

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5953 - L2 Version 4
Chandra X-Ray Center

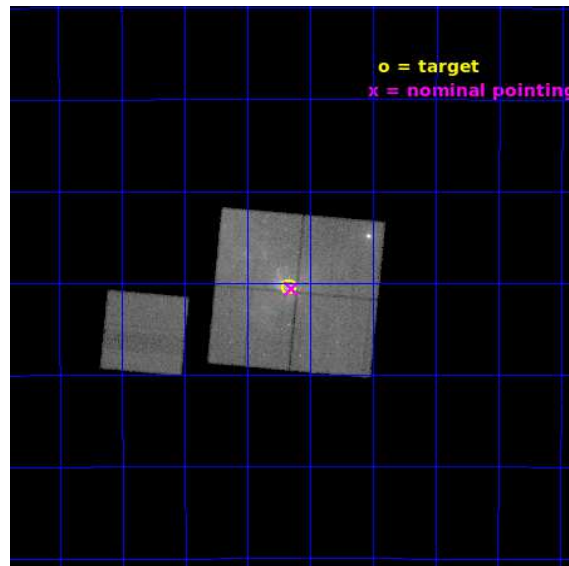
L2 Processing Date : Oct 9 2020

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1 Front

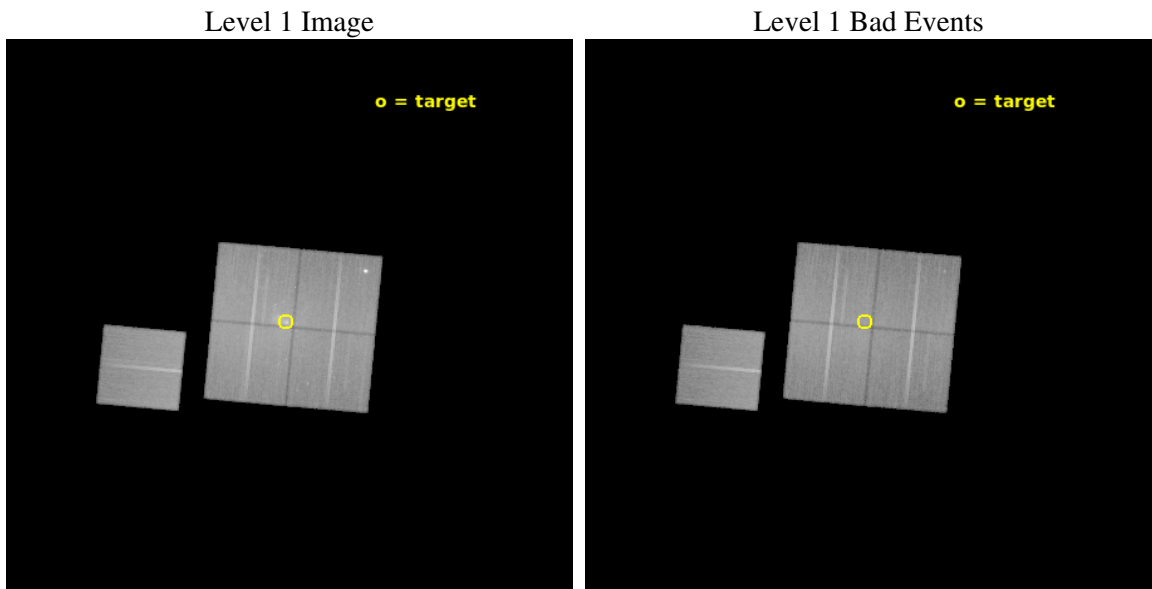
seq_num	600472	Sequence number
obs_id	5953	Observation id
title	Simultaneous Gamma-Ray to Sub-Millimeter Monitoring of Sagittarius A*	Proposal title
observer	Frederick Baganoff	Principal investigator
object	Sgr A*	Source name
dtycycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	266.416667	Observer's specified target RA [deg]
dec_targ	-29.007778	Observer's specified target Dec [deg]
ra_nom	266.41151660194	Nominal RA [deg]
dec_nom	-29.010354800799	Nominal Dec [deg]
roll_nom	275.28013199957	Nominal Roll [deg]
revision	4	Processing version of data
ontime	45960.5999116	Sum of GTIs [s]
livetime	45360.090838054	Livetime [s]
ontime0	45938.612940043	Sum of GTIs [s]
ontime1	45960.5999116	Sum of GTIs [s]
ontime2	45960.5999116	Sum of GTIs [s]
ontime3	45960.5999116	Sum of GTIs [s]
ontime6	45960.5999116	Sum of GTIs [s]
l2events	441544	Number of level 2 events



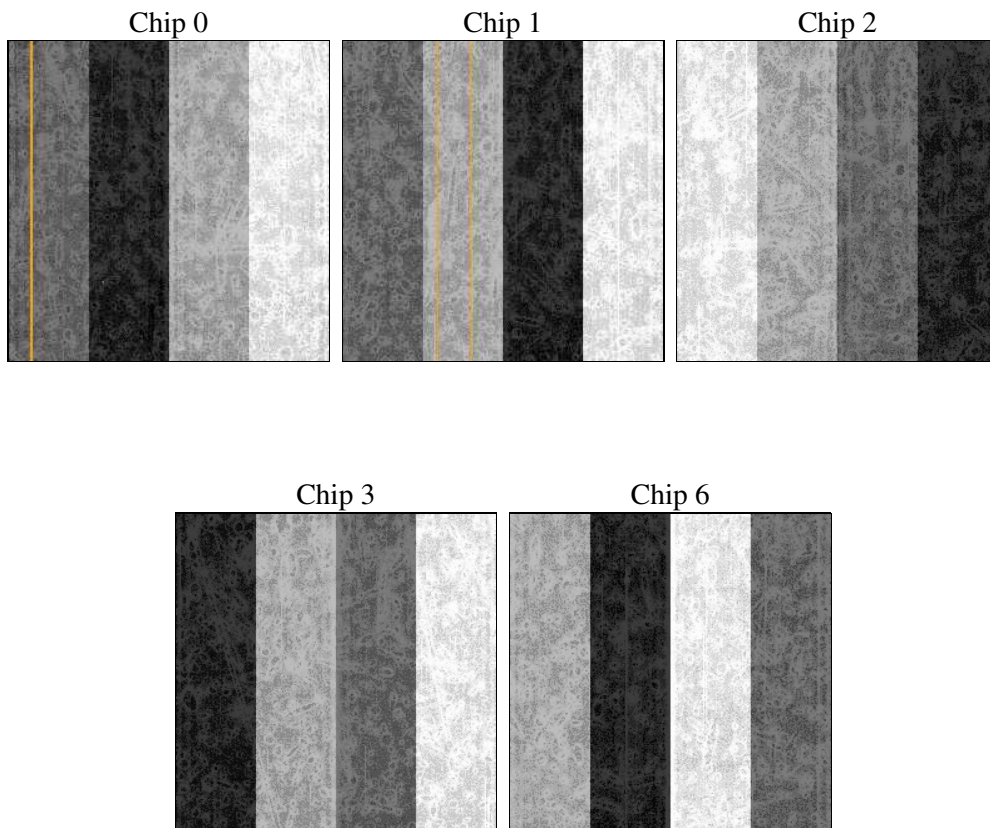
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	1	Obi number	sched_exp_time	45800.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	45960.5999116	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	45938.612940043	Sum of GTIs [s]
date	2020-10-09T14:51:51	Date and time of file creation	ontime1	45960.5999116	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	45960.5999116	Sum of GTIs [s]
			ontime3	45960.5999116	Sum of GTIs [s]
			ontime6	45960.5999116	Sum of GTIs [s]
			l1events	2257323	Number of level 1 events

