

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20937 - L2 Version 3
Chandra X-Ray Center

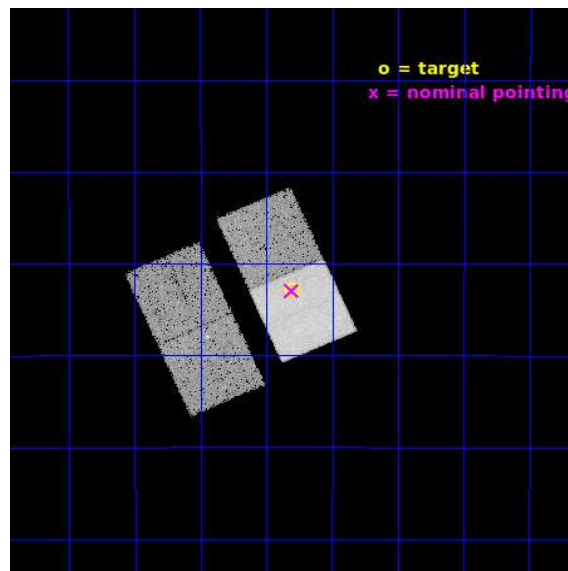
L2 Processing Date : Oct 24 2020

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1 Front

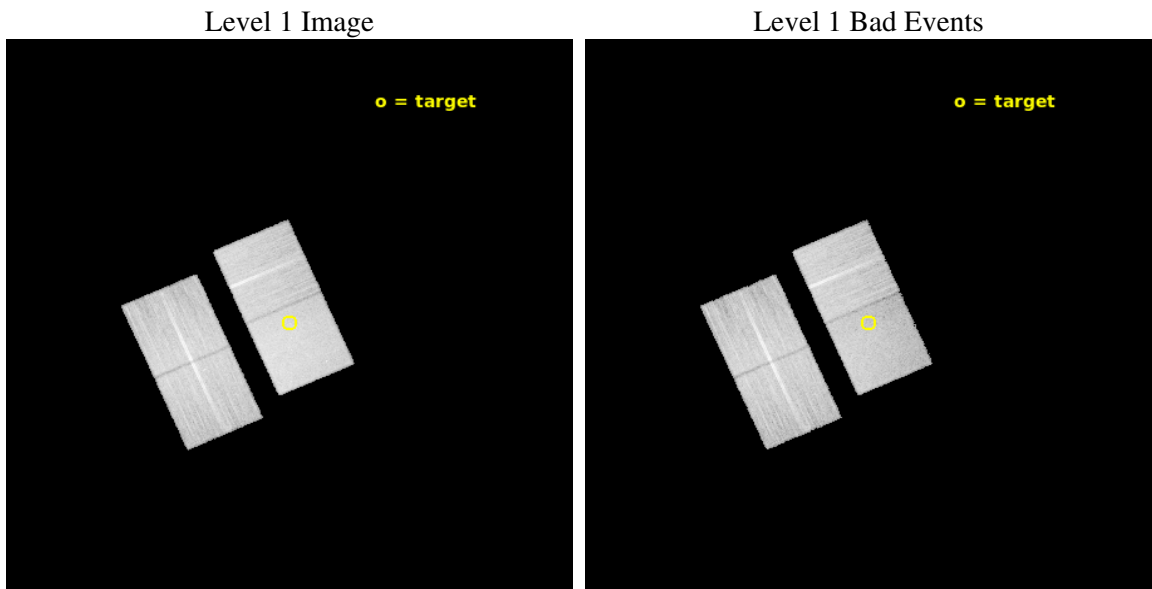
seq_num	402020	Sequence number
obs_id	20937	Observation id
title	GW170817: Tracking the X-ray light curve to study the origin of the emission	Proposal title
observer	Belinda Wilkes	Principal investigator
object	GW170817	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	197.450417	Observer's specified target RA [deg]
dec_targ	-23.381472	Observer's specified target Dec [deg]
ra_nom	197.4513968046	Nominal RA [deg]
dec_nom	-23.382532835951	Nominal Dec [deg]
roll_nom	66.150608527734	Nominal Roll [deg]
revision	3	Processing version of data
ontime	21045.162470102	Sum of GTIs [s]
livetime	20770.191929207	Livetime [s]
ontime2	21045.039350152	Sum of GTIs [s]
ontime3	21045.080390096	Sum of GTIs [s]
ontime6	21045.121430159	Sum of GTIs [s]
ontime7	21045.162470102	Sum of GTIs [s]
l2events	125870	Number of level 2 events



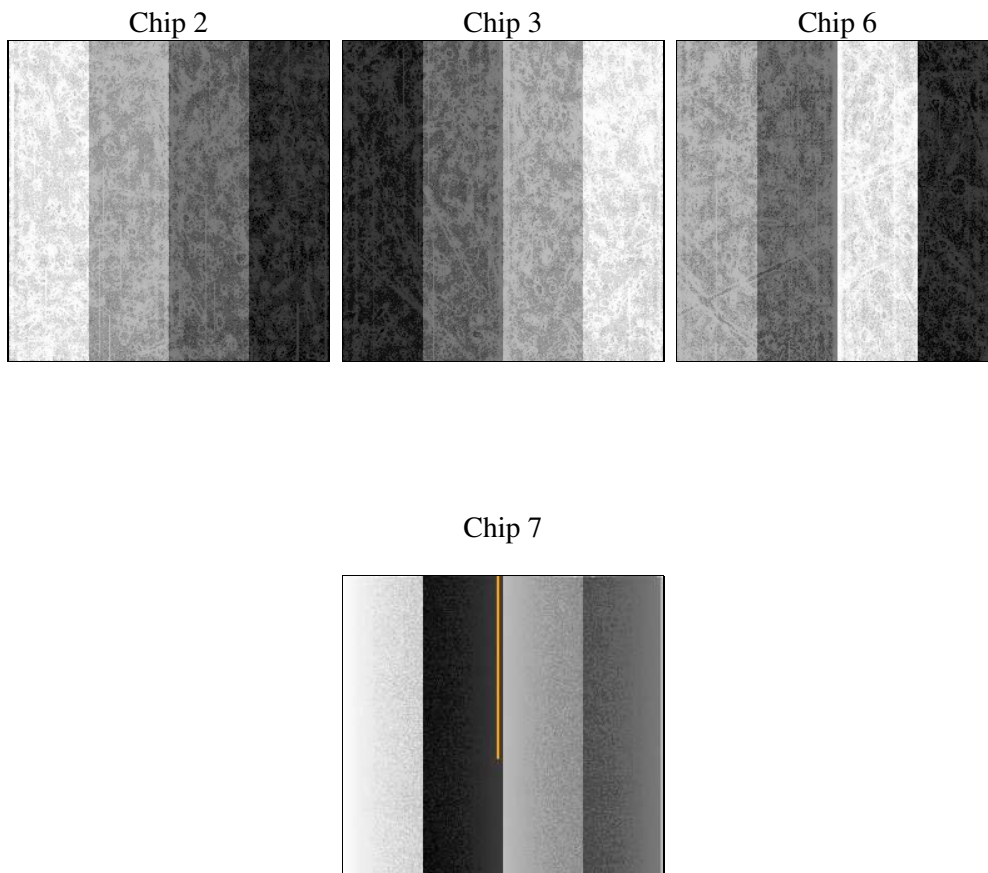
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	20982.761000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	21045.162470102	Sum of GTIs [s]
caldbver	4.9.3	 	ontime2	21045.039350152	Sum of GTIs [s]
date	2020-10-24T08:37:17	Date and time of file creation	ontime3	21045.080390096	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	21045.121430159	Sum of GTIs [s]
			ontime7	21045.162470102	Sum of GTIs [s]
			l1events	675976	Number of level 1 events

