

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20790 - L2 Version 3
Chandra X-Ray Center

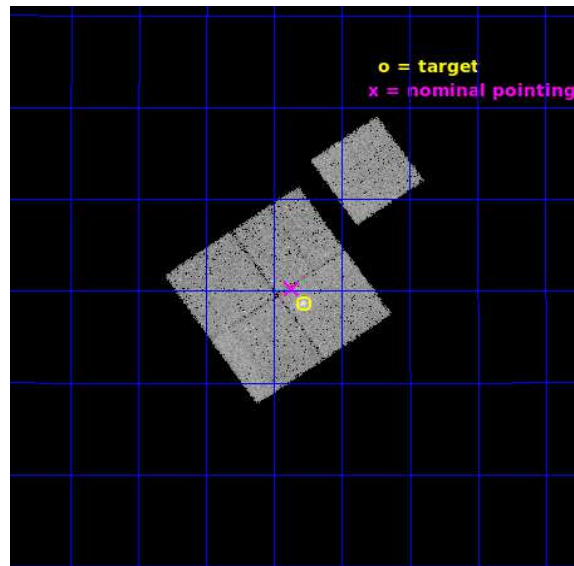
L2 Processing Date : Oct 28 2020

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1 Front

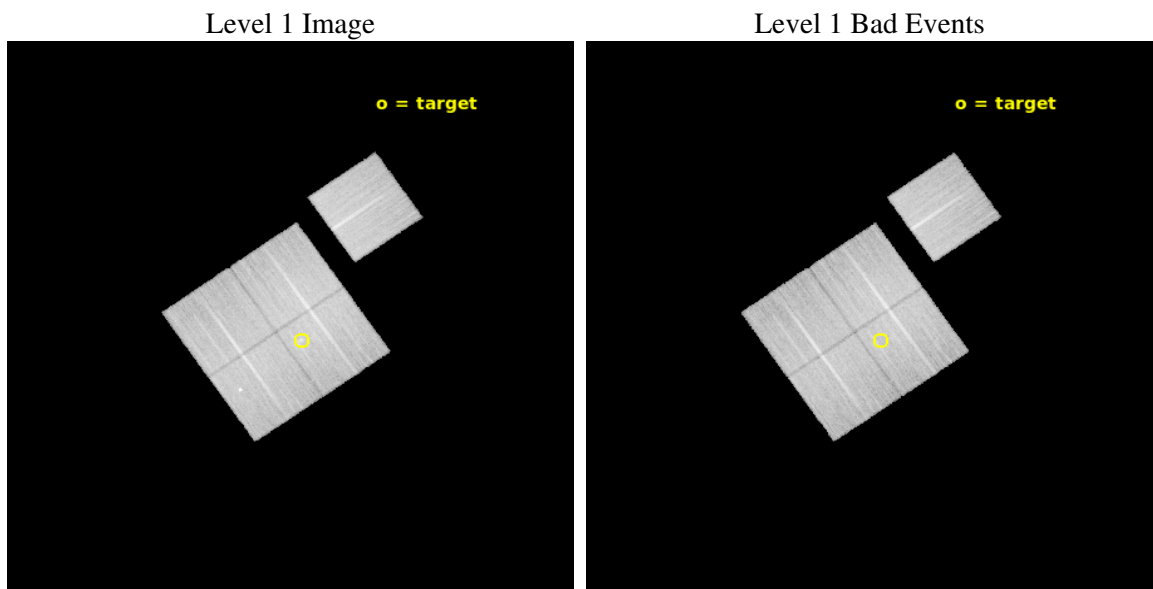
seq_num	801802	Sequence number
obs_id	20790	Observation id
title	A Unique Sample of Extreme-BCG Clusters at $0.2 < z < 0.5$	Proposal
observer	Gordon Garmire	Principal investigator
object	SDSS123	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.445833	Observer's specified target RA [deg]
dec_targ	18.977917	Observer's specified target Dec [deg]
ra_nom	186.46720175697	Nominal RA [deg]
dec_nom	19.004337688951	Nominal Dec [deg]
roll_nom	55.188876622117	Nominal Roll [deg]
revision	3	Processing version of data
ontime	24058.633083701	Sum of GTIs [s]
livetime	23744.289330755	Livetime [s]
ontime0	24058.509933591	Sum of GTIs [s]
ontime1	24061.692003965	Sum of GTIs [s]
ontime2	24055.45094347	Sum of GTIs [s]
ontime3	24058.633083701	Sum of GTIs [s]
ontime6	24061.609923959	Sum of GTIs [s]
l2events	85006	Number of level 2 events



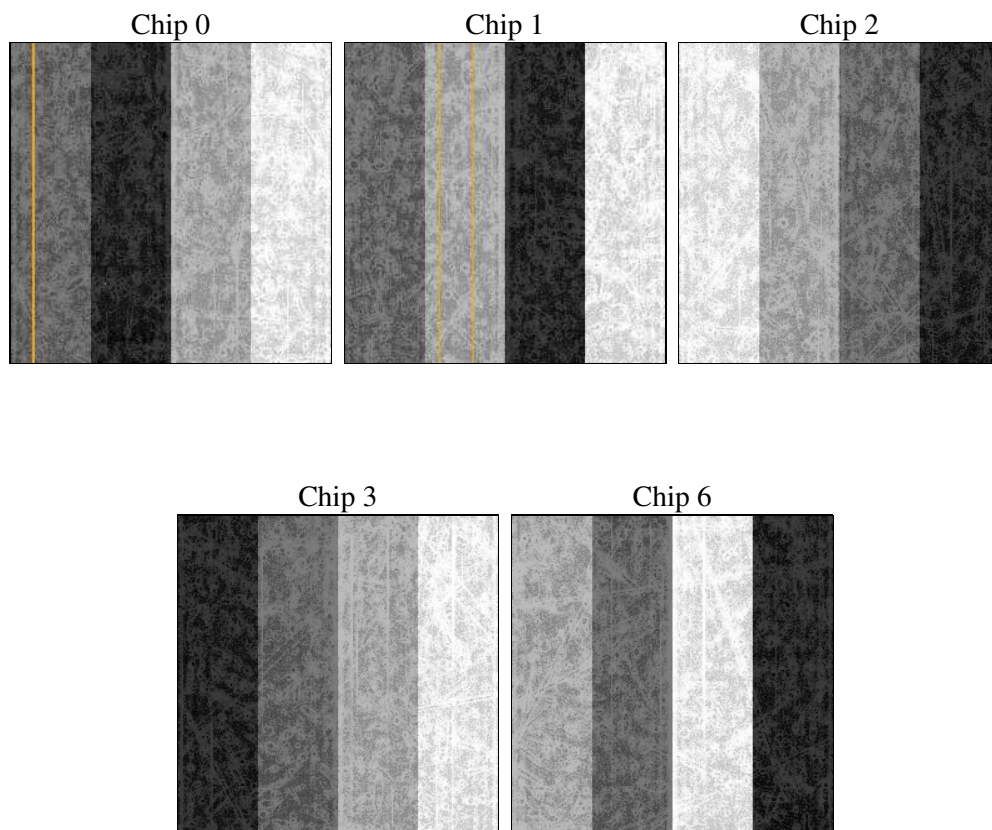
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	24000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	24058.633083701	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	24058.509933591	Sum of GTIs [s]
date	2020-10-28T21:18:03	Date and time of file creation	ontime1	24061.692003965	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	24055.45094347	Sum of GTIs [s]
			ontime3	24058.633083701	Sum of GTIs [s]
			ontime6	24061.609923959	Sum of GTIs [s]
			l1events	882114	Number of level 1 events

