

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 14634 - L2 Version 2
Chandra X-Ray Center

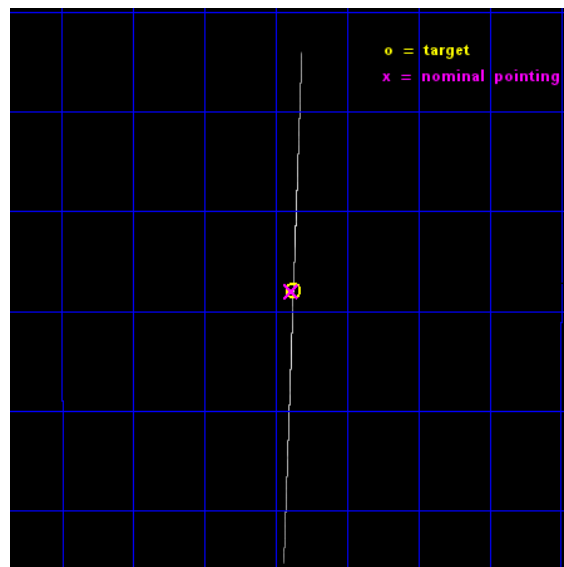
L2 Processing Date : Nov 27 2014

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1 Front

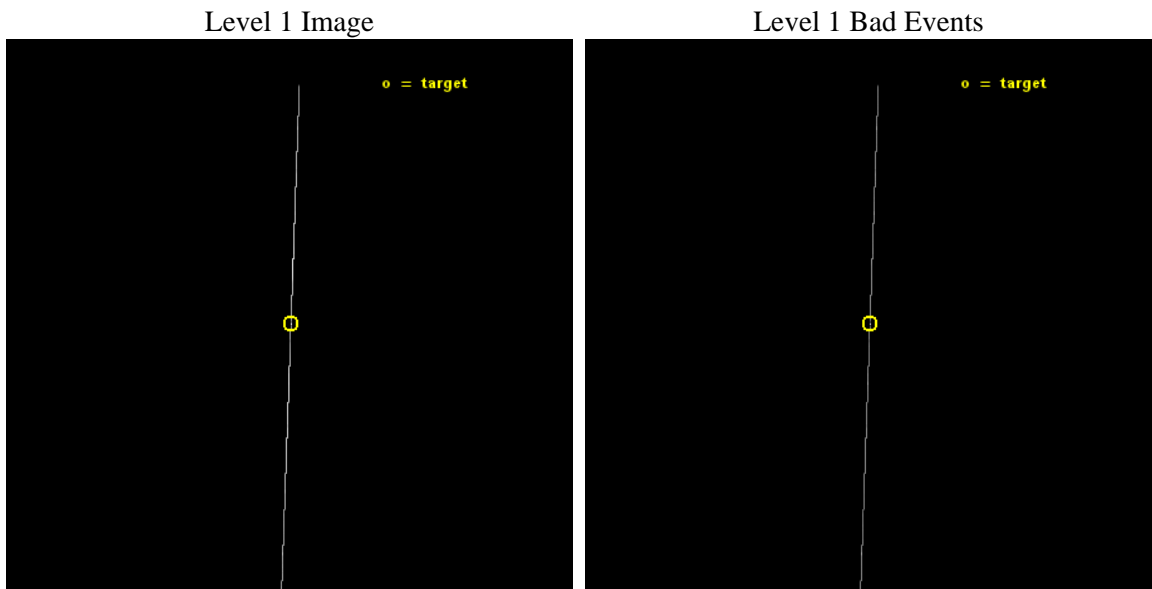
seq_num	401467	Sequence number
obs_id	14634	Observation id
title	Accretion and Ejection in a Neutron Star Transient	Proposal title
observer	Dr Jon Miller	Principal investigator
object	Swift J1910.2-0546	Source name
ra_targ	287.595	Observer's specified target RA [deg]
dec_targ	-5.798861	Observer's specified target Dec [deg]
ra_nom	287.59761246664	Nominal RA [deg]
dec_nom	-5.8004029184196	Nominal Dec [deg]
roll_nom	272.05757754329	Nominal Roll [deg]
revision	2	Processing version of data
ontime	30074.0	Sum of GTIs [s]
livetime	29956.5234375	Livetime [s]
ontime4	30074.0	Sum of GTIs [s]
ontime5	30074.0	Sum of GTIs [s]
ontime6	30074.0	Sum of GTIs [s]
ontime7	30074.0	Sum of GTIs [s]
ontime8	30074.0	Sum of GTIs [s]
ontime9	30074.0	Sum of GTIs [s]
l2events	7917574	Number of level 2 events



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.3	Processing system revision	ontime	30074.0	Sum of GTIs [s]
caldbver	4.6.4	 	ontime4	30074.0	Sum of GTIs [s]
date	2014-11-27T04:24:04	Date and time of file creation	ontime5	30074.0	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	30074.0	Sum of GTIs [s]
			ontime7	30074.0	Sum of GTIs [s]
			ontime8	30074.0	Sum of GTIs [s]
			ontime9	30074.0	Sum of GTIs [s]
			l1events	9915526	Number of level 1 events
			tgmethod	TGDETECT	Method used to create src1a file
				411550	

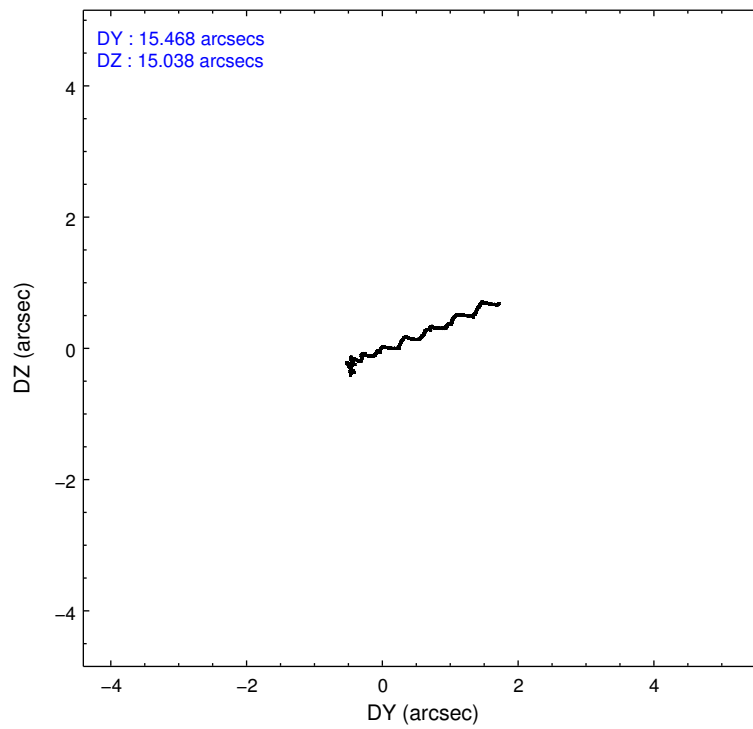
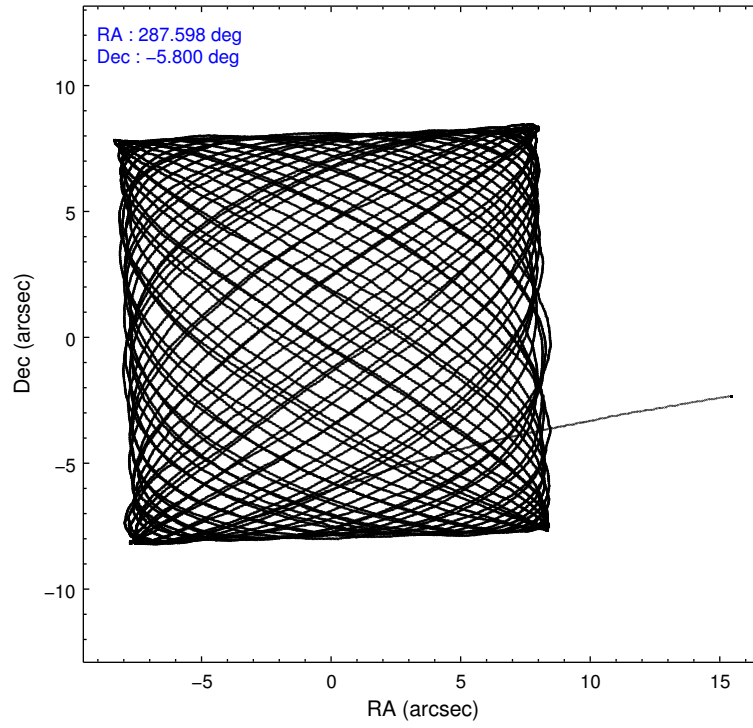
2.1.3 Events

