

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20280 - L2 Version 3
Chandra X-Ray Center

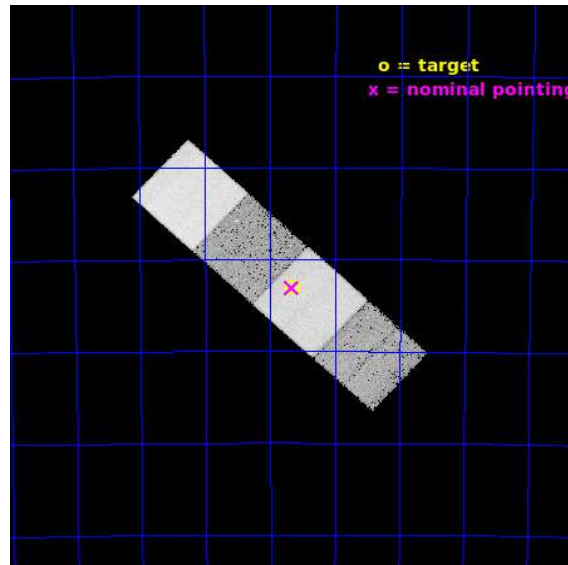
L2 Processing Date : Oct 27 2020

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1 Front

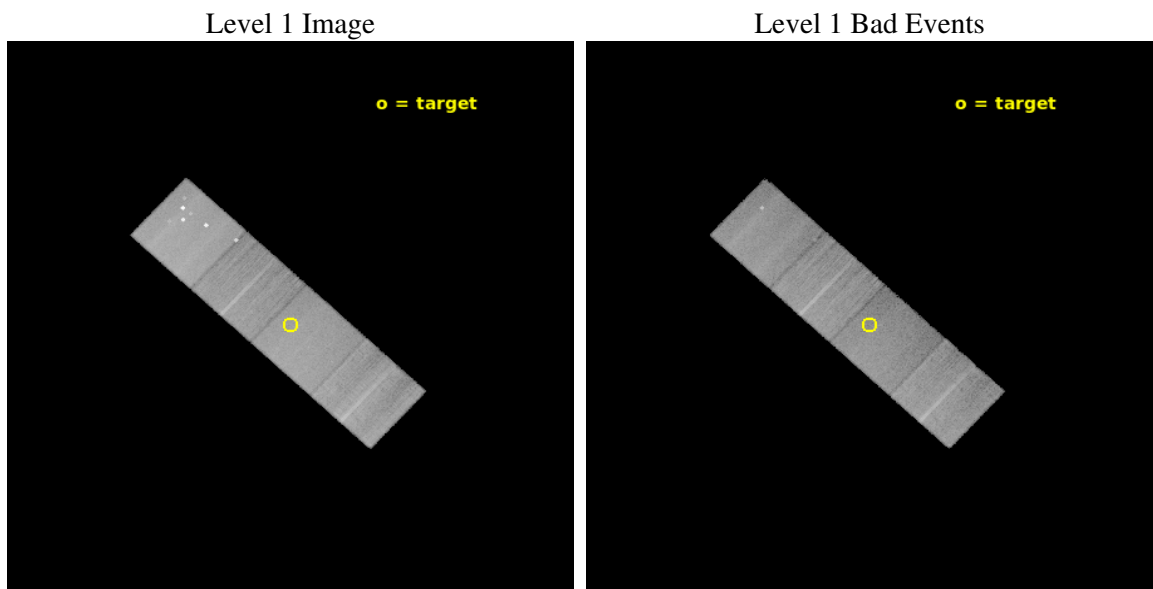
seq_num	502979	Sequence number
obs_id	20280	Observation id
title	Rapid Observations of Short-Duration Gamma-Ray Bursts: Accurate Positions Hold the Key to the Progenitor Population	Proposal title
observer	Edo Berger	Principal investigator
object	sGRB180727A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	346.666333	Observer's specified target RA [deg]
dec_targ	-63.05	Observer's specified target Dec [deg]
ra_nom	346.6667664575	Nominal RA [deg]
dec_nom	-63.05131270451	Nominal Dec [deg]
roll_nom	42.864370963281	Nominal Roll [deg]
revision	3	Processing version of data
ontime	20059.827479601	Sum of GTIs [s]
livetime	19797.73106575	Livetime [s]
ontime5	20059.786439657	Sum of GTIs [s]
ontime6	20059.745399594	Sum of GTIs [s]
ontime7	20059.827479601	Sum of GTIs [s]
ontime8	20056.563299417	Sum of GTIs [s]
l2events	221490	Number of level 2 events



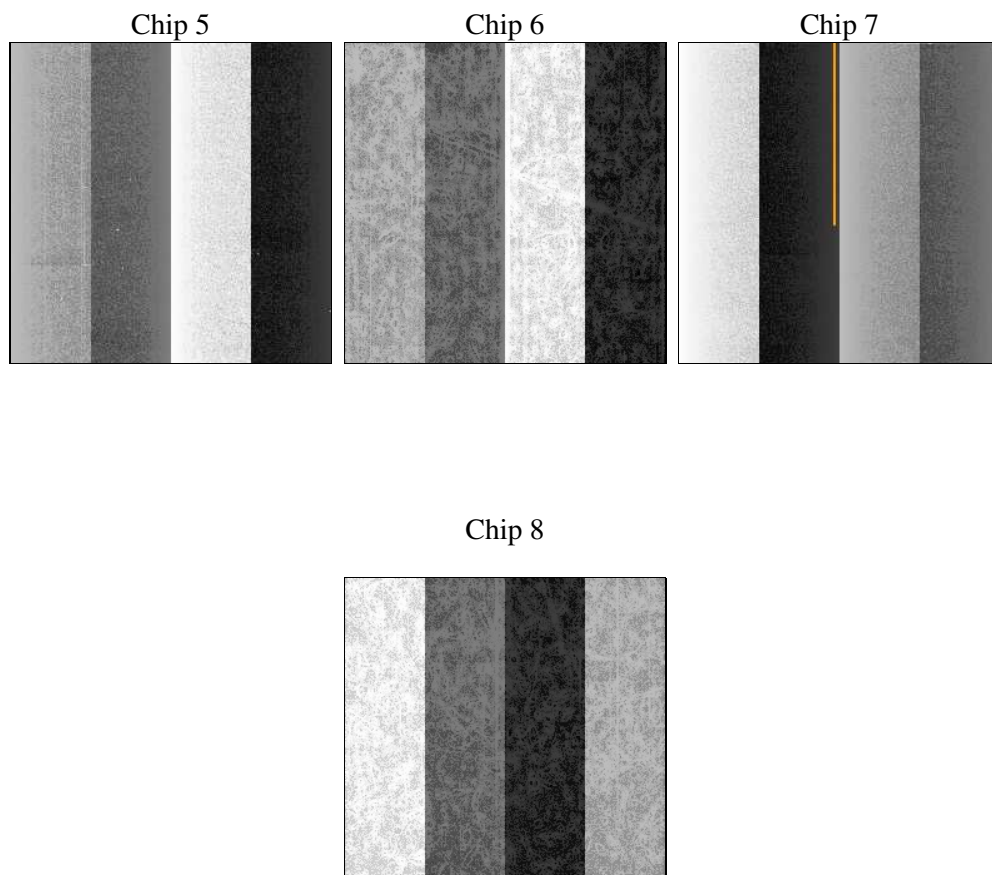
2 OBI

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	20059.827479601	Sum of GTIs [s]
caldsver	4.9.3	 	ontime5	20059.786439657	Sum of GTIs [s]
date	2020-10-28T00:22:52	Date and time of file creation	ontime6	20059.745399594	Sum of GTIs [s]
revision	3	Processing version of data	ontime7	20059.827479601	Sum of GTIs [s]
			ontime8	20056.563299417	Sum of GTIs [s]
			l1events	815517	Number of level 1 events

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	263156	160201	194658	197502
rejected events	127810	143232	111359	147638
rejected %	48%	89%	57%	74%

