

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4722 - L2 Version 4
Chandra X-Ray Center

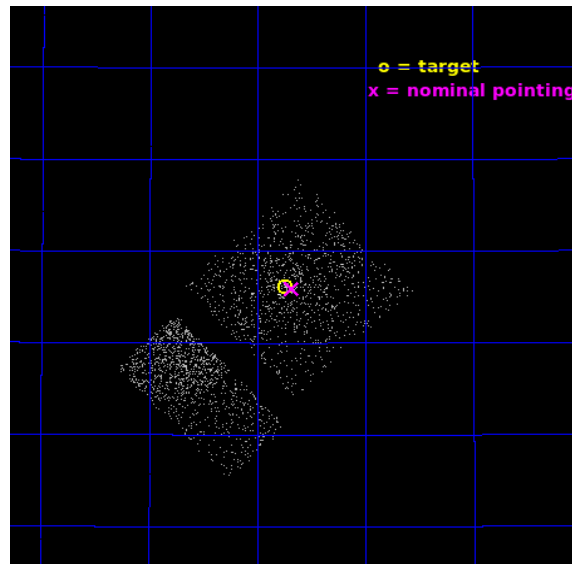
L2 Processing Date : Oct 3 2020

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1 Front

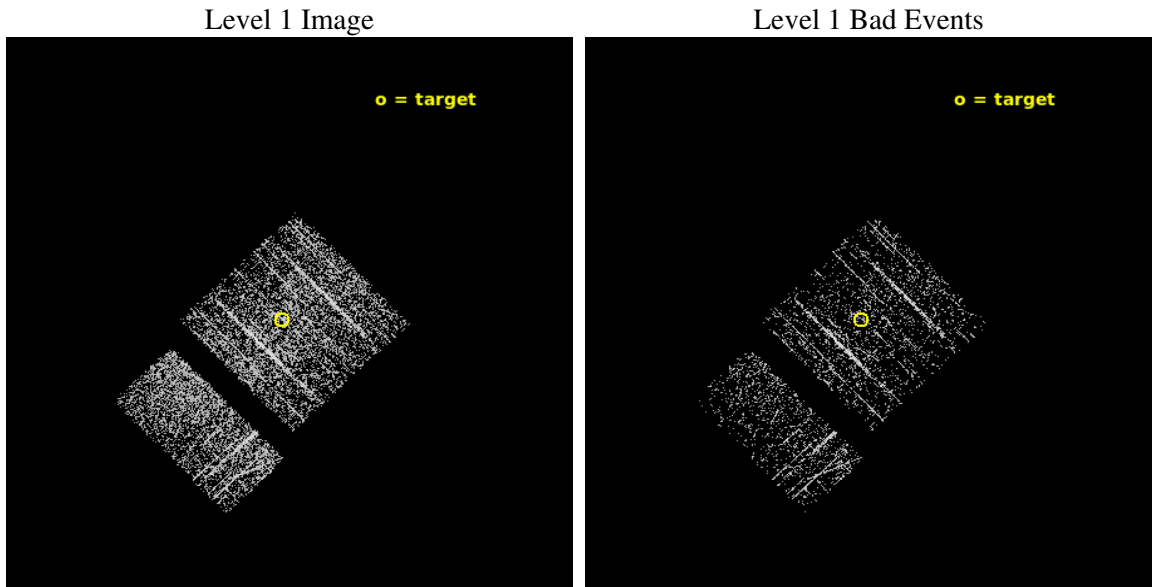
seq_num	600377	Sequence number
obs_id	4722	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.684583	Observer's specified target RA [deg]
dec_targ	41.269	Observer's specified target Dec [deg]
ra_nom	10.670084521129	Nominal RA [deg]
dec_nom	41.265125777833	Nominal Dec [deg]
roll_nom	225.99161069646	Nominal Roll [deg]
revision	4	Processing version of data
ontime	922.19764515758	Sum of GTIs [s]
livetime	145.17615420599	Livetime [s]
ontime0	922.19764515758	Sum of GTIs [s]
ontime1	922.19764515758	Sum of GTIs [s]
ontime2	922.19764515758	Sum of GTIs [s]
ontime3	922.19764515758	Sum of GTIs [s]
ontime6	922.19764515758	Sum of GTIs [s]
ontime7	922.19764515758	Sum of GTIs [s]
l2events	2609	Number of level 2 events



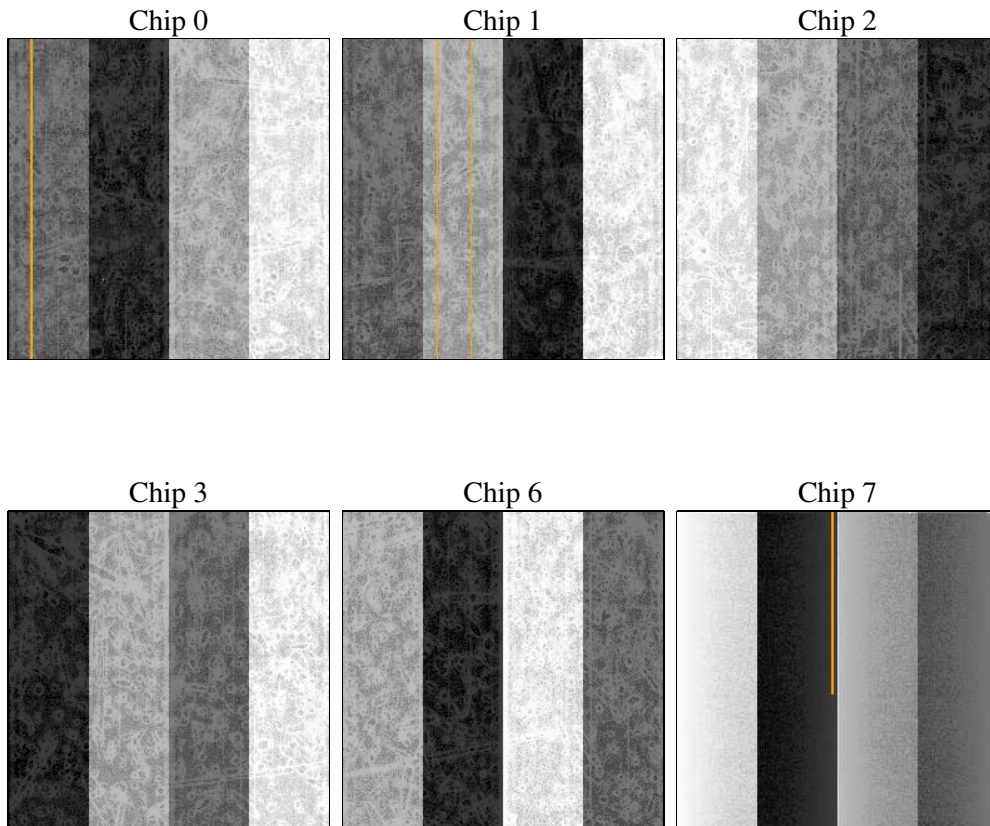
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	922.19764515758	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	922.19764515758	Sum of GTIs [s]
date	2020-10-04T00:56:28	Date and time of file creation	ontime1	922.19764515758	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	922.19764515758	Sum of GTIs [s]
			ontime3	922.19764515758	Sum of GTIs [s]
			ontime6	922.19764515758	Sum of GTIs [s]
			ontime7	922.19764515758	Sum of GTIs [s]
			l1events	22735	Number of level 1 events

