

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5851 - L2 Version 5
Chandra X-Ray Center

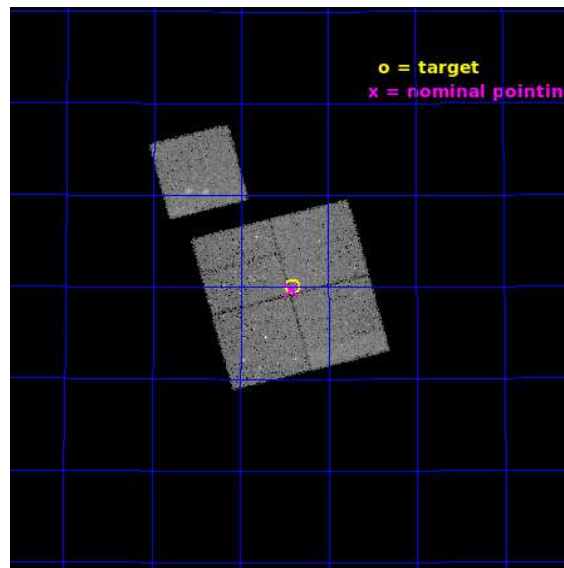
L2 Processing Date : Oct 10 2020

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1 Front

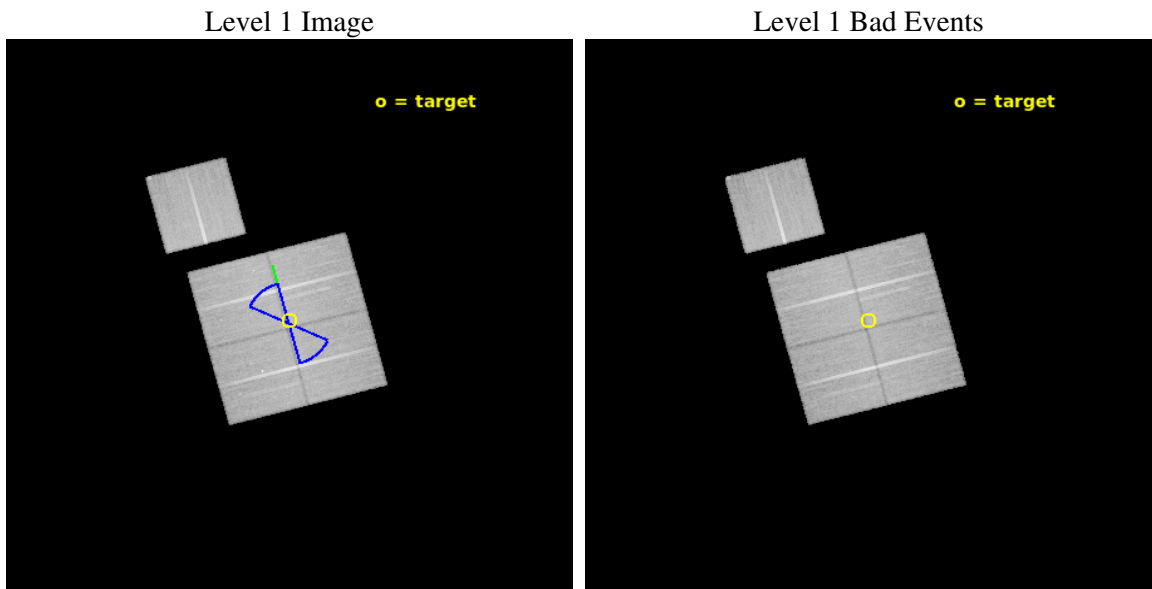
seq_num	900353	Sequence number
obs_id	5851	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	Extended Groth Strip (EGS)	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	214.102081	Observer's specified target RA [deg]
dec_targ	52.334053	Observer's specified target Dec [deg]
ra_nom	214.10375885945	Nominal RA [deg]
dec_nom	52.328547868953	Nominal Dec [deg]
roll_nom	345.20065198274	Nominal Roll [deg]
revision	5	Processing version of data
ontime	36149.017960042	Sum of GTIs [s]
livetime	35676.704427874	Livetime [s]
ontime0	36155.299930453	Sum of GTIs [s]
ontime1	36155.299930453	Sum of GTIs [s]
ontime2	36152.158960223	Sum of GTIs [s]
ontime3	36149.017960042	Sum of GTIs [s]
ontime6	36149.018049717	Sum of GTIs [s]
l2events	98893	Number of level 2 events



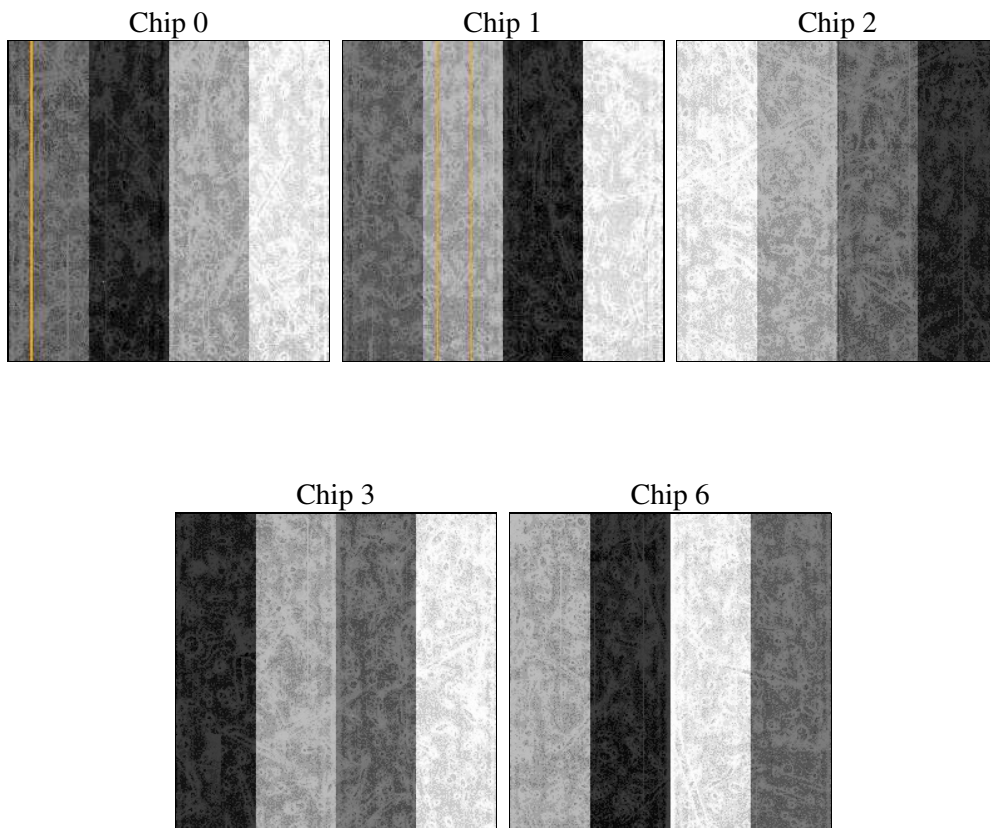
2 OBI

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	36149.017960042	Sum of GTIs [s]
caldbver	4.9.2	 	ontime0	36155.299930453	Sum of GTIs [s]
date	2020-10-11T02:39:27	Date and time of file creation	ontime1	36155.299930453	Sum of GTIs [s]
revision	5	Processing version of data	ontime2	36152.158960223	Sum of GTIs [s]
			ontime3	36149.017960042	Sum of GTIs [s]
			ontime6	36149.018049717	Sum of GTIs [s]
			l1events	1165700	Number of level 1 events