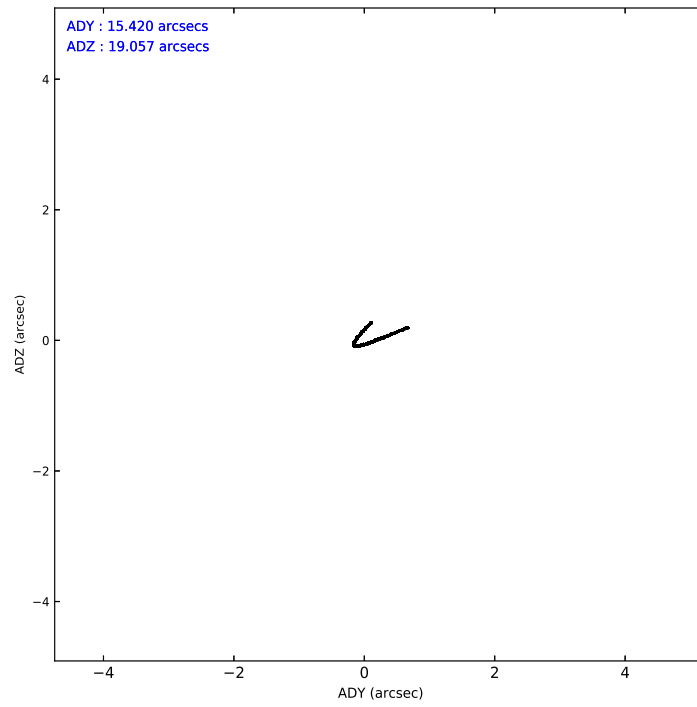
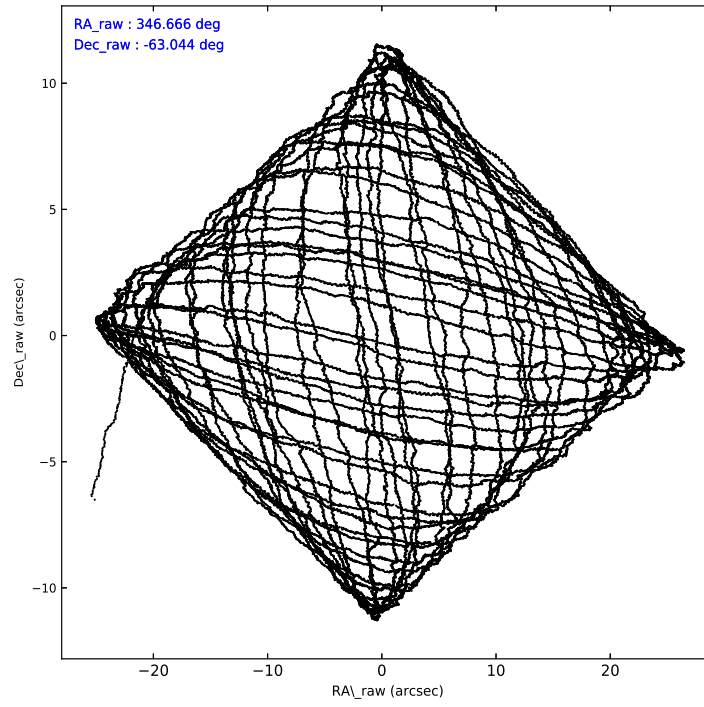
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	22354	4879	7008	13675
	8%	3%	3%	6%
grade 1 events	1560	68	306	133
	0%	0%	0%	0%
grade 2 events	39715	4540	17342	12532
	15%	2%	8%	6%
grade 3 events	3850	1466	6546	5053
	1%	0%	3%	2%
grade 4 events	3710	1473	6375	4646
	1%	0%	3%	2%
grade 5 events	15369	6325	19131	10520
	5%	3%	9%	5%
grade 6 events	65761	4617	46050	13975
	24%	2%	23%	7%
grade 7 events	110837	136833	91900	136968
	42%	85%	47%	69%

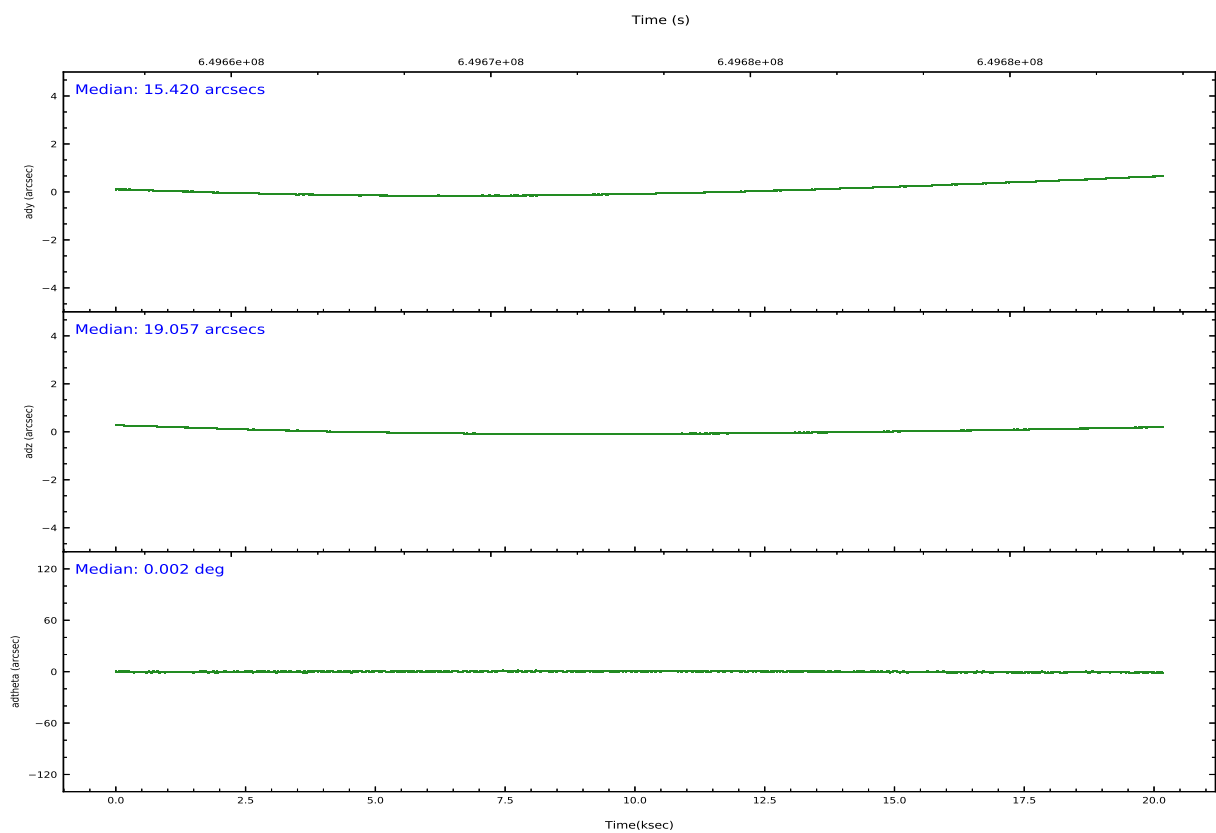
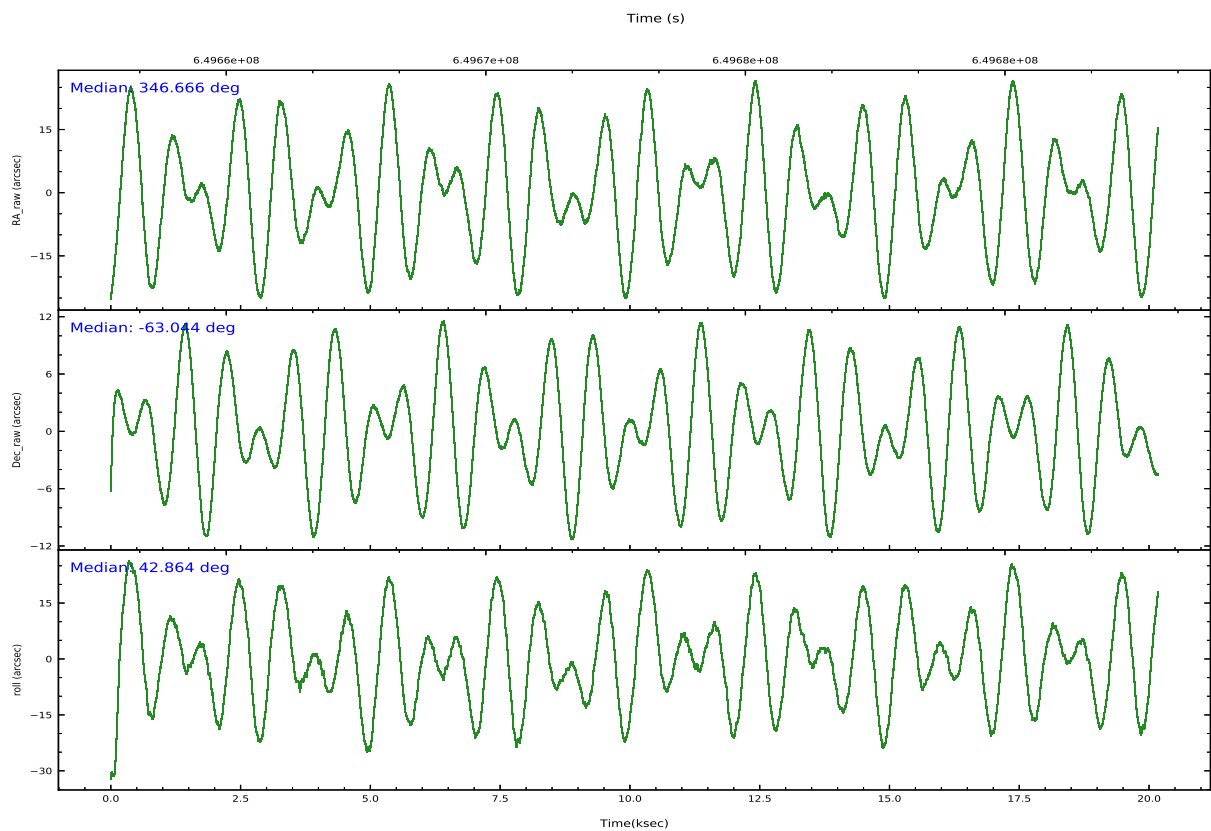
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-5678	ACIS-5678
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	346.648817	346.6667664575
[deg] Pointing Dec	-63.070552	-63.05131270451
[deg] Pointing Roll	42.701607	42.864370963281
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1400660498719
[mm] SIM translation stage offset	0	0.00754346686406393
[s] Observation start time (MET)	649662951.184000	649661848.61994
Observation start date	2018-08-03T05:54:42	2018-08-03T05:37:28
[s] Observation end time (MET)	649682951.184000	649683766.1962399
Observation end date	2018-08-03T11:28:02	2018-08-03T11:42:46
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
Number of optional ACIS chips dropped	0	0
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