2.1.4 Events

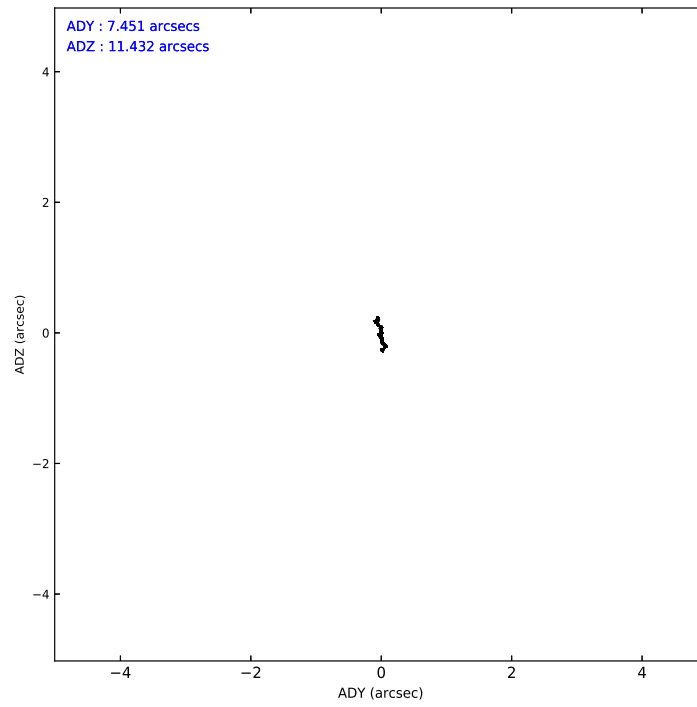
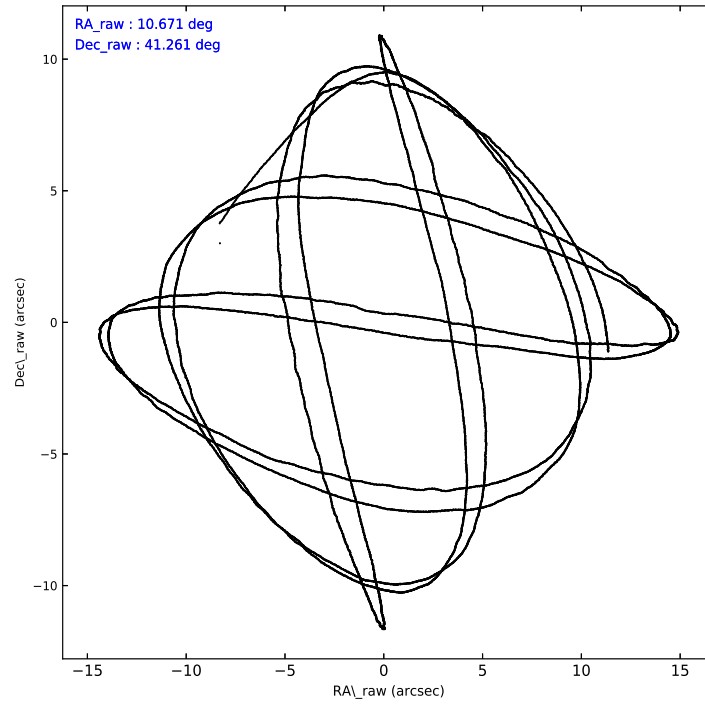
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3517	3637	3727	4100	4133	3621
rejected events	3102	3231	3403	3583	3801	2665
rejected %	88%	88%	91%	87%	91%	73%

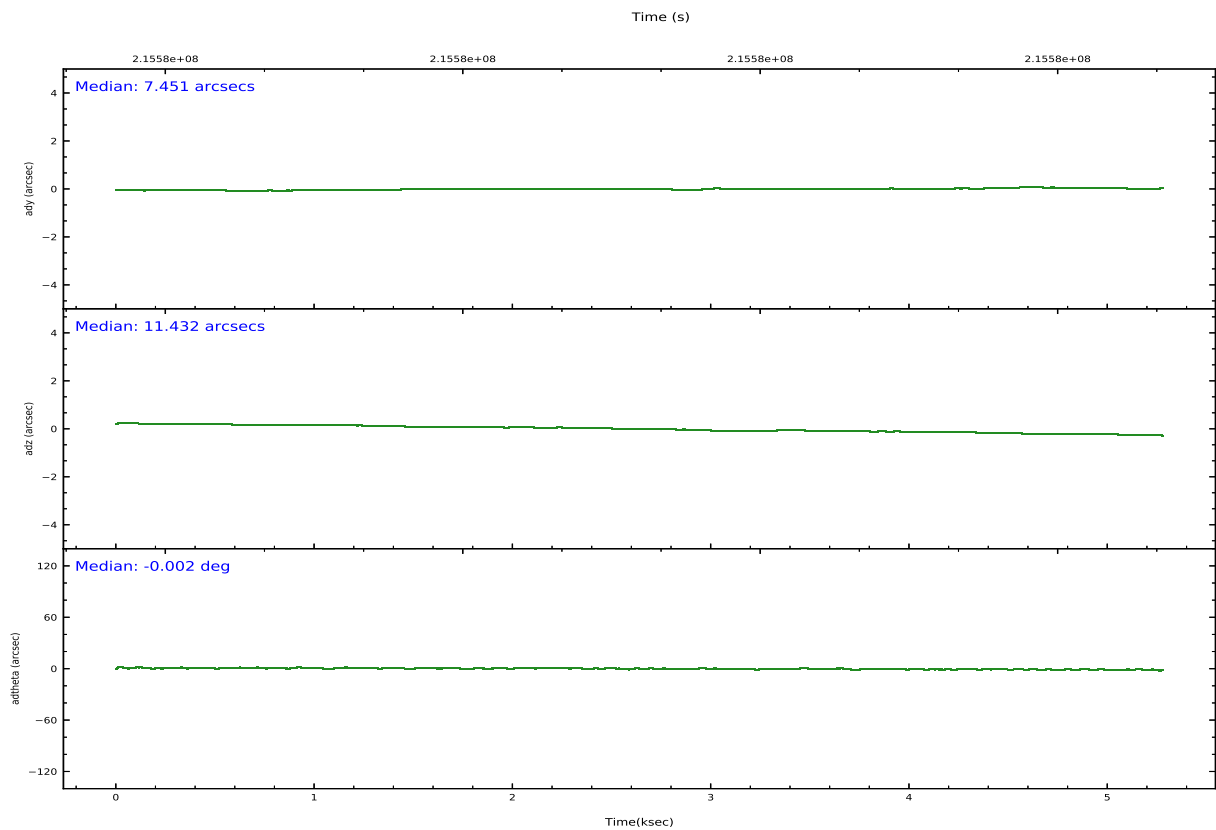
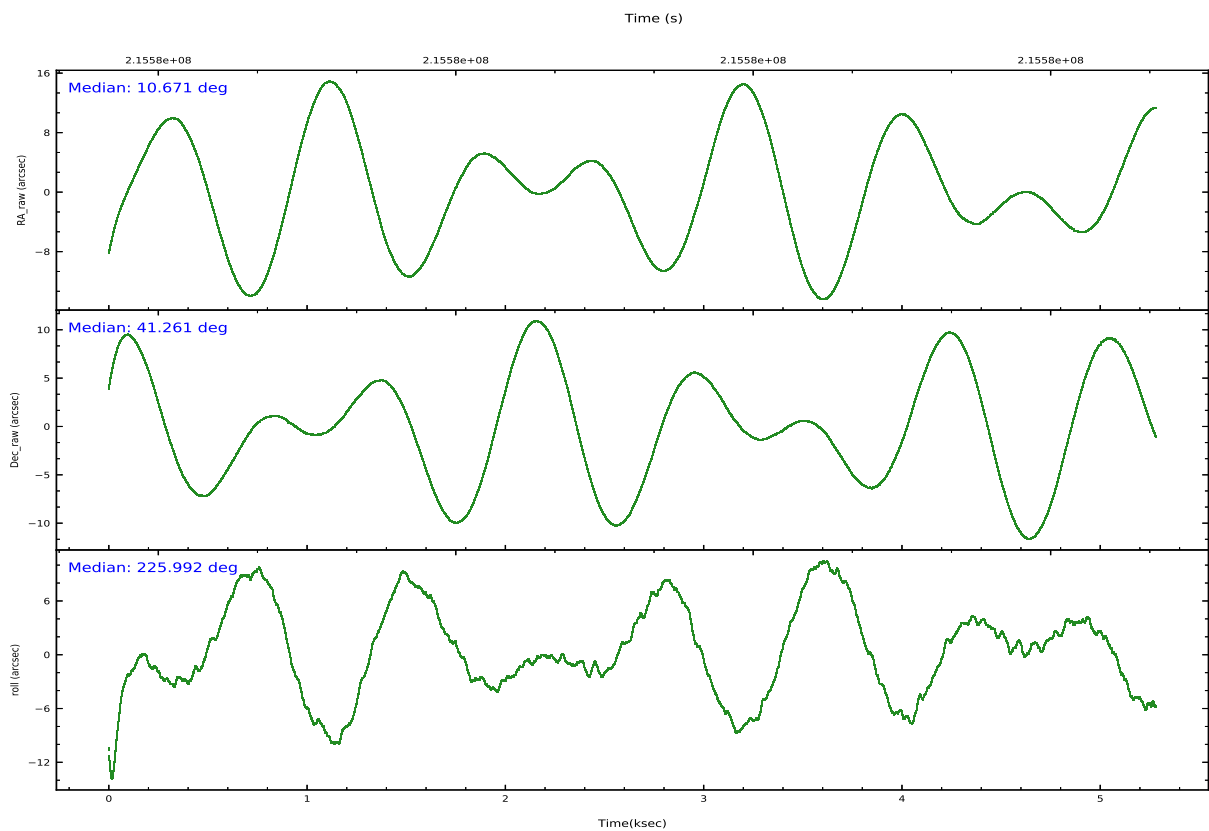
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	178	149	131	272	106	106
	5%	4%	3%	6%	2%	2%
grade 1 events	1	1	1	3	3	7
	0%	0%	0%	0%	0%	0%
grade 2 events	96	87	76	92	72	201
	2%	2%	2%	2%	1%	5%
grade 3 events	42	47	34	43	38	77
	1%	1%	0%	1%	0%	2%
grade 4 events	40	41	39	47	36	94
	1%	1%	1%	1%	0%	2%
grade 5 events	97	108	105	124	120	264
	2%	2%	2%	3%	2%	7%
grade 6 events	63	86	51	68	82	488
	1%	2%	1%	1%	1%	13%
grade 7 events	3000	3118	3290	3451	3676	2384
	85%	85%	88%	84%	88%	65%

