

V&V Reference Report

L2 ASCDS Version : 10.5

Observation 17716 - L2 Version 2
Chandra X-Ray Center

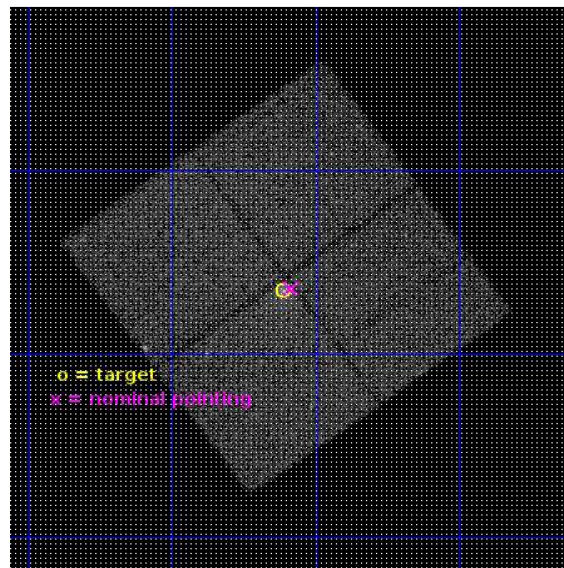
L2 Processing Date : Jun 17 2016

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1 Front

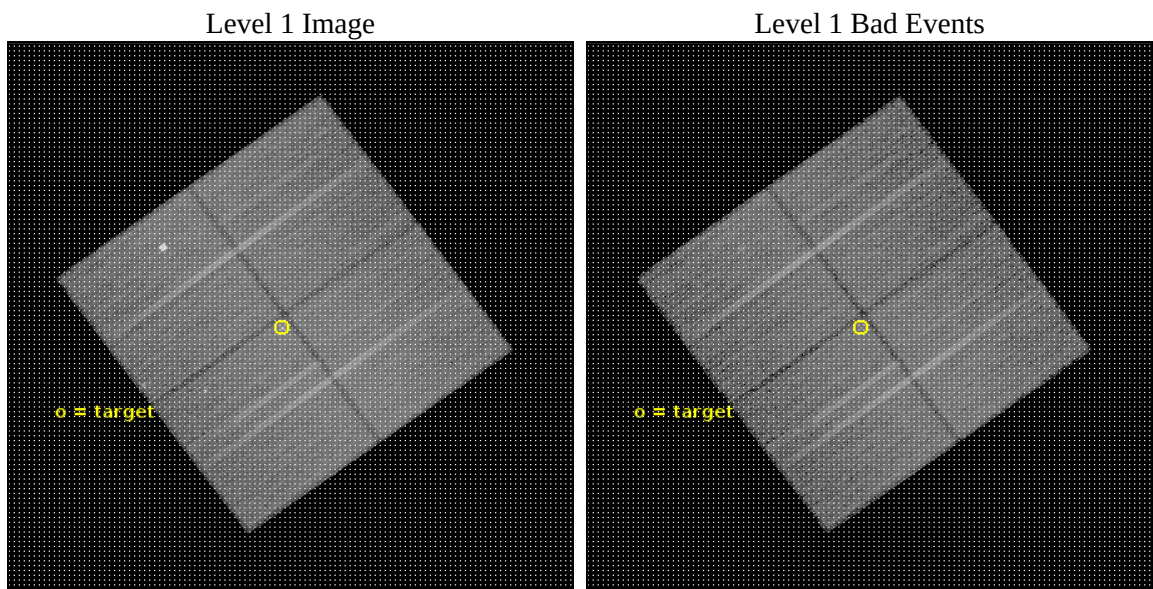
seq_num	201028	Sequence number
obs_id	17716	Observation id
title	Into the Maelstrom of W43	Proposal title
observer	Leisa Townsley	Principal investigator
object	W43-Main	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	281.902917	Observer's specified target RA [deg]
dec_targ	-1.942639	Observer's specified target Dec [deg]
ra_nom	281.89586891321	Nominal RA [deg]
dec_nom	-1.9406945795569	Nominal Dec [deg]
roll_nom	144.20845482811	Nominal Roll [deg]
revision	2	Processing version of data
ontime	44077.806473494	Sum of GTIs [s]
livetime	43501.897482308	Livetime [s]
ontime0	44074.542293429	Sum of GTIs [s]
ontime1	44074.583323121	Sum of GTIs [s]
ontime2	44074.624442816	Sum of GTIs [s]
ontime3	44077.806473494	Sum of GTIs [s]
l2events	103933	Number of level 2 events



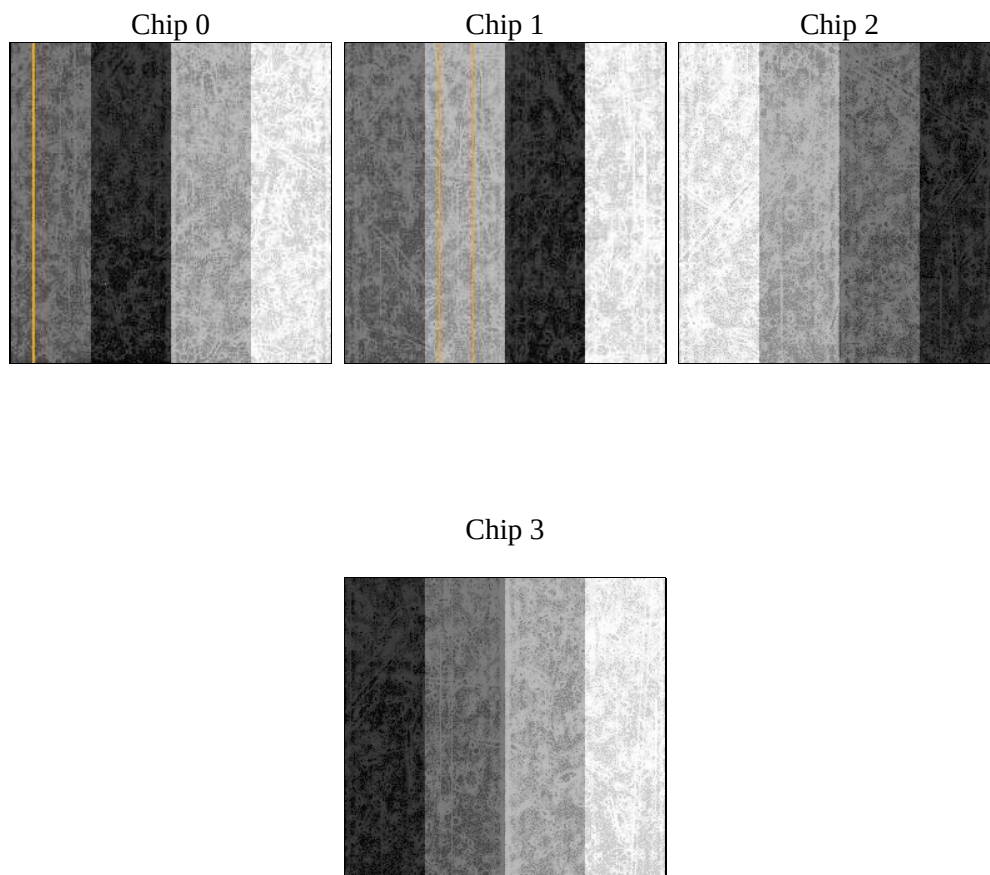
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	44000.000000	[s] Scheduled observation exposure time
ascdsver	10.5	Processing system revision	ontime	44077.806473494	Sum of GTIs [s]
caldsver	4.7.2	 	ontime0	44074.542293429	Sum of GTIs [s]
date	2016-06-17T19:19:43	Date and time of file creation	ontime1	44074.583323121	Sum of GTIs [s]
revision	2	Processing version of data	ontime2	44074.624442816	Sum of GTIs [s]
			ontime3	44077.806473494	Sum of GTIs [s]
			l1events	1033248	Number of level 1 events

