

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 702 - L2 Version 4
Chandra X-Ray Center

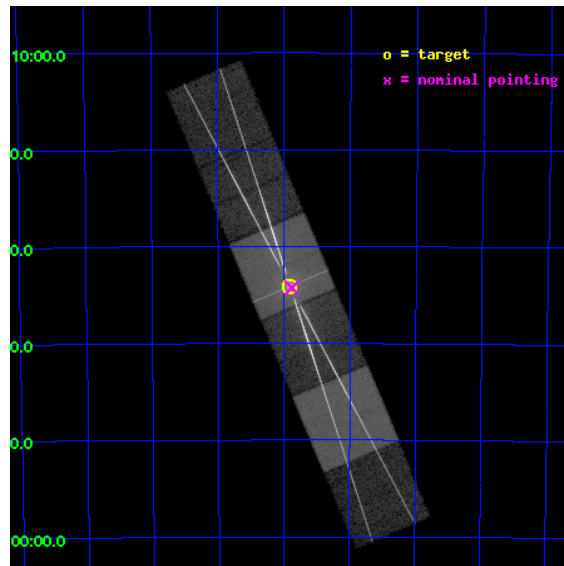
L2 Processing Date : Sep 14 2012

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1 Front

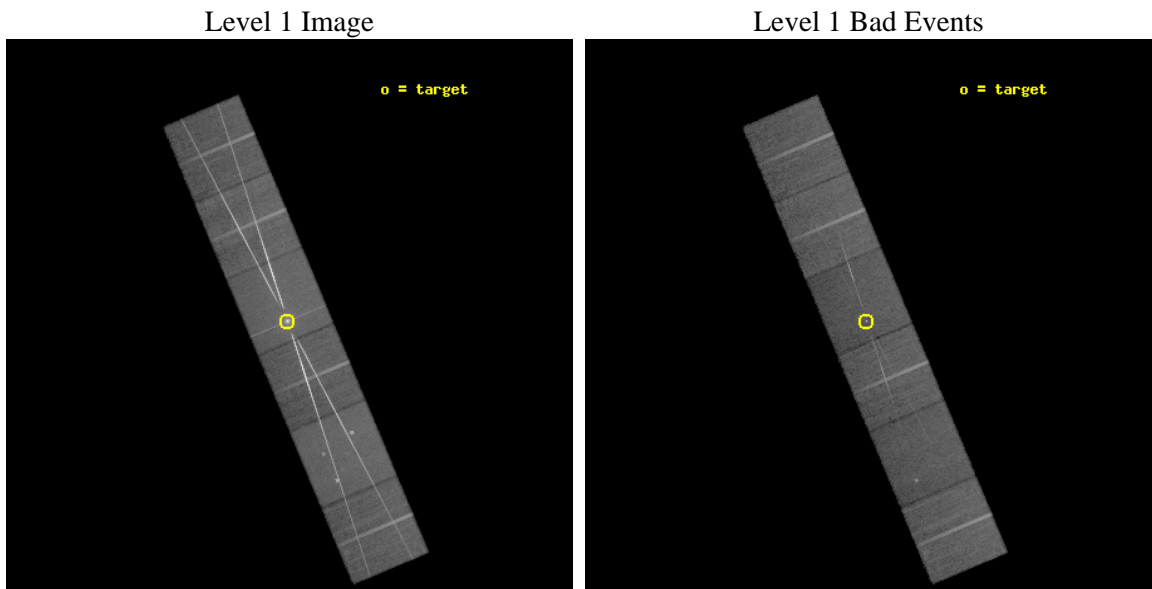
seq_num	400069	Sequence number
obs_id	702	Observation id
title	RESOLVING LOW ENERGY LINES FROM LMXRB	Proposal title
observer	Dr Lorella Angelini	Principal investigator
object	X1543-62	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	236.977917	Observer's specified target RA [deg]
dec_targ	-62.568056	Observer's specified target Dec [deg]
ra_nom	236.97082635434	Nominal RA [deg]
dec_nom	-62.571274895901	Nominal Dec [deg]
roll_nom	247.17707977248	Nominal Roll [deg]
revision	4	Processing version of data
ontime	27747.200025827	Sum of GTIs [s]
livetime	27395.848271742	Livetime [s]
ontime4	27747.200025827	Sum of GTIs [s]
ontime5	27747.200025827	Sum of GTIs [s]
ontime6	27747.200025827	Sum of GTIs [s]
ontime7	27747.200025827	Sum of GTIs [s]
ontime8	27743.959065586	Sum of GTIs [s]
ontime9	27747.200025827	Sum of GTIs [s]
l2events	869164	Number of level 2 events



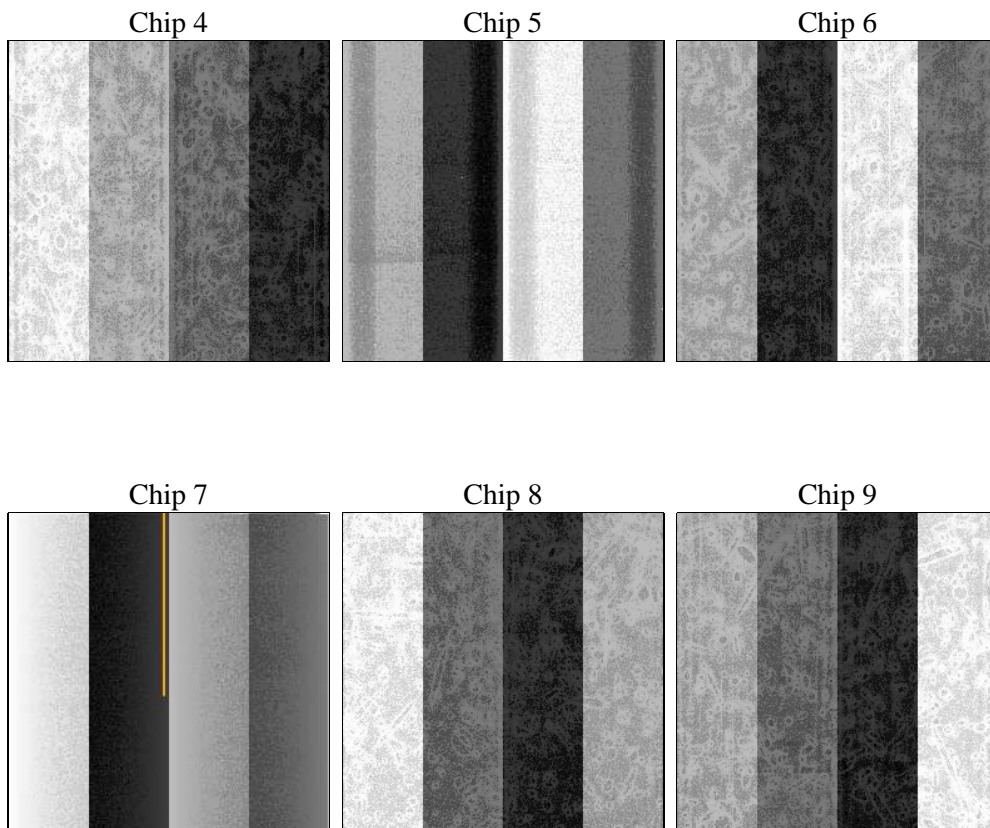
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27990.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	27747.200025827	Sum of GTIs [s]
caldsver	4.5.1.1	 	ontime4	27747.200025827	Sum of GTIs [s]
date	2012-09-01T16:12:35	Date and time of file creation	ontime5	27747.200025827	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	27747.200025827	Sum of GTIs [s]
			ontime7	27747.200025827	Sum of GTIs [s]
			ontime8	27743.959065586	Sum of GTIs [s]
			ontime9	27747.200025827	Sum of GTIs [s]
			l1events	1847178	Number of level 1 events

2.1.4 Events

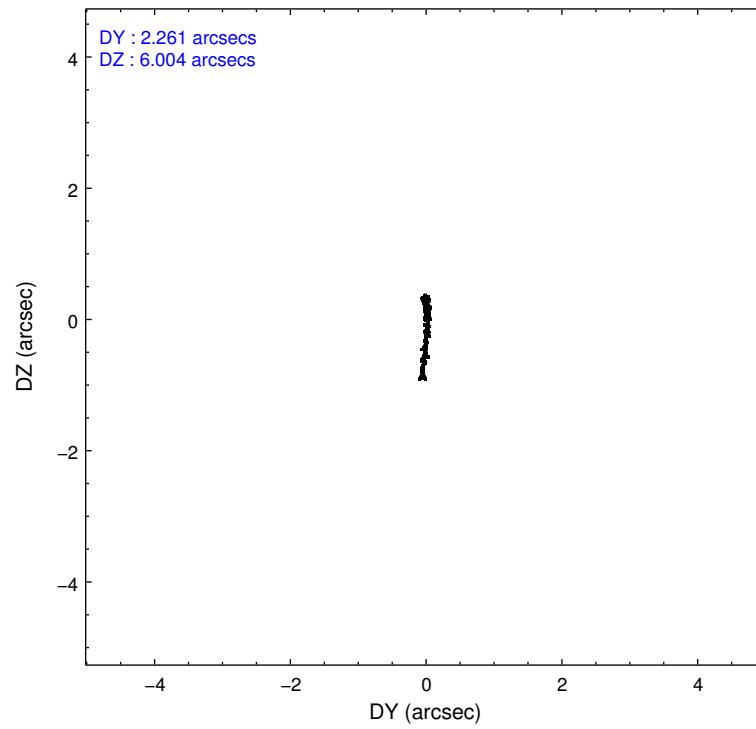
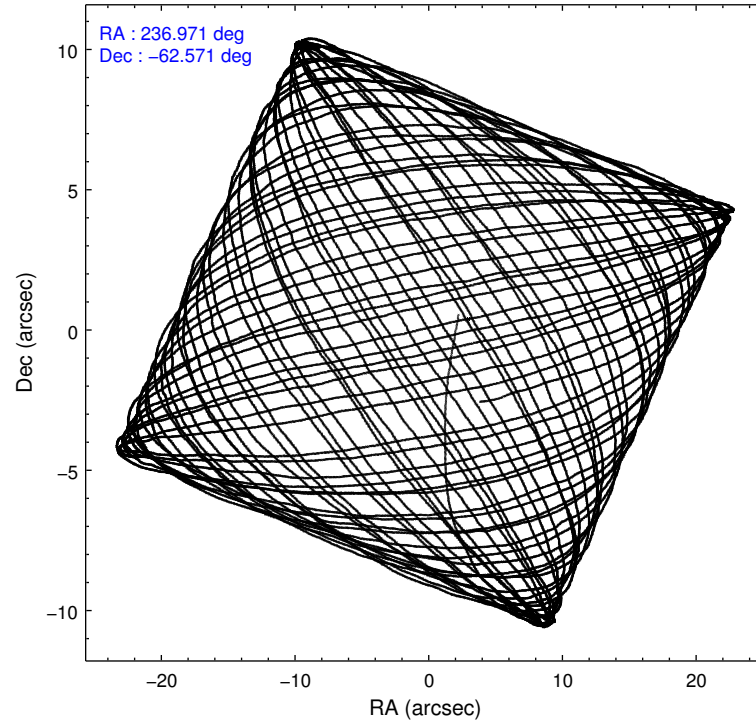
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	207212	294331	397284	428359	329383	190609	grade 0 events	21443	41346	179801	60382	107364	27333
rejected events	171574	122077	158180	125563	174487	147714		10%	14%	45%	14%	32%	14%
rejected %	82%	41%	39%	29%	52%	77%	grade 1 events	150	1178	2295	1230	822	161
								0%	0%	0%	0%	0%	0%
							grade 2 events	6235	48319	28758	70905	19607	6214
								3%	16%	7%	16%	5%	3%
							grade 3 events	2266	10732	10189	32640	7864	2633
								1%	3%	2%	7%	2%	1%
							grade 4 events	2086	10429	9902	32281	7520	2591
								1%	3%	2%	7%	2%	1%
							grade 5 events	5594	17688	8238	23368	8954	6797
								2%	6%	2%	5%	2%	3%
							grade 6 events	3614	61447	10482	106637	12555	4127
								1%	20%	2%	24%	3%	2%
							grade 7 events	165824	103192	147619	100916	164697	140753
								80%	35%	37%	23%	50%	73%