2.1.4 Events

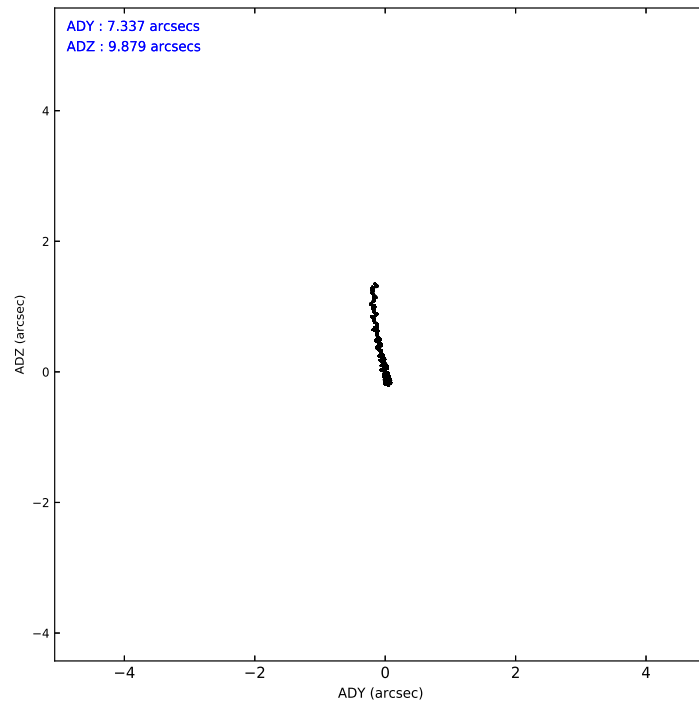
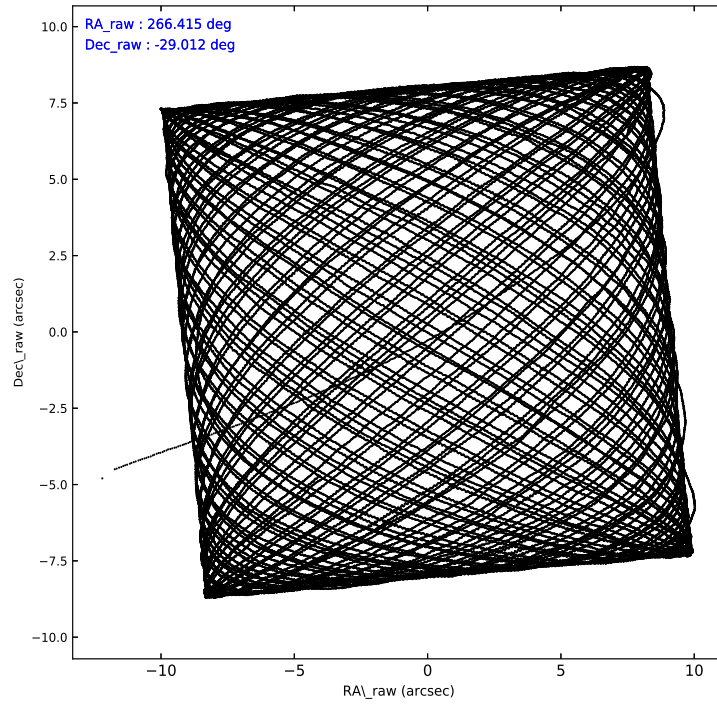
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	402271	434366	478934	509456	432296
rejected events	314946	327103	379469	369279	367239
rejected %	78%	75%	79%	72%	84%

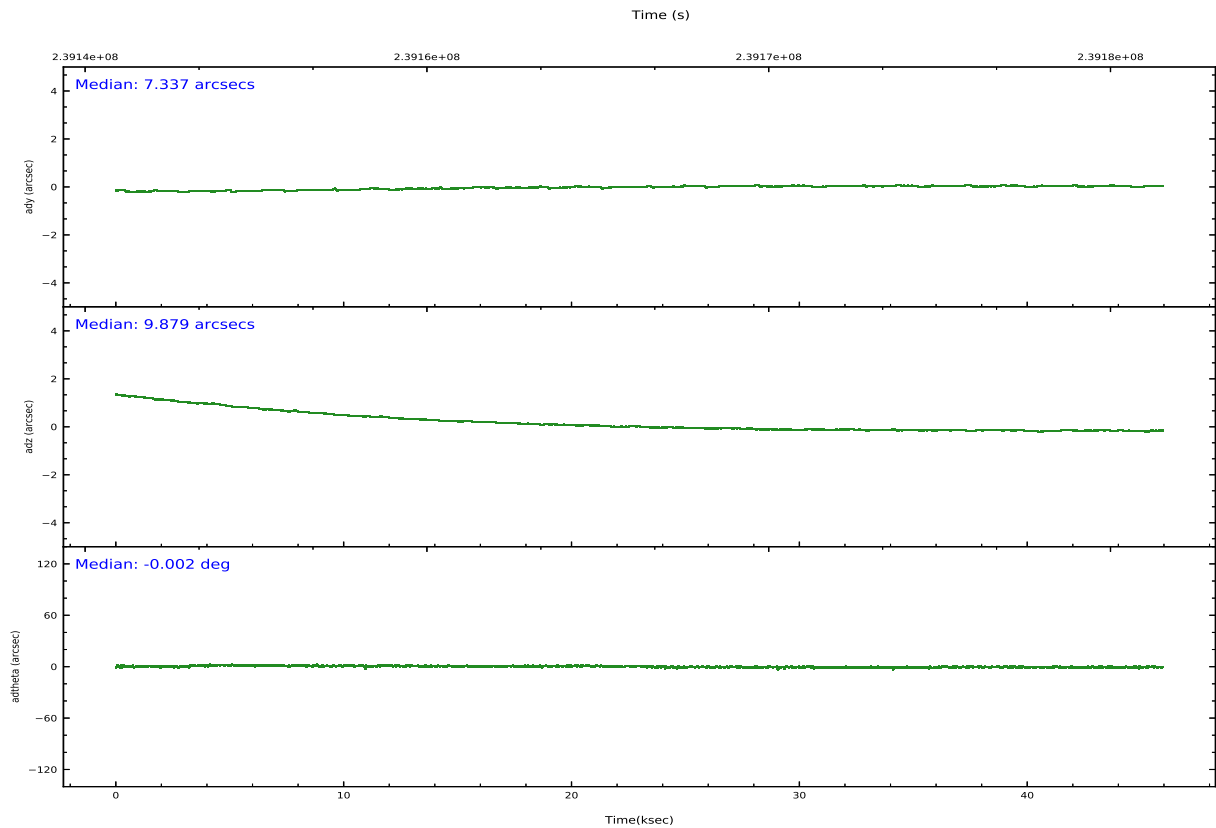
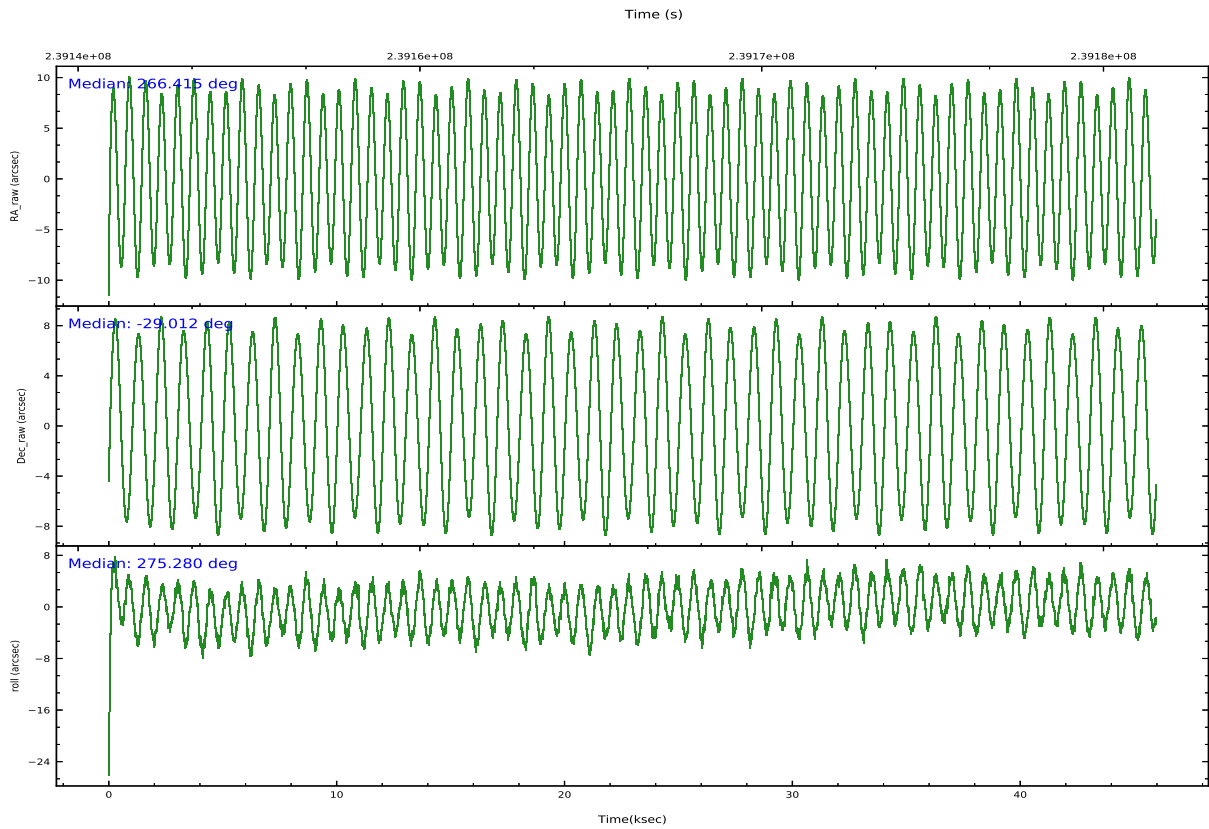
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	47474	58701	57519	85770	31407
	11%	13%	12%	16%	7%
grade 1 events	400	398	519	674	236
	0%	0%	0%	0%	0%
grade 2 events	18098	21174	19263	23095	14957
	4%	4%	4%	4%	3%
grade 3 events	6207	7409	6320	8896	4902
	1%	1%	1%	1%	1%
grade 4 events	5944	7305	6880	8807	4972
	1%	1%	1%	1%	1%
grade 5 events	14914	16058	14450	17083	17021
	3%	3%	3%	3%	3%
grade 6 events	11966	15186	12075	16012	11126
	2%	3%	2%	3%	2%
grade 7 events	297268	308135	361908	349119	347675
	73%	70%	75%	68%	80%

