

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 703 - L2 Version 5
Chandra X-Ray Center

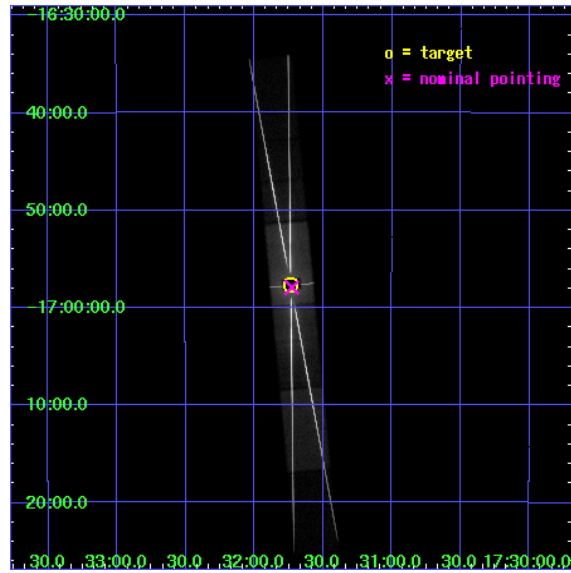
L2 Processing Date : Aug 8 2007

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1 Front

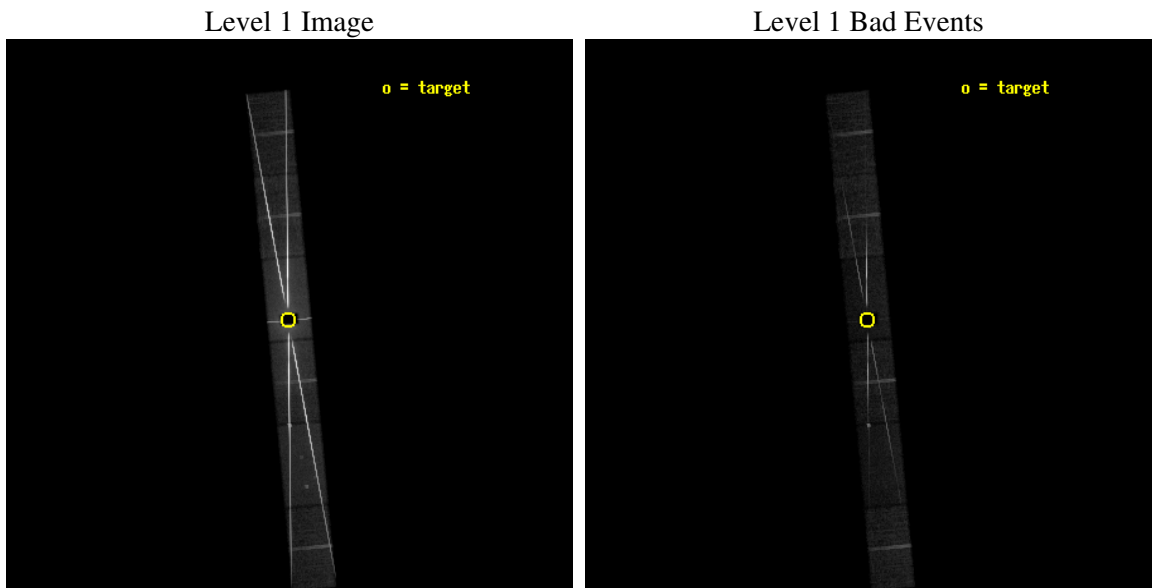
seq_num	400070
obs_id	703
title	HIGH RESOLUTION X-RAY SPECTROSCOPY OF COMPACT BINARIES
observer	Dr. Saeqa Vrtilek
object	4U 1728-16
dtcycle	0
cycle	P
ra_targ	262.934125
dec_targ	-16.961439
ra_nom	262.93183824092
dec_nom	-16.965522366917
roll_nom	264.59238909922
revision	5
ontime	21187.79996492
livetime	20715.486864411
ontime4	21187.79996492
ontime5	21187.79996492
ontime6	21187.79996492
ontime7	21187.79996492
ontime8	21187.79996492
ontime9	21187.79996492
l2events	2662729



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-05T08:32:33
revision	4

sched_exp_time	21000.000000
ontime	21187.79996492
ontime4	21187.79996492
ontime5	21187.79996492
ontime6	21187.79996492
ontime7	21187.79996492
ontime8	21187.79996492
ontime9	21187.79996492
l1events	3354247

2.1.3 Events

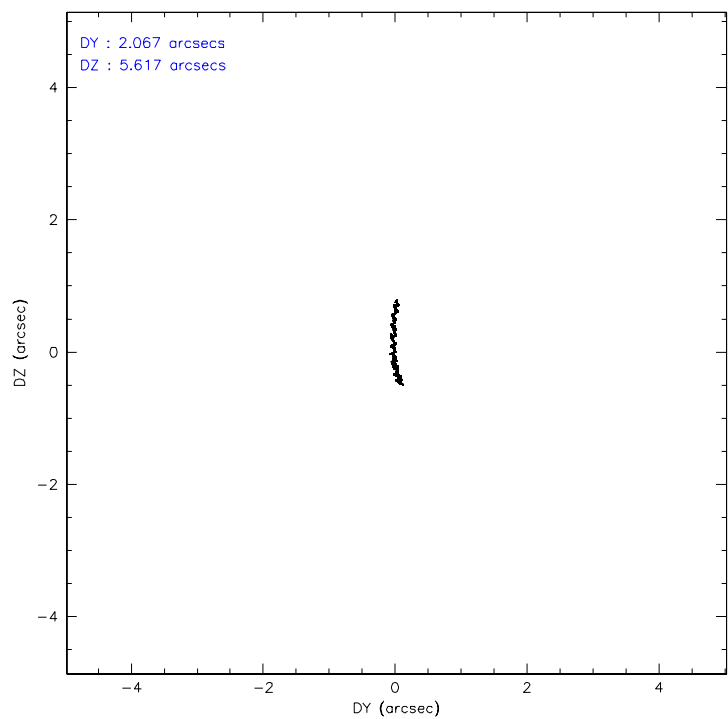
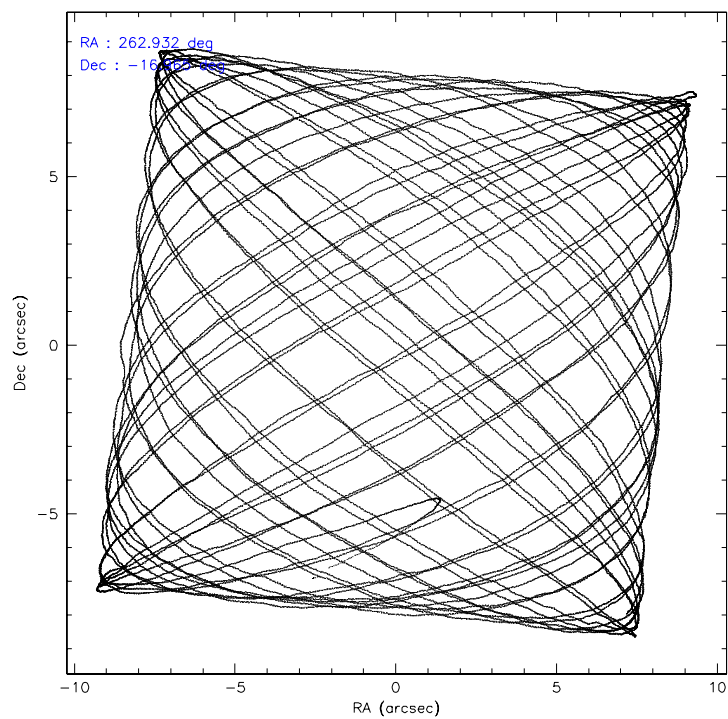
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	134500	356311	1115425	1011287	568467	168257
rejected events	75582	63181	120999	125835	91043	67108
rejected %	56%	17%	10%	12%	16%	39%

