

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 20540 - L2 Version 3
Chandra X-Ray Center

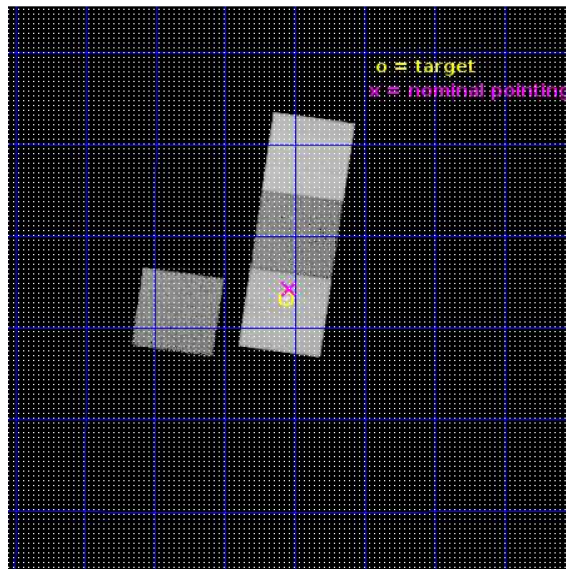
L2 Processing Date : Mar 7 2019

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1 Front

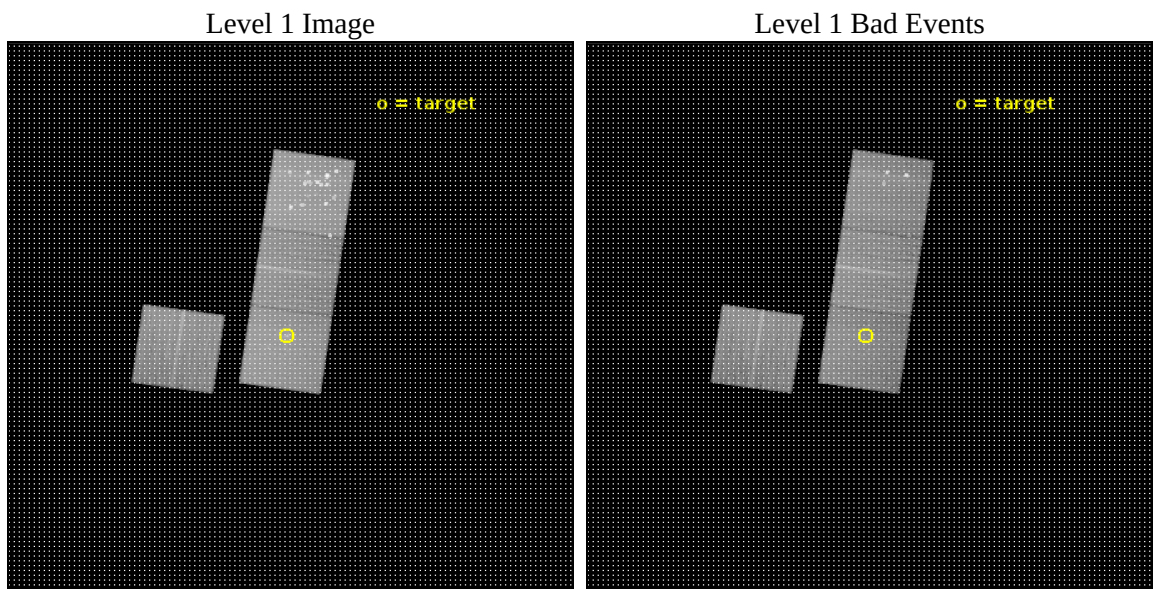
seq_num	801753	Sequence number
obs_id	20540	Observation id
title	Fuelling and self-regulation of AGN feedback at the Bondi radius of M84	Proposal title
observer	Helen Russell	Principal investigator
object	M84	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	186.265833	Observer's specified target RA [deg]
dec_targ	12.886944	Observer's specified target Dec [deg]
ra_nom	186.25969443316	Nominal RA [deg]
dec_nom	12.904674249808	Nominal Dec [deg]
roll_nom	98.158021087422	Nominal Roll [deg]
revision	3	Processing version of data
ontime	30568.106974363	Sum of GTIs [s]
livetime	30168.71215283	Livetime [s]
ontime3	30564.842774034	Sum of GTIs [s]
ontime5	30568.06593442	Sum of GTIs [s]
ontime6	30568.024894357	Sum of GTIs [s]
ontime7	30568.106974363	Sum of GTIs [s]
l2events	362383	Number of level 2 events



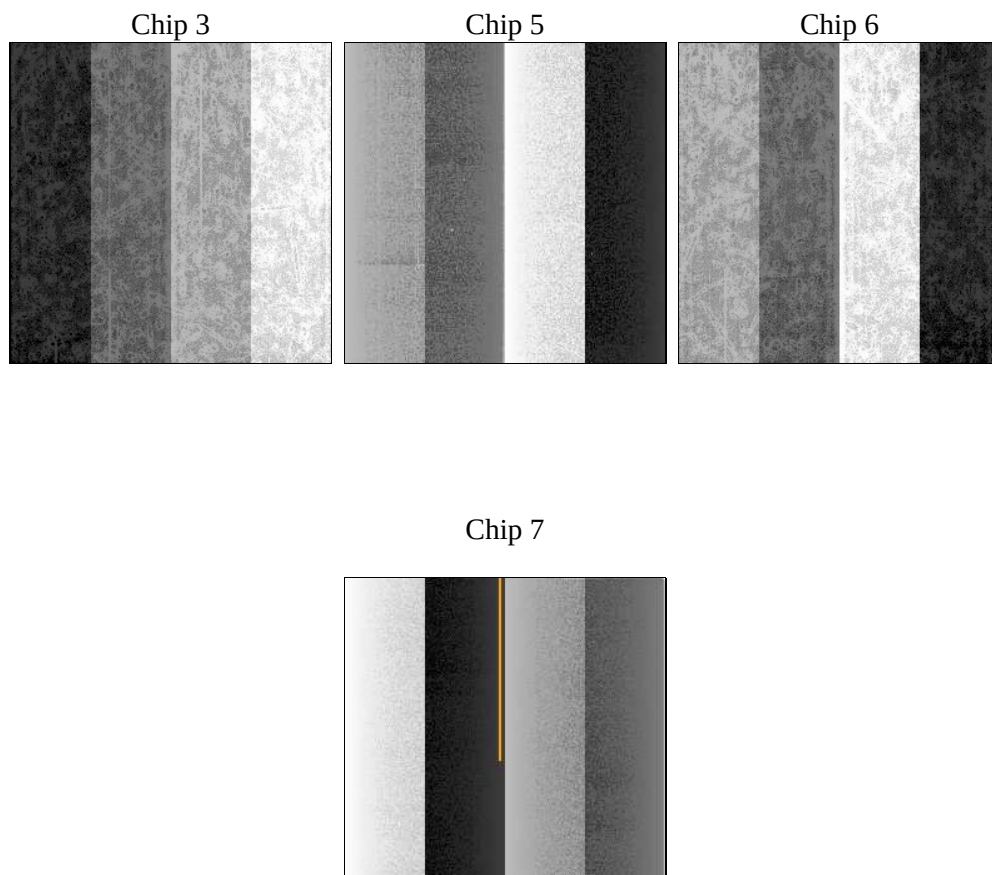
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	30500.000000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	30568.106974363	Sum of GTIs [s]
caldsver	4.8.2	 	ontime3	30564.842774034	Sum of GTIs [s]
date	2019-03-07T22:54:45	Date and time of file creation	ontime5	30568.06593442	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	30568.024894357	Sum of GTIs [s]
			ontime7	30568.106974363	Sum of GTIs [s]
			l1events	1276517	Number of level 1 events