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	266.396872	266.41151660194	Subarray requested	NONE	NONE
[deg] Pointing Dec	-28.989898	-29.010354800799	Alternating exposures requested	N	N
[deg] Pointing Roll	275.065390	275.28013199957	[s] Primary exposure time	0.000000	3.1
[s] Window start time (MET)	239138584.184000	239138584.184000			
[s] Window stop time (MET)	239187604.184000	239187604.184000			
[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)	239141511.184000	239139511.15236			
Observation start date	2005-07-30T20:10:47	2005-07-30T19:38:31			
[s] Observation end time (MET)	239187311.184000	239188352.4046			
Observation end date	2005-07-31T08:54:07	2005-07-31T09:12:32			
Read mode	TIMED	TIMED			

2.3 Aspect



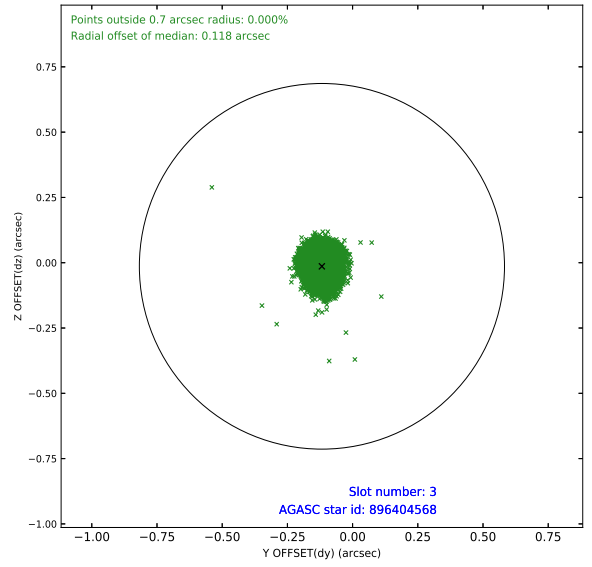
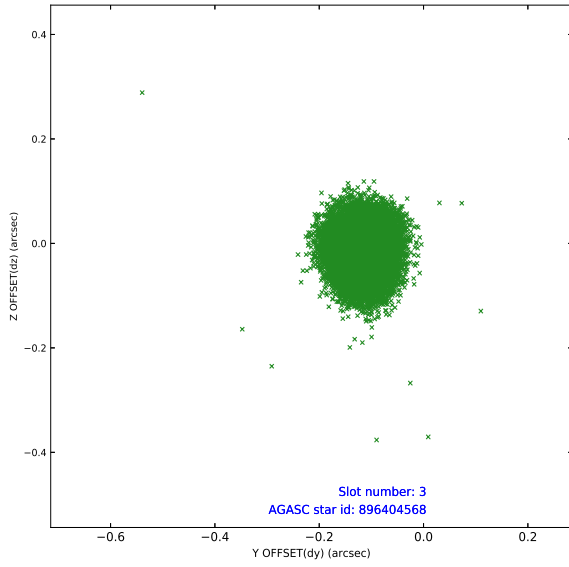


Slot Statistics

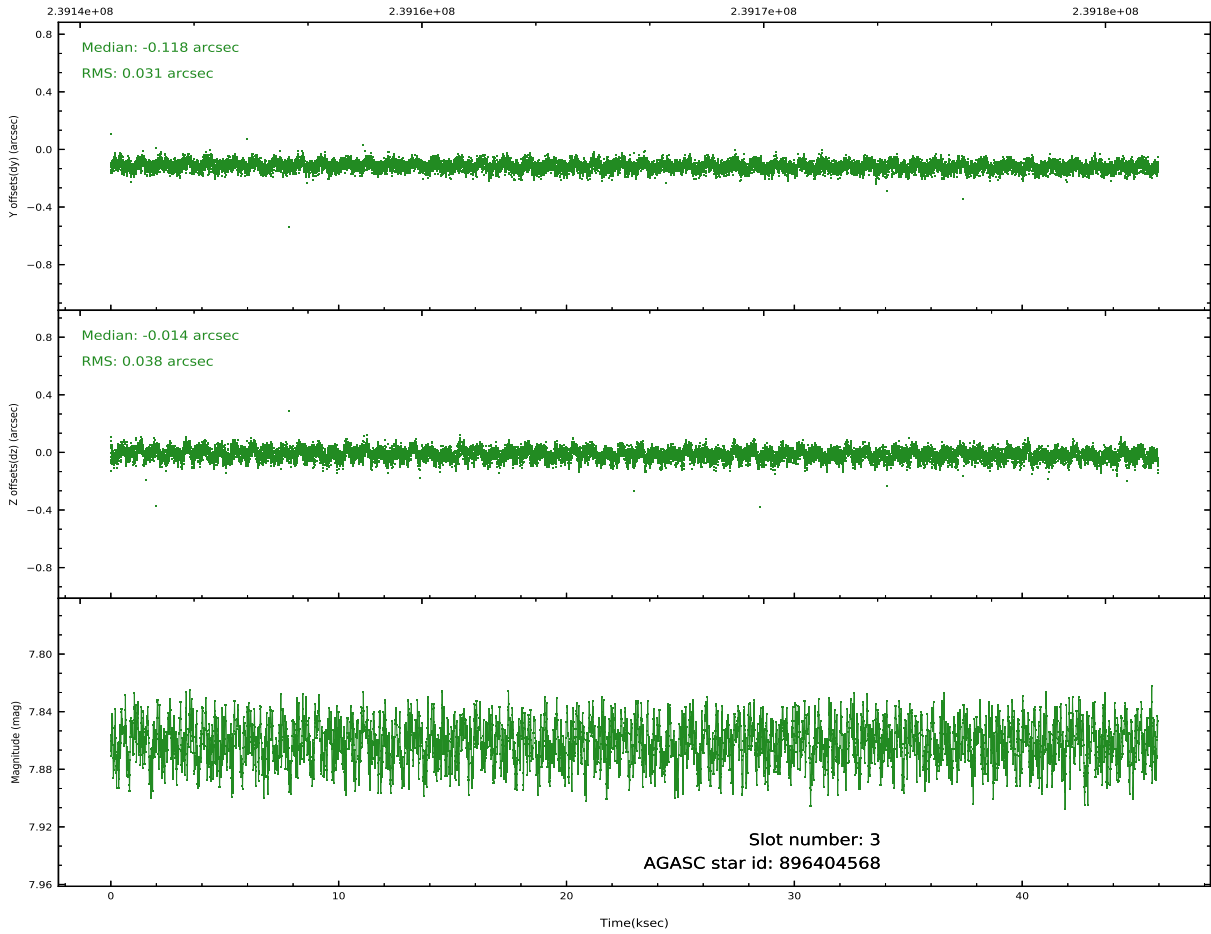
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.25	11209	1.000	-0.030	0.012	0.015	0.079	0.000000	0.000000	932.34	-833
1	FID		ACIS-I-4	7.19	11209	1.000	0.192	0.031	0.019	0.055	0.000000	0.000000	2152.60	1066
2	FID		ACIS-I-5	7.23	11210	1.000	-0.259	0.028	0.014	0.033	0.000000	0.000000	-1815.90	1064
3	GUIDE	used	896404568	7.86	22419	1.000	-0.118	-0.014	0.052	0.083	265.687293	-28.431080	-2195.39	-2060
4	GUIDE	used	896533888	7.02	22420	1.000	0.041	-0.016	0.048	0.079	266.666434	-29.392757	1520.36	714
5	GUIDE	used	896534664	8.19	22416	1.000	-0.027	-0.087	0.053	0.086	266.405570	-28.407461	-2085.67	212
6	GUIDE	used	896540808	7.48	22422	1.000	0.094	0.019	0.050	0.079	265.985401	-29.308604	1031.38	-1387
7	GUIDE	used	896541576	8.19	22418	1.000	0.007	0.100	0.058	0.089	267.051055	-28.762912	-625.98	2128

