

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5616 - L2 Version 6
Chandra X-Ray Center

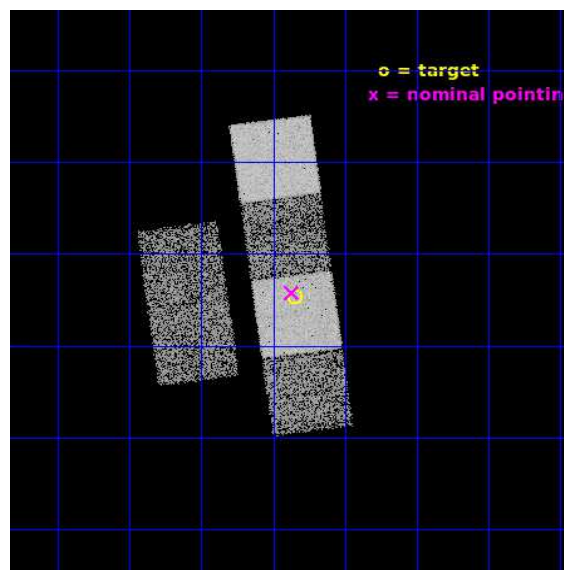
L2 Processing Date : Oct 7 2020

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 6	11
2.4.4	Slot 7	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

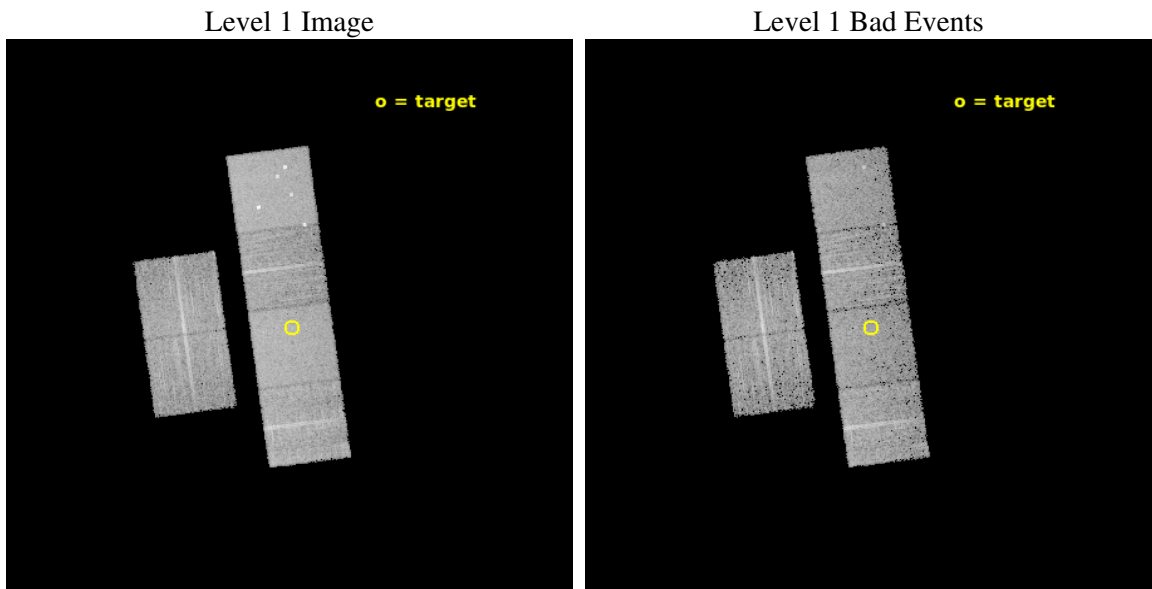
seq_num	701039	Sequence number
obs_id	5616	Observation id
title	A Chandra Survey of the Most Distant Quasars: X-raying the First Massive Black Holes	Proposal title
observer	William Brandt	Principal investigator
object	QSO J1408+0205	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	212.212083	Observer's specified target RA [deg]
dec_targ	2.089611	Observer's specified target Dec [deg]
ra_nom	212.21730659529	Nominal RA [deg]
dec_nom	2.0962933561782	Nominal Dec [deg]
roll_nom	82.379843639798	Nominal Roll [deg]
revision	6	Processing version of data
ontime	6076.7999773622	Sum of GTIs [s]
livetime	5999.8518770391	Livetime [s]
ontime2	6076.7999773622	Sum of GTIs [s]
ontime3	6076.7999773622	Sum of GTIs [s]
ontime5	6076.7999773622	Sum of GTIs [s]
ontime6	6076.7999773622	Sum of GTIs [s]
ontime7	6076.7999773622	Sum of GTIs [s]
ontime8	6076.7999773622	Sum of GTIs [s]
l2events	71873	Number of level 2 events



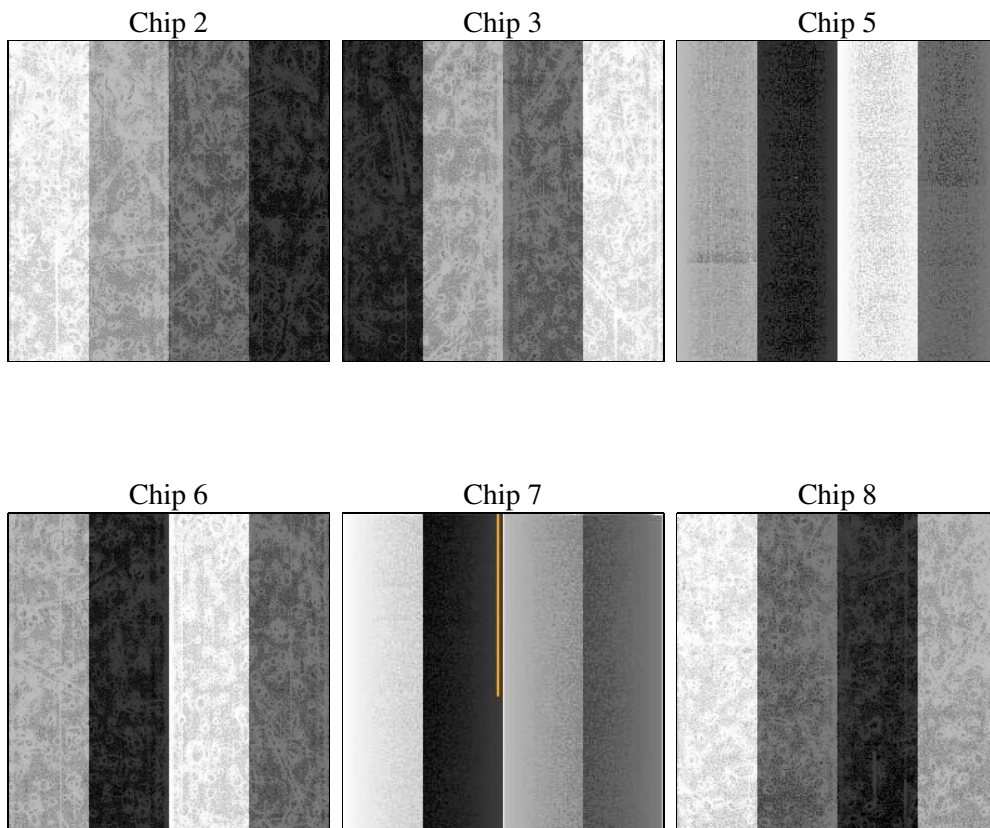
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	6120.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	6076.7999773622	Sum of GTIs [s]
caldbver	4.9.2	 	ontime2	6076.7999773622	Sum of GTIs [s]
date	2020-10-07T03:45:08	Date and time of file creation	ontime3	6076.7999773622	Sum of GTIs [s]
revision	6	Processing version of data	ontime5	6076.7999773622	Sum of GTIs [s]
			ontime6	6076.7999773622	Sum of GTIs [s]
			ontime7	6076.7999773622	Sum of GTIs [s]
			ontime8	6076.7999773622	Sum of GTIs [s]
			l1events	324287	Number of level 1 events