2.1.4 Events

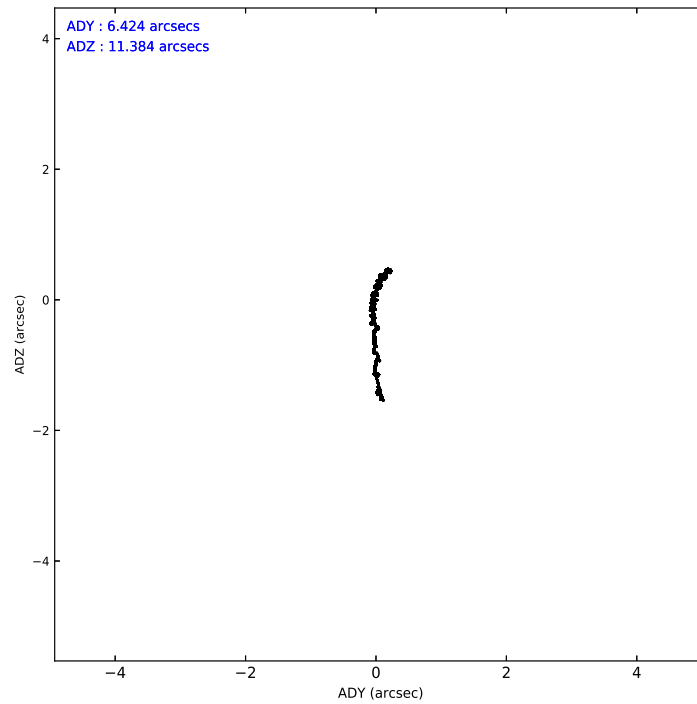
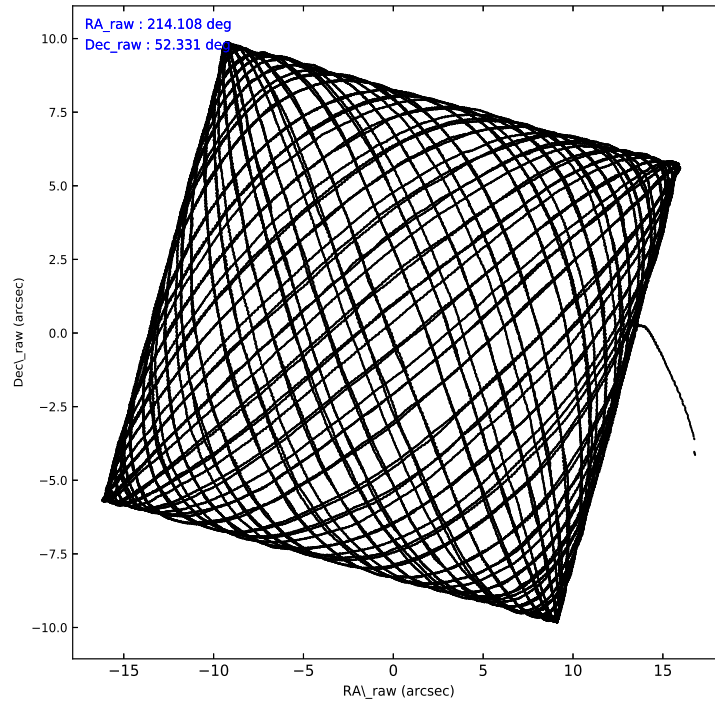
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	222398	221120	248803	237205	236174
rejected events	197875	195458	225629	215244	212124
rejected %	88%	88%	90%	90%	89%

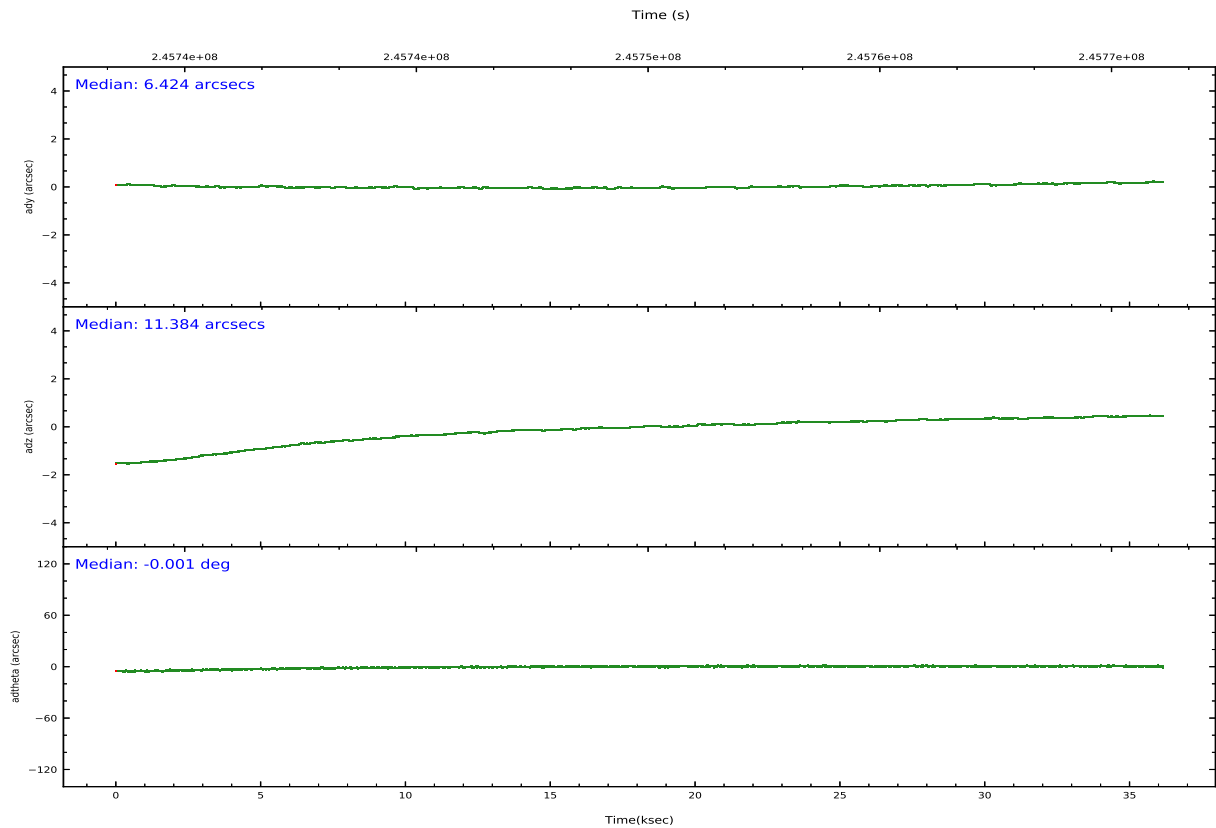
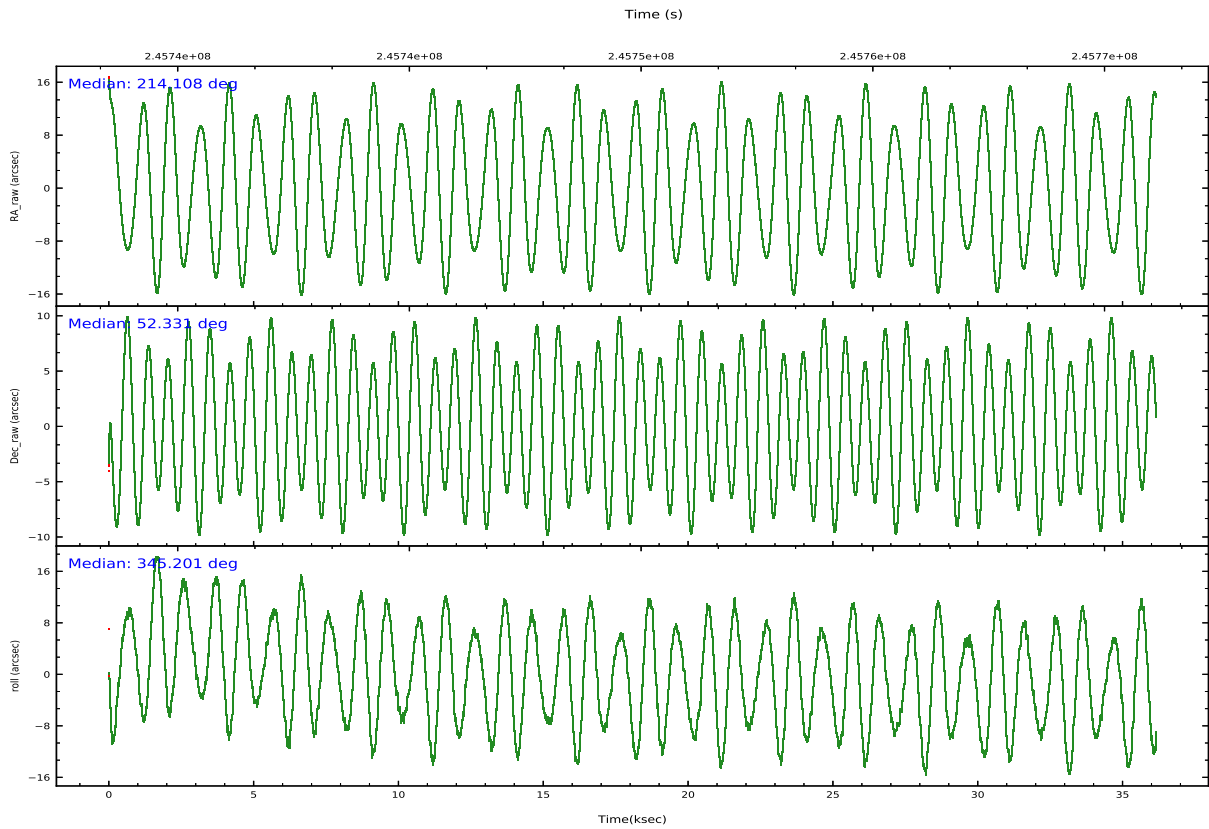
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	9382	9271	8673	7768	8624
	4%	4%	3%	3%	3%
grade 1 events	104	92	131	121	92
	0%	0%	0%	0%	0%
grade 2 events	5678	5681	5399	4824	5276
	2%	2%	2%	2%	2%
grade 3 events	2722	2846	2537	2630	2710
	1%	1%	1%	1%	1%
grade 4 events	2503	2898	2566	2549	2658
	1%	1%	1%	1%	1%
grade 5 events	8090	9111	7520	9684	9492
	3%	4%	3%	4%	4%
grade 6 events	4532	5251	4221	4455	5053
	2%	2%	1%	1%	2%
grade 7 events	189387	185970	217756	205174	202269
	85%	84%	87%	86%	85%