2.4 Star Slots

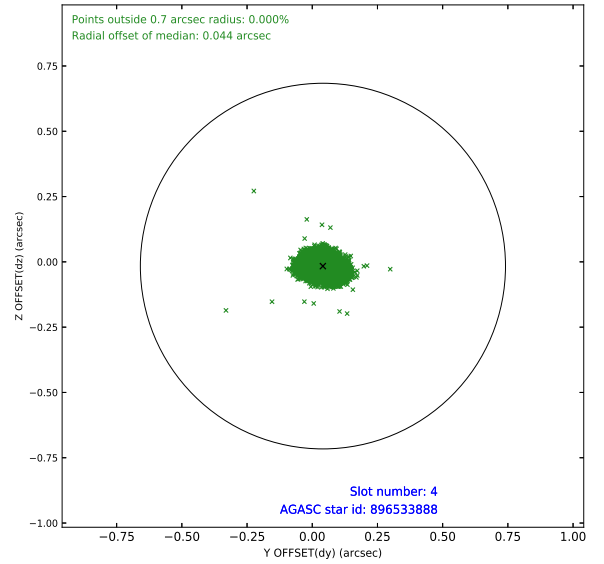
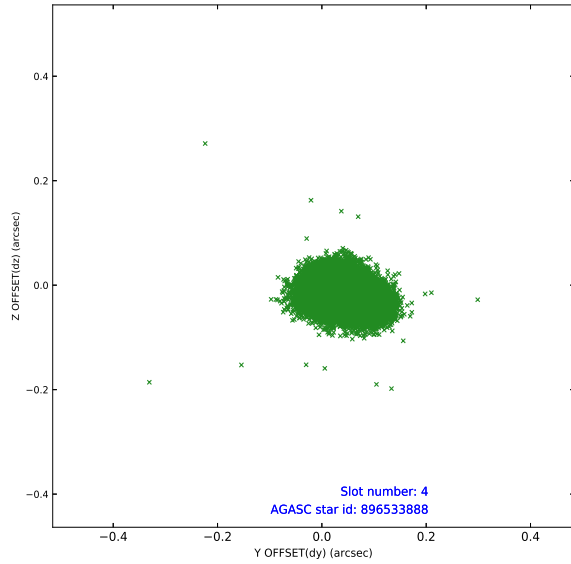
2.4.1 Slot 3



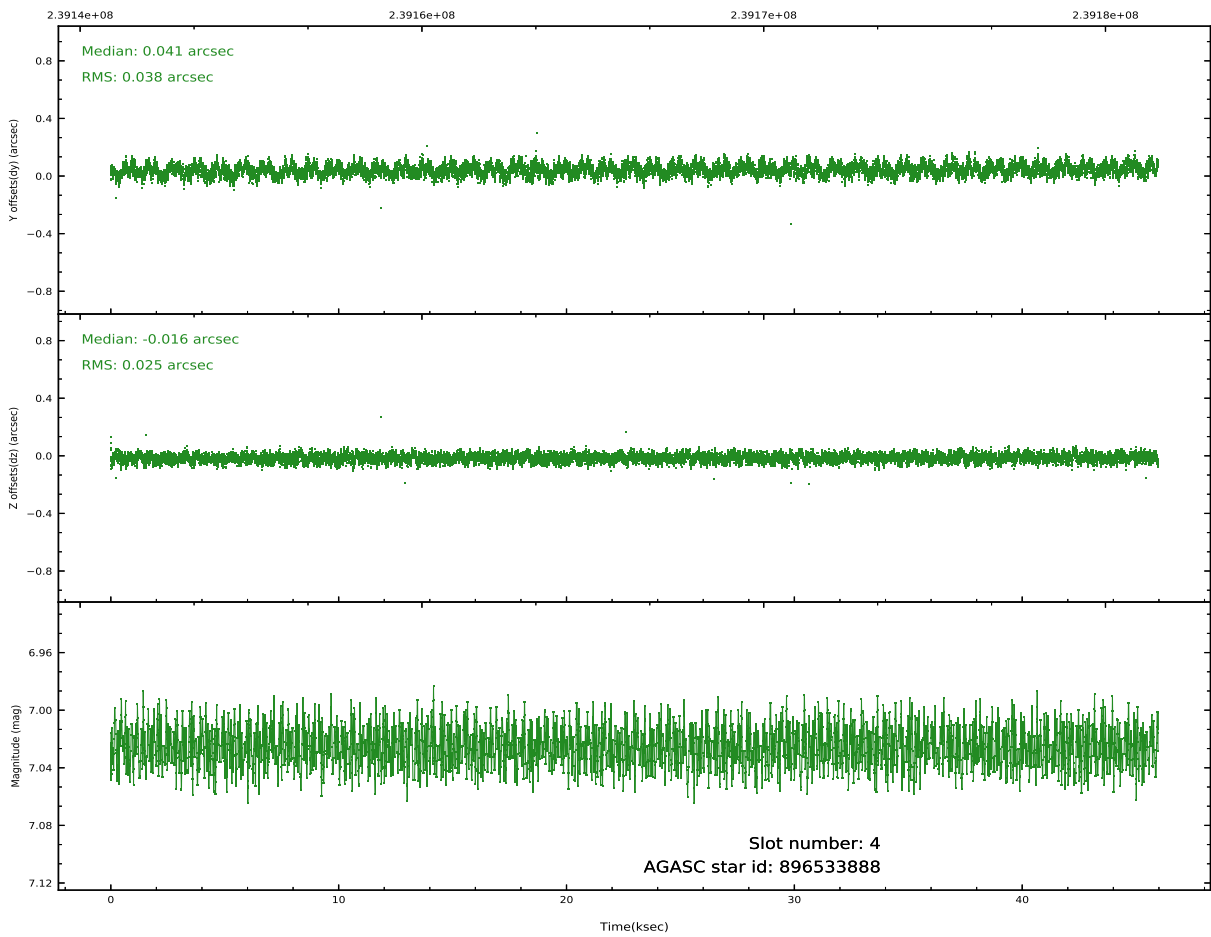
Time (s)



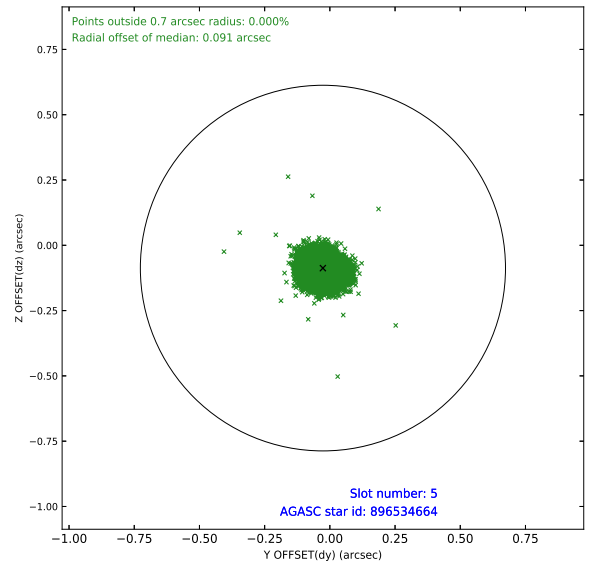
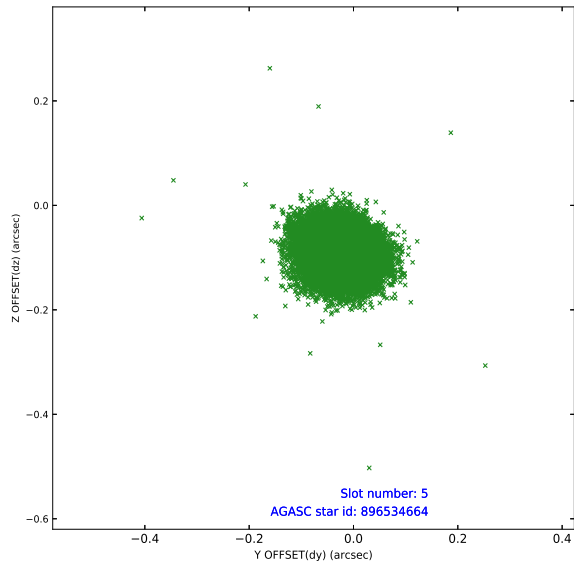
2.4.2 Slot 4



