

V&V Reference Report

L2 ASCDS Version : 7.6.7.2

Observation 4568 - L2 Version 3
Chandra X-Ray Center

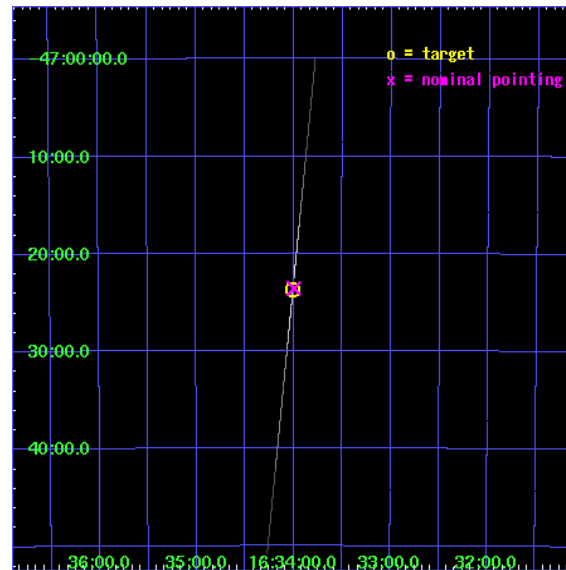
L2 Processing Date : Apr 11 2008

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1 Front

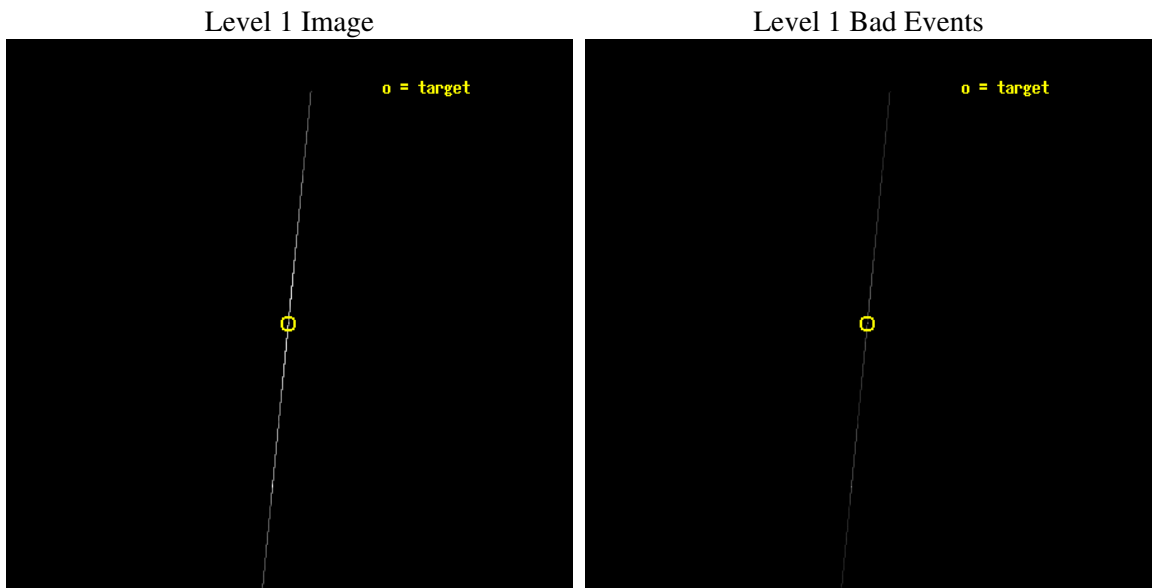
seq_num	400351
obs_id	4568
title	Resolving Relativistic Effects and the Accretion Flow Geometry of a Black Hole in Outburst
observer	Dr Jon Miller
object	4U 1630-472
ra_targ	248.501667
dec_targ	-47.394167
ra_nom	248.49900501418
dec_nom	-47.392846065007
roll_nom	275.61201509292
revision	3
ontime	50181.75
livetime	49985.727539062
ontime4	50181.75
ontime5	50181.75
ontime6	50181.75
ontime7	50181.75
ontime8	50181.75
ontime9	50181.75
l2events	3877162



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	2
ascdsver	7.6.11.6
caldsver	3.4.4
date	2008-04-11T20:47:51
revision	3

sched_exp_time	50000.000000
ontime	50181.75
ontime4	50181.75
ontime5	50181.75
ontime6	50181.75
ontime7	50181.75
ontime8	50181.75
ontime9	50181.75
l1events	4417794

2.1.3 Events

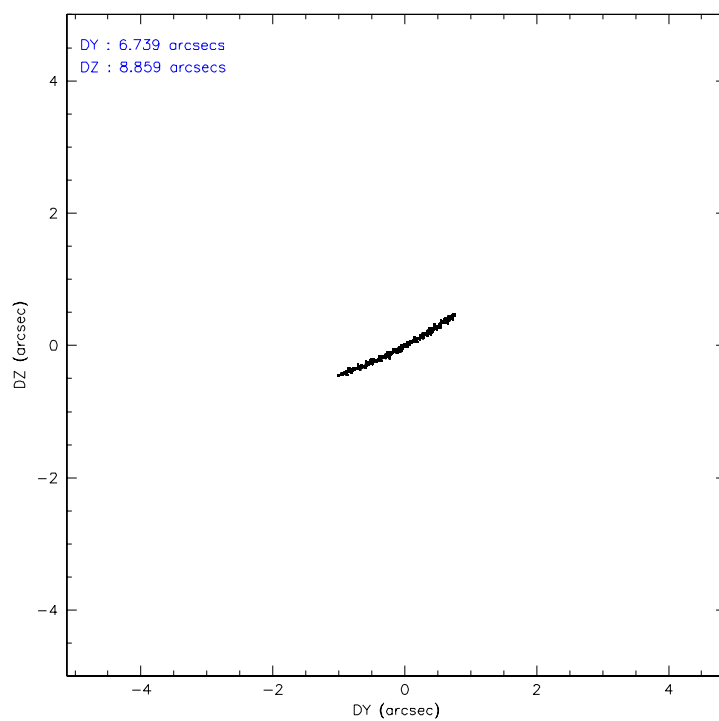
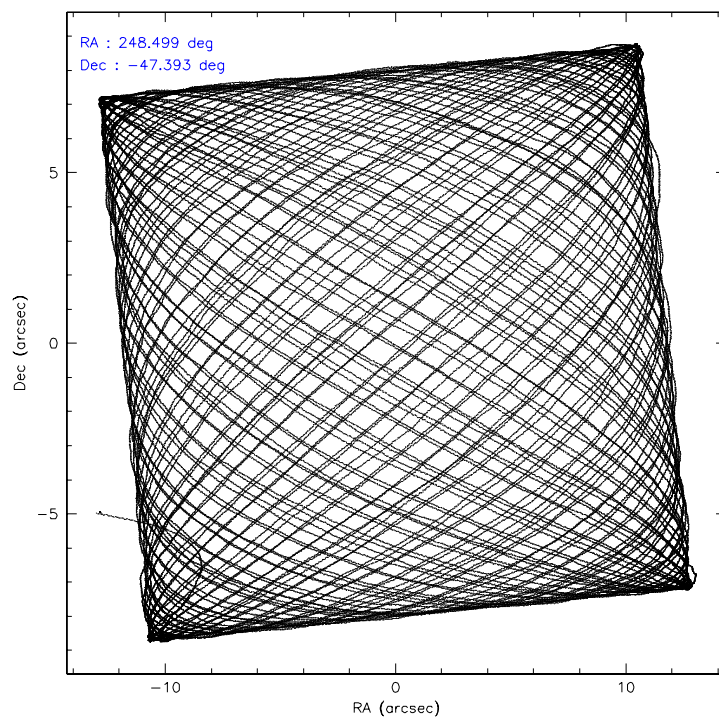
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	91719	454330	1334398	2115852	321940	99555
rejected events	14163	37203	27759	65329	26827	17990
rejected %	15%	8%	2%	3%	8%	18%

