

V&V Reference Report

L2 ASCDS Version : 7.6.8

Observation 4420 - L2 Version 001
Chandra X-Ray Center

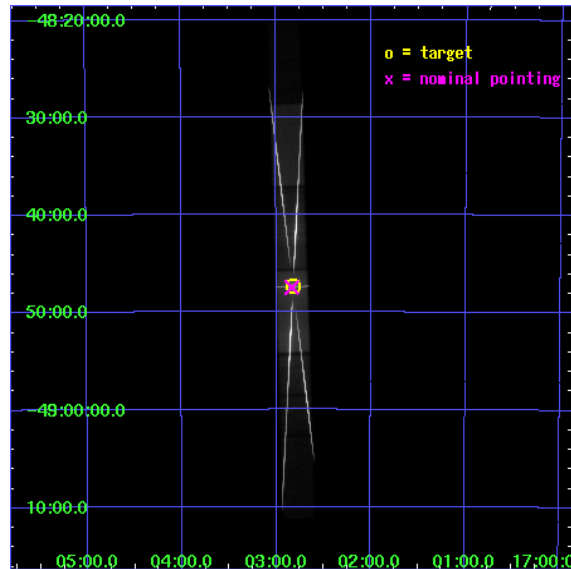
L2 Processing Date : Jul 25 2006

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	Gratings	17
3.1	HEG Arm	17
3.2	MEG Arm	19
A	Summary	21
A.1	Status	21
A.2	Comments	21

1 Front

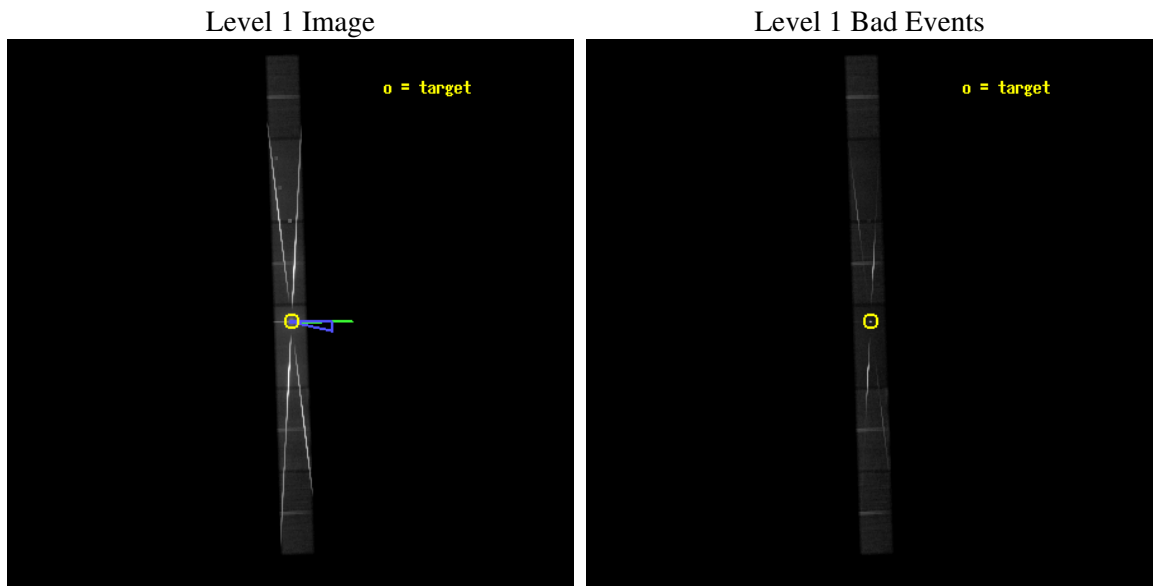
seq_num	400318
obs_id	4420
title	AN HETGS OBSERVATION OF GX 339-4 IN THE LOW/HARD STATE: ACCRETION GEOMETRY, RELATIVITY, AND JET FORMATION
observer	Dr Jon Miller
object	GX 339-4
dtcycle	0
cycle	P
ra_targ	255.70625
dec_targ	-48.789722
ra_nom	255.70870164432
dec_nom	-48.791280005596
roll_nom	88.158479608412
revision	2
ontime	76221.600324512
livetime	74050.852477597
ontime4	76221.600324512
ontime5	76220.15930441
ontime6	76220.15930438
ontime7	76221.600324512
ontime8	76220.15930441
ontime9	76221.600324512
l2events	7495744



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

obi_num	0
ascdsver	7.6.8
caldbver	3.2.2
date	2006-07-24T23:00:10
revision	2

sched_exp_time	75722.000000
ontime	76224.429531991
ontime4	76224.429531991
ontime5	76222.988531828
ontime6	76222.98851186
ontime7	76224.429531991
ontime8	76222.988531828
ontime9	76224.429531991
l1events	9373206

2.1.4 Events

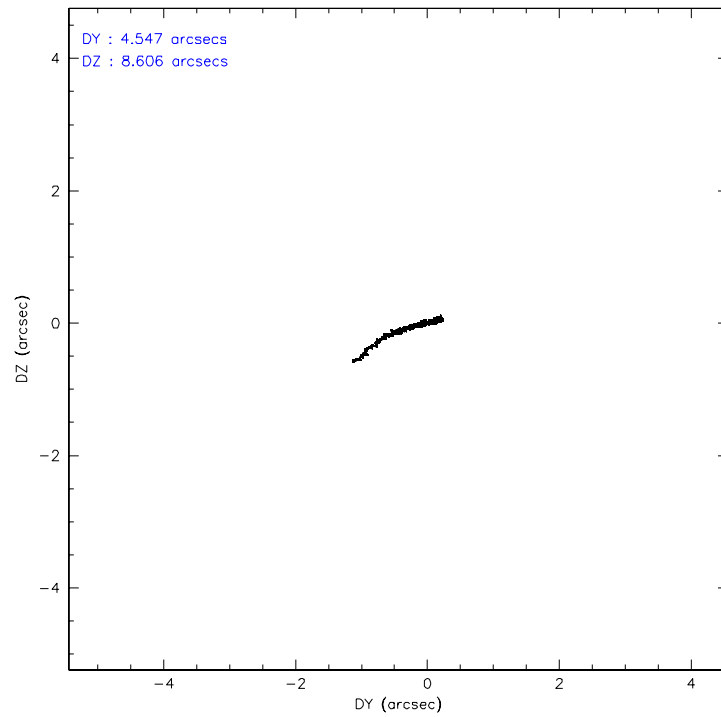
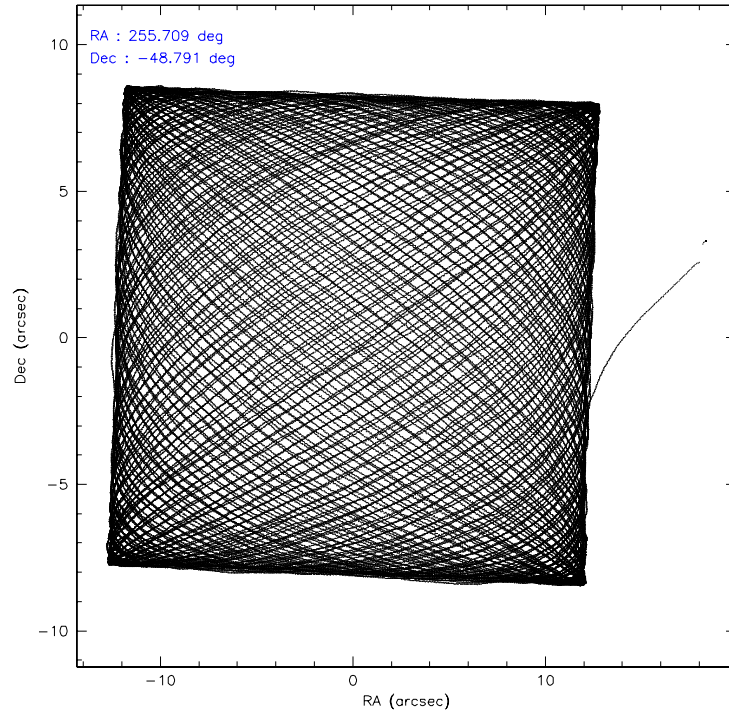
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	260826	1230409	2980027	2704628	1819826	377490
rejected events	209902	178514	299641	340854	247505	179287
rejected %	80%	14%	10%	12%	13%	47%

