

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4723 - L2 Version 4
Chandra X-Ray Center

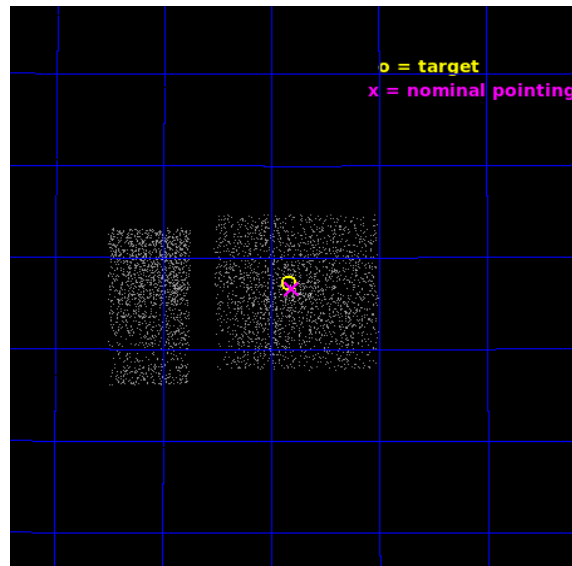
L2 Processing Date : Oct 5 2020

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1 Front

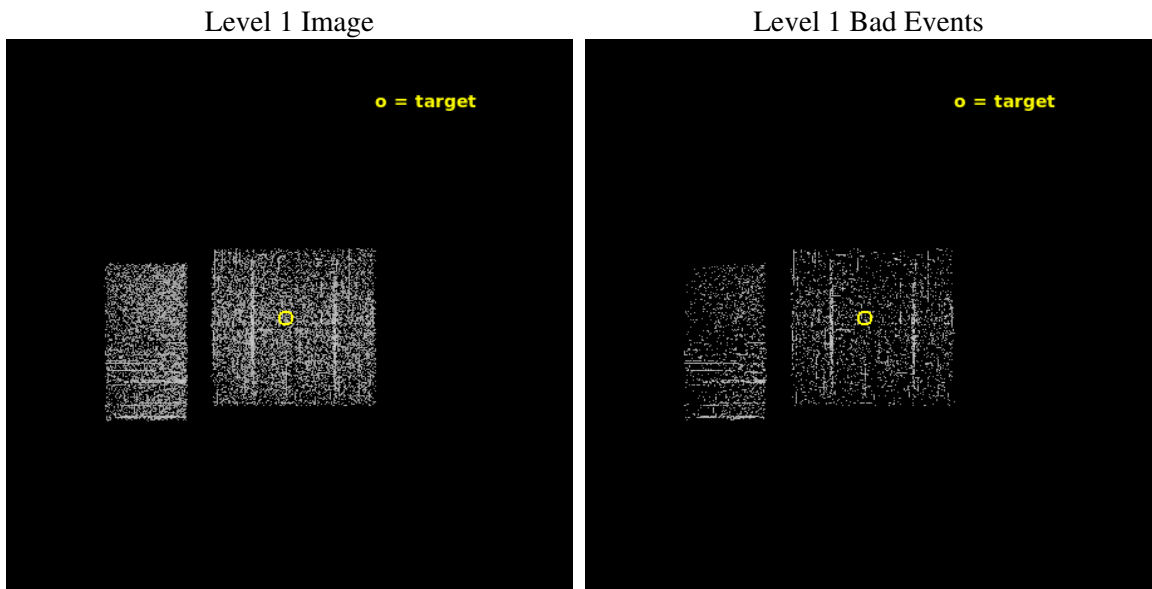
seq_num	600378	Sequence number
obs_id	4723	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.708333	Observer's specified target RA [deg]
dec_targ	41.2875	Observer's specified target Dec [deg]
ra_nom	10.702052859106	Nominal RA [deg]
dec_nom	41.277055356888	Nominal Dec [deg]
roll_nom	269.81511600988	Nominal Roll [deg]
revision	4	Processing version of data
ontime	960.323849231	Sum of GTIs [s]
livetime	151.17813839118	Livetime [s]
ontime0	960.20072925091	Sum of GTIs [s]
ontime1	960.24176922441	Sum of GTIs [s]
ontime2	960.28280922771	Sum of GTIs [s]
ontime3	960.323849231	Sum of GTIs [s]
ontime6	960.4059292376	Sum of GTIs [s]
ontime7	960.3648892343	Sum of GTIs [s]
l2events	4537	Number of level 2 events



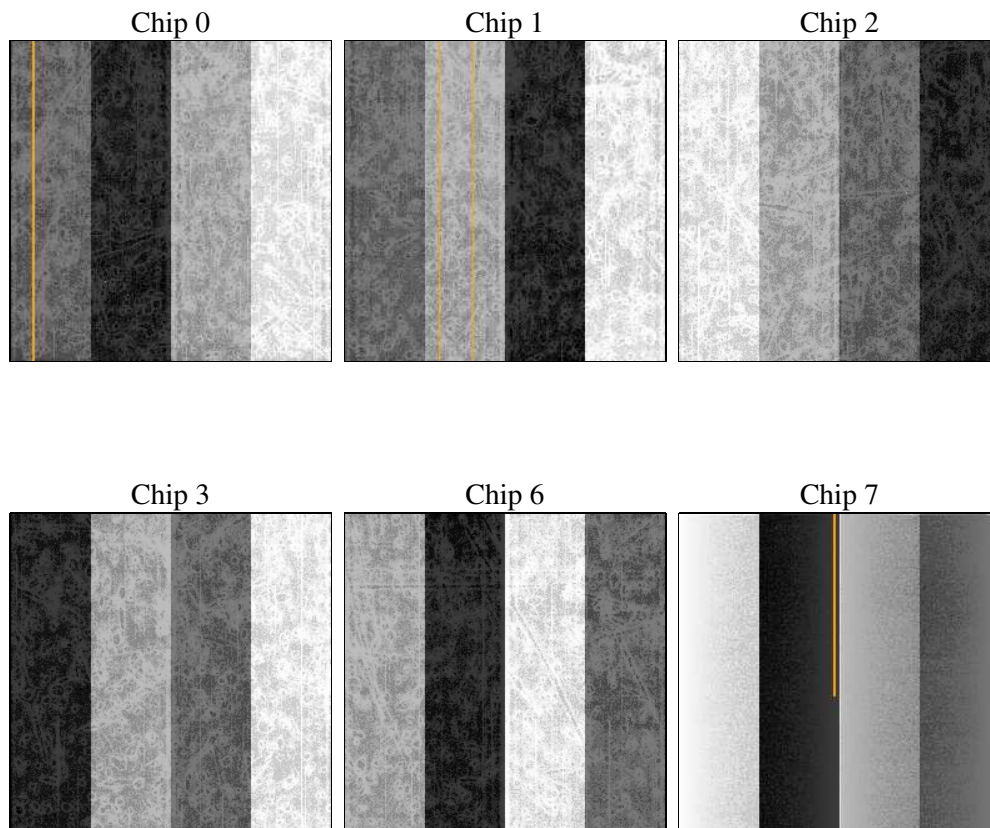
2 OBI Primary

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4906.362000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	960.323849231	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	960.20072925091	Sum of GTIs [s]
date	2020-10-05T11:26:02	Date and time of file creation	ontime1	960.24176922441	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	960.28280922771	Sum of GTIs [s]
			ontime3	960.323849231	Sum of GTIs [s]
			ontime6	960.4059292376	Sum of GTIs [s]
			ontime7	960.3648892343	Sum of GTIs [s]
			l1events	25972	Number of level 1 events

2.1.4 Events

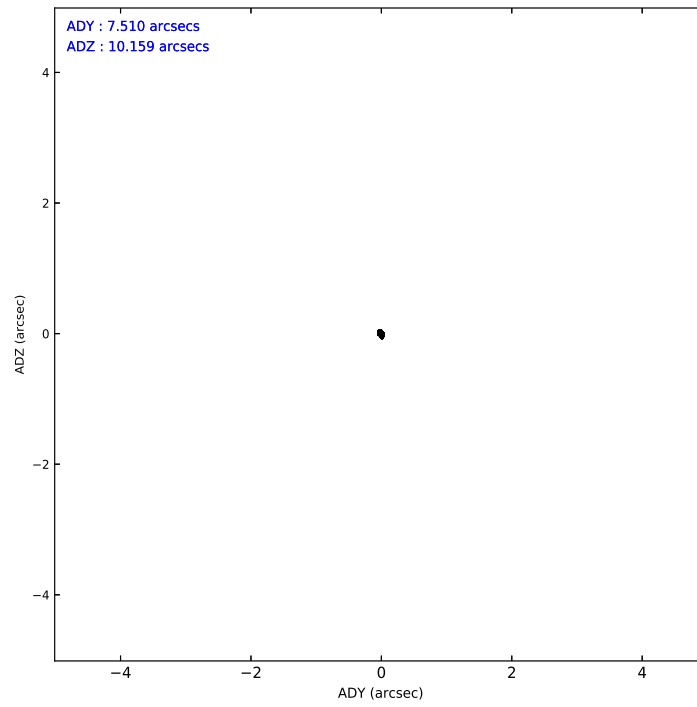
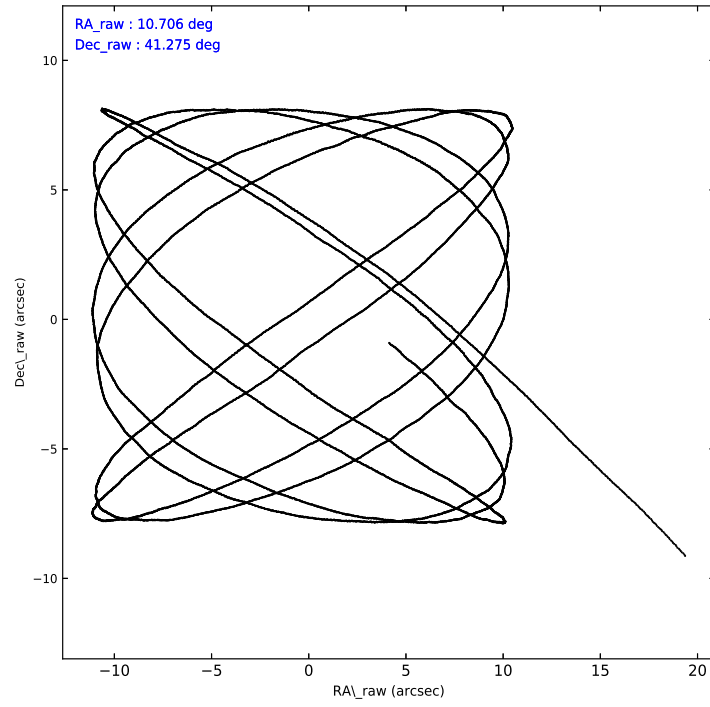
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	4188	3864	4478	4402	4975	4065
rejected events	3342	3140	3677	3688	4270	2742
rejected %	79%	81%	82%	83%	85%	67%

