

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 21084 - L2 Version 3
Chandra X-Ray Center

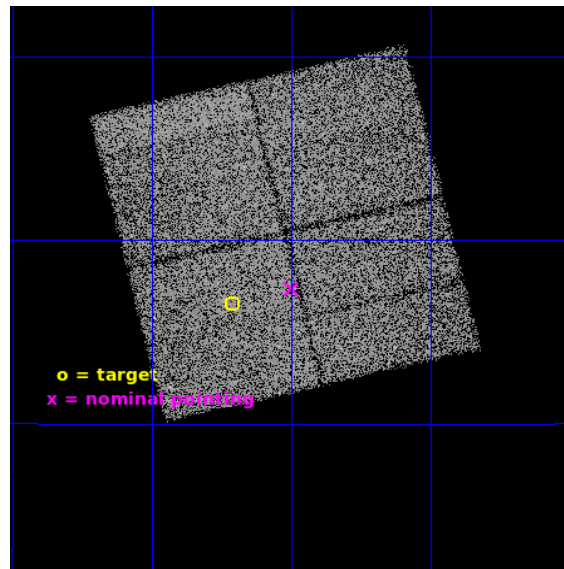
L2 Processing Date : Oct 26 2020

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1 Front

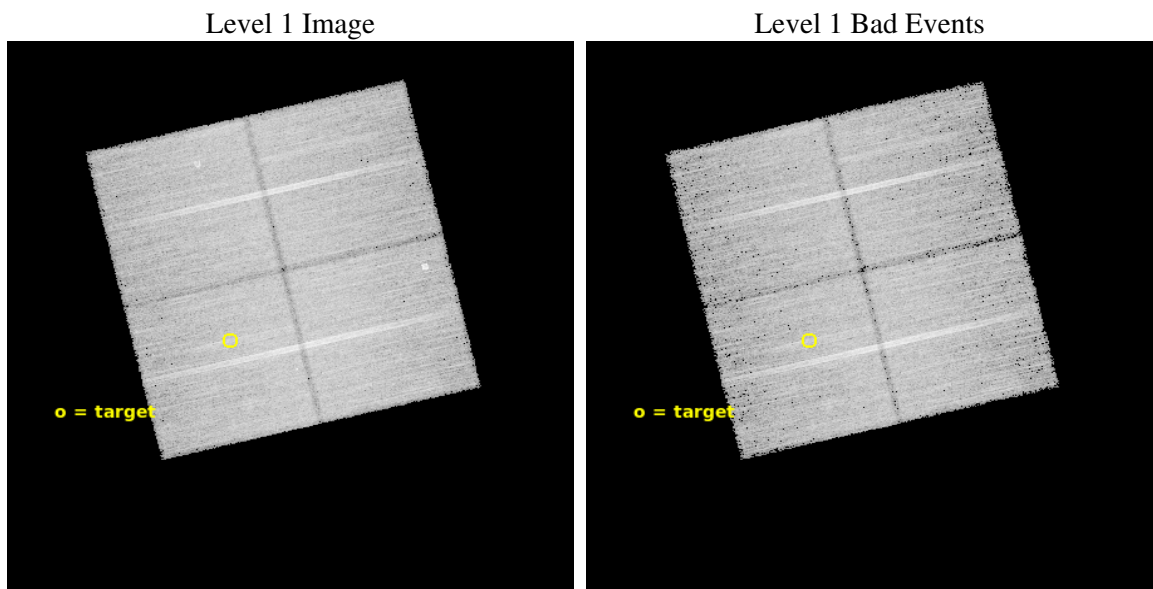
seq_num	801671	Sequence number
obs_id	21084	Observation id
title	Determining the Universality of f _{gas} at High Redshift	Proposal ti
observer	Mark Brodwin	Principal investigator
object	MOO J1514+1346	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	228.677917	Observer's specified target RA [deg]
dec_targ	13.775278	Observer's specified target Dec [deg]
ra_nom	228.62419859192	Nominal RA [deg]
dec_nom	13.789271735994	Nominal Dec [deg]
roll_nom	166.61566019931	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30072.929541826	Sum of GTIs [s]
livetime	29680.004577994	Livetime [s]
ontime0	30072.806481957	Sum of GTIs [s]
ontime1	30069.706421256	Sum of GTIs [s]
ontime2	30076.029572129	Sum of GTIs [s]
ontime3	30072.929541826	Sum of GTIs [s]
l2events	84059	Number of level 2 events



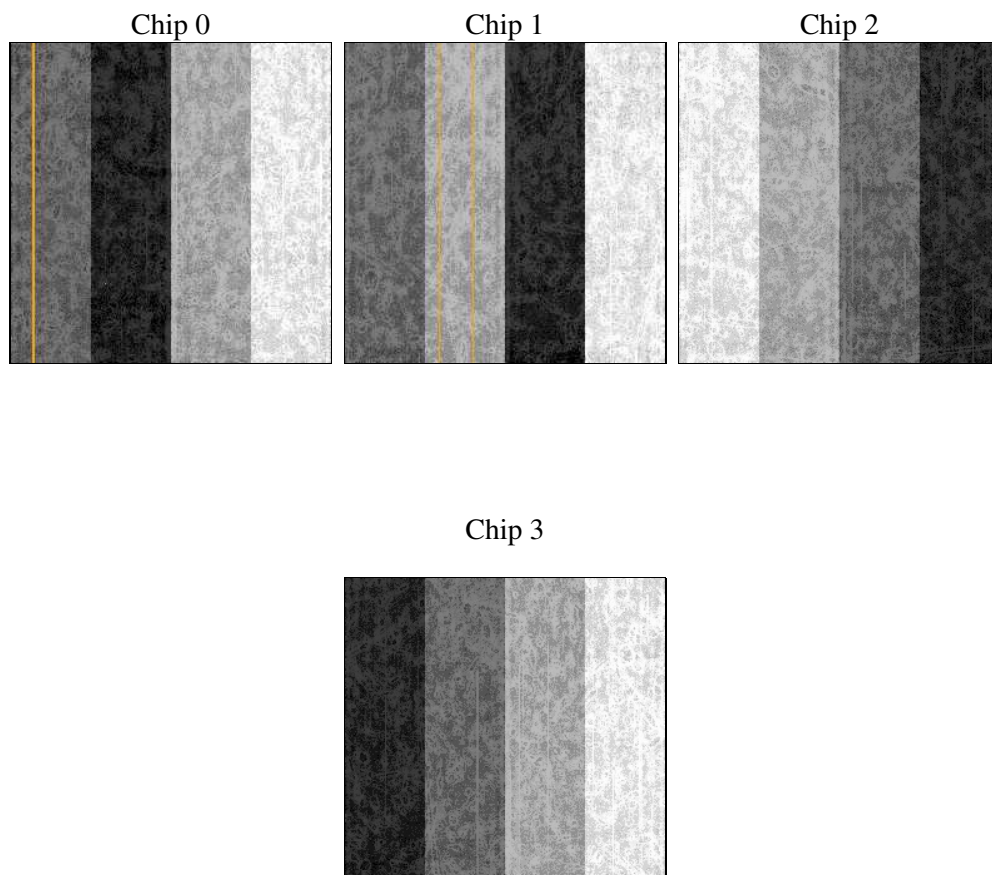
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	30072.929541826	Sum of GTIs [s]
caldsver	4.9.3	 	ontime0	30072.806481957	Sum of GTIs [s]
date	2020-10-27T00:54:08	Date and time of file creation	ontime1	30069.706421256	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	30076.029572129	Sum of GTIs [s]
			ontime3	30072.929541826	Sum of GTIs [s]
			l1events	864028	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	203134	208243	230314	222337
rejected events	178036	180447	204662	198534
rejected %	87%	86%	88%	89%

