

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 21045 - L2 Version 3
Chandra X-Ray Center

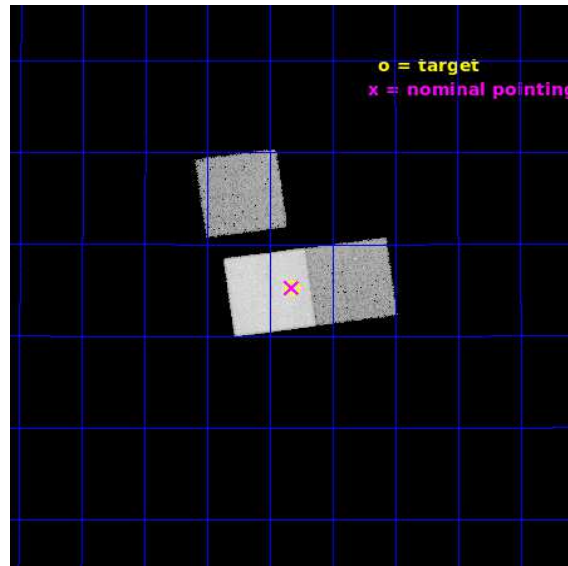
L2 Processing Date : Oct 26 2020

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1 Front

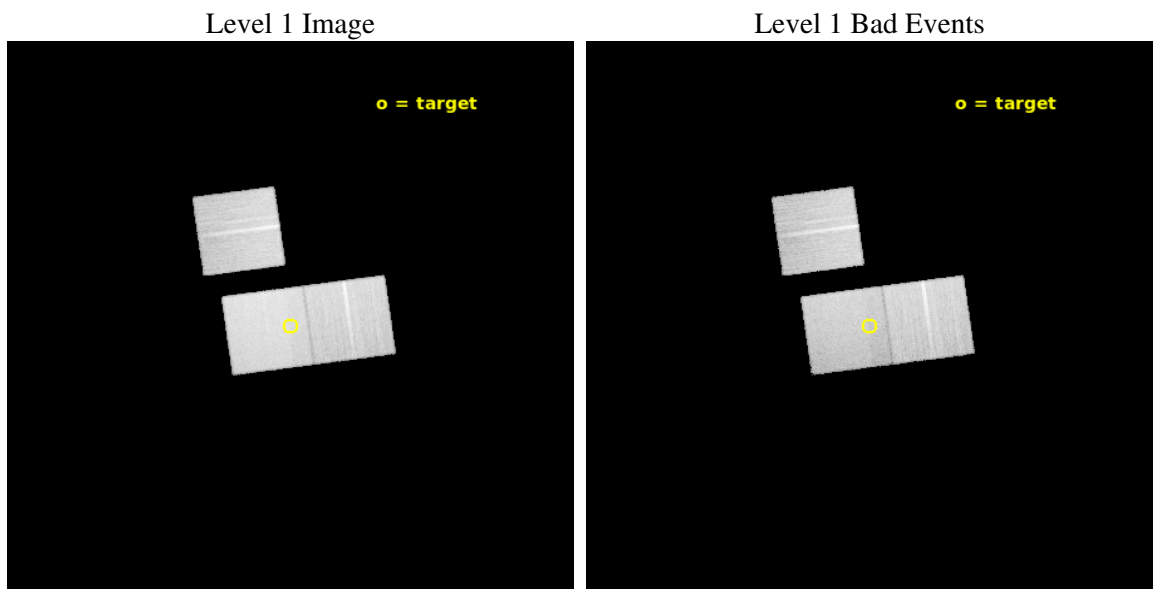
seq_num	703409	Sequence number
obs_id	21045	Observation id
title	Continued Quasar and AGN Variability on 10-100 kyr Timescales	Prop
observer	Walter Maksym	Principal investigator
object	UGC 7342	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	184.580417	Observer's specified target RA [deg]
dec_targ	29.253611	Observer's specified target Dec [deg]
ra_nom	184.58107155663	Nominal RA [deg]
dec_nom	29.254818247463	Nominal Dec [deg]
roll_nom	172.1609405923	Nominal Roll [deg]
revision	3	Processing version of data
ontime	29272.377638817	Sum of GTIs [s]
livetime	28889.912474955	Livetime [s]
ontime3	29272.29555881	Sum of GTIs [s]
ontime6	29272.336598873	Sum of GTIs [s]
ontime7	29272.377638817	Sum of GTIs [s]
l2events	160808	Number of level 2 events



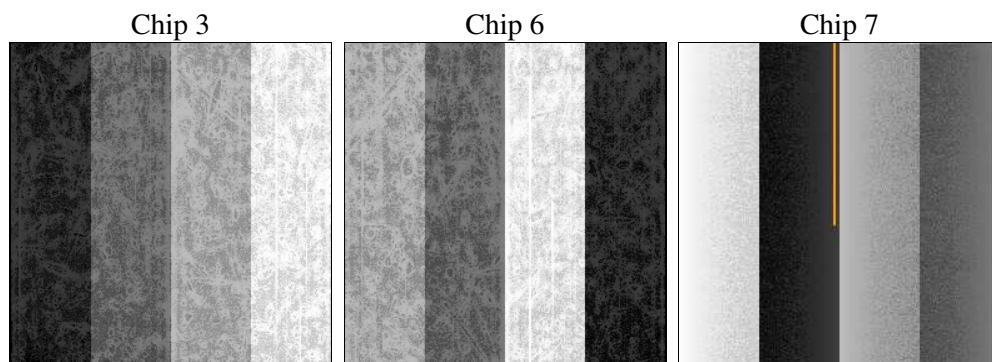
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29160.753000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	29272.377638817	Sum of GTIs [s]
caldsver	4.9.3	 	ontime3	29272.29555881	Sum of GTIs [s]
date	2020-10-27T00:19:41	Date and time of file creation	ontime6	29272.336598873	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	29272.377638817	Sum of GTIs [s]
			l1events	733213	Number of level 1 events

