

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20553 - L2 Version 2
Chandra X-Ray Center

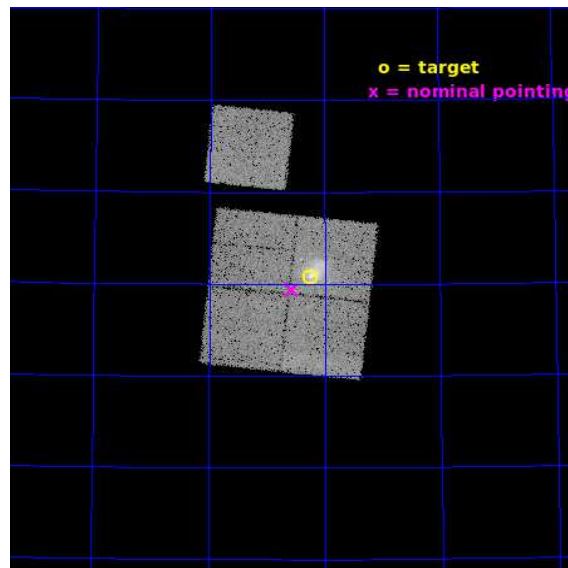
L2 Processing Date : Oct 28 2020

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1 Front

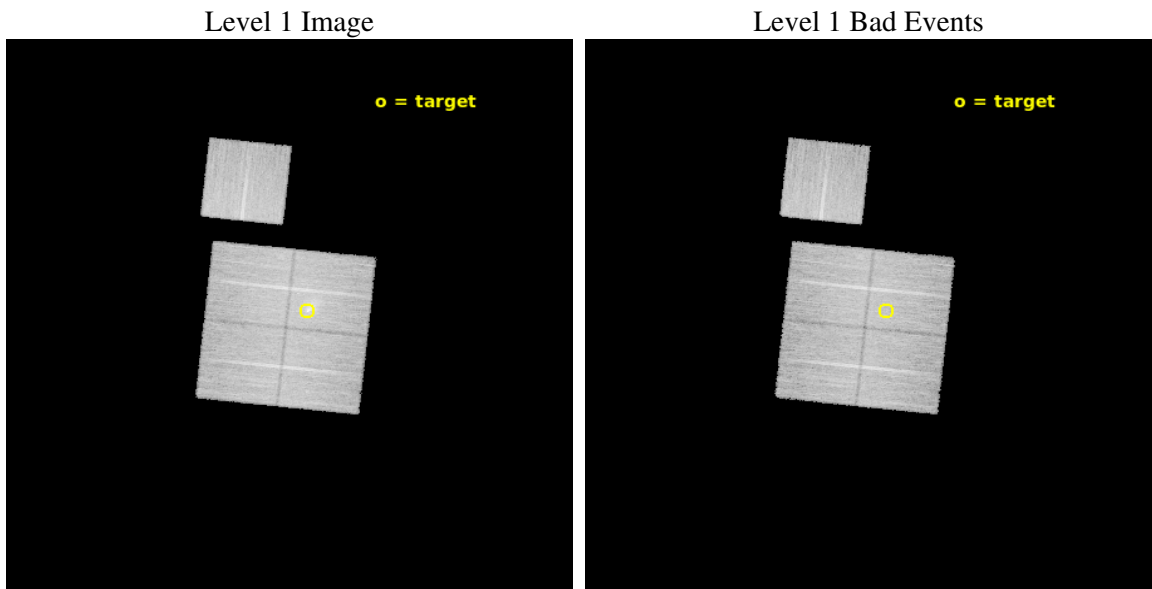
seq_num	801762	Sequence number
obs_id	20553	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	239.14213451203	Nominal RA [deg]
dec_nom	66.323220585245	Nominal Dec [deg]
roll_nom	6.1223134928252	Nominal Roll [deg]
revision	2	Processing version of data
ontime	20066.259174109	Sum of GTIs [s]
livetime	19804.078725434	Livetime [s]
ontime0	20069.400154471	Sum of GTIs [s]
ontime1	20063.118173599	Sum of GTIs [s]
ontime2	20063.118243456	Sum of GTIs [s]
ontime3	20066.259174109	Sum of GTIs [s]
ontime6	20069.400154471	Sum of GTIs [s]
l2events	80438	Number of level 2 events



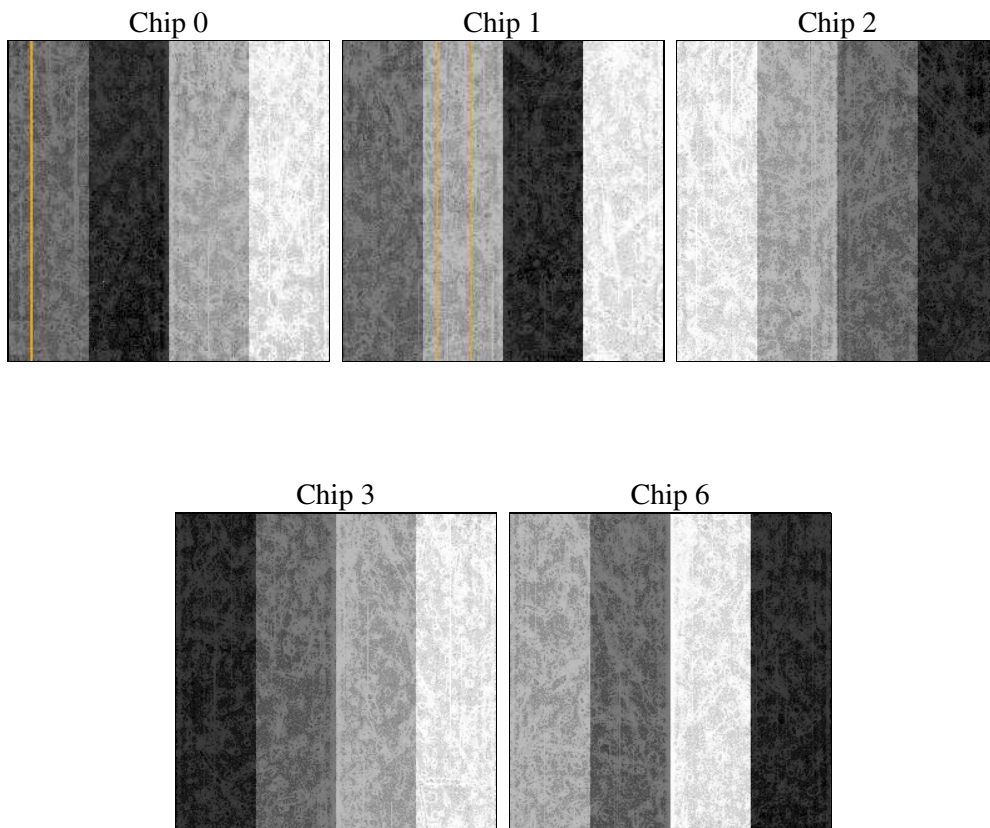
2 OBI

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	20066.259174109	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	20069.400154471	Sum of GTIs [s]
date	2020-10-28T16:14:13	Date and time of file creation	ontime1	20063.118173599	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	20063.118243456	Sum of GTIs [s]
			ontime3	20066.259174109	Sum of GTIs [s]
			ontime6	20069.400154471	Sum of GTIs [s]
			l1events	736966	Number of level 1 events

