

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20378 - L2 Version 3
Chandra X-Ray Center

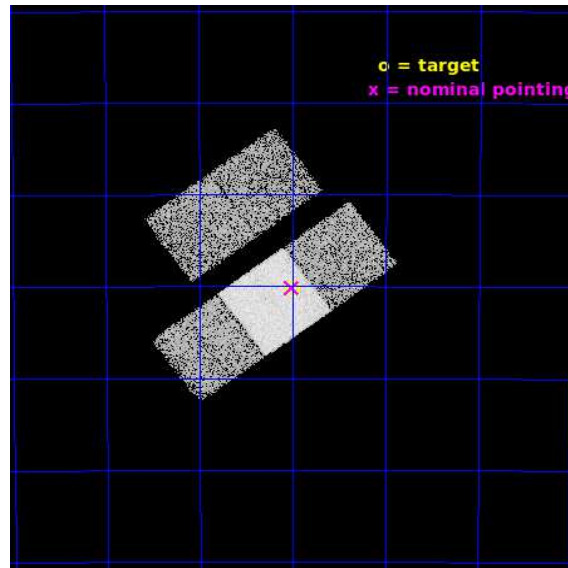
L2 Processing Date : Oct 24 2020

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1 Front

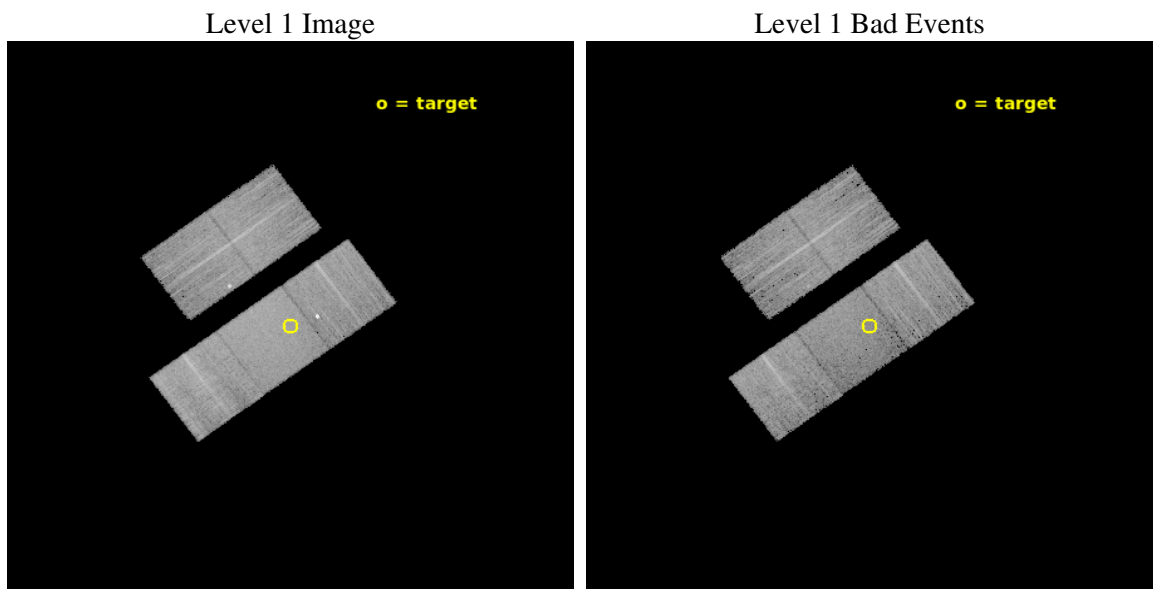
seq_num	703483	Sequence number
obs_id	20378	Observation id
title	HEAVILY REDDENED, LUMINOUS TYPE 1 QSOs: A TRANSITION POPULATION EMERGING FROM THE DUST	Proposal title
observer	Enrico Piconcelli	Principal investigator
object	VHSJ2130-4930	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	322.749167	Observer's specified target RA [deg]
dec_targ	-49.503194	Observer's specified target Dec [deg]
ra_nom	322.75213678503	Nominal RA [deg]
dec_nom	-49.502595000027	Nominal Dec [deg]
roll_nom	143.87515252789	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9048.9000697136	Sum of GTIs [s]
livetime	8930.6695285995	Livetime [s]
ontime2	9048.9000697136	Sum of GTIs [s]
ontime3	9048.9000697136	Sum of GTIs [s]
ontime6	9048.9000697136	Sum of GTIs [s]
ontime7	9048.9000697136	Sum of GTIs [s]
ontime8	9048.9000697136	Sum of GTIs [s]
l2events	61256	Number of level 2 events



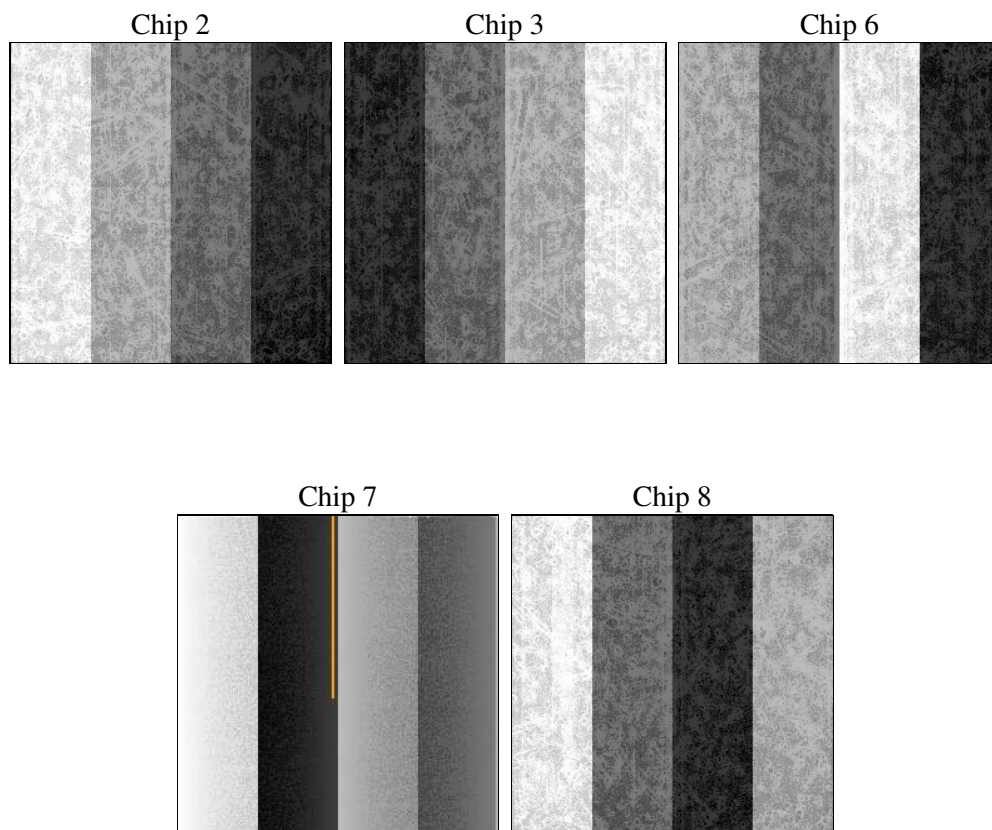
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	9000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	9048.9000697136	Sum of GTIs [s]
caldsver	4.9.3	 	ontime2	9048.9000697136	Sum of GTIs [s]
date	2020-10-25T02:29:17	Date and time of file creation	ontime3	9048.9000697136	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	9048.9000697136	Sum of GTIs [s]
			ontime7	9048.9000697136	Sum of GTIs [s]
			ontime8	9048.9000697136	Sum of GTIs [s]
			l1events	382811	Number of level 1 events