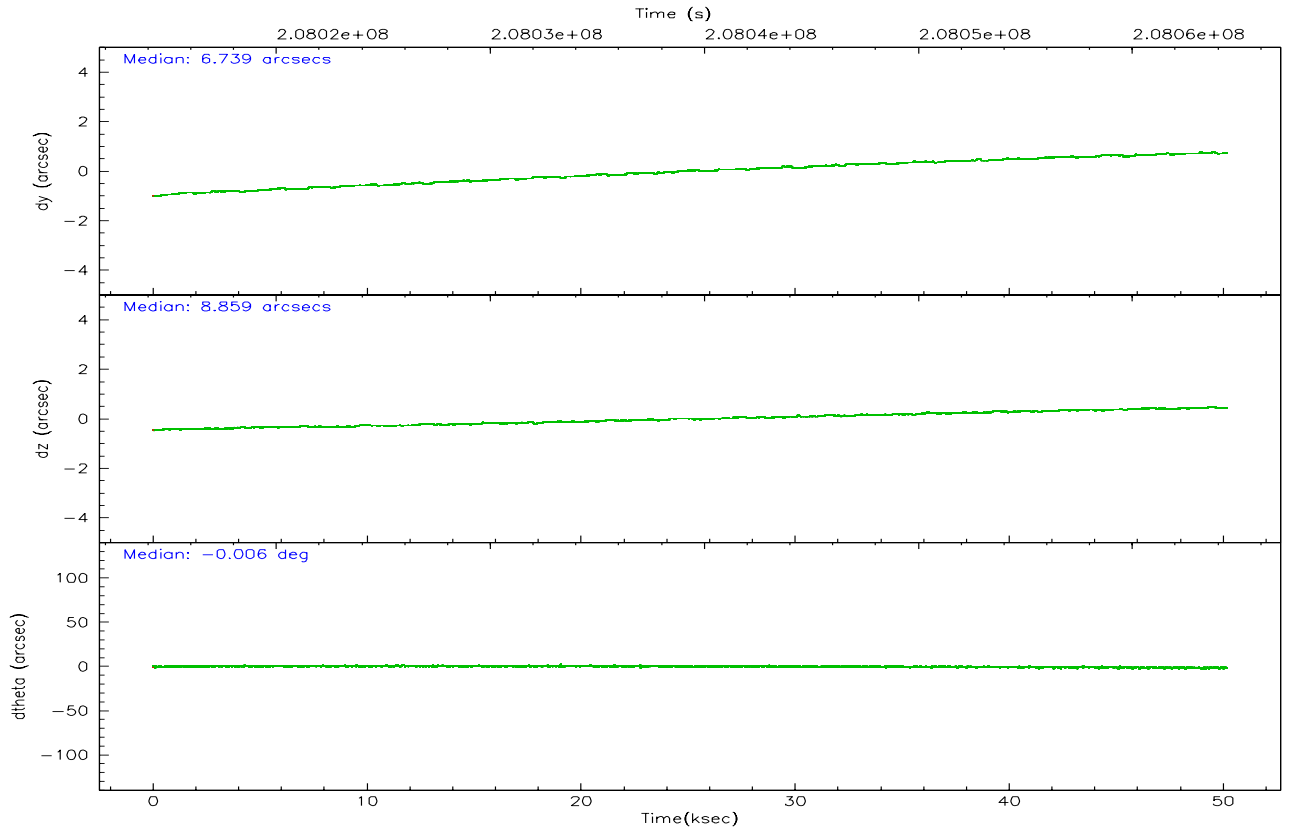
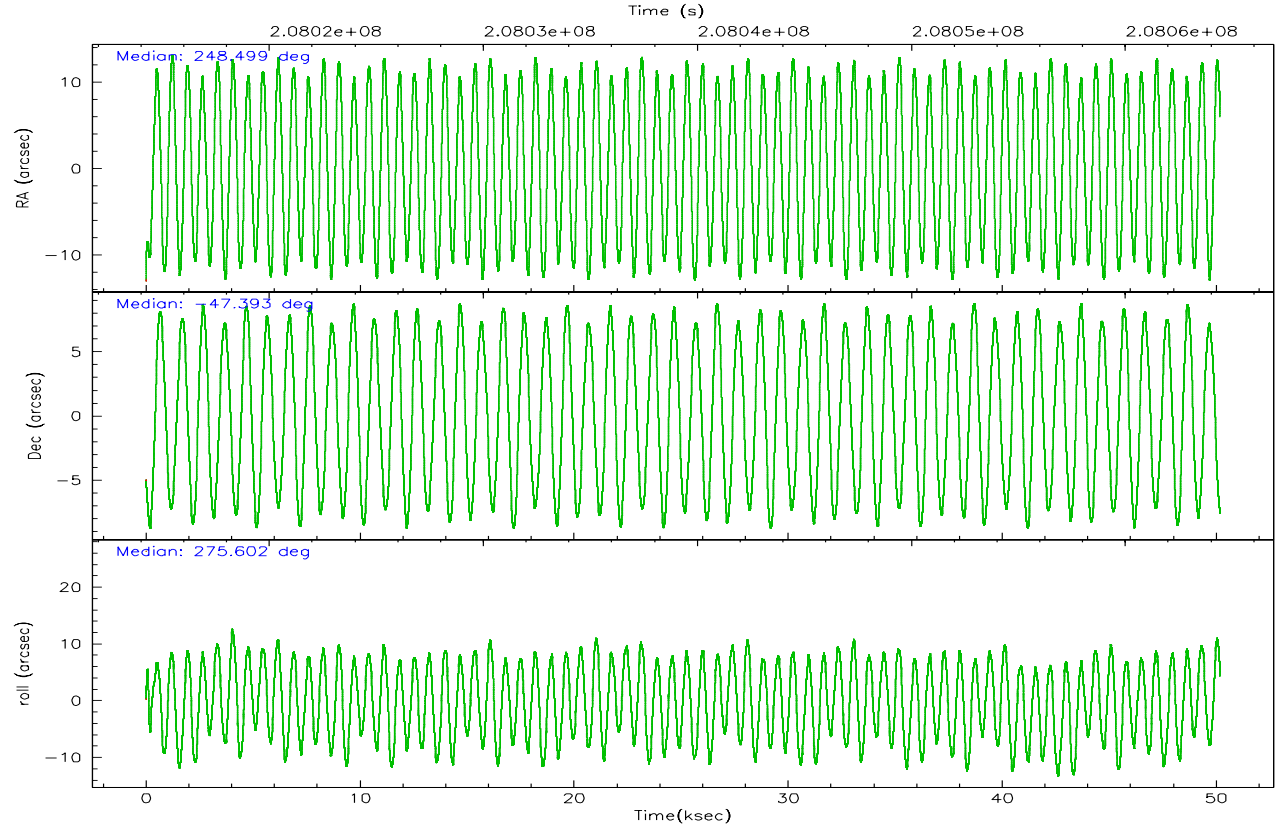
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	7165	105341	219622	286384	100036	9022
	7%	23%	16%	13%	31%	9%
grade 1 events	221	398	1017	2355	736	256
	0%	0%	0%	0%	0%	0%
grade 2 events	39999	128026	872657	596463	115528	40943
	43%	28%	65%	28%	35%	41%
grade 3 events	7758	7475	21981	167915	18657	7284
	8%	1%	1%	7%	5%	7%
grade 4 events	8329	7125	21528	167989	18378	8031
	9%	1%	1%	7%	5%	8%
grade 5 events	12434	28731	22345	51142	20296	15075
	13%	6%	1%	2%	6%	15%
grade 6 events	15813	177234	175248	843604	48309	18944
	17%	39%	13%	39%	15%	19%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

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	CC33_GRADED	CC33_GRADED	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	NONE	NONE
Pointing RA	248.475153	248.4990050141834	Alternating exposures requested	N	N
Pointing Dec	-47.370943	-47.39284606500707	Primary exposure time	0.000000	0
Pointing Roll	275.437835	275.61201509292			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-182.632523	-182.6398635053184			
SIM translation stage offset (mm)	-7.5	-7.49265907768941			
Observation start time	208014426.184000	208013137.43404			
Observation start date	2004-08-04T13:46:02	2004-08-04T13:25:37			
Observation end time	208064426.184000	208066012.06139			
Observation end date	2004-08-05T03:39:22	2004-08-05T04:06:52			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