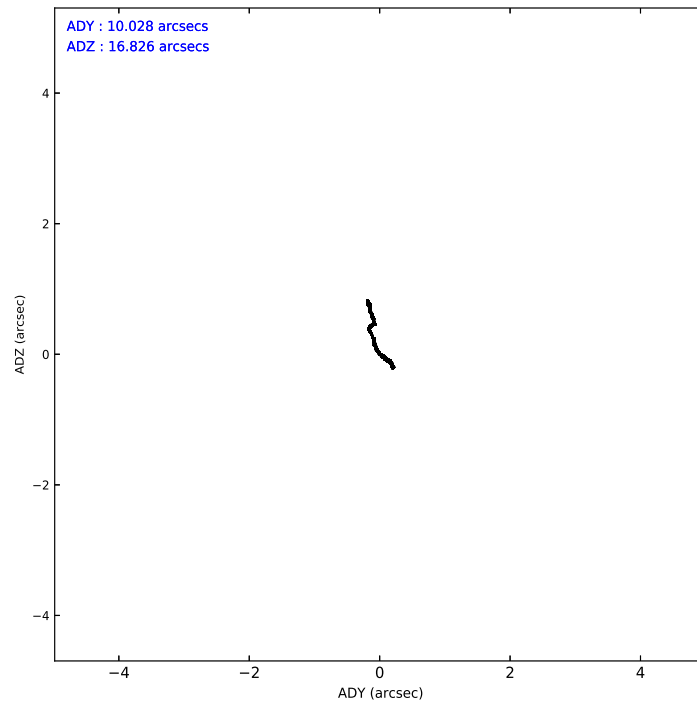
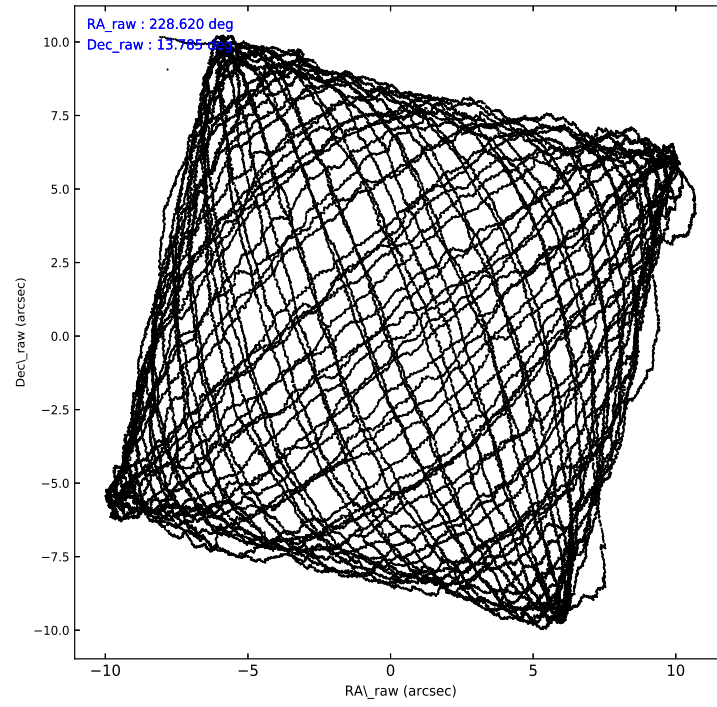
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	8630	9588	9858	8699
	4%	4%	4%	3%
grade 1 events	118	132	150	111
	0%	0%	0%	0%
grade 2 events	6206	6878	6022	5264
	3%	3%	2%	2%
grade 3 events	2567	2550	2328	2475
	1%	1%	1%	1%
grade 4 events	2424	2582	2517	2421
	1%	1%	1%	1%
grade 5 events	9478	9727	8898	10607
	4%	4%	3%	4%
grade 6 events	5276	6210	4932	4950
	2%	2%	2%	2%
grade 7 events	168435	170576	195609	187810
	82%	81%	84%	84%

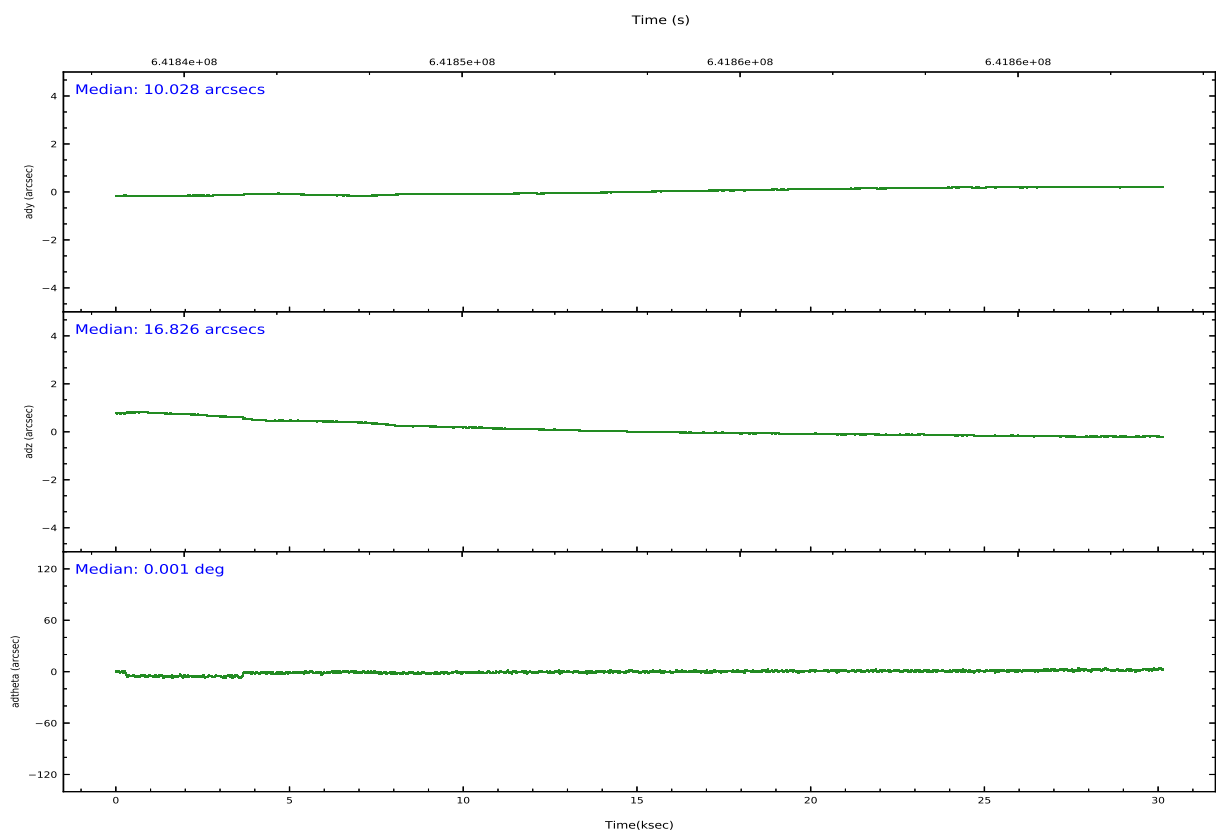
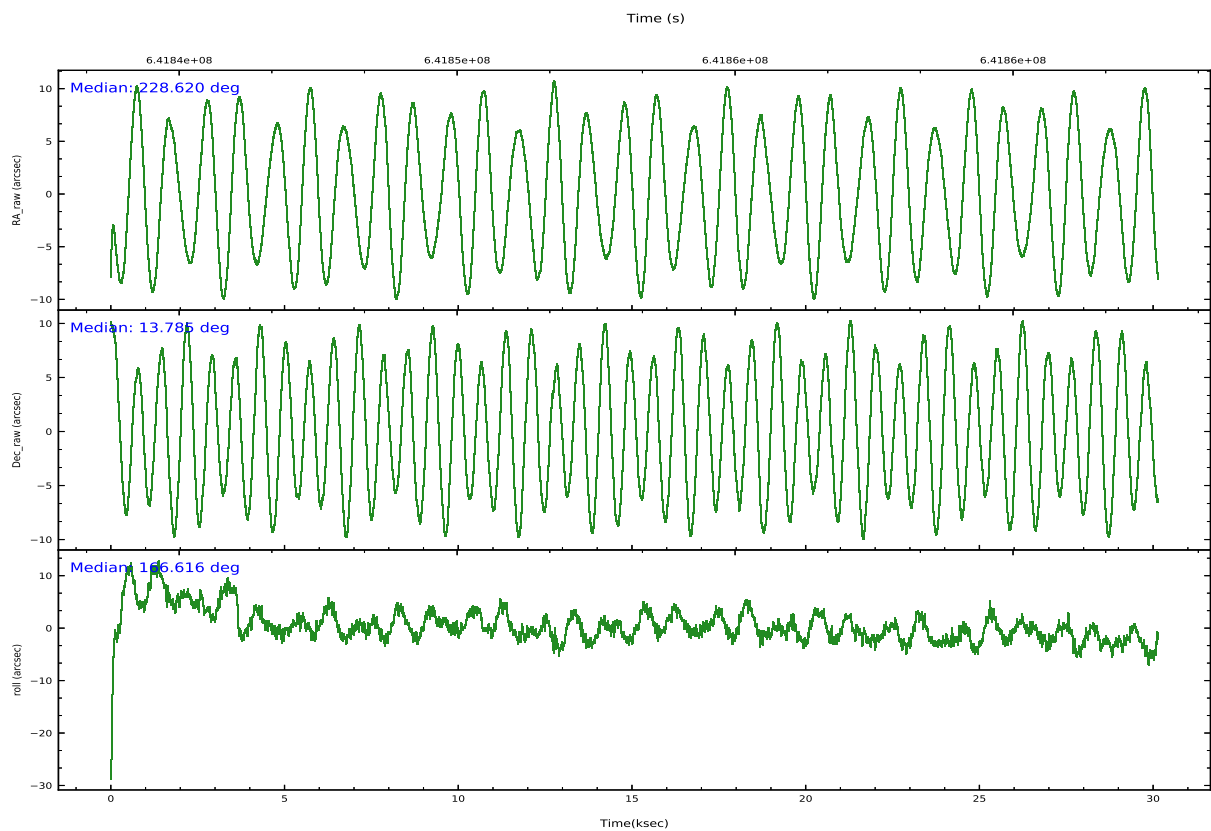
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-0123	ACIS-0123
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	228.647338	228.62419859192
[deg] Pointing Dec	13.793140	13.789271735994
[deg] Pointing Roll	166.407275	166.61566019931
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-225.840463	-225.8433433320239
[mm] SIM translation stage offset	-7.752	-7.749109670905796
[s] Observation start time (MET)	641838177.184000	641836994.56936
Observation start date	2018-05-04T16:21:48	2018-05-04T16:03:14
[s] Observation end time (MET)	641868177.184000	641869367.1462801
Observation end date	2018-05-05T00:41:48	2018-05-05T01:02:47
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar version number	8	8
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	N
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	1	1
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



