

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 21068 - L2 Version 3
Chandra X-Ray Center

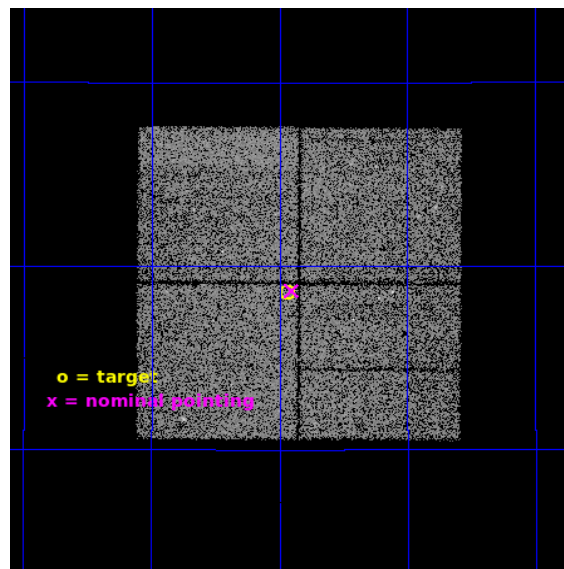
L2 Processing Date : Oct 25 2020

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1 Front

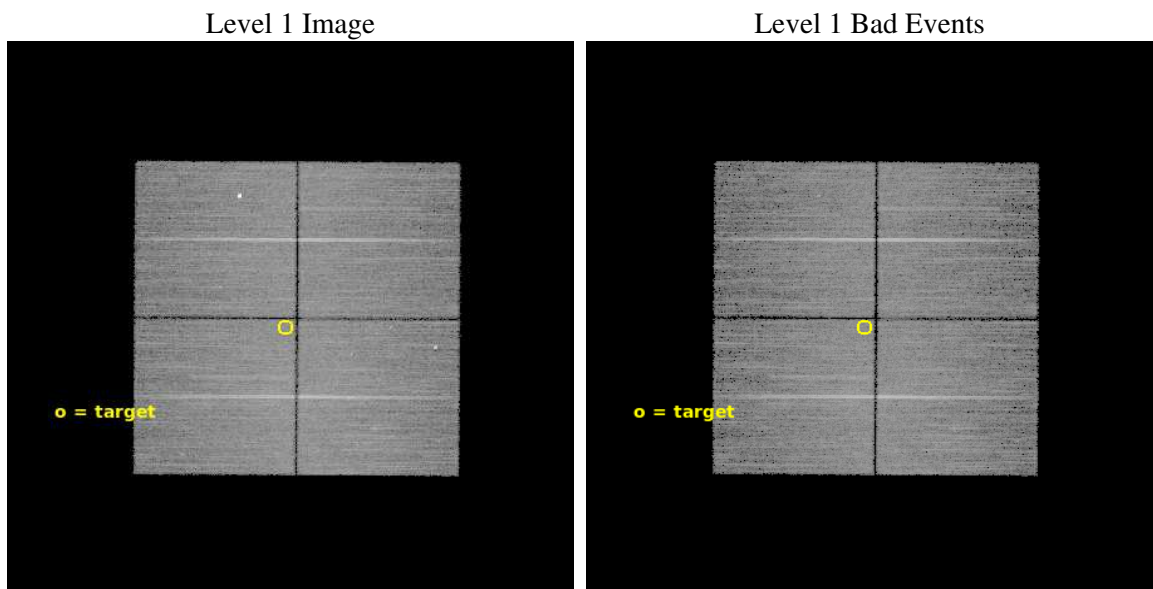
seq_num	601423	Sequence number
obs_id	21068	Observation id
title	Revealing the Formation Mechanism of Ultra-Diffuse Galaxies	Propos
observer	Gordon Garmire	Principal investigator
object	Dragonfly 44	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	195.241667	Observer's specified target RA [deg]
dec_targ	26.976389	Observer's specified target Dec [deg]
ra_nom	195.23775625345	Nominal RA [deg]
dec_nom	26.977690731118	Nominal Dec [deg]
roll_nom	180.31211939183	Nominal Roll [deg]
revision	3	Processing version of data
ontime	33565.868774056	Sum of GTIs [s]
livetime	33127.30598769	Livetime [s]
ontime0	33575.168794155	Sum of GTIs [s]
ontime1	33578.350884557	Sum of GTIs [s]
ontime2	33572.109773993	Sum of GTIs [s]
ontime3	33565.868774056	Sum of GTIs [s]
l2events	90708	Number of level 2 events



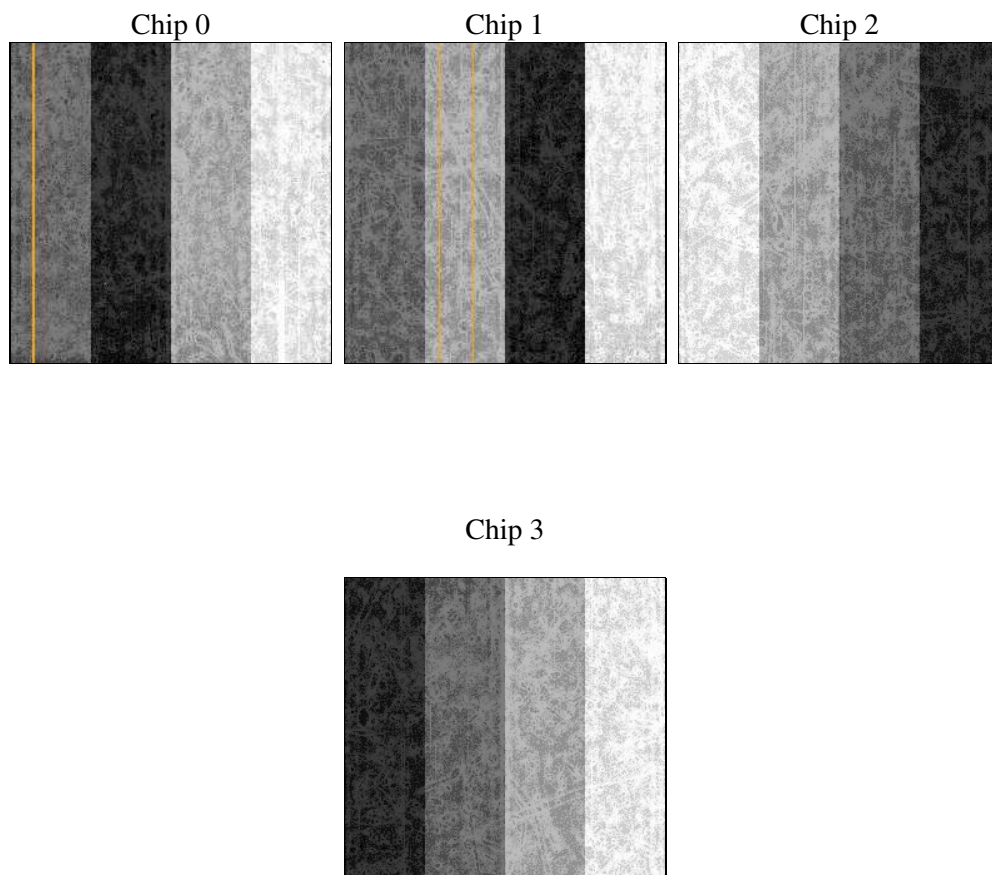
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	33500.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	33565.868774056	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	33575.168794155	Sum of GTIs [s]
date	2020-10-25T10:30:31	Date and time of file creation	ontime1	33578.350884557	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	33572.109773993	Sum of GTIs [s]
			ontime3	33565.868774056	Sum of GTIs [s]
			l1events	968918	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	230158	234818	256491	247451
rejected events	202751	200410	229322	222057
rejected %	88%	85%	89%	89%

