

V&V Reference Report

L2 ASCDS Version : 7.6.7.2

Observation 4587 - L2 Version 3
Chandra X-Ray Center

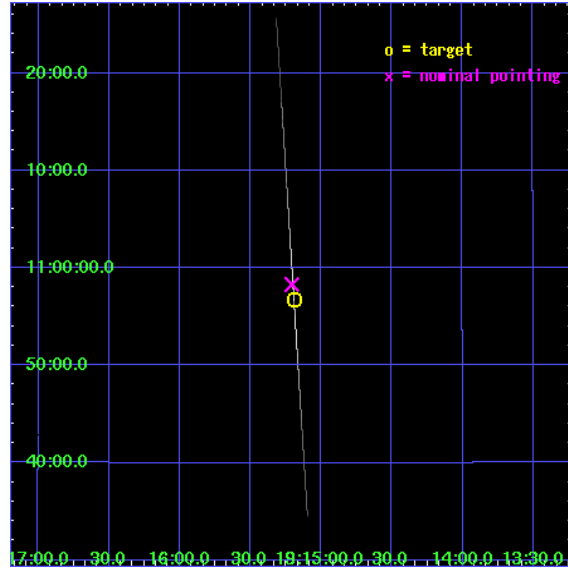
L2 Processing Date : Apr 11 2008

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1 Front

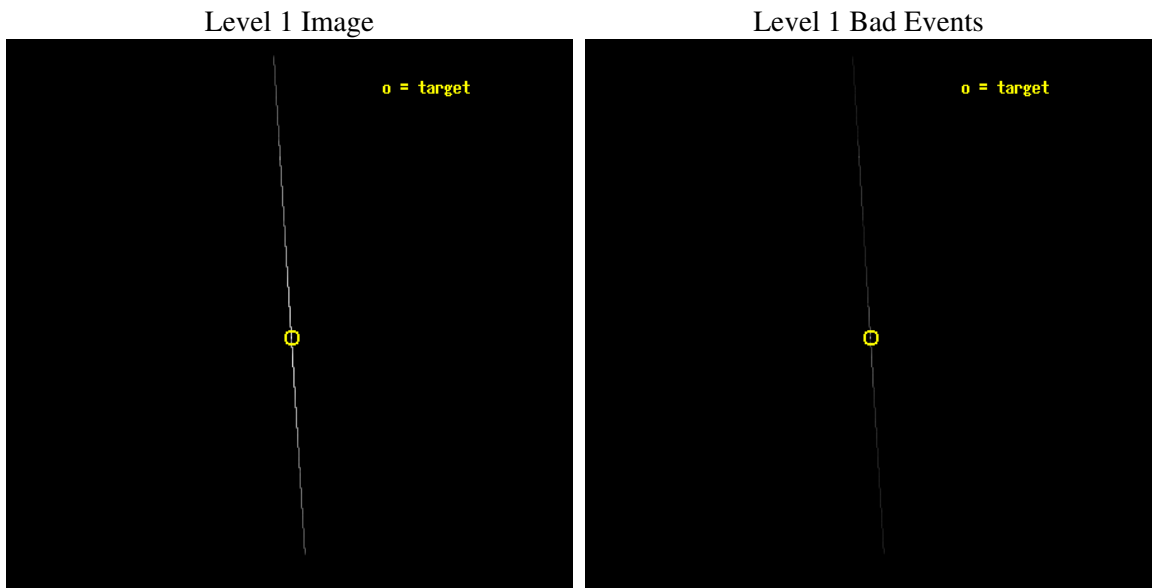
seq_num	400369
obs_id	4587
title	Probe the relativistic Out-flow in the microquasar GRS1915+105 with HETG/Chandra
observer	Dr. Yuxin Feng
object	GRS 1915+105
ra_targ	288.798333
dec_targ	10.945806
ra_nom	288.8018194892
dec_nom	10.971806831192
roll_nom	86.333519053559
revision	3
ontime	30155.25
livetime	30037.456054688
ontime4	30155.25
ontime5	30155.25
ontime6	30155.25
ontime7	30155.25
ontime8	30155.25
ontime9	30155.25
l2events	4460464



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0
ascdsver	7.6.11.6
caldsver	3.4.4
date	2008-04-11T15:11:12
revision	3

sched_exp_time	30000.000000
ontime	30155.25
ontime4	30155.25
ontime5	30155.25
ontime6	30155.25
ontime7	30155.25
ontime8	30155.25
ontime9	30155.25
l1events	4882077

2.1.3 Events

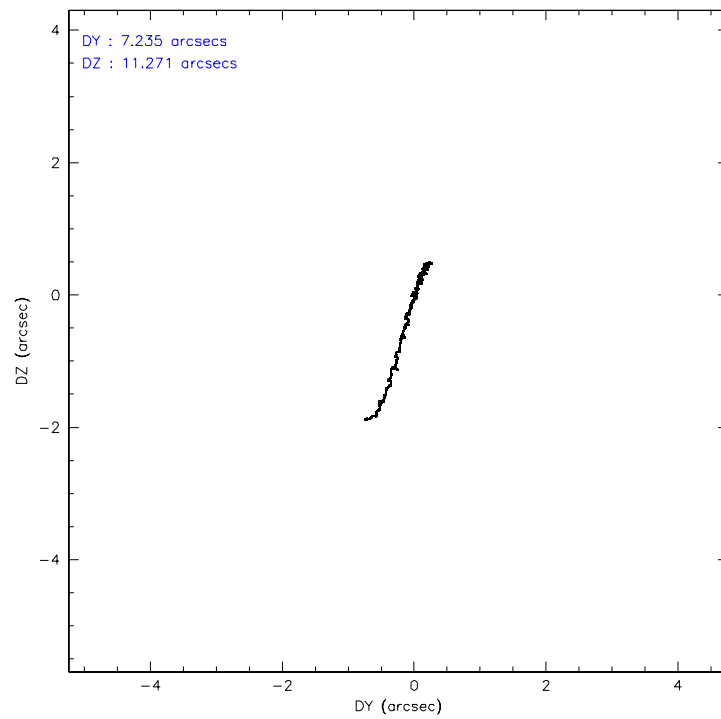
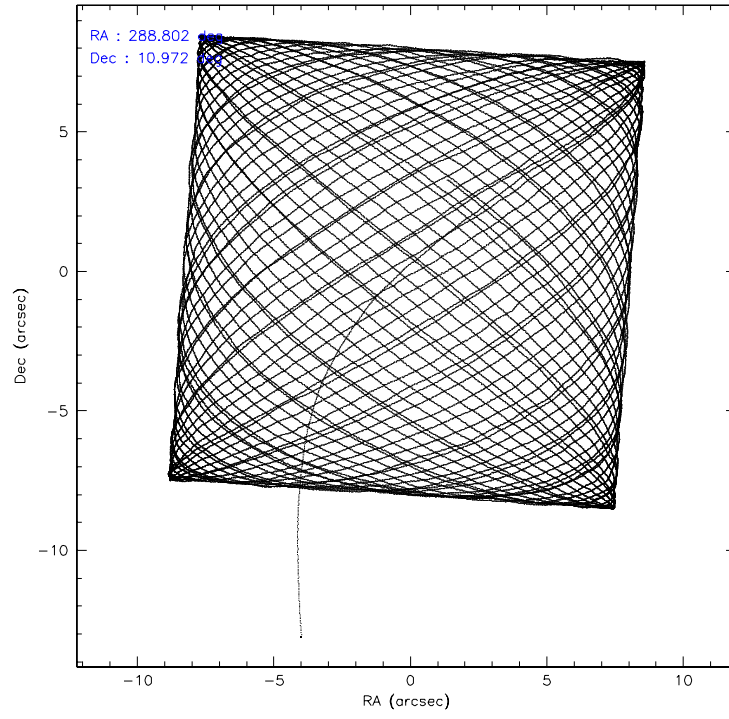
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	77689	297257	1039005	2746675	596438	125013
rejected events	8565	24270	18150	87159	17272	10415
rejected %	11%	8%	1%	3%	2%	8%

