

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4688 - L2 Version 6
Chandra X-Ray Center

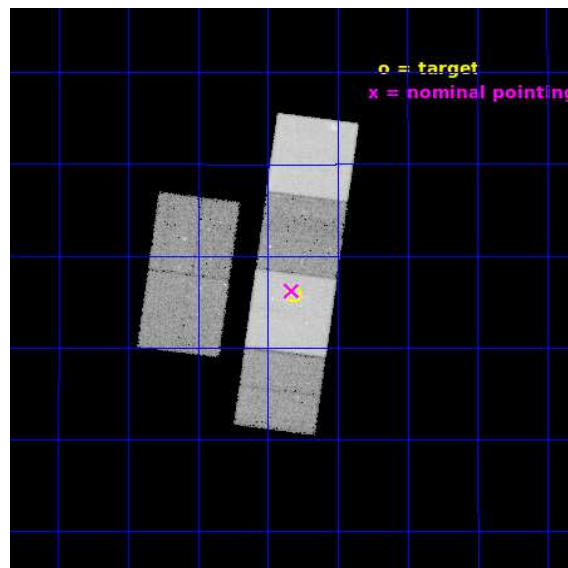
L2 Processing Date : Oct 6 2020

Contents

1	Front	2
2	OBI	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
2.5	FID Slots	13
2.5.1	Slot 0	13
2.5.2	Slot 1	14
2.5.3	Slot 2	15
A	Summary	16
A.1	Status	16
A.2	Comments	16

1 Front

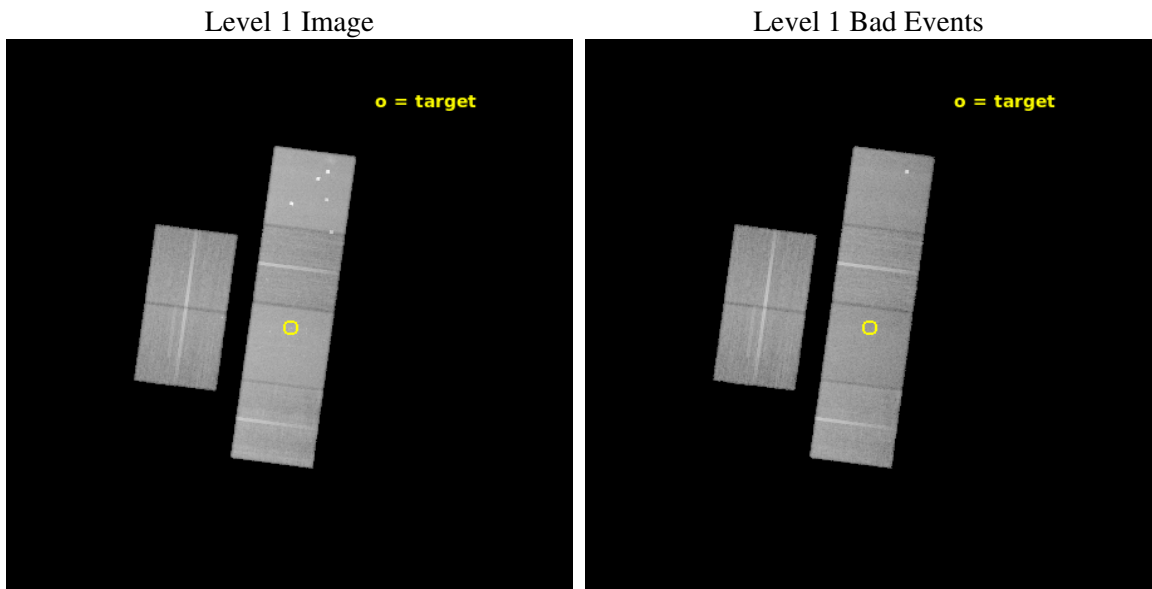
seq_num	600343	Sequence number
obs_id	4688	Observation id
title	X-ray Census of Supermassive Black Holes: I. New Observations	Prop
observer	Dr. Michael Loewenstein	Principal investigator
object	NGC 4473	Source name
dtycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.45375	Observer's specified target RA [deg]
dec_targ	13.429444	Observer's specified target Dec [deg]
ra_nom	187.45709709518	Nominal RA [deg]
dec_nom	13.437096881576	Nominal Dec [deg]
roll_nom	97.654135501728	Nominal Roll [deg]
revision	6	Processing version of data
ontime	29958.399888396	Sum of GTIs [s]
livetime	29579.048590227	Livetime [s]
ontime2	29958.399888396	Sum of GTIs [s]
ontime3	29958.399888396	Sum of GTIs [s]
ontime5	29958.399888396	Sum of GTIs [s]
ontime6	29955.158918023	Sum of GTIs [s]
ontime7	29958.399888396	Sum of GTIs [s]
ontime8	29958.399888396	Sum of GTIs [s]
l2events	385883	Number of level 2 events



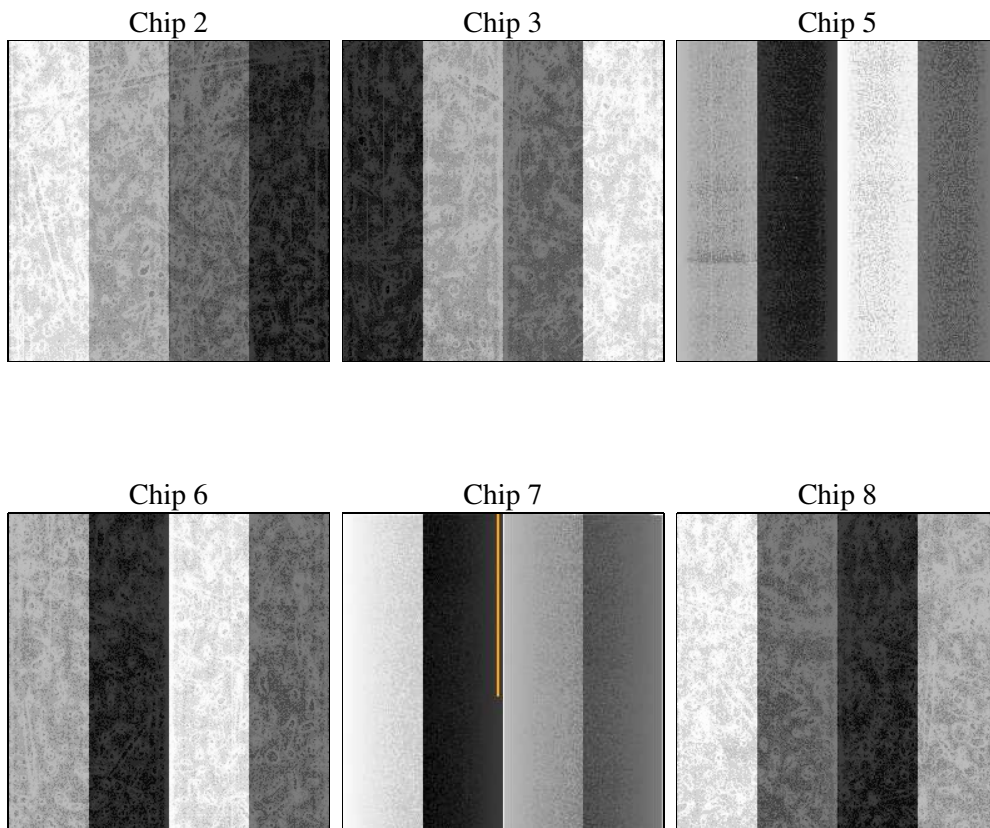
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	29958.399888396	Sum of GTIs [s]
caldsver	4.9.2	 	ontime2	29958.399888396	Sum of GTIs [s]
date	2020-10-06T22:53:01	Date and time of file creation	ontime3	29958.399888396	Sum of GTIs [s]
revision	6	Processing version of data	ontime5	29958.399888396	Sum of GTIs [s]
			ontime6	29955.158918023	Sum of GTIs [s]
			ontime7	29958.399888396	Sum of GTIs [s]
			ontime8	29958.399888396	Sum of GTIs [s]
			l1events	1627258	Number of level 1 events

