

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22043 - L2 Version 2
Chandra X-Ray Center

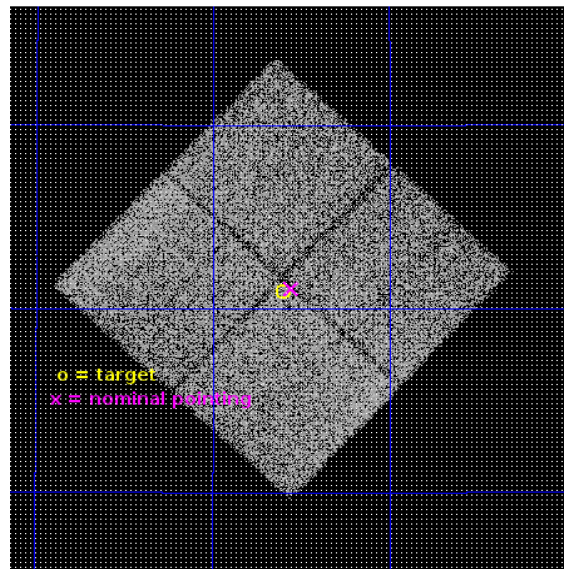
L2 Processing Date : Jan 10 2019

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1 Front

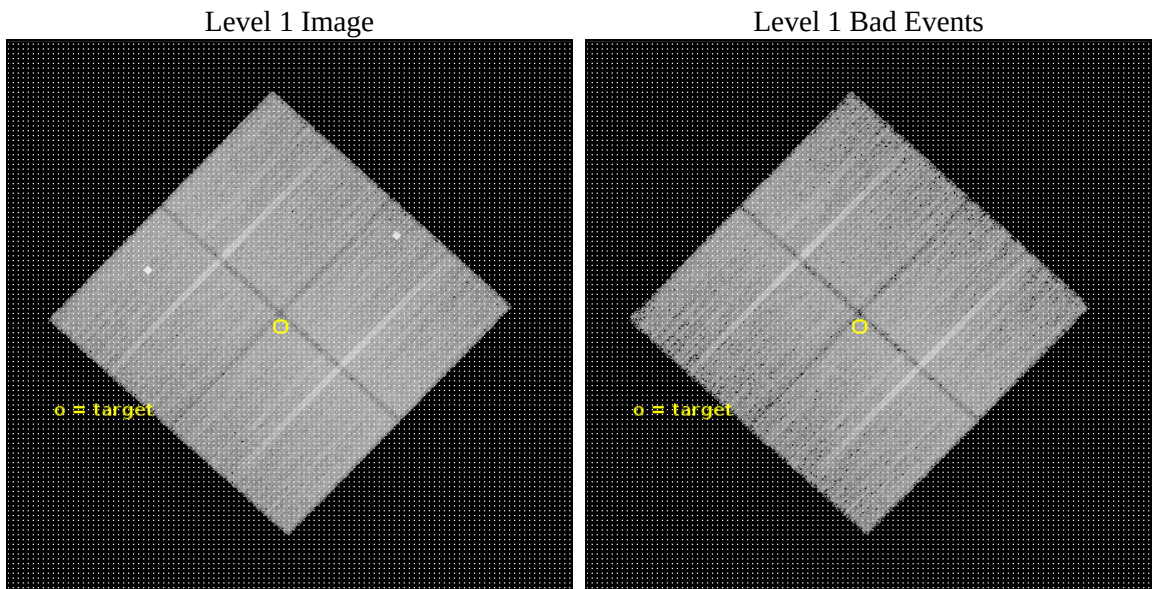
seq_num	801822	Sequence number
obs_id	22043	Observation id
title	A direct Chandra - Suzaku comparison of cluster outskirts	Proposal
observer	Andrea Morandi	Principal investigator
object	A773	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	139.649583	Observer's specified target RA [deg]
dec_targ	51.849472	Observer's specified target Dec [deg]
ra_nom	139.63892561809	Nominal RA [deg]
dec_nom	51.851665256158	Nominal Dec [deg]
roll_nom	133.2170710302	Nominal Roll [deg]
revision	2	Processing version of data
ontime	29573.755078673	Sum of GTIs [s]
livetime	29187.352196689	Livetime [s]
ontime0	29570.490888834	Sum of GTIs [s]
ontime1	29576.813969016	Sum of GTIs [s]
ontime2	29573.713978767	Sum of GTIs [s]
ontime3	29573.755078673	Sum of GTIs [s]
l2events	81951	Number of level 2 events



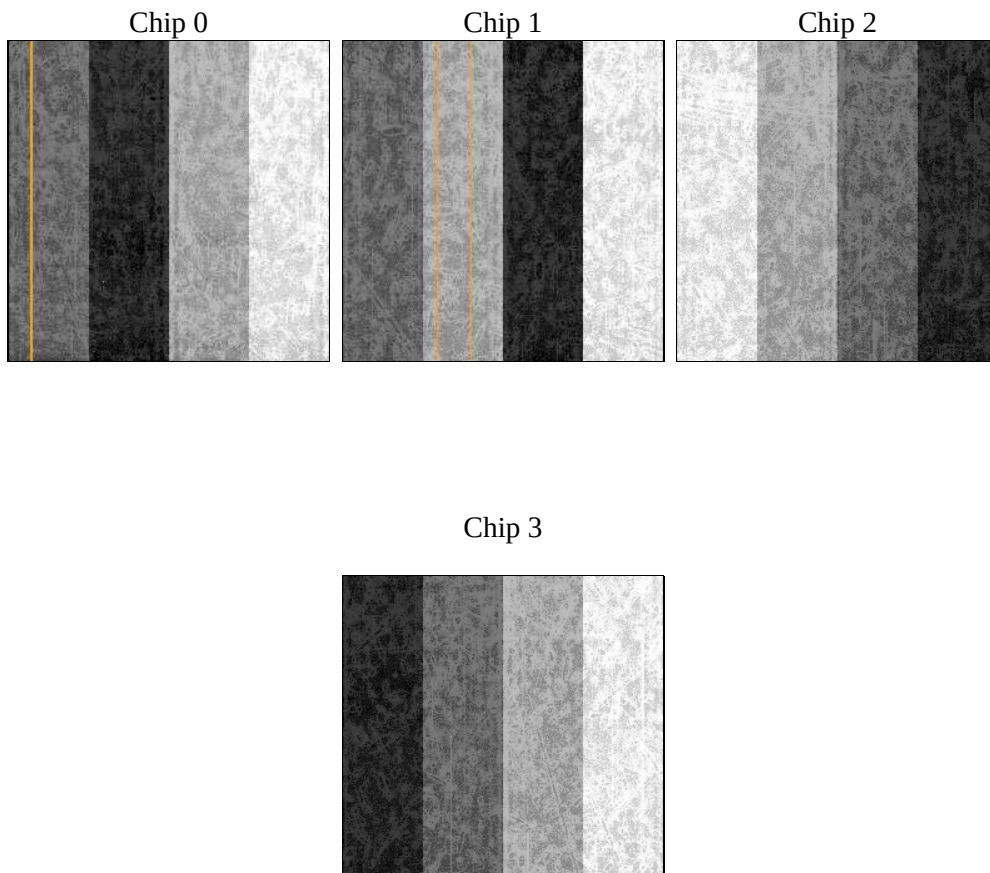
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	29500.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	29573.755078673	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	29570.490888834	Sum of GTIs [s]
date	2019-01-10T17:41:39	Date and time of file creation	ontime1	29576.813969016	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	29573.713978767	Sum of GTIs [s]
			ontime3	29573.755078673	Sum of GTIs [s]
			l1events	853490	Number of level 1 events