2.1.4 Events

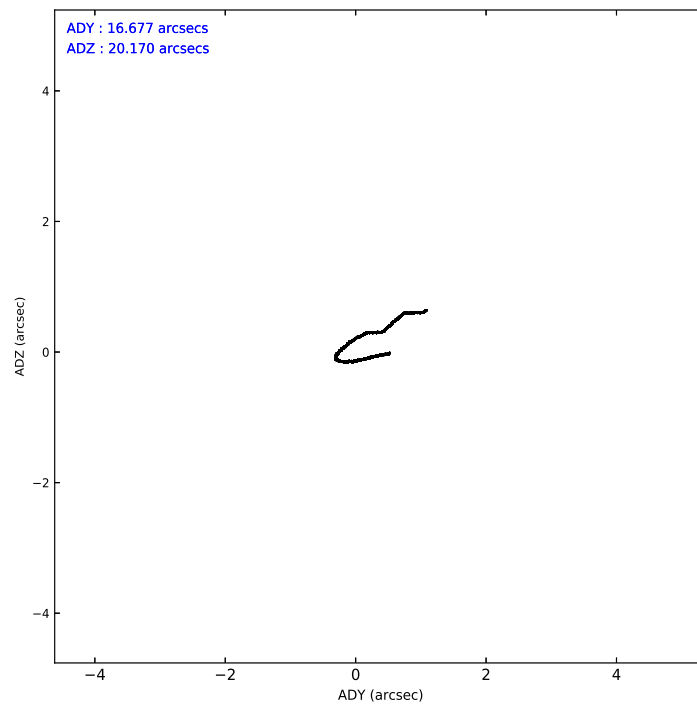
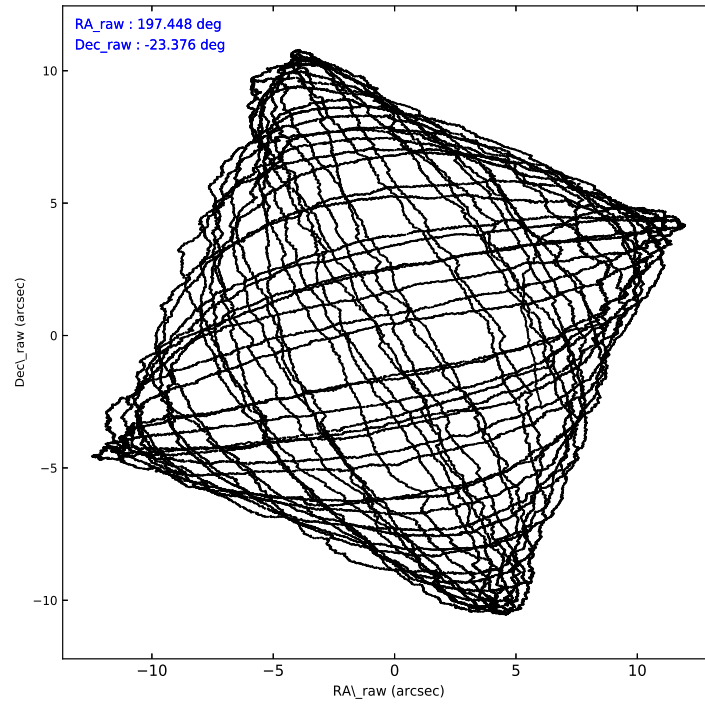
	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	159934	153017	163846	199179
rejected events	144226	137313	146608	112801
rejected %	90%	89%	89%	56%

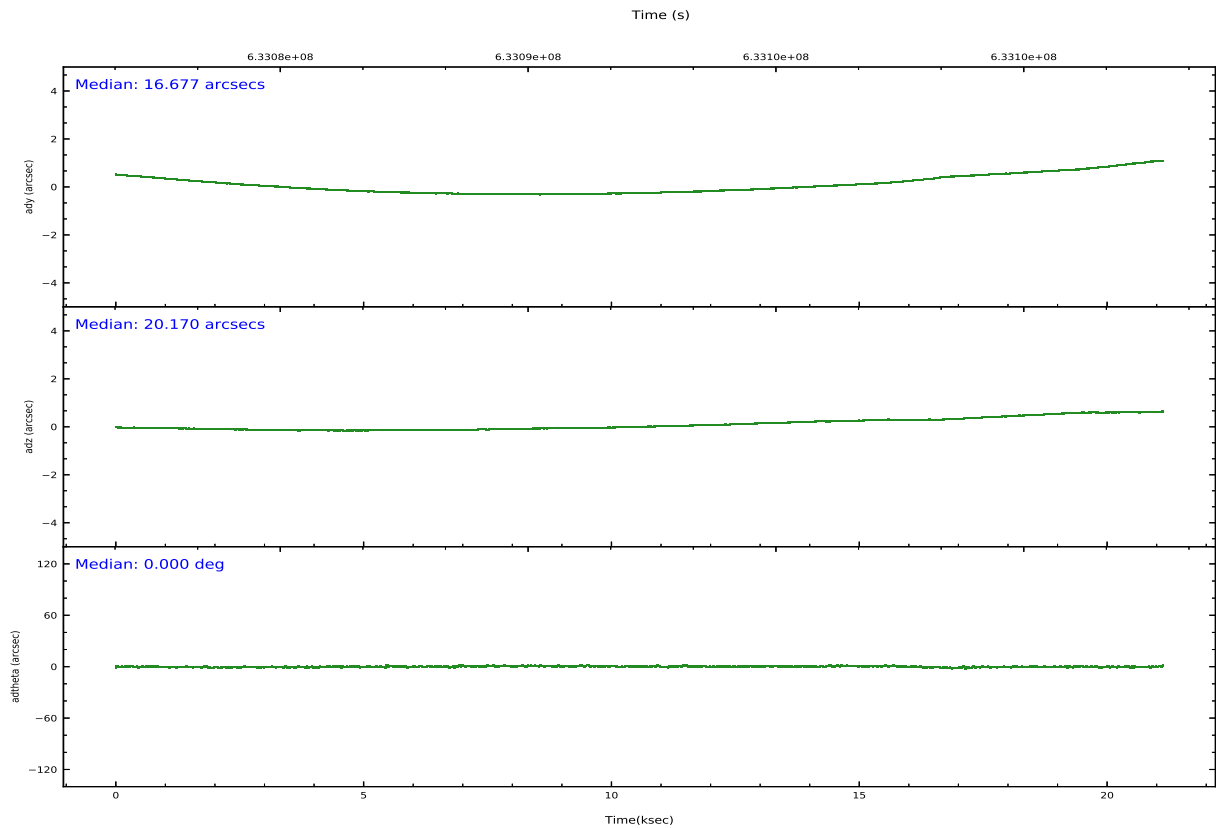
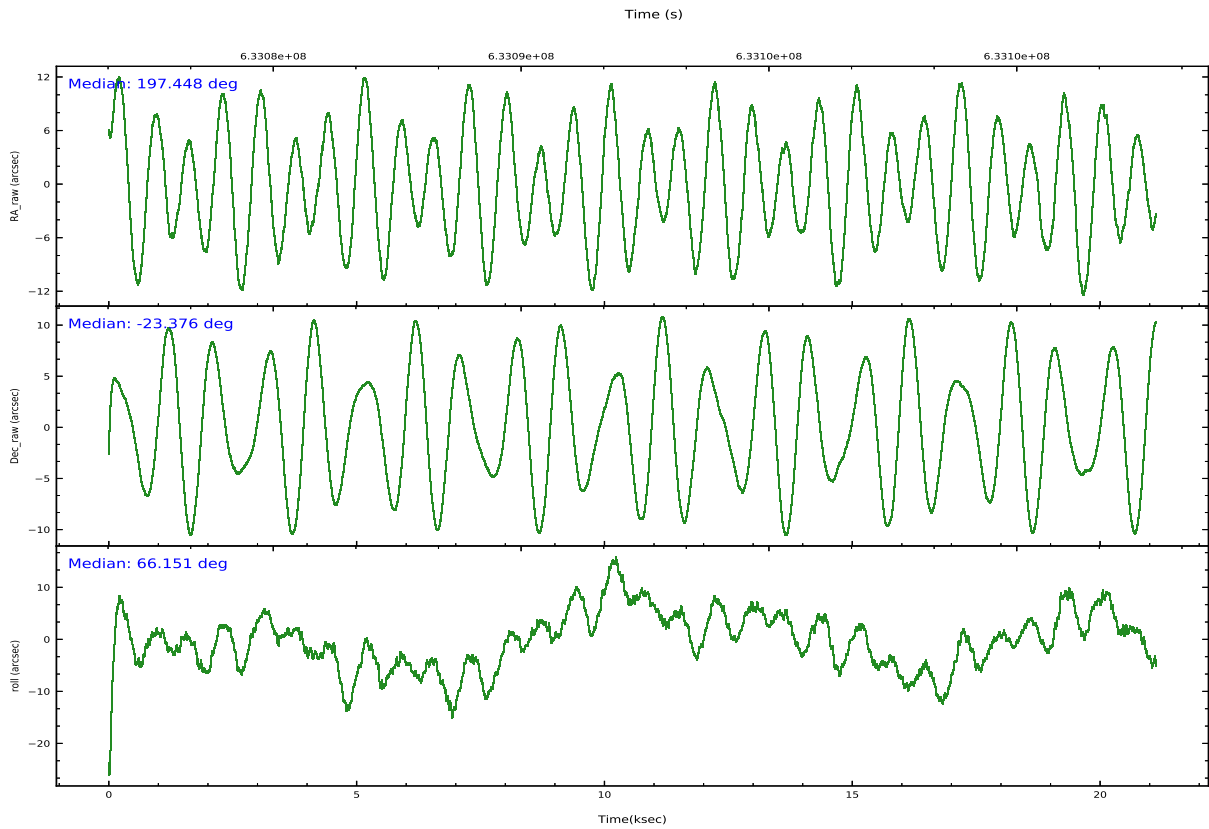
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	5481	5578	4842	7274
	3%	3%	2%	3%
grade 1 events	105	74	72	271
	0%	0%	0%	0%
grade 2 events	3792	3337	4580	17738
	2%	2%	2%	8%
grade 3 events	1621	1669	1538	6875
	1%	1%	0%	3%
grade 4 events	1608	1659	1508	6792
	1%	1%	0%	3%
grade 5 events	5547	6715	6591	19339
	3%	4%	4%	9%
grade 6 events	3210	3466	4776	47732
	2%	2%	2%	23%
grade 7 events	138570	130519	139939	93158
	86%	85%	85%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	197.451350	197.4513968046	CCD I2 on	O1	Y
[deg] Pointing Dec	-23.403031	-23.382532835951	CCD I3 on	O2	Y
[deg] Pointing Roll	66.000373	66.15060852773399	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	O3	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	N	N
[s] Observation start time (MET)	633081830.184000	633080855.70303	CCD S5 on	N	N
Observation start date	2018-01-23T08:02:41	2018-01-23T07:47:35	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	633102813.184000	633103587.12936	On-chip summing requested	N	N
Observation end date	2018-01-23T13:52:24	2018-01-23T14:06:27	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect