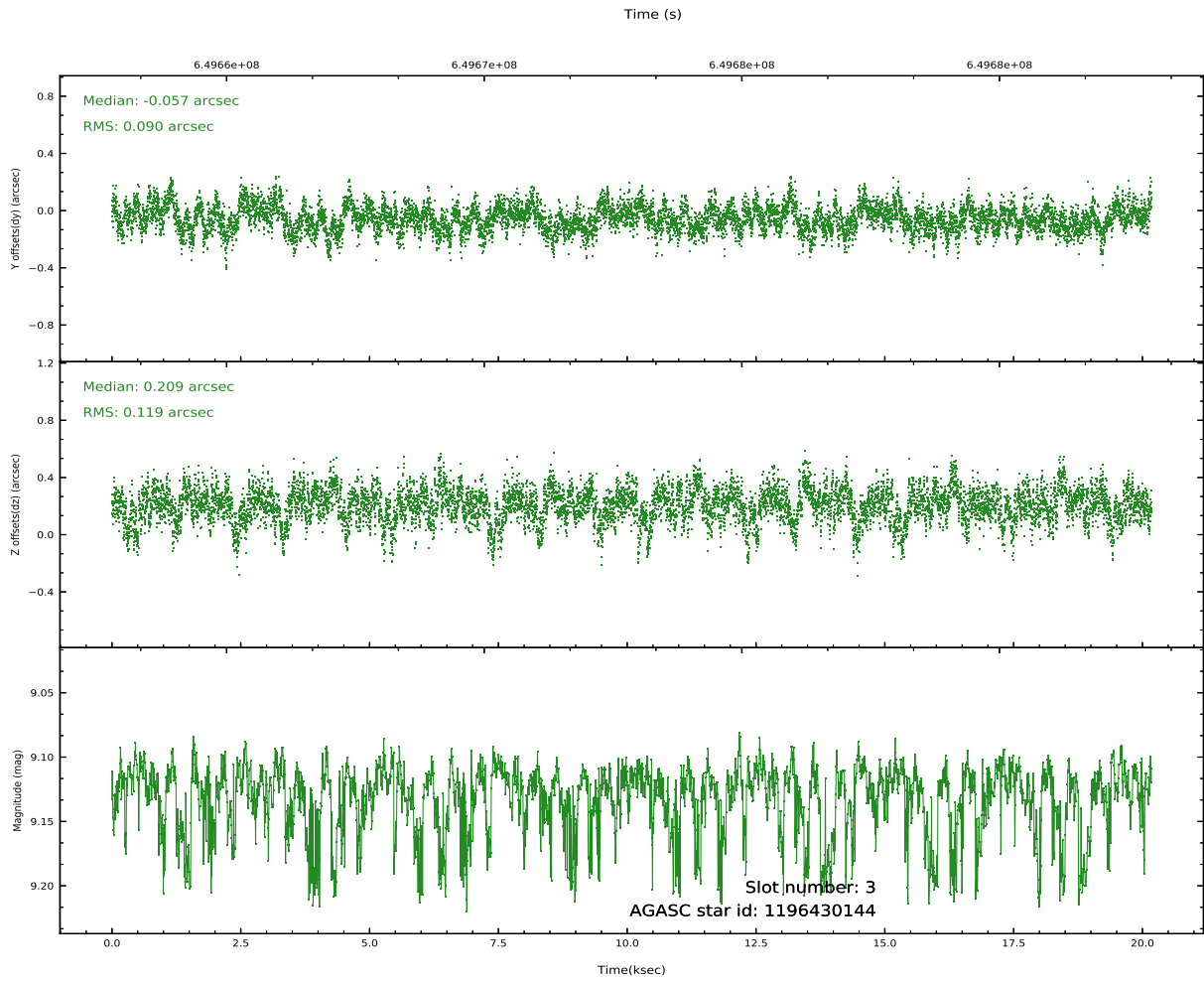
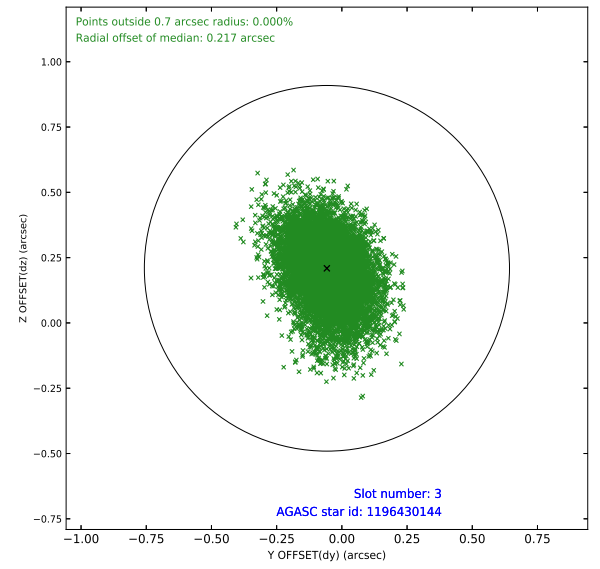
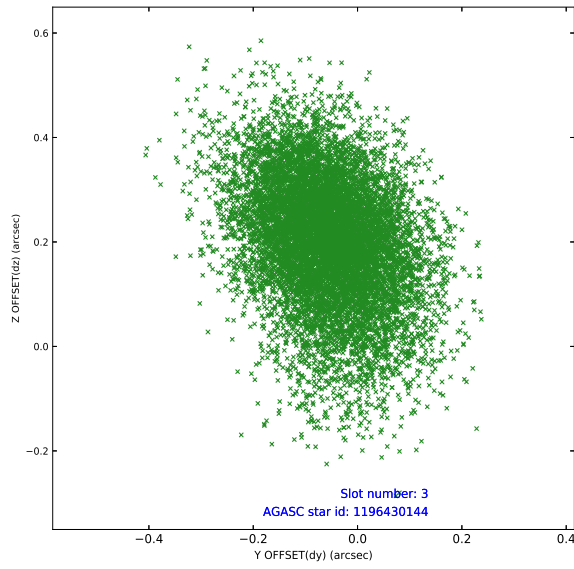