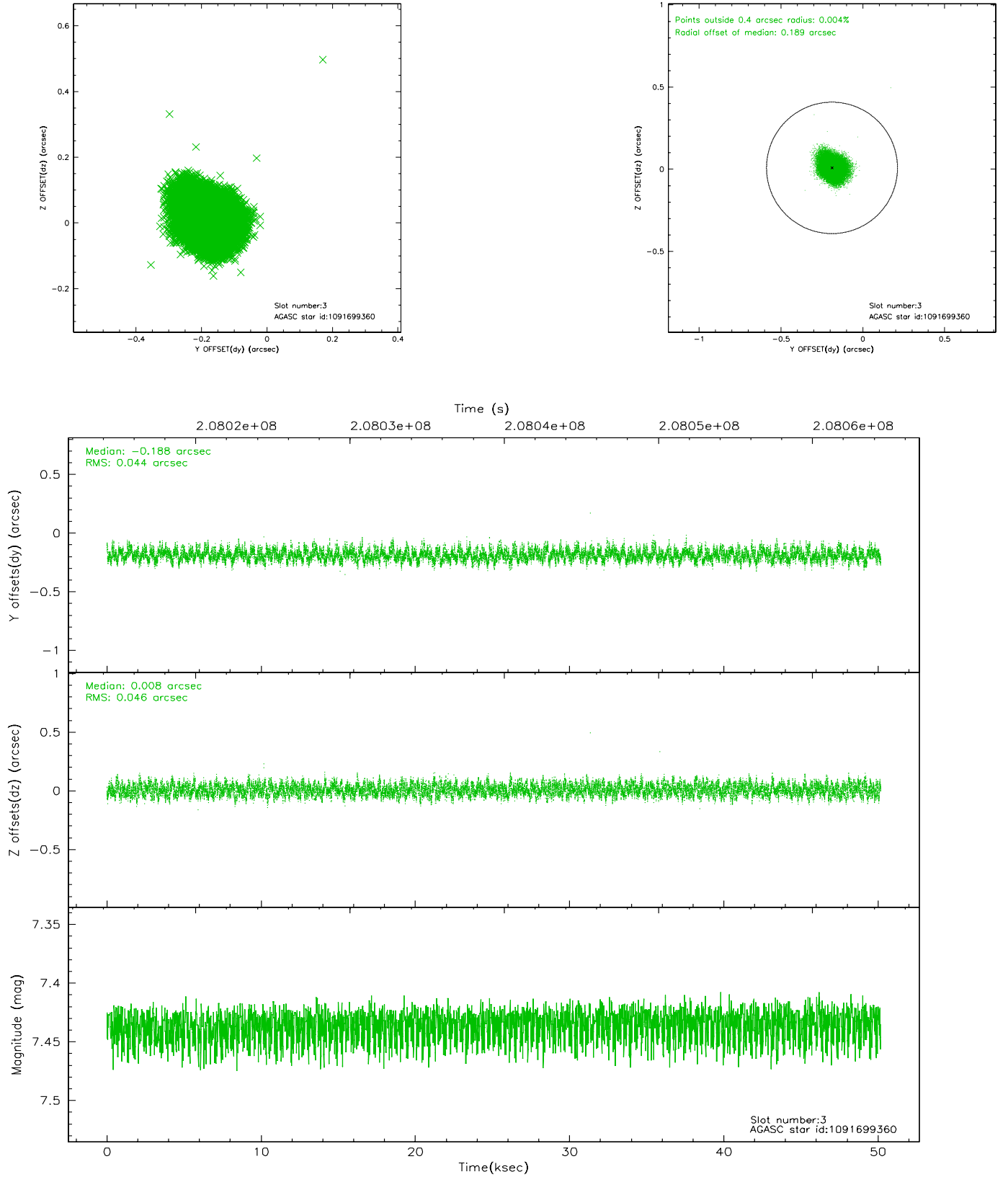


Slot Statistics

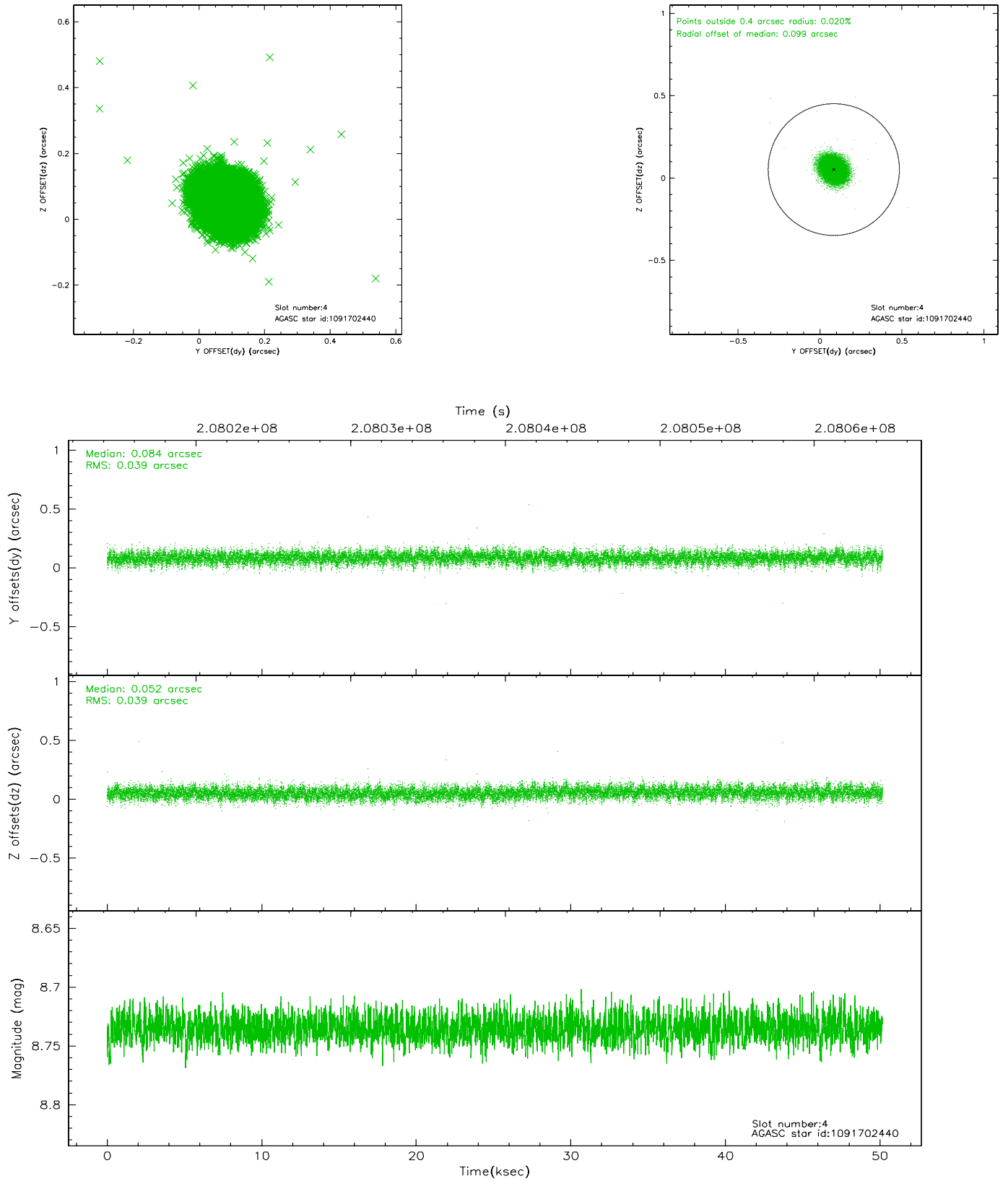
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	12241	-0.012	0.146	0.013	0.019	0.000000	0.000000	937.12	-1879.93
1	FID	ACIS-S-5	7.23	12240	-0.046	0.022	0.024	0.030	0.000000	0.000000	-1811.91	17.50
2	FID	ACIS-S-6	7.41	12240	0.034	-0.158	0.016	0.024	0.000000	0.000000	402.74	661.26
3	GUIDE	1091699360	7.44	24479	-0.188	0.008	0.068	0.106	248.660725	-47.004364	-1270.06	578.43
4	GUIDE	1091702440	8.74	24475	0.084	0.052	0.057	0.094	248.295809	-47.683380	1079.50	-539.05
5	GUIDE	1091703168	8.93	24474	-0.093	0.071	0.094	0.154	249.174634	-47.078871	-876.68	1806.01
6	GUIDE	1091709408	9.23	24446	0.057	0.071	0.098	0.158	249.304466	-47.312562	-6.74	2034.18
7	GUIDE	1091706216	9.04	24464	0.133	-0.202	0.082	0.134	248.520013	-47.617493	894.33	24.39

