

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4721 - L2 Version 4
Chandra X-Ray Center

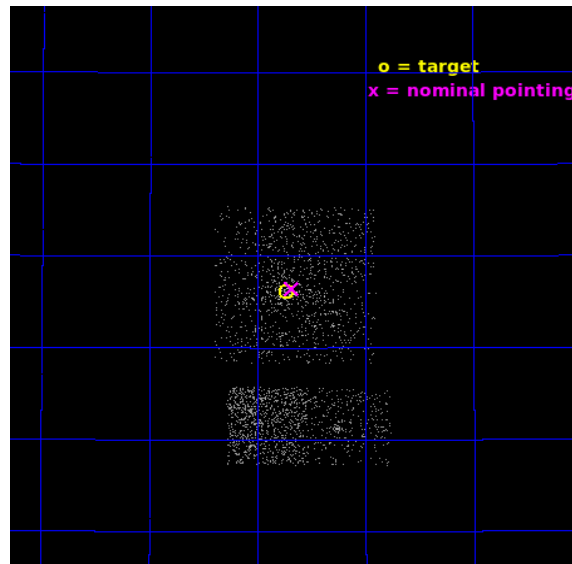
L2 Processing Date : Oct 2 2020

Contents

1	Front	2
2	OBI Primary	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
3	OBI Secondary	17
3.1	OBI	17
3.1.1	Images	17
3.1.2	Bias	17
3.1.3	Parameters	18
3.1.4	Events	18
A	Summary	19
A.1	Status	19
A.2	Comments	19

1 Front

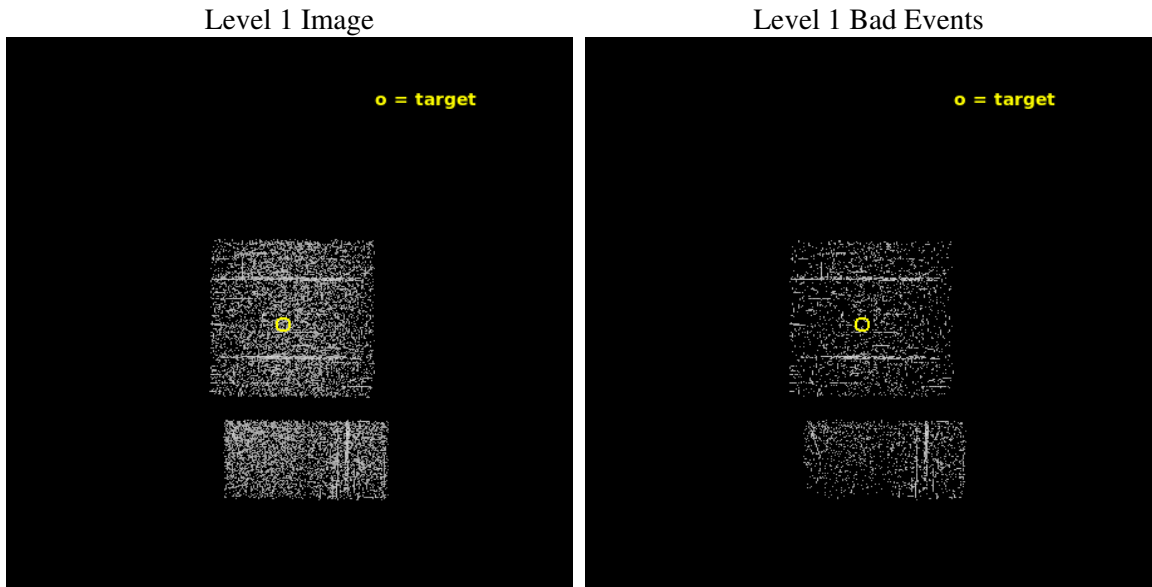
seq_num	600376	Sequence number
obs_id	4721	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.684583	Observer's specified target RA [deg]
dec_targ	41.269	Observer's specified target Dec [deg]
ra_nom	10.670492542527	Nominal RA [deg]
dec_nom	41.273928457734	Nominal Dec [deg]
roll_nom	180.54265070331	Nominal Roll [deg]
revision	4	Processing version of data
ontime	979.0264544487	Sum of GTIs [s]
livetime	154.12237958871	Livetime [s]
ontime0	978.9033344686	Sum of GTIs [s]
ontime1	978.9443744421	Sum of GTIs [s]
ontime2	978.9854144454	Sum of GTIs [s]
ontime3	979.0264544487	Sum of GTIs [s]
ontime6	979.1085344553	Sum of GTIs [s]
ontime7	979.067494452	Sum of GTIs [s]
l2events	2785	Number of level 2 events



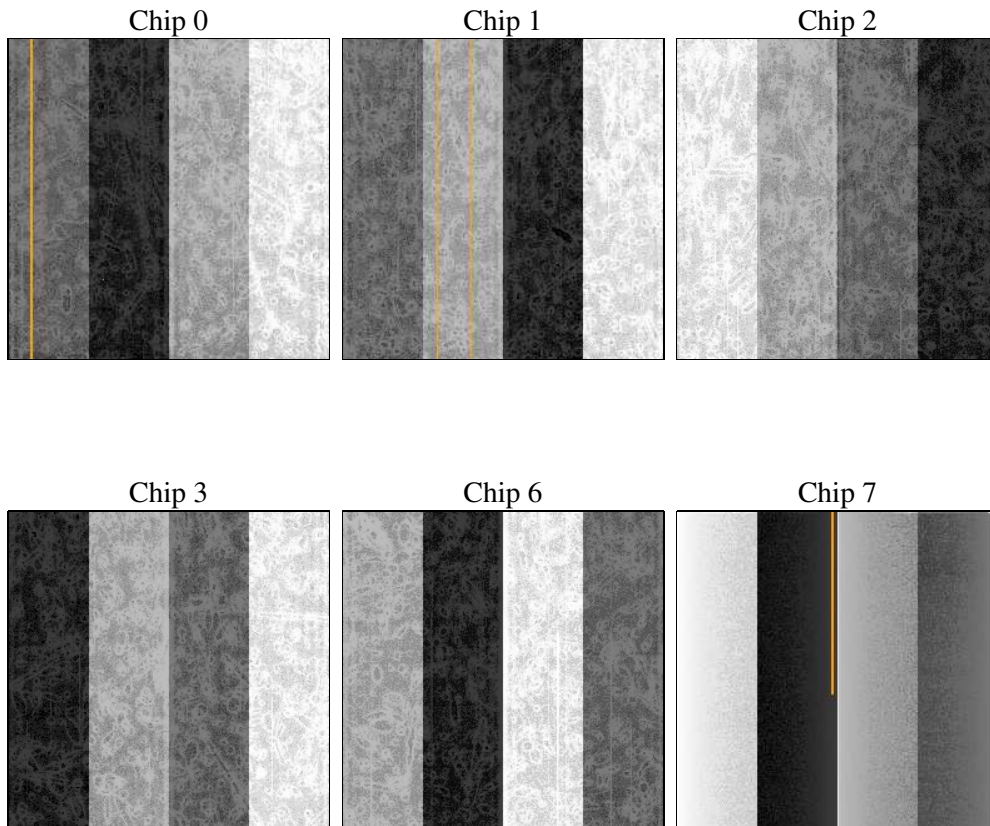
2 OBI Primary

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	979.0264544487	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	978.9033344686	Sum of GTIs [s]
date	2020-10-02T20:45:56	Date and time of file creation	ontime1	978.9443744421	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	978.9854144454	Sum of GTIs [s]
			ontime3	979.0264544487	Sum of GTIs [s]
			ontime6	979.1085344553	Sum of GTIs [s]
			ontime7	979.067494452	Sum of GTIs [s]
			l1events	25223	Number of level 1 events

