

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5564 - L2 Version 5
Chandra X-Ray Center

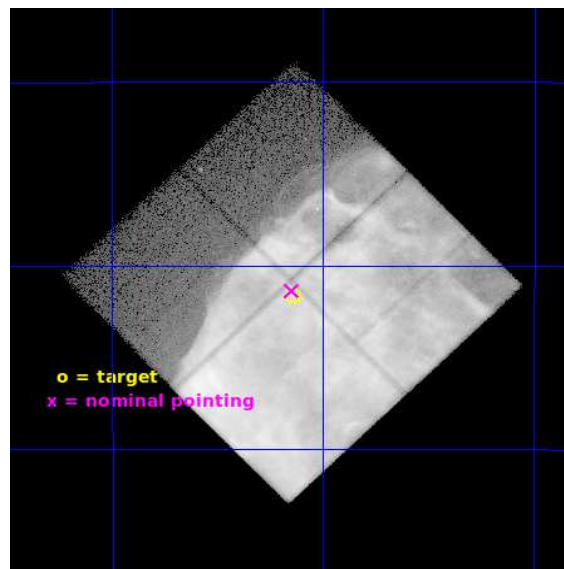
L2 Processing Date : Oct 10 2020

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

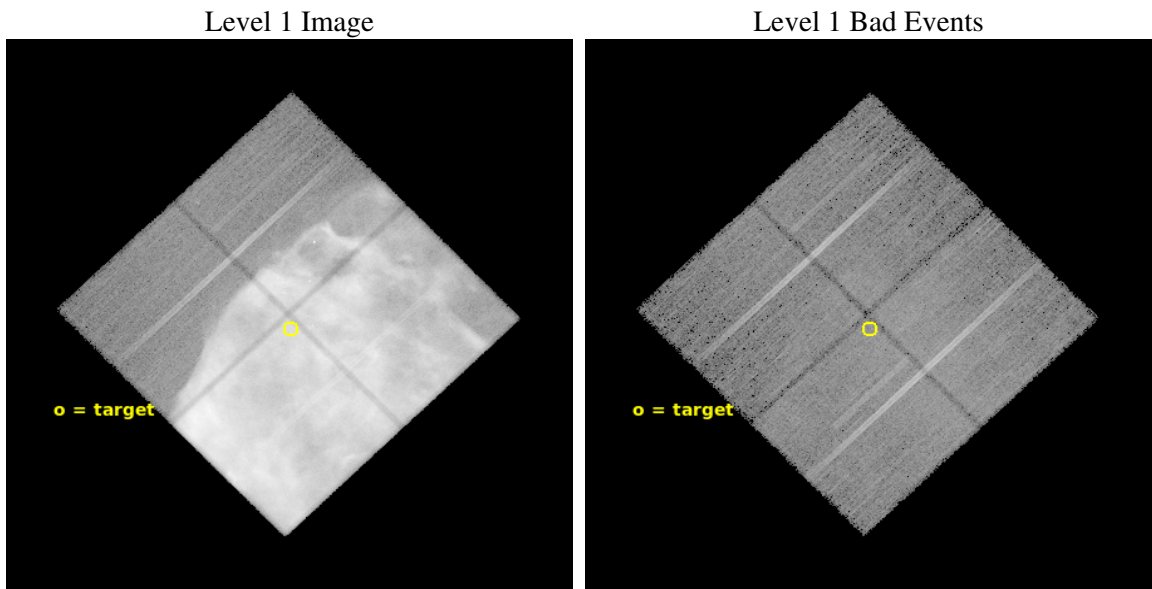
seq_num	500553	Sequence number
obs_id	5564	Observation id
title	Large-Scale Shock Interactions in Puppis A	Proposal title
observer	Dr Una Hwang	Principal investigator
object	Puppis A NE Shock Front	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	125.784	Observer's specified target RA [deg]
dec_targ	-42.694833	Observer's specified target Dec [deg]
ra_nom	125.7867478644	Nominal RA [deg]
dec_nom	-42.689571290504	Nominal Dec [deg]
roll_nom	136.00100298986	Nominal Roll [deg]
revision	5	Processing version of data
ontime	34478.199933678	Sum of GTIs [s]
livetime	34027.716869063	Livetime [s]
ontime0	34478.199933678	Sum of GTIs [s]
ontime1	34478.199933678	Sum of GTIs [s]
ontime2	34475.058963388	Sum of GTIs [s]
ontime3	34478.199933678	Sum of GTIs [s]
l2events	4931849	Number of level 2 events



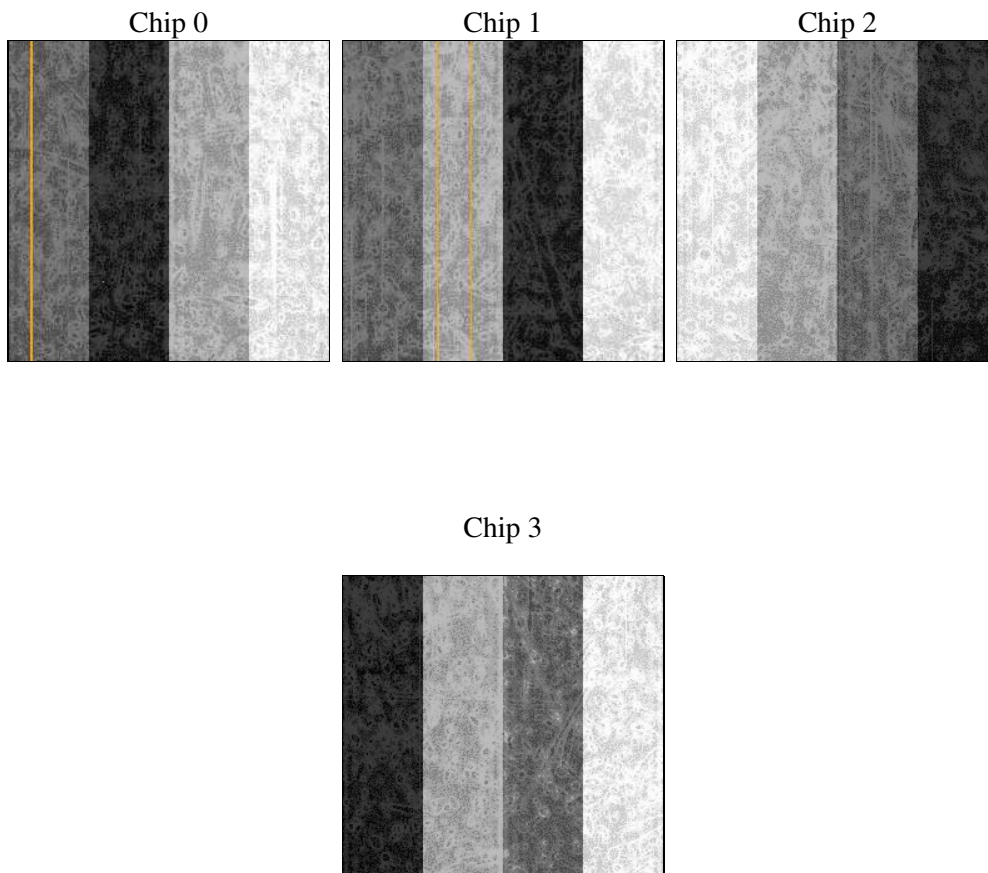
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	34325.273000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	34478.199933678	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	34478.199933678	Sum of GTIs [s]
date	2020-10-10T08:11:25	Date and time of file creation	ontime1	34478.199933678	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	34475.058963388	Sum of GTIs [s]
			ontime3	34478.199933678	Sum of GTIs [s]
			l1events	6039540	Number of level 1 events

