

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6106 - L2 Version 4
Chandra X-Ray Center

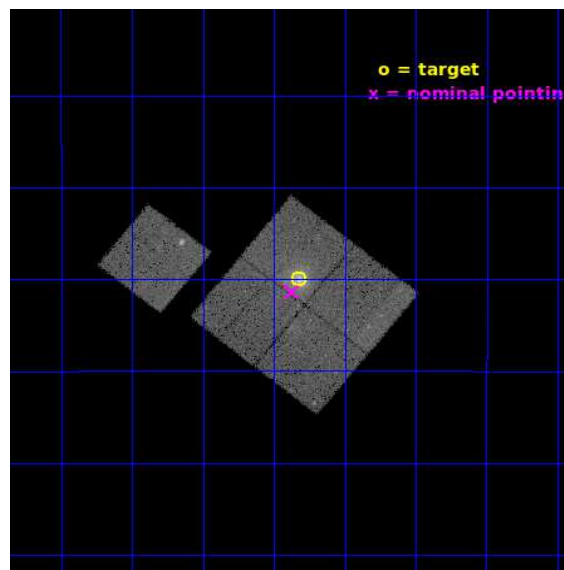
L2 Processing Date : Oct 5 2020

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

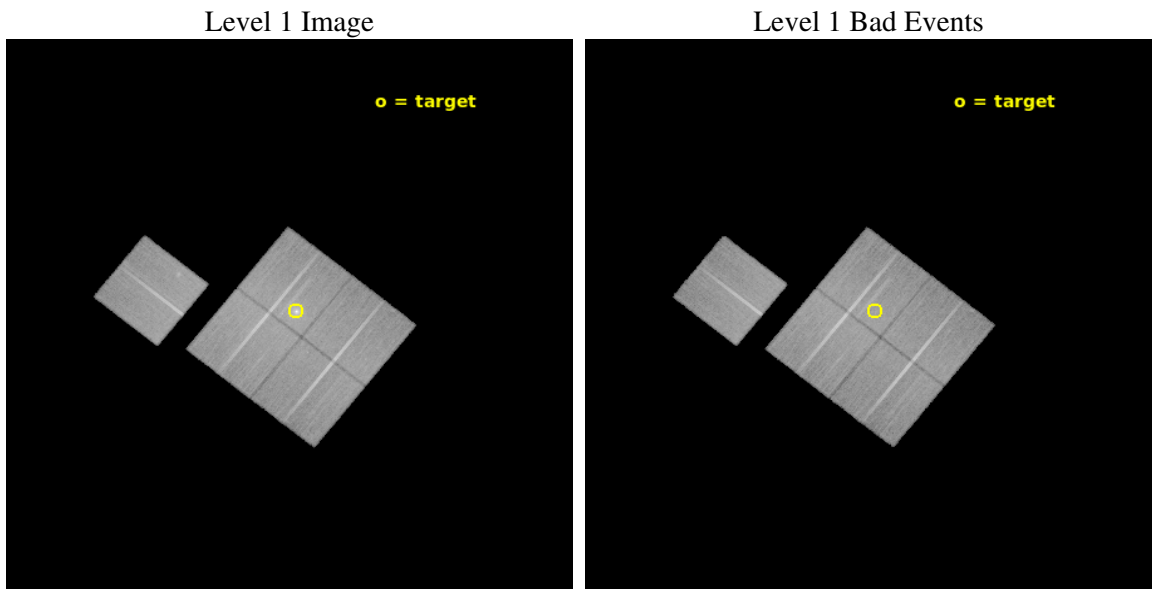
seq_num	800554	Sequence number
obs_id	6106	Observation id
title	Probing dark energy using the X-ray gas mass fraction in dynamically relaxed galaxy clusters	Proposal title
observer	Steve Allen	Principal investigator
object	MACS0159.8-0849	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	29.955833	Observer's specified target RA [deg]
dec_targ	-8.832917	Observer's specified target Dec [deg]
ra_nom	29.968133168573	Nominal RA [deg]
dec_nom	-8.855849217961	Nominal Dec [deg]
roll_nom	308.60774433145	Nominal Roll [deg]
revision	4	Processing version of data
ontime	35770.41328311	Sum of GTIs [s]
livetime	35303.046499771	Livetime [s]
ontime0	35757.726212144	Sum of GTIs [s]
ontime1	35764.04925251	Sum of GTIs [s]
ontime2	35764.090272576	Sum of GTIs [s]
ontime3	35770.41328311	Sum of GTIs [s]
ontime6	35767.108122915	Sum of GTIs [s]
l2events	116458	Number of level 2 events



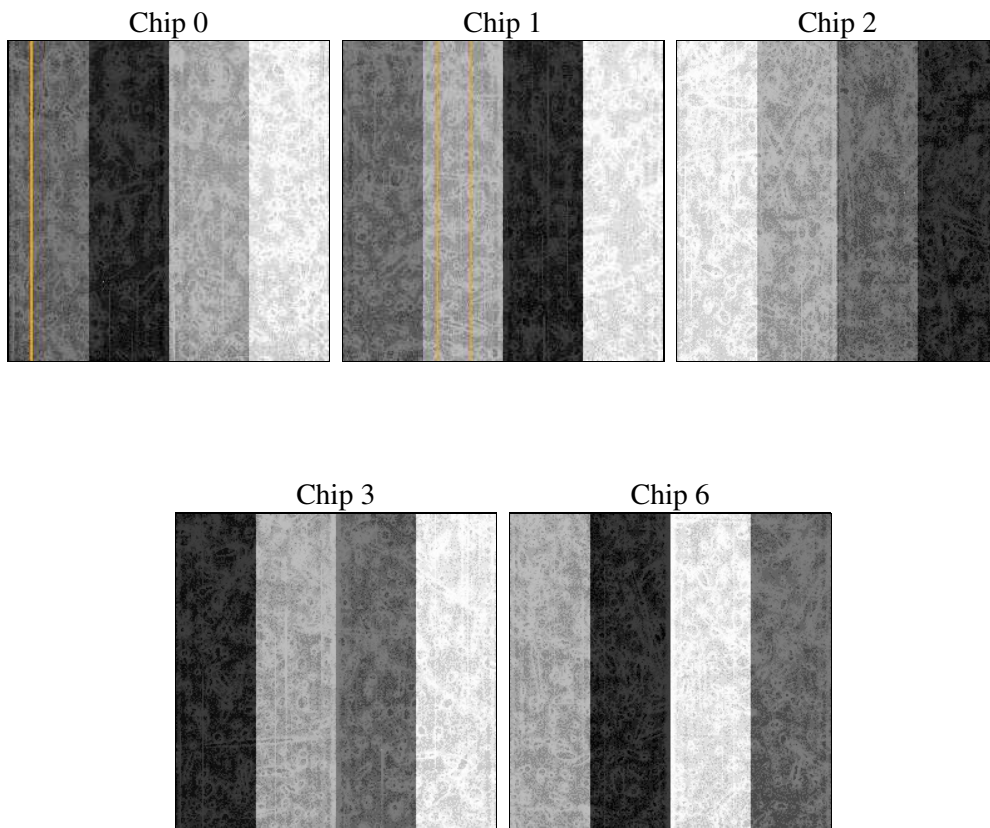
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	36000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	35770.41328311	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	35757.726212144	Sum of GTIs [s]
date	2020-10-05T11:56:56	Date and time of file creation	ontime1	35764.04925251	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	35764.090272576	Sum of GTIs [s]
			ontime3	35770.41328311	Sum of GTIs [s]
			ontime6	35767.108122915	Sum of GTIs [s]
			l1events	1238644	Number of level 1 events