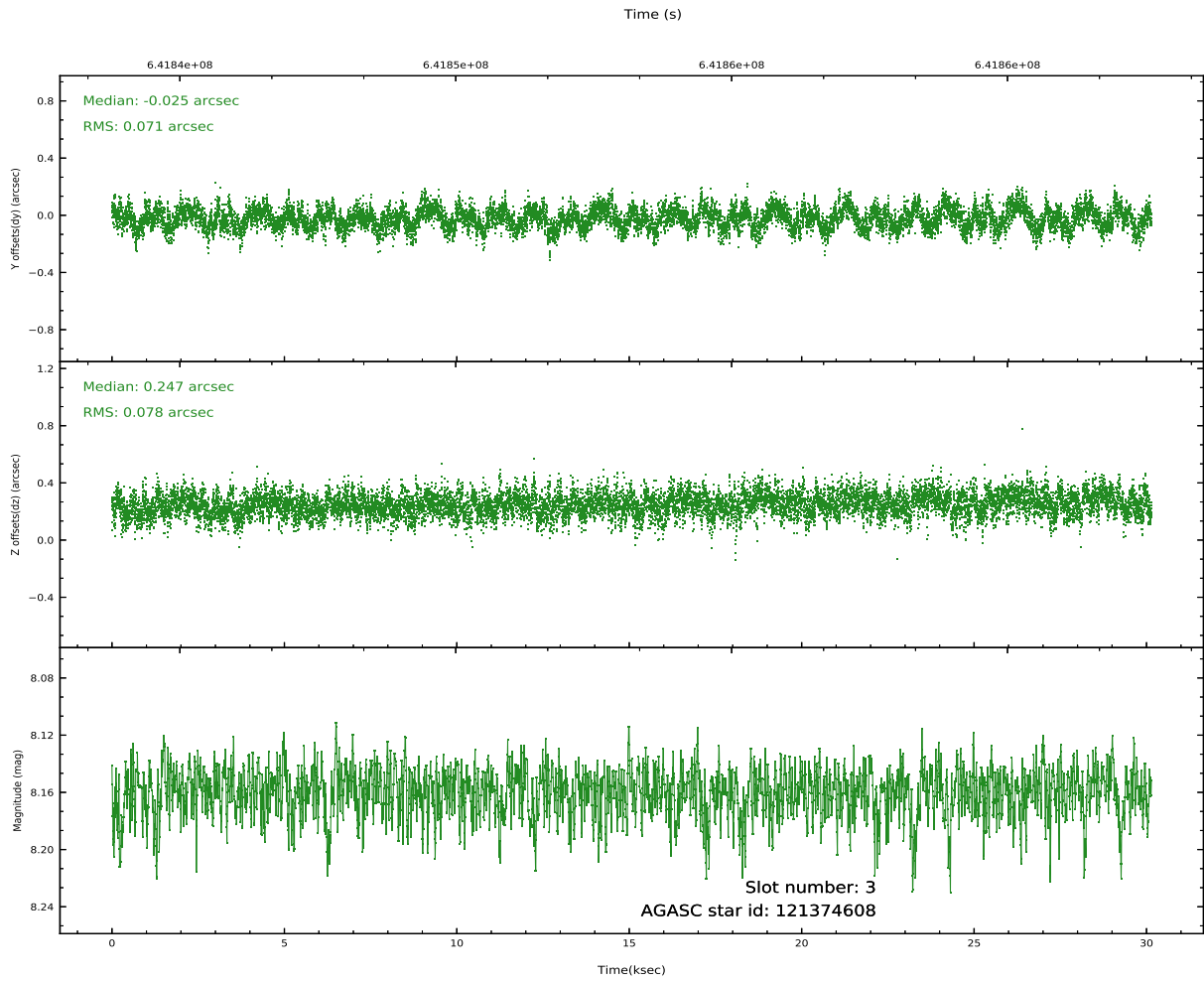
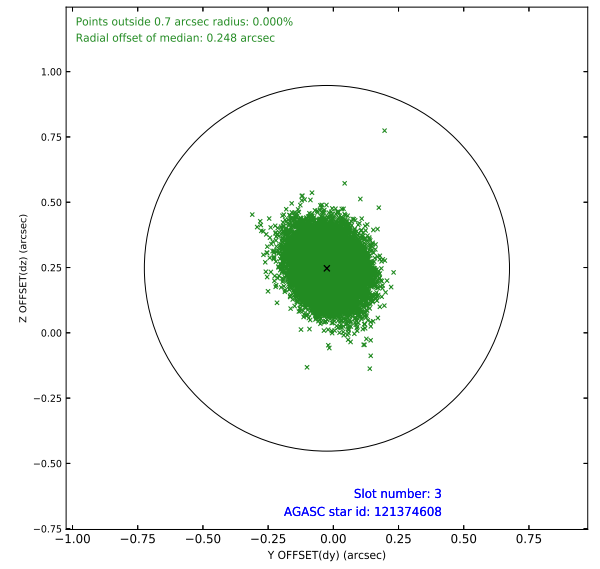
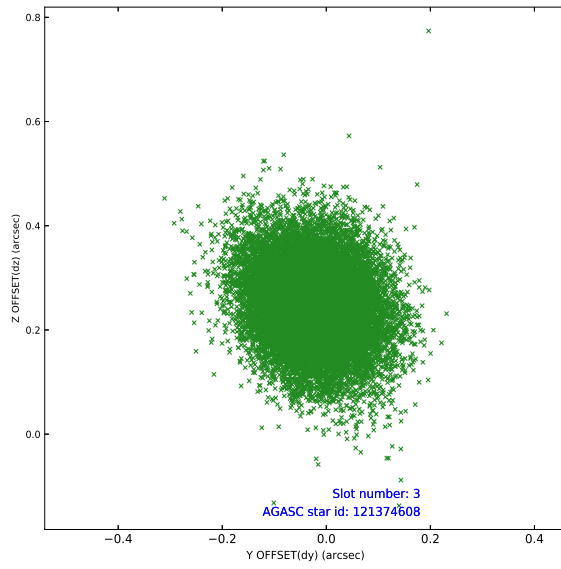


