

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20993 - L2 Version 2
Chandra X-Ray Center

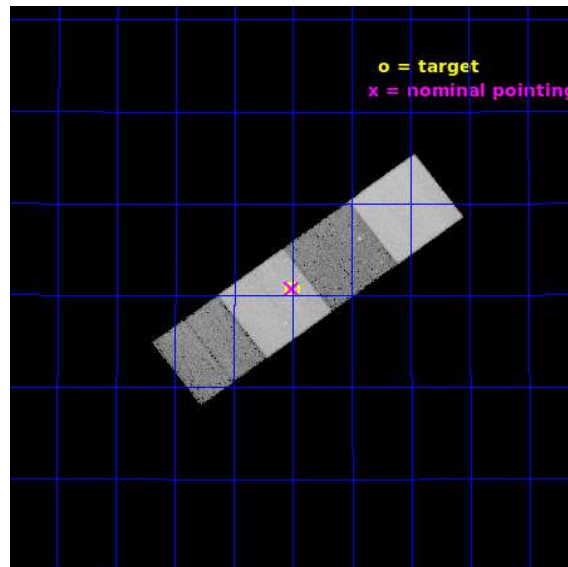
L2 Processing Date : Oct 24 2020

Contents

1	Front	2
2	OBI	3
2.1	OBI	3
2.1.1	Images	3
2.1.2	Bias	3
2.1.3	Parameters	4
2.1.4	Events	4
2.2	Compared Parameters	5
2.3	Aspect	6
2.4	Star Slots	9
2.4.1	Slot 3	9
2.4.2	Slot 4	10
2.4.3	Slot 5	11
2.4.4	Slot 6	12
2.4.5	Slot 7	13
2.5	FID Slots	14
2.5.1	Slot 0	14
2.5.2	Slot 1	15
2.5.3	Slot 2	16
A	Summary	17
A.1	Status	17
A.2	Comments	17

1 Front

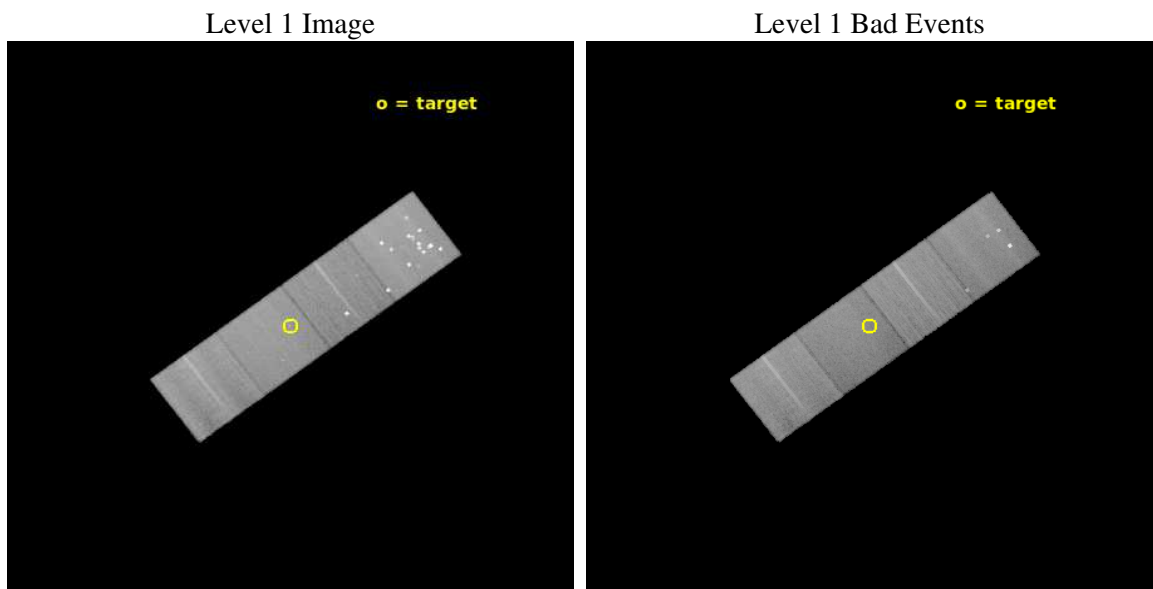
seq_num	703345	Sequence number
obs_id	20993	Observation id
title	Constraining the Nature of an Intermediate Mass Black Hole in the Nucleus of Mrk 59	Proposal title
observer	Yi-Jung Yang	Principal investigator
object	Mrk 59	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	194.75125	Observer's specified target RA [deg]
dec_targ	34.84525	Observer's specified target Dec [deg]
ra_nom	194.75249112056	Nominal RA [deg]
dec_nom	34.845706063049	Nominal Dec [deg]
roll_nom	143.14824340821	Nominal Roll [deg]
revision	2	Processing version of data
ontime	28058.100215912	Sum of GTIs [s]
livetime	27691.500480518	Livetime [s]
ontime5	28058.100215912	Sum of GTIs [s]
ontime6	28054.959115386	Sum of GTIs [s]
ontime7	28058.100215912	Sum of GTIs [s]
ontime8	28051.818035364	Sum of GTIs [s]
l2events	308762	Number of level 2 events



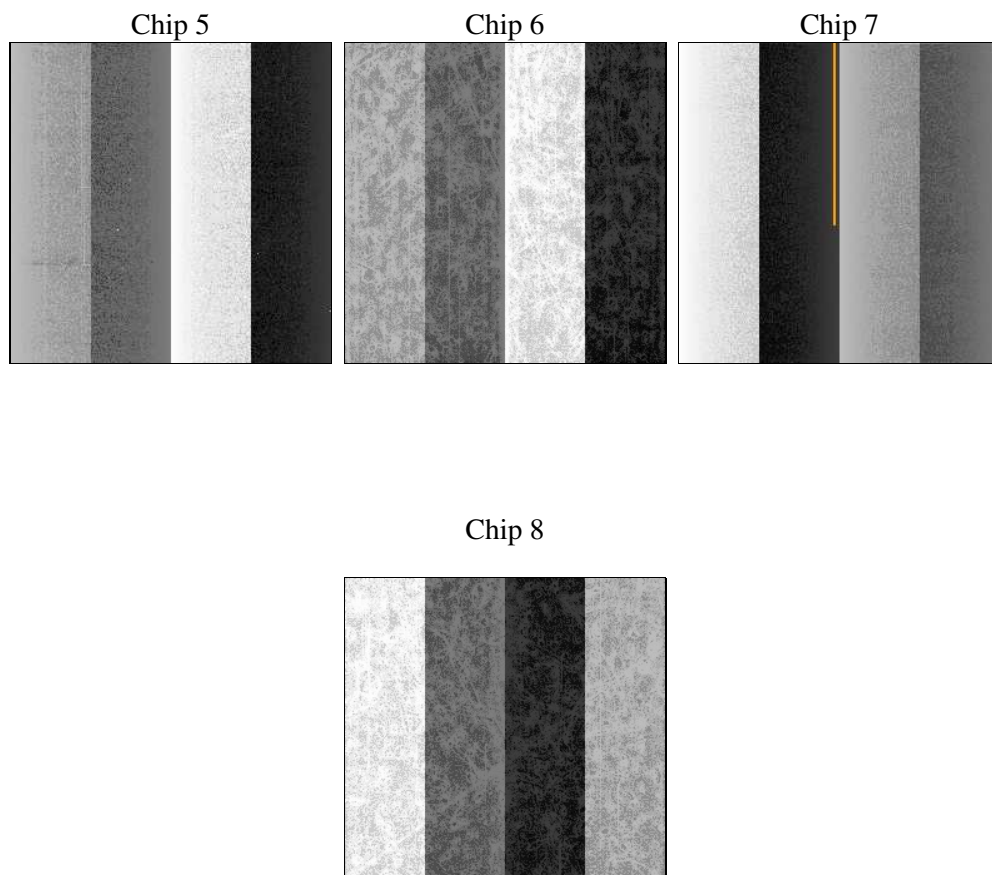
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	28000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	28058.100215912	Sum of GTIs [s]
caldsver	4.9.3	 	ontime5	28058.100215912	Sum of GTIs [s]
date	2020-10-25T03:28:03	Date and time of file creation	ontime6	28054.959115386	Sum of GTIs [s]
revision	2	Processing version of data	ontime7	28058.100215912	Sum of GTIs [s]
			ontime8	28051.818035364	Sum of GTIs [s]
			l1events	1210044	Number of level 1 events

