

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 21061 - L2 Version 2
Chandra X-Ray Center

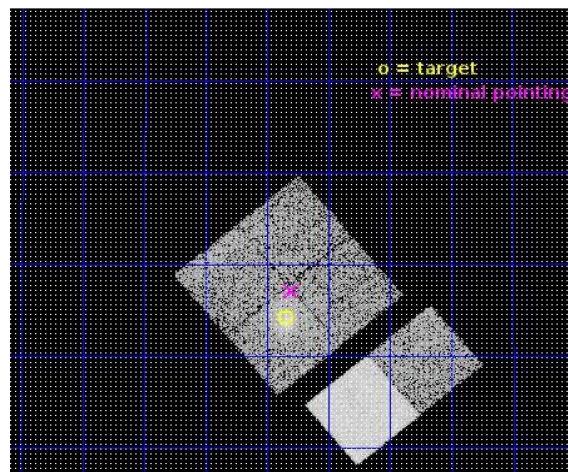
L2 Processing Date : Mar 27 2019

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1 Front

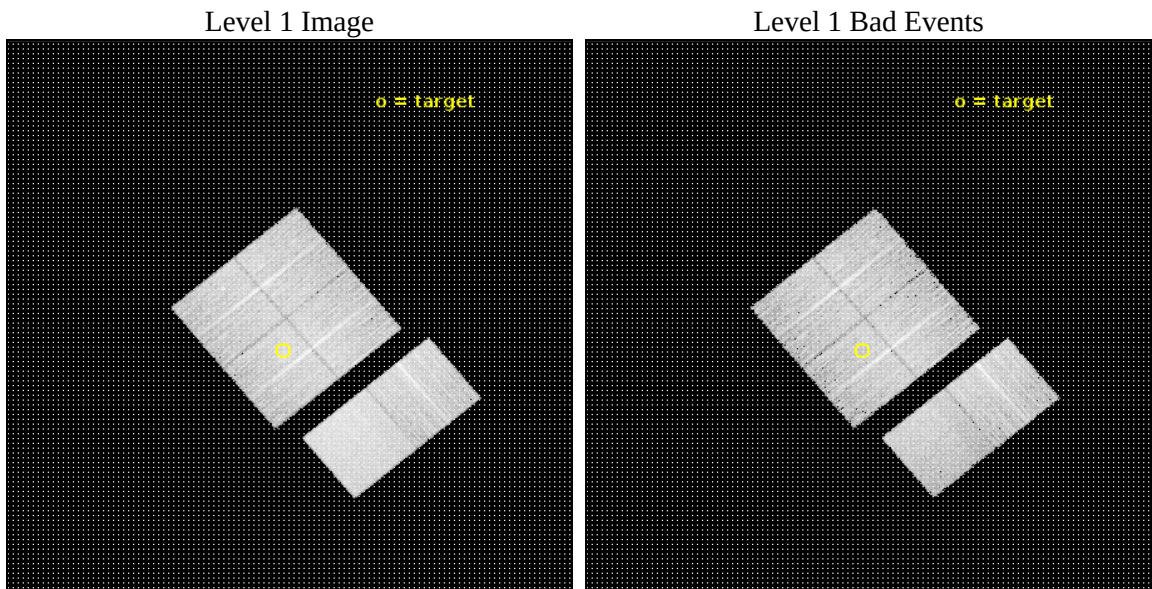
seq_num	801806	Sequence number
obs_id	21061	Observation id
title	Witnessing the culmination of structure formation in the Universe	
observer	Stefano Etori	Principal investigator
object	PSZ2 G083.86+85.09	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	196.4625	Observer's specified target RA [deg]
dec_targ	30.904722	Observer's specified target Dec [deg]
ra_nom	196.45060761241	Nominal RA [deg]
dec_nom	30.952768319297	Nominal Dec [deg]
roll_nom	140.31579252609	Nominal Roll [deg]
revision	2	Processing version of data
ontime	9955.200148344	Sum of GTIs [s]
livetime	9829.1414097638	Livetime [s]
ontime0	9955.200148344	Sum of GTIs [s]
ontime1	9955.200148344	Sum of GTIs [s]
ontime2	9955.200148344	Sum of GTIs [s]
ontime3	9955.200148344	Sum of GTIs [s]
ontime6	9955.200148344	Sum of GTIs [s]
ontime7	9955.200148344	Sum of GTIs [s]
l2events	80949	Number of level 2 events



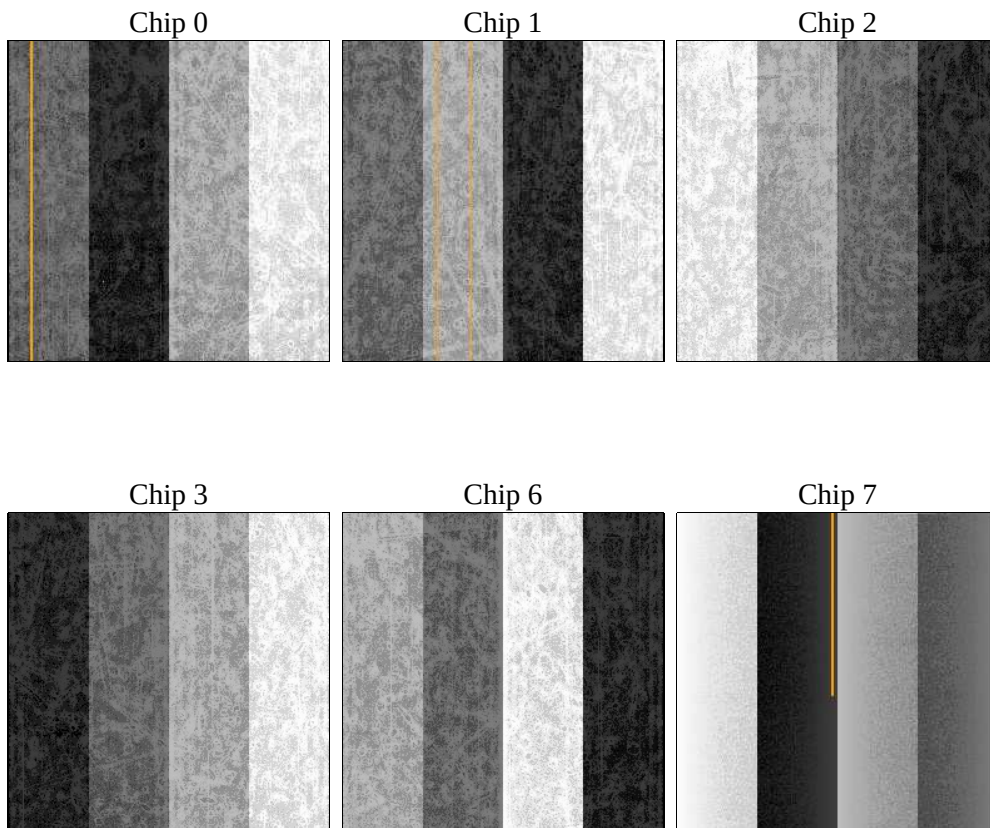
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	9955.200148344	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	9955.200148344	Sum of GTIs [s]
date	2019-03-27T19:19:07	Date and time of file creation	ontime1	9955.200148344	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	9955.200148344	Sum of GTIs [s]
			ontime3	9955.200148344	Sum of GTIs [s]
			ontime6	9955.200148344	Sum of GTIs [s]
			ontime7	9955.200148344	Sum of GTIs [s]
			l1events	462421	Number of level 1 events

