

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19779 - L2 Version 2
Chandra X-Ray Center

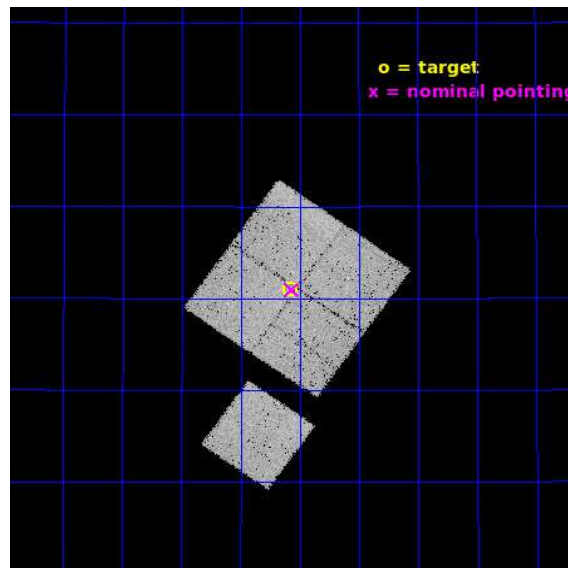
L2 Processing Date : Oct 25 2020

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1 Front

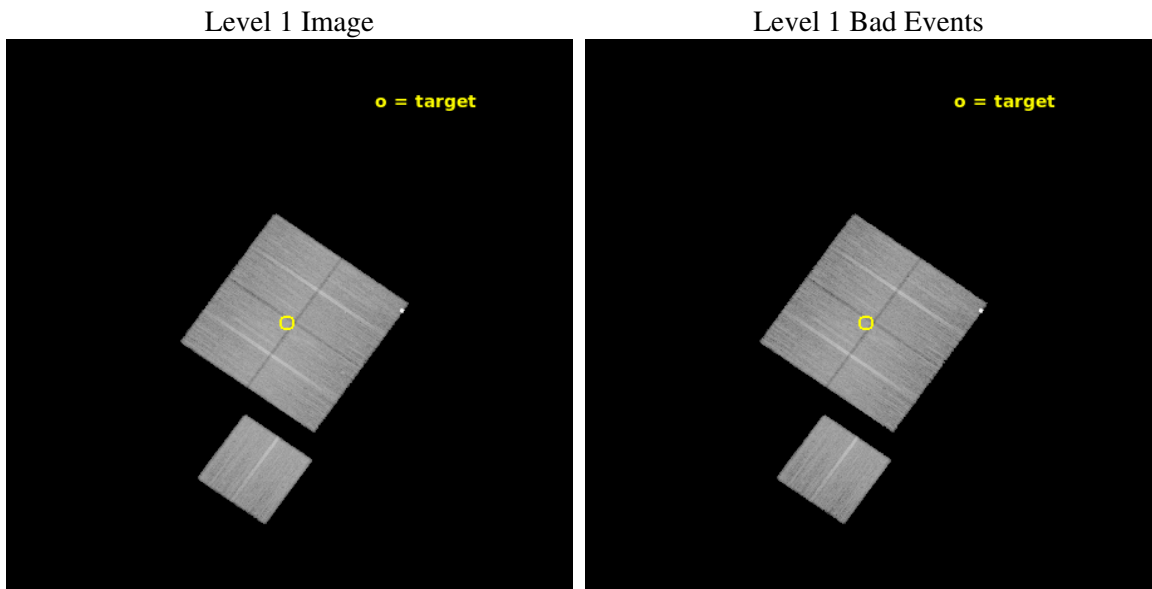
seq_num	901395	Sequence number
obs_id	19779	Observation id
title	An extended moderate-depth contiguous layer of the Chandra Bootes field -- additional pointings	Proposal title
observer	Ralph Kraft	Principal investigator
object	XBootes	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	216.77102	Observer's specified target RA [deg]
dec_targ	34.6833	Observer's specified target Dec [deg]
ra_nom	216.76660886036	Nominal RA [deg]
dec_nom	34.6824756277	Nominal Dec [deg]
roll_nom	215.20288745936	Nominal Roll [deg]
revision	2	Processing version of data
ontime	26070.565041065	Sum of GTIs [s]
livetime	25729.933915933	Livetime [s]
ontime0	26067.300860882	Sum of GTIs [s]
ontime1	26070.482961059	Sum of GTIs [s]
ontime2	26057.959789753	Sum of GTIs [s]
ontime3	26070.565041065	Sum of GTIs [s]
ontime6	26070.400881052	Sum of GTIs [s]
l2events	89004	Number of level 2 events



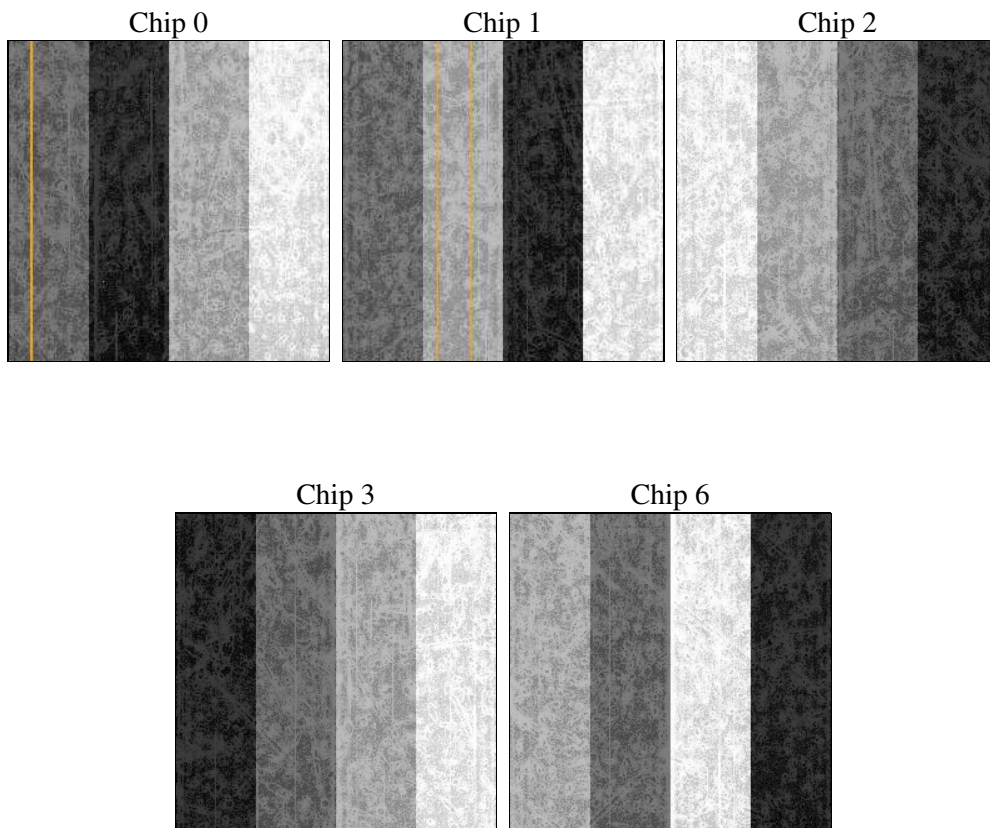
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	26000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	26070.565041065	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	26067.300860882	Sum of GTIs [s]
date	2020-10-26T00:38:58	Date and time of file creation	ontime1	26070.482961059	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	26057.959789753	Sum of GTIs [s]
			ontime3	26070.565041065	Sum of GTIs [s]
			ontime6	26070.400881052	Sum of GTIs [s]
			l1events	933210	Number of level 1 events

