

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6128 - L2 Version 5
Chandra X-Ray Center

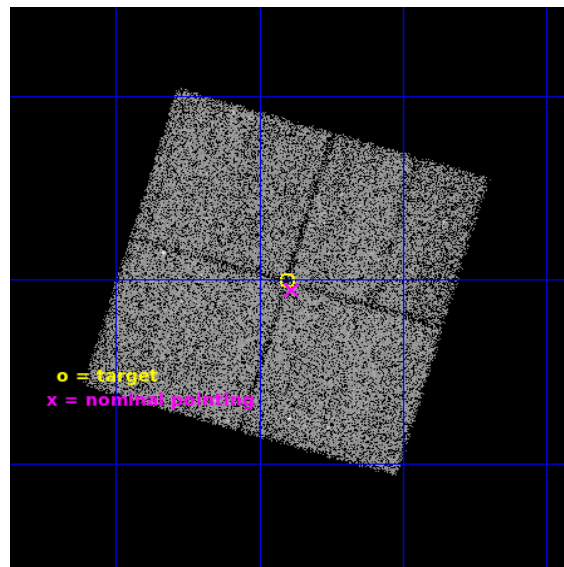
L2 Processing Date : Oct 7 2020

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1 Front

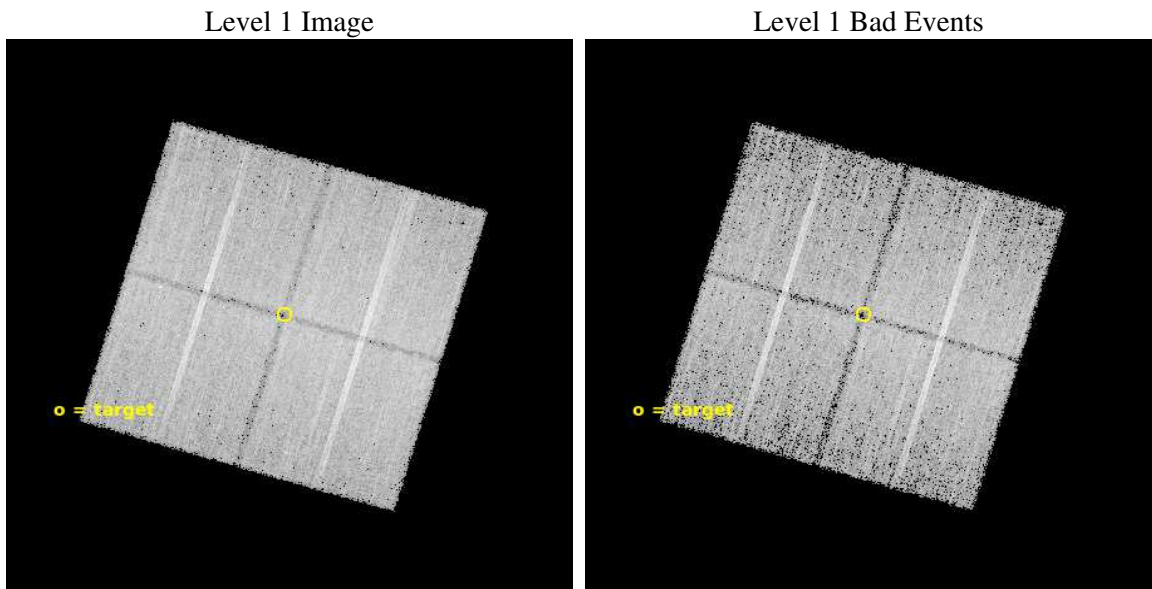
seq_num	500590	Sequence number
obs_id	6128	Observation id
title	GRB040912: An Unusual Event Exhibiting Strong Spectral Evolution from a GRB to an XRF	Proposal title
observer	Dr. george Ricker	Principal investigator
object	GRB040912	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	359.225	Observer's specified target RA [deg]
dec_targ	-1.000556	Observer's specified target Dec [deg]
ra_nom	359.22158546568	Nominal RA [deg]
dec_nom	-1.0088783491989	Nominal Dec [deg]
roll_nom	106.71604503109	Nominal Roll [deg]
revision	5	Processing version of data
ontime	18168.936004192	Sum of GTIs [s]
livetime	17931.545479521	Livetime [s]
ontime0	18181.499965012	Sum of GTIs [s]
ontime1	18181.499965012	Sum of GTIs [s]
ontime2	18181.499965012	Sum of GTIs [s]
ontime3	18168.936004192	Sum of GTIs [s]
l2events	89117	Number of level 2 events



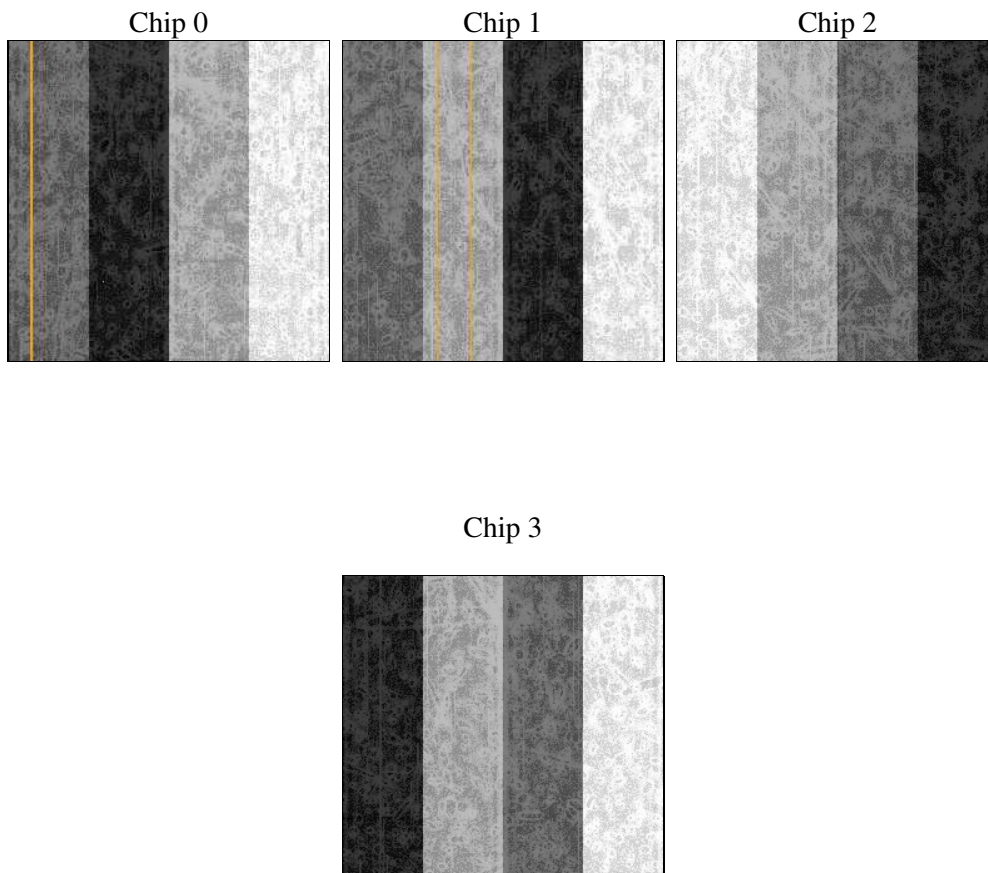
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	18168.936004192	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	18181.499965012	Sum of GTIs [s]
date	2020-10-07T18:03:41	Date and time of file creation	ontime1	18181.499965012	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	18181.499965012	Sum of GTIs [s]
			ontime3	18168.936004192	Sum of GTIs [s]
			l1events	683960	Number of level 1 events