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	10.679850	10.670084521129	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.287807	41.265125777833	Alternating exposures requested	Y	Y
[deg] Pointing Roll	225.780152	225.99161069646	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	215654464.184000	215654464.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	216259264.184000	216259264.184000	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)	215575033.184000	215573877.04651			
Observation start date	2004-10-31T01:56:09	2004-10-31T01:37:57			
[s] Observation end time (MET)	215580033.184000	215580557.48431			
Observation end date	2004-10-31T03:19:29	2004-10-31T03:29:17			
Read mode	TIMED	TIMED			

2.3 Aspect



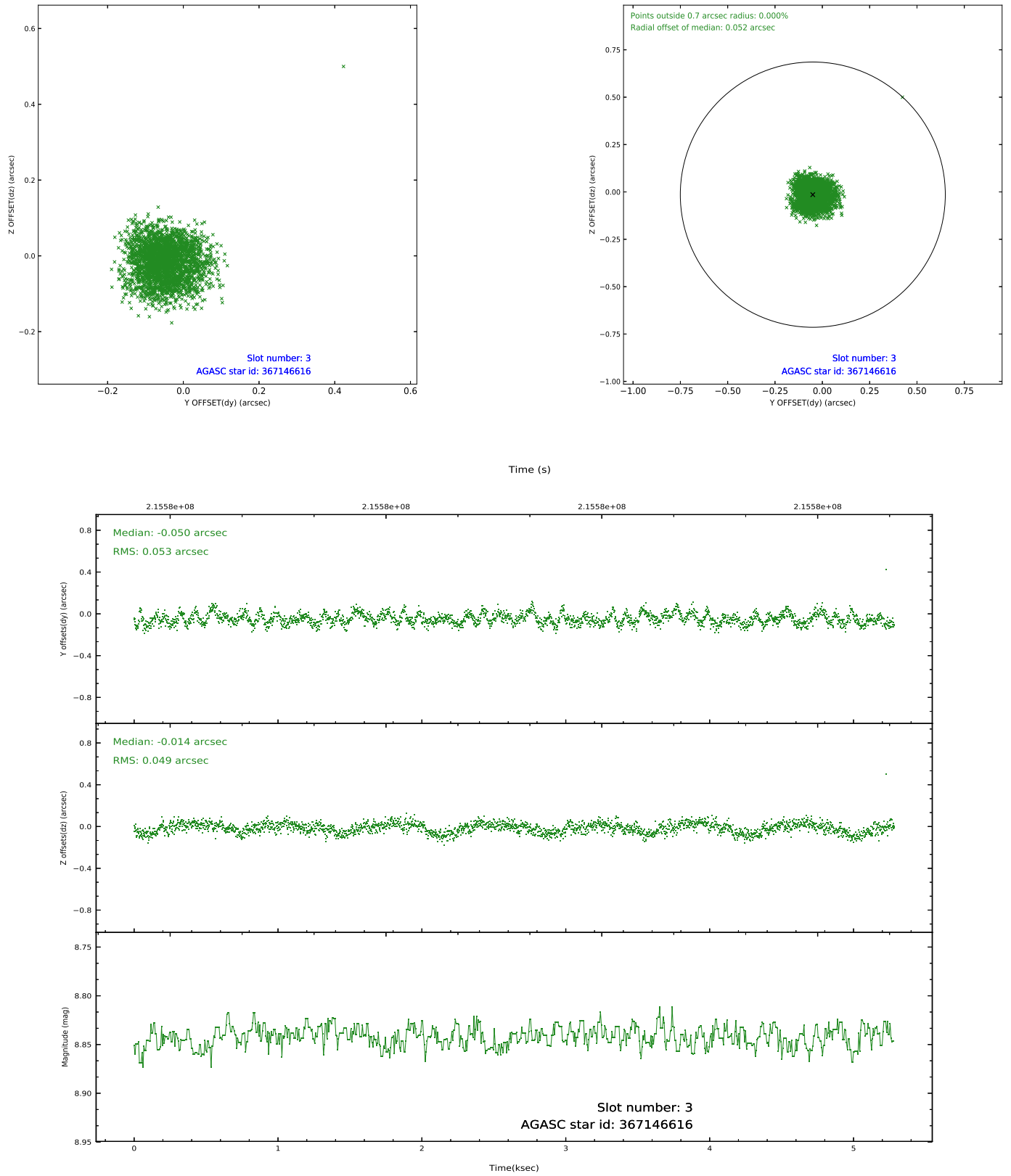


Slot Statistics

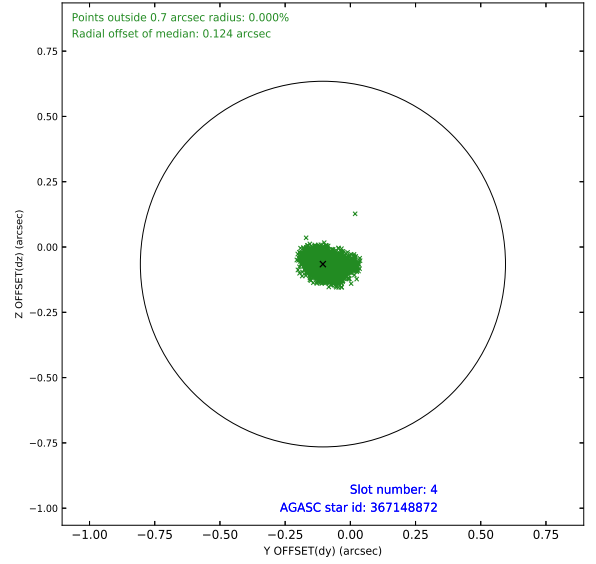
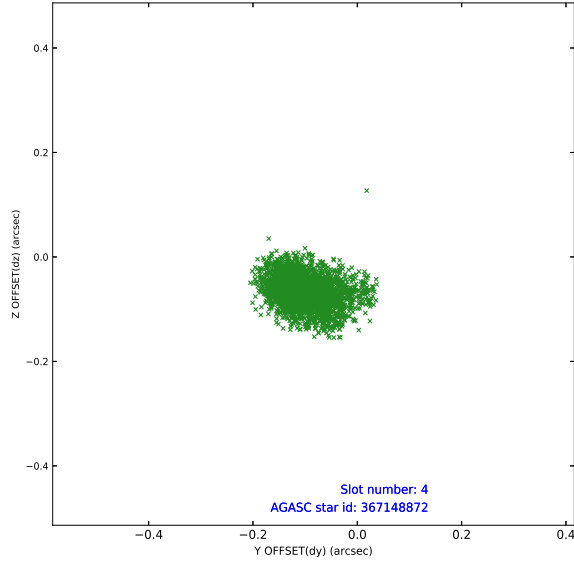
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	1289	1.000	0.055	-0.047	0.007	0.012	0.000000	0.000000	932.27	-834
1	FID		ACIS-I-5	7.23	1289	1.000	-0.182	0.062	0.008	0.014	0.000000	0.000000	-1815.42	1062
2	FID		ACIS-I-6	7.24	1289	1.000	0.035	0.055	0.008	0.013	0.000000	0.000000	396.58	1707
3	GUIDE	used	367146616	8.84	2577	1.000	-0.050	-0.014	0.077	0.121	11.418645	41.190163	-1149.66	1673
4	GUIDE	used	367148872	7.22	2578	1.000	-0.105	-0.065	0.057	0.096	10.505940	40.688258	1877.76	1165
5	GUIDE	used	367658664	9.59	2577	1.000	-0.009	-0.034	0.095	0.167	10.374070	41.369746	365.05	-798
6	GUIDE	used	367663272	9.29	2577	1.000	-0.034	-0.055	0.078	0.126	10.656279	41.699429	-1016.69	-1079
7	GUIDE	used	367145856	9.29	2574	1.000	0.193	0.169	0.084	0.138	10.744946	40.402085	2161.01	2351

