

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6910 - L2 Version 5
Chandra X-Ray Center

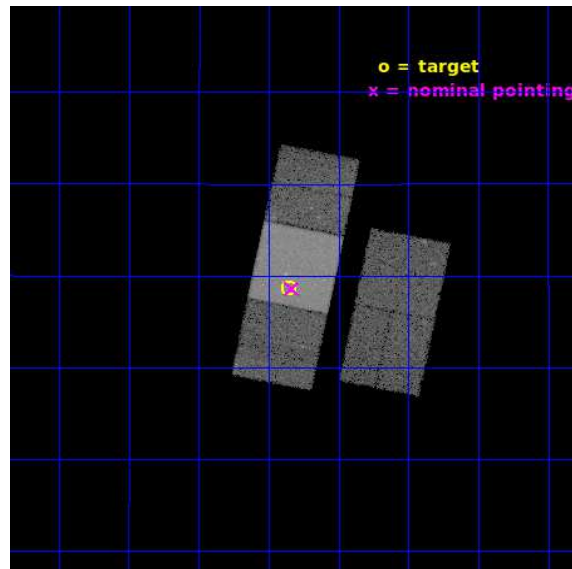
L2 Processing Date : Oct 11 2020

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1 Front

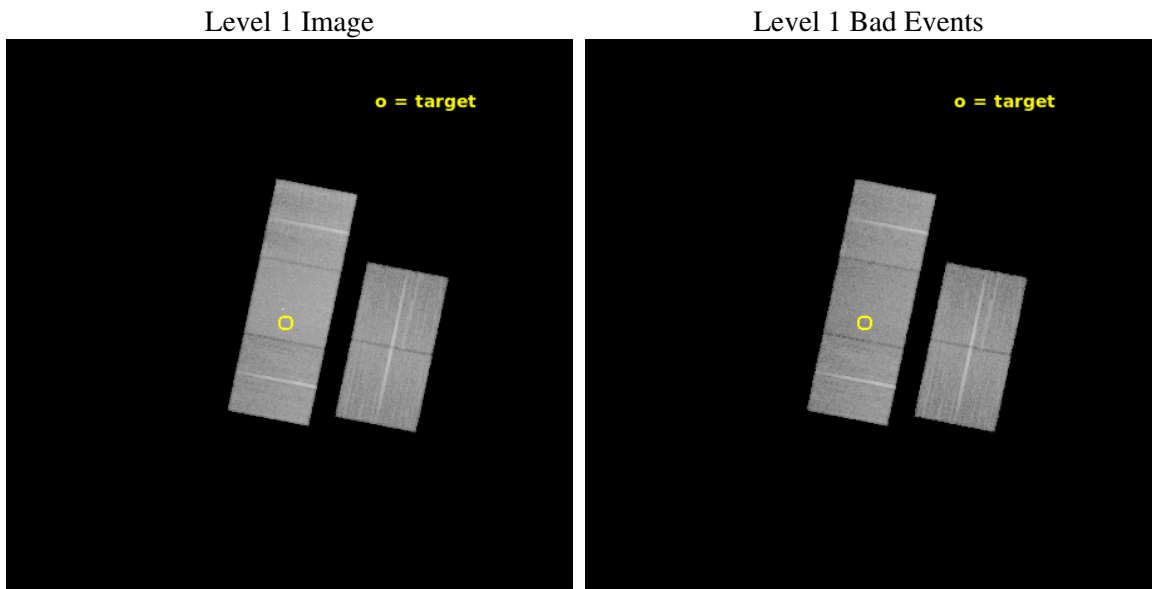
seq_num	701325	Sequence number
obs_id	6910	Observation id
title	A Chandra Study of Optical Hot-Spots in Two Nearby FR II Radio Galaxies	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	3C 33	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	17.213333	Observer's specified target RA [deg]
dec_targ	13.310119	Observer's specified target Dec [deg]
ra_nom	17.208411890413	Nominal RA [deg]
dec_nom	13.309833857372	Nominal Dec [deg]
roll_nom	281.46136451895	Nominal Roll [deg]
revision	5	Processing version of data
ontime	20174.799961179	Sum of GTIs [s]
livetime	19911.201347215	Livetime [s]
ontime2	20171.658970922	Sum of GTIs [s]
ontime3	20174.799961179	Sum of GTIs [s]
ontime6	20174.799961179	Sum of GTIs [s]
ontime7	20174.799961179	Sum of GTIs [s]
ontime8	20171.658980936	Sum of GTIs [s]
l2events	160293	Number of level 2 events



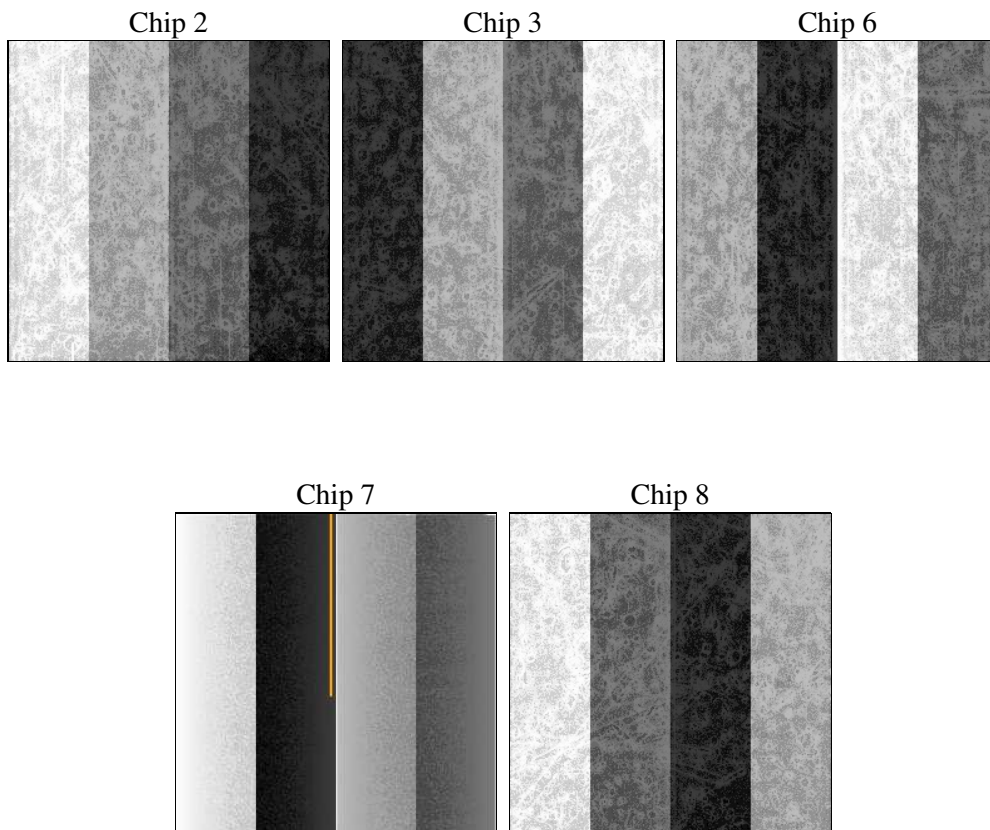
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.1	Processing system revision	ontime	20174.799961179	Sum of GTIs [s]
caldbver	4.9.2	 	ontime2	20171.658970922	Sum of GTIs [s]
date	2020-10-11T22:25:23	Date and time of file creation	ontime3	20174.799961179	Sum of GTIs [s]
revision	5	Processing version of data	ontime6	20174.799961179	Sum of GTIs [s]
			ontime7	20174.799961179	Sum of GTIs [s]
			ontime8	20171.658980936	Sum of GTIs [s]
			l1events	964681	Number of level 1 events