2.1.4 Events

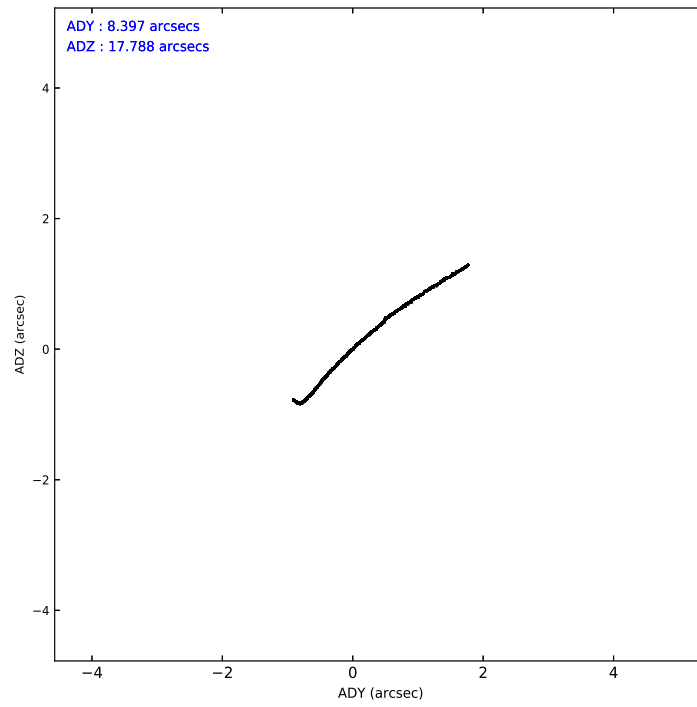
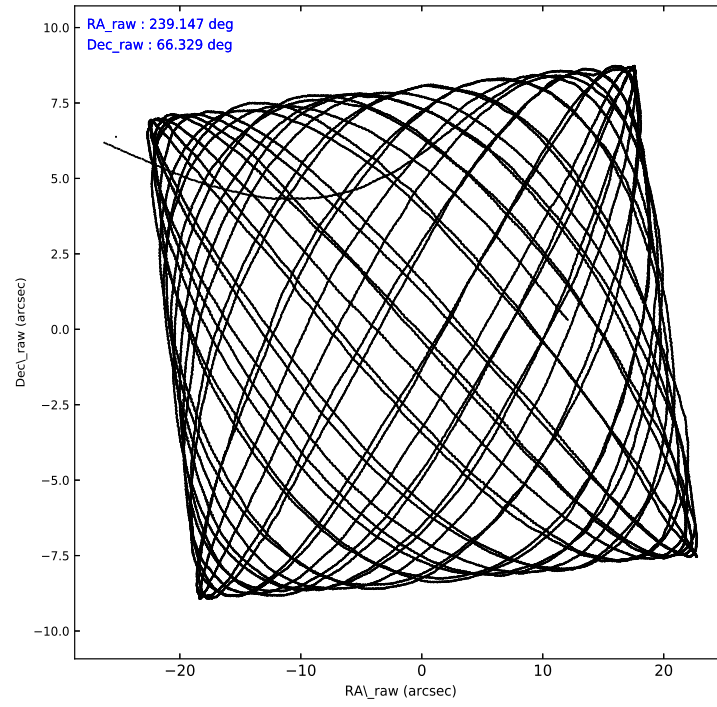
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	137815	141551	150373	155866	151361
rejected events	120802	122493	133716	130756	134465
rejected %	87%	86%	88%	83%	88%

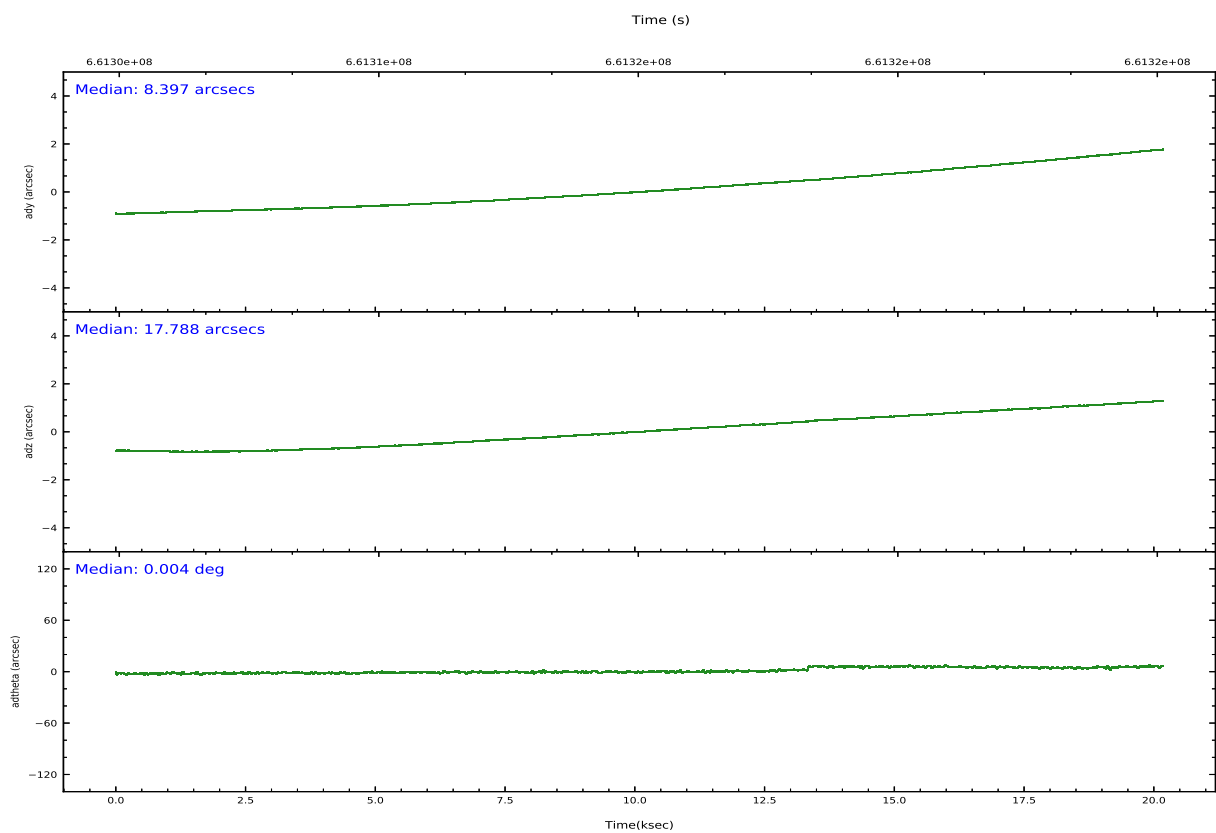
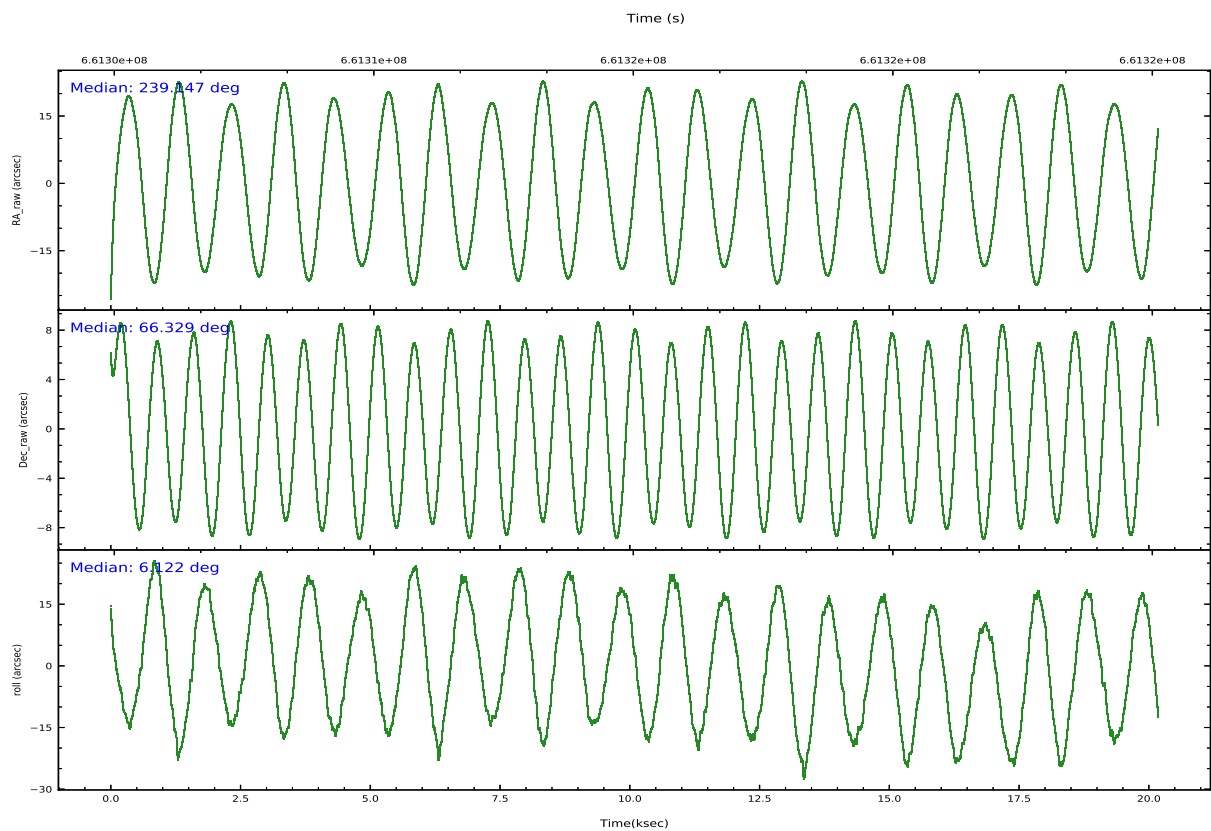
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5579	6466	5845	12830	5611
	4%	4%	3%	8%	3%
grade 1 events	85	90	97	137	61
	0%	0%	0%	0%	0%
grade 2 events	4568	4879	4175	4654	3928
	3%	3%	2%	2%	2%
grade 3 events	1698	1711	1658	2055	1710
	1%	1%	1%	1%	1%
grade 4 events	1584	1817	1689	1928	1656
	1%	1%	1%	1%	1%
grade 5 events	6740	6831	6402	7463	7053
	4%	4%	4%	4%	4%
grade 6 events	3587	4190	3295	3645	3991
	2%	2%	2%	2%	2%
grade 7 events	113974	115567	127212	123154	127351
	82%	81%	84%	79%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-01236	ACIS-01236	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	239.091888	239.14213451203	CCD I2 on	Y	Y
[deg] Pointing Dec	66.312161	66.323220585245	CCD I3 on	Y	Y
[deg] Pointing Roll	5.971938	6.1223134928252	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	O1	Y
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	661305112.184000	661303743.52959	CCD S5 on	N	N
Observation start date	2018-12-15T23:50:43	2018-12-15T23:29:03	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	661325112.184000	661325743.6184	On-chip summing requested	N	N
Observation end date	2018-12-16T05:24:03	2018-12-16T05:35:43	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