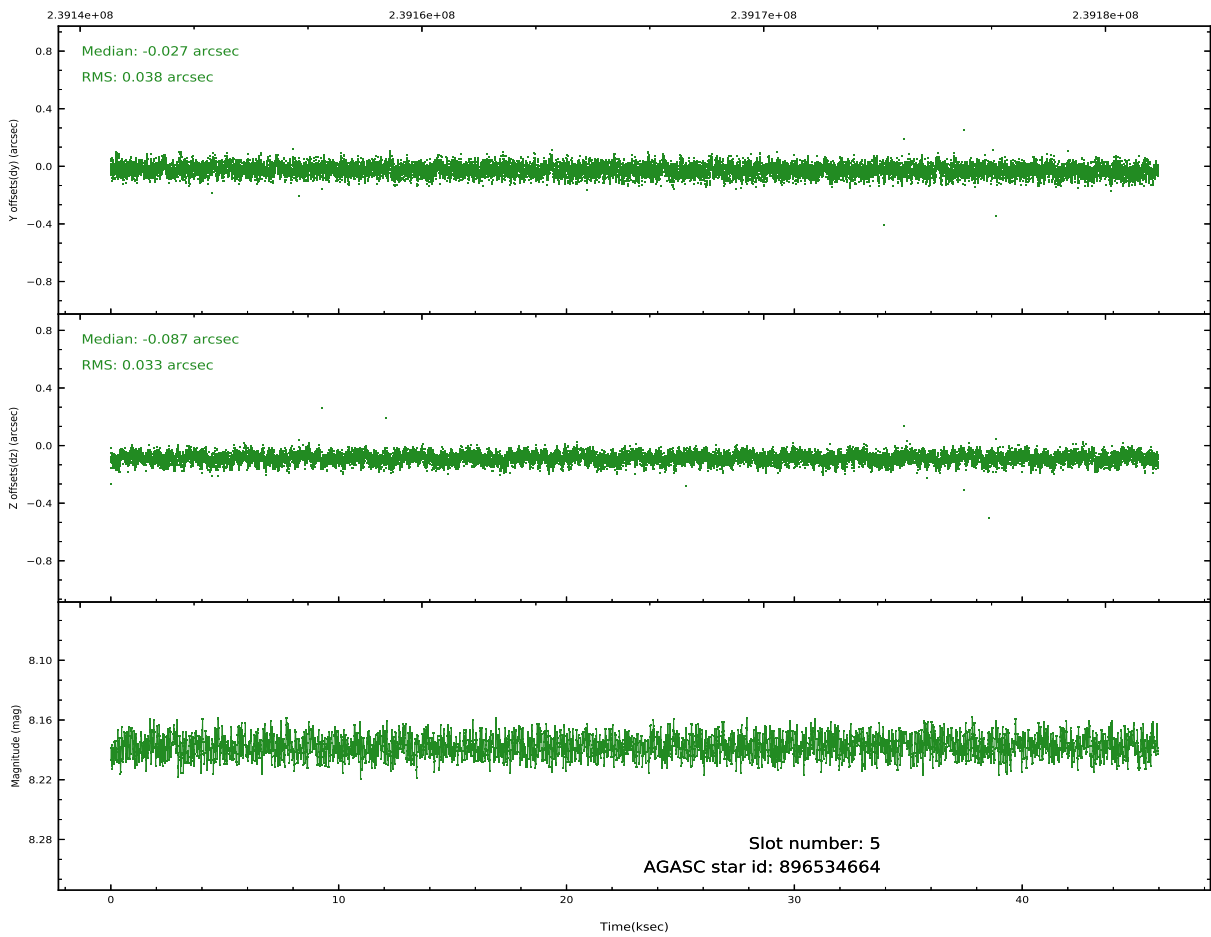
Time (s)



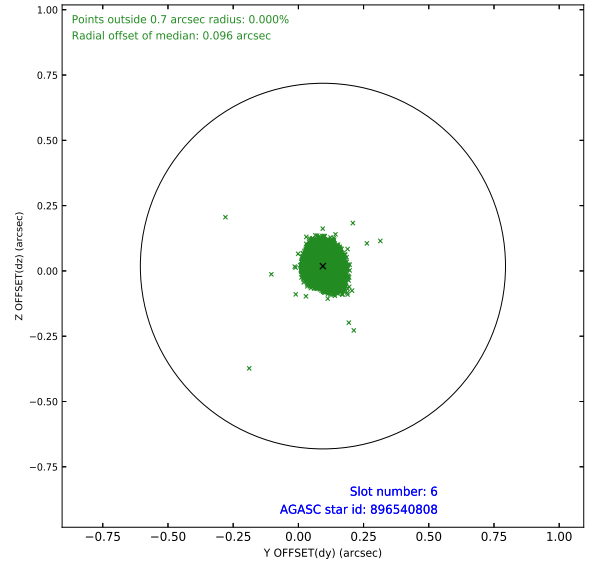
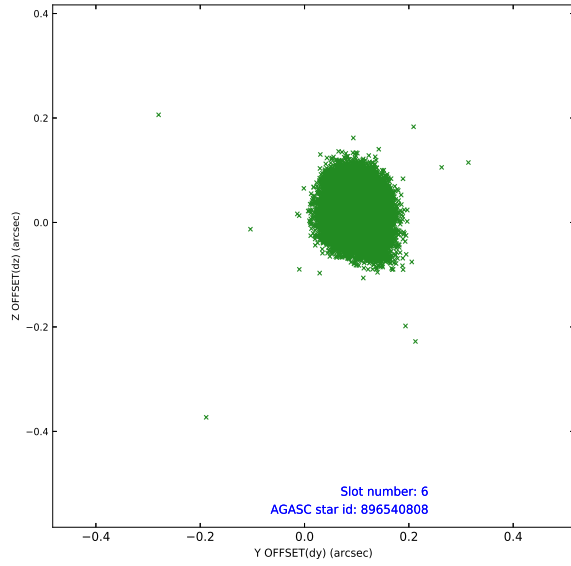
2.4.3 Slot 5



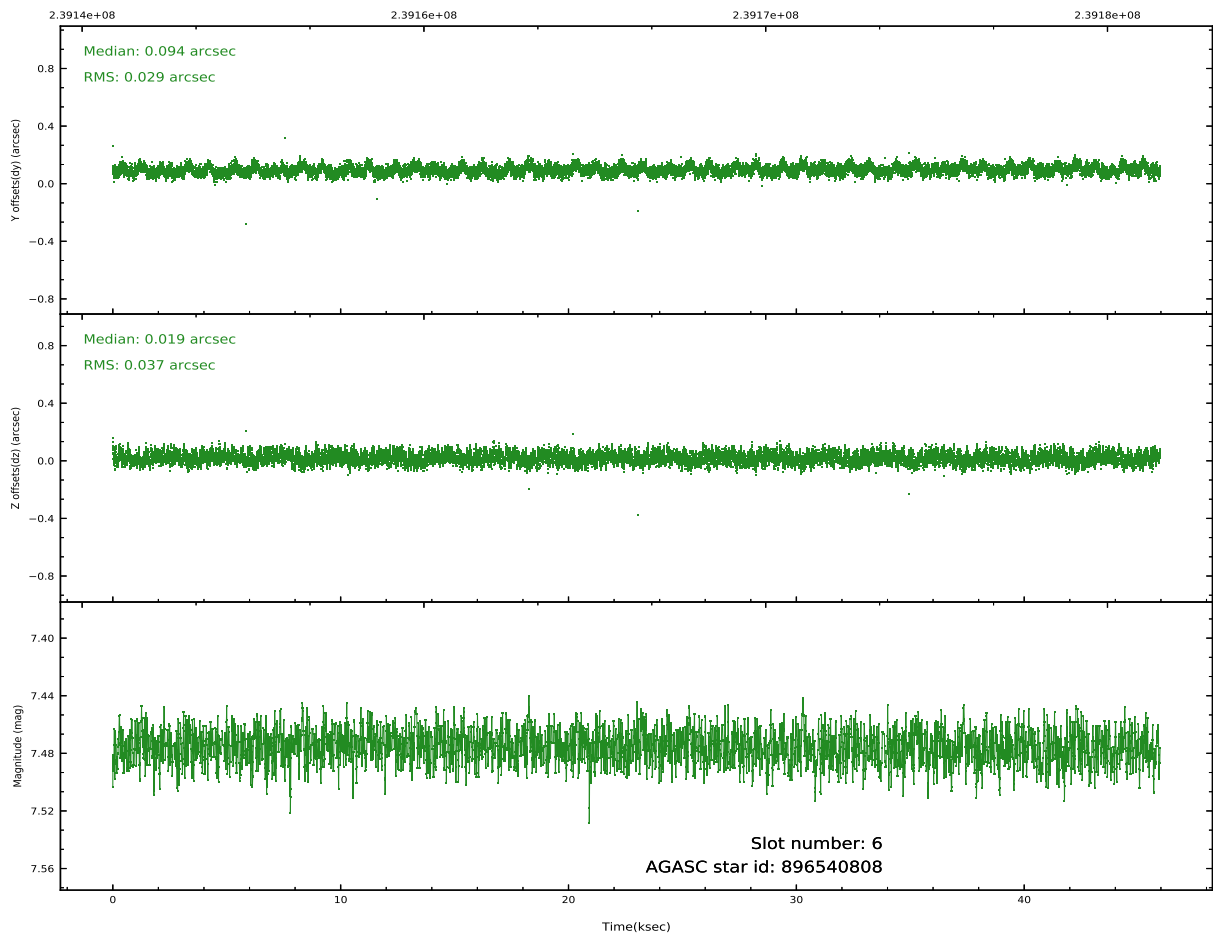
Time (s)