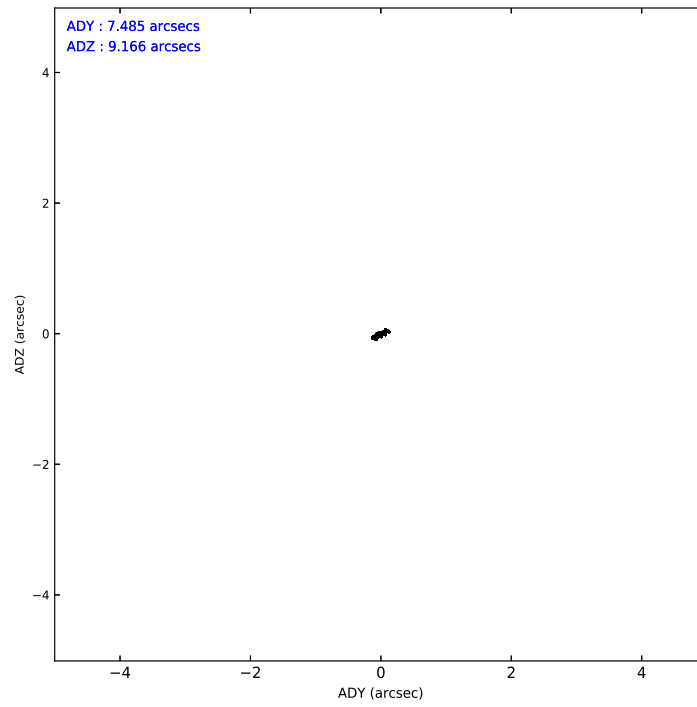
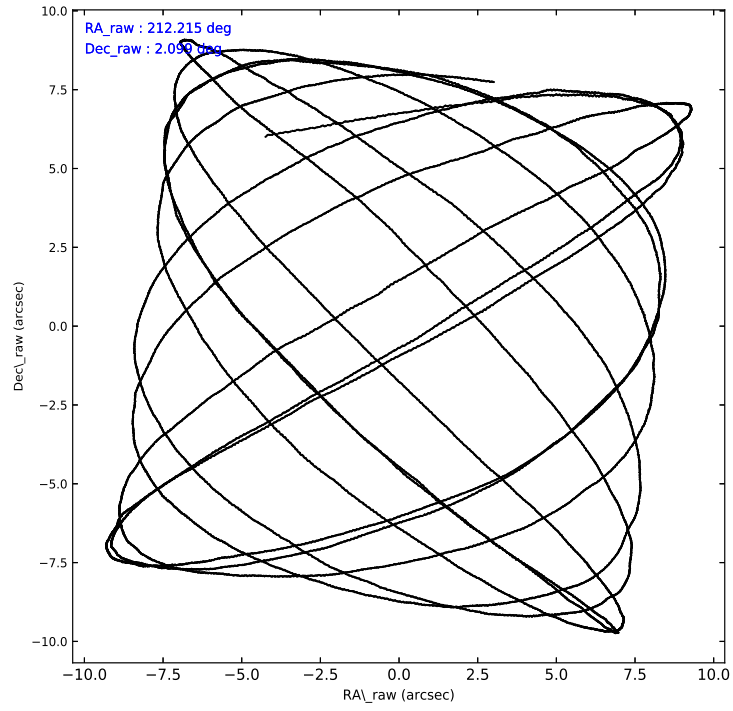
2.1.4 Events

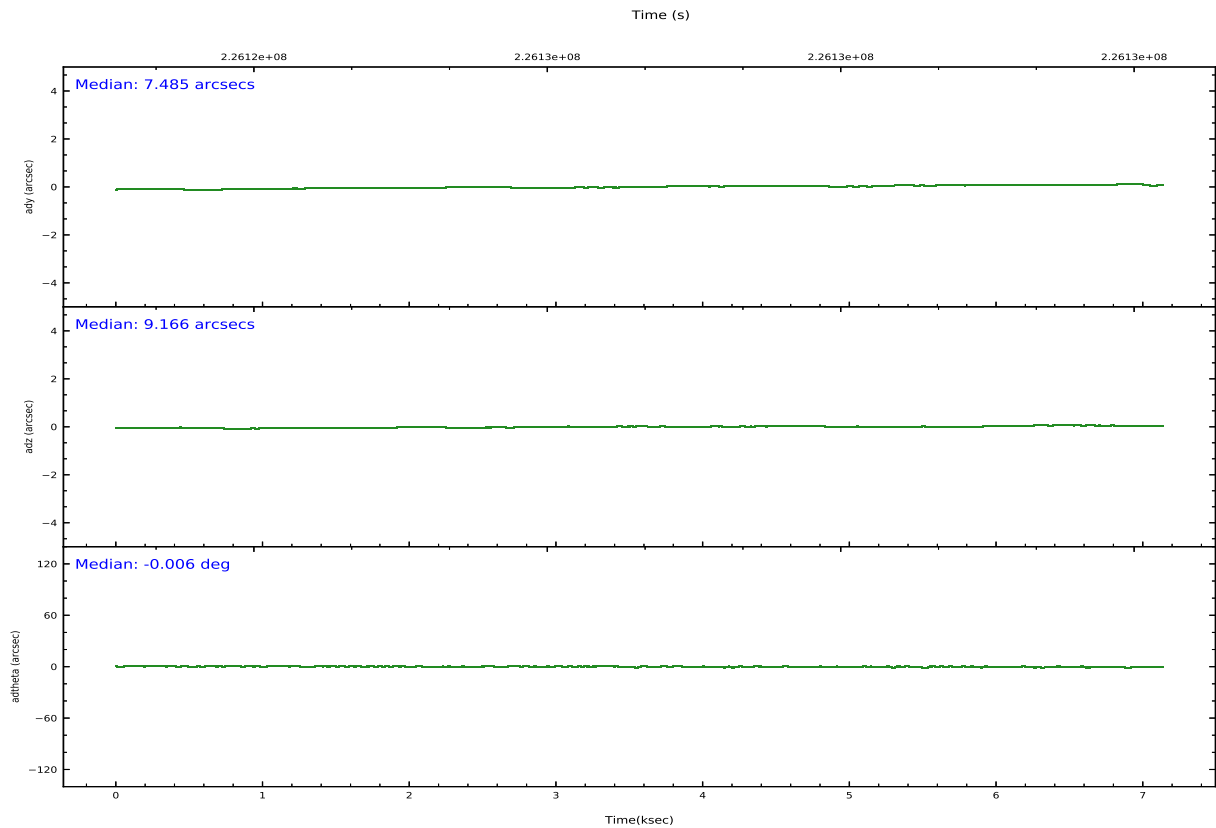
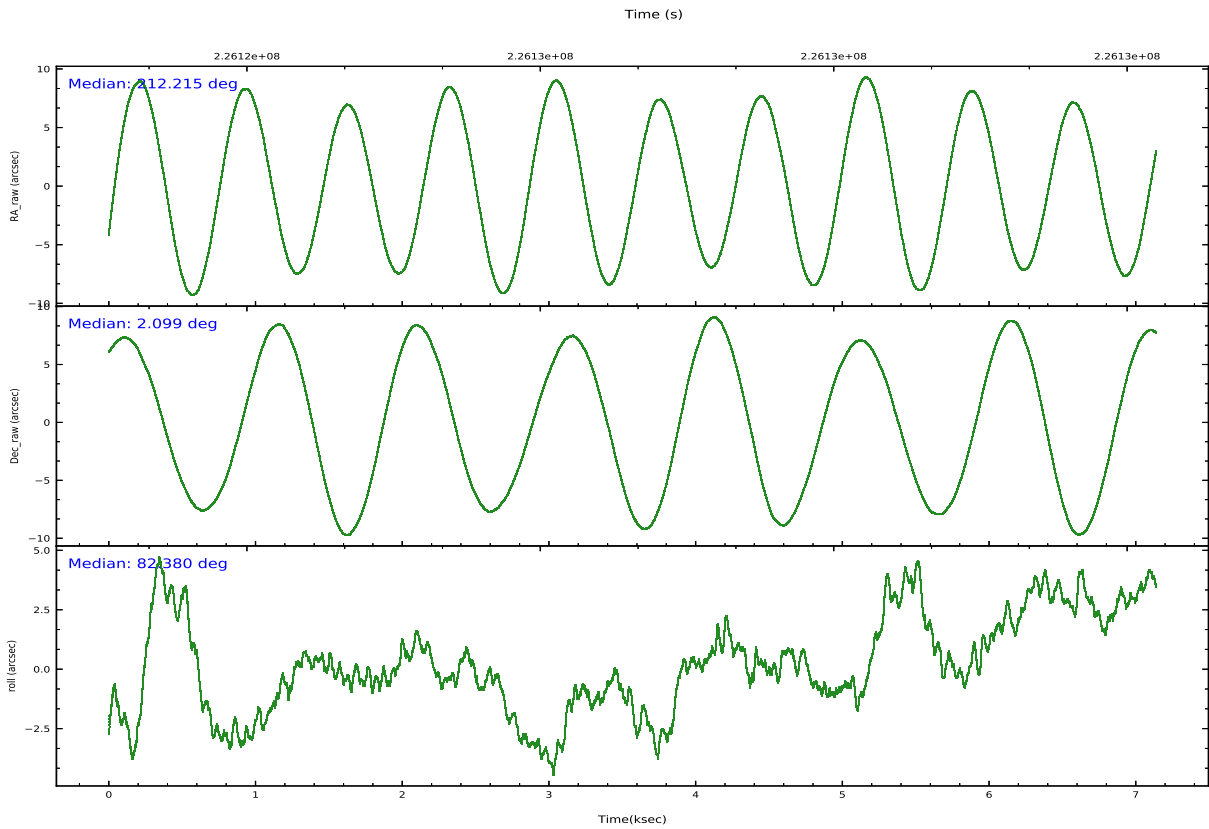
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	46607	43250	70317	44667	61327	58119	grade 0 events	2394	2275	4986	2104	2255	3712
rejected events	41243	38099	37407	39305	35973	45968		5%	5%	7%	4%	3%	6%
rejected %	88%	88%	53%	87%	58%	79%	grade 1 events	31	29	251	16	55	41
								0%	0%	0%	0%	0%	0%
							grade 2 events	1098	995	9441	1142	5004	2743
								2%	2%	13%	2%	8%	4%
							grade 3 events	500	494	1178	494	2197	1237
								1%	1%	1%	1%	3%	2%
							grade 4 events	510	482	1111	511	2149	1121
								1%	1%	1%	1%	3%	1%
							grade 5 events	1834	2054	5070	2029	5667	2802
								3%	4%	7%	4%	9%	4%
							grade 6 events	868	911	16232	1113	13773	3343
								1%	2%	23%	2%	22%	5%
							grade 7 events	39372	36010	32048	37258	30227	43120
								84%	83%	45%	83%	49%	74%

