

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20645 - L2 Version 2
Chandra X-Ray Center

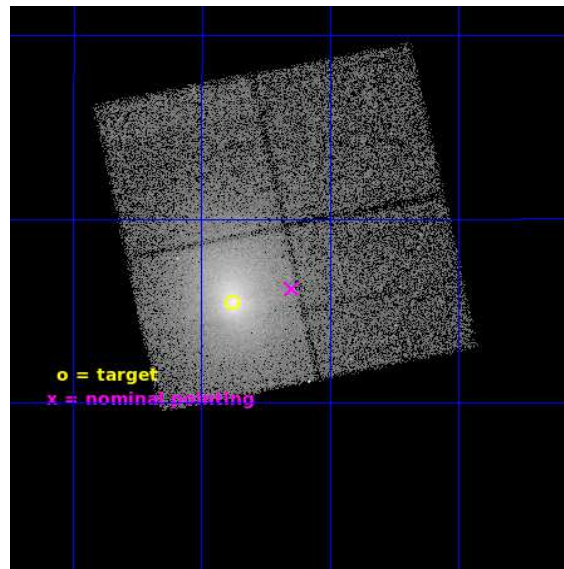
L2 Processing Date : Oct 25 2020

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1 Front

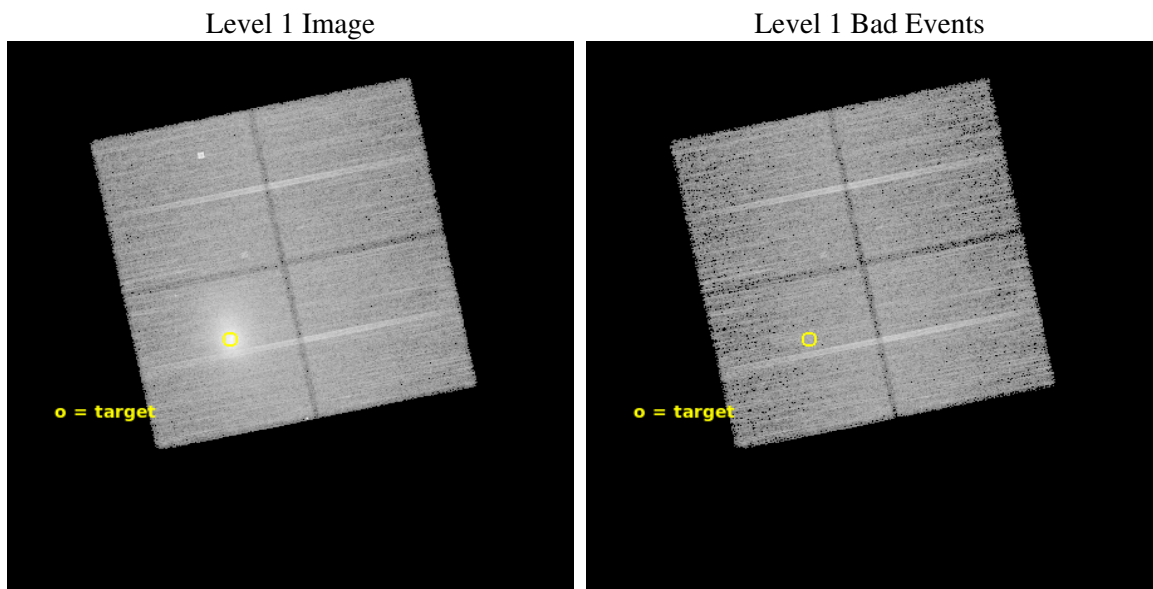
seq_num	890152	Sequence number
obs_id	20645	Observation id
title	AO-19 Calibration Observations of A1795	Proposal title
observer	CXC Calibration	Principal investigator
object	A1795	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	207.219583	Observer's specified target RA [deg]
dec_targ	26.590833	Observer's specified target Dec [deg]
ra_nom	207.16180150891	Nominal RA [deg]
dec_nom	26.603410189726	Nominal Dec [deg]
roll_nom	168.22783438397	Nominal Roll [deg]
revision	2	Processing version of data
ontime	23079.440045238	Sum of GTIs [s]
livetime	22777.89017021	Livetime [s]
ontime0	23073.034814835	Sum of GTIs [s]
ontime1	23069.934814572	Sum of GTIs [s]
ontime2	23073.116914868	Sum of GTIs [s]
ontime3	23079.440045238	Sum of GTIs [s]
l2events	189871	Number of level 2 events



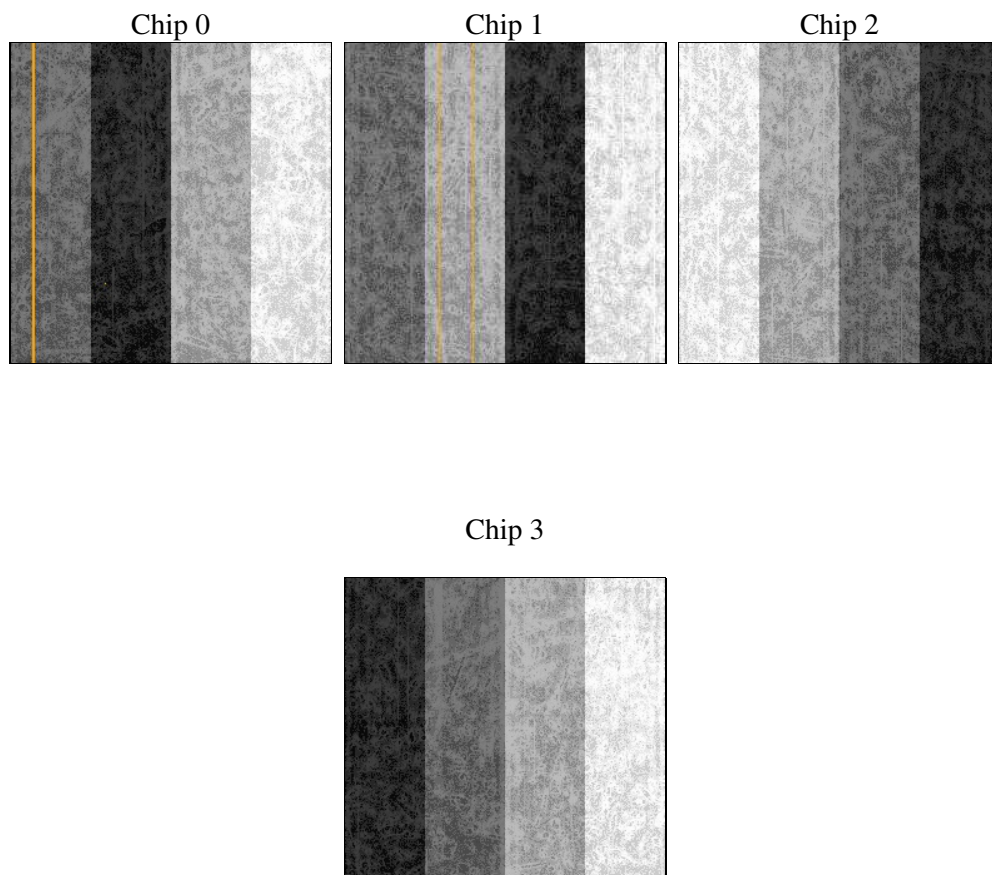
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	23000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	23079.440045238	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	23073.034814835	Sum of GTIs [s]
date	2020-10-25T11:53:20	Date and time of file creation	ontime1	23069.934814572	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	23073.116914868	Sum of GTIs [s]
			ontime3	23079.440045238	Sum of GTIs [s]
			l1events	811355	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	159878	174483	186559	290435
rejected events	139313	142648	163132	157012
rejected %	87%	81%	87%	54%

