

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4682 - L2 Version 4
Chandra X-Ray Center

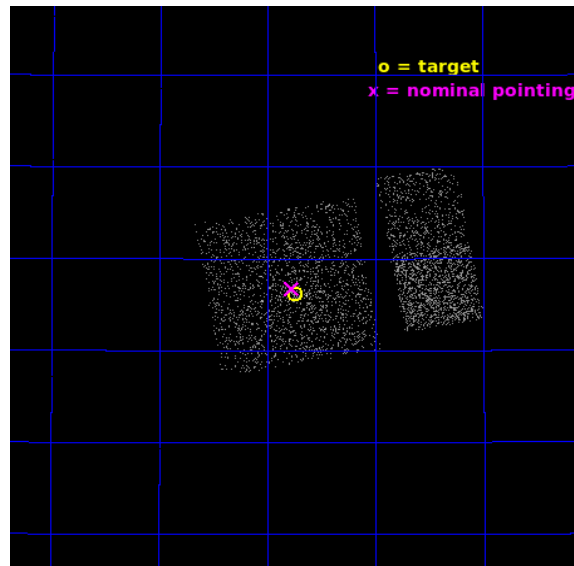
L2 Processing Date : Sep 26 2020

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1 Front

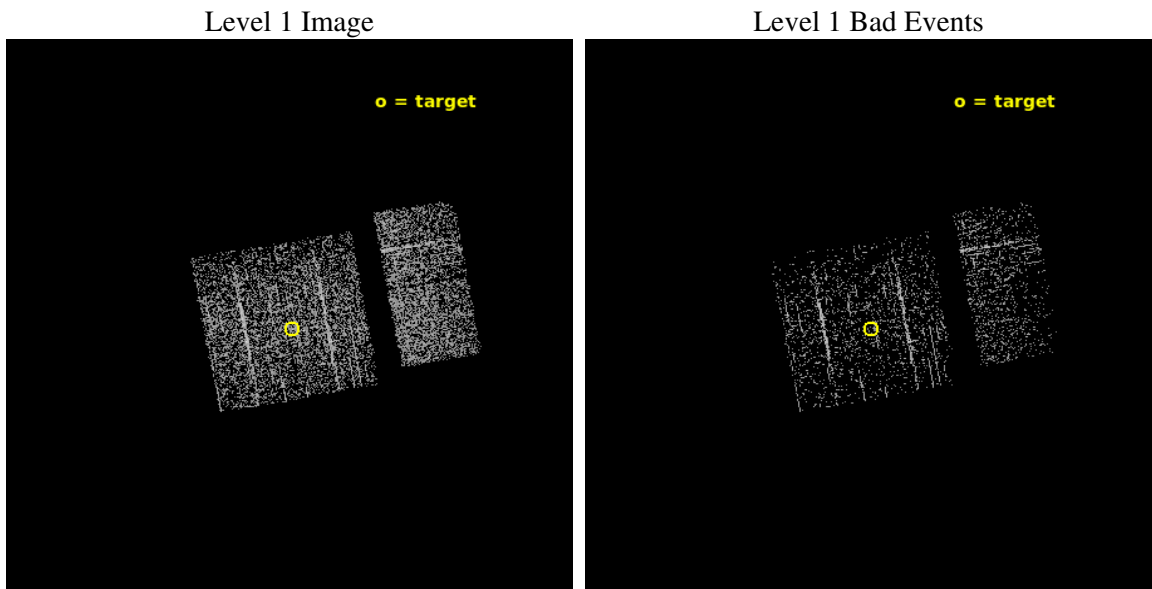
seq_num	600337	Sequence number
obs_id	4682	Observation id
title	Searching for Black Hole X-ray Nova in M31	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.685	Observer's specified target RA [deg]
dec_targ	41.268972	Observer's specified target Dec [deg]
ra_nom	10.693199296005	Nominal RA [deg]
dec_nom	41.278881250609	Nominal Dec [deg]
roll_nom	79.990960229211	Nominal Roll [deg]
revision	4	Processing version of data
ontime	937.21597102284	Sum of GTIs [s]
livetime	147.54040096283	Livetime [s]
ontime0	937.09285104275	Sum of GTIs [s]
ontime1	937.13389101624	Sum of GTIs [s]
ontime2	937.17493101954	Sum of GTIs [s]
ontime3	937.21597102284	Sum of GTIs [s]
ontime6	937.29805102944	Sum of GTIs [s]
ontime7	937.25701102614	Sum of GTIs [s]
l2events	4471	Number of level 2 events



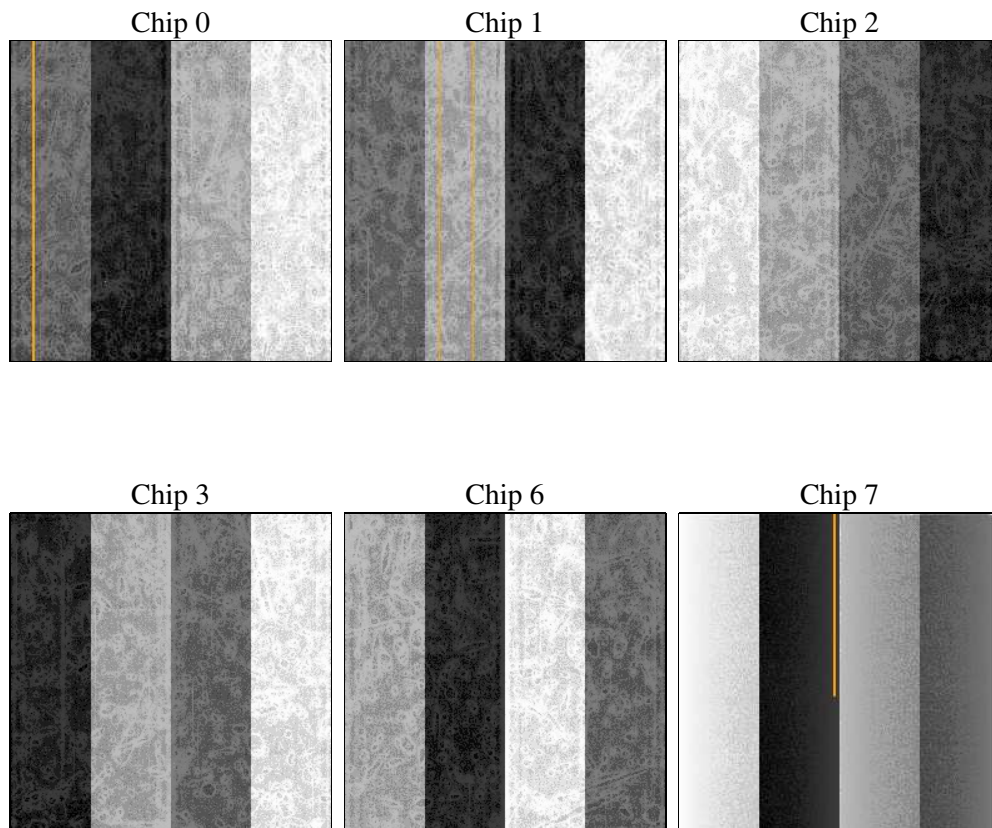
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4791.529000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	937.21597102284	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	937.09285104275	Sum of GTIs [s]
date	2020-09-26T02:37:43	Date and time of file creation	ontime1	937.13389101624	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	937.17493101954	Sum of GTIs [s]
			ontime3	937.21597102284	Sum of GTIs [s]
			ontime6	937.29805102944	Sum of GTIs [s]
			ontime7	937.25701102614	Sum of GTIs [s]
			l1events	22282	Number of level 1 events