Slot Statistics

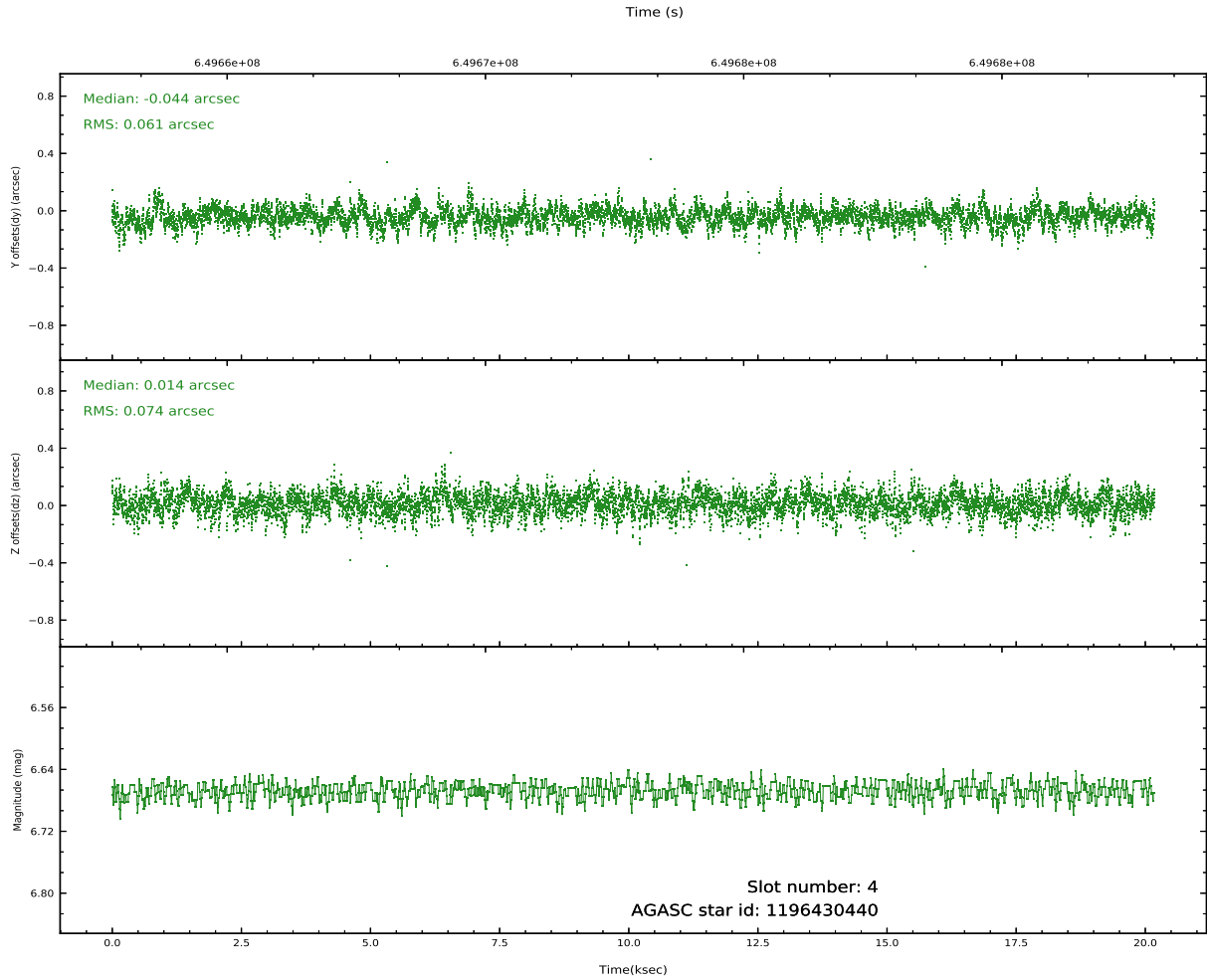
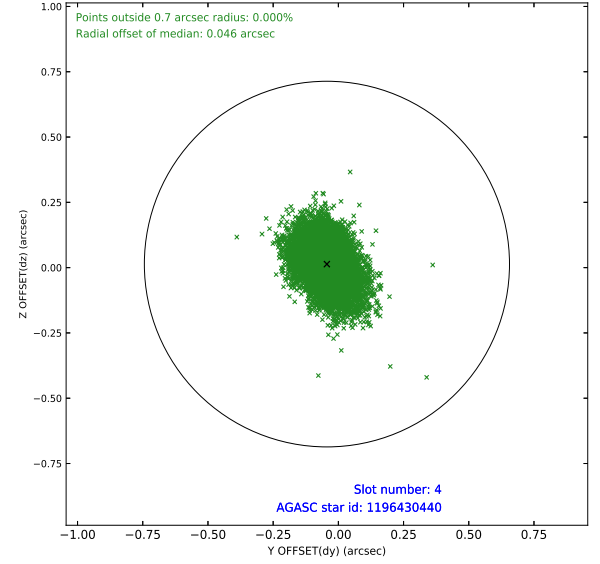
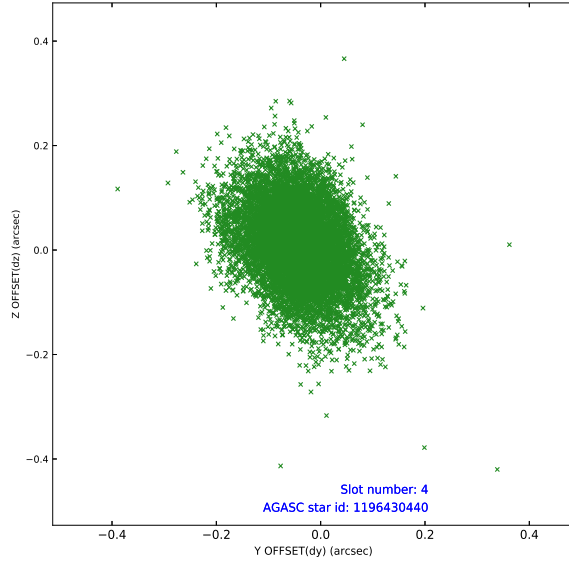
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.15	4921	1.000	0.074	-0.109	0.012	0.023	0.000000	0.000000	-768.60	-1740
1	FID		ACIS-S-4	7.26	4921	1.000	0.177	-0.007	0.006	0.012	0.000000	0.000000	2144.90	167
2	FID		ACIS-S-5	7.24	4922	1.000	-0.282	0.125	0.010	0.021	0.000000	0.000000	-1821.36	161
3	GUIDE	used	1196430144	9.13	9836	1.000	-0.057	0.209	0.155	0.269	346.194537	-63.325448	-1163.78	-178
4	GUIDE	used	1196430440	6.67	9842	1.000	-0.044	0.014	0.100	0.170	347.793971	-63.189982	1064.89	-1589
5	GUIDE	used	1196433752	9.82	9642	1.000	0.076	-0.150	0.223	0.382	345.709706	-62.743943	-348.20	1905
6	GUIDE	used	1196427424	8.59	9834	1.000	0.154	0.019	0.144	0.242	348.317104	-62.899367	2405.22	-1428
7	GUIDE	used	1196032440	9.46	9733	1.000	-0.123	-0.088	0.167	0.286	346.411989	-62.376790	1403.35	2102

2.4 Star Slots

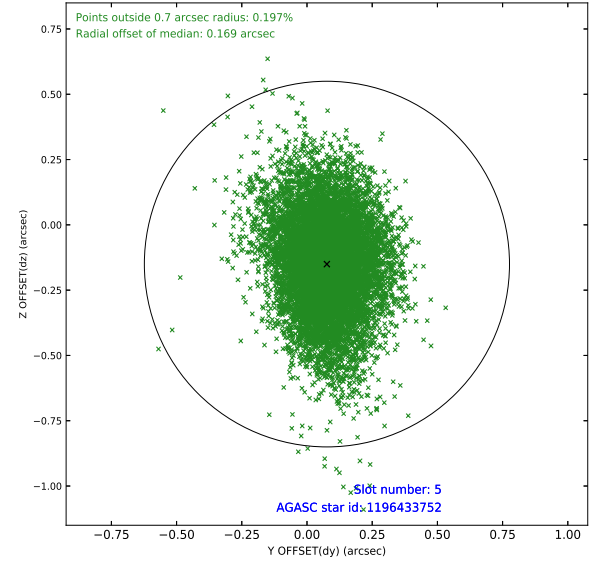
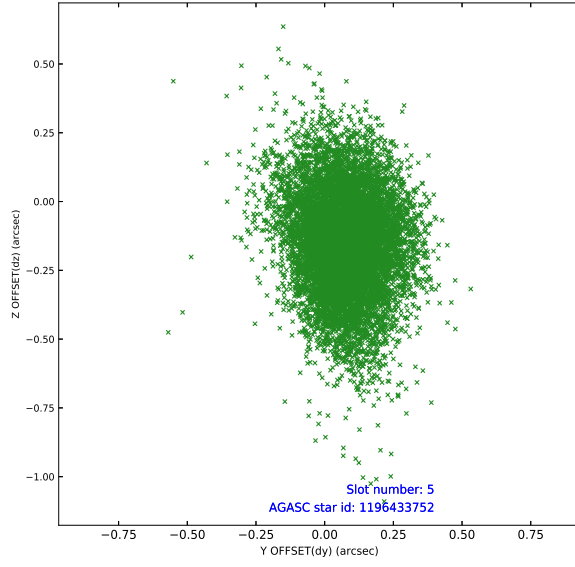
2.4.1 Slot 3



