

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4719 - L2 Version 4
Chandra X-Ray Center

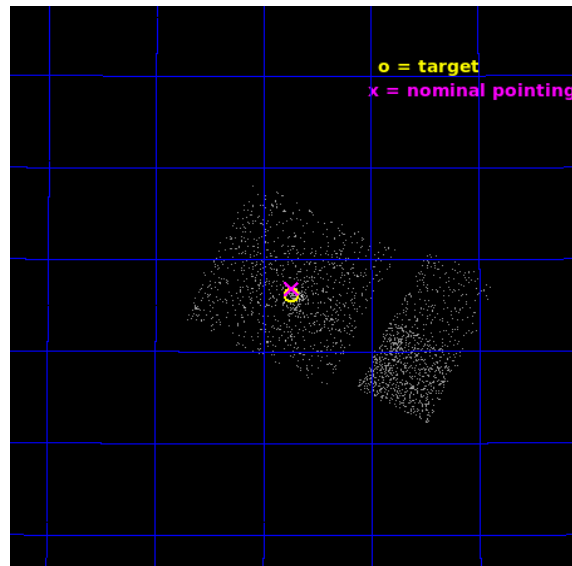
L2 Processing Date : Sep 27 2020

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1 Front

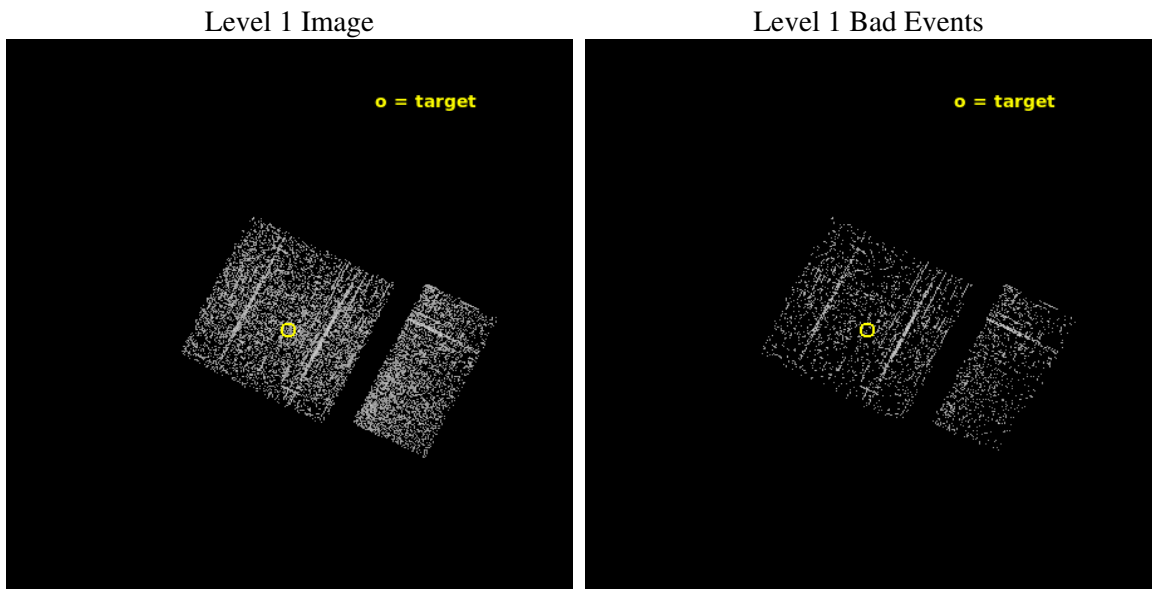
seq_num	600374	Sequence number
obs_id	4719	Observation id
title	Black Hole X-ray Novae in M31	Proposal title
observer	Dr. Michael Garcia	Principal investigator
object	M31 Center	Source name
dtcycle	0	
cycle	P	events are from which exps? P[primary] S[econdar
ra_targ	10.684583	Observer's specified target RA [deg]
dec_targ	41.269	Observer's specified target Dec [deg]
ra_nom	10.683508004629	Nominal RA [deg]
dec_nom	41.280729860632	Nominal Dec [deg]
roll_nom	116.82616487016	Nominal Roll [deg]
revision	4	Processing version of data
ontime	981.51694083214	Sum of GTIs [s]
livetime	154.51444221991	Livetime [s]
ontime0	981.51694083214	Sum of GTIs [s]
ontime1	981.51694083214	Sum of GTIs [s]
ontime2	981.51694083214	Sum of GTIs [s]
ontime3	981.51694083214	Sum of GTIs [s]
ontime6	981.51694083214	Sum of GTIs [s]
ontime7	981.51694083214	Sum of GTIs [s]
l2events	2533	Number of level 2 events



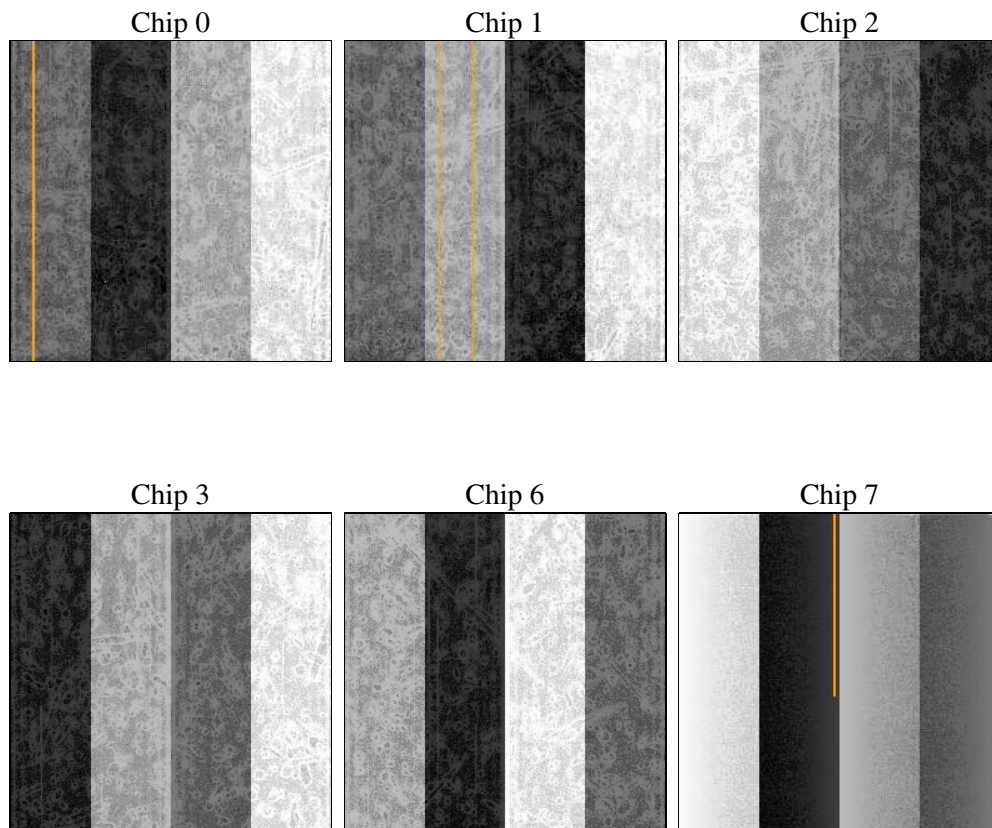
2 OBI Primary

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	981.51694083214	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	981.51694083214	Sum of GTIs [s]
date	2020-09-27T13:00:50	Date and time of file creation	ontime1	981.51694083214	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	981.51694083214	Sum of GTIs [s]
			ontime3	981.51694083214	Sum of GTIs [s]
			ontime6	981.51694083214	Sum of GTIs [s]
			ontime7	981.51694083214	Sum of GTIs [s]
			l1events	27060	Number of level 1 events

