

V&V Reference Report

L2 ASCDS Version : 8.5.1.1

Observation 5500 - L2 Version 3
Chandra X-Ray Center

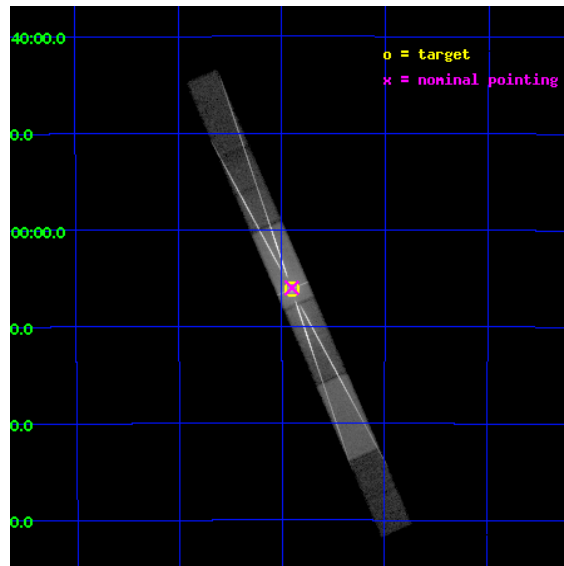
L2 Processing Date : Dec 31 2012

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1 Front

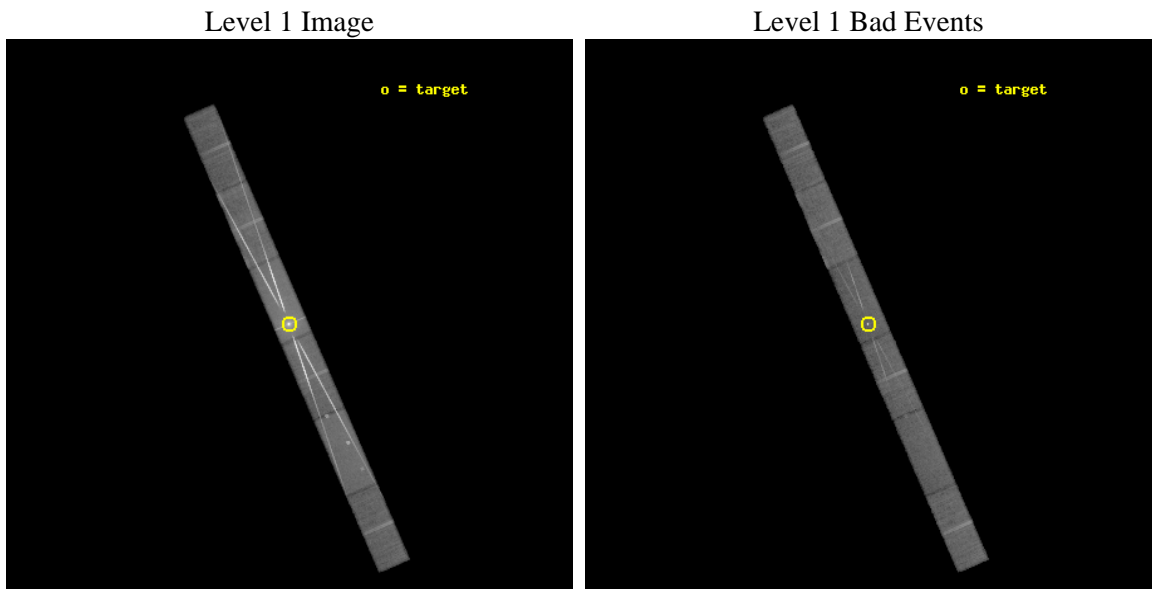
seq_num	400430	Sequence number
obs_id	5500	Observation id
title	Follow-up Chandra observation of 4U 1705-44	Proposal title
observer	Dr. Tiziana Di Salvo	Principal investigator
object	4U 1705-44	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	257.226958	Observer's specified target RA [deg]
dec_targ	-44.102042	Observer's specified target Dec [deg]
ra_nom	257.22567827898	Nominal RA [deg]
dec_nom	-44.100018886032	Nominal Dec [deg]
roll_nom	246.45084333301	Nominal Roll [deg]
revision	3	Processing version of data
ontime	27249.600116044	Sum of GTIs [s]
livetime	26473.546995546	Livetime [s]
ontime4	27249.600116044	Sum of GTIs [s]
ontime5	27249.600116044	Sum of GTIs [s]
ontime6	27249.600116044	Sum of GTIs [s]
ontime7	27249.600116044	Sum of GTIs [s]
ontime8	27249.600116044	Sum of GTIs [s]
ontime9	27249.600116044	Sum of GTIs [s]
l2events	990145	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	1	Obi number	sched_exp_time	27066.881000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	27249.600116044	Sum of GTIs [s]
caldsver	4.5.5	 	ontime4	27249.600116044	Sum of GTIs [s]
date	2012-12-30T23:35:59	Date and time of file creation	ontime5	27249.600116044	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	27249.600116044	Sum of GTIs [s]
			ontime7	27249.600116044	Sum of GTIs [s]
			ontime8	27249.600116044	Sum of GTIs [s]
			ontime9	27249.600116044	Sum of GTIs [s]
			l1events	1569122	Number of level 1 events

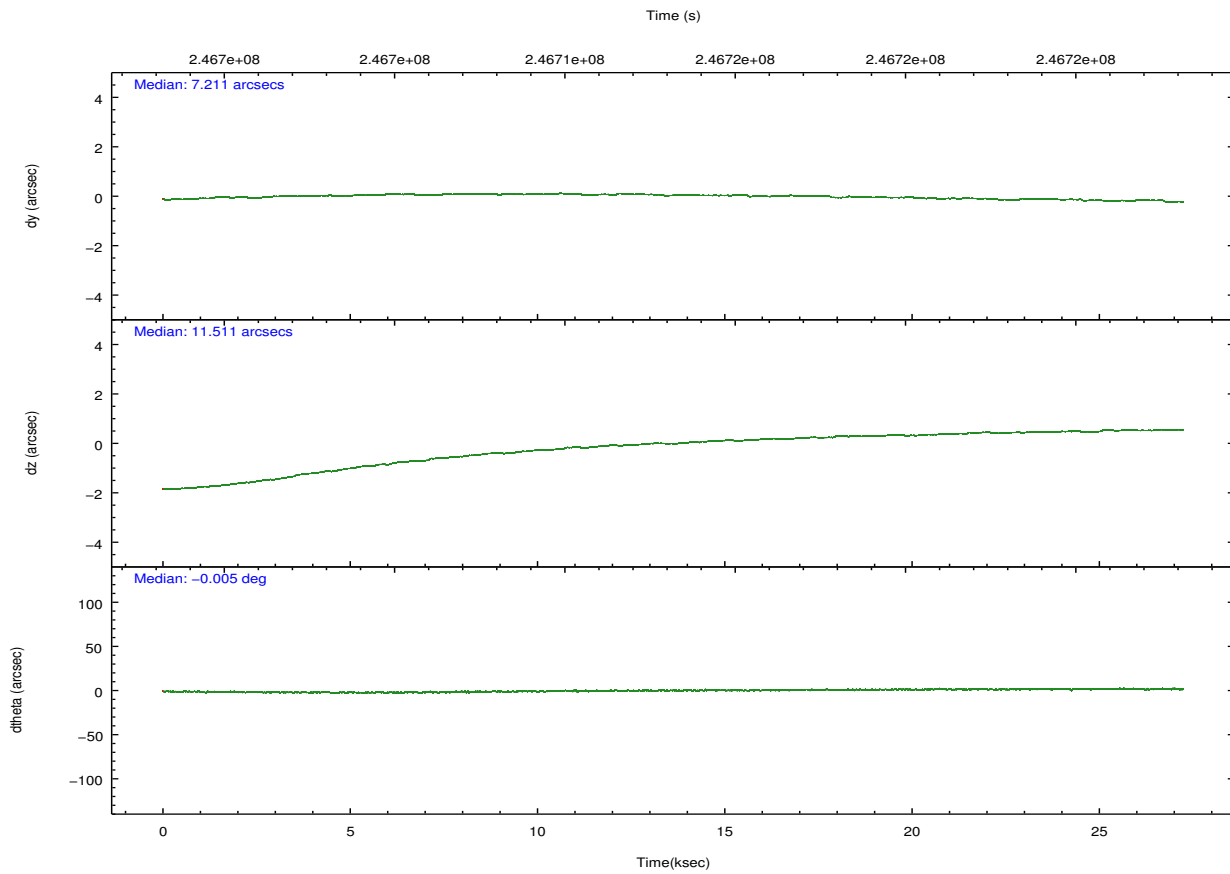
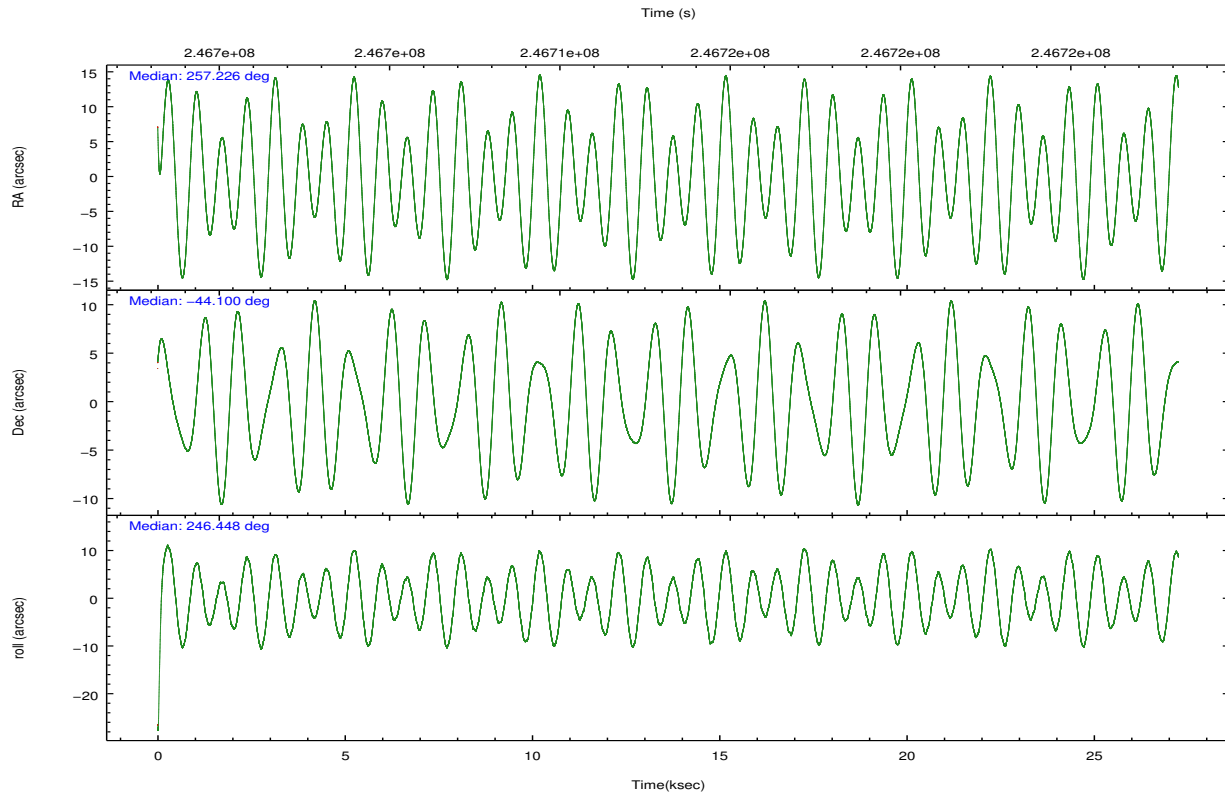
2.1.3 Events