2.1.4 Events

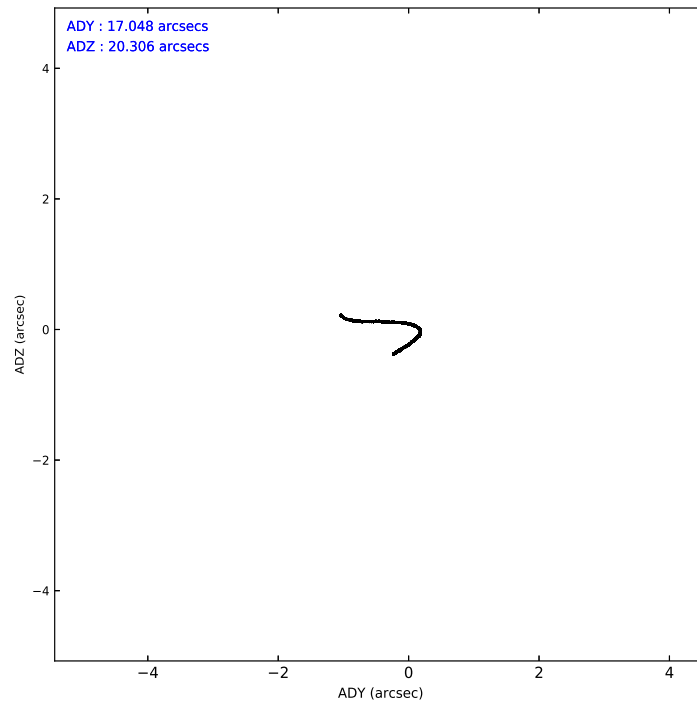
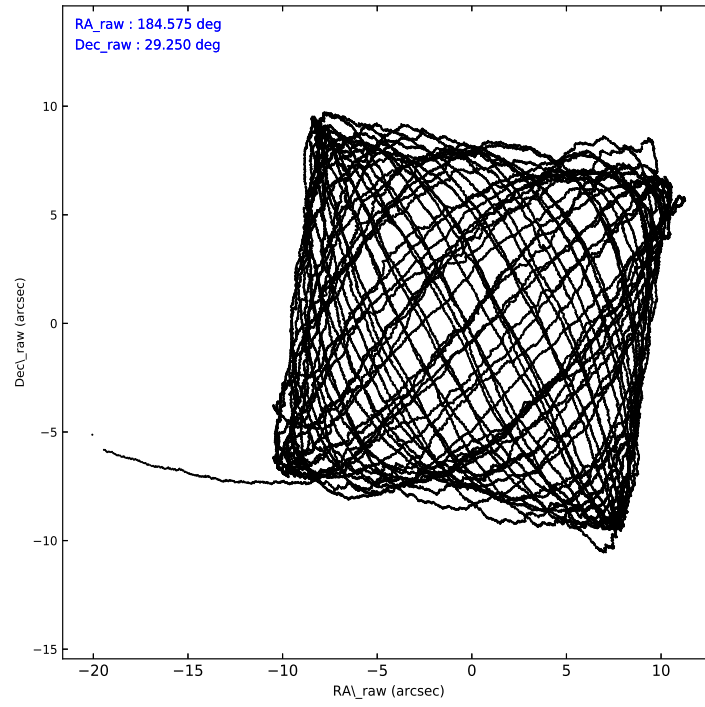
	ccd 3	ccd 6	ccd 7
level 1 events	218481	231527	283205
rejected events	195906	206789	160875
rejected %	89%	89%	56%

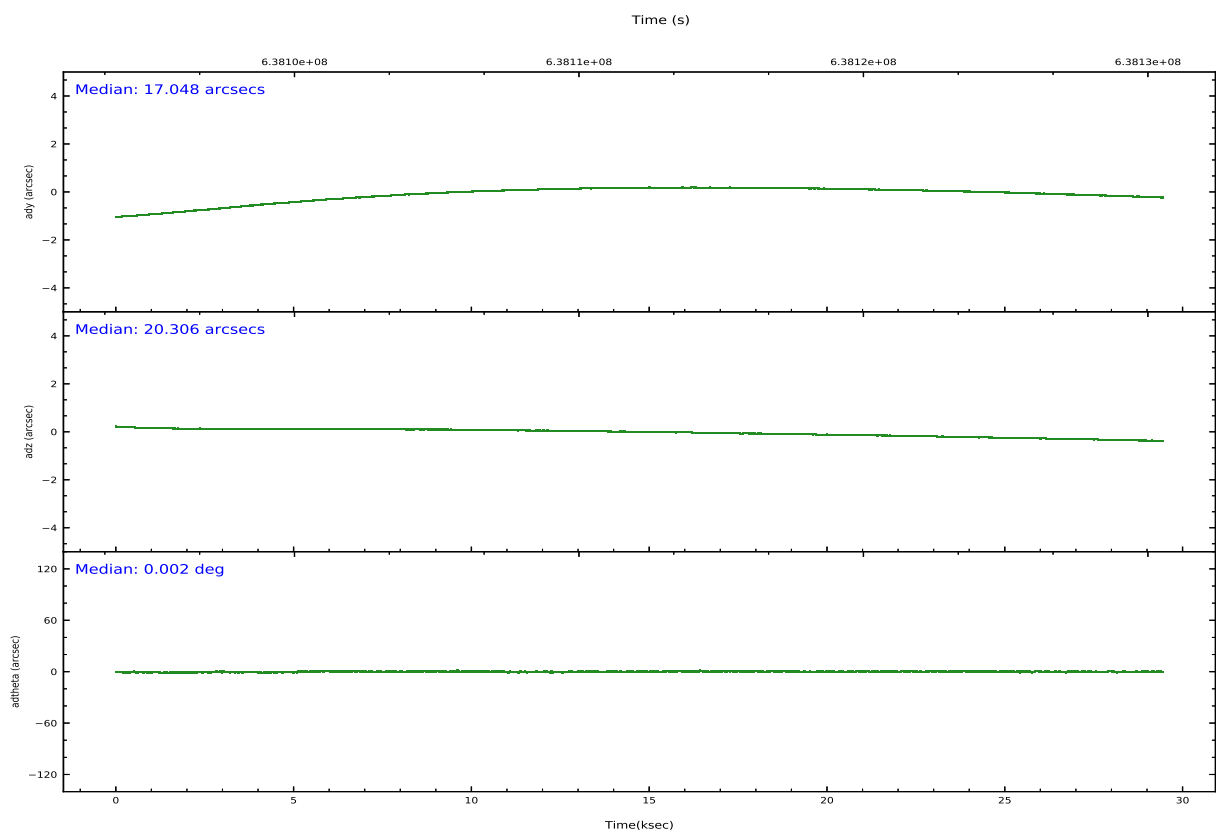
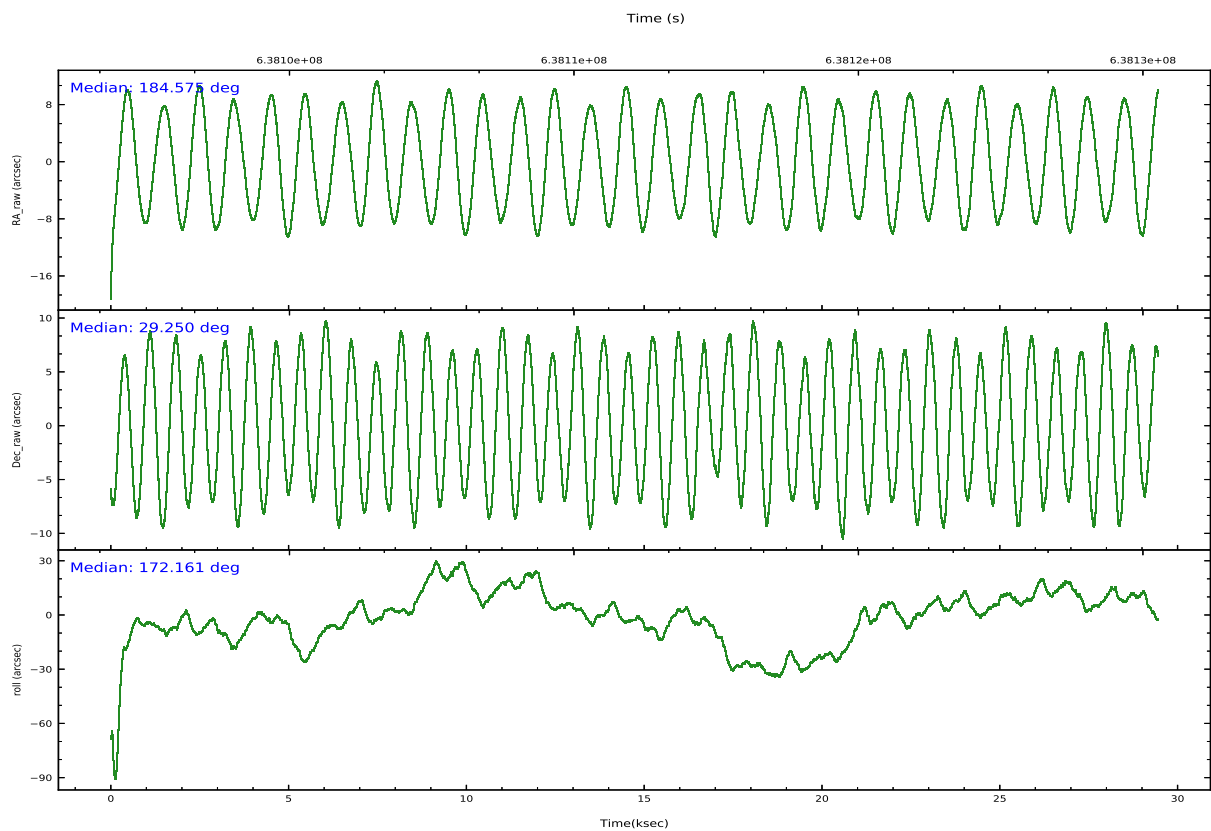
	ccd 3	ccd 6	ccd 7
grade 0 events	7884	7643	10171
	3%	3%	3%
grade 1 events	112	97	428
	0%	0%	0%
grade 2 events	4888	6211	25639
	2%	2%	9%
grade 3 events	2443	2394	9779
	1%	1%	3%
grade 4 events	2388	2290	9486
	1%	0%	3%
grade 5 events	9931	9669	27813
	4%	4%	9%
grade 6 events	4980	6206	67293
	2%	2%	23%
grade 7 events	185855	197017	132596
	85%	85%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-367	ACIS-367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	184.603732	184.58107155663	CCD I2 on	O2	N
[deg] Pointing Dec	29.260318	29.254818247463	CCD I3 on	O3	Y
[deg] Pointing Roll	171.988603	172.1609405923	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	O4	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	O1	N
[s] Observation start time (MET)	638099268.184000	638098356.5612	CCD S5 on	N	N
Observation start date	2018-03-22T09:46:39	2018-03-22T09:32:36	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	638128429.184000	638128687.33799	On-chip summing requested	N	N
Observation end date	2018-03-22T17:52:40	2018-03-22T17:58:07	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



