

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4960 - L2 Version 5
Chandra X-Ray Center

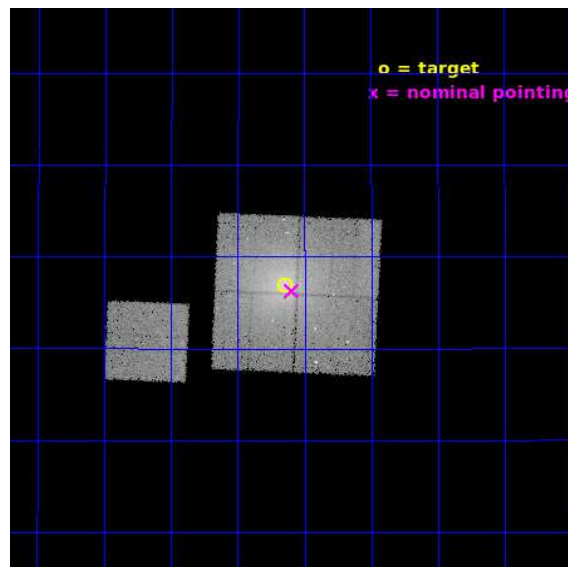
L2 Processing Date : Oct 5 2020

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1 Front

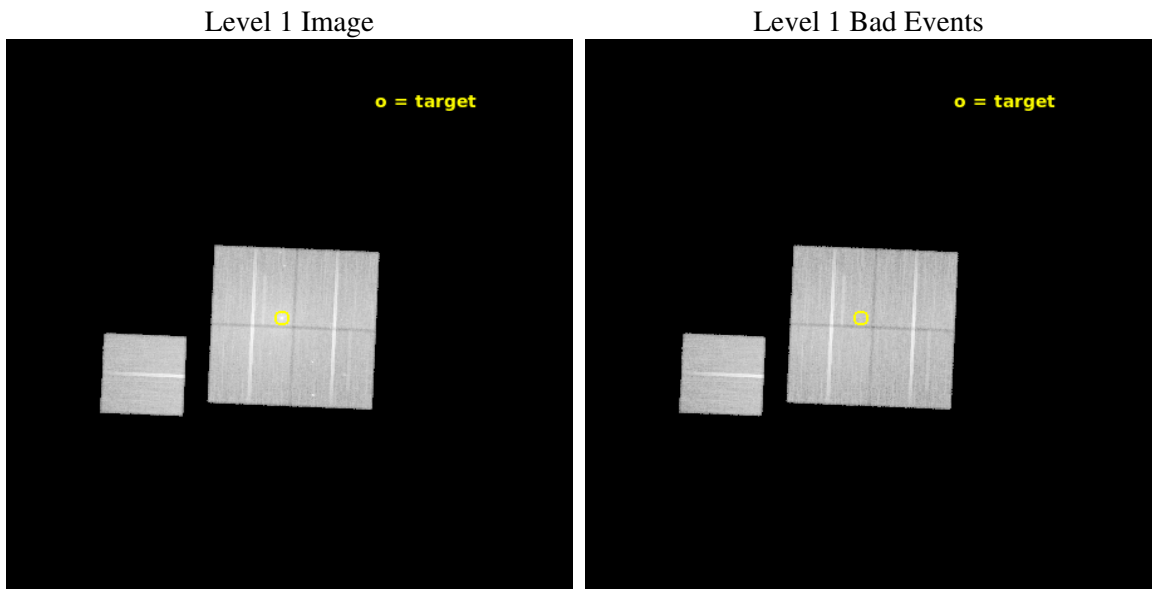
seq_num	800406	Sequence number
obs_id	4960	Observation id
title	Chandra Observations of Galaxy Clusters with Large cD Galaxy Peculiar Velocities	Proposal title
observer	Craig Sarazin	Principal investigator
object	Abell 2107	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	234.9125	Observer's specified target RA [deg]
dec_targ	21.782778	Observer's specified target Dec [deg]
ra_nom	234.89854532695	Nominal RA [deg]
dec_nom	21.77187083459	Nominal Dec [deg]
roll_nom	272.53542319469	Nominal Roll [deg]
revision	5	Processing version of data
ontime	36043.618010163	Sum of GTIs [s]
livetime	35572.681605935	Livetime [s]
ontime0	36040.477089673	Sum of GTIs [s]
ontime1	36043.617970228	Sum of GTIs [s]
ontime2	36043.618020087	Sum of GTIs [s]
ontime3	36043.618010163	Sum of GTIs [s]
ontime6	36043.61800018	Sum of GTIs [s]
l2events	172262	Number of level 2 events



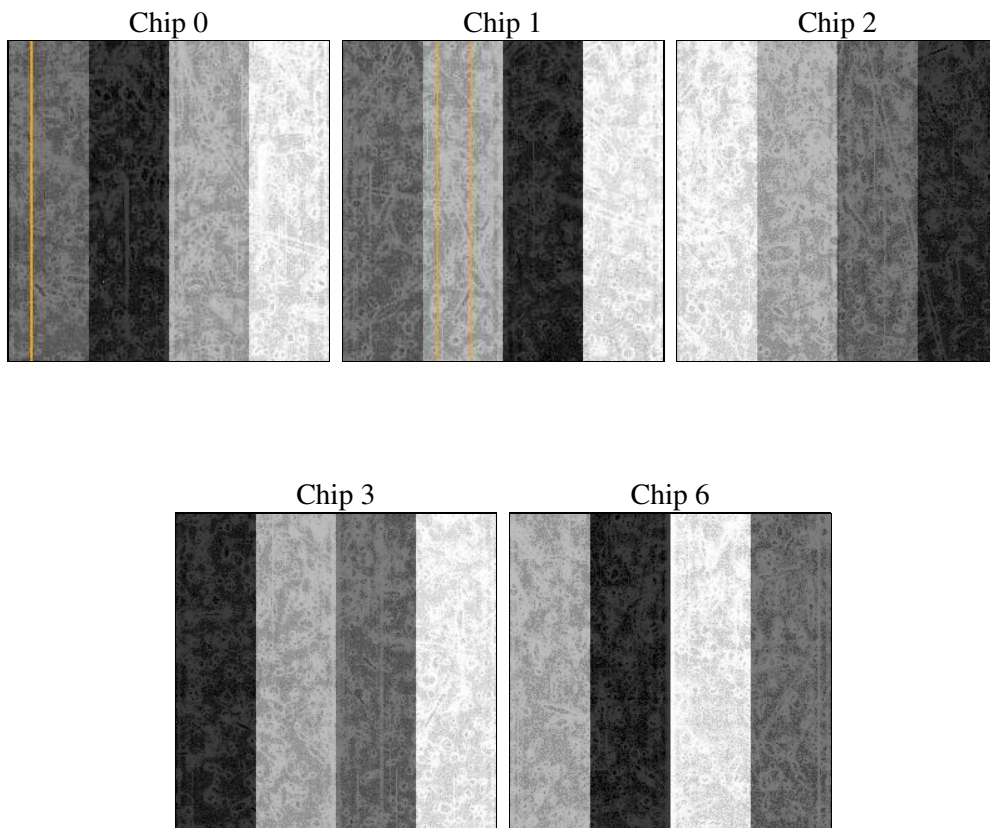
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	36043.618010163	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	36040.477089673	Sum of GTIs [s]
date	2020-10-06T00:16:15	Date and time of file creation	ontime1	36043.617970228	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	36043.618020087	Sum of GTIs [s]
			ontime3	36043.618010163	Sum of GTIs [s]
			ontime6	36043.61800018	Sum of GTIs [s]
			l1events	1228050	Number of level 1 events