2.1.4 Events

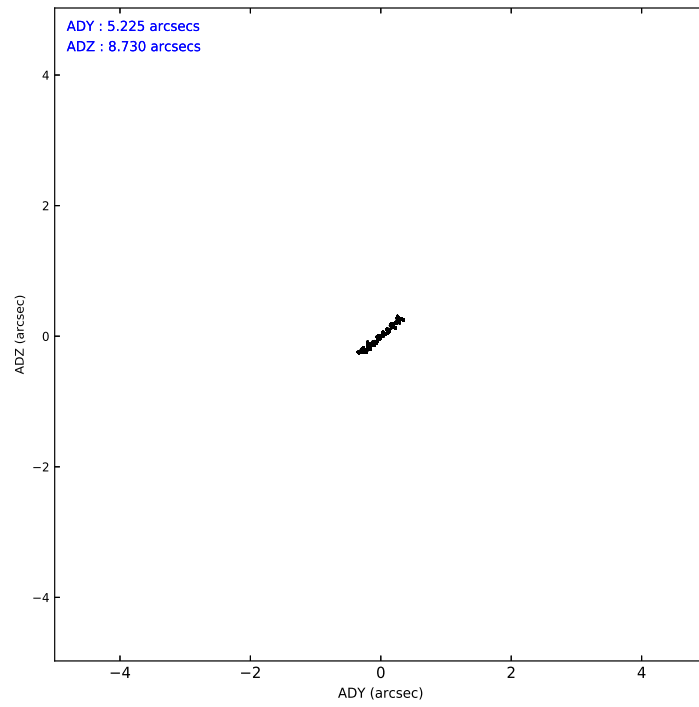
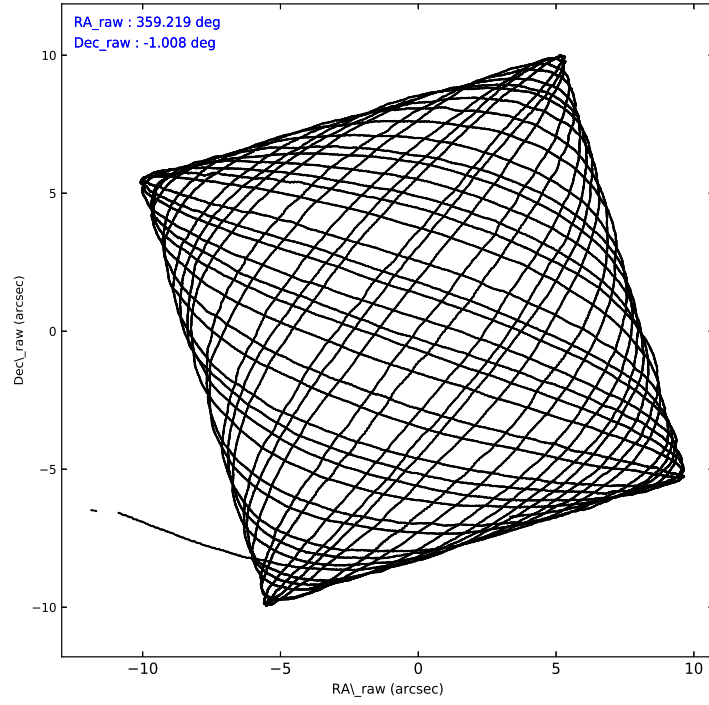
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	159598	164039	183933	176390
rejected events	131725	136563	155171	151129
rejected %	82%	83%	84%	85%

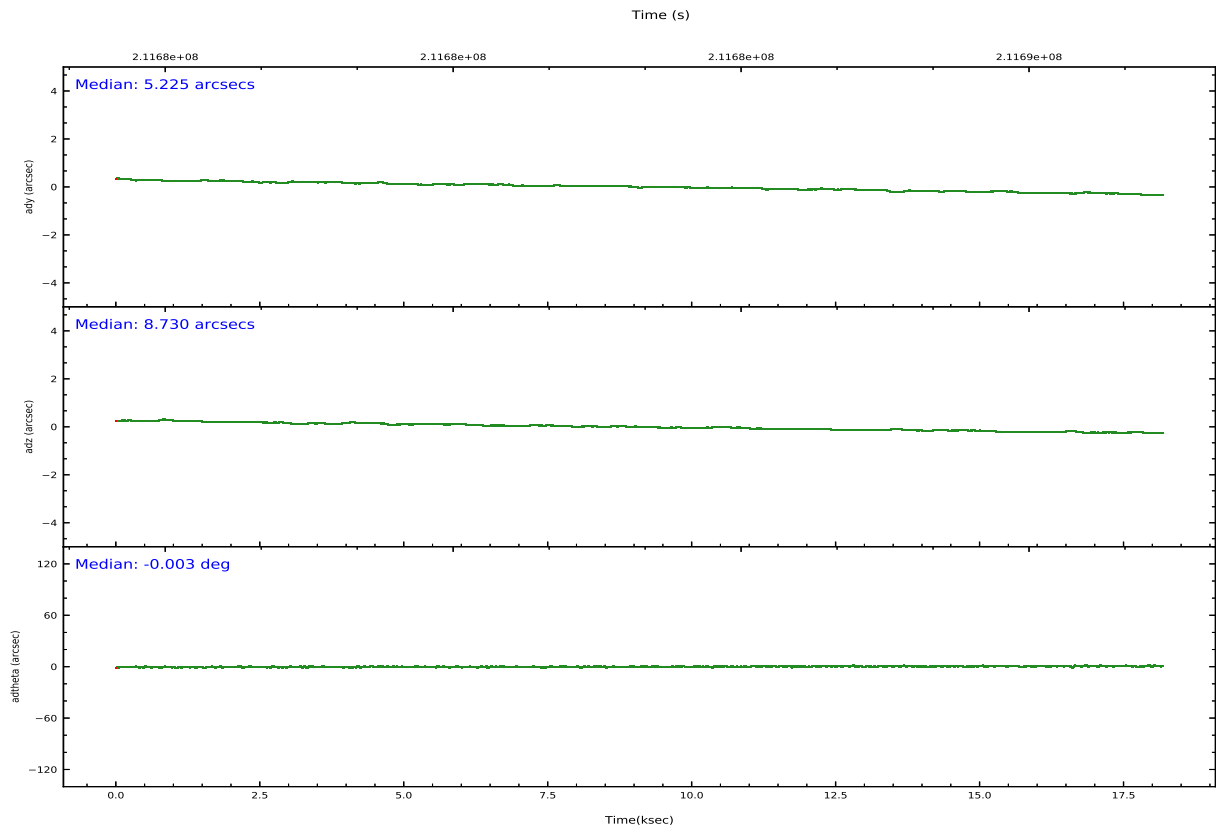
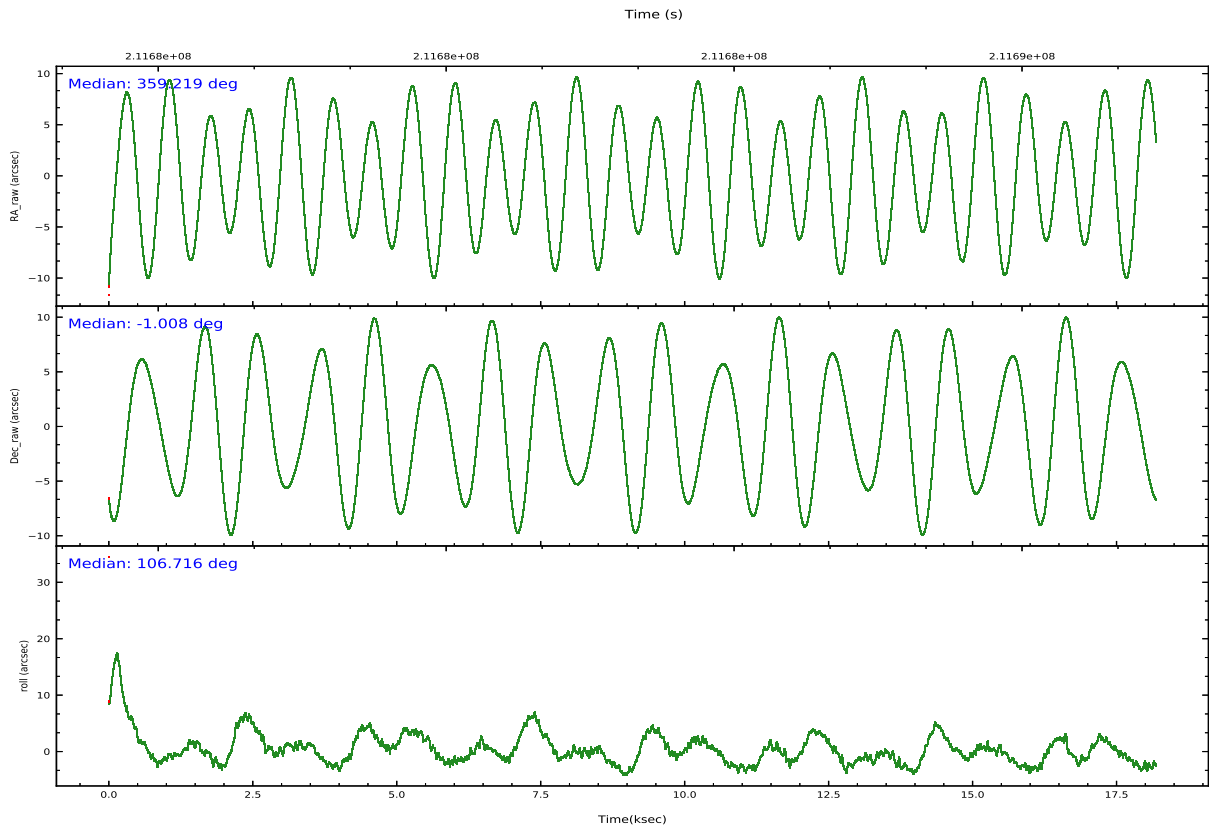
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	12191	10267	13684	10609
	7%	6%	7%	6%
grade 1 events	109	95	120	91
	0%	0%	0%	0%
grade 2 events	8496	9056	7775	7536
	5%	5%	4%	4%
grade 3 events	1841	1944	1702	1680
	1%	1%	0%	0%
grade 4 events	1832	1918	2393	1807
	1%	1%	1%	1%
grade 5 events	5636	5995	5434	6179
	3%	3%	2%	3%
grade 6 events	5794	6577	5571	5753
	3%	4%	3%	3%
grade 7 events	123699	128187	147254	142735
	77%	78%	80%	80%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-0123	ACIS-0123	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	359.238690	359.22158546568	Subarray requested	NONE	NONE
[deg] Pointing Dec	-1.026801	-1.0088783491989	Alternating exposures requested	N	N
[deg] Pointing Roll	106.514271	106.71604503109	[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	-233.592463	-233.5874344608287			
[mm] SIM translation stage offset	0	-0.005018542100998502			
[s] Observation start time (MET)	211674330.184000	211672661.78453			
Observation start date	2004-09-15T22:24:26	2004-09-15T21:57:41			
[s] Observation end time (MET)	211692330.184000	211693727.07297			
Observation end date	2004-09-16T03:24:26	2004-09-16T03:48:47			
Read mode	TIMED	TIMED			