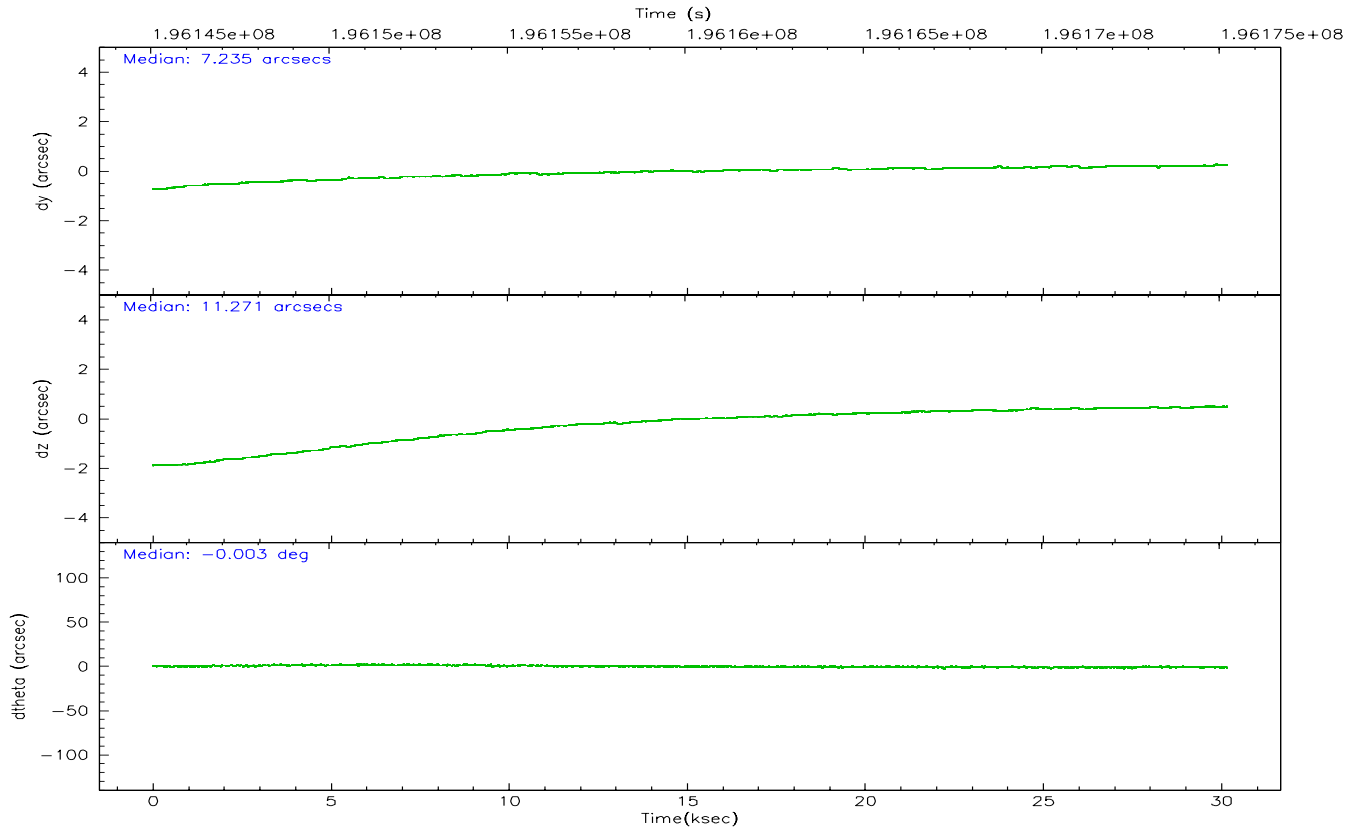
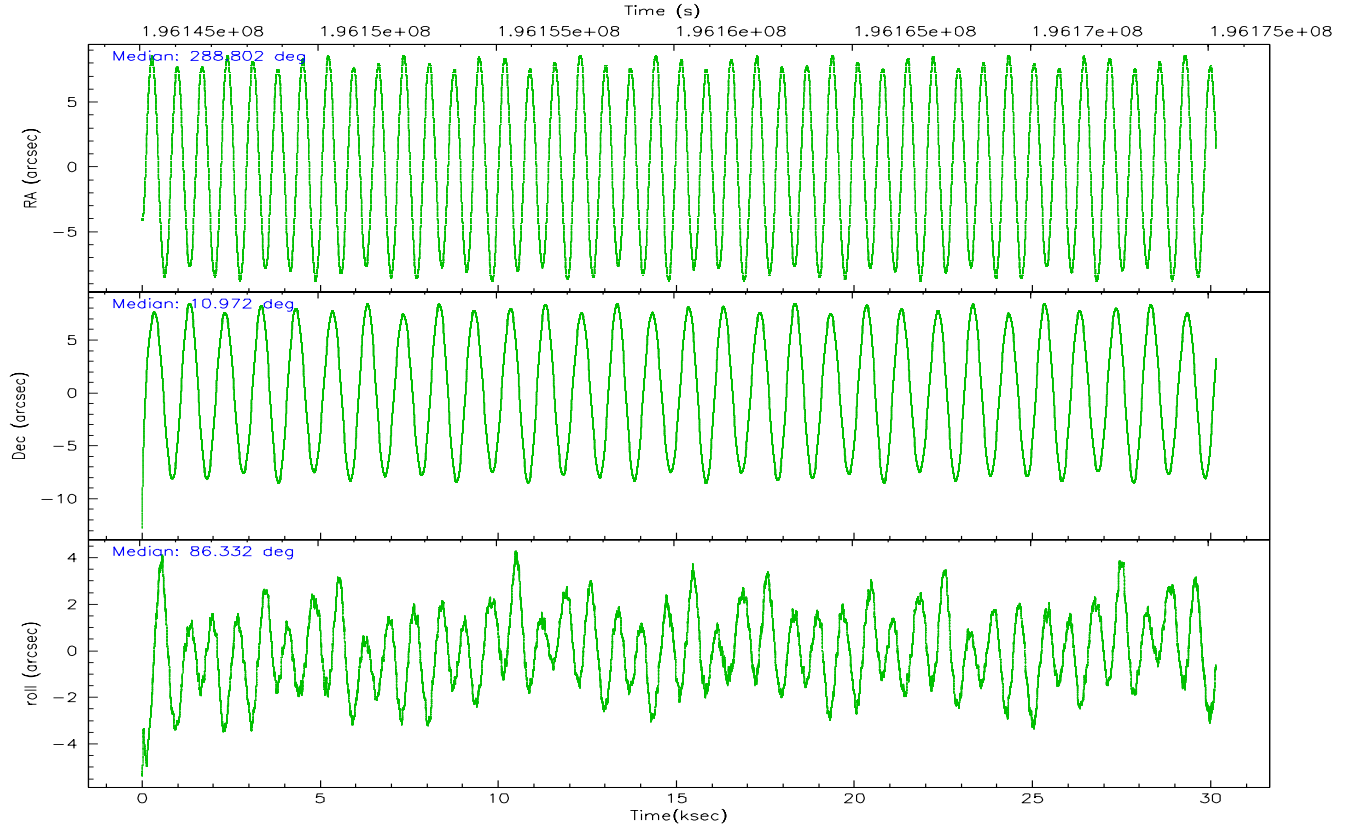
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	4470	34497	14195	249443	26569	6402
	5%	11%	1%	9%	4%	5%
grade 1 events	115	230	153	2284	288	157
	0%	0%	0%	0%	0%	0%
grade 2 events	44687	106201	886120	1005327	471228	82727
	57%	35%	85%	36%	79%	66%
grade 3 events	4809	4903	5070	141366	9105	4415
	6%	1%	0%	5%	1%	3%
grade 4 events	5043	4665	4797	139372	8961	4751
	6%	1%	0%	5%	1%	3%
grade 5 events	7401	17881	12701	65910	13444	9111
	9%	6%	1%	2%	2%	7%
grade 6 events	11164	128880	115969	1142973	66843	17450
	14%	43%	11%	41%	11%	13%
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	288.814446	288.801819489199	Alternating exposures requested	N	N
Pointing Dec	10.947584	10.97180683119159	Primary exposure time	0.000000	0
Pointing Roll	86.174499	86.33351905355896			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-194.132523	-194.1227414875429			
SIM translation stage offset (mm)	4	3.990218904535112			
Observation start time	196145215.184000	196144133.52204			
Observation start date	2004-03-20T04:45:51	2004-03-20T04:28:53			
Observation end time	196175215.184000	196176396.93595			
Observation end date	2004-03-20T13:05:51	2004-03-20T13:26:36			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



