

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 13129 - L2 Version 2
Chandra X-Ray Center

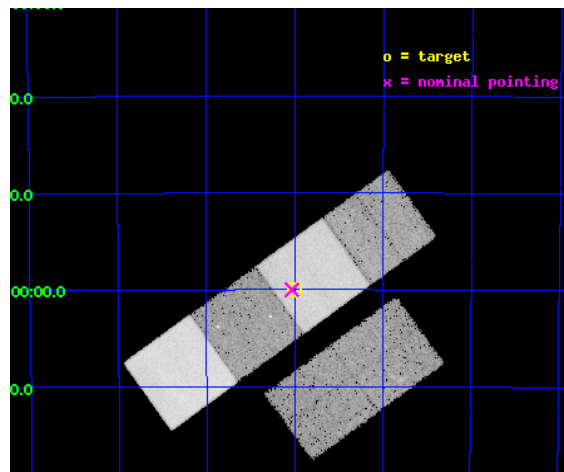
L2 Processing Date : Feb 2 2012

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1 Front

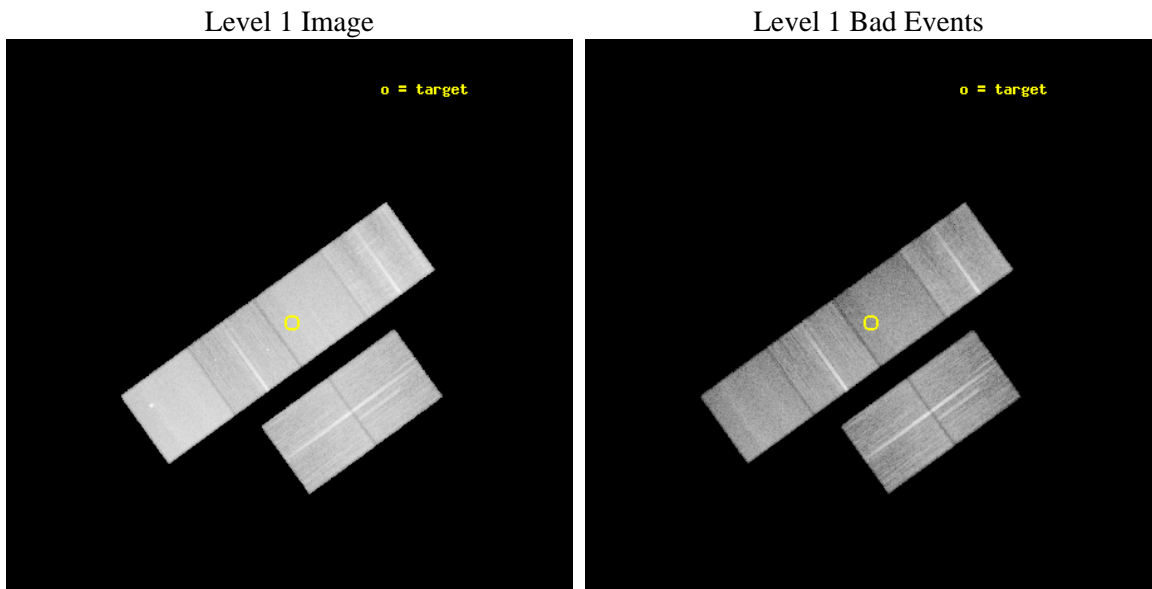
seq_num	900956	Sequence number
obs_id	13129	Observation id
title	Properties of the Warm-Hot Intergalactic Medium Using X-ray/SZ Cross-Correlation	Proposal title
observer	Dr. Massimiliano Galeazzi	Principal investigator
object	Blanco Cosmological Survey	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.25	Observer's specified target RA [deg]
dec_targ	-52.0	Observer's specified target Dec [deg]
ra_nom	79.257881228863	Nominal RA [deg]
dec_nom	-52.000350347734	Nominal Dec [deg]
roll_nom	324.16283897455	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27547.354645848	Sum of GTIs [s]
livetime	27198.533454297	Livetime [s]
ontime2	27547.395685852	Sum of GTIs [s]
ontime3	27543.99051553	Sum of GTIs [s]
ontime5	27547.313605845	Sum of GTIs [s]
ontime6	27547.272565842	Sum of GTIs [s]
ontime7	27547.354645848	Sum of GTIs [s]
ontime8	27547.190485835	Sum of GTIs [s]
l2events	313348	Number of level 2 events



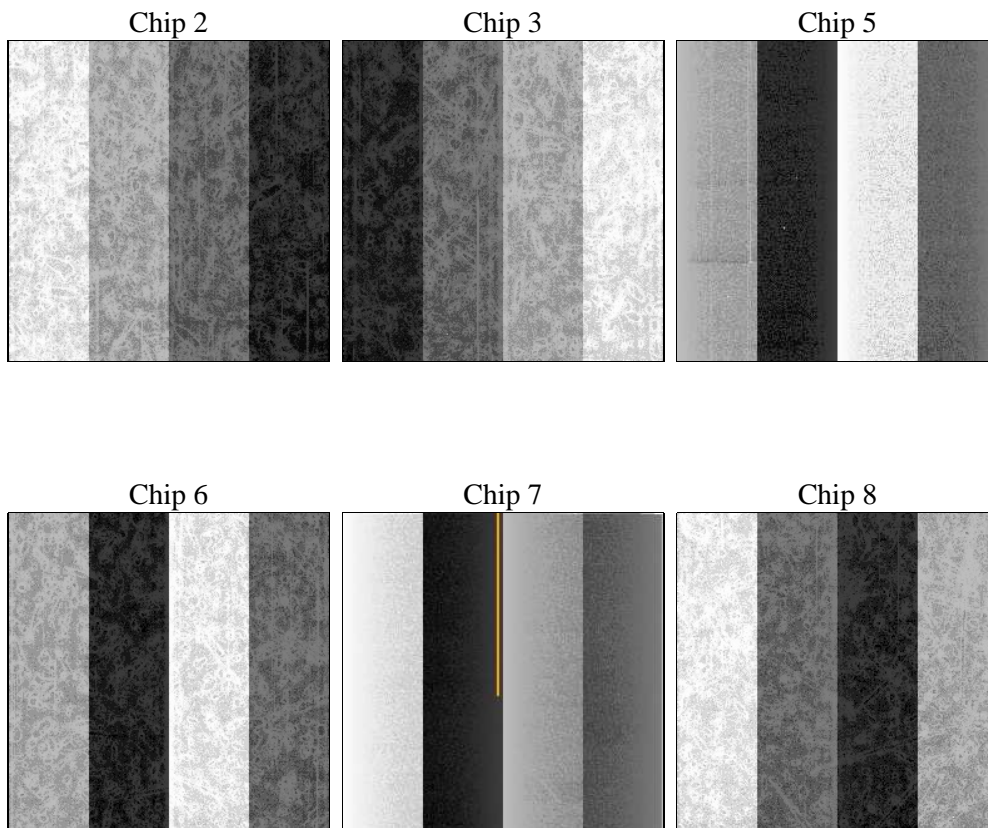
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27500.000000	[s] Scheduled observation exposure time
ascdsver	8.4.3	Processing system revision	ontime	27547.354645848	Sum of GTIs [s]
caldbver	4.4.7	 	ontime2	27547.395685852	Sum of GTIs [s]
date	2012-02-02T05:18:26	Date and time of file creation	ontime3	27543.99051553	Sum of GTIs [s]
revision	2	Processing version of data	ontime5	27547.313605845	Sum of GTIs [s]
			ontime6	27547.272565842	Sum of GTIs [s]
			ontime7	27547.354645848	Sum of GTIs [s]
			ontime8	27547.190485835	Sum of GTIs [s]
			l1events	1358626	Number of level 1 events

