

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19322 - L2 Version 3
Chandra X-Ray Center

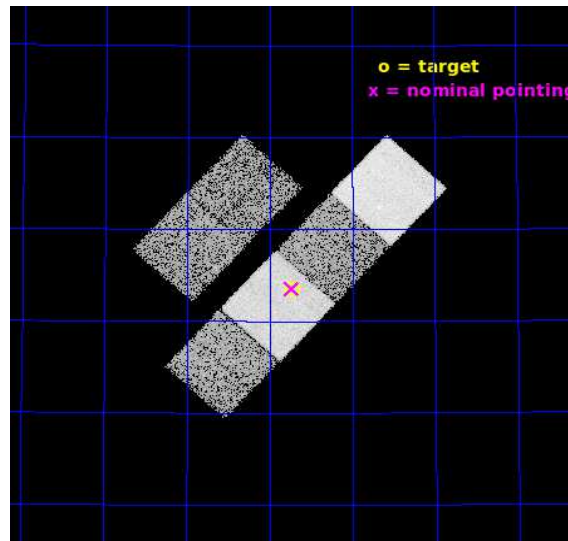
L2 Processing Date : Oct 26 2020

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1 Front

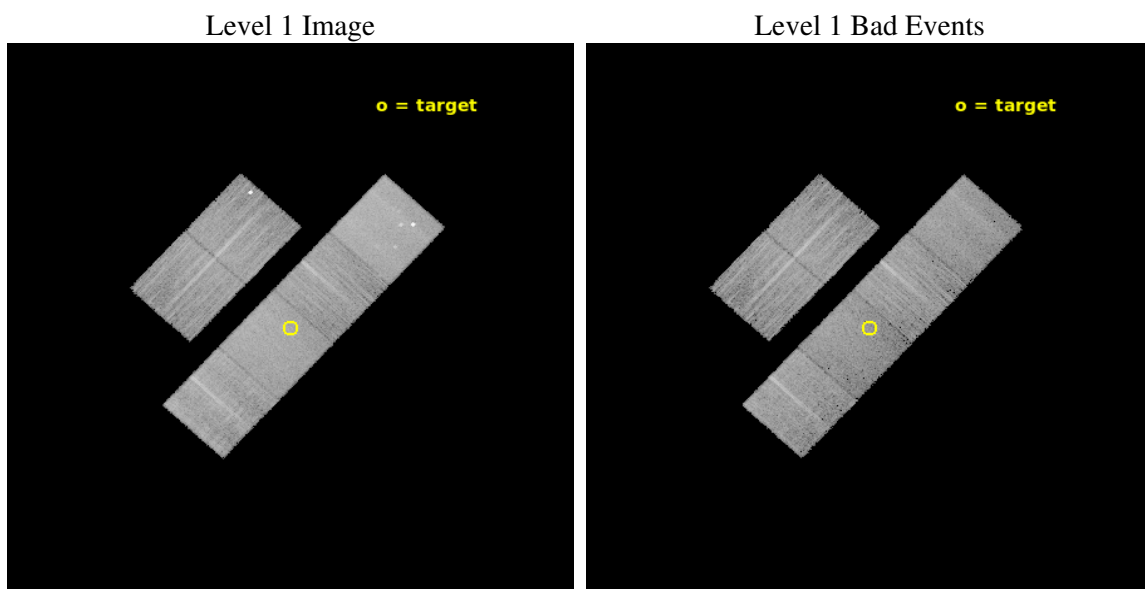
seq_num	601279	Sequence number
obs_id	19322	Observation id
title	A homogeneous view of X-ray halos in massive early-type galaxies	P
observer	Andy Goulding	Principal investigator
object	NGC5473	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	211.18	Observer's specified target RA [deg]
dec_targ	54.8925	Observer's specified target Dec [deg]
ra_nom	211.18320152033	Nominal RA [deg]
dec_nom	54.892481259117	Nominal Dec [deg]
roll_nom	132.63727849262	Nominal Roll [deg]
revision	3	Processing version of data
ontime	9945.600148201	Sum of GTIs [s]
livetime	9819.662970603	Livetime [s]
ontime2	9942.359087944	Sum of GTIs [s]
ontime3	9945.600148201	Sum of GTIs [s]
ontime5	9945.600148201	Sum of GTIs [s]
ontime6	9945.600148201	Sum of GTIs [s]
ontime7	9945.600148201	Sum of GTIs [s]
ontime8	9945.600148201	Sum of GTIs [s]
l2events	119667	Number of level 2 events



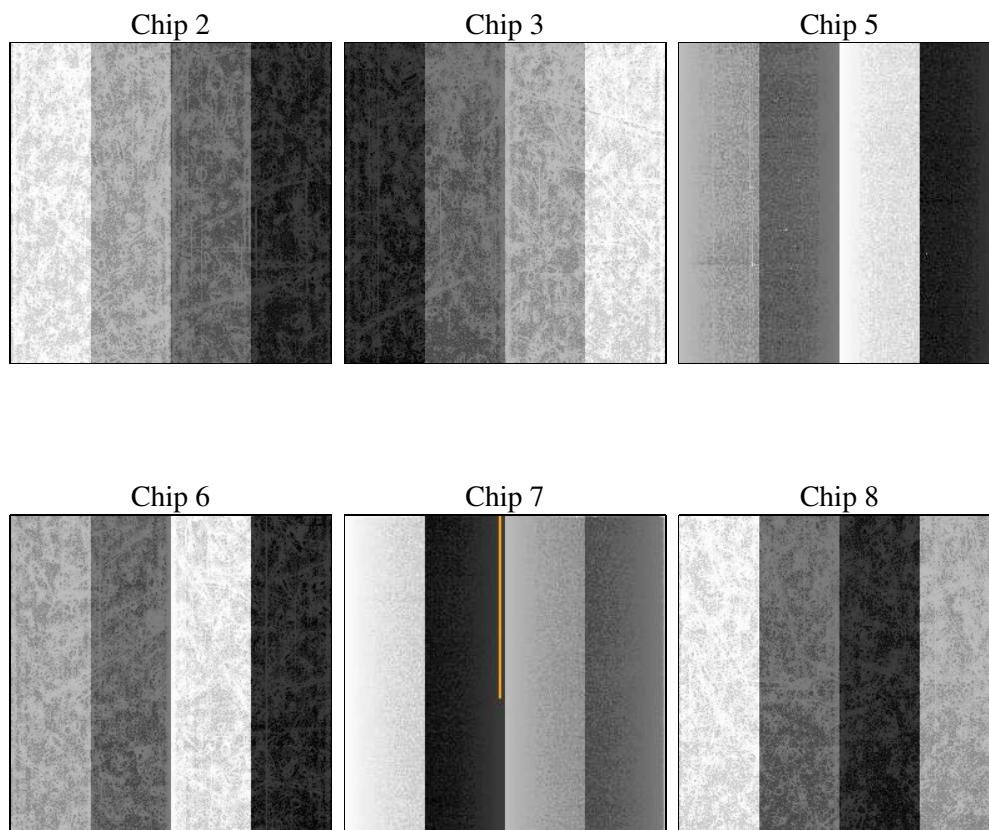
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	9945.600148201	Sum of GTIs [s]
caldsver	4.9.3	 	ontime2	9942.359087944	Sum of GTIs [s]
date	2020-10-27T00:16:18	Date and time of file creation	ontime3	9945.600148201	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	9945.600148201	Sum of GTIs [s]
			ontime6	9945.600148201	Sum of GTIs [s]
			ontime7	9945.600148201	Sum of GTIs [s]
			ontime8	9945.600148201	Sum of GTIs [s]
			l1events	540187	Number of level 1 events