2.1.4 Events

	ccd 3	ccd 5	ccd 6	ccd 7
level 1 events	234200	480021	250072	312224
rejected events	204723	217049	220074	173719
rejected %	87%	45%	88%	55%

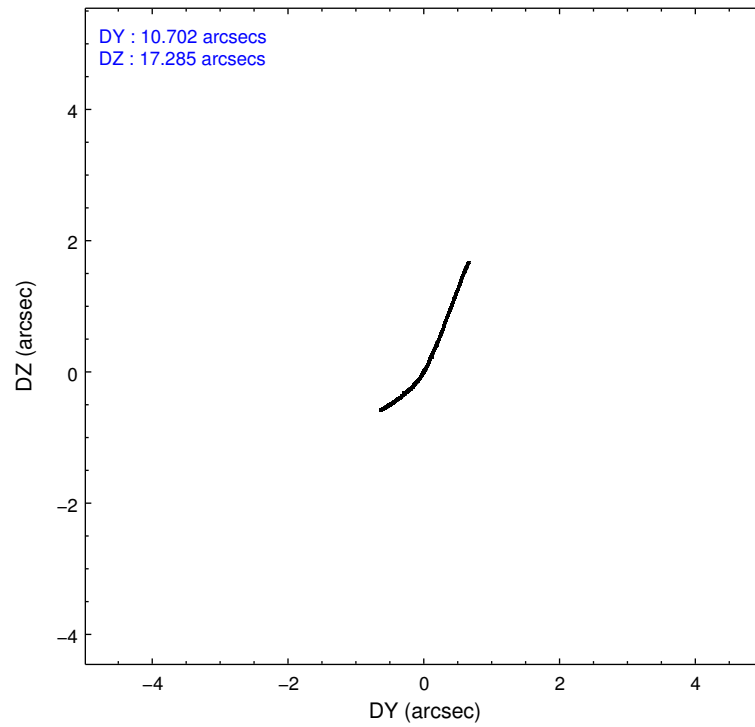
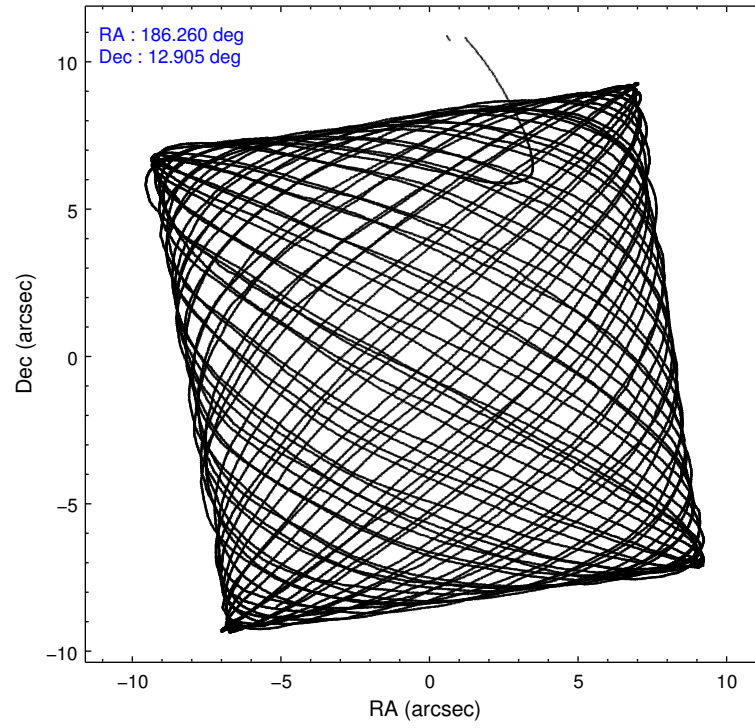
	ccd 3	ccd 5	ccd 6	ccd 7
grade 0 events	12885	75542	10642	13377
	5%	15%	4%	4%
grade 1 events	157	1062	130	469
	0%	0%	0%	0%
grade 2 events	5856	69957	7349	29664
	2%	14%	2%	9%
grade 3 events	2660	7105	2466	10868
	1%	1%	0%	3%
grade 4 events	2636	8203	2479	10626
	1%	1%	0%	3%
grade 5 events	10484	27252	10040	29196
	4%	5%	4%	9%
grade 6 events	5444	102201	7068	73989
	2%	21%	2%	23%
grade 7 events	194078	188699	209898	144035
	82%	39%	83%	46%