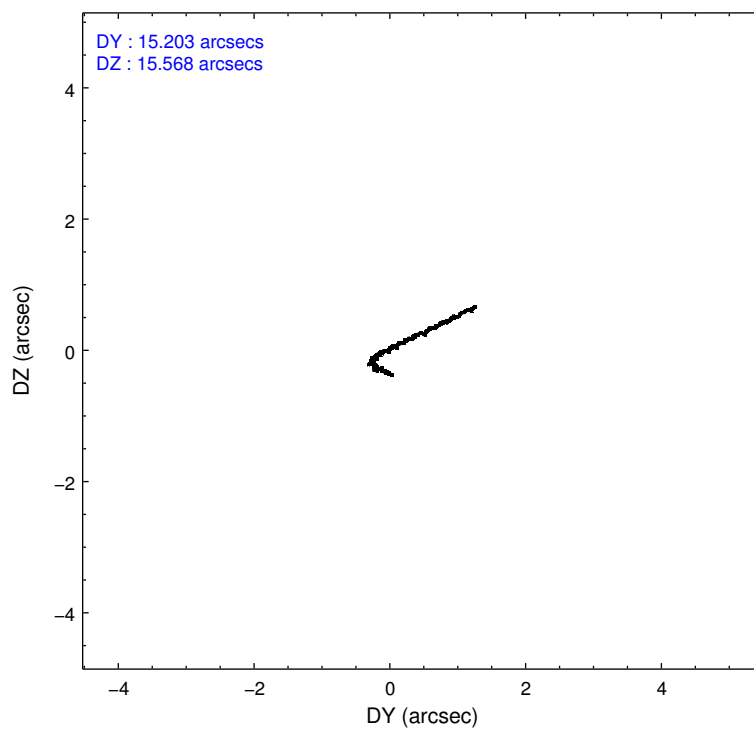
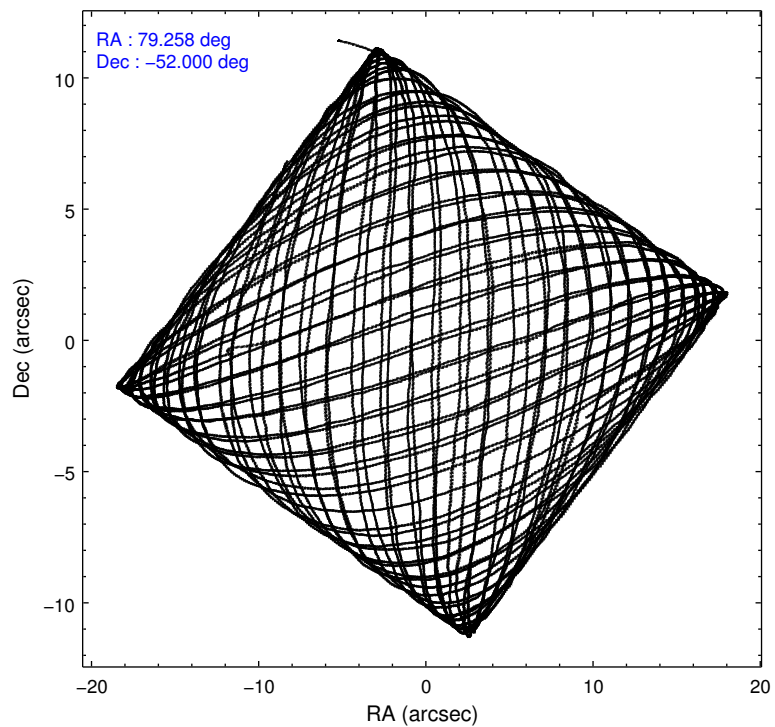
2.1.4 Events

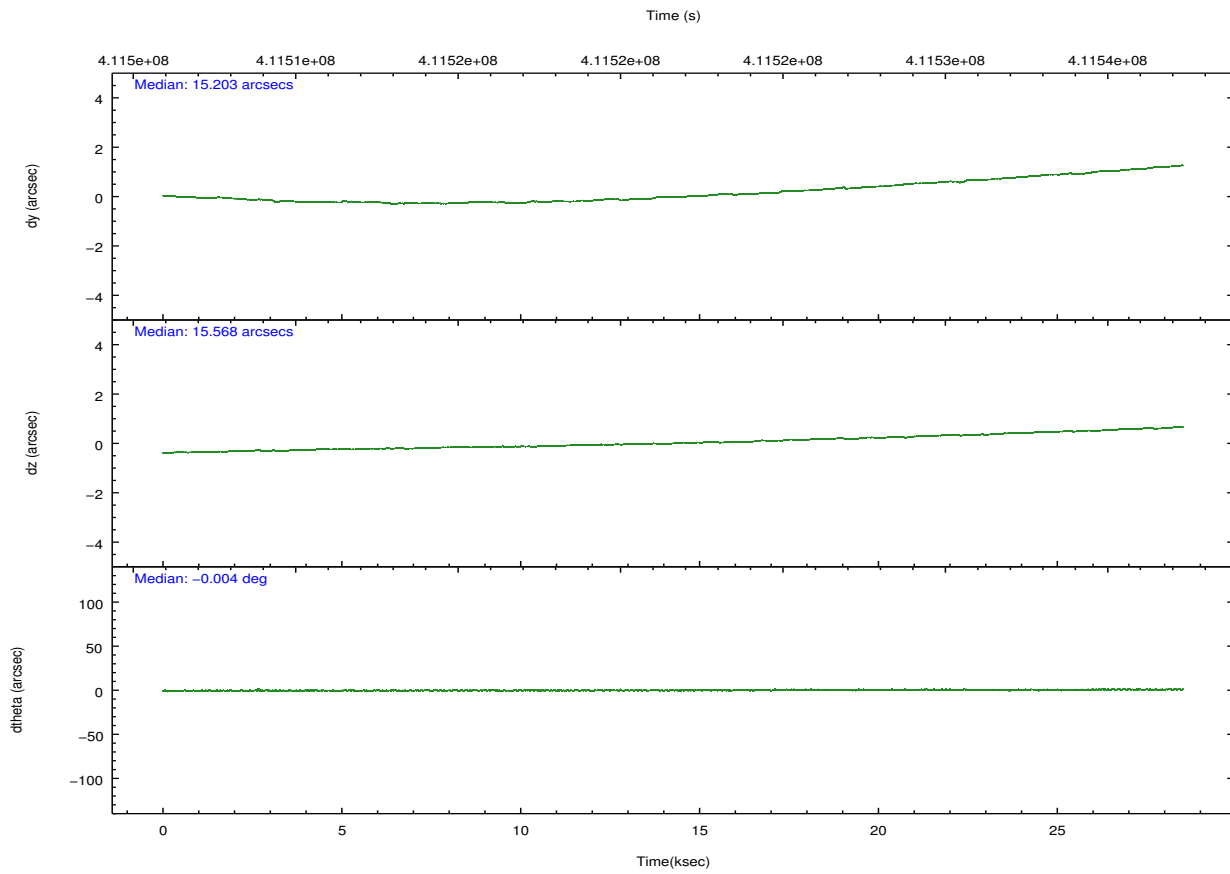
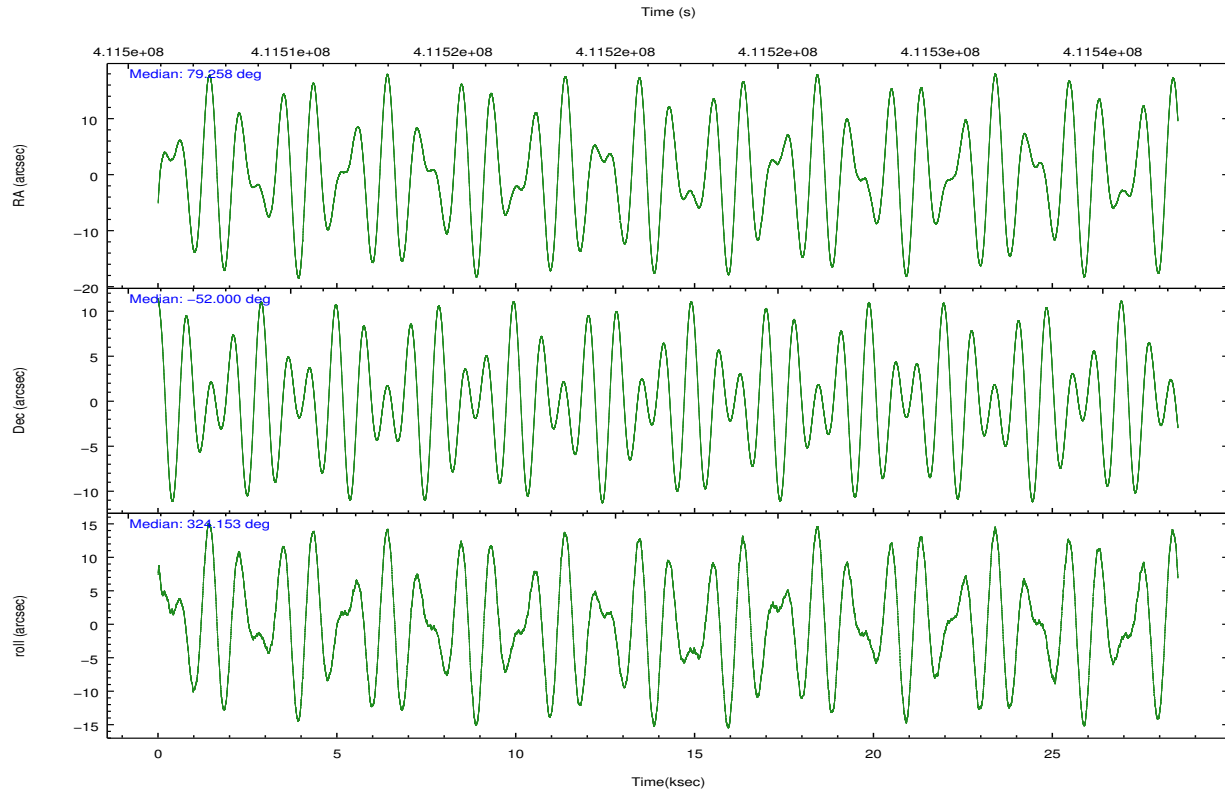
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	199154	185308	289459	197114	238061	249530	grade 0 events	7170	6859	9394	7790	9292	18810
rejected events	178721	165832	149526	175116	132681	184886		3%	3%	3%	3%	3%	7%
rejected %	89%	89%	51%	88%	55%	74%	grade 1 events	123	107	487	89	312	197
								0%	0%	0%	0%	0%	0%
							grade 2 events	4995	4305	42438	4973	21447	15221
								2%	2%	14%	2%	9%	6%
							grade 3 events	2157	2157	5427	2208	9080	6747
								1%	1%	1%	1%	3%	2%
							grade 4 events	2141	2197	5382	2196	8975	6327
								1%	1%	1%	1%	3%	2%
							grade 5 events	7904	8757	22057	8788	24620	12620
								3%	4%	7%	4%	10%	5%
							grade 6 events	3973	3961	77318	4834	56596	17543
								1%	2%	26%	2%	23%	7%
							grade 7 events	170691	156965	126956	166236	107739	172065
								85%	84%	43%	84%	45%	68%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	79.213619	79.25788122886254	CCD I2 on	O1	Y
[deg] Pointing Dec	-51.997933	-52.00035034773387	CCD I3 on	Y	Y
[deg] Pointing Roll	323.971332	324.162838974547	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	Y	Y
[s] Observation start time (MET)	411508372.184000	411506594.32619	CCD S5 on	N	N
Observation start date	2011-01-15T19:51:46	2011-01-15T19:23:14	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	411535872.184000	411536601.71524	On-chip summing requested	N	N
Observation end date	2011-01-16T03:30:06	2011-01-16T03:43:21	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



