

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20581 - L2 Version 2
Chandra X-Ray Center

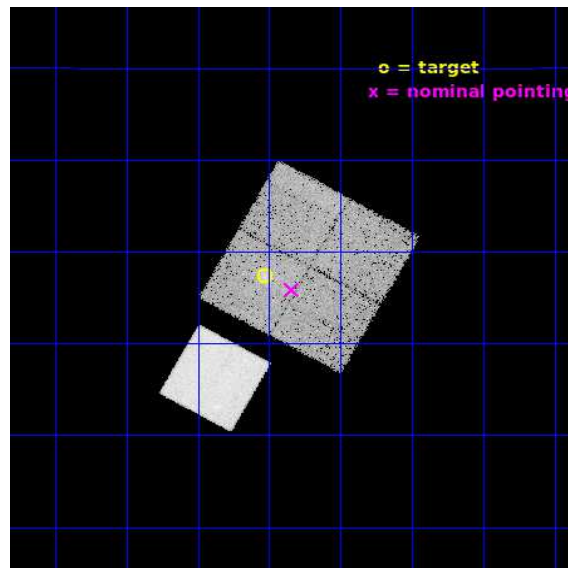
L2 Processing Date : Oct 26 2020

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1 Front

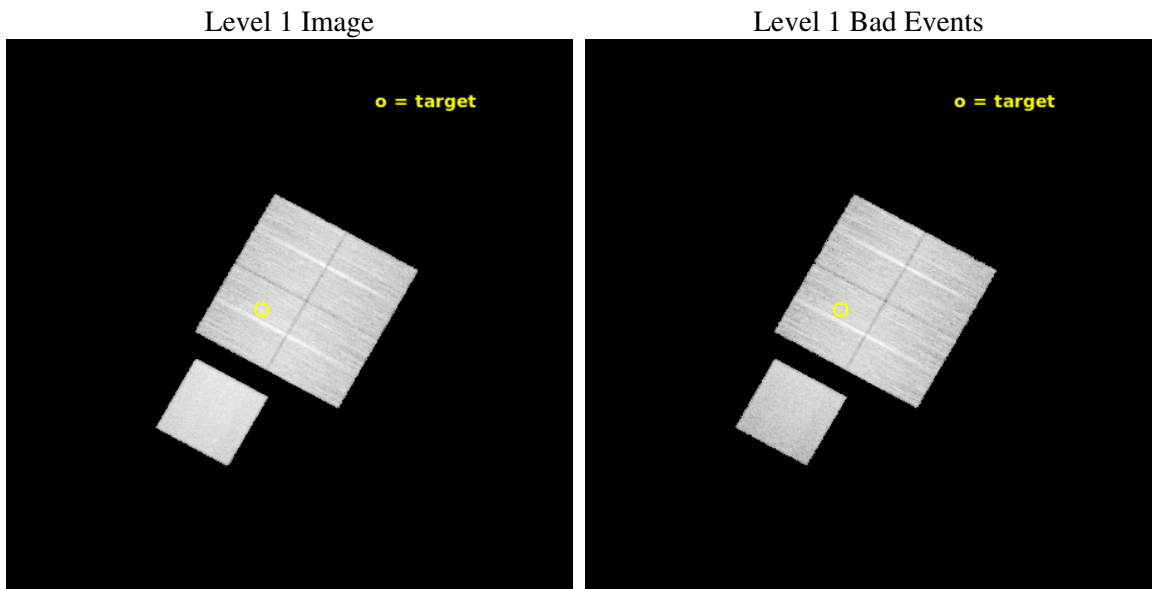
seq_num	801780	Sequence number
obs_id	20581	Observation id
title	The Chandra Strong Lens Sample: Revealing Baryonic Physics In Strong Lensing Selected Clusters	Proposal title
observer	Matthew Bayliss	Principal investigator
object	SDSSJ1621+0607	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	245.383333	Observer's specified target RA [deg]
dec_targ	6.122222	Observer's specified target Dec [deg]
ra_nom	245.33526728526	Nominal RA [deg]
dec_nom	6.0978279637985	Nominal Dec [deg]
roll_nom	209.16922954577	Nominal Roll [deg]
revision	2	Processing version of data
ontime	19756.300152063	Sum of GTIs [s]
livetime	19498.1695462	Livetime [s]
ontime0	19753.048367143	Sum of GTIs [s]
ontime1	19756.230457306	Sum of GTIs [s]
ontime2	19756.27149725	Sum of GTIs [s]
ontime3	19756.300152063	Sum of GTIs [s]
ontime7	19756.300152063	Sum of GTIs [s]
l2events	140704	Number of level 2 events



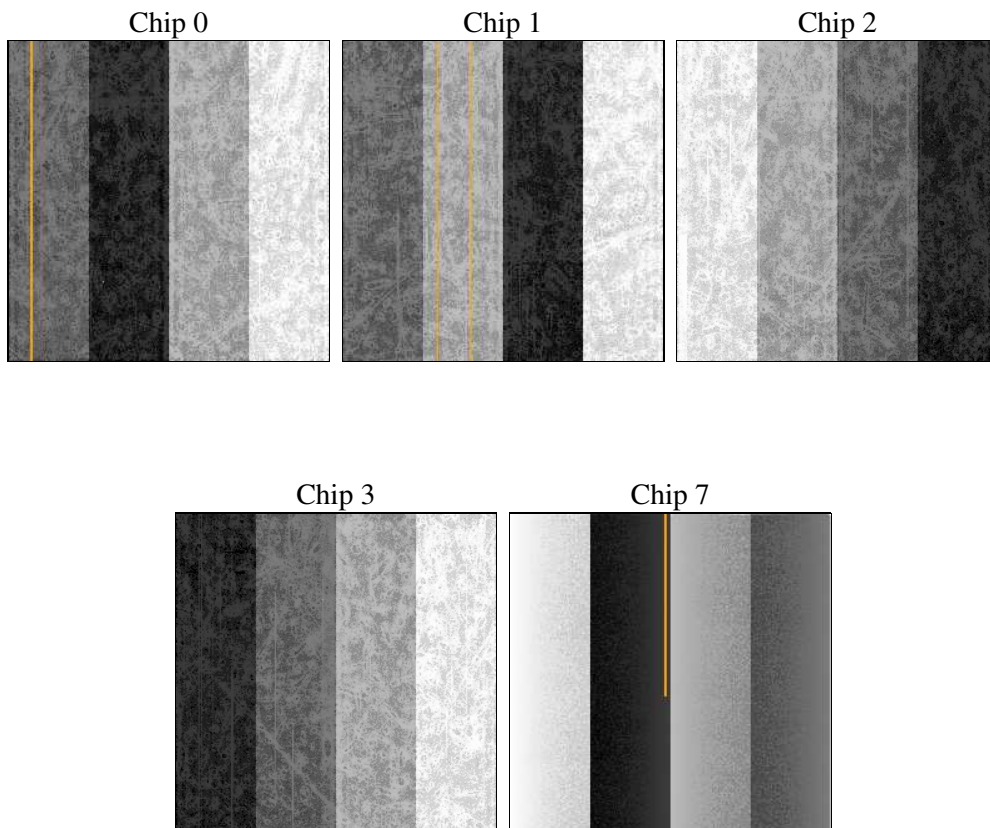
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	19700.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	19756.300152063	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	19753.048367143	Sum of GTIs [s]
date	2020-10-26T08:35:00	Date and time of file creation	ontime1	19756.230457306	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	19756.27149725	Sum of GTIs [s]
			ontime3	19756.300152063	Sum of GTIs [s]
			ontime7	19756.300152063	Sum of GTIs [s]
			l1events	779081	Number of level 1 events