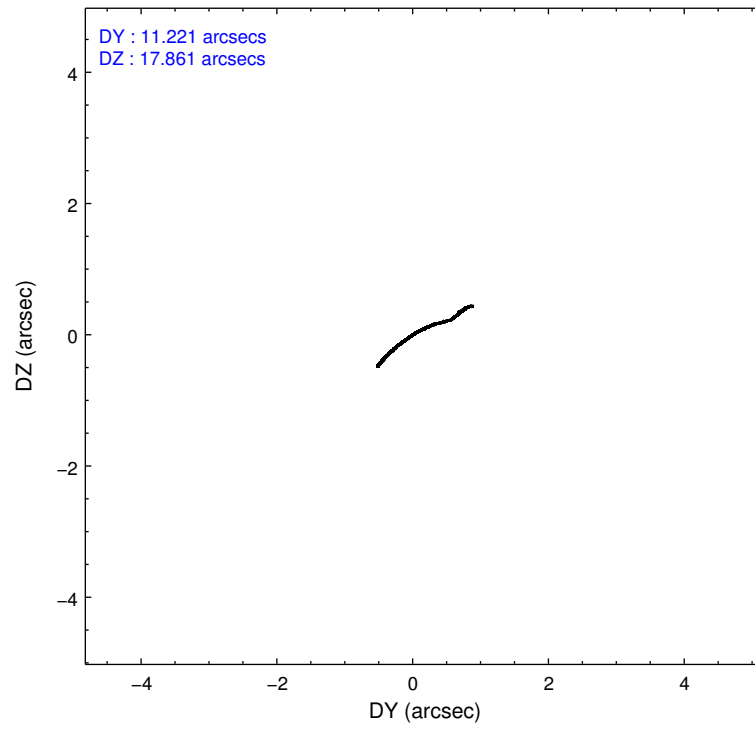
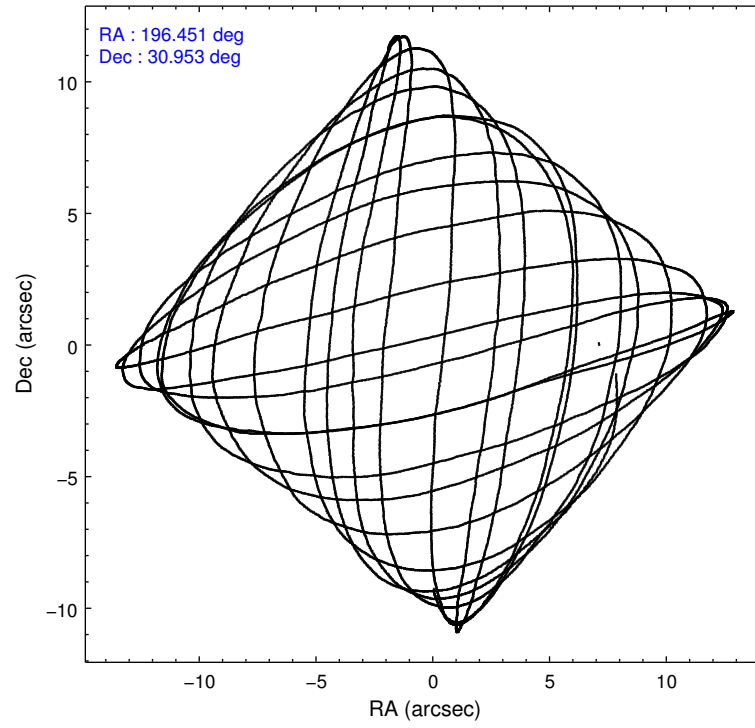
2.1.4 Events

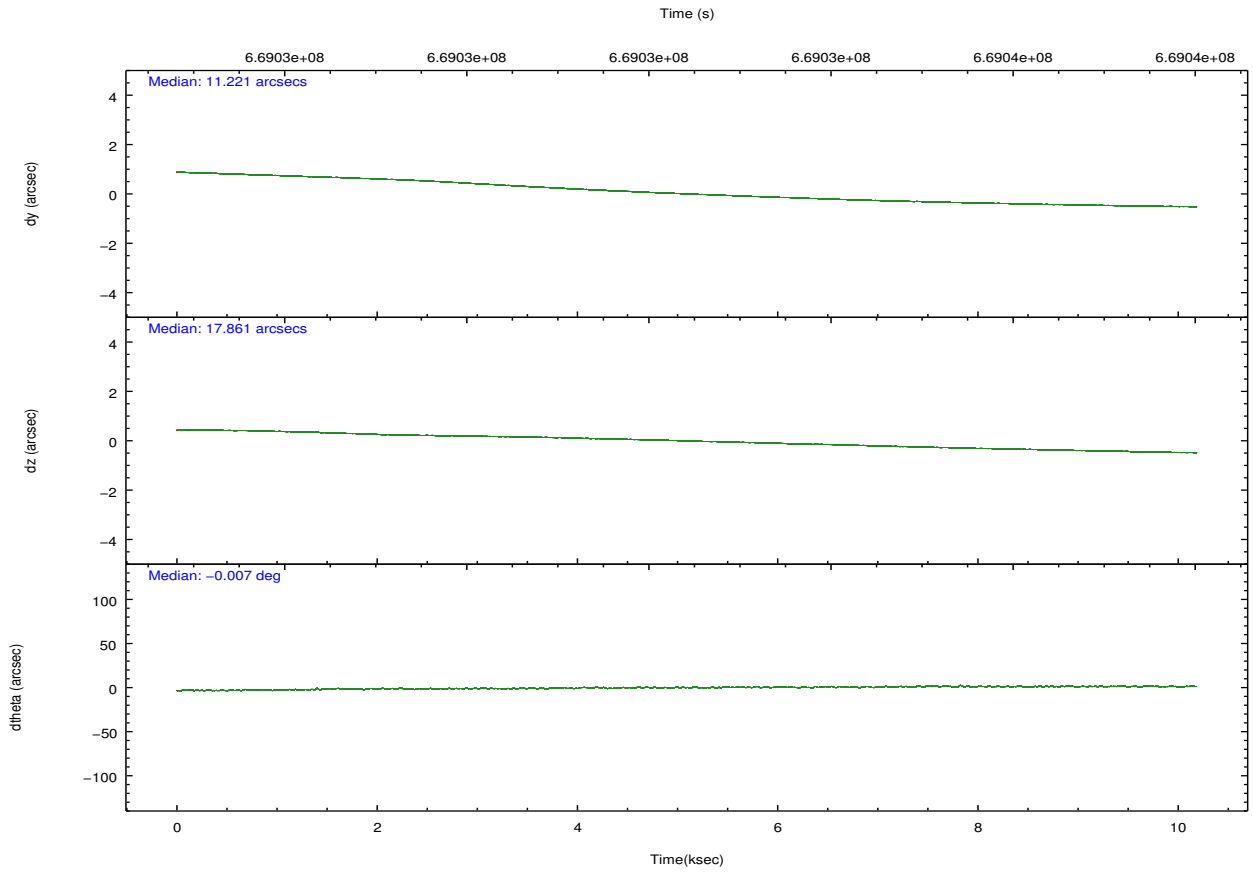
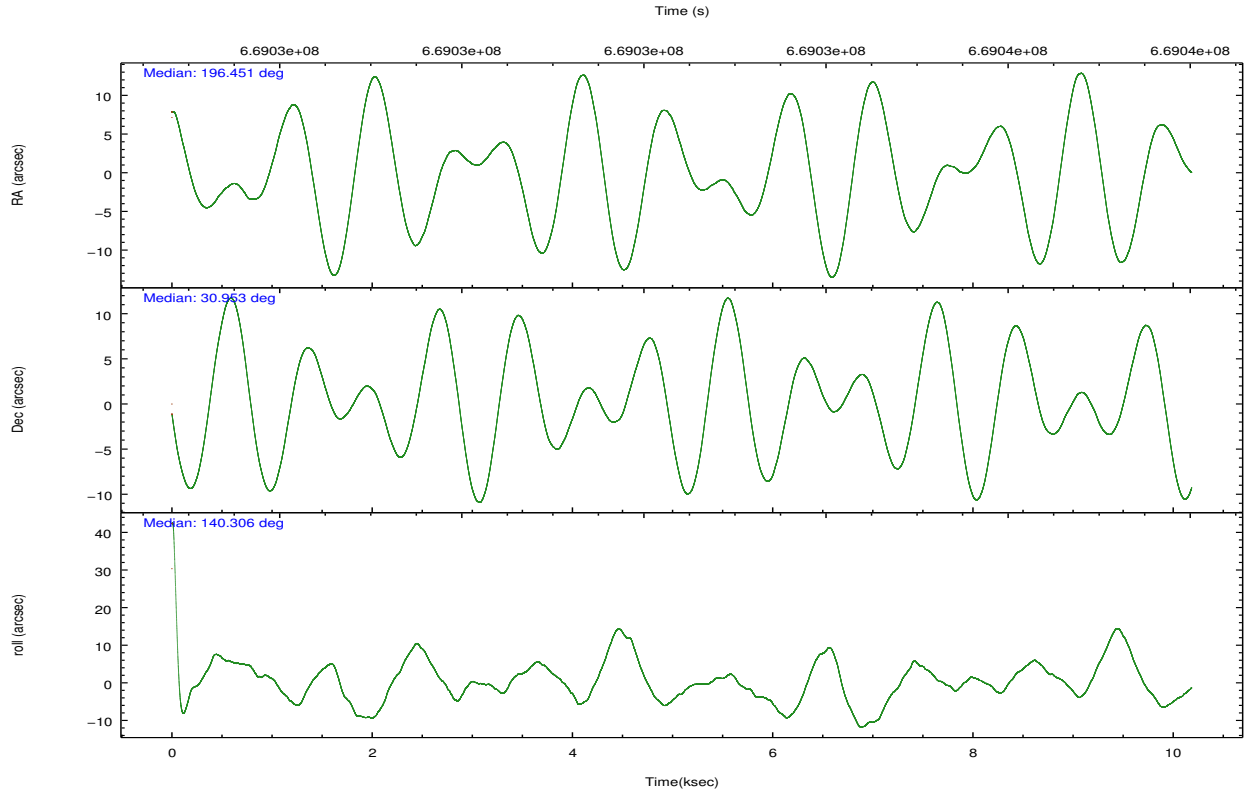
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7		ccd 0	ccd 1	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	70189	68811	74188	73688	77205	98340	grade 0 events	2872	3250	3122	5647	2818	3545
rejected events	61810	59455	65783	62231	68508	55589		4%	4%	4%	7%	3%	3%
rejected %	88%	86%	88%	84%	88%	56%	grade 1 events	33	44	42	62	29	134
								0%	0%	0%	0%	0%	0%
							grade 2 events	2093	2323	2010	2122	2063	9165
								2%	3%	2%	2%	2%	9%
							grade 3 events	871	827	798	953	779	3451
								1%	1%	1%	1%	1%	3%
							grade 4 events	775	893	870	954	854	3382
								1%	1%	1%	1%	1%	3%
							grade 5 events	3305	3264	3066	3613	3590	9852
								4%	4%	4%	4%	4%	10%
							grade 6 events	1770	2068	1607	1784	2186	23220
								2%	3%	2%	2%	2%	23%
							grade 7 events	58470	56142	62673	58553	64886	45591
								83%	81%	84%	79%	84%	46%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-012367	ACIS-012367	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	196.482357	196.4506076124106	CCD I2 on	Y	Y
[deg] Pointing Dec	30.948281	30.95276831929701	CCD I3 on	Y	Y
[deg] Pointing Roll	140.090692	140.31579252609	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	-233.592463	-233.5874344608287	CCD S3 on	O2	Y
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	669027529.184000	669026657.74086	CCD S5 on	N	N
Observation start date	2019-03-15T08:57:40	2019-03-15T08:44:17	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	669037529.184000	669038171.56655	On-chip summing requested	N	N
Observation end date	2019-03-15T11:44:20	2019-03-15T11:56:11	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.2

