

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 2307 - L2 Version 3
Chandra X-Ray Center

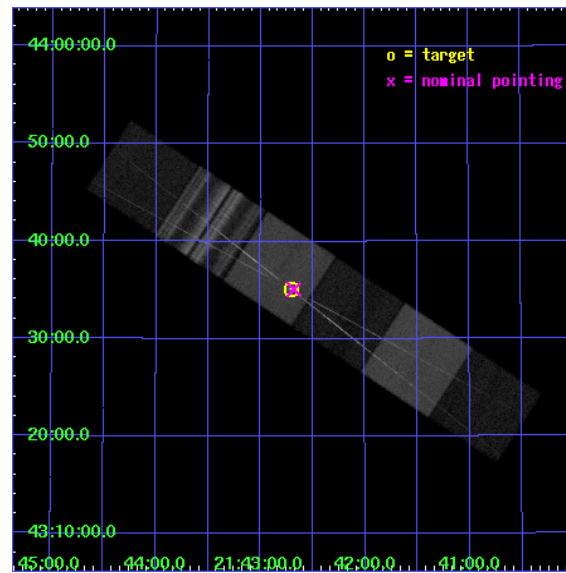
L2 Processing Date : Jul 30 2007

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

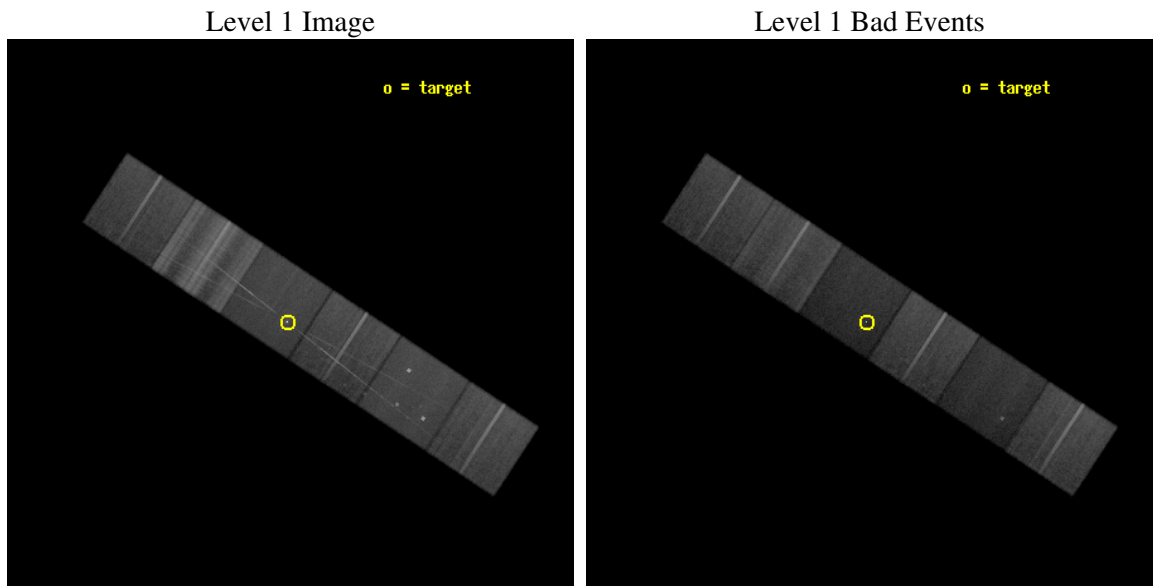
seq_num	300017
obs_id	2307
title	BROAD-BAND HIGH RESOLUTION SPECTROSCOPY OF SS CYGNI IN OUTBURST
observer	Dr. Christopher Mauche
object	SS CYG
dtcycle	0
cycle	P
ra_targ	325.67625
dec_targ	43.585556
ra_nom	325.67001498923
dec_nom	43.584716182782
roll_nom	213.25992626279
revision	3
ontime	37040.000034496
livetime	36570.977251249
ontime4	37040.000034496
ontime5	37040.000034496
ontime6	37040.000034496
ontime7	37040.000034496
ontime8	37040.000034496
ontime9	37040.000034496
l2events	571579



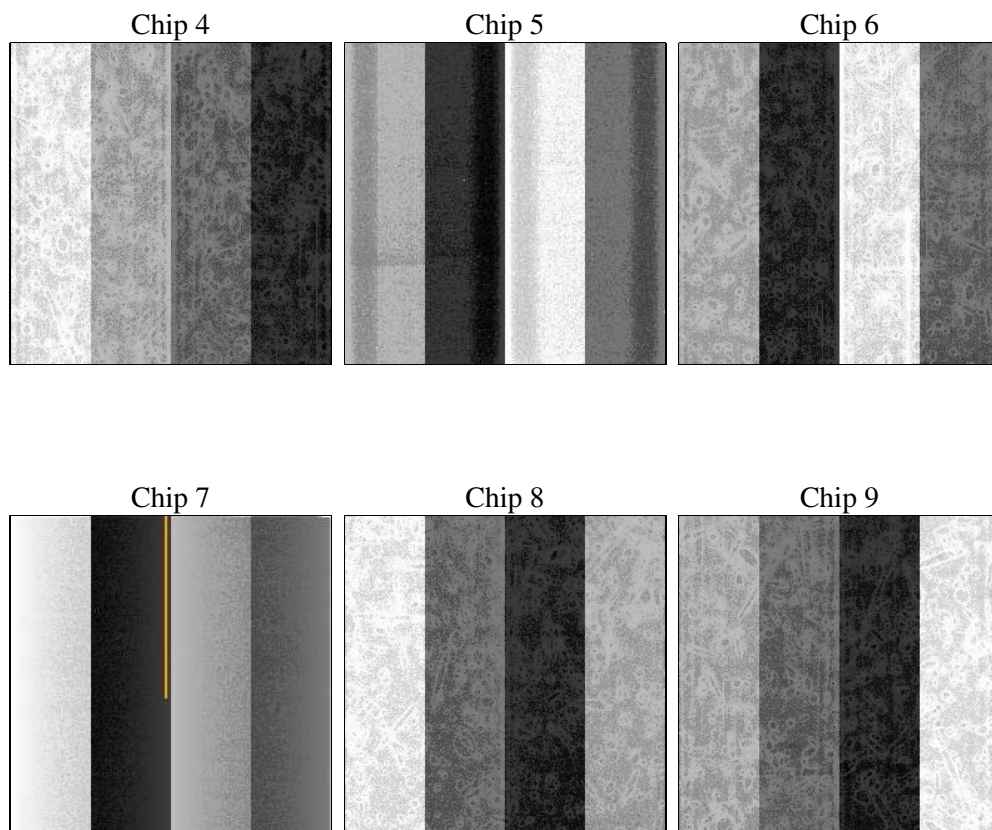
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0
ascdsver	7.6.10
caldsver	3.4.0
date	2007-06-08T06:27:26
revision	2

sched_exp_time	37285.091000
ontime	37040.000034496
ontime4	37040.000034496
ontime5	37040.000034496
ontime6	37040.000034496
ontime7	37040.000034496
ontime8	37040.000034496
ontime9	37040.000034496
l1events	2358037

2.1.4 Events

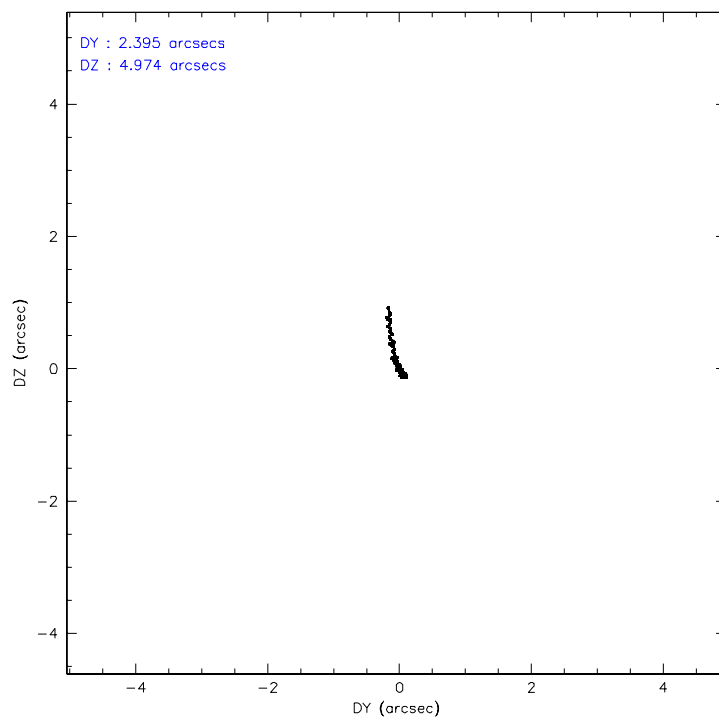
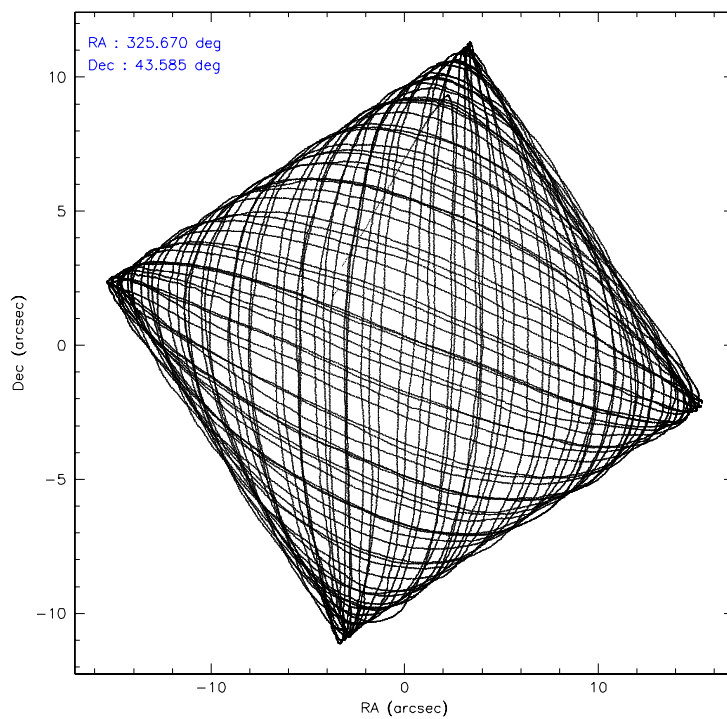
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	374886	351606	358154	335980	609428	327983
rejected events	323981	173913	303476	173345	344281	286385
rejected %	86%	49%	84%	51%	56%	87%

