

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22217 - L2 Version 1
Chandra X-Ray Center

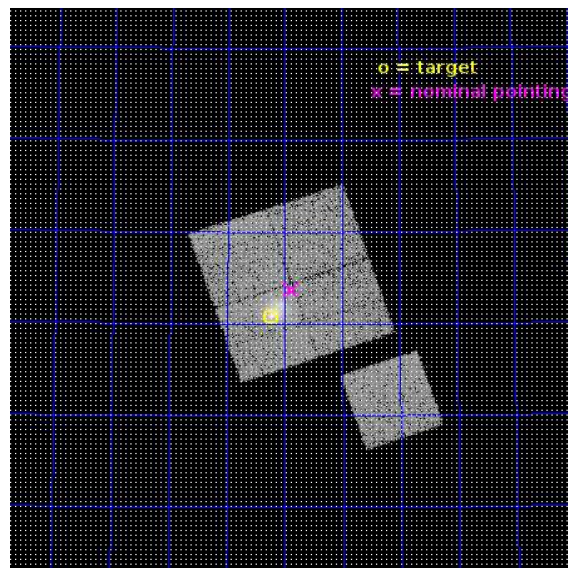
L2 Processing Date : May 13 2019

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1 Front

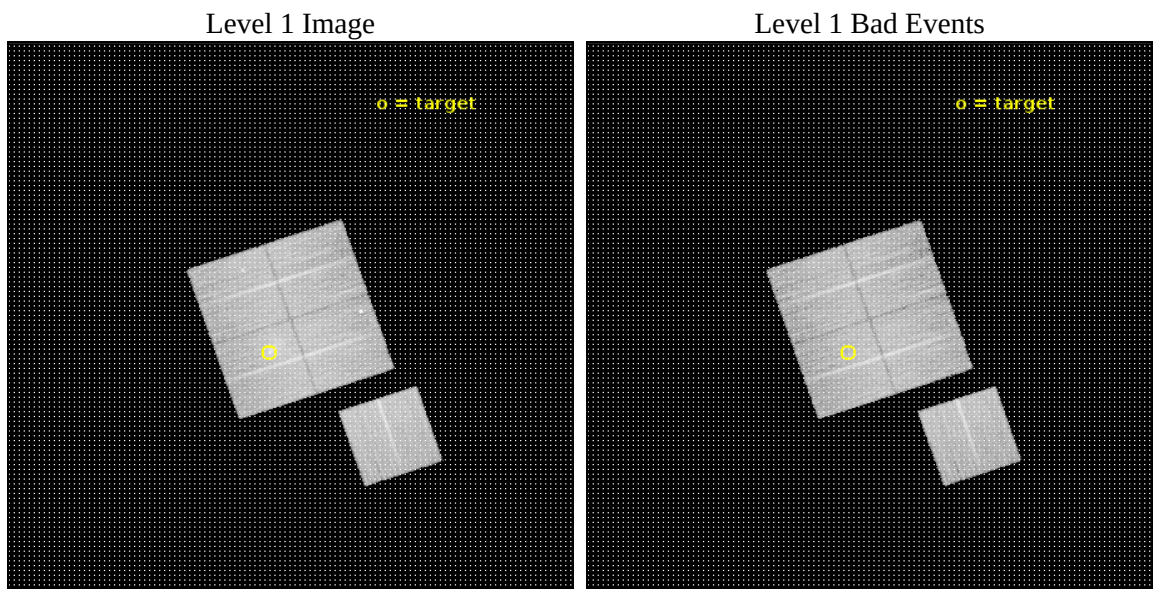
seq_num	801762	Sequence number
obs_id	22217	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.97147886938	Nominal RA [deg]
dec_nom	66.395227367364	Nominal Dec [deg]
roll_nom	161.29091090855	Nominal Roll [deg]
revision	1	Processing version of data
ontime	18066.80013907	Sum of GTIs [s]
livetime	17830.744094668	Livetime [s]
ontime0	18066.80013907	Sum of GTIs [s]
ontime1	18060.51819849	Sum of GTIs [s]
ontime2	18057.377128482	Sum of GTIs [s]
ontime3	18066.80013907	Sum of GTIs [s]
ontime6	18066.80013907	Sum of GTIs [s]
l2events	71173	Number of level 2 events



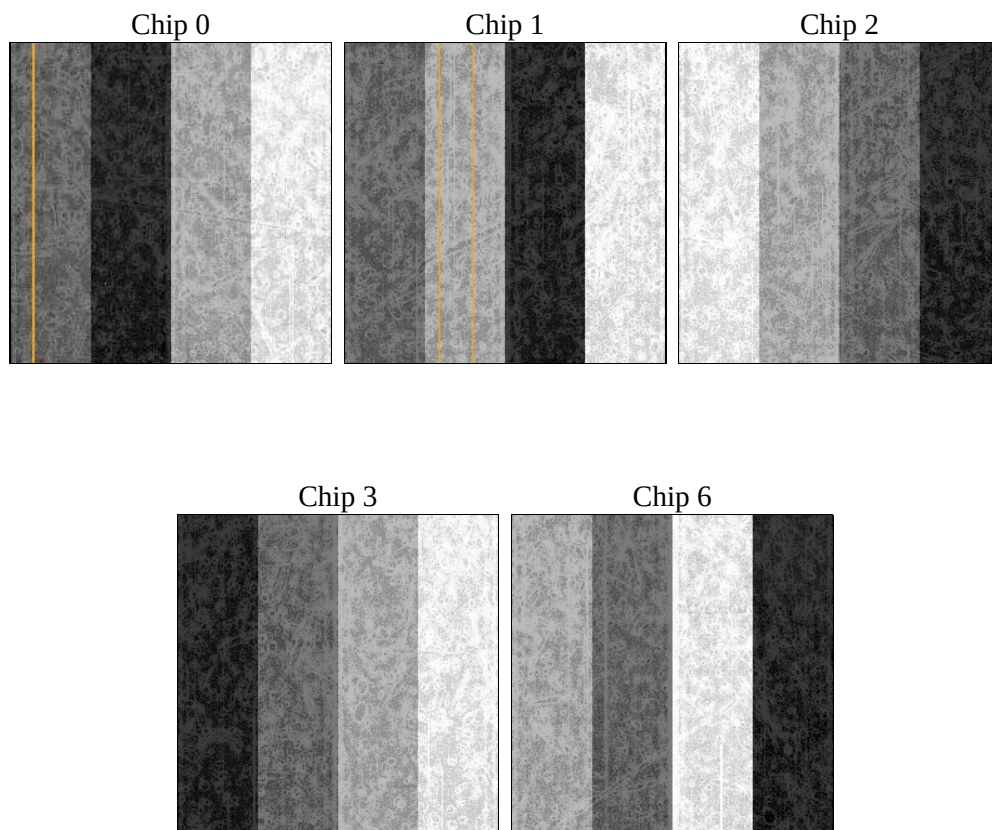
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	18000.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	18066.80013907	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	18066.80013907	Sum of GTIs [s]
date	2019-05-13T05:46:19	Date and time of file creation	ontime1	18060.51819849	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	18057.377128482	Sum of GTIs [s]
			ontime3	18066.80013907	Sum of GTIs [s]
			ontime6	18066.80013907	Sum of GTIs [s]
			l1events	640946	Number of level 1 events