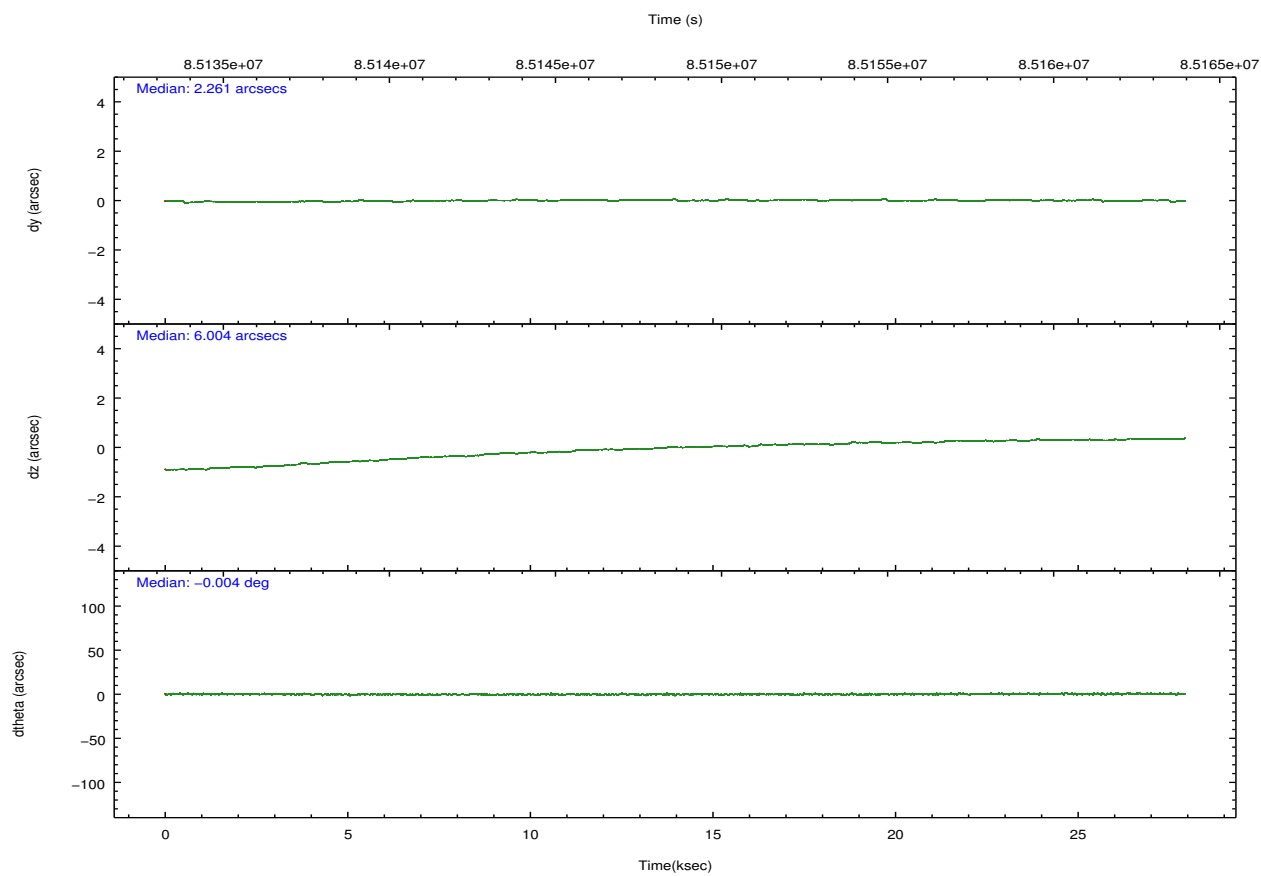
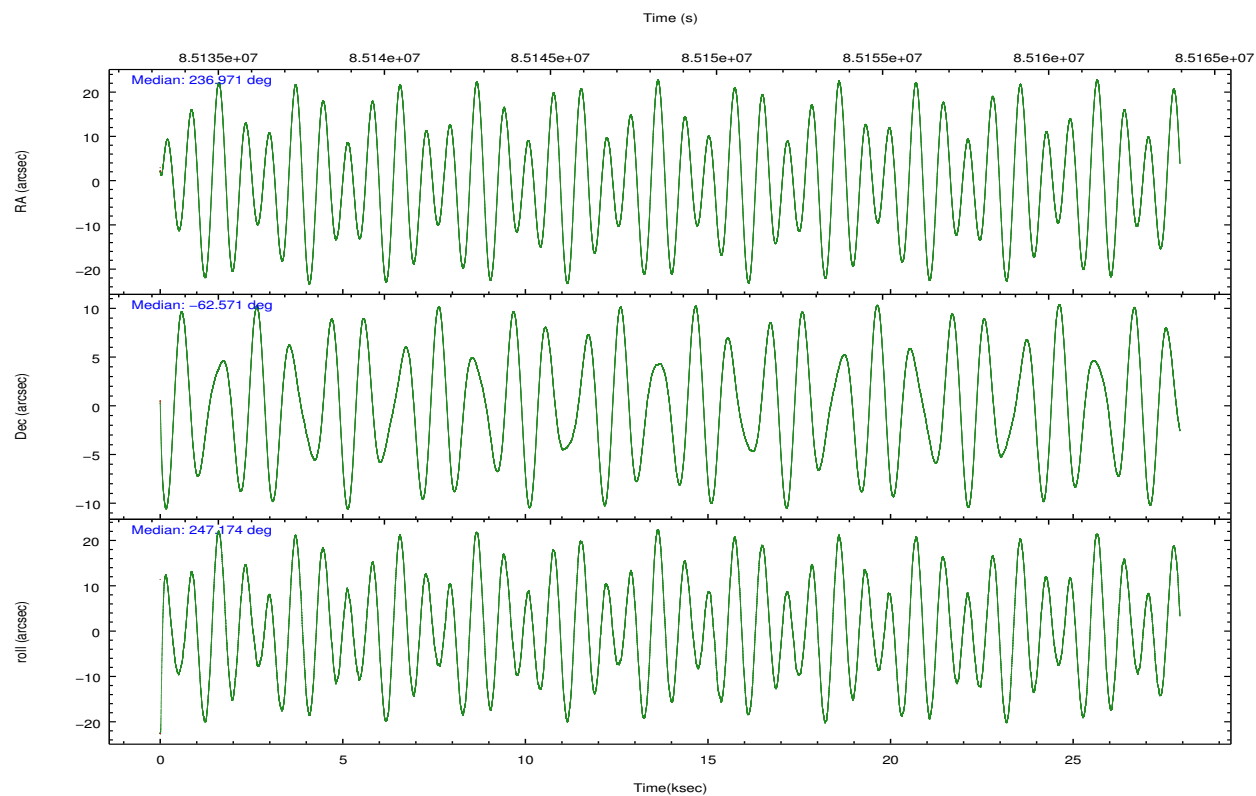
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-456789	ACIS-456789
Grating	HETG	HETG
Data mode	FAINT	FAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	236.962995	236.9708263543365
[deg] Pointing Dec	-62.544142	-62.57127489590098
[deg] Pointing Roll	247.013517	247.1770797724763
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	85134834.184000	85133840.47590999
Observation start date	2000-09-12T08:32:50	2000-09-12T08:17:20
[s] Observation end time (MET)	85162824.184000	85163316.402017
Observation end date	2000-09-12T16:19:20	2000-09-12T16:28:36
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.2