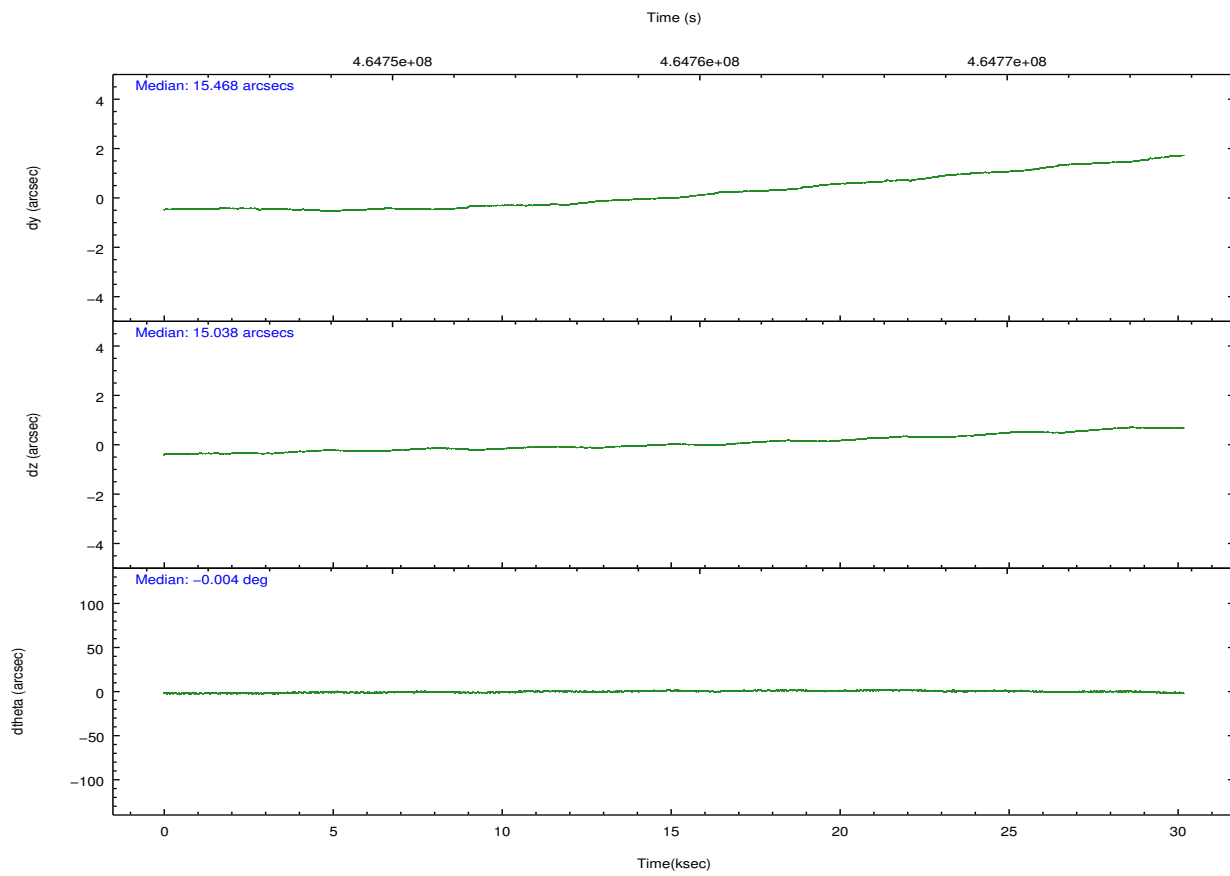
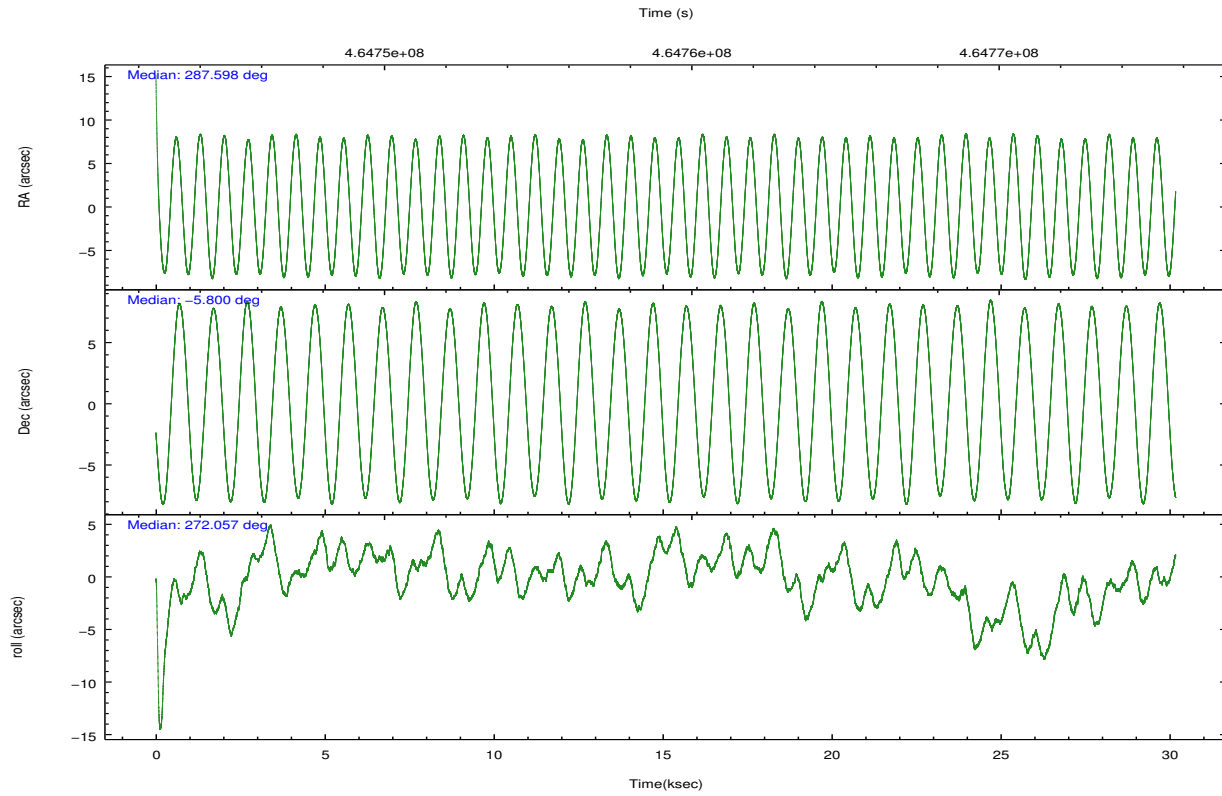
	ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9		ccd 4	ccd 5	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	507021	1422858	2848087	2510275	2013376	613909	grade 0 events	75644	181791	558163	473815	911451	104263
rejected events	173856	215317	209401	256216	243291	174502		14%	12%	19%	18%	45%	16%
rejected %	34%	15%	7%	10%	12%	28%	grade 1 events	259	357	1109	5783	1612	335
								0%	0%	0%	0%	0%	0%
							grade 2 events	230500	650449	1890937	789626	732568	301130
								45%	45%	66%	31%	36%	49%
							grade 3 events	6344	42295	25175	204230	38451	6341
								1%	2%	0%	8%	1%	1%
							grade 4 events	6383	41871	24792	201181	37940	6602
								1%	2%	0%	8%	1%	1%
							grade 5 events	7687	27492	19733	48095	15807	9399
								1%	1%	0%	1%	0%	1%
							grade 6 events	14301	291258	139849	585448	49832	21115
								2%	20%	4%	23%	2%	3%
							grade 7 events	165903	187345	188329	202097	225715	164724
								32%	13%	6%	8%	11%	26%

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	CC33_GRADED	CC33_GRADED	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	287.582722	287.597612466643	Subarray requested	NONE	NONE
[deg] Pointing Dec	-5.777429	-5.800402918419627	Alternating exposures requested	N	N
[deg] Pointing Roll	271.899446	272.057577543286	[s] Primary exposure time	0.000000	0
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-183.992523	-183.985022191653			
[mm] SIM translation stage offset	-6.14	-6.147500391354811			
[s] Observation start time (MET)	464744230.184000	464743341.73924			
Observation start date	2012-09-22T23:36:03	2012-09-22T23:22:21			
[s] Observation end time (MET)	464774230.184000	464775195.66595			
Observation end date	2012-09-23T07:56:03	2012-09-23T08:13:15			
Read mode	CONTINUOUS	CONTINUOUS			

2.3 Aspect





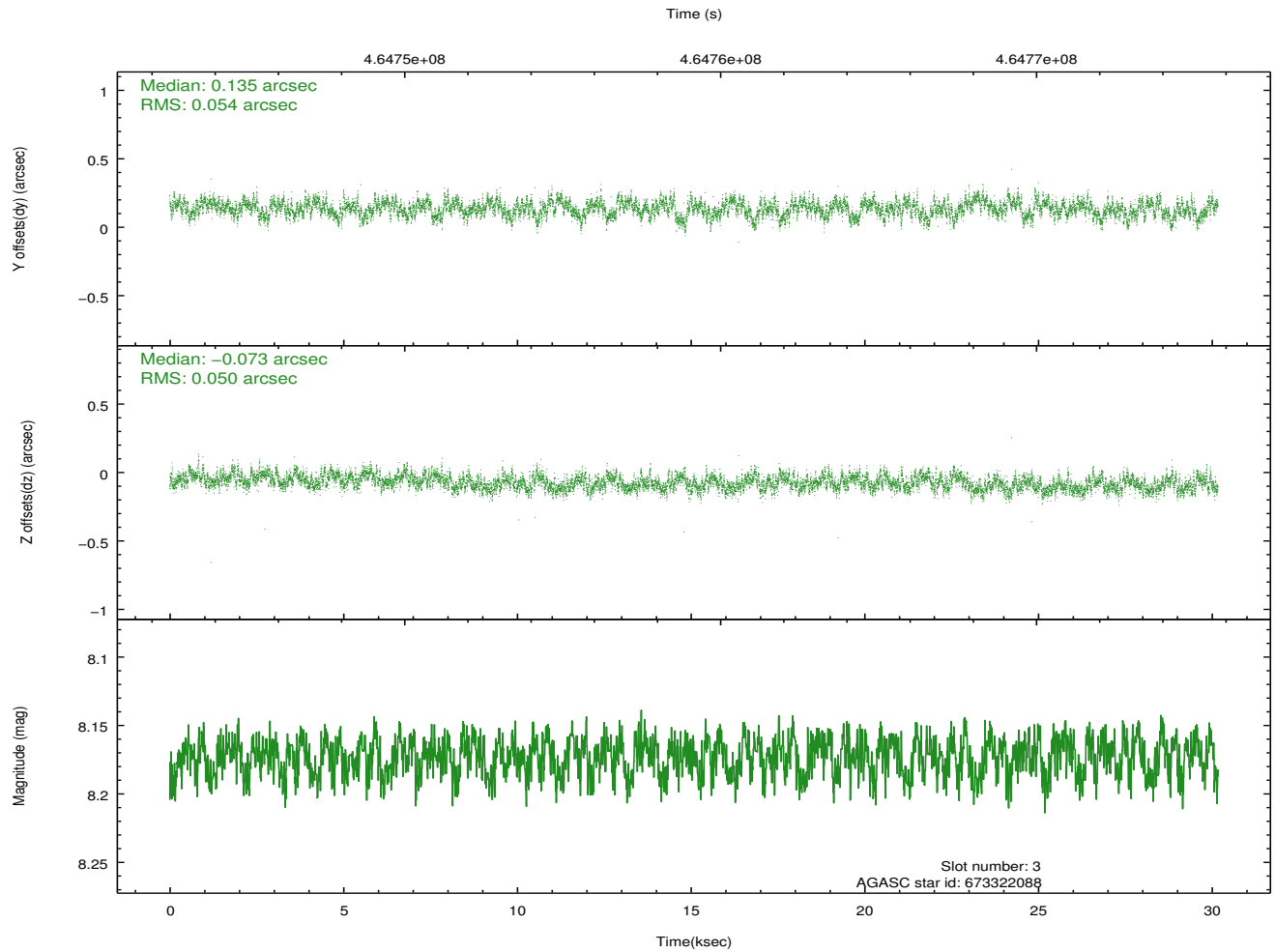
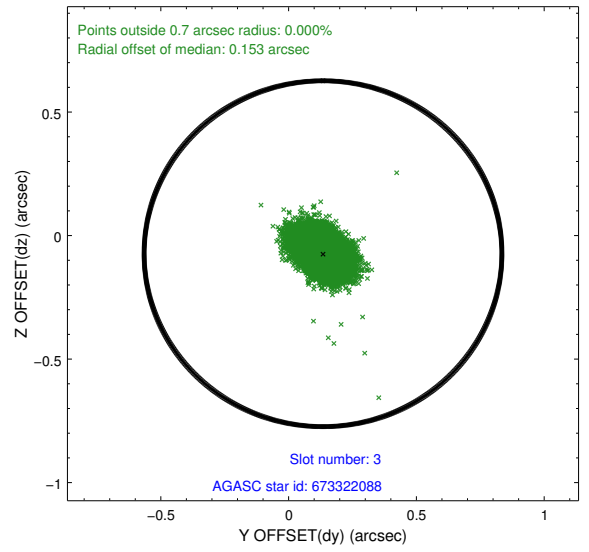
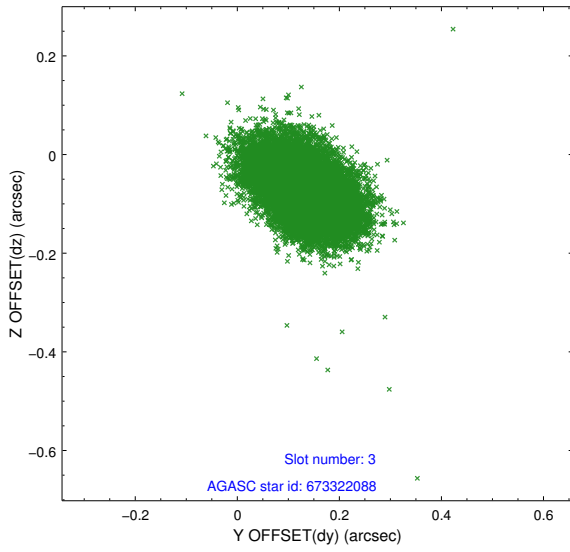
Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-S-1	7.02	7360	0.060	0.114	0.027	0.035	0.000000	0.000000	927.79	-1858.73
1	FID		ACIS-S-4	7.01	7360	0.152	-0.102	0.009	0.014	0.000000	0.000000	2145.36	45.09
2	FID		ACIS-S-5	7.06	7359	-0.239	0.001	0.026	0.037	0.000000	0.000000	-1821.25	38.93
3	GUIDE	used	673322088	8.17	14718	0.135	-0.073	0.079	0.127	288.114236	-5.414546	-1240.91	1947.34
4	GUIDE	used	673327336	8.39	14717	-0.244	-0.032	0.080	0.131	287.059963	-5.332735	-1660.91	-1819.37
5	GUIDE	used	673856224	9.18	14708	0.226	0.172	0.109	0.174	287.314246	-5.691486	-340.11	-950.68
6	GUIDE	used	673858800	9.32	14601	-0.002	0.183	0.113	0.179	287.310730	-6.055032	967.42	-1005.94
7	GUIDE	used	673328024	9.15	14693	-0.103	-0.244	0.109	0.181	286.884822	-5.239779	-2015.38	-2436.65