2.1.4 Events

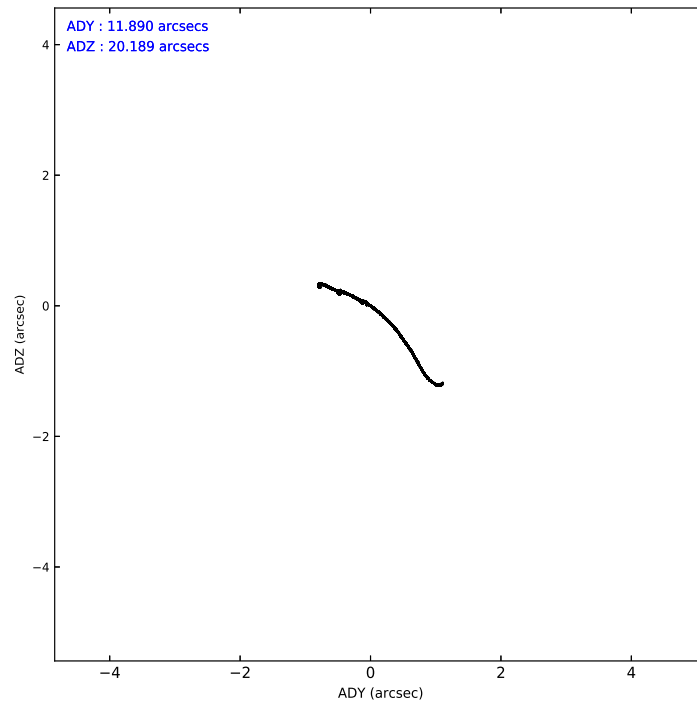
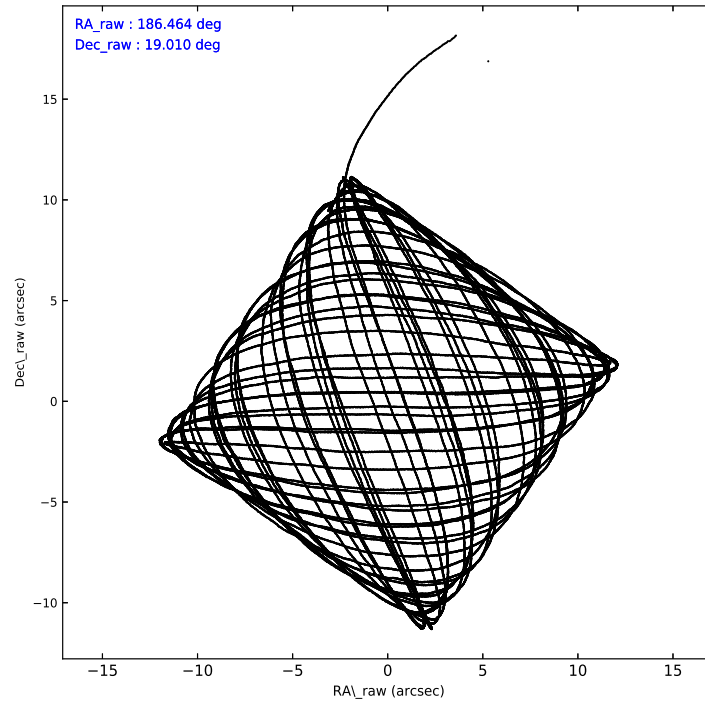
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	162862	170667	184146	180771	183668
rejected events	143369	147930	165047	160020	163874
rejected %	88%	86%	89%	88%	89%

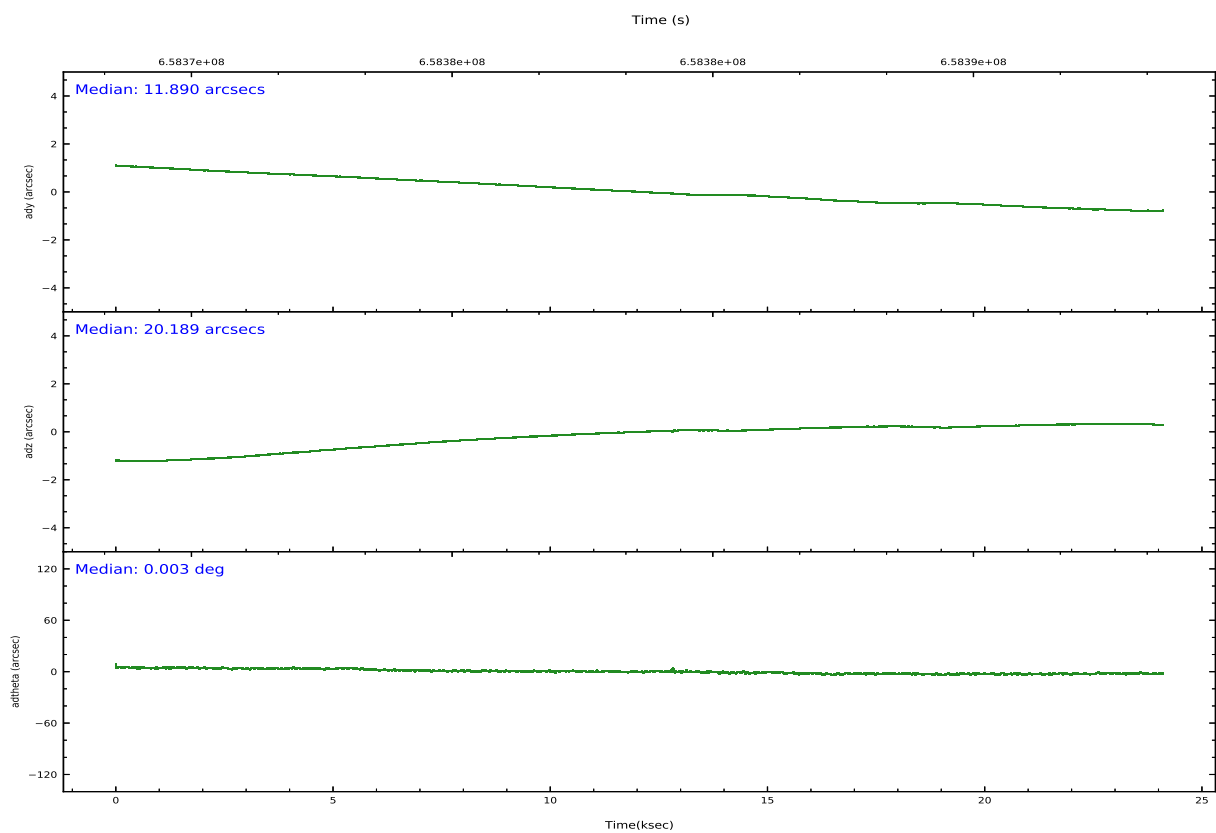
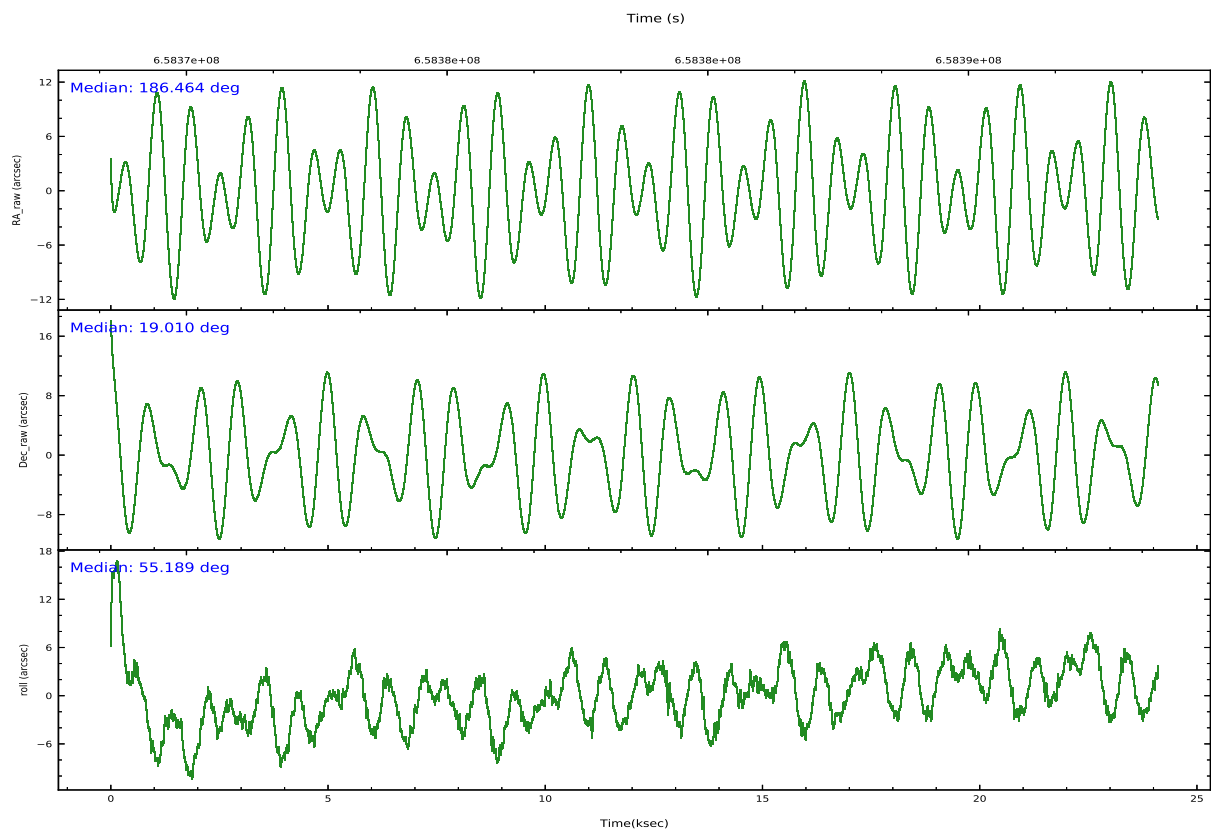
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6476	7810	6813	8371	6068
	3%	4%	3%	4%	3%
grade 1 events	80	106	107	106	92
	0%	0%	0%	0%	0%
grade 2 events	4919	6032	4685	4391	5014
	3%	3%	2%	2%	2%
grade 3 events	1925	1840	1852	2047	1804
	1%	1%	1%	1%	0%
grade 4 events	1886	1872	1904	1940	1812
	1%	1%	1%	1%	0%
grade 5 events	7480	7581	7031	8306	7549
	4%	4%	3%	4%	4%
grade 6 events	4293	5187	3848	4005	5097
	2%	3%	2%	2%	2%
grade 7 events	135803	140239	157906	151605	156232
	83%	82%	85%	83%	85%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	186.461990	186.46720175697	CCD I2 on	Y	Y
[deg] Pointing Dec	18.982992	19.004337688951	CCD I3 on	Y	Y
[deg] Pointing Roll	54.994734	55.188876622117	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-230.082463	-230.0875075610572	CCD S3 on	N	N
[mm] SIM translation stage offset	-3.51	-3.504945441872508	CCD S4 on	N	N
[s] Observation start time (MET)	658370366.184000	658369041.76724	CCD S5 on	N	N
Observation start date	2018-11-12T00:38:17	2018-11-12T00:17:21	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	658394366.184000	658395449.35631	On-chip summing requested	N	N
Observation end date	2018-11-12T07:18:17	2018-11-12T07:37:29	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