2.4 Star Slots

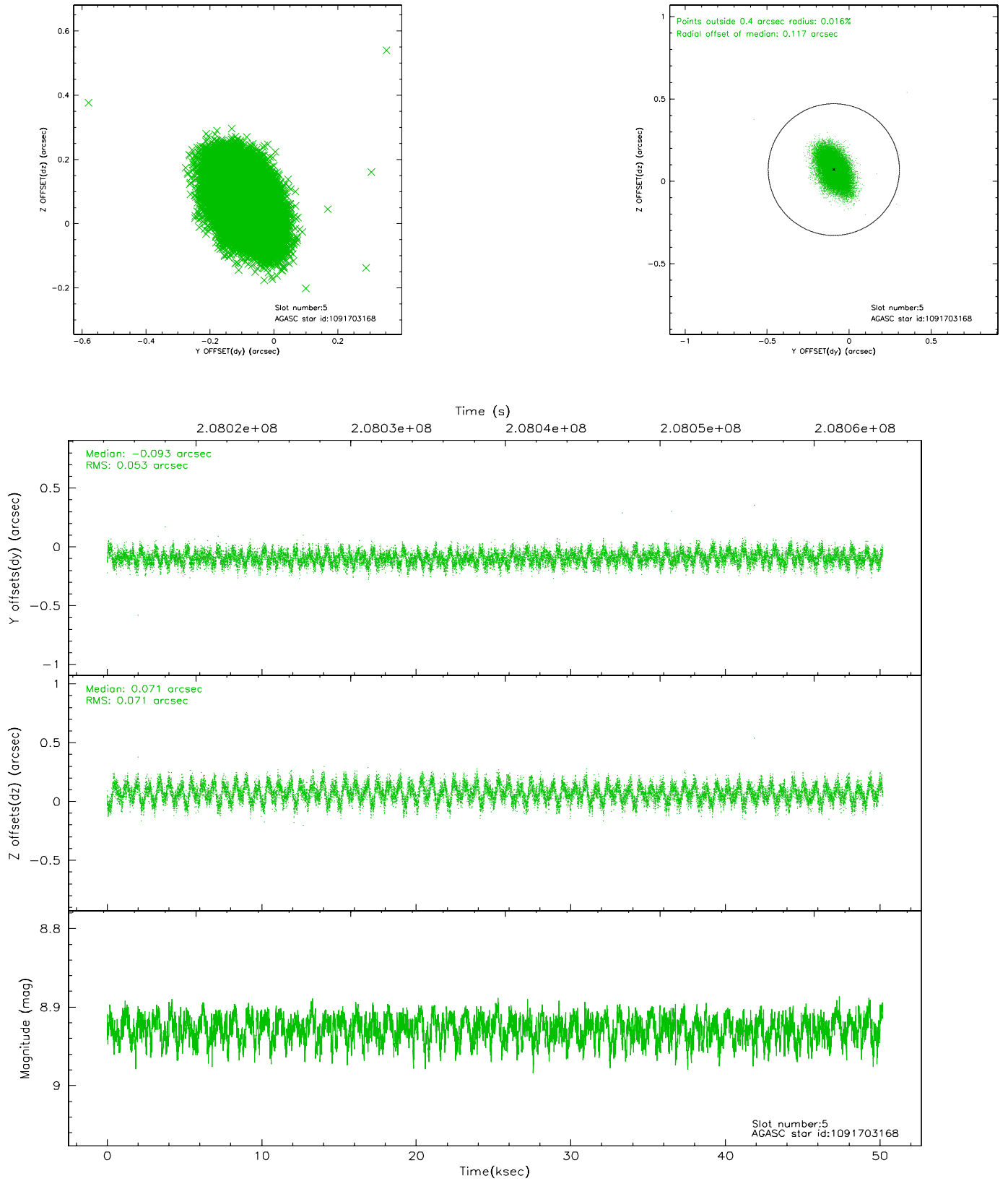
2.4.1 Slot 3



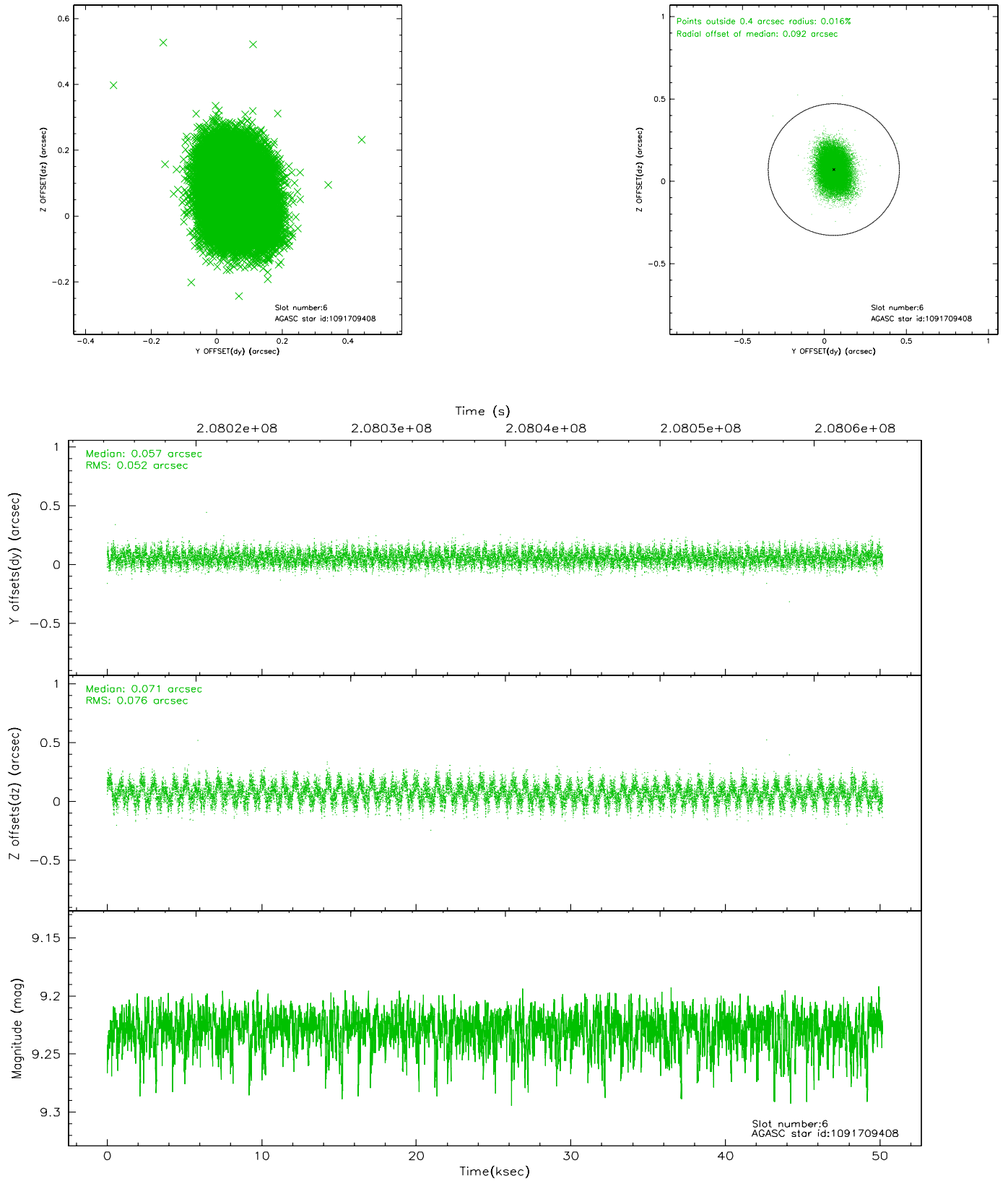
2.4.2 Slot 4



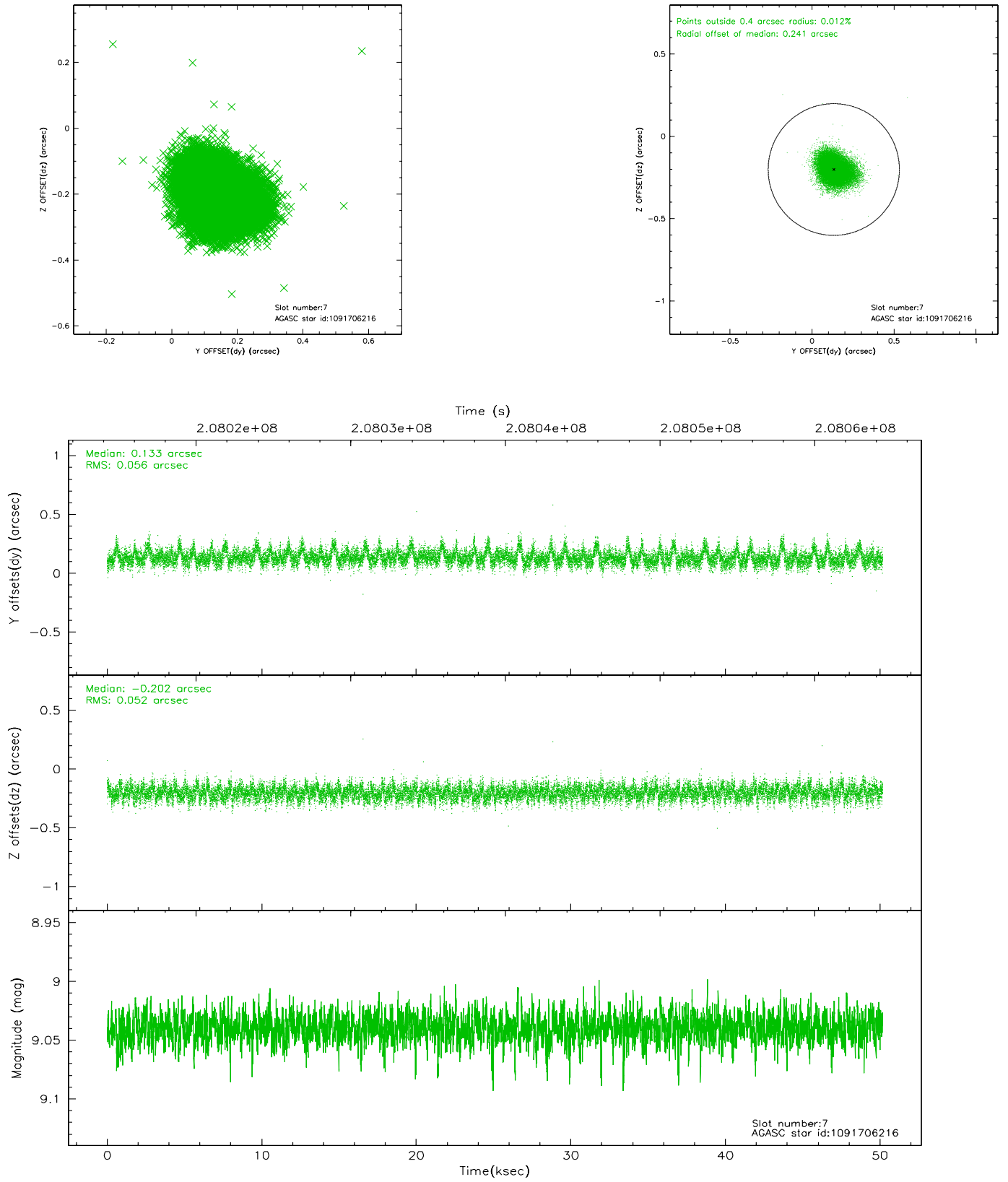
2.4.3 Slot 5



