

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19279 - L2 Version 3
Chandra X-Ray Center

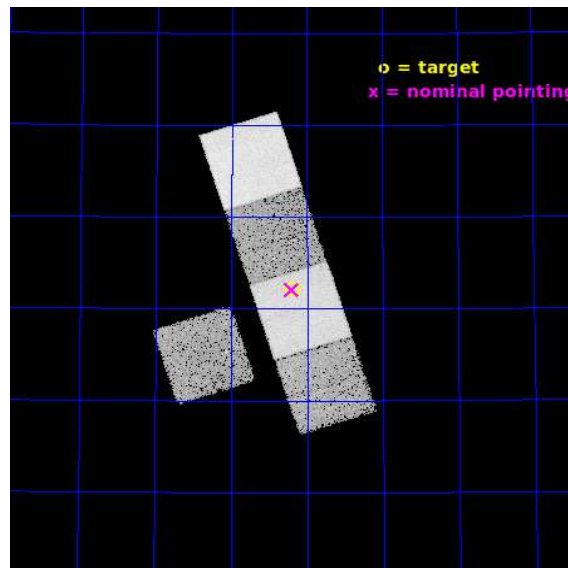
L2 Processing Date : Oct 26 2020

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1 Front

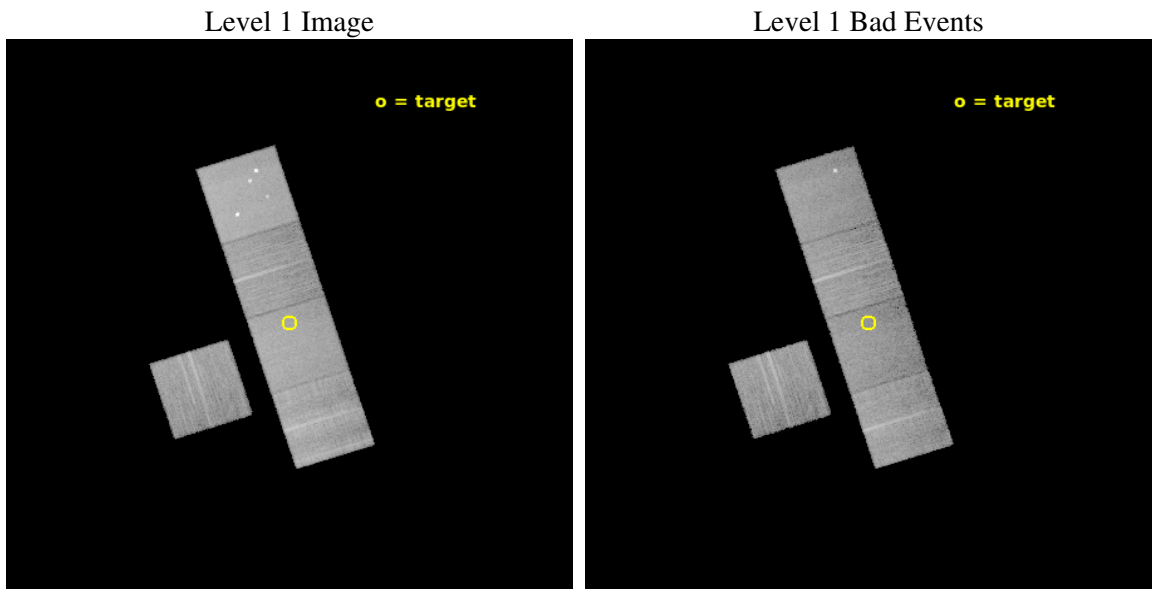
seq_num	502929	Sequence number
obs_id	19279	Observation id
title	Mapping extreme mass loss from evolved massive stars with coordinated Chandra-NuSTAR observations	Proposal title
observer	RAFFAELLA MARGUTTI	Principal investigator
object	SN2017gas	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	304.297167	Observer's specified target RA [deg]
dec_targ	58.202222	Observer's specified target Dec [deg]
ra_nom	304.2999618587	Nominal RA [deg]
dec_nom	58.20160639203	Nominal Dec [deg]
roll_nom	72.150749576472	Nominal Roll [deg]
revision	3	Processing version of data
ontime	15041.2001158	Sum of GTIs [s]
livetime	14844.675763117	Livetime [s]
ontime3	15041.2001158	Sum of GTIs [s]
ontime5	15041.2001158	Sum of GTIs [s]
ontime6	15038.05914557	Sum of GTIs [s]
ontime7	15041.2001158	Sum of GTIs [s]
ontime8	15038.059155583	Sum of GTIs [s]
l2events	177425	Number of level 2 events



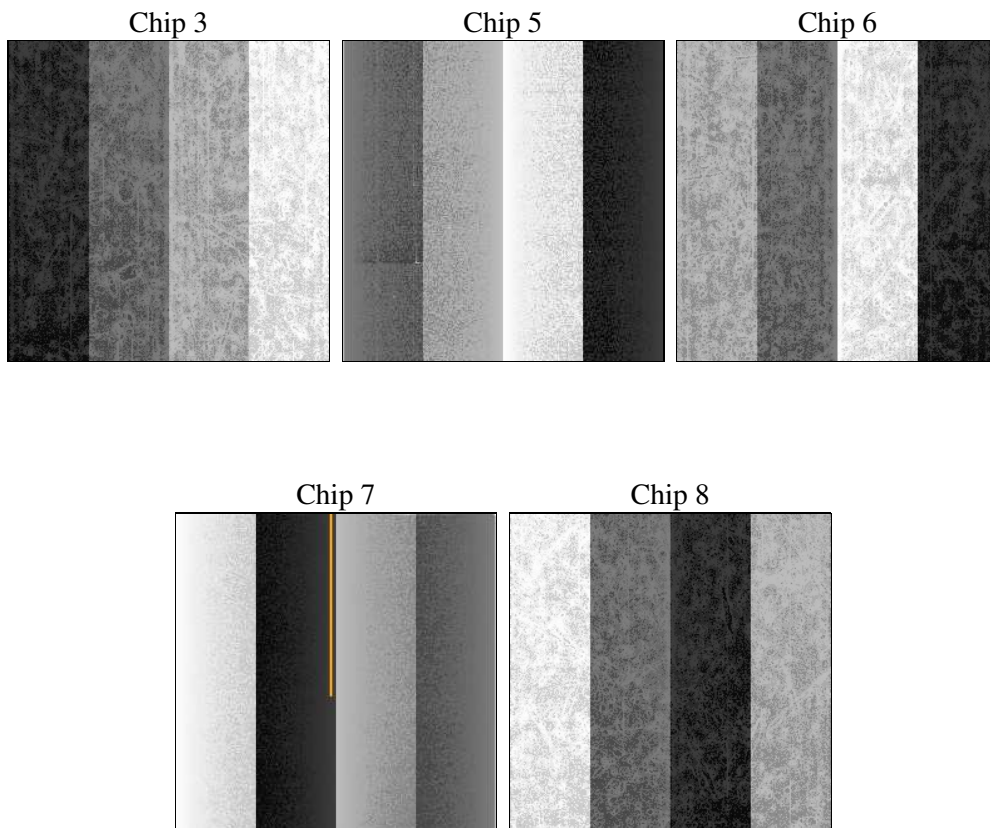
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	15041.2001158	Sum of GTIs [s]
caldsver	4.9.3	 	ontime3	15041.2001158	Sum of GTIs [s]
date	2020-10-27T00:45:58	Date and time of file creation	ontime5	15041.2001158	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	15038.05914557	Sum of GTIs [s]
			ontime7	15041.2001158	Sum of GTIs [s]
			ontime8	15038.059155583	Sum of GTIs [s]
			l1events	697866	Number of level 1 events