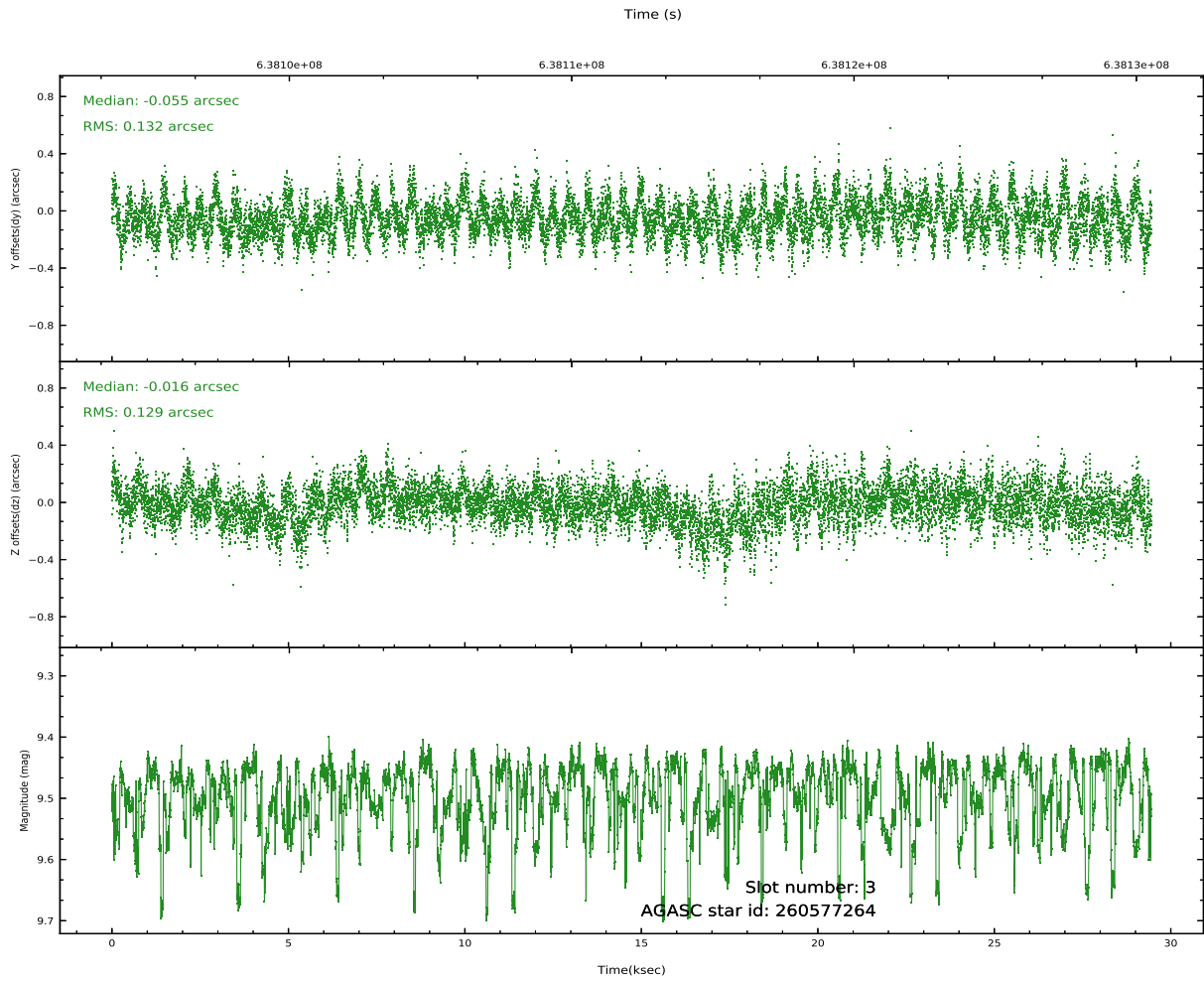
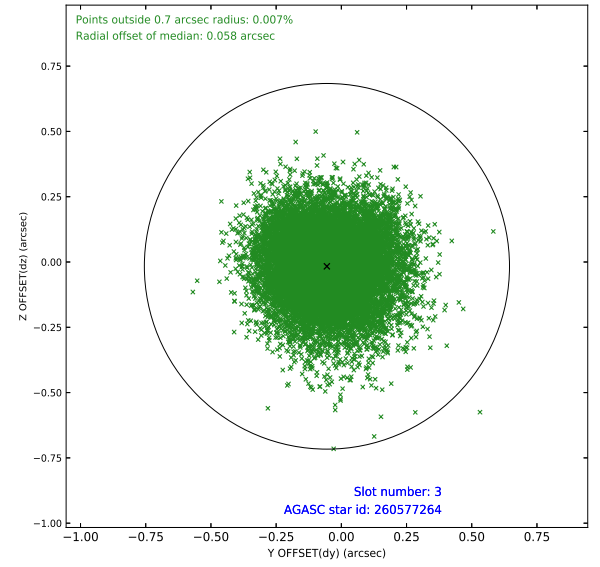
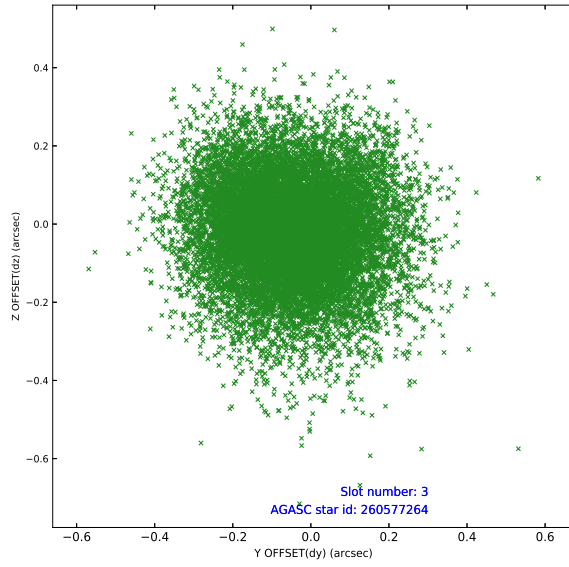