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	214.064887	214.10375885945	Subarray requested	NONE	NONE
[deg] Pointing Dec	52.323922	52.328547868953	Alternating exposures requested	N	N
[deg] Pointing Roll	345.029437	345.20065198274	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	50.756000	50.756000			
[deg] Roll tolerance	25.000000	25.000000			
Roll constraint allows 180D rotation	Y	Y			
[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)	245733783.184000	245732598.45517			
Observation start date	2005-10-15T03:21:59	2005-10-15T03:03:18			
[s] Observation end time (MET)	245769783.184000	245770725.38193			
Observation end date	2005-10-15T13:21:59	2005-10-15T13:38:45			
Read mode	TIMED	TIMED			

2.3 Aspect





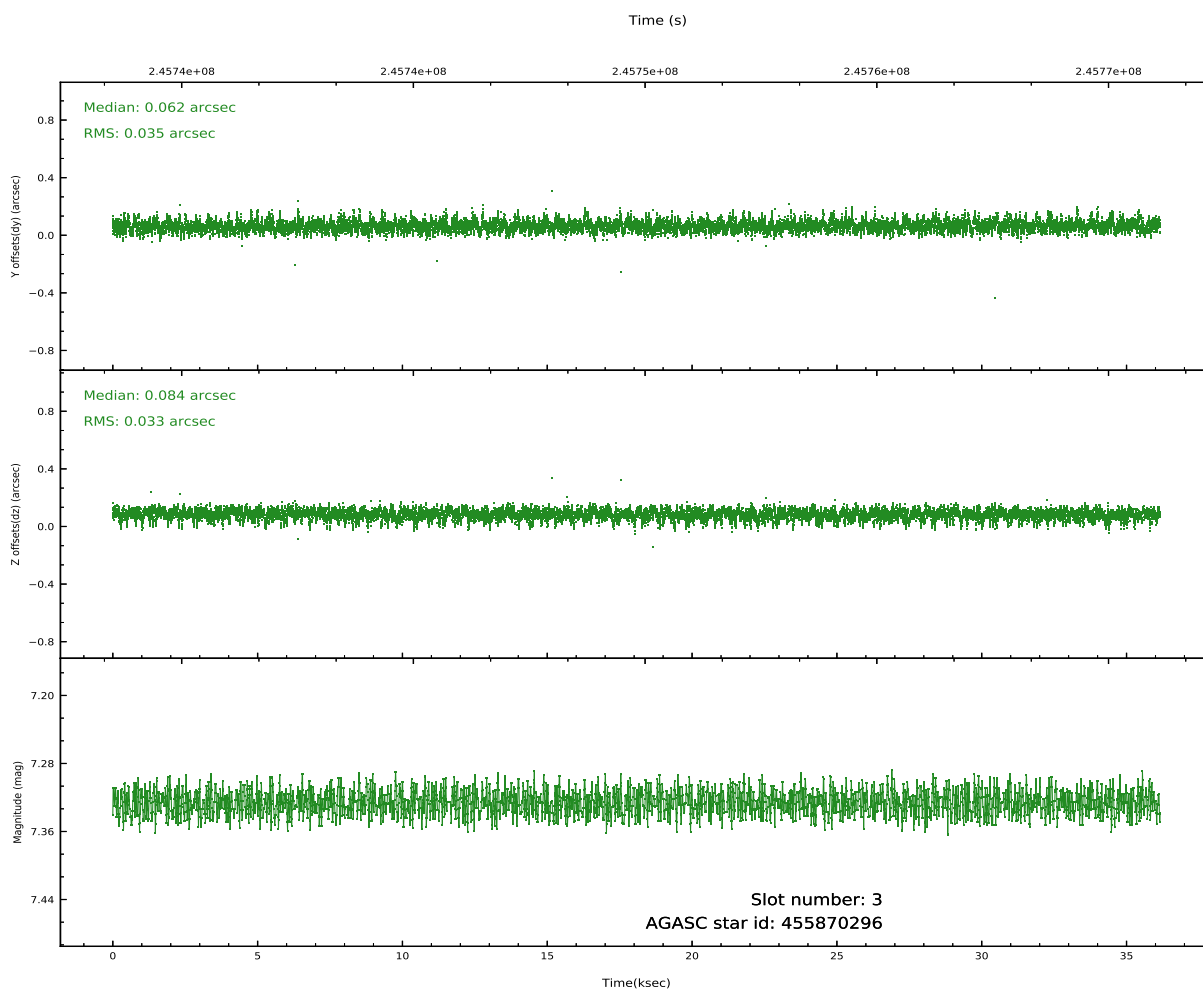
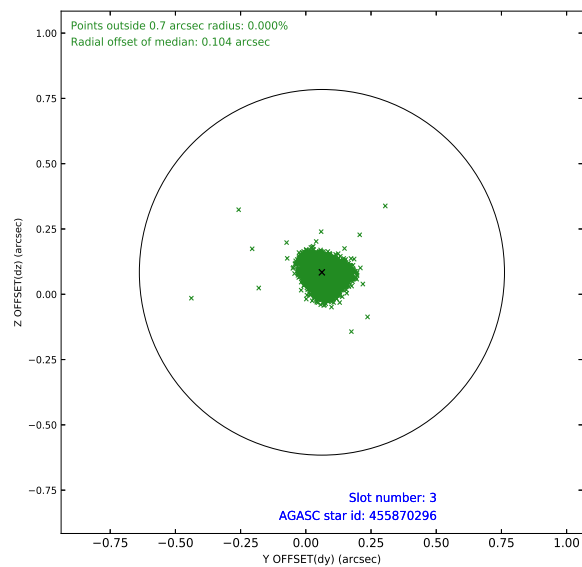
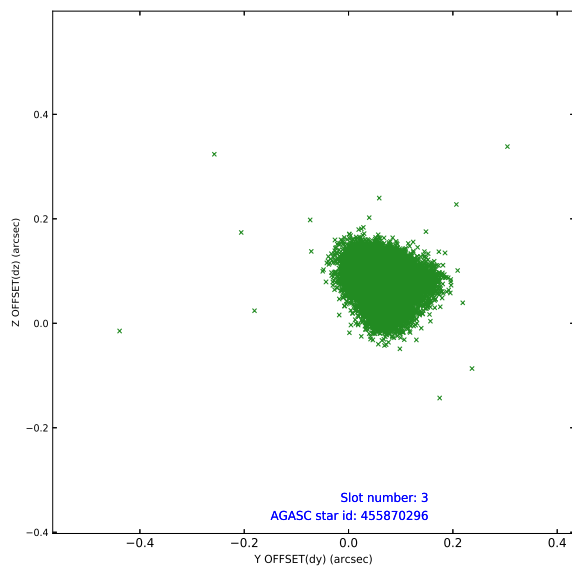
Slot Statistics

slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	8819	1.000	0.056	-0.050	0.012	0.057	0.000000	0.000000	933.29	-834
1	FID		ACIS-I-5	7.23	8820	1.000	-0.200	0.056	0.011	0.036	0.000000	0.000000	-1815.03	1062
2	FID		ACIS-I-6	7.25	8820	1.000	0.054	0.065	0.013	0.028	0.000000	0.000000	398.83	1707
3	GUIDE	used	455870296	7.33	17639	1.000	0.062	0.084	0.050	0.084	214.629779	52.033323	1477.81	-682
4	GUIDE	used	504894728	8.81	17631	1.000	0.049	0.089	0.056	0.094	213.220892	52.722550	-2151.07	921
5	GUIDE	used	505806936	7.01	17571	1.000	0.003	-0.011	0.071	0.111	213.820815	52.535927	-713.81	600
6	GUIDE	used	505812376	7.66	17640	1.000	-0.072	-0.101	0.044	0.072	214.039537	52.937930	-624.48	2121
7	GUIDE	used	455871352	8.13	17573	1.000	-0.050	-0.061	0.053	0.089	215.099961	52.172669	2344.18	80