	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	104028	188671	426658	540023	211759	97983	grade 0 events	5983	24420	244792	76574	77857	11715
rejected events	89903	76431	90213	88000	96773	77155		5%	12%	57%	14%	36%	11%
rejected %	86%	40%	21%	16%	45%	78%	grade 1 events	32	344	1935	1050	291	40
								0%	0%	0%	0%	0%	0%
							grade 2 events	3523	33822	44689	118084	16116	3563
								3%	17%	10%	21%	7%	3%
							grade 3 events	1421	6917	15331	44645	6135	1698
								1%	3%	3%	8%	2%	1%
							grade 4 events	1283	6966	14908	44782	6048	1655
								1%	3%	3%	8%	2%	1%
							grade 5 events	3136	8148	5304	14985	4887	3745
								3%	4%	1%	2%	2%	3%
							grade 6 events	2284	42604	18428	171094	10053	2567
								2%	22%	4%	31%	4%	2%
							grade 7 events	86366	65450	81271	68809	90372	73000
								83%	34%	19%	12%	42%	74%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-456789	ACIS-456789	Obspar file type	PREDICTED	ACTUAL
Grating	HETG	HETG	Obspar update status	NONE	UPDATED
Data mode	GRADED	GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	257.220881	257.2256782789783	Subarray requested	CUSTOM	CUSTOM
[deg] Pointing Dec	-44.073004	-44.10001888603216	Subarray start row	1	1
[deg] Pointing Roll	246.290890	246.4508433330147	Subarray row count	400	400
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	1.4
[mm] SIM translation stage pos	-182.642523	-182.6398635053184			
[mm] SIM translation stage offset	-7.49	-7.49265907768941			
[s] Observation start time (MET)	246699731.184000	246698477.01218			
Observation start date	2005-10-26T07:41:07	2005-10-26T07:21:17			
[s] Observation end time (MET)	246726798.184000	246727009.93849			
Observation end date	2005-10-26T15:12:14	2005-10-26T15:16:49			
Read mode	TIMED	TIMED			

2.3 Aspect



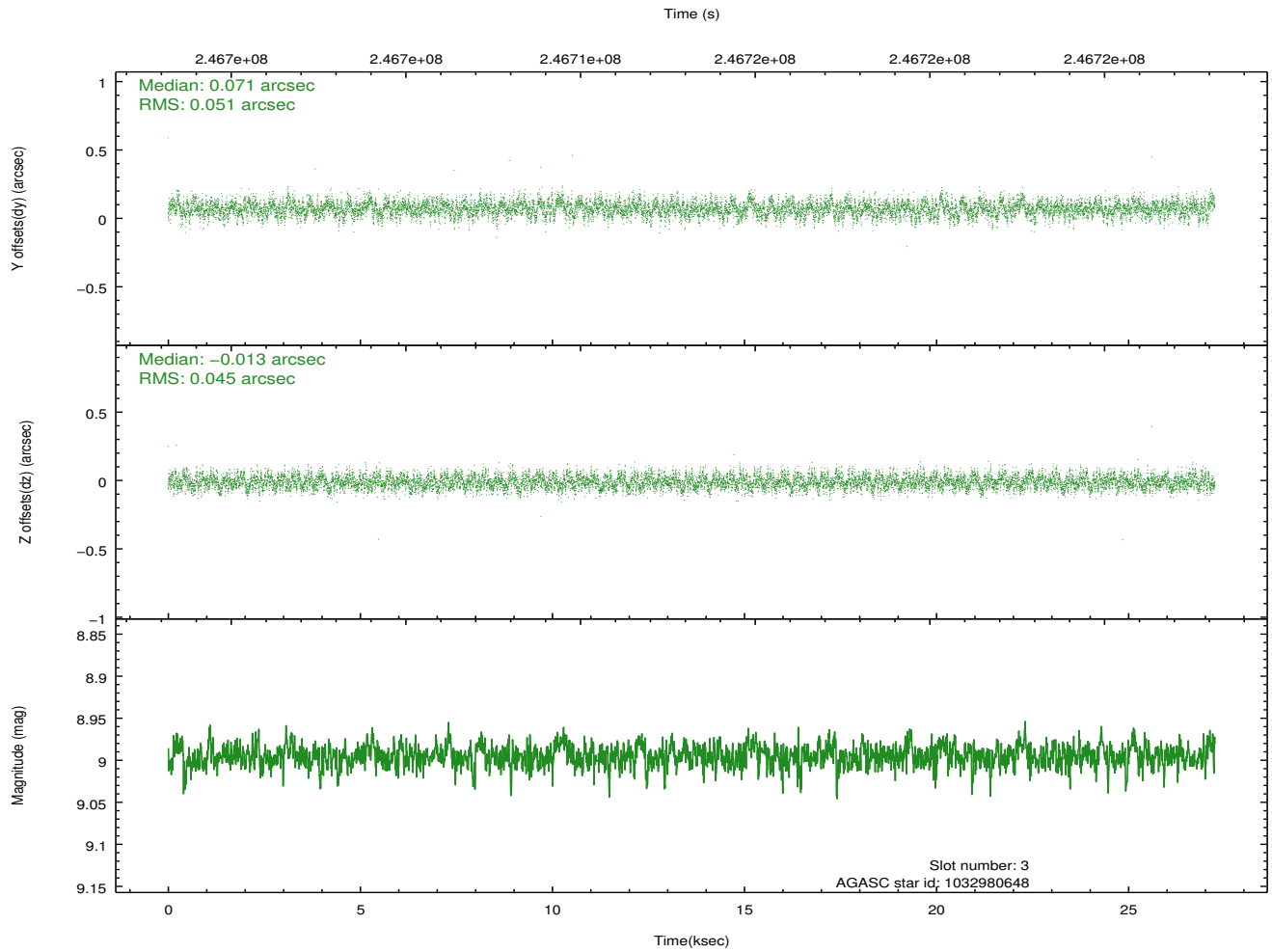
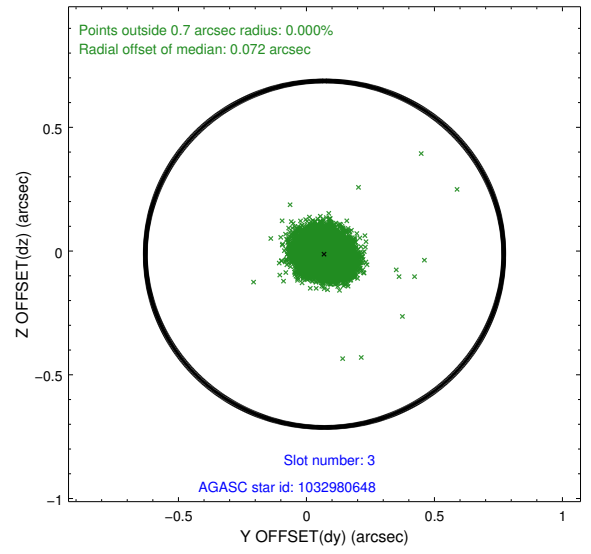
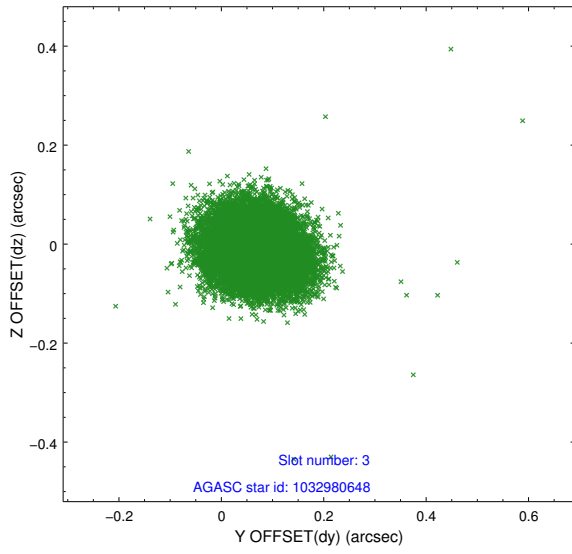
Slot Statistics

slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.18	6648	0.007	0.073	0.018	0.026	0.000000	0.000000	936.61	-1882.50
1	FID	ACIS-S-4	7.18	6647	0.074	-0.050	0.016	0.024	0.000000	0.000000	2154.15	21.39
2	FID	ACIS-S-5	7.22	6647	-0.108	-0.011	0.007	0.012	0.000000	0.000000	-1812.24	15.17
3	GUIDE	1032980648	8.99	13278	0.071	-0.013	0.072	0.115	256.588109	-44.440758	1872.38	-954.14
4	GUIDE	1033000208	7.80	13292	0.027	0.017	0.071	0.110	256.502750	-44.372681	1738.85	-1254.85
5	GUIDE	1033110048	8.17	13290	-0.147	0.107	0.059	0.095	258.190525	-43.756216	-2044.20	1855.92
6	GUIDE	1032983104	8.94	13283	0.140	-0.086	0.072	0.117	256.914293	-44.699956	2383.82	190.10
7	GUIDE	1033109664	7.88	13293	-0.095	-0.025	0.059	0.096	257.645718	-43.523560	-2253.66	221.11