2.1.4 Events

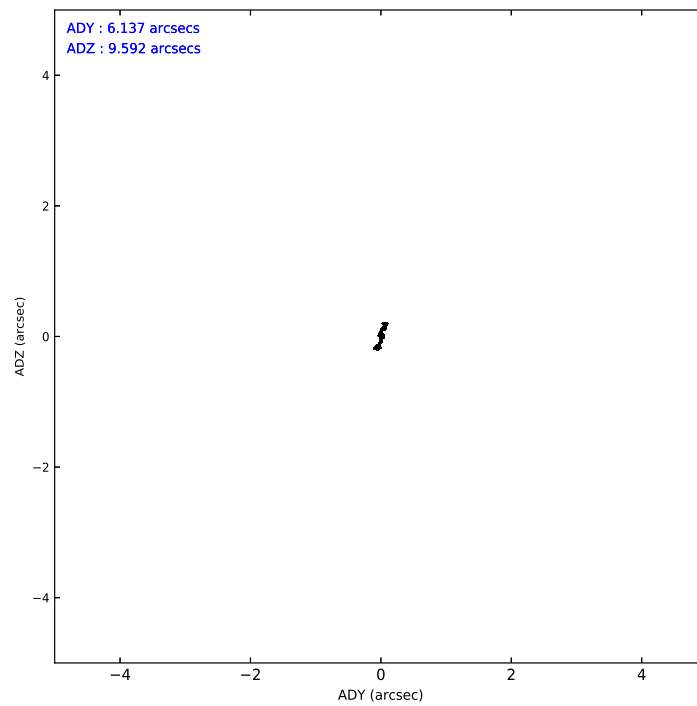
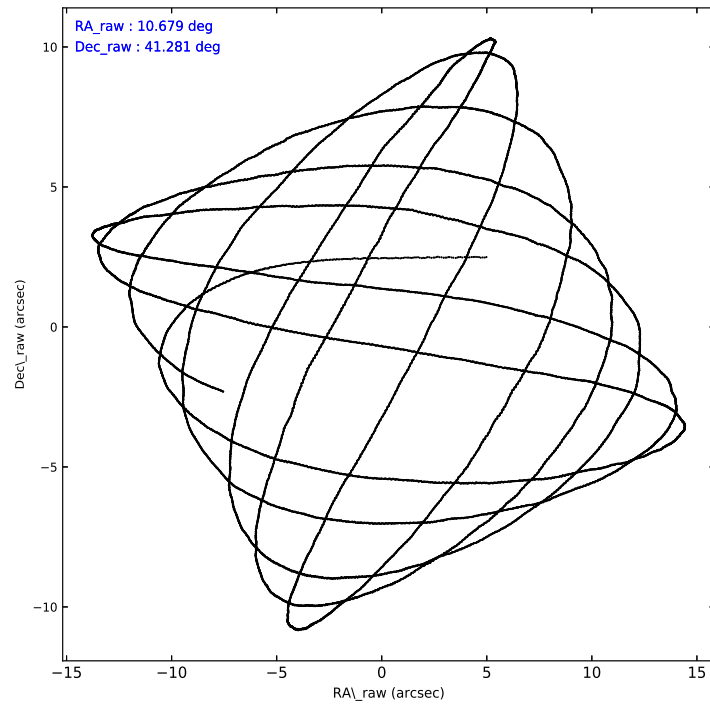
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	3926	4154	5017	4764	4781	4418
rejected events	3595	3763	4678	4174	4510	3473
rejected %	91%	90%	93%	87%	94%	78%

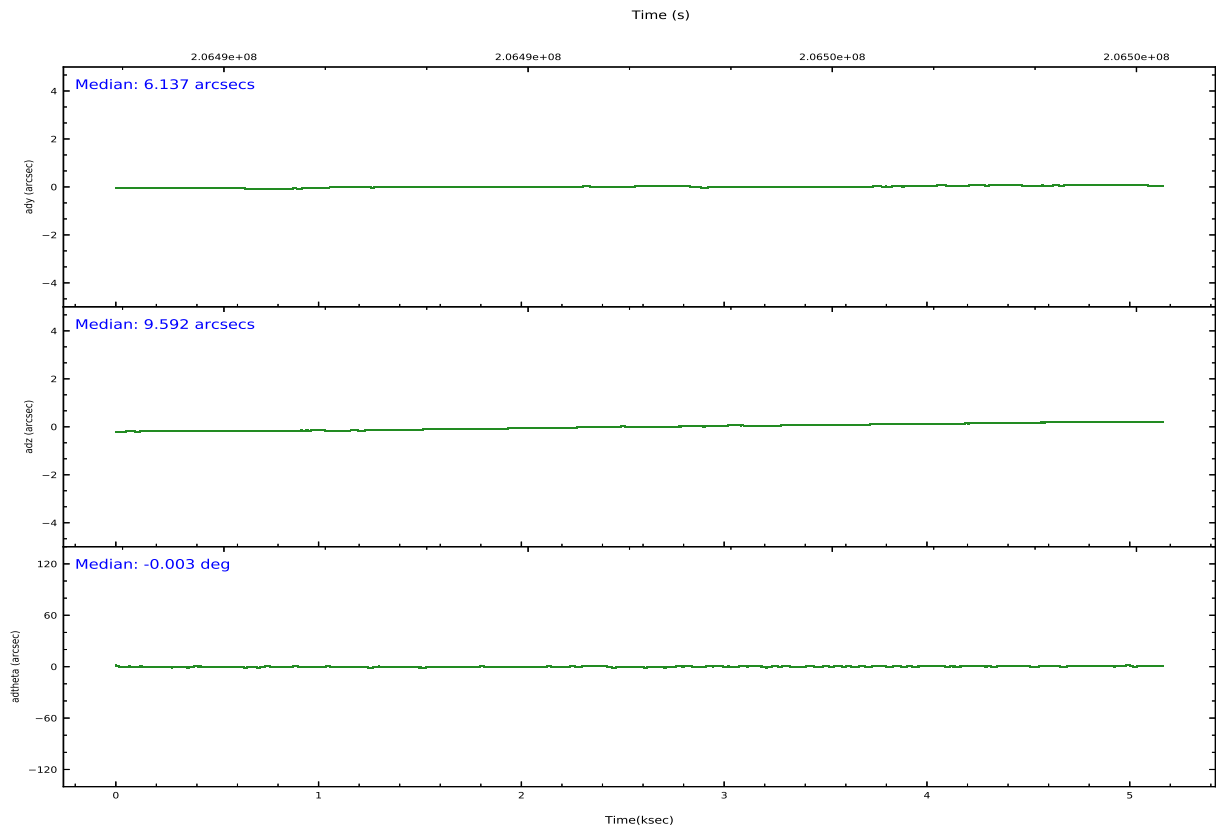
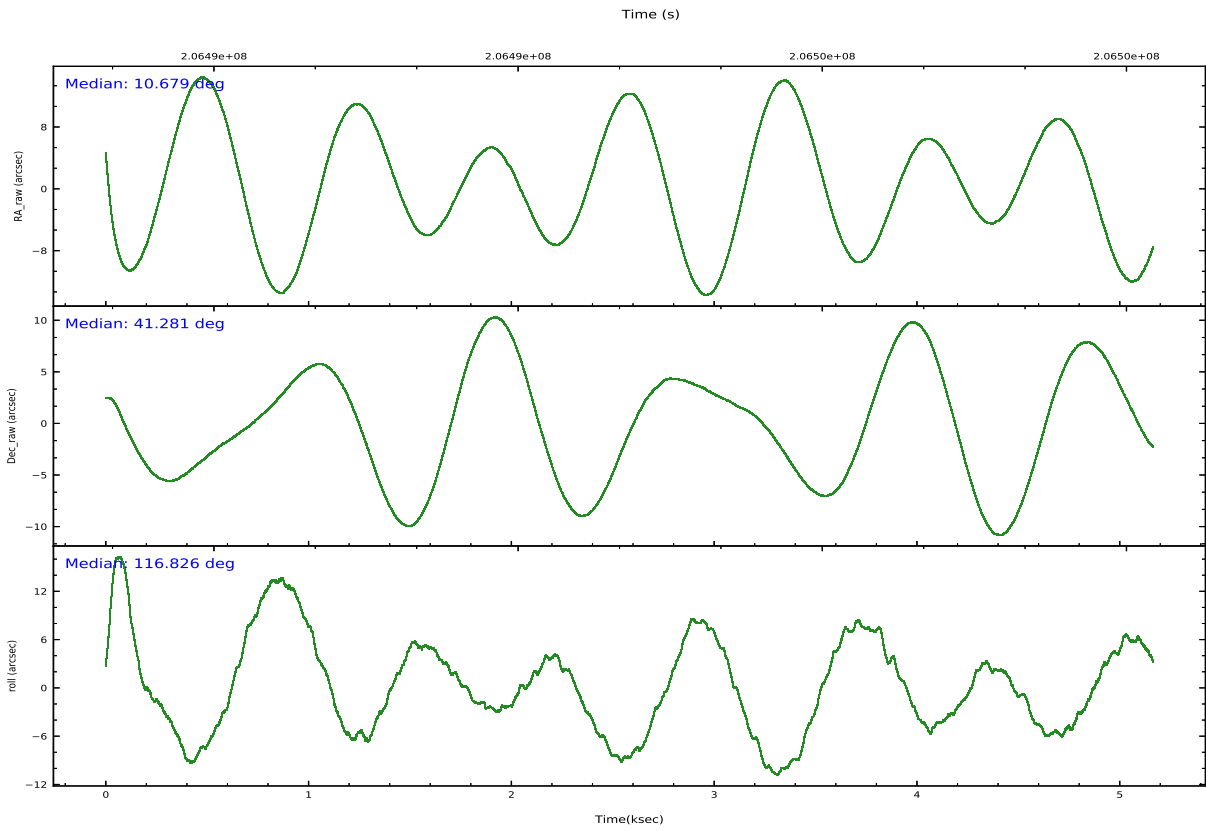
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	147	193	200	381	95	126
	3%	4%	3%	7%	1%	2%
grade 1 events	2	1	2	9	2	4
	0%	0%	0%	0%	0%	0%
grade 2 events	81	97	89	125	78	264
	2%	2%	1%	2%	1%	5%
grade 3 events	64	63	34	62	42	124
	1%	1%	0%	1%	0%	2%
grade 4 events	48	54	42	44	44	124
	1%	1%	0%	0%	0%	2%
grade 5 events	127	135	129	164	147	403
	3%	3%	2%	3%	3%	9%
grade 6 events	67	82	57	63	91	616
	1%	1%	1%	1%	1%	13%
grade 7 events	3390	3529	4464	3916	4282	2757
	86%	84%	88%	82%	89%	62%