Slot Statistics

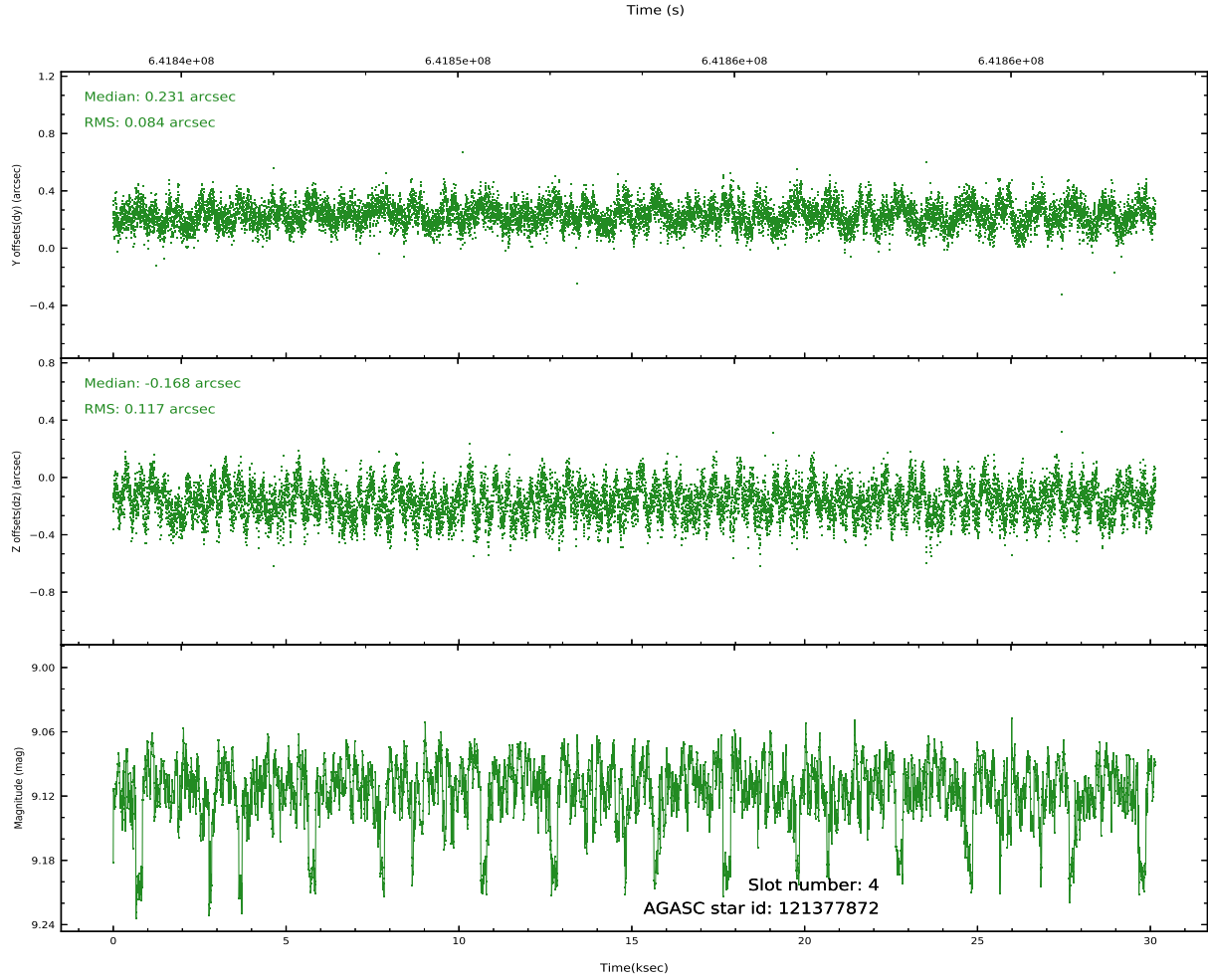
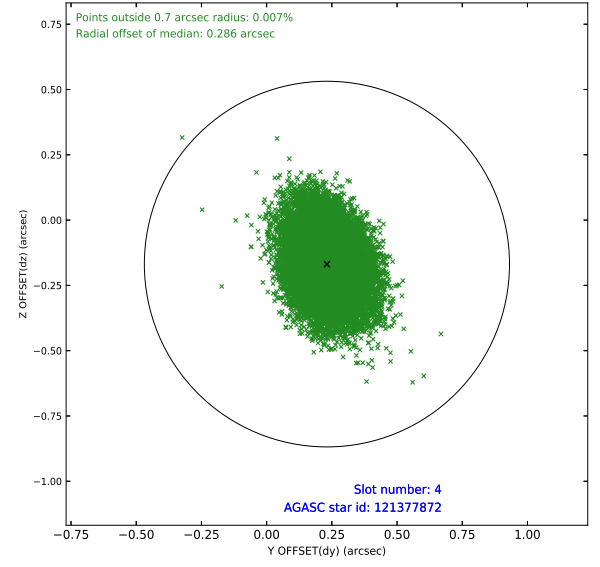
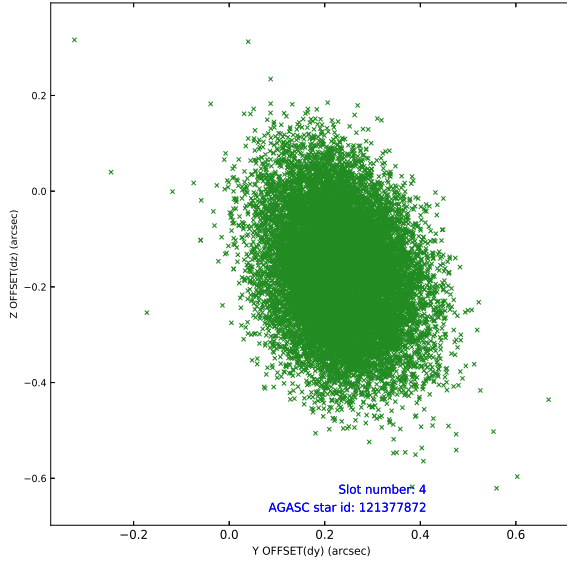
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-2	7.04	7353	1.000	-0.106	-0.023	0.019	0.053	0.000000	0.000000	-765.35	-1004
1	FID		ACIS-I-4	7.00	7353	1.000	-0.041	0.101	0.014	0.023	0.000000	0.000000	2148.83	901
2	FID		ACIS-I-6	7.09	7350	1.000	0.047	-0.014	0.015	0.044	0.000000	0.000000	395.54	1542
3	GUIDE	used	121374608	8.16	14702	1.000	-0.025	0.247	0.112	0.178	229.231600	14.224898	-1615.19	-1992
4	GUIDE	used	121377872	9.11	14686	1.000	0.231	-0.168	0.153	0.247	228.754541	13.759513	-392.26	29
5	GUIDE	used	121381656	7.06	14701	1.000	-0.110	-0.017	0.108	0.190	229.029733	13.470196	-1574.46	814
6	GUIDE	used	121383304	8.77	14691	1.000	-0.096	-0.016	0.118	0.196	228.341612	13.273353	602.35	2070
7	GUIDE	used	121381016	9.01	14619	1.000	0.001	-0.049	0.118	0.205	228.973703	13.064816	-1727.74	2280