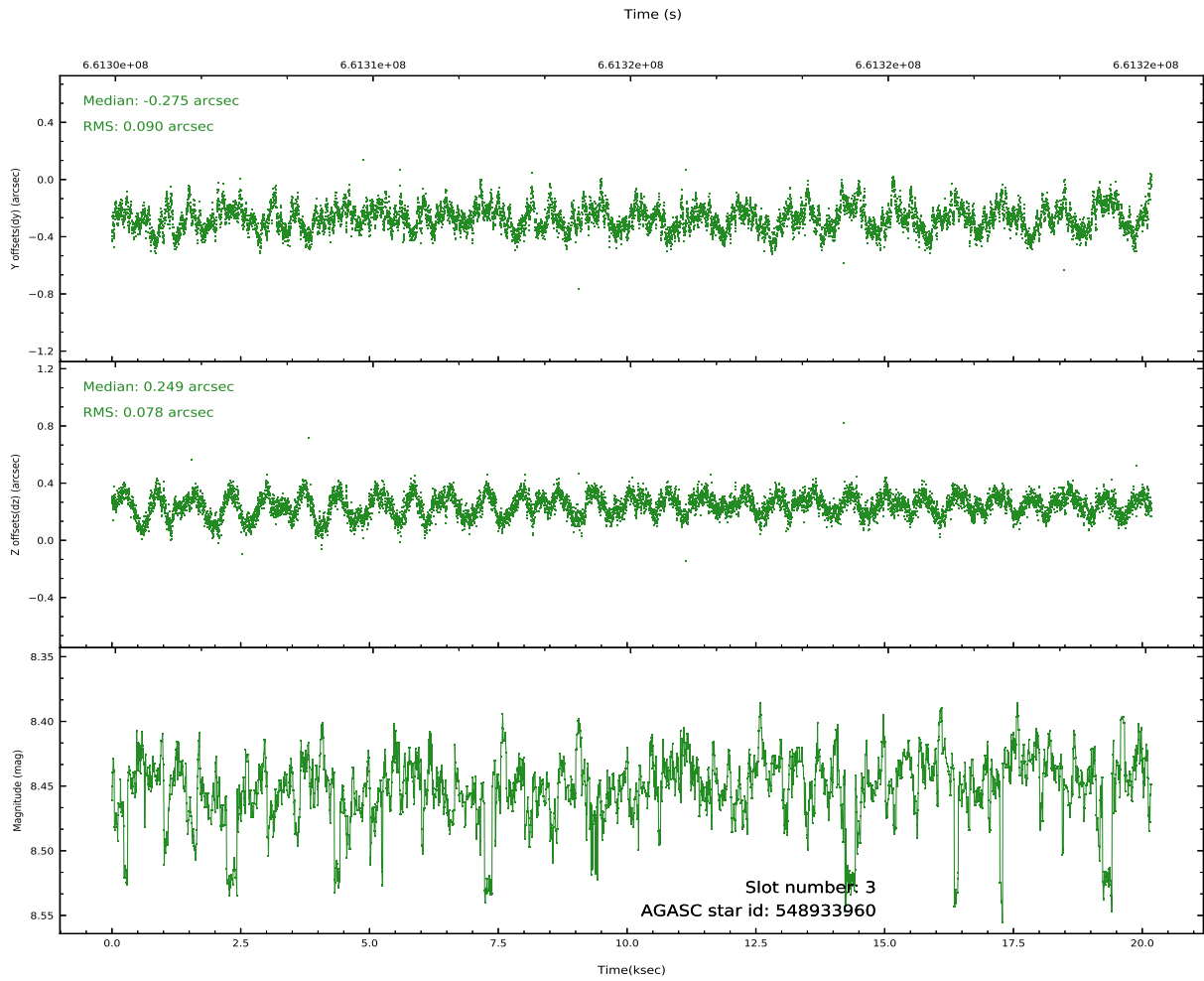
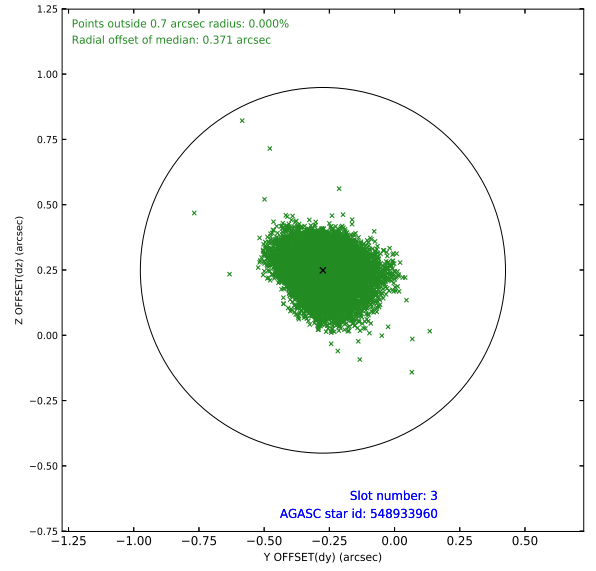
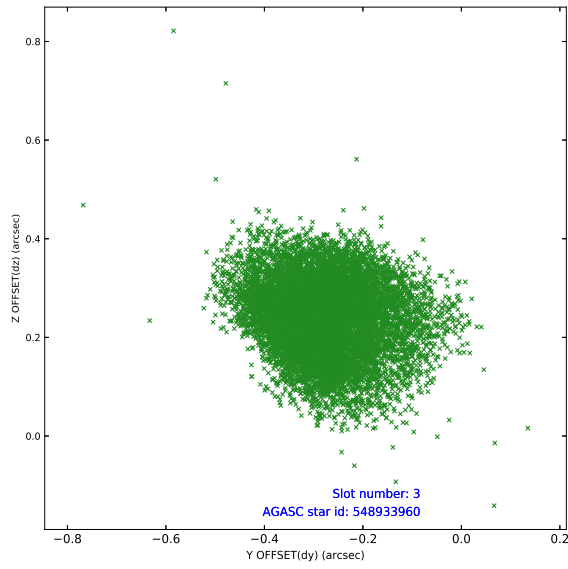