2.4 Star Slots

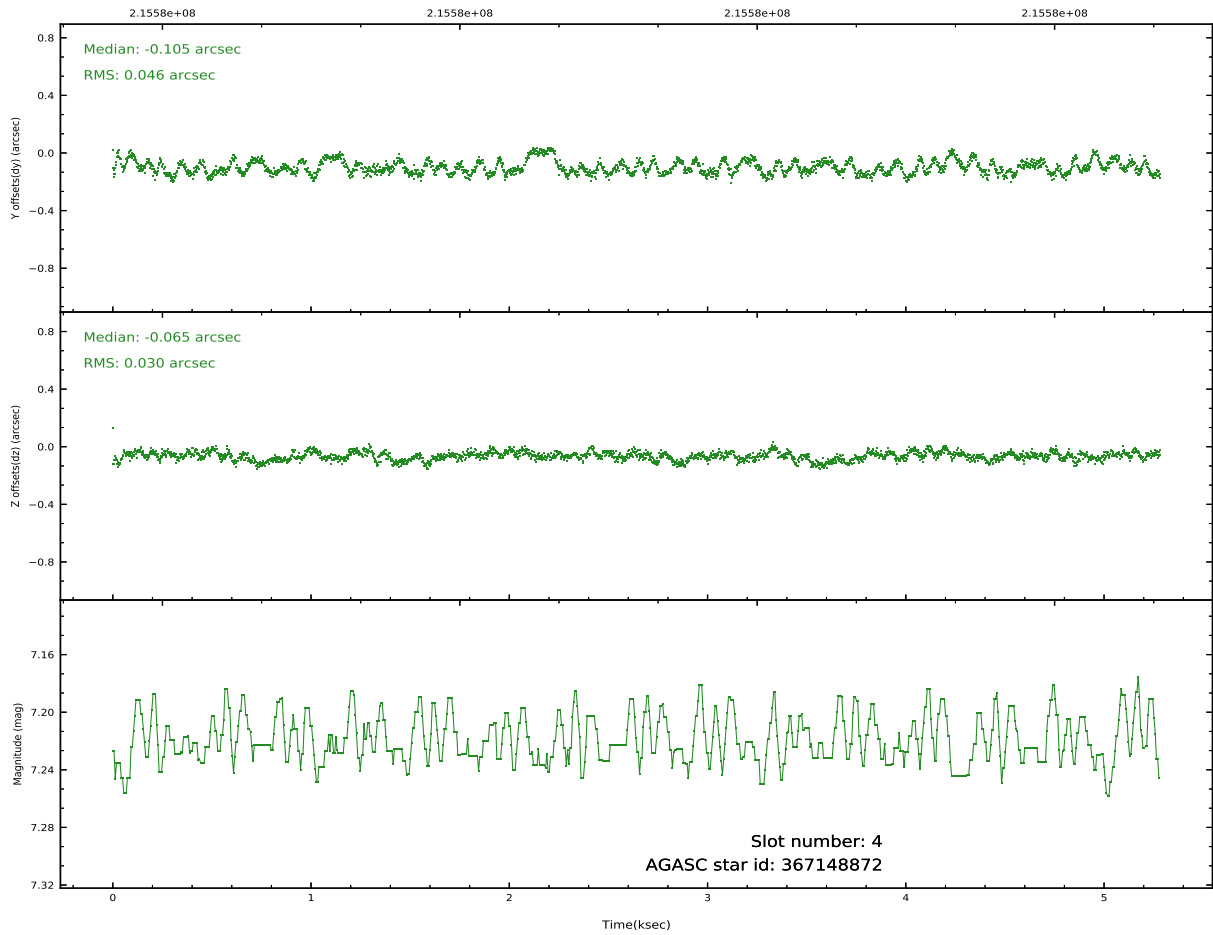
2.4.1 Slot 3



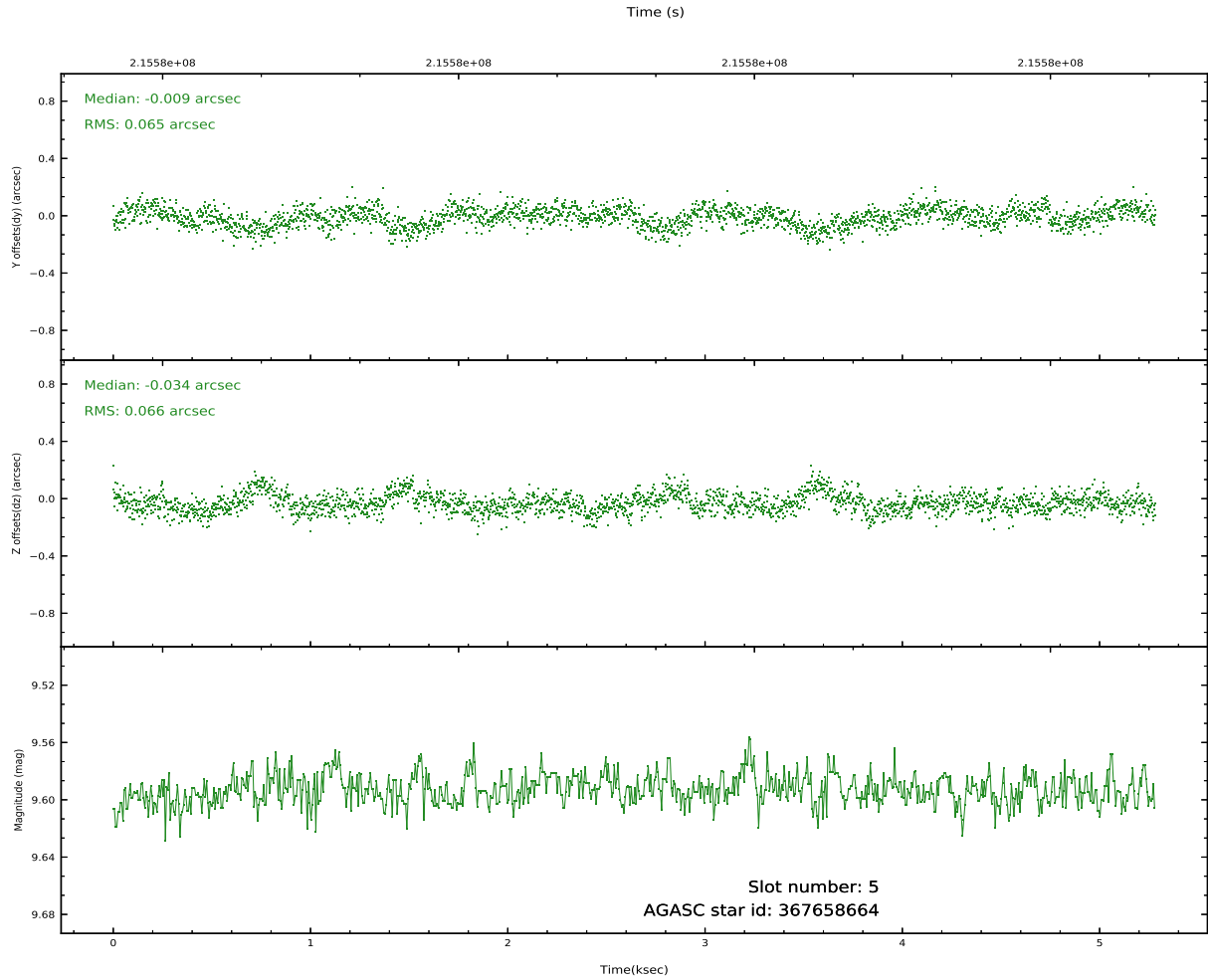
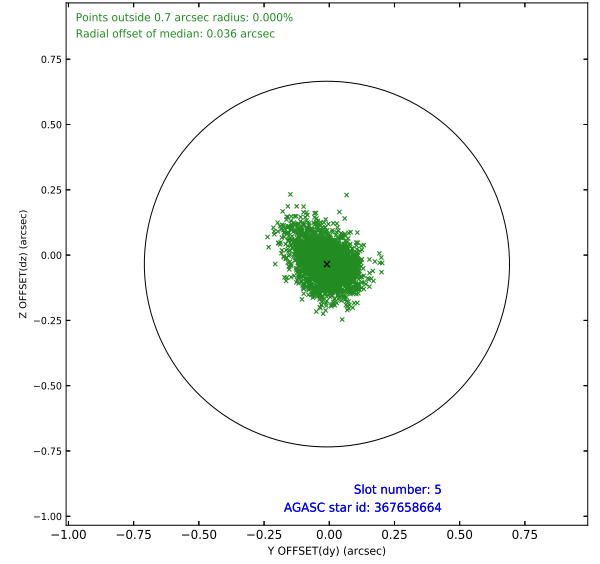
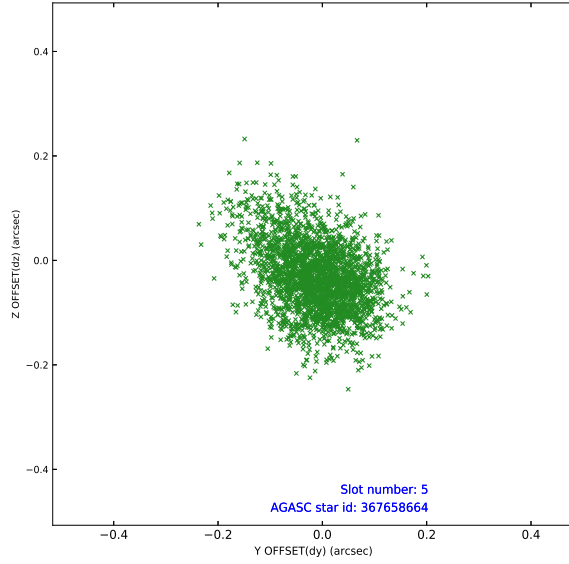
2.4.2 Slot 4



