

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20509 - L2 Version 3
Chandra X-Ray Center

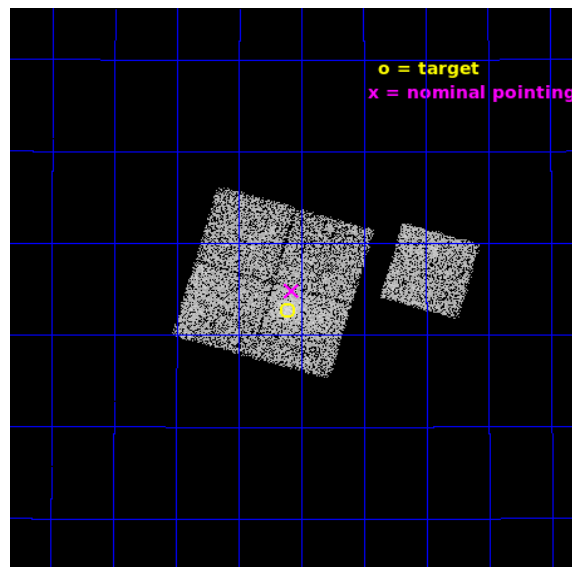
L2 Processing Date : Oct 24 2020

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1 Front

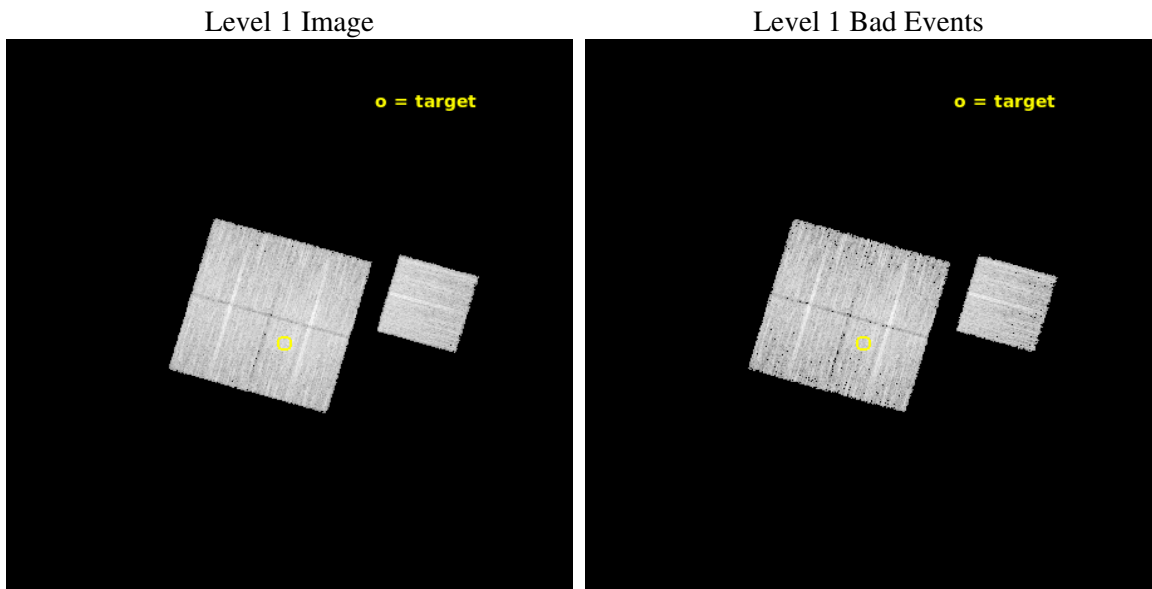
seq_num	801723	Sequence number
obs_id	20509	Observation id
title	Enabling precision cosmology with optically selected galaxy clusters	
observer	Roger Morris	Principal investigator
object	CIG J085007+293256	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	132.52875	Observer's specified target RA [deg]
dec_targ	29.545083	Observer's specified target Dec [deg]
ra_nom	132.51888886518	Nominal RA [deg]
dec_nom	29.58079147407	Nominal Dec [deg]
roll_nom	106.21249376984	Nominal Roll [deg]
revision	3	Processing version of data
ontime	7892.6000608206	Sum of GTIs [s]
livetime	7789.4774305783	Livetime [s]
ontime0	7892.6000608206	Sum of GTIs [s]
ontime1	7892.6000608206	Sum of GTIs [s]
ontime2	7889.4590004683	Sum of GTIs [s]
ontime3	7892.6000608206	Sum of GTIs [s]
ontime6	7892.6000608206	Sum of GTIs [s]
l2events	27806	Number of level 2 events



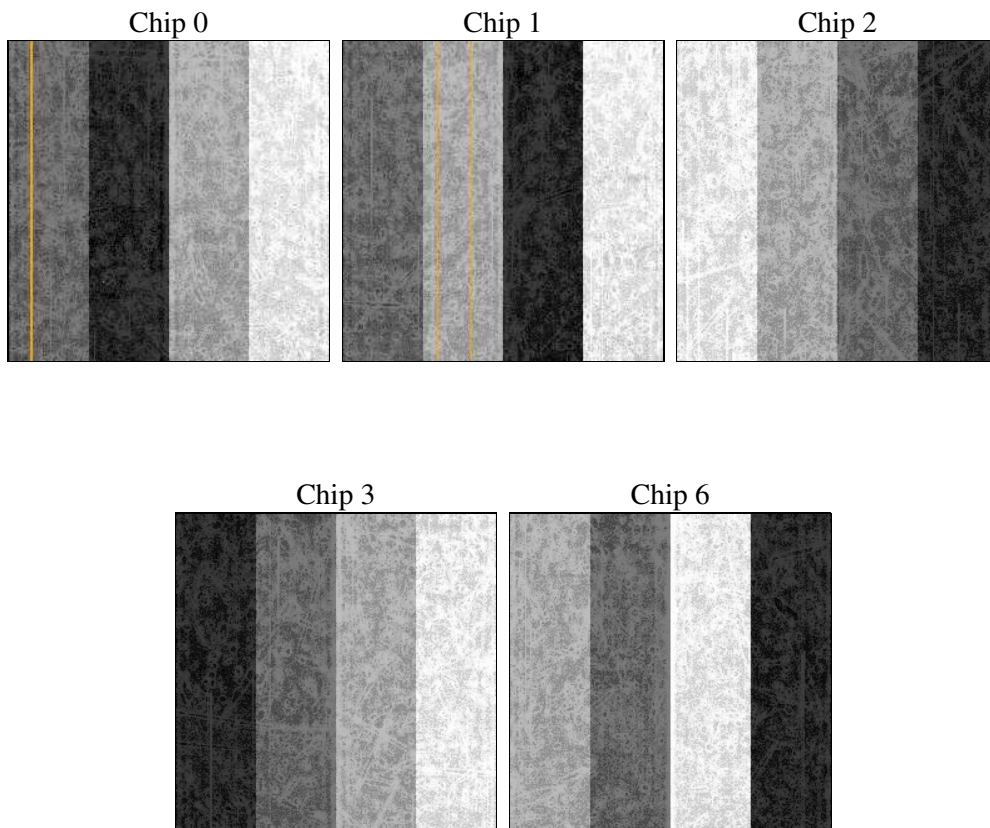
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	8000.000000	[s] Scheduled observation exposure time
ascdsver	10.9.2	Processing system revision	ontime	7892.6000608206	Sum of GTIs [s]
caldbver	4.9.3	 	ontime0	7892.6000608206	Sum of GTIs [s]
date	2020-10-24T05:24:49	Date and time of file creation	ontime1	7892.6000608206	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	7889.4590004683	Sum of GTIs [s]
			ontime3	7892.6000608206	Sum of GTIs [s]
			ontime6	7892.6000608206	Sum of GTIs [s]
			l1events	278751	Number of level 1 events

