

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19723 - L2 Version 3
Chandra X-Ray Center

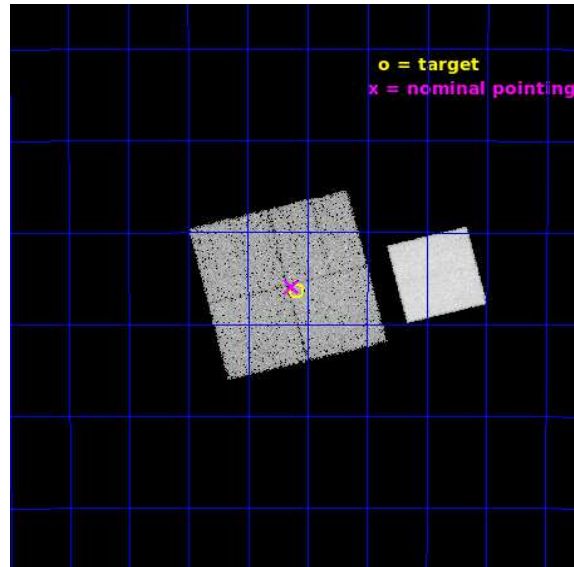
L2 Processing Date : Oct 26 2020

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1 Front

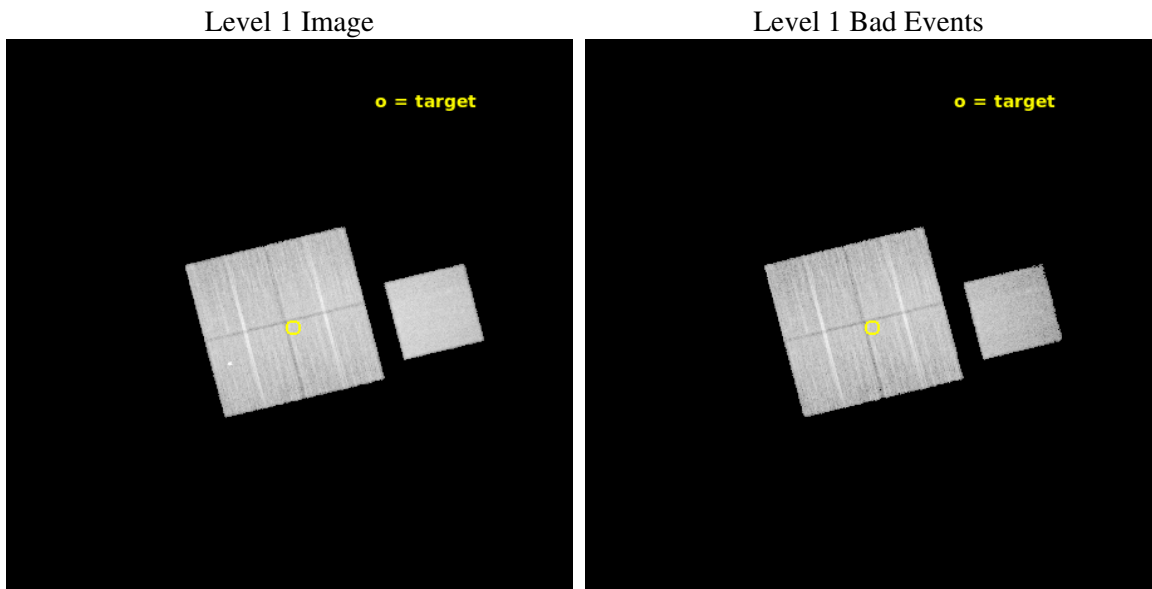
seq_num	502966	Sequence number
obs_id	19723	Observation id
title	X-raying a galactic gravitational lense	Proposal title
observer	Gordon Garmire	Principal investigator
object	OGLE3-ULENSPAR-05	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.647917	Observer's specified target RA [deg]
dec_targ	-33.772167	Observer's specified target Dec [deg]
ra_nom	266.65790636508	Nominal RA [deg]
dec_nom	-33.765391250348	Nominal Dec [deg]
roll_nom	75.863719443761	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20050.718054056	Sum of GTIs [s]
livetime	19788.740661556	Livetime [s]
ontime0	20053.859064221	Sum of GTIs [s]
ontime1	20057.000154376	Sum of GTIs [s]
ontime2	20053.859094143	Sum of GTIs [s]
ontime3	20050.718054056	Sum of GTIs [s]
ontime7	20057.000154376	Sum of GTIs [s]
l2events	128420	Number of level 2 events



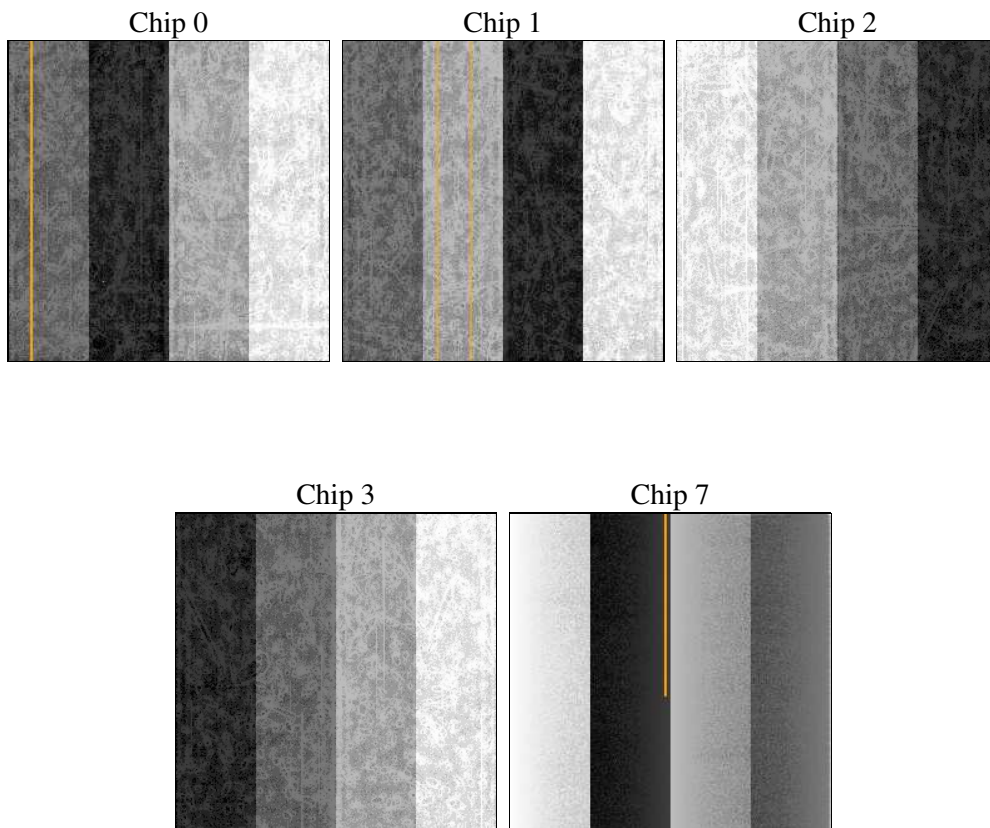
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	20050.718054056	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	20053.859064221	Sum of GTIs [s]
date	2020-10-27T00:54:26	Date and time of file creation	ontime1	20057.000154376	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	20053.859094143	Sum of GTIs [s]
			ontime3	20050.718054056	Sum of GTIs [s]
			ontime7	20057.000154376	Sum of GTIs [s]
			l1events	682471	Number of level 1 events