2.3 Aspect





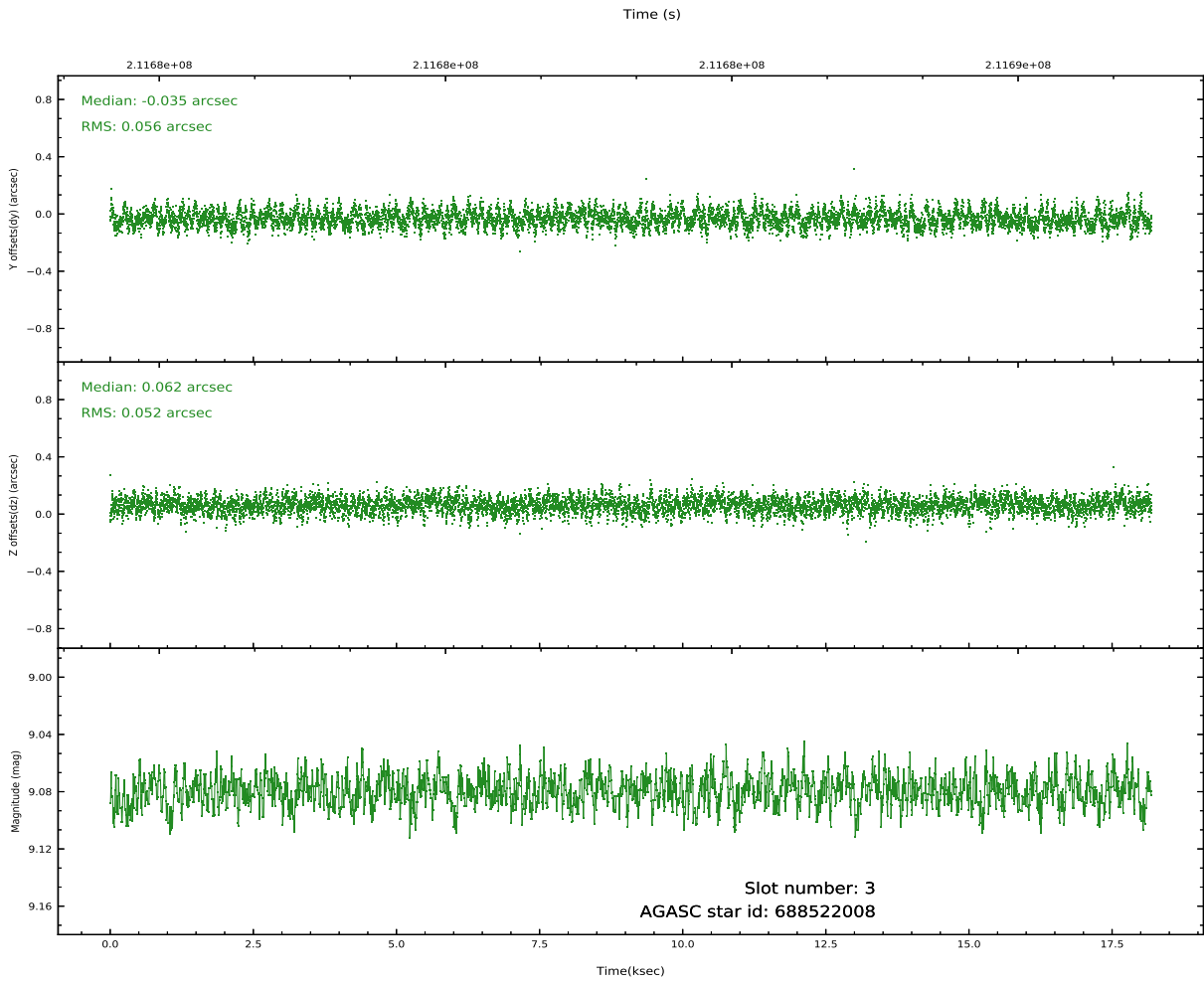
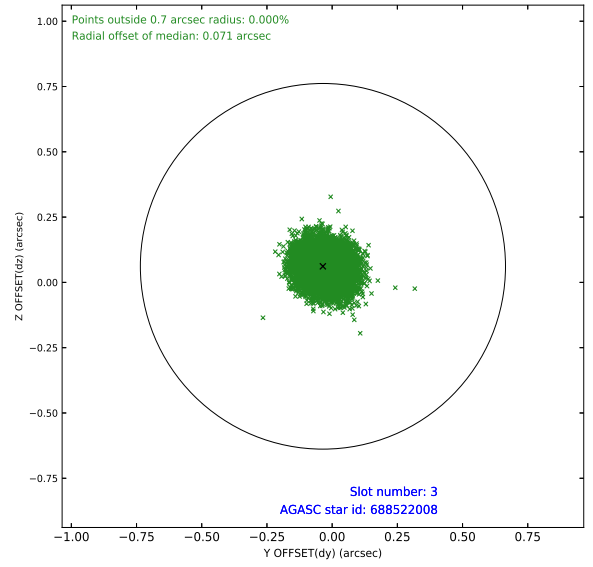
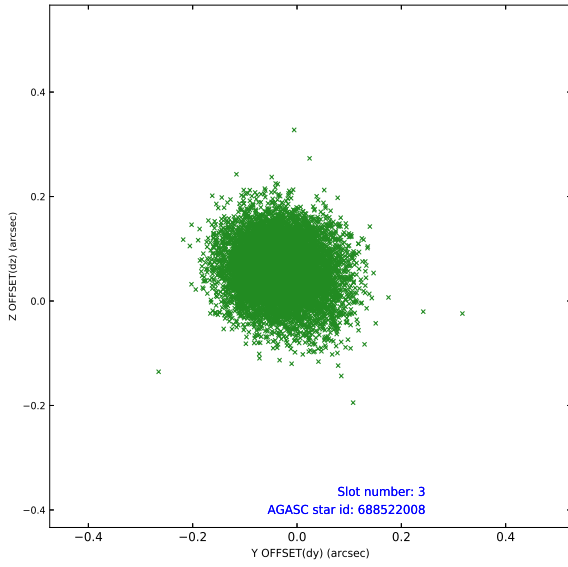
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.24	4437	1.000	0.028	0.014	0.008	0.016	0.000000	0.000000	934.54	-832
1	FID		ACIS-I-5	7.23	4437	1.000	-0.207	0.037	0.008	0.014	0.000000	0.000000	-1813.70	1065
2	FID		ACIS-I-6	7.25	4437	1.000	0.088	0.018	0.009	0.014	0.000000	0.000000	399.88	1709
3	GUIDE	used	688522008	9.08	8871	1.000	-0.035	0.062	0.082	0.132	359.793079	-0.583482	963.26	-2366
4	GUIDE	used	688523168	9.81	8868	1.000	-0.012	-0.017	0.127	0.201	358.843792	-1.079337	222.81	1416
5	GUIDE	used	688526568	8.84	8869	1.000	-0.007	-0.176	0.065	0.106	359.115698	-0.932325	452.19	328
6	GUIDE	used	688526856	9.26	8865	1.000	0.081	0.090	0.102	0.166	359.962410	-1.196707	-1325.98	-2323
7	GUIDE	used	688521312	8.47	8870	1.000	-0.022	0.050	0.084	0.138	359.794684	-0.499831	1250.34	-2457

