

V&V Reference Report

L2 ASCDS Version : 7.6.8

Observation 3815 - L2 Version 001
Chandra X-Ray Center

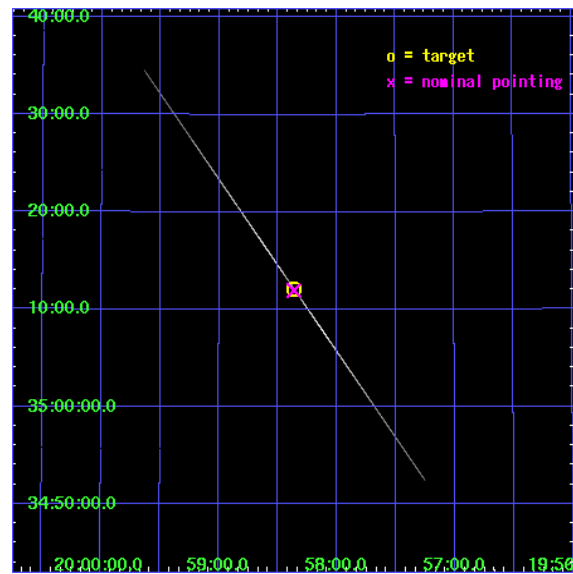
L2 Processing Date : Jul 23 2006

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1 Front

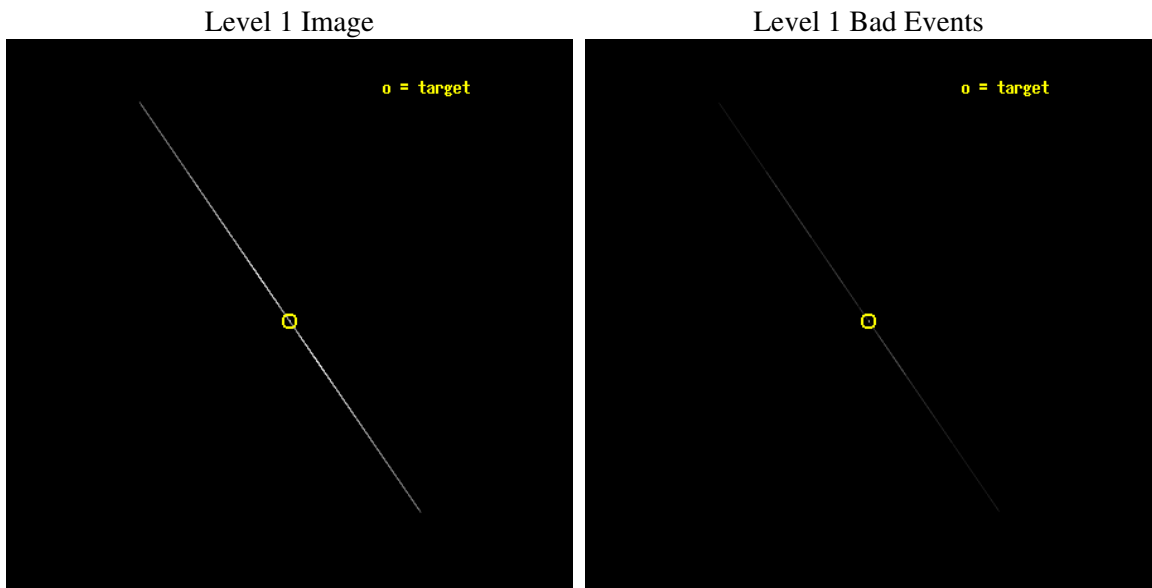
seq_num	400302
obs_id	3815
title	RESOLVING THE LOW/HARD STATE OF CYGNUS X-1 WITH CHANDRA
observer	Prof. Walter Lewin
object	CYGNUS X-1
ra_targ	299.590417
dec_targ	35.201611
ra_nom	299.59103990999
dec_nom	35.199425153893
roll_nom	55.164333738585
revision	2
ontime	55845.974398136
livetime	55627.826060643
ontime4	58167.55345428
ontime5	58345.54032594
ontime6	55393.63655889
ontime7	55845.974398136
ontime8	57423.36426878
ontime9	58272.579183429
l2events	15002831



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0
ascdsver	7.6.8
caldsver	3.2.2
date	2006-07-22T17:24:20
revision	2

sched_exp_time	58000.000000
ontime	56546.270452559
ontime4	58867.850271434
ontime5	59045.836893916
ontime6	56093.932872593
ontime7	56546.270452559
ontime8	58123.66006729
ontime9	58972.874724835
l1events	16380956

2.1.3 Events

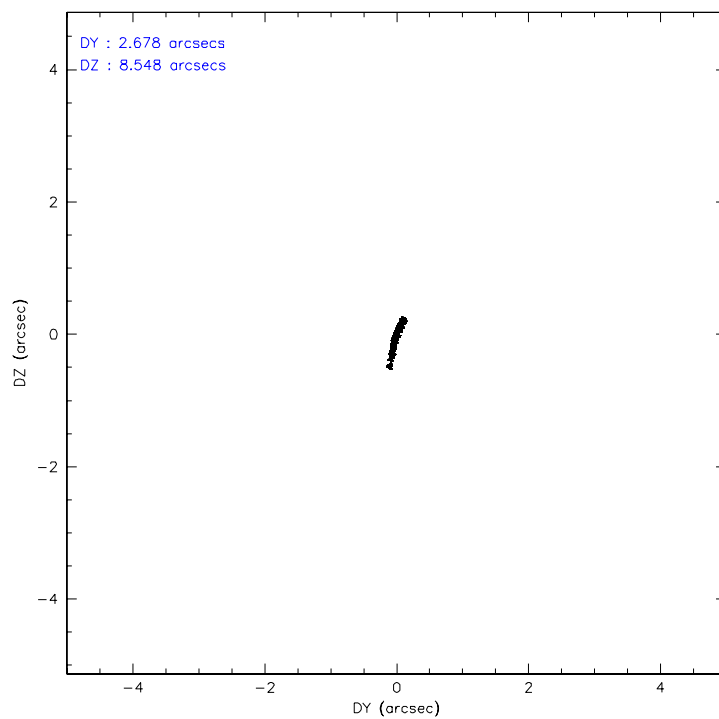
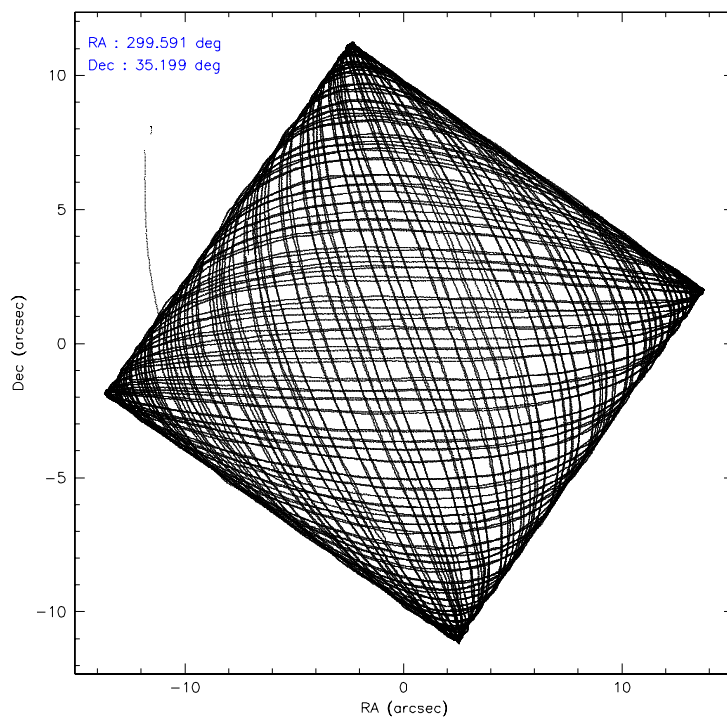
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	443779	1887837	5264326	5536001	2641962	607051
rejected events	18490	60889	53603	136896	36642	19338
rejected %	4%	3%	1%	2%	1%	3%