2.1.4 Events

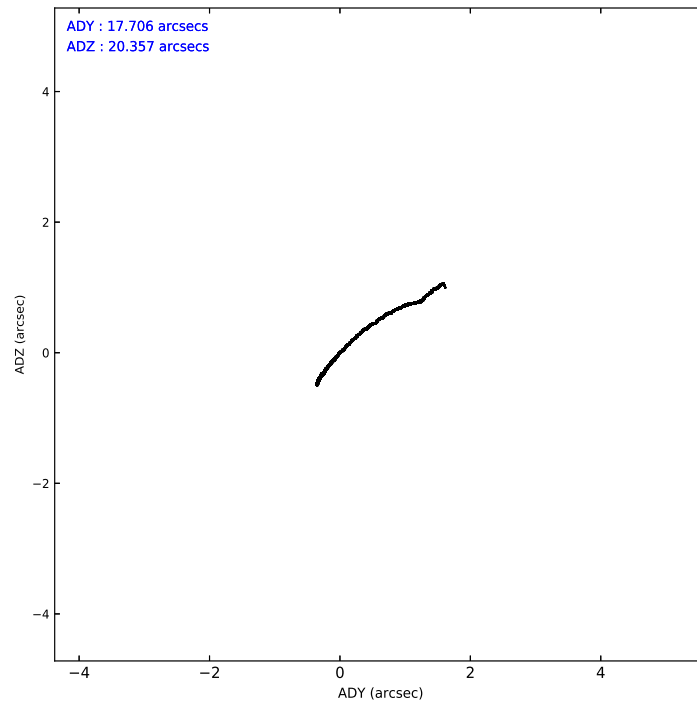
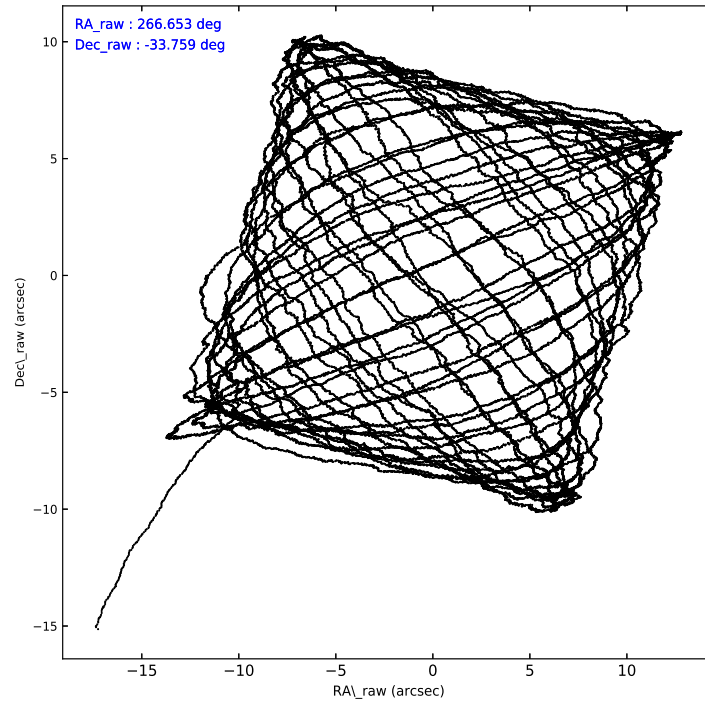
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
level 1 events	123470	127906	140245	134629	156221
rejected events	106584	109683	123156	118251	81865
rejected %	86%	85%	87%	87%	52%

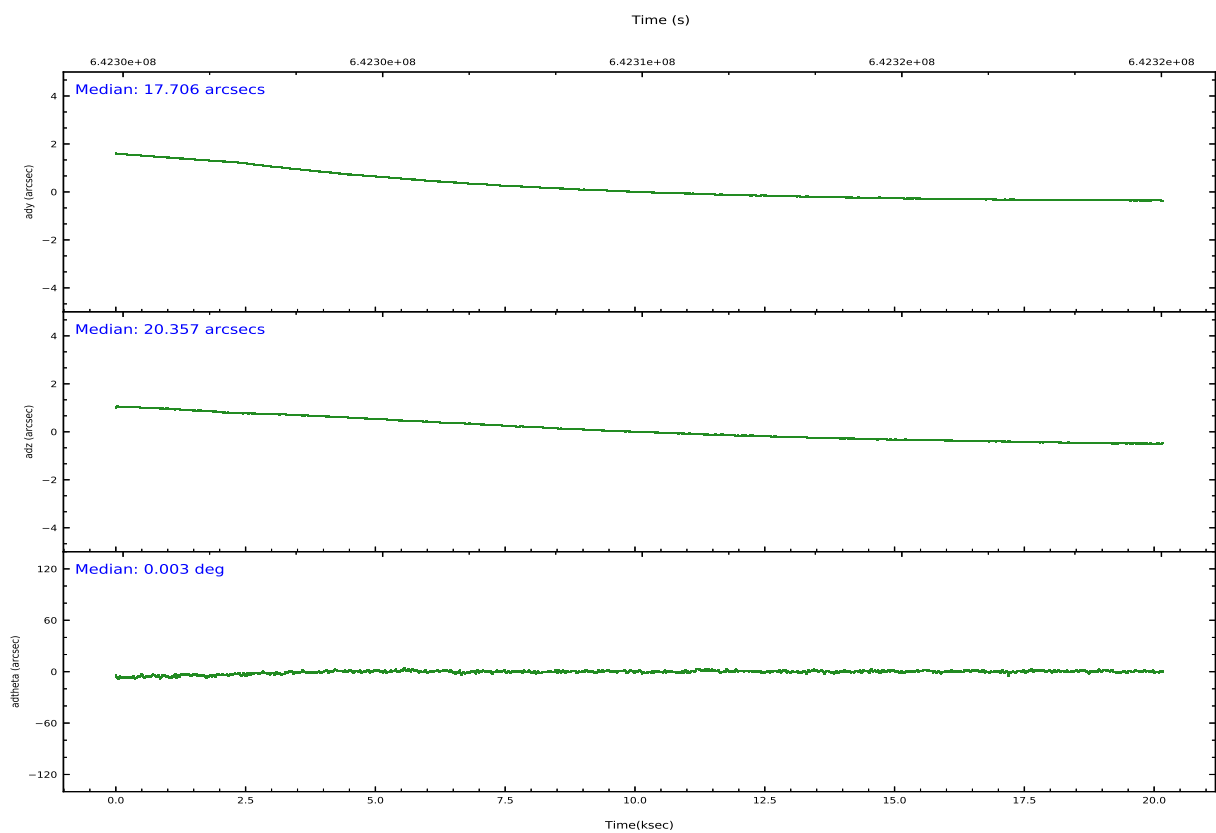
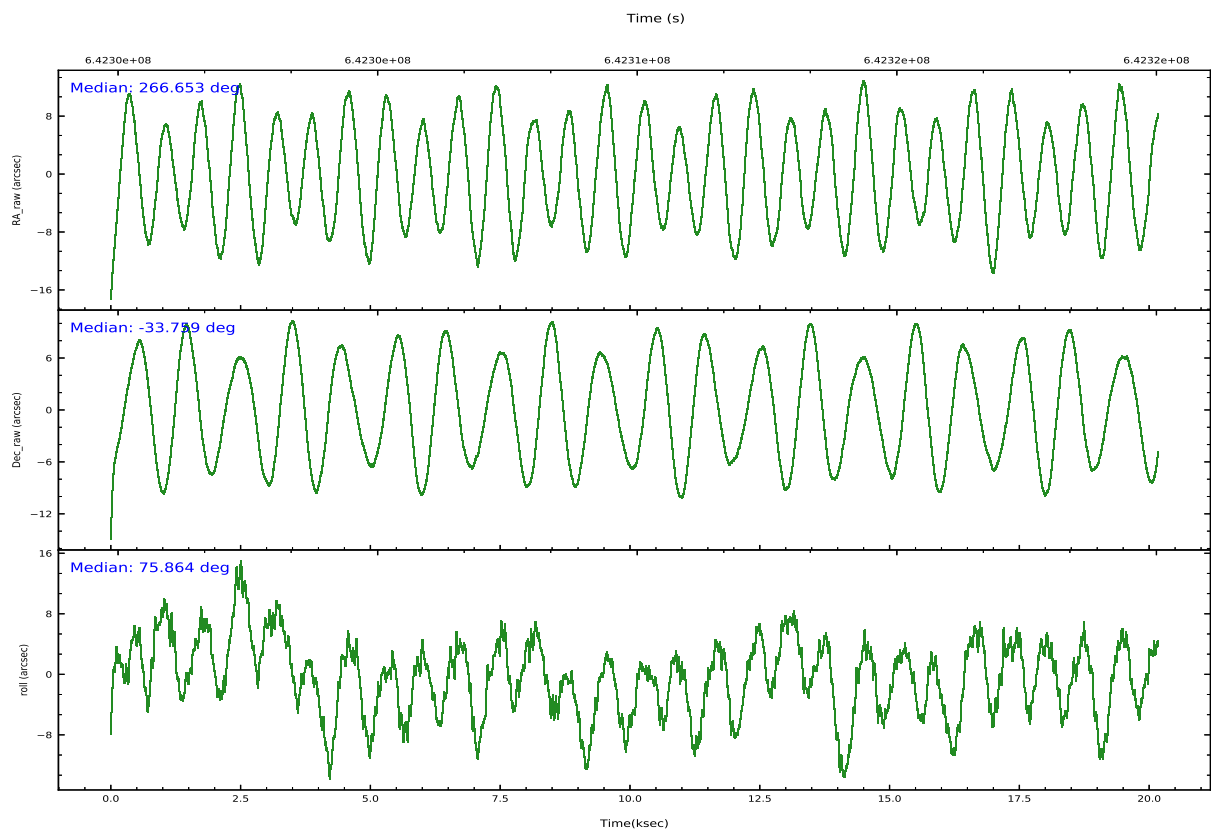
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 7
grade 0 events	6498	7280	7211	6916	7317
	5%	5%	5%	5%	4%
grade 1 events	88	73	104	89	278
	0%	0%	0%	0%	0%
grade 2 events	4150	3996	3959	3338	16751
	3%	3%	2%	2%	10%
grade 3 events	1642	1677	1485	1554	6126
	1%	1%	1%	1%	3%
grade 4 events	1472	1567	1541	1544	6095
	1%	1%	1%	1%	3%
grade 5 events	4989	5279	4819	5478	15773
	4%	4%	3%	4%	10%
grade 6 events	3124	3703	2895	3027	38082
	2%	2%	2%	2%	24%
grade 7 events	101507	104331	118231	112683	65799
	82%	81%	84%	83%	42%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01237	ACIS-01237	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	266.661773	266.65790636508	CCD I2 on	Y	Y
[deg] Pointing Dec	-33.785413	-33.765391250348	CCD I3 on	Y	Y
[deg] Pointing Roll	75.670453	75.863719443761	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	N	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	O1	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	642300033.184000	642299183.49667	CCD S5 on	N	N
Observation start date	2018-05-10T00:39:24	2018-05-10T00:26:23	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	642320033.184000	642320534.76043	On-chip summing requested	N	N
Observation end date	2018-05-10T06:12:44	2018-05-10T06:22:14	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