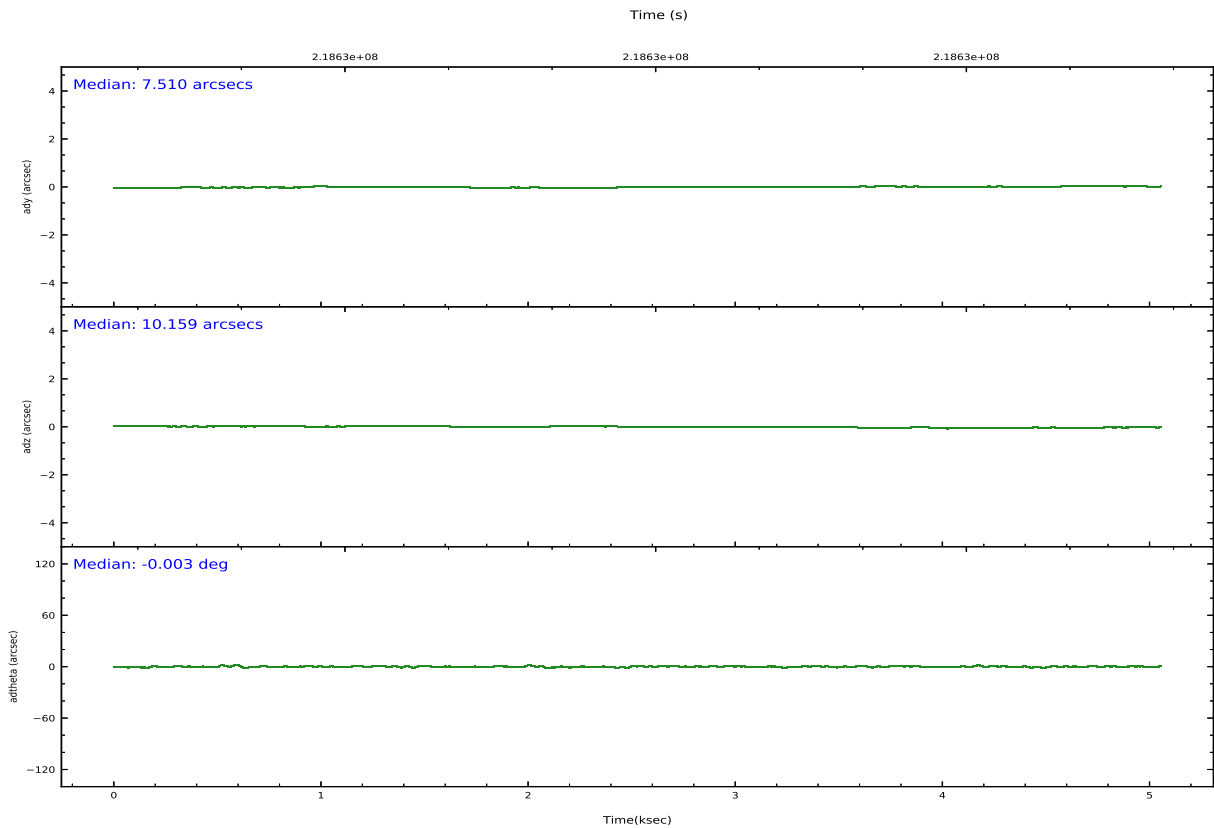
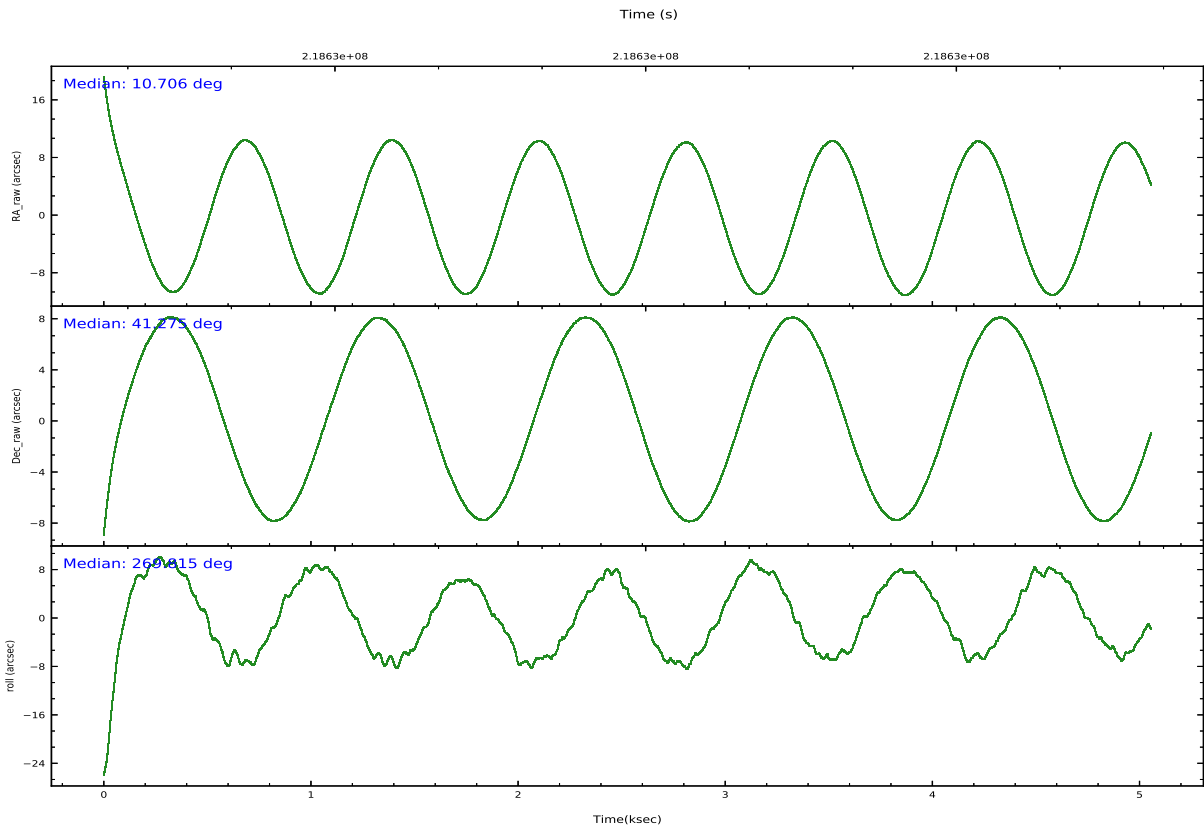
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	419	263	362	280	278	122
	10%	6%	8%	6%	5%	3%
grade 1 events	2	3	2	2	1	10
	0%	0%	0%	0%	0%	0%
grade 2 events	206	225	199	229	235	318
	4%	5%	4%	5%	4%	7%
grade 3 events	53	59	42	40	48	108
	1%	1%	0%	0%	0%	2%
grade 4 events	41	45	64	45	49	98
	0%	1%	1%	1%	0%	2%
grade 5 events	124	102	122	134	152	290
	2%	2%	2%	3%	3%	7%
grade 6 events	146	146	141	129	105	701
	3%	3%	3%	2%	2%	17%
grade 7 events	3197	3021	3546	3543	4107	2418
	76%	78%	79%	80%	82%	59%

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	10.687588	10.702052859106	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.298605	41.277055356888	Alternating exposures requested	Y	Y
[deg] Pointing Roll	269.617640	269.81511600988	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	218073664.184000	218073664.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	218678464.184000	218678464.184000	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)	218625034.184000	218623894.34591			
Observation start date	2004-12-05T09:09:30	2004-12-05T08:51:34			
[s] Observation end time (MET)	218629940.184000	218630179.13369			
Observation end date	2004-12-05T10:31:16	2004-12-05T10:36:19			
Read mode	TIMED	TIMED			