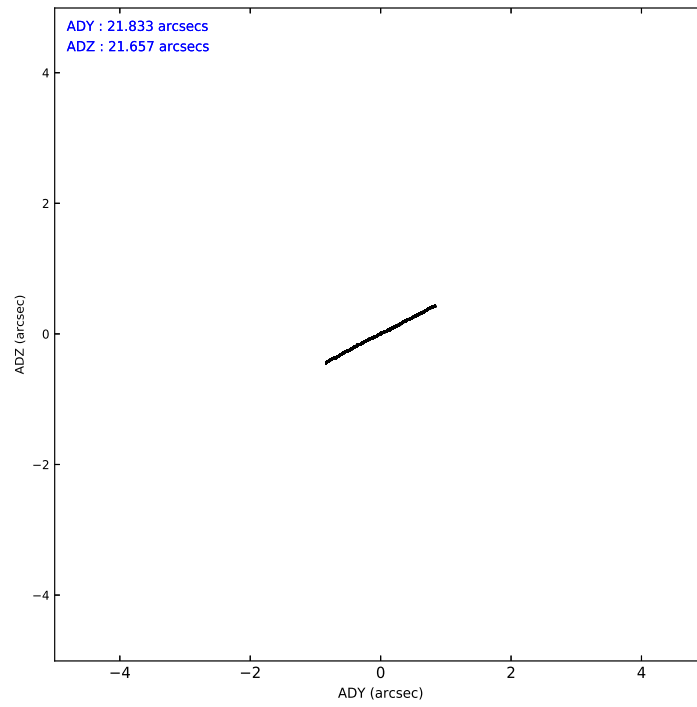
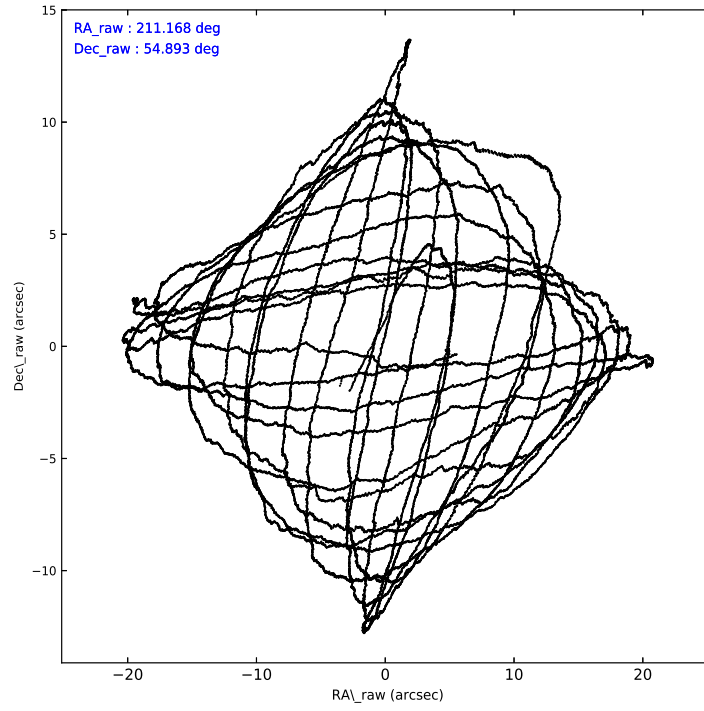
2.1.4 Events

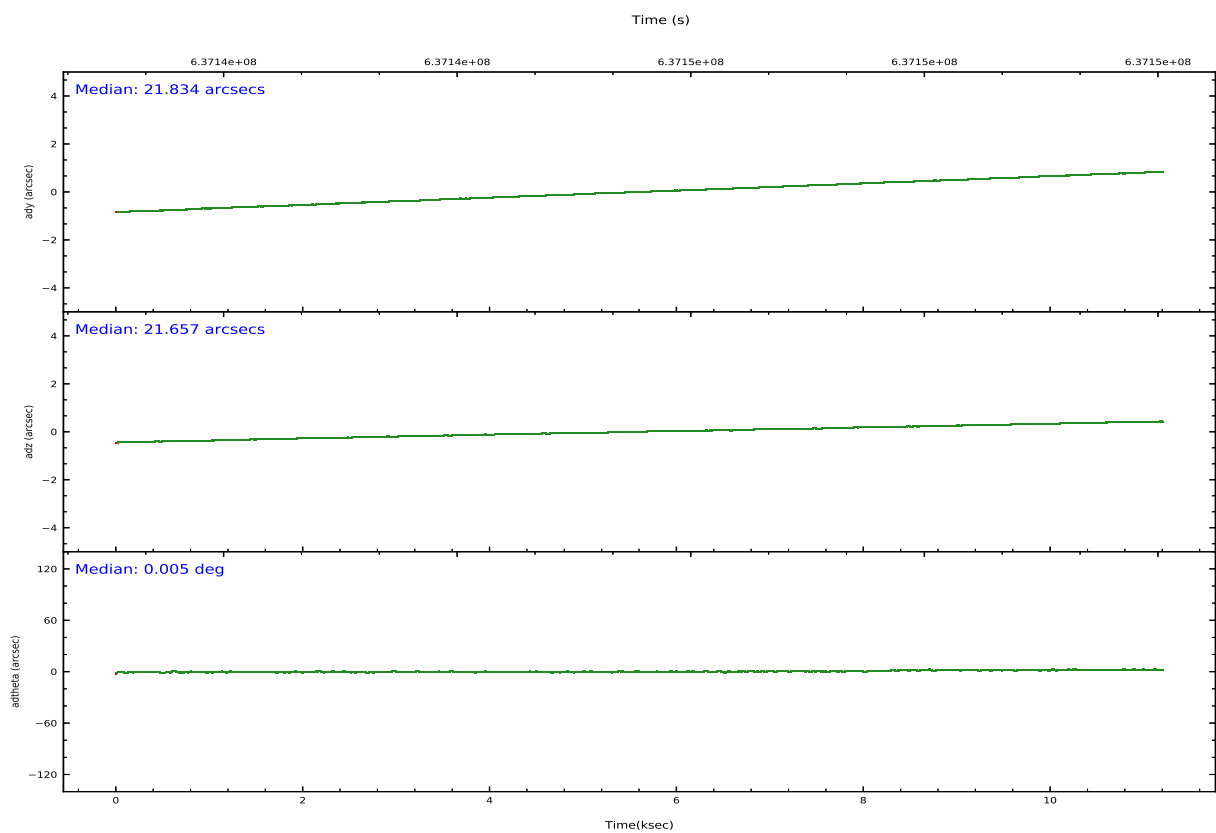
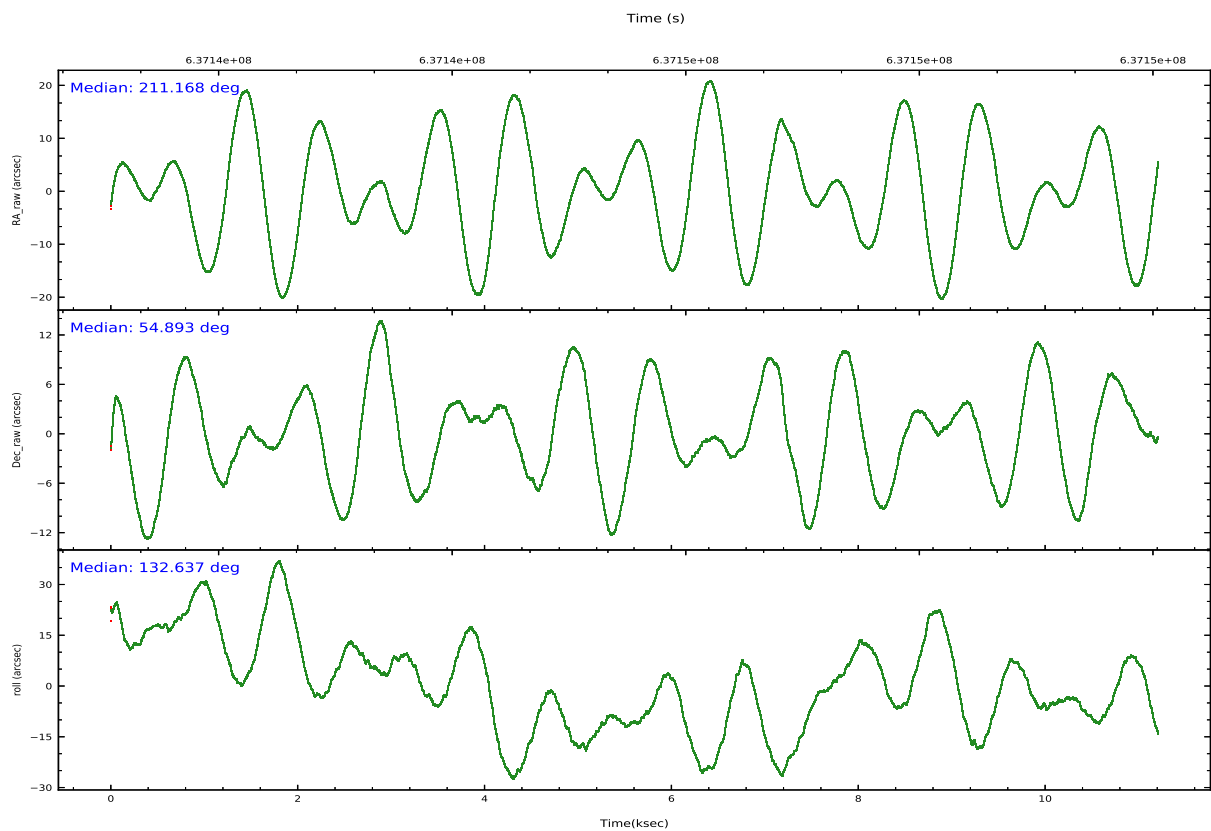
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	80179	73324	119331	77982	94496	94875	grade 0 events	5409	2545	5017	2448	3332	6968
rejected events	69969	66013	60996	69926	53648	70538		6%	3%	4%	3%	3%	7%
rejected %	87%	90%	51%	89%	56%	74%	grade 1 events	60	37	311	38	126	66
								0%	0%	0%	0%	0%	0%
							grade 2 events	1799	1590	18790	2145	8551	5913
								2%	2%	15%	2%	9%	6%
							grade 3 events	699	810	1627	717	3231	2566
								0%	1%	1%	0%	3%	2%
							grade 4 events	758	749	1556	707	3173	2410
								0%	1%	1%	0%	3%	2%
							grade 5 events	2824	3275	7535	3212	9278	5103
								3%	4%	6%	4%	9%	5%
							grade 6 events	1550	1620	31356	2042	22575	6528
								1%	2%	26%	2%	23%	6%
							grade 7 events	67080	62698	53139	66673	44230	65321
								83%	85%	44%	85%	46%	68%