2.1.4 Events

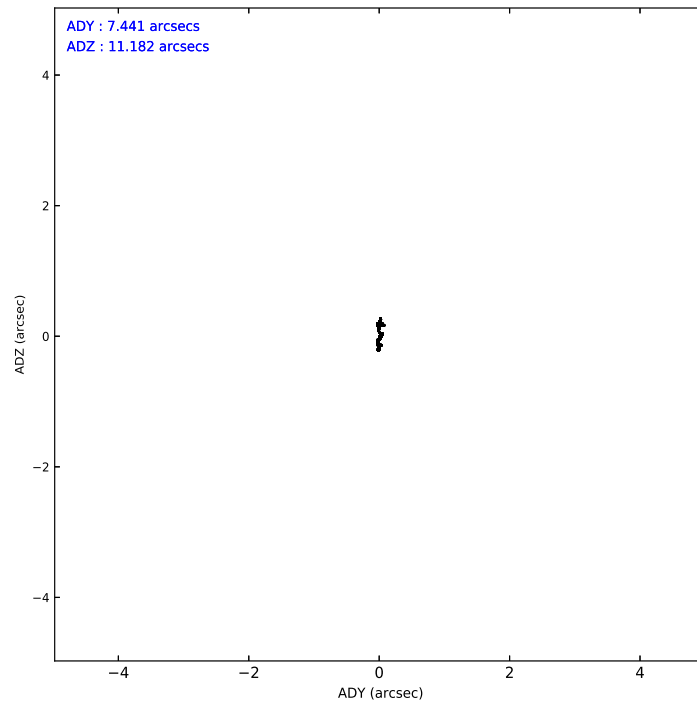
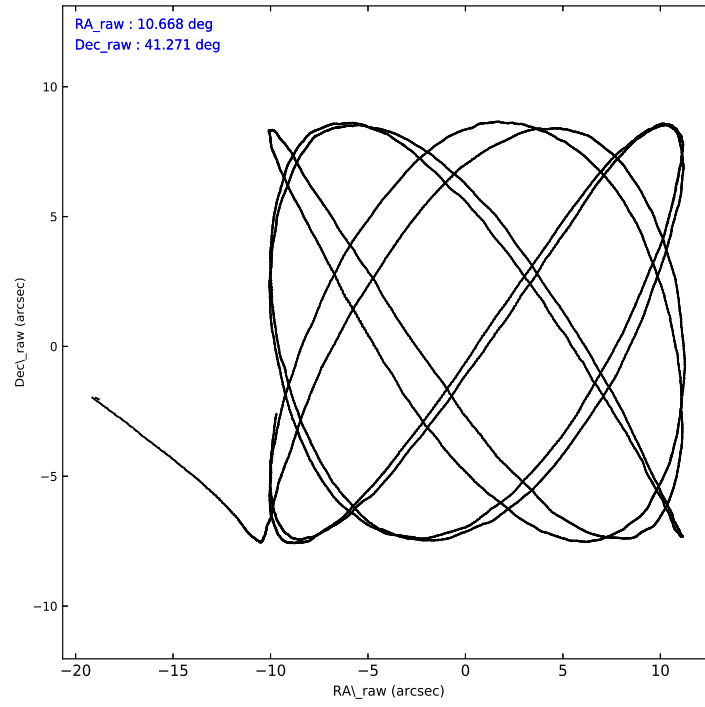
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3906	4010	4188	4173	4653	4293
rejected events	3493	3634	3718	3649	4288	3282
rejected %	89%	90%	88%	87%	92%	76%

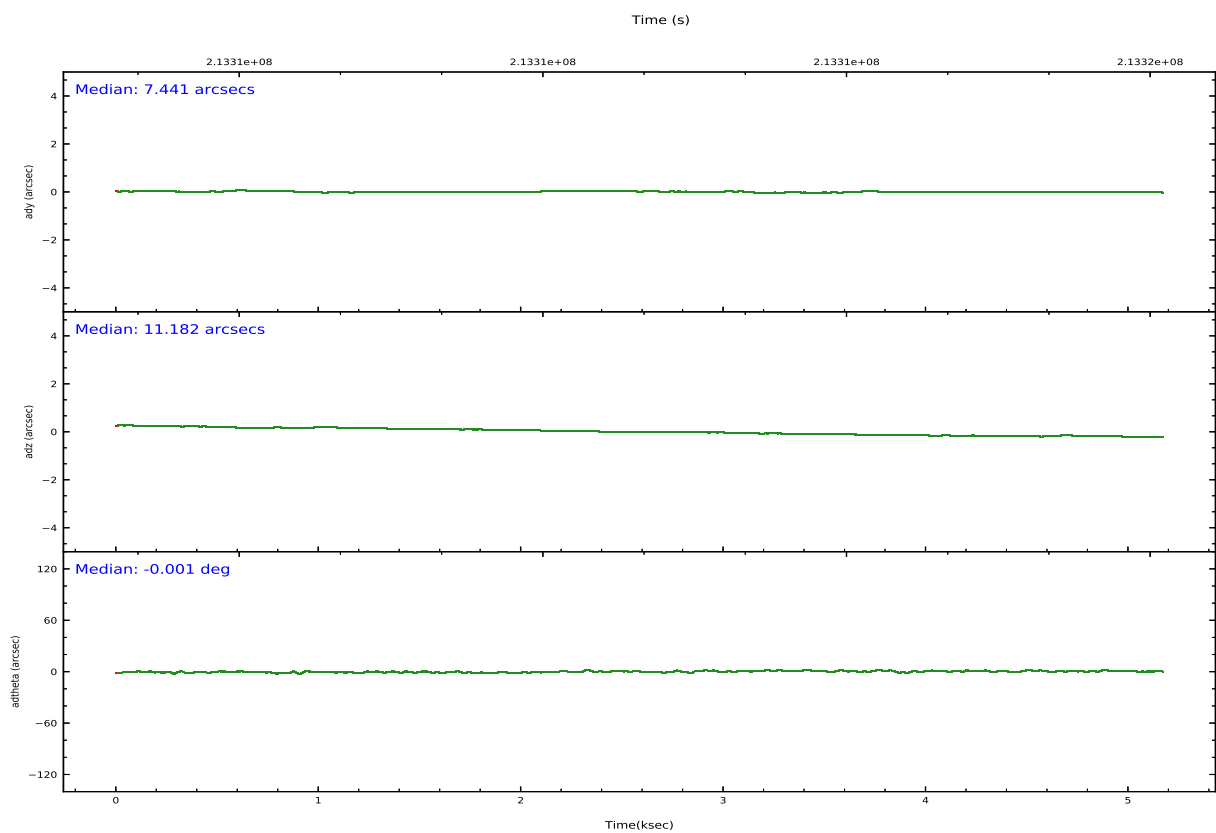
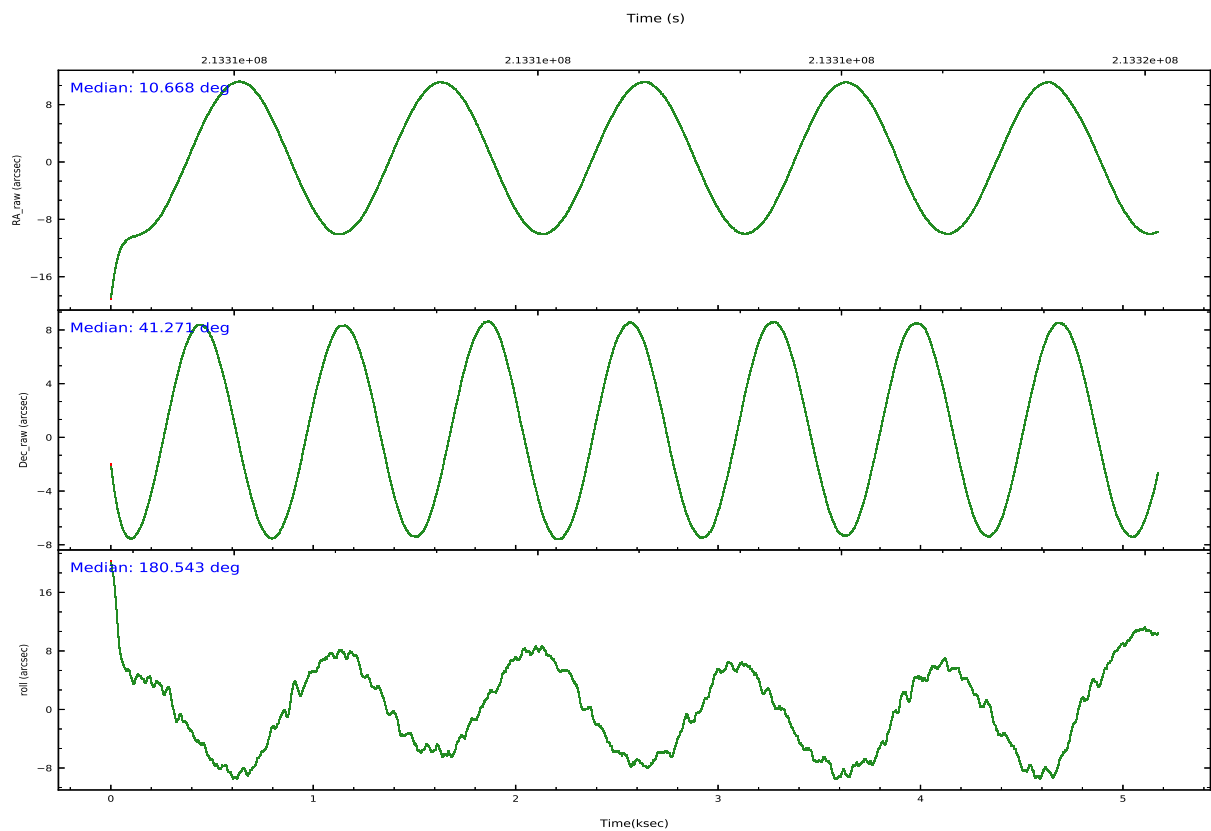
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	184	175	260	341	144	96
	4%	4%	6%	8%	3%	2%
grade 1 events	2	3	2	1	2	4
	0%	0%	0%	0%	0%	0%
grade 2 events	98	74	89	78	84	244
	2%	1%	2%	1%	1%	5%
grade 3 events	43	51	50	50	46	109
	1%	1%	1%	1%	0%	2%
grade 4 events	53	38	51	40	46	99
	1%	0%	1%	0%	0%	2%
grade 5 events	148	124	134	124	153	343
	3%	3%	3%	2%	3%	7%
grade 6 events	90	86	55	65	83	621
	2%	2%	1%	1%	1%	14%
grade 7 events	3288	3459	3547	3474	4095	2777
	84%	86%	84%	83%	88%	64%

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	10.699109	10.670492542527	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.284729	41.273928457734	Alternating exposures requested	Y	Y
[deg] Pointing Roll	180.317643	180.54265070331	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	213235264.184000	213235264.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	213840064.184000	213840064.184000	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)	213311065.184000	213309573.02018			
Observation start date	2004-10-04T21:03:21	2004-10-04T20:39:33			
[s] Observation end time (MET)	213316065.184000	213316677.2955			
Observation end date	2004-10-04T22:26:41	2004-10-04T22:37:57			
Read mode	TIMED	TIMED			