2.1.4 Events

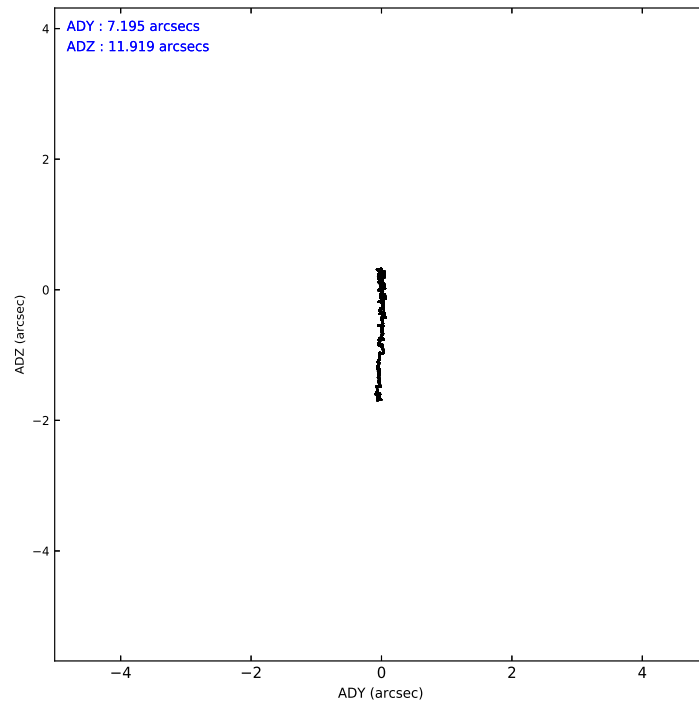
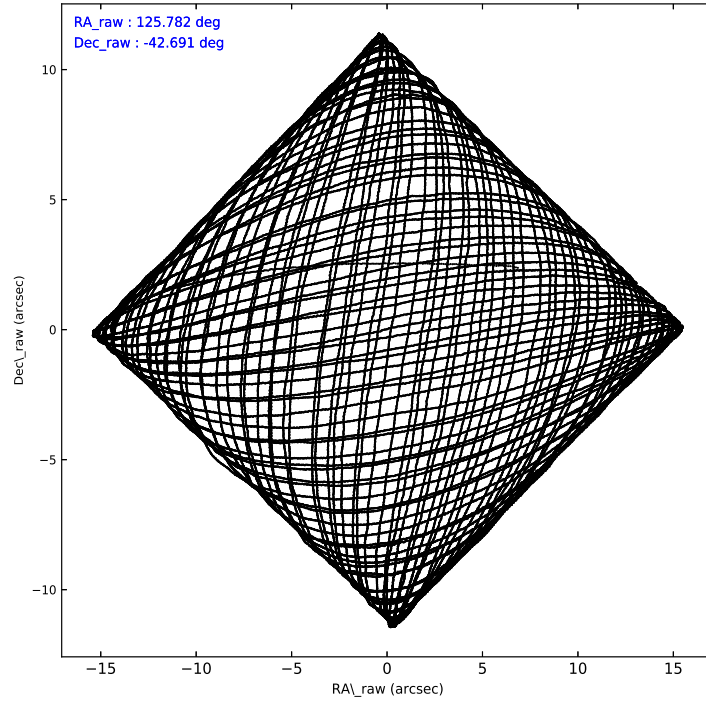
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	639471	662099	1771668	2966302
rejected events	186543	180222	233960	246390
rejected %	29%	27%	13%	8%

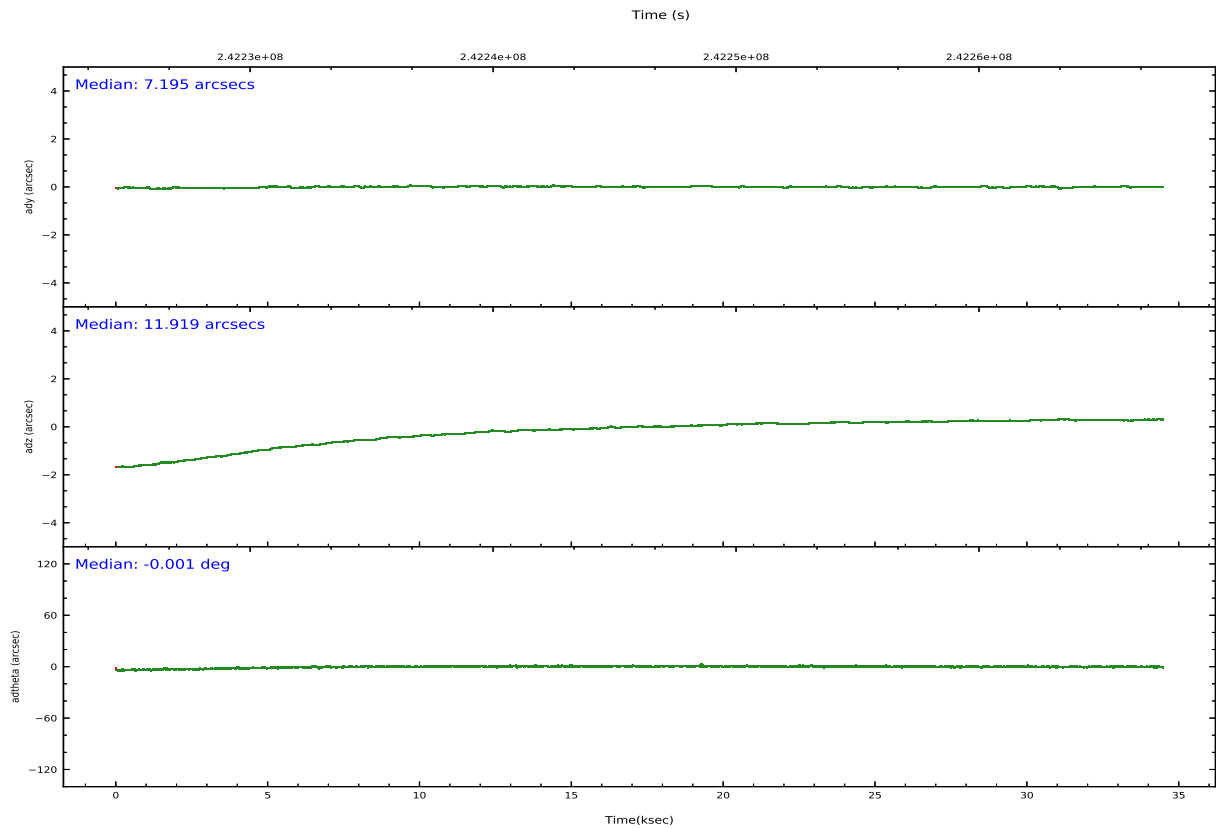
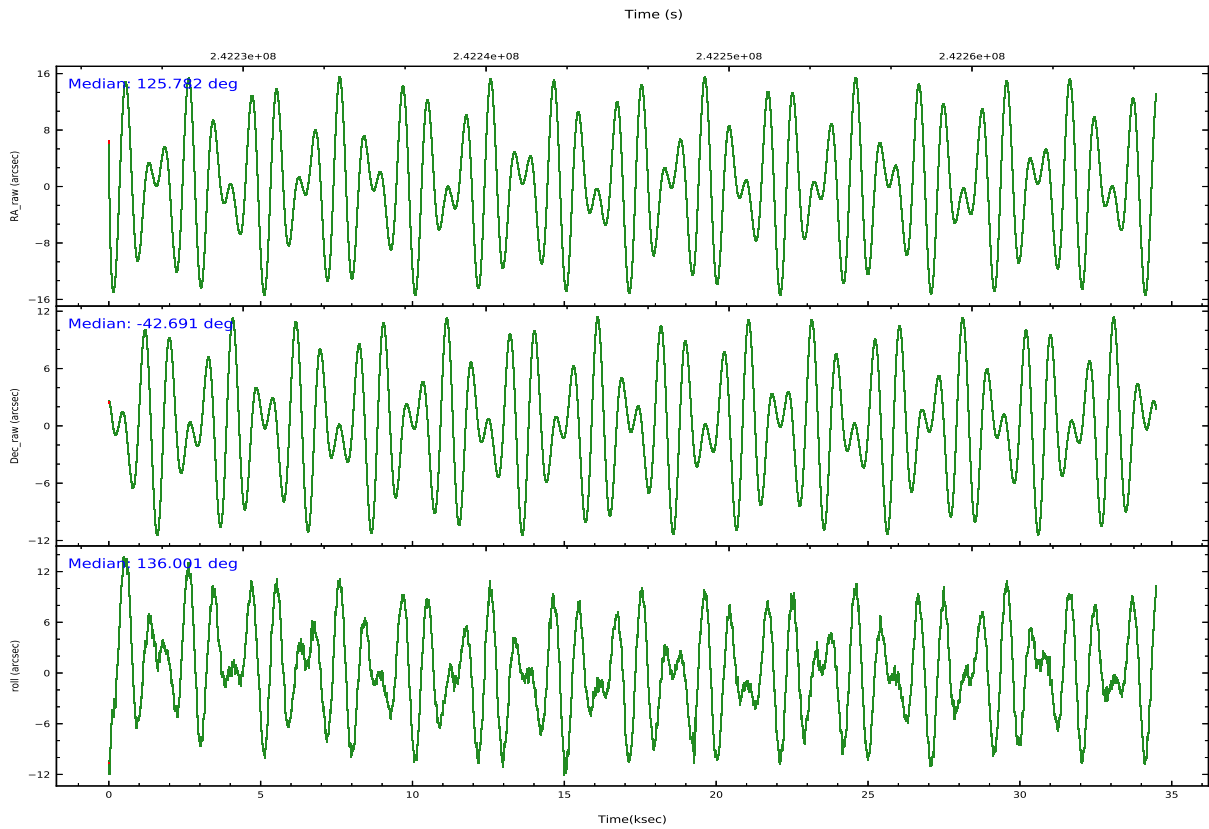
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	398489	422507	1377824	2407797
	62%	63%	77%	81%
grade 1 events	1789	1799	7268	11286
	0%	0%	0%	0%
grade 2 events	34719	37499	105461	201050
	5%	5%	5%	6%
grade 3 events	9090	10163	26138	51544
	1%	1%	1%	1%
grade 4 events	9170	9967	25724	51389
	1%	1%	1%	1%
grade 5 events	7062	8094	9765	14037
	1%	1%	0%	0%
grade 6 events	6311	7427	12126	23389
	0%	1%	0%	0%
grade 7 events	172841	164643	207362	205810
	27%	24%	11%	6%