Slot Statistics

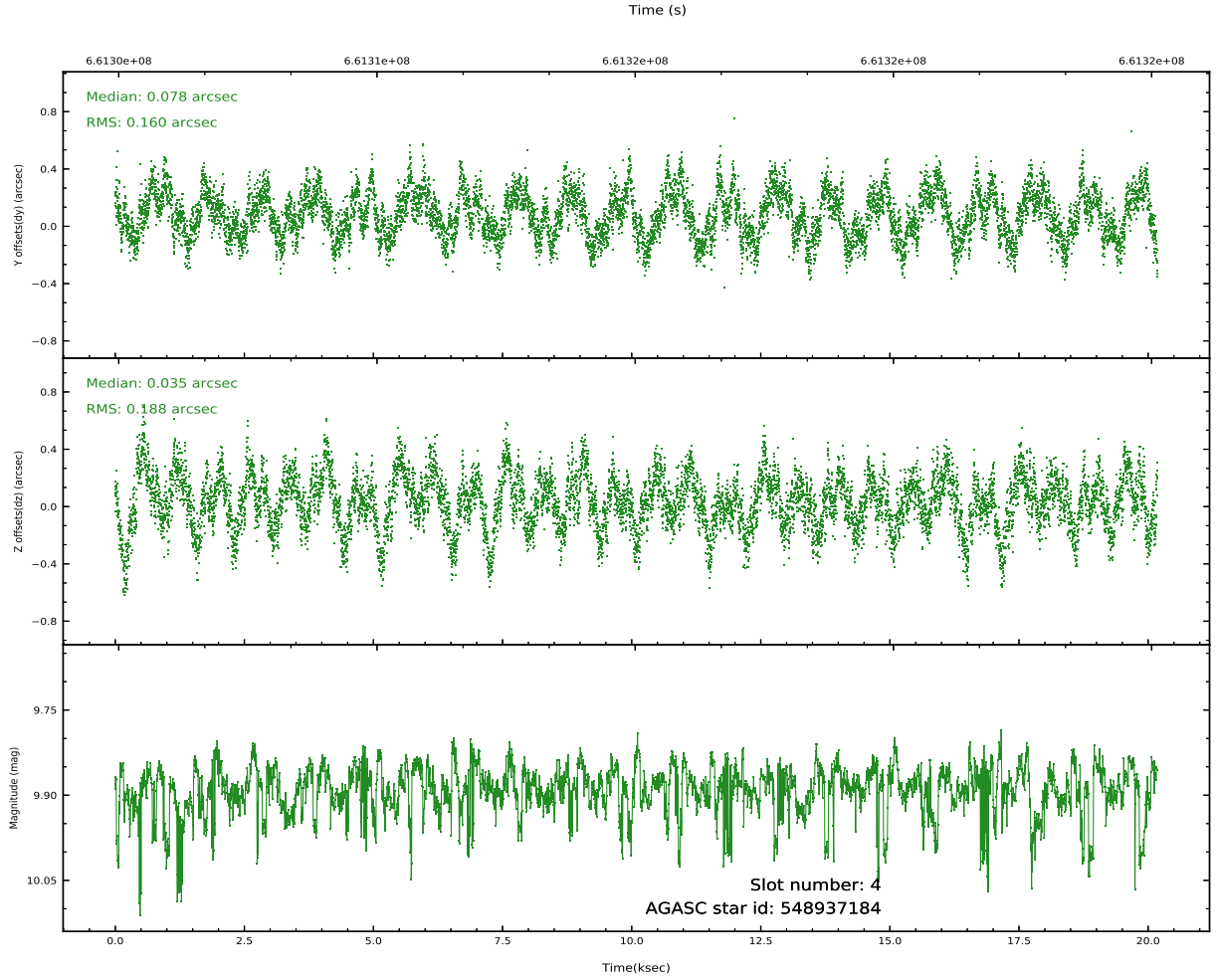
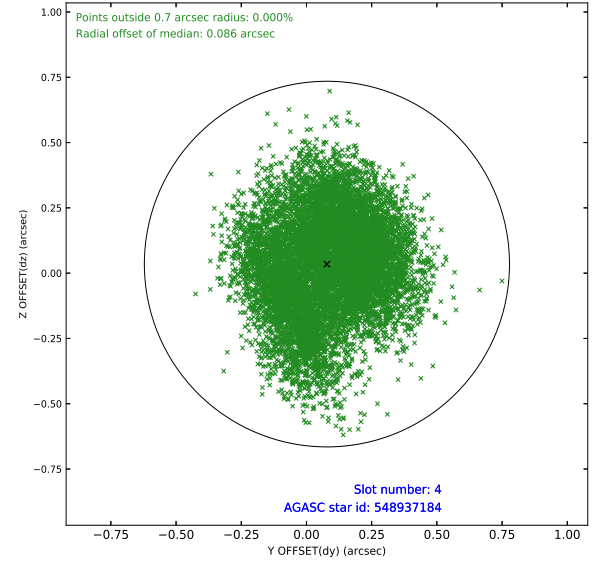
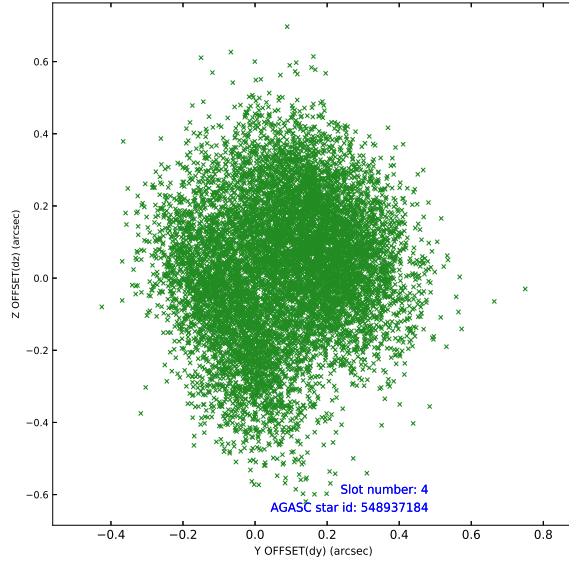
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-2	7.06	4922	1.000	0.036	-0.087	0.049	0.075	0.000000	0.000000	-763.15	-847
1	FID		ACIS-I-4	7.10	4922	1.000	0.189	0.016	0.018	0.025	0.000000	0.000000	2151.19	1057
2	FID		ACIS-I-5	7.15	4919	1.000	-0.327	0.138	0.035	0.058	0.000000	0.000000	-1816.88	1056
3	GUIDE	used	548933960	8.45	9841	1.000	-0.275	0.249	0.126	0.202	237.671184	66.428675	-1987.90	651
4	GUIDE	used	548937184	9.89	9823	1.000	0.078	0.035	0.267	0.406	238.771821	66.565432	-360.18	955
5	GUIDE	used	549849072	9.24	9839	1.000	-0.140	-0.035	0.173	0.265	240.420863	66.802816	2060.28	1580
6	GUIDE	used	549849656	9.18	9827	1.000	0.324	-0.272	0.202	0.368	240.650889	65.694358	2069.97	-2423
7	GUIDE	used	548932512	8.61	9830	1.000	-0.005	0.038	0.155	0.227	239.727627	66.054972	829.07	-1012

