

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 646 - L2 Version 3
Chandra X-Ray Center

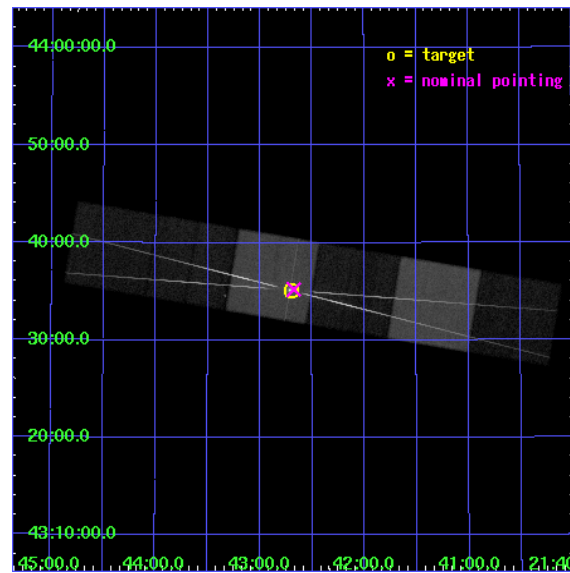
L2 Processing Date : Jul 30 2007

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1 Front

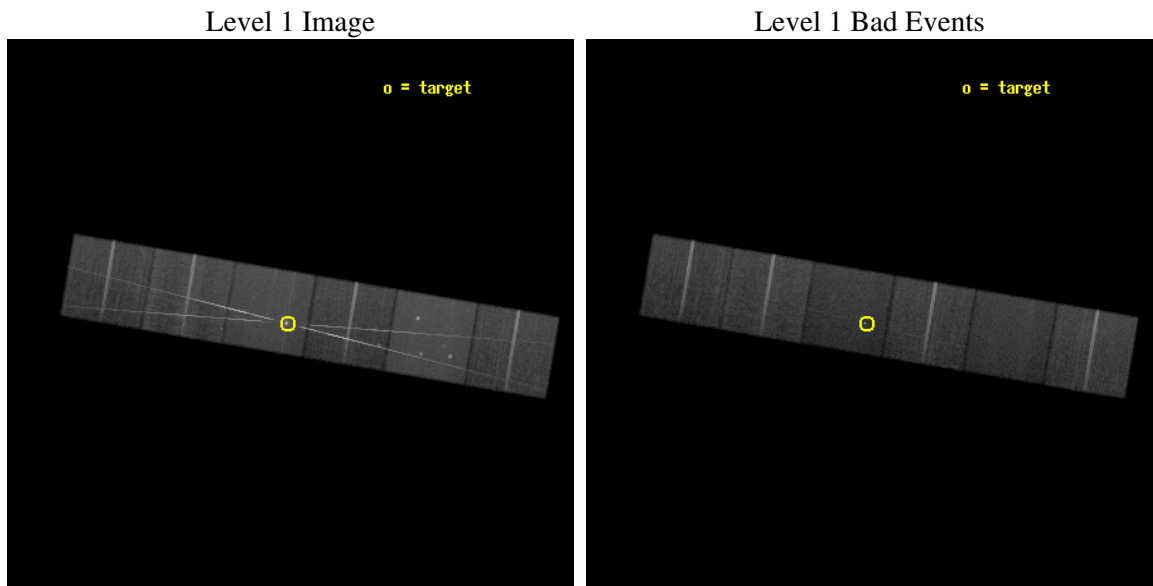
seq_num	300015
obs_id	646
title	HIGH-RESOLUTION X-RAY SPECTROSCOPY OF SS CYGNI IN QUIESCENCE
observer	Dr Peter Wheatley
object	SS CYGNI
dtcycle	0
cycle	P
ra_targ	325.675
dec_targ	43.586111
ra_nom	325.66877400922
dec_nom	43.587173555826
roll_nom	189.5757827232
revision	3
ontime	47948.800044656
livetime	47341.643467189
ontime4	47948.800044656
ontime5	47948.800044656
ontime6	47948.800044656
ontime7	47948.800044656
ontime8	47948.800044656
ontime9	47948.800044656
l2events	635203



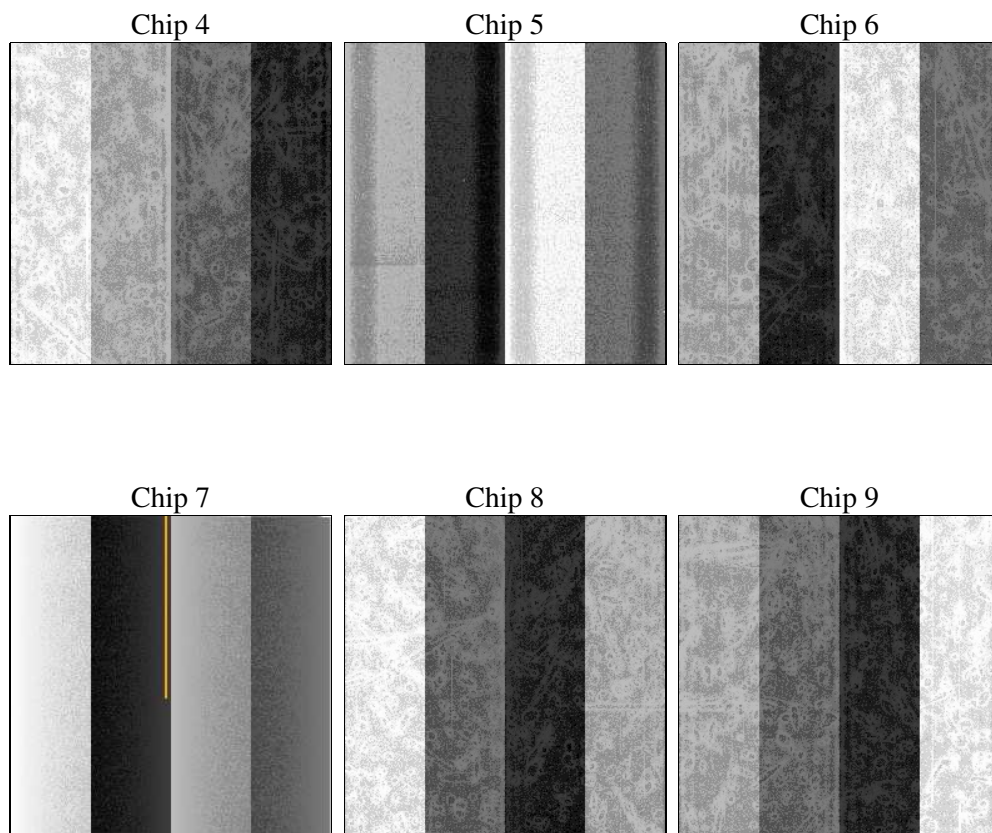
2 OBI

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	2007-06-05T09:45:08
revision	2

sched_exp_time	48000.000000
ontime	47948.800044656
ontime4	47948.800044656
ontime5	47948.800044656
ontime6	47948.800044656
ontime7	47948.800044656
ontime8	47948.800044656
ontime9	47948.800044656
l1events	2246933

2.1.4 Events

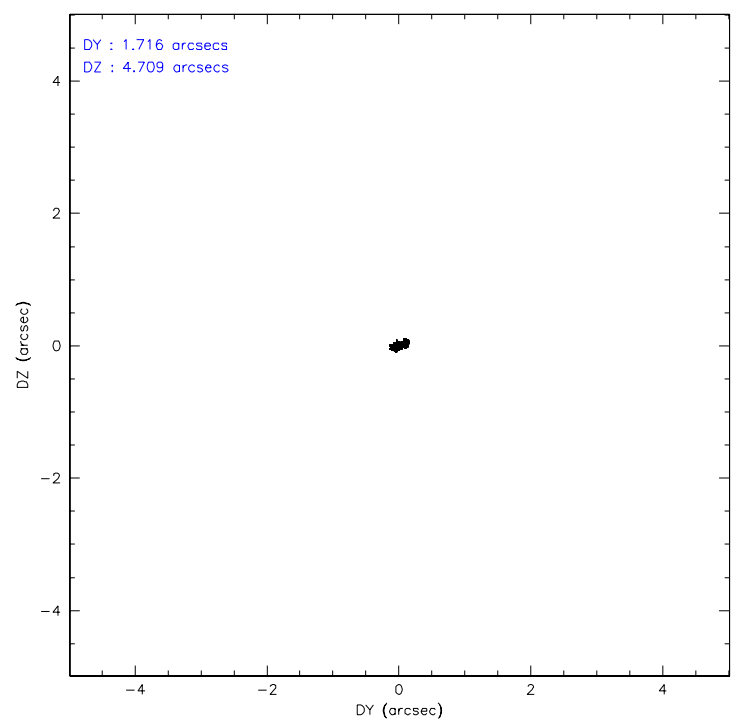
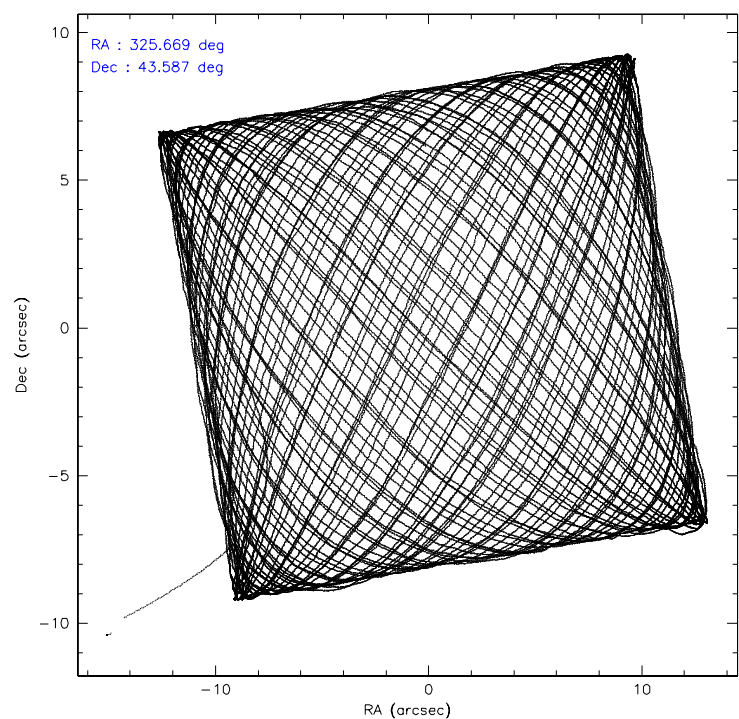
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	322594	412144	368946	434955	403551	304743
rejected events	284399	212031	263670	212984	294196	263921
rejected %	88%	51%	71%	48%	72%	86%

