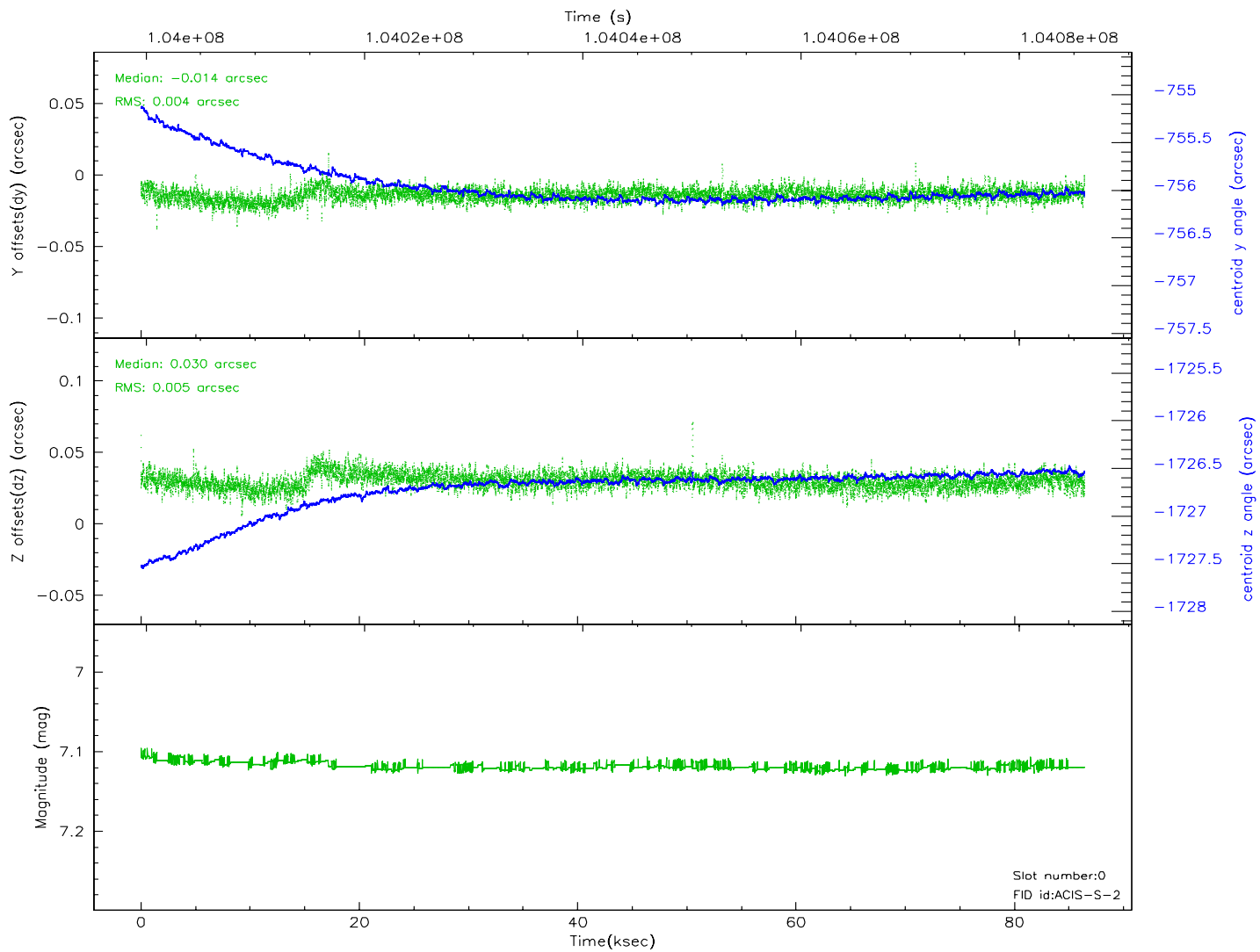
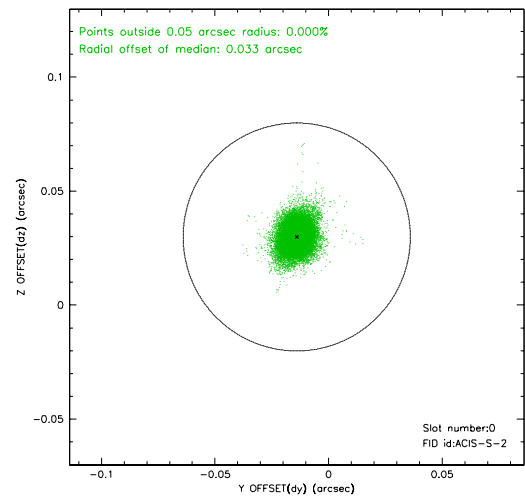
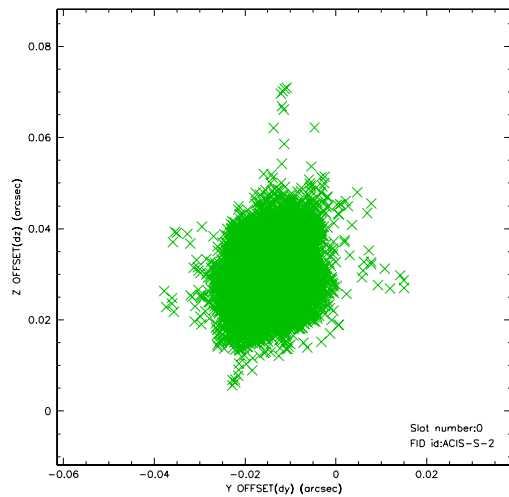