2.4.4 Slot 6

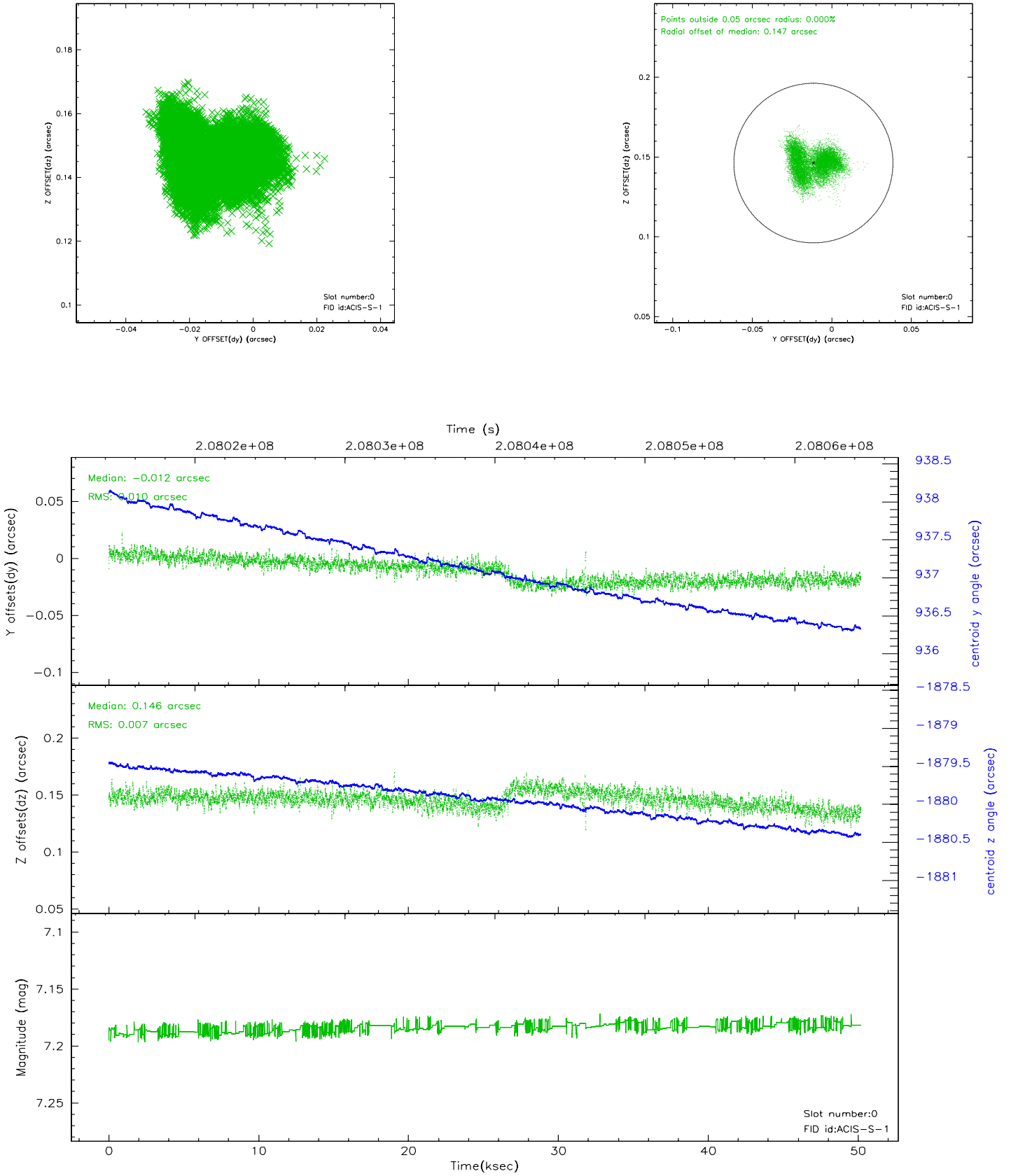


2.4.5 Slot 7

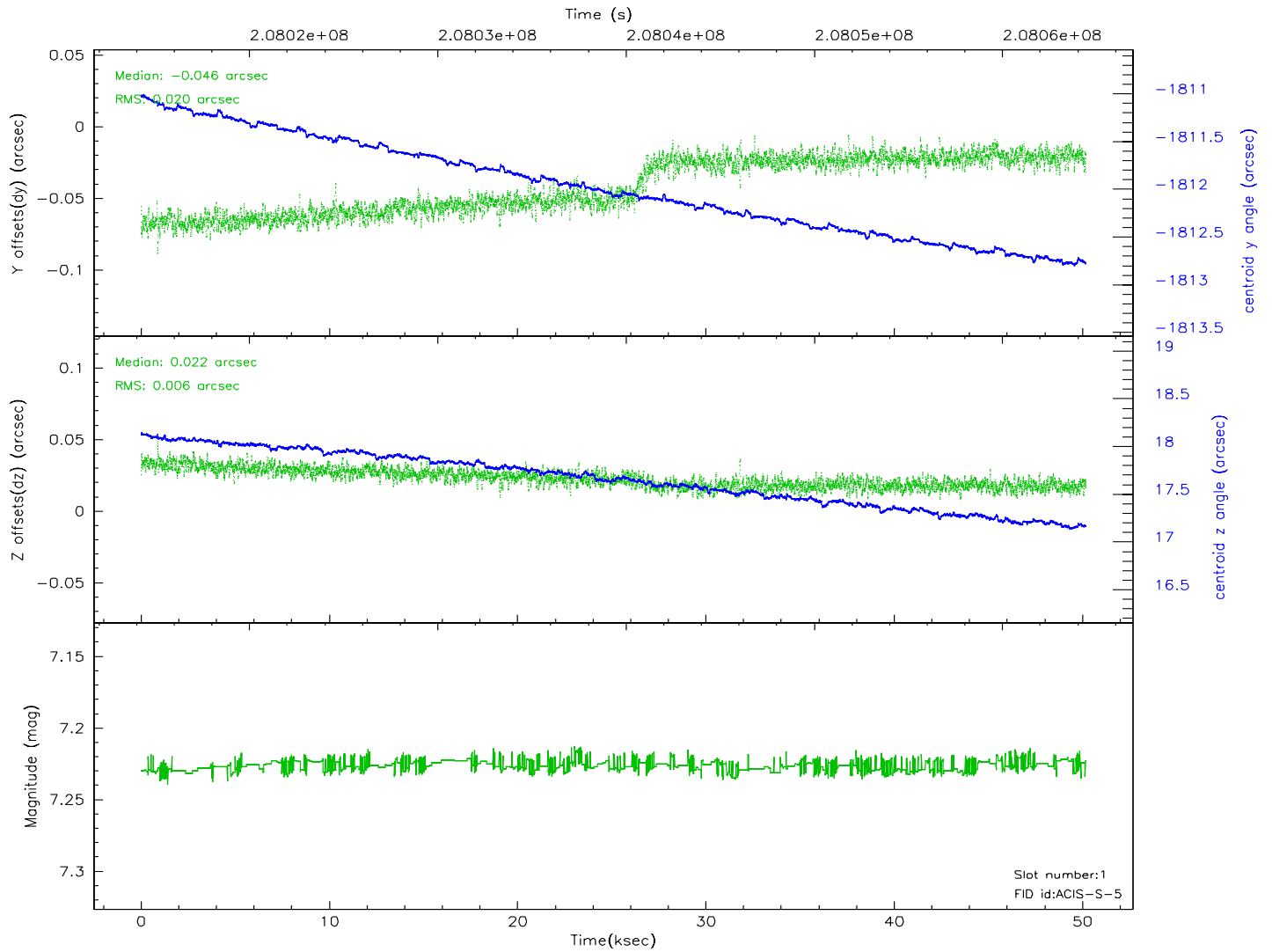
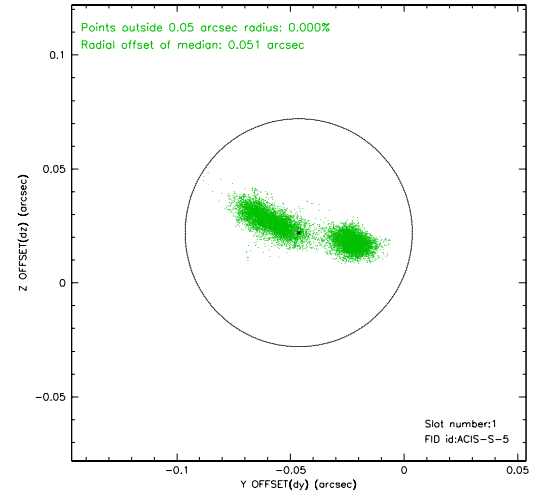
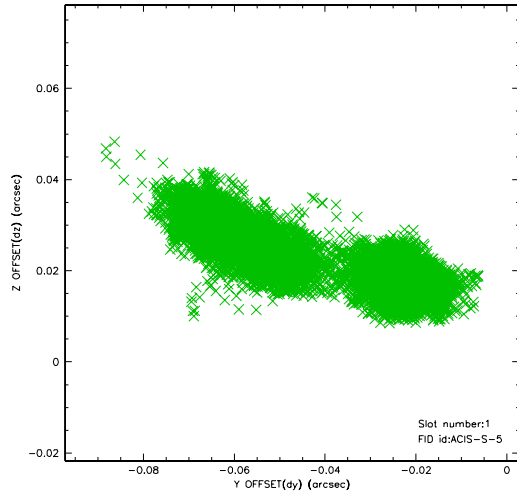