2.3 Aspect





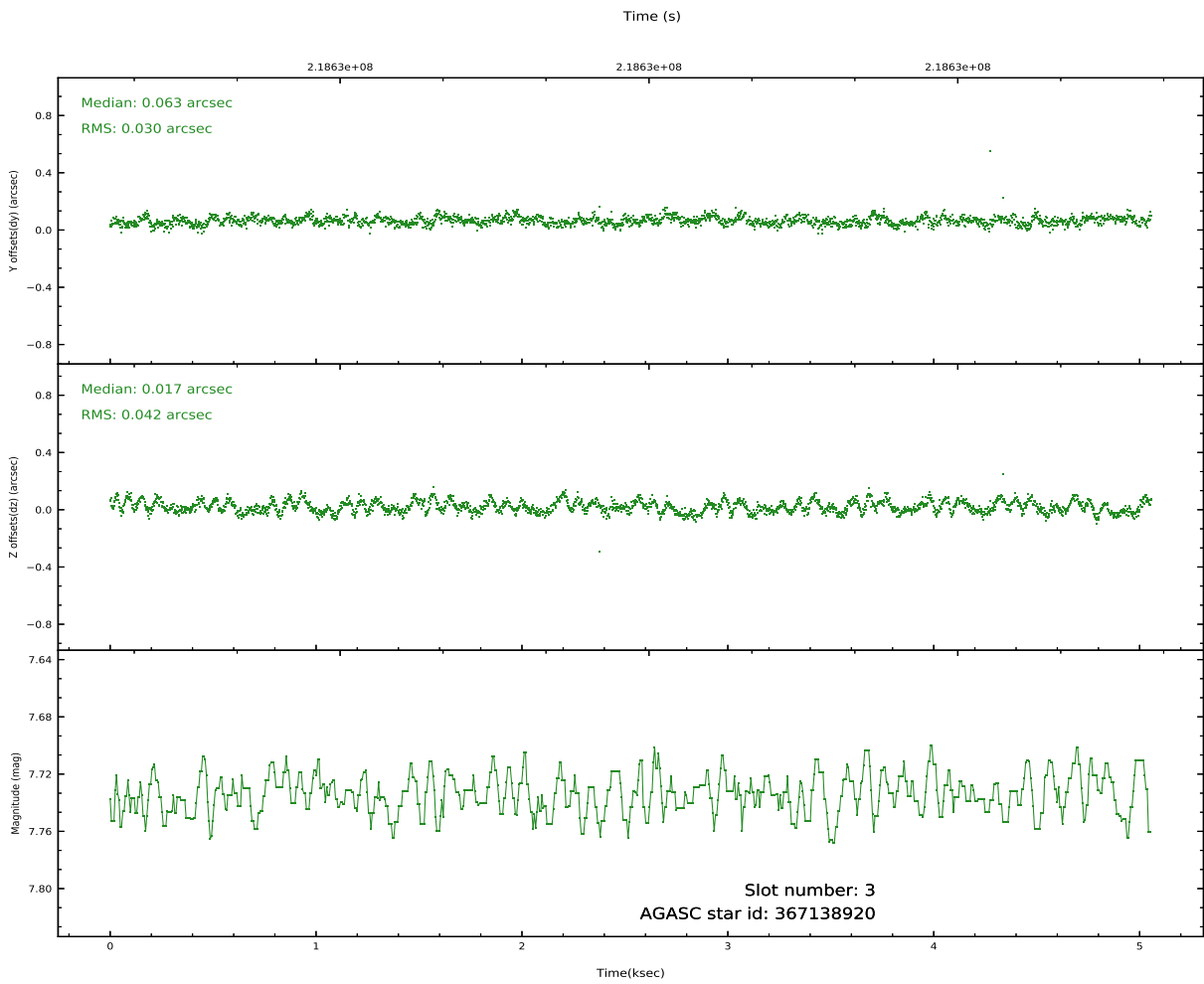
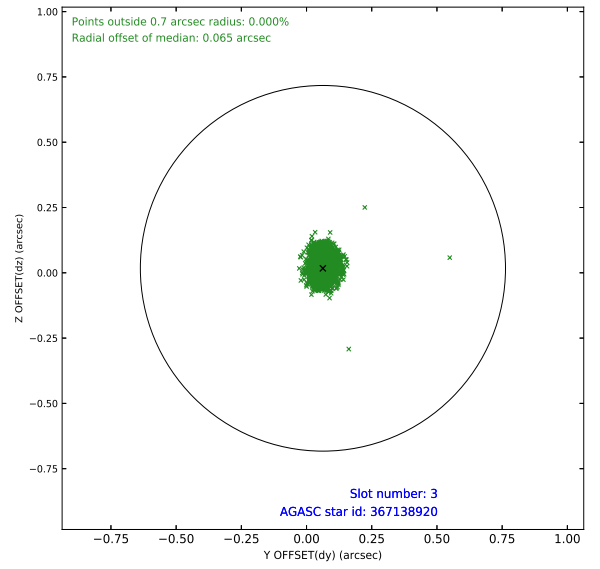
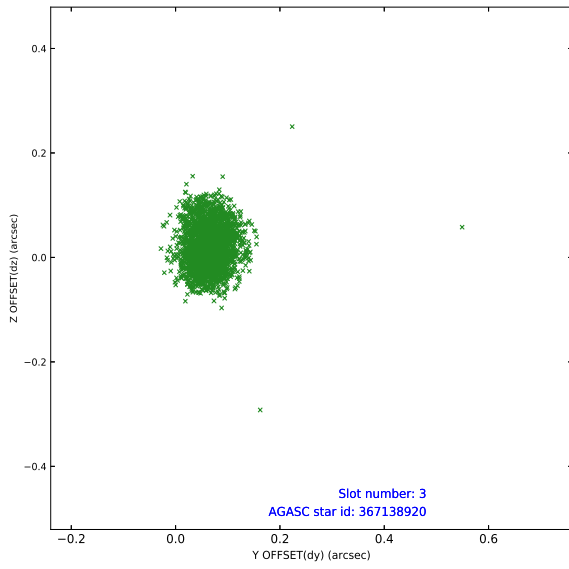
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.24	1234	1.000	-0.032	-0.014	0.008	0.014	0.000000	0.000000	932.14	-833
1	FID		ACIS-I-4	7.19	1234	1.000	0.193	0.048	0.007	0.012	0.000000	0.000000	2153.06	1065
2	FID		ACIS-I-5	7.22	1233	1.000	-0.259	0.036	0.007	0.013	0.000000	0.000000	-1814.56	1064
3	GUIDE	used	367138920	7.73	2468	1.000	0.063	0.017	0.053	0.085	11.513485	40.808909	1737.62	2262
4	GUIDE	used	367148872	7.23	2468	1.000	0.040	0.032	0.053	0.089	10.505940	40.688258	2201.15	-480
5	GUIDE	used	367657896	9.01	2468	1.000	0.035	0.004	0.074	0.118	11.197765	41.313576	-66.18	1378
6	GUIDE	used	367663272	9.29	2467	1.000	-0.104	0.019	0.077	0.130	10.656279	41.699429	-1442.24	-93
7	GUIDE	used	367674552	8.85	2467	1.000	-0.039	-0.072	0.077	0.125	11.016238	41.570845	-988.15	878