2.1.4 Events

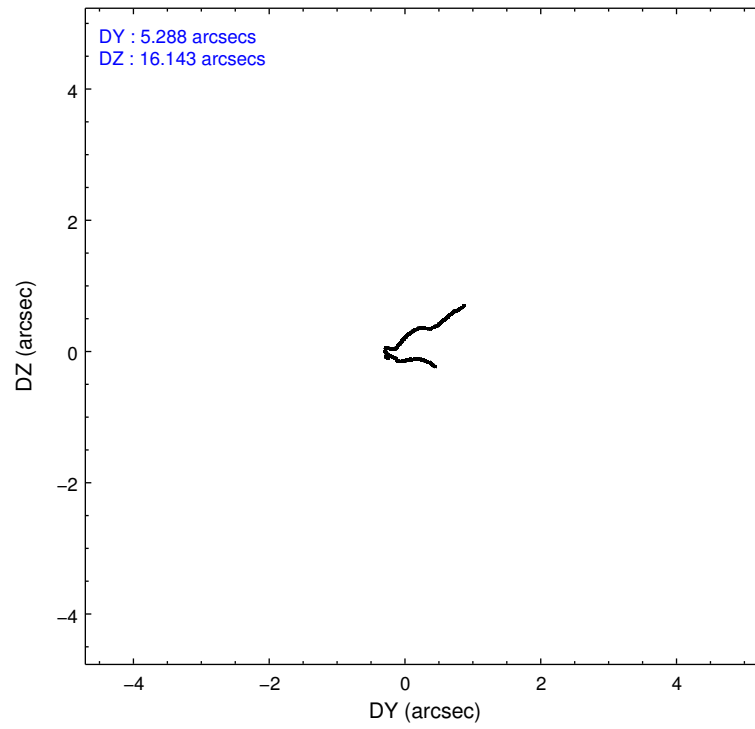
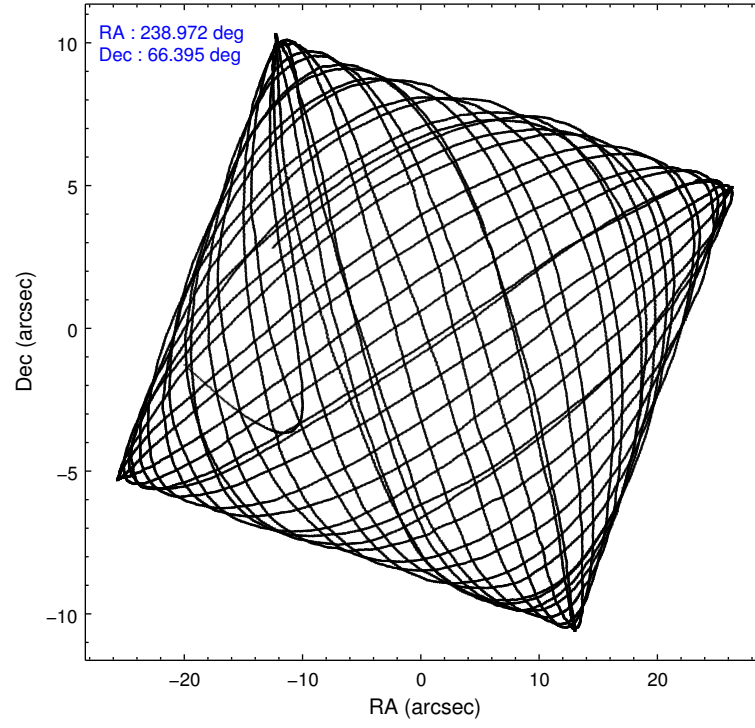
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	119707	122750	131362	134848	132279
rejected events	104977	106063	115522	112277	117364
rejected %	87%	86%	87%	83%	88%