Slot Statistics

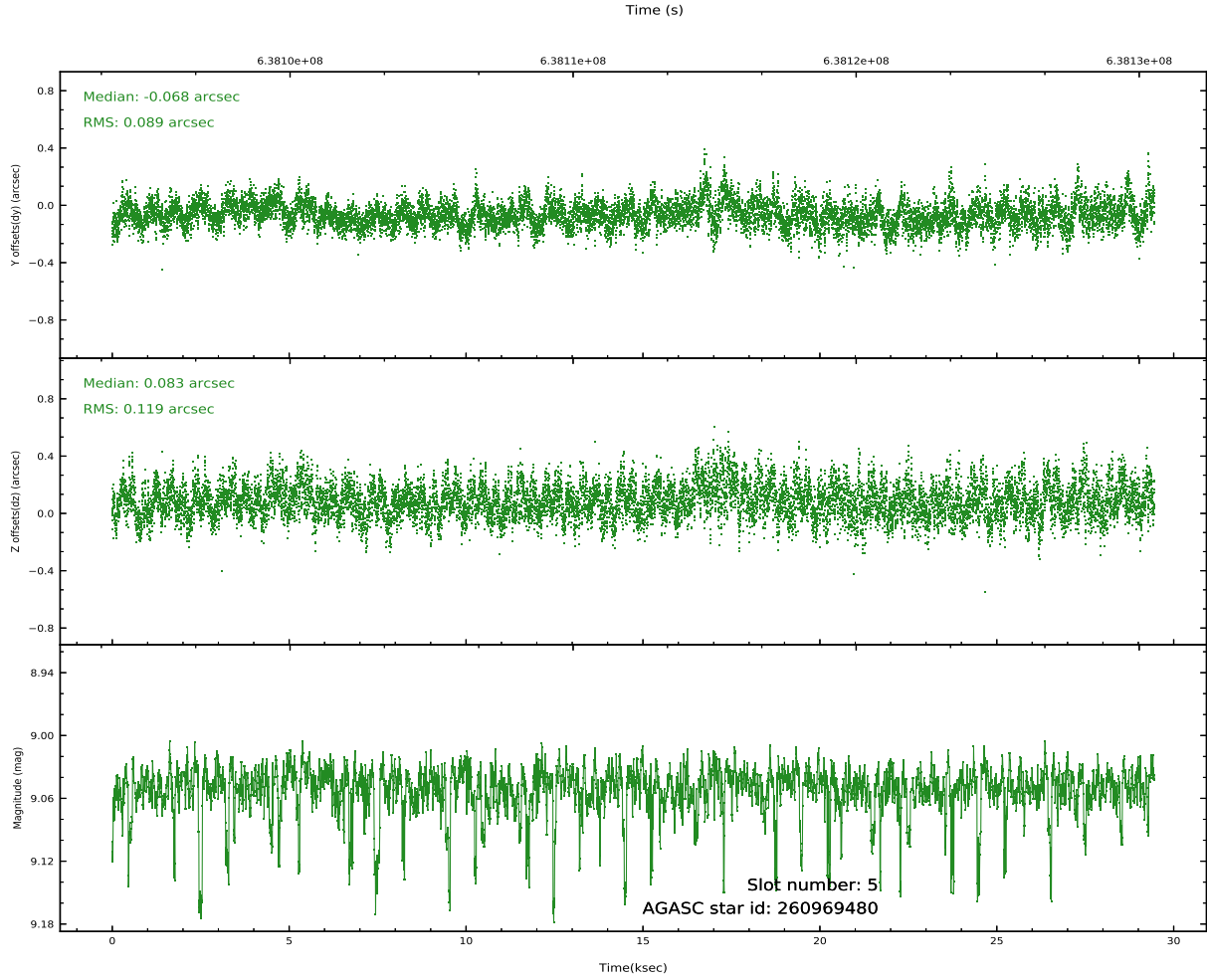
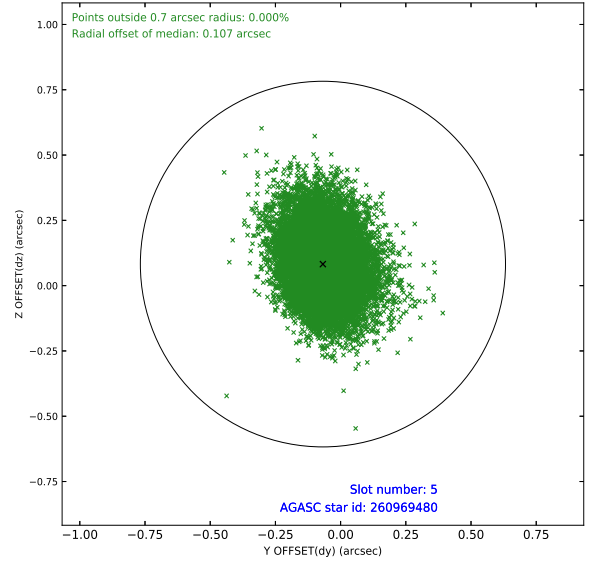
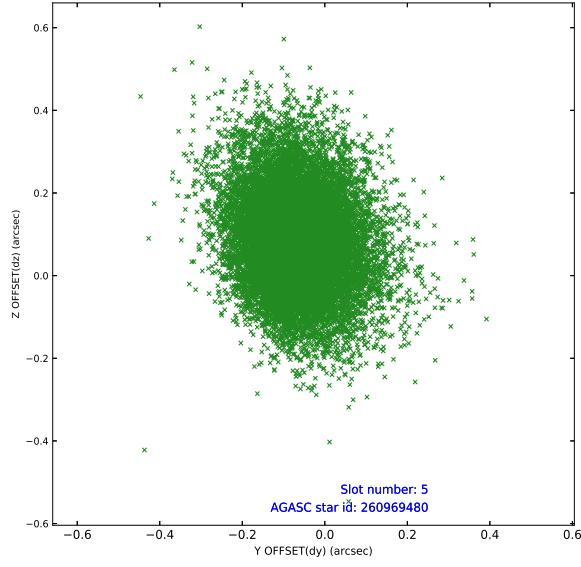
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.11	7184	1.000	0.091	-0.105	0.010	0.025	0.000000	0.000000	-770.05	-1741
1	FID		ACIS-S-4	7.21	7183	1.000	0.161	-0.015	0.011	0.021	0.000000	0.000000	2143.46	166
2	FID		ACIS-S-5	7.19	7183	1.000	-0.282	0.130	0.013	0.023	0.000000	0.000000	-1822.96	160
3	GUIDE	used	260577264	9.49	14343	1.000	-0.055	-0.016	0.197	0.322	183.832255	29.107902	2327.27	873
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	260969480	9.05	14352	1.000	-0.068	0.083	0.155	0.265	184.329513	28.726397	590.74	2023
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	260979504	6.11	14367	1.000	0.115	-0.069	0.153	0.251	184.377399	28.937186	544.74	1250