2.1.4 Events

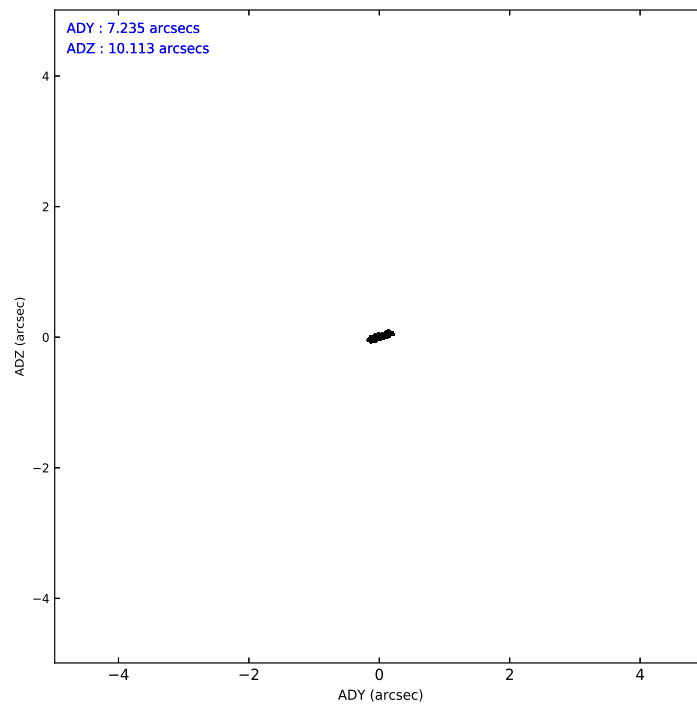
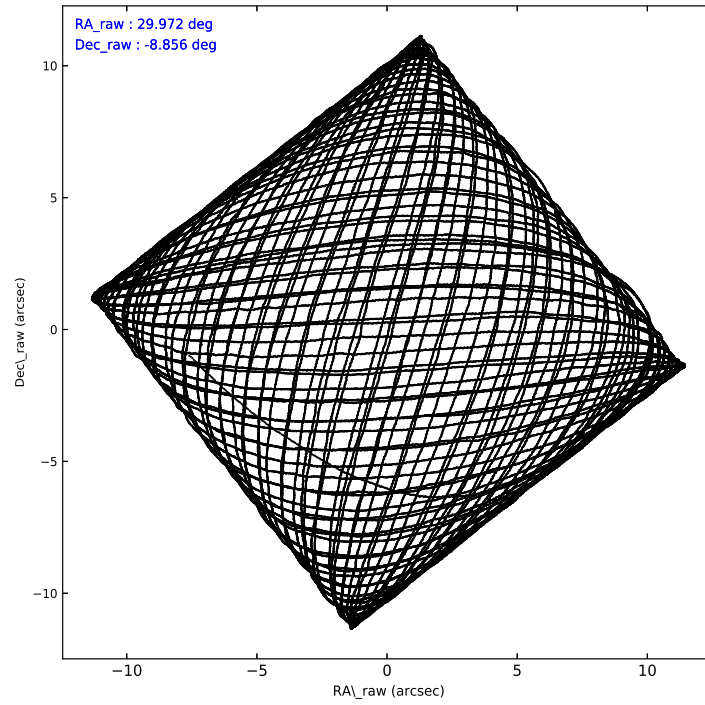
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	224848	229443	271505	265751	247097
rejected events	200242	202892	246954	225898	222141
rejected %	89%	88%	90%	85%	89%

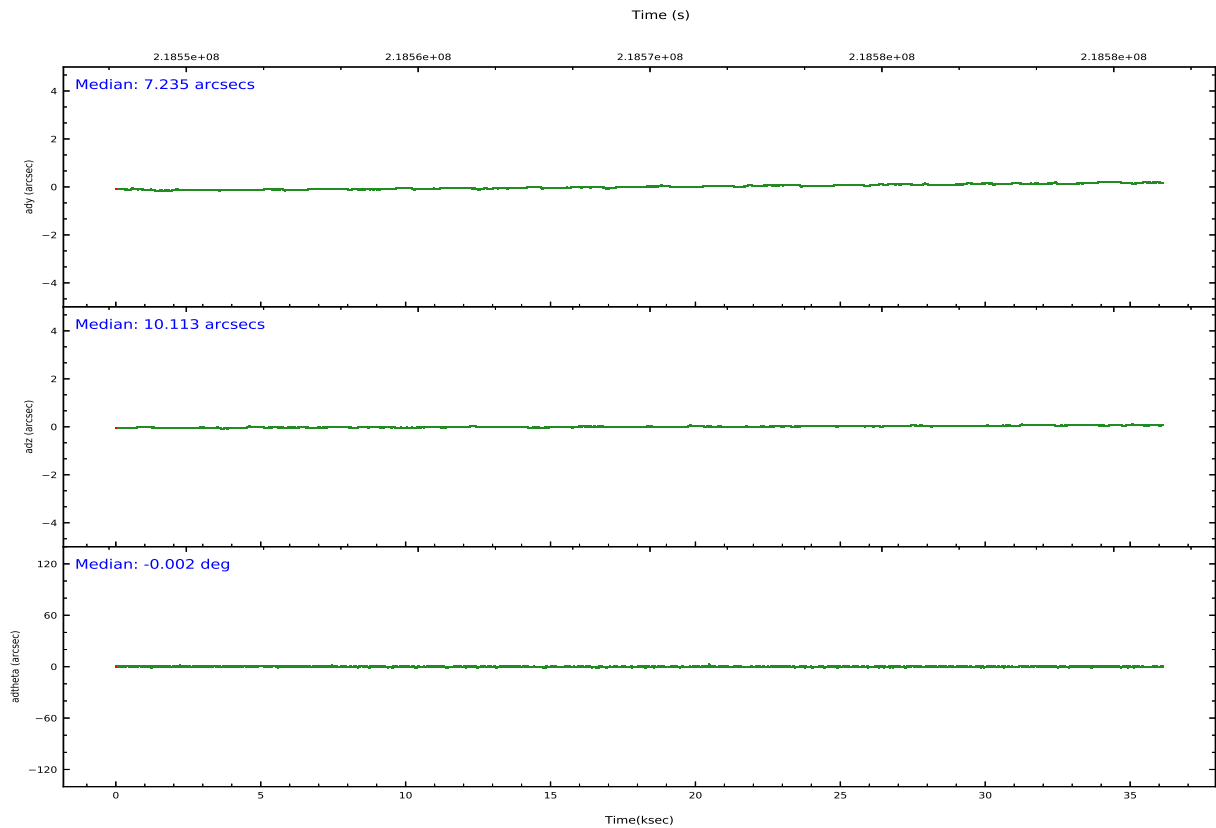
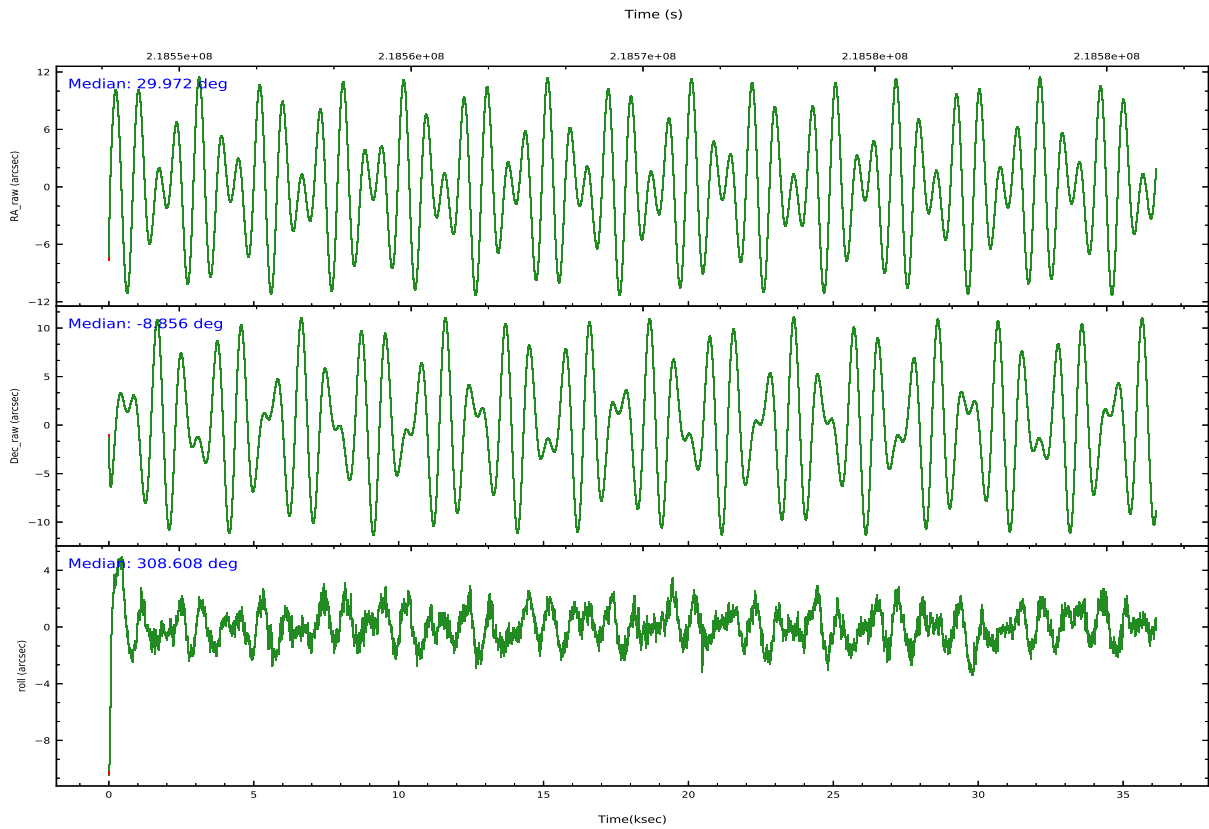
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	8859	9744	9074	22172	9152
	3%	4%	3%	8%	3%
grade 1 events	127	126	124	235	116
	0%	0%	0%	0%	0%
grade 2 events	5897	5698	5991	6522	5411
	2%	2%	2%	2%	2%
grade 3 events	2712	3006	2611	3132	2782
	1%	1%	0%	1%	1%
grade 4 events	2609	2857	2663	3093	2707
	1%	1%	0%	1%	1%
grade 5 events	8116	8933	7965	9581	9307
	3%	3%	2%	3%	3%
grade 6 events	4540	5250	4213	4945	4910
	2%	2%	1%	1%	1%
grade 7 events	191988	193829	238864	216071	212712
	85%	84%	87%	81%	86%