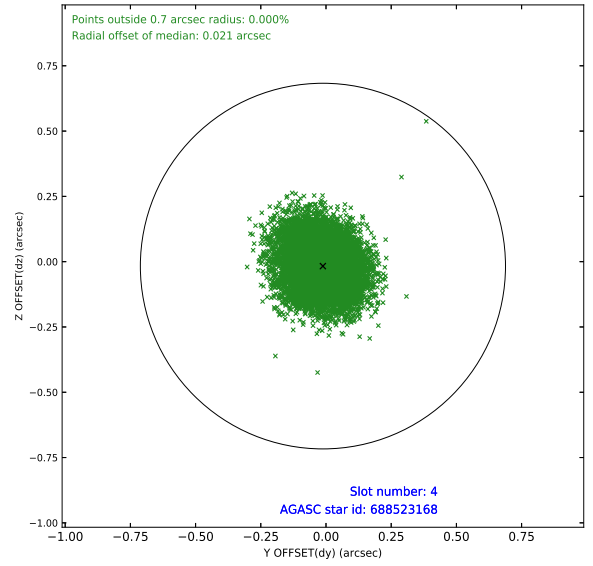
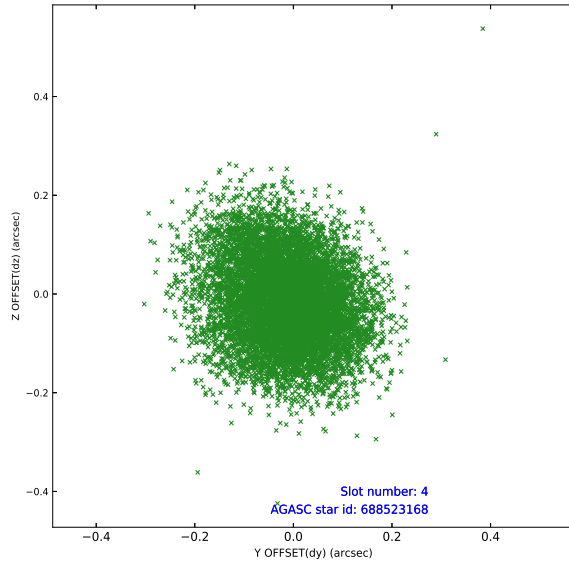
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2.4 Star Slots

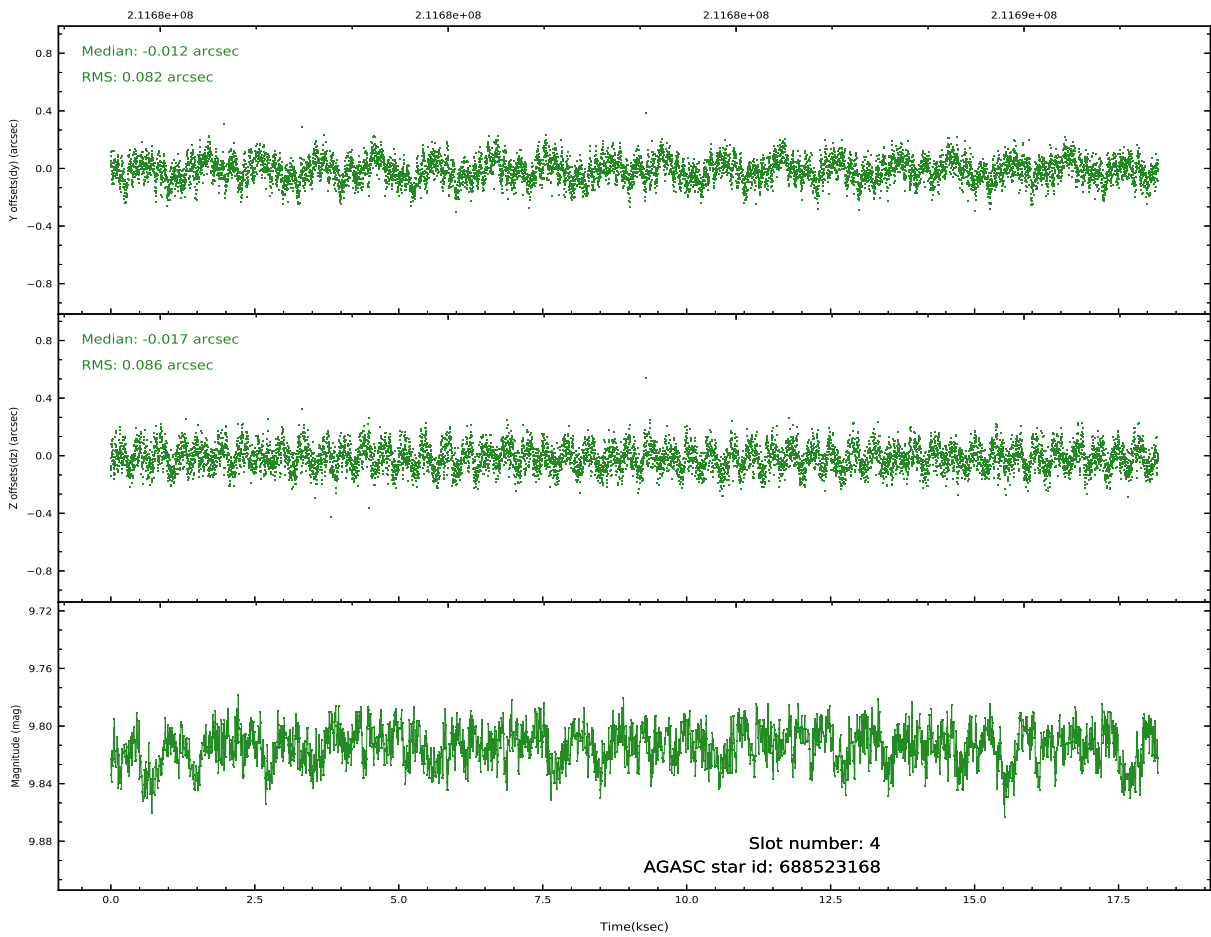
2.4.1 Slot 3



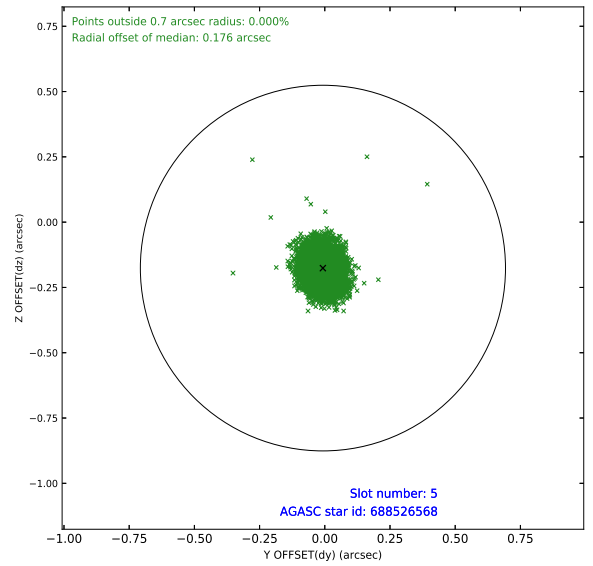
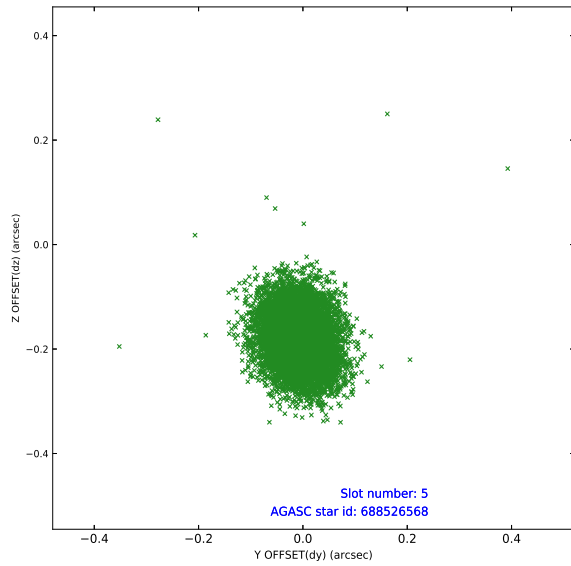
2.4.2 Slot 4