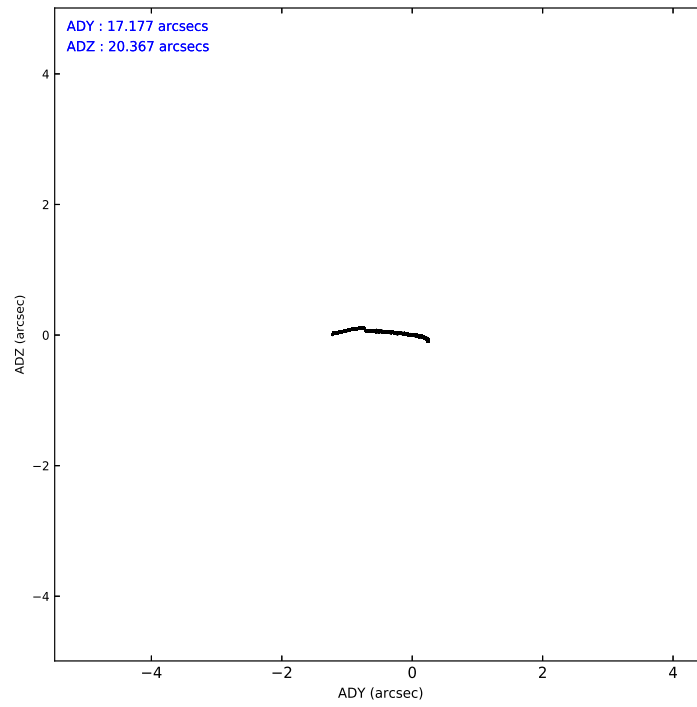
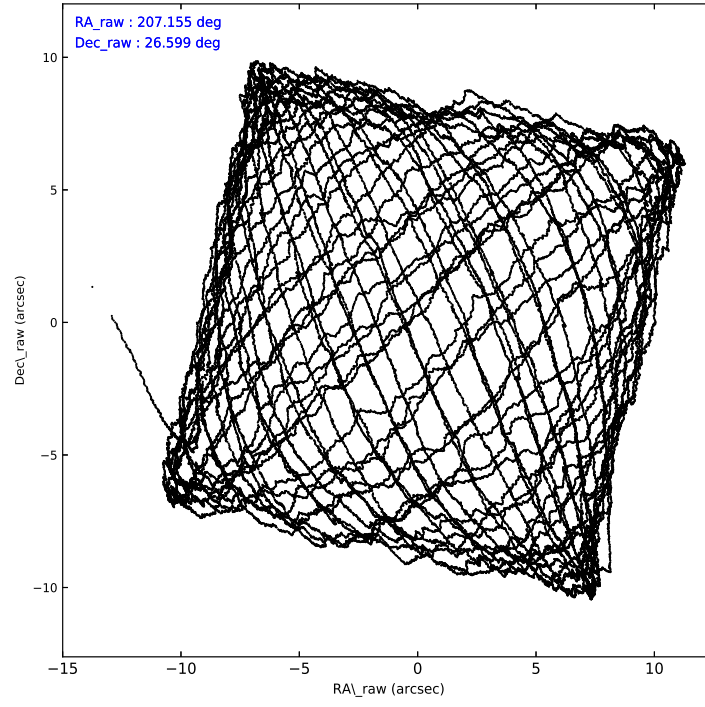
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	7825	15887	10882	99048
	4%	9%	5%	34%
grade 1 events	91	140	122	591
	0%	0%	0%	0%
grade 2 events	4918	6522	4903	15954
	3%	3%	2%	5%
grade 3 events	1883	2160	1934	5701
	1%	1%	1%	1%
grade 4 events	1871	2104	2012	5578
	1%	1%	1%	1%
grade 5 events	6951	7527	6514	8536
	4%	4%	3%	2%
grade 6 events	4076	5166	3699	7150
	2%	2%	1%	2%
grade 7 events	132263	134977	156493	147877
	82%	77%	83%	50%

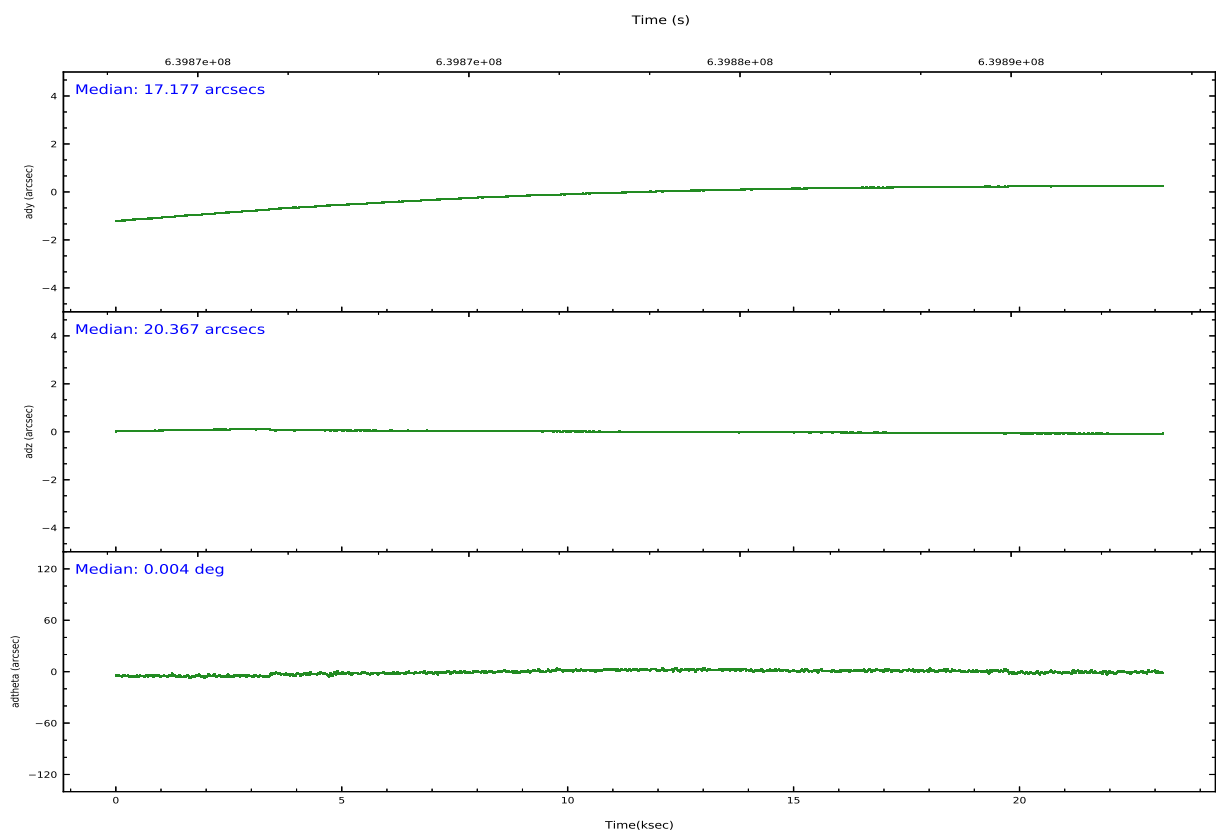
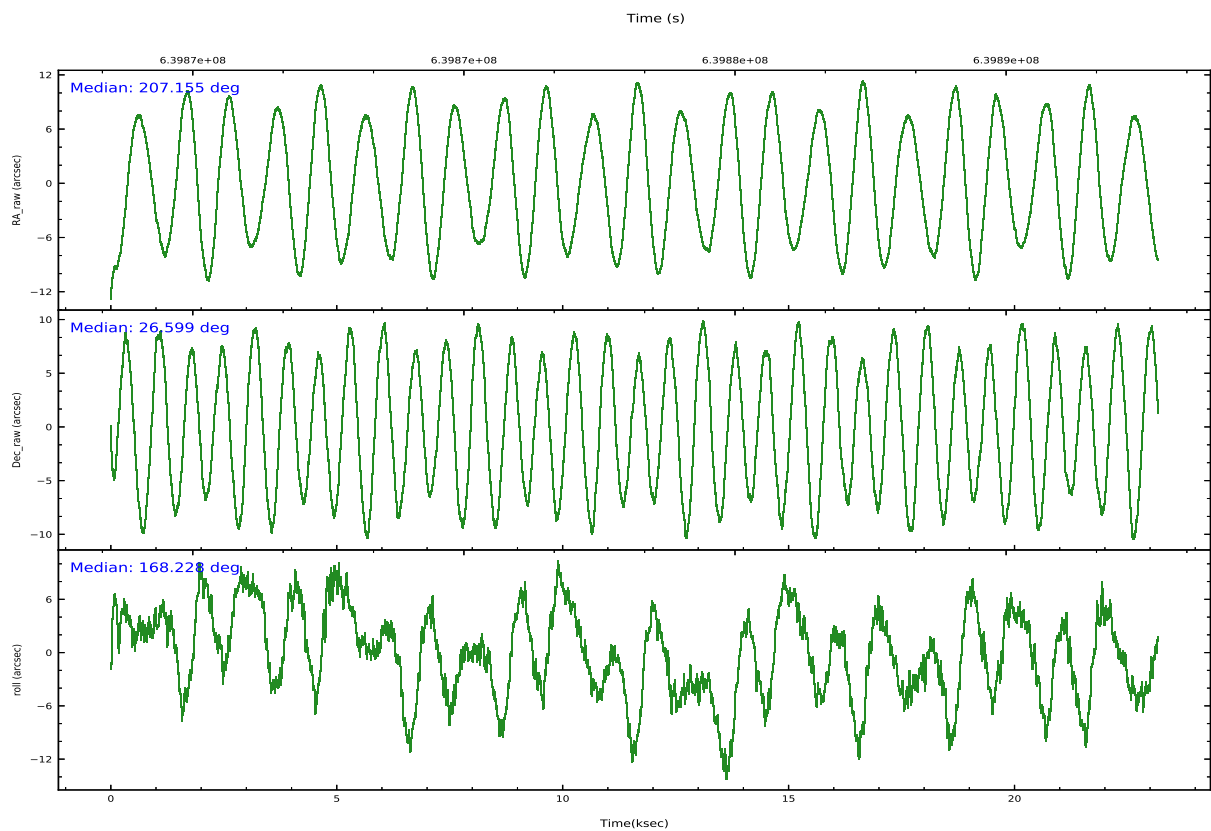
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-0123	ACIS-0123
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	207.184399	207.16180150891
[deg] Pointing Dec	26.607402	26.603410189726
[deg] Pointing Roll	168.015742	168.22783438397
[s] Window start time (MET)	638928069.184000	638928069.184000
[s] Window stop time (MET)	641433669.184000	641433669.184000
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-224.862463	-224.8602460491139
[mm] SIM translation stage offset	-8.73	-8.732206953815762
[s] Observation start time (MET)	639866363.184000	639865434.6279401
Observation start date	2018-04-11T20:38:14	2018-04-11T20:23:54
[s] Observation end time (MET)	639889363.184000	639890050.51689
Observation end date	2018-04-12T03:01:34	2018-04-12T03:14:10
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	N
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