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	125.817719	125.7867478644	Subarray requested	NONE	NONE
[deg] Pointing Dec	-42.697078	-42.689571290504	Alternating exposures requested	N	N
[deg] Pointing Roll	135.822496	136.00100298986	[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)	242227738.184000	242226565.80644			
Observation start date	2005-09-04T13:27:54	2005-09-04T13:09:25			
[s] Observation end time (MET)	242262064.184000	242263019.42062			
Observation end date	2005-09-04T23:00:00	2005-09-04T23:16:59			
Read mode	TIMED	TIMED			

2.3 Aspect



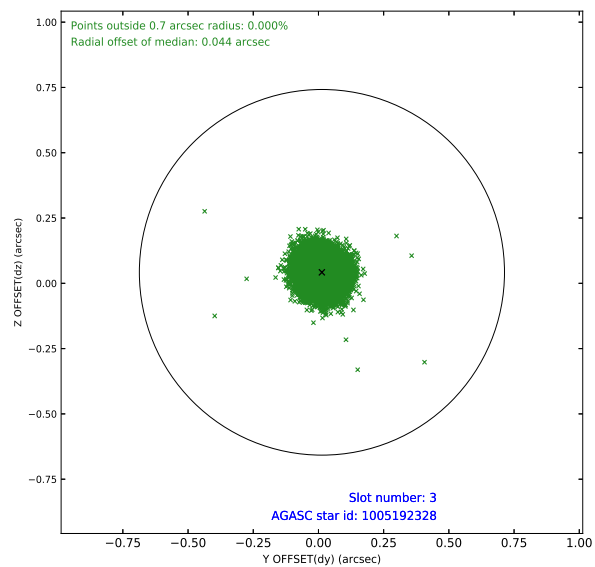
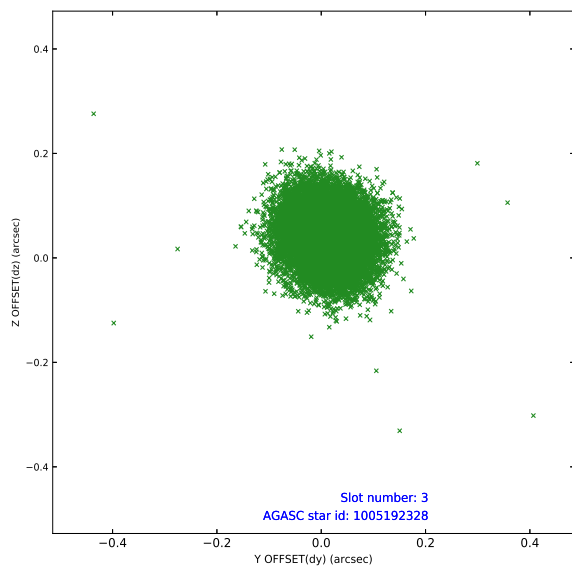


Slot Statistics

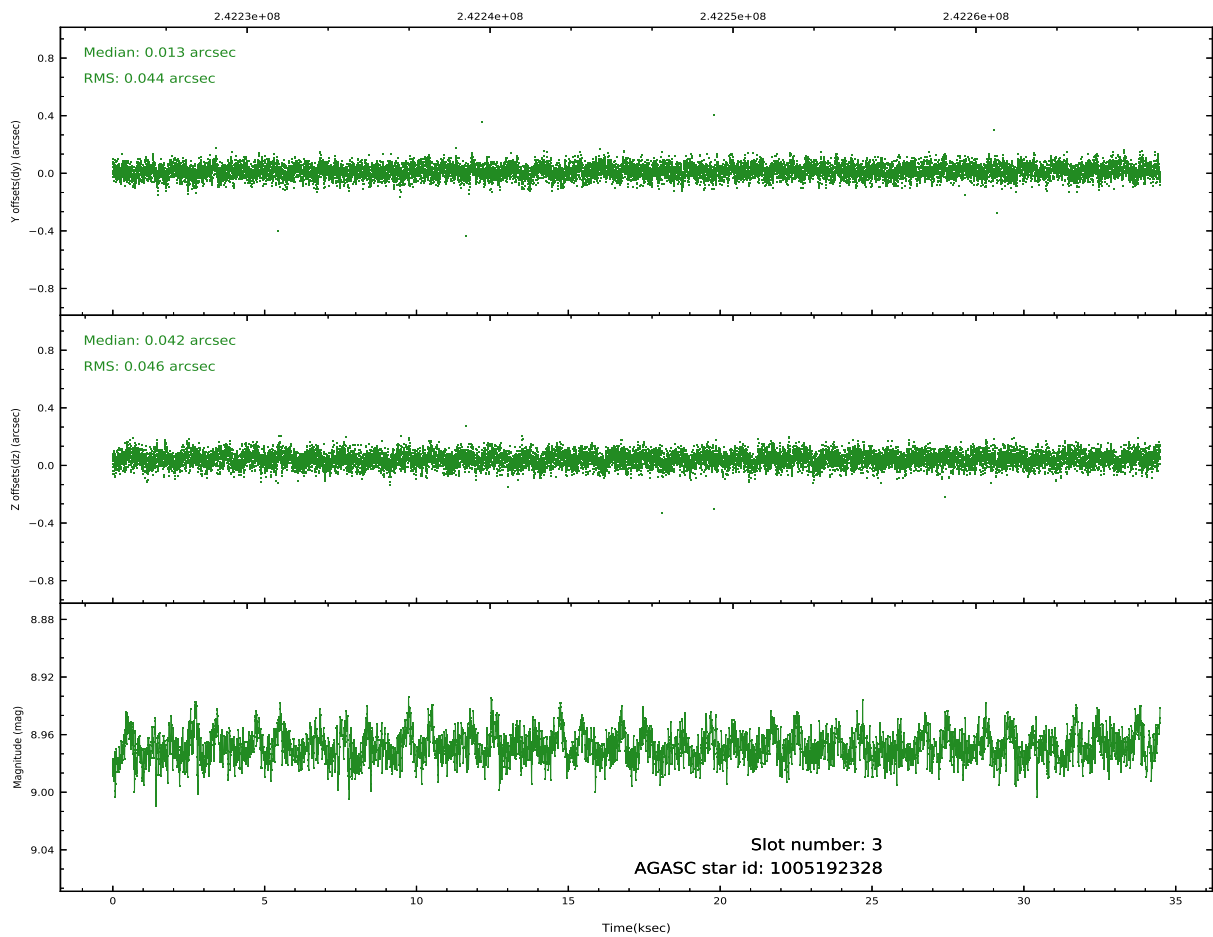
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.24	8412	1.000	0.052	-0.034	0.013	0.026	0.000000	0.000000	932.52	-835
1	FID		ACIS-I-5	7.23	8412	1.000	-0.208	0.054	0.009	0.025	0.000000	0.000000	-1815.80	1062
2	FID		ACIS-I-6	7.25	8409	1.000	0.065	0.052	0.016	0.030	0.000000	0.000000	398.07	1706
3	GUIDE	used	1005192328	8.97	16819	1.000	0.013	0.042	0.067	0.109	126.494374	-42.919317	-1841.65	-664
4	GUIDE	used	1005201896	8.52	16812	1.000	-0.047	0.051	0.067	0.105	126.670468	-42.695868	-1622.85	-1567
5	GUIDE	used	1005216672	7.94	16824	1.000	-0.008	-0.028	0.078	0.125	125.948907	-42.033869	1412.42	-1956
6	GUIDE	used	1005724040	7.60	16824	1.000	-0.047	-0.061	0.103	0.161	125.738175	-43.227880	-1182.05	1515
7	GUIDE	used	1005199176	9.34	16808	1.000	0.085	-0.013	0.104	0.166	125.827015	-41.895026	1994.83	-2087