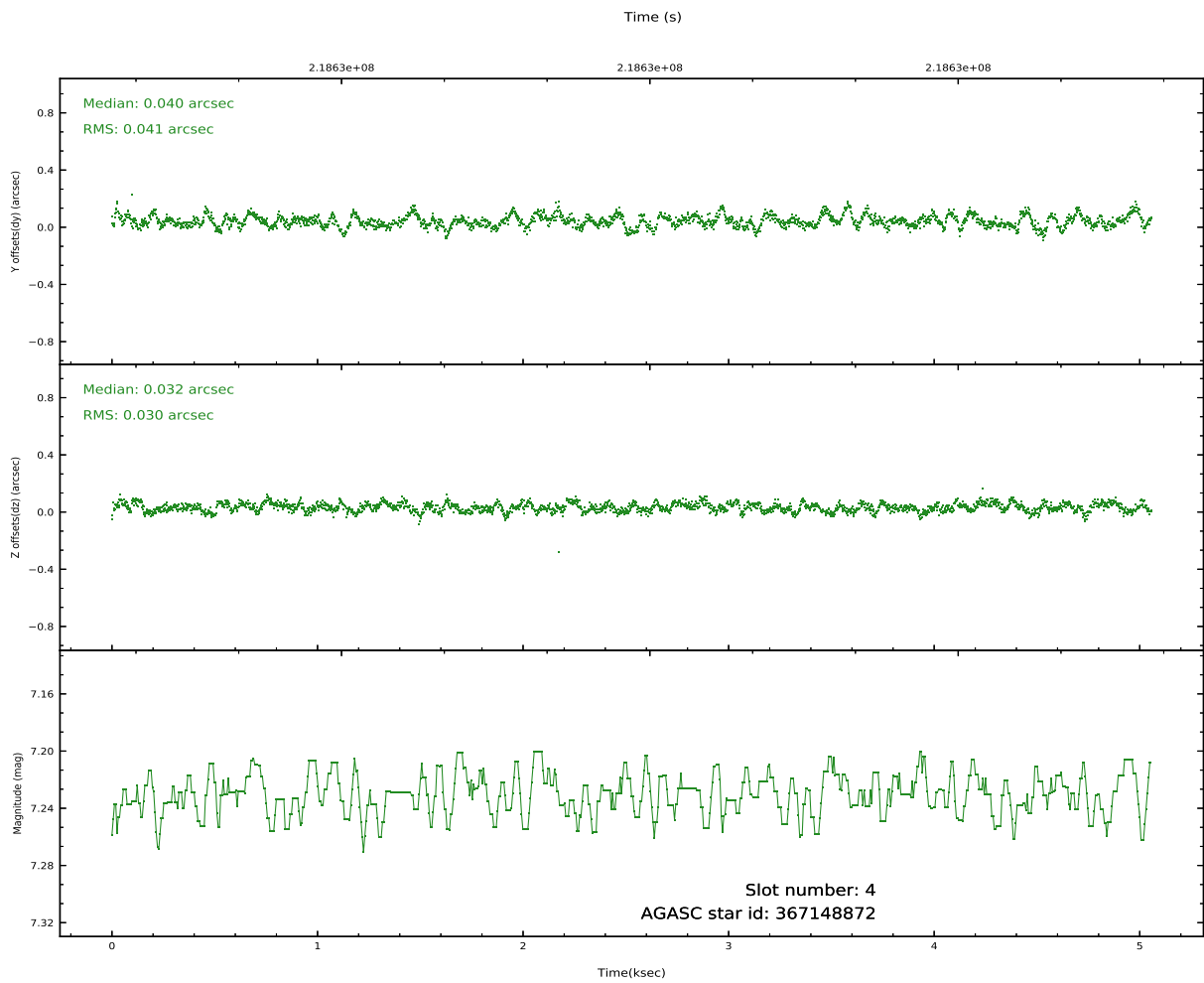
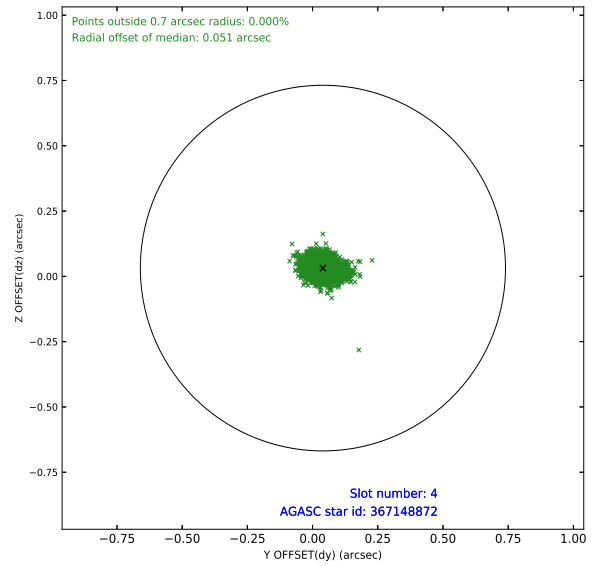
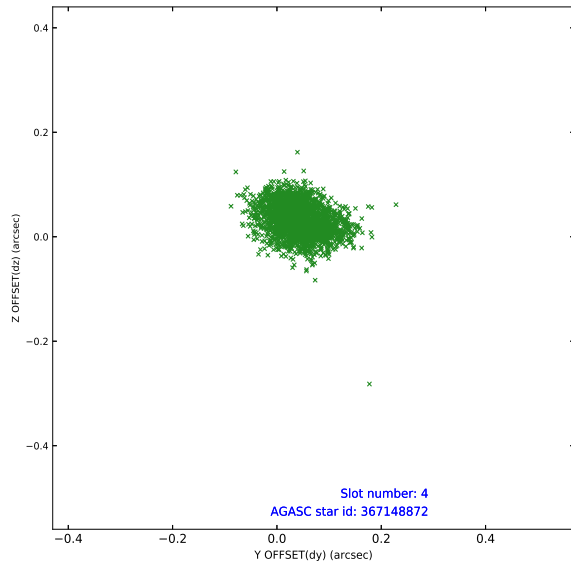
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2.4 Star Slots

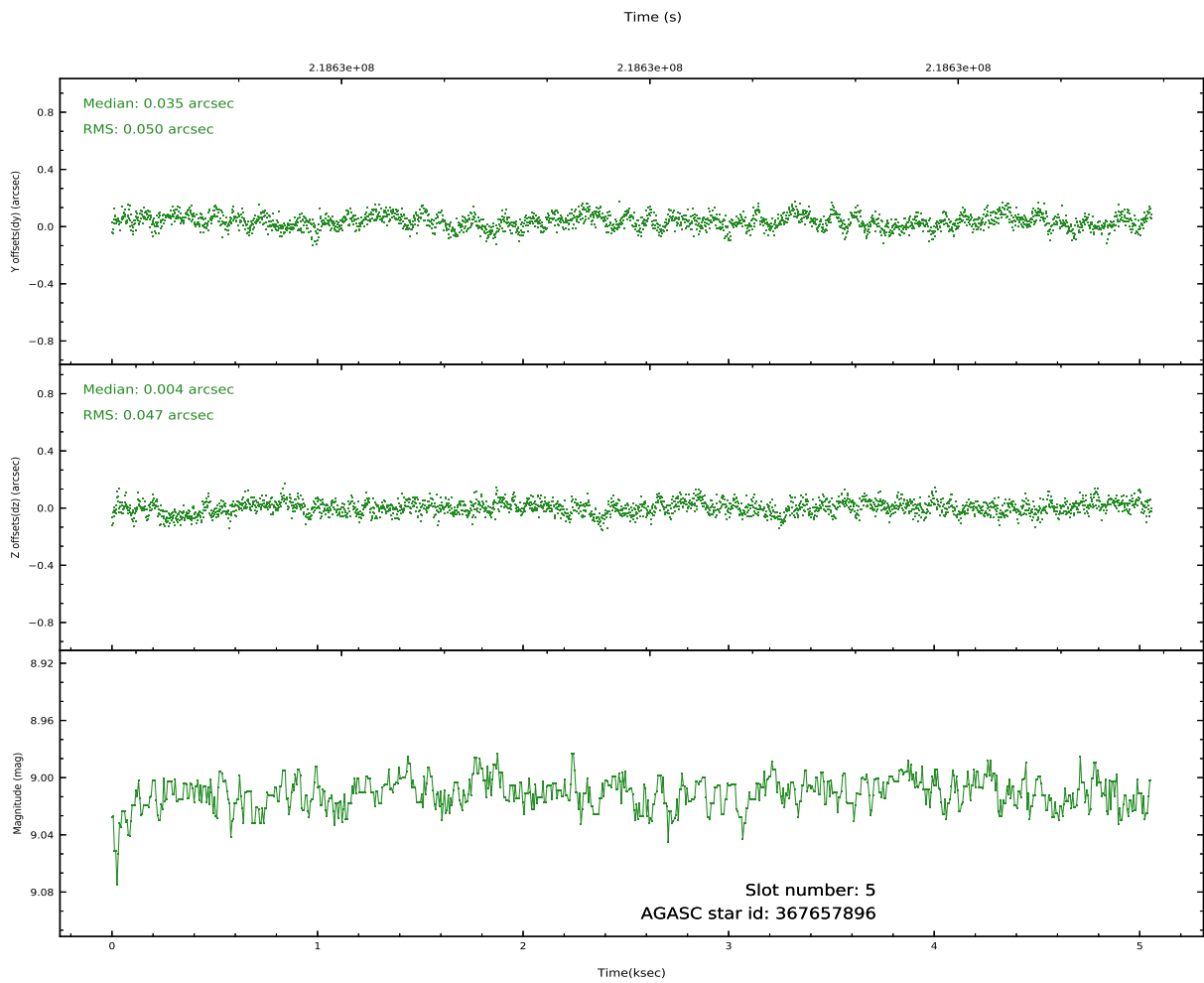
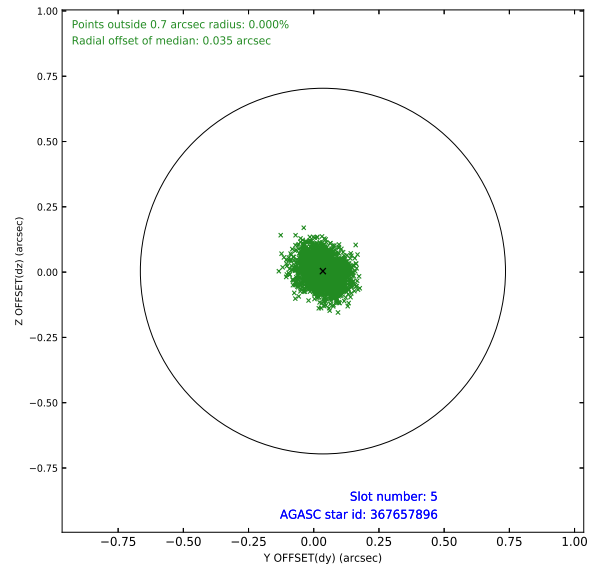
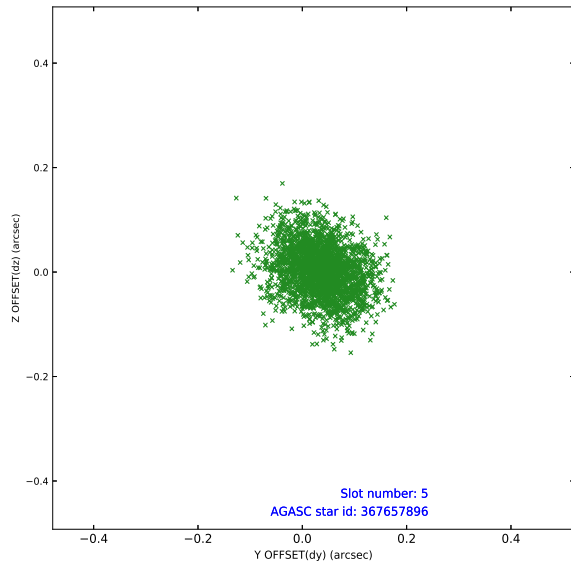
2.4.1 Slot 3