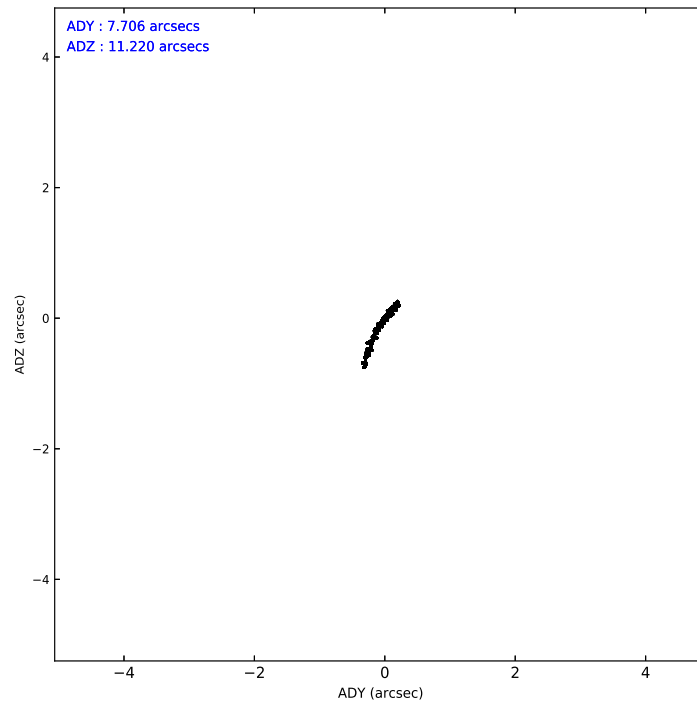
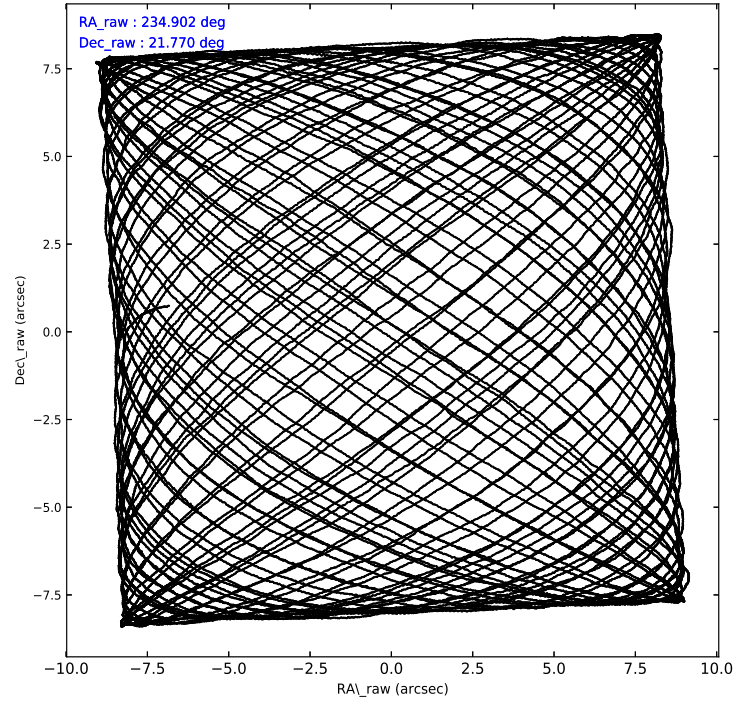
2.1.4 Events

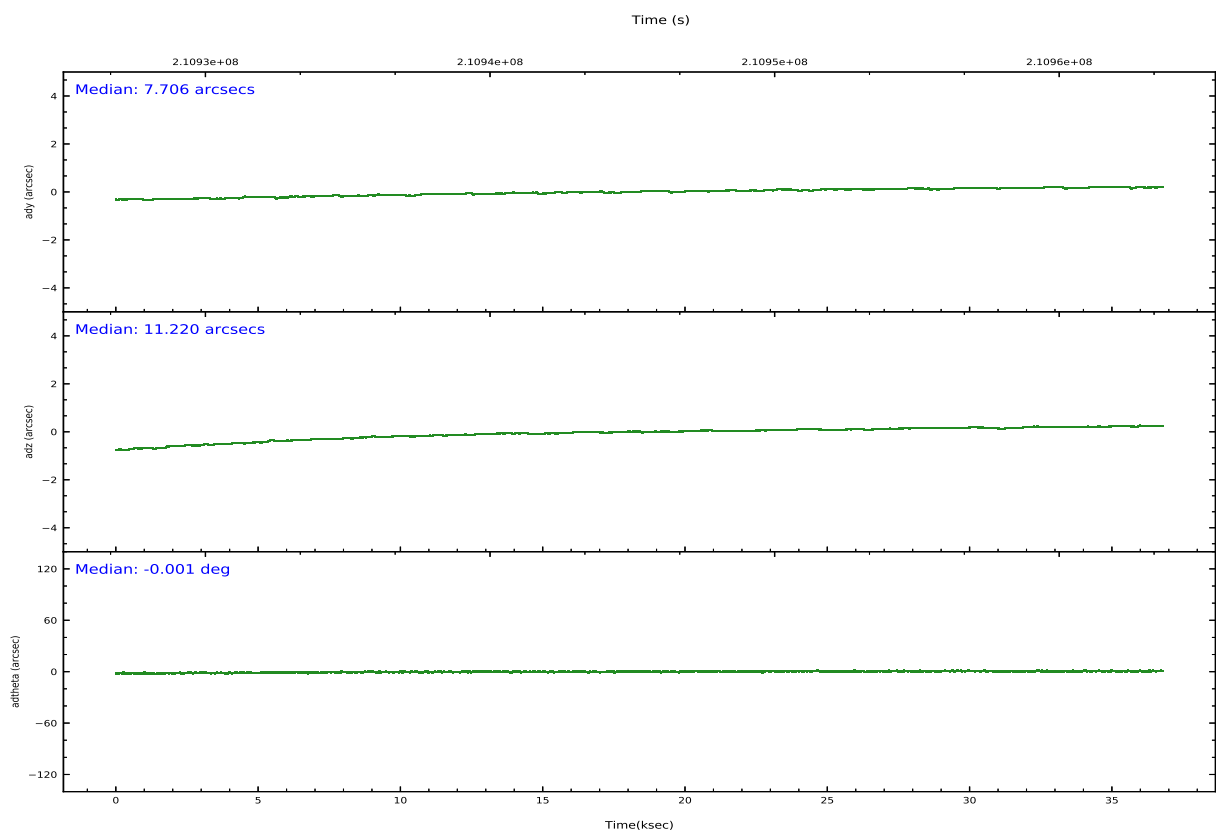
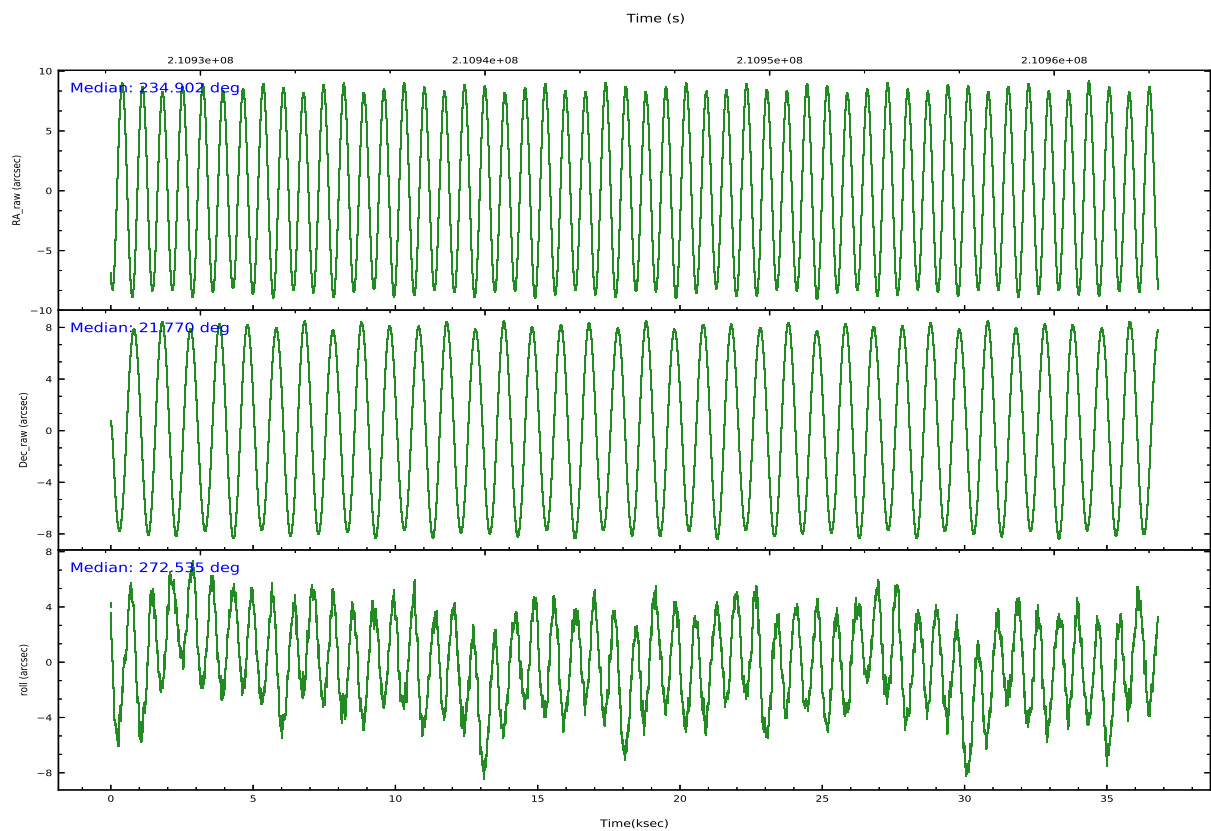
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	221448	235904	263957	271776	234965	grade 0 events	16157	20911	23005	38516	8857
rejected events	188601	196241	223470	212873	210679		7%	8%	8%	14%	3%
rejected %	85%	83%	84%	78%	89%	grade 1 events	143	155	206	304	105
							0%	0%	0%	0%	0%
						grade 2 events	6300	6917	6859	8162	5110
							2%	2%	2%	3%	2%
						grade 3 events	2993	3243	3051	3601	2733
							1%	1%	1%	1%	1%
						grade 4 events	2813	3143	3024	3551	2547
							1%	1%	1%	1%	1%
						grade 5 events	8085	8691	7850	9334	9008
							3%	3%	2%	3%	3%
						grade 6 events	4592	5452	4558	5084	5044
							2%	2%	1%	1%	2%
						grade 7 events	180365	187392	215404	203224	201561
							81%	79%	81%	74%	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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	234.886193	234.89854532695	Subarray requested	NONE	NONE
[deg] Pointing Dec	21.792795	21.77187083459	Alternating exposures requested	N	N
[deg] Pointing Roll	272.338591	272.53542319469	[s] Primary exposure time	0.000000	3.1
[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)	210927652.184000	210926414.60123			
Observation start date	2004-09-07T06:59:48	2004-09-07T06:40:14			
[s] Observation end time (MET)	210963652.184000	210964413.91542			
Observation end date	2004-09-07T16:59:48	2004-09-07T17:13:33			
Read mode	TIMED	TIMED			