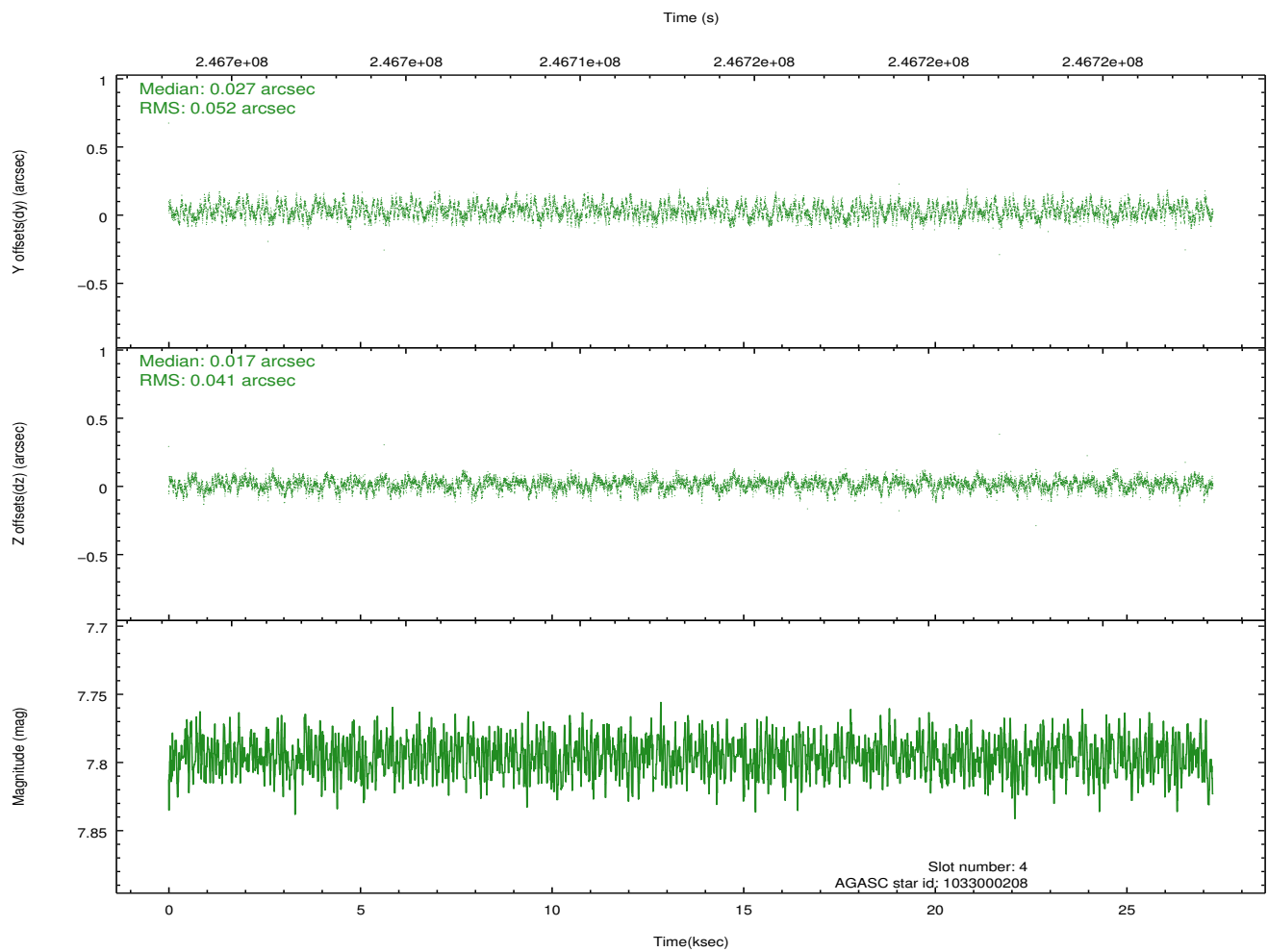
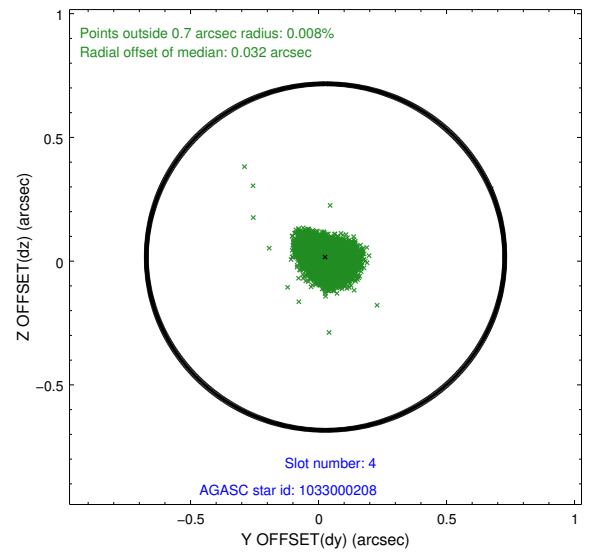
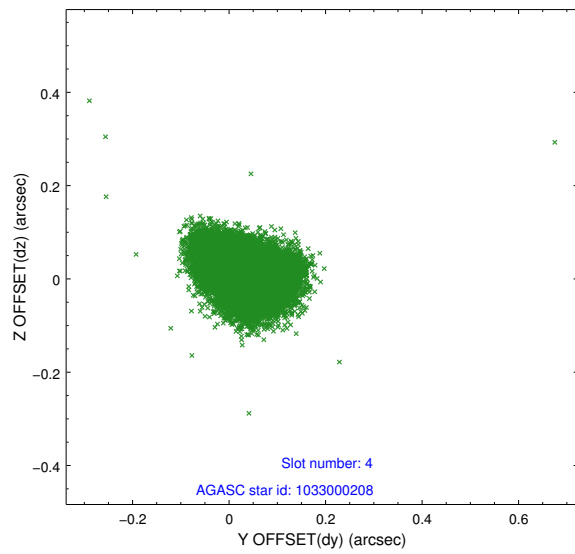
∞

2.4 Star Slots

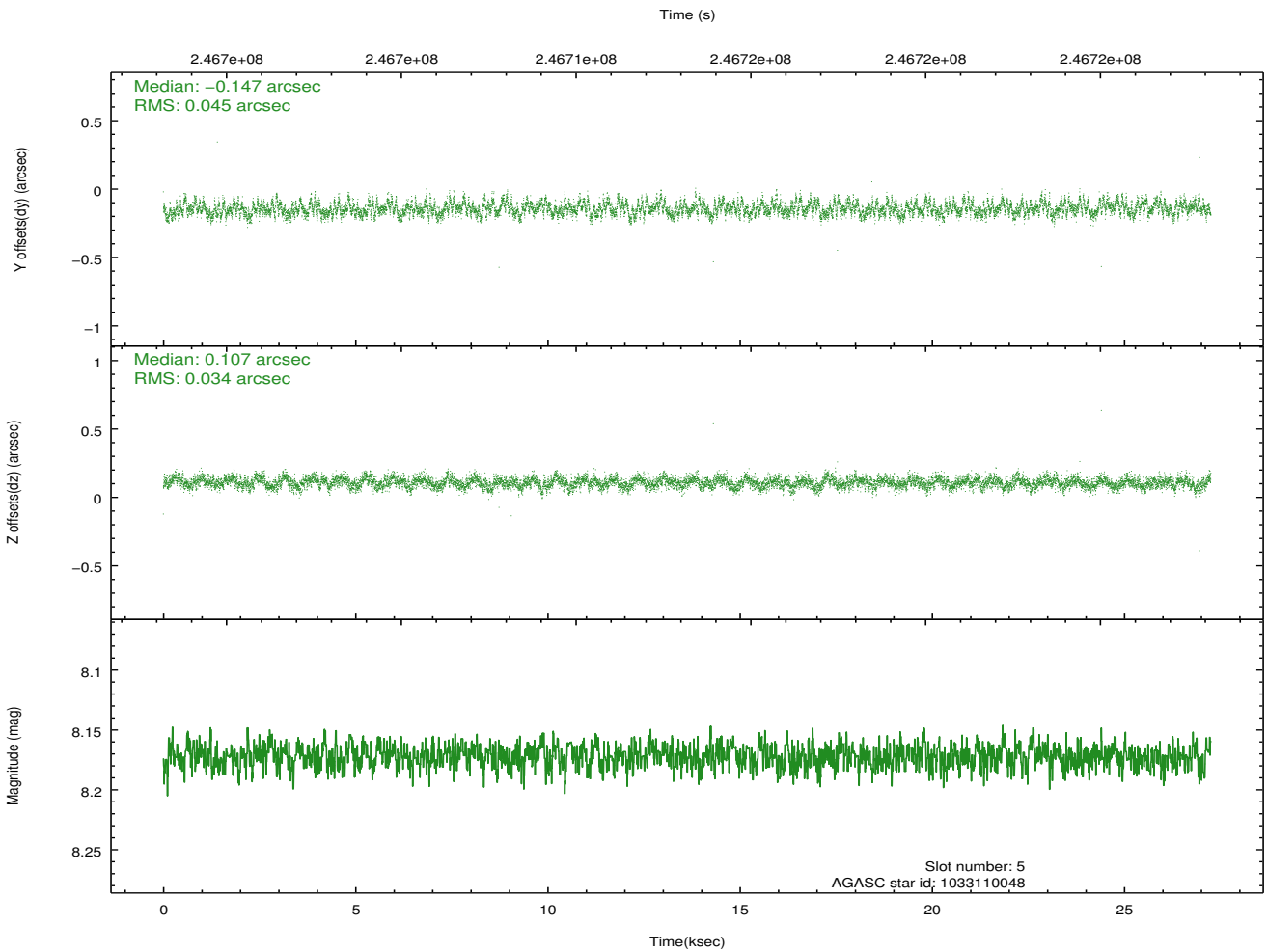
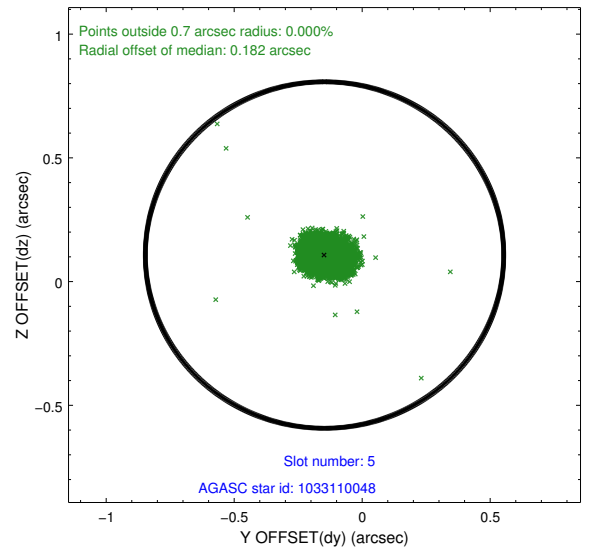
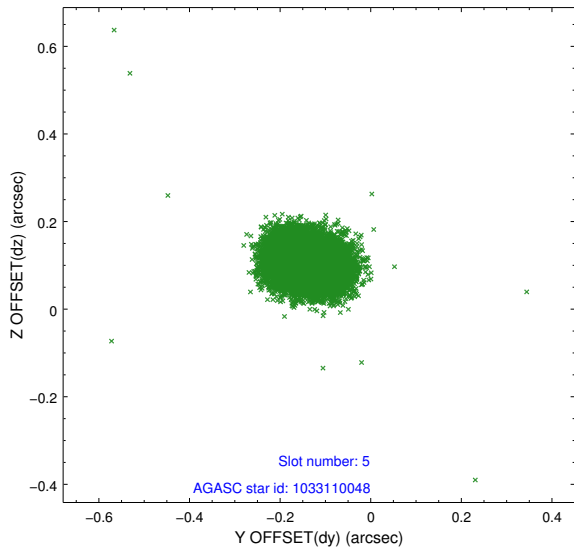
2.4.1 Slot 3