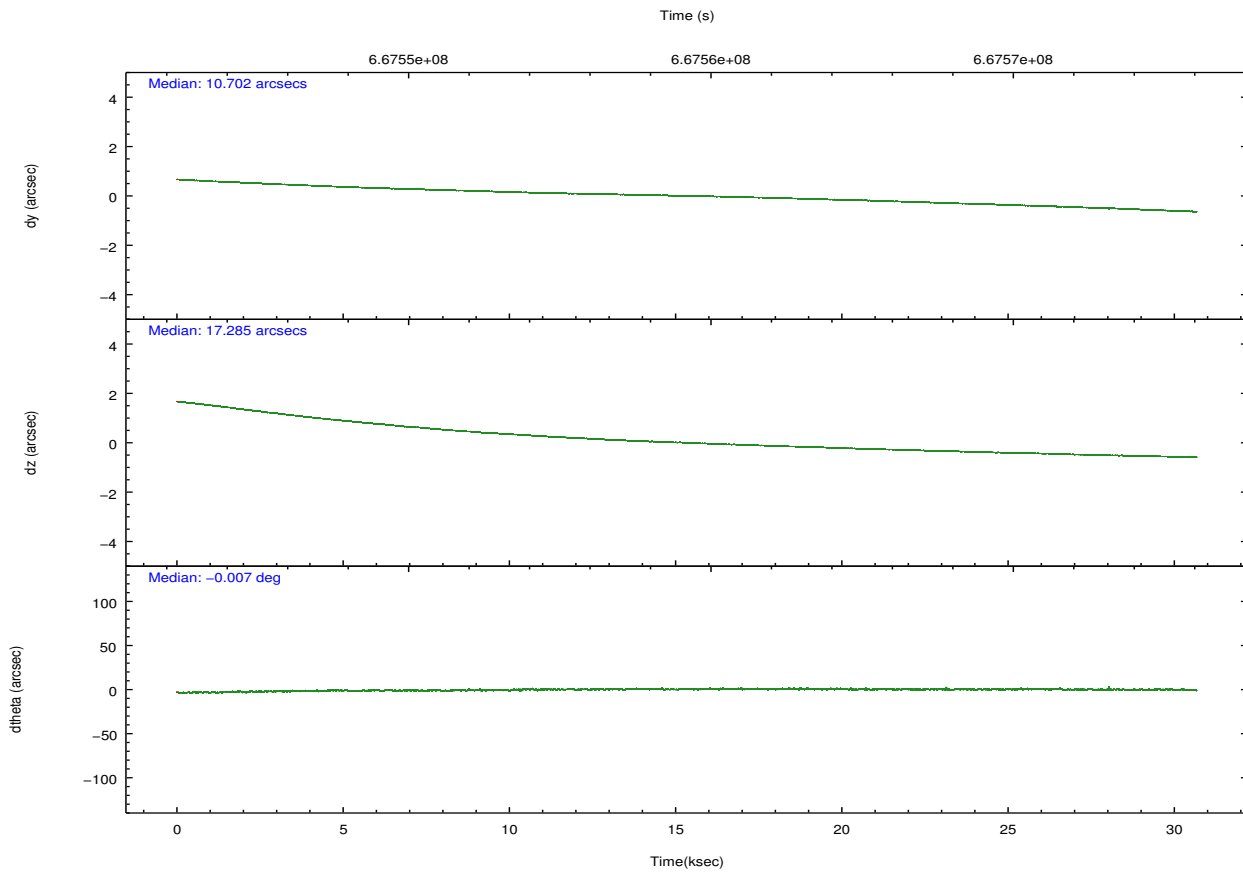
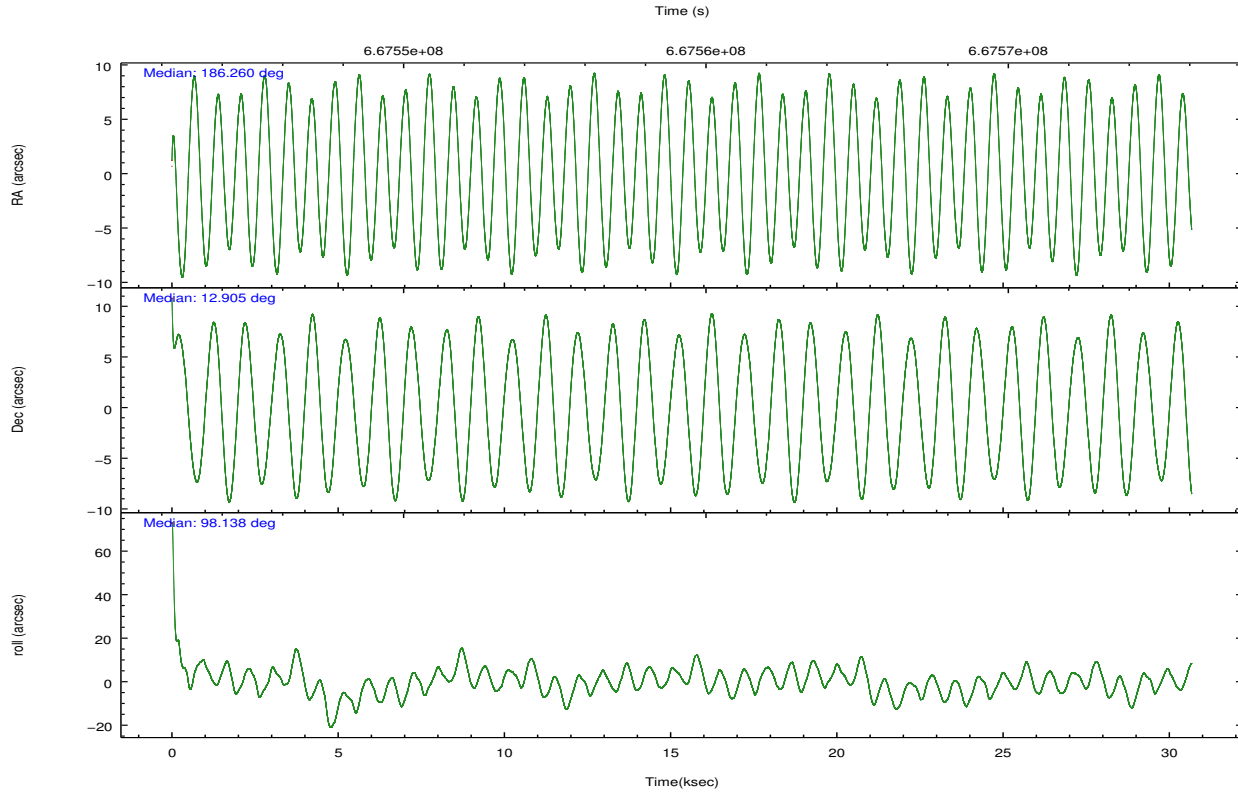
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-3567	ACIS-3567
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	186.277383	186.2596944331645
[deg] Pointing Dec	12.883301	12.90467424980819
[deg] Pointing Roll	97.997429	98.15802108742177
[mm] SIM focus pos	-0.684267	-0.6828225247311905
[mm] SIM defocus	0	0.001444936568705701
[mm] SIM translation stage pos	-190.132523	-190.1425803651734
[mm] SIM translation stage offset	0	0.01005778216563158
[s] Observation start time (MET)	667544019.184000	667542447.40212
Observation start date	2019-02-26T04:52:30	2019-02-26T04:27:27
[s] Observation end time (MET)	667574519.184000	667575478.0290999
Observation end date	2019-02-26T13:20:50	2019-02-26T13:37:58
Read mode	TIMED	TIMED

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED
CCD I0 on	N	N
CCD I1 on	N	N
CCD I2 on	O1	N
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	Y	Y
CCD S2 on	Y	Y
CCD S3 on	Y	Y
CCD S4 on	O2	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	2	2
On-chip summing requested	N	N
Subarray requested	NONE	NONE
Alternating exposures requested	N	N
[s] Primary exposure time	0.000000	3.1

