

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 21569 - L2 Version 2
Chandra X-Ray Center

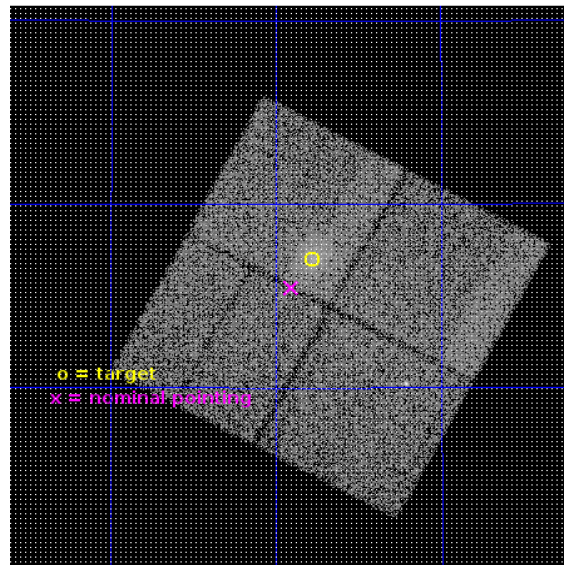
L2 Processing Date : Sep 13 2019

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1 Front

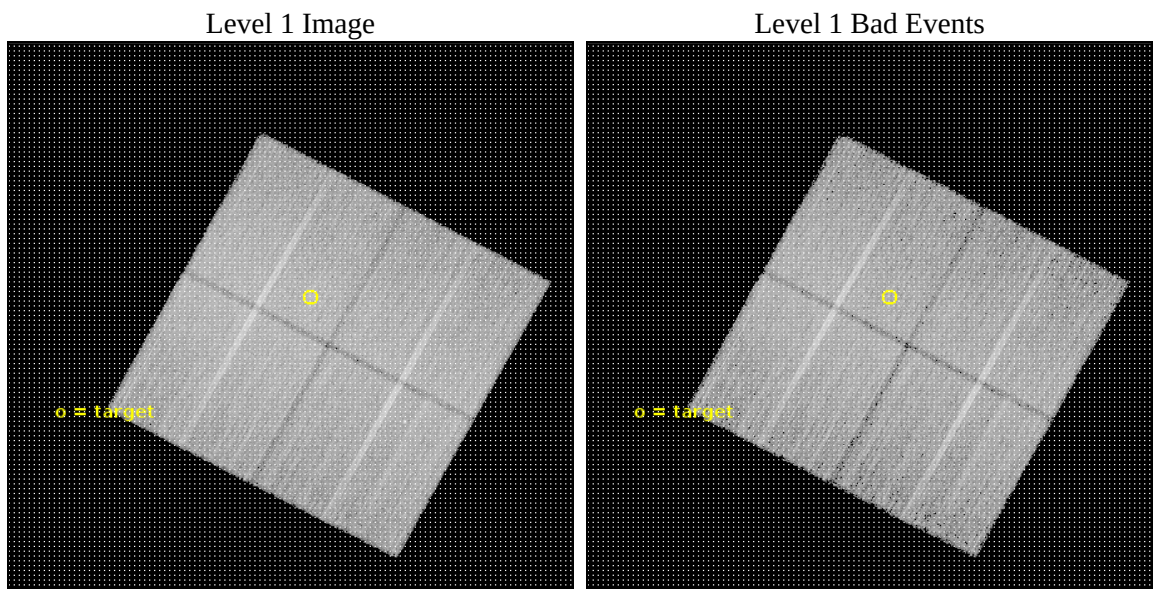
seq_num	801847	Sequence number
obs_id	21569	Observation id
title	Characterizing the most X-ray luminous galaxy clusters at z=0.5-1	
observer	Harald Ebeling	Principal investigator
object	eMACSJ1414.7+5446	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	213.694583	Observer's specified target RA [deg]
dec_targ	54.783333	Observer's specified target Dec [deg]
ra_nom	213.72681104727	Nominal RA [deg]
dec_nom	54.7575556461	Nominal Dec [deg]
roll_nom	298.1823502429	Nominal Roll [deg]
revision	2	Processing version of data
ontime	33073.859294176	Sum of GTIs [s]
livetime	32641.724973877	Livetime [s]
ontime0	33067.577363849	Sum of GTIs [s]
ontime1	33077.000254512	Sum of GTIs [s]
ontime2	33077.000254512	Sum of GTIs [s]
ontime3	33073.859294176	Sum of GTIs [s]
l2events	101235	Number of level 2 events



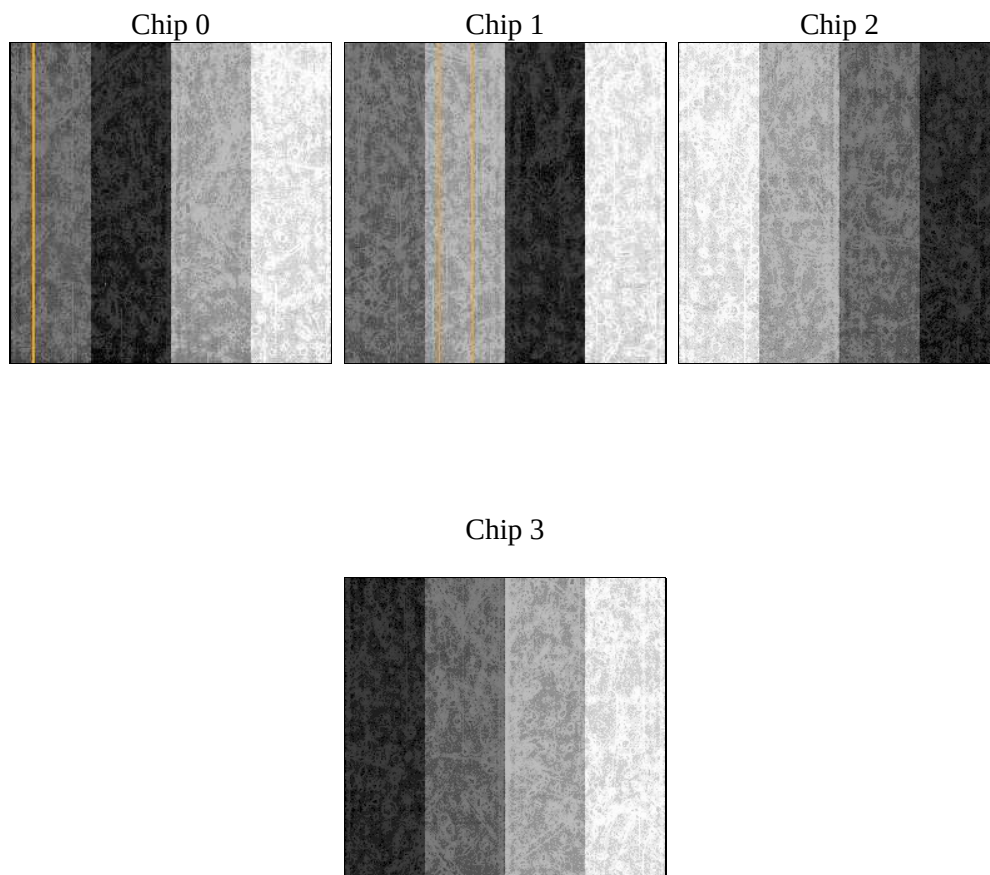
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	33000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	33073.859294176	Sum of GTIs [s]
caldsver	4.8.4.1	 	ontime0	33067.577363849	Sum of GTIs [s]
date	2019-09-13T19:43:43	Date and time of file creation	ontime1	33077.000254512	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	33077.000254512	Sum of GTIs [s]
			ontime3	33073.859294176	Sum of GTIs [s]
			l1events	971472	Number of level 1 events

