

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22175 - L2 Version 2
Chandra X-Ray Center

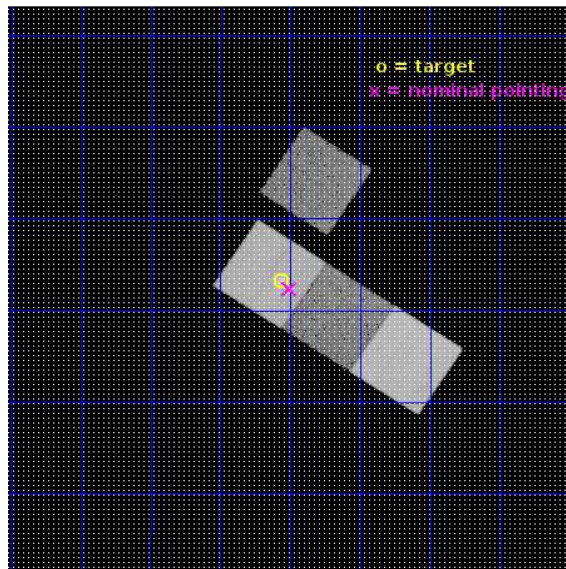
L2 Processing Date : Apr 16 2019

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1 Front

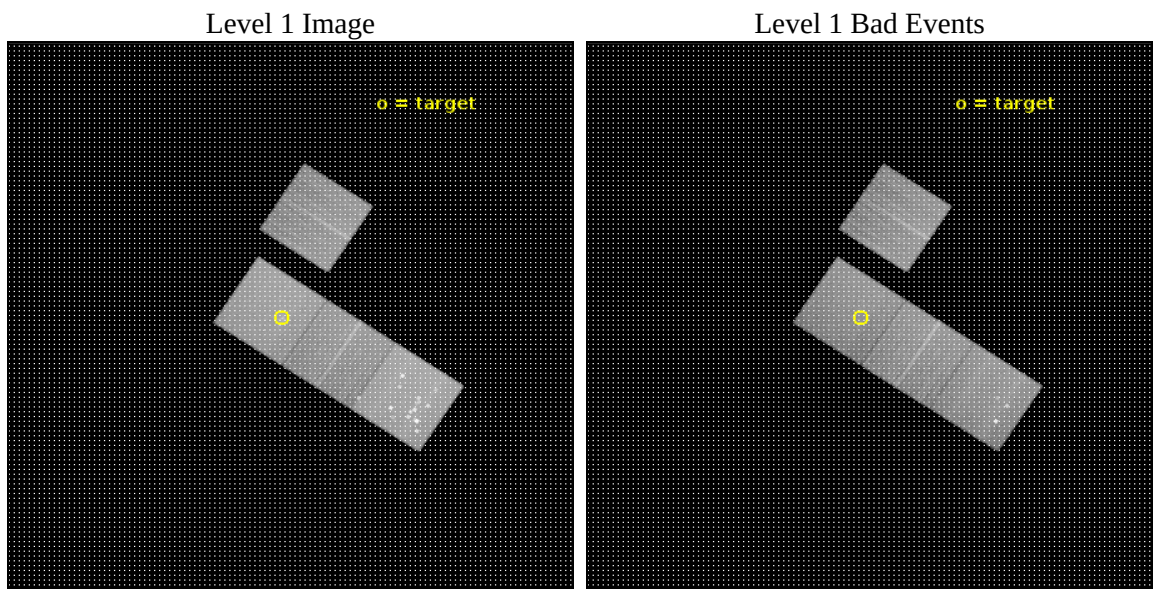
seq_num	801753	Sequence number
obs_id	22175	Observation id
title	Fuelling and self-regulation of AGN feedback at the Bondi radius of M84	Proposal title
observer	Helen Russell	Principal investigator
object	M84	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.265833	Observer's specified target RA [deg]
dec_targ	12.886944	Observer's specified target Dec [deg]
ra_nom	186.25140527182	Nominal RA [deg]
dec_nom	12.873116286954	Nominal Dec [deg]
roll_nom	213.15987784191	Nominal Roll [deg]
revision	2	Processing version of data
ontime	27561.370752096	Sum of GTIs [s]
livetime	27201.261152834	Livetime [s]
ontime3	27558.106561899	Sum of GTIs [s]
ontime5	27561.329712152	Sum of GTIs [s]
ontime6	27561.28867209	Sum of GTIs [s]
ontime7	27561.370752096	Sum of GTIs [s]
l2events	320708	Number of level 2 events



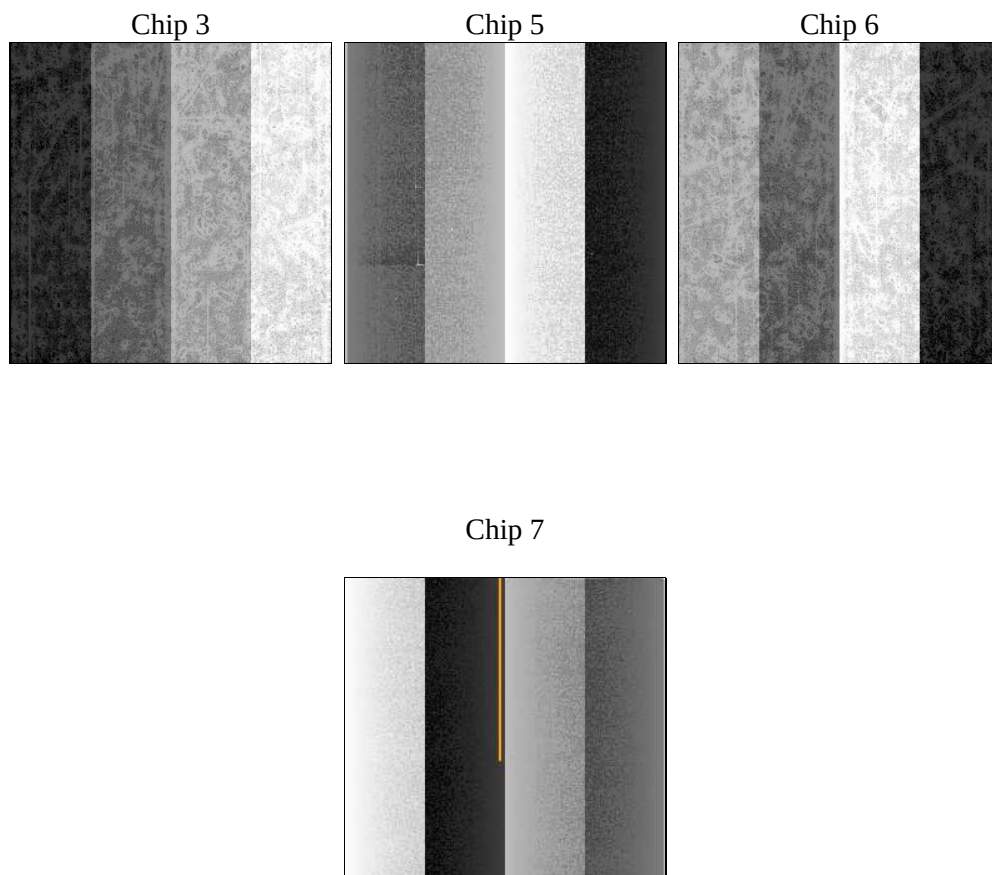
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	27496.172000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	27561.370752096	Sum of GTIs [s]
caldsver	4.8.2	 	ontime3	27558.106561899	Sum of GTIs [s]
date	2019-04-16T20:41:15	Date and time of file creation	ontime5	27561.329712152	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	27561.28867209	Sum of GTIs [s]
			ontime7	27561.370752096	Sum of GTIs [s]
			l1events	1104232	Number of level 1 events