2.1.4 Events

	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	427500	234440	272616	275488
rejected events	191536	202038	154560	207911
rejected %	44%	86%	56%	75%

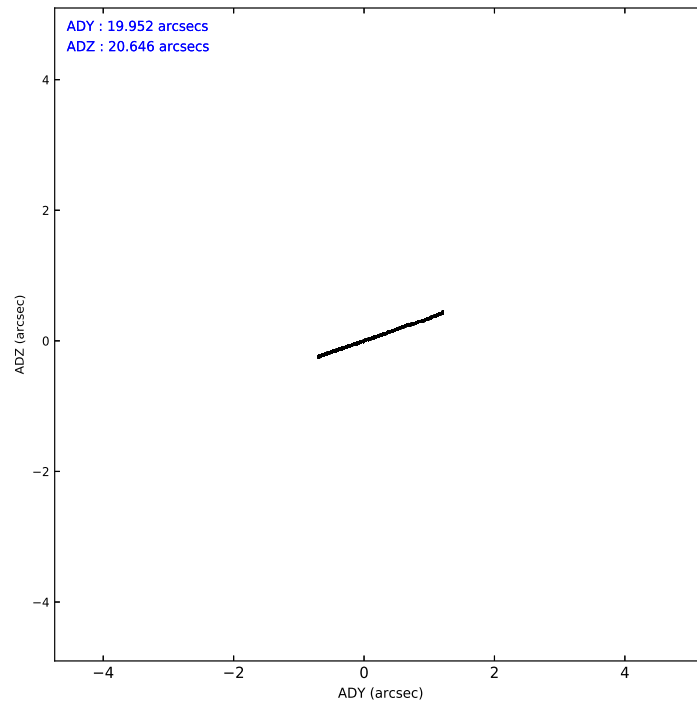
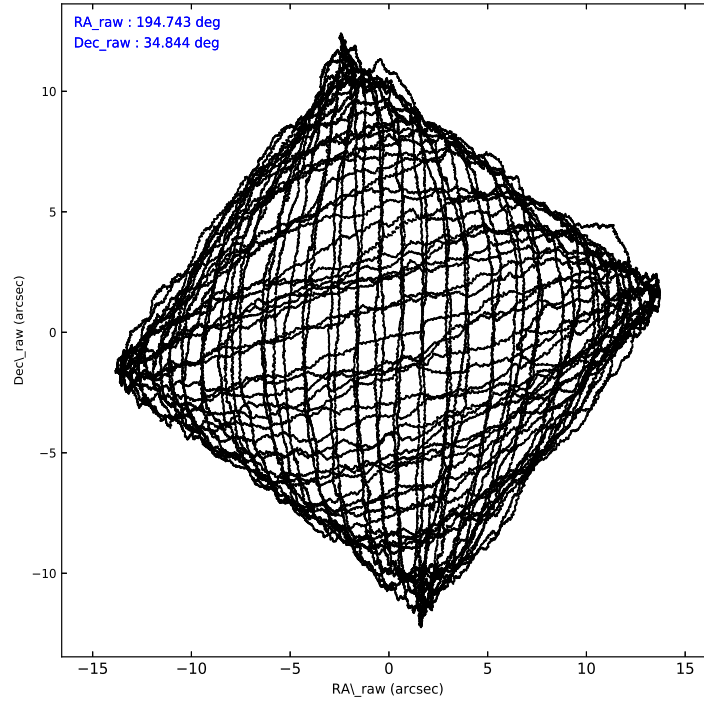
	ccd 5	ccd 6	ccd 7	ccd 8
grade 0 events	66719	15478	10206	18636
	15%	6%	3%	6%
grade 1 events	899	128	408	207
	0%	0%	0%	0%
grade 2 events	63187	6445	24194	16496
	14%	2%	8%	5%
grade 3 events	6311	2097	9491	7041
	1%	0%	3%	2%
grade 4 events	6267	2079	9429	6610
	1%	0%	3%	2%
grade 5 events	24014	9113	26215	14297
	5%	3%	9%	5%
grade 6 events	93543	6313	64753	18818
	21%	2%	23%	6%
grade 7 events	166560	192787	127920	193383
	38%	82%	46%	70%

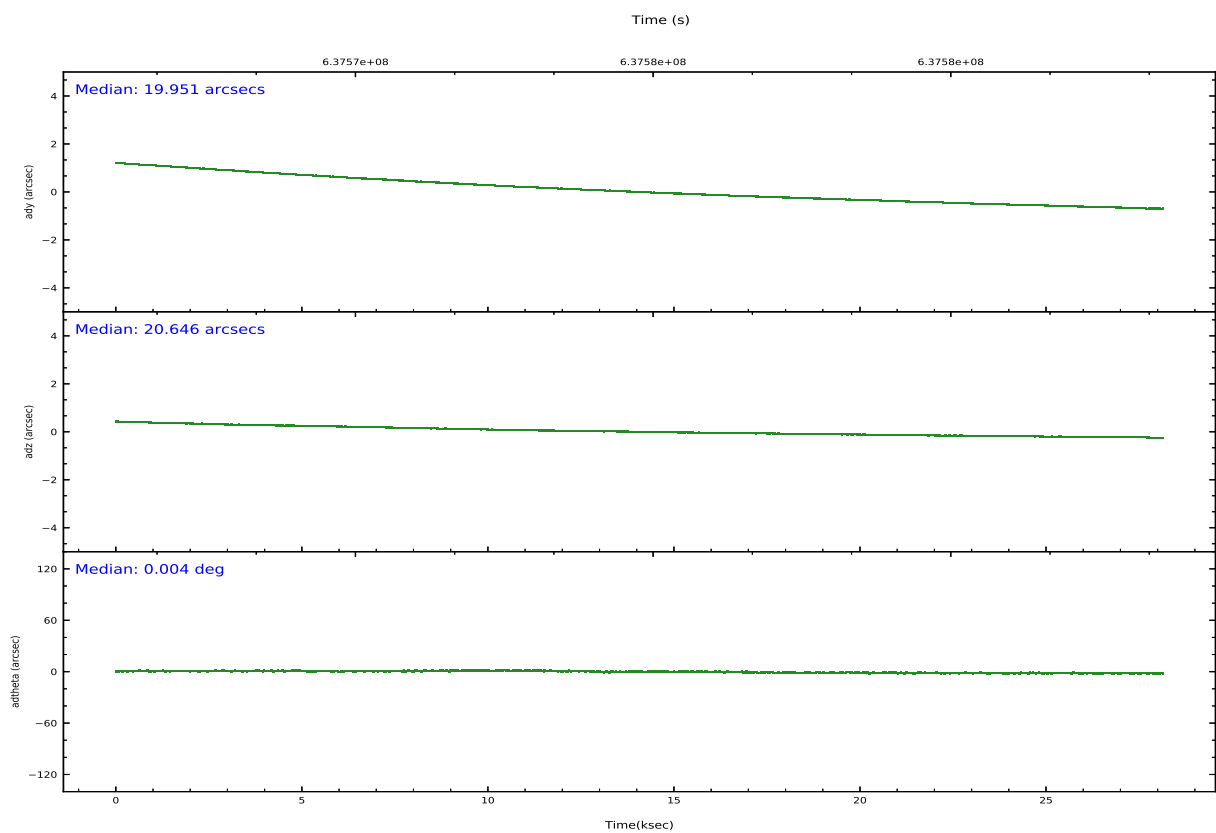
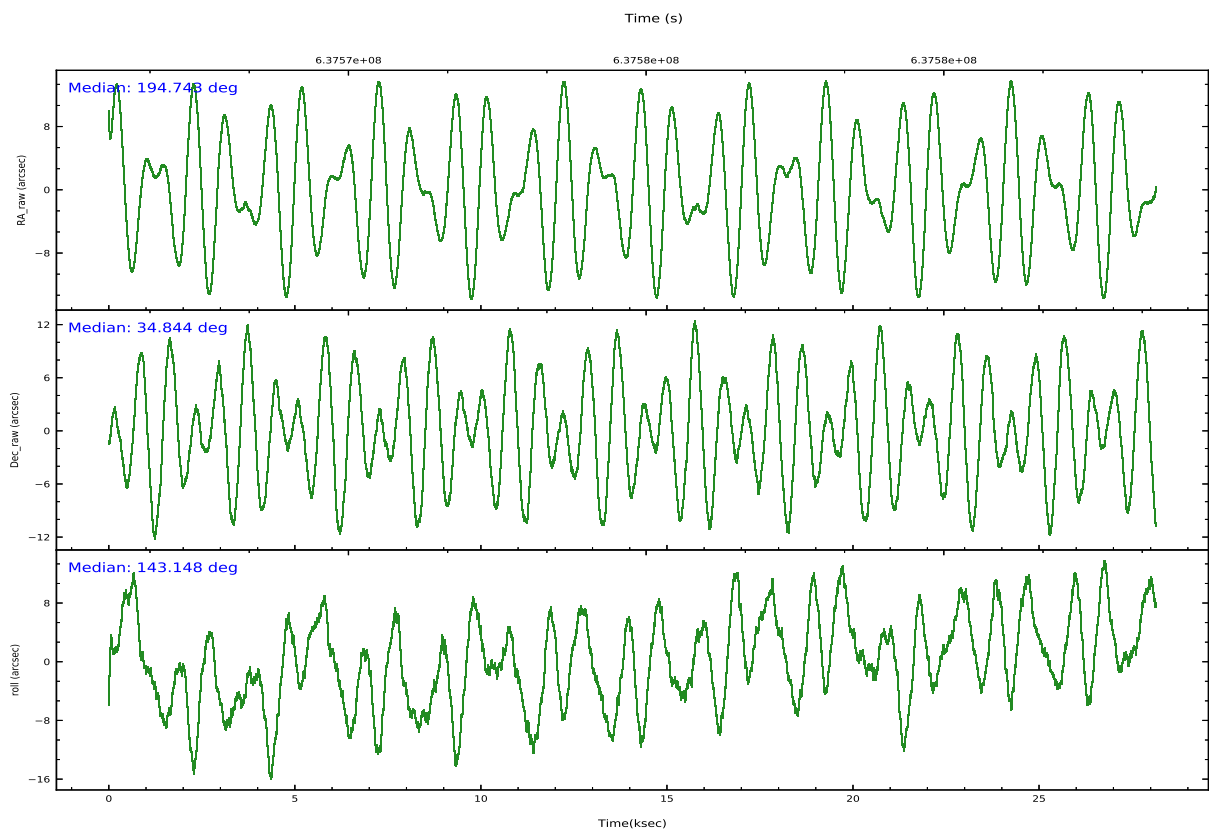
2.2 Compared Parameters