2.1.4 Events

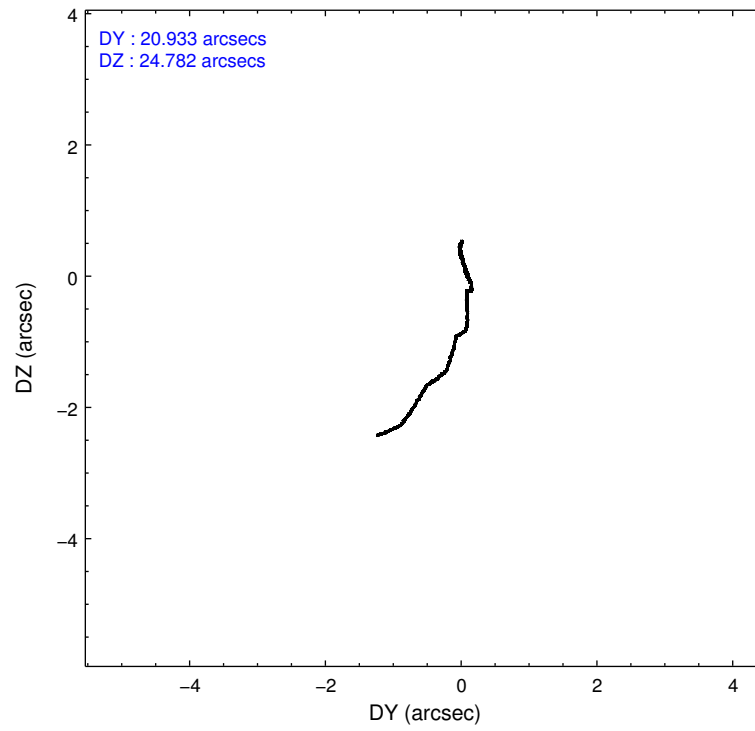
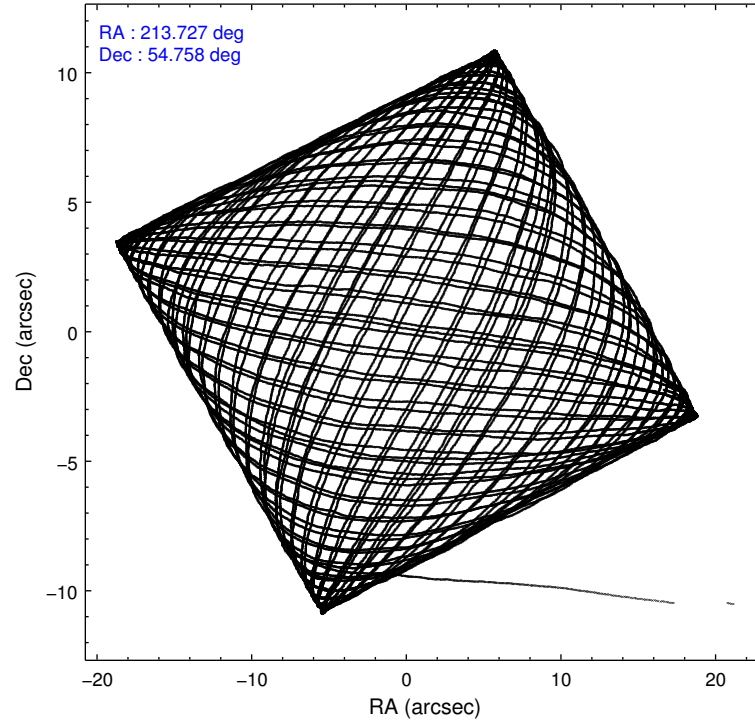
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	227885	237819	257016	248752
rejected events	198871	205830	228127	217294
rejected %	87%	86%	88%	87%

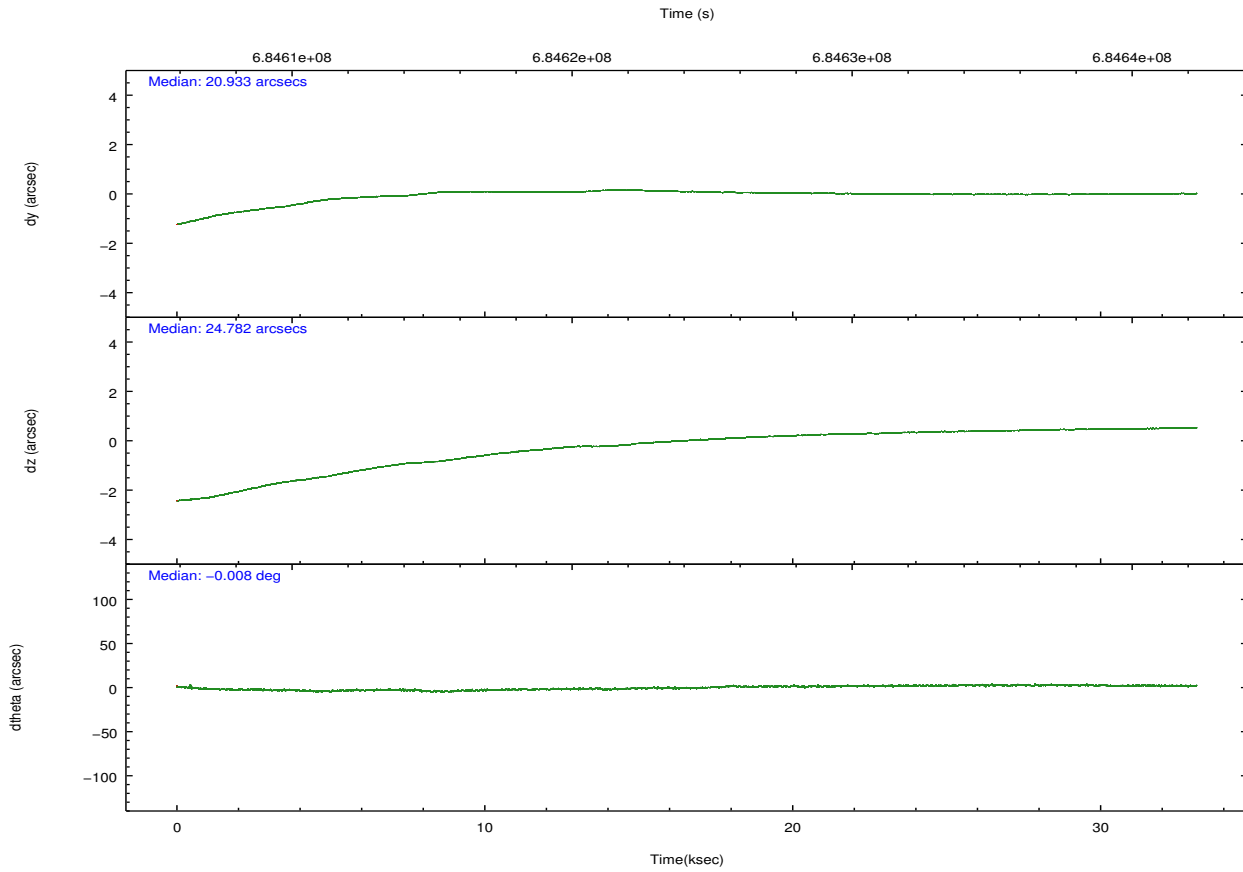
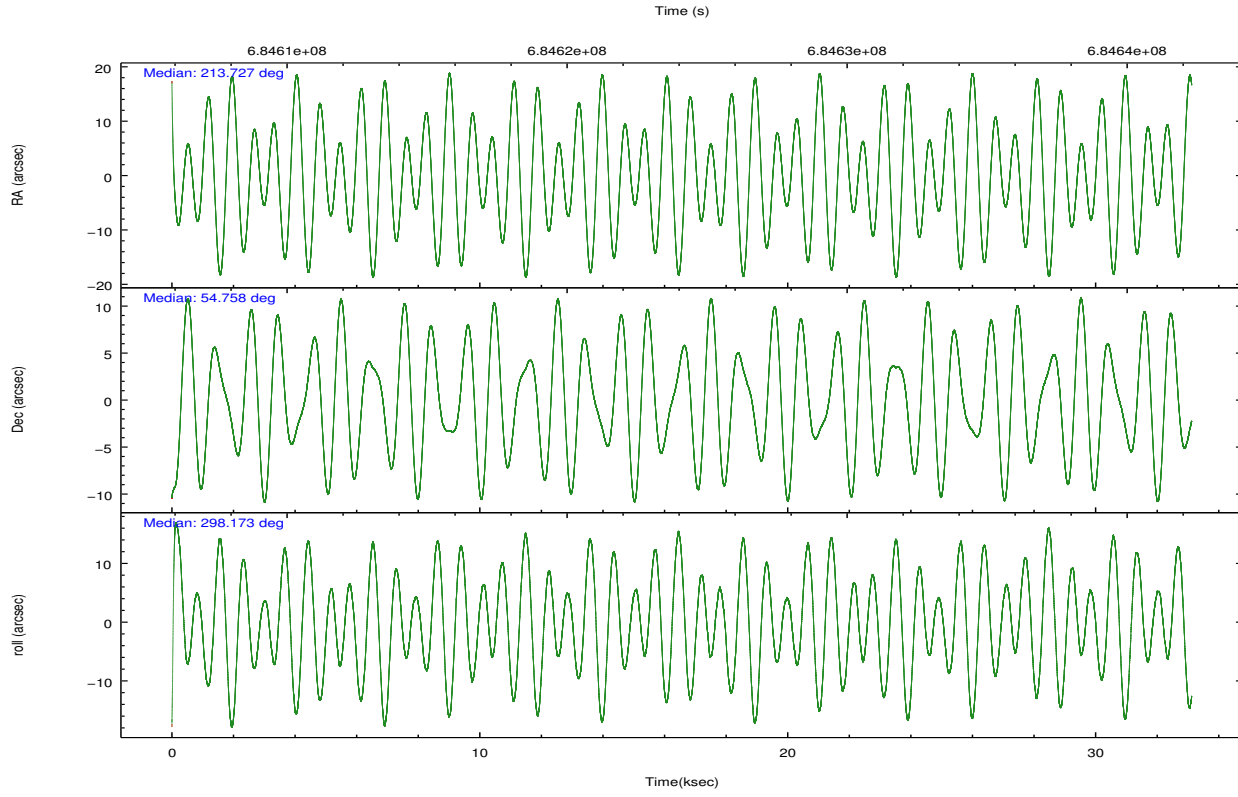
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	10096	10609	10267	13251
	4%	4%	3%	5%
grade 1 events	164	126	162	167
	0%	0%	0%	0%
grade 2 events	7389	8201	7487	6421
	3%	3%	2%	2%
grade 3 events	2863	2994	2660	3001
	1%	1%	1%	1%
grade 4 events	2645	3040	2779	2987
	1%	1%	1%	1%
grade 5 events	10844	11419	10069	12323
	4%	4%	3%	4%
grade 6 events	6027	7150	5703	5801
	2%	3%	2%	2%
grade 7 events	187857	194280	217889	204801
	82%	81%	84%	82%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	213.686070	213.7268110472735	Subarray requested	NONE	NONE
[deg] Pointing Dec	54.772014	54.7575556461005	Alternating exposures requested	N	N
[deg] Pointing Roll	298.006949	298.1823502429016	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	684607661.184000	684605932.97549			
Observation start date	2019-09-11T16:46:32	2019-09-11T16:18:52			
[s] Observation end time (MET)	684640661.184000	684641768.00265			
Observation end date	2019-09-12T01:56:32	2019-09-12T02:16:08			
Read mode	TIMED	TIMED			