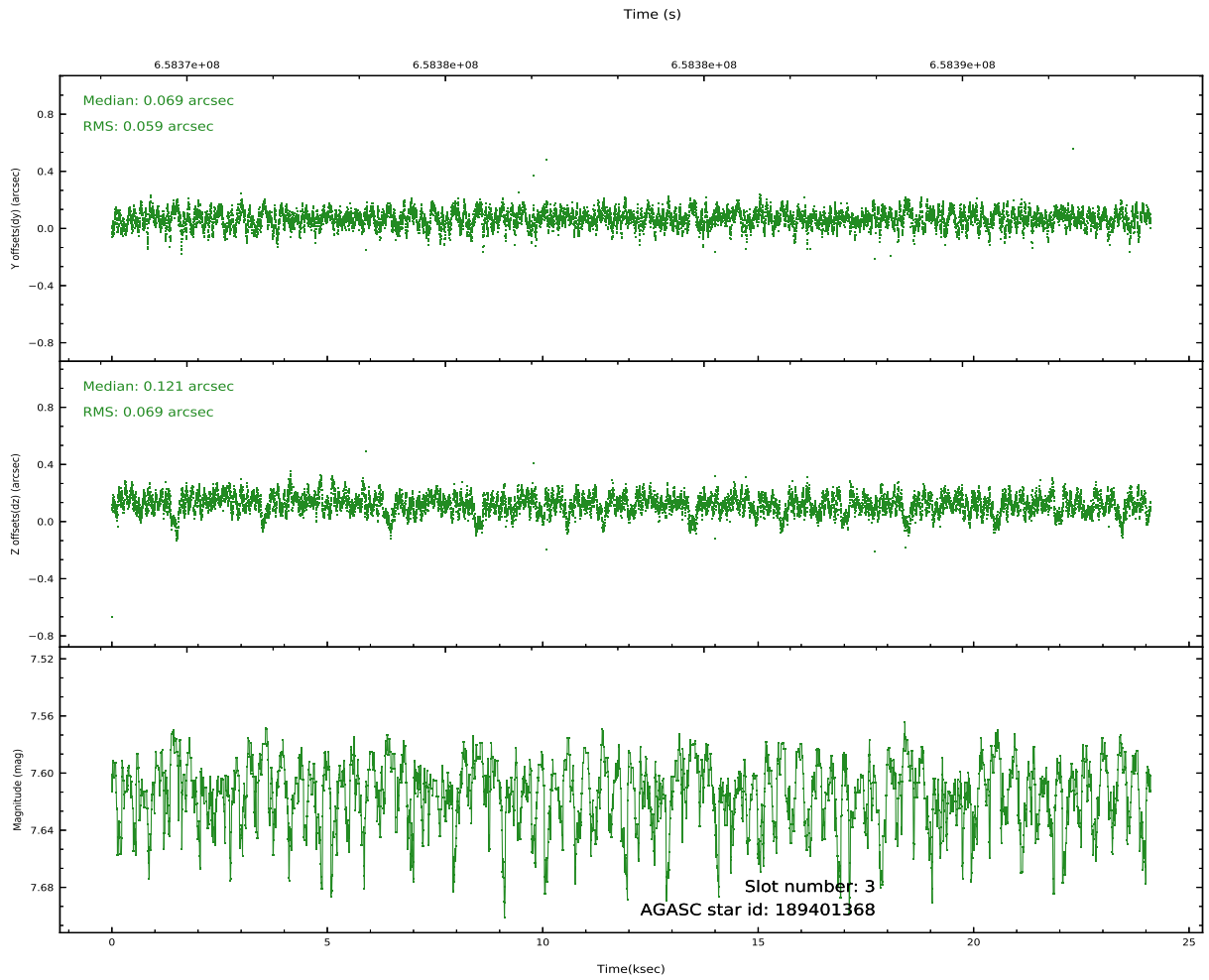
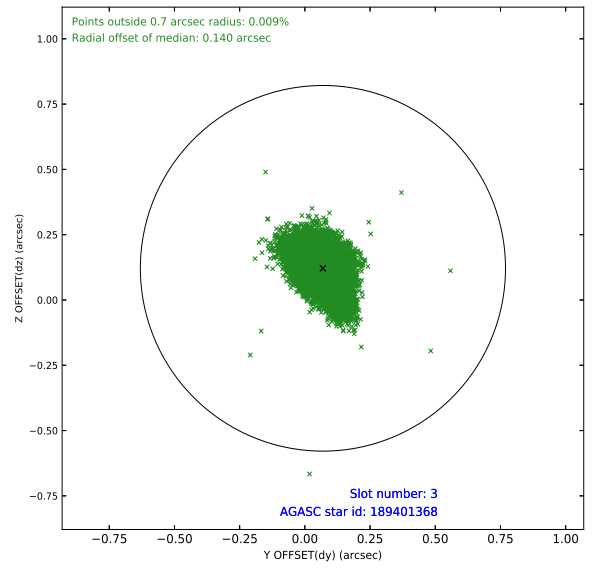
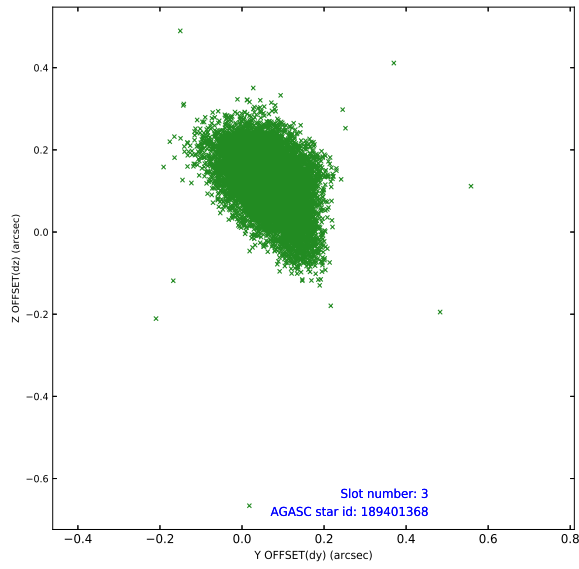