2.3 Aspect



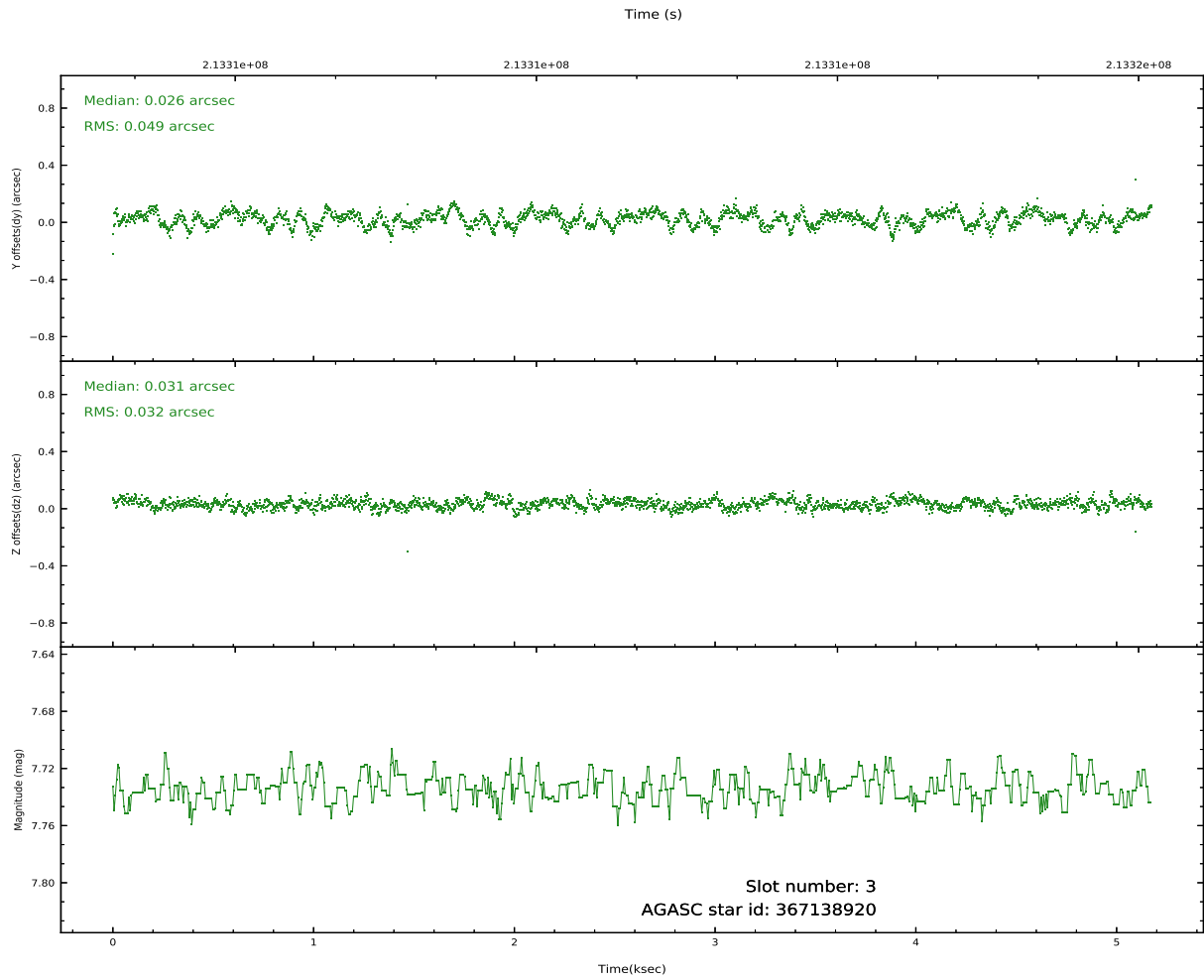
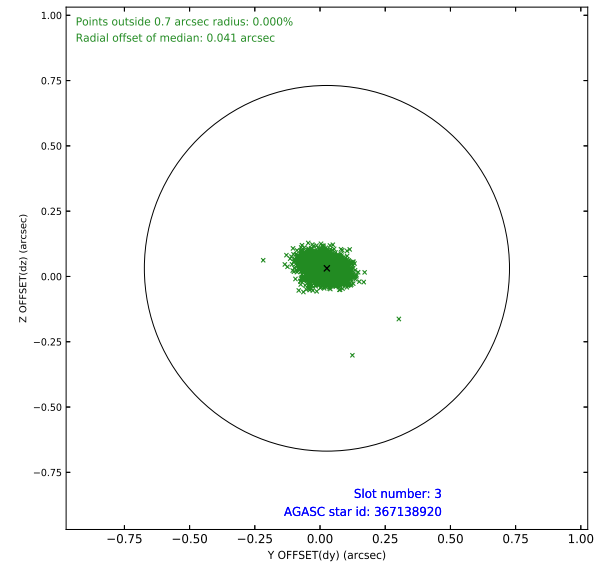
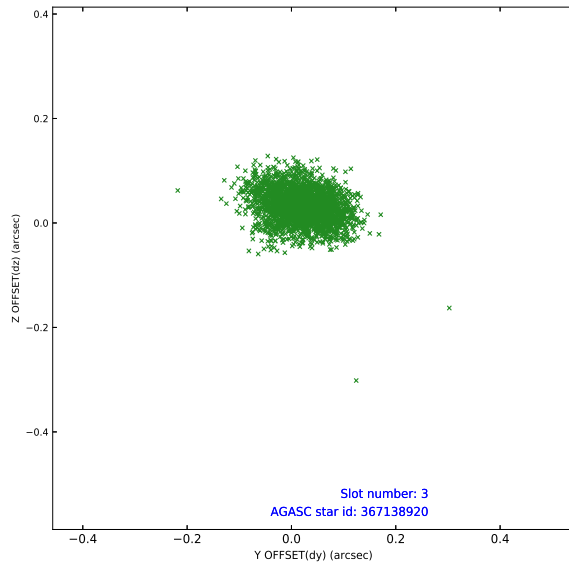