2.1.4 Events

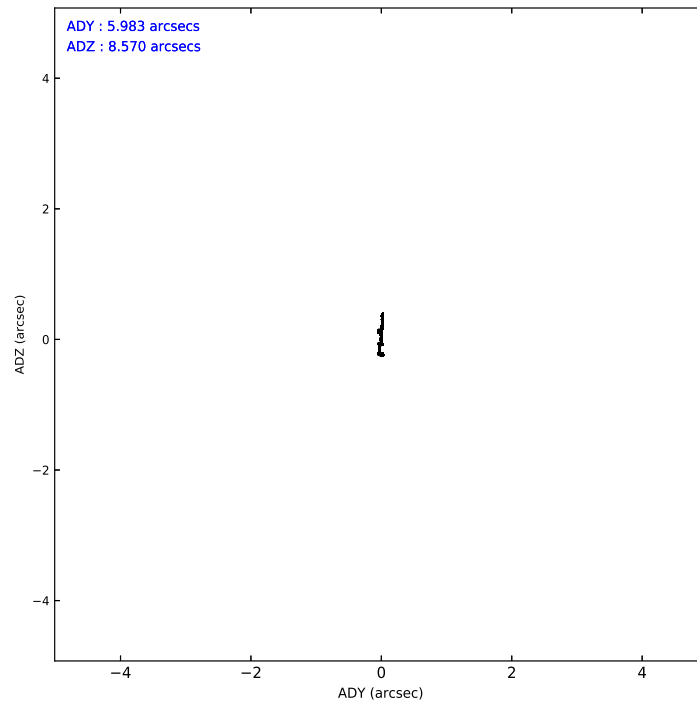
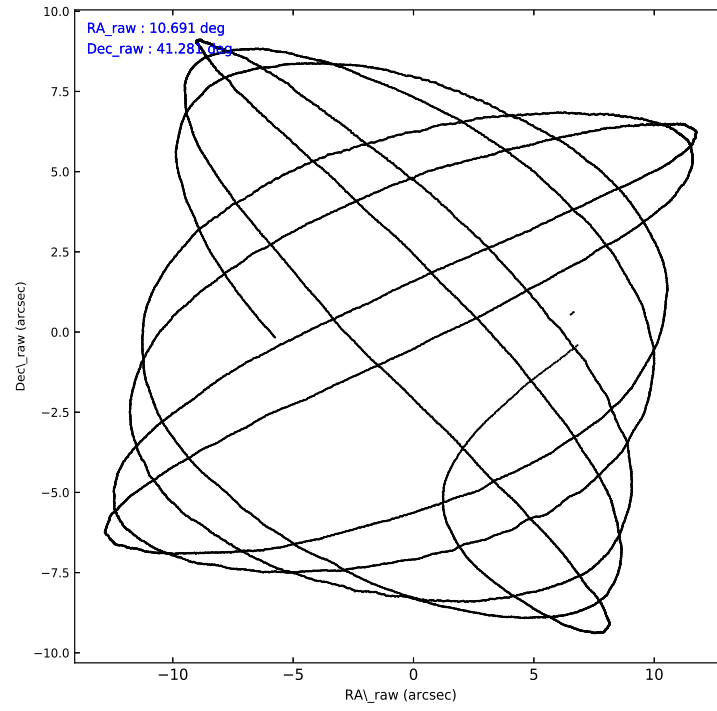
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3524	3539	3400	3829	4004	3986
rejected events	2901	2804	2749	2973	3373	2536
rejected %	82%	79%	80%	77%	84%	63%

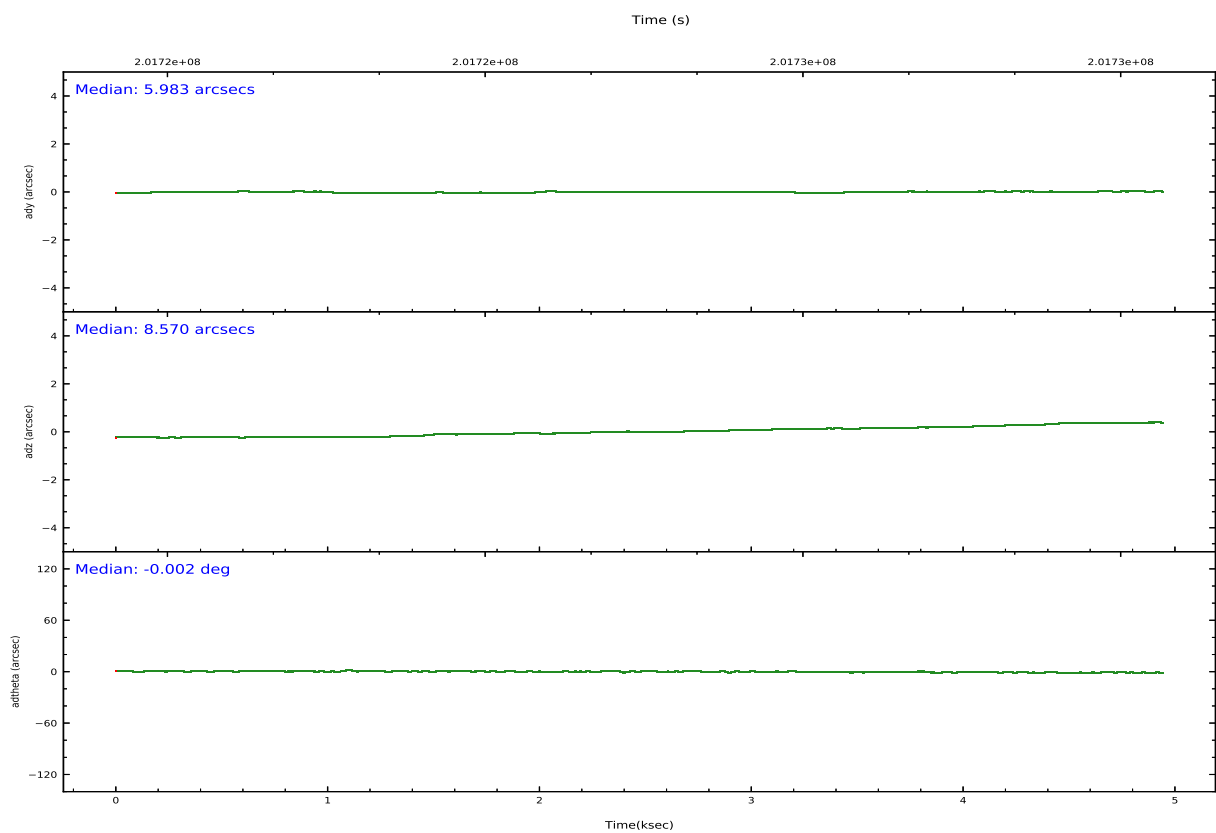
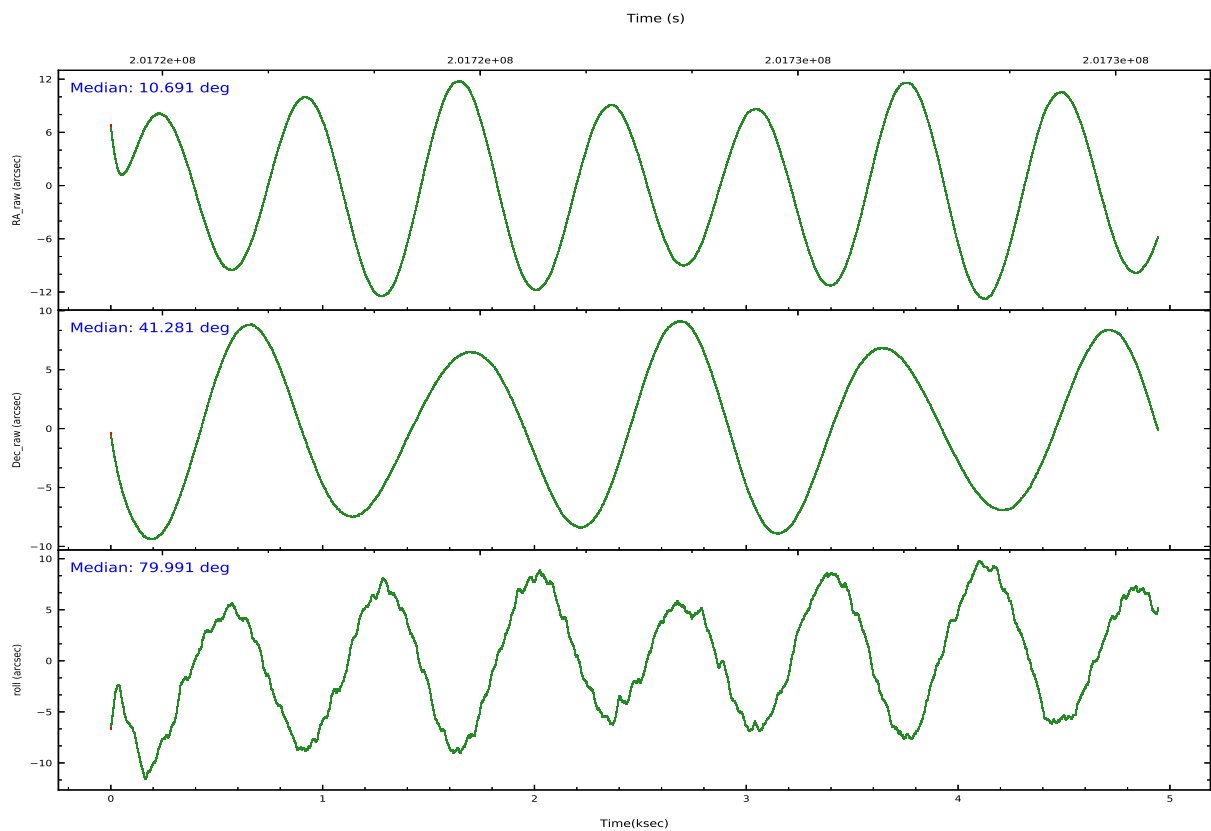
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	358	411	398	563	345	151
	10%	11%	11%	14%	8%	3%
grade 1 events	1	1	1	5	4	2
	0%	0%	0%	0%	0%	0%
grade 2 events	89	127	103	109	106	273
	2%	3%	3%	2%	2%	6%
grade 3 events	63	63	39	56	50	105
	1%	1%	1%	1%	1%	2%
grade 4 events	53	54	40	65	59	123
	1%	1%	1%	1%	1%	3%
grade 5 events	107	135	83	115	129	314
	3%	3%	2%	3%	3%	7%
grade 6 events	70	82	80	73	77	819
	1%	2%	2%	1%	1%	20%
grade 7 events	2783	2666	2656	2843	3234	2199
	78%	75%	78%	74%	80%	55%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-012367	ACIS-012367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	10.702912	10.693199296005	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.255369	41.278881250609	Alternating exposures requested	Y	Y
[deg] Pointing Roll	79.773202	79.990960229211	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	201139264.184000	201139264.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	201744064.184000	201744064.184000	Duty cycle	5	5
[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)	201722410.184000	201721169.53019			
Observation start date	2004-05-23T17:59:06	2004-05-23T17:39:29			
[s] Observation end time (MET)	201727201.184000	201727516.33048			
Observation end date	2004-05-23T19:18:57	2004-05-23T19:25:16			
Read mode	TIMED	TIMED			

