

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 19401 - L2 Version 2
Chandra X-Ray Center

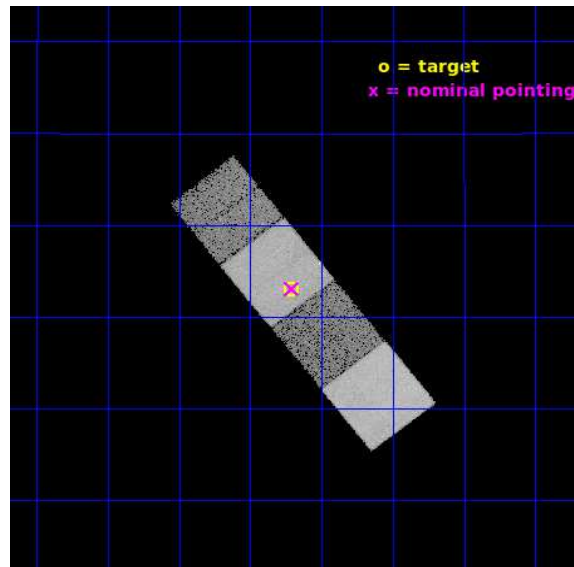
L2 Processing Date : Oct 25 2020

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1 Front

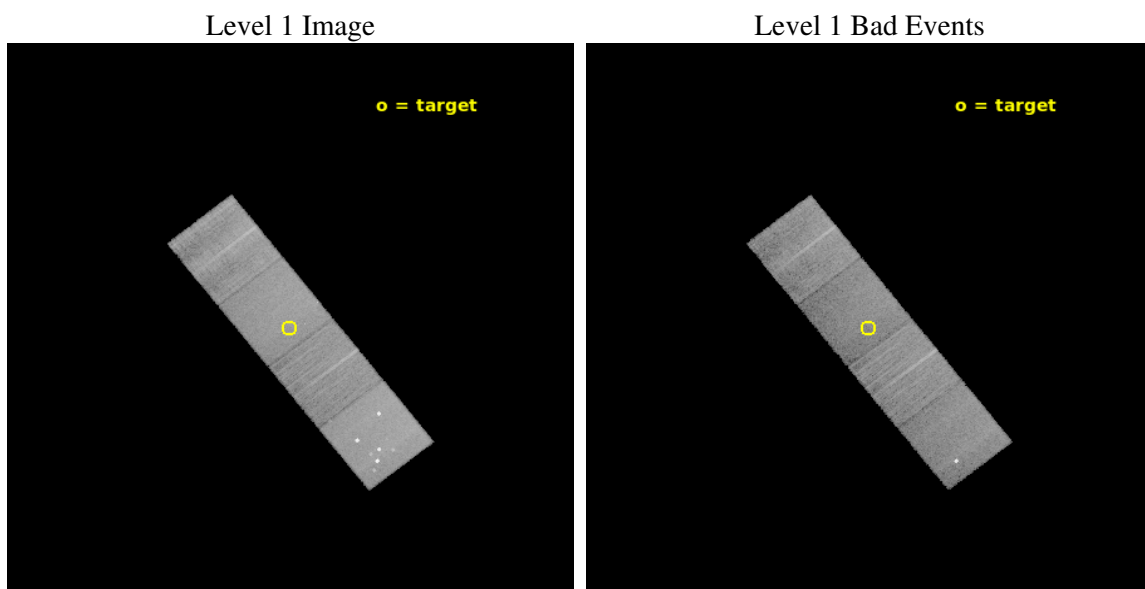
seq_num	601358	Sequence number
obs_id	19401	Observation id
title	Spiral galaxies of the Virgo cluster	Proposal title
observer	Roberto Soria	Principal investigator
object	IC 3322A	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.4275	Observer's specified target RA [deg]
dec_targ	7.216667	Observer's specified target Dec [deg]
ra_nom	186.42705996243	Nominal RA [deg]
dec_nom	7.2180986369051	Nominal Dec [deg]
roll_nom	231.8545920433	Nominal Roll [deg]
revision	2	Processing version of data
ontime	14064.423858762	Sum of GTIs [s]
livetime	13880.661806969	Livetime [s]
ontime5	14064.382818818	Sum of GTIs [s]
ontime6	14061.20073843	Sum of GTIs [s]
ontime7	14064.423858762	Sum of GTIs [s]
ontime8	14061.159688592	Sum of GTIs [s]
l2events	150767	Number of level 2 events



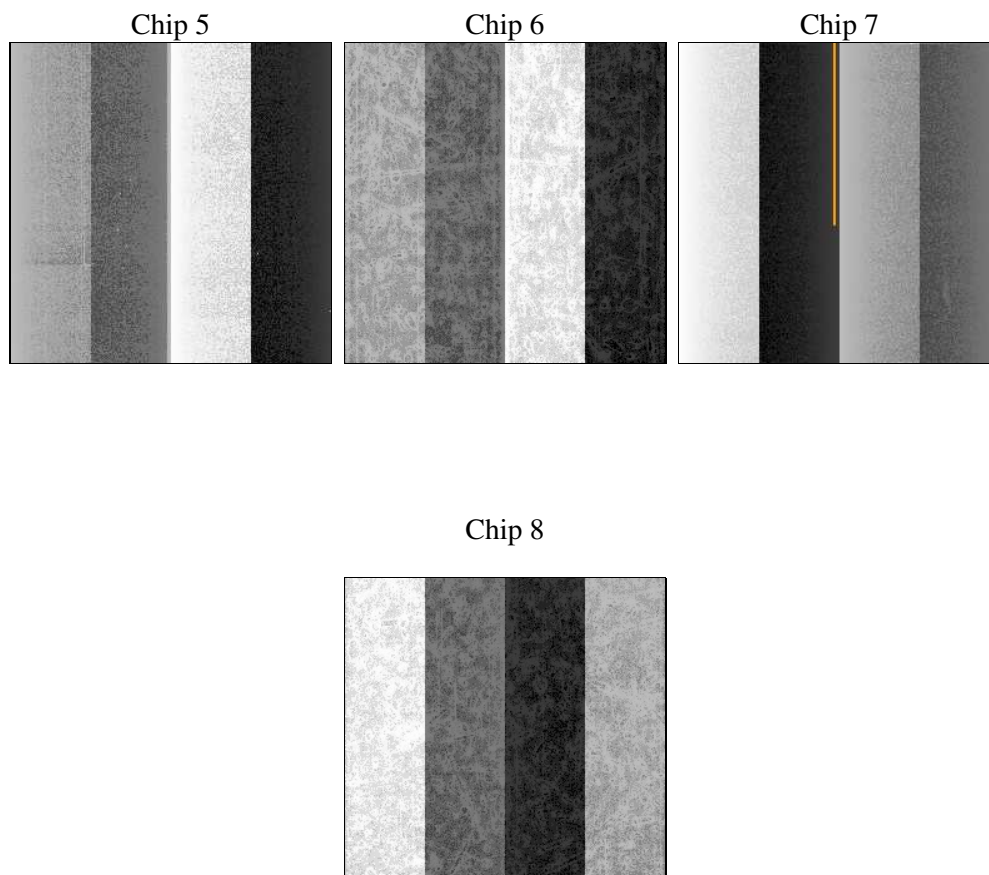
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	14064.423858762	Sum of GTIs [s]
caldsver	4.9.3	 	ontime5	14064.382818818	Sum of GTIs [s]
date	2020-10-25T15:12:34	Date and time of file creation	ontime6	14061.20073843	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	14064.423858762	Sum of GTIs [s]
			ontime8	14061.159688592	Sum of GTIs [s]
			l1events	554691	Number of level 1 events

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	180093	109847	131651	133100
rejected events	88348	98448	74536	97648
rejected %	49%	89%	56%	73%