2.1.4 Events

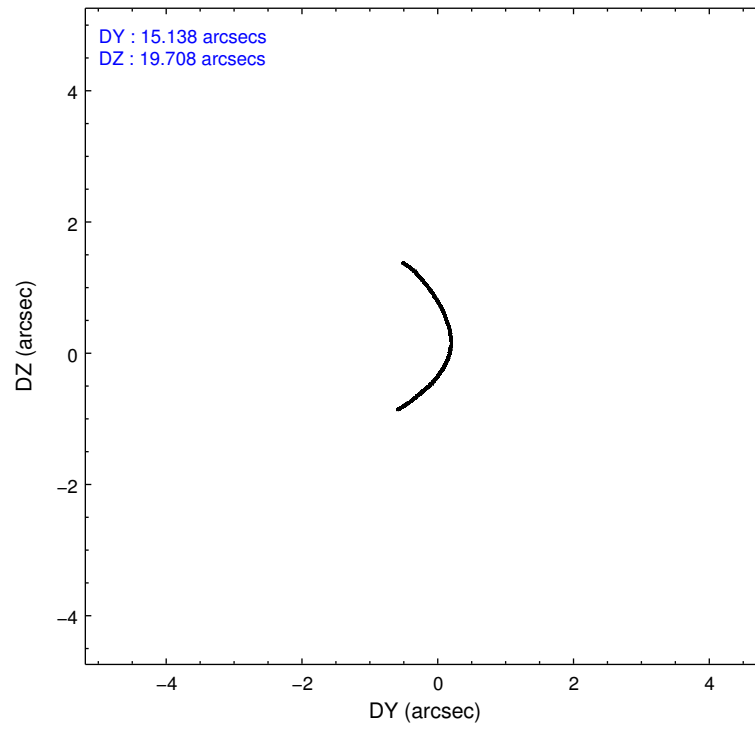
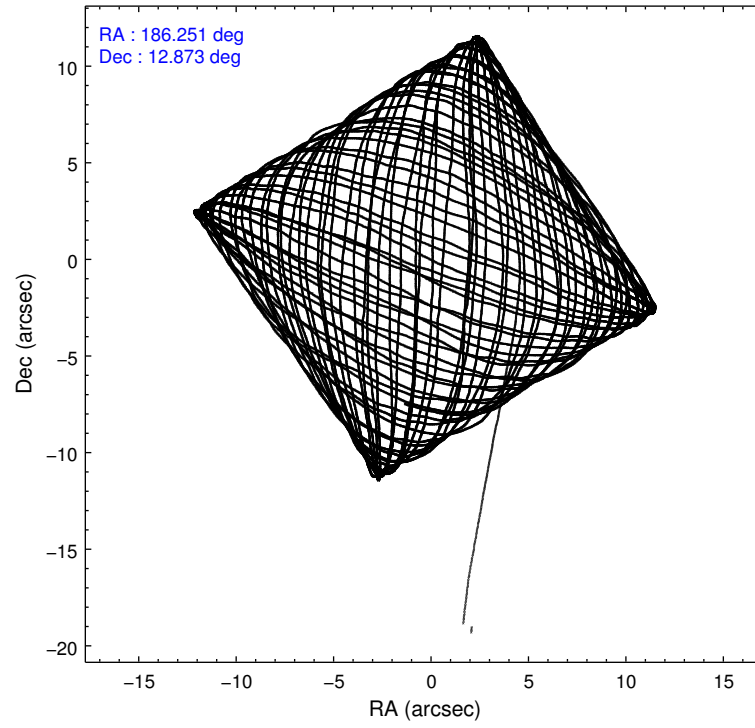
	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	206555	405436	212636	279605
rejected events	183645	189488	187270	154521
rejected %	88%	46%	88%	55%