2.4 Star Slots

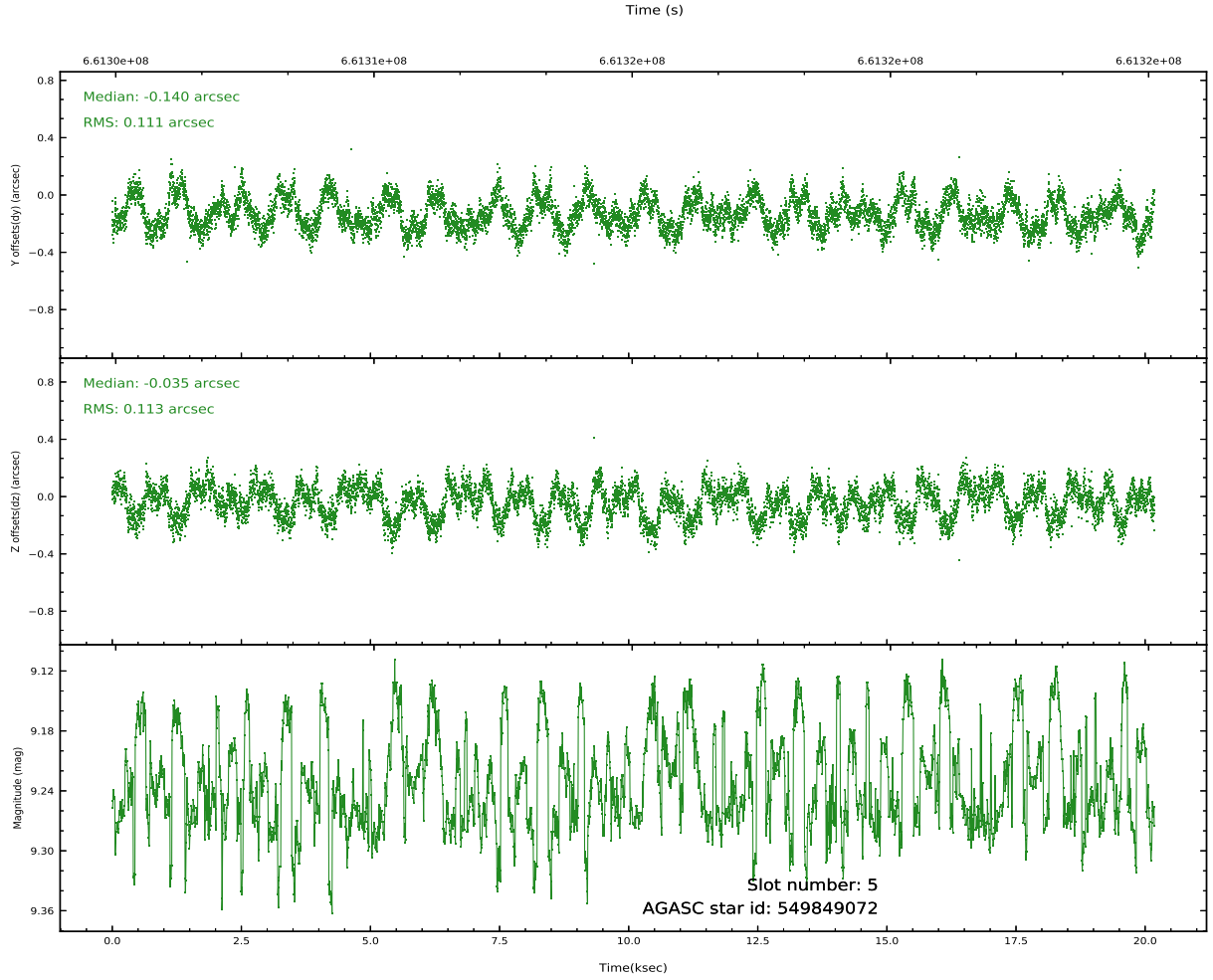
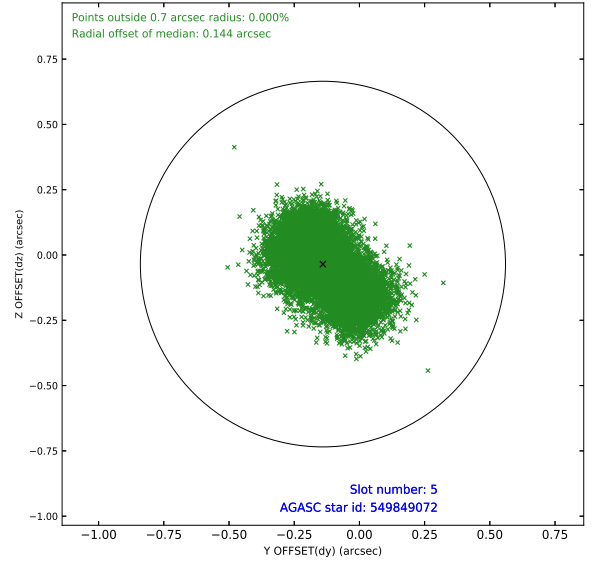
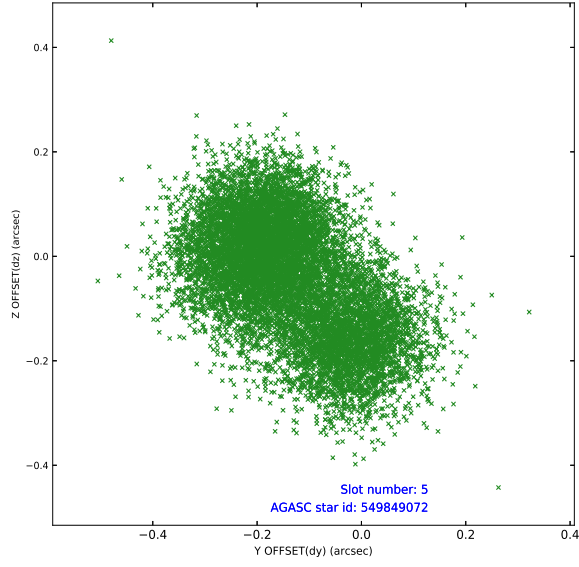
2.4.1 Slot 3



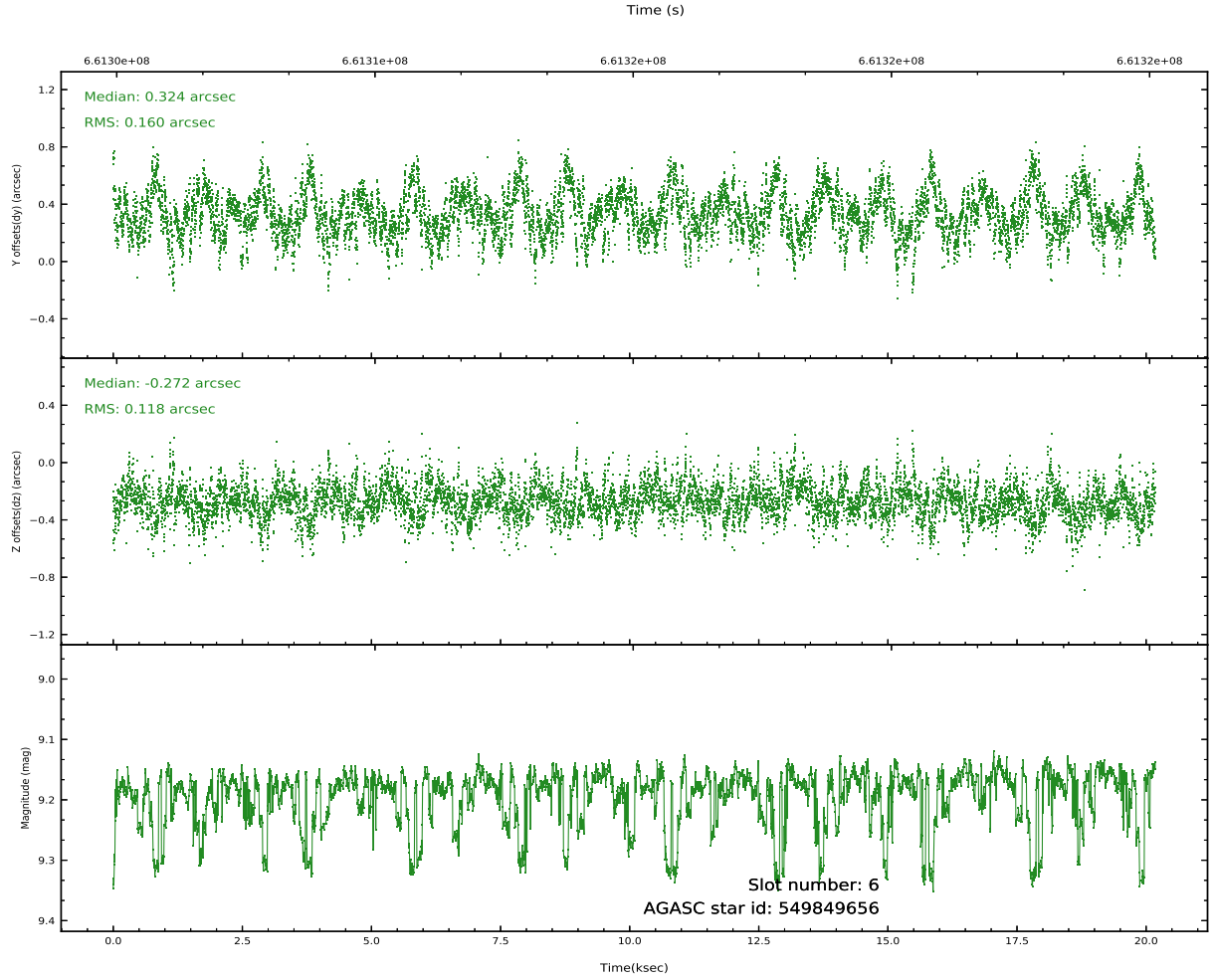
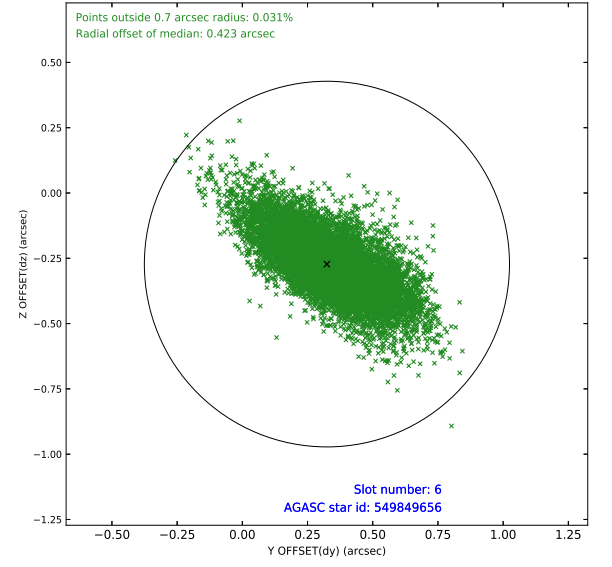
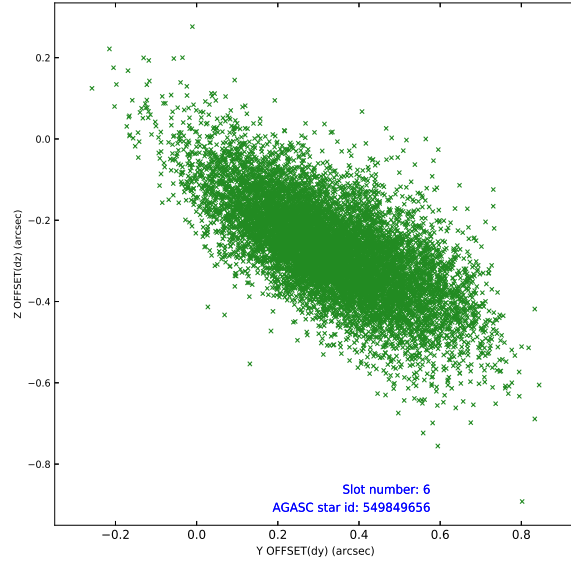
2.4.2 Slot 4