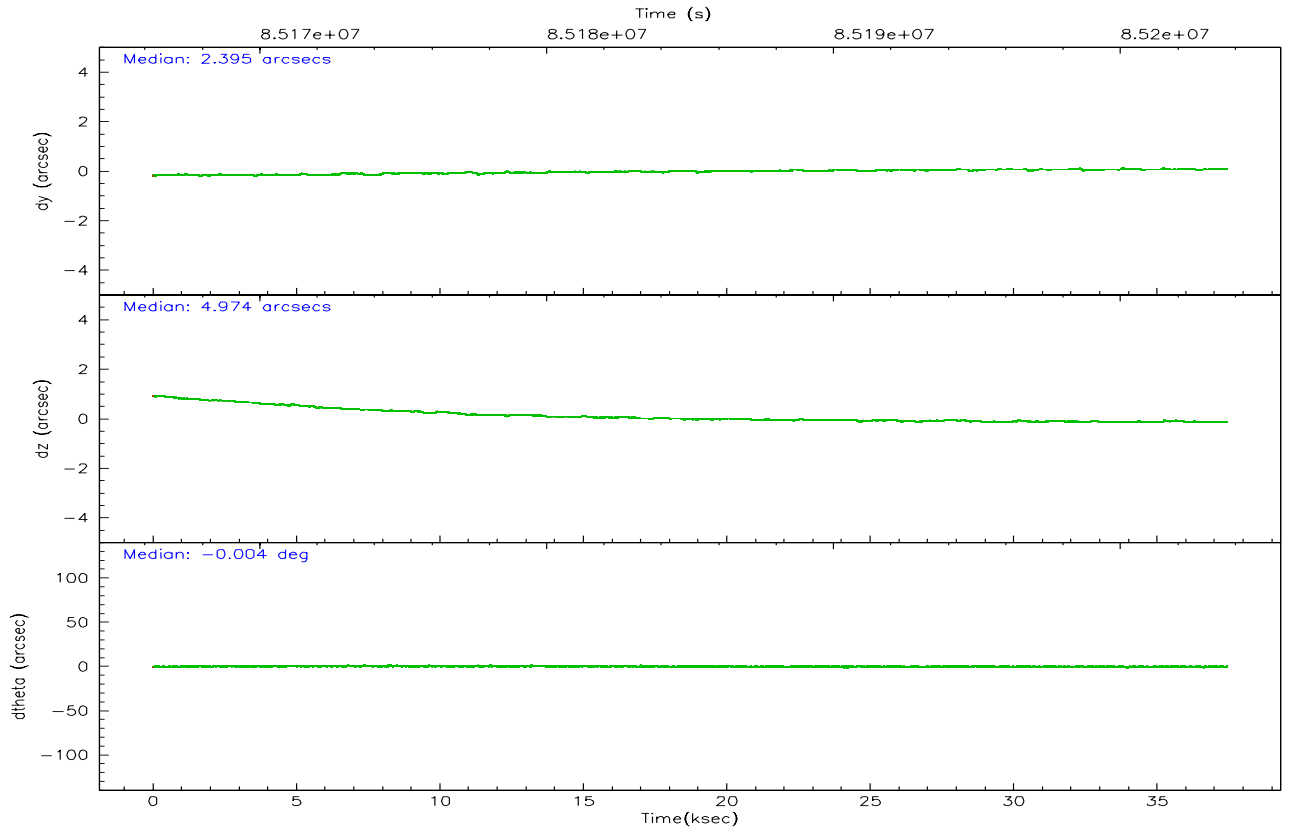
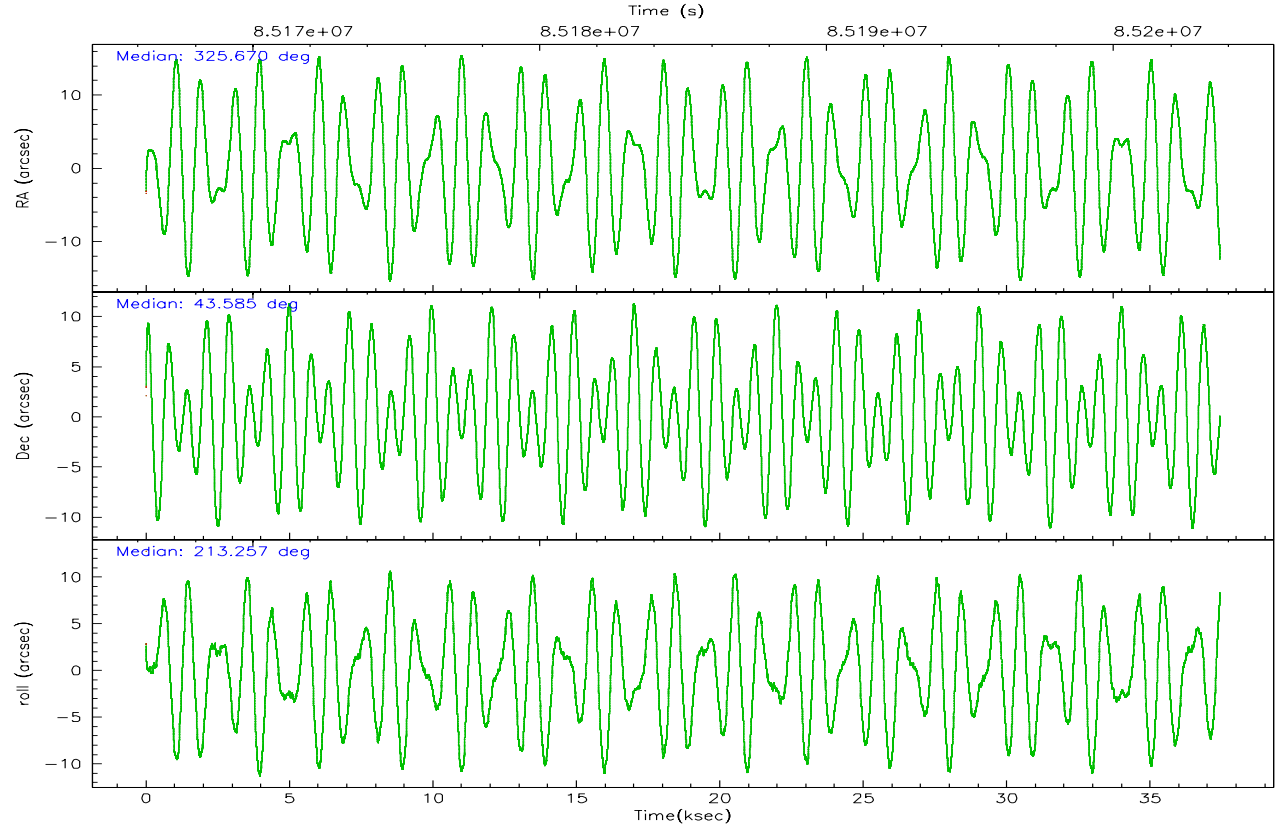
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	23298	26384	29262	18662	73050	20080
	6%	7%	8%	5%	11%	6%
grade 1 events	247	1704	213	657	549	168
	0%	0%	0%	0%	0%	0%
grade 2 events	14709	52237	11170	34546	48033	8817
	3%	14%	3%	10%	7%	2%
grade 3 events	3217	9155	3667	14878	36882	3157
	0%	2%	1%	4%	6%	0%
grade 4 events	3256	9054	3726	14856	32933	3138
	0%	2%	1%	4%	5%	0%
grade 5 events	7827	24726	9200	29041	15248	9084
	2%	7%	2%	8%	2%	2%
grade 6 events	6435	80882	6856	79706	74267	6407
	1%	23%	1%	23%	12%	1%
grade 7 events	315897	147464	294060	143634	328466	277132
	84%	41%	82%	42%	53%	84%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	325.686799	325.6700149892322	Subarray requested	NONE	NONE
Pointing Dec	43.609237	43.58471618278244	Alternating exposures requested	N	N
Pointing Roll	213.091731	213.2599262627868	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	-0.6828225247311905			
SIM defocus (mm)	0	0.001444936568705701			
SIM translation stage pos (mm)	-187.132523	-187.1254020033014			
SIM translation stage offset (mm)	-3	-3.007120579706367			
Observation start time	85166439.184000	85165258.26459			
Observation start date	2000-09-12T17:19:35	2000-09-12T17:00:58			
Observation end time	85203724.184000	85204038.11604799			
Observation end date	2000-09-13T03:41:00	2000-09-13T03:47:18			
Read mode	TIMED	TIMED			