2.1.4 Events

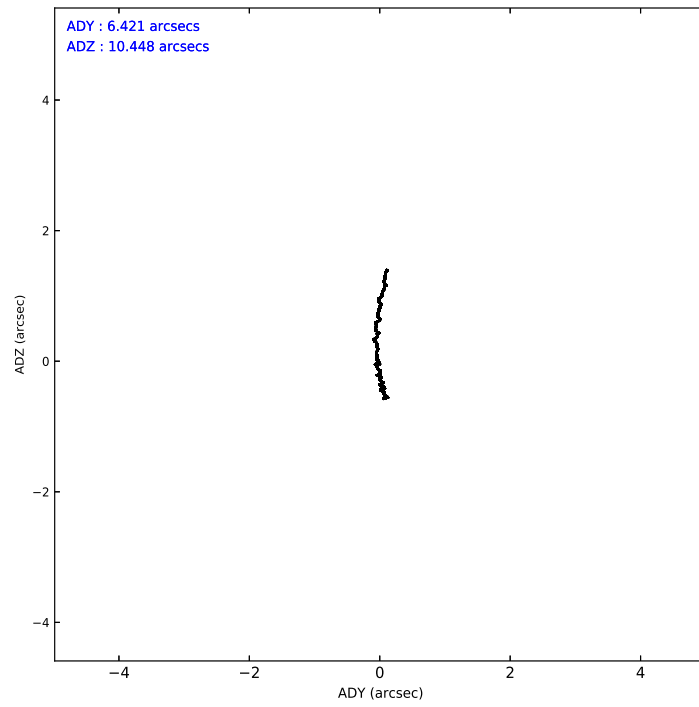
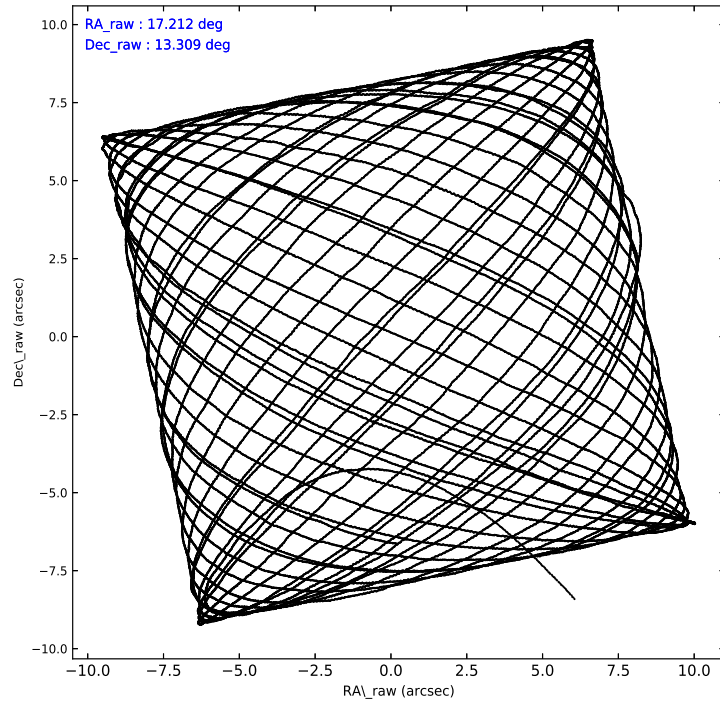
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
level 1 events	168923	166003	176649	234633	218473
rejected events	150365	147408	155251	142352	174231
rejected %	89%	88%	87%	60%	79%

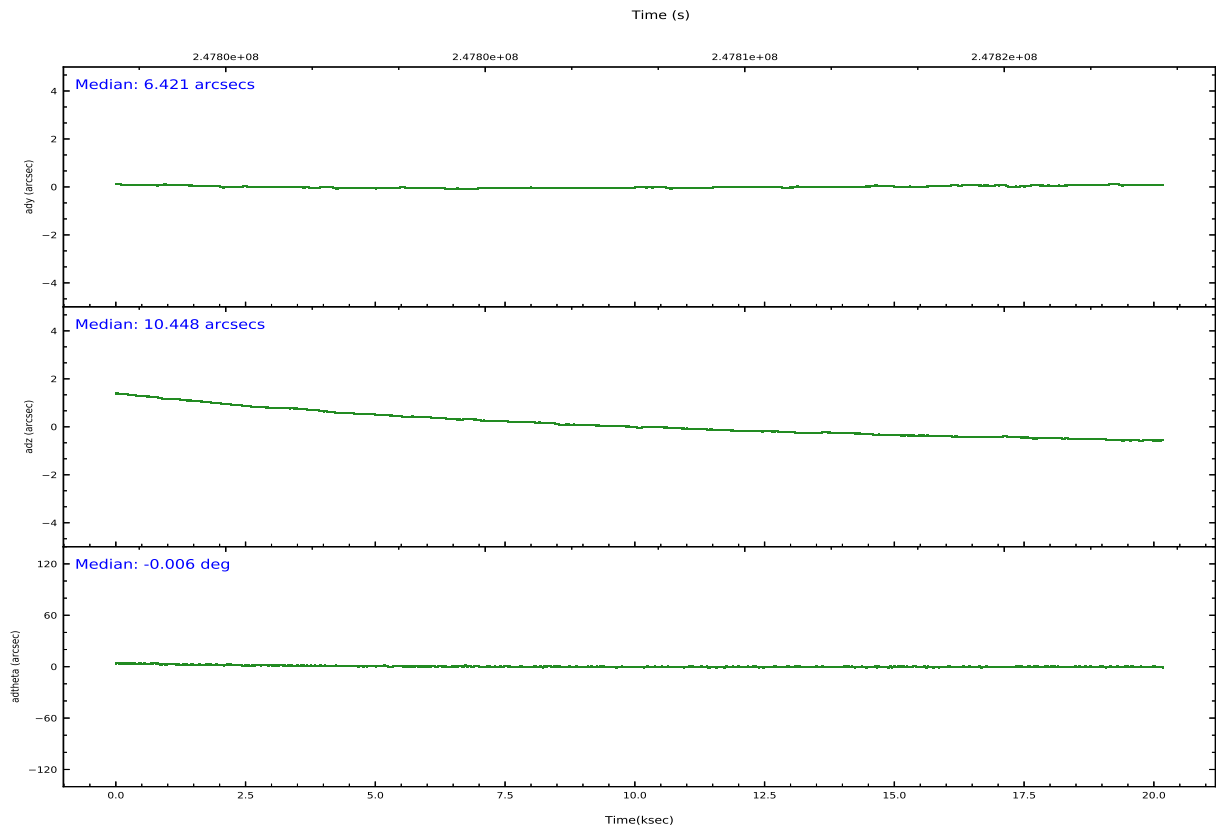
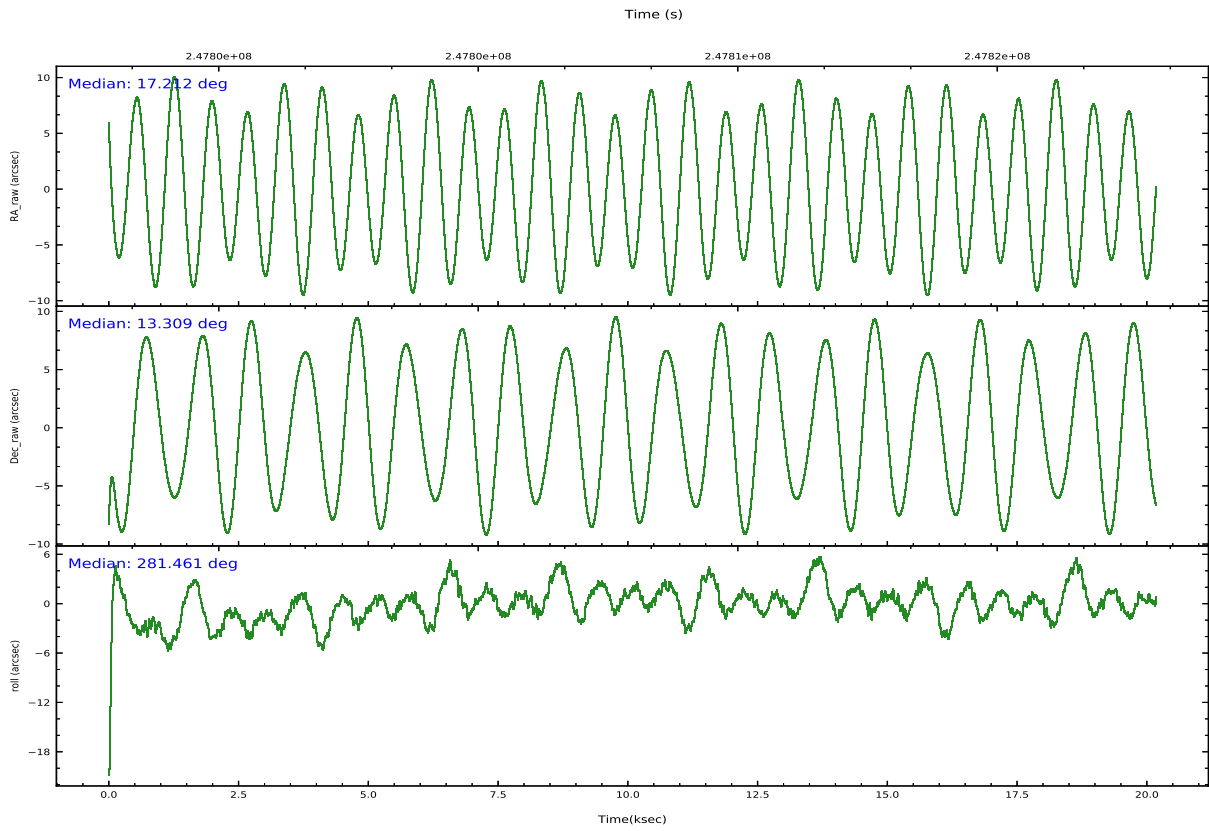
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8
grade 0 events	8826	8454	9653	9229	14809
	5%	5%	5%	3%	6%
grade 1 events	91	101	111	216	125
	0%	0%	0%	0%	0%
grade 2 events	3912	3883	4670	19573	10567
	2%	2%	2%	8%	4%
grade 3 events	1852	1947	2084	8501	4755
	1%	1%	1%	3%	2%
grade 4 events	1845	1920	1971	8394	4440
	1%	1%	1%	3%	2%
grade 5 events	6289	7610	8138	22350	10534
	3%	4%	4%	9%	4%
grade 6 events	3154	3475	4146	51457	11973
	1%	2%	2%	21%	5%
grade 7 events	142954	138613	145876	114913	161270
	84%	83%	82%	48%	73%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar version number	8	8
Detector	ACIS-23678	ACIS-23678	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	17.193096	17.208411890413	Subarray requested	NONE	NONE
[deg] Pointing Dec	13.328733	13.309833857372	Alternating exposures requested	N	N
[deg] Pointing Roll	281.304669	281.46136451895	[s] Primary exposure time	0.000000	3.1
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	247798061.184000	247796508.31281			
Observation start date	2005-11-08T00:46:37	2005-11-08T00:21:48			
[s] Observation end time (MET)	247818061.184000	247819231.02636			
Observation end date	2005-11-08T06:19:57	2005-11-08T06:40:31			
Read mode	TIMED	TIMED			