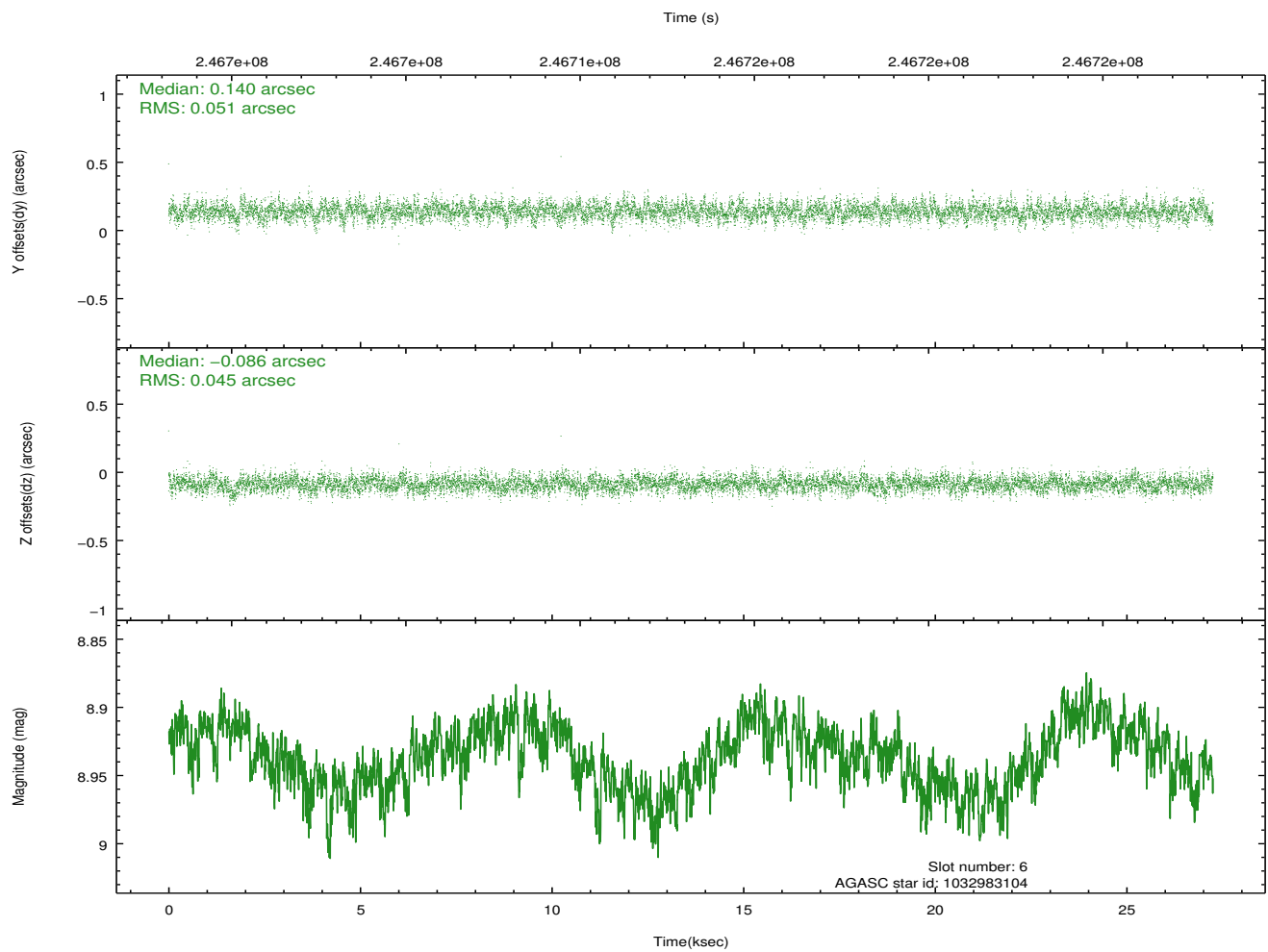
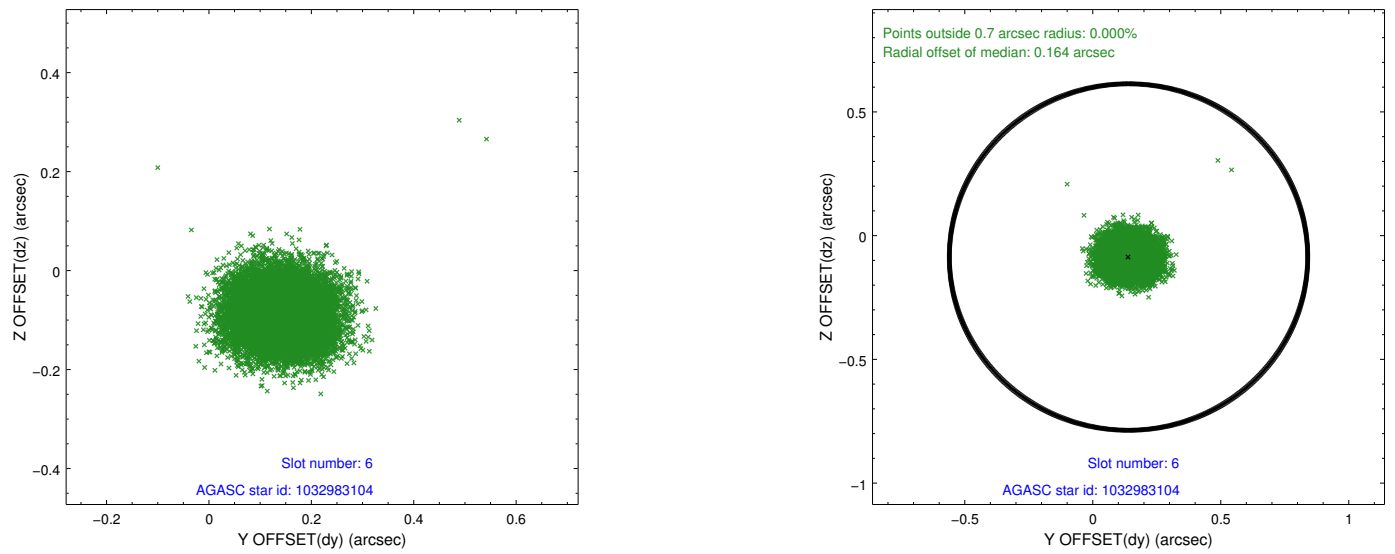
2.4.2 Slot 4



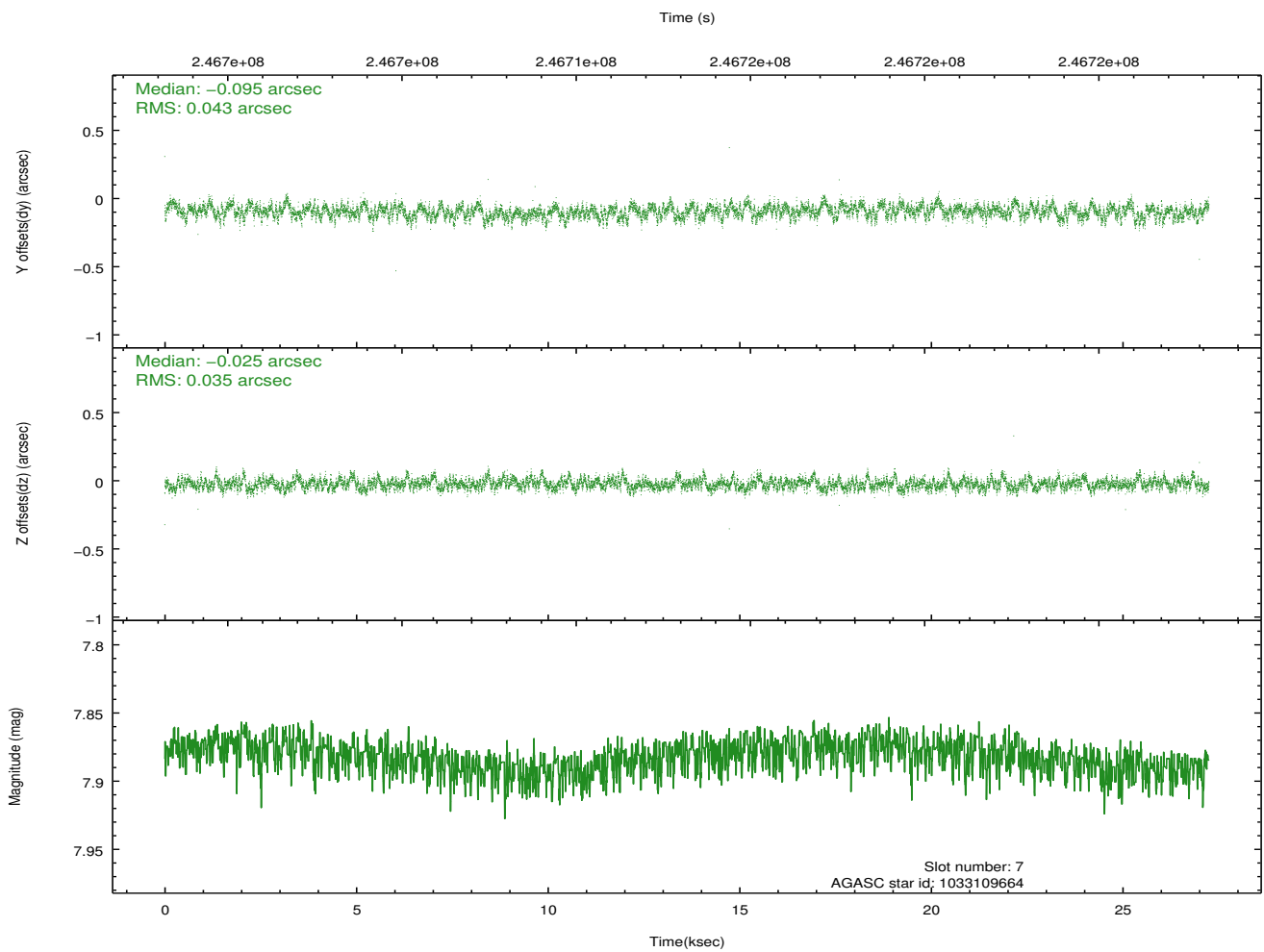
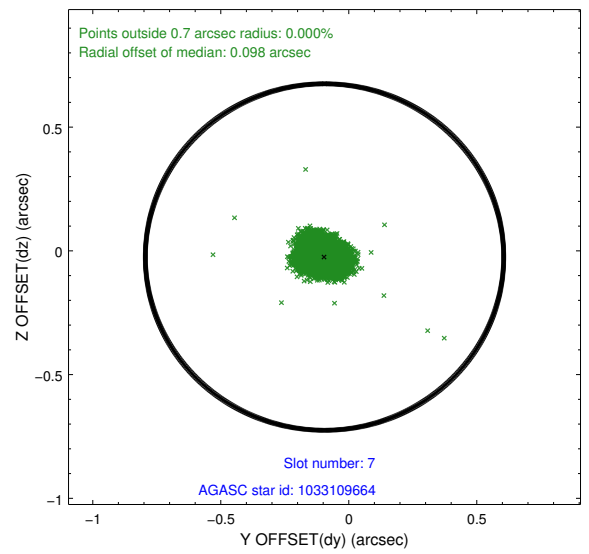
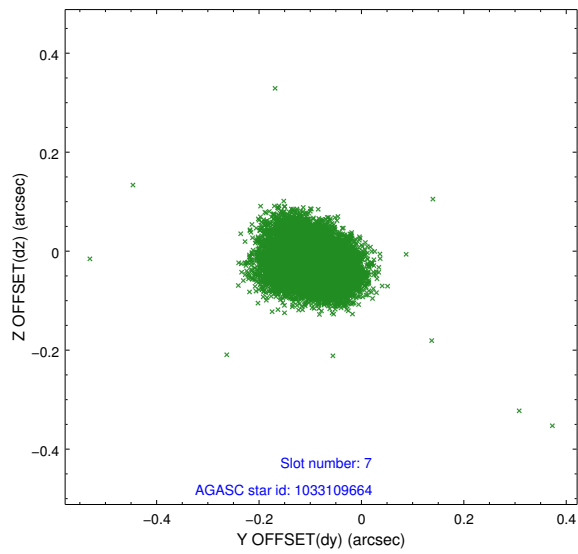
2.4.3 Slot 5