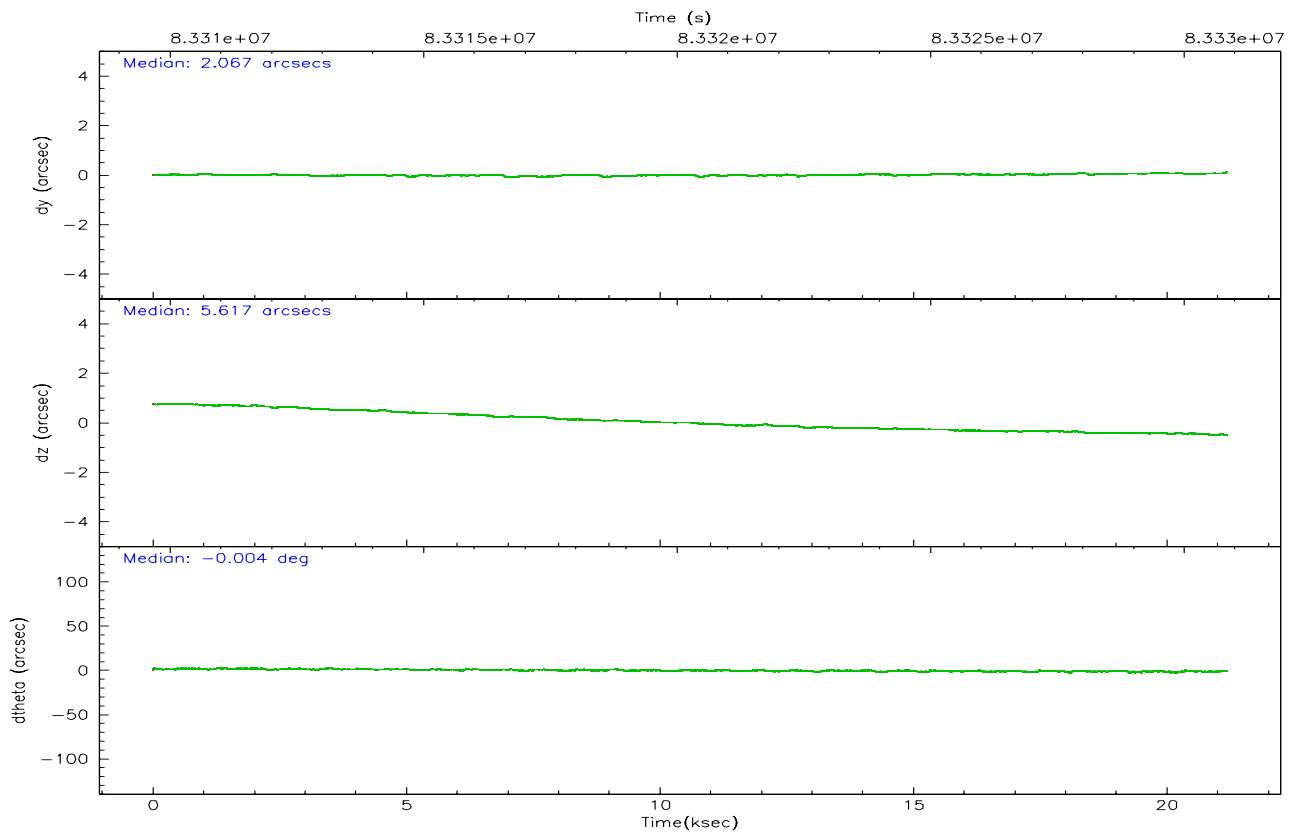
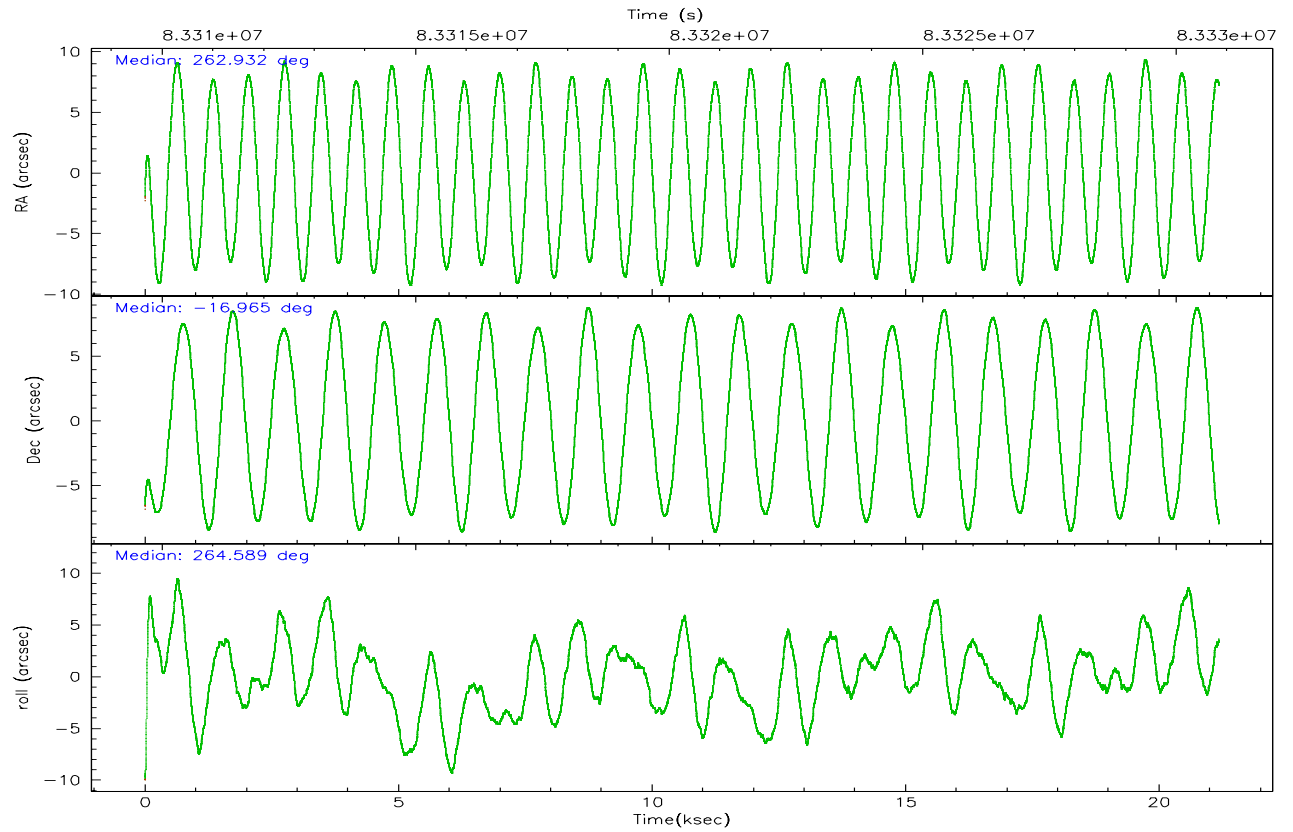
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	44445	85679	740349	164888	380939	78642
	33%	24%	66%	16%	67%	46%
grade 1 events	141	1972	23498	6301	5699	270
	0%	0%	2%	0%	1%	0%
grade 2 events	7656	96203	128837	232860	51855	11807
	5%	26%	11%	23%	9%	7%
grade 3 events	2357	24027	45481	90611	17111	3847
	1%	6%	4%	8%	3%	2%
grade 4 events	2352	23516	44387	89632	17275	3970
	1%	6%	3%	8%	3%	2%
grade 5 events	2218	9352	18063	34421	6207	2755
	1%	2%	1%	3%	1%	1%
grade 6 events	2482	65671	41907	313513	13842	3572
	1%	18%	3%	31%	2%	2%
grade 7 events	72849	49891	72903	79061	75539	63394
	54%	14%	6%	7%	13%	37%

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	262.919791	262.9318382409226	Subarray requested	CUSTOM	CUSTOM
Pointing Dec	-16.940680	-16.96552236691727	Subarray start row	15	15
Pointing Roll	264.432257	264.5923890992185	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	-184.5306286120915			
SIM translation stage offset (mm)	-5.6	-5.601893970916279			
Observation start time	83309853.184000	83308885.307399			
Observation start date	2000-08-22T05:36:29	2000-08-22T05:21:25			
Observation end time	83330853.184000	83331329.220741			
Observation end date	2000-08-22T11:26:29	2000-08-22T11:35:29			
Read mode	TIMED	TIMED			