2.3 Aspect



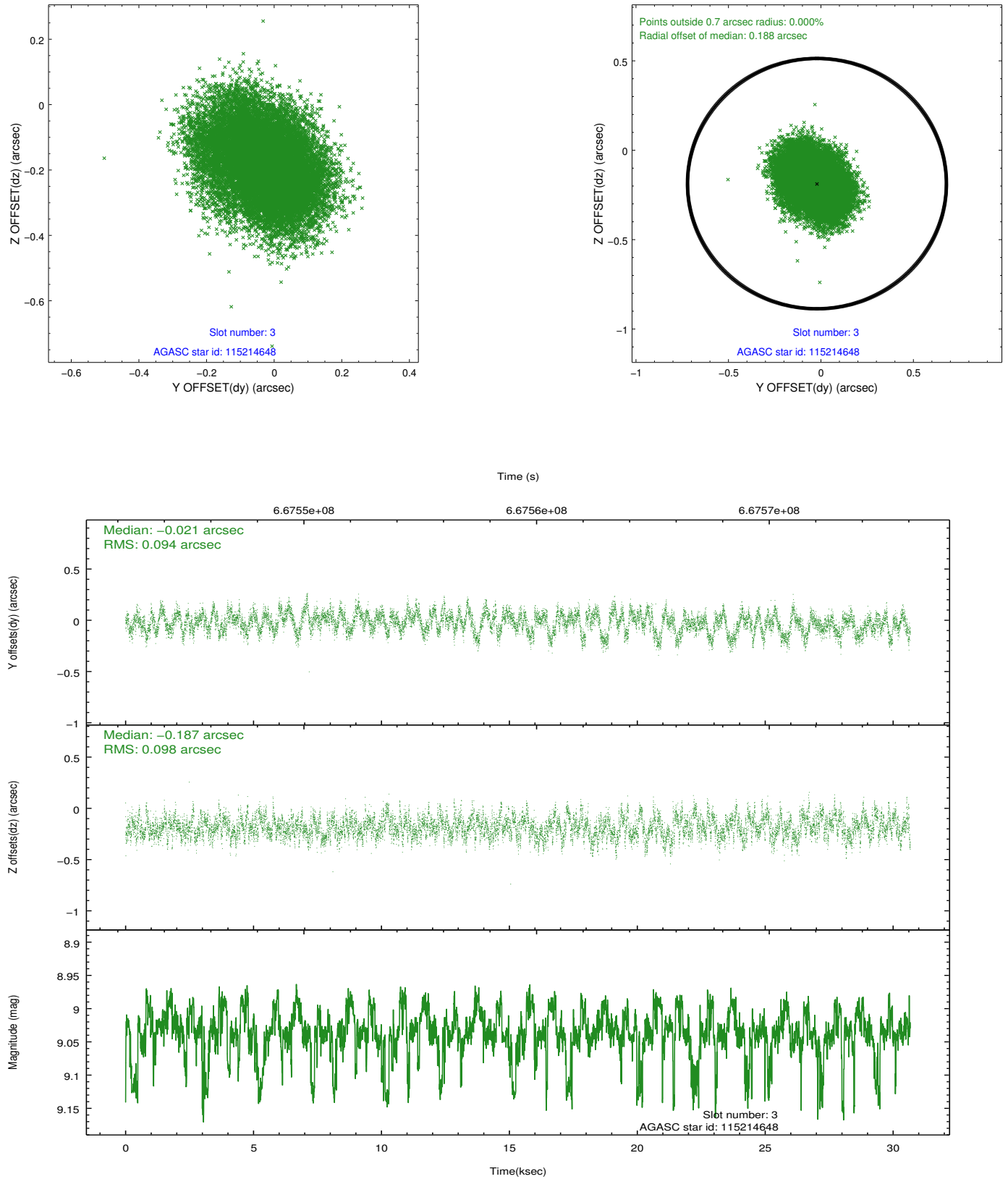


Slot Statistics

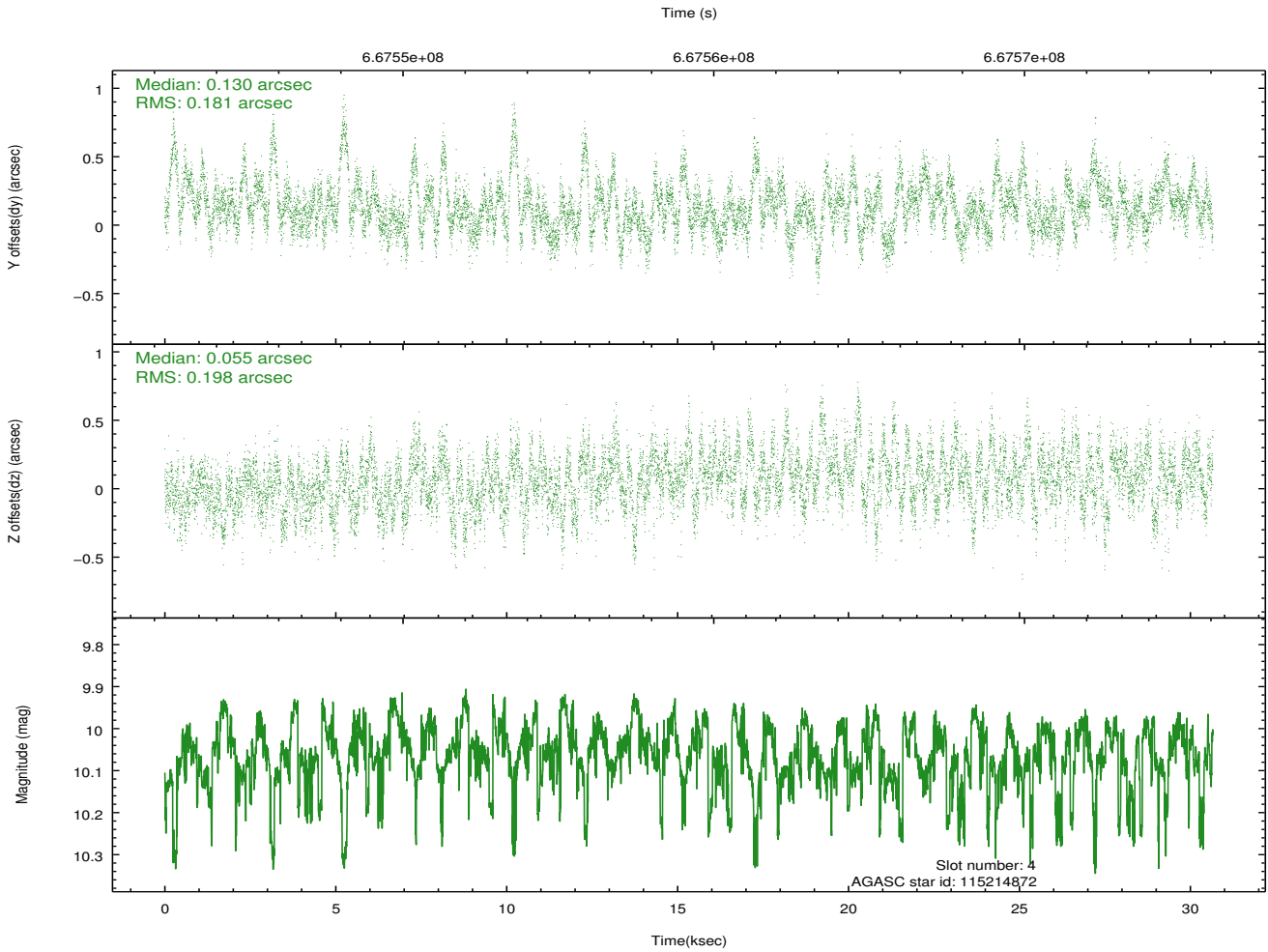
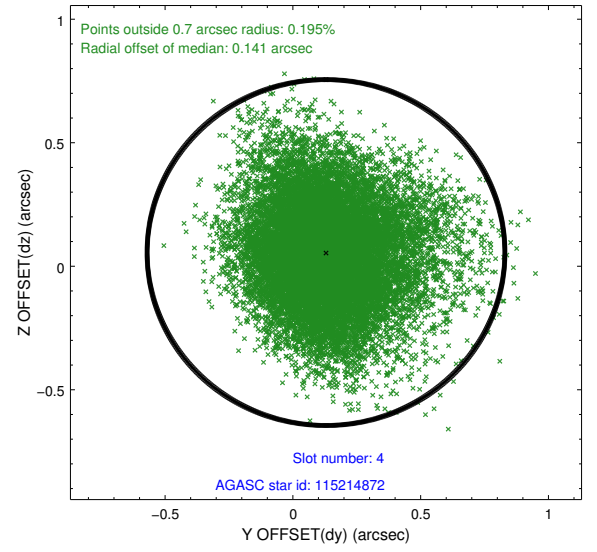
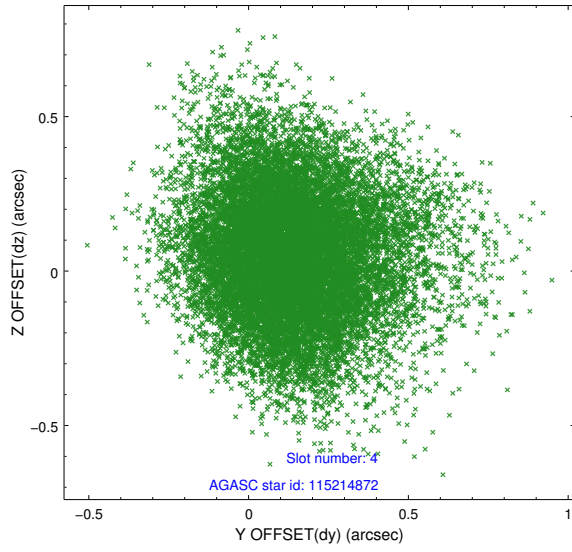
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-1	7.19	7481	1.000	0.162	-0.070	0.036	0.056	0.000000	0.000000	932.71	-1734
1	FID		ACIS-S-5	7.20	7481	1.000	-0.428	0.057	0.013	0.023	0.000000	0.000000	-1816.90	163
2	FID		ACIS-S-6	7.35	7481	1.000	0.248	0.019	0.028	0.042	0.000000	0.000000	398.19	807
3	GUIDE	used	115214648	9.04	14941	1.000	-0.021	-0.187	0.147	0.232	185.771147	12.685188	-457.19	1860
4	GUIDE	used	115214872	10.06	14899	1.000	0.130	0.055	0.283	0.470	185.840719	12.668185	-552.13	1626
5	GUIDE	used	115215984	10.01	14912	1.000	0.025	-0.136	0.296	0.483	186.134733	12.875031	40.24	500
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	115347480	9.50	14881	1.000	-0.141	0.291	0.331	0.496	186.668576	13.310410	1334.06	-1570