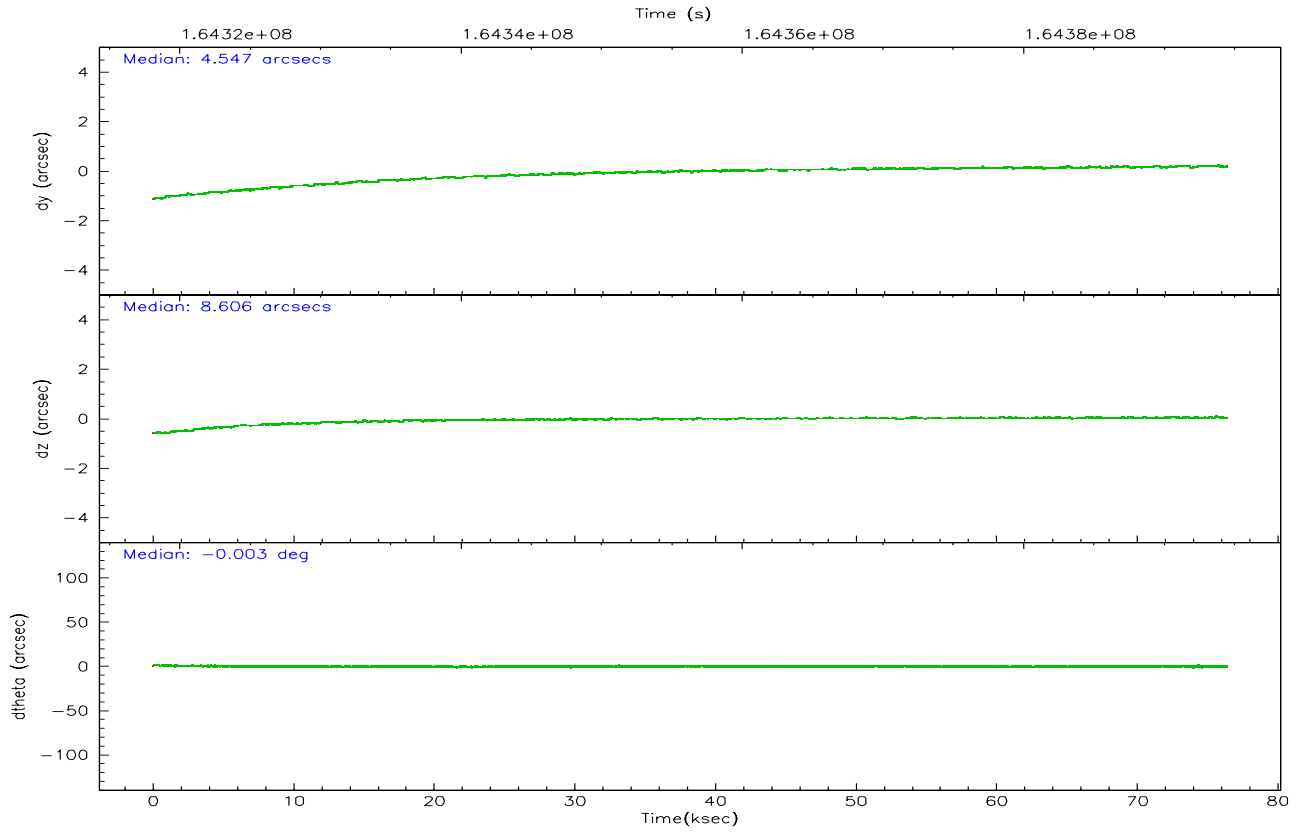
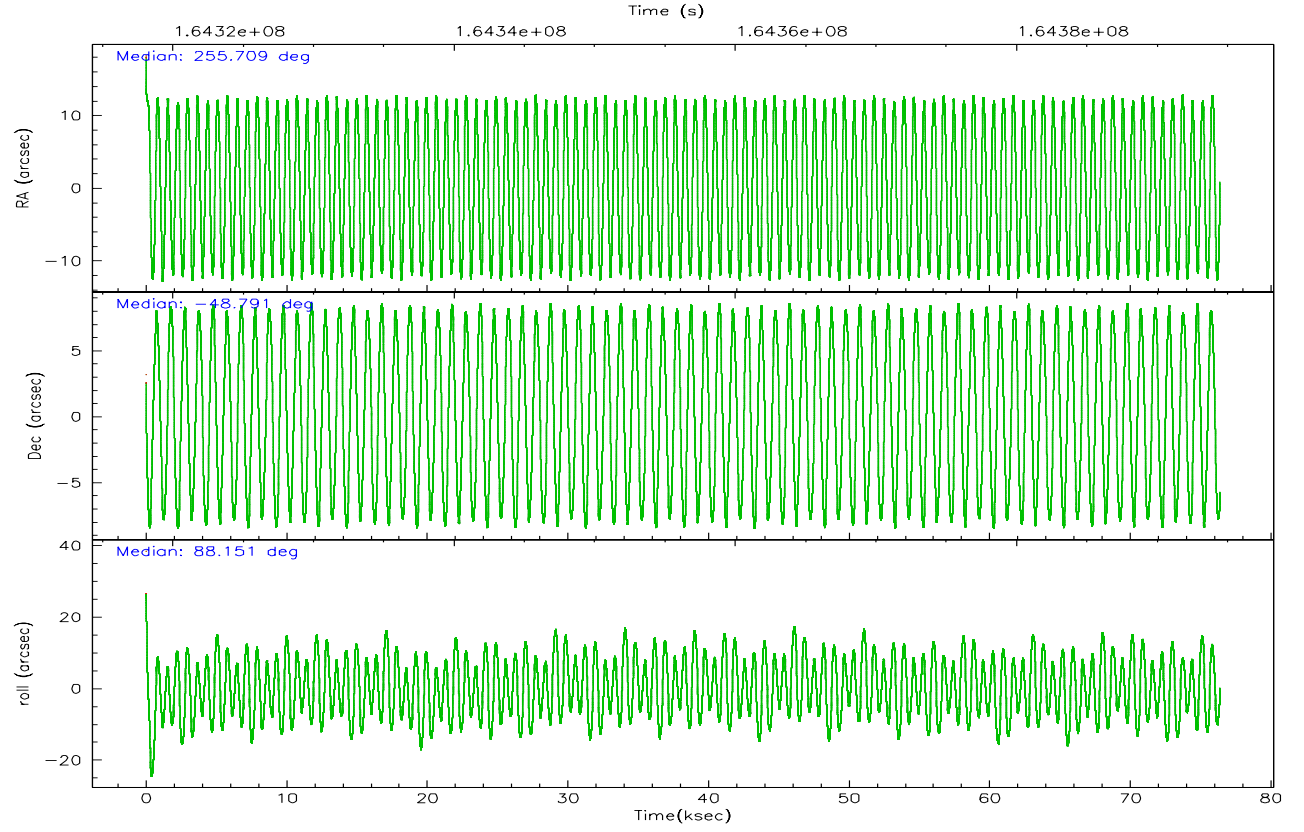
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	30328	326542	2083099	477177	1260251	149515
	11%	26%	69%	17%	69%	39%
grade 1 events	149	2368	59180	20480	15546	496
	0%	0%	1%	0%	0%	0%
grade 2 events	8050	339687	310207	627506	161712	22940
	3%	27%	10%	23%	8%	6%
grade 3 events	3893	86623	110940	258636	55368	8867
	1%	7%	3%	9%	3%	2%
grade 4 events	3837	86028	108002	257961	54617	8827
	1%	6%	3%	9%	3%	2%
grade 5 events	7484	26828	43727	100260	17875	8650
	2%	2%	1%	3%	0%	2%
grade 6 events	4819	213045	68235	742582	40436	8061
	1%	17%	2%	27%	2%	2%
grade 7 events	202266	149288	196637	220026	214021	170134
	77%	12%	6%	8%	11%	45%

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	FAINT	FAINT	On-chip summing requested	N	N
Observation mode	POINTING	POINTING	Subarray requested	CUSTOM	CUSTOM
Pointing RA	255.728718	255.7087016443196	Subarray start row	1	1
Pointing Dec	-48.815086	-48.79128000559632	Subarray row count	400	400
Pointing Roll	88.016916	88.15847960841214	Alternating exposures requested	N	N
Roll angle	95.000000	95.000000	Primary exposure time	0.000000	1.4
Roll tolerance	7.000000	7.000000			
Roll constraint allows 180D rotation	N	N			
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-182.644523	-182.6373491900168			
SIM translation stage offset (mm)	-7.488	-7.495173392990978			
Observation start time	164318764.184000	164317559.79222			
Observation start date	2003-03-17T20:05:00	2003-03-17T19:45:59			
Observation end time	164394486.184000	164394962.15798			
Observation end date	2003-03-18T17:07:02	2003-03-18T17:16:02			
Read mode	TIMED	TIMED			