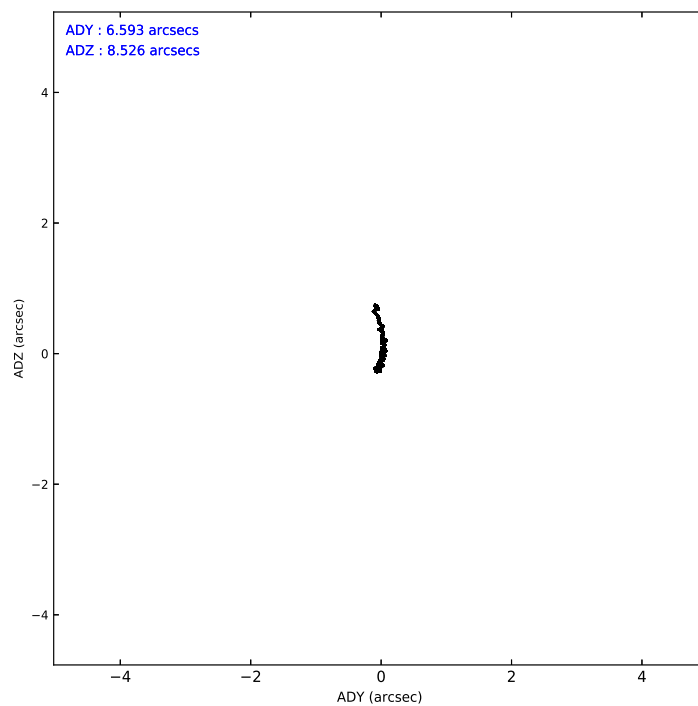
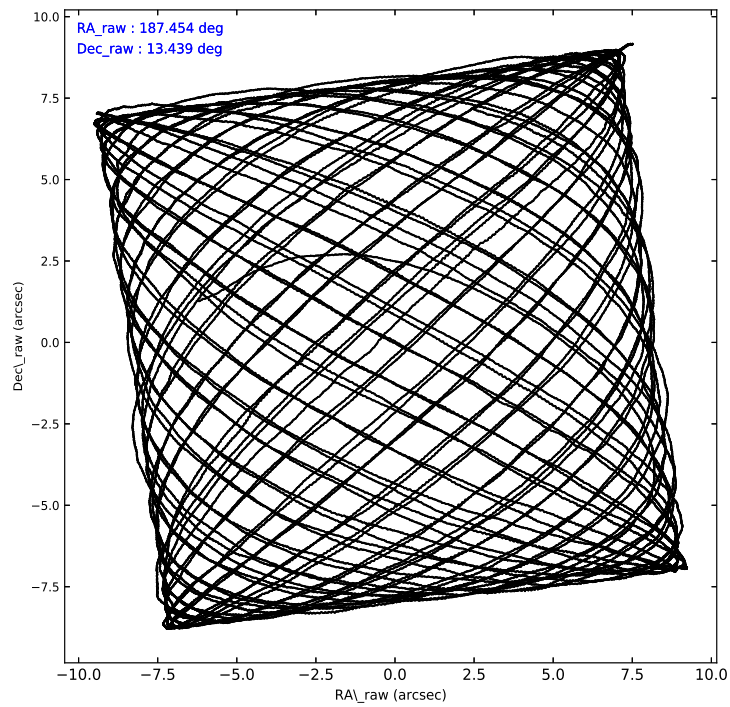
2.1.4 Events

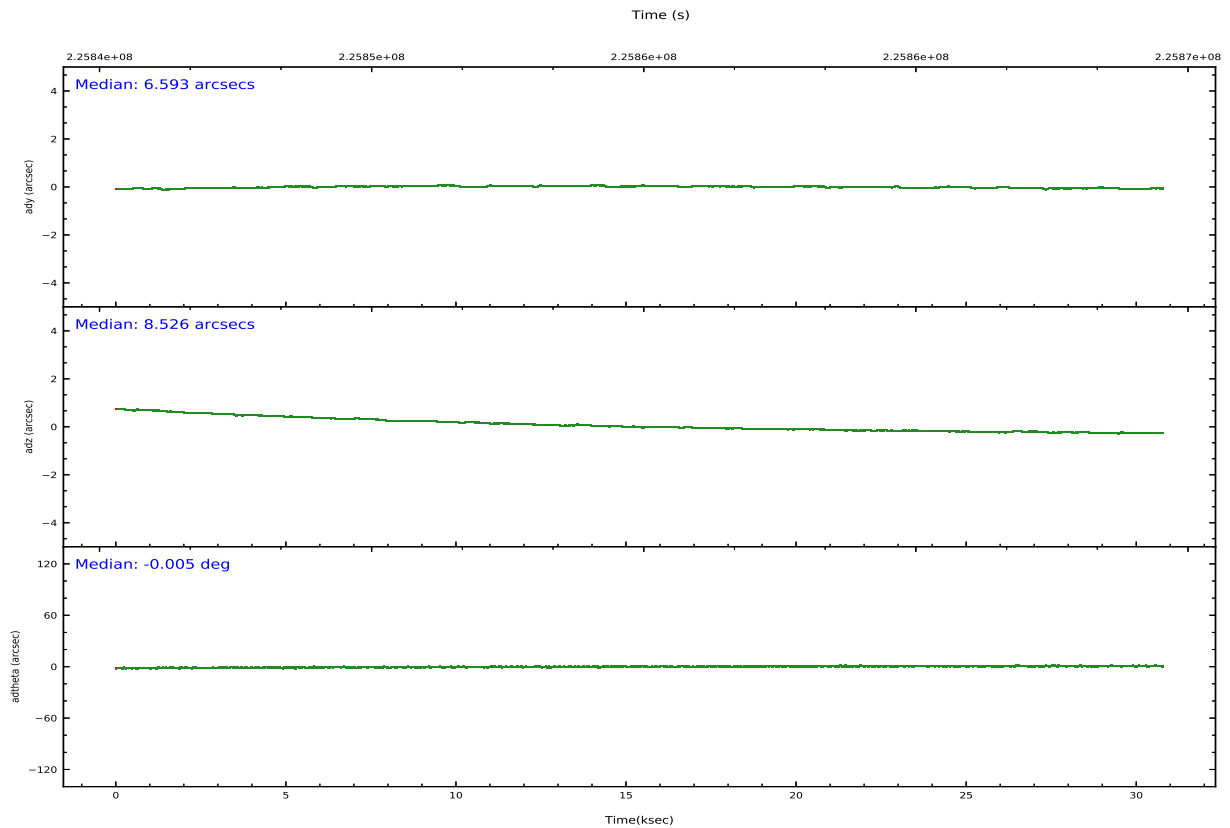
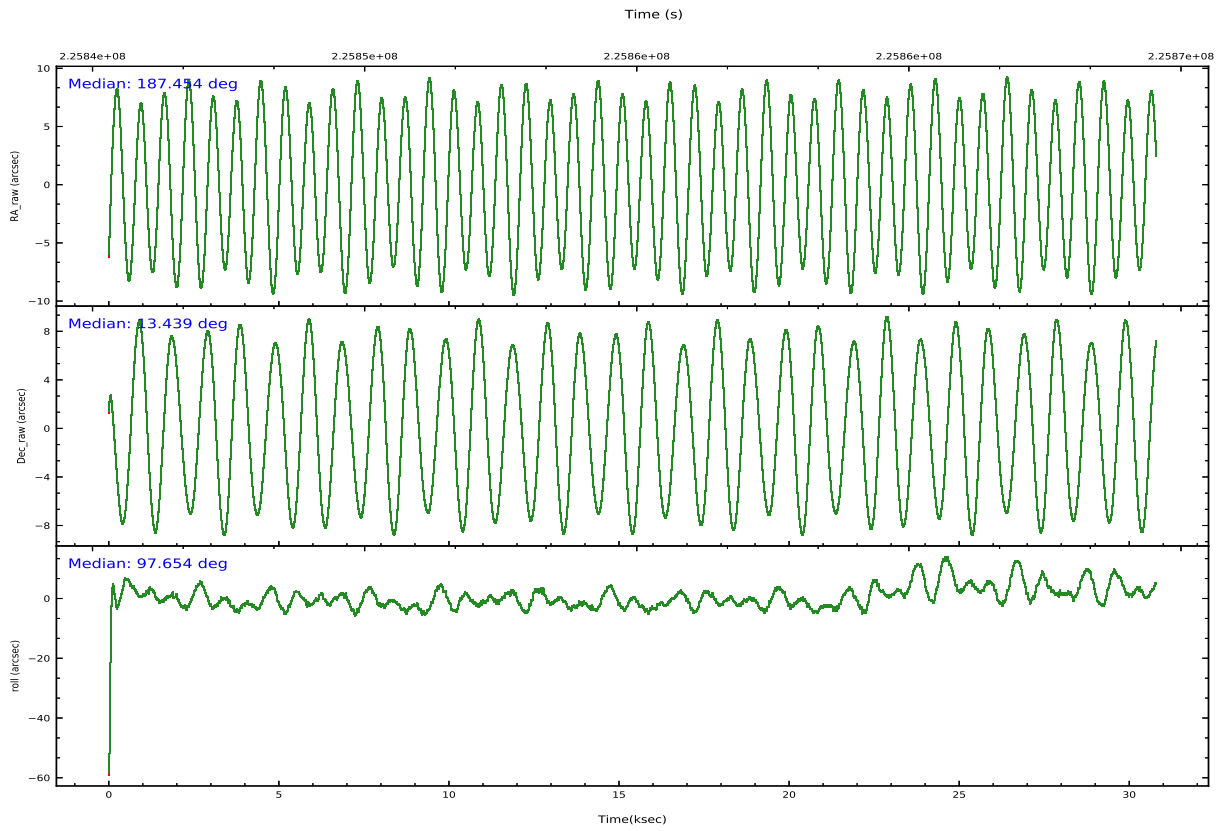
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	217511	216854	361907	227017	314138	289831	grade 0 events	14209	14190	31466	14252	14010	23445
rejected events	188227	187712	186967	195913	180349	223622		6%	6%	8%	6%	4%	8%
rejected %	86%	86%	51%	86%	57%	77%	grade 1 events	173	148	495	125	297	226
								0%	0%	0%	0%	0%	0%
							grade 2 events	5538	5182	49584	5931	27032	14129
								2%	2%	13%	2%	8%	4%
							grade 3 events	2460	2558	6158	2783	11818	6558
								1%	1%	1%	1%	3%	2%
							grade 4 events	2543	2671	5942	2592	12081	6250
								1%	1%	1%	1%	3%	2%
							grade 5 events	8728	10024	23996	10137	29139	13731
								4%	4%	6%	4%	9%	4%
							grade 6 events	4536	4541	81809	5547	68871	15828
								2%	2%	22%	2%	21%	5%
							grade 7 events	179324	177540	162457	185650	150890	209664
								82%	81%	44%	81%	48%	72%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-235678	ACIS-235678	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	187.471632	187.45709709518	Subarray requested	NONE	NONE
[deg] Pointing Dec	13.417273	13.437096881576	Alternating exposures requested	N	N
[deg] Pointing Roll	97.484226	97.65413550172801	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	225841270.184000	225840007.42155			
Observation start date	2005-02-26T21:40:06	2005-02-26T21:20:07			
[s] Observation end time (MET)	225871270.184000	225872764.88554			
Observation end date	2005-02-27T06:00:06	2005-02-27T06:26:04			
Read mode	TIMED	TIMED			