2.3 Aspect



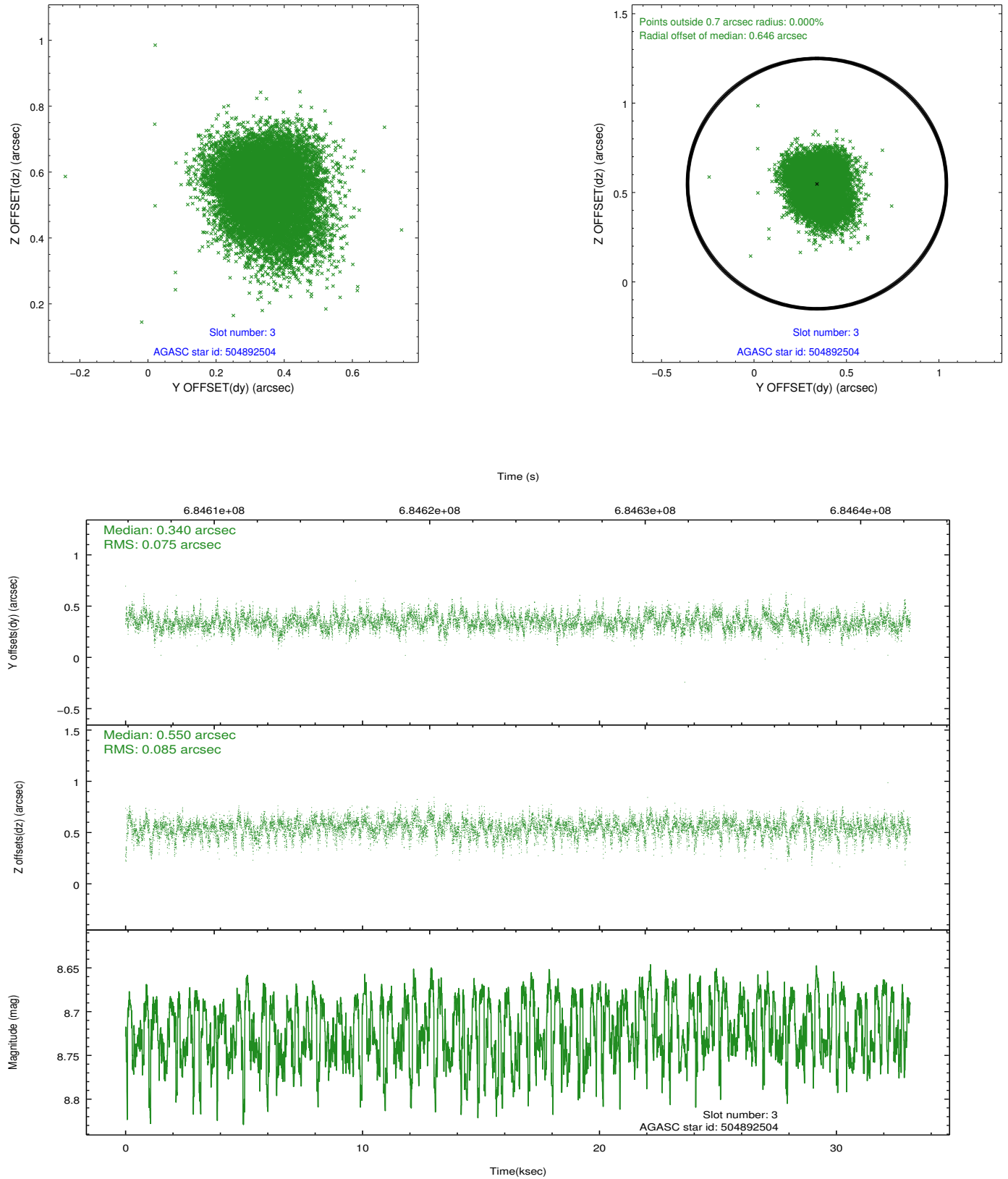


Slot Statistics

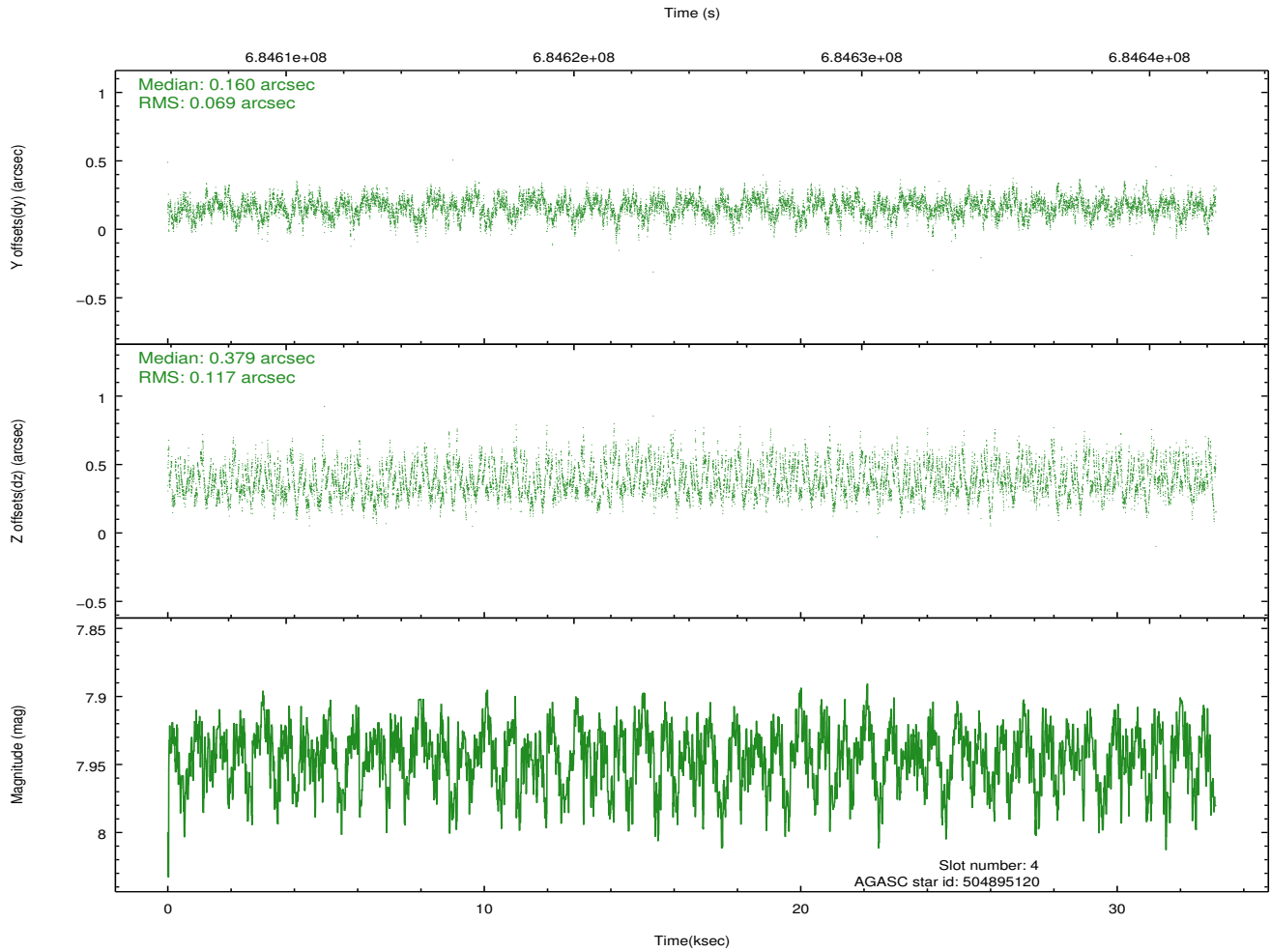
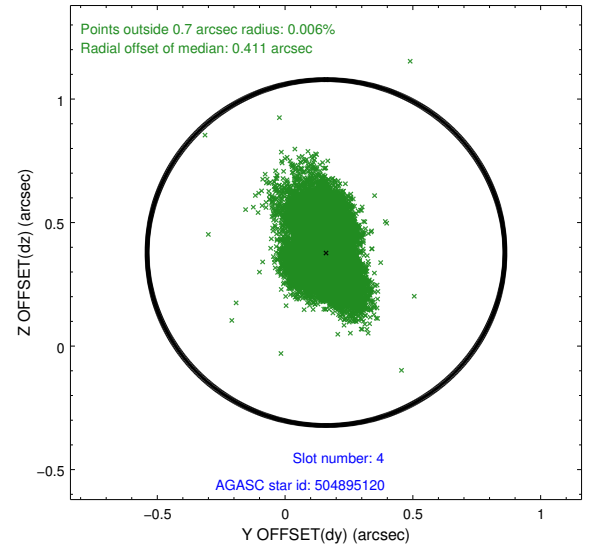
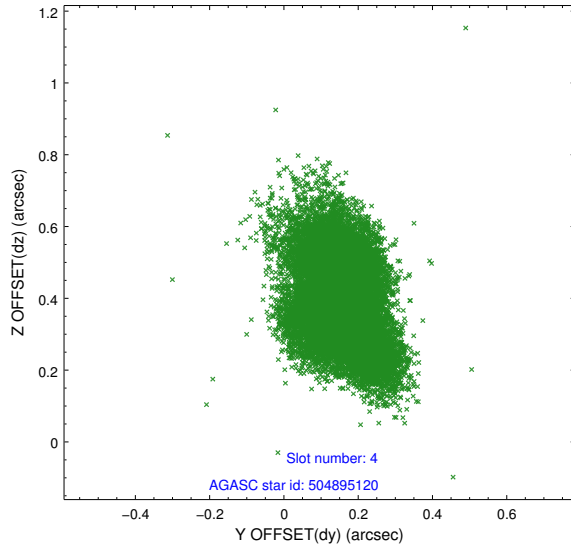
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.09	8079	1.000	0.128	-0.141	0.031	0.058	0.000000	0.000000	918.60	-933
1	FID		ACIS-I-5	7.07	8079	1.000	-0.625	-0.004	0.019	0.043	0.000000	0.000000	-1830.44	963
2	FID		ACIS-I-6	7.09	8079	1.000	0.403	0.218	0.020	0.067	0.000000	0.000000	384.08	1608
3	GUIDE	used	504892504	8.72	16140	1.000	0.340	0.550	0.117	0.202	213.055460	54.883192	-970.98	-962
4	GUIDE	used	504895120	7.94	16144	1.000	0.160	0.379	0.143	0.237	212.821804	54.409138	293.18	-2209
5	GUIDE	used	505808256	7.77	16149	1.000	0.076	0.299	0.117	0.207	213.522404	54.637471	267.70	-527
6	GUIDE	used	505809480	7.07	16154	1.000	-0.256	-0.601	0.090	0.147	214.265638	54.542866	1291.55	679
7	GUIDE	used	505809688	6.87	16154	1.000	-0.321	-0.607	0.112	0.188	214.732961	54.863763	712.08	2076