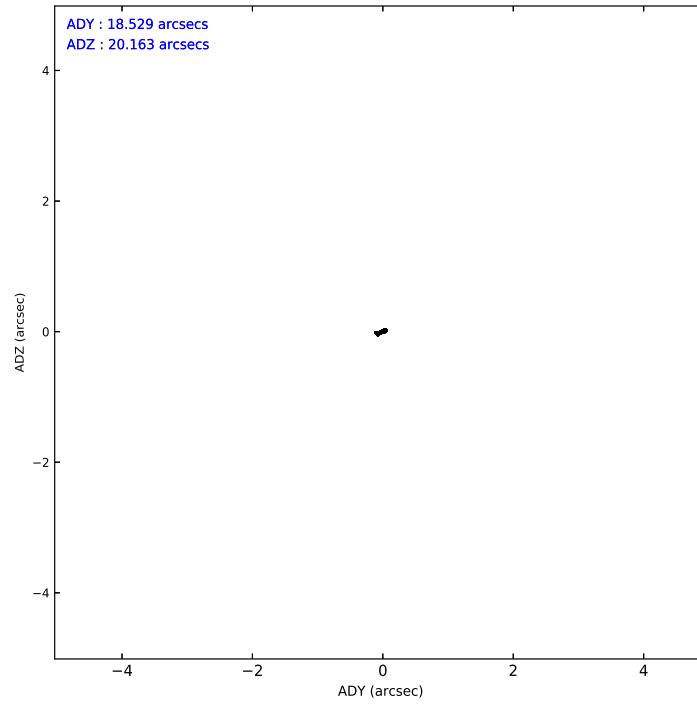
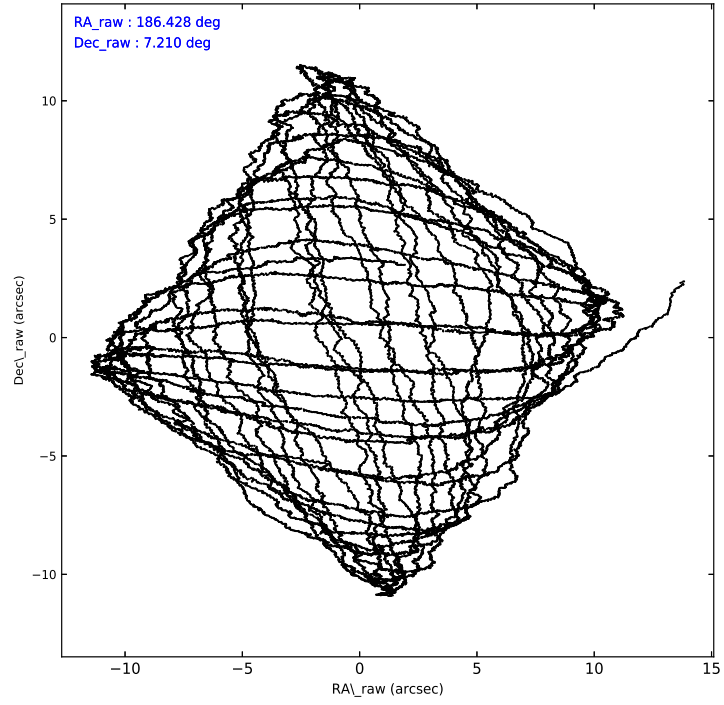
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	17137	3721	4872	10190
	9%	3%	3%	7%
grade 1 events	421	51	212	92
	0%	0%	0%	0%
grade 2 events	26669	2704	11855	8514
	14%	2%	9%	6%
grade 3 events	2412	1123	4561	3722
	1%	1%	3%	2%
grade 4 events	2239	1114	4588	3586
	1%	1%	3%	2%
grade 5 events	10982	4678	12983	7287
	6%	4%	9%	5%
grade 6 events	43304	2744	31255	9442
	24%	2%	23%	7%
grade 7 events	76929	93712	61325	90267
	42%	85%	46%	67%

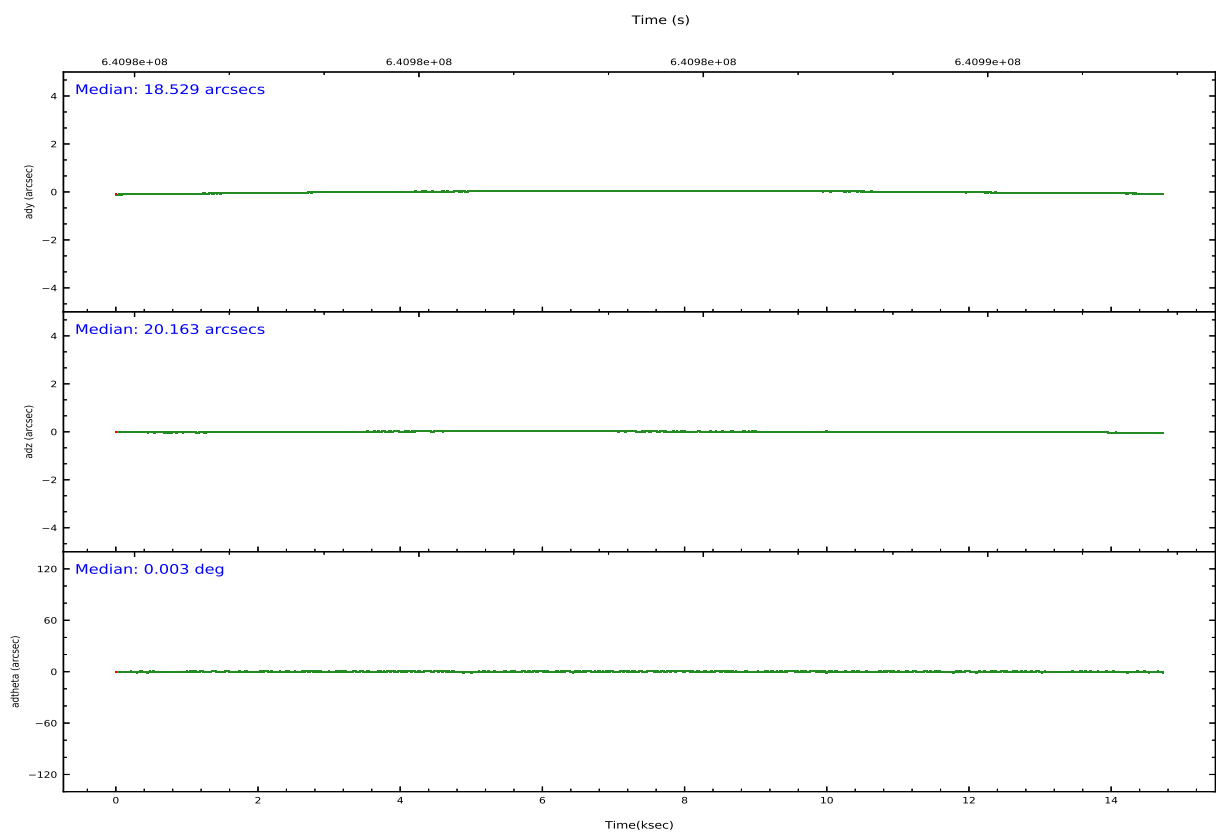
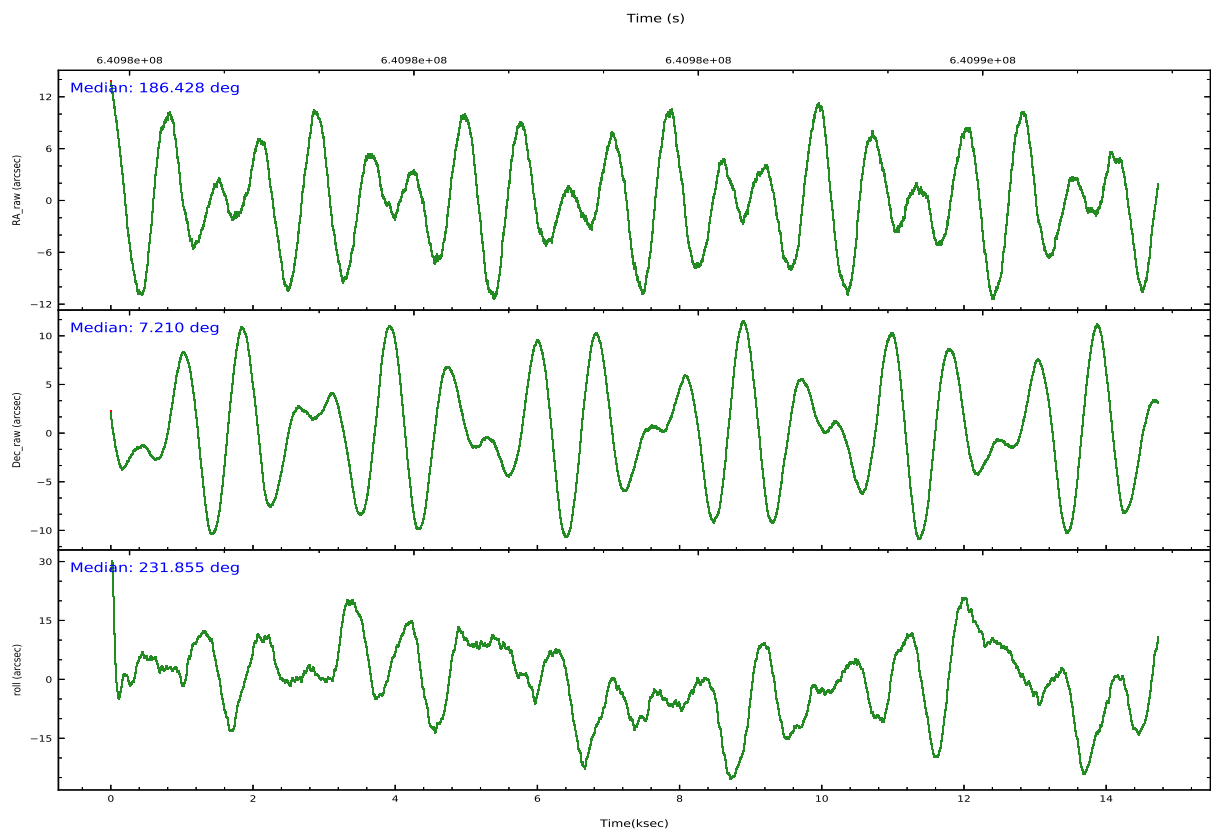
2.2 Compared Parameters