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	10.709779	10.683508004629	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.266185	41.280729860632	Alternating exposures requested	Y	Y
[deg] Pointing Roll	116.600666	116.82616487016	[s] Primary exposure time	0.600000	0.6
[s] Window start time (MET)	205977664.184000	205977664.184000	[s] Secondary exposure time	0.000000	3.2
[s] Window stop time (MET)	206582464.184000	206582464.184000	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)	206492132.184000	206490236.44135			
Observation start date	2004-07-17T22:54:28	2004-07-17T22:23:56			
[s] Observation end time (MET)	206497132.184000	206497910.10419			
Observation end date	2004-07-18T00:17:48	2004-07-18T00:31:50			
Read mode	TIMED	TIMED			

2.3 Aspect





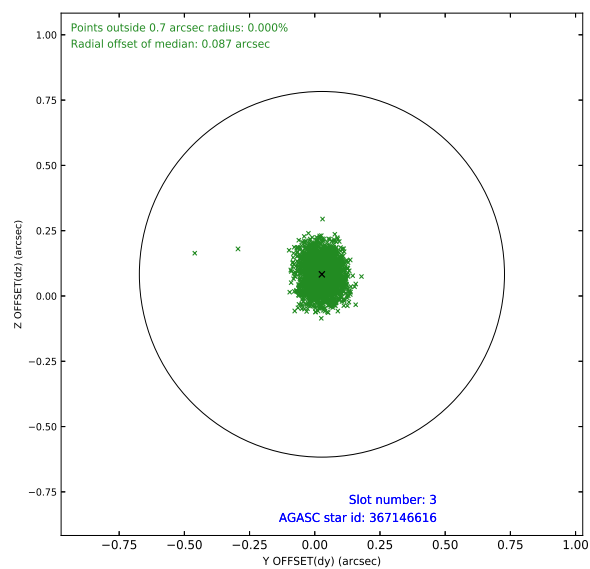
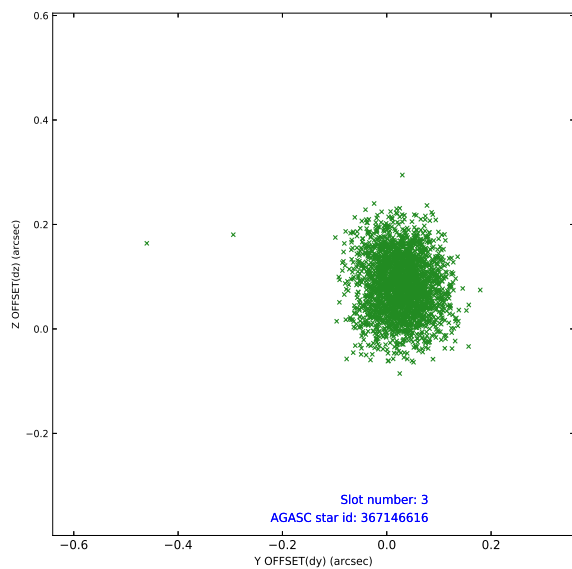
Slot Statistics

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	1260	1.000	0.004	0.020	0.007	0.012	0.000000	0.000000	933.58	-833
1	FID		ACIS-I-5	7.23	1260	1.000	-0.187	0.018	0.007	0.011	0.000000	0.000000	-1814.09	1063
2	FID		ACIS-I-6	7.26	1260	1.000	0.092	0.033	0.008	0.013	0.000000	0.000000	397.91	1709
3	GUIDE	used	367146616	8.85	2518	1.000	0.027	0.083	0.076	0.122	11.418645	41.190163	-1097.24	-1598
4	GUIDE	used	367148872	7.20	2521	1.000	0.101	-0.186	0.059	0.101	10.505940	40.688258	-1611.17	1428
5	GUIDE	used	367657896	9.02	2521	1.000	0.038	0.052	0.086	0.131	11.197765	41.313576	-435.31	-1257
6	GUIDE	used	367663272	9.28	2507	1.000	-0.069	-0.017	0.087	0.143	10.656279	41.699429	1459.00	-569
7	GUIDE	used	367674552	8.84	2519	1.000	-0.094	0.068	0.062	0.100	11.016238	41.570845	613.11	-1229

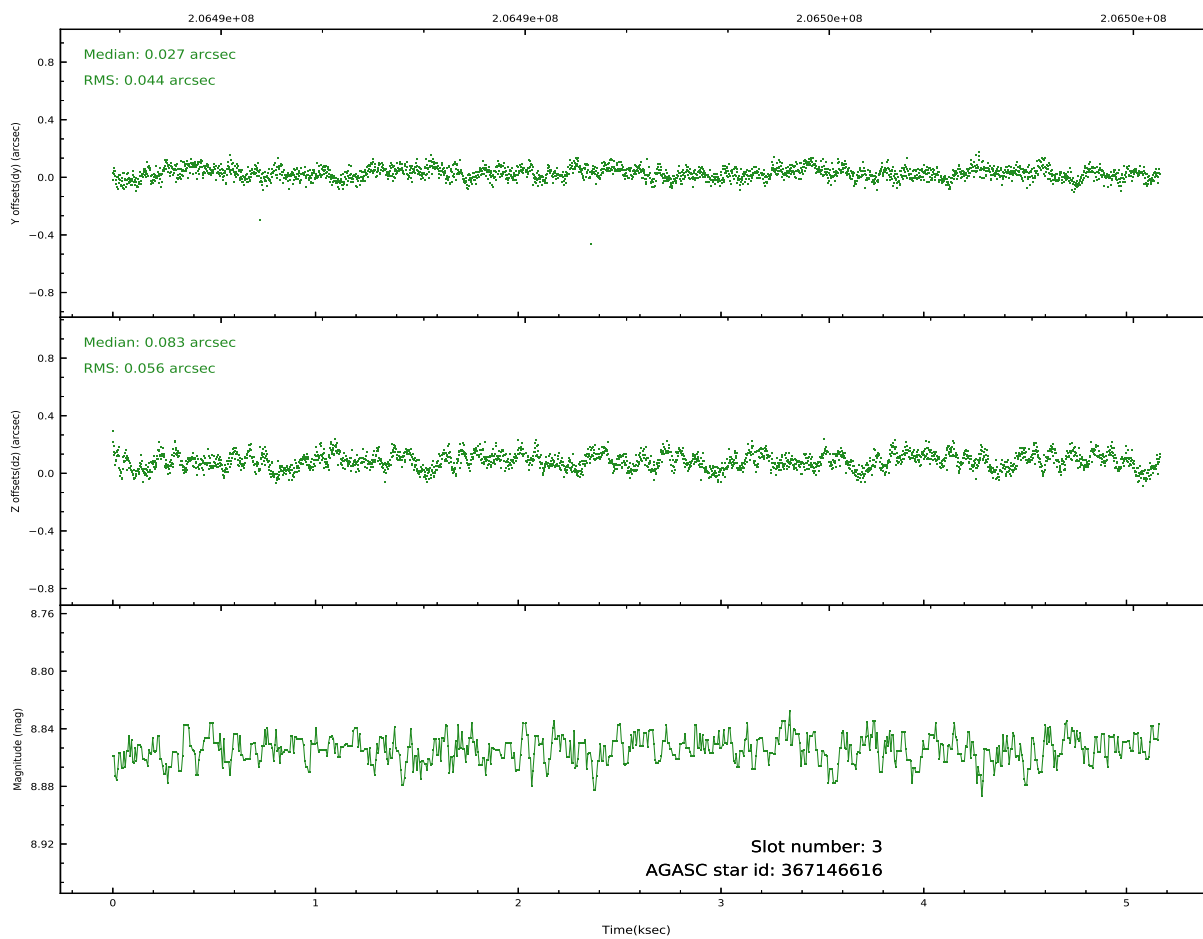
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2.4 Star Slots

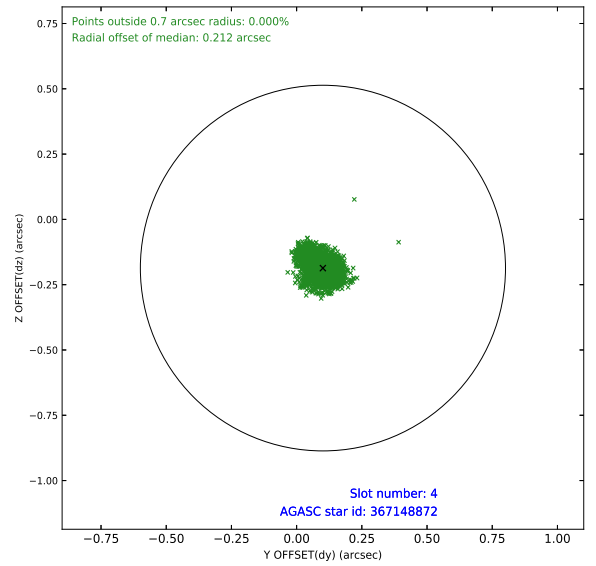
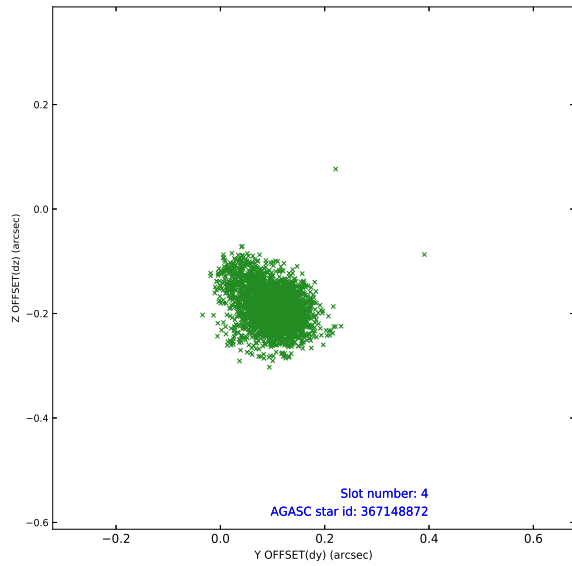
2.4.1 Slot 3



