

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6384 - L2 Version 5
Chandra X-Ray Center

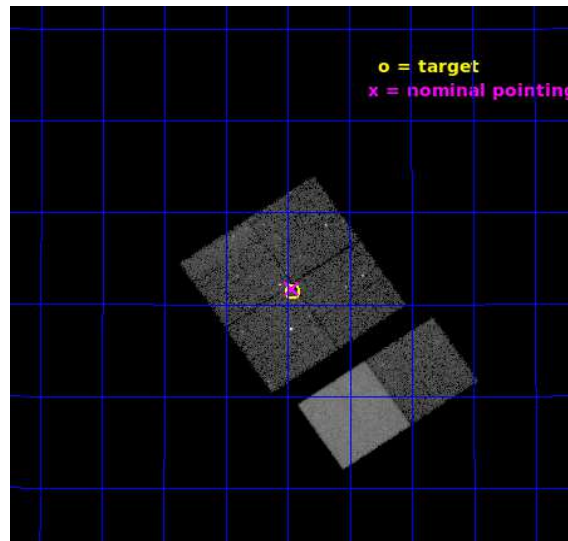
L2 Processing Date : Oct 10 2020

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1 Front

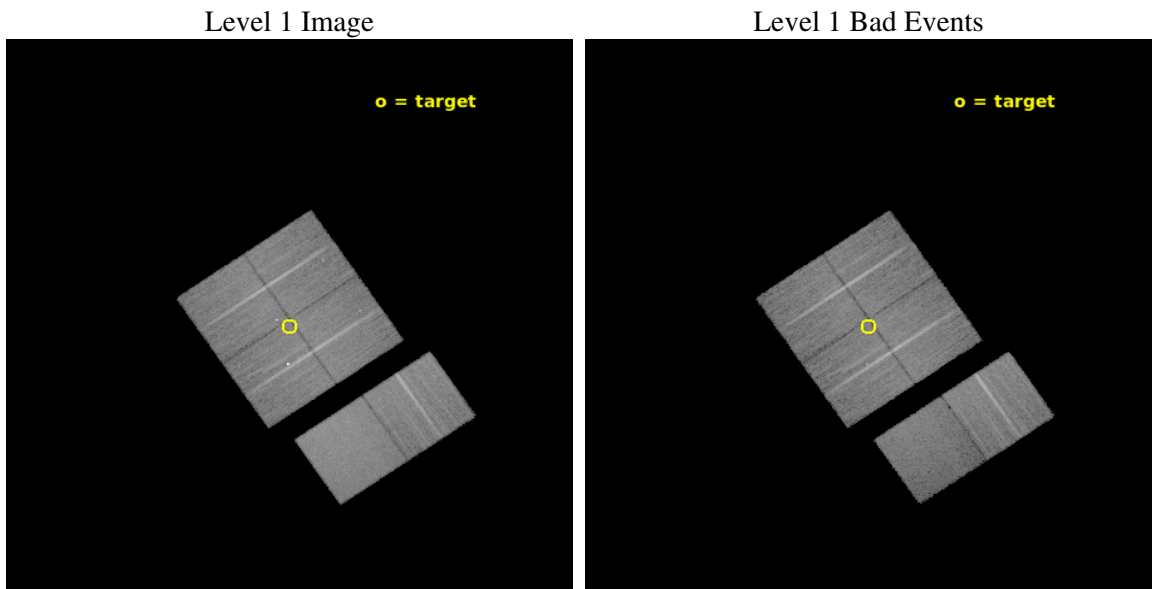
seq_num	600486	Sequence number
obs_id	6384	Observation id
title	The Chandra ACIS Survey of M33 (ChASem33): A Deep Survey of the Nearest Face-on Spiral Galaxy	Proposal title
observer	Manami Sasaki	Principal investigator
object	M33	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	23.36625	Observer's specified target RA [deg]
dec_targ	30.523694	Observer's specified target Dec [deg]
ra_nom	23.366786133847	Nominal RA [deg]
dec_nom	30.528860053766	Nominal Dec [deg]
roll_nom	145.70700353143	Nominal Roll [deg]
revision	5	Processing version of data
ontime	22451.199916363	Sum of GTIs [s]
livetime	22166.909304532	Livetime [s]
ontime0	22451.199916363	Sum of GTIs [s]
ontime1	22451.199916363	Sum of GTIs [s]
ontime2	22451.199916363	Sum of GTIs [s]
ontime3	22451.199916363	Sum of GTIs [s]
ontime6	22451.199916363	Sum of GTIs [s]
ontime7	22451.199916363	Sum of GTIs [s]
l2events	132842	Number of level 2 events



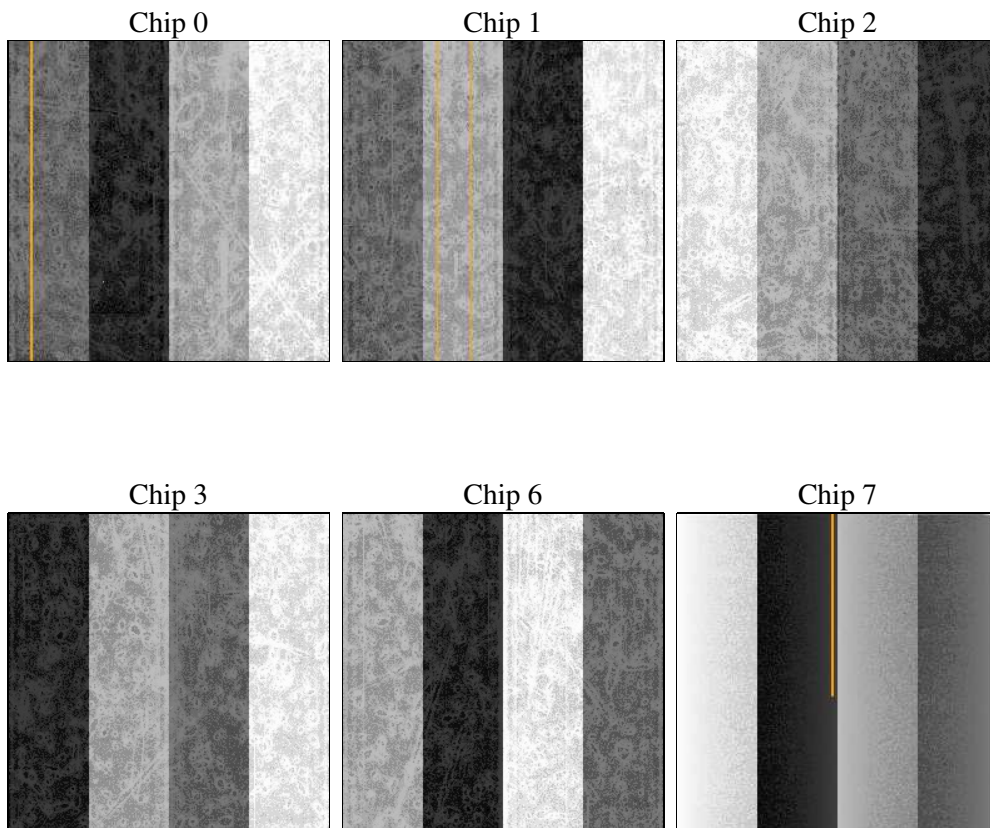
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	22400.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	22451.199916363	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	22451.199916363	Sum of GTIs [s]
date	2020-10-11T01:11:35	Date and time of file creation	ontime1	22451.199916363	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	22451.199916363	Sum of GTIs [s]
			ontime3	22451.199916363	Sum of GTIs [s]
			ontime6	22451.199916363	Sum of GTIs [s]
			ontime7	22451.199916363	Sum of GTIs [s]
			l1events	825943	Number of level 1 events