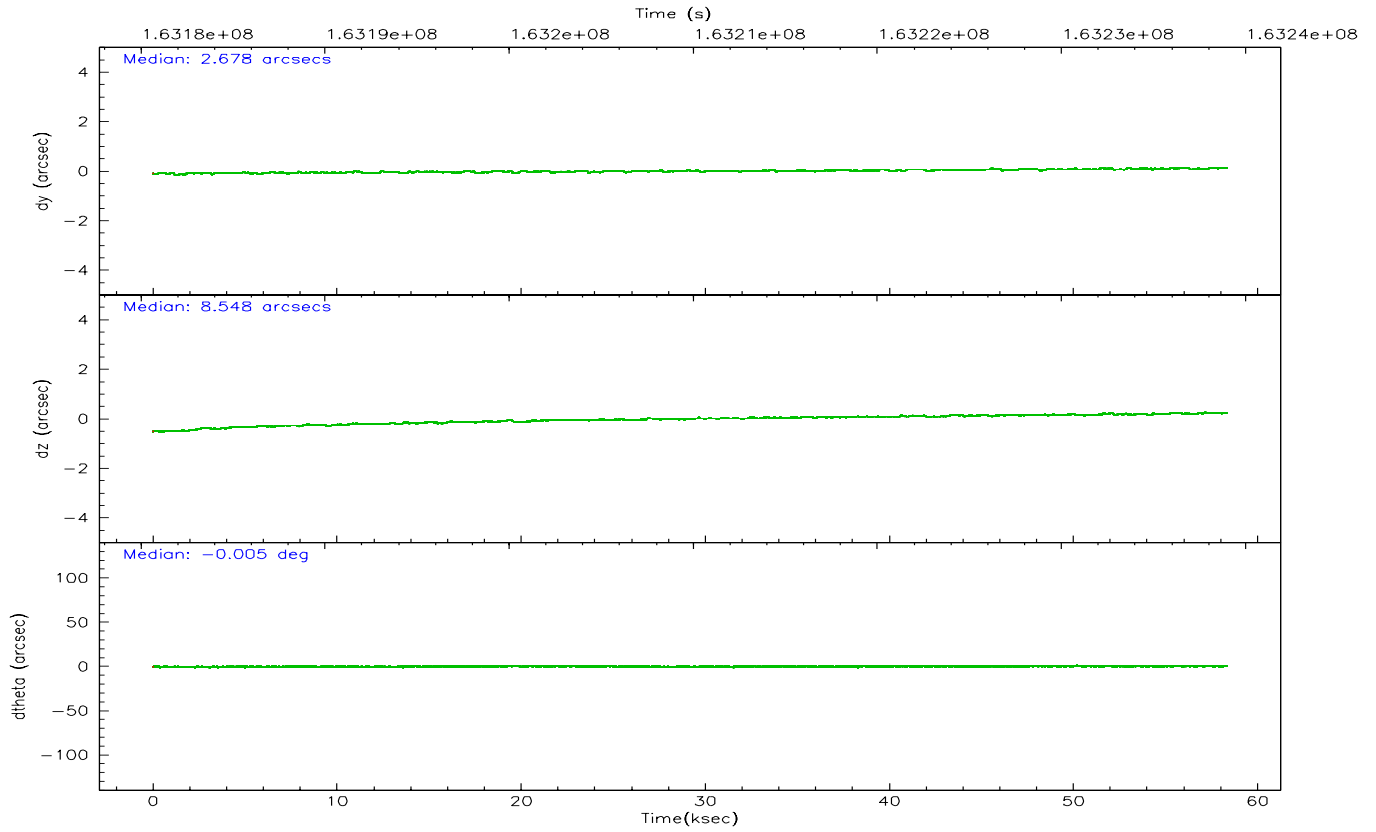
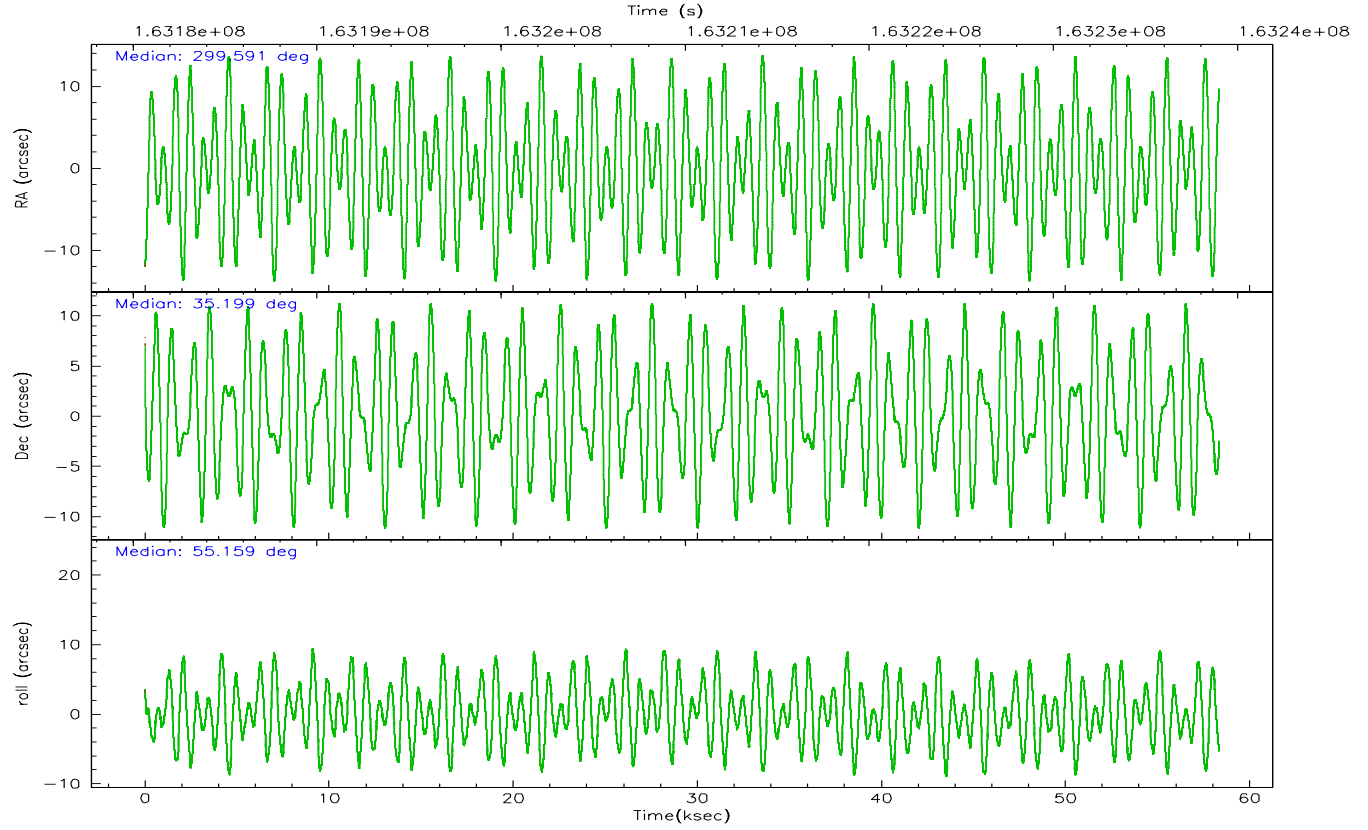
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	108415	366577	412007	967778	1045526	170921
	24%	19%	7%	17%	39%	28%
grade 1 events	393	622	996	10006	1927	486
	0%	0%	0%	0%	0%	0%
grade 2 events	263602	810773	4297765	1708343	1338436	347677
	59%	42%	81%	30%	50%	57%
grade 3 events	12566	80616	25857	470341	55480	13540
	2%	4%	0%	8%	2%	2%
grade 4 events	13079	79990	25399	465499	55127	14007
	2%	4%	0%	8%	2%	2%
grade 5 events	14314	48948	38077	112937	29020	17133
	3%	2%	0%	2%	1%	2%
grade 6 events	31410	500311	464225	1801097	116446	43287
	7%	26%	8%	32%	4%	7%
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	299.588699	299.5910399099924	Alternating exposures requested	N	N
Pointing Dec	35.172286	35.19942515389258	Primary exposure time	0.000000	0
Pointing Roll	55.009052	55.16433373858465			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-186.132523	-186.1397904050899			
SIM translation stage offset (mm)	-4	-3.992732177917873			
Observation start time	163181012.184000	163179966.05682			
Observation start date	2003-03-04T16:02:28	2003-03-04T15:46:06			
Observation end time	163239012.184000	163239878.84684			
Observation end date	2003-03-05T08:09:08	2003-03-05T08:24:38			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect