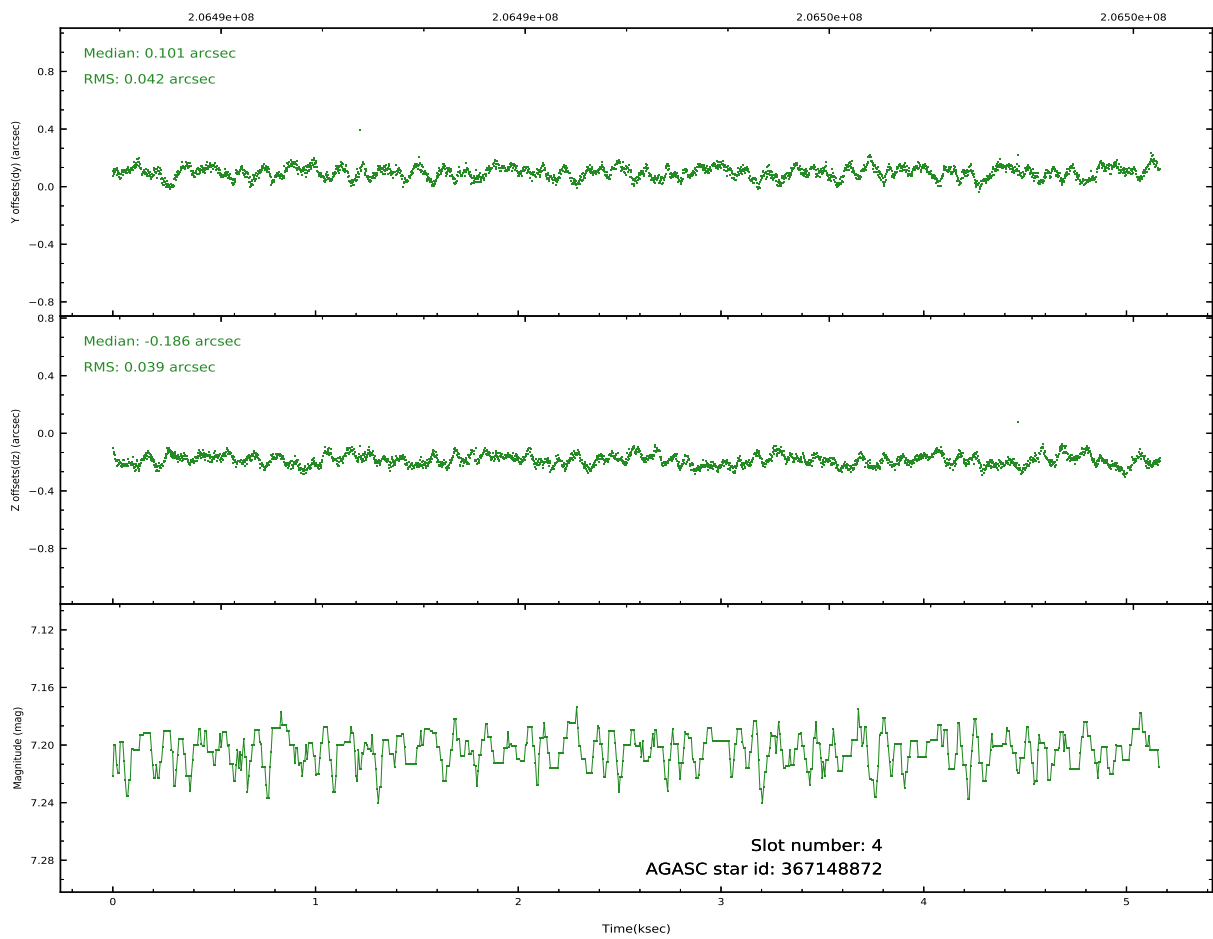
Time (s)



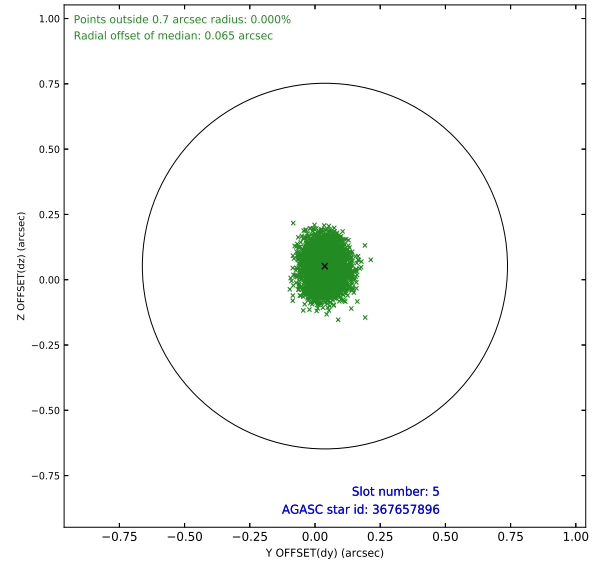
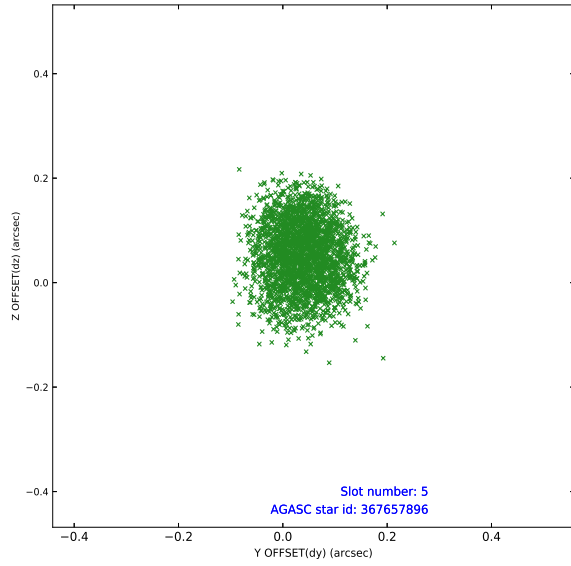
2.4.2 Slot 4



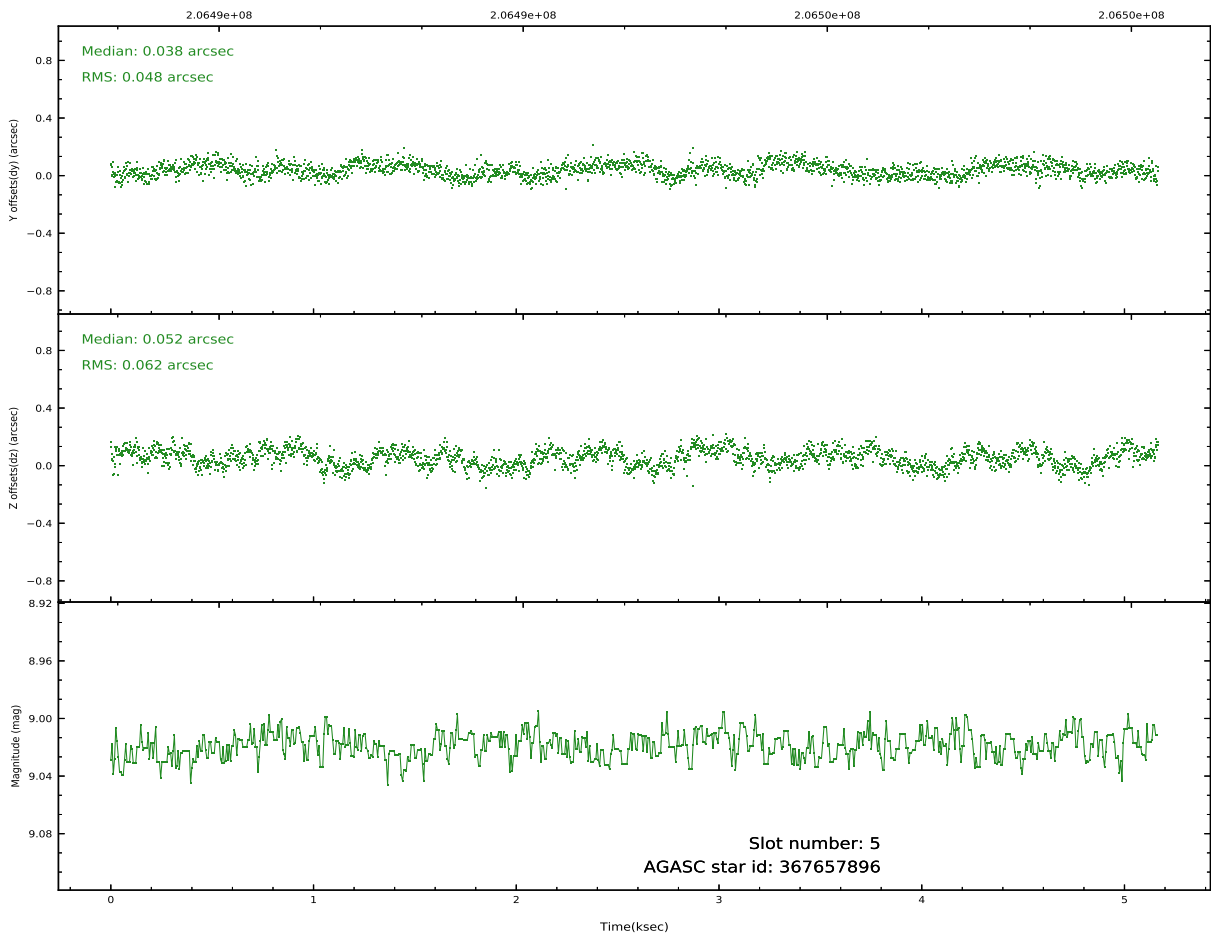
Time (s)