Slot Statistics

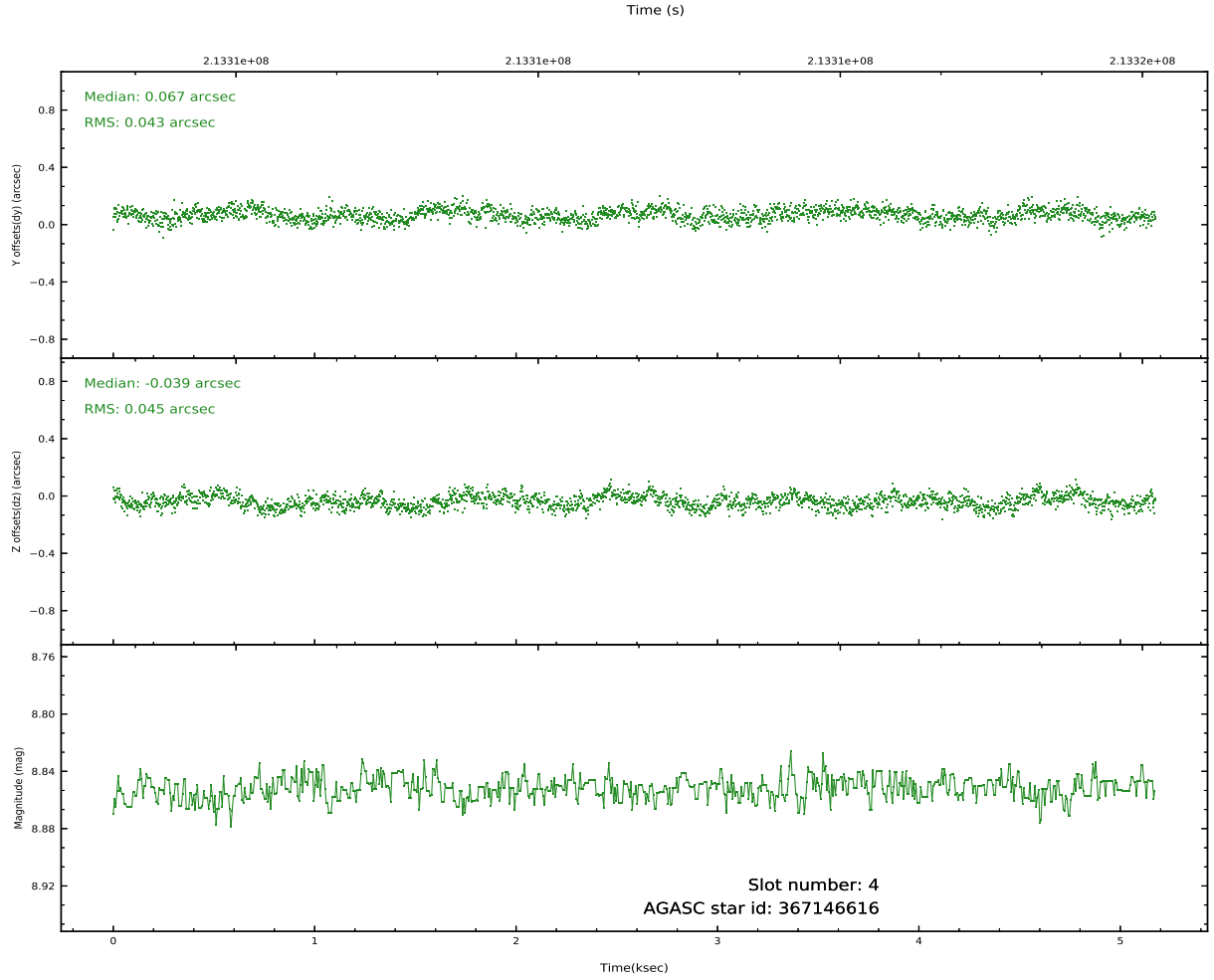
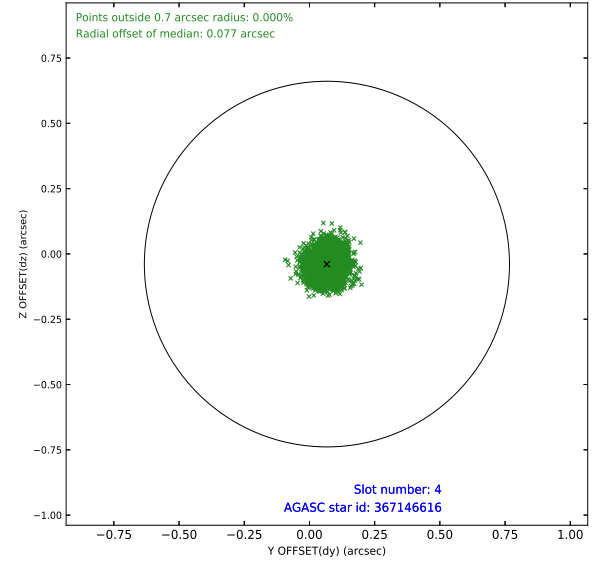
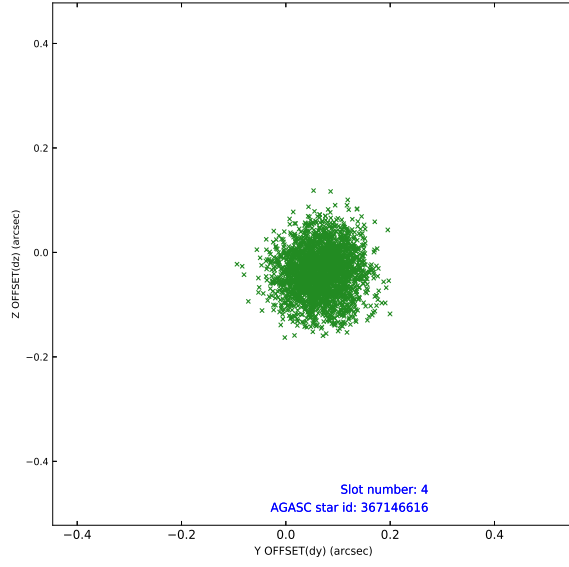
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	1263	1.000	-0.098	-0.073	0.008	0.014	0.000000	0.000000	932.12	-834
1	FID		ACIS-I-4	7.18	1263	1.000	0.067	0.113	0.010	0.016	0.000000	0.000000	2153.00	1064
2	FID		ACIS-I-6	7.25	1262	1.000	-0.065	0.026	0.009	0.016	0.000000	0.000000	399.59	1708
3	GUIDE	used	367138920	7.74	2525	1.000	0.026	0.031	0.061	0.101	11.513485	40.808909	-2210.35	1715
4	GUIDE	used	367146616	8.85	2525	1.000	0.067	-0.039	0.067	0.104	11.418645	41.190163	-1948.37	343
5	GUIDE	used	367663272	9.27	2524	1.000	-0.054	0.004	0.104	0.164	10.656279	41.699429	106.38	-1493
6	GUIDE	used	367674552	8.85	2524	1.000	0.067	0.105	0.068	0.107	11.016238	41.570845	-859.85	-1027
7	GUIDE	used	367148872	7.20	2524	1.000	-0.099	-0.102	0.069	0.107	10.505940	40.688258	538.46	2143

2.4 Star Slots

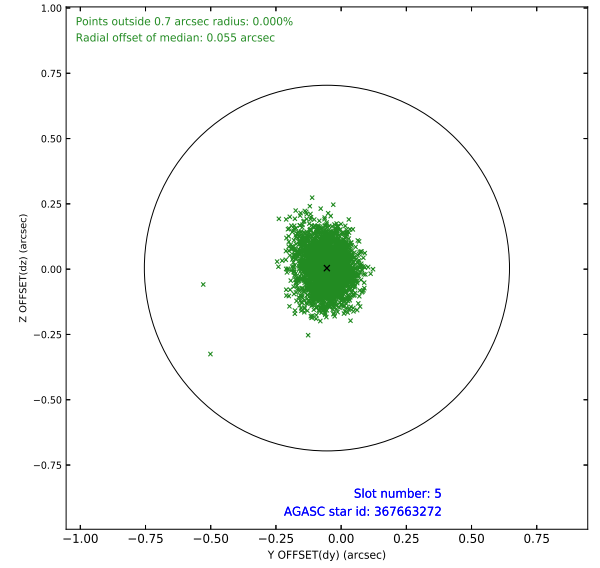
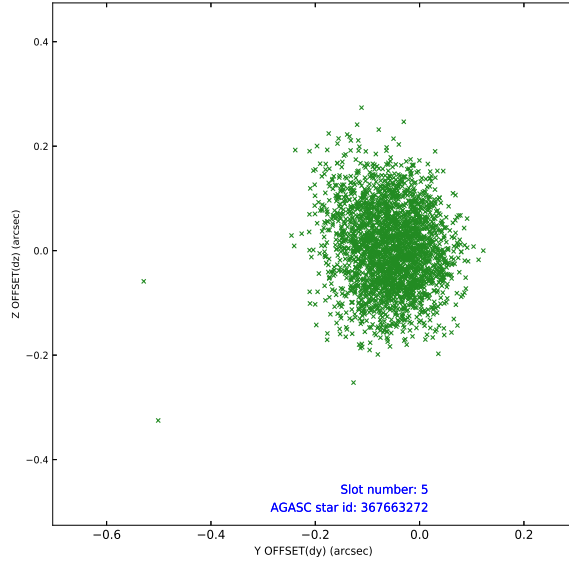
2.4.1 Slot 3