2.4 Star Slots

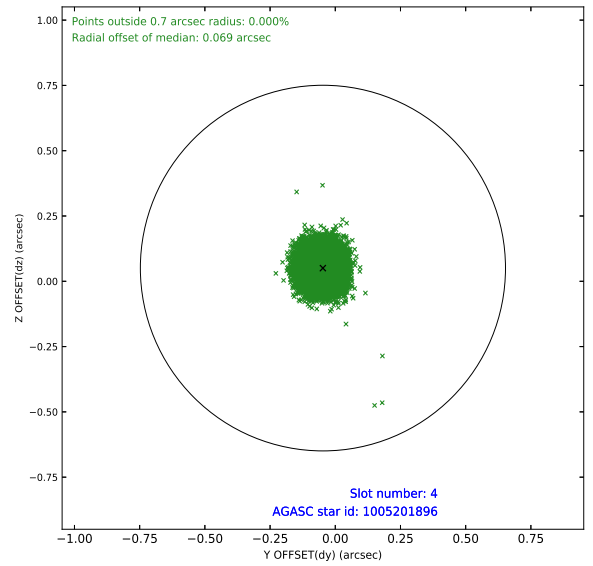
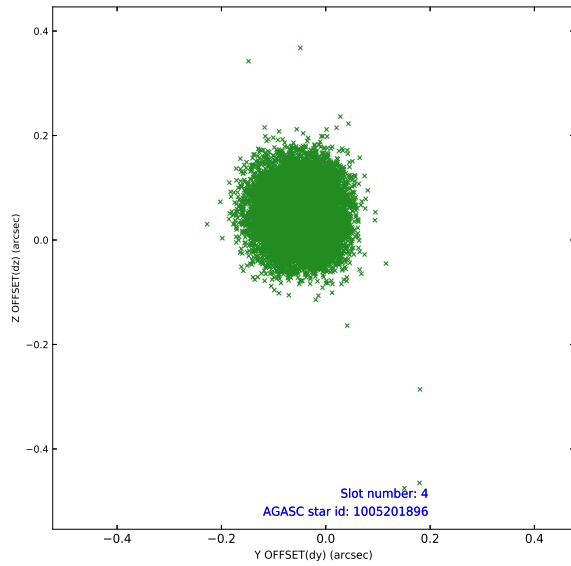
2.4.1 Slot 3



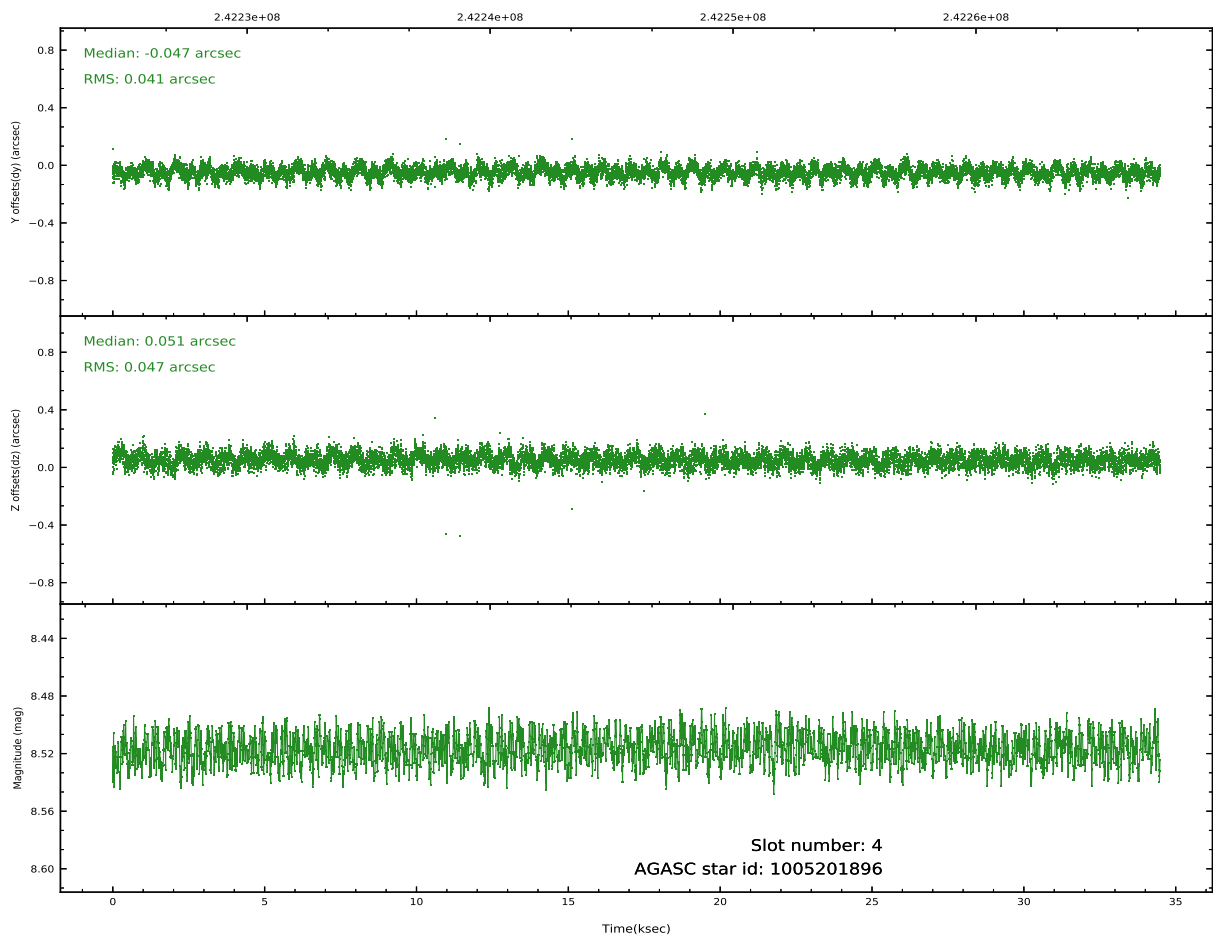
Time (s)



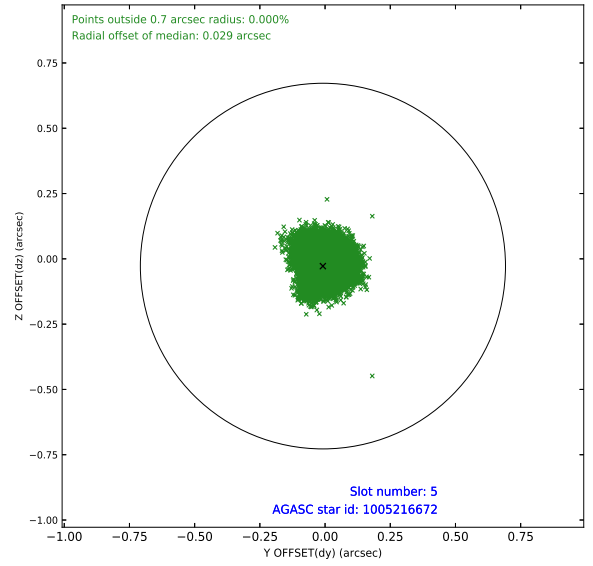
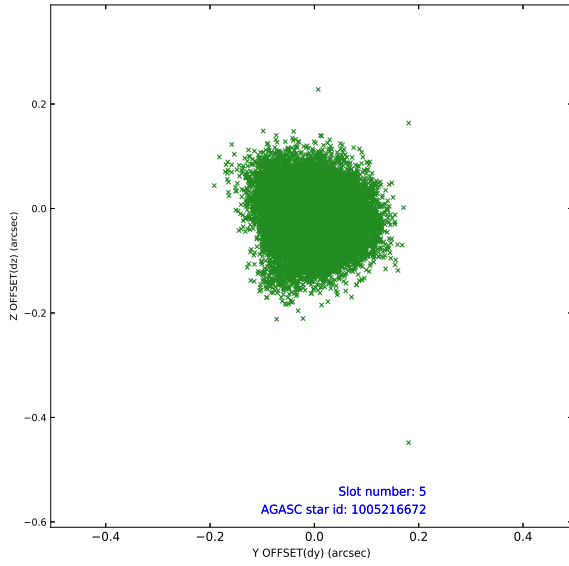
2.4.2 Slot 4