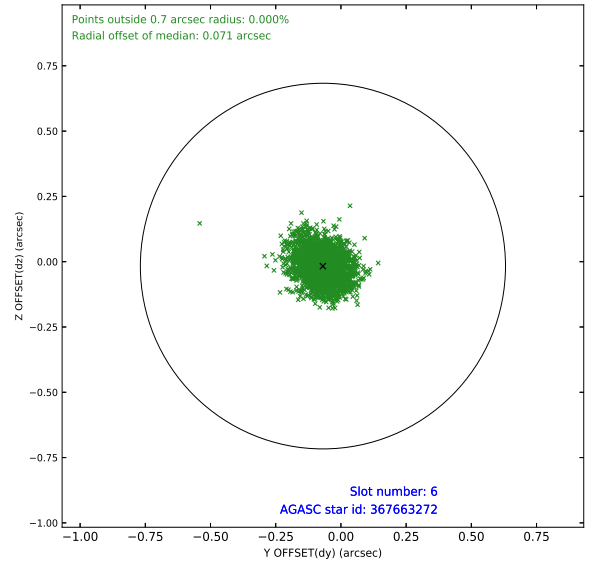
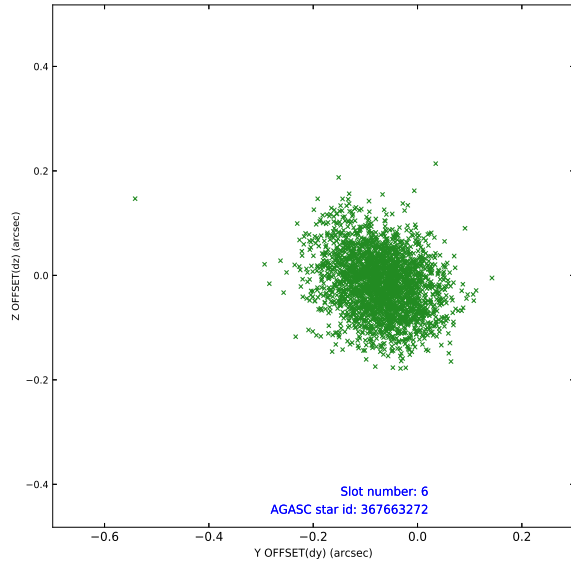
2.4.3 Slot 5



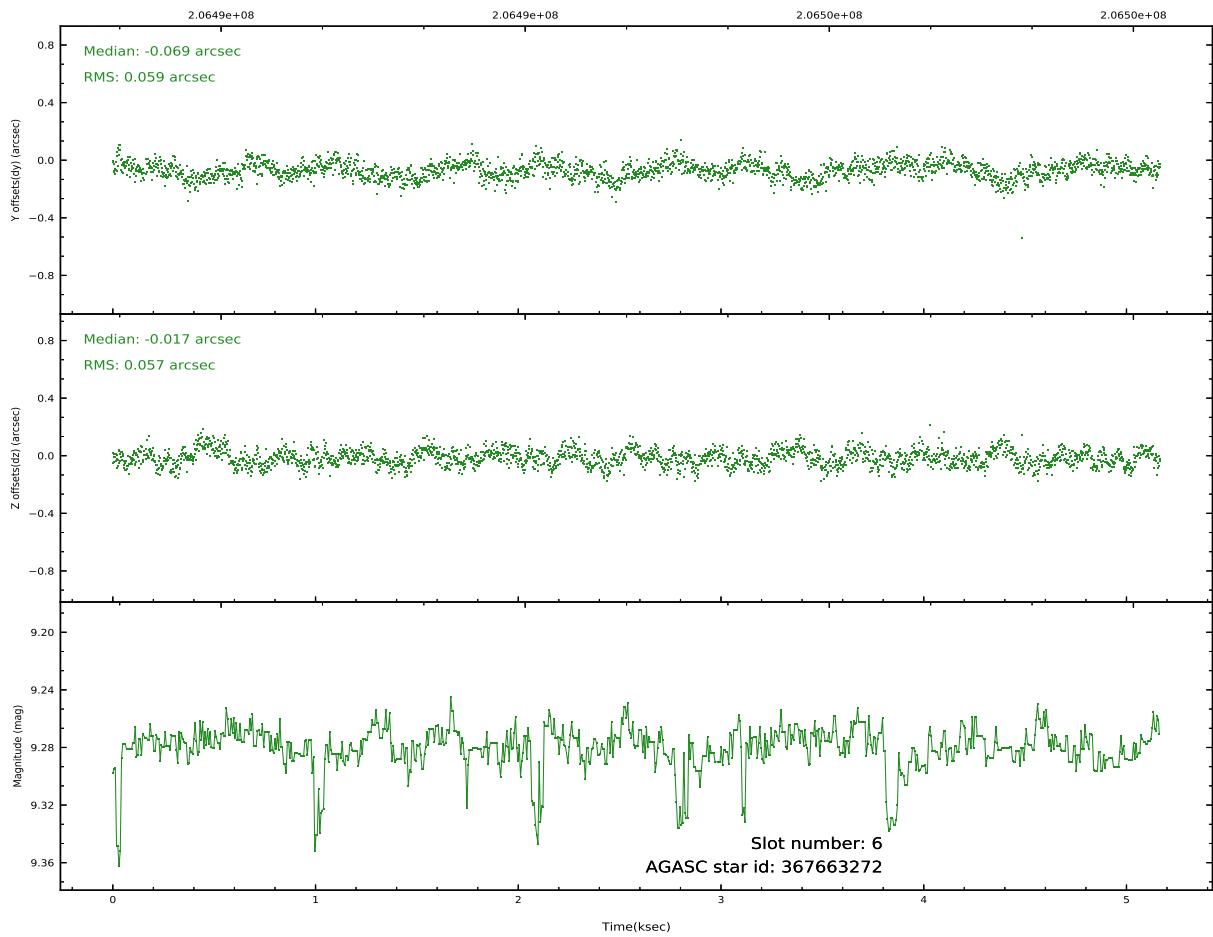
Time (s)



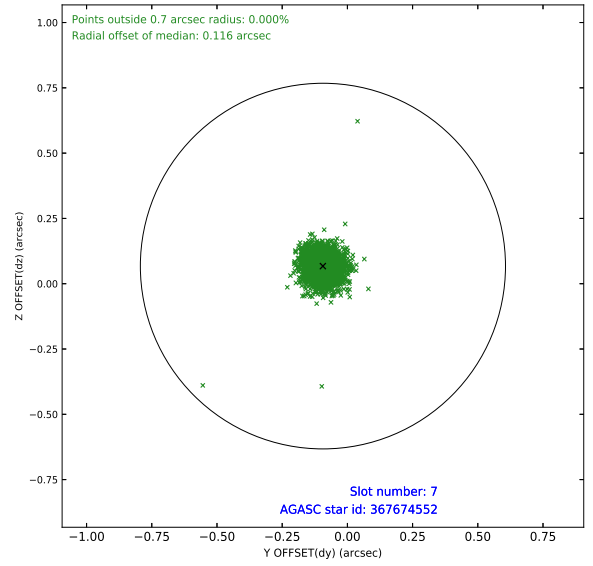
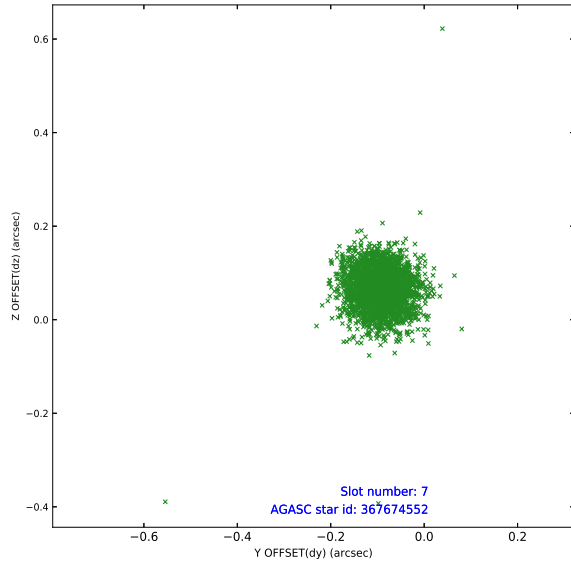
2.4.4 Slot 6