2.4 Star Slots

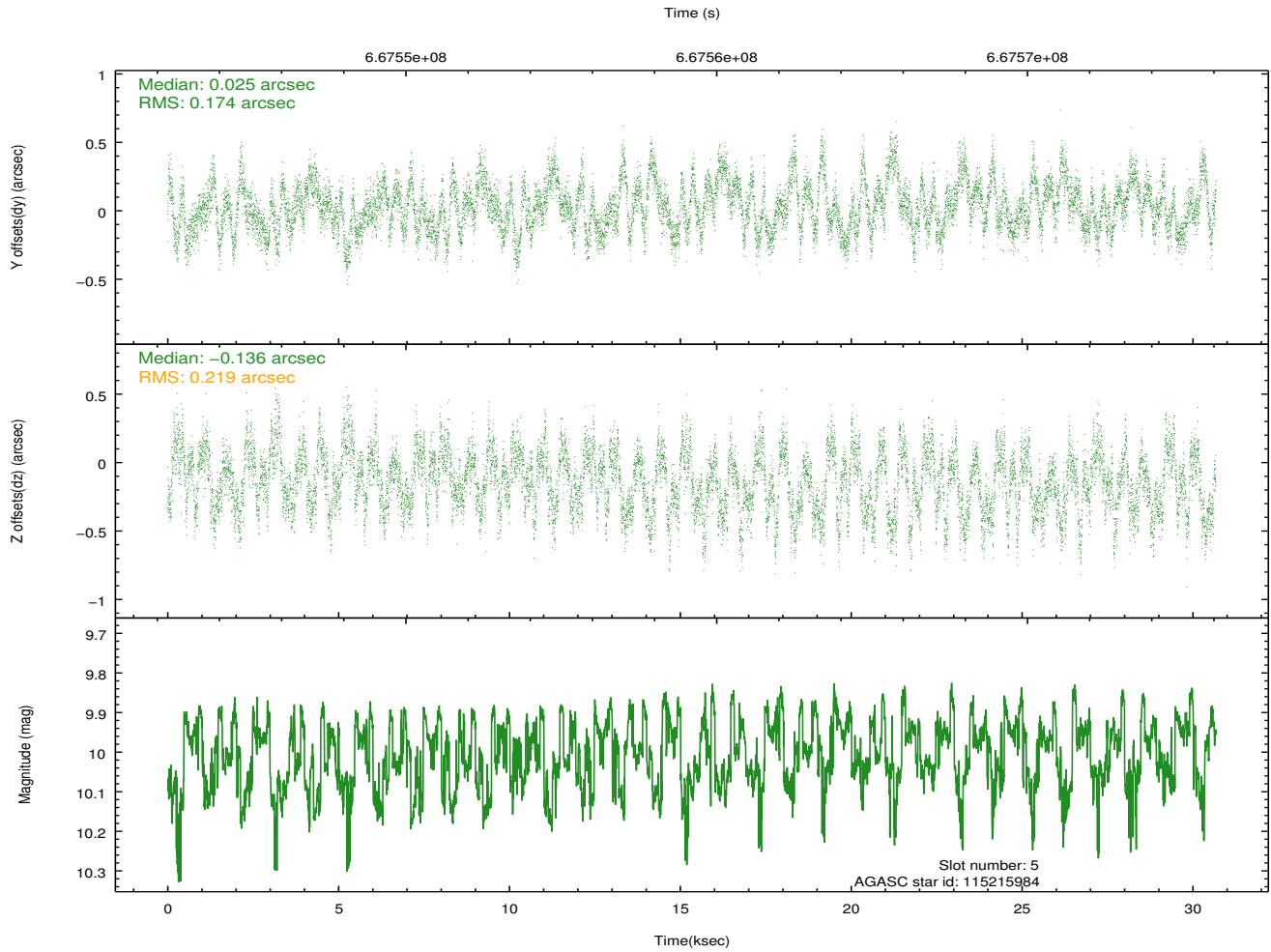
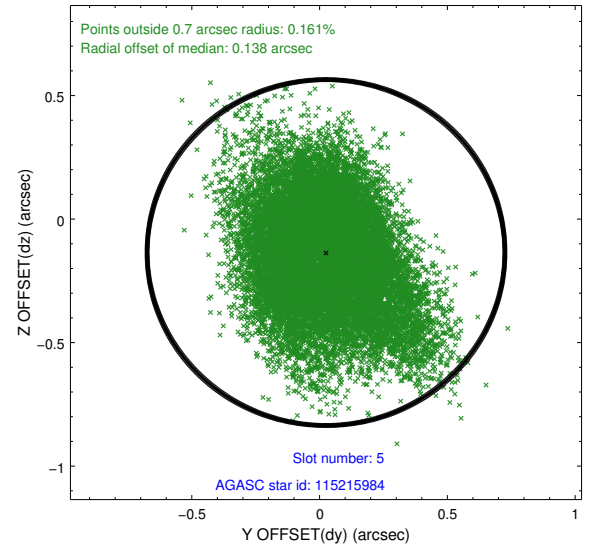
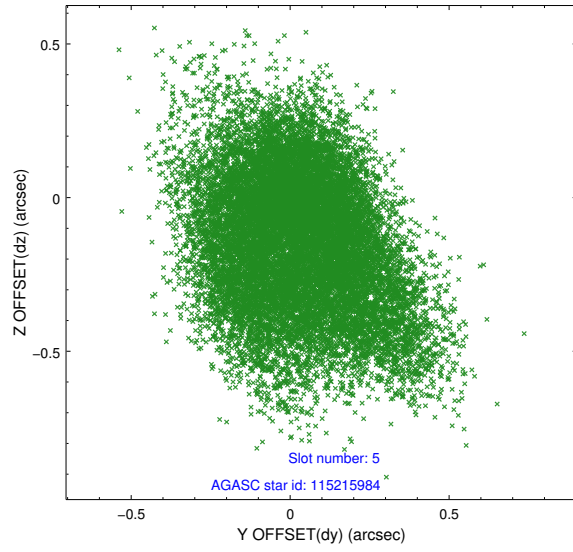
2.4.1 Slot 3