2.1.4 Events

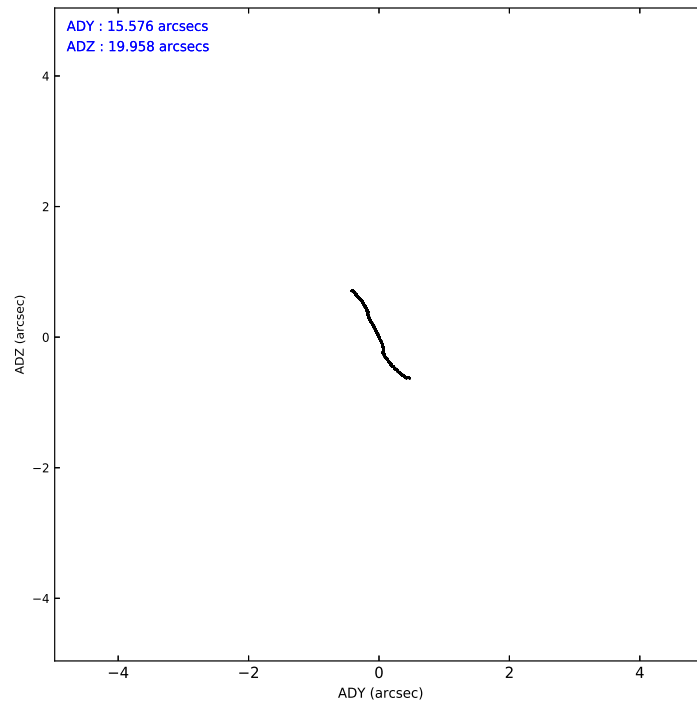
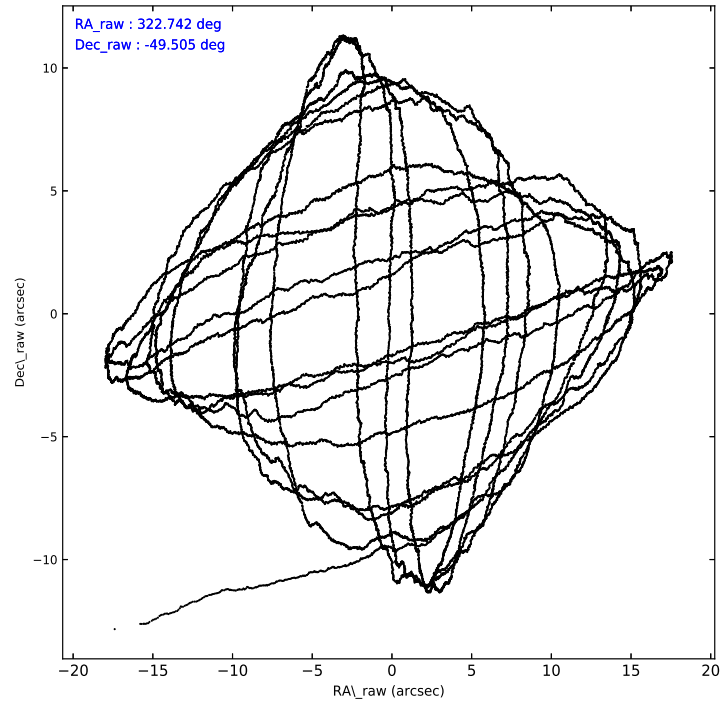
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	71728	66605	72738	85883	85857
rejected events	64711	58935	62413	48920	64423
rejected %	90%	88%	85%	56%	75%

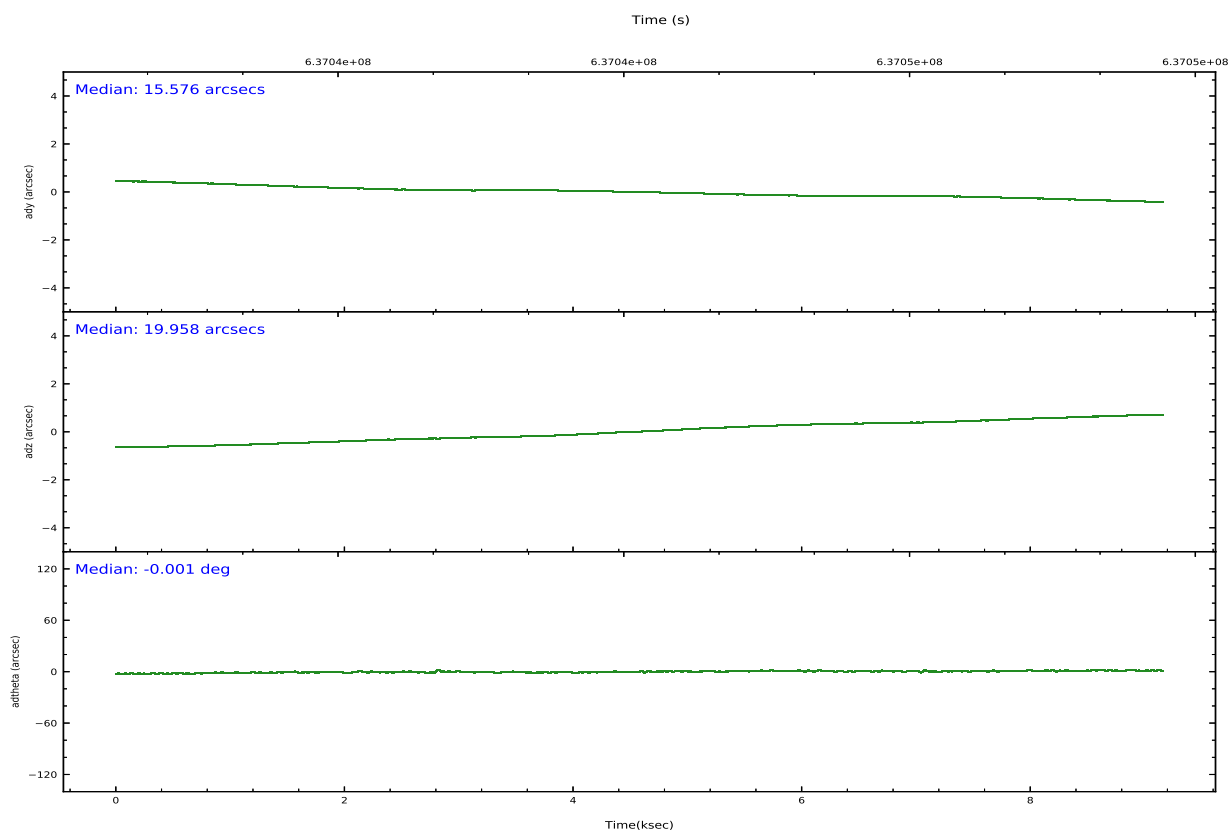
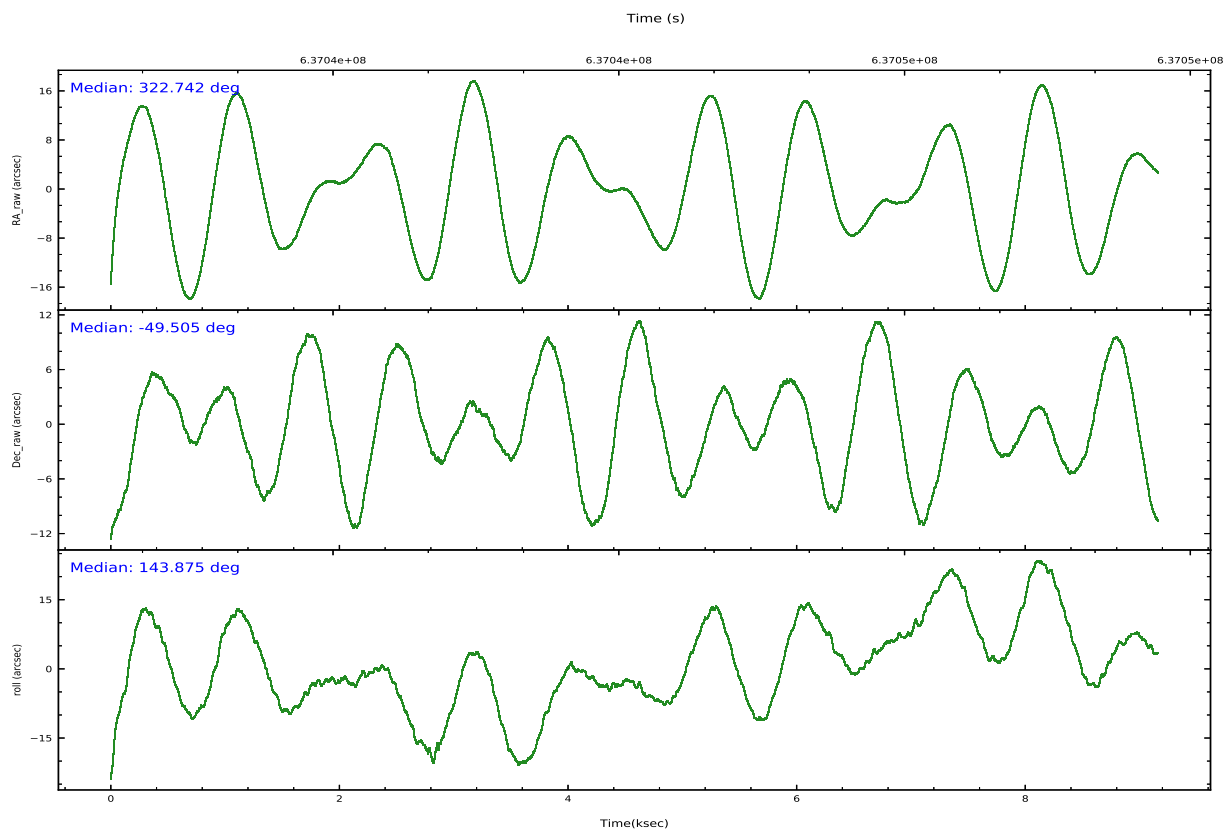
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	2429	2991	5011	3097	5911
	3%	4%	6%	3%	6%
grade 1 events	32	67	52	133	69
	0%	0%	0%	0%	0%
grade 2 events	1705	1773	1968	7769	5318
	2%	2%	2%	9%	6%
grade 3 events	729	658	701	2987	2177
	1%	0%	0%	3%	2%
grade 4 events	713	721	697	2841	2082
	0%	1%	0%	3%	2%
grade 5 events	2424	2975	2834	8280	4584
	3%	4%	3%	9%	5%
grade 6 events	1442	1534	1955	20295	5976
	2%	2%	2%	23%	6%
grade 7 events	62254	55886	59520	40481	59740
	86%	83%	81%	47%	69%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-23678	ACIS-23678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	322.783372	322.75213678503	CCD I2 on	O1	Y
[deg] Pointing Dec	-49.507119	-49.502595000027	CCD I3 on	O2	Y
[deg] Pointing Roll	143.748120	143.87515252789	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O3	Y
[s] Observation start time (MET)	637040719.184000	637039417.72374	CCD S5 on	N	N
Observation start date	2018-03-10T03:44:10	2018-03-10T03:23:37	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	637049719.184000	637050766.52441	On-chip summing requested	N	N
Observation end date	2018-03-10T06:14:10	2018-03-10T06:32:46	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