2.3 Aspect



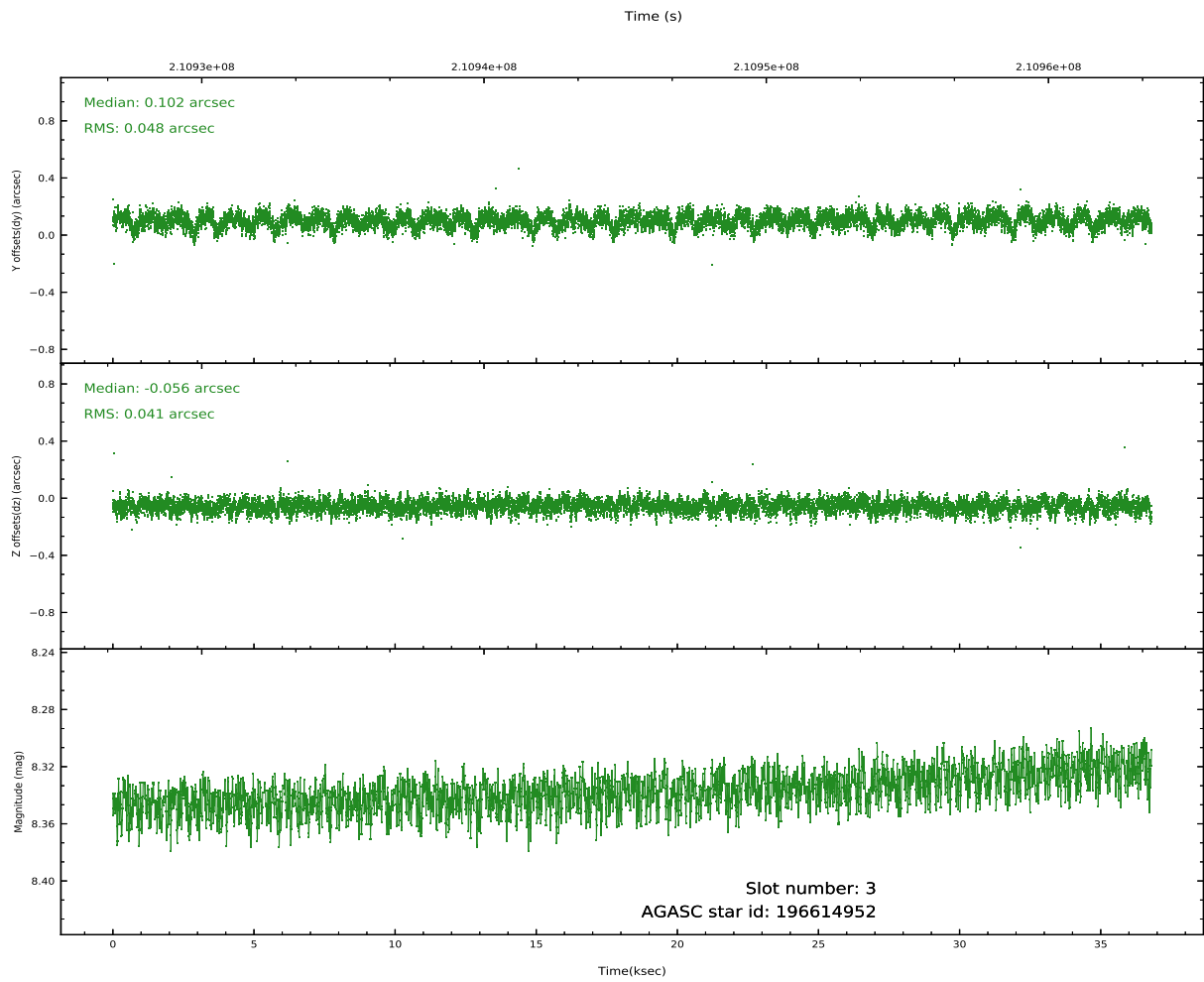
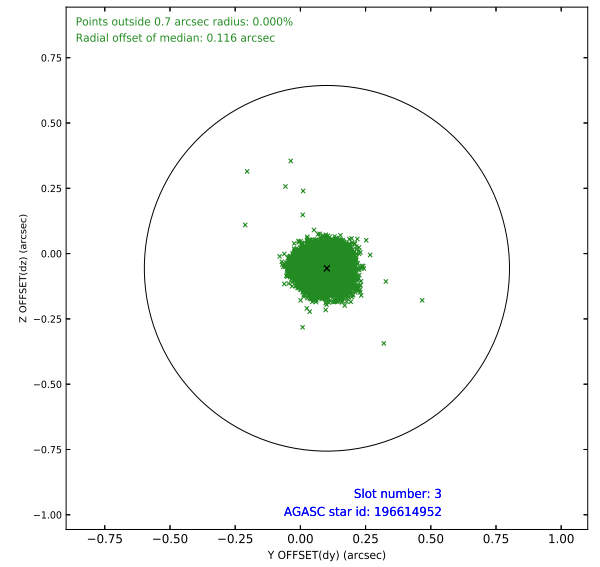
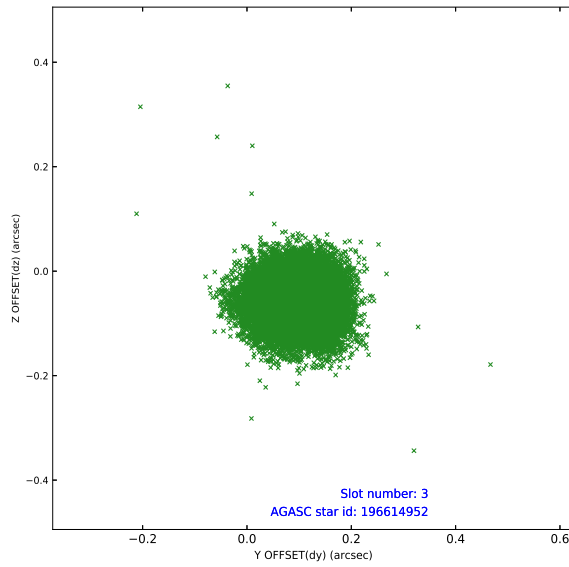