2.3 Aspect



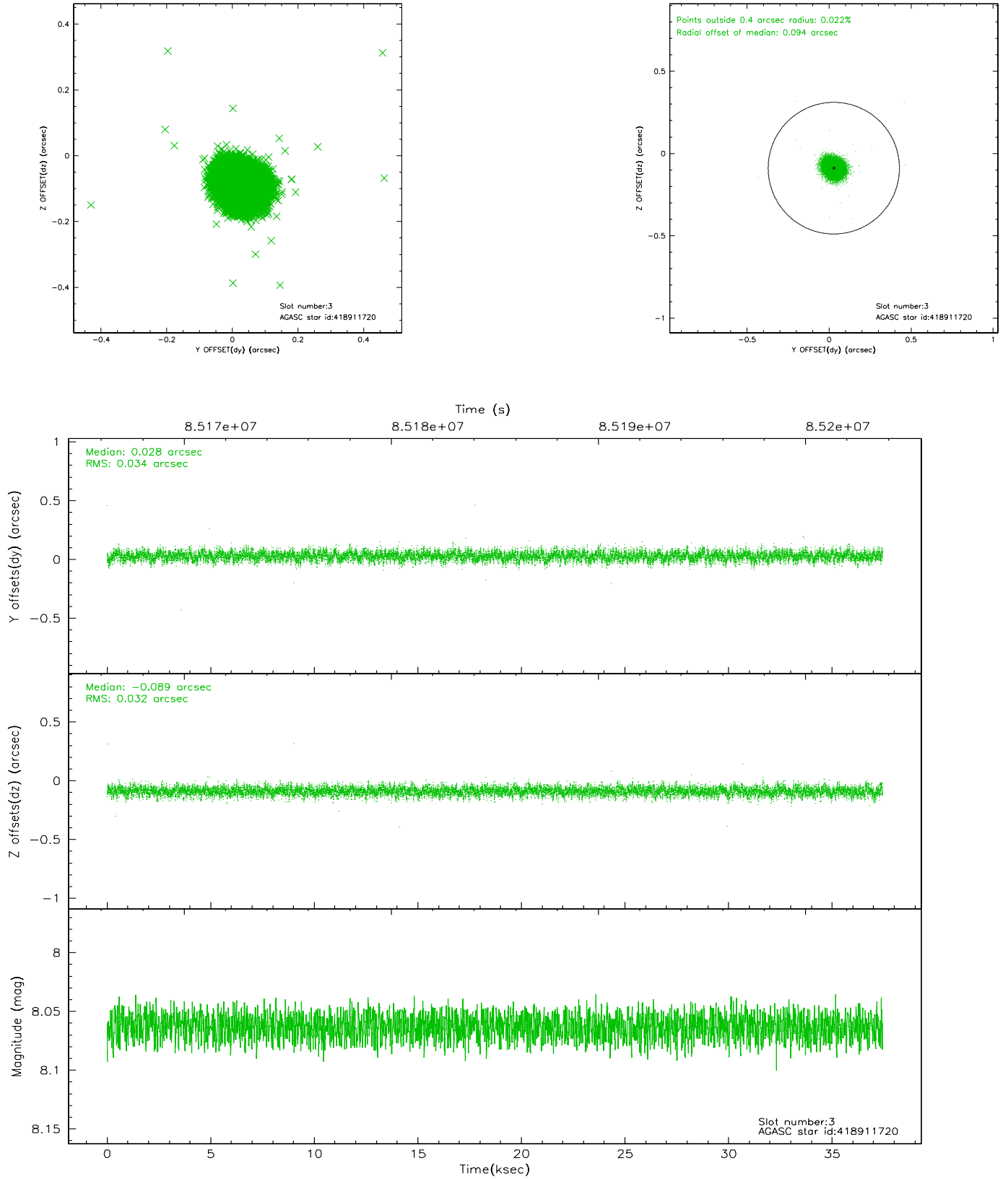


Slot Statistics

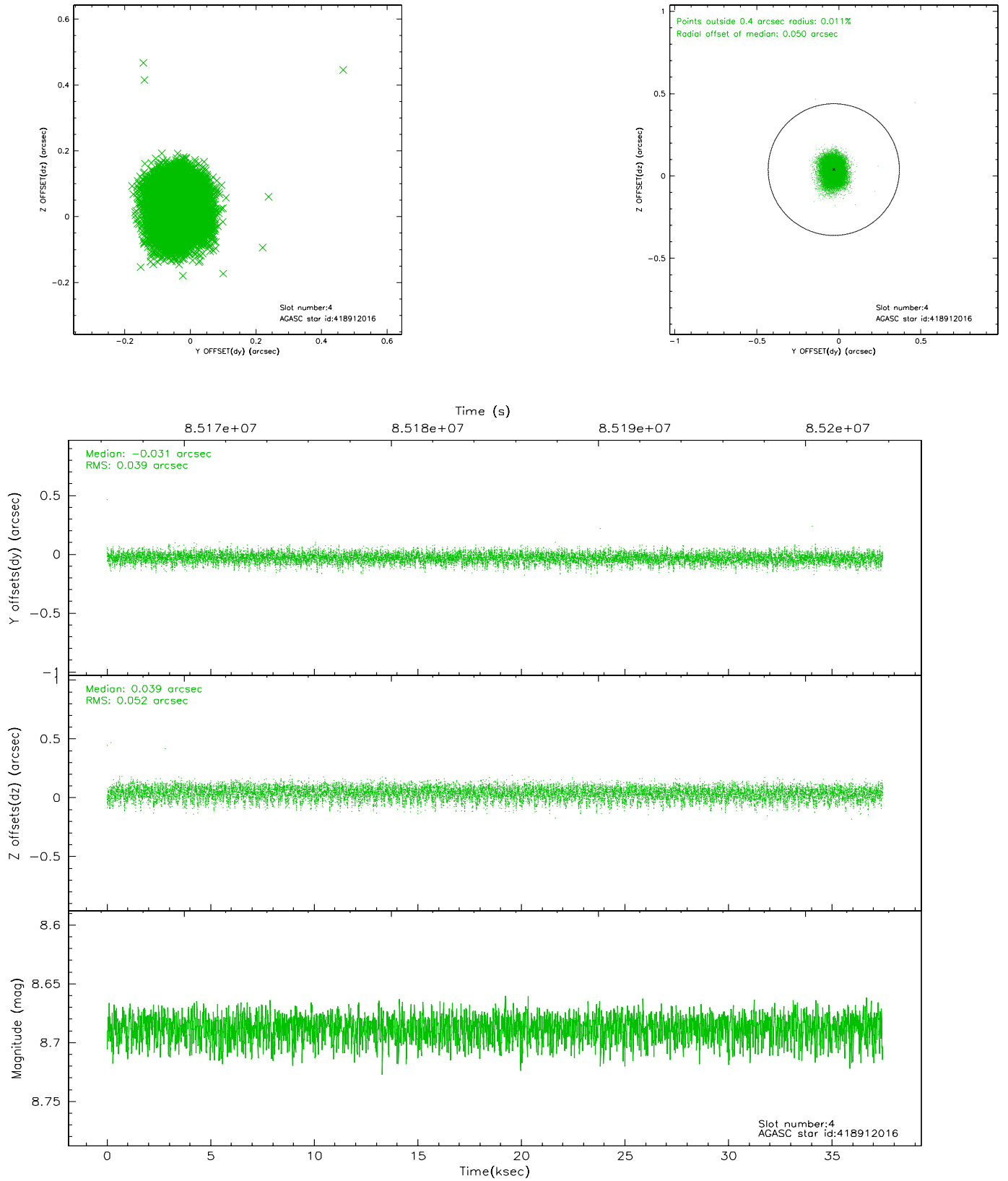
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.19	9131	0.003	0.005	0.013	0.041	0.000000	0.000000	941.21	-1783.94
1	FID	ACIS-S-5	7.24	9130	0.027	0.026	0.006	0.010	0.000000	0.000000	-1807.70	113.65
2	FID	ACIS-S-6	7.38	9129	-0.051	-0.019	0.014	0.043	0.000000	0.000000	406.74	757.54
3	GUIDE	418911720	8.06	18257	0.028	-0.089	0.049	0.078	325.786180	43.583511	-166.90	219.49
4	GUIDE	418912016	8.69	18258	-0.031	0.039	0.068	0.113	325.830997	44.345072	-1757.83	-2016.37
5	GUIDE	418393488	9.02	18245	-0.001	0.030	0.083	0.132	325.537667	42.821079	1878.47	2162.55
6	GUIDE	418390104	8.98	18248	-0.005	0.029	0.063	0.103	325.407324	43.099724	1616.05	1135.48
7	GUIDE	418920400	8.99	18253	0.008	-0.002	0.073	0.117	325.896170	44.074587	-1368.82	-1107.85