2.1.4 Events

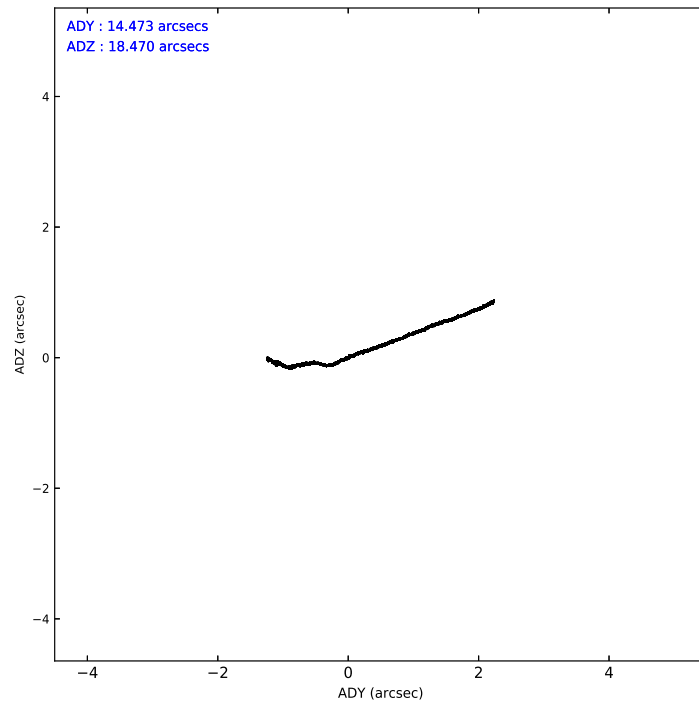
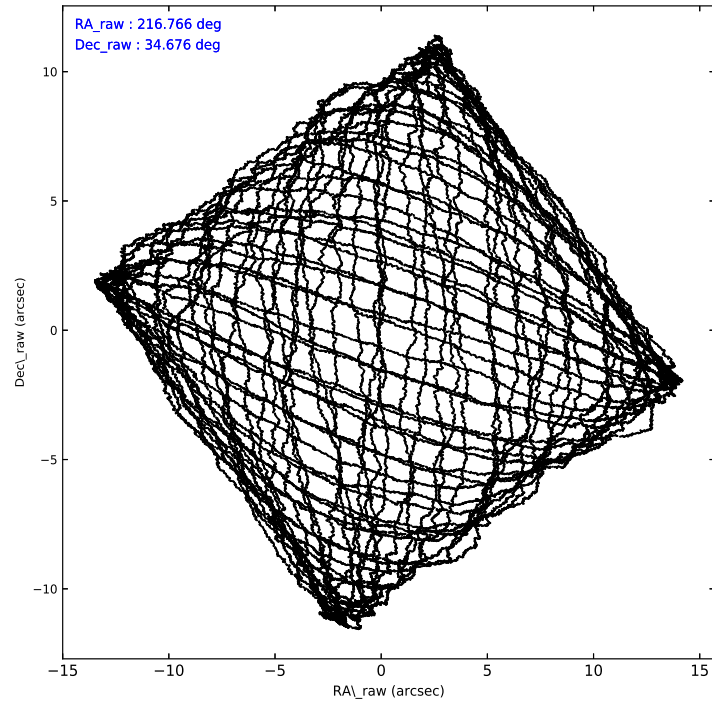
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	183779	177393	193763	184894	193381
rejected events	162693	153864	173016	165177	172159
rejected %	88%	86%	89%	89%	89%

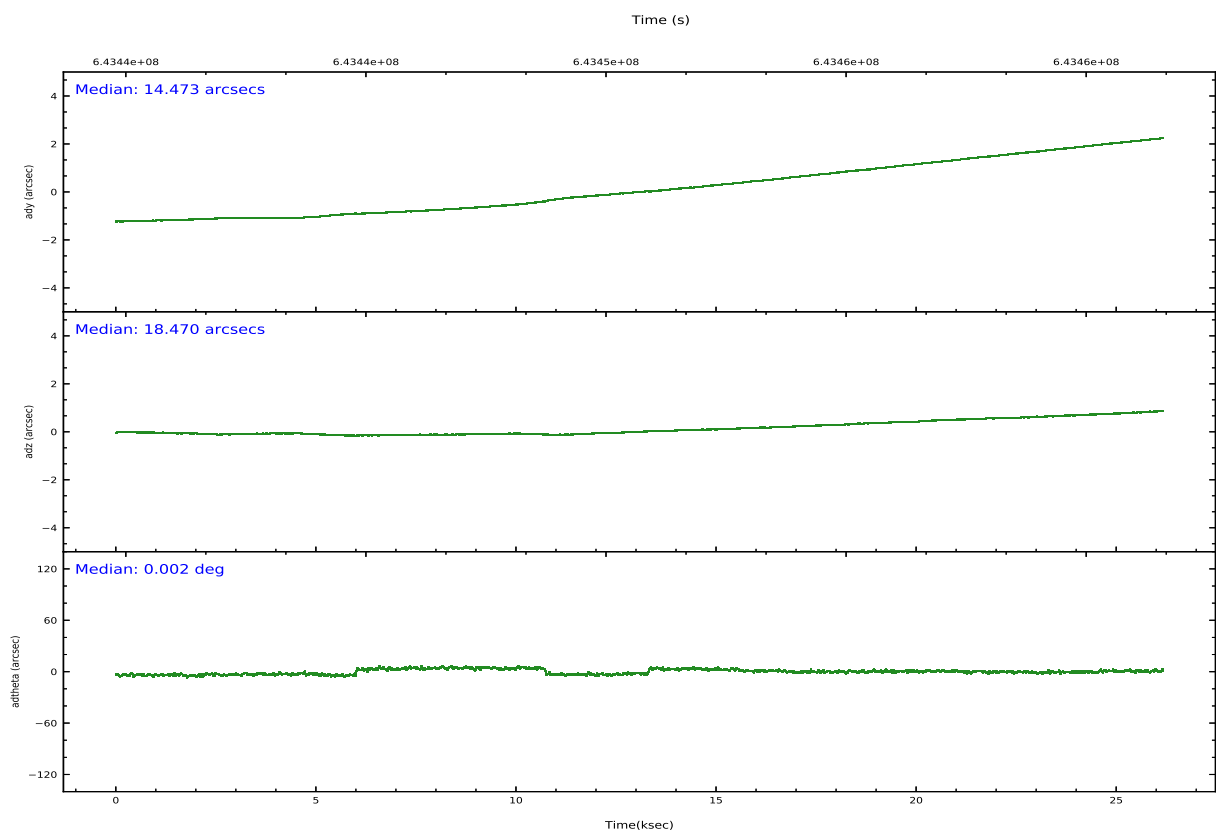
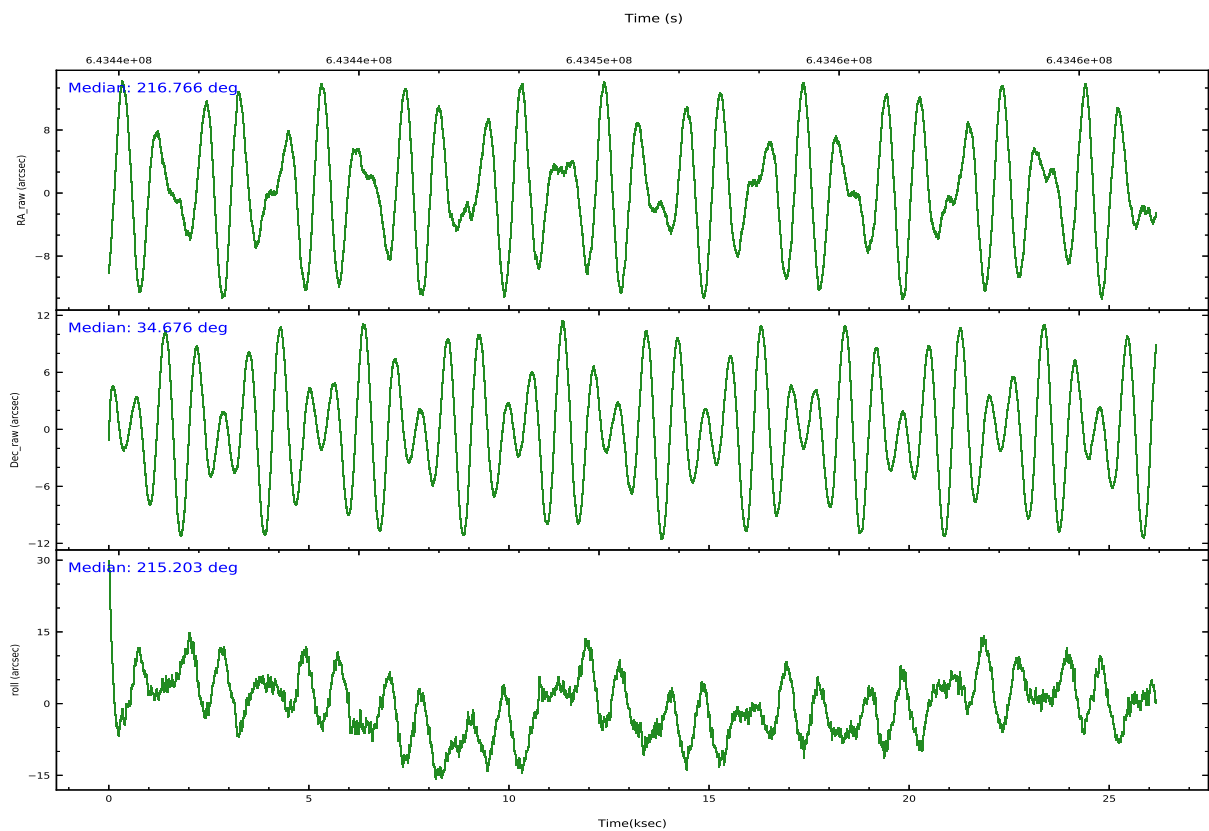
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	7097	7731	7344	6681	6961
	3%	4%	3%	3%	3%
grade 1 events	8319	104	95	124	87
	4%	0%	0%	0%	0%
grade 2 events	5370	6178	5108	4576	4964
	2%	3%	2%	2%	2%
grade 3 events	2204	2248	2080	2091	2228
	1%	1%	1%	1%	1%
grade 4 events	1984	2108	2127	2083	2063
	1%	1%	1%	1%	1%
grade 5 events	8199	8683	7567	9045	8592
	4%	4%	3%	4%	4%
grade 6 events	4432	5267	4092	4288	5010
	2%	2%	2%	2%	2%
grade 7 events	146174	145074	165350	156006	163476
	79%	81%	85%	84%	84%