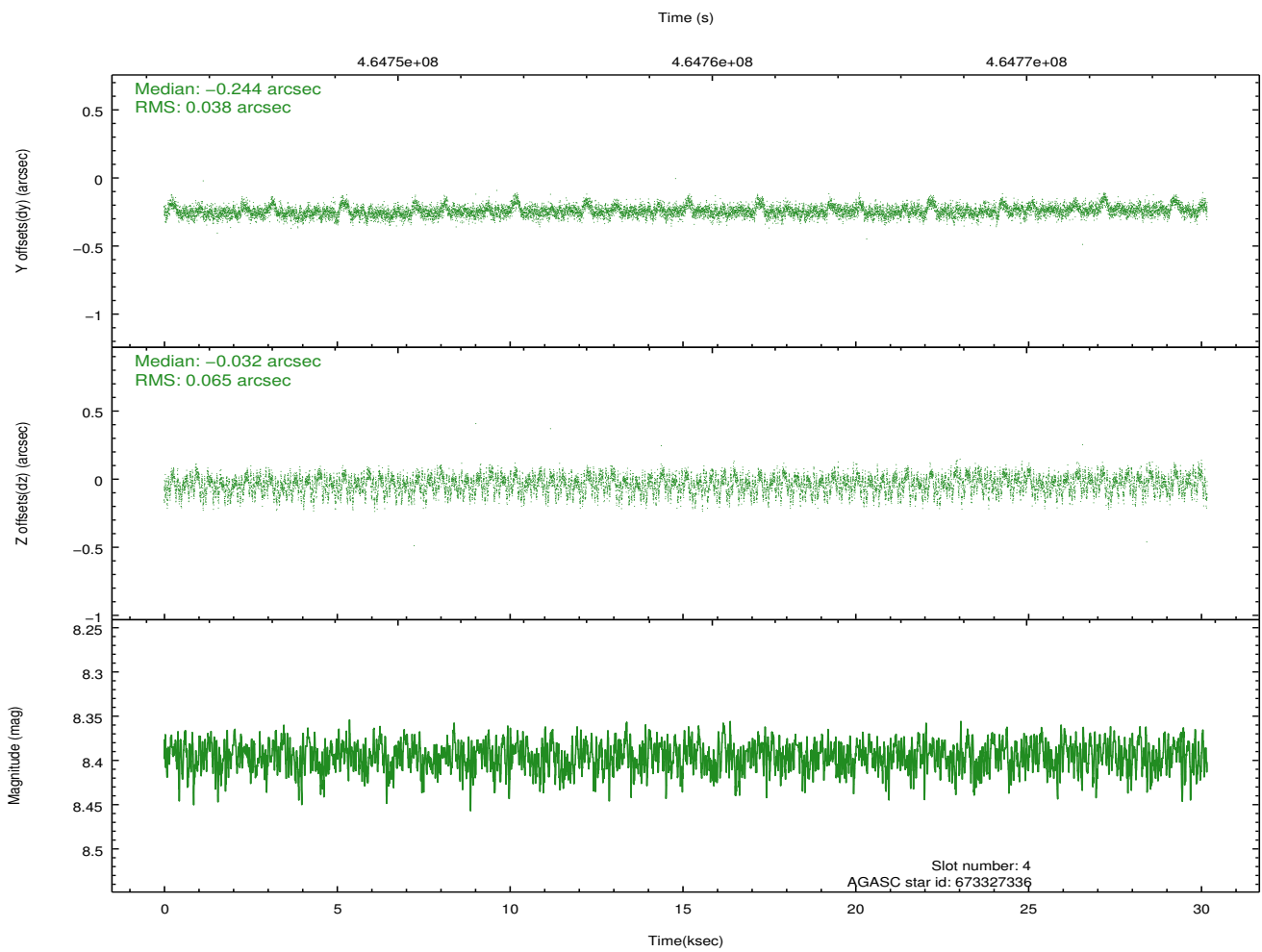
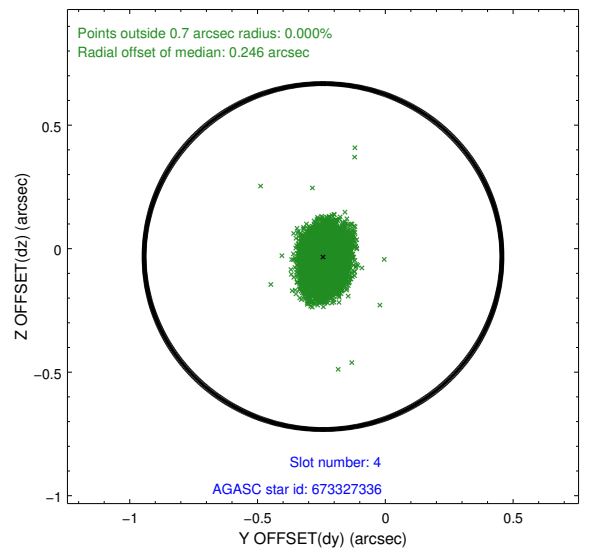
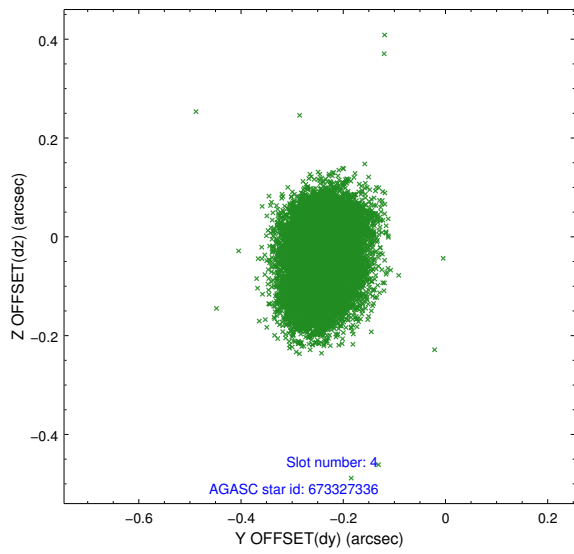
∞

2.4 Star Slots

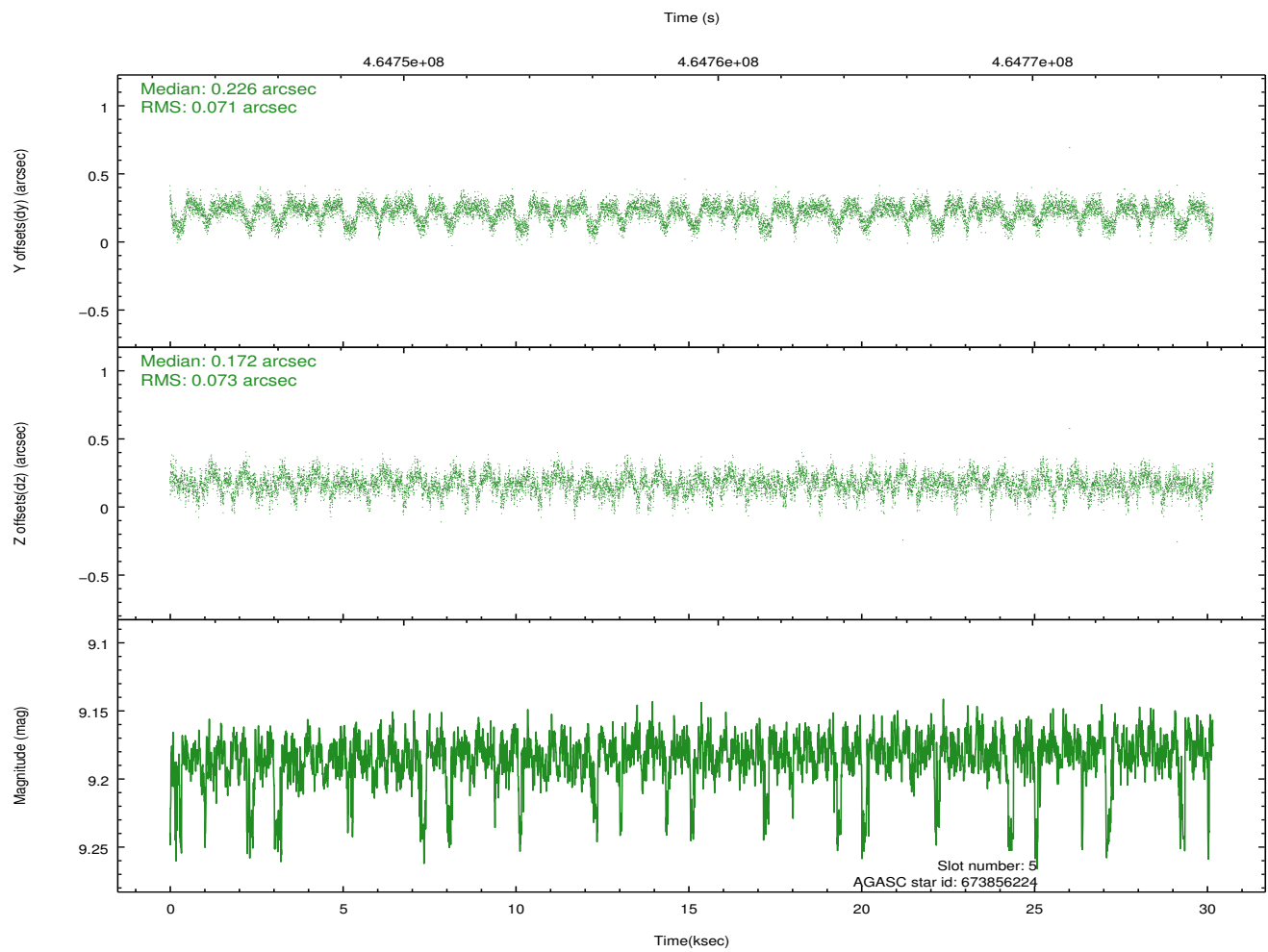
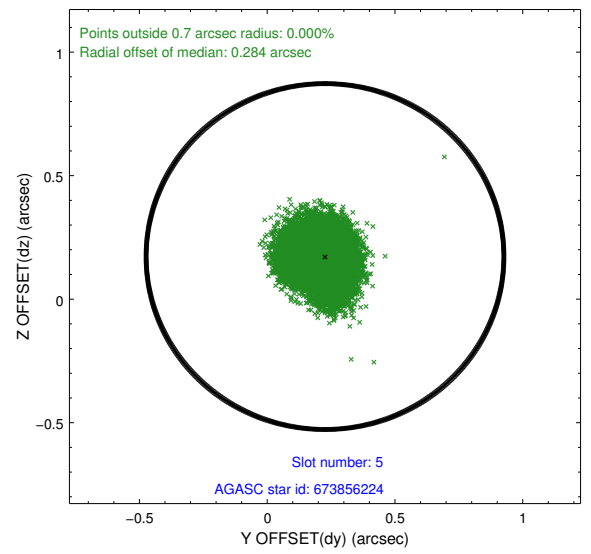
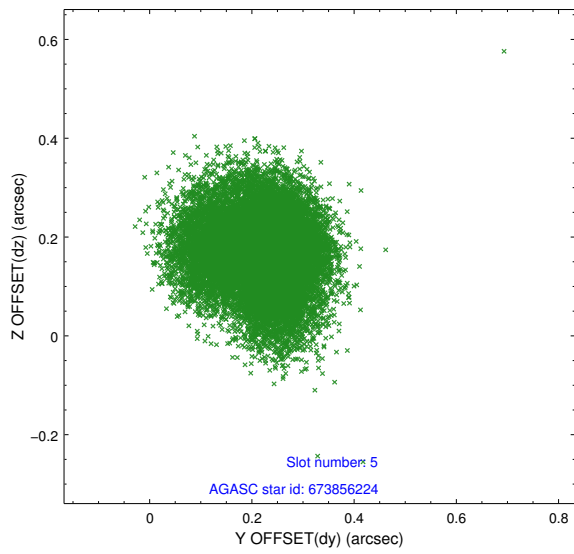
2.4.1 Slot 3



