

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4720 - L2 Version 4
Chandra X-Ray Center

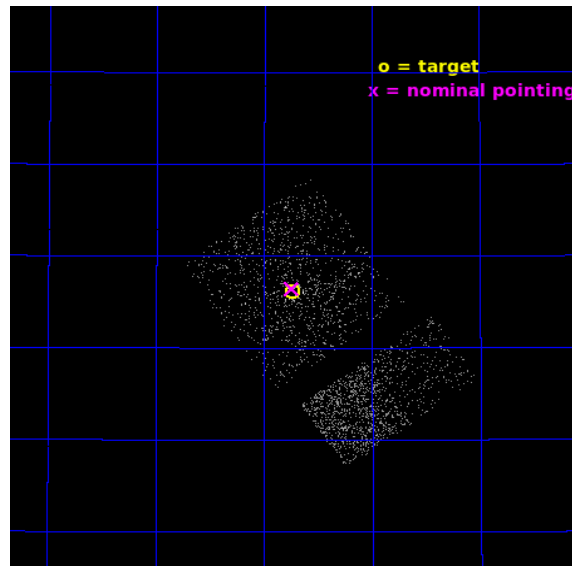
L2 Processing Date : Oct 1 2020

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1 Front

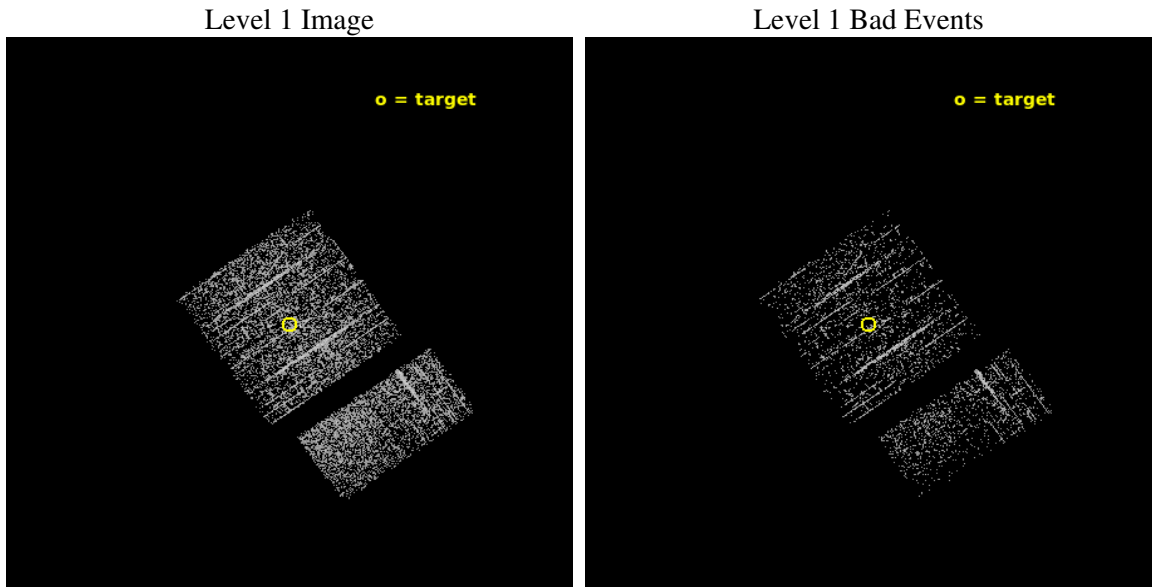
seq_num	600375	Sequence number
obs_id	4720	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[rimary] S[econdar
ra_targ	10.684583	Observer's specified target RA [deg]
dec_targ	41.269	Observer's specified target Dec [deg]
ra_nom	10.685713399293	Nominal RA [deg]
dec_nom	41.274216959526	Nominal Dec [deg]
roll_nom	144.79341785963	Nominal Roll [deg]
revision	4	Processing version of data
ontime	975.2615634501	Sum of GTIs [s]
livetime	153.52969493043	Livetime [s]
ontime0	975.13844347	Sum of GTIs [s]
ontime1	975.1794834435	Sum of GTIs [s]
ontime2	975.2205234468	Sum of GTIs [s]
ontime3	975.2615634501	Sum of GTIs [s]
ontime6	975.3436434567	Sum of GTIs [s]
ontime7	975.3026034534	Sum of GTIs [s]
l2events	2741	Number of level 2 events



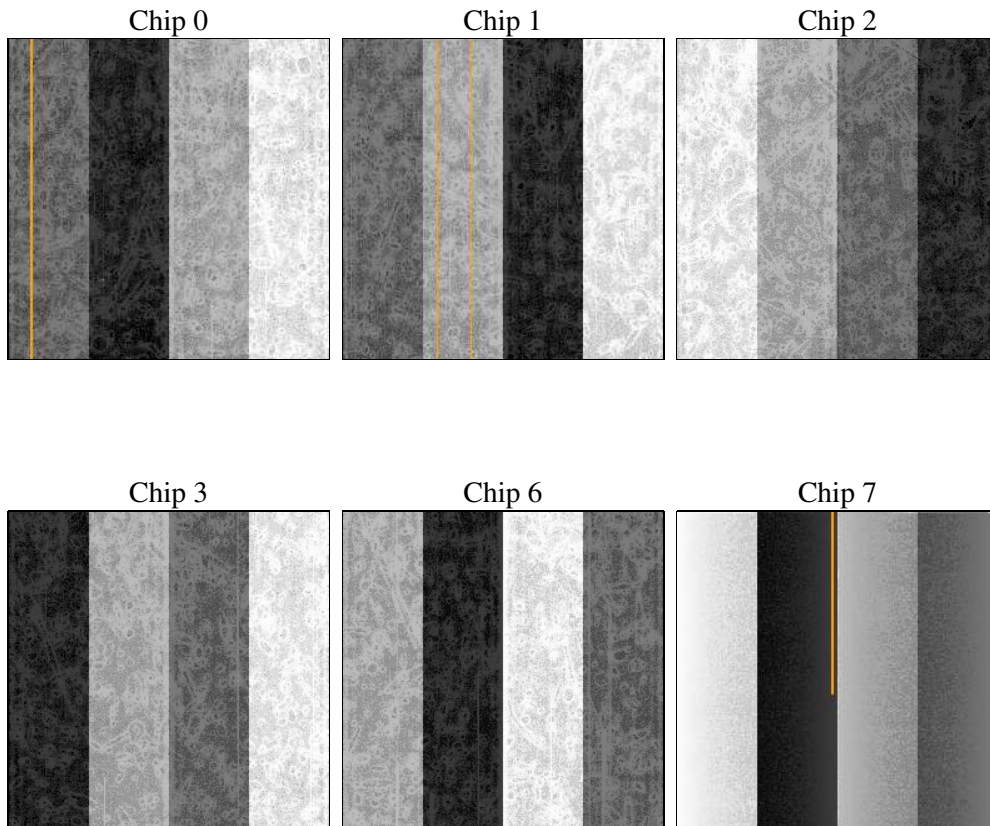
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	975.2615634501	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	975.13844347	Sum of GTIs [s]
date	2020-10-01T21:47:02	Date and time of file creation	ontime1	975.1794834435	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	975.2205234468	Sum of GTIs [s]
			ontime3	975.2615634501	Sum of GTIs [s]
			ontime6	975.3436434567	Sum of GTIs [s]
			ontime7	975.3026034534	Sum of GTIs [s]
			l1events	25466	Number of level 1 events