2.4.5 Slot 7

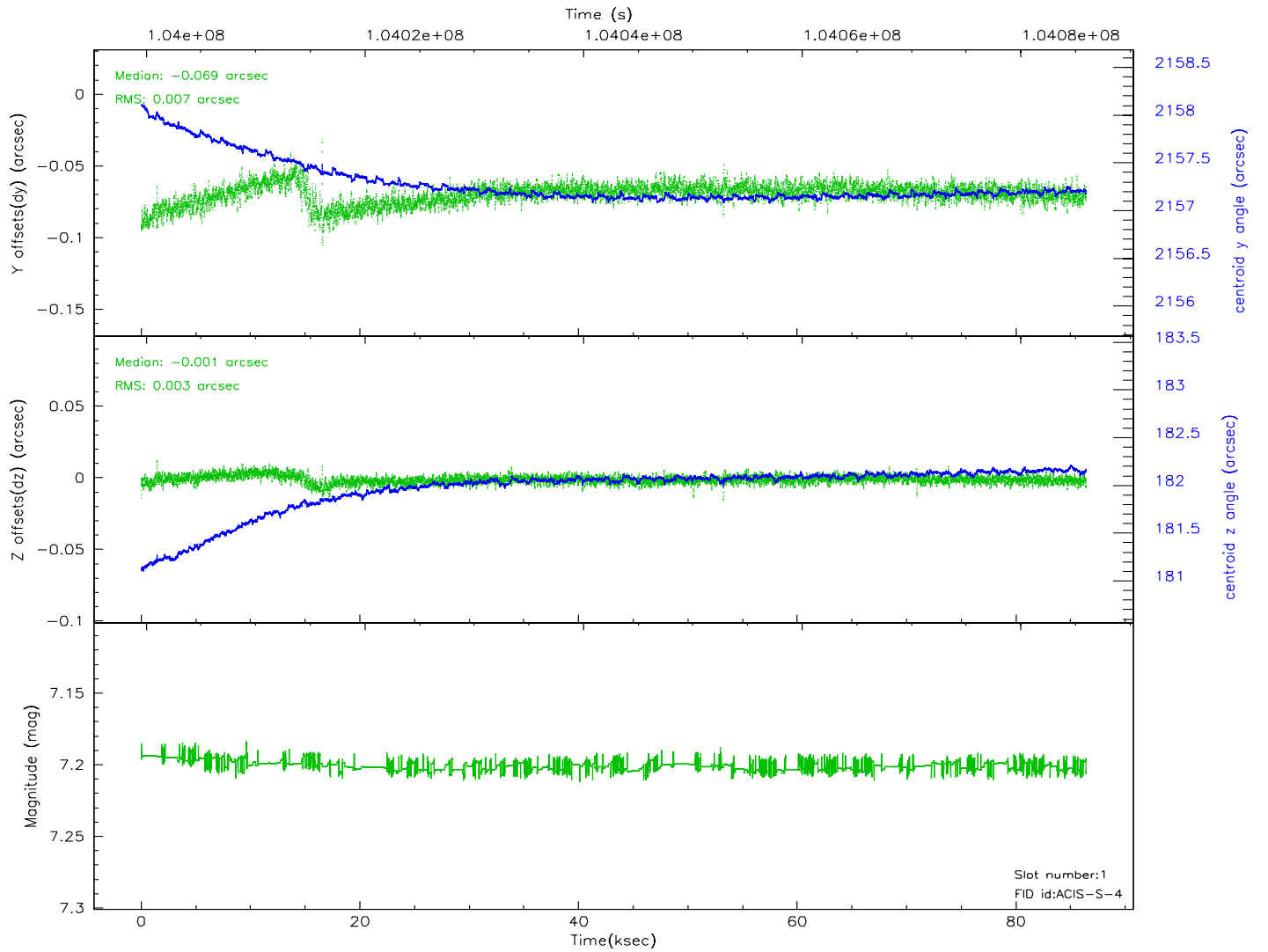
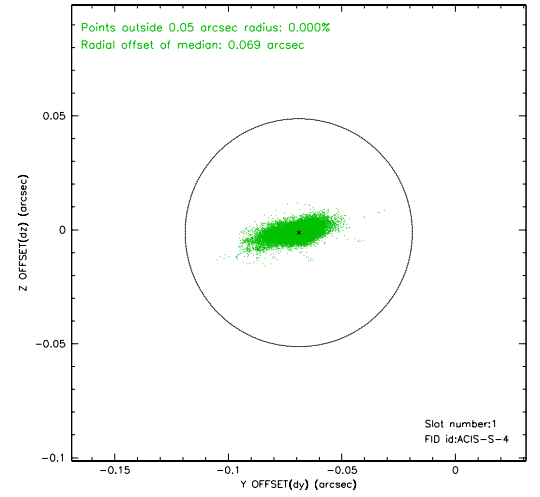
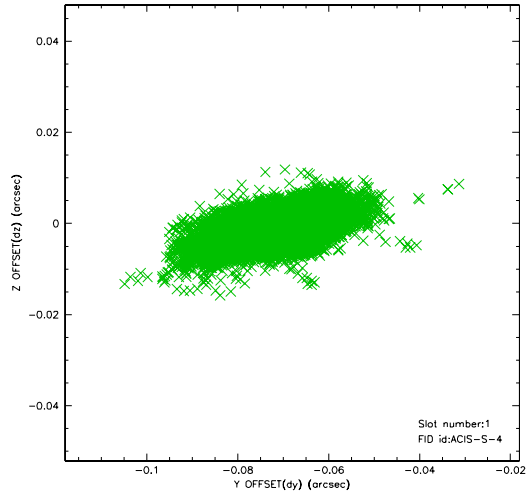