Slot Statistics

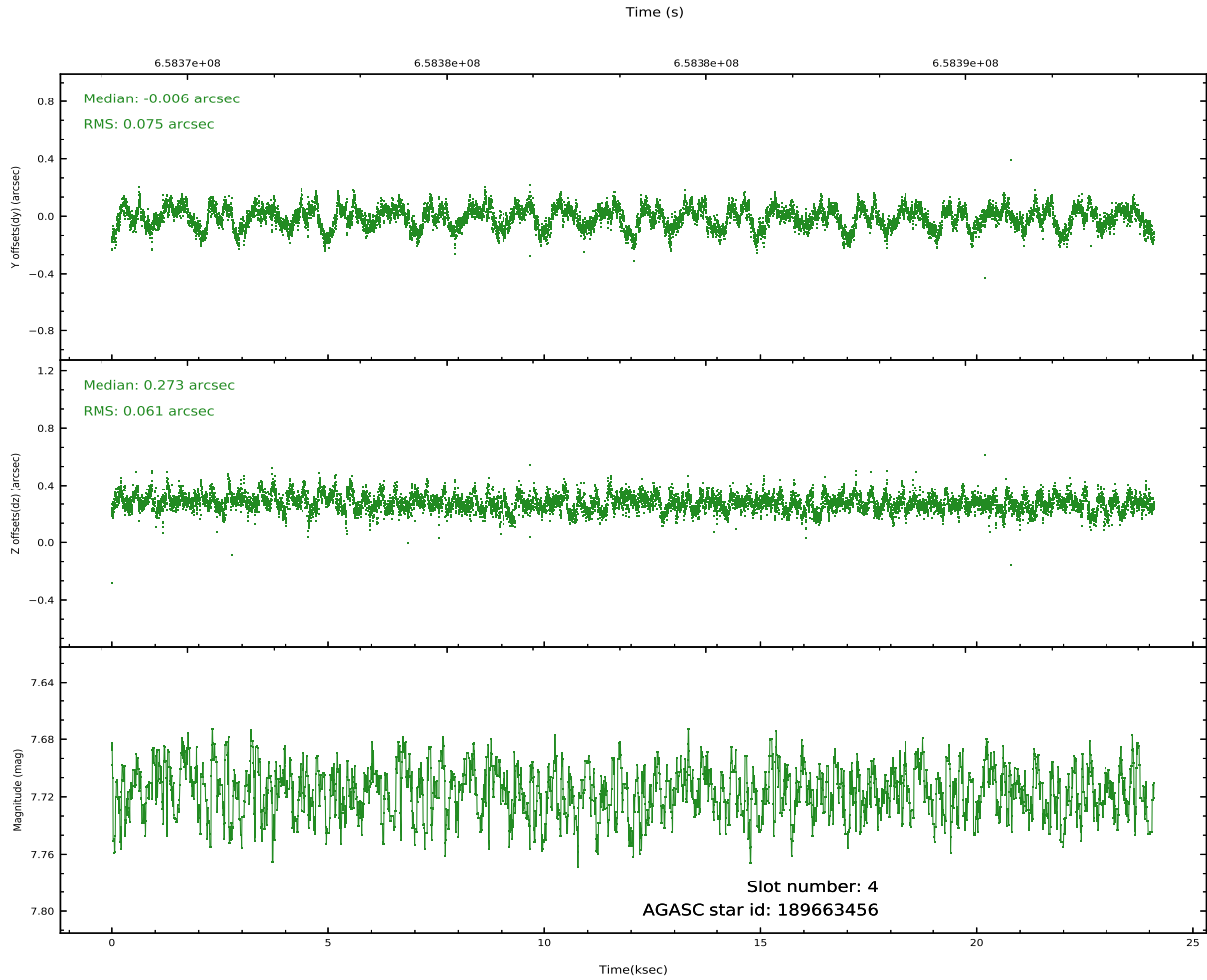
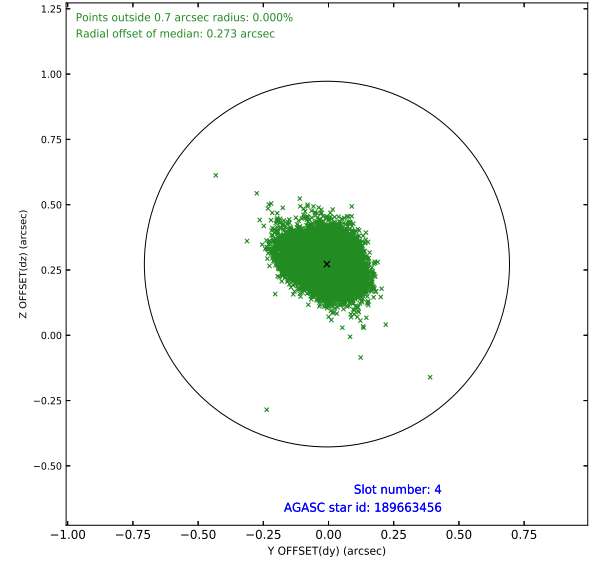
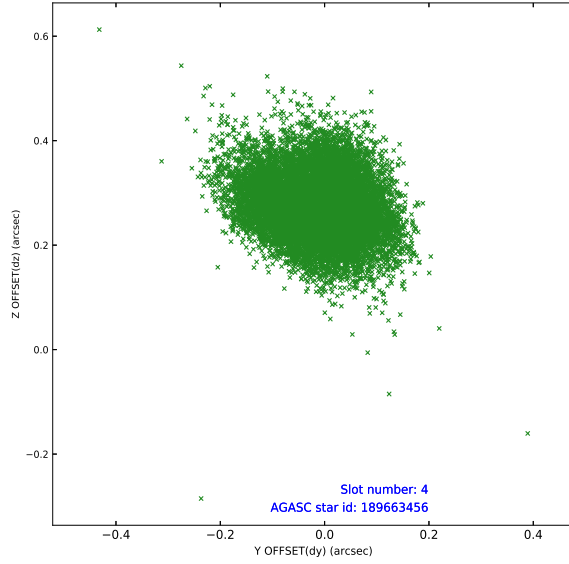
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.26	5879	1.000	0.265	-0.236	0.030	0.047	0.000000	0.000000	927.70	-915
1	FID		ACIS-I-4	7.19	5879	1.000	0.081	0.061	0.028	0.044	0.000000	0.000000	2147.60	984
2	FID		ACIS-I-5	7.23	5880	1.000	-0.444	0.246	0.028	0.043	0.000000	0.000000	-1820.68	982
3	GUIDE	used	189401368	7.61	11759	1.000	0.069	0.121	0.093	0.159	186.150770	18.668355	-1535.65	220
4	GUIDE	used	189663456	7.72	11756	1.000	-0.006	0.273	0.103	0.163	186.991225	18.802334	504.58	-1848
5	GUIDE	used	189666616	9.08	11749	1.000	0.079	-0.202	0.114	0.201	185.776817	19.143936	-858.35	2243
6	GUIDE	used	189683448	9.08	11742	1.000	-0.077	0.186	0.145	0.226	186.626682	18.890381	49.59	-649
7	GUIDE	used	189662176	9.36	11707	1.000	-0.061	-0.383	0.136	0.229	185.896976	19.371745	47.71	2375