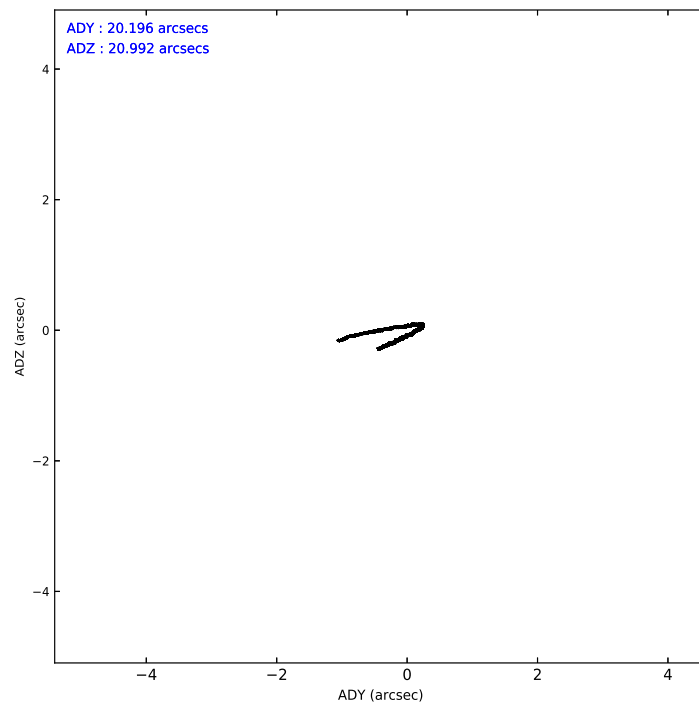
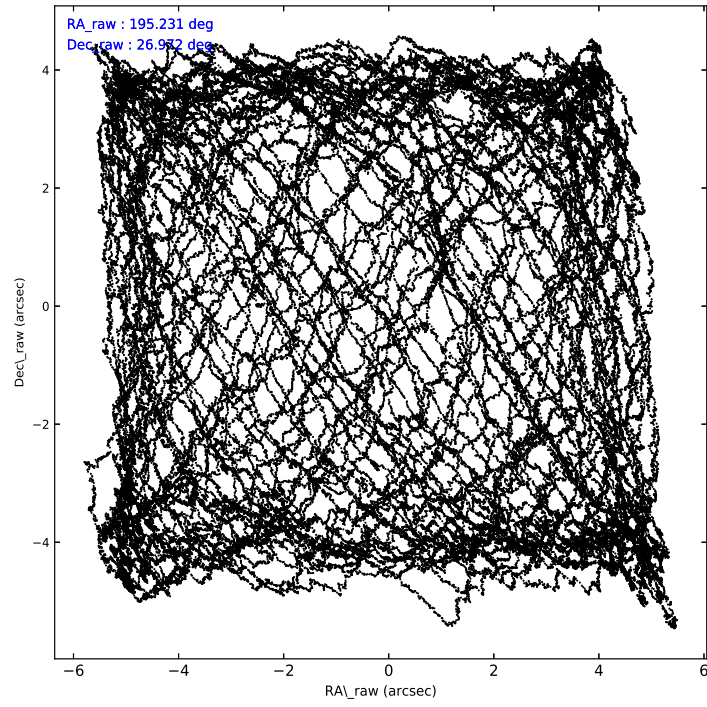
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	9216	14305	10310	8708
	4%	6%	4%	3%
grade 1 events	122	163	139	149
	0%	0%	0%	0%
grade 2 events	6993	7585	6285	5717
	3%	3%	2%	2%
grade 3 events	2722	2800	2583	2734
	1%	1%	1%	1%
grade 4 events	2657	2802	2689	2727
	1%	1%	1%	1%
grade 5 events	10220	10628	9584	11612
	4%	4%	3%	4%
grade 6 events	5824	6921	5303	5511
	2%	2%	2%	2%
grade 7 events	192404	189614	219598	210293
	83%	80%	85%	84%

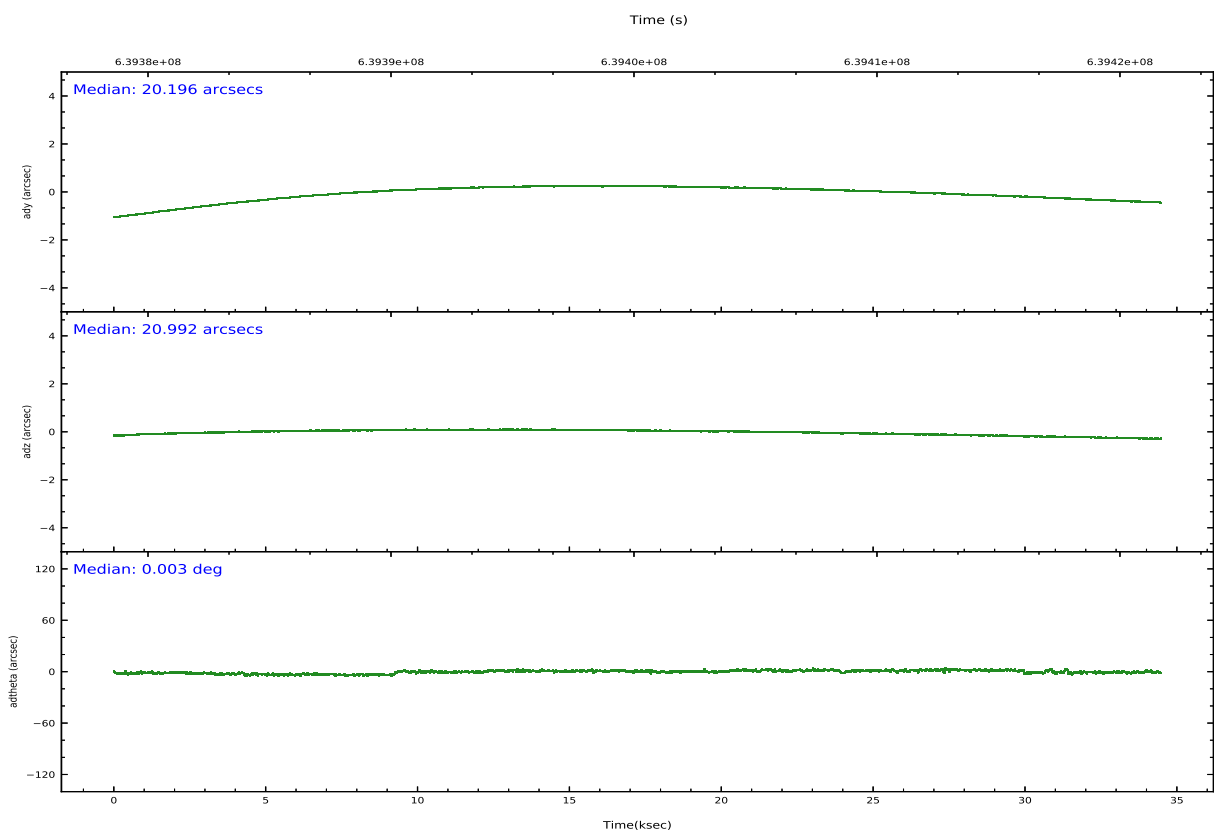
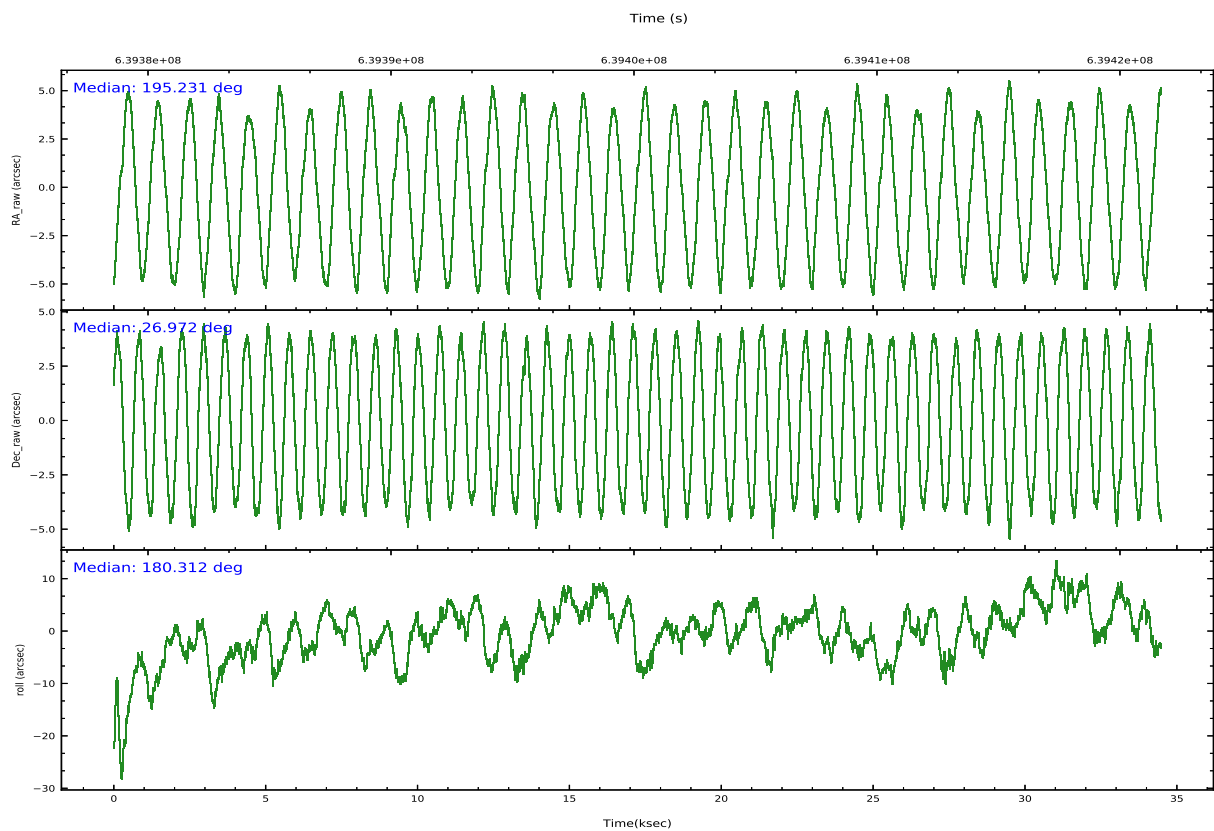
2.2 Compared Parameters