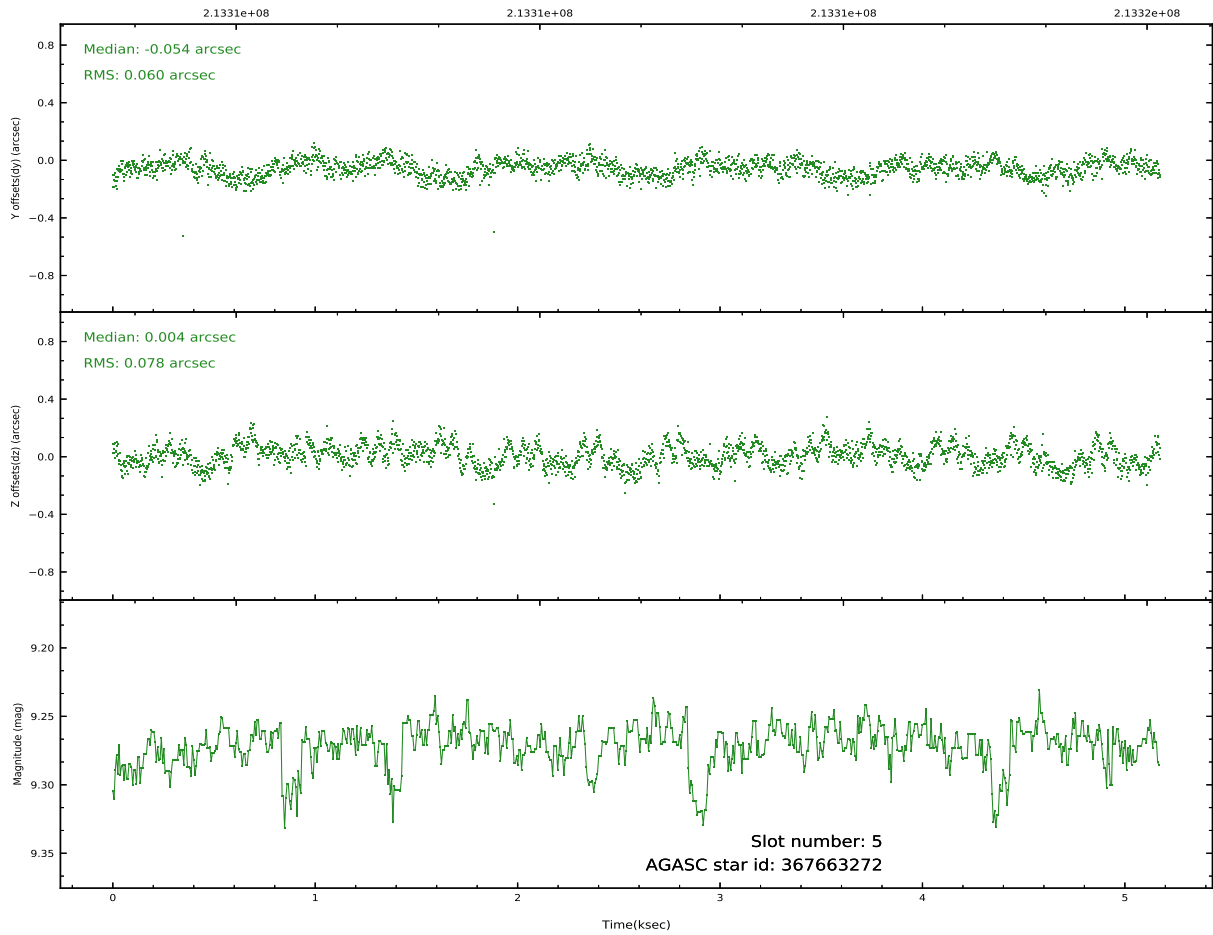
2.4.2 Slot 4



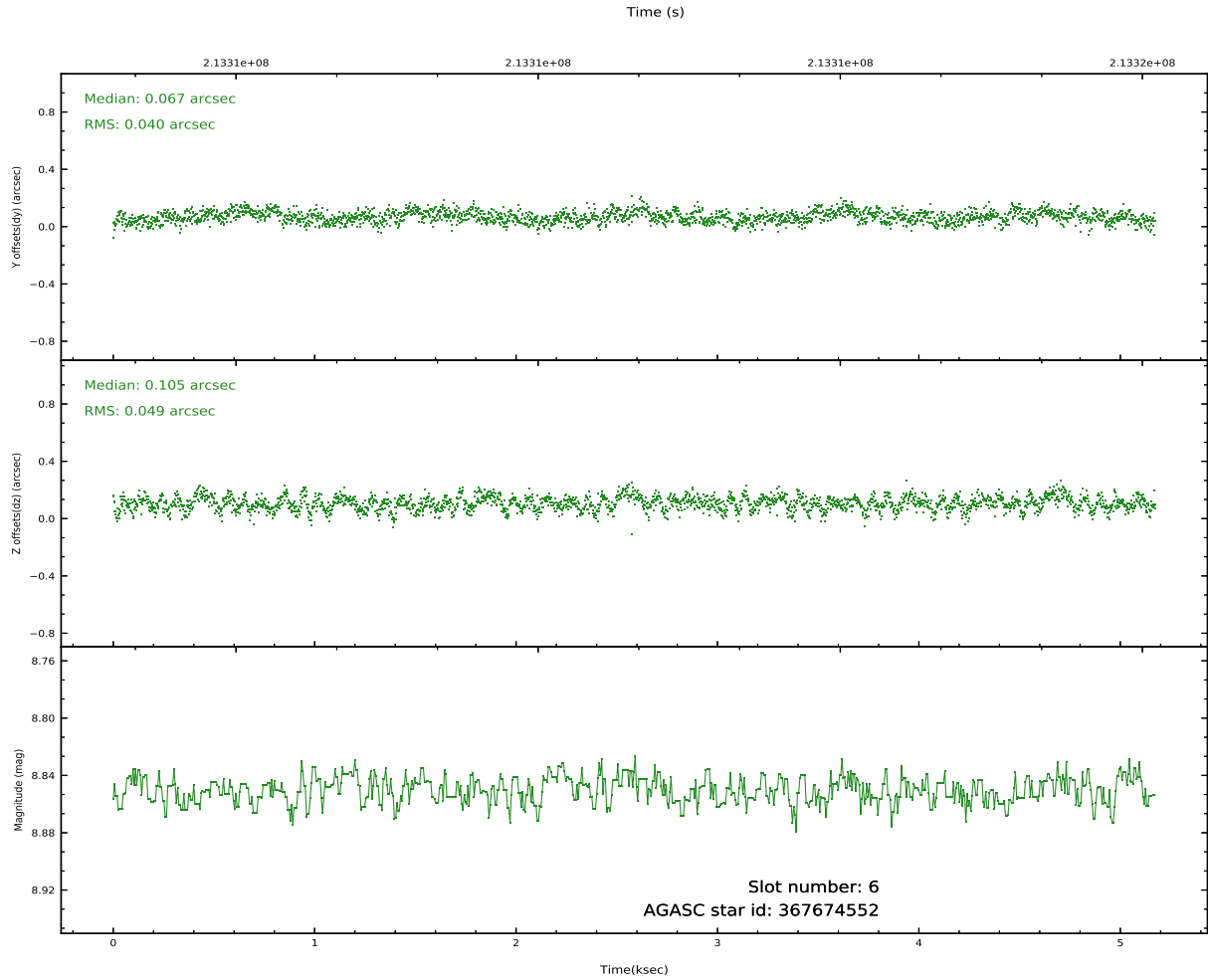
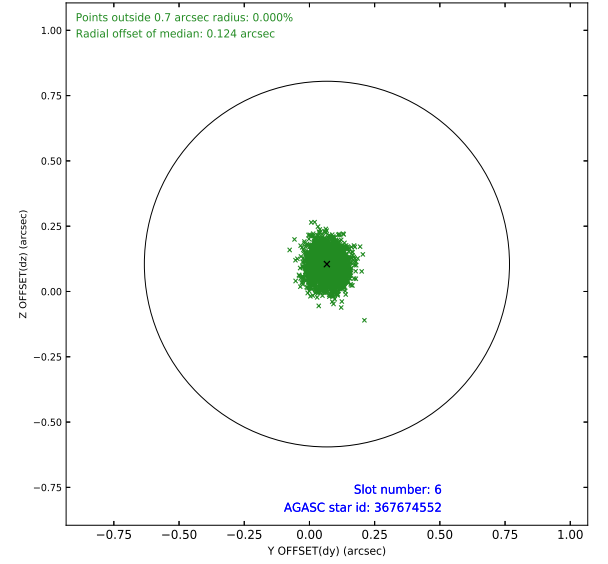
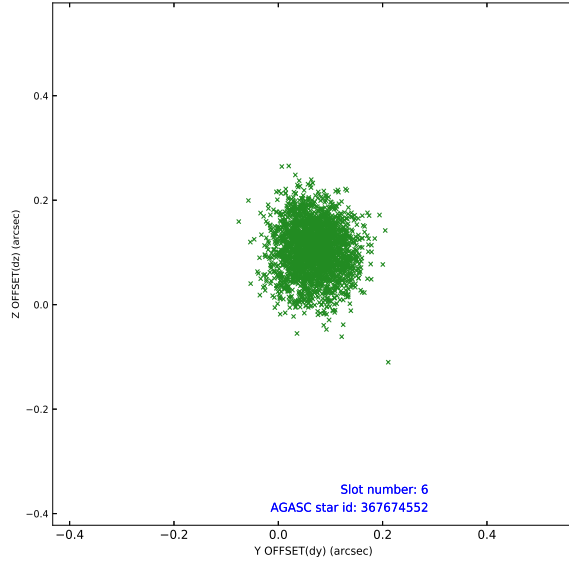
2.4.3 Slot 5