2.3 Aspect



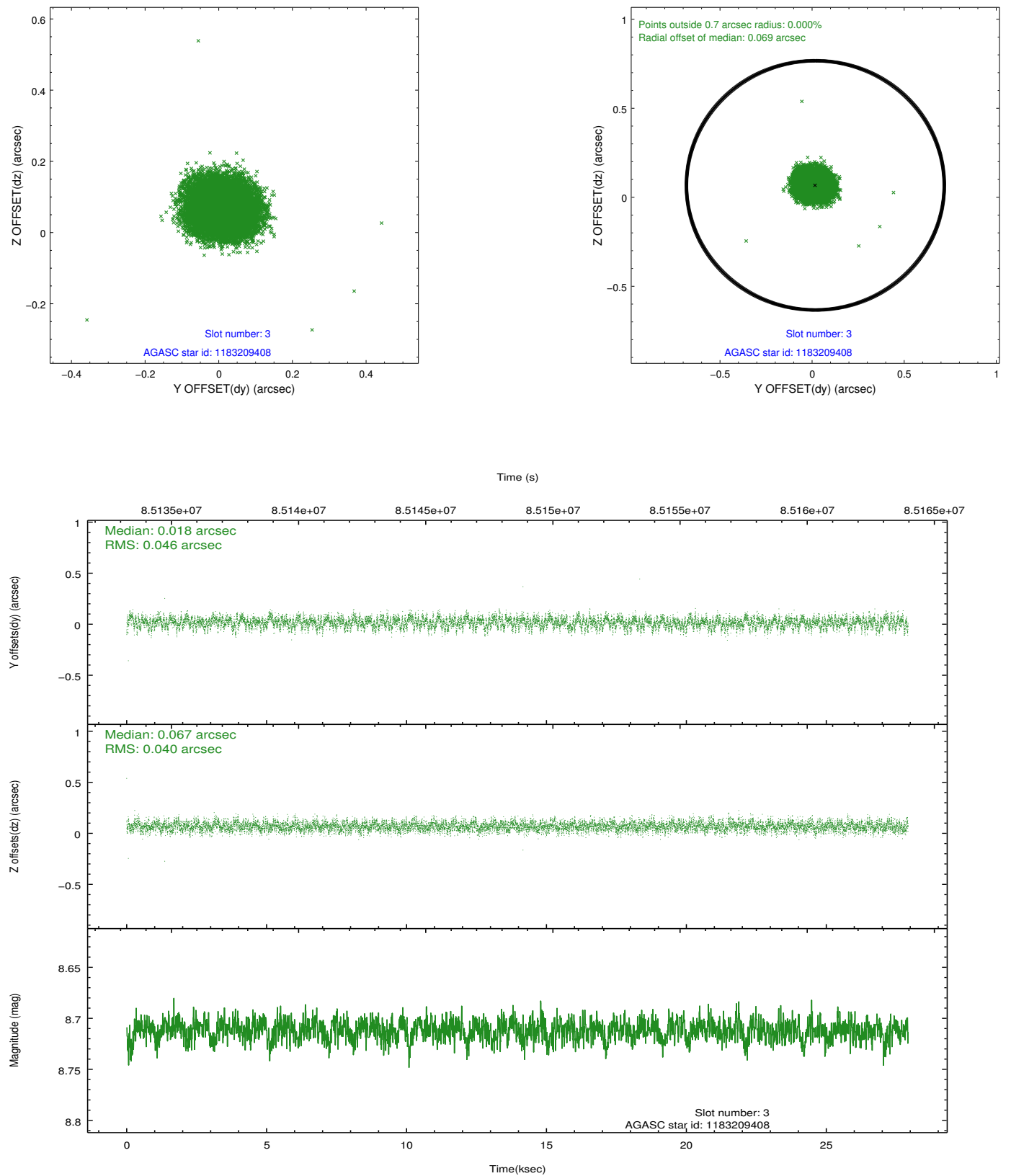


Slot Statistics

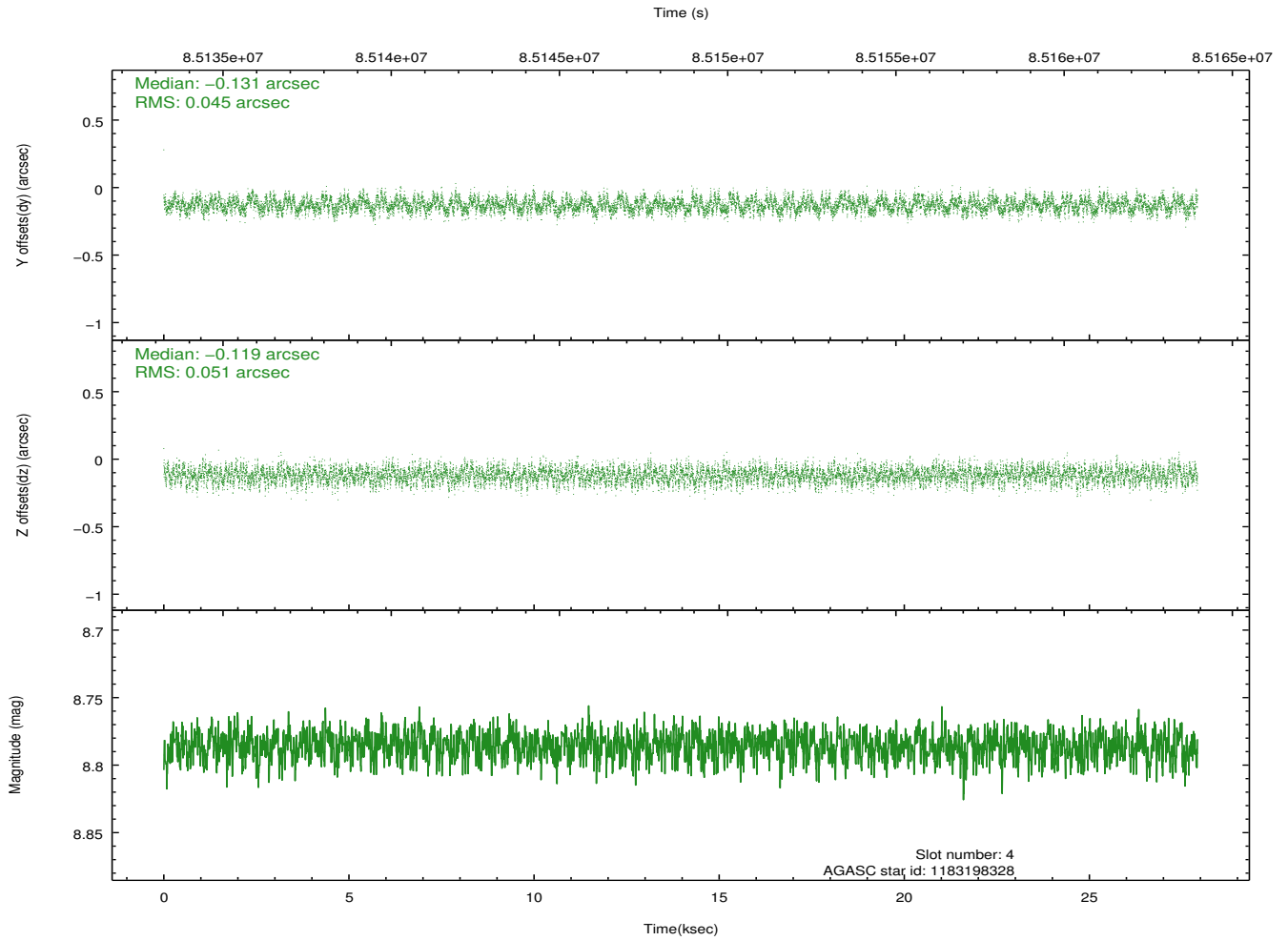
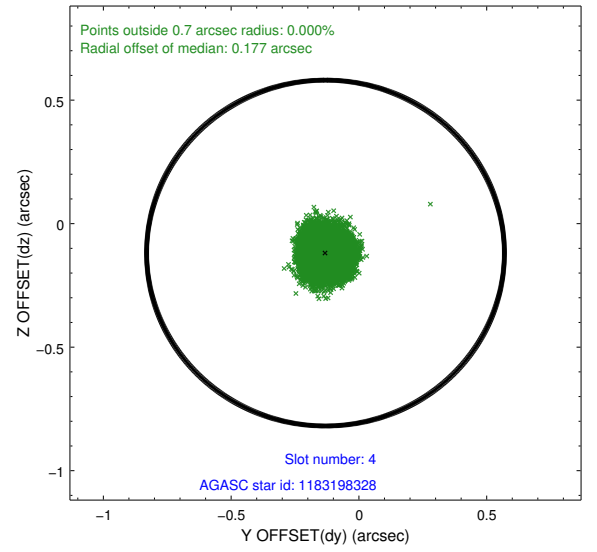
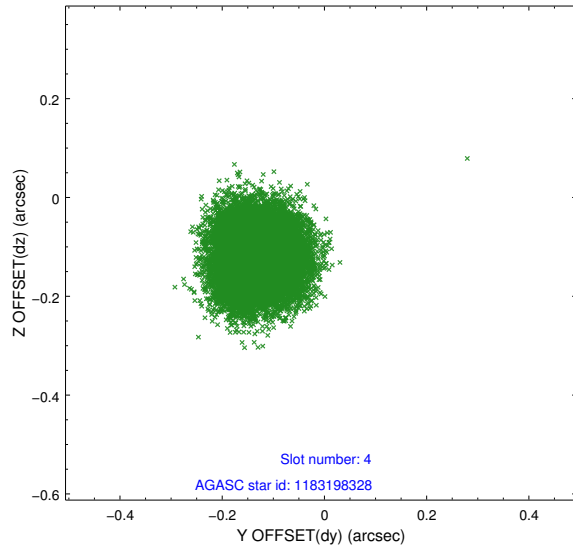
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.11	6811	0.015	0.017	0.015	0.026	0.000000	0.000000	-754.86	-1727.01
1	FID	ACIS-S-3	7.36	6810	-0.069	-0.066	0.019	0.040	0.000000	0.000000	58.15	-1856.40
2	FID	ACIS-S-4	7.20	6812	0.026	0.051	0.007	0.014	0.000000	0.000000	2158.50	181.41
3	GUIDE	1183209408	8.71	13618	0.018	0.067	0.064	0.104	237.705131	-63.010355	1078.68	1774.90
4	GUIDE	1183198328	8.79	13620	-0.131	-0.119	0.074	0.114	236.222922	-61.997390	-1316.25	-1917.10
5	GUIDE	1183208704	8.86	13620	0.155	0.050	0.078	0.124	236.306731	-63.131978	2370.91	-153.92
6	GUIDE	1183192312	9.40	13610	0.024	0.046	0.080	0.129	238.126227	-62.276476	-1630.88	1424.28
7	GUIDE	1183187560	9.55	13616	-0.064	-0.045	0.084	0.136	236.833951	-62.217883	-995.98	-657.52