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	194.775810	194.75249112056
[deg] Pointing Dec	34.841429	34.845706063049
[deg] Pointing Roll	142.985969	143.14824340821
[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)	637561707.184000	637560053.69195
Observation start date	2018-03-16T04:27:18	2018-03-16T04:00:53
[s] Observation end time (MET)	637589707.184000	637590859.0437599
Observation end date	2018-03-16T12:13:58	2018-03-16T12:34:19
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



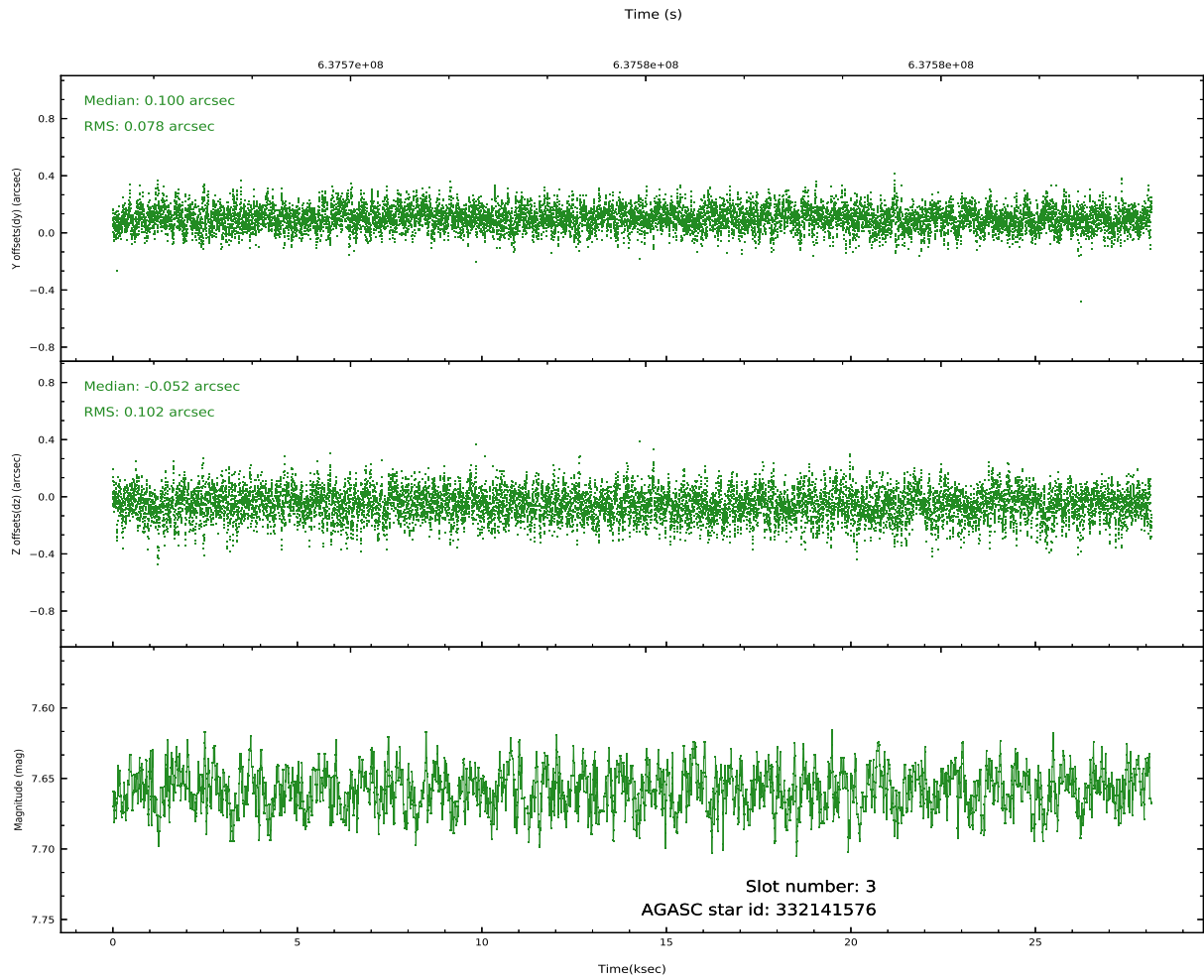
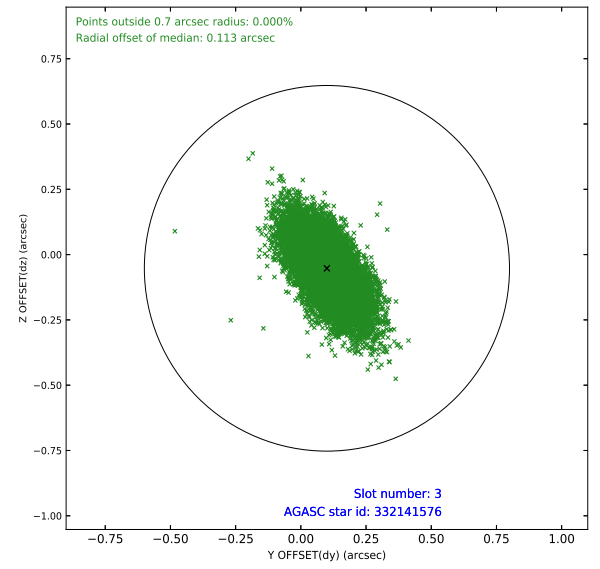
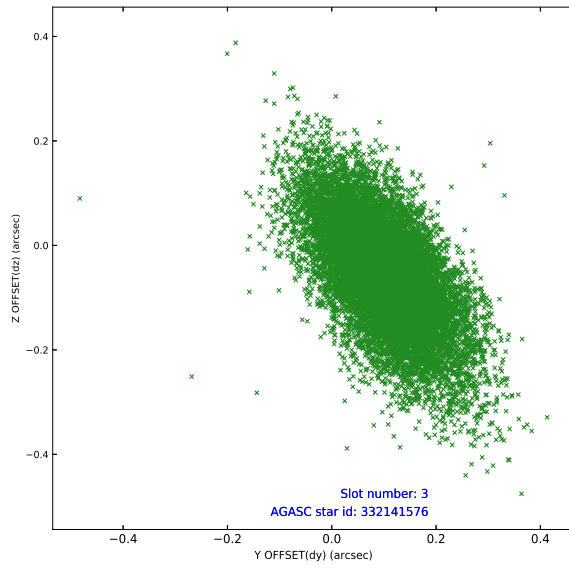