2.4 Star Slots

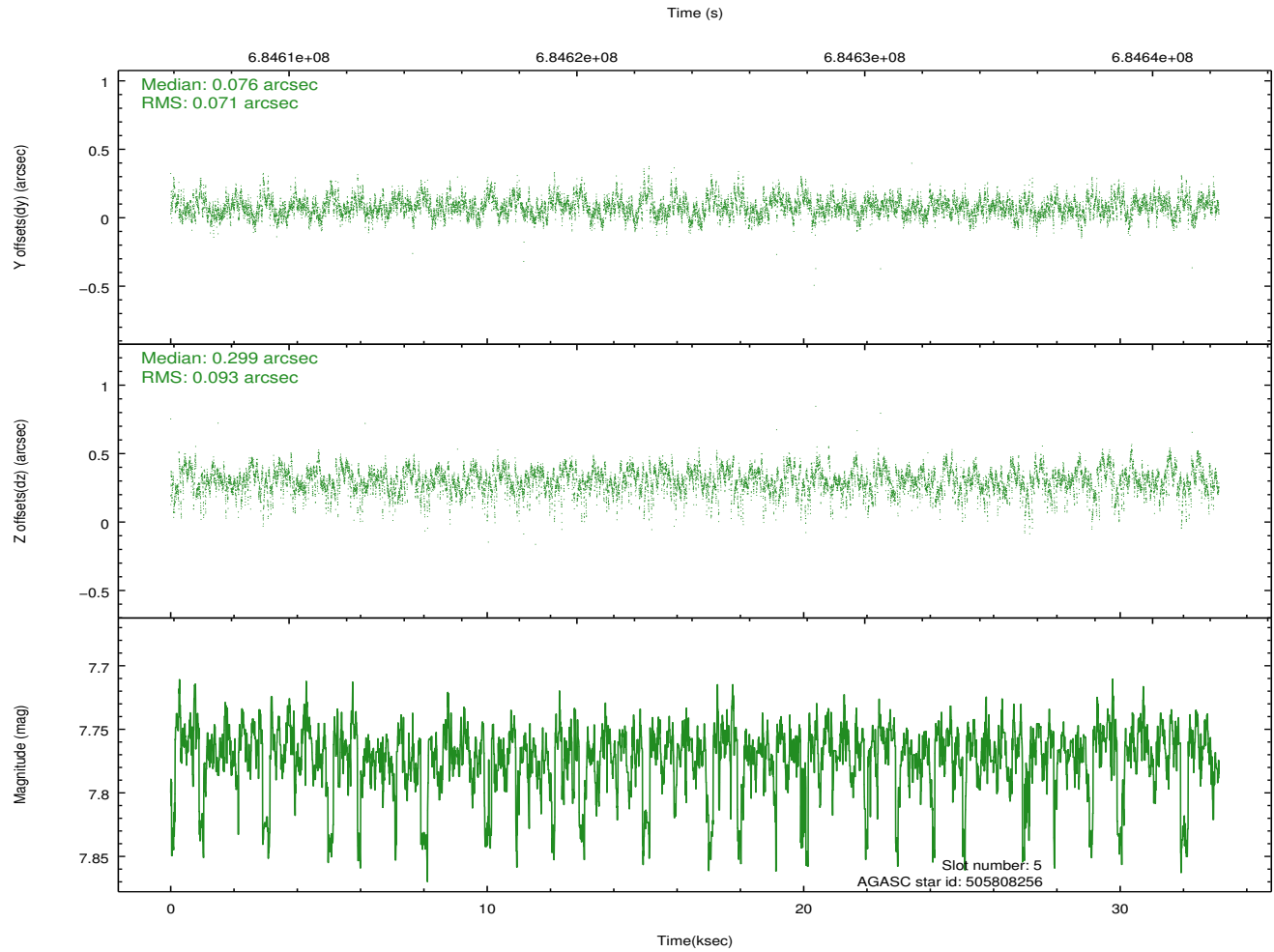
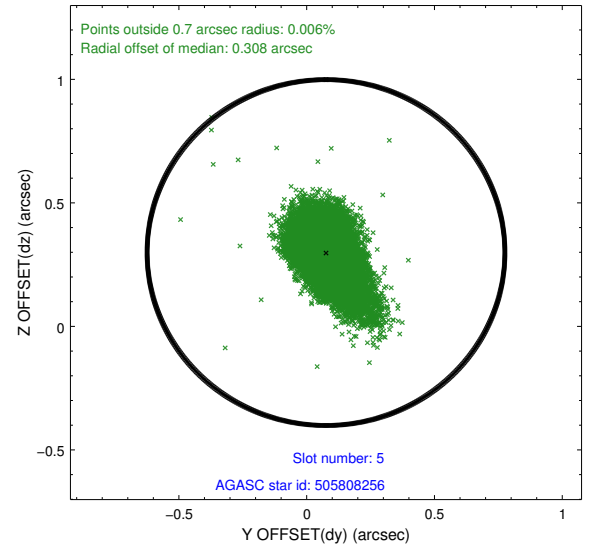
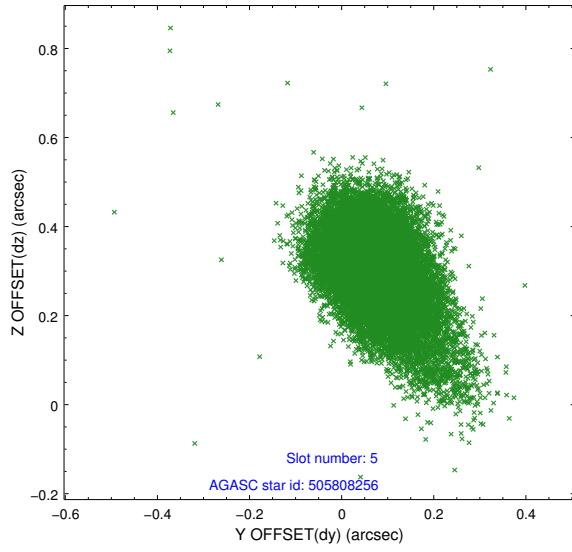