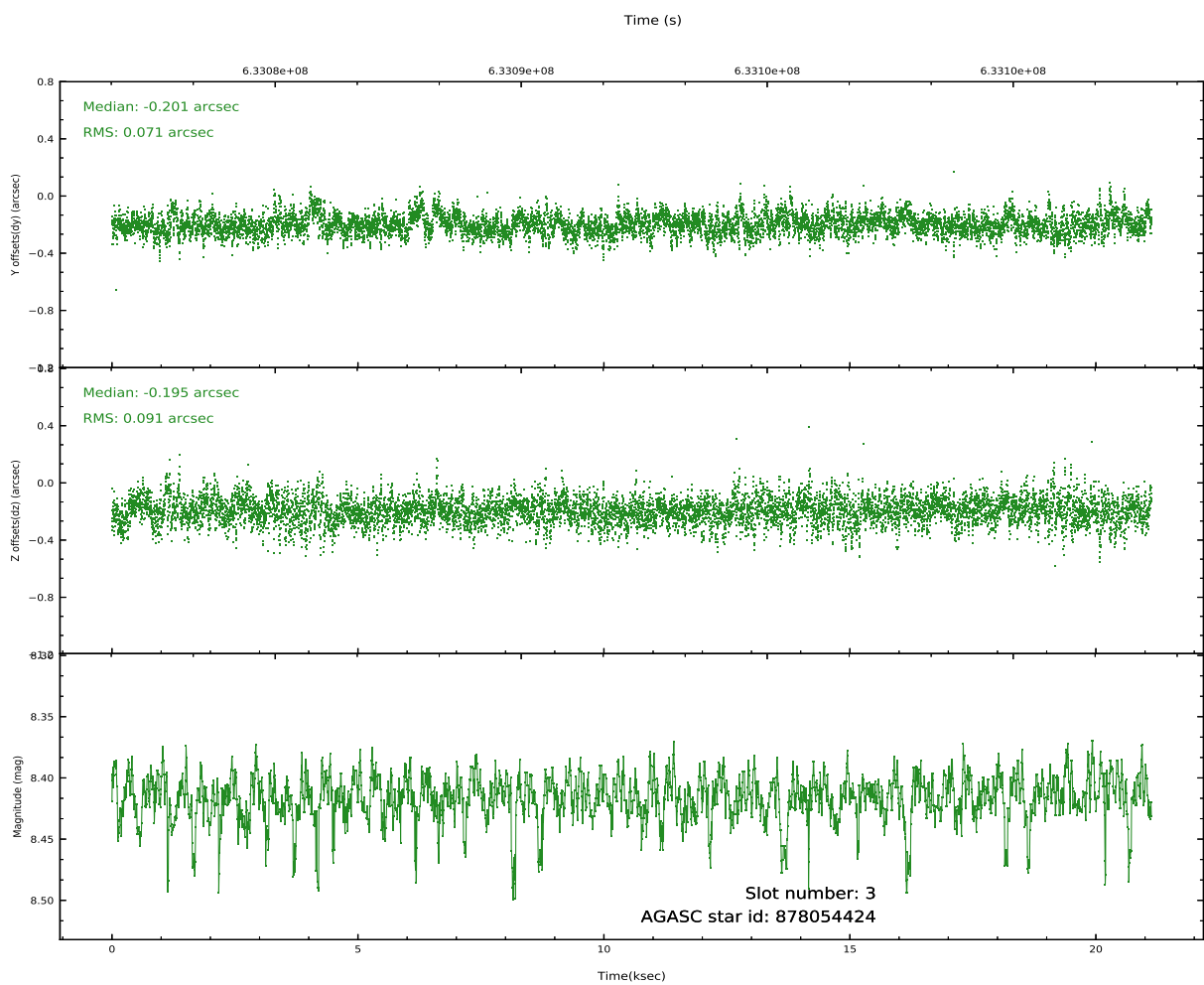
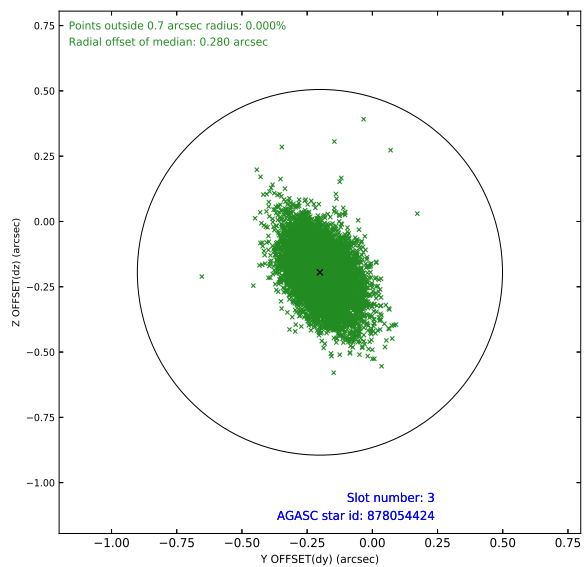
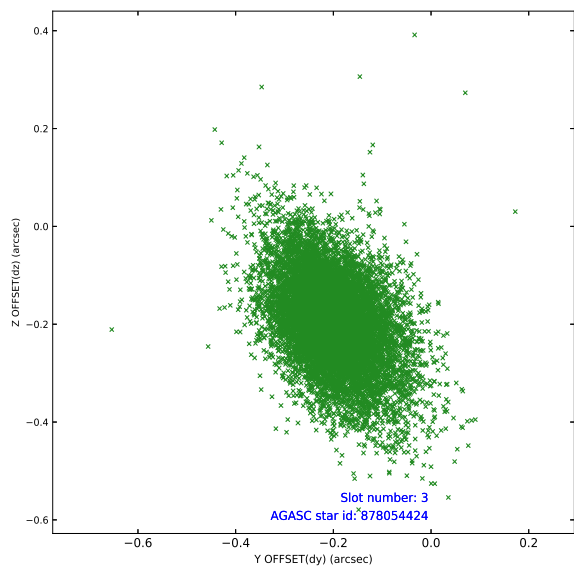
Slot Statistics