2.1.4 Events

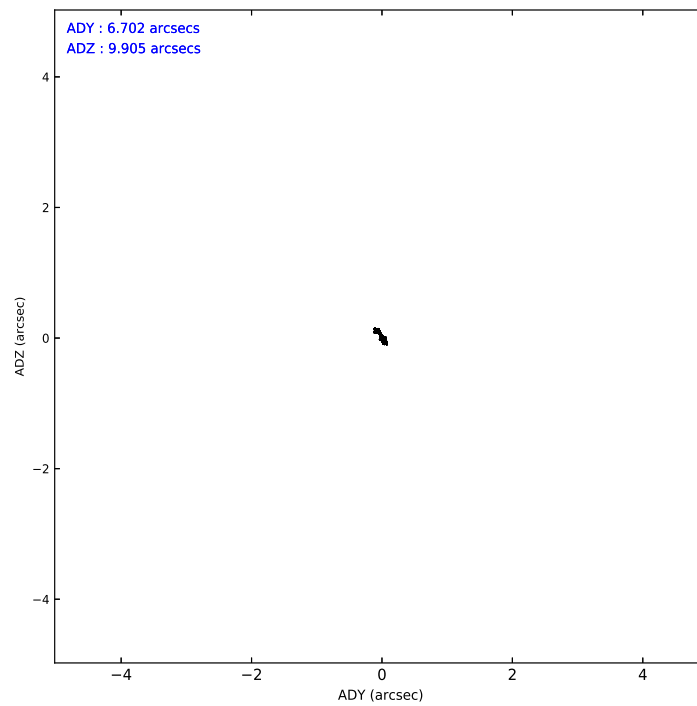
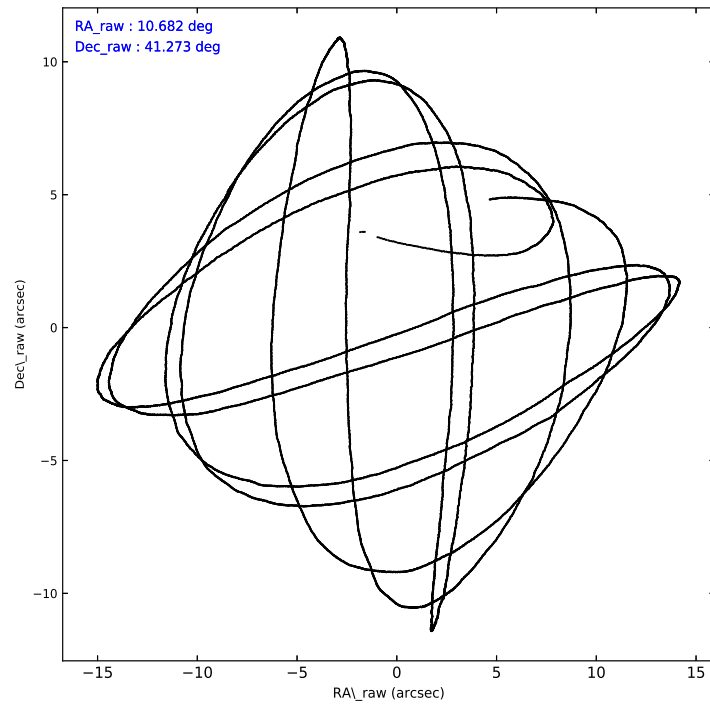
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3812	4167	4446	4136	4585	4320
rejected events	3452	3761	3920	3709	4266	3256
rejected %	90%	90%	88%	89%	93%	75%

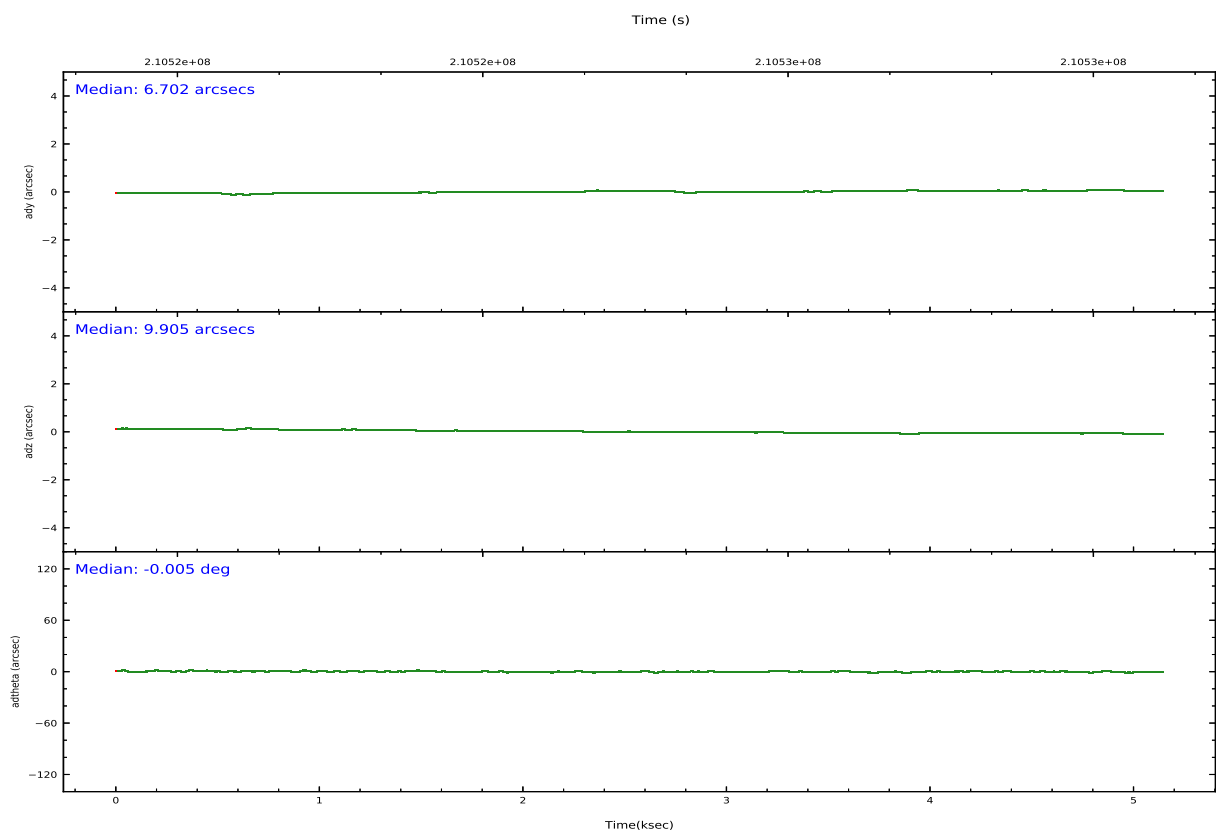
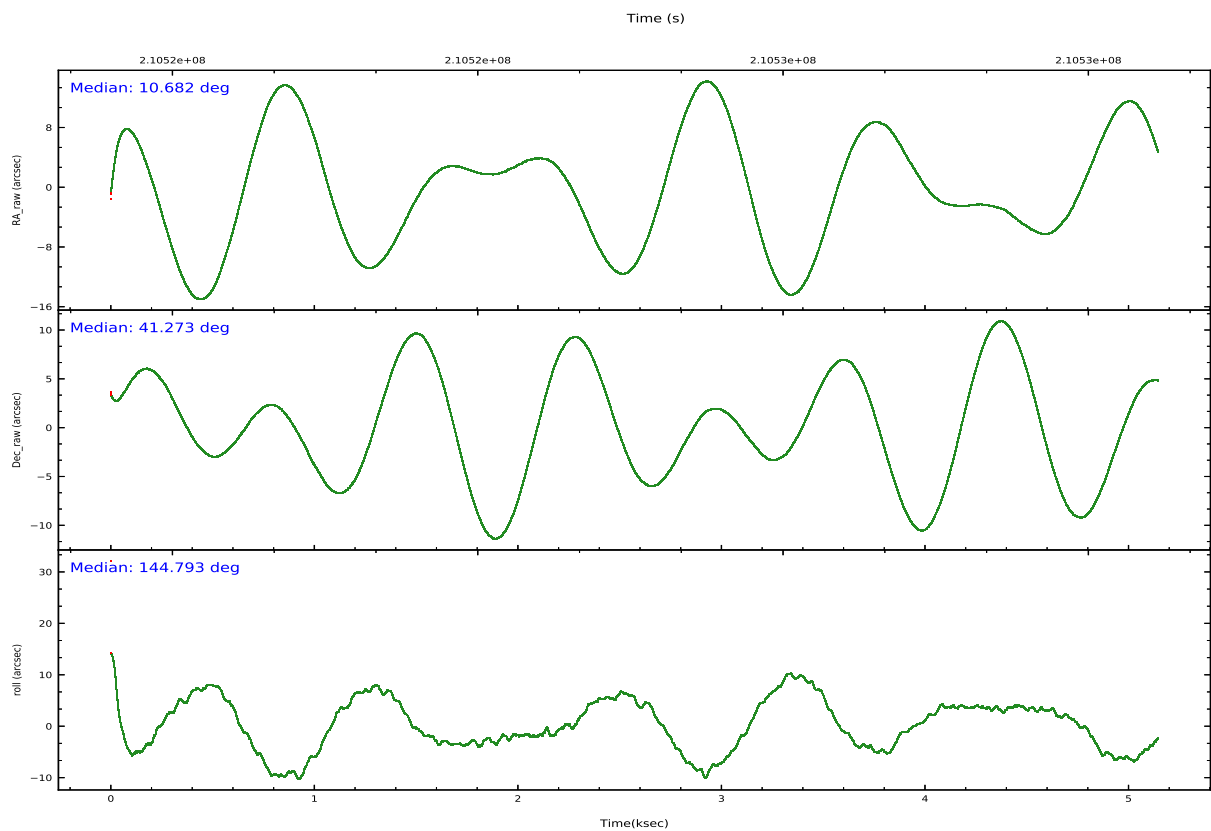
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	159	195	310	247	98	101
	4%	4%	6%	5%	2%	2%
grade 1 events	1	2	9	2	3	5
	0%	0%	0%	0%	0%	0%
grade 2 events	85	85	103	89	95	283
	2%	2%	2%	2%	2%	6%
grade 3 events	42	48	51	33	51	132
	1%	1%	1%	0%	1%	3%
grade 4 events	42	51	51	40	50	118
	1%	1%	1%	0%	1%	2%
grade 5 events	127	136	142	111	147	367
	3%	3%	3%	2%	3%	8%
grade 6 events	69	77	71	77	72	580
	1%	1%	1%	1%	1%	13%
grade 7 events	3287	3573	3709	3537	4069	2734
	86%	85%	83%	85%	88%	63%