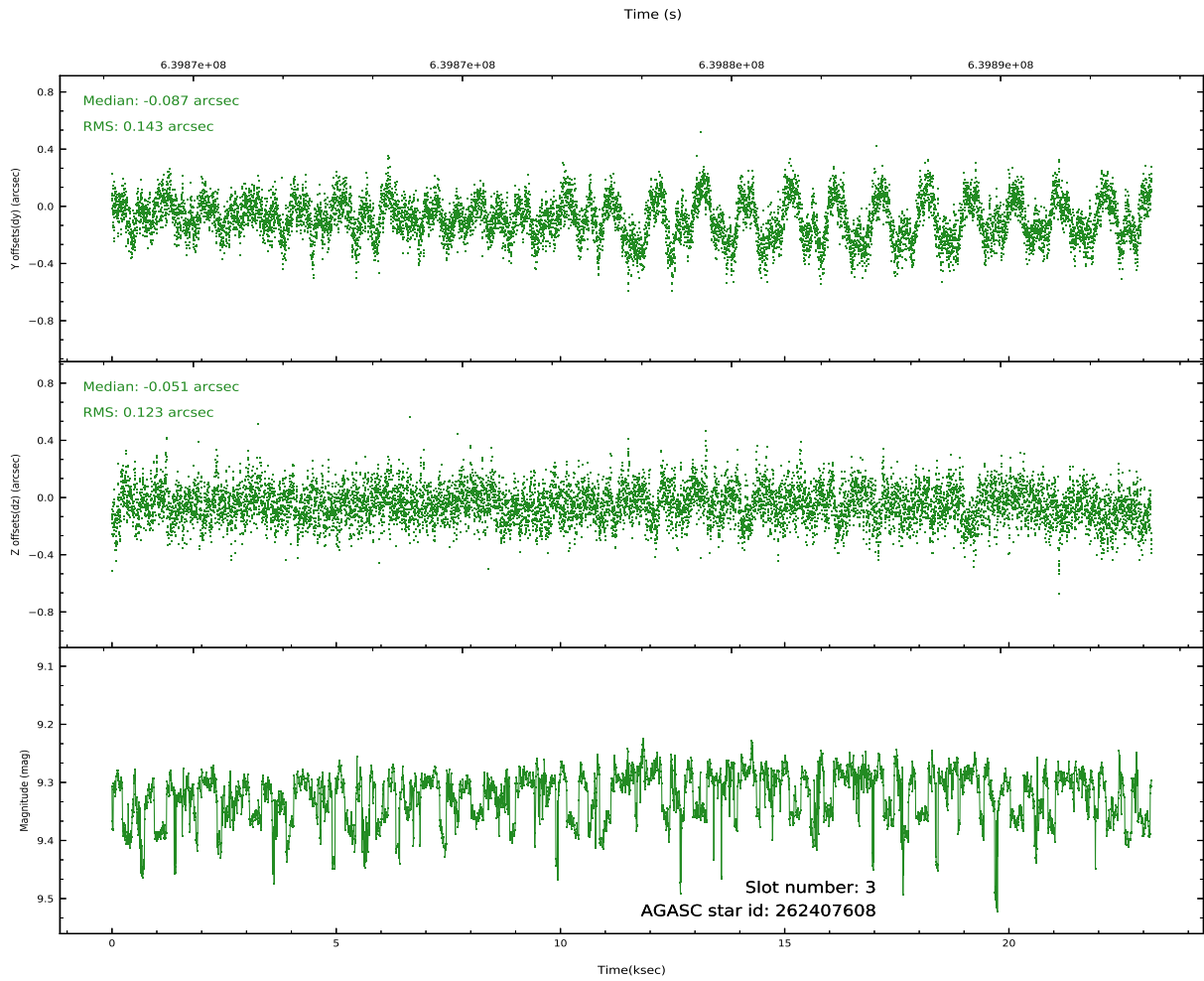
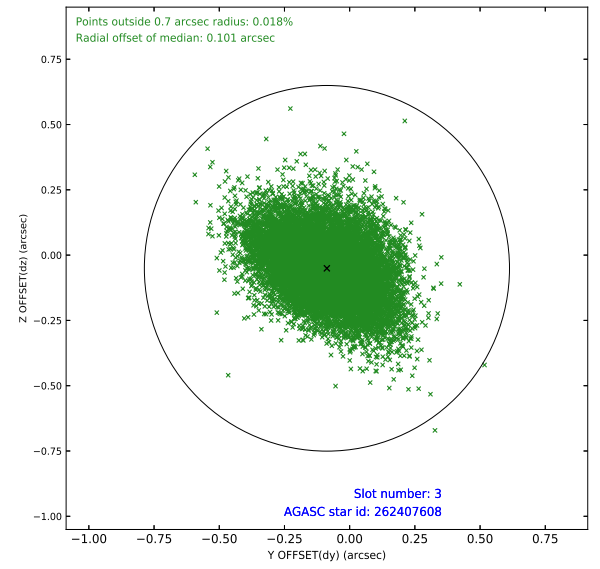
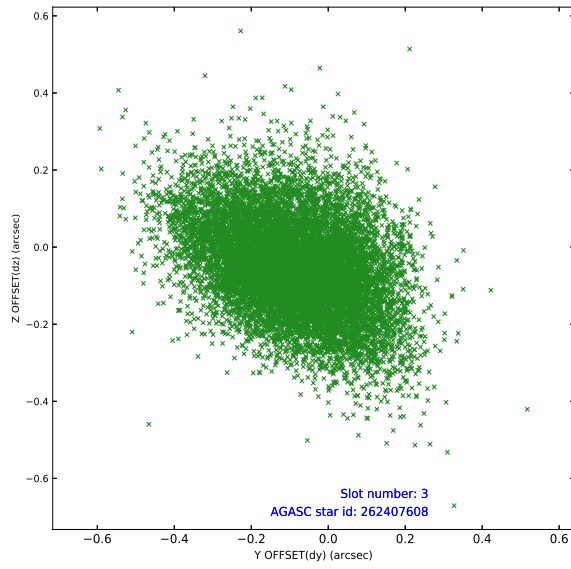