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	212.225746	212.21730659529	Subarray requested	NONE	NONE
[deg] Pointing Dec	2.073785	2.0962933561782	Alternating exposures requested	N	N
[deg] Pointing Roll	82.225632	82.379843639798	[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	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	226124078.184000	226122700.89686			
Observation start date	2005-03-02T04:13:34	2005-03-02T03:51:40			
[s] Observation end time (MET)	226130198.184000	226130734.84722			
Observation end date	2005-03-02T05:55:34	2005-03-02T06:05:34			
Read mode	TIMED	TIMED			

2.3 Aspect





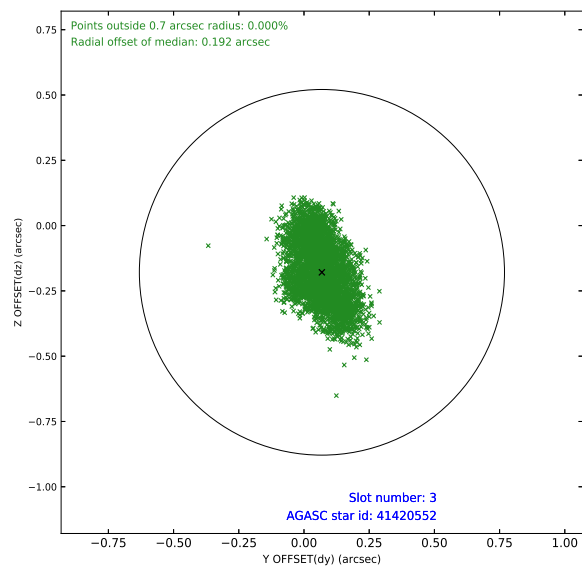
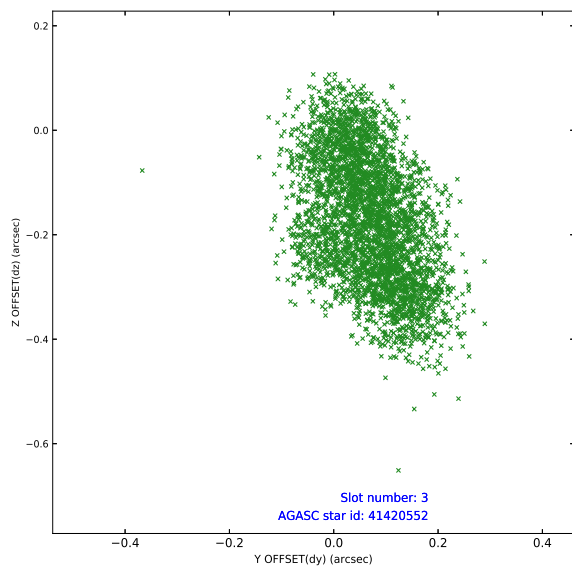
Slot Statistics

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	1742	1.000	-0.058	-0.081	0.007	0.012	0.000000	0.000000	-760.26	-1730
1	FID		ACIS-S-4	7.20	1742	1.000	0.151	0.050	0.006	0.011	0.000000	0.000000	2152.81	177
2	FID		ACIS-S-5	7.23	1742	1.000	-0.124	0.040	0.008	0.012	0.000000	0.000000	-1812.18	171
3	GUIDE	used	41420552	9.12	3482	1.000	0.069	-0.179	0.150	0.232	211.681746	1.924562	-796.64	1866
4	GUIDE	used	41550328	10.09	3480	1.000	0.077	0.145	0.144	0.258	212.629903	1.702344	-1127.71	-1621
5	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
6	GUIDE	used	41553792	9.65	3473	1.000	-0.088	0.034	0.107	0.172	212.509696	2.277510	865.01	-913
7	GUIDE	used	41812816	9.93	3474	1.000	-0.058	0.006	0.134	0.223	212.090922	2.732829	2285.18	801