2.1.4 Events

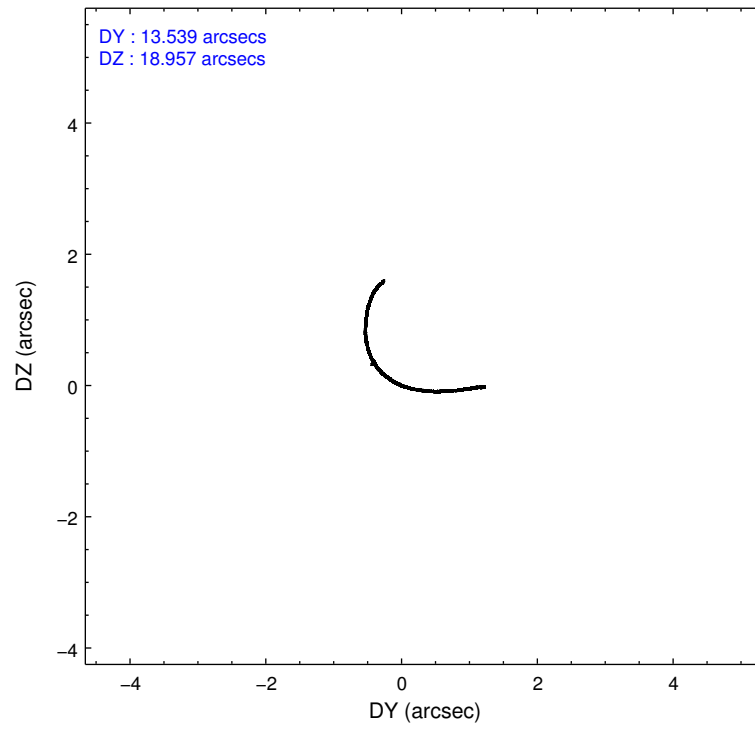
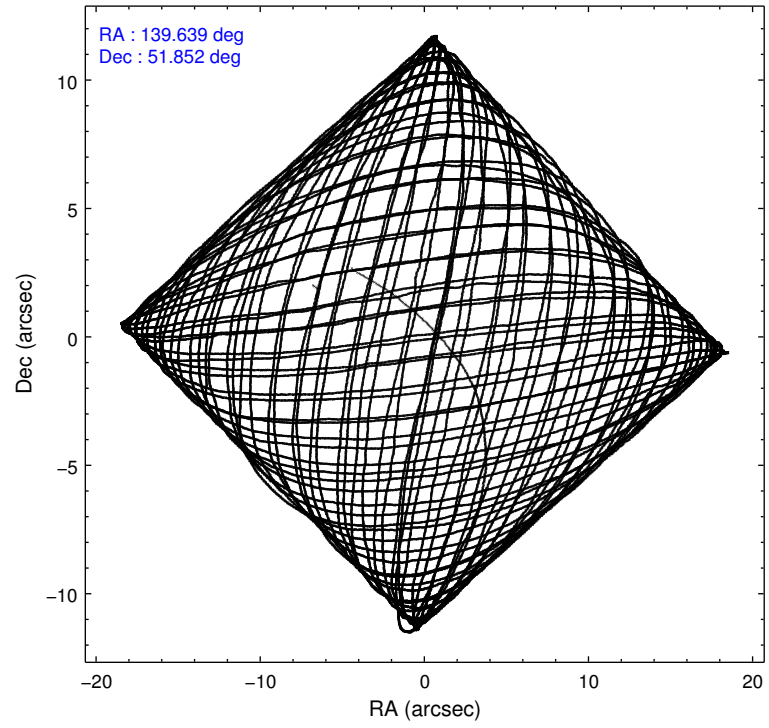
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	202719	206980	227062	216729
rejected events	178739	176331	200186	192856
rejected %	88%	85%	88%	88%

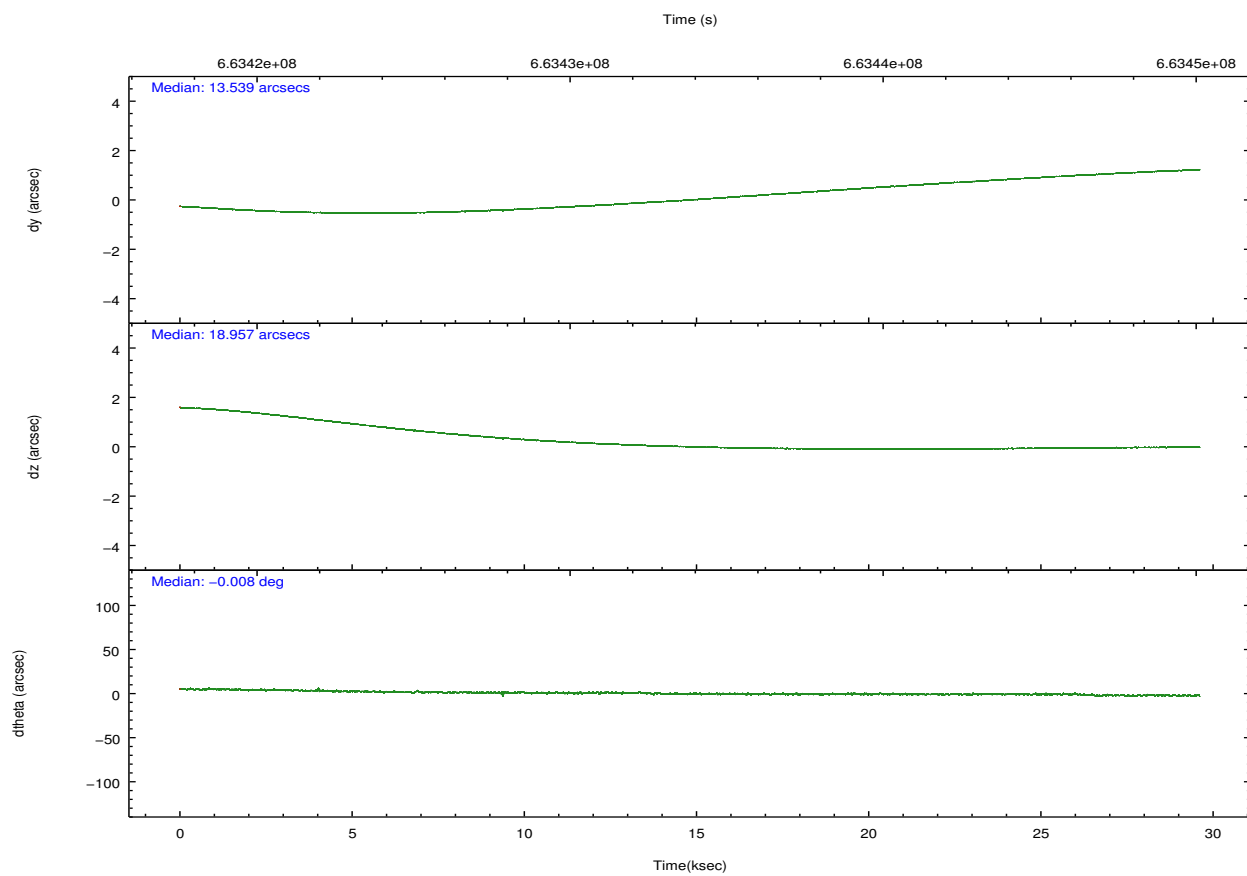
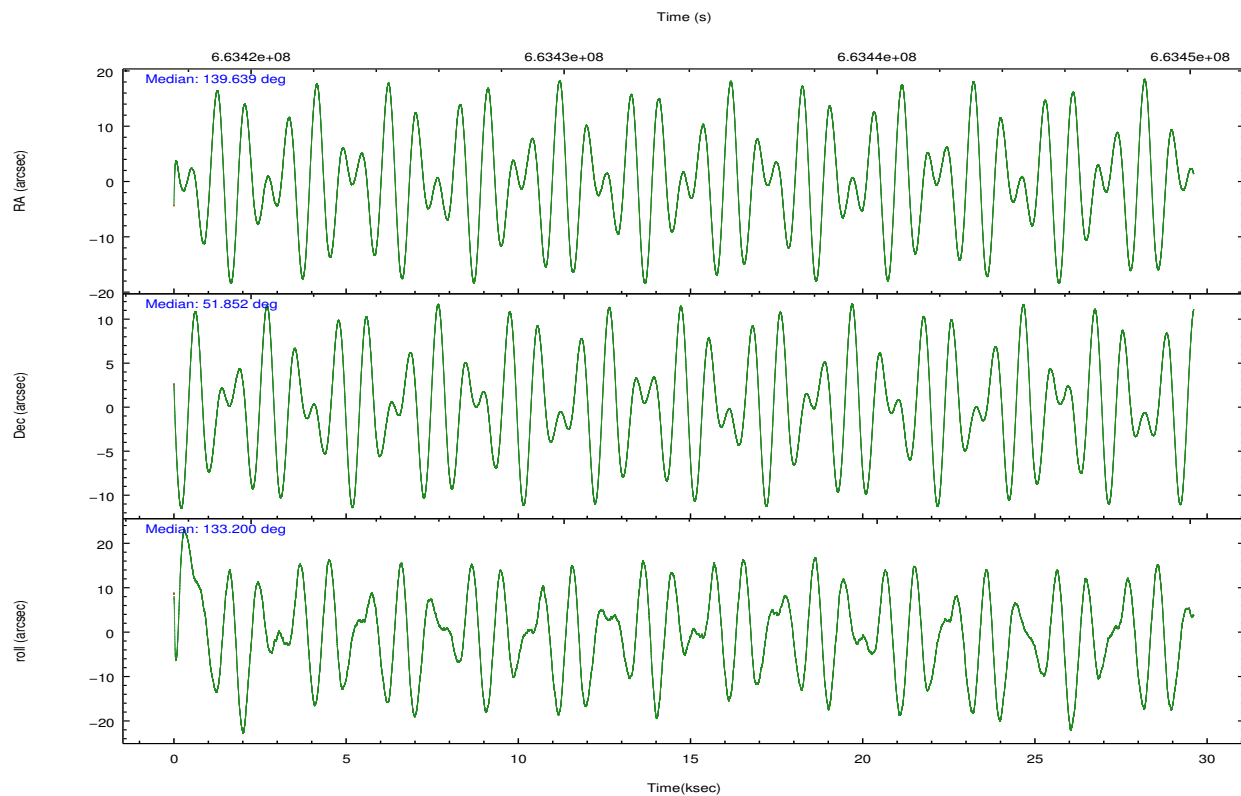
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	7881	12661	11728	8833
	3%	6%	5%	4%
grade 1 events	99	129	142	118
	0%	0%	0%	0%
grade 2 events	6022	6776	5707	5062
	2%	3%	2%	2%
grade 3 events	2483	2448	2347	2446
	1%	1%	1%	1%
grade 4 events	2270	2458	2362	2481
	1%	1%	1%	1%
grade 5 events	9281	9408	8557	10256
	4%	4%	3%	4%
grade 6 events	5329	6313	4742	5057
	2%	3%	2%	2%
grade 7 events	169354	166787	191477	182476
	83%	80%	84%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	139.681739	139.6389256180898	CCD I2 on	Y	Y
[deg] Pointing Dec	51.843795	51.85166525615843	CCD I3 on	Y	Y
[deg] Pointing Roll	132.974711	133.2170710301959	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	N
[mm] SIM translation stage pos	-233.592463	-233.5874344608287	CCD S3 on	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	663419143.184000	663417899.94322	CCD S5 on	N	N
Observation start date	2019-01-09T11:04:34	2019-01-09T10:44:59	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	663448643.184000	663449618.57011	On-chip summing requested	N	N
Observation end date	2019-01-09T19:16:14	2019-01-09T19:33:38	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