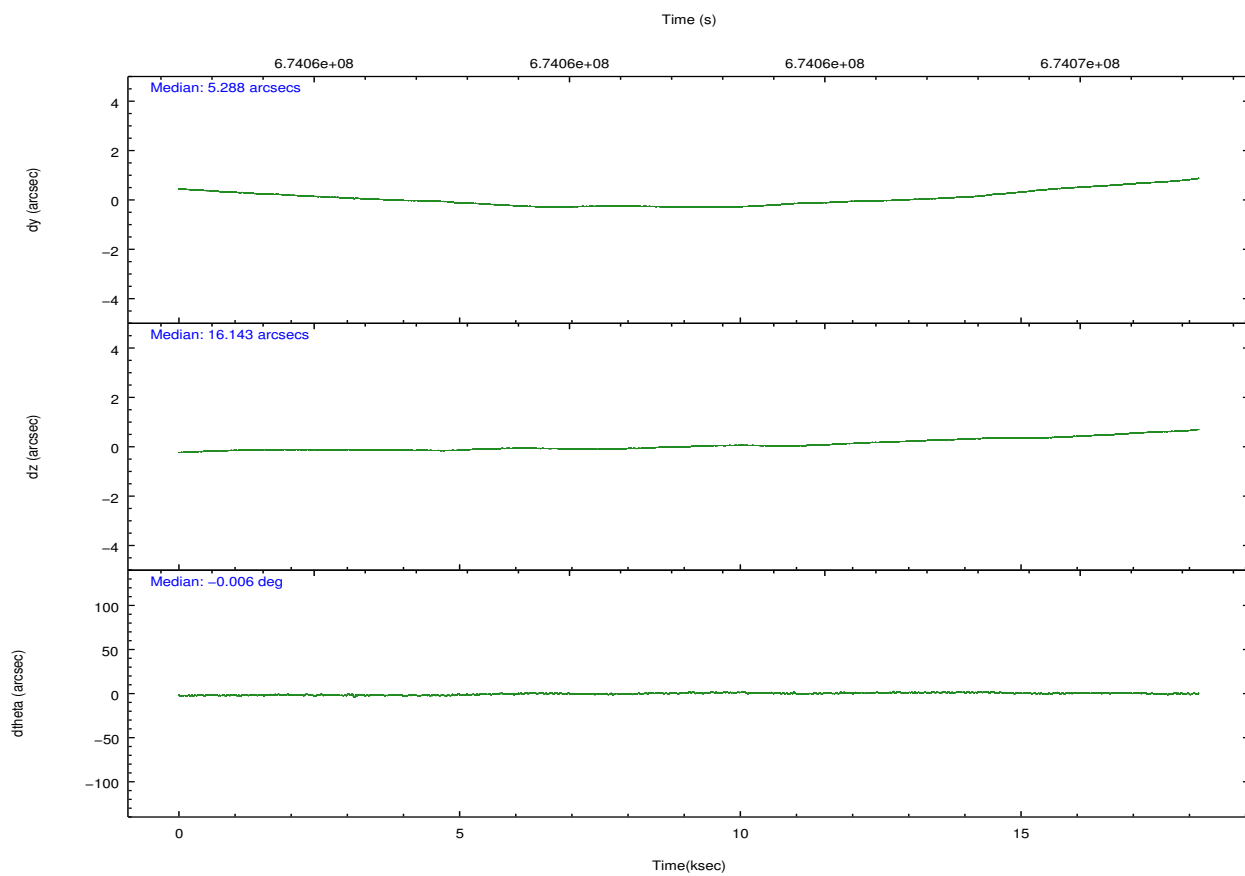
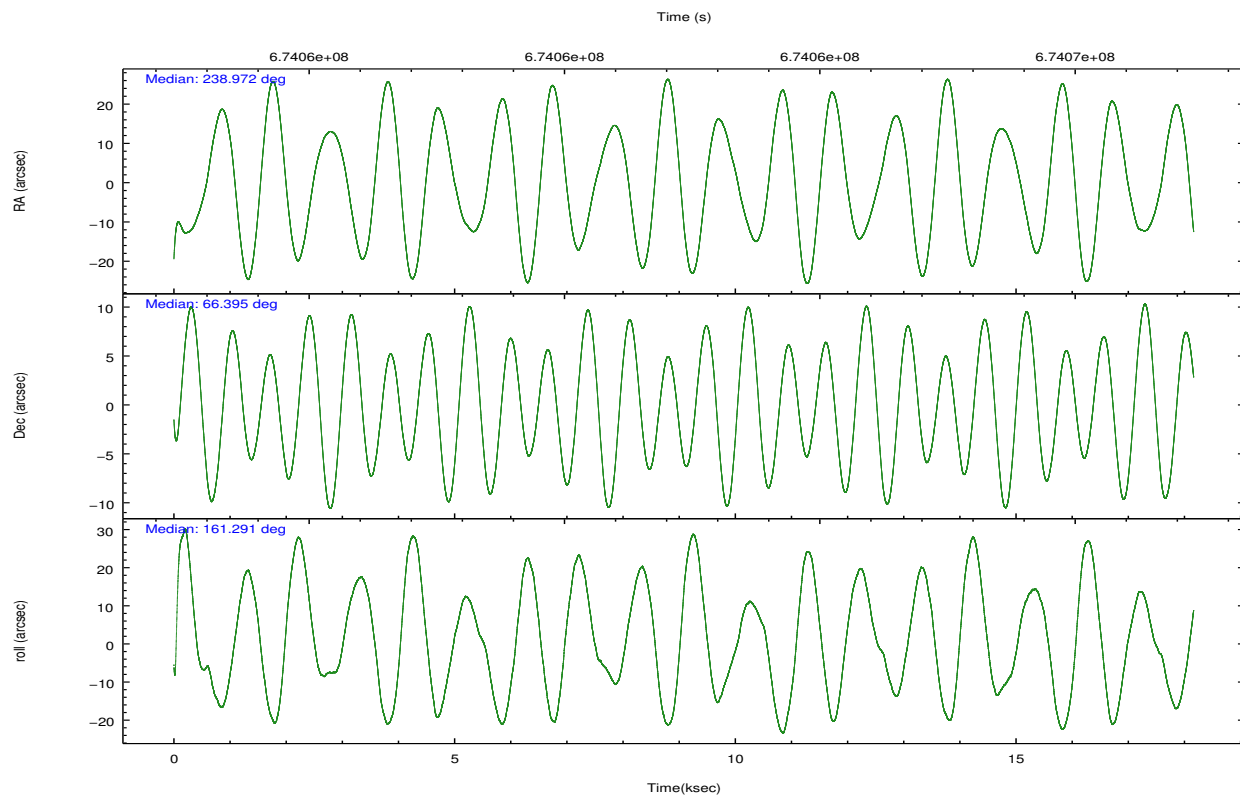
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	5040	5688	6623	11939	4851
	4%	4%	5%	8%	3%
grade 1 events	82	71	97	109	62
	0%	0%	0%	0%	0%
grade 2 events	3753	4317	3573	4001	3588
	3%	3%	2%	2%	2%
grade 3 events	1500	1495	1405	1714	1506
	1%	1%	1%	1%	1%
grade 4 events	1316	1463	1364	1691	1453
	1%	1%	1%	1%	1%
grade 5 events	5749	5818	5478	6456	5839
	4%	4%	4%	4%	4%
grade 6 events	3125	3733	2877	3238	3522
	2%	3%	2%	2%	2%
grade 7 events	99142	100165	109945	105700	111458
	82%	81%	83%	78%	84%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
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	239.039059	238.9714788693754	CCD I2 on	Y	Y
[deg] Pointing Dec	66.400681	66.39522736736407	CCD I3 on	Y	Y
[deg] Pointing Roll	161.020330	161.2909109085456	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	N	N
[mm] SIM translation stage offset	0	-0.005018542100998502	CCD S4 on	N	N
[s] Observation start time (MET)	674053413.184000	674052380.64171	CCD S5 on	N	N
Observation start date	2019-05-12T13:02:24	2019-05-12T12:46:20	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	674071413.184000	674072348.66791	On-chip summing requested	N	N
Observation end date	2019-05-12T18:02:24	2019-05-12T18:19:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