2.5 FID Slots

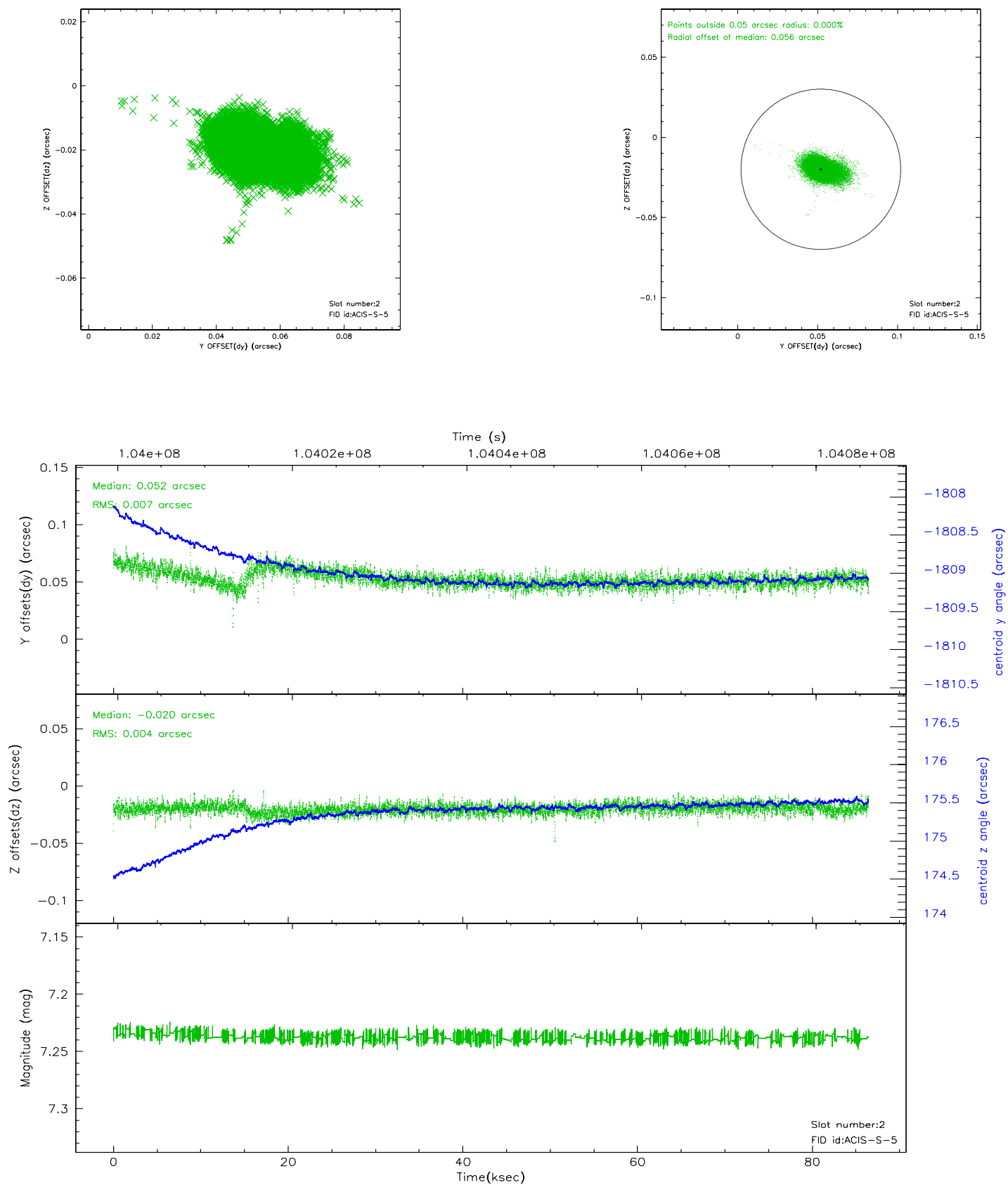
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