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	216.780116	216.76660886036	CCD I2 on	Y	Y
[deg] Pointing Dec	34.700727	34.6824756277	CCD I3 on	Y	Y
[deg] Pointing Roll	214.994816	215.20288745936	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	O2	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	643437923.184000	643437073.98892	CCD S5 on	N	N
Observation start date	2018-05-23T04:44:14	2018-05-23T04:31:13	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	643463923.184000	643465181.02808	On-chip summing requested	N	N
Observation end date	2018-05-23T11:57:34	2018-05-23T12:19:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



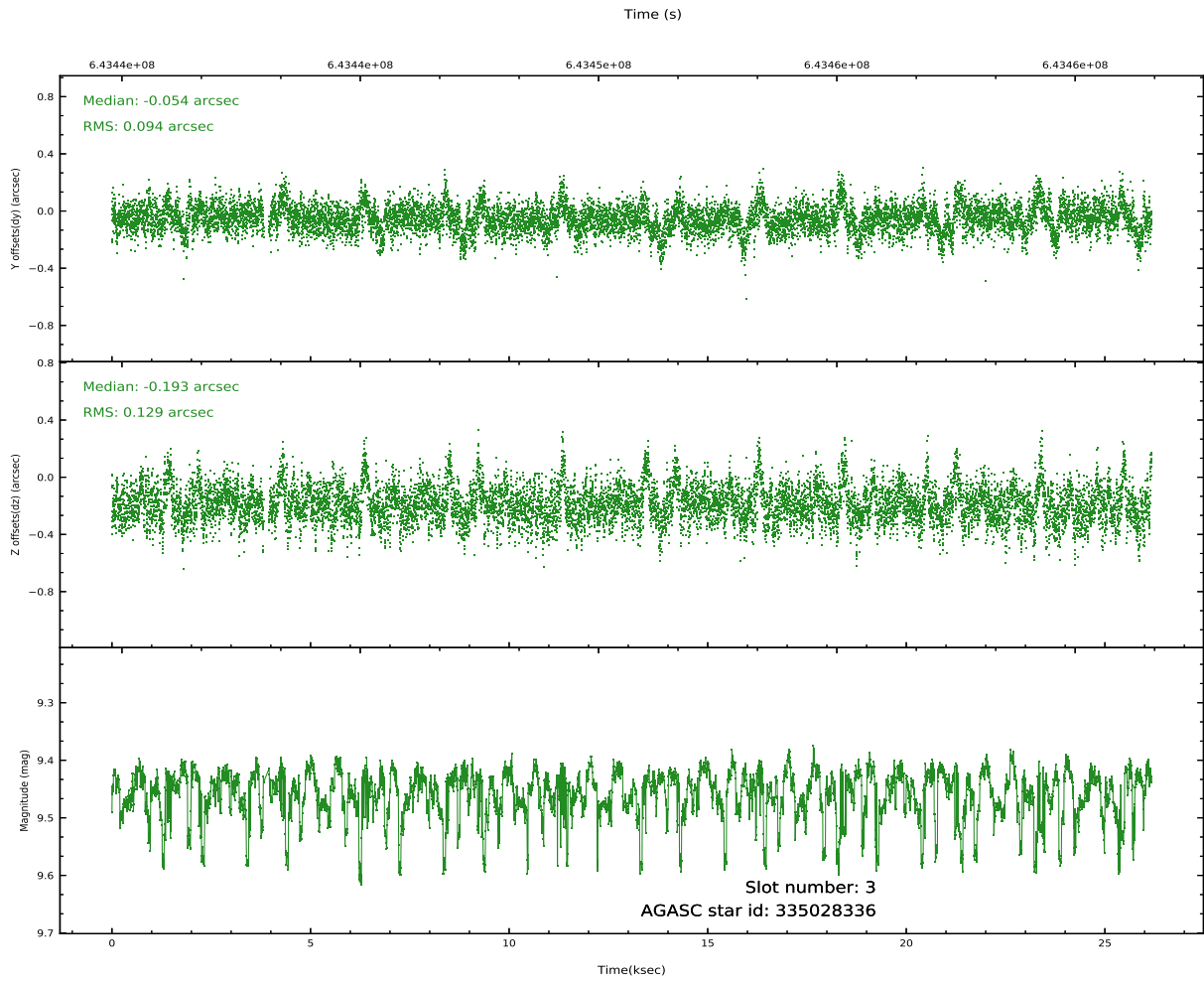
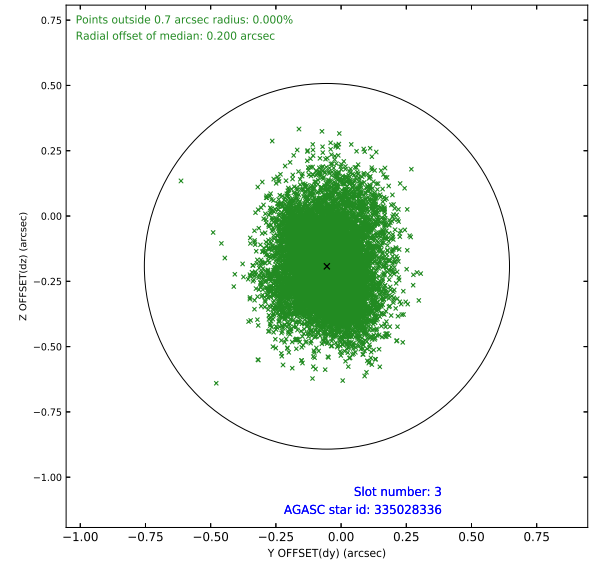
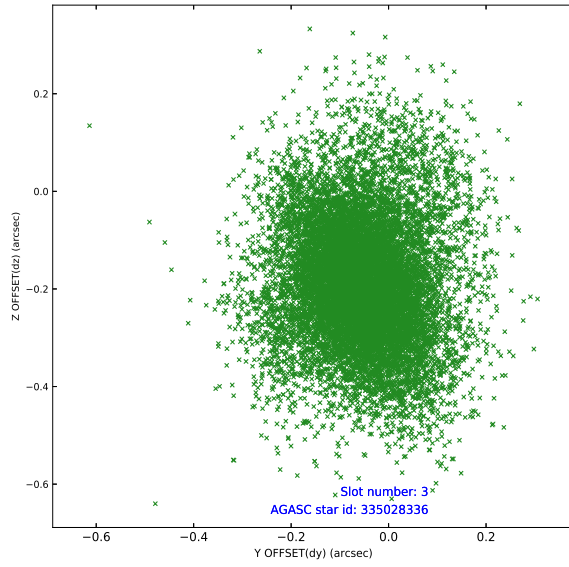


