

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 704 - L2 Version 6
Chandra X-Ray Center

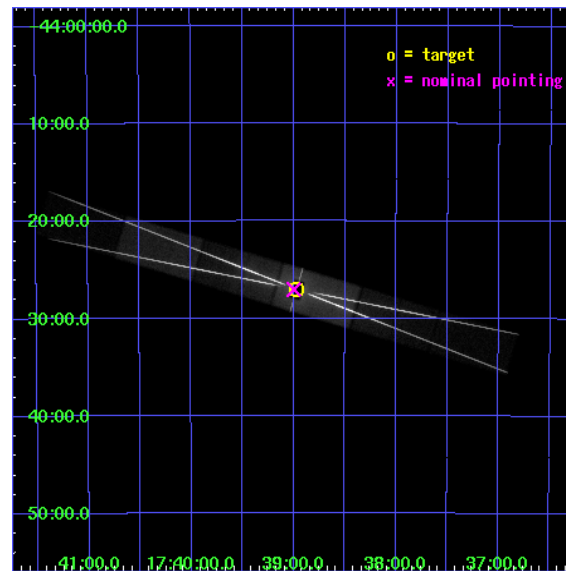
L2 Processing Date : Jul 24 2007

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1 Front

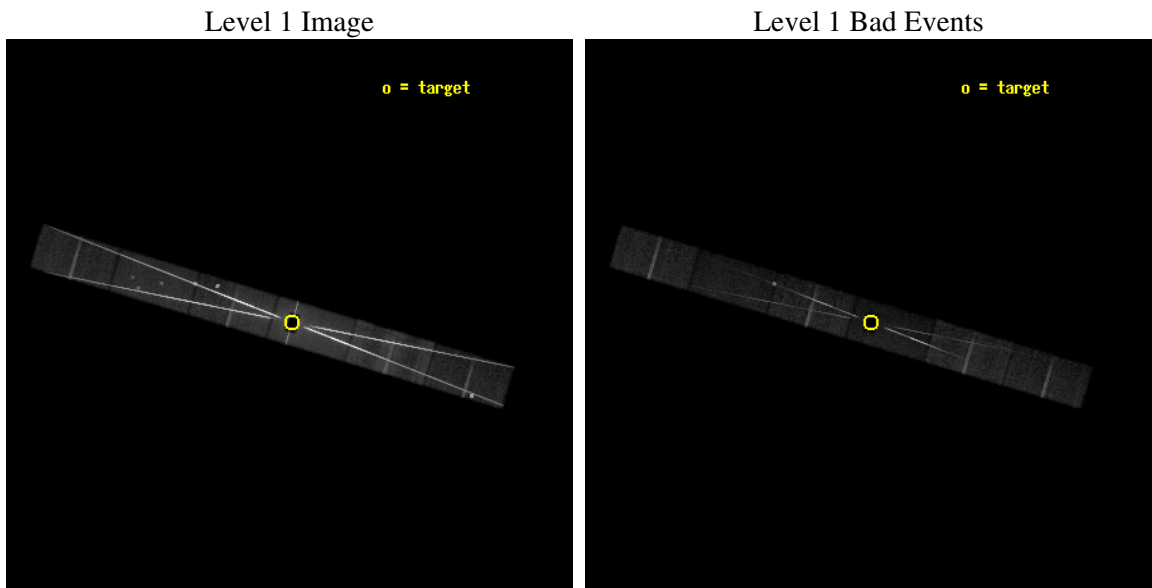
seq_num	400071
obs_id	704
title	HIGH RESOLUTION X-RAY SPECTROSCOPY OF COMPACT BINARIES
observer	Dr. Saeqa Vrtilek
object	4U 1735-44
dtcycle	0
cycle	P
ra_targ	264.74275
dec_targ	-44.450036
ra_nom	264.74926244484
dec_nom	-44.450557916212
roll_nom	16.520652225629
revision	6
ontime	24908.39995876
livetime	24353.14818025
ontime4	24904.717928588
ontime5	24908.39995876
ontime6	24906.558938667
ontime7	24908.39995876
ontime8	24908.39995876
ontime9	24902.876958355
l2events	2233648



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	2
ascdsver	7.6.10
caldsver	3.4.0
date	2007-05-25T10:15:10
revision	4

sched_exp_time	24575.000000
ontime	24908.39995876
ontime4	24904.717928588
ontime5	24908.39995876
ontime6	24906.558938667
ontime7	24908.39995876
ontime8	24908.39995876
ontime9	24902.876958355
l1events	2947053

2.1.3 Events

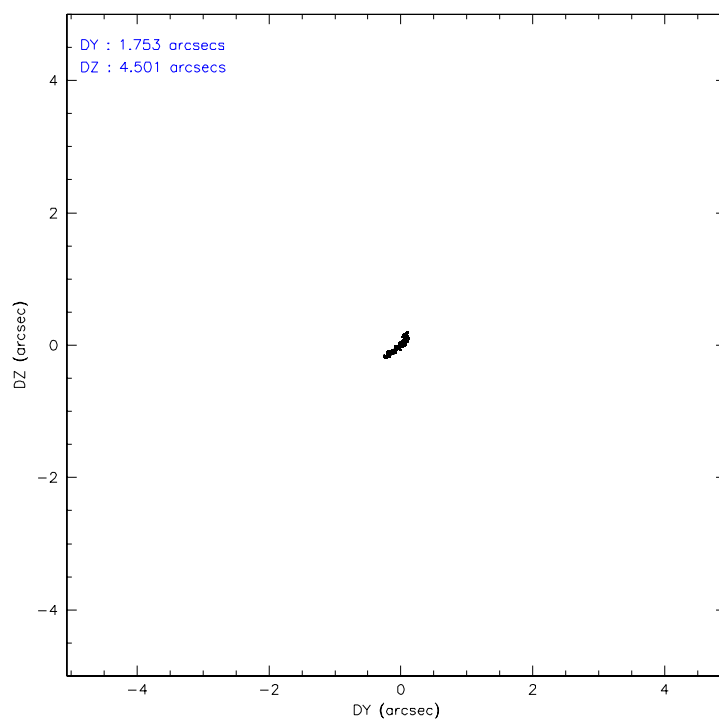
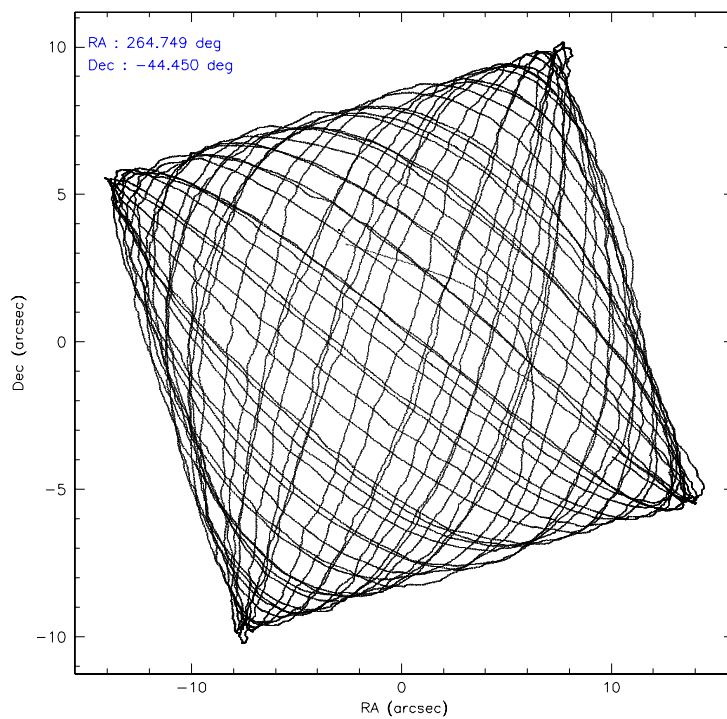
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	137963	319326	944406	829451	538998	176909
rejected events	85444	65034	110427	94030	101094	75082
rejected %	61%	20%	11%	11%	18%	42%