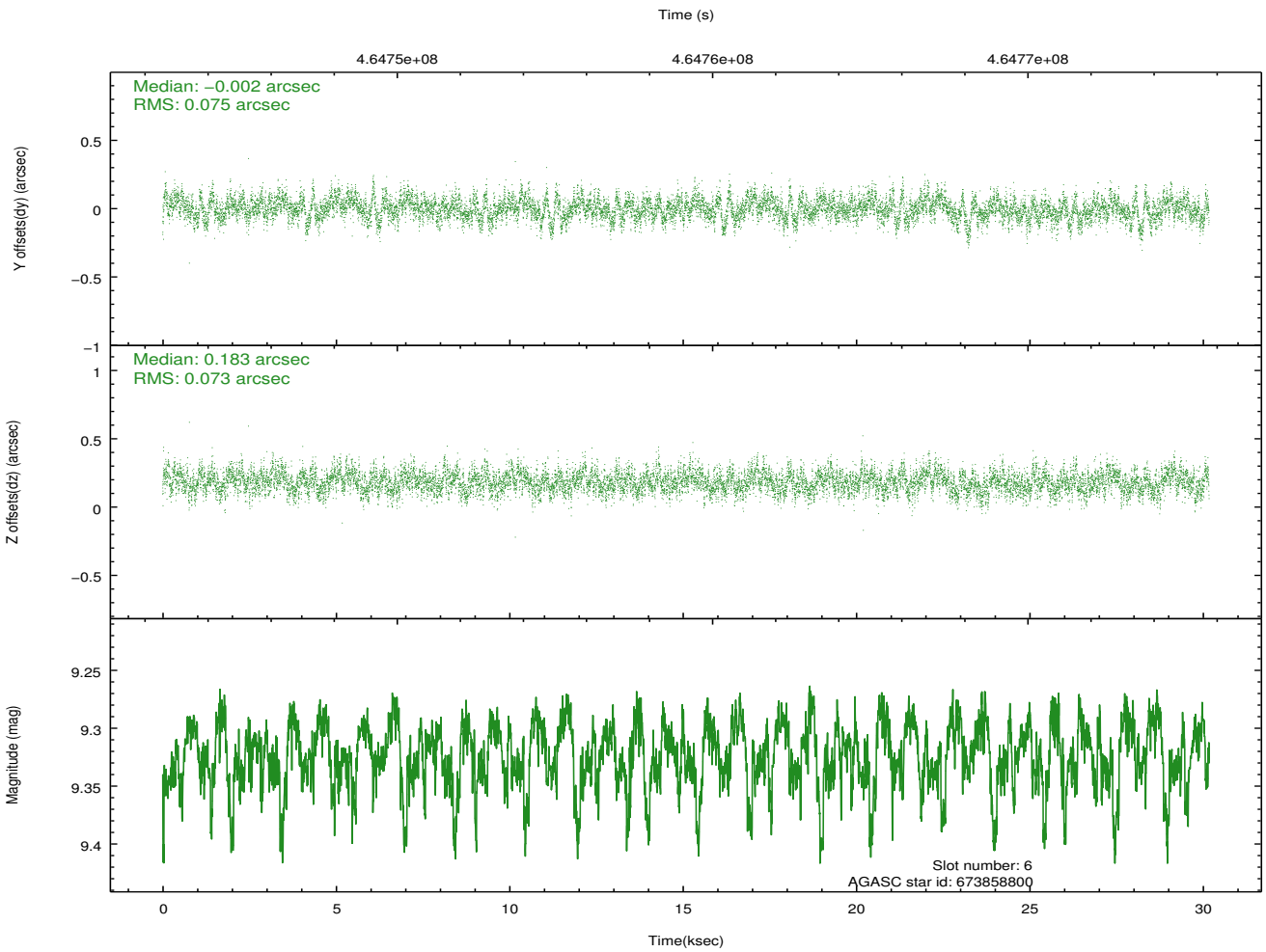
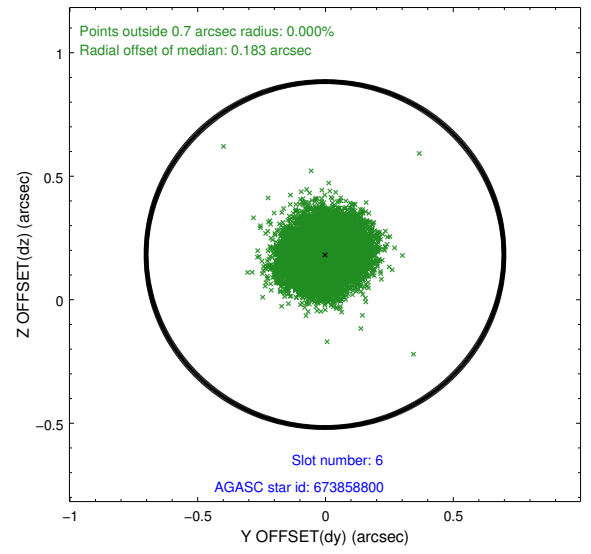
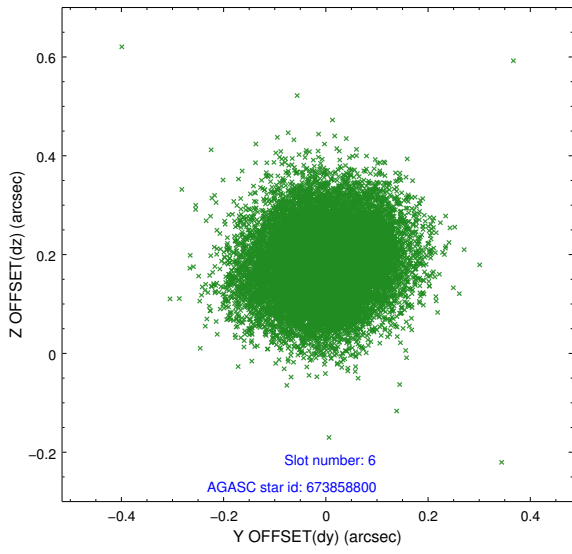
2.4.2 Slot 4



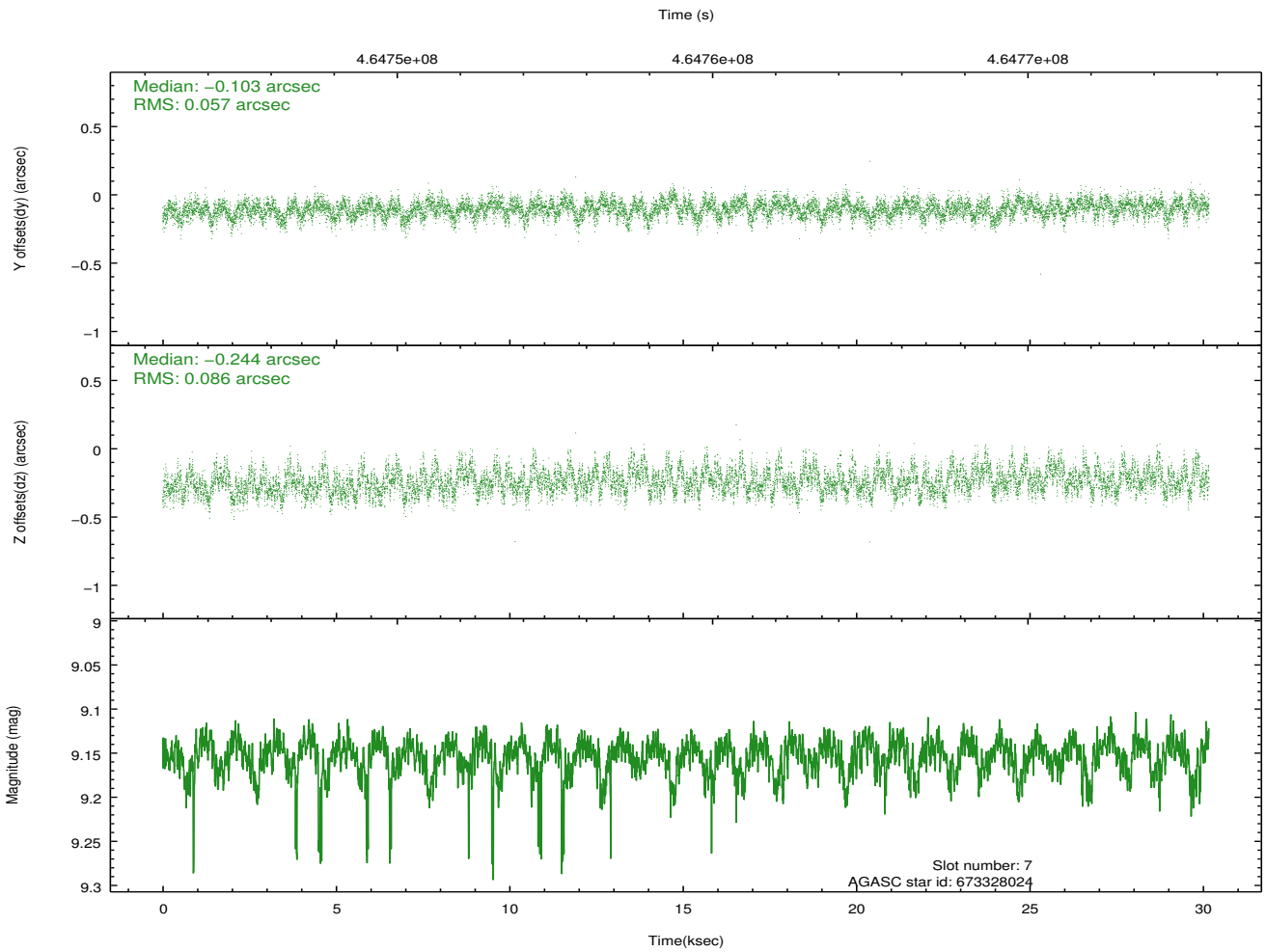
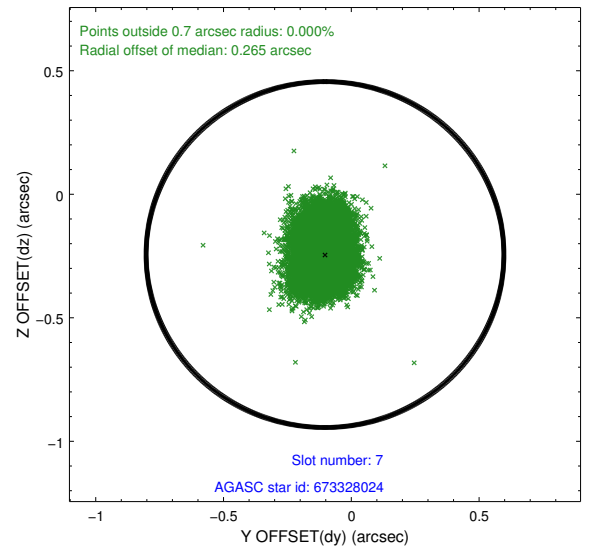
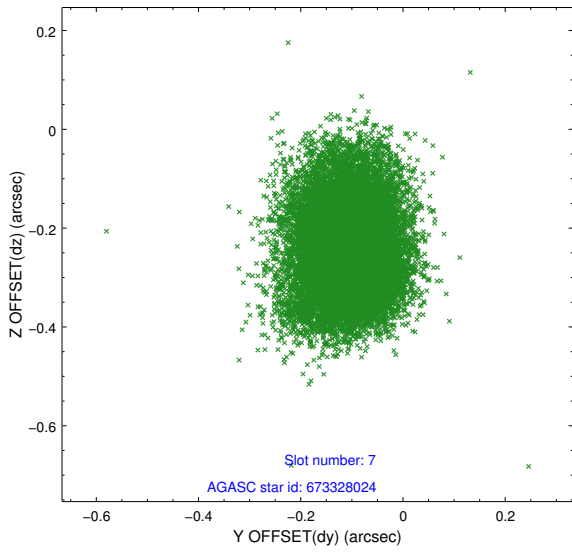
2.4.3 Slot 5