2.1.4 Events

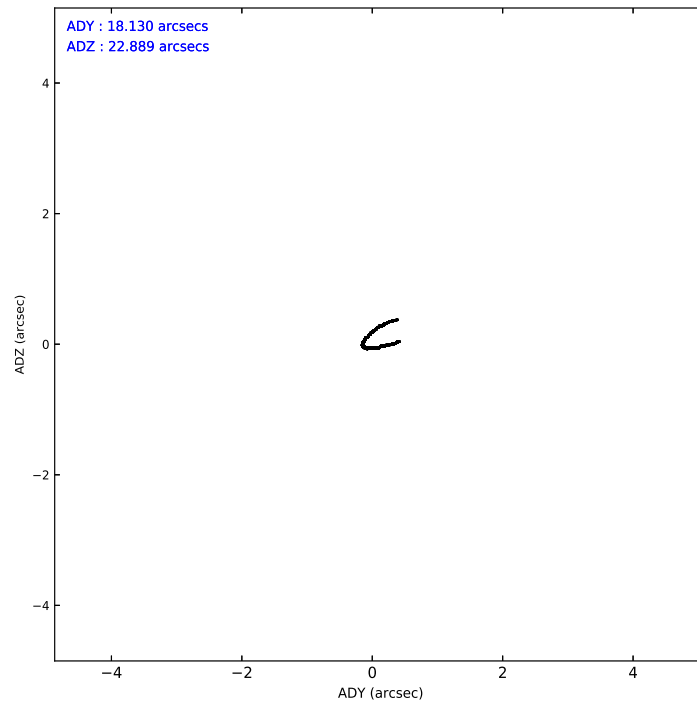
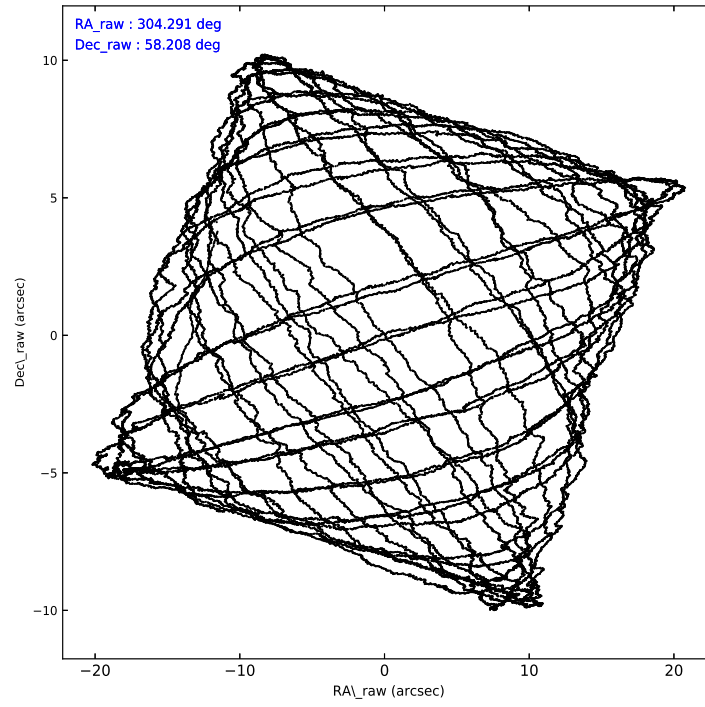
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	108799	185513	113927	143082	146545
rejected events	96609	93193	101090	80601	105950
rejected %	88%	50%	88%	56%	72%

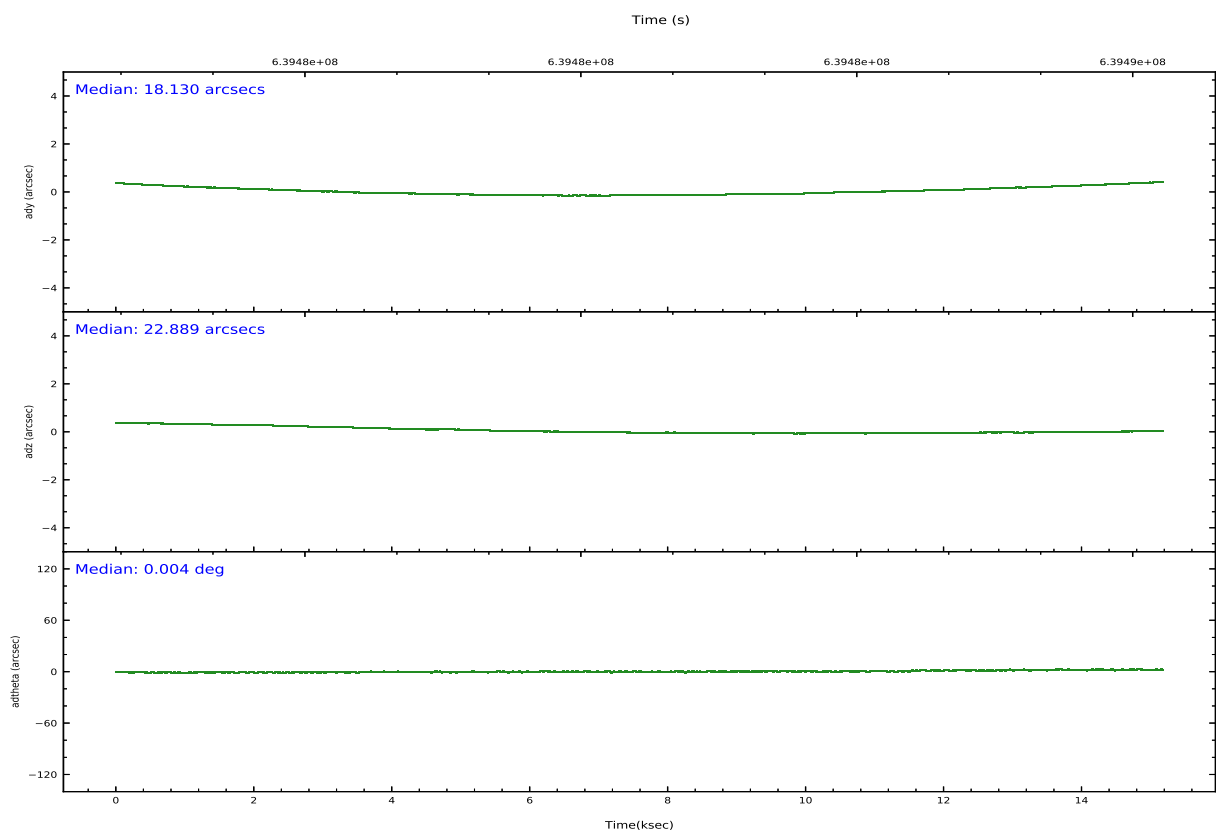
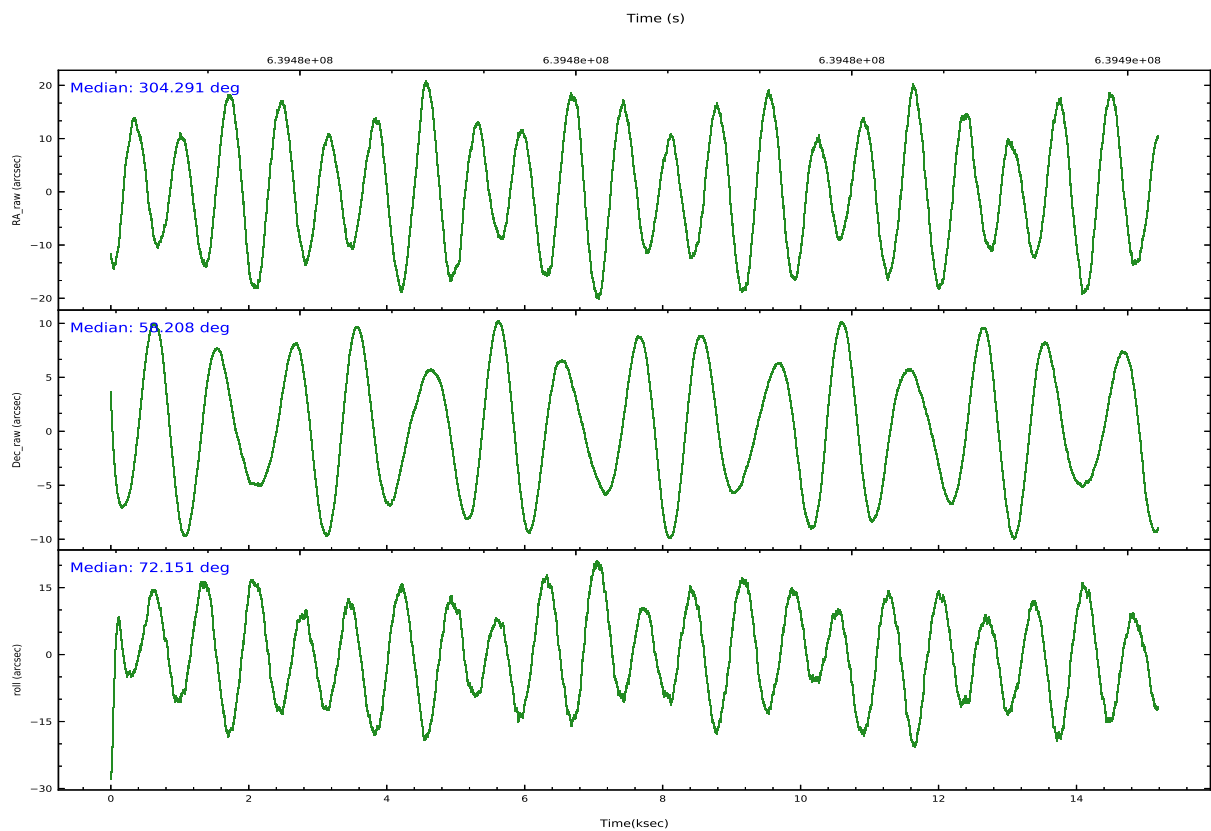
	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	4695	11637	4261	5381	12070
	4%	6%	3%	3%	8%
grade 1 events	78	377	52	210	109
	0%	0%	0%	0%	0%
grade 2 events	2494	28907	3011	13385	9921
	2%	15%	2%	9%	6%
grade 3 events	1256	2778	1300	5092	4053
	1%	1%	1%	3%	2%
grade 4 events	1211	2725	1312	4999	3810
	1%	1%	1%	3%	2%
grade 5 events	5063	13223	5424	14413	7998
	4%	7%	4%	10%	5%
grade 6 events	2538	46310	2960	33648	10753
	2%	24%	2%	23%	7%
grade 7 events	91464	79556	95607	65954	97831
	84%	42%	83%	46%	66%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-35678	ACIS-35678	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	304.302760	304.2999618587	CCD I2 on	N	N
[deg] Pointing Dec	58.181898	58.20160639203	CCD I3 on	O1	Y
[deg] Pointing Roll	71.995243	72.15074957647199	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	Y	Y
[s] Observation start time (MET)	639473441.184000	639471756.7047	CCD S5 on	N	N
Observation start date	2018-04-07T07:29:32	2018-04-07T07:02:36	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	639488441.184000	639489411.30575	On-chip summing requested	N	N
Observation end date	2018-04-07T11:39:32	2018-04-07T11:56:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