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	186.432003	186.42705996243
[deg] Pointing Dec	7.237580	7.2180986369051
[deg] Pointing Roll	231.702939	231.8545920433
[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)	640976468.184000	640975315.45597
Observation start date	2018-04-24T16:59:59	2018-04-24T16:41:55
[s] Observation end time (MET)	640990468.184000	640991540.1819299
Observation end date	2018-04-24T20:53:19	2018-04-24T21:12:20
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



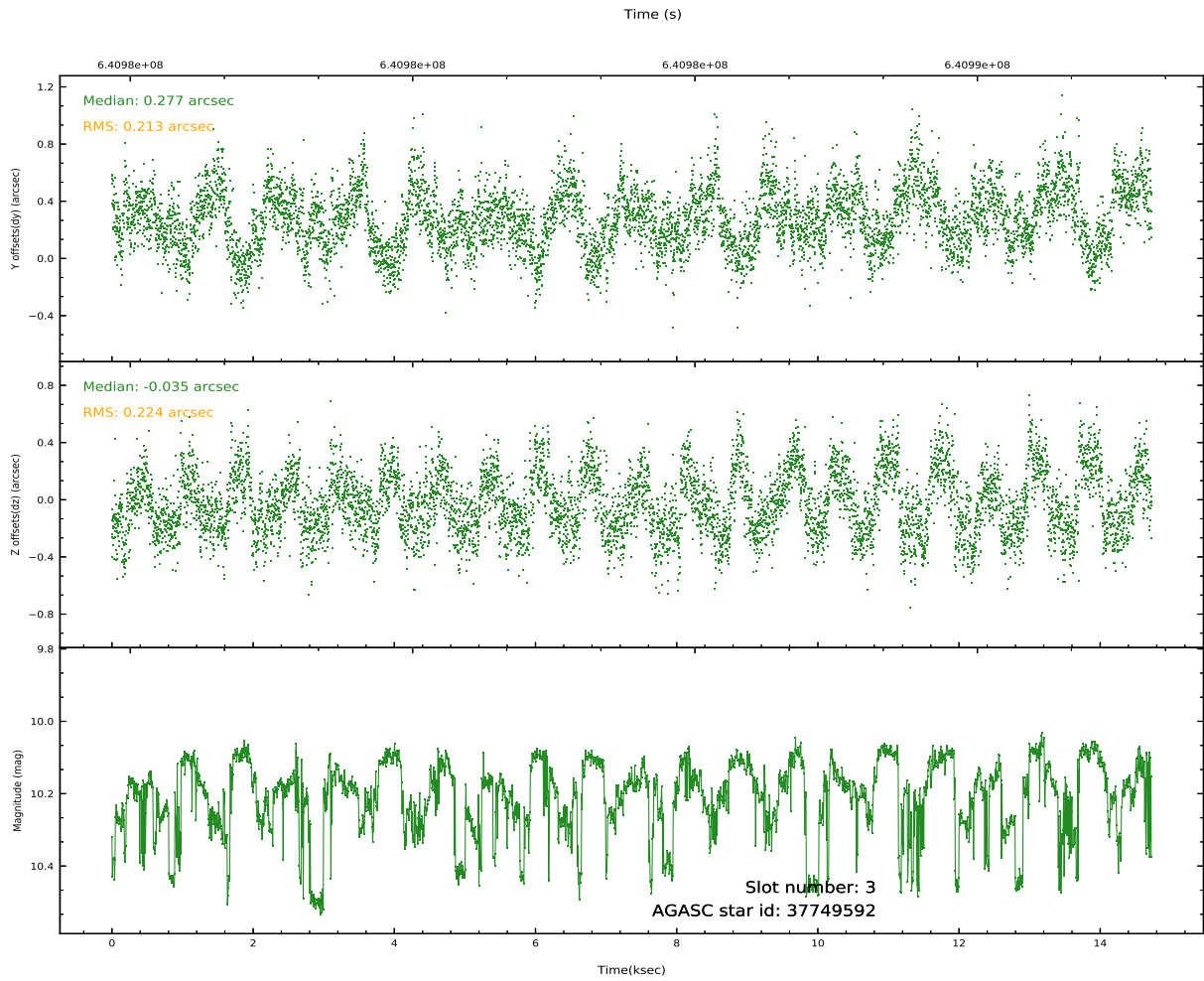
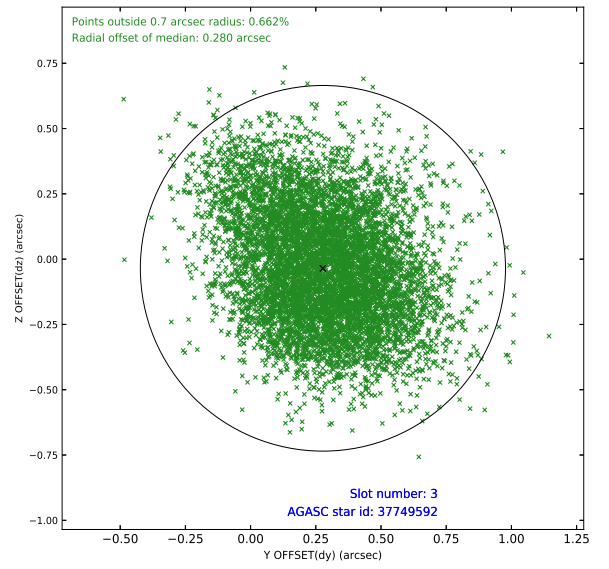
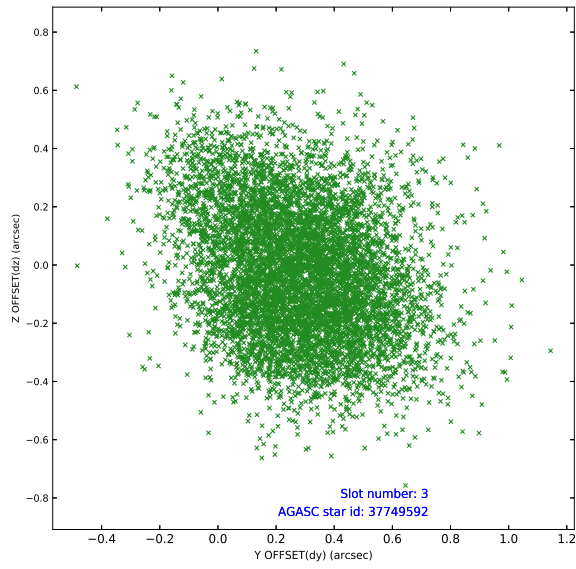