2.3 Aspect



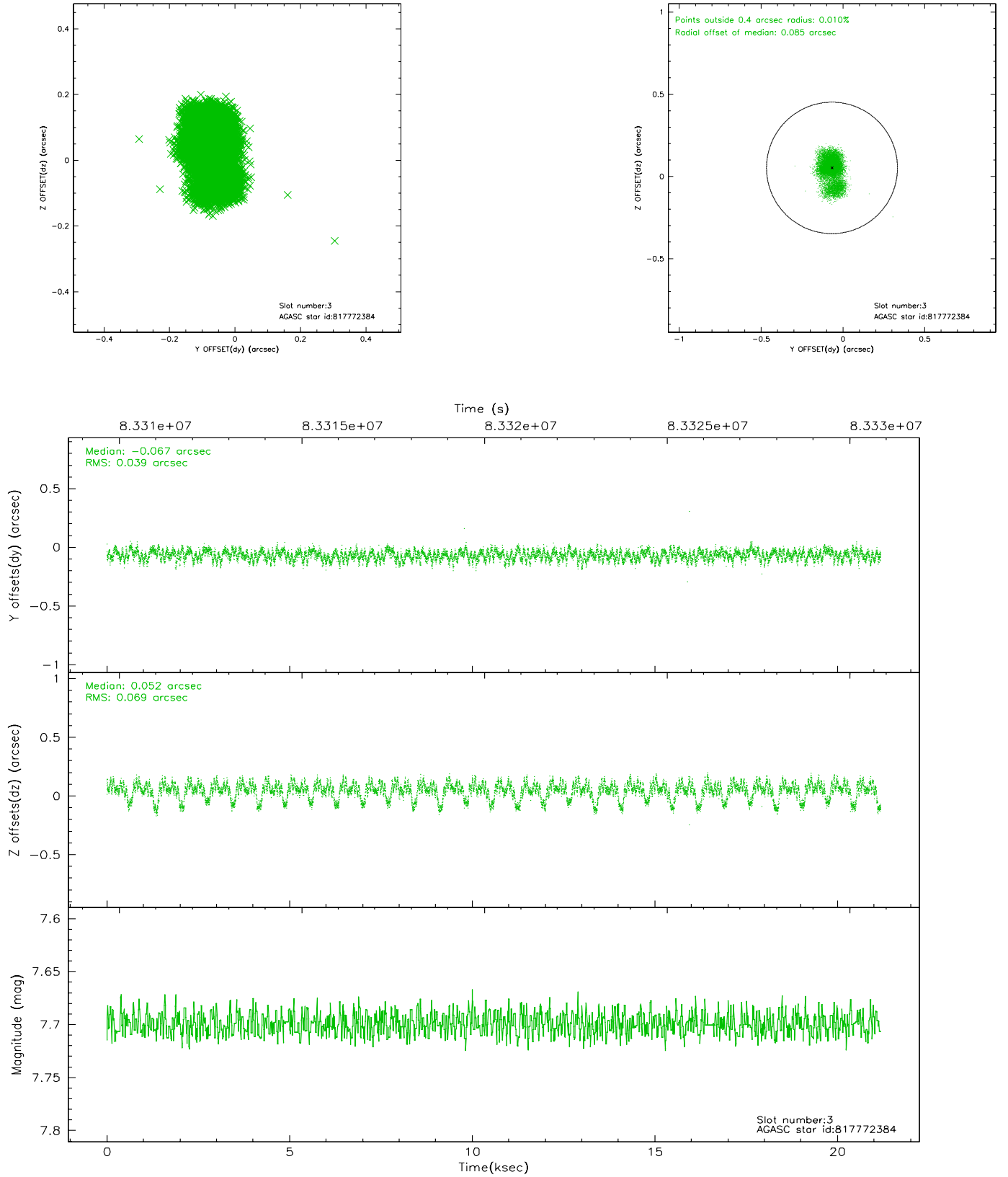


Slot Statistics

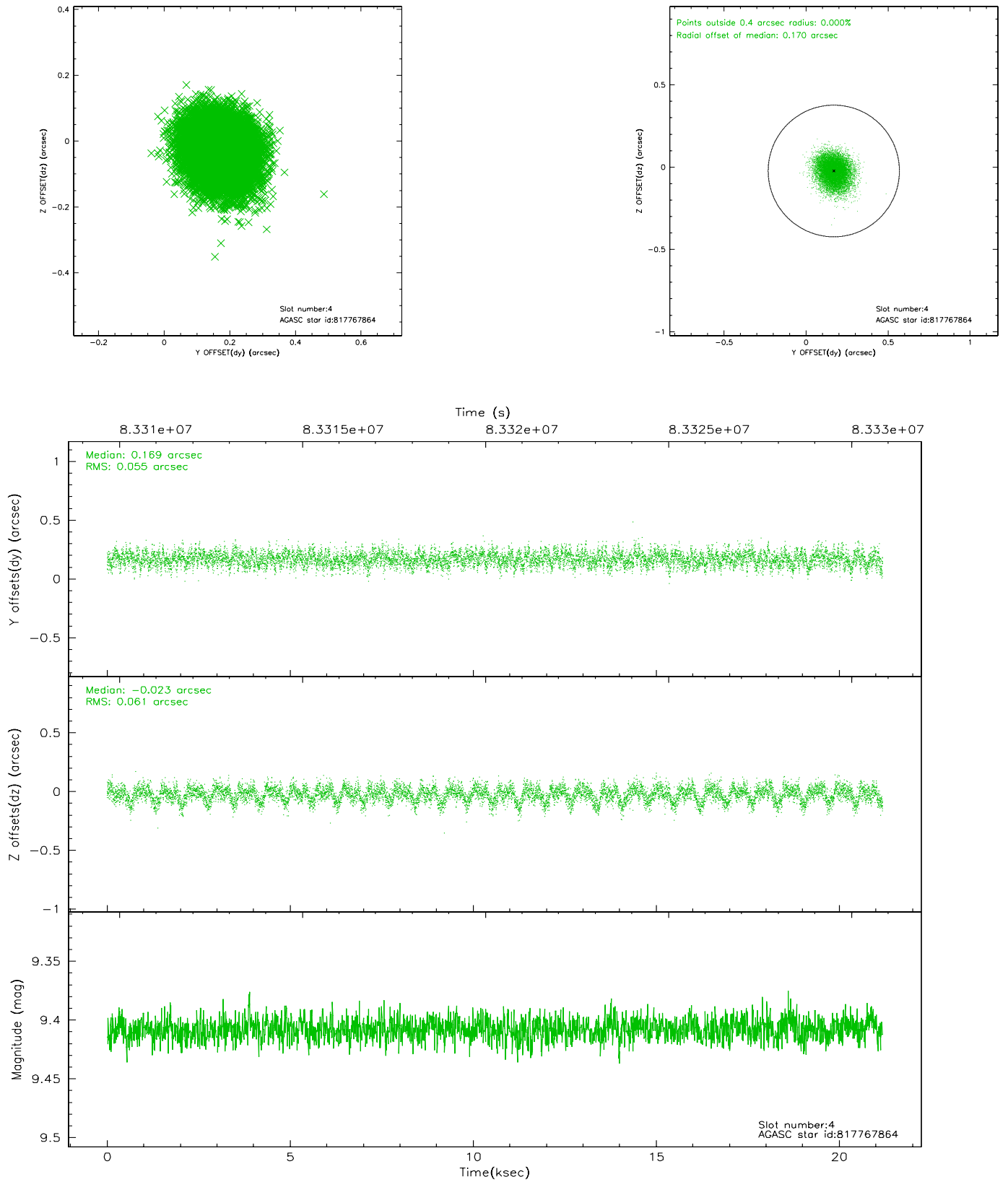
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	5169	-0.038	-0.041	0.015	0.022	0.000000	0.000000	-754.34	-1842.33
1	FID	ACIS-S-4	7.19	5168	-0.038	0.030	0.011	0.020	0.000000	0.000000	2158.87	66.01
2	FID	ACIS-S-5	7.23	5169	0.046	0.019	0.013	0.021	0.000000	0.000000	-1806.87	59.88
3	GUIDE	817772384	7.70	10336	-0.067	0.052	0.080	0.152	263.349126	-17.303212	1158.04	1596.17
4	GUIDE	817767864	9.41	10332	0.169	-0.023	0.088	0.140	262.973127	-17.324232	1357.57	317.18
5	GUIDE	817766376	9.11	10331	0.047	-0.083	0.078	0.128	262.480803	-17.079573	646.97	-1454.32
6	GUIDE	817255128	9.23	10336	-0.162	-0.162	0.105	0.167	262.326809	-16.590807	-1051.27	-2157.96
7	GUIDE	817772808	10.02	10330	0.015	0.189	0.209	0.409	263.524030	-17.138376	510.45	2138.85