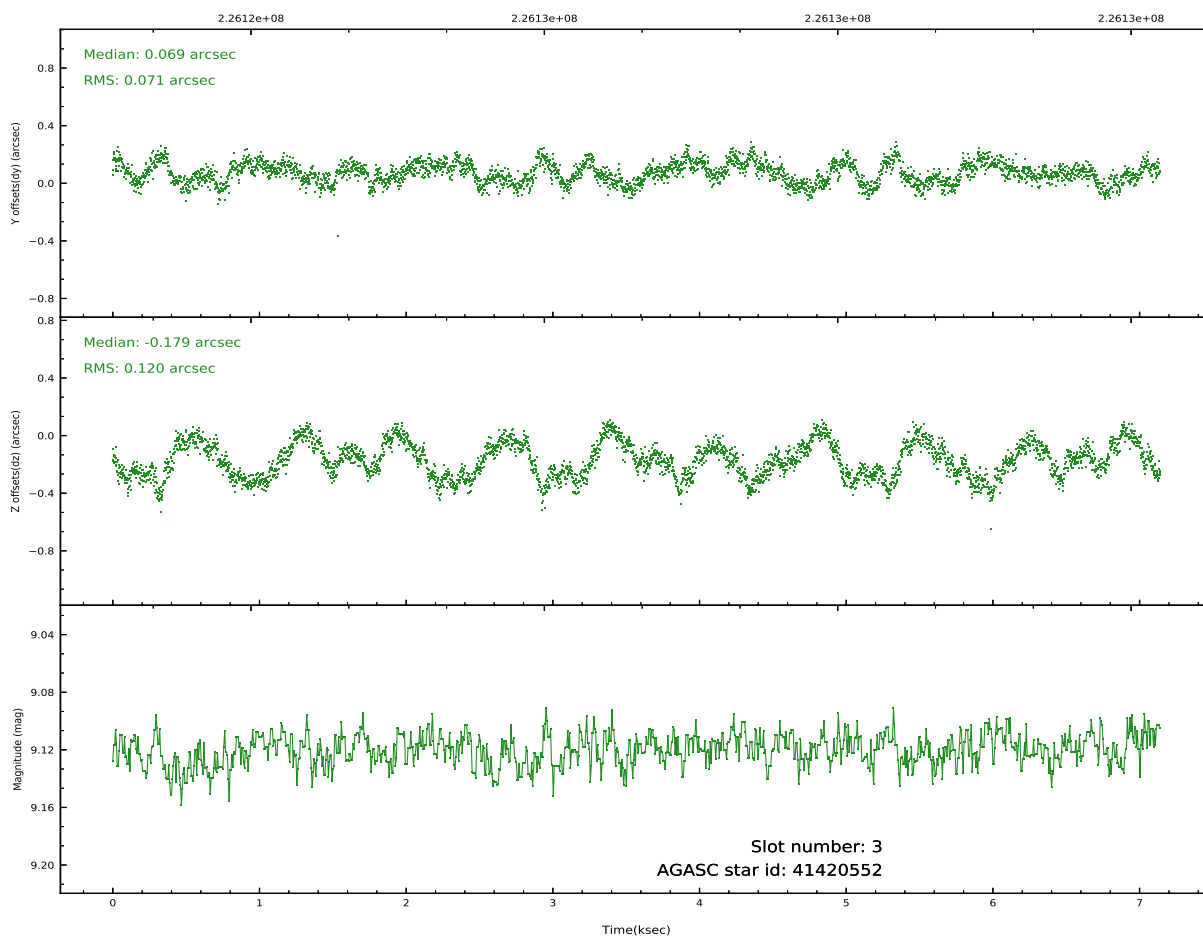
∞

2.4 Star Slots

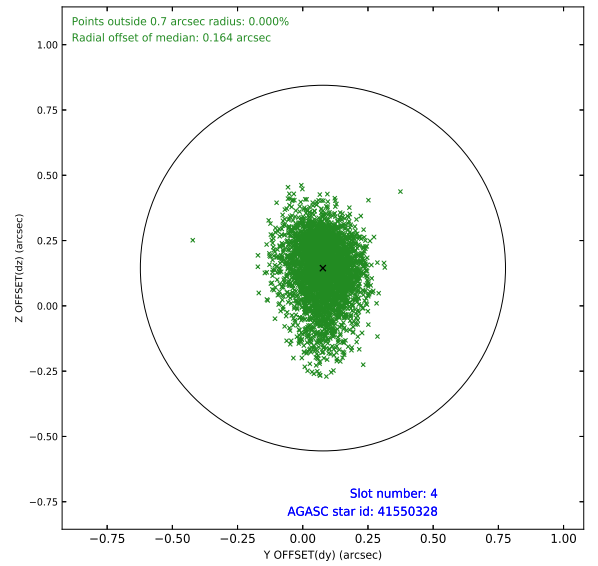
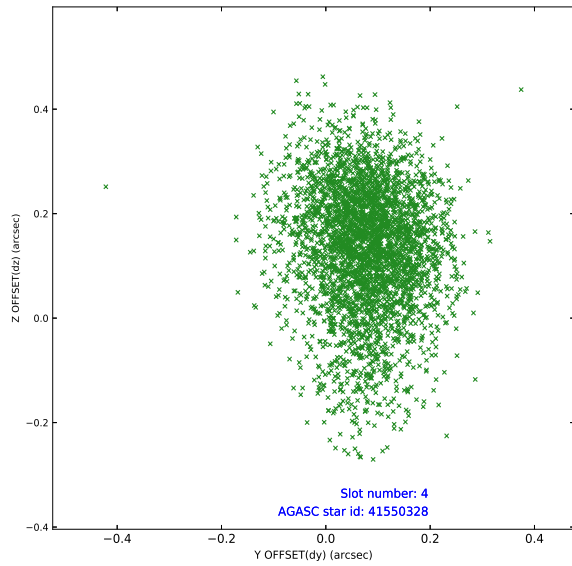
2.4.1 Slot 3



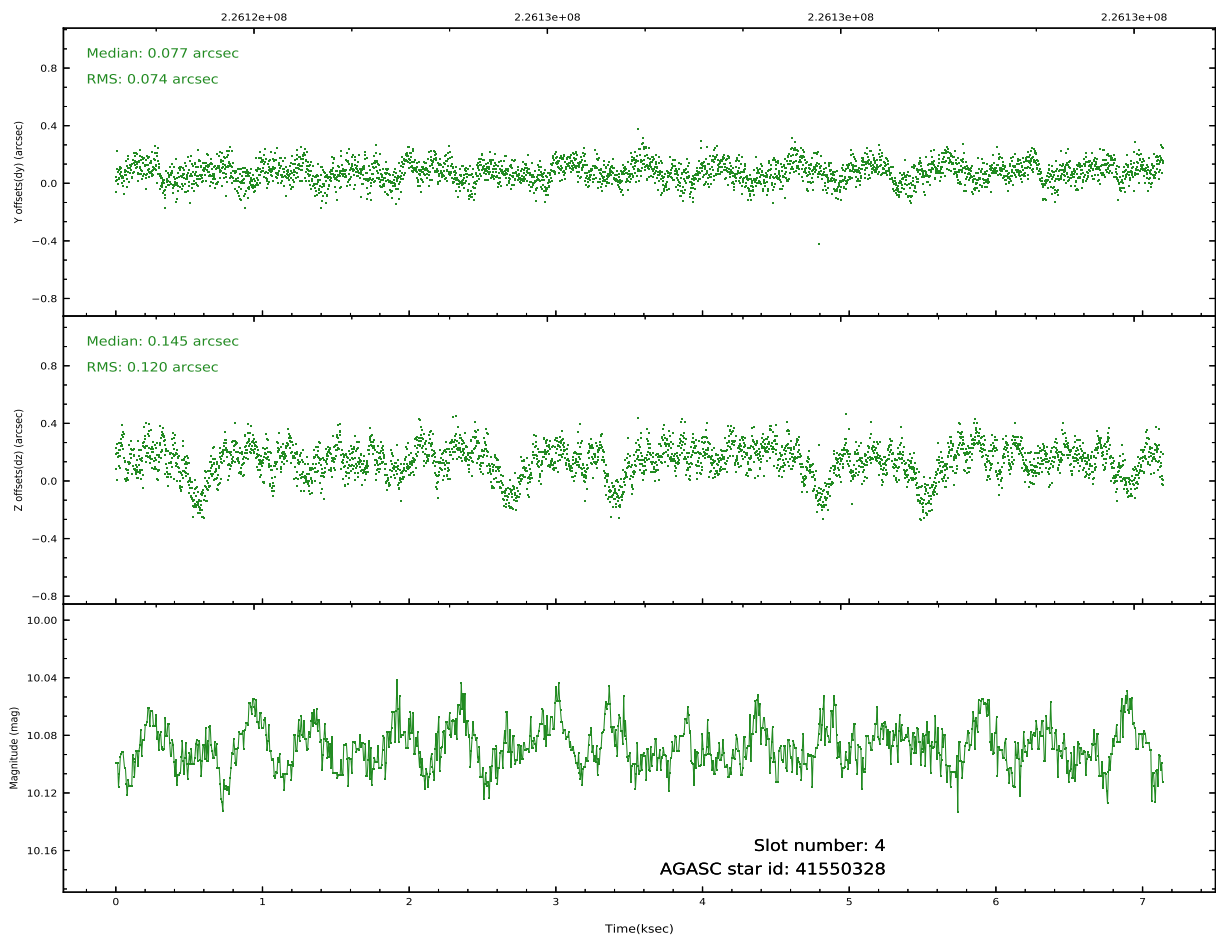
Time (s)