2.1.4 Events

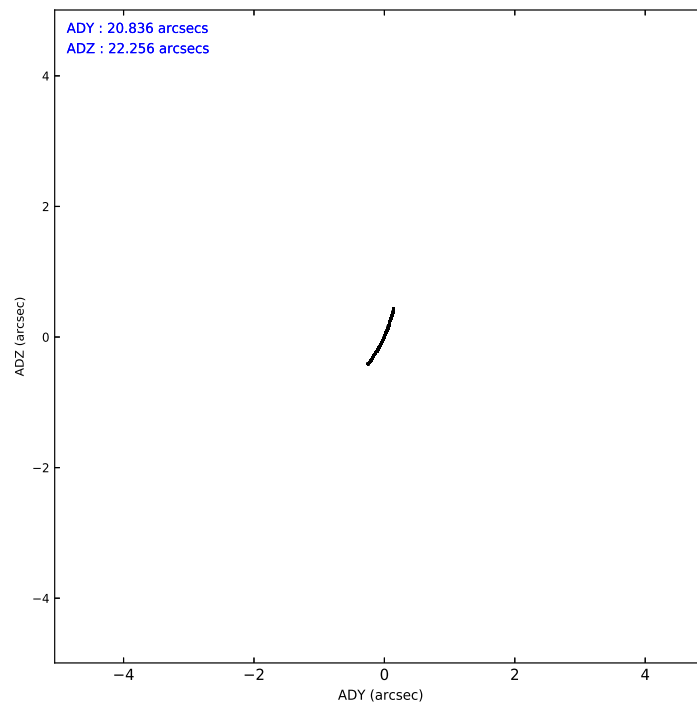
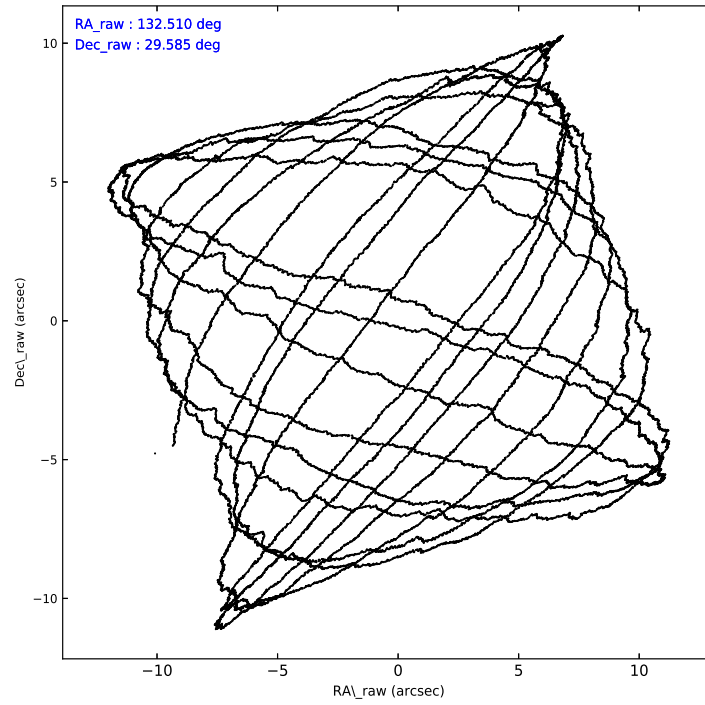
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	54686	52566	57515	56937	57047
rejected events	48281	45599	51263	49968	50629
rejected %	88%	86%	89%	87%	88%

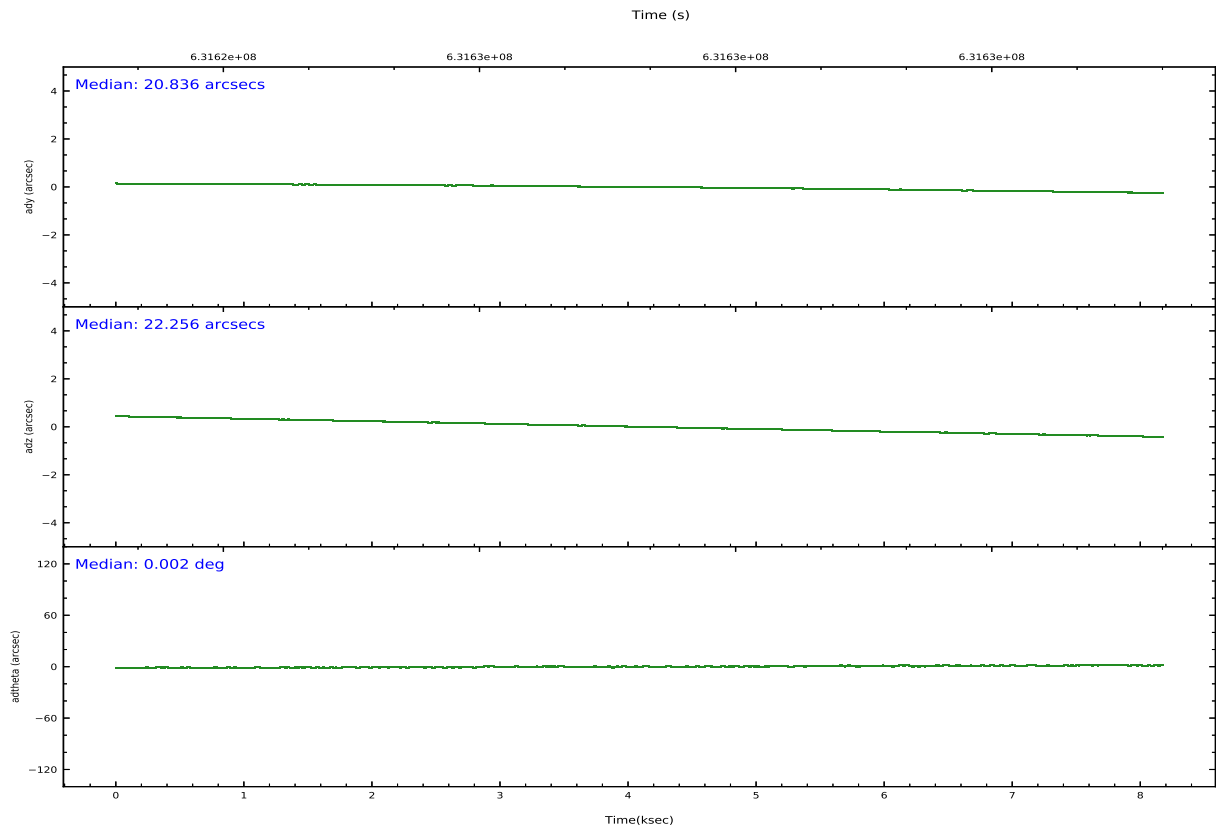
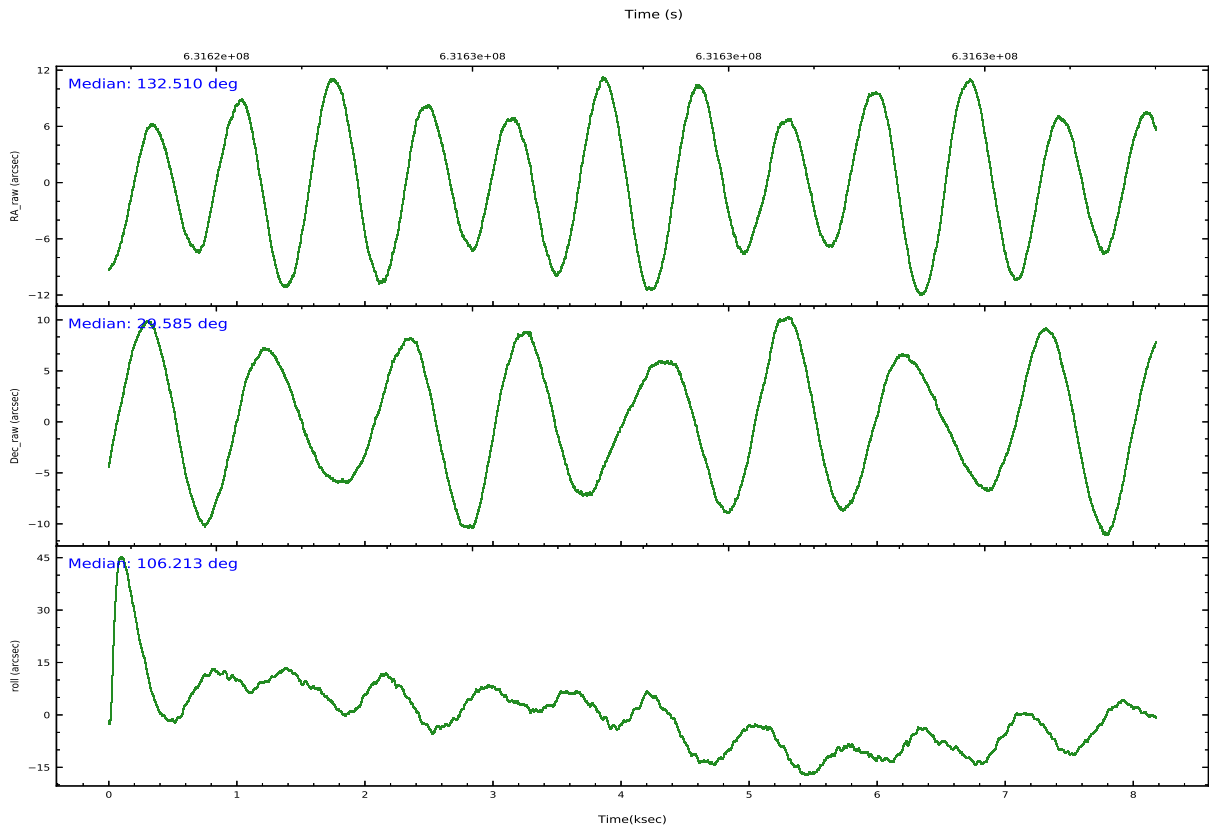
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	2153	2312	2196	2949	2139
	3%	4%	3%	5%	3%
grade 1 events	27	16	34	36	24
	0%	0%	0%	0%	0%
grade 2 events	1636	1709	1562	1429	1463
	2%	3%	2%	2%	2%
grade 3 events	641	653	651	695	634
	1%	1%	1%	1%	1%
grade 4 events	660	729	639	630	670
	1%	1%	1%	1%	1%
grade 5 events	2620	2575	2352	2786	2726
	4%	4%	4%	4%	4%
grade 6 events	1319	1568	1204	1269	1514
	2%	2%	2%	2%	2%
grade 7 events	45630	43004	48877	47143	47877
	83%	81%	84%	82%	83%