2.4 Star Slots

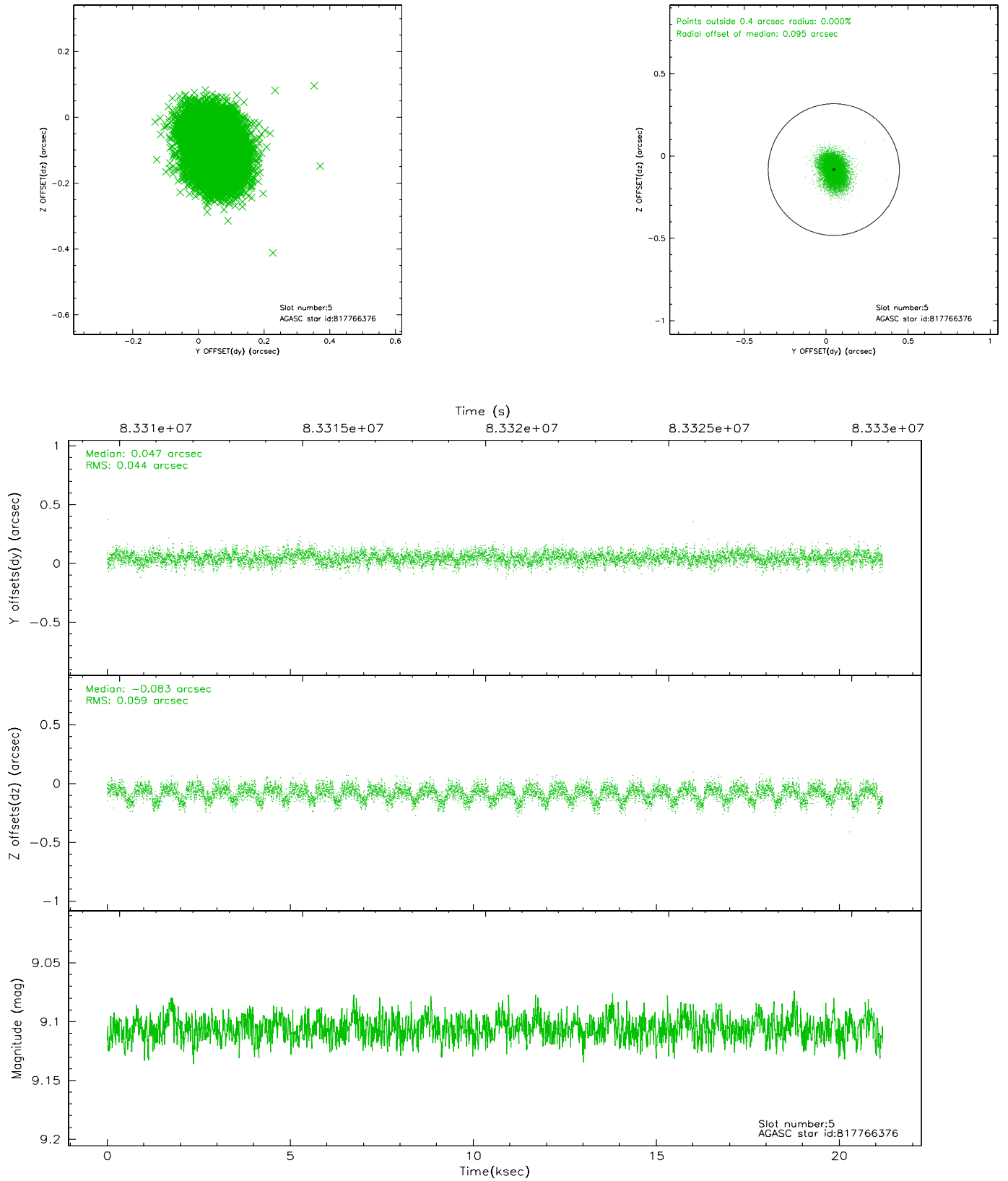
2.4.1 Slot 3



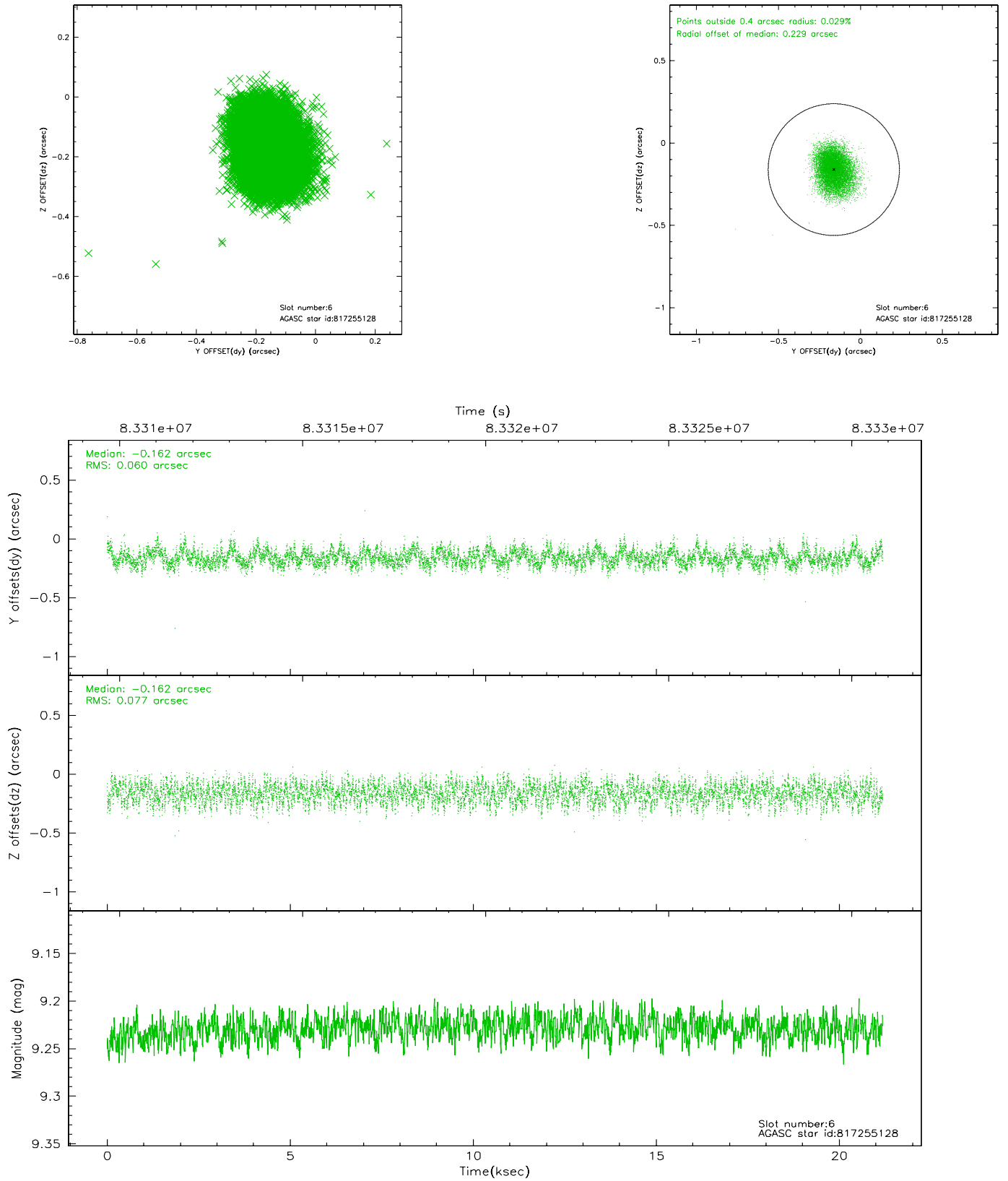
2.4.2 Slot 4



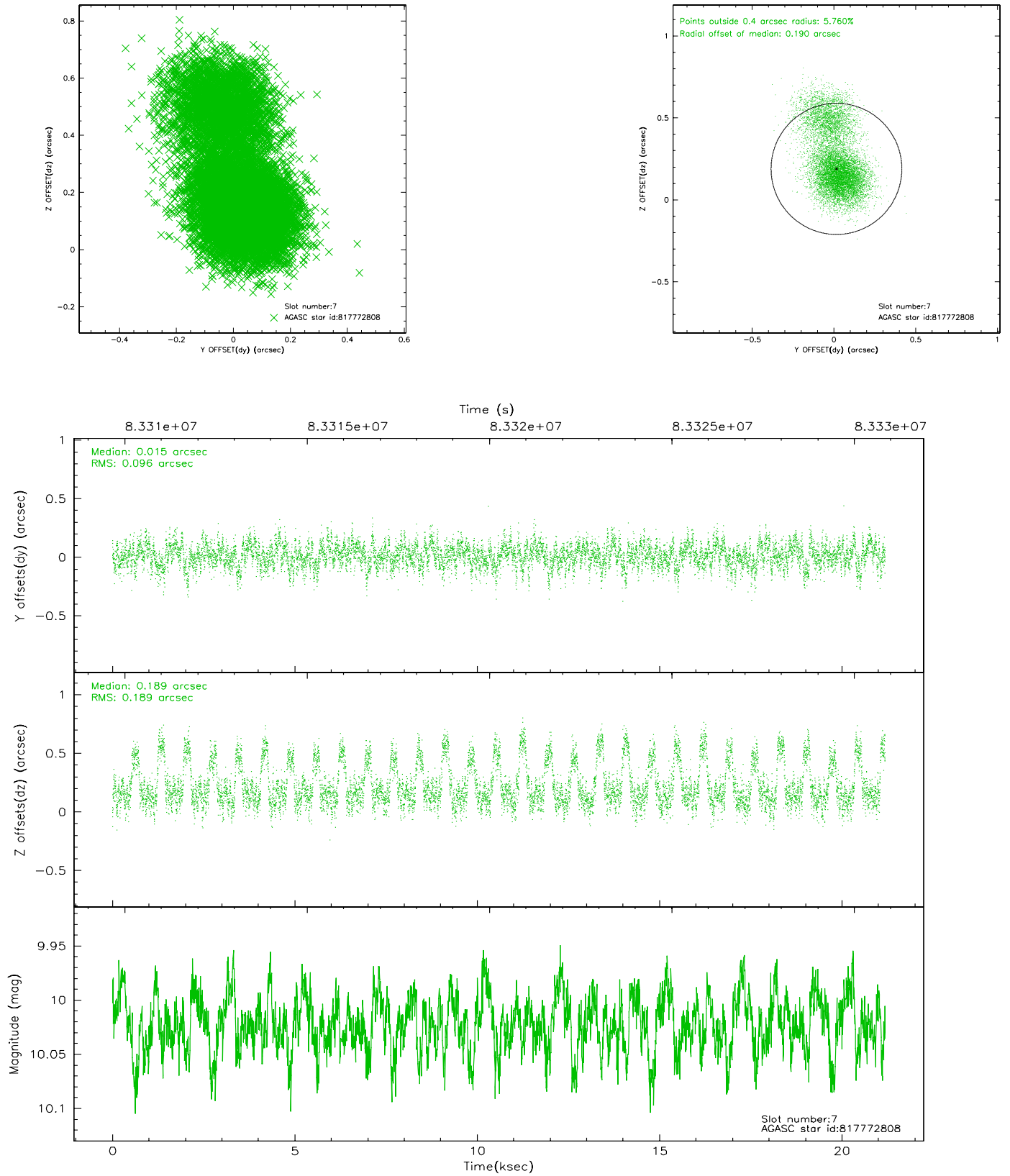
2.4.3 Slot 5



2.4.4 Slot 6

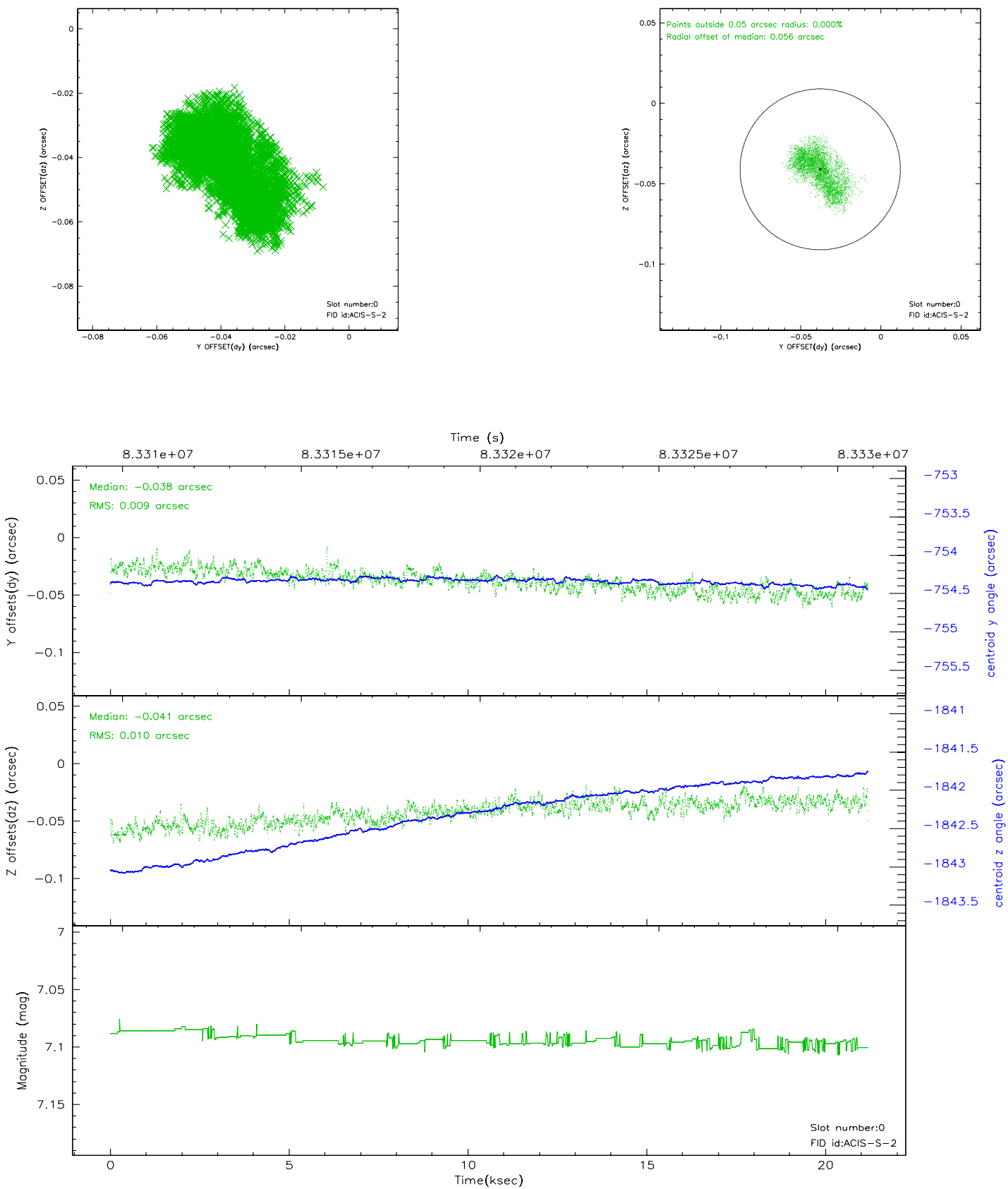