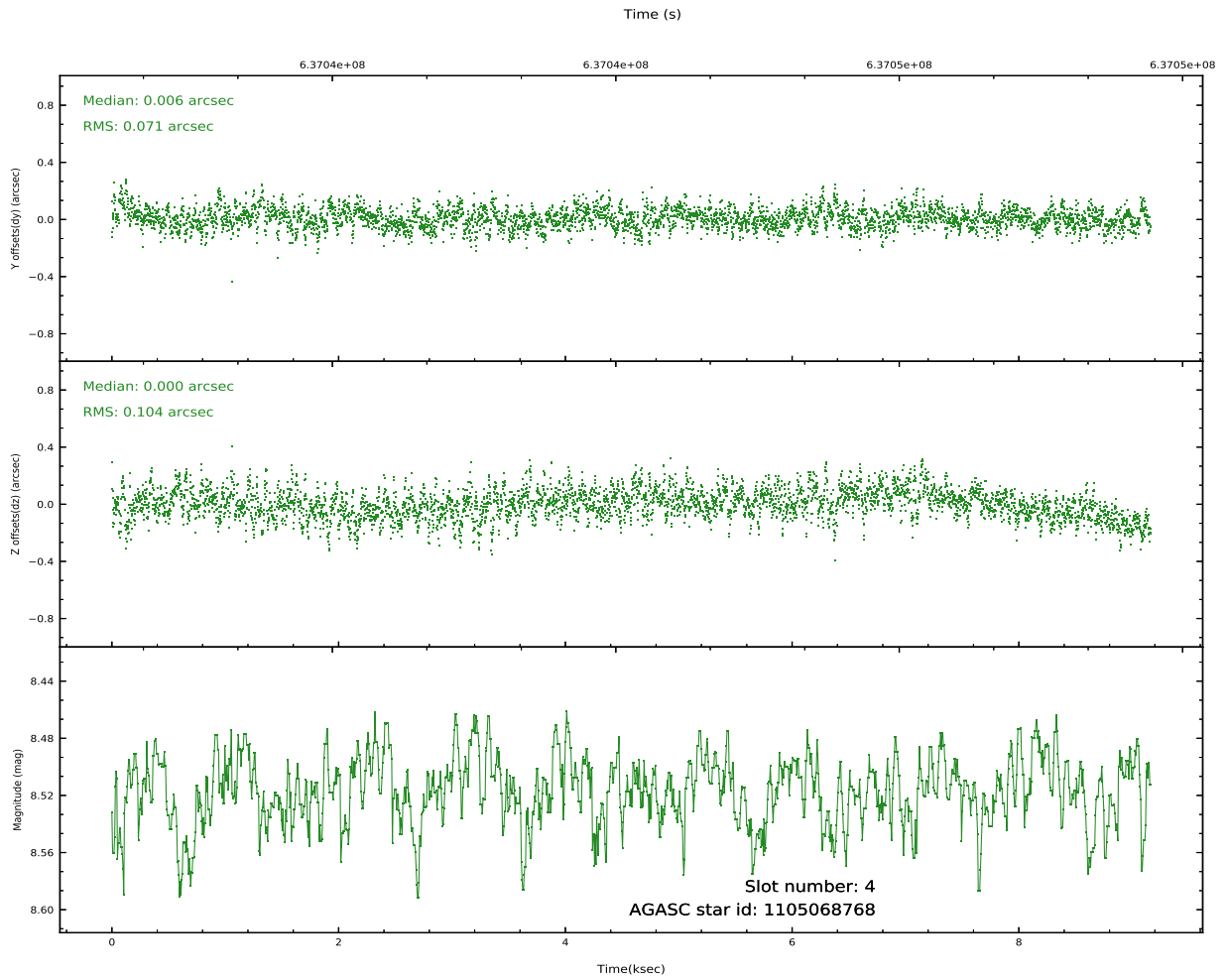
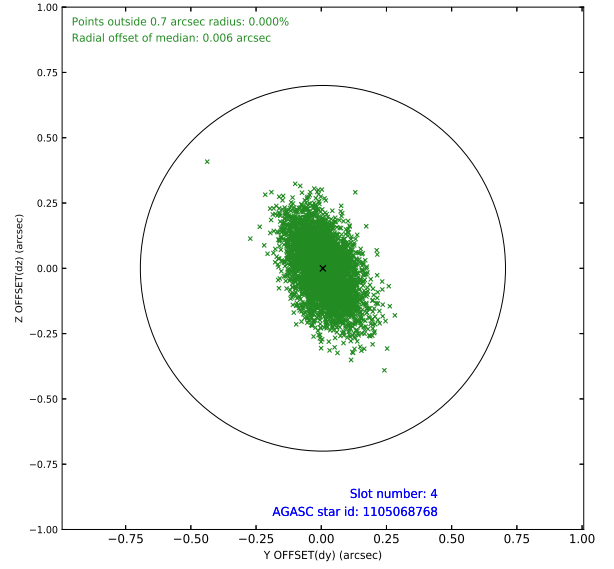
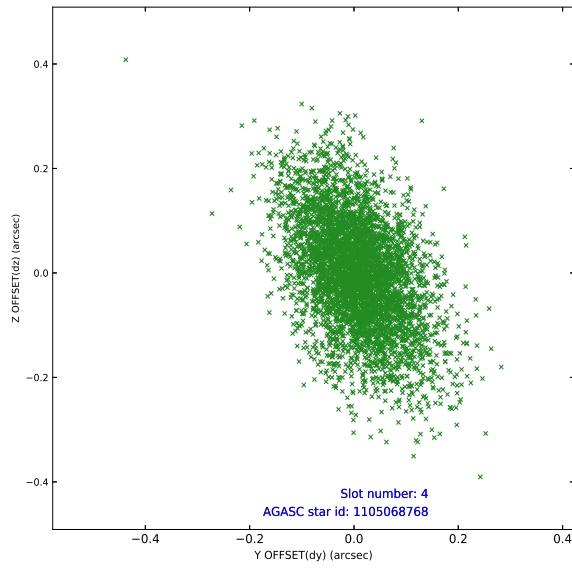