Slot Statistics

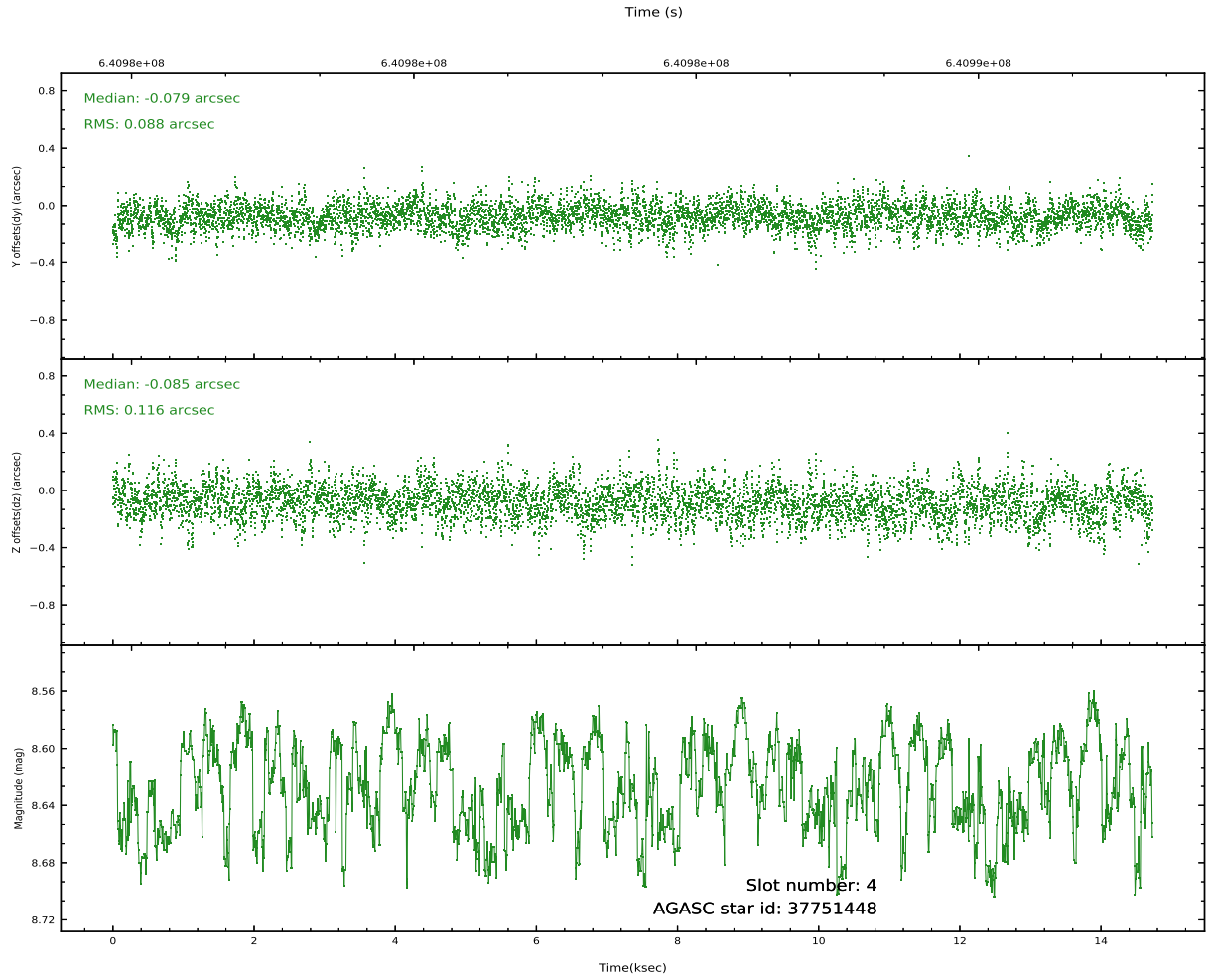
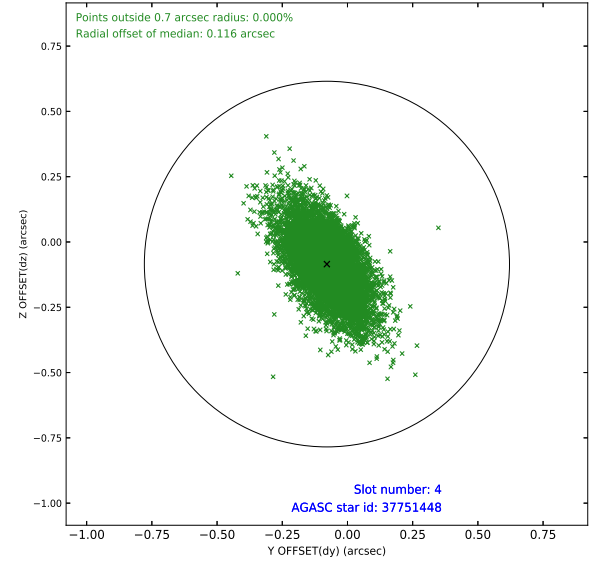
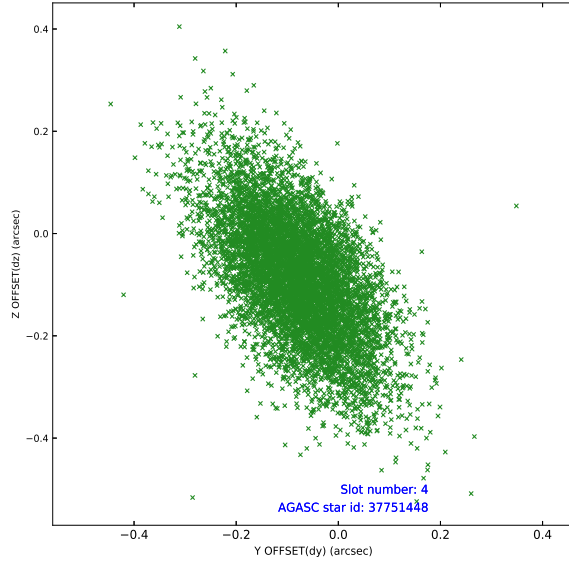
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.04	3594	1.000	0.100	-0.101	0.007	0.012	0.000000	0.000000	-771.70	-1741
1	FID		ACIS-S-4	7.15	3593	1.000	0.167	-0.021	0.006	0.010	0.000000	0.000000	2141.73	166
2	FID		ACIS-S-5	7.13	3591	1.000	-0.298	0.131	0.007	0.012	0.000000	0.000000	-1824.32	160
3	GUIDE	used	37749592	10.19	7103	1.000	0.277	-0.035	0.328	0.533	186.177253	6.631115	2279.64	634
4	GUIDE	used	37751448	8.63	7184	1.000	-0.079	-0.085	0.147	0.268	186.840242	7.148441	-652.06	1342
5	GUIDE	used	37753024	7.97	7184	1.000	-0.007	-0.071	0.153	0.268	186.830113	7.241612	-893.04	1106
6	GUIDE	used	37755024	8.14	7184	1.000	-0.198	-0.133	0.160	0.284	187.037308	7.093611	-934.61	2017
7	GUIDE	used	114565080	10.06	7162	1.000	0.019	0.305	0.293	0.502	186.537681	7.759404	-1708.19	-867