2.5 FID Slots

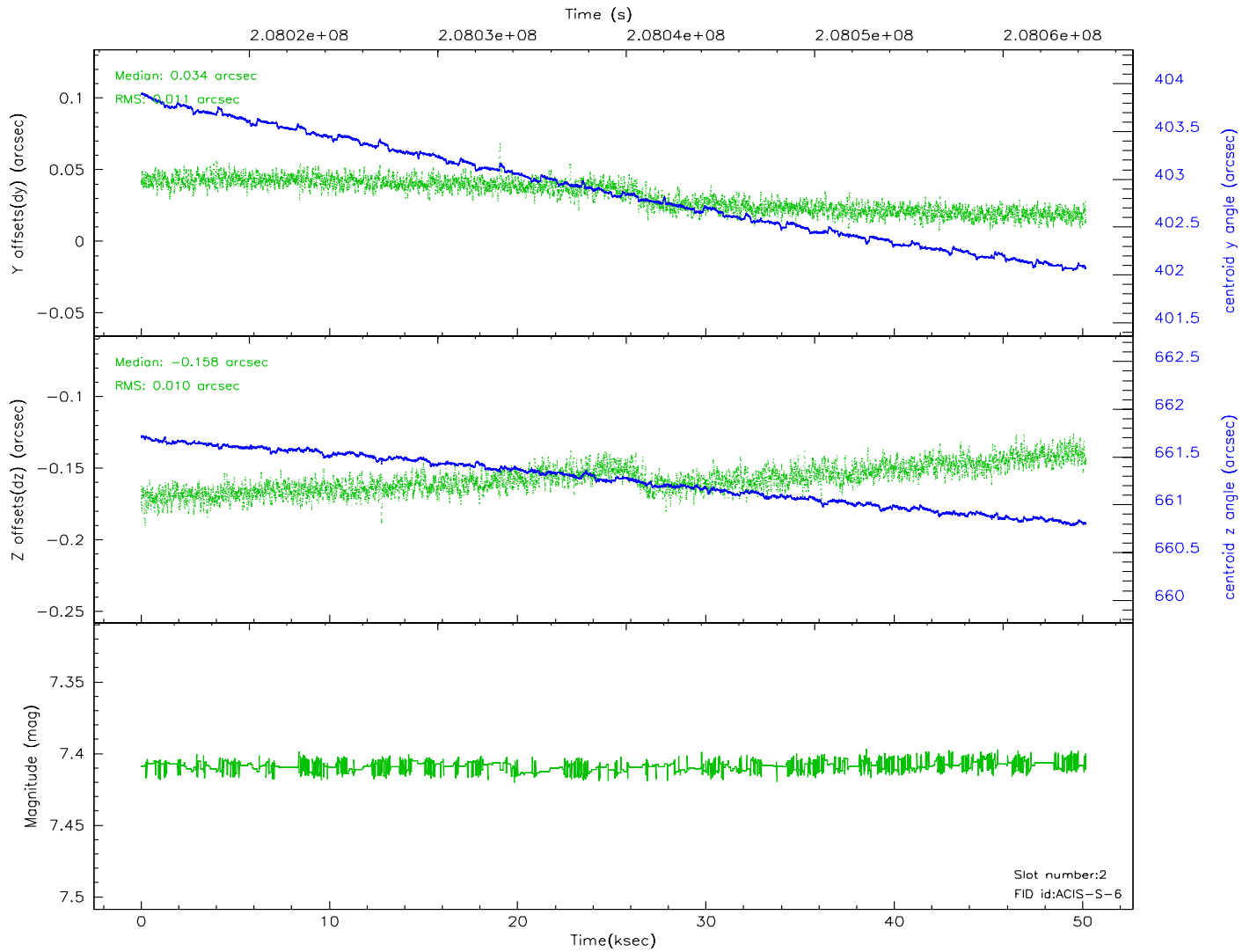
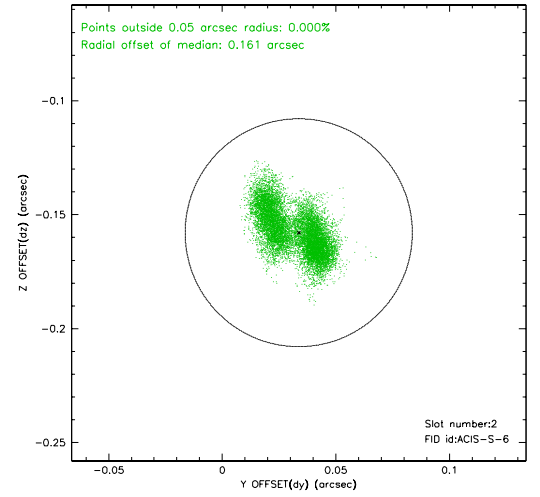
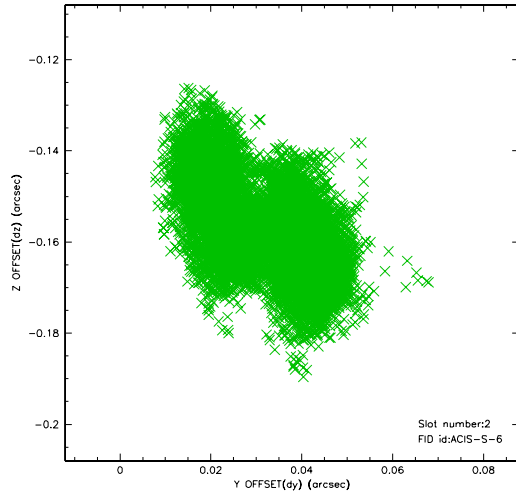
2.5.1 Slot 0