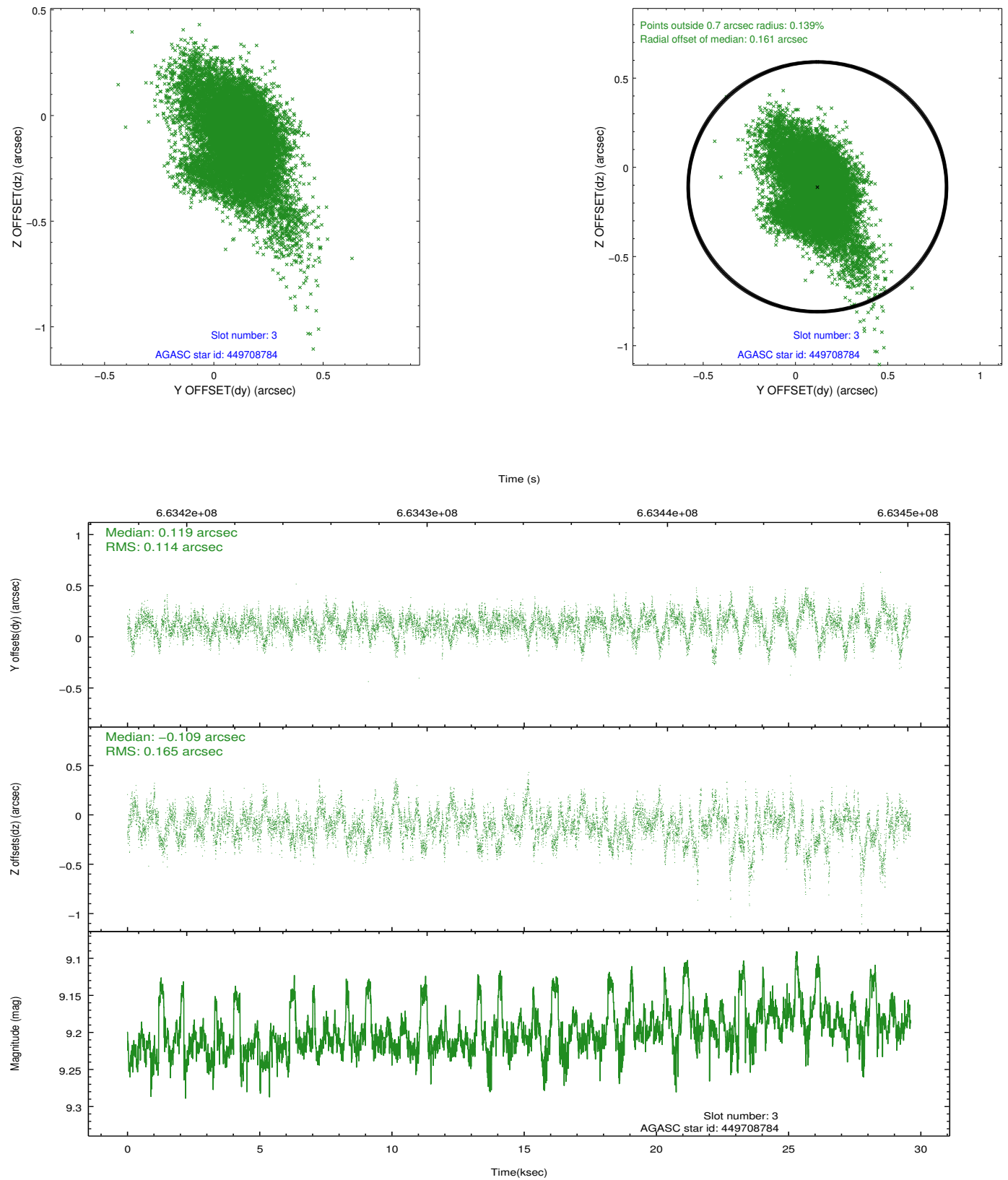


Slot Statistics

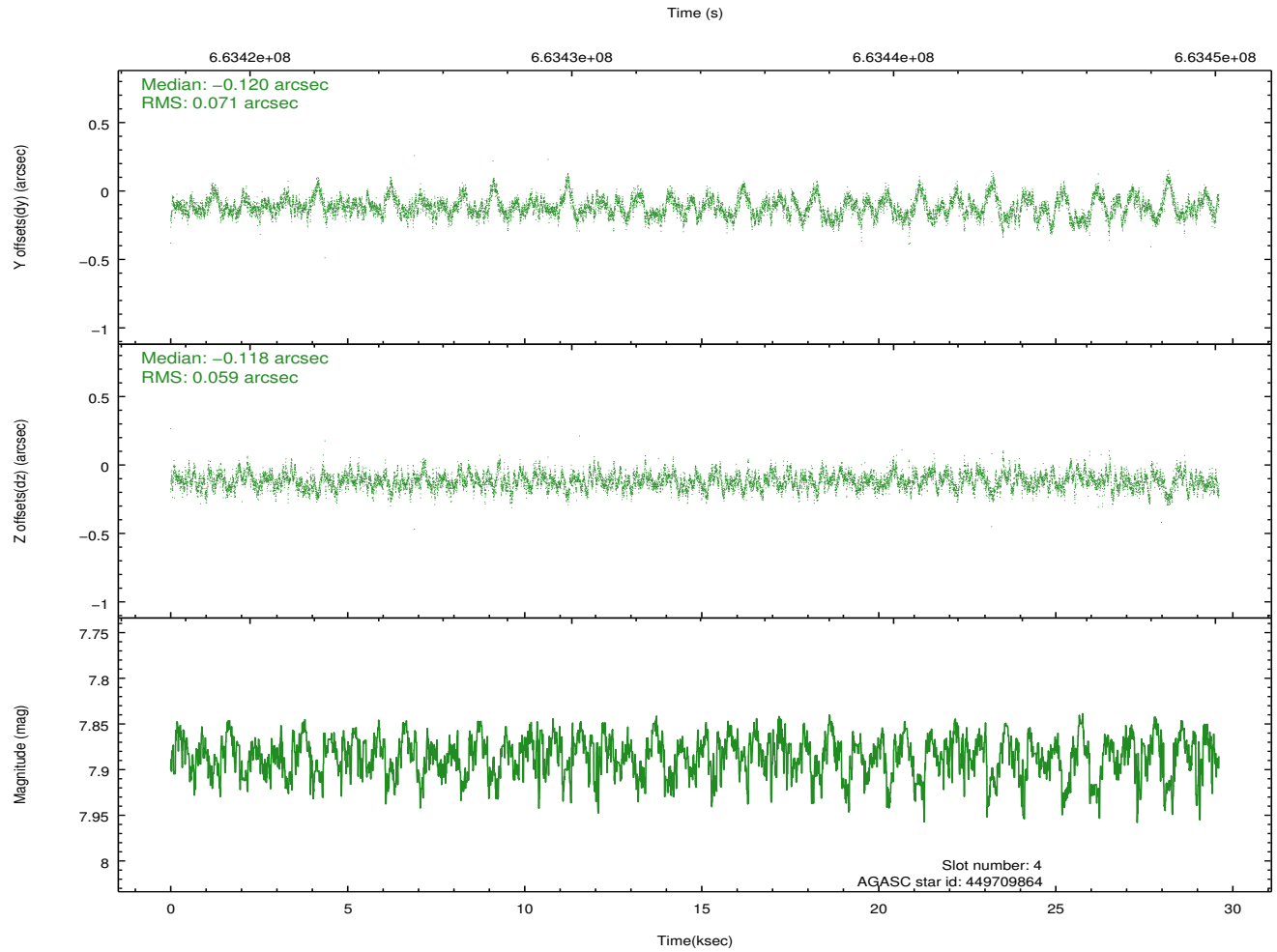
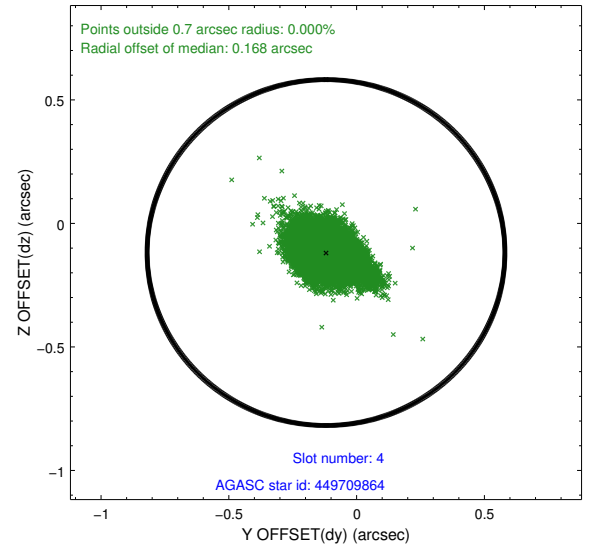
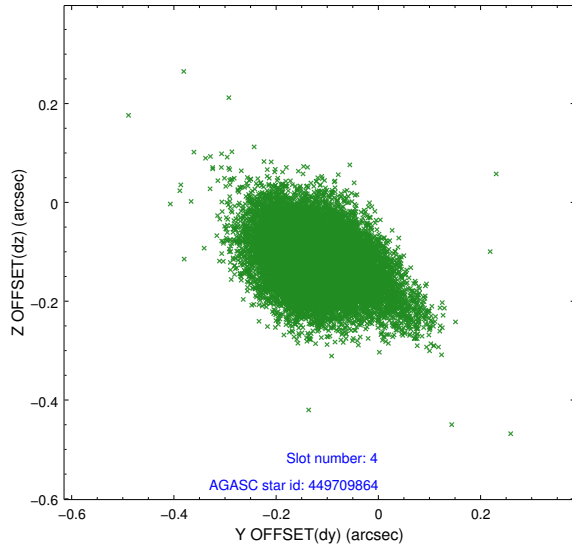
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.24	7223	1.000	0.075	-0.054	0.018	0.073	0.000000	0.000000	925.98	-842
1	FID		ACIS-I-5	7.23	7222	1.000	-0.483	-0.006	0.017	0.030	0.000000	0.000000	-1822.84	1054
2	FID		ACIS-I-6	7.24	7223	1.000	0.315	0.132	0.022	0.045	0.000000	0.000000	391.42	1699
3	GUIDE	used	449708784	9.20	14427	1.000	0.119	-0.109	0.200	0.374	139.281247	51.322176	-757.48	1938
4	GUIDE	used	449709864	7.88	14441	1.000	-0.120	-0.118	0.095	0.162	139.601682	51.402076	-1041.12	1215
5	GUIDE	used	449709968	6.99	14444	1.000	-0.050	0.218	0.127	0.210	140.122718	52.450980	942.86	-2199
6	GUIDE	used	449712984	8.73	14430	1.000	0.144	0.038	0.150	0.236	139.803051	51.633381	-738.69	317
7	GUIDE	used	449708792	9.35	14384	1.000	-0.092	-0.034	0.226	0.414	139.724660	52.475322	1599.87	-1617