2.3 Aspect



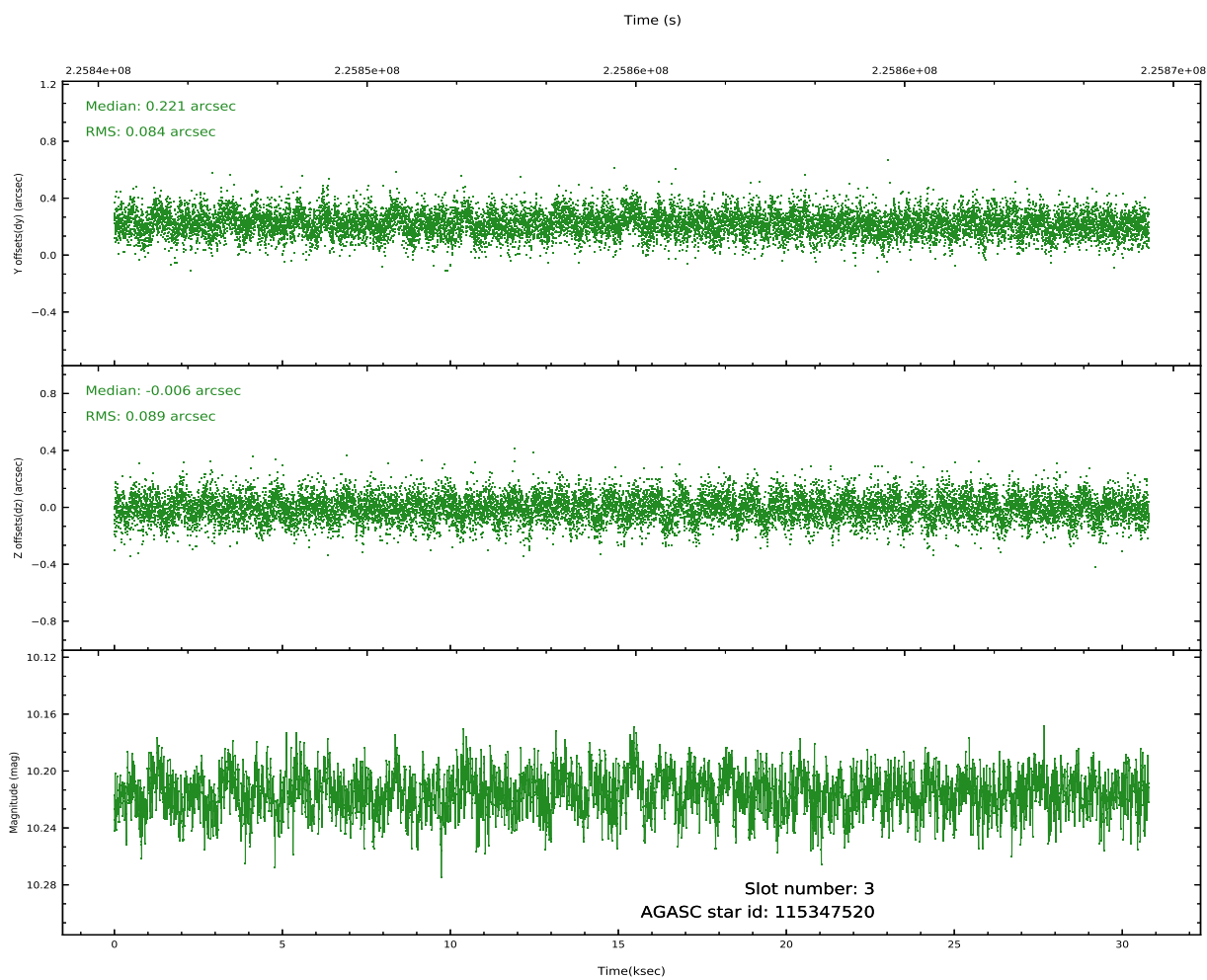
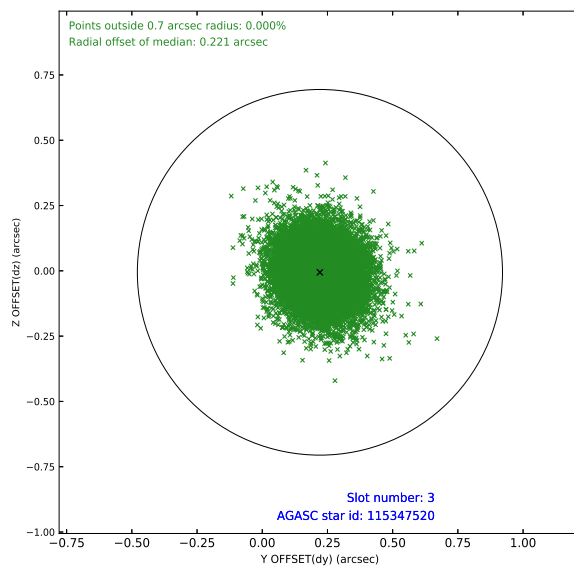
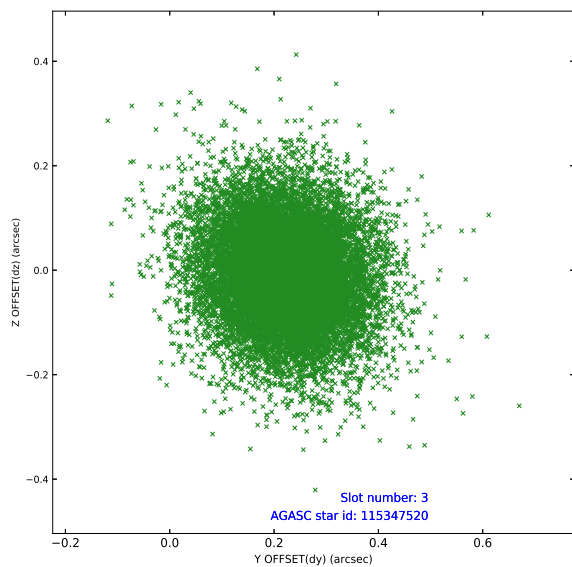