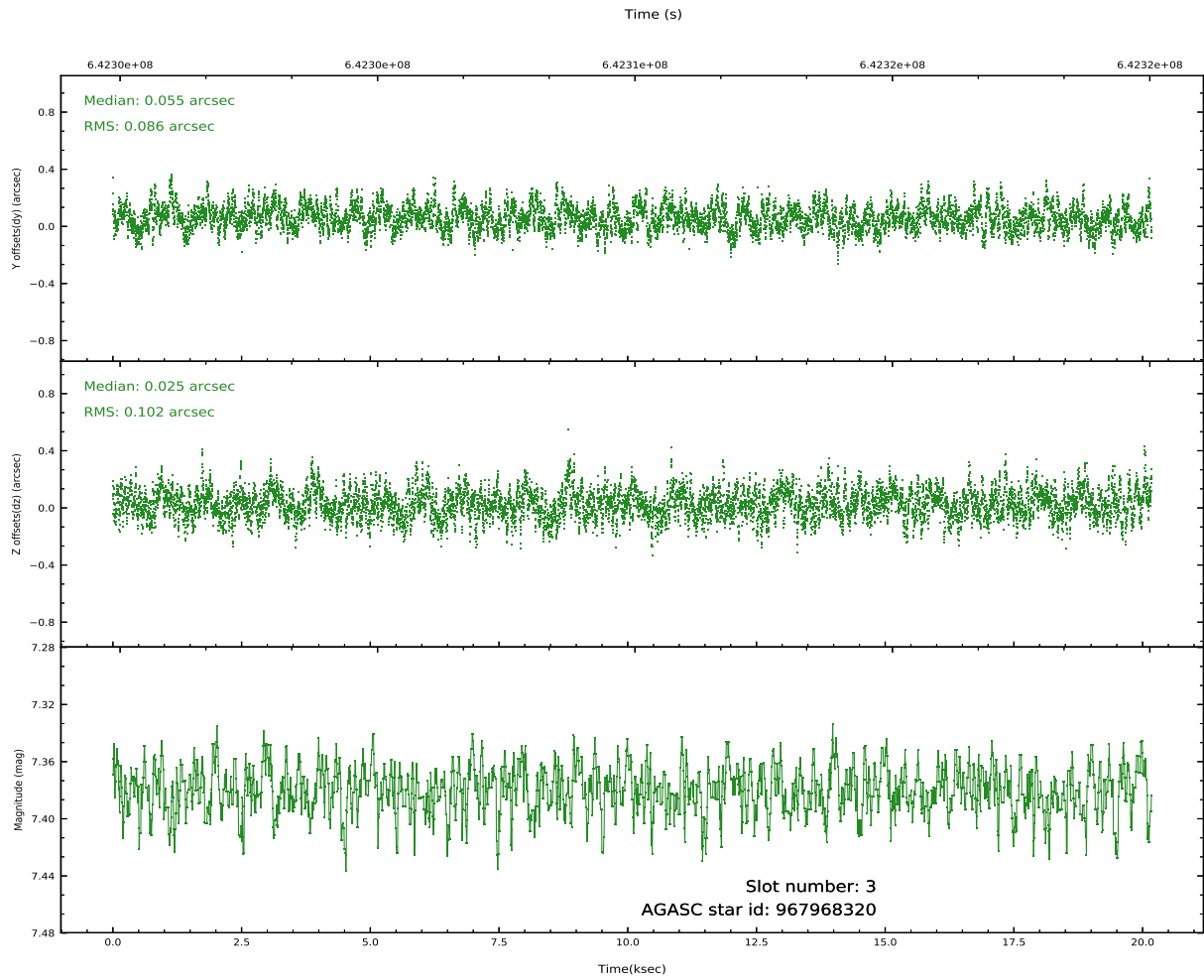
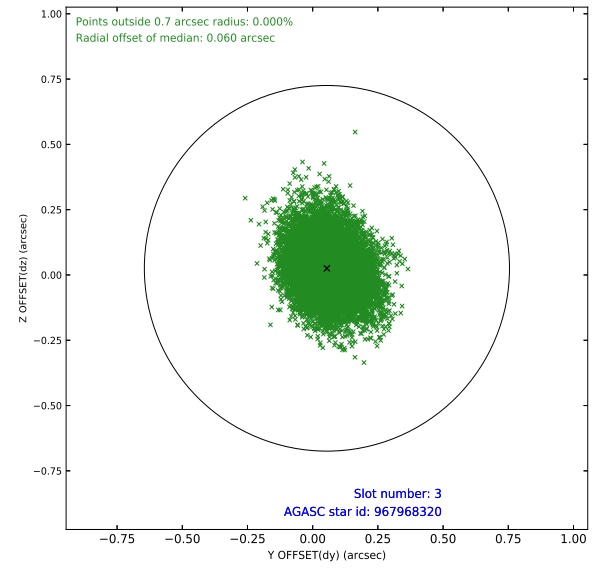
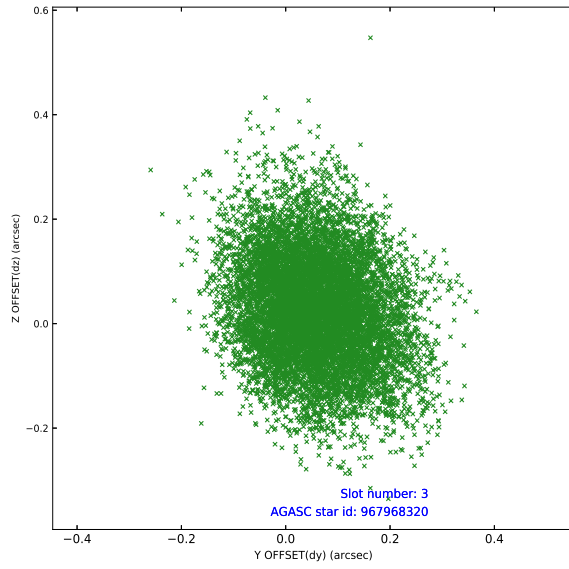