2.4 Star Slots

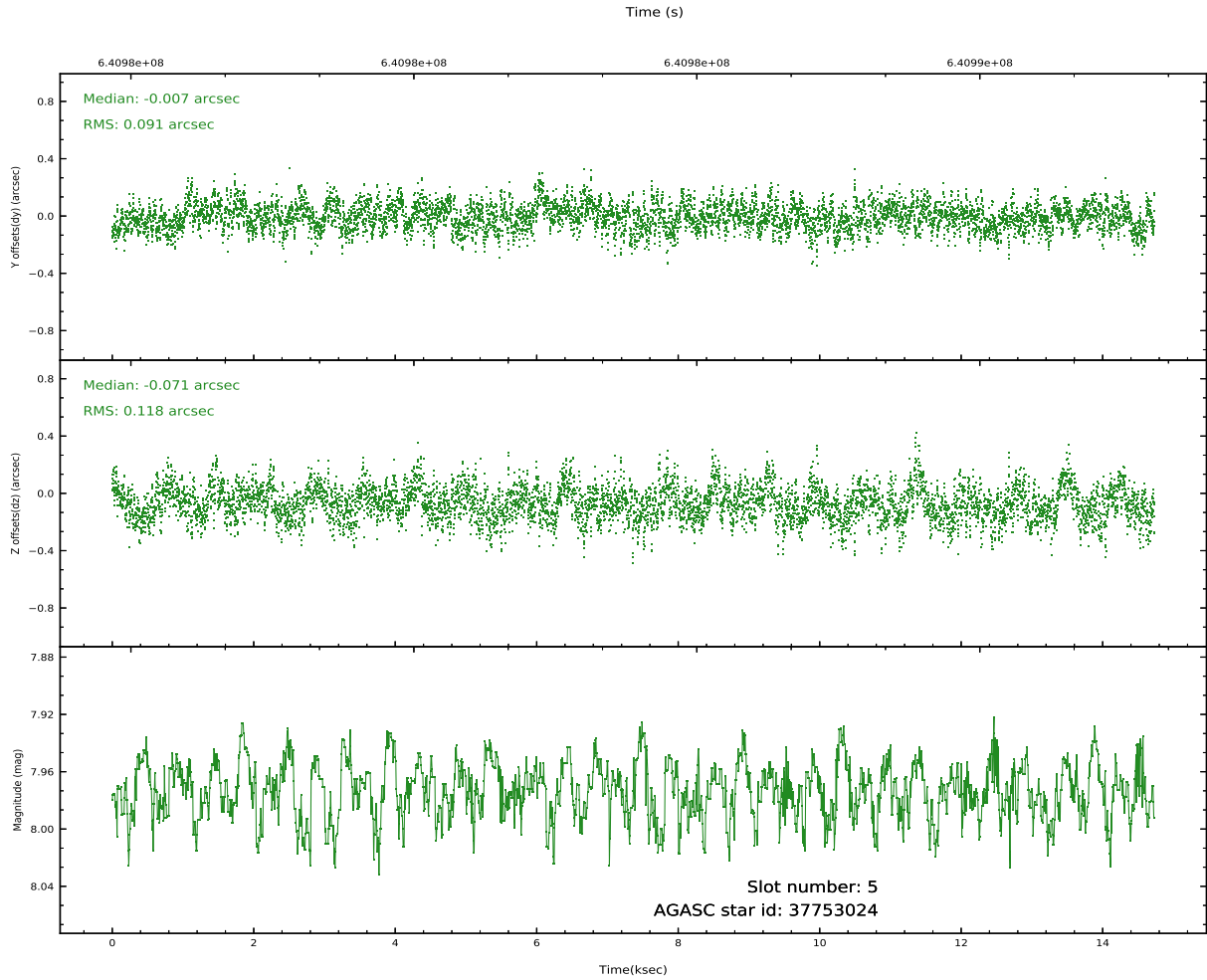
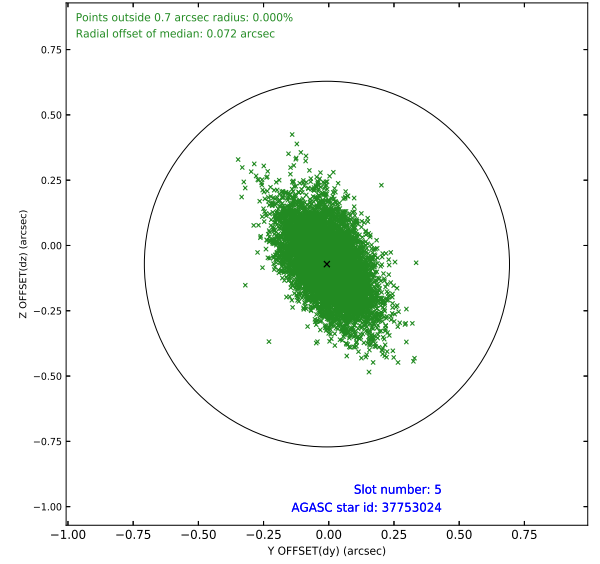
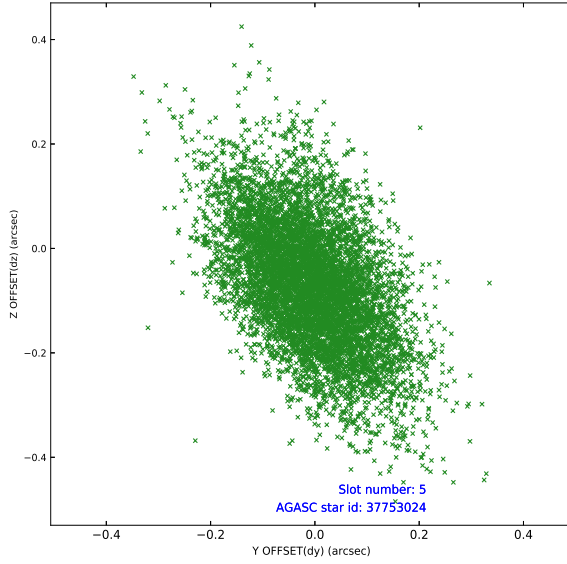
2.4.1 Slot 3



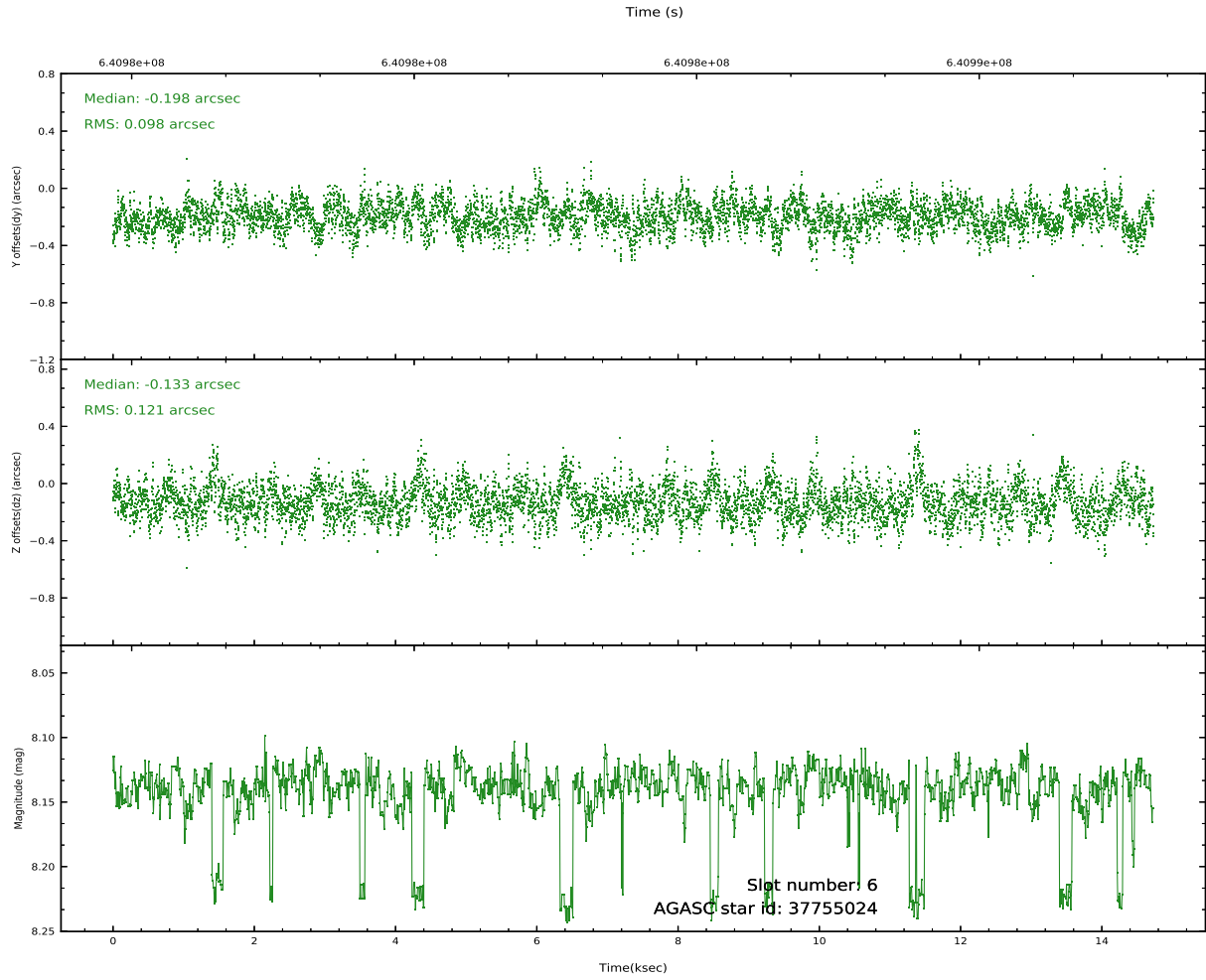
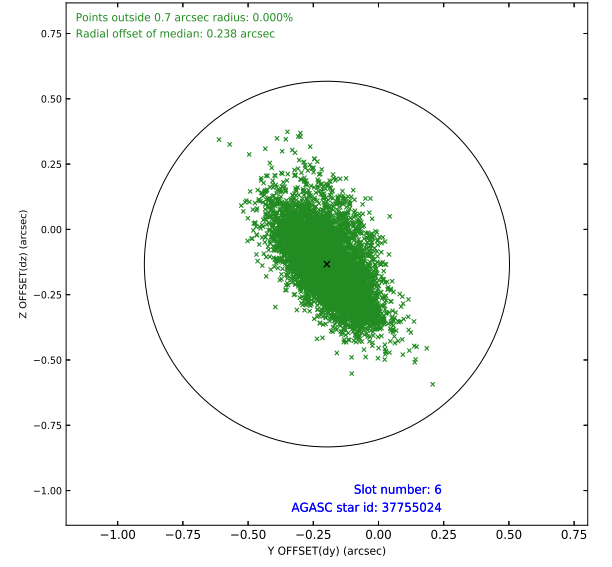
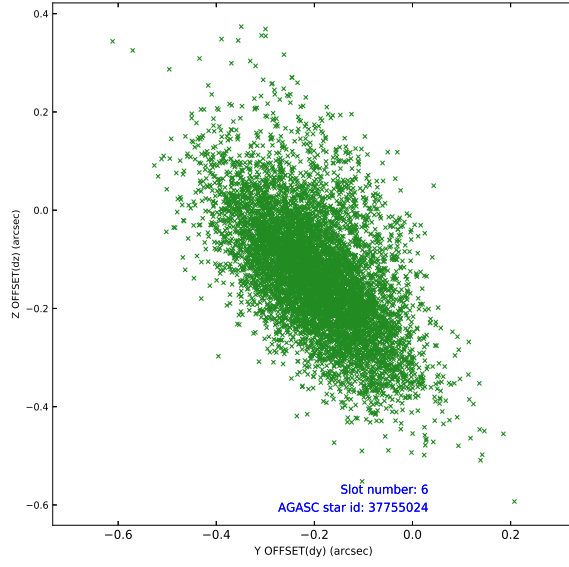
2.4.2 Slot 4