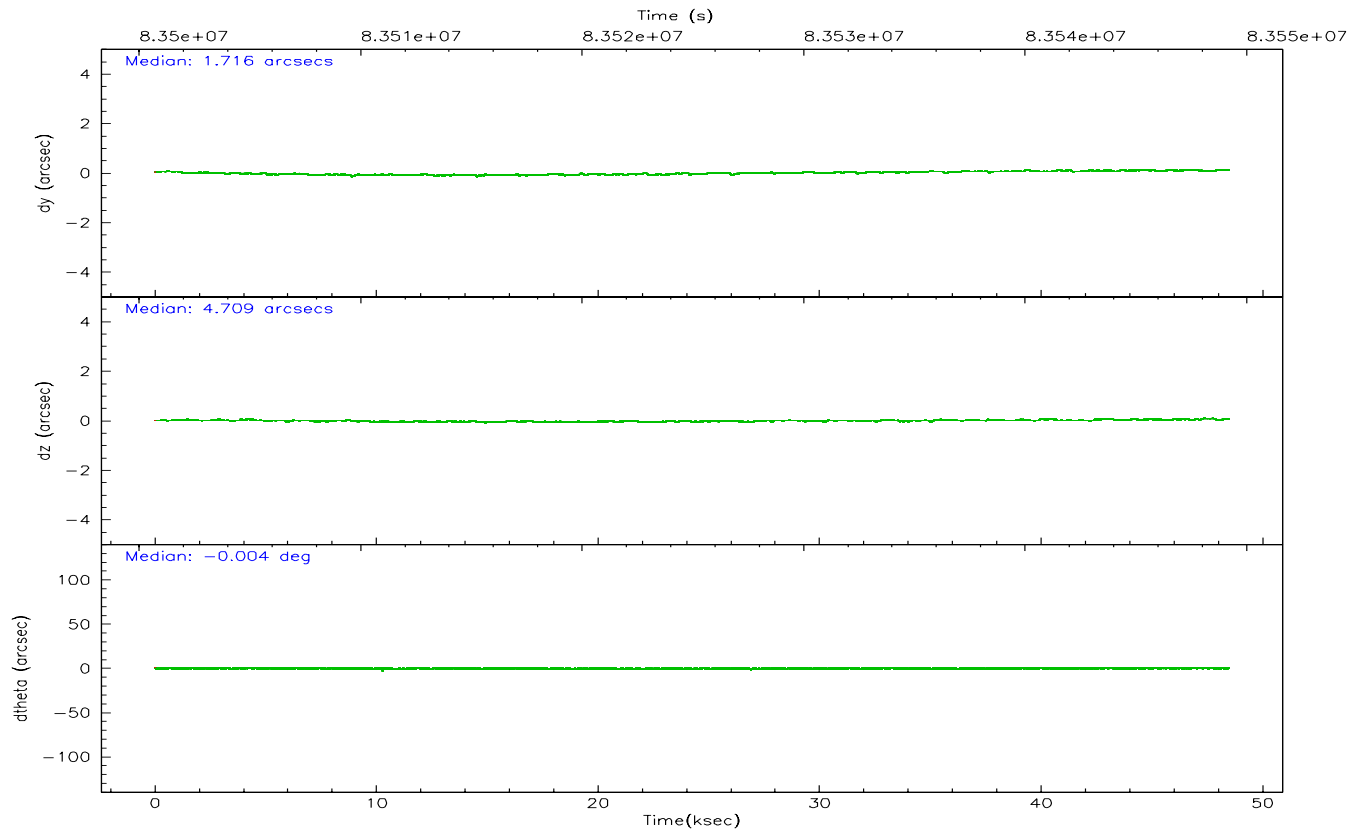
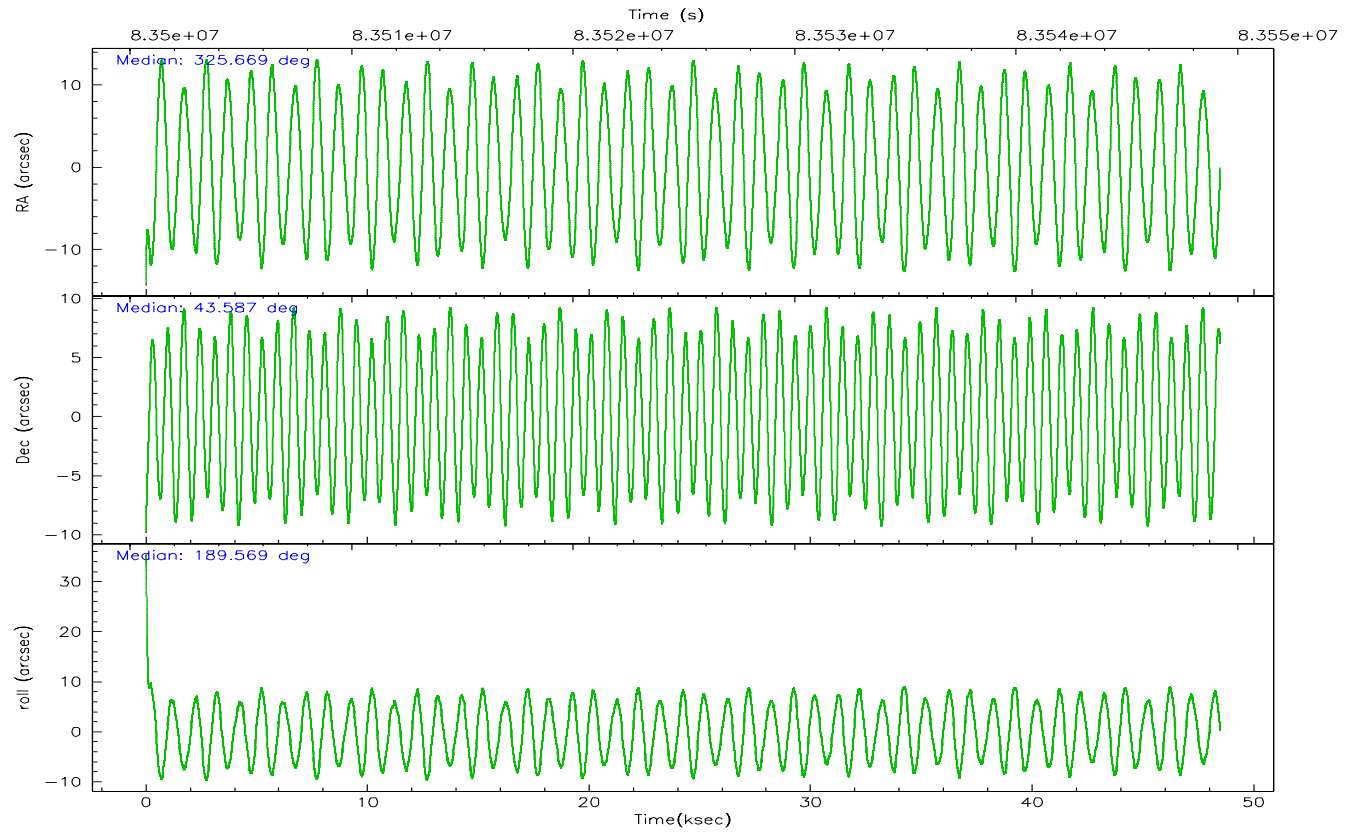
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	17699	28010	69480	30738	55082	20083
	5%	6%	18%	7%	13%	6%
grade 1 events	149	458	418	696	336	160
	0%	0%	0%	0%	0%	0%
grade 2 events	8345	56780	15243	46848	18805	7286
	2%	13%	4%	10%	4%	2%
grade 3 events	3176	9963	5868	21835	8600	3458
	0%	2%	1%	5%	2%	1%
grade 4 events	3234	9799	5751	21789	8057	3490
	1%	2%	1%	5%	1%	1%
grade 5 events	9734	30302	11913	36038	14969	12024
	3%	7%	3%	8%	3%	3%
grade 6 events	5741	95573	8940	100780	18818	6509
	1%	23%	2%	23%	4%	2%
grade 7 events	274516	181259	251333	176231	278884	251733
	85%	43%	68%	40%	69%	82%