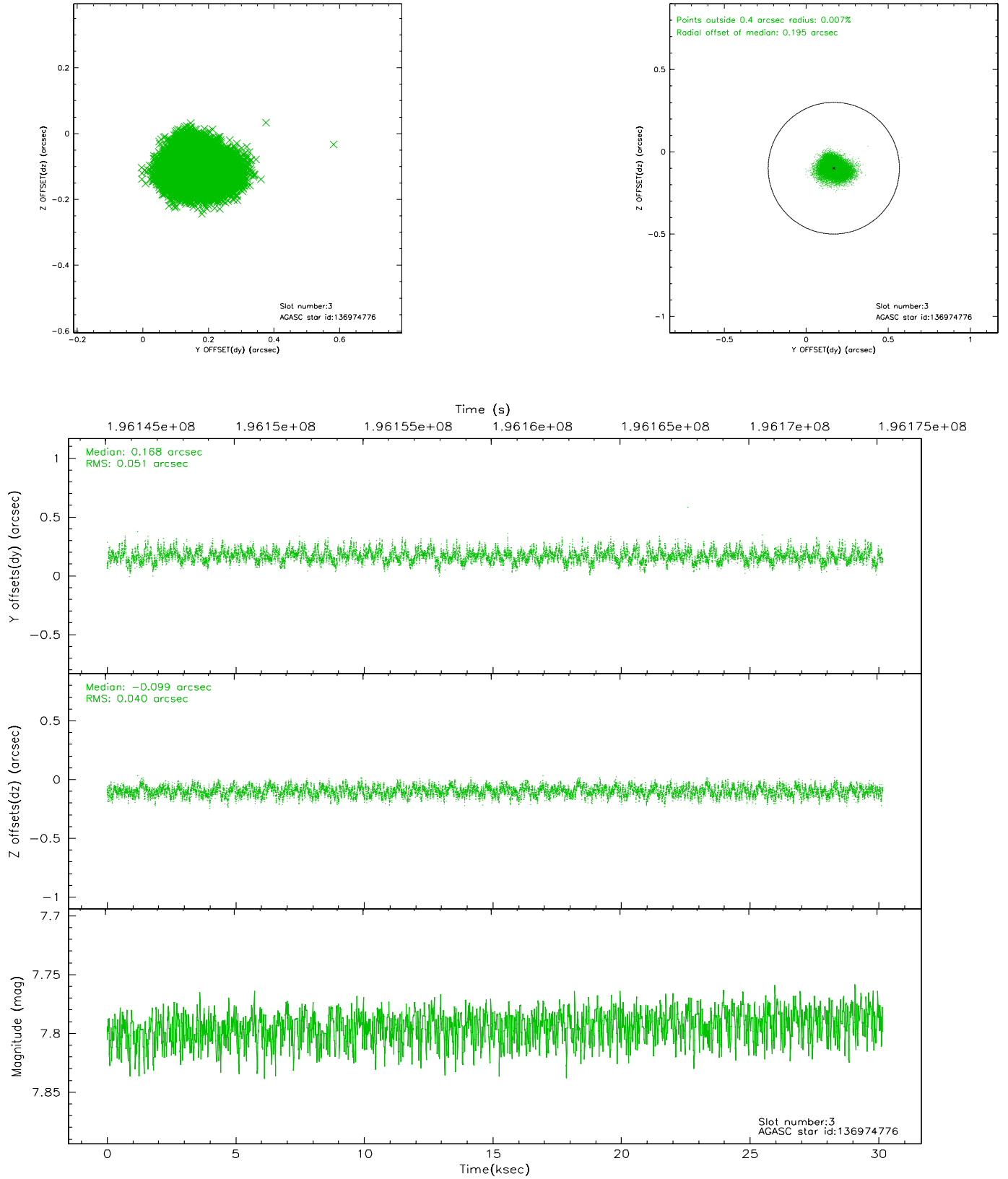


Slot Statistics

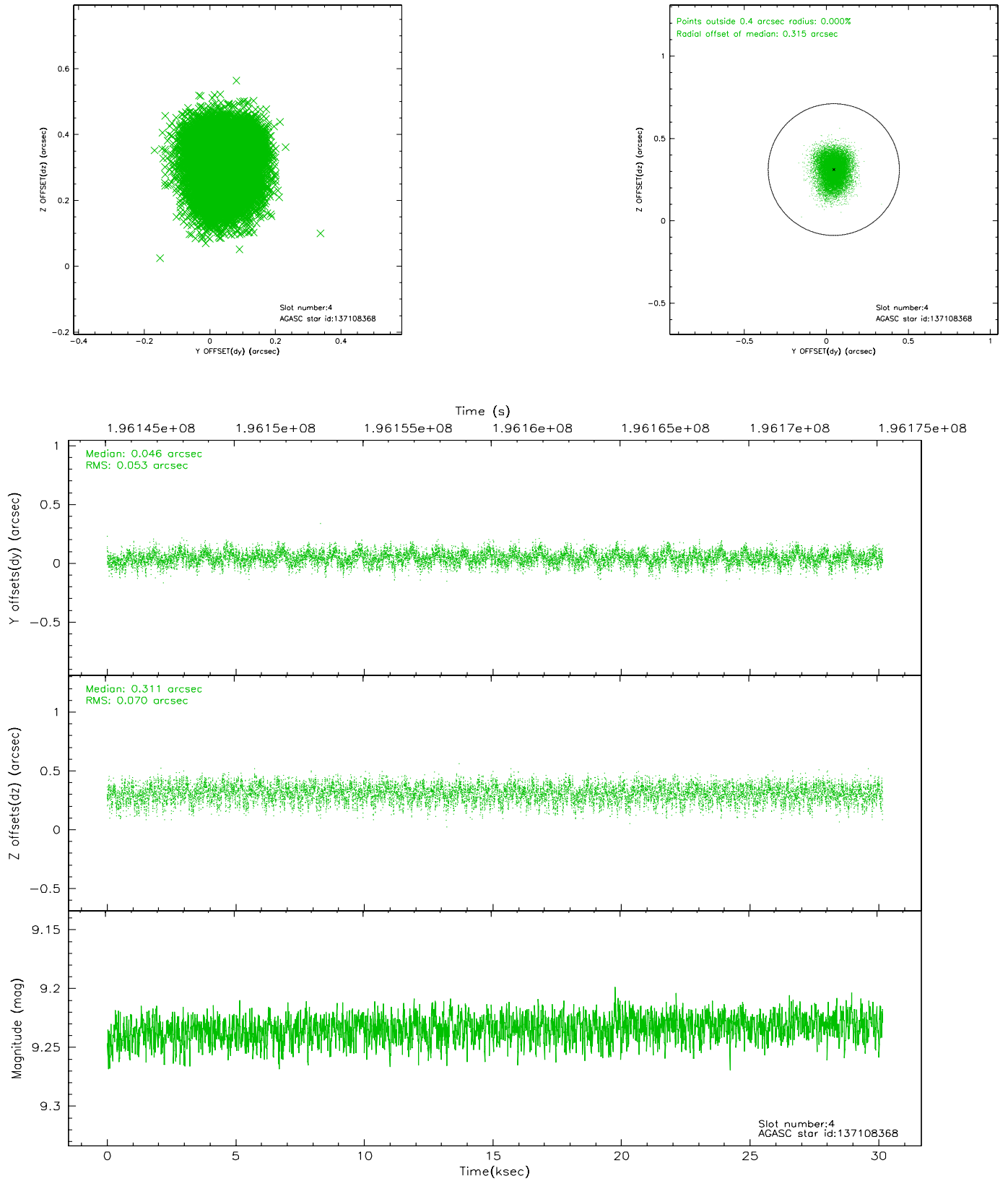
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	7356	0.023	0.048	0.012	0.031	0.000000	0.000000	-760.18	-1650.10
1	FID	ACIS-S-4	7.21	7356	0.014	-0.019	0.008	0.021	0.000000	0.000000	2153.08	258.21
2	FID	ACIS-S-6	7.32	7356	-0.065	-0.022	0.012	0.021	0.000000	0.000000	401.85	895.71
3	GUIDE	136974776	7.79	14713	0.168	-0.099	0.070	0.110	288.742109	10.409402	-1949.90	126.38
4	GUIDE	137108368	9.23	14707	0.046	0.311	0.094	0.151	289.421925	10.352056	-1993.42	-2289.05
5	GUIDE	137497048	7.99	14713	-0.229	0.141	0.053	0.086	288.896055	11.554718	2199.16	-141.89
6	GUIDE	136977584	8.42	14711	0.196	-0.115	0.060	0.095	288.635599	10.555283	-1450.72	537.42
7	GUIDE	137498872	7.06	14712	-0.184	-0.245	0.061	0.098	288.350862	11.344926	1319.06	1728.24