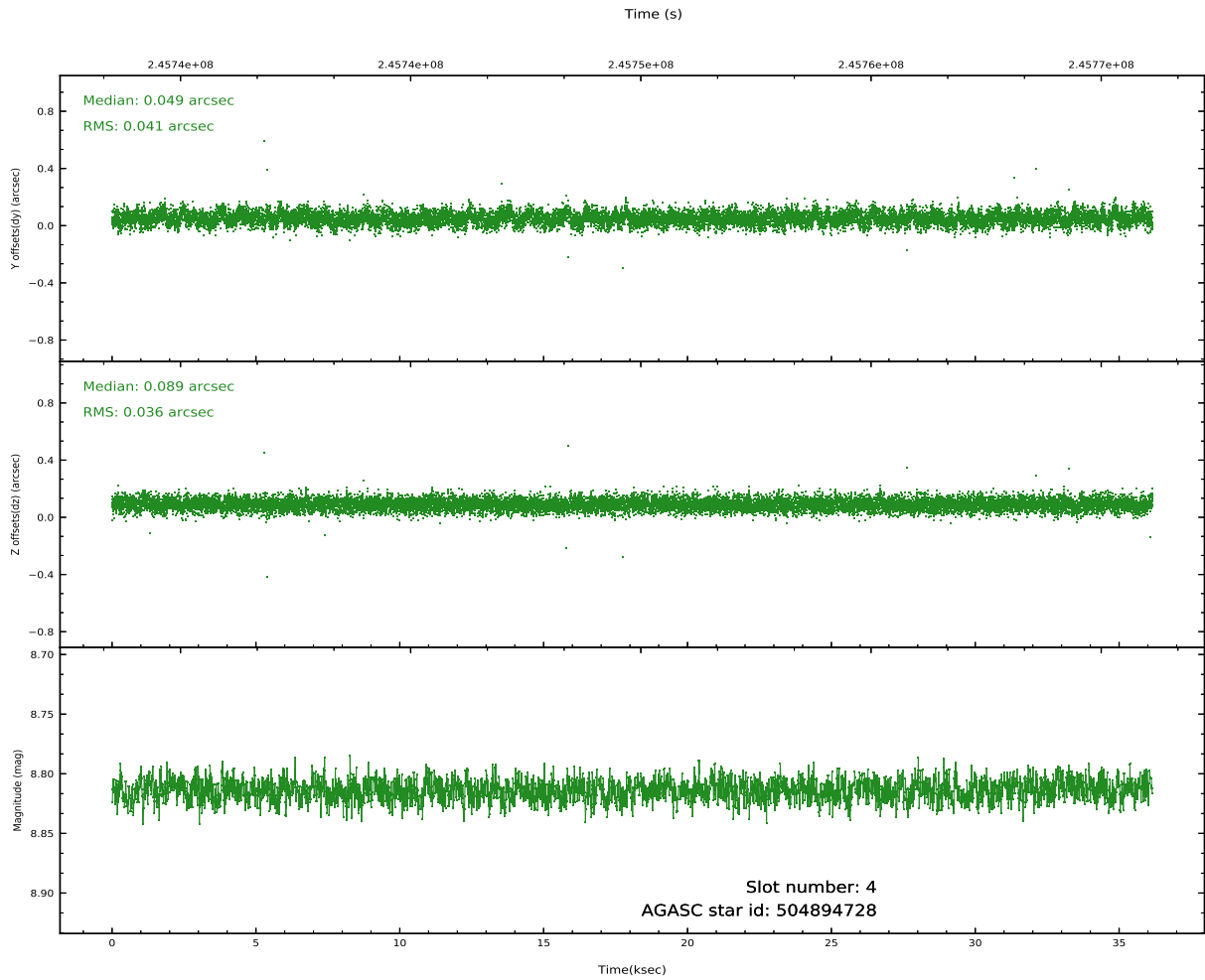
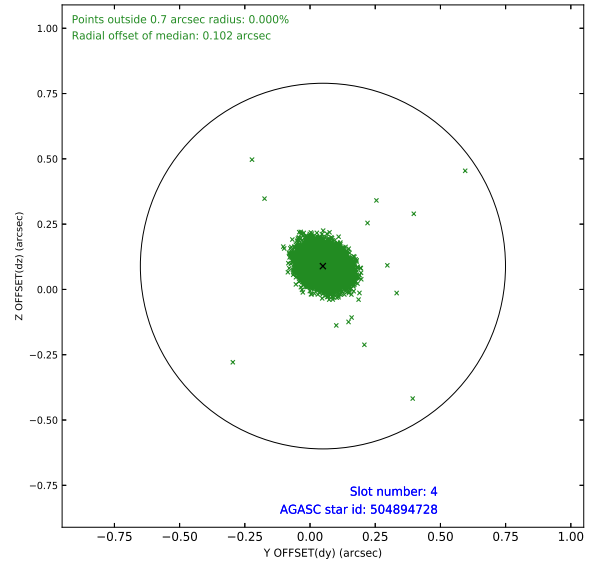
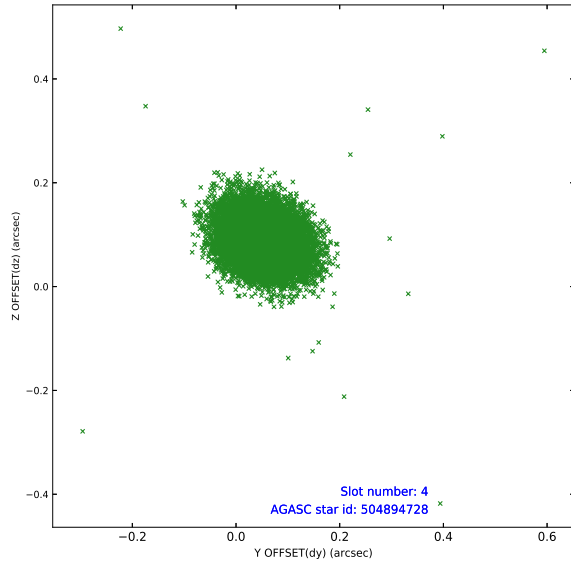
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2.4 Star Slots