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	CCD I0 on	Y	Y
Observation mode	POINTING	POINTING	CCD I1 on	Y	Y
[deg] Pointing RA	132.532896	132.5188886518	CCD I2 on	Y	Y
[deg] Pointing Dec	29.565801	29.58079147407	CCD I3 on	Y	Y
[deg] Pointing Roll	105.997950	106.21249376984	CCD S0 on	N	N
[mm] SIM focus pos	-0.782348	-0.7809083437167272	CCD S1 on	N	N
[mm] SIM defocus	0	0.001439871863259334	CCD S2 on	O1	Y
[mm] SIM translation stage pos	-228.472463	-228.4783457680588	CCD S3 on	N	N
[mm] SIM translation stage offset	-5.12	-5.114107234870914	CCD S4 on	N	N
[s] Observation start time (MET)	631623339.184000	631622648.07972	CCD S5 on	N	N
Observation start date	2018-01-06T10:54:30	2018-01-06T10:44:08	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	631631339.184000	631632711.01781	On-chip summing requested	N	N
Observation end date	2018-01-06T13:07:50	2018-01-06T13:31:51	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



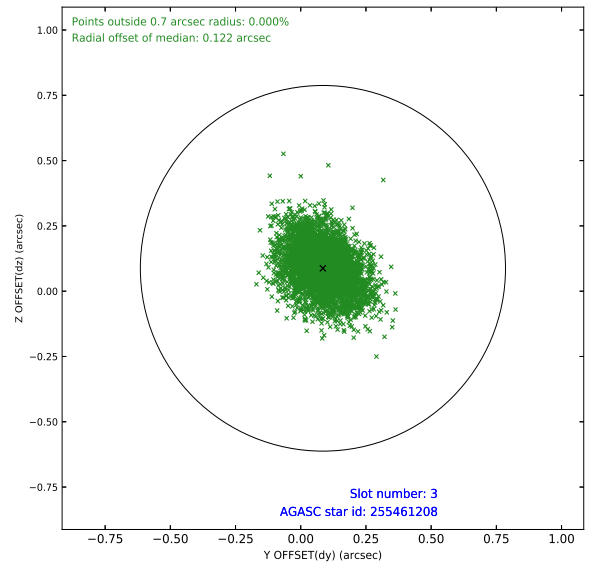
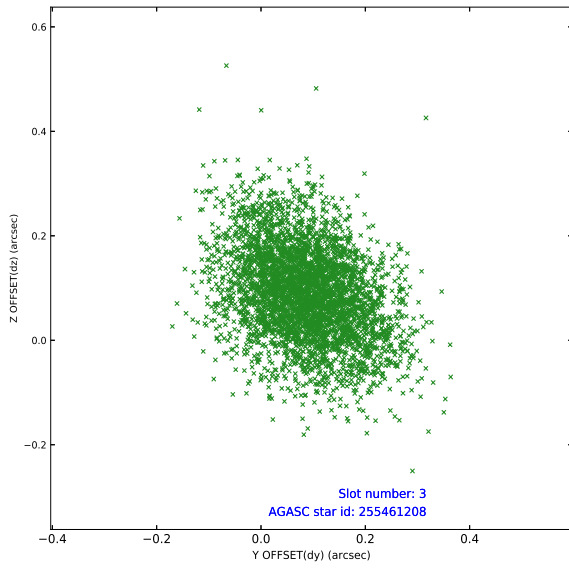