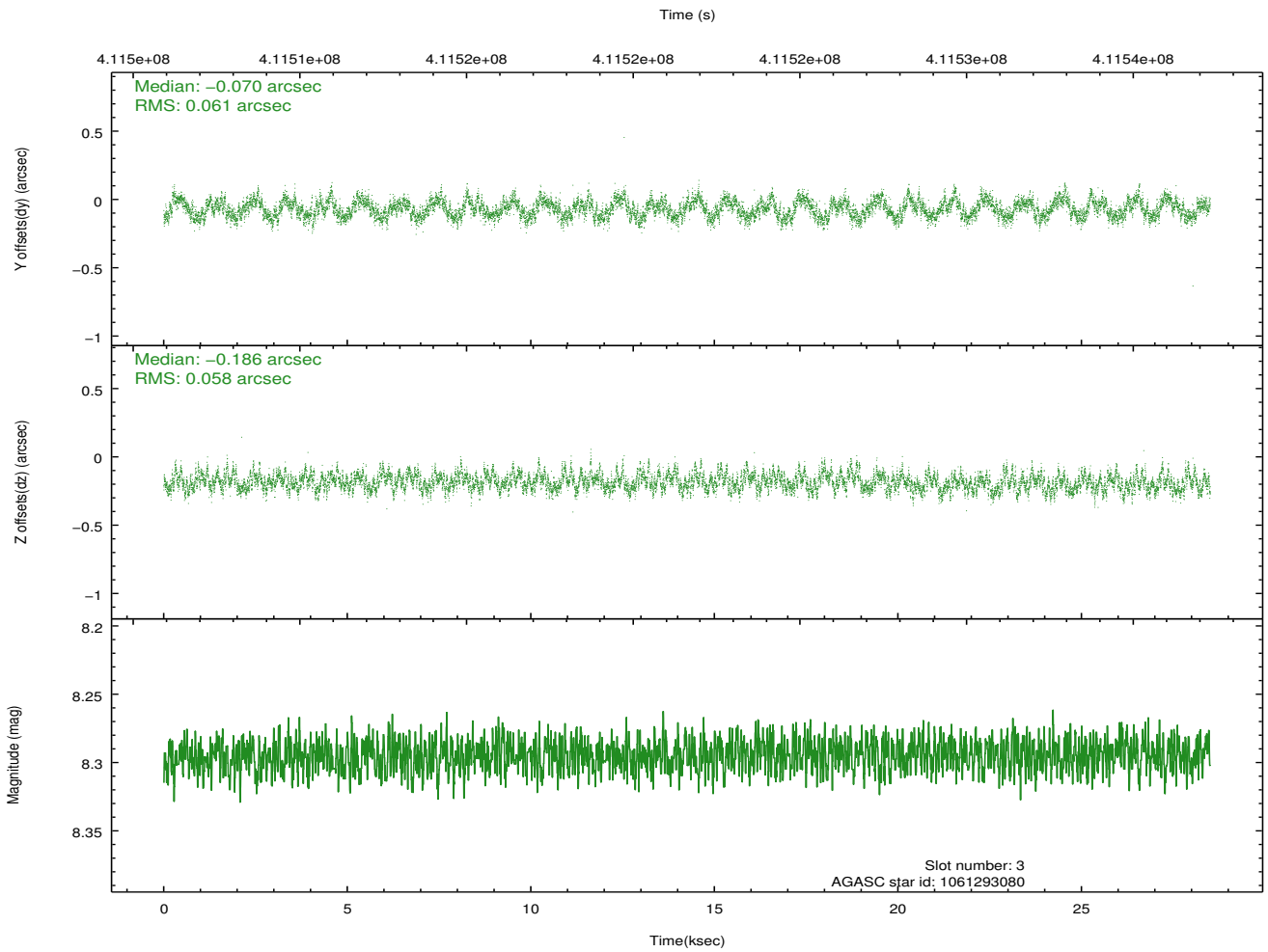
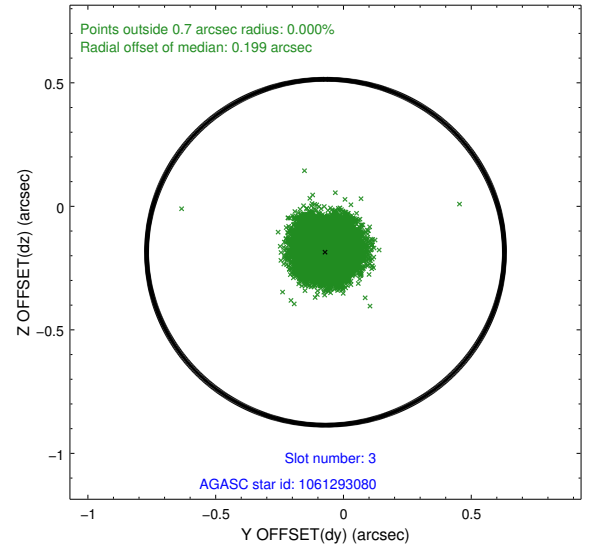
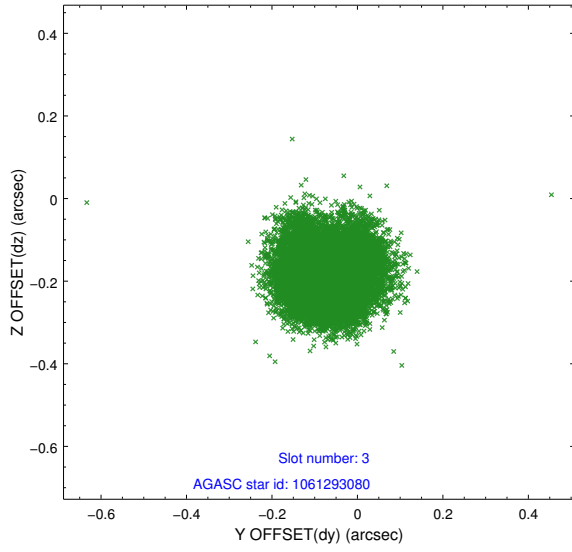