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	325.697798	325.6687740092214	Subarray requested	NONE	NONE
Pointing Dec	43.604731	43.58717355582584	Alternating exposures requested	N	N
Pointing Roll	189.399154	189.5757827232022	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	-187.1228876879999			
SIM translation stage offset (mm)	-3	-3.009634895007935			
Observation start time	83501213.184000	83500103.677066			
Observation start date	2000-08-24T10:45:49	2000-08-24T10:28:23			
Observation end time	83549213.184000	83549970.953936			
Observation end date	2000-08-25T00:05:49	2000-08-25T00:19:30			
Read mode	TIMED	TIMED			

2.3 Aspect



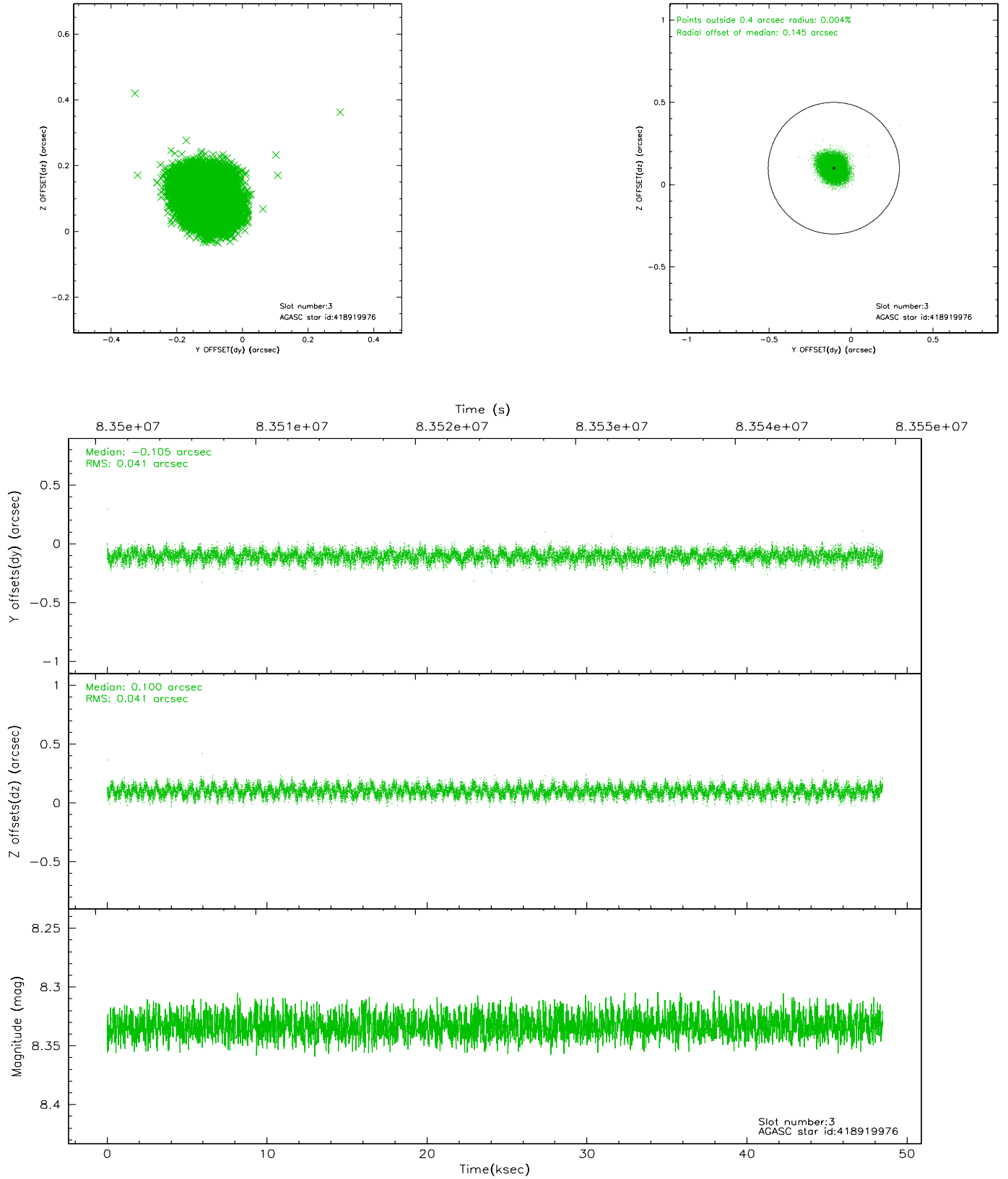


Slot Statistics

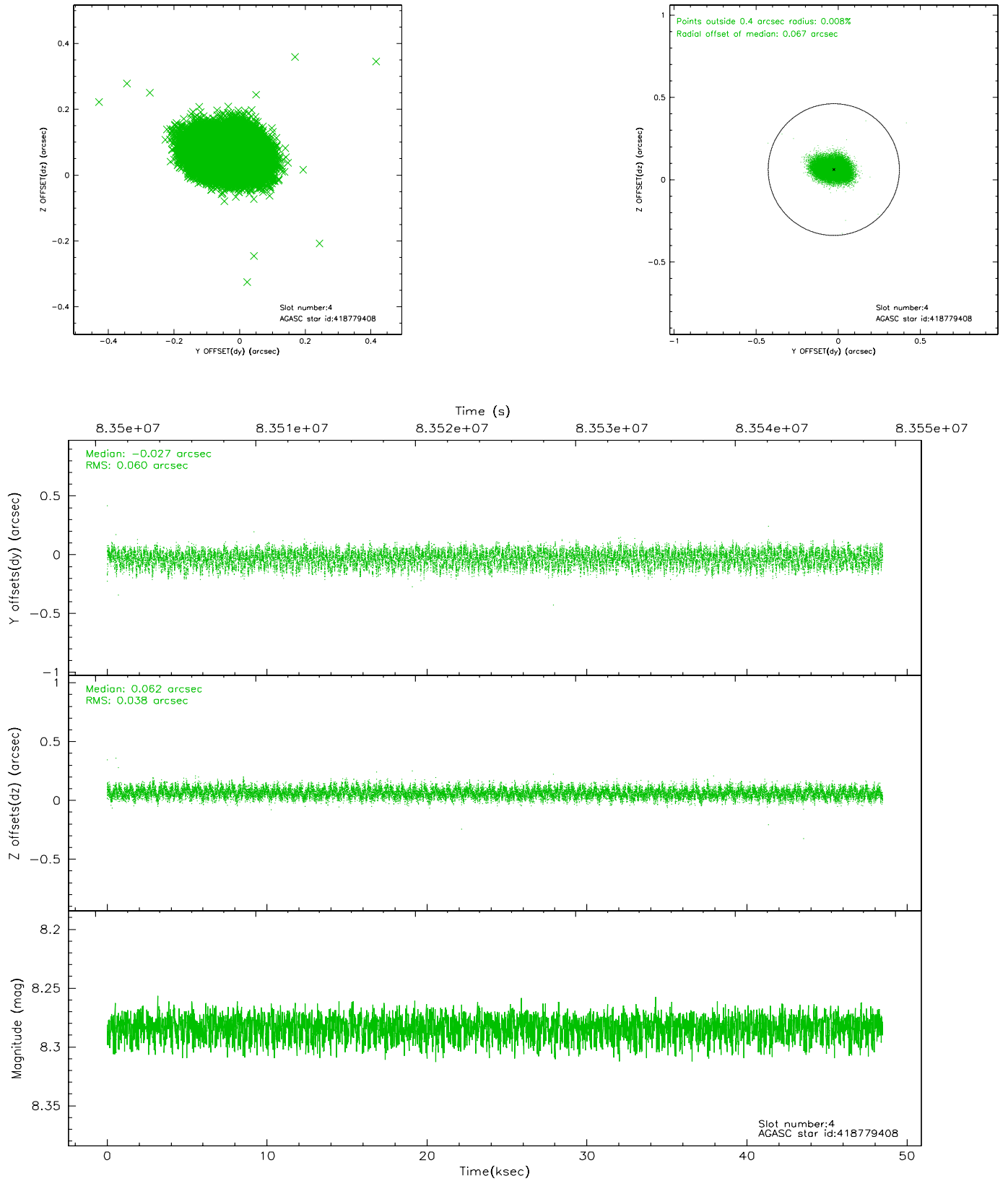
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	11828	-0.022	-0.012	0.006	0.011	0.000000	0.000000	-754.16	-1787.96
1	FID	ACIS-S-4	7.20	11827	-0.037	0.014	0.005	0.009	0.000000	0.000000	2159.12	120.53
2	FID	ACIS-S-5	7.23	11825	0.028	0.007	0.006	0.010	0.000000	0.000000	-1806.95	114.21
3	GUIDE	418919976	8.33	23648	-0.105	0.100	0.062	0.099	325.082300	43.946188	1372.19	-1478.29
4	GUIDE	418779408	8.28	23649	-0.027	0.062	0.076	0.121	324.813346	44.038681	2001.24	-1926.32
5	GUIDE	418390104	8.99	23650	-0.073	-0.043	0.074	0.117	325.407324	43.099724	1049.69	1668.22
6	GUIDE	418917368	9.24	23642	0.087	-0.039	0.093	0.152	326.308221	43.332066	-1417.79	1224.14
7	GUIDE	418911992	9.34	23640	0.126	-0.081	0.098	0.155	326.487476	43.206584	-1812.14	1743.17