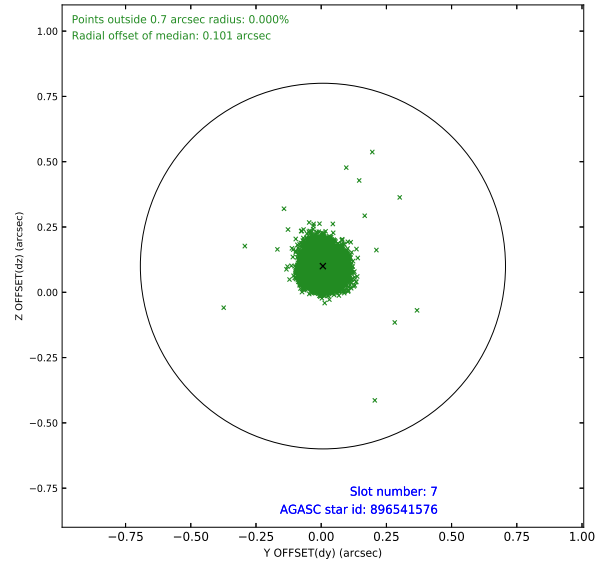
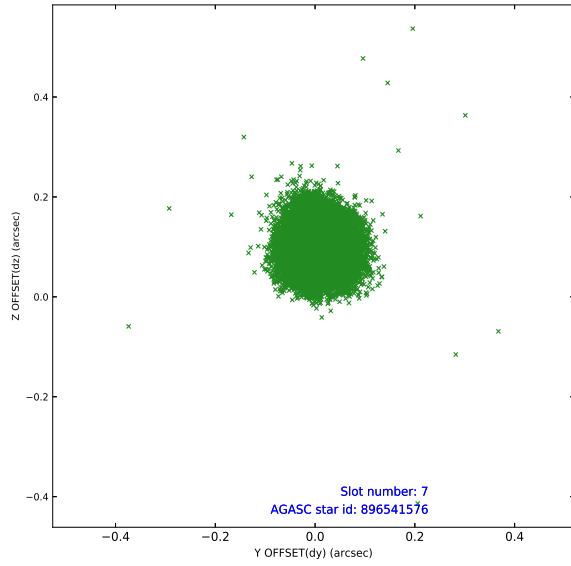
2.4.4 Slot 6



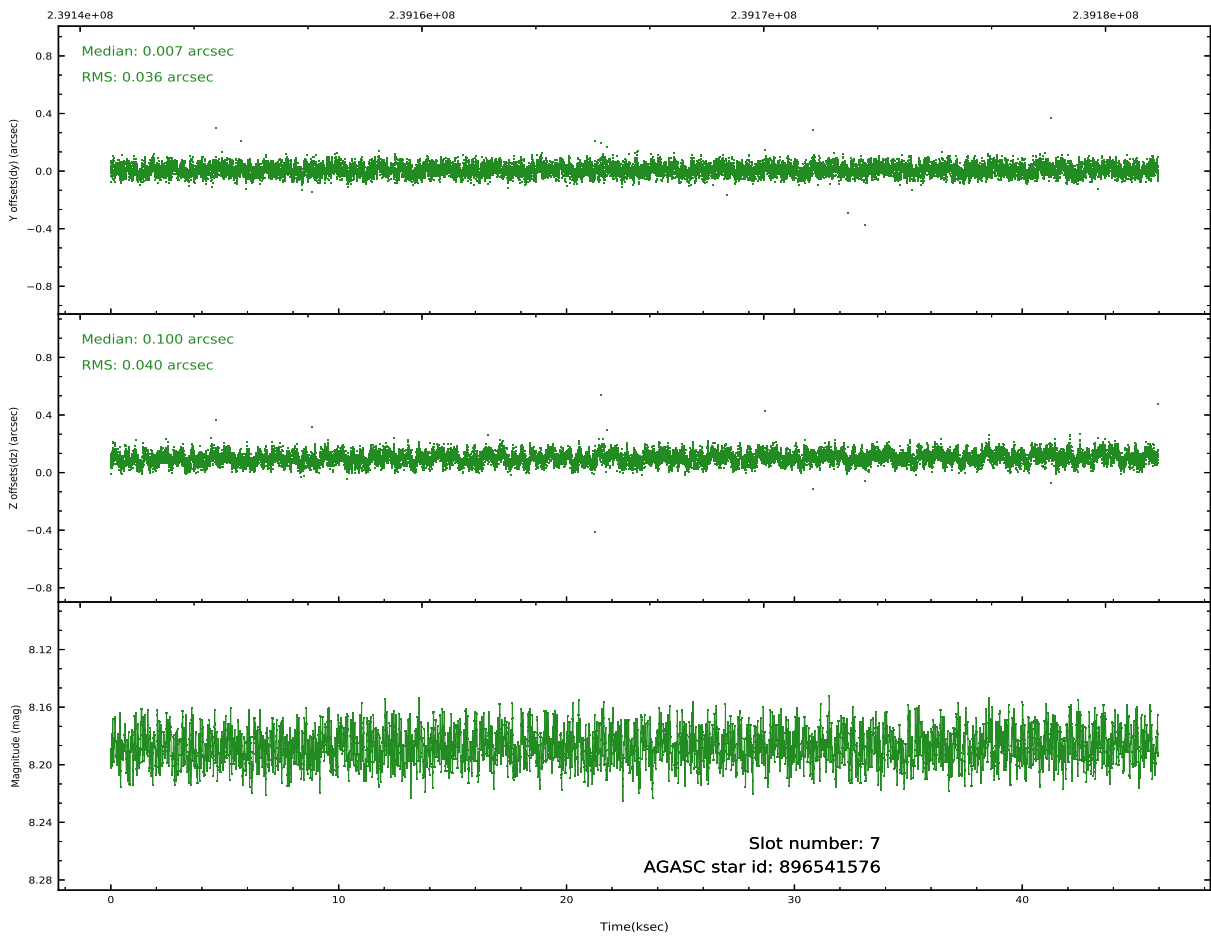
Time (s)



2.4.5 Slot 7

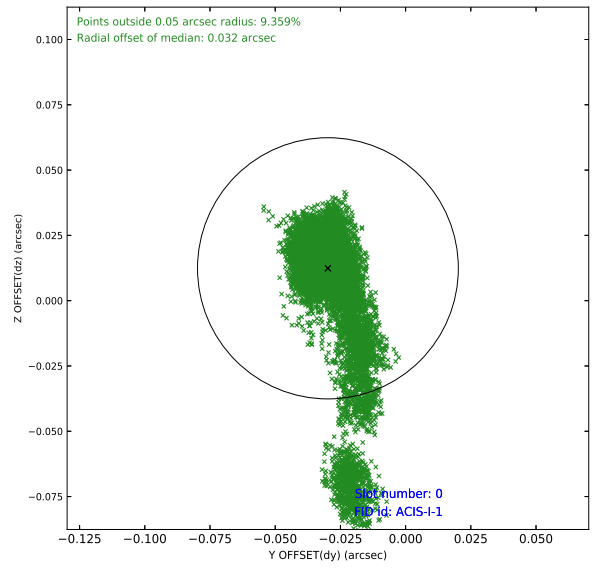
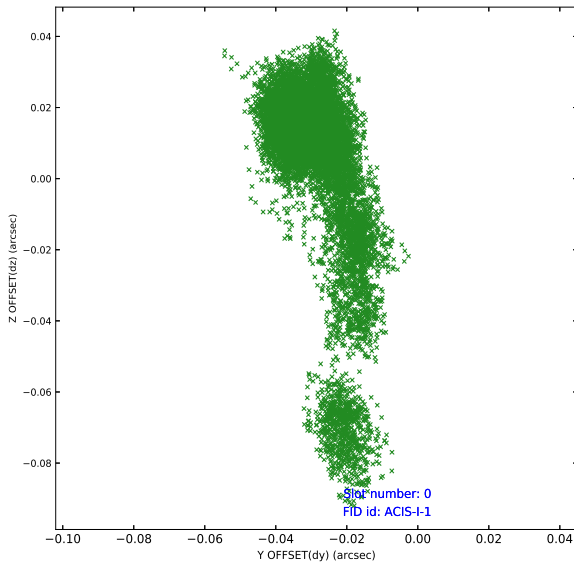