2.3 Aspect





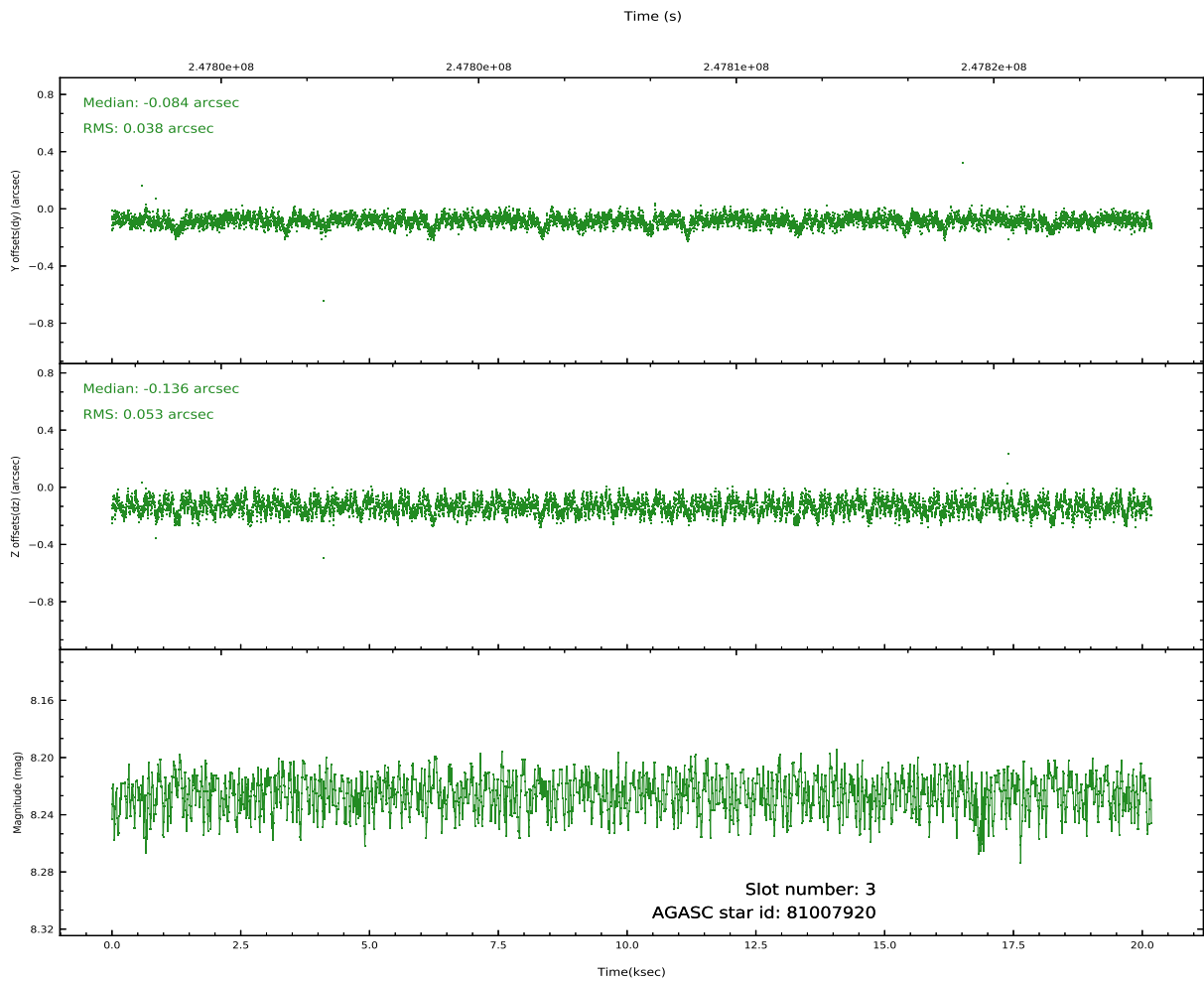
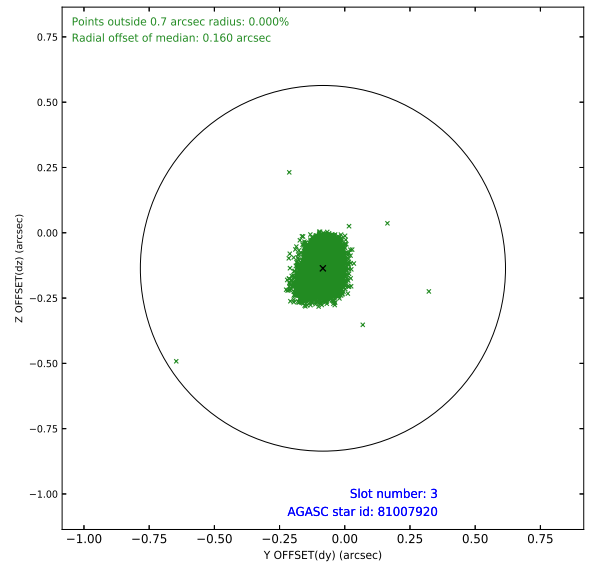
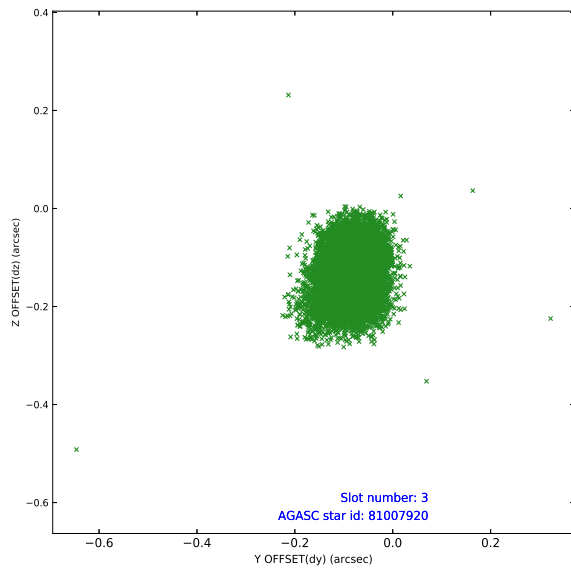
Slot Statistics

pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.10	4922	1.000	-0.095	-0.061	0.010	0.019	0.000000	0.000000	-759.19	-1731
1	FID		ACIS-S-4	7.21	4921	1.000	0.159	0.062	0.009	0.018	0.000000	0.000000	2154.19	176
2	FID		ACIS-S-5	7.24	4921	1.000	-0.095	0.008	0.008	0.015	0.000000	0.000000	-1811.87	170
3	GUIDE	used	81007920	8.22	9844	1.000	-0.084	-0.136	0.069	0.109	16.552631	13.252748	-173.93	-2252
4	GUIDE	used	81009232	8.69	9840	1.000	-0.074	0.113	0.067	0.106	17.046481	13.691825	-1382.18	-246
5	GUIDE	used	81011112	8.74	9840	1.000	0.117	0.097	0.069	0.110	17.296463	12.693067	2315.29	-92
6	GUIDE	used	81012328	9.63	9802	1.000	0.259	0.044	0.102	0.165	17.237006	12.753828	2060.65	-254
7	GUIDE	used	81005408	7.42	9844	1.000	-0.216	-0.114	0.060	0.091	16.652176	13.884607	-2334.32	-1460