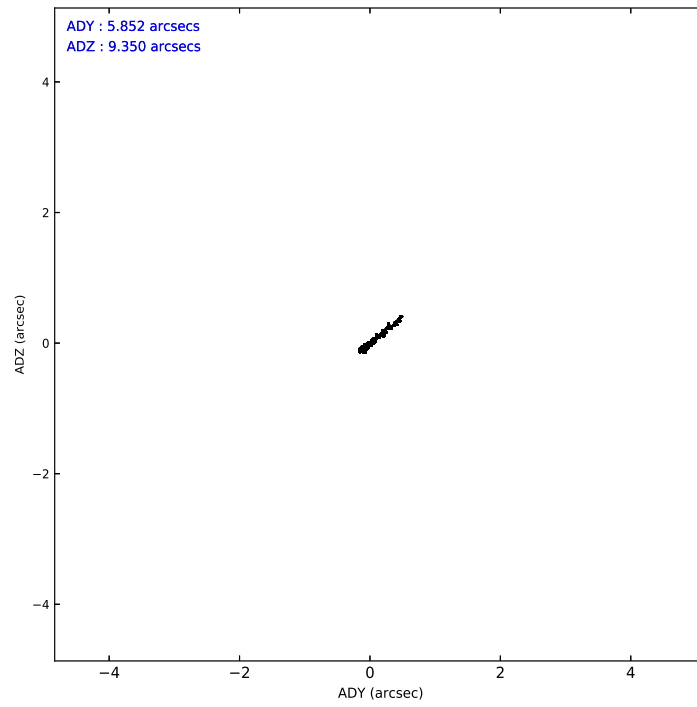
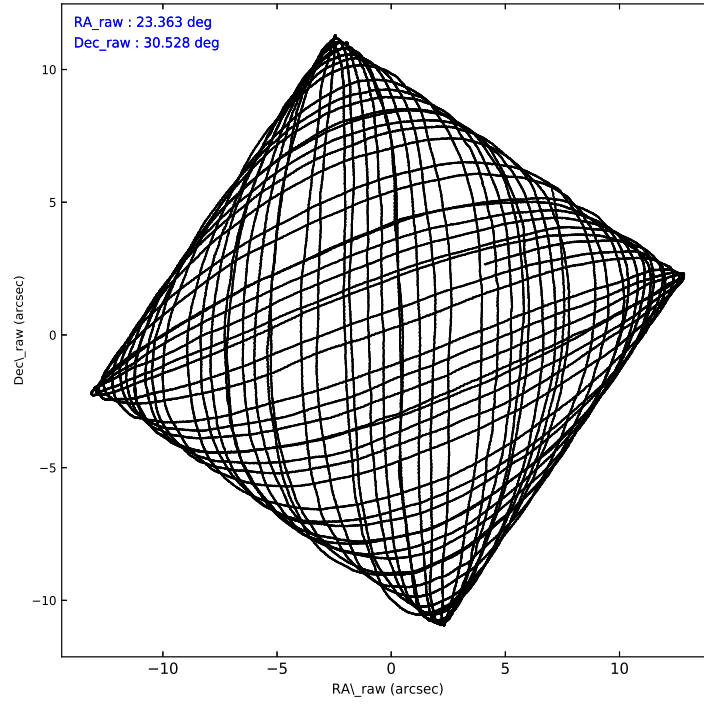
2.1.4 Events

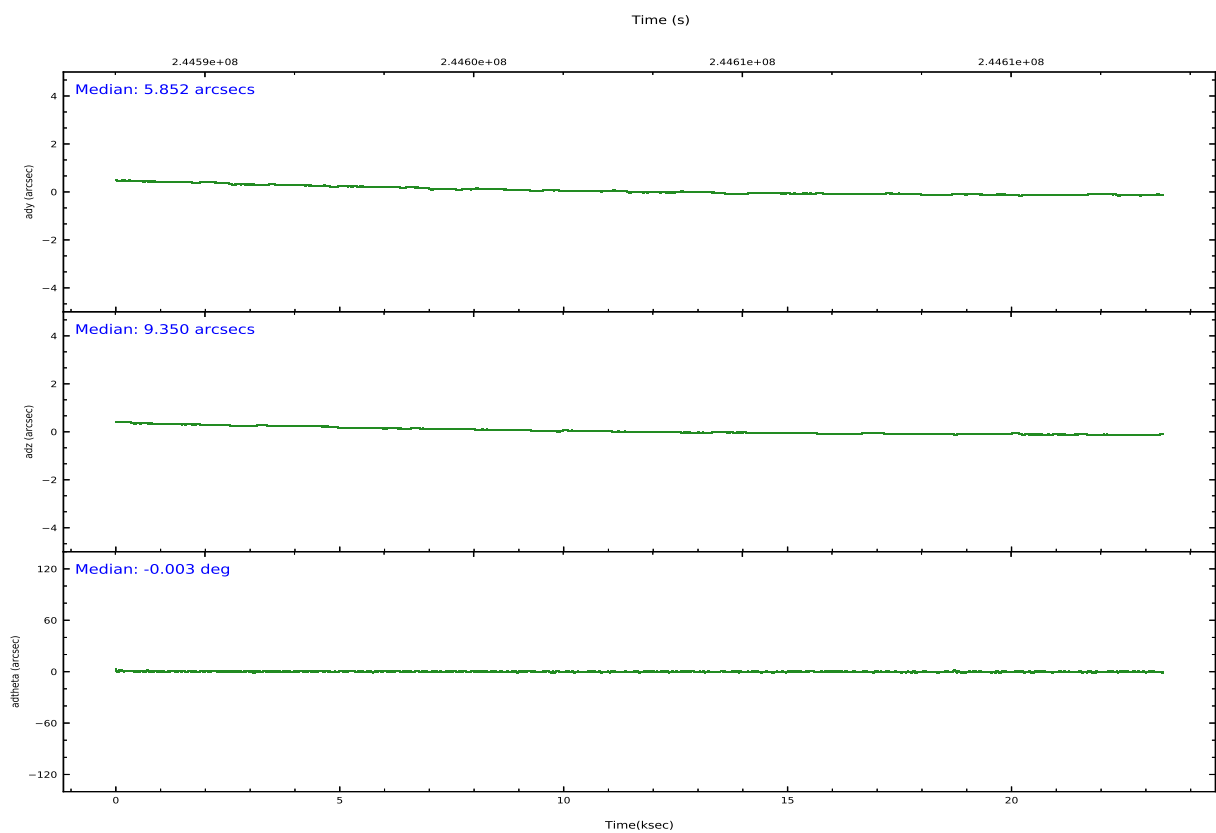
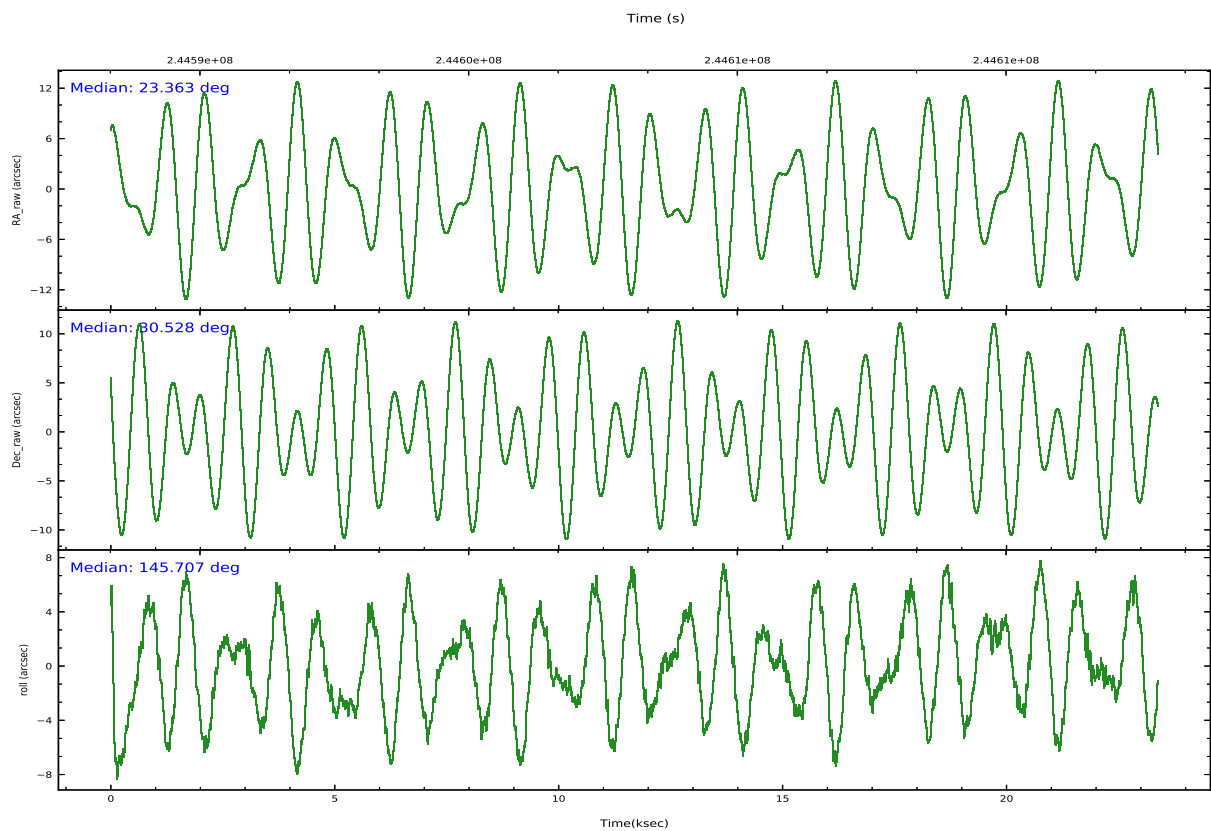
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	127340	129525	137846	135586	141727	153919	grade 0 events	5503	7647	5151	8460	4944	5690
rejected events	113012	111698	124267	117751	127314	85026		4%	5%	3%	6%	3%	3%
rejected %	88%	86%	90%	86%	89%	55%	grade 1 events	62	106	73	244	73	134
								0%	0%	0%	0%	0%	0%
							grade 2 events	3266	3646	3133	3270	3144	13631
								2%	2%	2%	2%	2%	8%
							grade 3 events	1610	1734	1458	1657	1550	6420
								1%	1%	1%	1%	1%	4%
							grade 4 events	1433	1761	1416	1626	1549	6412
								1%	1%	1%	1%	1%	4%
							grade 5 events	4733	5259	4357	5506	5772	16392
								3%	4%	3%	4%	4%	10%
							grade 6 events	2518	3043	2423	2827	3235	36756
								1%	2%	1%	2%	2%	23%
							grade 7 events	108215	106329	119835	111996	121460	68484
								84%	82%	86%	82%	85%	44%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-012367	ACIS-012367	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	23.395045	23.366786133847	Subarray requested	NONE	NONE
[deg] Pointing Dec	30.525656	30.528860053766	Alternating exposures requested	N	N
[deg] Pointing Roll	145.485377	145.70700353143	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	244592995.184000	244591587.87765			
Observation start date	2005-10-01T22:28:51	2005-10-01T22:06:27			
[s] Observation end time (MET)	244615395.184000	244616046.42878			
Observation end date	2005-10-02T04:42:11	2005-10-02T04:54:06			
Read mode	TIMED	TIMED			