2.4 Star Slots

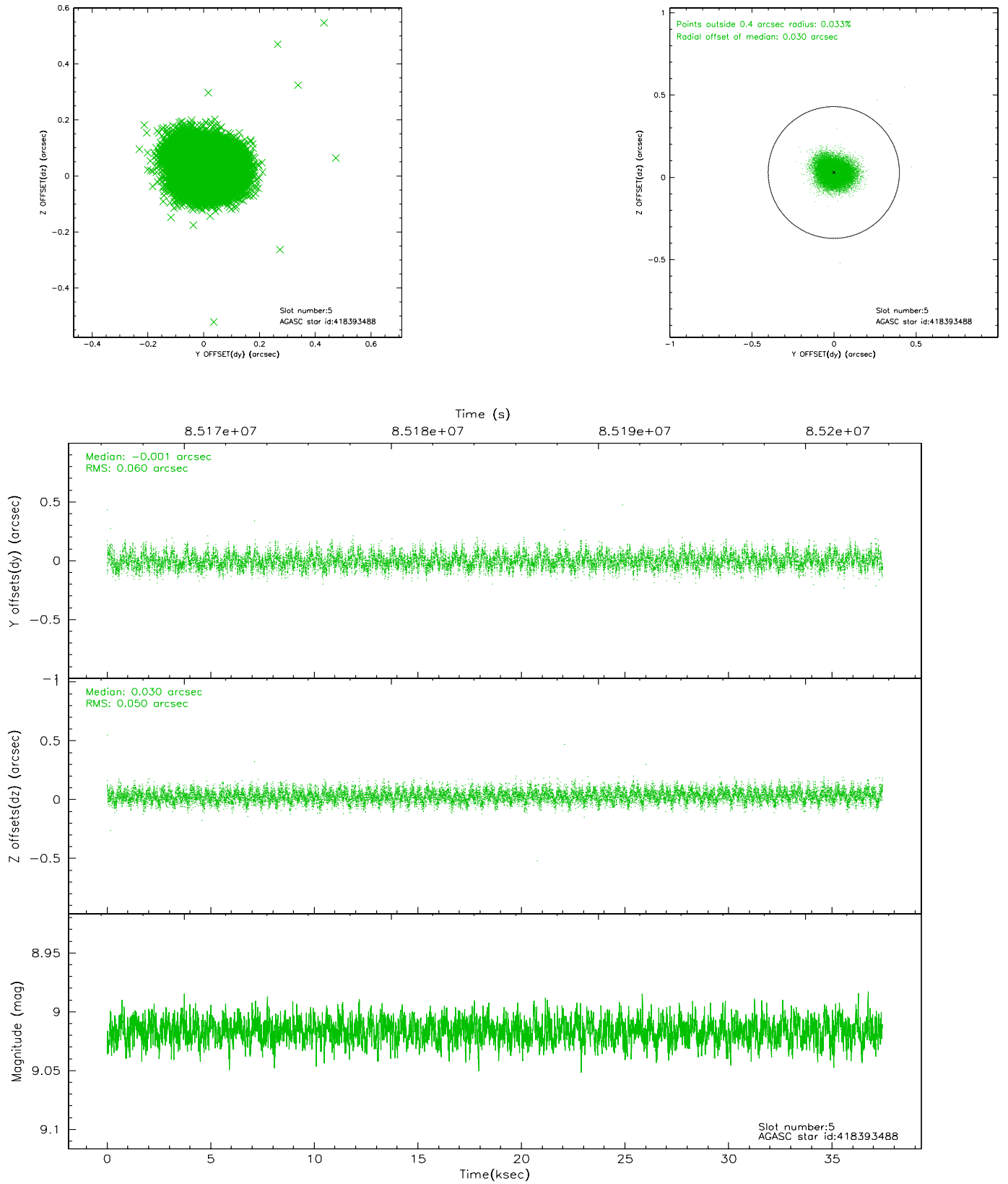
2.4.1 Slot 3



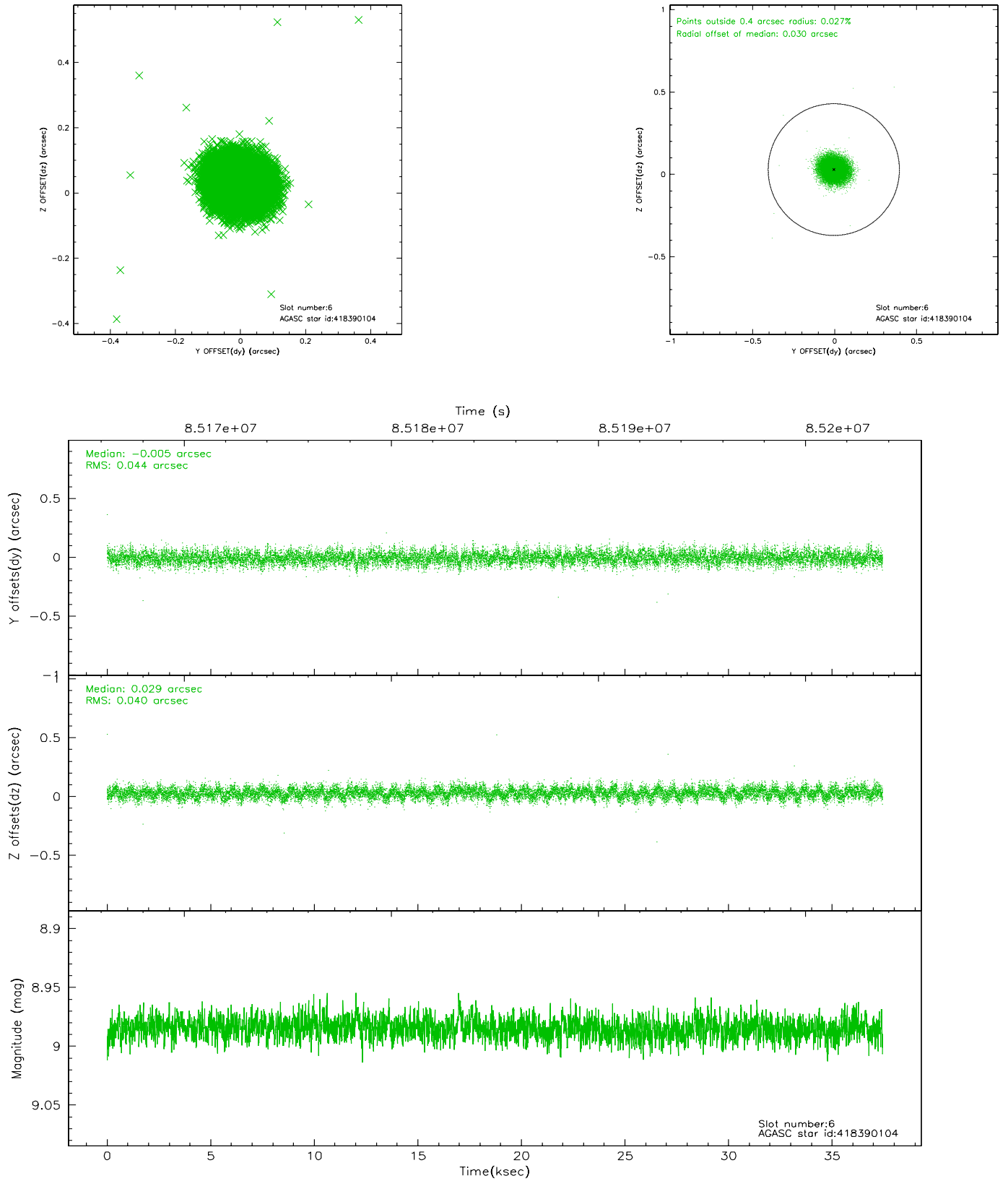
2.4.2 Slot 4



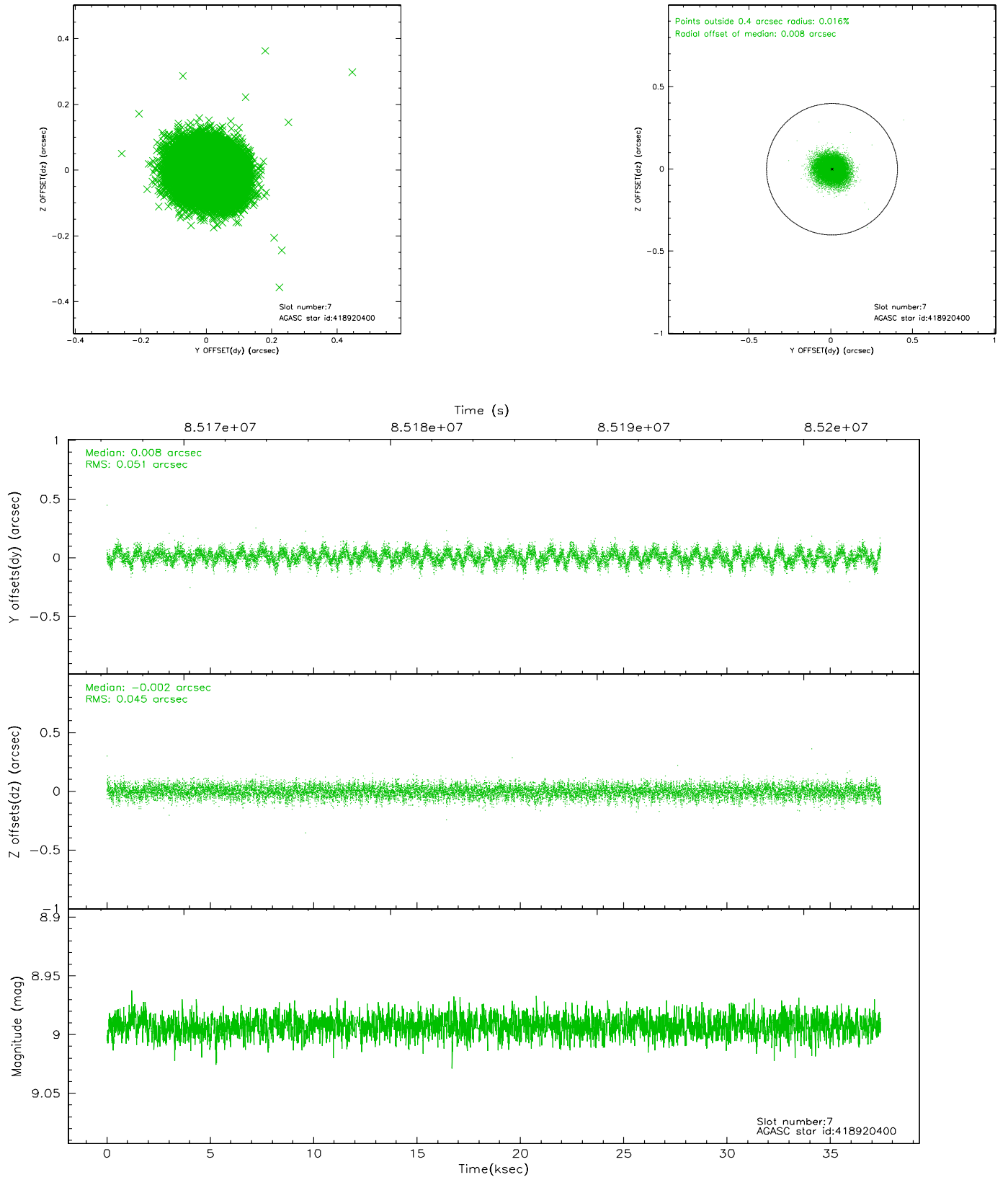