Slot Statistics

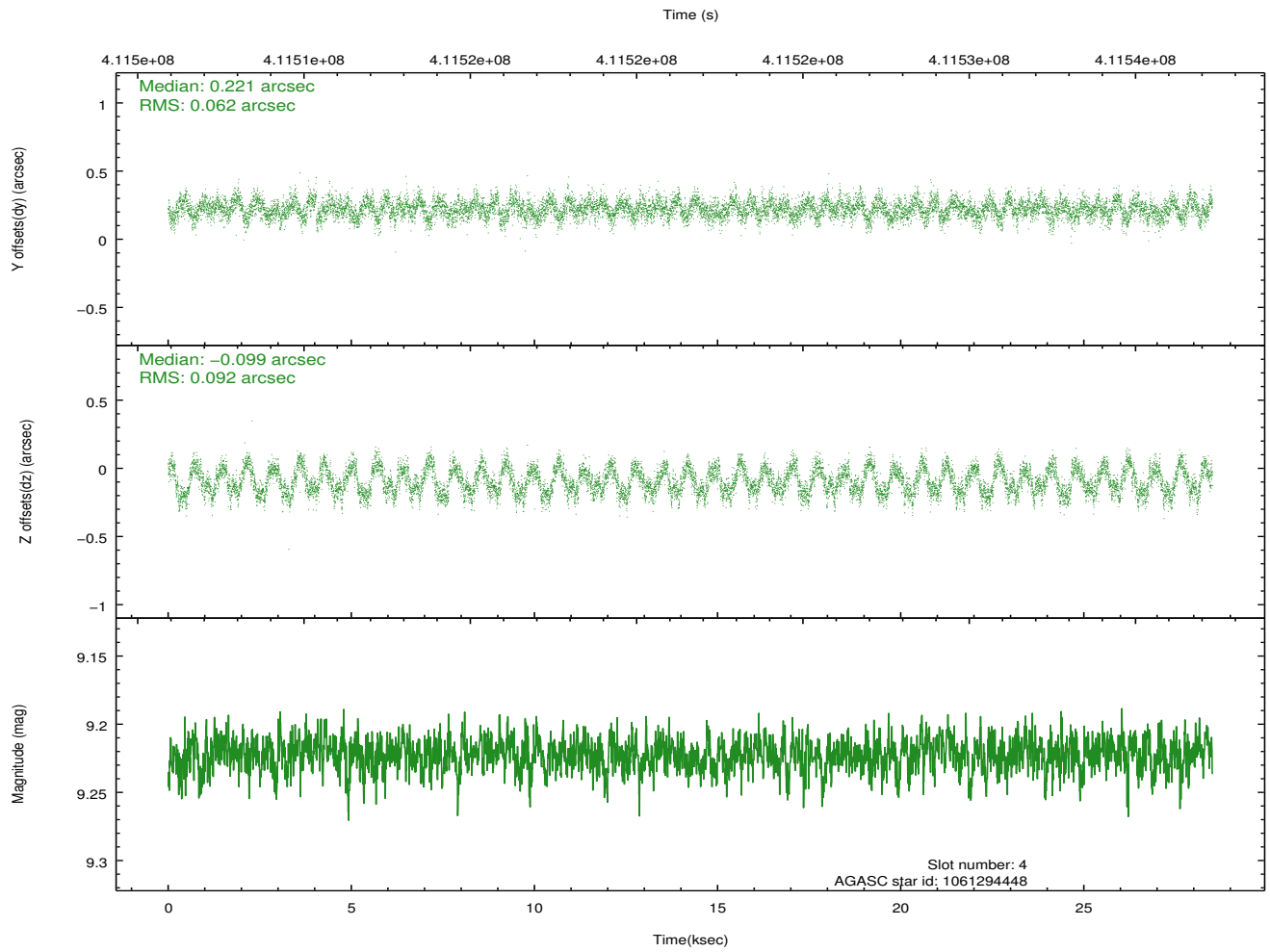
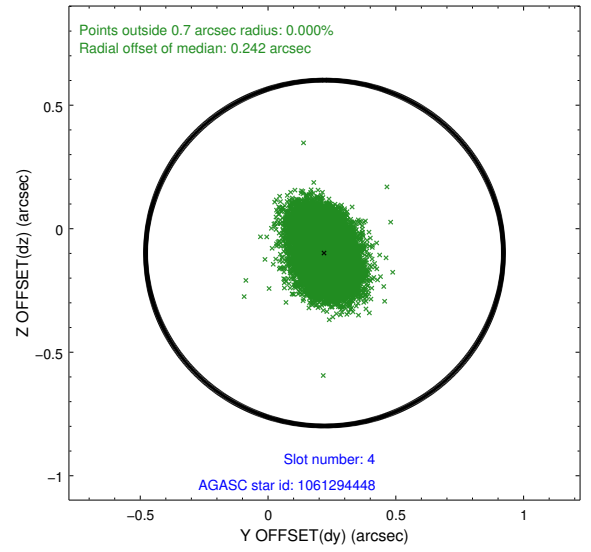
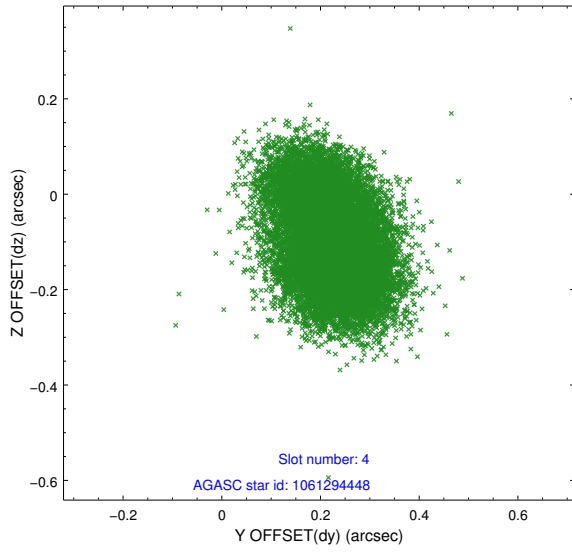
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	6.97	6952	-0.107	-0.030	0.010	0.018	0.000000	0.000000	-768.47	-1737.06
1	FID	ACIS-S-4	7.05	6953	0.219	0.060	0.016	0.038	0.000000	0.000000	2145.07	171.44
2	FID	ACIS-S-5	7.08	6952	-0.141	-0.021	0.014	0.028	0.000000	0.000000	-1821.25	165.10
3	GUIDE	1061293080	8.29	13897	-0.070	-0.186	0.091	0.141	79.617415	-51.426985	-473.88	2191.70
4	GUIDE	1061294448	9.22	13892	0.221	-0.099	0.120	0.186	79.302052	-51.902274	-43.16	394.17
5	GUIDE	1061296568	8.36	13901	-0.077	0.129	0.105	0.171	79.123429	-51.476040	-1268.59	1400.15
6	GUIDE	1061297288	8.42	13901	0.021	-0.028	0.078	0.126	79.226530	-52.452693	986.37	-1306.93
7	GUIDE	1115553880	7.14	13906	-0.106	0.189	0.082	0.134	78.817349	-52.665283	715.56	-2453.24