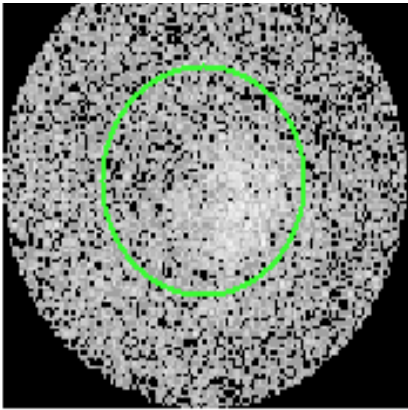


3 Gratings

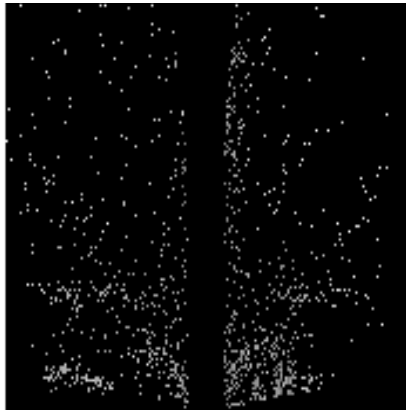
3.1 HEG Arm



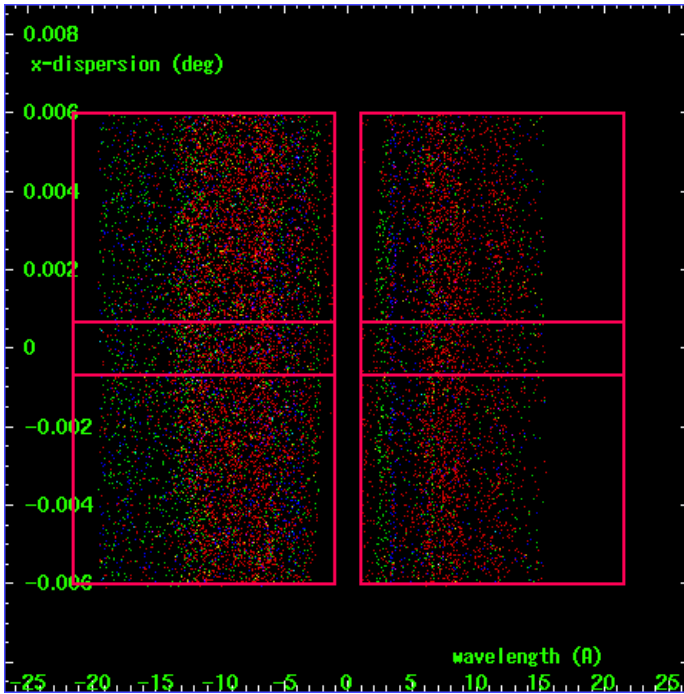
HEG Order Sort 123



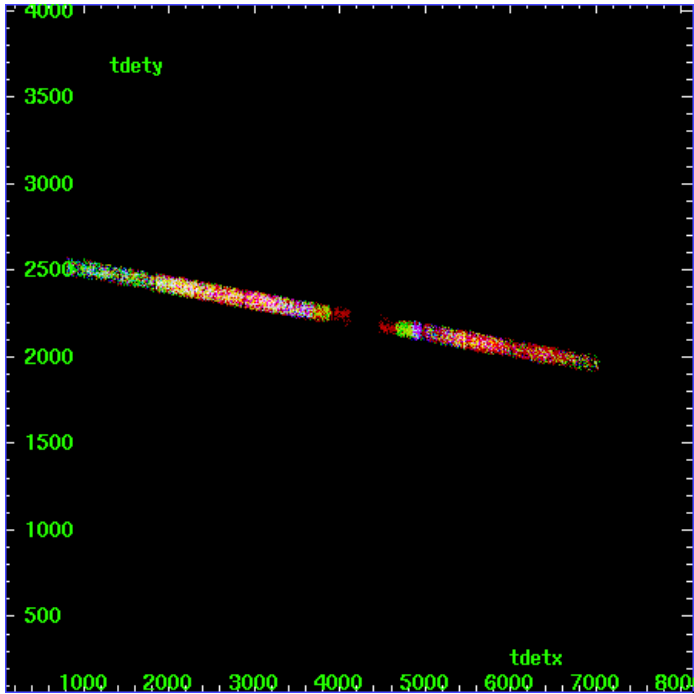