2.4 Star Slots

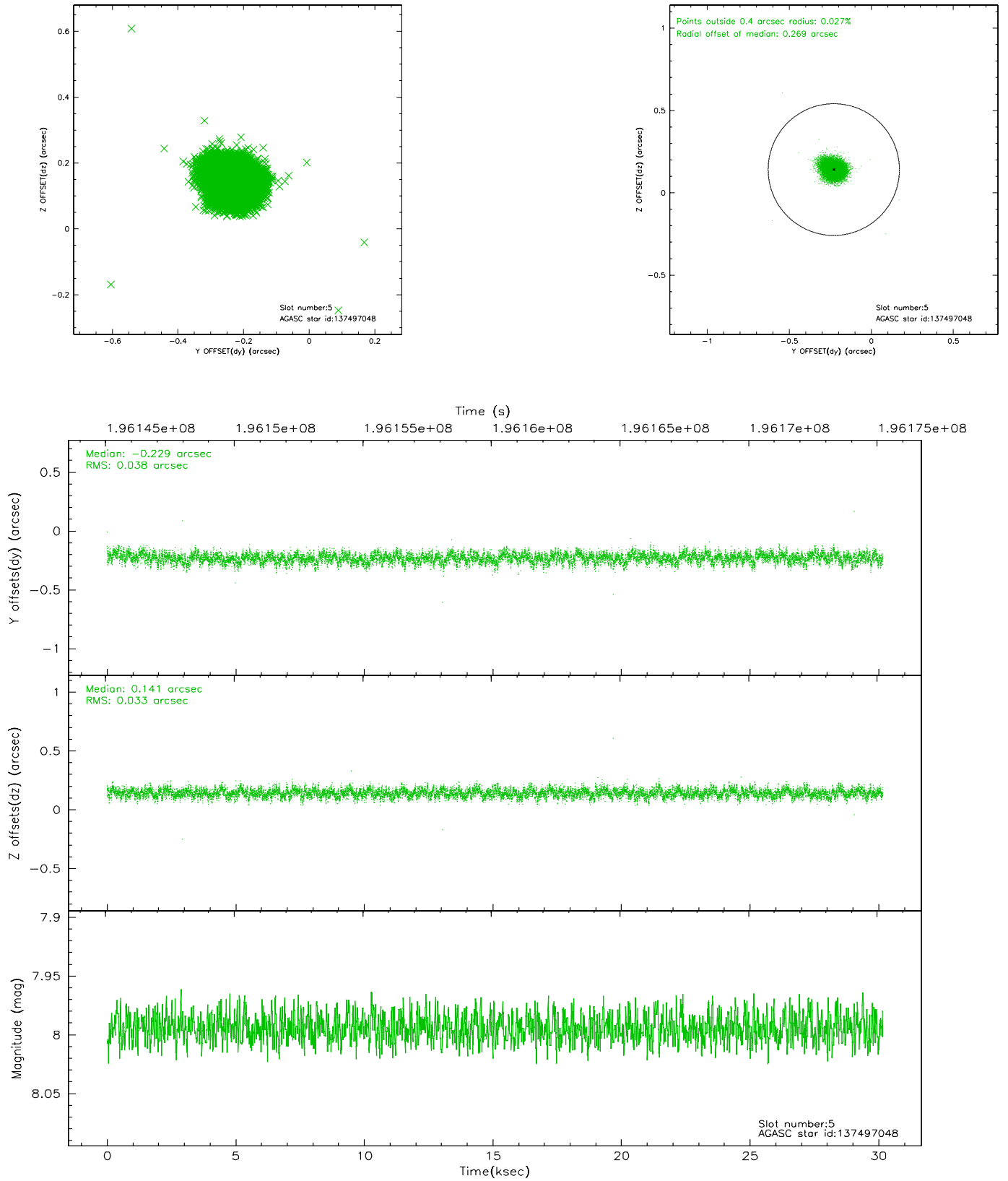
2.4.1 Slot 3



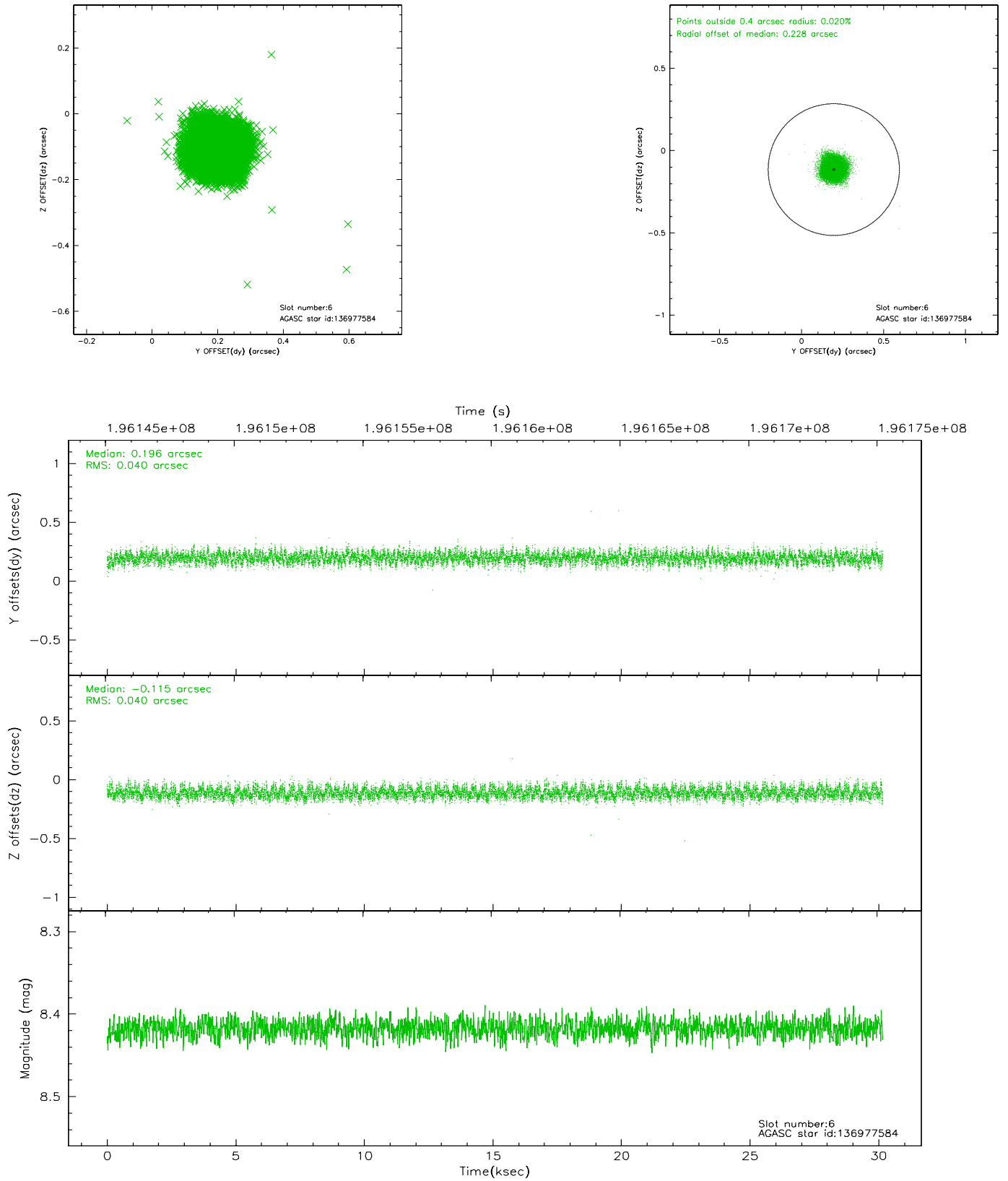
2.4.2 Slot 4



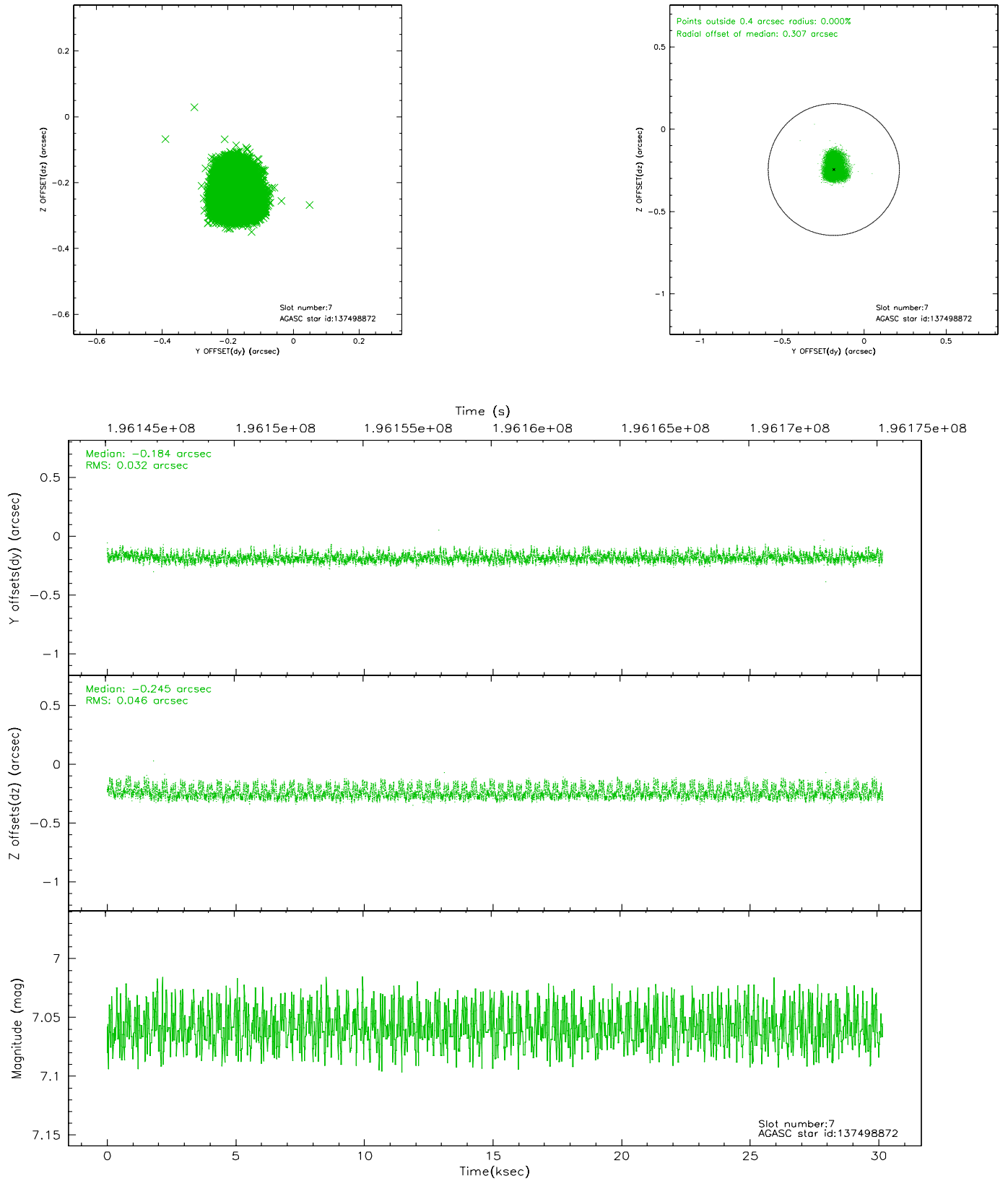