2.4 Star Slots

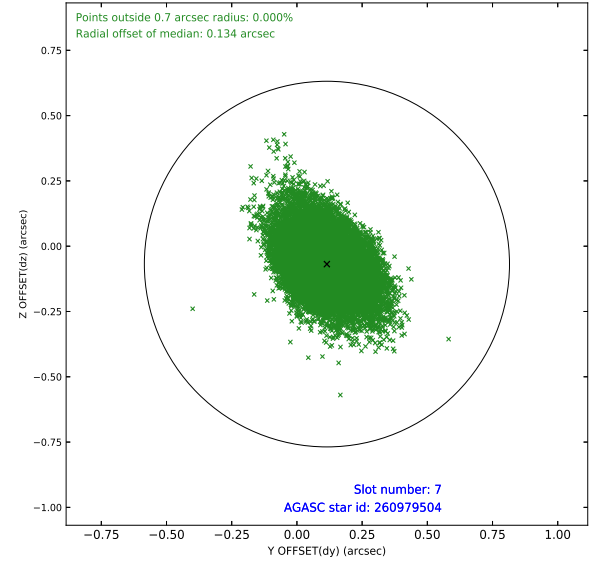
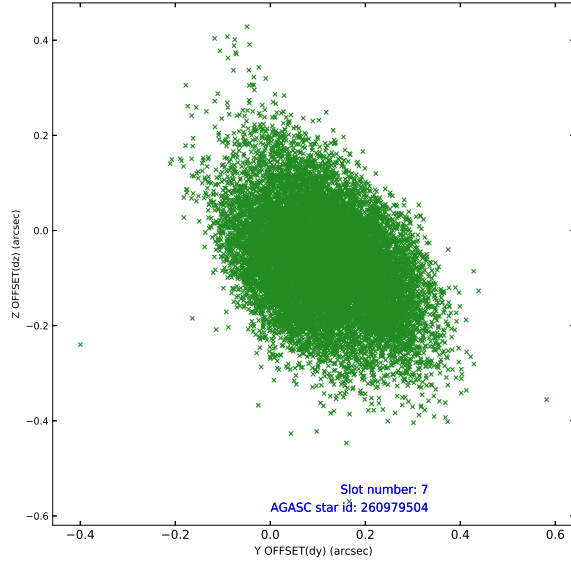
2.4.1 Slot 3