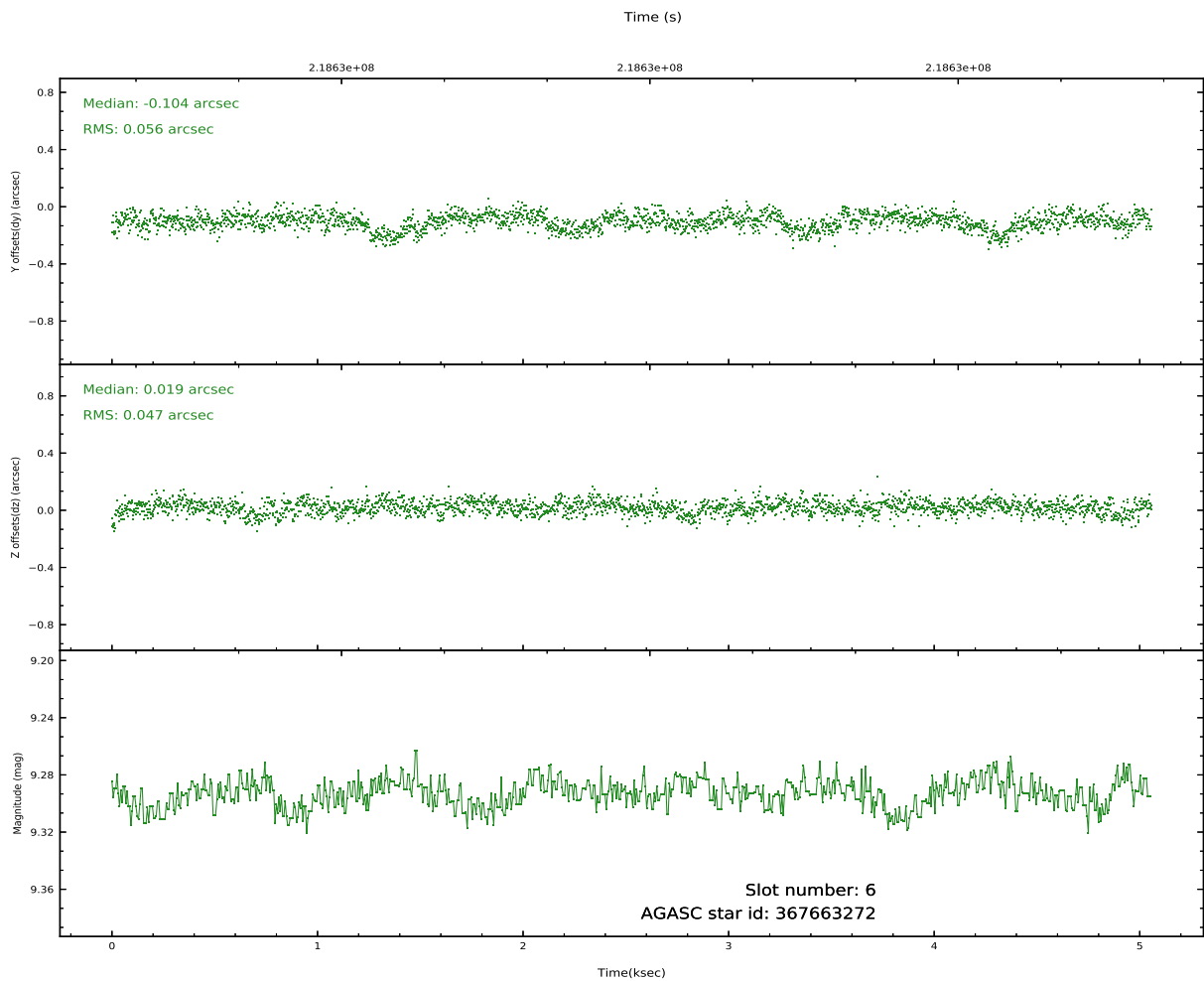
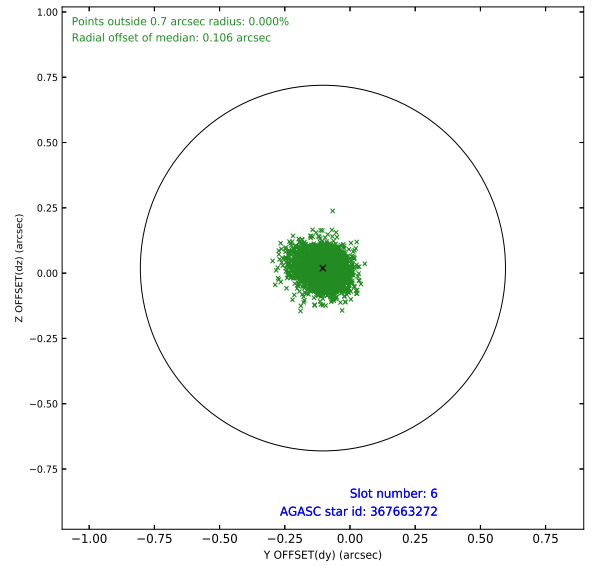
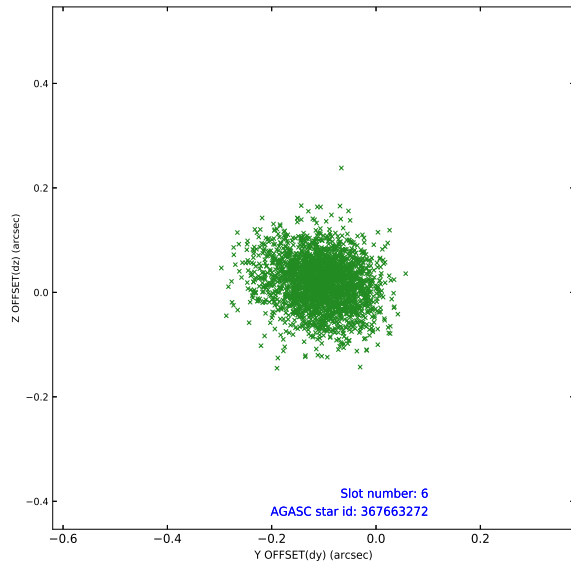
2.4.2 Slot 4