2.3 Aspect



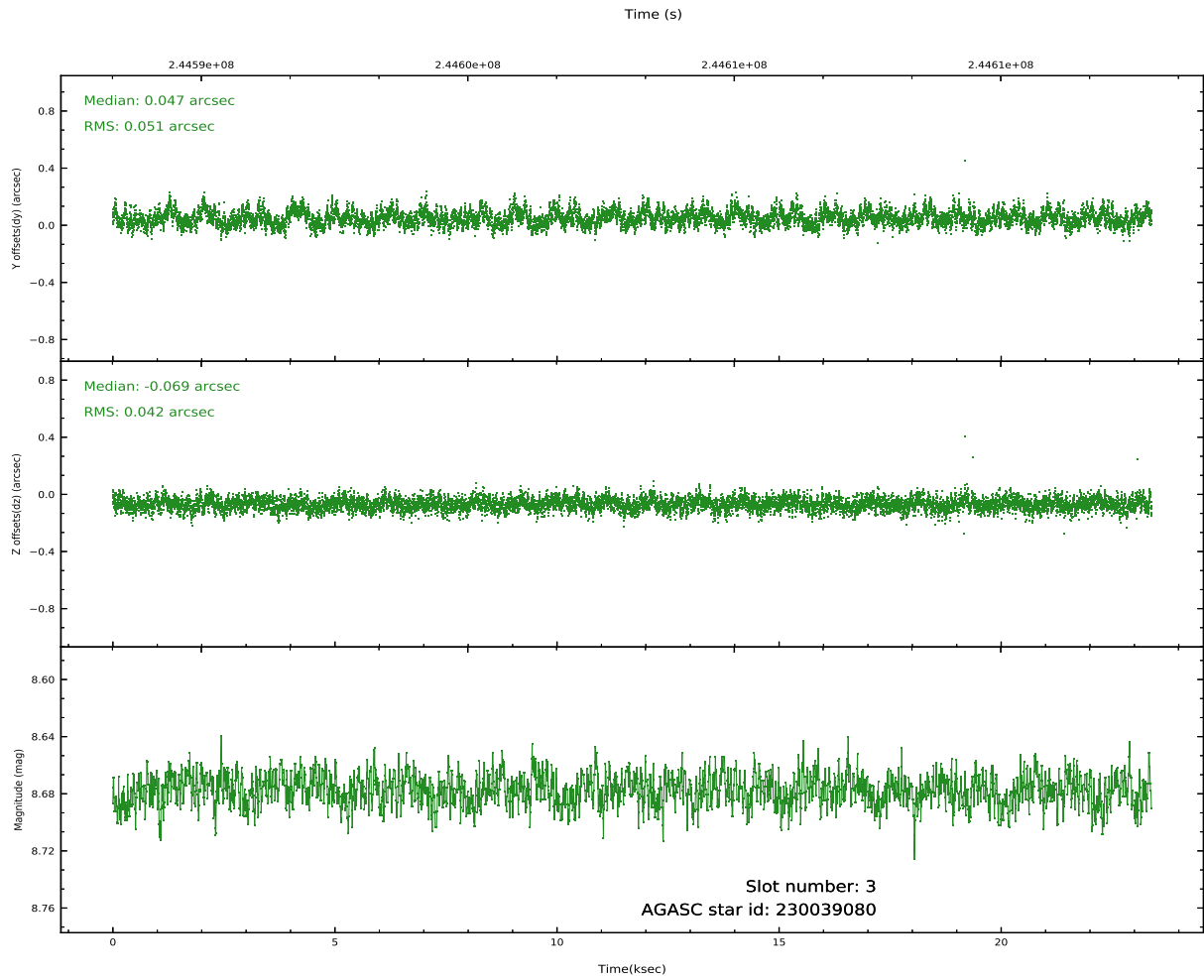
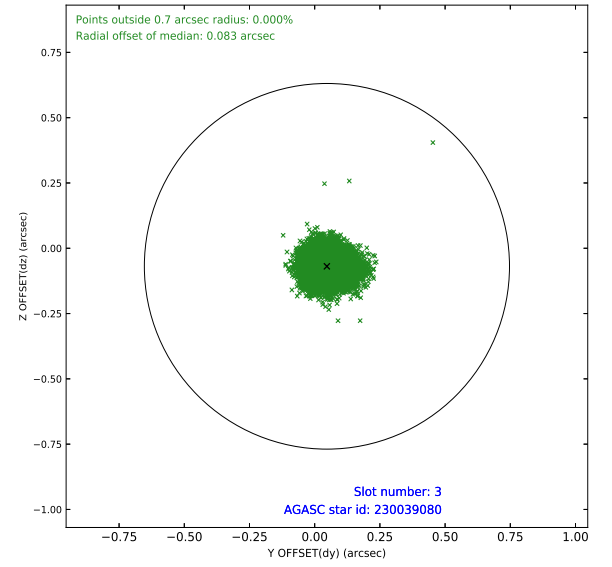
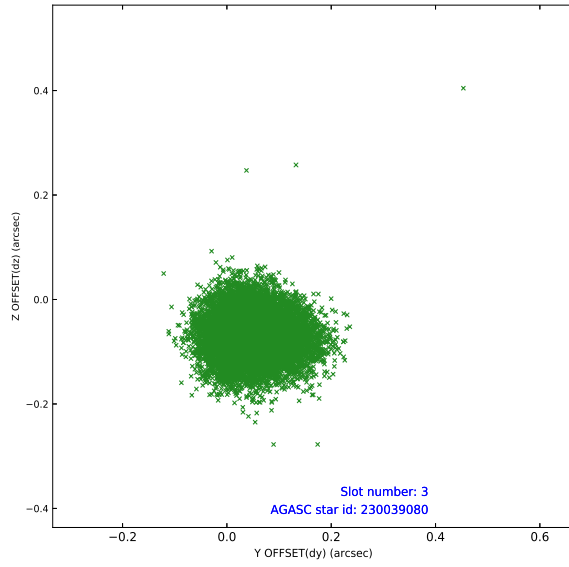