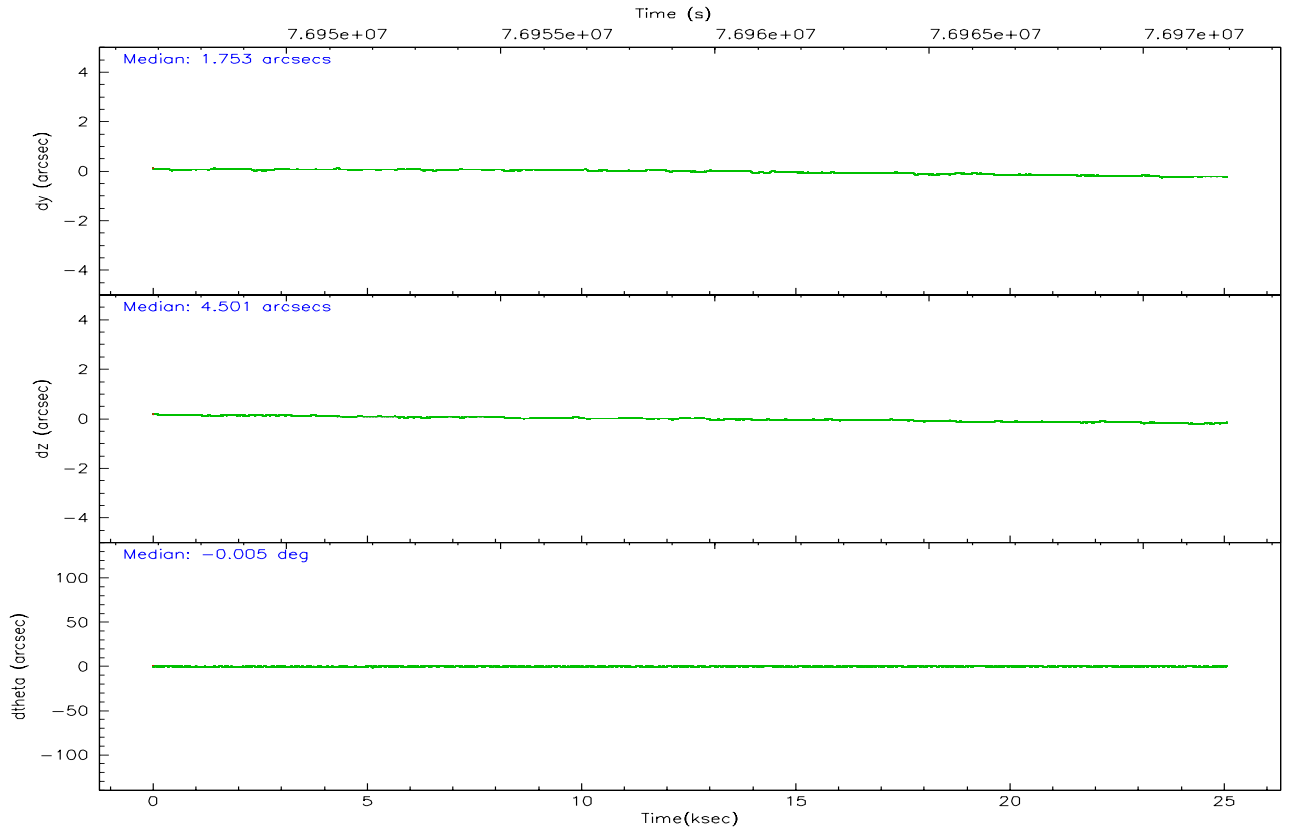
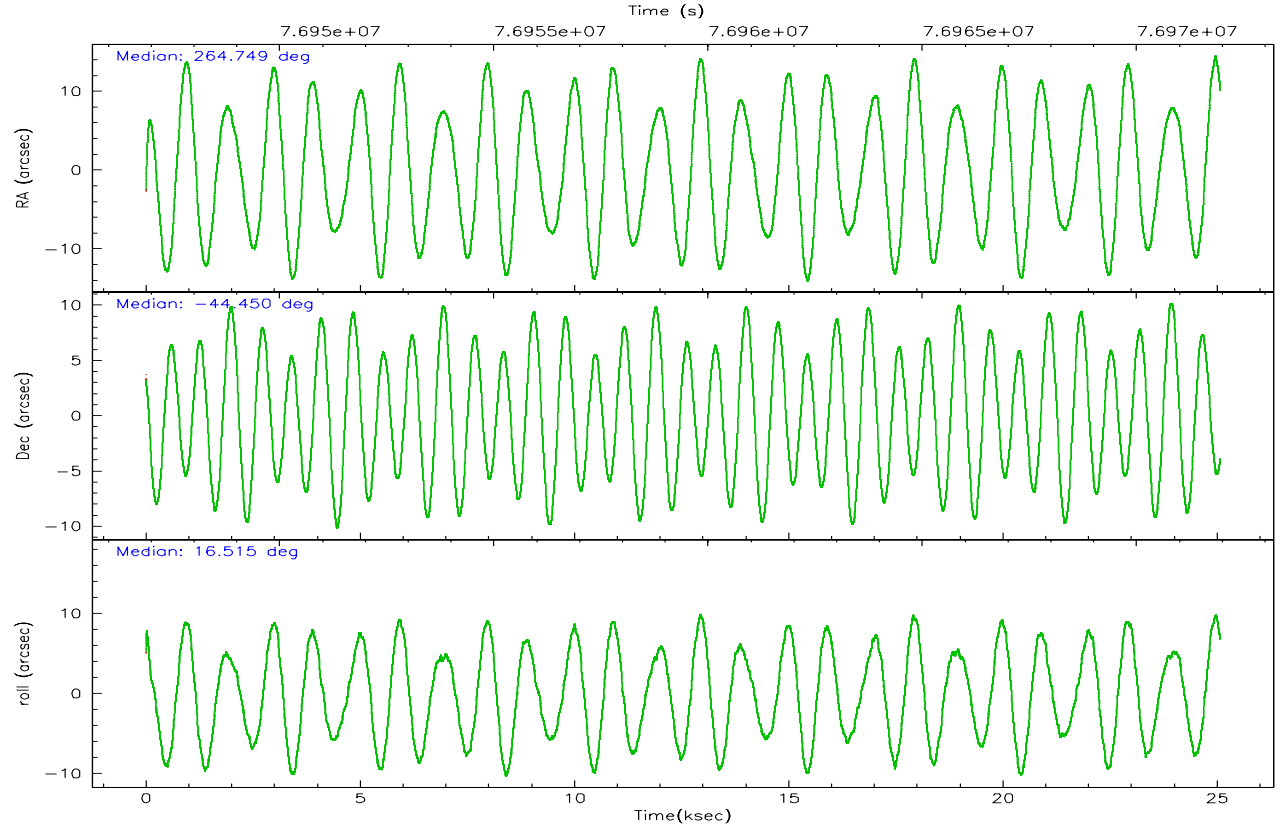
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	37555	72648	626814	138781	332764	80691
	27%	22%	66%	16%	61%	45%
grade 1 events	106	1874	14005	3926	3883	238
	0%	0%	1%	0%	0%	0%
grade 2 events	7740	82320	104071	194792	47481	10703
	5%	25%	11%	23%	8%	6%
grade 3 events	2254	19792	35520	74157	20741	3539
	1%	6%	3%	8%	3%	2%
grade 4 events	2233	19355	34638	74065	19359	3397
	1%	6%	3%	8%	3%	1%
grade 5 events	2259	9425	12013	24597	5633	2845
	1%	2%	1%	2%	1%	1%
grade 6 events	2746	60196	32998	253672	17621	3531
	1%	18%	3%	30%	3%	1%
grade 7 events	83070	53716	84347	65461	91516	71965
	60%	16%	8%	7%	16%	40%

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	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	264.722939	264.7492624448406	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-44.470519	-44.45055791621159	Subarray start row	15	15
Pointing Roll	16.345581	16.52065222562905	Subarray row count	542	542
SIM focus pos (mm)	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
SIM defocus (mm)	0	0.001444936568705701	Primary exposure time	3.200000	1.8
SIM translation stage pos (mm)	-184.532523	-184.52811429679			
SIM translation stage offset (mm)	-5.6	-5.604408286217847			
Observation start time	76947376.184000	76946266.24655201			
Observation start date	2000-06-09T14:15:12	2000-06-09T13:57:46			
Observation end time	76971951.184000	76972442.69751599			
Observation end date	2000-06-09T21:04:47	2000-06-09T21:14:02			
Read mode	TIMED	TIMED			