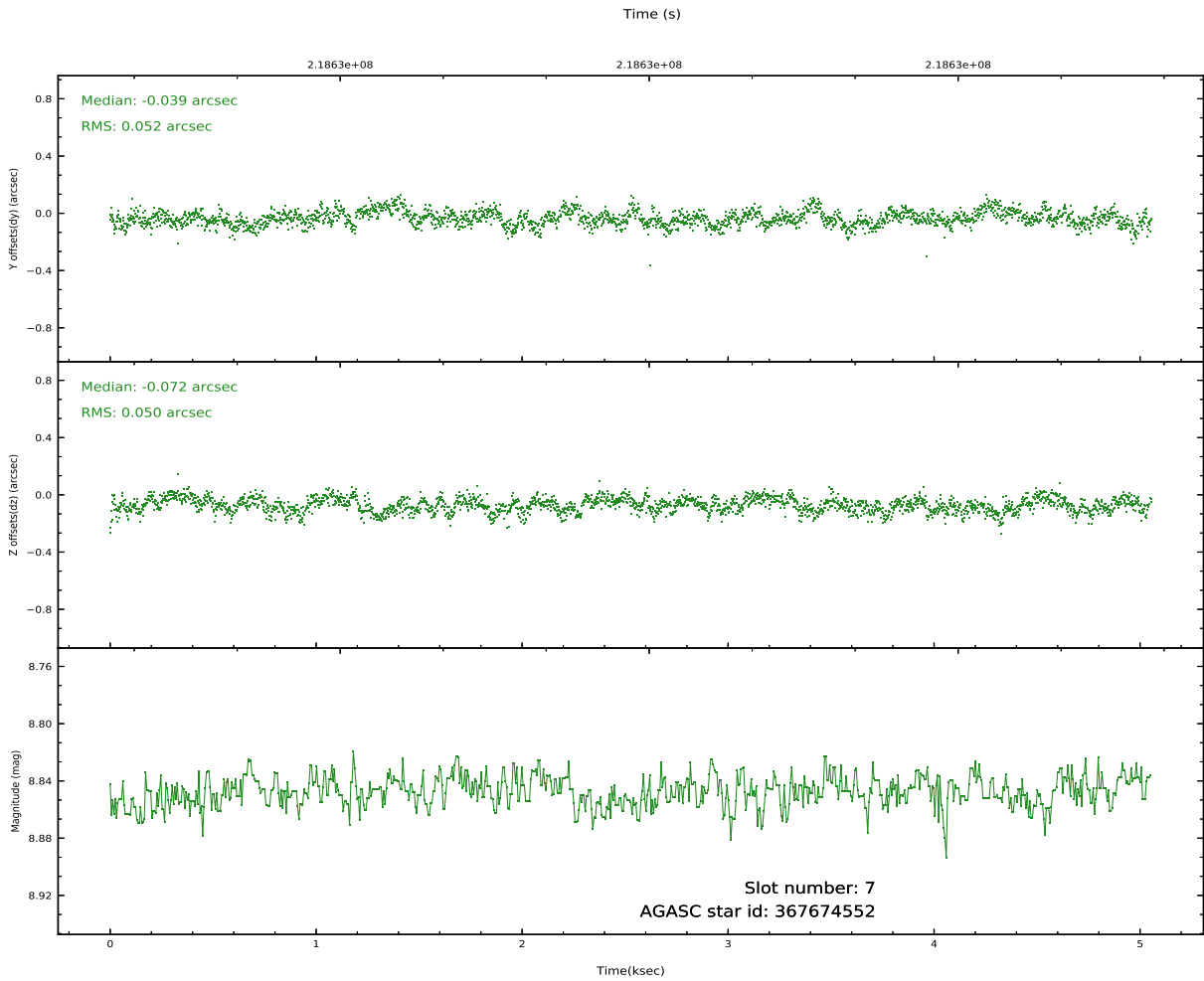
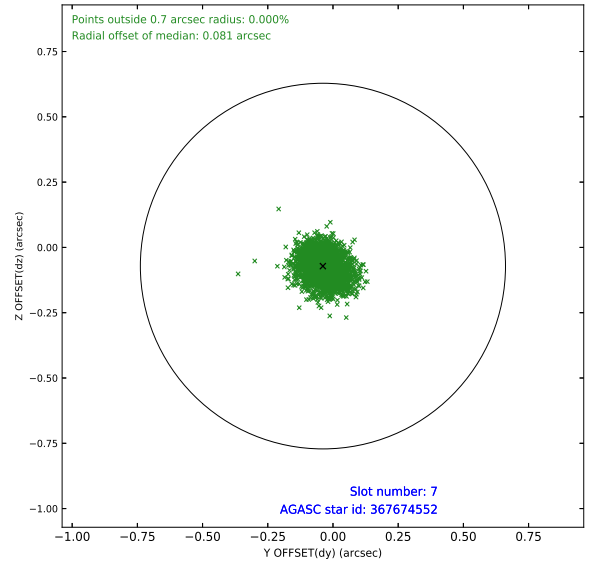
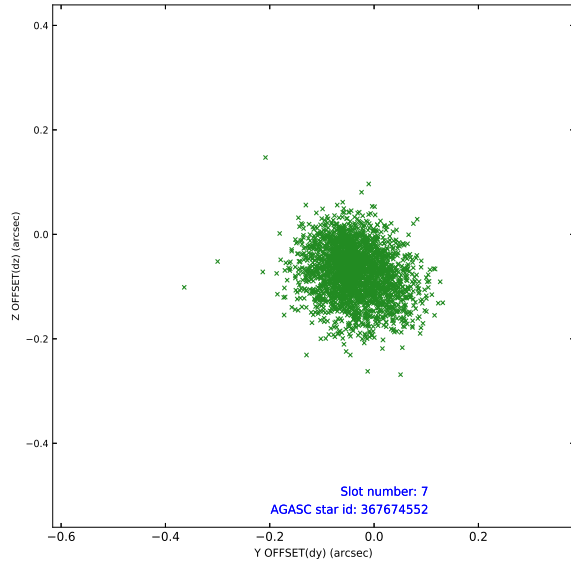
2.4.3 Slot 5



2.4.4 Slot 6

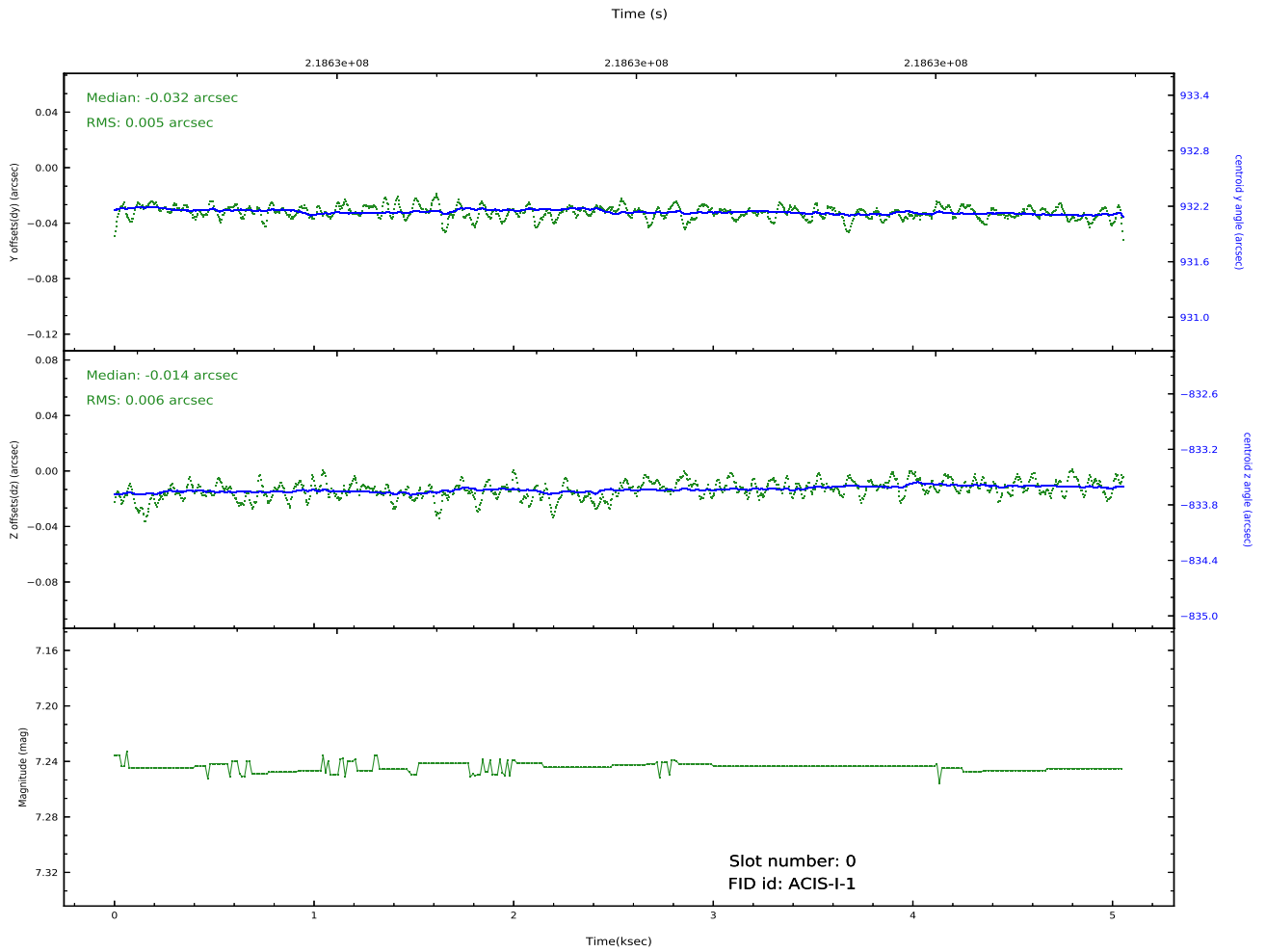
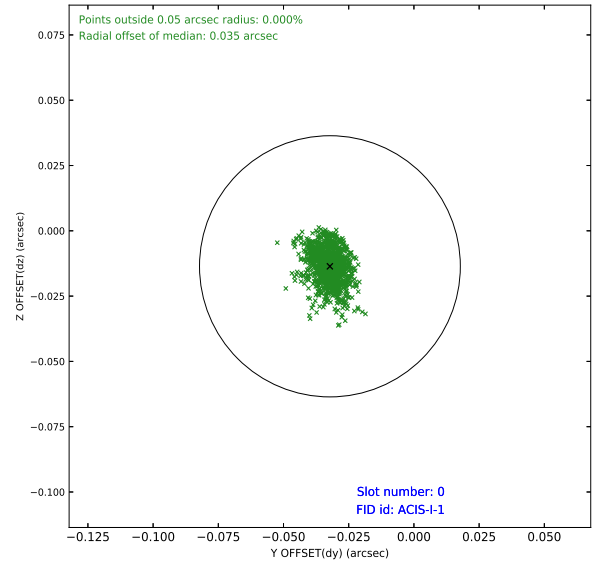
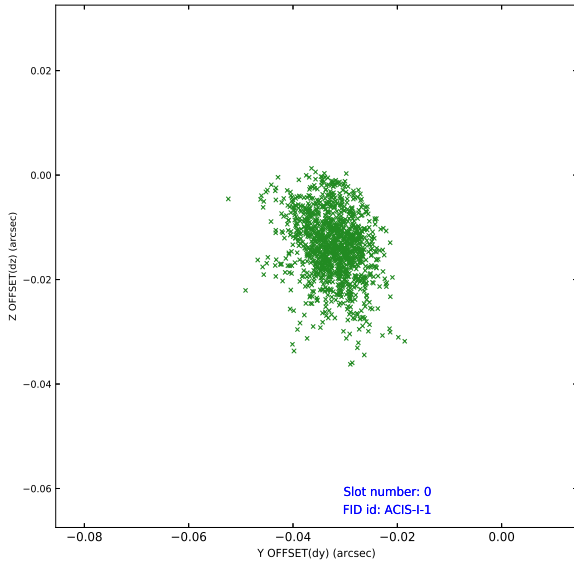