Slot Statistics

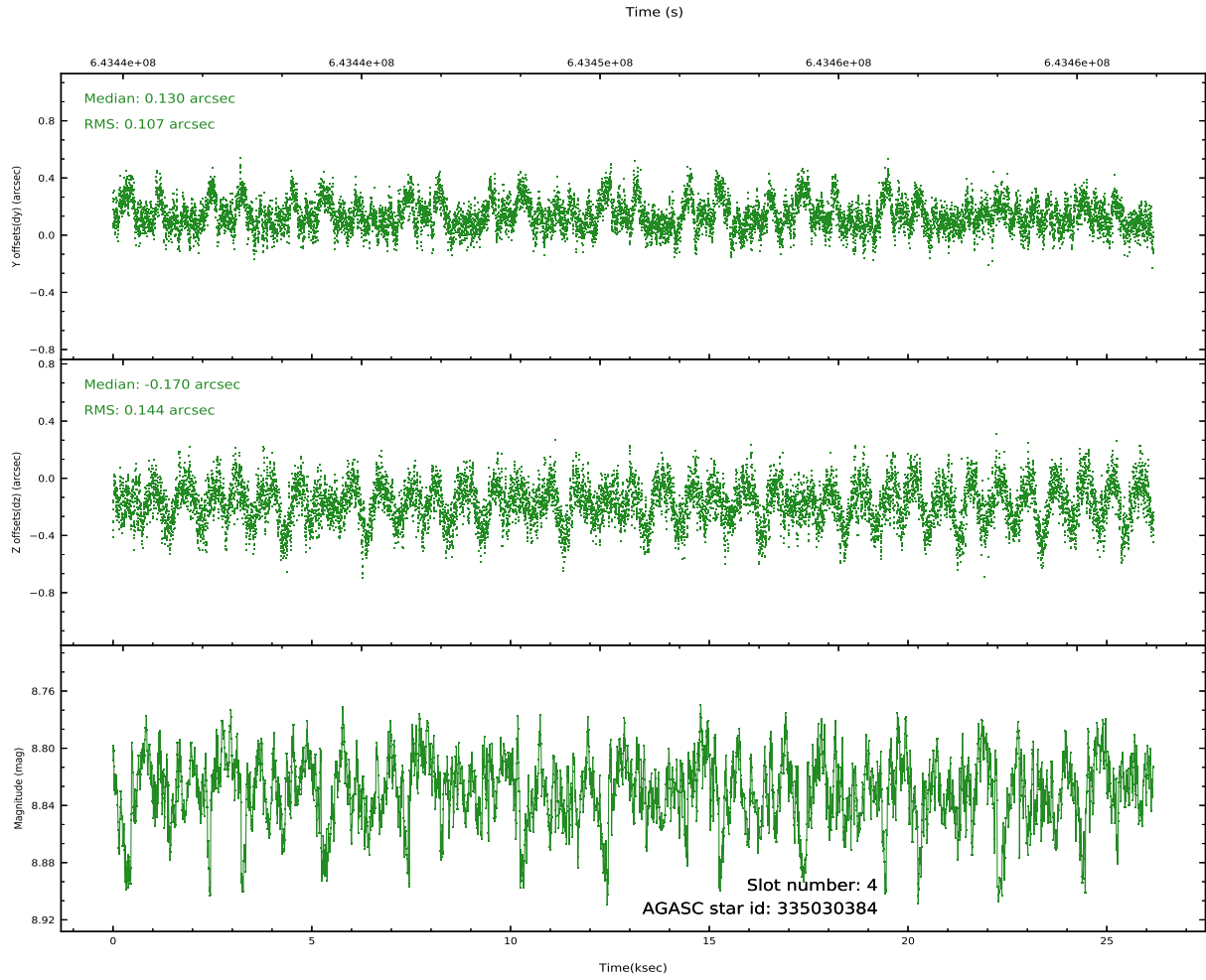
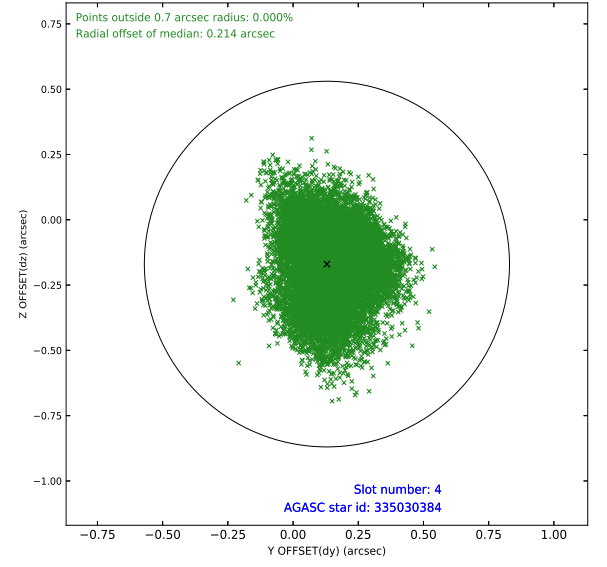
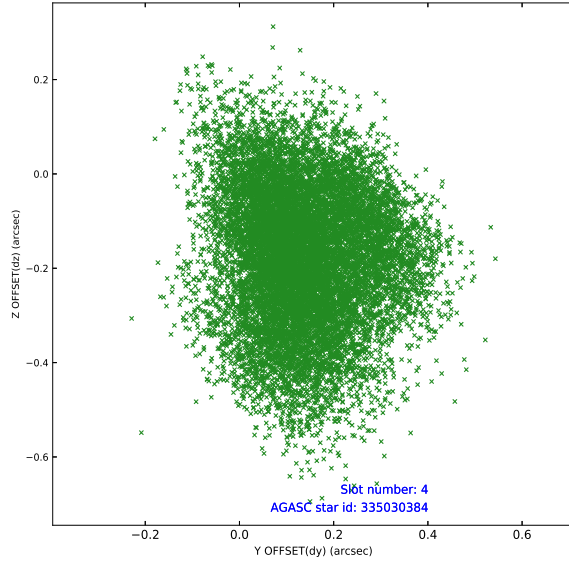
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.13	6382	1.000	0.021	-0.023	0.028	0.042	0.000000	0.000000	924.80	-842
1	FID		ACIS-I-2	7.03	6383	1.000	-0.108	0.029	0.042	0.053	0.000000	0.000000	-769.36	-848
2	FID		ACIS-I-4	7.09	6381	1.000	-0.018	0.055	0.034	0.085	0.000000	0.000000	2144.74	1057
3	GUIDE	used	335028336	9.45	12685	1.000	-0.054	-0.193	0.164	0.293	217.189840	34.665629	-922.76	797
4	GUIDE	used	335030384	8.83	12755	1.000	0.130	-0.170	0.194	0.305	216.806407	34.722197	-107.65	-18
5	GUIDE	used	335417968	9.33	12751	1.000	-0.126	0.267	0.159	0.260	217.358149	35.055285	-2129.73	-72
6	GUIDE	used	335414448	7.33	12767	1.000	-0.250	-0.015	0.139	0.233	216.992261	35.577204	-2318.79	-2227
7	GUIDE	used	334496656	9.75	12739	1.000	0.299	0.106	0.232	0.372	215.929218	35.031287	1367.01	-2421