2.1.4 Events

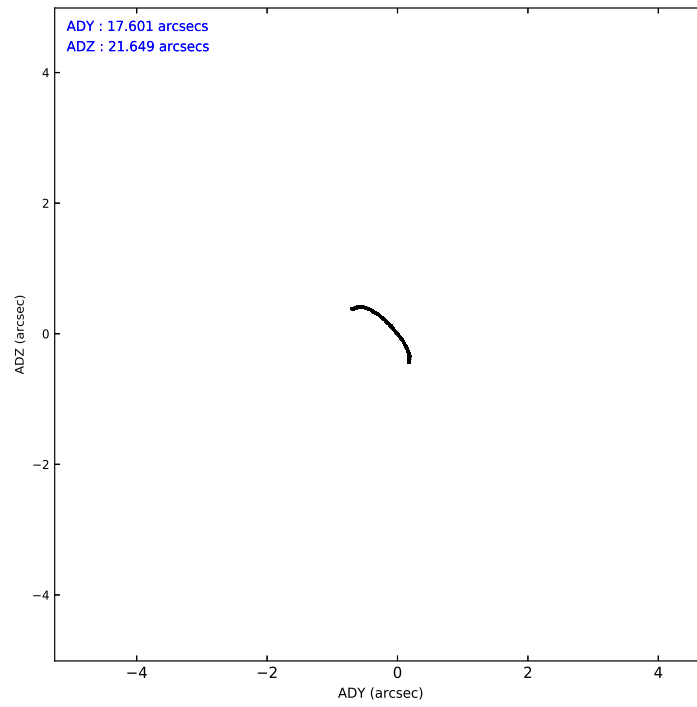
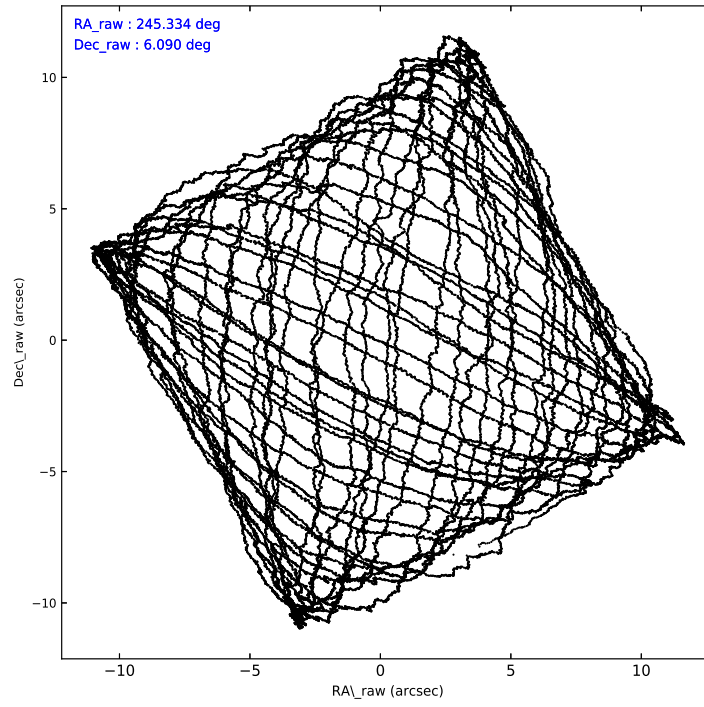
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	134526	144475	152698	152042	195340
rejected events	117655	125973	136103	134796	109590
rejected %	87%	87%	89%	88%	56%

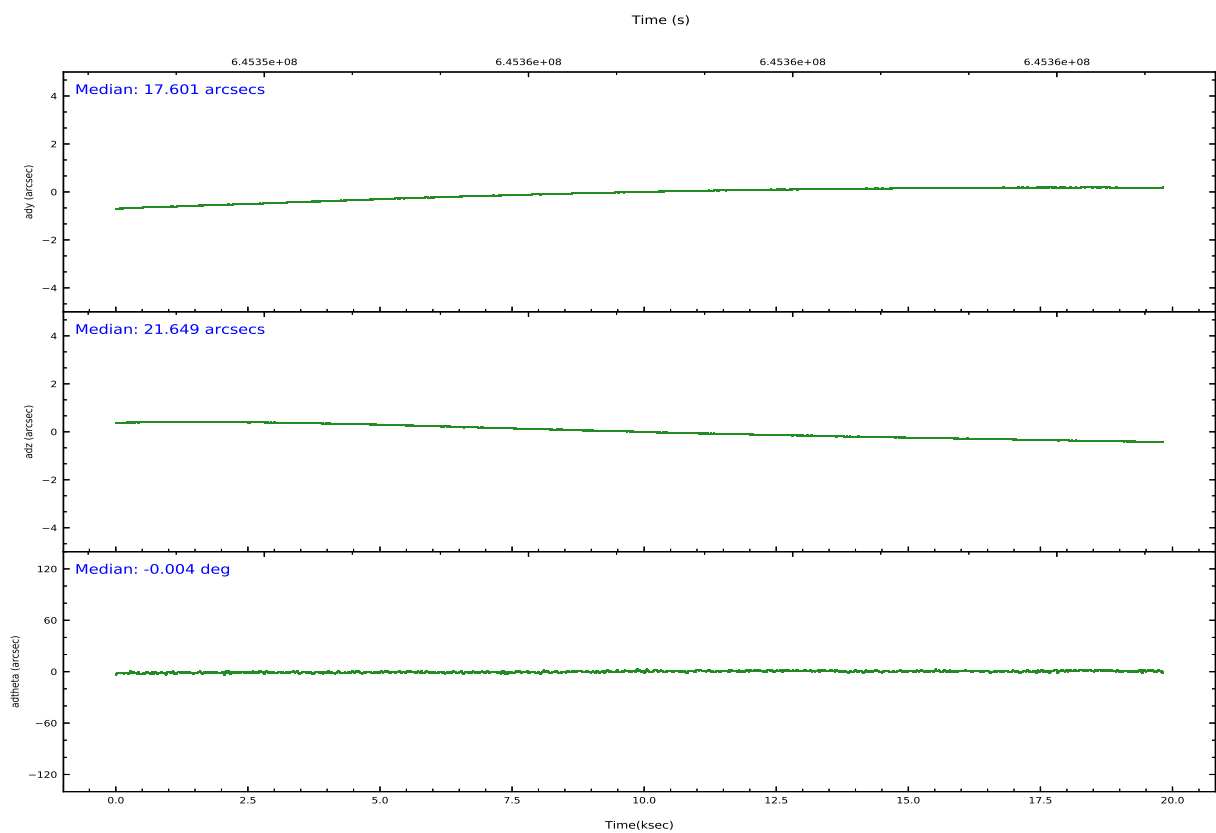
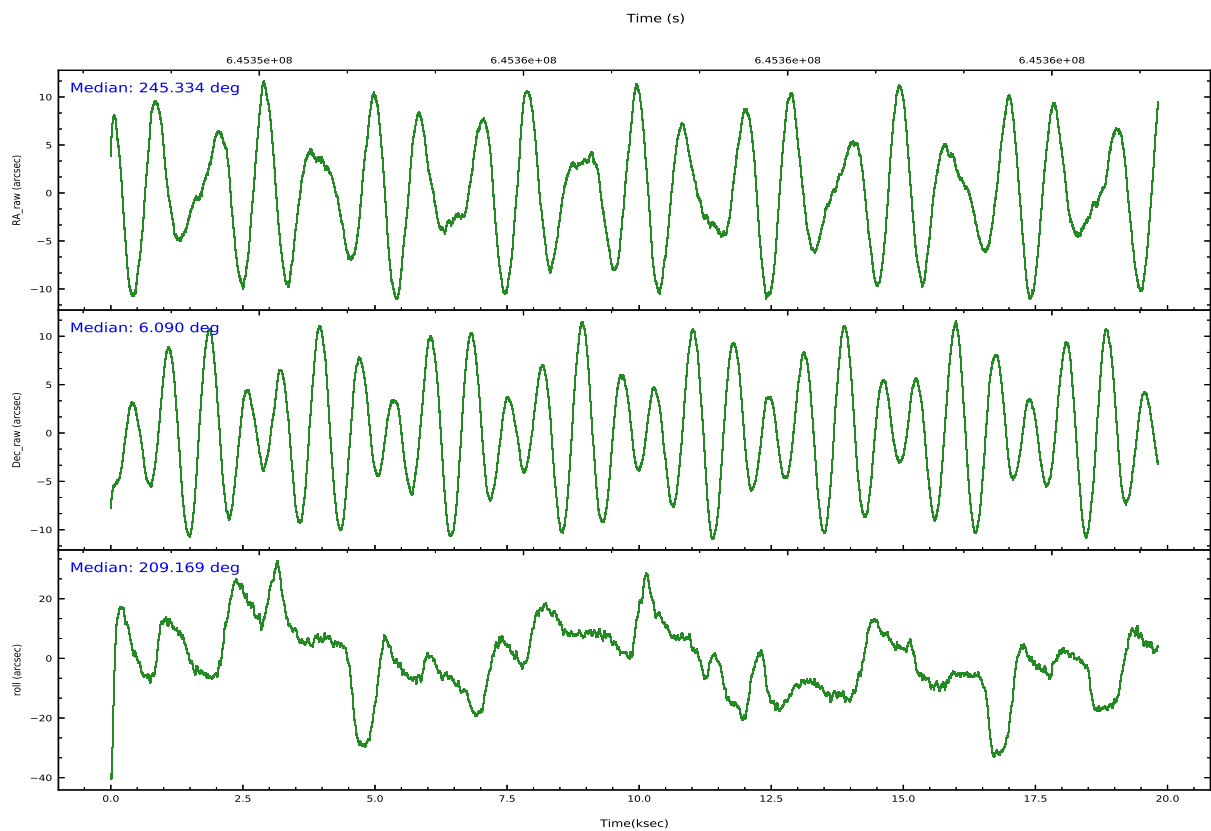
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	5778	6231	5898	6722	7553
	4%	4%	3%	4%	3%
grade 1 events	77	77	83	88	270
	0%	0%	0%	0%	0%
grade 2 events	4194	4734	4098	3540	18315
	3%	3%	2%	2%	9%
grade 3 events	1770	1749	1647	1783	6850
	1%	1%	1%	1%	3%
grade 4 events	1607	1717	1699	1686	6794
	1%	1%	1%	1%	3%
grade 5 events	6484	6635	6084	7274	19560
	4%	4%	3%	4%	10%
grade 6 events	3524	4072	3258	3519	46244
	2%	2%	2%	2%	23%
grade 7 events	111092	119260	129931	127430	89754
	82%	82%	85%	83%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01237	ACIS-01237	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	245.348044	245.33526728526	CCD I2 on	Y	Y
[deg] Pointing Dec	6.113677	6.0978279637985	CCD I3 on	Y	Y
[deg] Pointing Roll	208.958386	209.16922954577	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	N
[mm] SIM translation stage pos	-225.840463	-225.8433433320239	CCD S3 on	O2	Y
[mm] SIM translation stage offset	-7.752	-7.749109670905796	CCD S4 on	N	N
[s] Observation start time (MET)	645347312.184000	645346197.07683	CCD S5 on	N	N
Observation start date	2018-06-14T07:07:23	2018-06-14T06:49:57	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	645367012.184000	645367346.41558	On-chip summing requested	N	N
Observation end date	2018-06-14T12:35:43	2018-06-14T12:42:26	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