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	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	211.213712	211.18320152033	CCD I2 on	O1	Y
[deg] Pointing Dec	54.884947	54.892481259117	CCD I3 on	O2	Y
[deg] Pointing Roll	132.451648	132.63727849262	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)	637142555.184000	637141079.27973	CCD S5 on	N	N
Observation start date	2018-03-11T08:01:26	2018-03-11T07:37:59	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	637152555.184000	637153051.28044	On-chip summing requested	N	N
Observation end date	2018-03-11T10:48:06	2018-03-11T10:57:31	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



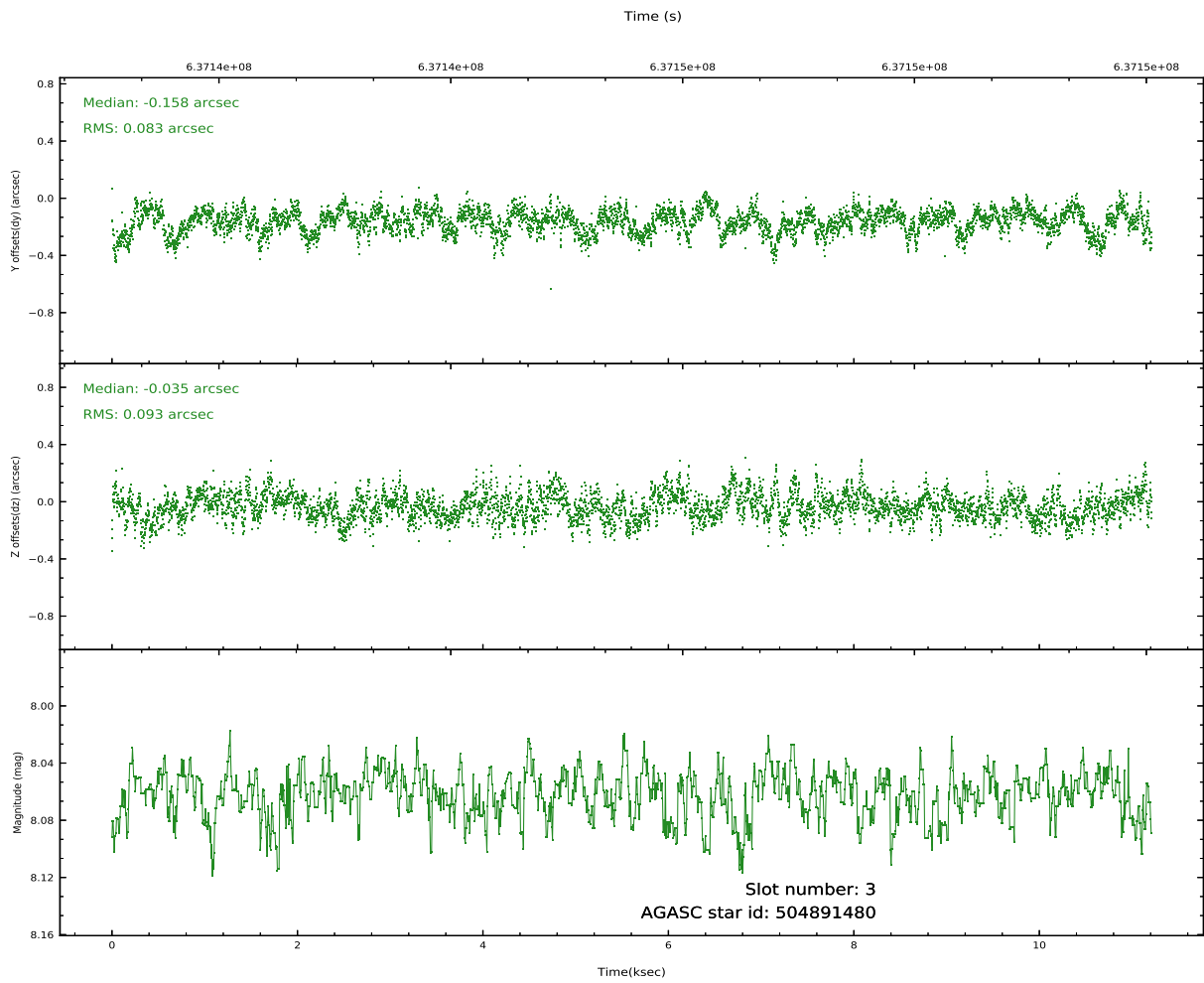
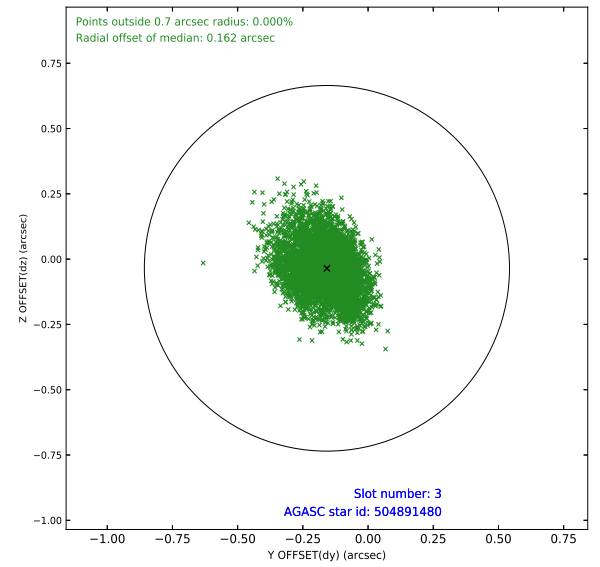
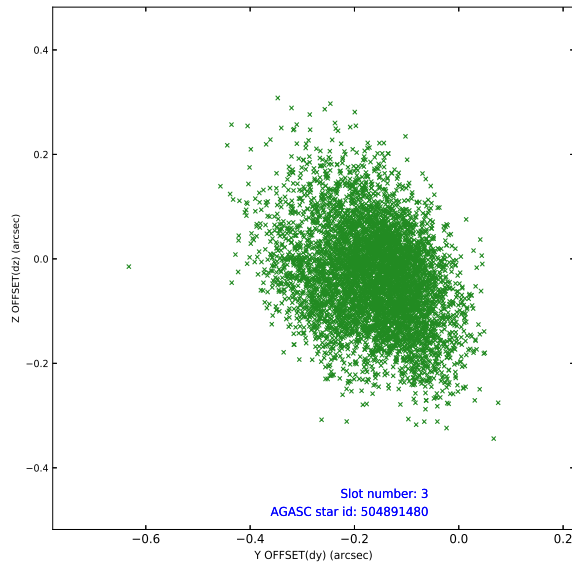