2.4 Star Slots

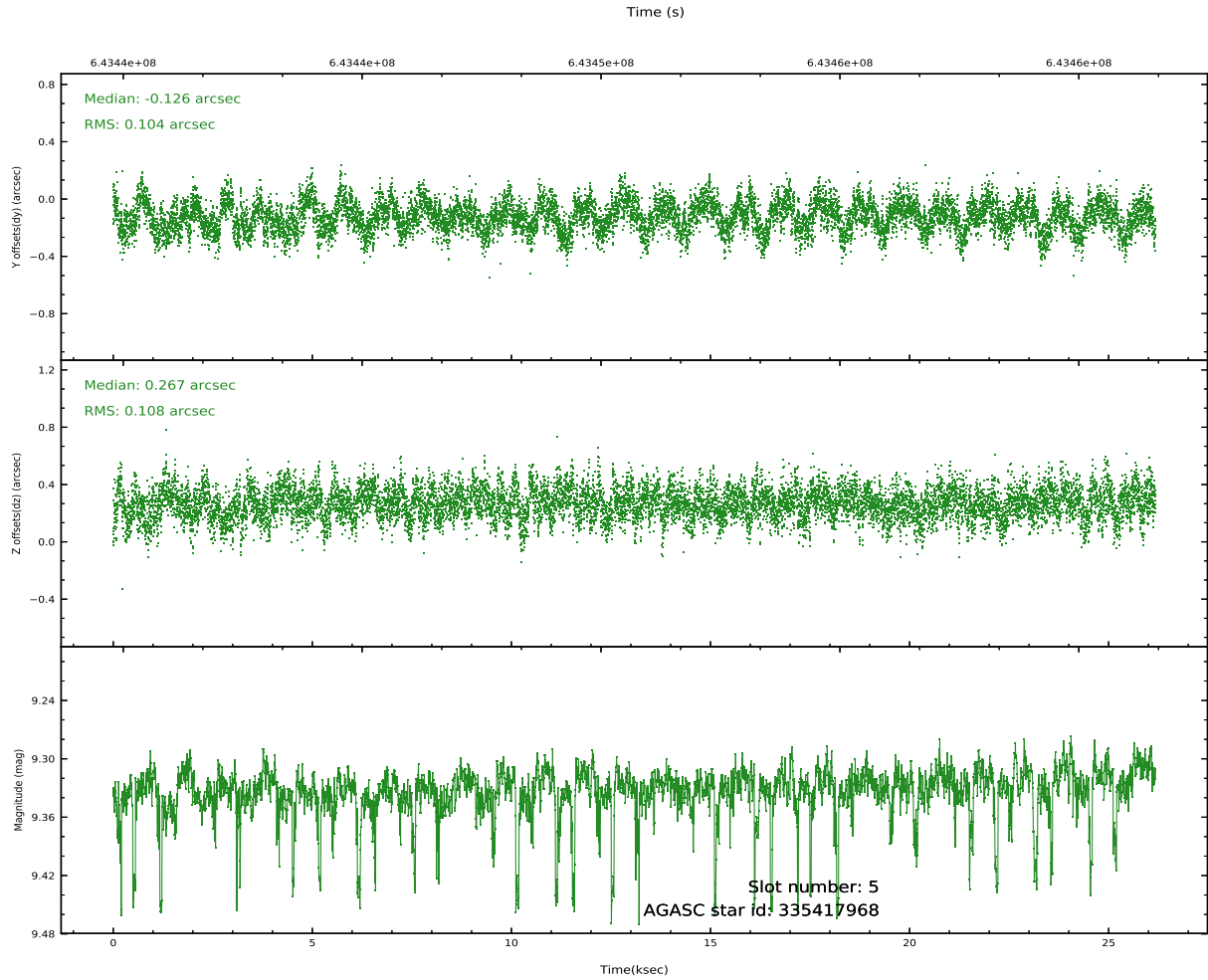
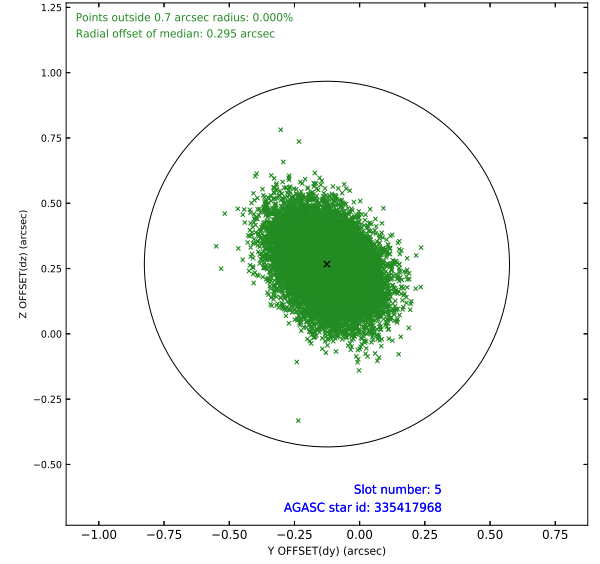
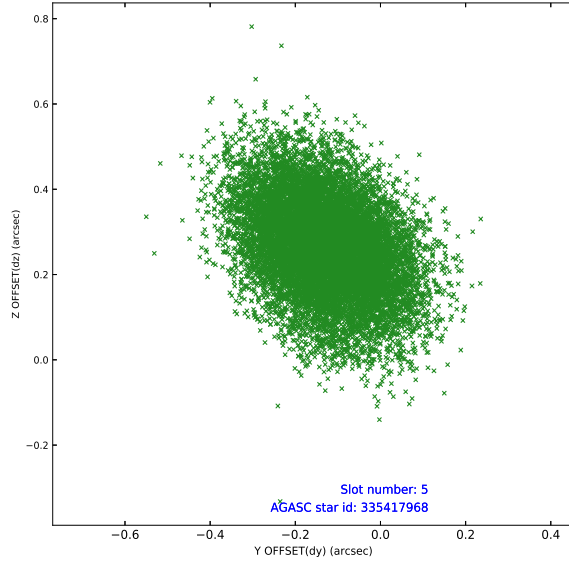
2.4.1 Slot 3



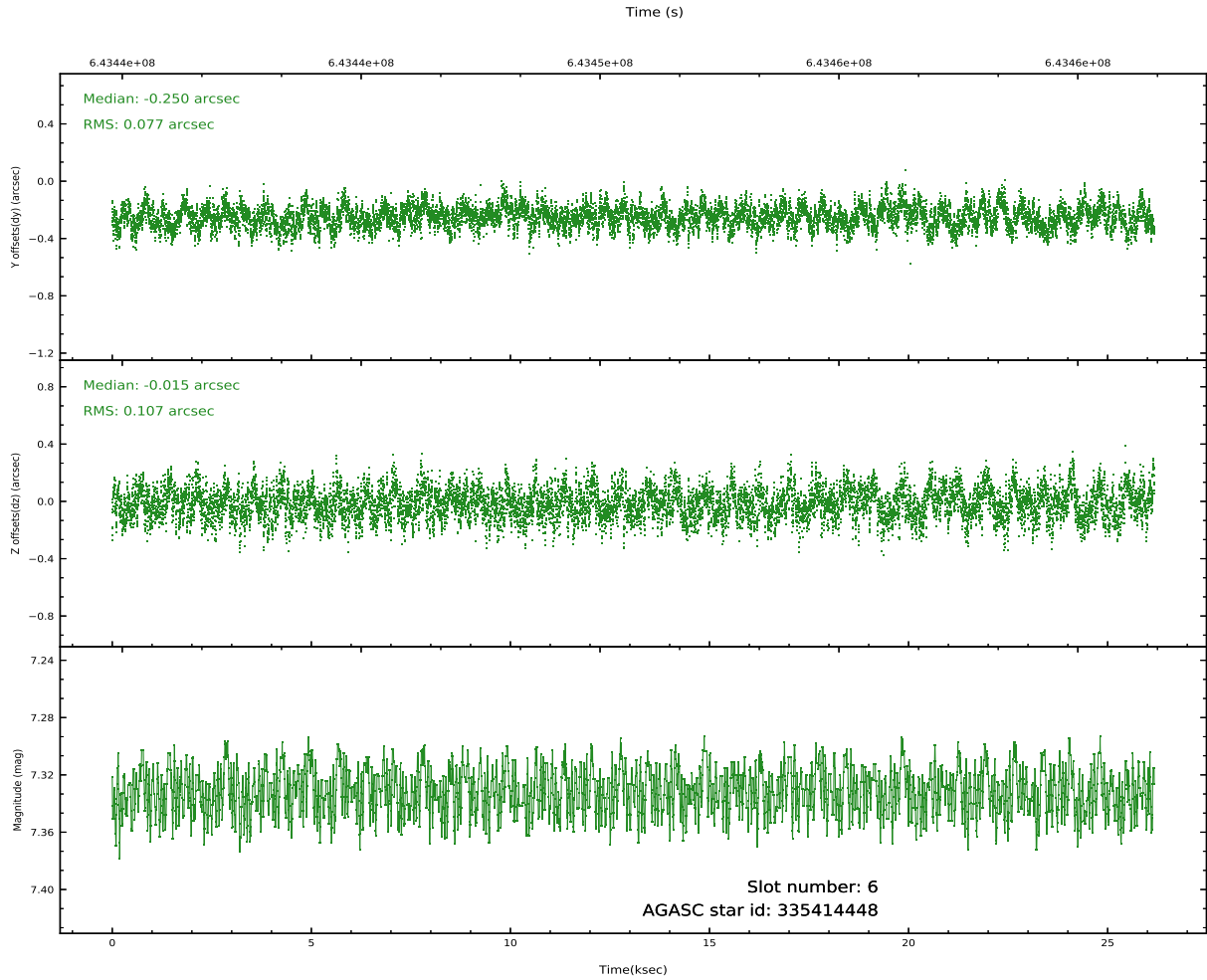
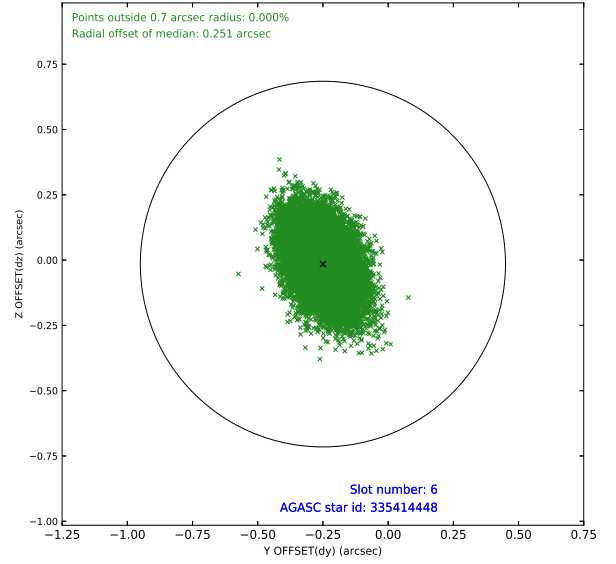
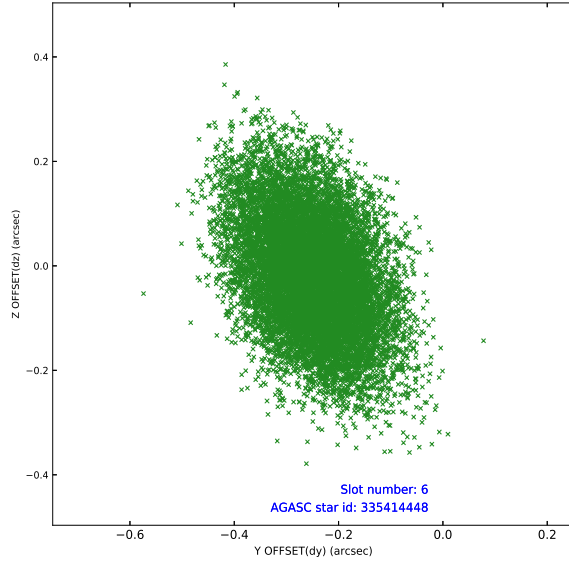
2.4.2 Slot 4