2.4 Star Slots

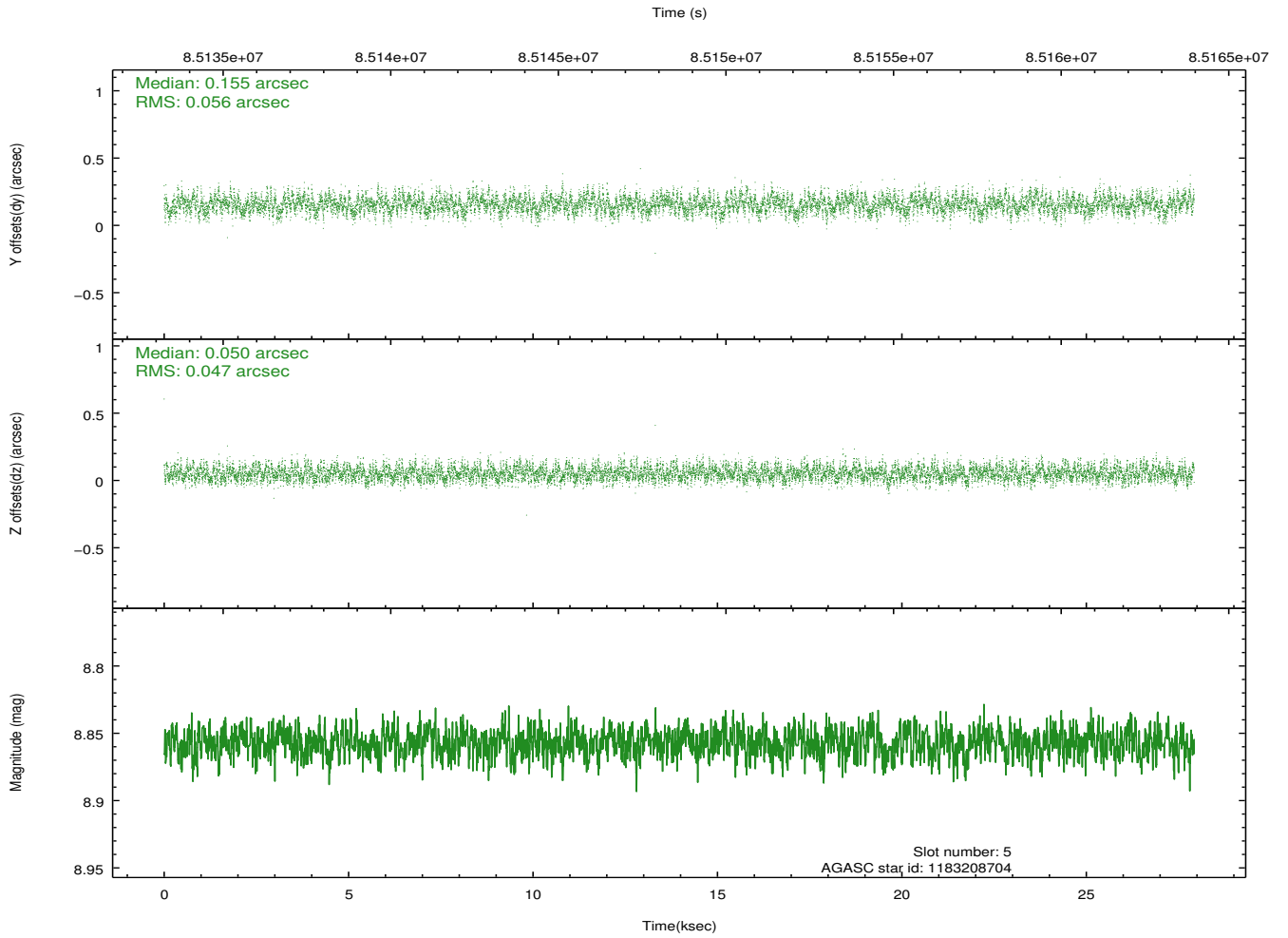
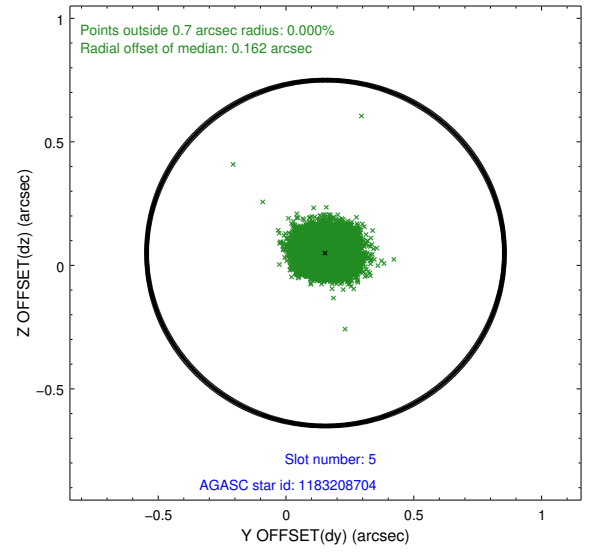
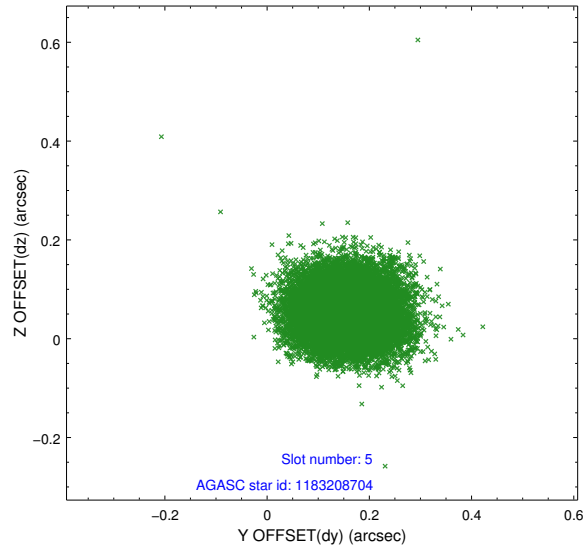
2.4.1 Slot 3



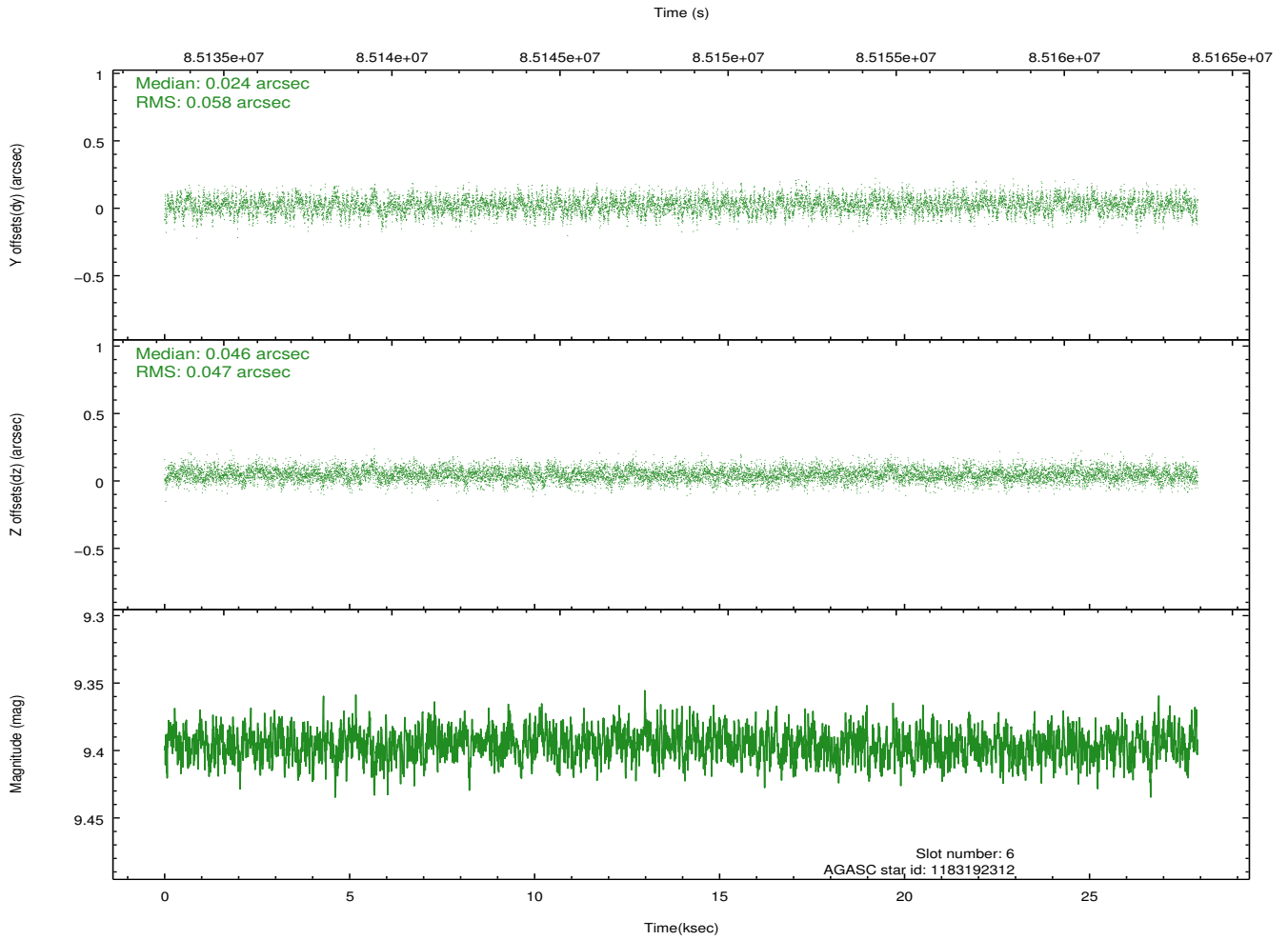
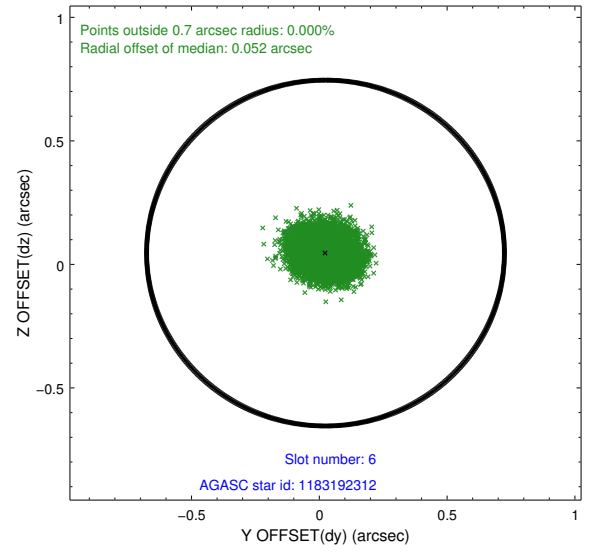
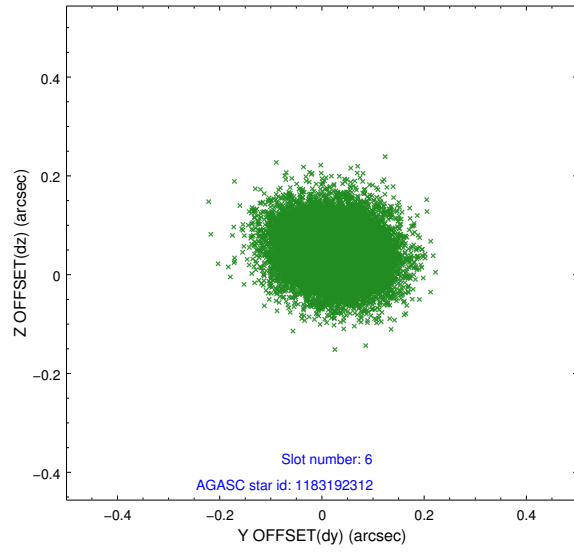
2.4.2 Slot 4