Slot Statistics

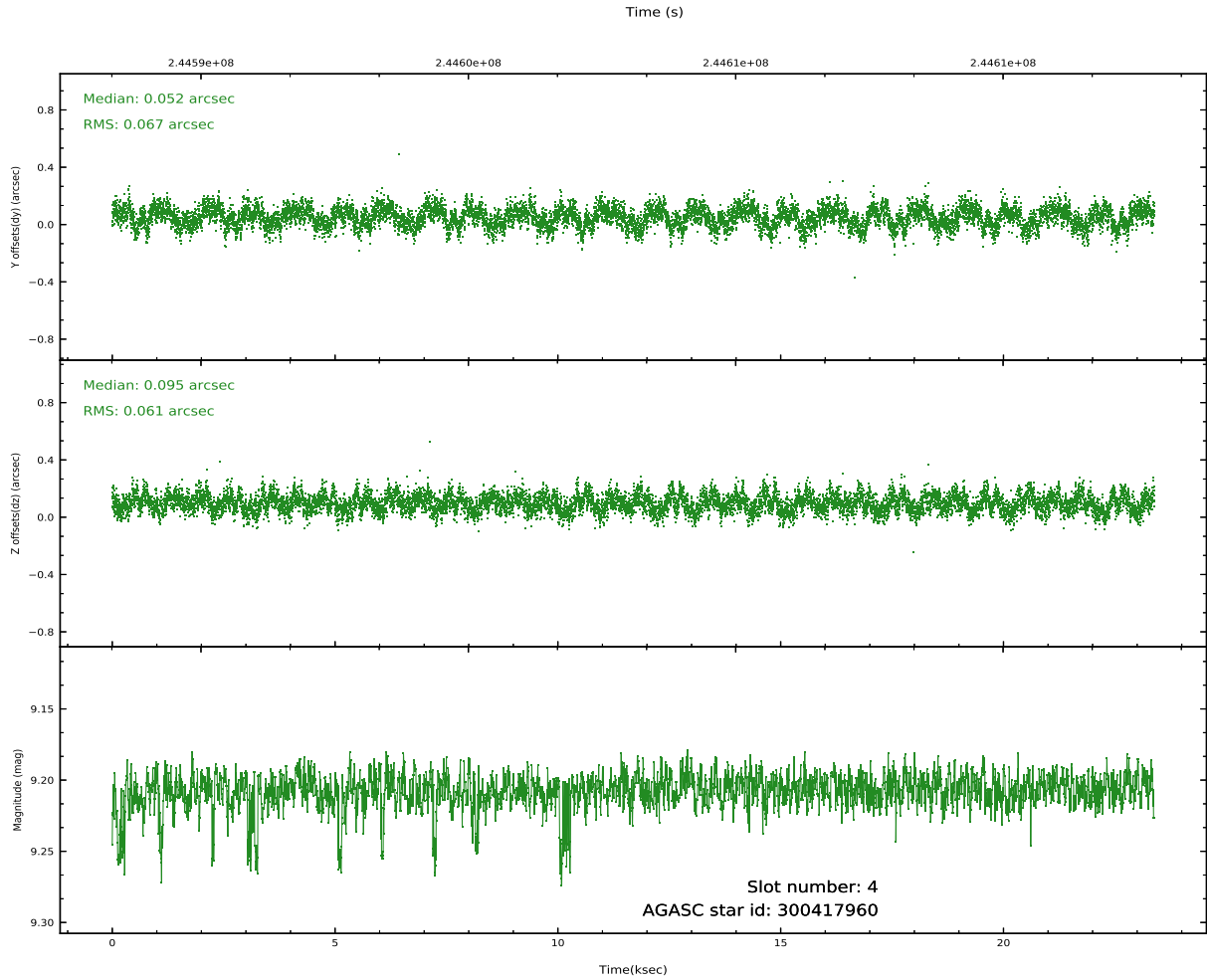
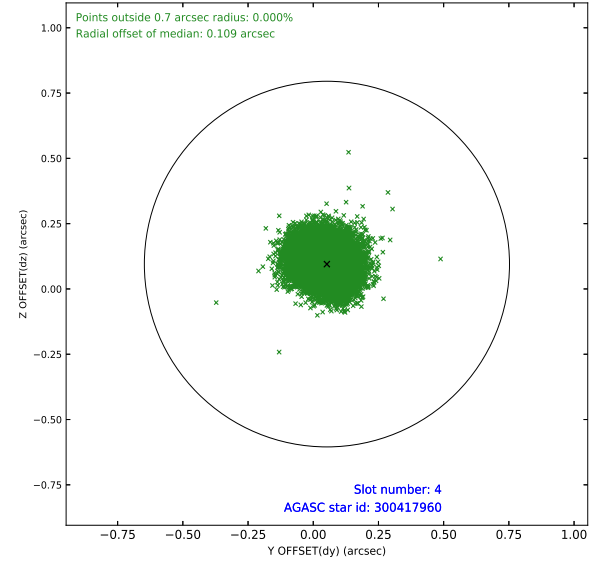
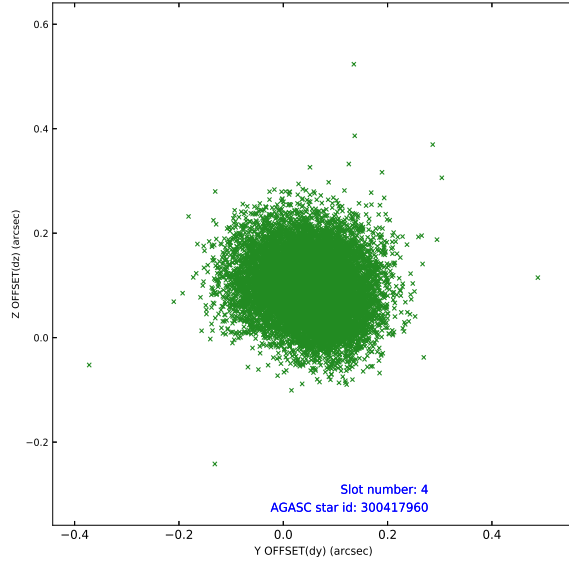
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.25	5704	1.000	0.016	0.004	0.008	0.014	0.000000	0.000000	933.82	-832
1	FID		ACIS-I-5	7.23	5703	1.000	-0.197	0.024	0.007	0.012	0.000000	0.000000	-1814.44	1064
2	FID		ACIS-I-6	7.26	5702	1.000	0.090	0.042	0.010	0.016	0.000000	0.000000	399.26	1709
3	GUIDE	used	230039080	8.68	11408	1.000	0.047	-0.069	0.070	0.114	23.320866	29.887774	-1110.32	2023
4	GUIDE	used	300417960	9.21	11398	1.000	0.052	0.095	0.098	0.153	22.346894	30.364196	2361.96	2311
5	GUIDE	used	300553080	9.05	11405	1.000	-0.018	0.100	0.072	0.118	23.777101	30.773227	-467.06	-1405
6	GUIDE	used	300559160	9.40	11394	1.000	0.033	-0.011	0.093	0.149	24.161026	30.632205	-1732.82	-1667
7	GUIDE	used	300559960	7.87	11407	1.000	-0.118	-0.115	0.055	0.088	22.944463	30.624765	1353.39	494