2.4.4 Slot 6

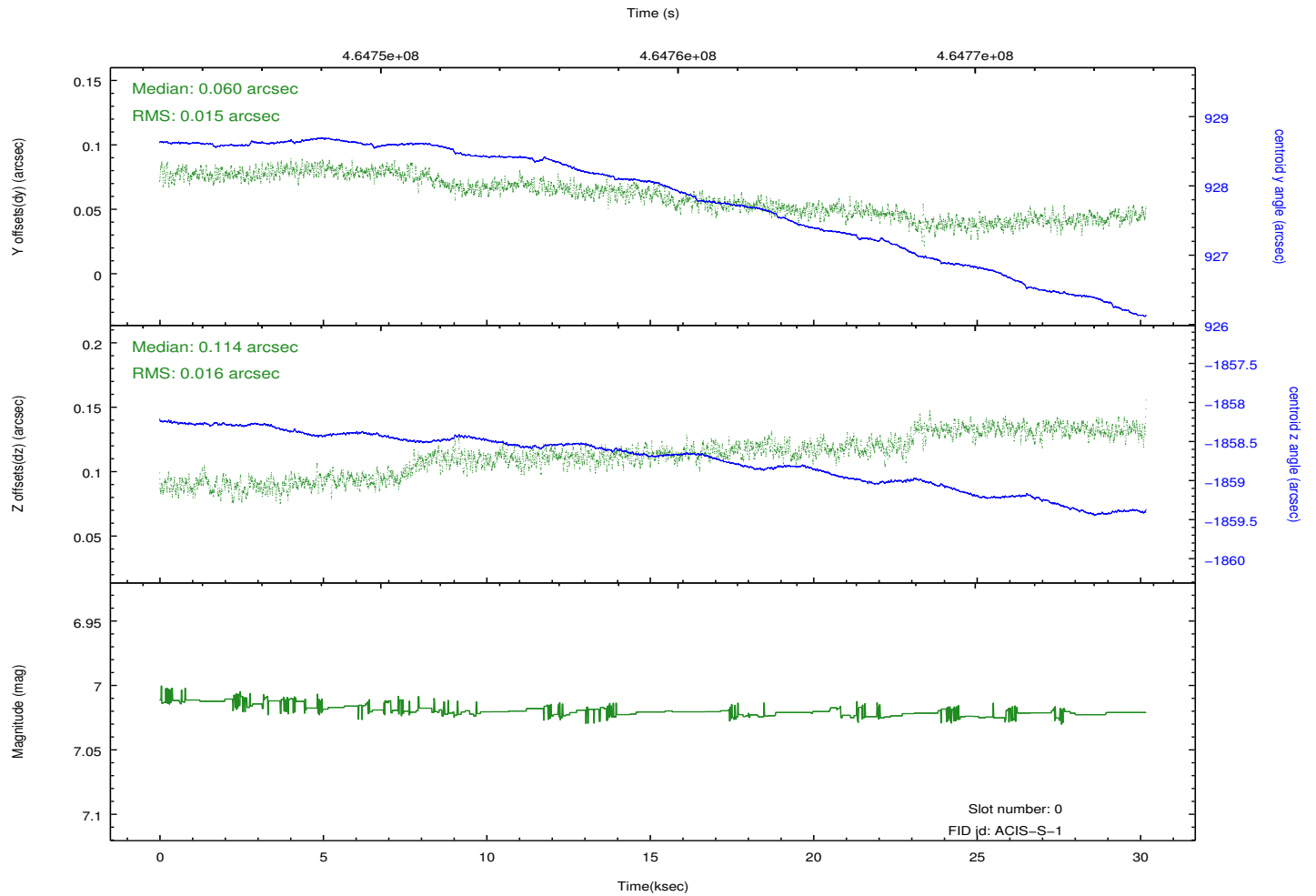
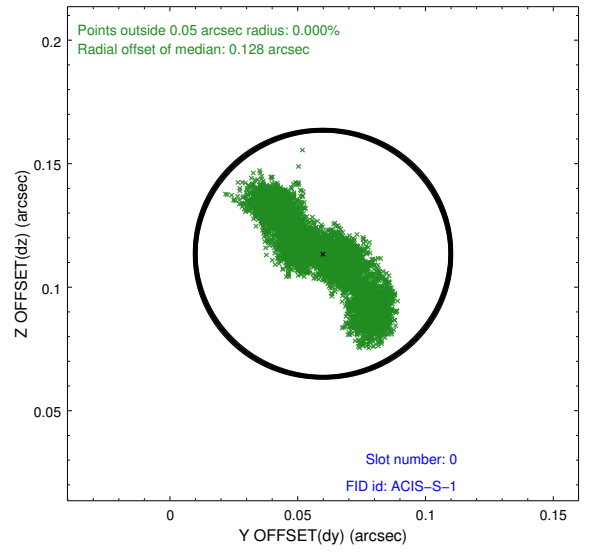
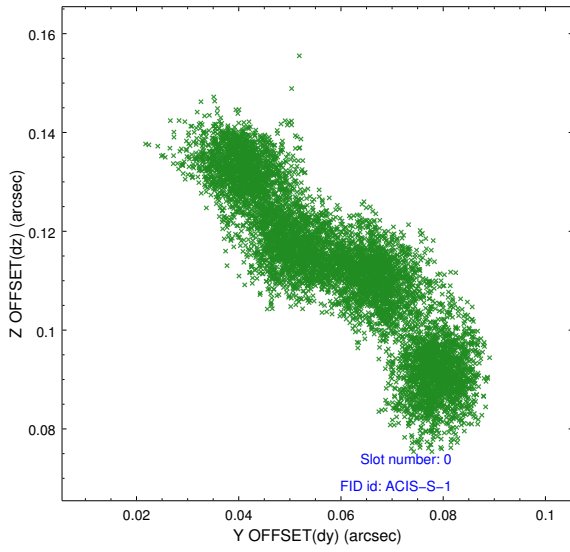