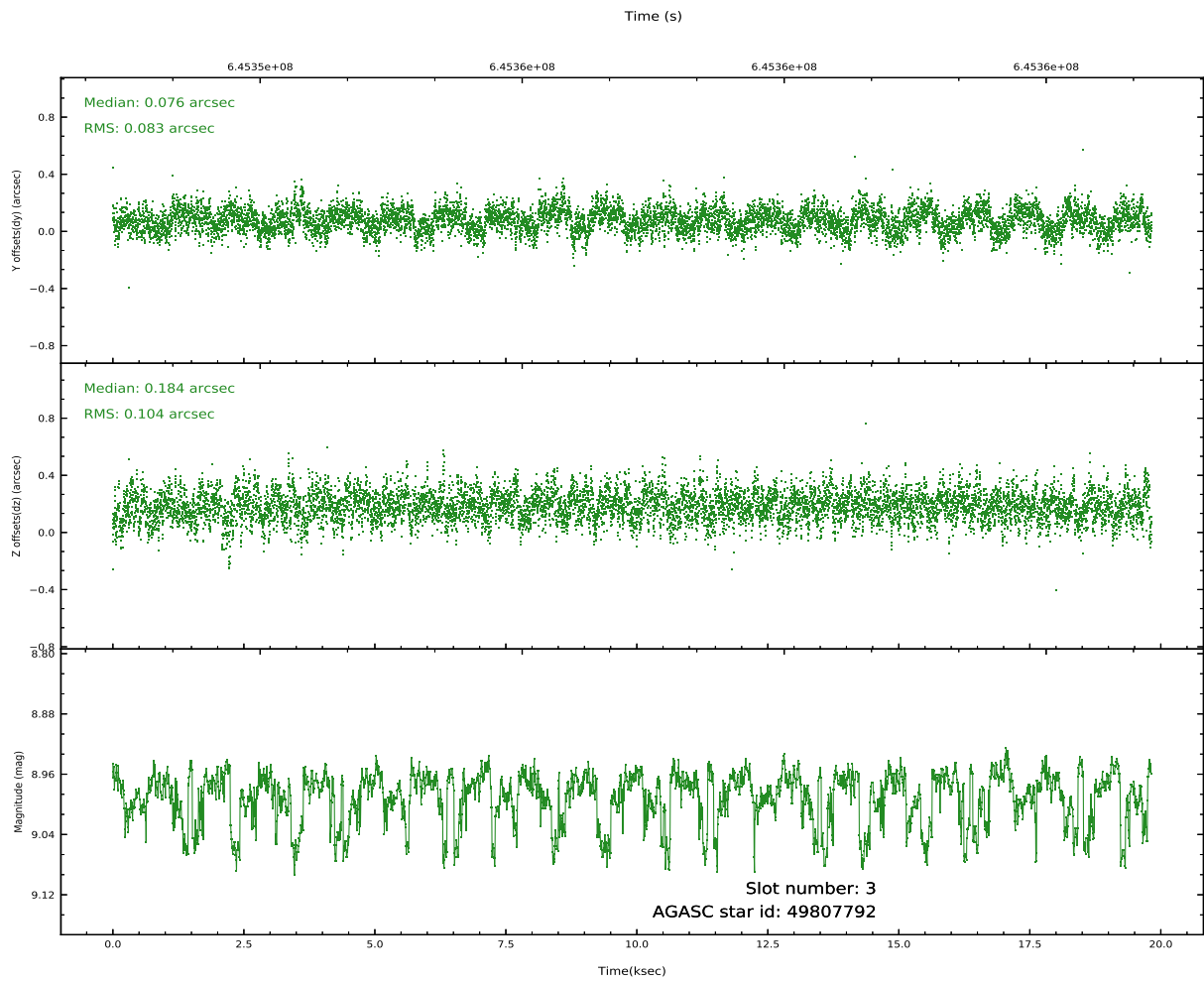
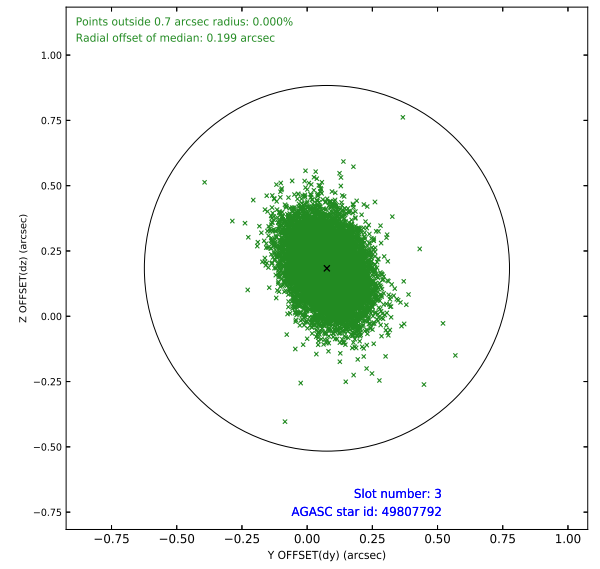
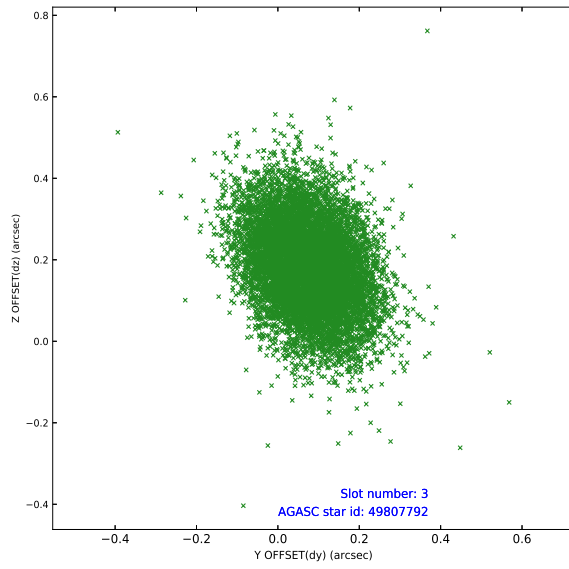