Slot Statistics

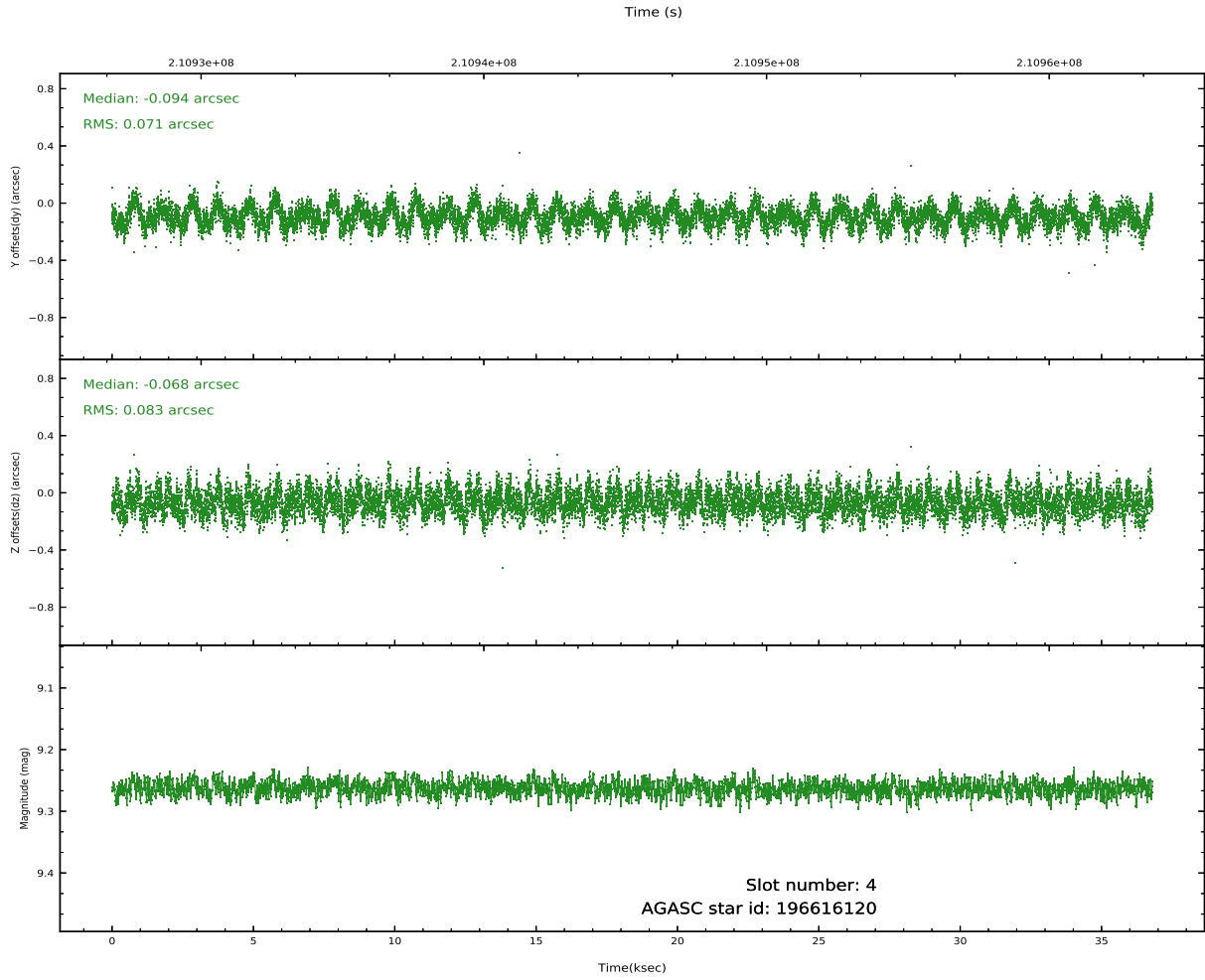
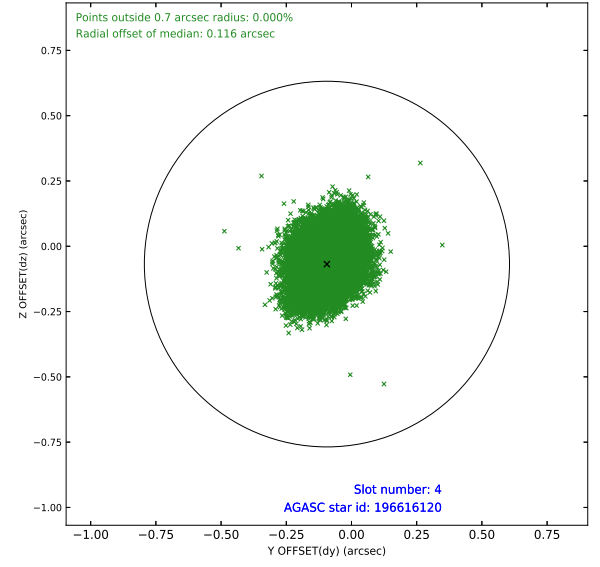
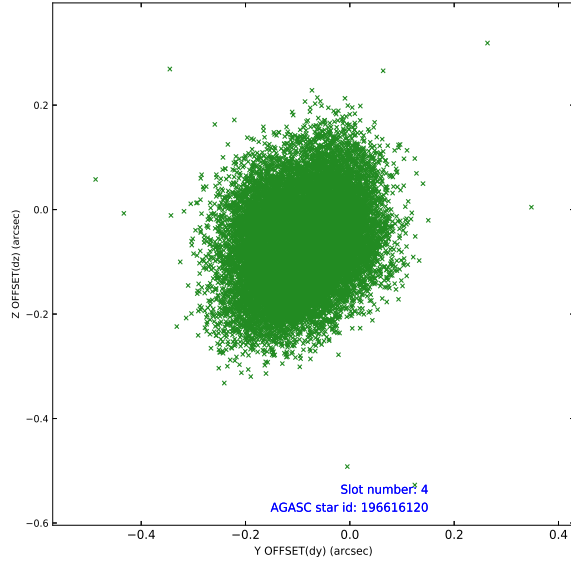
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	8976	1.000	0.044	-0.034	0.012	0.027	0.000000	0.000000	932.00	-834
1	FID		ACIS-I-5	7.23	8976	1.000	-0.205	0.044	0.012	0.022	0.000000	0.000000	-1816.31	1062
2	FID		ACIS-I-6	7.25	8976	1.000	0.072	0.061	0.008	0.013	0.000000	0.000000	397.57	1707
3	GUIDE	used	196614952	8.34	17951	1.000	0.102	-0.056	0.067	0.108	234.474207	21.440713	1208.74	-1430
4	GUIDE	used	196616120	9.26	17912	1.000	-0.094	-0.068	0.117	0.187	234.158557	22.129689	-1316.11	-2374
5	GUIDE	used	196745720	9.41	17901	1.000	0.057	0.002	0.112	0.177	234.789121	21.653101	489.44	-344
6	GUIDE	used	196749704	8.93	17877	1.000	0.097	0.007	0.087	0.142	234.990728	21.168908	2258.67	259
7	GUIDE	used	196752504	8.12	17950	1.000	-0.158	0.113	0.056	0.093	235.370064	22.324206	-1848.24	1688