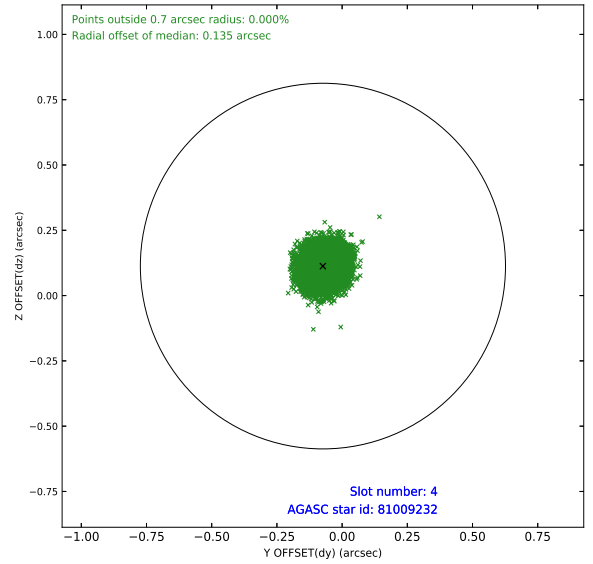
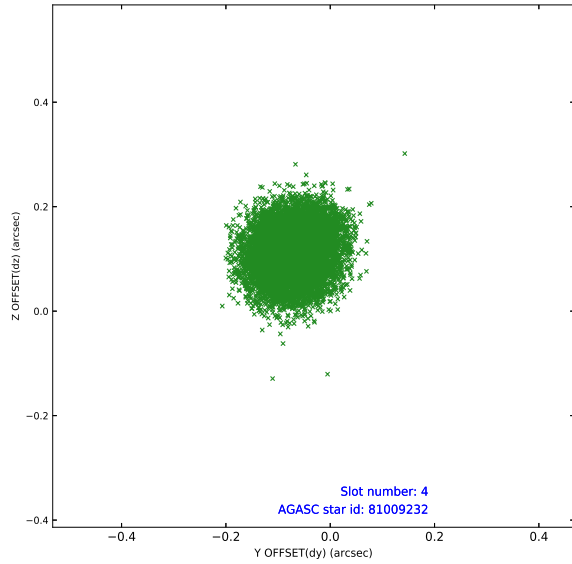
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2.4 Star Slots

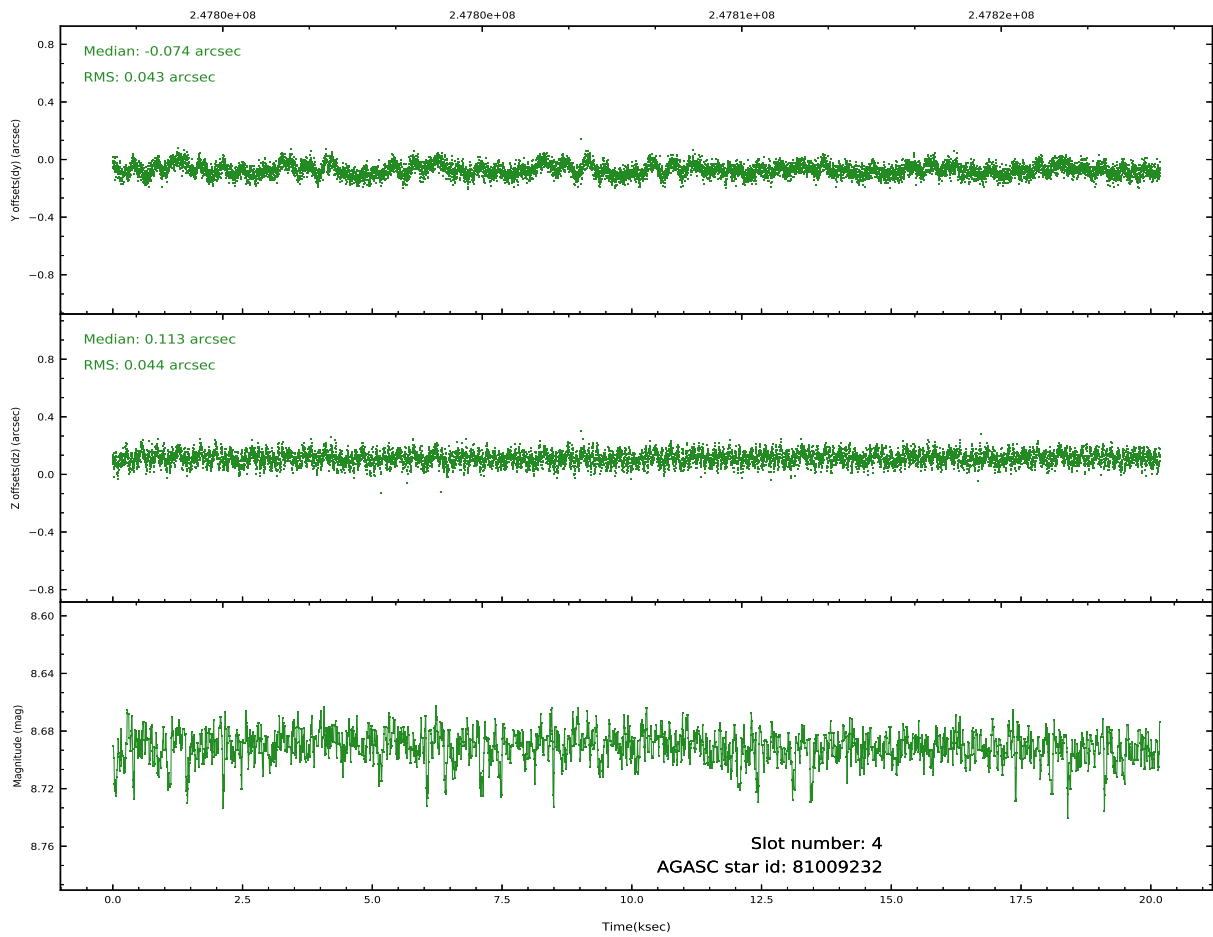
2.4.1 Slot 3



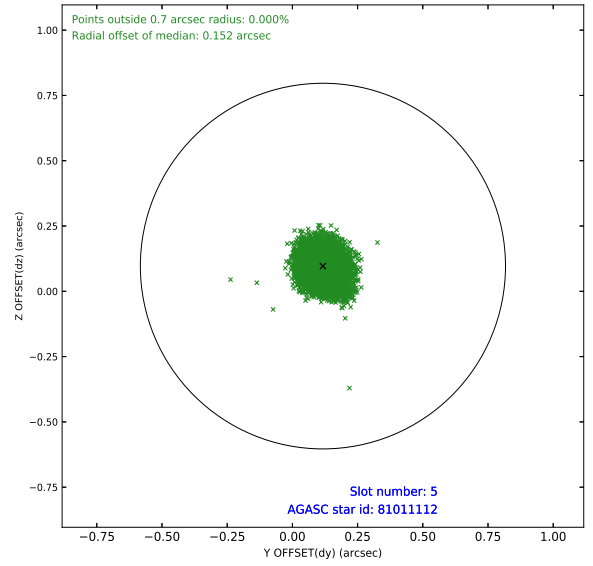
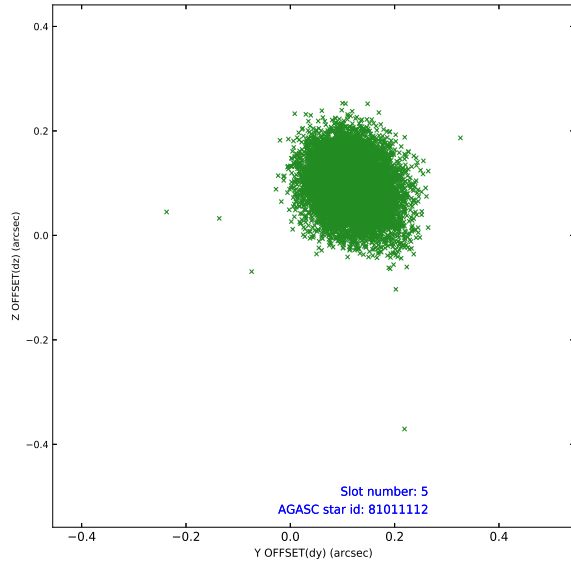
2.4.2 Slot 4