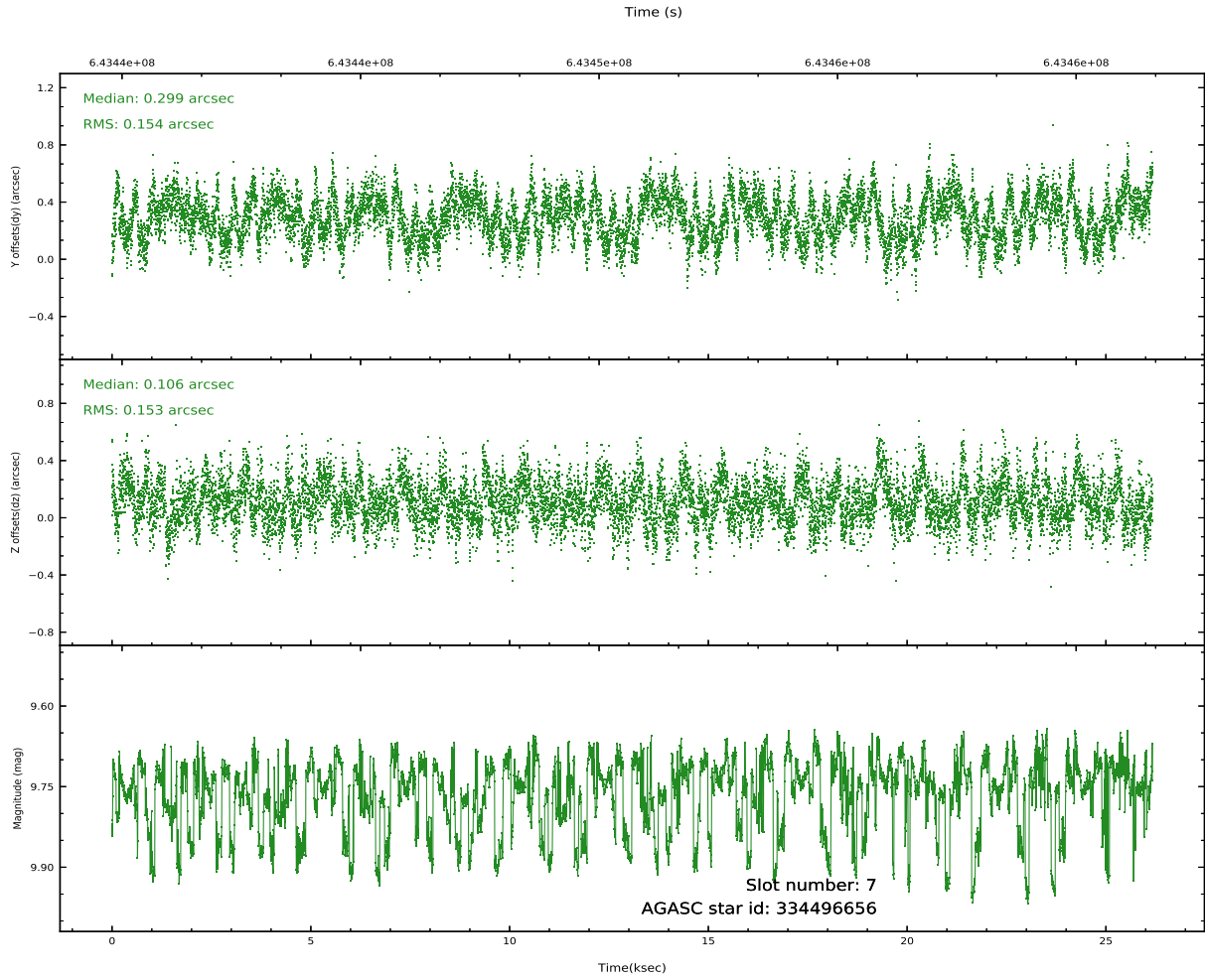
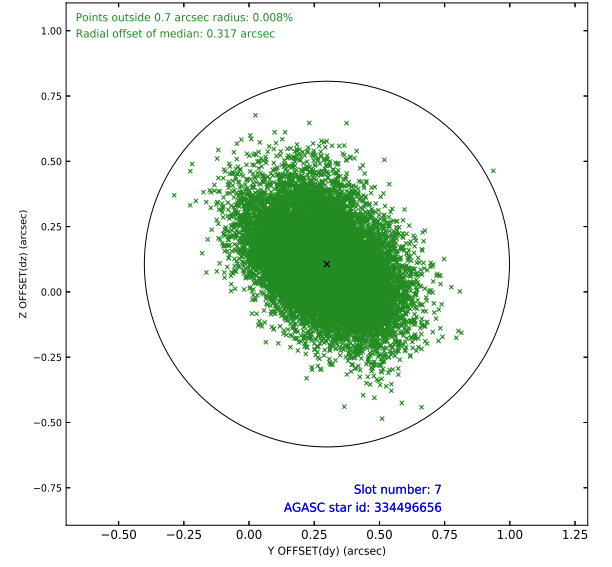
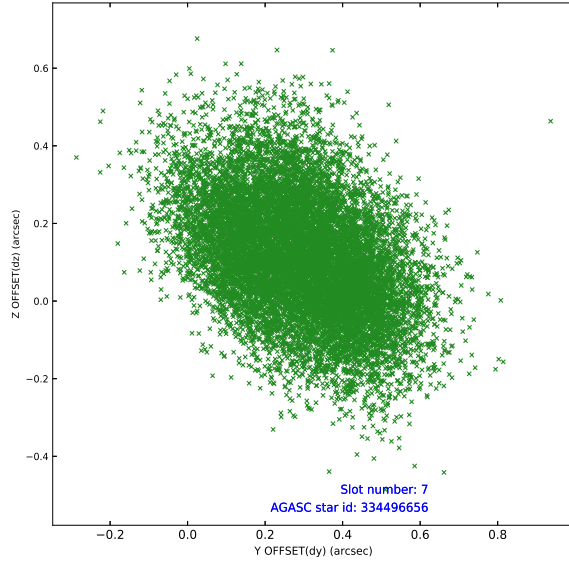
2.4.3 Slot 5