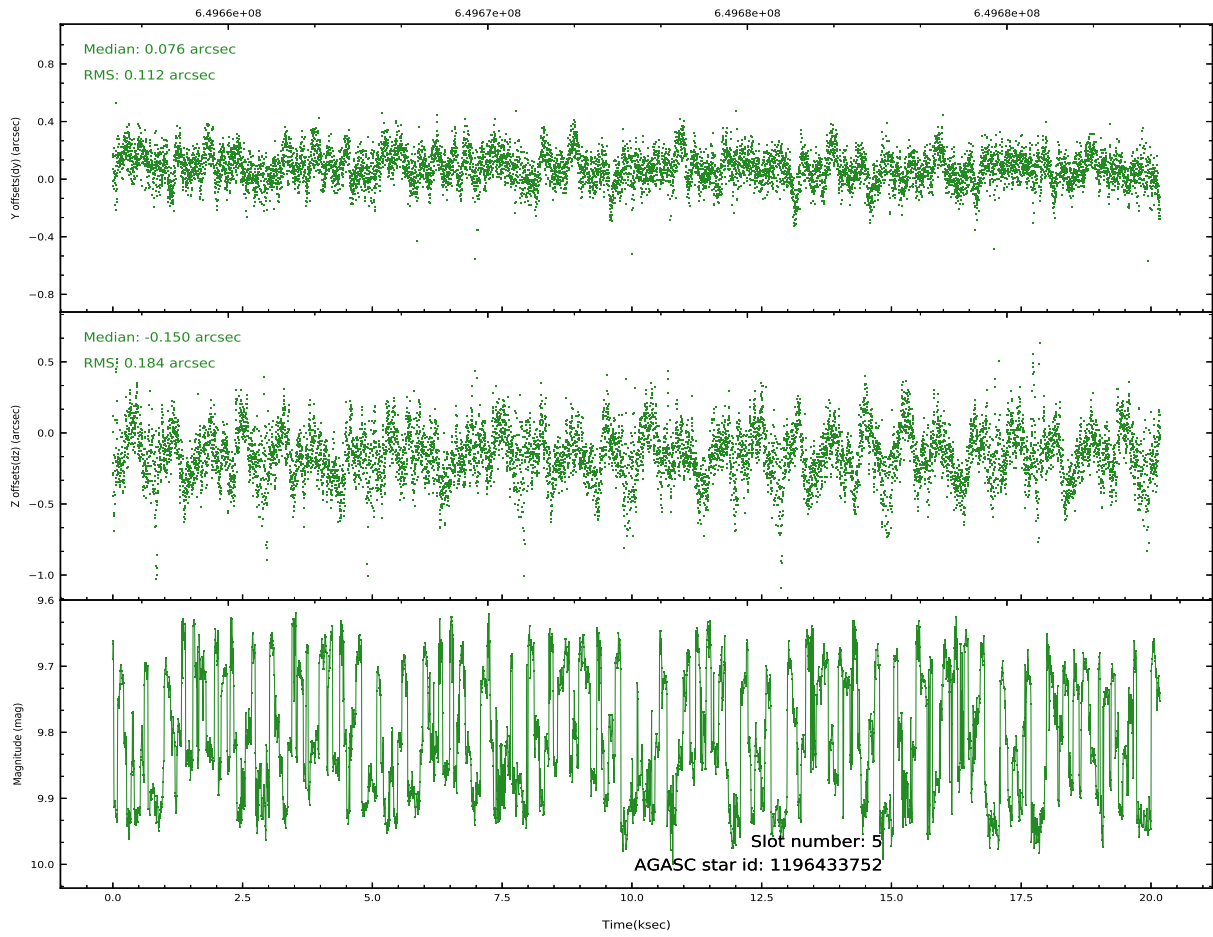
2.4.2 Slot 4



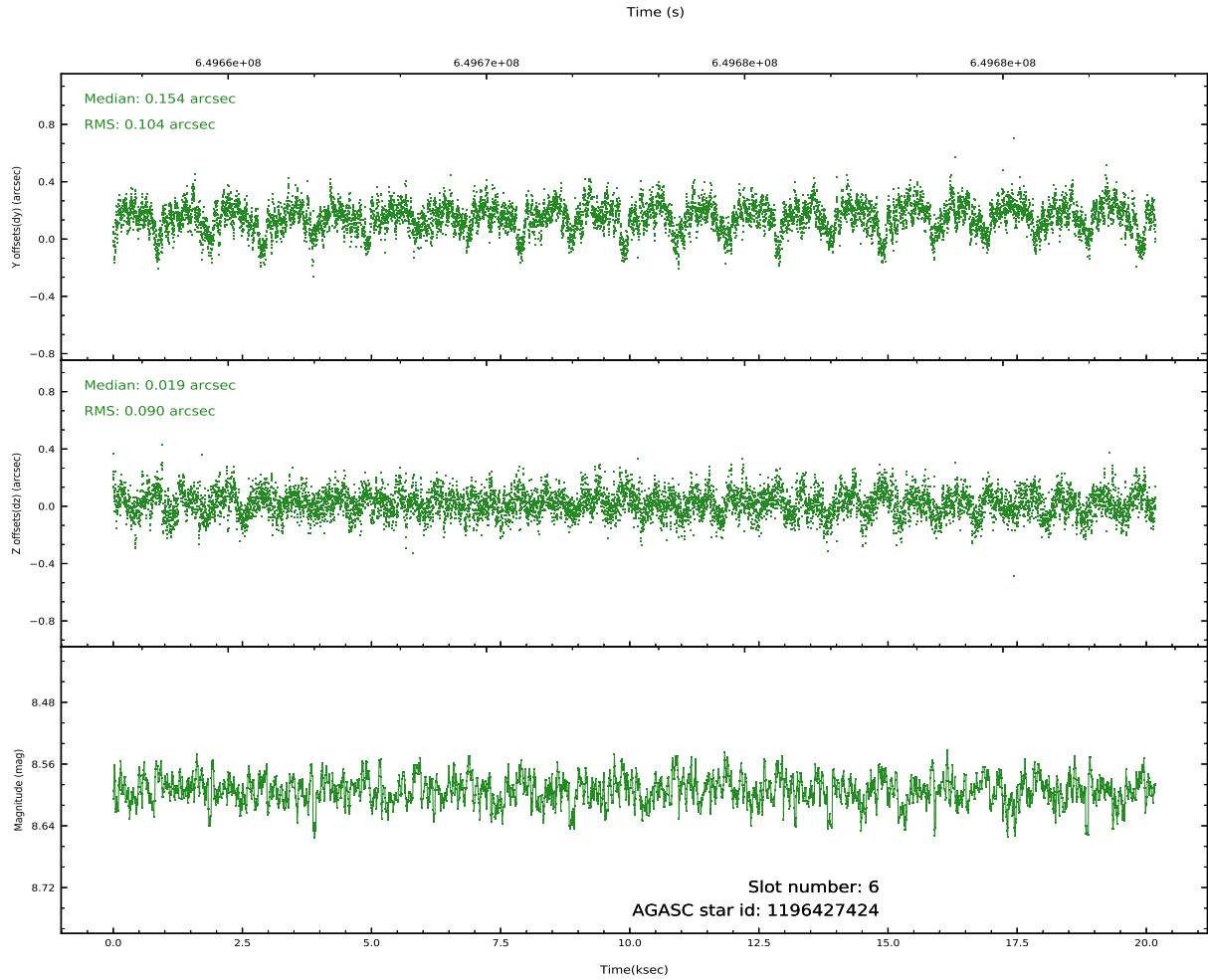
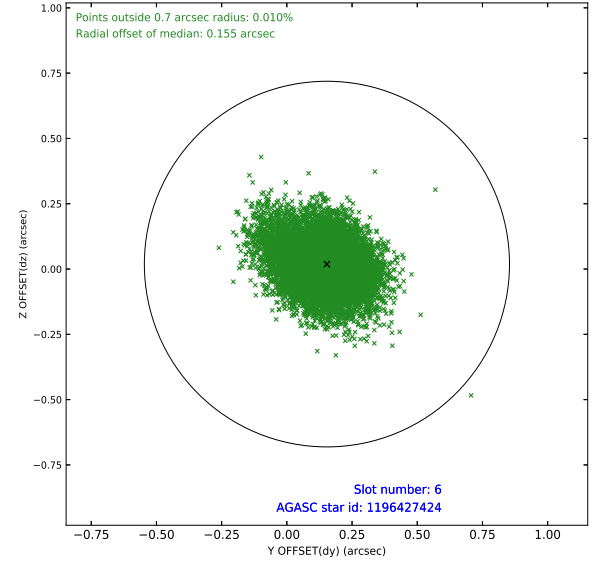
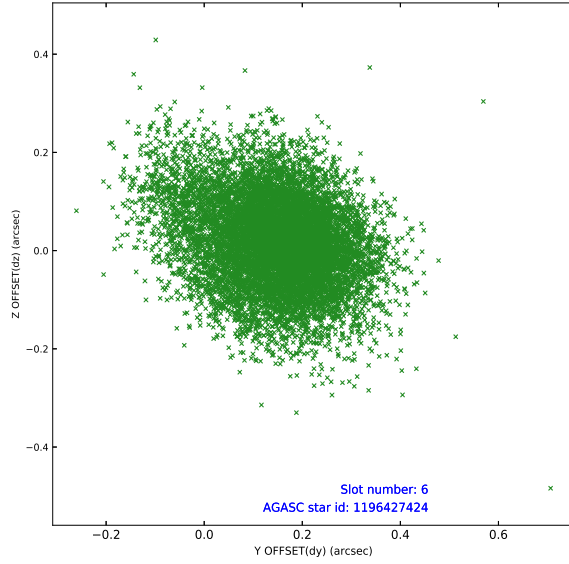
2.4.3 Slot 5