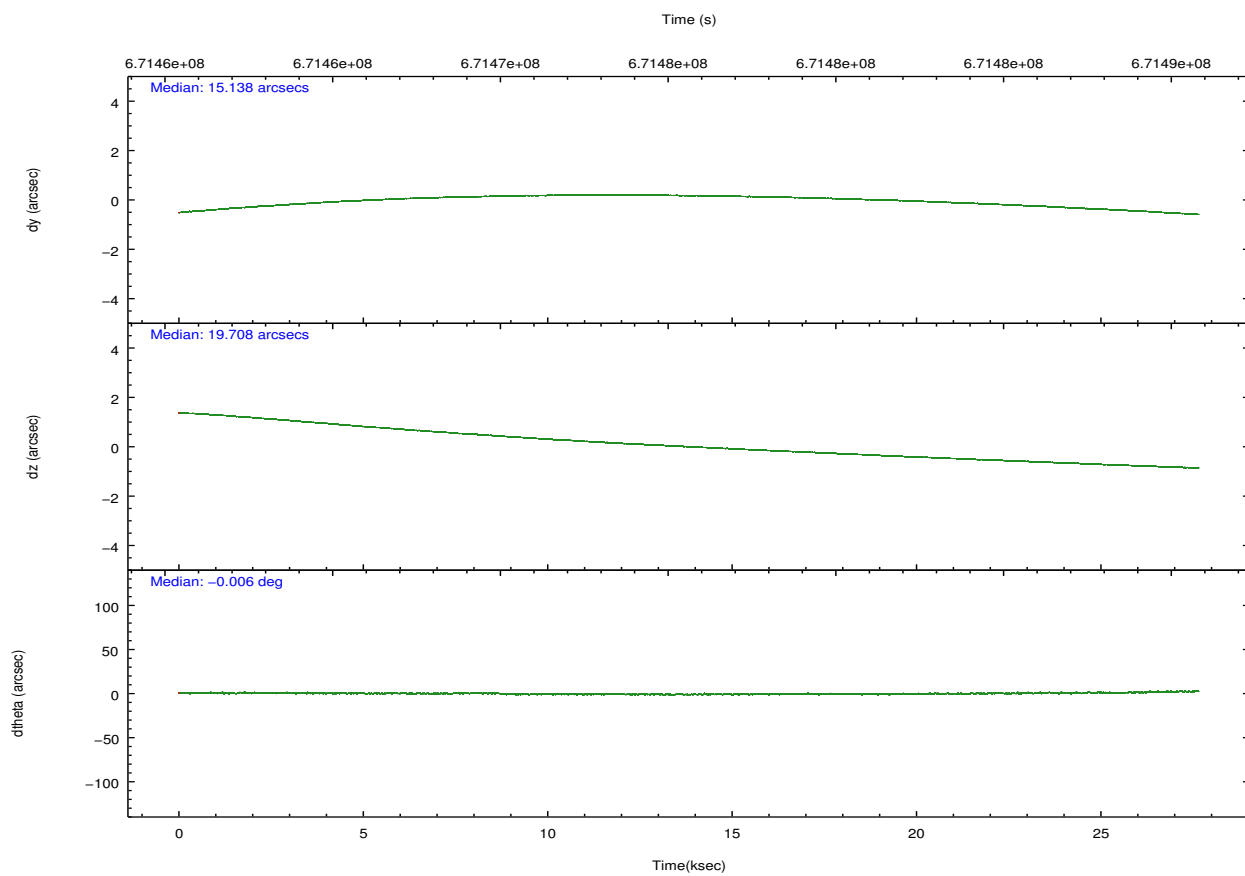
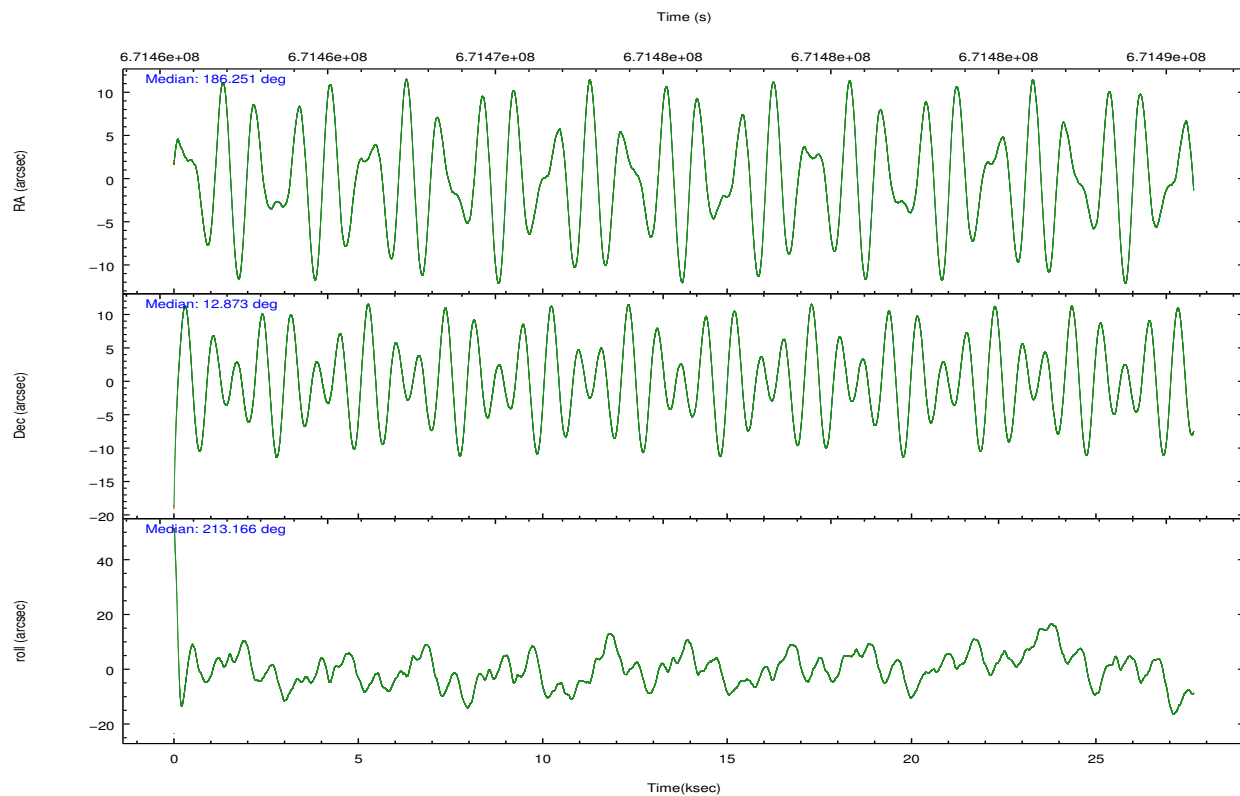
	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	8887	52504	8645	11863
	4%	12%	4%	4%
grade 1 events	109	954	94	465
	0%	0%	0%	0%
grade 2 events	4776	60886	6099	27105
	2%	15%	2%	9%
grade 3 events	2387	5876	2230	9960
	1%	1%	1%	3%
grade 4 events	2314	5716	2289	9614
	1%	1%	1%	3%
grade 5 events	9097	23669	9319	26283
	4%	5%	4%	9%
grade 6 events	4548	90995	6106	66560
	2%	22%	2%	23%
grade 7 events	174437	164836	177854	127755
	84%	40%	83%	45%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-3567	ACIS-3567	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	VFAINT	VFAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	186.263762	186.2514052718224	CCD I2 on	O1	N
[deg] Pointing Dec	12.897767	12.87311628695446	CCD I3 on	Y	Y
[deg] Pointing Roll	213.000461	213.1598778419107	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	Y	Y
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1400660498719	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.00754346686406393	CCD S4 on	O2	N
[s] Observation start time (MET)	671461969.184000	671460949.86149	CCD S5 on	N	N
Observation start date	2019-04-12T13:11:40	2019-04-12T12:55:49	Number of optional ACIS chips dropped	2	2
[s] Observation end time (MET)	671489465.184000	671490107.52574	On-chip summing requested	N	N
Observation end date	2019-04-12T20:49:56	2019-04-12T21:01:47	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