2.4 Star Slots

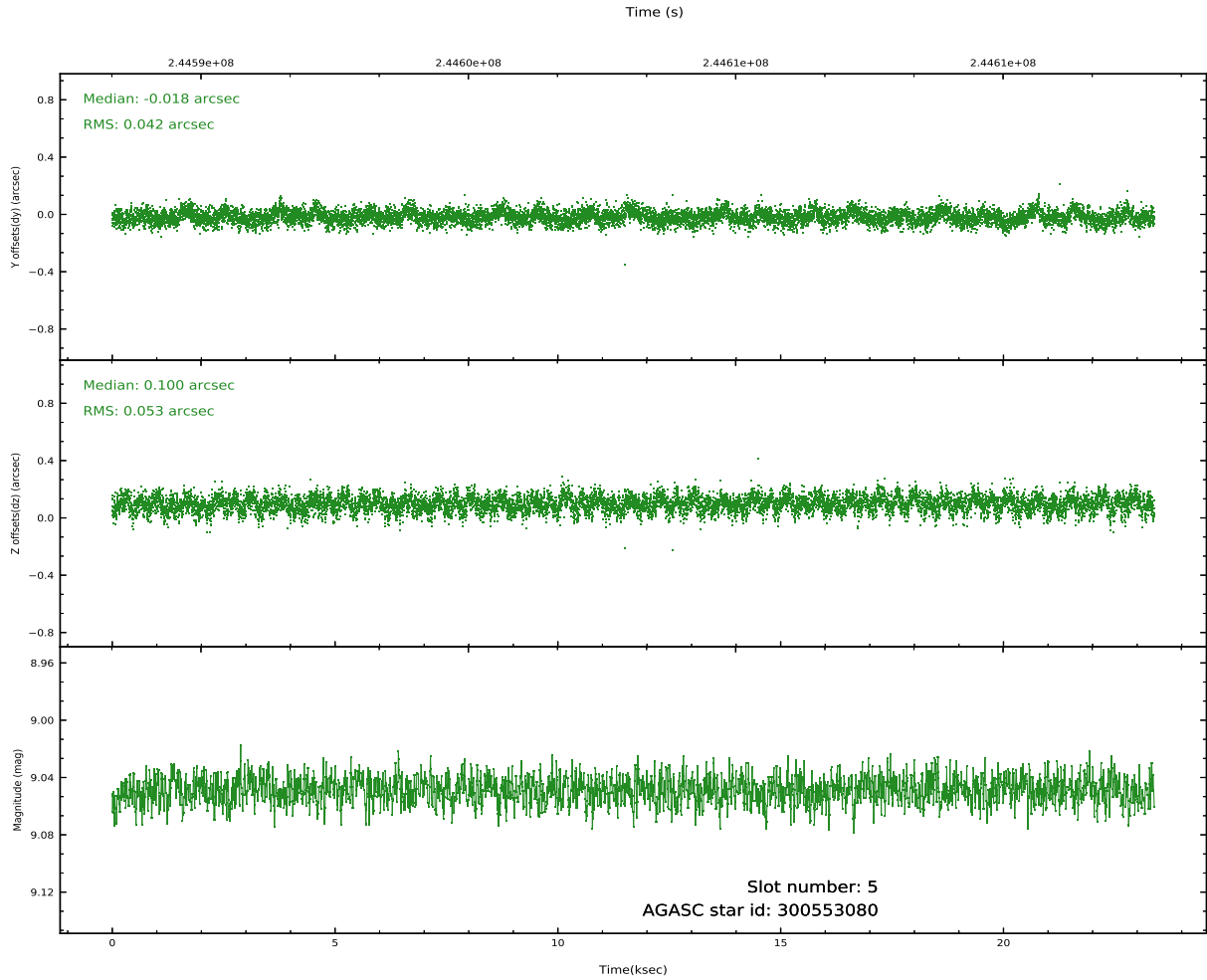
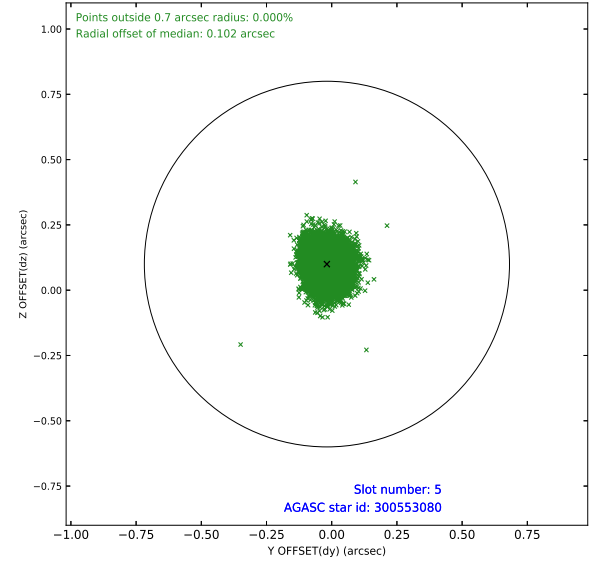
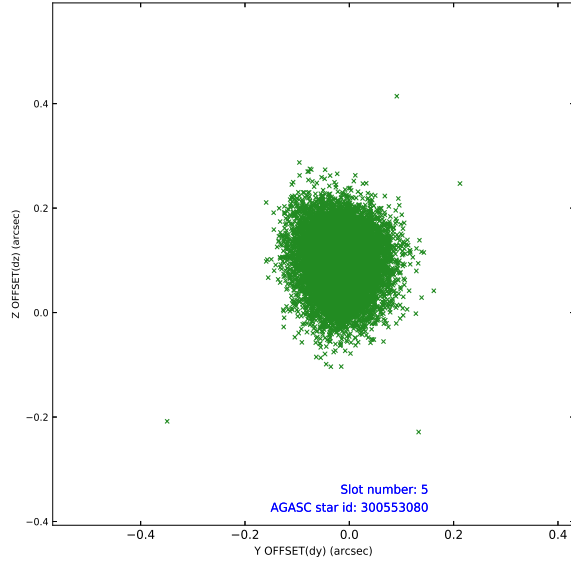
2.4.1 Slot 3



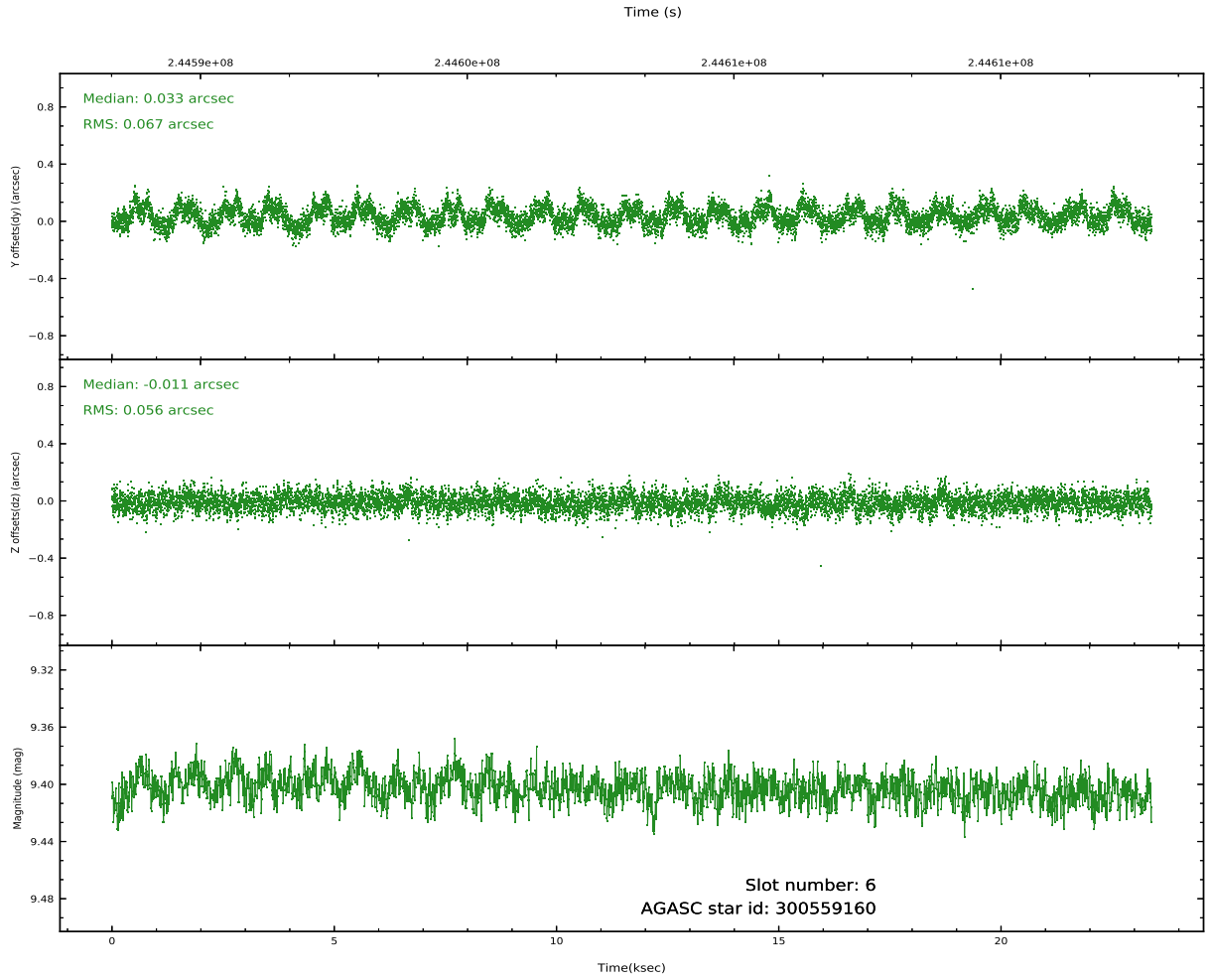
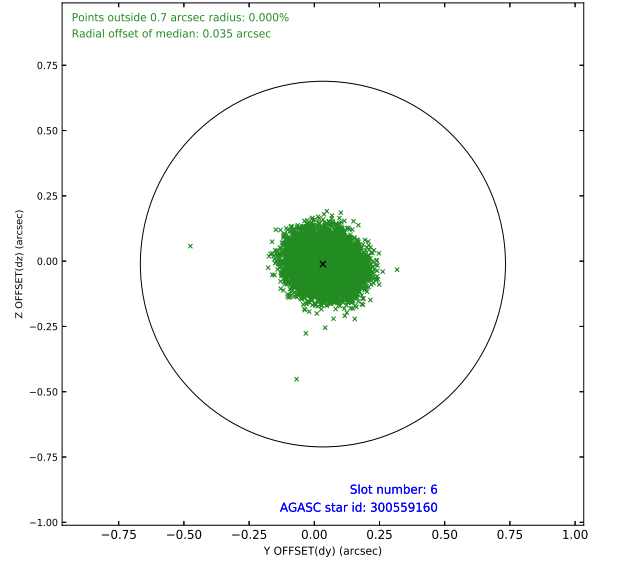
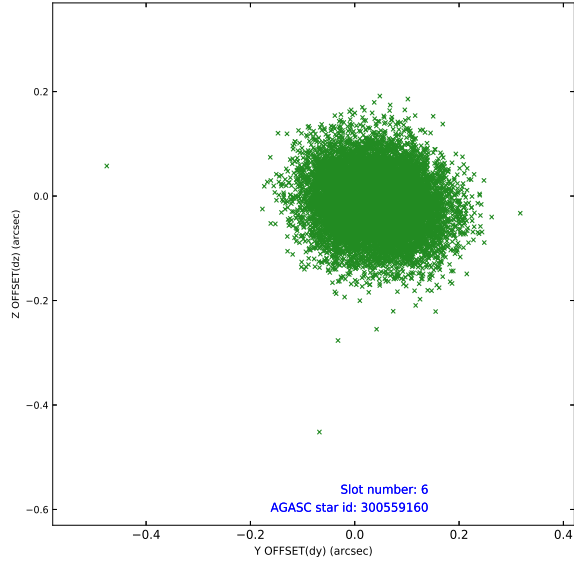
2.4.2 Slot 4