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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	29.945928	29.968133168573	Subarray requested	NONE	NONE
[deg] Pointing Dec	-8.845784	-8.855849217961	Alternating exposures requested	N	N
[deg] Pointing Roll	308.400571	308.60774433145	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.782348	-0.7809083437167272			
[mm] SIM defocus	0	0.001439871863259334			
[mm] SIM translation stage pos	-229.442463	-229.4438428438578			
[mm] SIM translation stage offset	-4.15	-4.148610159071865			
[s] Observation start time (MET)	218549705.184000	218547929.02999			
Observation start date	2004-12-04T12:14:01	2004-12-04T11:45:29			
[s] Observation end time (MET)	218585705.184000	218586204.06922			
Observation end date	2004-12-04T22:14:01	2004-12-04T22:23:24			
Read mode	TIMED	TIMED			

2.3 Aspect



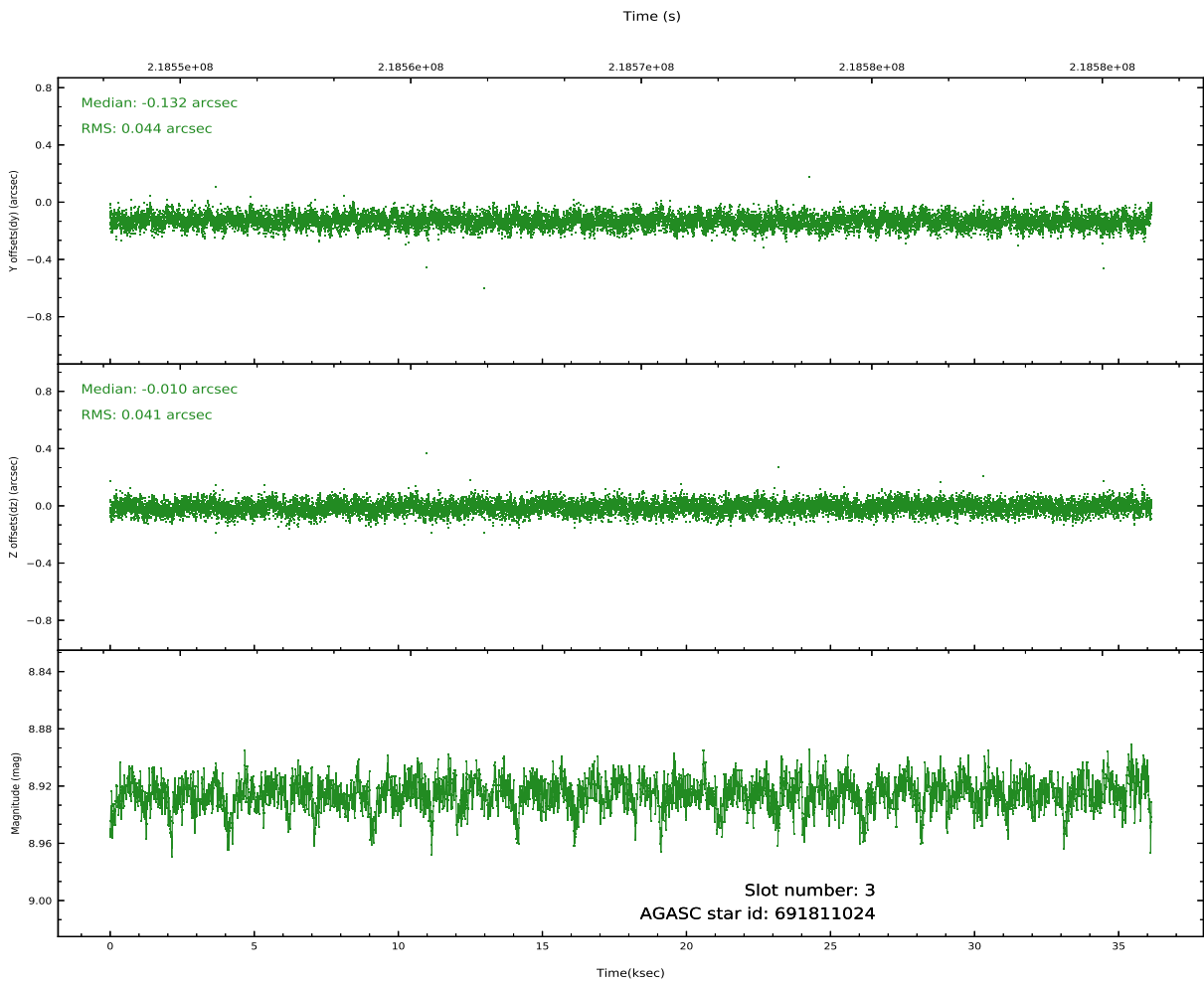
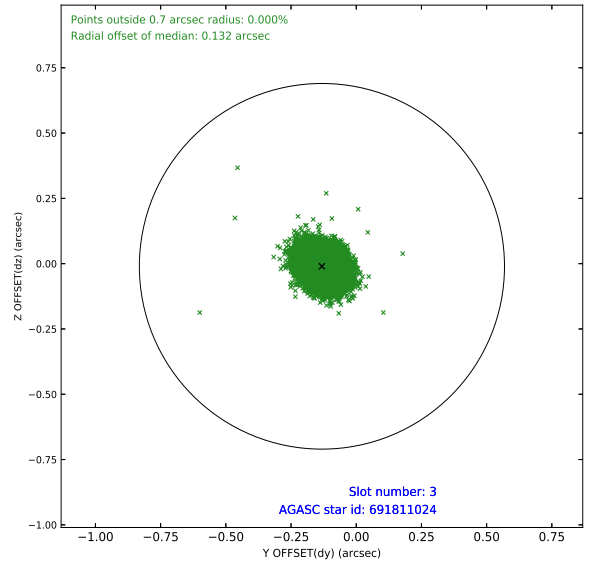
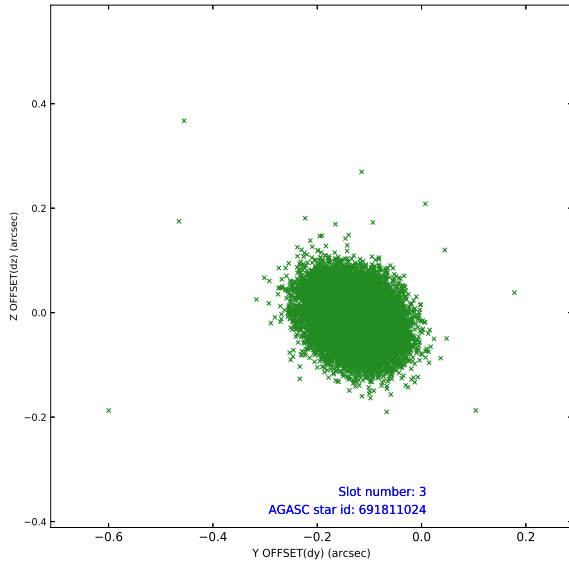