2.3 Aspect



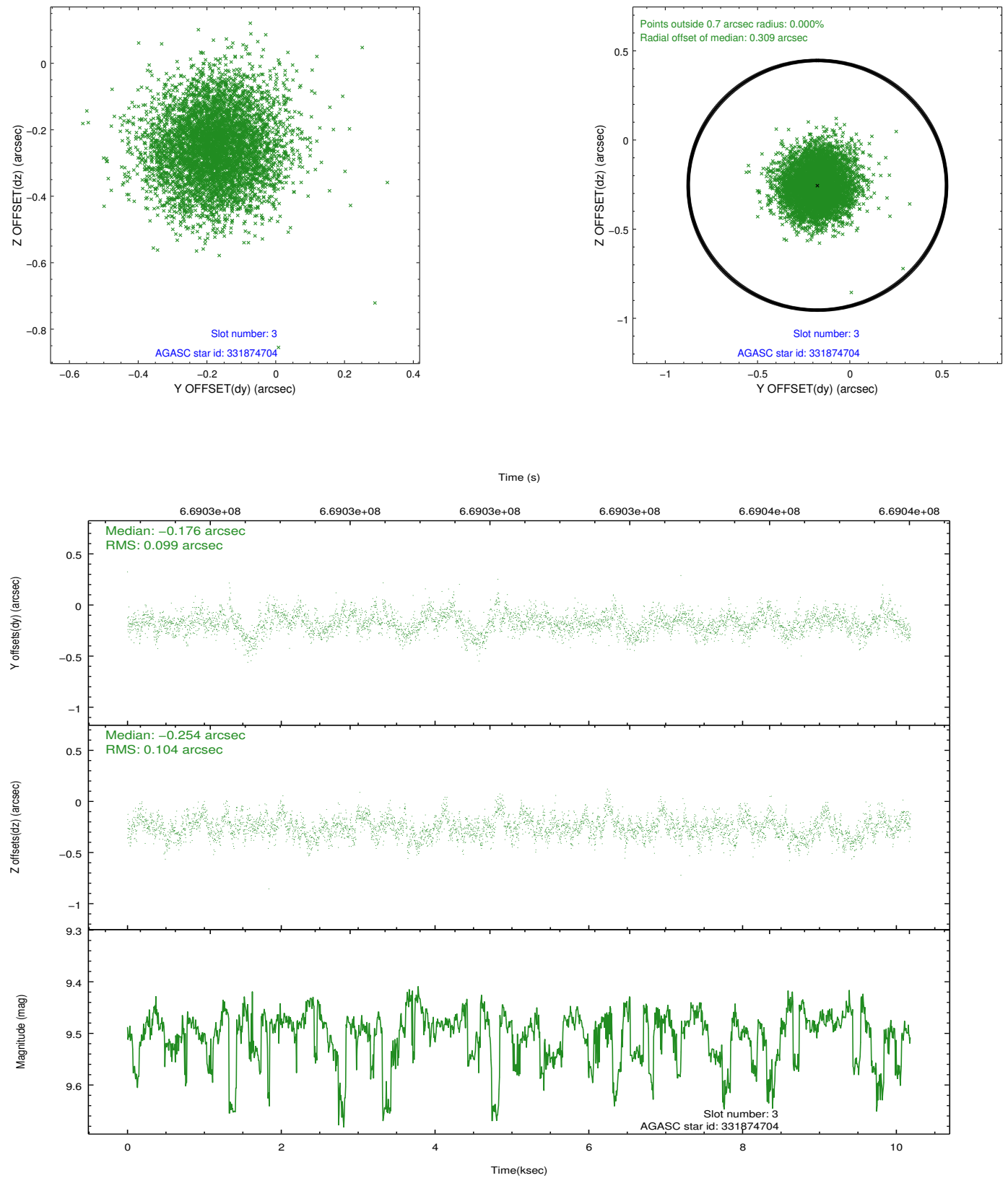


Slot Statistics

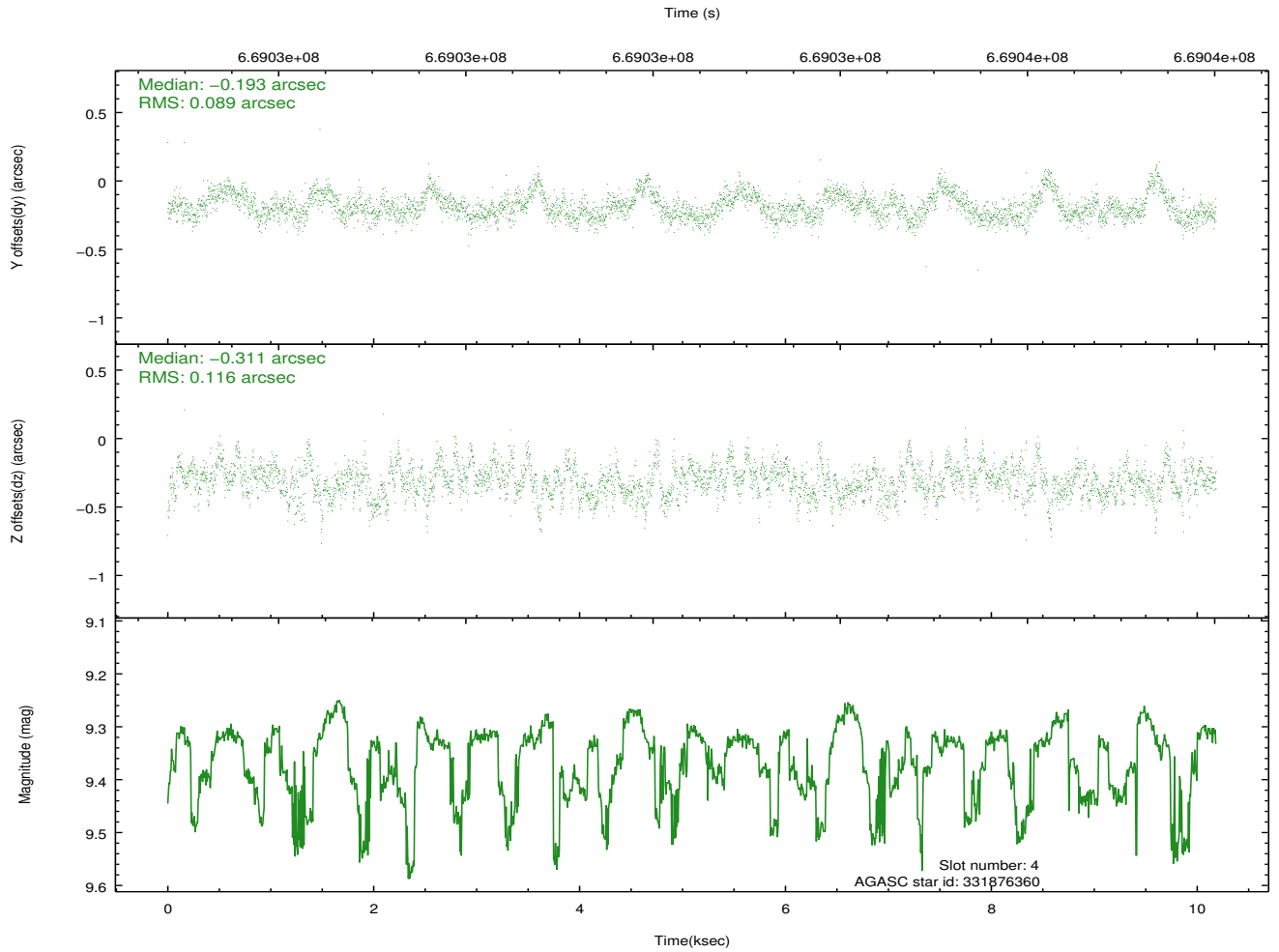
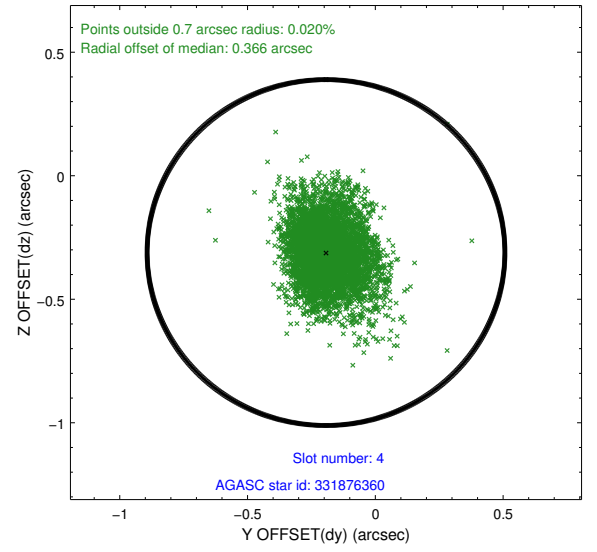
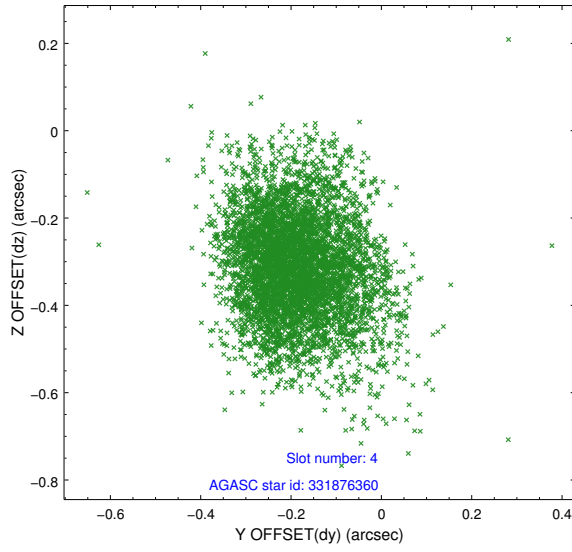
id	status	used	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_x
0	FID		7.07	2485	1.000	0.082	-0.060	0.013	0.033	0.000000	0.000000	928.41	-841
1	FID		7.06	2485	1.000	-0.451	0.010	0.008	0.015	0.000000	0.000000	-1820.11	1055
2	FID		7.06	2485	1.000	0.279	0.120	0.013	0.022	0.000000	0.000000	393.36	1700
3	GUIDE	used	9.50	4962	1.000	-0.176	-0.254	0.155	0.247	195.661588	31.078320	2245.40	1258
4	GUIDE	used	9.35	4962	1.000	-0.193	-0.311	0.153	0.261	196.000873	30.466986	36.82	2284
5	GUIDE	used	7.19	4969	1.000	-0.234	-0.193	0.103	0.159	195.954407	31.001467	1374.33	895
6	GUIDE	used	8.67	4963	1.000	-0.107	-0.159	0.153	0.239	195.963962	30.756873	791.28	1554
7	GUIDE	used	9.76	4941	1.000	0.689	0.906	0.212	0.335	197.347711	31.097940	-1691.99	-2131