Slot Statistics

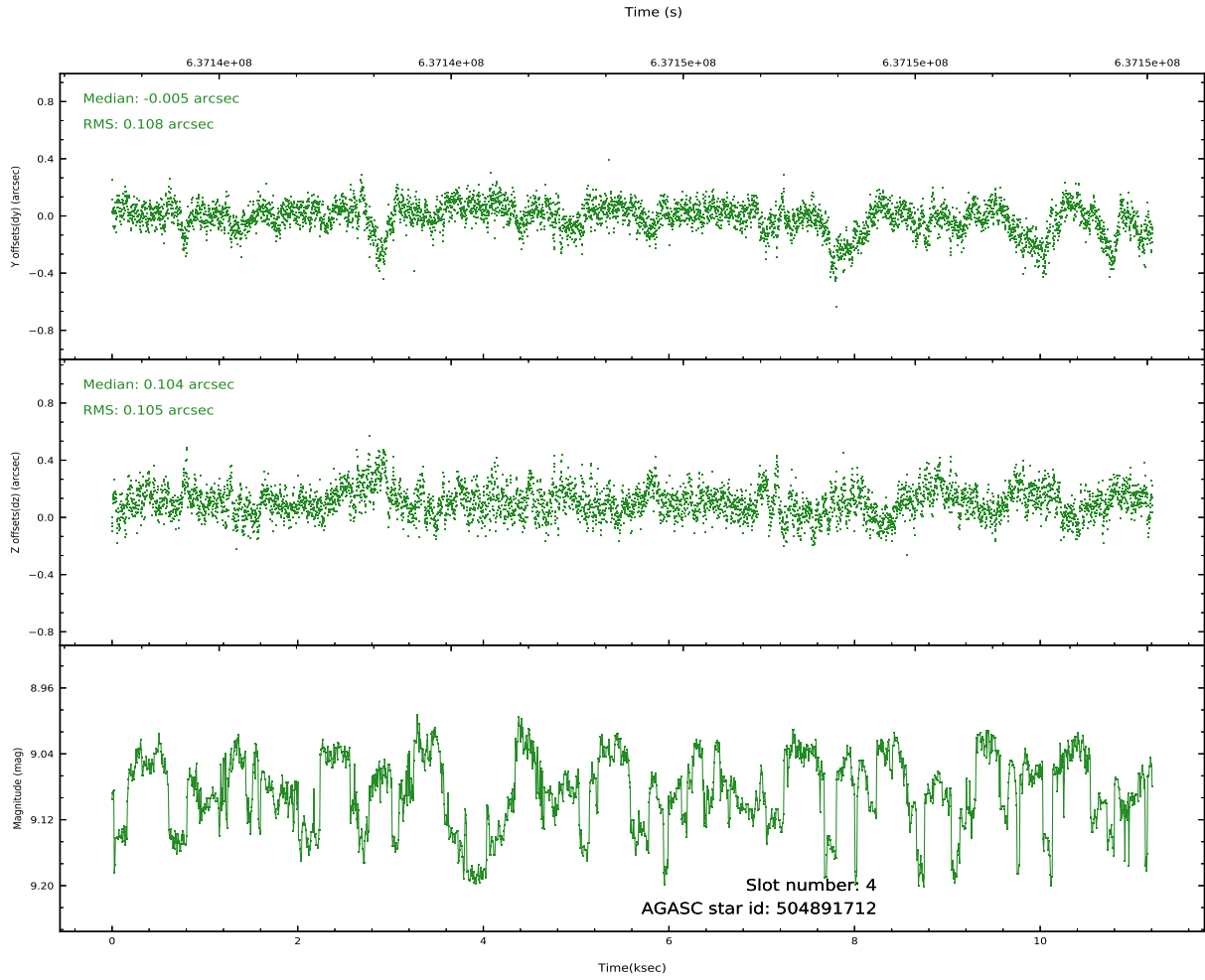
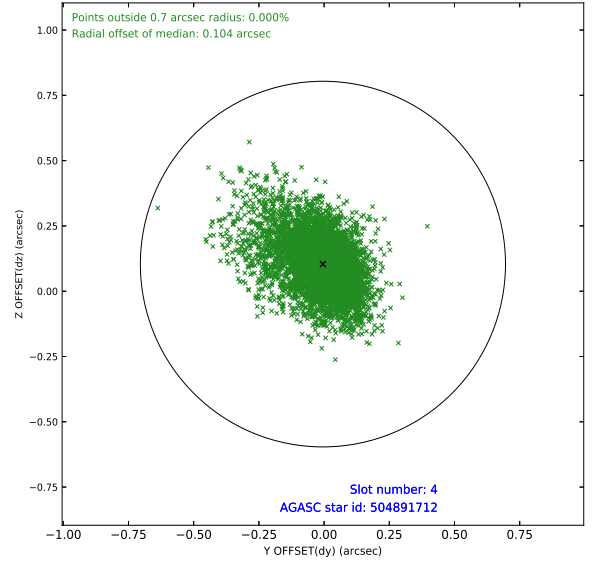
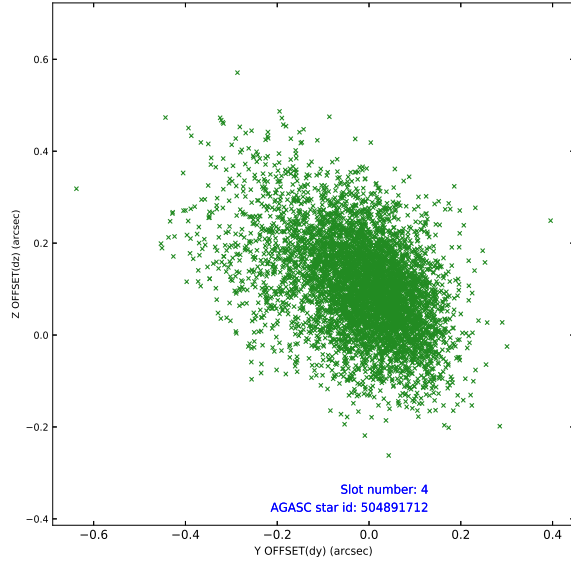
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.13	2735	1.000	0.172	-0.119	0.020	0.032	0.000000	0.000000	-775.09	-1743
1	FID		ACIS-S-4	7.25	2735	1.000	0.061	-0.049	0.010	0.017	0.000000	0.000000	2138.16	164
2	FID		ACIS-S-5	7.24	2735	1.000	-0.267	0.182	0.022	0.041	0.000000	0.000000	-1827.49	159
3	GUIDE	used	504891480	8.06	5466	1.000	-0.158	-0.035	0.131	0.218	210.708012	54.666096	131.84	1306
4	GUIDE	used	504891712	9.08	5462	1.000	-0.005	0.104	0.149	0.280	211.460410	54.206144	-2153.30	1266
5	GUIDE	used	504894528	9.59	5456	1.000	-0.156	0.113	0.254	0.430	211.278713	54.058569	-2288.67	1907
6	GUIDE	used	505289936	8.64	5465	1.000	0.128	0.048	0.159	0.264	211.265099	55.244504	883.34	-951
7	GUIDE	used	505292416	9.24	5458	1.000	0.209	-0.239	0.173	0.292	210.920759	55.040479	823.87	67