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-1	7.26	5153	1.000	0.146	-0.096	0.013	0.022	0.000000	0.000000	926.20	-1737
1	FID		ACIS-S-2	7.17	5154	1.000	-0.138	0.054	0.013	0.019	0.000000	0.000000	-769.89	-1742
2	FID		ACIS-S-4	7.28	5154	1.000	-0.034	0.048	0.014	0.021	0.000000	0.000000	2143.37	166
3	GUIDE	used	878054424	8.42	10306	1.000	-0.201	-0.195	0.116	0.208	197.311680	-23.210058	446.01	704
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	878058424	9.18	10228	1.000	0.420	0.261	0.168	0.296	197.645163	-24.009629	-1735.80	-1469
6	GUIDE	used	878061480	7.95	10299	1.000	-0.412	-0.315	0.137	0.244	197.360027	-22.852260	1686.83	1083
7	GUIDE	used	878056592	8.74	10305	1.000	0.191	0.252	0.140	0.244	197.586702	-23.861101	-1325.15	-1076

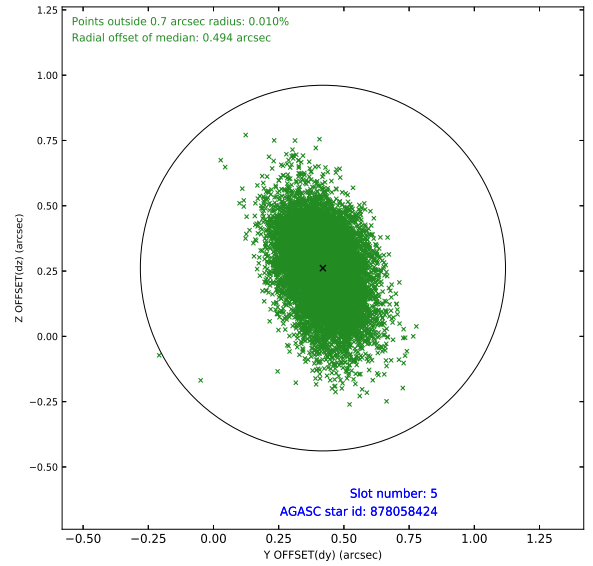
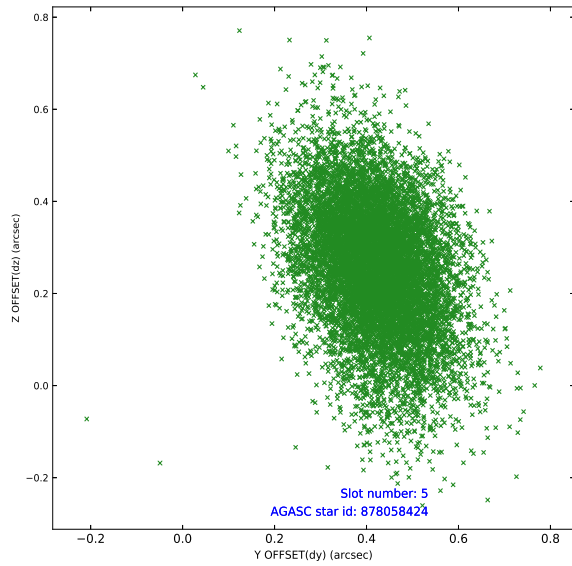
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2.4 Star Slots