2.1.4 Events

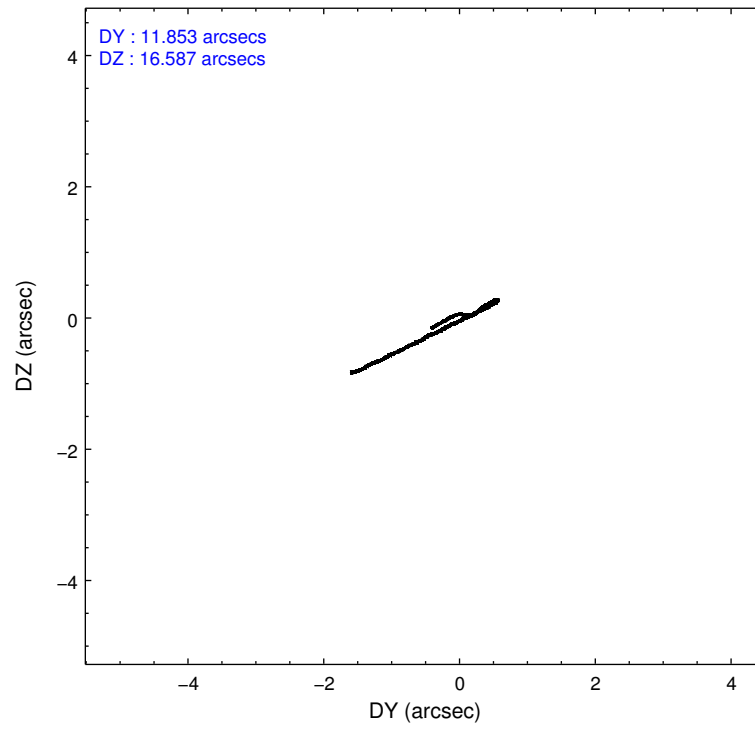
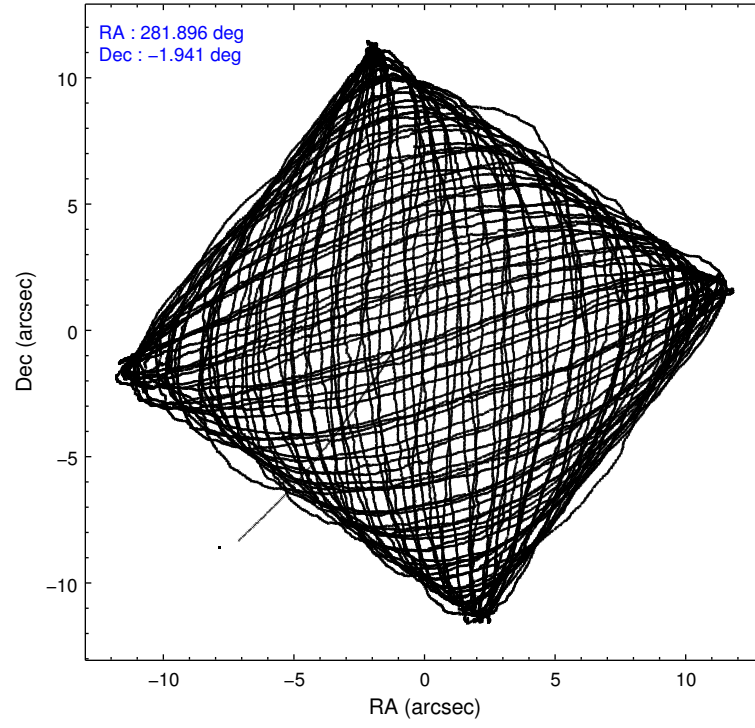
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	238367	259099	271686	264096
rejected events	208516	214875	242632	230941
rejected %	87%	82%	89%	87%

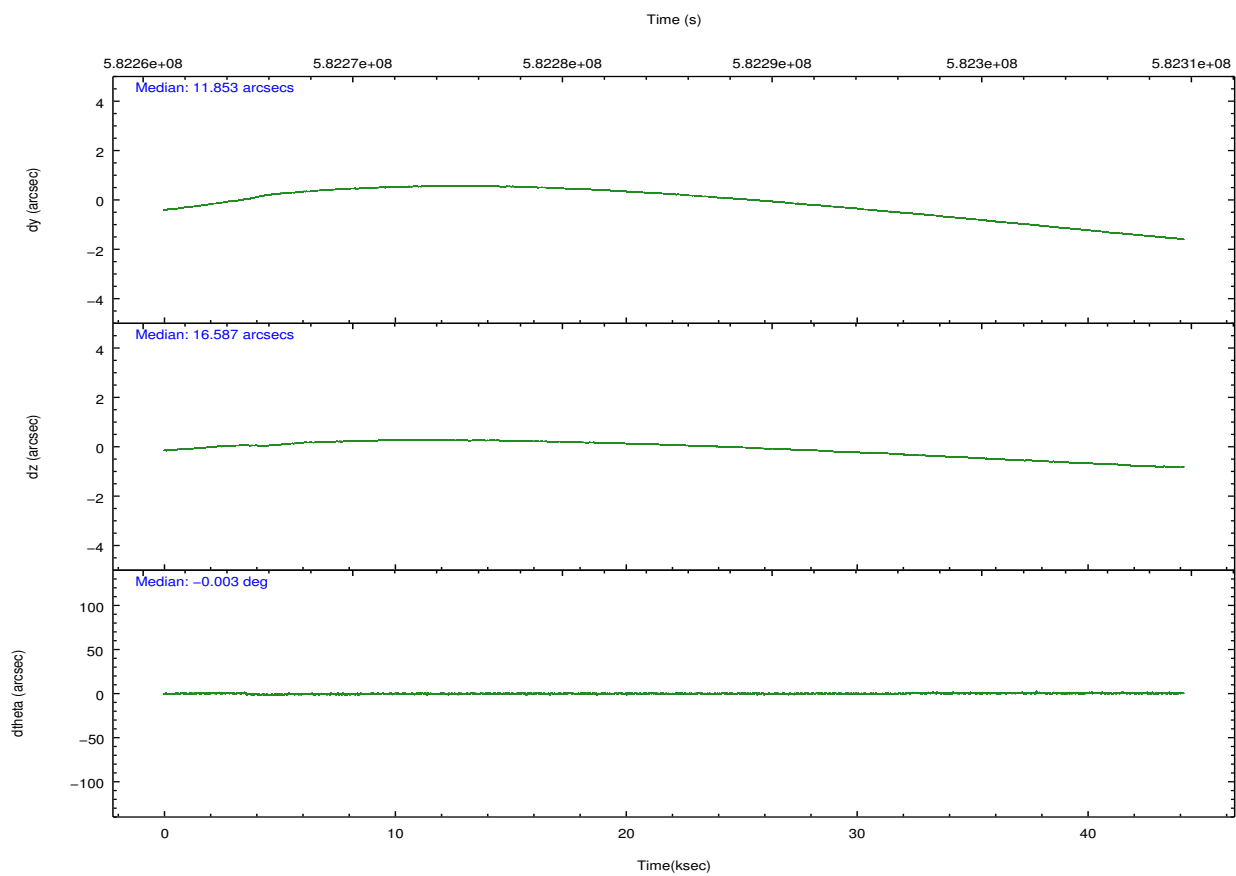
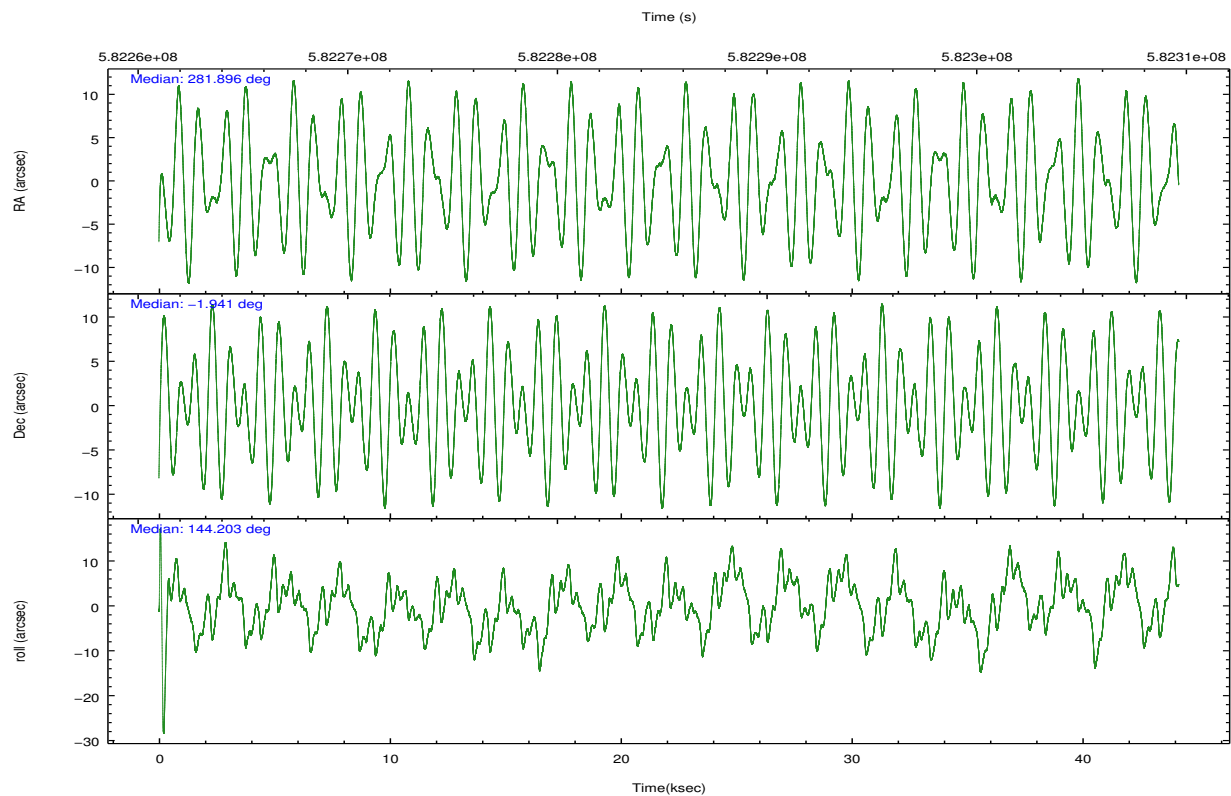
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	11053	23843	11354	14350
	4%	9%	4%	5%
grade 1 events	145	216	185	226
	0%	0%	0%	0%
grade 2 events	7323	7410	6765	6753
	3%	2%	2%	2%
grade 3 events	3002	3062	2818	3155
	1%	1%	1%	1%
grade 4 events	2761	3081	2864	3140
	1%	1%	1%	1%
grade 5 events	9270	10098	8789	11086
	3%	3%	3%	4%
grade 6 events	5713	6833	5254	5759
	2%	2%	1%	2%
grade 7 events	199100	204556	233657	219627
	83%	78%	86%	83%