2.4 Star Slots

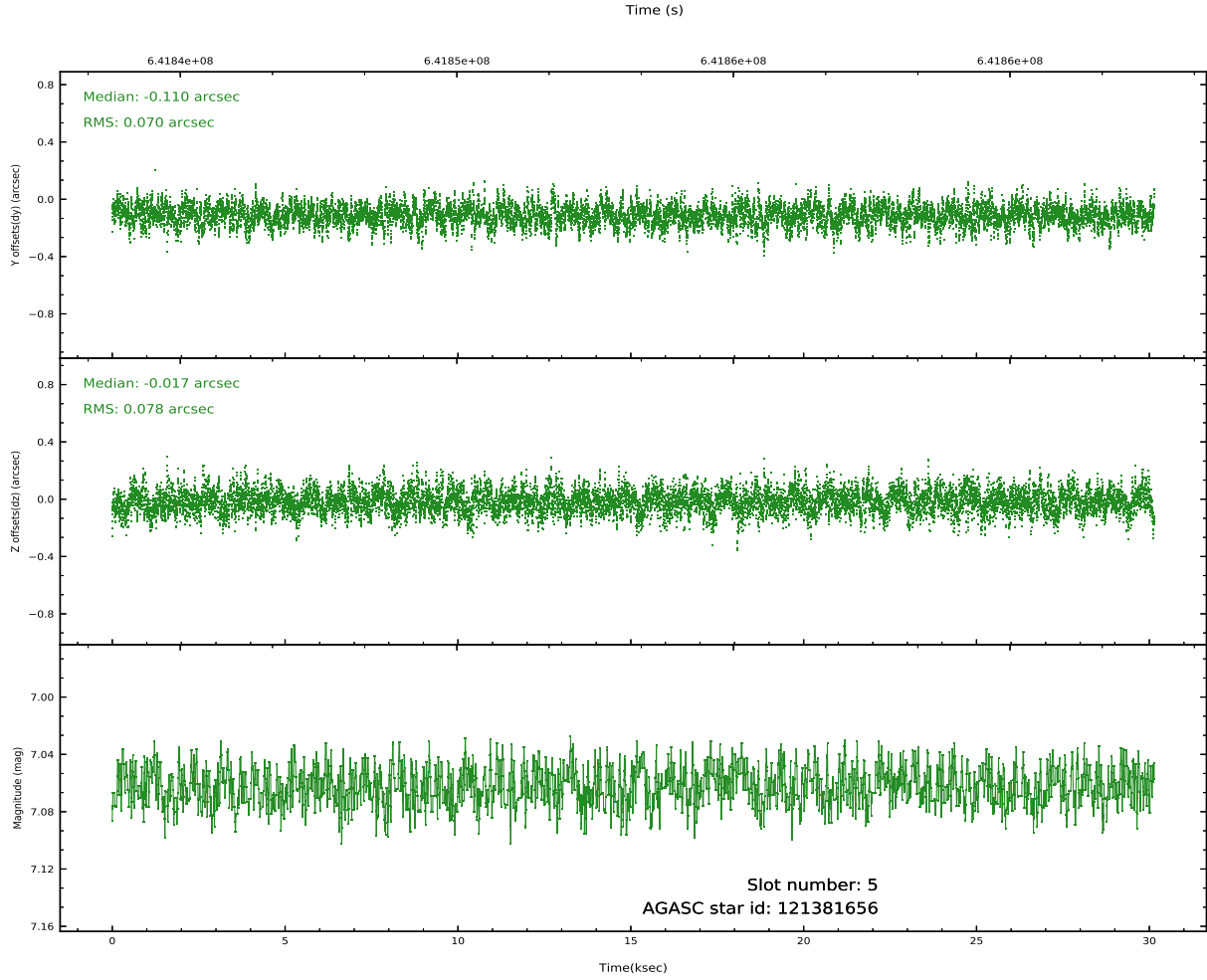
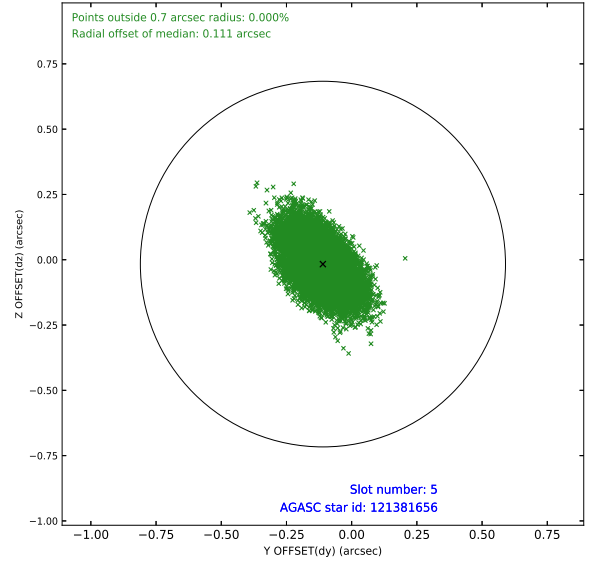
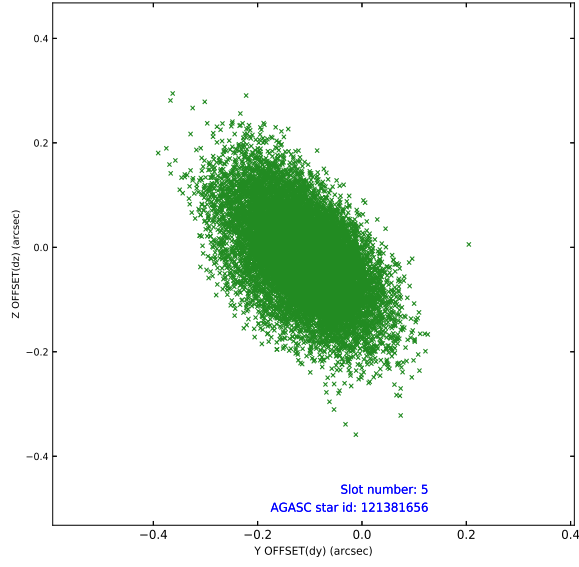
2.4.1 Slot 3



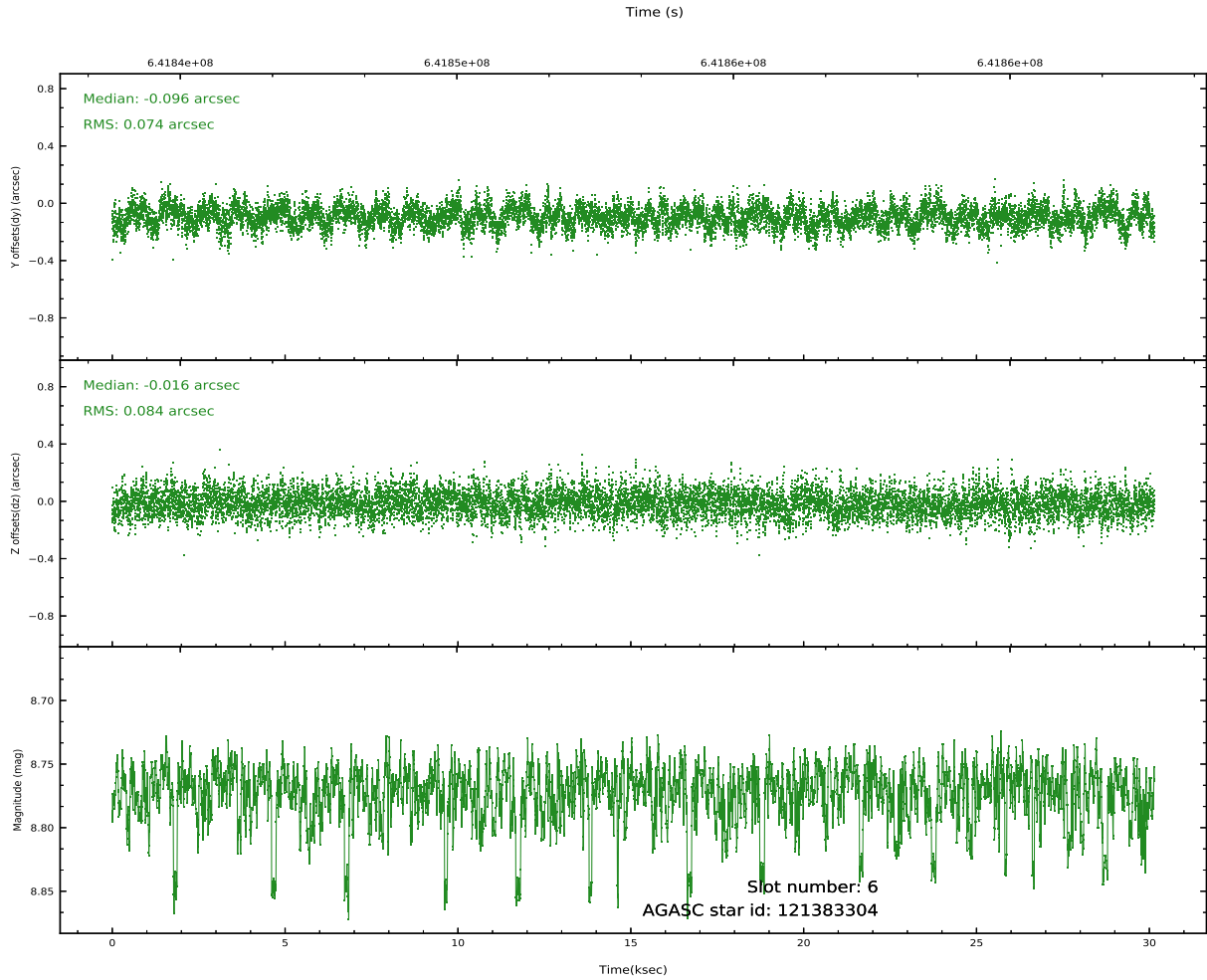
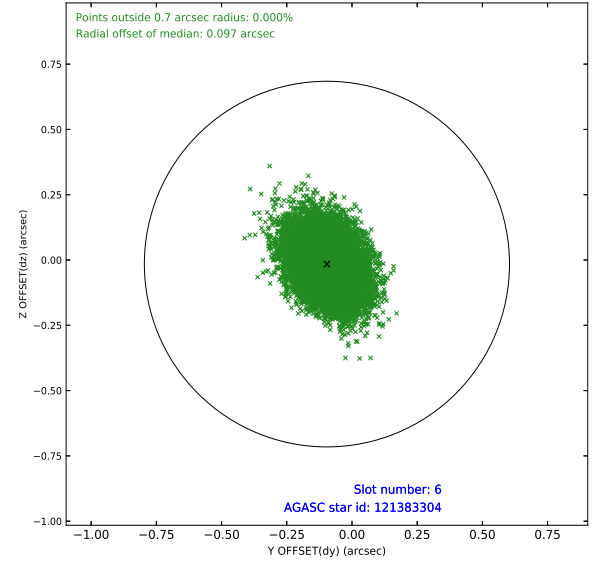
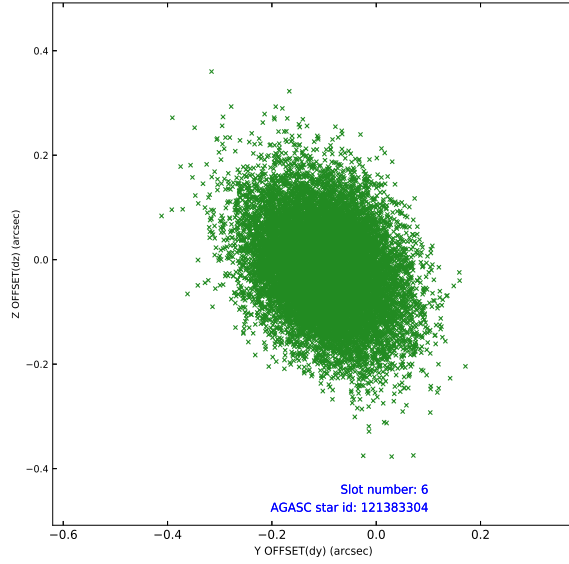
2.4.2 Slot 4