2.4.5 Slot 7

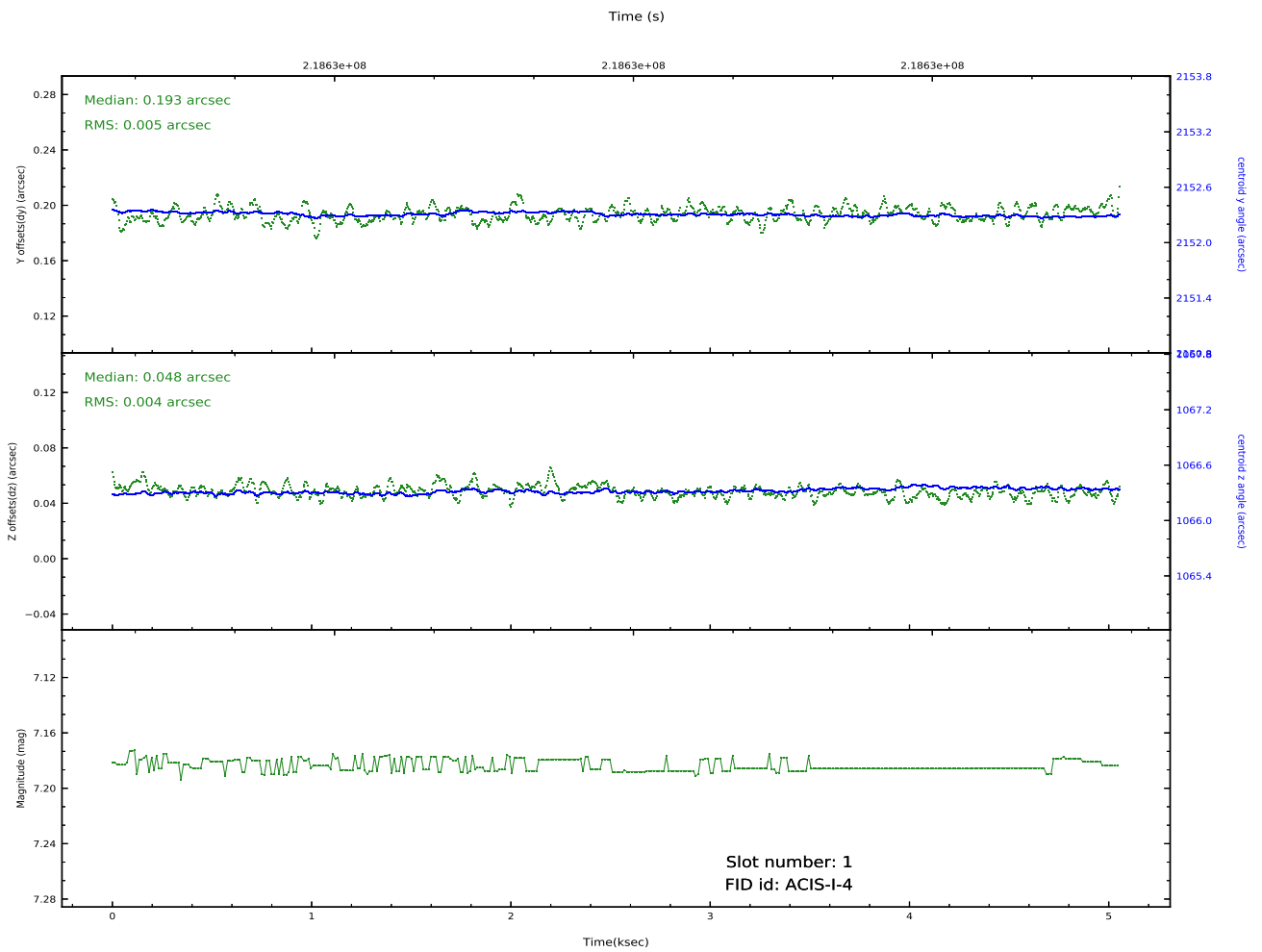
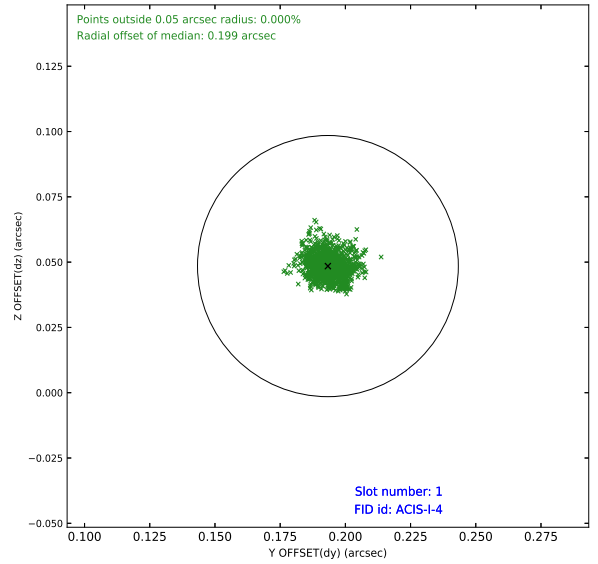
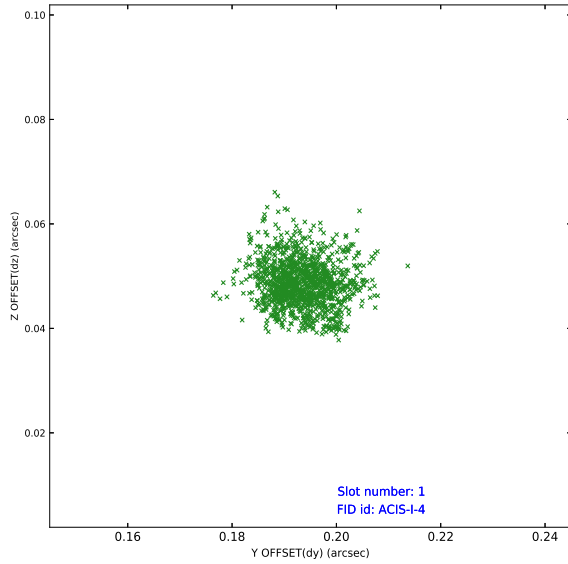


2.5 FID Slots

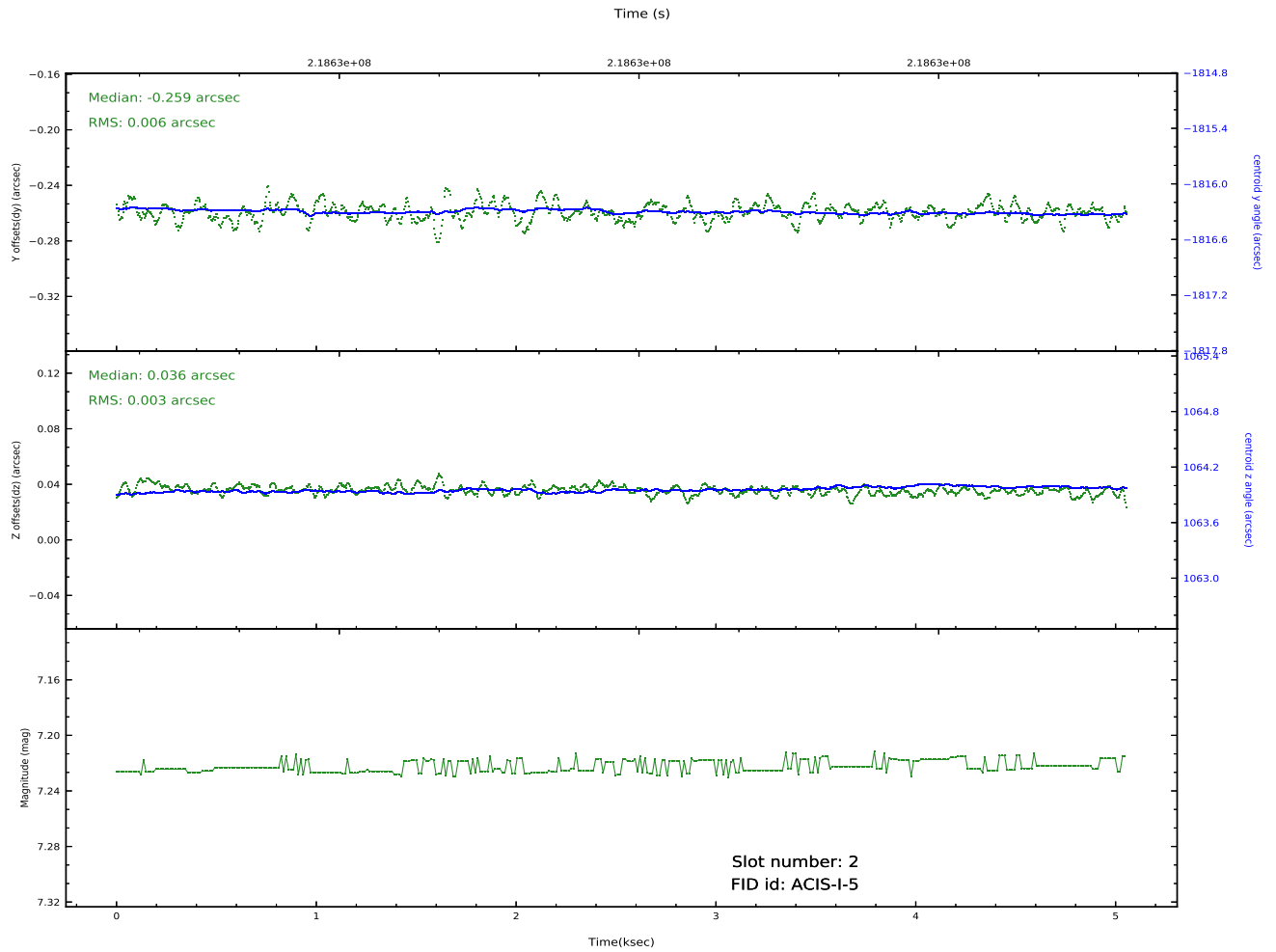
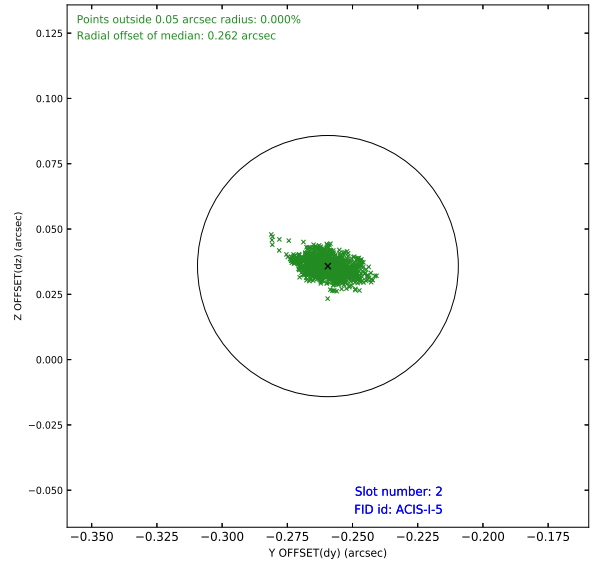
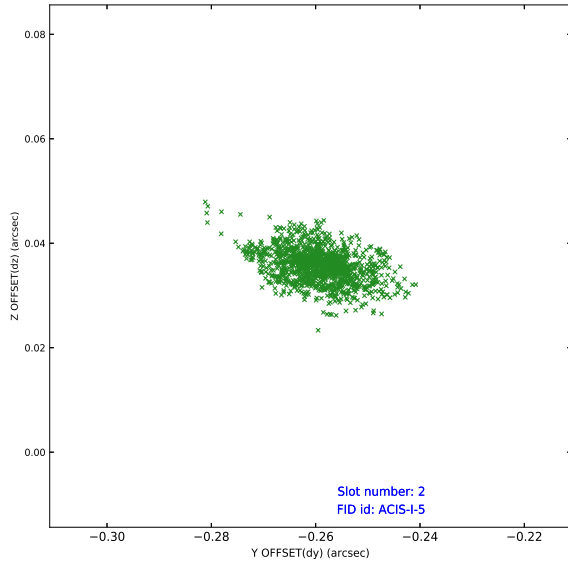
2.5.1 Slot 0