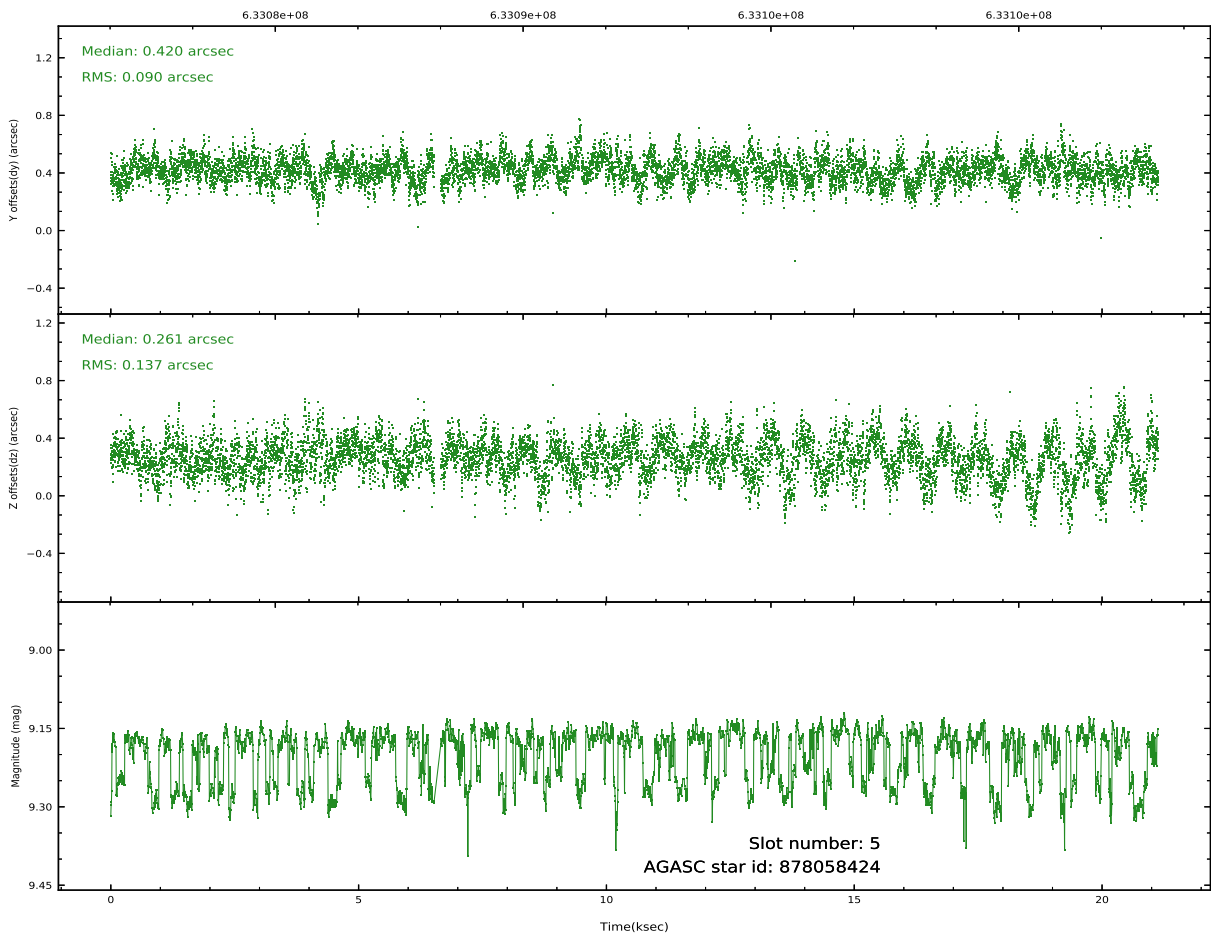
2.4.1 Slot 3



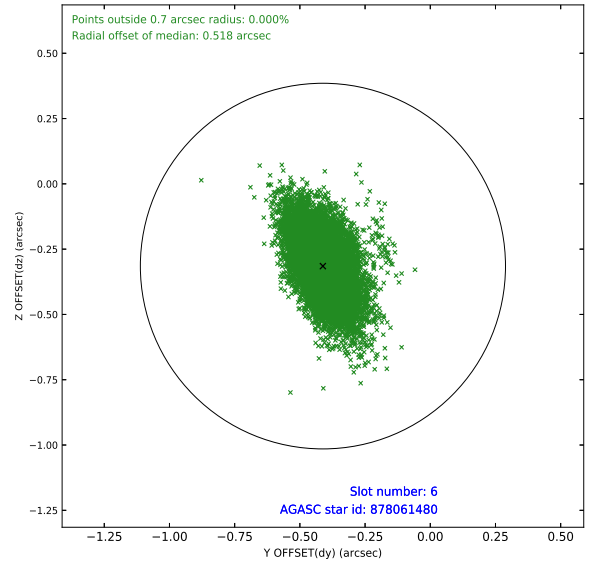
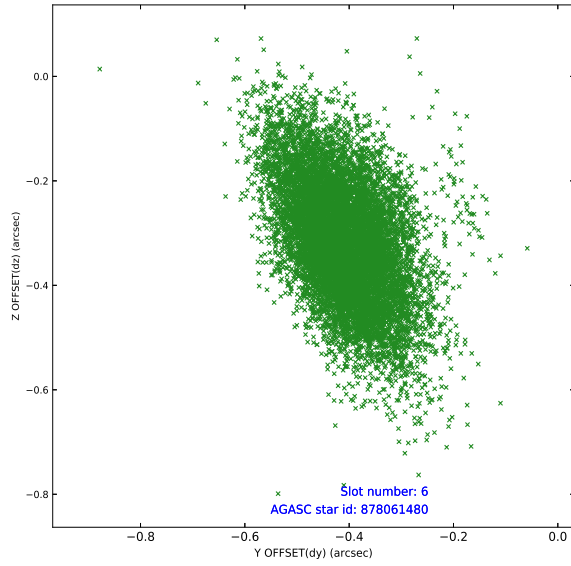
2.4.2 Slot 5



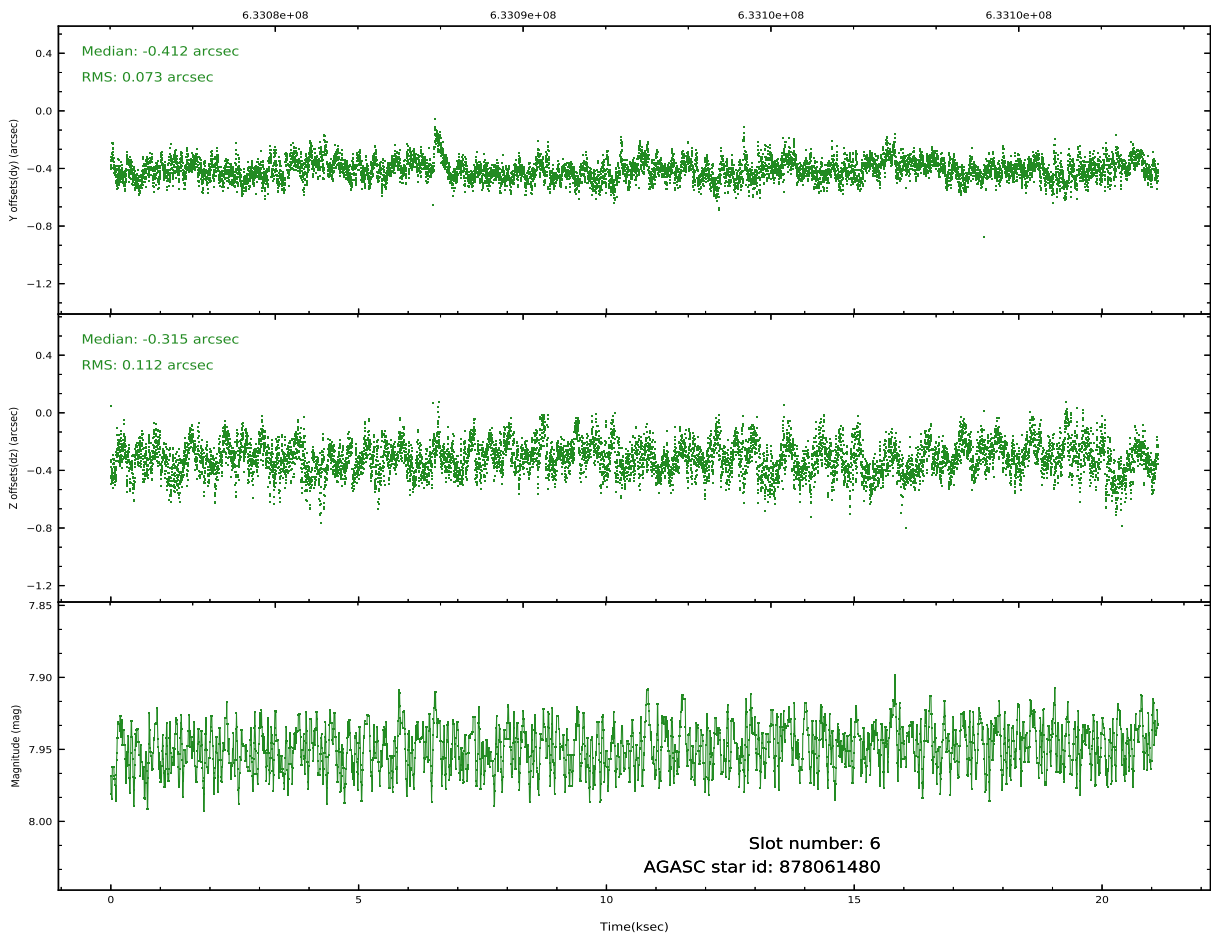
Time (s)