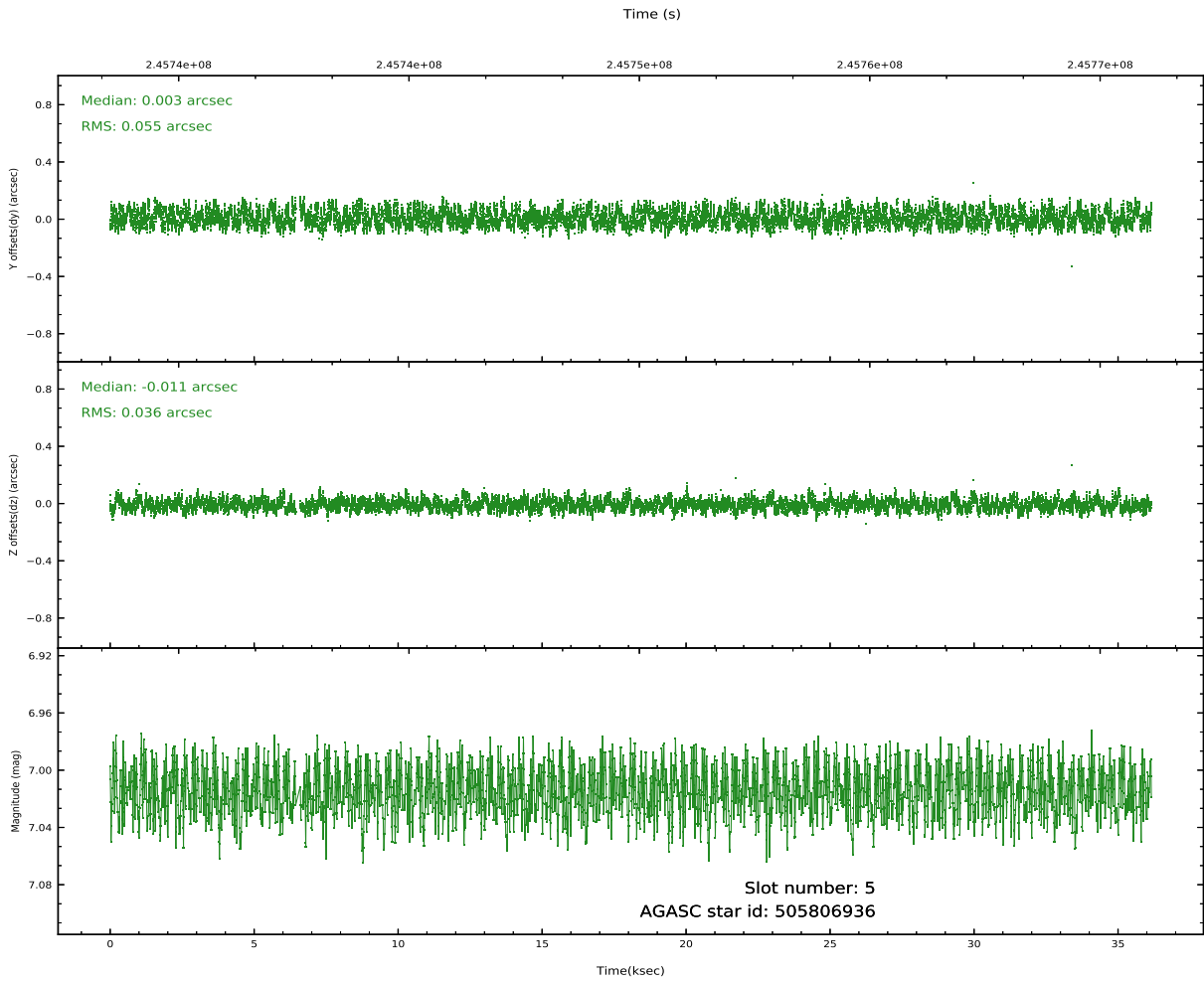
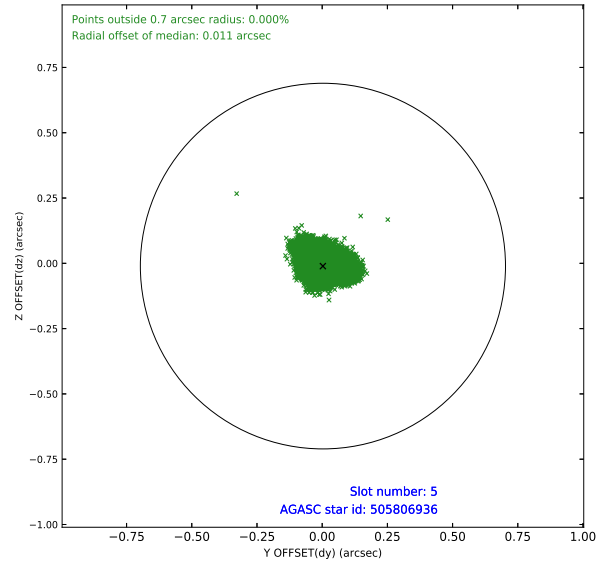
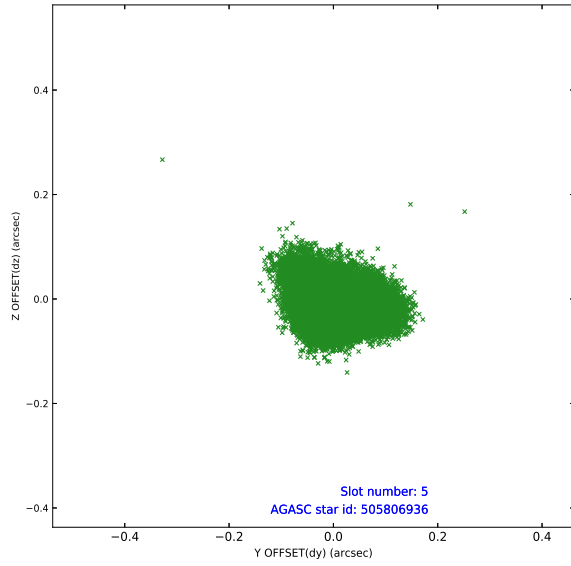
2.4.1 Slot 3



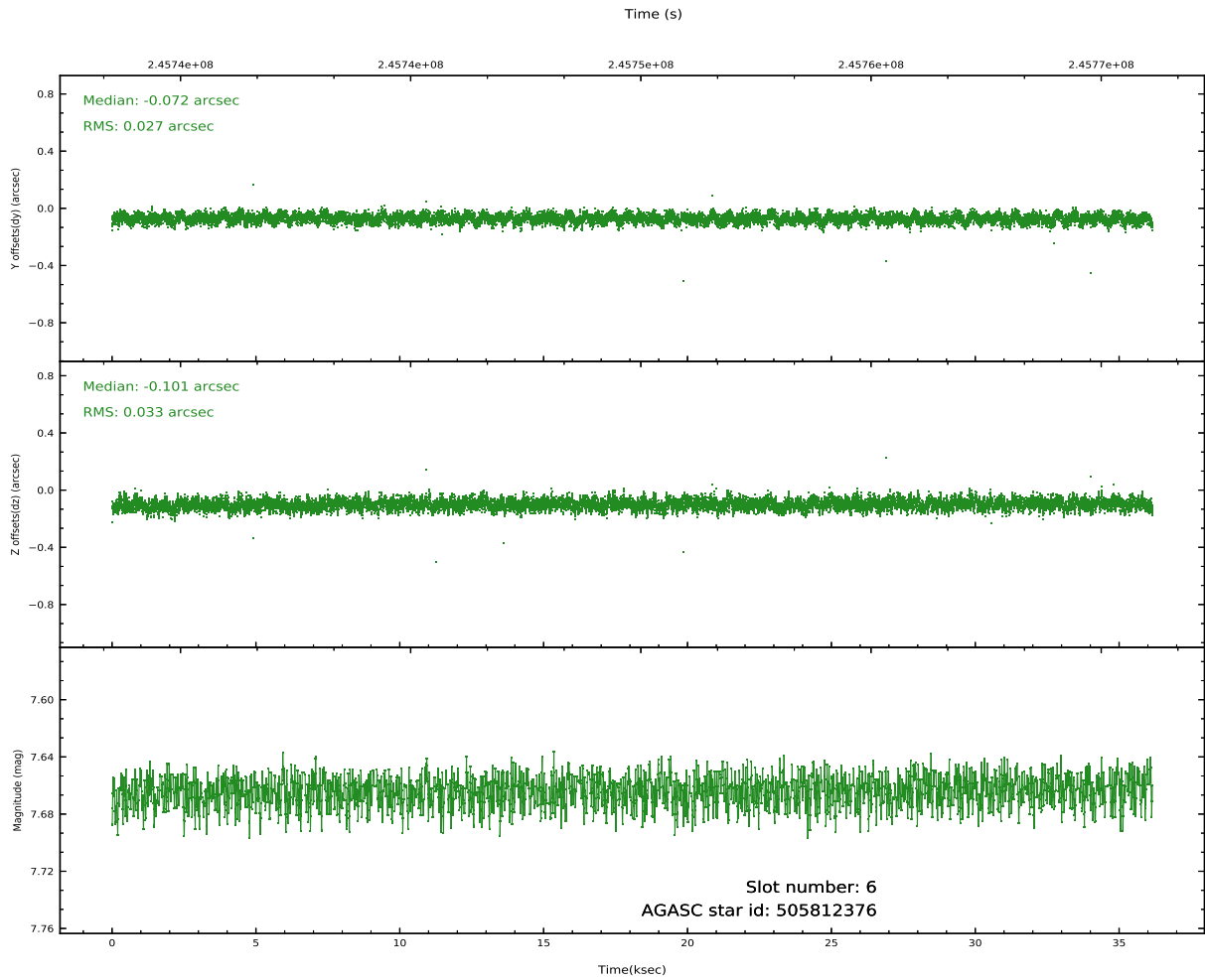
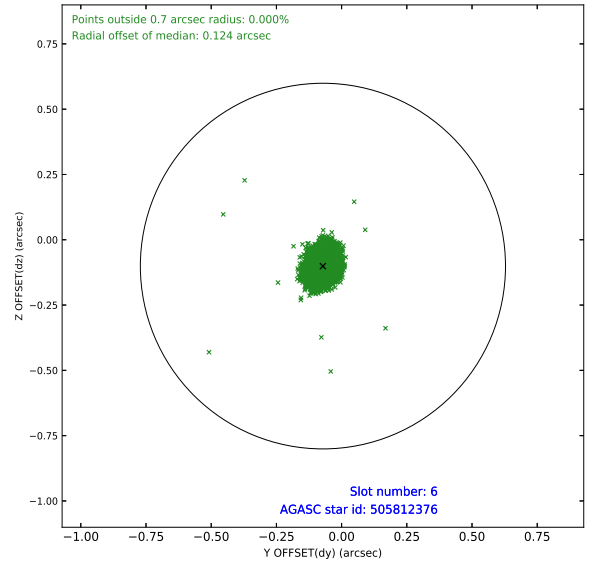
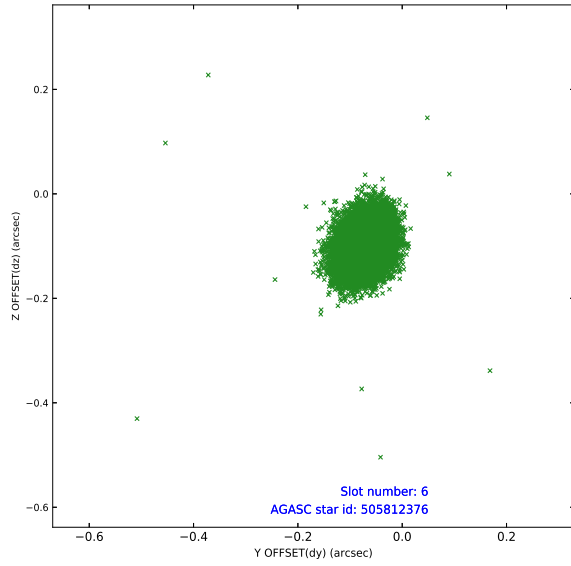
2.4.2 Slot 4