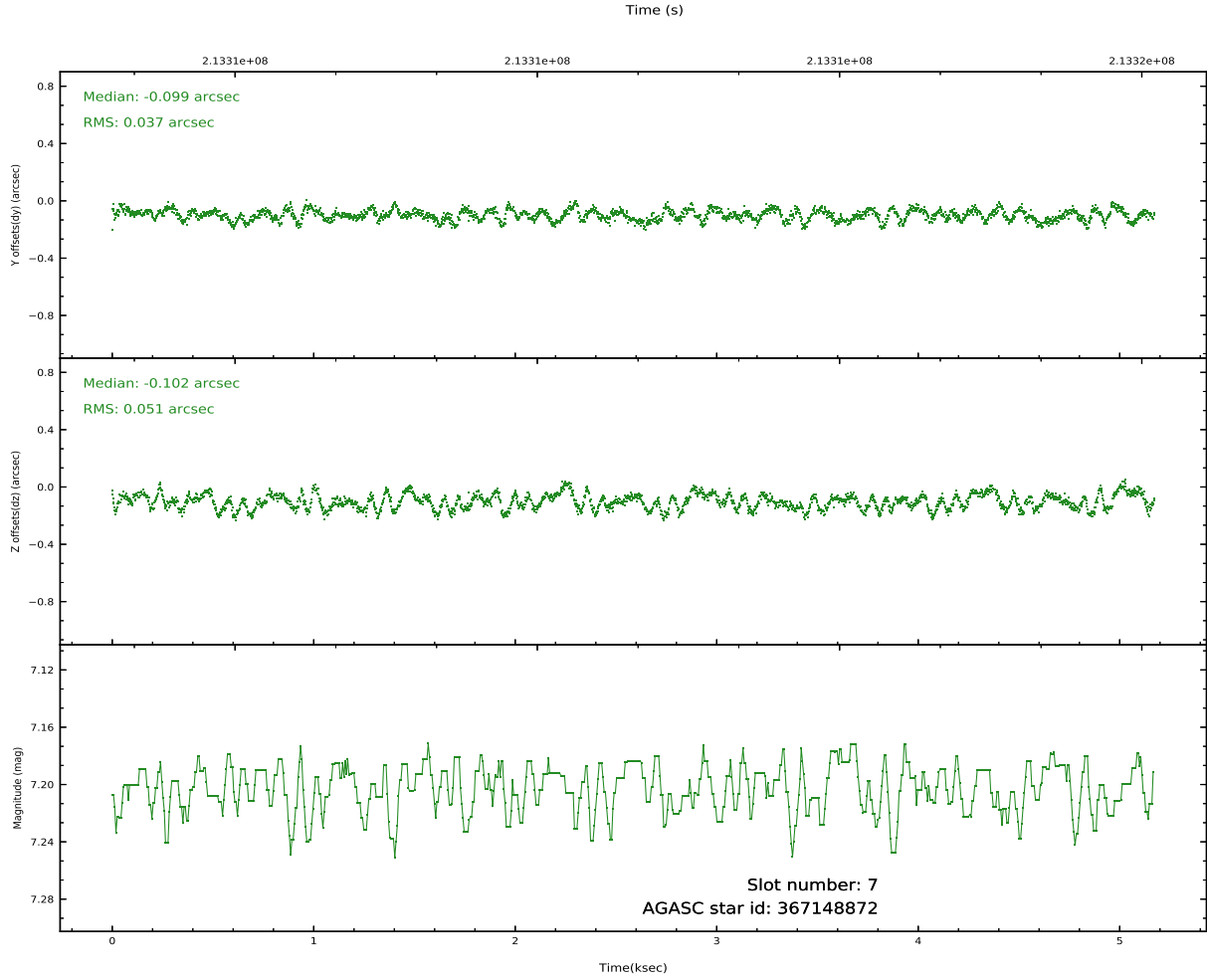
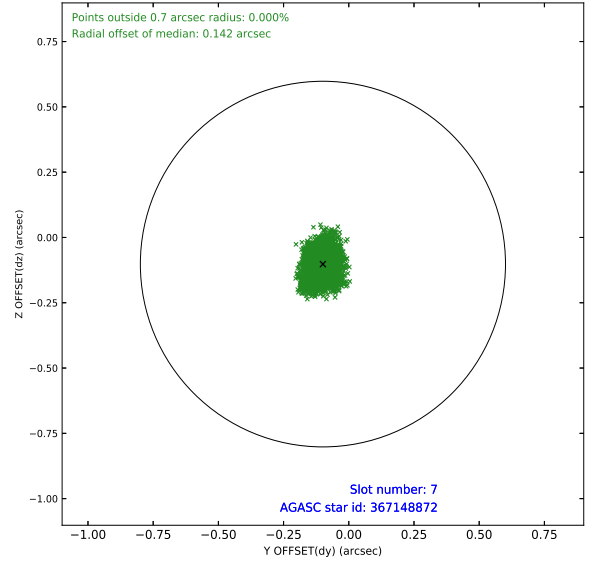
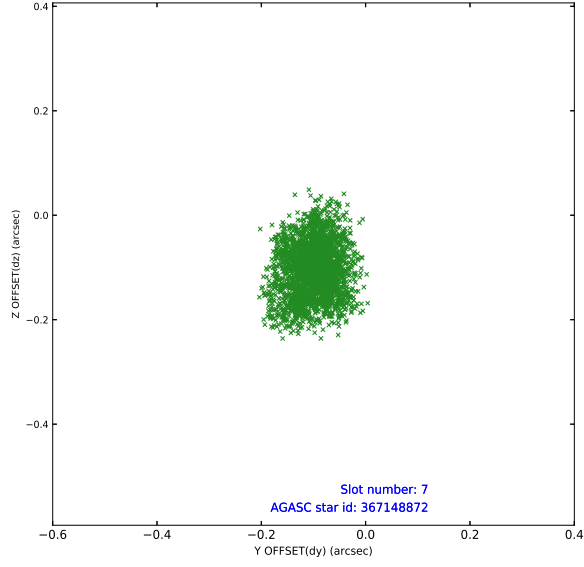
Time (s)



2.4.4 Slot 6

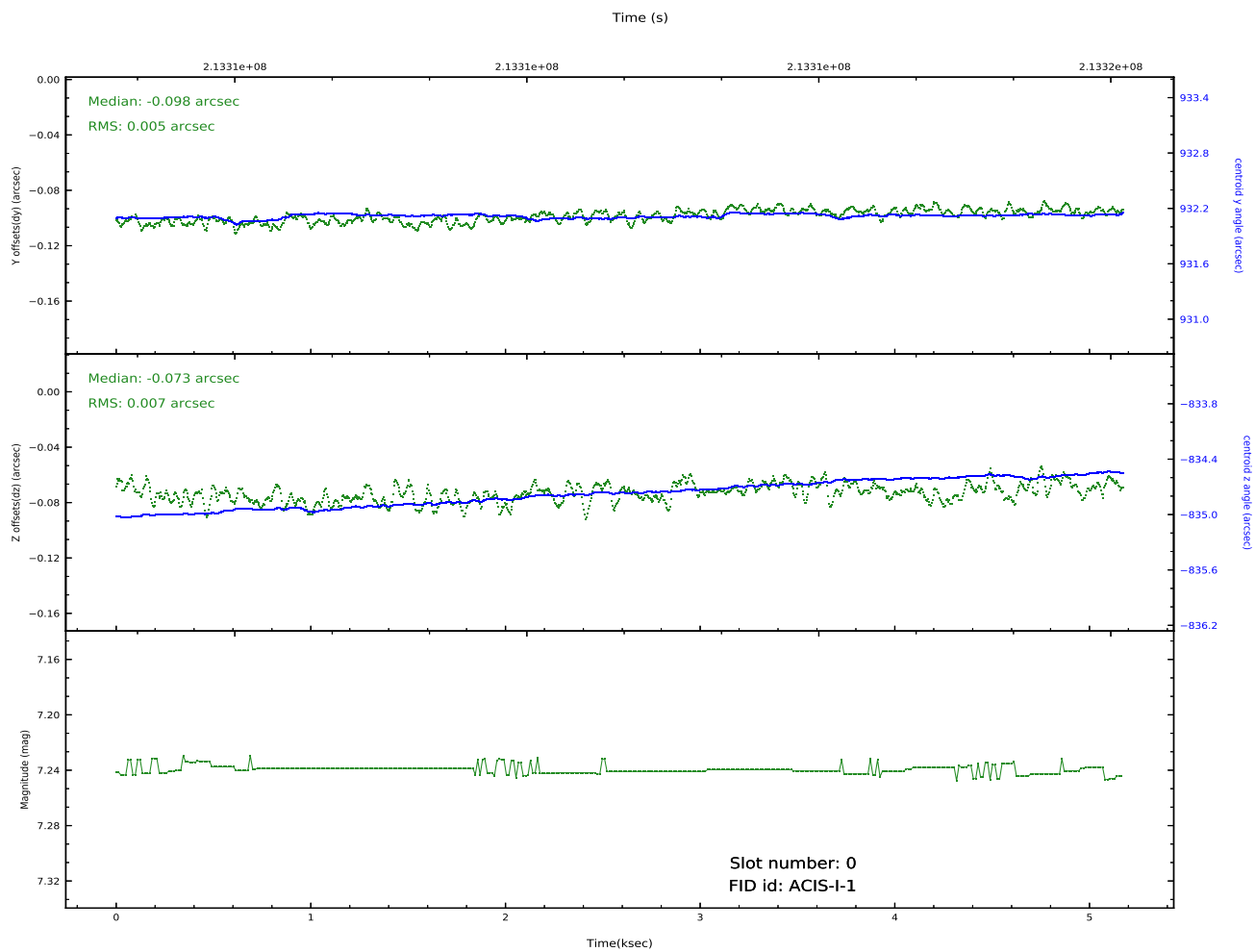
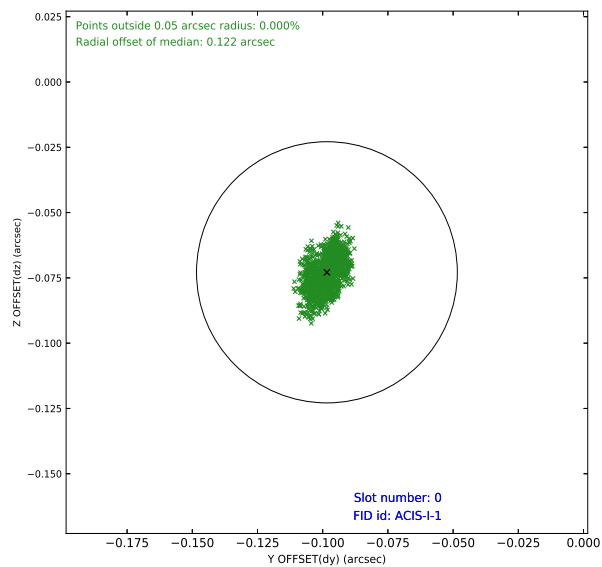
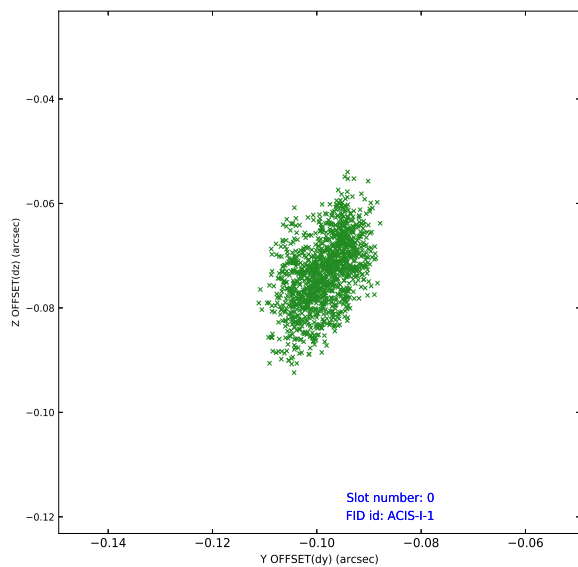