2.4.5 Slot 7

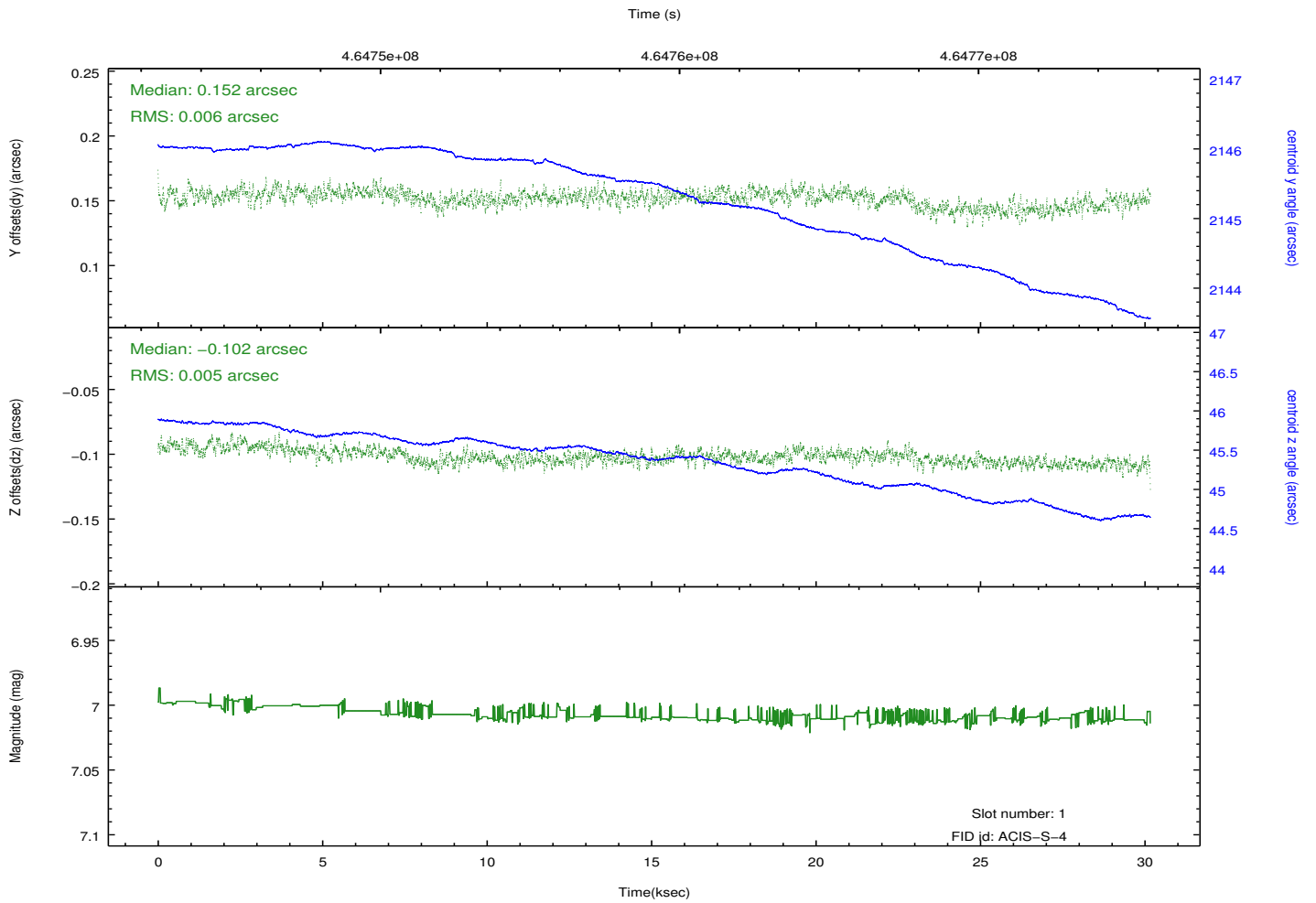
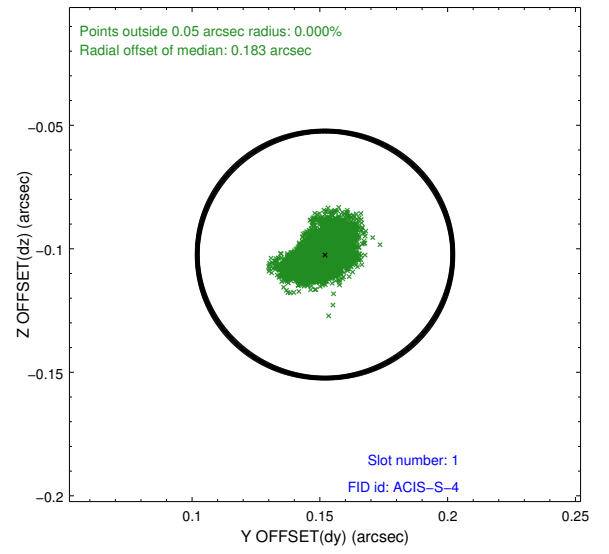
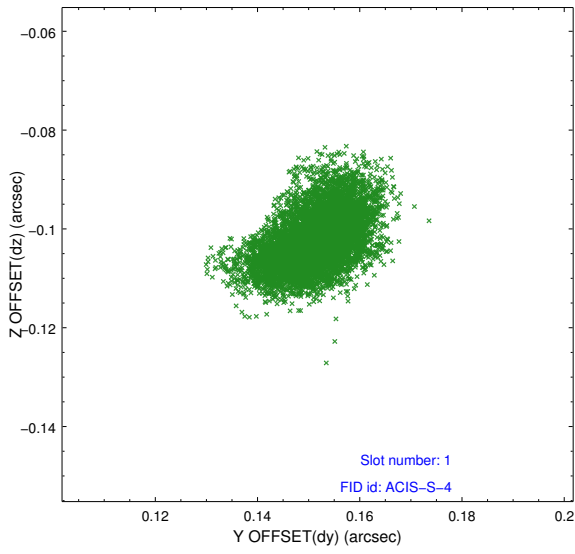


2.5 FID Slots

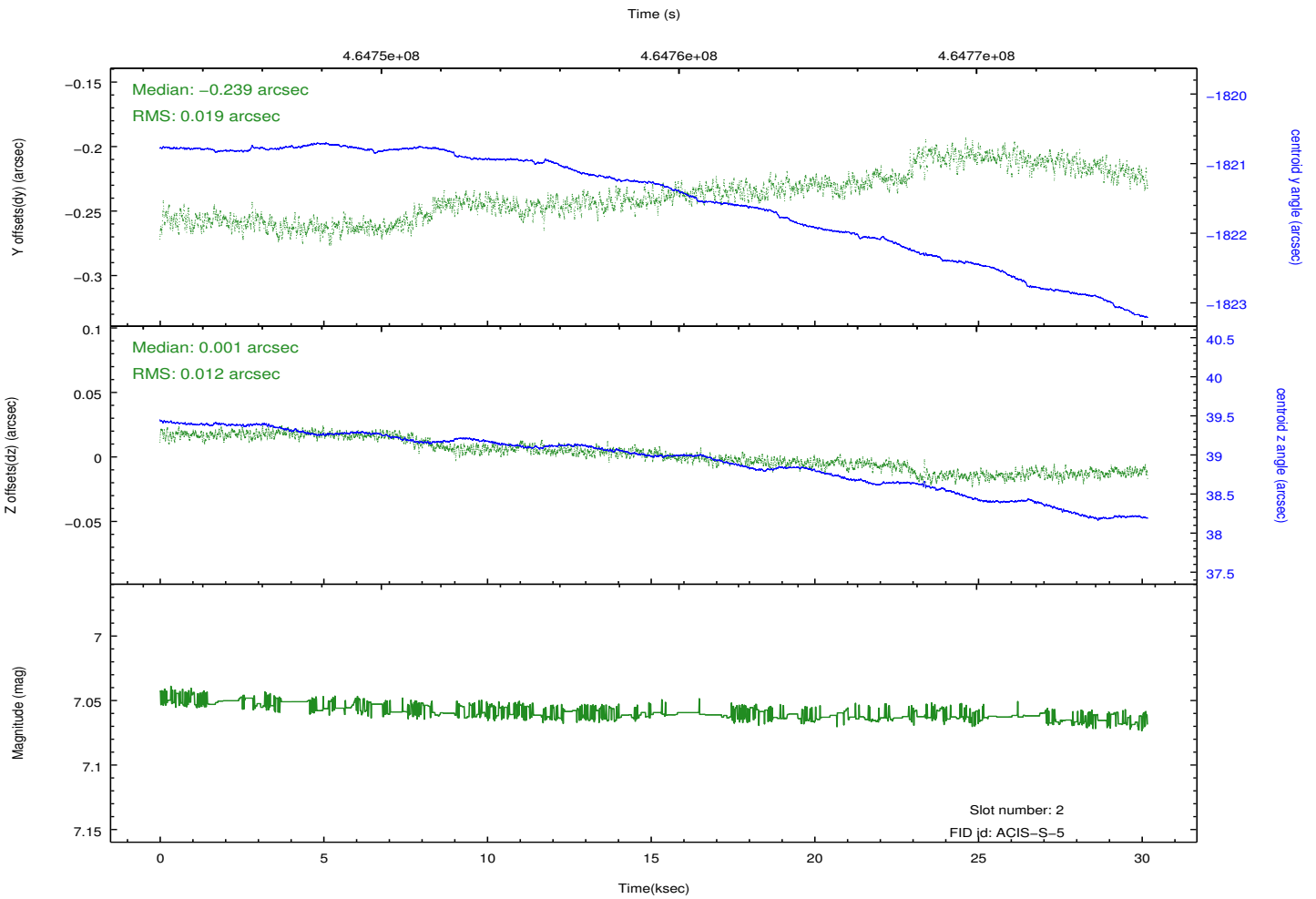
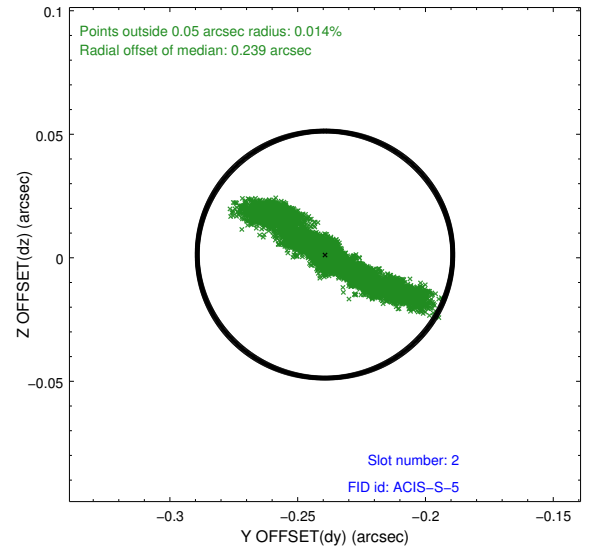
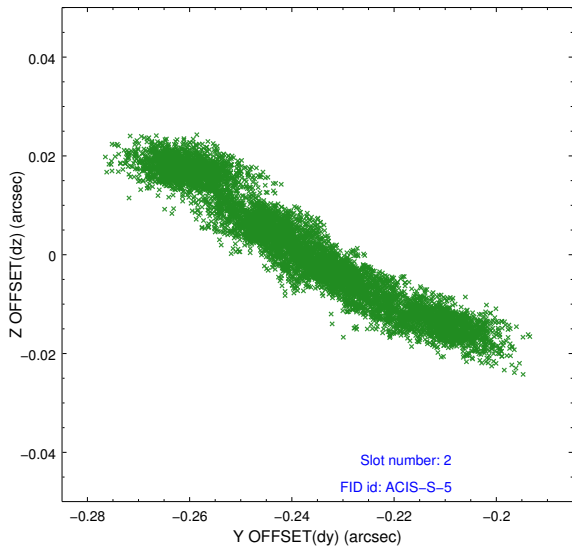
2.5.1 Slot 0