2.4.3 Slot 5



2.4.4 Slot 6

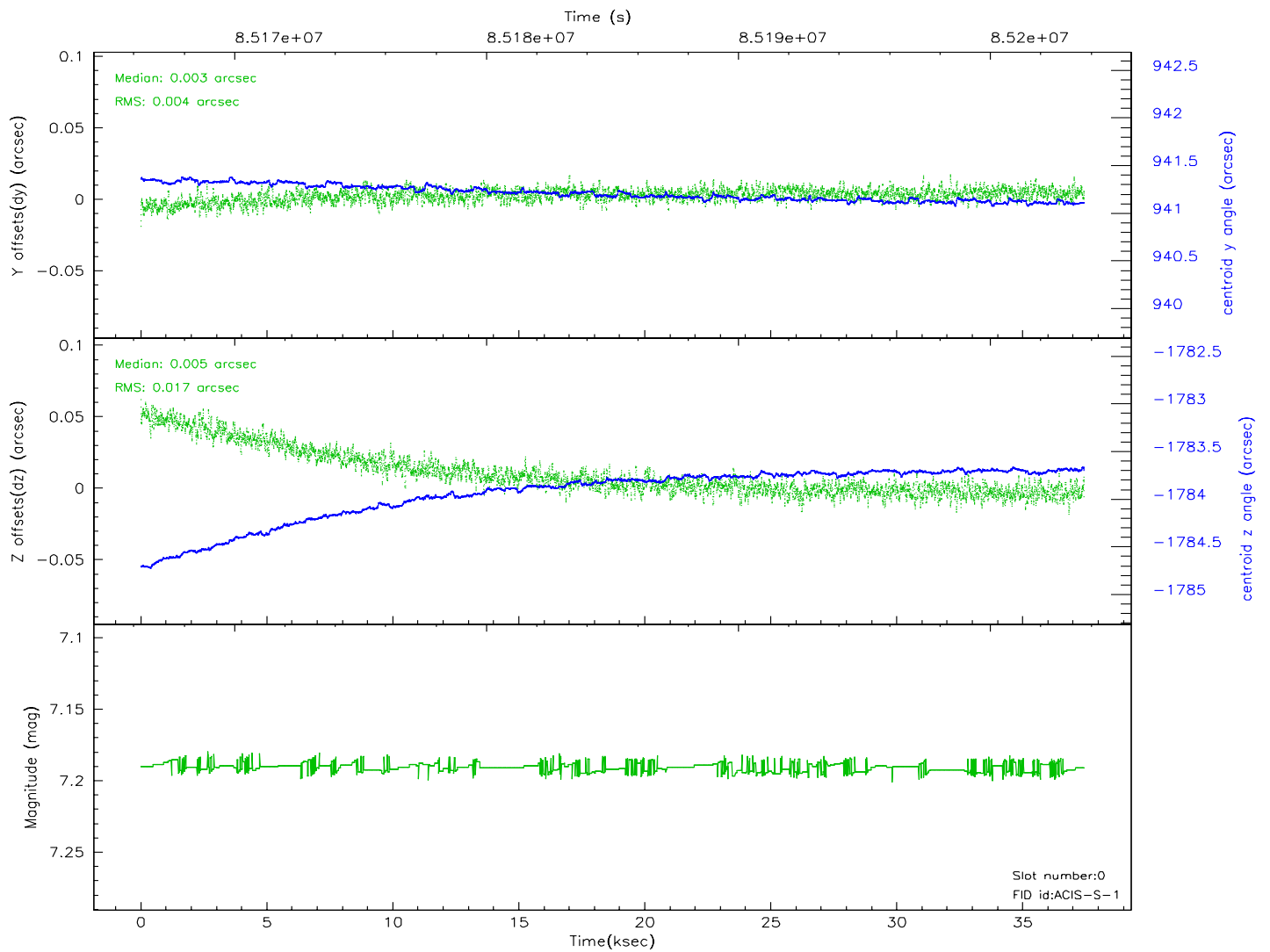
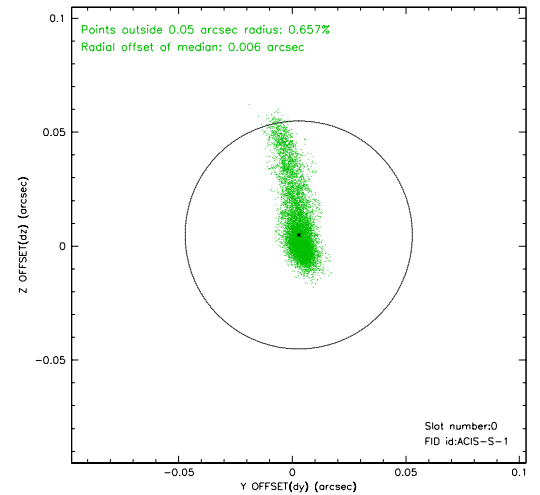
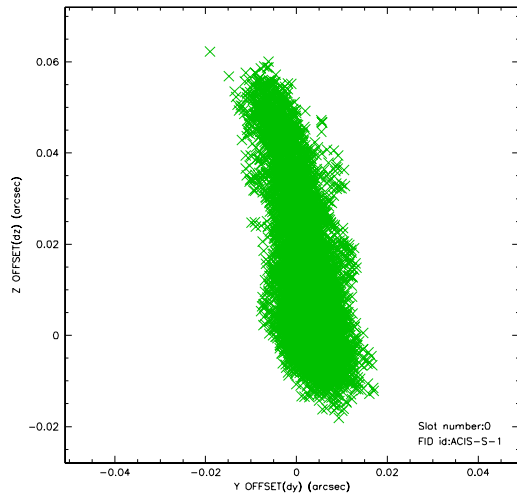