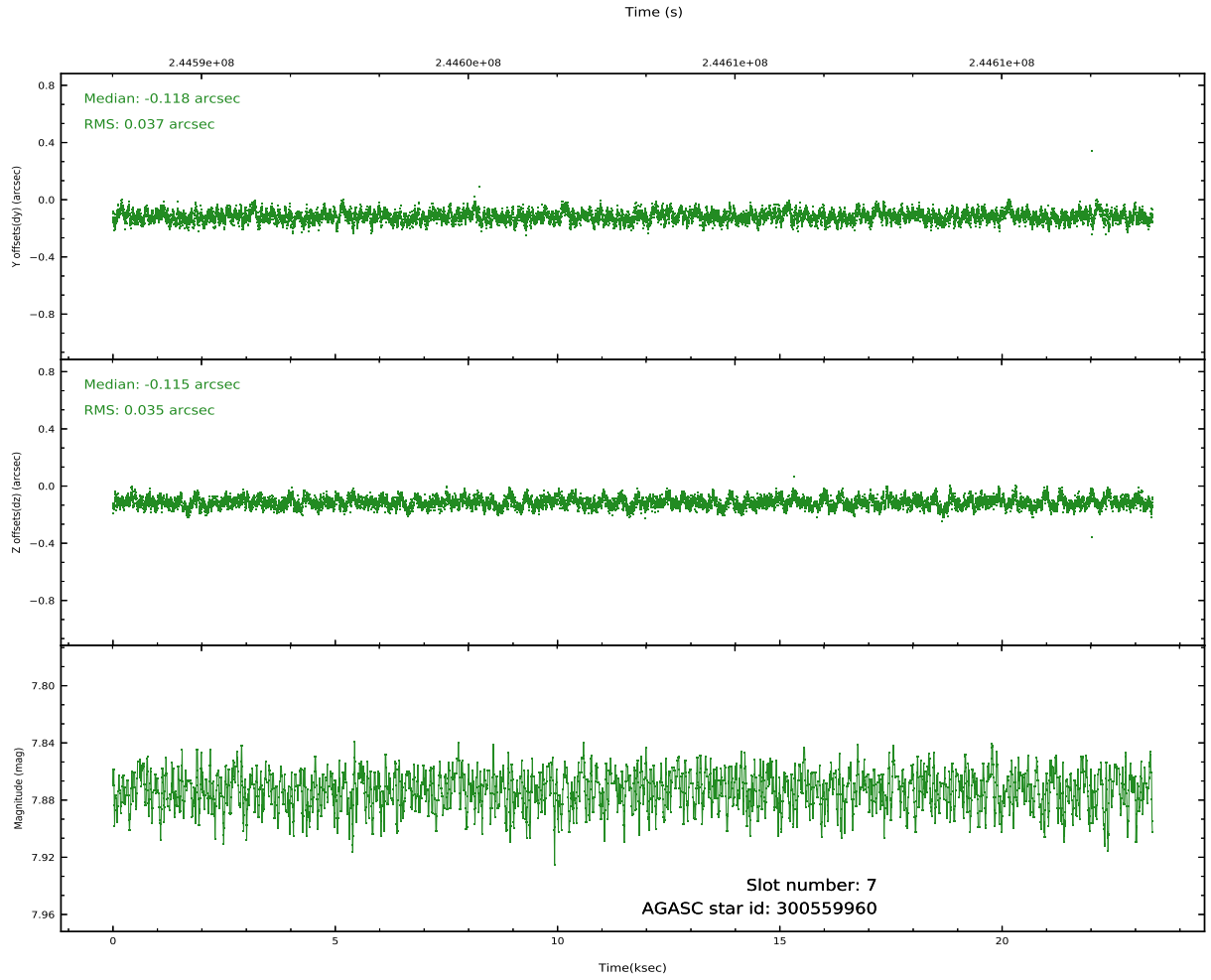
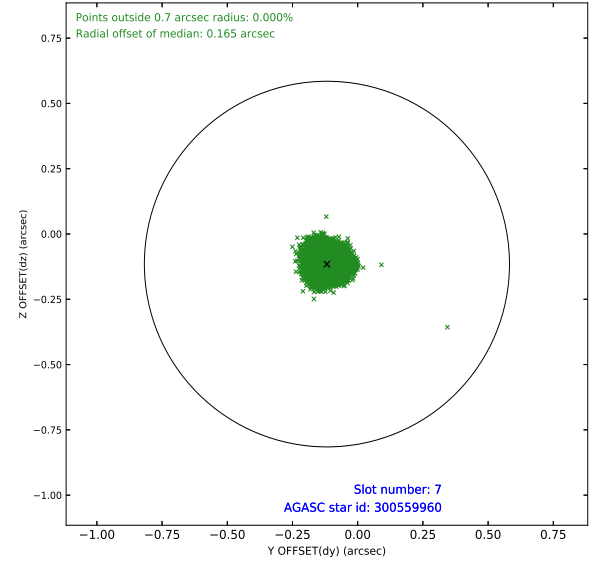
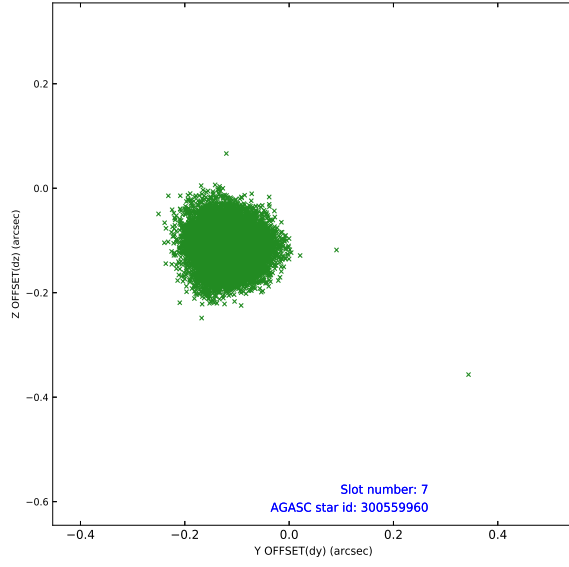
2.4.3 Slot 5