Slot Statistics

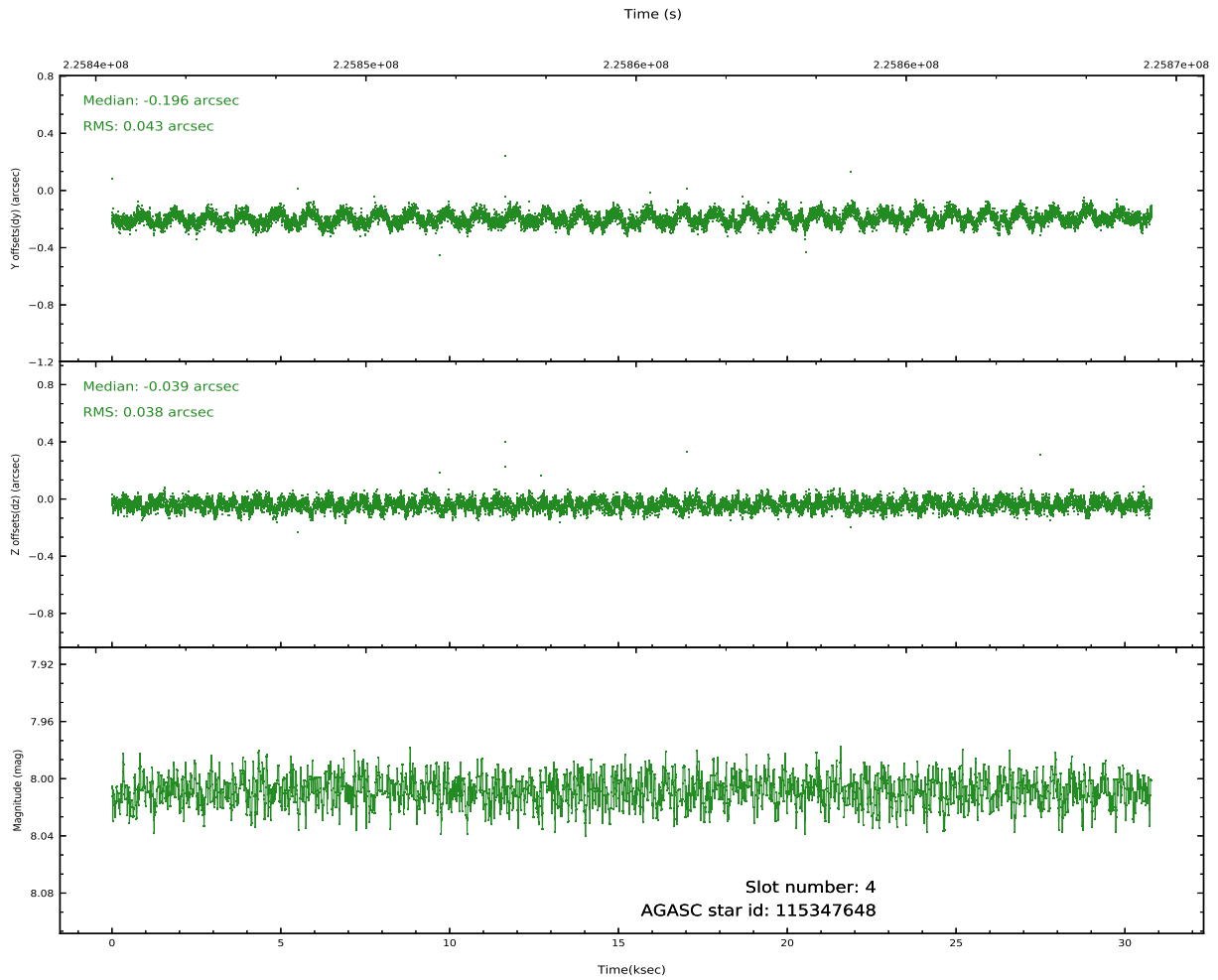
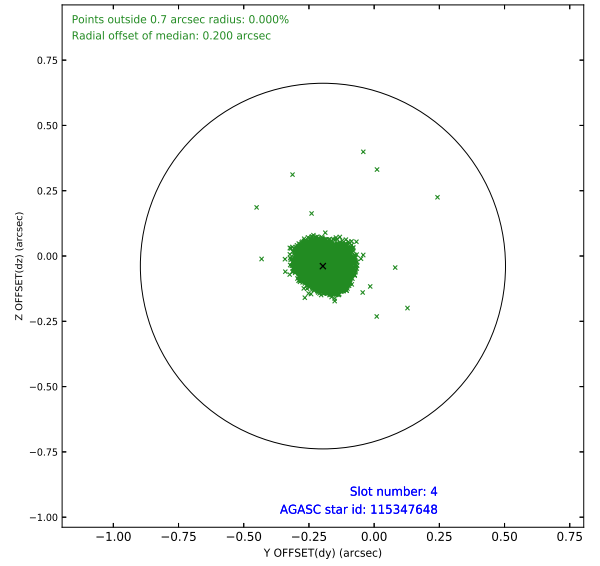
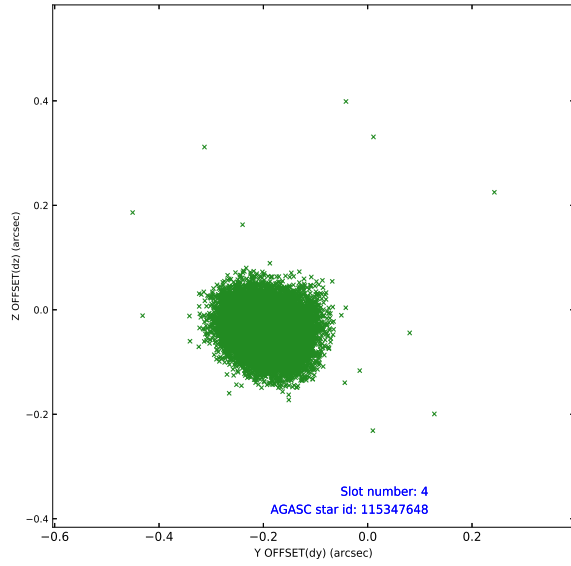
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-S-2	7.10	7511	1.000	-0.063	-0.081	0.008	0.015	0.000000	0.000000	-759.37	-1729
1	FID		ACIS-S-4	7.21	7511	1.000	0.133	0.053	0.006	0.011	0.000000	0.000000	2154.05	178
2	FID		ACIS-S-5	7.23	7510	1.000	-0.100	0.038	0.008	0.014	0.000000	0.000000	-1812.18	172
3	GUIDE	used	115347520	10.22	15001	1.000	0.221	-0.006	0.129	0.215	187.517505	12.810279	-2187.25	125
4	GUIDE	used	115347648	8.01	15020	1.000	-0.196	-0.039	0.061	0.095	187.273687	13.950334	1992.77	435
5	GUIDE	used	115348424	9.51	15010	1.000	0.175	0.022	0.092	0.151	187.199498	13.087929	-1050.46	1101
6	GUIDE	used	115350296	9.10	15013	1.000	-0.198	0.017	0.084	0.135	187.140806	13.950701	2055.15	896
7	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0