2.4.4 Slot 6

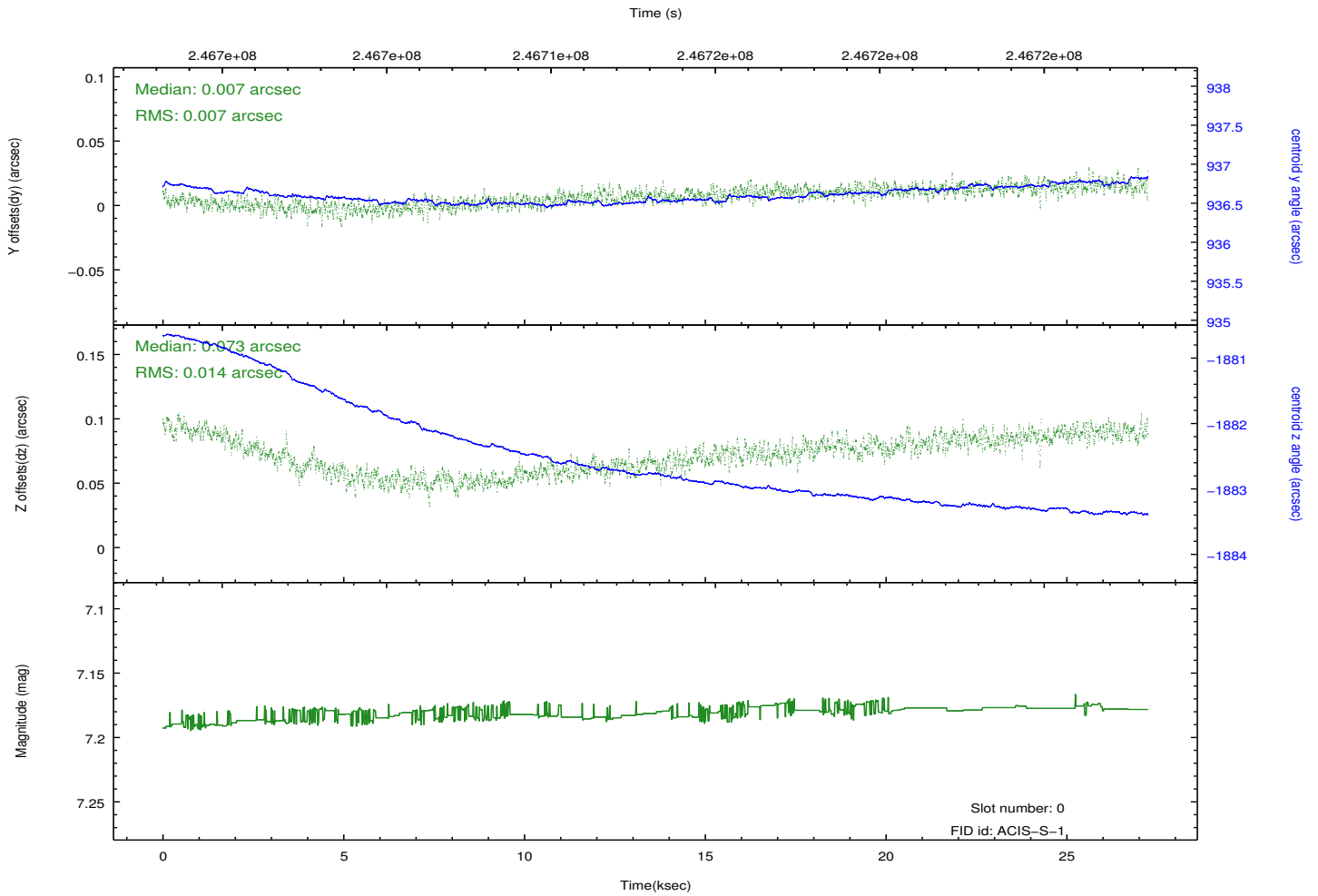
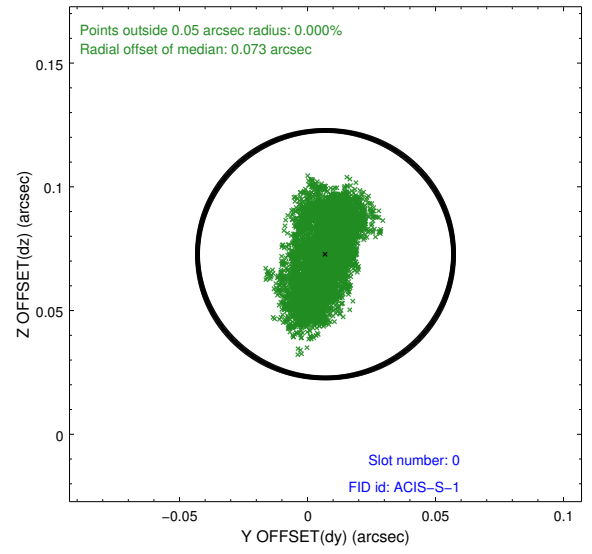
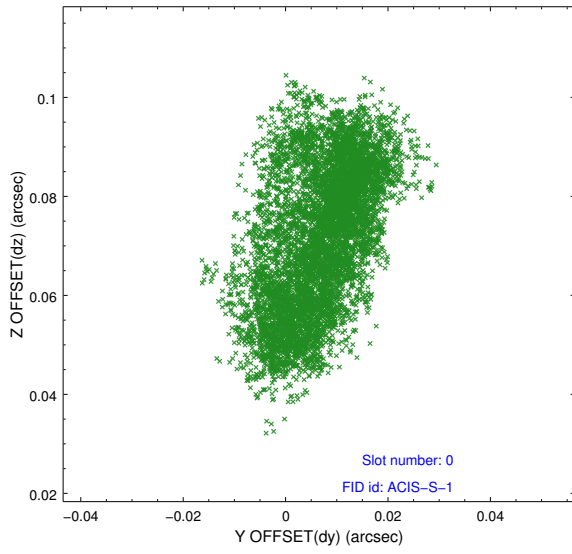