Slot Statistics

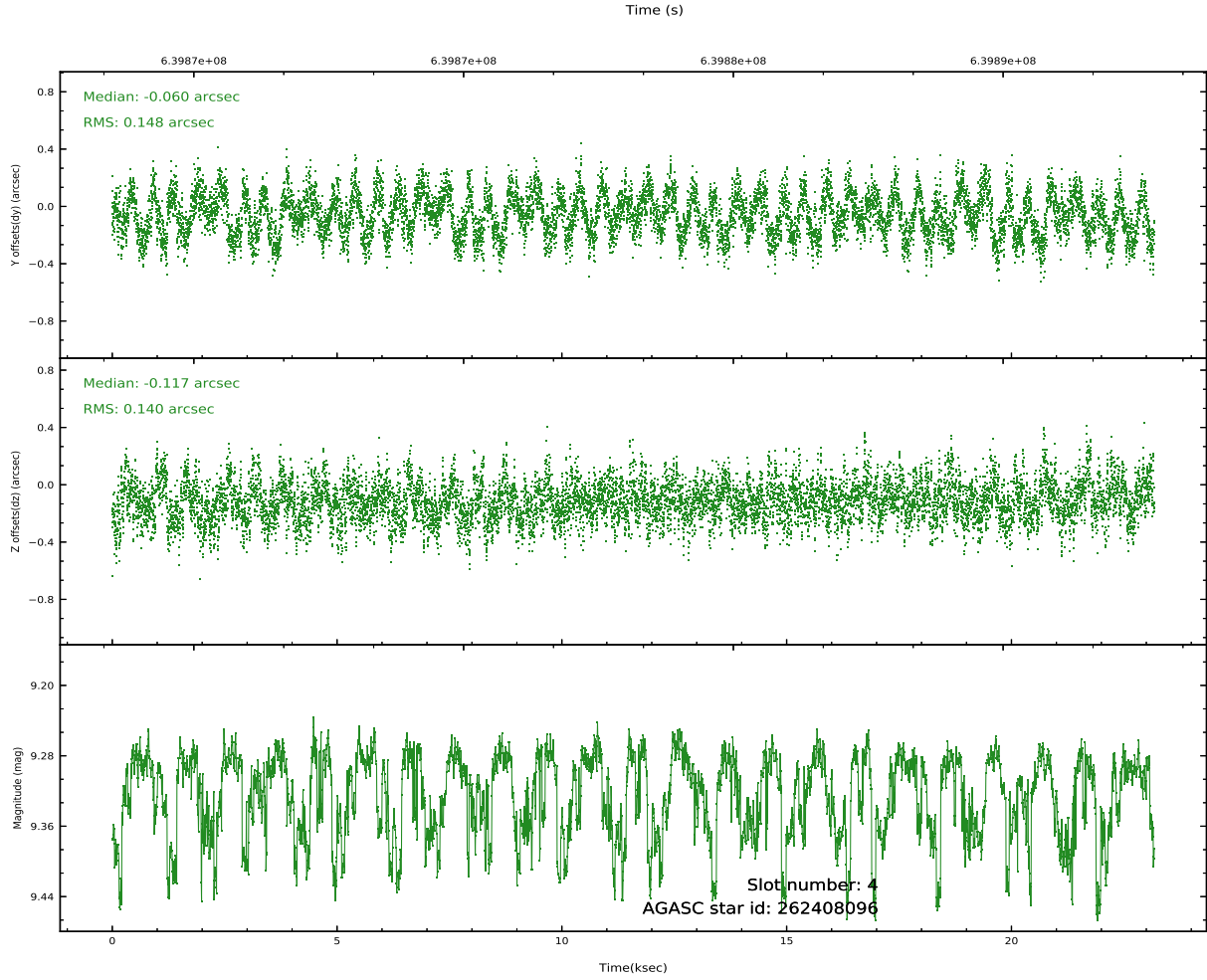
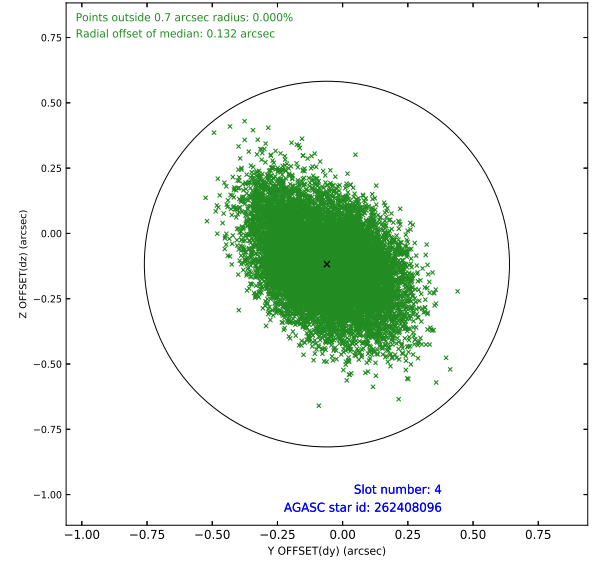
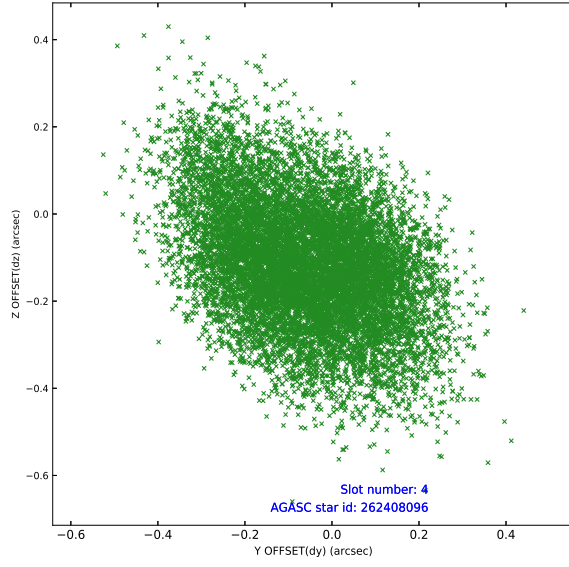
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	5651	1.000	0.327	-0.293	0.018	0.026	0.000000	0.000000	922.45	-1023
1	FID		ACIS-I-2	7.17	5654	1.000	-0.330	0.188	0.017	0.045	0.000000	0.000000	-772.69	-1028
2	FID		ACIS-I-4	7.12	5654	1.000	-0.089	0.173	0.012	0.024	0.000000	0.000000	2141.56	877
3	GUIDE	used	262407608	9.31	11292	1.000	-0.087	-0.051	0.199	0.326	207.378401	26.435507	-740.38	475
4	GUIDE	used	262408096	9.32	11292	1.000	-0.060	-0.117	0.217	0.352	207.011678	26.515421	476.26	439
5	GUIDE	used	262408512	7.96	11304	1.000	-0.010	0.103	0.158	0.263	207.800210	27.128796	-1538.90	-2250
6	GUIDE	used	262408936	9.60	11285	1.000	-0.028	0.141	0.218	0.374	207.154731	26.726554	182.05	-399
7	GUIDE	used	262409552	8.17	11295	1.000	0.174	-0.079	0.163	0.290	206.584269	27.192805	2319.04	-1666