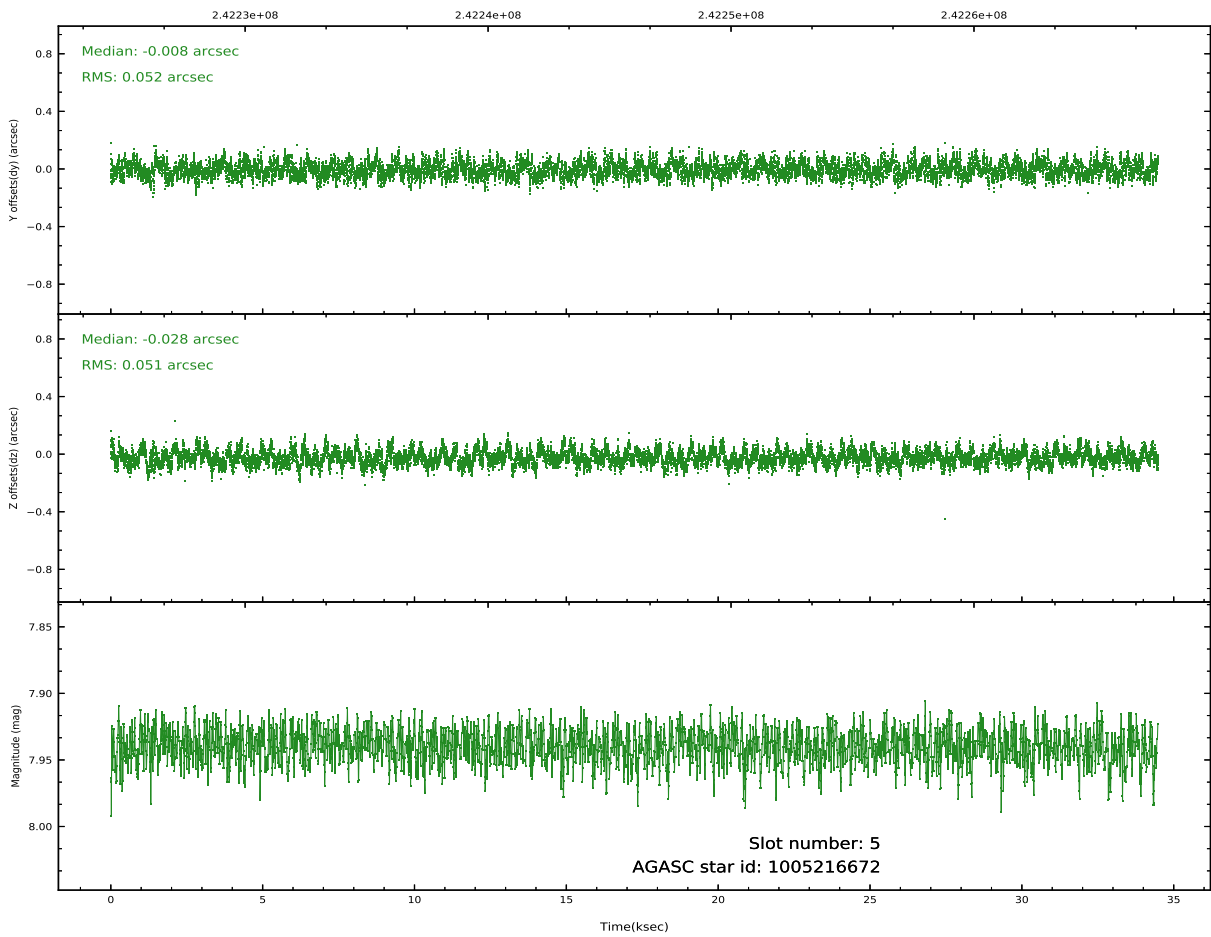
Time (s)



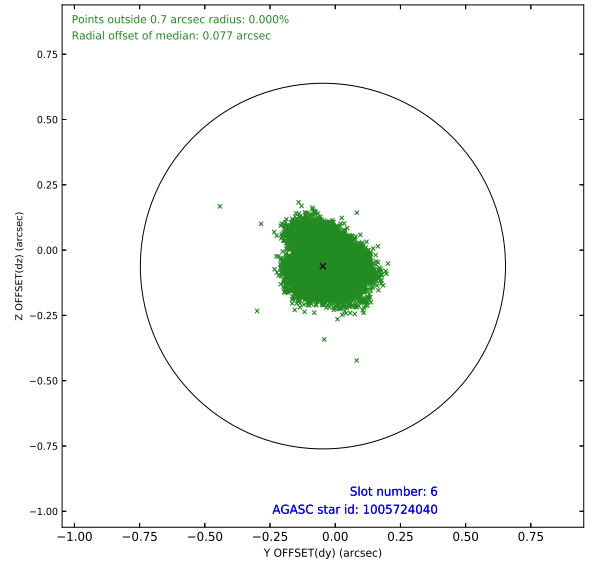
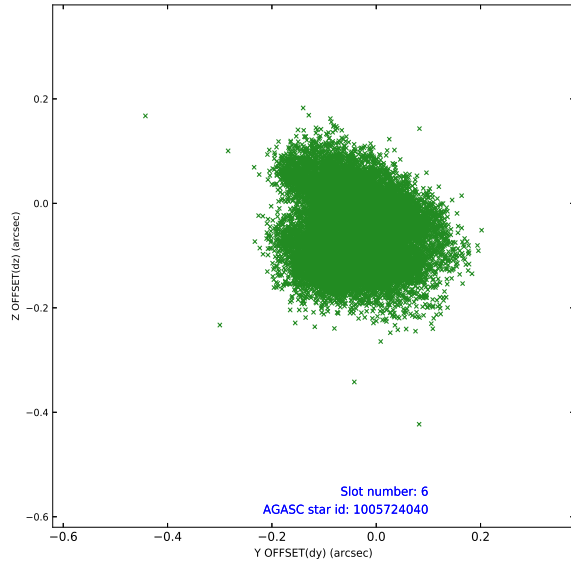
2.4.3 Slot 5



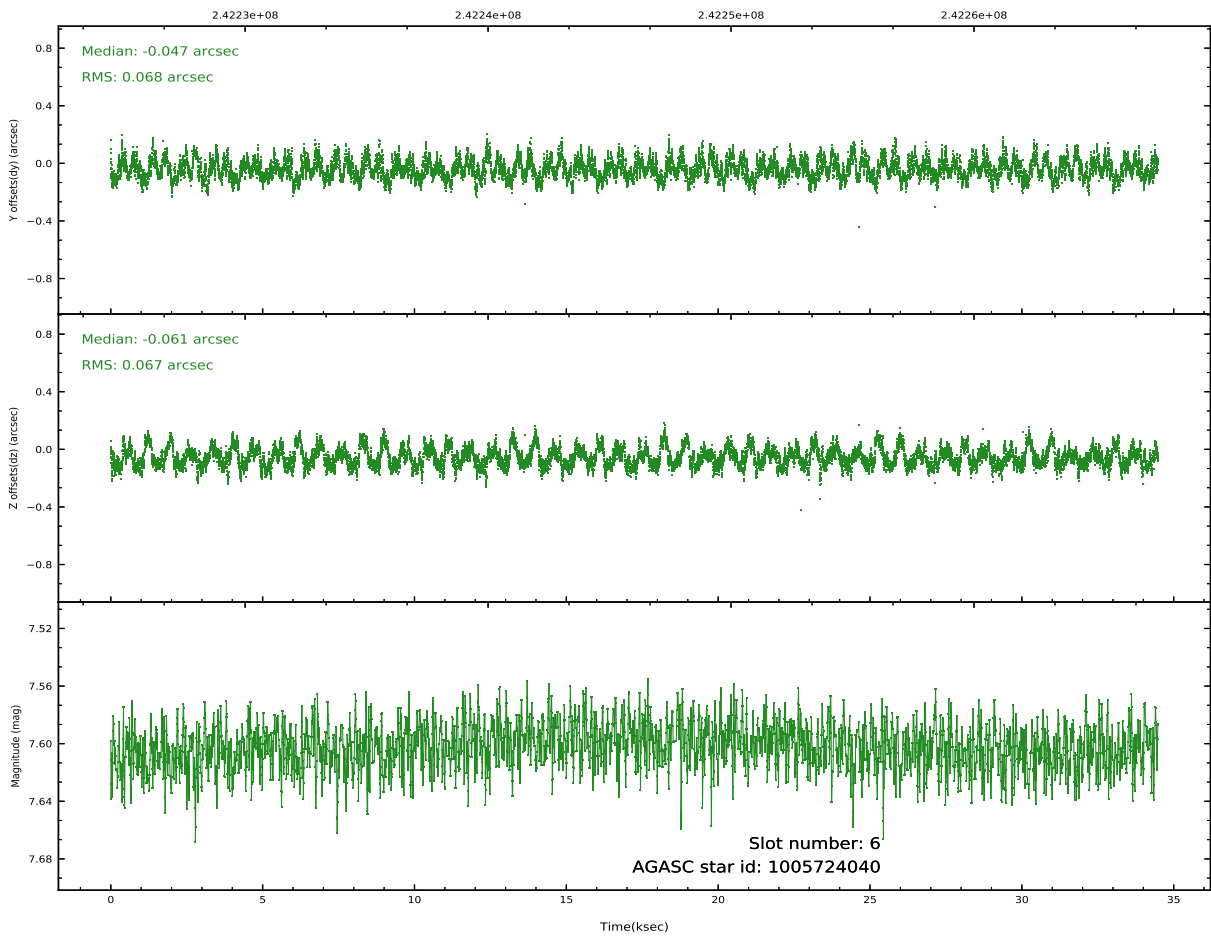
Time (s)