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	10.717624	10.685713399293	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.270563	41.274216959526	Alternating exposures requested	Y	Y
[deg] Pointing Roll	144.565429	144.79341785963	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	210211264.184000	210211264.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	210816064.184000	210816064.184000	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)	210522843.184000	210521362.25818			
Observation start date	2004-09-02T14:32:59	2004-09-02T14:09:22			
[s] Observation end time (MET)	210527843.184000	210528571.596			
Observation end date	2004-09-02T15:56:19	2004-09-02T16:09:31			
Read mode	TIMED	TIMED			

2.3 Aspect



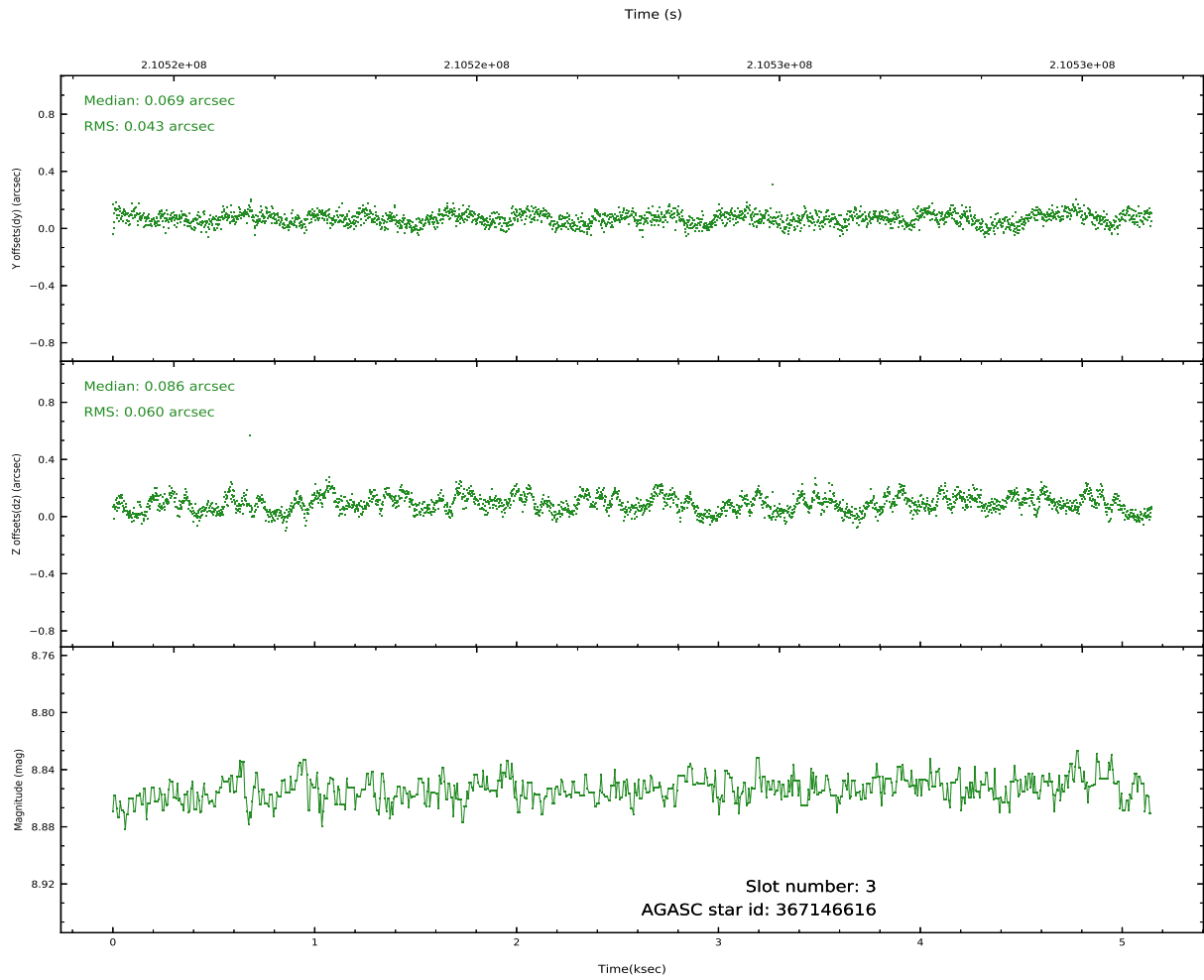
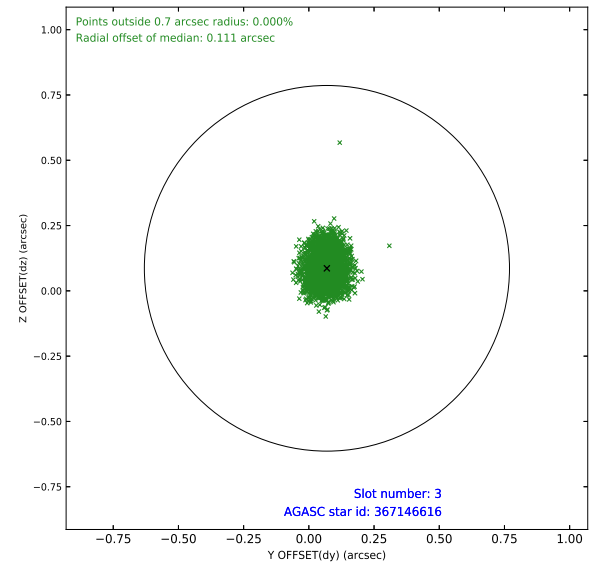
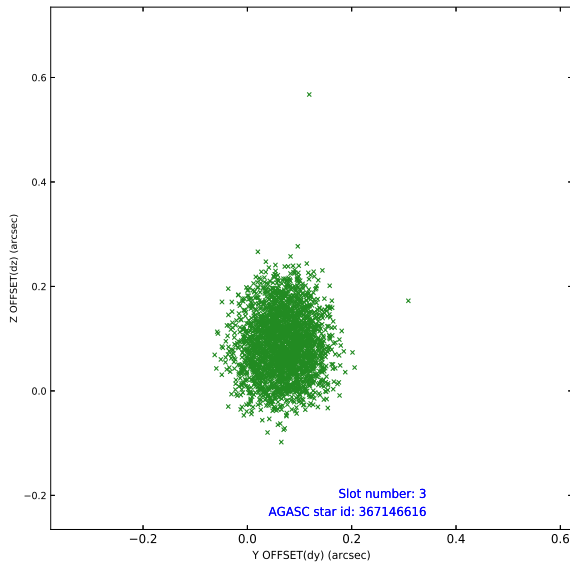