Slot Statistics

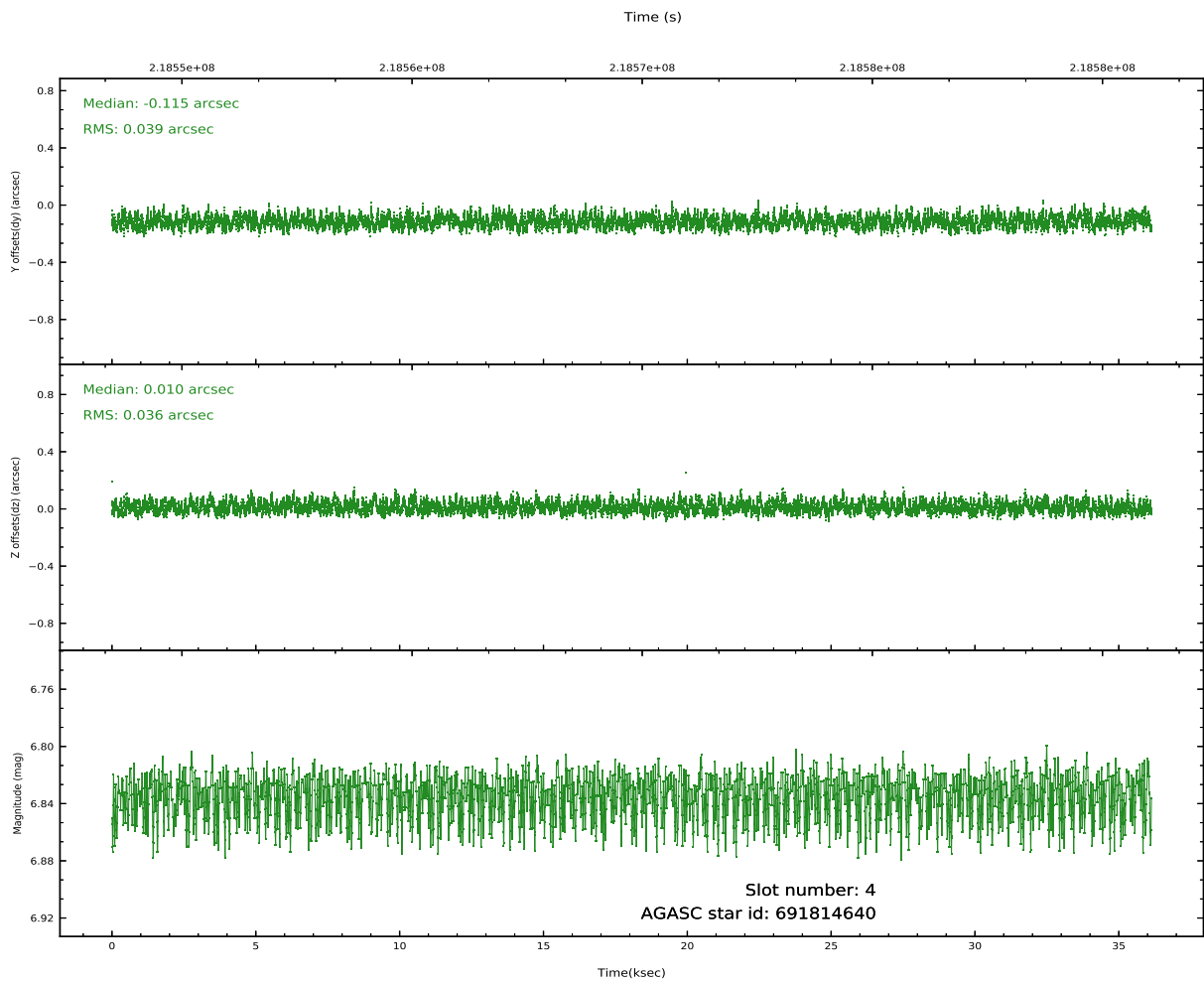
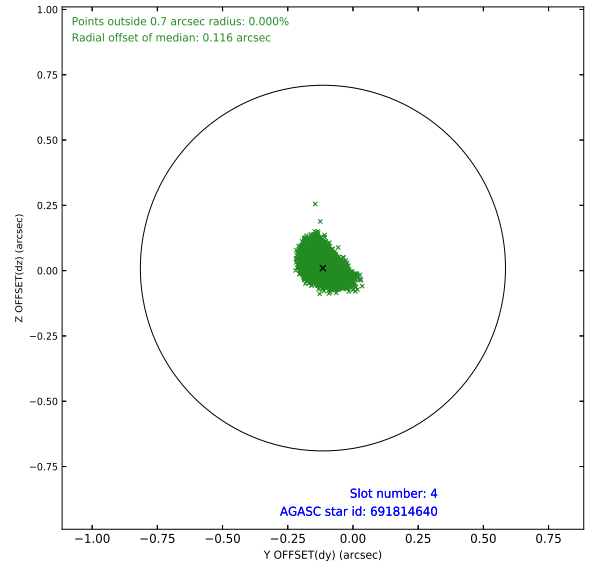
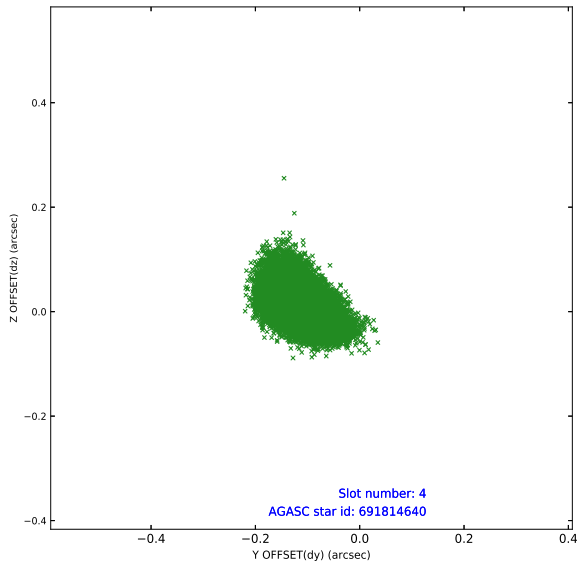
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	8812	1.000	0.077	-0.058	0.007	0.012	0.000000	0.000000	932.43	-918
1	FID		ACIS-I-5	7.23	8810	1.000	-0.239	0.068	0.007	0.012	0.000000	0.000000	-1815.97	978
2	FID		ACIS-I-6	7.25	8811	1.000	0.070	0.061	0.007	0.012	0.000000	0.000000	397.94	1623
3	GUIDE	used	691811024	8.93	17621	1.000	-0.132	-0.010	0.063	0.104	29.791583	-8.363095	-1703.14	648
4	GUIDE	used	691814640	6.83	17626	1.000	-0.115	0.010	0.057	0.091	30.206085	-8.471716	-479.41	1562
5	GUIDE	used	691817096	8.32	17625	1.000	0.005	-0.124	0.076	0.118	29.769058	-8.981725	-6.71	-796
6	GUIDE	used	692203704	9.54	17609	1.000	0.253	0.242	0.094	0.154	30.759553	-8.916713	2000.29	2107
7	GUIDE	used	691810800	8.53	17618	1.000	-0.013	-0.118	0.068	0.112	29.827543	-9.580078	1811.44	-1970