Slot Statistics

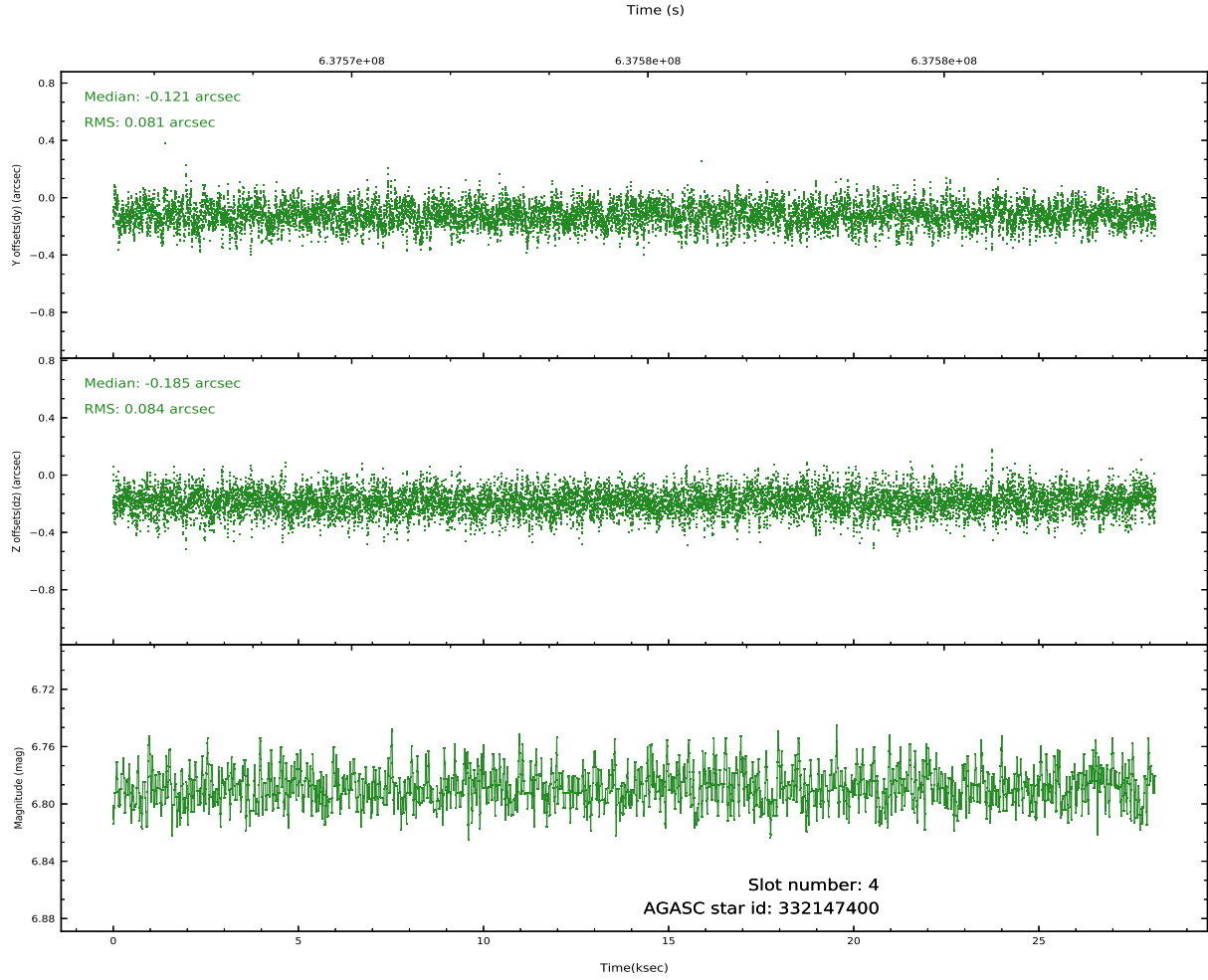
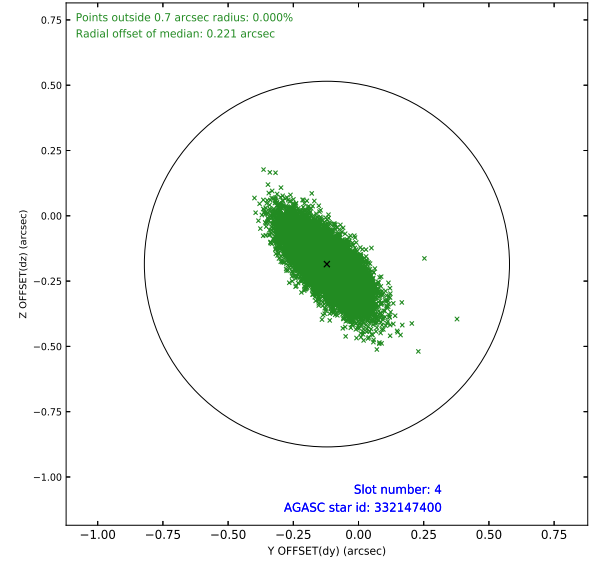
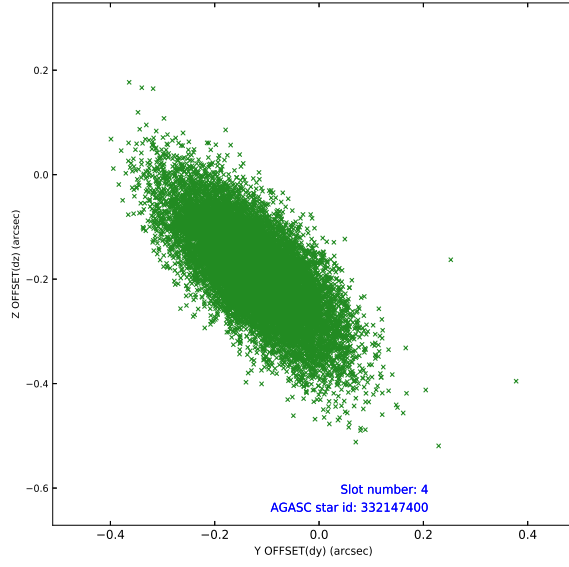
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.13	6866	1.000	0.097	-0.111	0.017	0.038	0.000000	0.000000	-773.30	-1742
1	FID		ACIS-S-4	7.25	6866	1.000	0.136	-0.016	0.036	0.063	0.000000	0.000000	2140.23	165
2	FID		ACIS-S-5	7.24	6865	1.000	-0.263	0.137	0.022	0.030	0.000000	0.000000	-1826.12	160
3	GUIDE	used	332141576	7.66	13729	1.000	0.100	-0.052	0.130	0.234	195.042870	34.998417	-286.61	-925
4	GUIDE	used	332147400	6.79	13732	1.000	-0.121	-0.185	0.117	0.216	194.745902	34.545694	-570.19	903
5	GUIDE	used	332148064	8.84	13716	1.000	-0.087	0.044	0.149	0.271	194.866742	34.047668	-1936.74	2119
6	GUIDE	used	332150720	7.53	13731	1.000	0.084	-0.081	0.153	0.253	195.031183	34.919346	-431.28	-677
7	GUIDE	used	332147328	9.68	13580	1.000	0.025	0.275	0.201	0.338	195.656361	34.859115	-2030.99	-1625