Slot Statistics

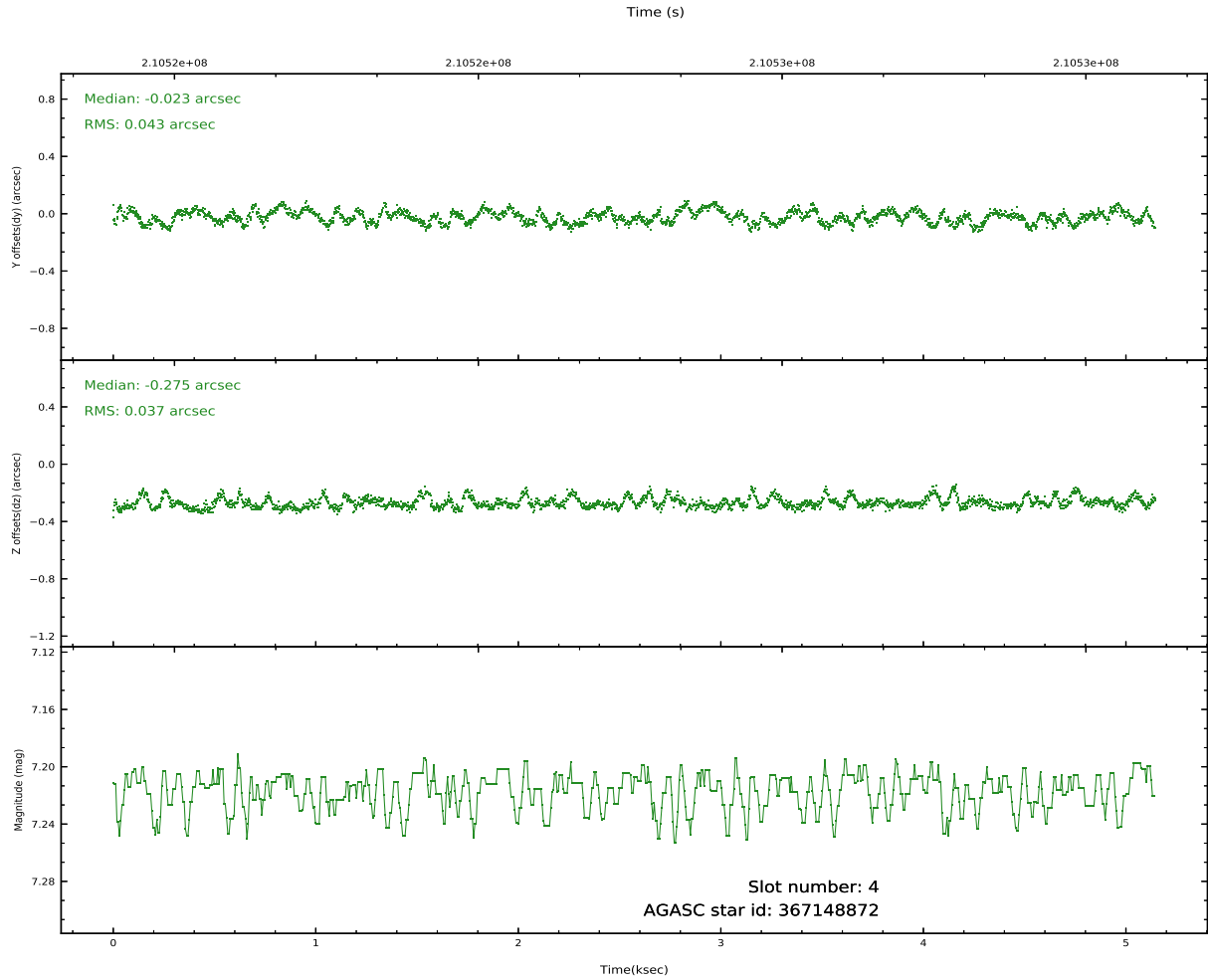
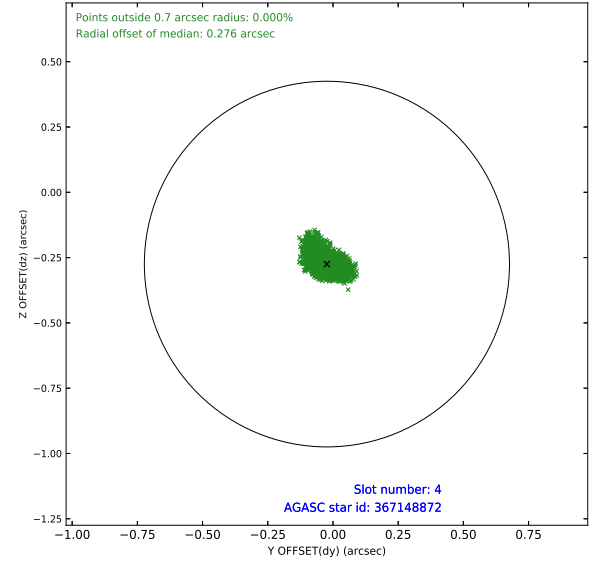
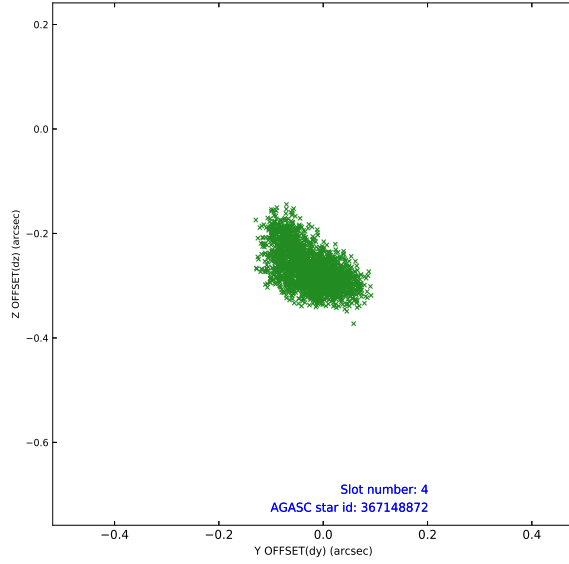
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	1256	1.000	0.035	0.022	0.007	0.011	0.000000	0.000000	933.06	-833
1	FID		ACIS-I-2	7.14	1256	1.000	-0.035	-0.081	0.009	0.017	0.000000	0.000000	-760.44	-840
2	FID		ACIS-I-5	7.22	1256	1.000	-0.092	0.131	0.007	0.013	0.000000	0.000000	-1815.95	1063
3	GUIDE	used	367146616	8.85	2510	1.000	0.069	0.086	0.079	0.124	11.418645	41.190163	-1710.25	-871
4	GUIDE	used	367148872	7.22	2510	1.000	-0.023	-0.275	0.060	0.103	10.505940	40.688258	-745.08	2042
5	GUIDE	used	367663272	9.28	2511	1.000	-0.081	0.004	0.084	0.133	10.656279	41.699429	1029.77	-1160
6	GUIDE	used	367674552	8.85	2510	1.000	0.010	0.072	0.078	0.126	11.016238	41.570845	-26.93	-1348
7	GUIDE	used	367657896	9.02	2510	1.000	0.023	0.106	0.070	0.113	11.197765	41.313576	-965.59	-882

2.4 Star Slots

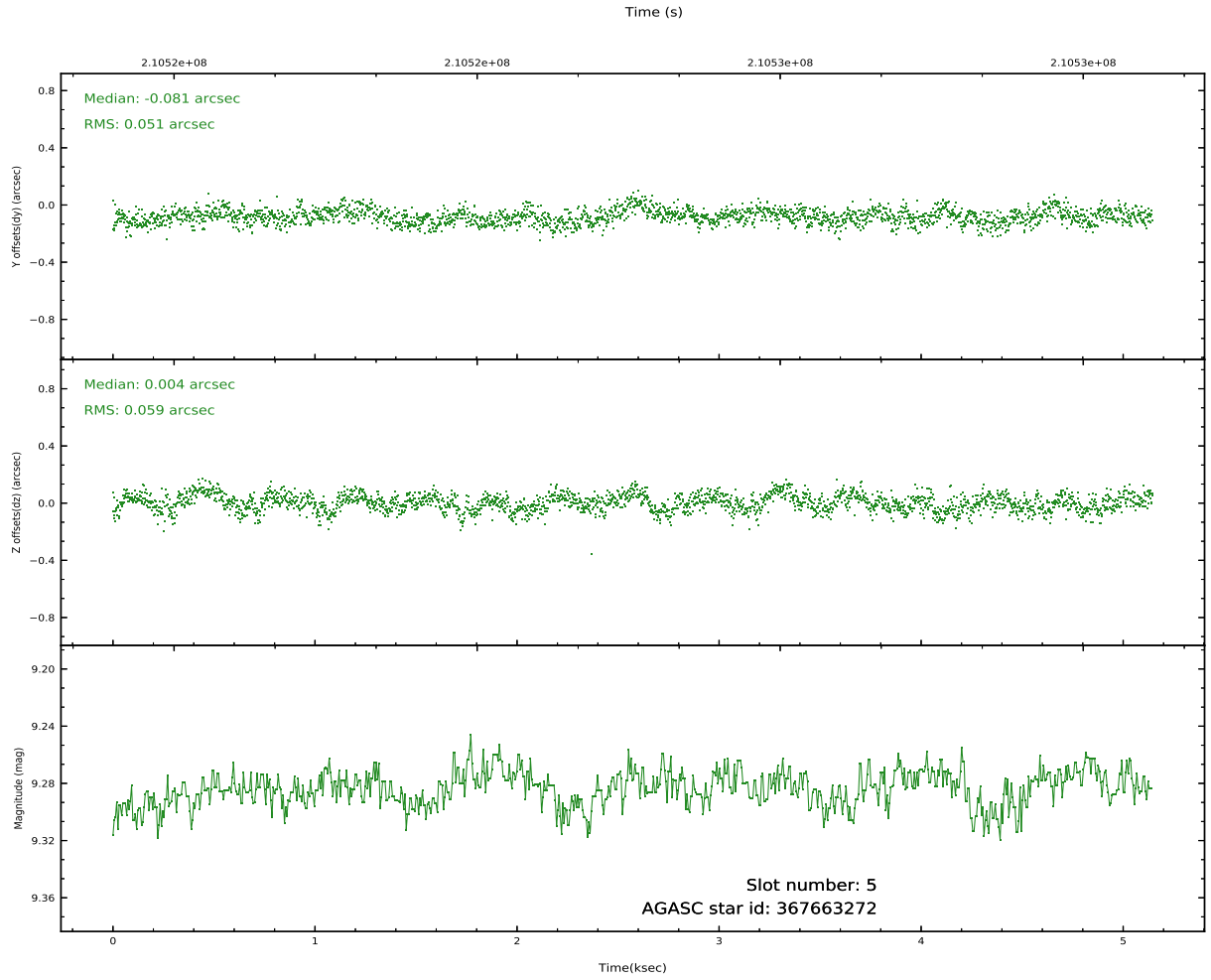
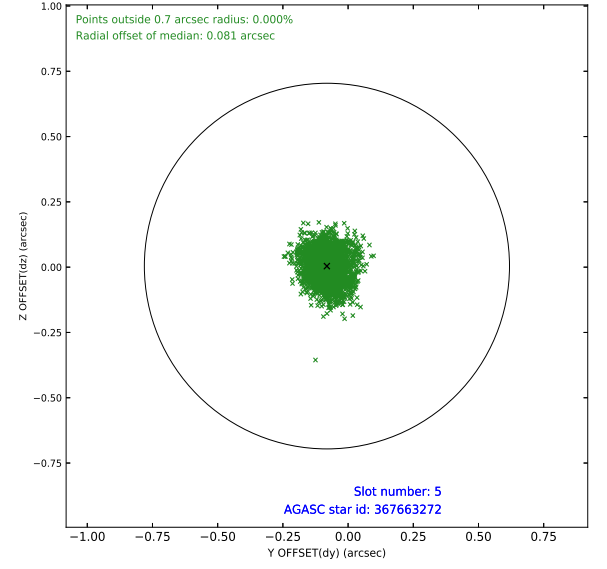
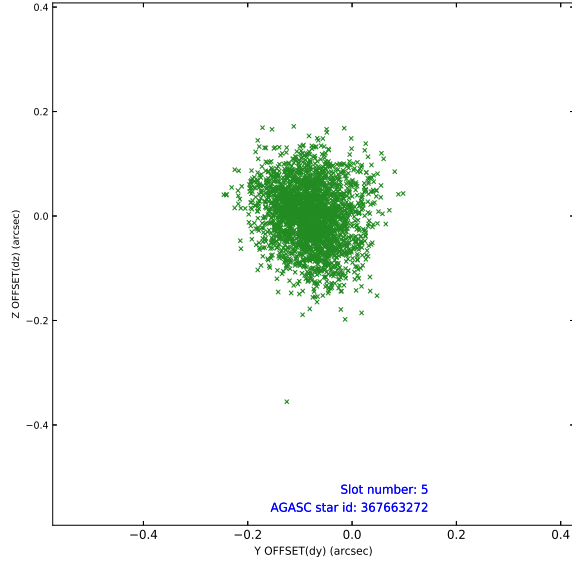
2.4.1 Slot 3