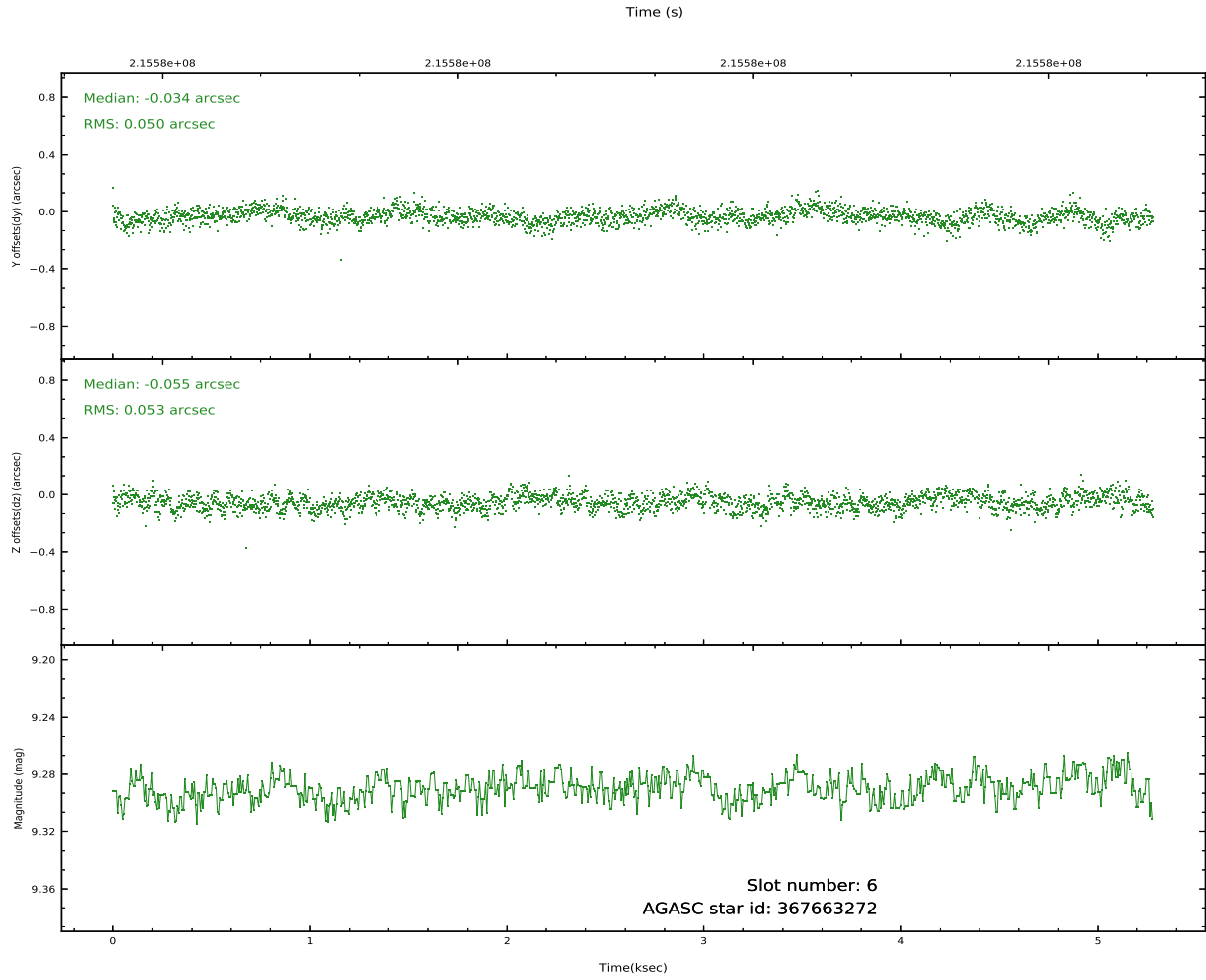
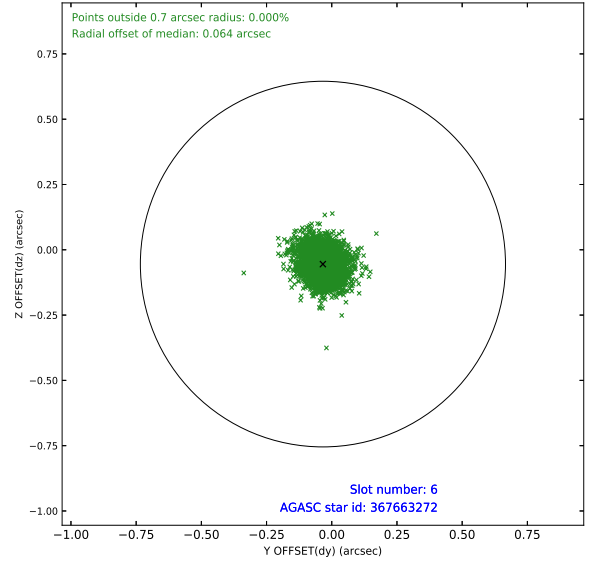
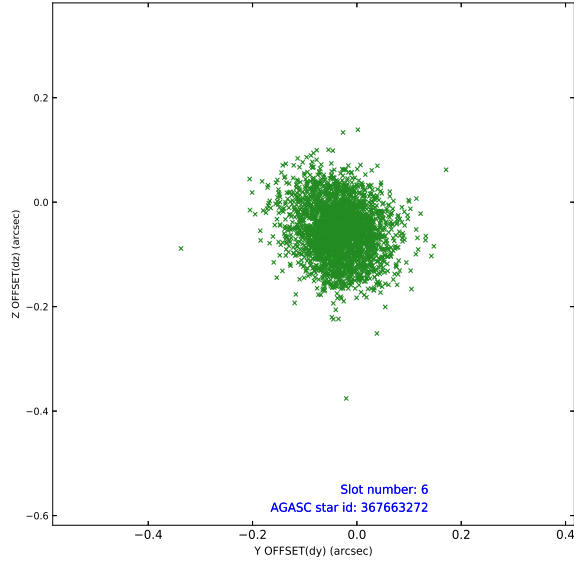
Time (s)