2.3 Aspect



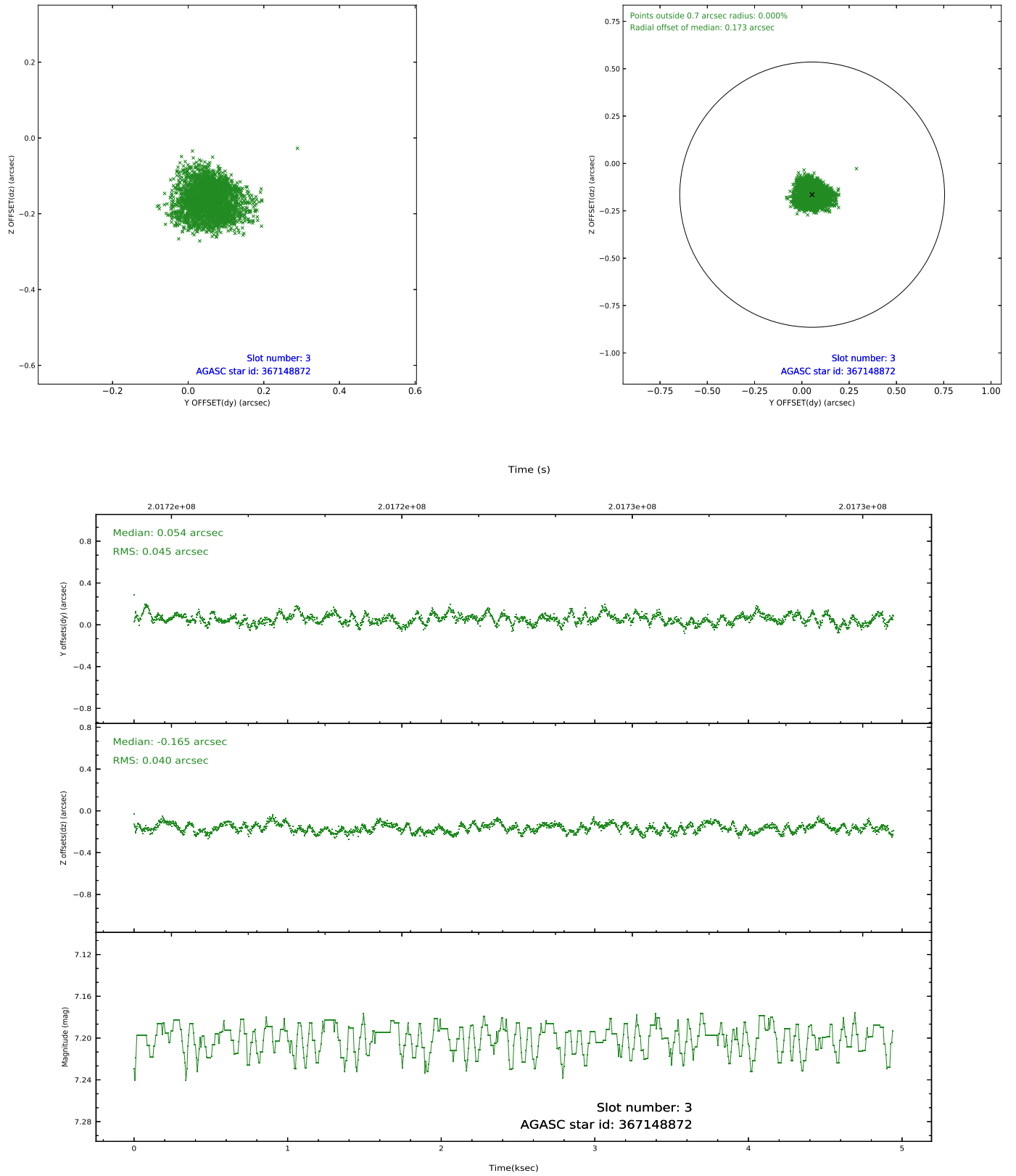


Slot Statistics

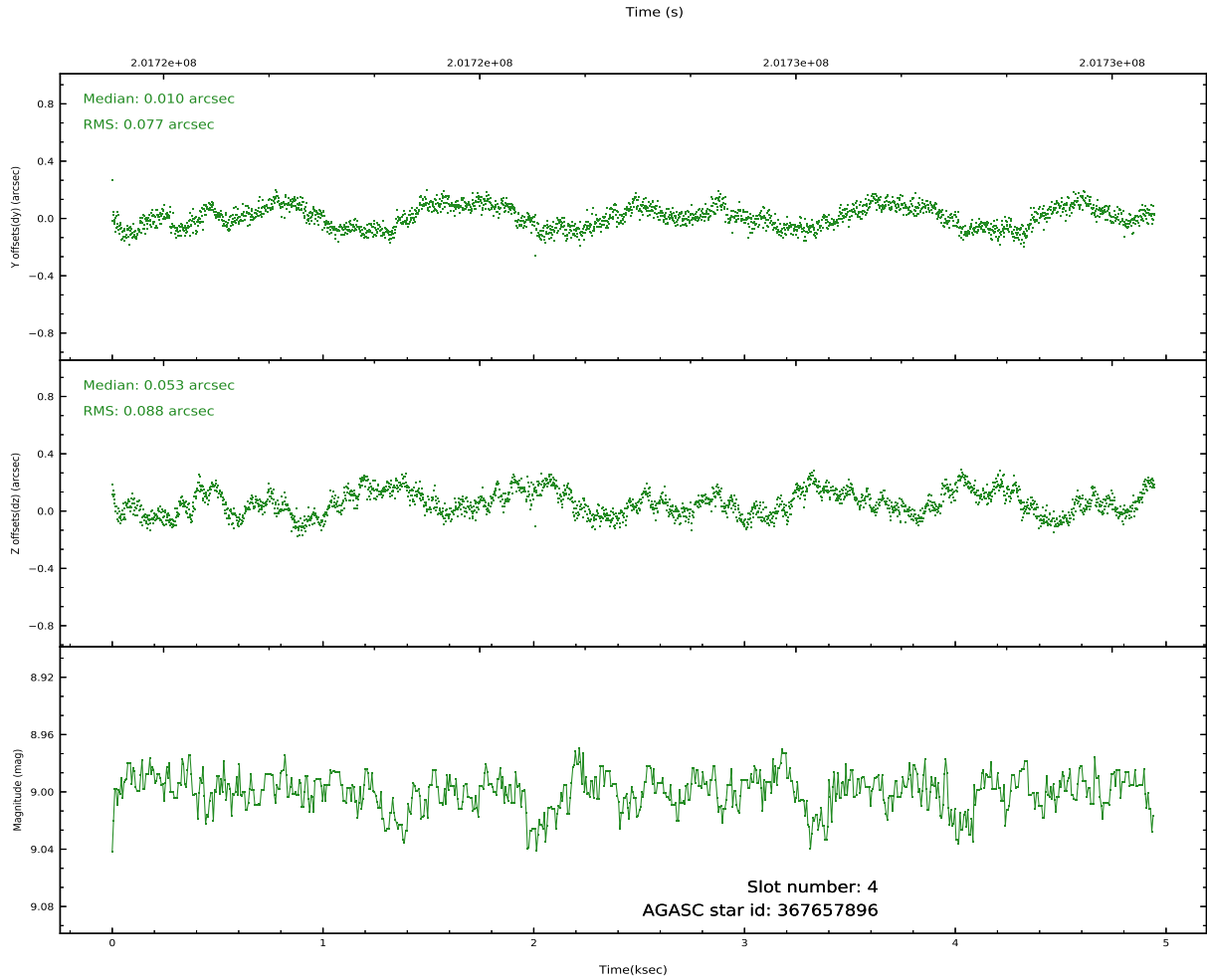
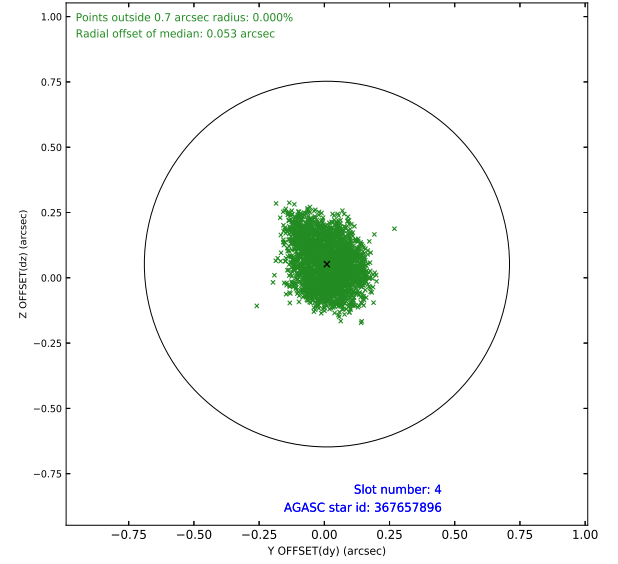
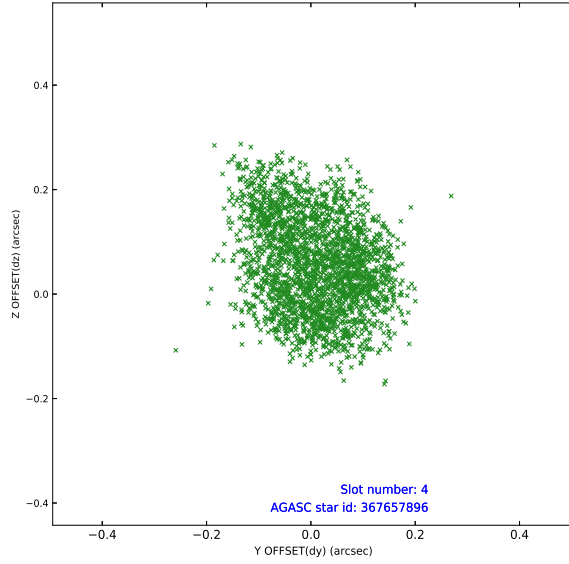
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	1207	1.000	0.023	0.023	0.009	0.015	0.000000	0.000000	933.76	-831
1	FID		ACIS-I-5	7.23	1207	1.000	-0.189	0.039	0.008	0.014	0.000000	0.000000	-1813.89	1064
2	FID		ACIS-I-6	7.26	1207	1.000	0.076	0.010	0.009	0.014	0.000000	0.000000	398.01	1710
3	GUIDE	used	367148872	7.20	2413	1.000	0.054	-0.165	0.065	0.101	10.505940	40.688258	-2103.94	166
4	GUIDE	used	367657896	9.00	2410	1.000	0.010	0.053	0.128	0.190	11.197765	41.313576	447.04	-1278
5	GUIDE	used	367663272	9.29	2413	1.000	0.025	-0.104	0.079	0.129	10.656279	41.699429	1551.29	407
6	GUIDE	used	367674552	8.85	2413	1.000	-0.038	0.080	0.070	0.113	11.016238	41.570845	1269.91	-628
7	GUIDE	used	367138920	7.73	2411	1.000	-0.048	0.135	0.076	0.121	11.513485	40.808909	-1178.85	-2457