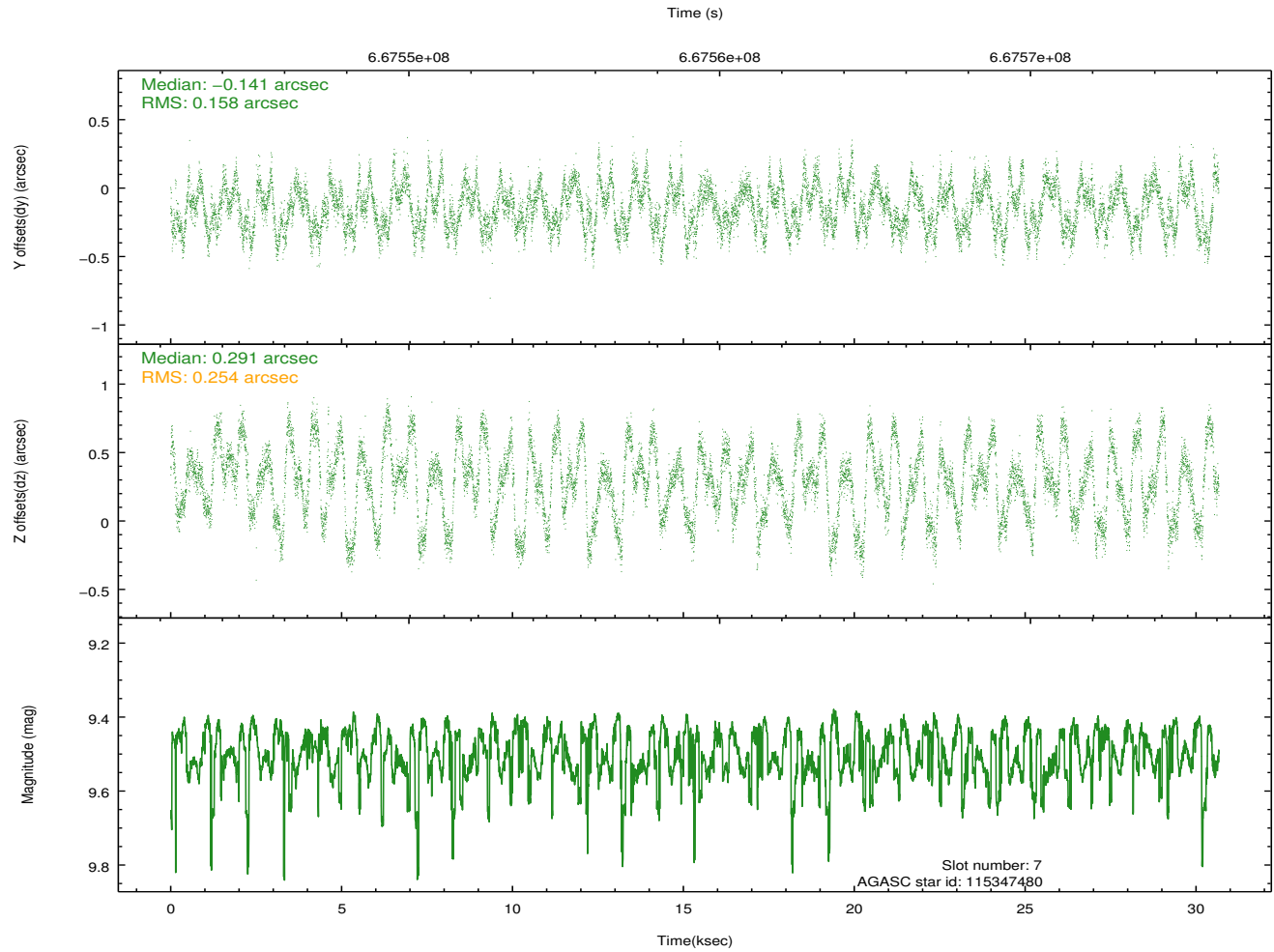
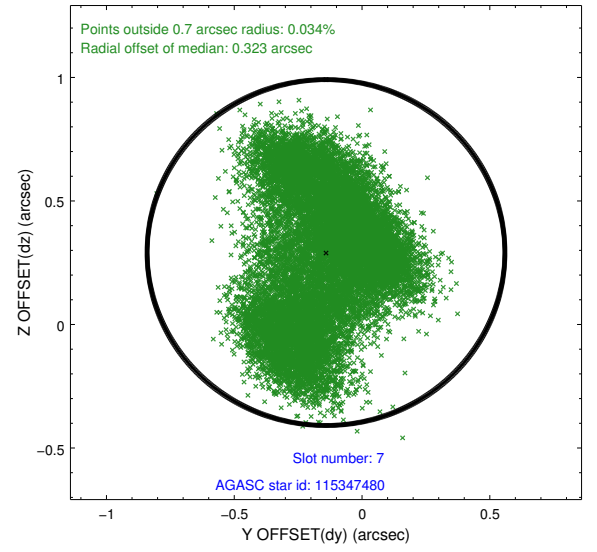
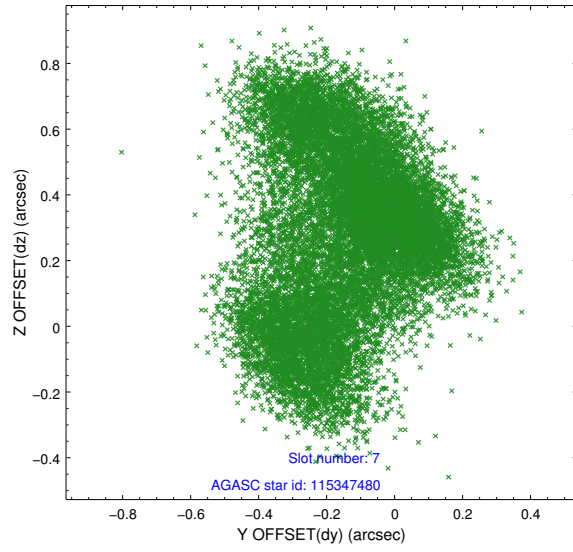
2.4.2 Slot 4