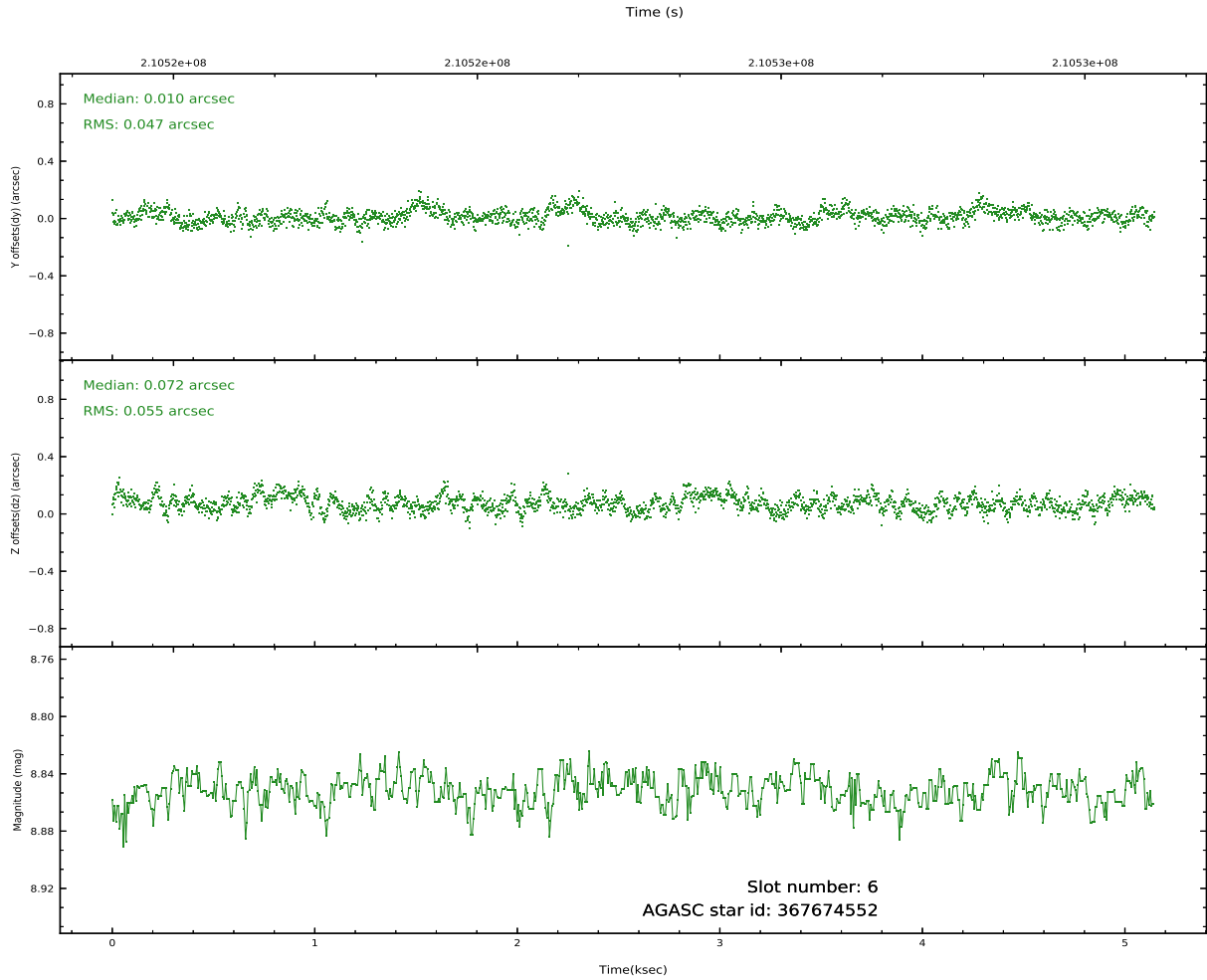
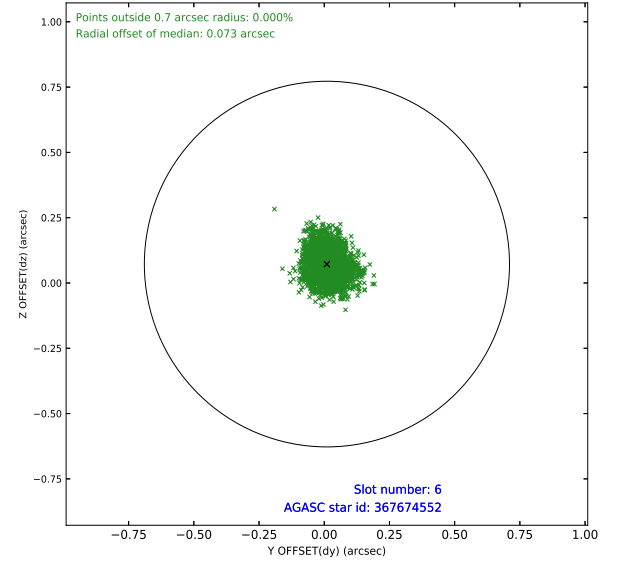
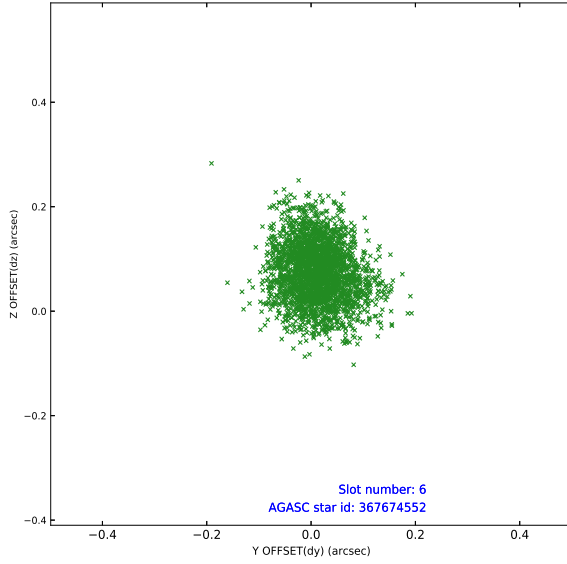
2.4.2 Slot 4