2.4 Star Slots

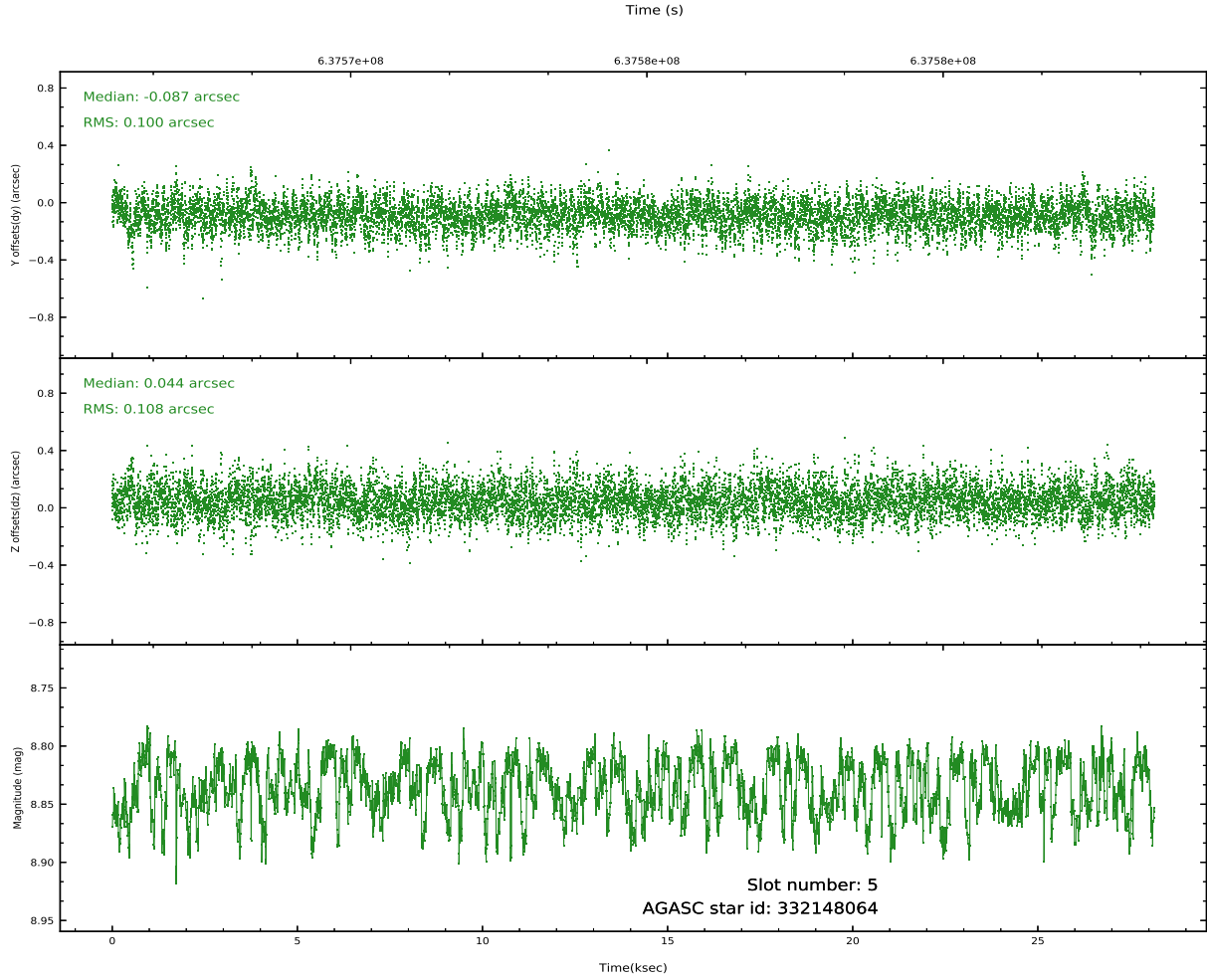
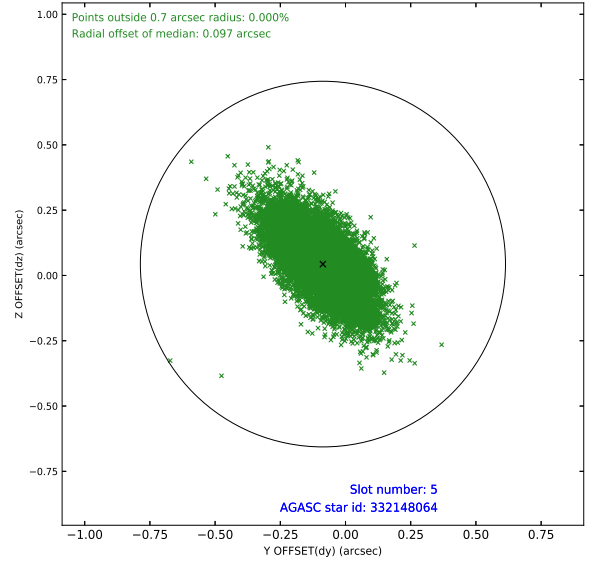
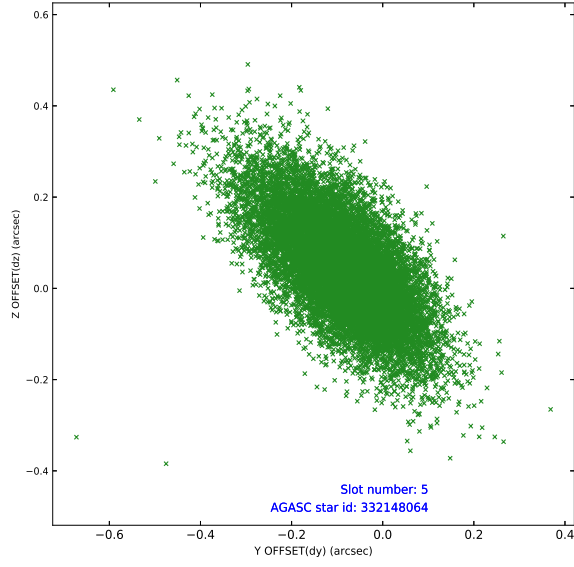
2.4.1 Slot 3



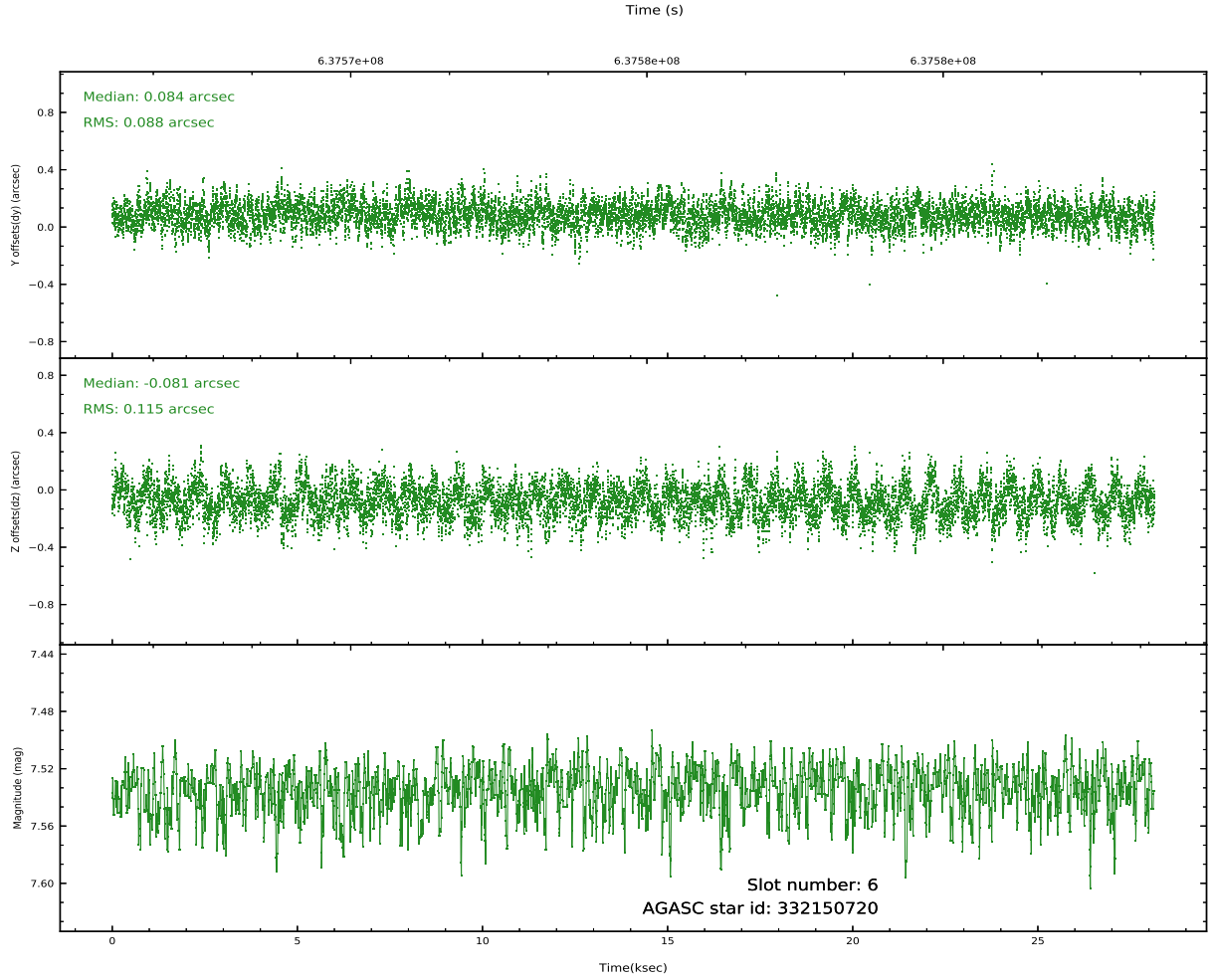
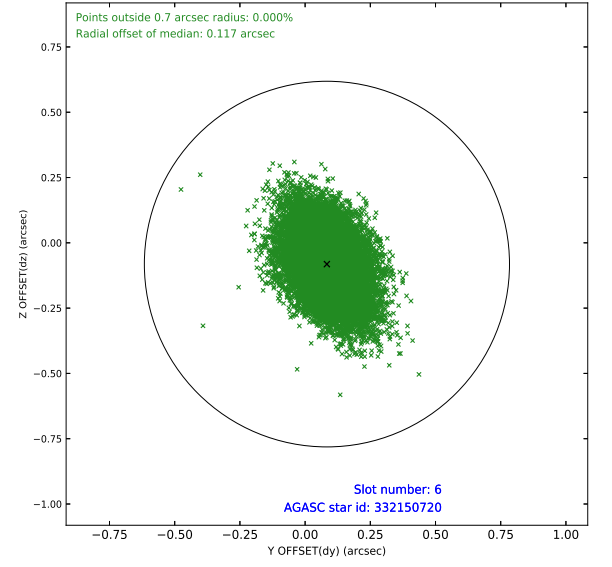
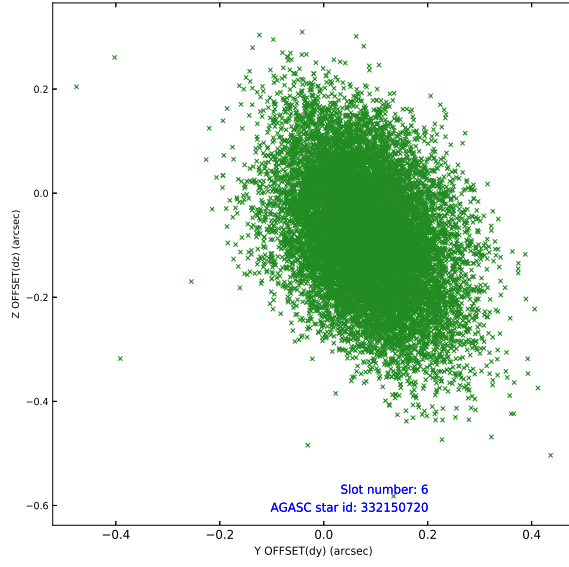
2.4.2 Slot 4