Slot Statistics

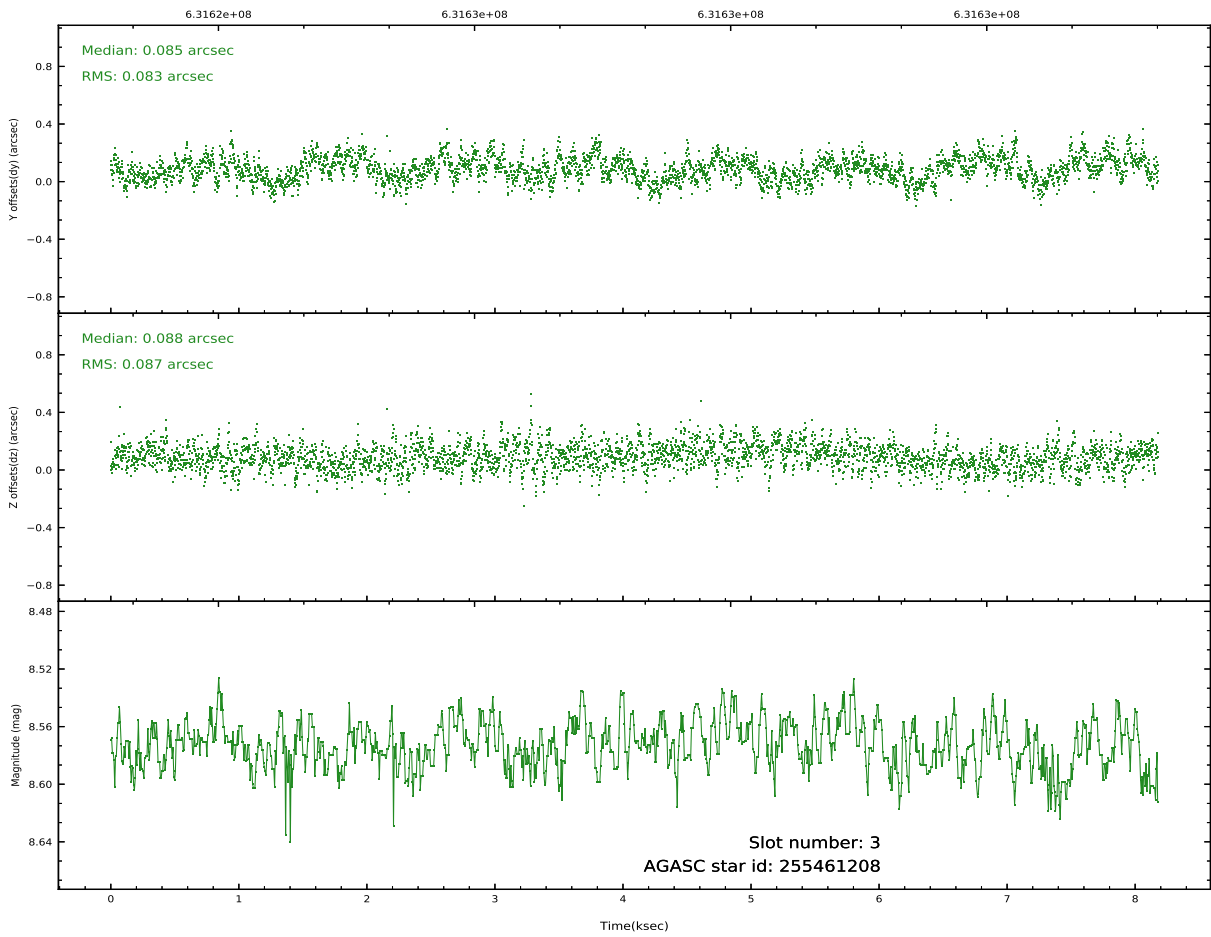
slot	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		ACIS-I-1	7.15	1995	1.000	0.276	-0.169	0.011	0.018	0.000000	0.000000	918.58	-951
1	FID		ACIS-I-5	7.13	1995	1.000	-0.360	0.234	0.008	0.013	0.000000	0.000000	-1829.64	946
2	FID		ACIS-I-6	7.15	1995	1.000	-0.006	0.007	0.008	0.013	0.000000	0.000000	383.29	1591
3	GUIDE	used	255461208	8.57	3986	1.000	0.085	0.088	0.126	0.207	133.042272	29.134108	-1931.61	-1112
4	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
5	GUIDE	used	255464520	8.82	3986	1.000	0.217	0.112	0.177	0.278	132.862871	29.521385	-436.61	-949
6	GUIDE	used	255468488	7.19	3990	1.000	-0.177	-0.218	0.121	0.207	132.438800	29.448877	-323.52	399
7	GUIDE	used	255469144	6.95	3990	1.000	-0.126	0.022	0.140	0.242	133.040262	29.853720	563.48	-1808

2.4 Star Slots

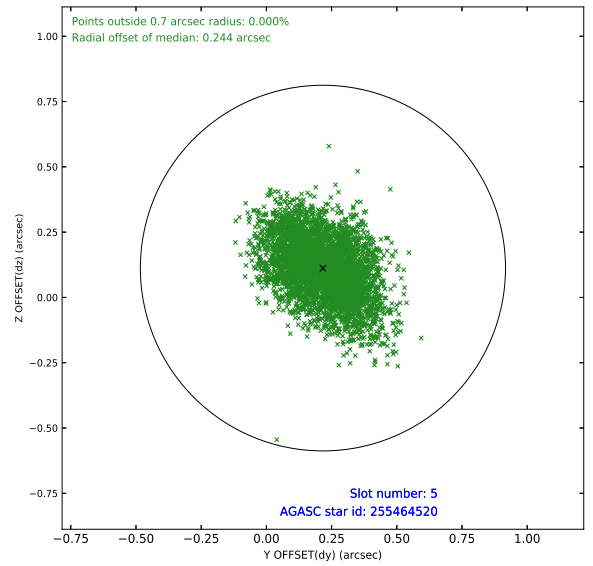
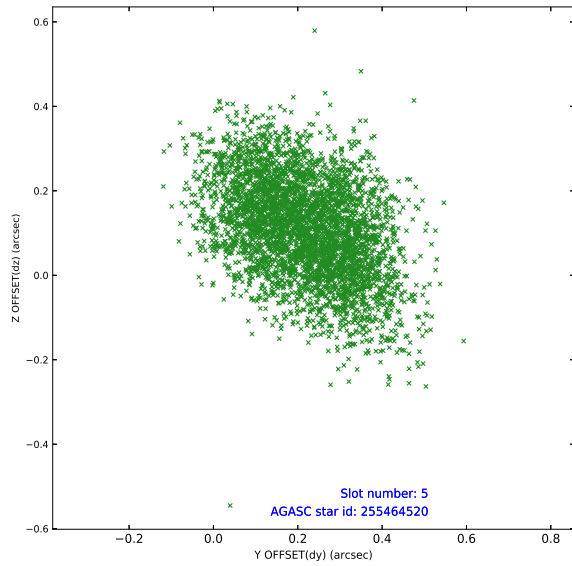
2.4.1 Slot 3



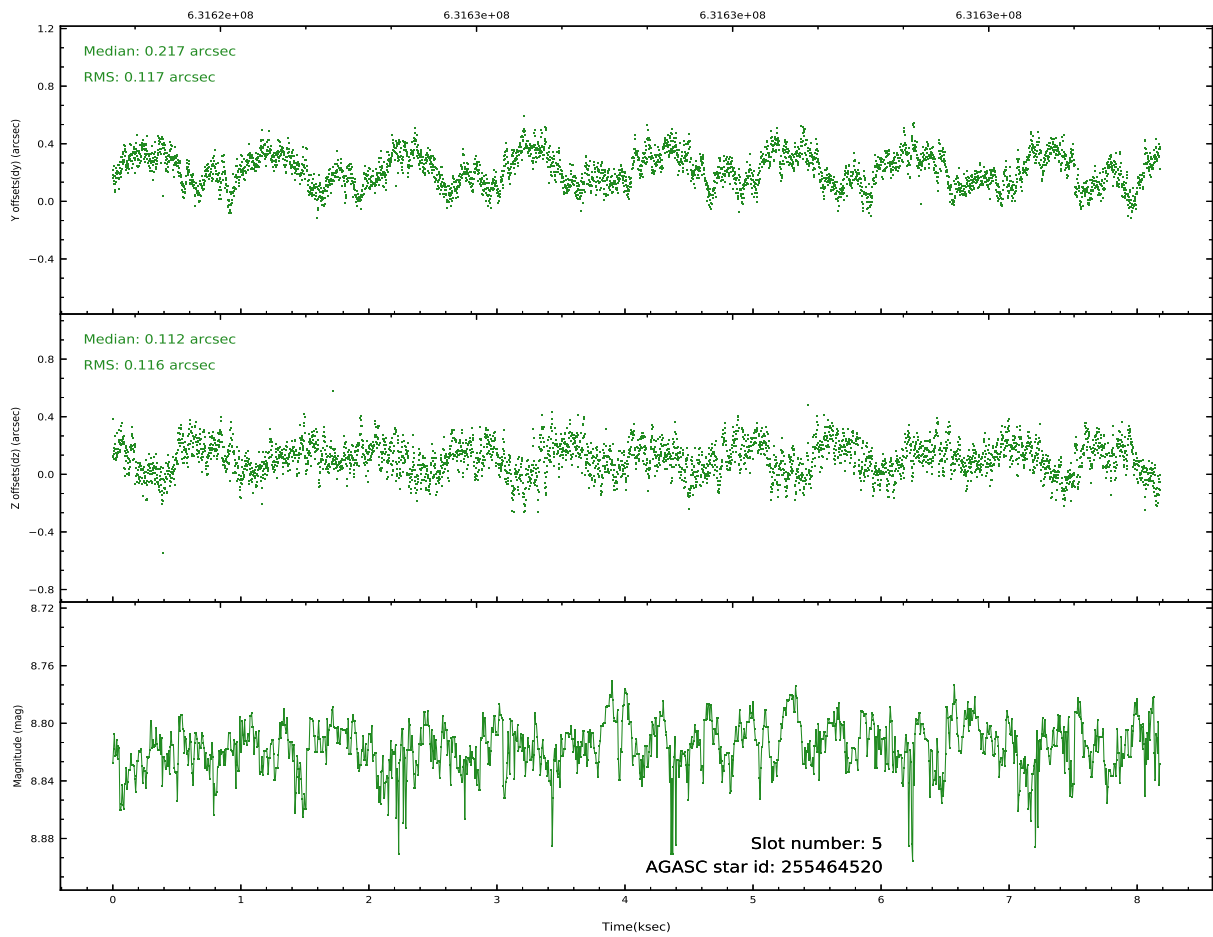
Time (s)