2.4 Star Slots

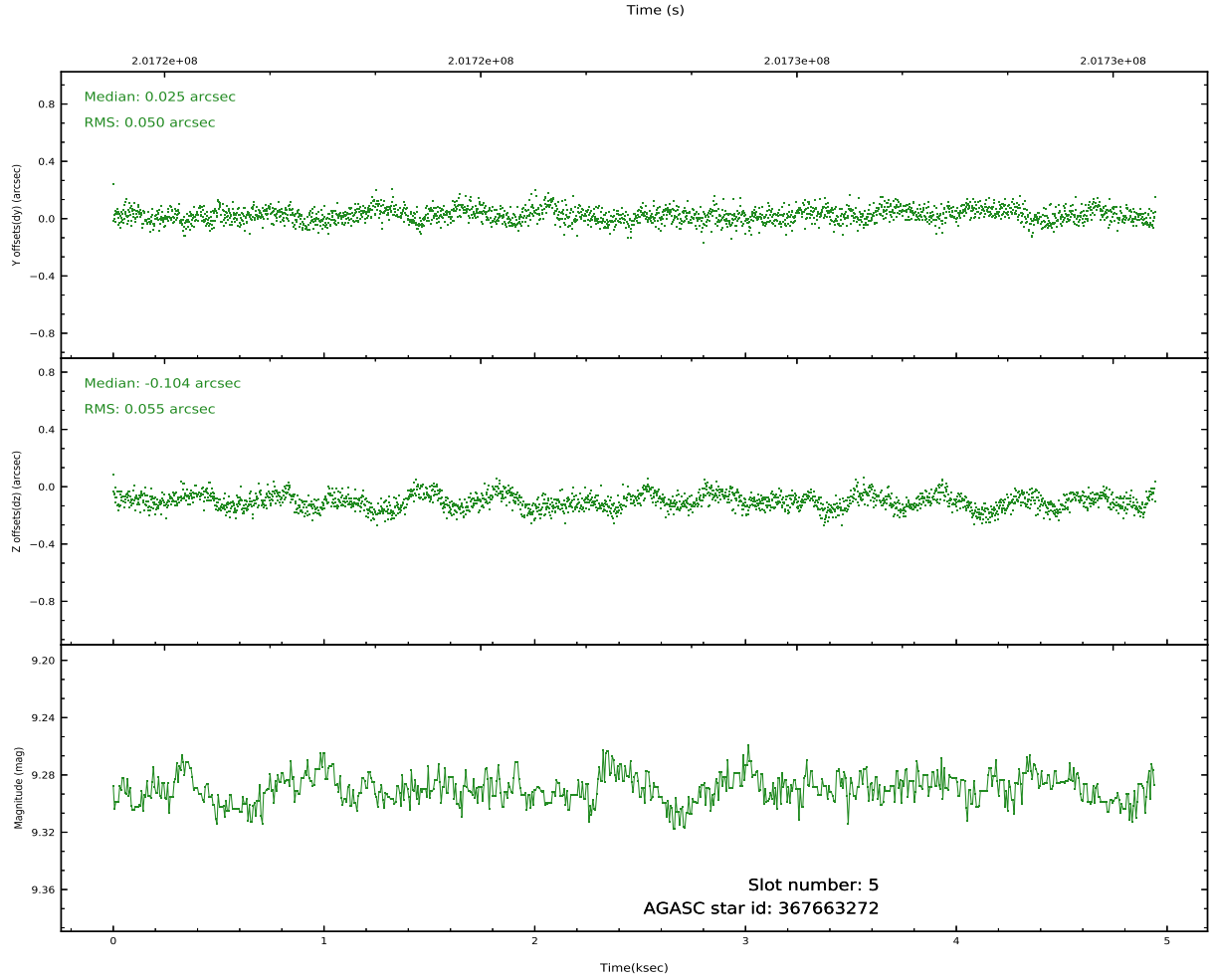
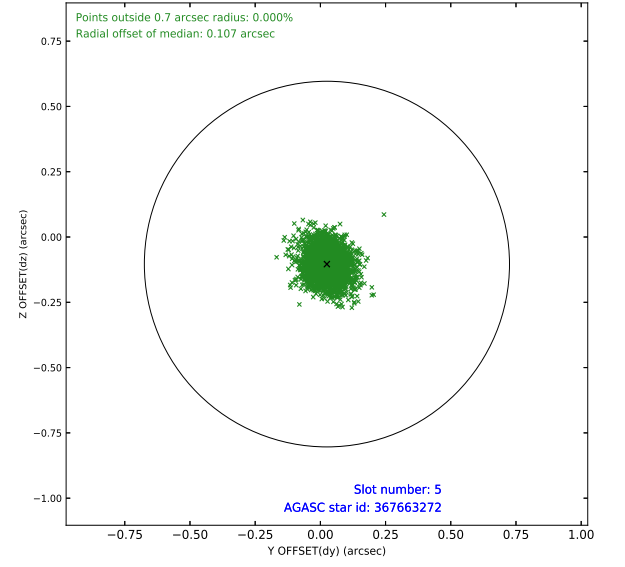
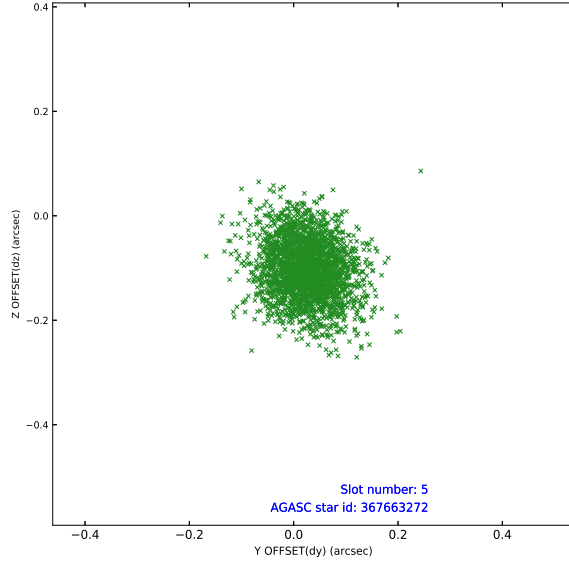
2.4.1 Slot 3