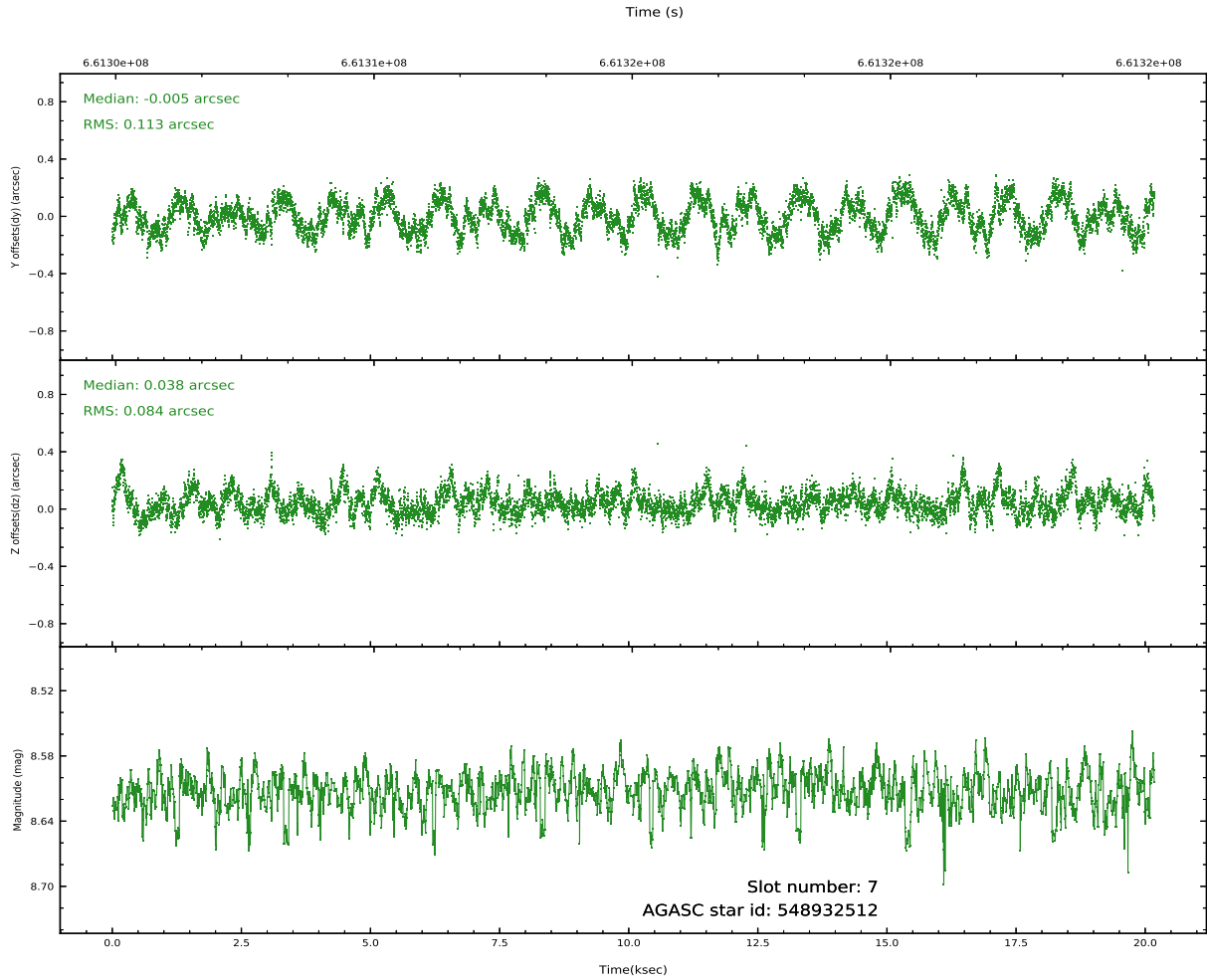
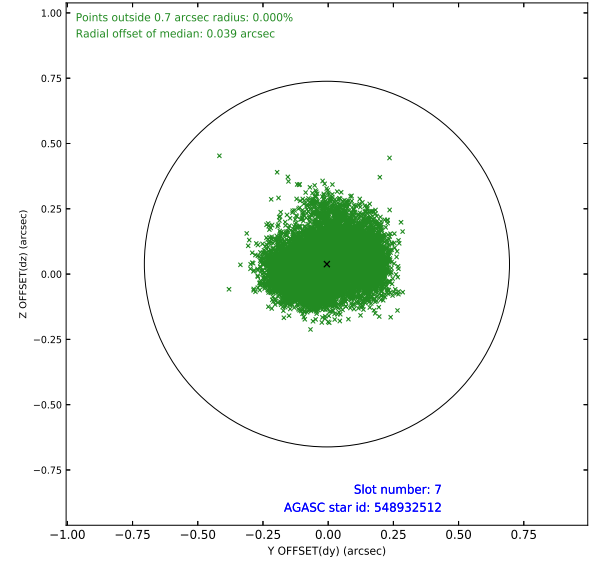
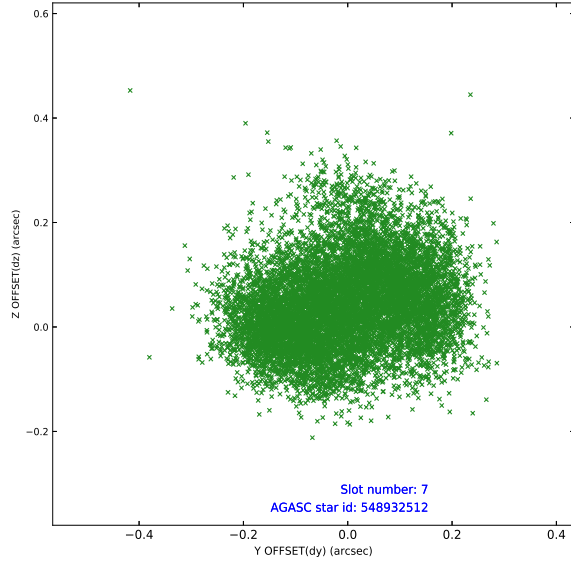
2.4.3 Slot 5