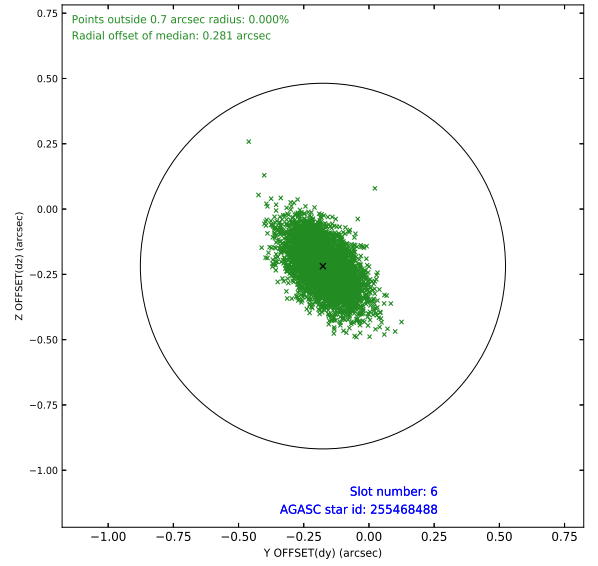
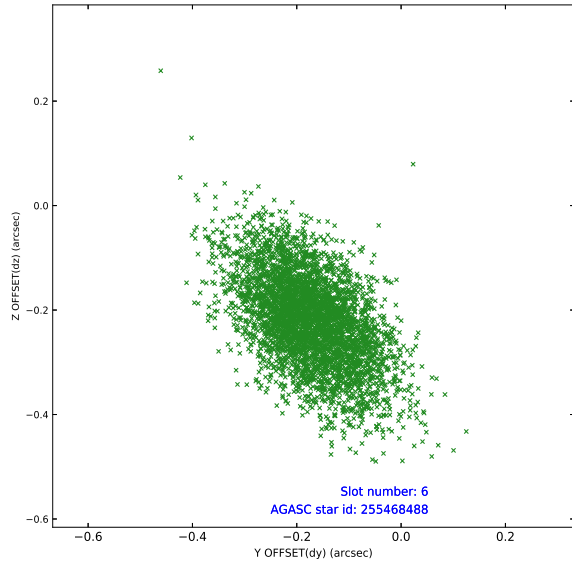
2.4.2 Slot 5



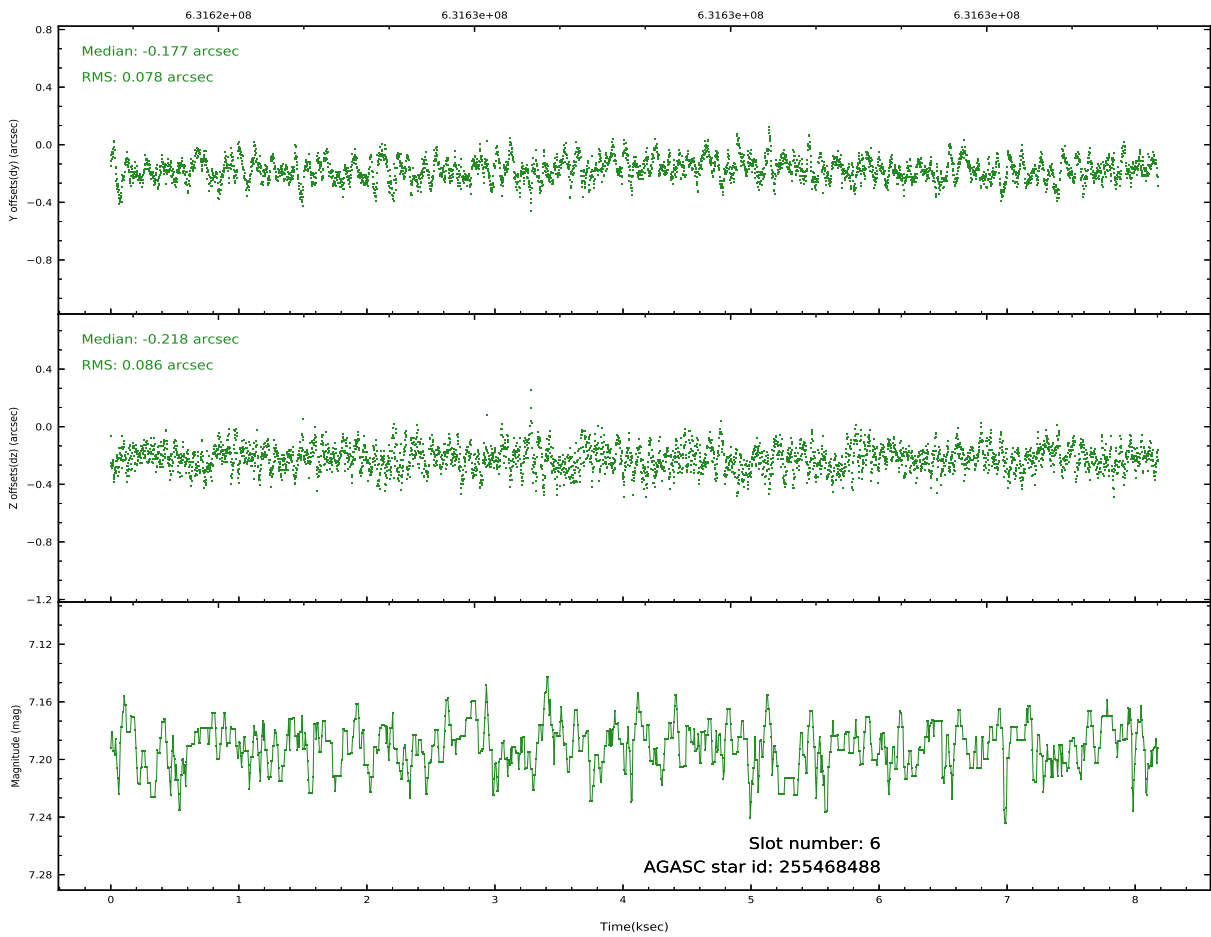
Time (s)