2.4 Star Slots

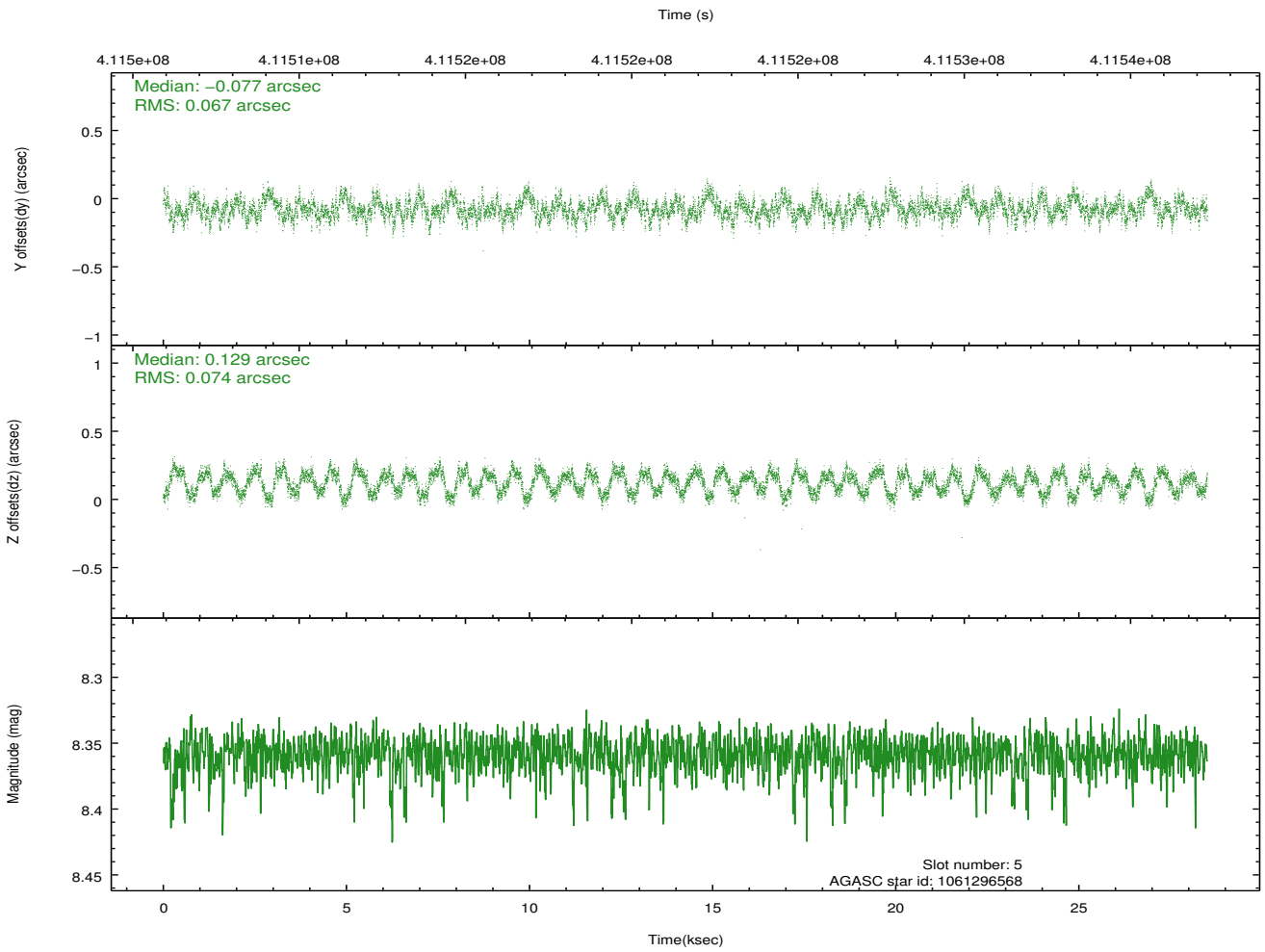
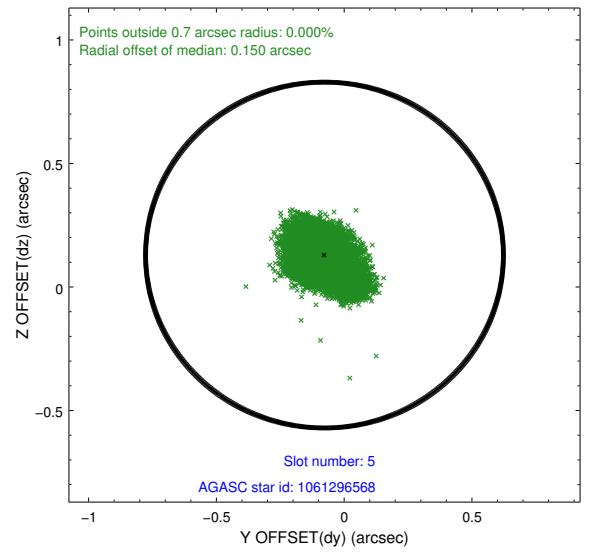
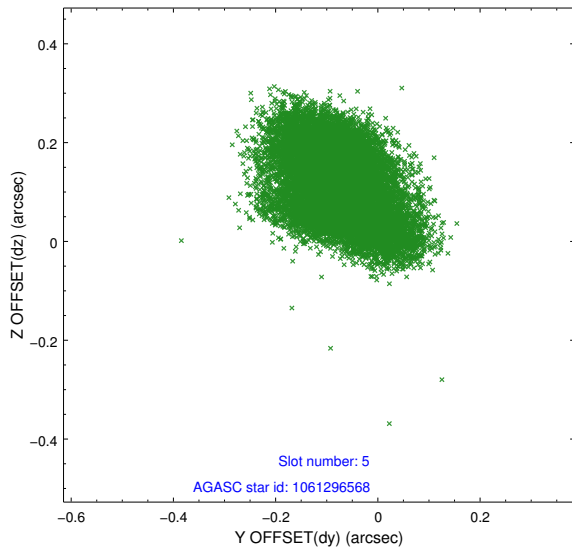
2.4.1 Slot 3



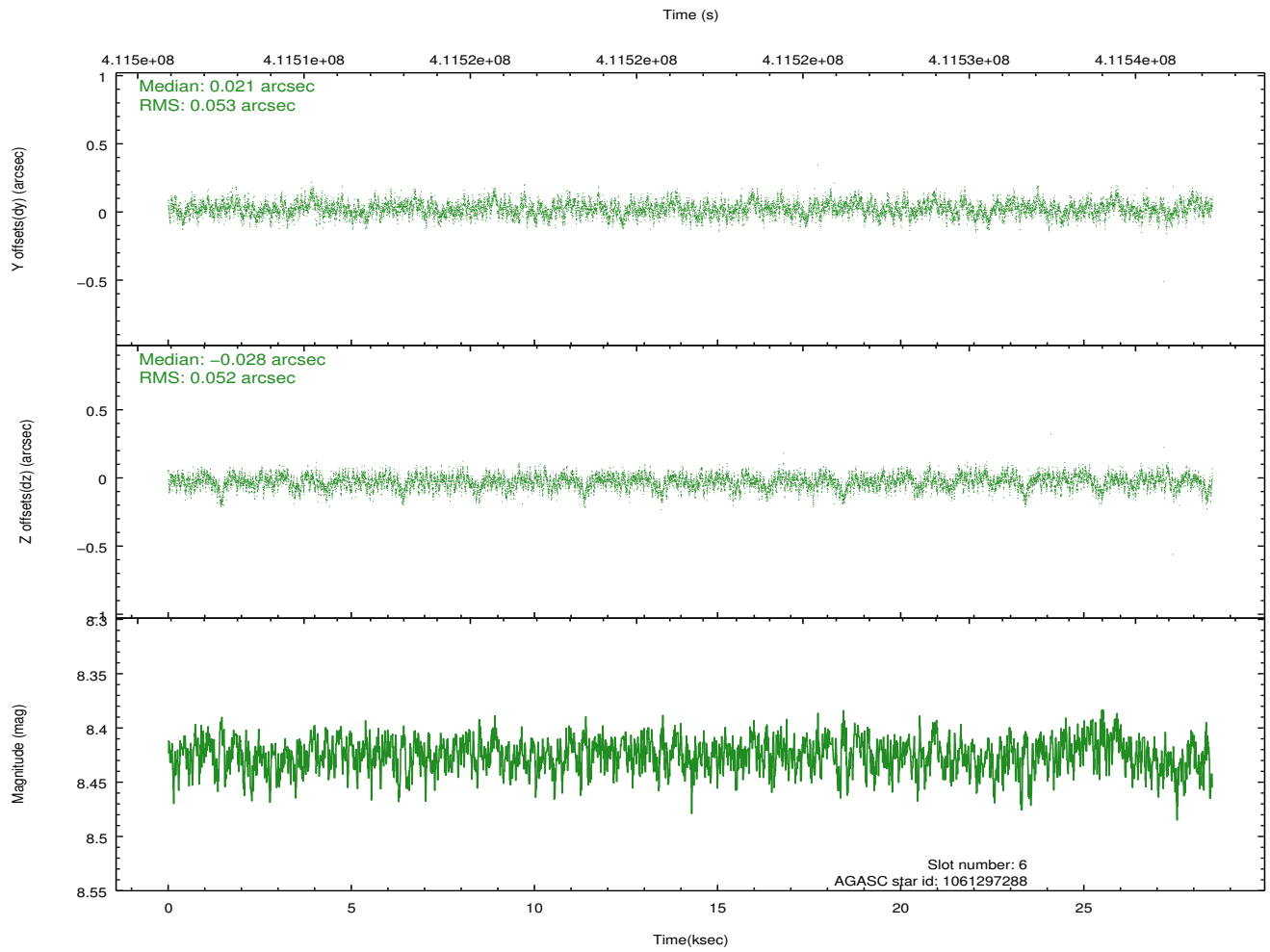
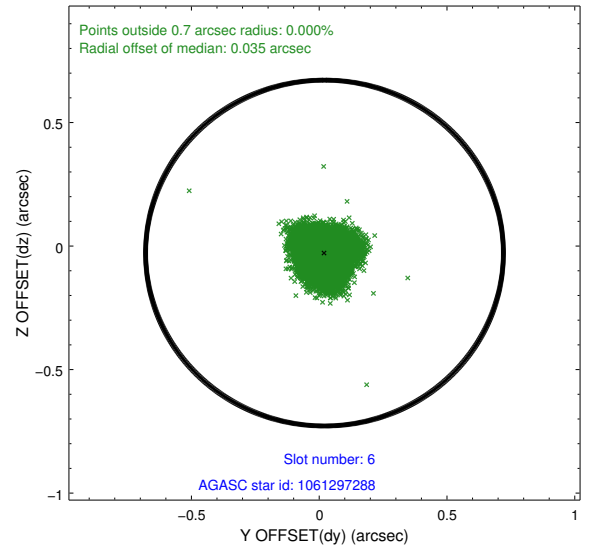
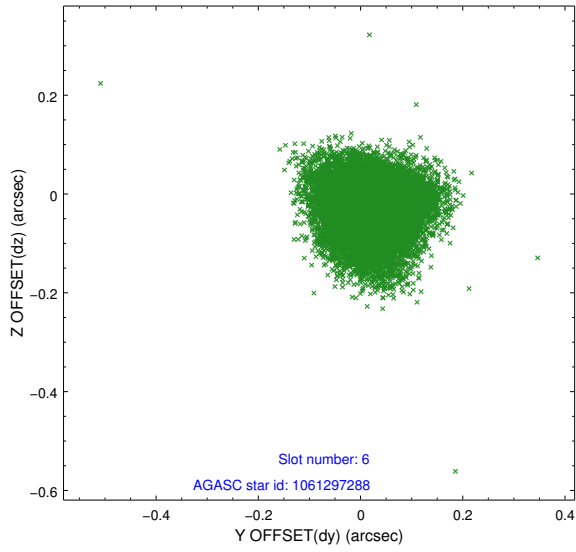
2.4.2 Slot 4