2.4.5 Slot 7

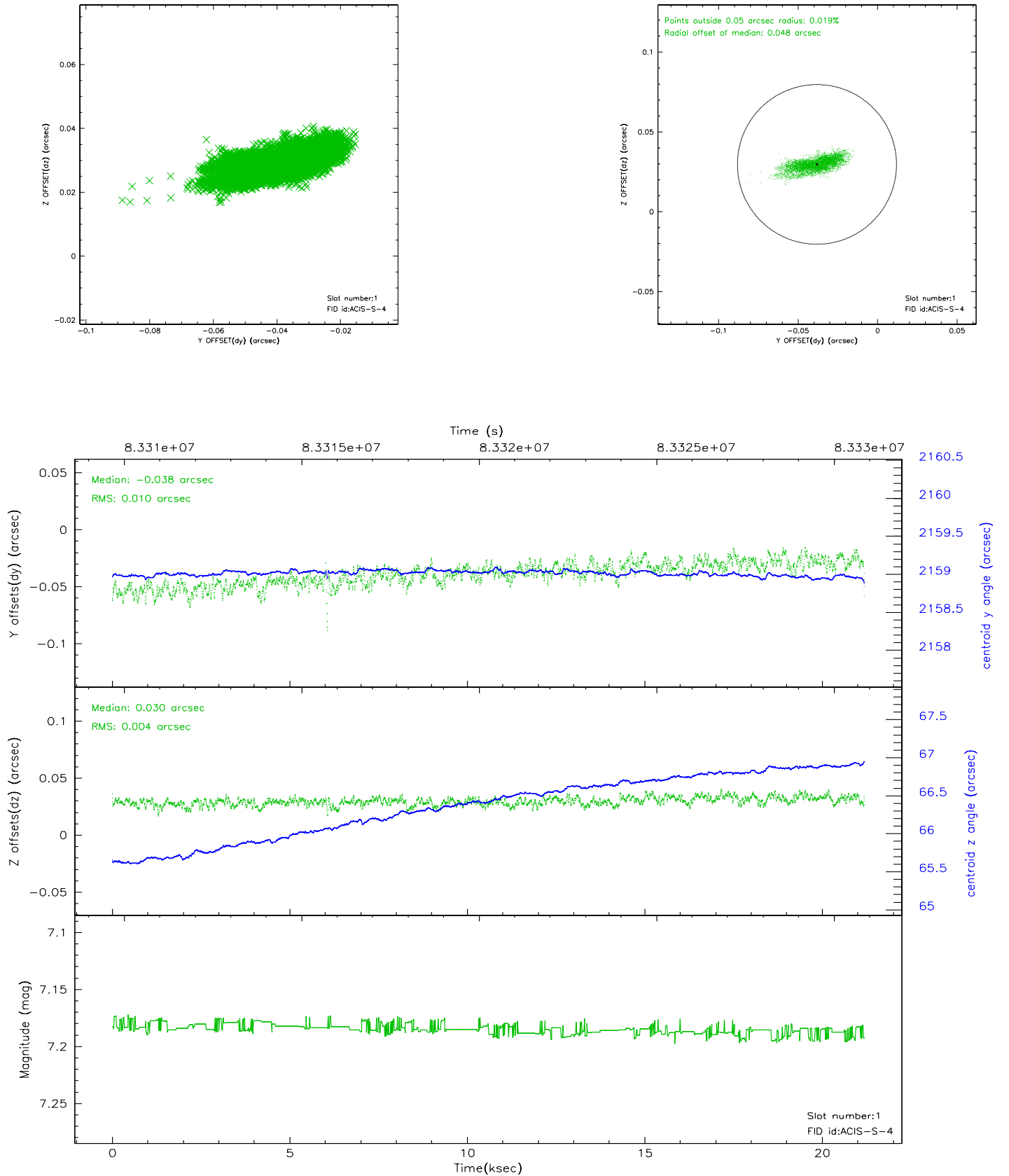


2.5 FID Slots

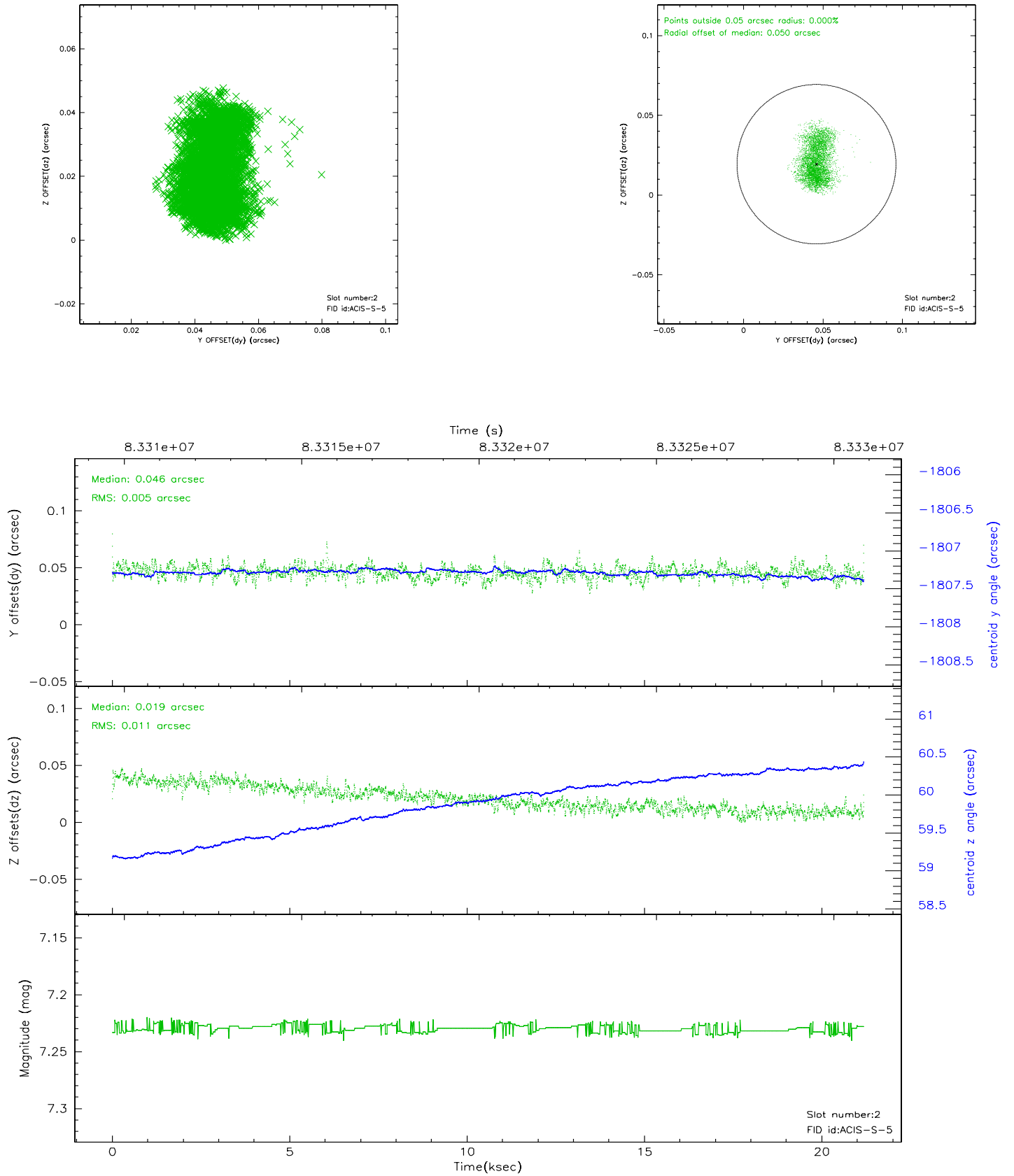
2.5.1 Slot 0



2.5.2 Slot 1

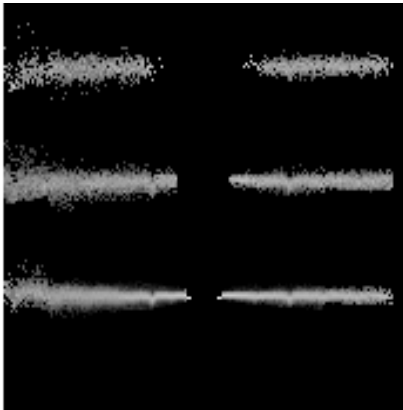


2.5.3 Slot 2

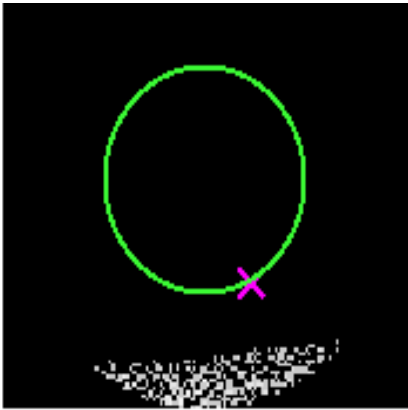