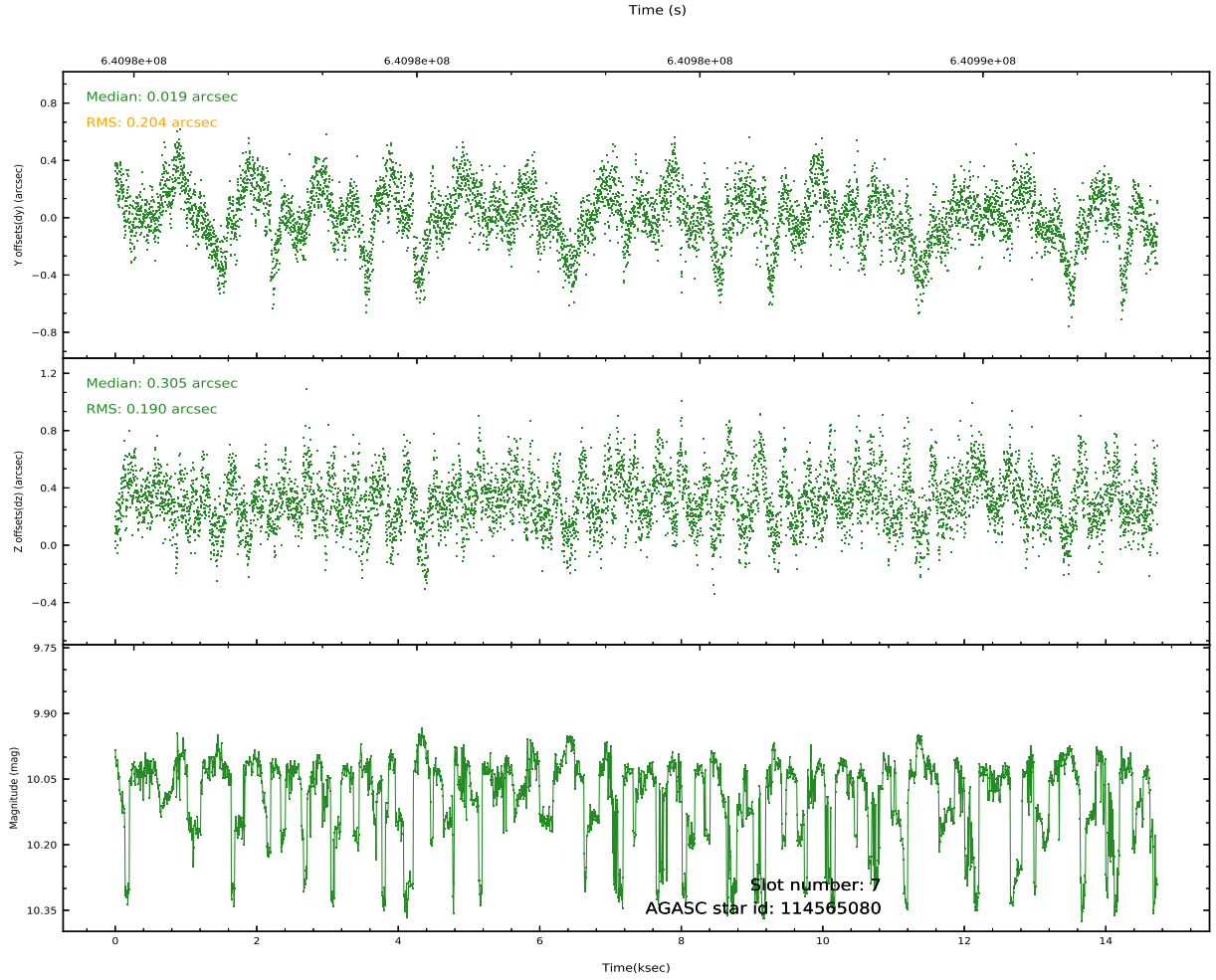
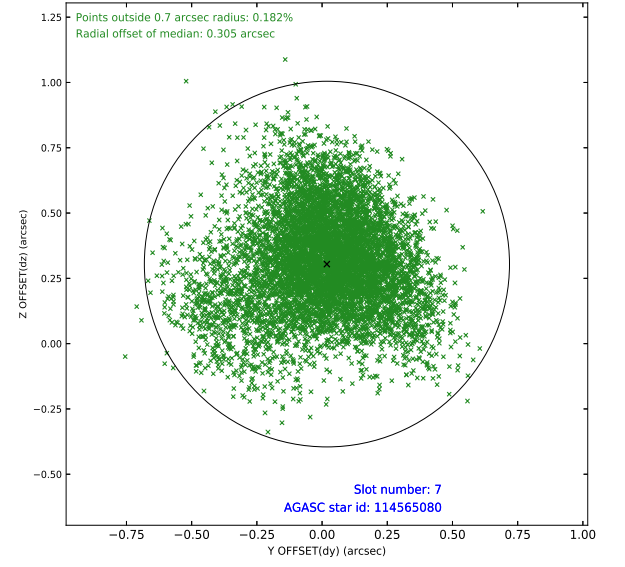
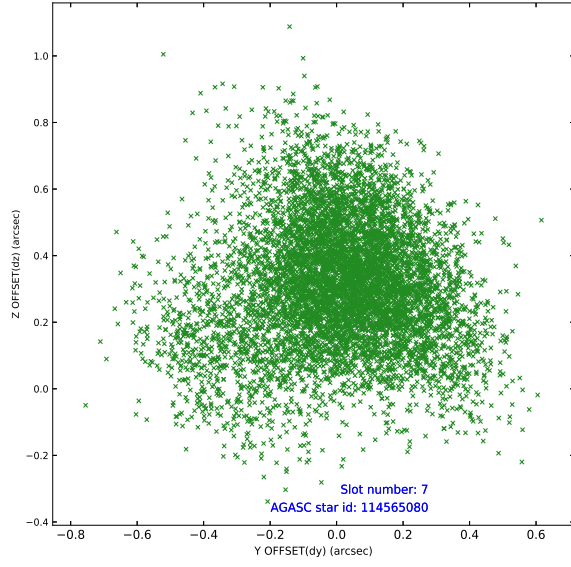
2.4.3 Slot 5