2.4 Star Slots

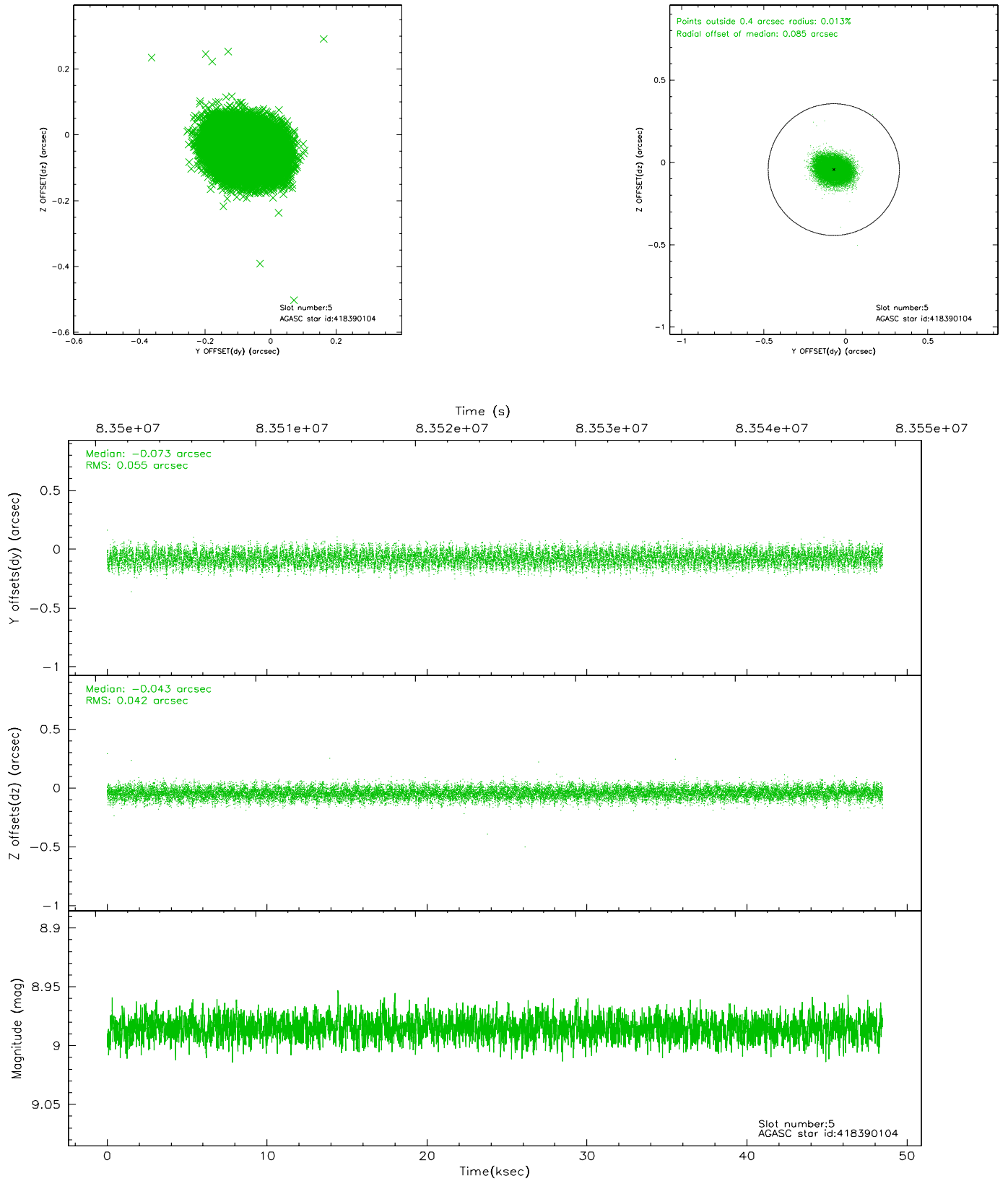
2.4.1 Slot 3



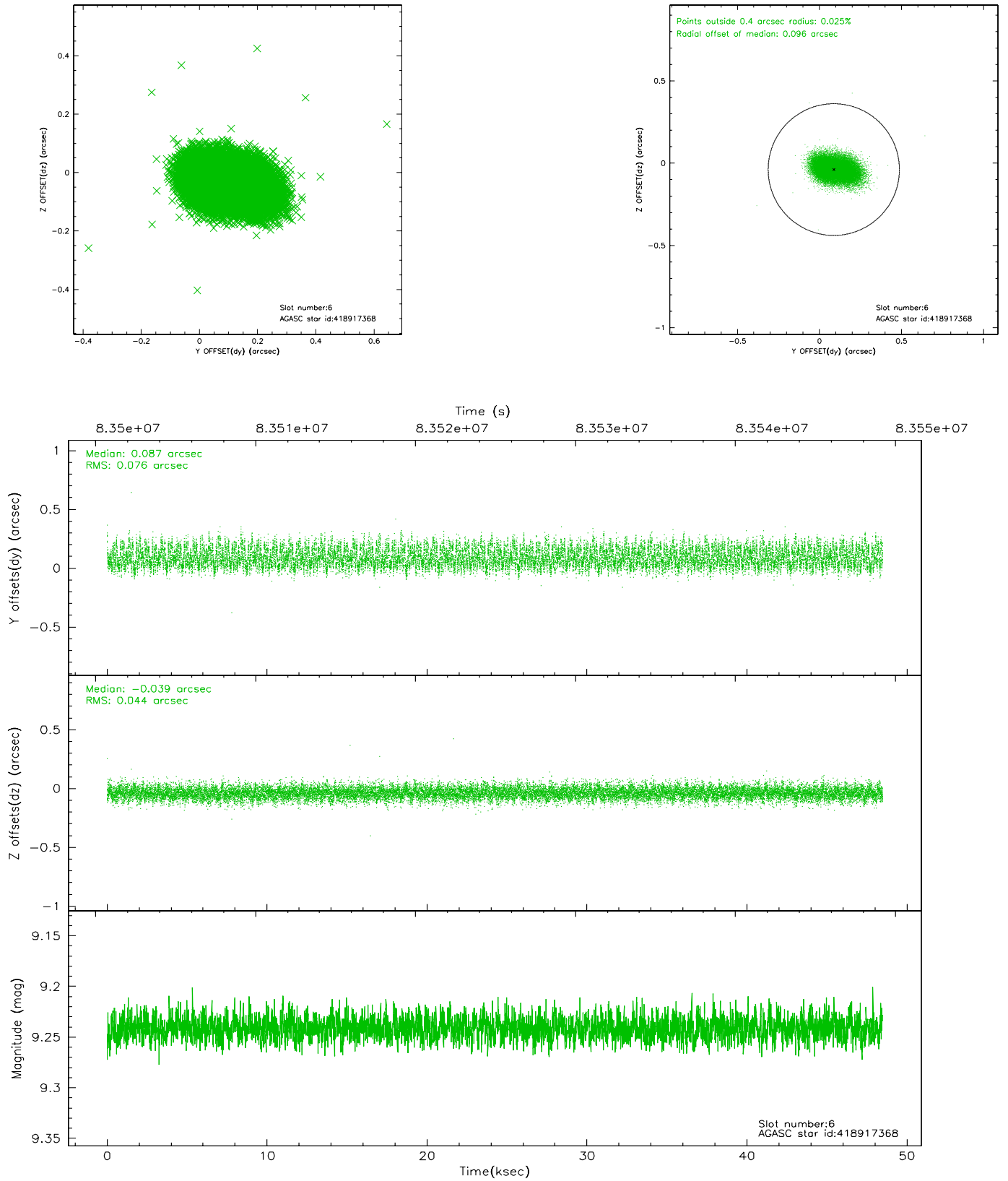
2.4.2 Slot 4



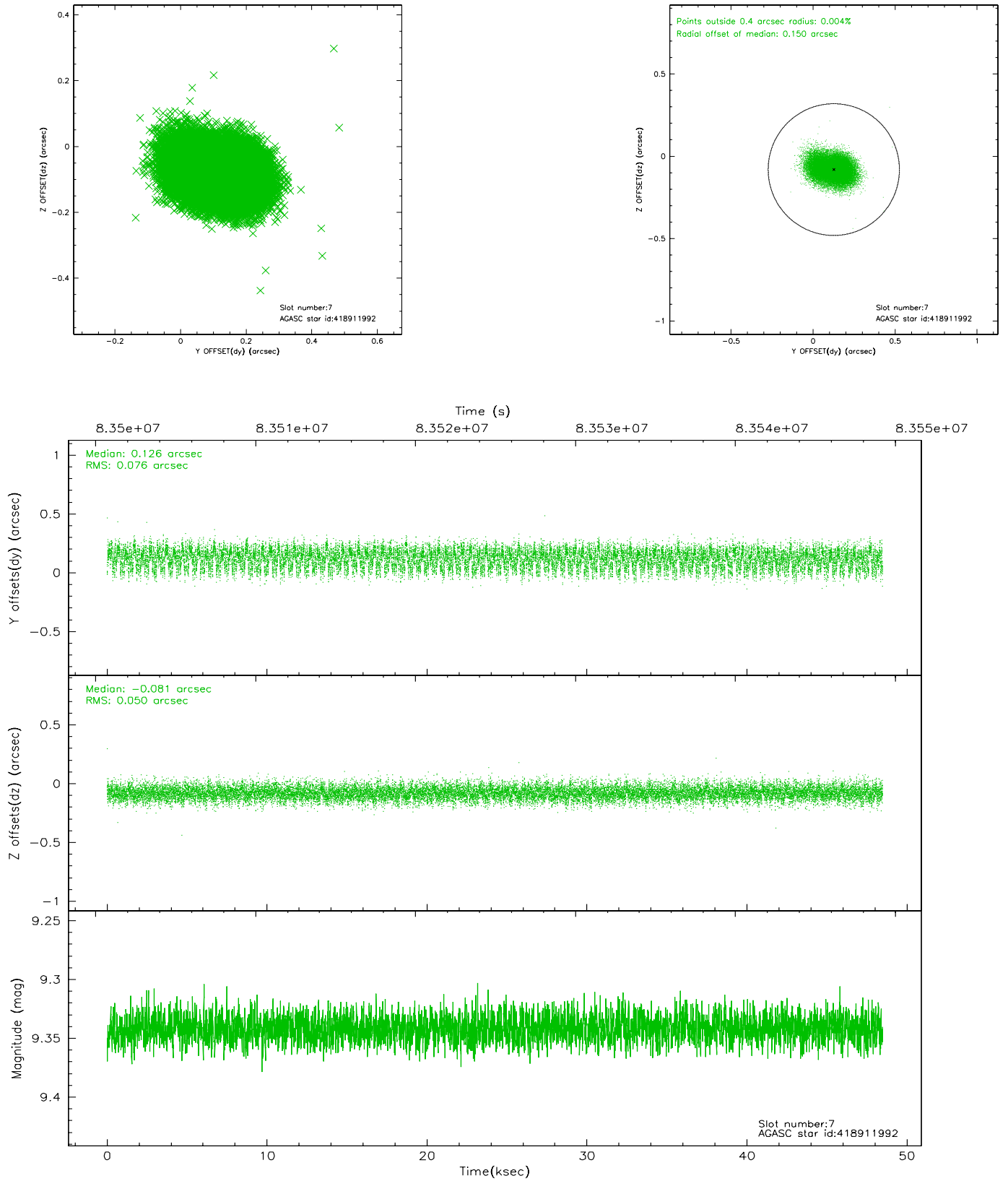