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	195.258062	195.23775625345
[deg] Pointing Dec	26.985679	26.977690731118
[deg] Pointing Roll	180.092557	180.31211939183
[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)	639383857.184000	639382672.41195
Observation start date	2018-04-06T06:36:28	2018-04-06T06:17:52
[s] Observation end time (MET)	639417357.184000	639417521.3890001
Observation end date	2018-04-06T15:54:48	2018-04-06T15:58:41
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
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



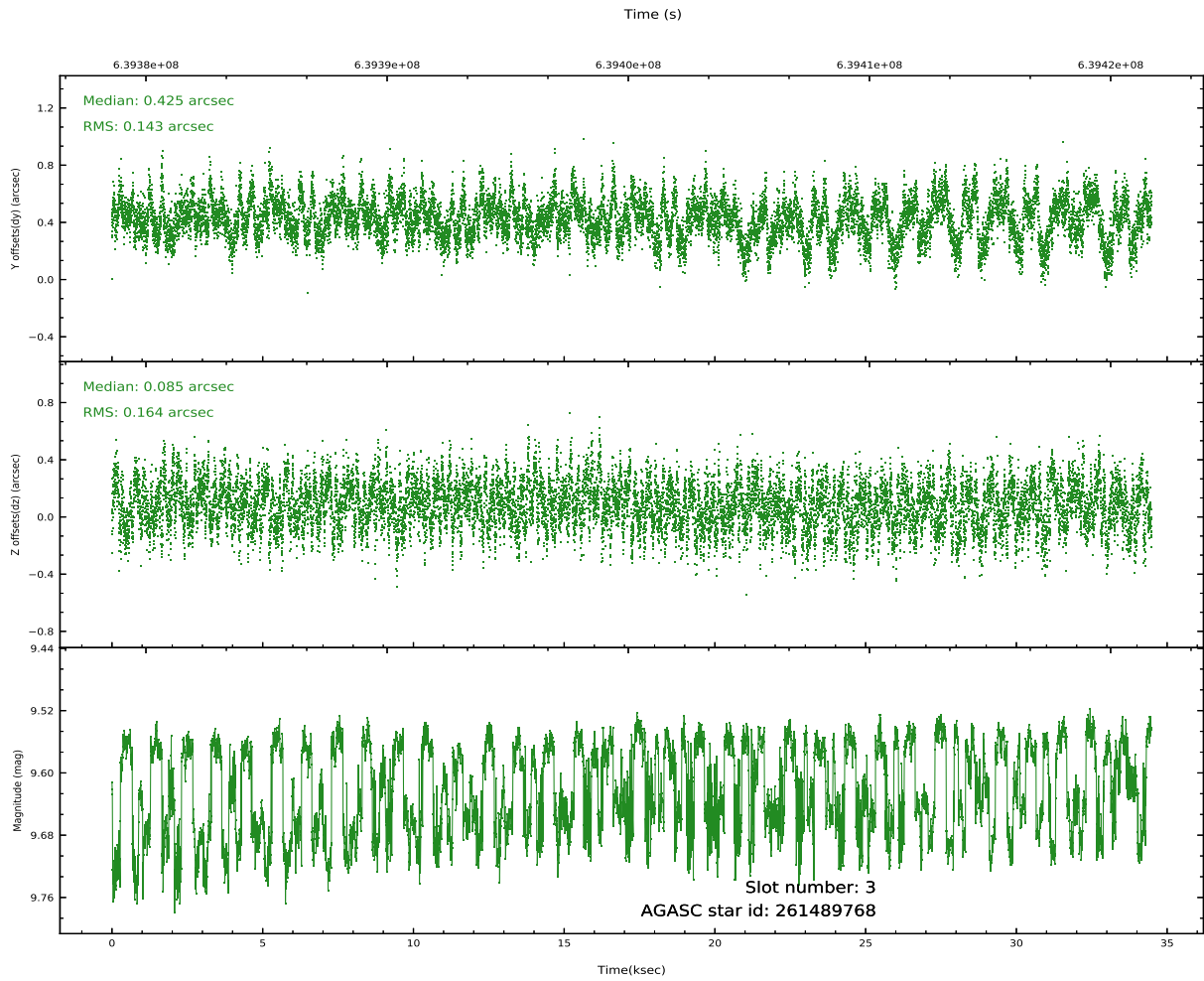
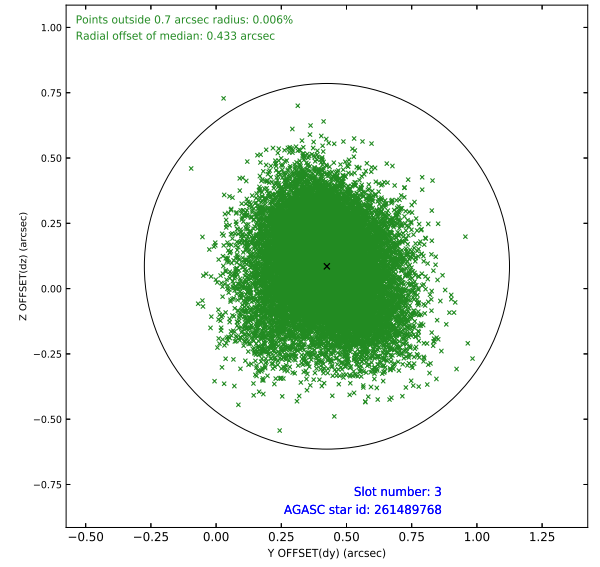
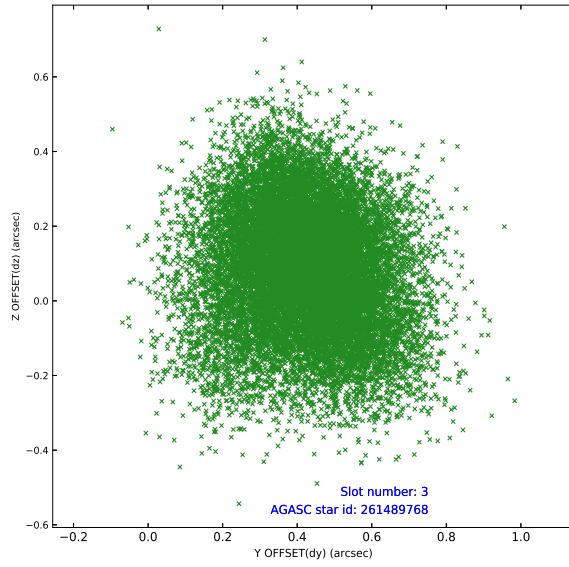