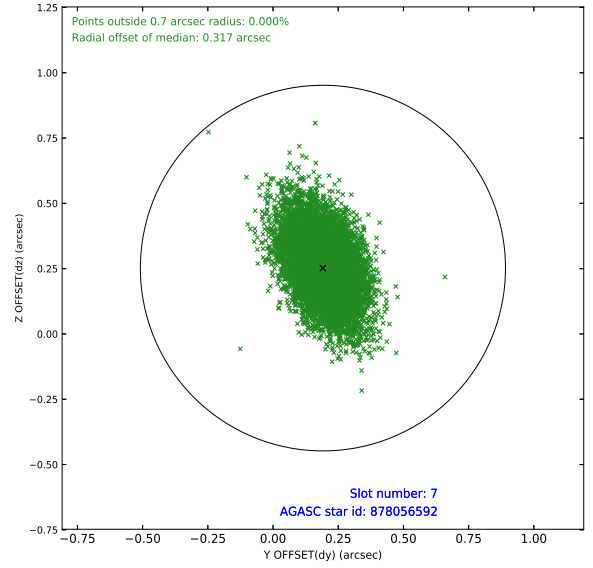
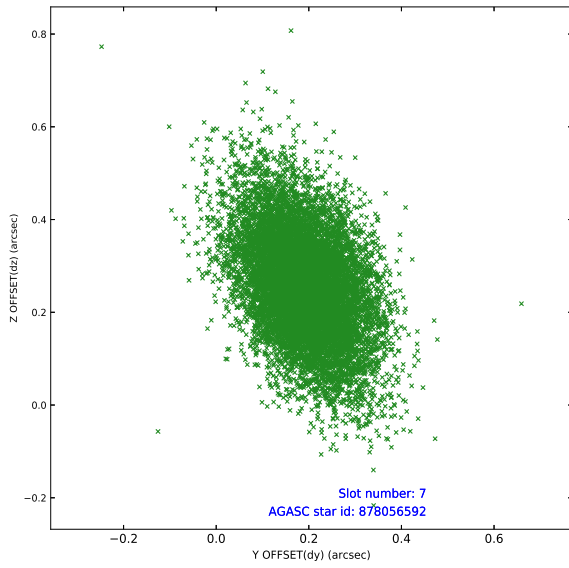
2.4.3 Slot 6



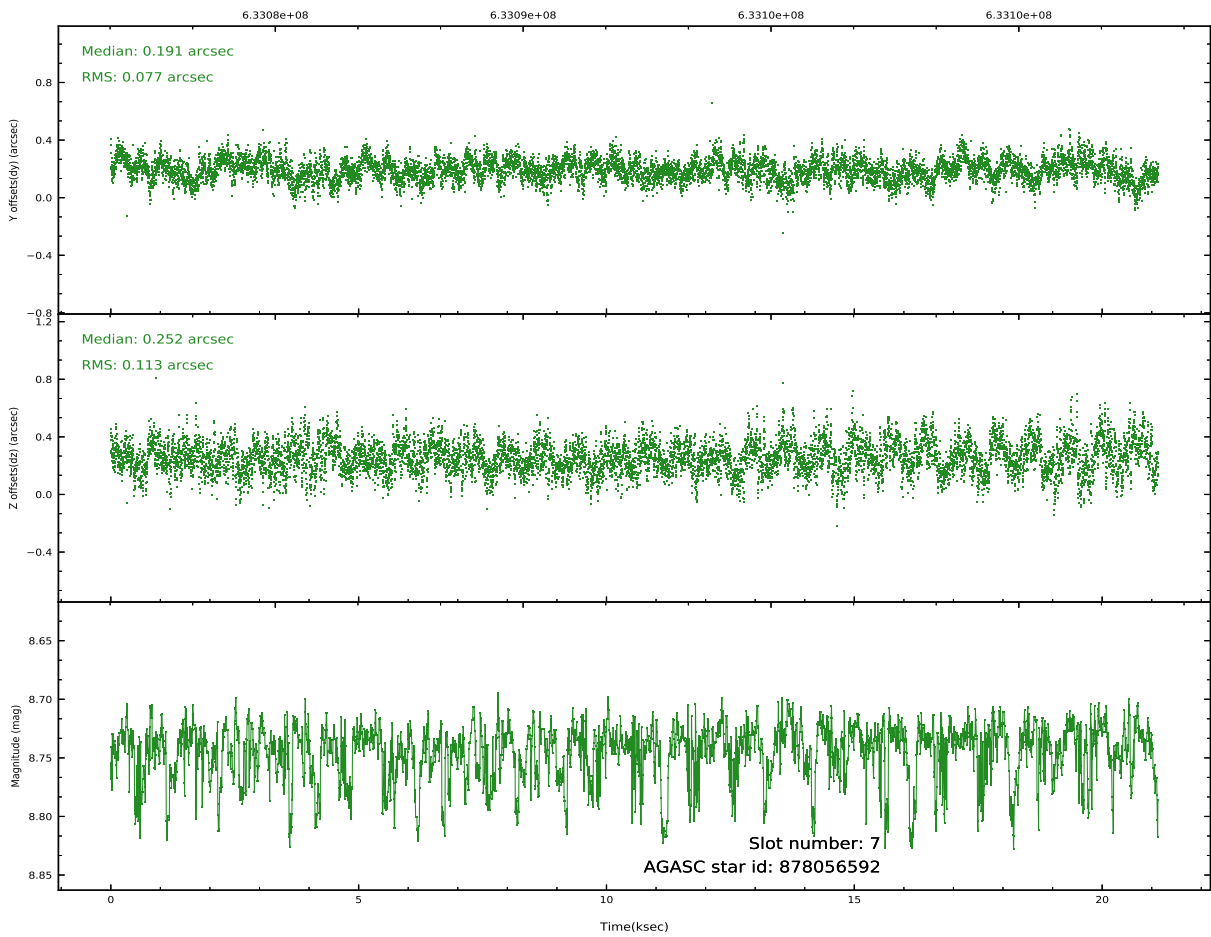
Time (s)