2.4 Star Slots

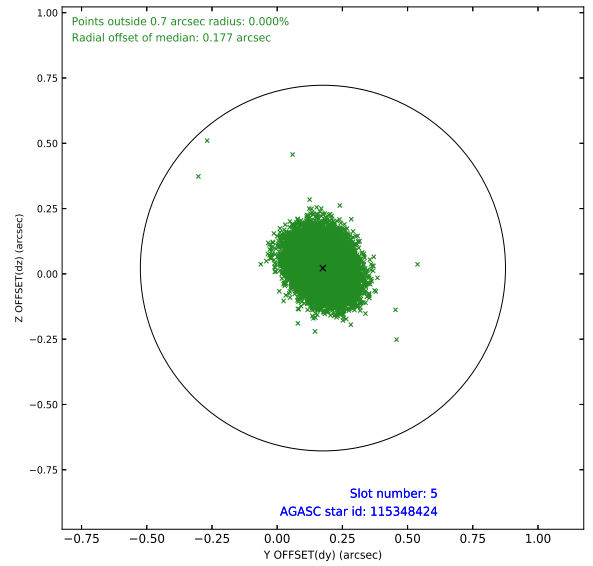
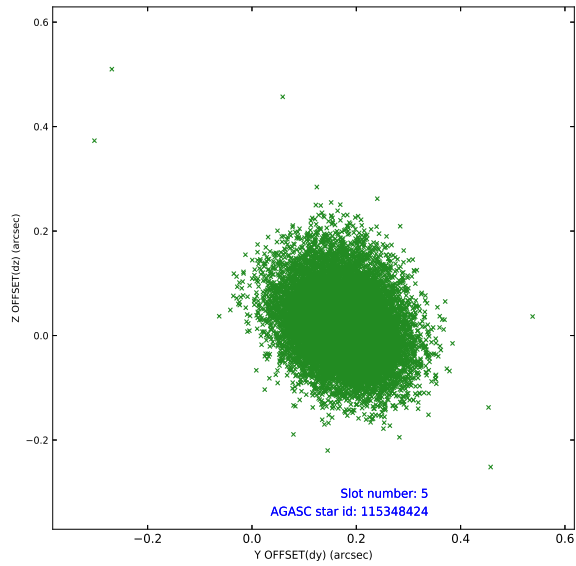
2.4.1 Slot 3