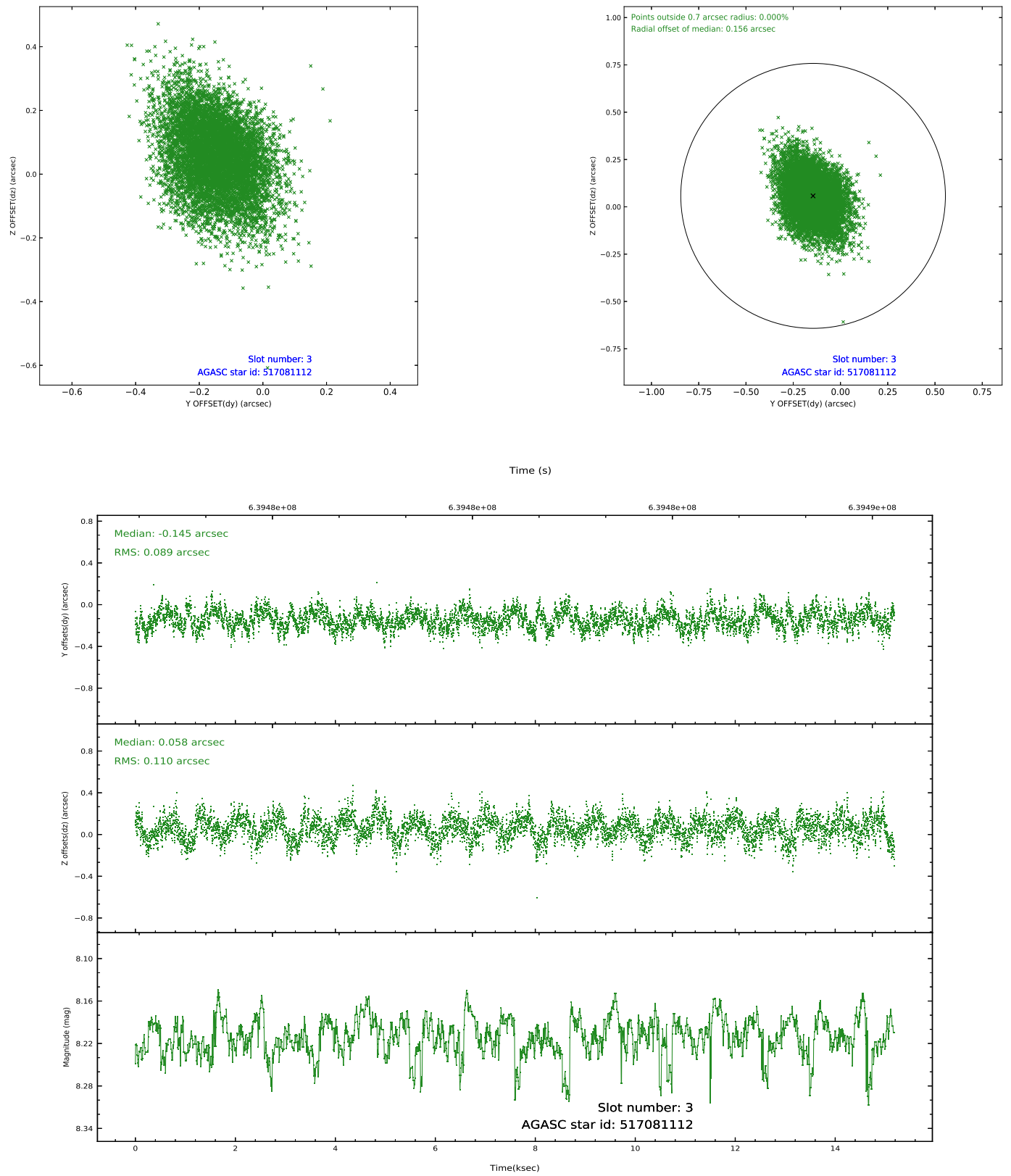


Slot Statistics

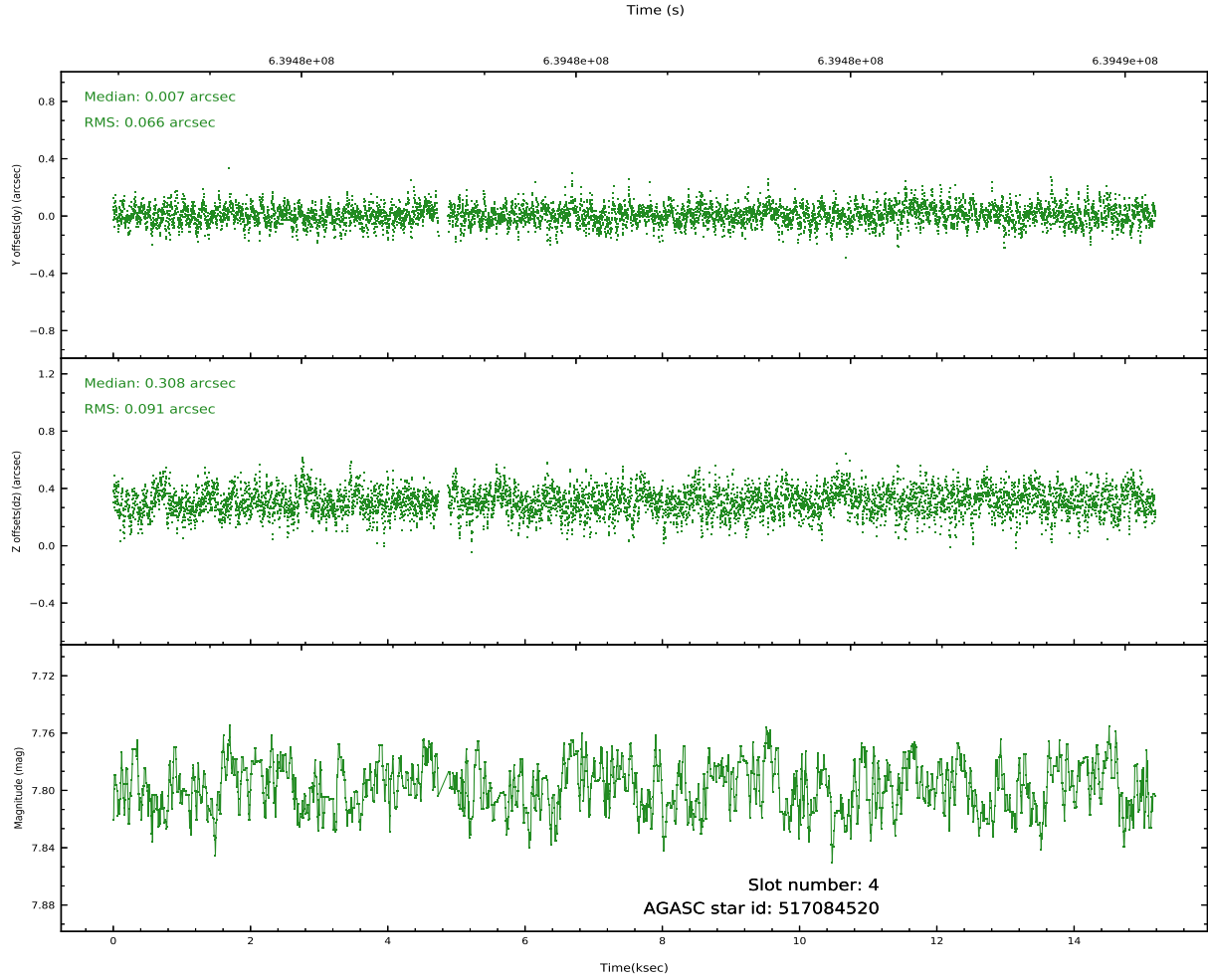
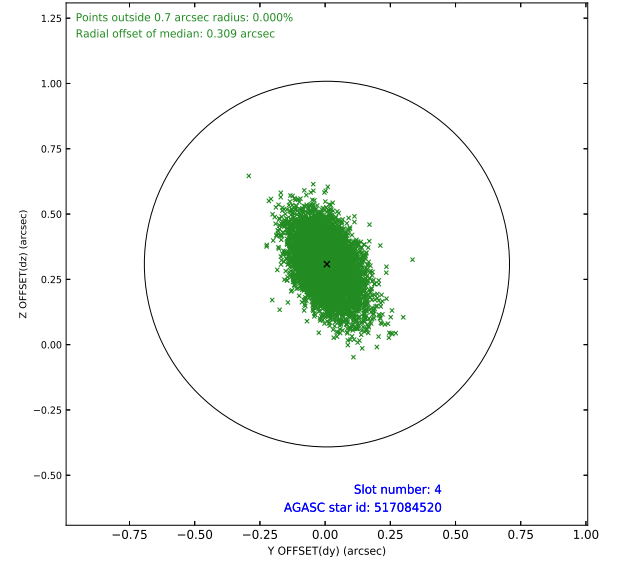
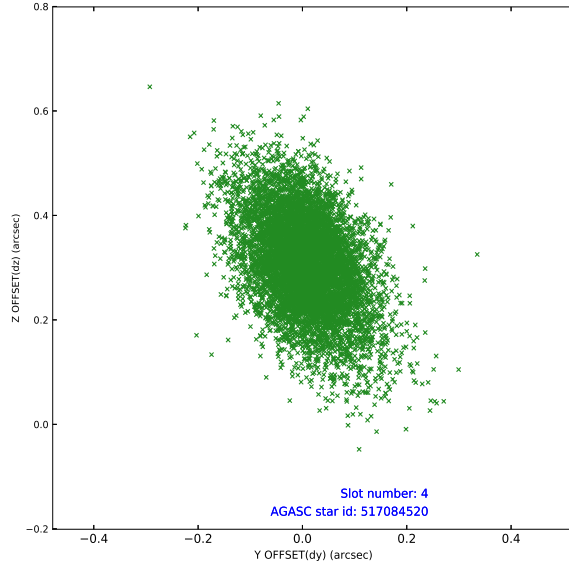
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	6.99	3704	1.000	0.135	-0.100	0.009	0.015	0.000000	0.000000	-771.33	-1744
1	FID		ACIS-S-4	7.08	3704	1.000	0.064	-0.038	0.009	0.017	0.000000	0.000000	2142.00	163
2	FID		ACIS-S-5	7.09	3704	1.000	-0.231	0.147	0.008	0.013	0.000000	0.000000	-1823.90	158
3	GUIDE	used	517081112	8.21	7404	1.000	-0.145	0.058	0.149	0.249	304.023666	58.045719	-629.35	354