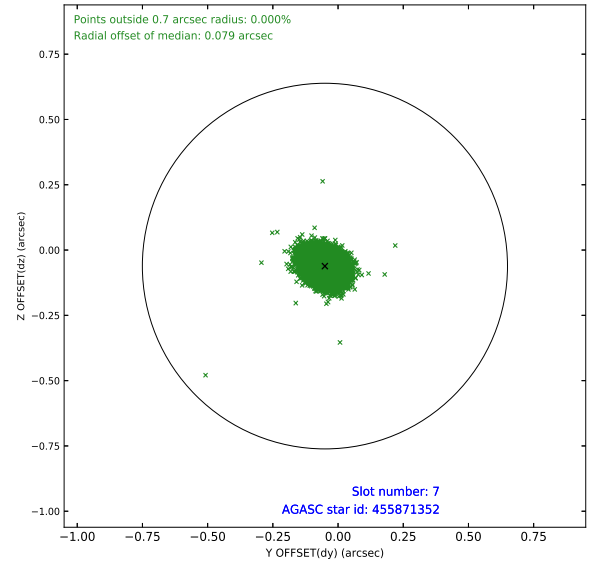
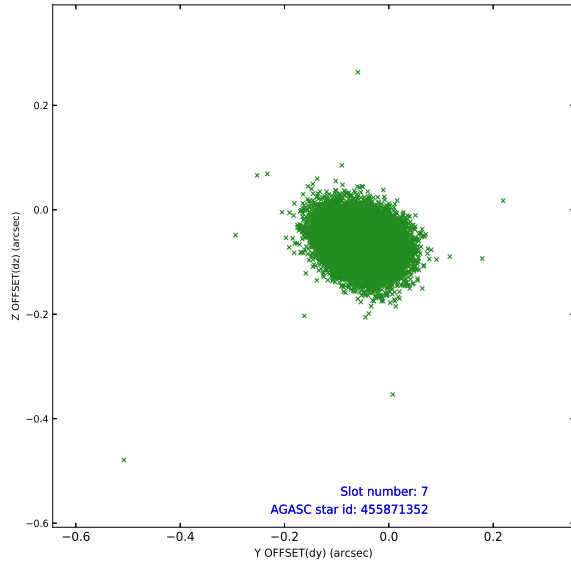
2.4.3 Slot 5