Slot Statistics

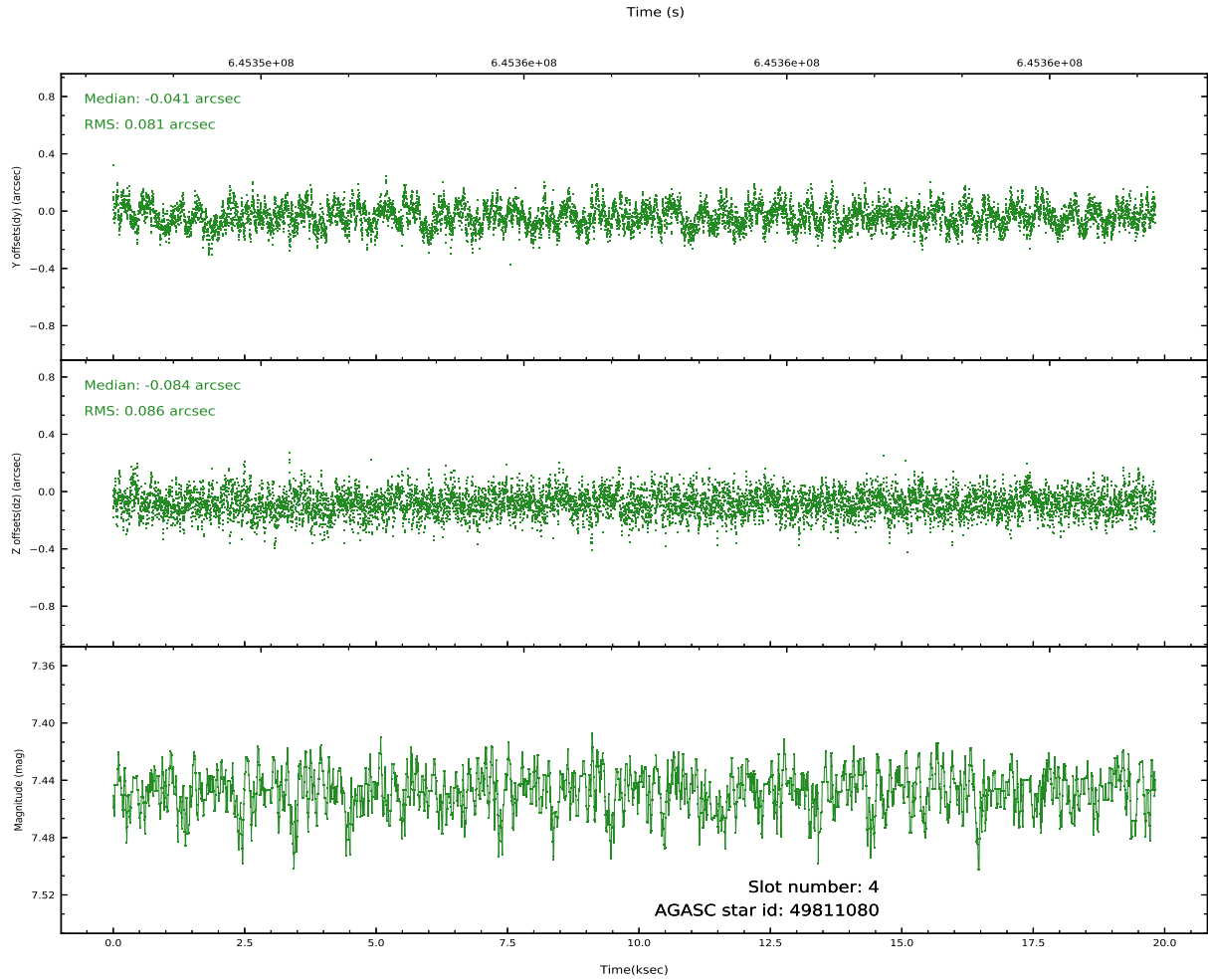
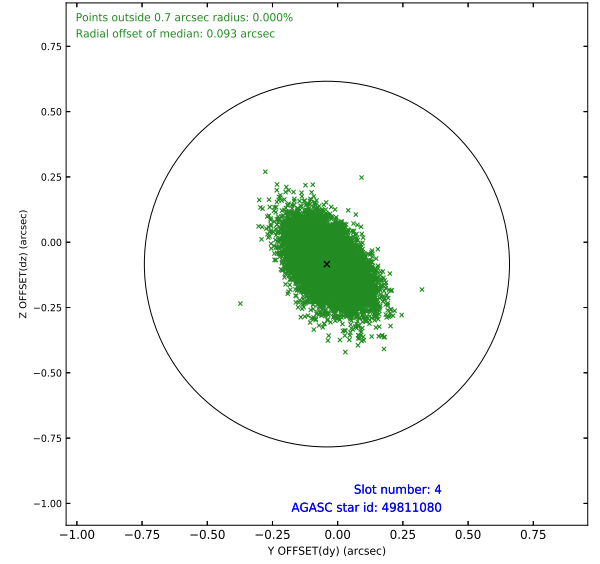
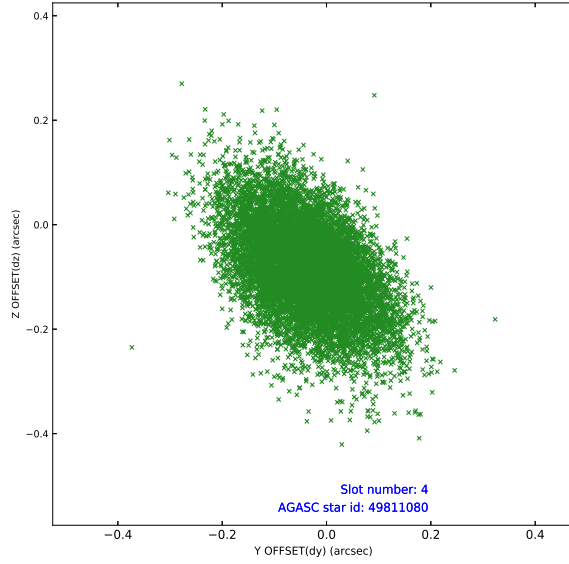
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.18	4834	1.000	0.036	-0.121	0.013	0.020	0.000000	0.000000	921.80	-1004
1	FID		ACIS-I-4	7.08	4833	1.000	-0.074	-0.017	0.014	0.022	0.000000	0.000000	2141.35	896
2	FID		ACIS-I-6	7.20	4834	1.000	-0.061	0.207	0.019	0.039	0.000000	0.000000	387.79	1537
3	GUIDE	used	49807792	8.98	9660	1.000	0.076	0.184	0.139	0.232	245.483233	6.546417	-1176.81	-1128
4	GUIDE	used	49811080	7.45	9668	1.000	-0.041	-0.084	0.122	0.209	245.425504	5.807368	291.85	1098
5	GUIDE	used	49812160	8.18	9663	1.000	-0.016	-0.014	0.116	0.199	245.347232	6.665322	-957.48	-1739
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	49949888	8.64	9664	1.000	-0.016	-0.087	0.143	0.243	245.841856	5.820032	-1036.04	1780