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	281.923355	281.8958689132086	CCD I2 on	Y	Y
[deg] Pointing Dec	-1.943379	-1.940694579556884	CCD I3 on	Y	Y
[deg] Pointing Roll	144.000690	144.2084548281132	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	O2	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	582263373.184000	582262476.6643	CCD S5 on	N	N
Observation start date	2016-06-14T03:48:25	2016-06-14T03:34:36	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	582307373.184000	582308405.89193	On-chip summing requested	N	N
Observation end date	2016-06-14T16:01:45	2016-06-14T16:20:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



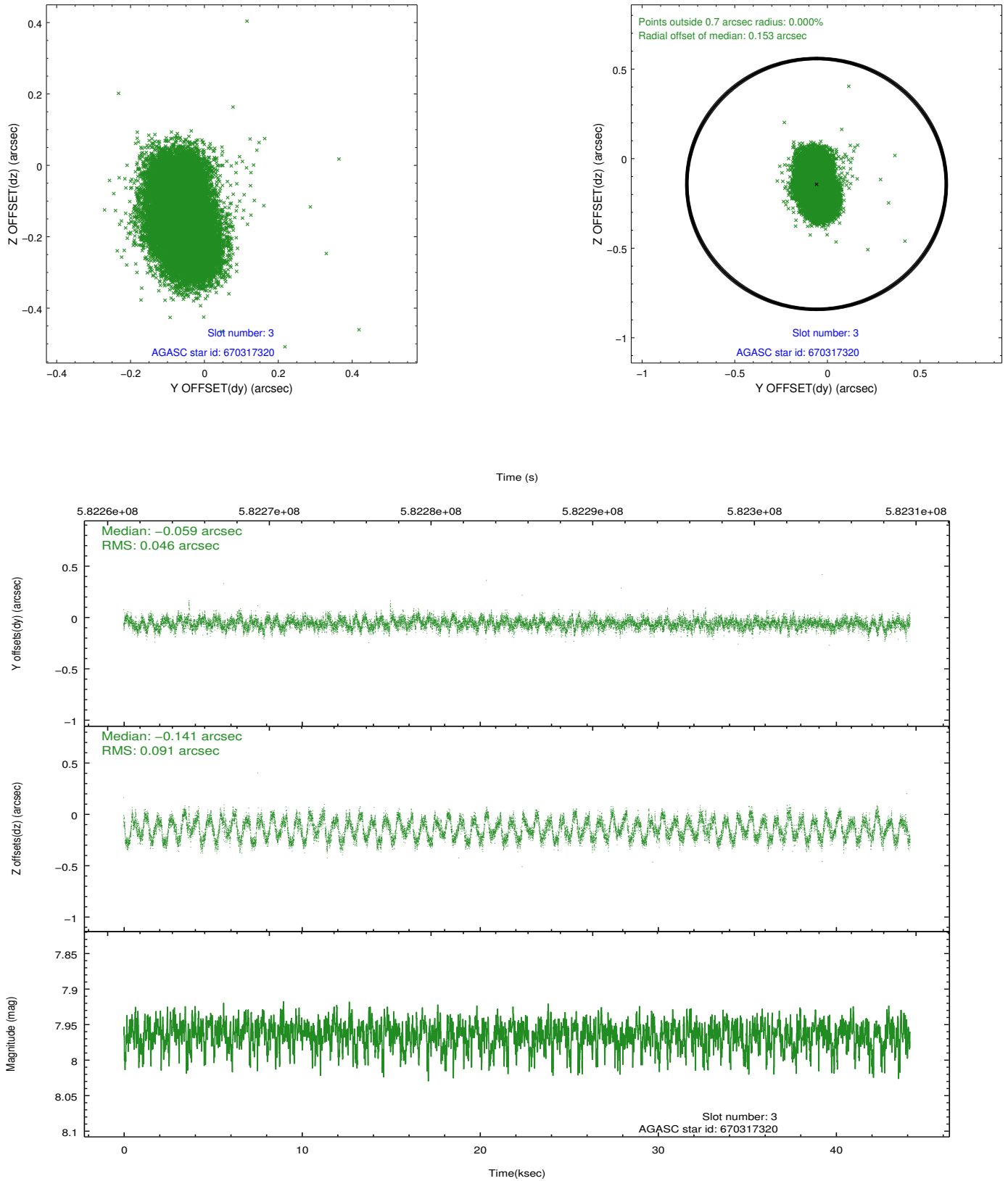


Slot Statistics

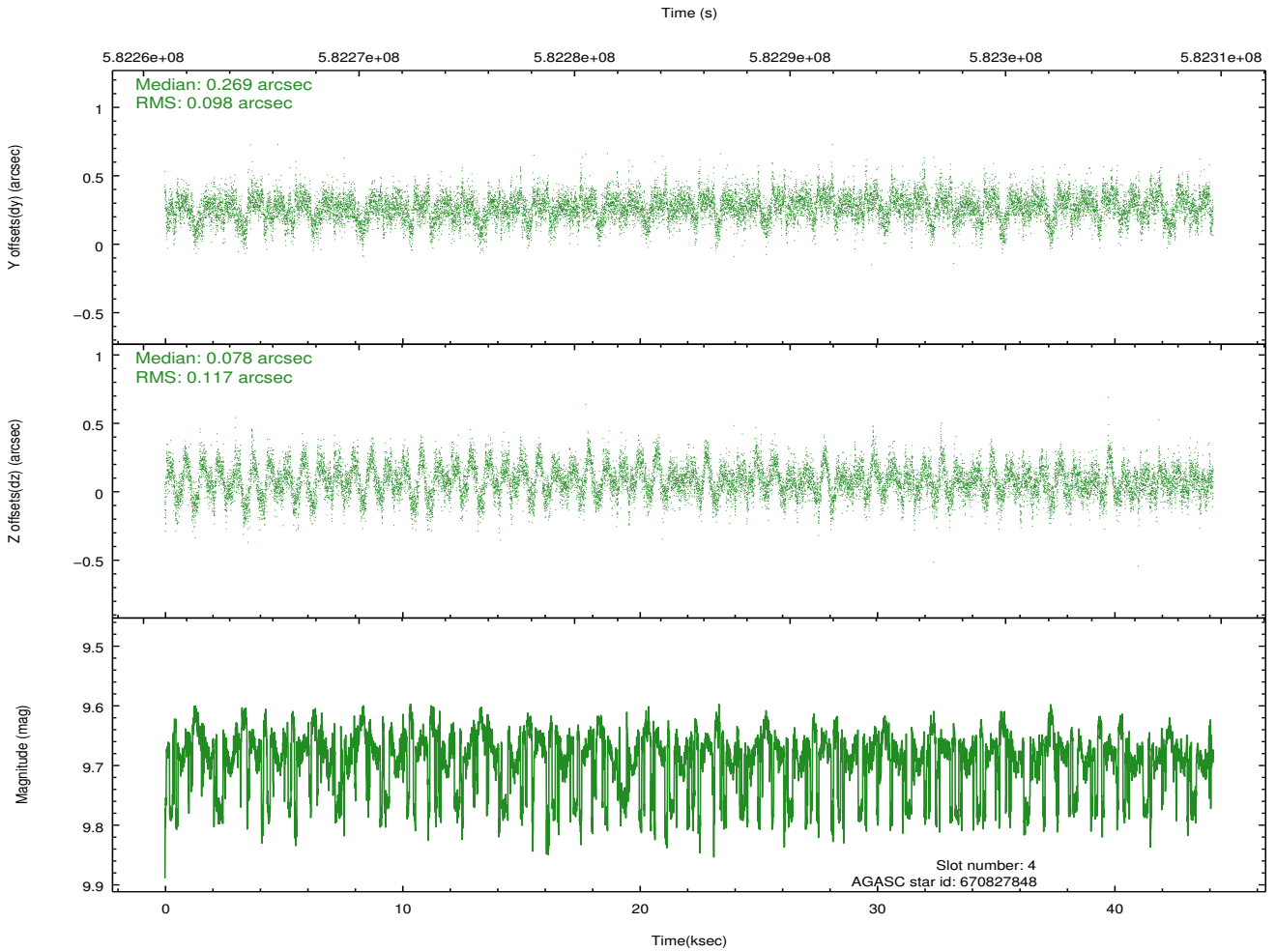
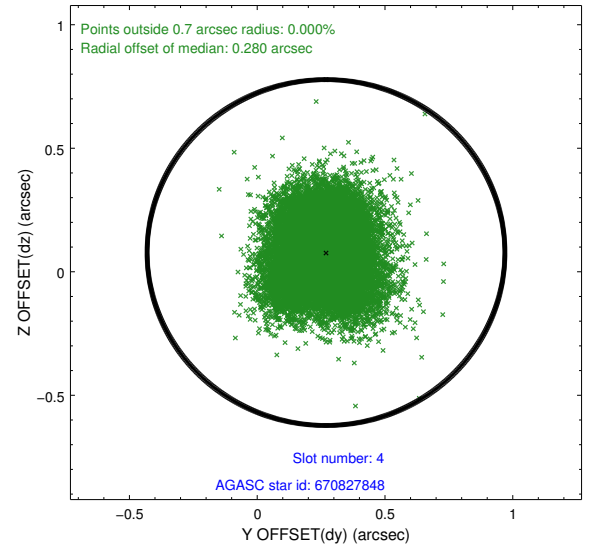
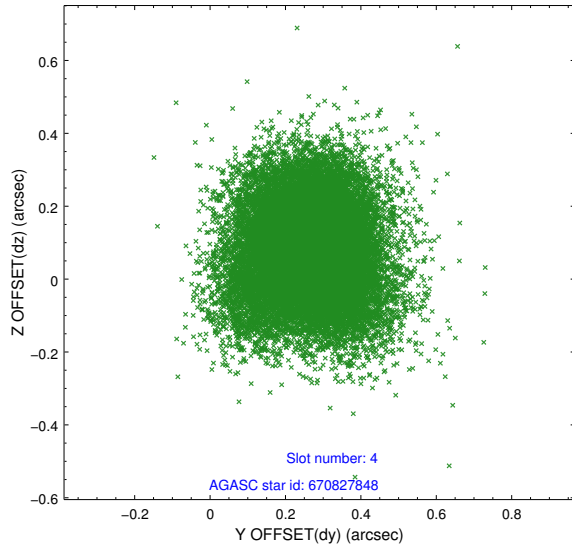
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.26	10772	0.089	-0.090	0.013	0.020	0.000000	0.000000	927.96	-840.20
1	FID		ACIS-I-5	7.25	10772	-0.306	0.053	0.008	0.013	0.000000	0.000000	-1820.58	1057.38
2	FID		ACIS-I-6	7.26	10771	0.126	0.107	0.014	0.022	0.000000	0.000000	393.49	1701.99
3	GUIDE	used	670317320	7.96	21538	-0.059	-0.141	0.111	0.168	281.764311	-1.843342	674.84	45.37
4	GUIDE	used	670827848	9.68	21506	0.269	0.078	0.161	0.269	282.233886	-2.502228	-2085.98	971.59
5	GUIDE	used	670829768	7.55	21544	0.050	0.102	0.097	0.152	281.927934	-2.010470	-155.08	186.28
6	GUIDE	used	670698280	9.40	21428	-0.276	-0.021	0.185	0.374	281.071617	-2.124861	2094.35	2330.91
7	GUIDE	used	670827280	9.36	21511	0.008	-0.017	0.128	0.205	281.434708	-1.976010	1353.23	1130.75