HEG Zero Order



HEG Order Sort ALL

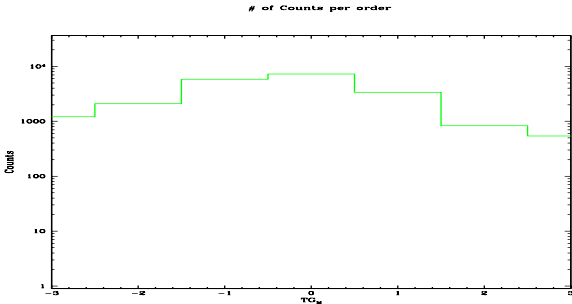


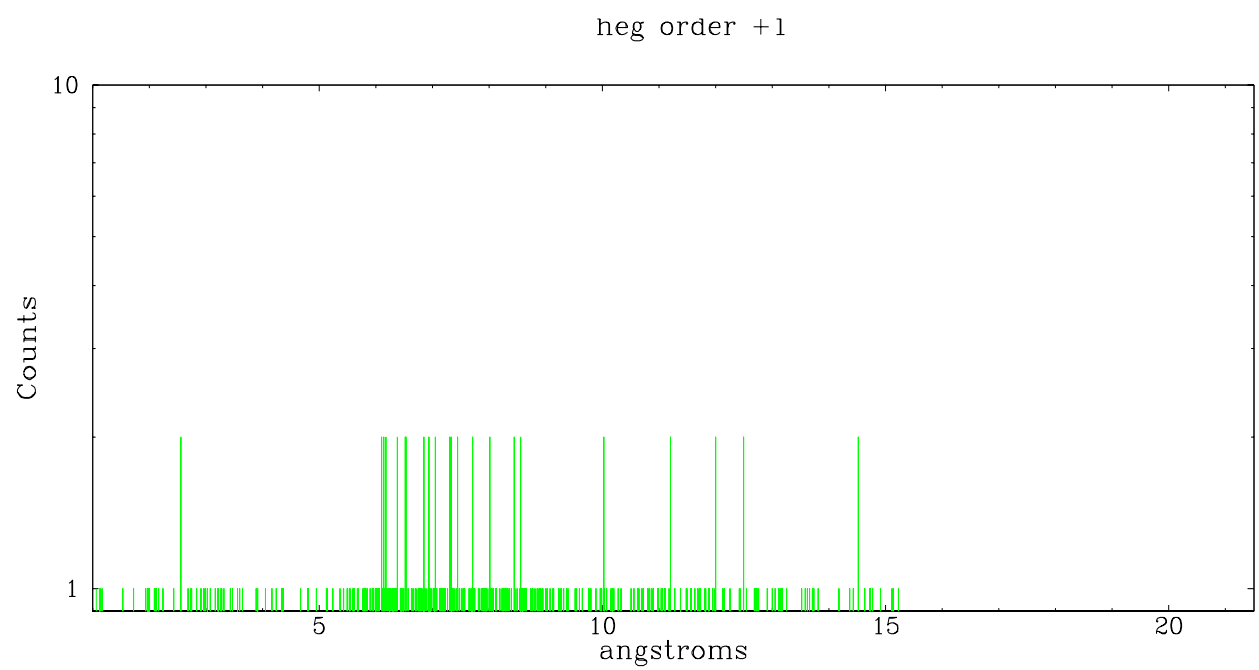
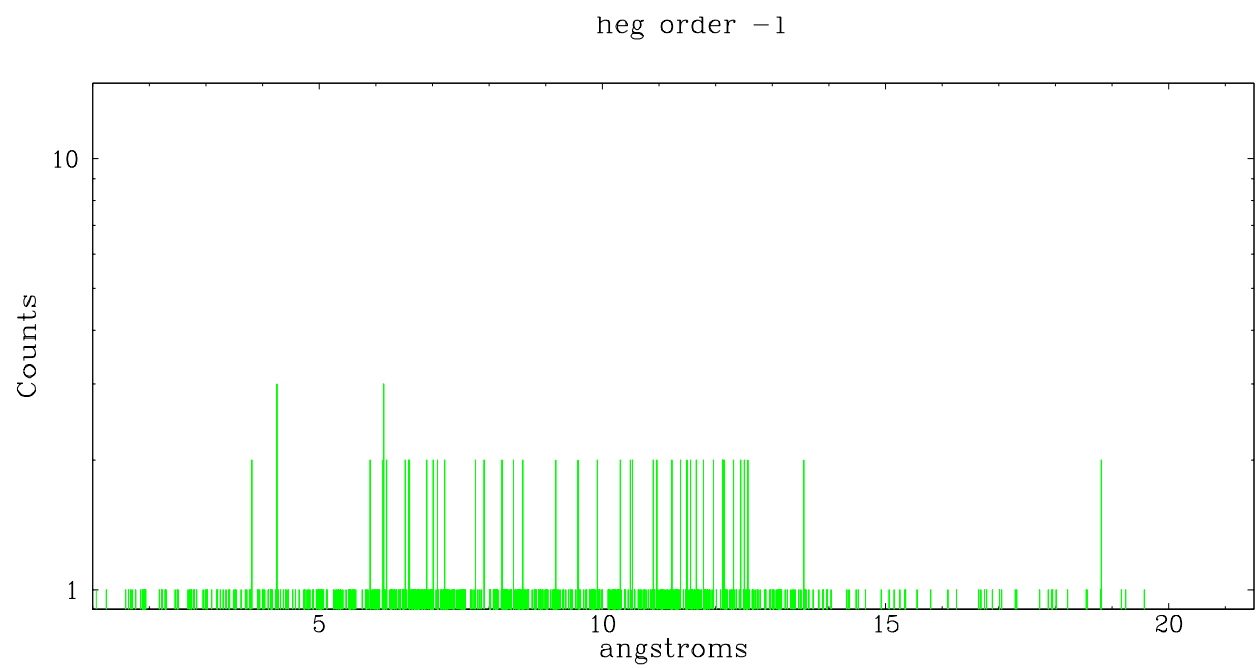
Spot Image HEG