2.4.4 Slot 7

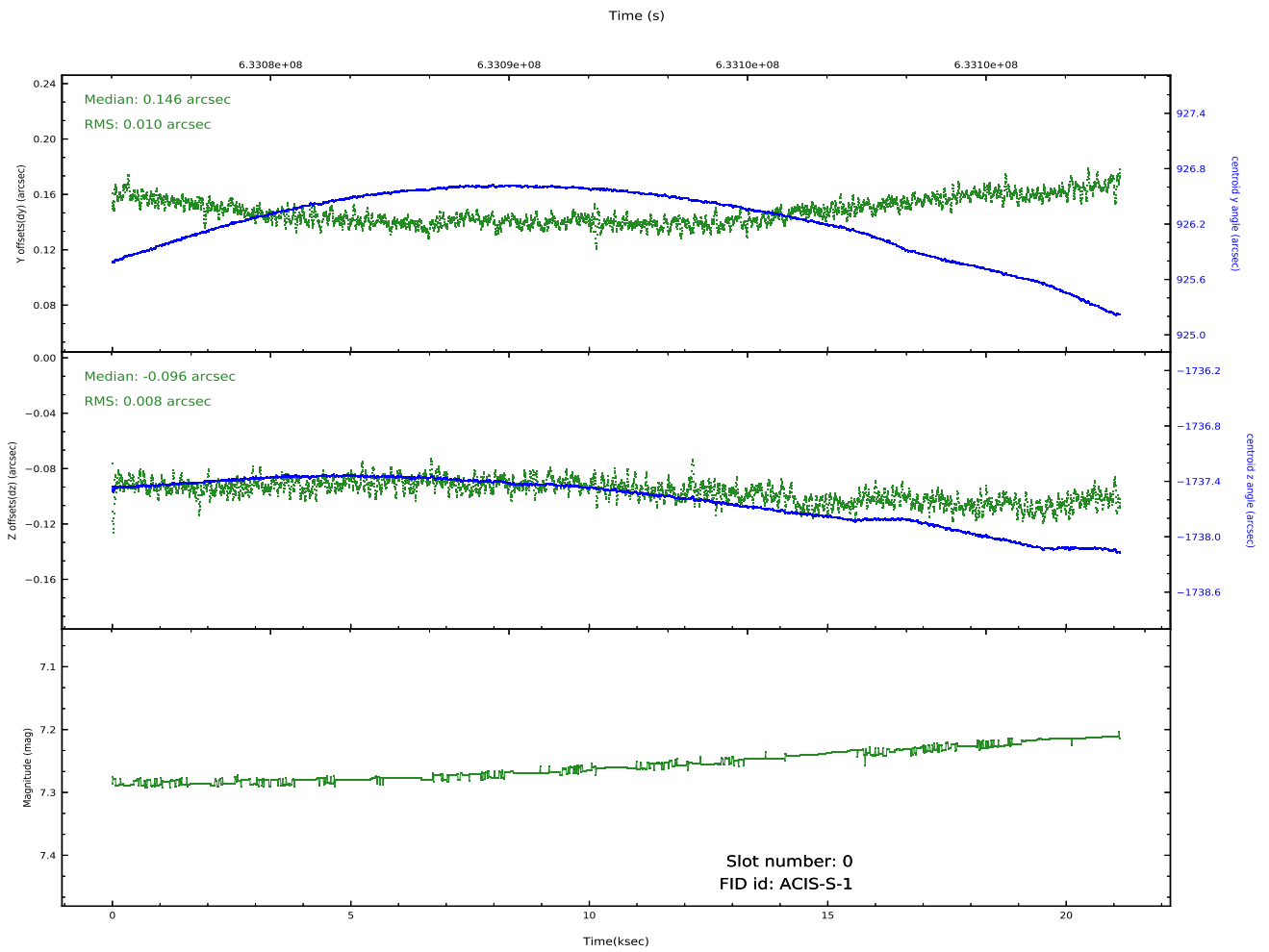
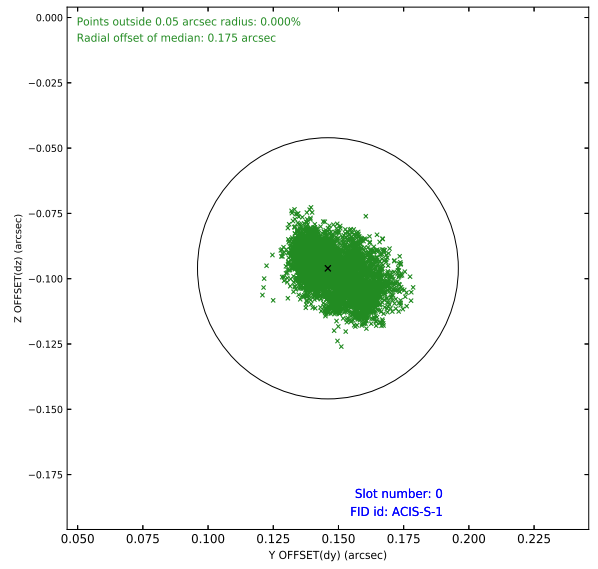
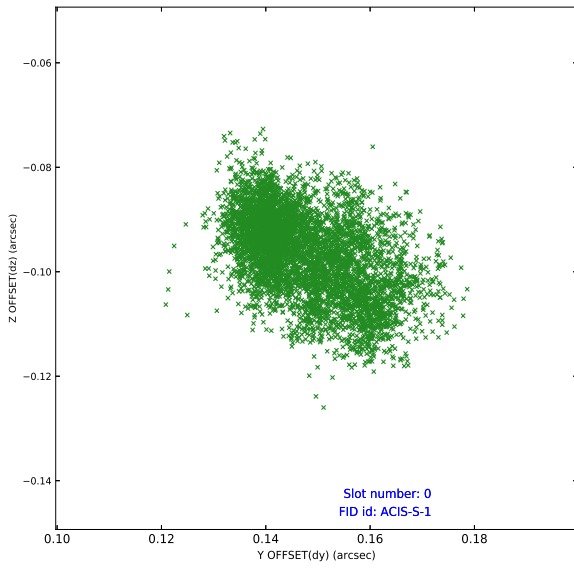


Time (s)

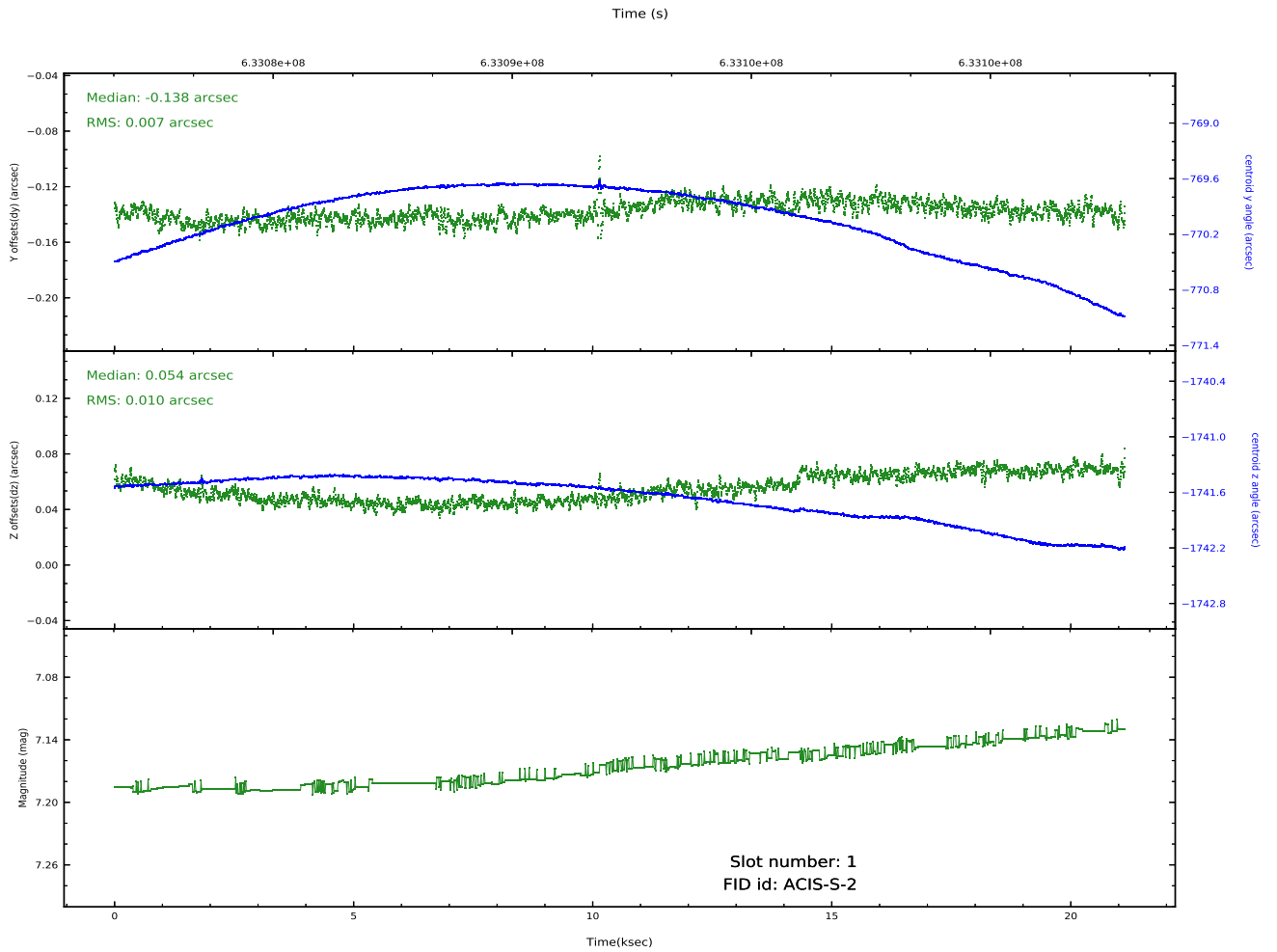
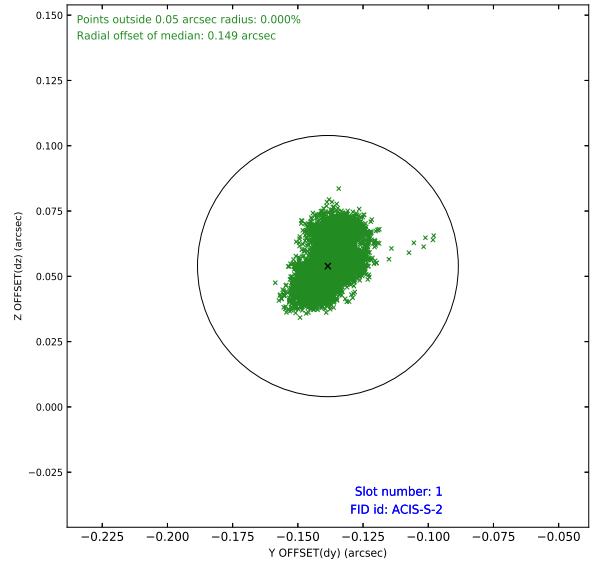
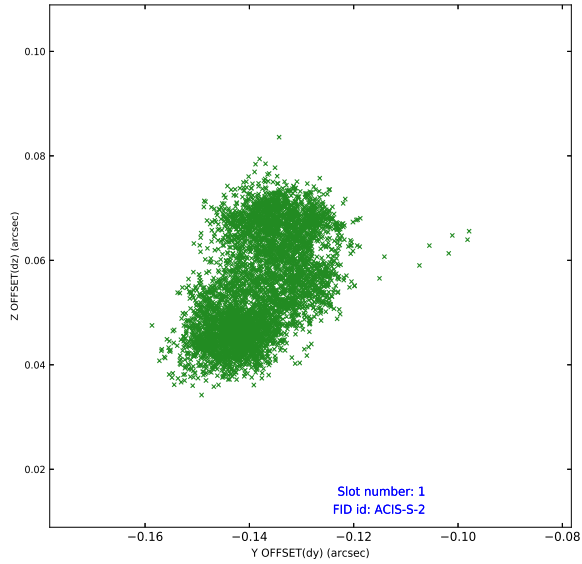