2.4.3 Slot 5



2.4.4 Slot 6

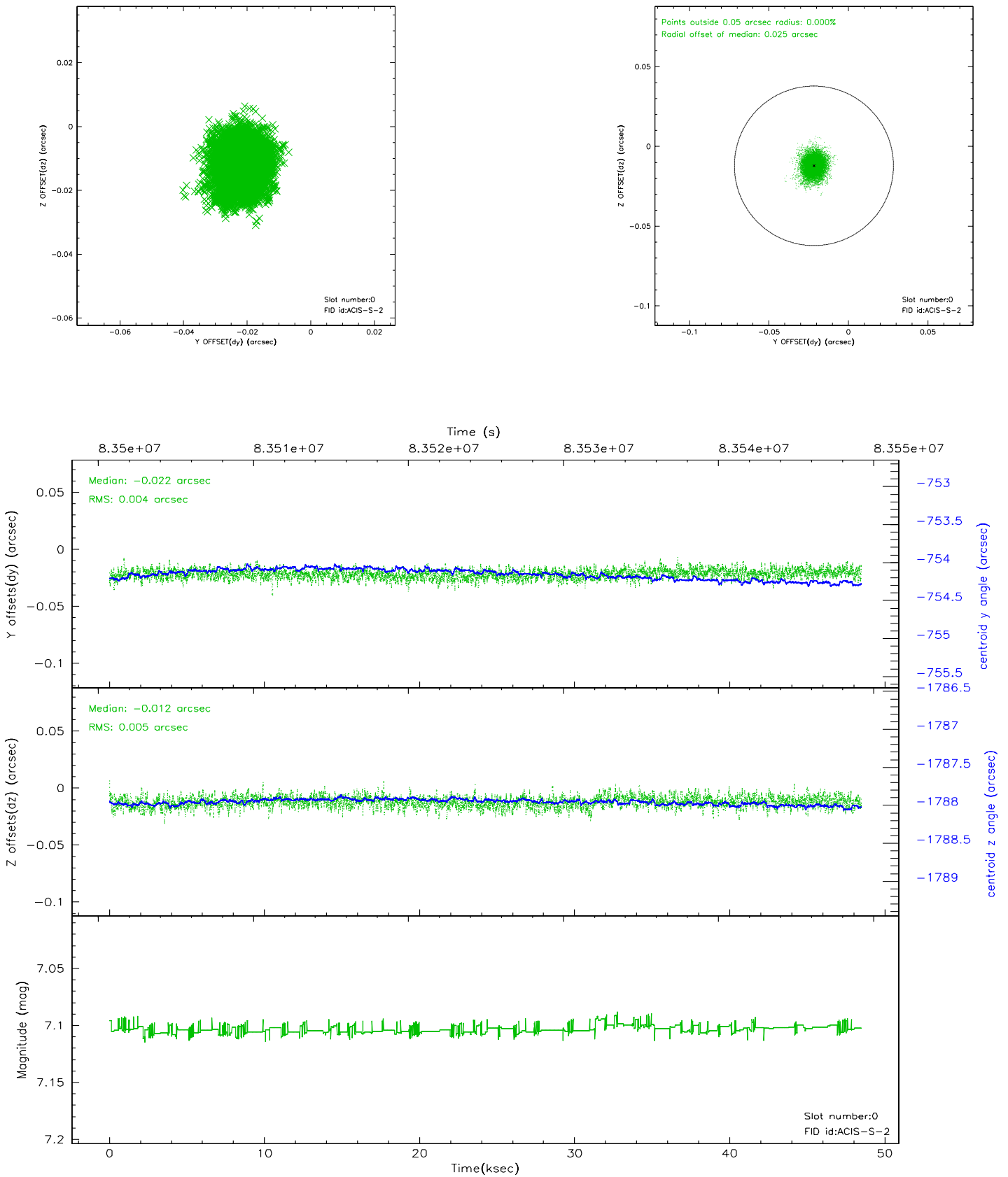


2.4.5 Slot 7

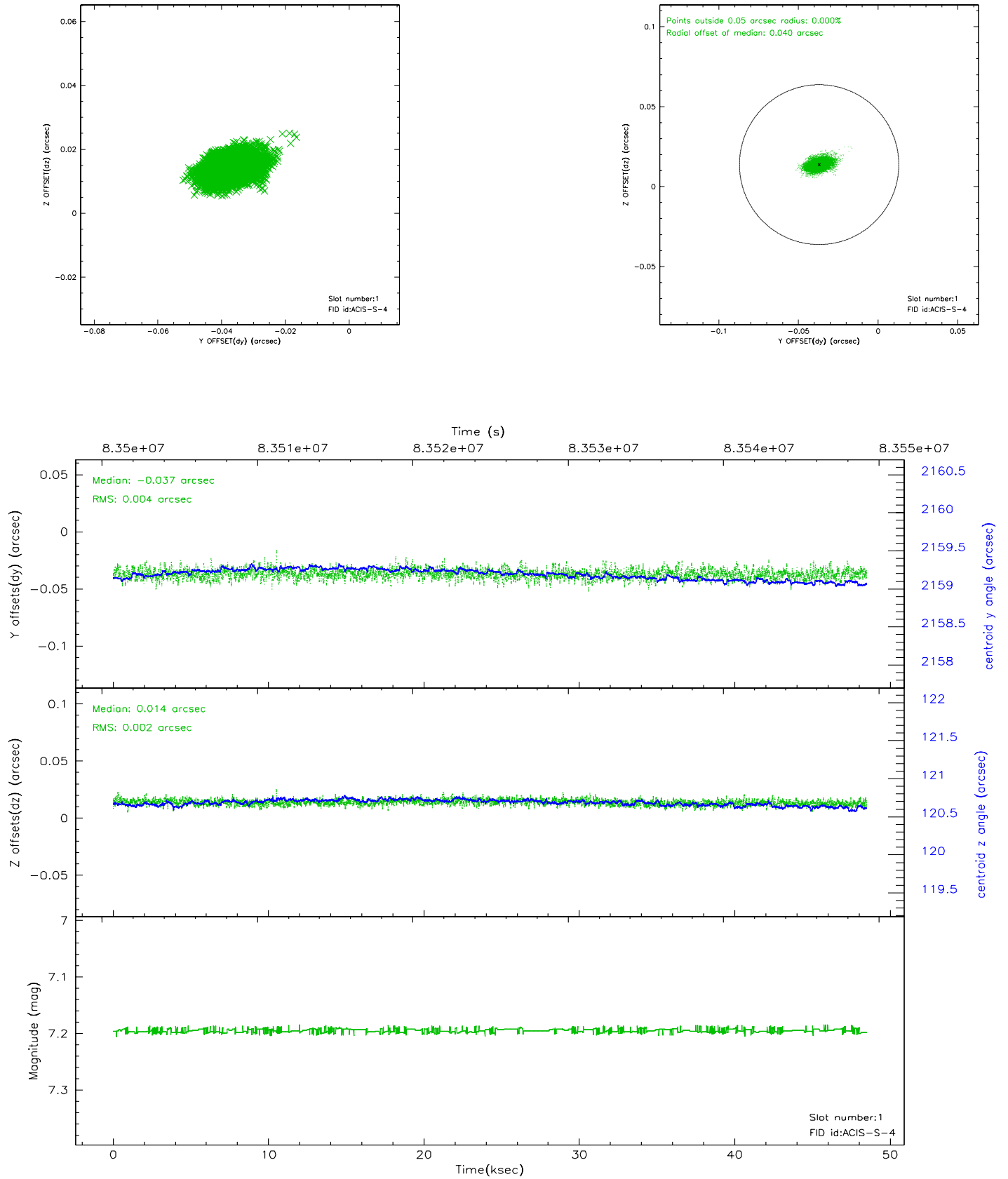