2.4.4 Slot 6

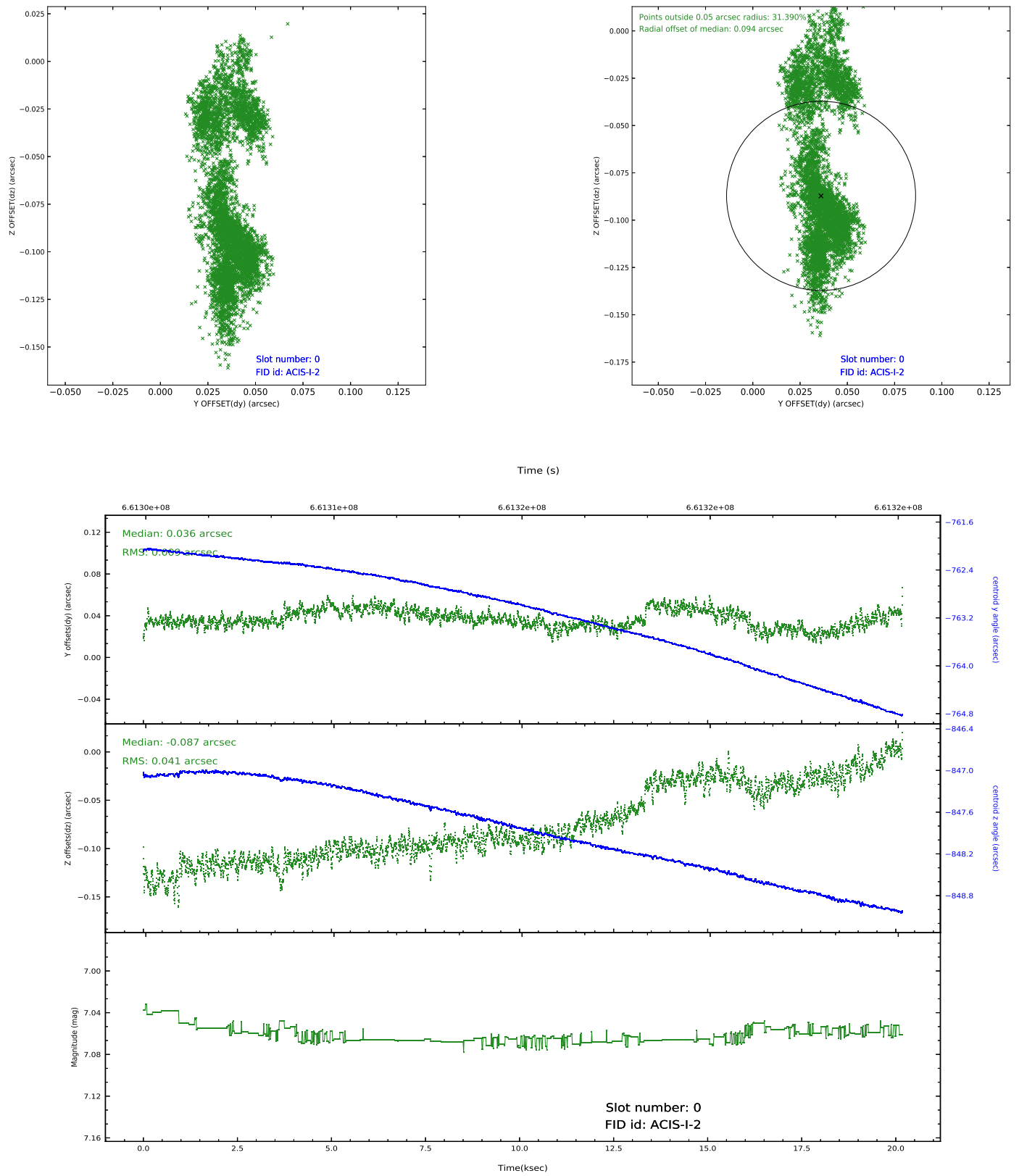


2.4.5 Slot 7

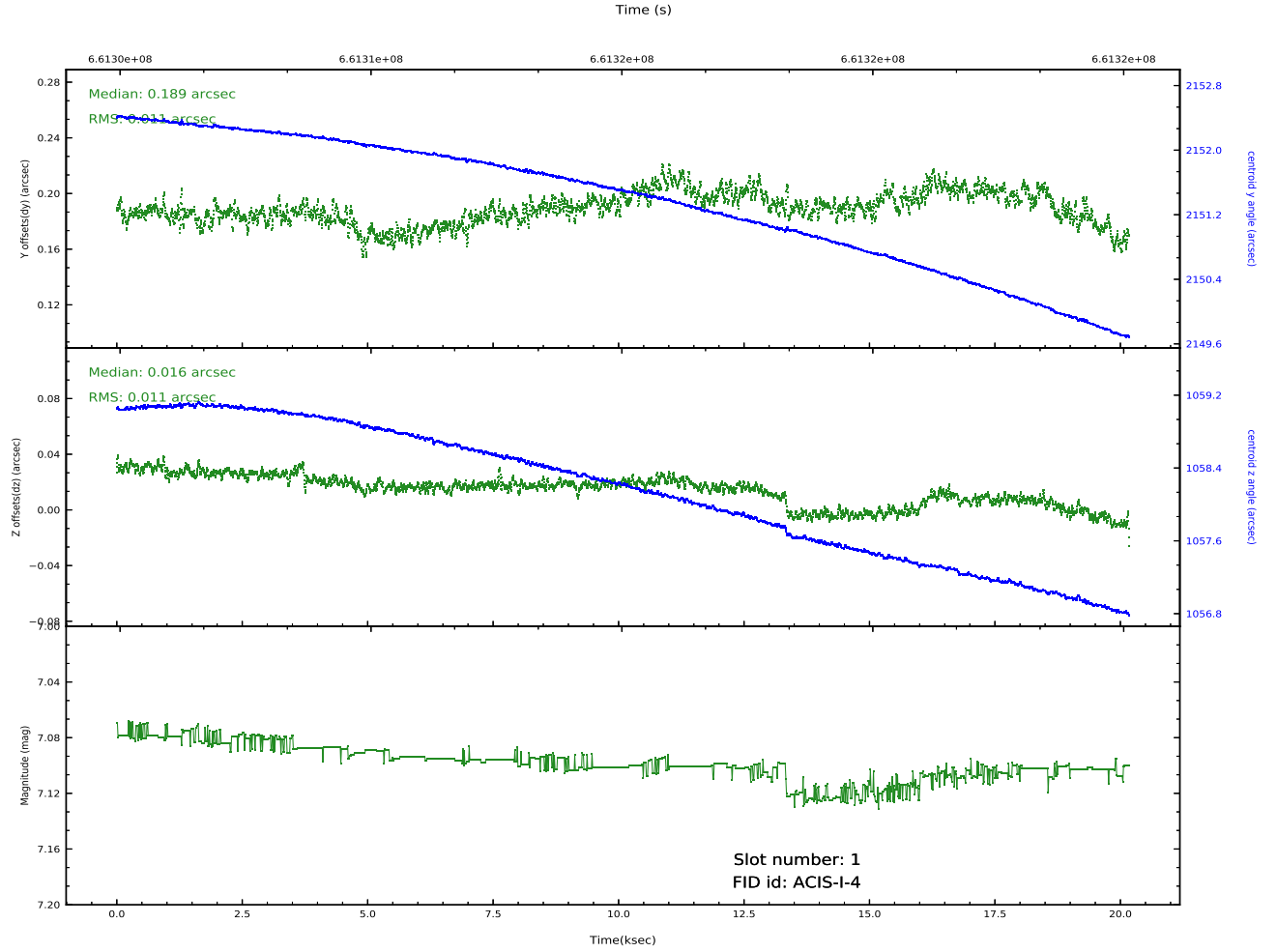
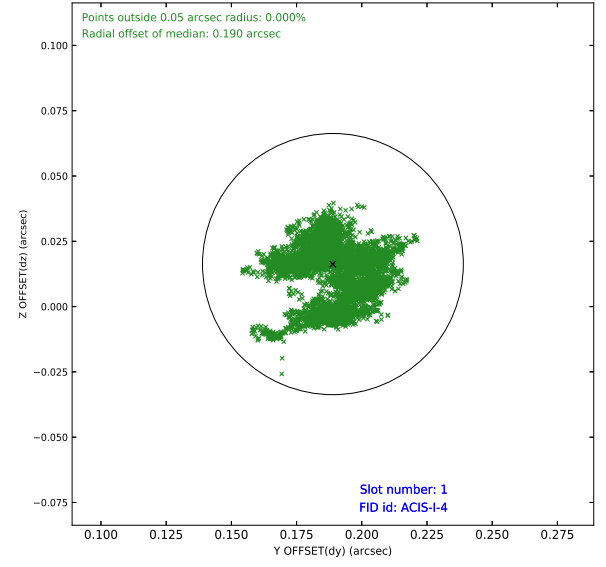
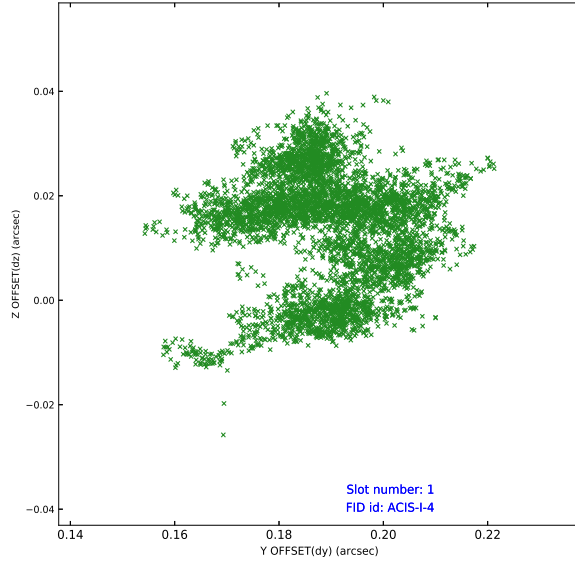