2.4.3 Slot 5

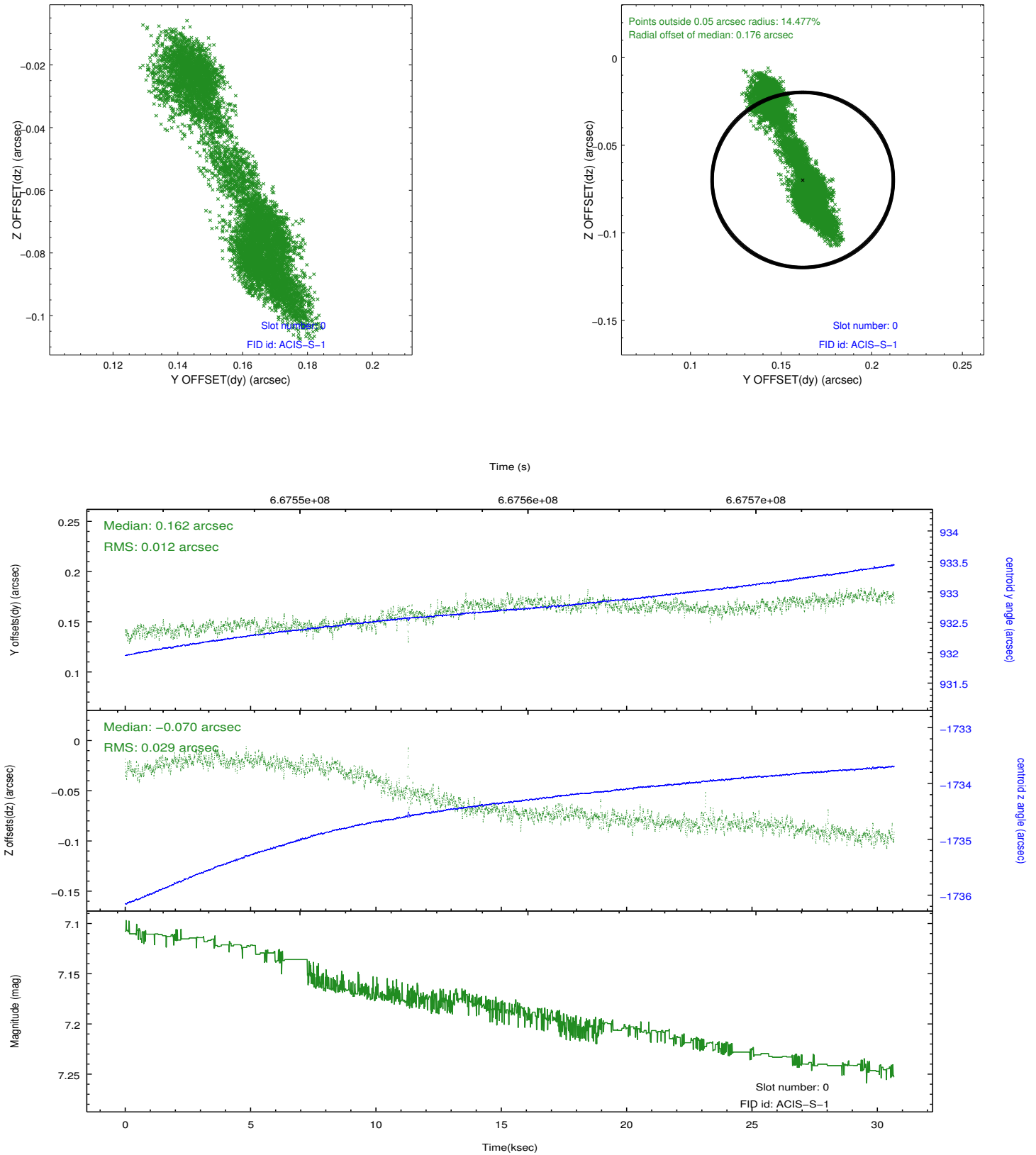


2.4.4 Slot 7

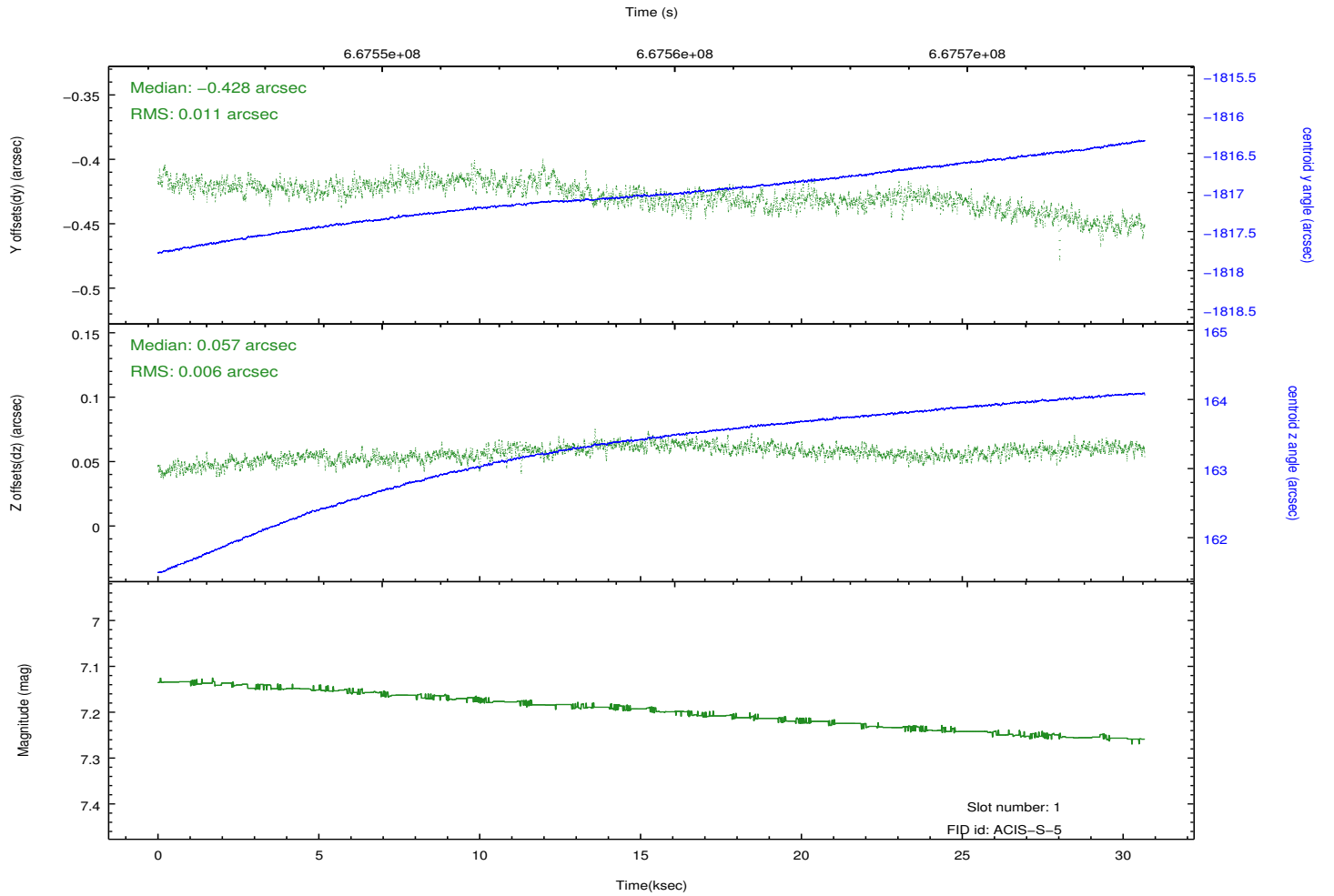
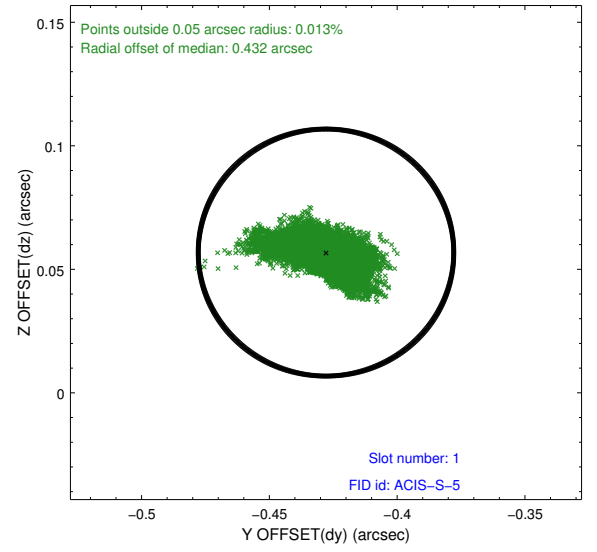
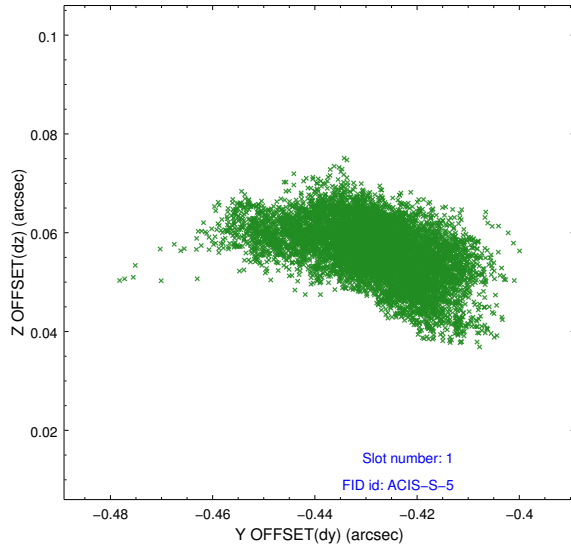