Slot Statistics

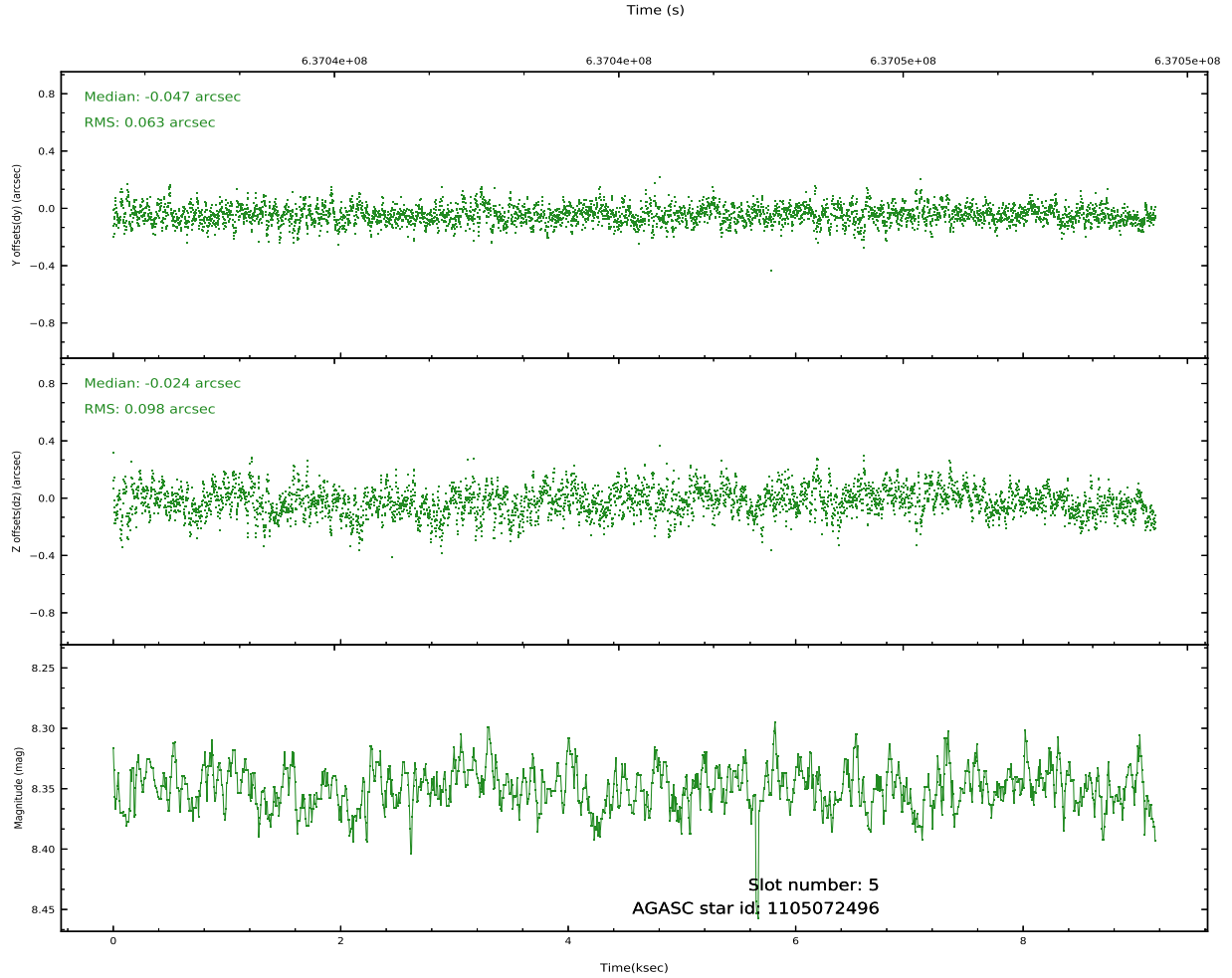
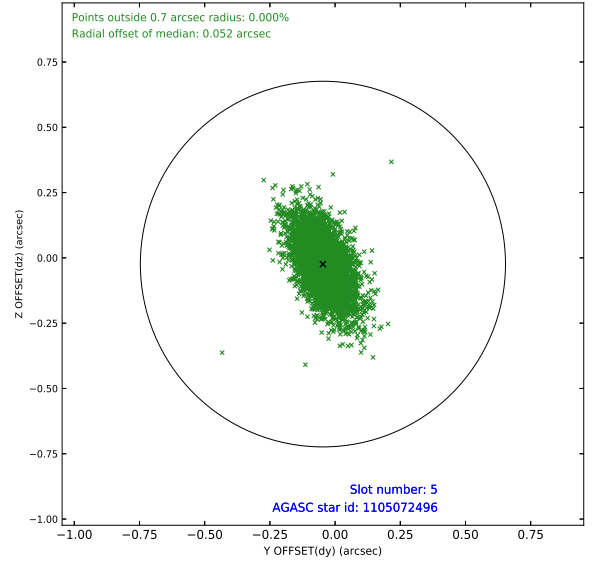
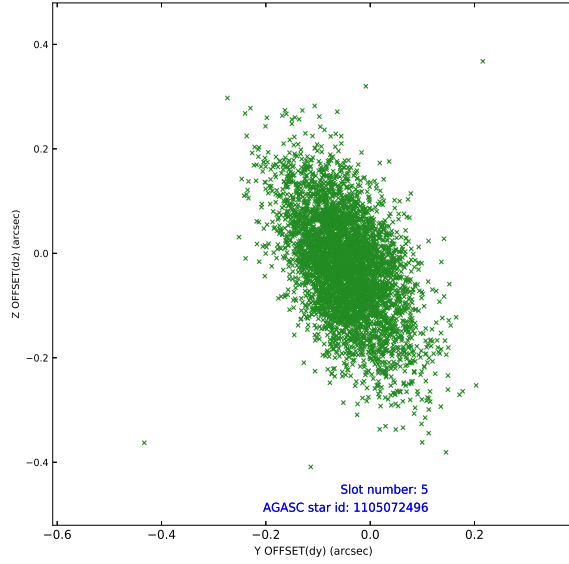
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.16	2234	1.000	0.251	-0.166	0.017	0.025	0.000000	0.000000	927.60	-1737
1	FID		ACIS-S-5	7.18	2235	1.000	-0.243	0.190	0.010	0.018	0.000000	0.000000	-1821.42	160
2	FID		ACIS-S-6	7.33	2235	1.000	-0.030	-0.012	0.024	0.039	0.000000	0.000000	392.42	804
3	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
4	GUIDE	used	1105068768	8.52	4469	1.000	0.006	0.000	0.128	0.232	321.952080	-49.263248	2088.05	456
5	GUIDE	used	1105072496	8.35	4466	1.000	-0.047	-0.024	0.116	0.217	322.237607	-49.425239	1202.72	522
6	GUIDE	used	1105075880	8.14	4471	1.000	0.106	0.019	0.118	0.223	322.882872	-49.783529	-774.64	666
7	GUIDE	used	1105074200	8.52	4466	1.000	-0.064	0.010	0.136	0.242	322.883518	-50.108896	-1467.96	1611