2.4 Star Slots

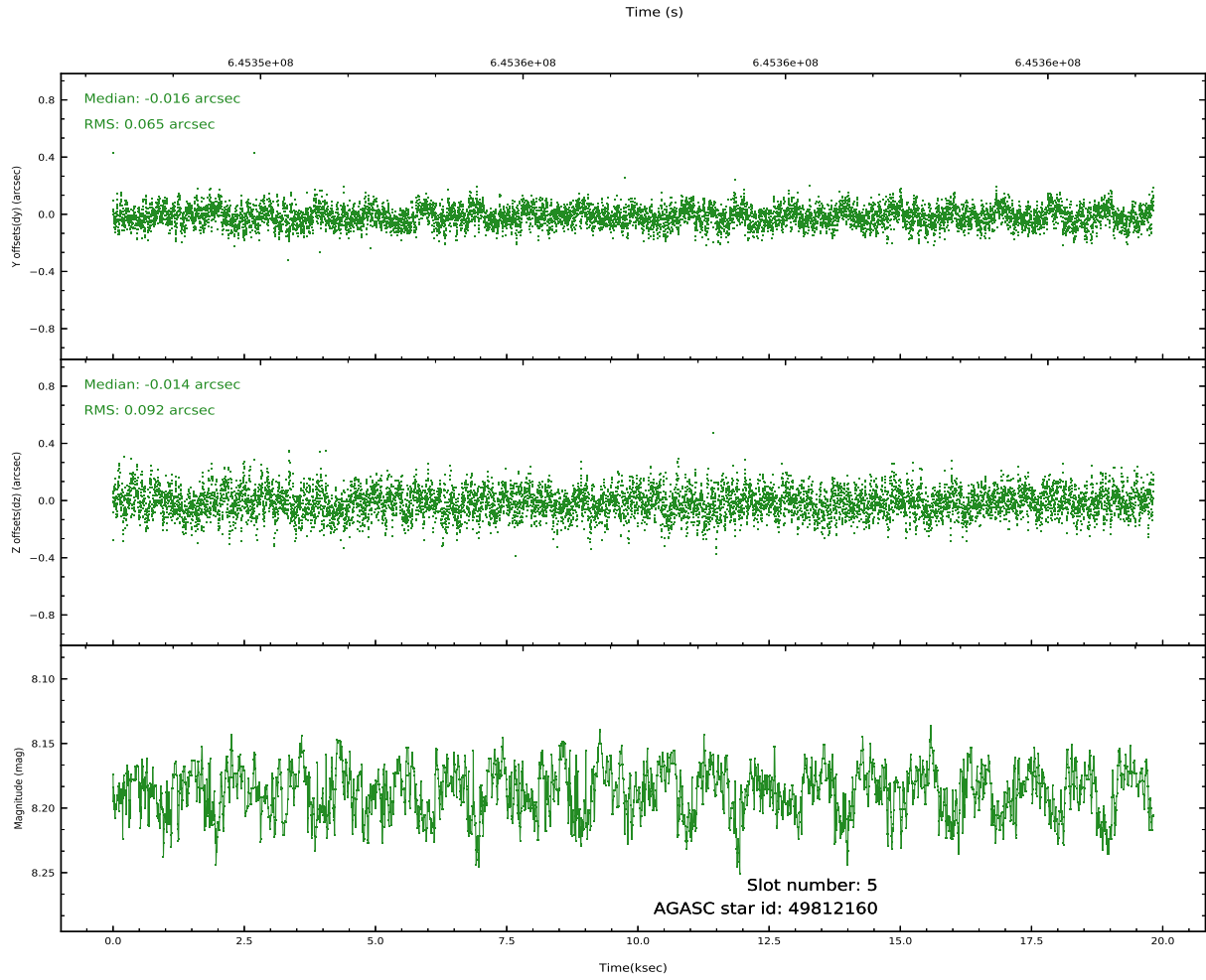
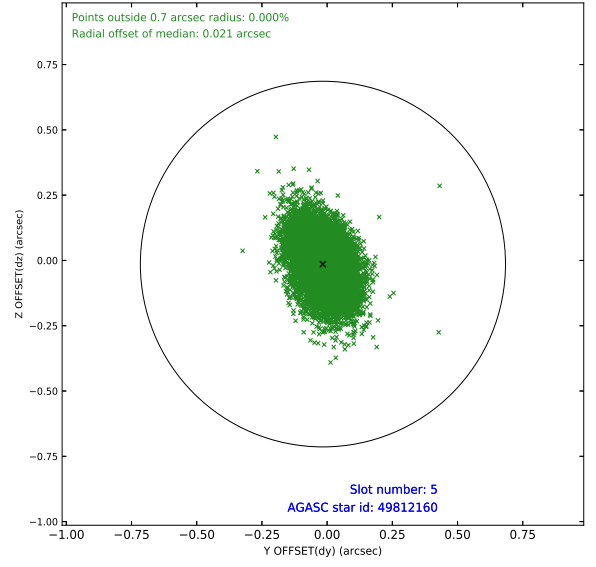
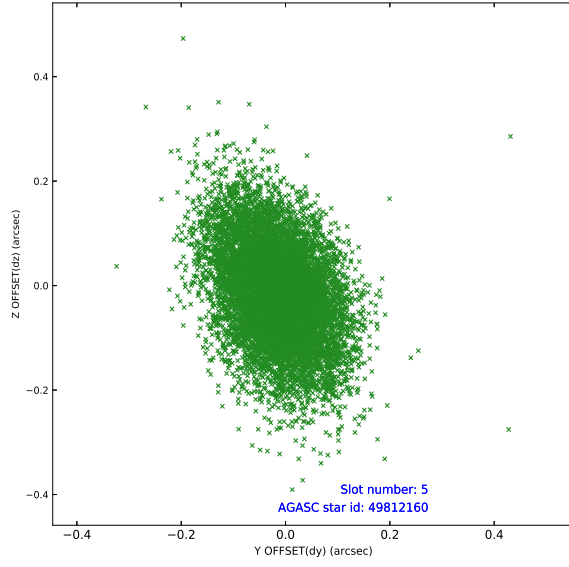
2.4.1 Slot 3