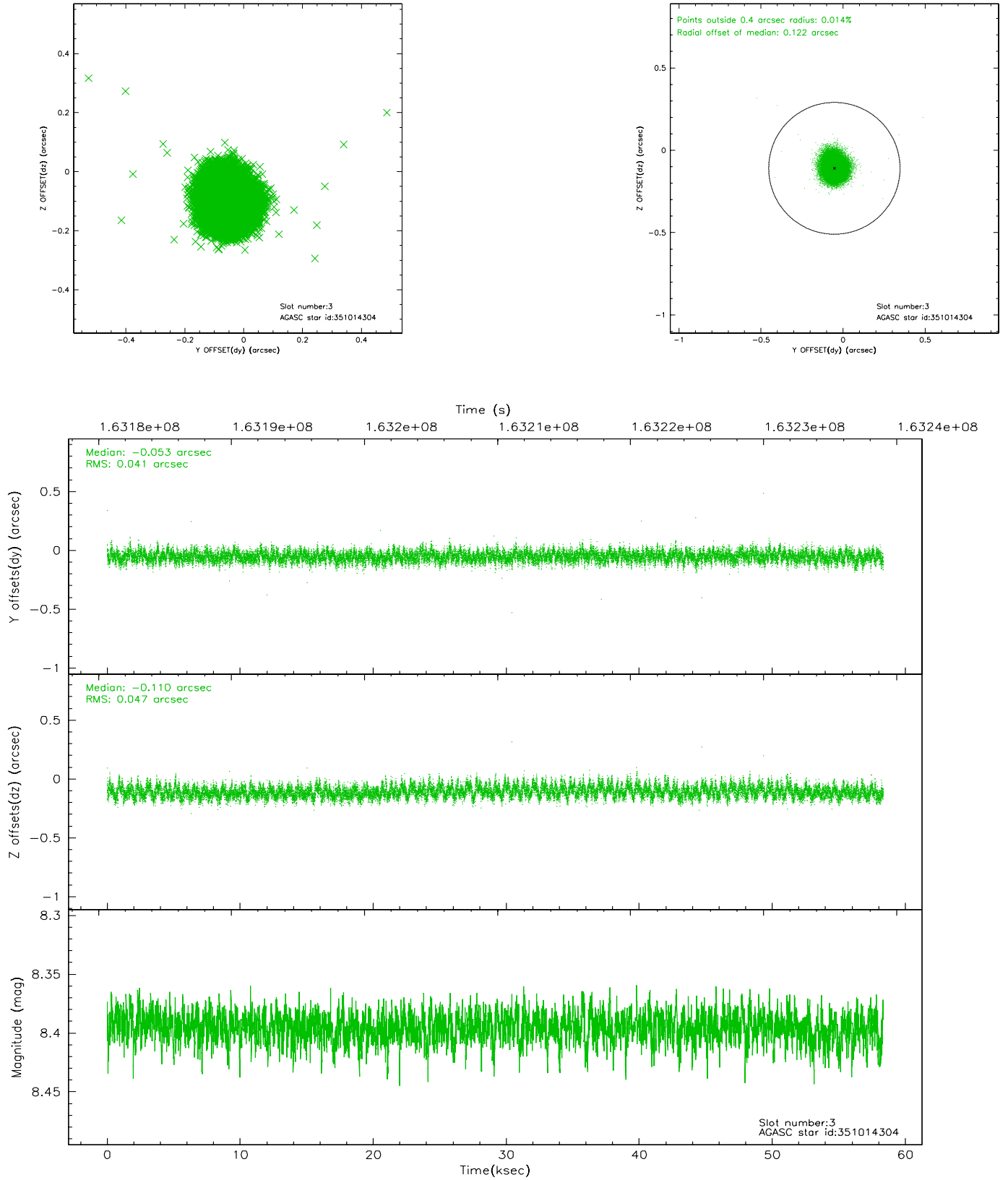


Slot Statistics

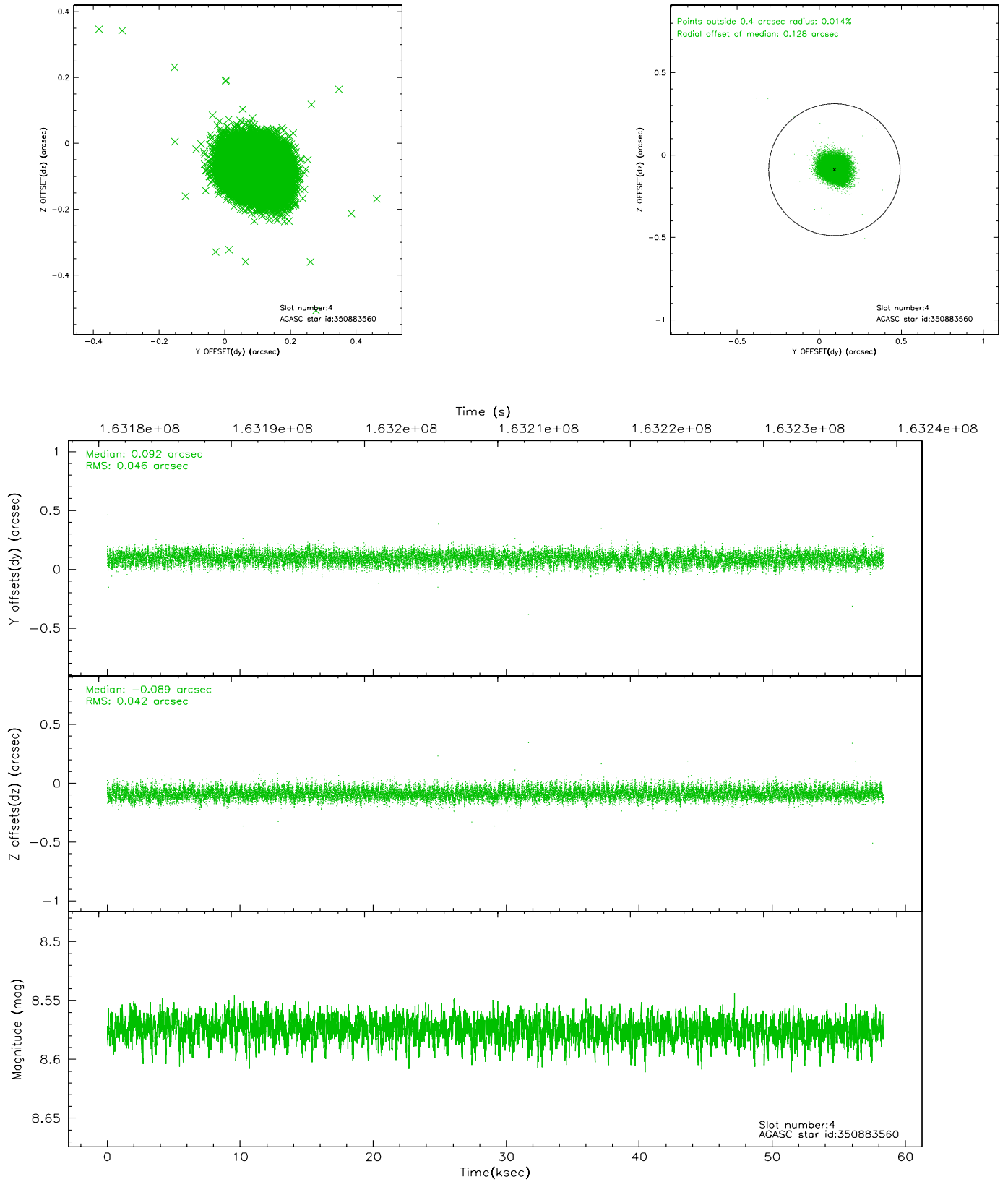
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.09	14232	-0.025	-0.007	0.009	0.015	0.000000	0.000000	-755.04	-1812.11
1	FID	ACIS-S-4	7.19	14232	-0.044	0.014	0.005	0.010	0.000000	0.000000	2158.21	96.46
2	FID	ACIS-S-5	7.23	14231	0.038	0.001	0.008	0.014	0.000000	0.000000	-1807.89	90.02
3	GUIDE	351014304	8.40	28460	-0.053	-0.110	0.066	0.105	299.690883	35.621541	1496.57	682.68
4	GUIDE	350883560	8.57	28458	0.092	-0.089	0.066	0.105	298.735652	34.933431	-2139.28	1575.52
5	GUIDE	351020936	8.19	28456	0.113	0.129	0.059	0.094	299.556954	34.422753	-2264.41	-1470.08
6	GUIDE	351012848	9.07	28448	-0.090	0.213	0.072	0.116	300.487504	35.253107	1763.50	-1990.60
7	GUIDE	351406432	8.84	28444	-0.062	-0.145	0.097	0.150	299.163921	35.698316	841.33	2104.83