2.4 Star Slots

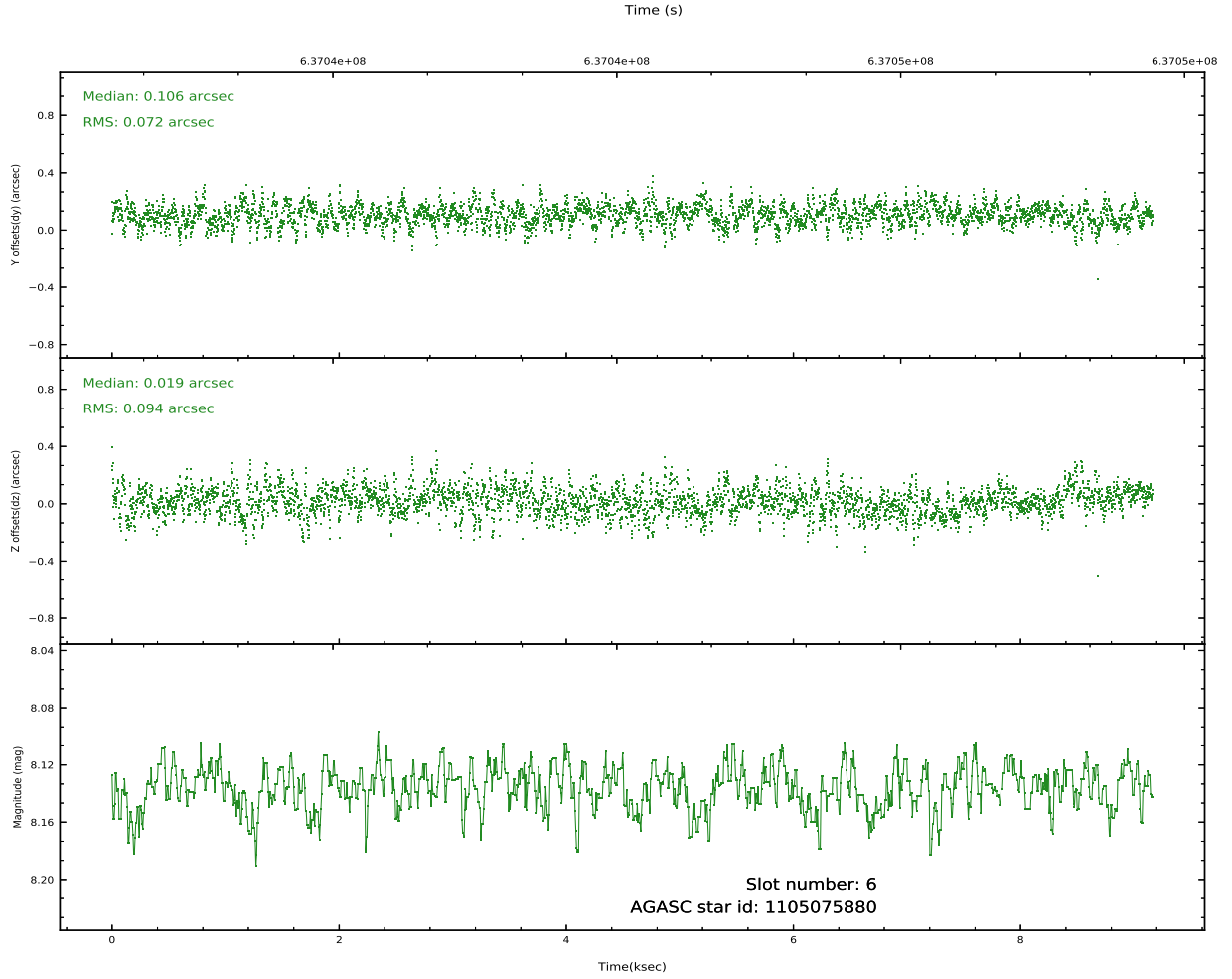
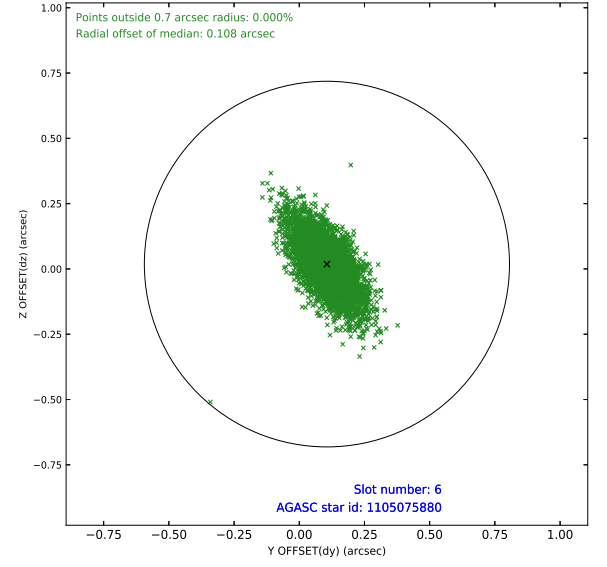
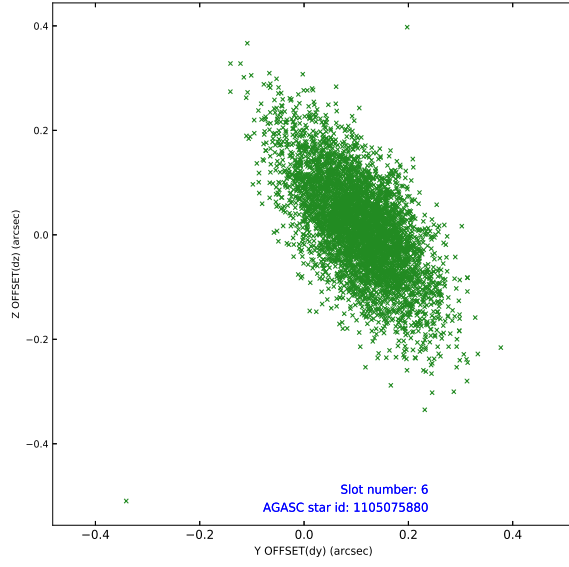
2.4.1 Slot 4