2.4 Star Slots

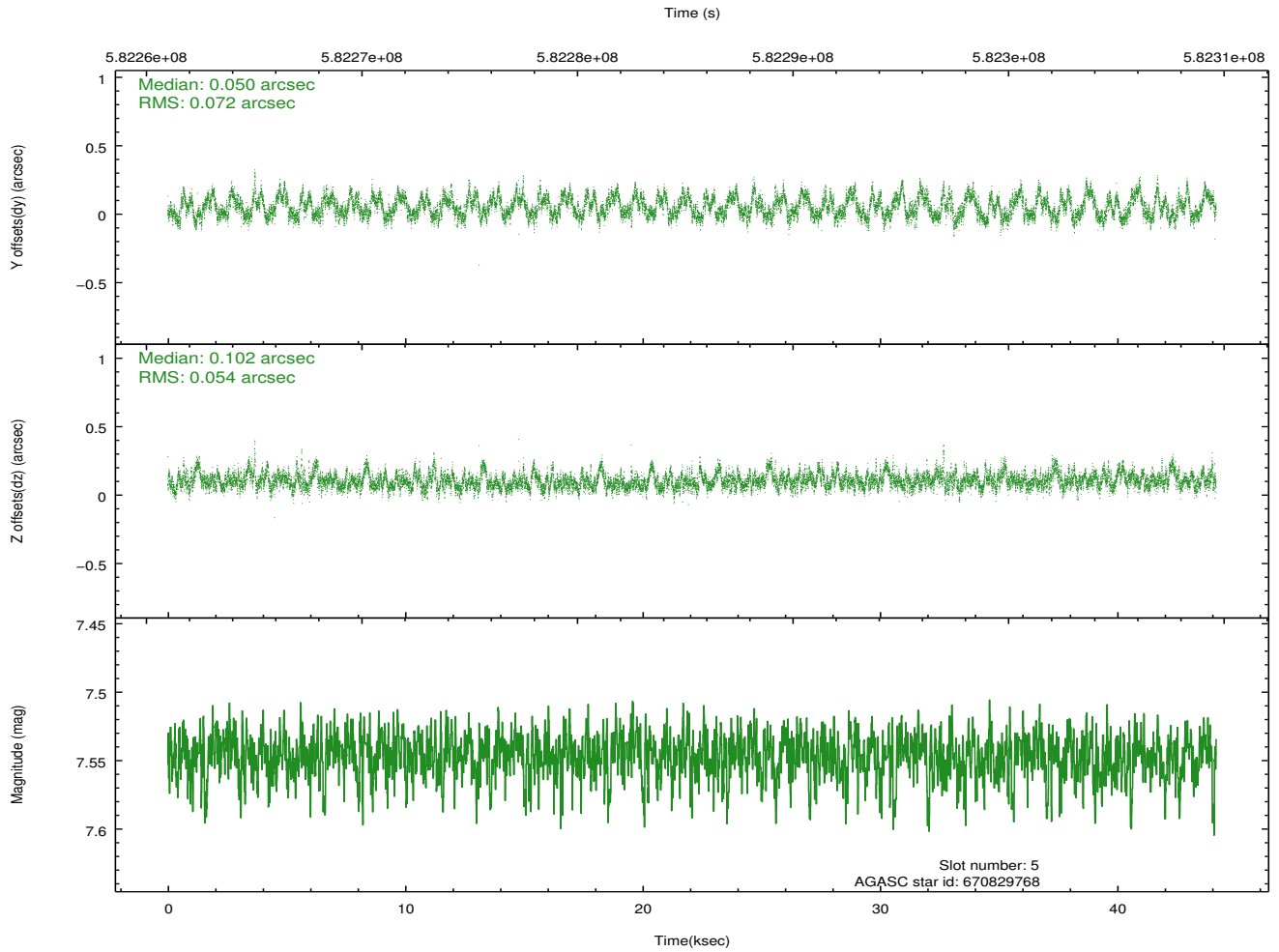
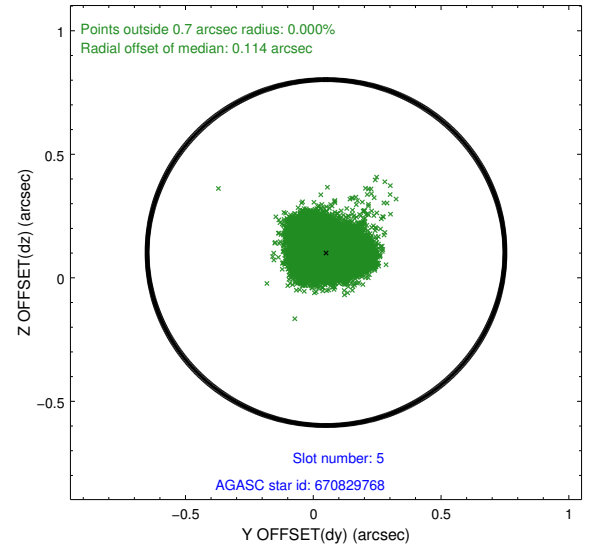
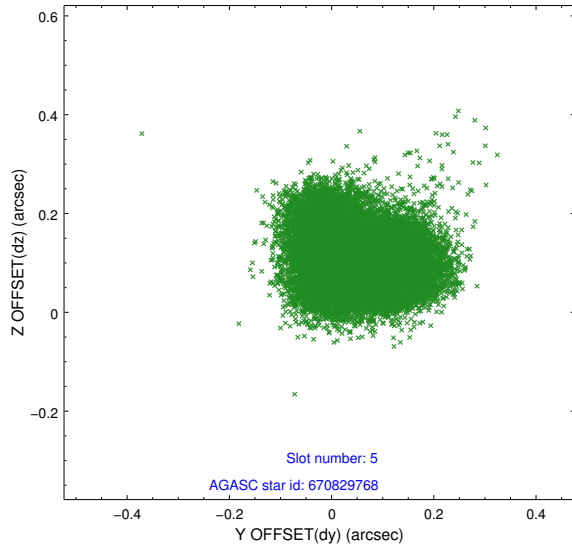