2.4 Star Slots

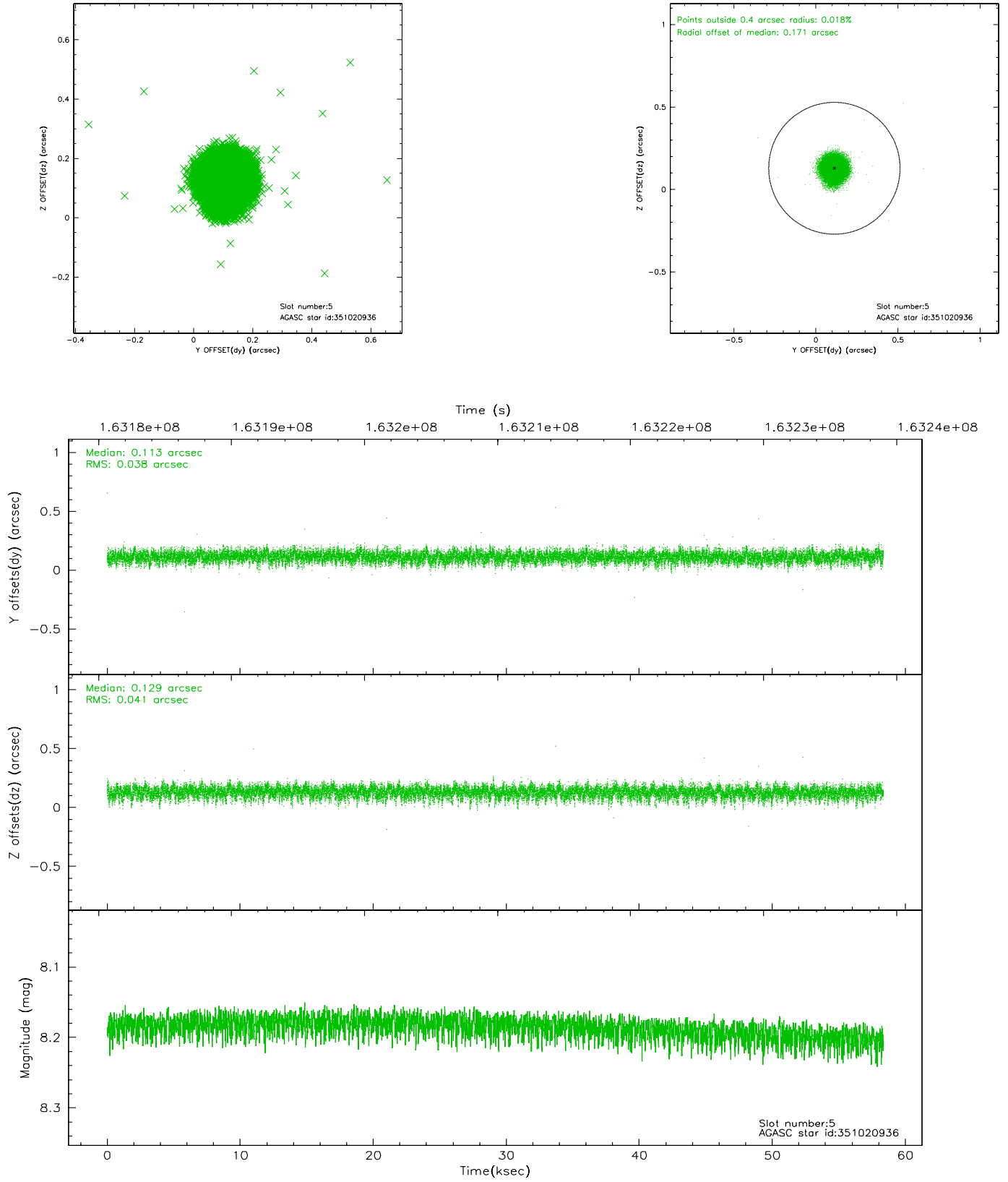
2.4.1 Slot 3



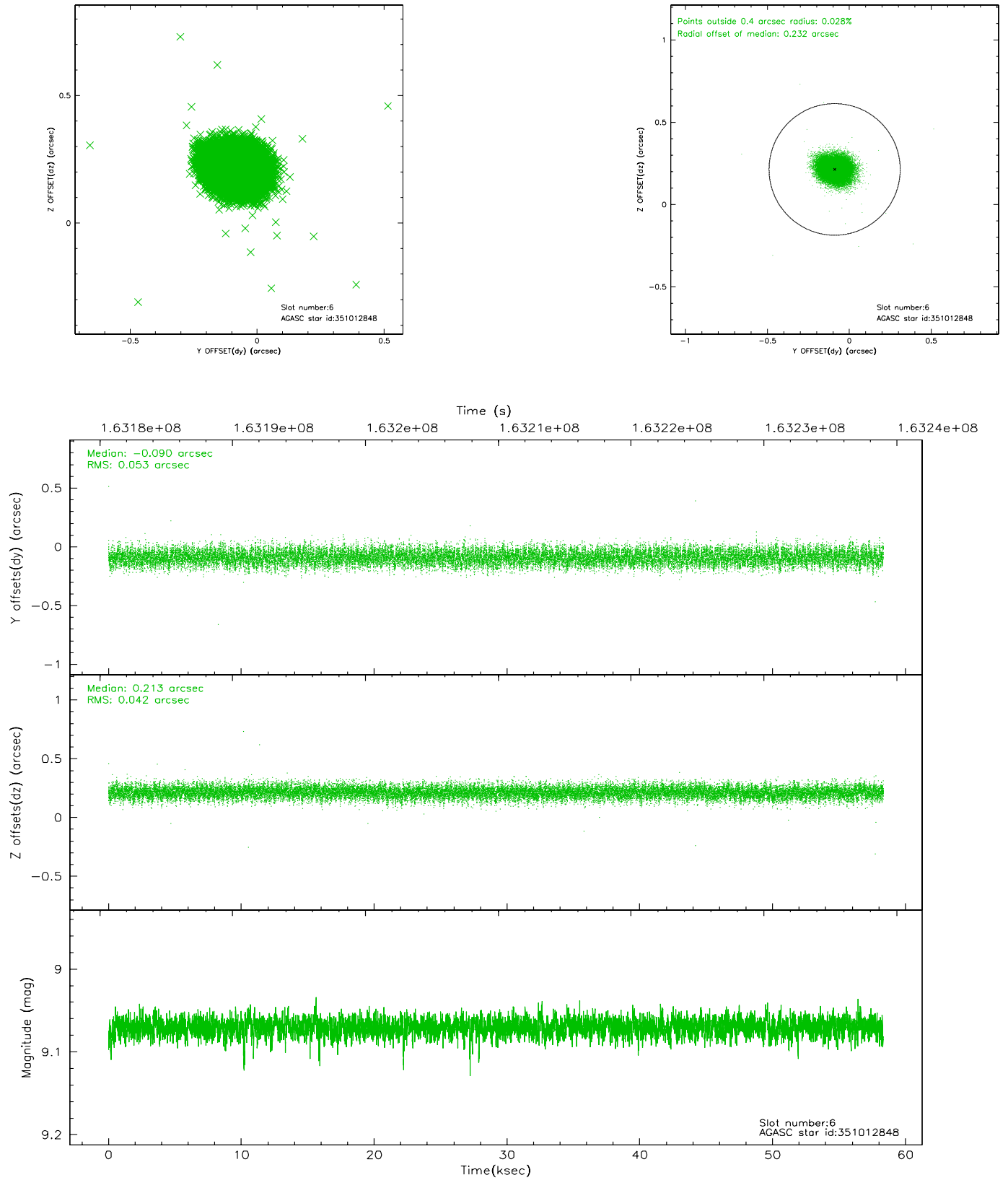
2.4.2 Slot 4



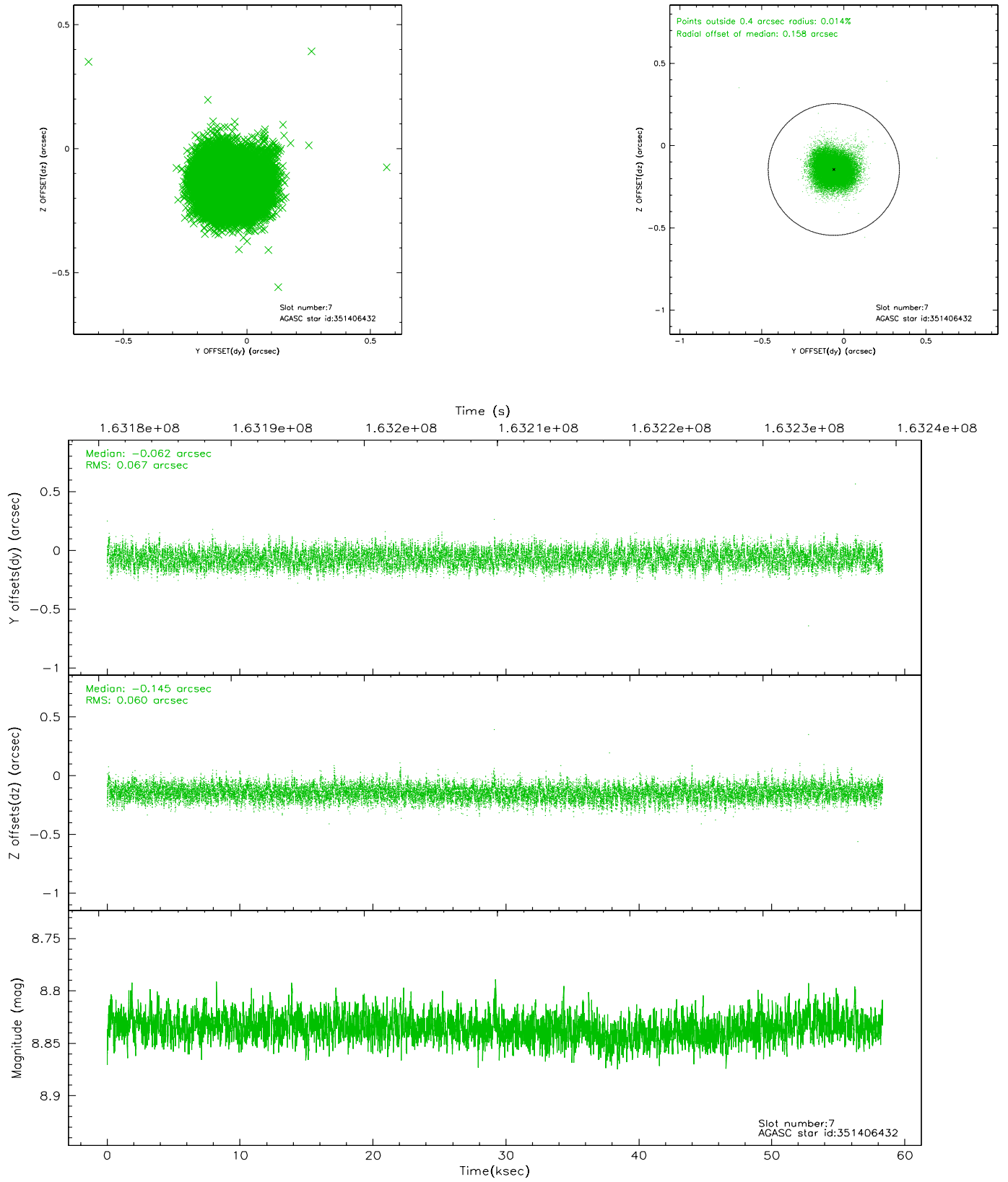