Slot Statistics

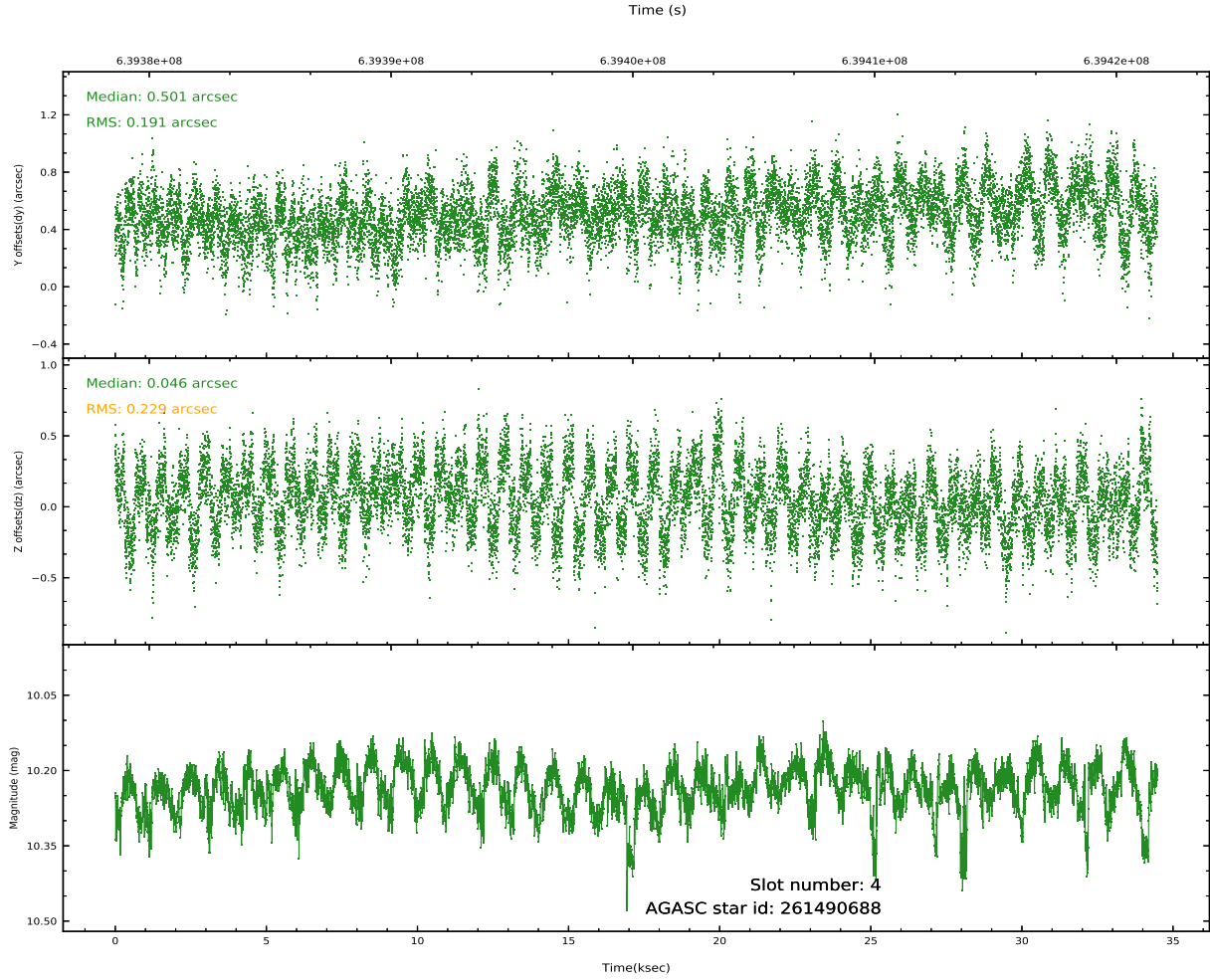
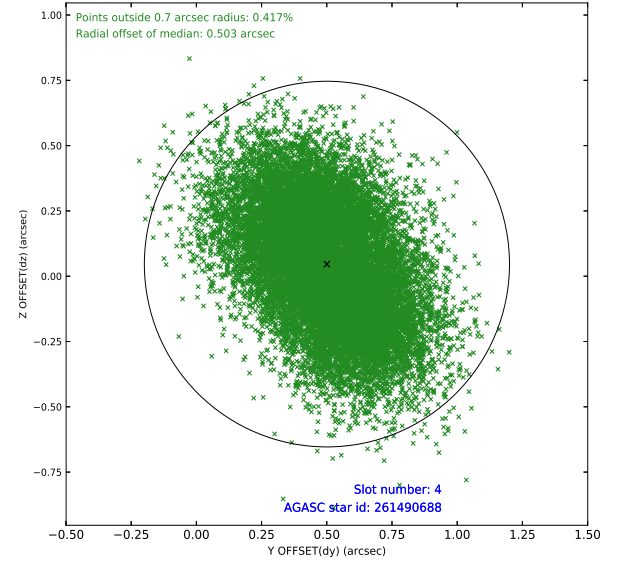
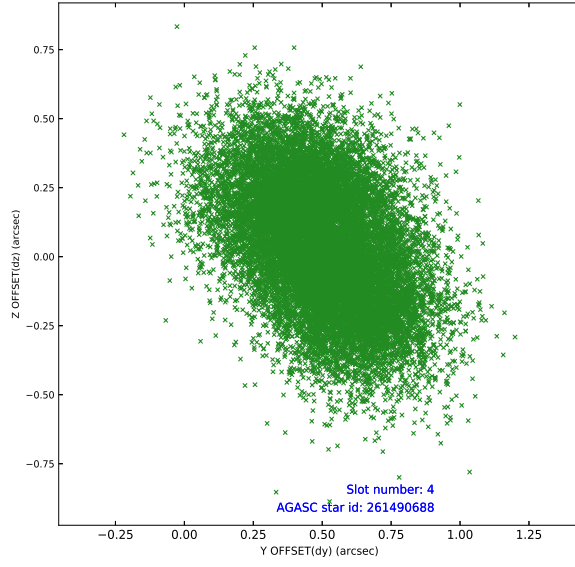
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-2	7.09	8410	1.000	0.121	-0.035	0.027	0.039	0.000000	0.000000	-774.93	-851
1	FID		ACIS-I-4	7.16	8409	1.000	0.111	-0.039	0.025	0.044	0.000000	0.000000	2139.27	1054
2	FID		ACIS-I-5	7.19	8410	1.000	-0.334	0.142	0.015	0.025	0.000000	0.000000	-1828.99	1053
3	GUIDE	used	261489768	9.62	16794	1.000	0.425	0.085	0.233	0.374	195.906248	27.591842	-2071.16	-2184
4	GUIDE	used	261490688	10.24	16786	1.000	0.501	0.046	0.318	0.507	194.649982	27.195247	1946.20	-762
5	GUIDE	used	261490800	10.17	16559	1.000	-0.399	0.351	0.288	0.493	195.029641	27.224508	730.04	-861
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	261490008	8.58	16804	1.000	-0.523	-0.479	0.191	0.312	194.679481	27.119494	1852.59	-489