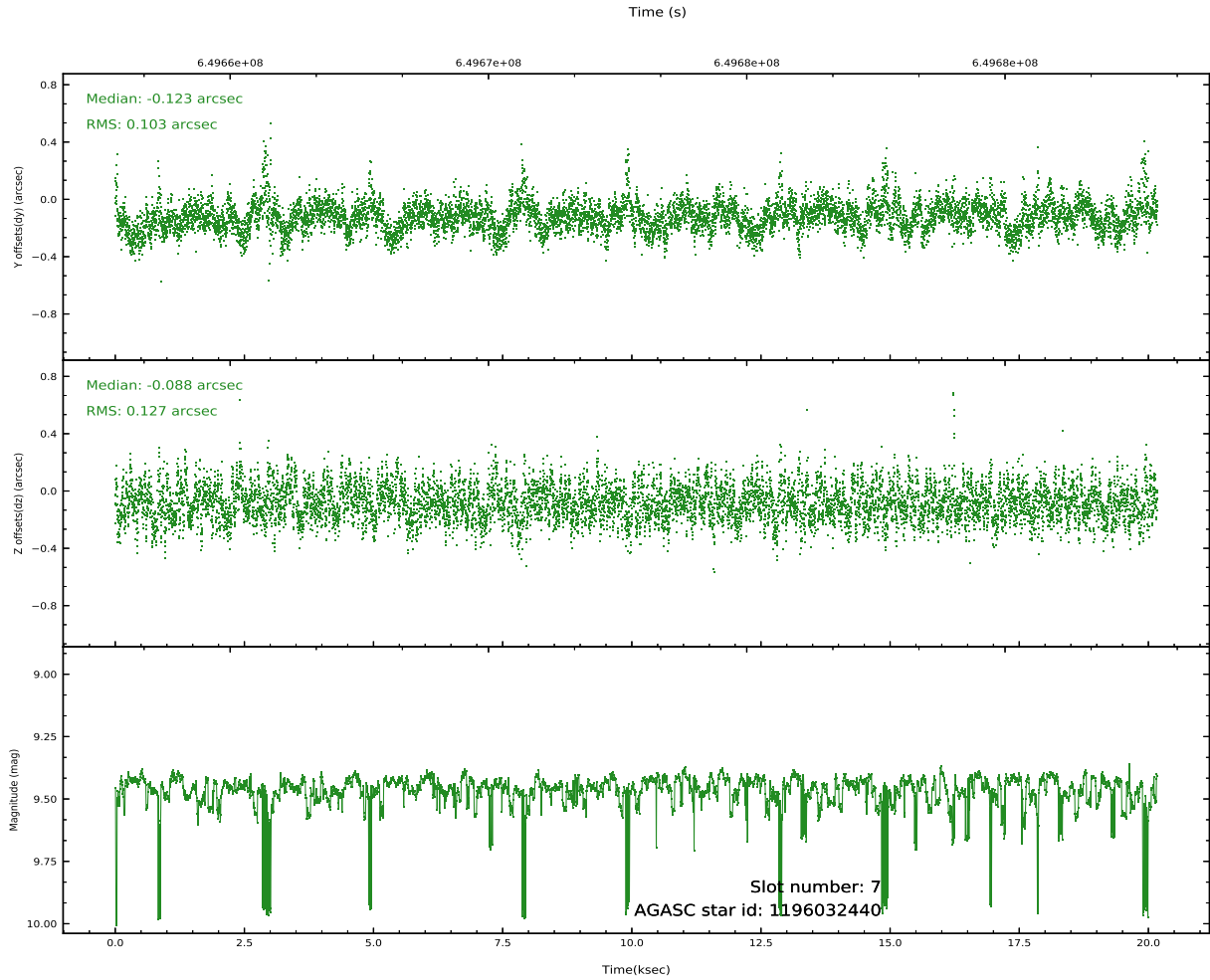
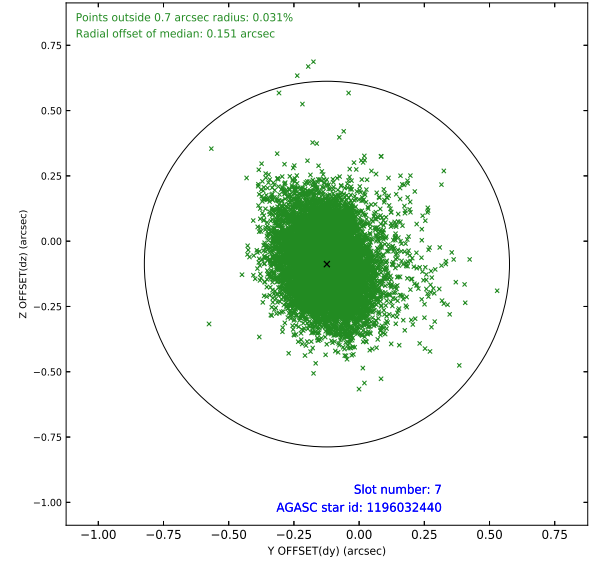
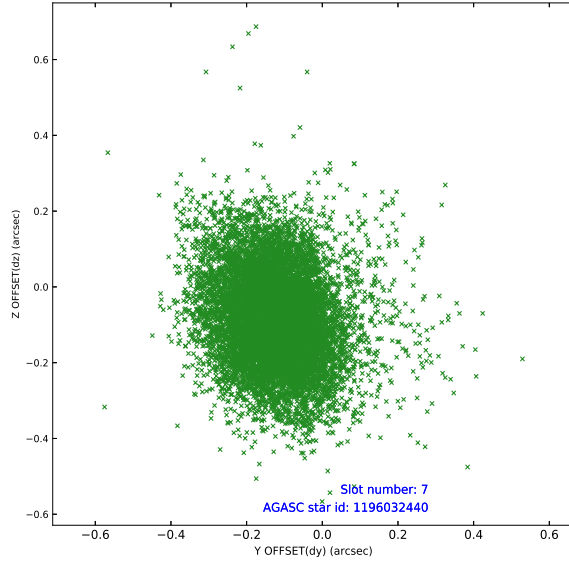
Time (s)