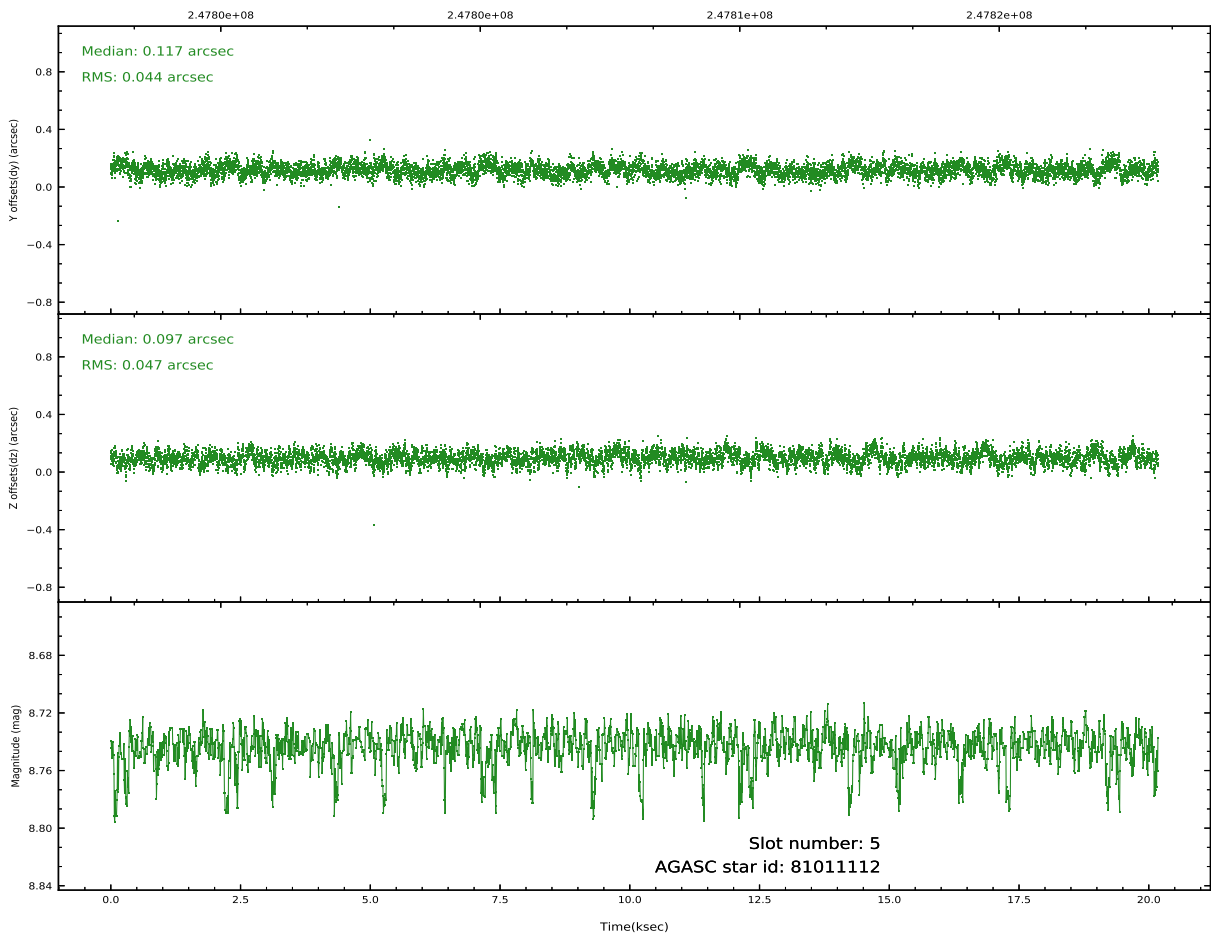
Time (s)



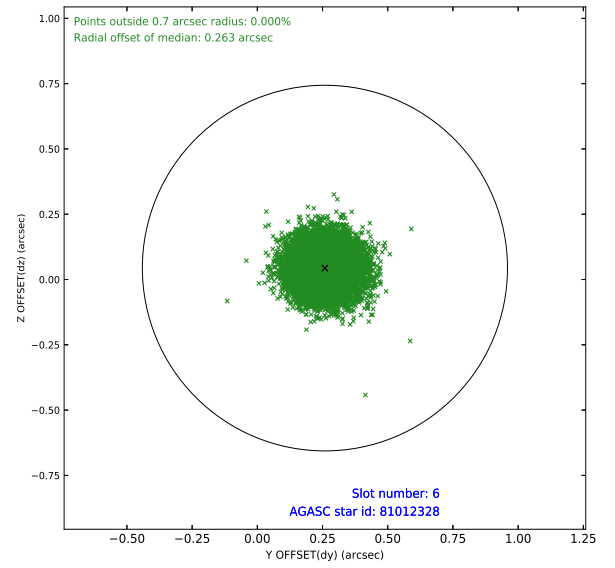
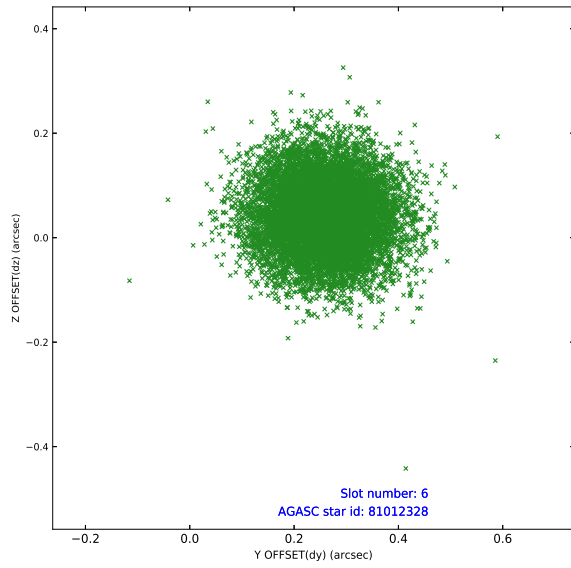
2.4.3 Slot 5



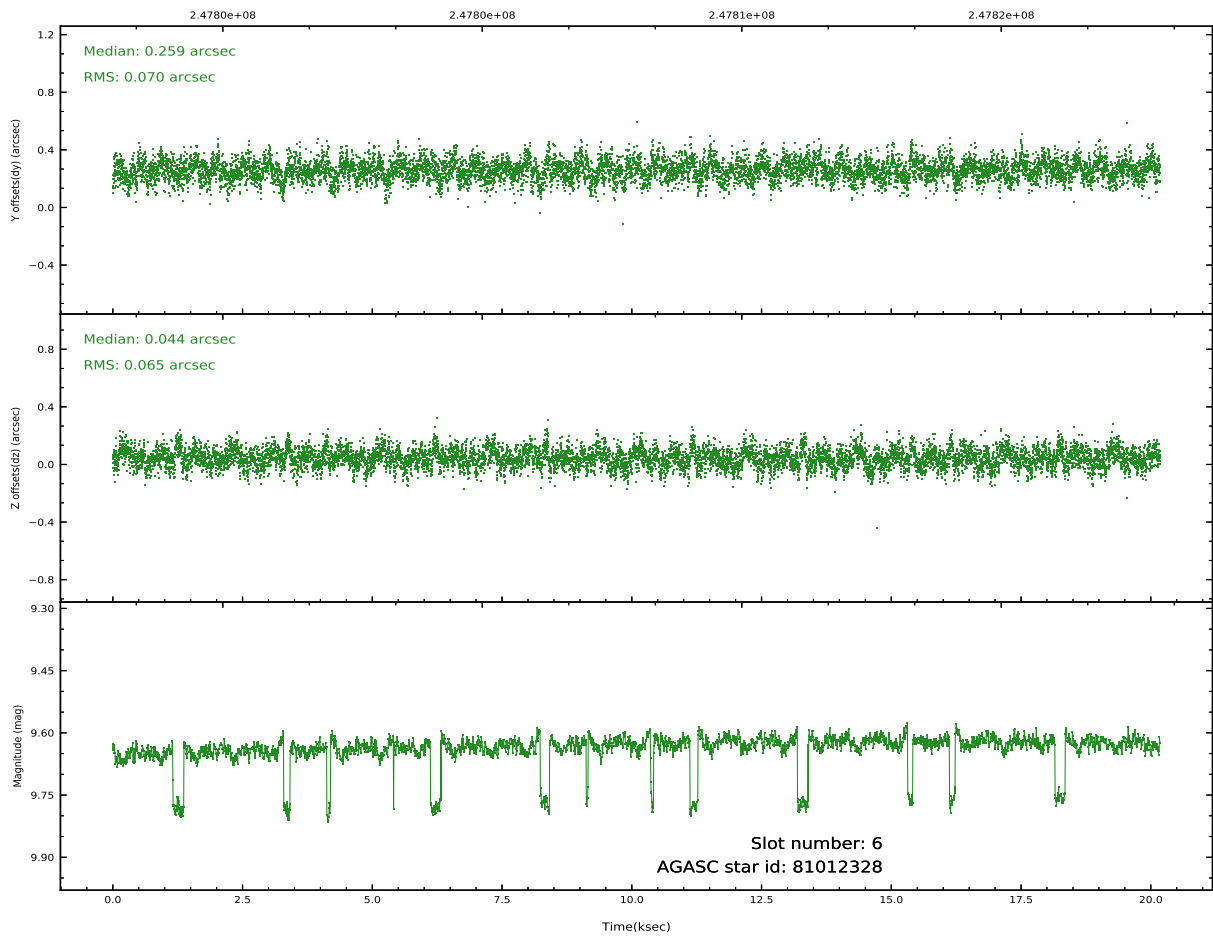
Time (s)