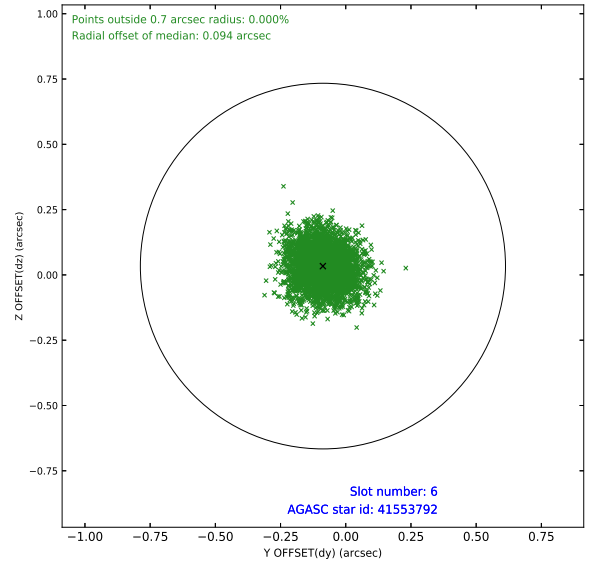
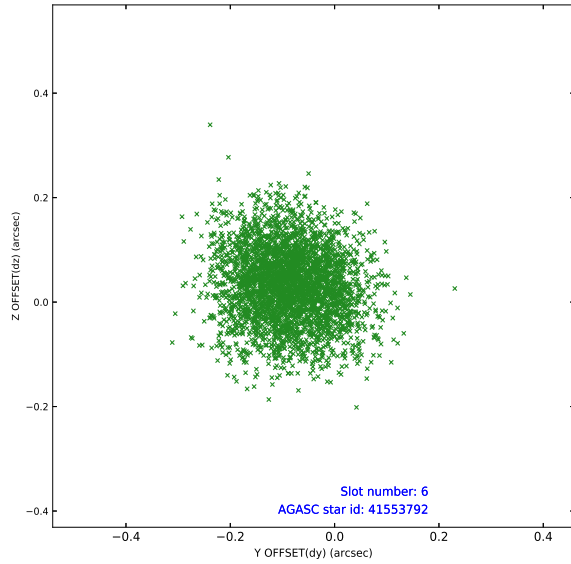
2.4.2 Slot 4



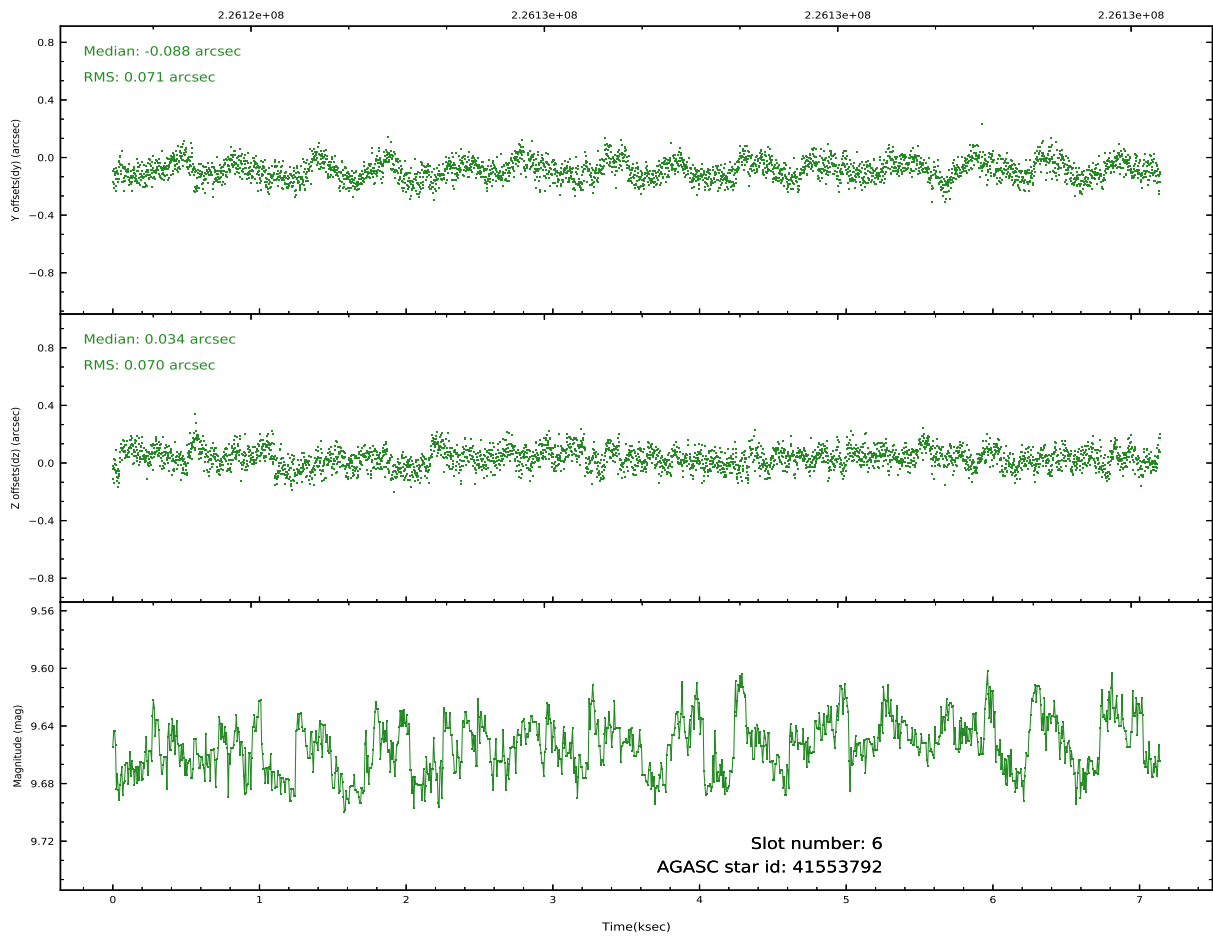
Time (s)