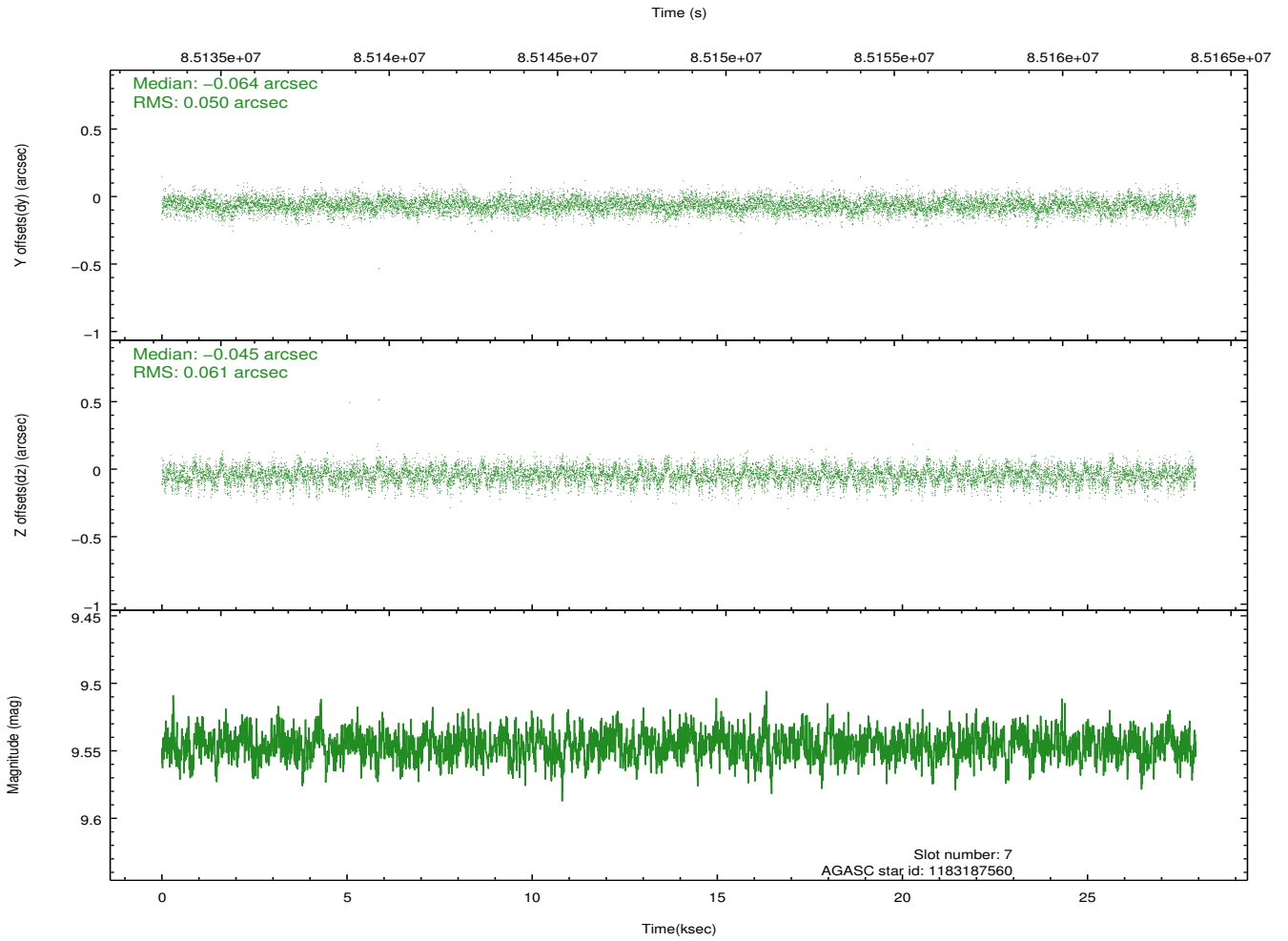
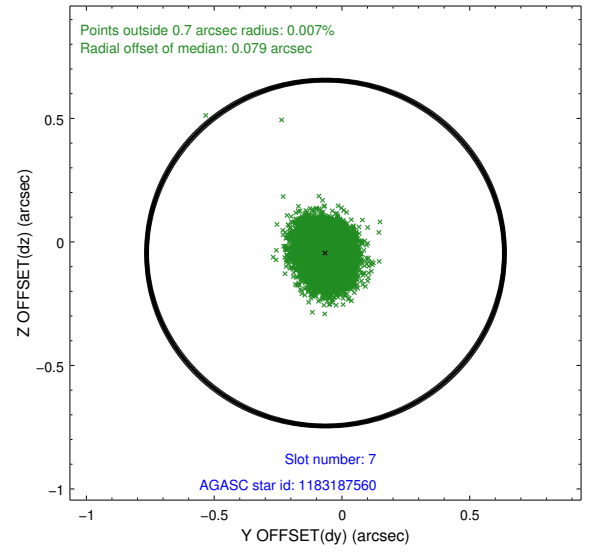
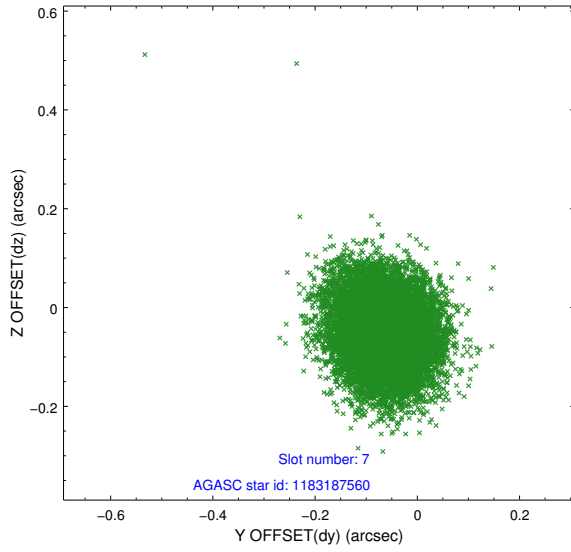
2.4.3 Slot 5