2.5.2 Slot 1

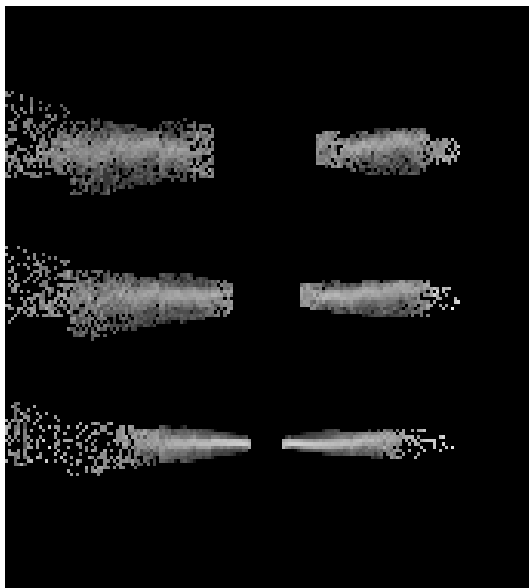


2.5.3 Slot 2

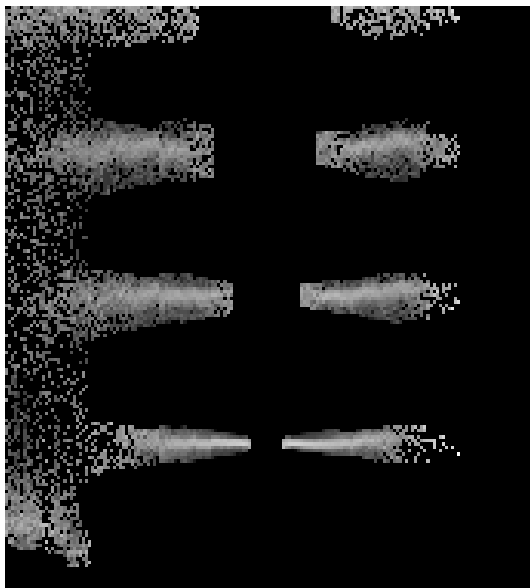


3 Gratings

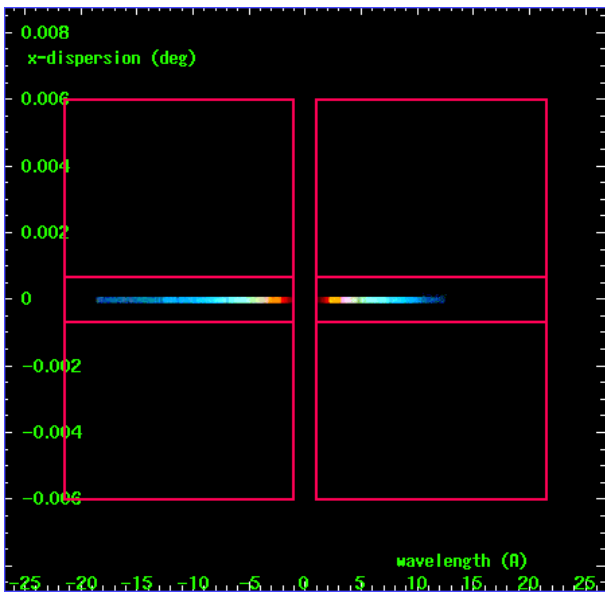
3.1 HEG Arm



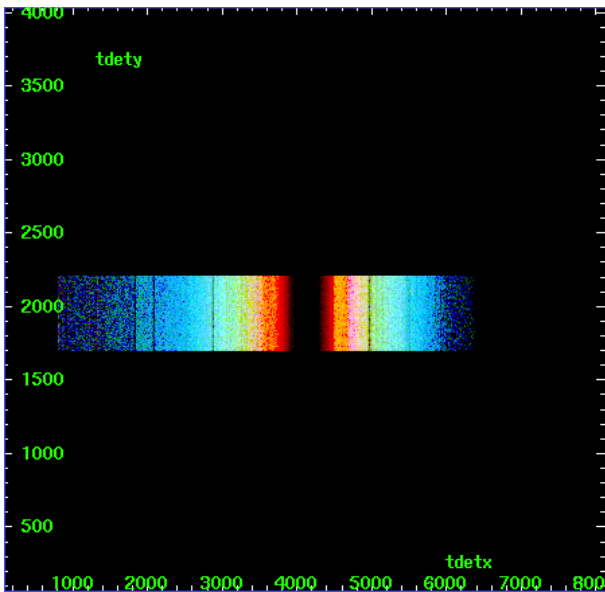
HEG Order Sort 123



HEG Order Sort ALL

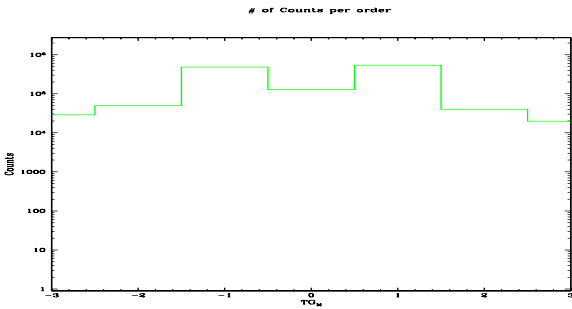


Spot Image HEG

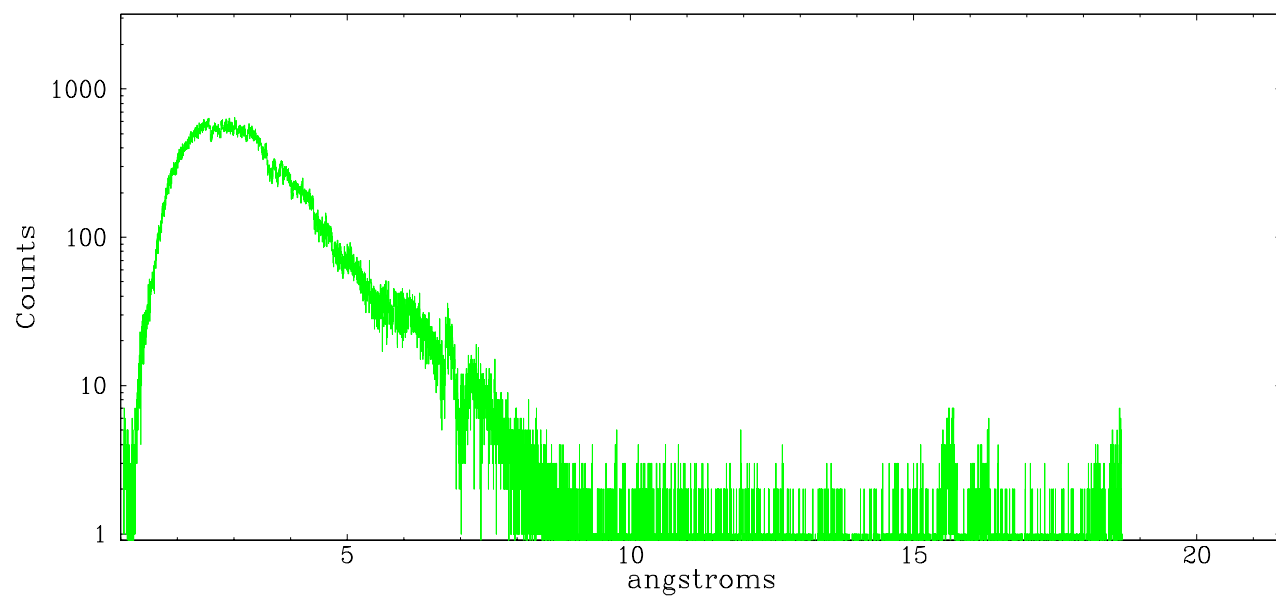


Full Detector HEG

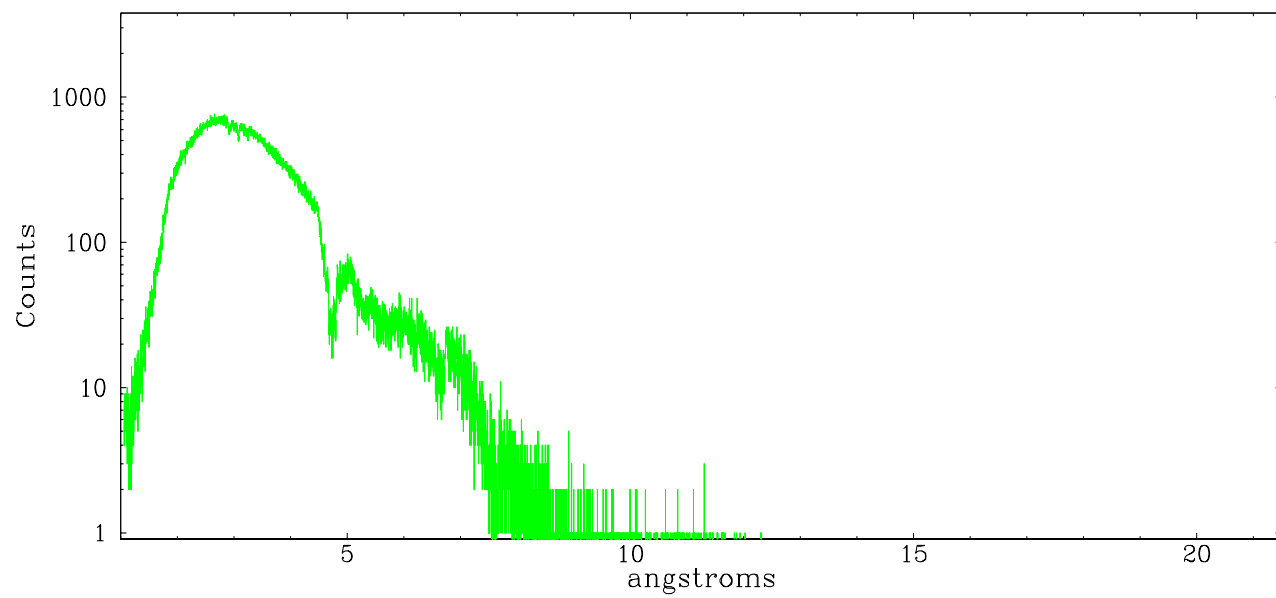
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	28860	49364	481503	128196	539891	40285	19827