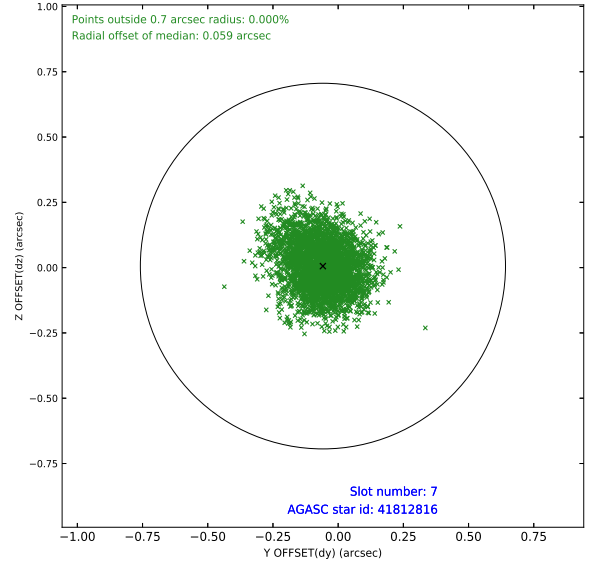
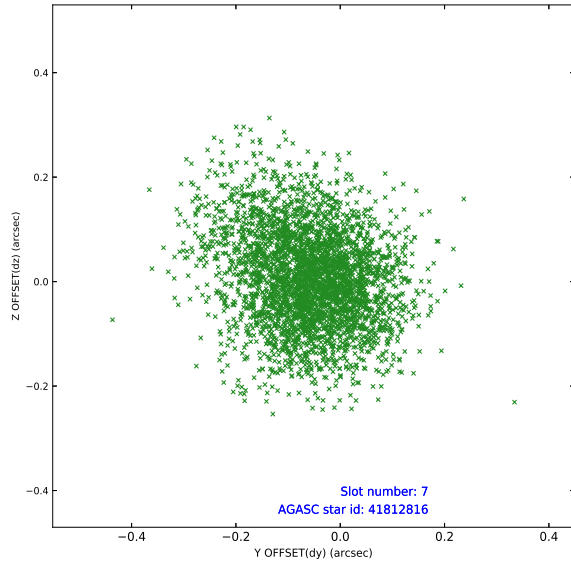
2.4.3 Slot 6



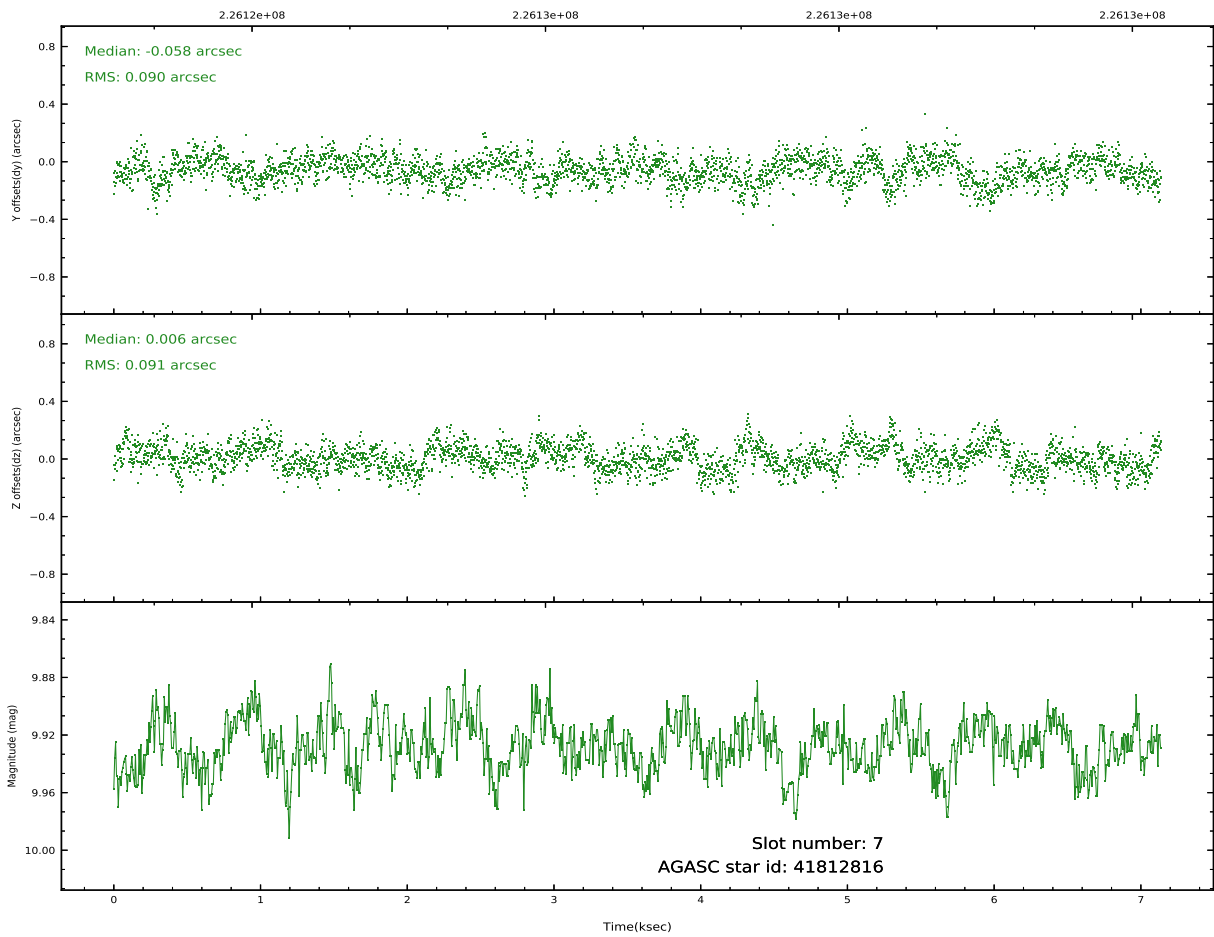
Time (s)



2.4.4 Slot 7

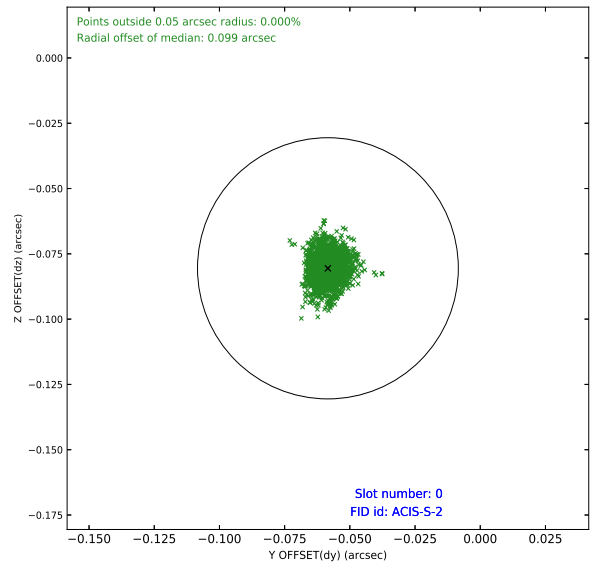
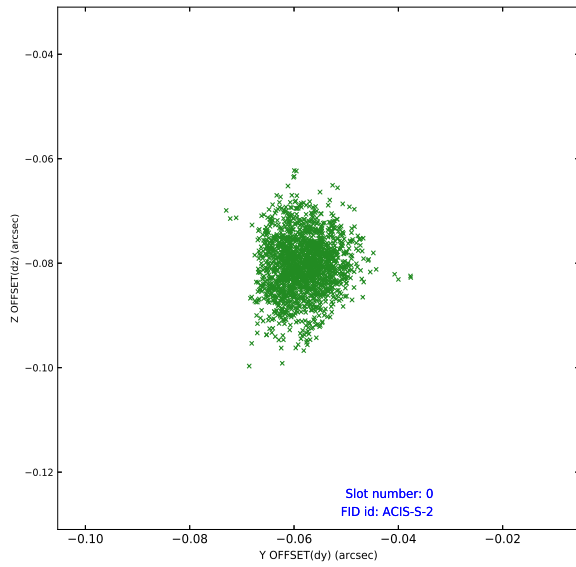


Time (s)