2.4 Star Slots

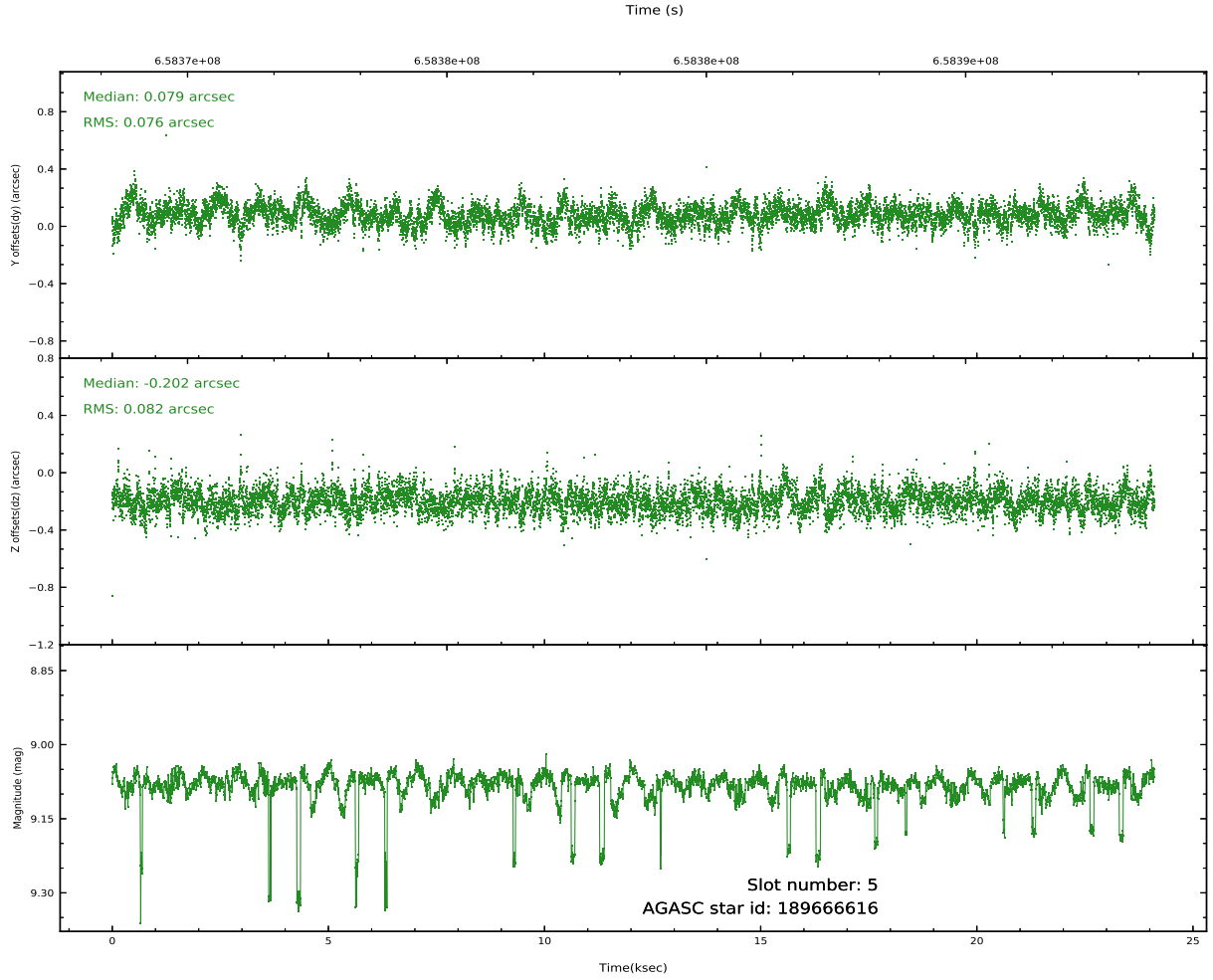
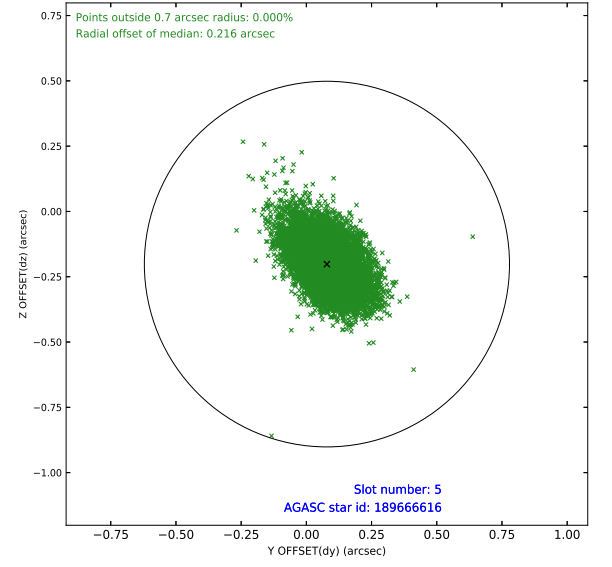
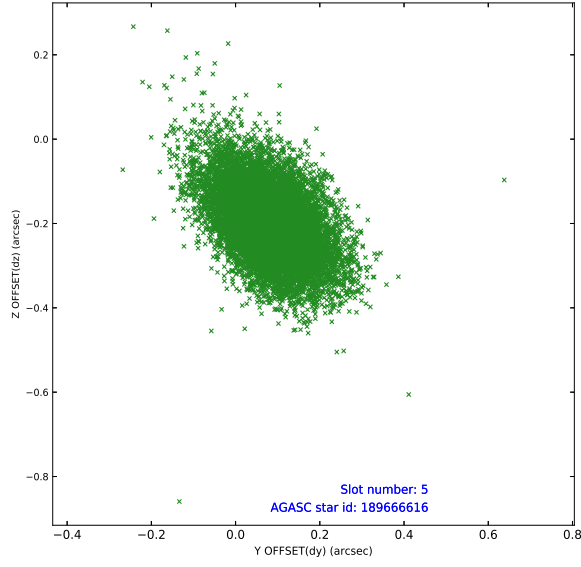
2.4.1 Slot 3



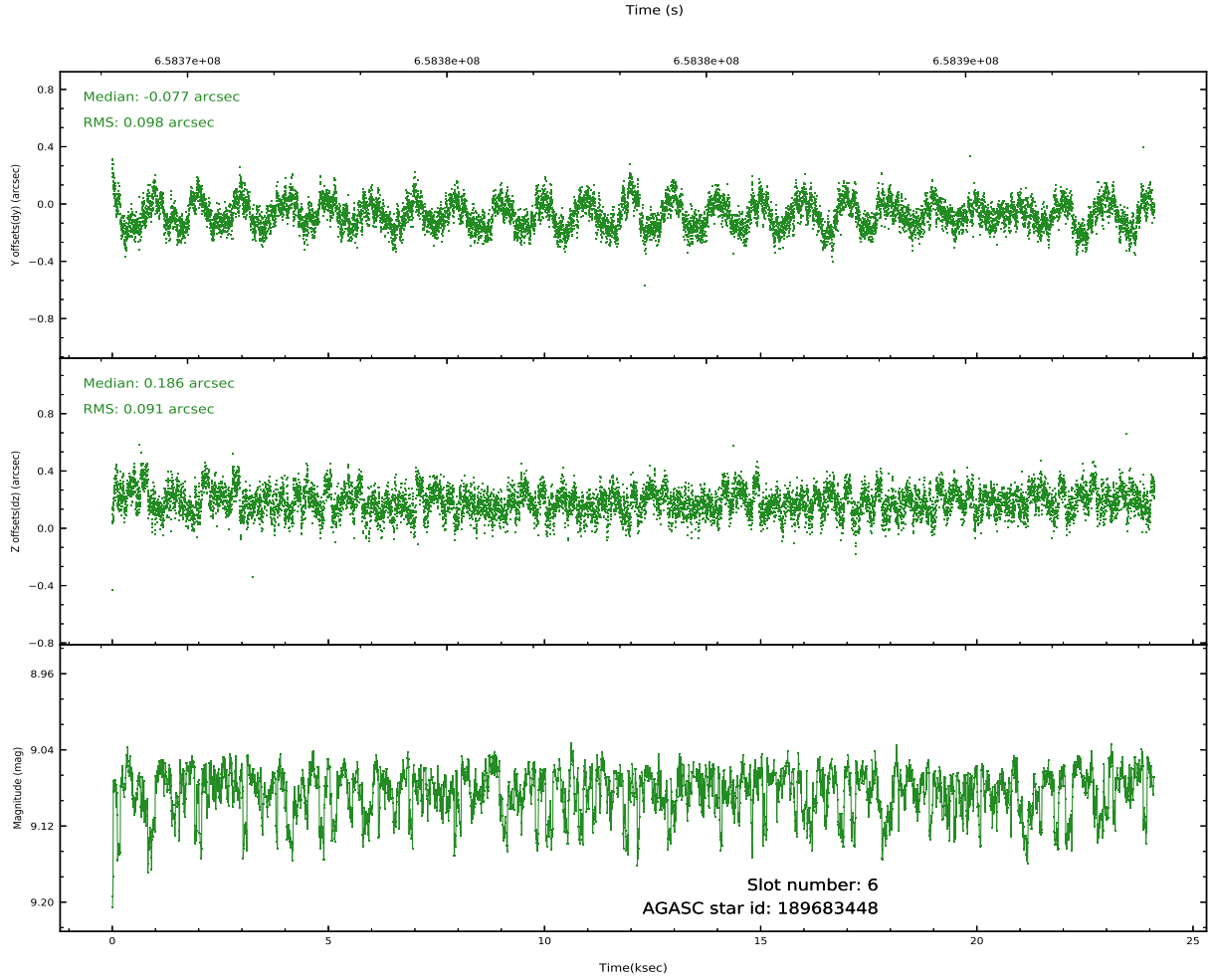
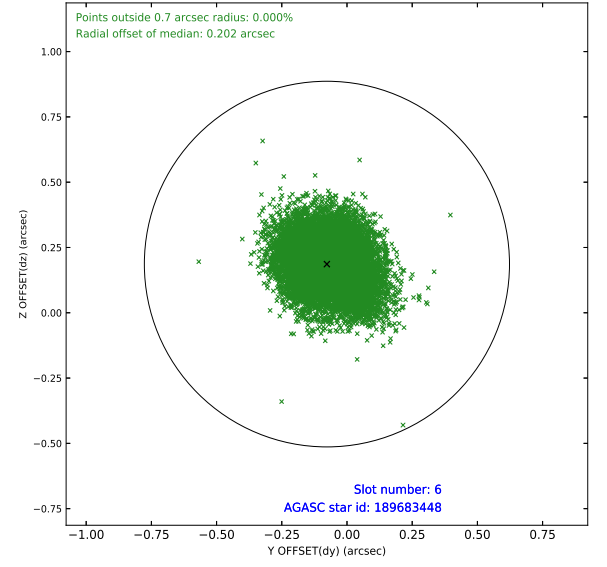
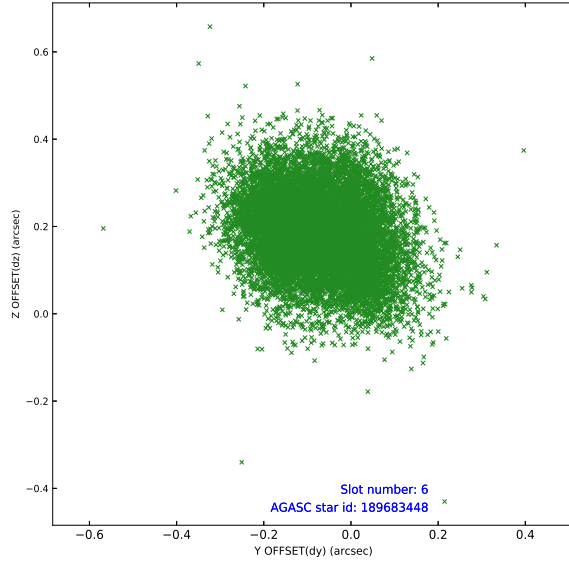
2.4.2 Slot 4