2.4 Star Slots

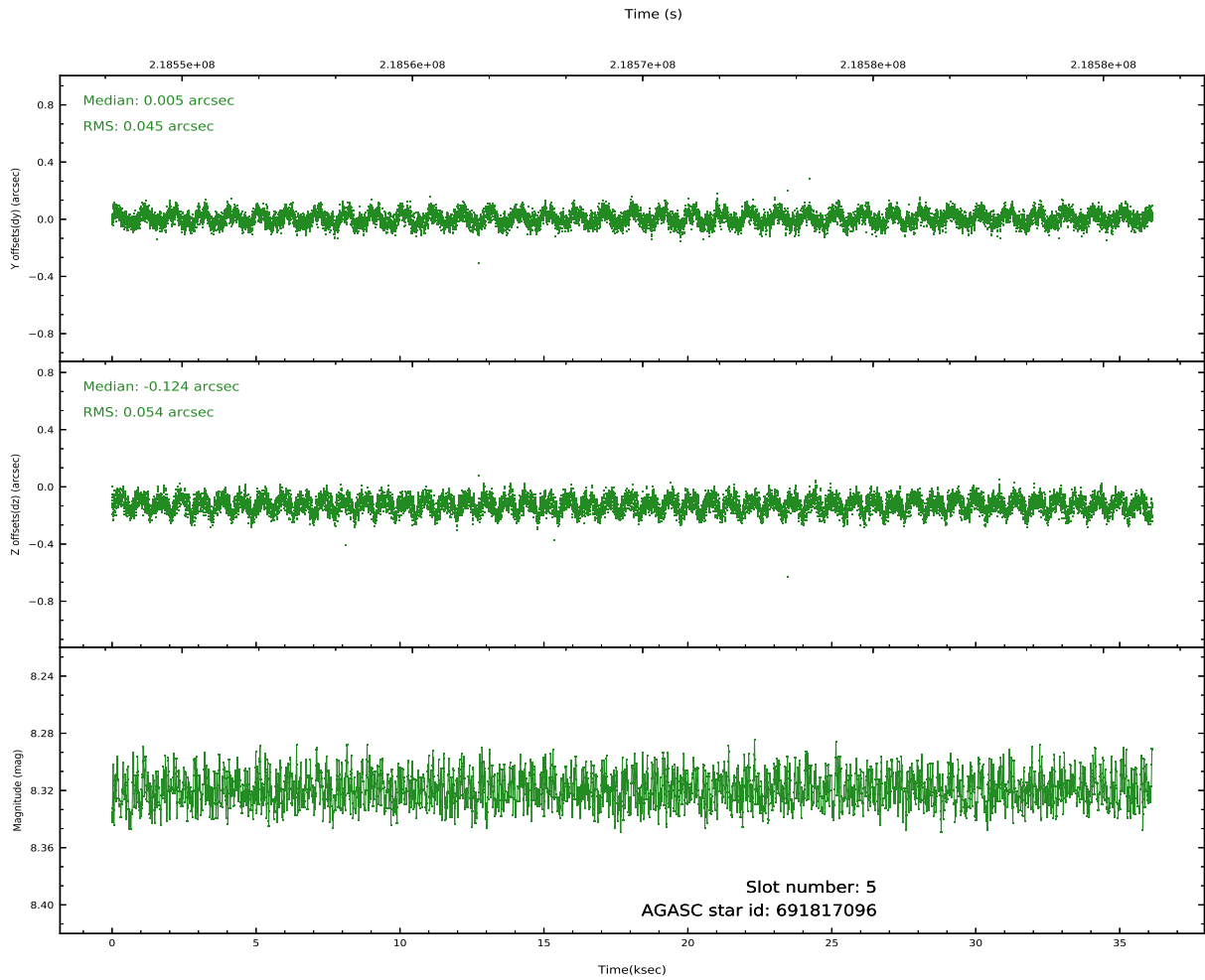
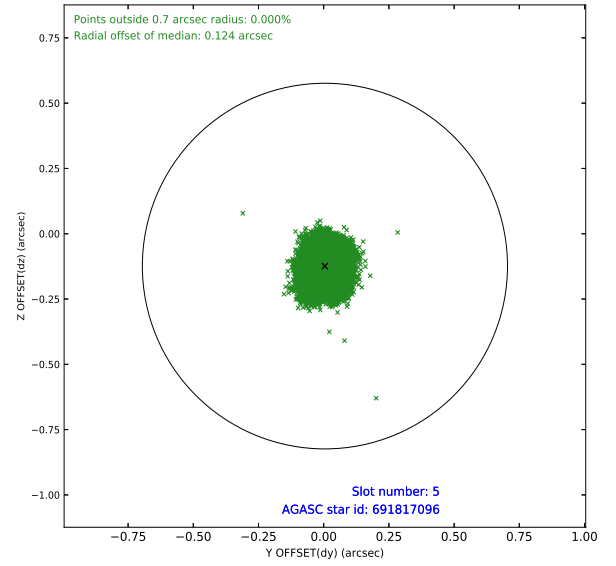
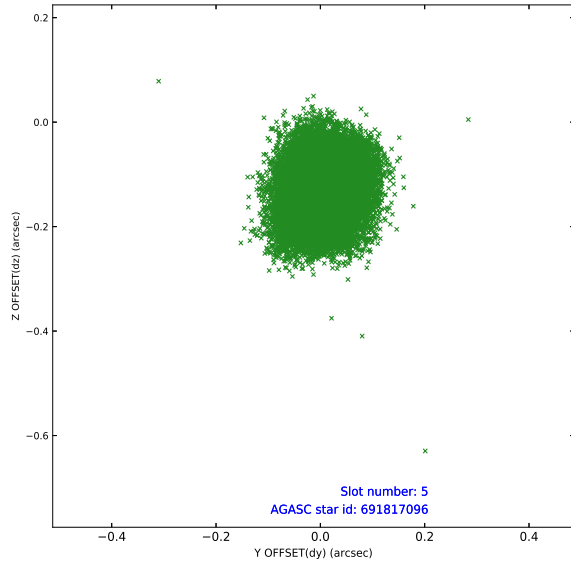
2.4.1 Slot 3



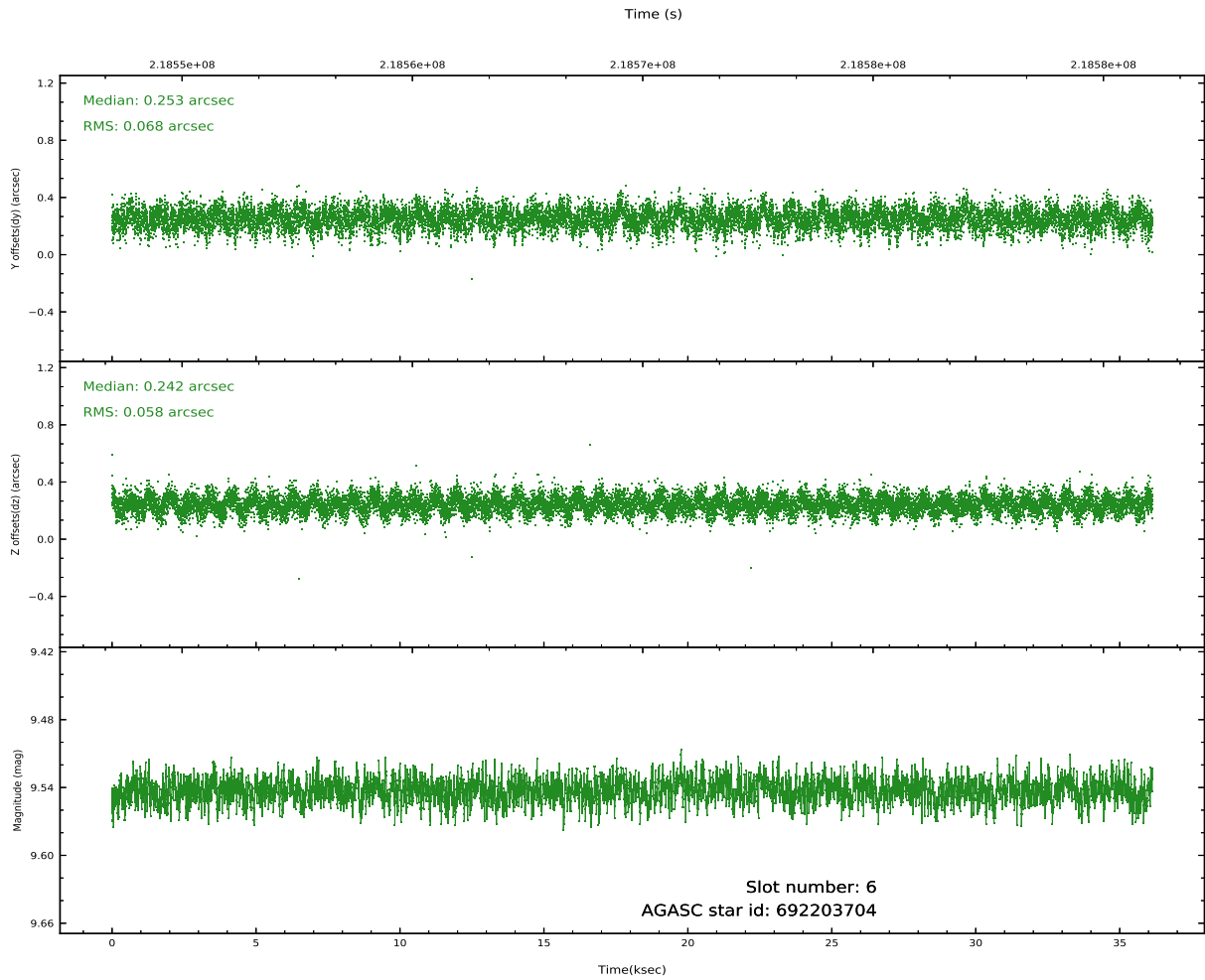
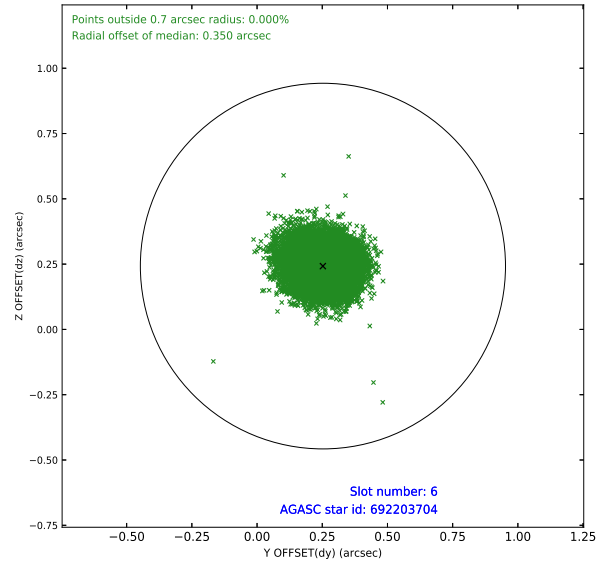
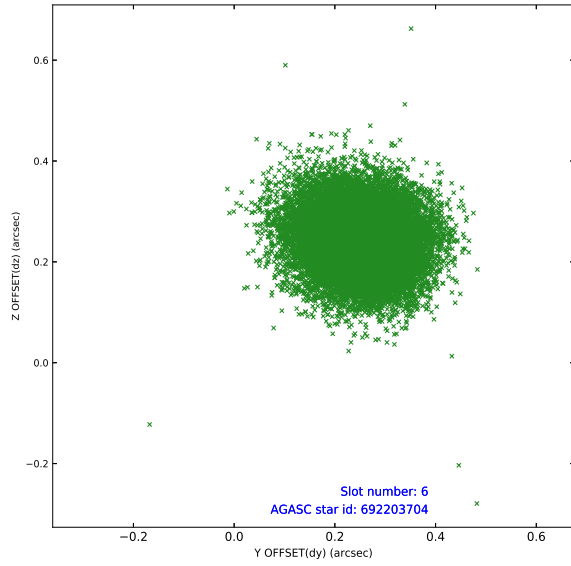
2.4.2 Slot 4