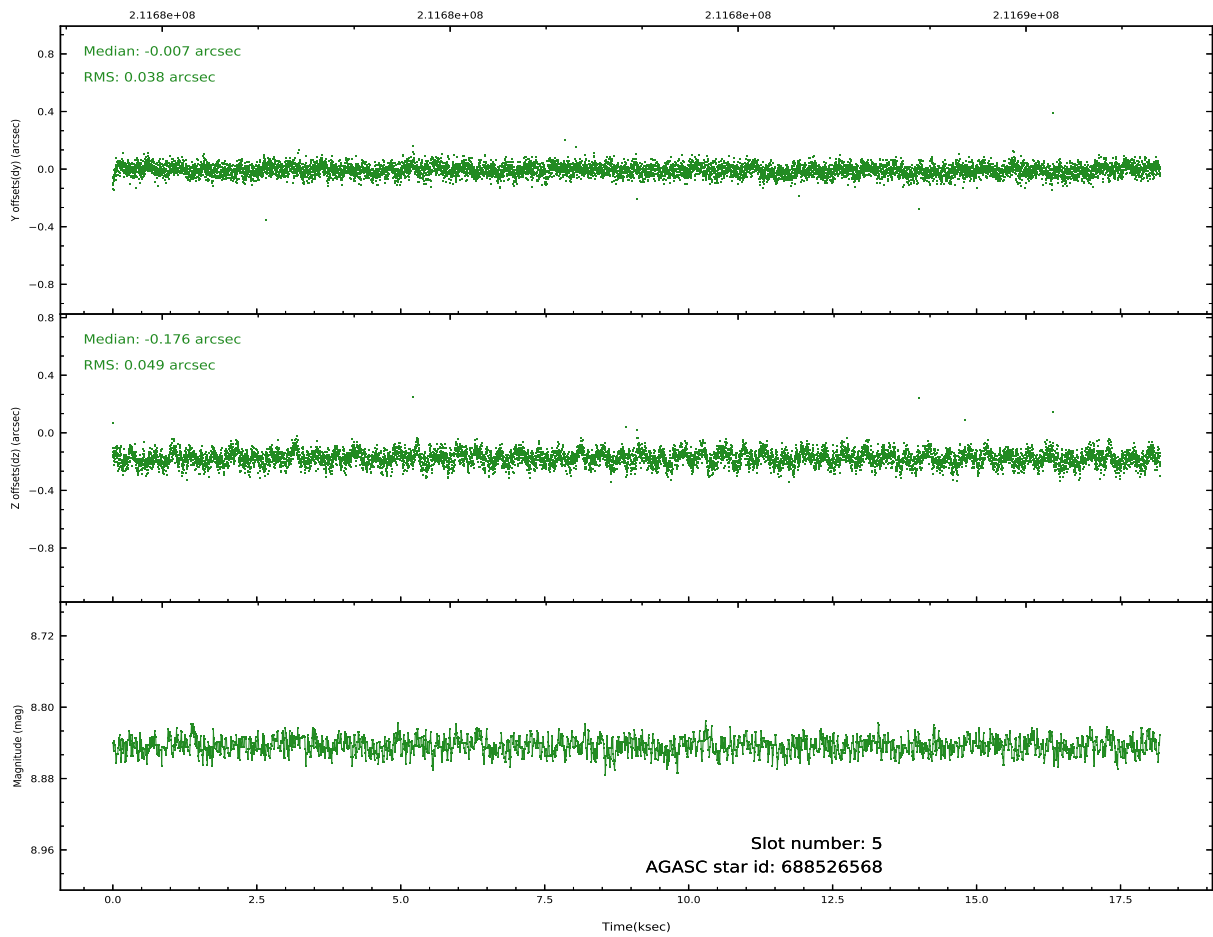
Time (s)



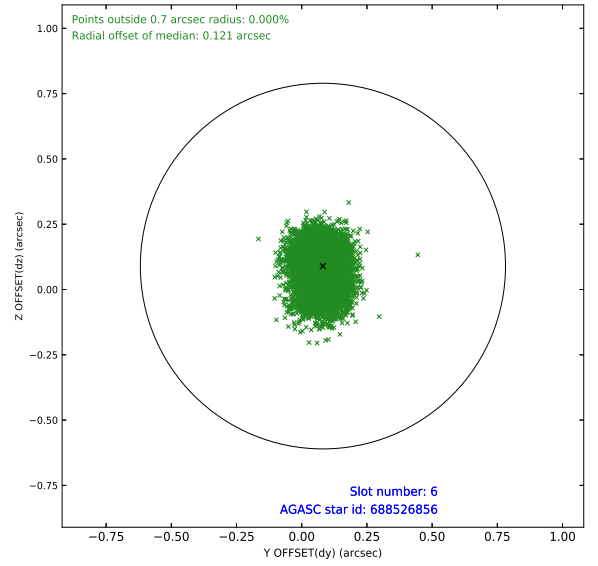
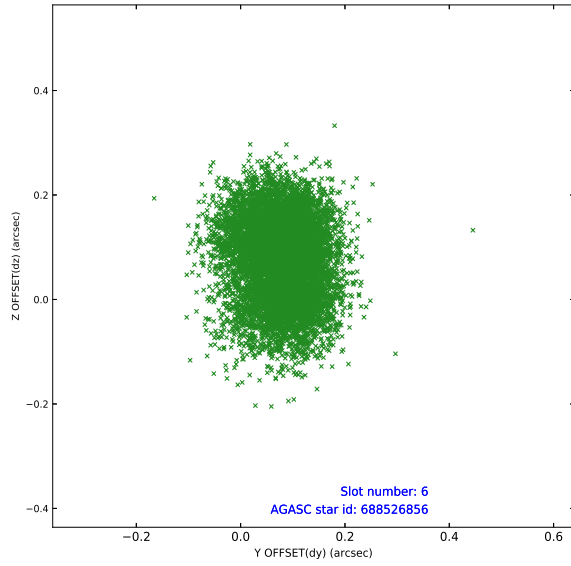
2.4.3 Slot 5



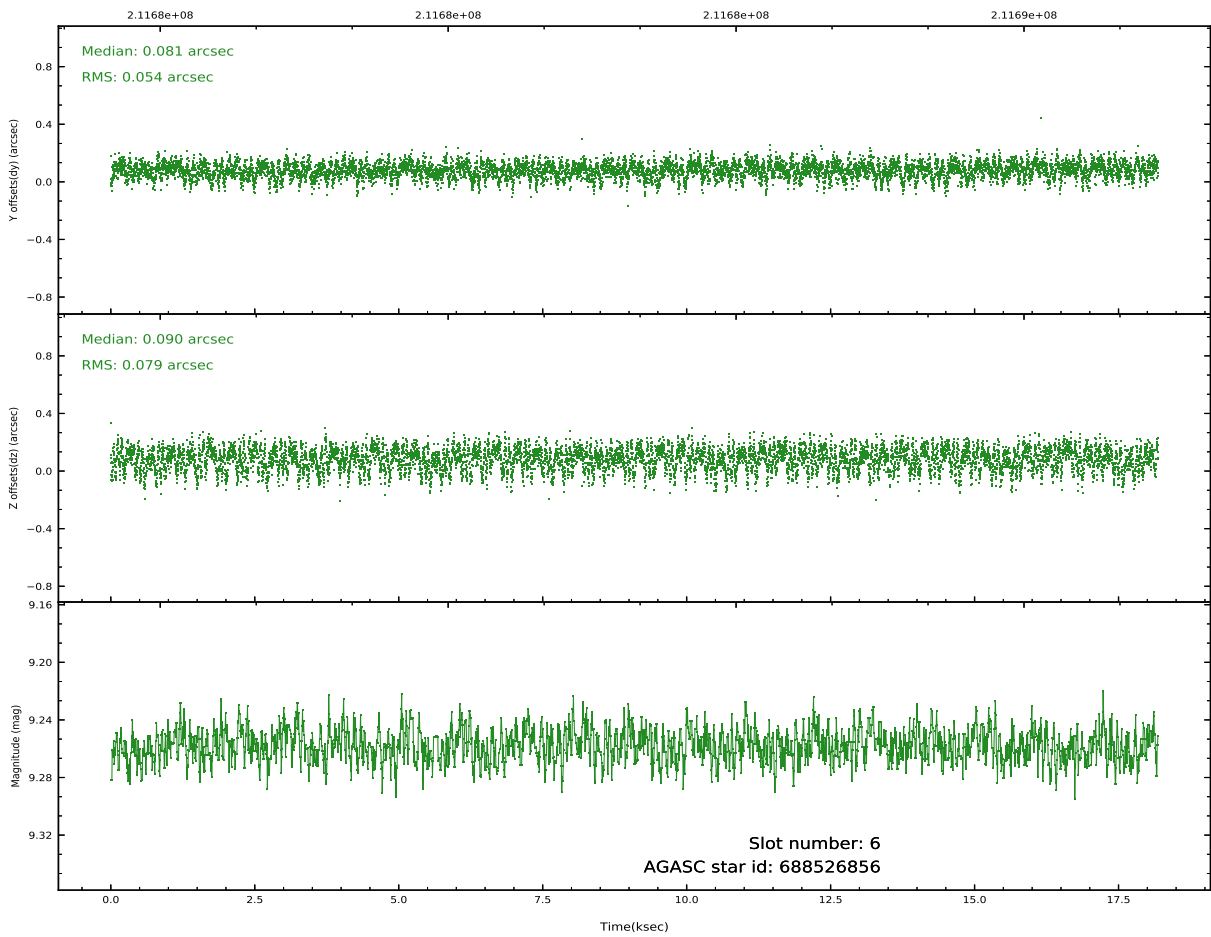
Time (s)