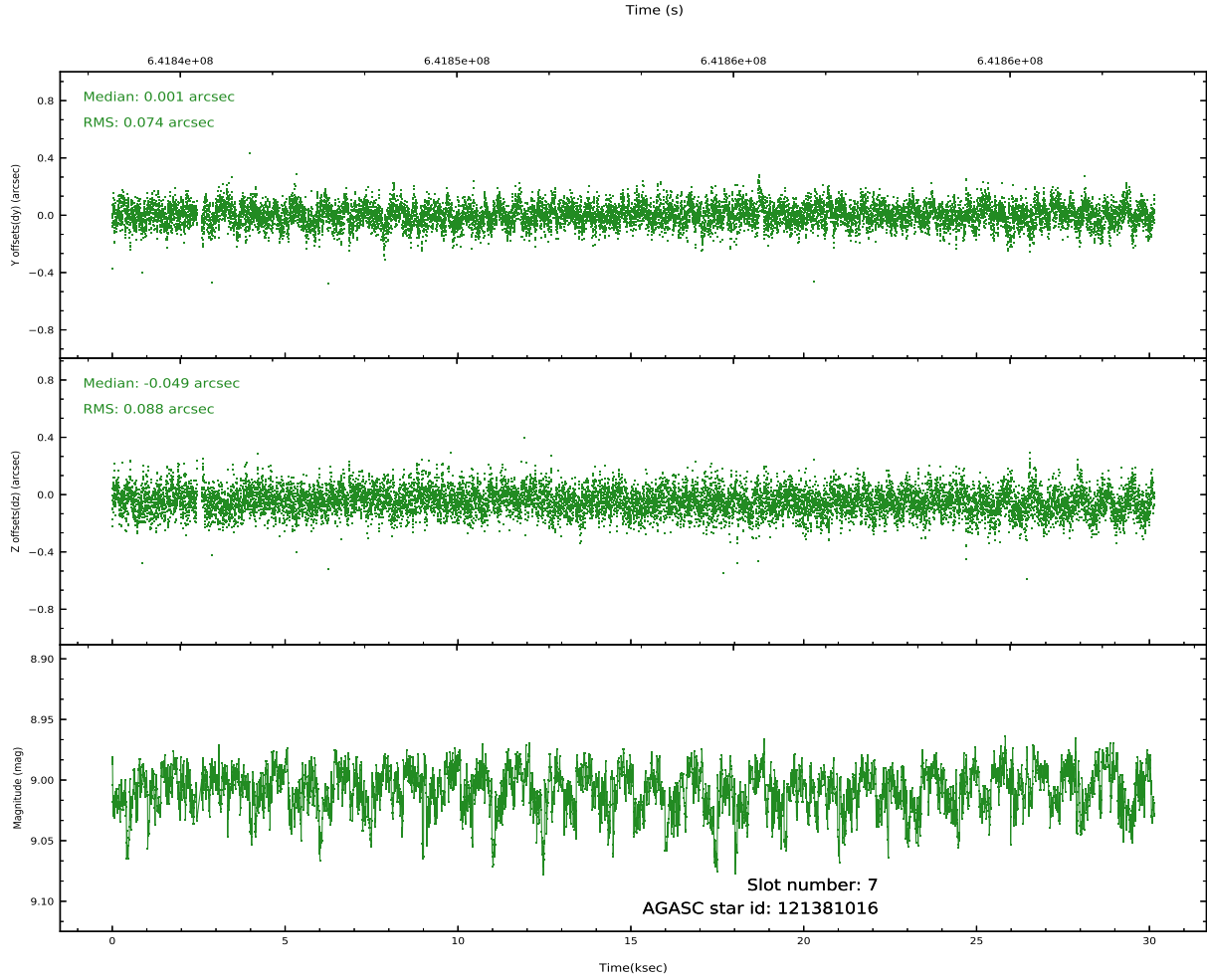
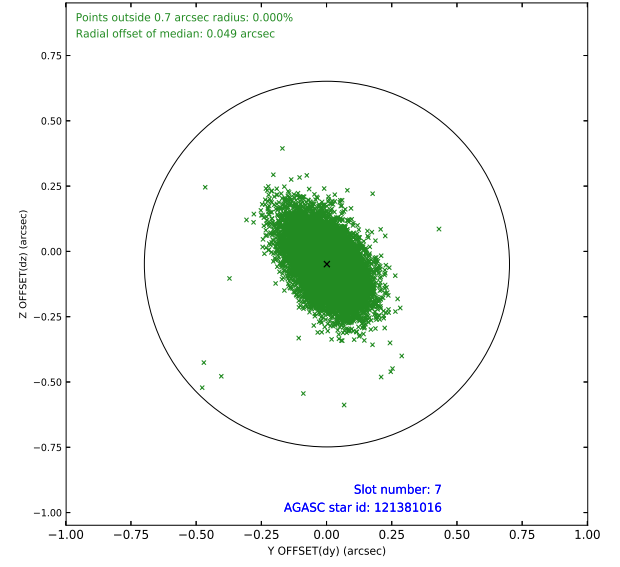
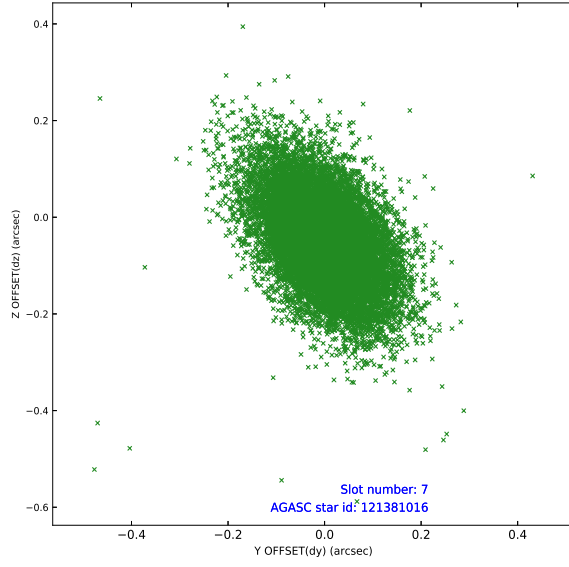
2.4.3 Slot 5