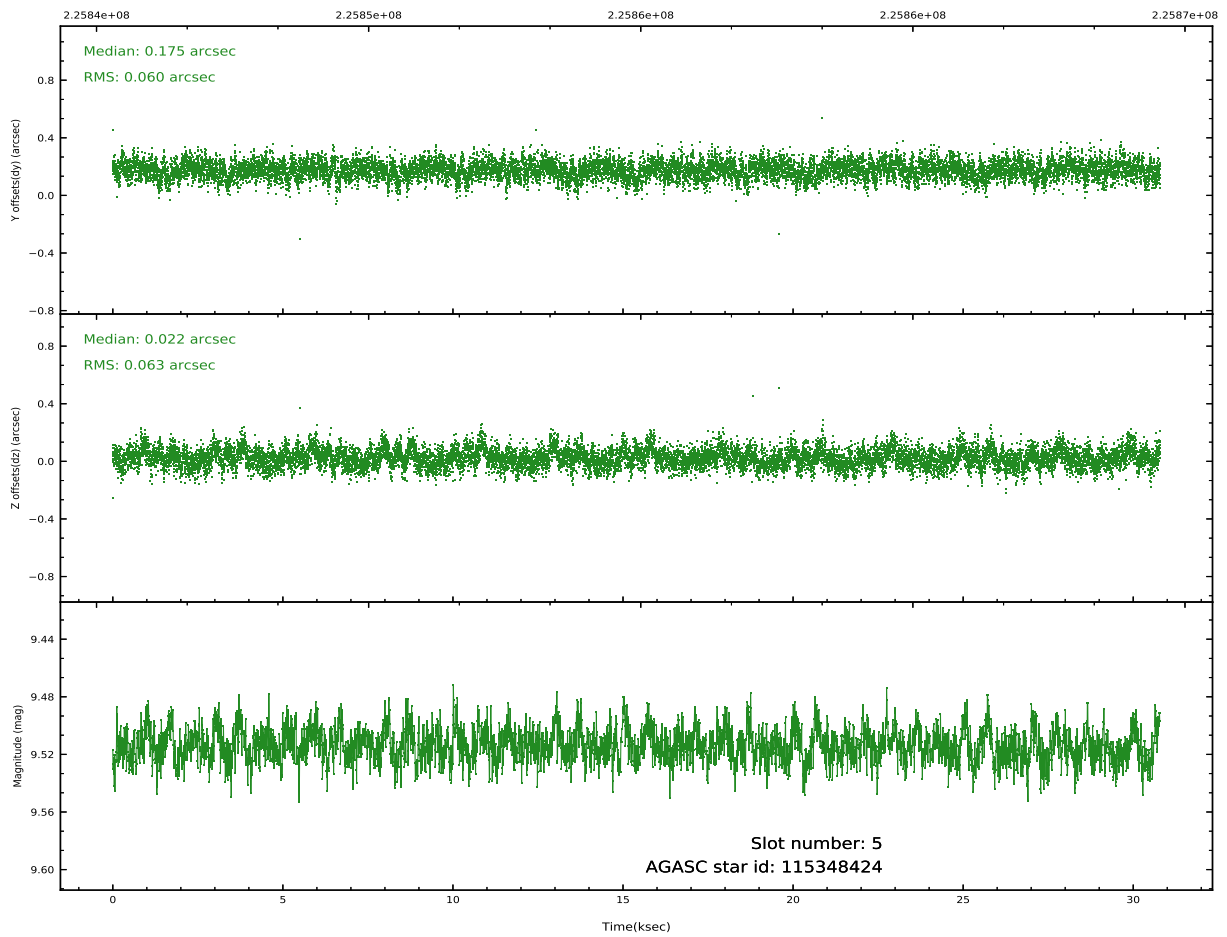
2.4.2 Slot 4



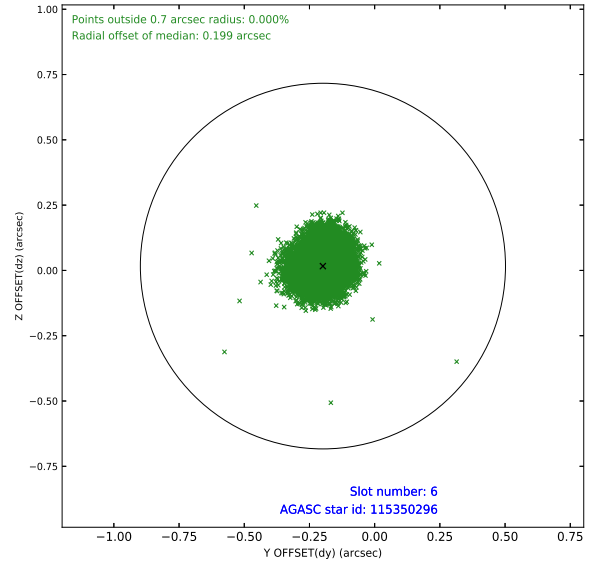
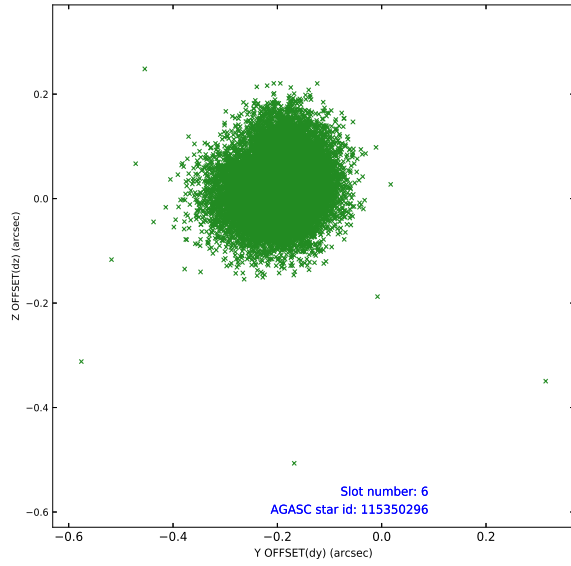
2.4.3 Slot 5



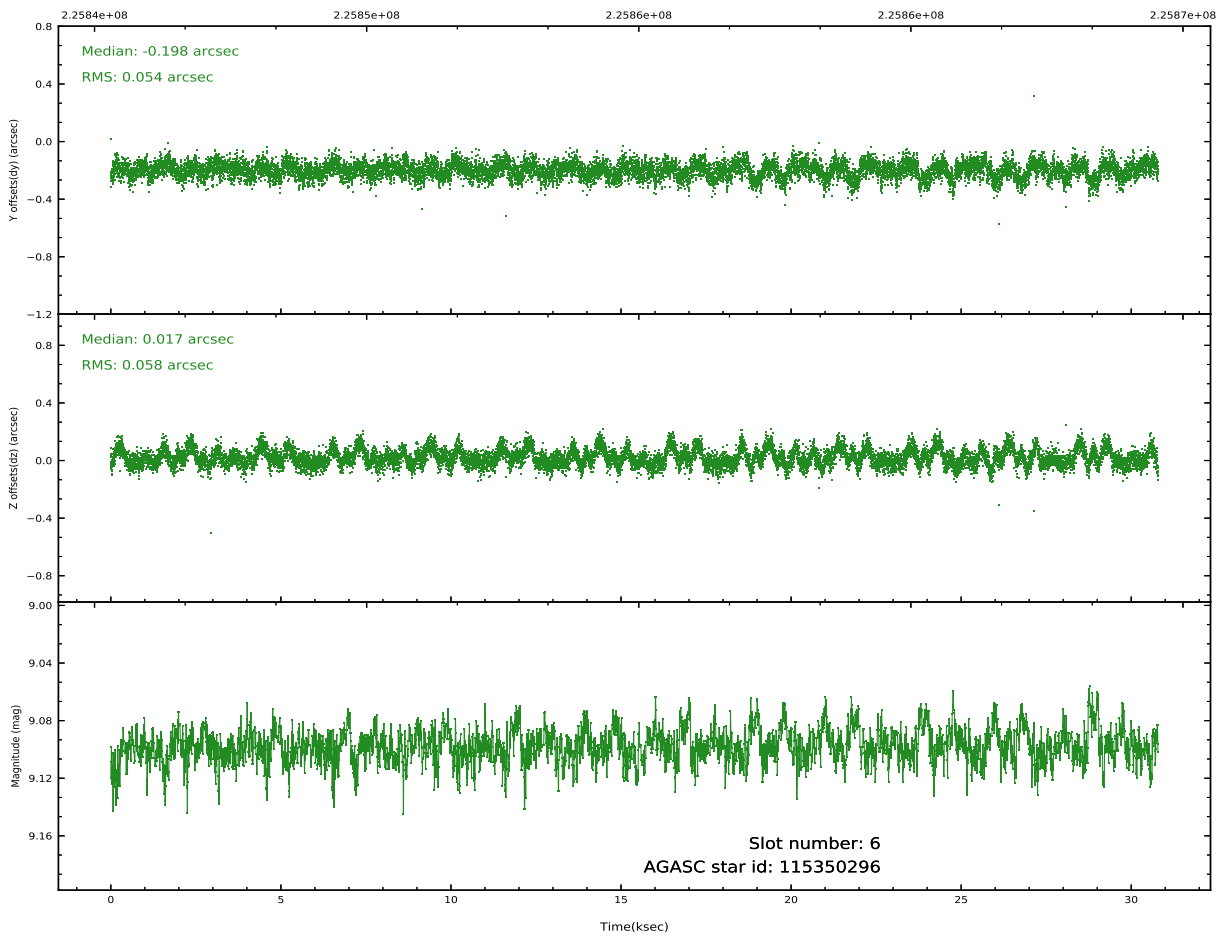
Time (s)