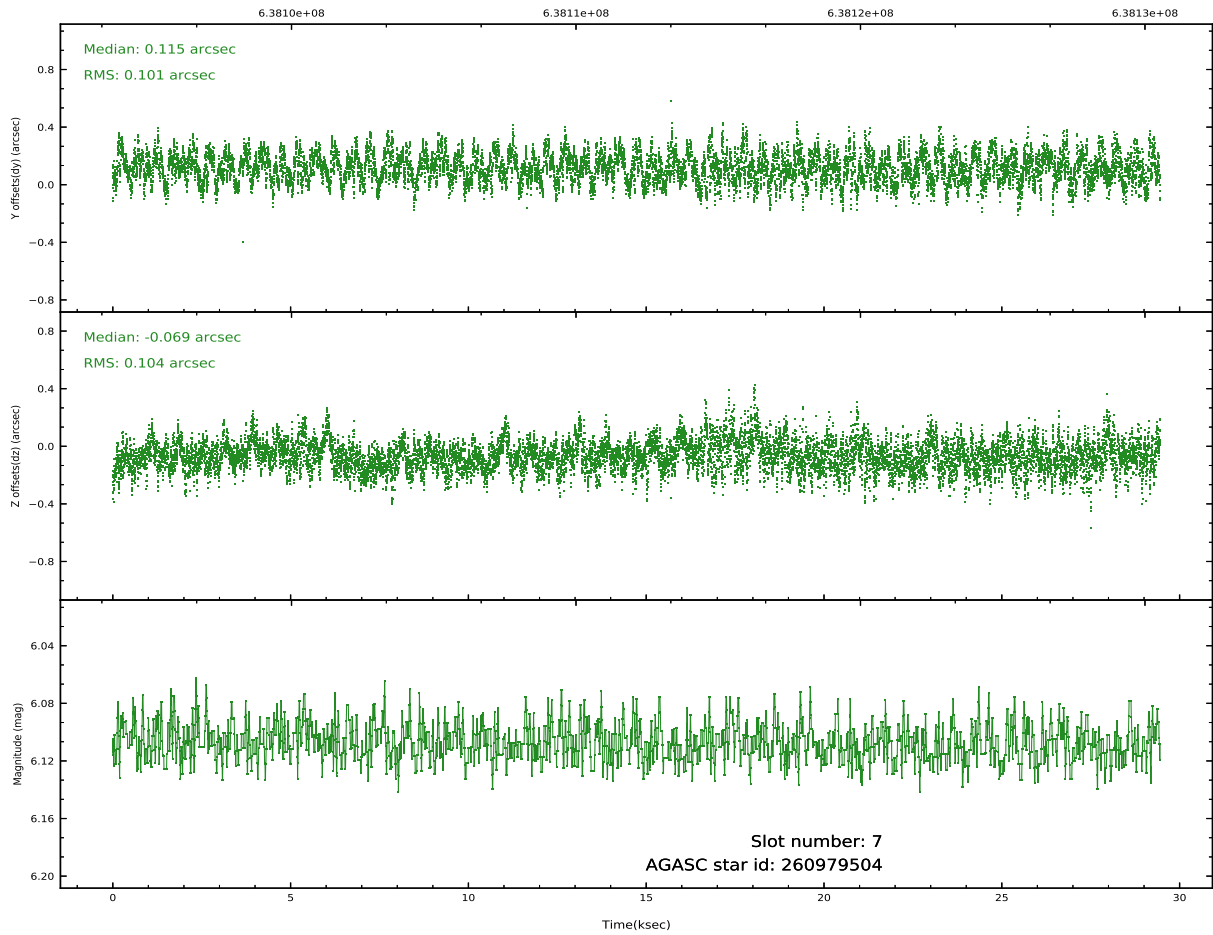
2.4.2 Slot 5



2.4.3 Slot 7

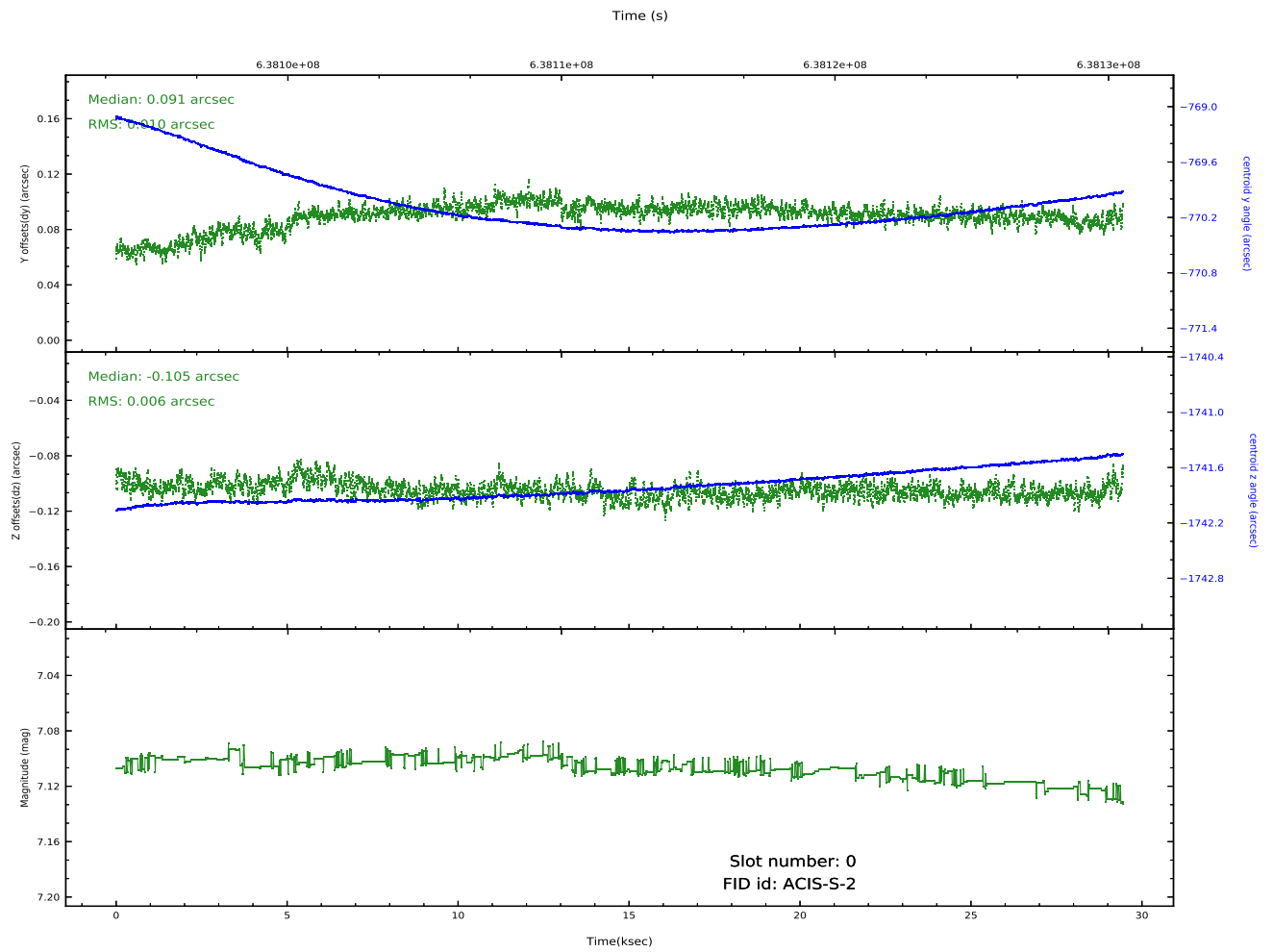
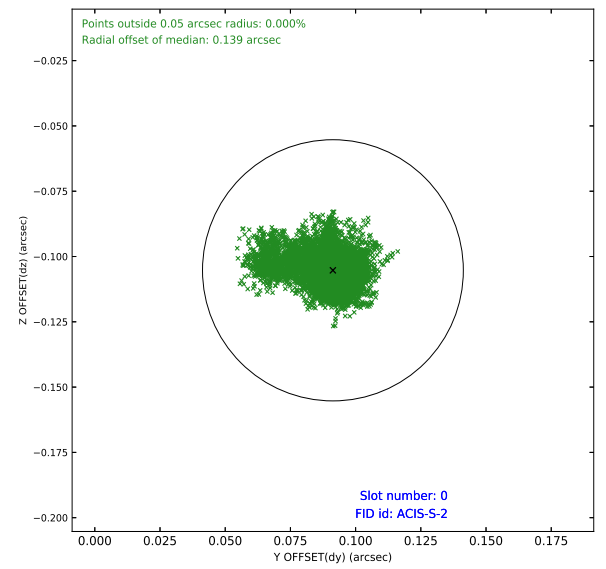
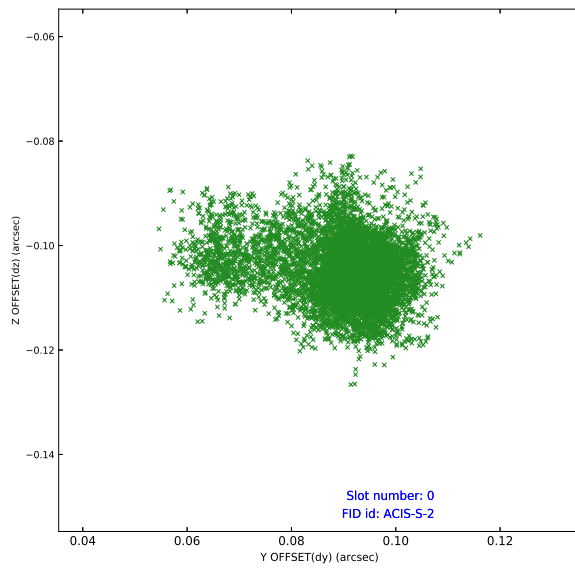