2.4 Star Slots

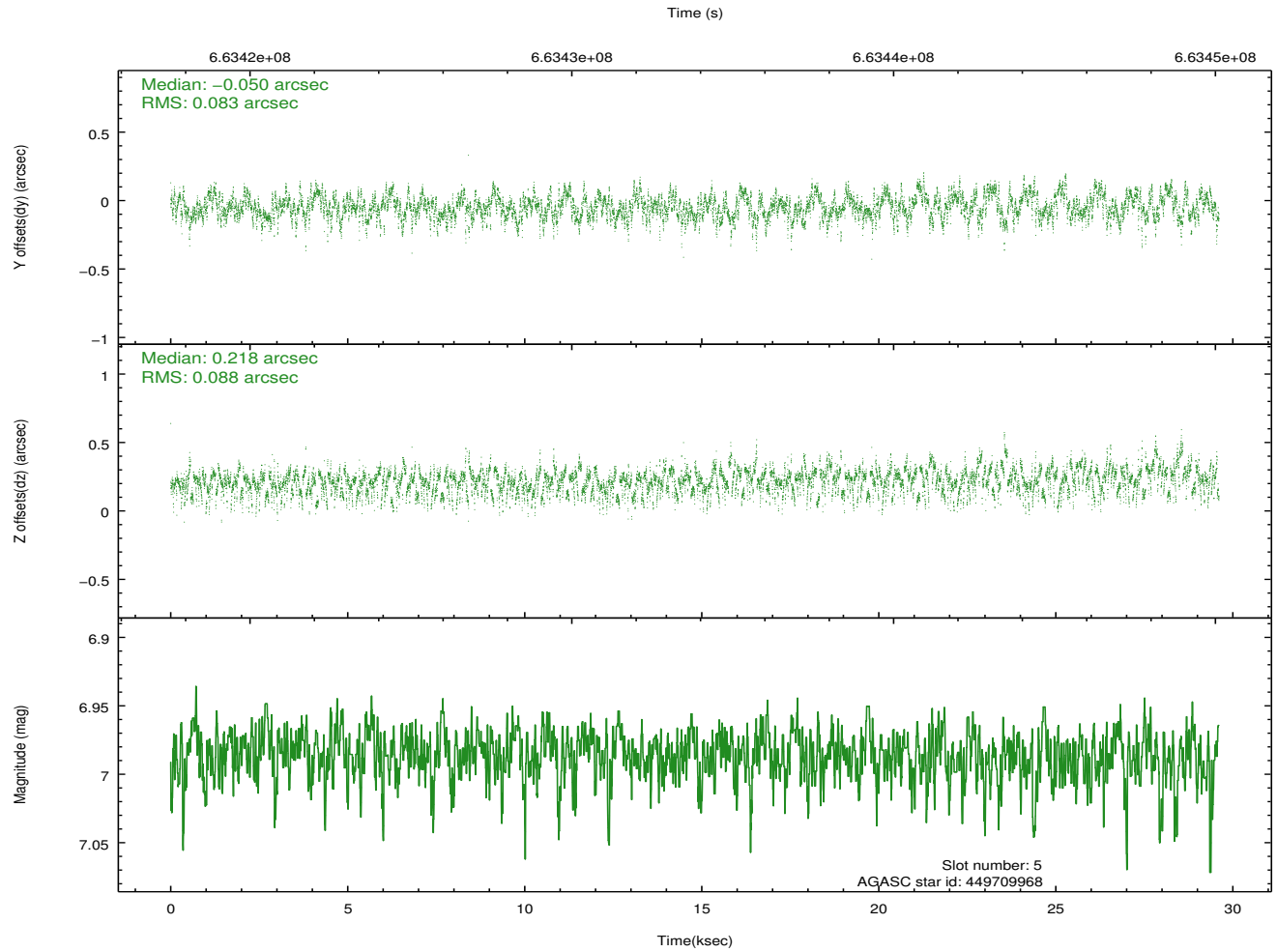
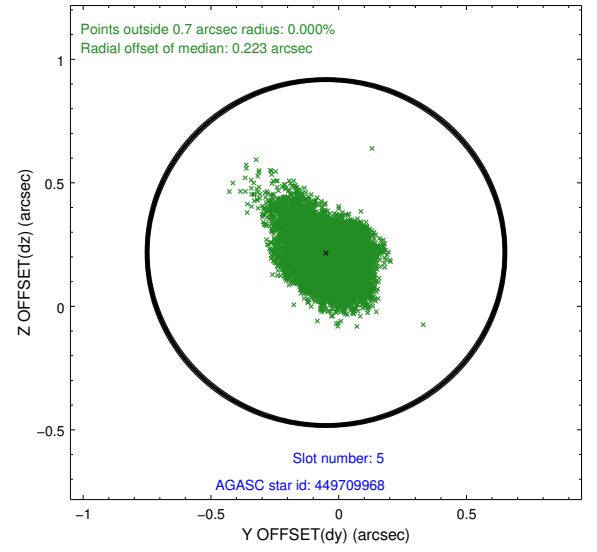
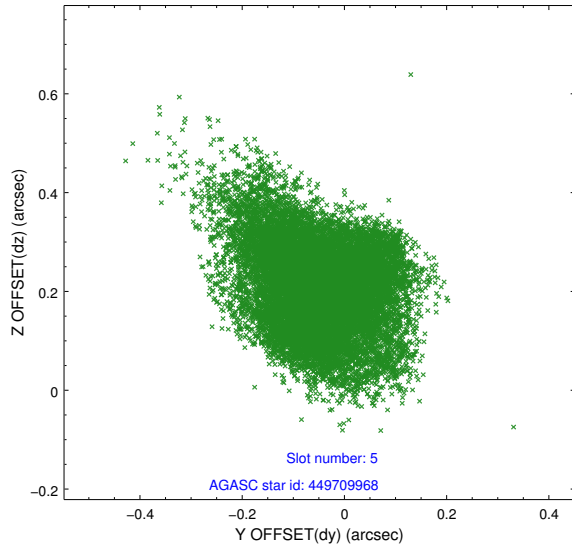
2.4.1 Slot 3



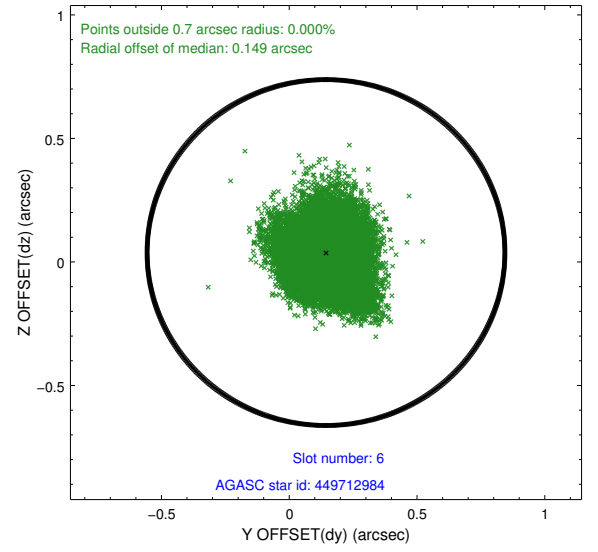
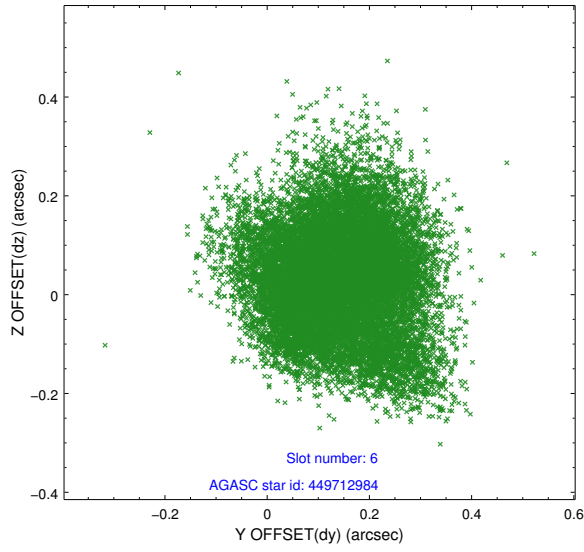
2.4.2 Slot 4