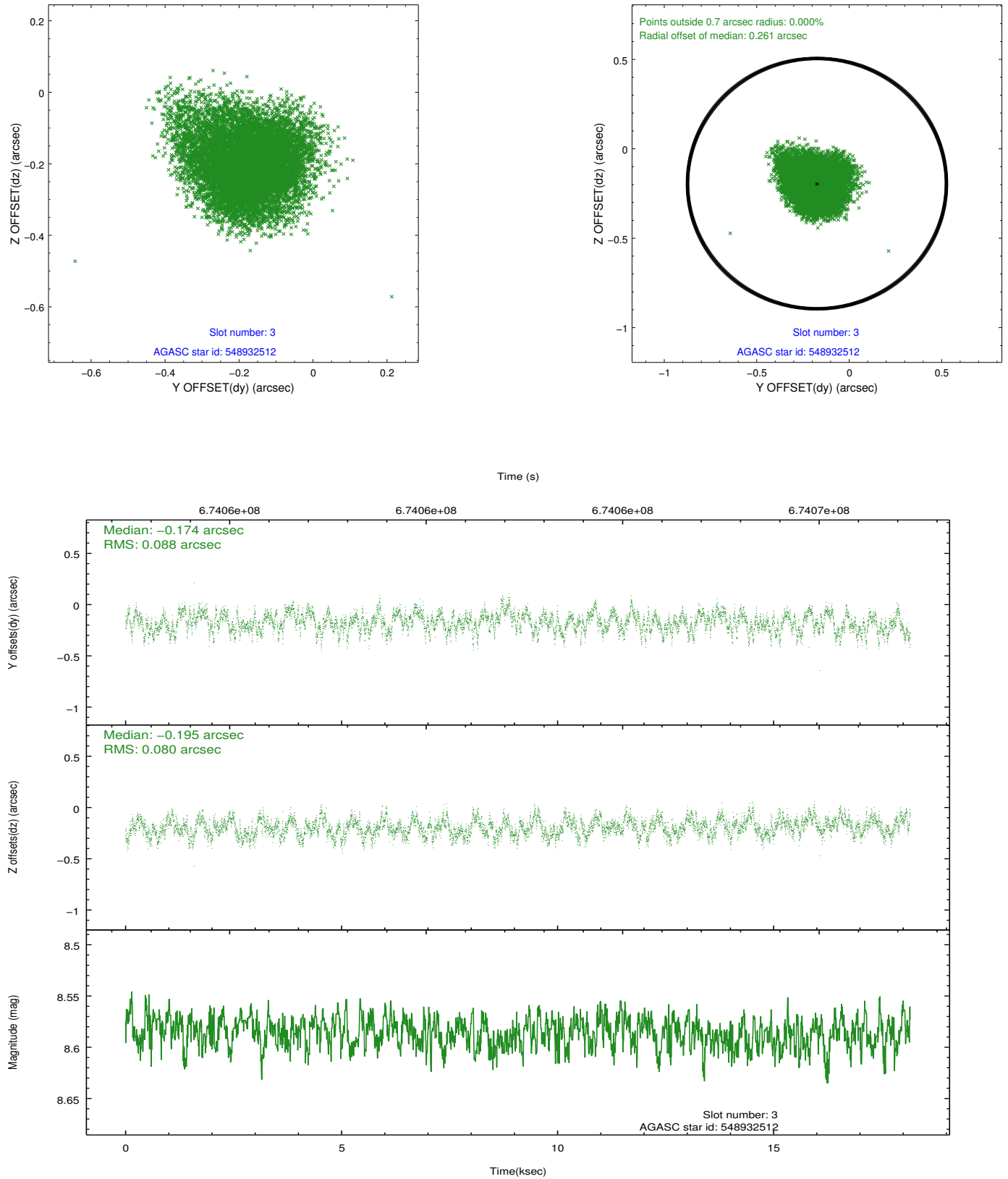


Slot Statistics

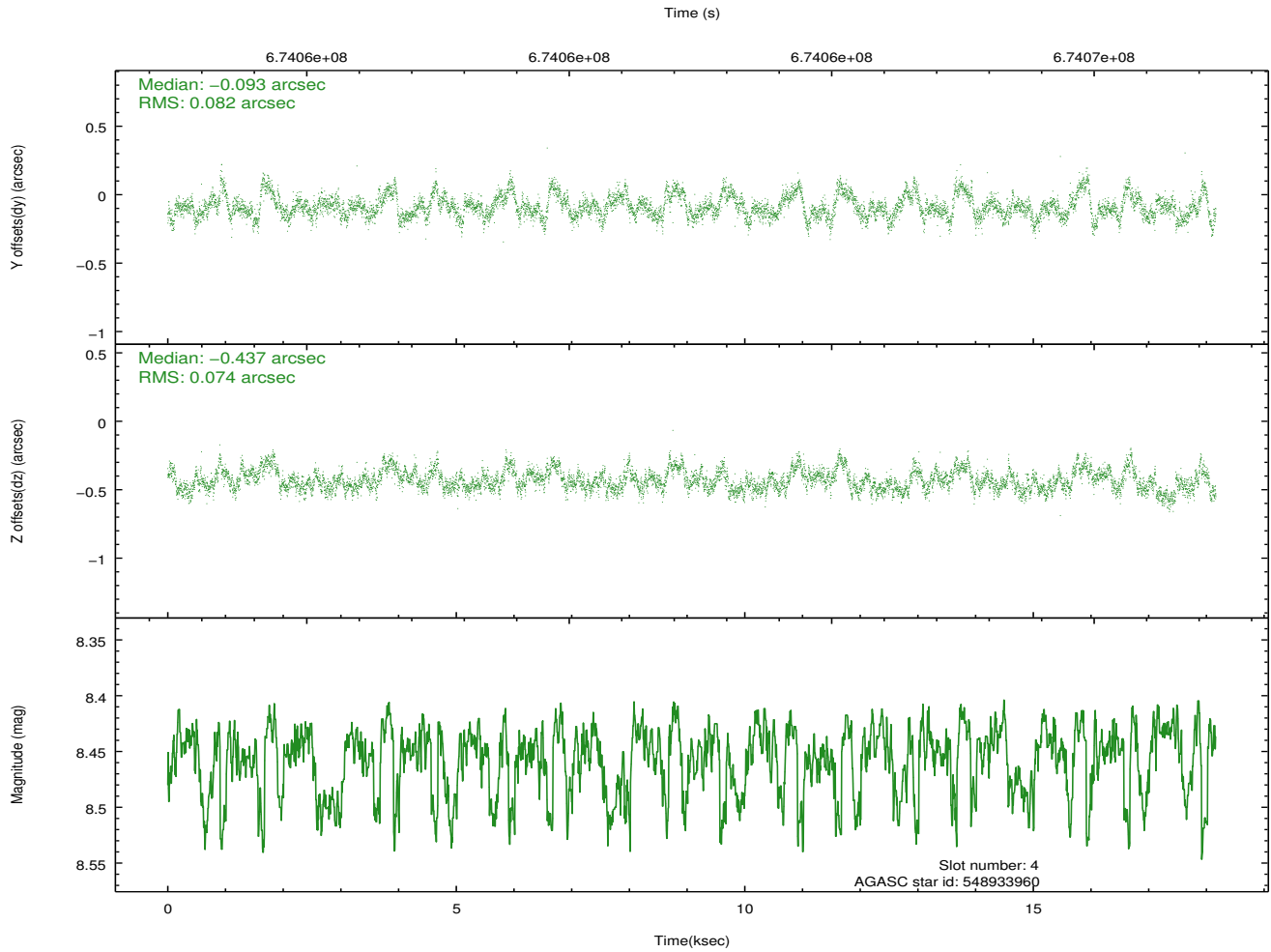
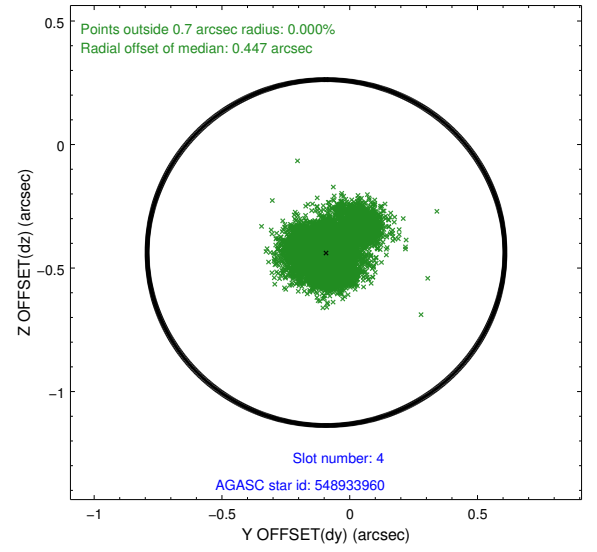
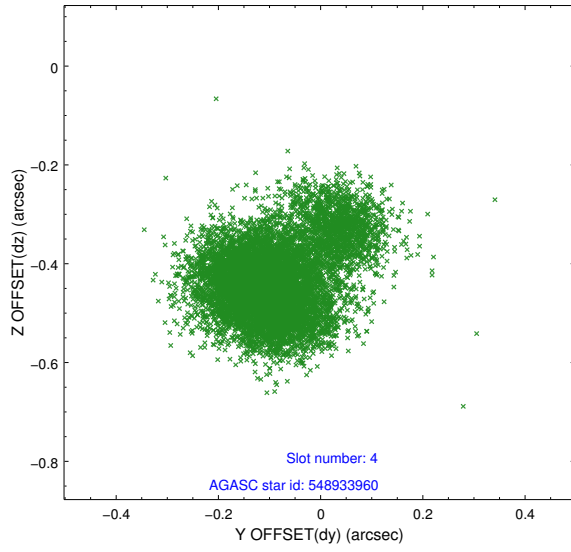
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.18	4431	1.000	0.119	-0.142	0.009	0.019	0.000000	0.000000	934.54	-839
1	FID		ACIS-I-5	7.12	4431	1.000	-0.420	0.042	0.009	0.014	0.000000	0.000000	-1814.11	1057
2	FID		ACIS-I-6	7.13	4431	1.000	0.210	0.170	0.013	0.025	0.000000	0.000000	399.76	1702
3	GUIDE	used	548932512	8.59	8856	1.000	-0.174	-0.195	0.129	0.200	239.727627	66.054972	-1354.19	844
4	GUIDE	used	548933960	8.45	8857	1.000	-0.093	-0.437	0.114	0.201	237.671184	66.428675	1901.57	525
5	GUIDE	used	548937184	9.86	8832	1.000	-0.049	0.316	0.223	0.365	238.771821	66.565432	555.29	-436
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	549849072	9.14	8847	1.000	0.319	0.315	0.148	0.236	240.420863	66.802816	-1374.16	-2025