2.5.2 Slot 1

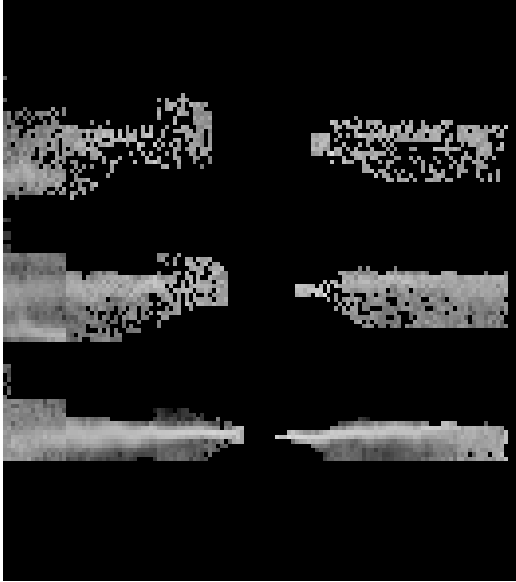


2.5.3 Slot 2

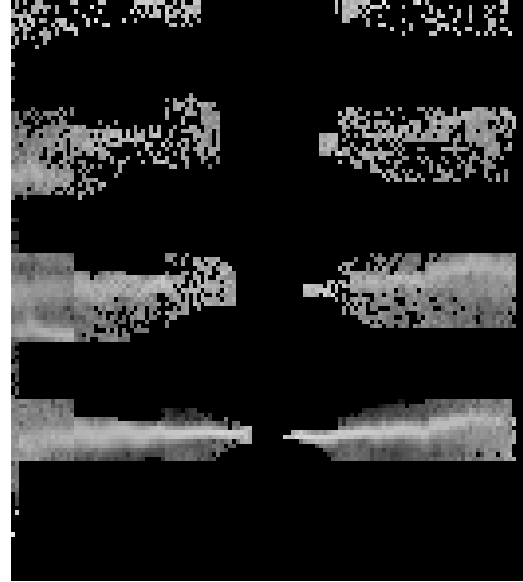


3 Gratings

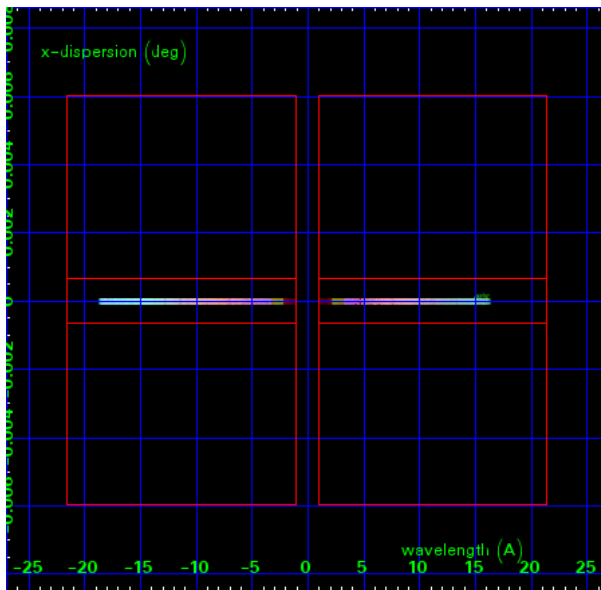
3.1 HEG Arm



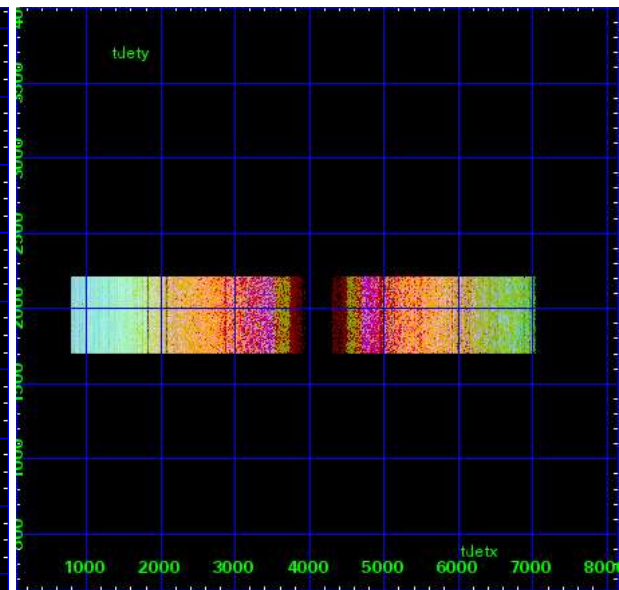
HEG Order Sort 123



HEG Order Sort ALL

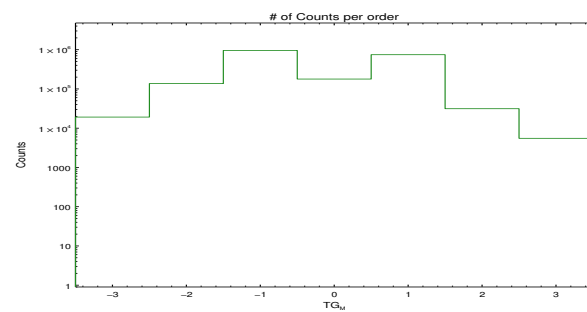


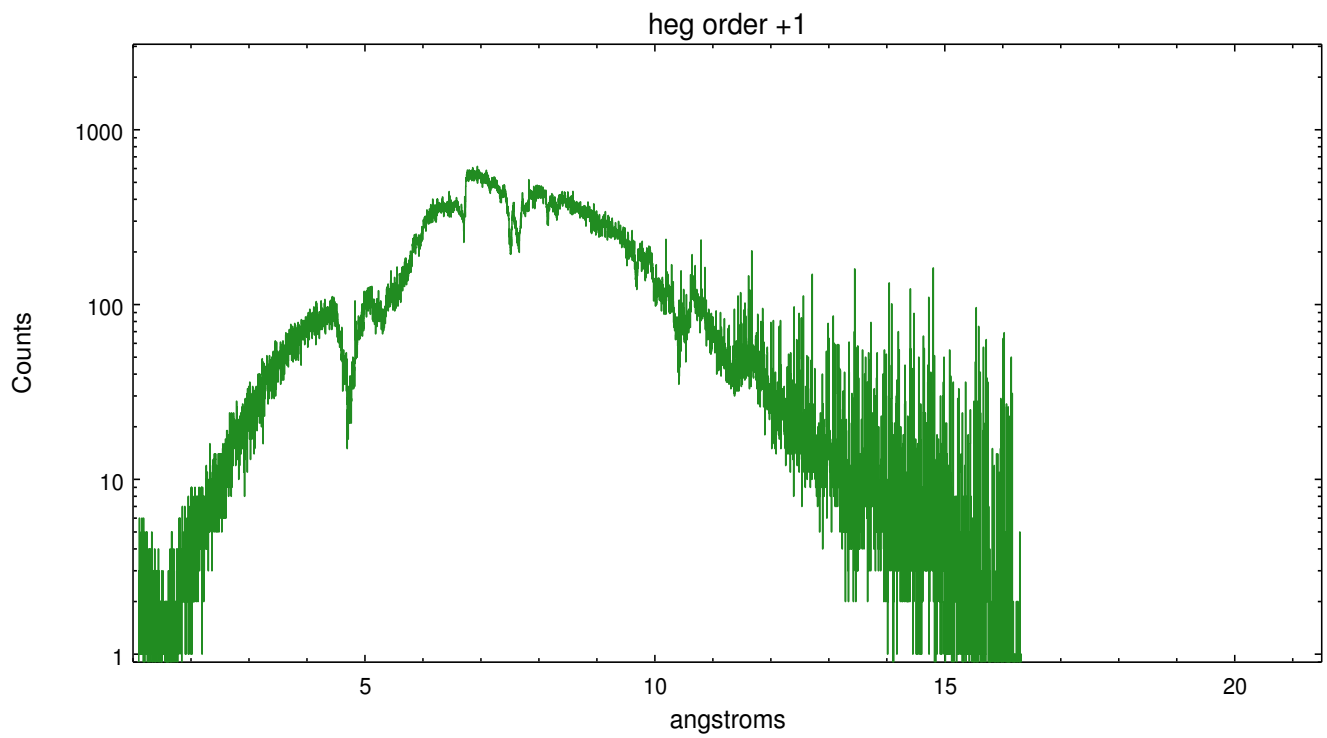
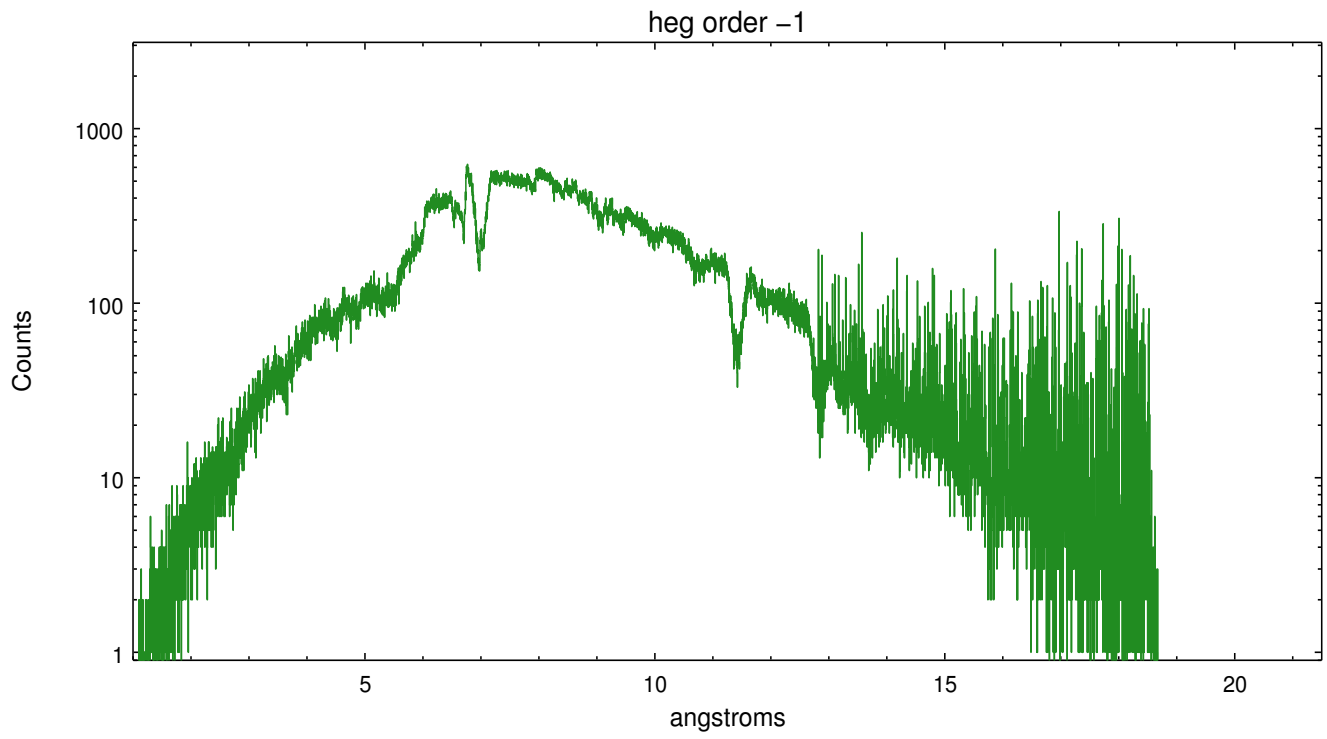
Spot Image HEG



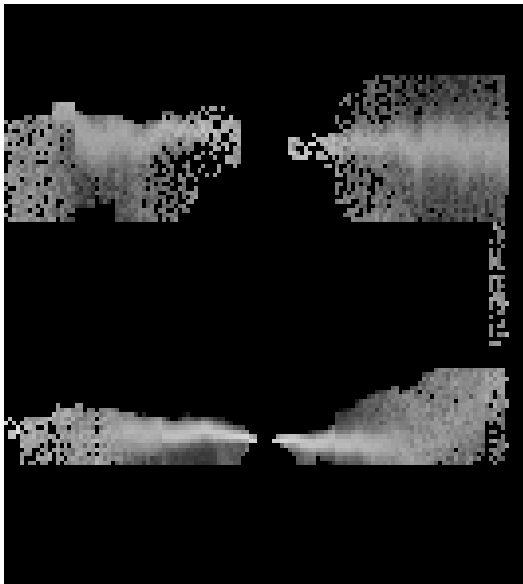
Full Detector HEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	19191	136923	958204	178571	746004	31392	5515