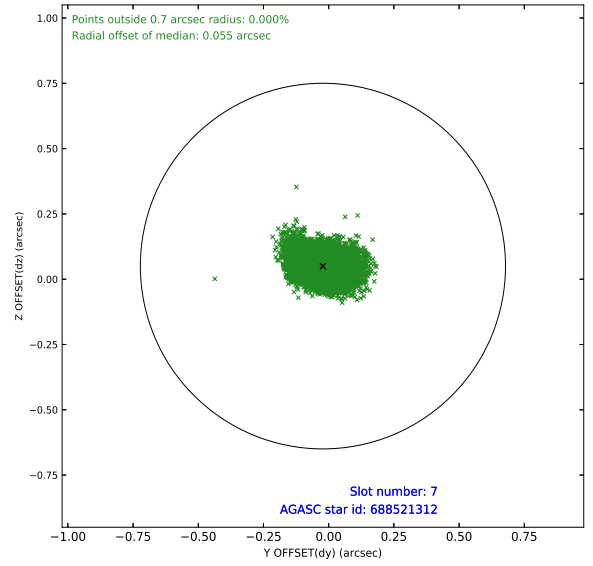
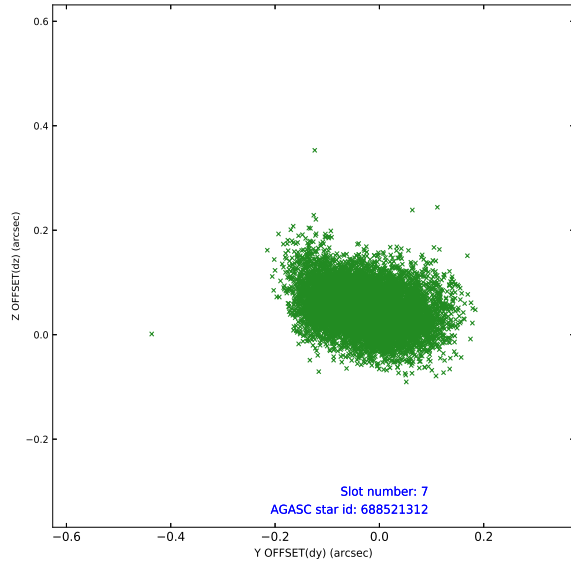
2.4.4 Slot 6



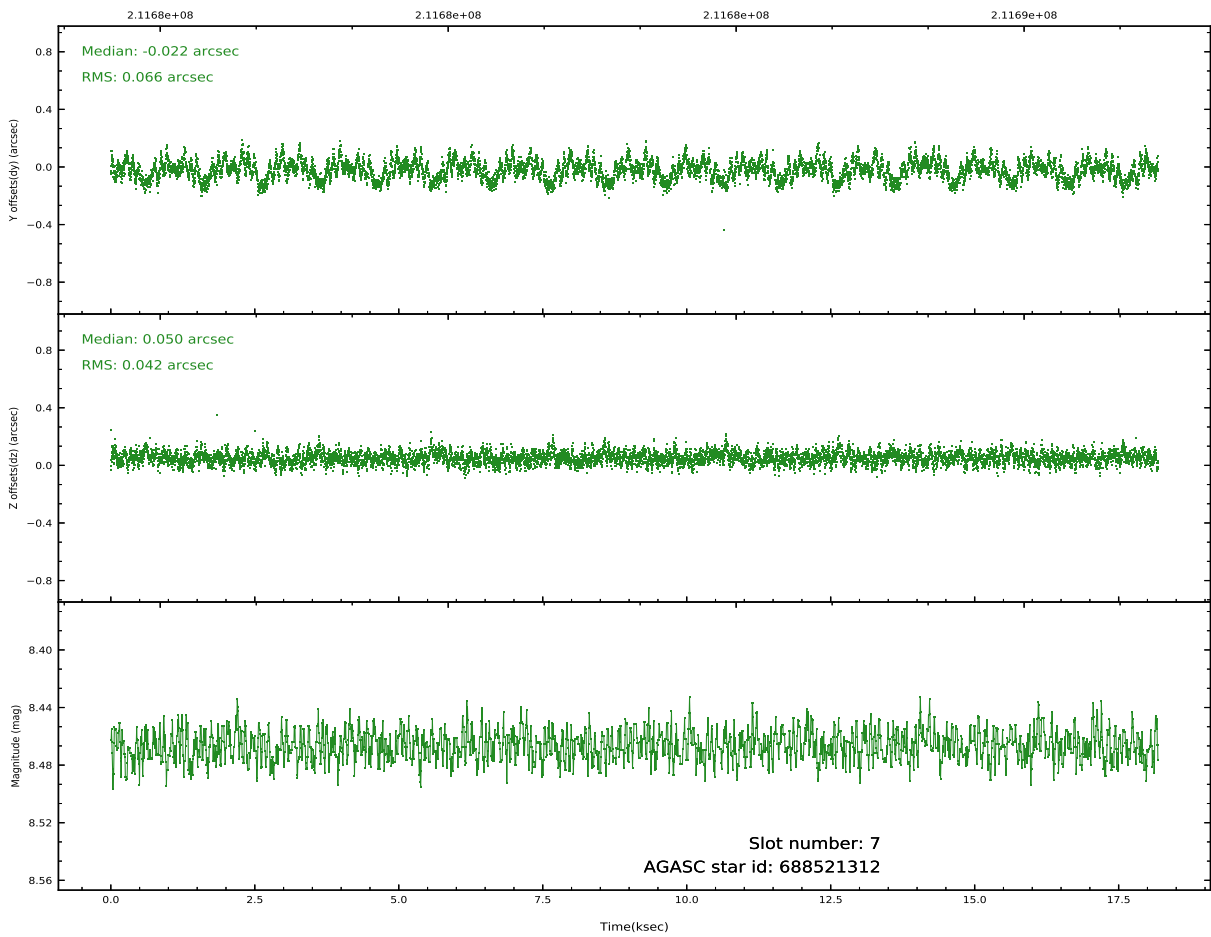
Time (s)