4	GUIDE	used	517084520	7.80	7335	1.000	0.007	0.308	0.114	0.205	304.586702	57.796542	-1149.26	-946
5	GUIDE	used	517614208	7.88	7407	1.000	-0.257	-0.057	0.148	0.253	303.785064	58.334621	223.95	1101
6	GUIDE	used	517608688	8.00	7404	1.000	0.074	-0.310	0.125	0.221	304.557945	58.809237	2296.21	246
7	GUIDE	used	517609504	8.86	7394	1.000	0.319	0.010	0.188	0.351	305.876598	58.492491	2012.96	-2459

2.4 Star Slots

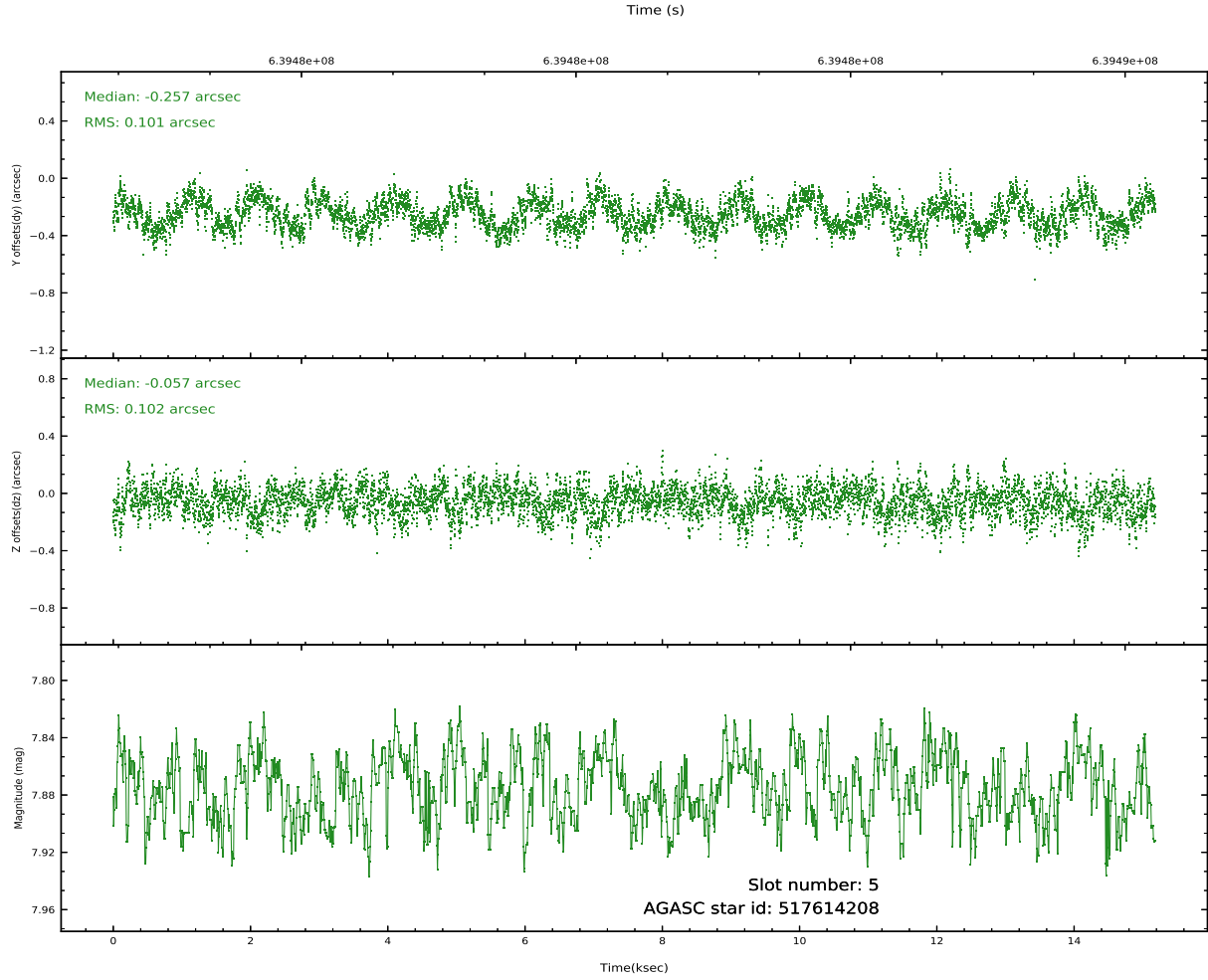
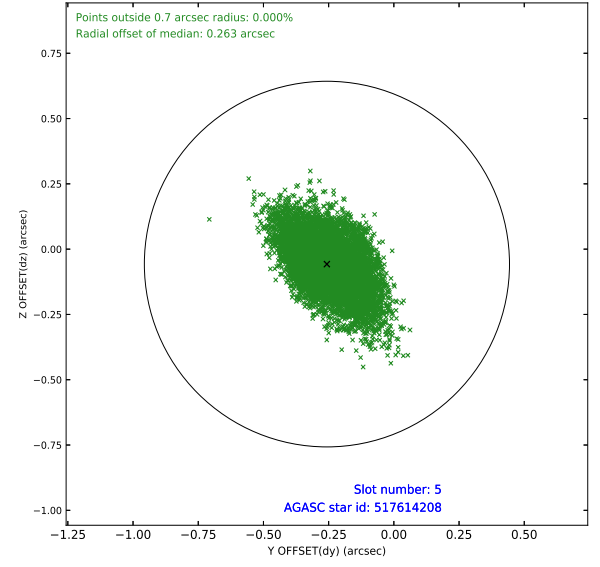
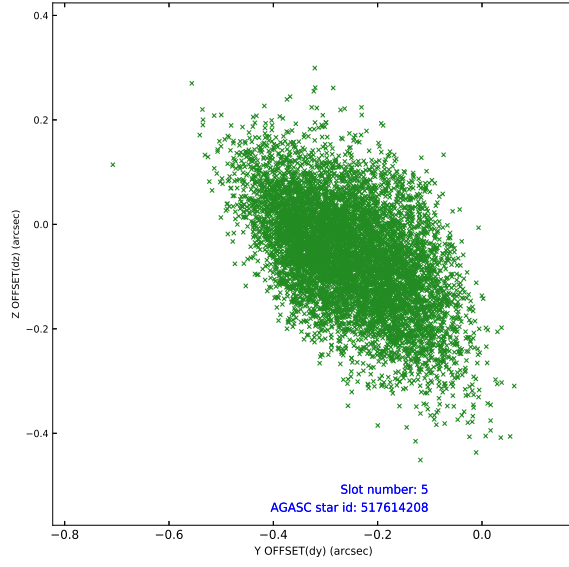
2.4.1 Slot 3