2.4.4 Slot 6

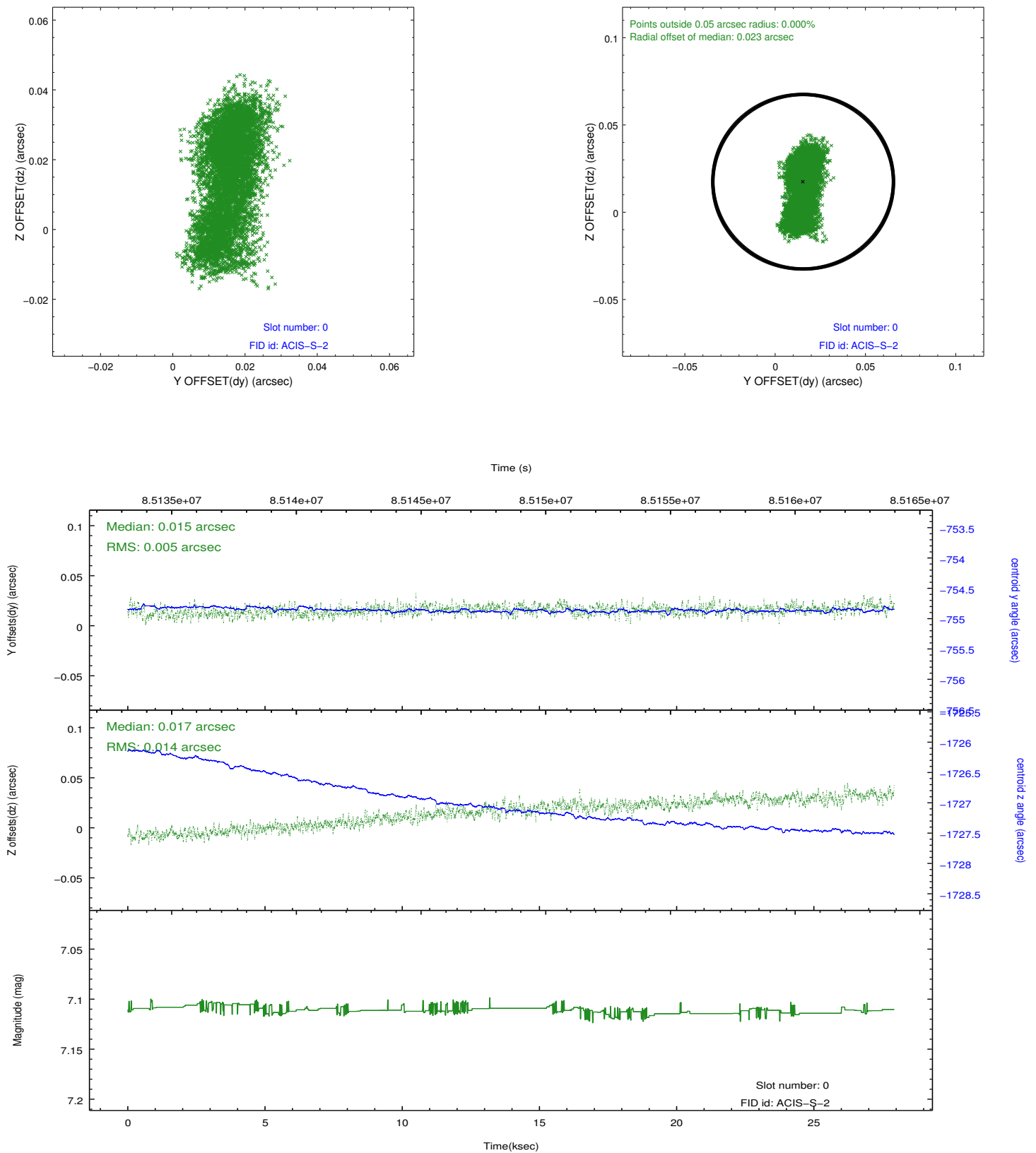


2.4.5 Slot 7

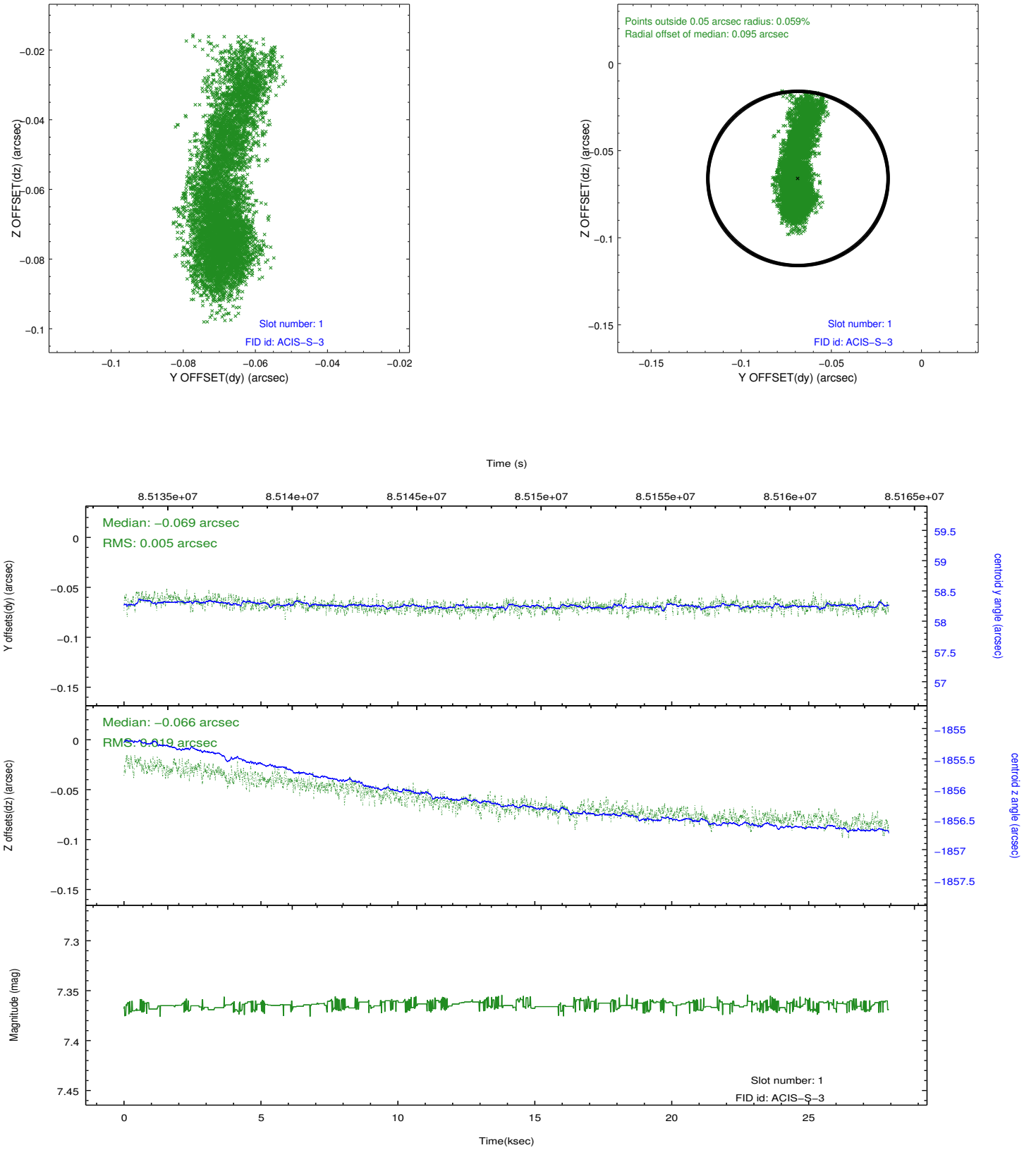


2.5 FID Slots

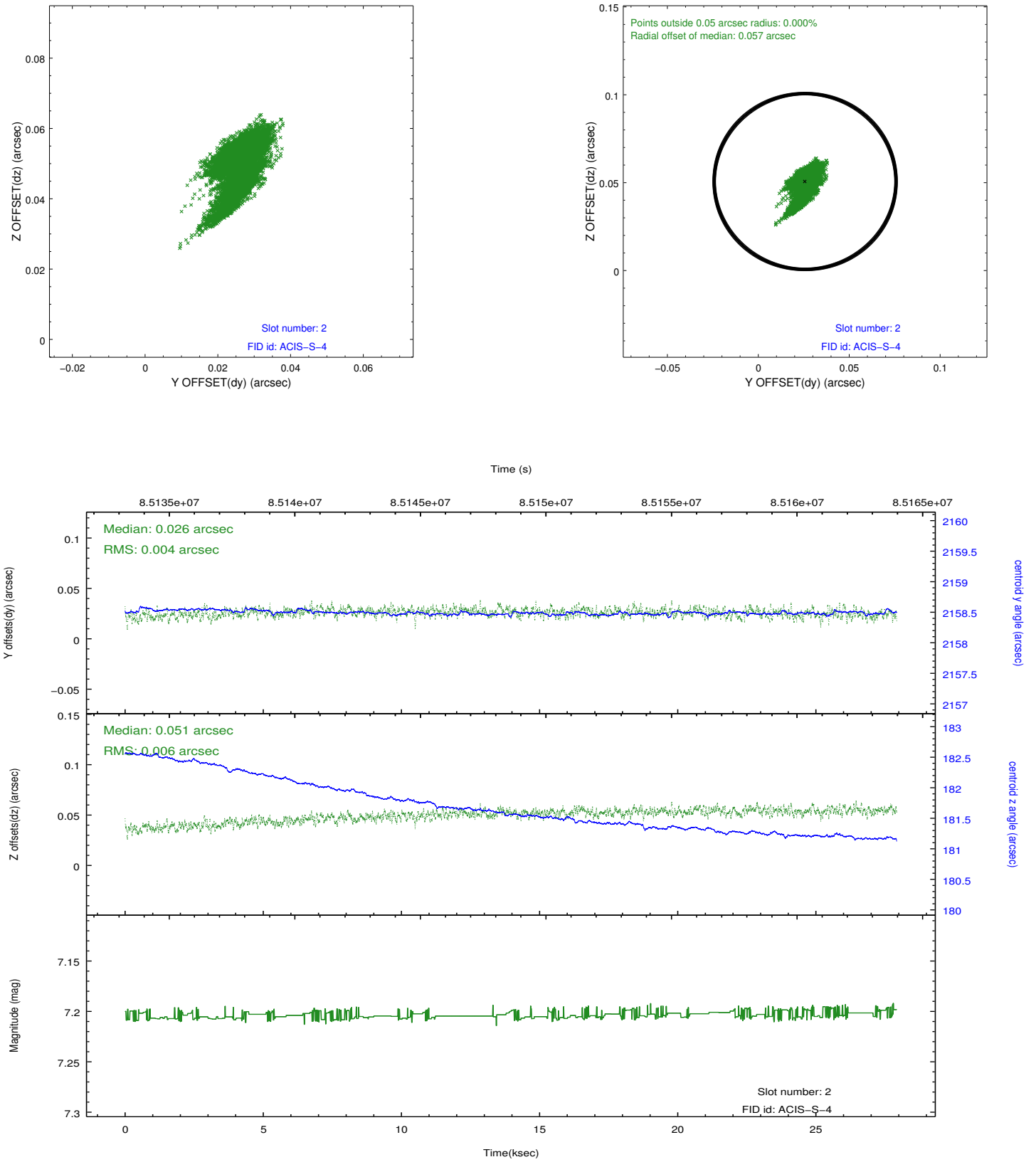
2.5.1 Slot 0



2.5.2 Slot 1

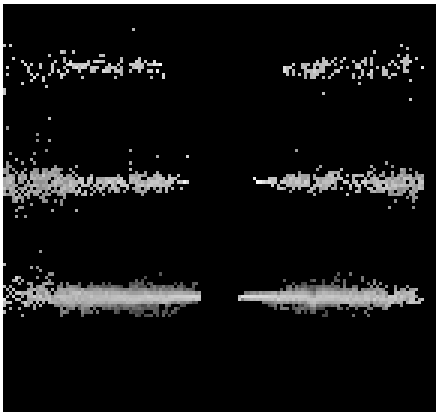


2.5.3 Slot 2

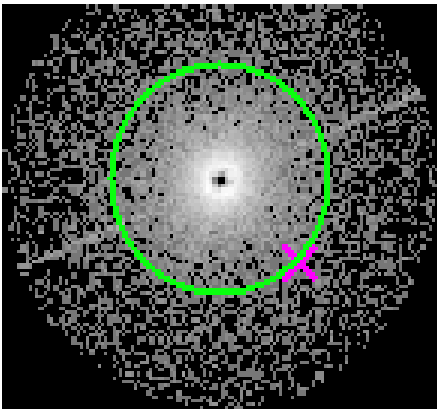


3 Gratings

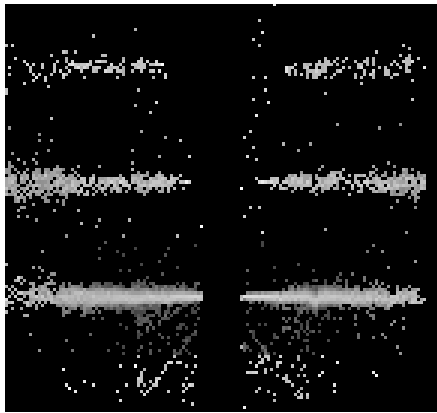
3.1 HEG Arm



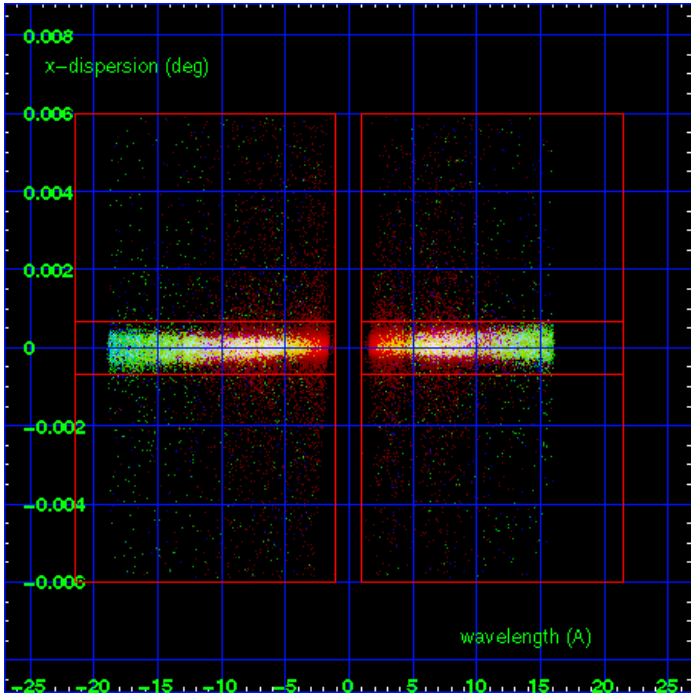