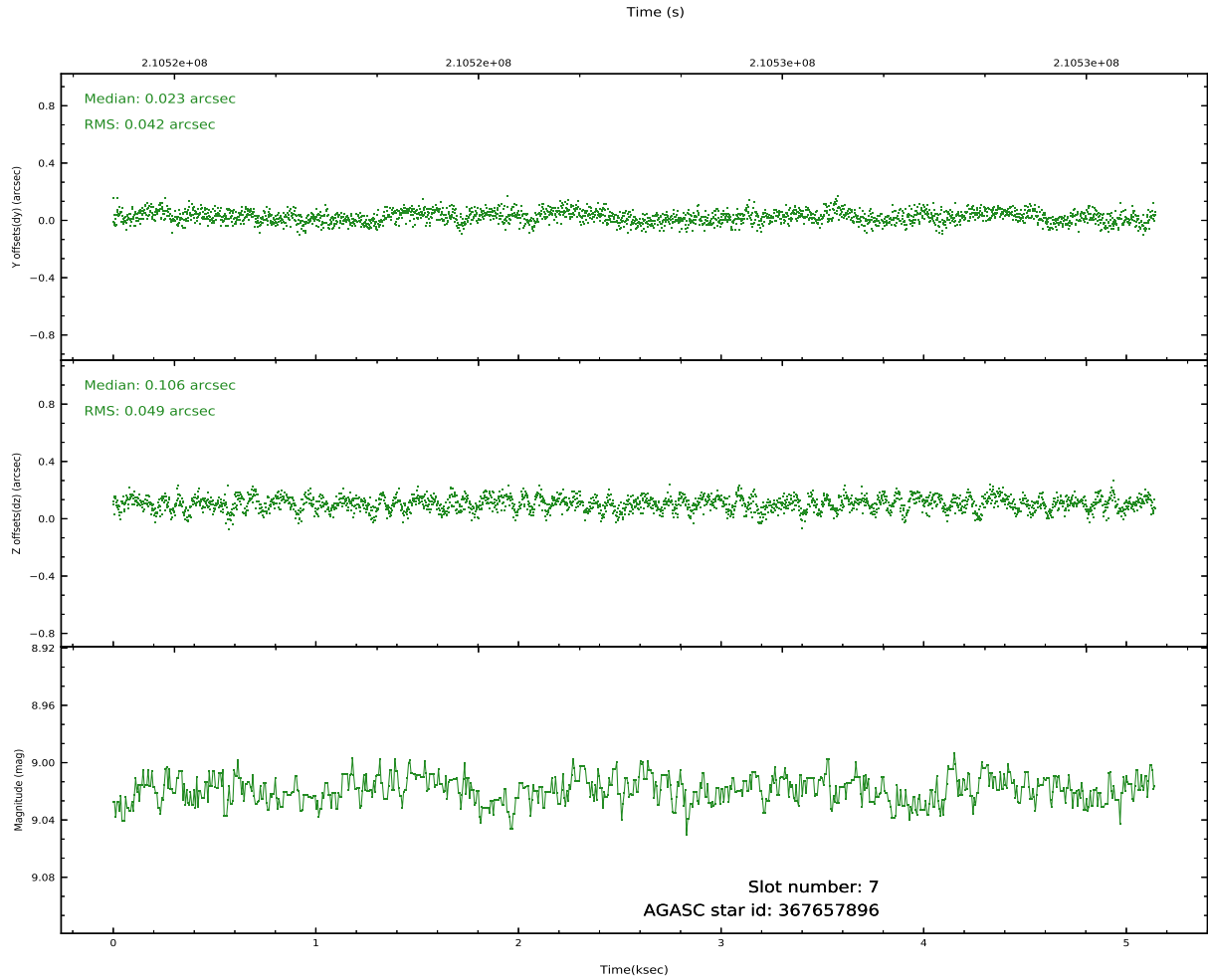
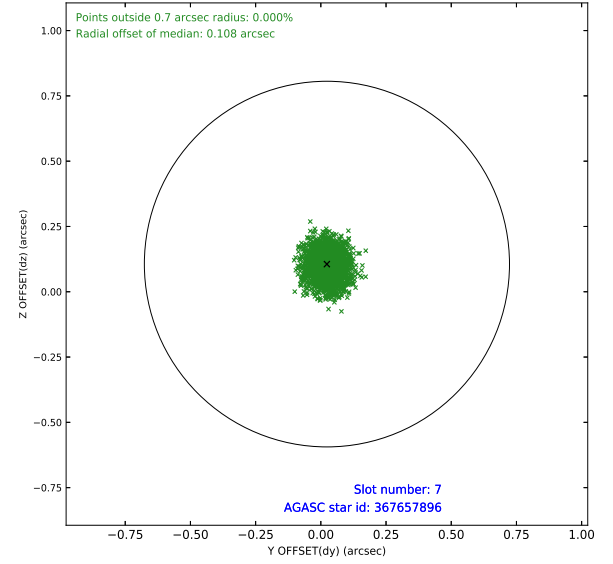
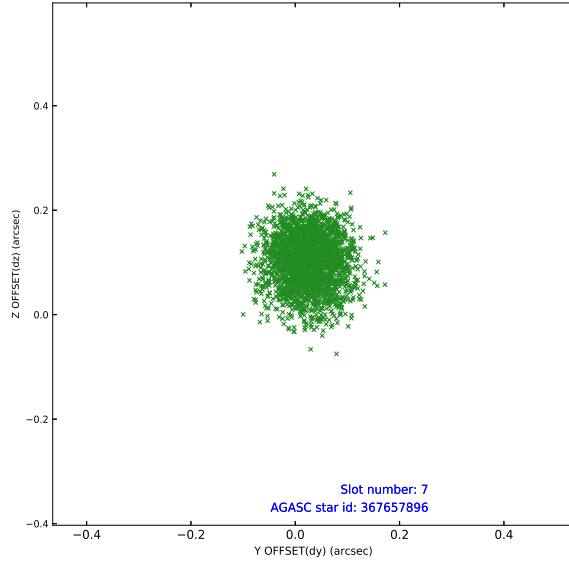
2.4.3 Slot 5