2.3 Aspect



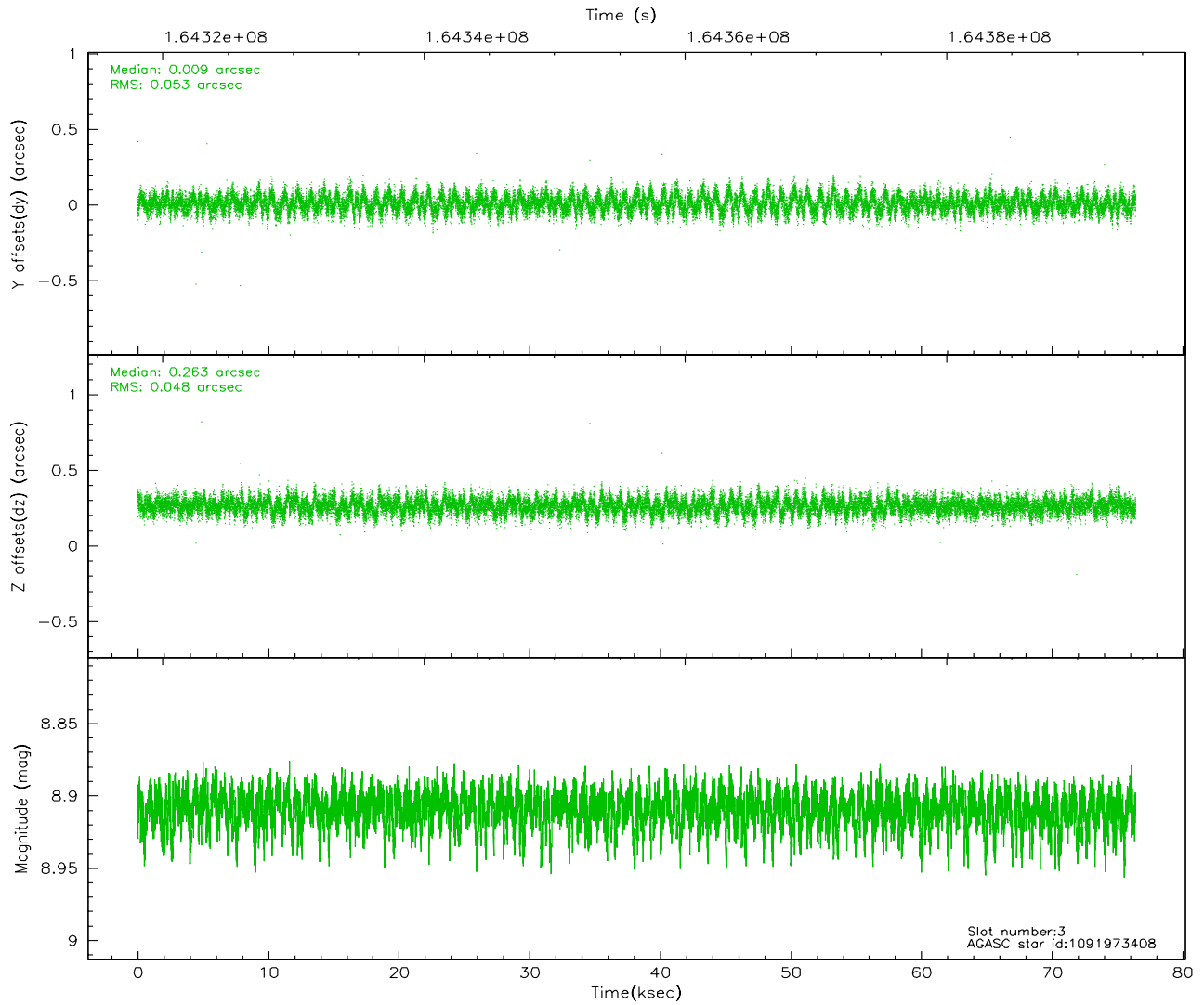
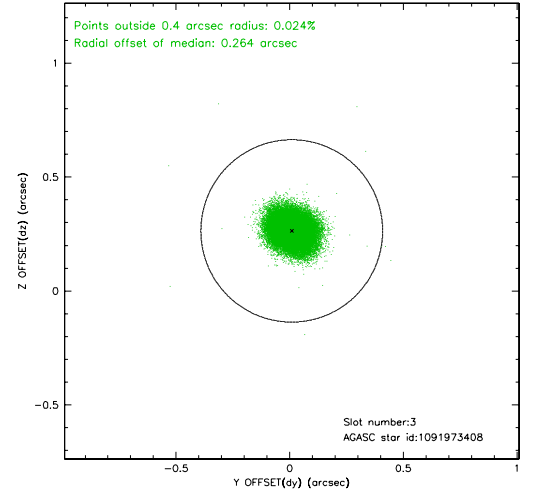
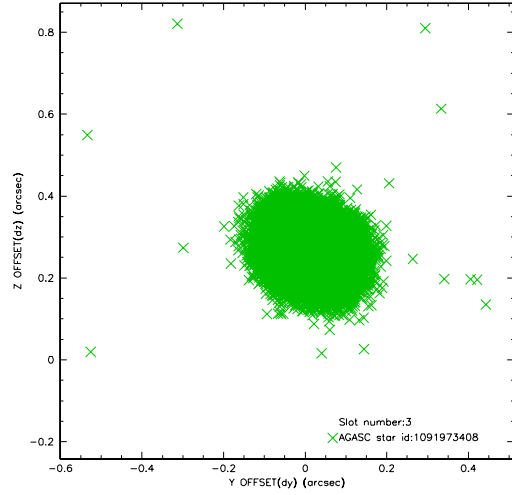


Slot Statistics

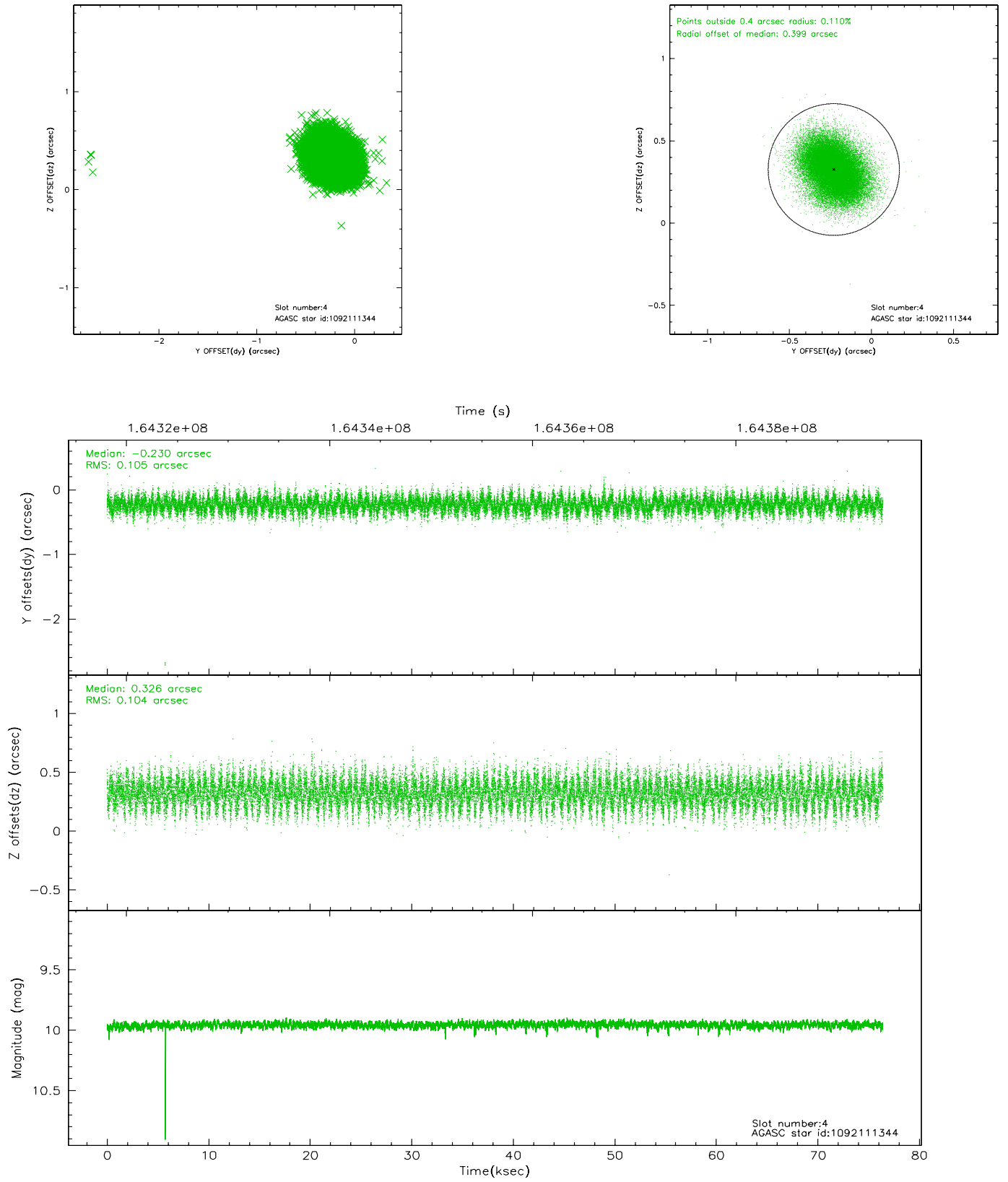
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	18633	-0.045	-0.079	0.011	0.024	0.000000	0.000000	-756.63	-1884.25
1	FID	ACIS-S-4	7.18	18633	0.017	0.042	0.014	0.043	0.000000	0.000000	2156.76	24.35
2	FID	ACIS-S-5	7.23	18633	-0.001	0.044	0.010	0.024	0.000000	0.000000	-1809.48	18.02
3	GUIDE	1091973408	8.91	37239	0.009	0.263	0.076	0.122	255.800233	-48.601800	773.33	-143.37
4	GUIDE	1092111344	9.96	37216	-0.230	0.326	0.156	0.250	256.132869	-48.213784	2194.41	-893.71
5	GUIDE	1092485728	6.89	37267	0.029	-0.445	0.073	0.123	254.773222	-48.875124	-308.56	2252.33
6	GUIDE	1092491384	9.12	37243	0.198	0.093	0.108	0.171	254.923973	-49.184437	-1404.37	1845.96
7	GUIDE	1091972504	9.43	37247	-0.003	-0.239	0.116	0.186	254.743578	-48.438196	1259.14	2397.73