2.4 Star Slots

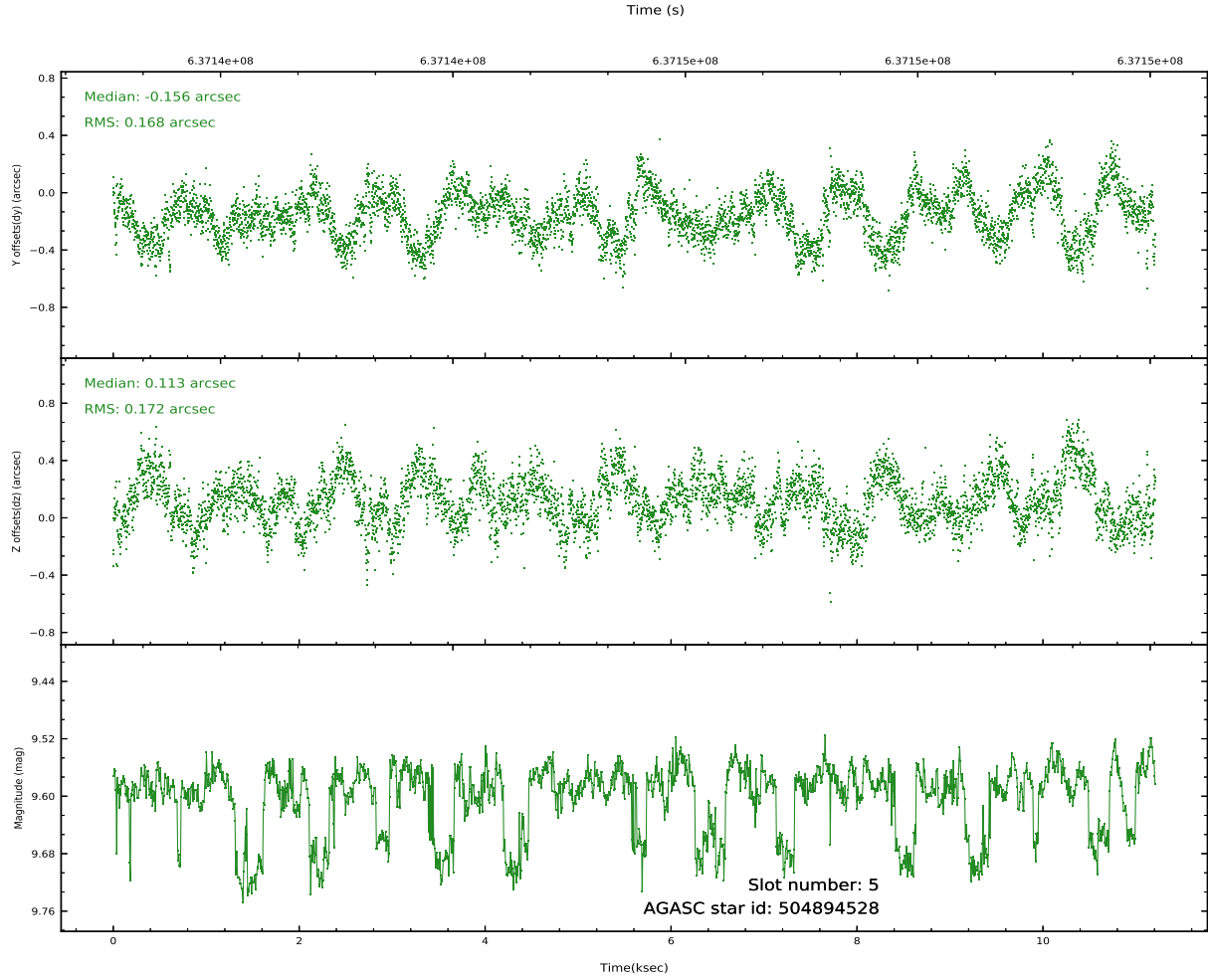
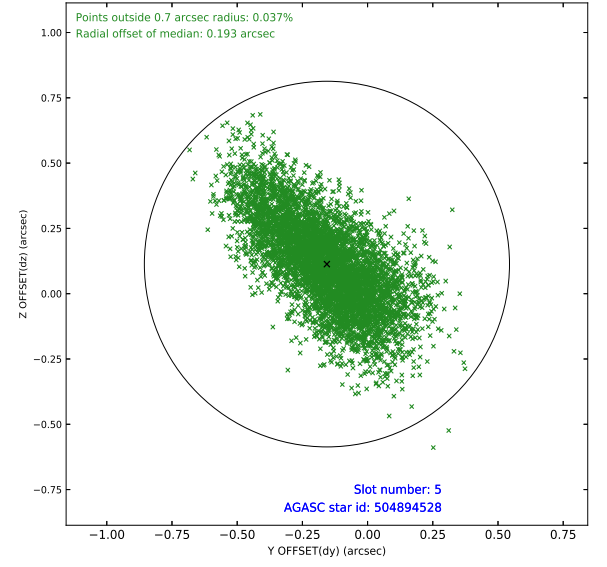
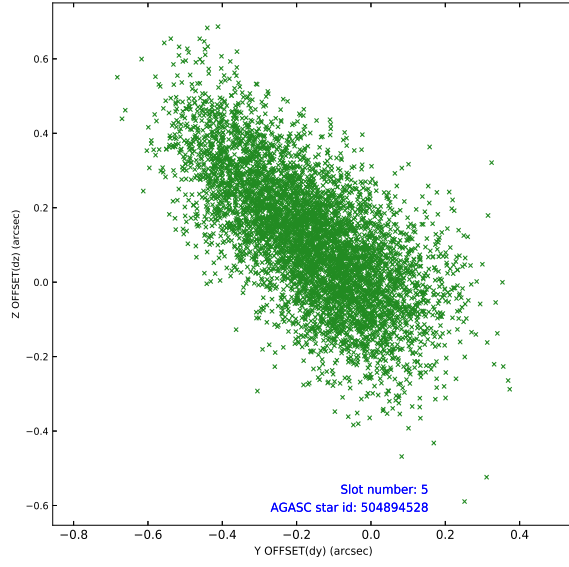
2.4.1 Slot 3



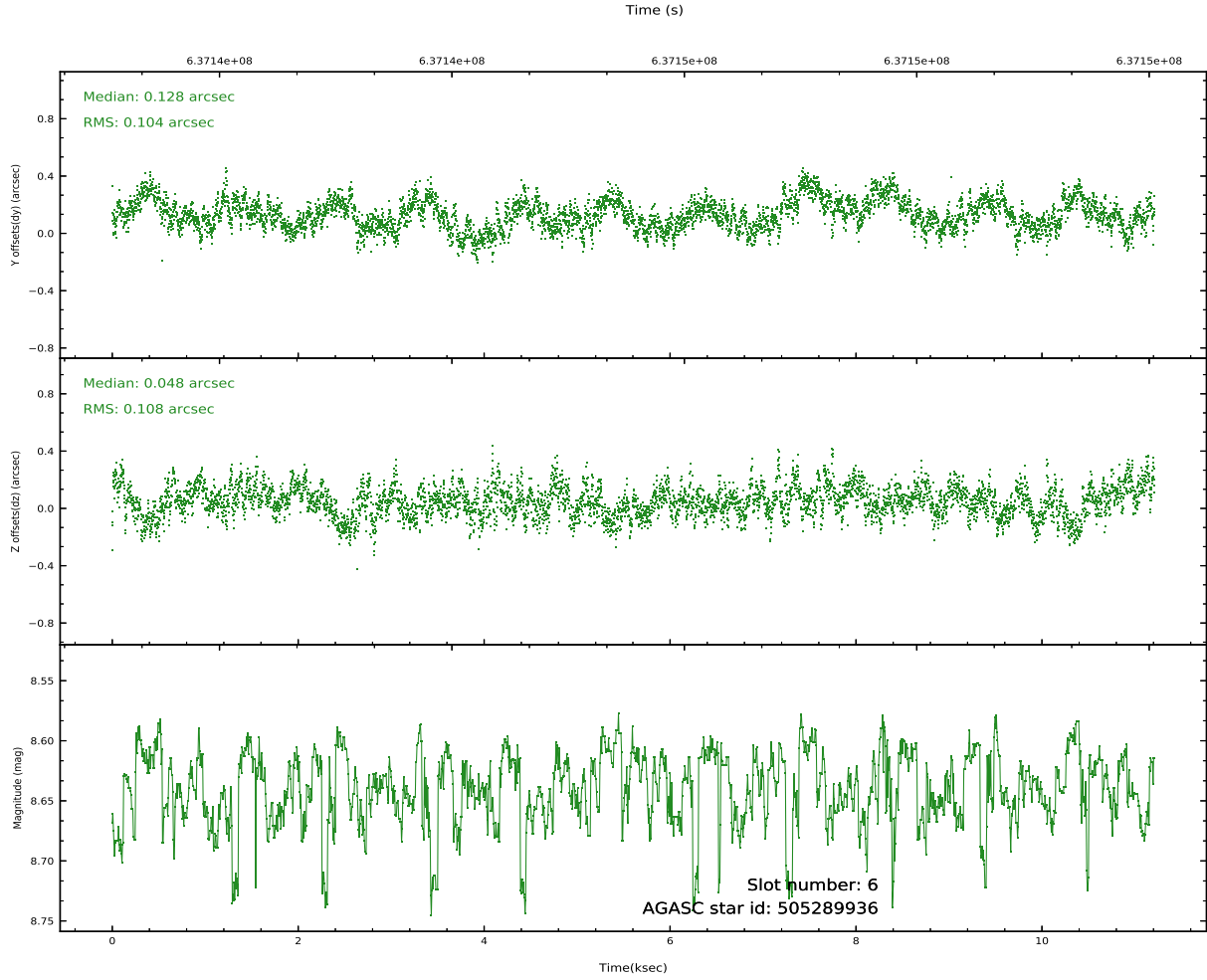
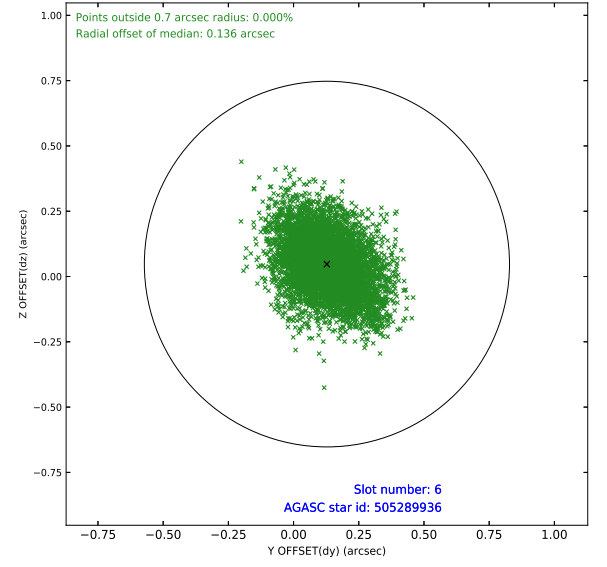
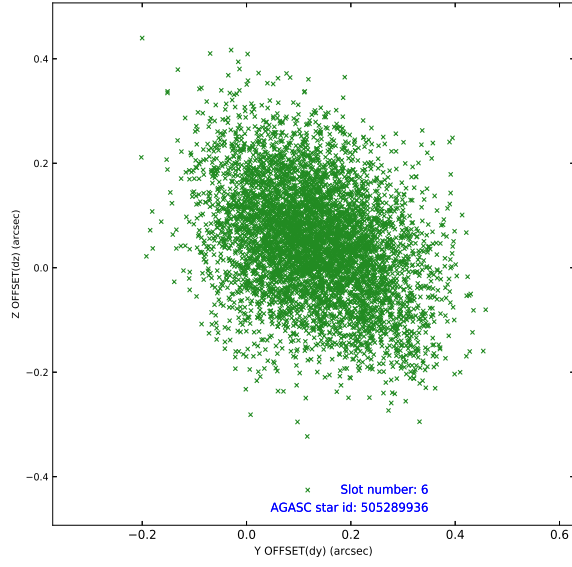
2.4.2 Slot 4