2.4 Star Slots

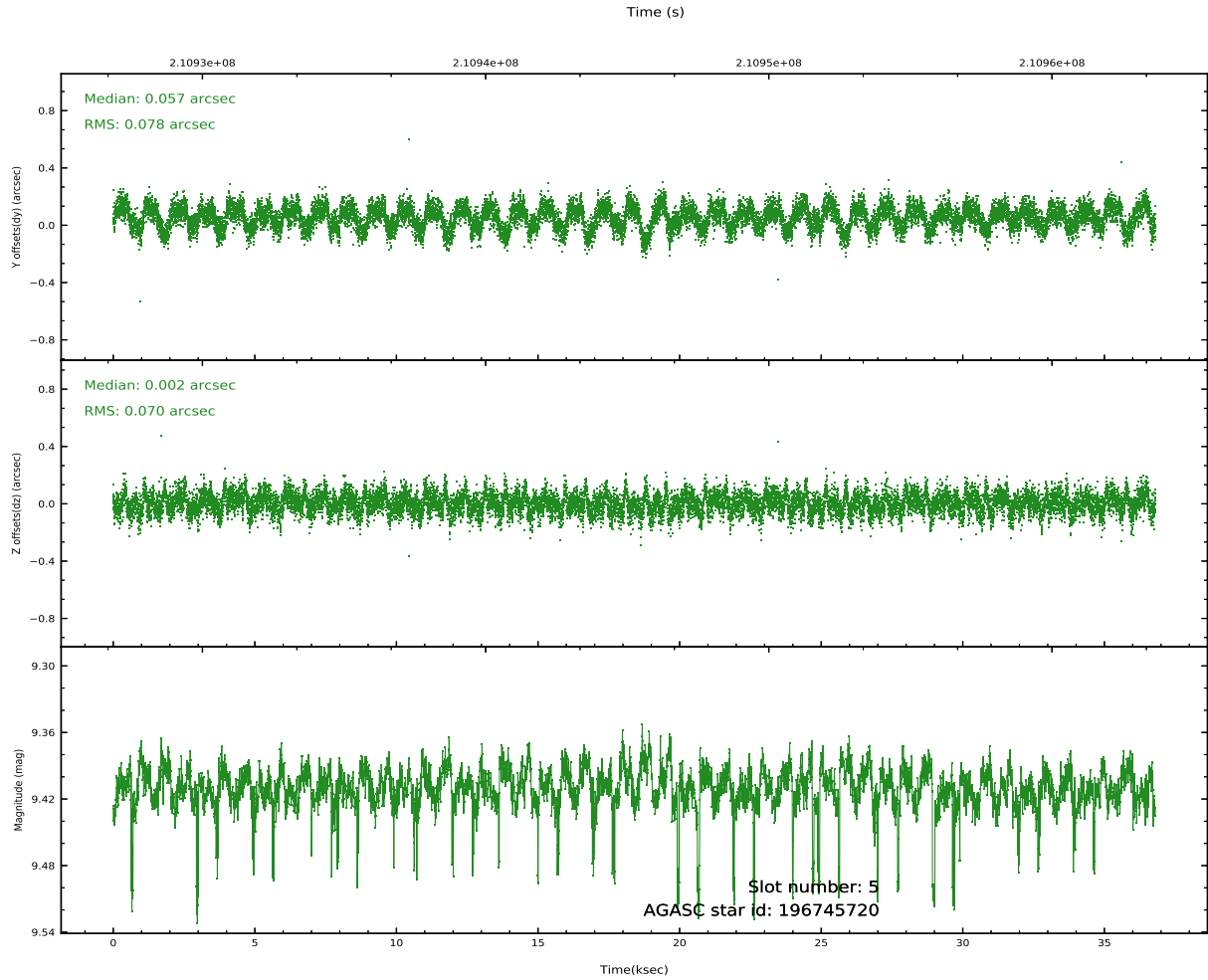
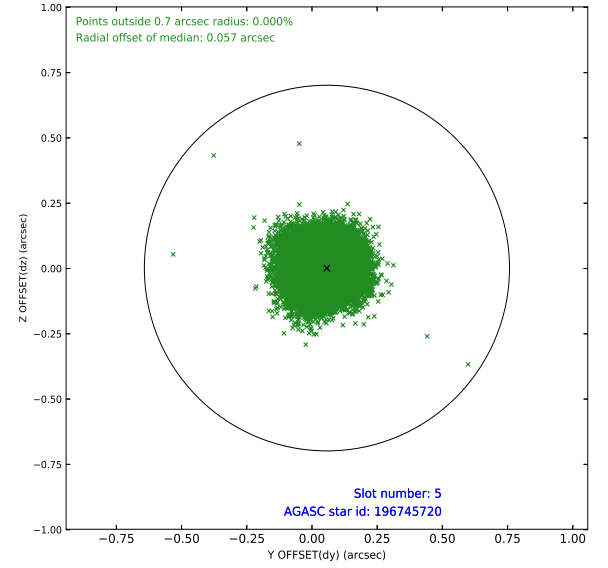
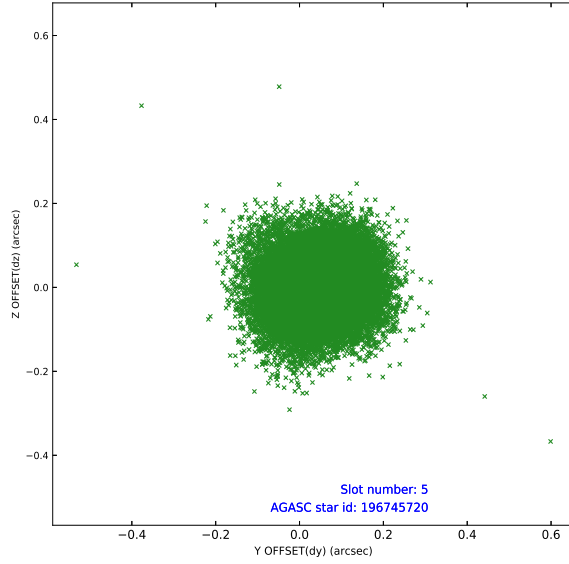
2.4.1 Slot 3



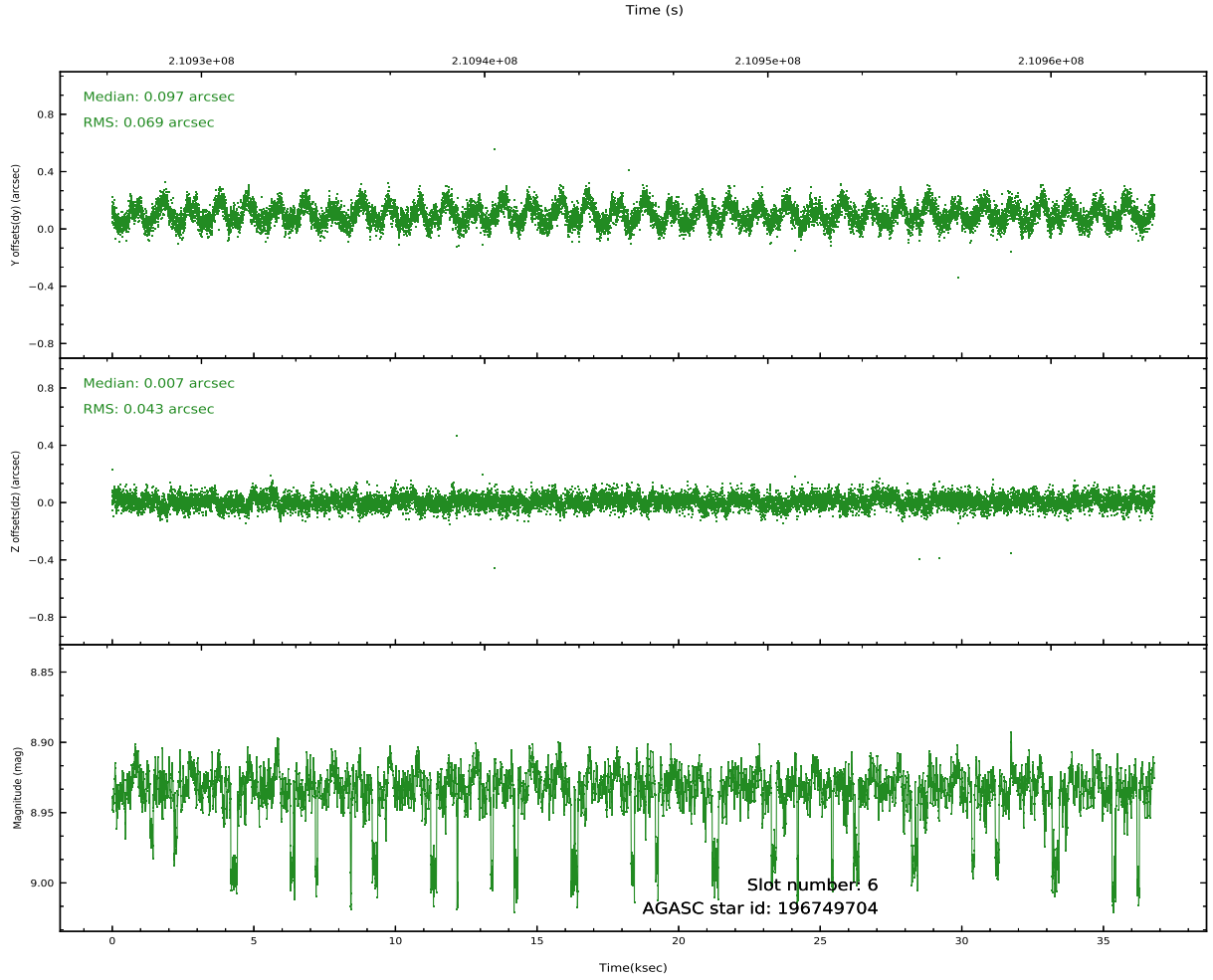
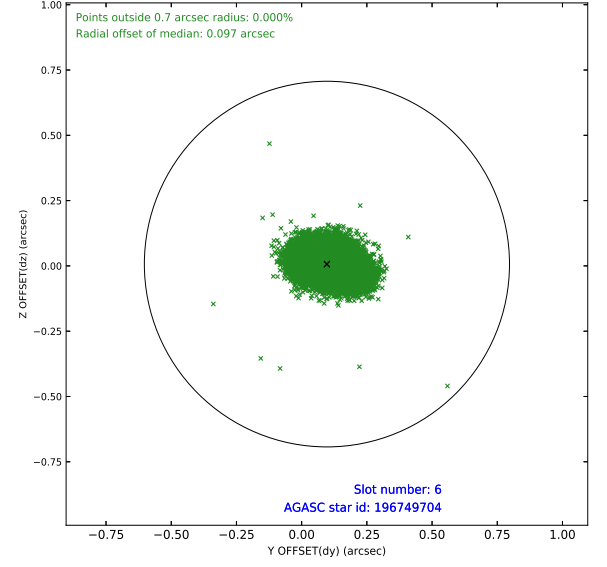
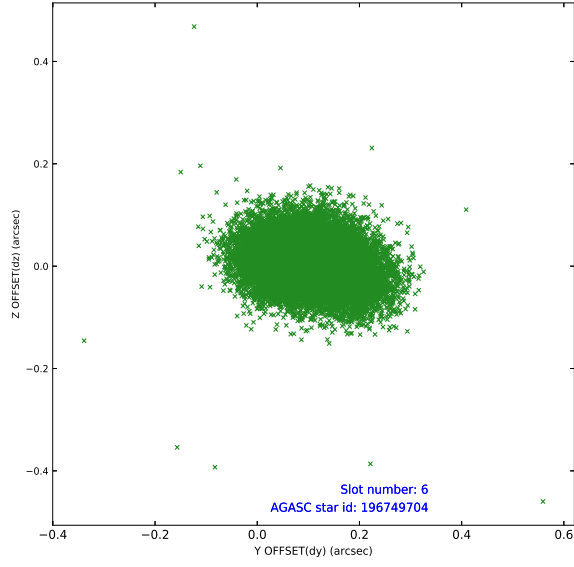
2.4.2 Slot 4