2.4 Star Slots

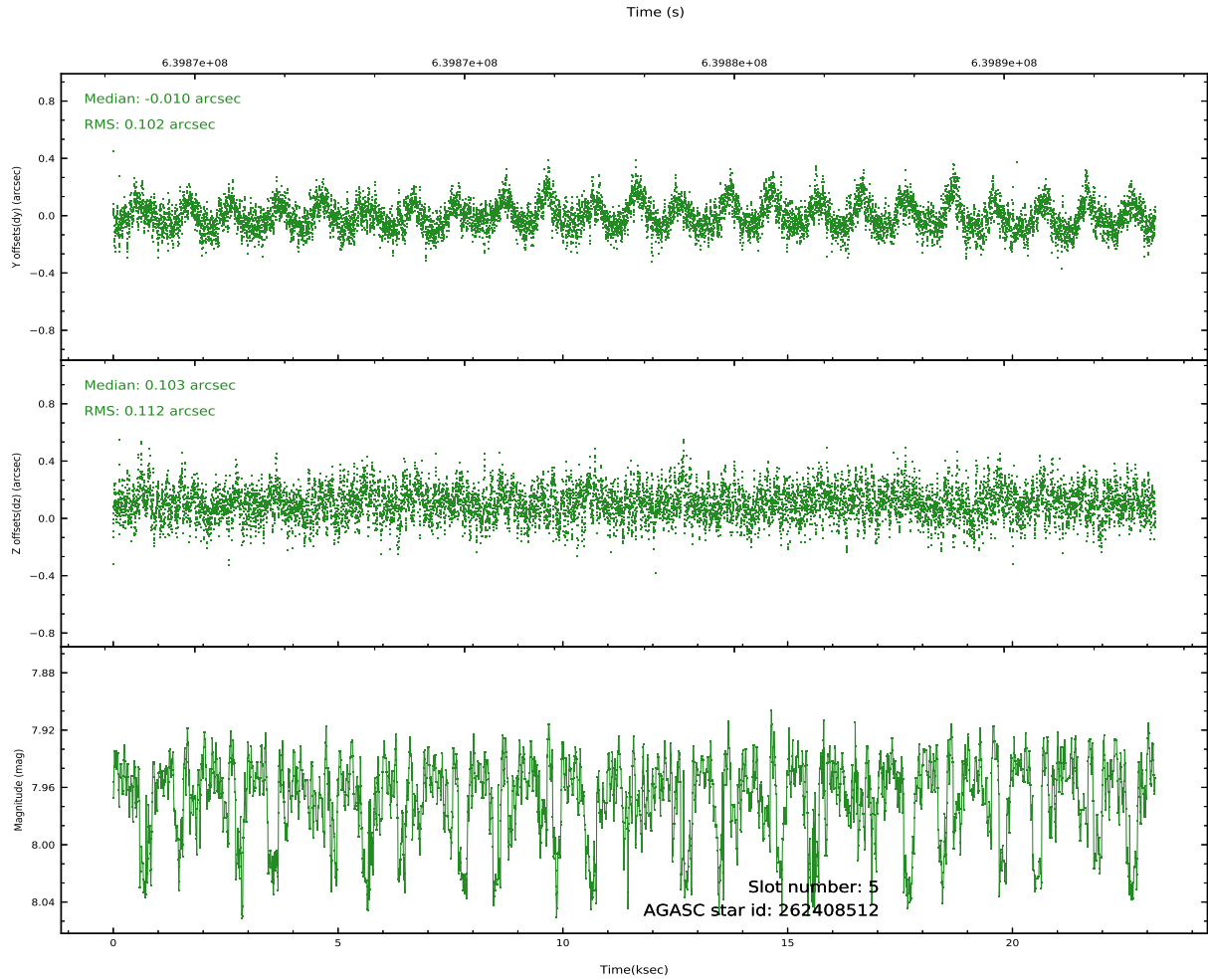
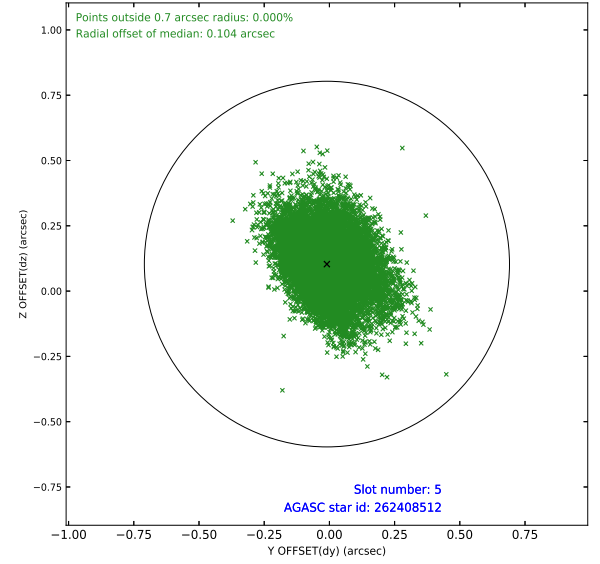
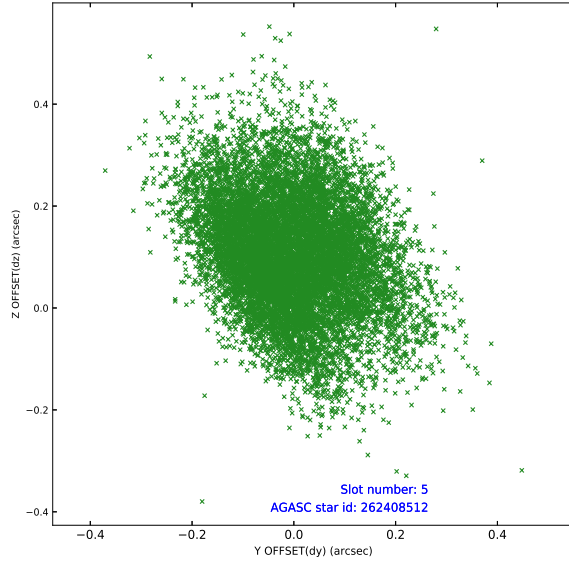
2.4.1 Slot 3



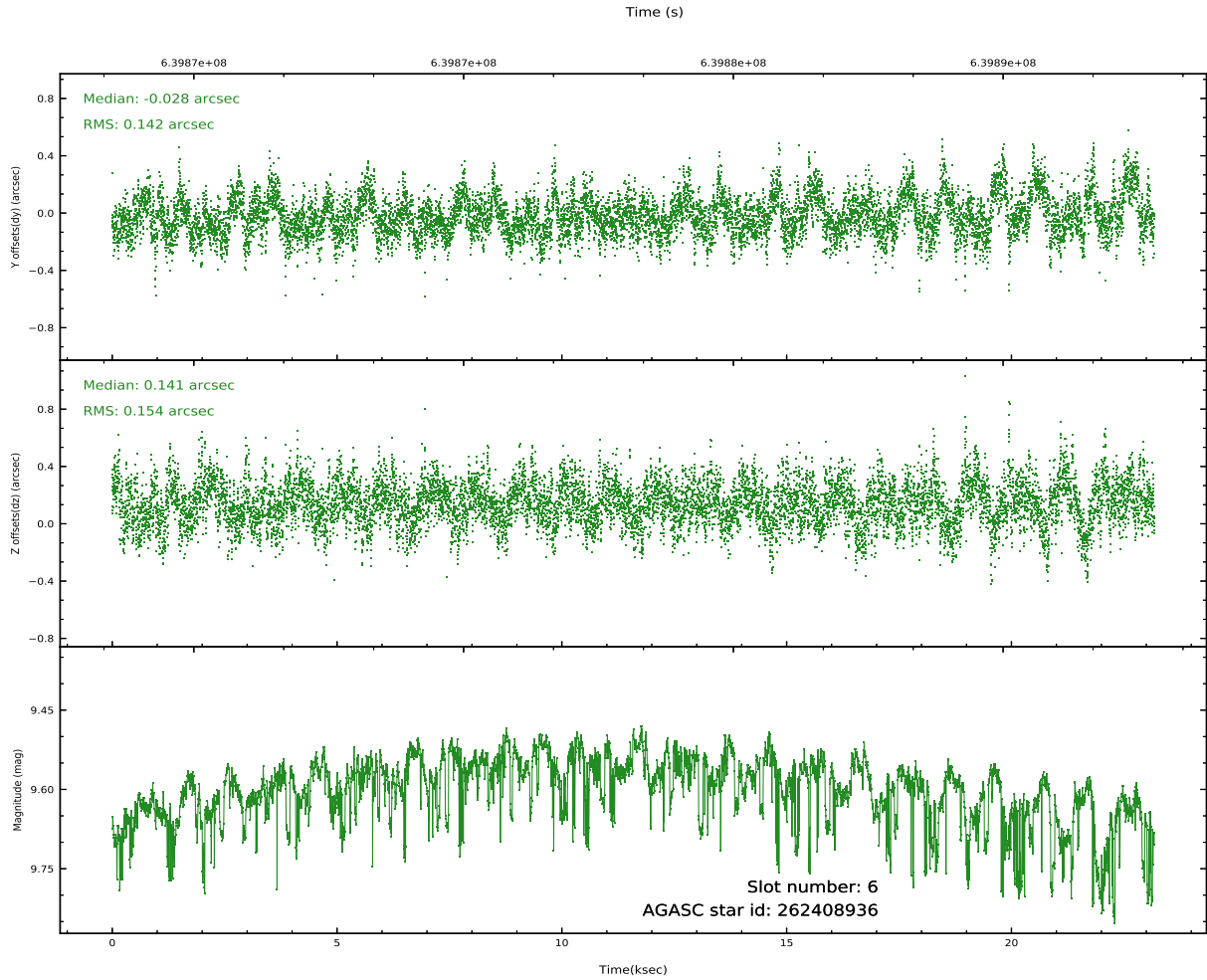
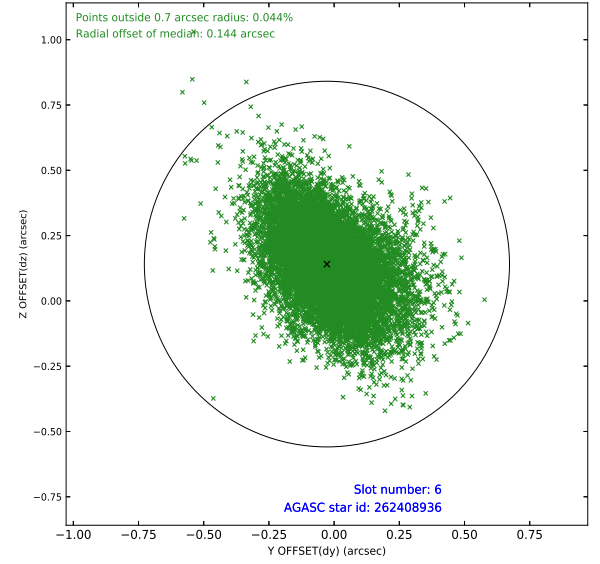
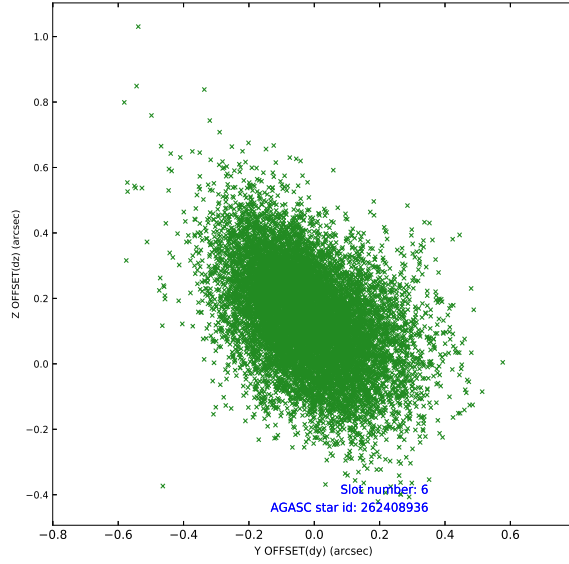
2.4.2 Slot 4