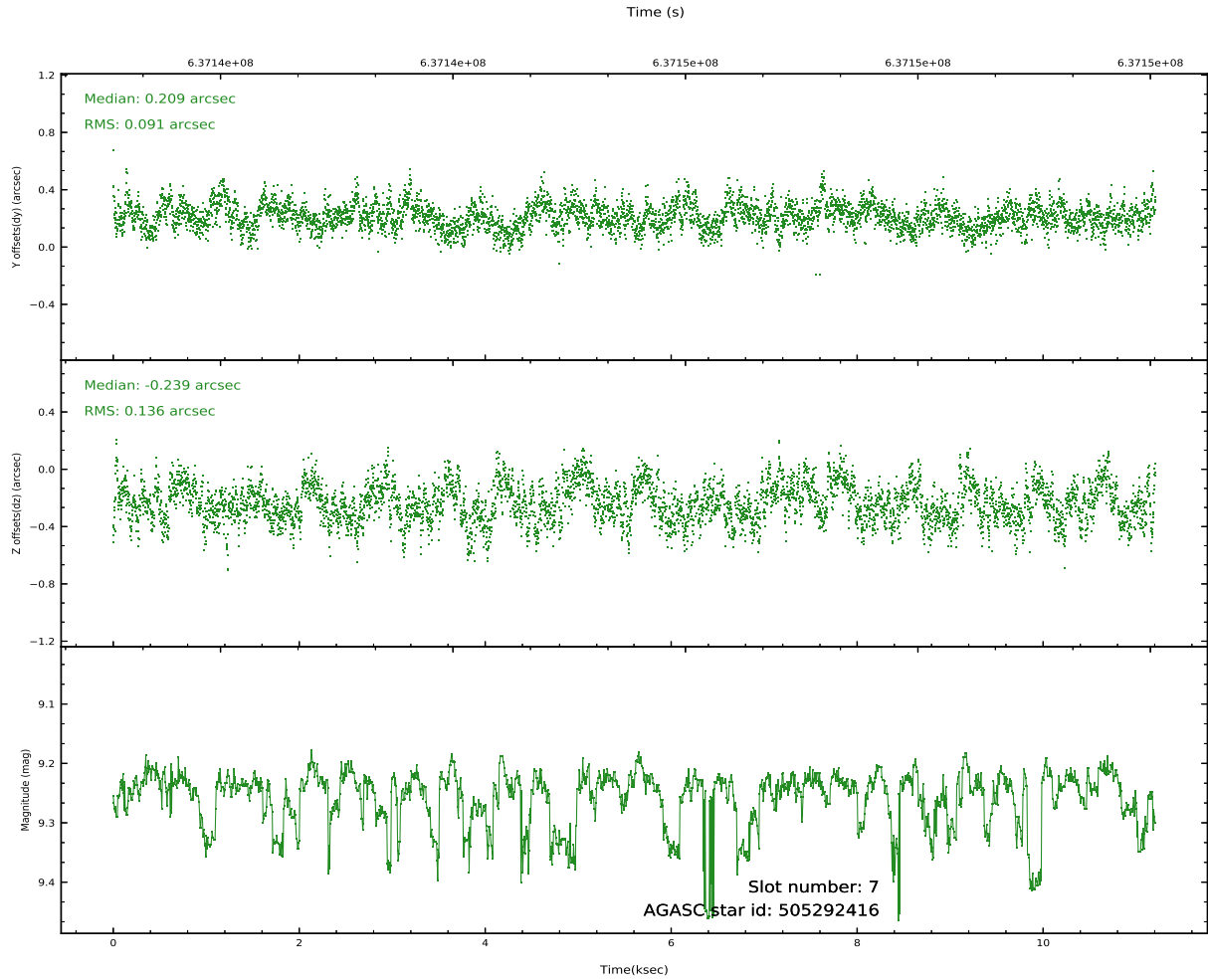
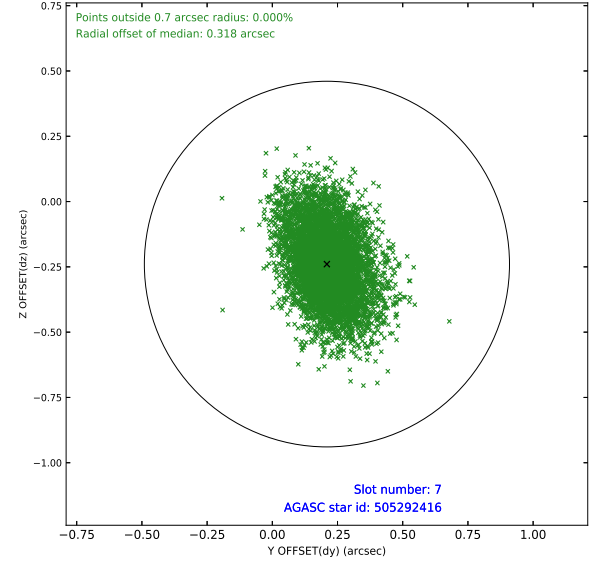
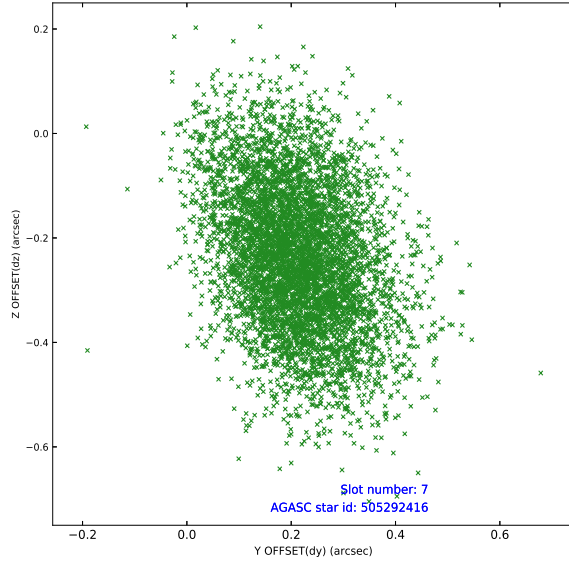
2.4.3 Slot 5