2.4.5 Slot 7

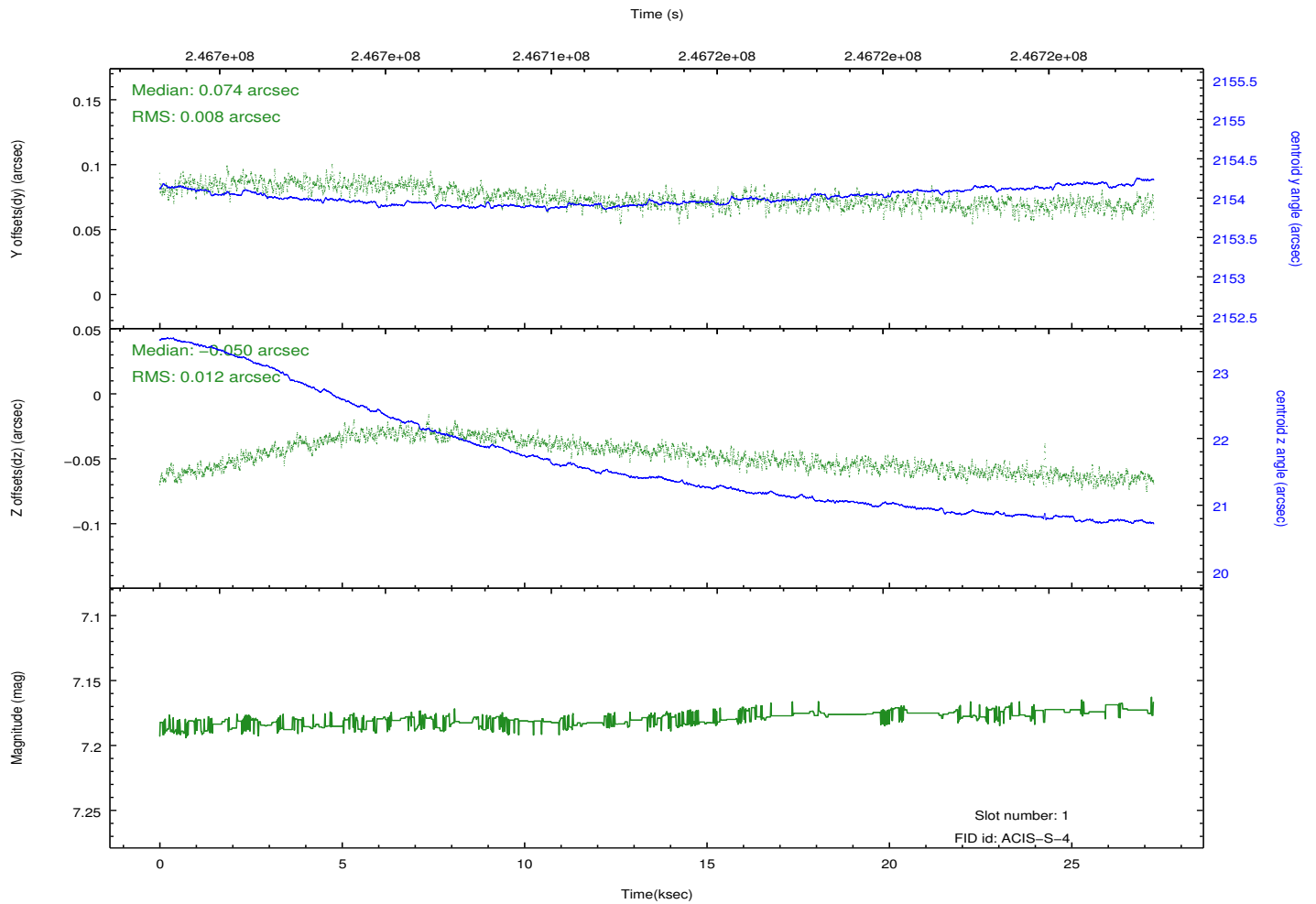
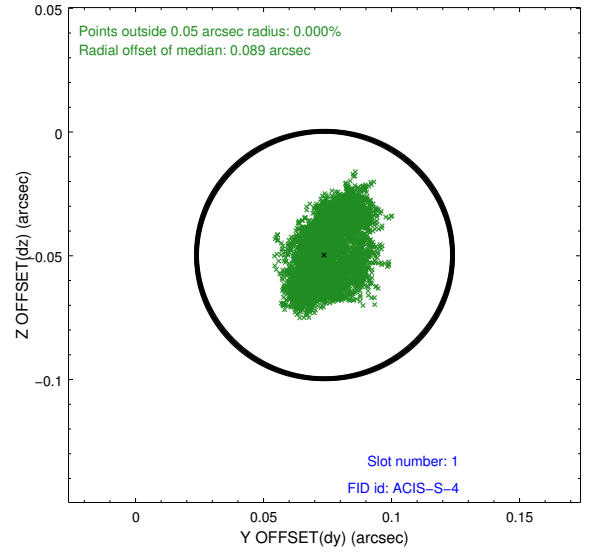
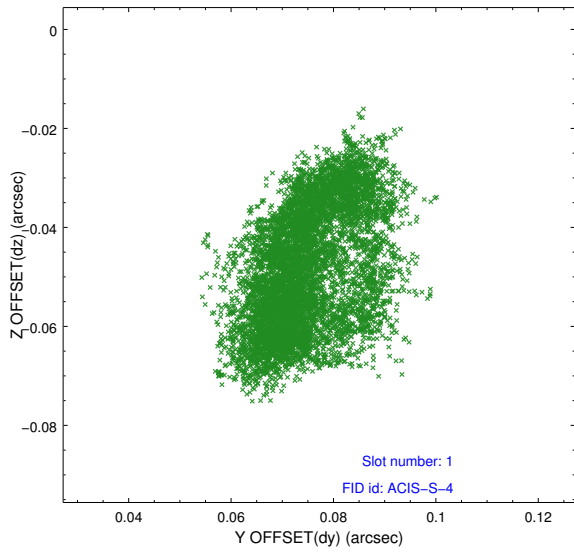


2.5 FID Slots

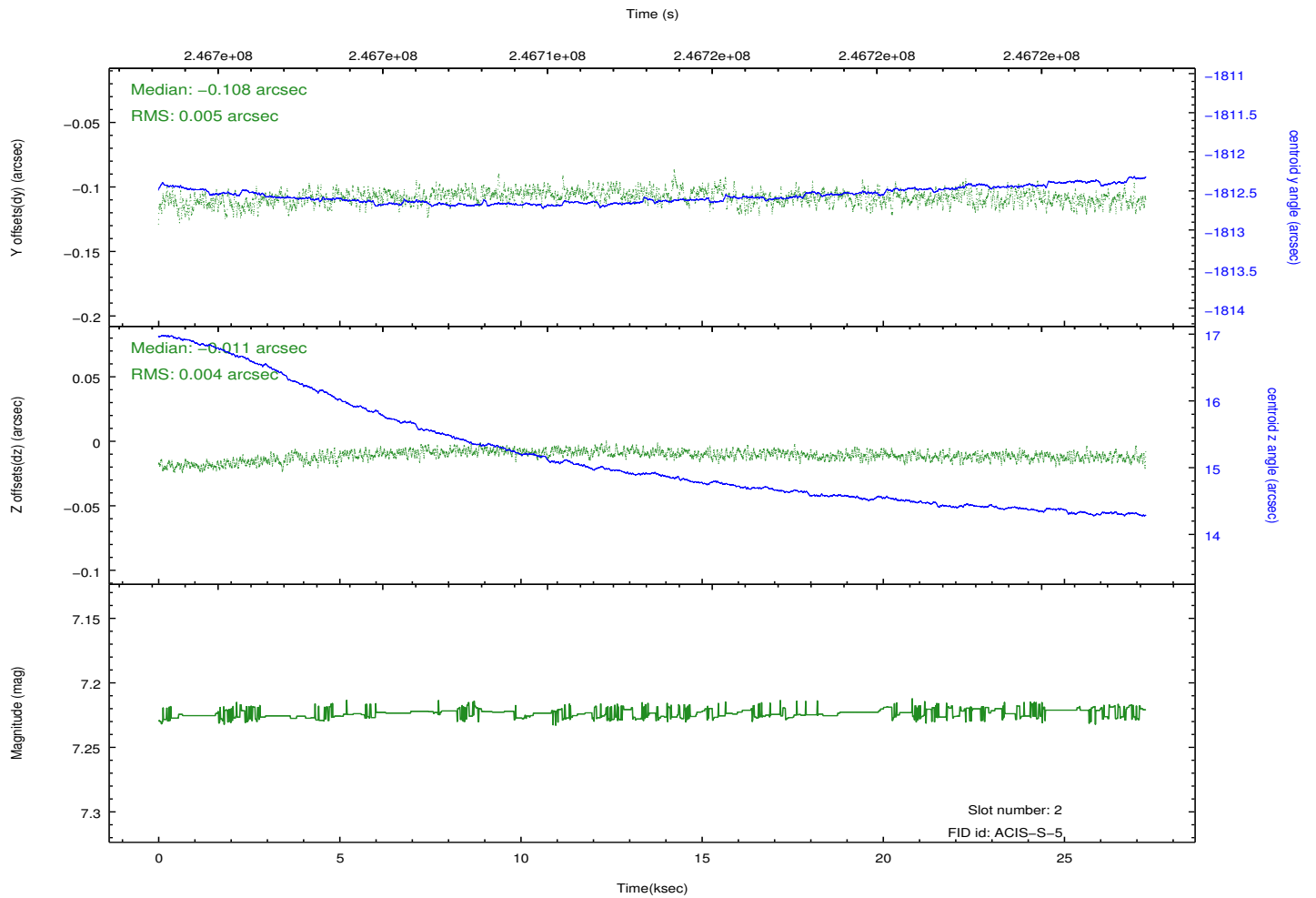
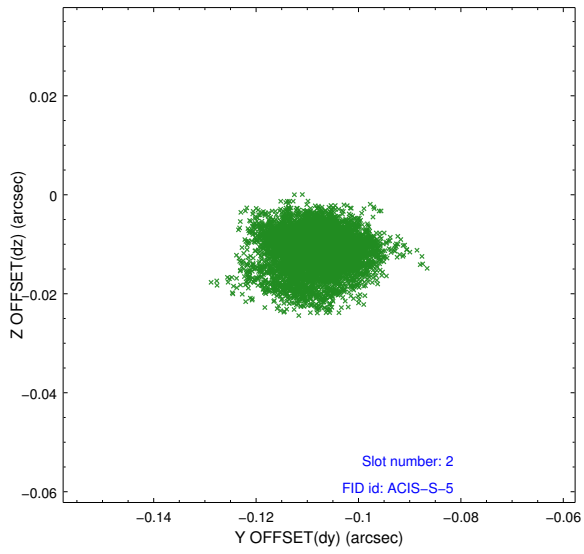
2.5.1 Slot 0