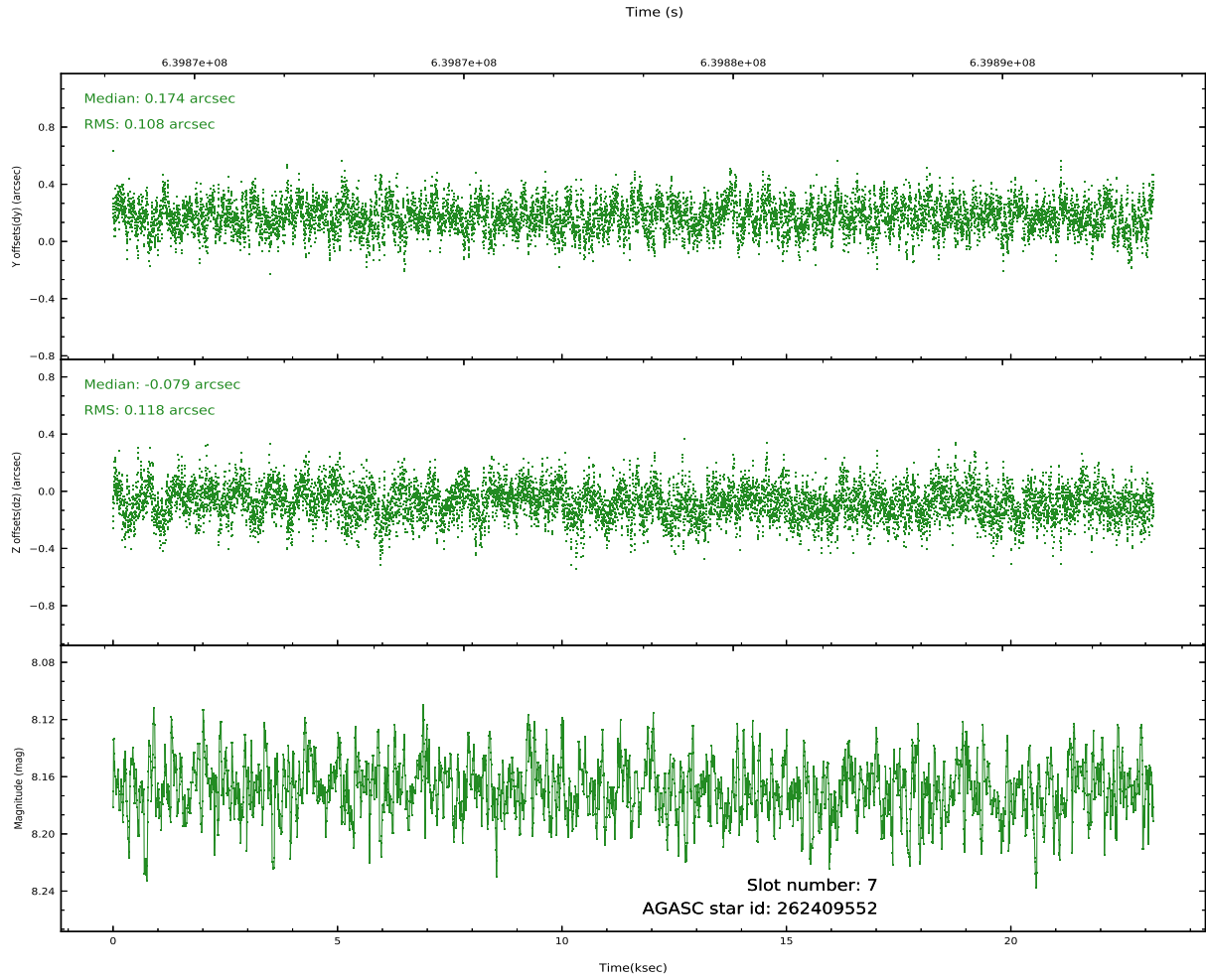
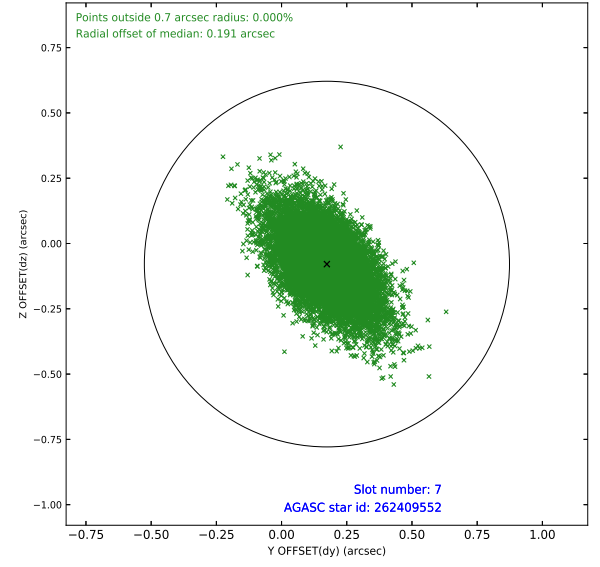
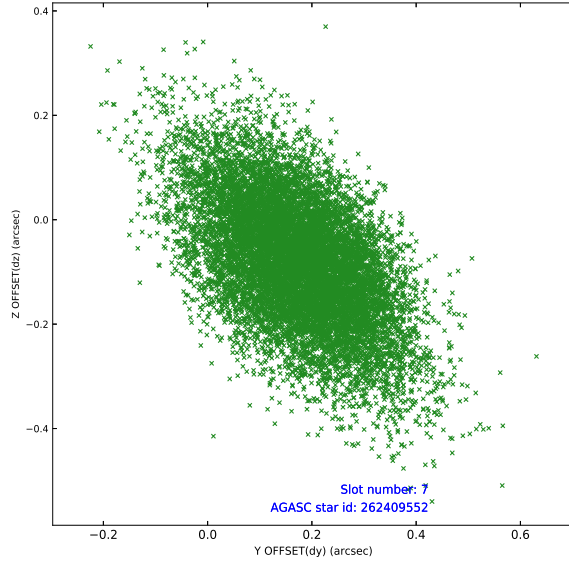
2.4.3 Slot 5