2.4.3 Slot 5



2.4.4 Slot 6

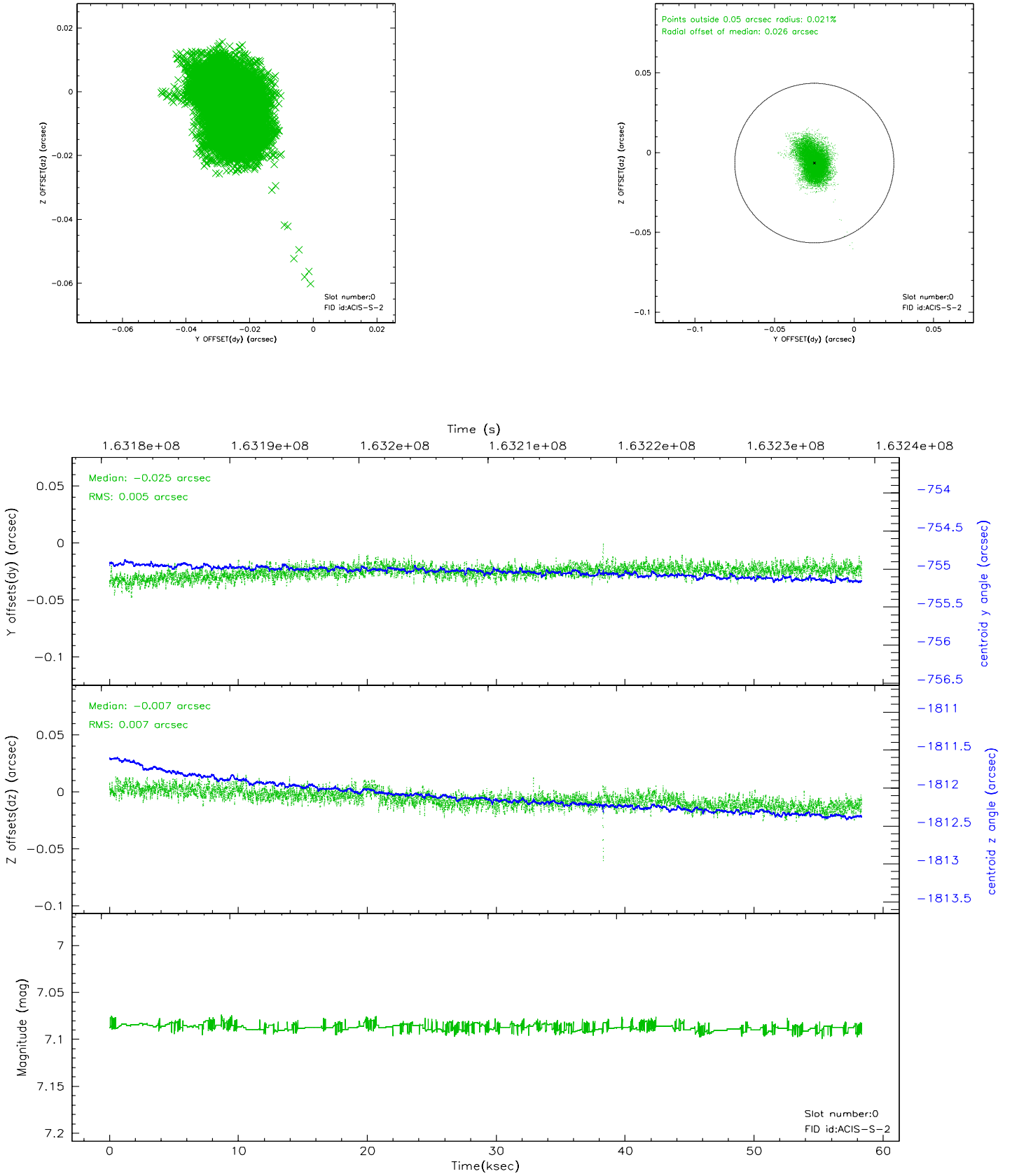


2.4.5 Slot 7

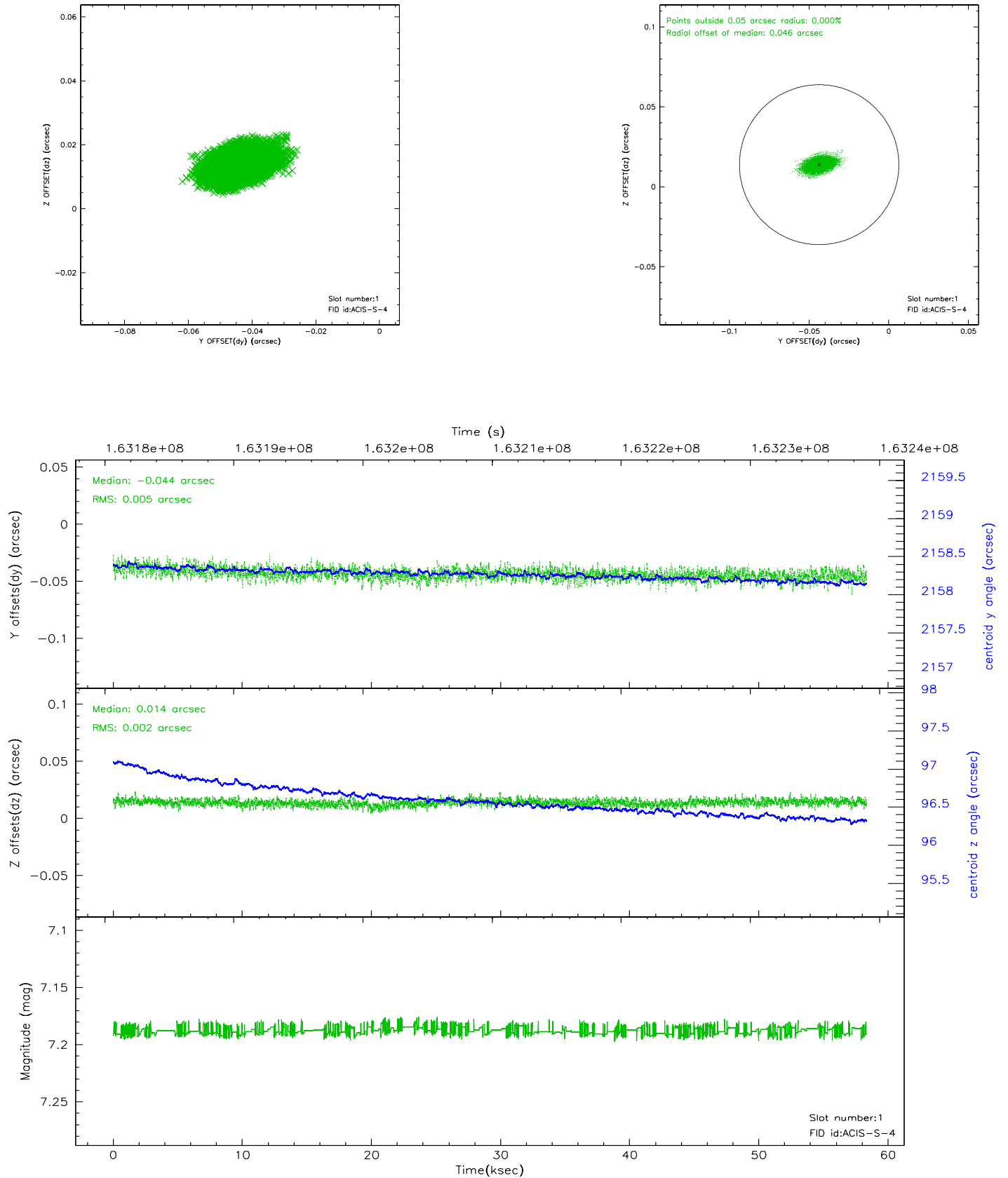