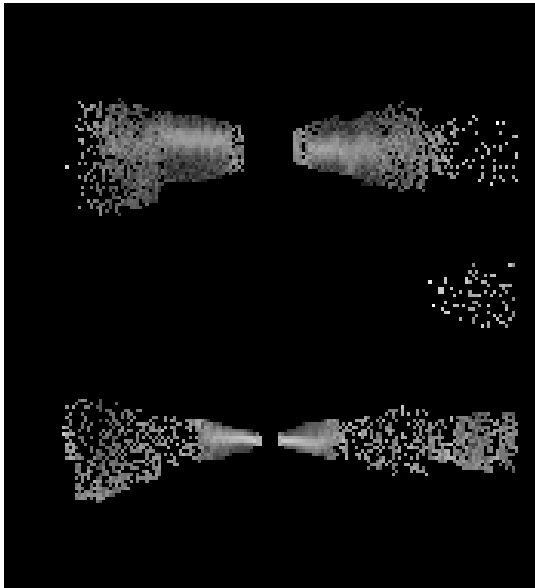
heg order -1



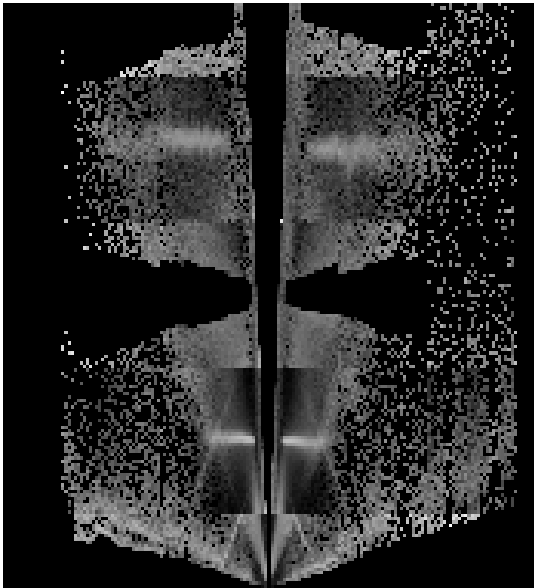
heg order +1



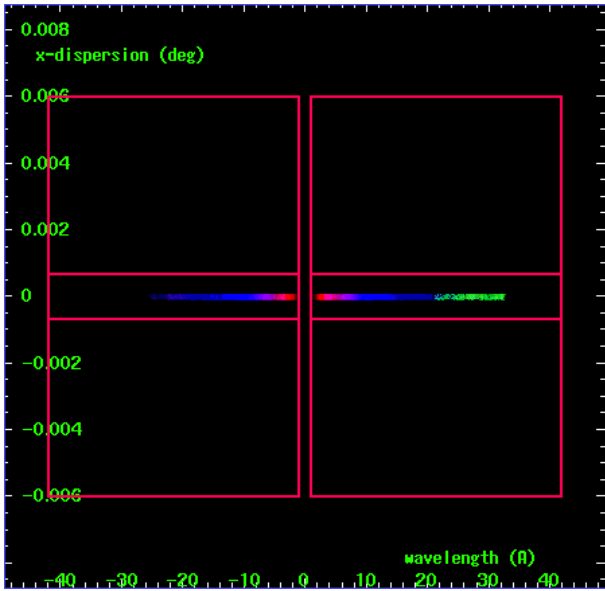
3.2 MEG Arm



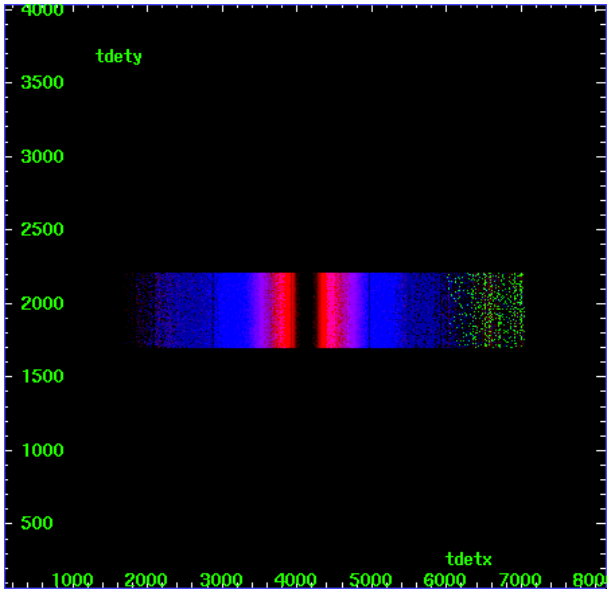
MEG Order Sort 123



MEG Order Sort ALL

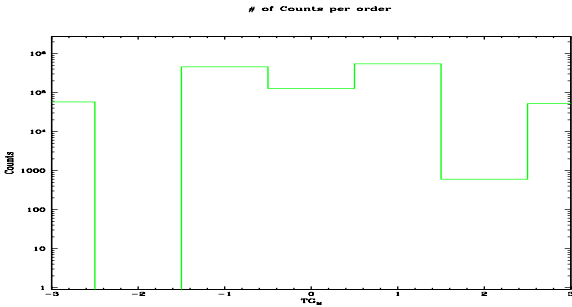


Spot Image MEG

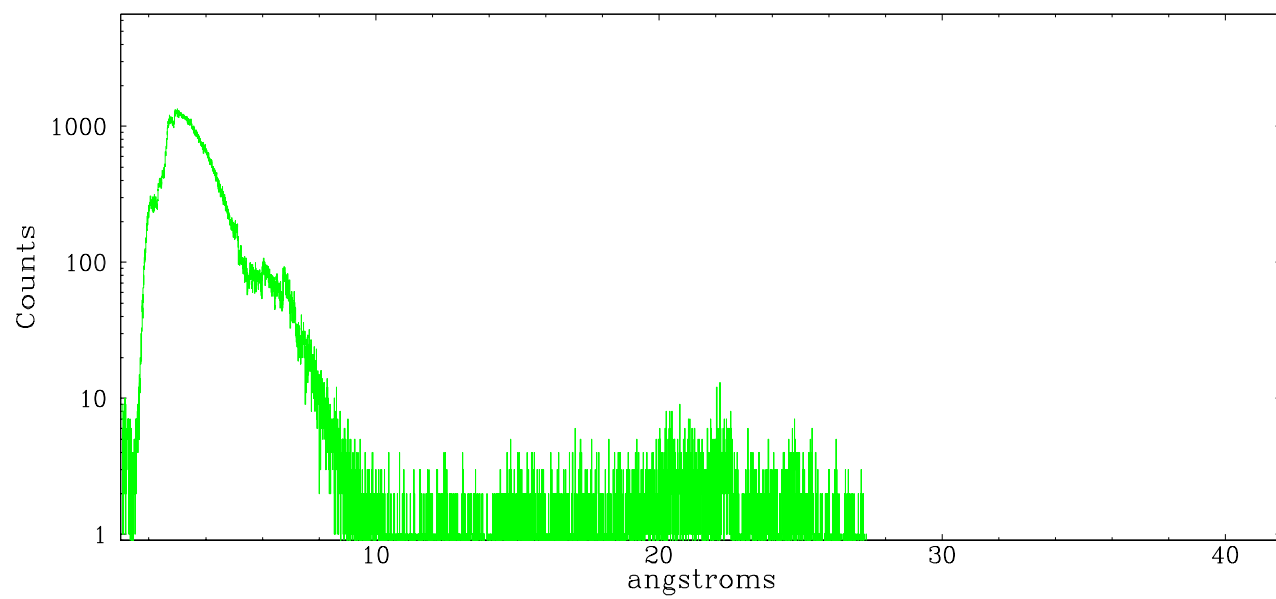


Full Detector MEG

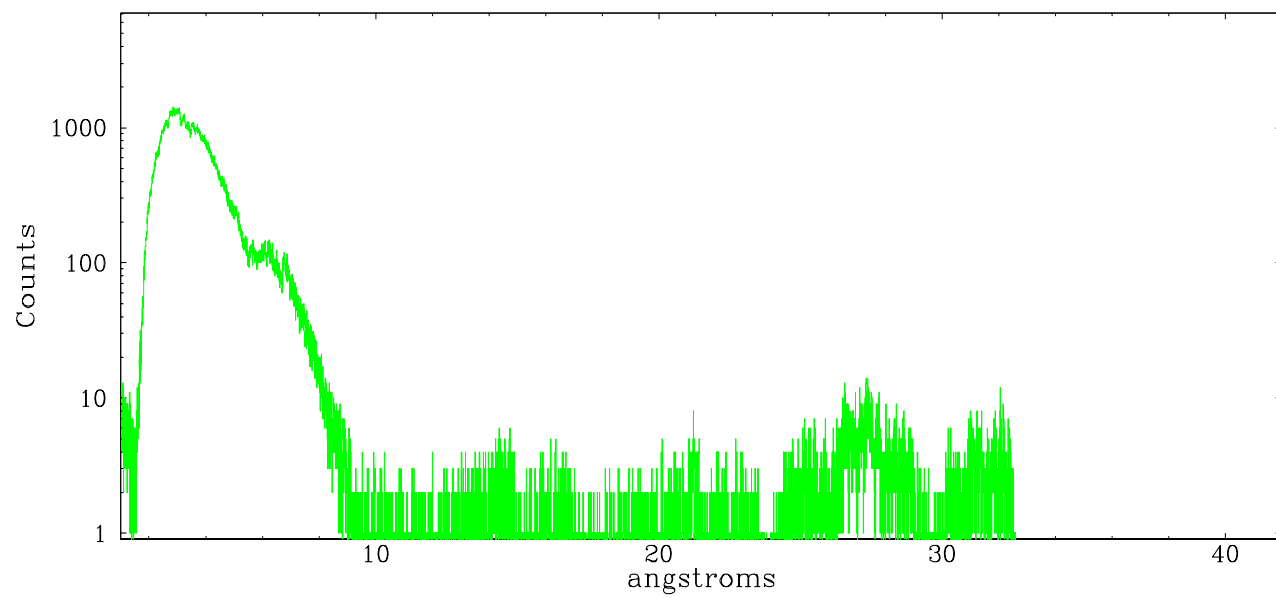
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	57626	0	456056	128196	548515	601	52476



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2008.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	50.184

A.2 Comments

Zeroth order is in a 100-column-wide count exclusion window with a sampling

rate of 1/20.=====

Gain and CTI correction are not well calibrated in CC-mode.

Default order sorting can clip some regions, particularly in high orders. User-specified custom processing parameters may be required in `tg_resolve_events` (`osipfile=None`, `osort_lo`, `osort_hi` ~0.3)

though this can allow more zeroth order background at short wavelengths.=====

For ACIS/CC-mode w/ HETG, there are no MEG even order counts. MEG even orders overlap with HEG orders in energy, but MEG even order efficiencies are very low. Since HEG and MEG cannot be spatially separated, events are preferentially assigned to HEG. (MEG odd orders can be resolved.)