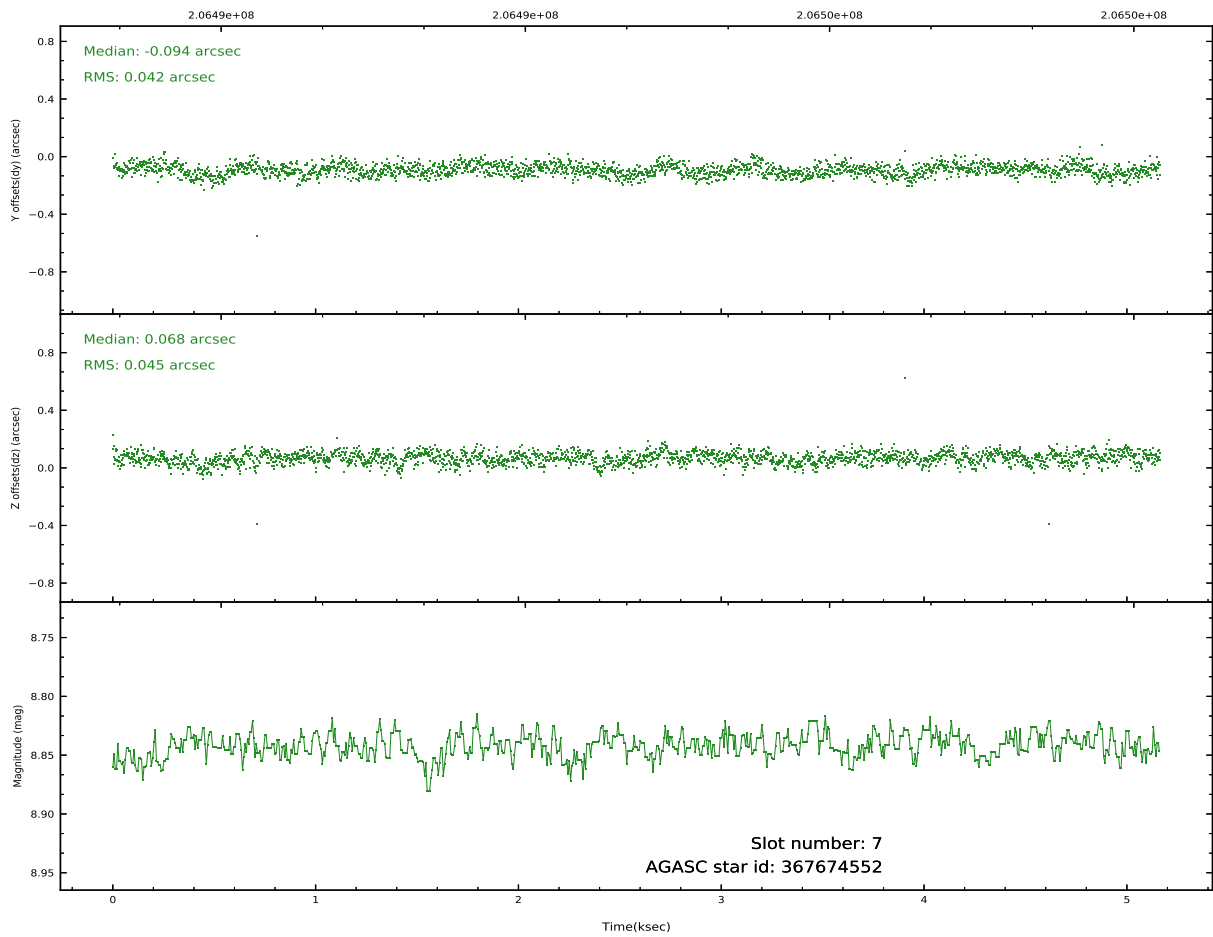
Time (s)



2.4.5 Slot 7

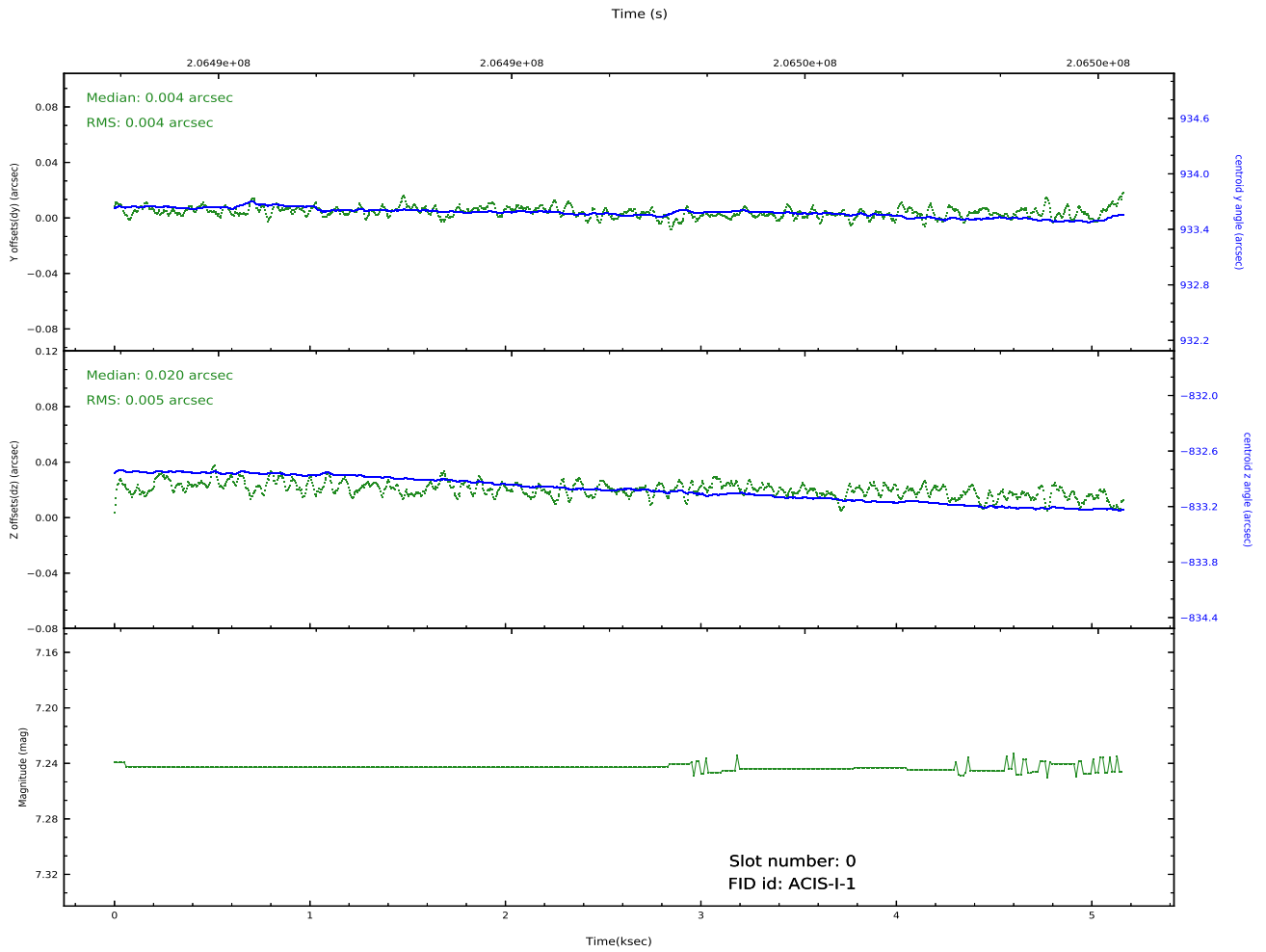
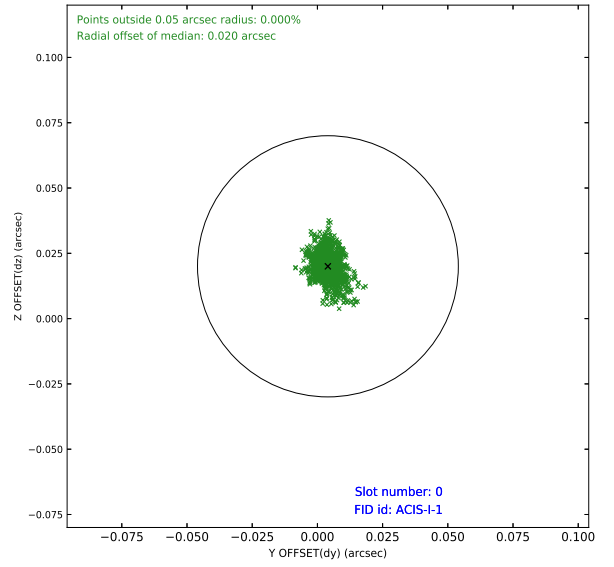
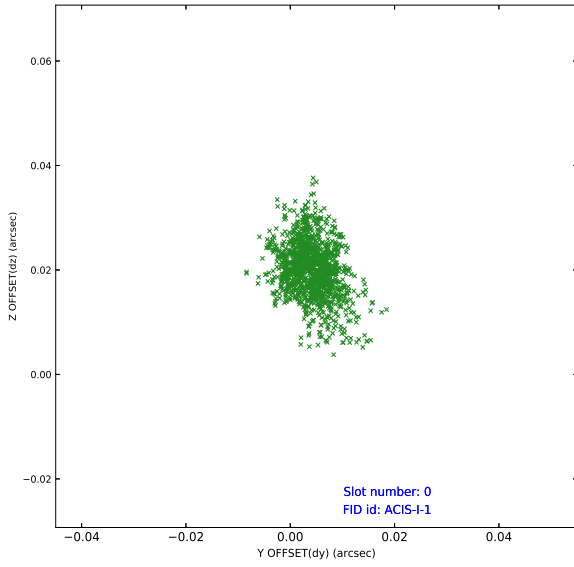


Time (s)