2.4.4 Slot 6

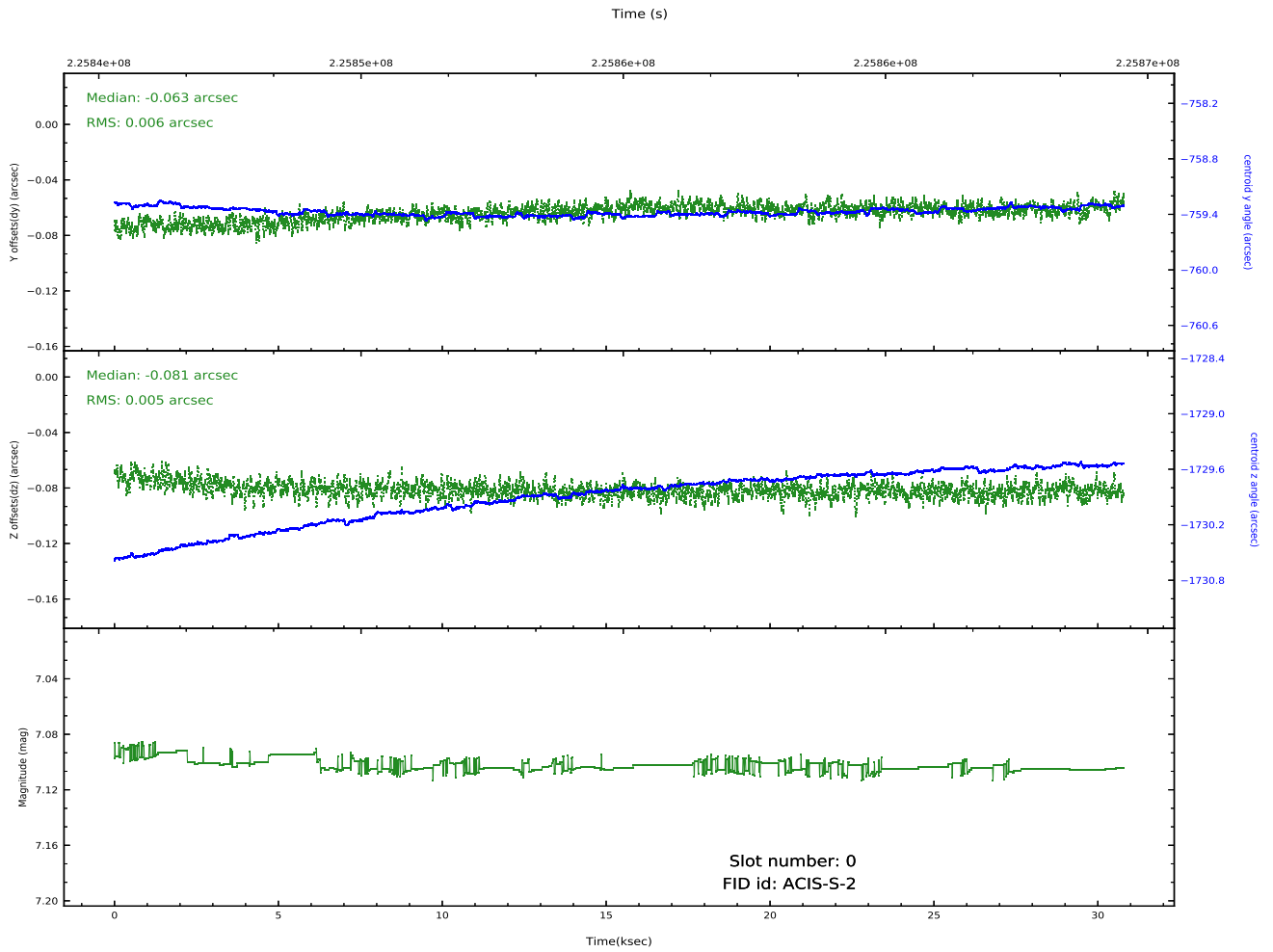
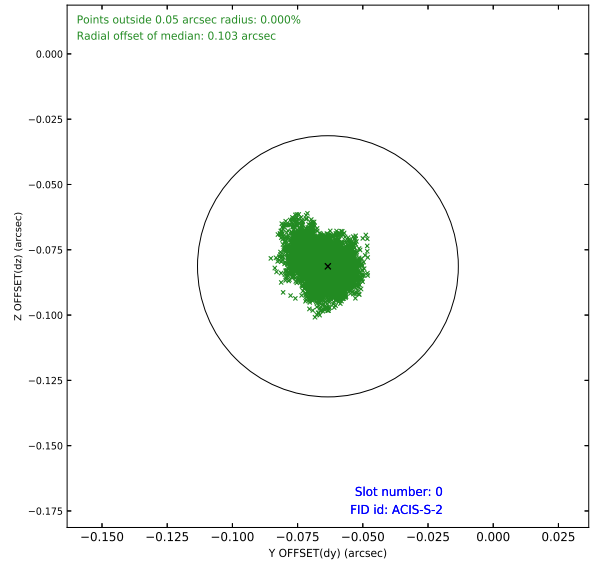
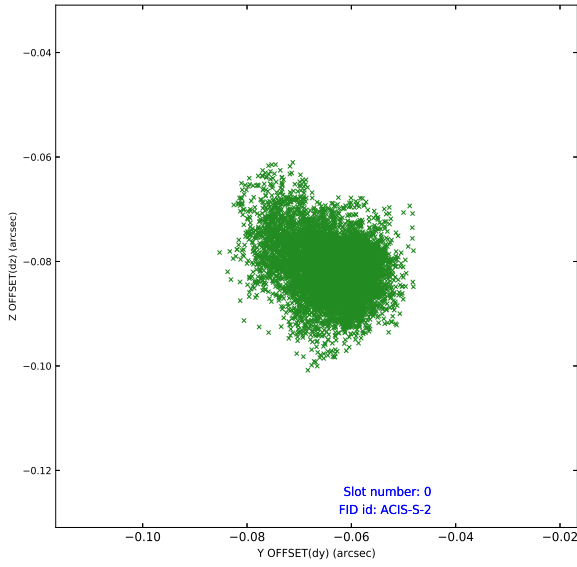


Time (s)

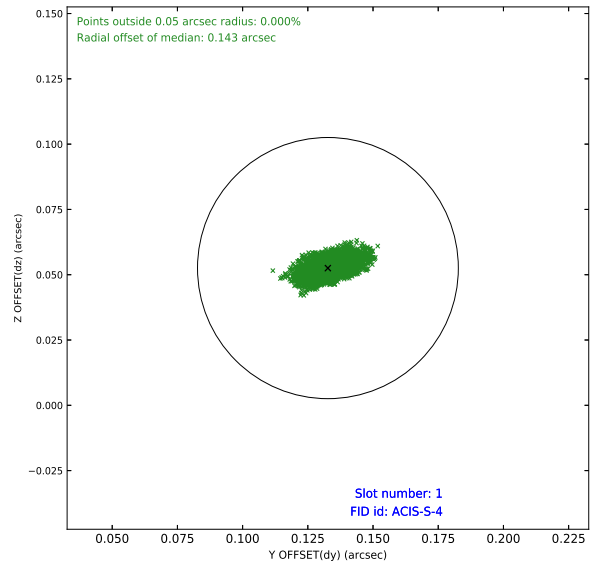
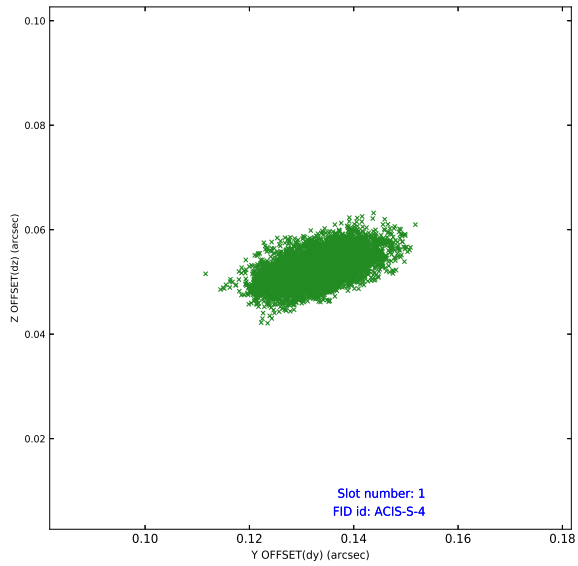