2.4.4 Slot 6

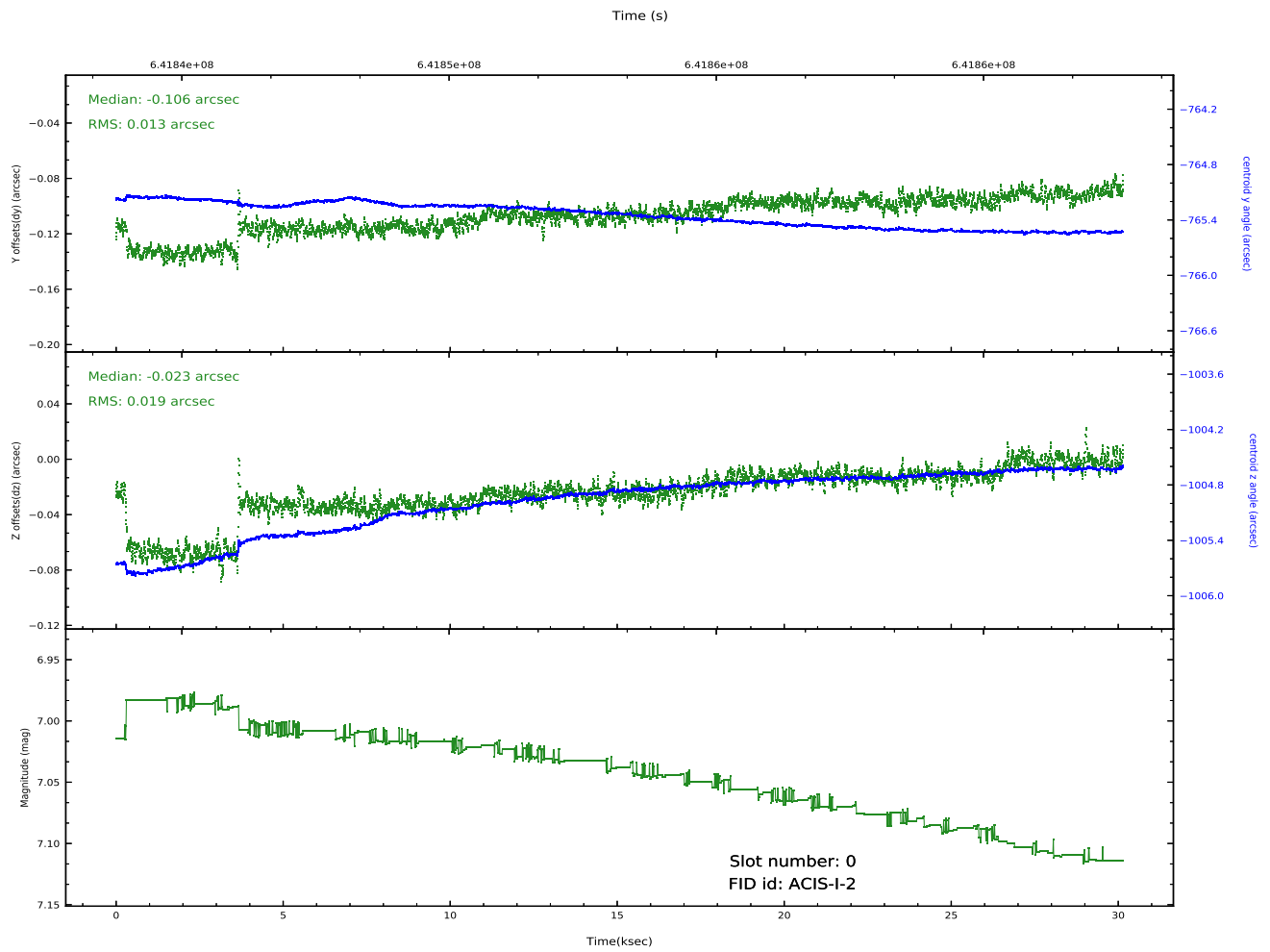
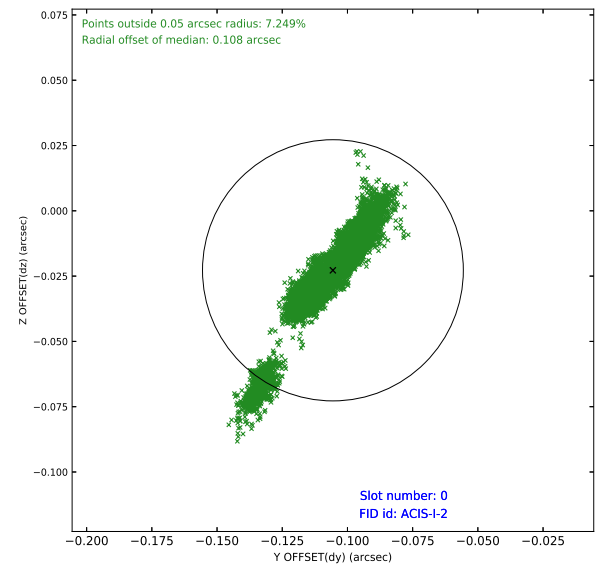
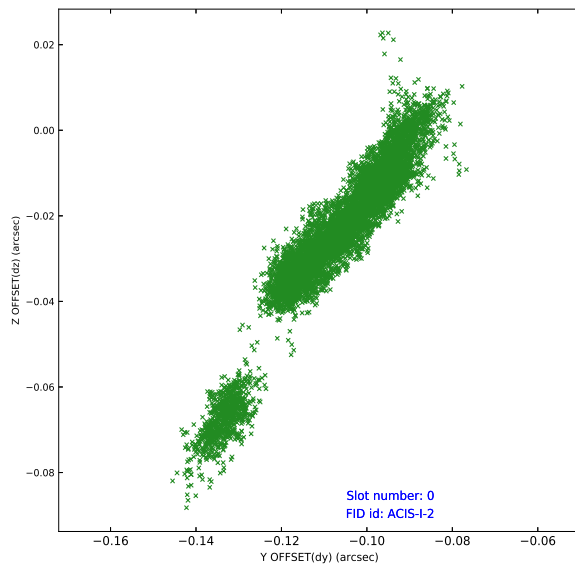


2.4.5 Slot 7

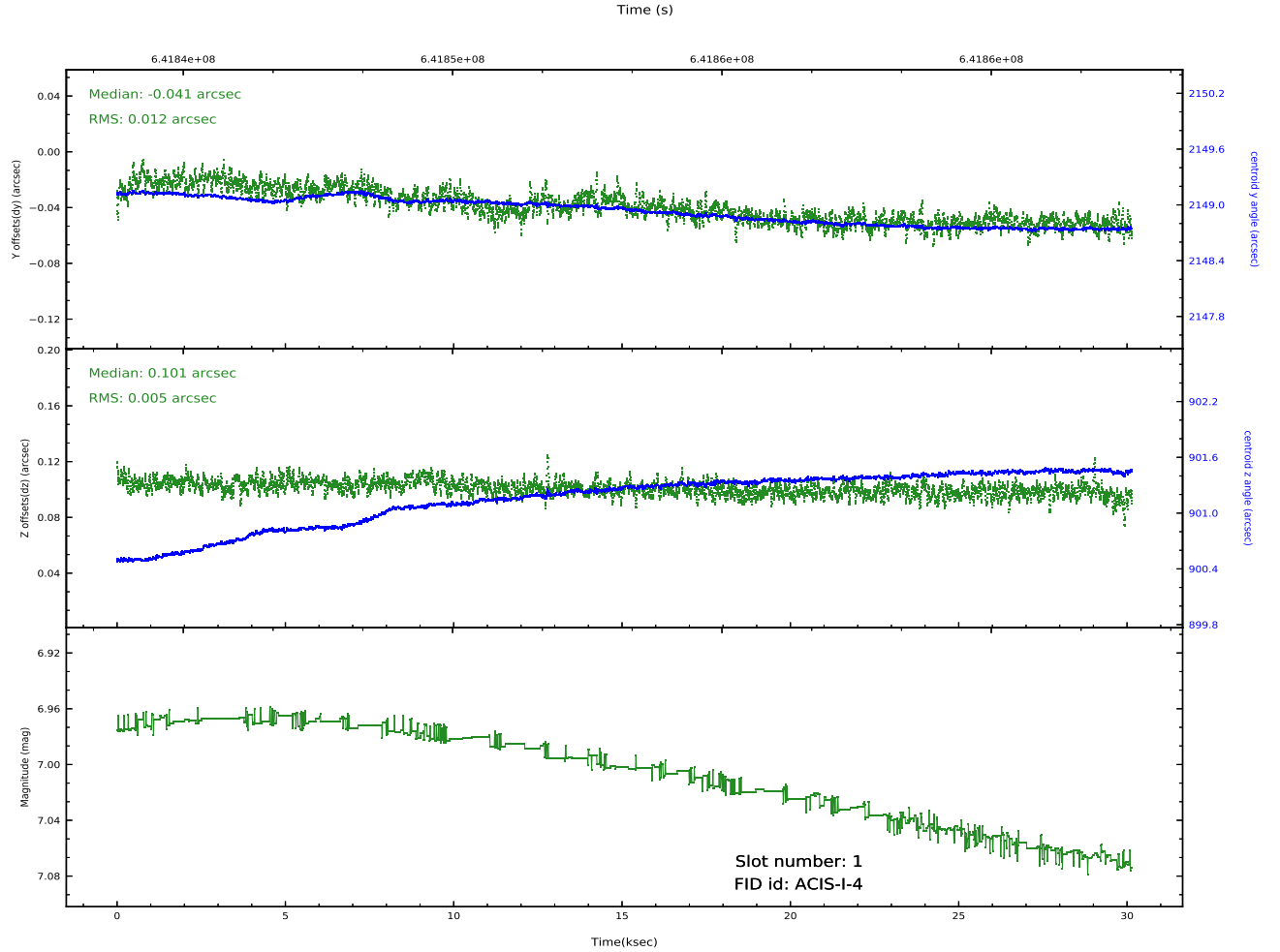
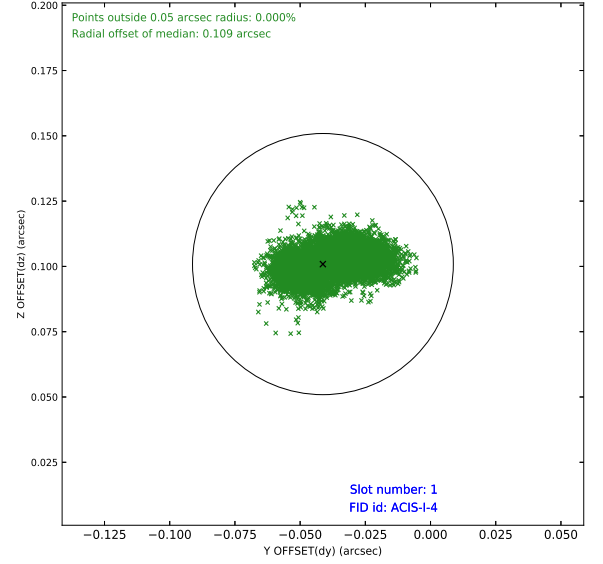
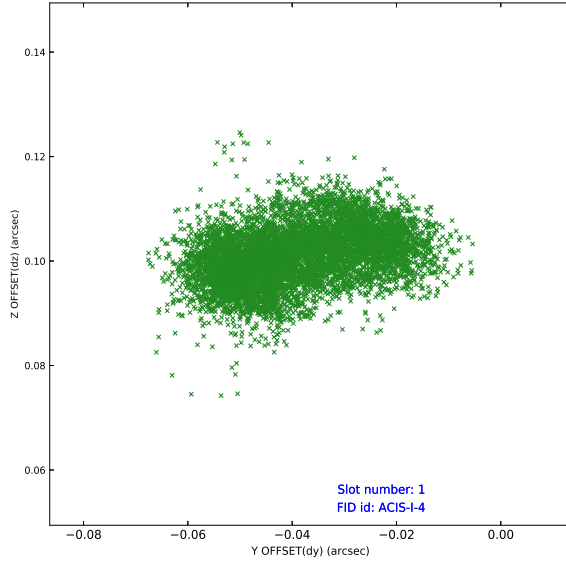