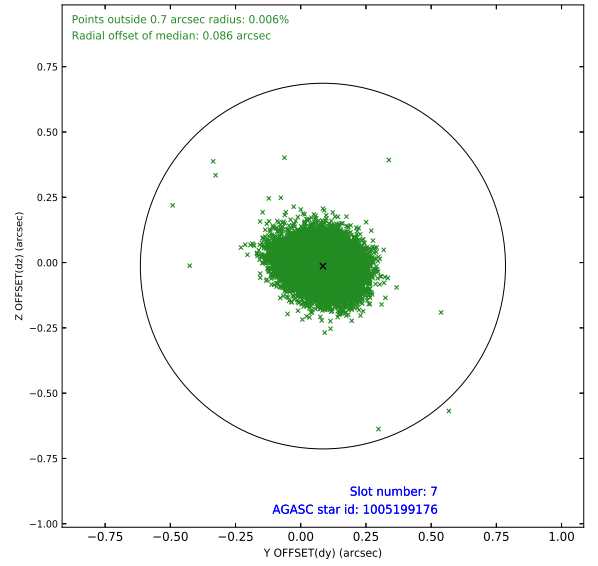
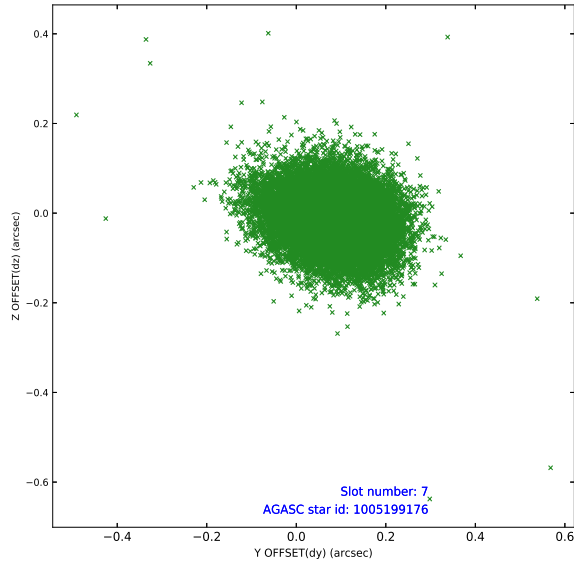
2.4.4 Slot 6



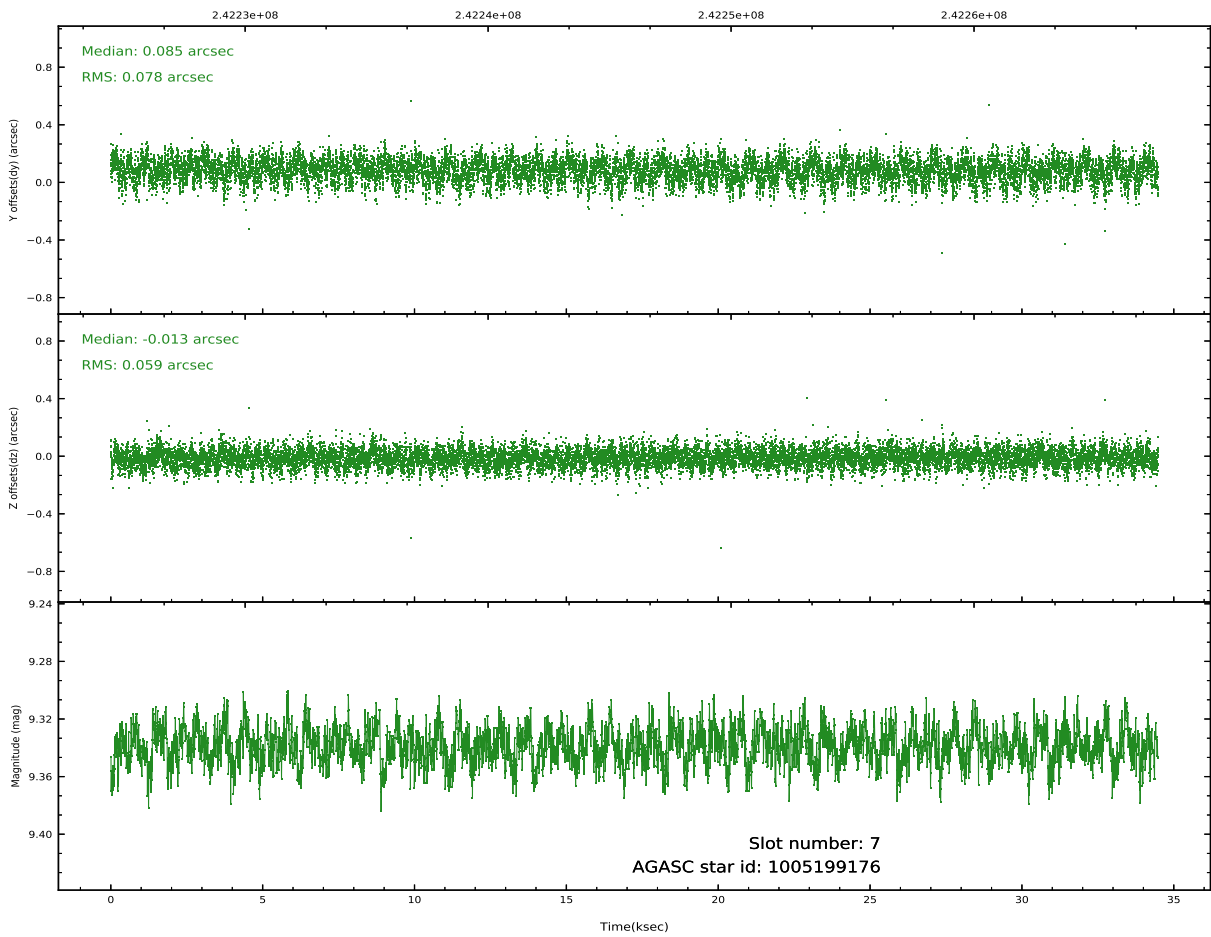
Time (s)



2.4.5 Slot 7

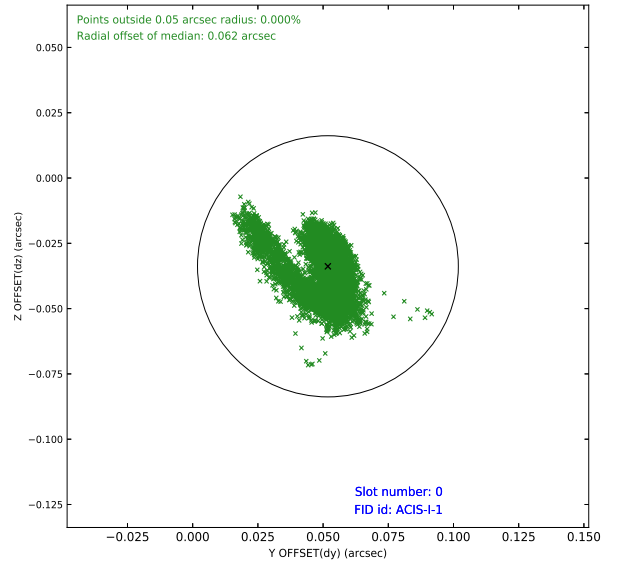
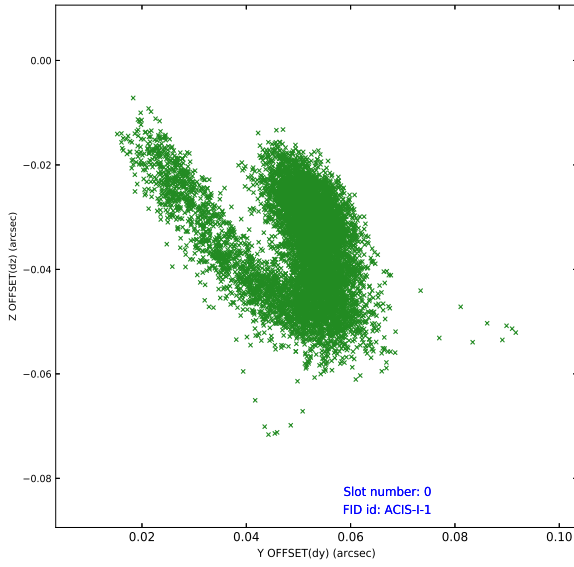