2.4.1 Slot 3



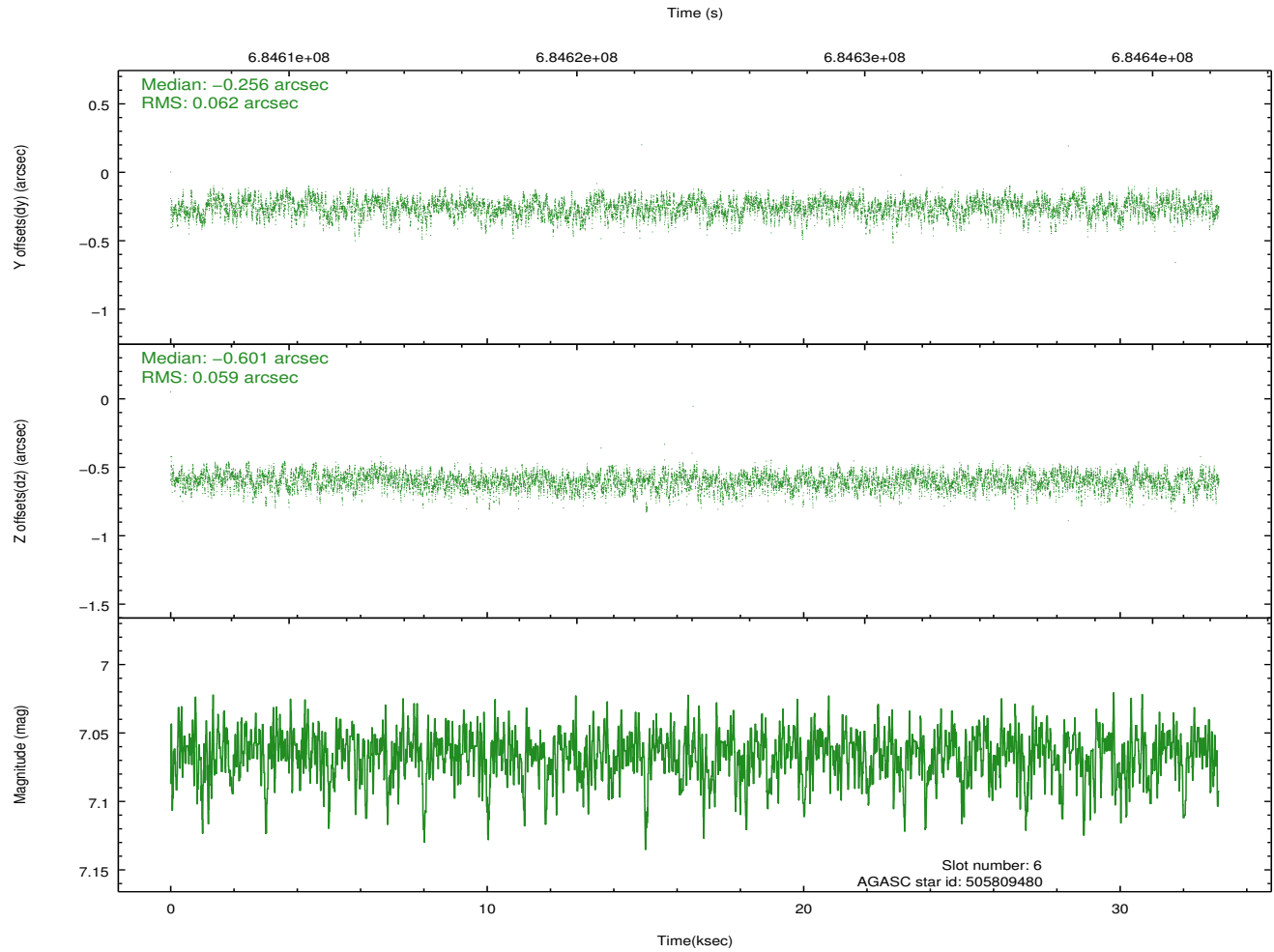
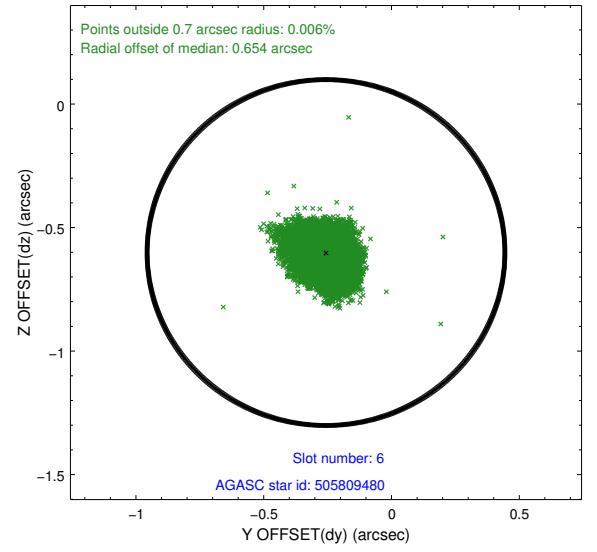
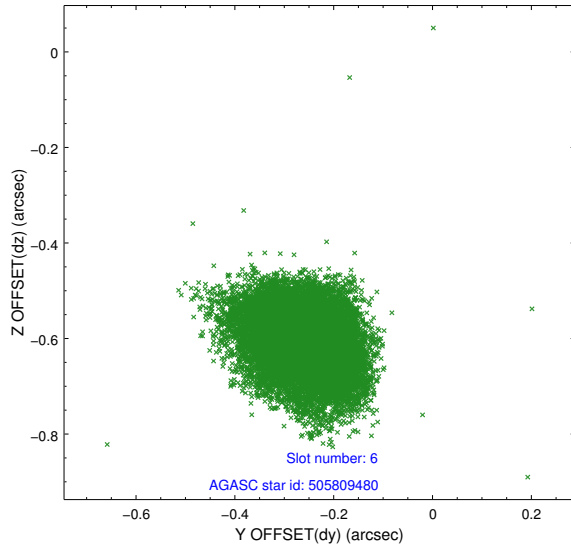
2.4.2 Slot 4