2.4.5 Slot 7

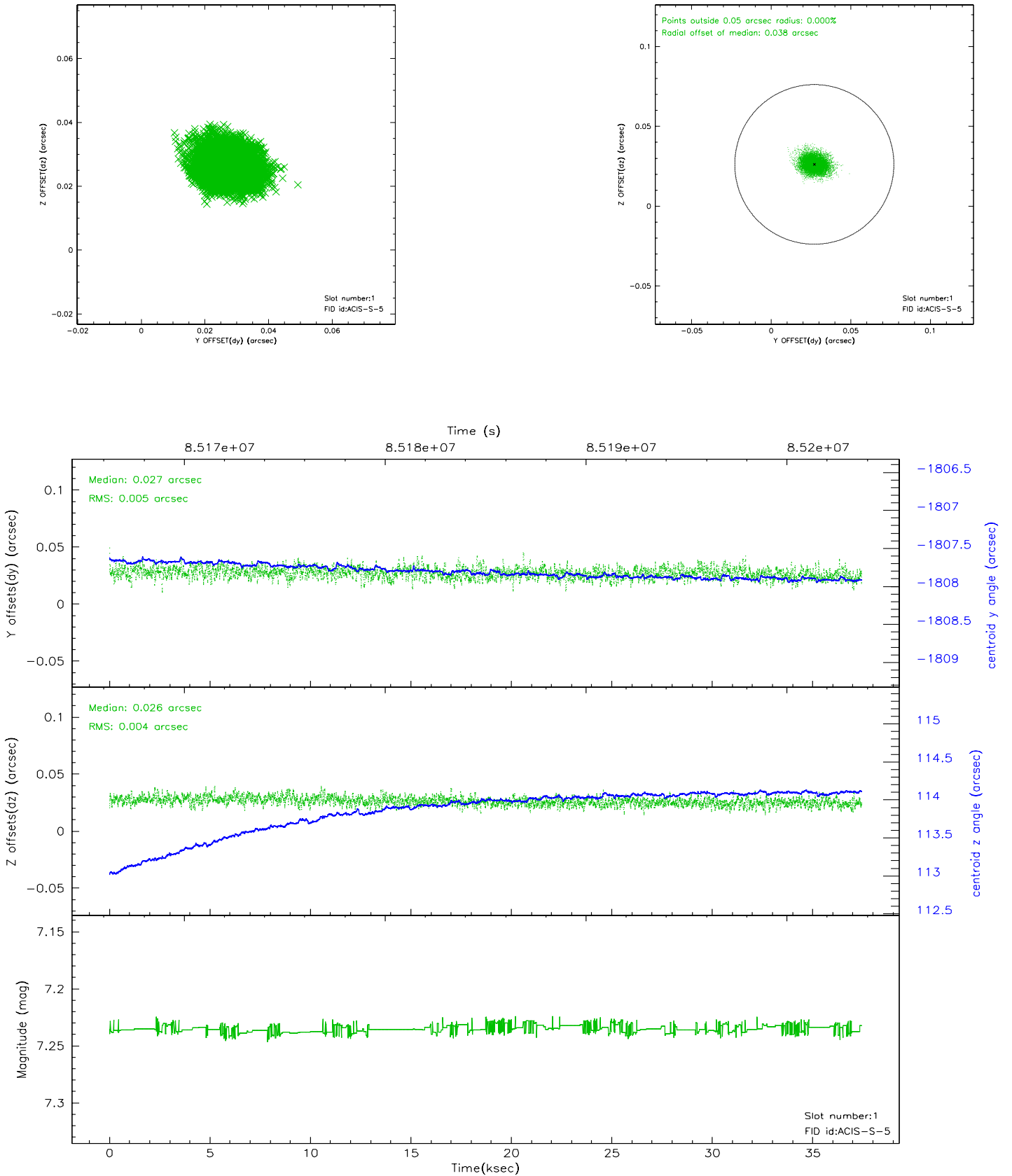


2.5 FID Slots

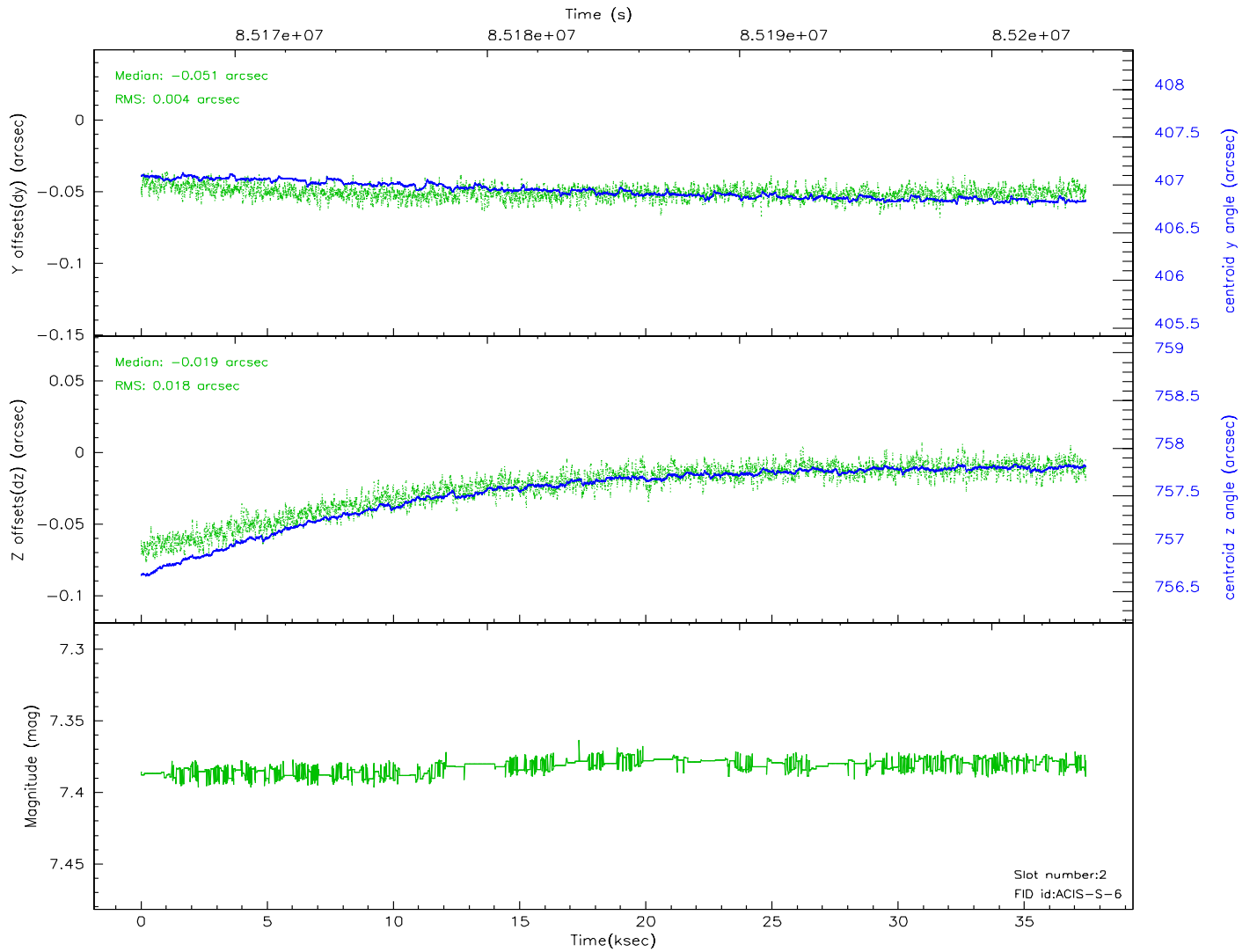
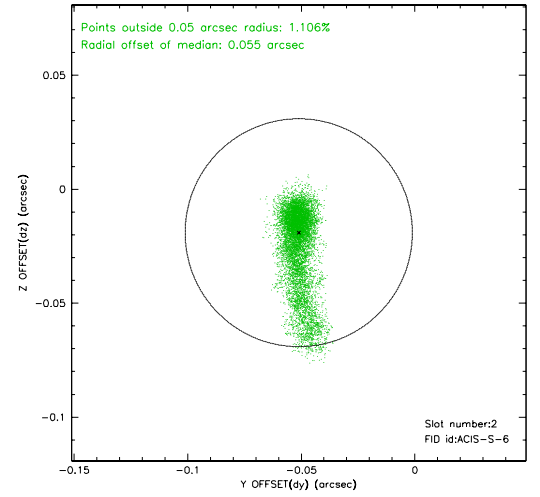
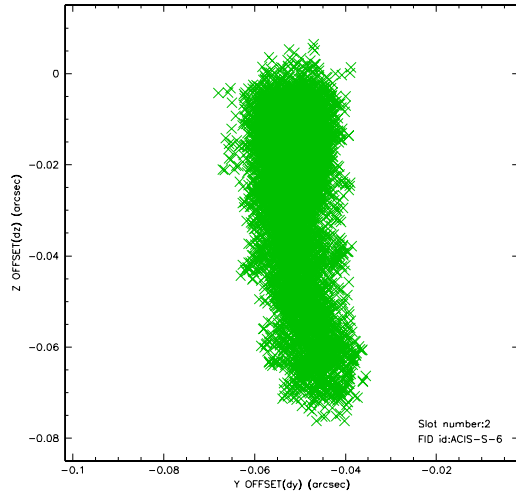
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