2.4 Star Slots

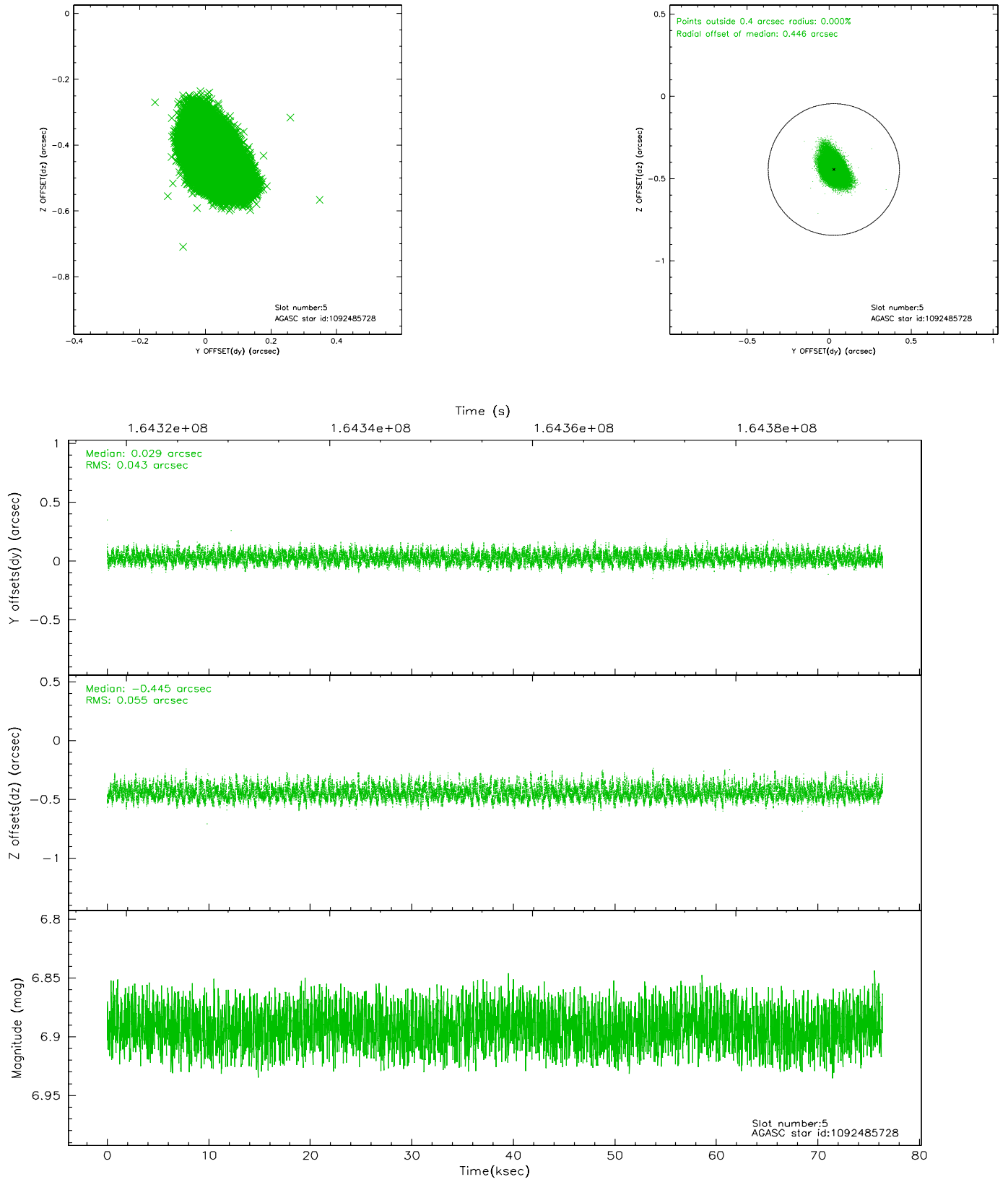
2.4.1 Slot 3



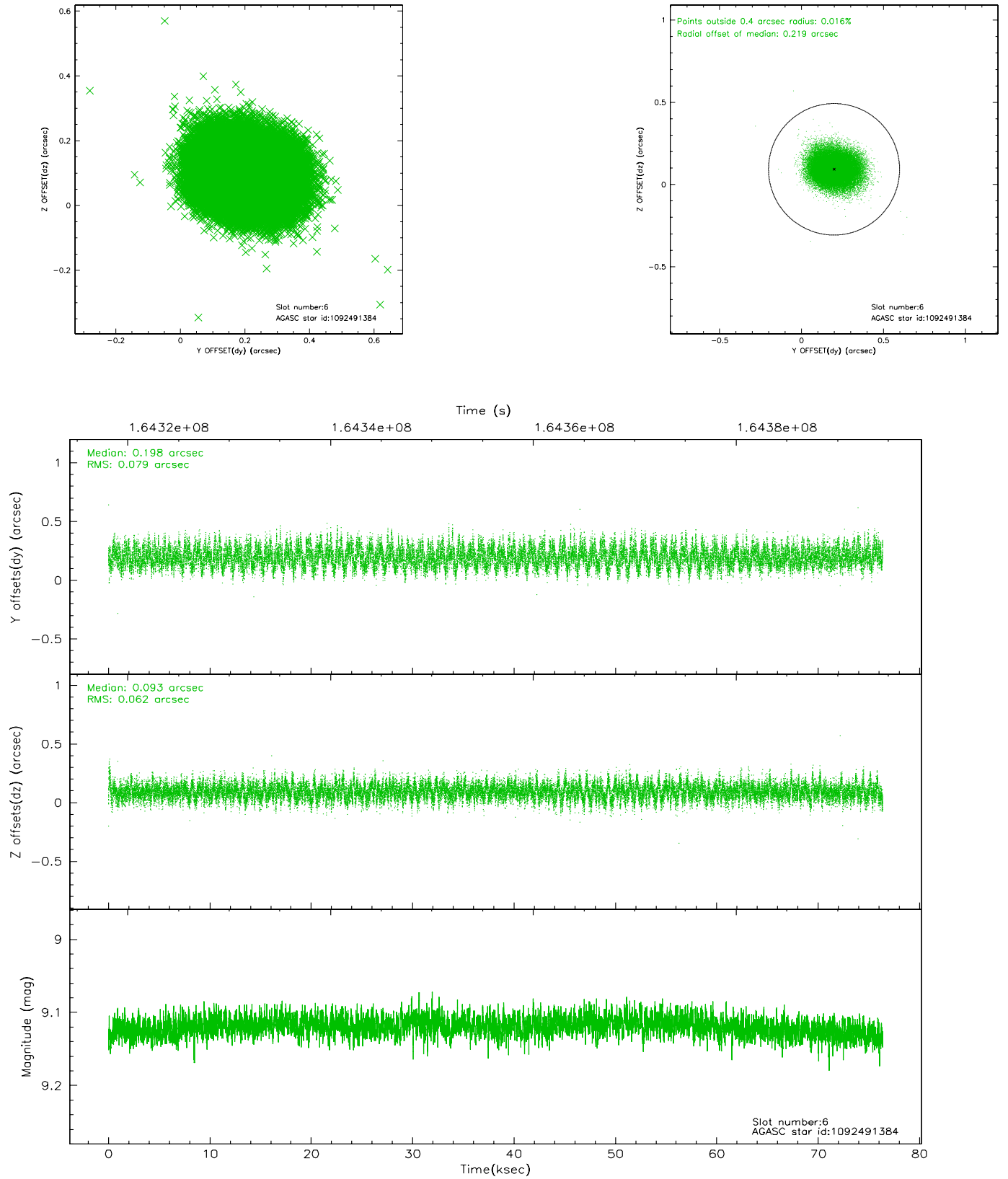
2.4.2 Slot 4



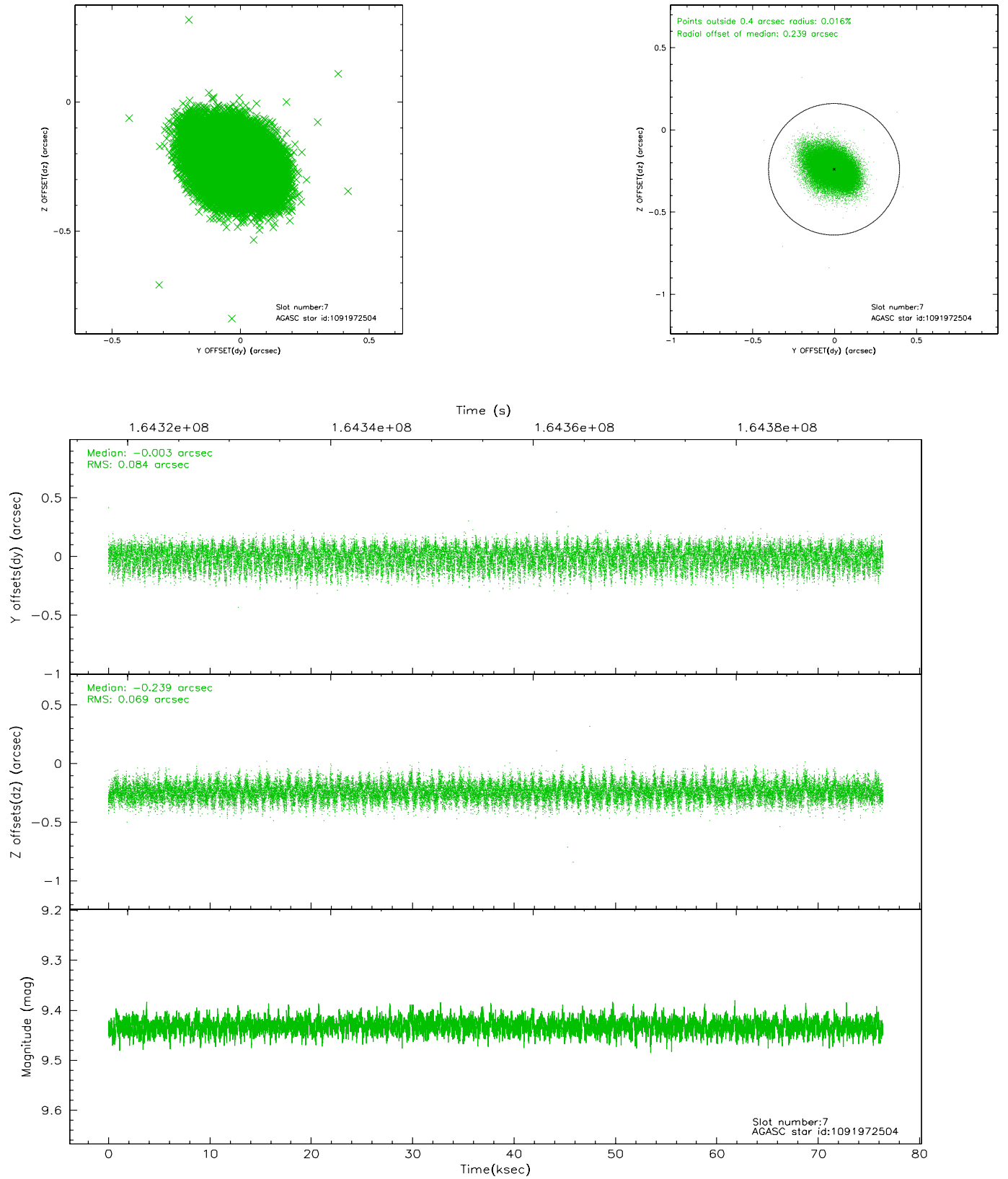