2.5 FID Slots

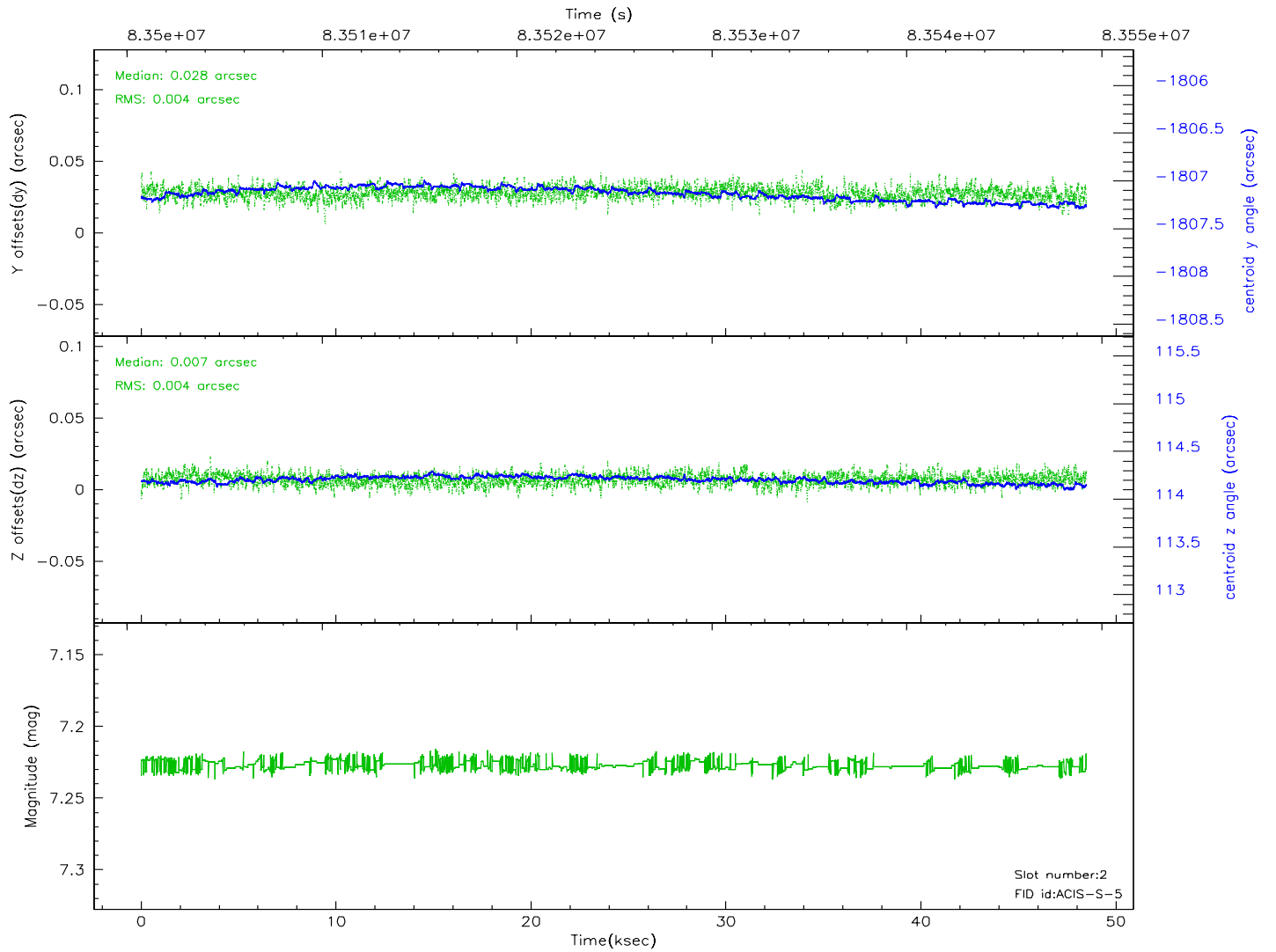
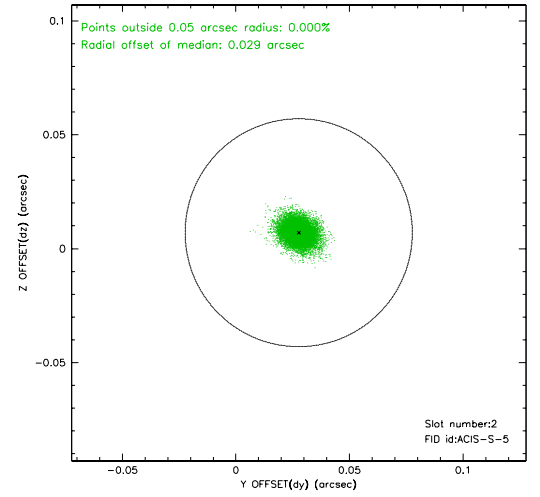
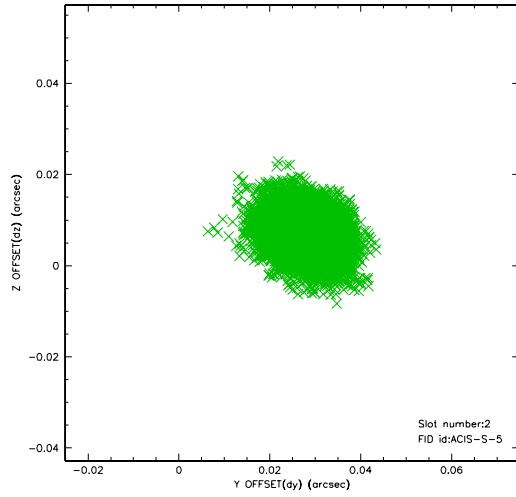
2.5.1 Slot 0