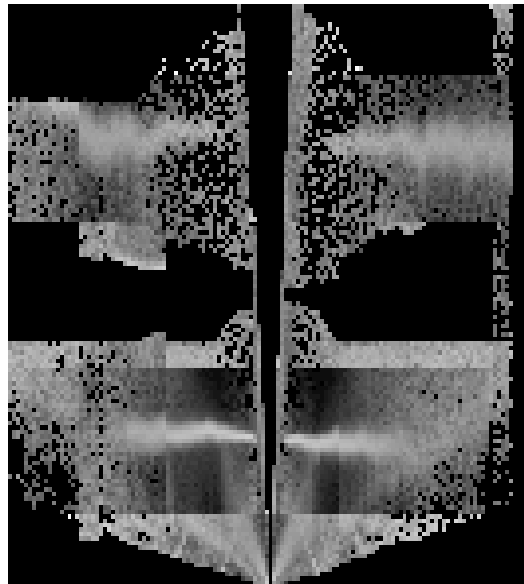




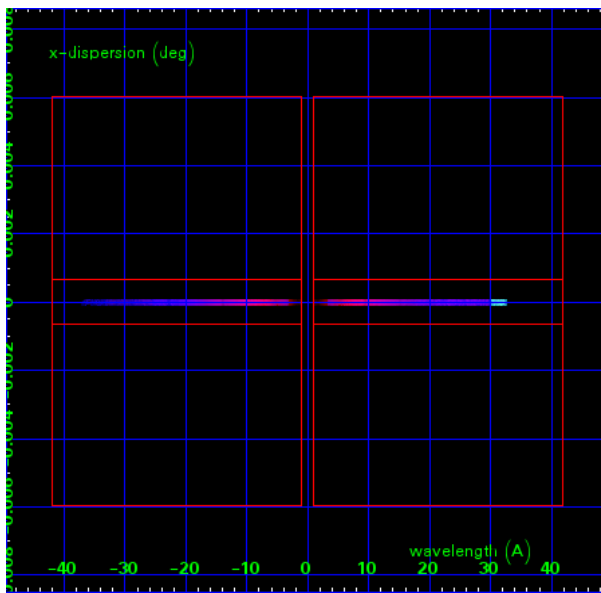
3.2 MEG Arm



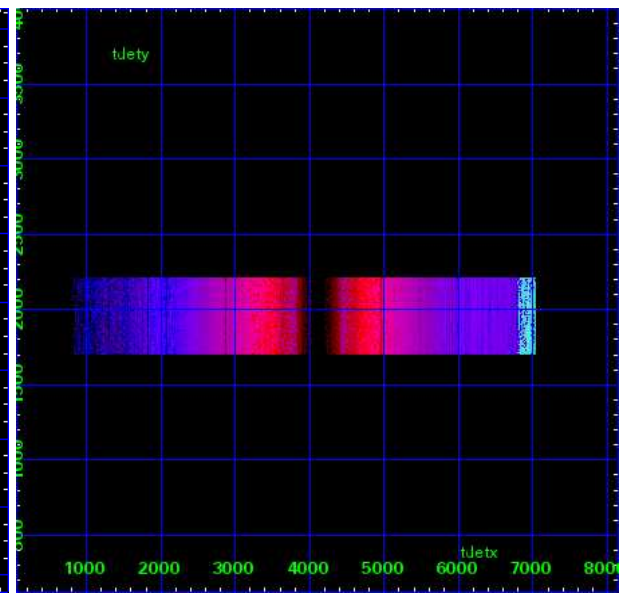
MEG Order Sort 123



MEG Order Sort ALL

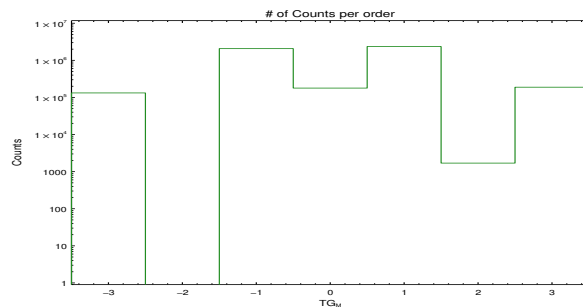


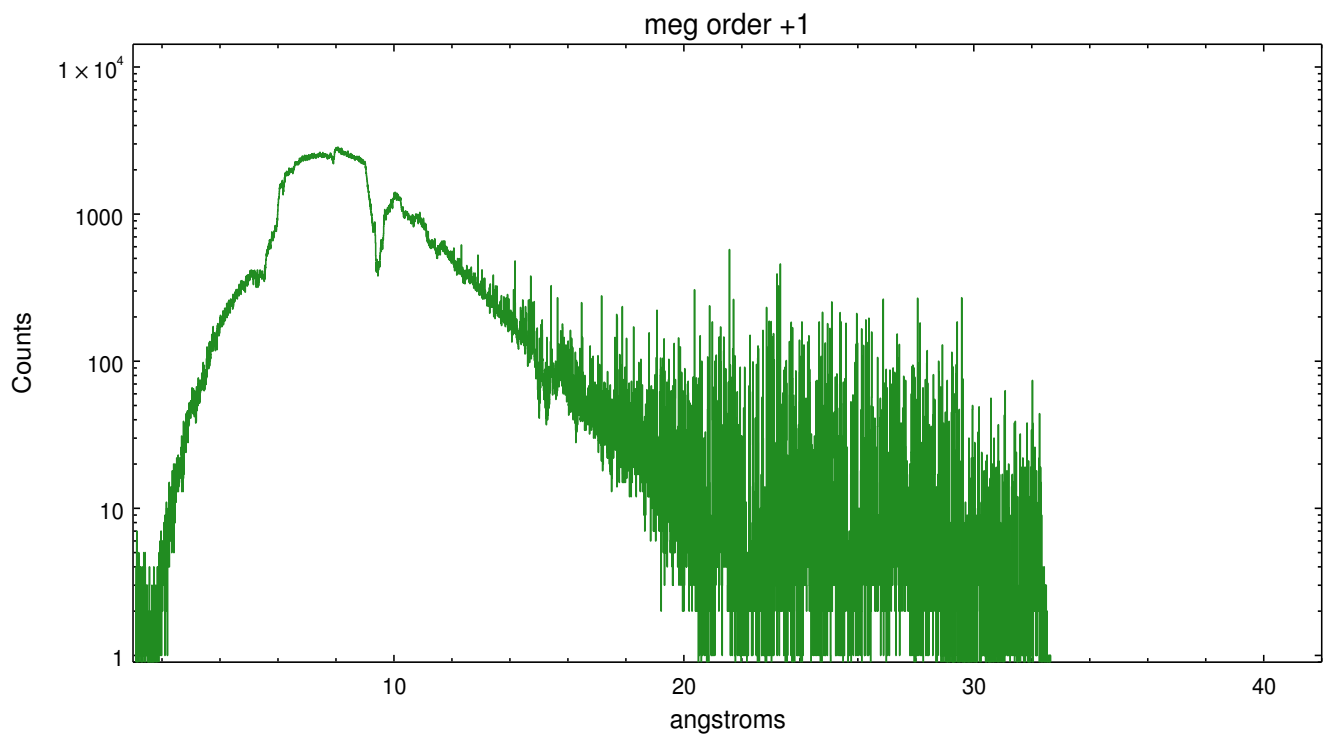
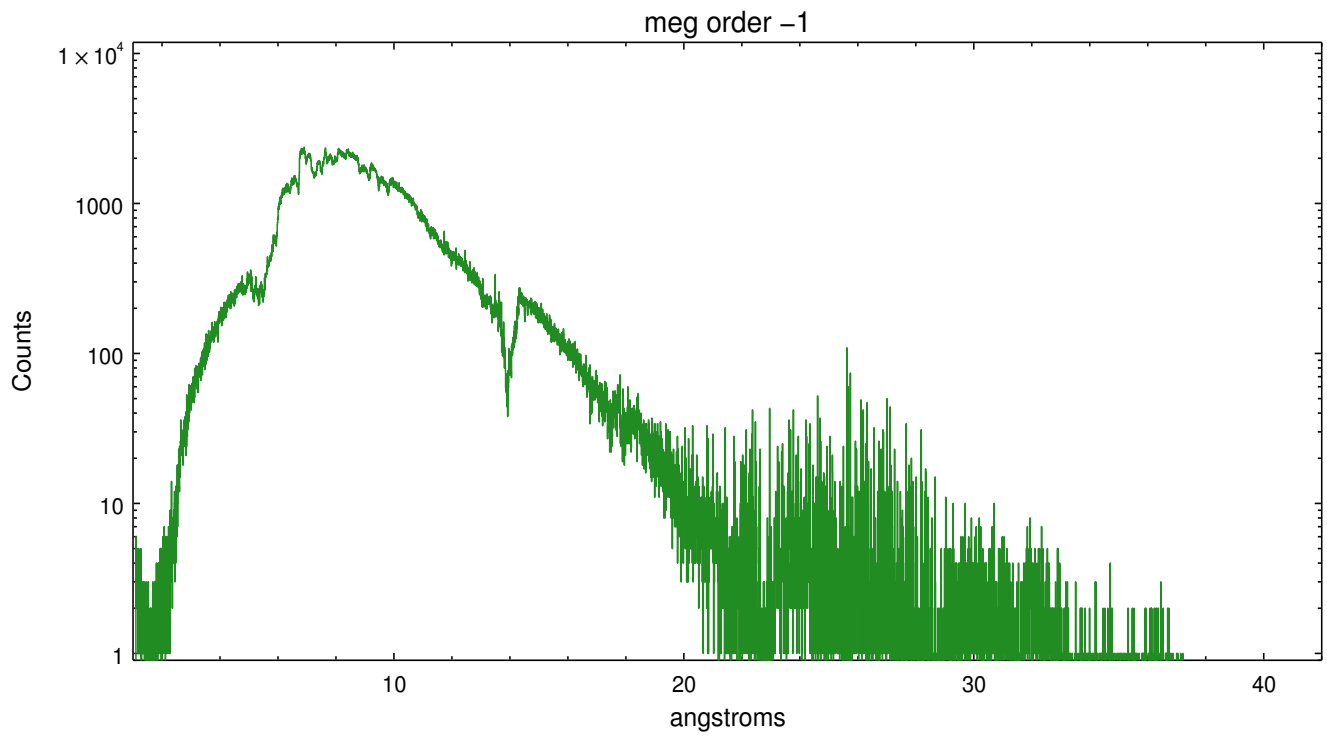
Spot Image MEG



Full Detector MEG

	order -3	order -2	order -1	order 0	order 1	order 2	order 3
Events	132308	0	2070416	178571	2352359	1697	188696





A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2014.12.12
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.074

A.2 Comments

Zeroth order filtered with a grey filter, allowing 1 in 10 events to be recorded. The filter is 100 columns wide.

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As of November 1, 2009, events with a flight grade of 66 were added to the telemetry stream for continuous-clocking mode observations because it was found that a significant fraction of real X-ray events have this flight grade in this mode. To prevent these events from being discarded from Level 2 event files, the CALDB grade file was modified to change the 'ASCA' grade for these events from 7 (a bad grade) to 2 (a good grade). The new grade file has been used in standard pipeline processing for code versions DS 10.3 and later (i.e. 2014 Oct 30 and later). Since the calibration products for continuous-clocking mode observations are appropriate for data that includes flight grade 66 events, data obtained on or after 2009 Nov 1, but that were processed using an earlier version of the pipeline code, should be reprocessed with CIAO using version 4.7 (i.e. 2014 December) or later. Note that it is not possible to fix the data obtained before 2009 Nov 1. Since these earlier continuous-clocking observations are not calibrated at present, spectral analyses of these data may yield inaccurate results.

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For ACIS/CC-mode w/ HETG, at with no SIM-Z offset, there are no MEG even order counts. MEG even orders overlap with HEG orders in energy, but MEG even order efficiencies are very low. Since HEG and MEG cannot be spatially separated, events are preferentially assigned to HEG. (MEG odd orders can be resolved.) For observations with a SIM-Z offset, MEG negative and MEG positive orders will be missing (off the array), and remove some of the ambiguity.

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These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.