2.5 FID Slots

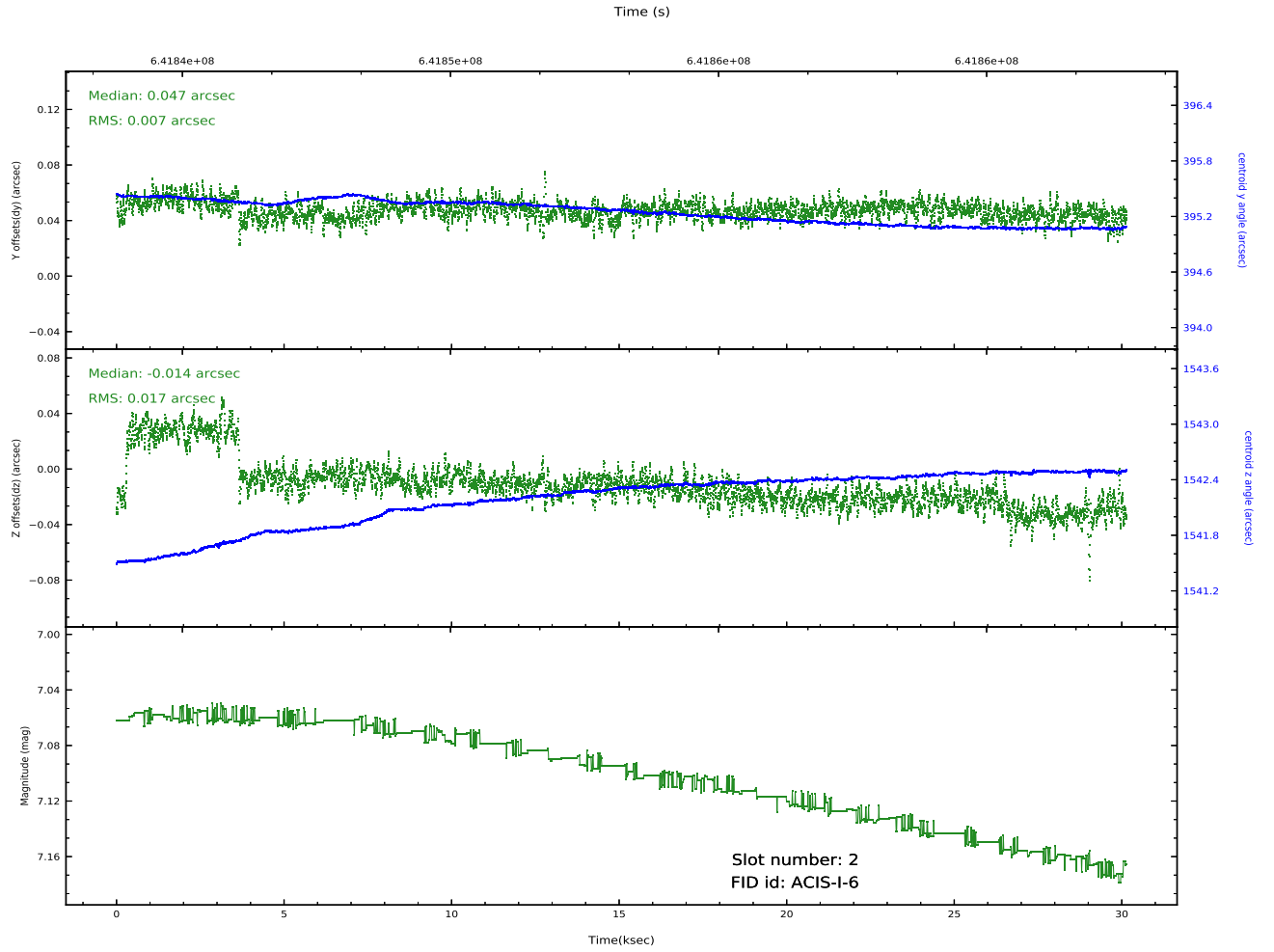
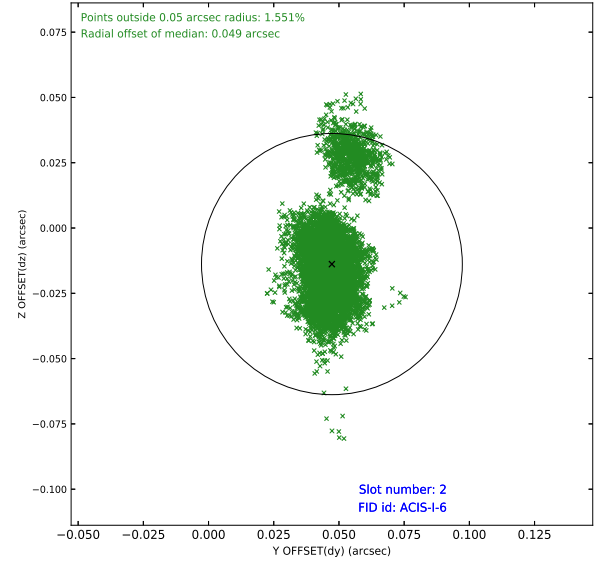
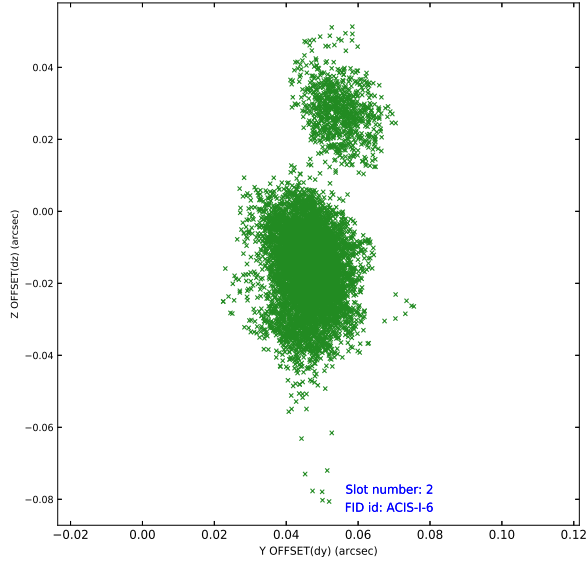
2.5.1 Slot 0



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)	2020.10.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.072929546475

A.2 Comments

One optional chip was dropped.

===

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: (228.76580,13.78235), (228.76646,13.78500), (228.62675,13.81730), (228.62610,13.81465).