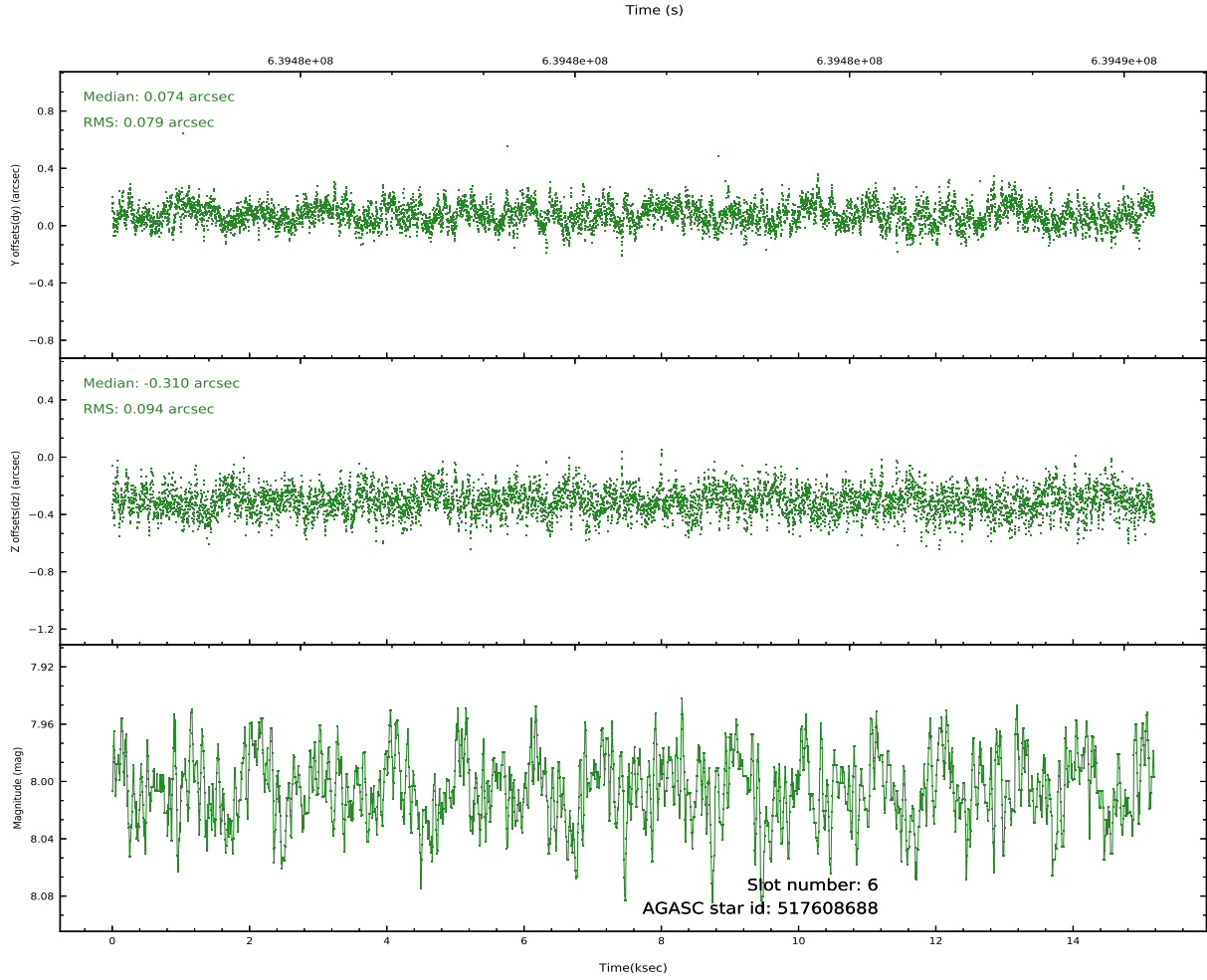
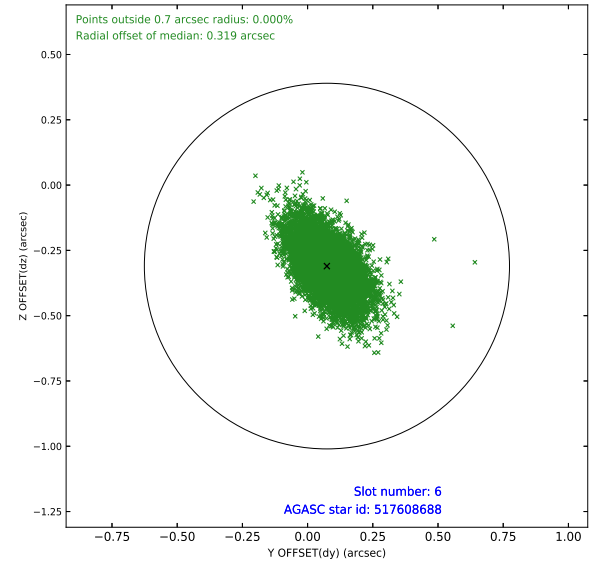
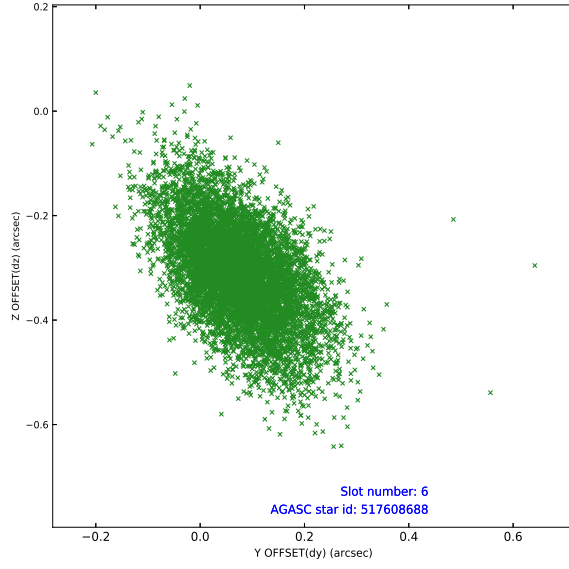
2.4.2 Slot 4