2.4 Star Slots

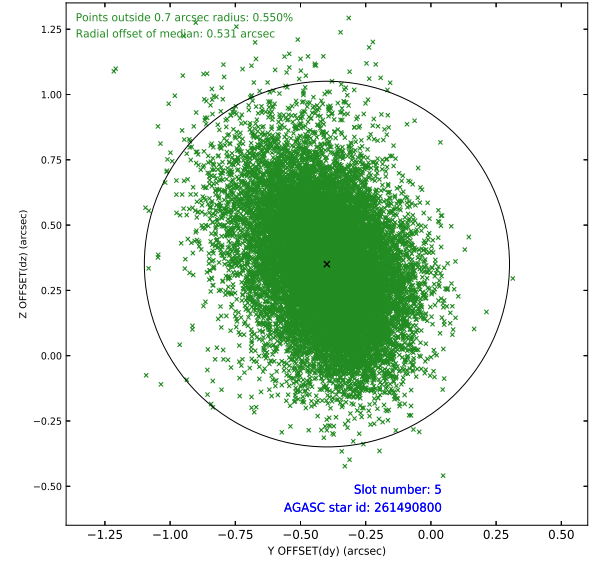
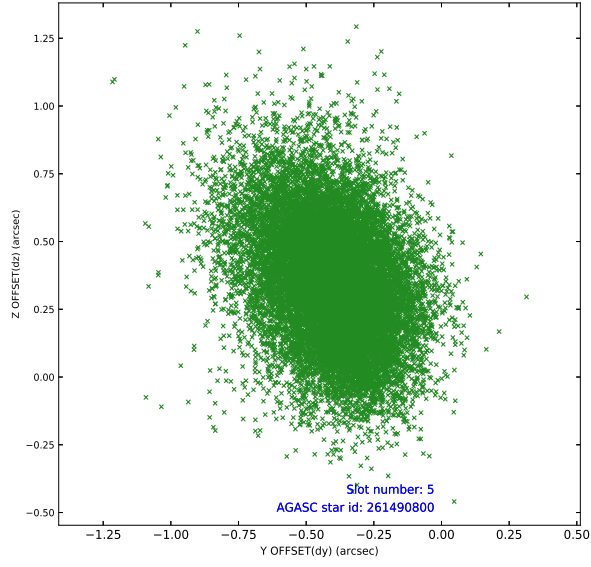
2.4.1 Slot 3