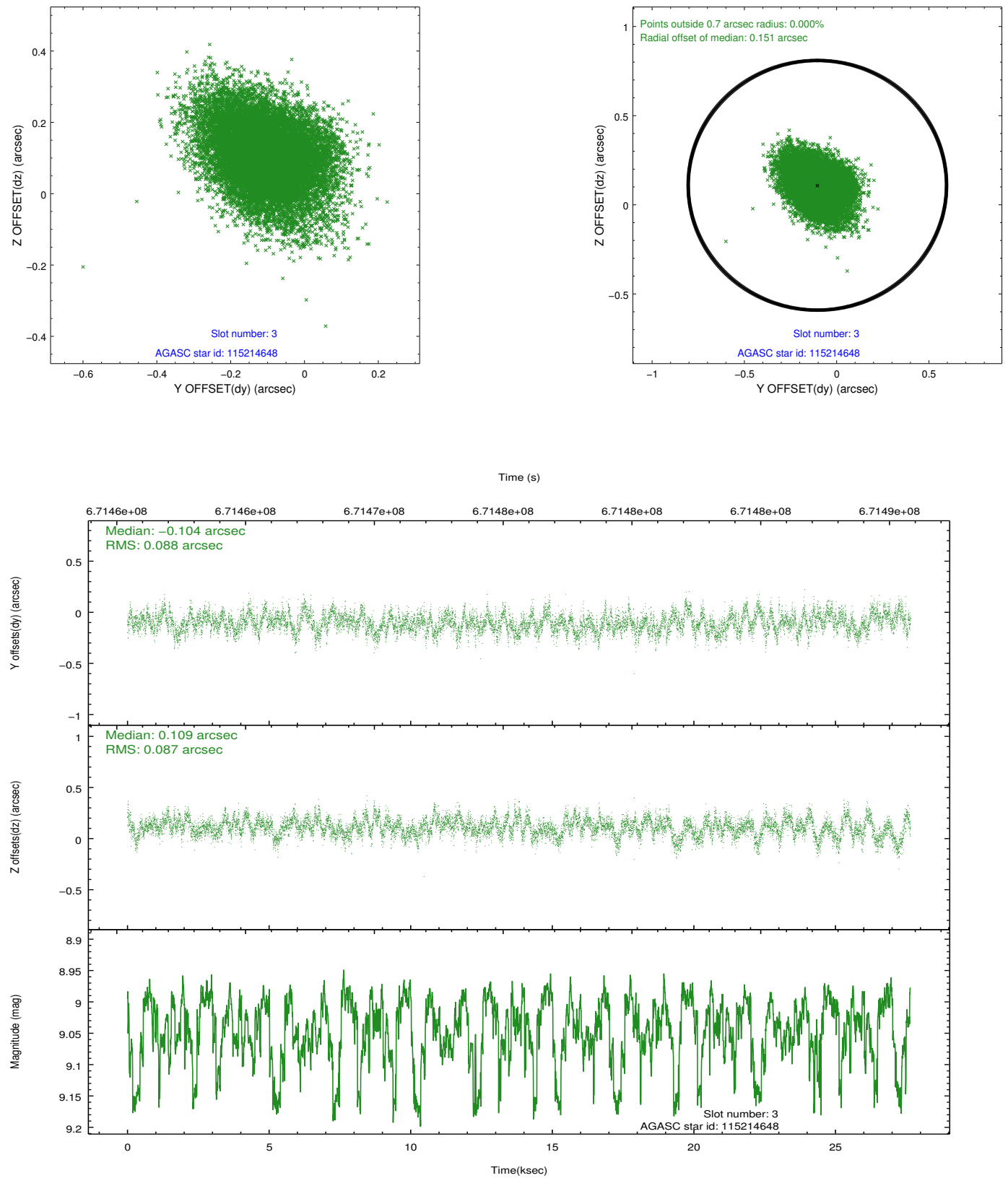


Slot Statistics

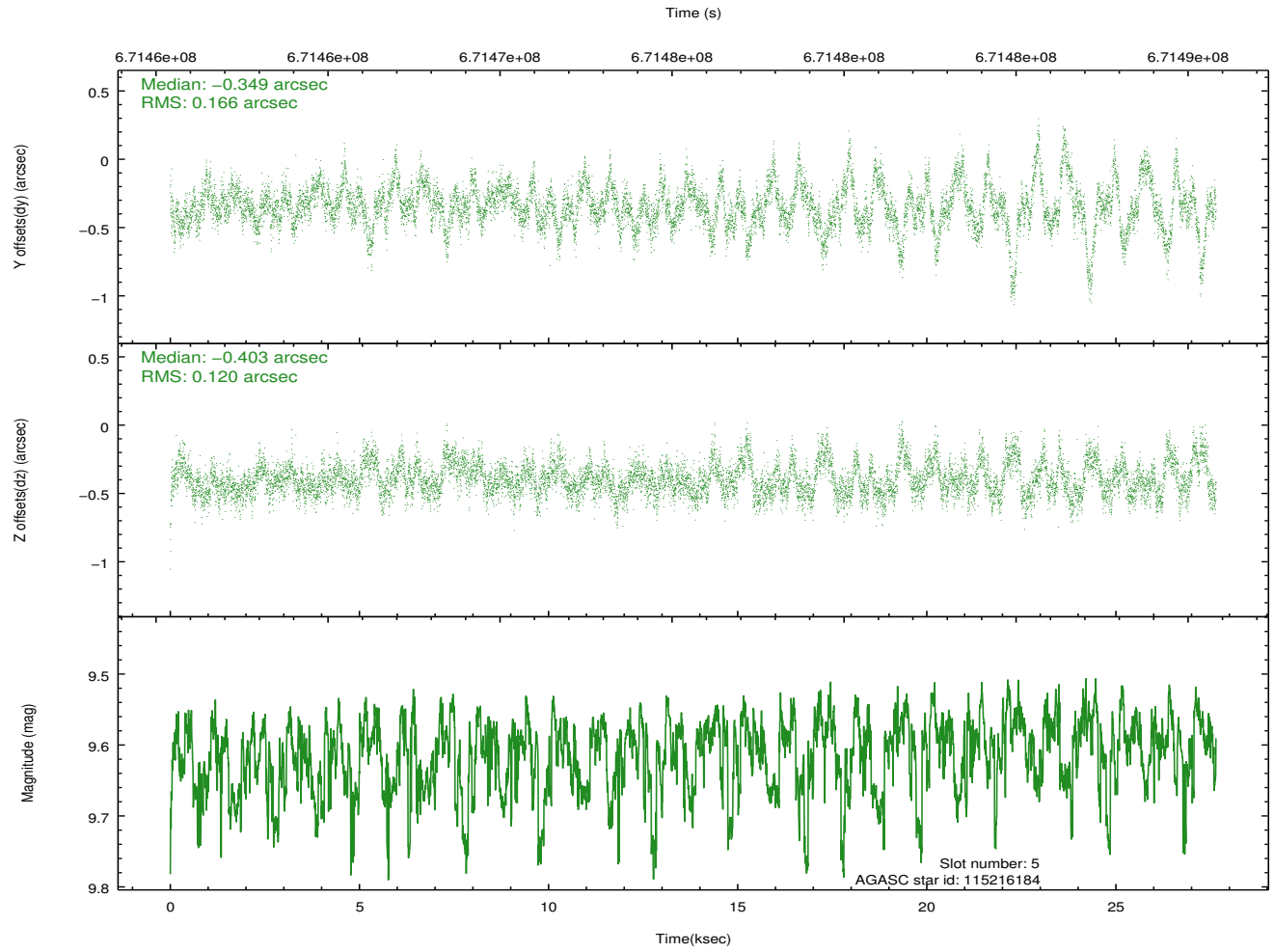
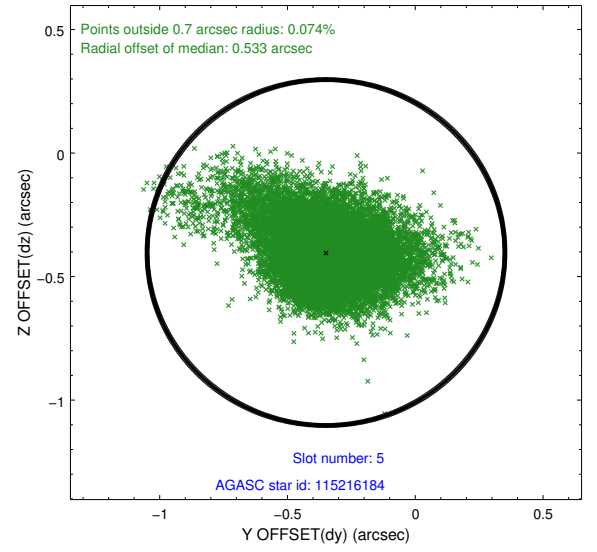
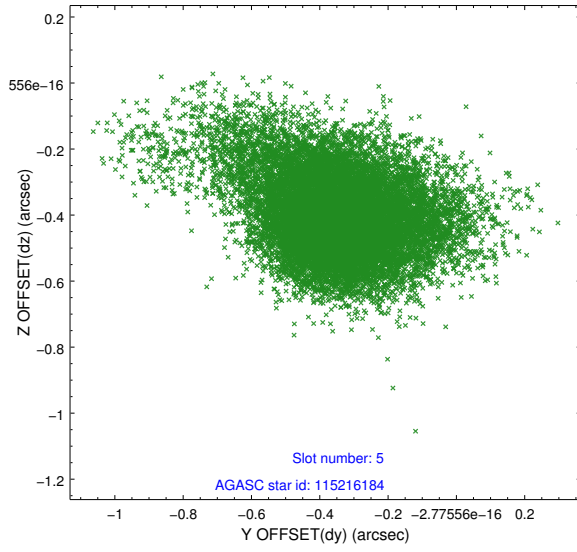
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	7.06	6745	1.000	-0.351	-0.200	0.024	0.045	0.000000	0.000000	-768.33	-1741
1	FID		ACIS-S-4	7.17	6743	1.000	0.816	0.225	0.017	0.052	0.000000	0.000000	2145.99	167
2	FID		ACIS-S-5	7.14	6743	1.000	-0.490	-0.018	0.026	0.055	0.000000	0.000000	-1821.26	160
3	GUIDE	used	115214648	9.04	13476	1.000	-0.104	0.109	0.131	0.215	185.771147	12.685188	1868.51	-301
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	115216184	9.61	13459	1.000	-0.349	-0.403	0.202	0.378	185.973150	12.580247	1480.44	405
6	GUIDE	used	115347480	9.63	13452	1.000	0.061	0.101	0.171	0.283	186.668576	13.310410	-1997.89	-473
7	GUIDE	used	115349448	9.68	13468	1.000	0.387	0.183	0.186	0.308	186.471080	13.770115	-2317.21	-2238