Slot Statistics

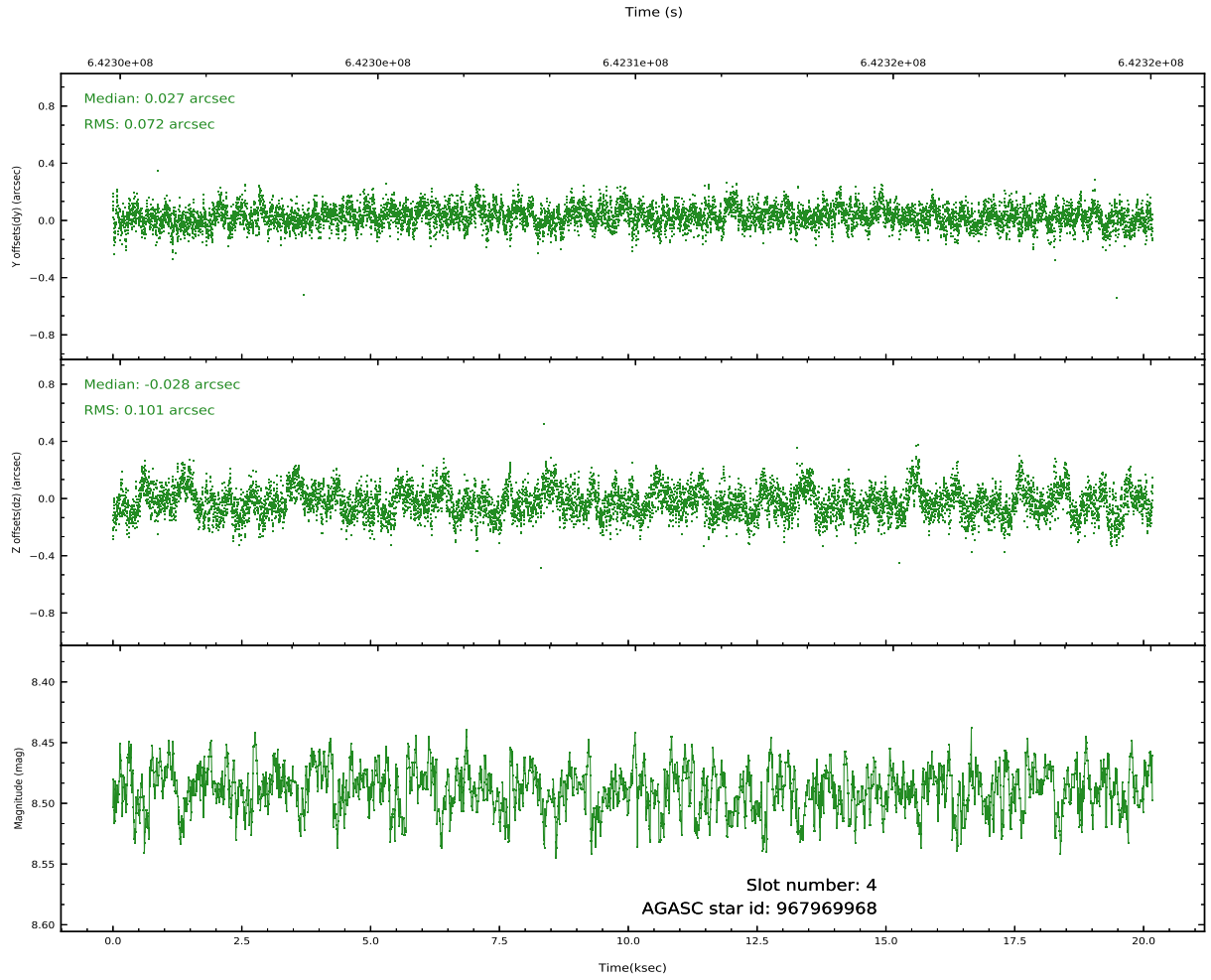
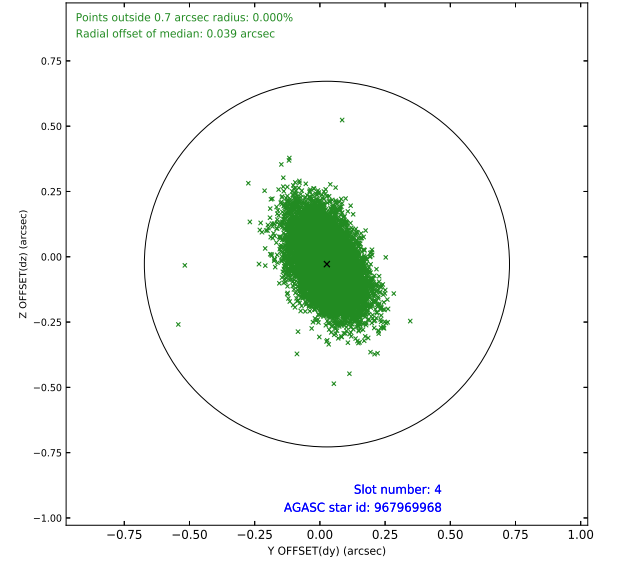
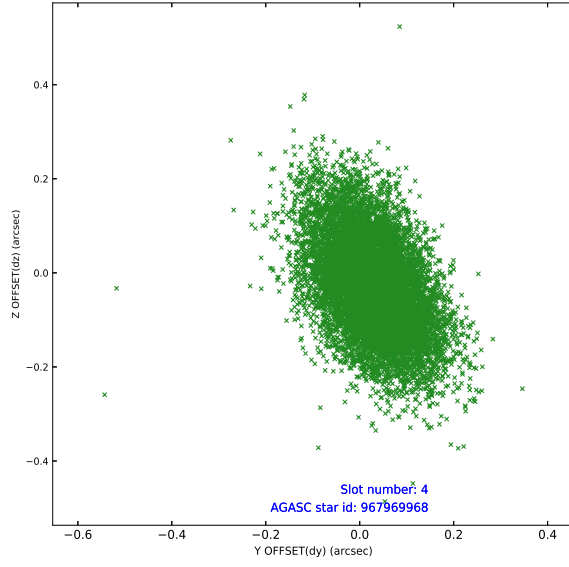
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.12	4921	1.000	-0.006	-0.065	0.029	0.056	0.000000	0.000000	921.35	-844
1	FID		ACIS-I-2	7.01	4921	1.000	-0.072	0.050	0.019	0.028	0.000000	0.000000	-772.70	-850
2	FID		ACIS-I-4	7.04	4920	1.000	-0.021	0.086	0.025	0.035	0.000000	0.000000	2141.30	1055
3	GUIDE	used	967968320	7.38	9840	1.000	0.055	0.025	0.142	0.231	266.948124	-34.310677	-1621.90	-1293
4	GUIDE	used	967969968	8.49	9831	1.000	0.027	-0.028	0.129	0.222	266.289004	-33.823947	-412.28	1045
5	GUIDE	used	967971272	8.99	9826	1.000	-0.033	0.014	0.161	0.279	266.240095	-34.205664	-1778.83	841
6	GUIDE	used	967971320	9.25	9830	1.000	0.010	0.220	0.161	0.263	267.324389	-33.759062	577.08	-1899
7	GUIDE	used	967448616	9.13	9821	1.000	-0.056	-0.232	0.178	0.296	266.122473	-33.317129	1227.94	1988