2.4 Star Slots

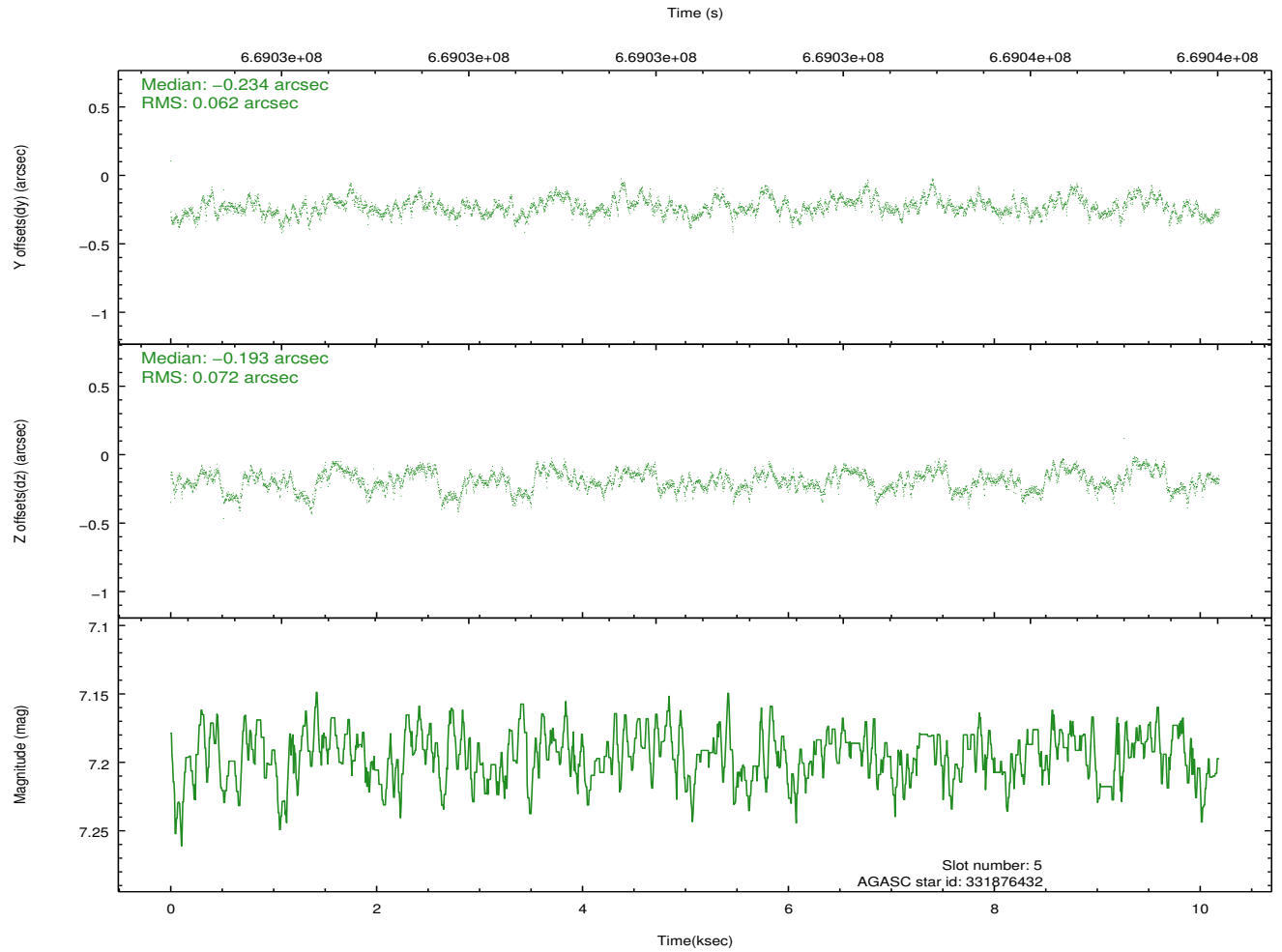
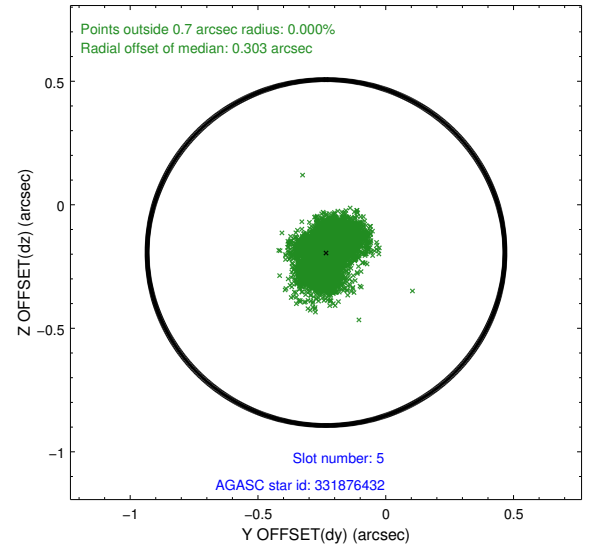
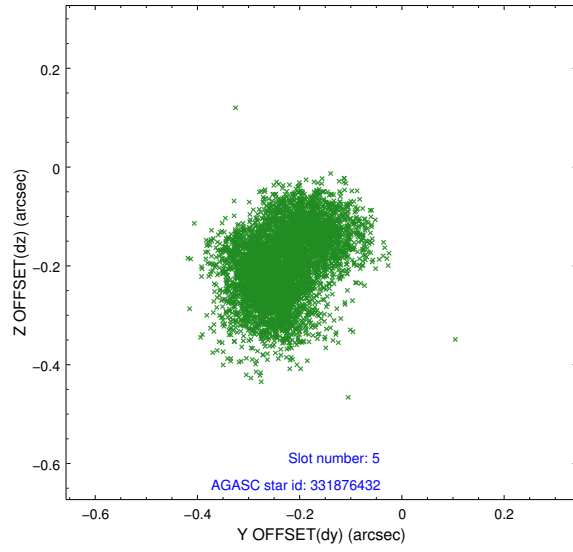
2.4.1 Slot 3