2.4.5 Slot 7

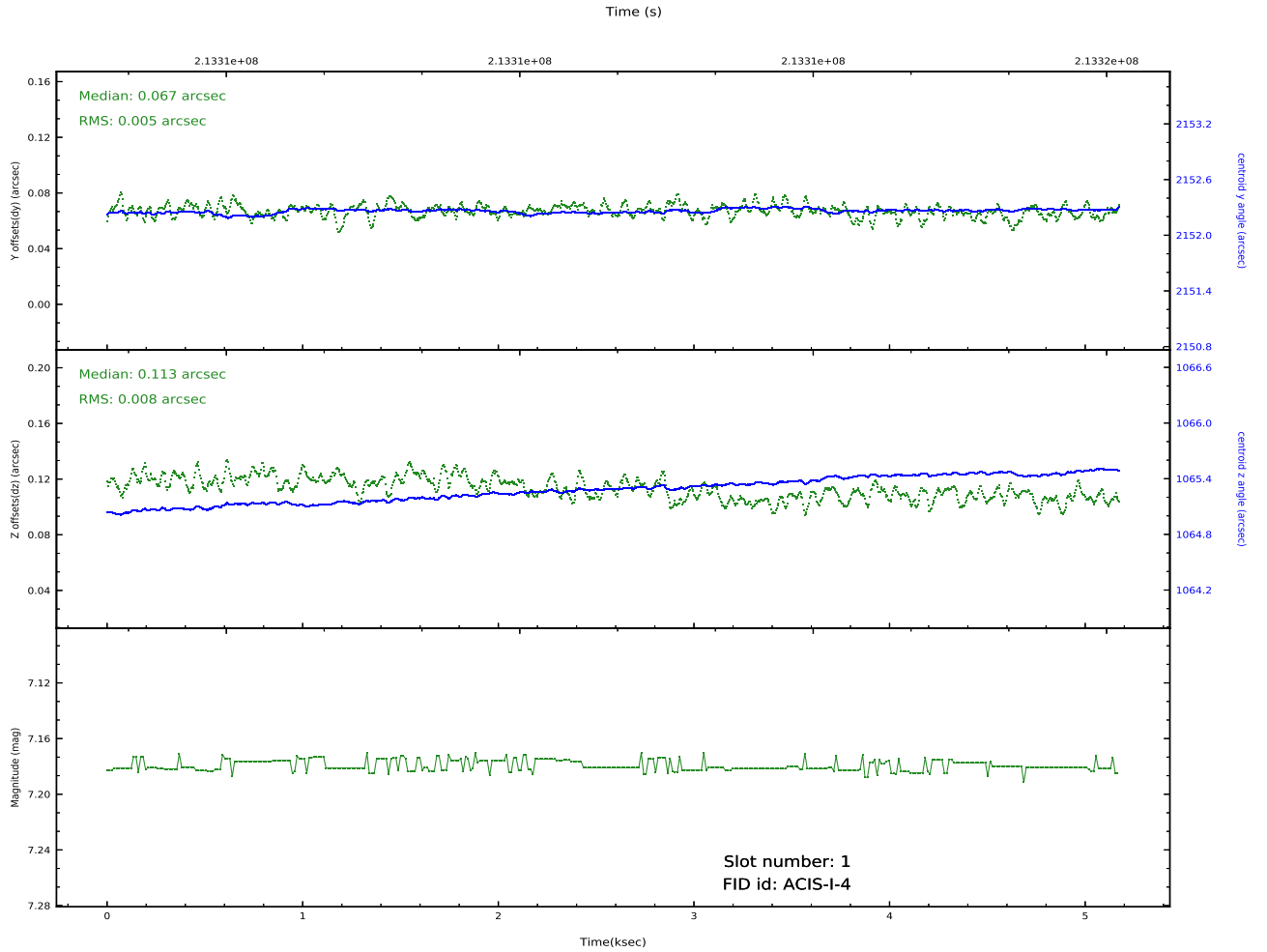
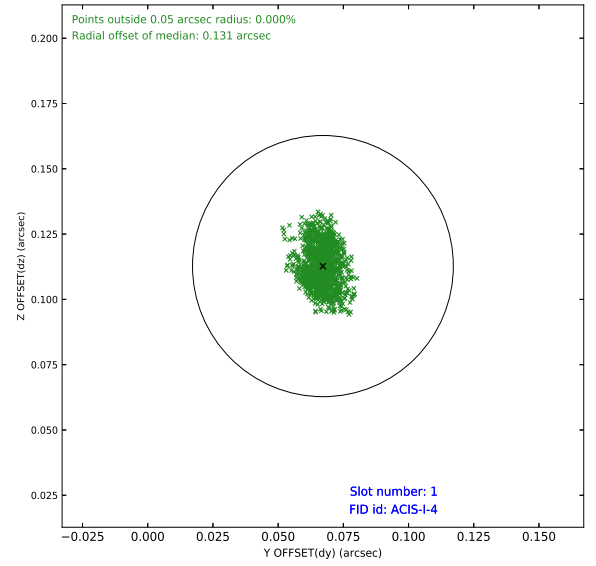
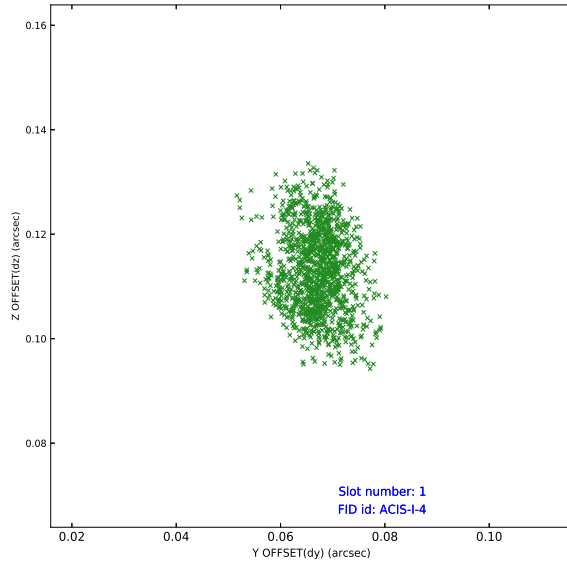


2.5 FID Slots

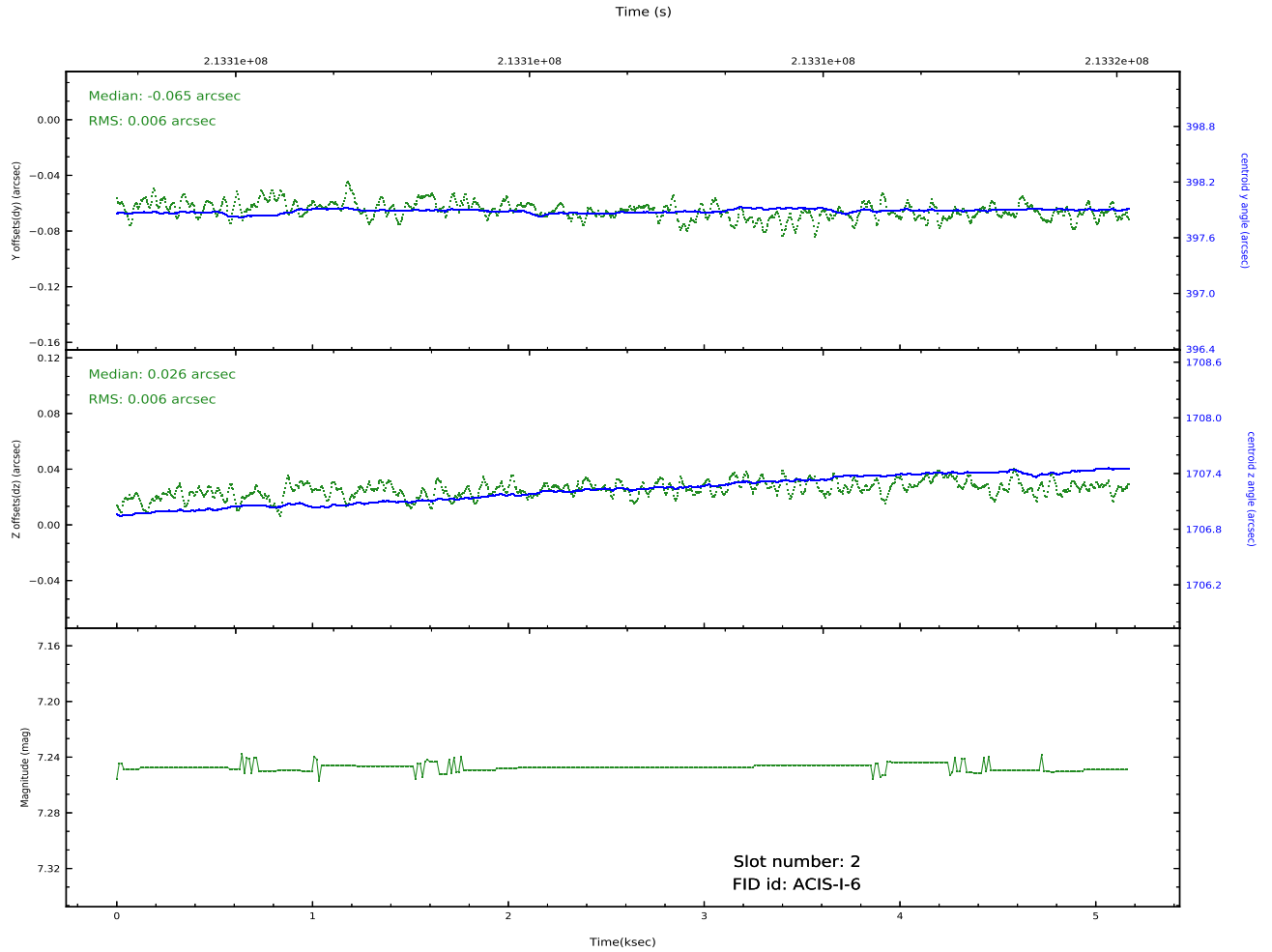
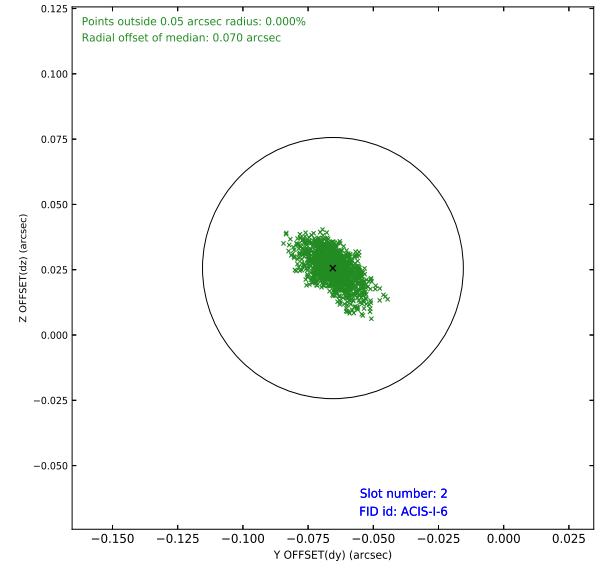
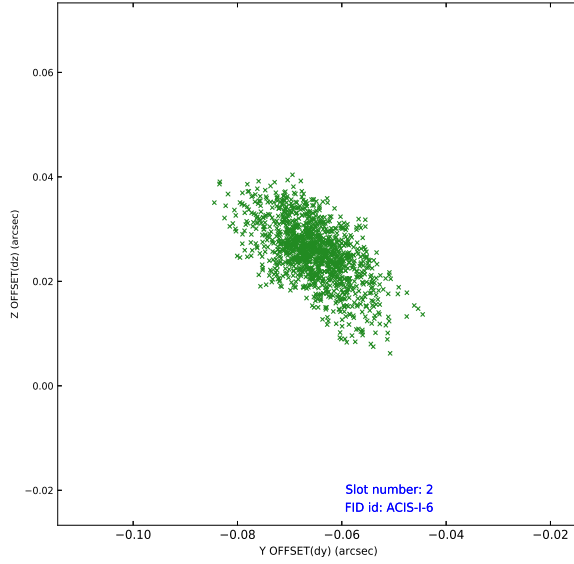
2.5.1 Slot 0