3 Gratings

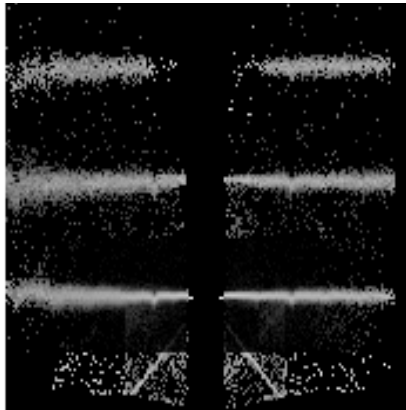
3.1 HEG Arm



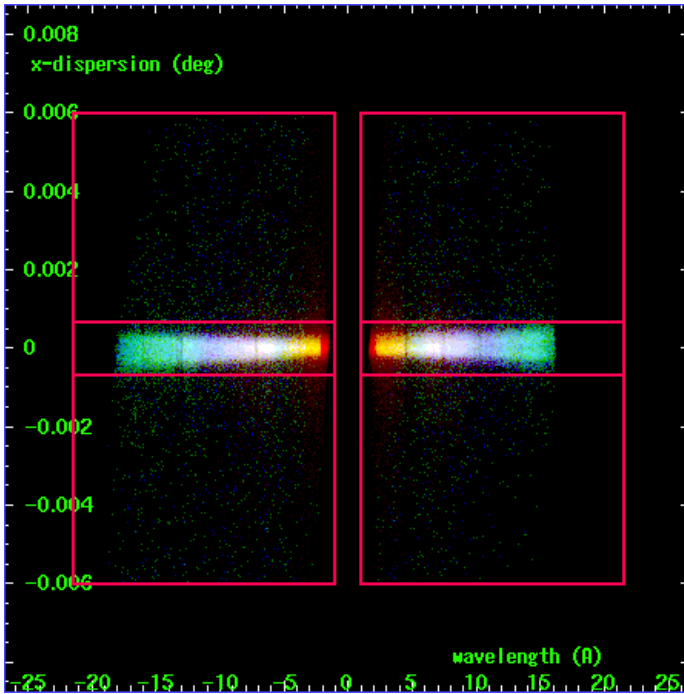
HEG Order Sort 123



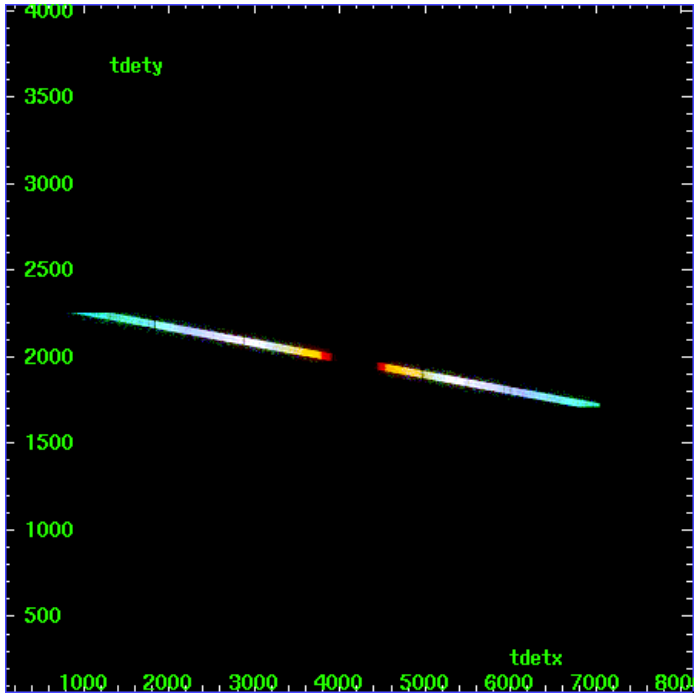
HEG Zero Order



HEG Order Sort ALL