HEG Order Sort 123



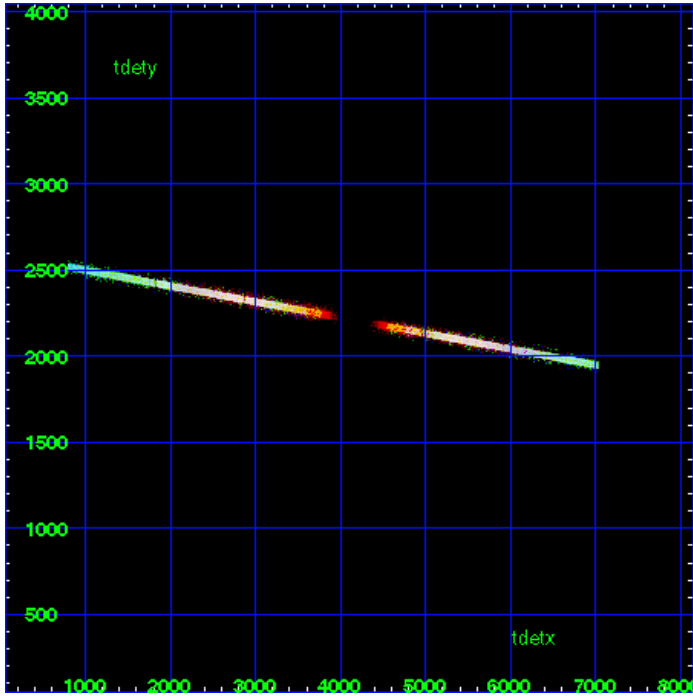
HEG Zero Order



HEG Order Sort ALL

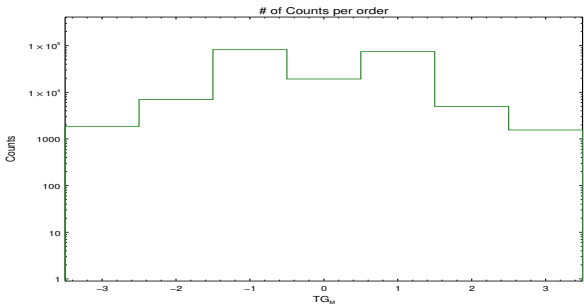


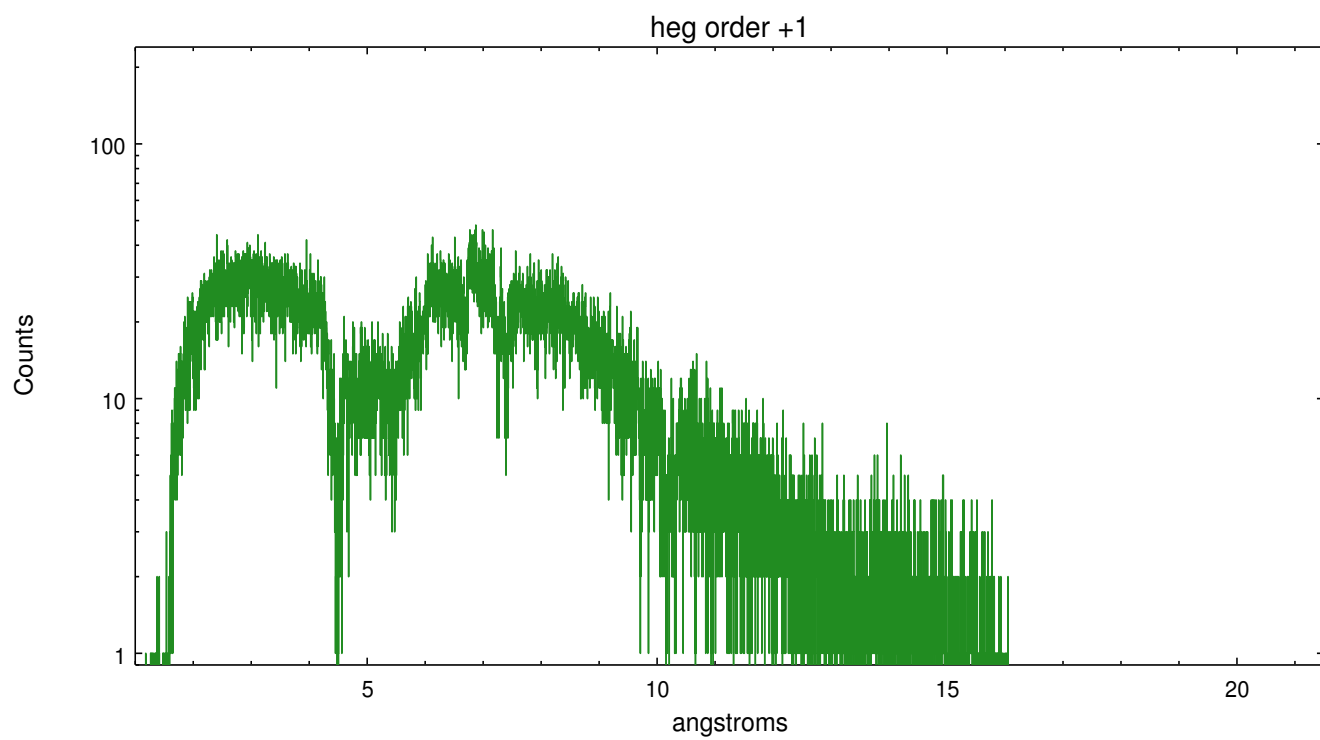
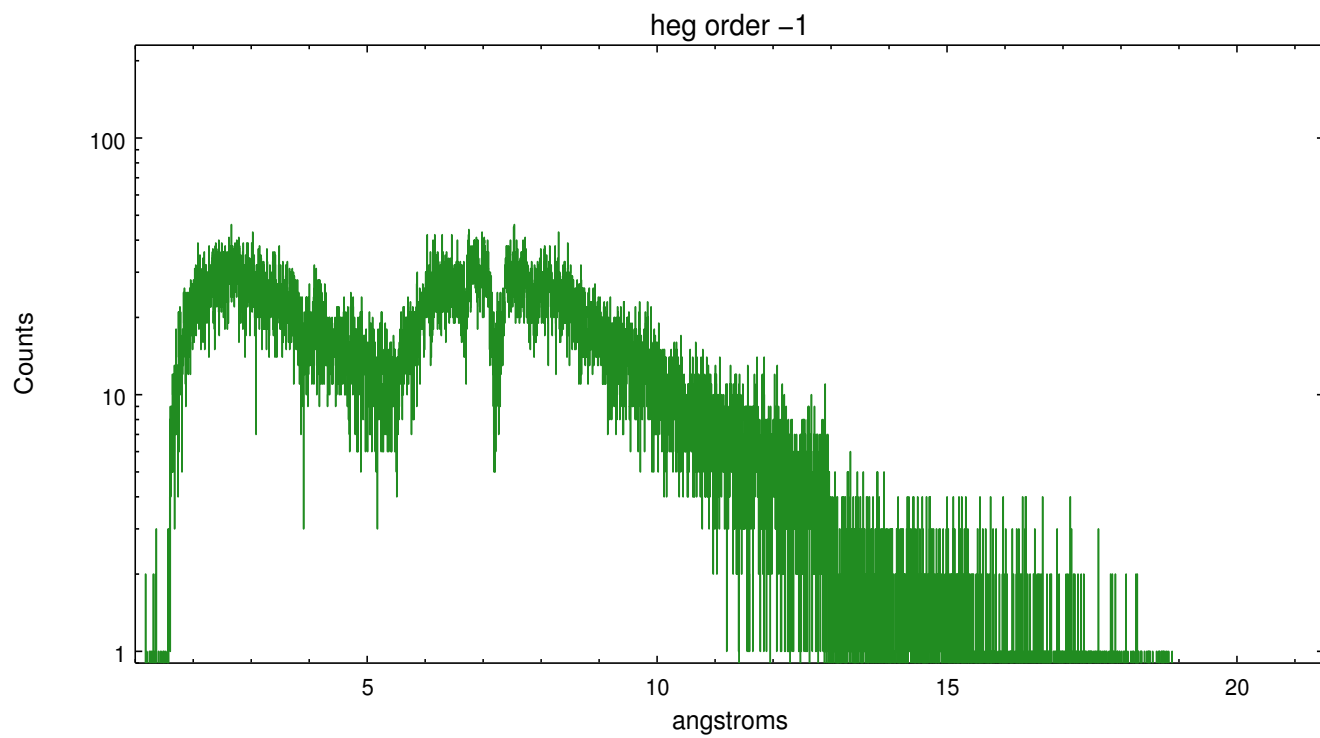
Spot Image HEG



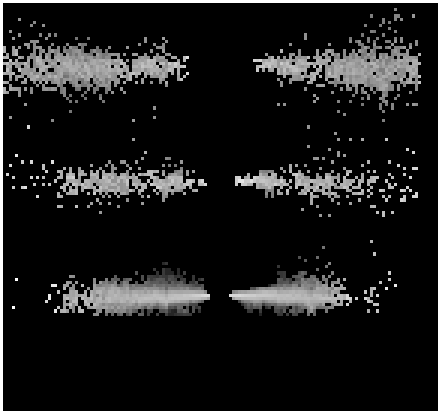
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	1861	6990	81982	19261	74329	4983	1554