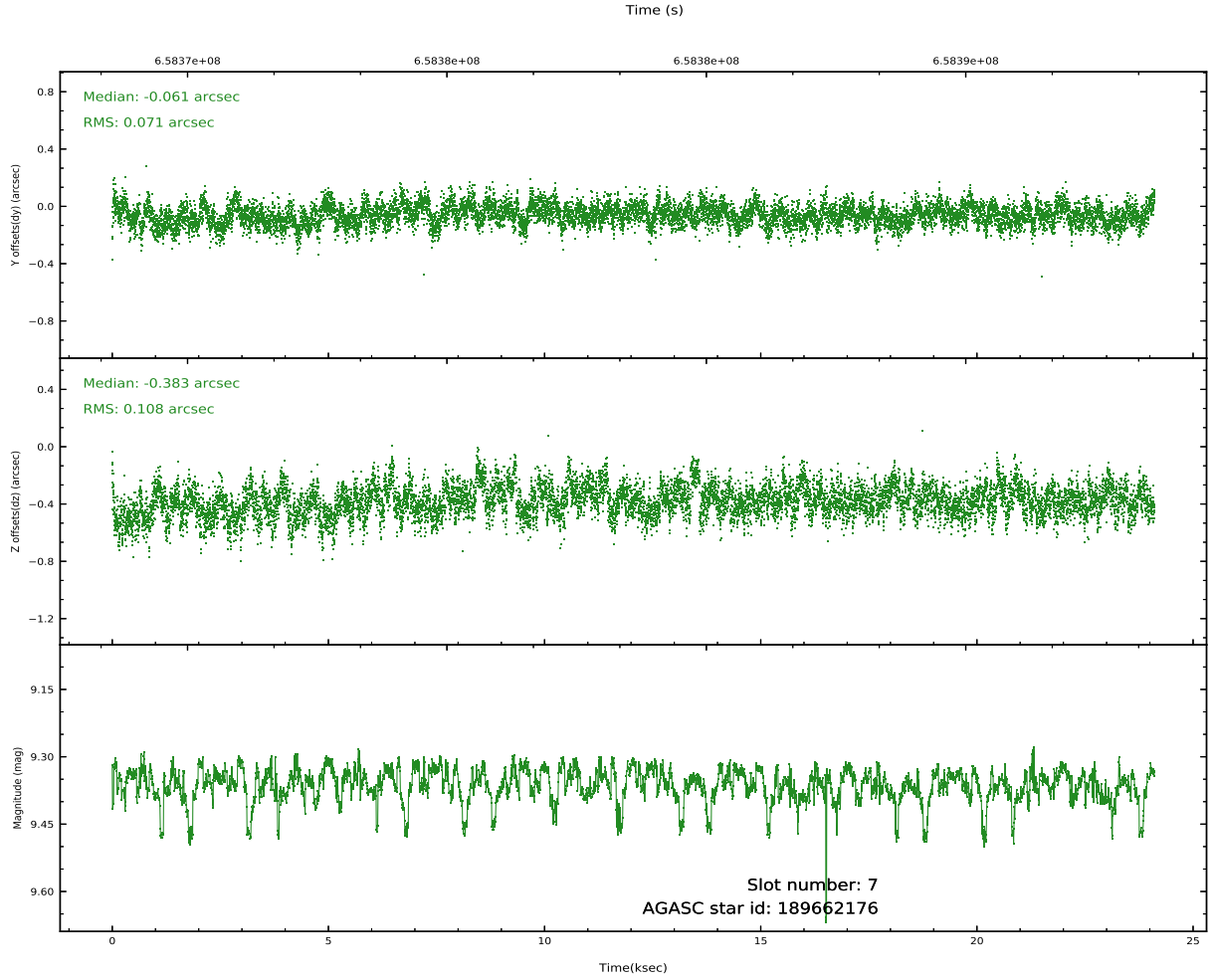
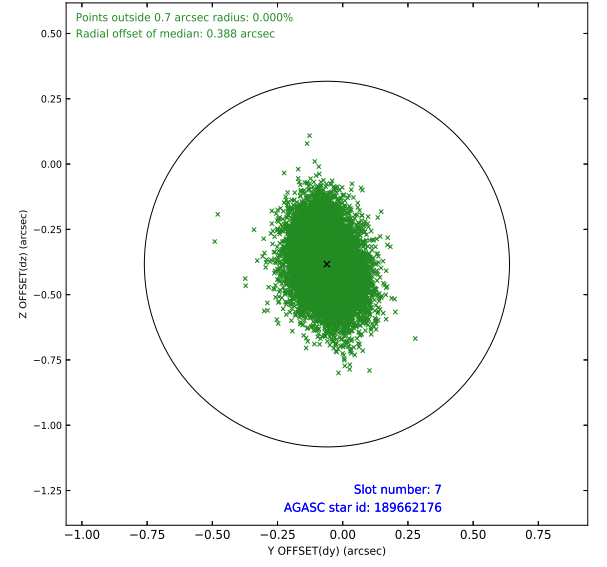
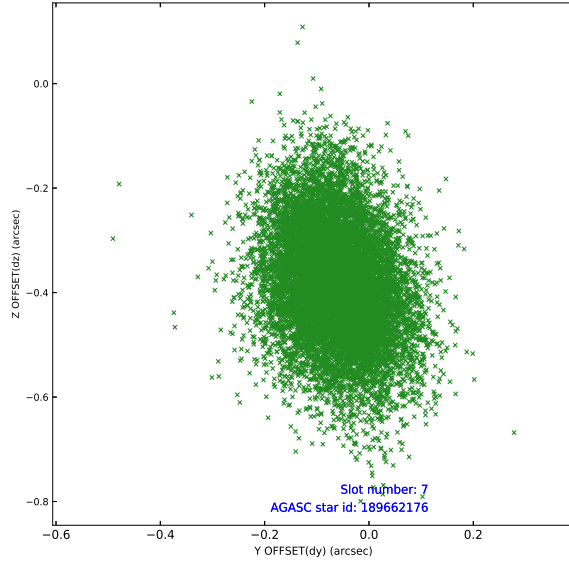
2.4.3 Slot 5