2.4.3 Slot 5



2.4.4 Slot 6

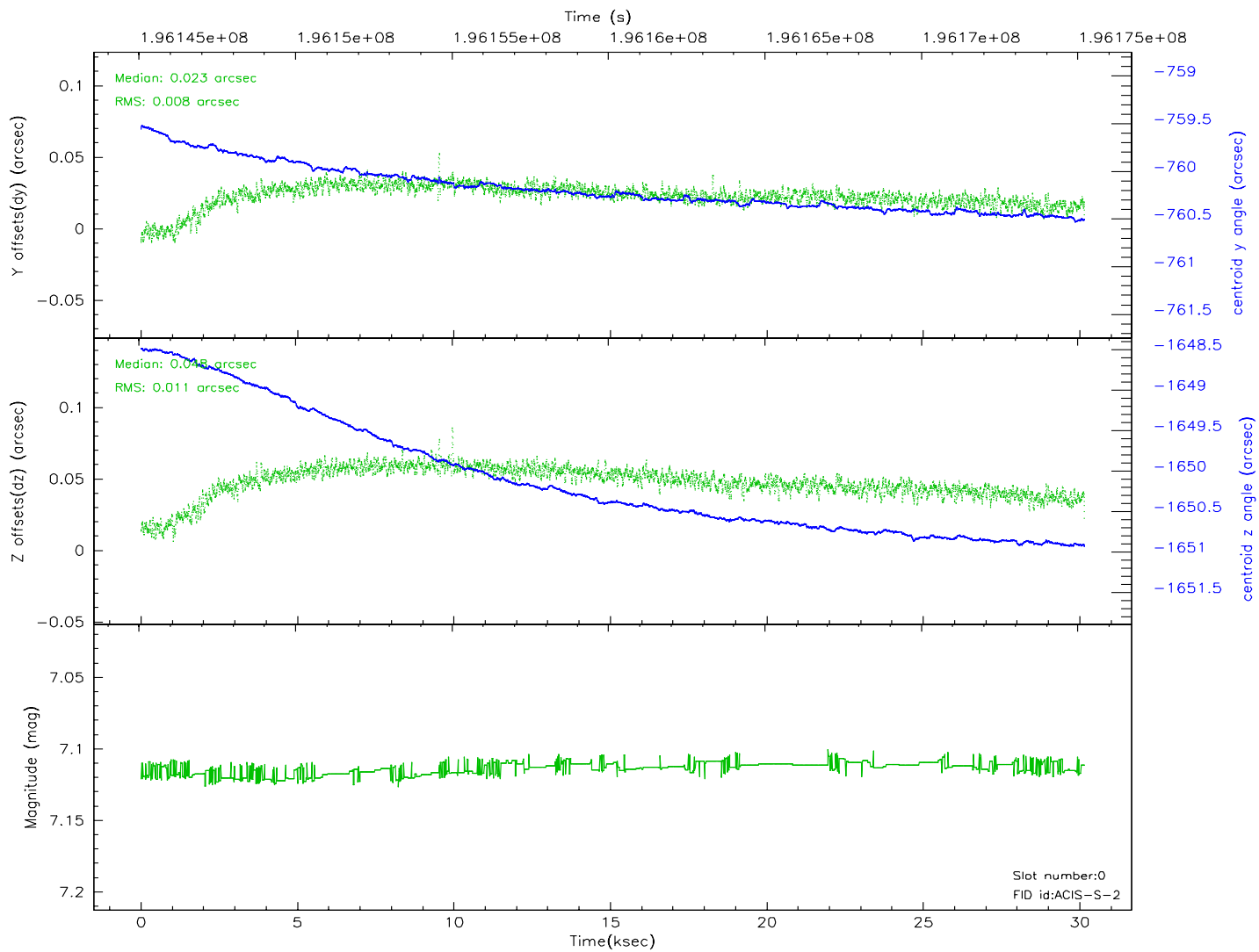
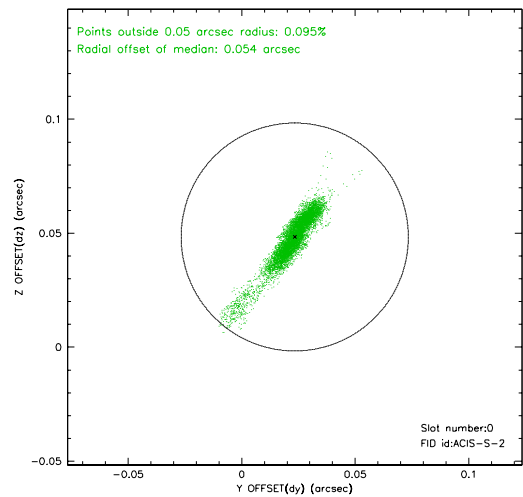
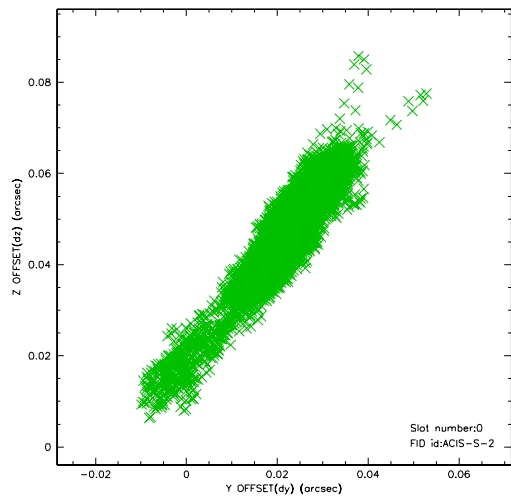