2.4.4 Slot 6

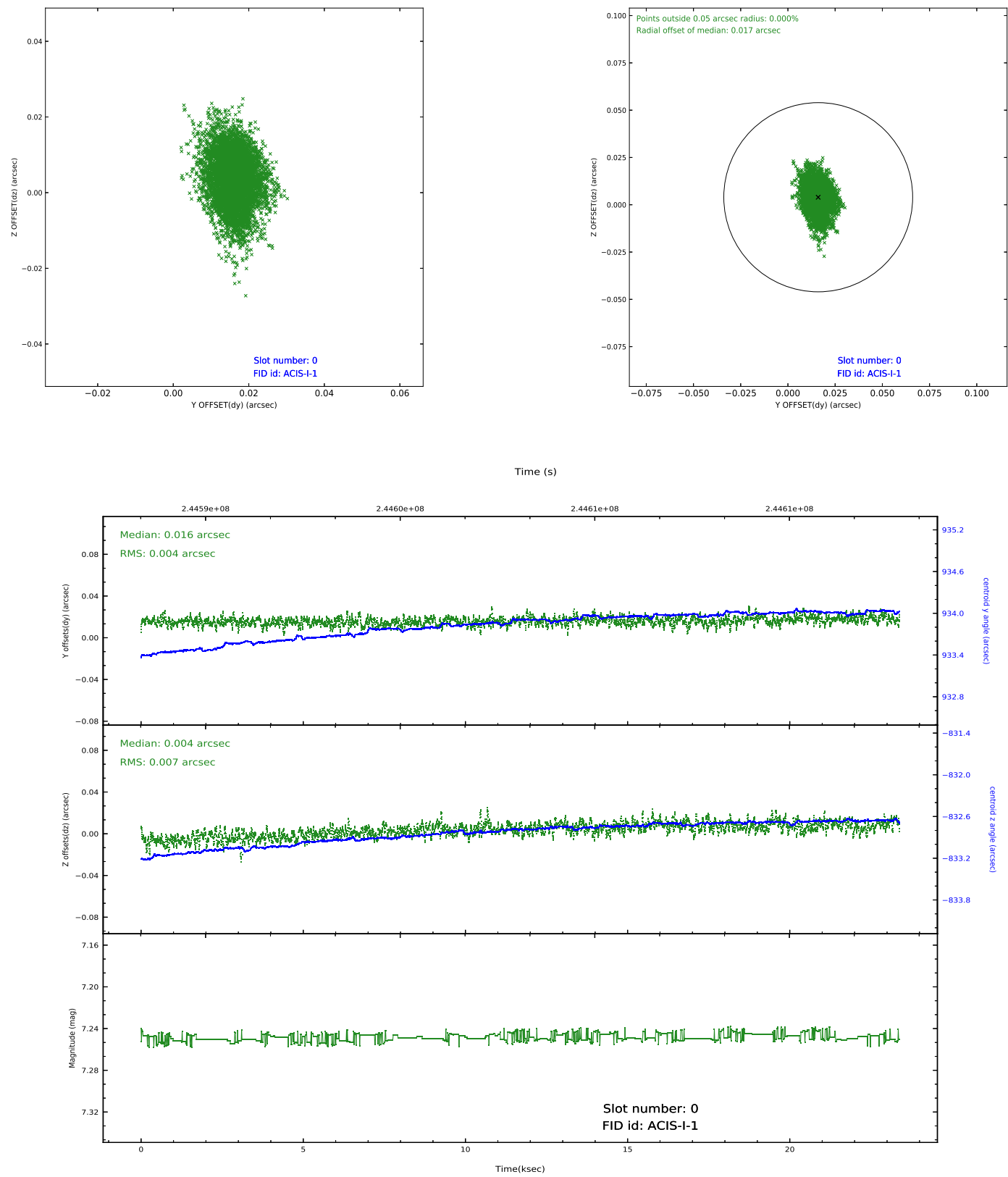


2.4.5 Slot 7

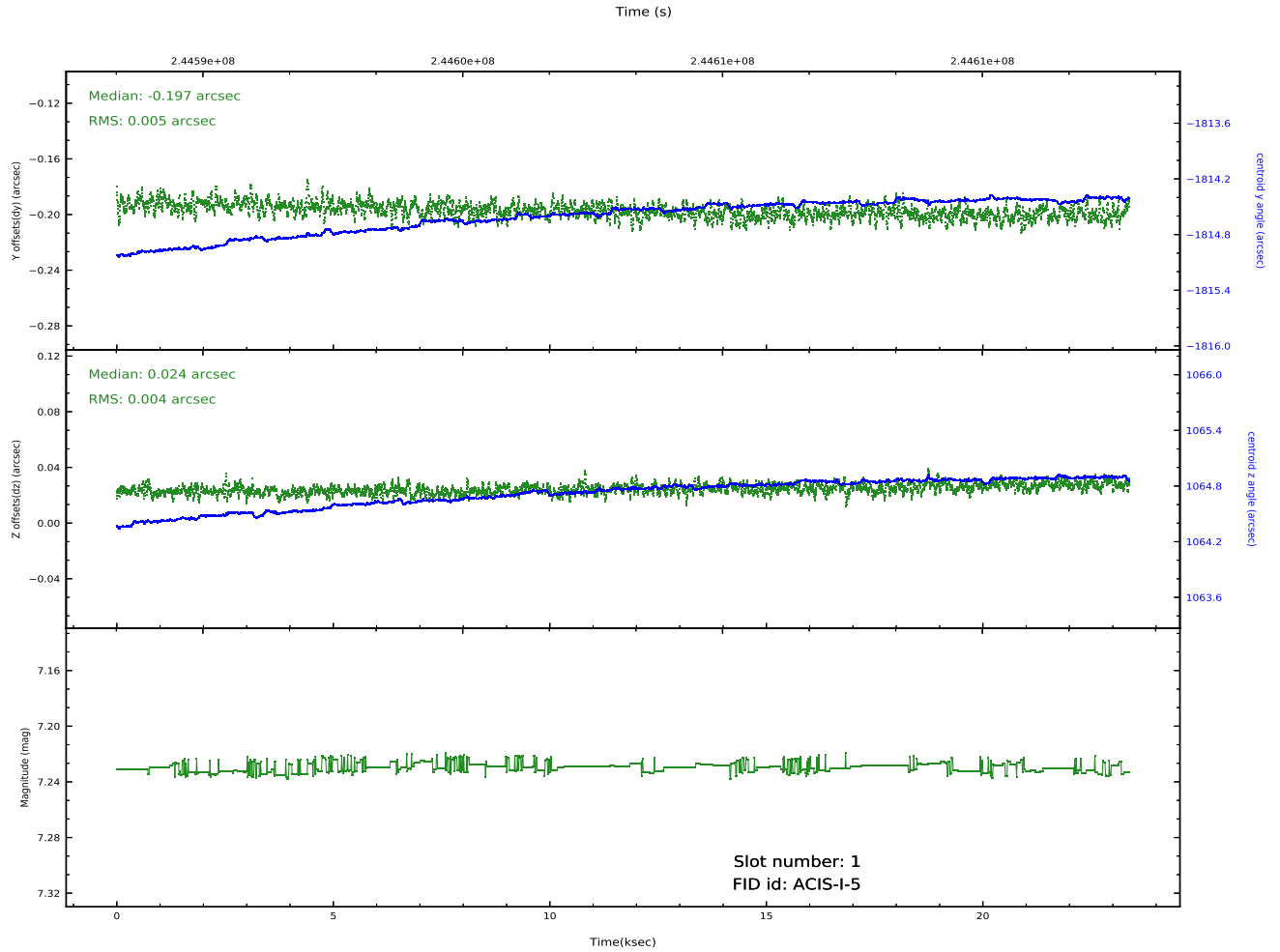
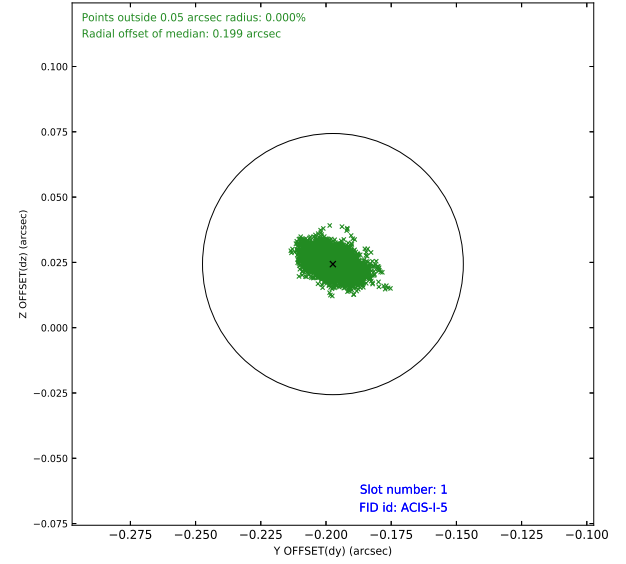
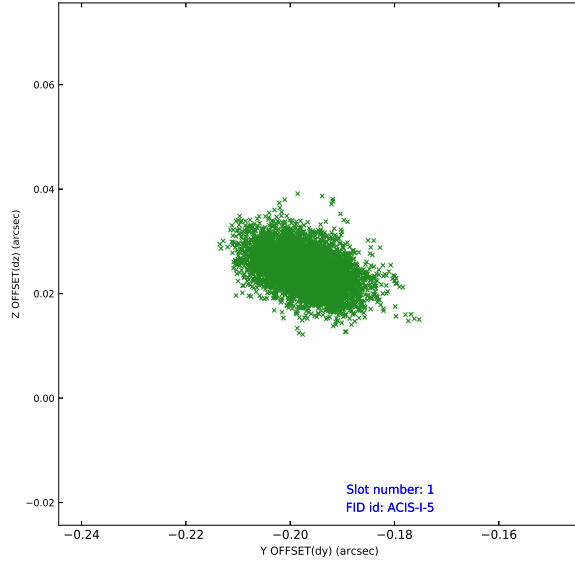