2.5.2 Slot 1

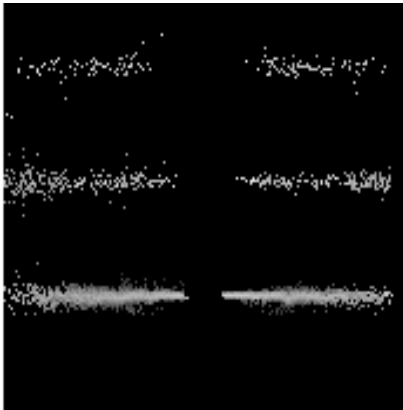


2.5.3 Slot 2

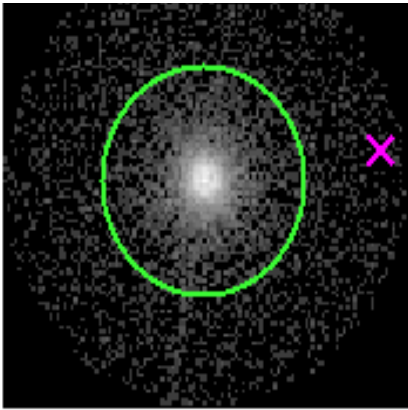


3 Gratings

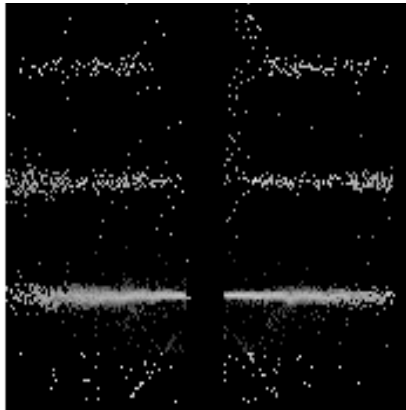
3.1 HEG Arm



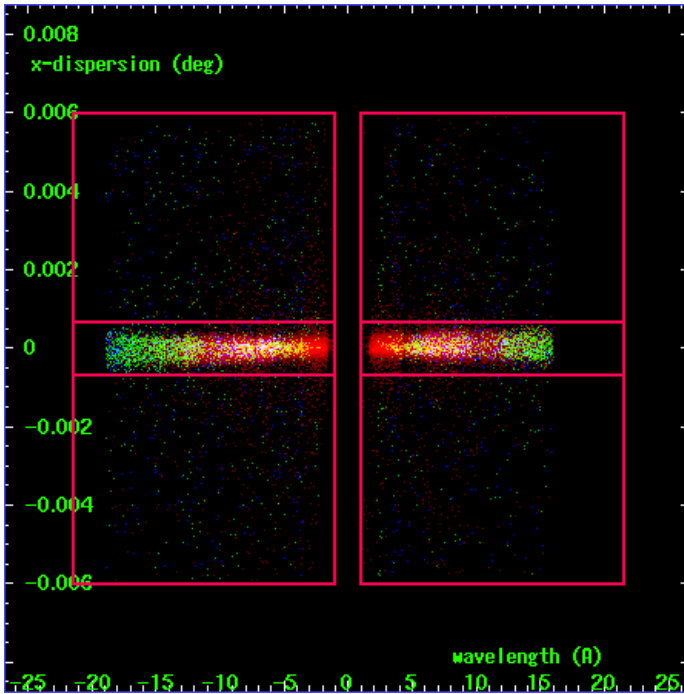
HEG Order Sort 123



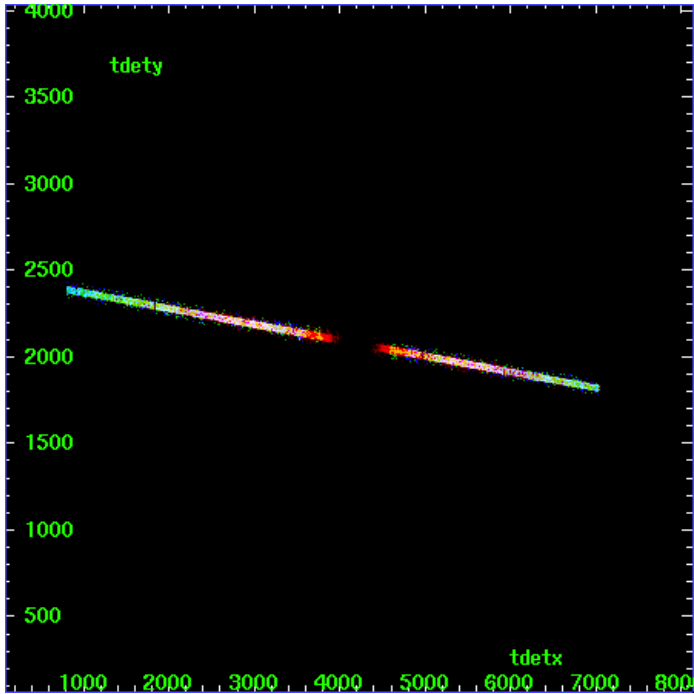
HEG Zero Order



HEG Order Sort ALL

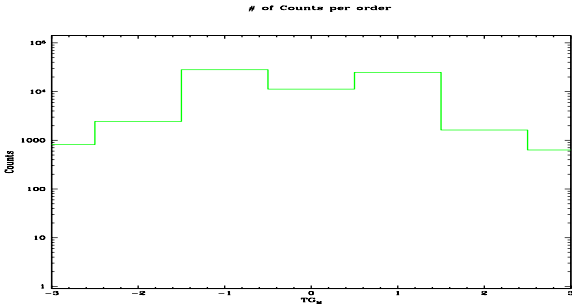


Spot Image HEG

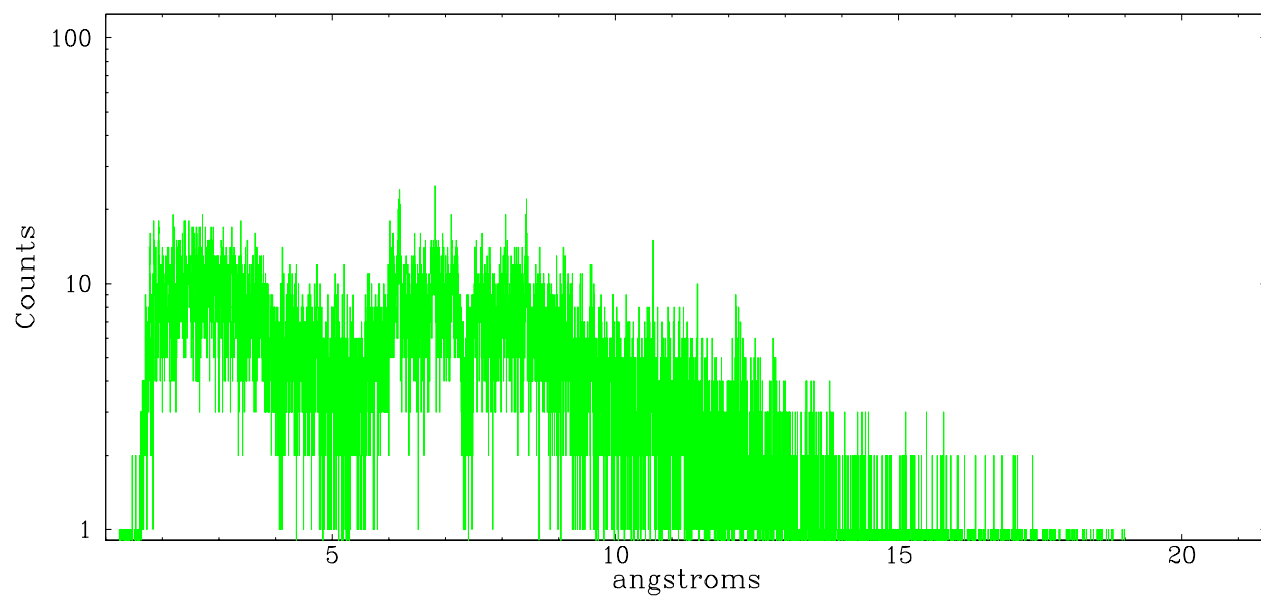


Full Detector HEG

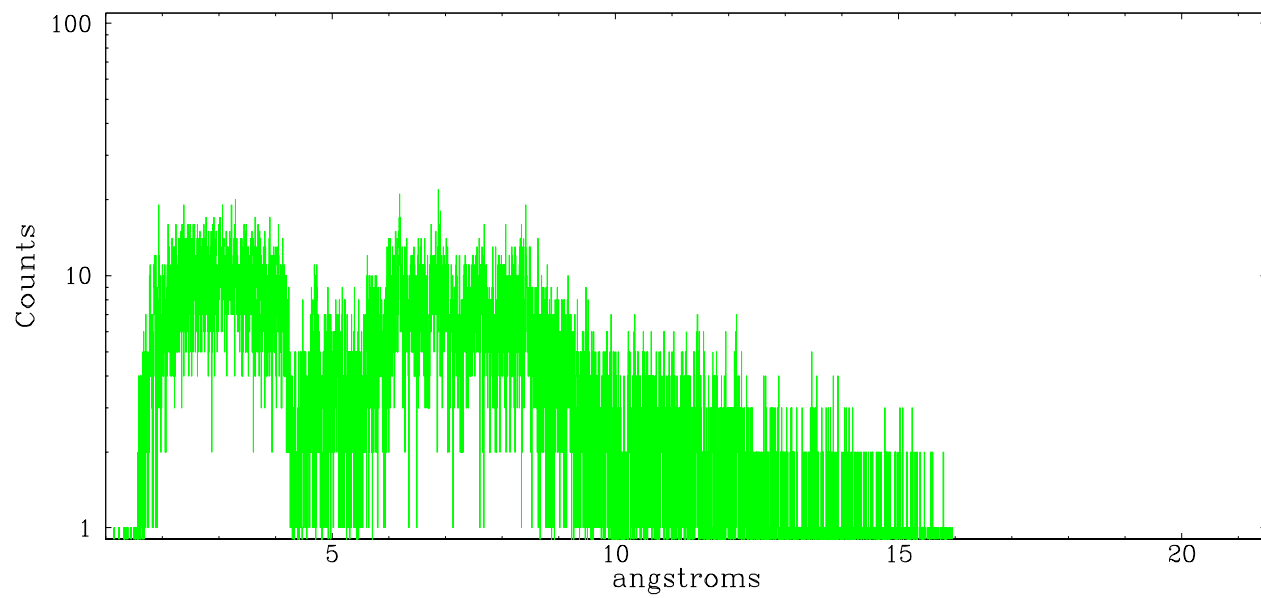
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	817	2434	28179	11264	24943	1623	635