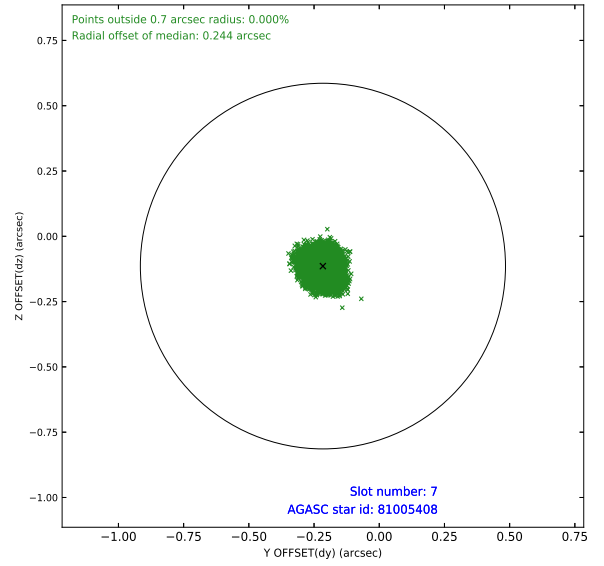
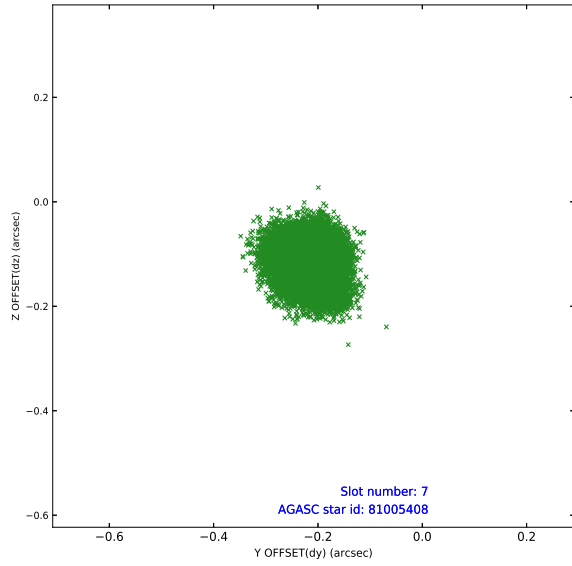
2.4.4 Slot 6



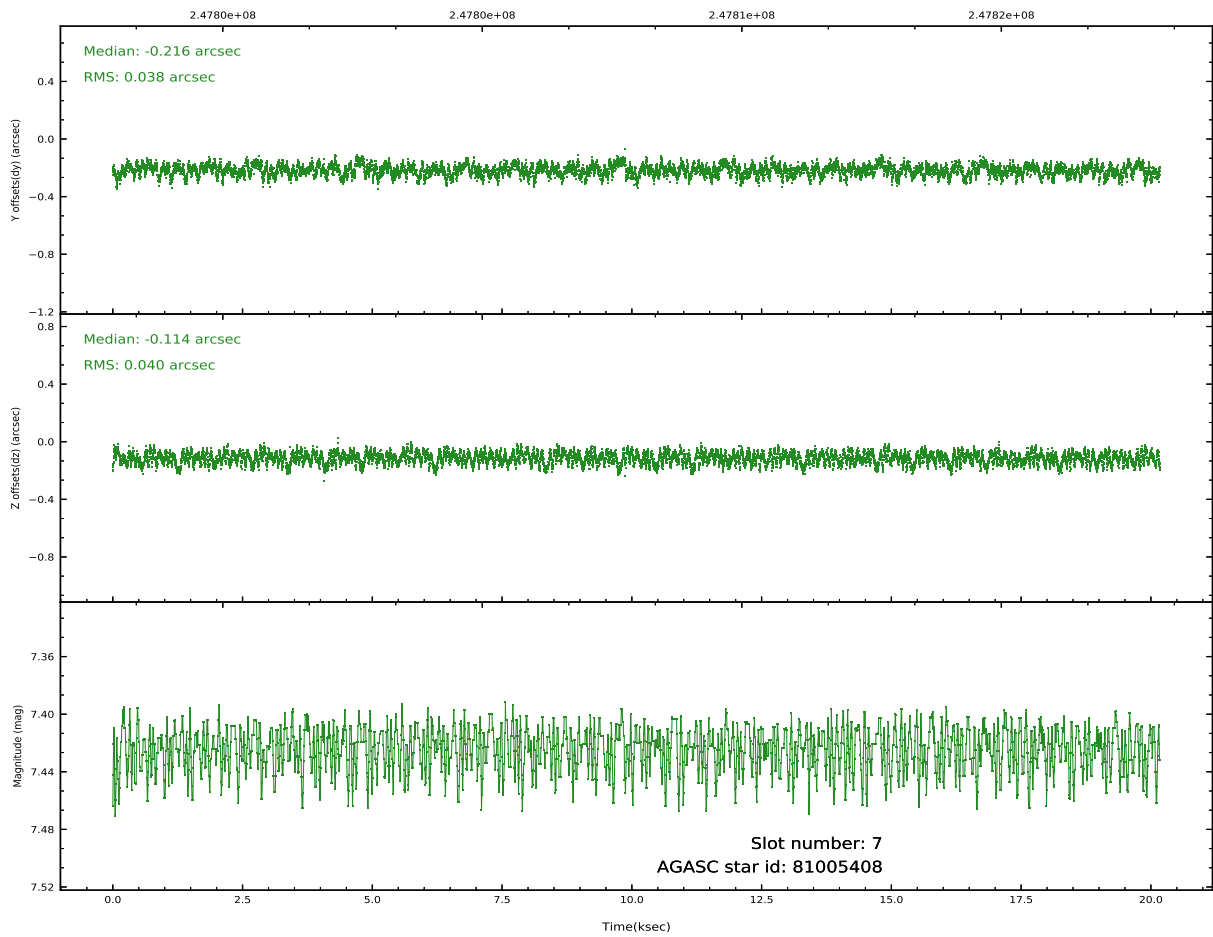
Time (s)