2.5.2 Slot 1

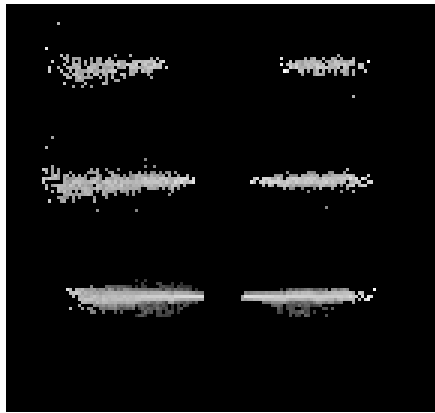


2.5.3 Slot 2

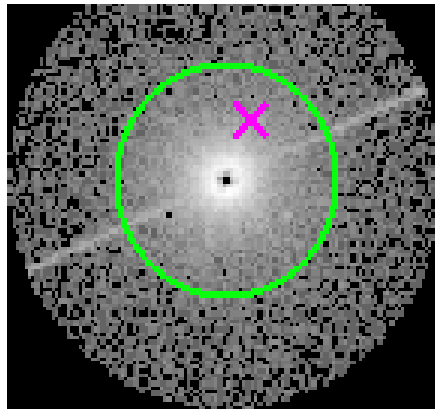


3 Gratings

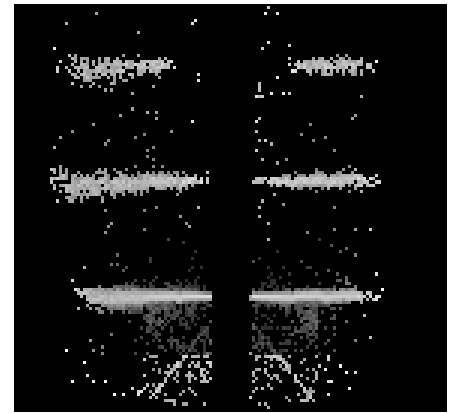
3.1 HEG Arm



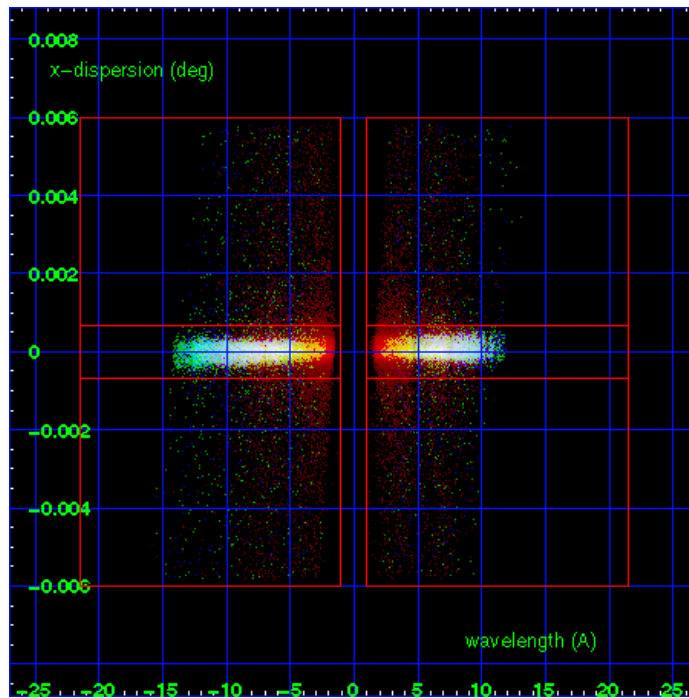
HEG Order Sort 123



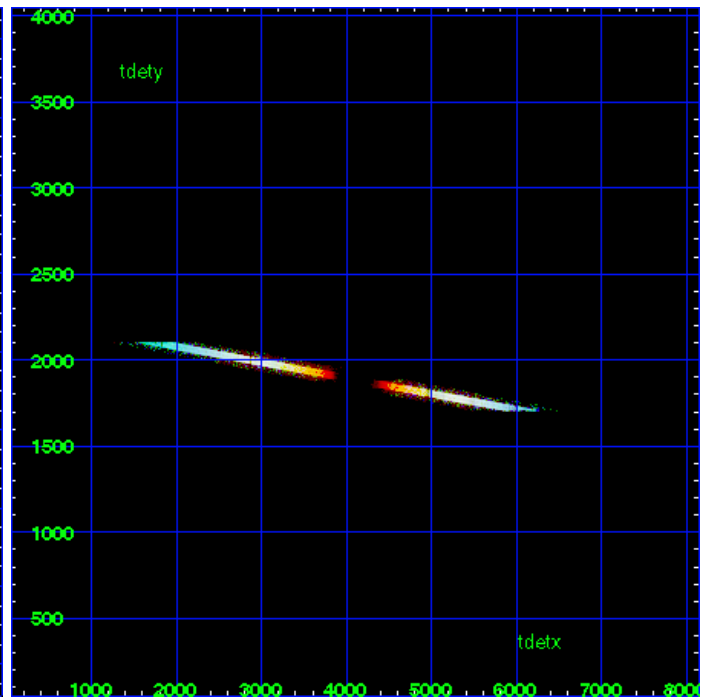
HEG Zero Order



HEG Order Sort ALL

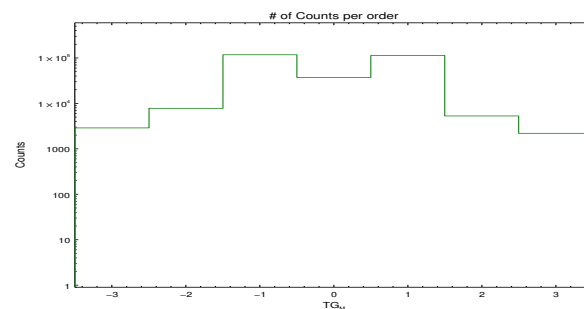


Spot Image HEG

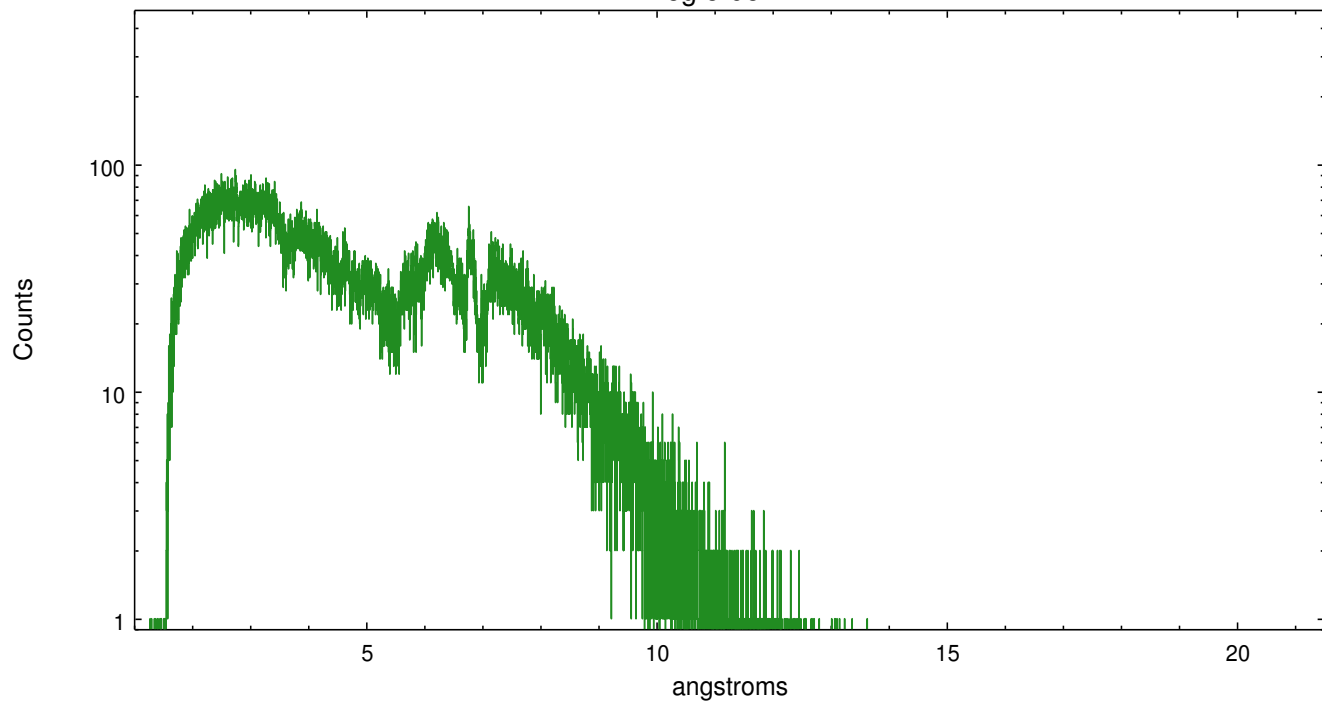


Full Detector HEG

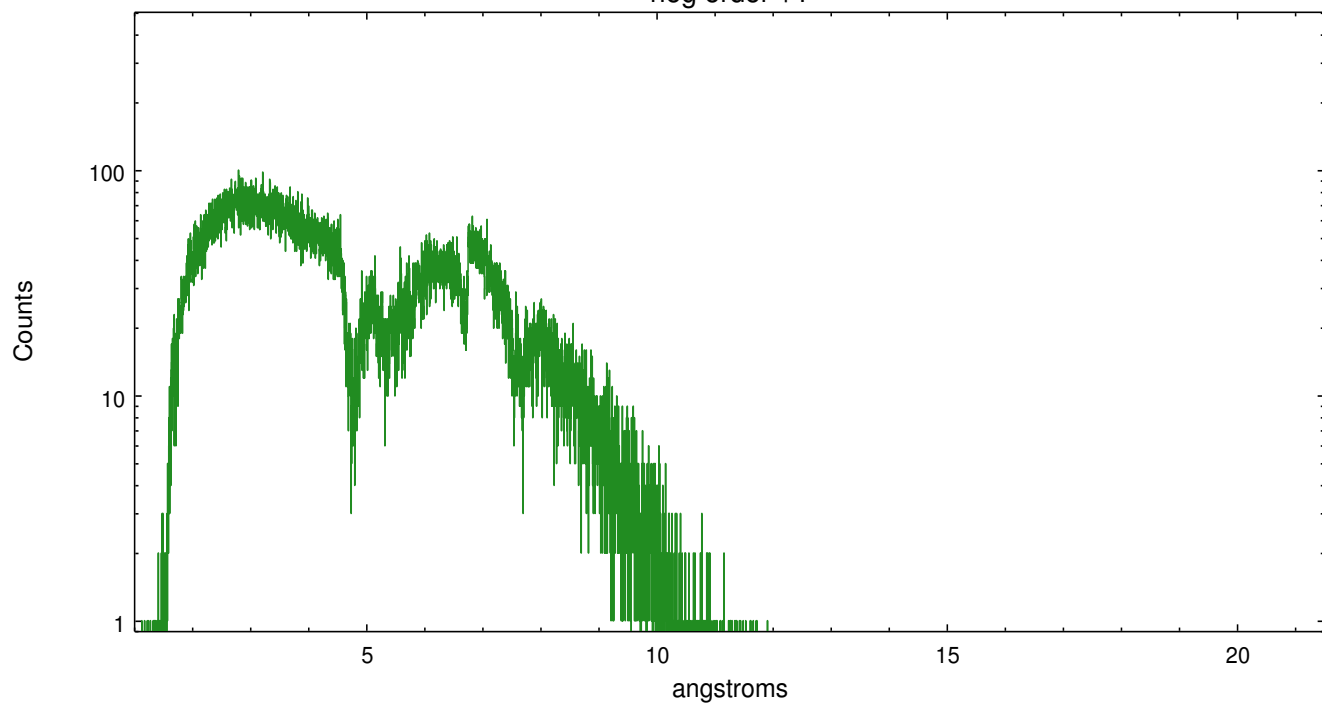
	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	2899	7826	118693	37459	114041	5318	2198