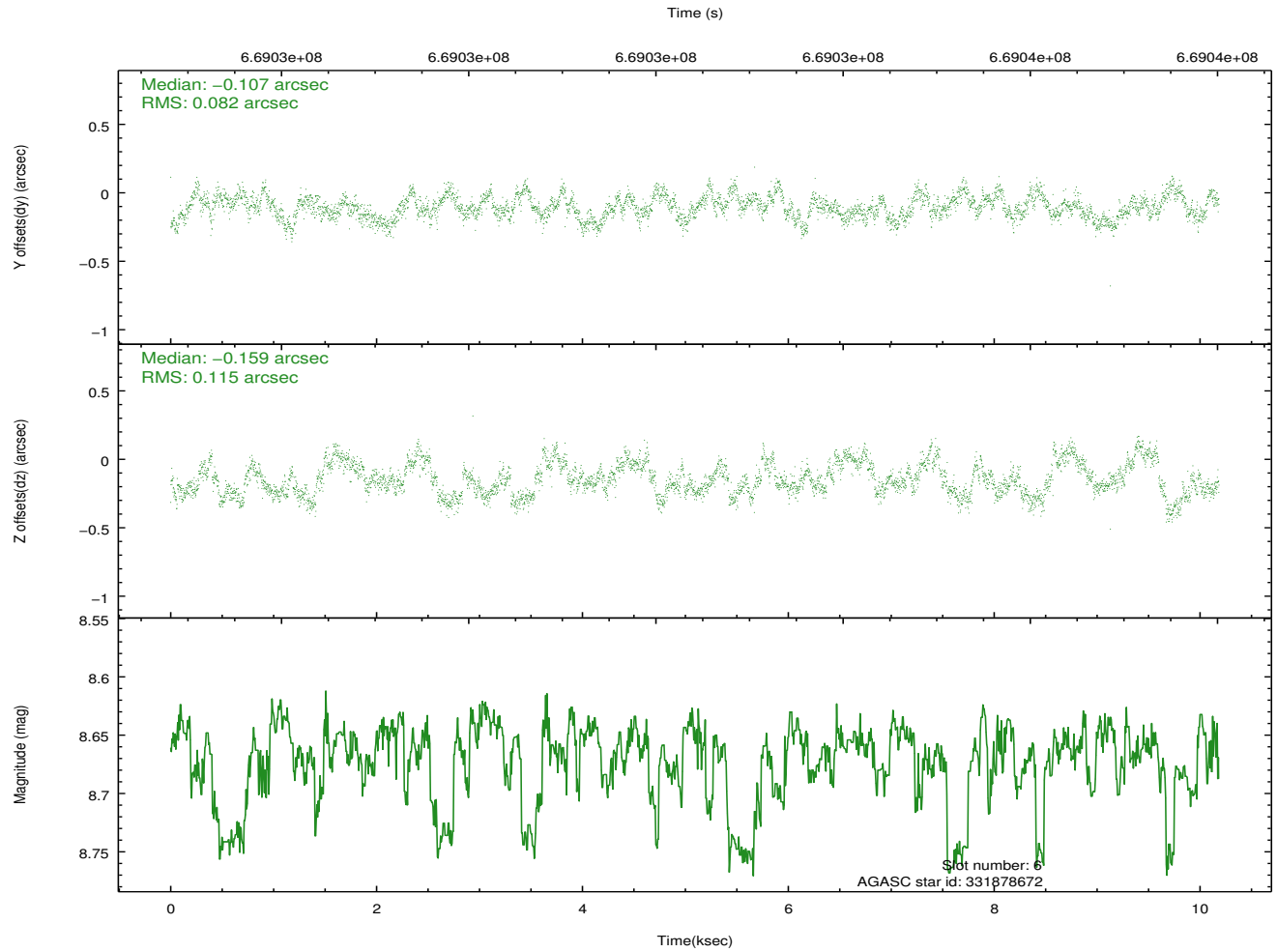
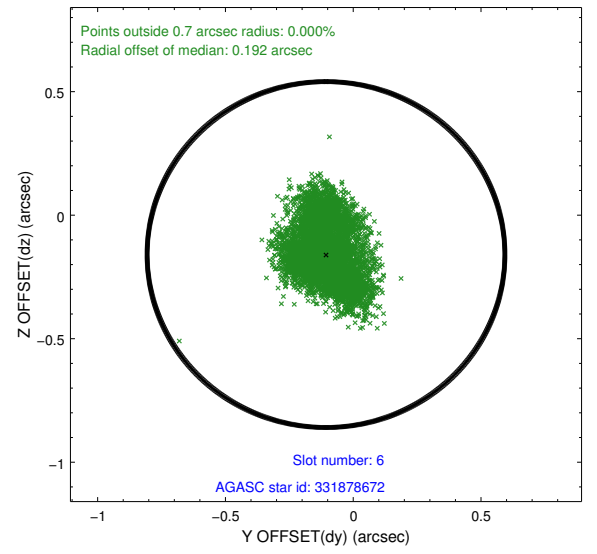
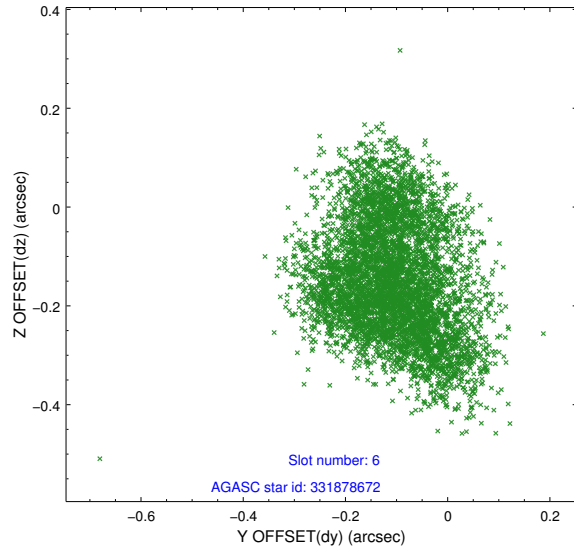
2.4.2 Slot 4