2.4.4 Slot 6

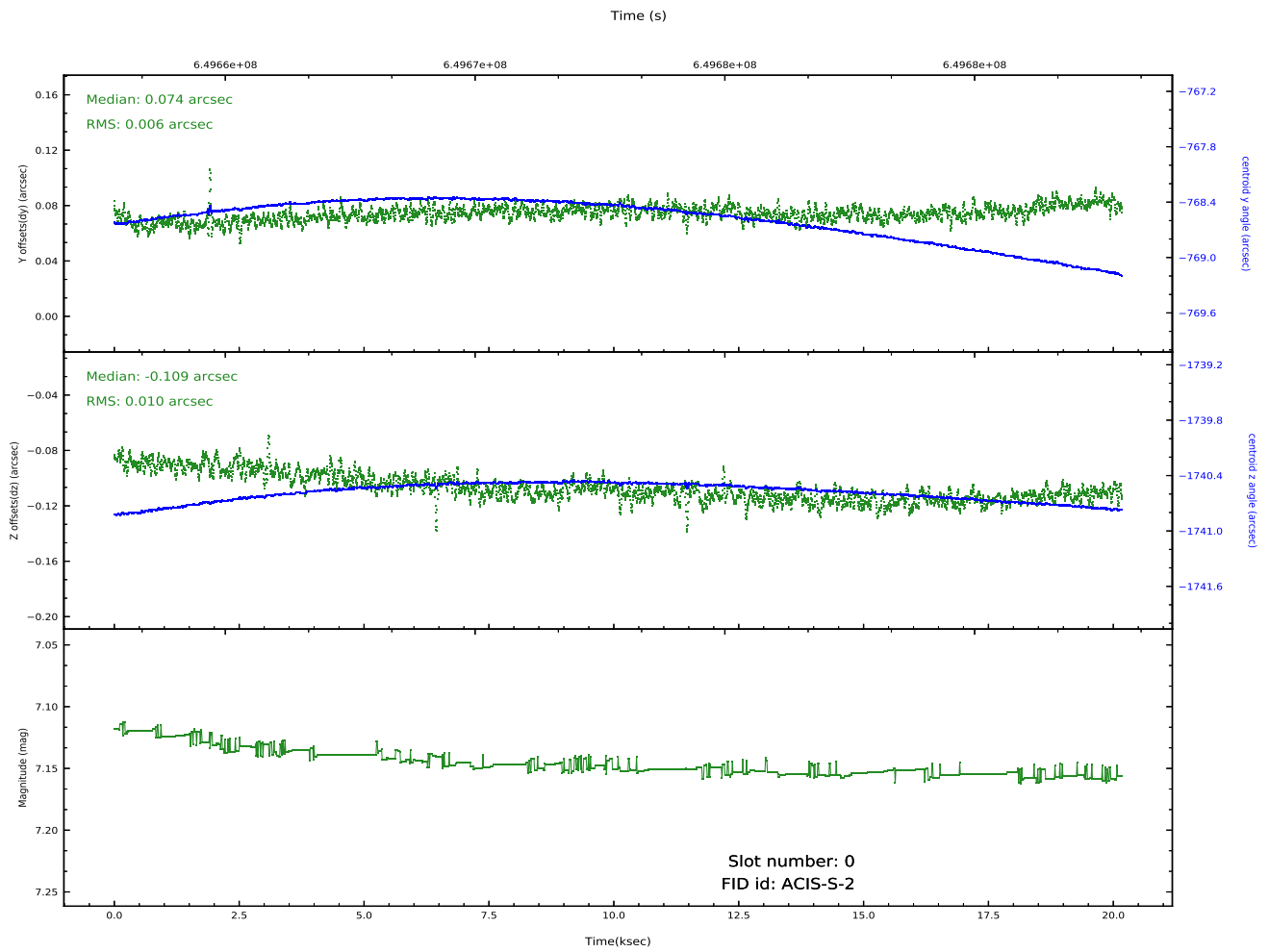
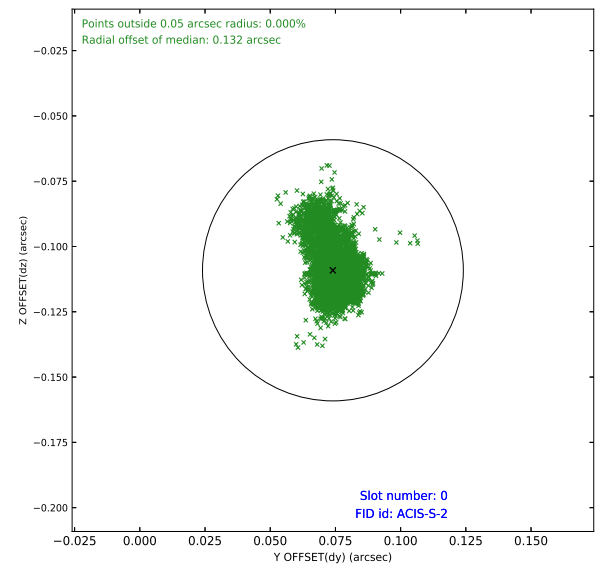
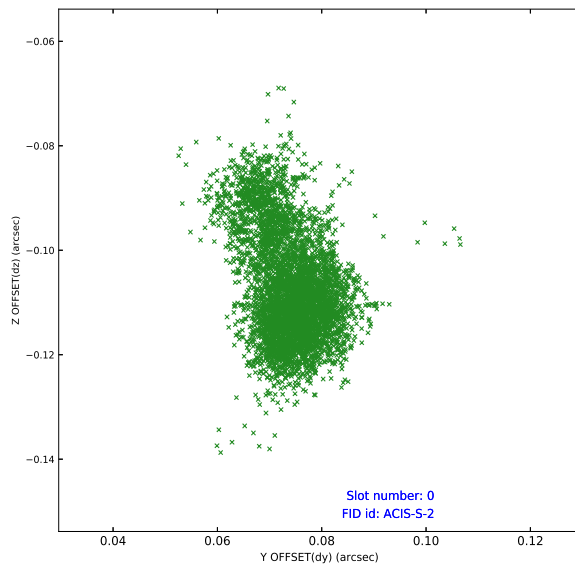


2.4.5 Slot 7

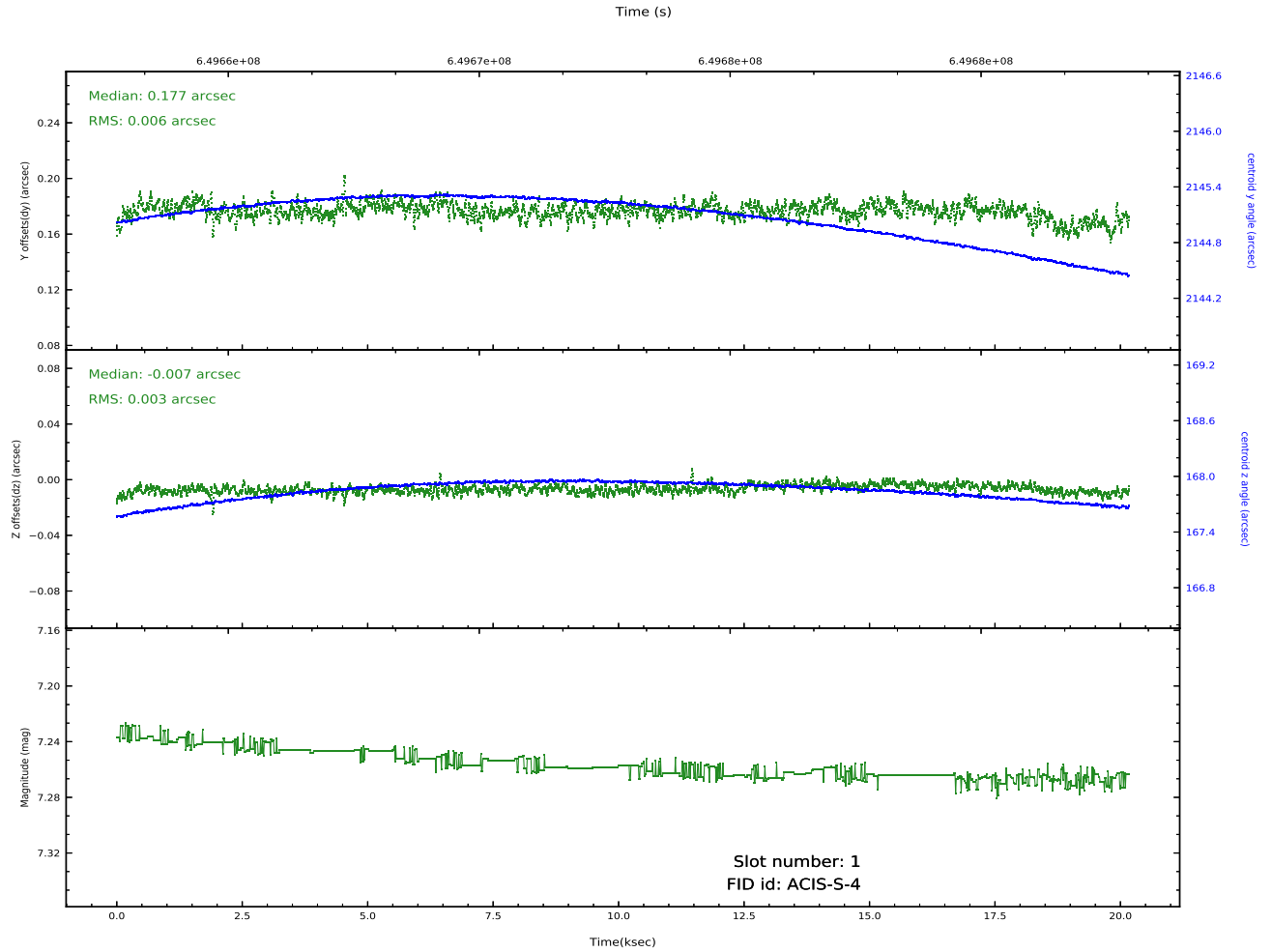
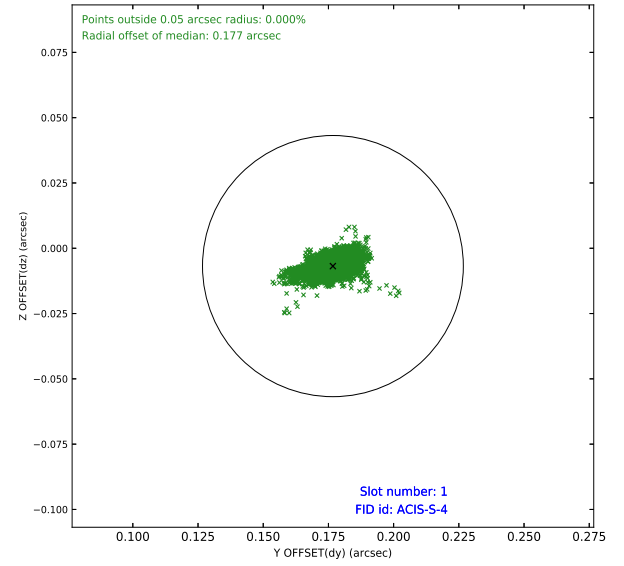
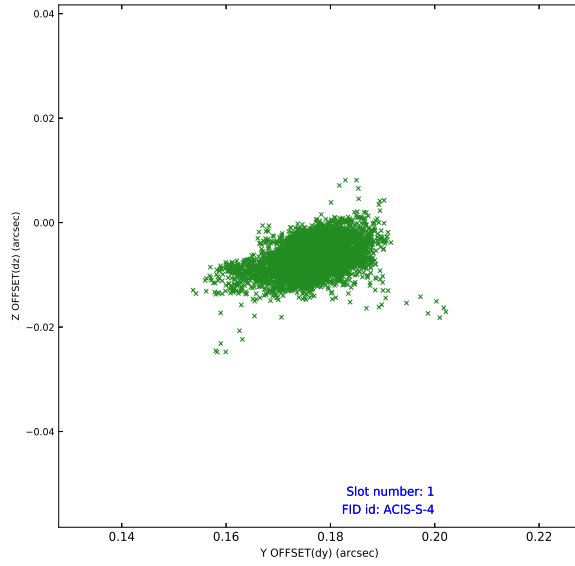