2.4.1 Slot 3



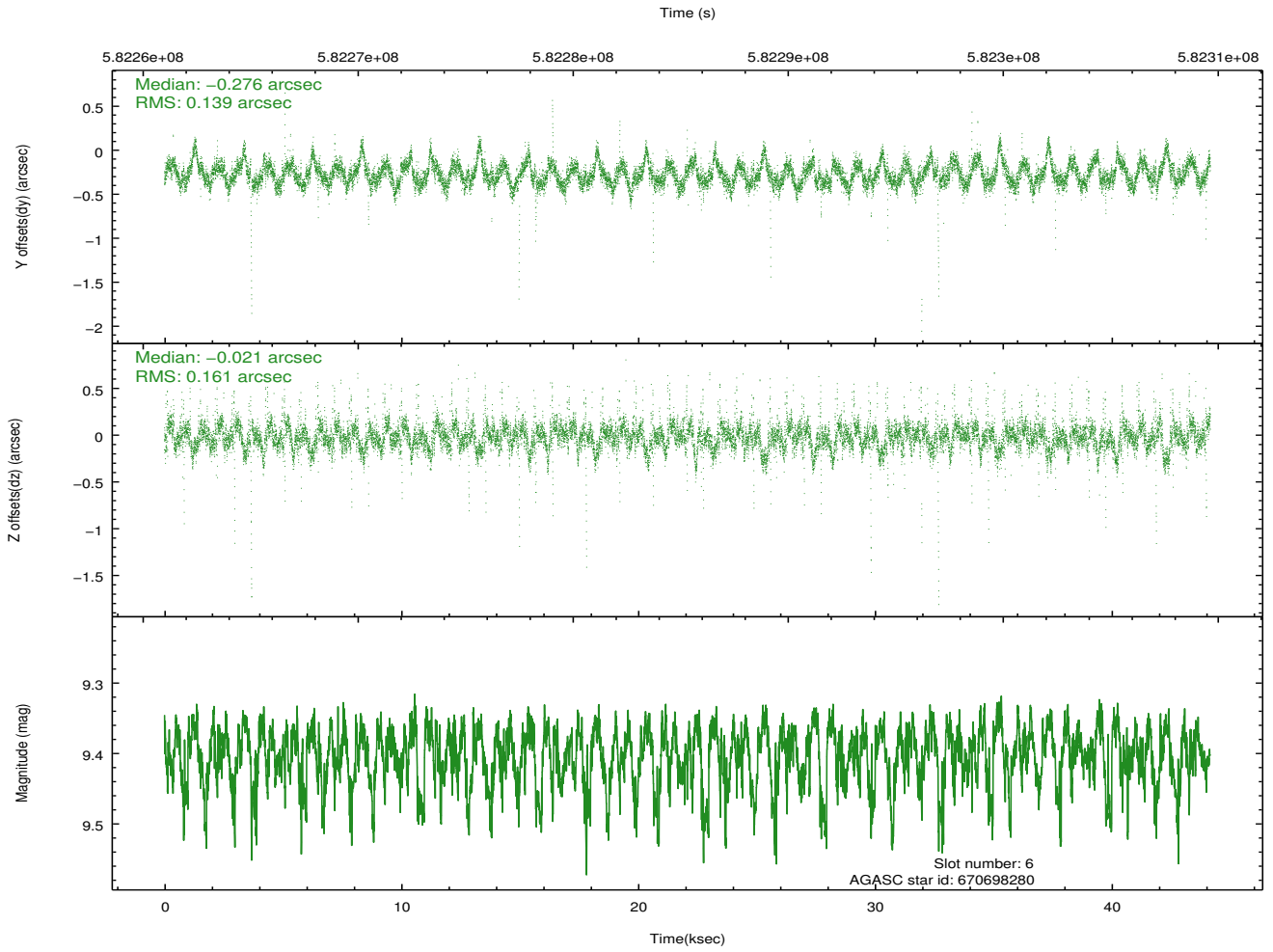
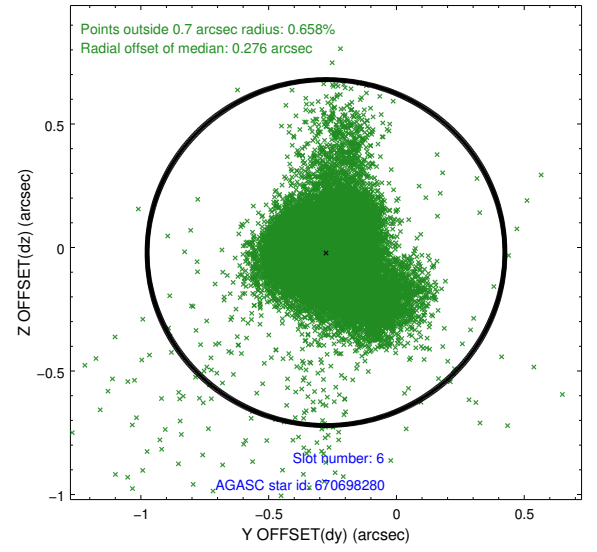
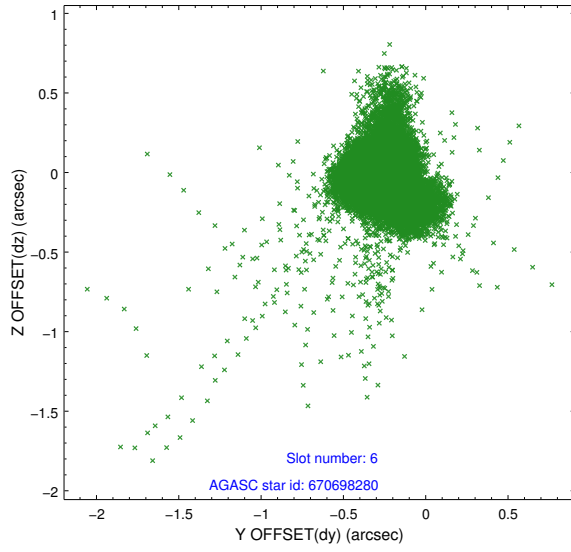
2.4.2 Slot 4