2.4.4 Slot 6

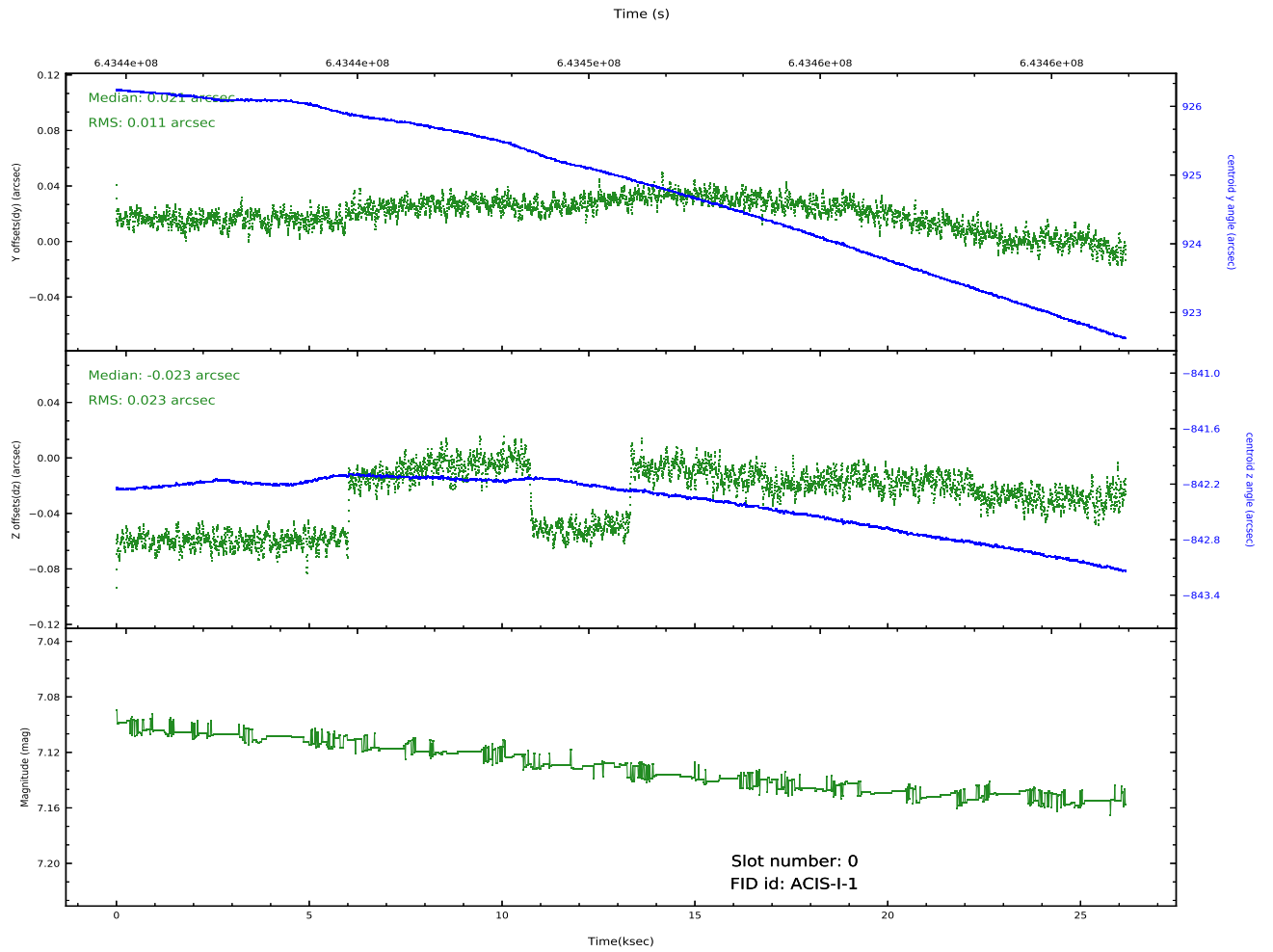
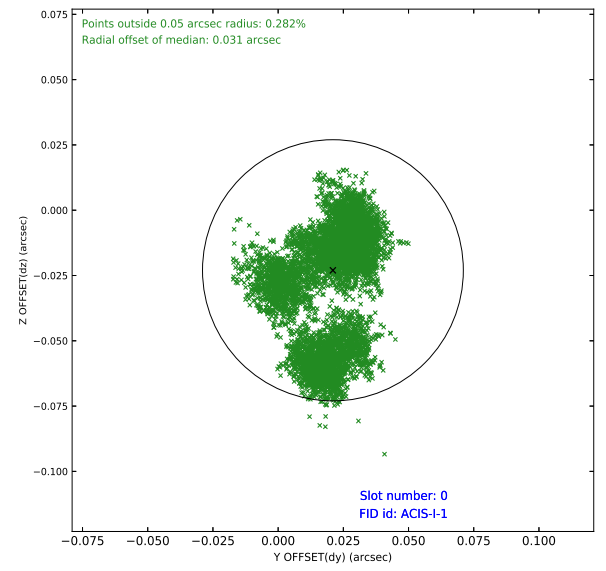
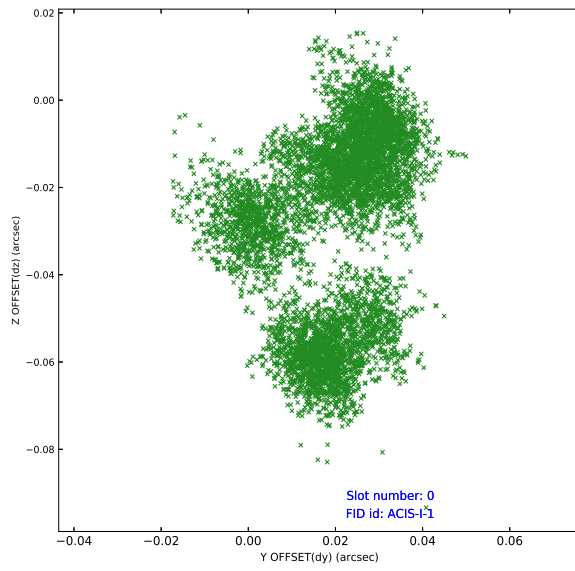


2.4.5 Slot 7

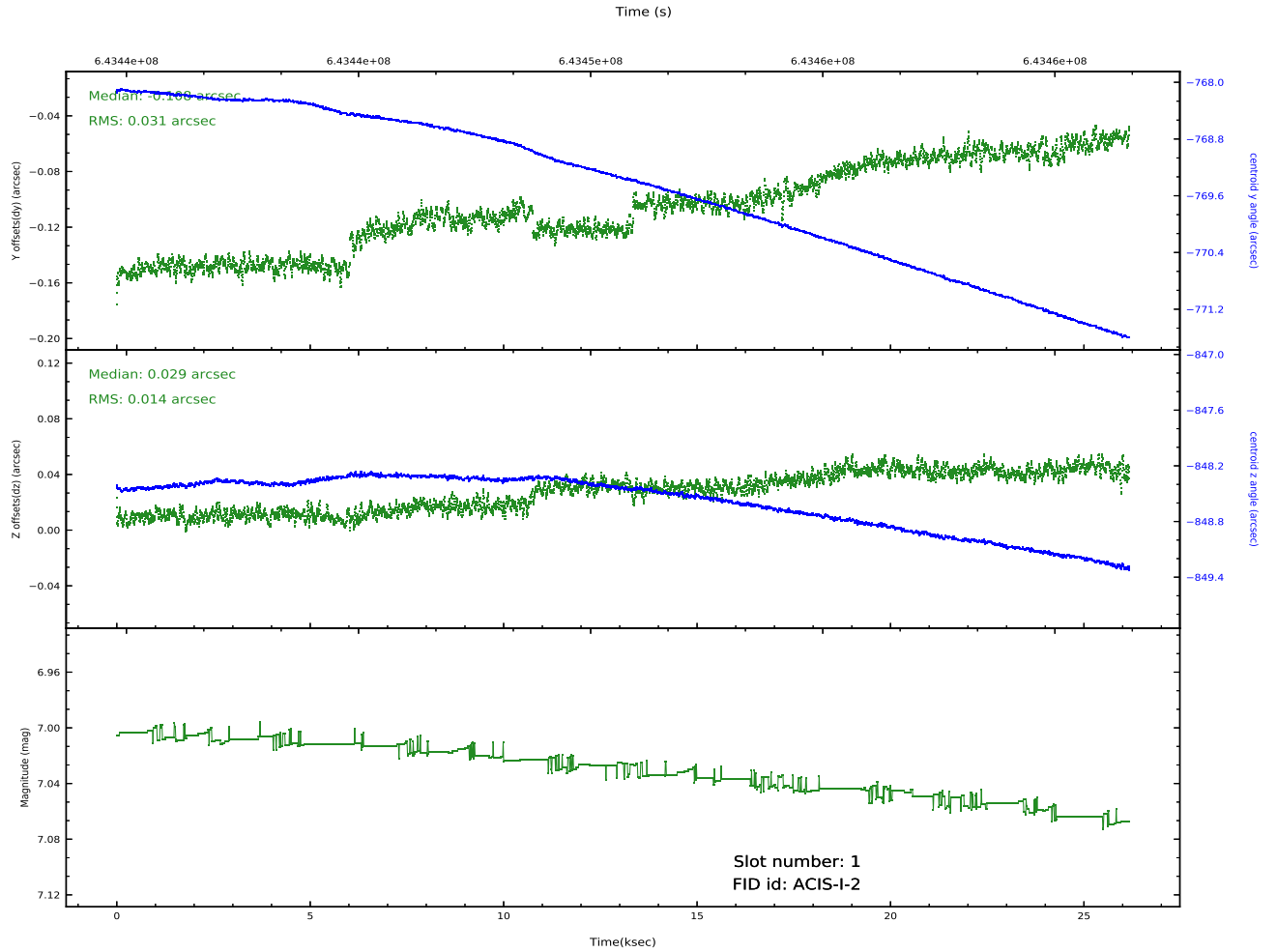
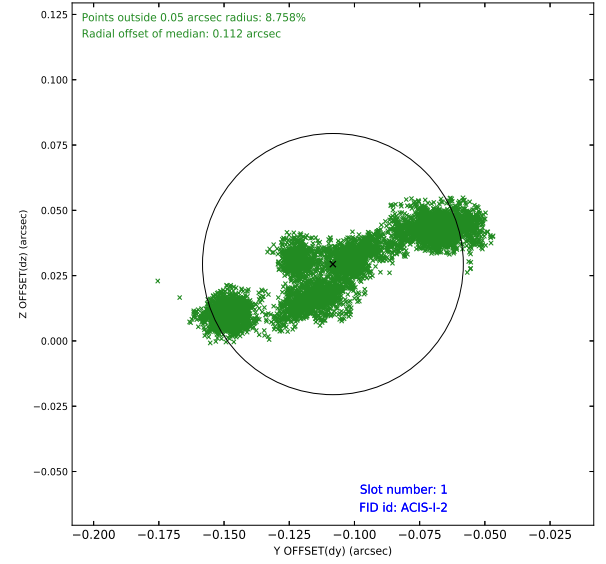
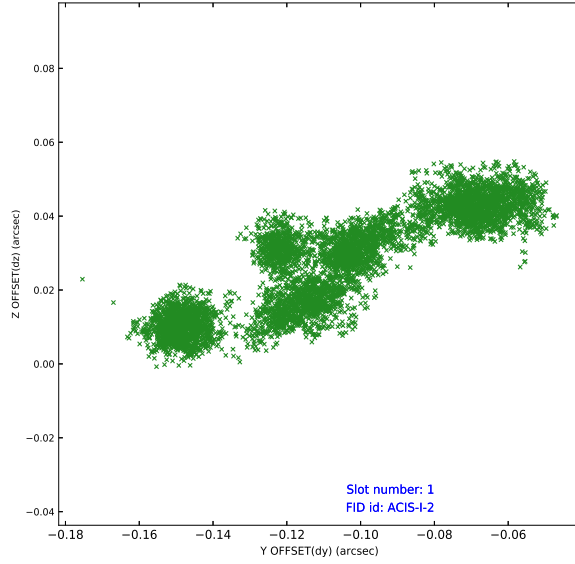