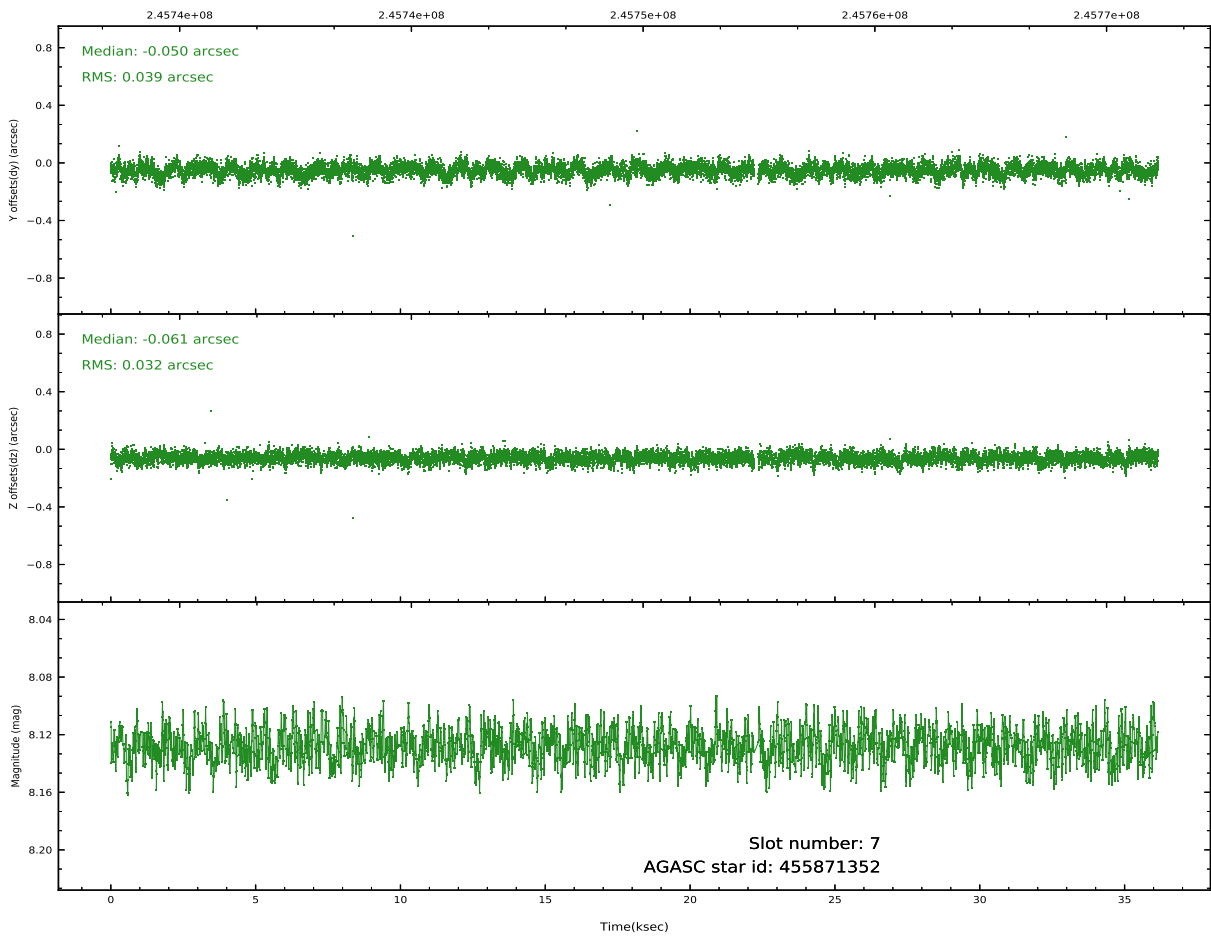
2.4.4 Slot 6



2.4.5 Slot 7

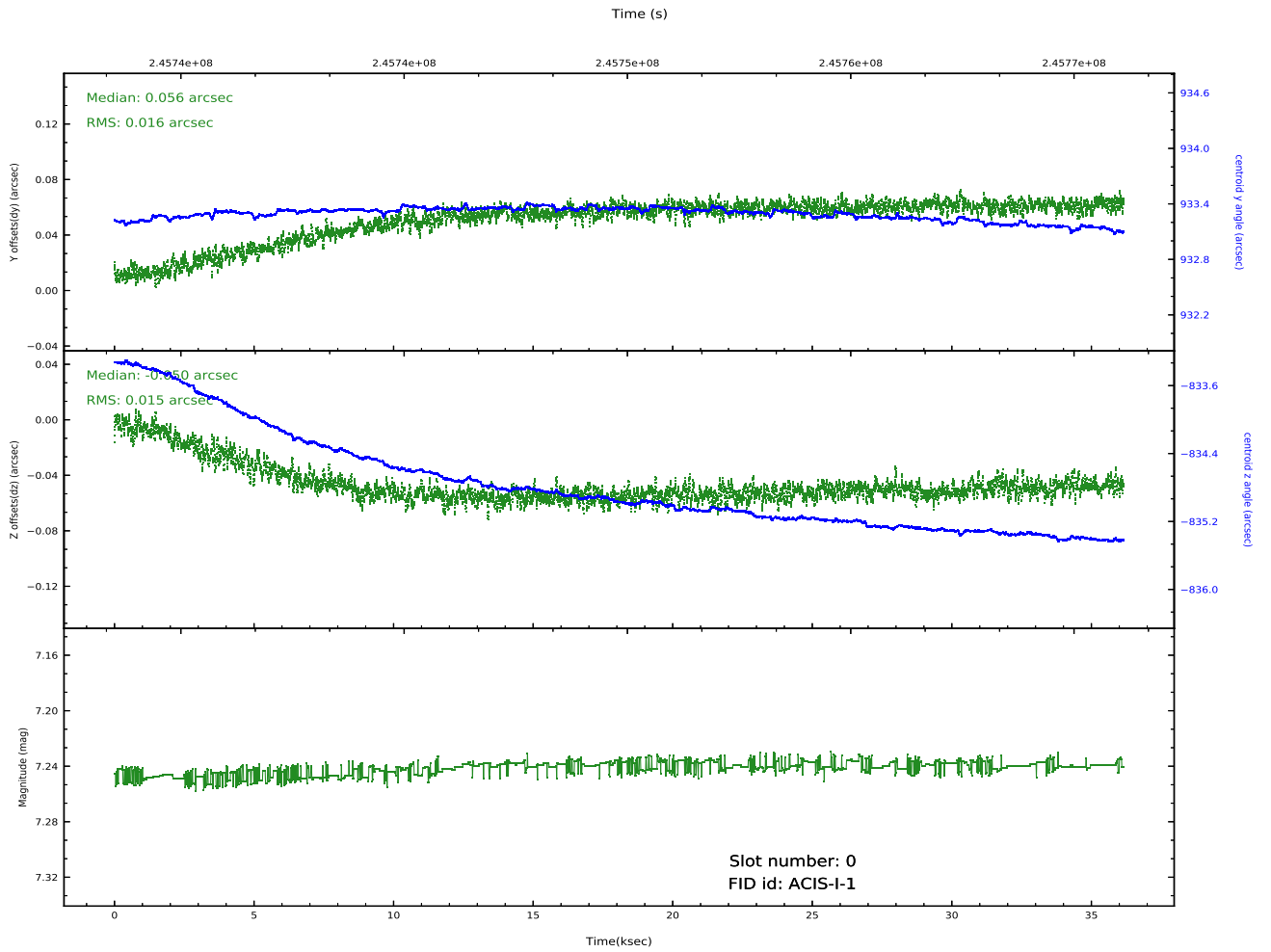
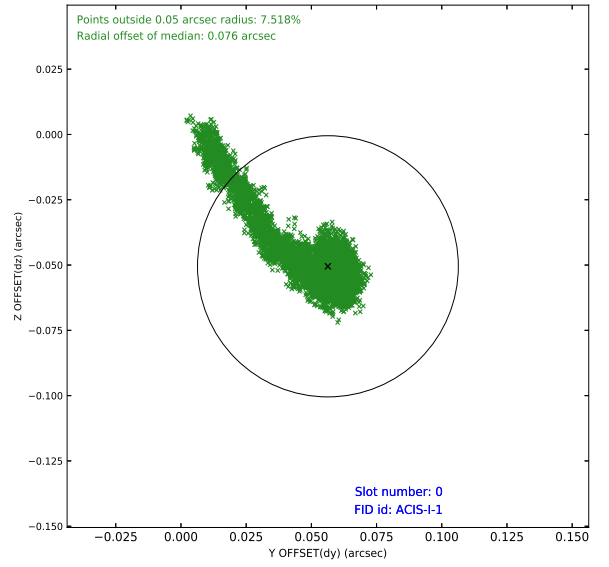
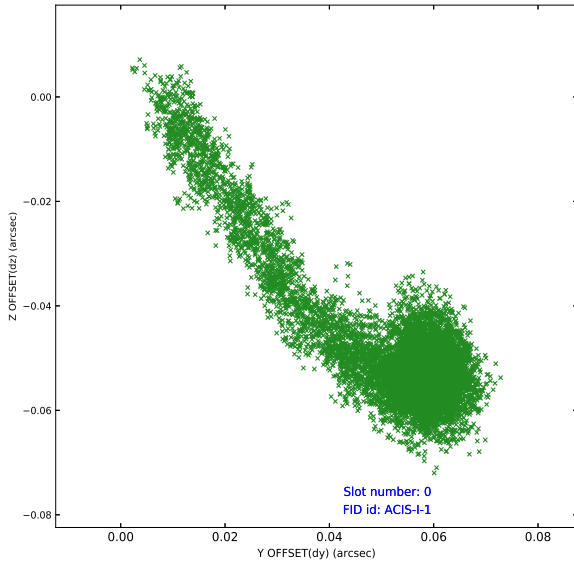


Time (s)

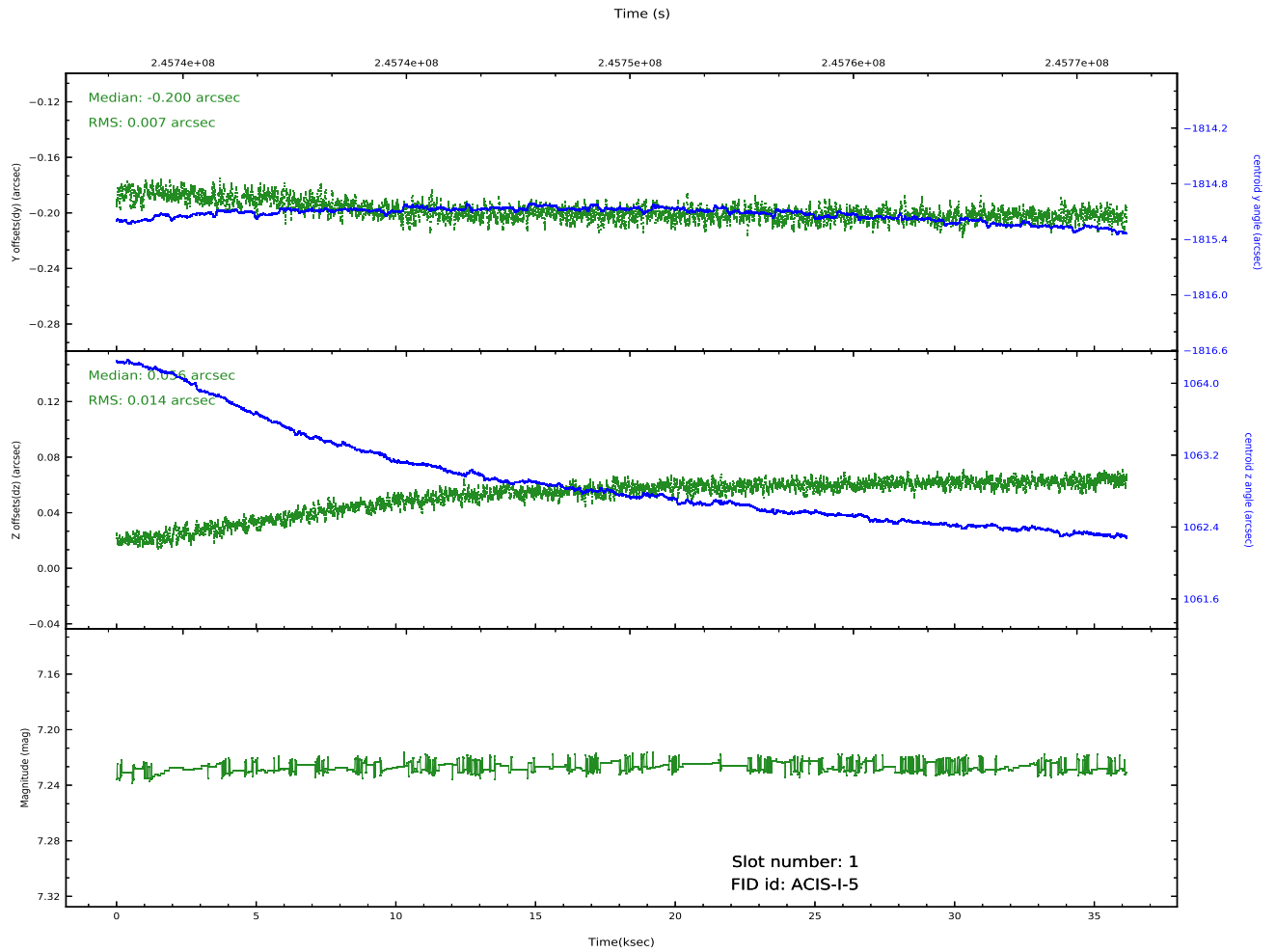
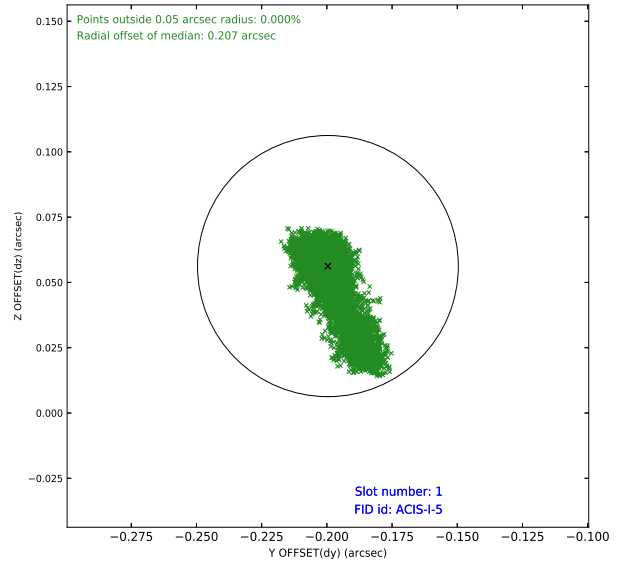
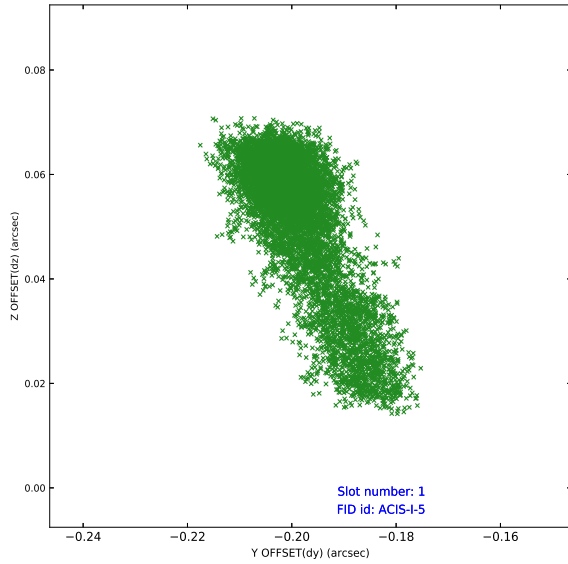