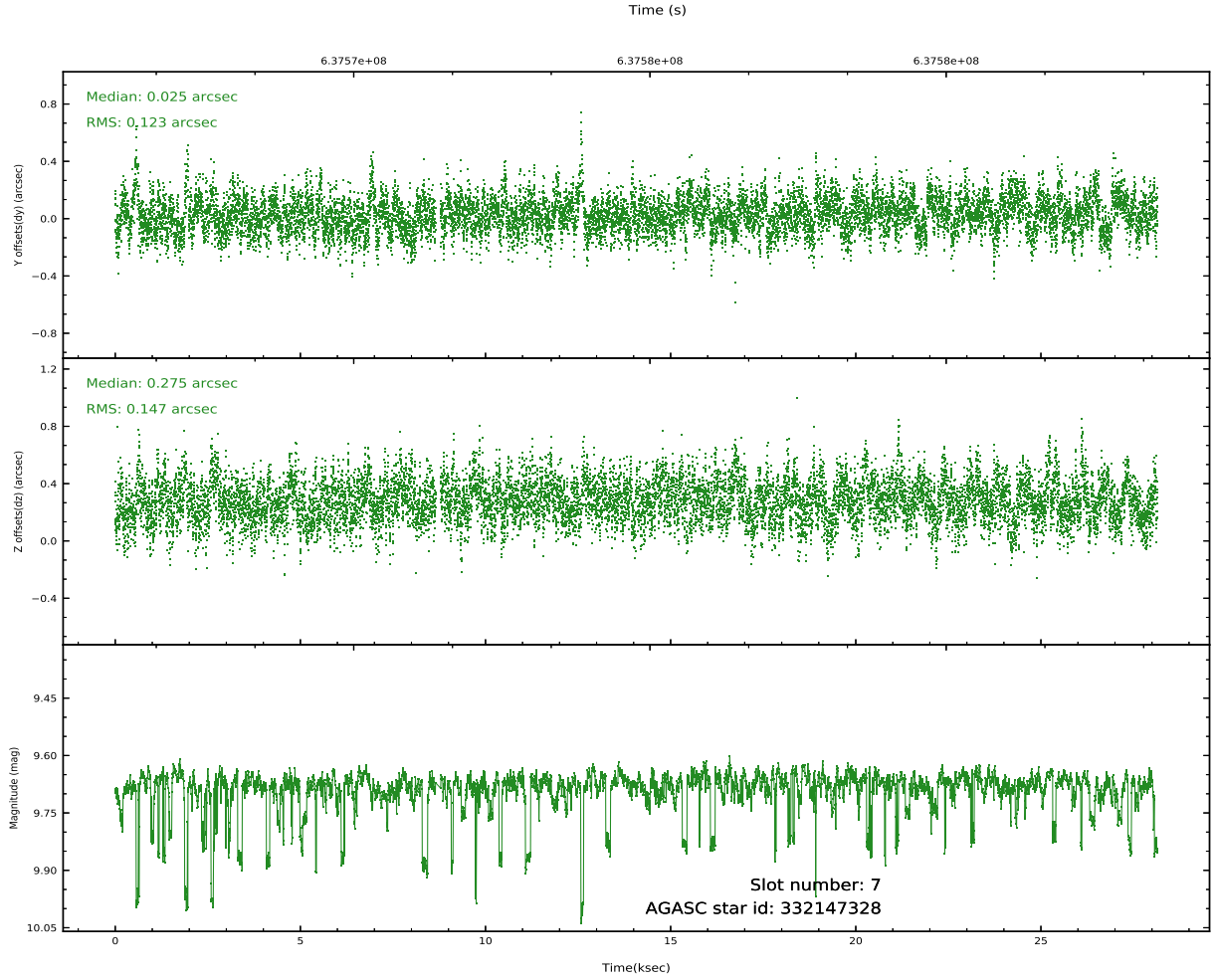
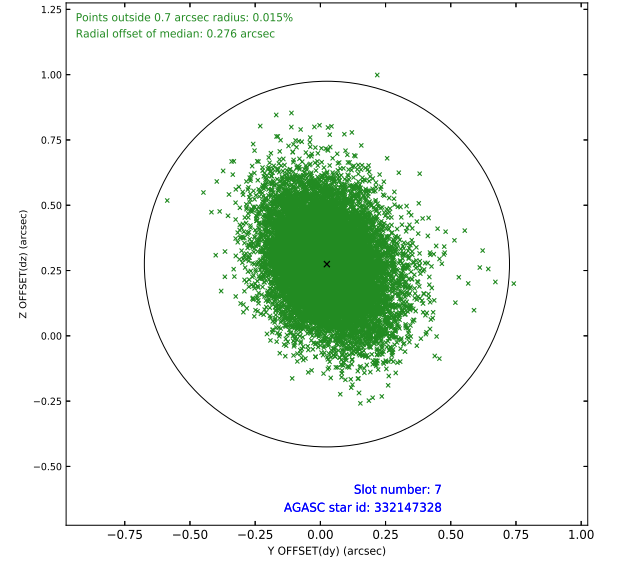
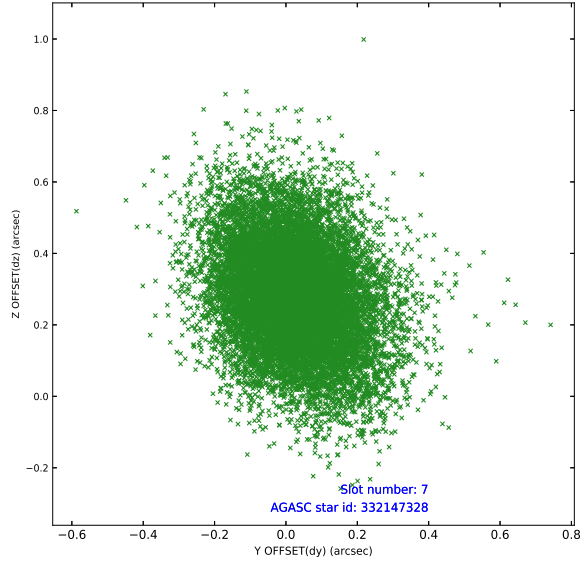
2.4.3 Slot 5