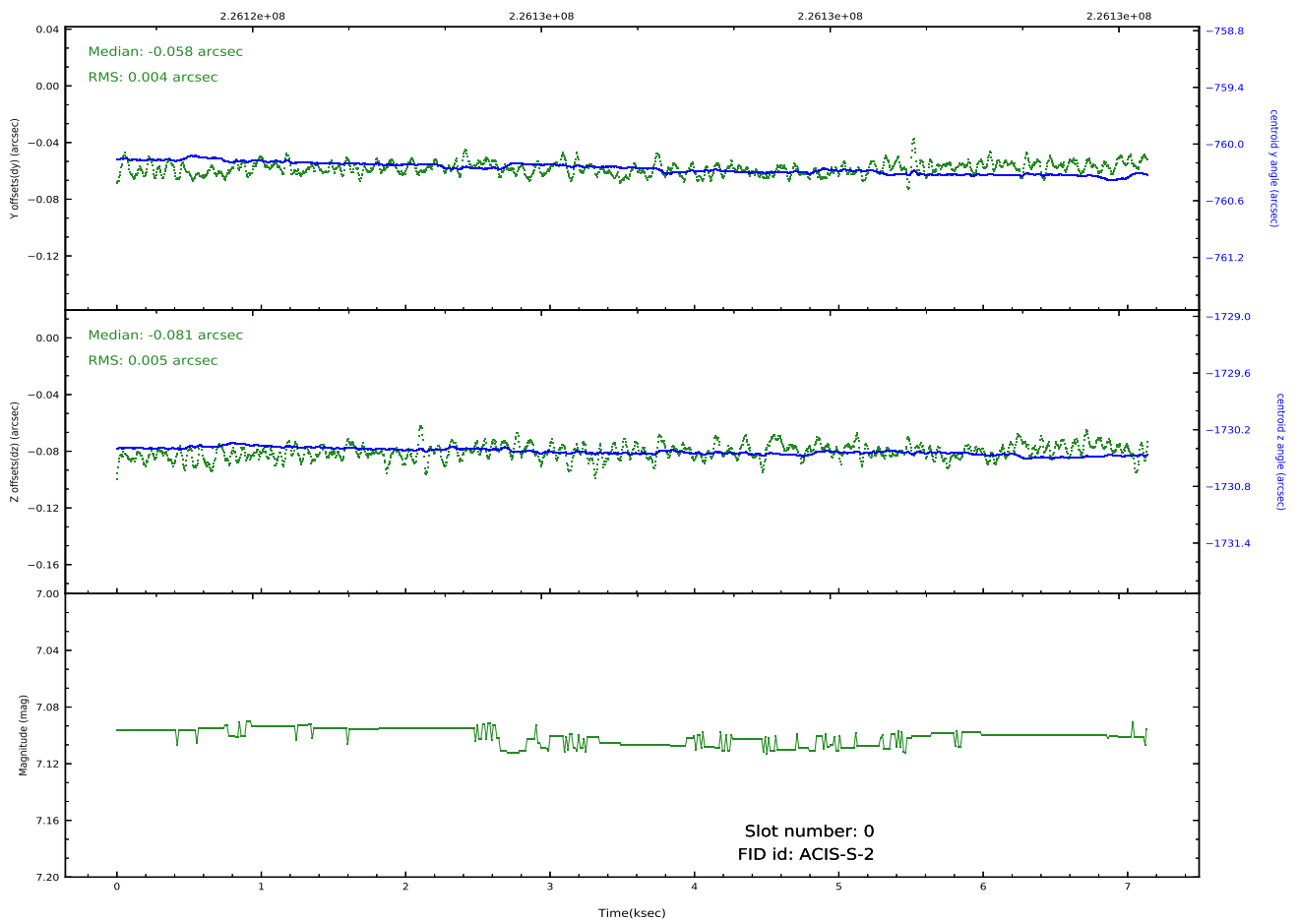


2.5 FID Slots

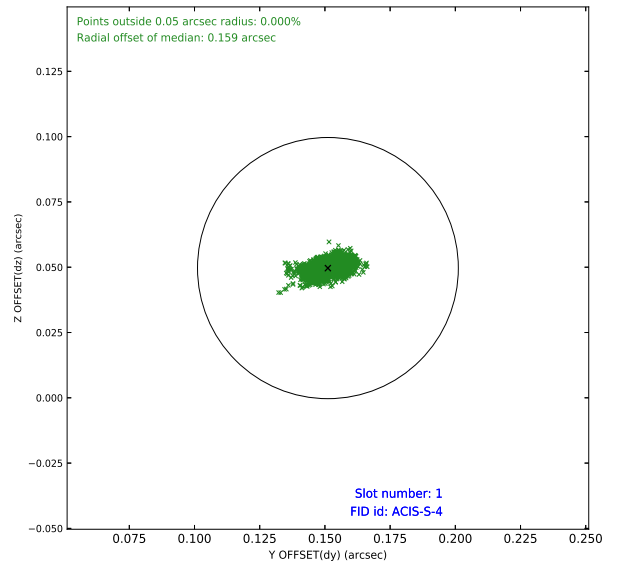
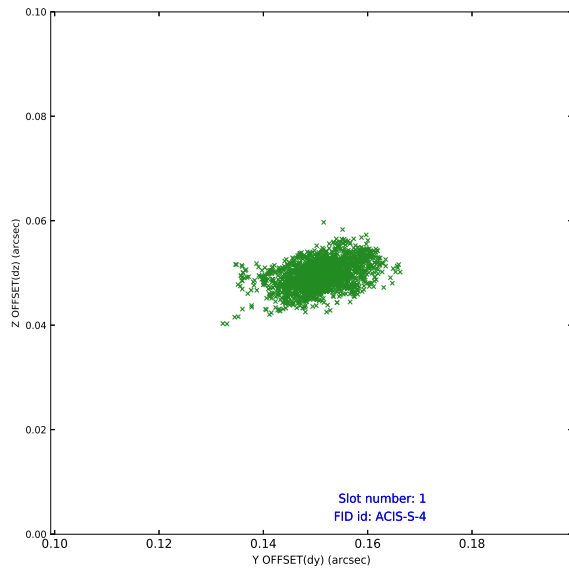
2.5.1 Slot 0



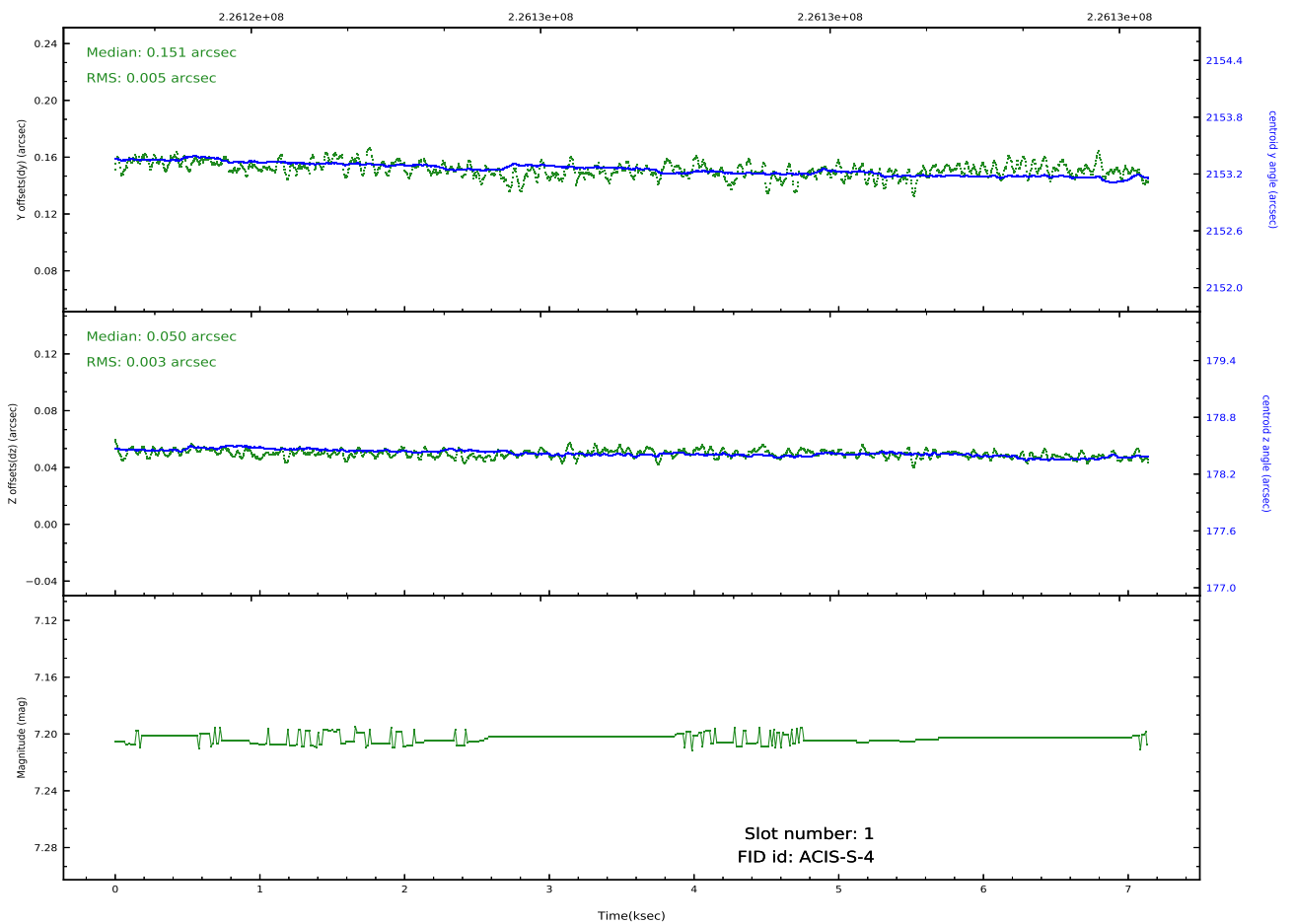
Time (s)