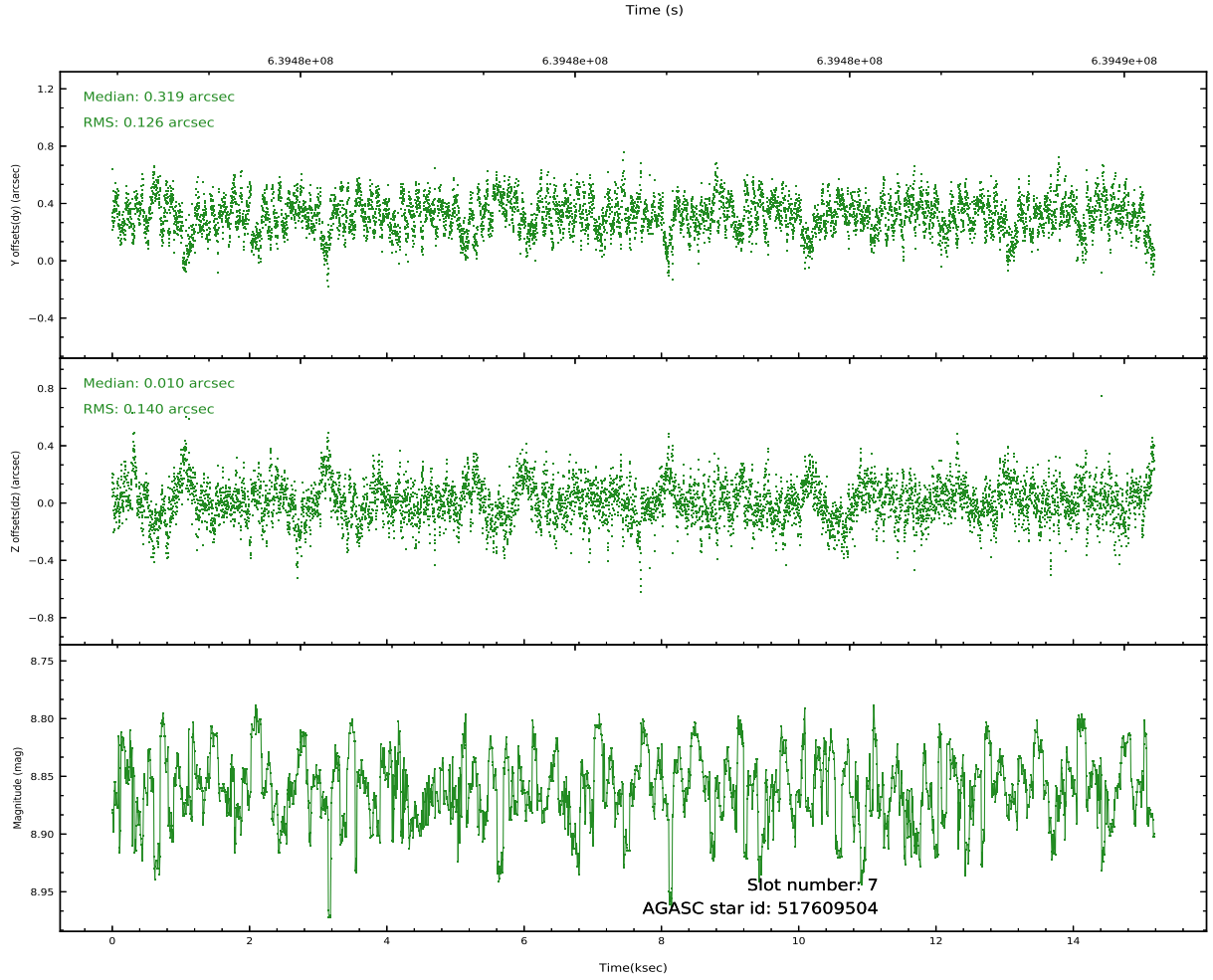
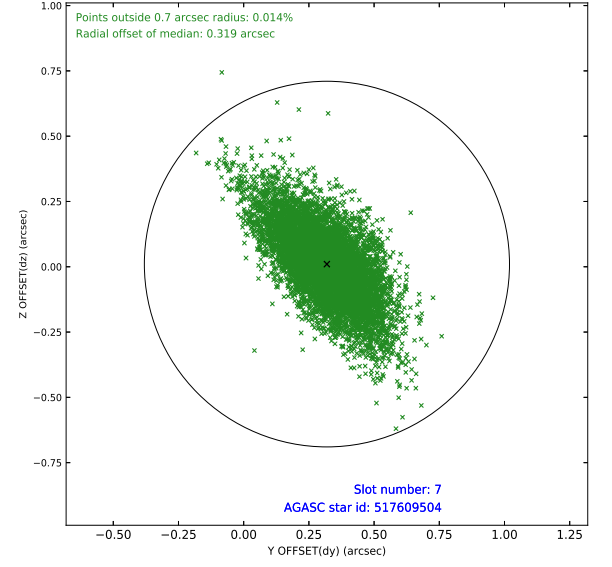
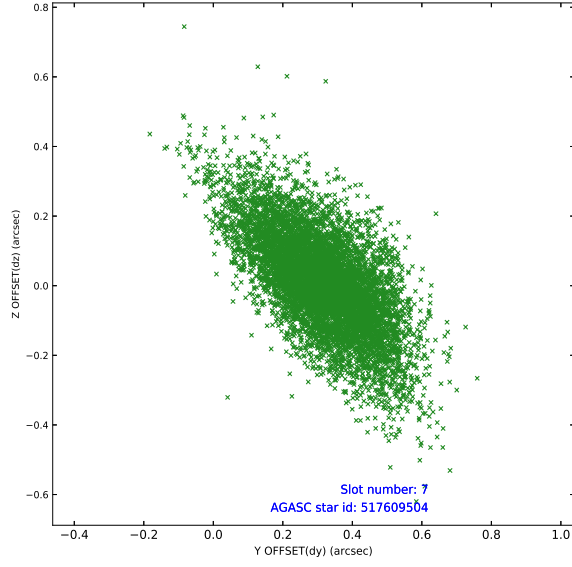
2.4.3 Slot 5