2.4 Star Slots

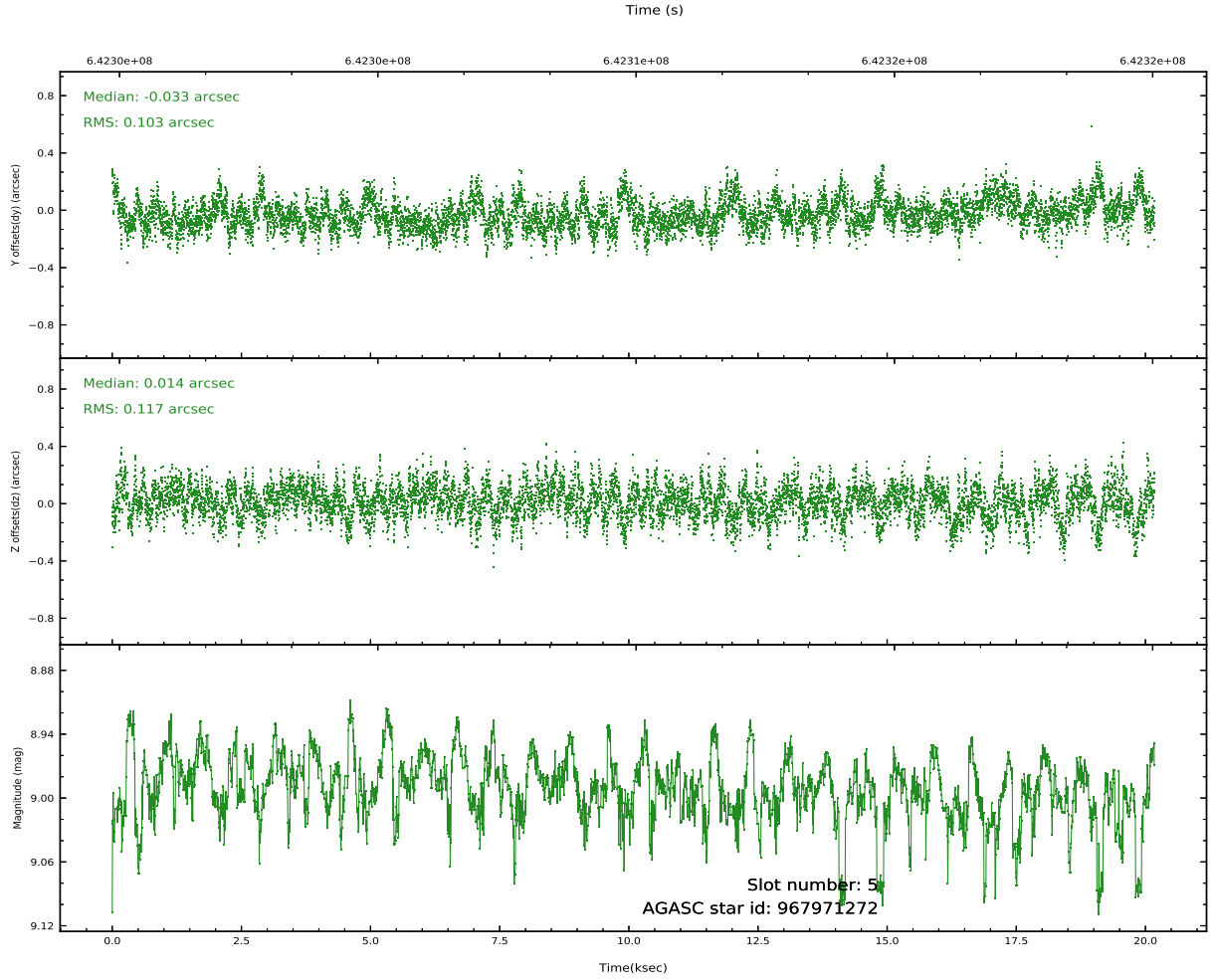
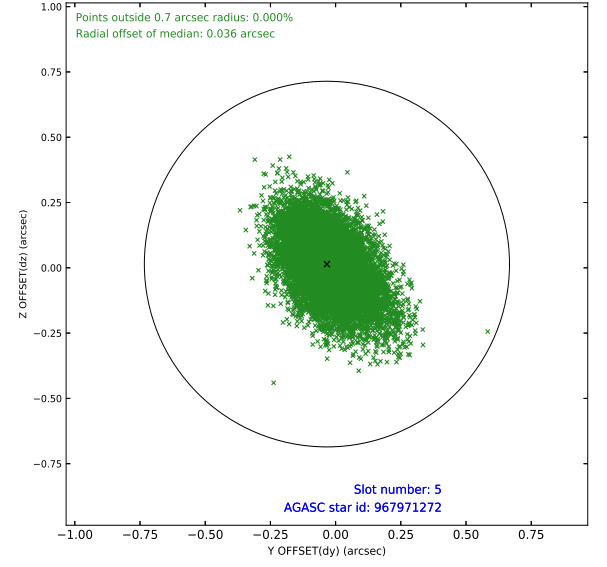
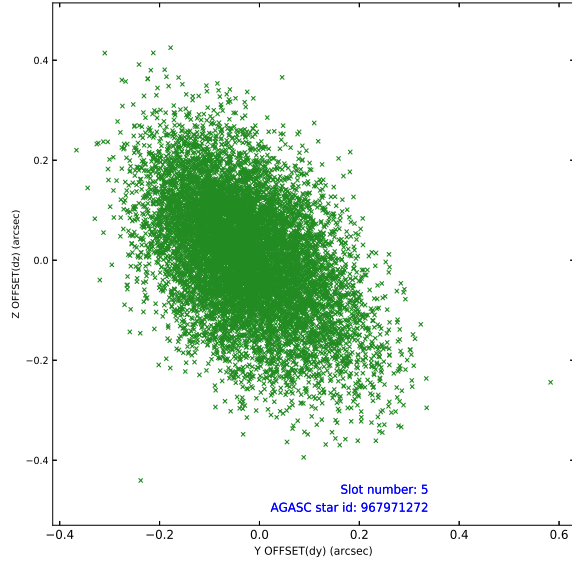
2.4.1 Slot 3



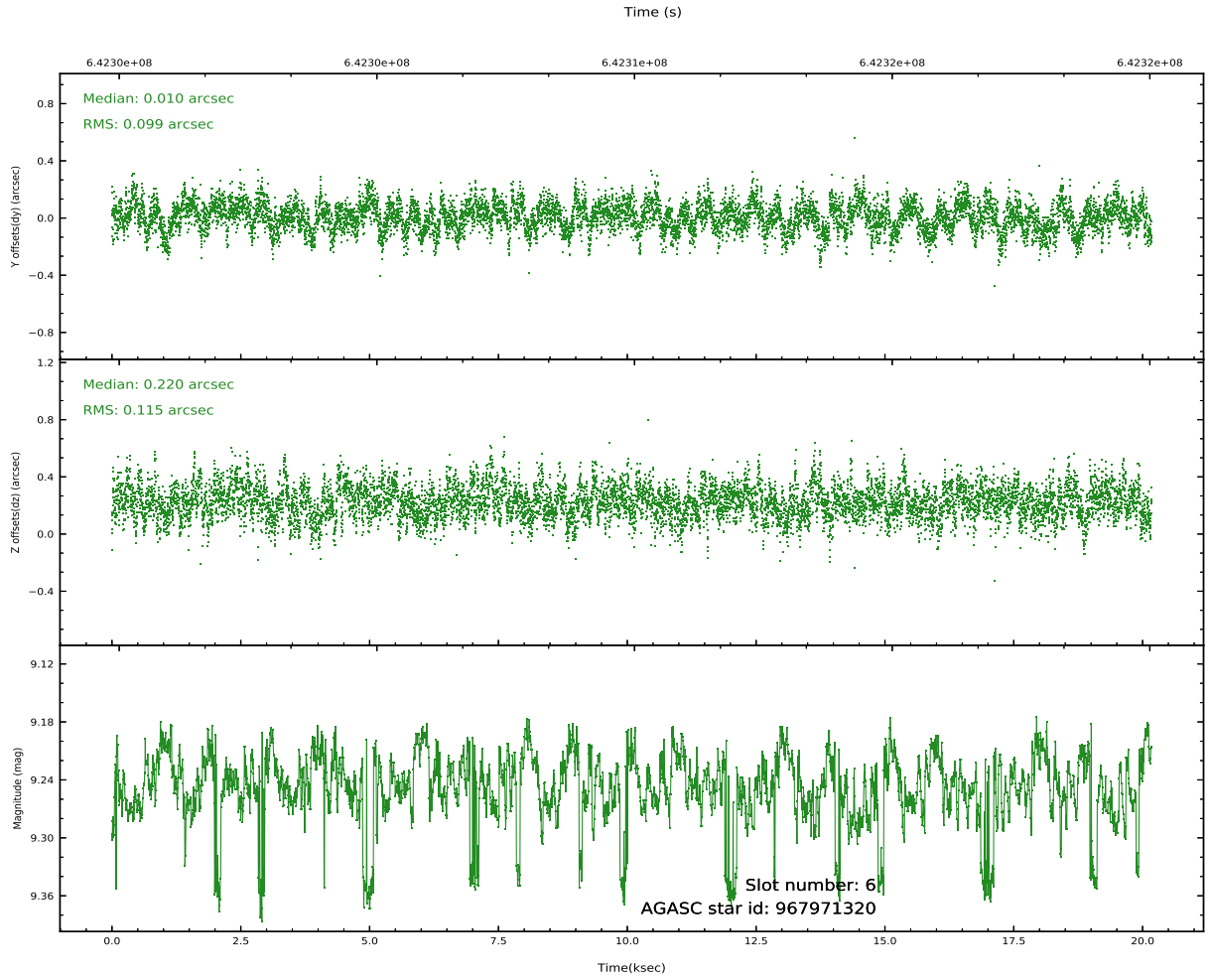
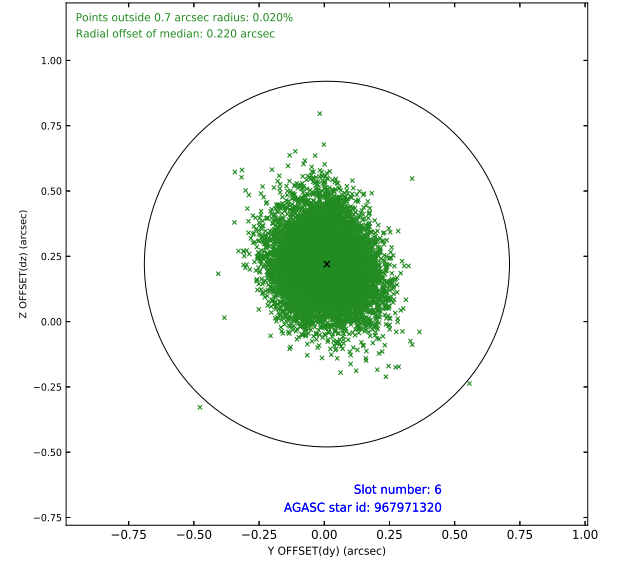
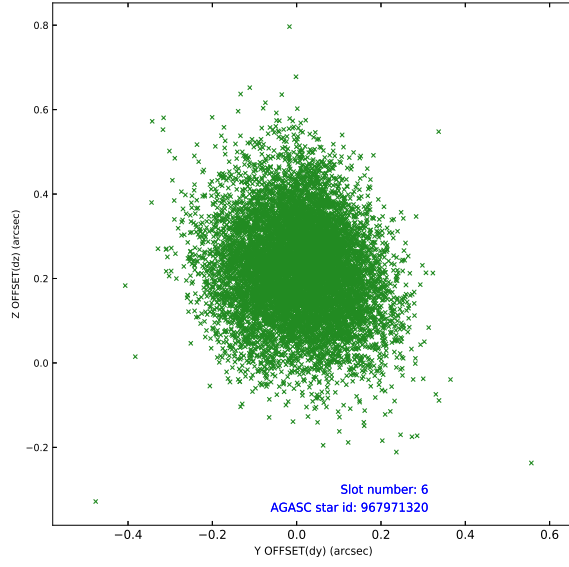
2.4.2 Slot 4