2.4.4 Slot 6

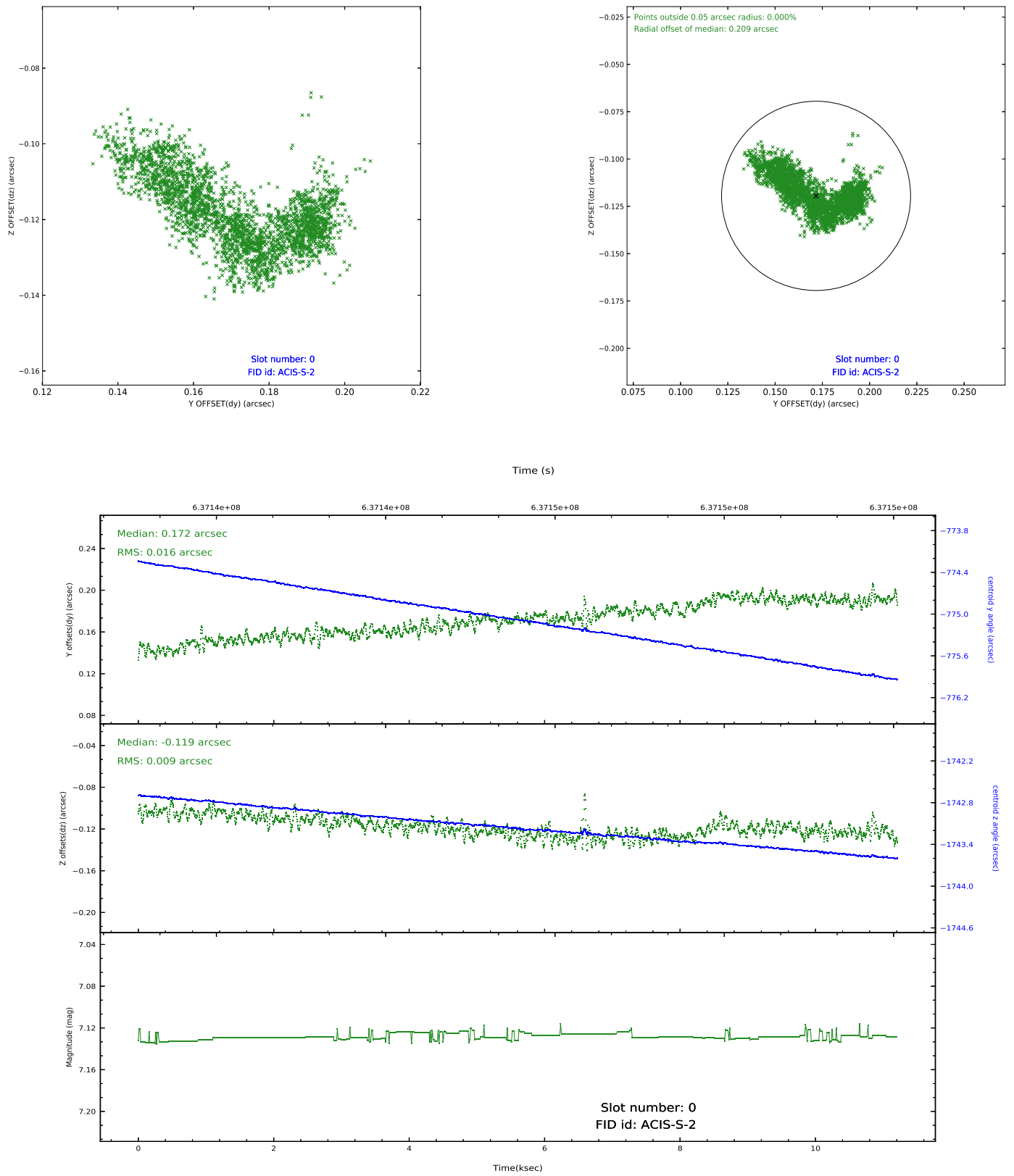


2.4.5 Slot 7

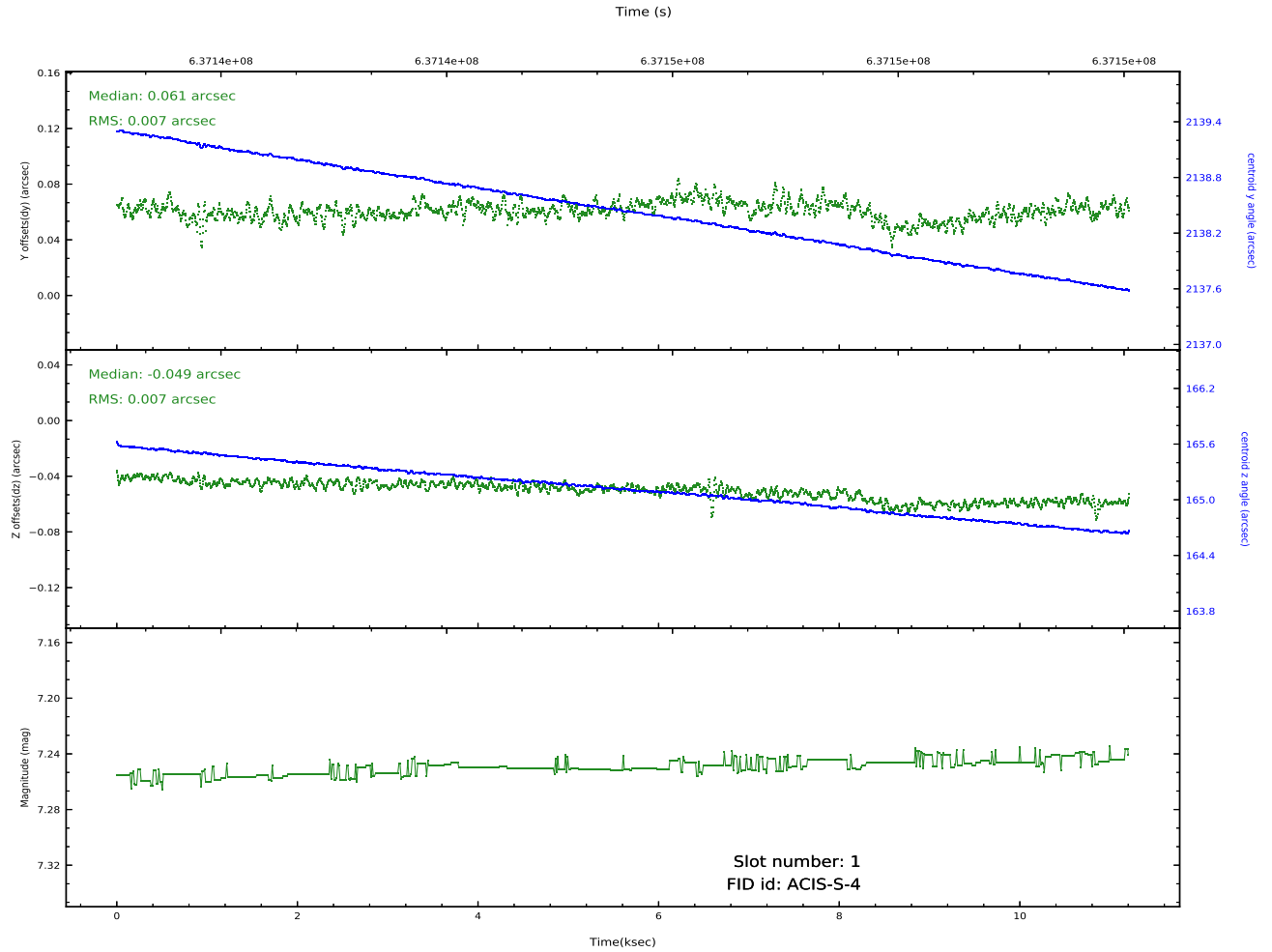
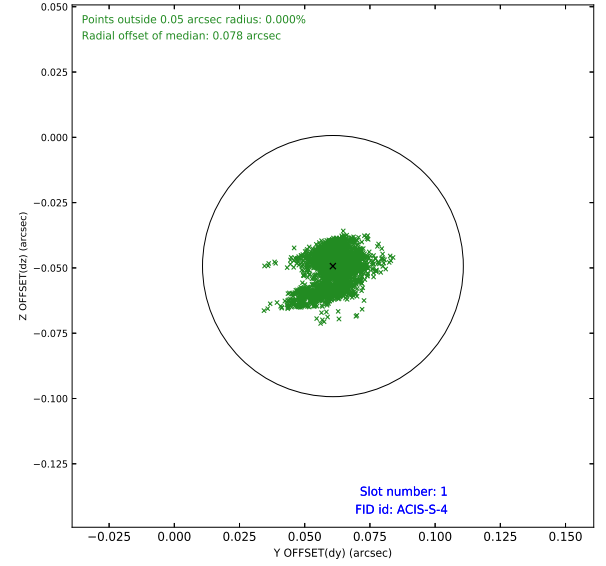
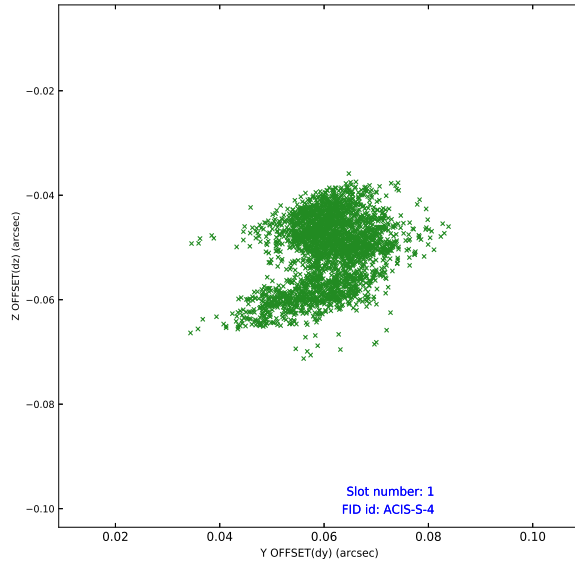