2.4.3 Slot 5



2.4.4 Slot 6

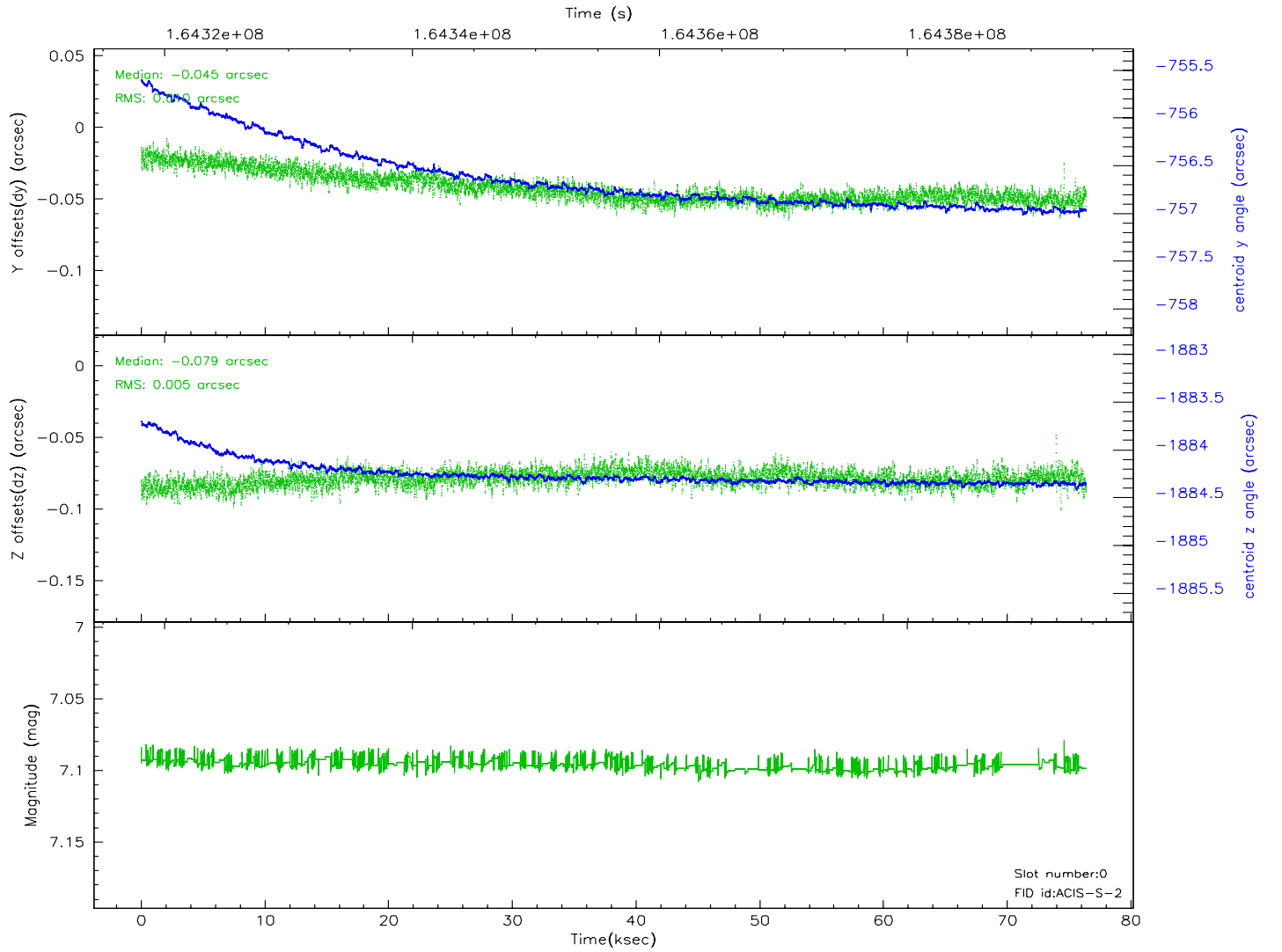
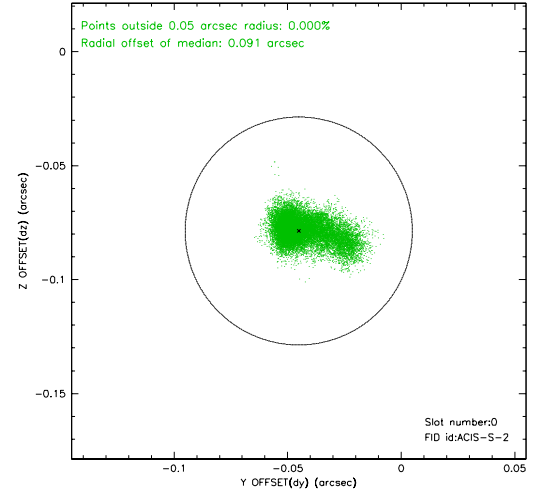
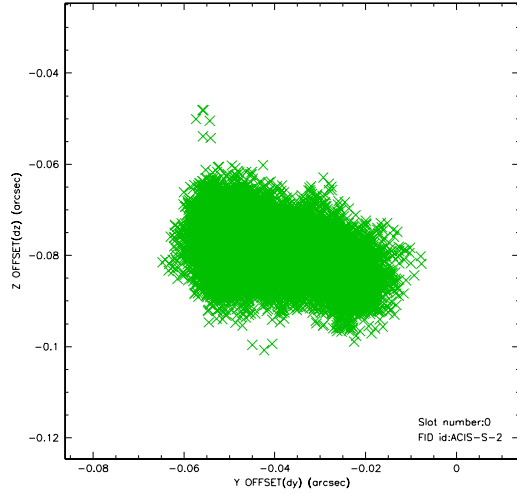