2.5 FID Slots

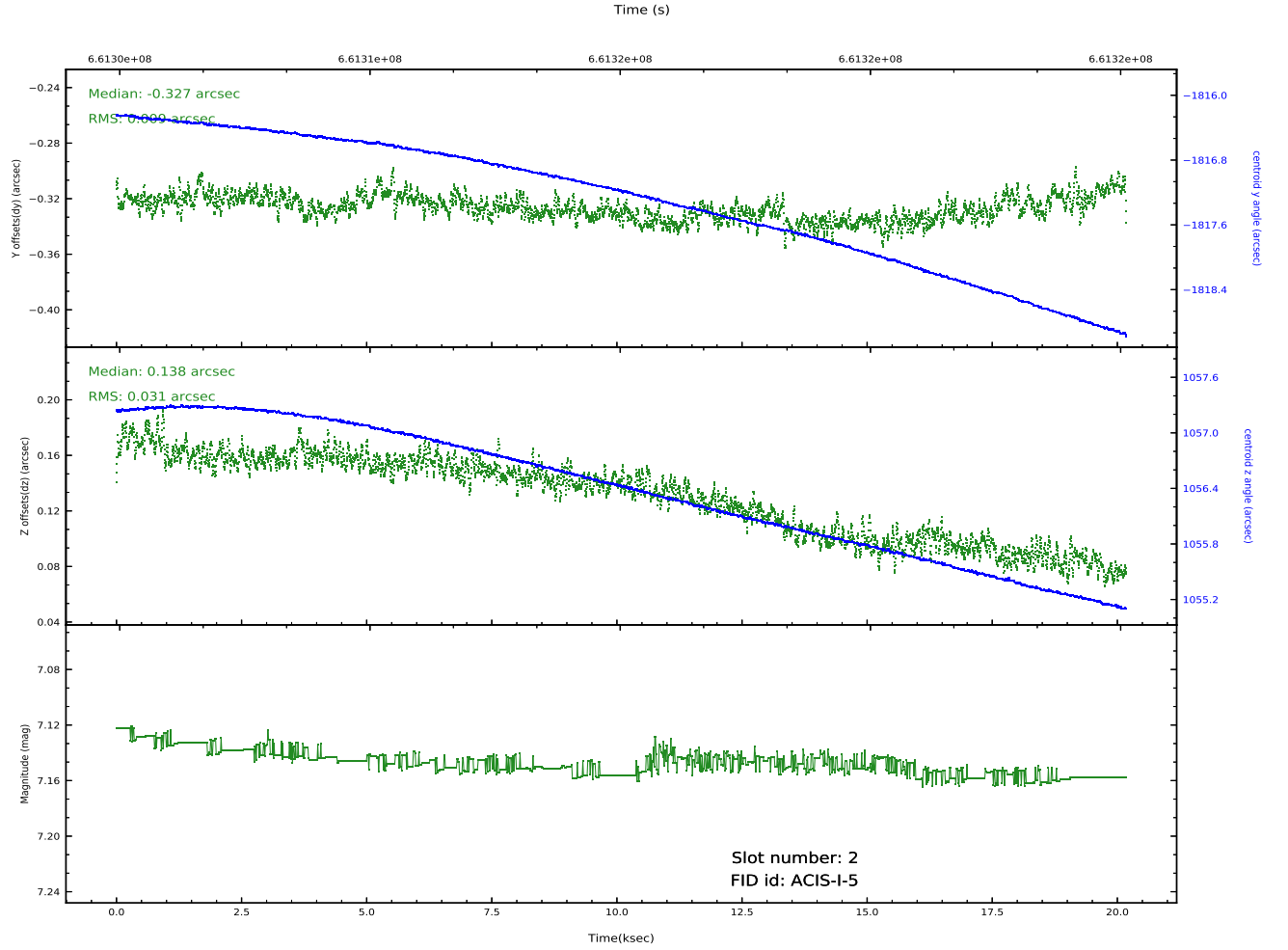
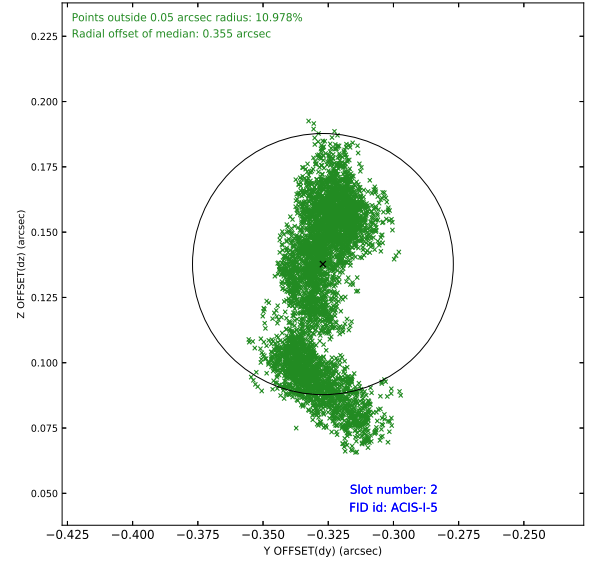
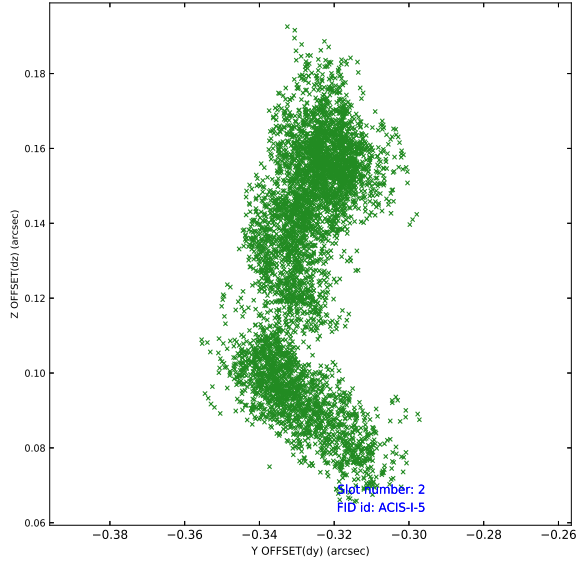
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2020.10.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.066259174228

A.2 Comments