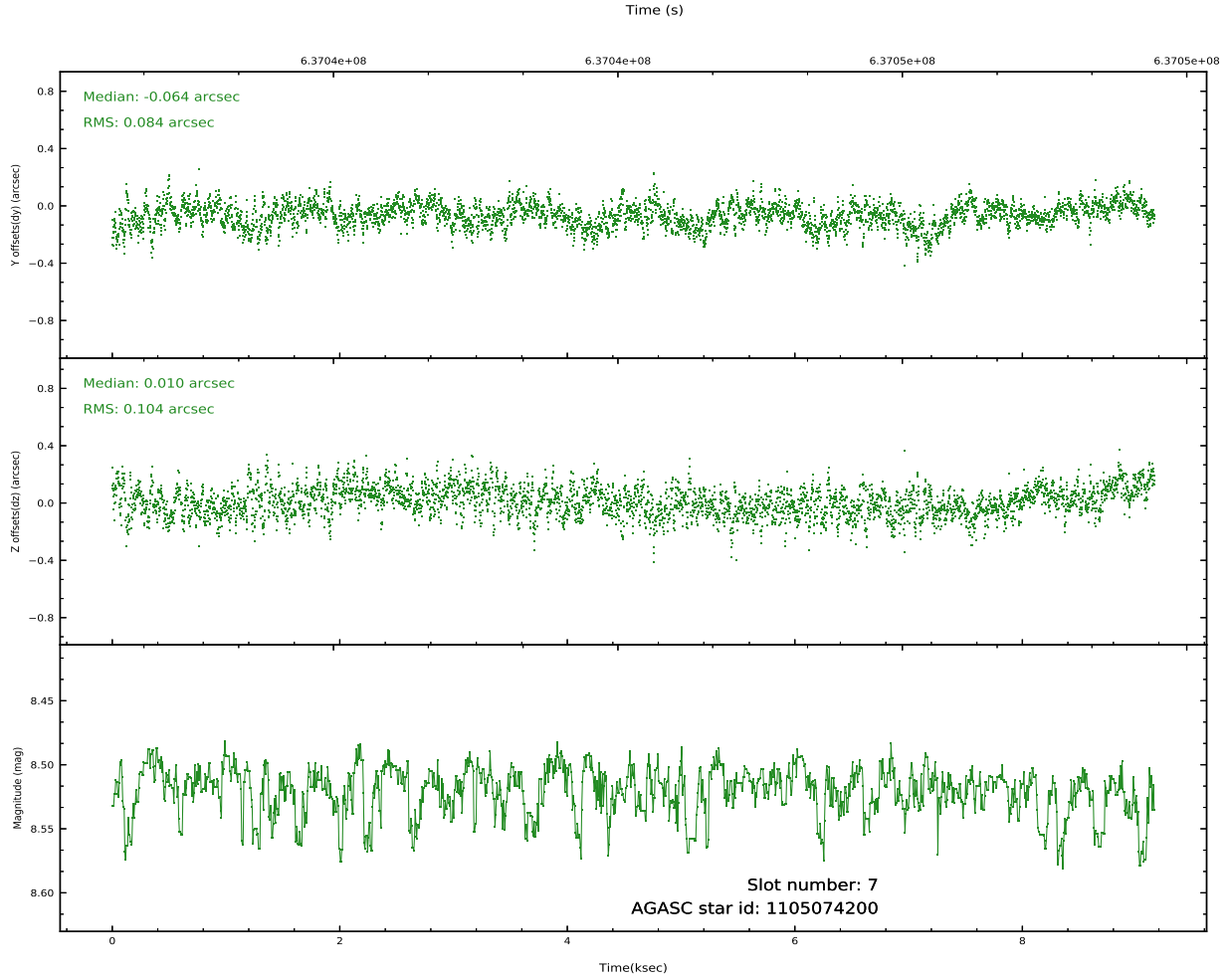
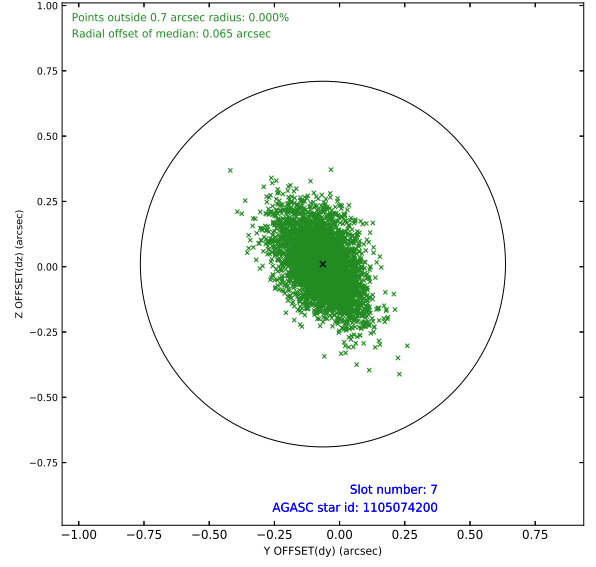
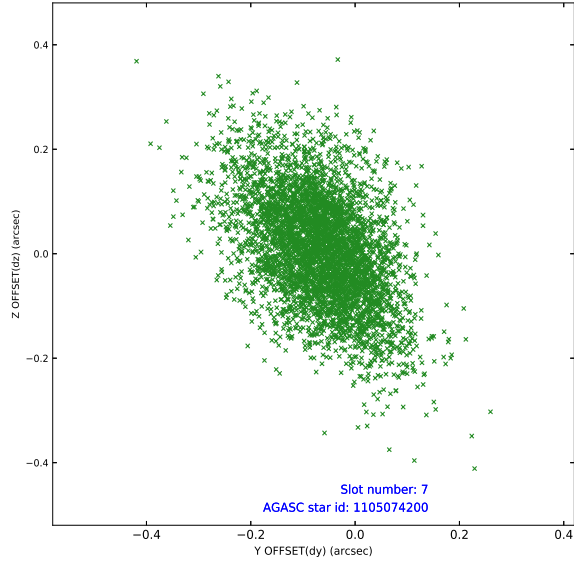
2.4.2 Slot 5