Time (s)

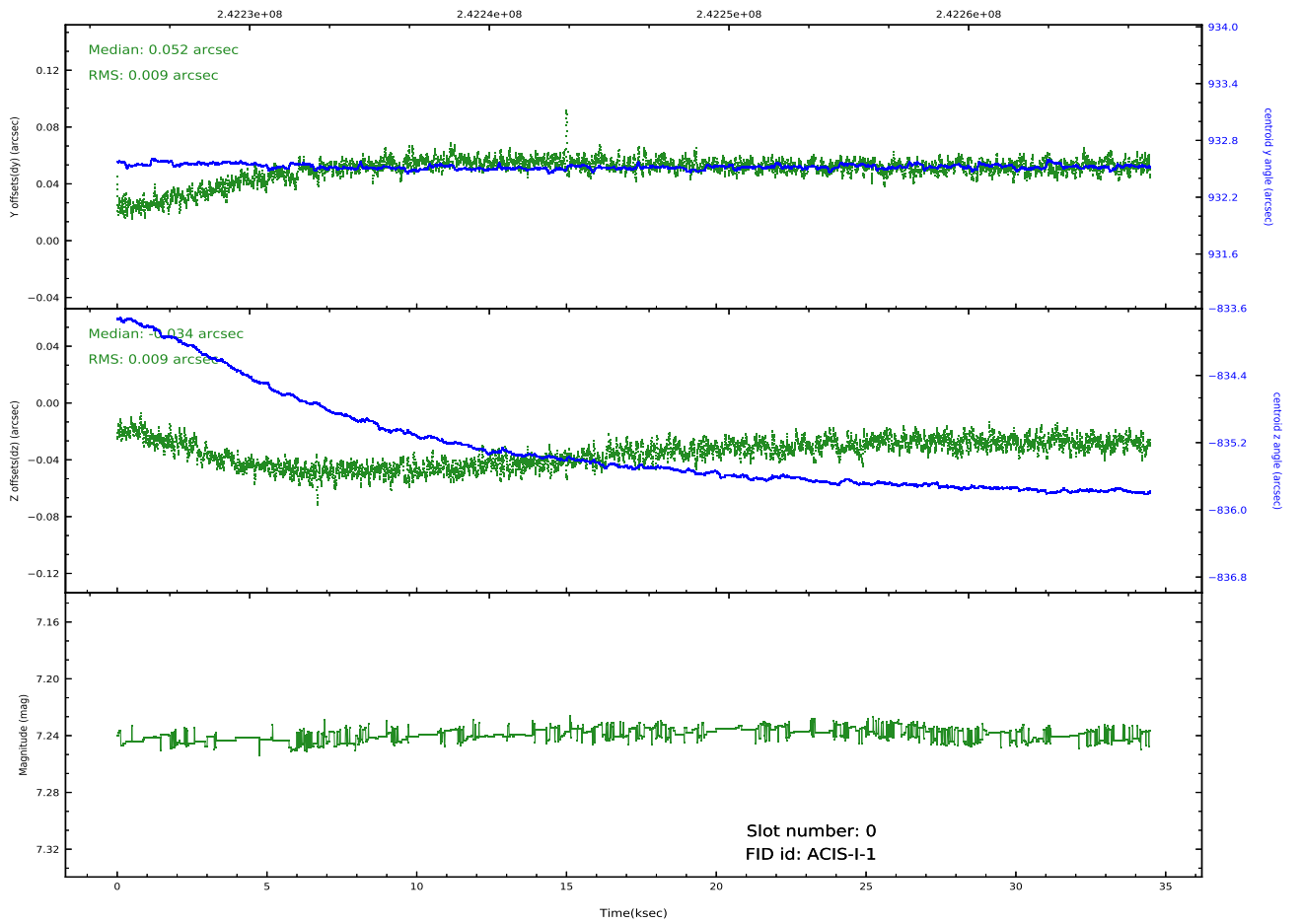


2.5 FID Slots

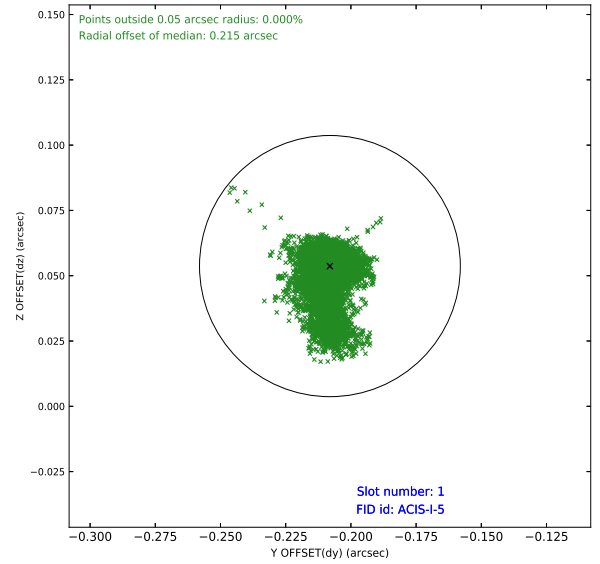
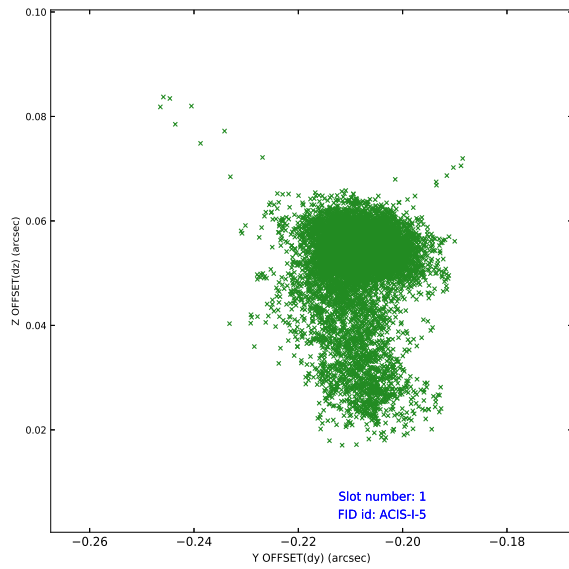
2.5.1 Slot 0