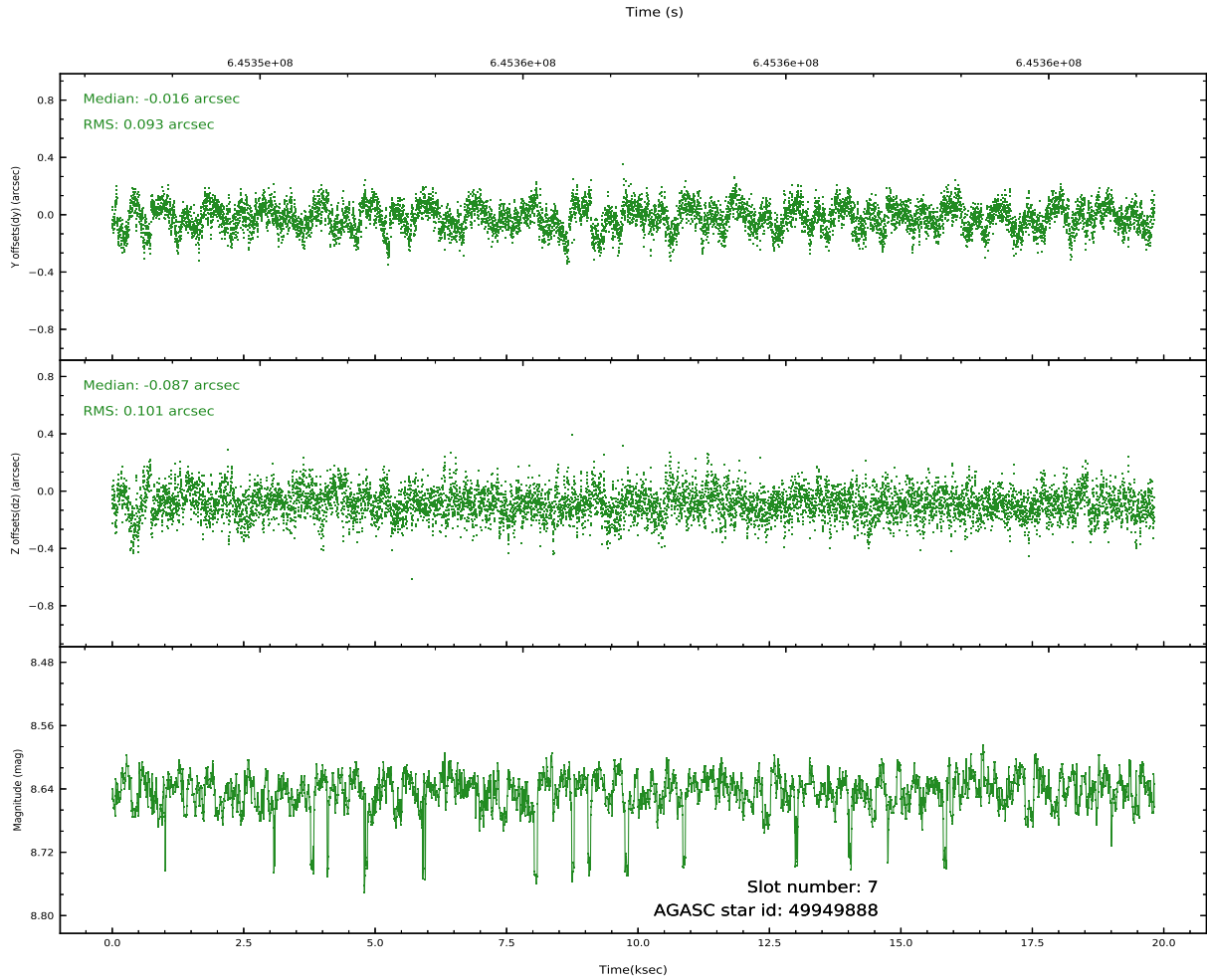
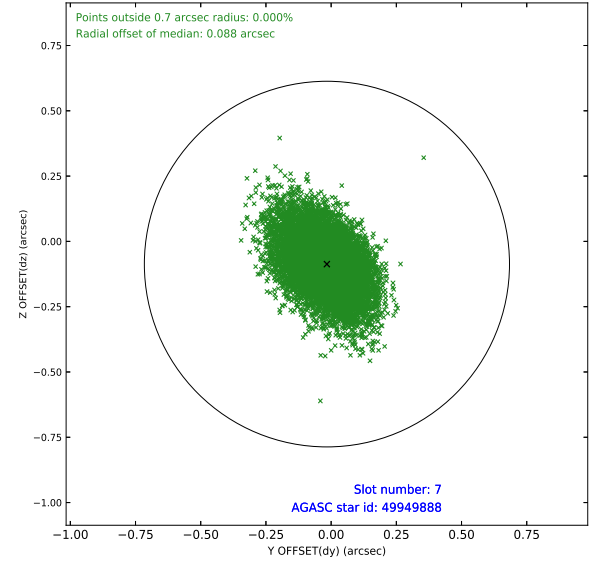
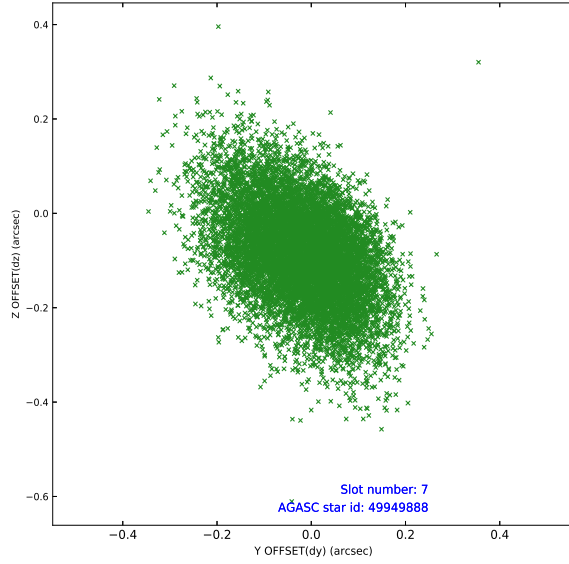
2.4.2 Slot 4