2.3 Aspect



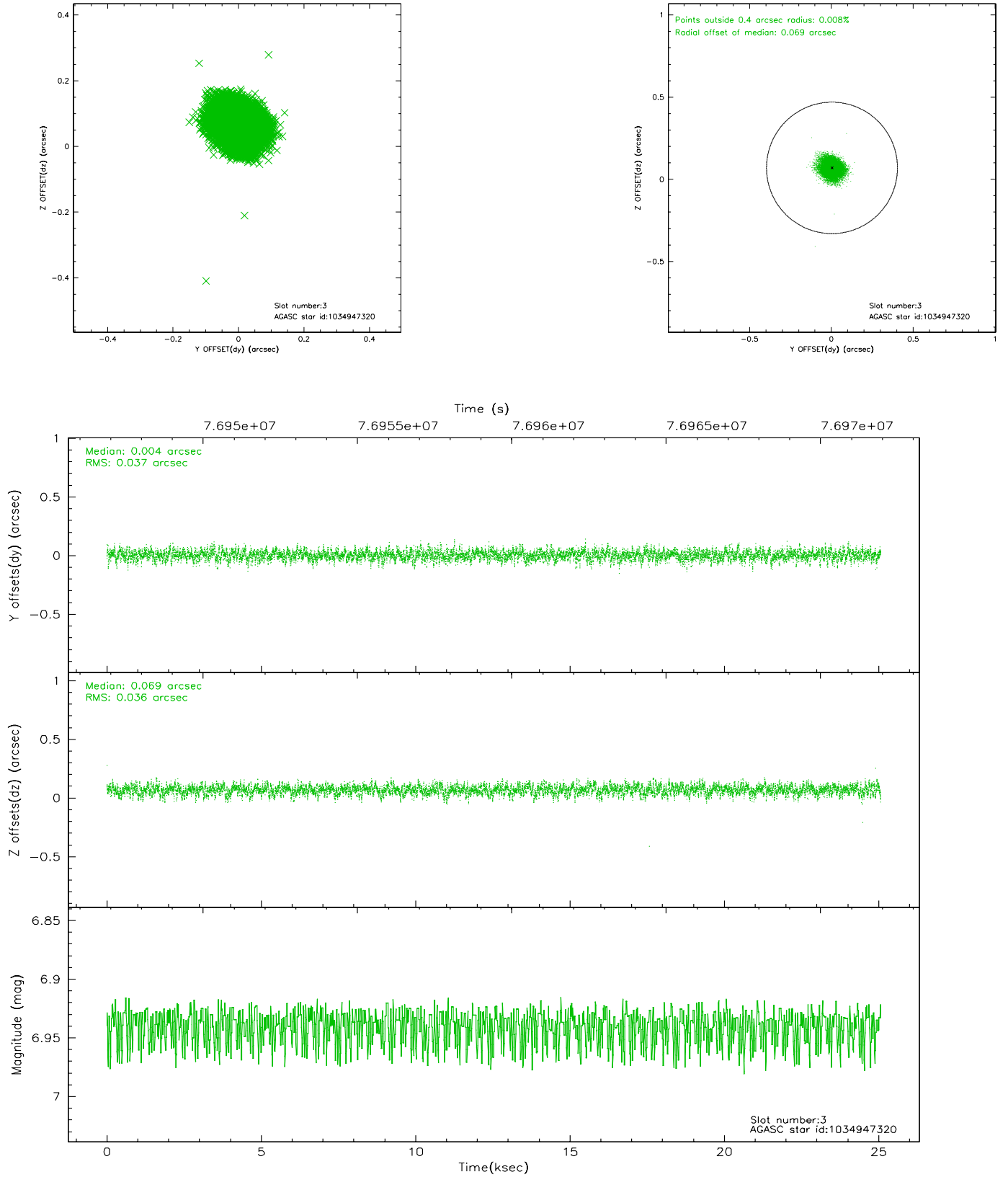


Slot Statistics

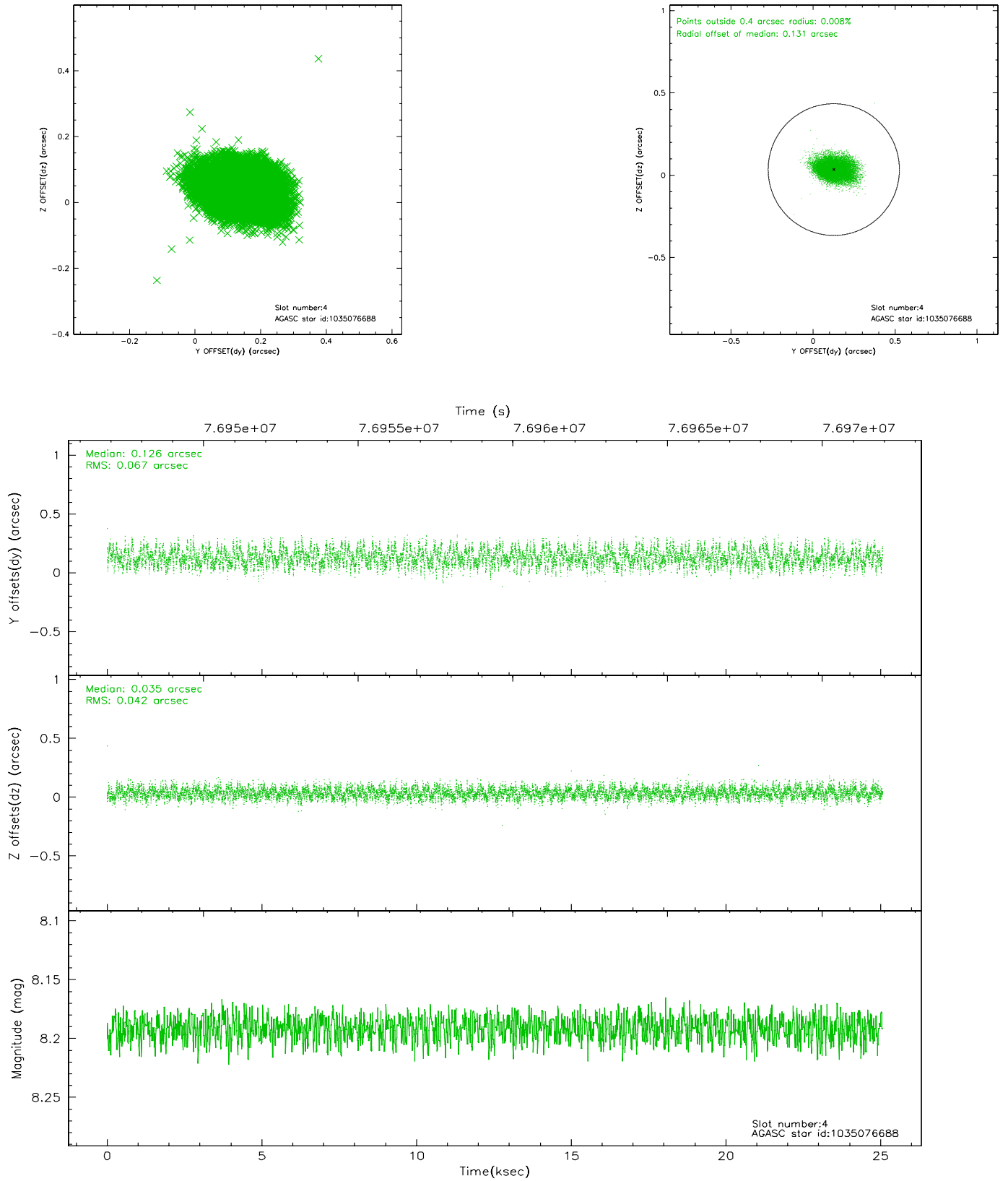
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	6115	-0.019	0.074	0.008	0.014	0.000000	0.000000	942.09	-1836.68
1	FID	ACIS-S-5	7.24	6113	0.004	0.010	0.007	0.012	0.000000	0.000000	-1806.82	60.66
2	FID	ACIS-S-6	7.40	6112	-0.006	-0.073	0.010	0.016	0.000000	0.000000	407.53	704.67
3	GUIDE	1034947320	6.94	12227	0.004	0.069	0.054	0.087	264.173264	-44.879236	-1760.80	-1022.85
4	GUIDE	1035076688	8.19	12228	0.126	0.035	0.085	0.136	265.780908	-44.766732	2289.97	-1801.86
5	GUIDE	1035079304	7.79	12229	-0.170	-0.140	0.062	0.101	265.287192	-43.791891	2093.14	1925.91
6	GUIDE	1093415704	8.48	12228	-0.019	0.073	0.088	0.139	264.307658	-45.157399	-1707.96	-2079.58
7	GUIDE	1034965840	9.39	12224	0.058	-0.030	0.090	0.147	264.114303	-44.055620	-1092.55	1869.63