2.4 Star Slots

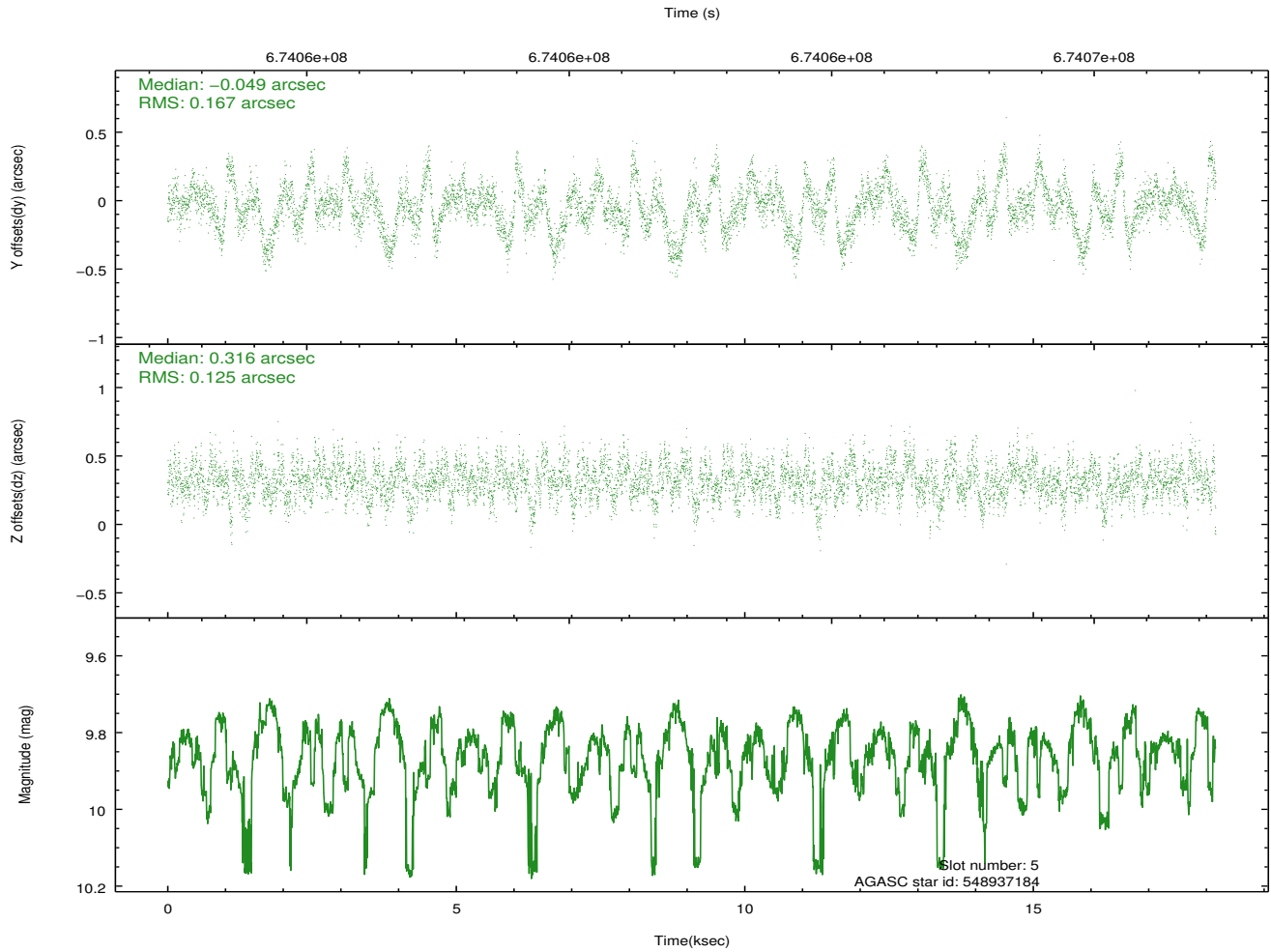
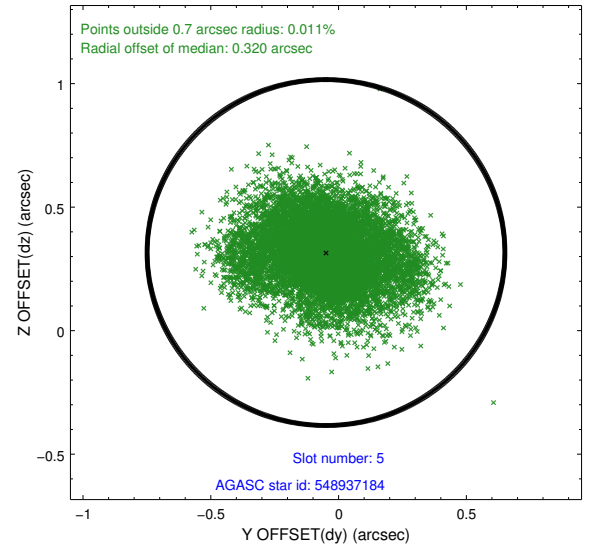
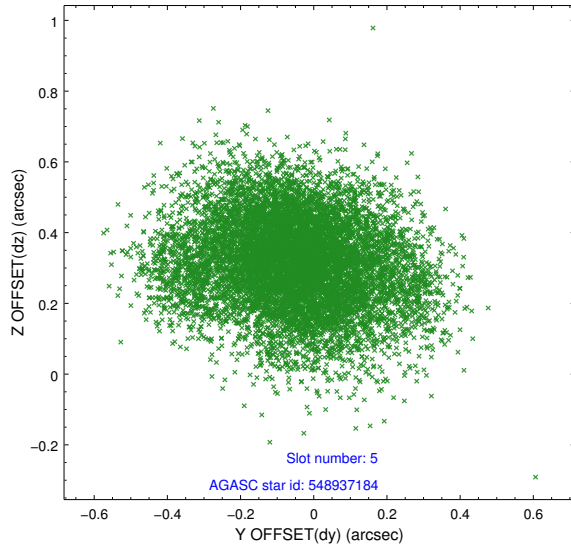
2.4.1 Slot 3