2.4 Star Slots

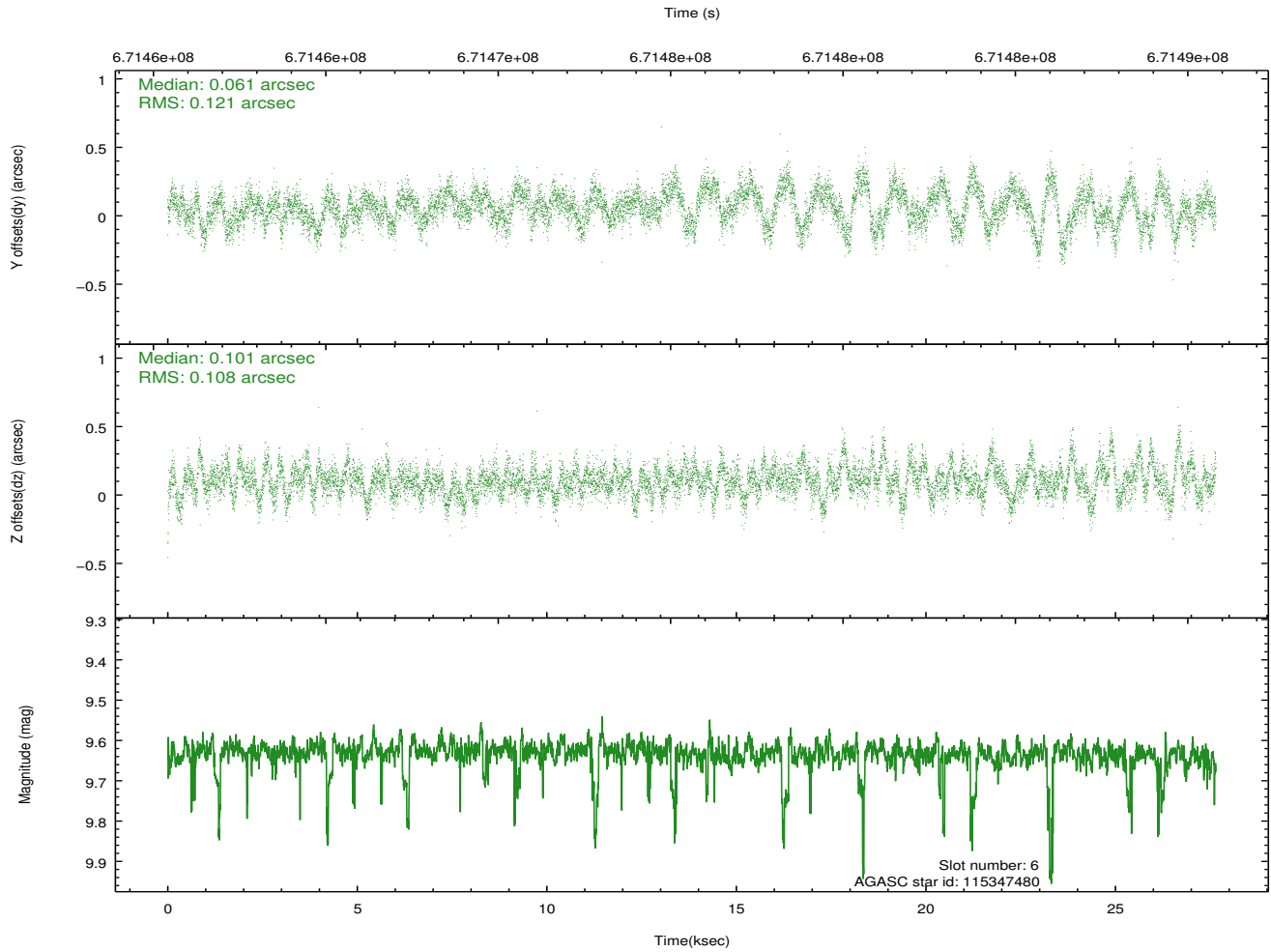
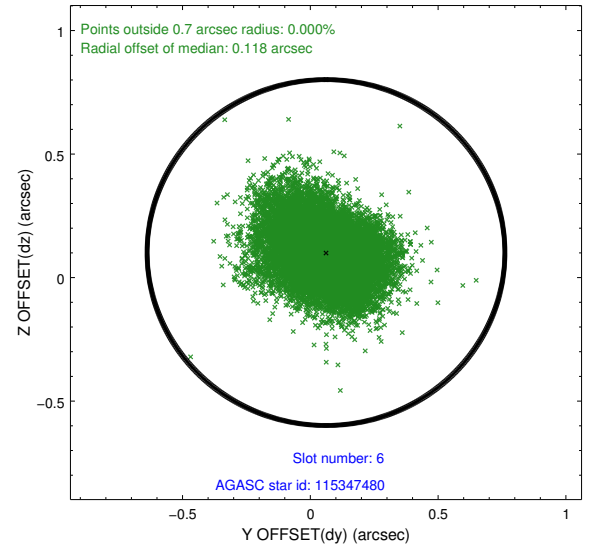
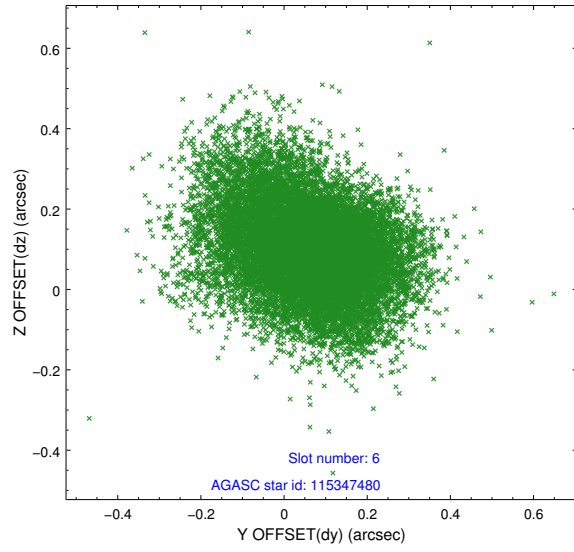
2.4.1 Slot 3