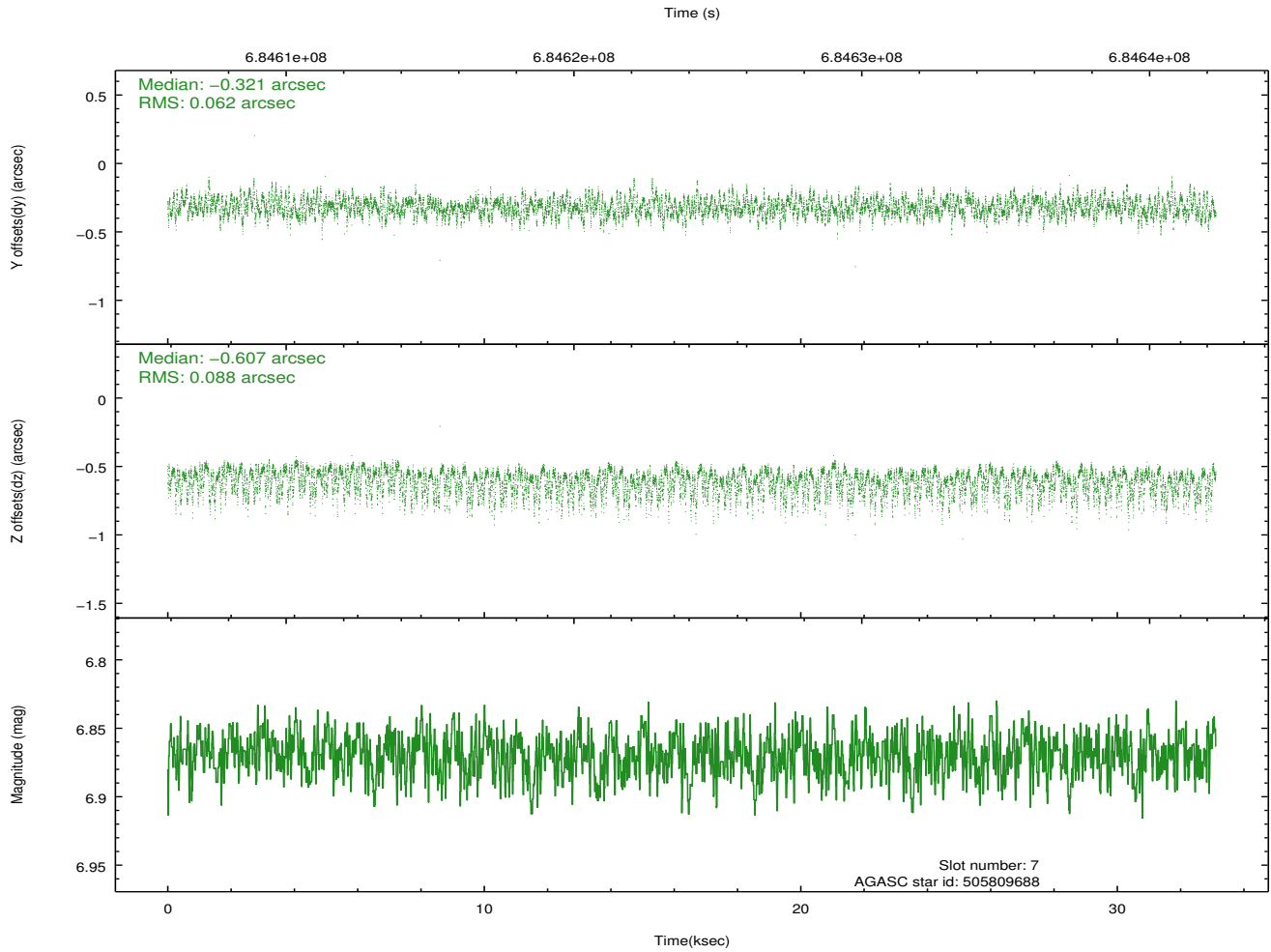
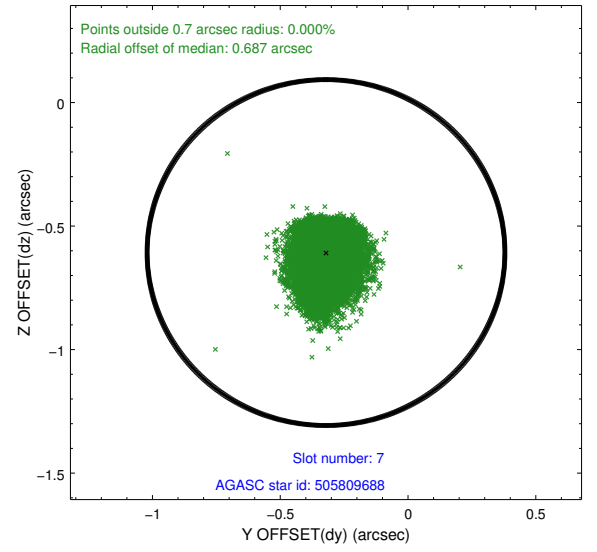
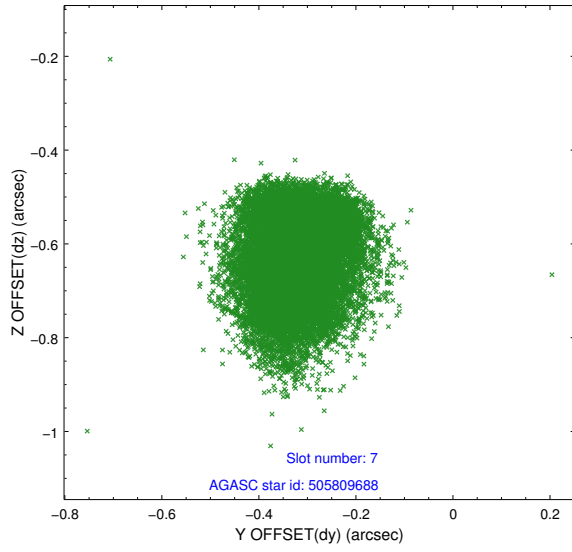
2.4.3 Slot 5