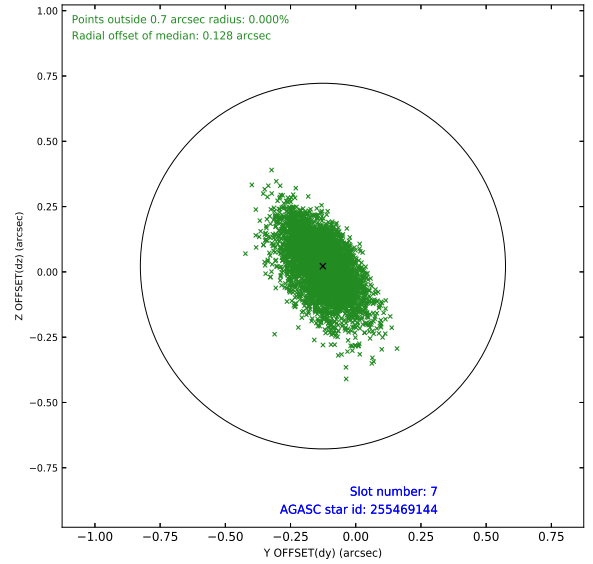
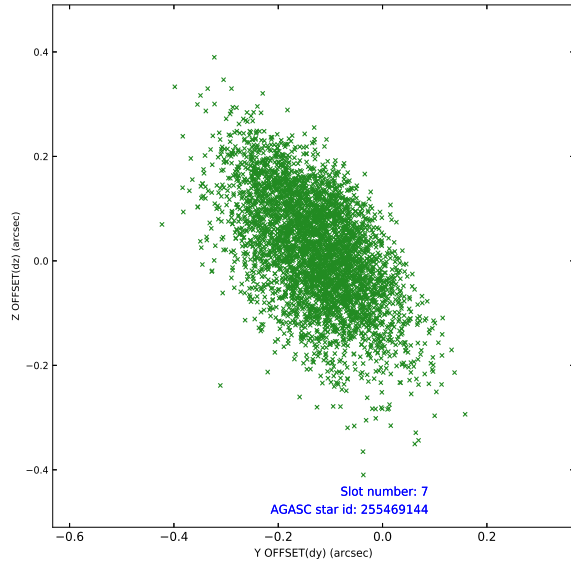
2.4.3 Slot 6



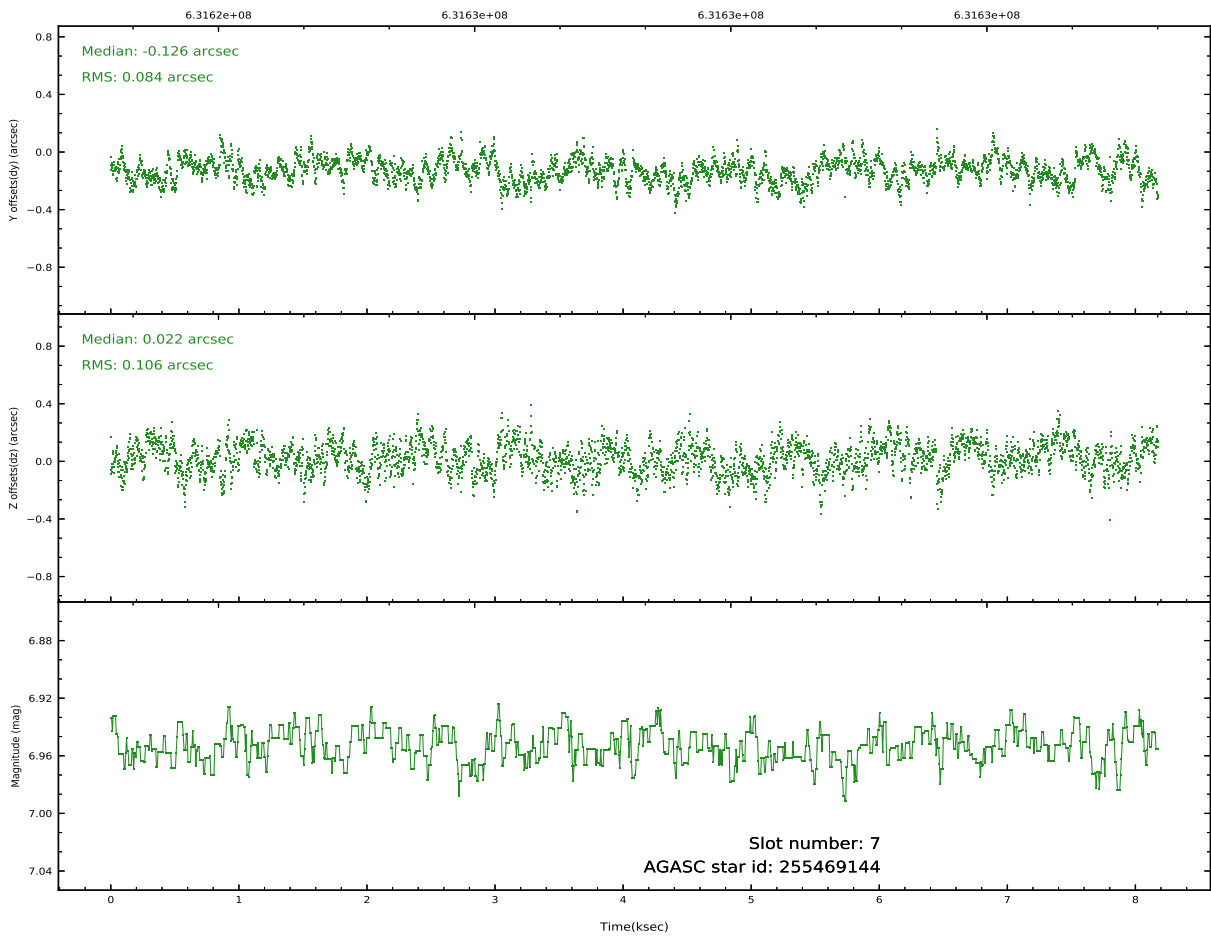
Time (s)