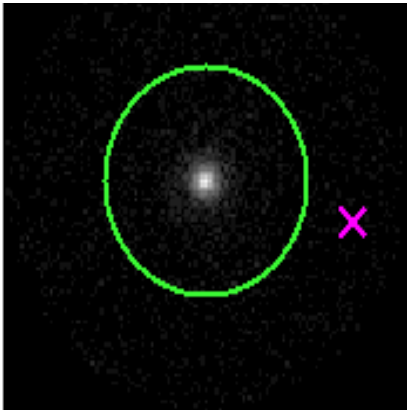


3 Gratings

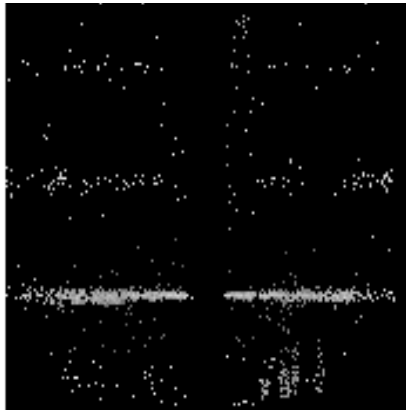
3.1 HEG Arm



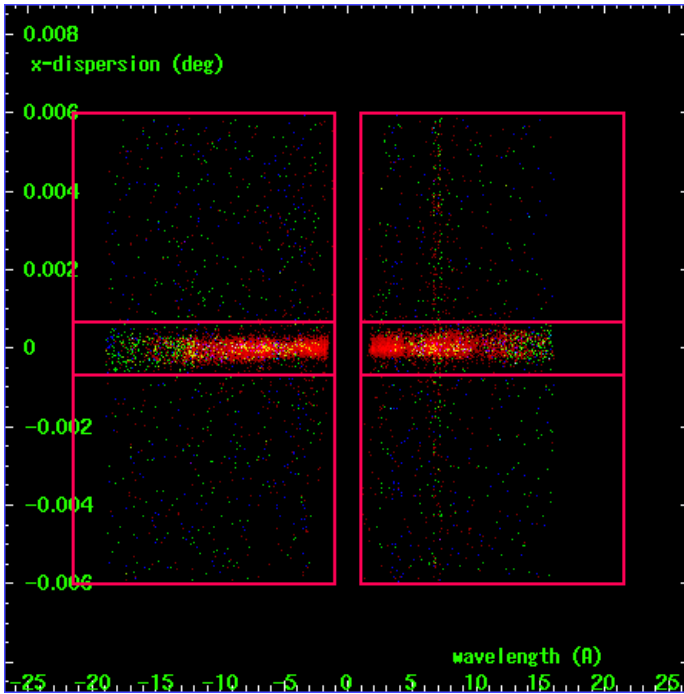
HEG Order Sort 123



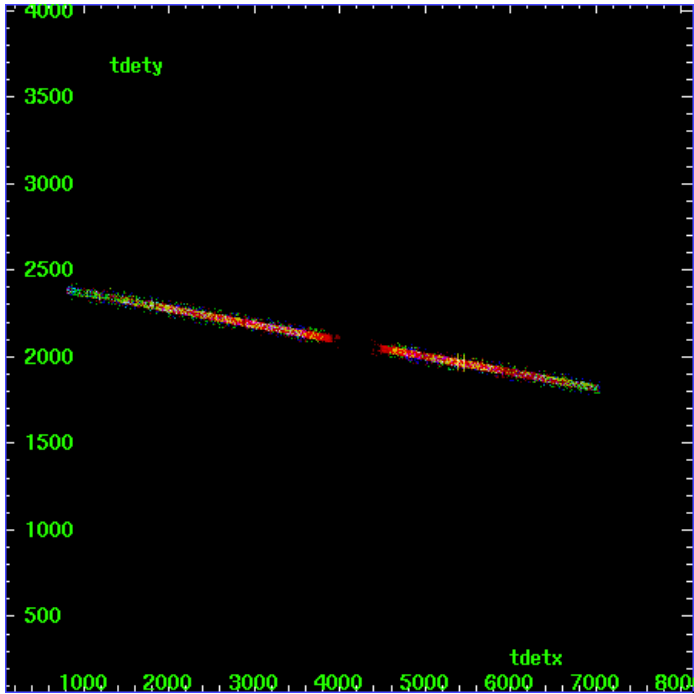
HEG Zero Order



HEG Order Sort ALL

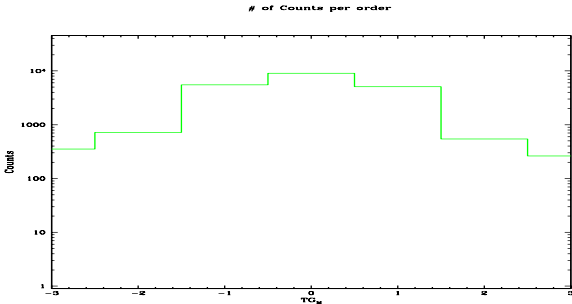


Spot Image HEG

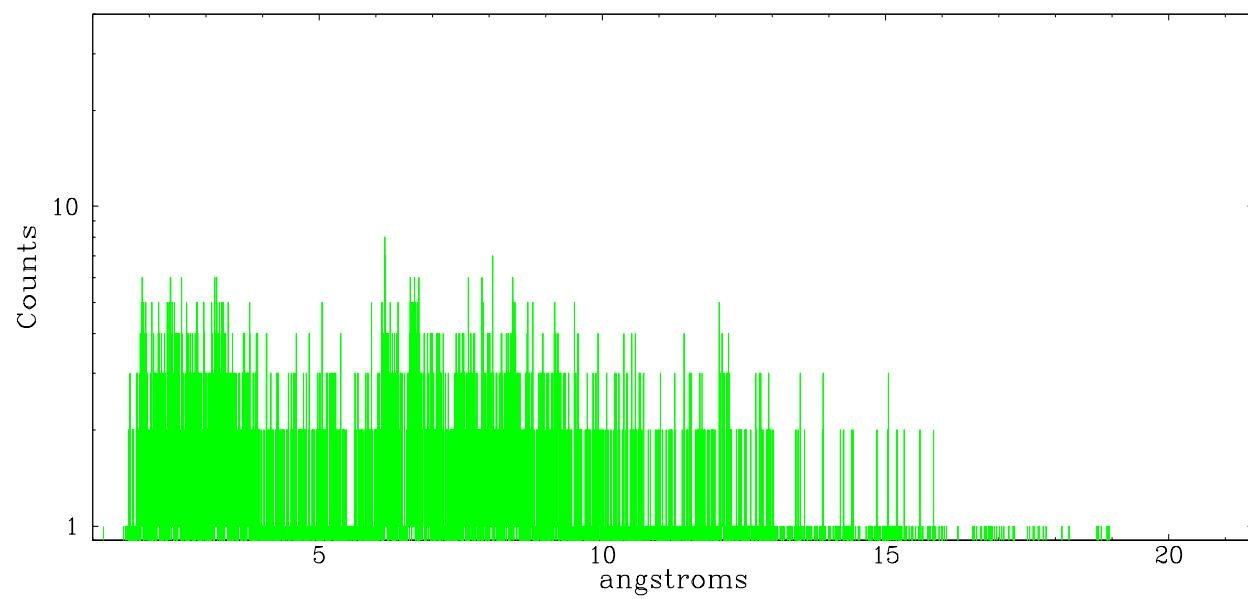


Full Detector HEG

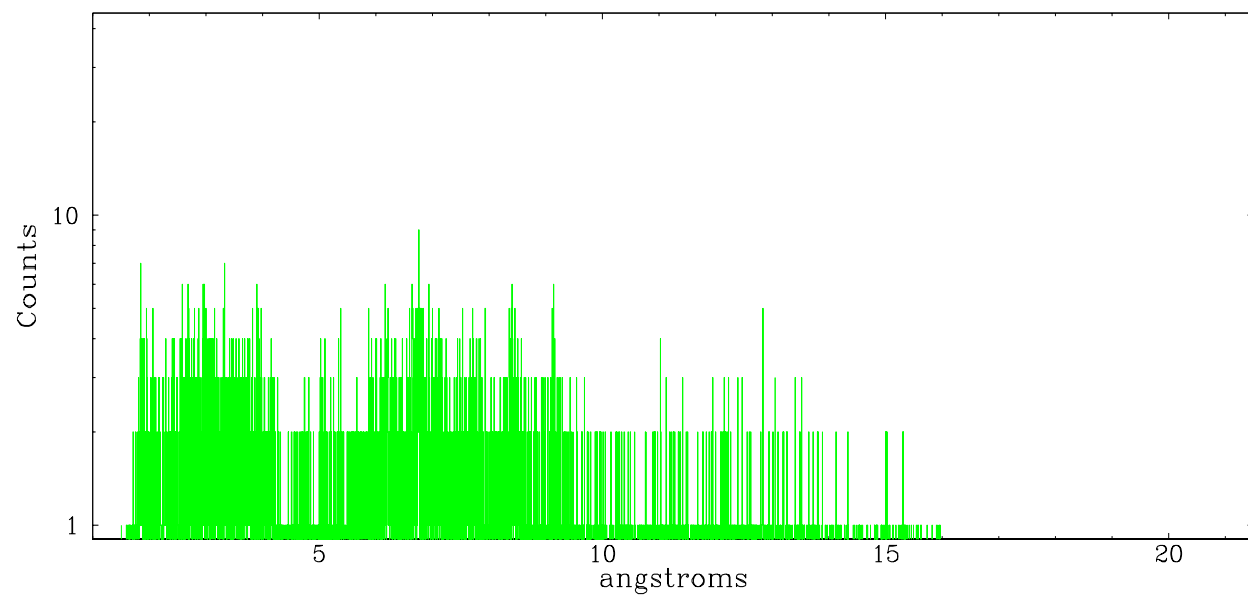
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	353	720	5510	9050	5072	542	262