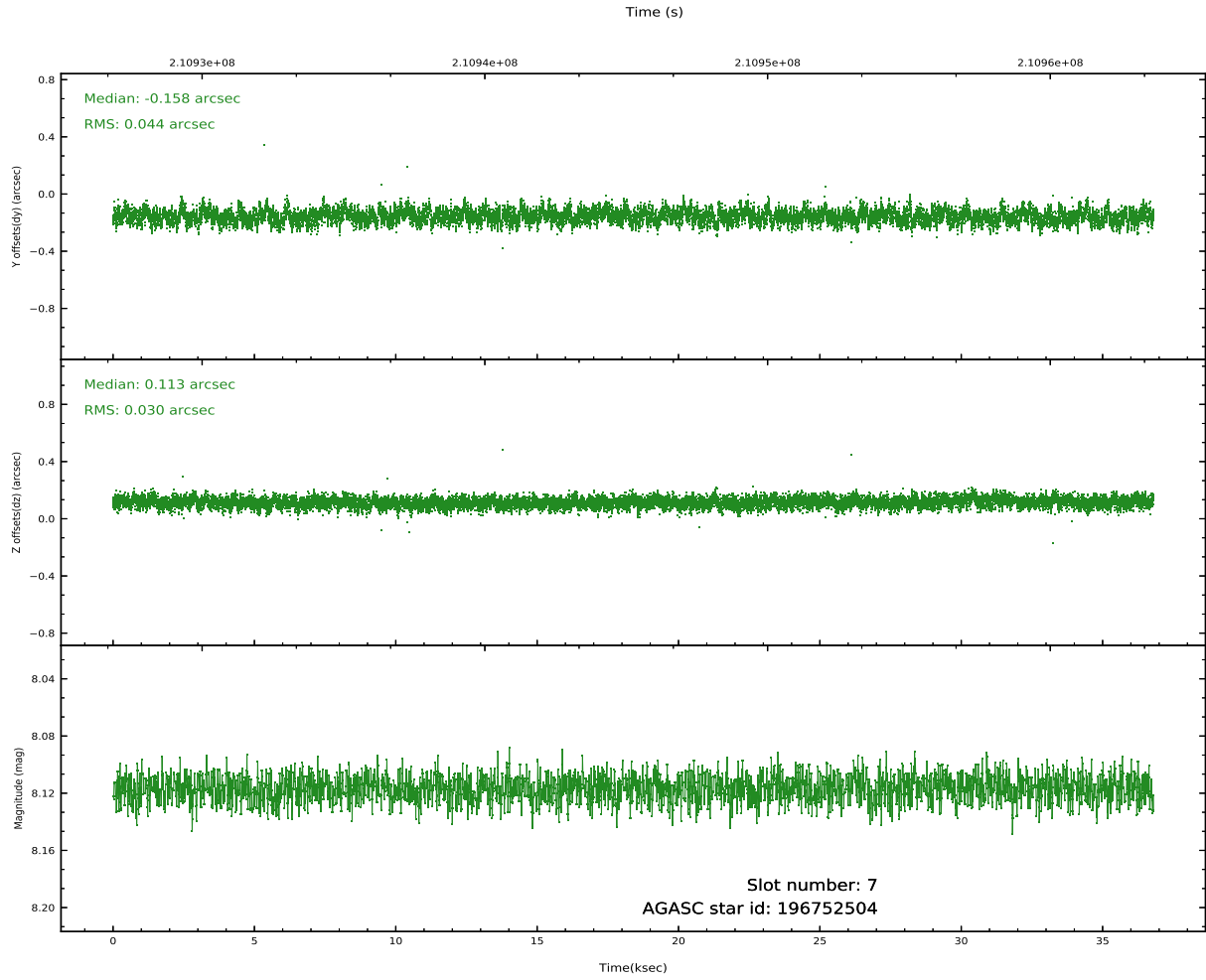
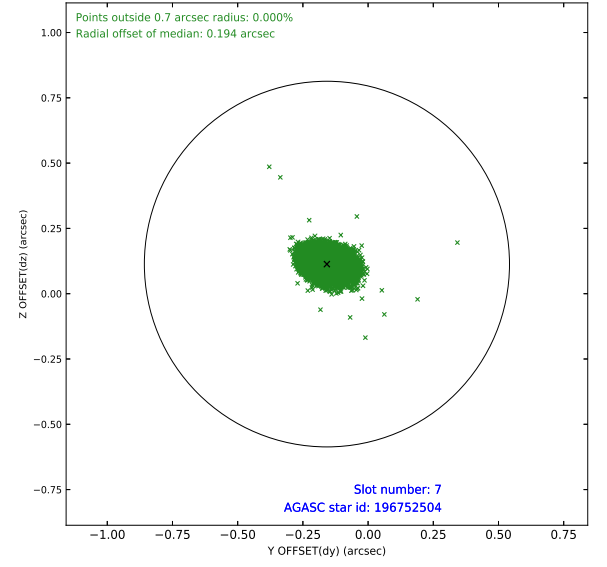
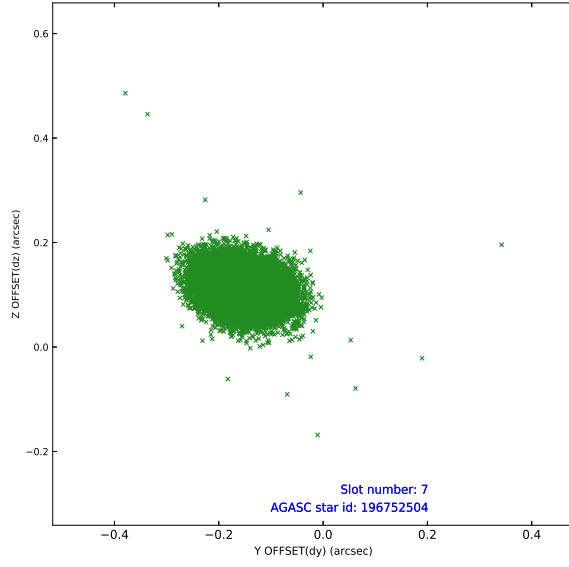
2.4.3 Slot 5