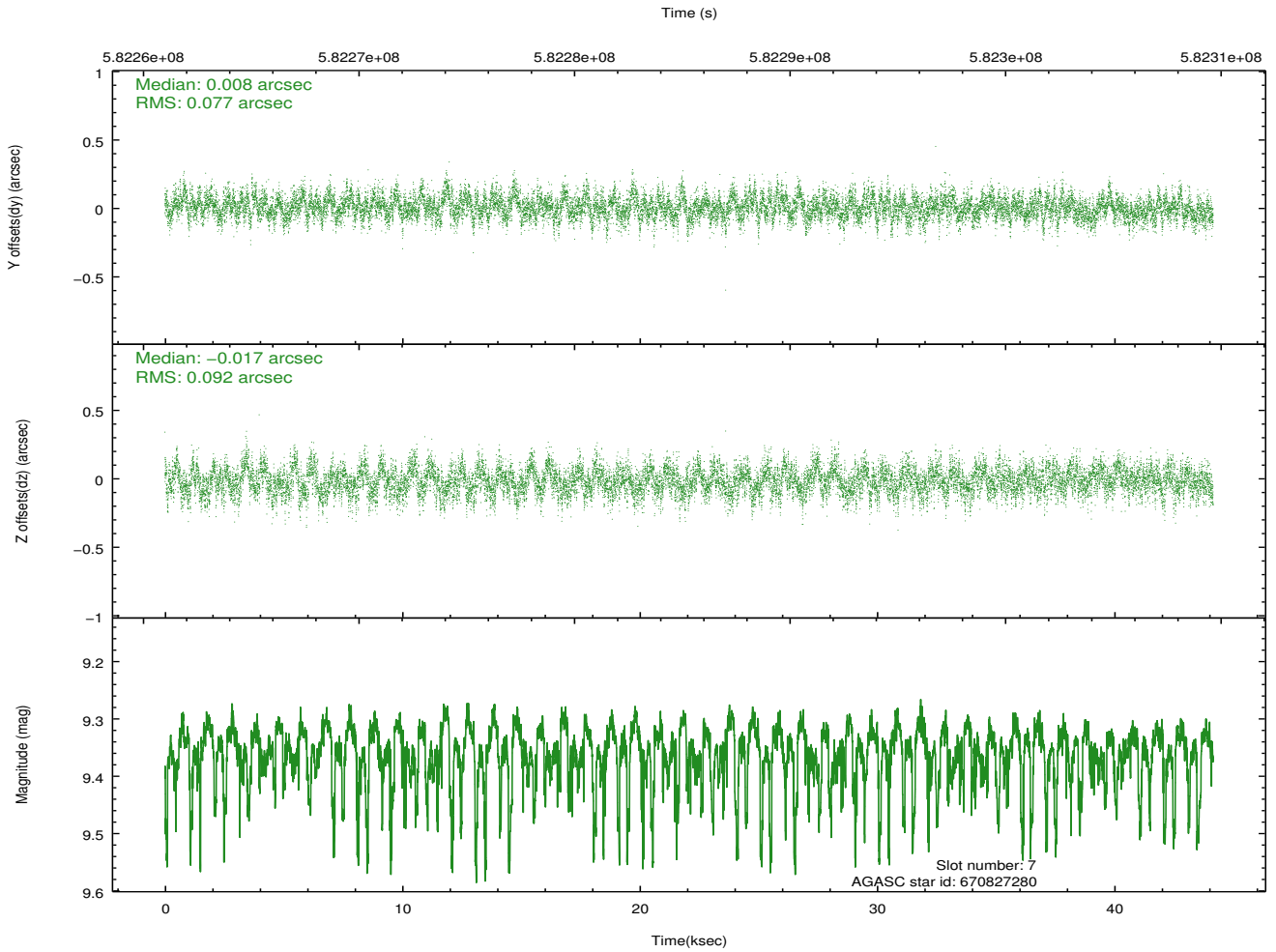
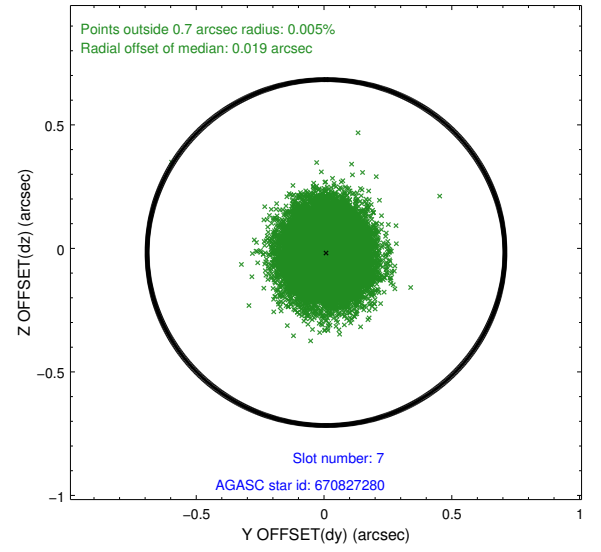
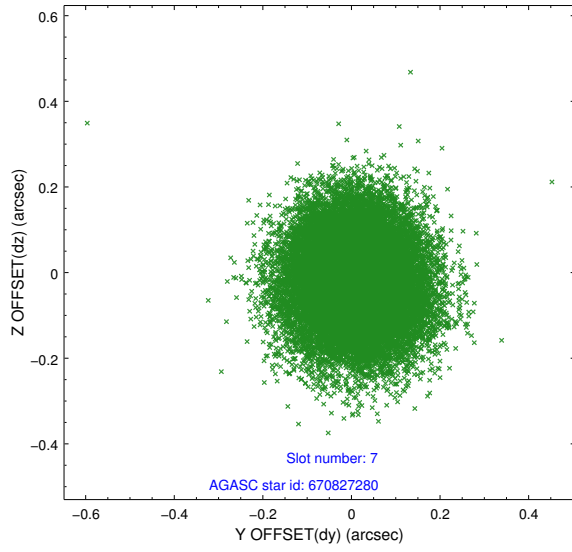
2.4.3 Slot 5