2.4.4 Slot 6

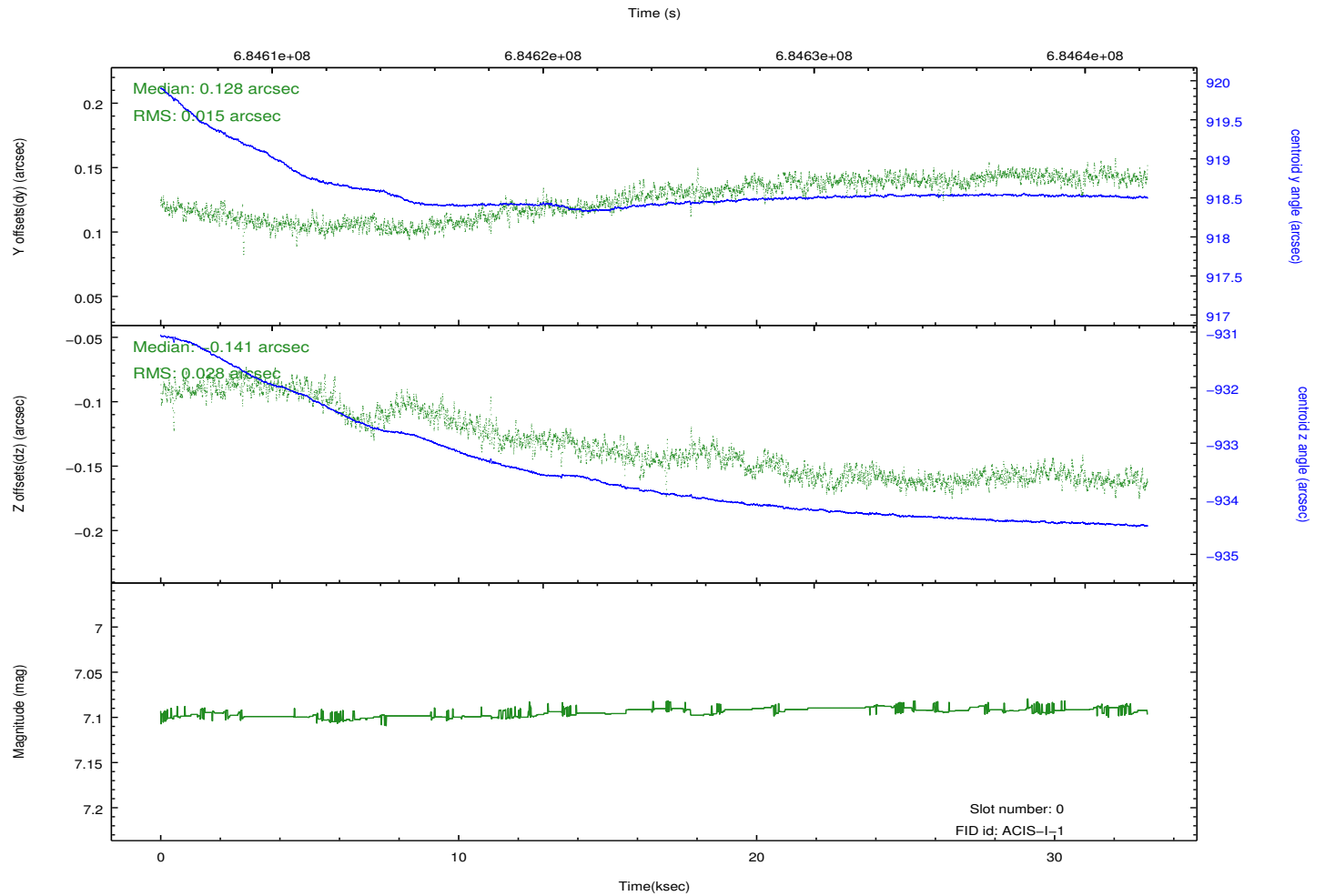
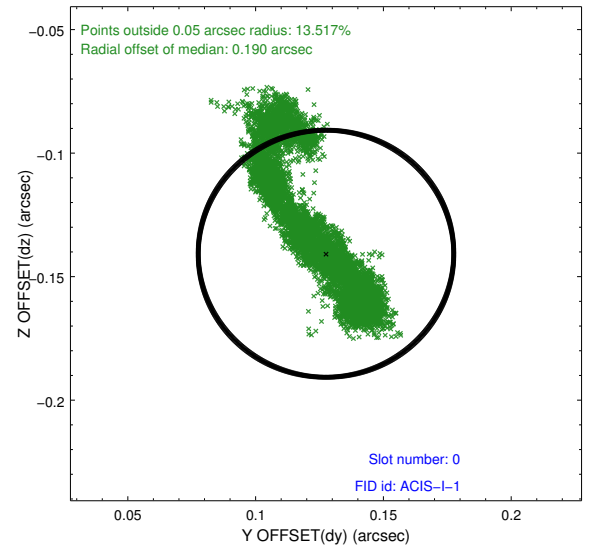
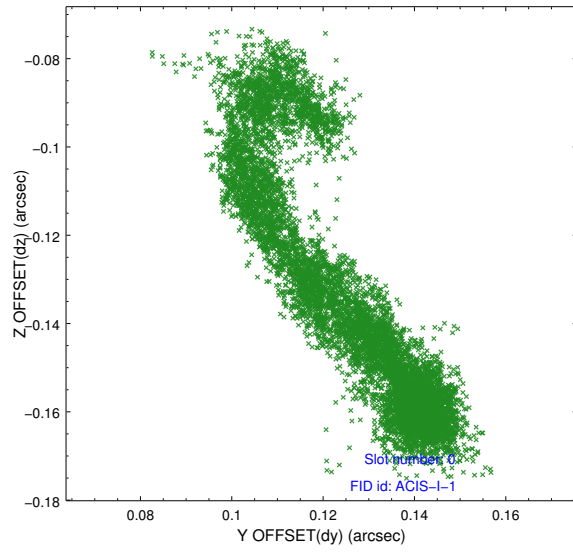