2.4 Star Slots

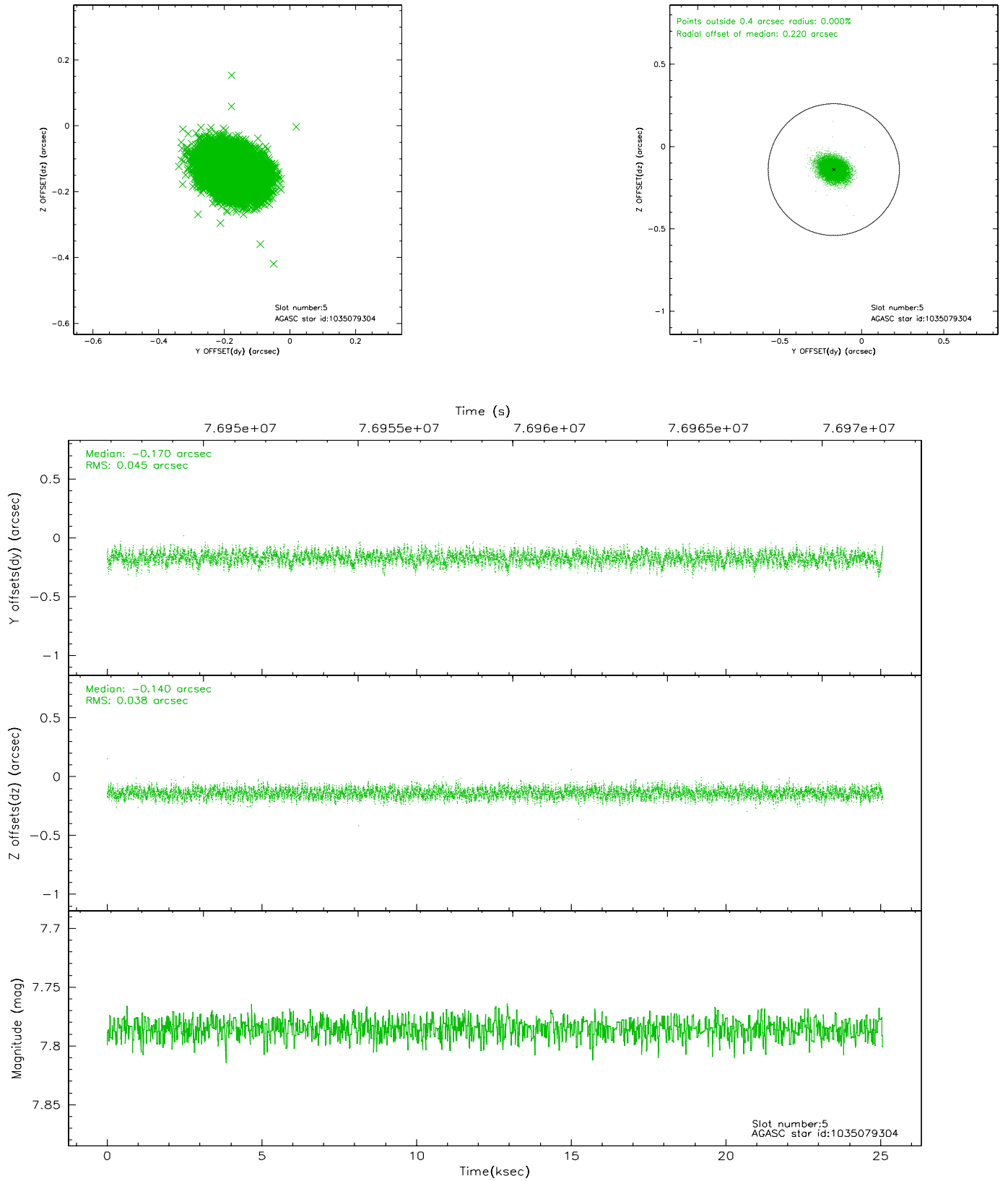
2.4.1 Slot 3



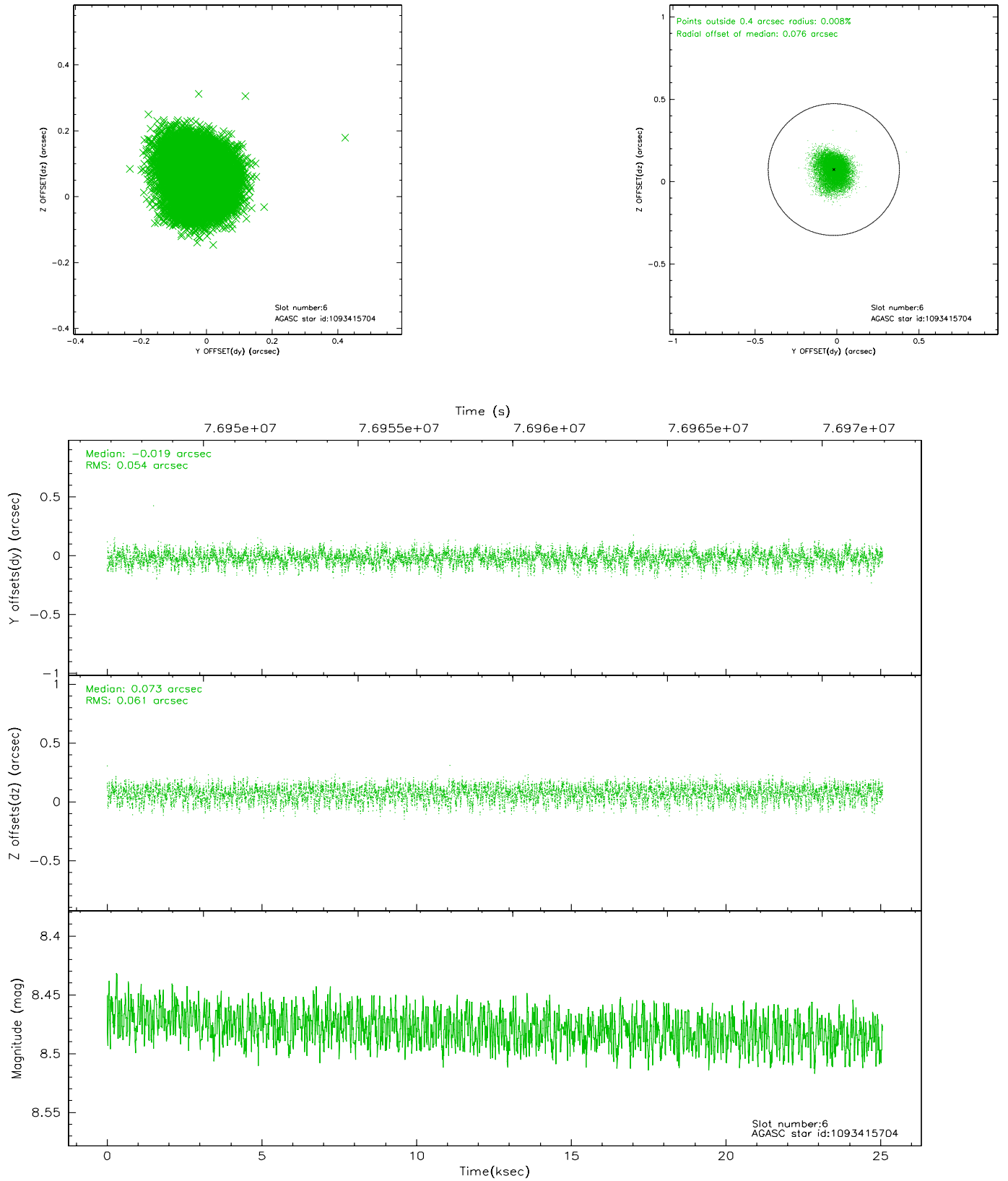
2.4.2 Slot 4



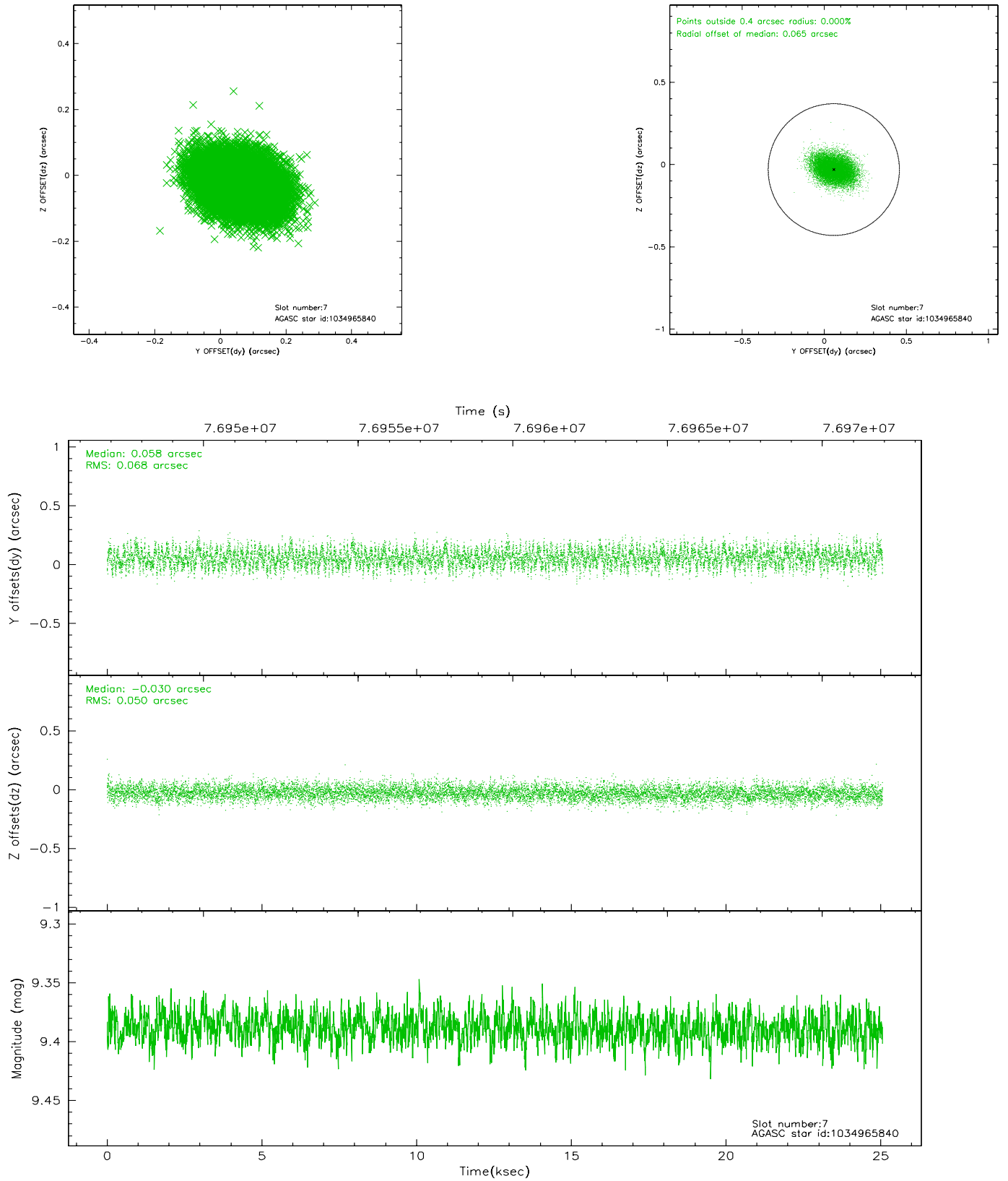
2.4.3 Slot 5



2.4.4 Slot 6

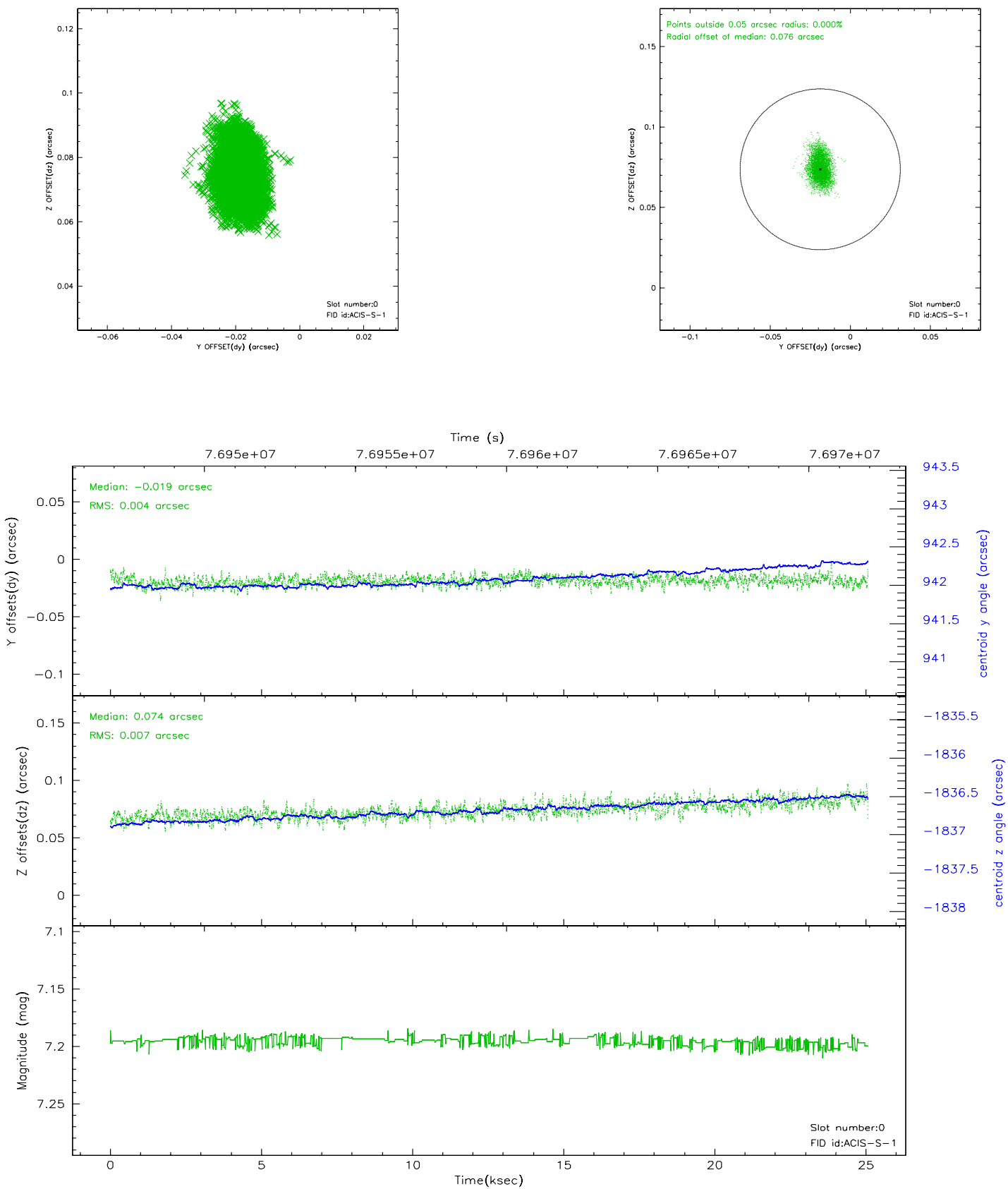