2.4.4 Slot 6

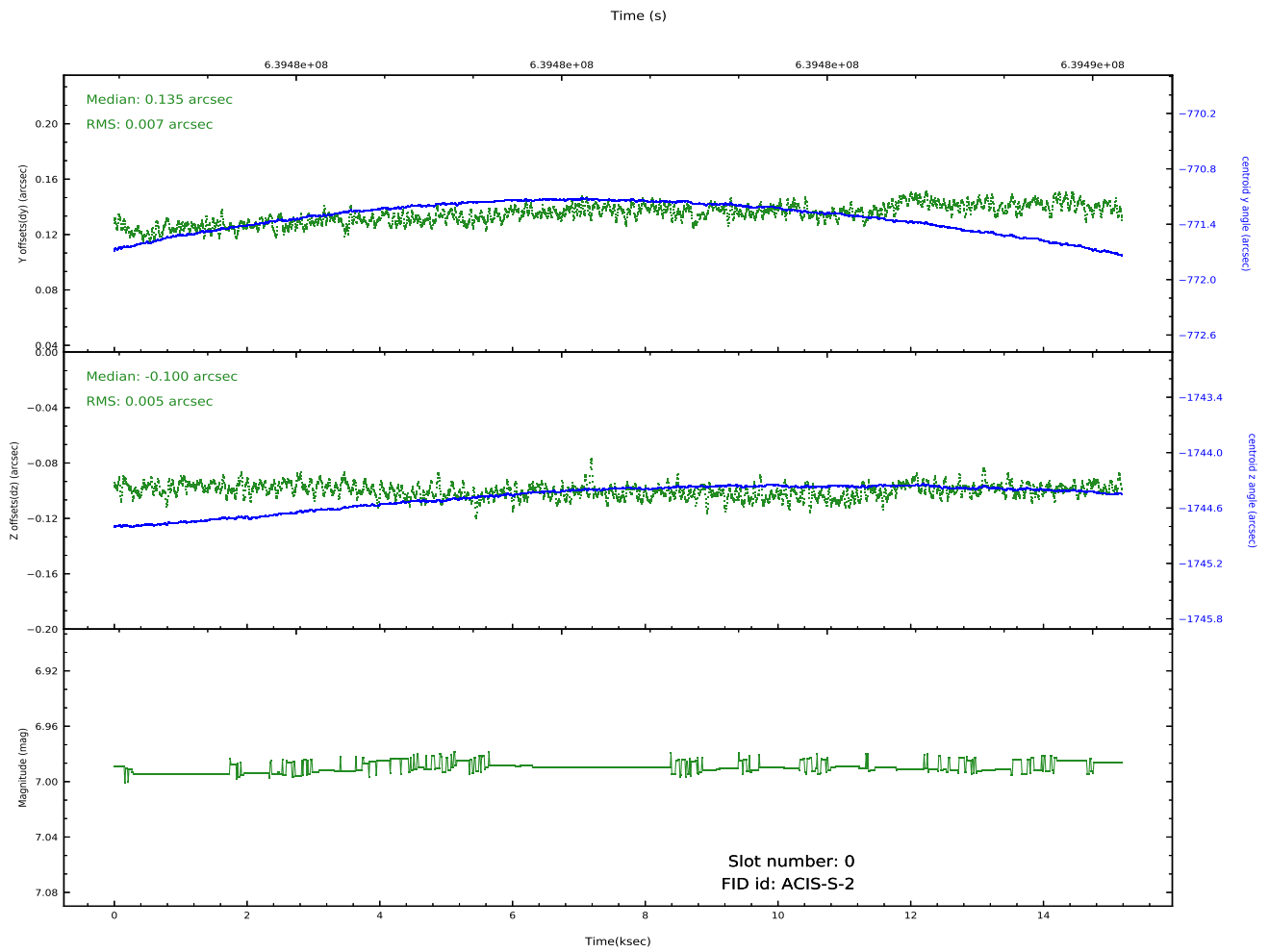
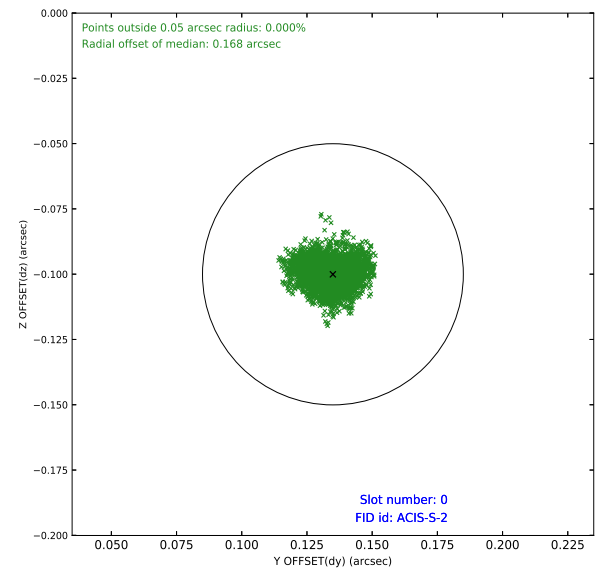
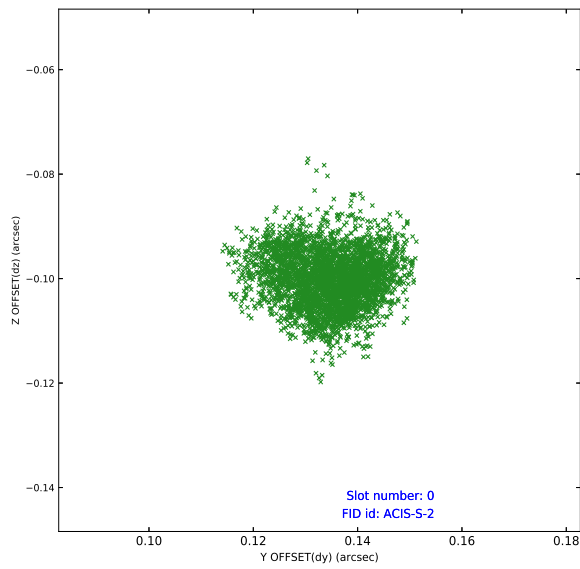


2.4.5 Slot 7

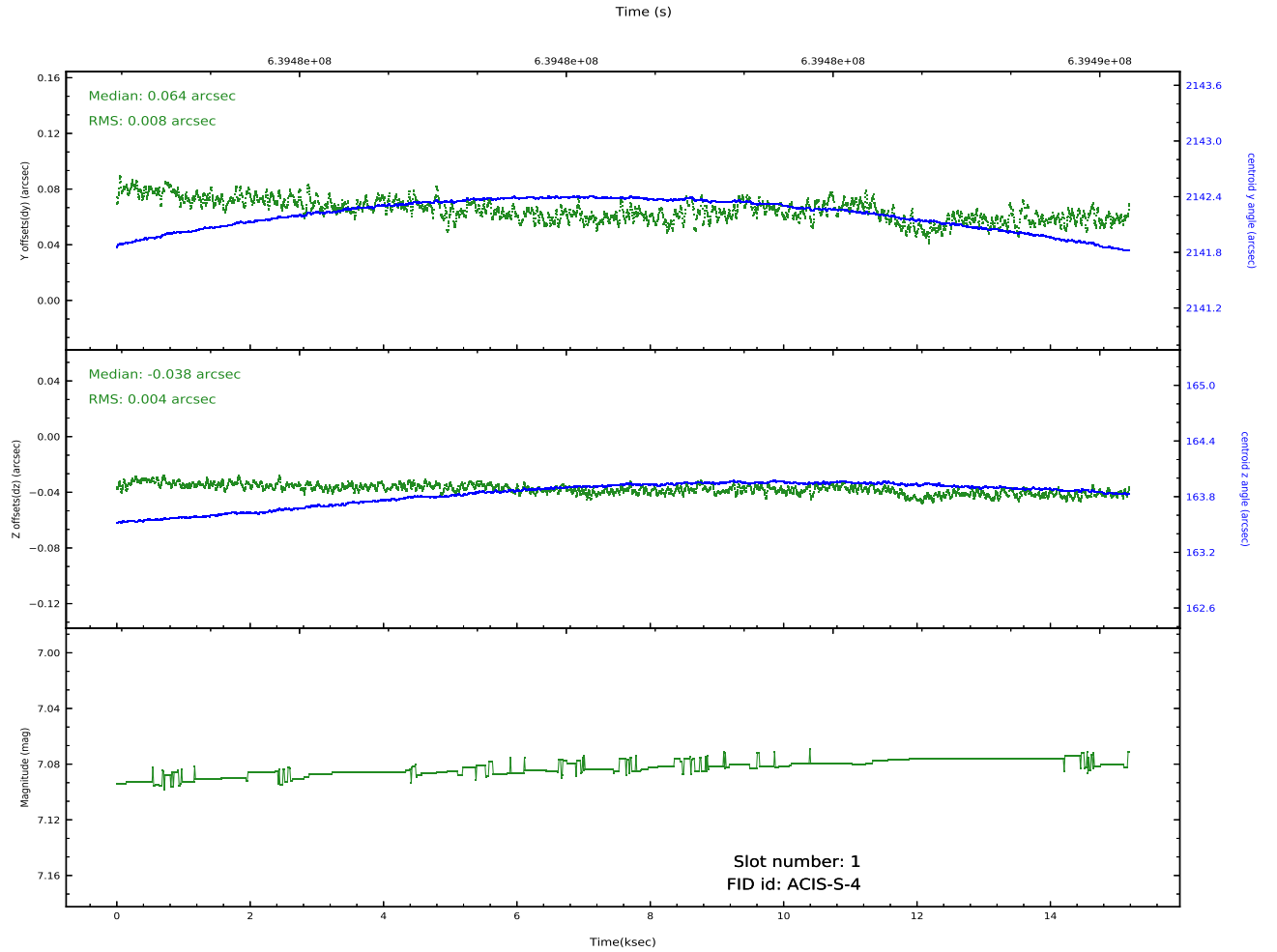
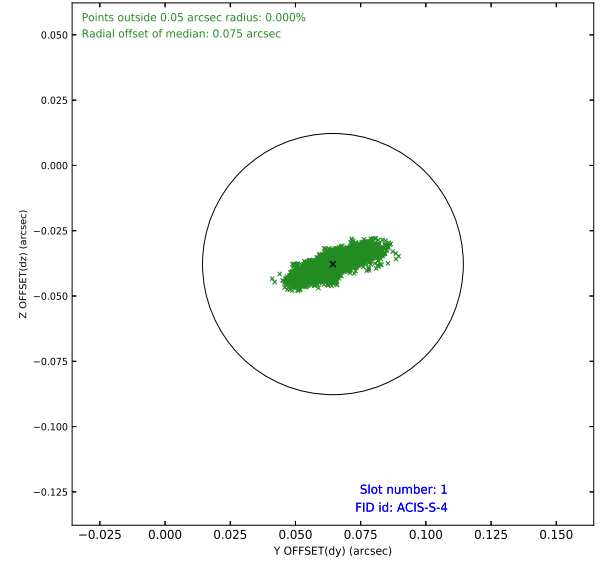
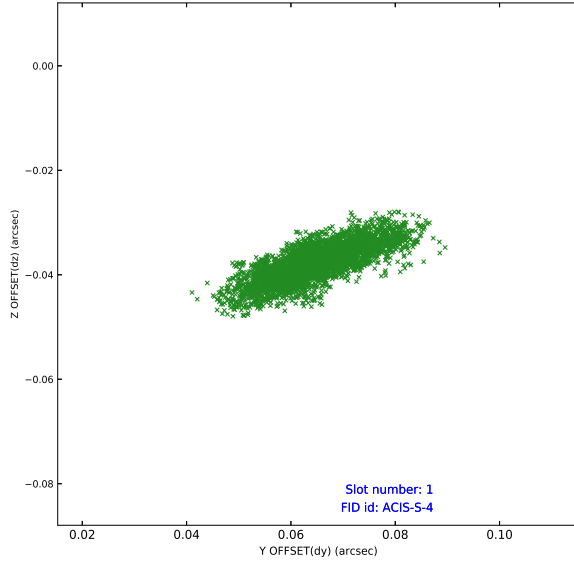