2.4.4 Slot 6

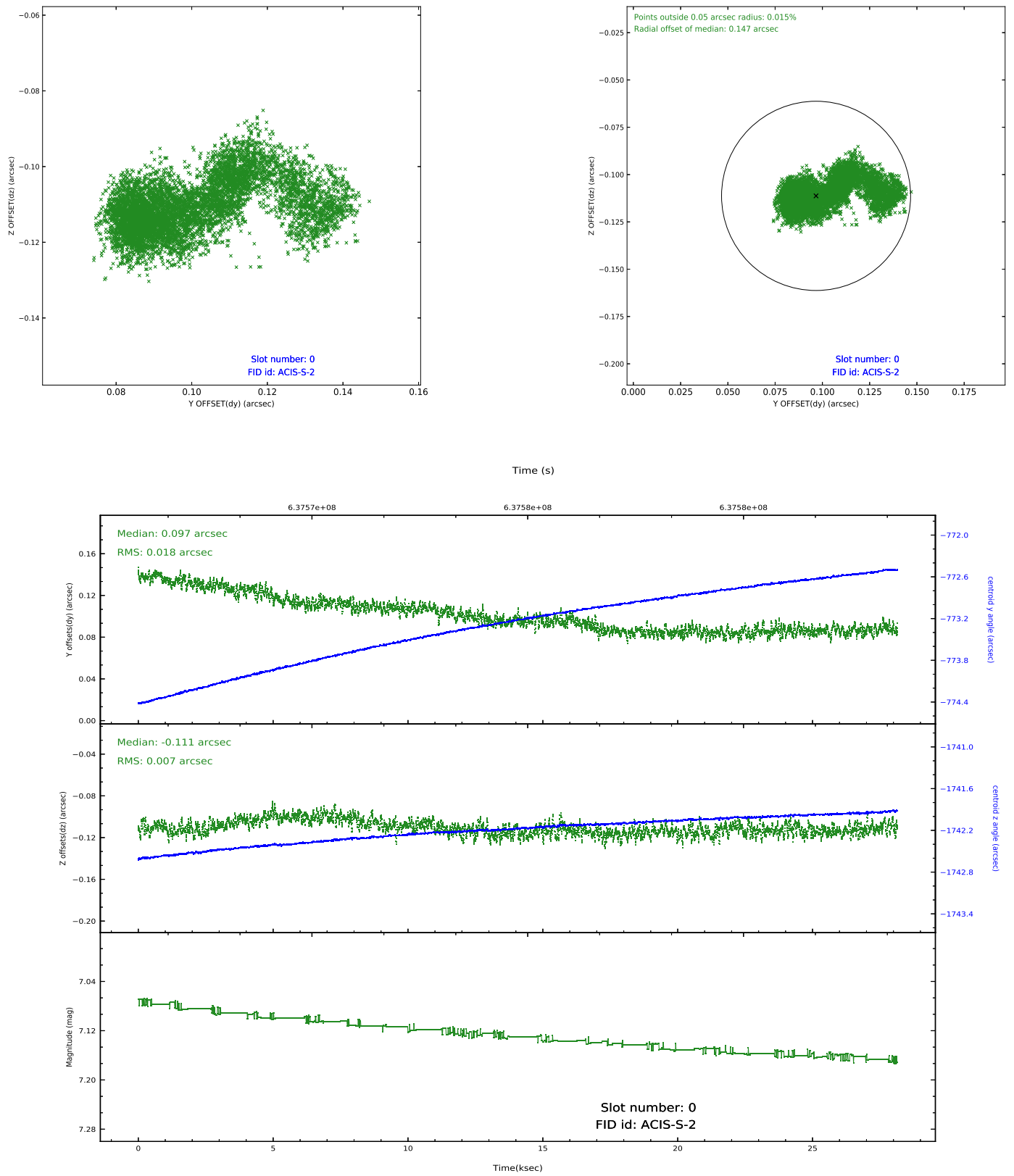


2.4.5 Slot 7

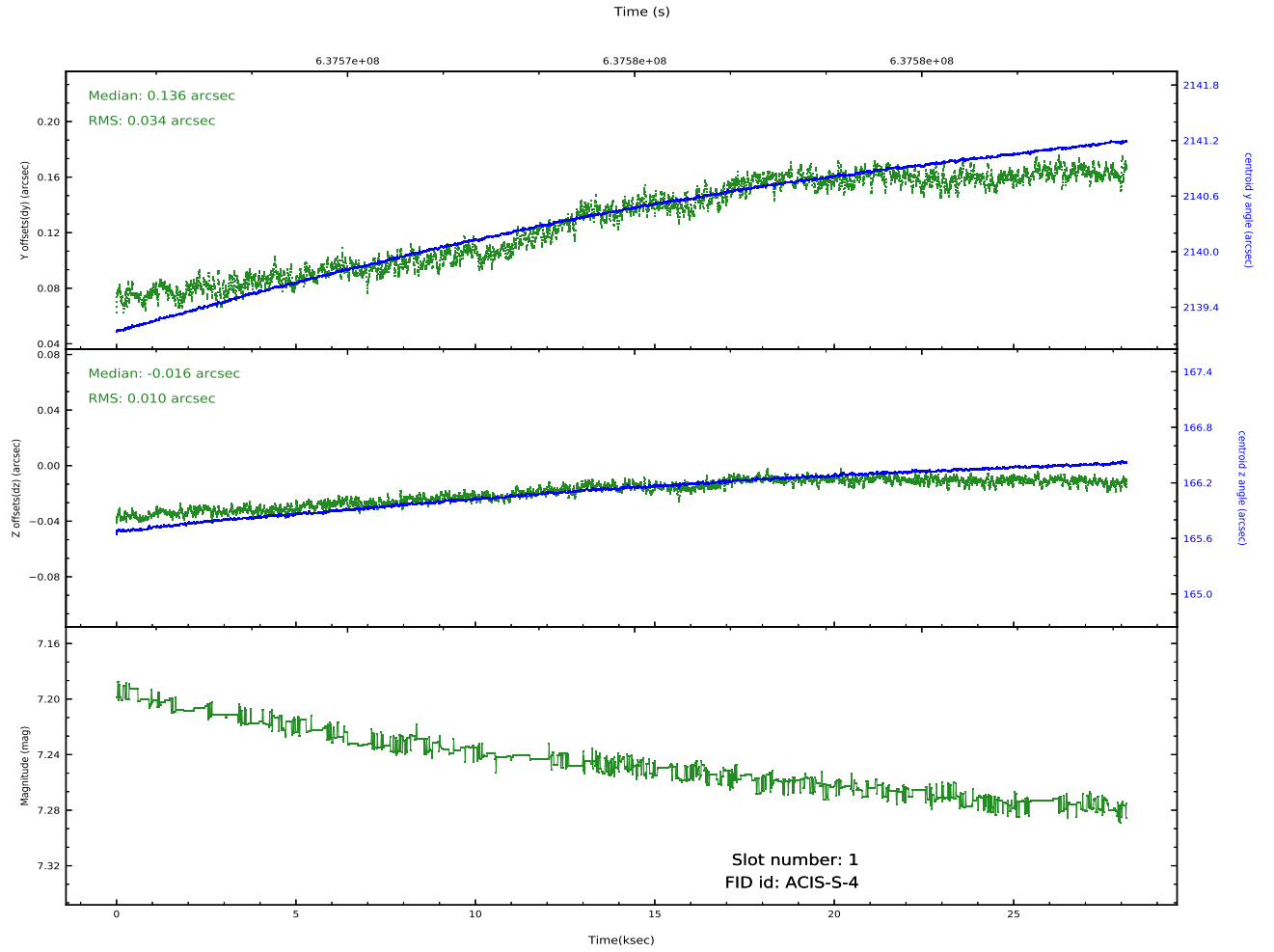
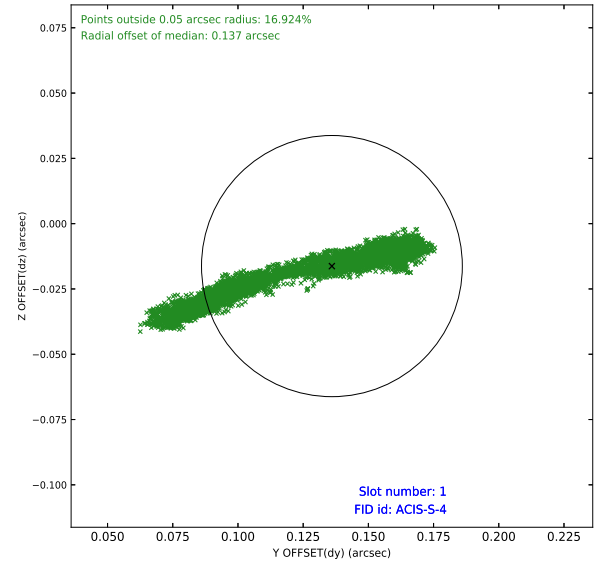
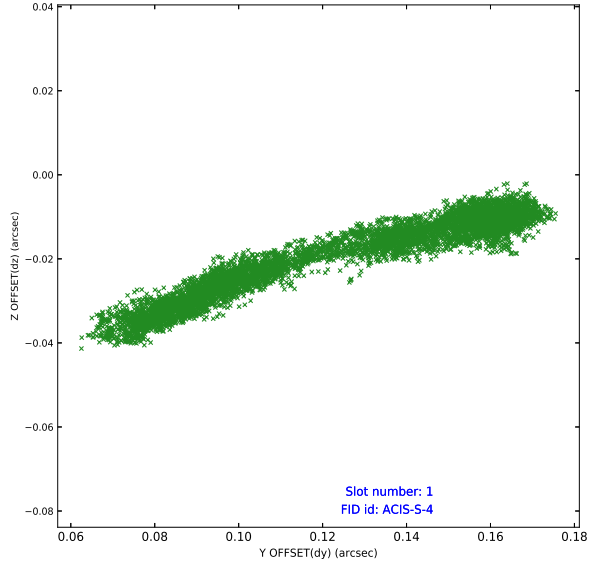