2.4.5 Slot 7

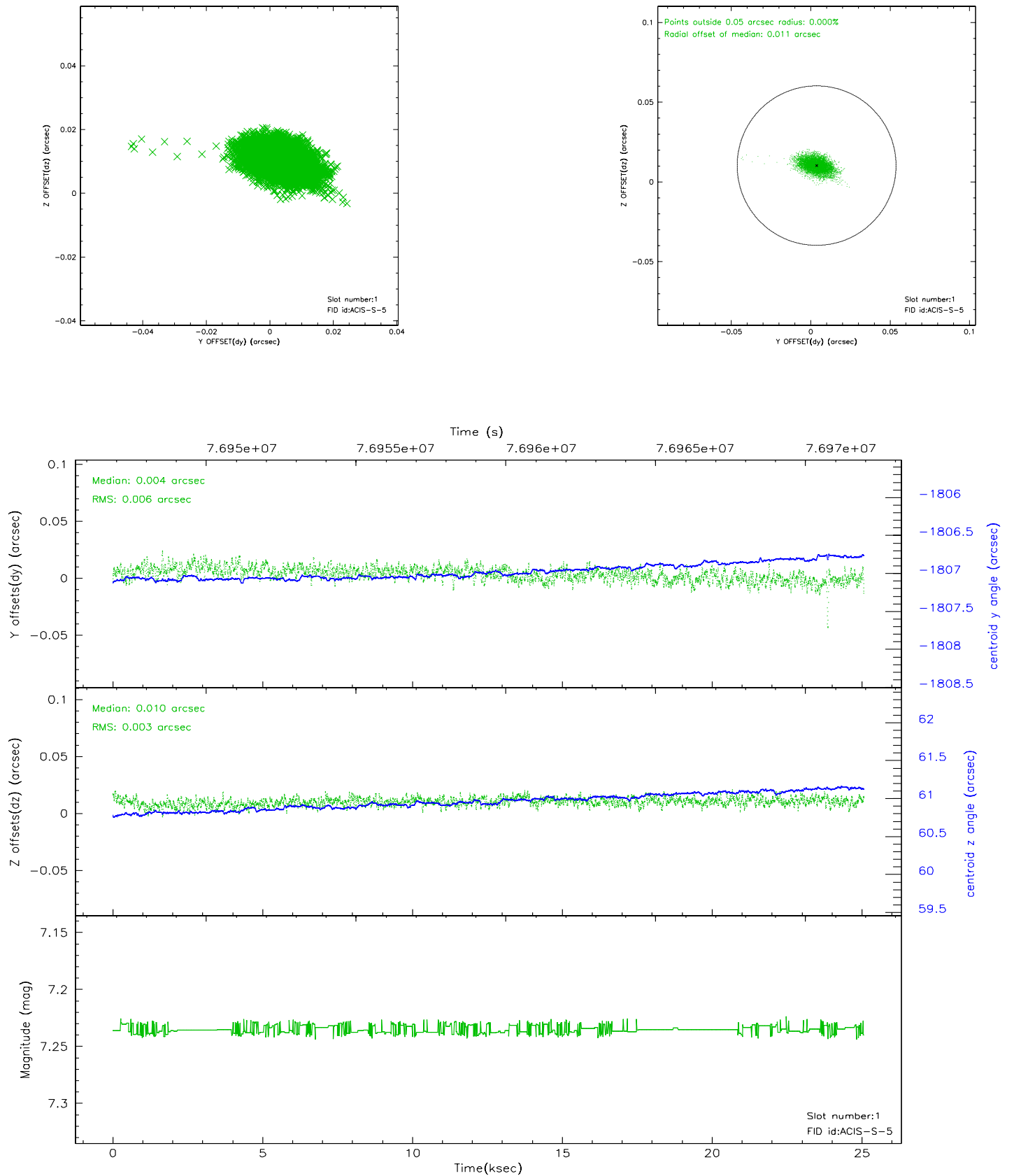


2.5 FID Slots

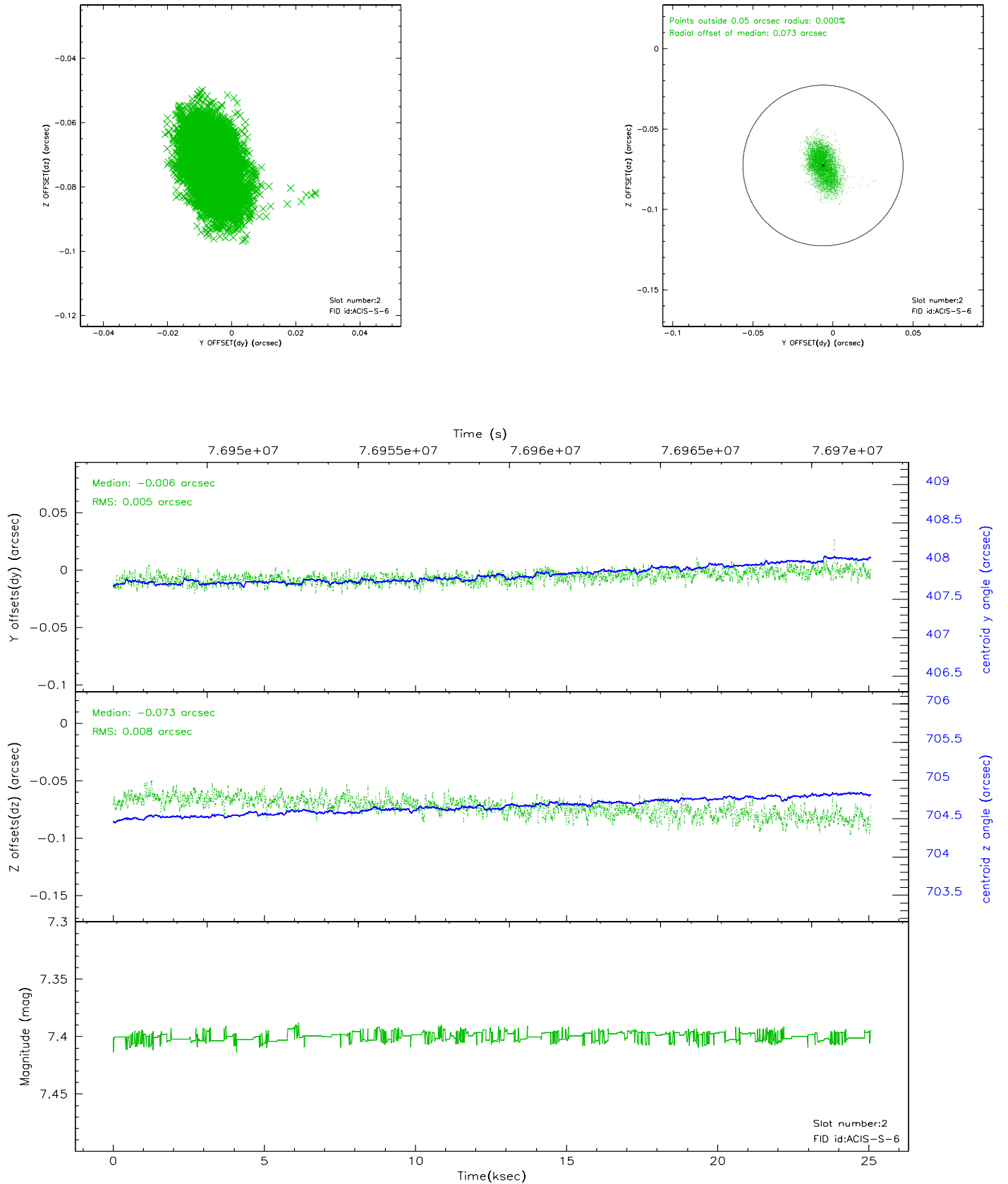
2.5.1 Slot 0



2.5.2 Slot 1

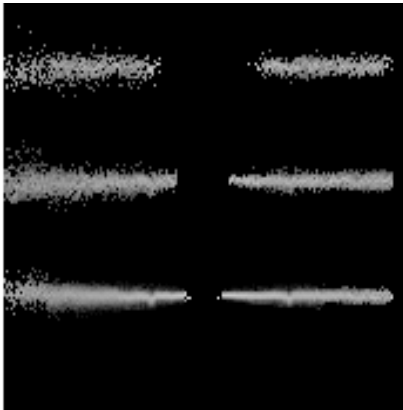


2.5.3 Slot 2

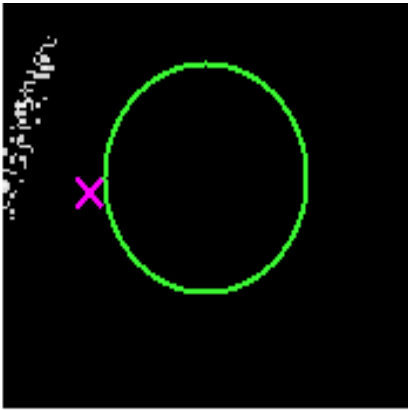