2.4.5 Slot 7

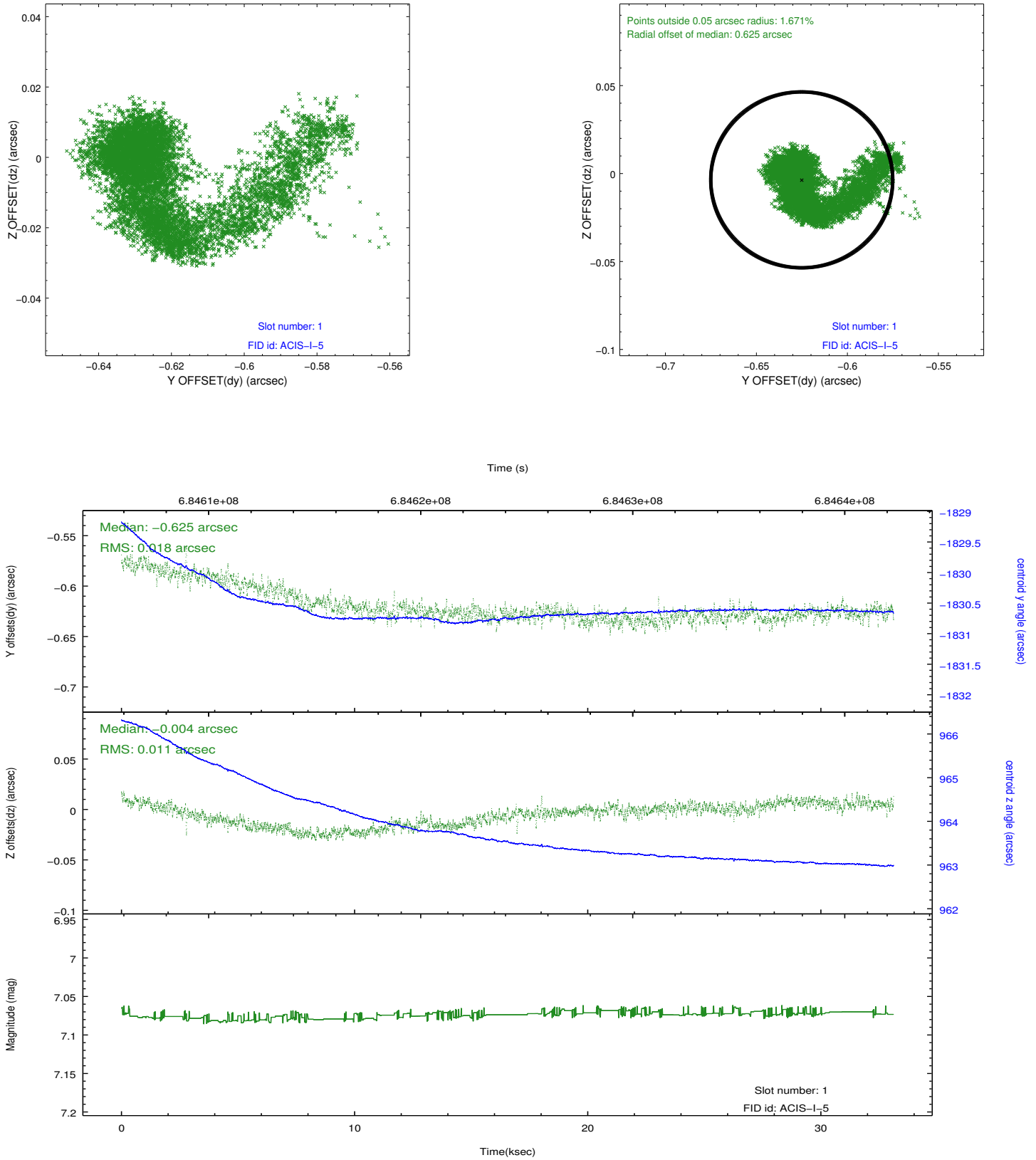


2.5 FID Slots

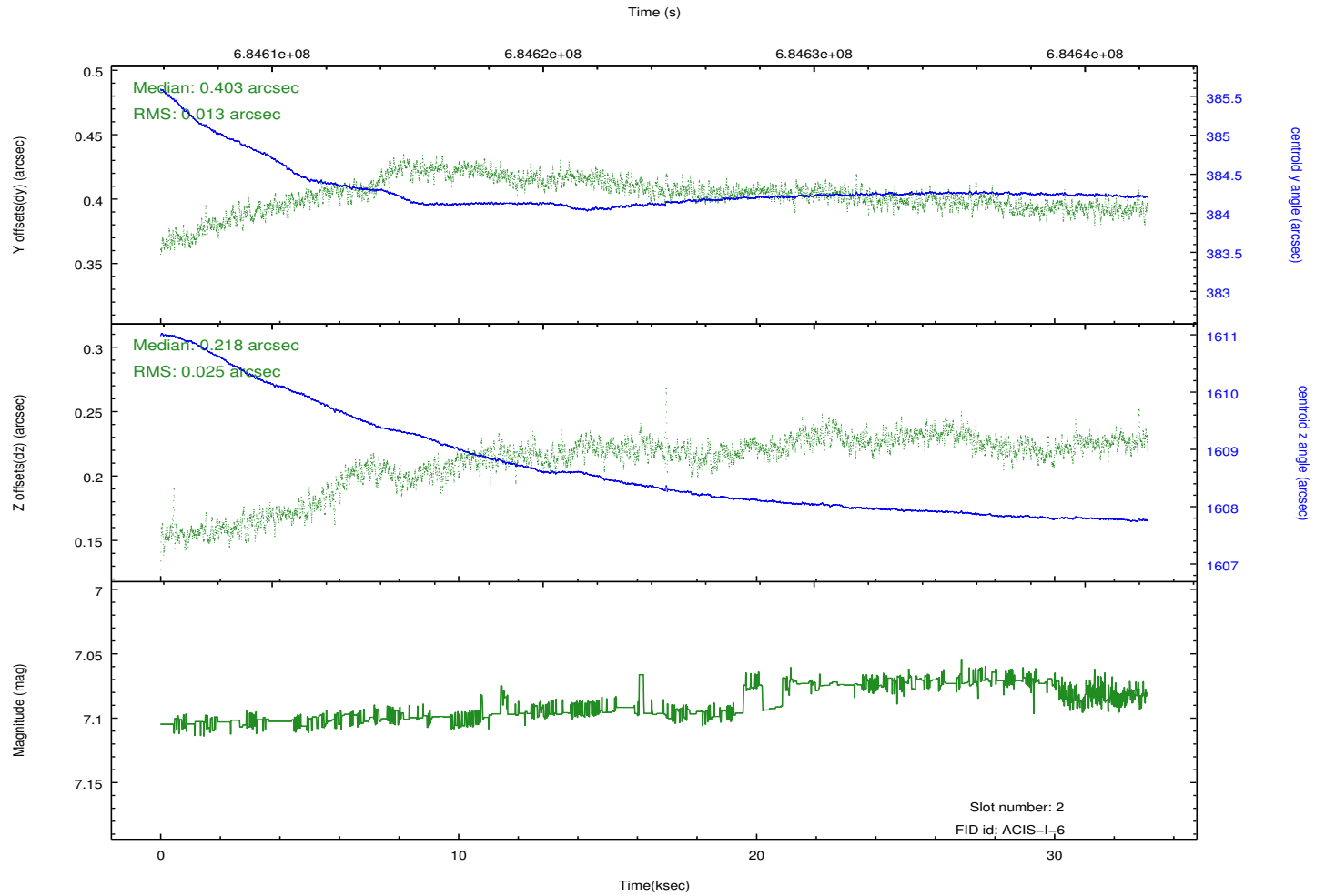
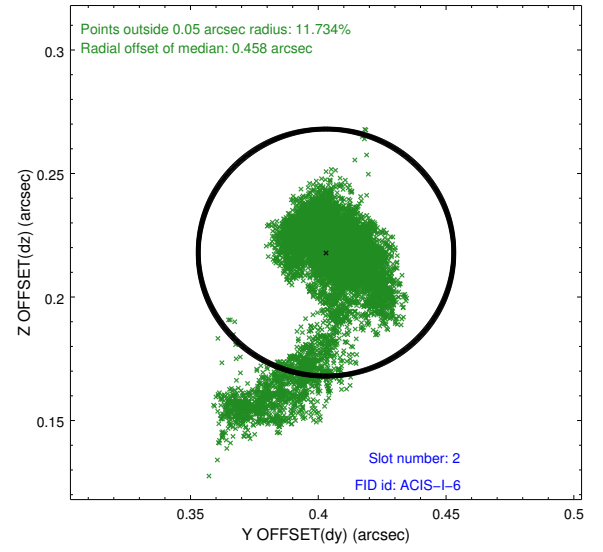
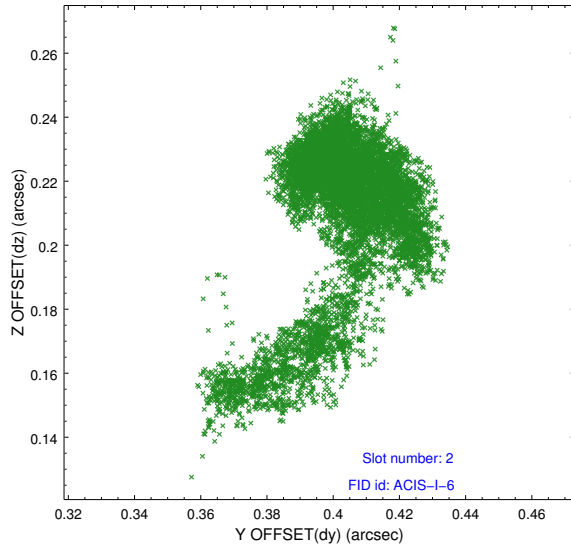
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.09.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	33.073859294176

A.2 Comments

Joint proposal with HST.

A spatial region of the original bias map for CCD = 1 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 1 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (213.52062,54.85420), (213.50855,54.85043), (213.62331,54.72766), (213.63535,54.73143).