2.4.5 Slot 7

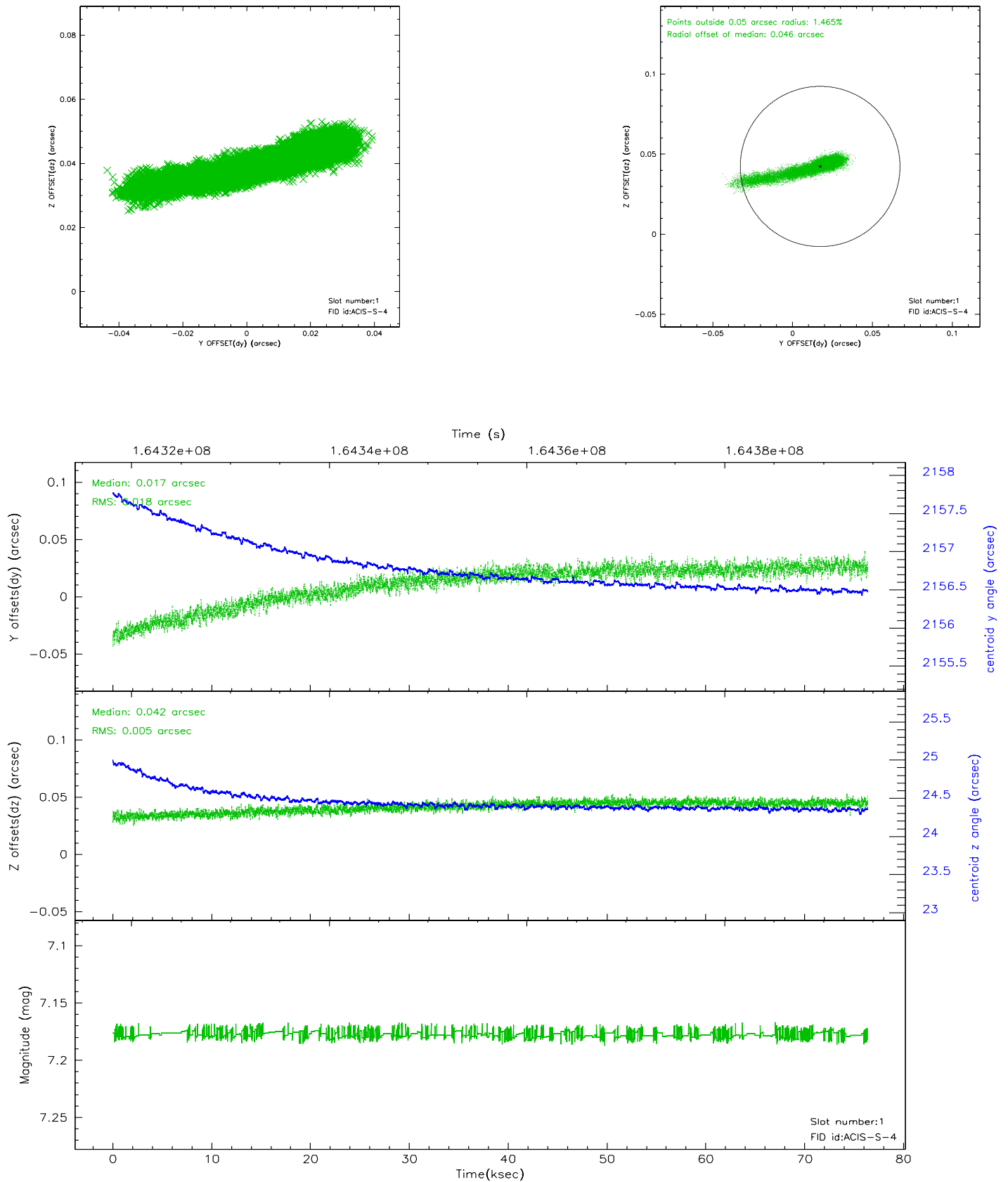


2.5 FID Slots

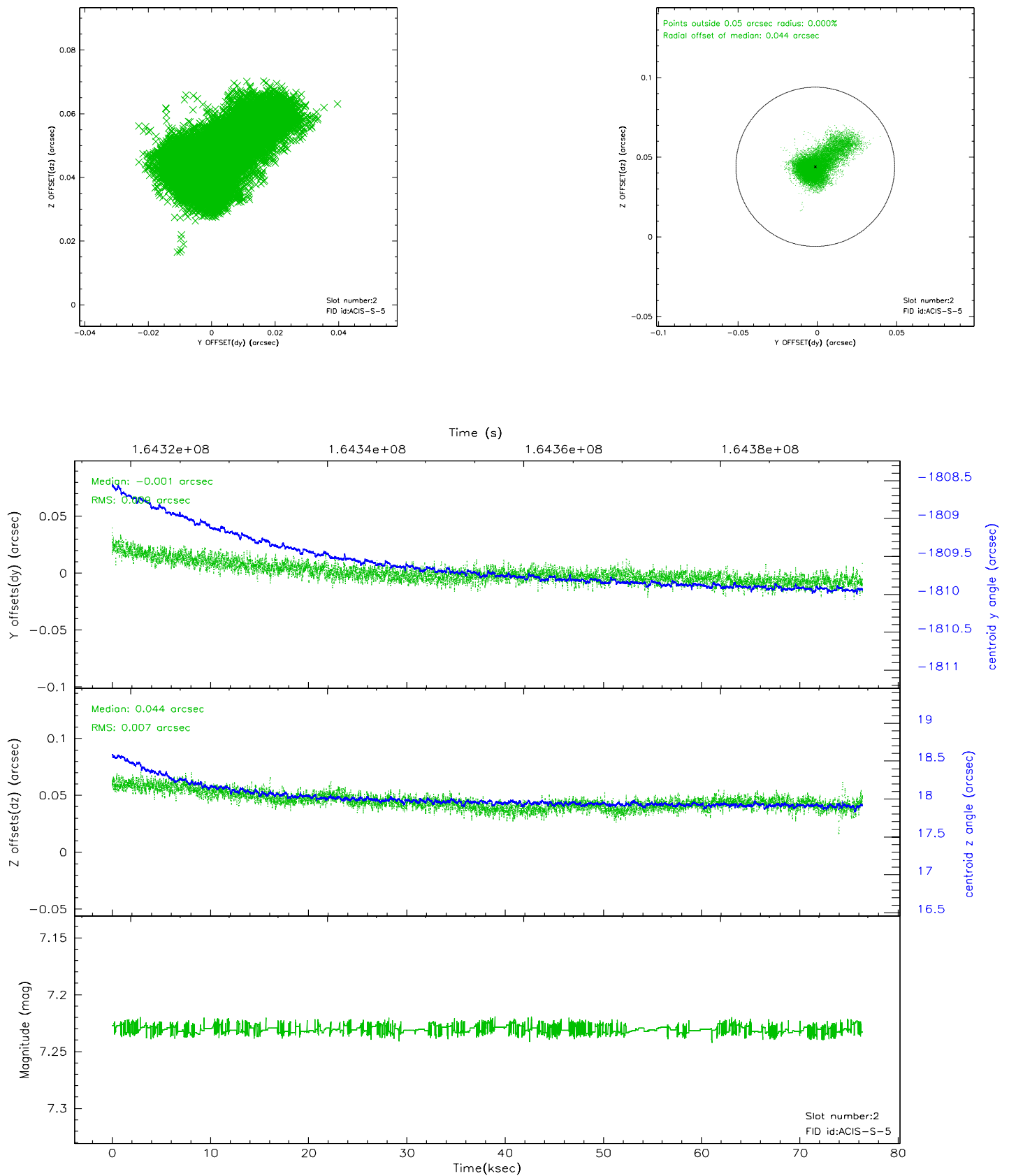
2.5.1 Slot 0



2.5.2 Slot 1

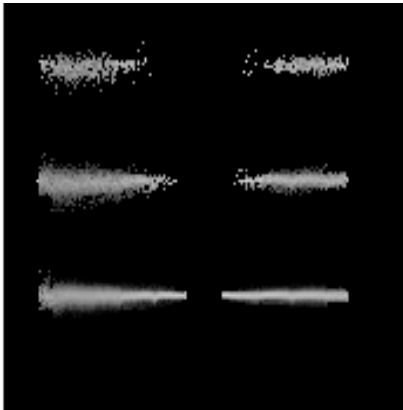


2.5.3 Slot 2

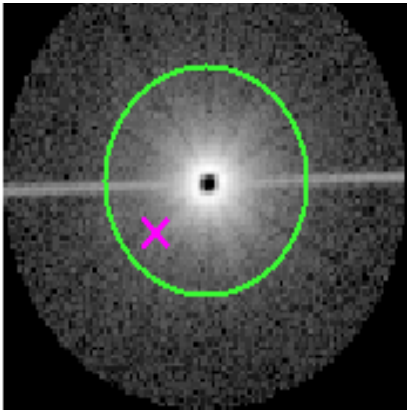


3 Gratings

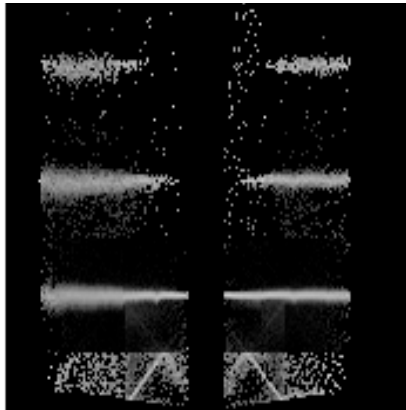
3.1 HEG Arm



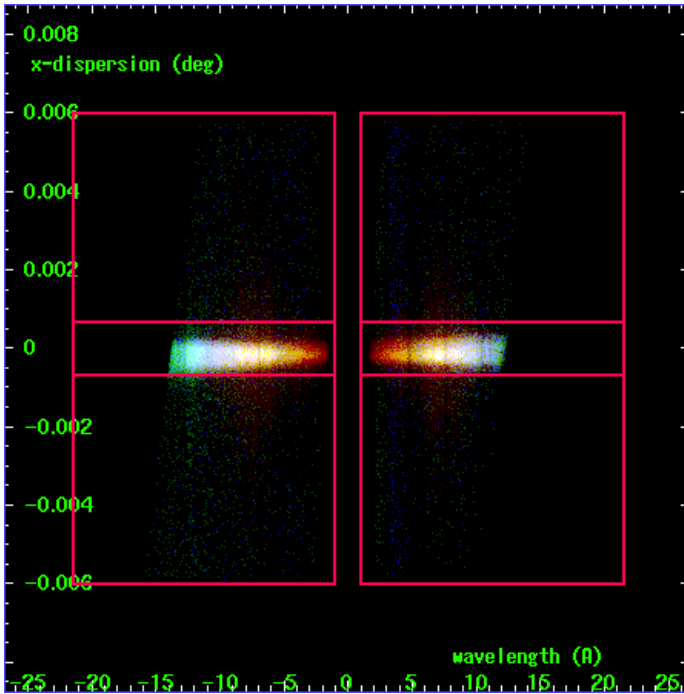