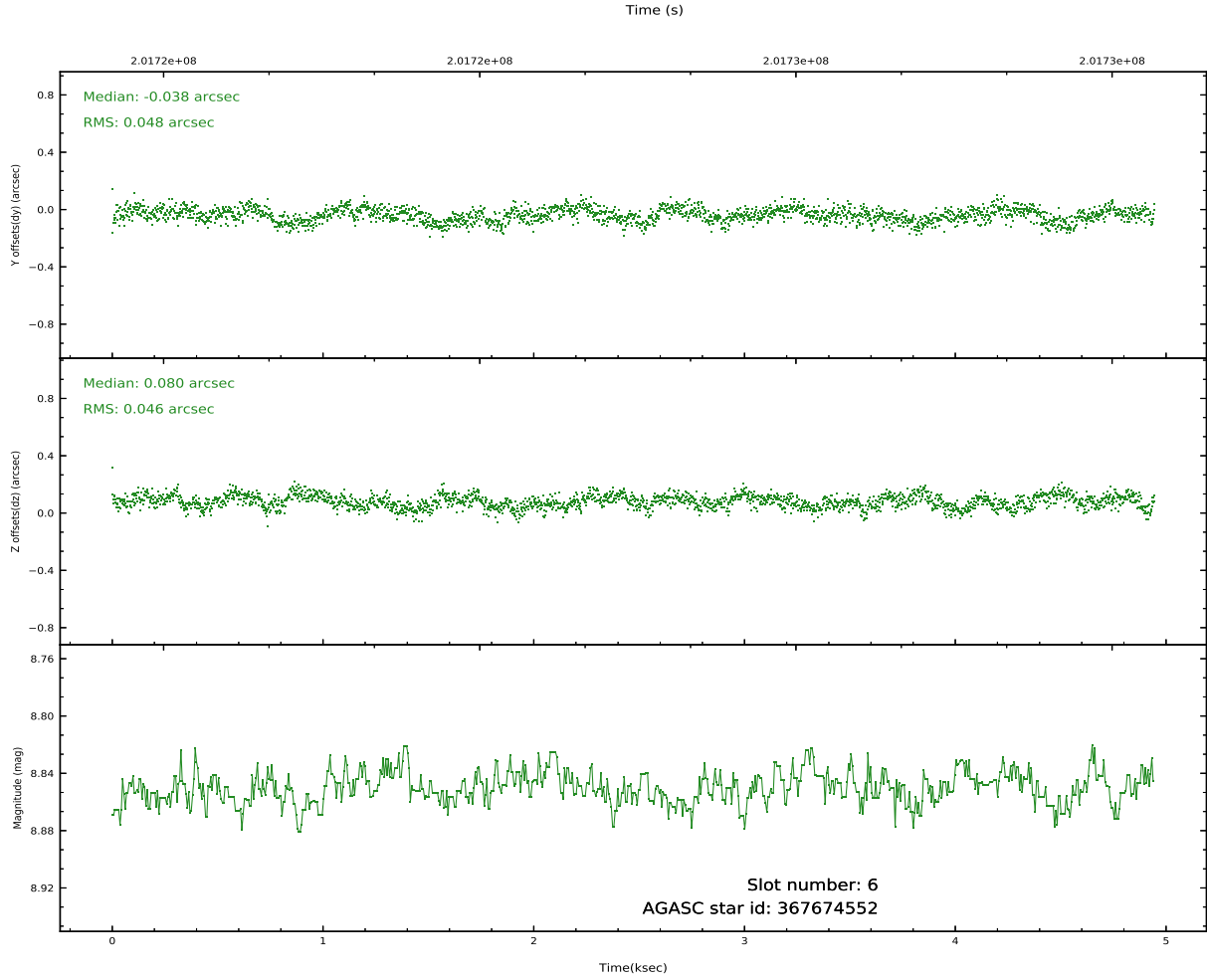
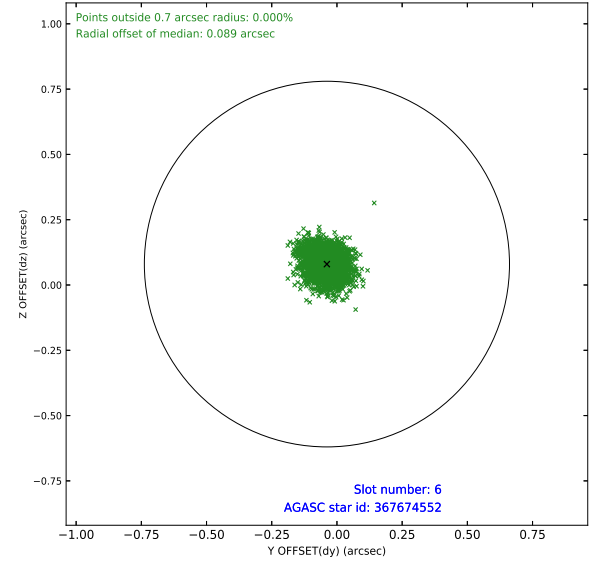
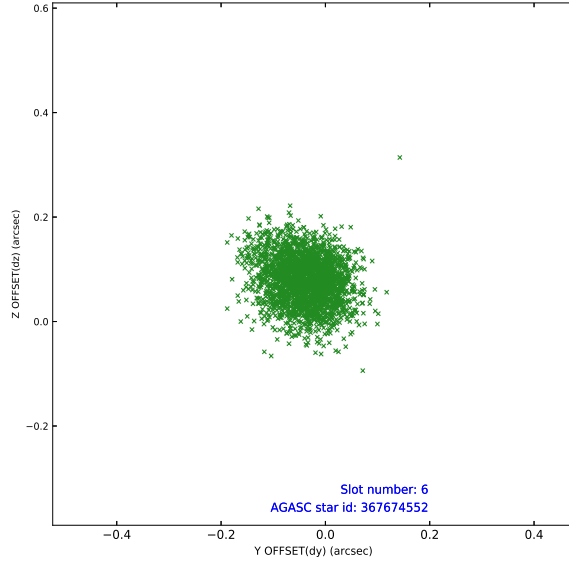
2.4.2 Slot 4