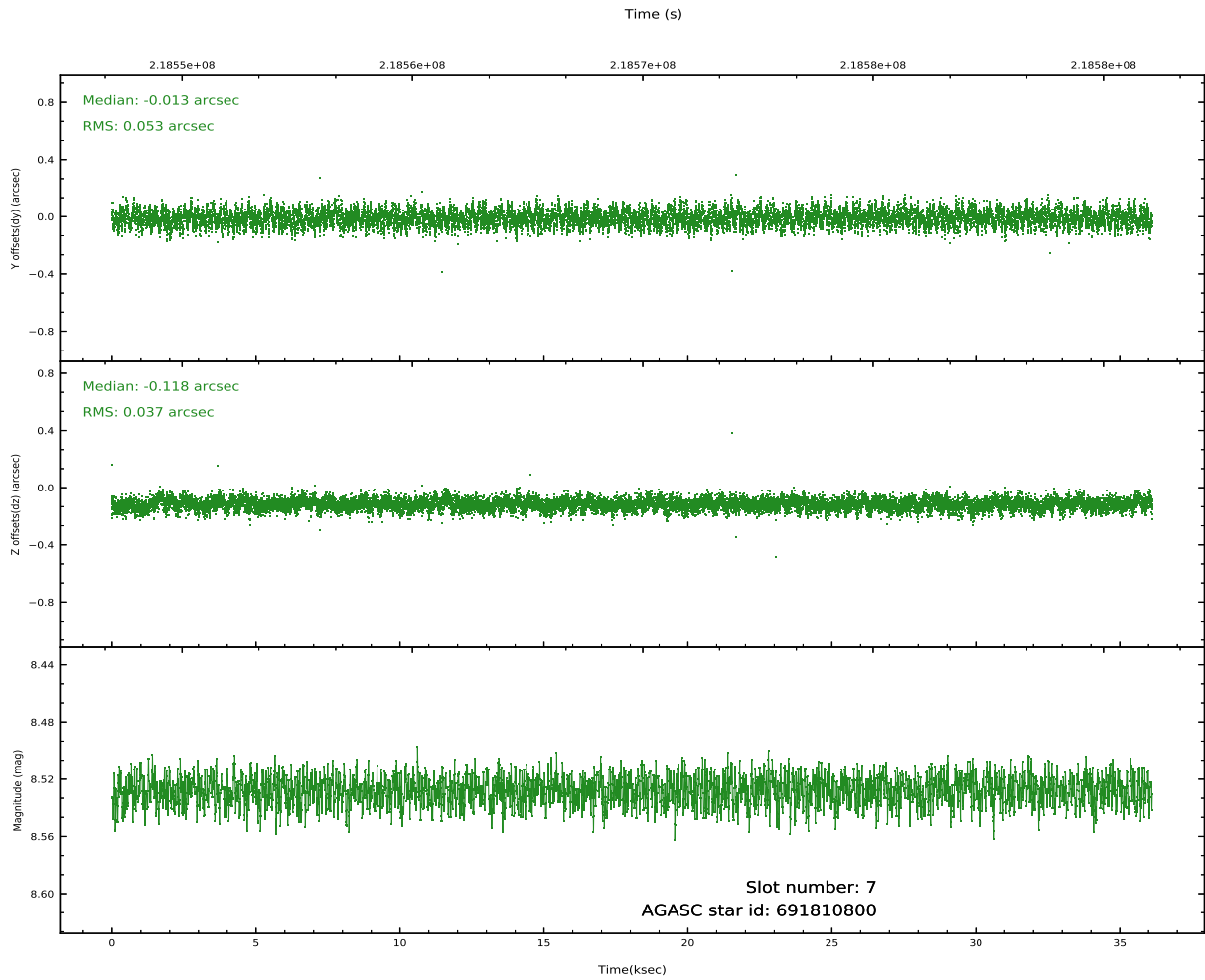
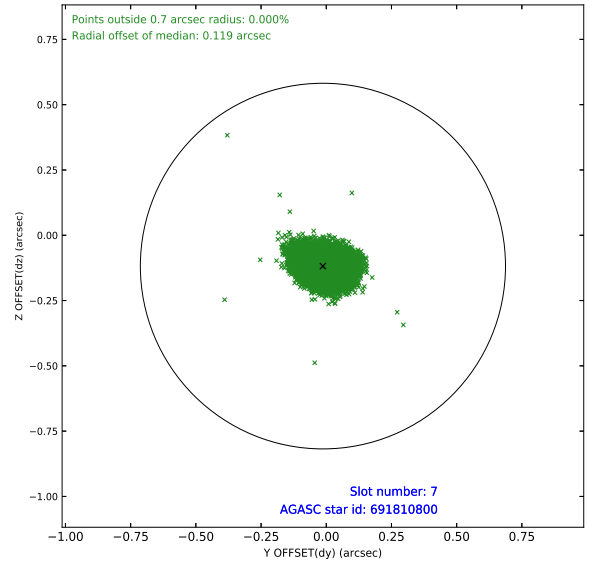
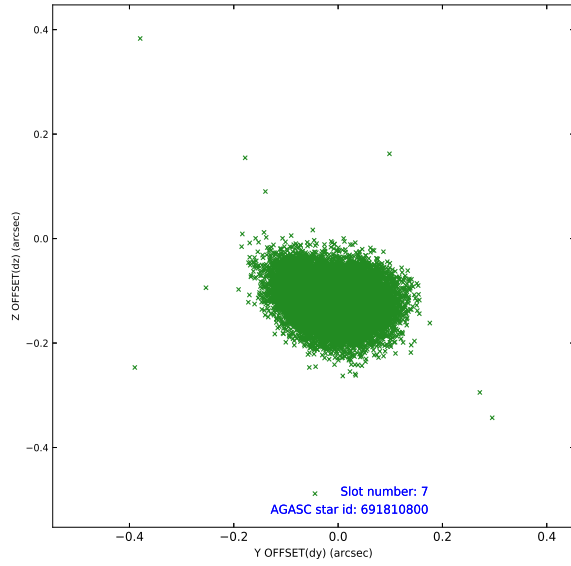
2.4.3 Slot 5