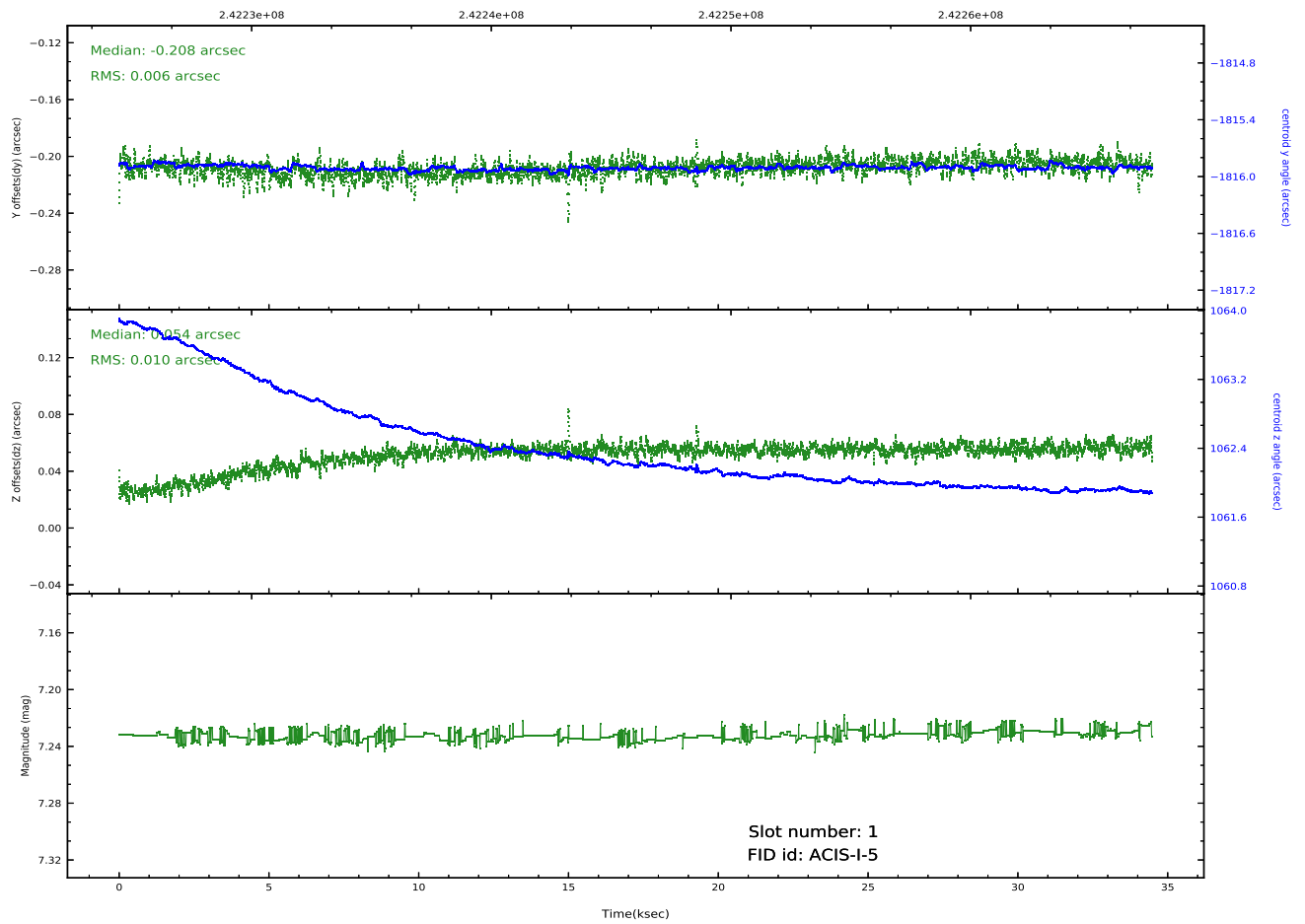
Time (s)



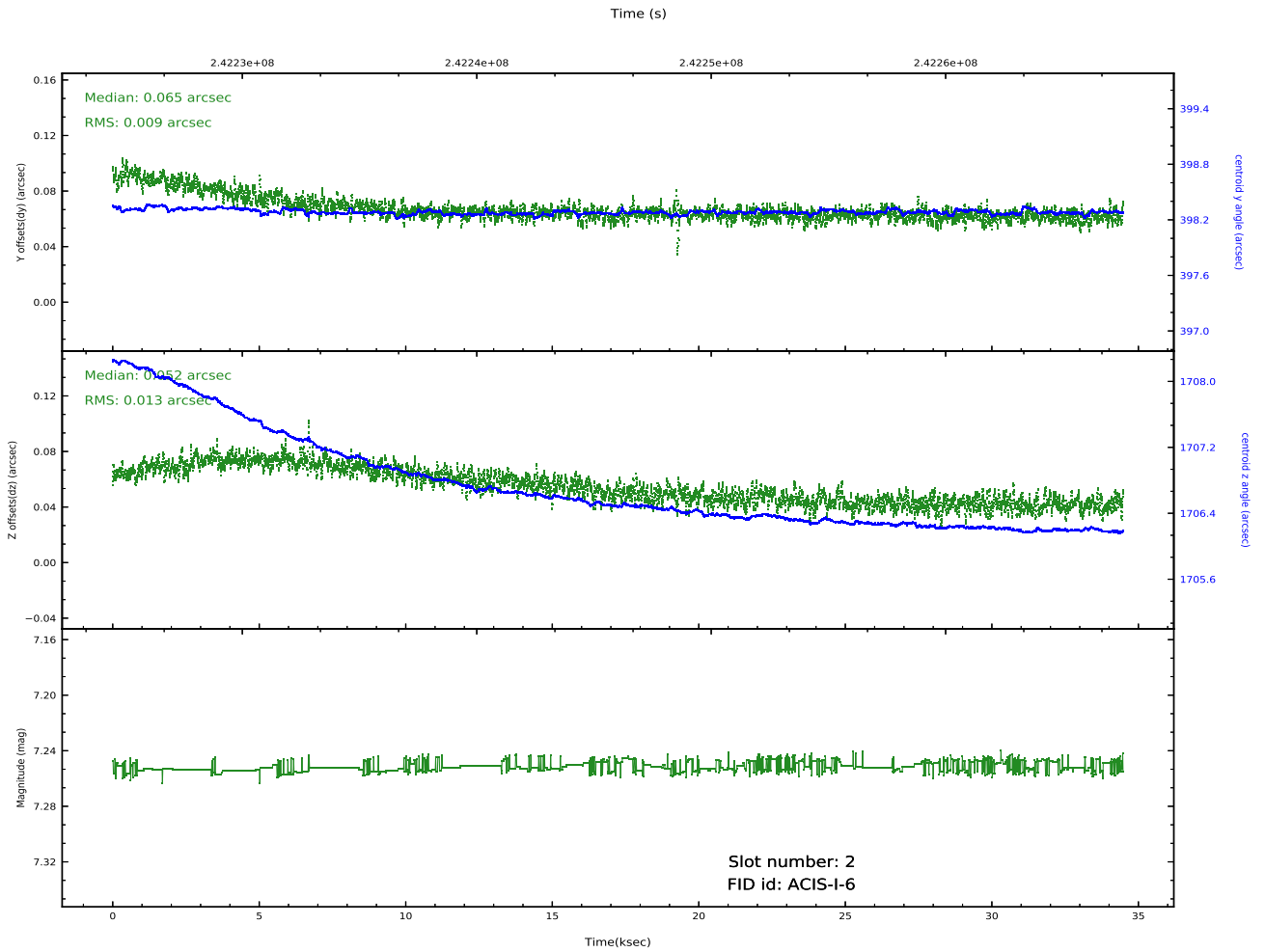
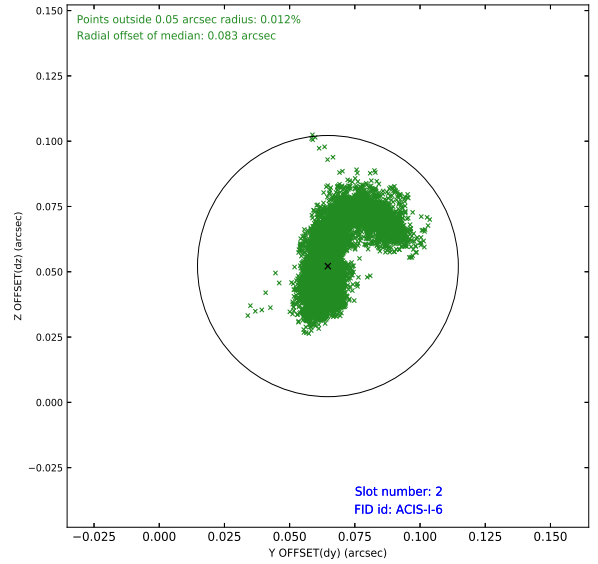
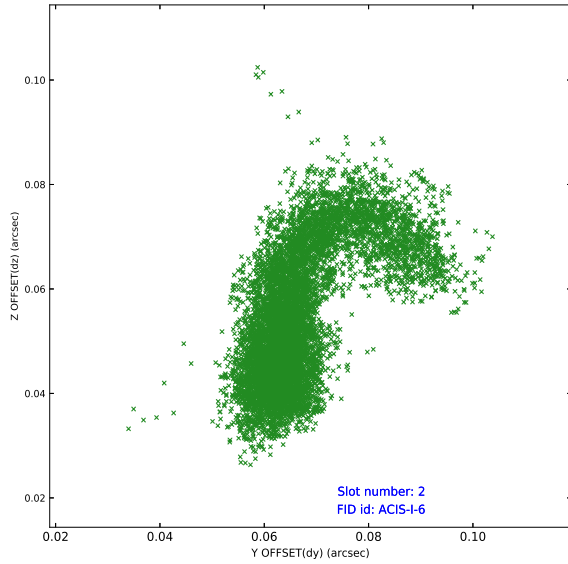
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	34.47819

A.2 Comments

A spatial region 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. In this case, the bias map for CCD = 0 could not be improved because no suitable data at a compatible temperature and time range are available to use as replacement values. The bias map used in this processing is the original bias map telemetered with the observation.