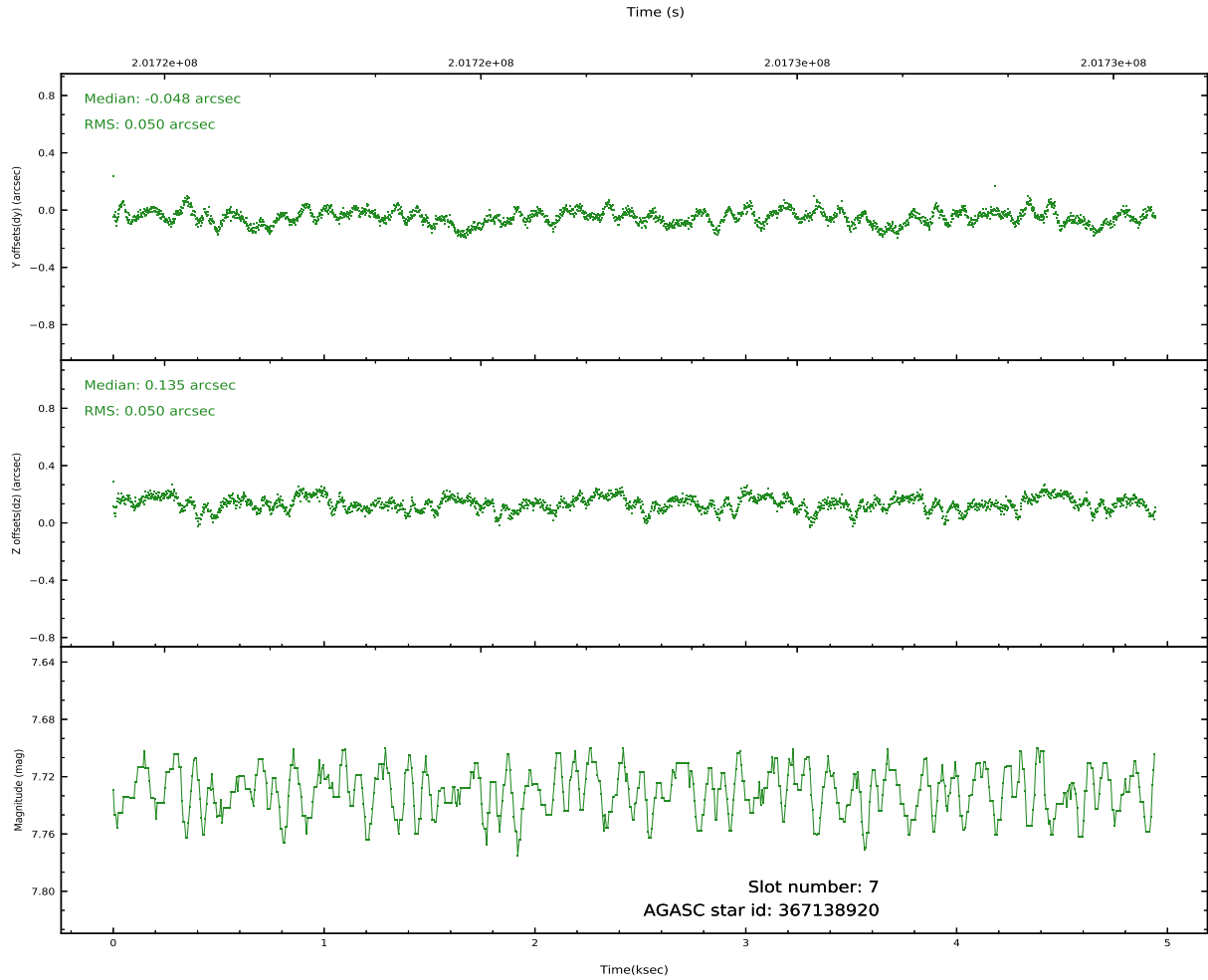
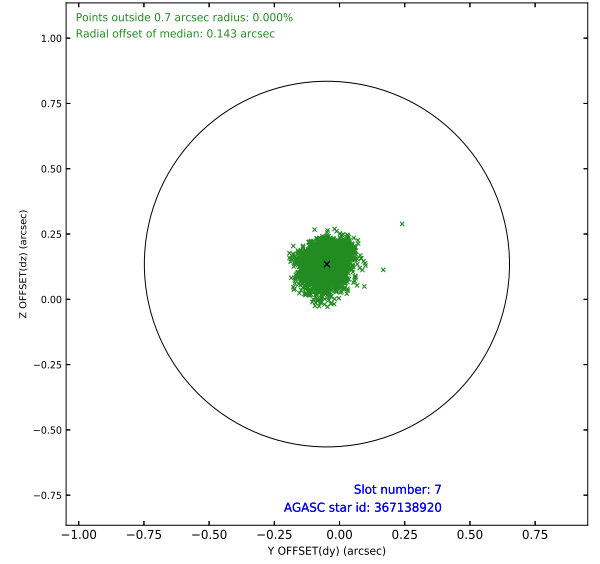
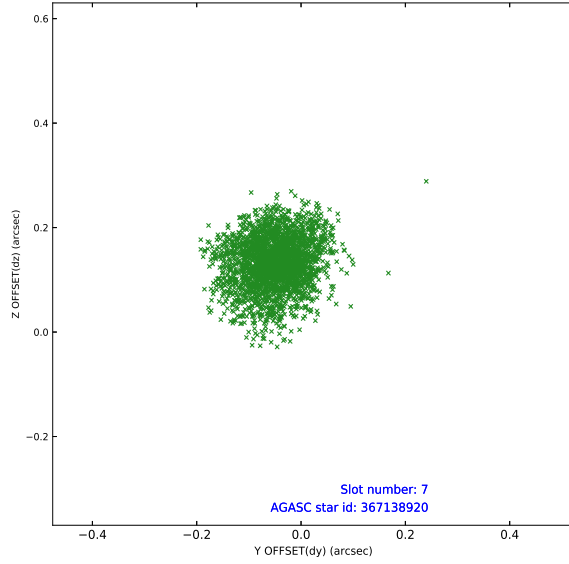
2.4.3 Slot 5