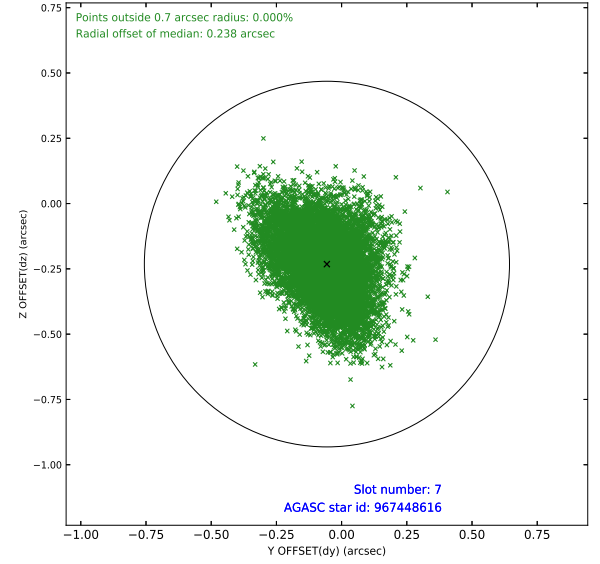
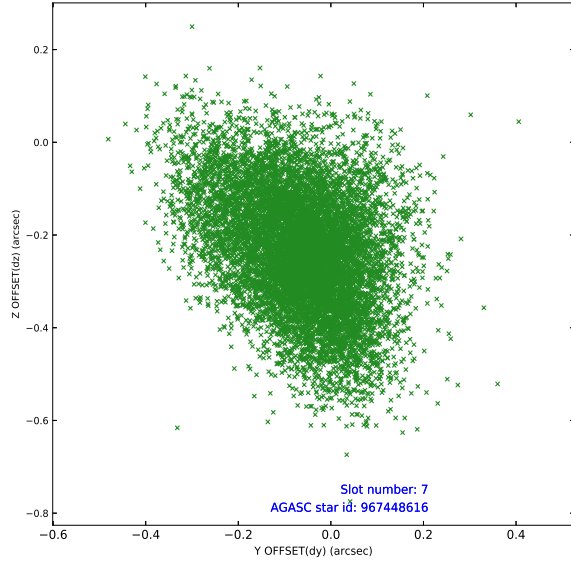
2.4.3 Slot 5