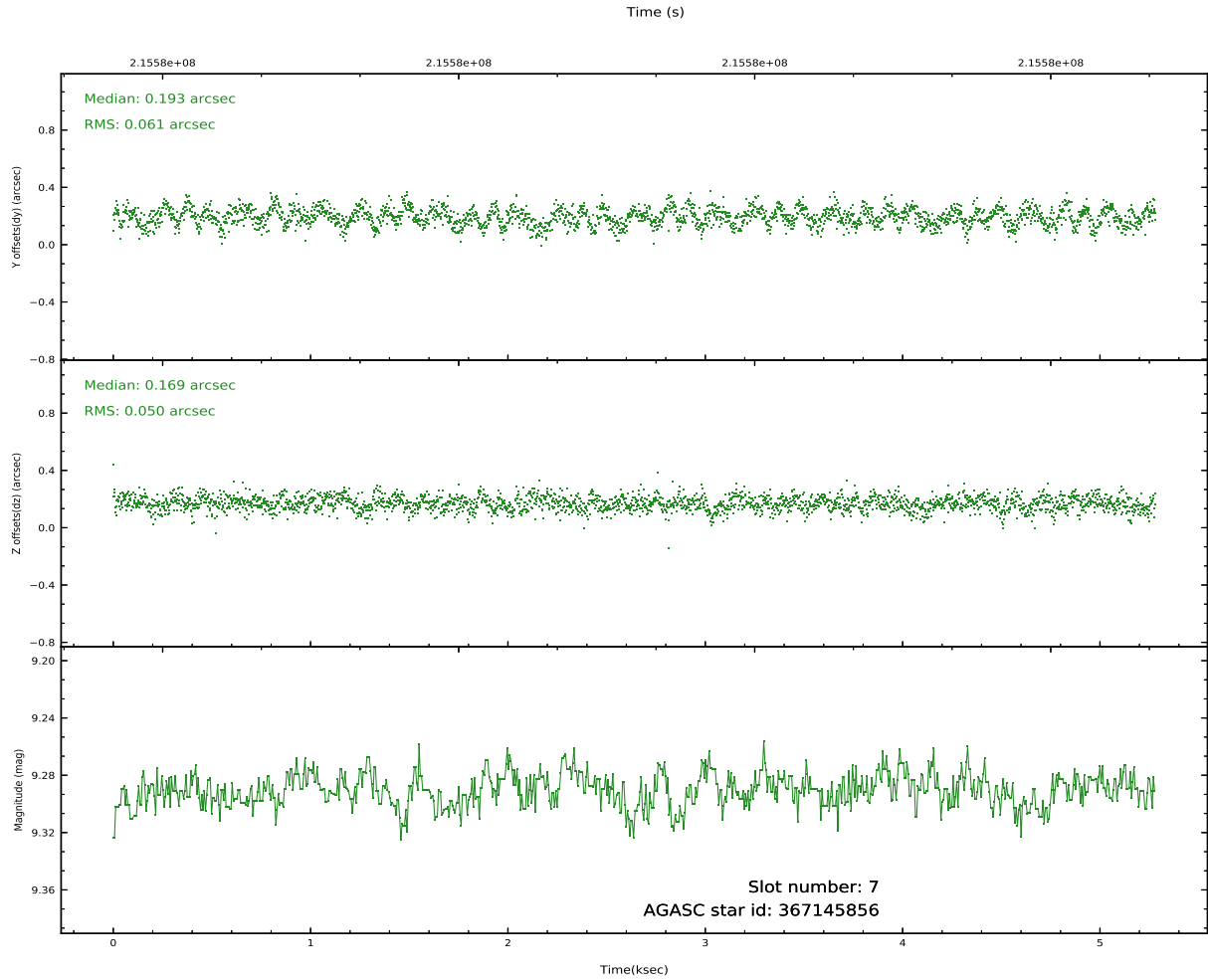
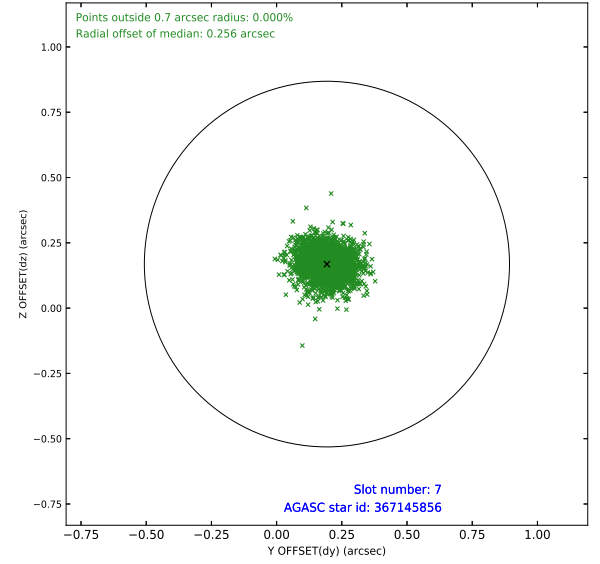
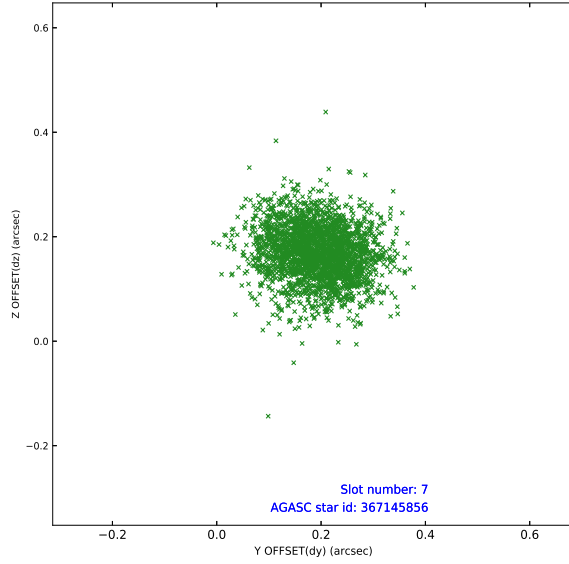
2.4.3 Slot 5