HEG Order Sort 123



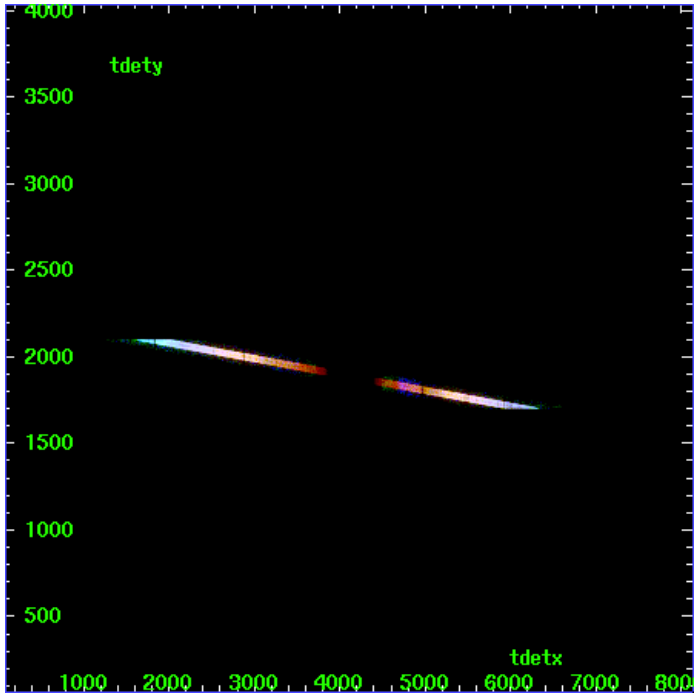
HEG Zero Order



HEG Order Sort ALL

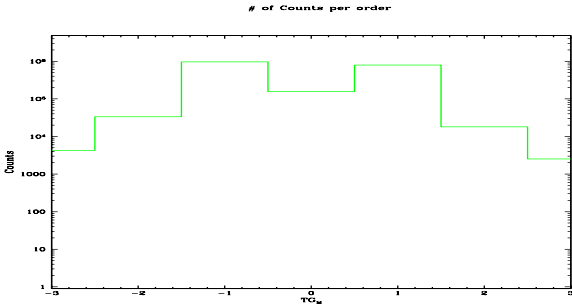


Spot Image HEG

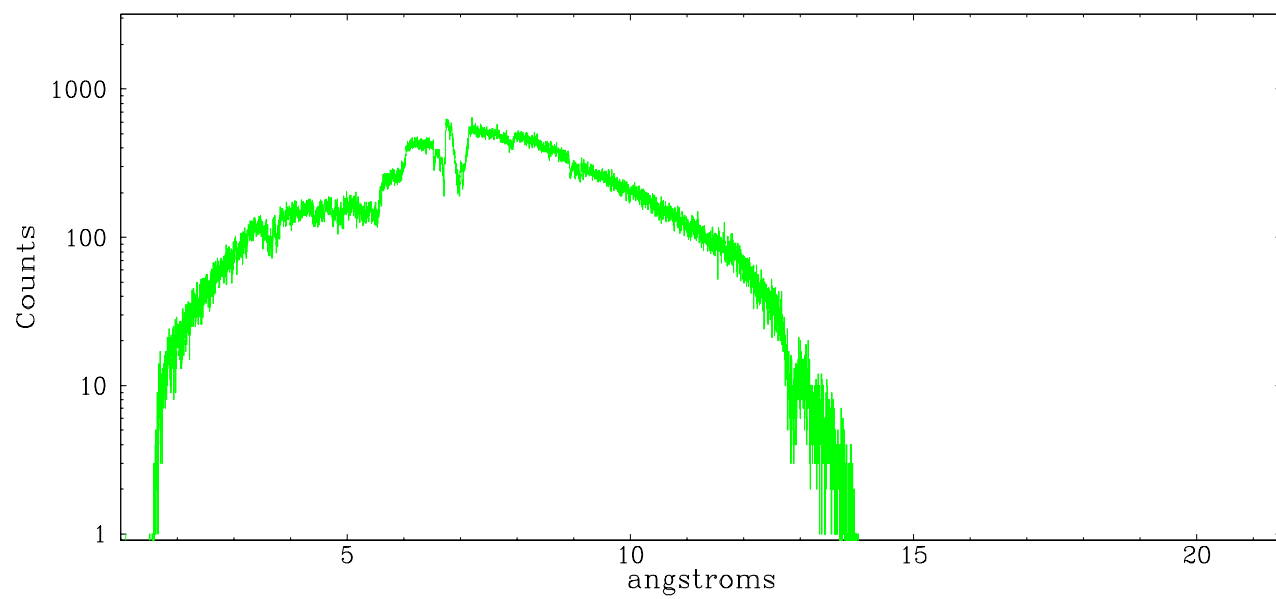


Full Detector HEG

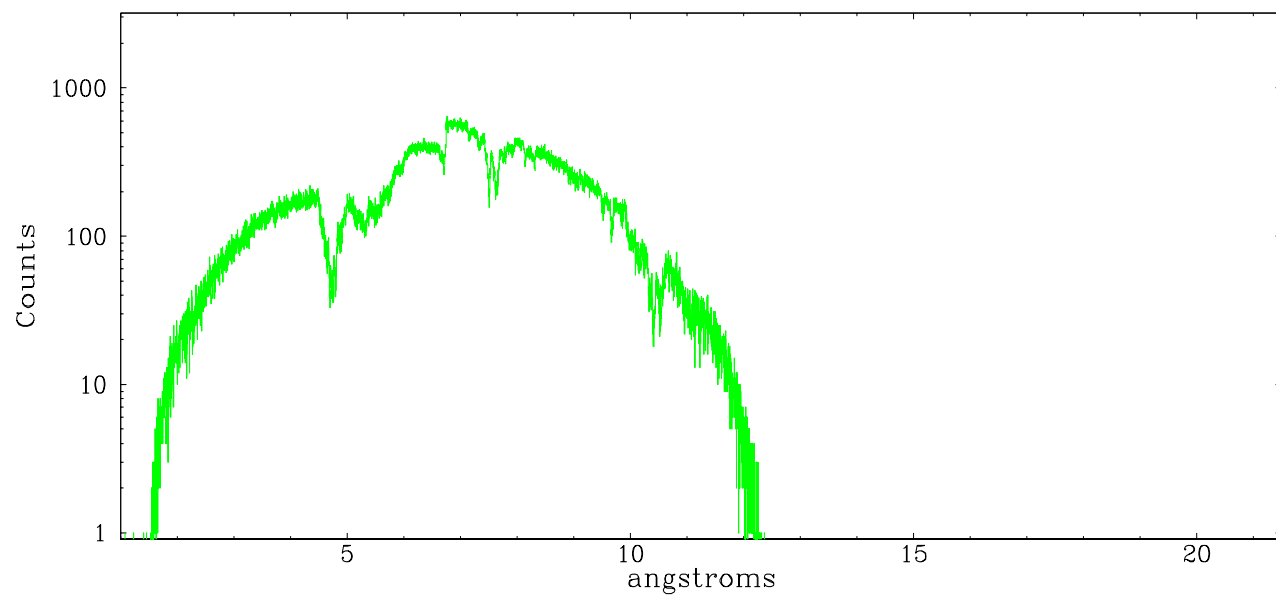
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	4278	33591	960884	156510	794315	17954	2540