2.4.4 Slot 6

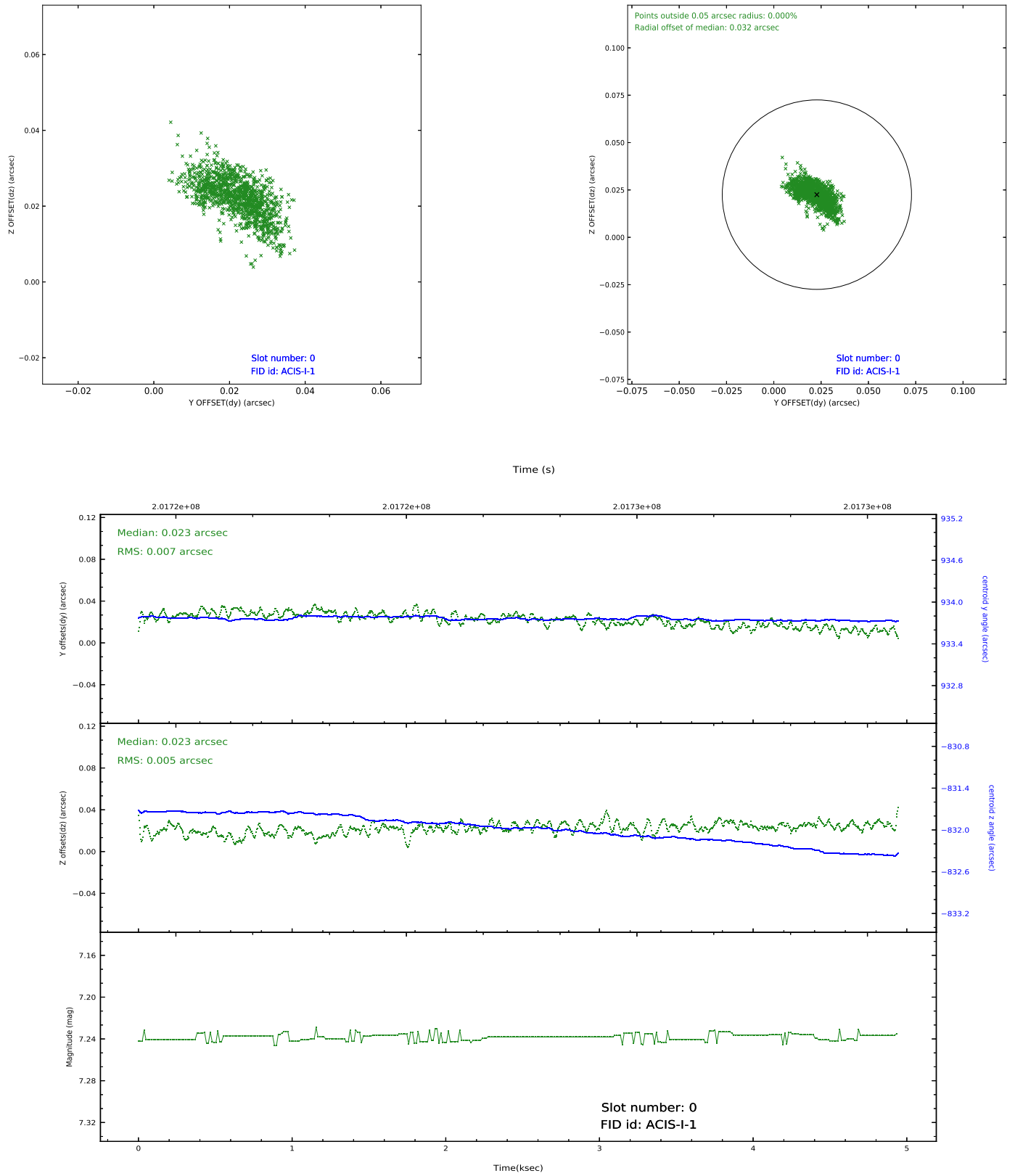


2.4.5 Slot 7

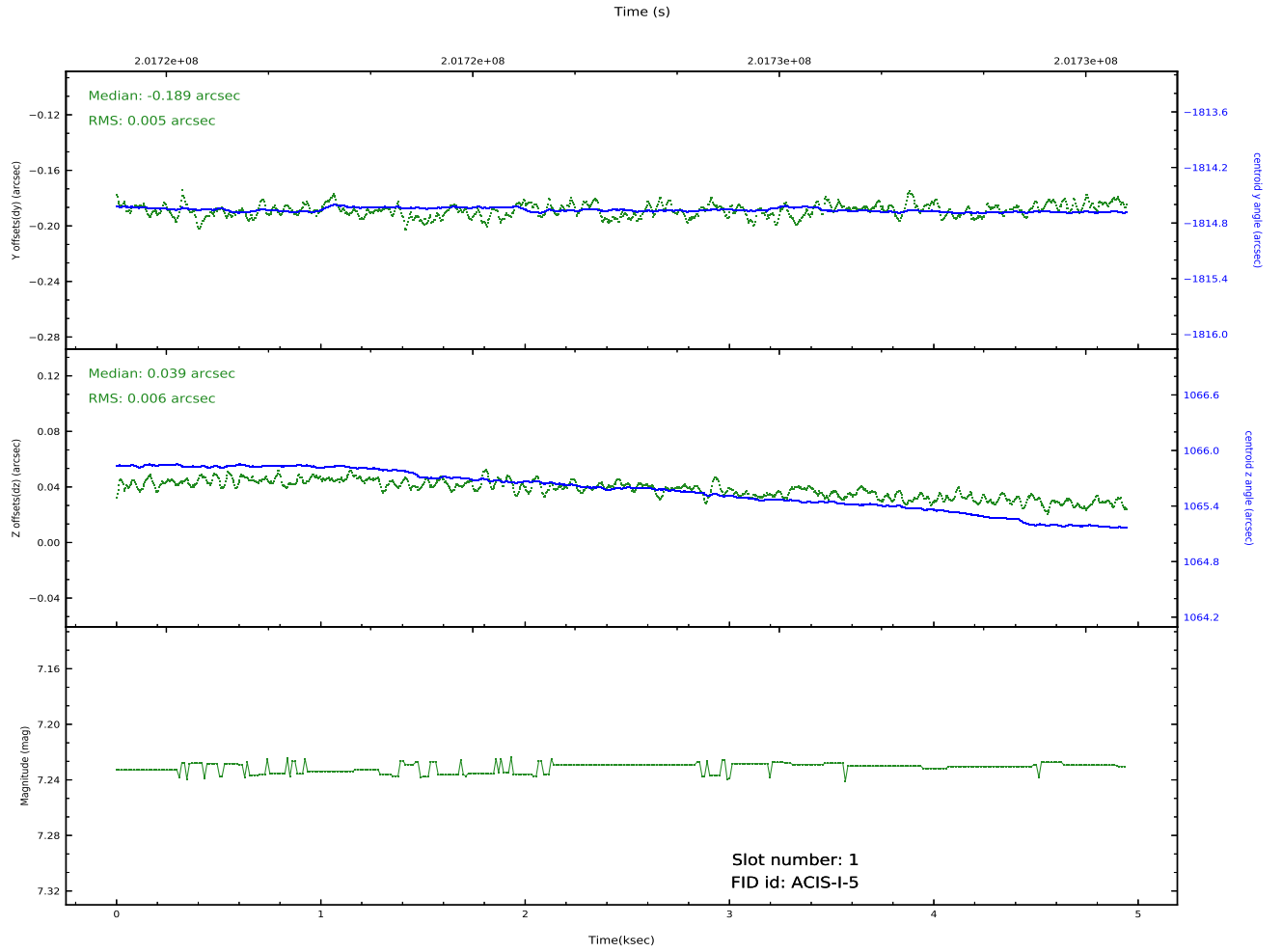
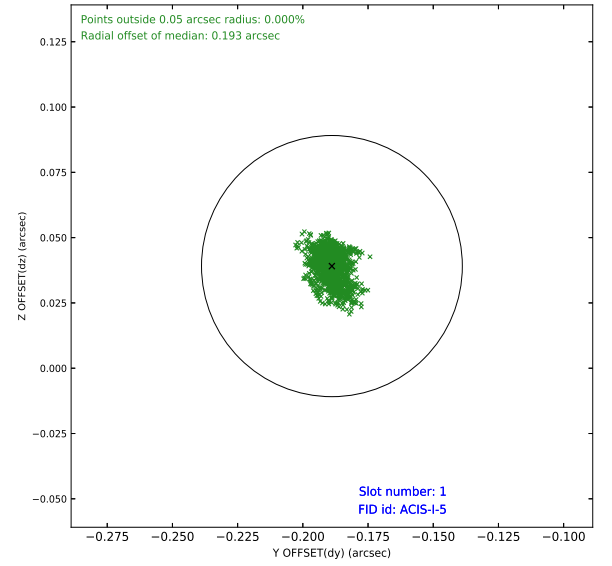
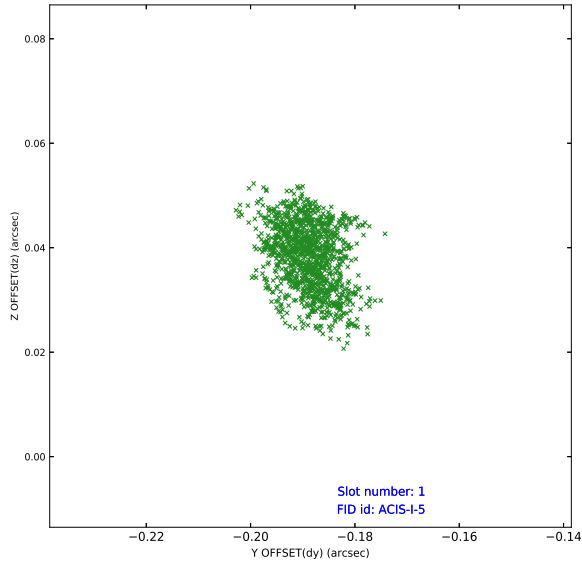


2.5 FID Slots

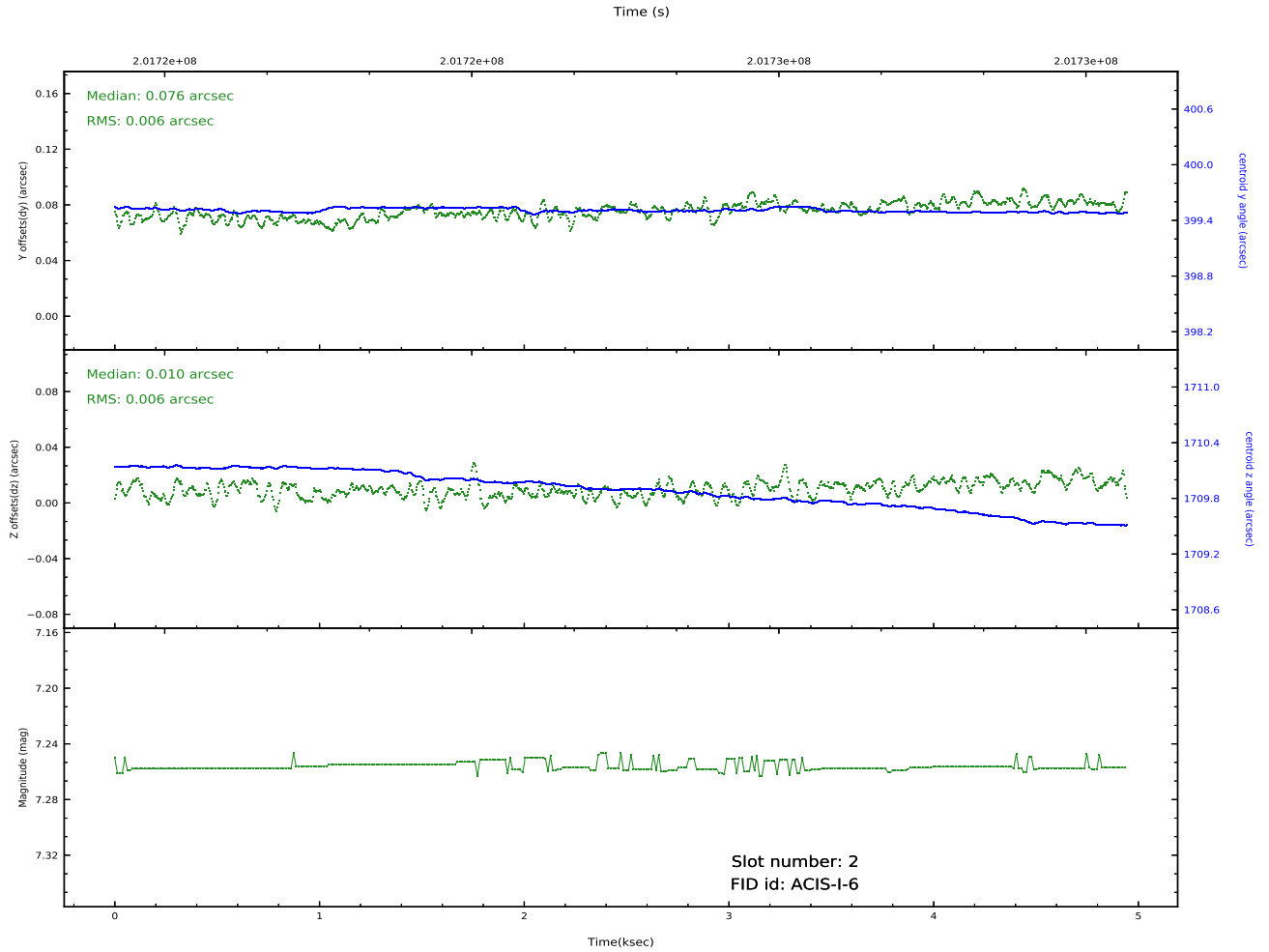
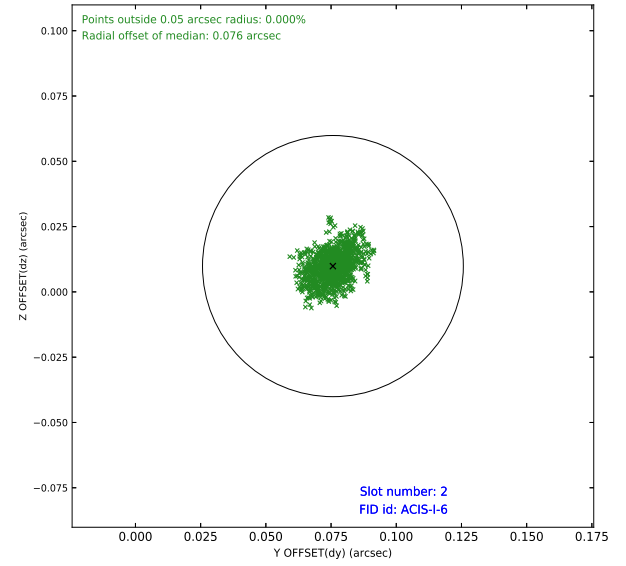
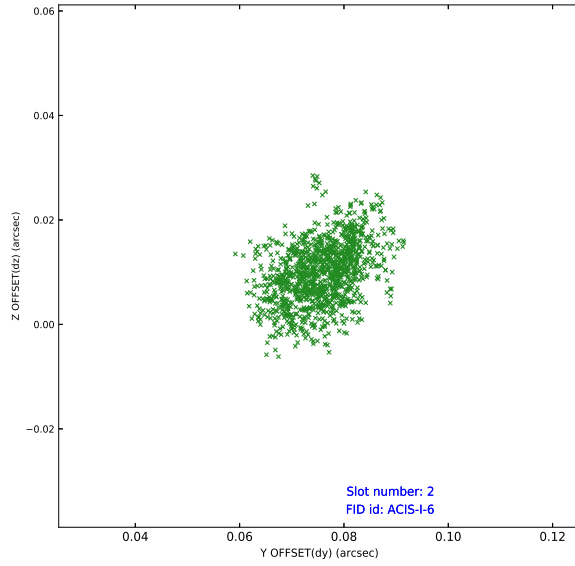
2.5.1 Slot 0