2.4.4 Slot 6

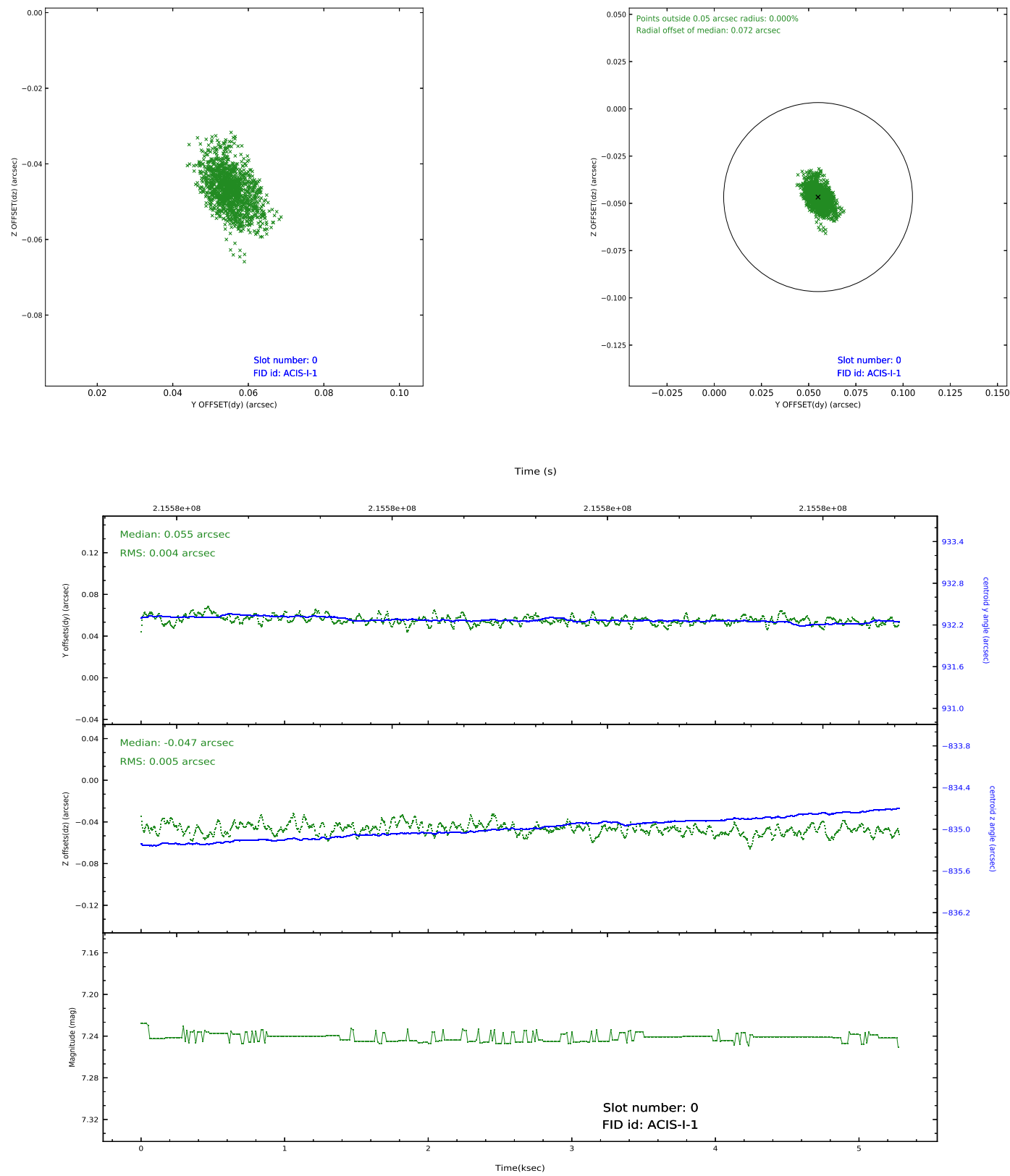


2.4.5 Slot 7

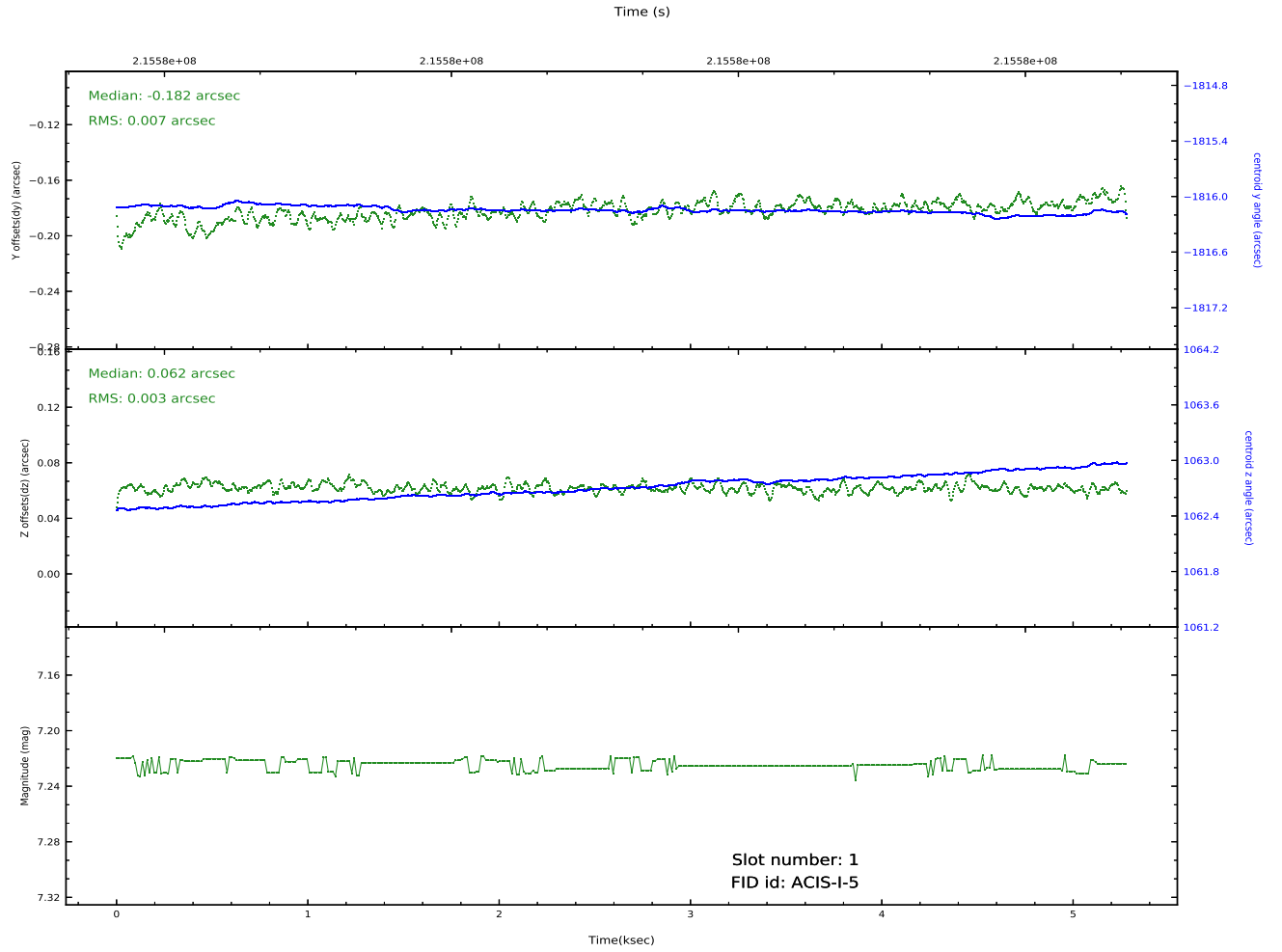
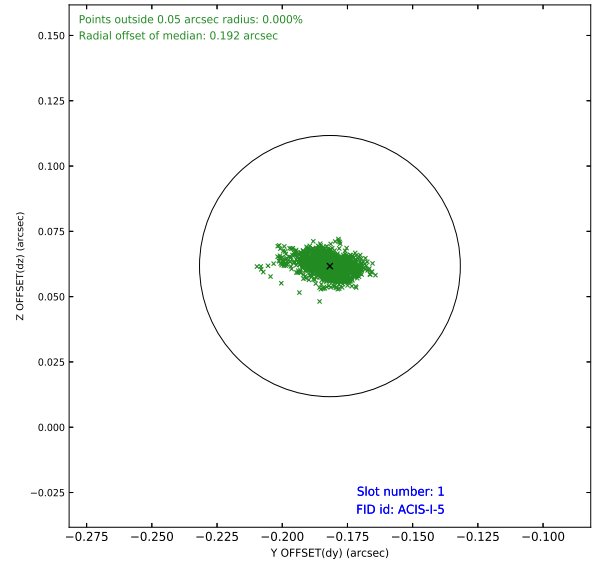
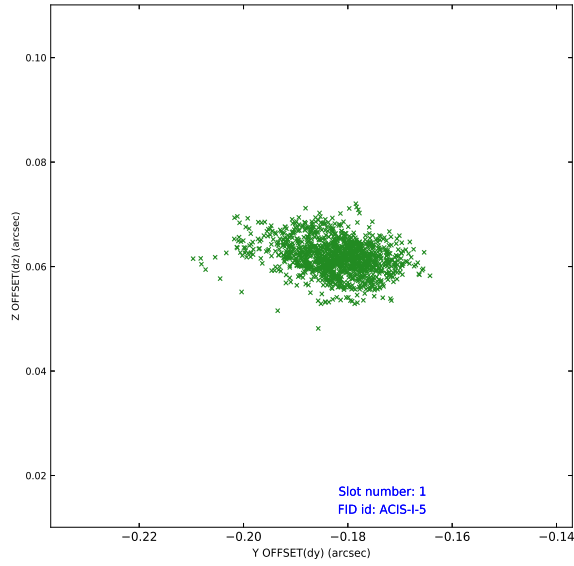


2.5 FID Slots

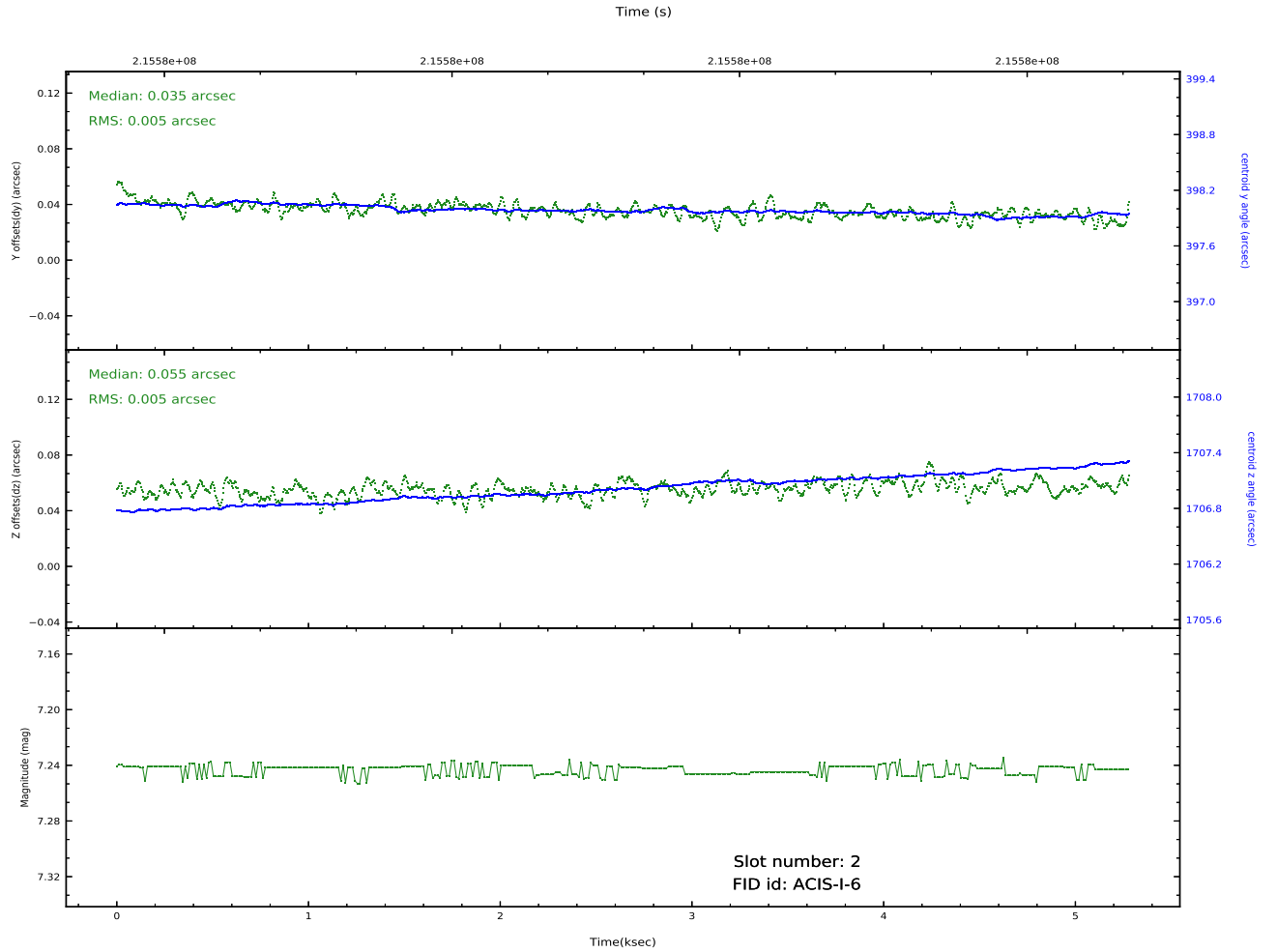
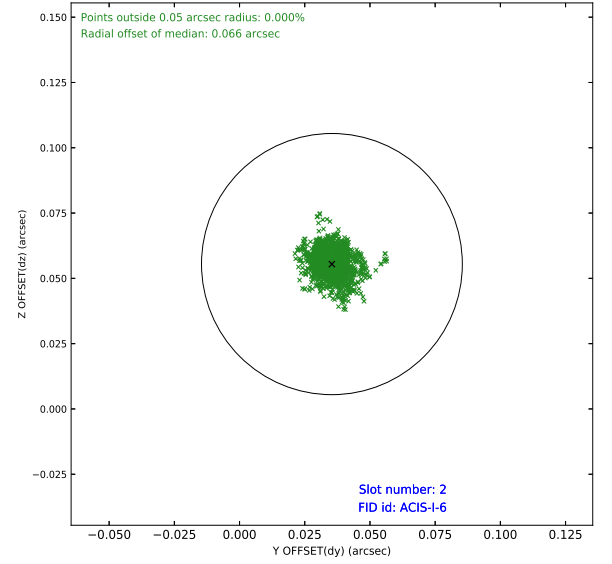
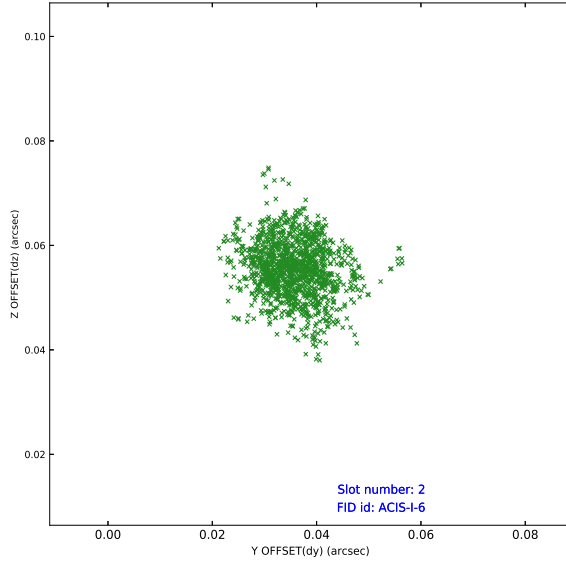
2.5.1 Slot 0