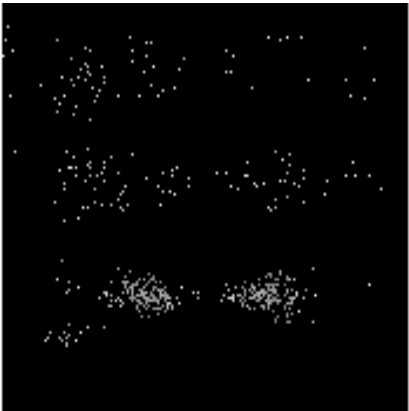
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1209	2094	5811	7240	3373	831	538

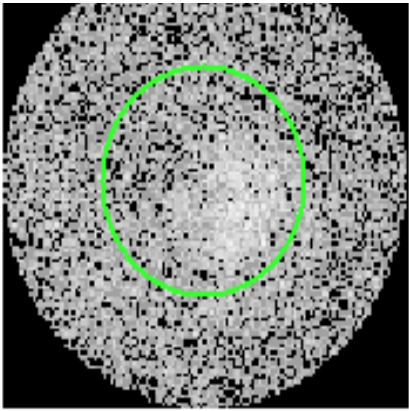




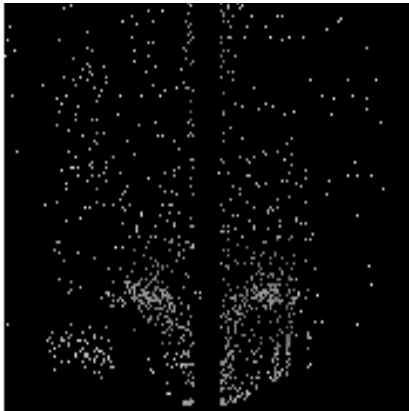
3.2 MEG Arm



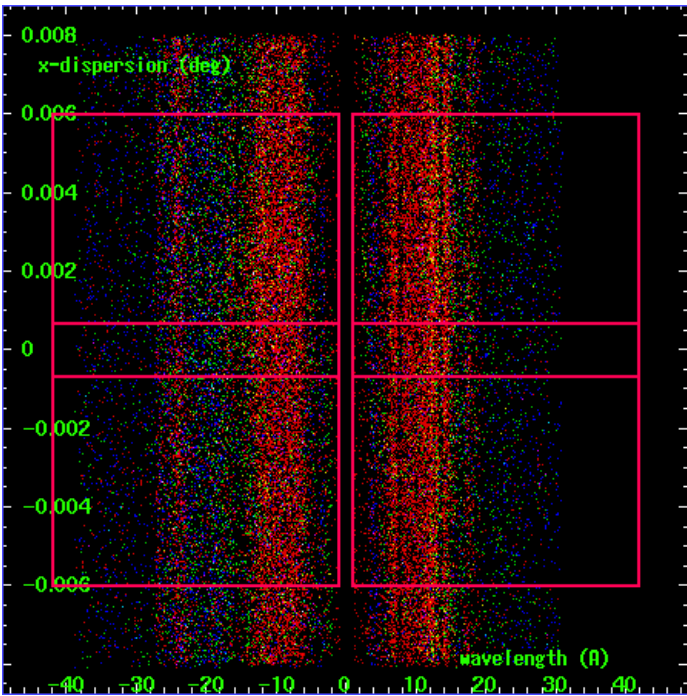
MEG Order Sort 123



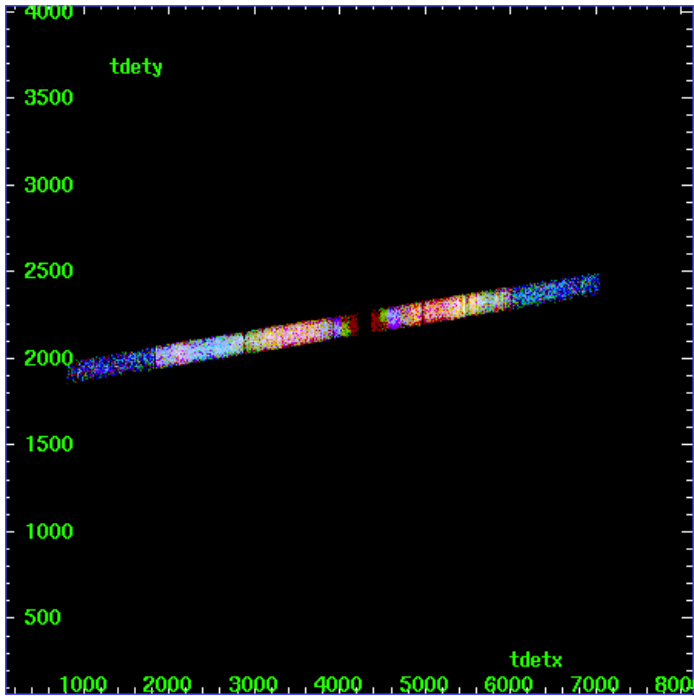
MEG Zero Order



MEG Order Sort ALL

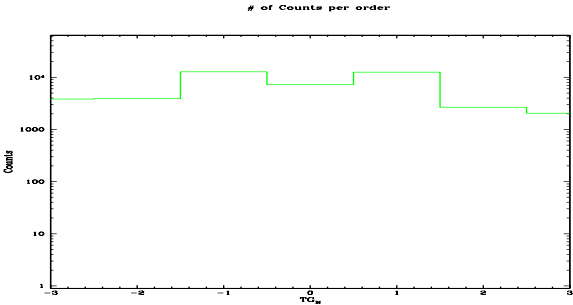


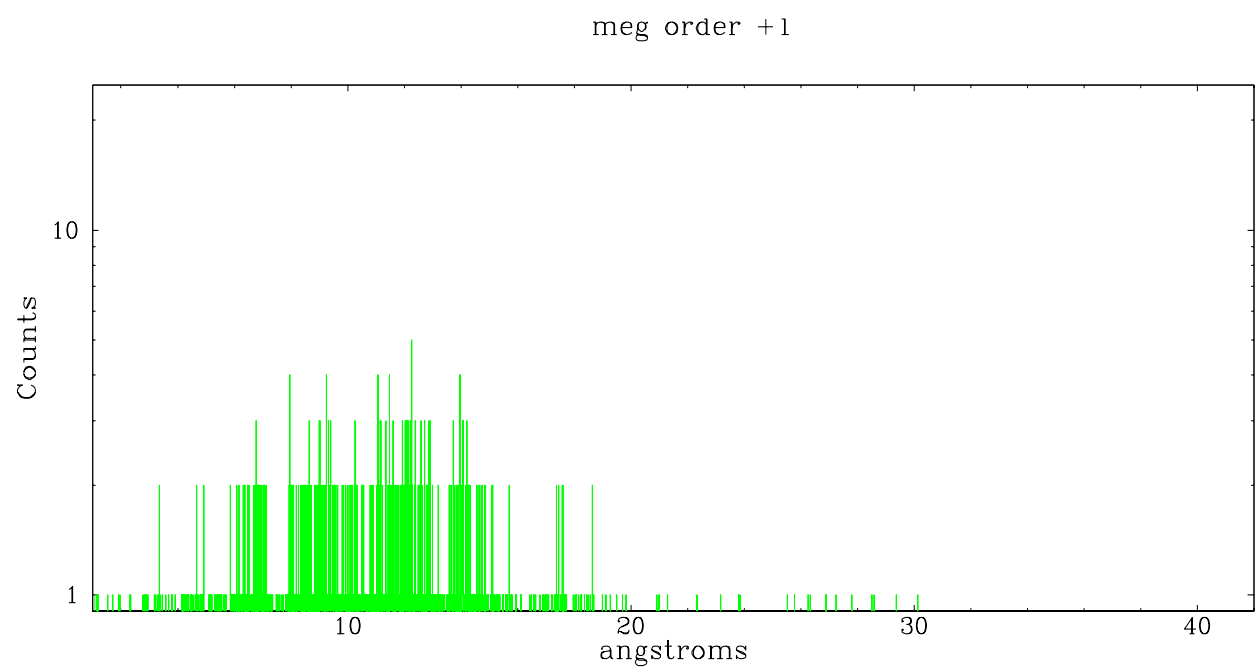
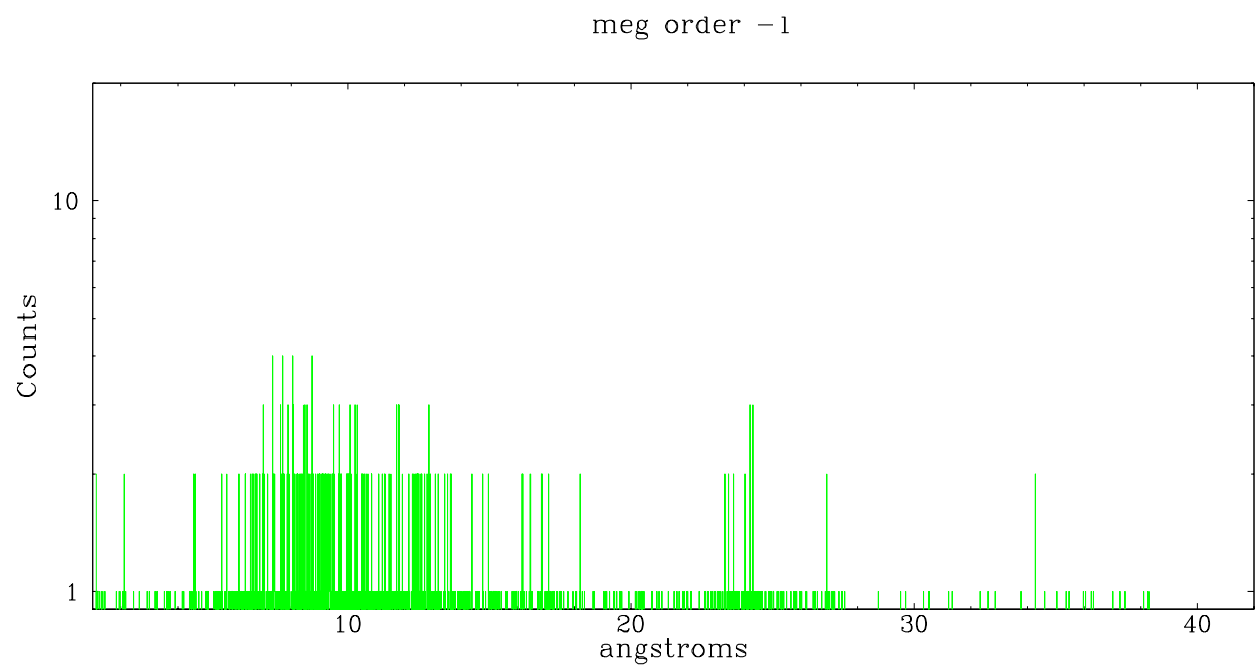
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	3815	3880	12785	7240	12514	2664	2052





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.01.18
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	85.84

A.2 Comments

Standard software processing technique using the tool tgdetect failed to determine a position for the zeroth order for this observation. The source is extended and asymmetric. The processing software defaulted to the coordinates supplied by the user for the position of the zeroth order for the grating spectral extraction. For grating analysis of localized X-ray emission within the extended emission, the investigator will need to extract one or more dispersed spectra using user-defined zeroth order positions for all positions of interest.

Destreaking on S4 was not very successful.

A high radiation environment resulted in an elevated count rate during the first approximately 20 ksec of the observation.