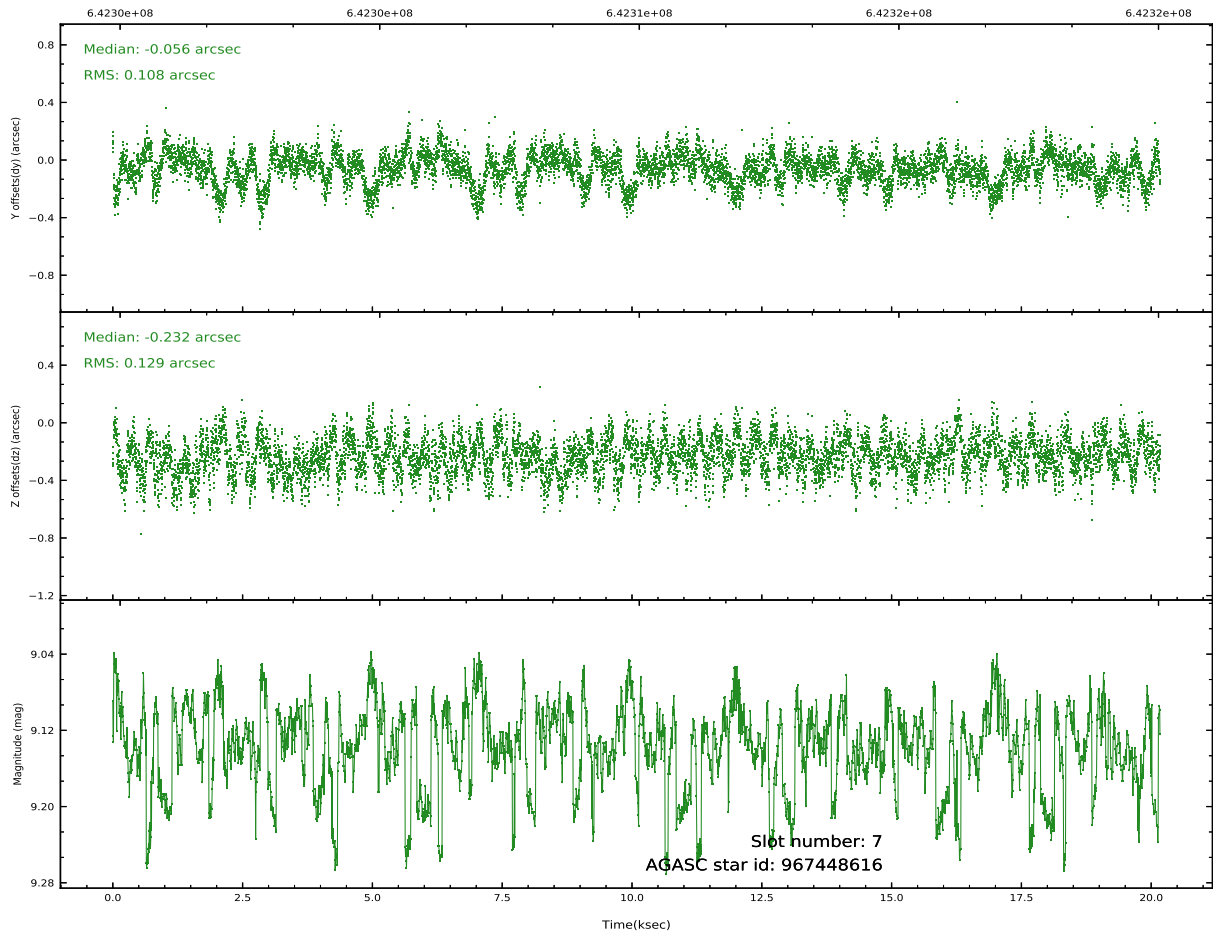
2.4.4 Slot 6



2.4.5 Slot 7

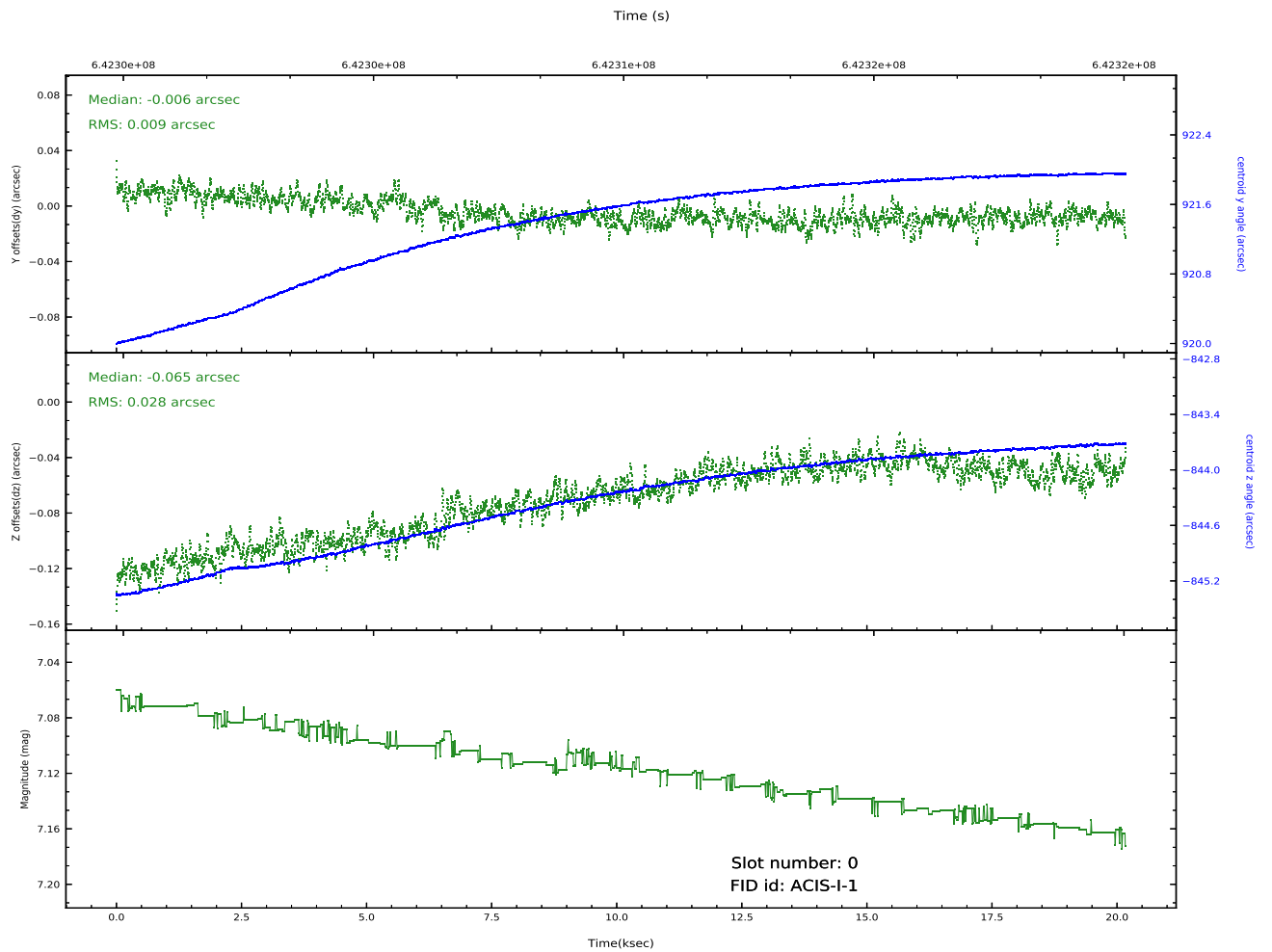
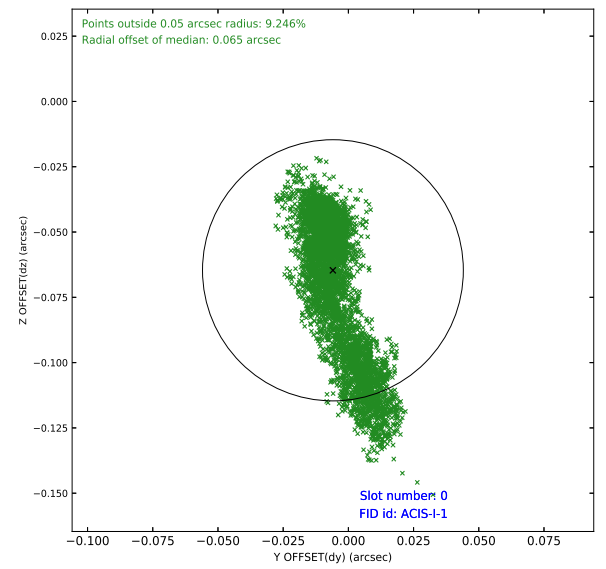
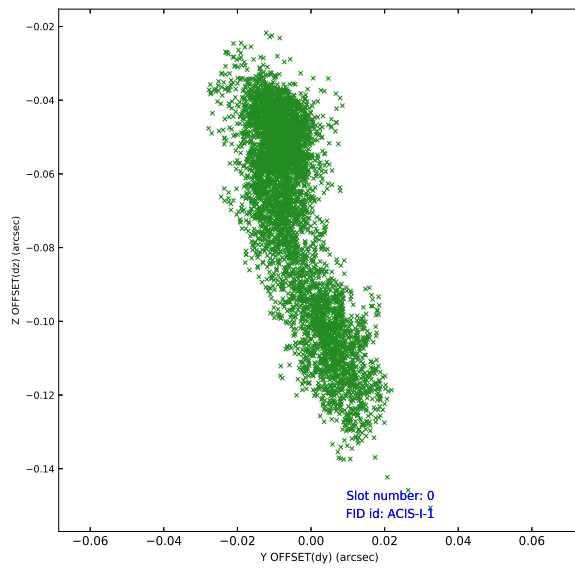


Time (s)

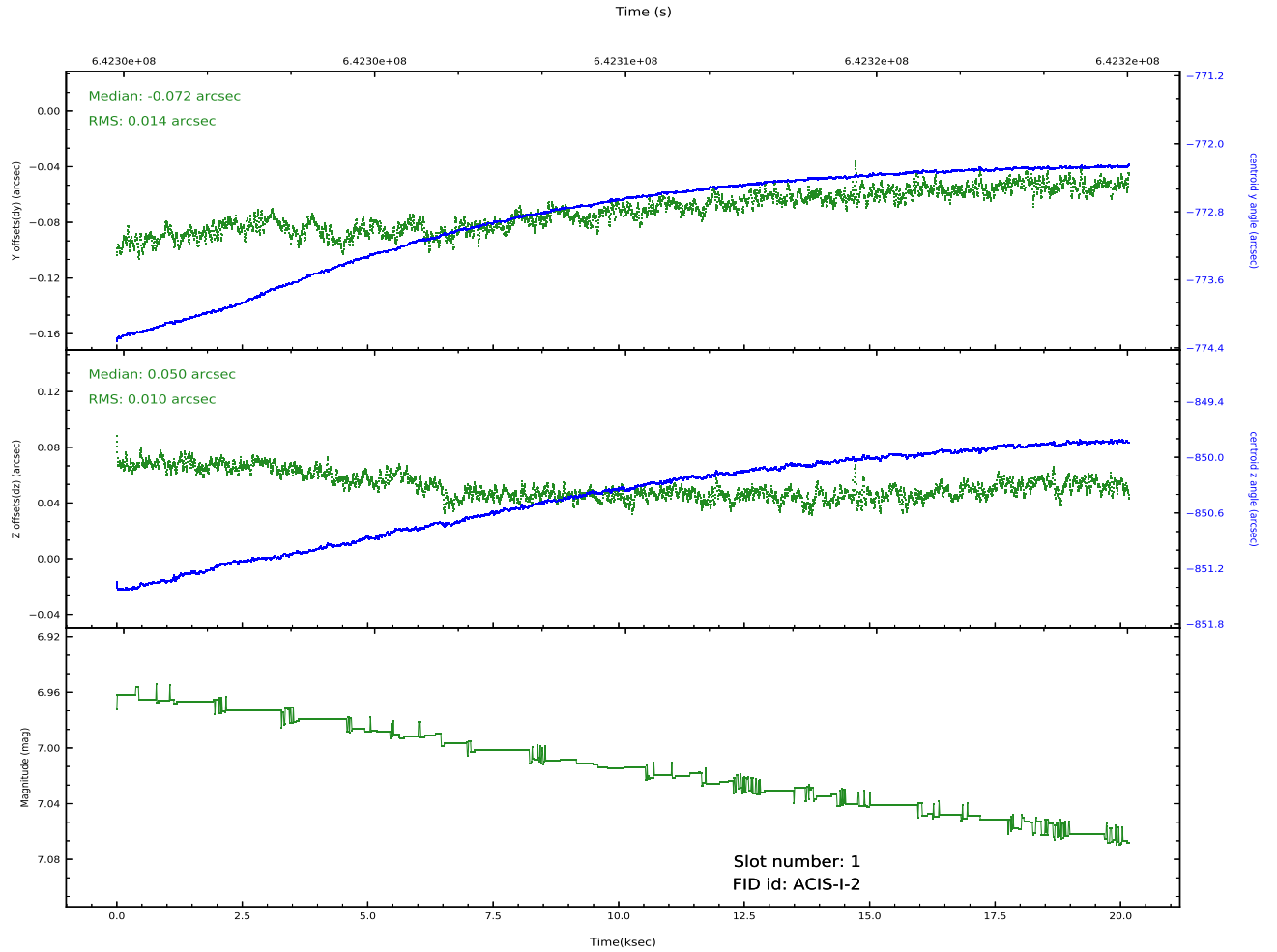
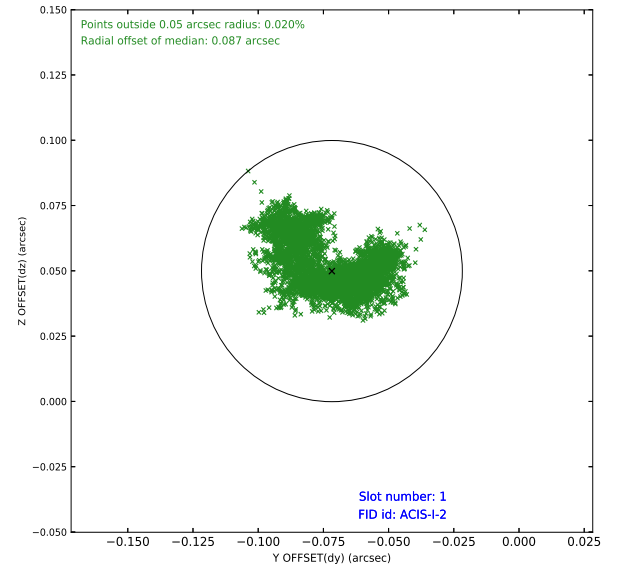
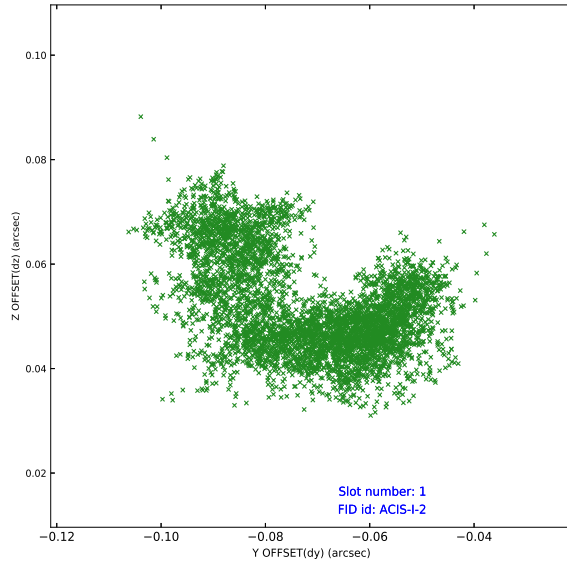