2.5 FID Slots

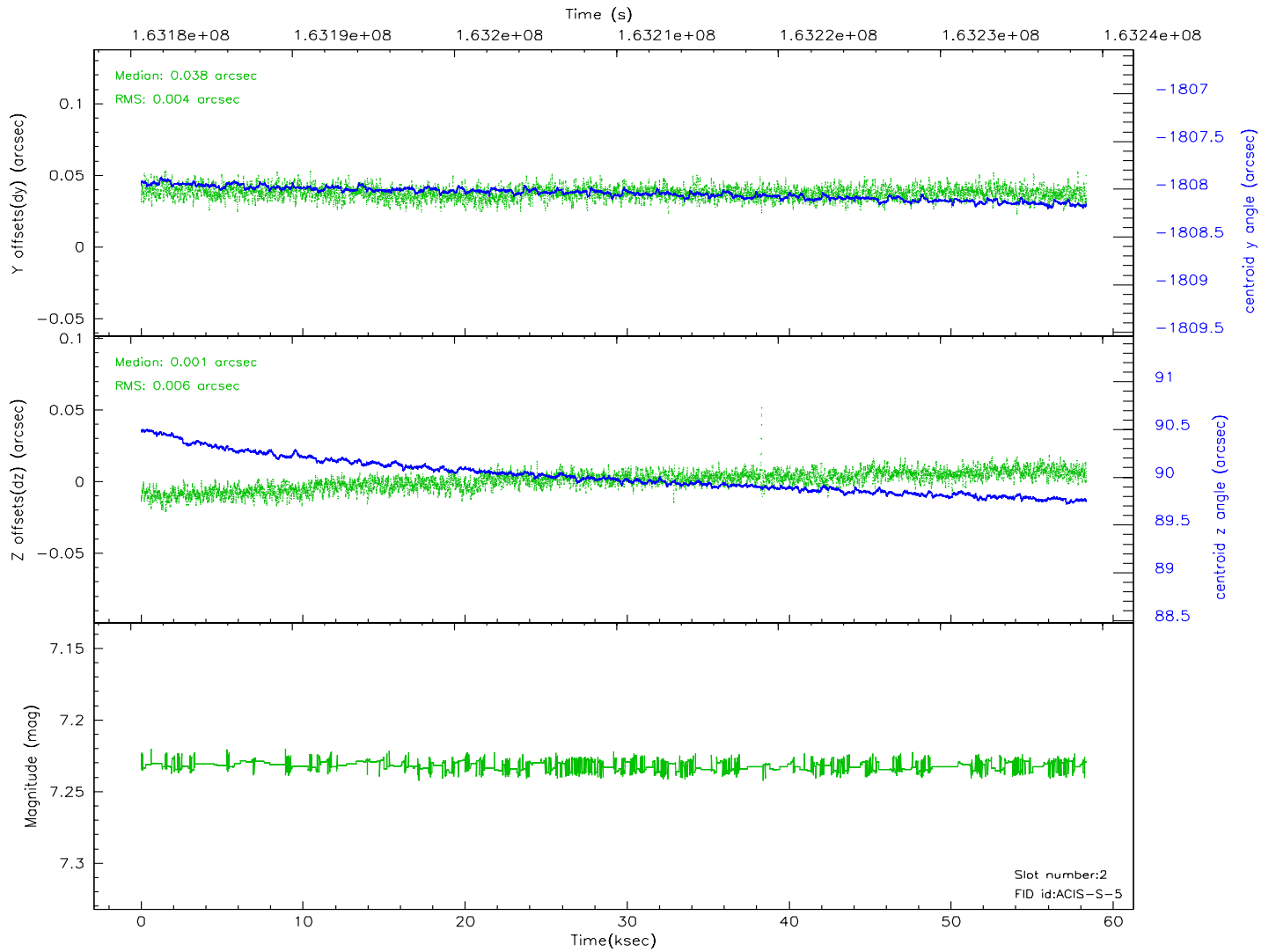
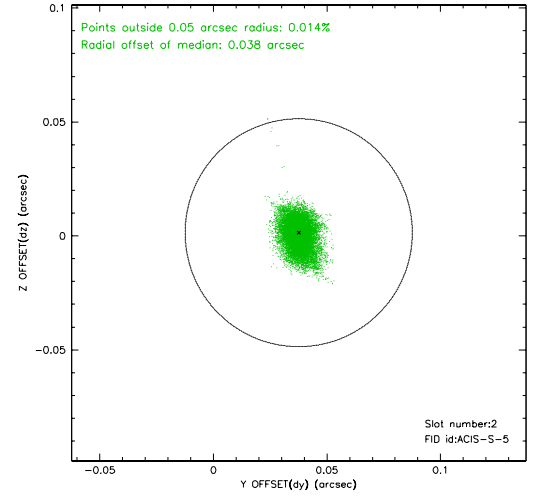
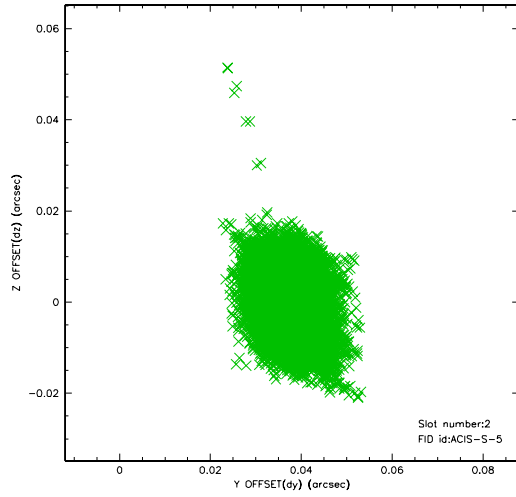
2.5.1 Slot 0