2.4.4 Slot 6

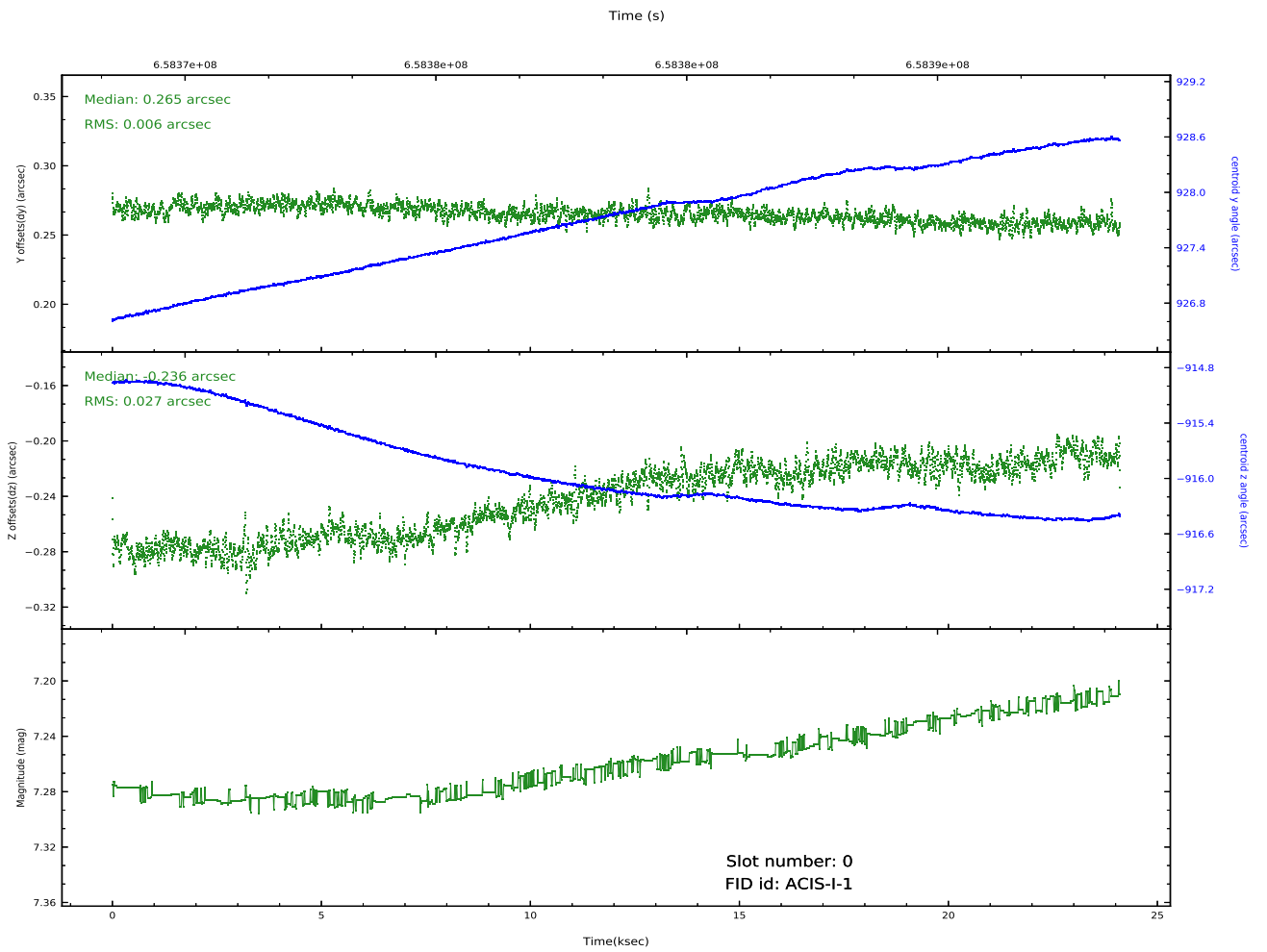
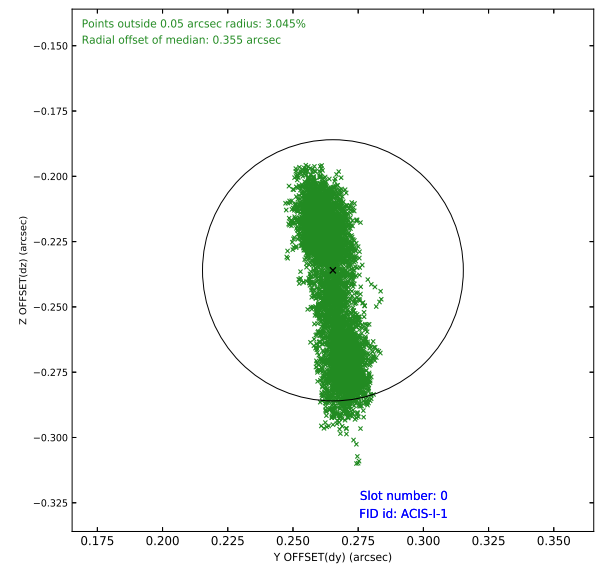
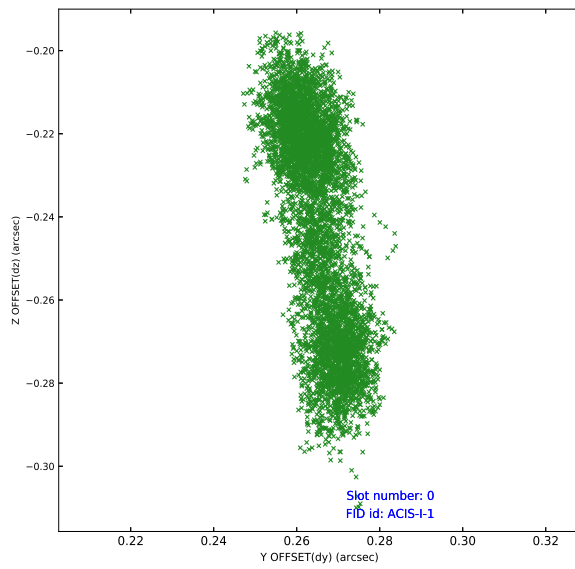


2.4.5 Slot 7

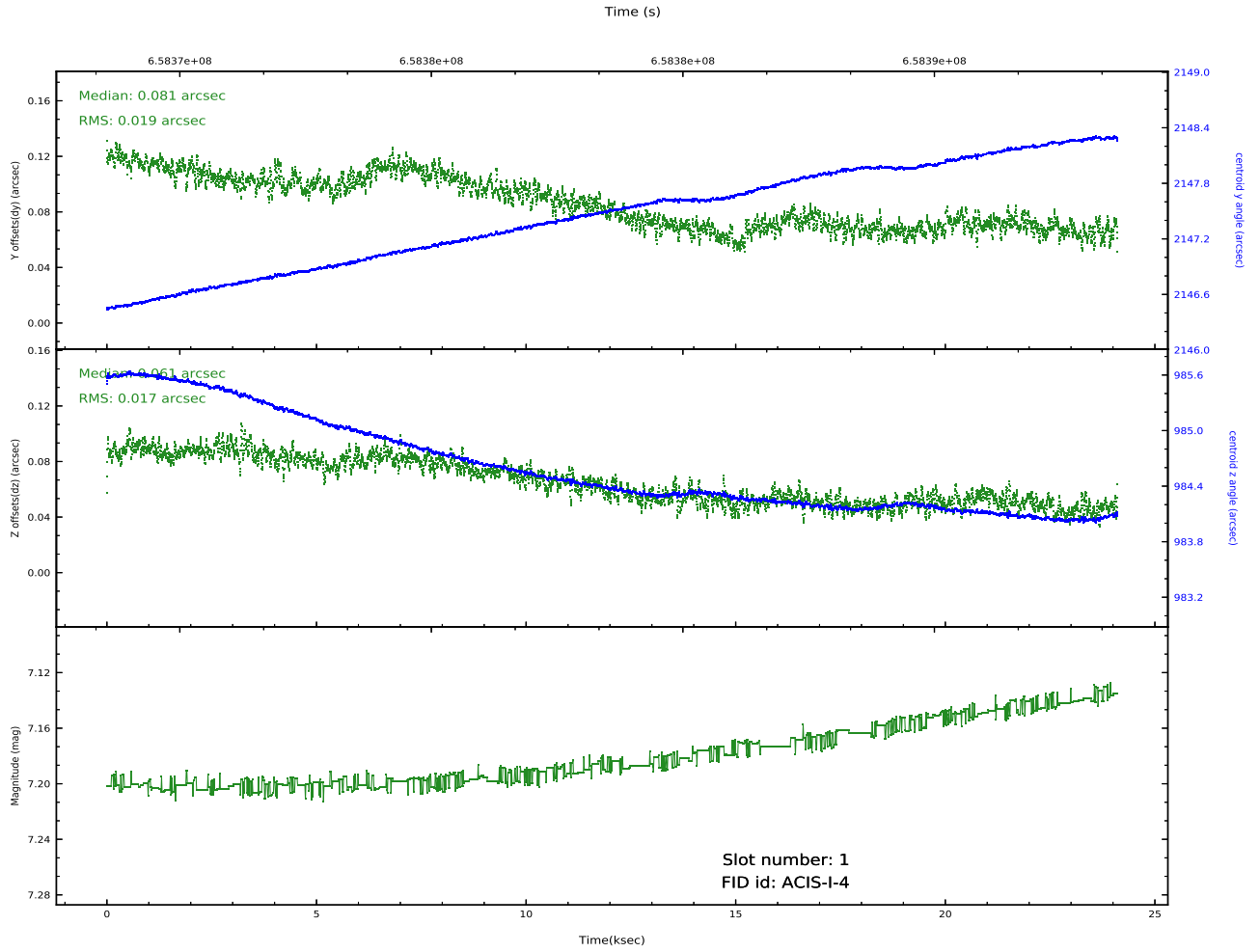
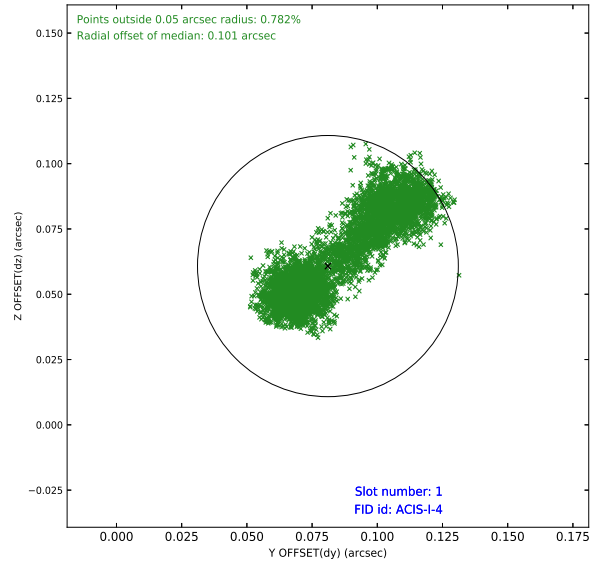
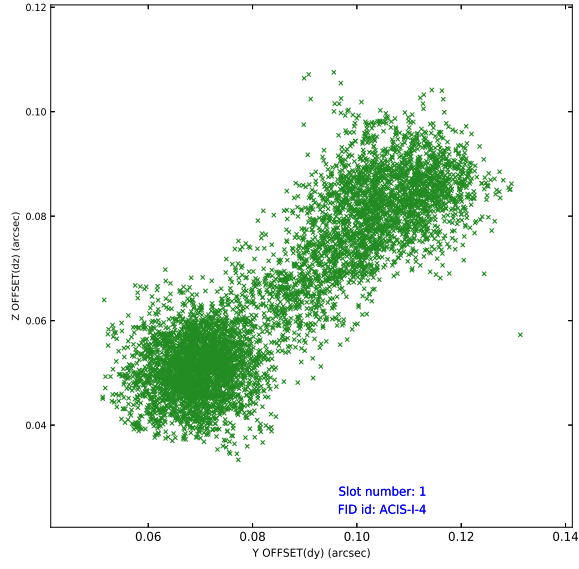