Time (s)

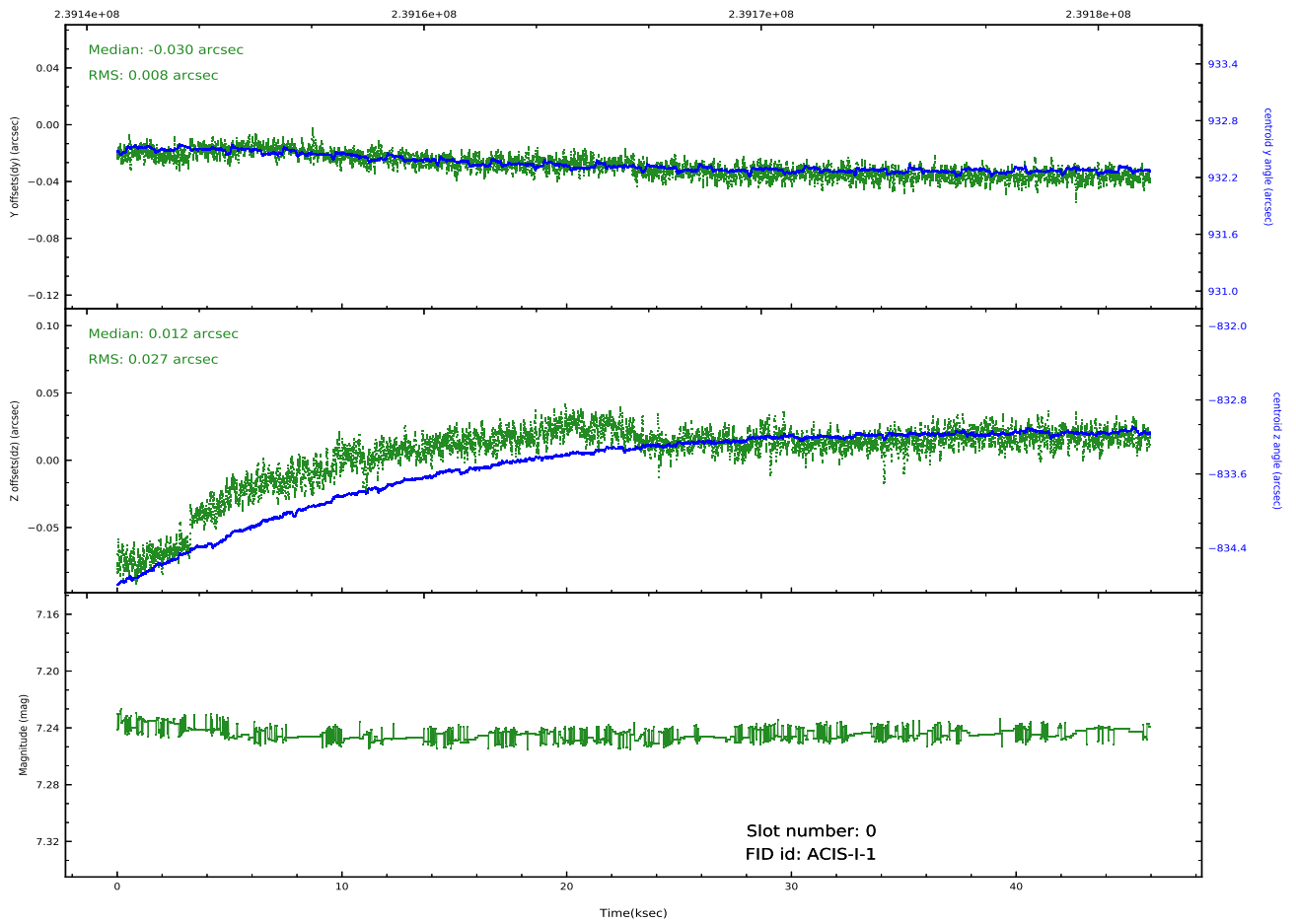


2.5 FID Slots

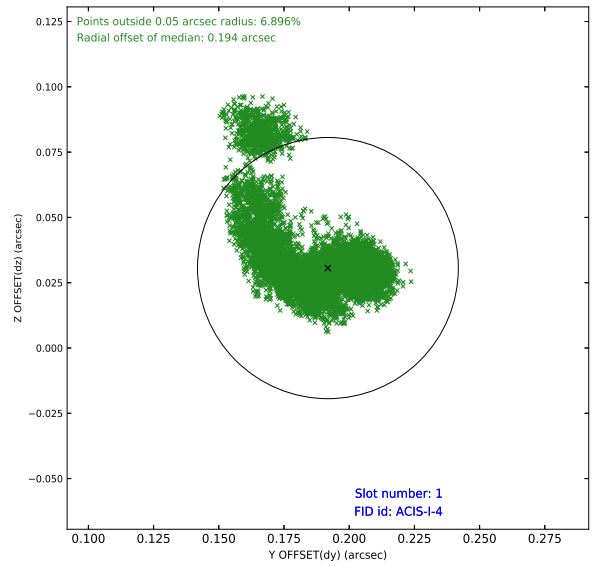
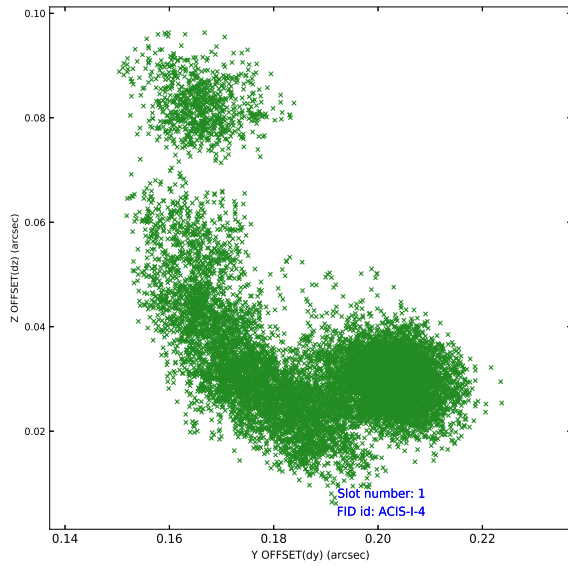
2.5.1 Slot 0