2.4.4 Slot 6

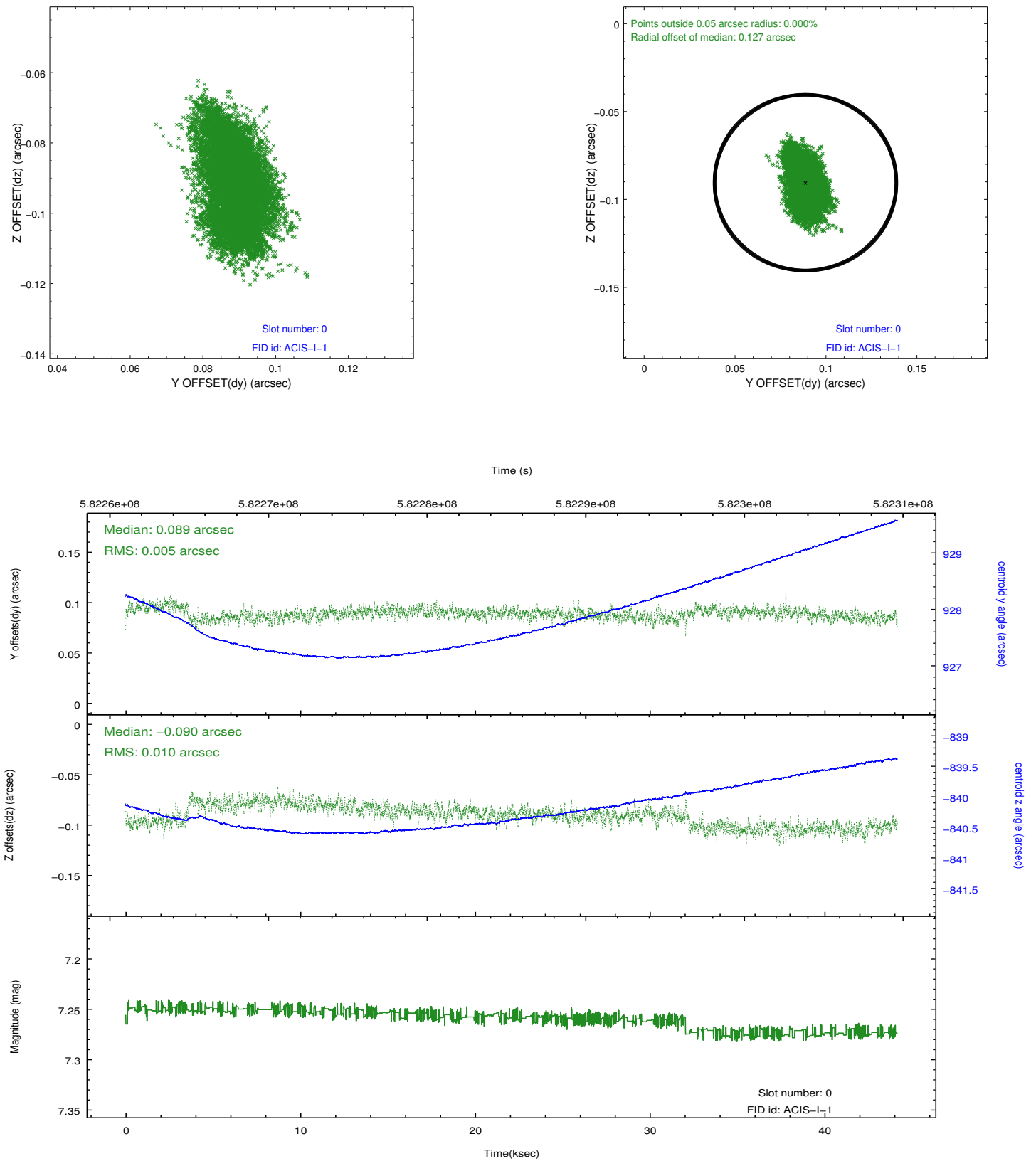


2.4.5 Slot 7

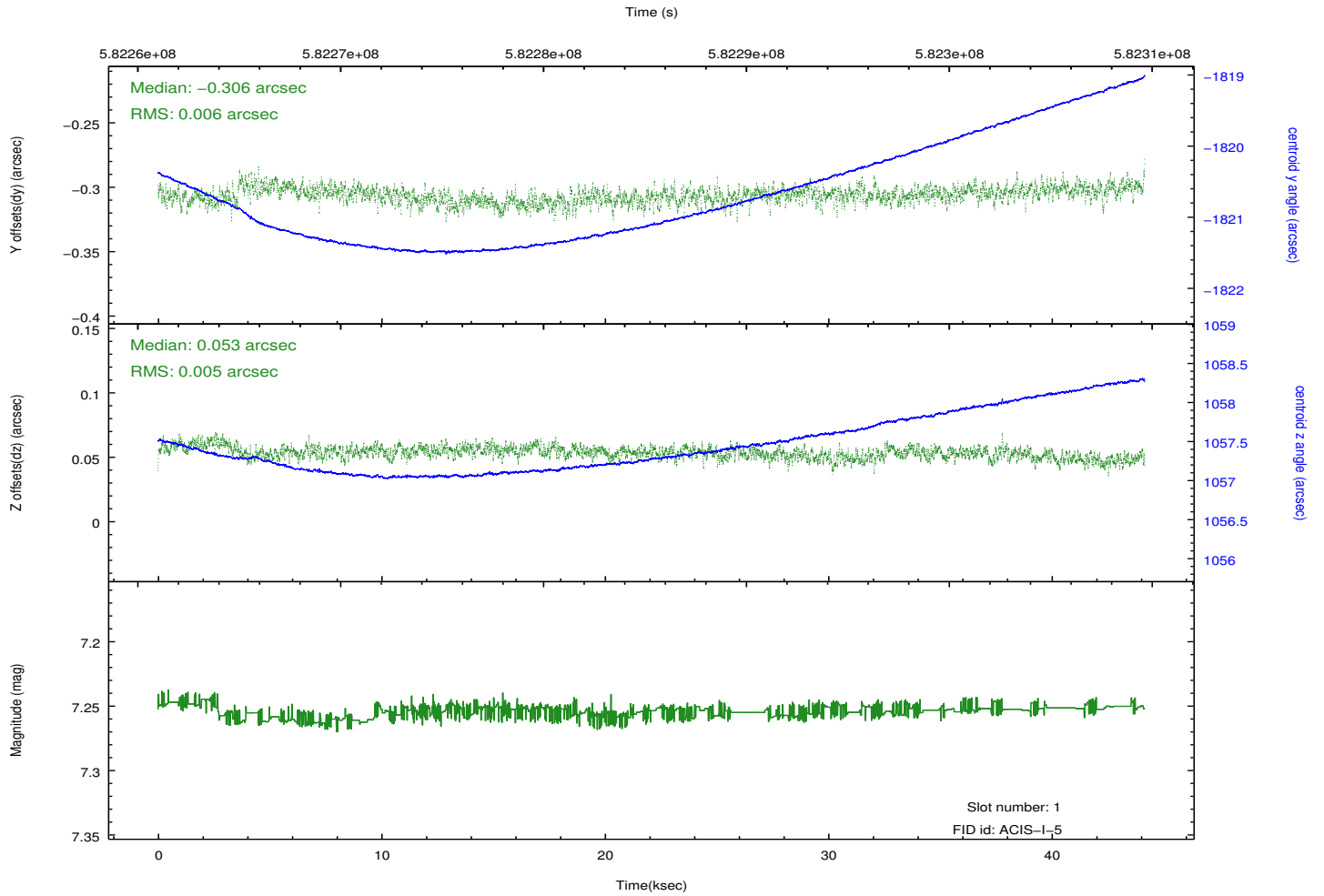
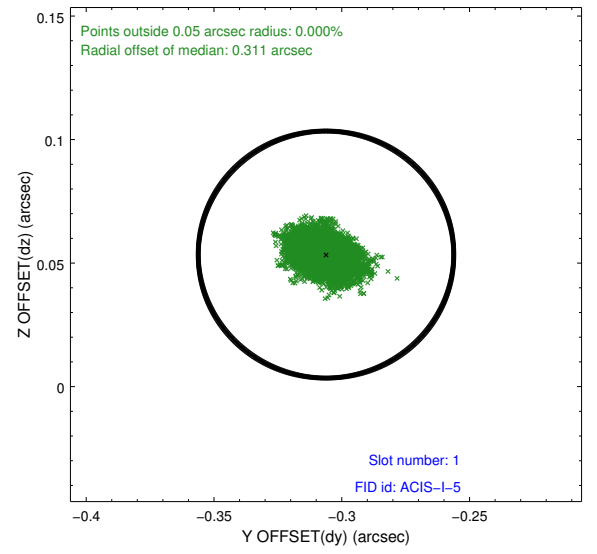
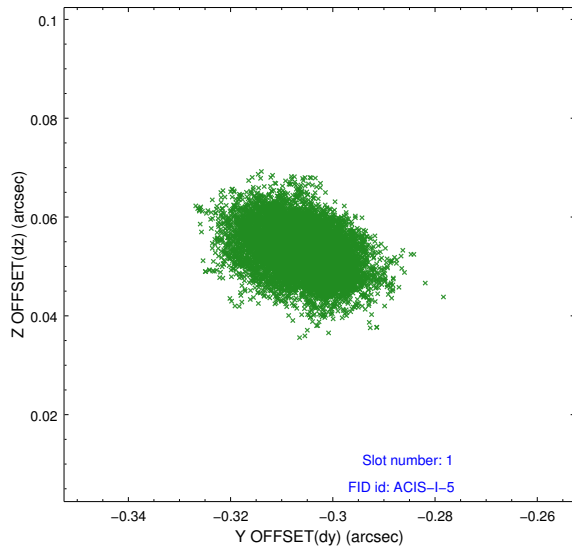