2.4.4 Slot 6

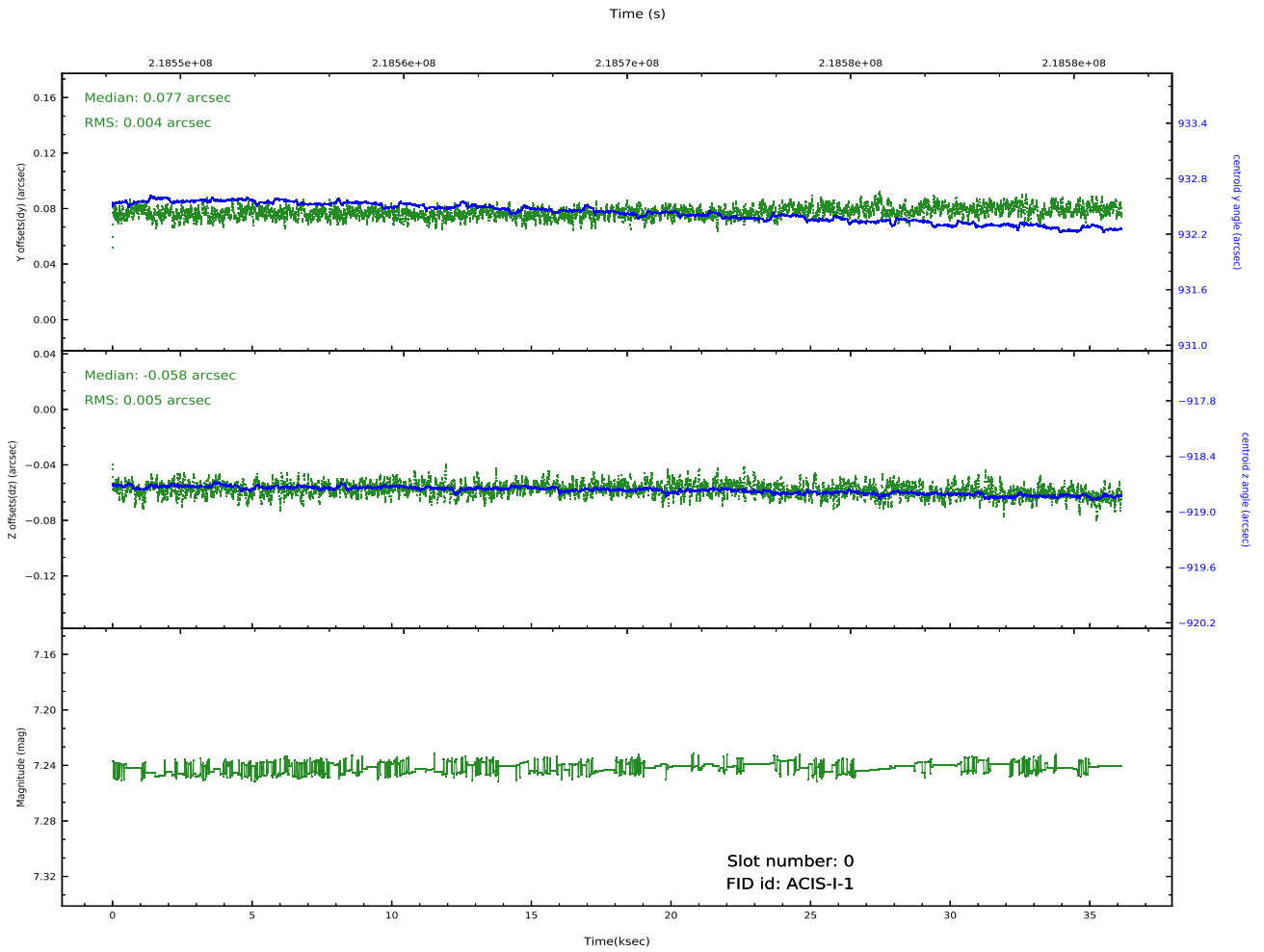
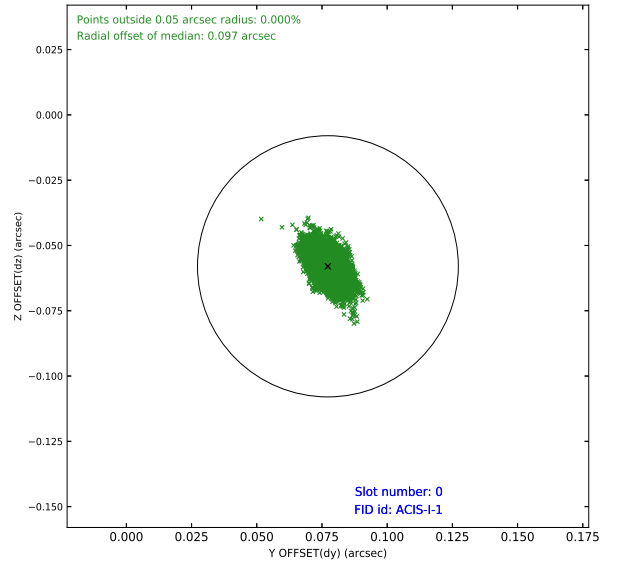
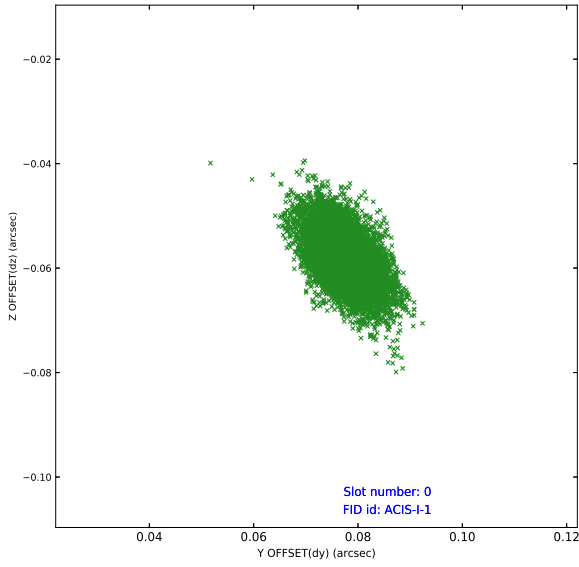


2.4.5 Slot 7

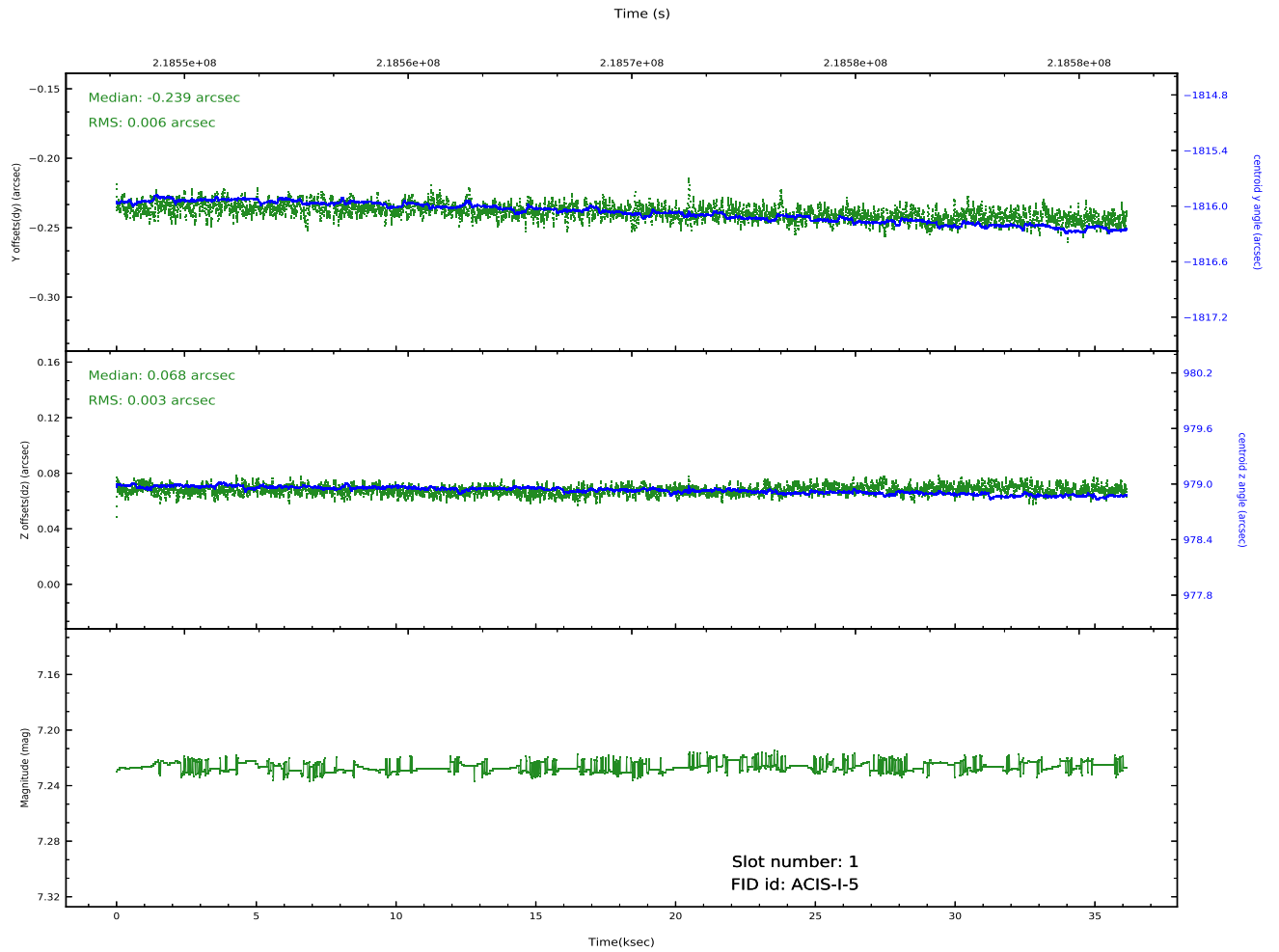
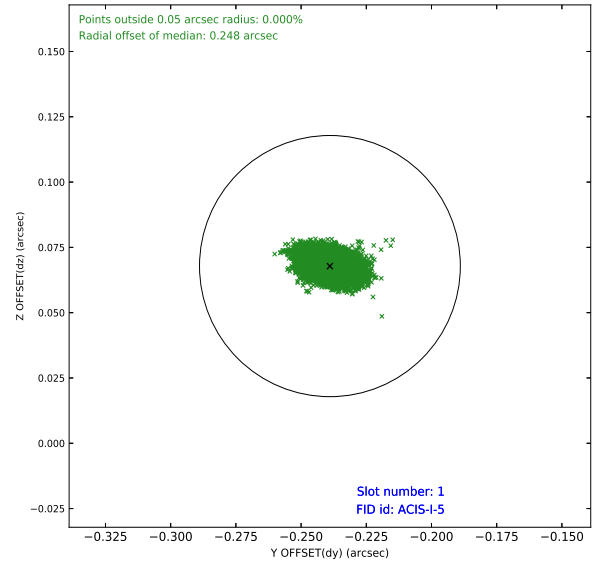
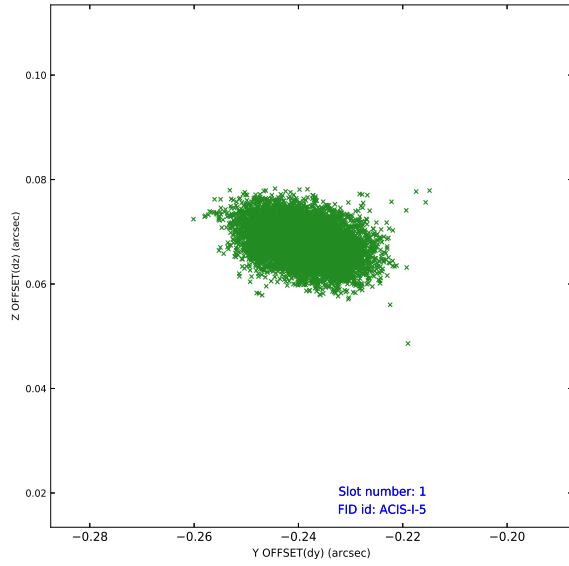