3 Gratings

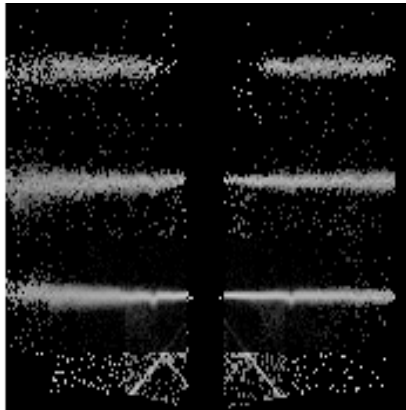
3.1 HEG Arm



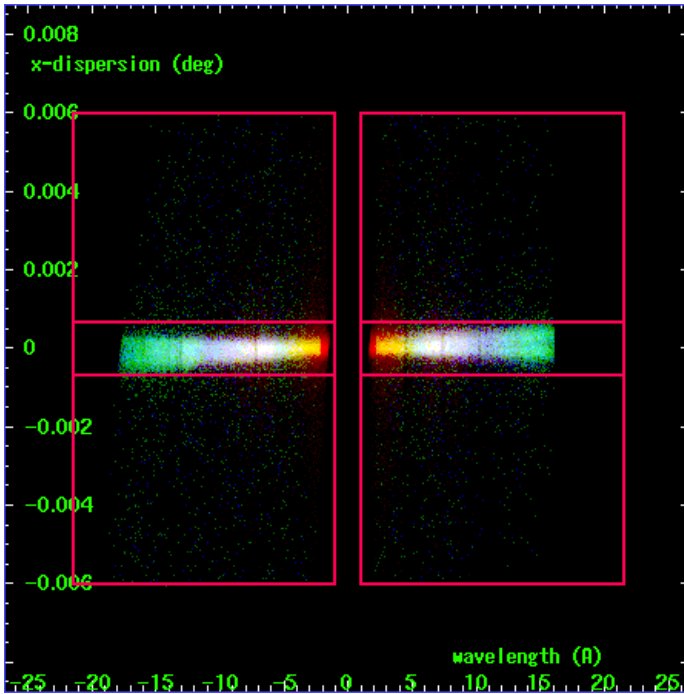
HEG Order Sort 123



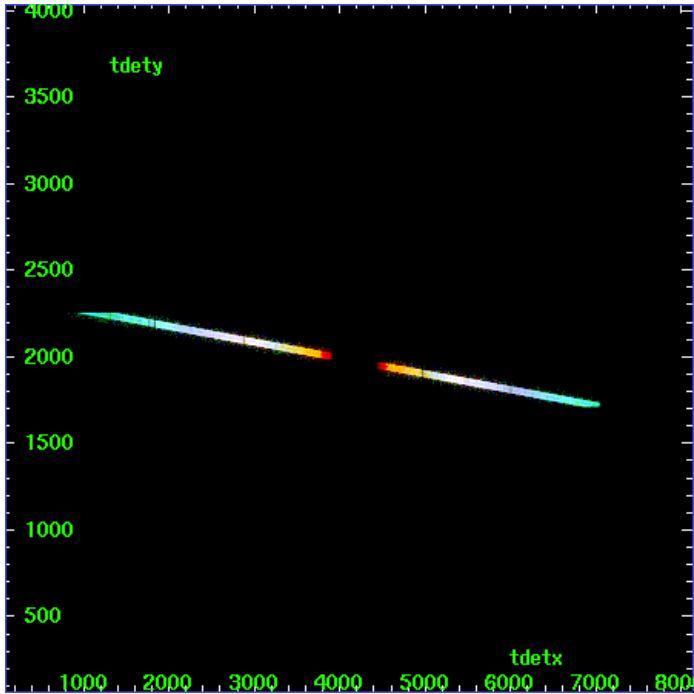
HEG Zero Order



HEG Order Sort ALL