2.4.5 Slot 7

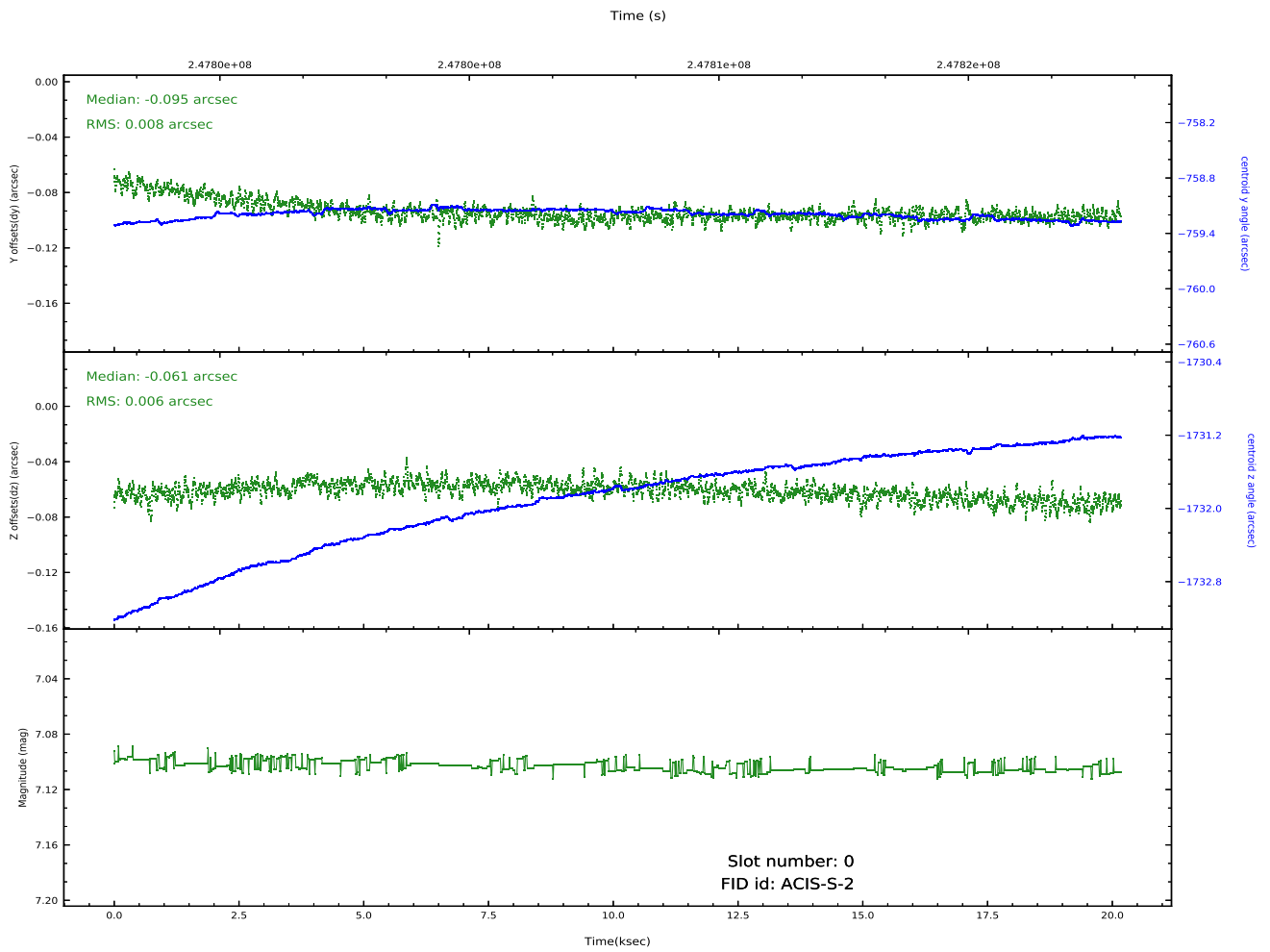
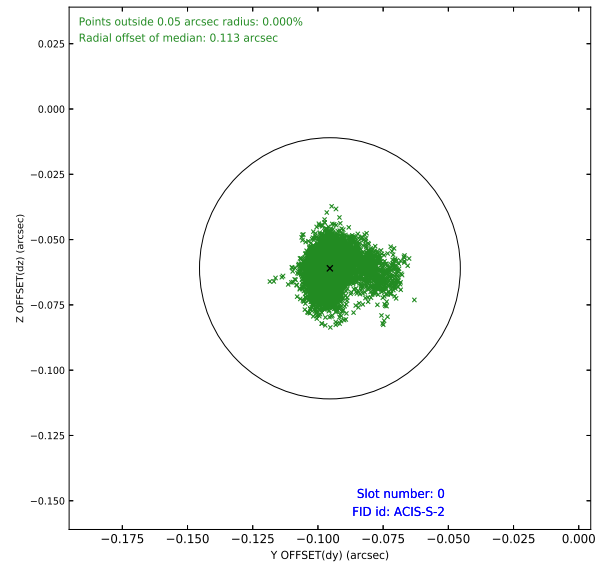
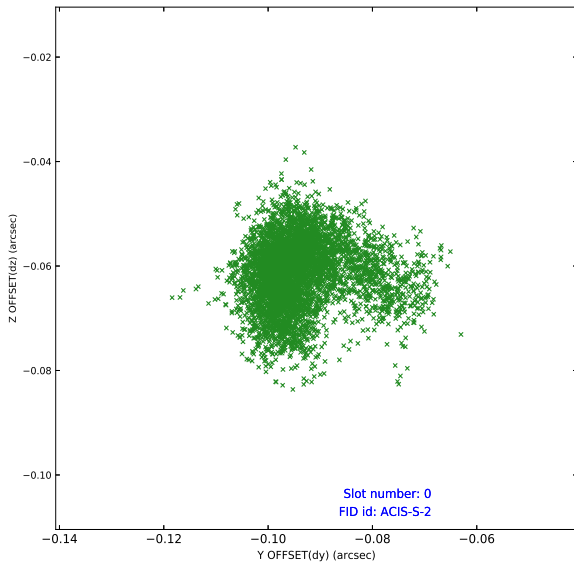


Time (s)

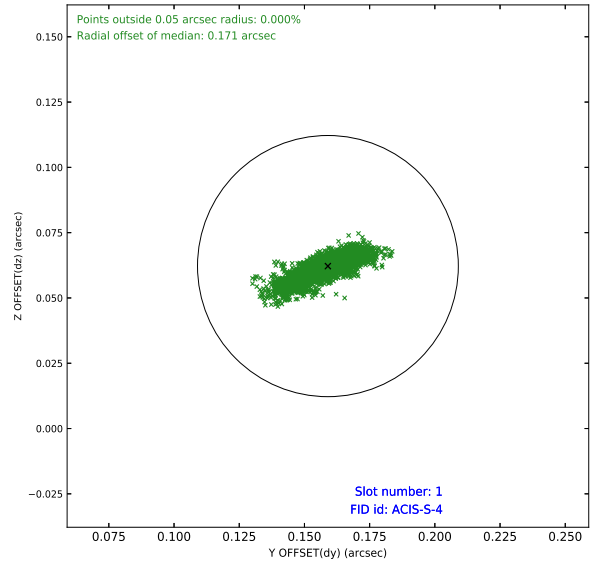
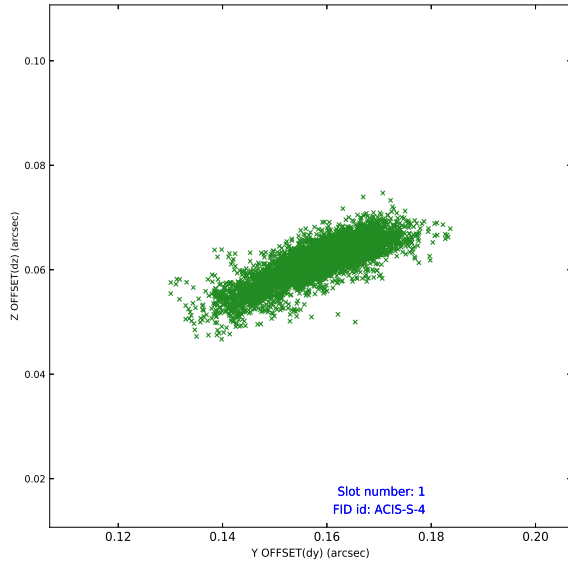