2.4.4 Slot 6

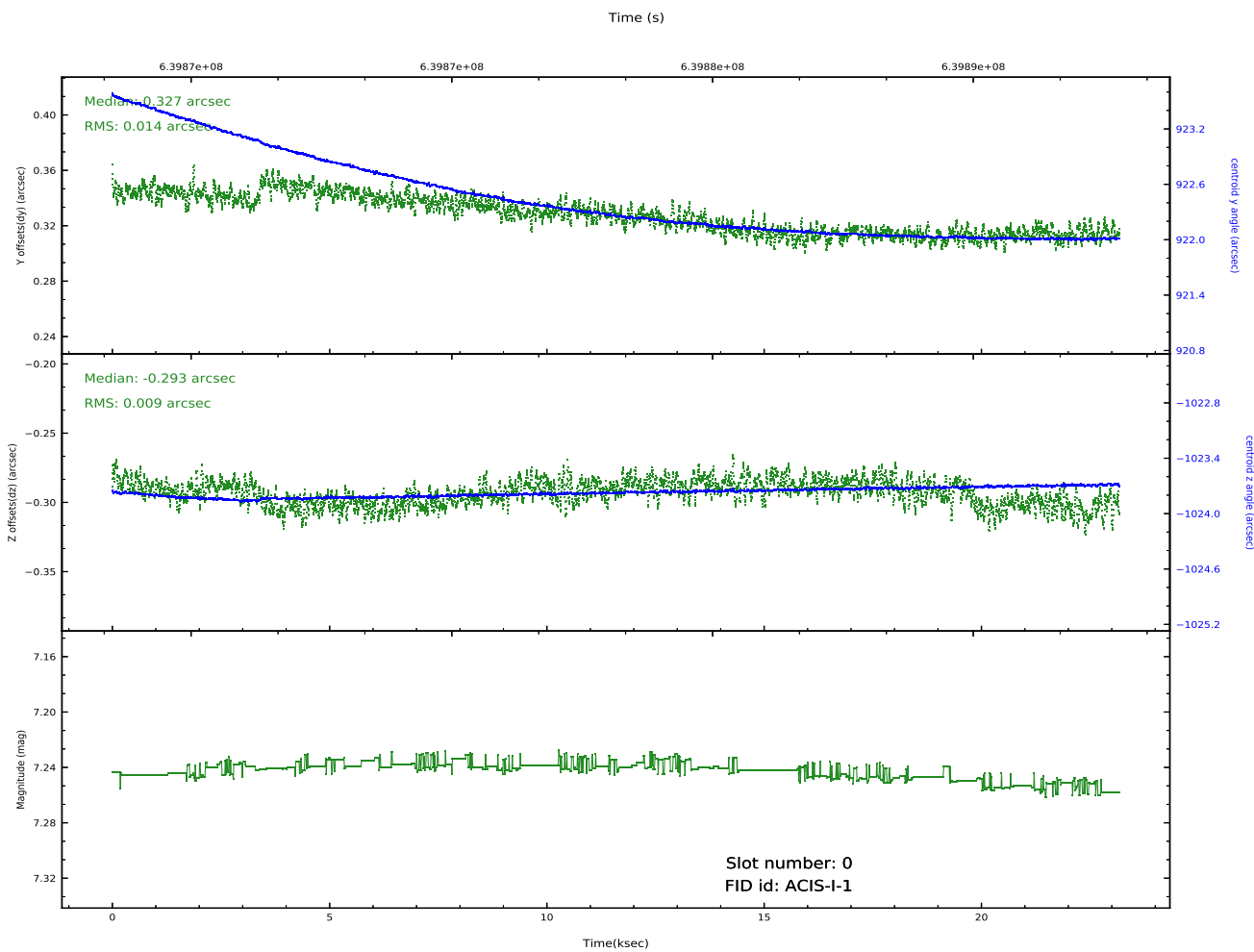
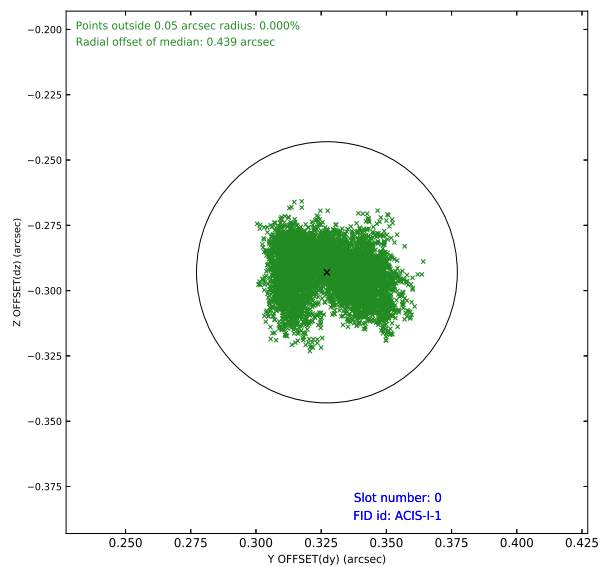
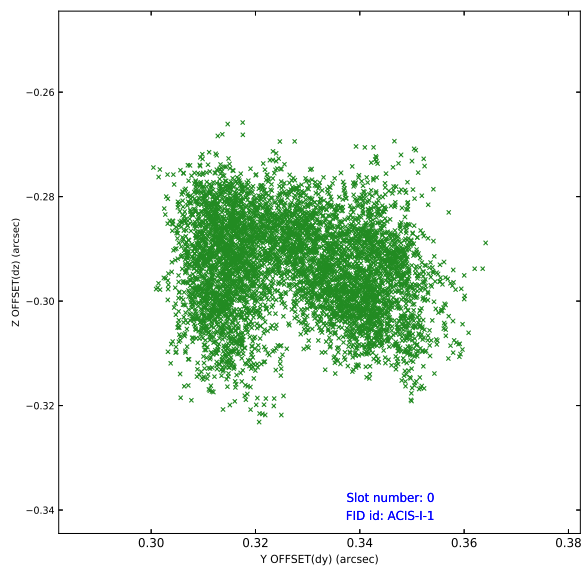


2.4.5 Slot 7

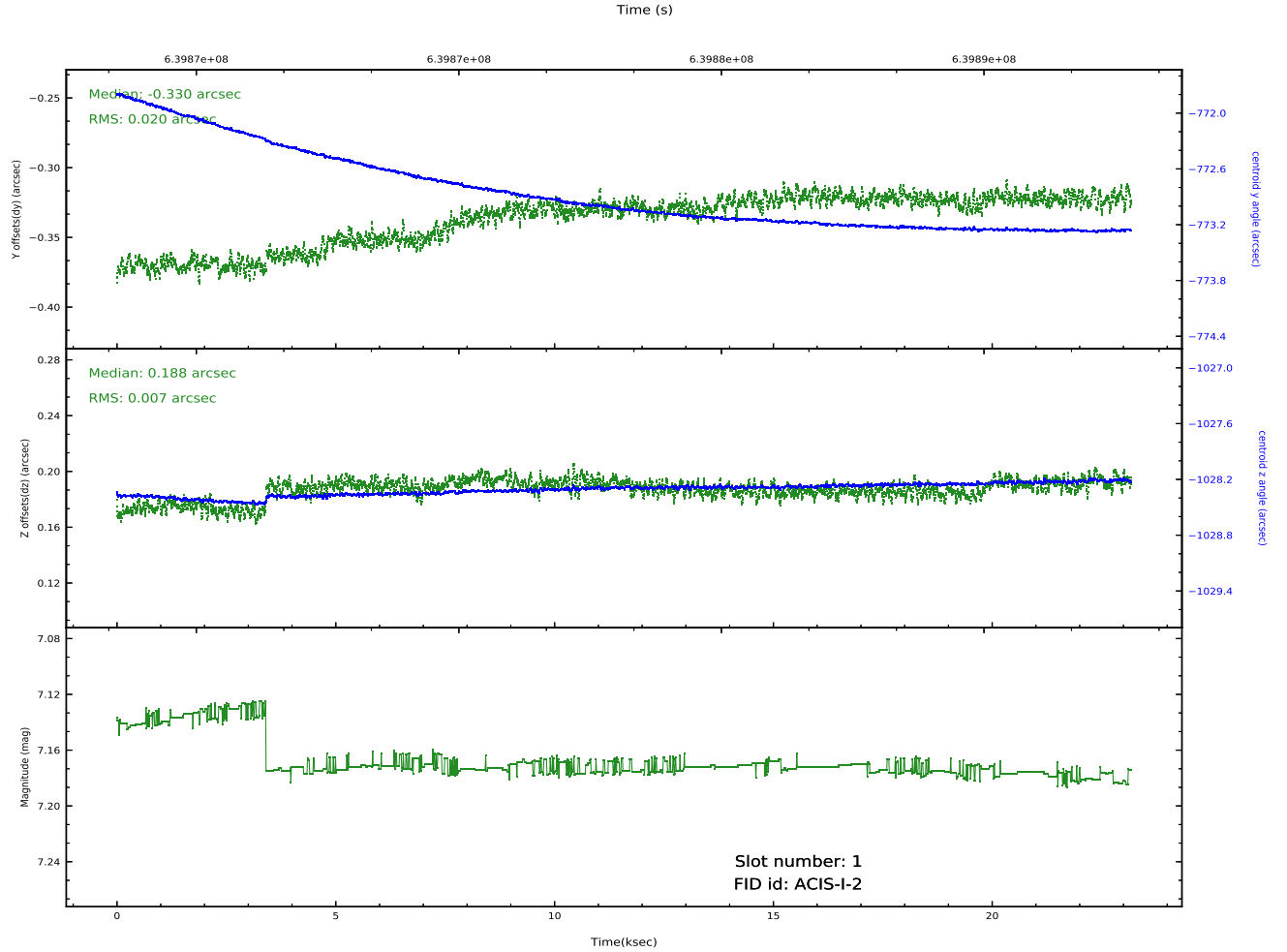
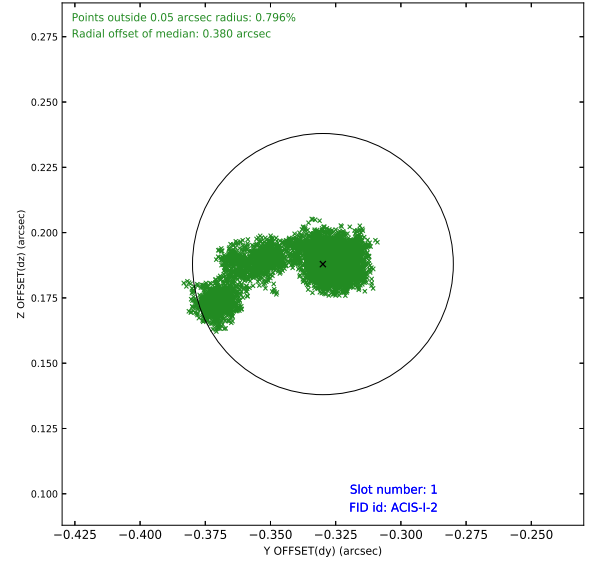
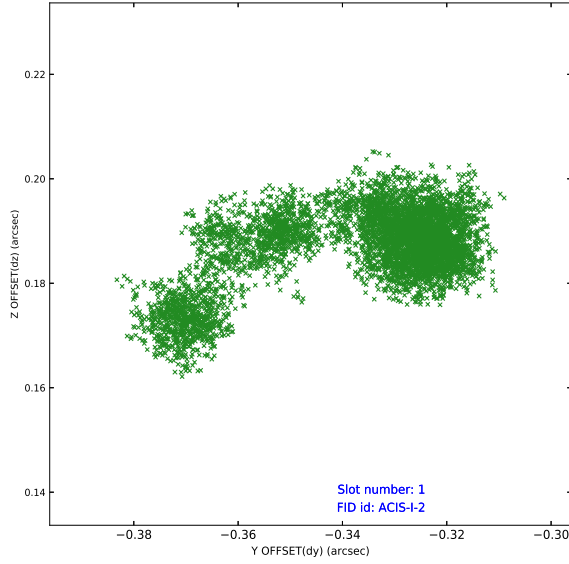