2.5 FID Slots

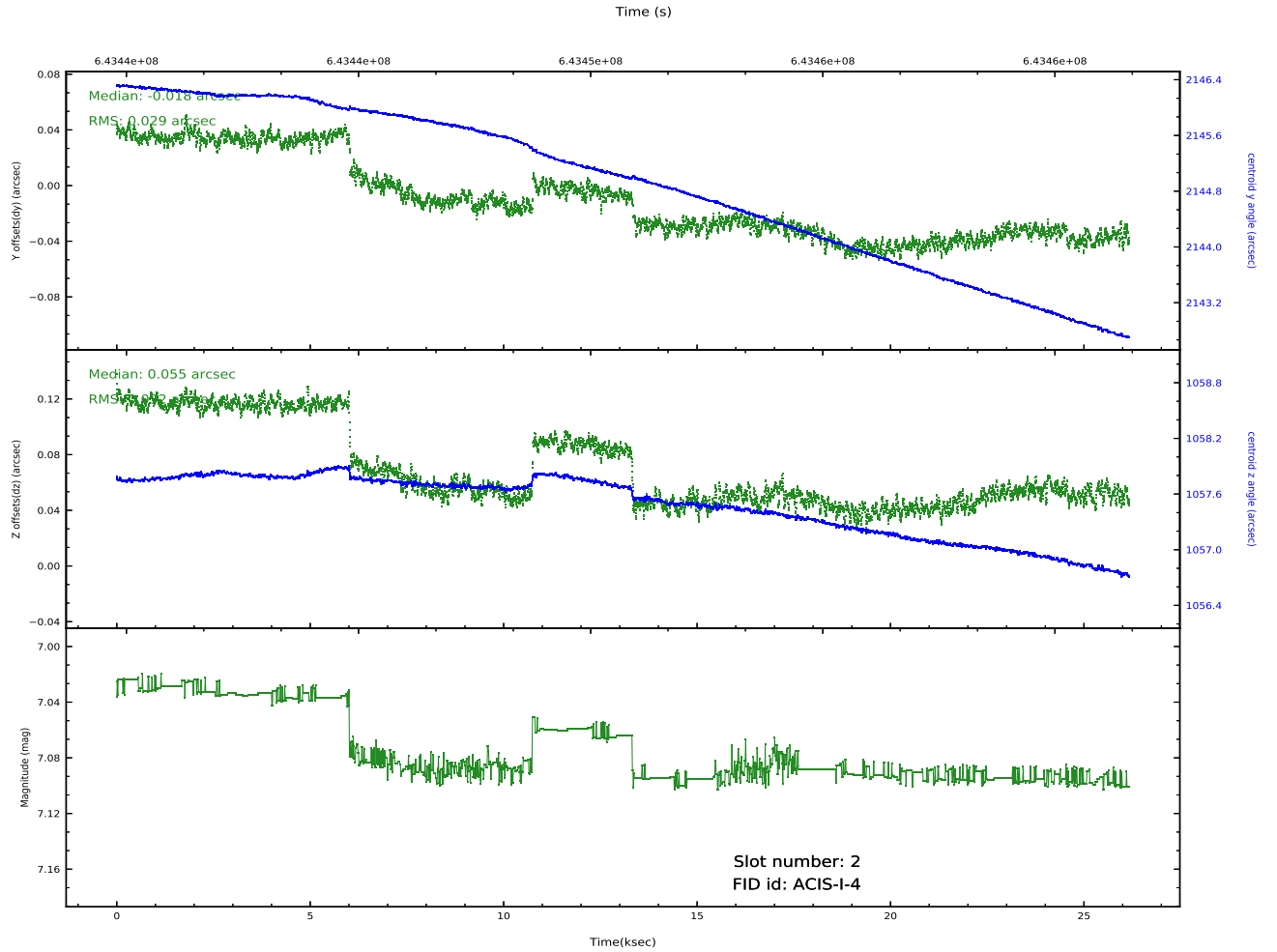
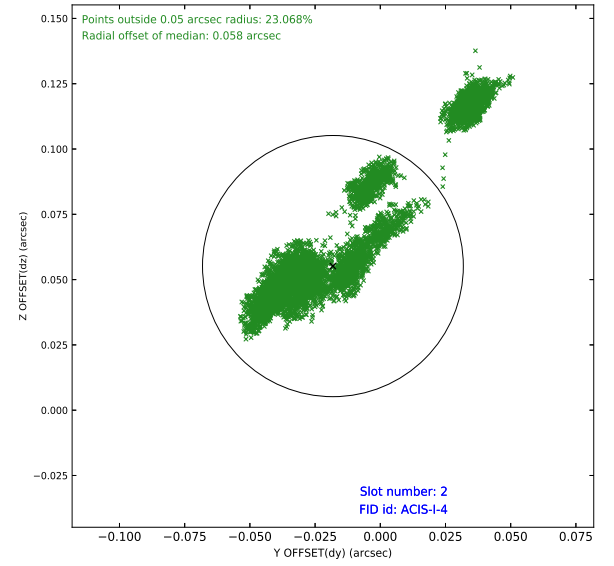
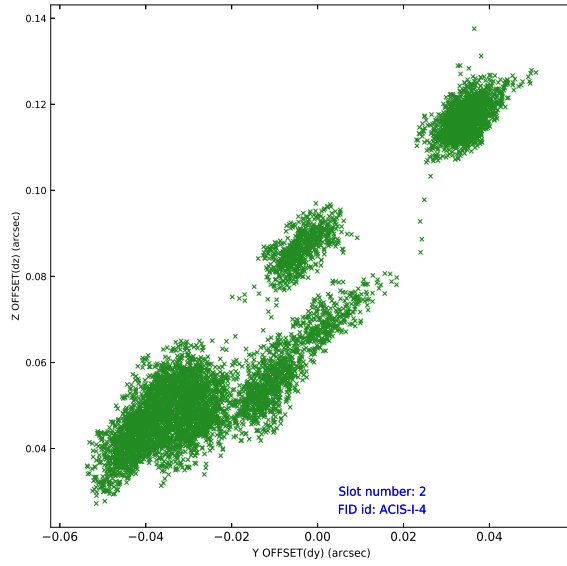
2.5.1 Slot 0



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)	2020.10.27
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	26.070565037012

A.2 Comments

SAP team: Please reprocess using replacement bias file for chip 0.

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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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One optional chip was dropped.