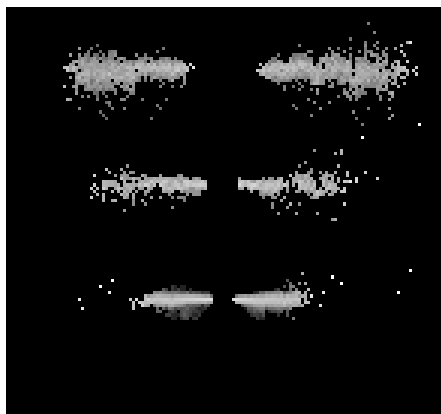
heg order -1



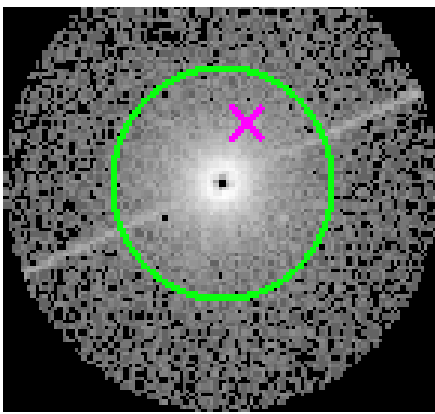
heg order +1



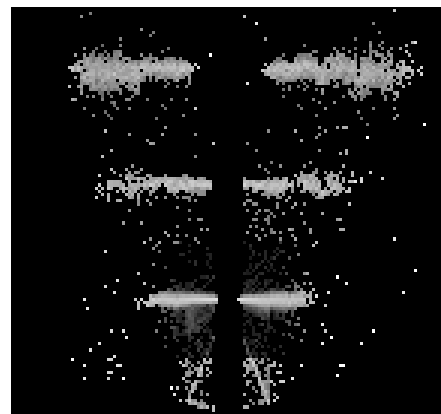
3.2 MEG Arm



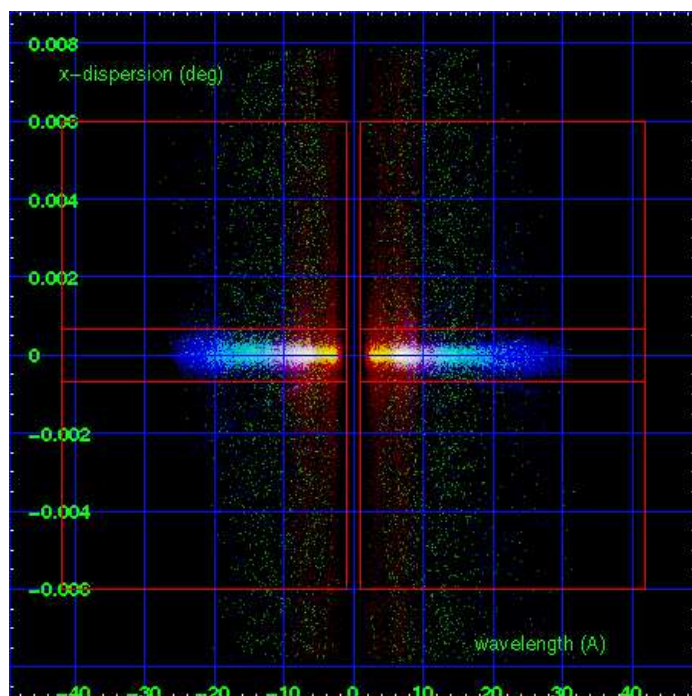
MEG Order Sort 123



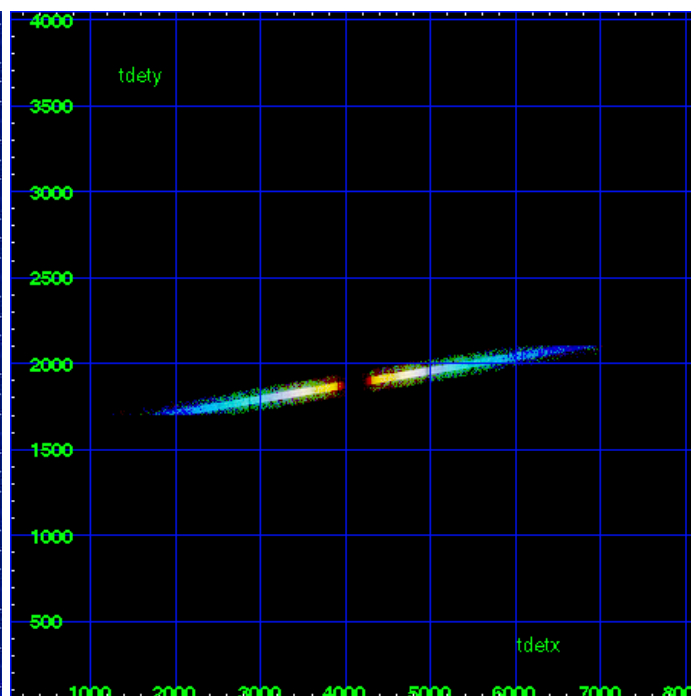
MEG Zero Order



MEG Order Sort ALL

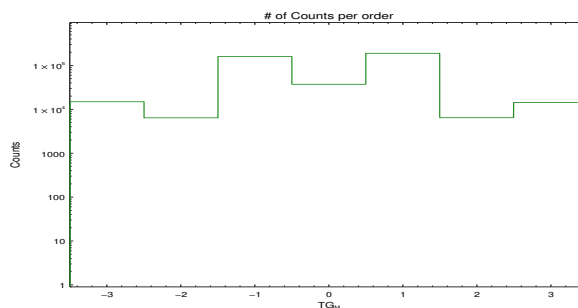


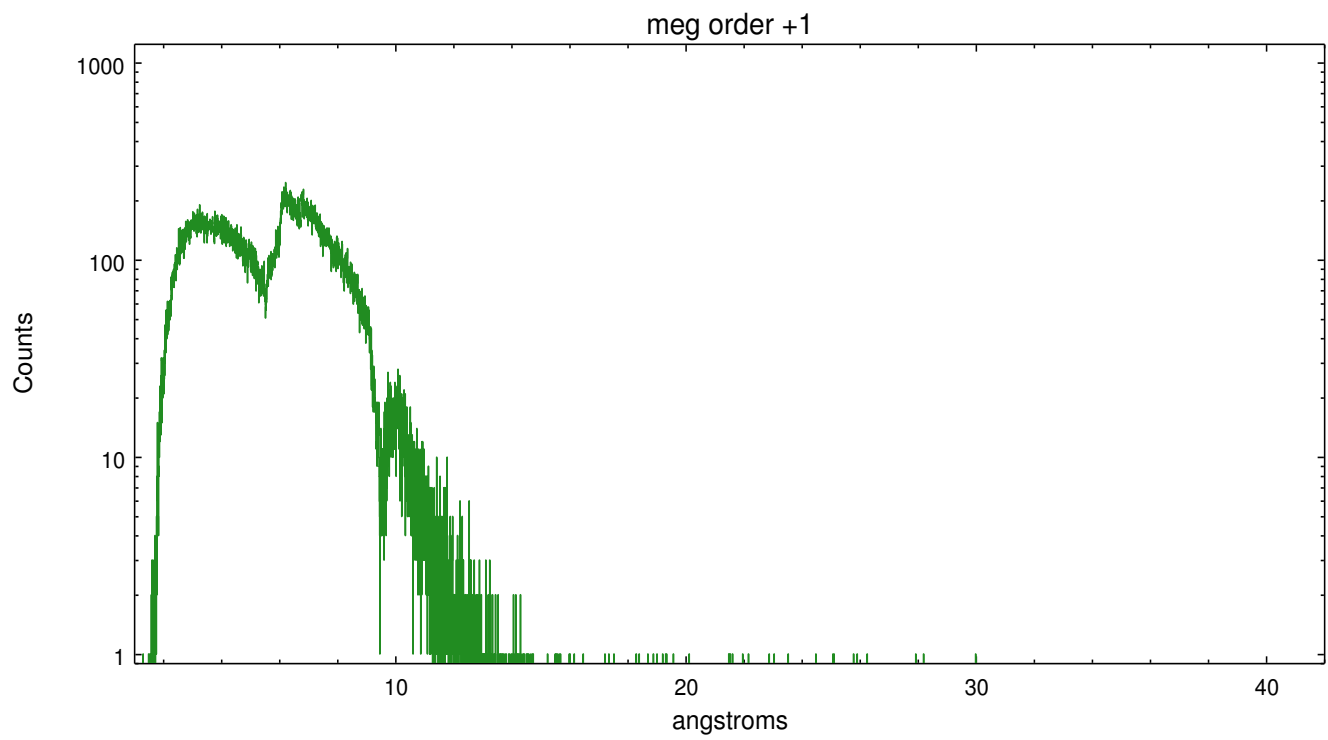
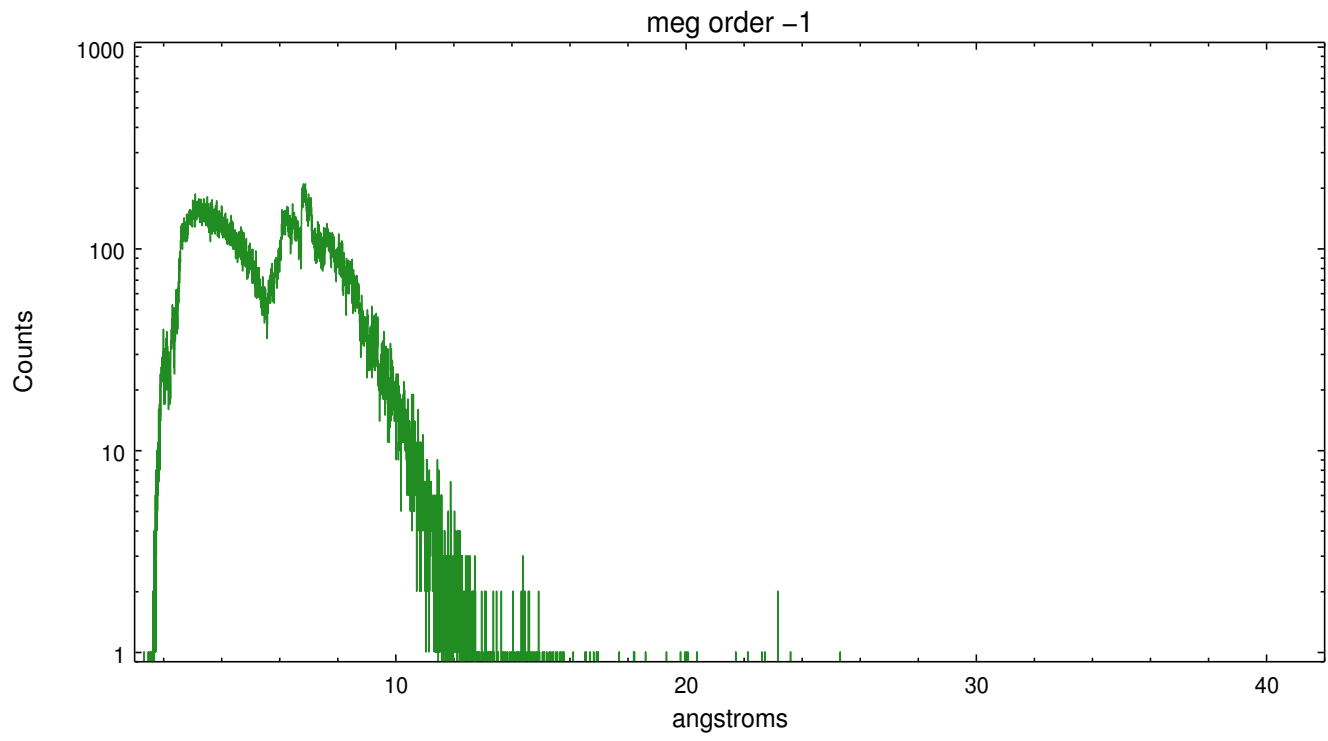
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	14975	6432	160623	37459	190812	6470	14435





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2013.01.22
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.2496

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=4089.38, y=4081.29) into the *src1a.fits file table. These corrected coordinates were determined using a software tool developed by CXC called tg_findzo, available in CIAO. 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.