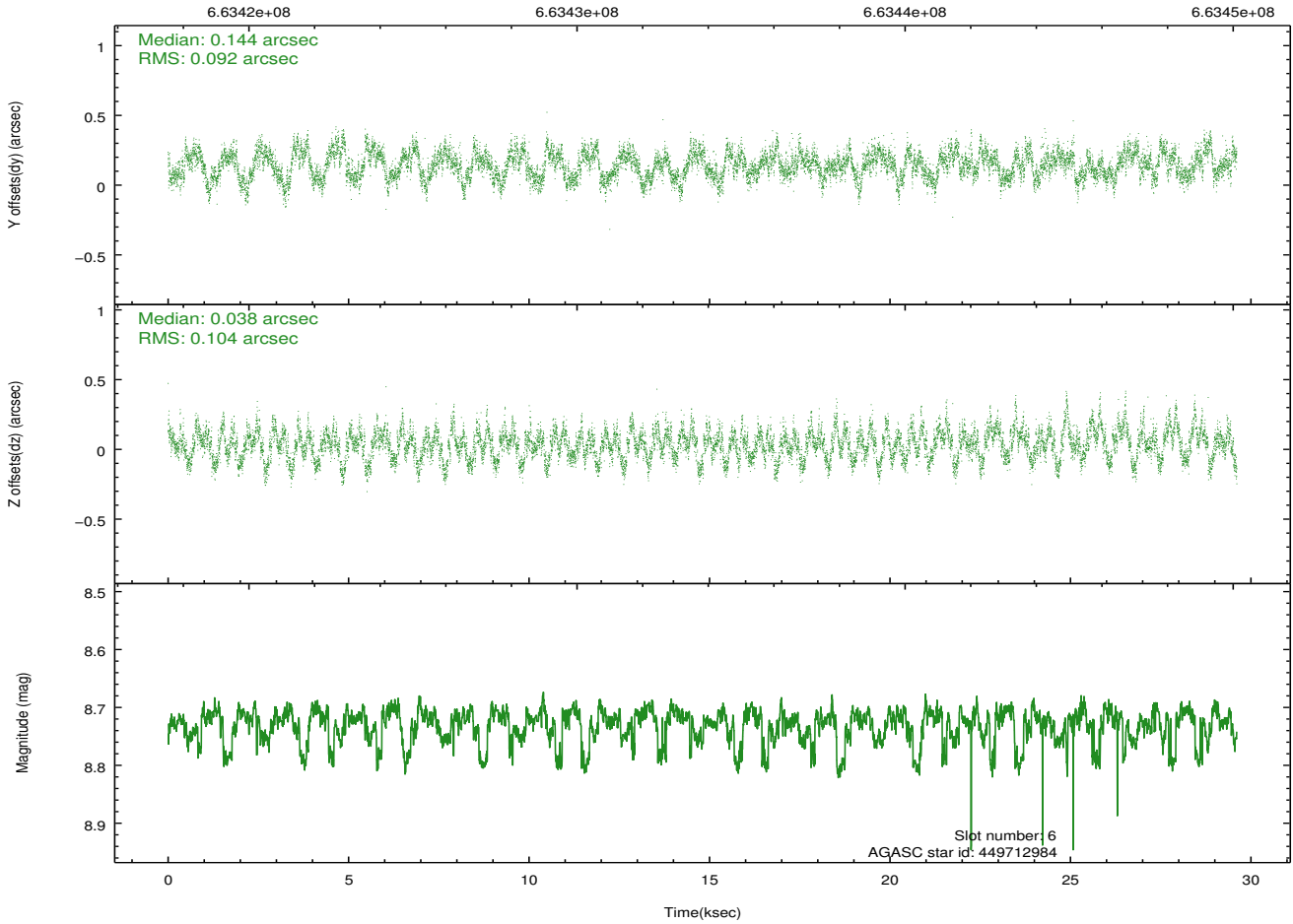
2.4.3 Slot 5



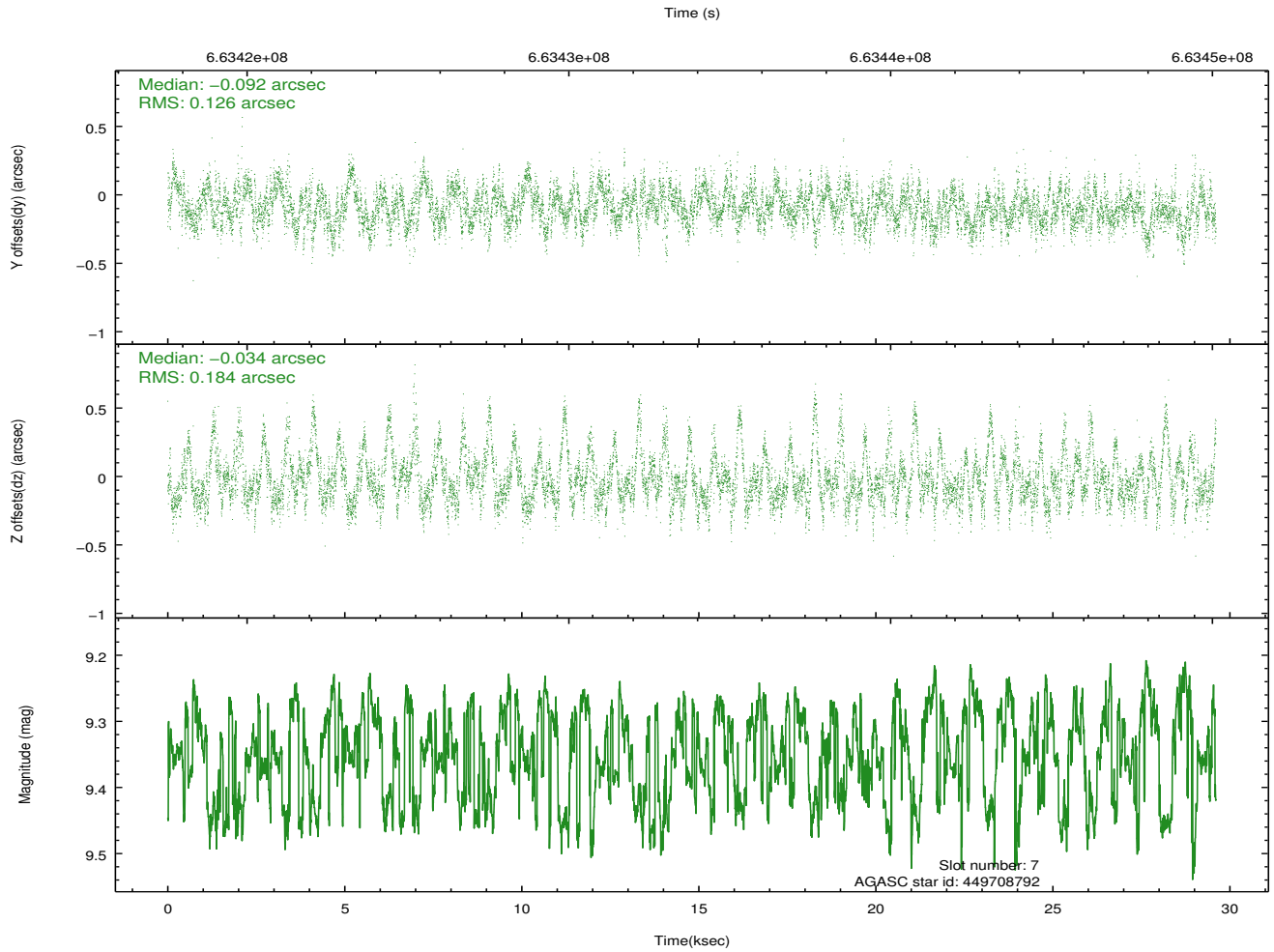
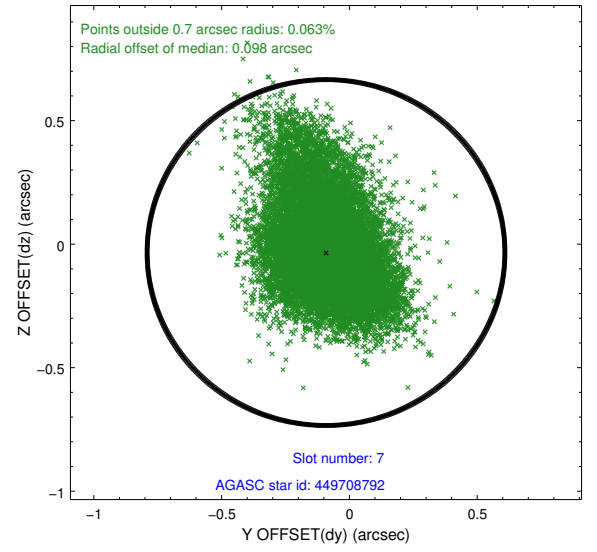
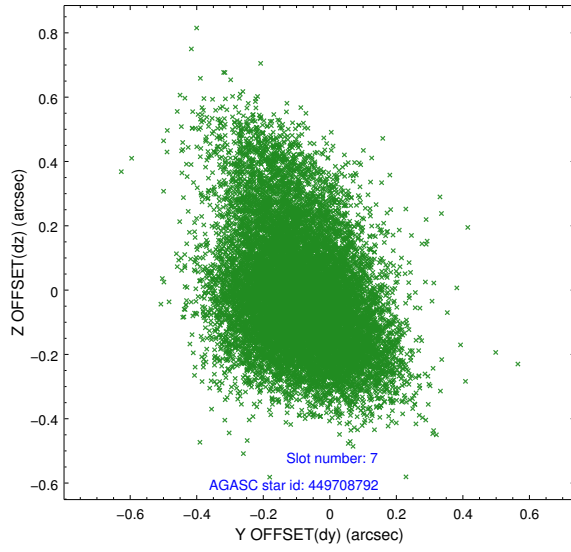
2.4.4 Slot 6