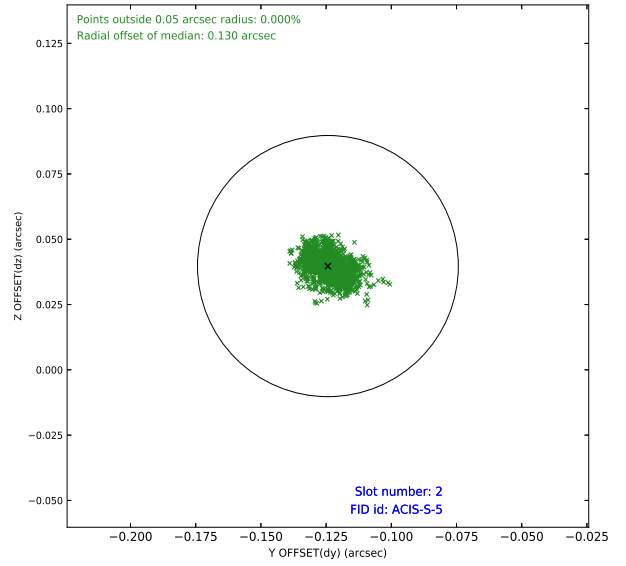
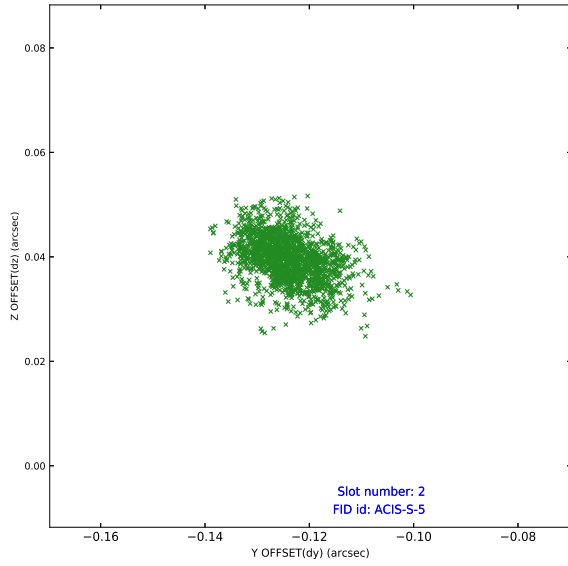
2.5.2 Slot 1



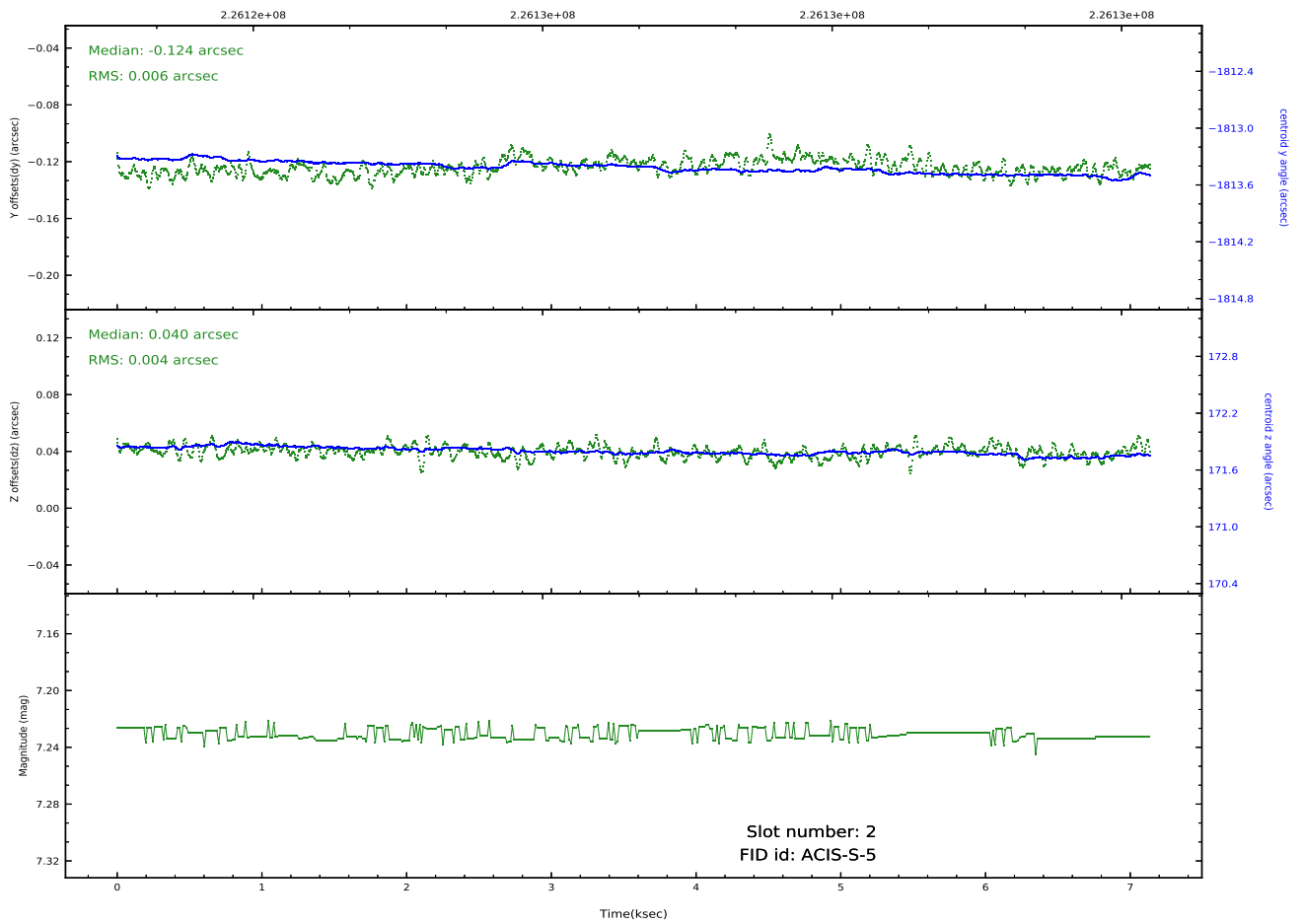
Time (s)



2.5.3 Slot 2



Time (s)



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	6.076799

A.2 Comments

The guide star in slot 5 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.