2.5 FID Slots

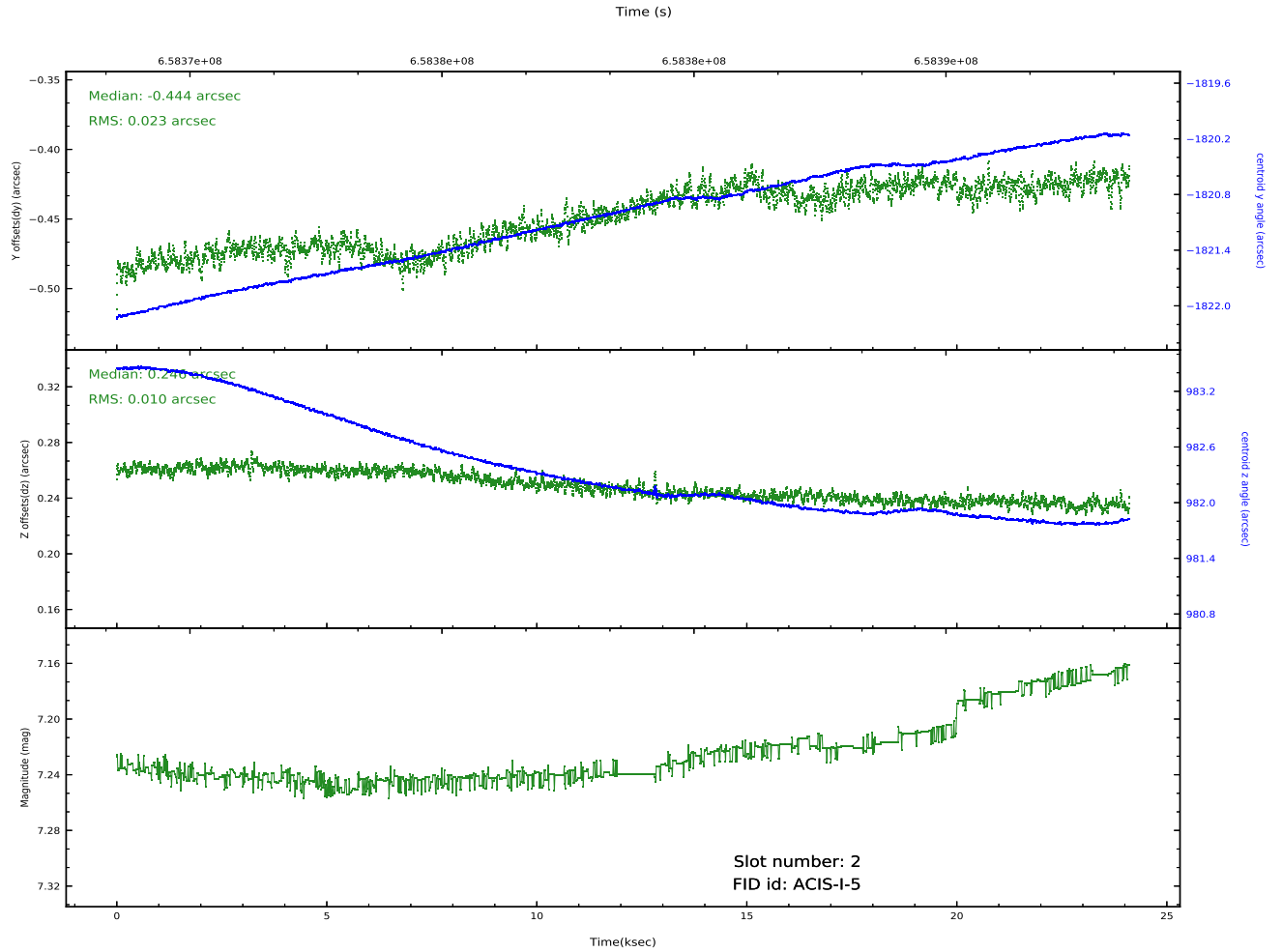
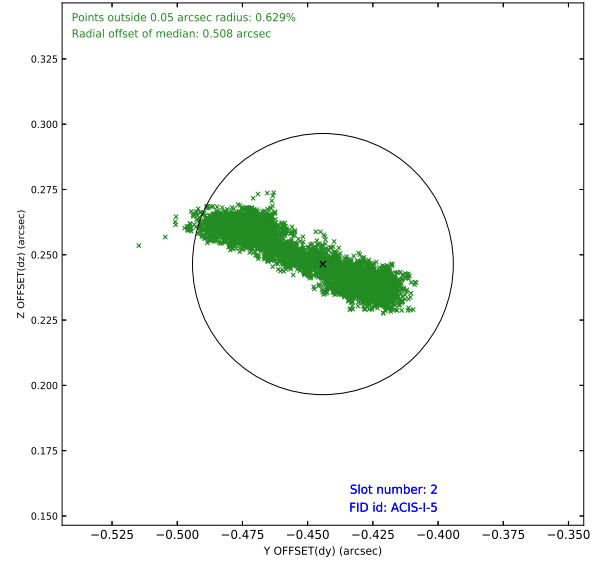
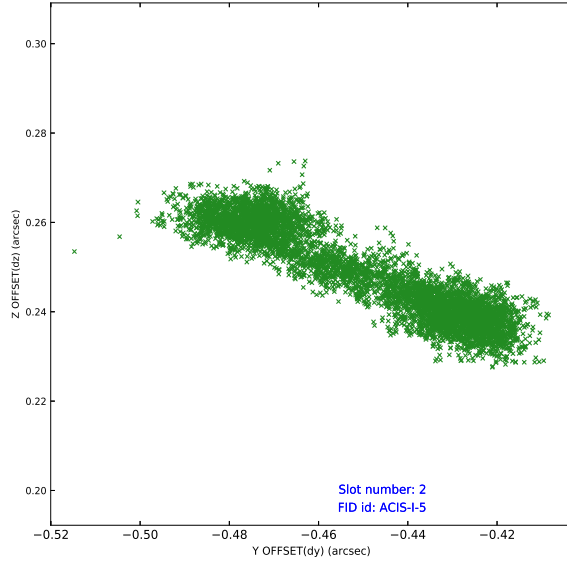
2.5.1 Slot 0



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)	2020.10.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	24.058633077025

A.2 Comments

A spatial region of the original bias map for CCD = 2 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 = 2 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: (186.53352,19.13954), (186.52866,19.14272), (186.44445,19.02819), (186.44931,19.02501).