2.4.4 Slot 6

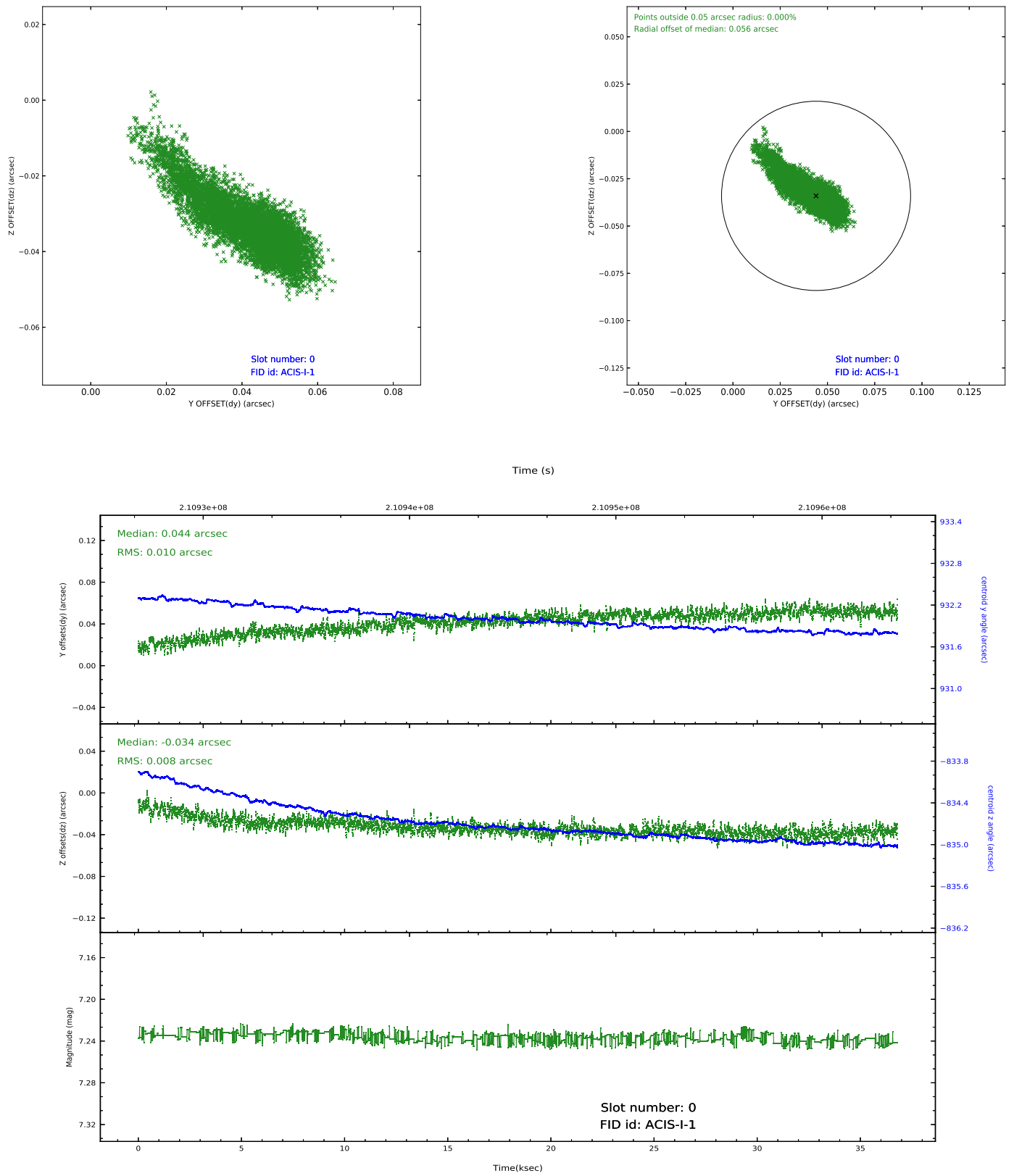


2.4.5 Slot 7

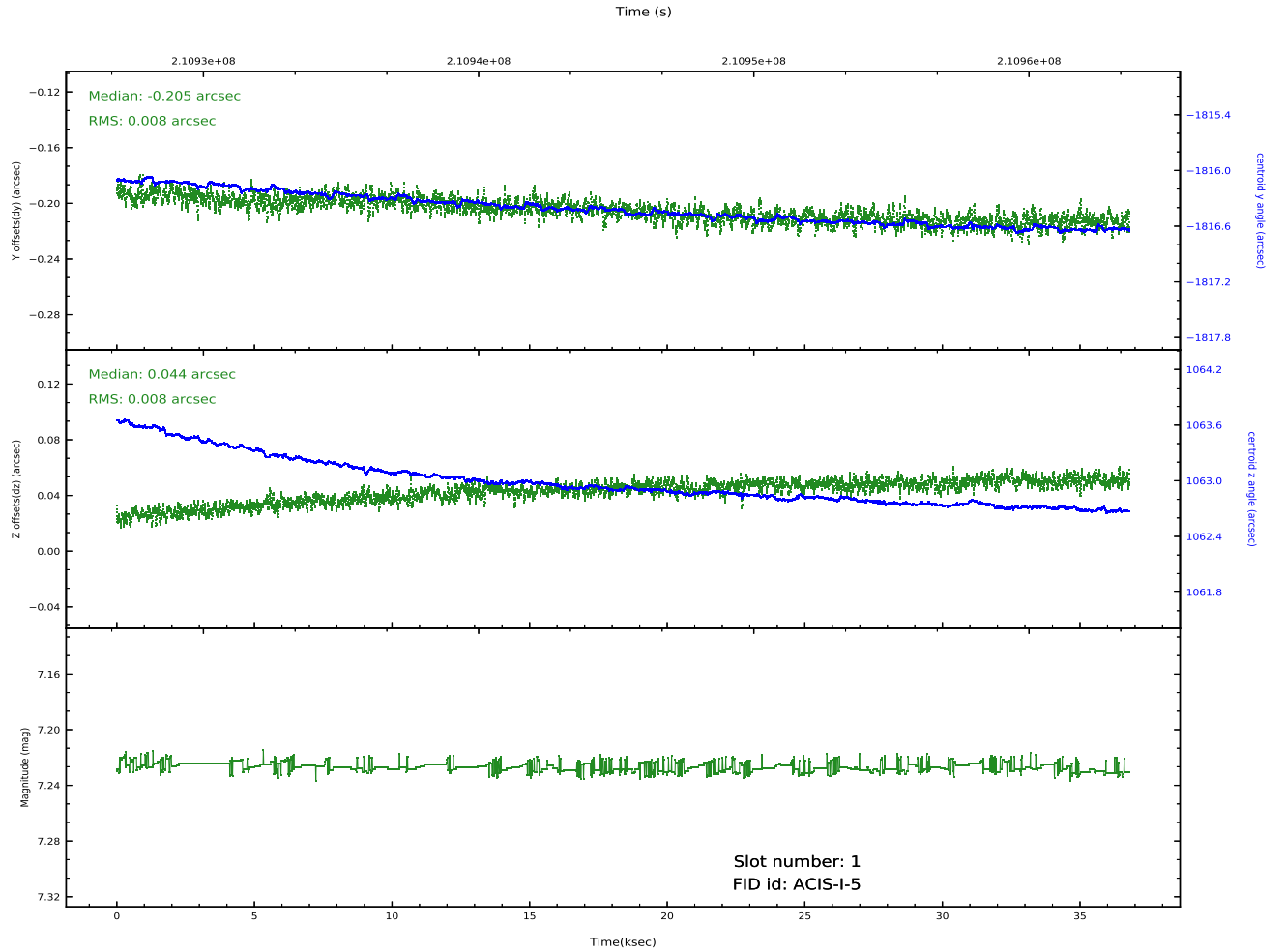
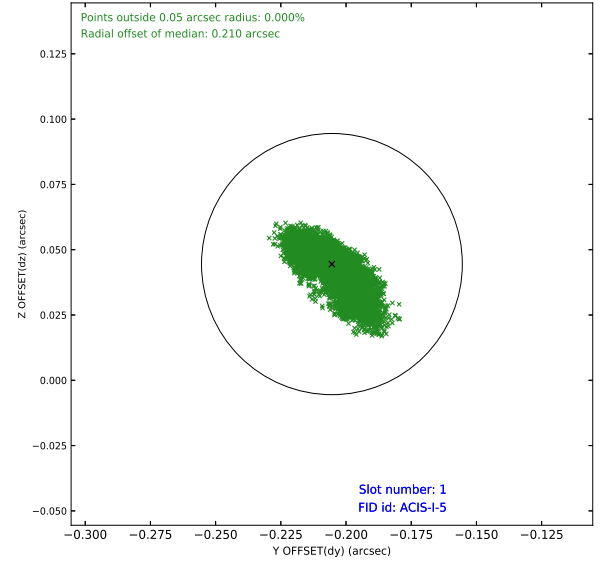
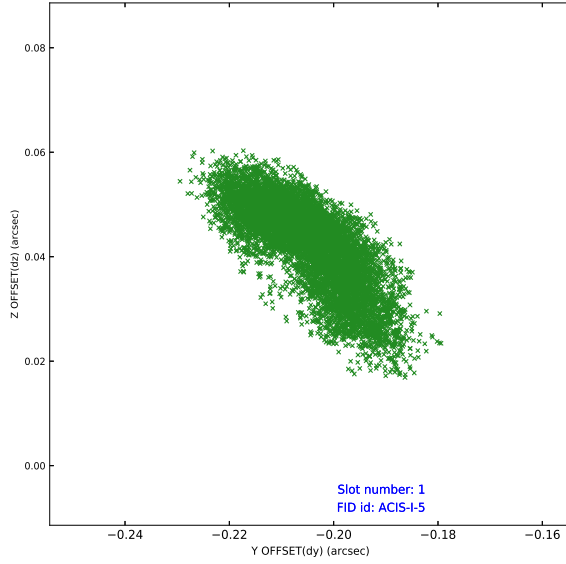