2.4.5 Slot 7

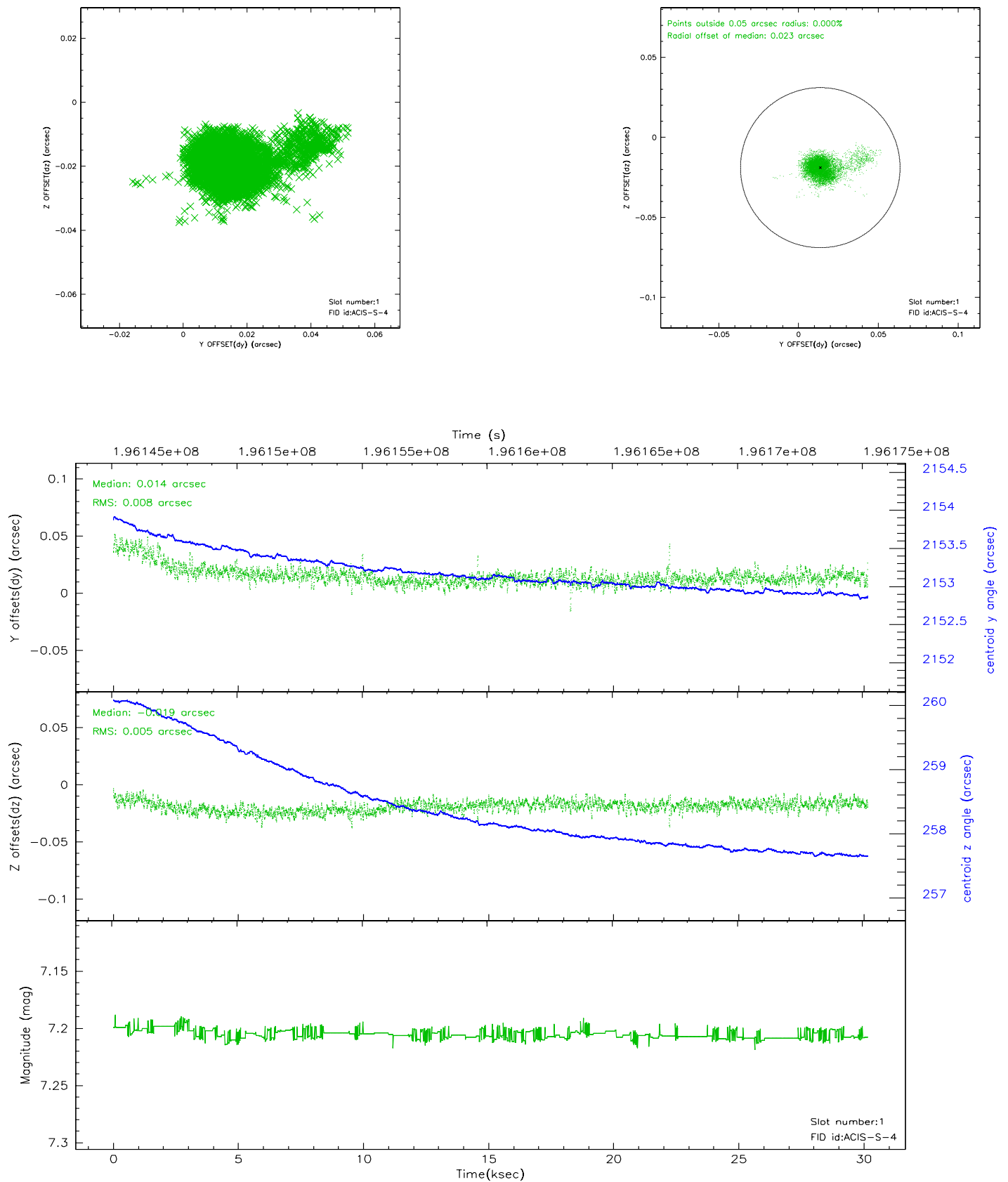


2.5 FID Slots

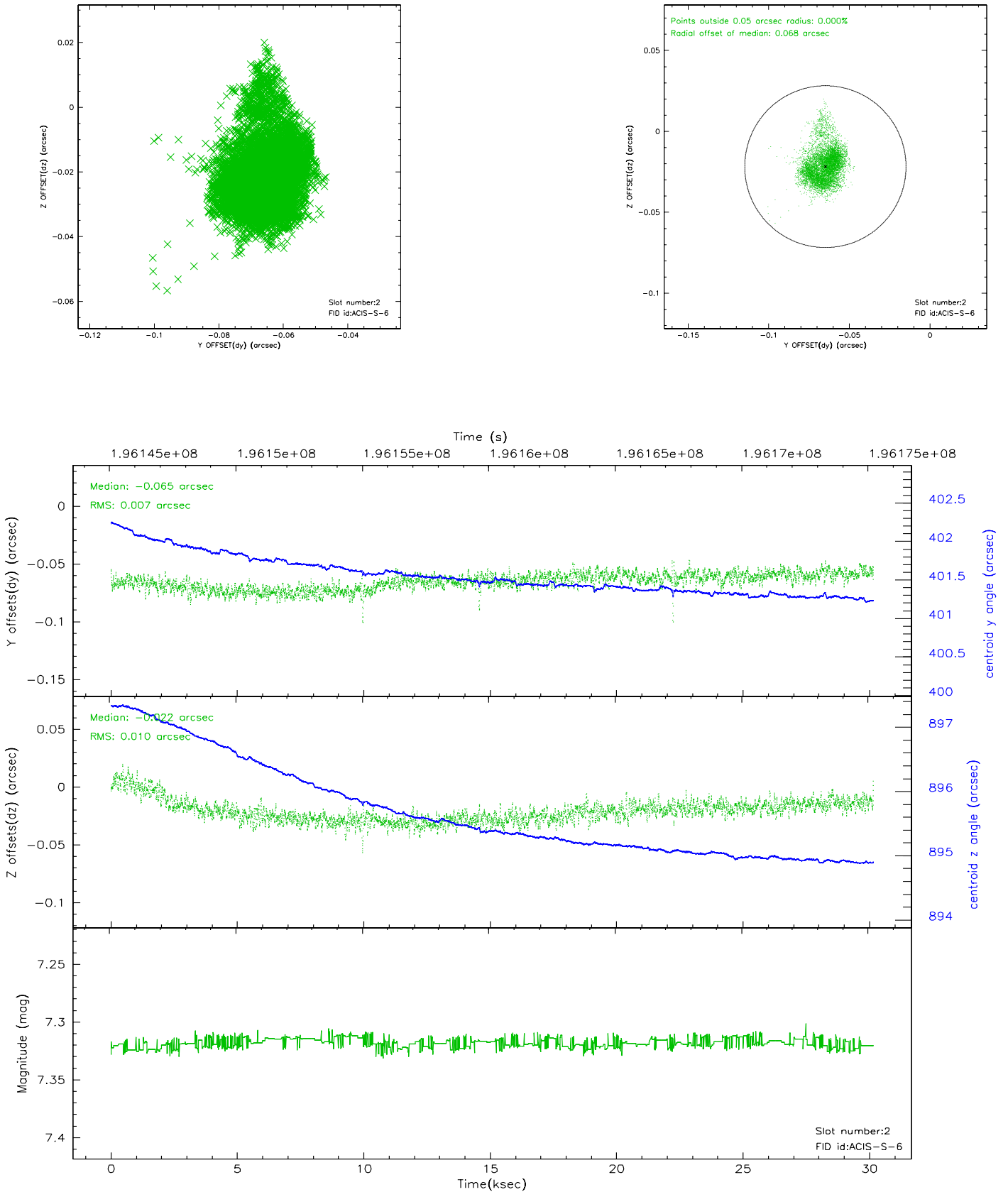
2.5.1 Slot 0



2.5.2 Slot 1

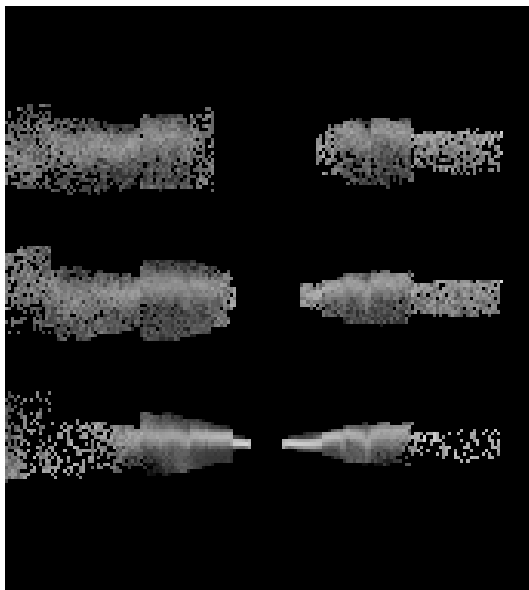


2.5.3 Slot 2

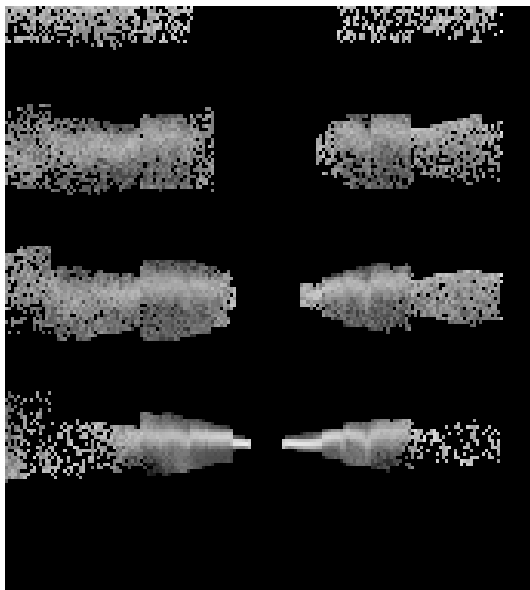


3 Gratings

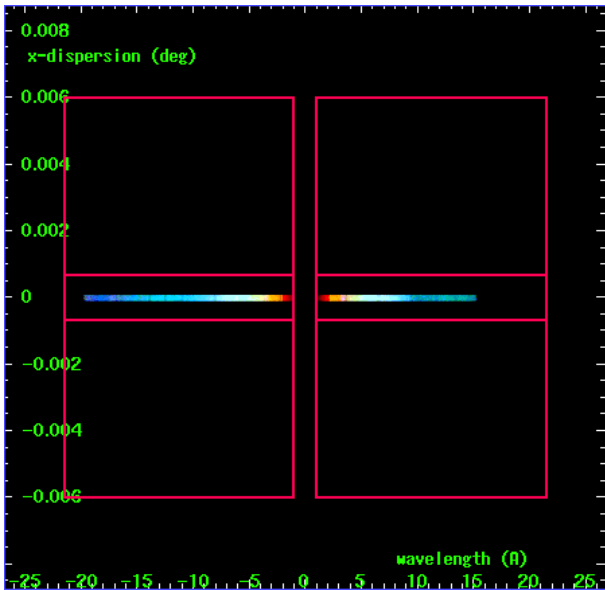
3.1 HEG Arm