2.5 FID Slots

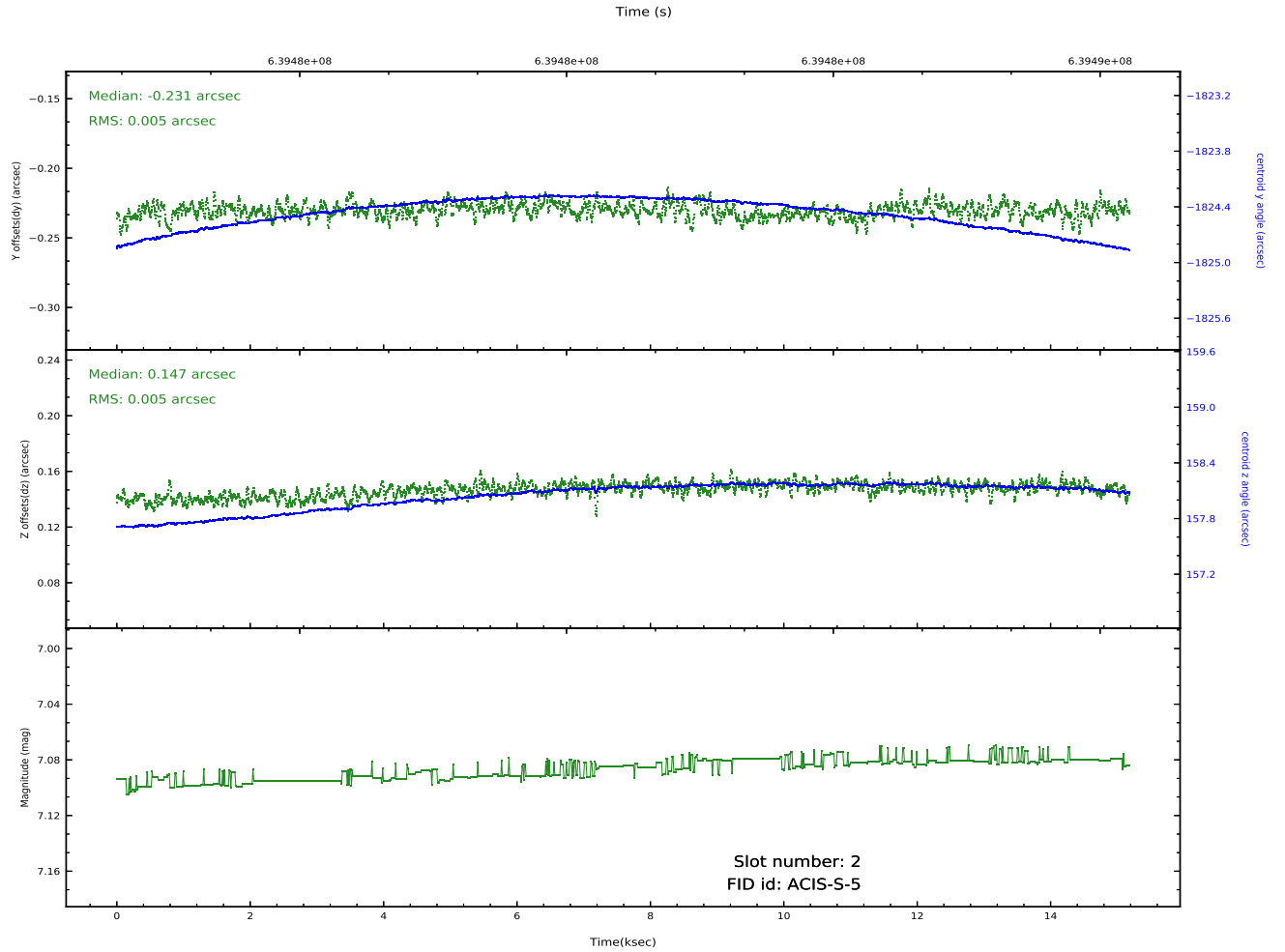
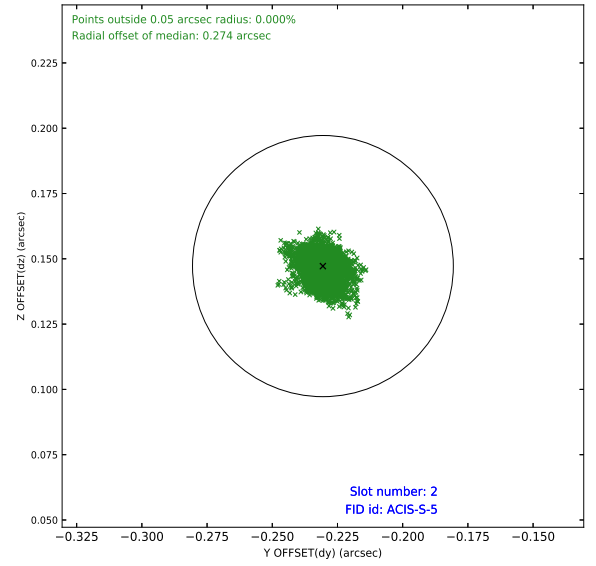
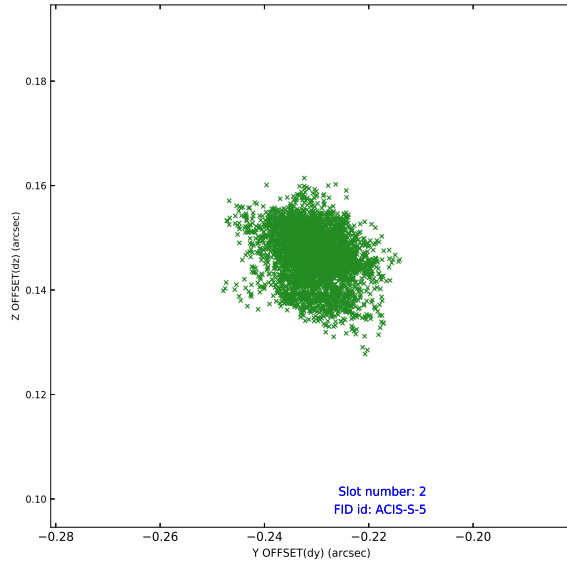
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.0412001158

A.2 Comments

Joint proposal with NuSTAR.

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A spatial region of the original bias map for CCD = 6 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small (~ 20 eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 6 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (304.30614,58.35791), (304.30025,58.34830), (304.43315,58.32583), (304.45218,58.33322).