2.4.4 Slot 6

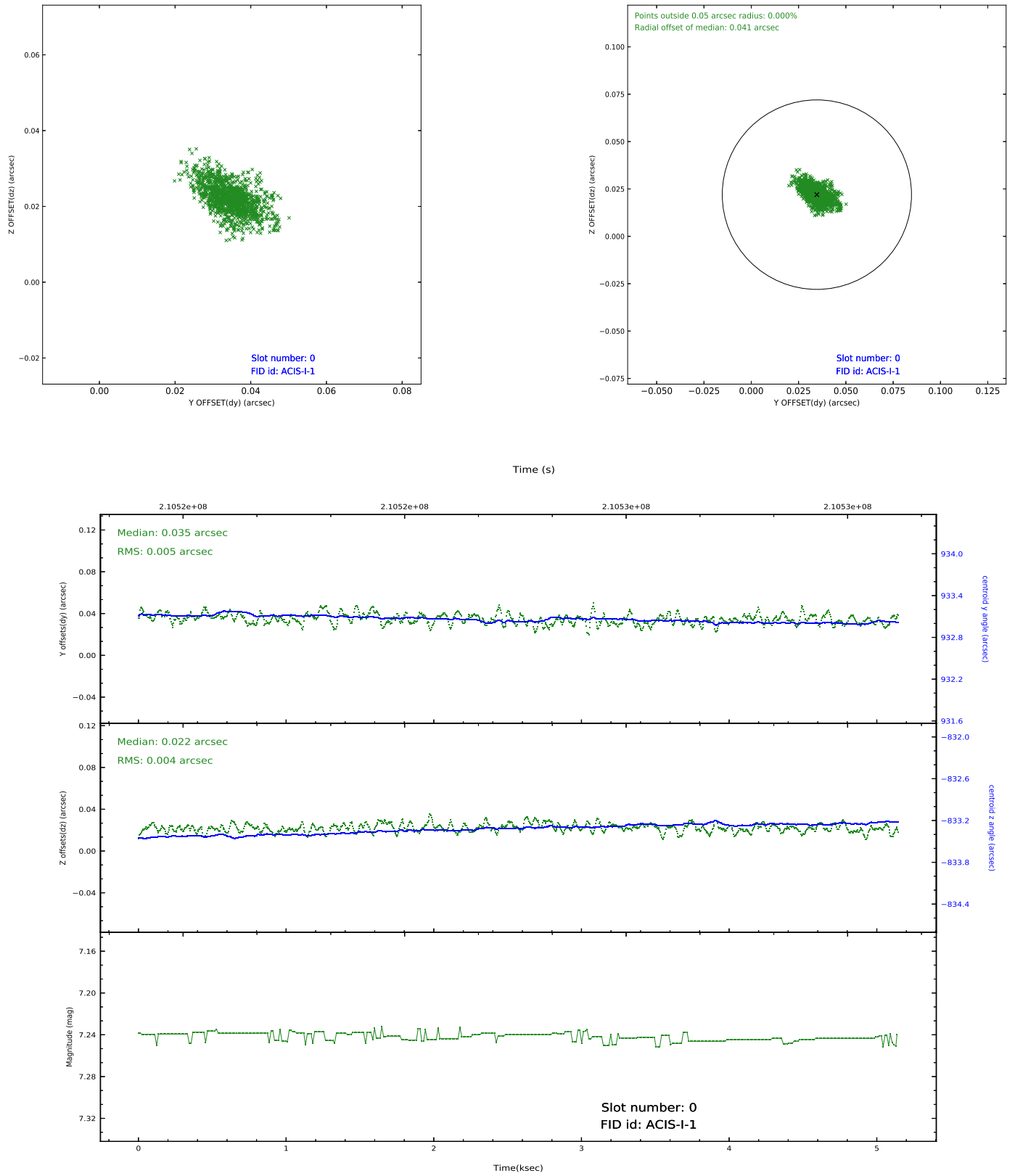


2.4.5 Slot 7

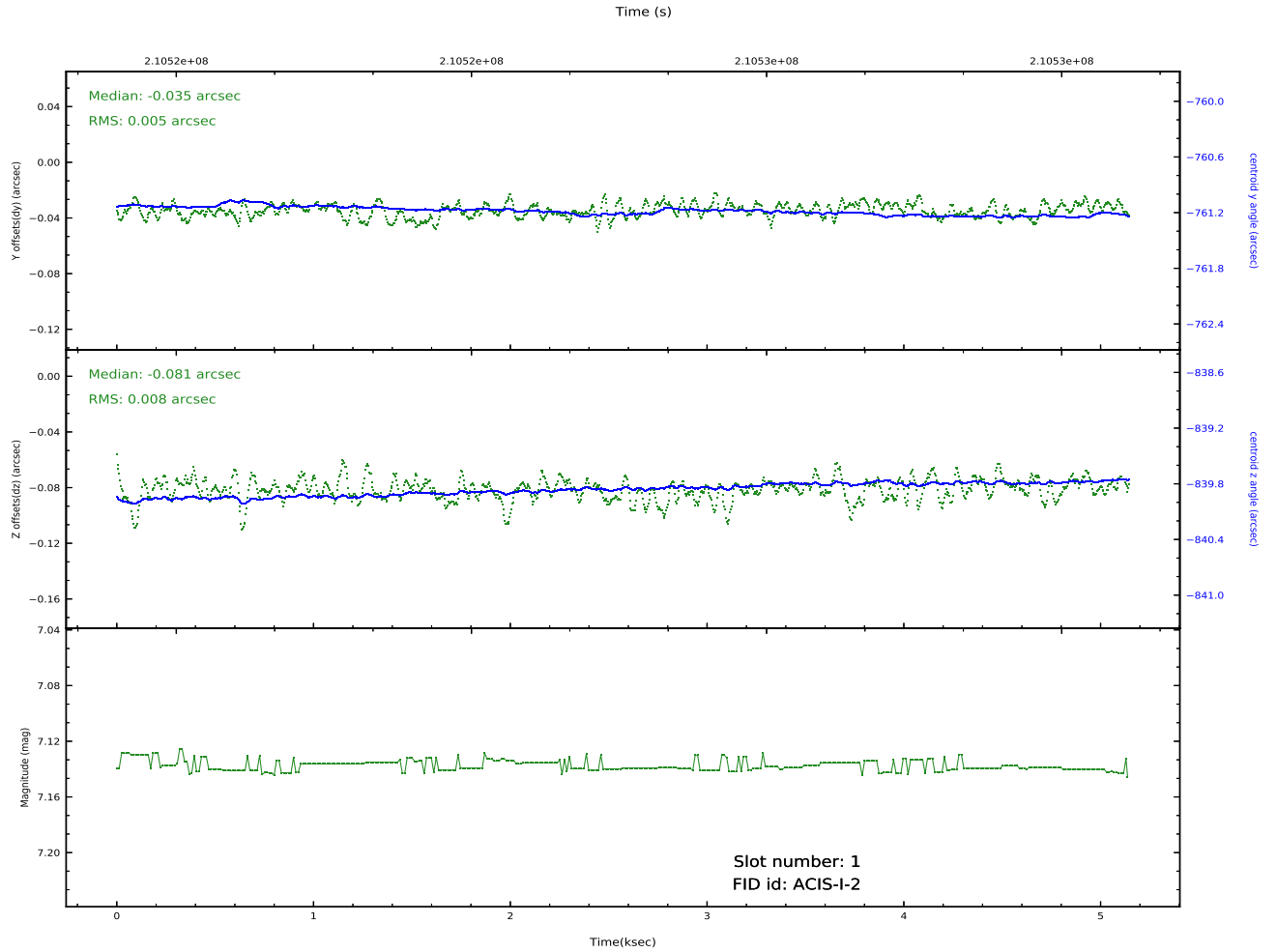
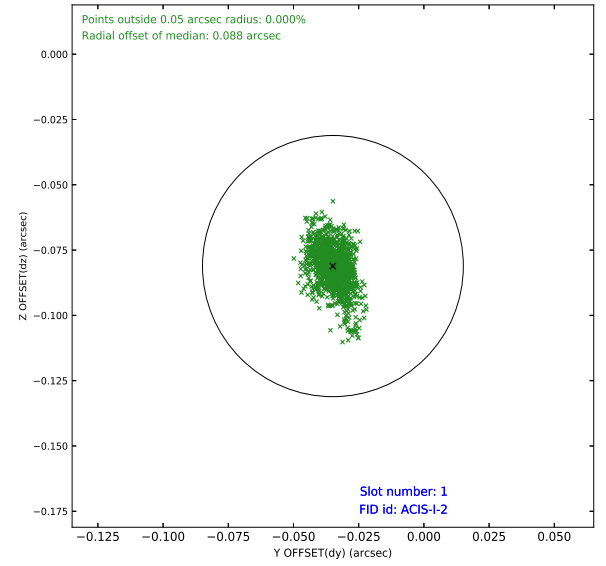
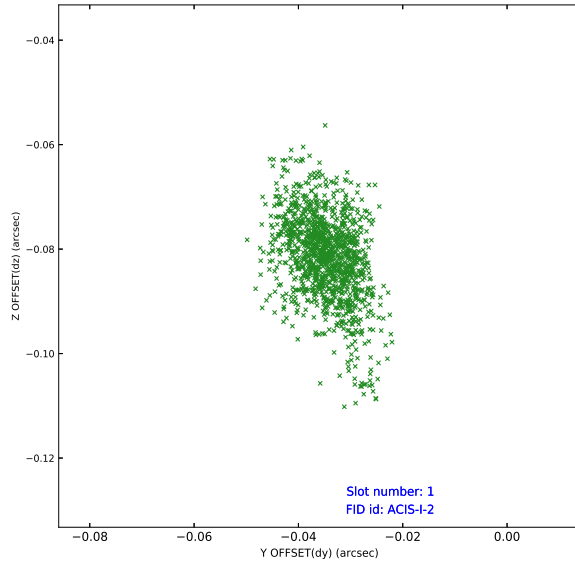


2.5 FID Slots

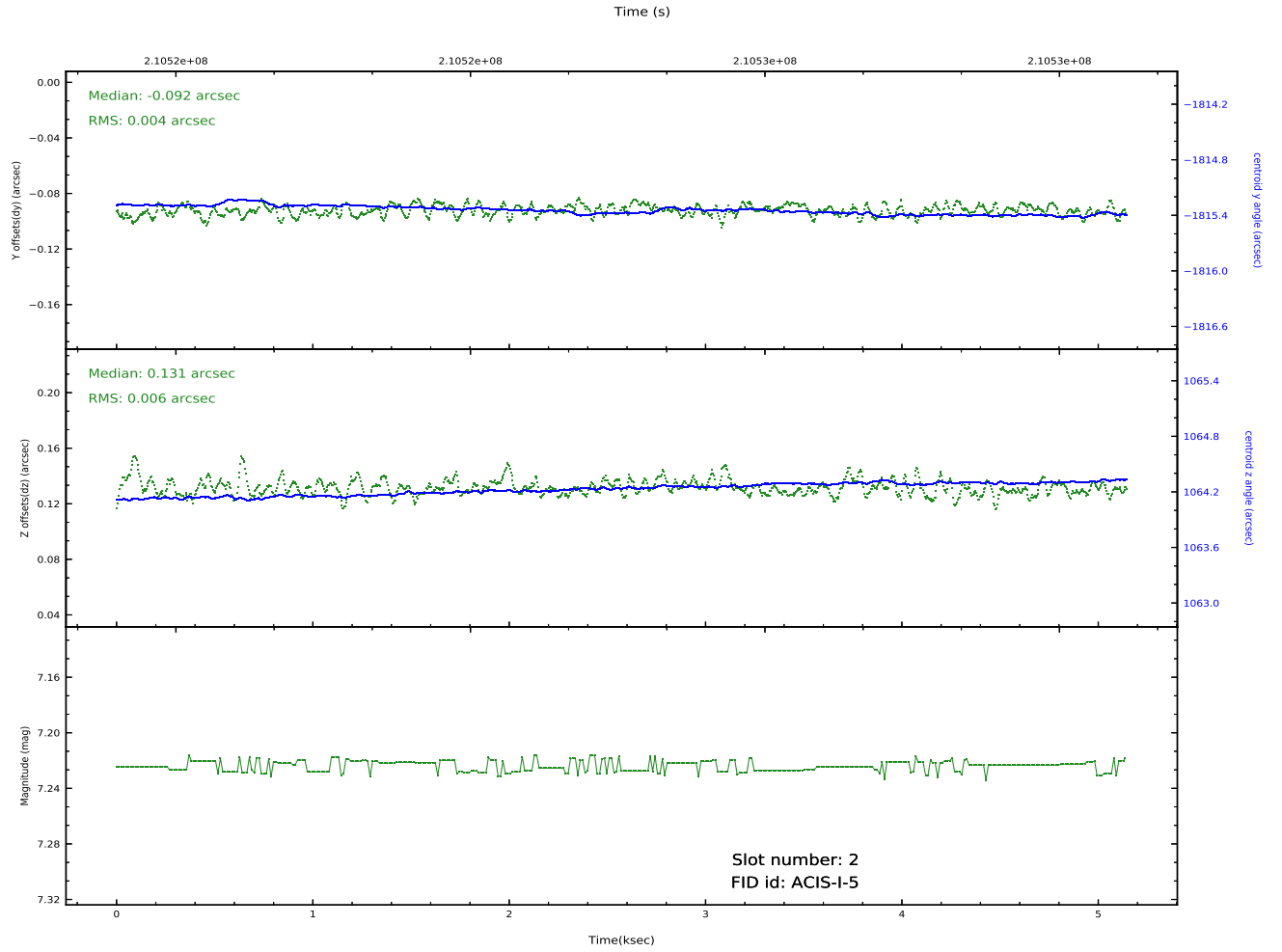
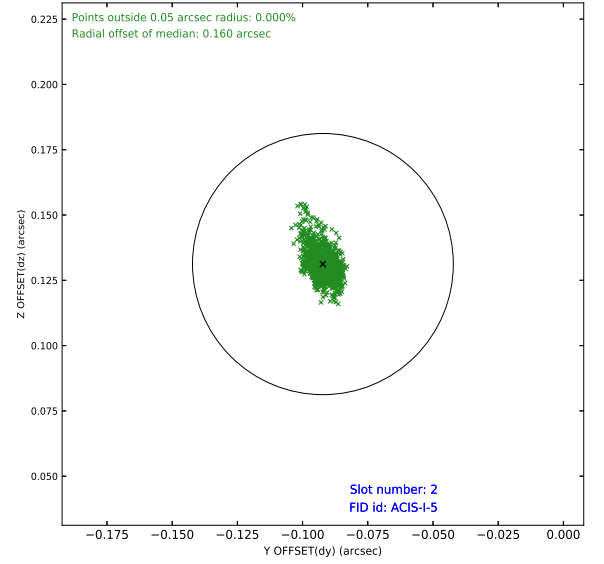
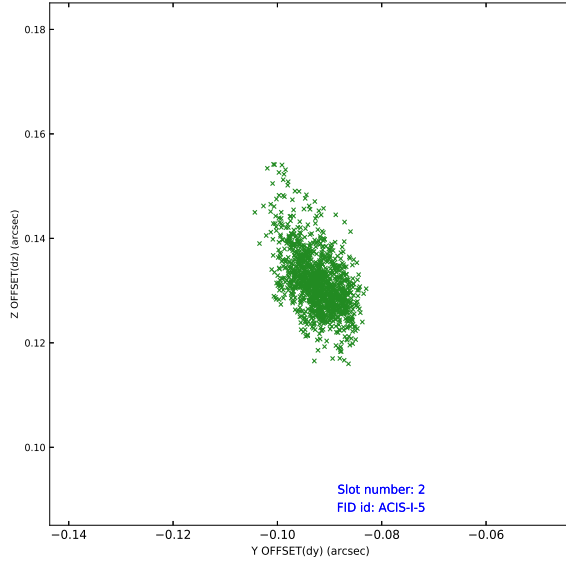
2.5.1 Slot 0