2.4.3 Slot 6

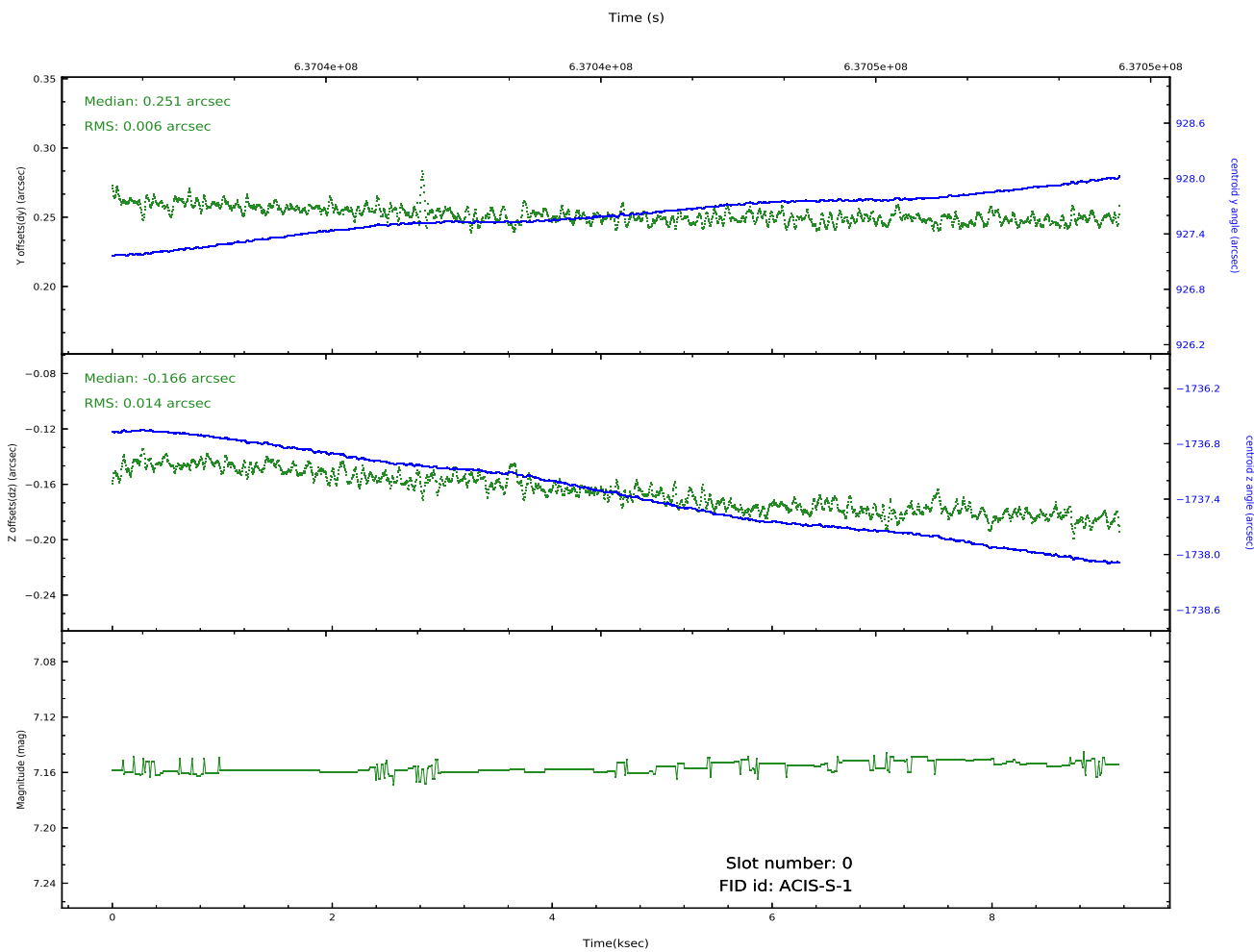
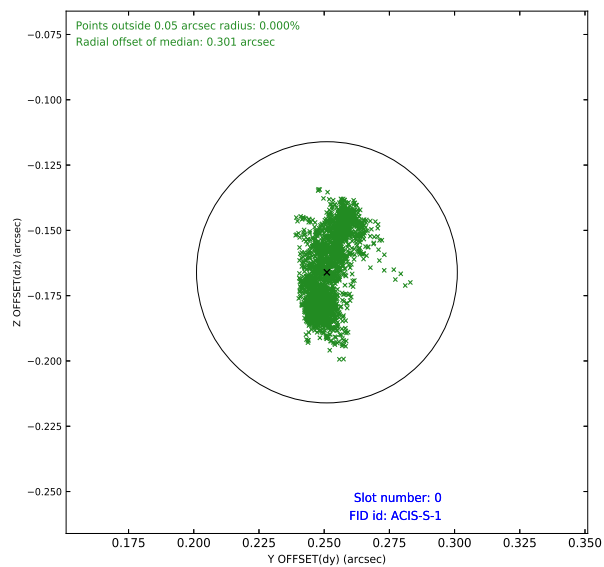
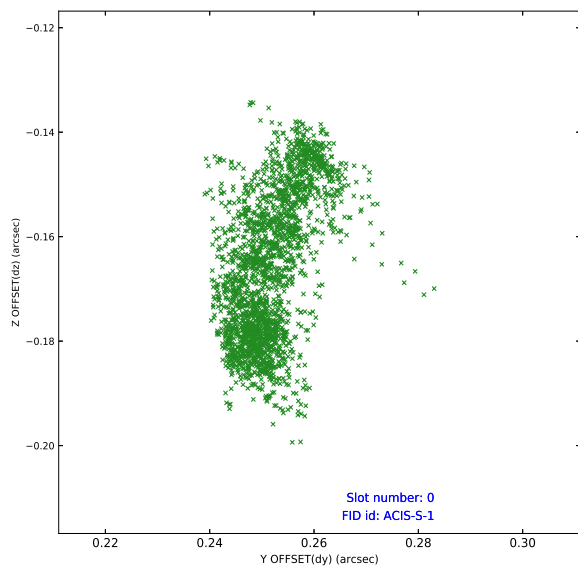


2.4.4 Slot 7

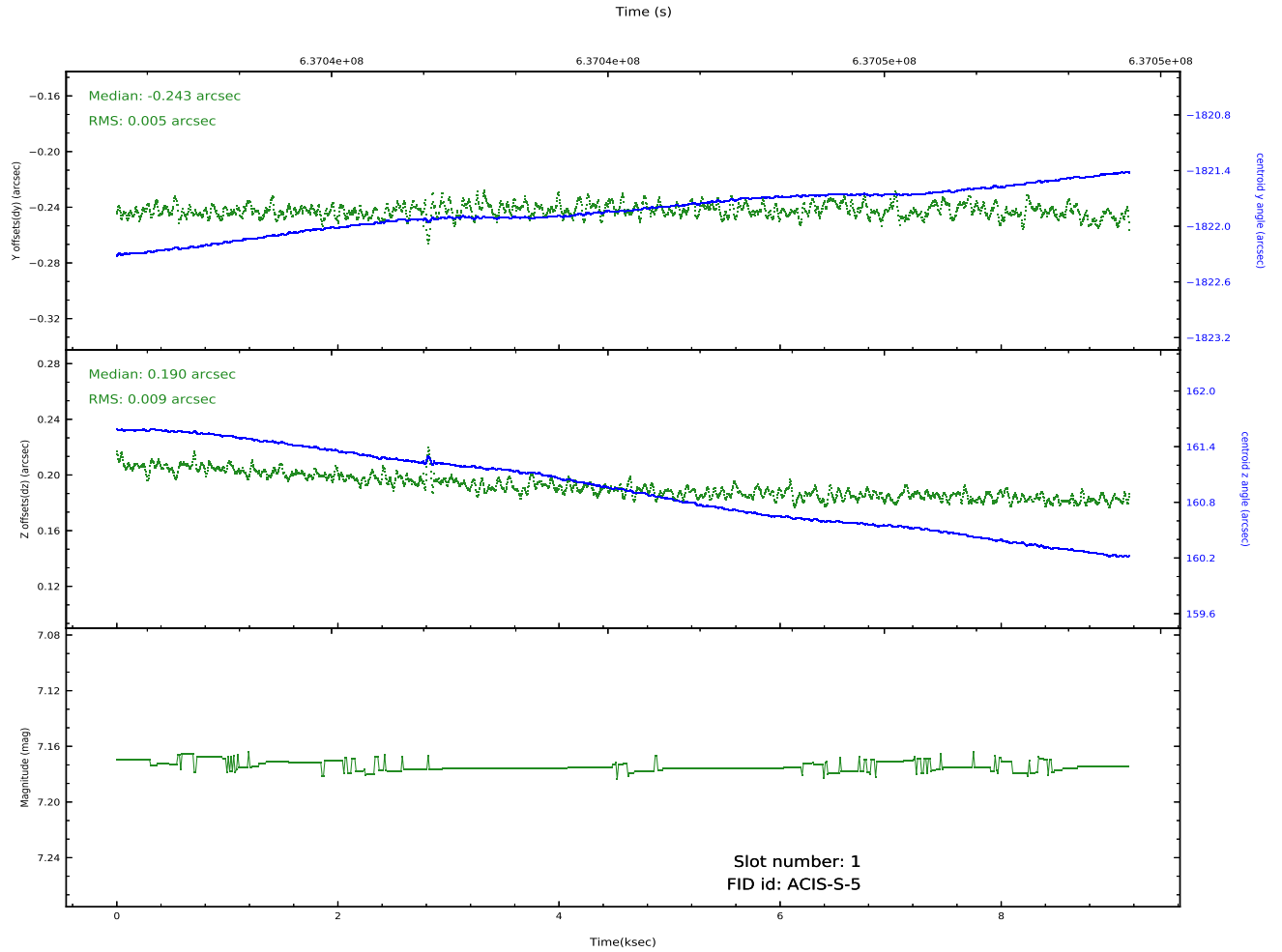
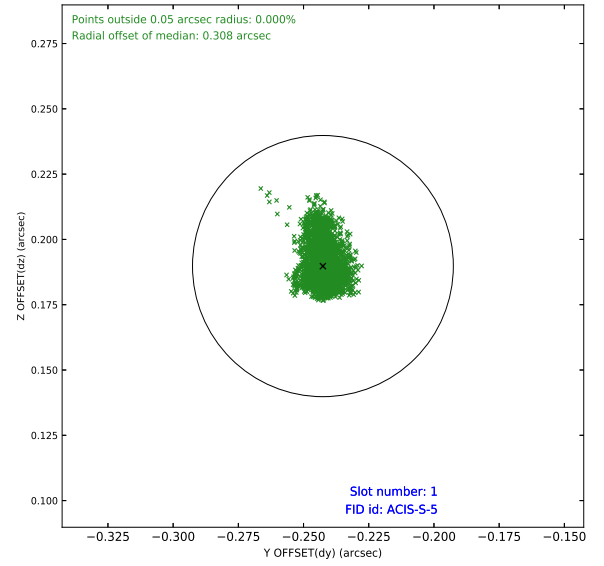
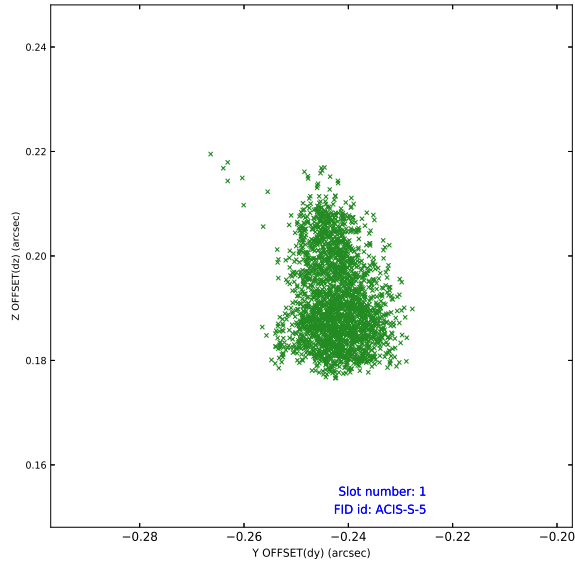