2.5 FID Slots

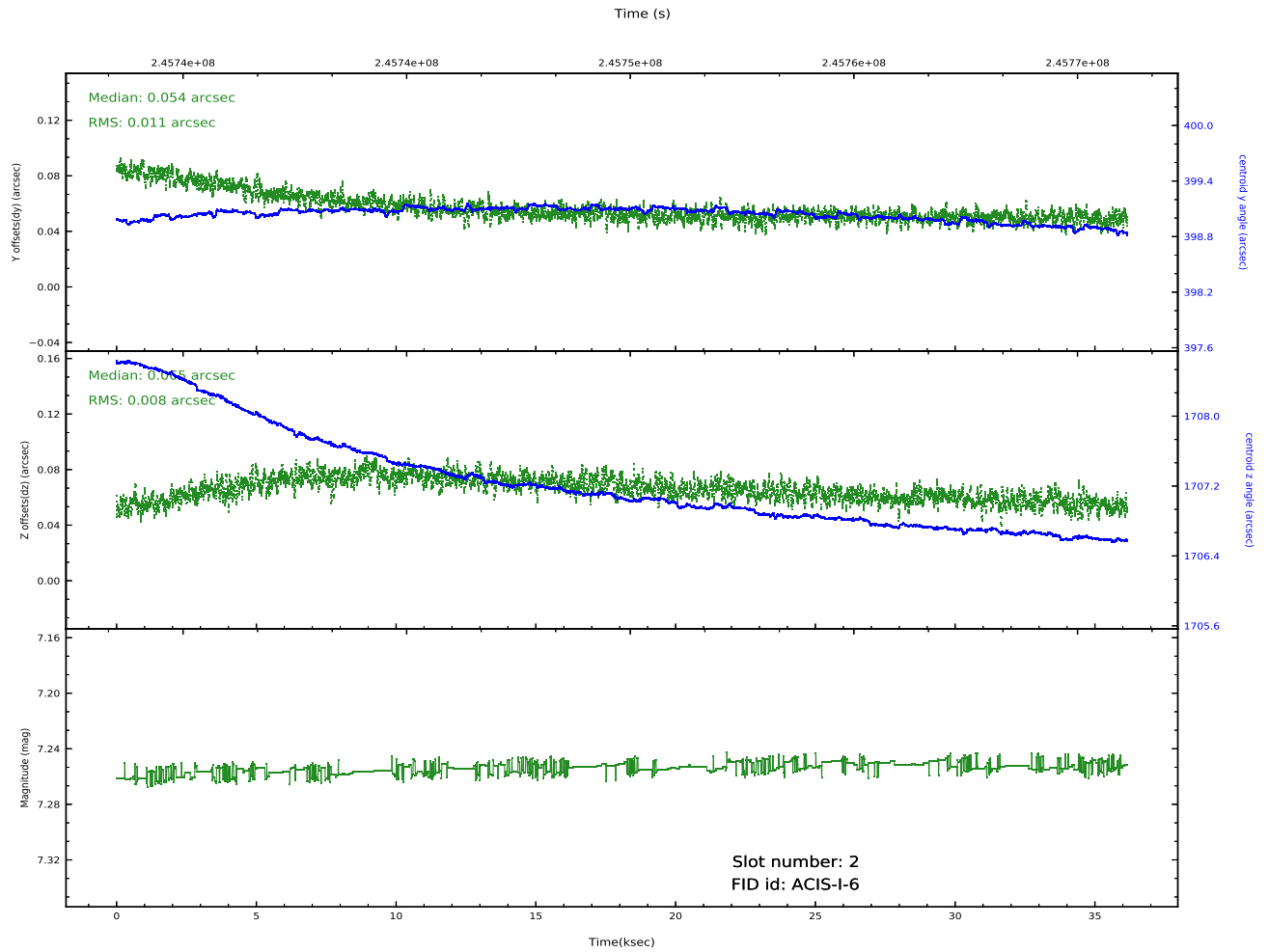
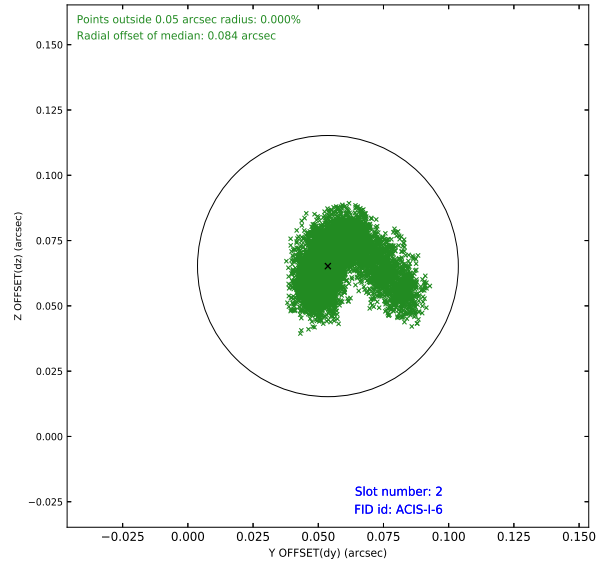
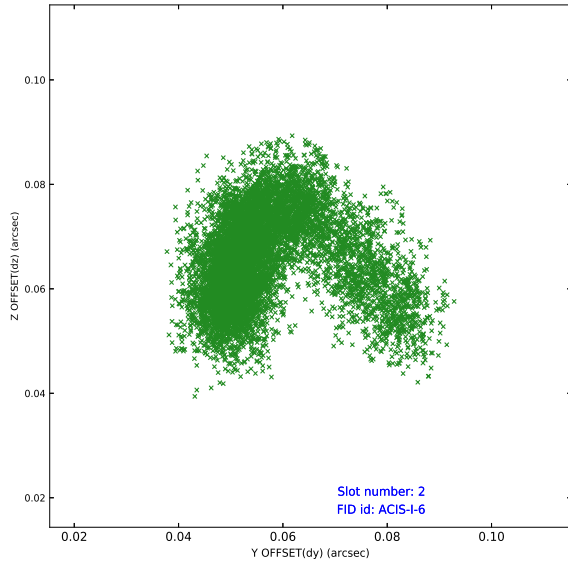
2.5.1 Slot 0



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)	2020.10.22
V&V Edition	1
V&V Disposition and Status	Repr+DD
V&V Charge Time	36.14901

A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files ARE INCORRECT by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct.

=====

Roll constraint met.

=====

The bias map for CCD_ID = 3 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 = 3 will be recreated to remove this anomaly and the data will be reprocessed.

=====

SAP: please reprocess with the replacement bias for CCD_ID = 3