2.5.2 Slot 1



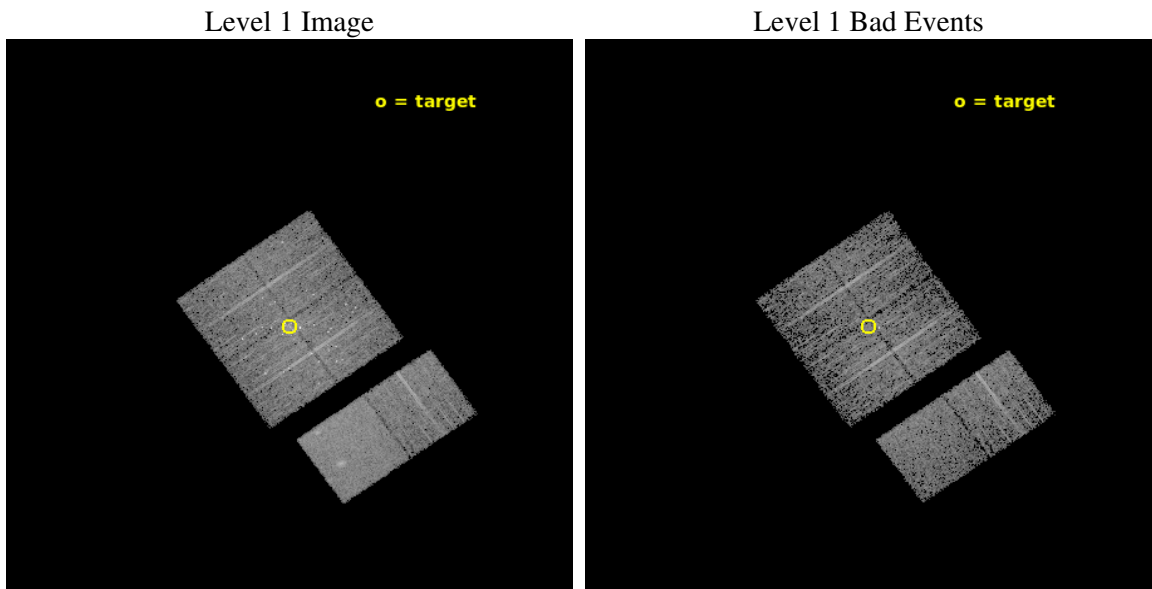
2.5.3 Slot 2



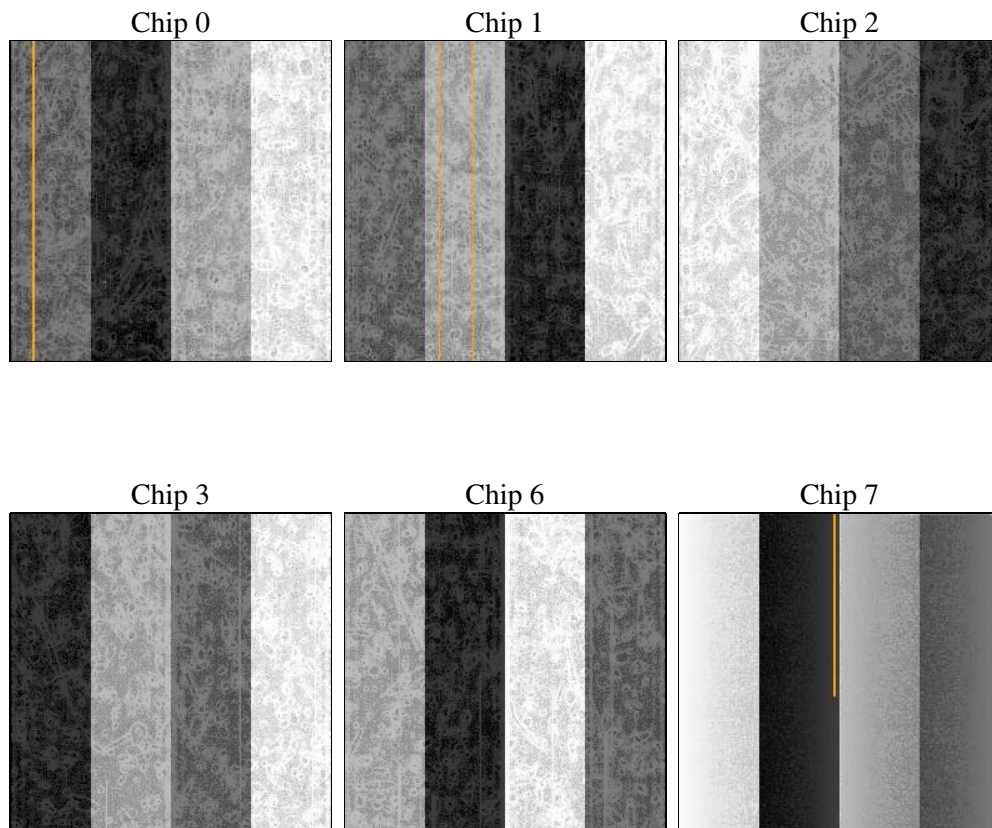
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	4161.3001358211	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	4161.3001055717	Sum of GTIs [s]
date	2020-10-01T21:47:17	Date and time of file creation	ontime1	4161.3000555933	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	4161.3000257909	Sum of GTIs [s]
			ontime3	4161.3001358211	Sum of GTIs [s]
			ontime6	4161.3001458049	Sum of GTIs [s]
			ontime7	4161.3000357747	Sum of GTIs [s]
			l1events	228274	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	32878	33404	38220	38559	36368	48845	grade 0 events	2656	4014	5116	5296	1716	2156
rejected events	28215	26835	30453	30902	32659	30229		8%	12%	13%	13%	4%	4%
rejected %	85%	80%	79%	80%	89%	61%	grade 1 events	28	42	172	78	16	47
								0%	0%	0%	0%	0%	0%
							grade 2 events	1032	1245	1375	1135	875	4228
								3%	3%	3%	2%	2%	8%
							grade 3 events	421	554	549	536	374	1877
								1%	1%	1%	1%	1%	3%
							grade 4 events	413	516	539	513	378	1869
								1%	1%	1%	1%	1%	3%
							grade 5 events	1437	1428	1496	1535	1590	4542
								4%	4%	3%	3%	4%	9%
							grade 6 events	703	901	831	807	825	10885
								2%	2%	2%	2%	2%	22%
							grade 7 events	26188	24704	28142	28659	30594	23241
								79%	73%	73%	74%	84%	47%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.136

A.2 Comments

Joint proposal with HST.

Window constraint met.