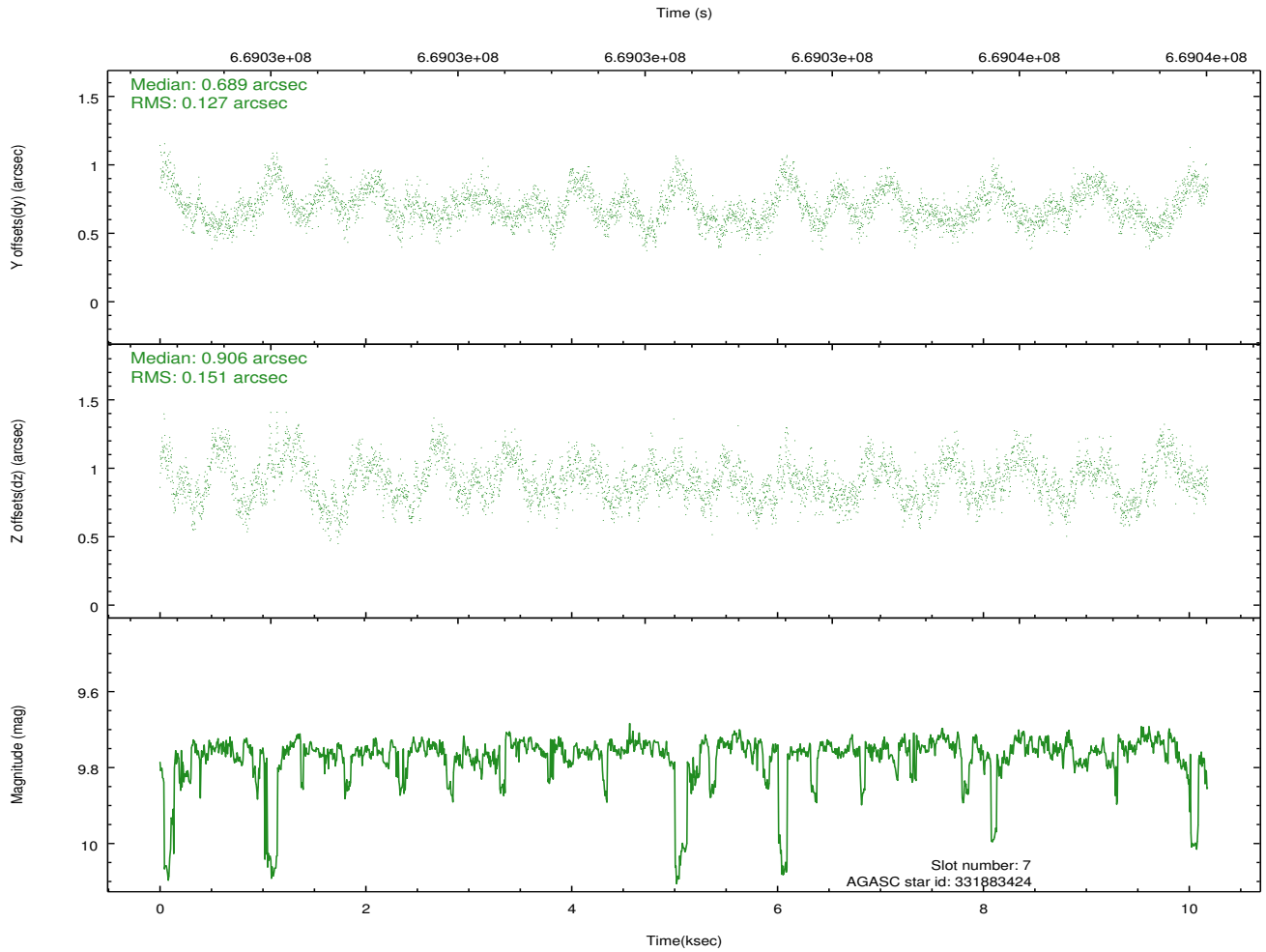
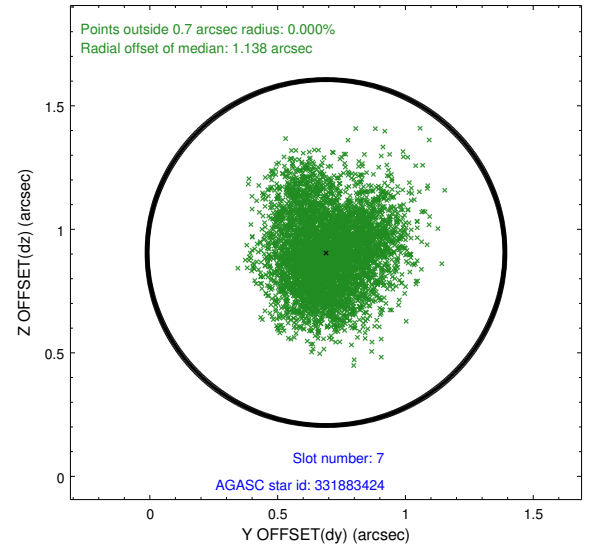
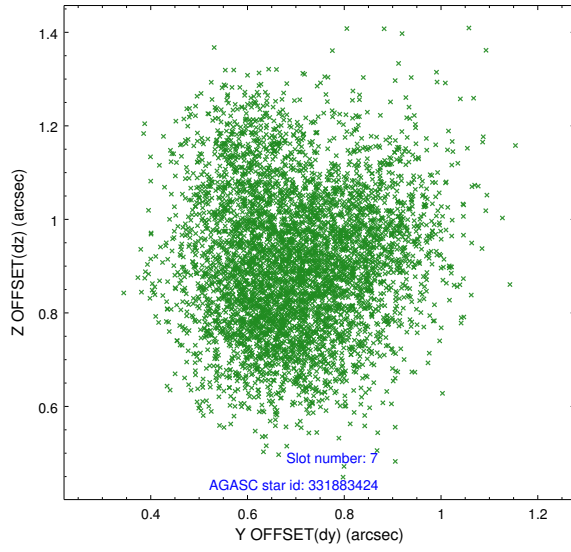
2.4.3 Slot 5