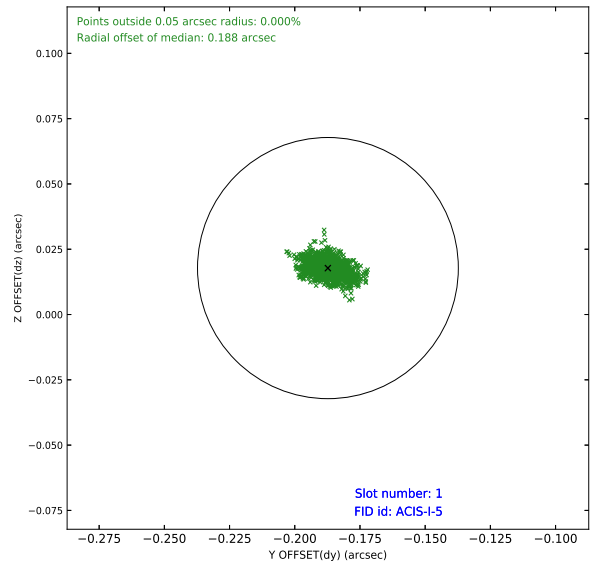
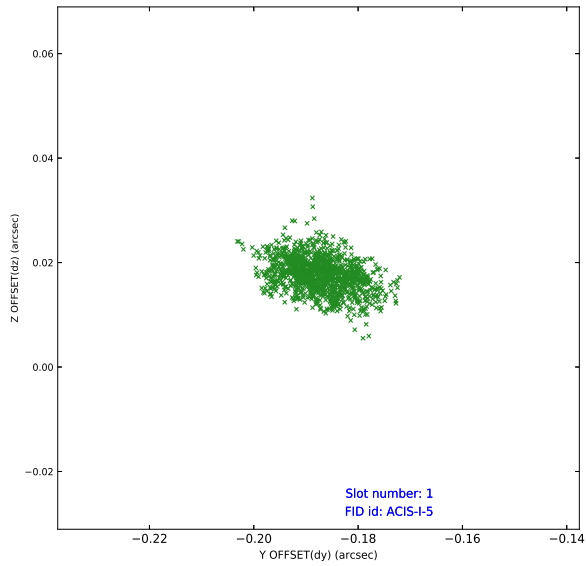


2.5 FID Slots

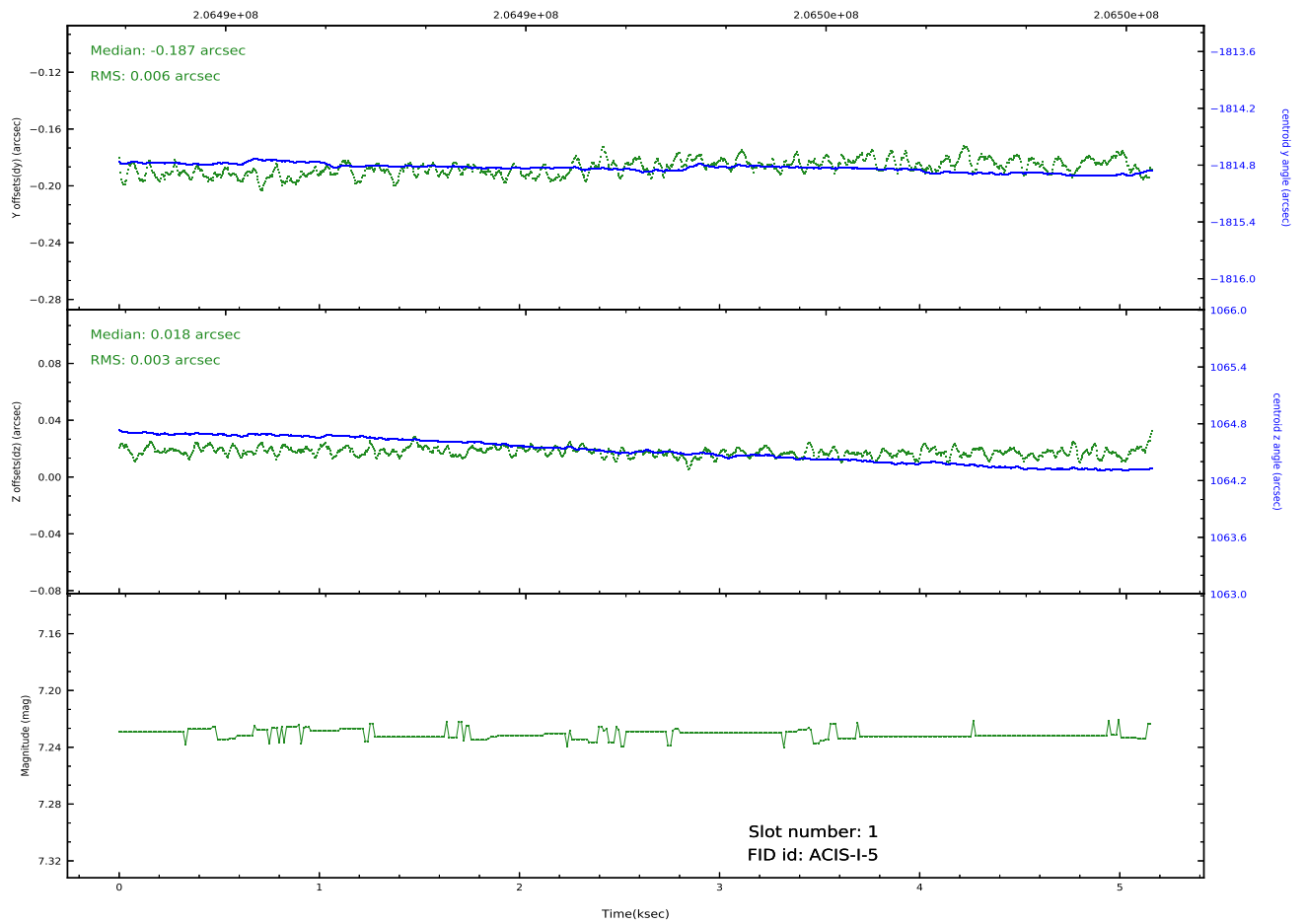
2.5.1 Slot 0



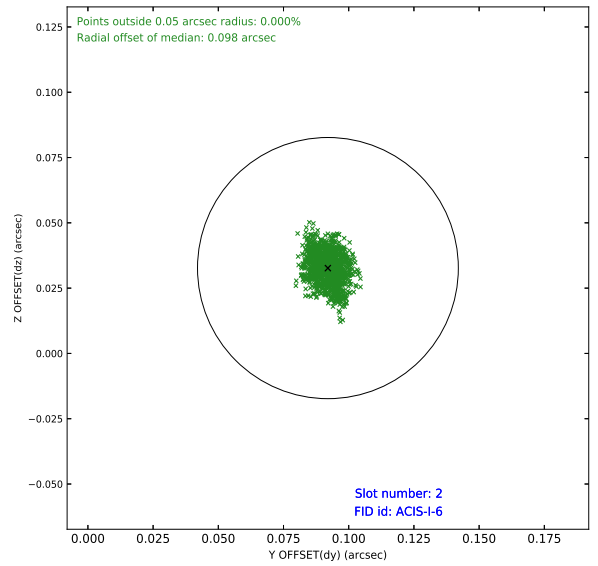
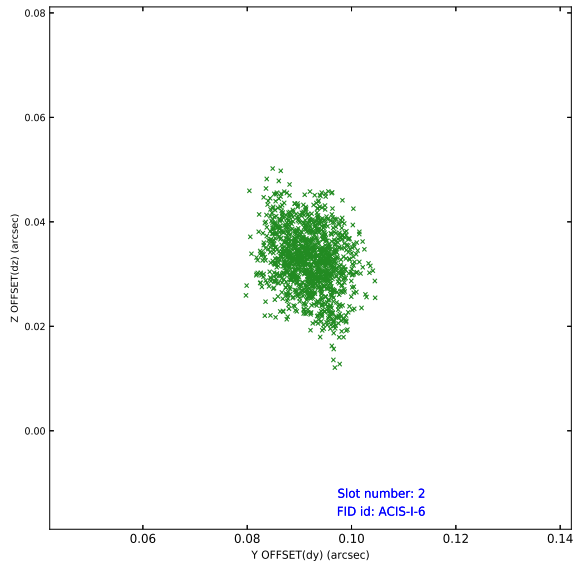
2.5.2 Slot 1