2.5 FID Slots

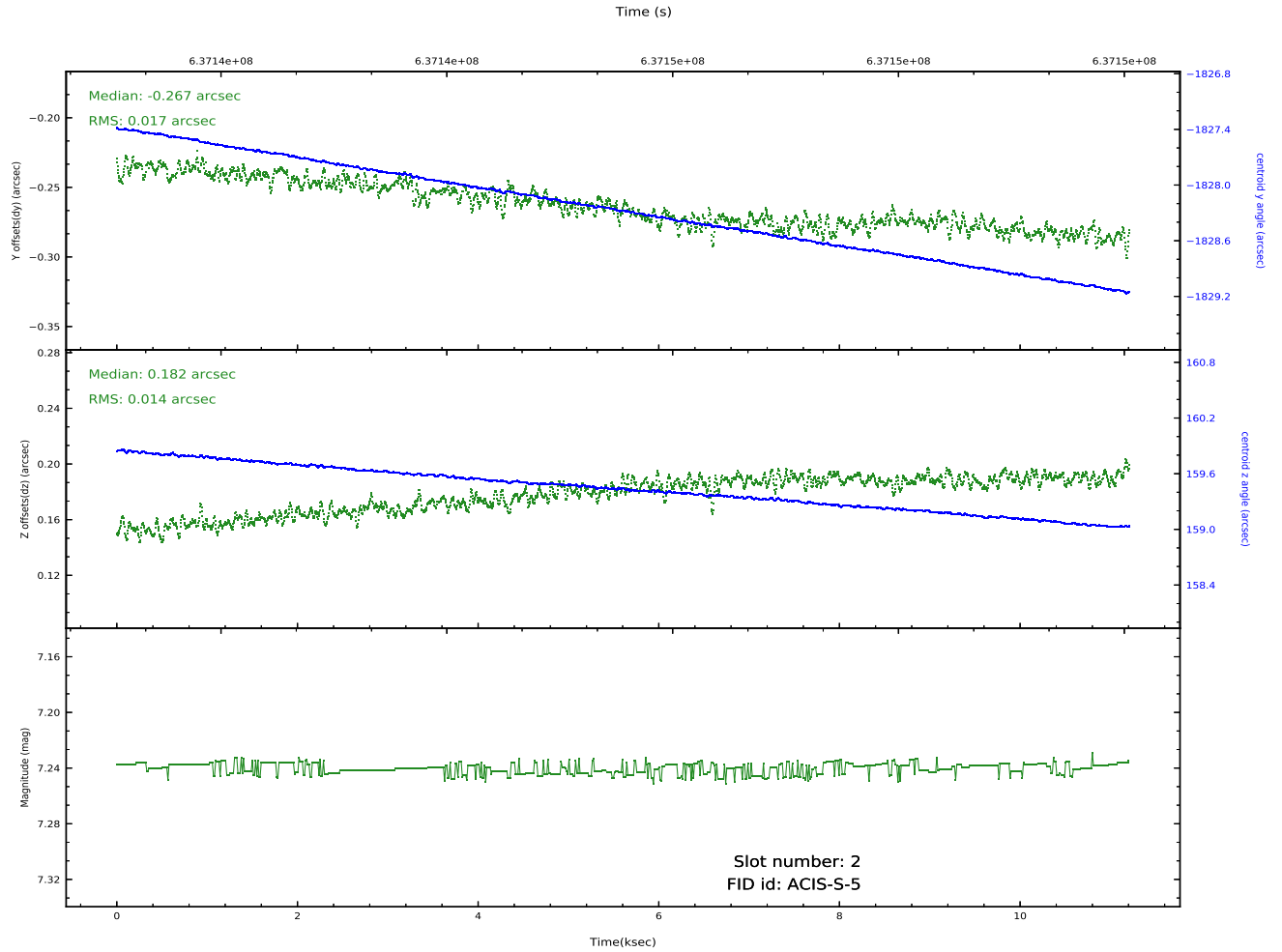
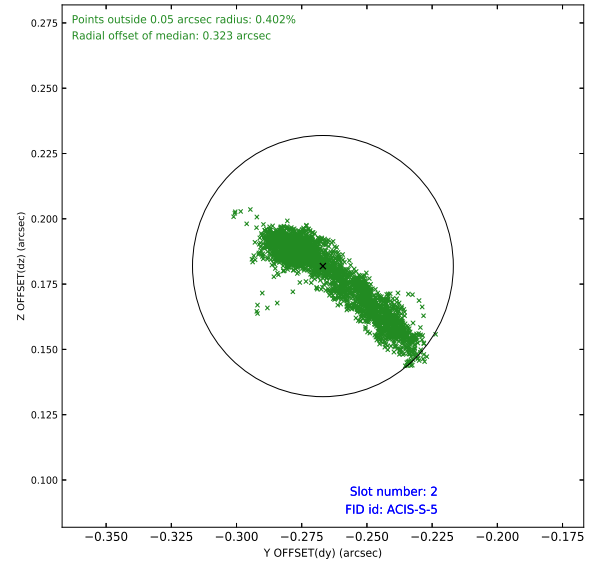
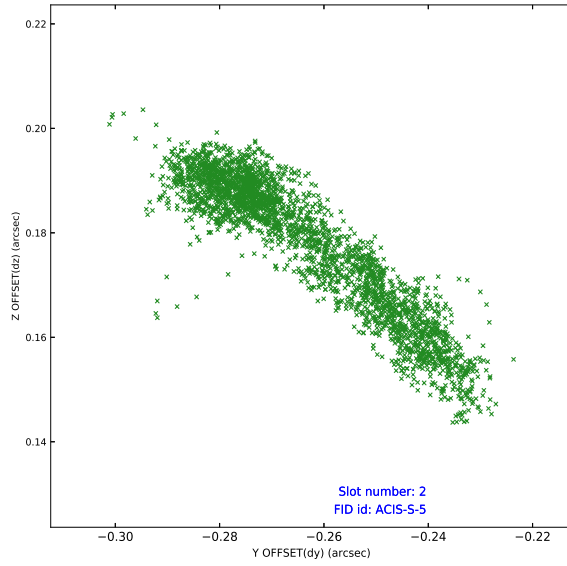
2.5.1 Slot 0



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	9.945600148201

A.2 Comments

A spatial region of the original bias map for CCD = 3 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 = 3 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: (211.60418,54.93032), (211.61121,54.93398), (211.57222,54.95858), (211.56598,54.95441)