Time (s)

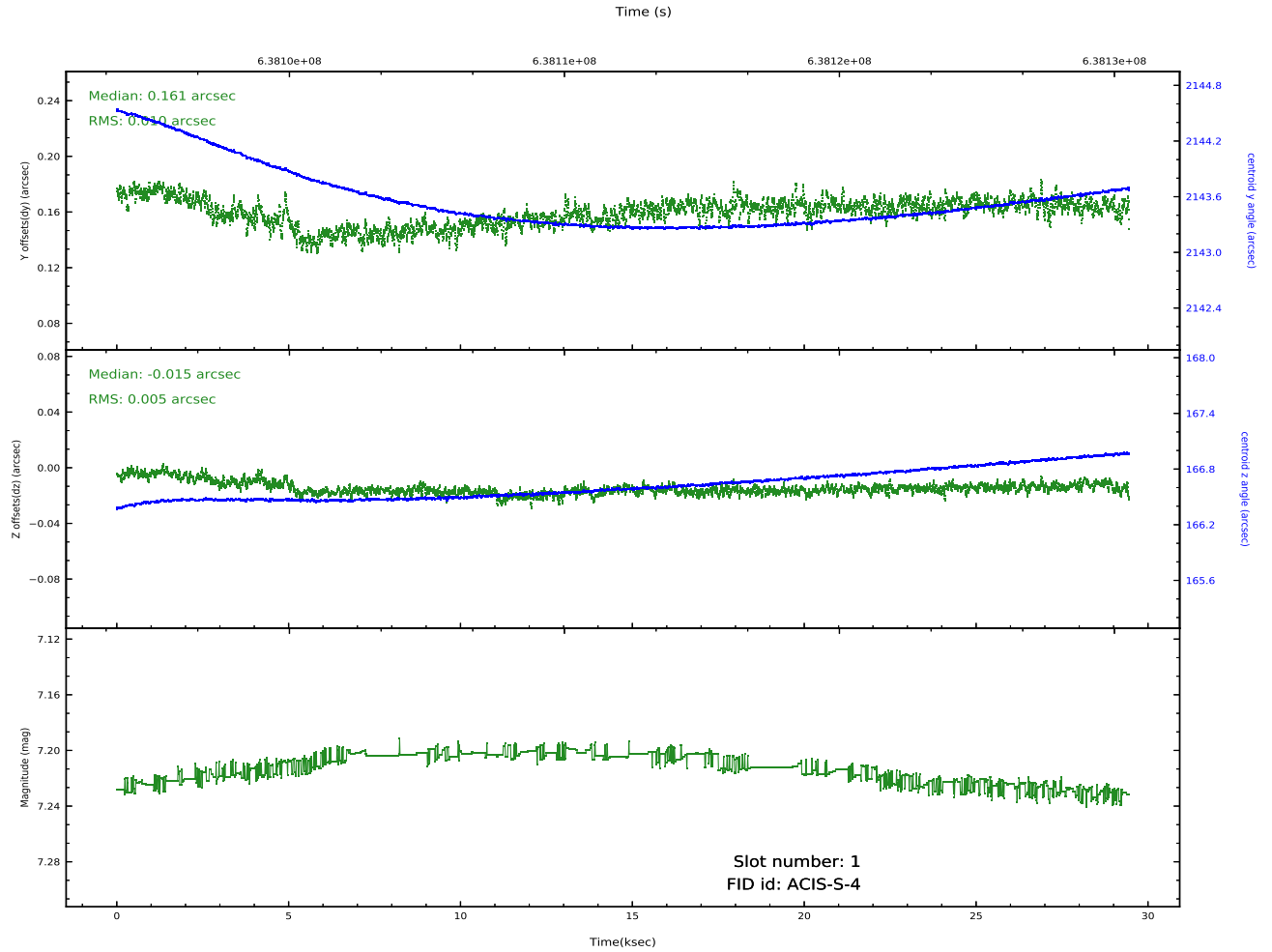
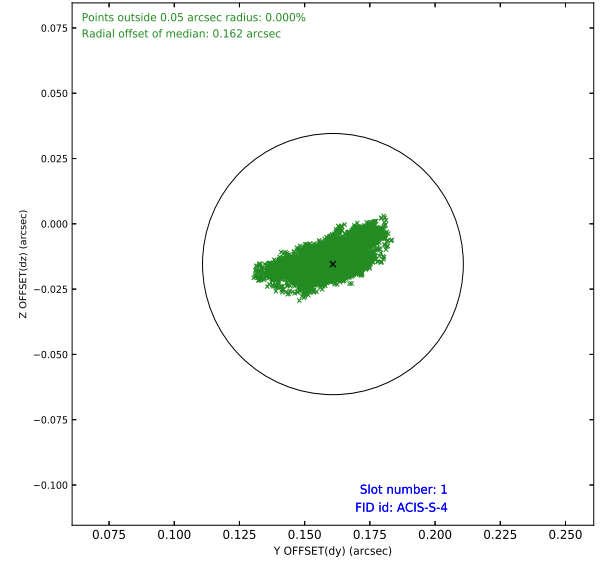
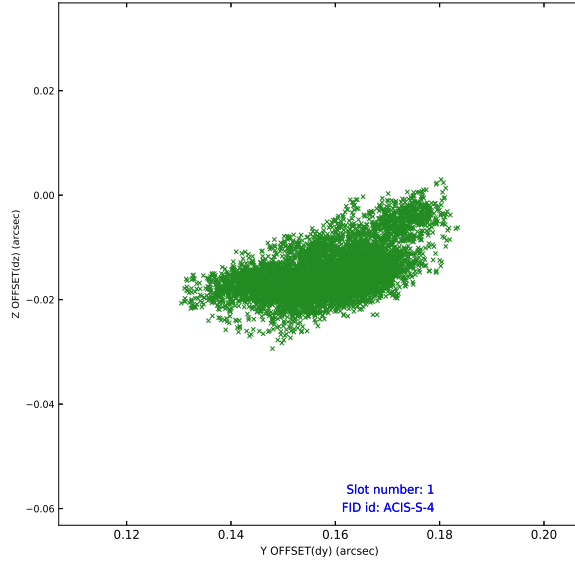