2.4.5 Slot 7

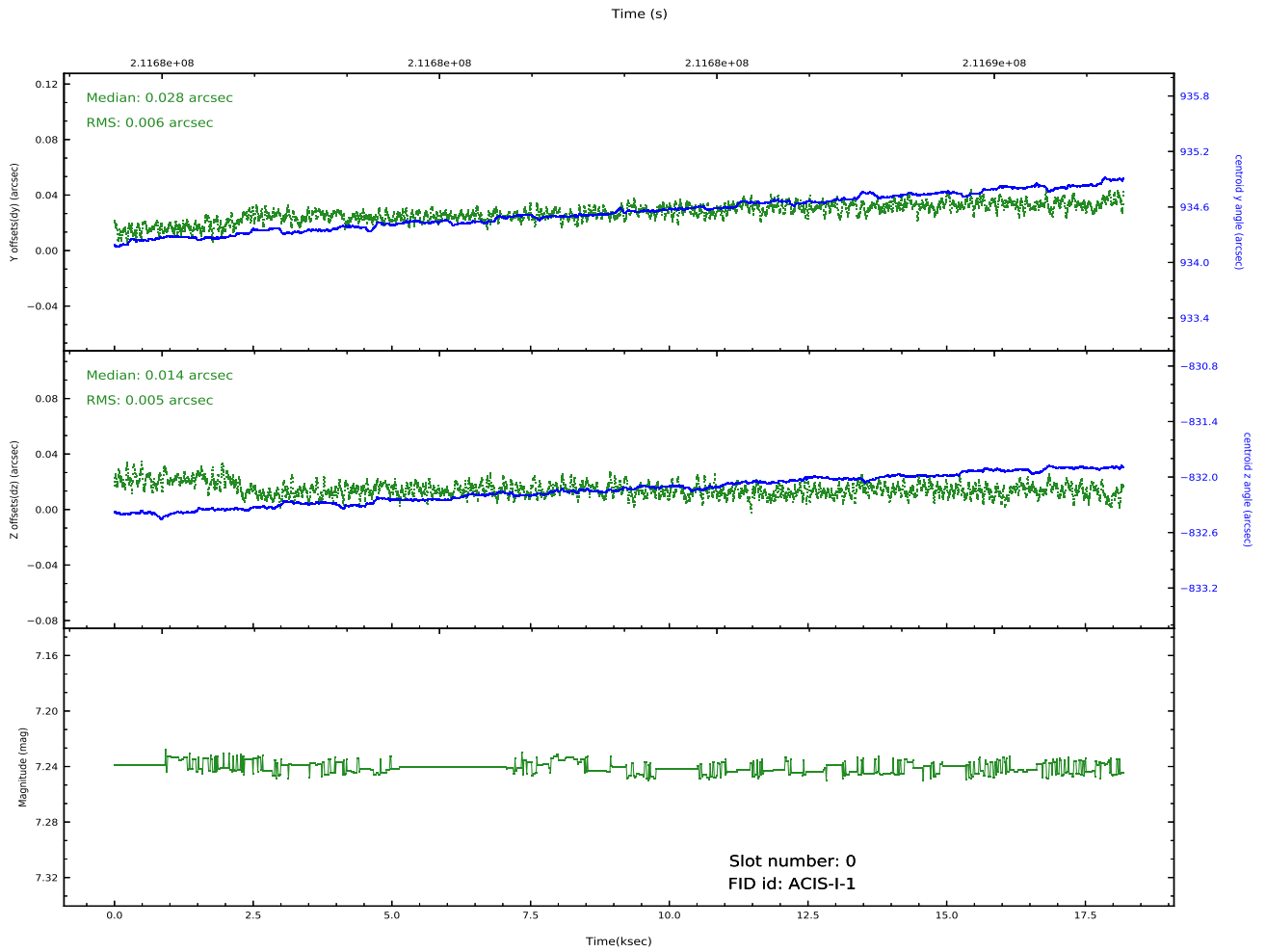
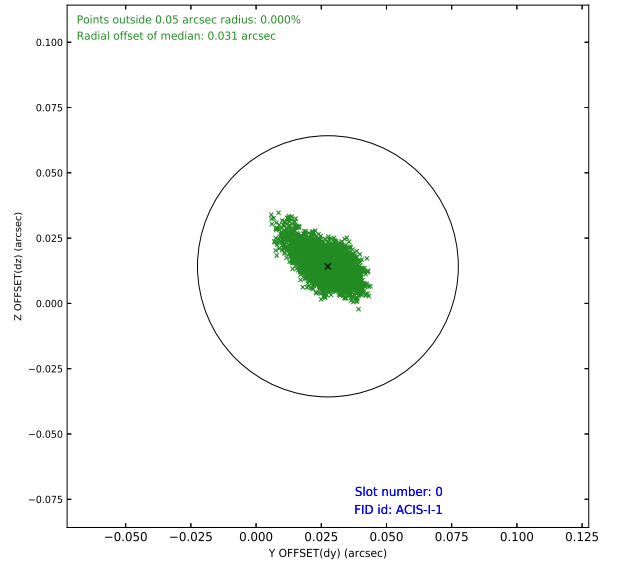
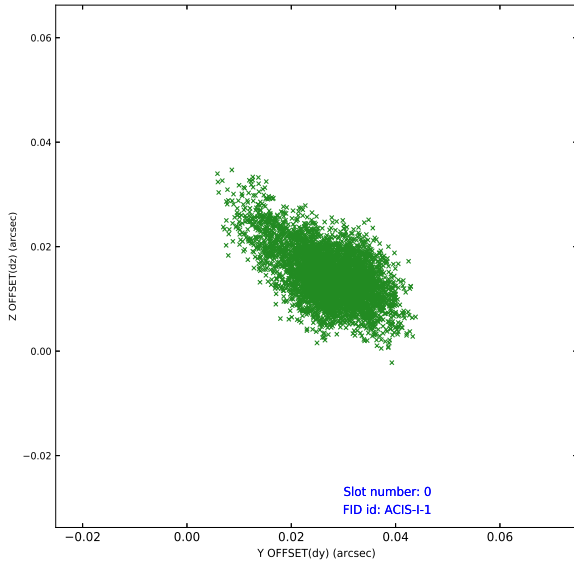


Time (s)

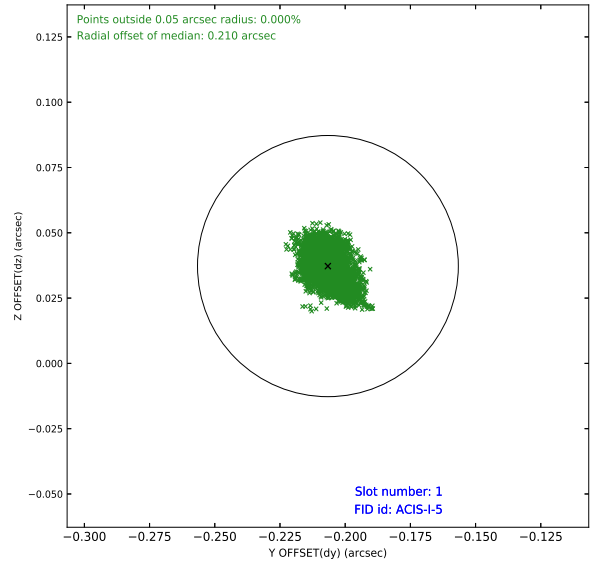
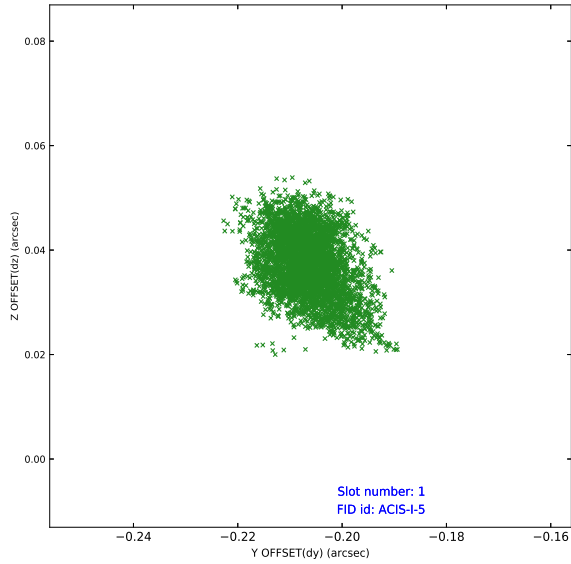