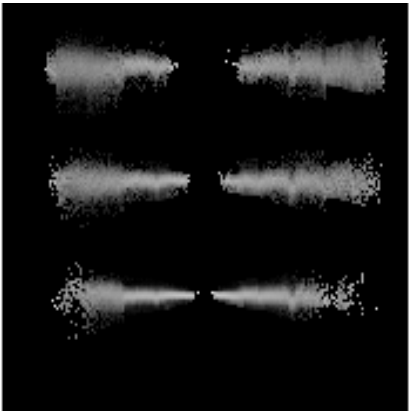
heg order -1



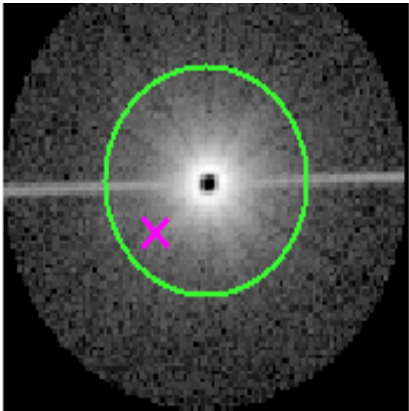
heg order +1



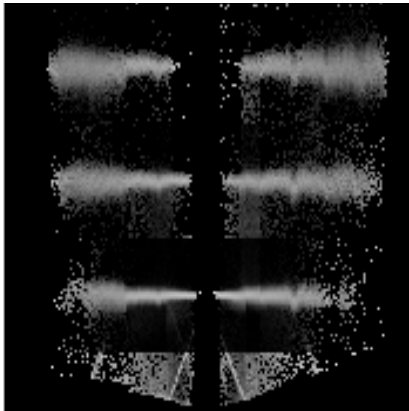
3.2 MEG Arm



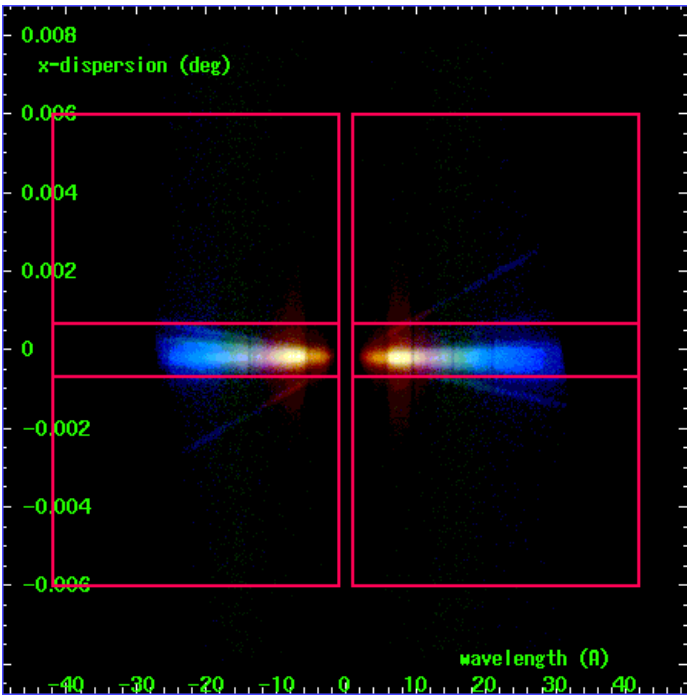
MEG Order Sort 123



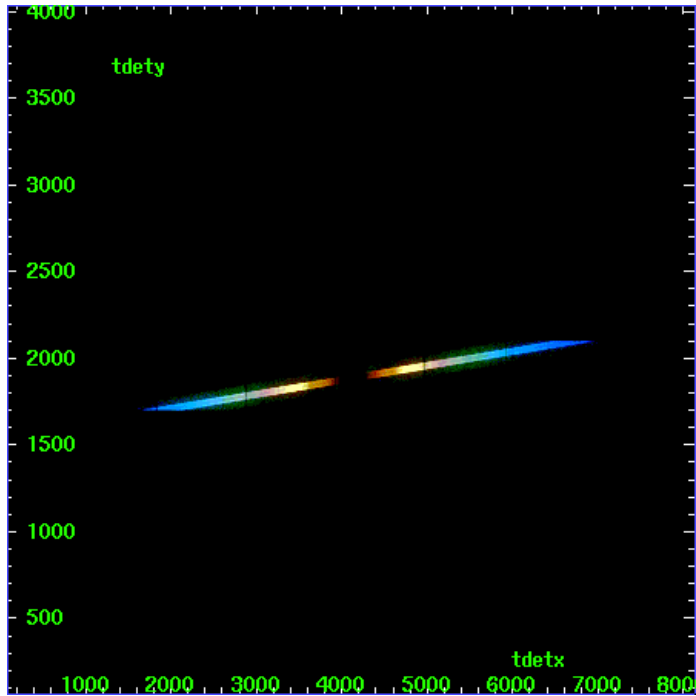
MEG Zero Order



MEG Order Sort ALL

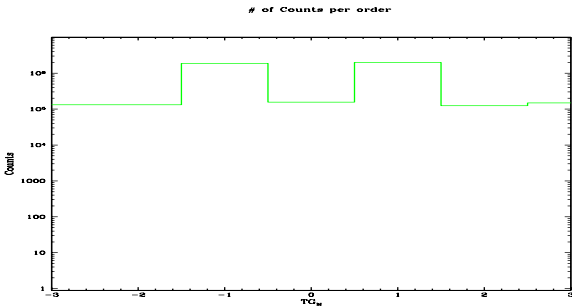


Spot Image MEG

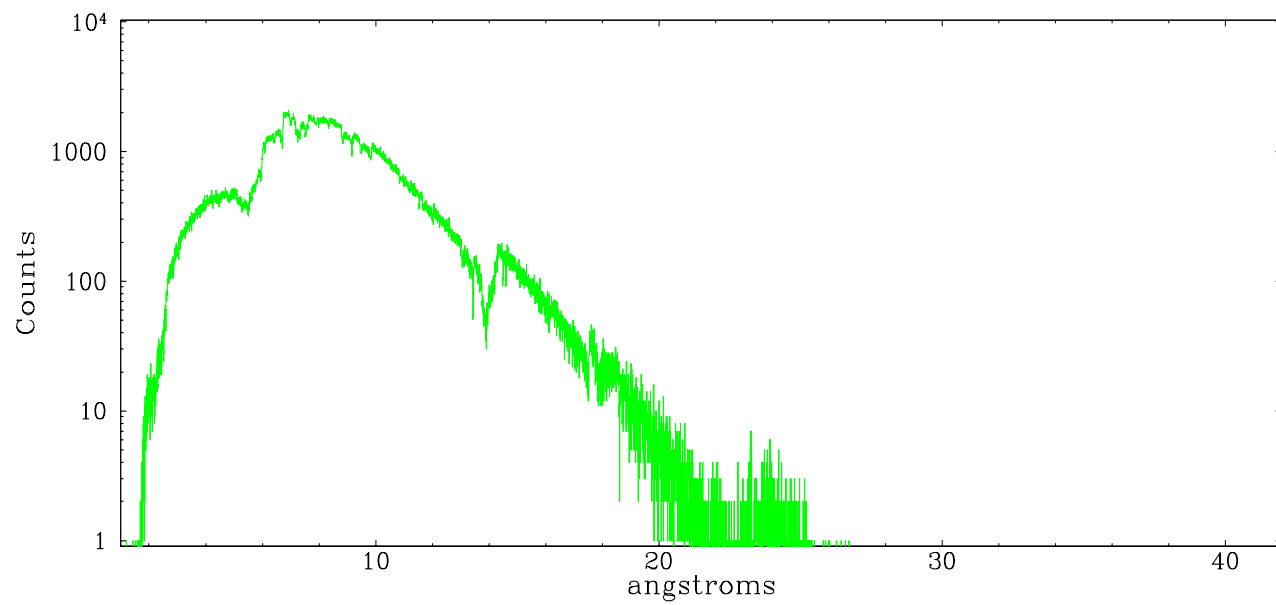


Full Detector MEG

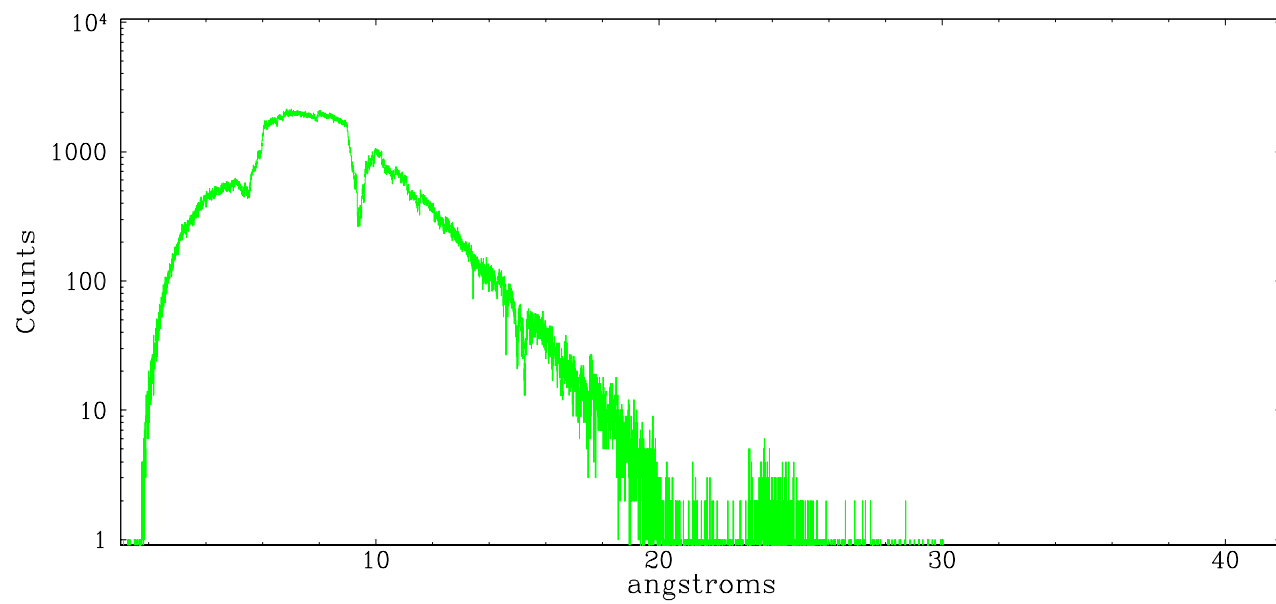
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	131433	132599	1891397	156510	1999391	124715	147933



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2006.07.25
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	76.22

A.2 Comments

Revised roll constraint of 80-100 degrees met.

Zeroth order piled up.