2.5.2 Slot 1



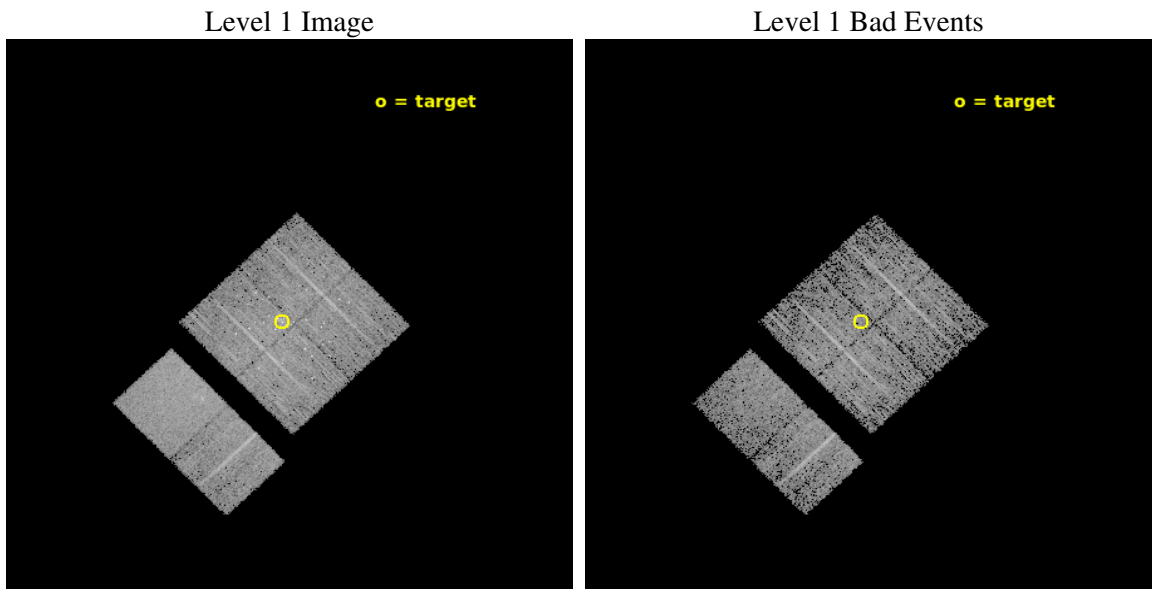
2.5.3 Slot 2



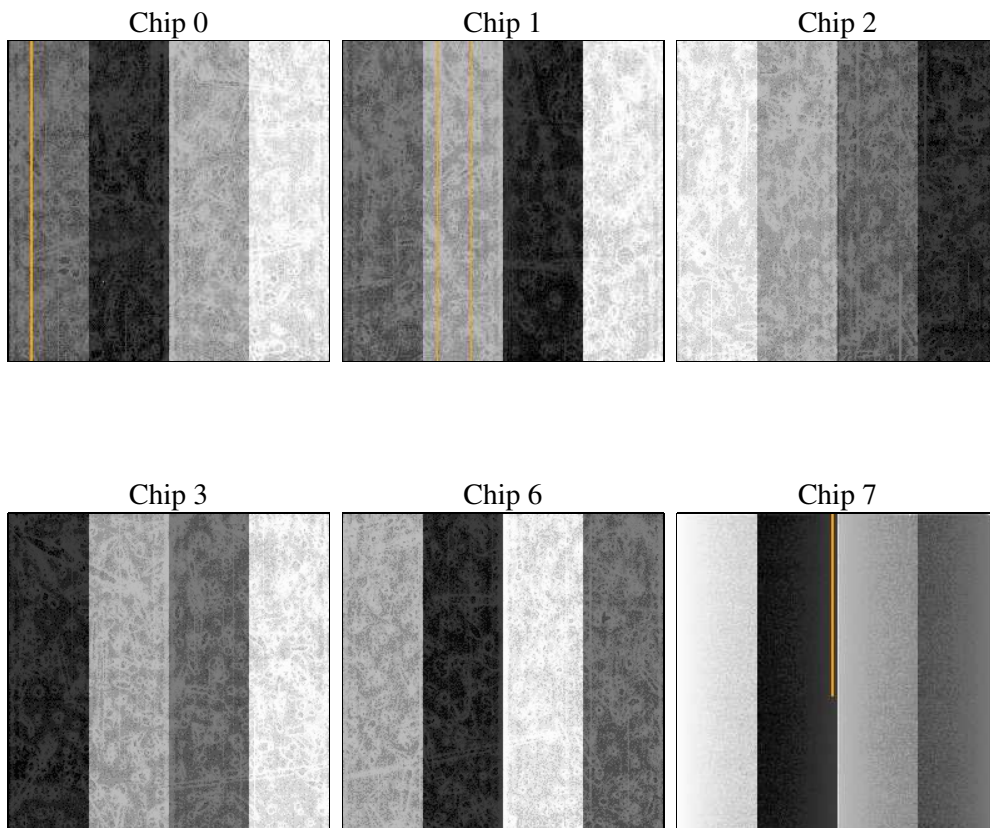
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	3944.6591528654	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	3944.6593124568	Sum of GTIs [s]
date	2020-10-04T00:56:30	Date and time of file creation	ontime1	3944.659411788	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	3944.659053266	Sum of GTIs [s]
			ontime3	3944.6591528654	Sum of GTIs [s]
			ontime6	3944.6591327786	Sum of GTIs [s]
			ontime7	3944.6591729522	Sum of GTIs [s]
			l1events	206703	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	30740	30565	35439	36291	31926	41742	grade 0 events	3302	2750	3071	5714	1670	1664
rejected events	24847	25115	29994	27527	27978	24085		10%	8%	8%	15%	5%	3%
rejected %	80%	82%	84%	75%	87%	57%	grade 1 events	35	34	26	89	29	46
								0%	0%	0%	0%	0%	0%
							grade 2 events	987	1033	985	1233	799	3484
								3%	3%	2%	3%	2%	8%
							grade 3 events	453	438	396	491	393	1578
								1%	1%	1%	1%	1%	3%
							grade 4 events	375	407	360	505	323	1515
								1%	1%	1%	1%	1%	3%
							grade 5 events	1229	1322	1227	1351	1550	3988
								3%	4%	3%	3%	4%	9%
							grade 6 events	788	832	639	831	764	9430
								2%	2%	1%	2%	2%	22%
							grade 7 events	23571	23749	28735	26077	26398	20037
								76%	77%	81%	71%	82%	48%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	4.866

A.2 Comments

Joint proposal with HST.

Window constraint was not met.