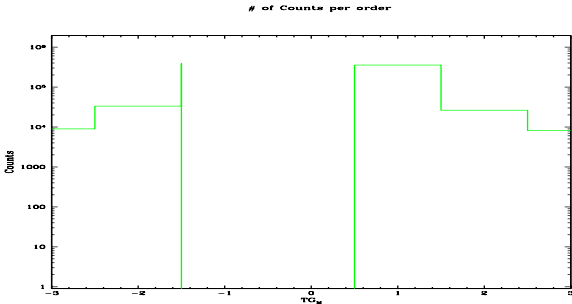


Spot Image HEG

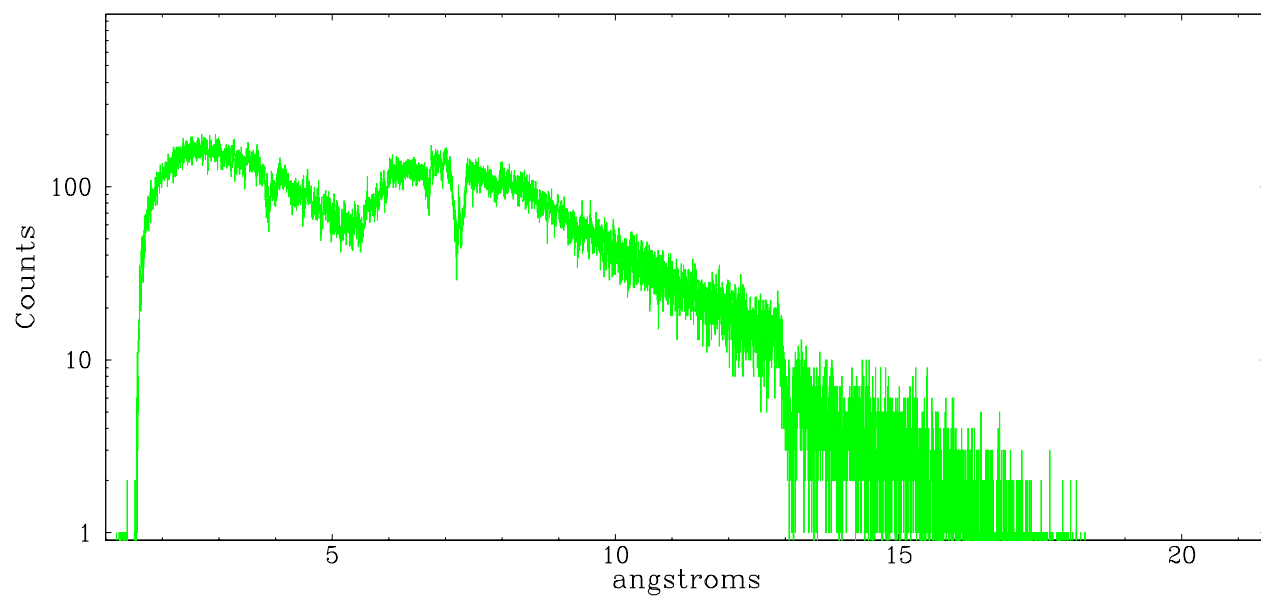


Full Detector HEG

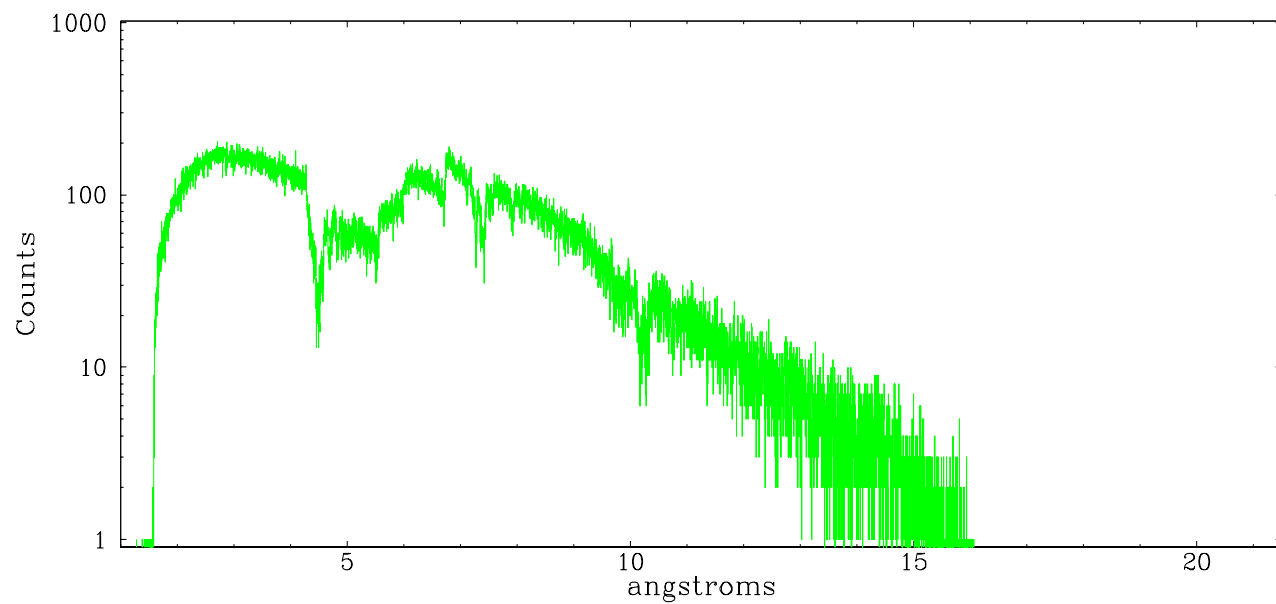
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	8976	33230	387172	0	356297	26251	8112