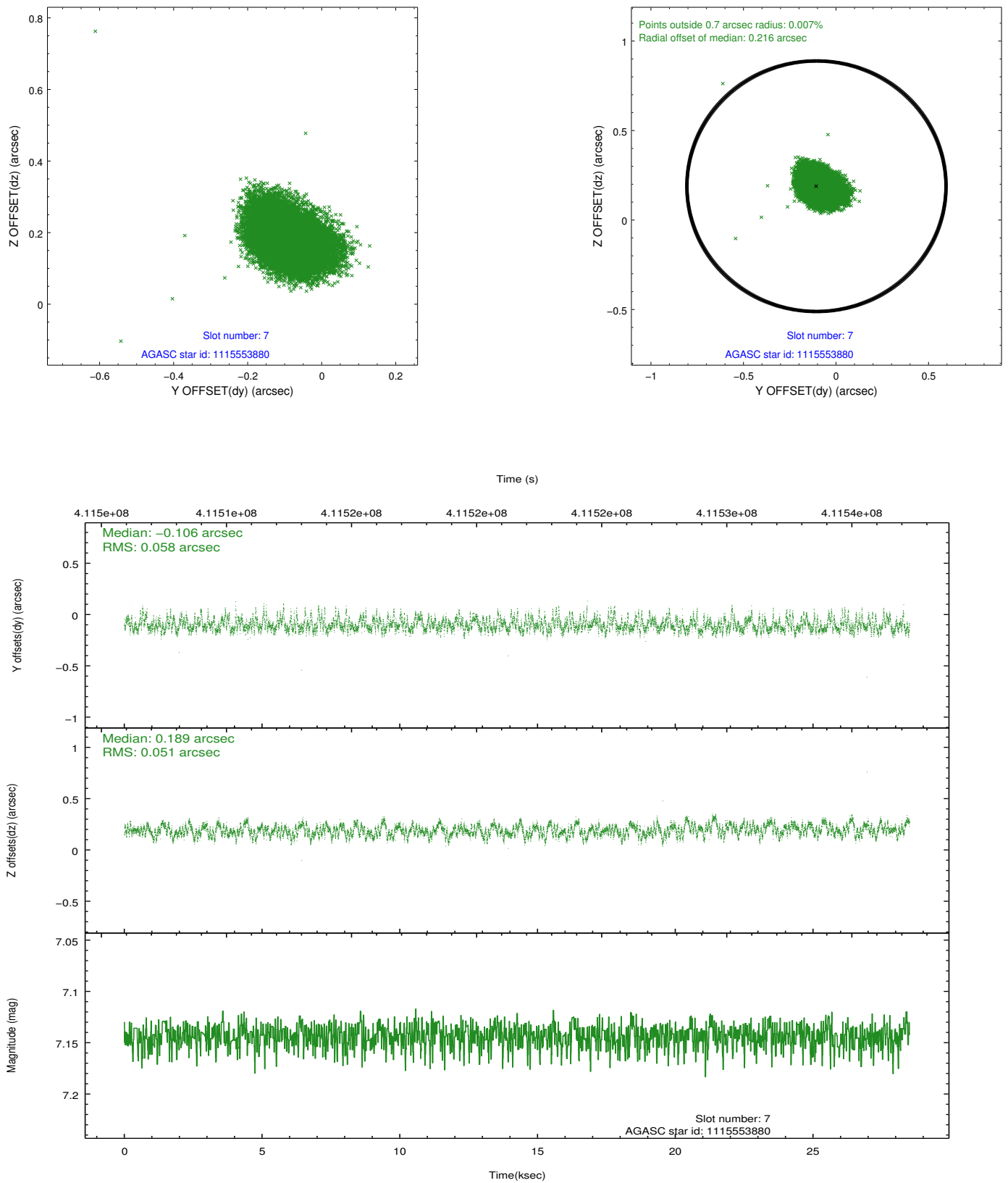
2.4.3 Slot 5



2.4.4 Slot 6

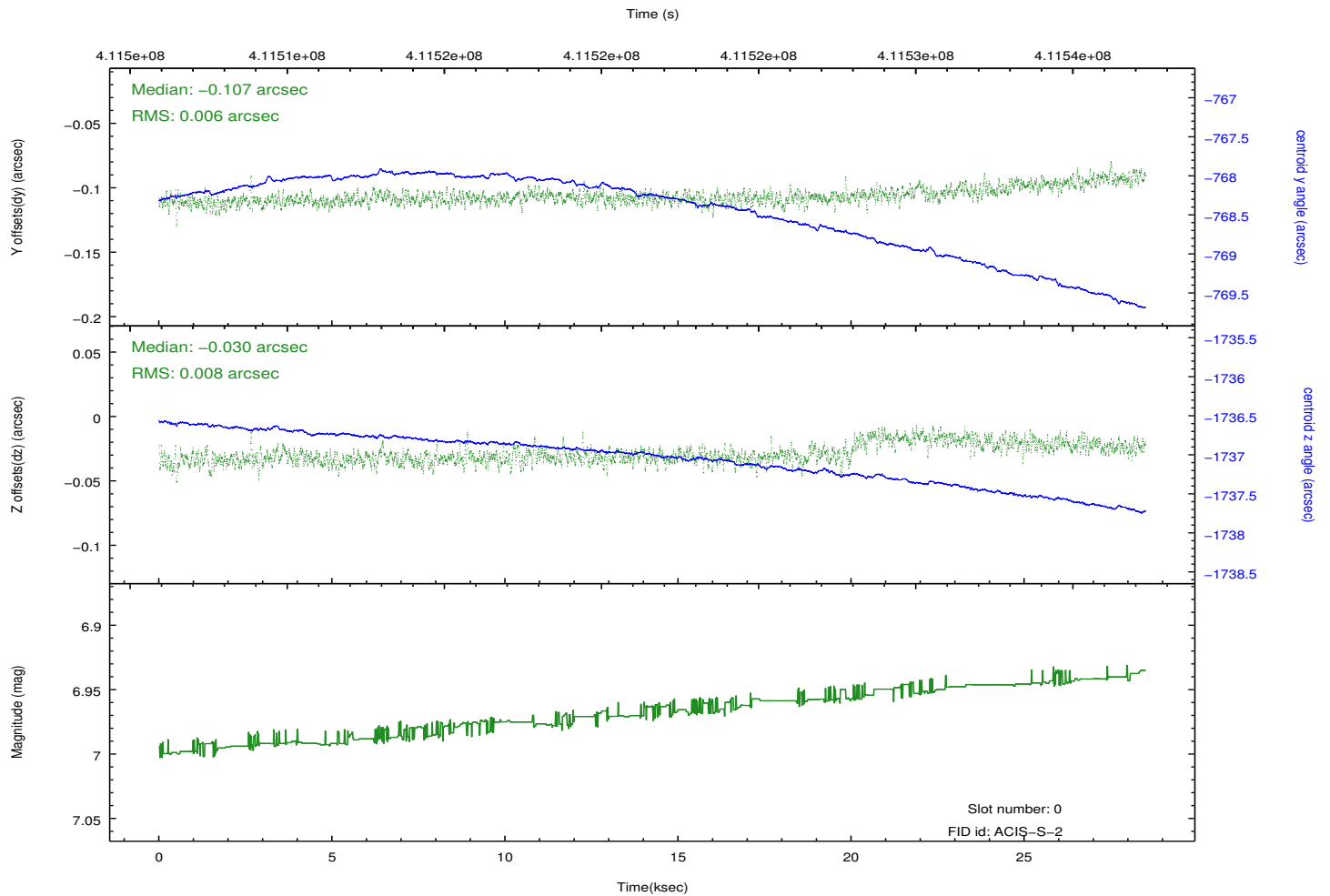
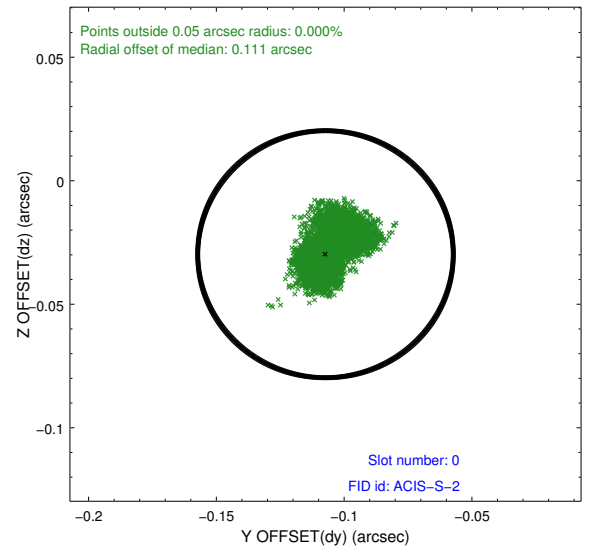