2.5 FID Slots

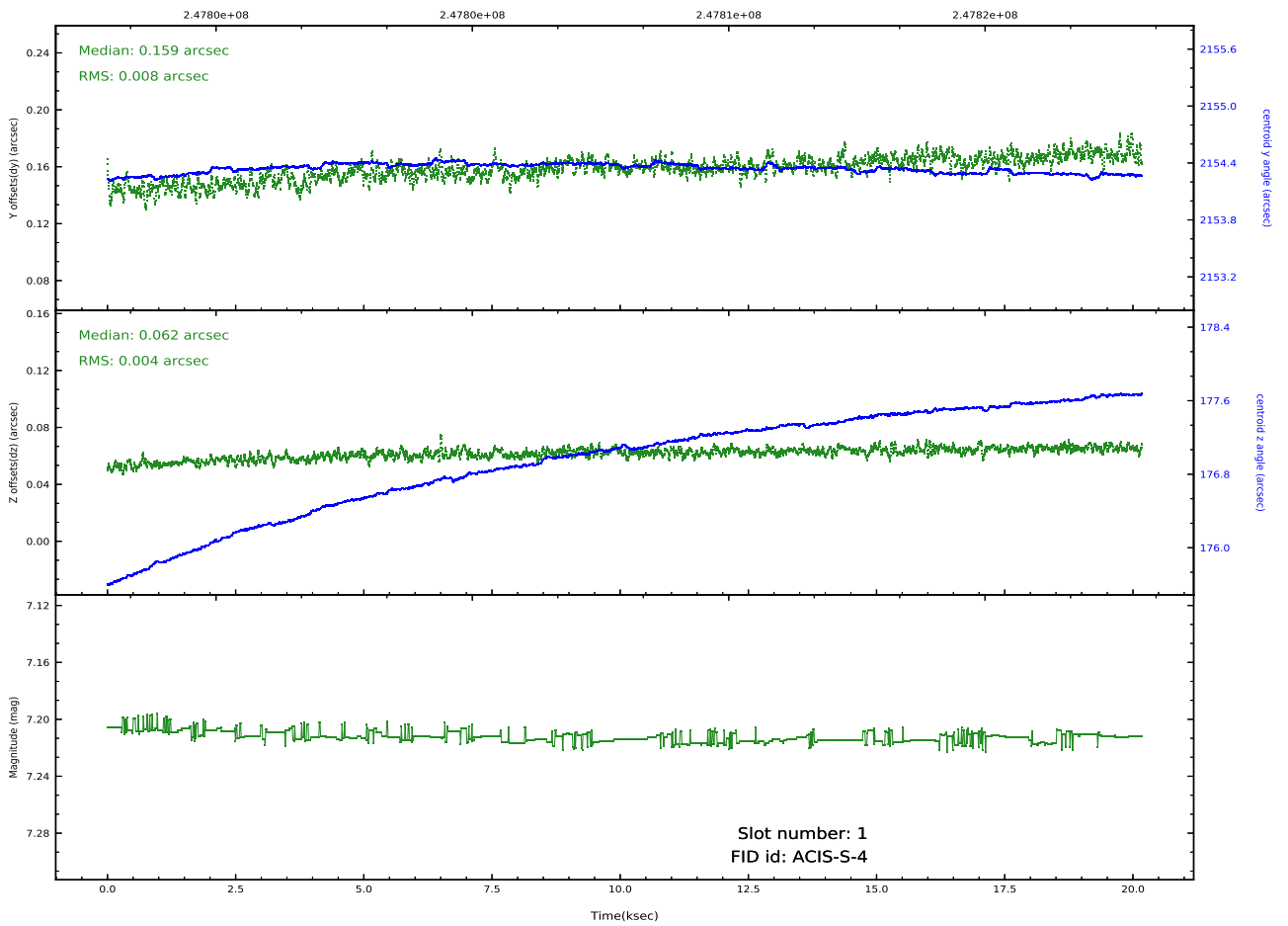
2.5.1 Slot 0



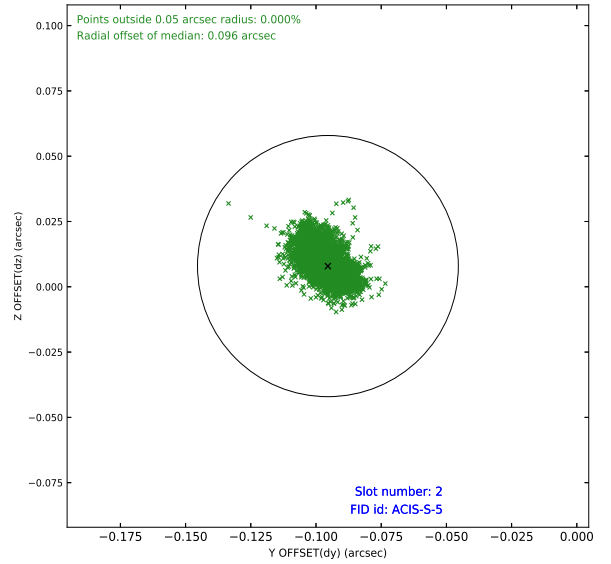
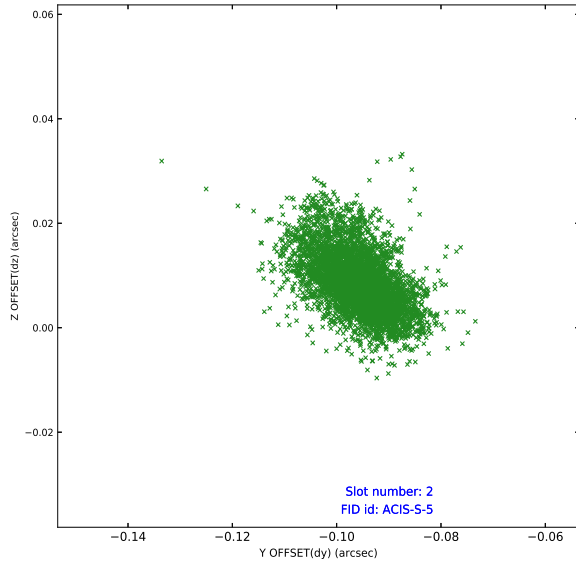
2.5.2 Slot 1



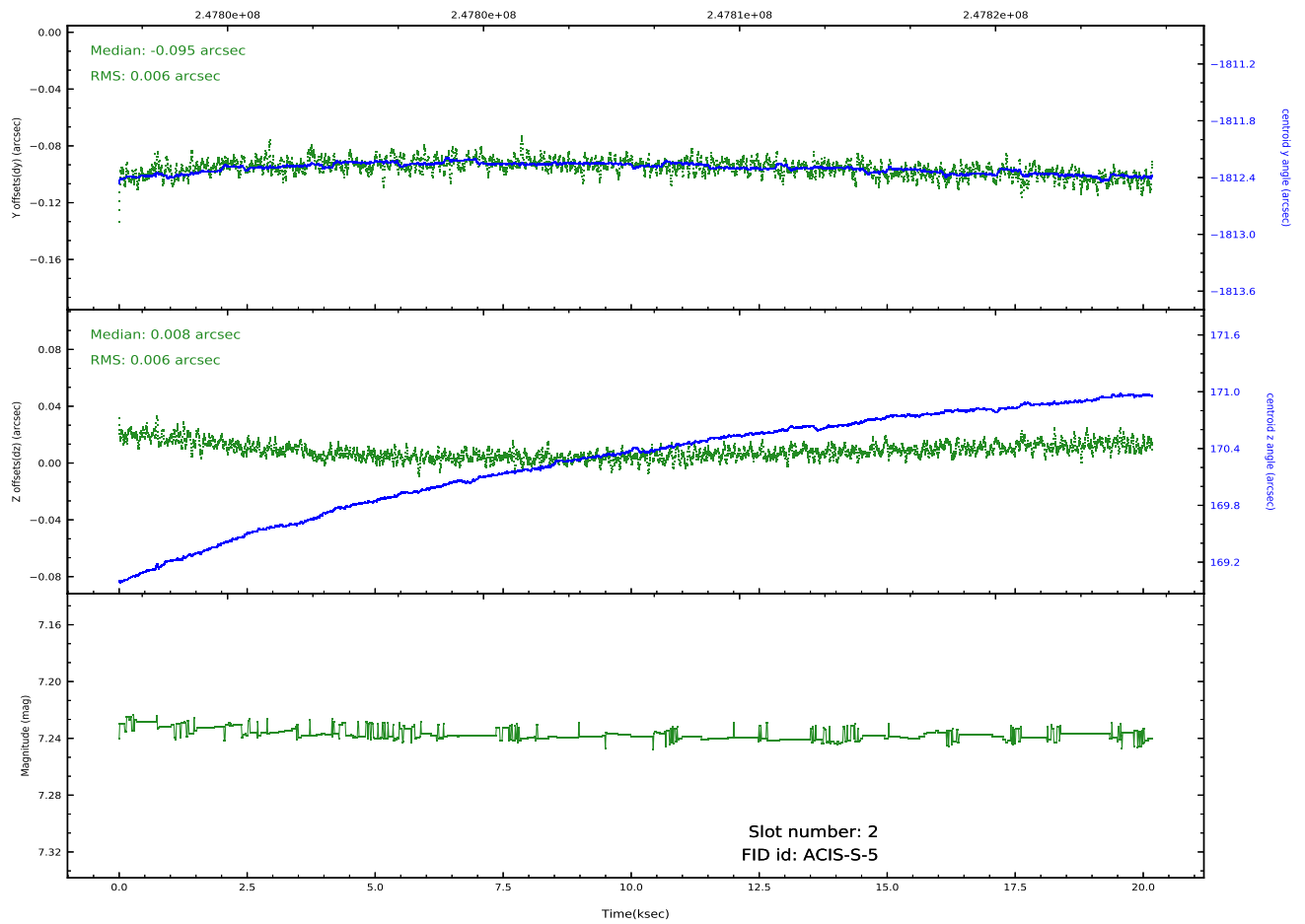
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.16
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.17479

A.2 Comments

A spatial region of the original bias map for CCD = 3 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 = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (17.00883, 13.40832), (17.00168, 13.40692), (17.00669, 13.38301), (17.01311, 13.38788).