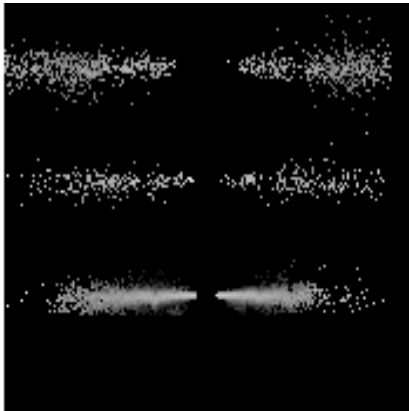
heg order -1



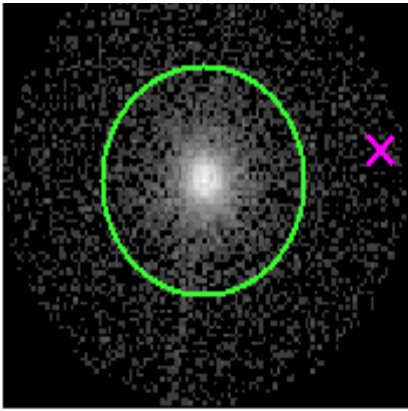
heg order +1



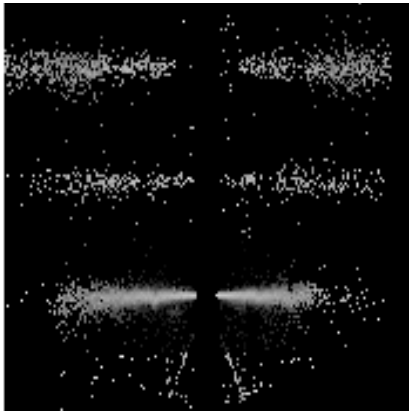
3.2 MEG Arm



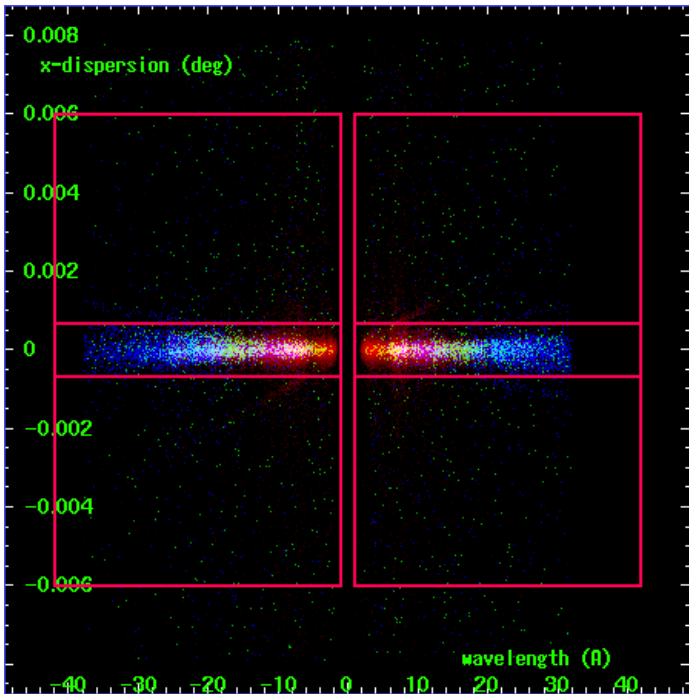
MEG Order Sort 123



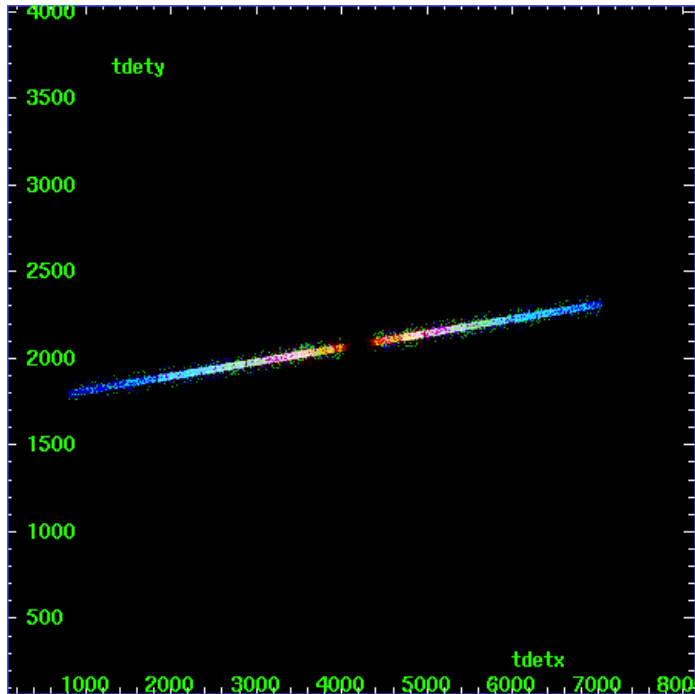
MEG Zero Order



MEG Order Sort ALL

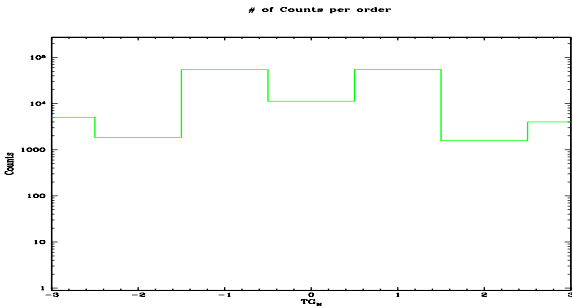


Spot Image MEG

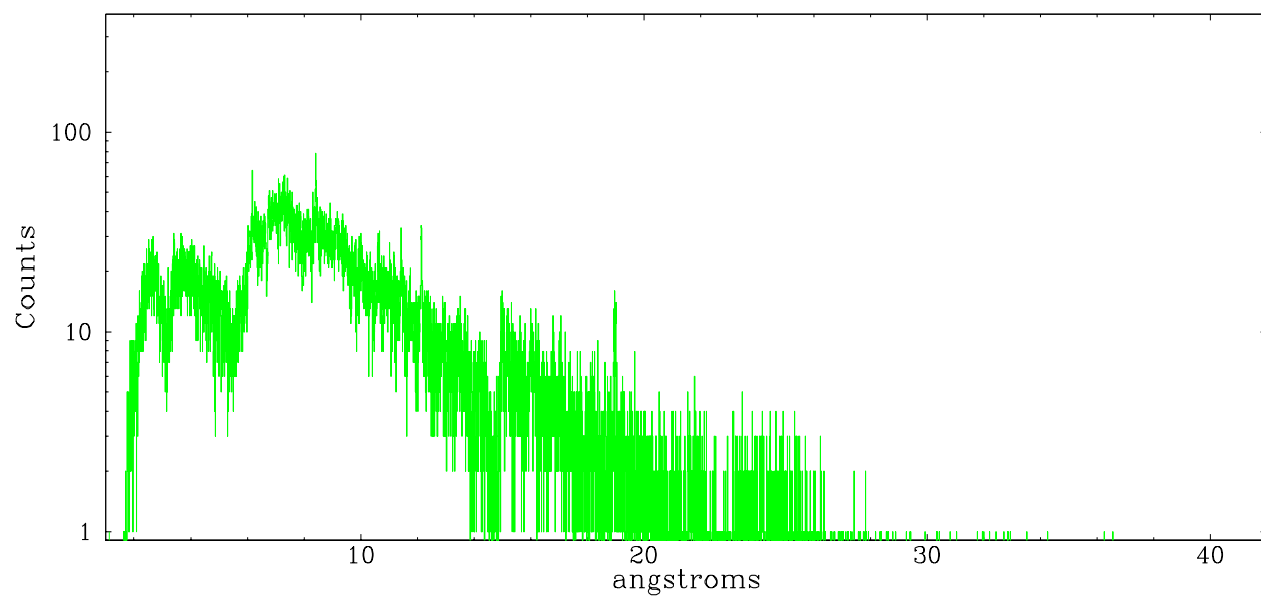


Full Detector MEG

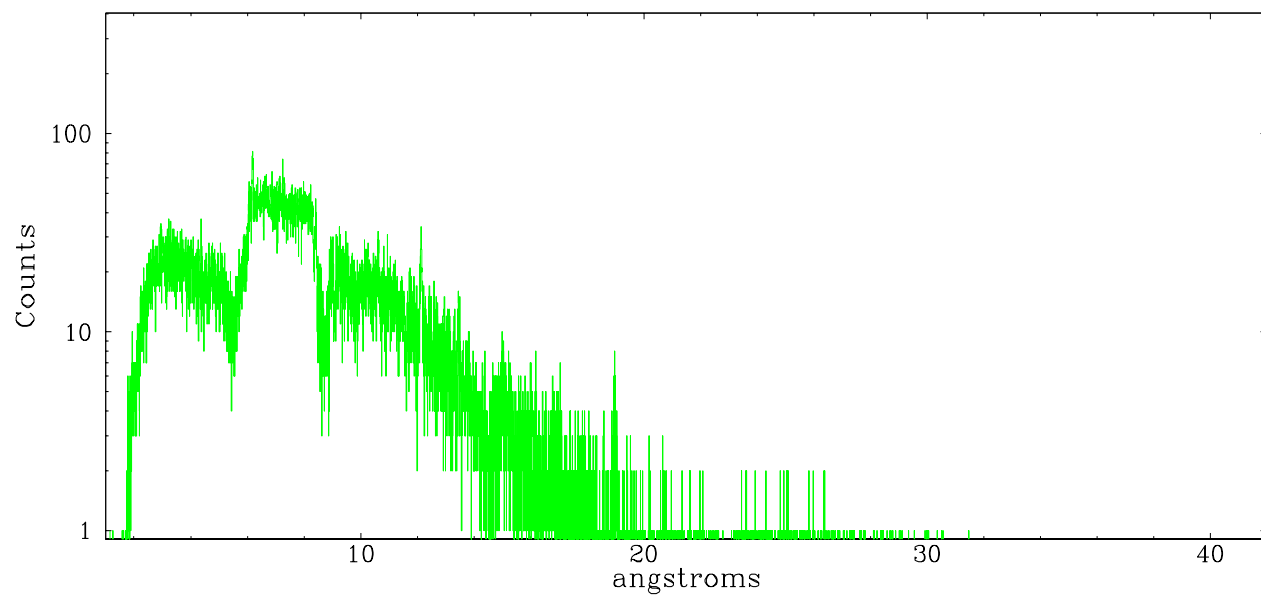
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	5027	1853	54346	11264	54599	1571	3987



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	47.948

A.2 Comments

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=4045.64, y=4088.54) 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.