2.4.4 Slot 6

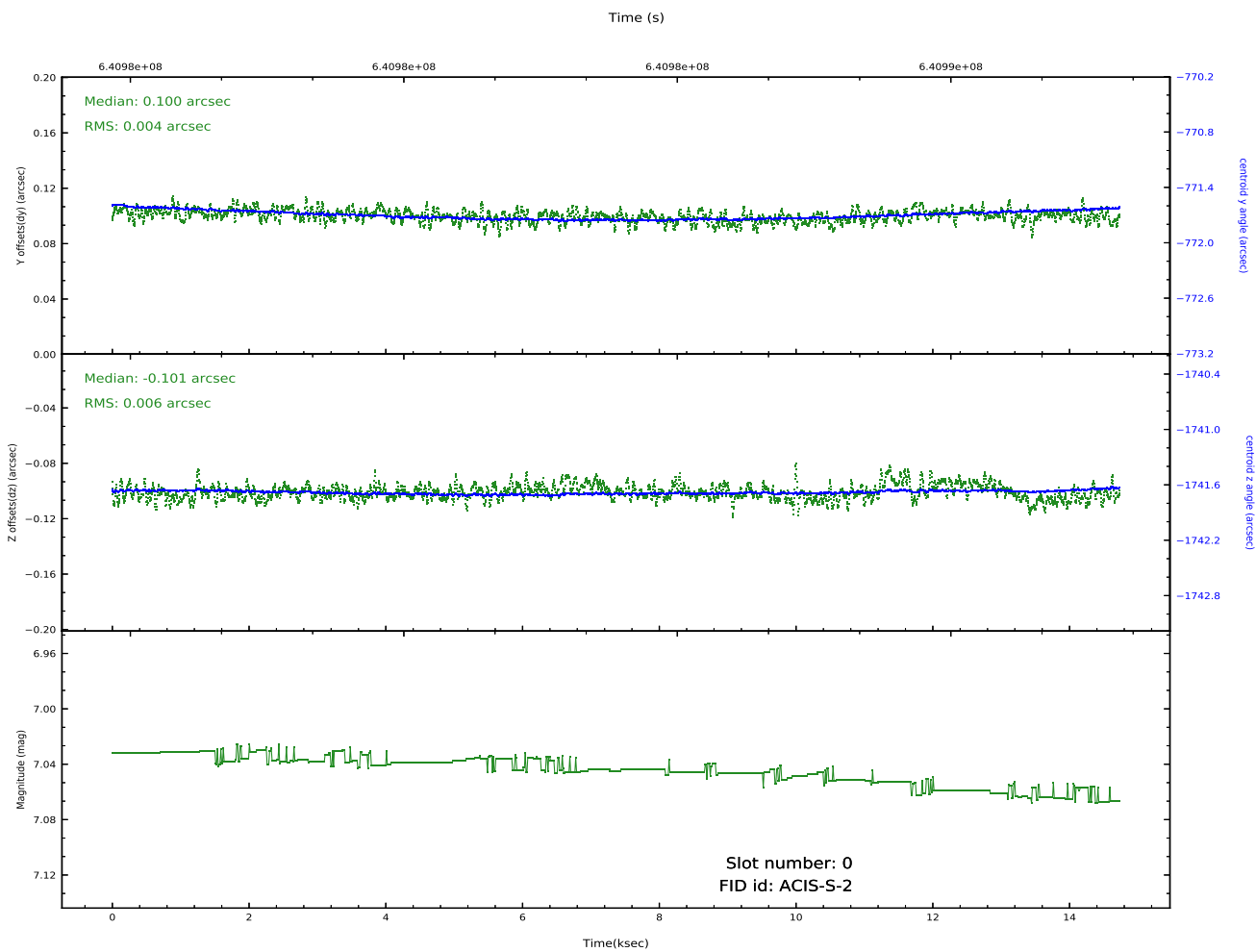
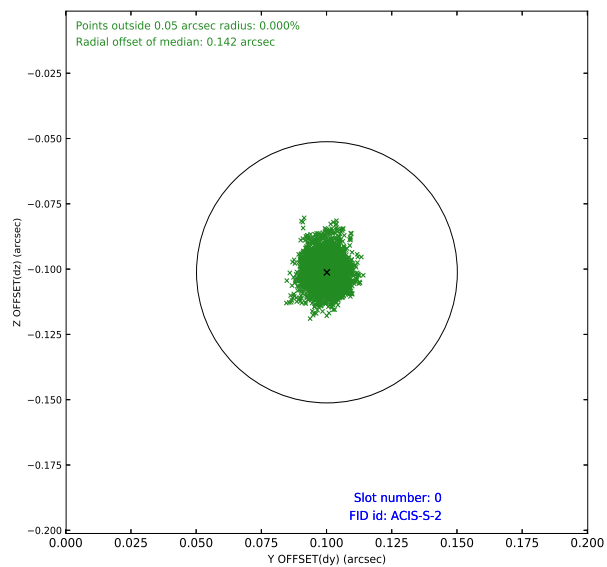
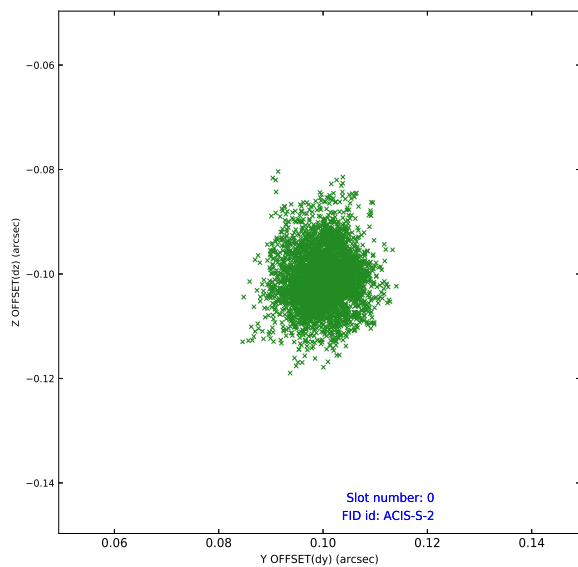


2.4.5 Slot 7

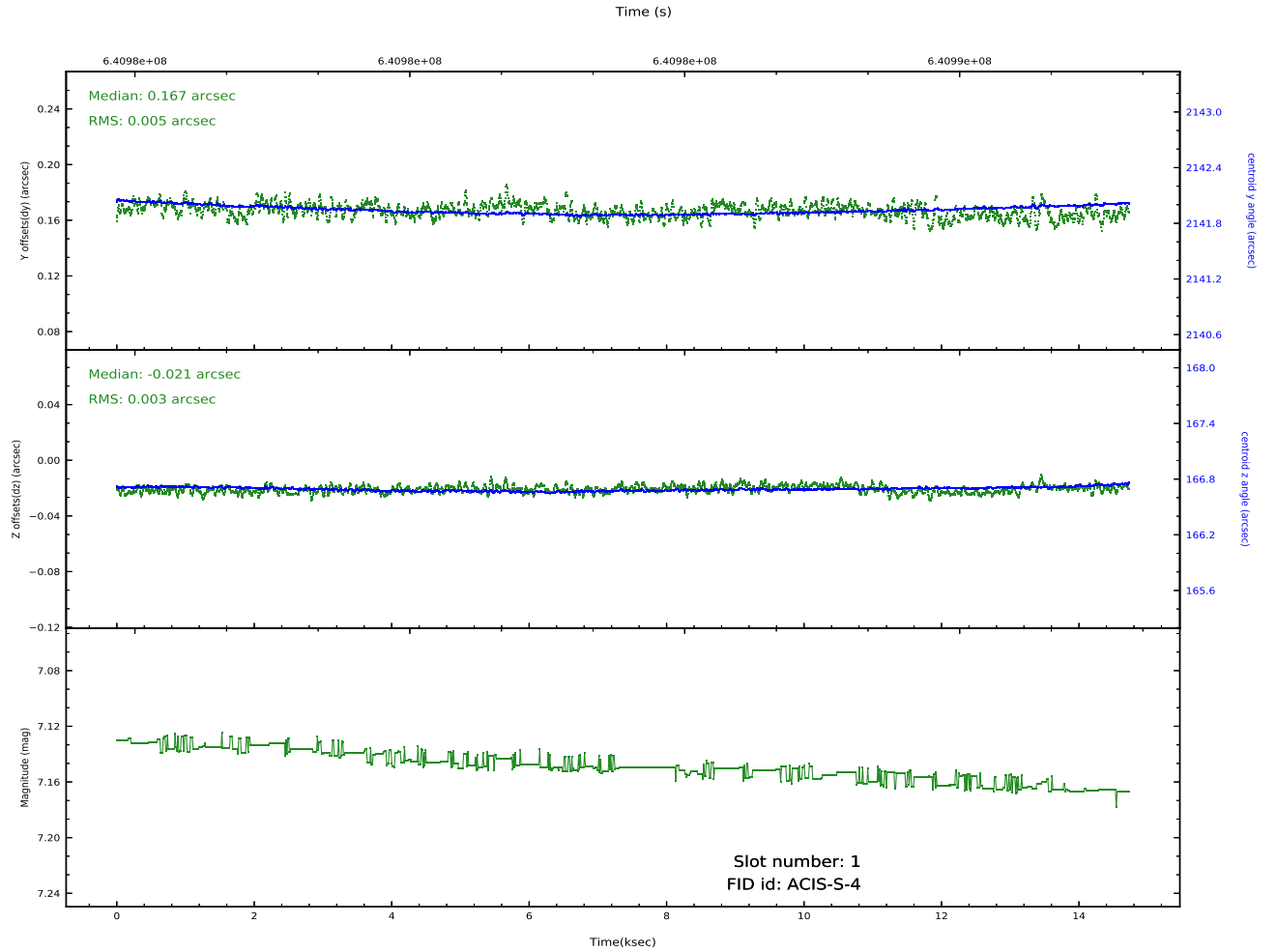
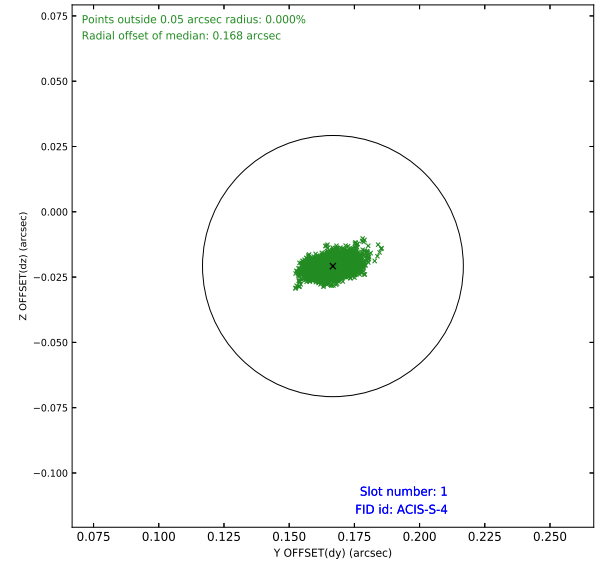
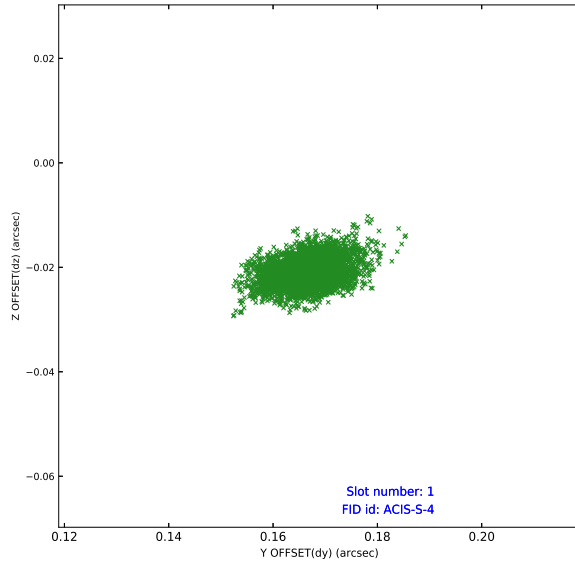