2.5 FID Slots

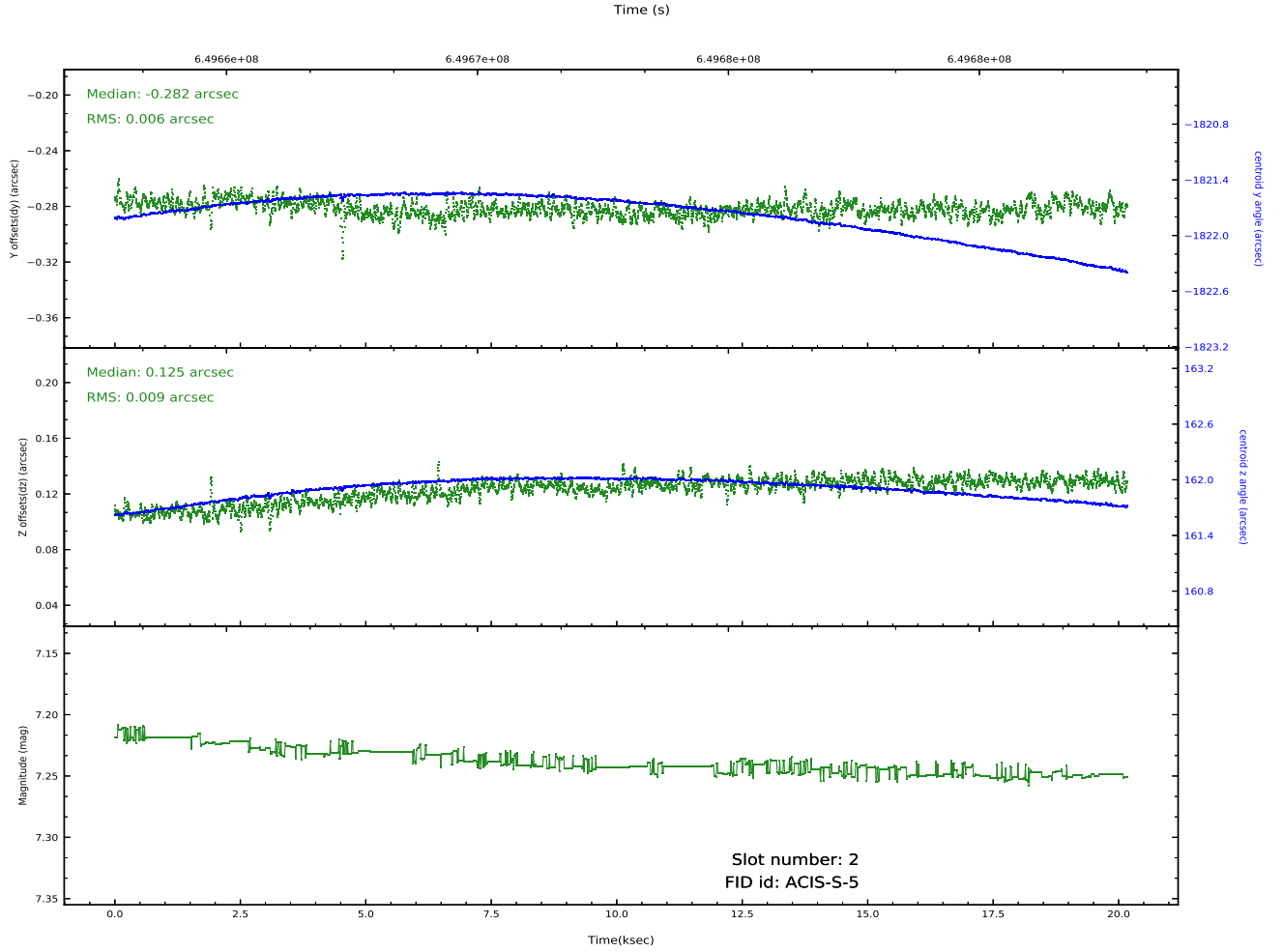
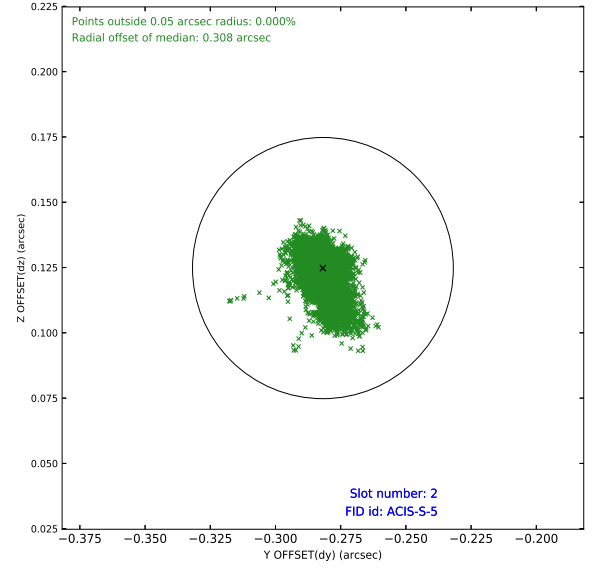
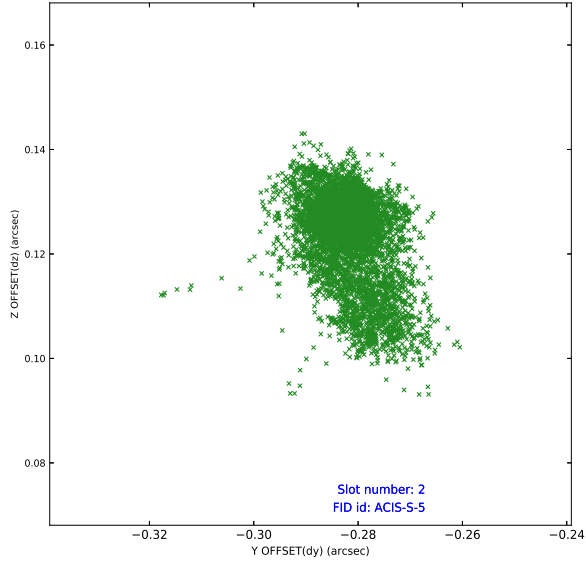
2.5.1 Slot 0



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)	2020.10.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.059827476859

A.2 Comments

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:
(346.79310, -62.89871), (346.78850, -62.90067), (346.87327, -62.94194),
(346.87828, -62.94018).