2.4.4 Slot 6

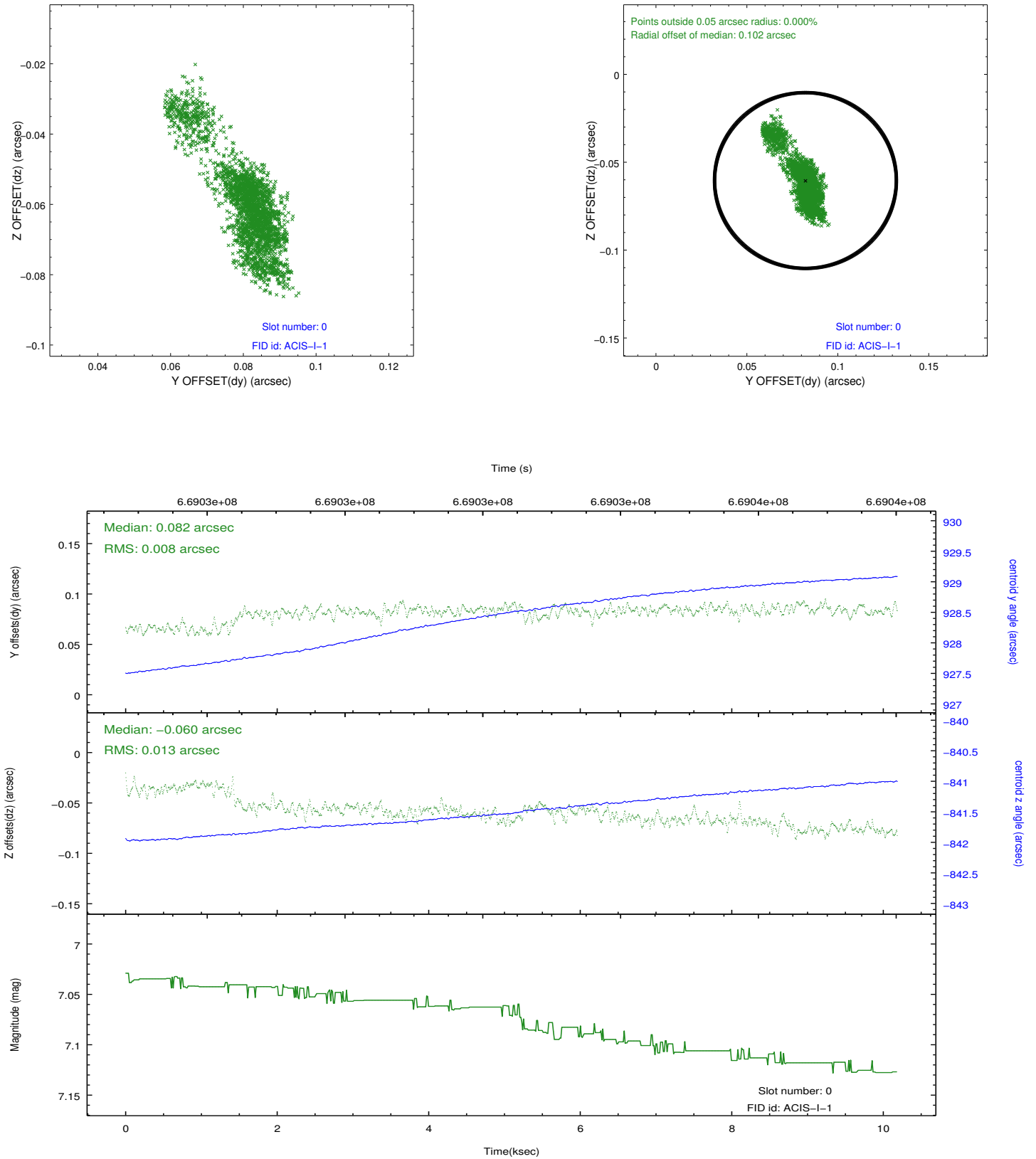


2.4.5 Slot 7

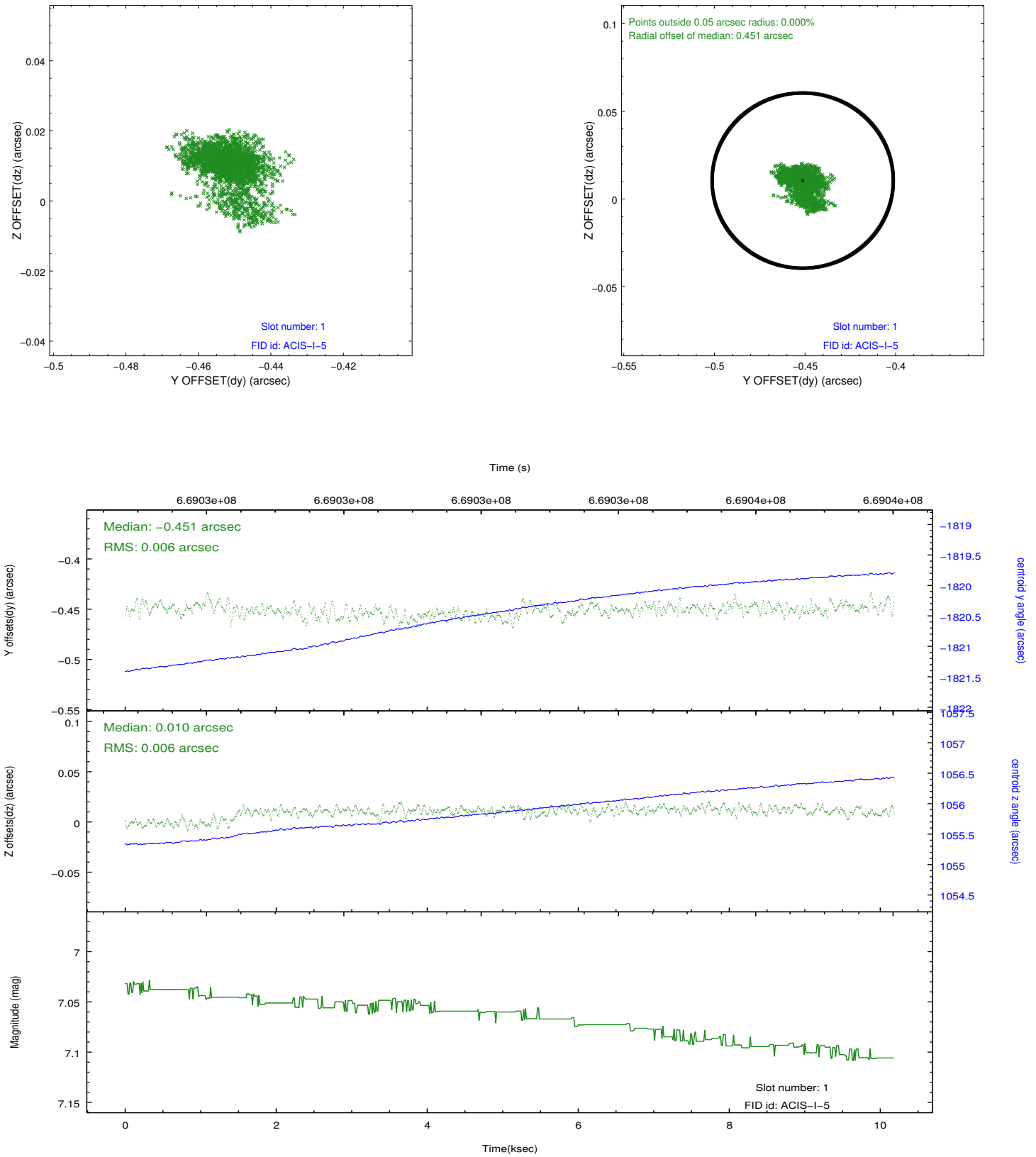


2.5 FID Slots

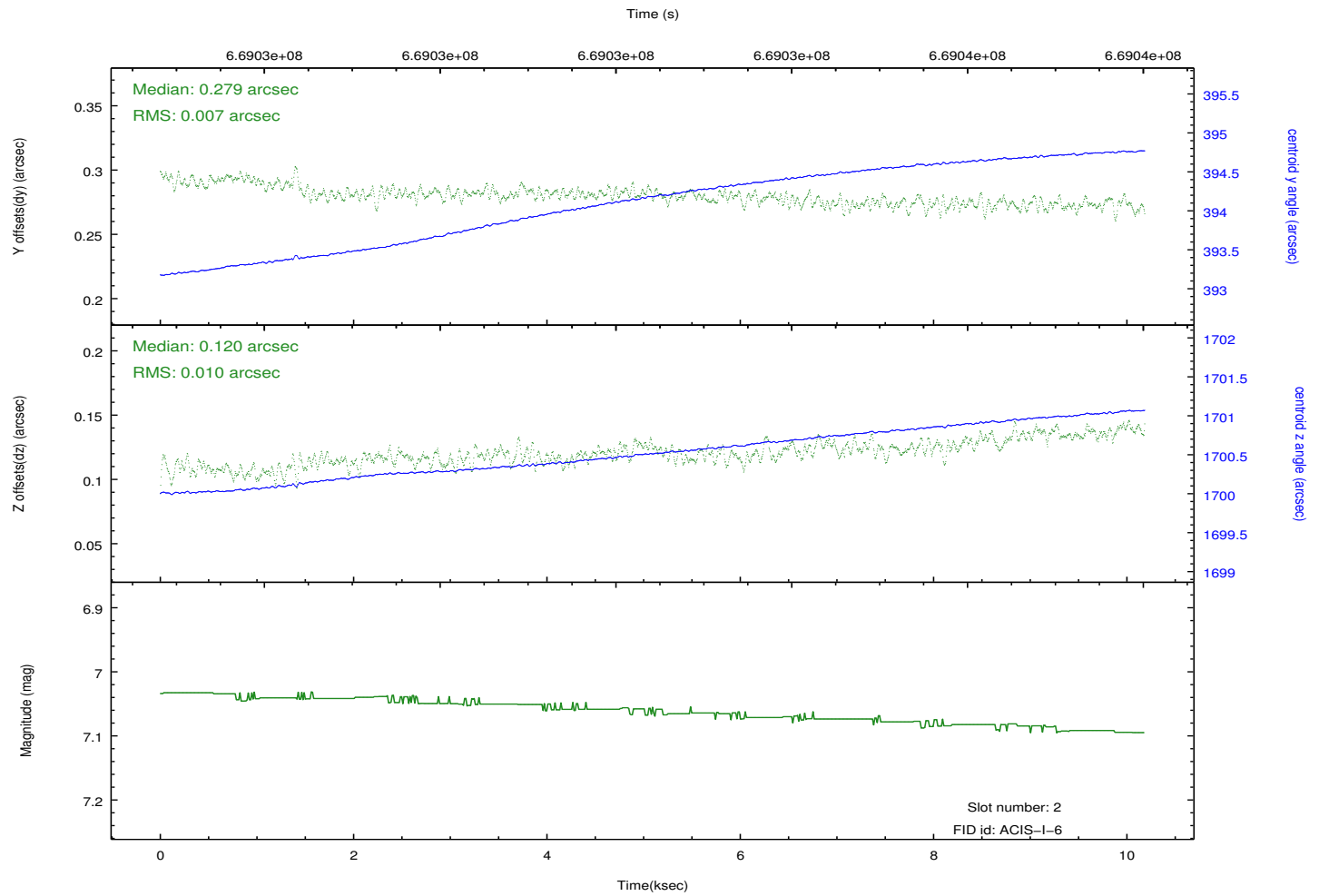
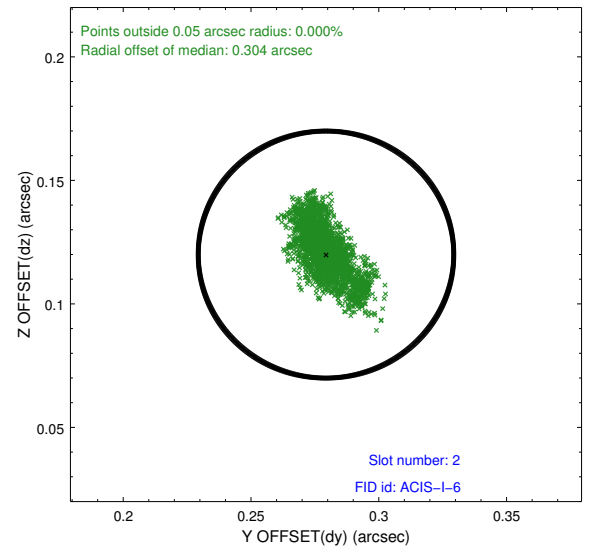
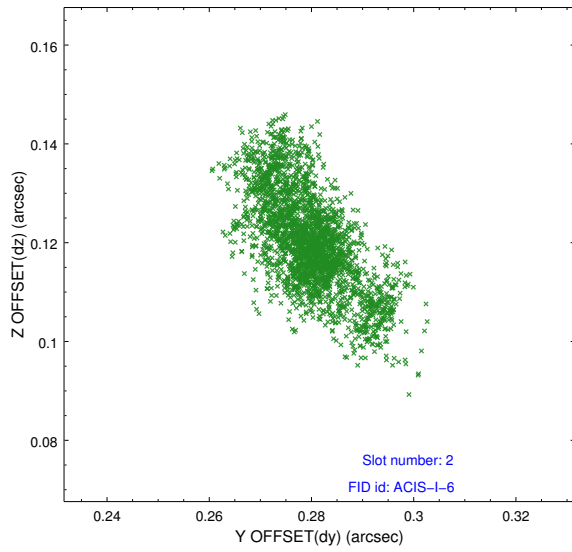
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.03.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.955200148344

A.2 Comments

Joint proposal with XMM.

==

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. The bias map for CCD = 0 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: (196.38245,31.05321), (196.37980,31.05048), (196.47420,30.98340), (196.47685,30.98612).