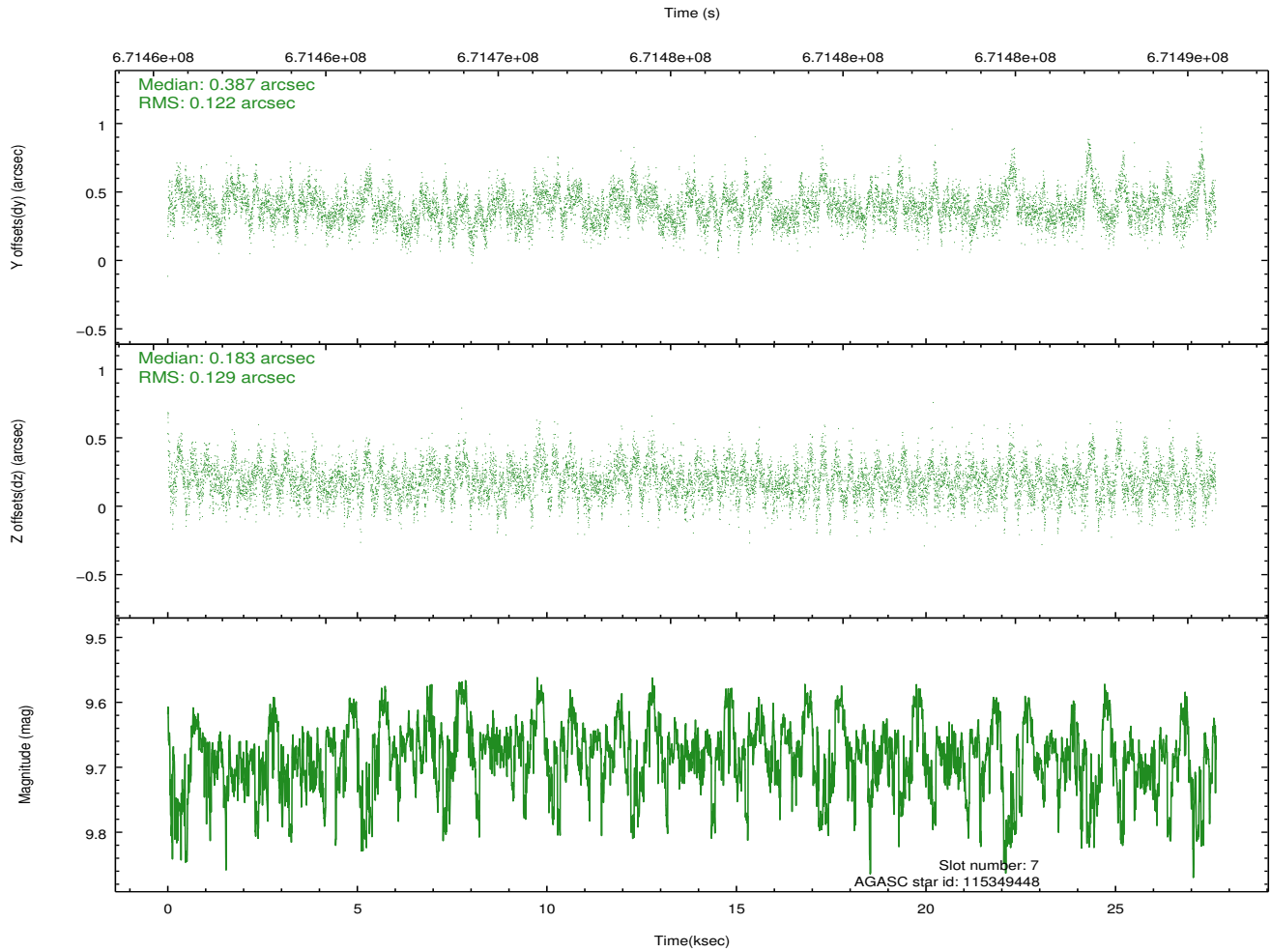
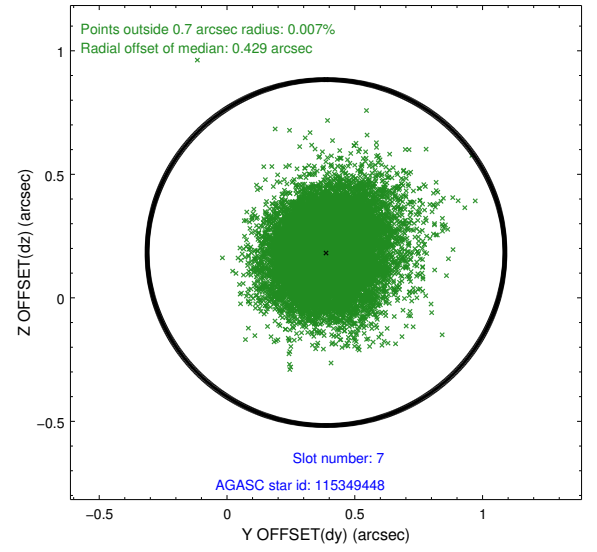
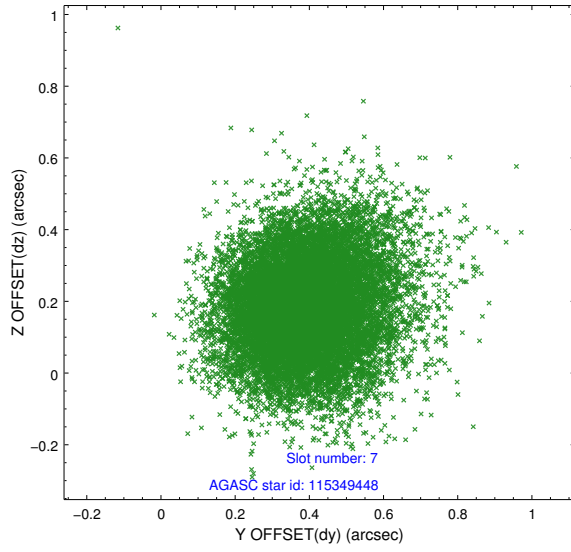
2.4.2 Slot 5