2.5.2 Slot 1

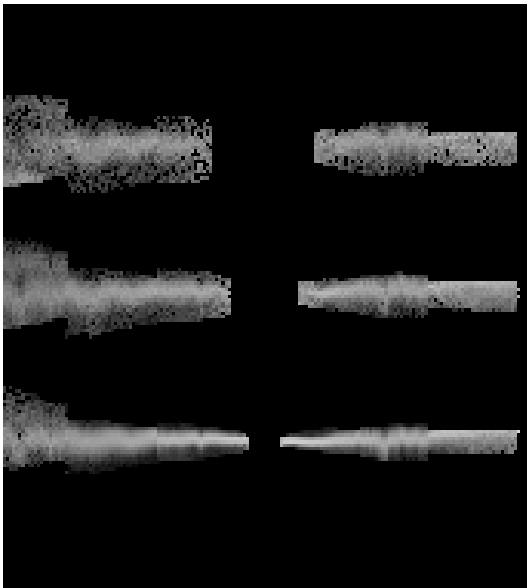


2.5.3 Slot 2

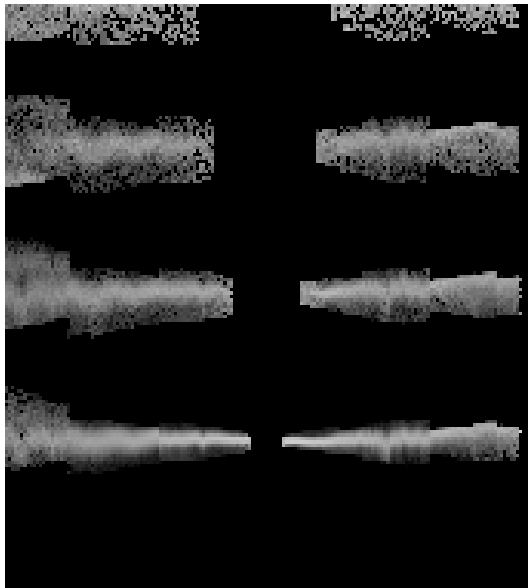


3 Gratings

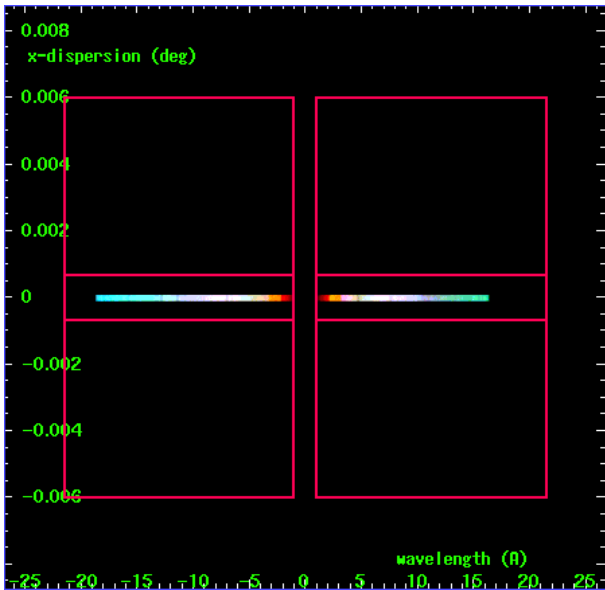
3.1 HEG Arm



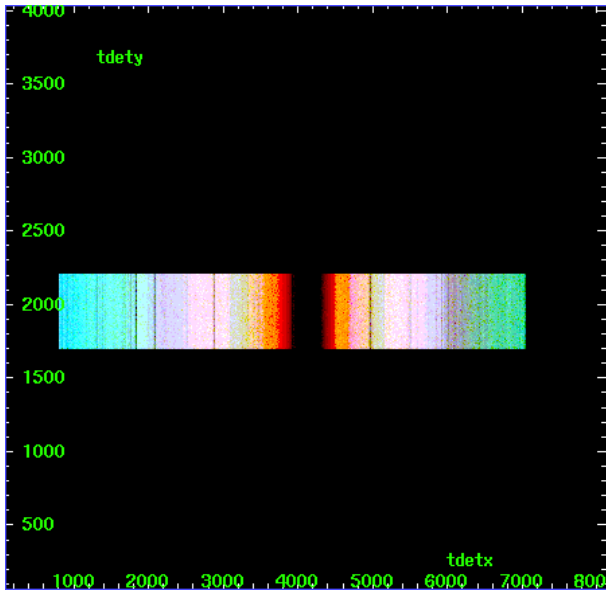
HEG Order Sort 123



HEG Order Sort ALL

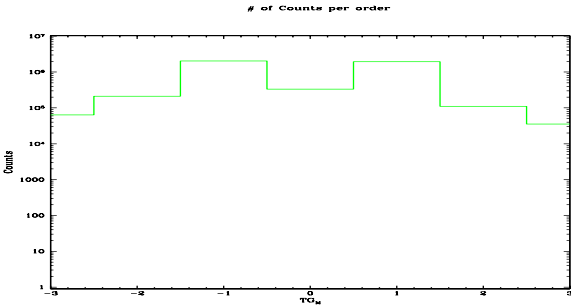


Spot Image HEG

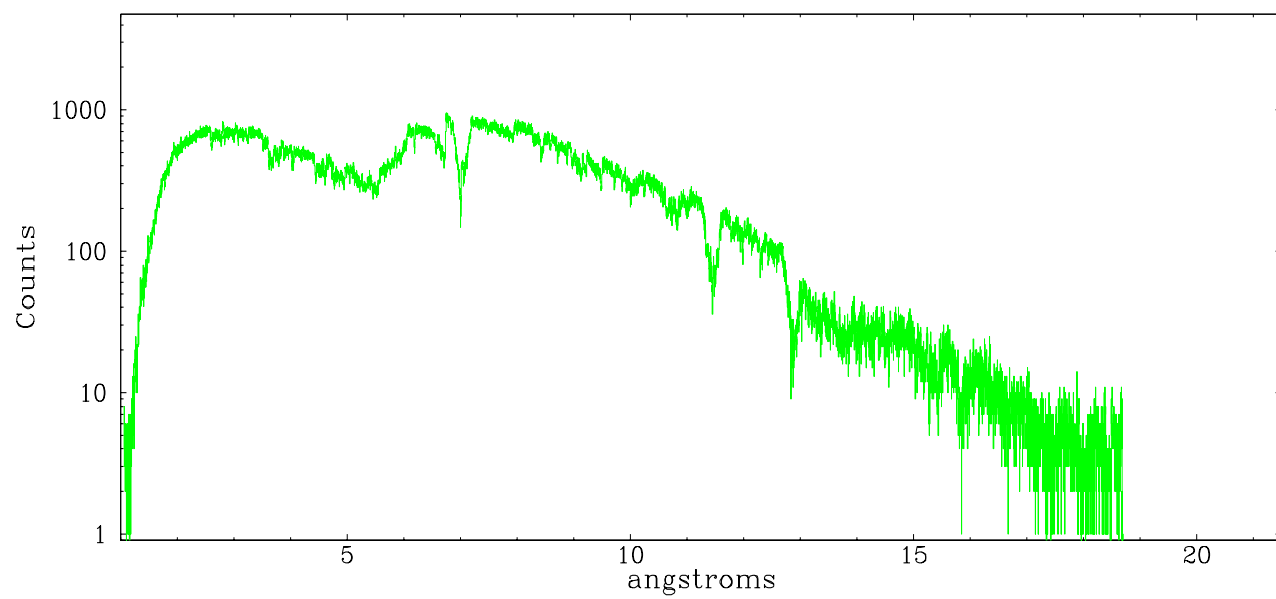


Full Detector HEG

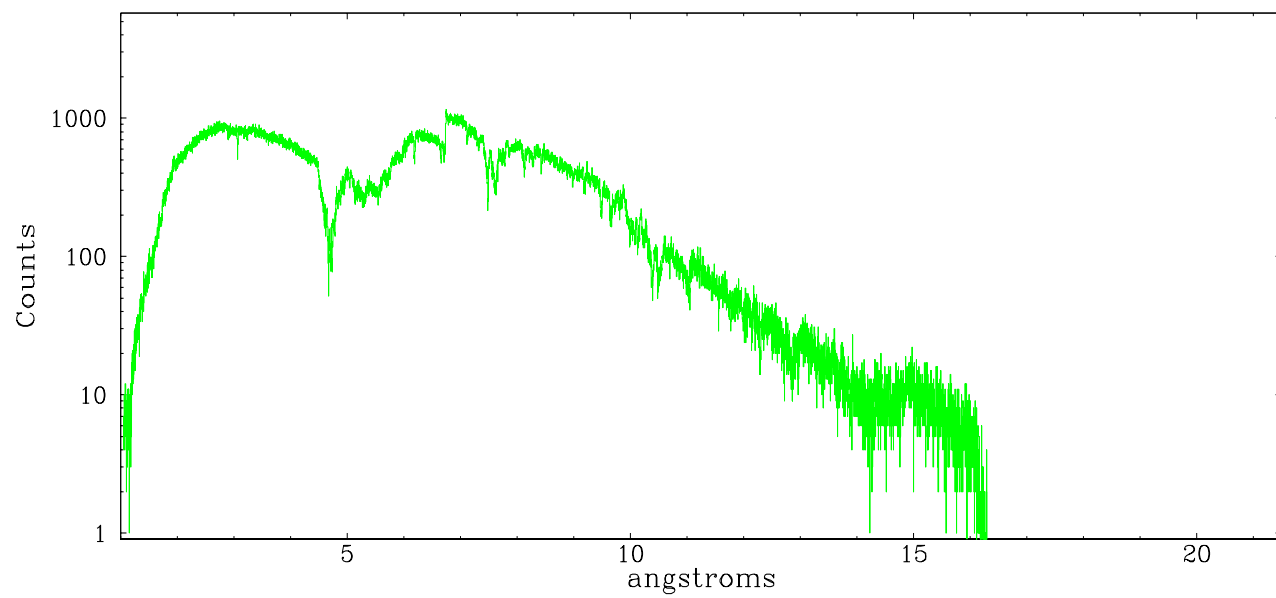
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	63973	211712	2044540	334114	1934065	110593	35483