2.5.2 Slot 1



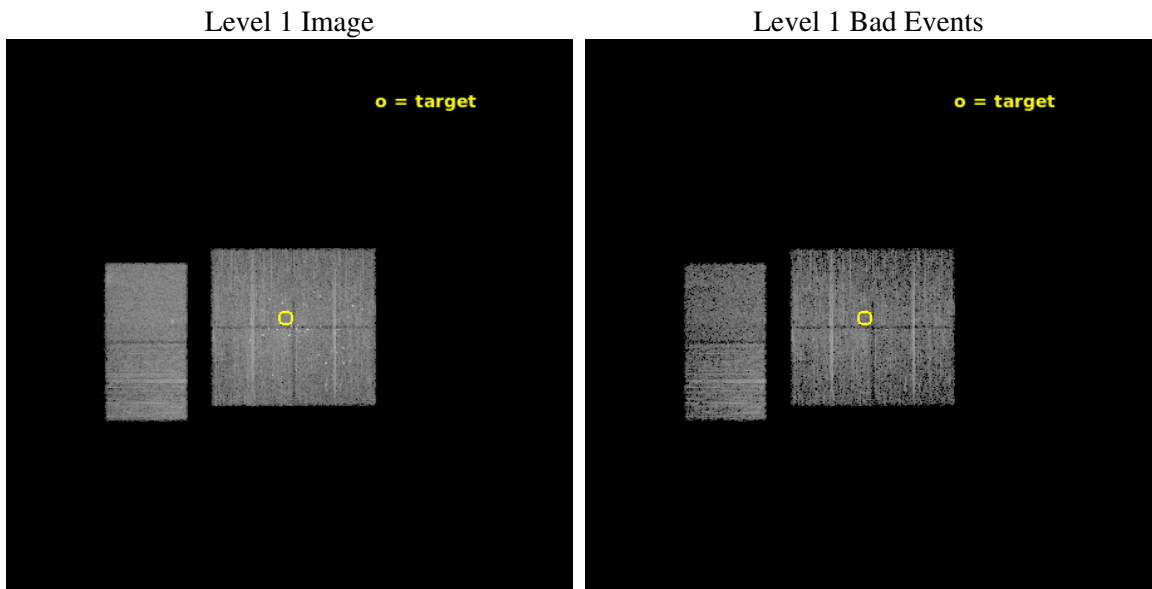
2.5.3 Slot 2



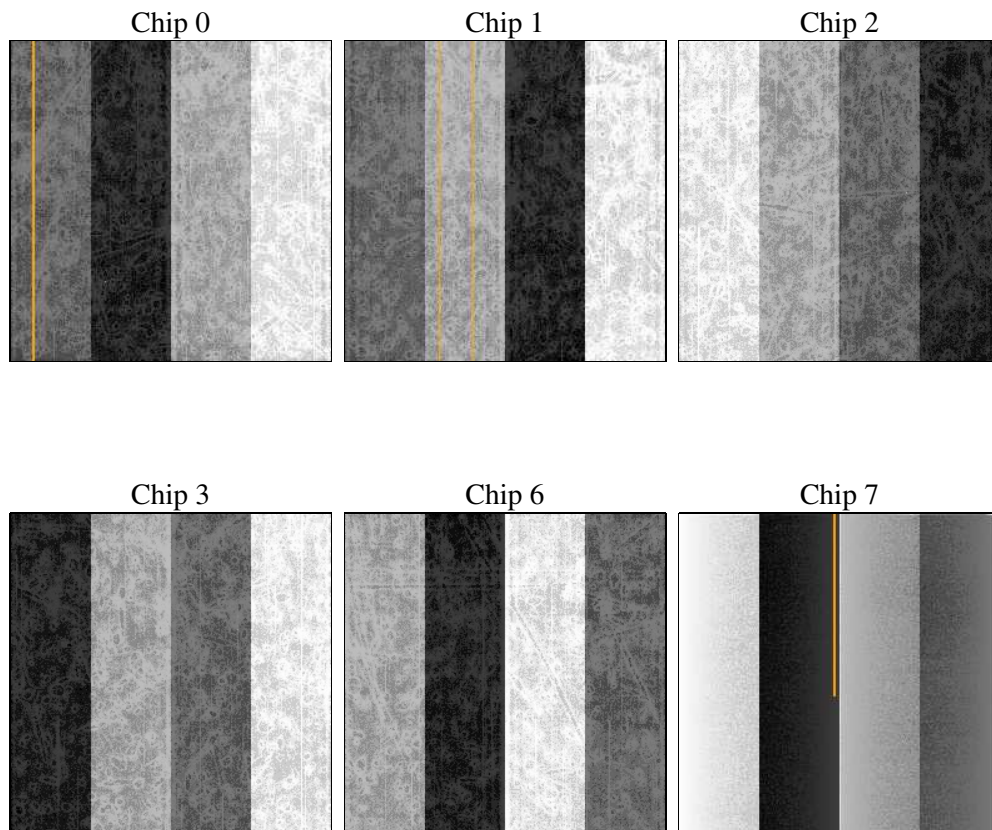
3 OBI Secondary

3.1 OBI

3.1.1 Images



3.1.2 Bias



3.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	4906.362000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	4086.7552683055	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	4086.7552783787	Sum of GTIs [s]
date	2020-10-05T11:26:18	Date and time of file creation	ontime1	4086.7554475367	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	4086.7556366324	Sum of GTIs [s]
			ontime3	4086.7552683055	Sum of GTIs [s]
			ontime6	4086.7552684546	Sum of GTIs [s]
			ontime7	4086.7555274963	Sum of GTIs [s]
			l1events	295990	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	46151	45668	50789	50019	50154	53209	grade 0 events	8846	6093	8014	6608	5567	2543
rejected events	29178	30872	35947	35590	37017	27258		19%	13%	15%	13%	11%	4%
rejected %	63%	67%	70%	71%	73%	51%	grade 1 events	176	42	90	49	27	73
								0%	0%	0%	0%	0%	0%
							grade 2 events	4429	5114	3577	4632	4795	5314
								9%	11%	7%	9%	9%	9%
							grade 3 events	646	571	523	496	476	2219
								1%	1%	1%	0%	0%	4%
							grade 4 events	708	511	707	552	446	2207
								1%	1%	1%	1%	0%	4%
							grade 5 events	1257	1389	1273	1448	1467	4324
								2%	3%	2%	2%	2%	8%
							grade 6 events	2577	2722	2199	2322	2024	14064
								5%	5%	4%	4%	4%	26%
							grade 7 events	27512	29226	34406	33912	35352	22465
								59%	63%	67%	67%	70%	42%

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	5.047217

A.2 Comments

Joint proposal with HST.

Window constraint met.