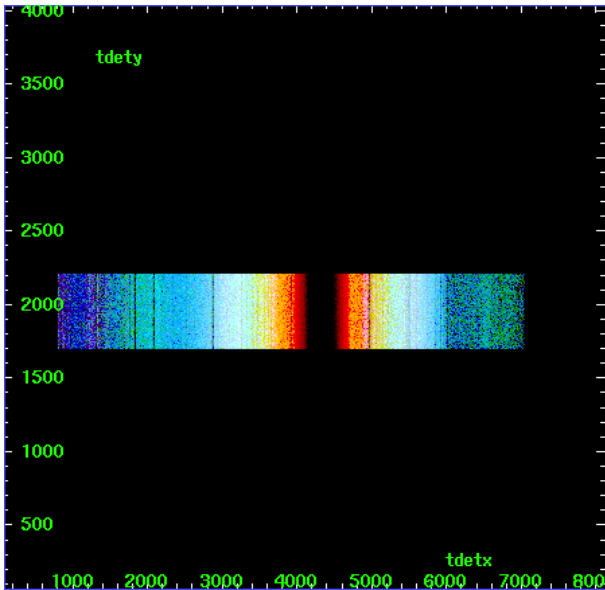
HEG Order Sort 123



HEG Order Sort ALL

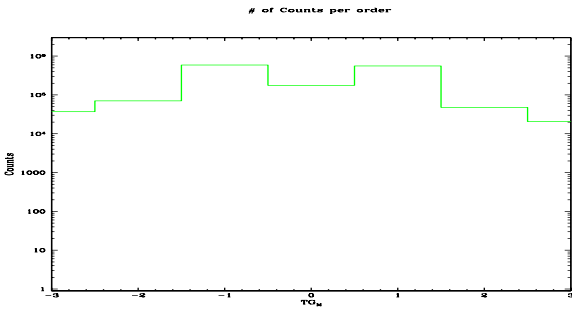


Spot Image HEG

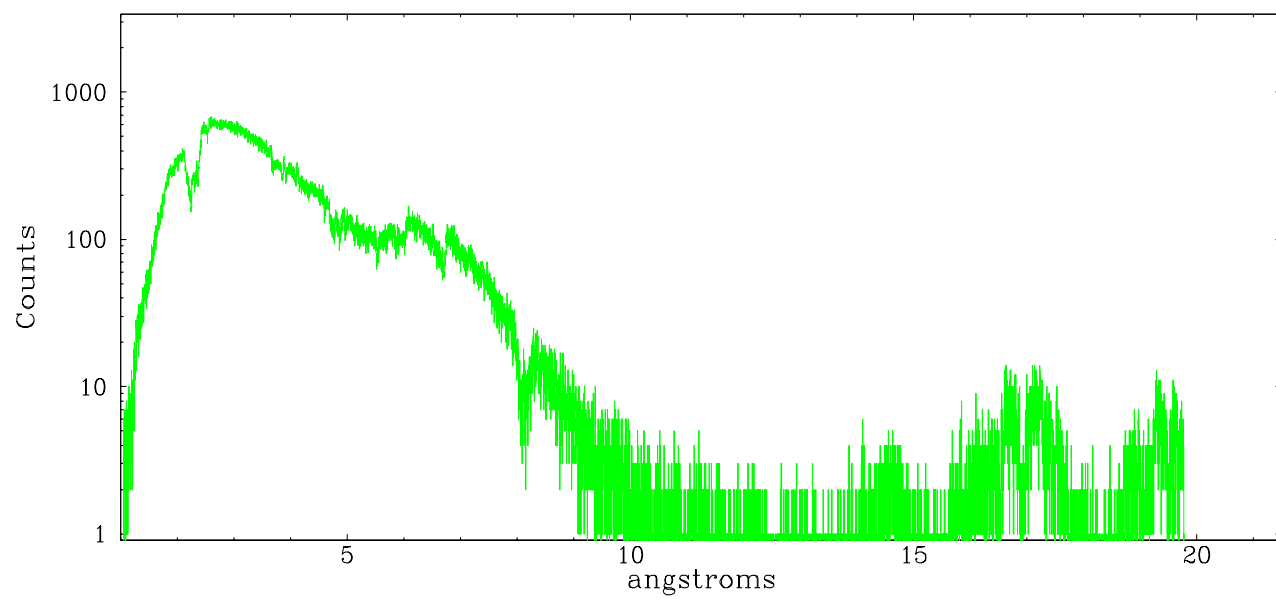


Full Detector HEG

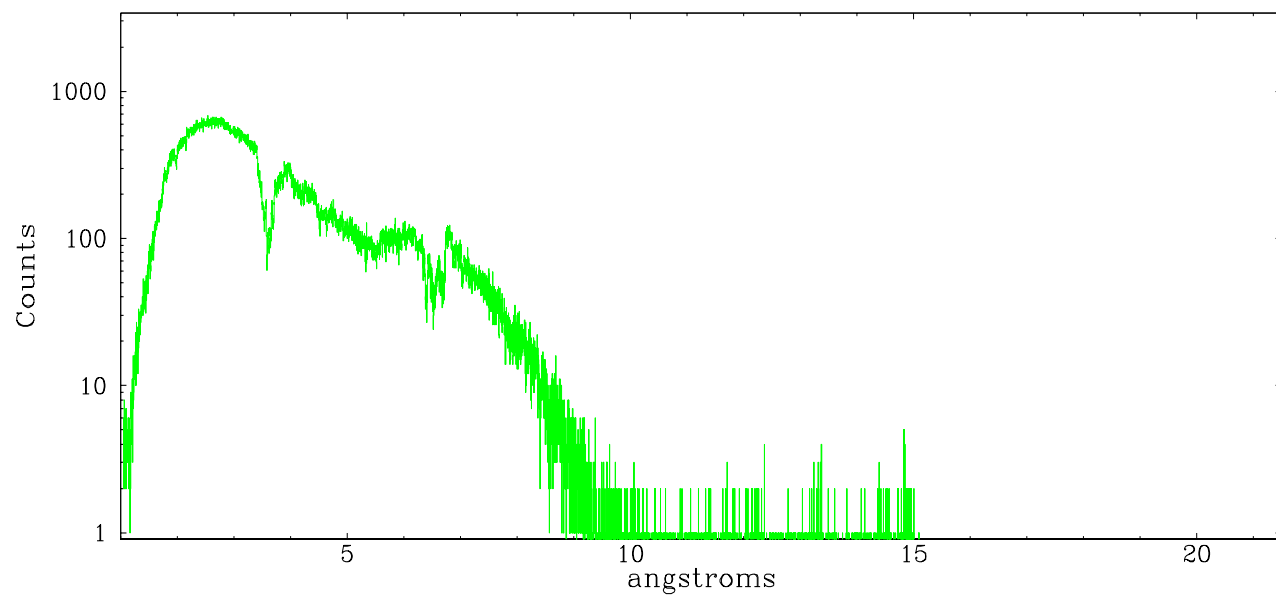
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	37130	70766	592111	177124	561064	47816	20656