2.4.4 Slot 7

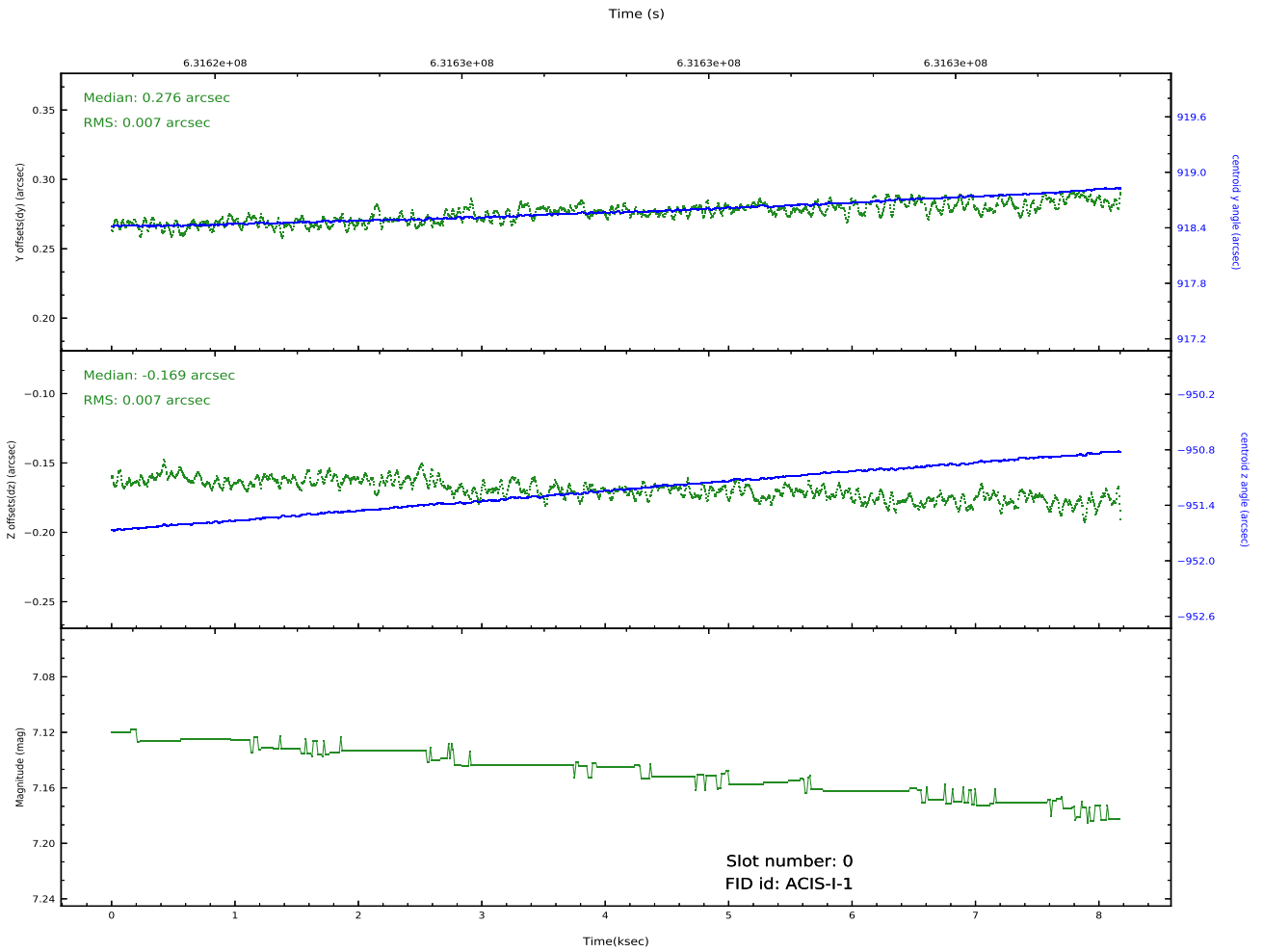
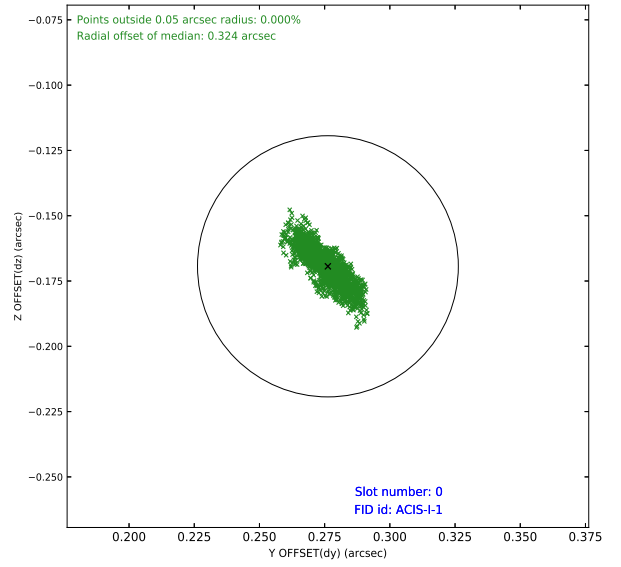
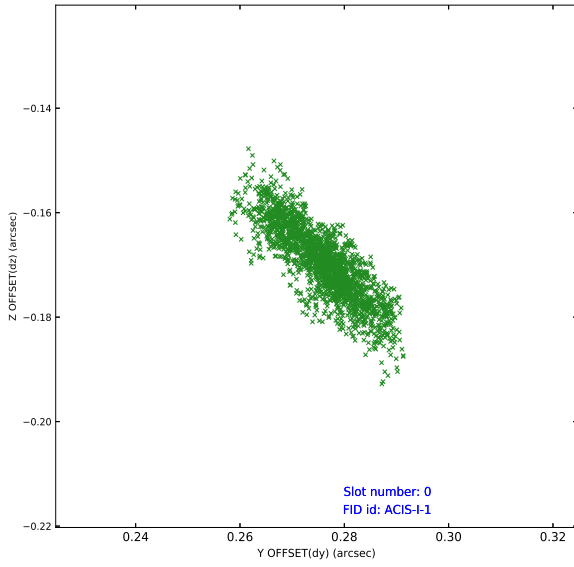


Time (s)

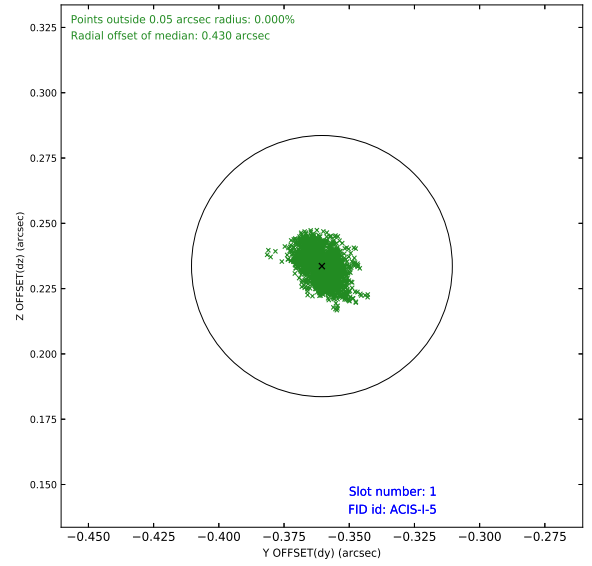
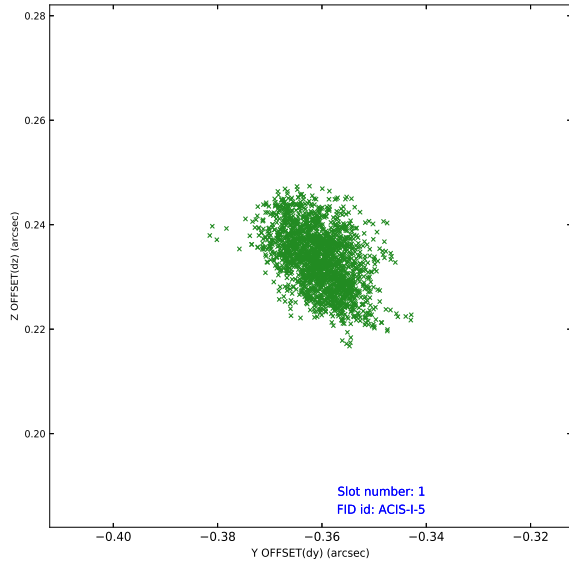