2.5 FID Slots

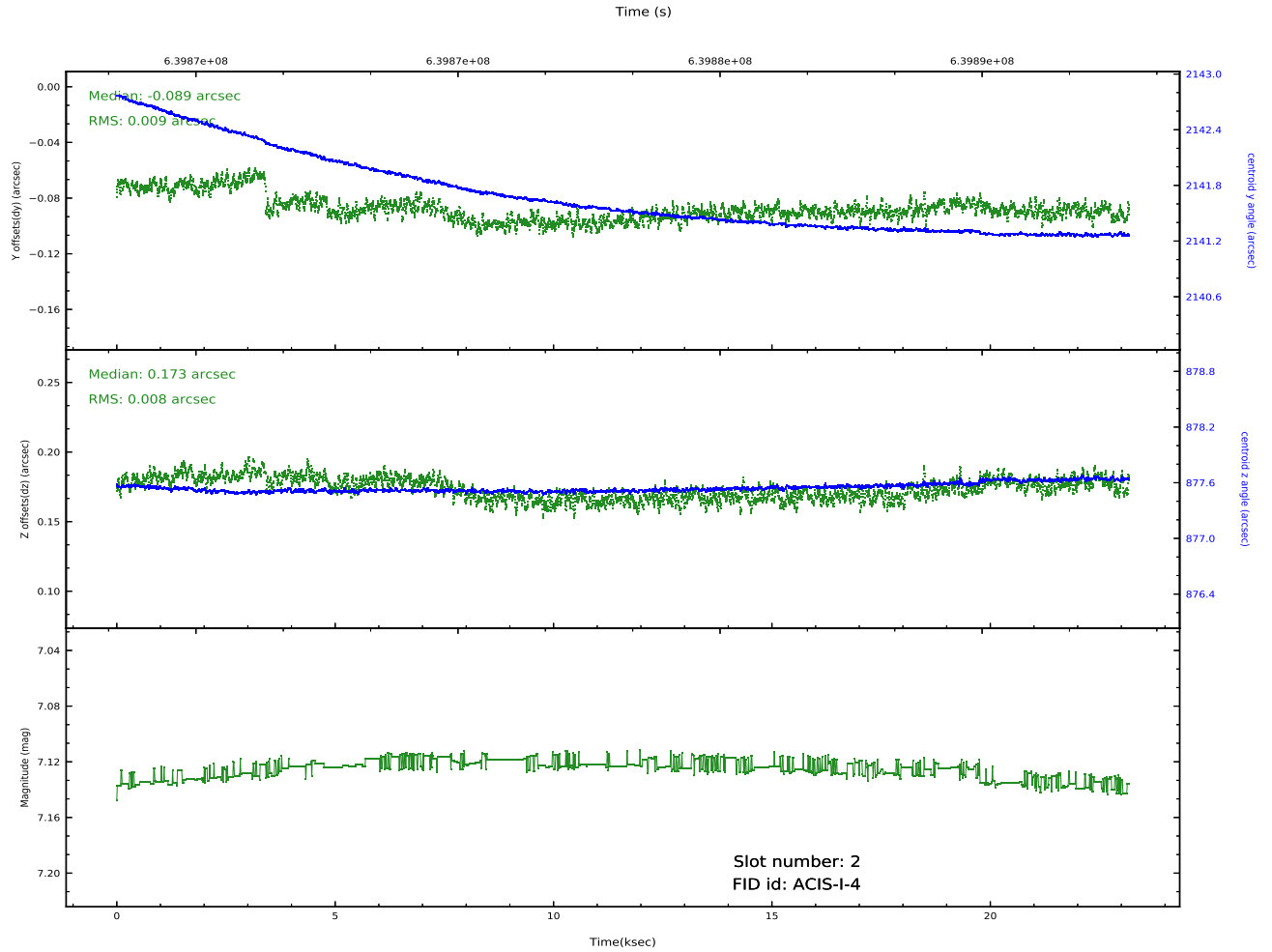
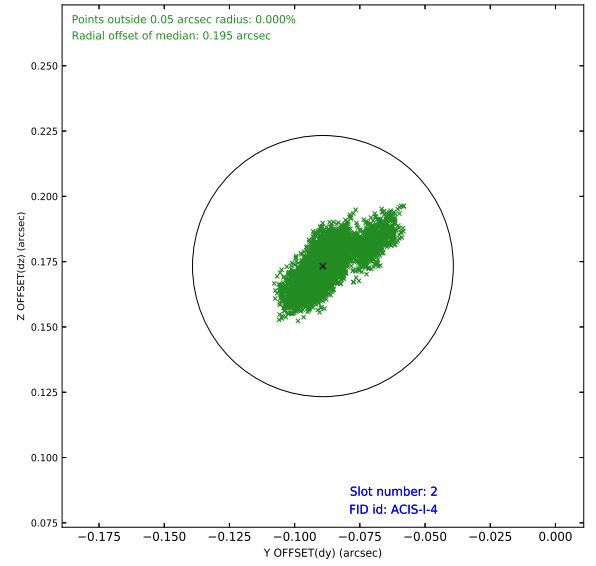
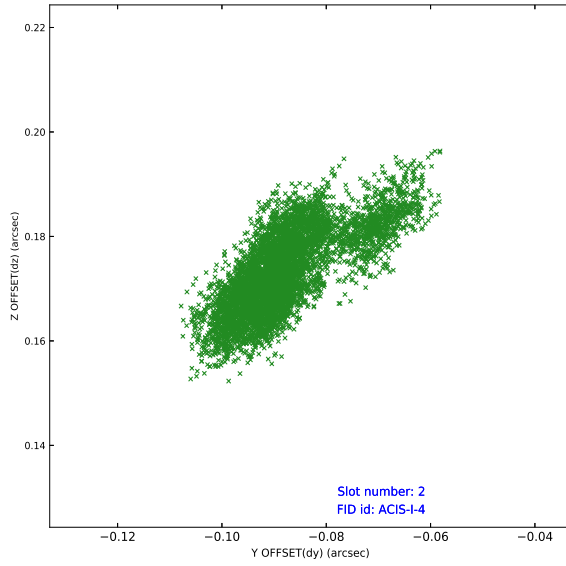
2.5.1 Slot 0



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)	2020.10.28
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	23.079440045357

A.2 Comments

SAP Team: Please reprocess using replacement bias file for chip 3.

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The bias map for CCD_ID = 3 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 = 3 will be recreated to remove this anomaly and the data will be reprocessed.

===

Window constraint was met.

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One optional chip was dropped.