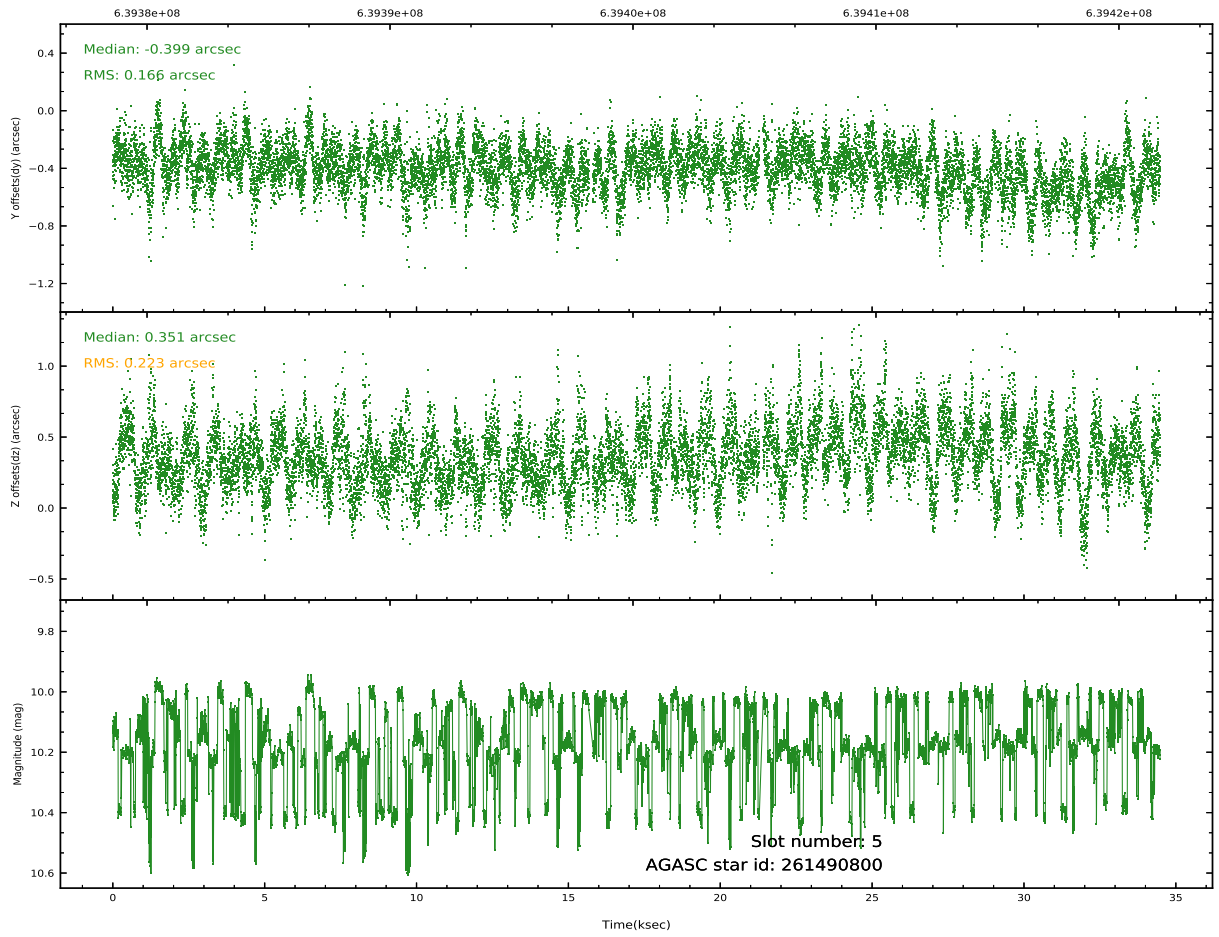
2.4.2 Slot 4



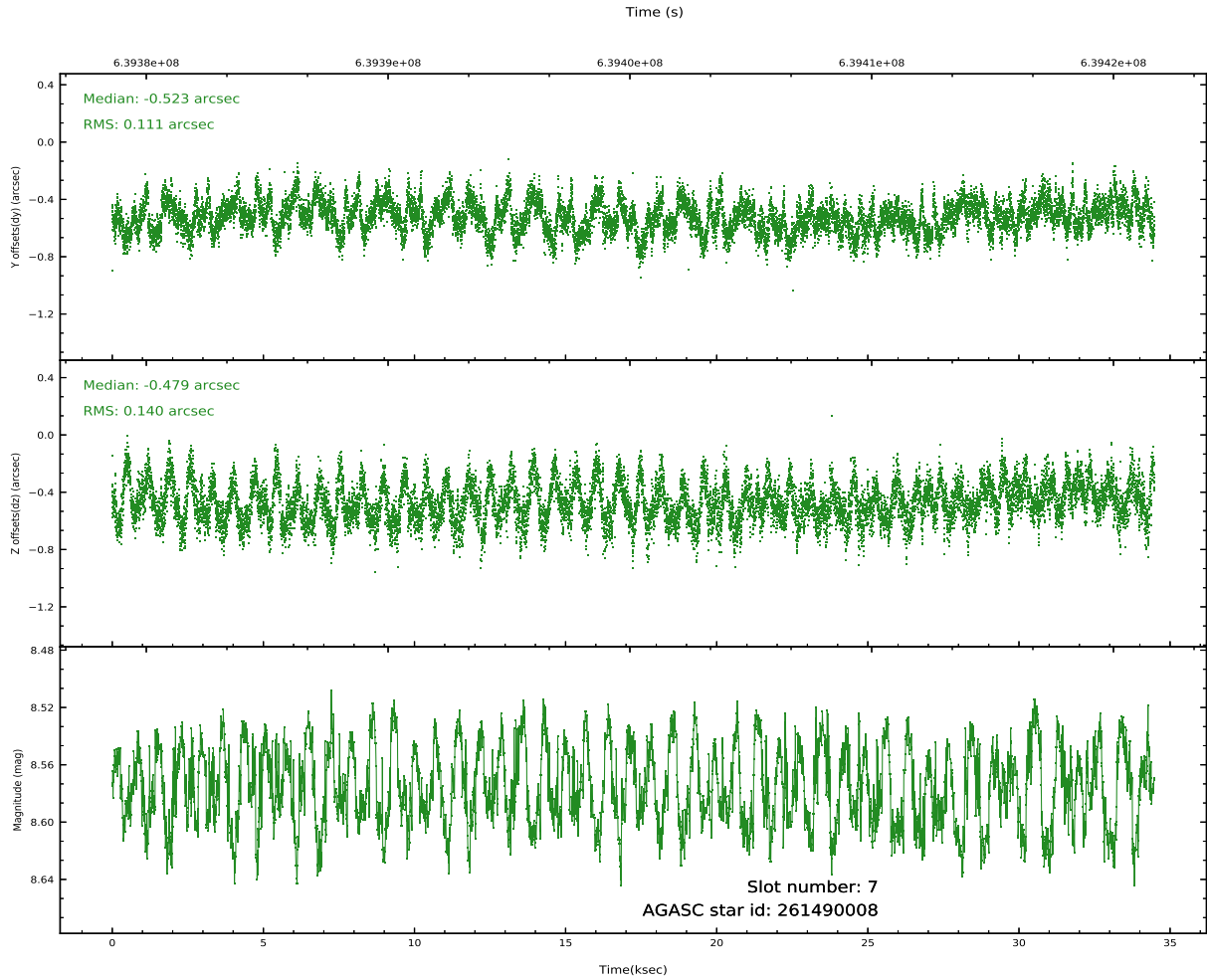
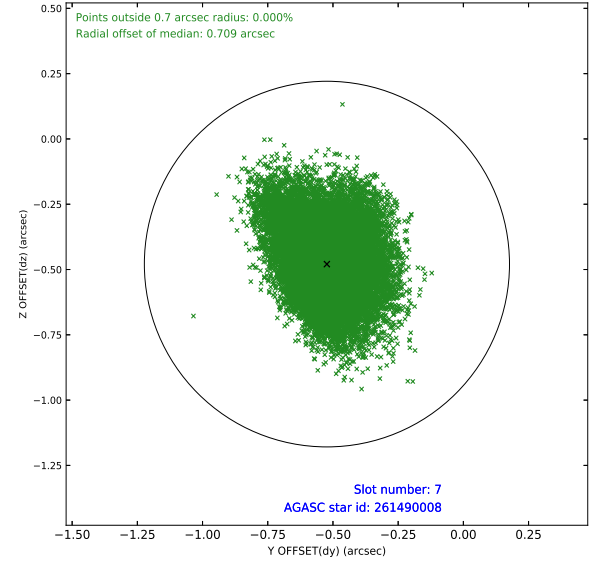
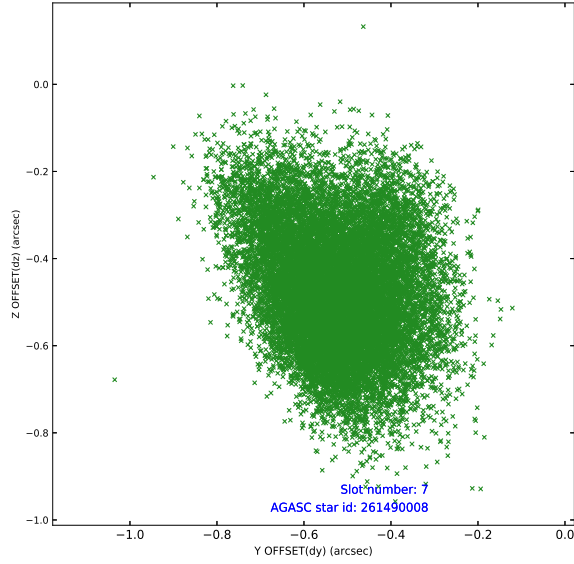
2.4.3 Slot 5



Time (s)