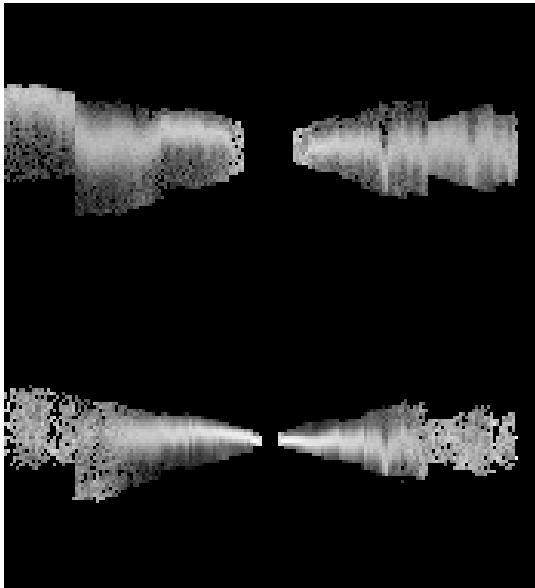
heg order -1



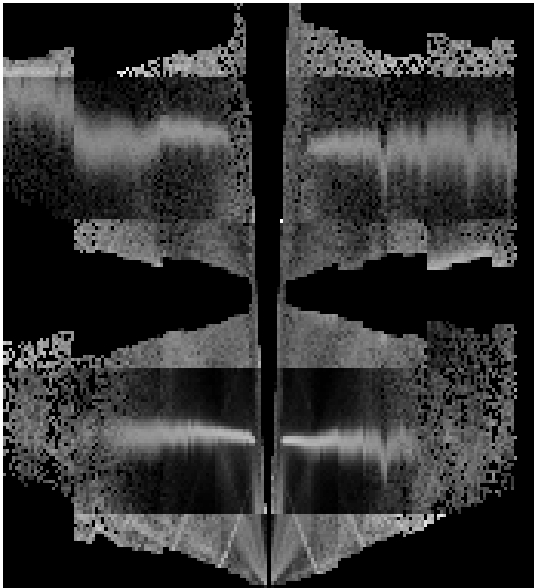
heg order +1



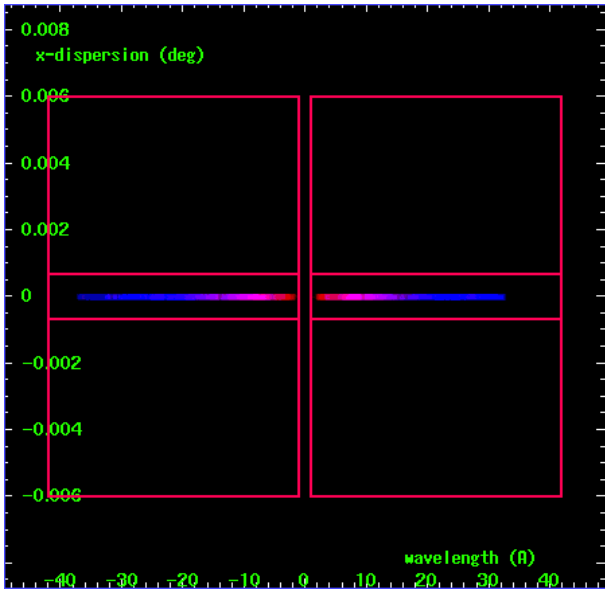
3.2 MEG Arm



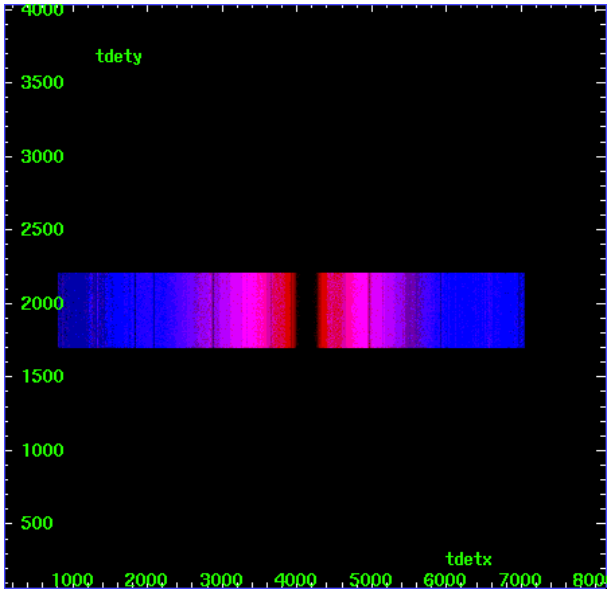
MEG Order Sort 123



MEG Order Sort ALL

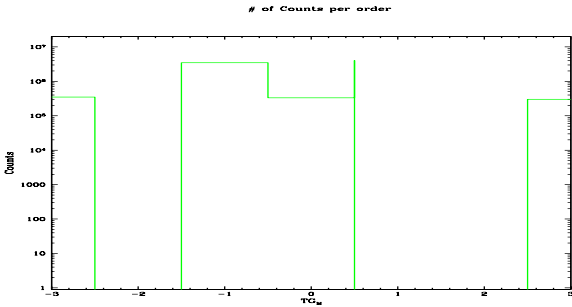


Spot Image MEG

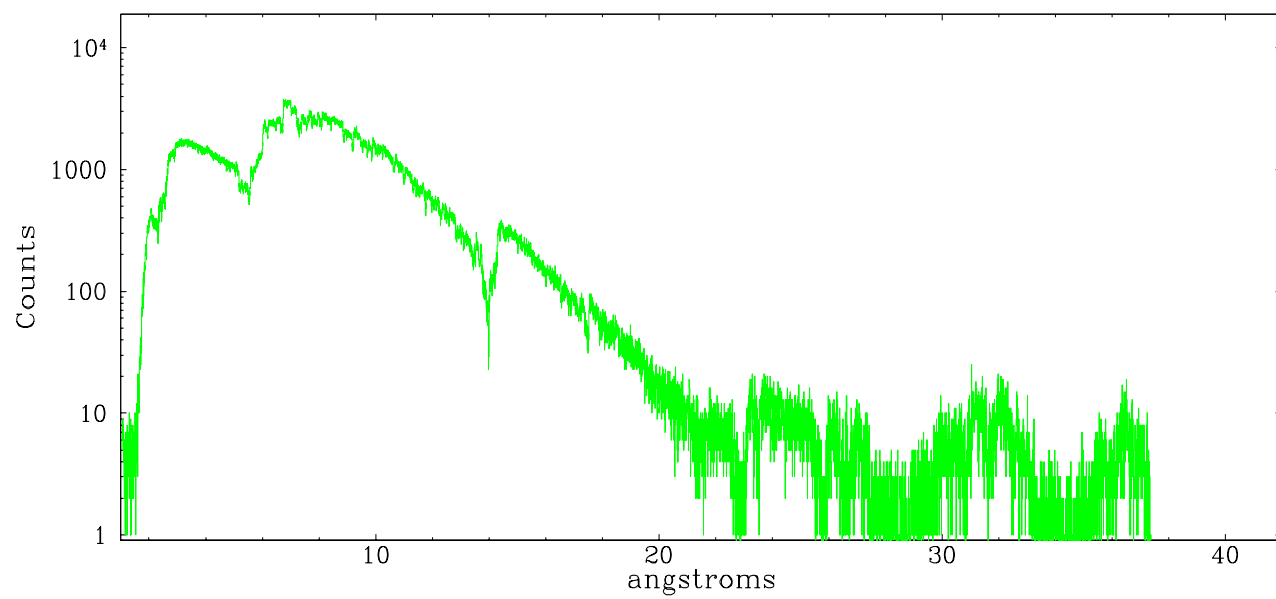


Full Detector MEG

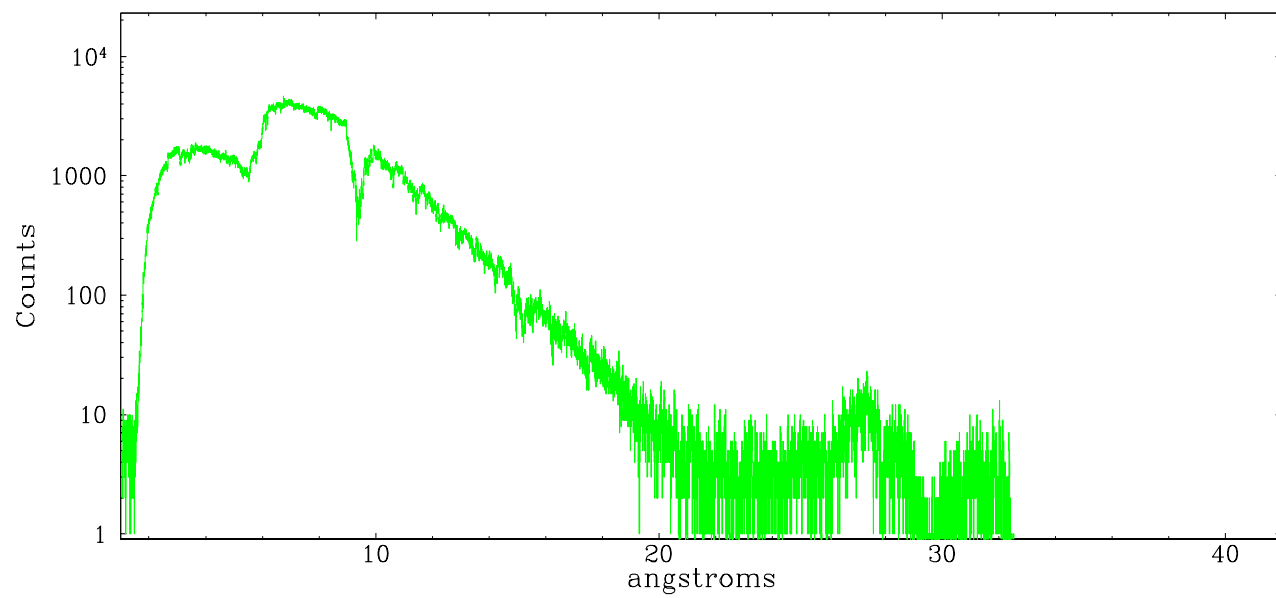
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	351656	0	3470235	334114	4023765	0	301467



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	David Huenemoerder
V&V Date (YYYY-MM-DD)	2006.07.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	55.85

A.2 Comments