2.5 FID Slots

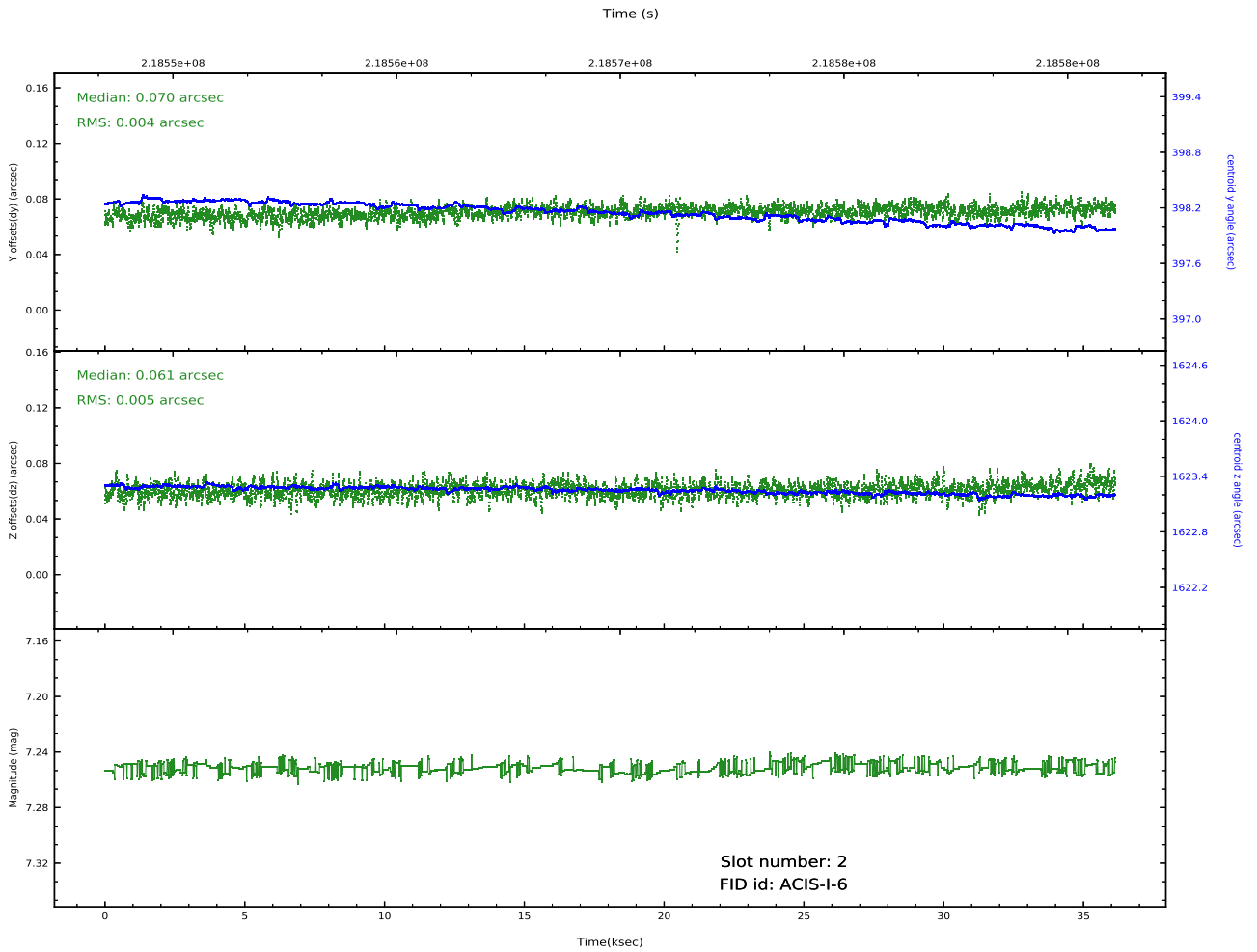
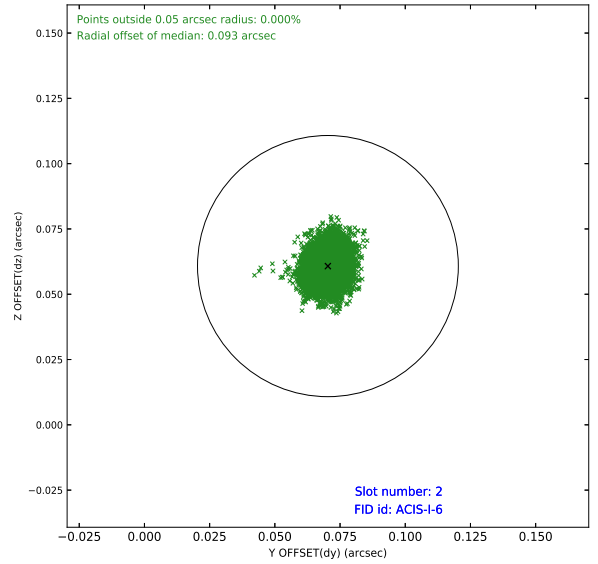
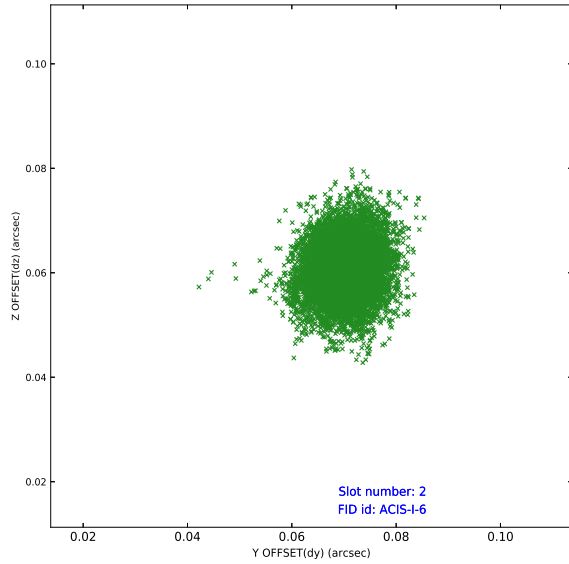
2.5.1 Slot 0



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)	2020.10.05
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	35.77089

A.2 Comments