2.5 FID Slots

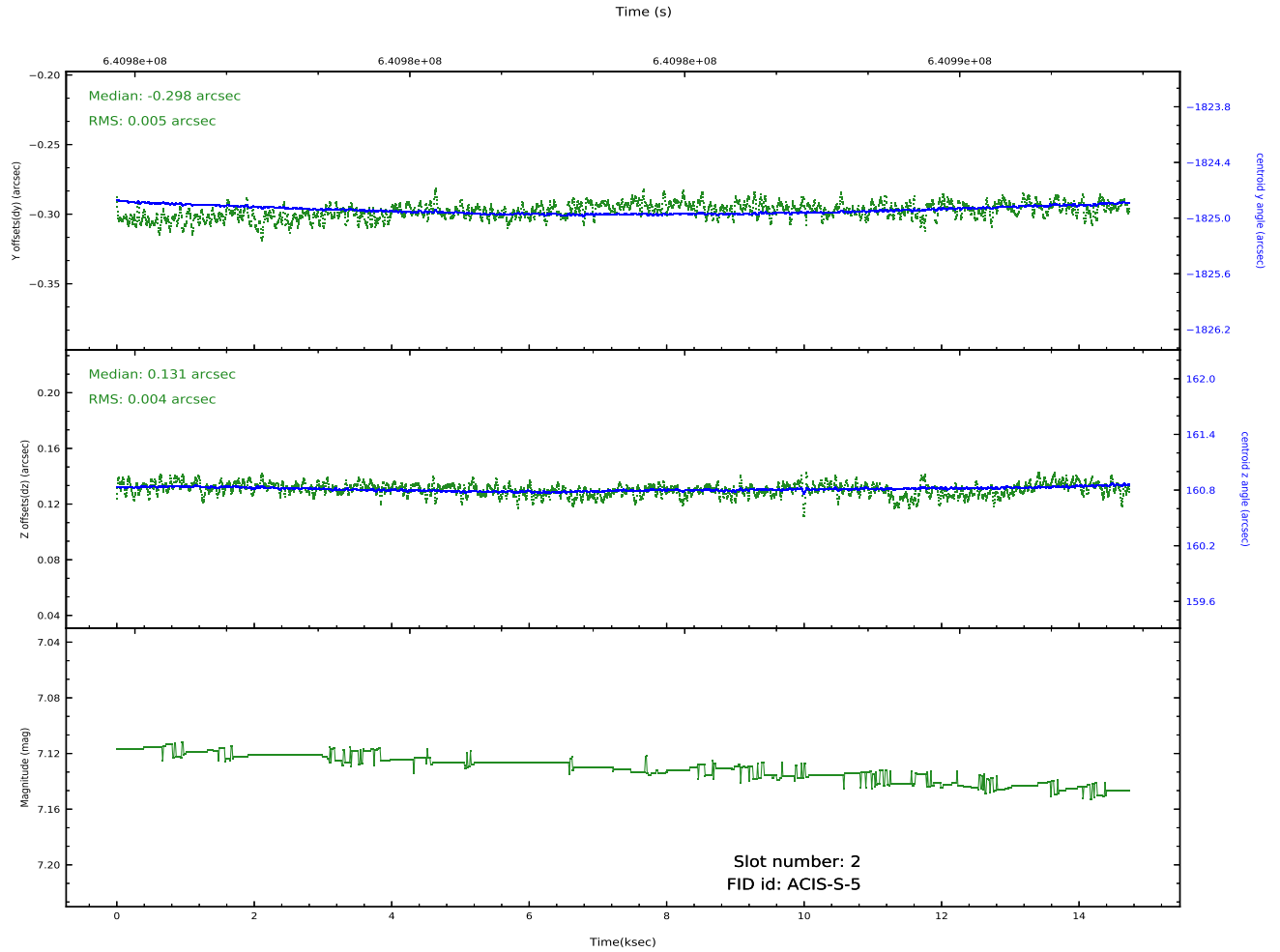
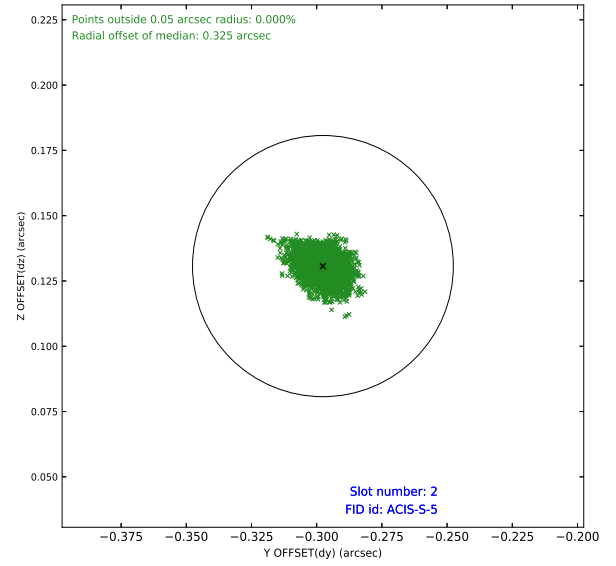
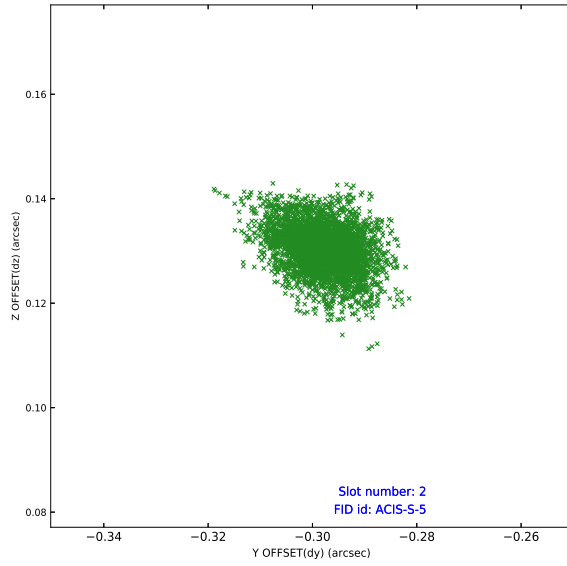
2.5.1 Slot 0



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)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.064423866987

A.2 Comments

There is a faint anomalous bias feature on chip 7 in same node and chip as the target. ACIS was still taking bias maps when the maneuver to the target ended. This caused the target to slew across the chip for a short time, creating an elongated region of slightly enhanced bias values on the chip during the bias measurement. Pixels in the event data that have been bias-corrected by one of the 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. Approximate coordinates of corners of feature: (186.52120,7.25246), (186.52349,7.25536), (186.51072,7.26530), (186.50842,7.26241).