2.4.3 Slot 6

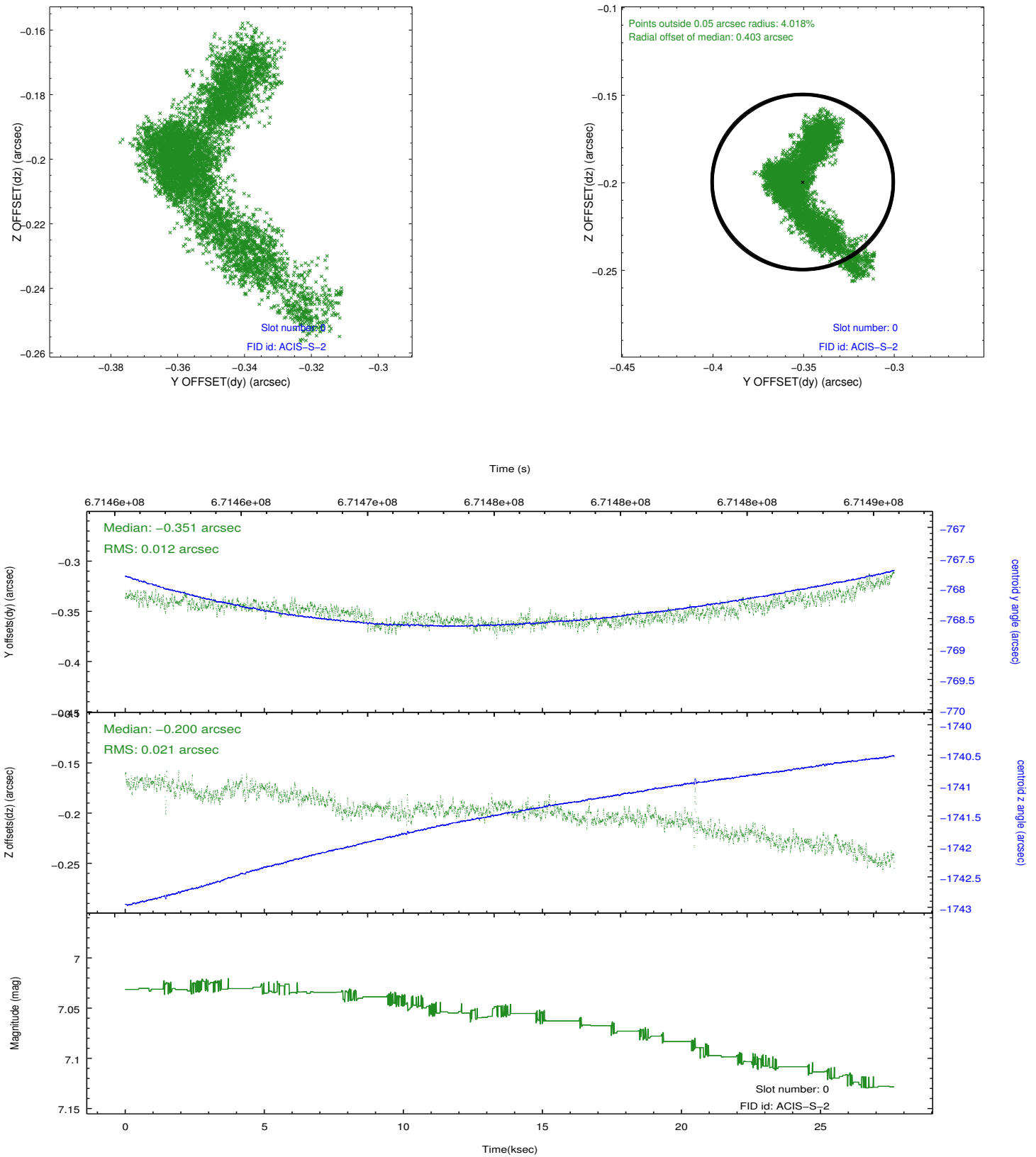


2.4.4 Slot 7

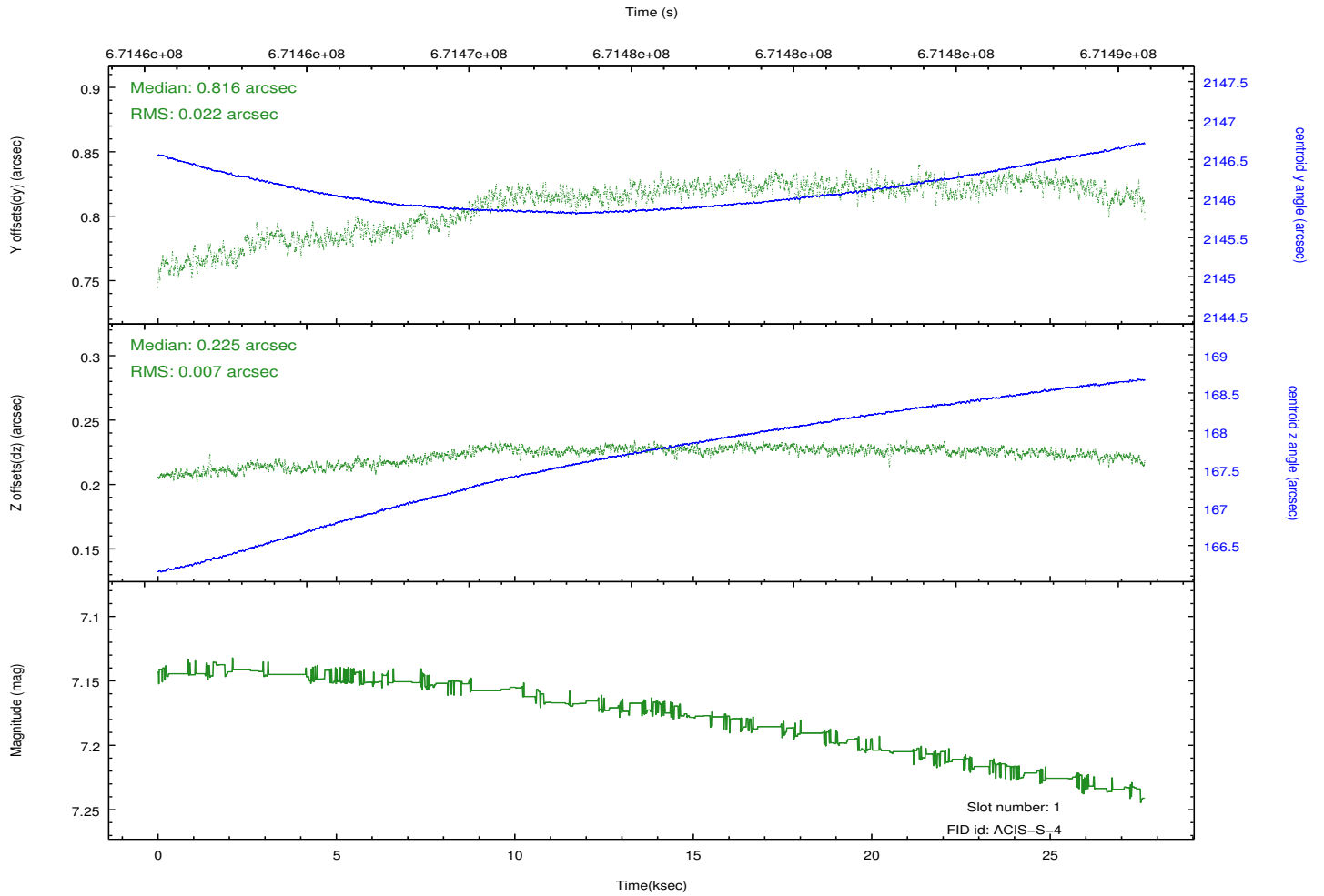
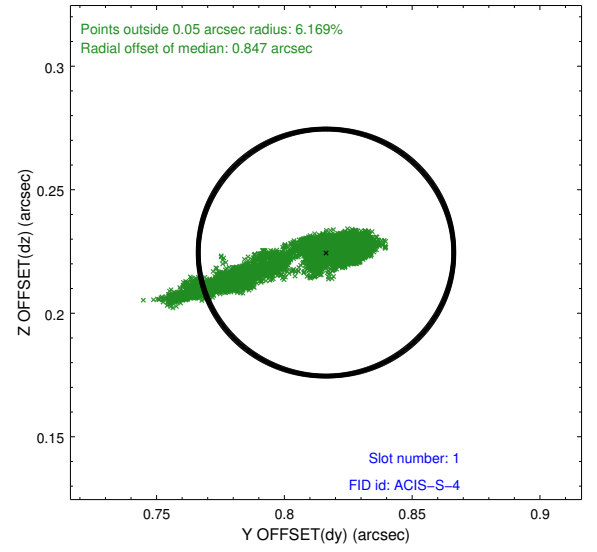
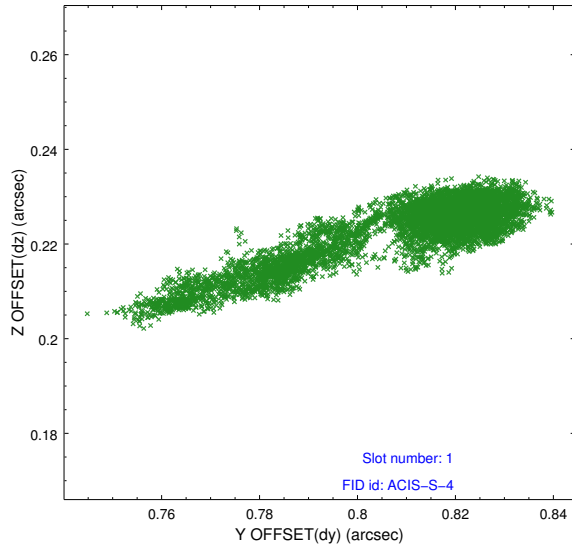