2.5 FID Slots

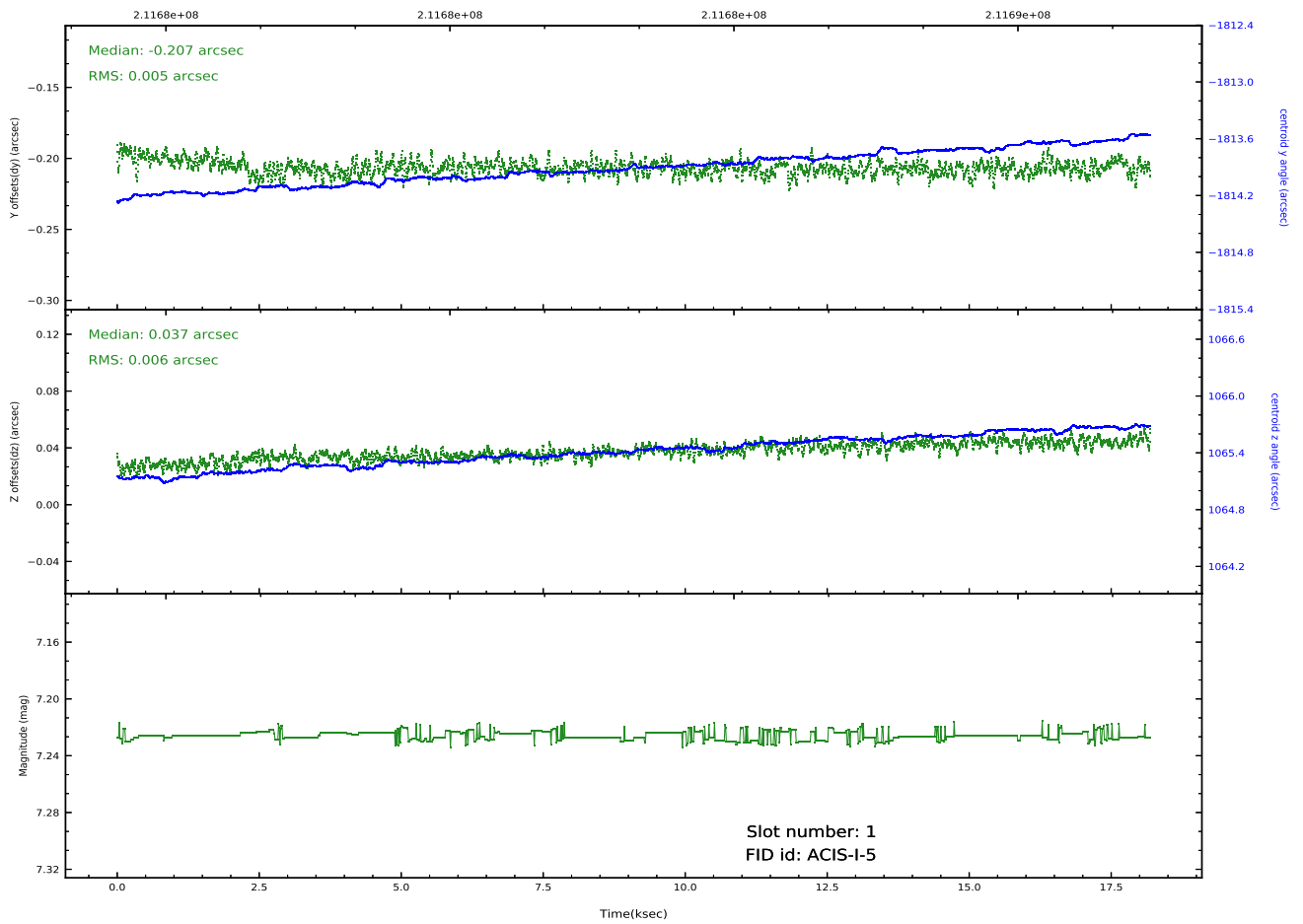
2.5.1 Slot 0



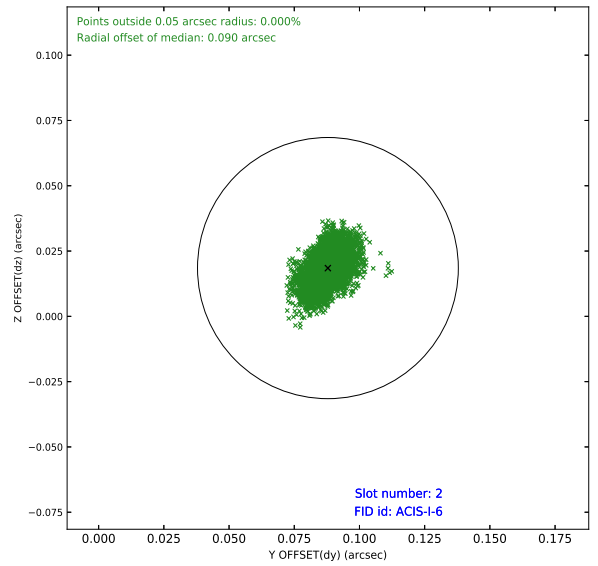
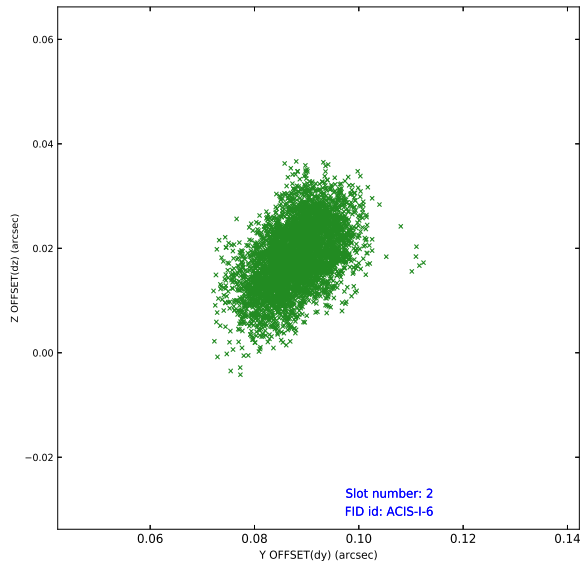
2.5.2 Slot 1



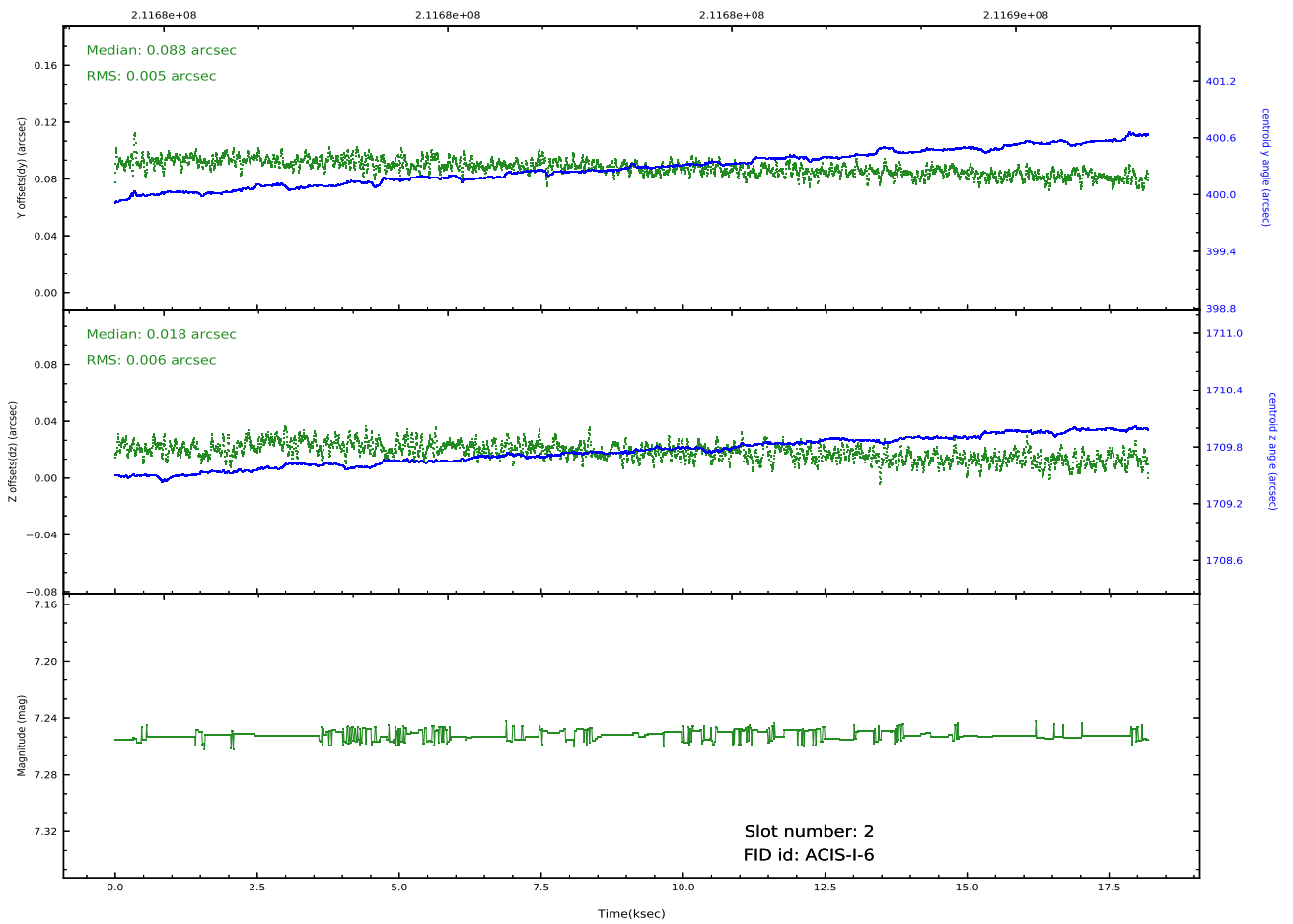
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.168

A.2 Comments

Two spatial regions of the original bias map for CCD = 0 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 = 0 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation.

The pixels in the first region affected by the anomaly are bounded by sky coords:

(359.30514, -0.86690), (359.30096, -0.86814), (359.30810, -0.89191), (359.31189, -0.88936).

The pixels in the second region are bounded by sky coords:

(359.21433, -0.90488), (359.21172, -0.90566), (359.22548, -0.95149), (359.22810, -0.95071).