2.5 FID Slots

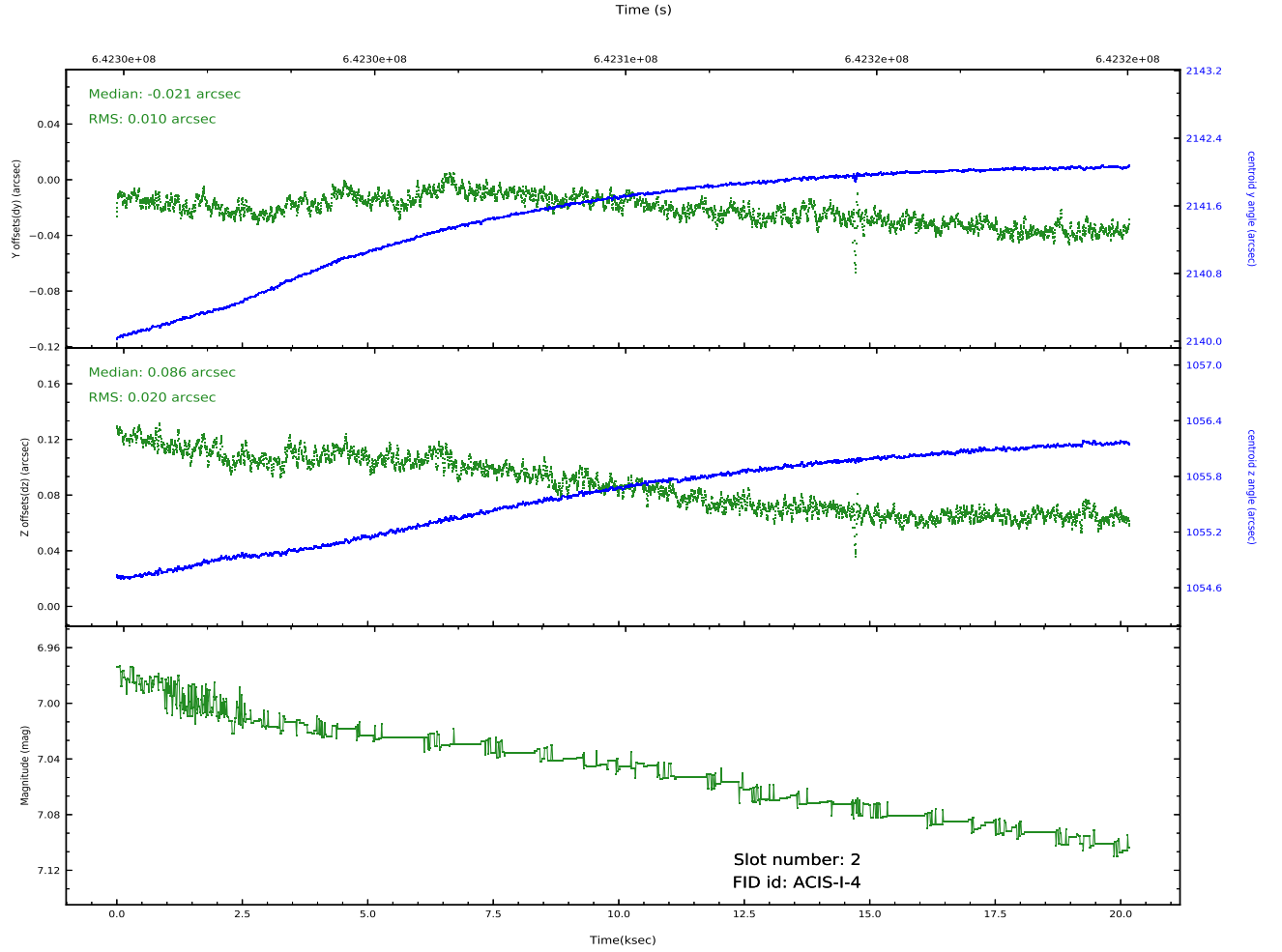
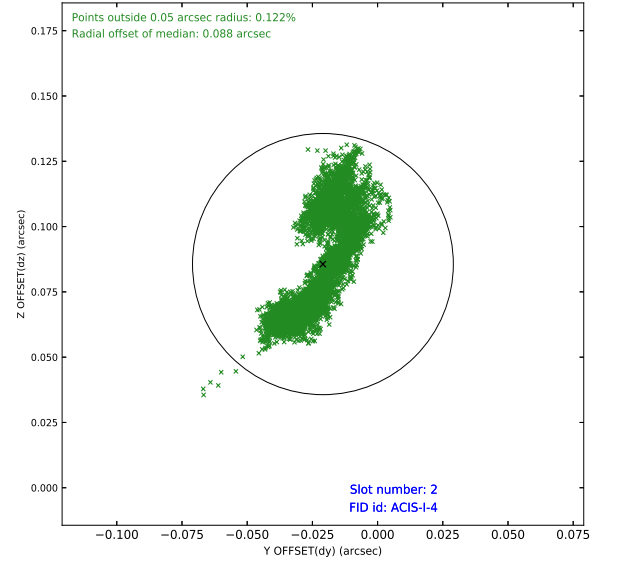
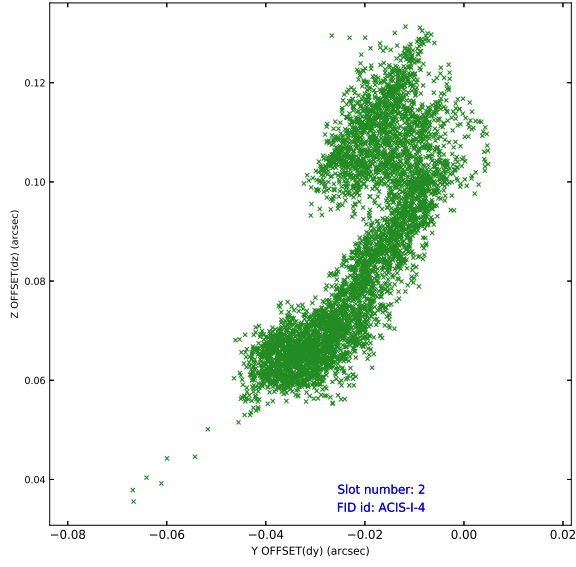
2.5.1 Slot 0



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)	2020.10.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.050718054175

A.2 Comments

A spatial region of the original bias map for CCD = 0 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 = 0 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:
(266.81947, -33.64794), (266.80931, -33.64581), (266.76859, -33.78110),
(266.77877, -33.78324).