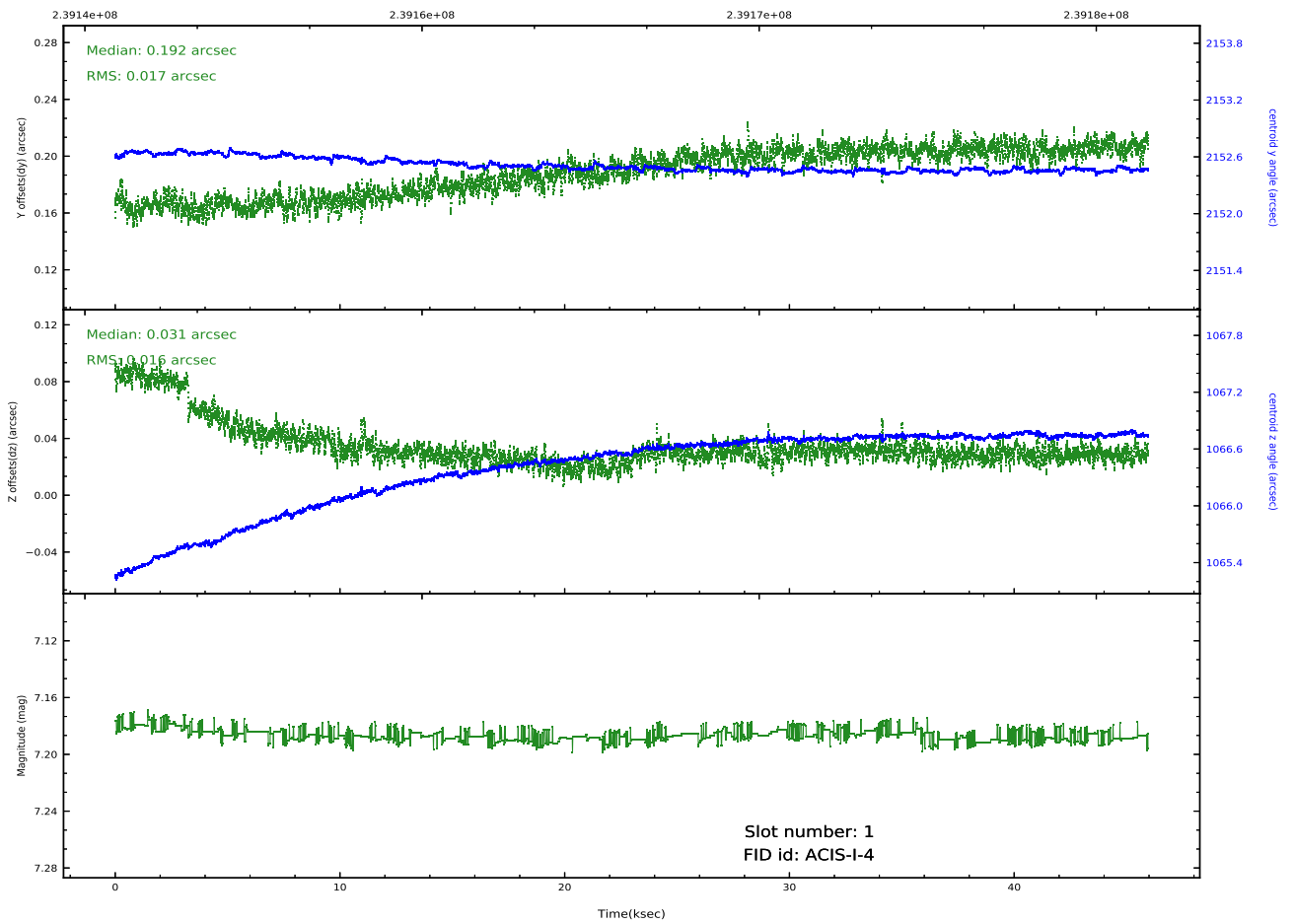
Time (s)



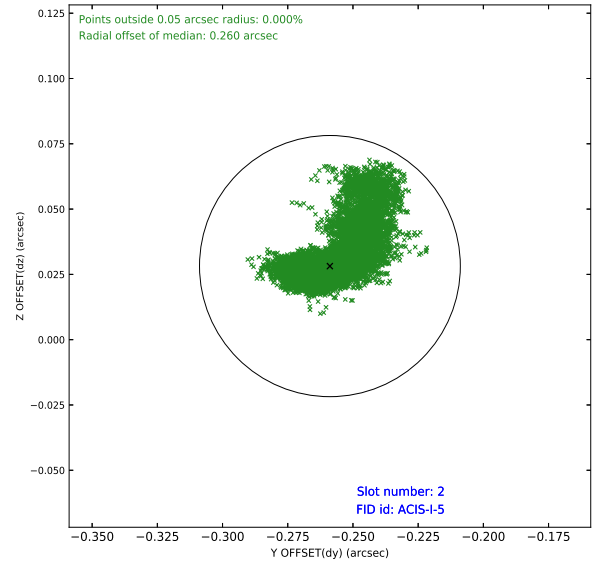
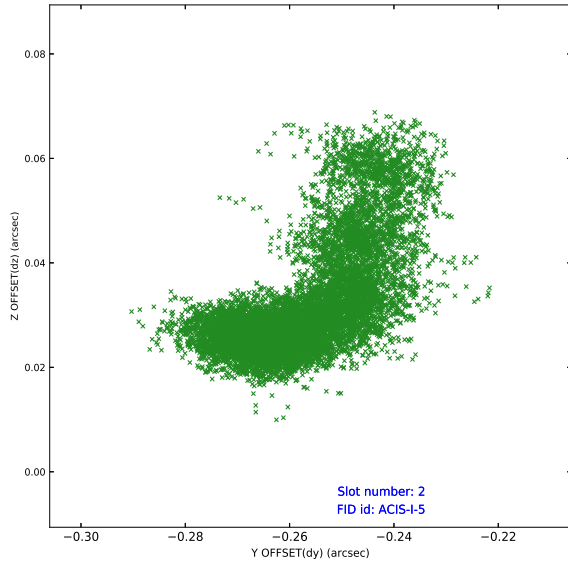
2.5.2 Slot 1



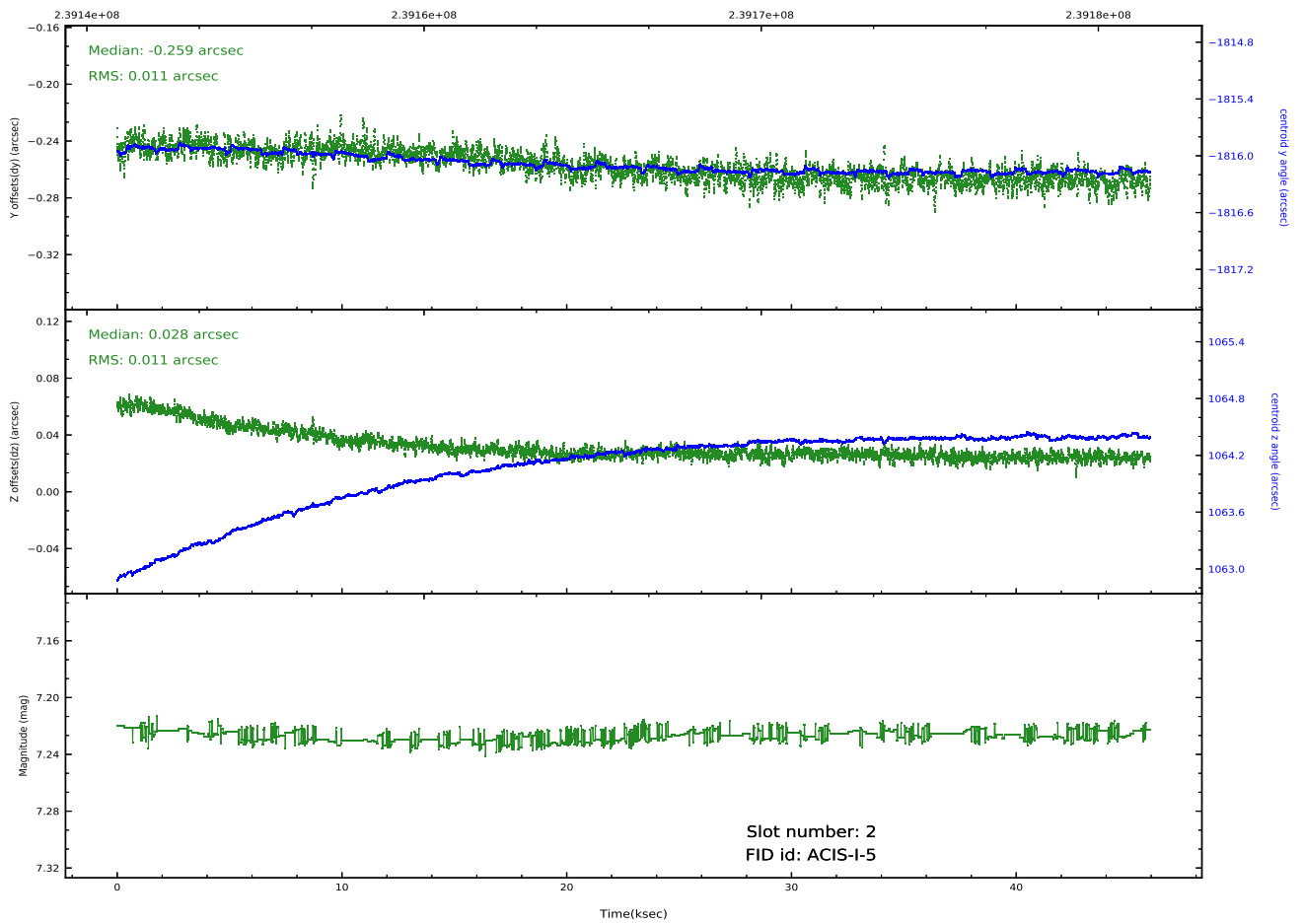
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Francesca Civano
V&V Date (YYYY-MM-DD)	2020.10.13
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	45.9606

A.2 Comments

Window constraint met.

The bias map for CCD_ID = 1 suffers from anomalously high bias values in an 'exacto-knife'-shaped area of the bias file. Pixels in the event data that have been bias-corrected by one of the 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_ID = 1 will be recreated to remove this anomaly and the data will be reprocessed.