2.5 FID Slots

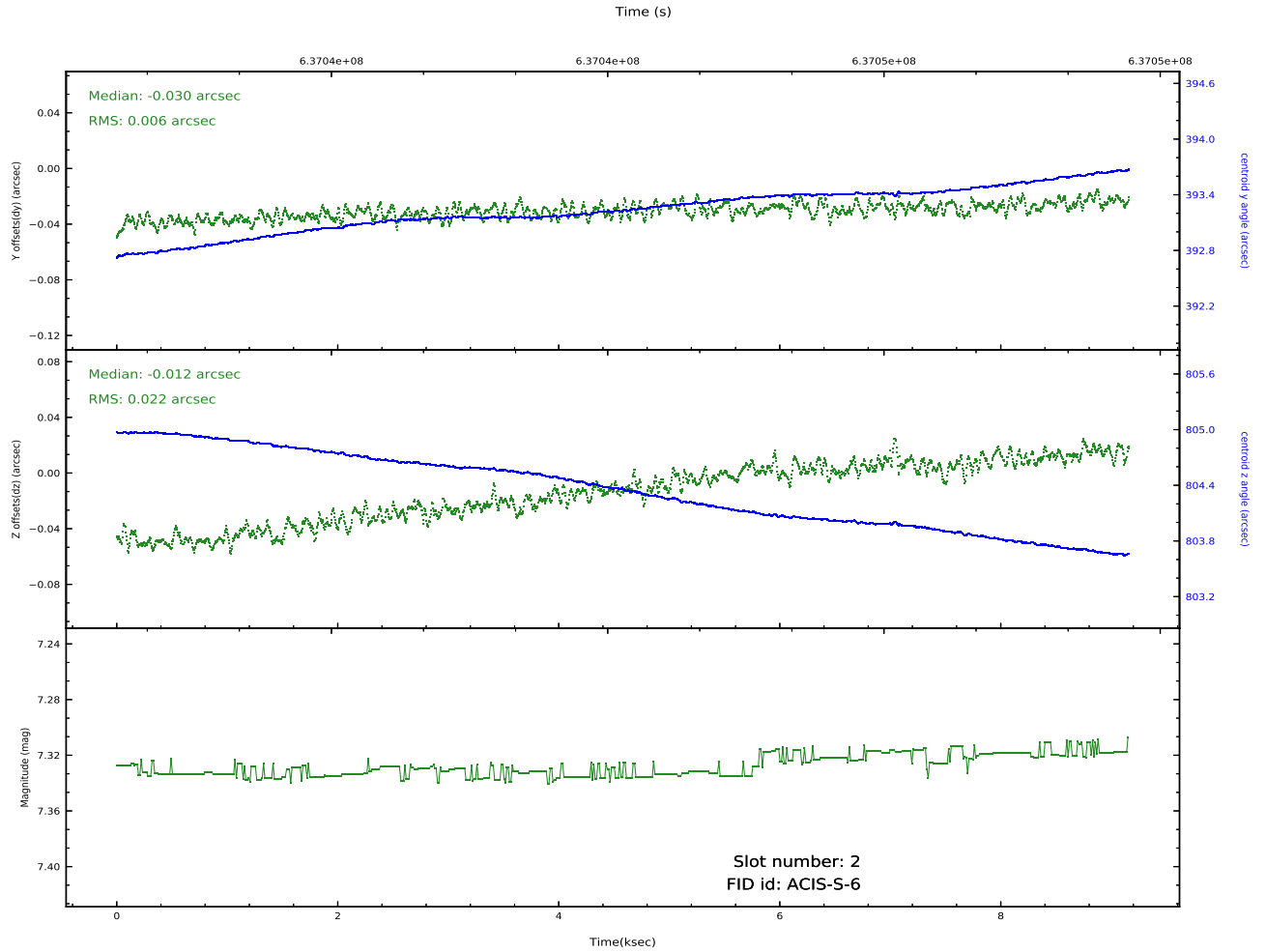
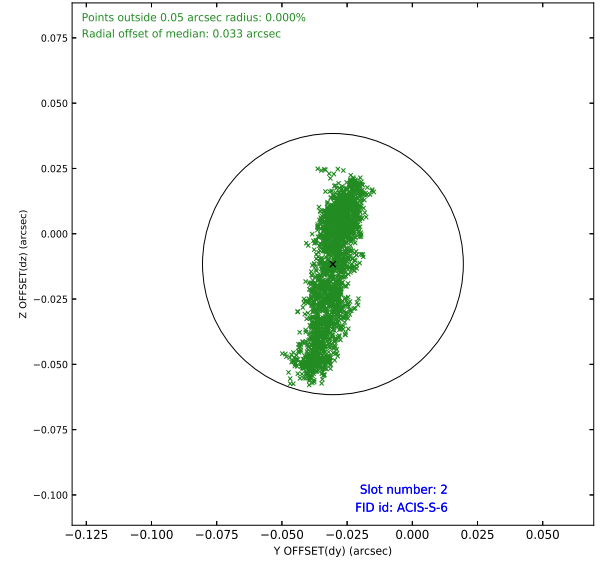
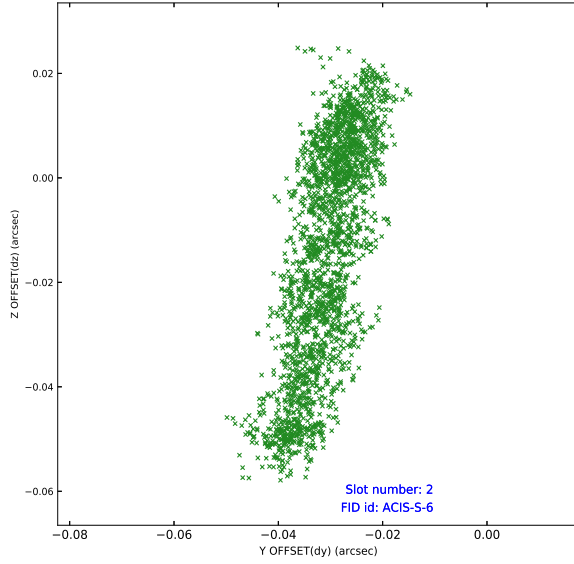
2.5.1 Slot 0



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)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.0489000697136

A.2 Comments

The guide star in slot 3 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.

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A spatial region of the original bias map for CCD = 8 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 = 8 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.