2.5 FID Slots

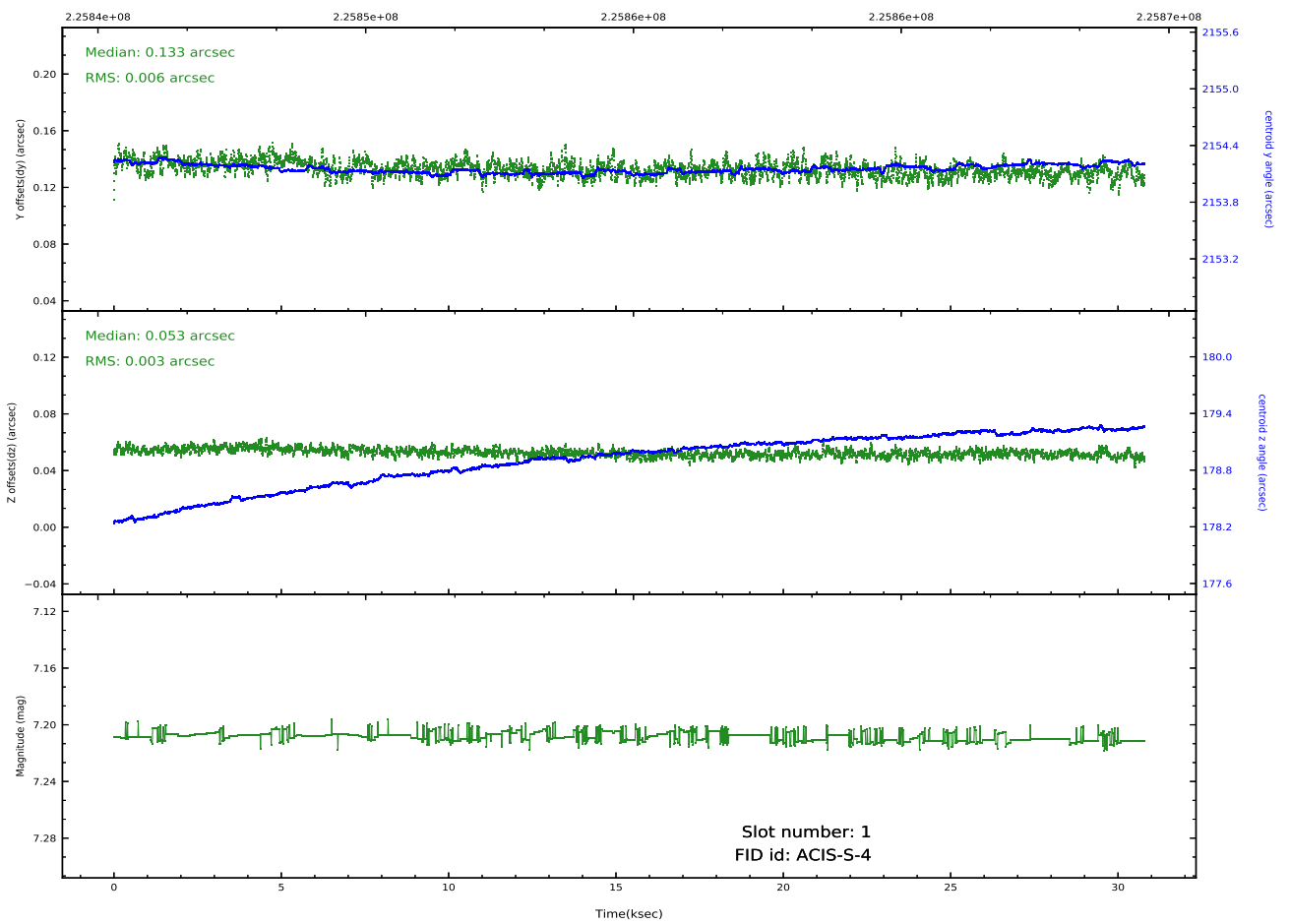
2.5.1 Slot 0



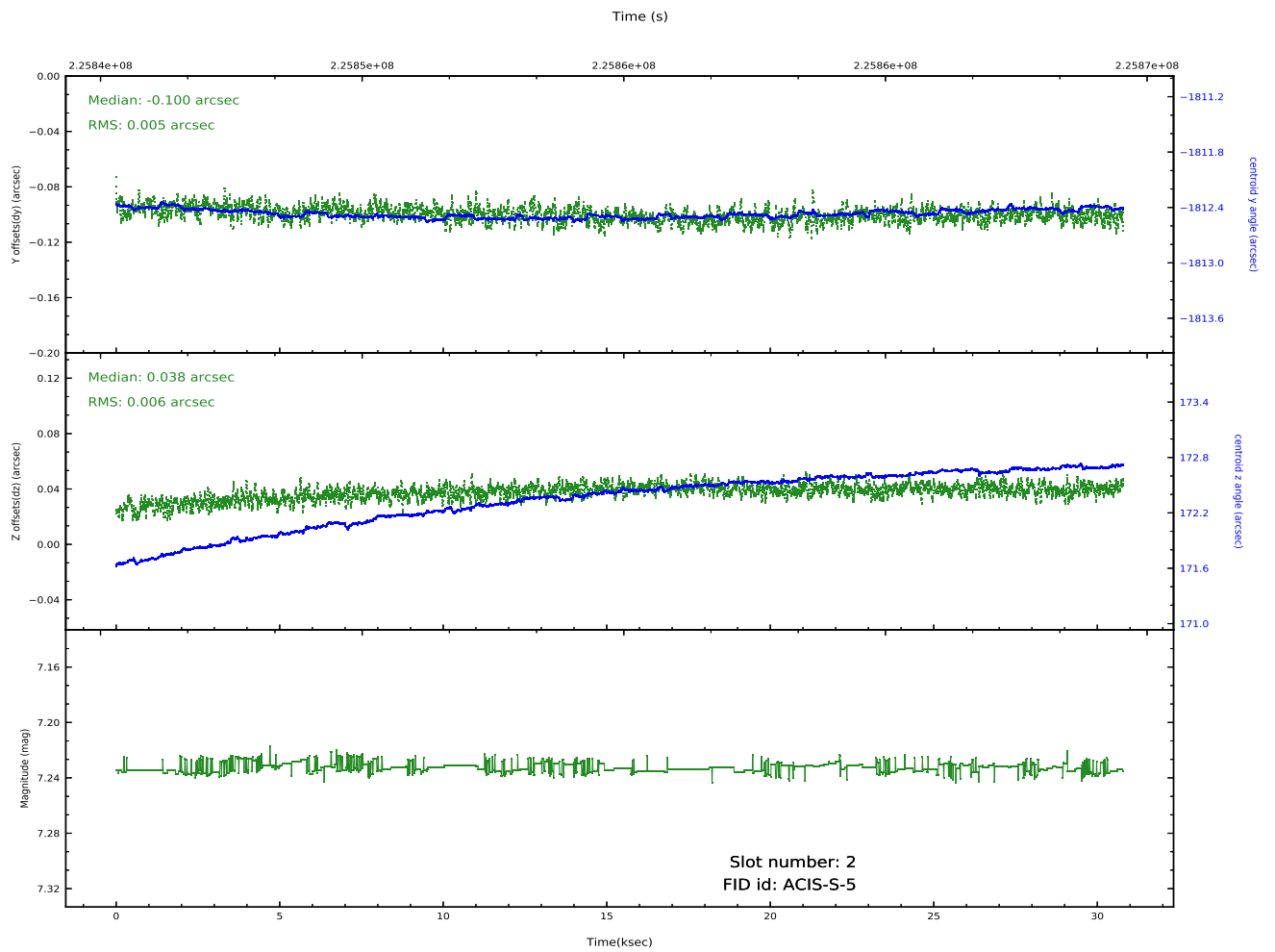
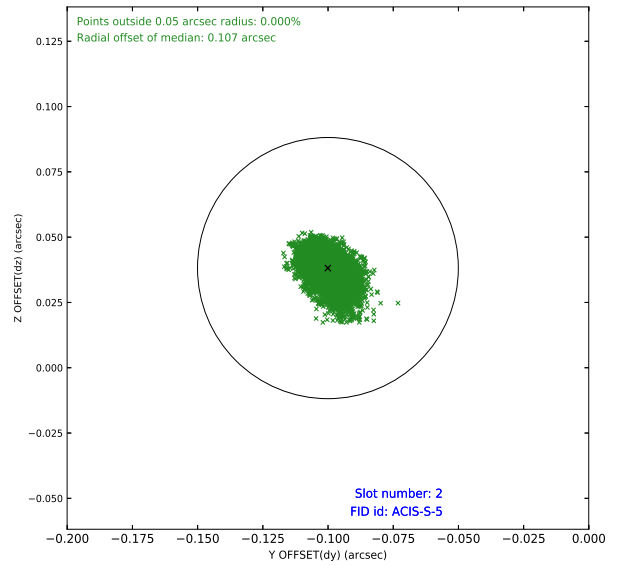
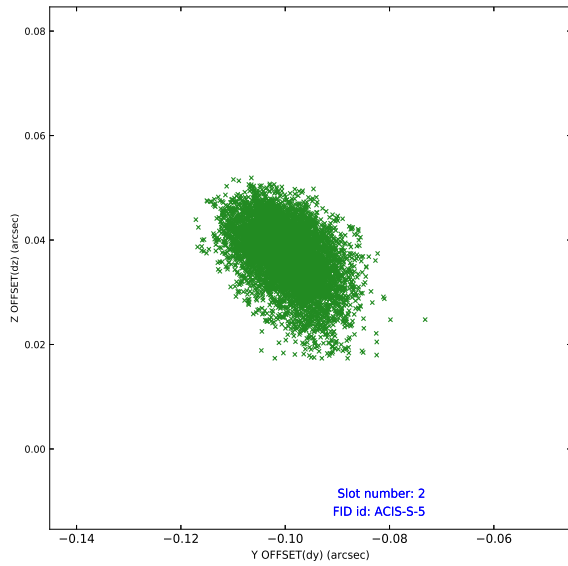
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.95839

A.2 Comments

The guide star in slot 7 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.