2.5 FID Slots

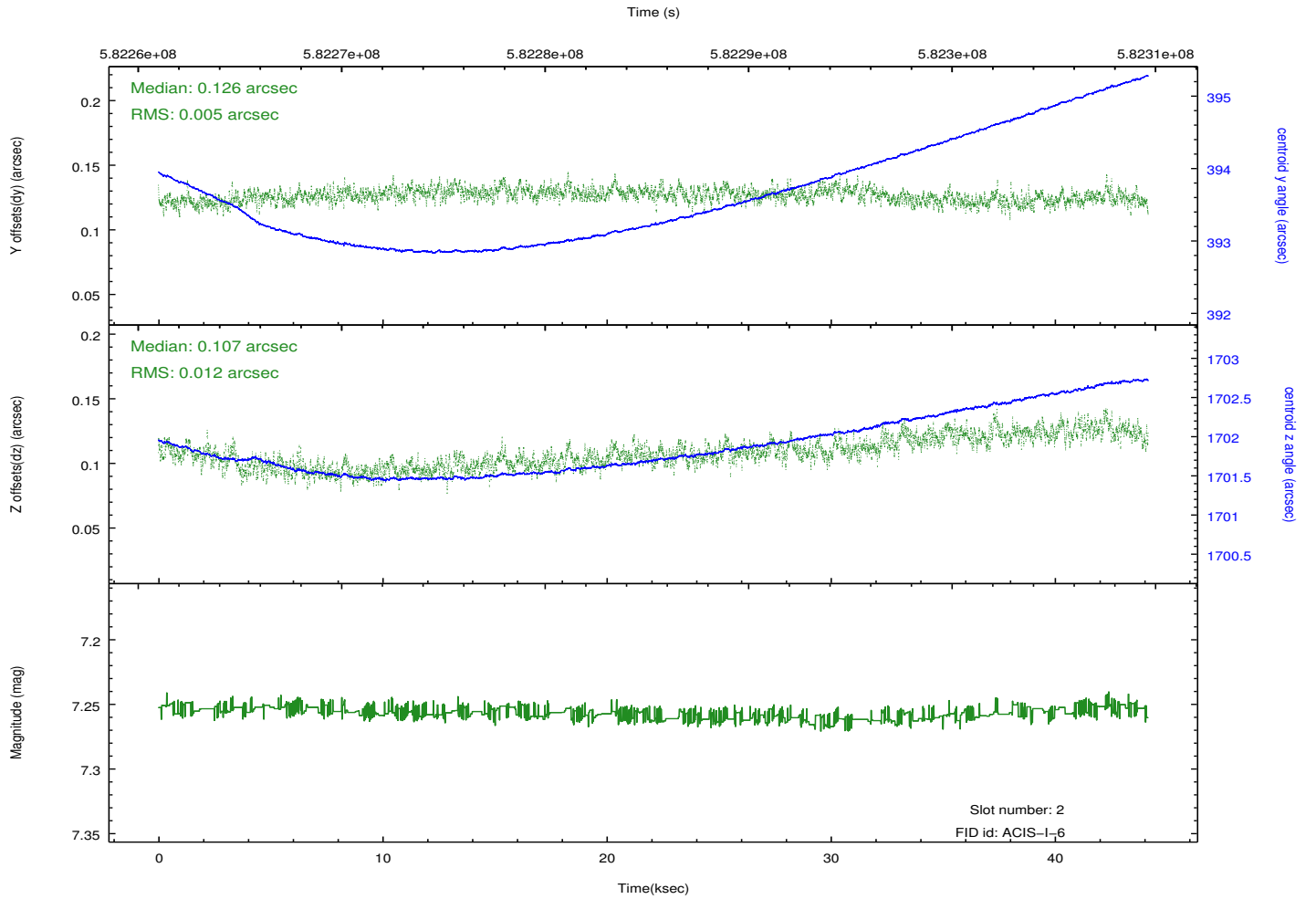
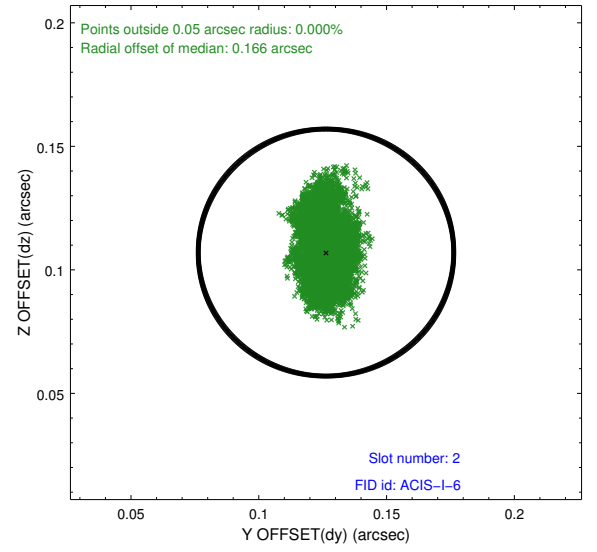
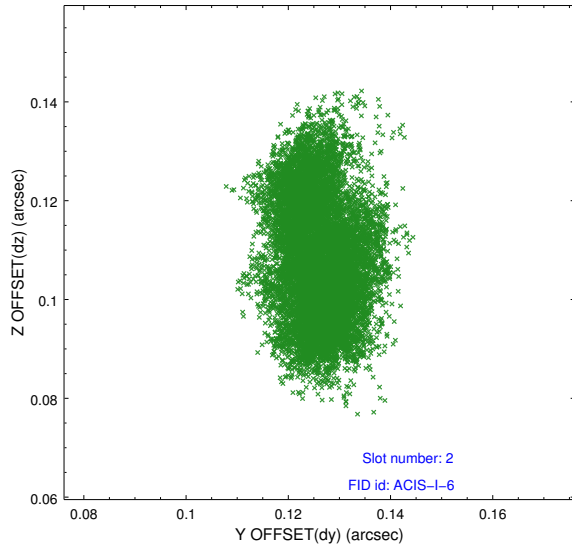
2.5.1 Slot 0



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)	2016.06.20
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	44.077806473494

A.2 Comments

Two optional chips were dropped.

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: (281.99566, -2.03961), (281.99686, -2.03795), (281.97152, -2.01969), (281.96888, -2.02031).