2.5.2 Slot 1



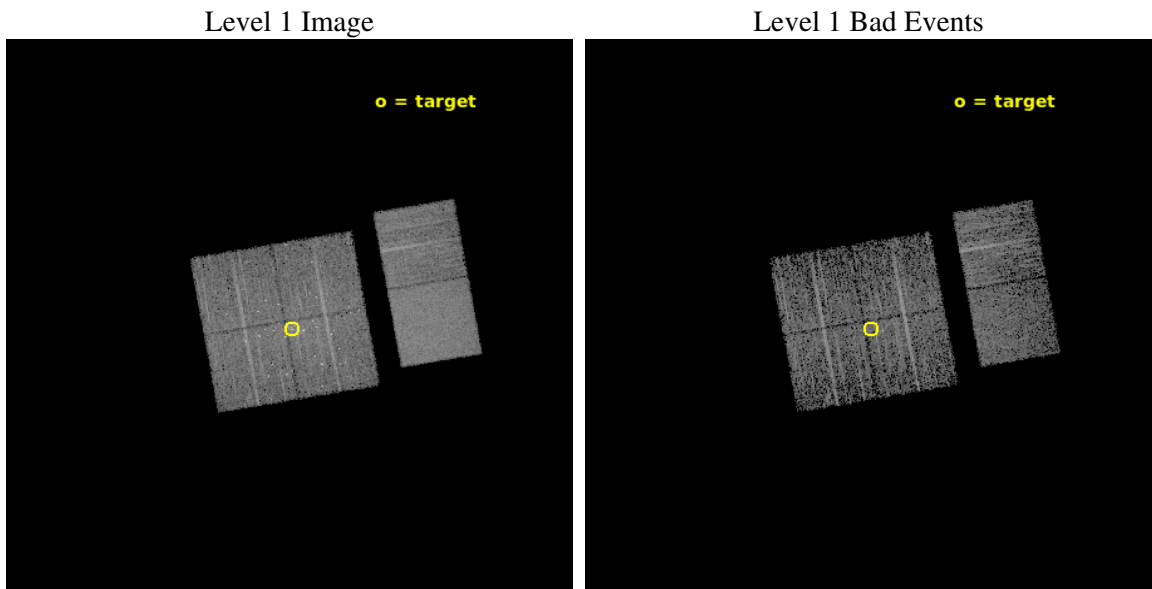
2.5.3 Slot 2



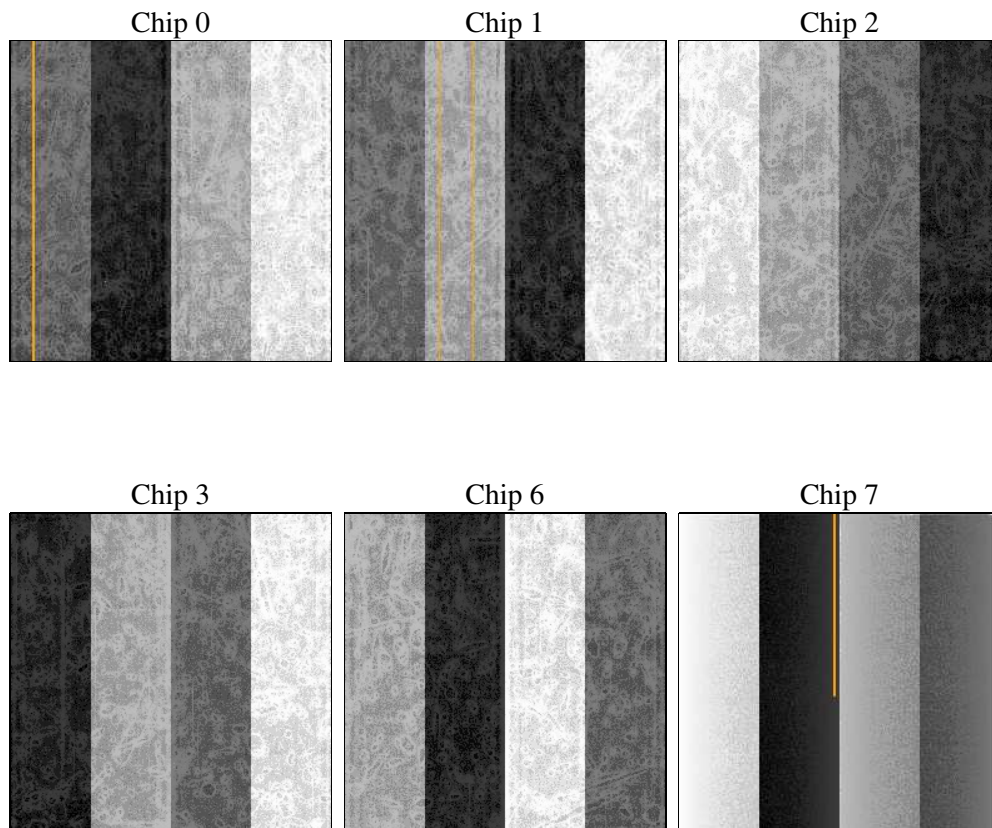
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4791.529000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	3996.0117826462	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	3996.0118520856	Sum of GTIs [s]
date	2020-09-26T02:38:56	Date and time of file creation	ontime1	3996.011672914	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	3996.0119715631	Sum of GTIs [s]
			ontime3	3996.0117826462	Sum of GTIs [s]
			ontime6	3996.0119216442	Sum of GTIs [s]
			ontime7	3996.0118620694	Sum of GTIs [s]
			l1events	246507	Number of level 1 events

3.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	36634	38637	36712	42955	39098	52471	grade 0 events	8218	9308	8451	12325	7673	2703
rejected events	24657	24932	24788	25976	27672	23882		22%	24%	23%	28%	19%	5%
rejected %	67%	64%	67%	60%	70%	45%	grade 1 events	71	53	56	230	33	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	1689	1999	1460	2069	1564	5130
								4%	5%	3%	4%	4%	9%
							grade 3 events	613	748	563	846	590	2181
								1%	1%	1%	1%	1%	4%
							grade 4 events	626	672	607	832	590	2196
								1%	1%	1%	1%	1%	4%
							grade 5 events	1199	1304	1140	1438	1416	3836
								3%	3%	3%	3%	3%	7%
							grade 6 events	983	1142	978	1125	1147	16623
								2%	2%	2%	2%	2%	31%
							grade 7 events	23235	23411	23457	24090	26085	19750
								63%	60%	63%	56%	66%	37%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.09.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.933

A.2 Comments

Window constraint was met.