2.5 FID Slots

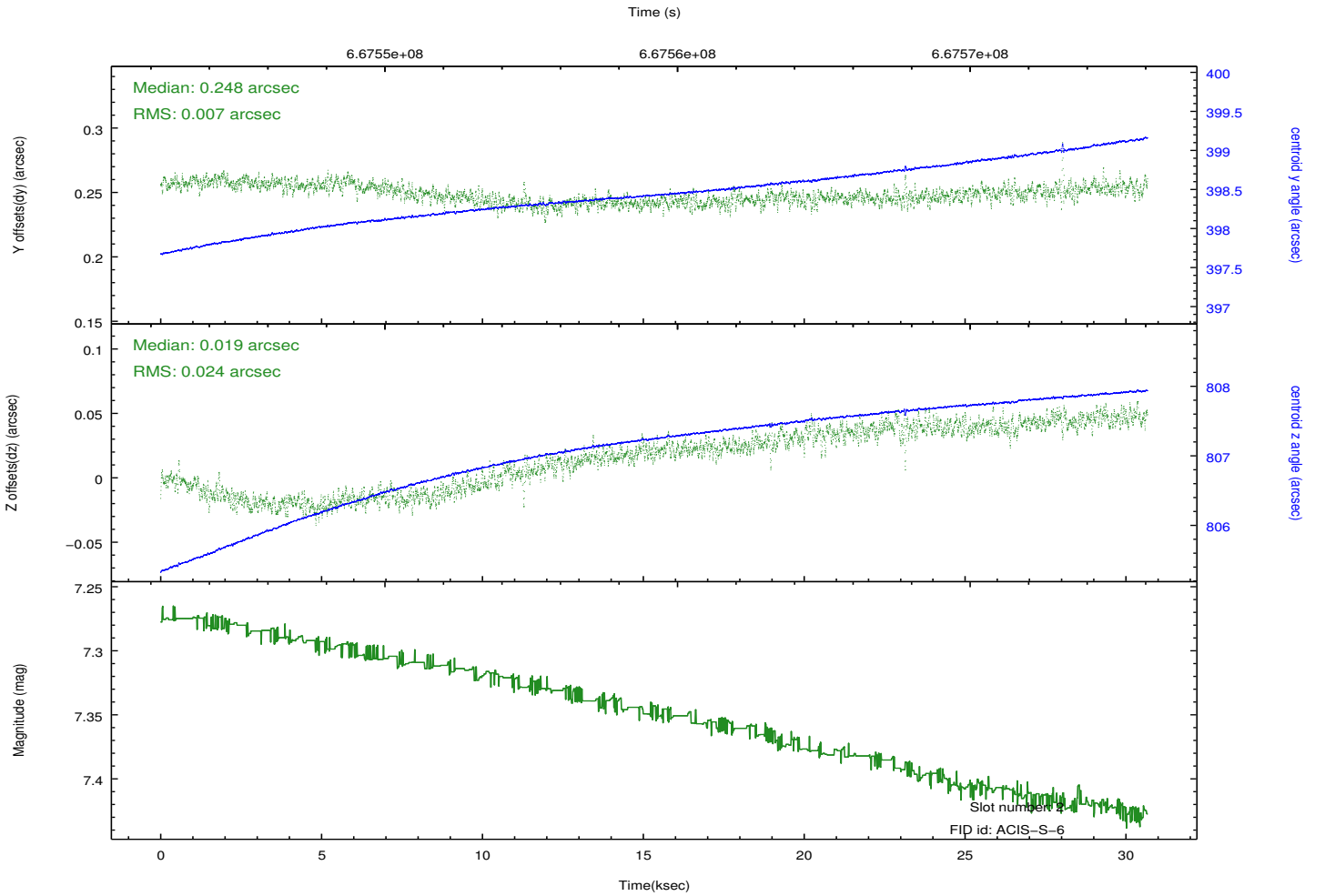
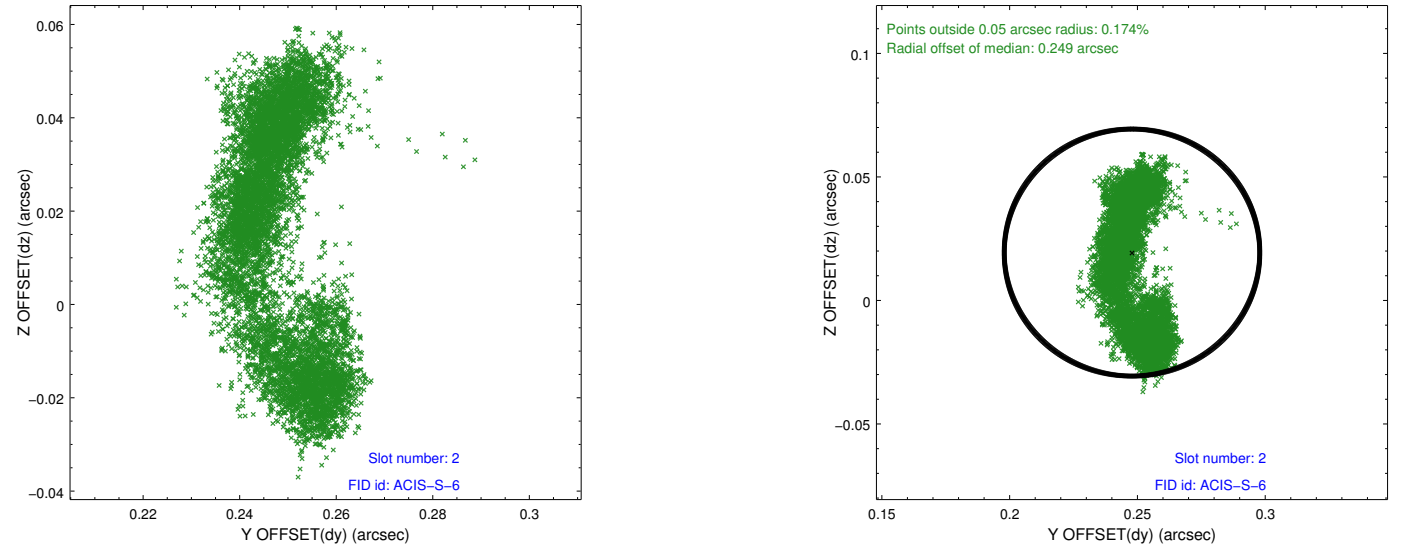
2.5.1 Slot 0



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)	2019.03.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	30.568106974363

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.

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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).