2.4.3 Slot 5

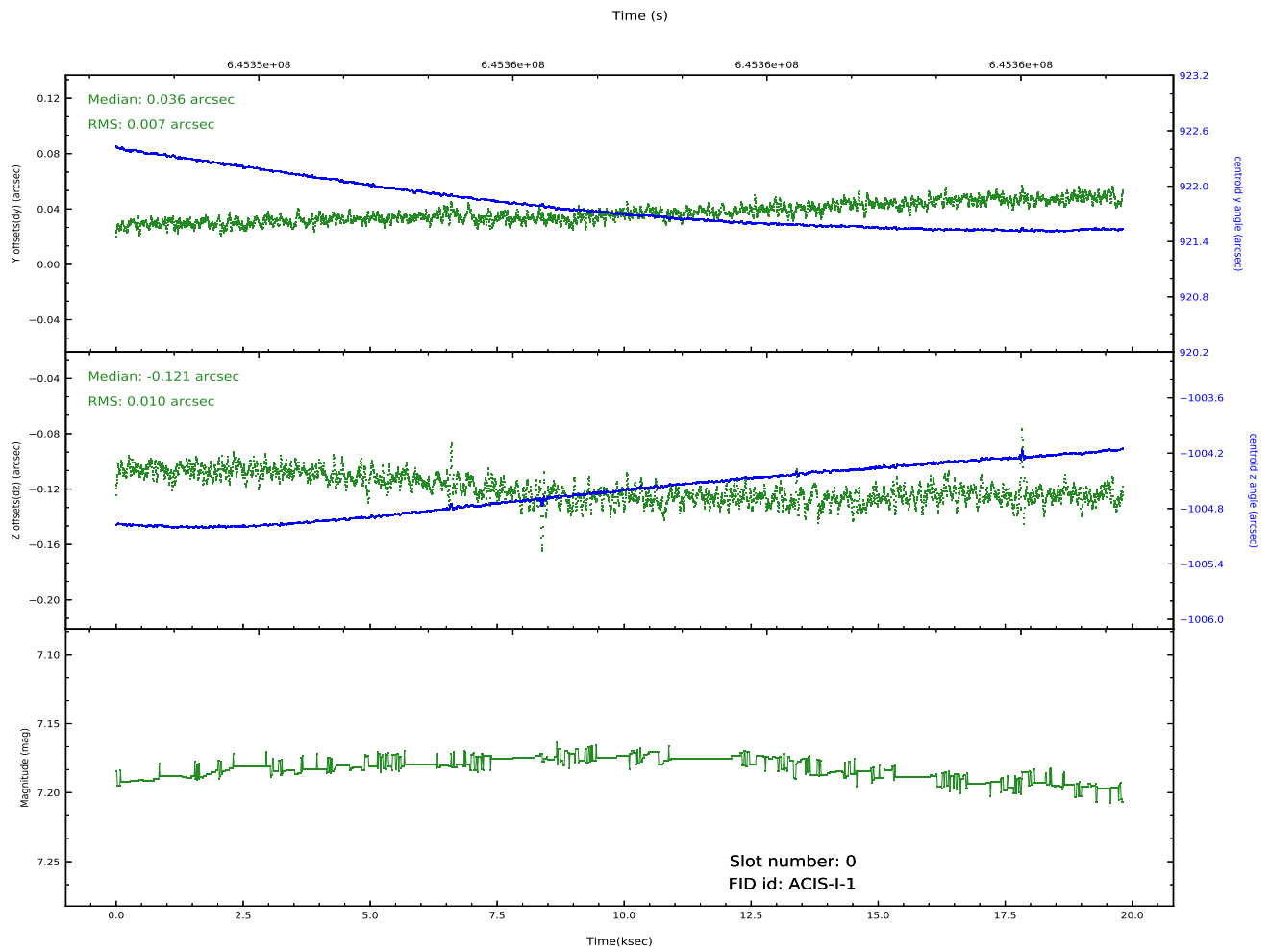
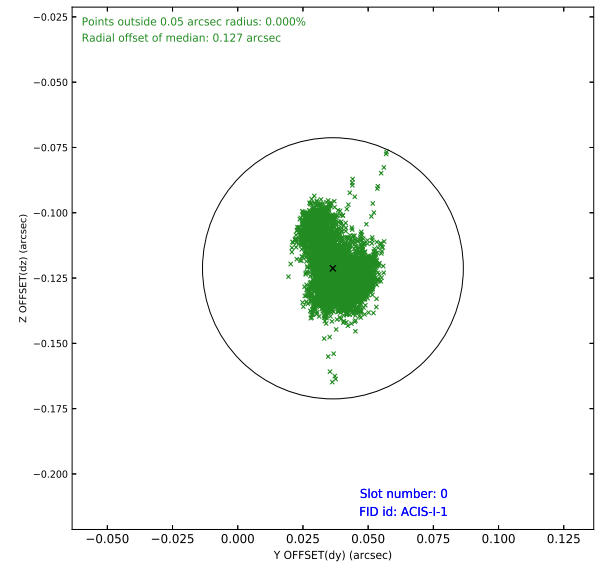
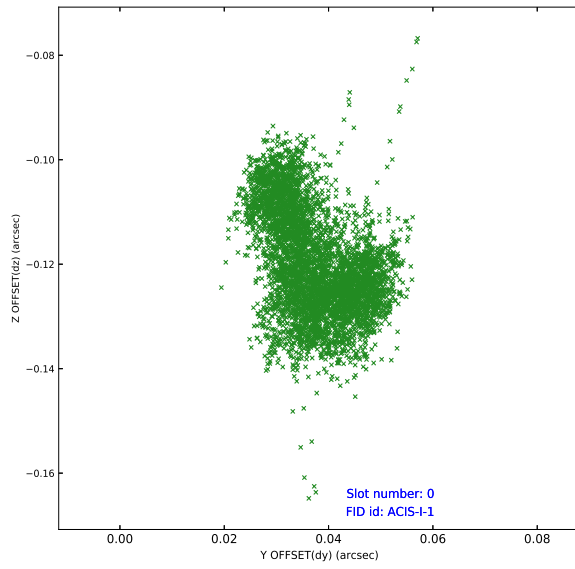


2.4.4 Slot 7

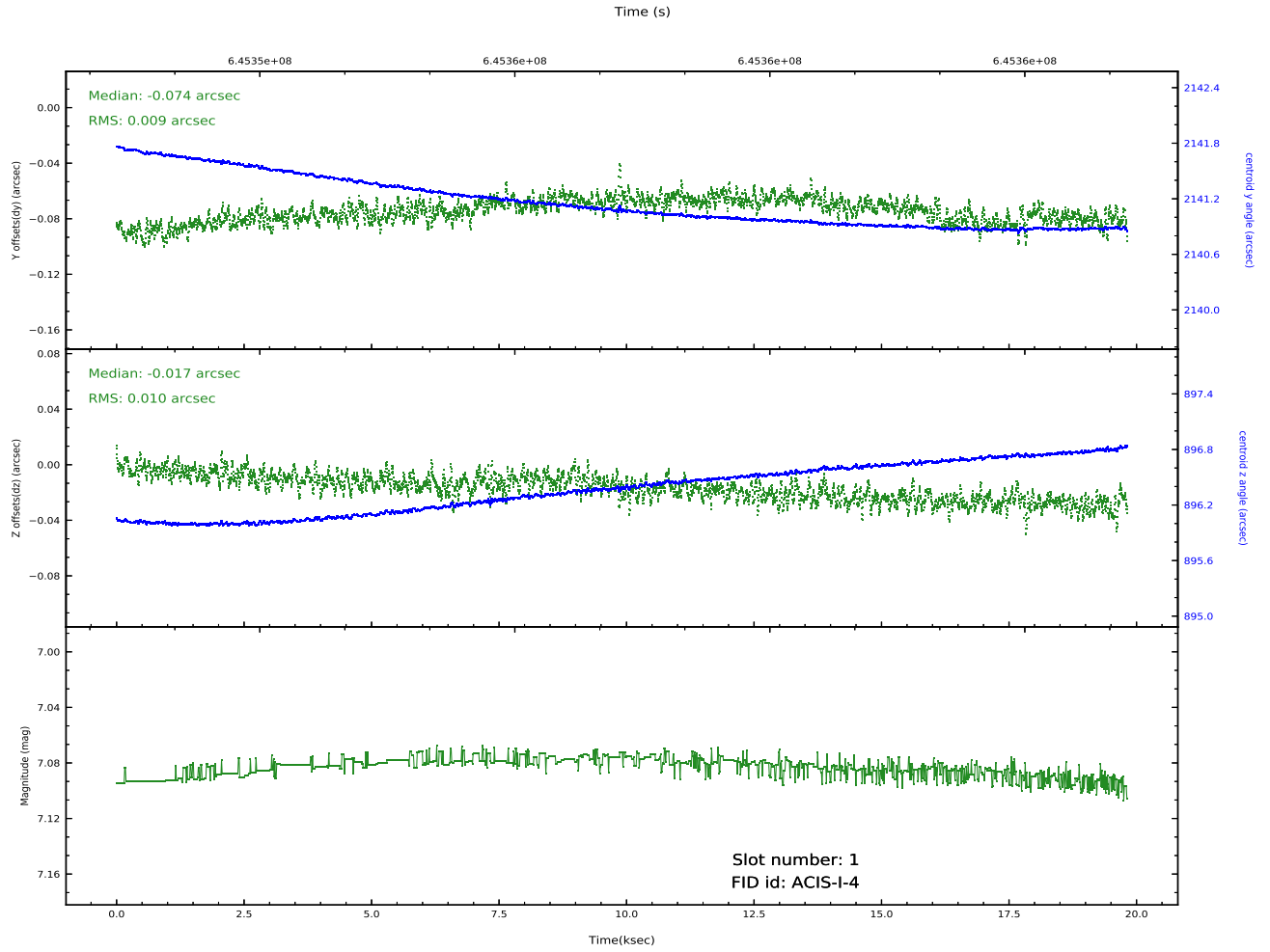
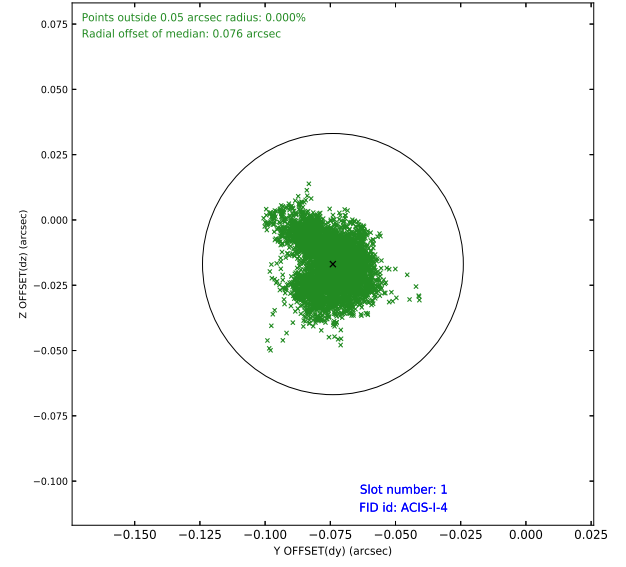
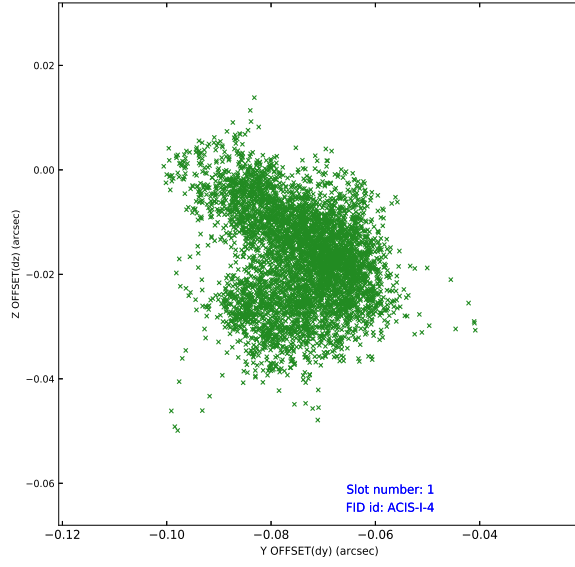