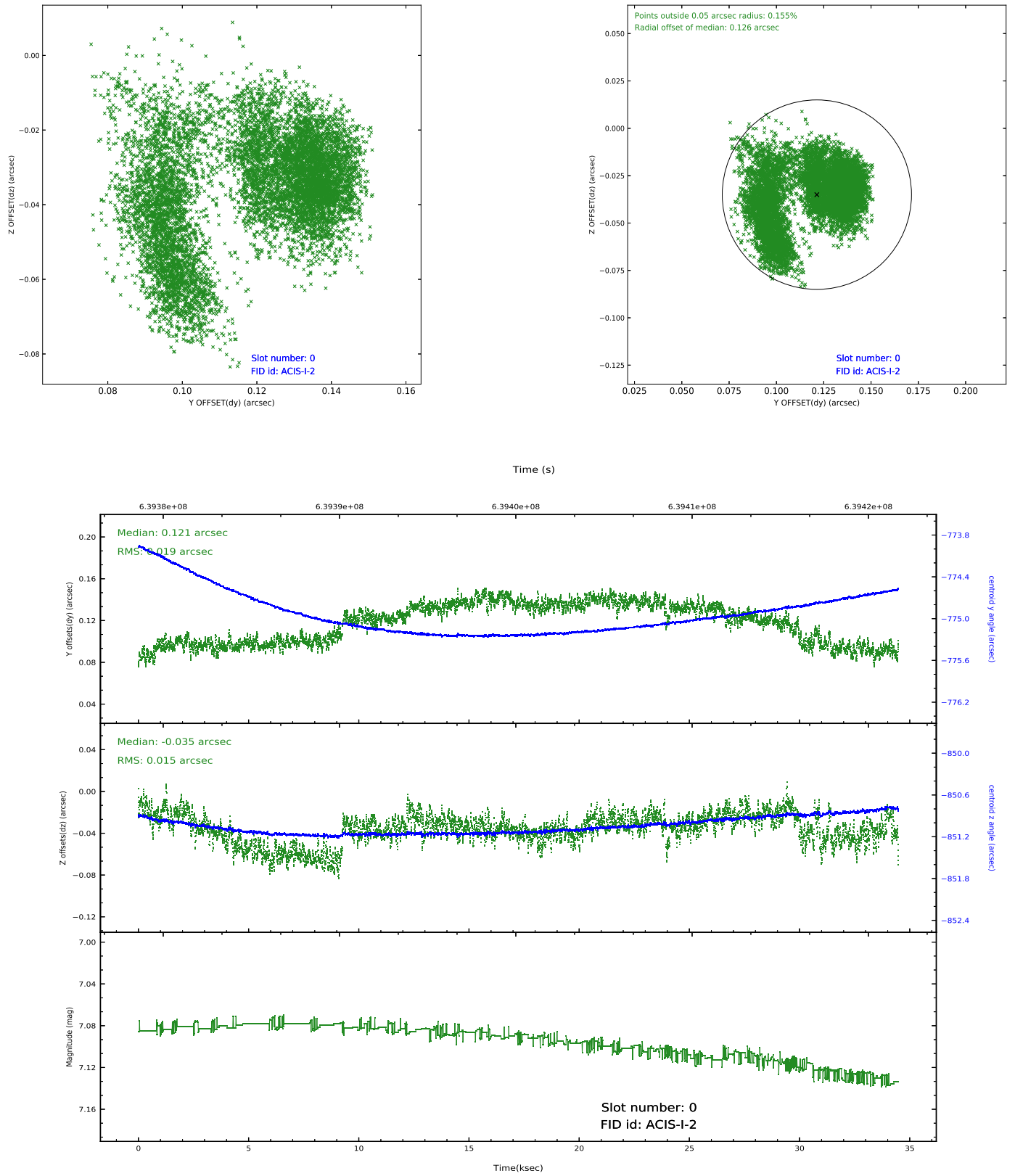


2.4.4 Slot 7

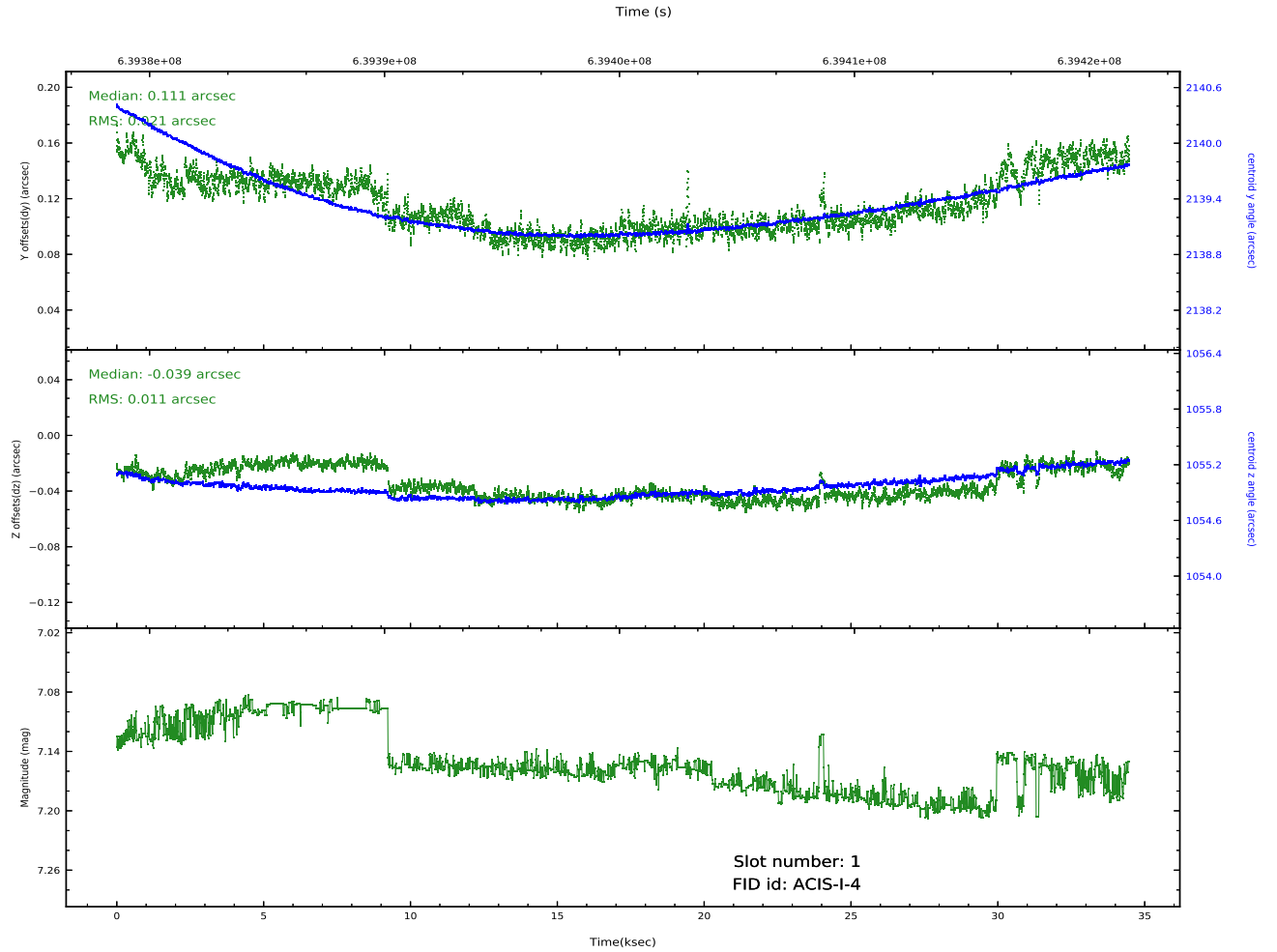
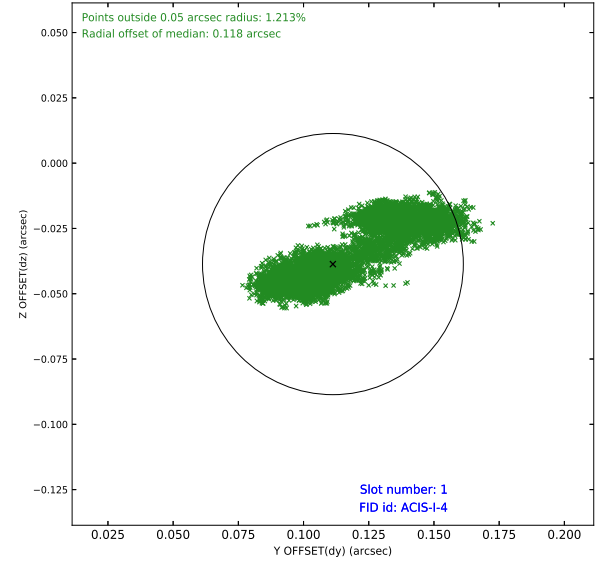
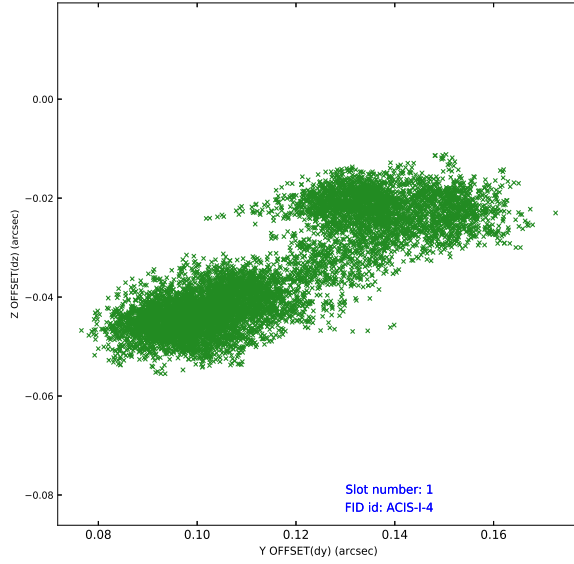