2.5.2 Slot 1



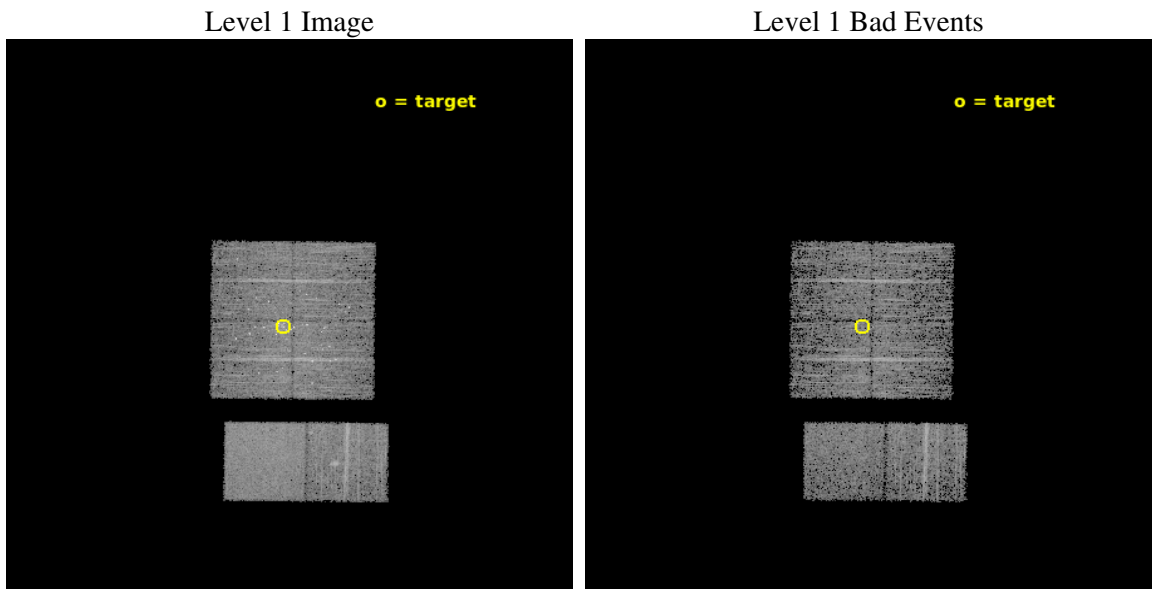
2.5.3 Slot 2



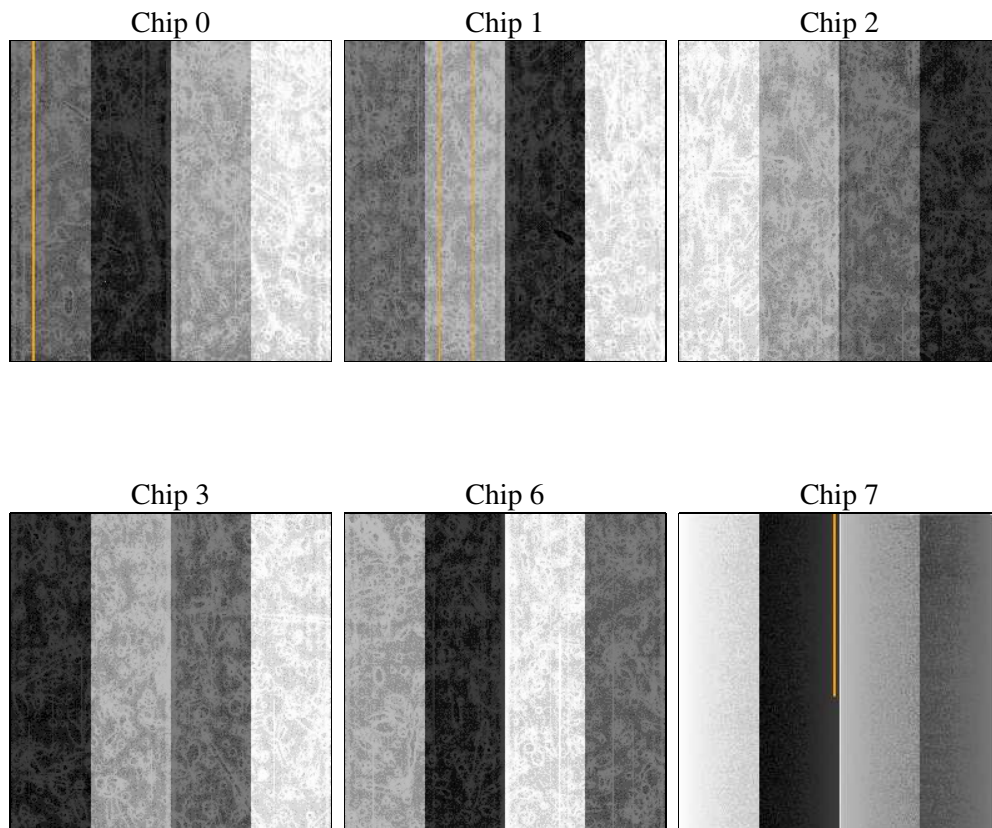
3 OBI Secondary

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	4185.6889540851	Sum of GTIs [s]
caldsver	4.9.2	 	ontime0	4185.6886755526	Sum of GTIs [s]
date	2020-10-02T20:46:39	Date and time of file creation	ontime1	4185.688765049	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	4185.6888647974	Sum of GTIs [s]
			ontime3	4185.6889540851	Sum of GTIs [s]
			ontime6	4185.6887948811	Sum of GTIs [s]
			ontime7	4185.6888447106	Sum of GTIs [s]
			l1events	245085	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	36601	35791	41199	41973	40177	49344	grade 0 events	2850	3253	4613	6635	2618	1775
rejected events	31594	30117	34007	32714	35166	31394		7%	9%	11%	15%	6%	3%
rejected %	86%	84%	82%	77%	87%	63%	grade 1 events	35	24	105	104	23	52
								0%	0%	0%	0%	0%	0%
							grade 2 events	1019	1132	1248	1284	1007	4010
								2%	3%	3%	3%	2%	8%
							grade 3 events	461	457	531	584	490	1738
								1%	1%	1%	1%	1%	3%
							grade 4 events	438	464	526	585	491	1774
								1%	1%	1%	1%	1%	3%
							grade 5 events	1467	1572	1436	1636	1757	4666
								4%	4%	3%	3%	4%	9%
							grade 6 events	766	904	828	920	936	10908
								2%	2%	2%	2%	2%	22%
							grade 7 events	29565	27985	31912	30225	32855	24421
								80%	78%	77%	72%	81%	49%

A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.04
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.164

A.2 Comments

Joint proposal with HST.

Window constraint met.