2.5 FID Slots

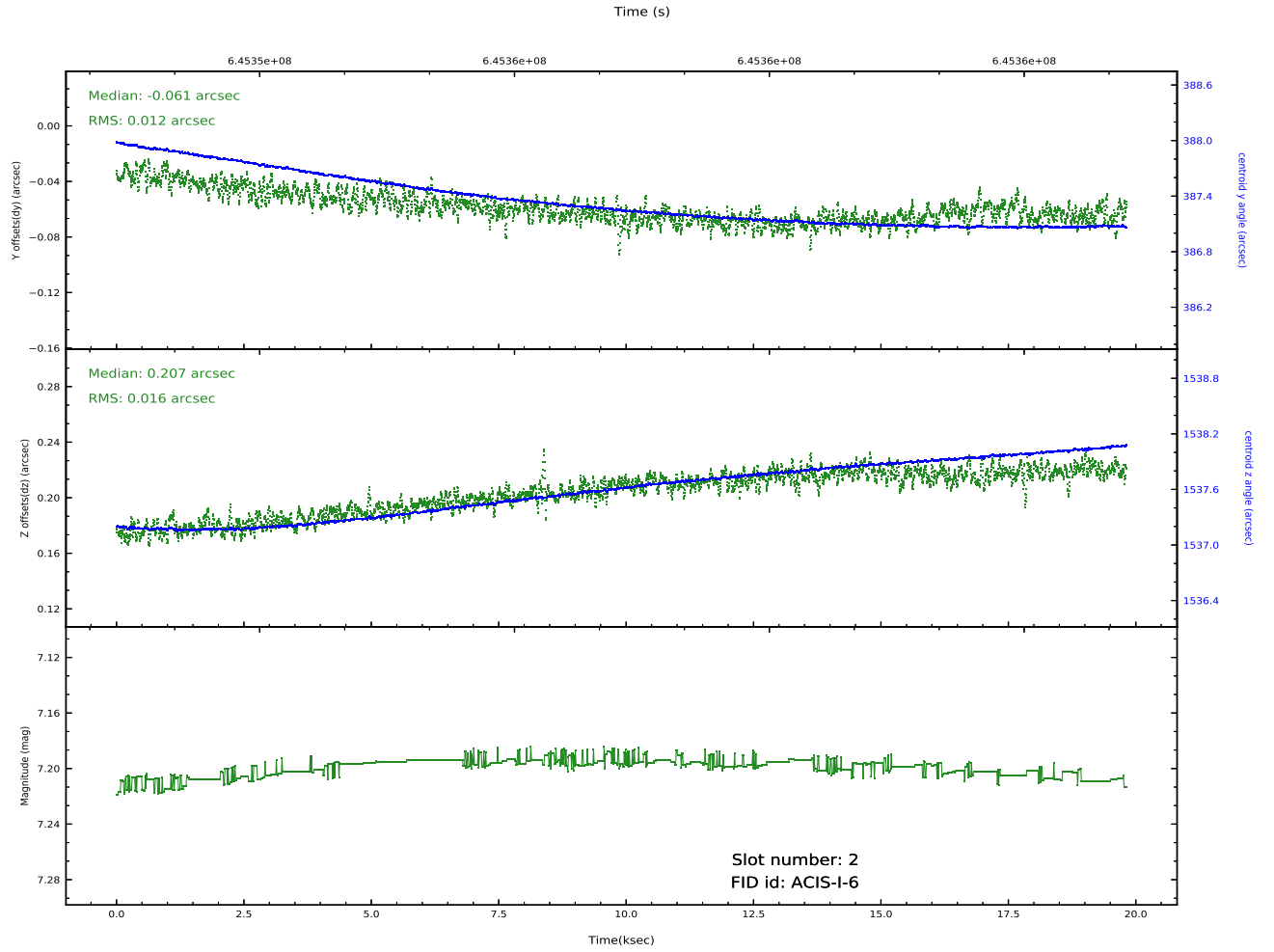
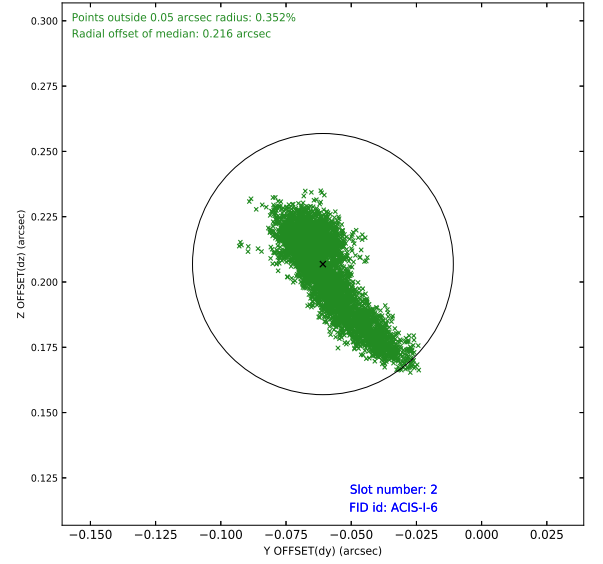
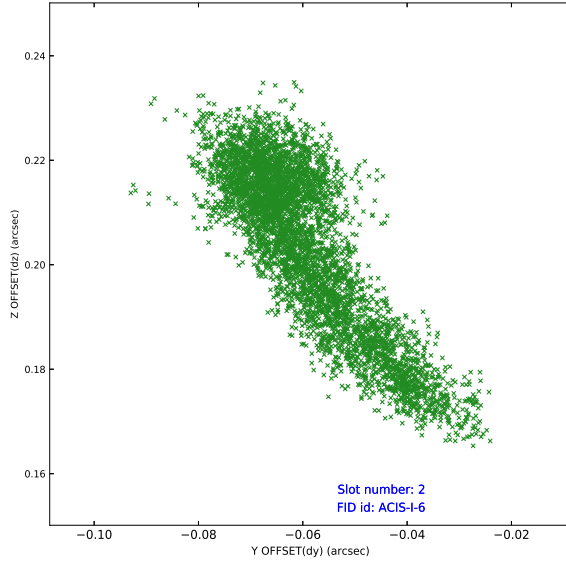
2.5.1 Slot 0



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	OK
V&V Charge Time	19.756300152063

A.2 Comments

Joint proposal with HST.

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One optional chip was dropped.

===

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.

===

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. In this case, the bias map for CCD = 2 could not be improved because no suitable data at a compatible temperature and time range are available to use as replacement values. The bias map used in this processing is the original bias map telemetered with the observation.