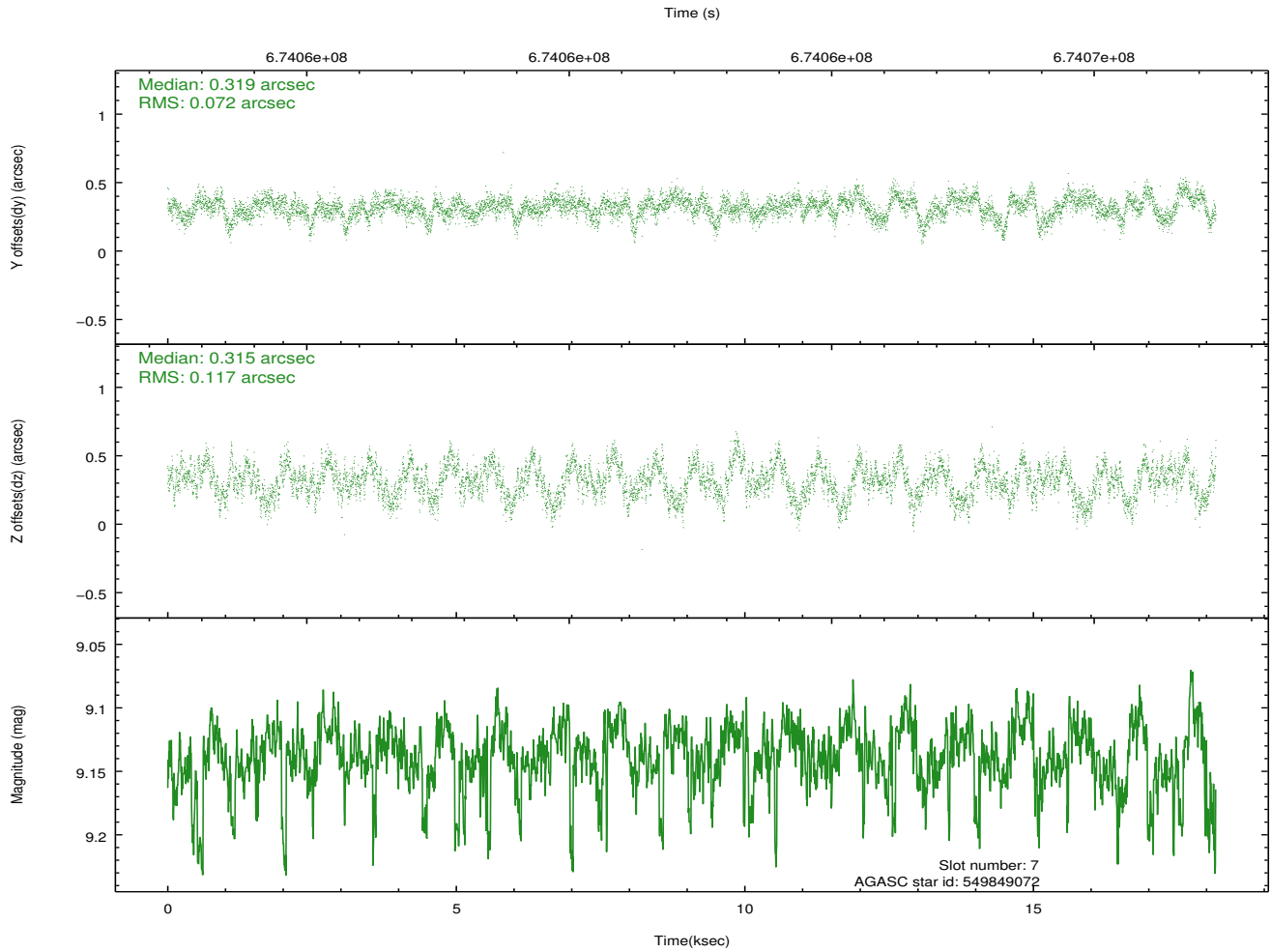
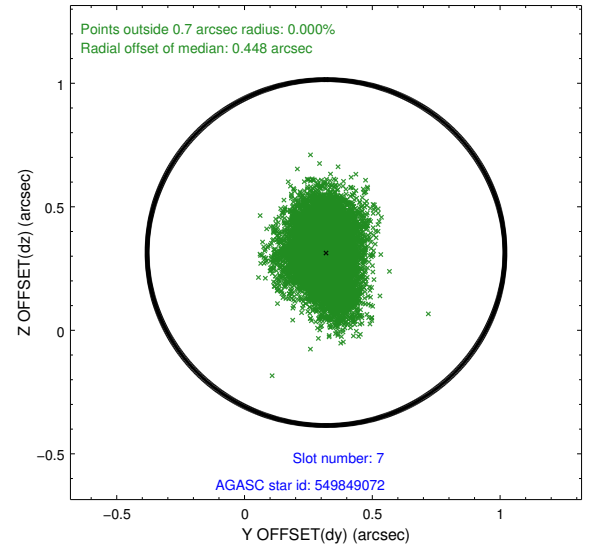
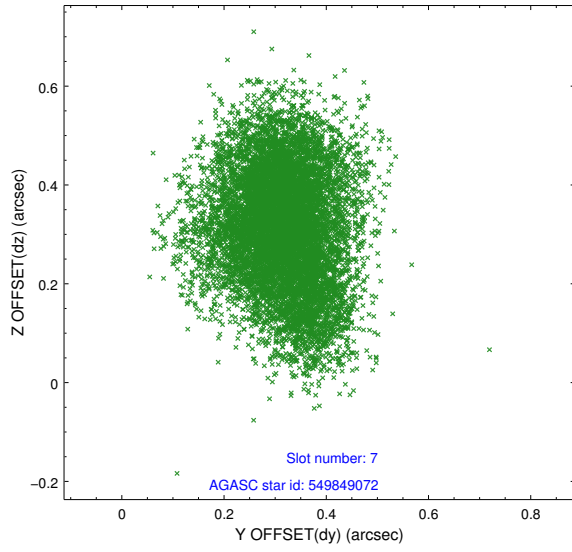
2.4.2 Slot 4