Time (s)

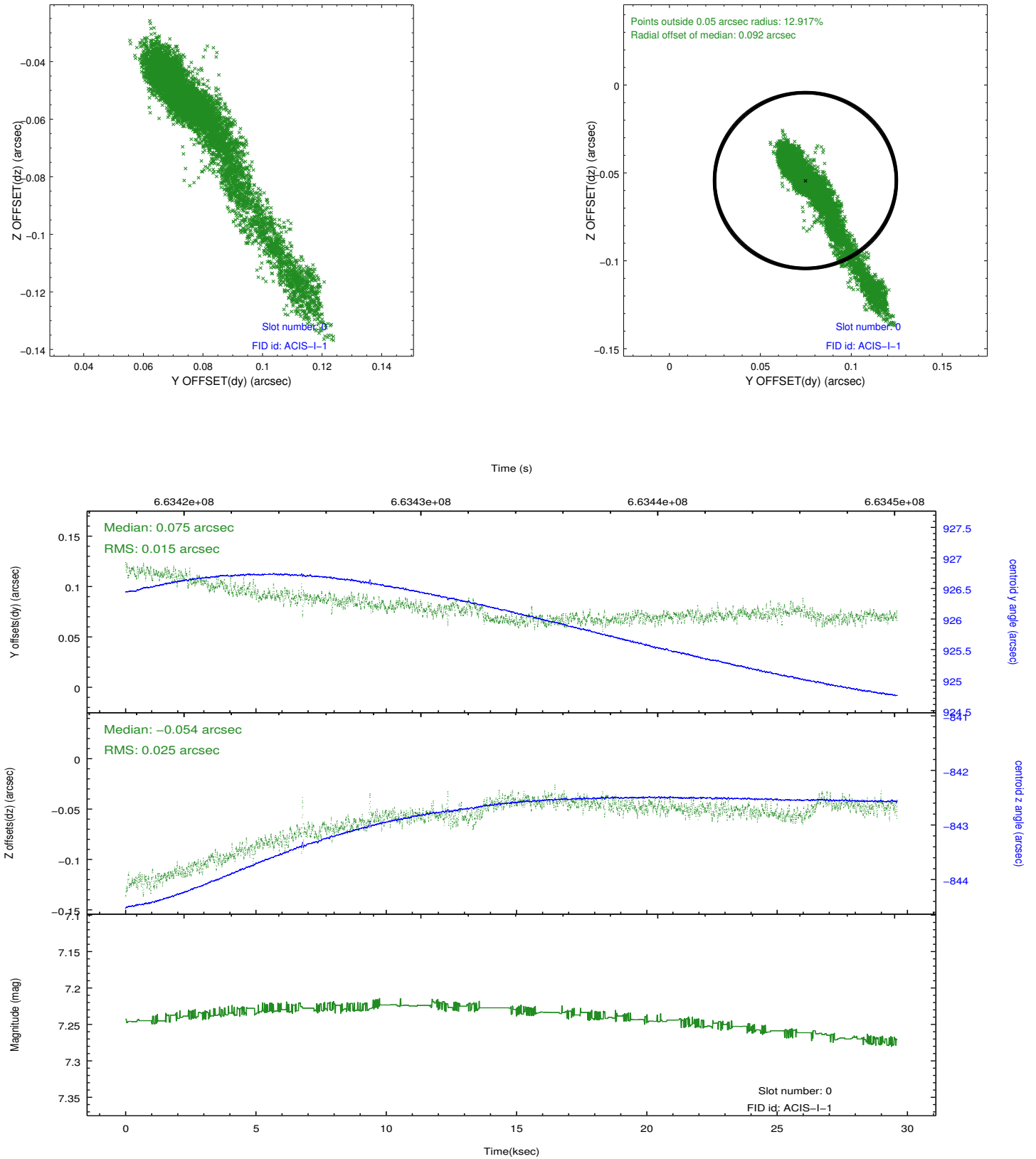


2.4.5 Slot 7

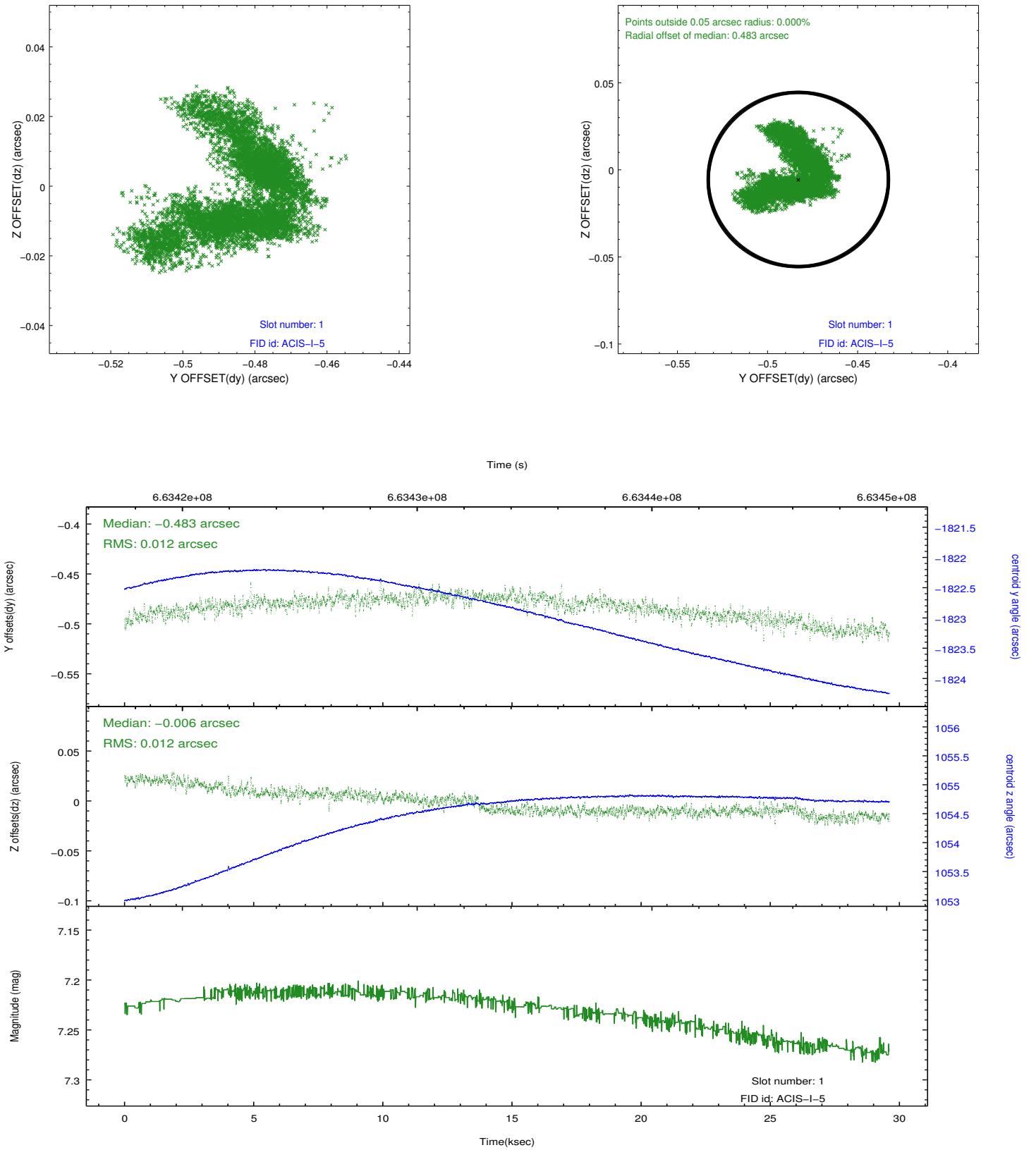


2.5 FID Slots

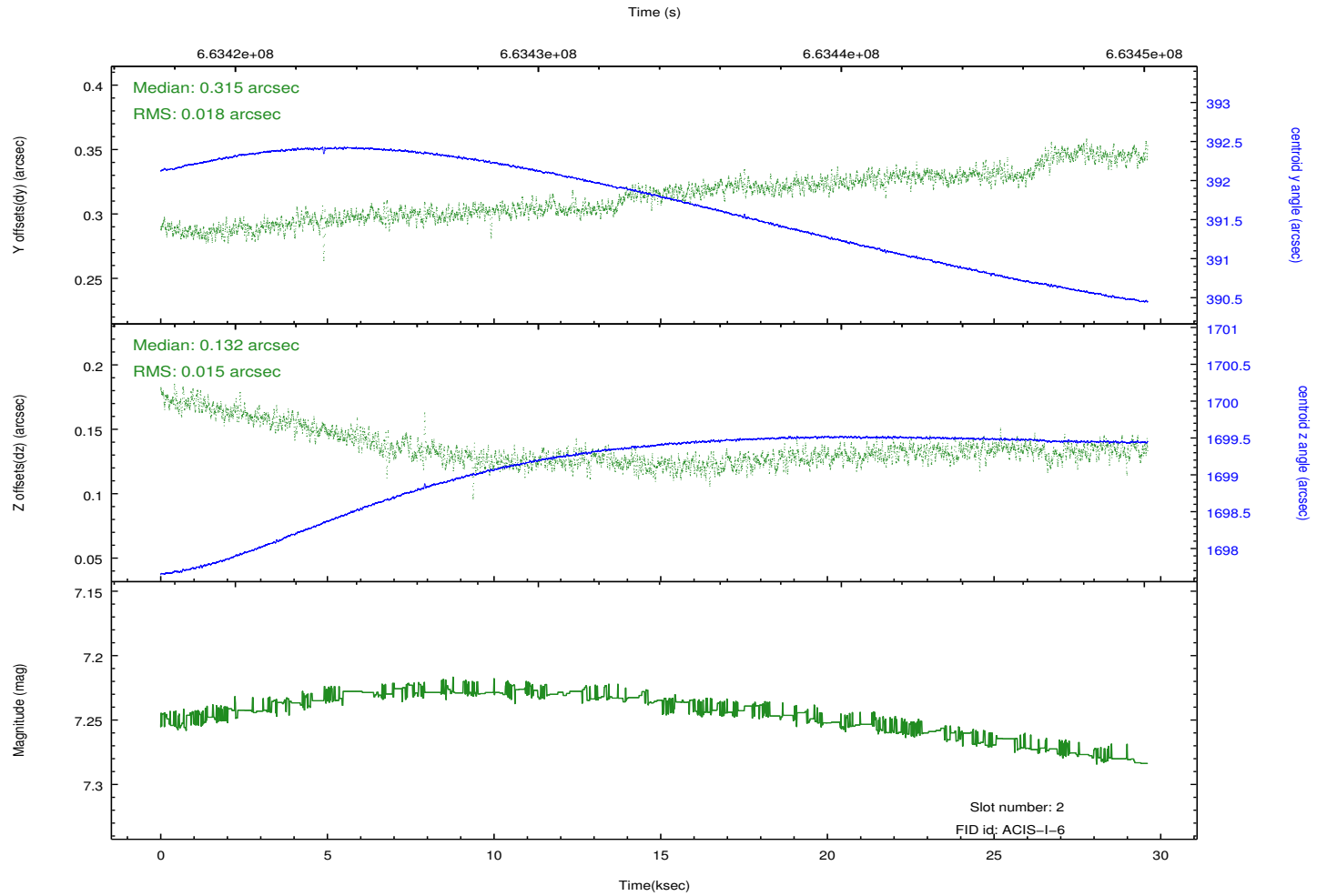
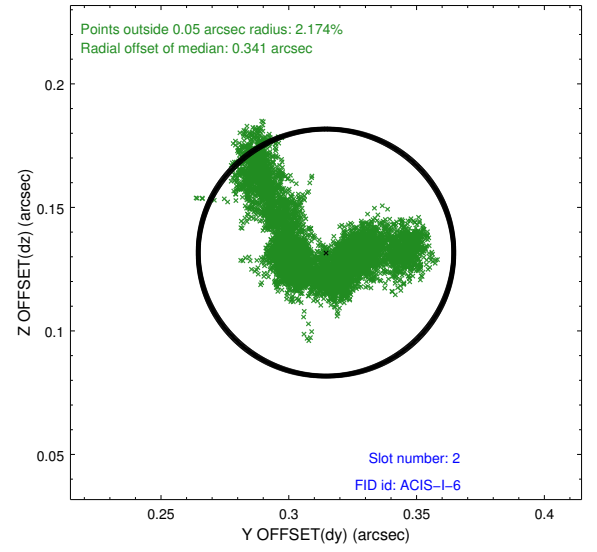
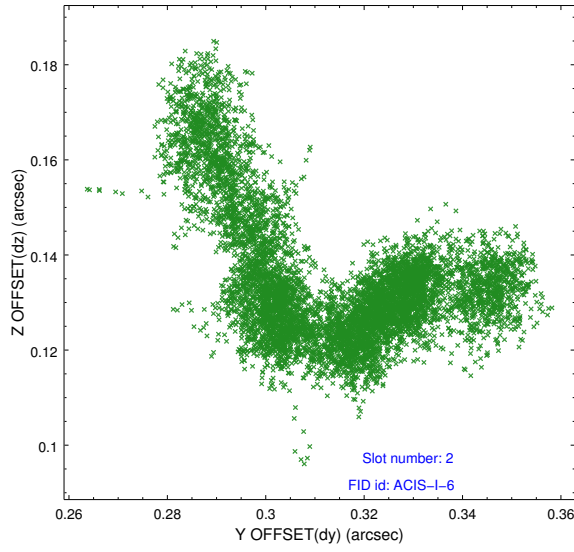
2.5.1 Slot 0



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)	2019.01.10
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	29.573755078673

A.2 Comments

One optional chip was dropped.

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: (139.68831,51.99859), (139.68362,51.99590), (139.76111,51.94497), (139.76792,51.94628).