2.5 FID Slots

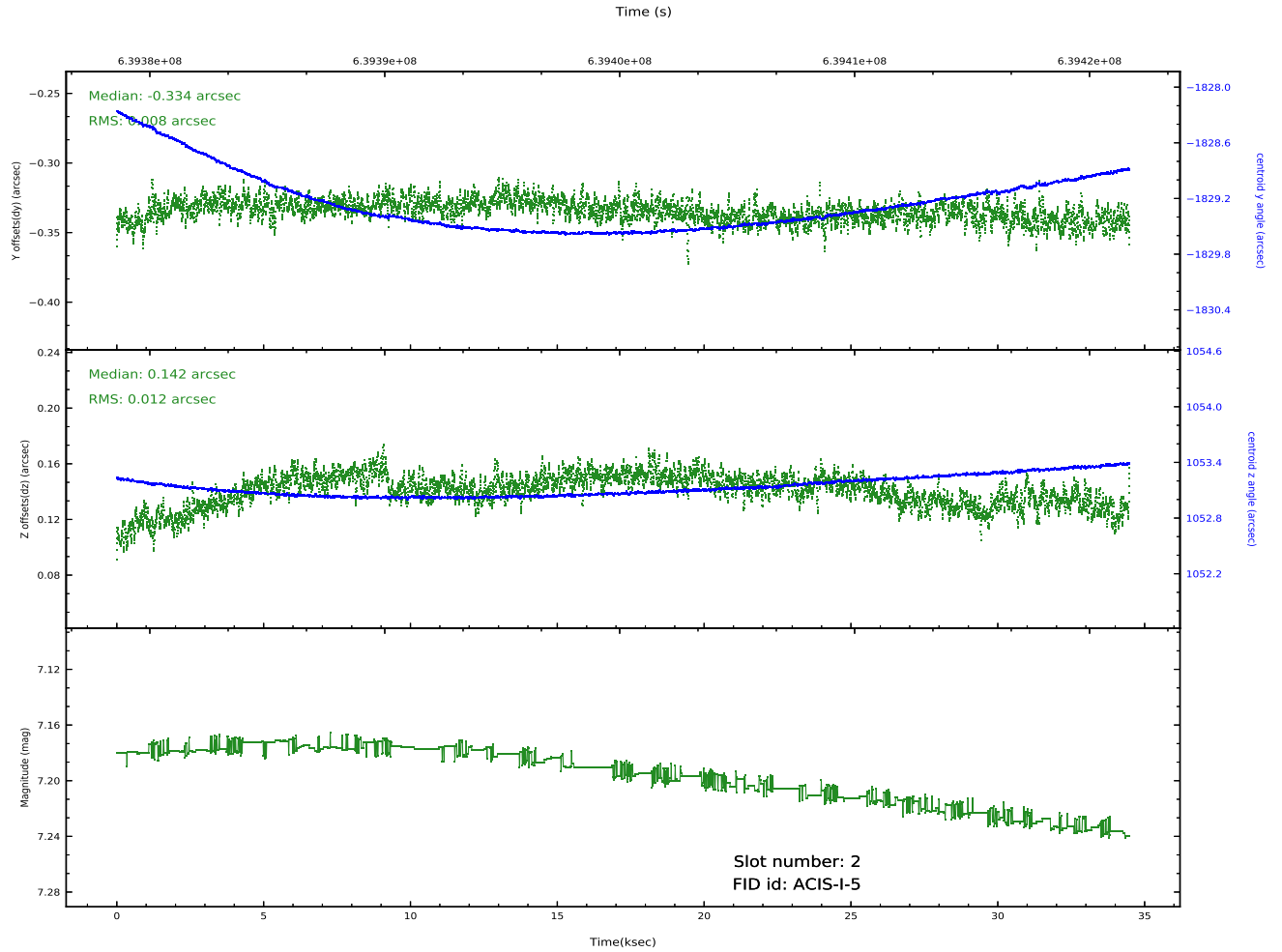
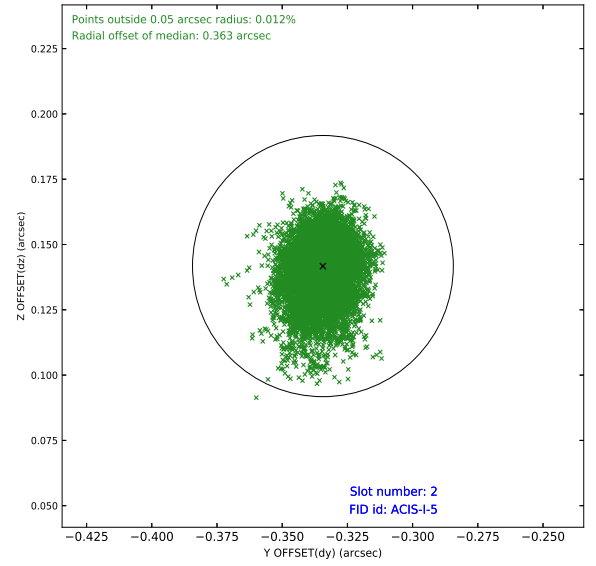
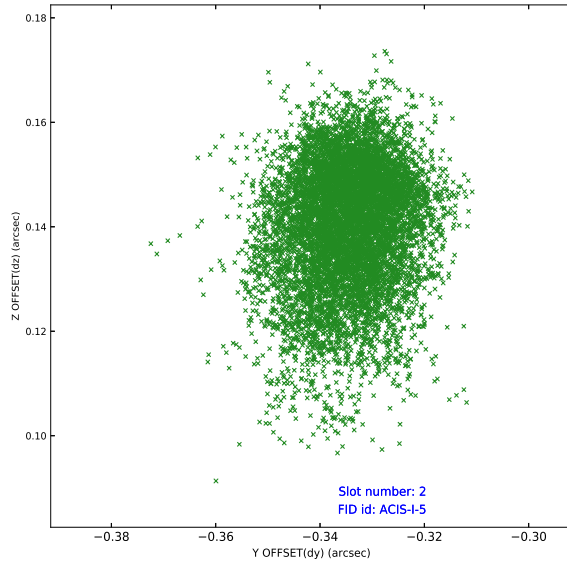
2.5.1 Slot 0



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)	2020.10.29
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	33.565868768573

A.2 Comments

SAP Team: Please reprocess using replacement bias file for chip 0, and also without slot 6 per earlier processings.

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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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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.