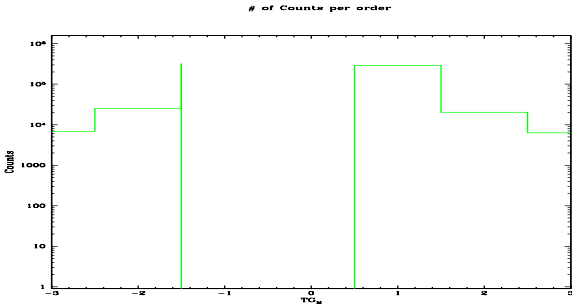


Spot Image HEG

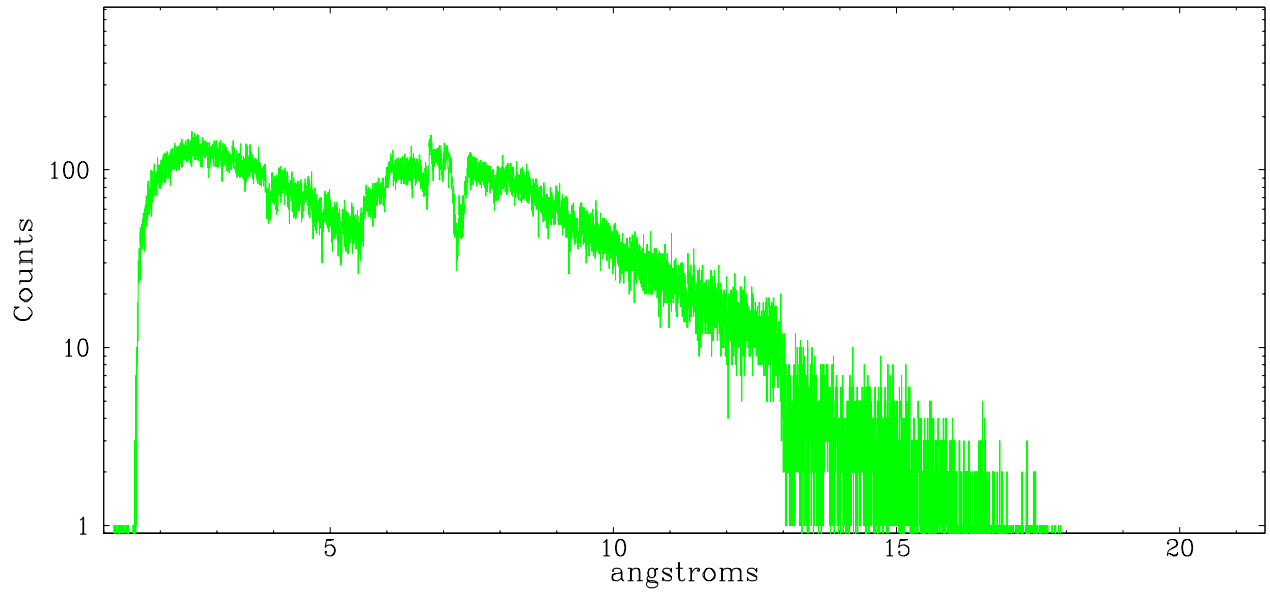


Full Detector HEG

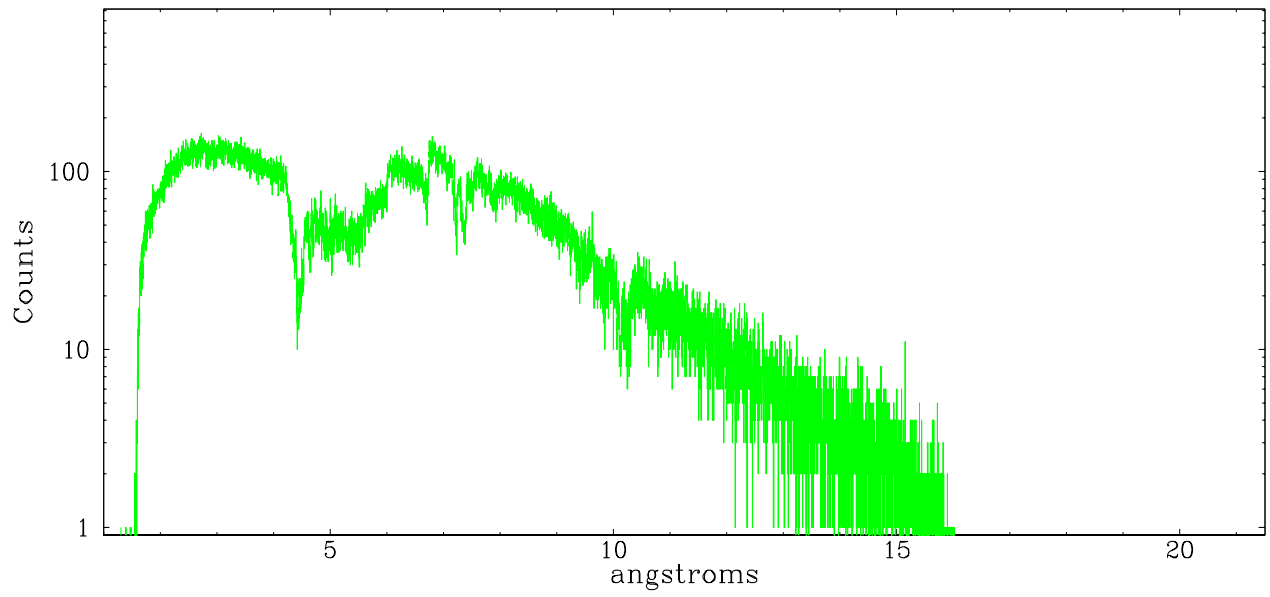
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	6832	24909	315479	0	289032	20209	6314