2.5 FID Slots

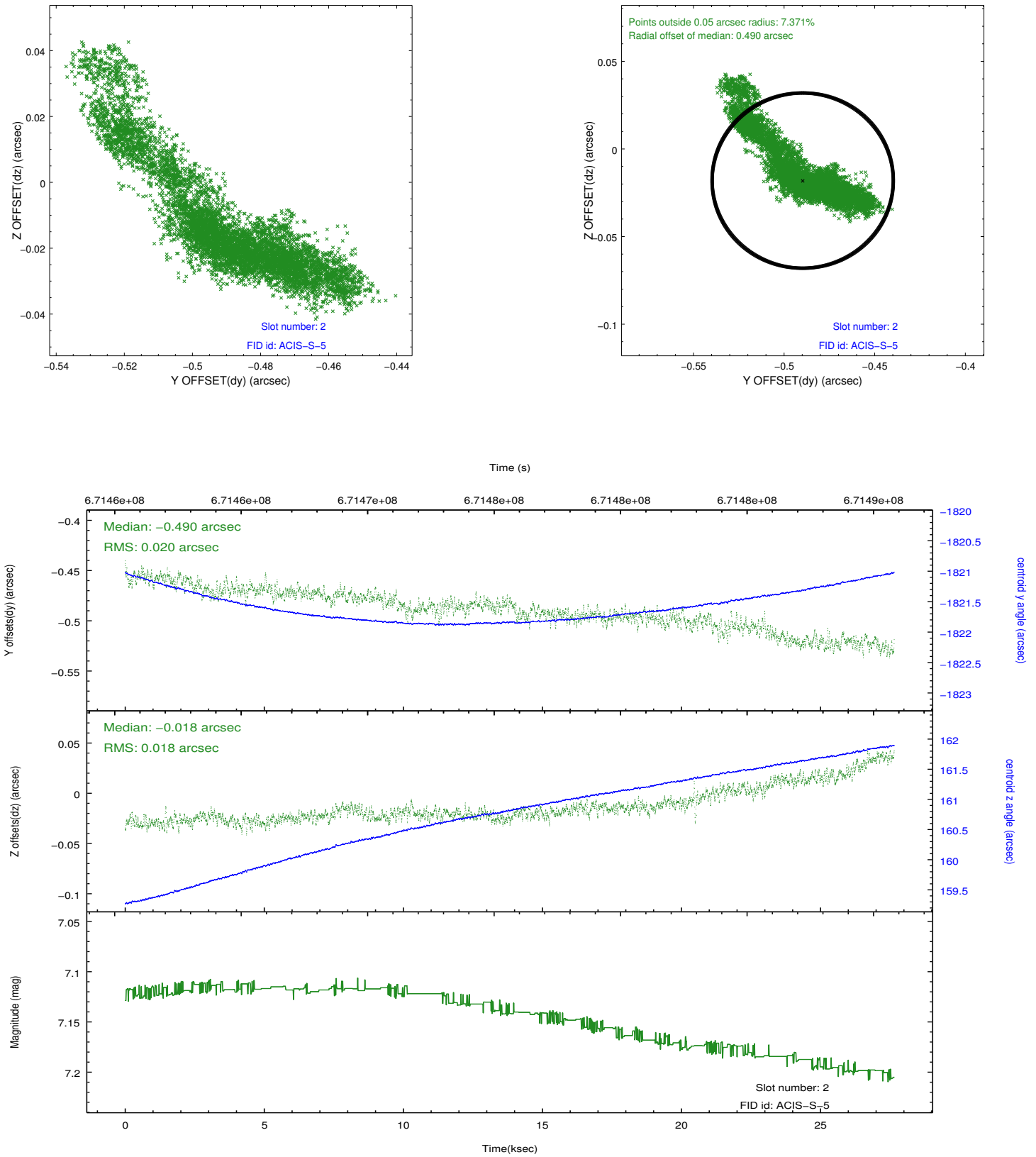
2.5.1 Slot 0



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)	2019.04.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	27.561370752096

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 guide star from the solution.

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Optional chips I2 and S4 not included.

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To compensate for a few bad pixels not marked as bad that were not removed in the Level 2 processing, a custom bad pixel file with additional bad pixels at (chipx, chipy) = (232:234,322:339) in S1 was added in this processing. As a result, the user will NOT find a relatively bright square of pixels on the S1 chip for level 2 data caused by the application of the dither algorithm to the bad pixels in question, as opposed to previous processing(s).