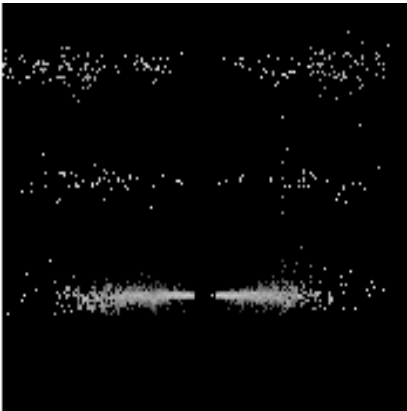
heg order -1



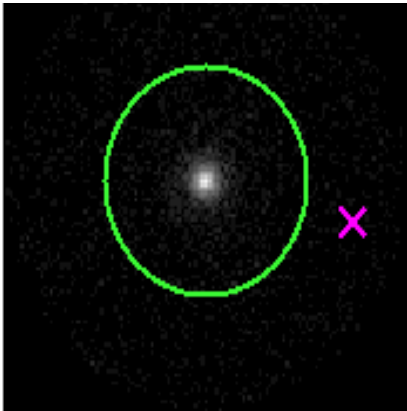
heg order +1



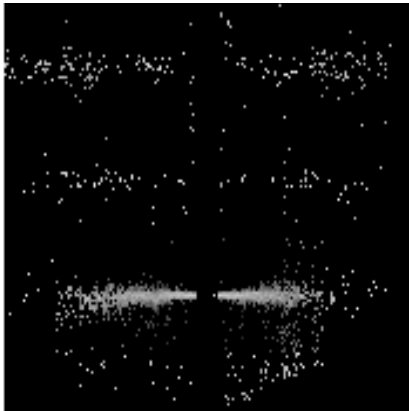
3.2 MEG Arm



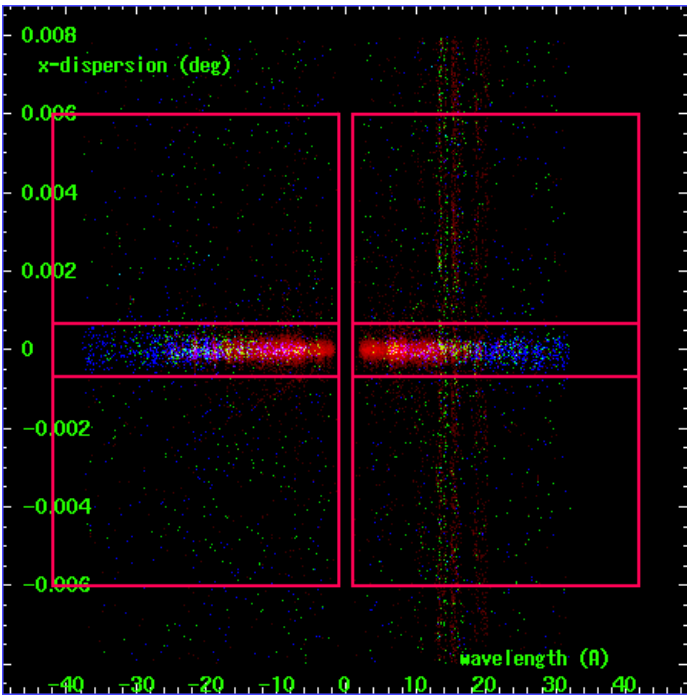
MEG Order Sort 123



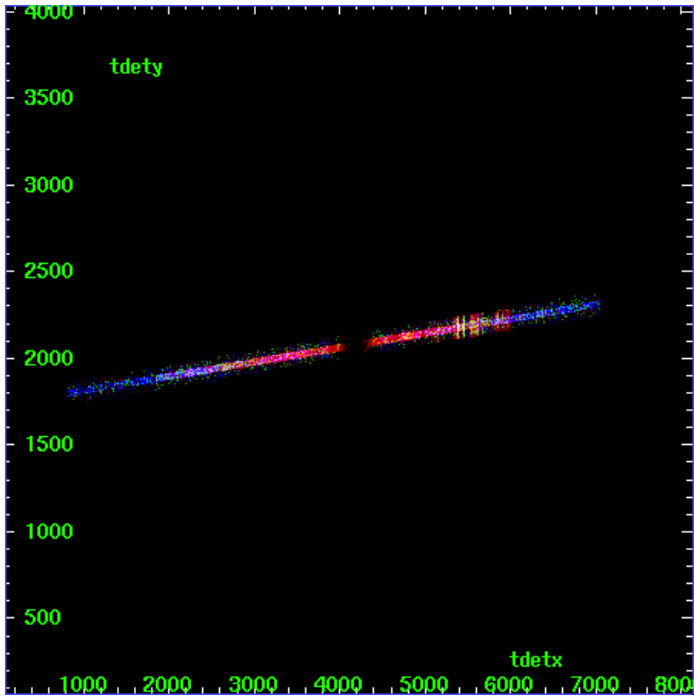
MEG Zero Order



MEG Order Sort ALL

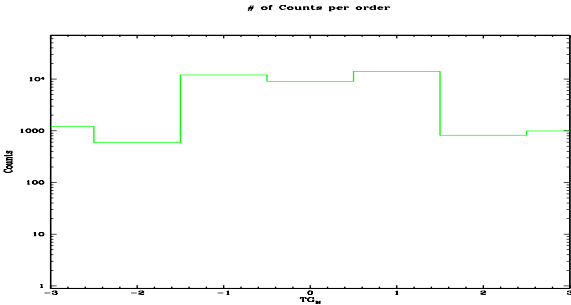


Spot Image MEG

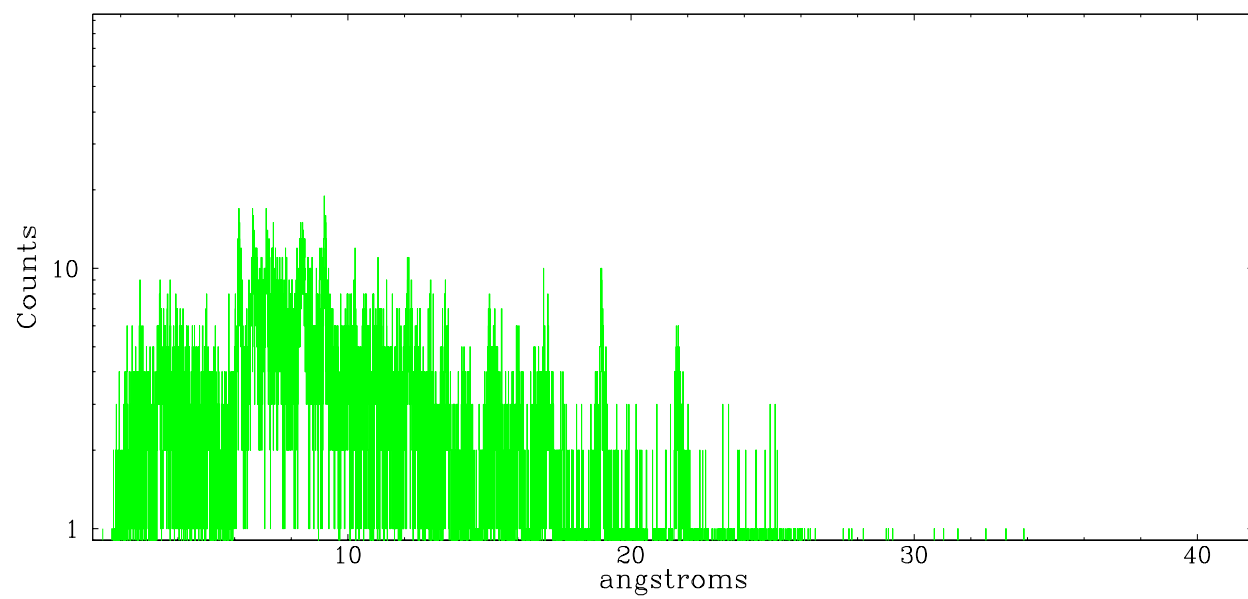


Full Detector MEG

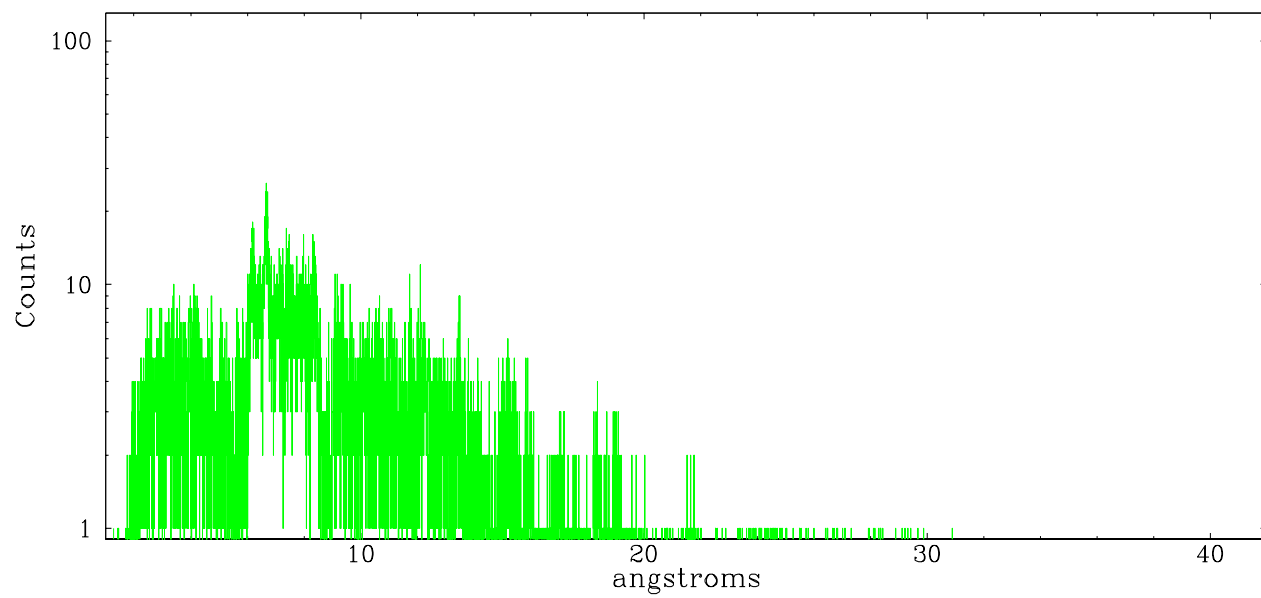
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1210	594	11946	9050	14021	820	988



meg order -1



meg order +1



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2007.08.03
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.937

A.2 Comments

Charge time for this ObsId remains at original value of 36.937 ks, although with the current processing the charge time would have been 37.040 ksec.

=====

Destreak algorithm applied to Level 1 data did not remove all of the streak artifacts. It is probably advisable to run the destreak algorithm on the Level 2 data for chip 8 only.

=====

Zeroth order piled up. Standard data processing software did not correctly locate the zeroth order due to pileup. Manual intervention was used to input the correct sky coordinates (x=4052.25, y=4106.43) 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.