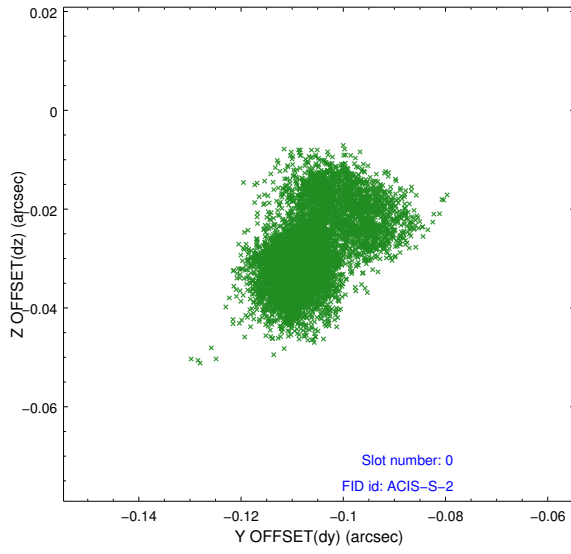


2.4.5 Slot 7

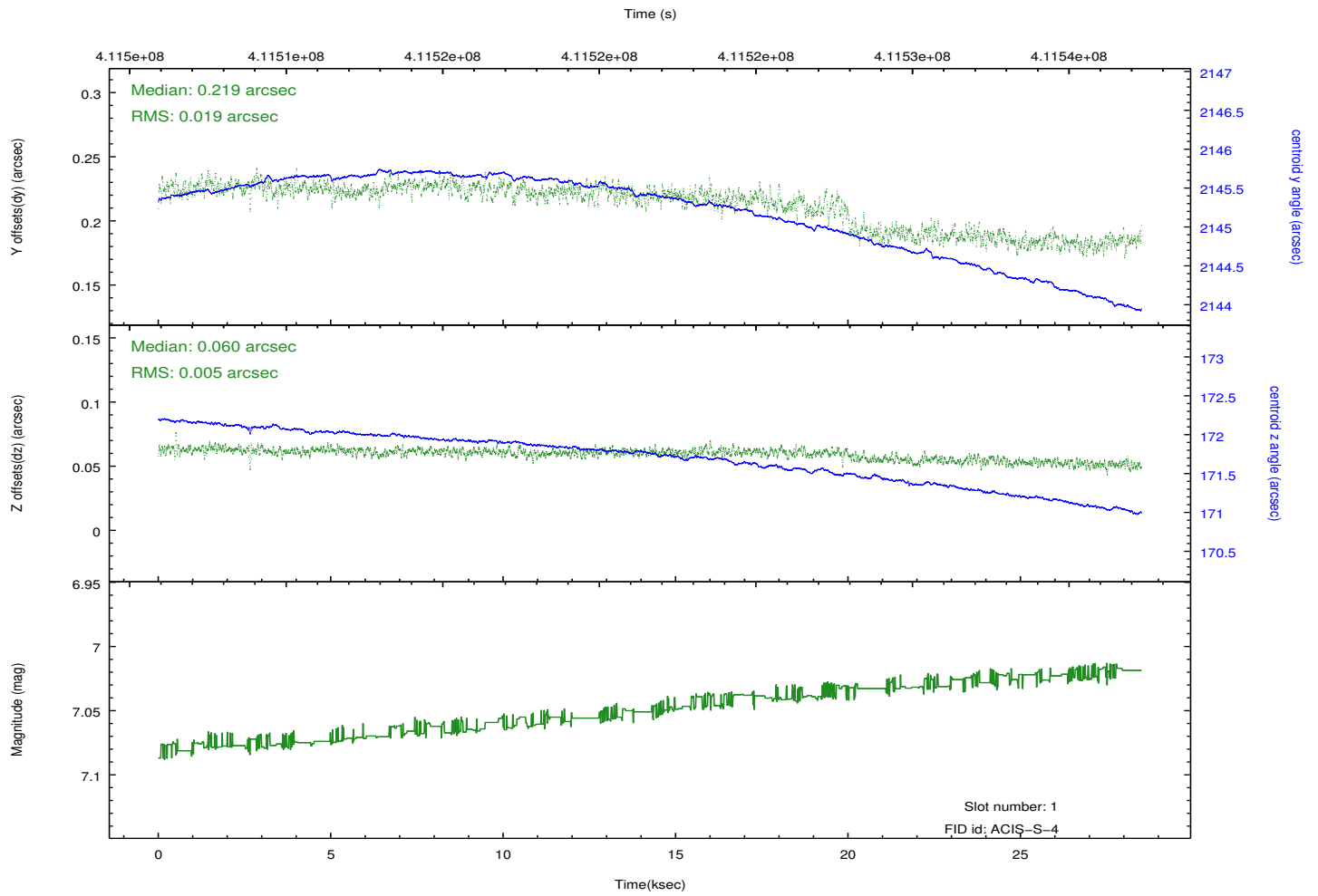
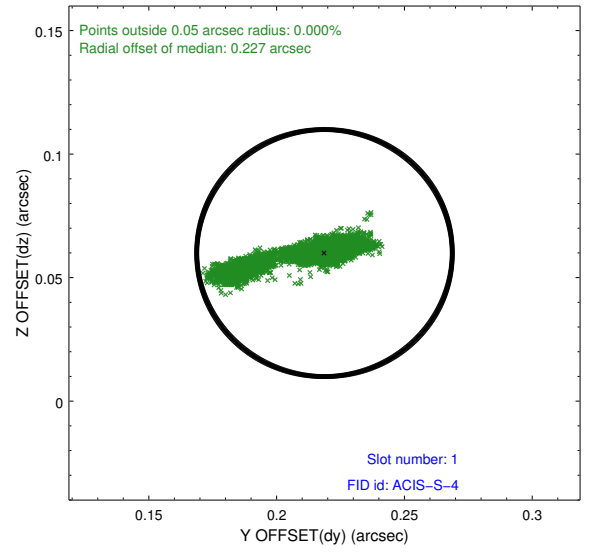
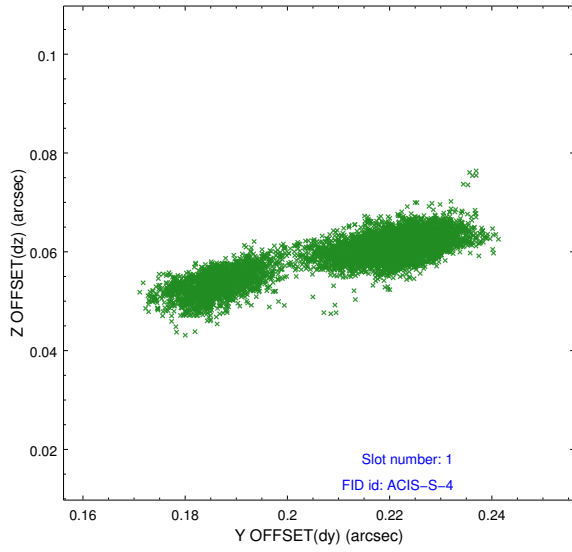