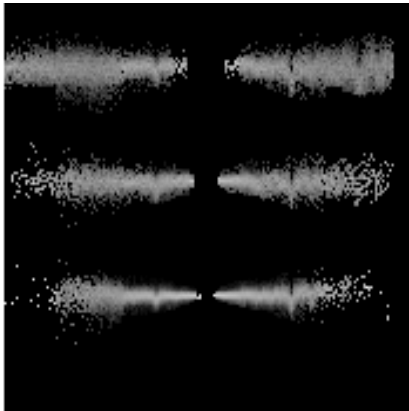
heg order -1



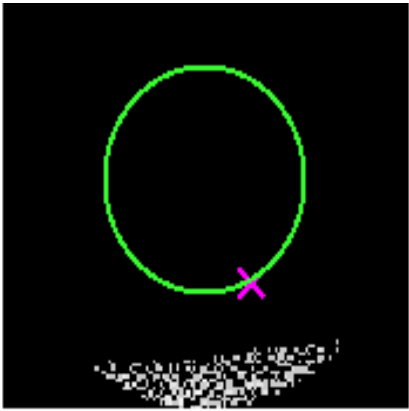
heg order +1



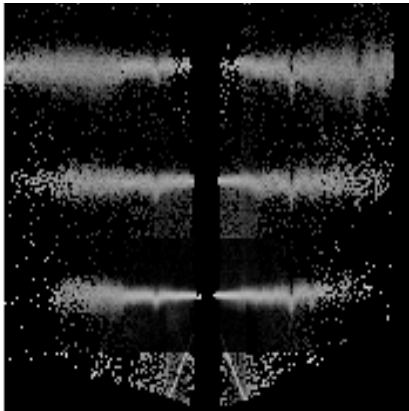
3.2 MEG Arm



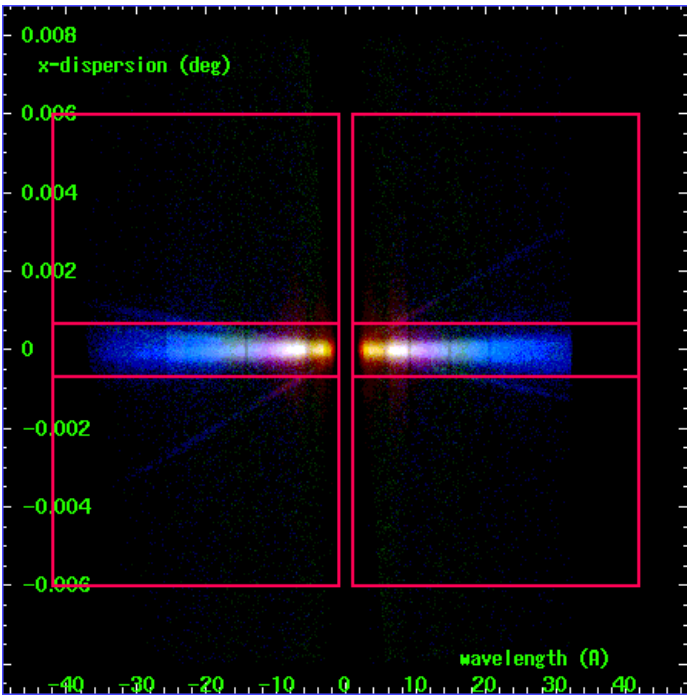
MEG Order Sort 123



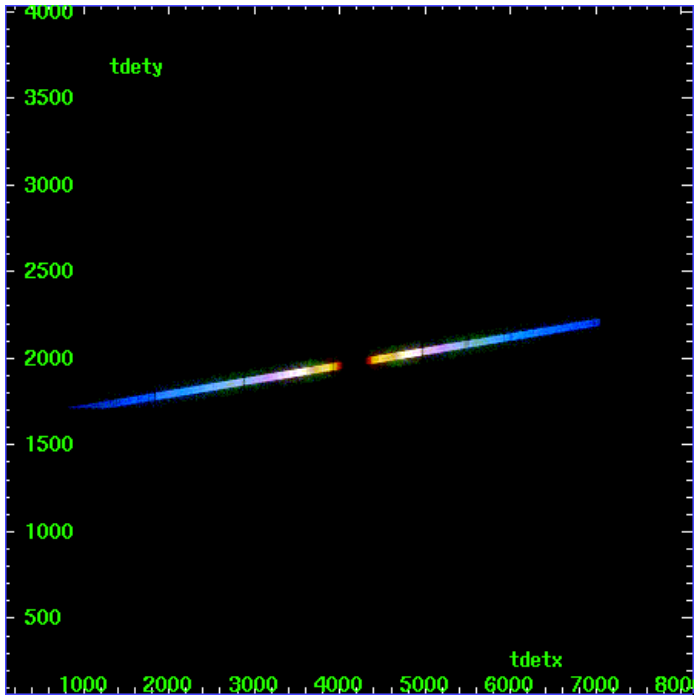
MEG Zero Order



MEG Order Sort ALL

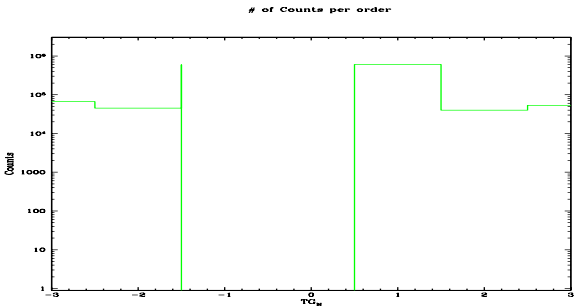


Spot Image MEG

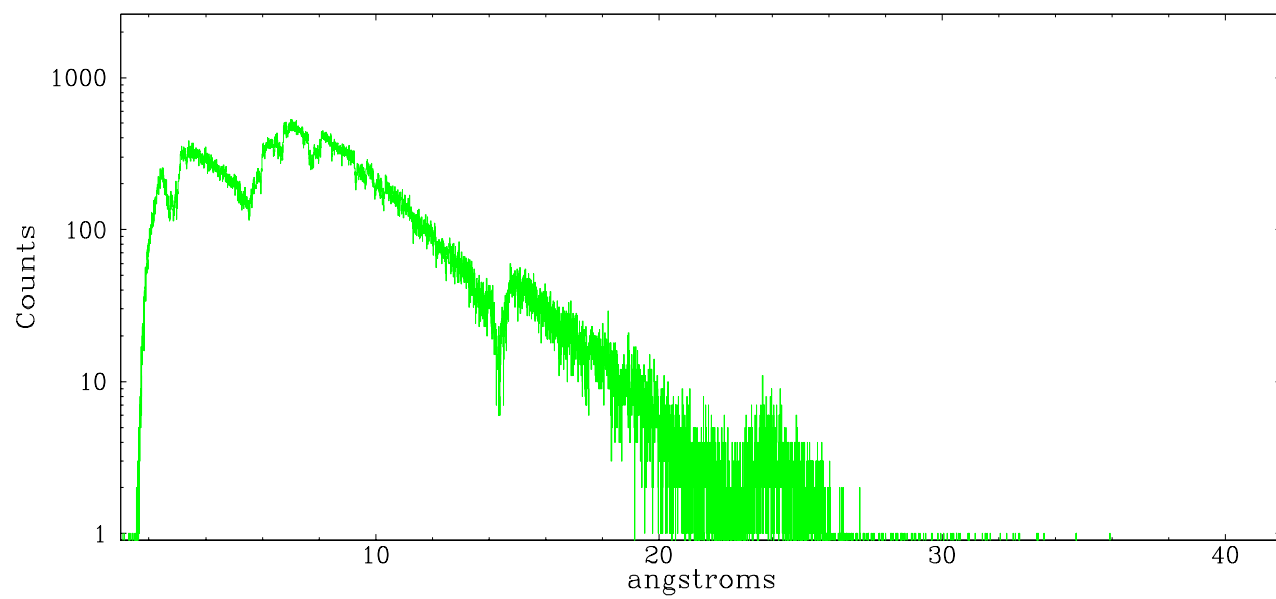


Full Detector MEG

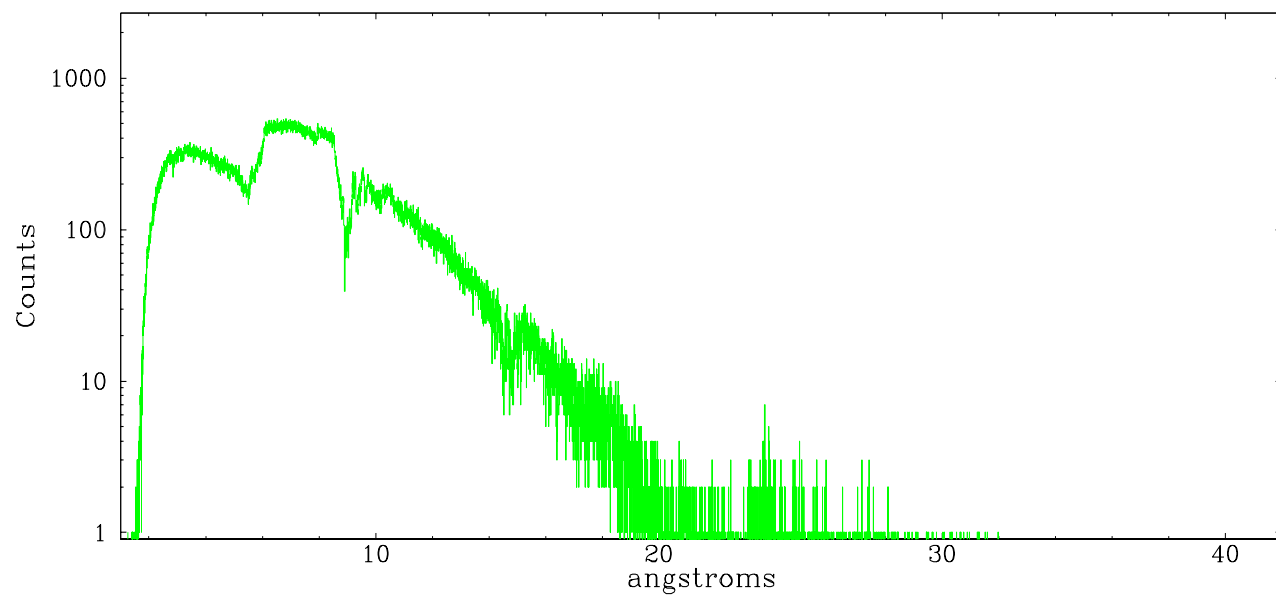
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	66410	45322	587882	0	607003	39983	53248



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.08.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	21.188

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 = 4082.12, Y = 4122.38) 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.