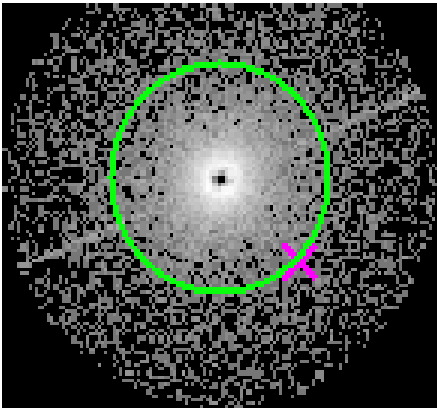




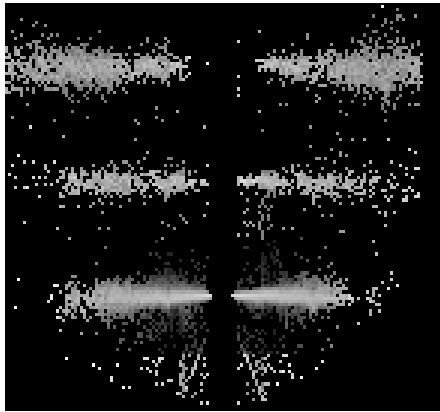
3.2 MEG Arm



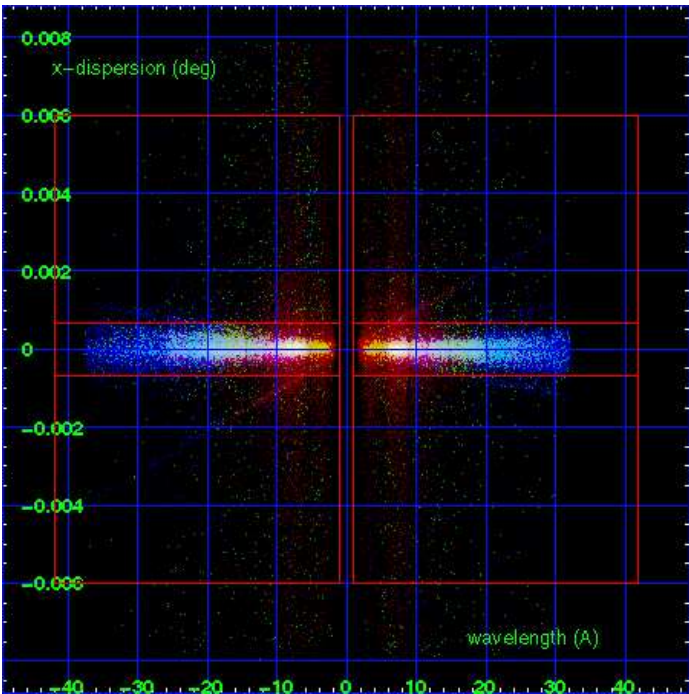
MEG Order Sort 123



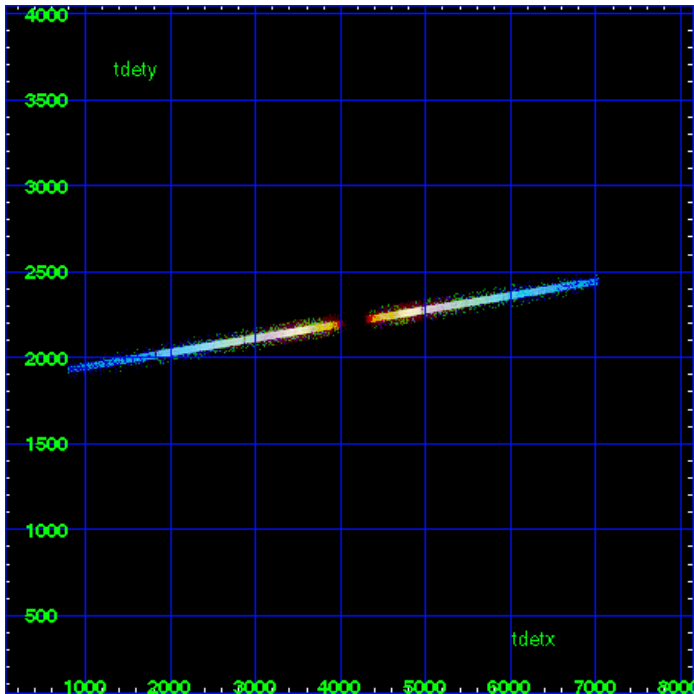
MEG Zero Order



MEG Order Sort ALL

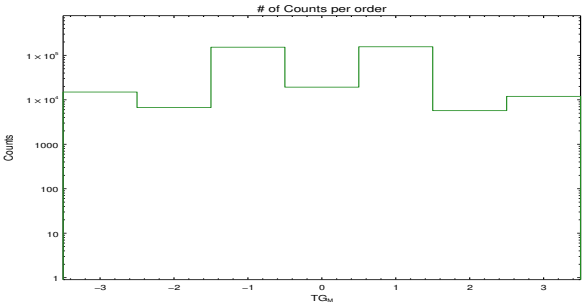


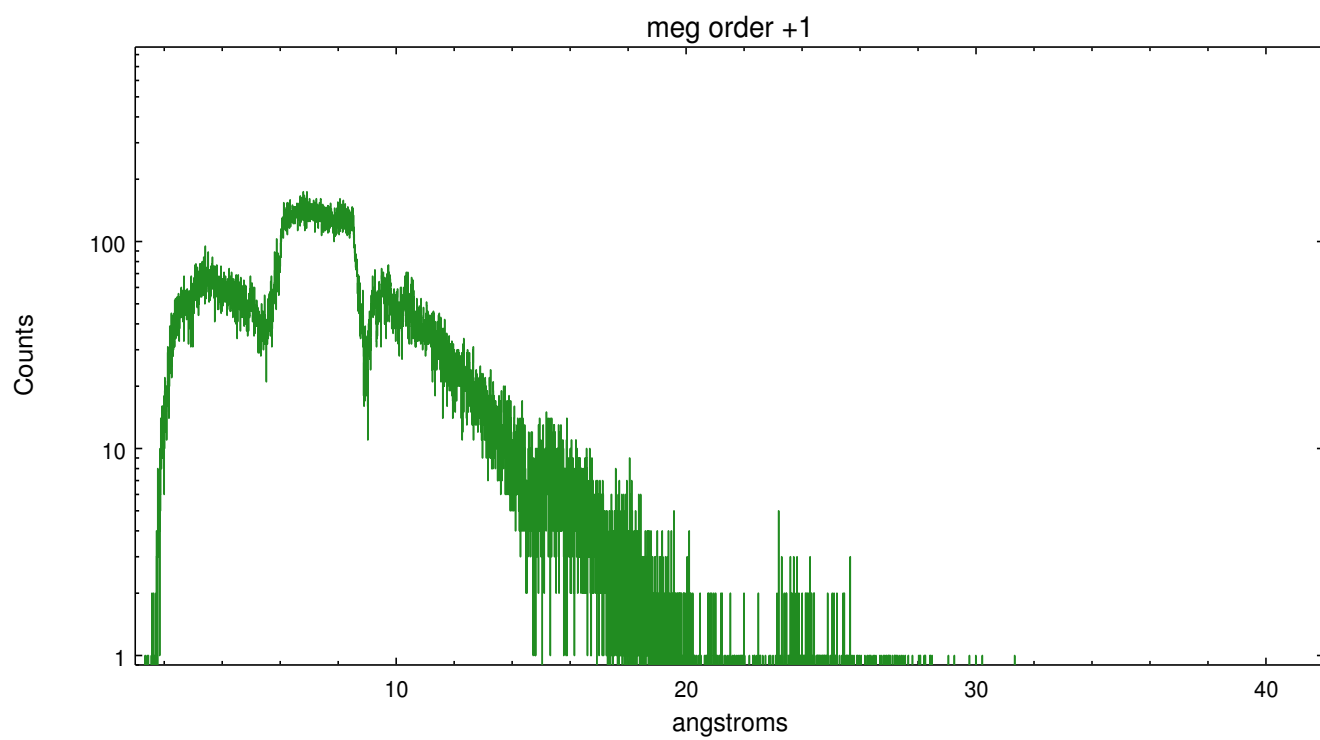
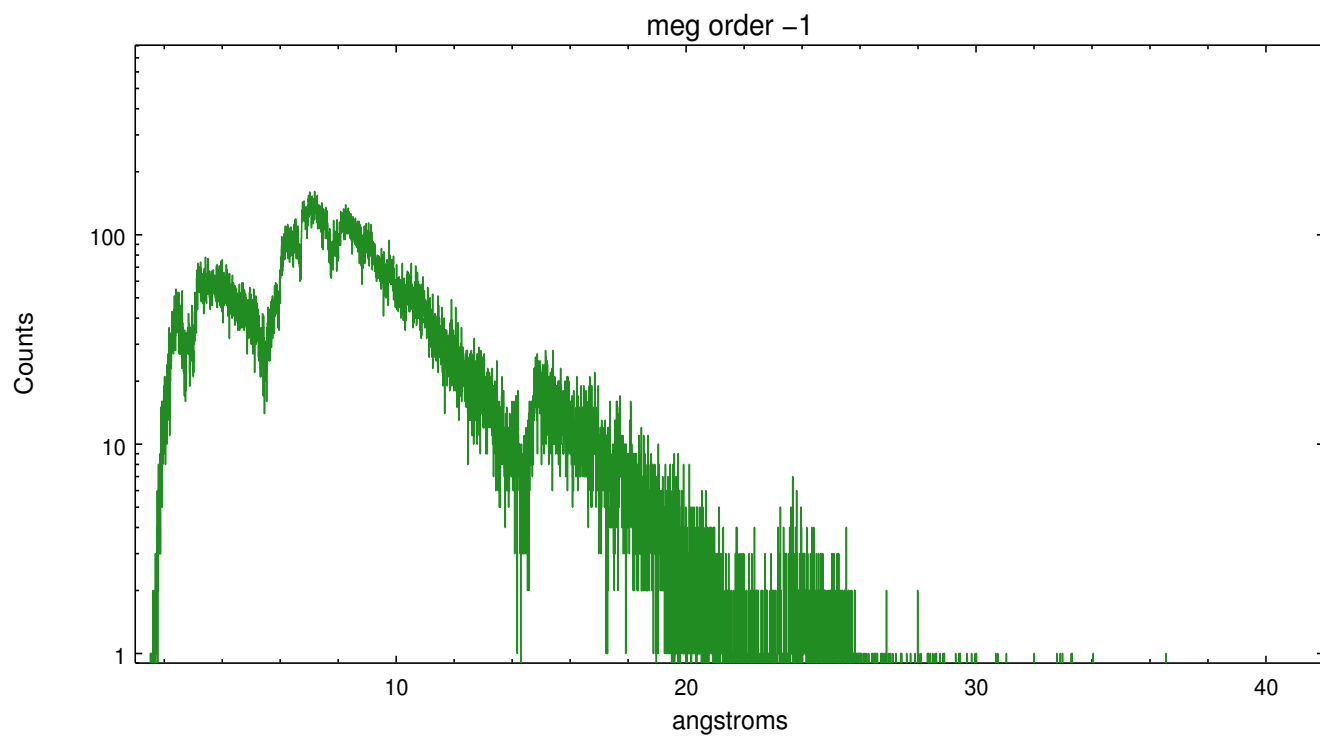
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	14956	6685	152502	19261	156029	5710	11952





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.09.14
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.75

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=4074.05, y=4117.85) 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 as tg_findzo (currently in ISIS as findzo). The tool calculates the point of intersection of the readout streak and the meg 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. Spectral arms are also piled up.