2.5 FID Slots

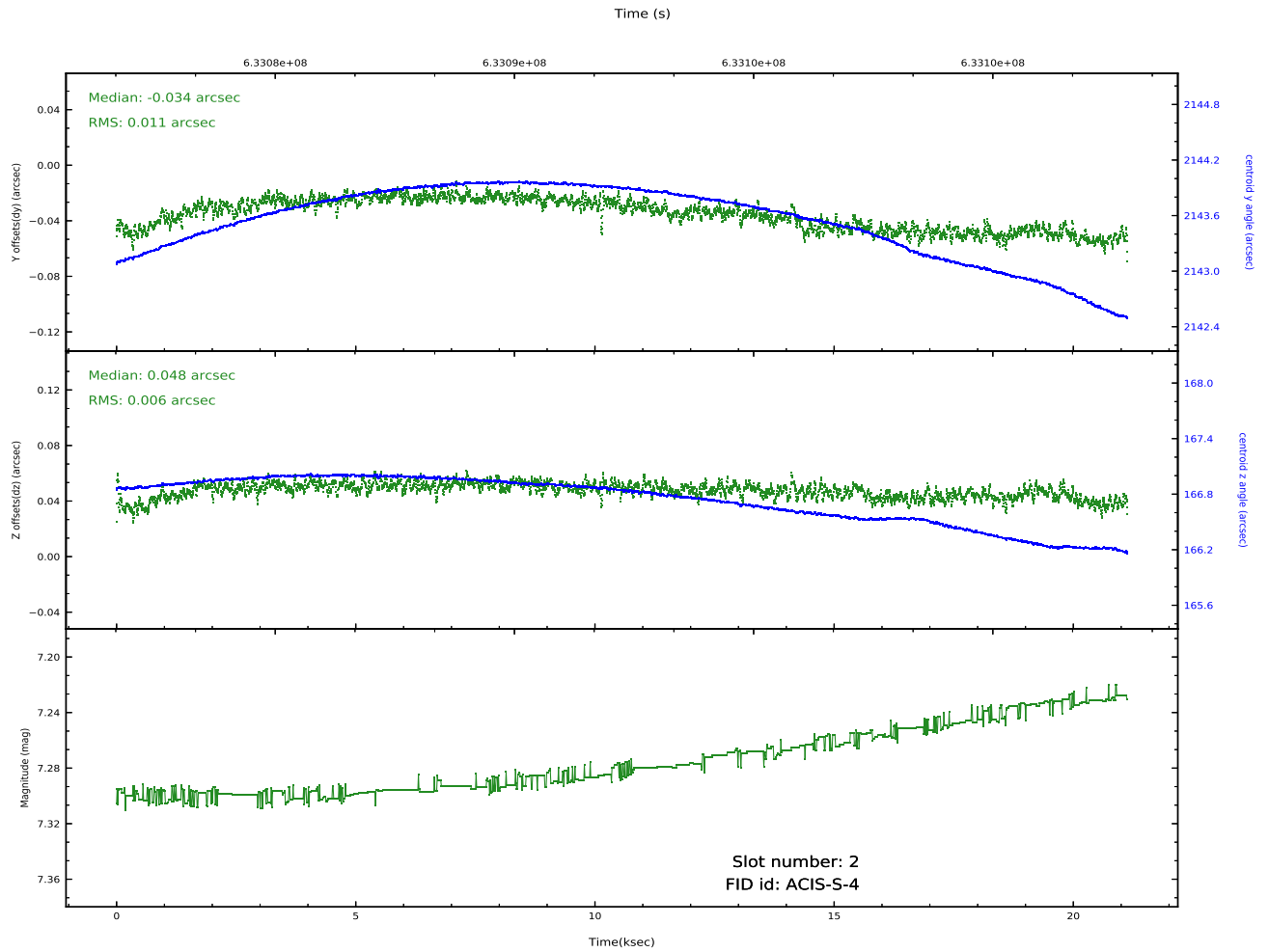
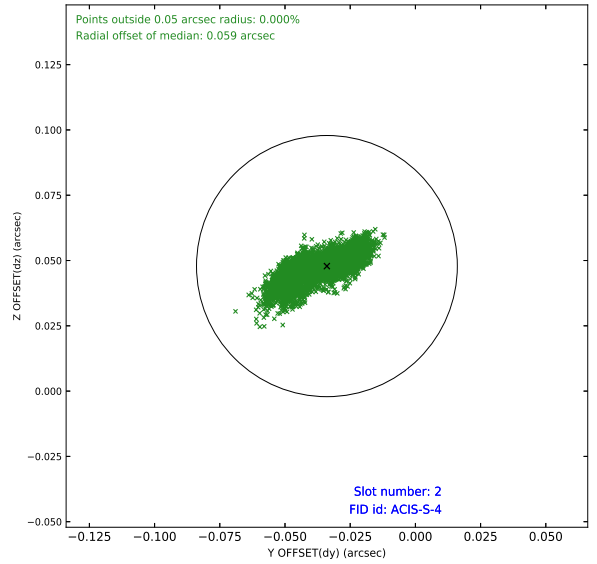
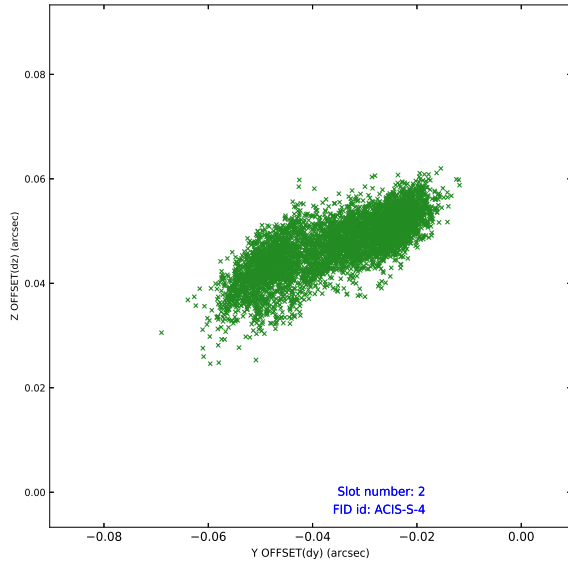
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.27
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	21.045162463188

A.2 Comments

The guide star in slot 4 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.