2.4.3 Slot 5

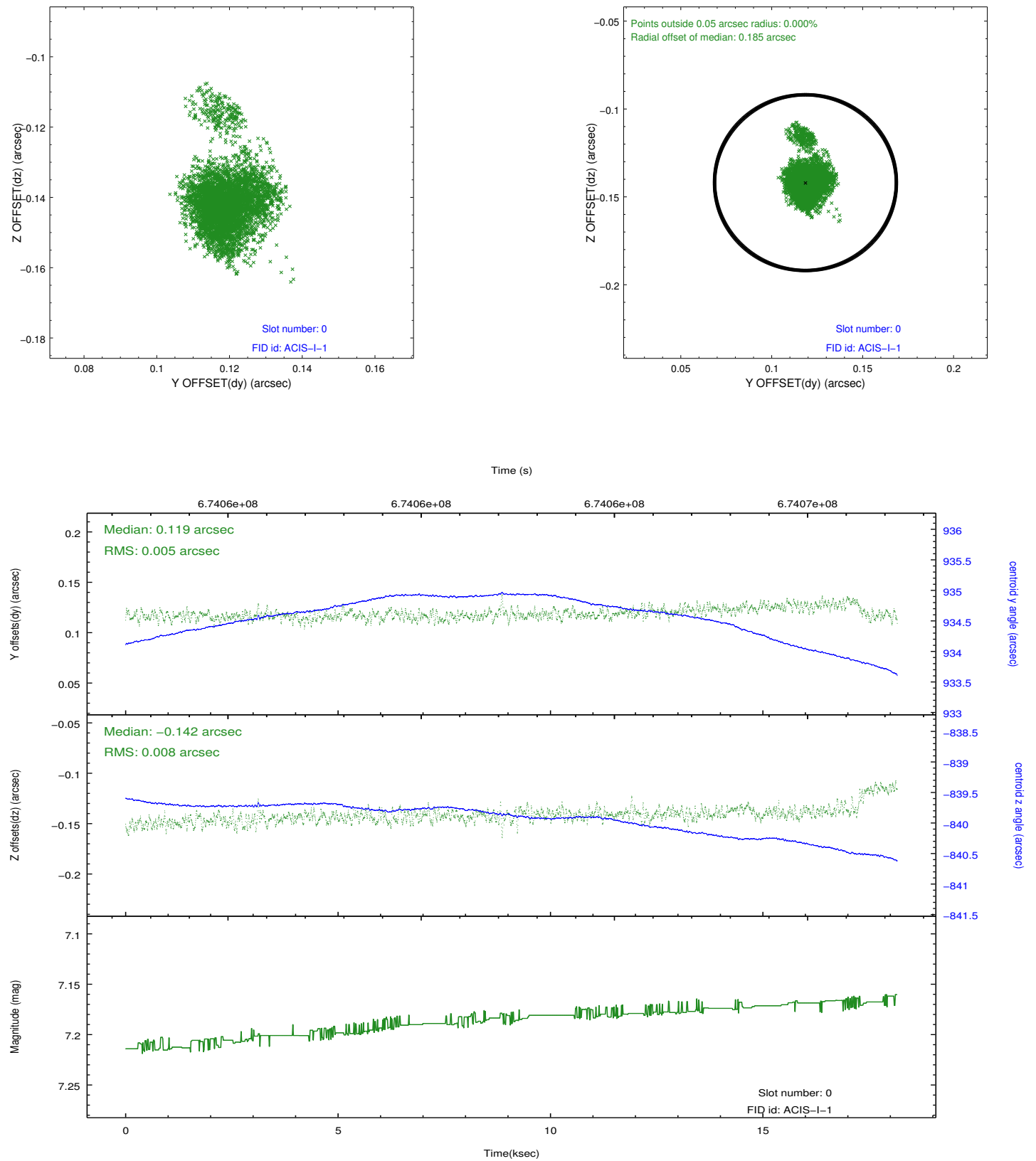


2.4.4 Slot 7

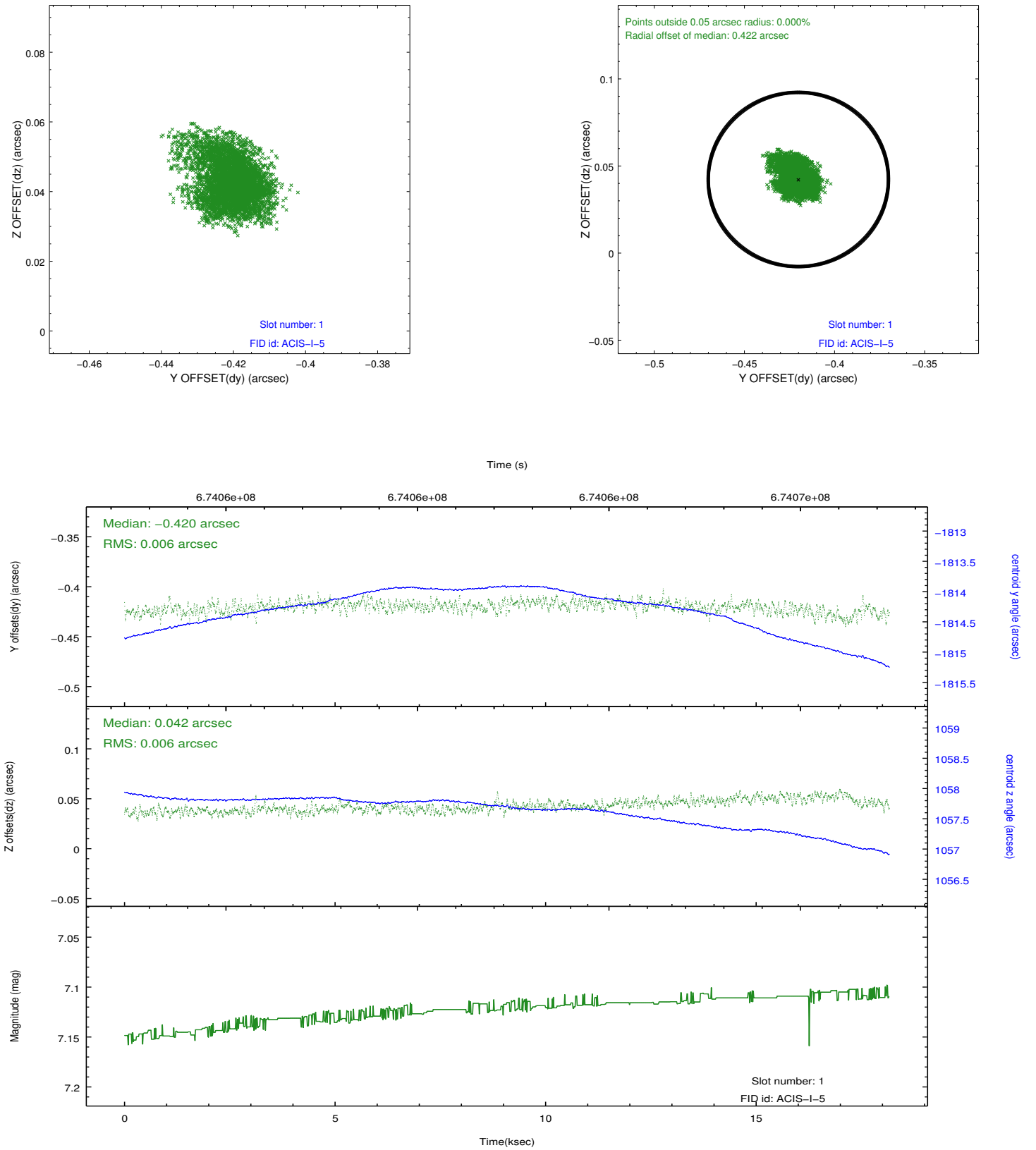


2.5 FID Slots

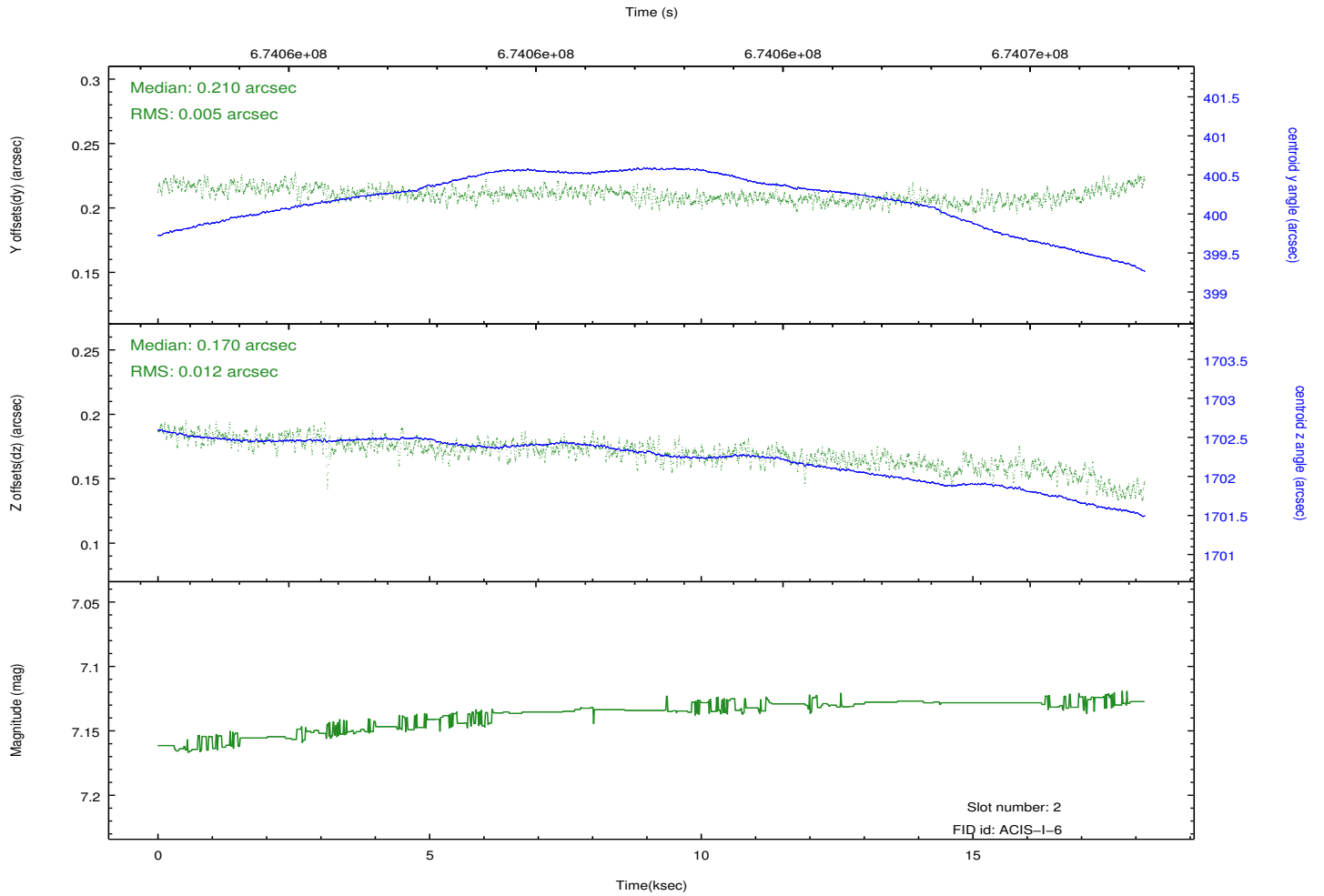
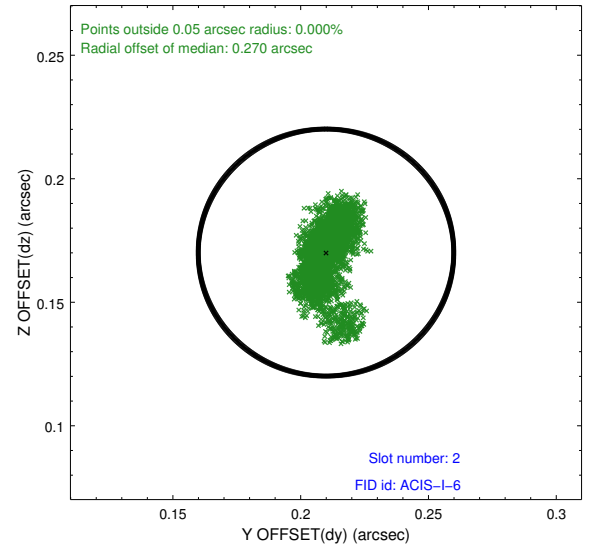
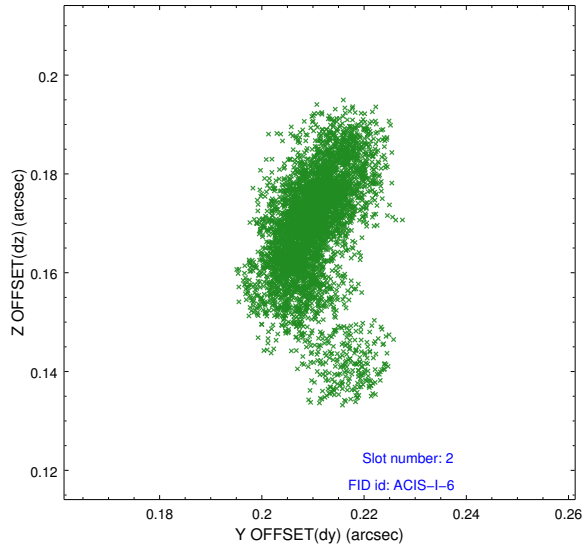
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2019.05.13
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	18.06680013907

A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.