2.5 FID Slots

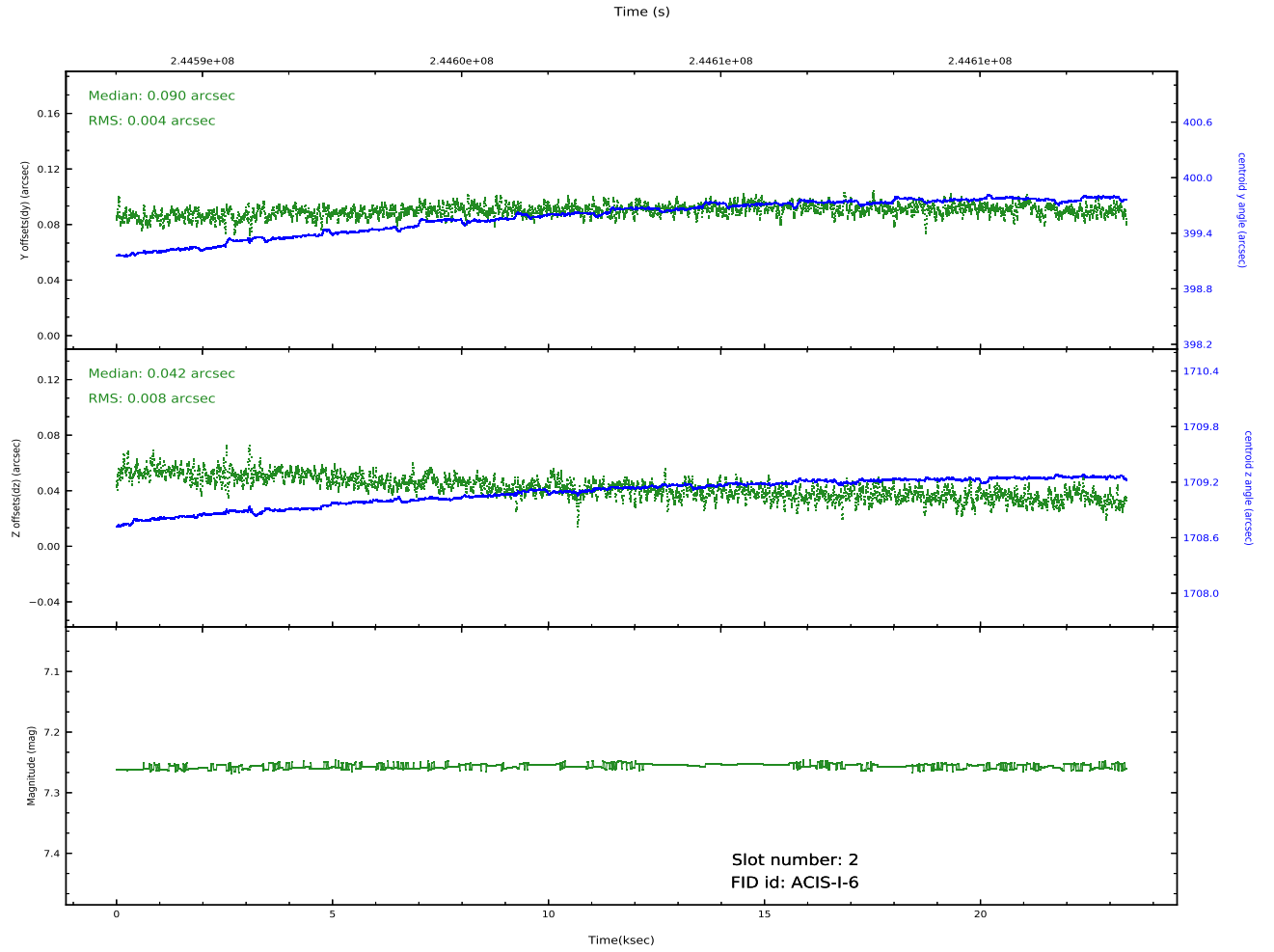
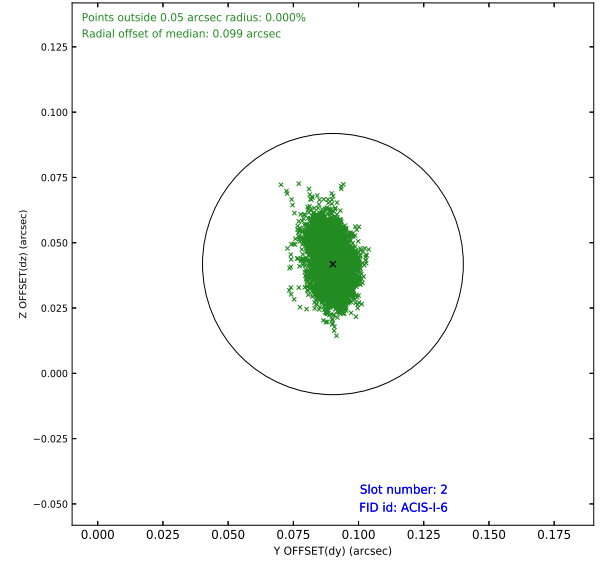
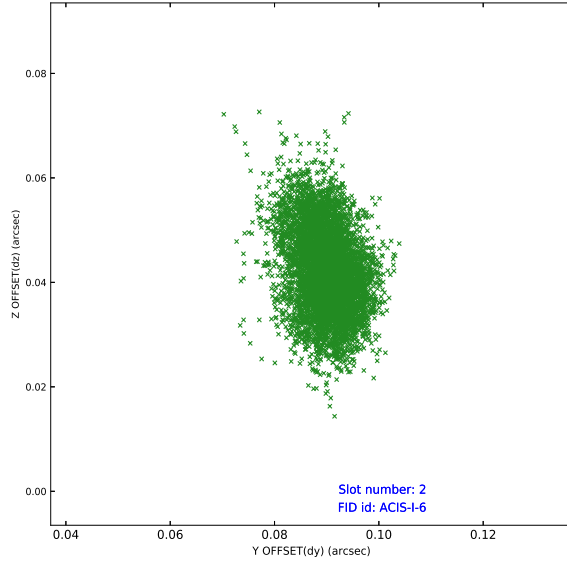
2.5.1 Slot 0



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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	22.45119

A.2 Comments

SAP Team: please reprocess using replacement bias file for chip 0.

===

The bias map for CCD_ID = 0 suffers from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the 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_ID = 0 will be recreated to remove this anomaly and the data will be reprocessed.

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As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.