2.5 FID Slots

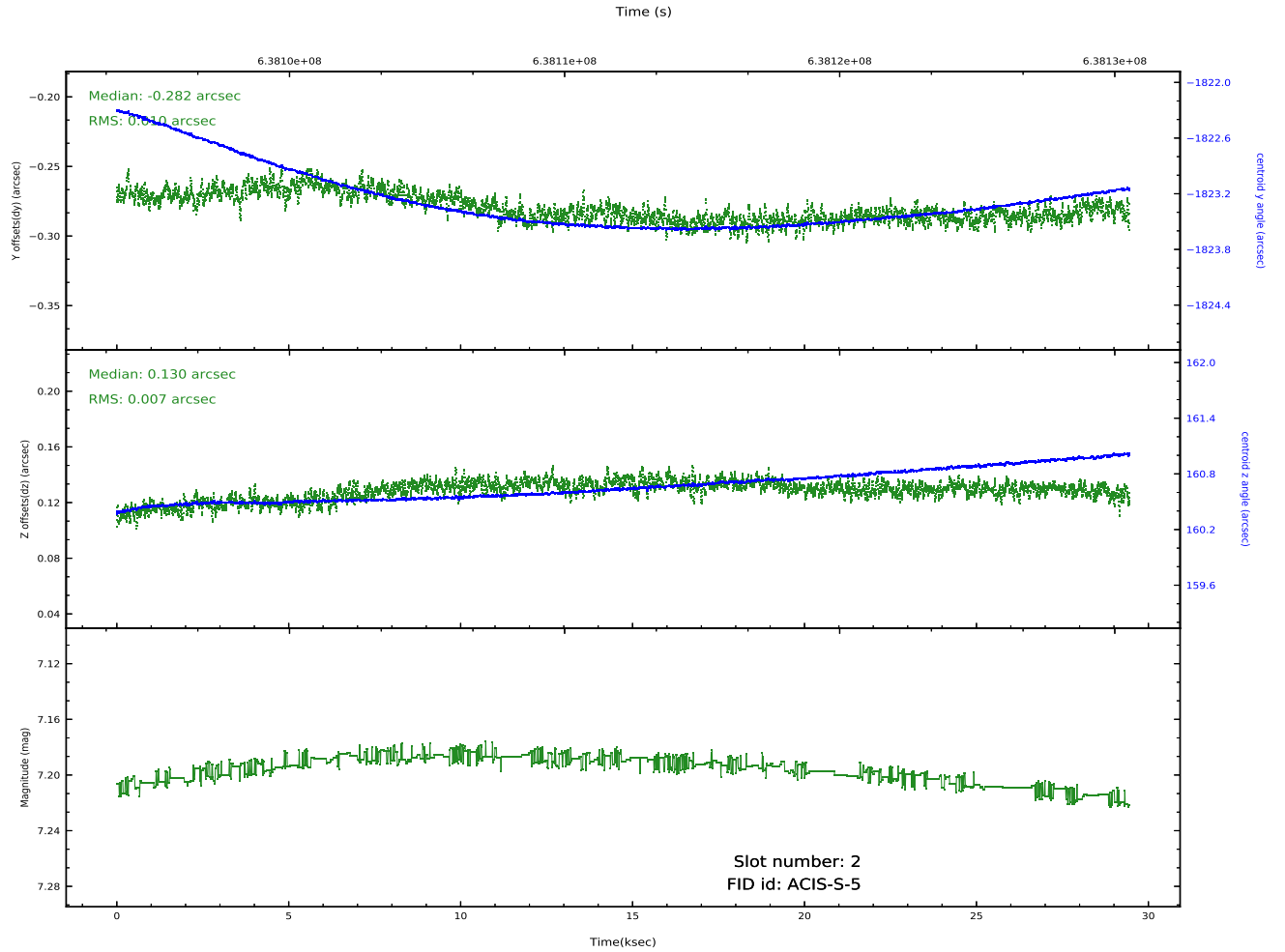
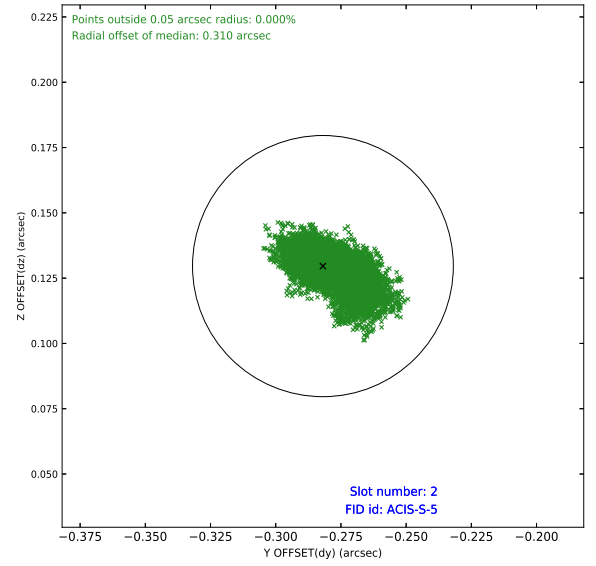
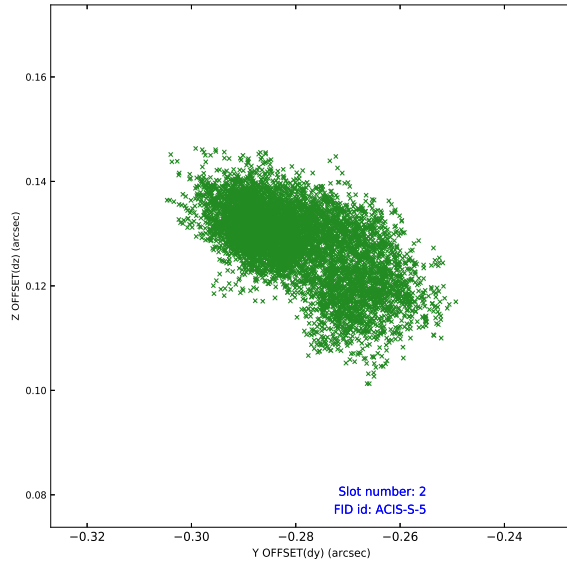
2.5.1 Slot 0



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)	2020.10.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.272377637863

A.2 Comments

Two optional chips were dropped.

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The guide stars in slots 4 and 6 were removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of these slots from the solution.

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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: (184.38939,29.20432), (184.39264,29.20393), (184.39880,29.24370), (184.39534,29.24273).