2.5 FID Slots

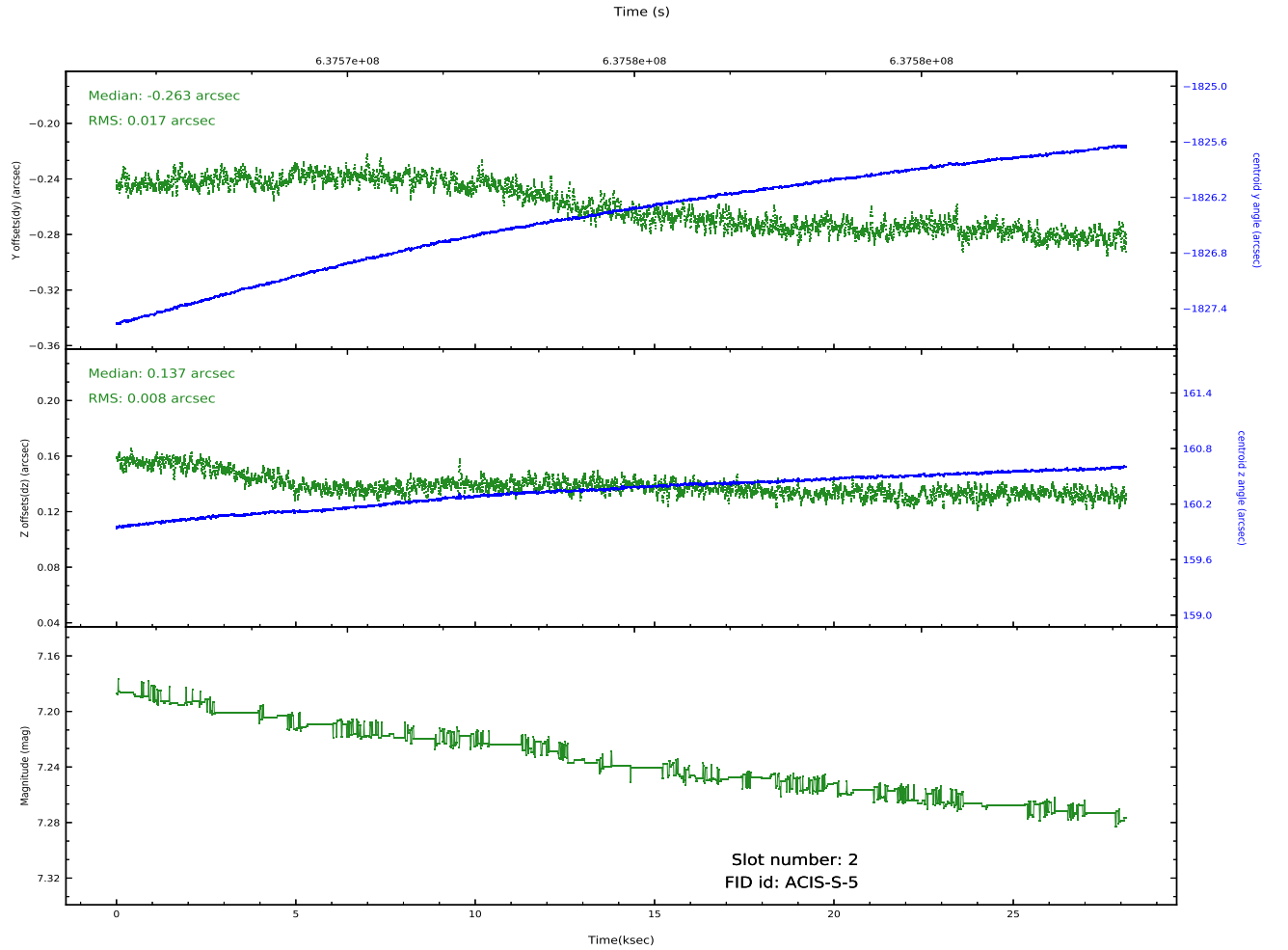
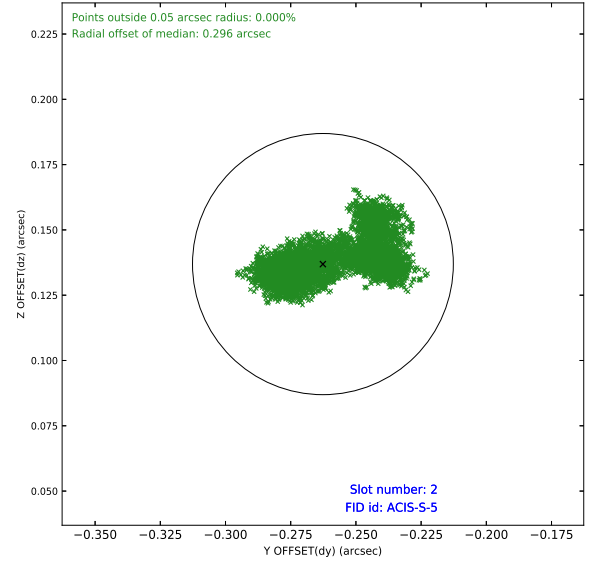
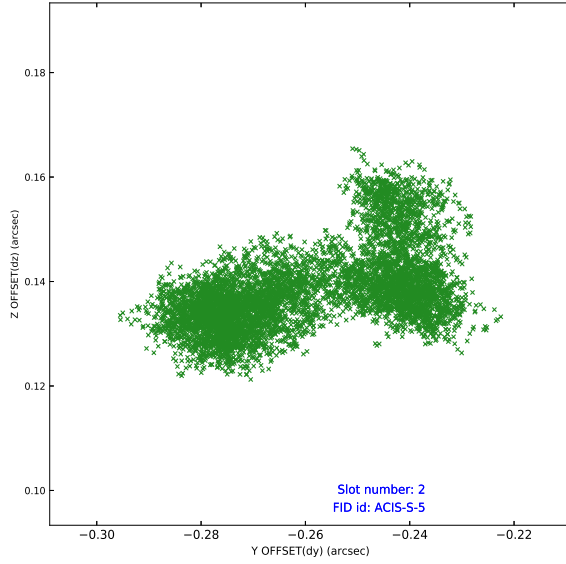
2.5.1 Slot 0



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)	2020.10.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	28.058100215912

A.2 Comments