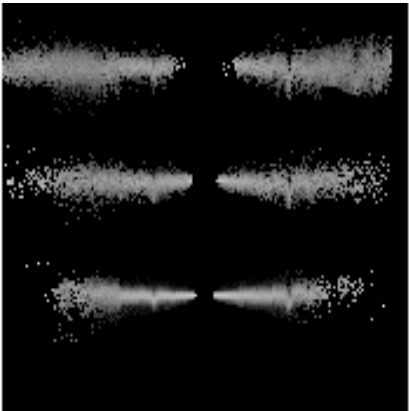
heg order -1



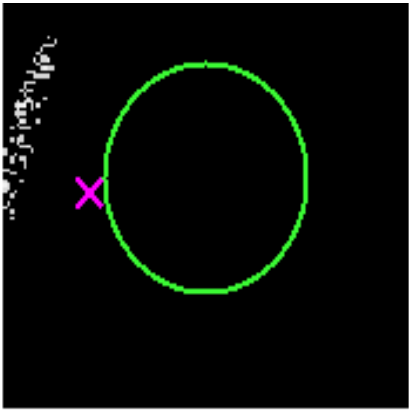
heg order +1



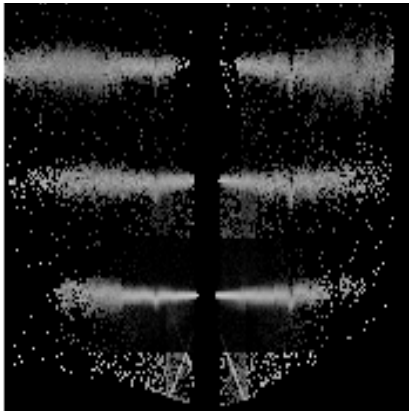
3.2 MEG Arm



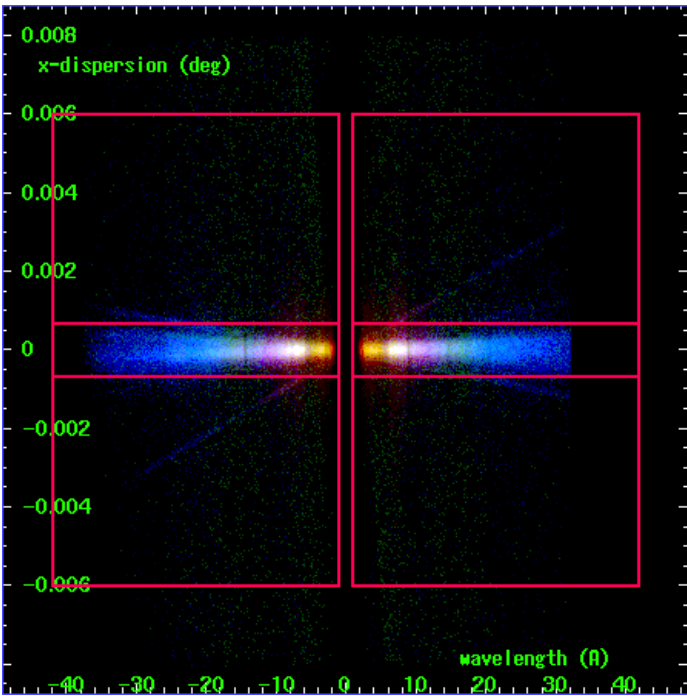
MEG Order Sort 123



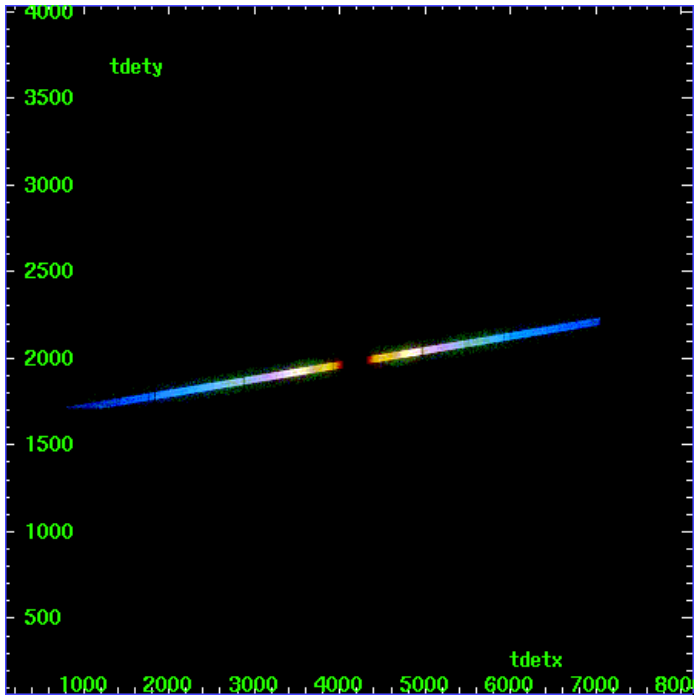
MEG Zero Order



MEG Order Sort ALL

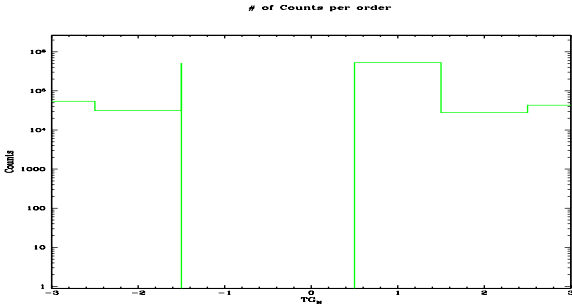


Spot Image MEG

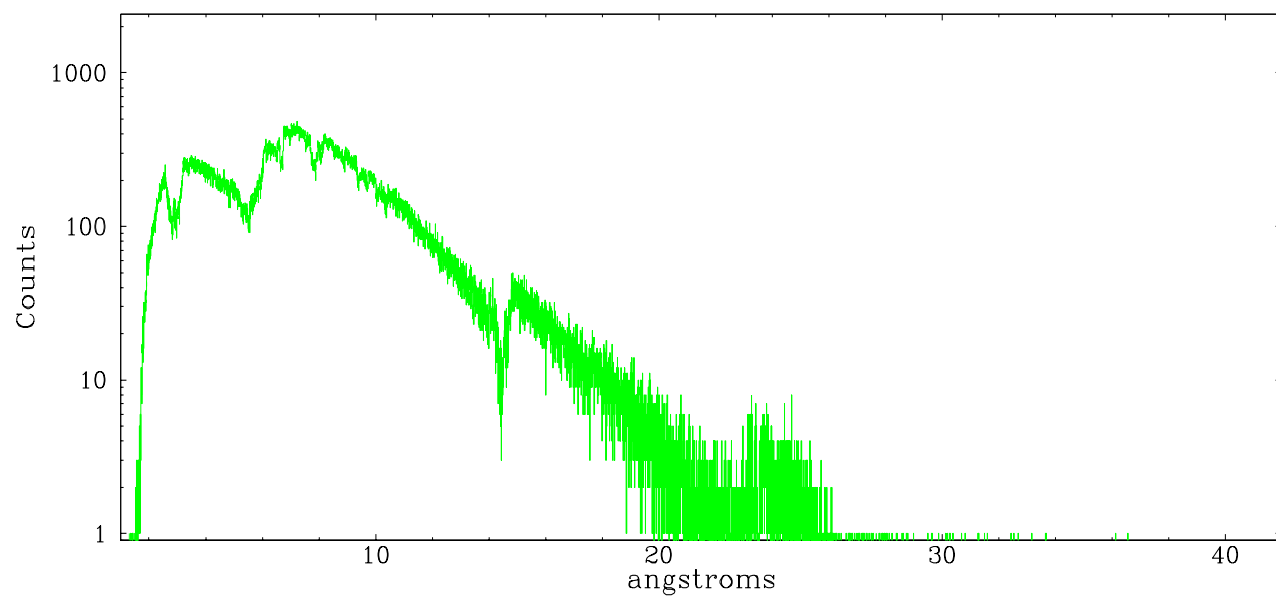


Full Detector MEG

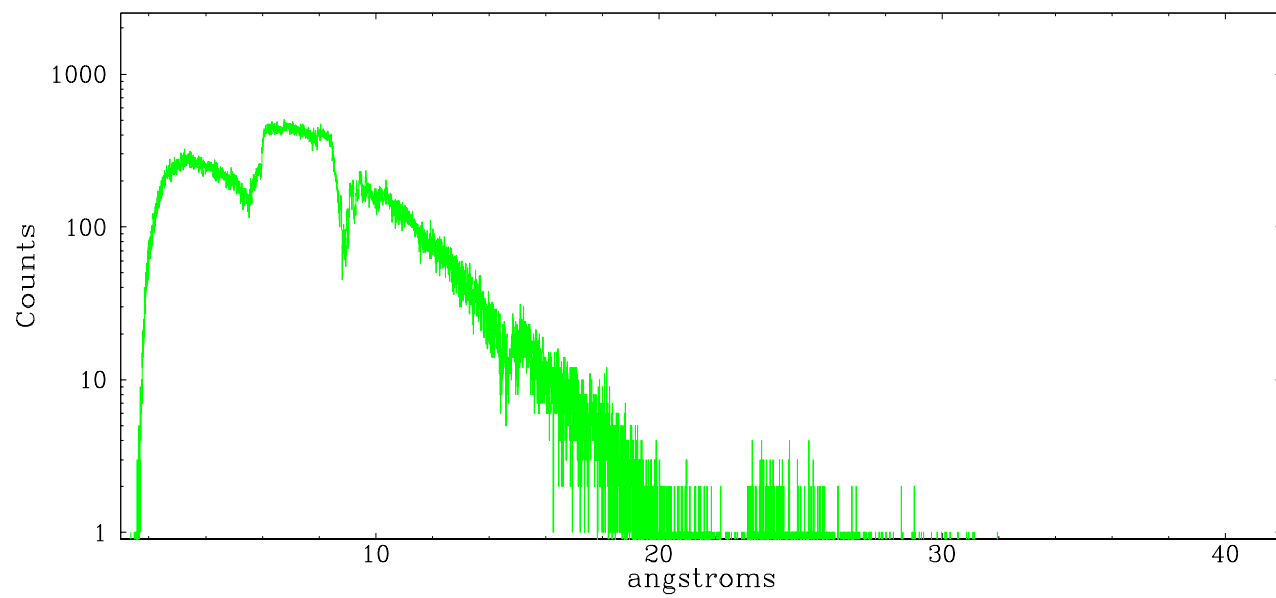
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	54534	31300	503088	0	528369	27708	43236



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.08.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.908

A.2 Comments

Standard data processing software did not correctly locate the zeroth order because a spatial exclusion window was used to block the zeroth order image. Manual intervention was used to input the correct sky coordinates (x=4131.04; y=4099.24) 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. --- MEG and HEG spectral arms are piled up.