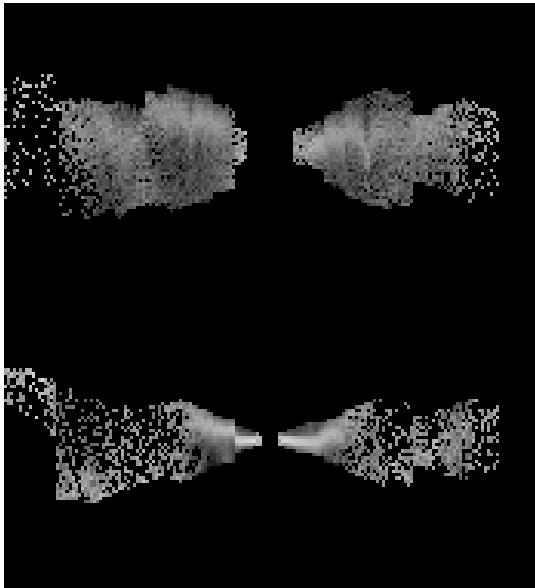
heg order -1



heg order +1



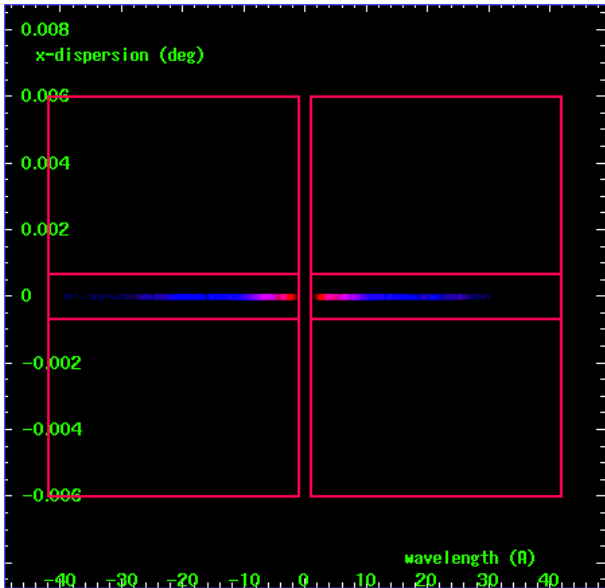
3.2 MEG Arm



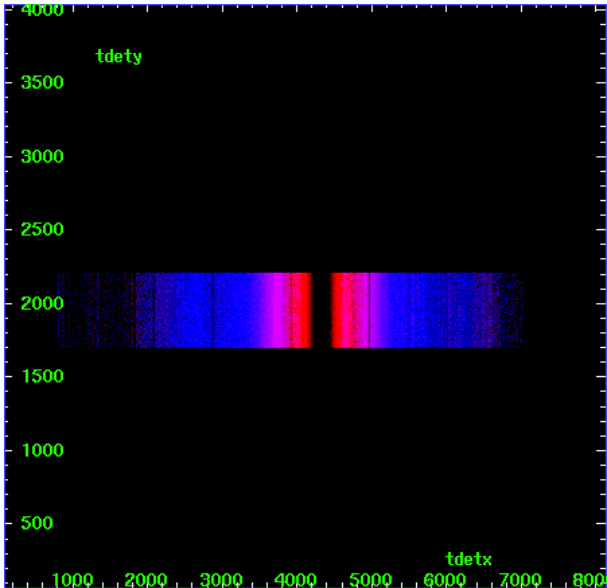
MEG Order Sort 123



MEG Order Sort ALL

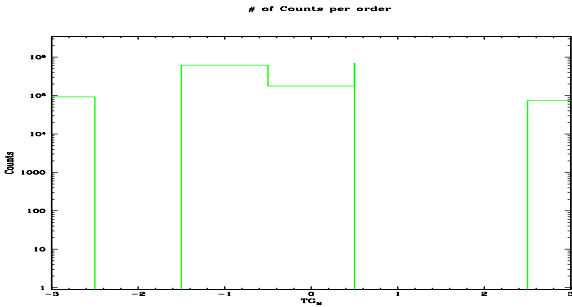


Spot Image MEG

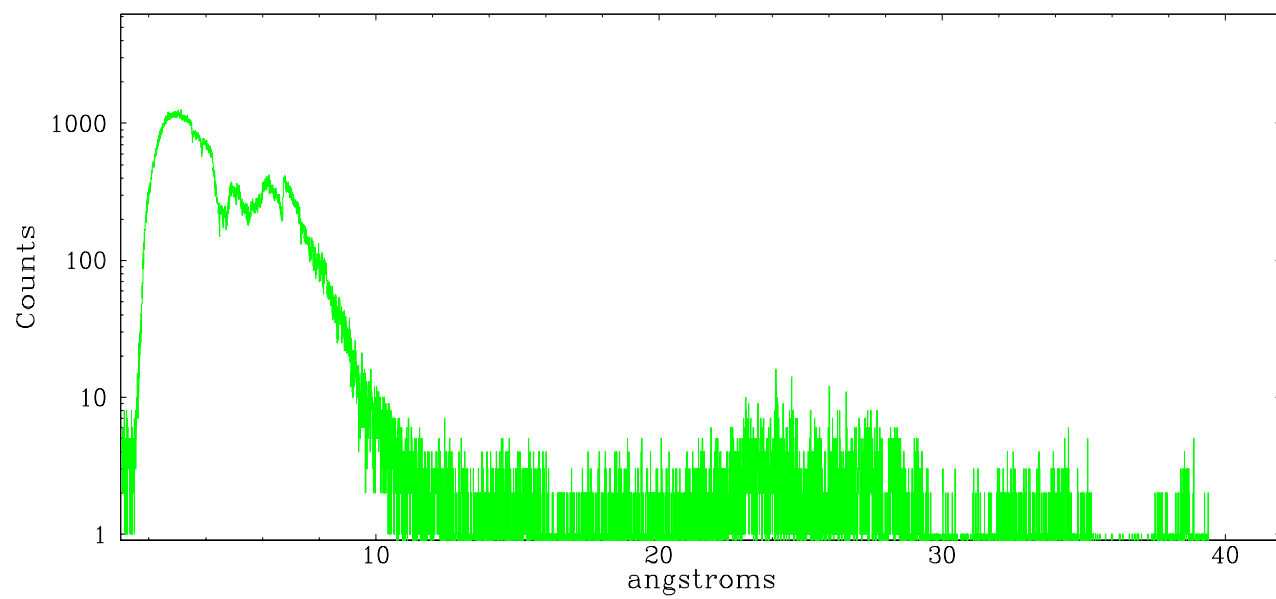


Full Detector MEG

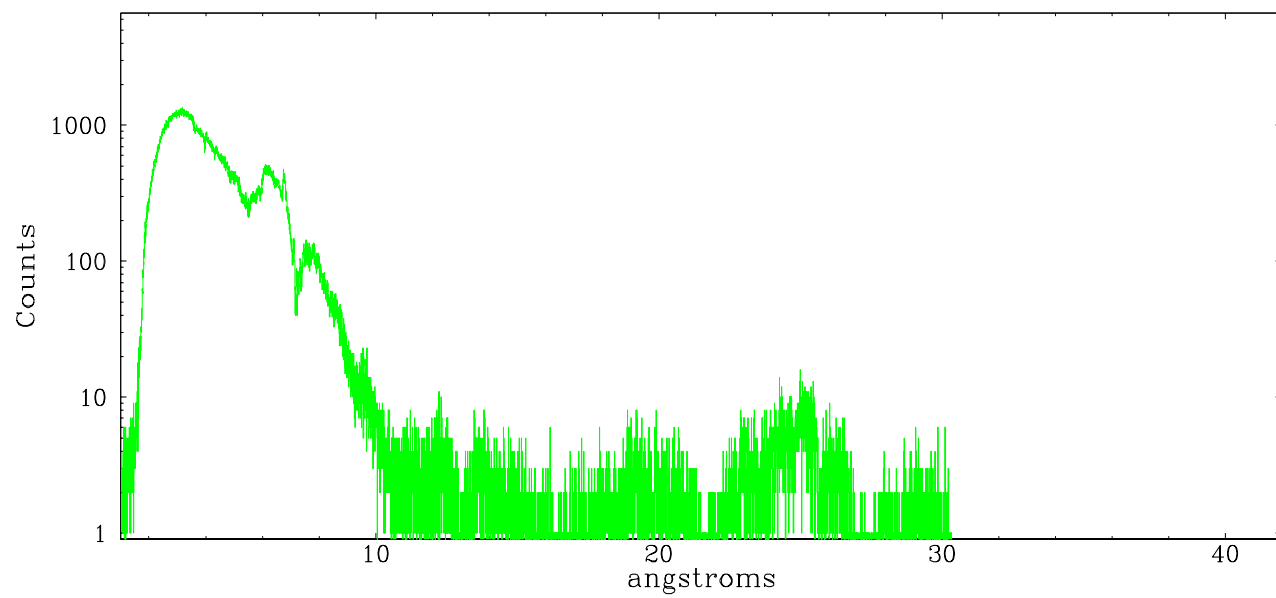
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	92464	0	619056	177124	688570	0	73887



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	30.159

A.2 Comments

Joint proposal with RSTE.=====

A gray filtering area 100 columns wide around the zeroth order was used,

allowing 1 in 10 zeroth order photons in this window

to be telemetered.=====

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.)