2.5 FID Slots

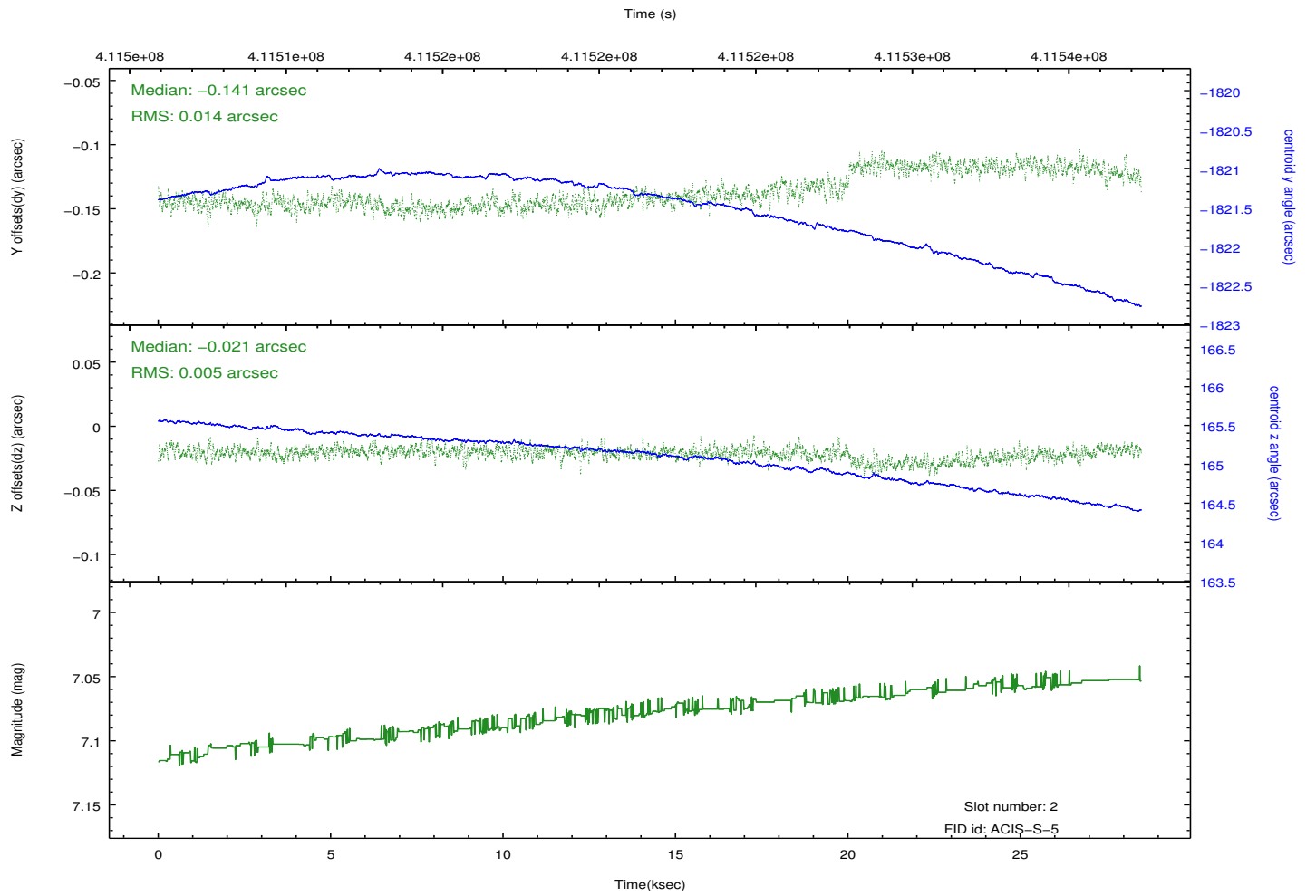
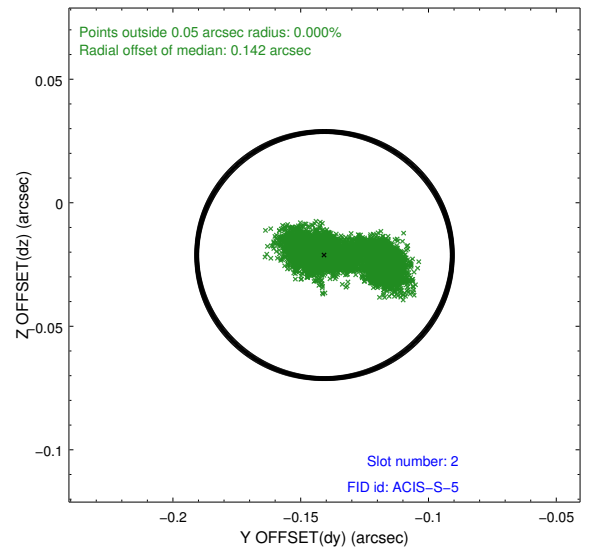
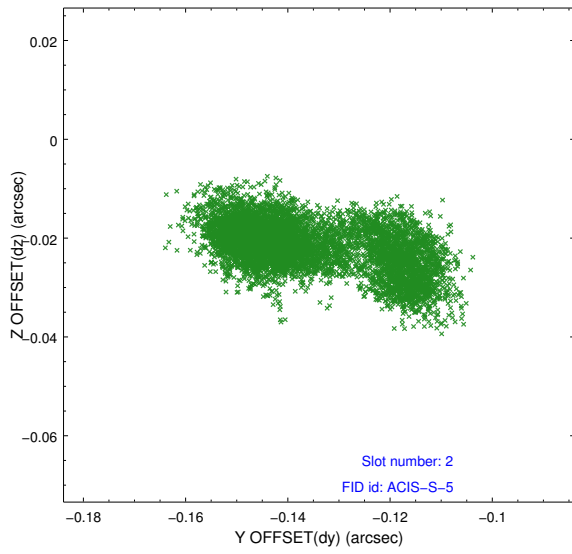
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.02.02
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.547354640961

A.2 Comments

The temperature is as high as about -114 deg C at the beginning of the observation and decreases to the nominal -119.7 deg C temperature at the end. The beginning temperature is slightly higher than the highest temperature that has been observed before for observations where the focal-plane temperature was 'set' to -120 deg C. The pulse-height amplitudes (i.e. PHA, ENERGY, and PI) are temperature dependent because the CTI is temperature dependent. However, the standard temperature-dependent CTI adjustment was performed. A comparison of the PI distribution of the data taken at temperatures between about -114 and -116 deg C with the PI distribution of the data taken at a temperature of about -119.7 deg C indicates that the two distributions are nearly identical. The user should be able to use the spectral information with the existing calibration products with little degradation in the reliability of the results. If the user is particularly concerned, then they can use the spectral data to the portion that was obtained at temperatures within about 1 deg C of -119.7. The relatively high temperature at the beginning of the observation has no effect on the event times and should have a marginal affect on the spatial locations of the events. In summary, I think that the data is suitable for use for scientific analyses.===

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The data for this observation have been processed using the 'EDSER' sub-pixel event-repositioning algorithm of Li et al. (2004, ApJ, 610, 1204). Small-scale features should become sharper for sources near the aim point. The improvement will be less noticeable for off-axis sources where the size of the point-spread function is comparable to or larger than the size of an ACIS pixel. To take full advantage of the improvement, images should be binned on spatial scales smaller than the size of an ACIS pixel. Note that, at present, the point-spread function has not been calibrated for data to which the EDSER algorithm has been applied. If dither was disabled for the observation, then the algorithm can introduce artificial aliasing effects on spatial scales smaller than a pixel. If you would prefer to use no sub-pixel adjustment or to apply a coordinate randomization, then use `acis_process_events` to reprocess the data with the parameter `pix_adj=NONE` or `RANDOMIZE`, respectively.