2.5 FID Slots

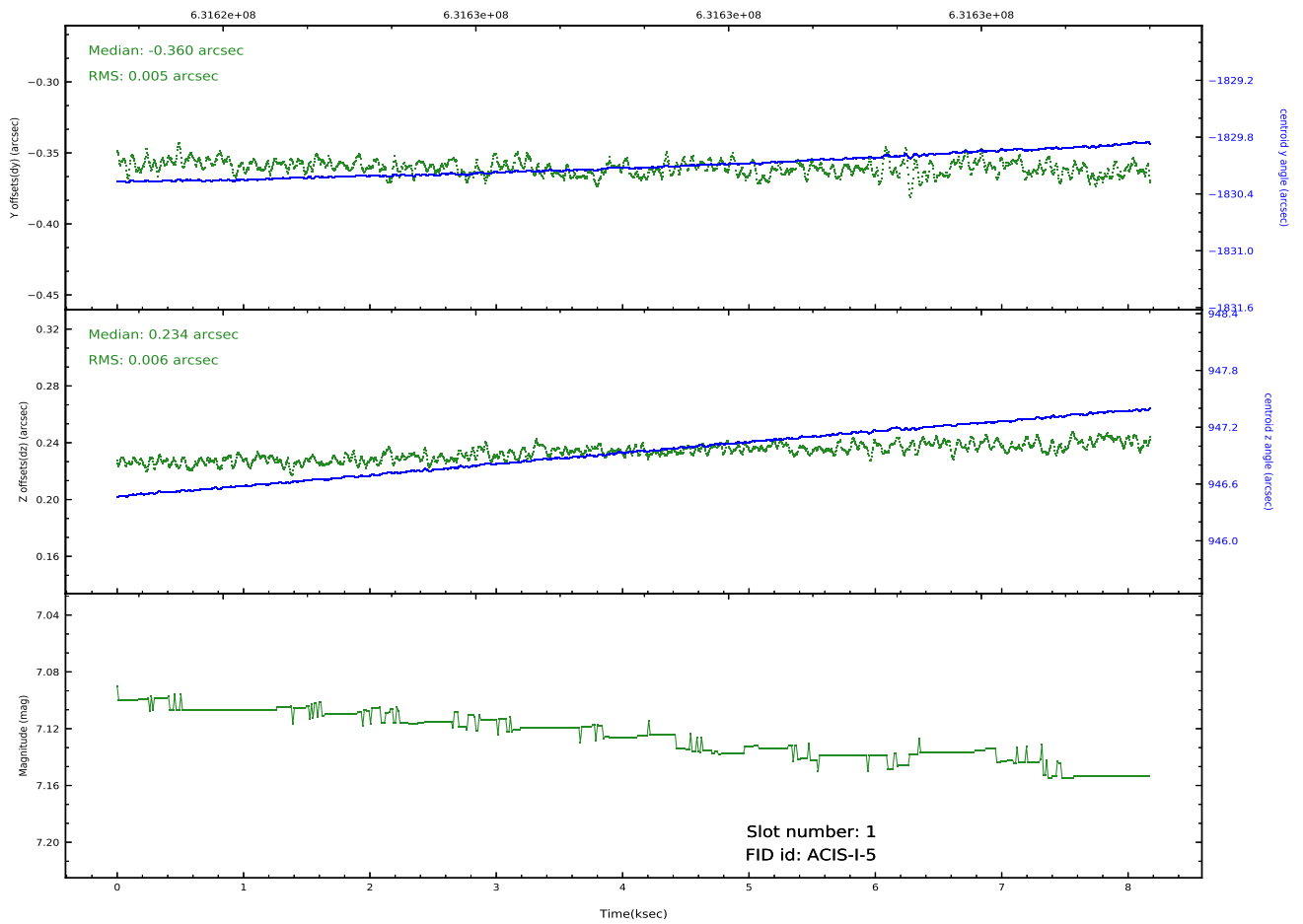
2.5.1 Slot 0



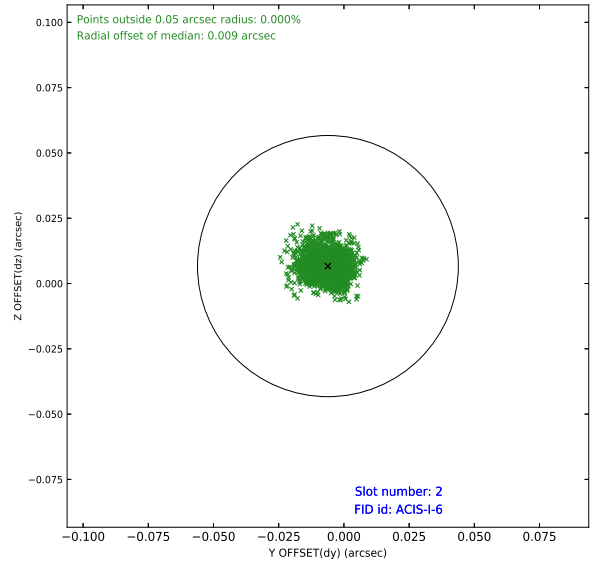
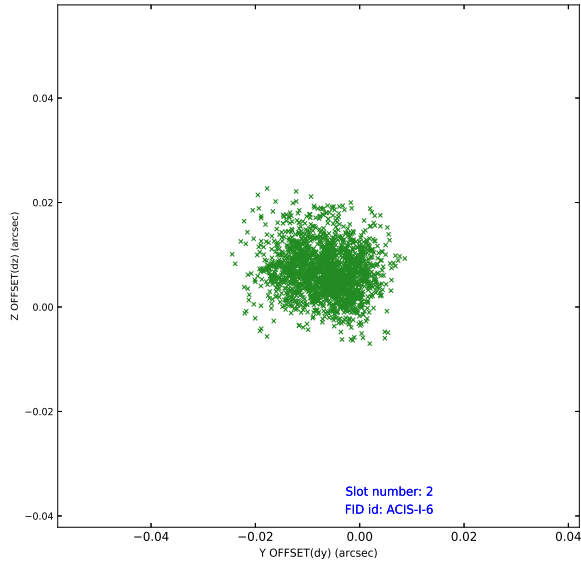
2.5.2 Slot 1



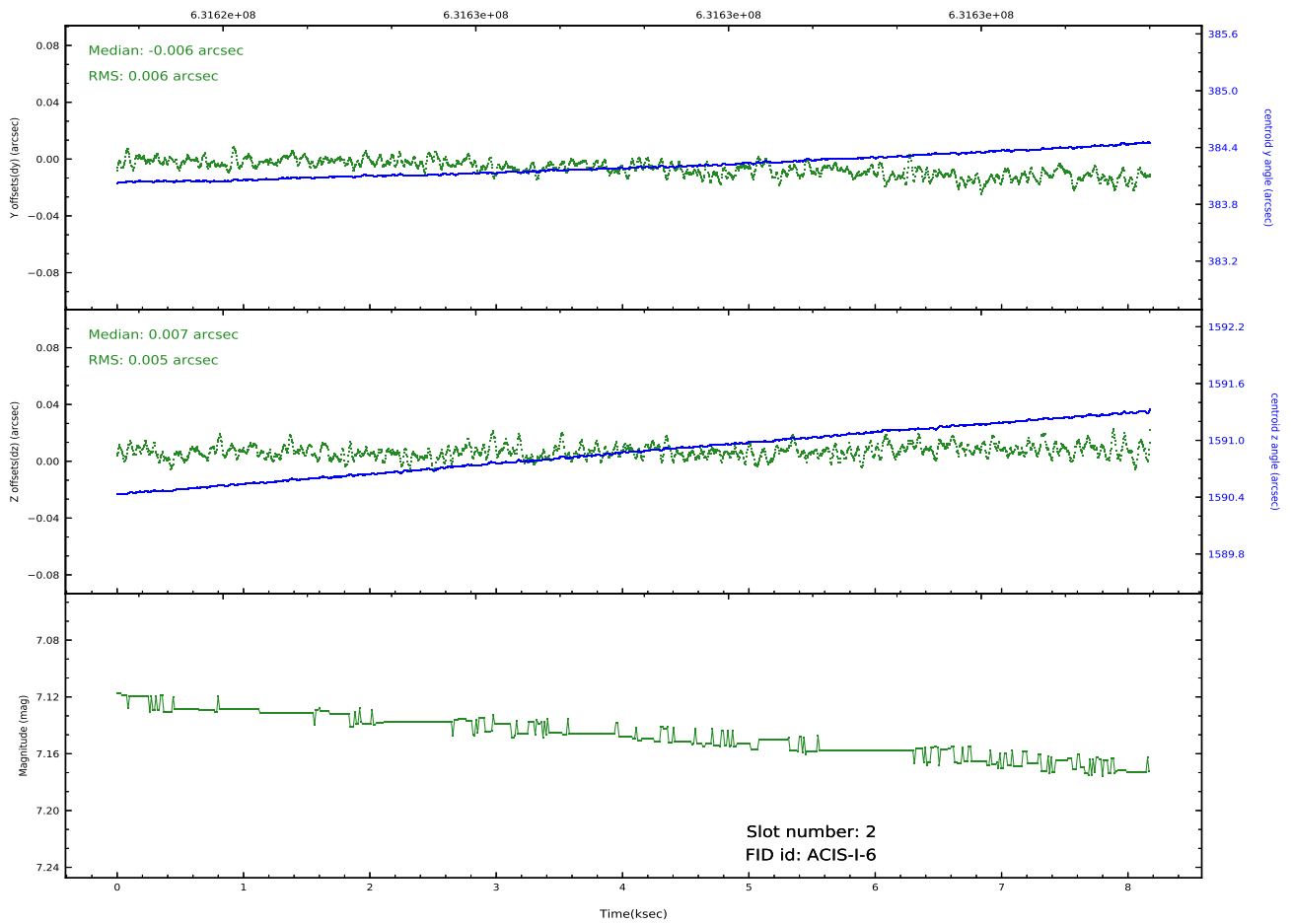
Time (s)



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2020.10.26
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	7.8926000608206

A.2 Comments

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.