2.5 FID Slots

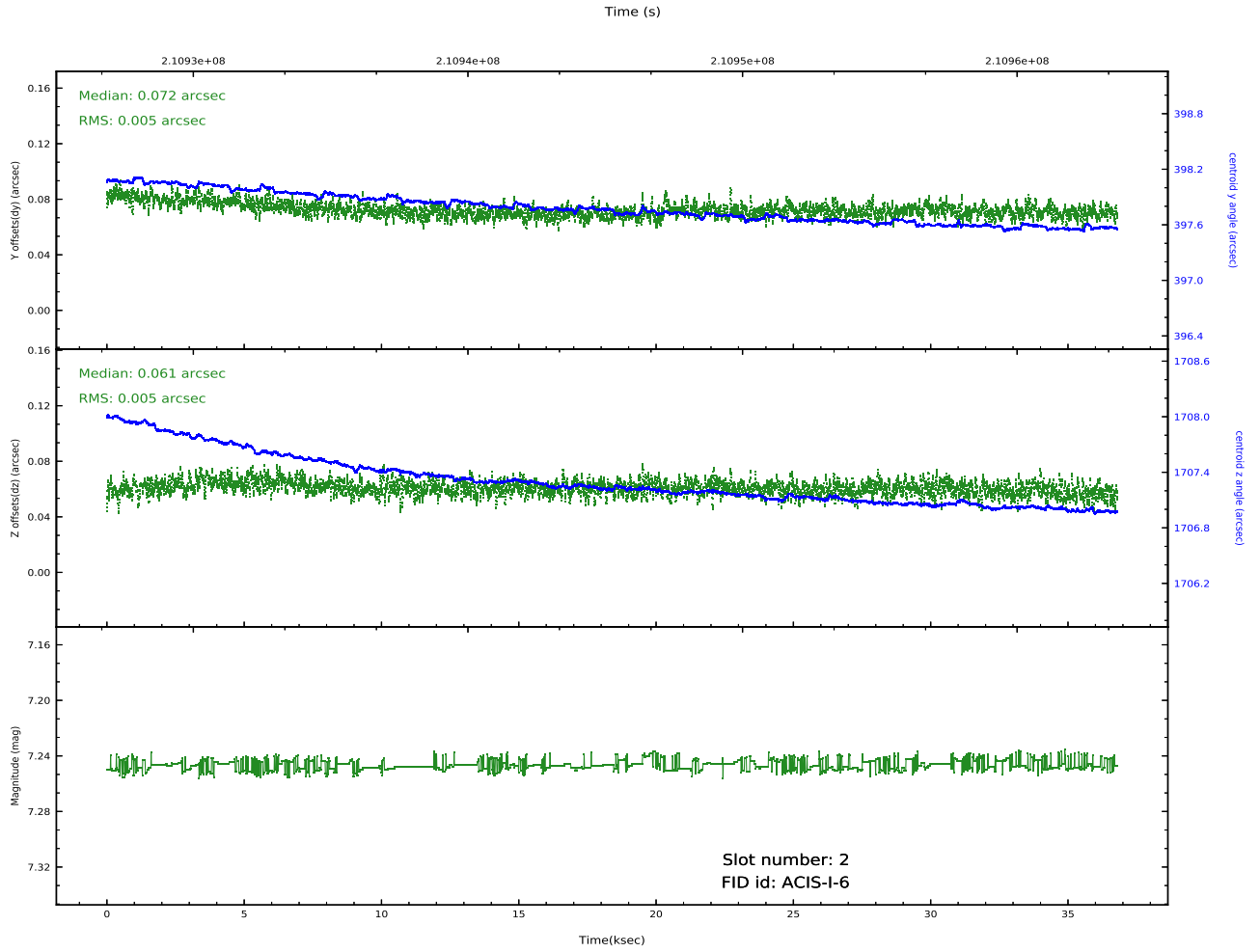
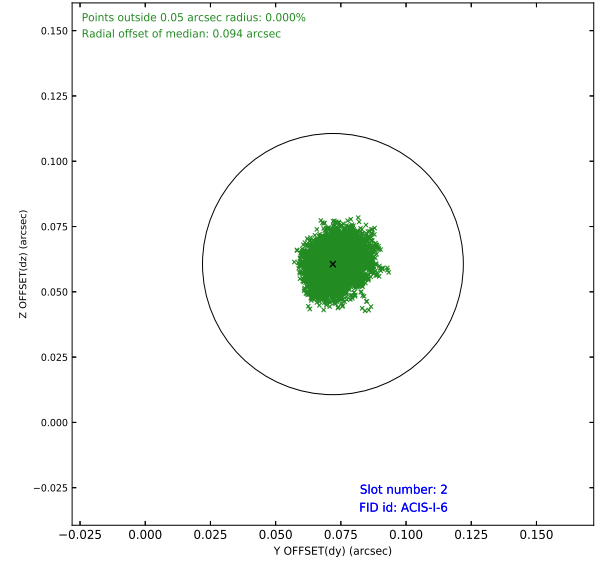
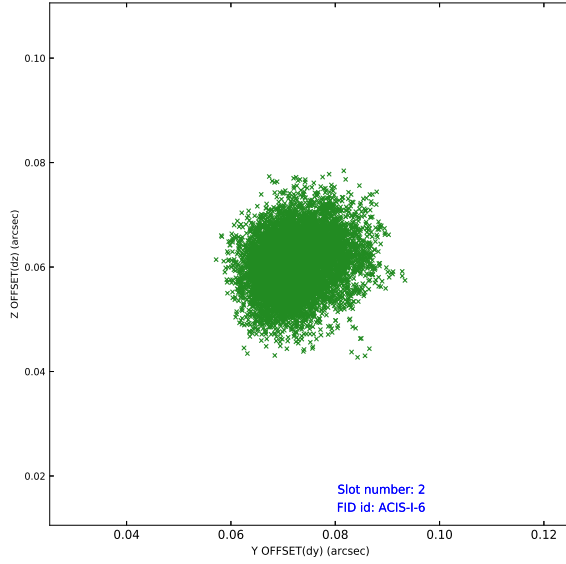
2.5.1 Slot 0



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)	2020.10.06
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	36.043

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:
(234.95353,21.62728), (234.95675,21.62742), (234.95014,21.76675), (234.94691,21.76661).