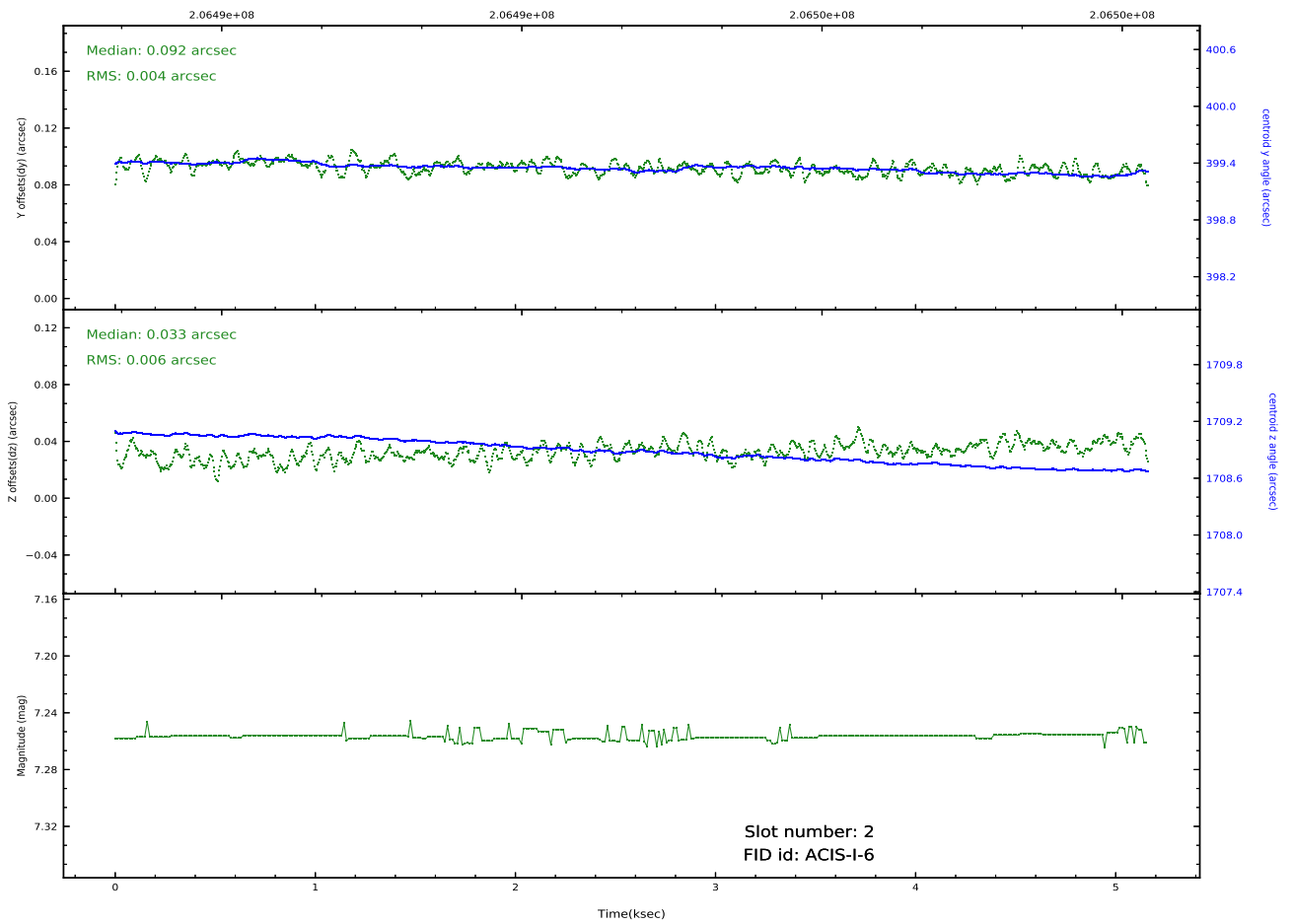
Time (s)



2.5.3 Slot 2



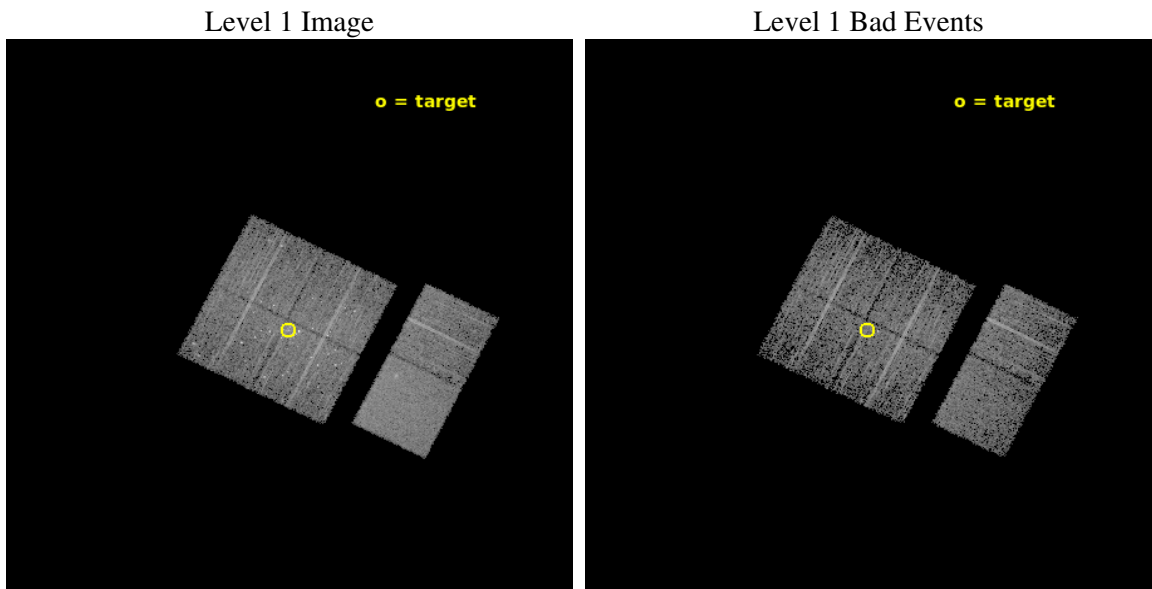
Time (s)



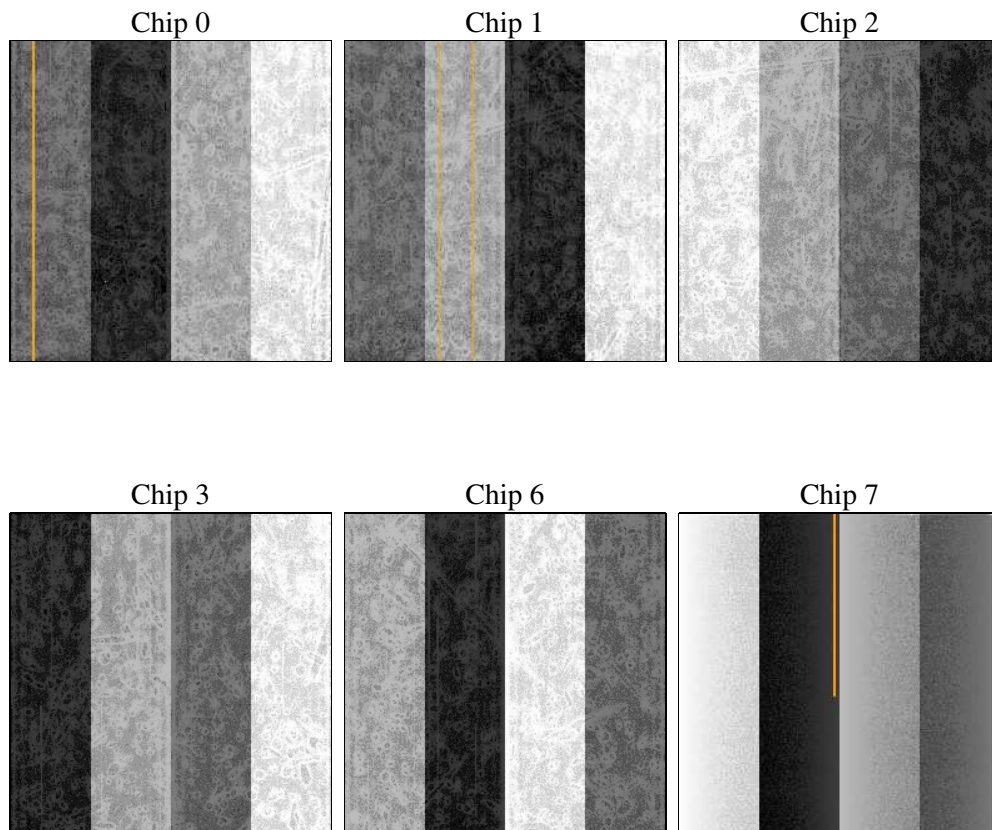
3 OBI Secondary

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	4176.3133982718	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	4176.1901982725	Sum of GTIs [s]
date	2020-09-27T13:01:25	Date and time of file creation	ontime1	4176.231079191	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	4176.2723581791	Sum of GTIs [s]
			ontime3	4176.3133982718	Sum of GTIs [s]
			ontime6	4176.3951096237	Sum of GTIs [s]
			ontime7	4176.3542290926	Sum of GTIs [s]
			l1events	257828	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	38990	37627	40963	45905	40906	53437	grade 0 events	3210	4208	4207	7240	1909	2019
rejected events	34008	31336	35160	36247	37140	36463		8%	11%	10%	15%	4%	3%
rejected %	87%	83%	85%	78%	90%	68%	grade 1 events	26	35	45	196	20	61
								0%	0%	0%	0%	0%	0%
							grade 2 events	1126	1327	1297	1710	1001	4363
								2%	3%	3%	3%	2%	8%
							grade 3 events	507	520	528	707	457	1999
								1%	1%	1%	1%	1%	3%
							grade 4 events	454	593	487	688	479	1940
								1%	1%	1%	1%	1%	3%
							grade 5 events	1564	1645	1557	1941	1917	5156
								4%	4%	3%	4%	4%	9%
							grade 6 events	866	982	785	1004	975	11713
								2%	2%	1%	2%	2%	21%
							grade 7 events	31237	28317	32057	32419	34148	26186
								80%	75%	78%	70%	83%	49%

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	5.1

A.2 Comments

Joint proposal with HST.

Window constraint met.

Charge time for this observation remains at previous value of 5.1 ksec, although with the current processing the charge time would have been 5.15 ksec.