

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 20561 - L2 Version 1
Chandra X-Ray Center

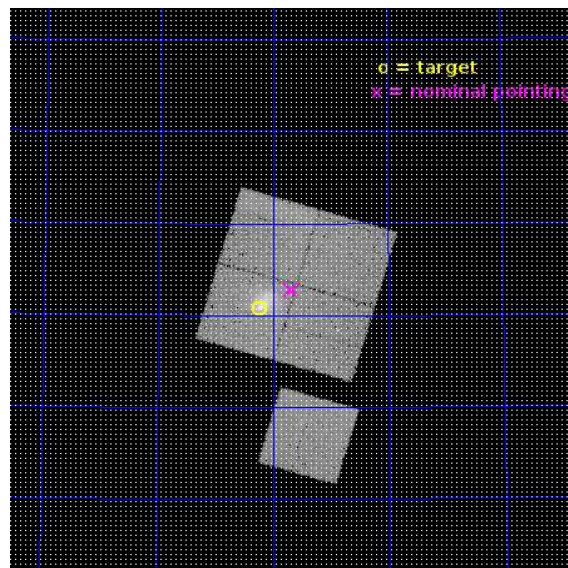
L2 Processing Date : Jun 24 2019

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1 Front

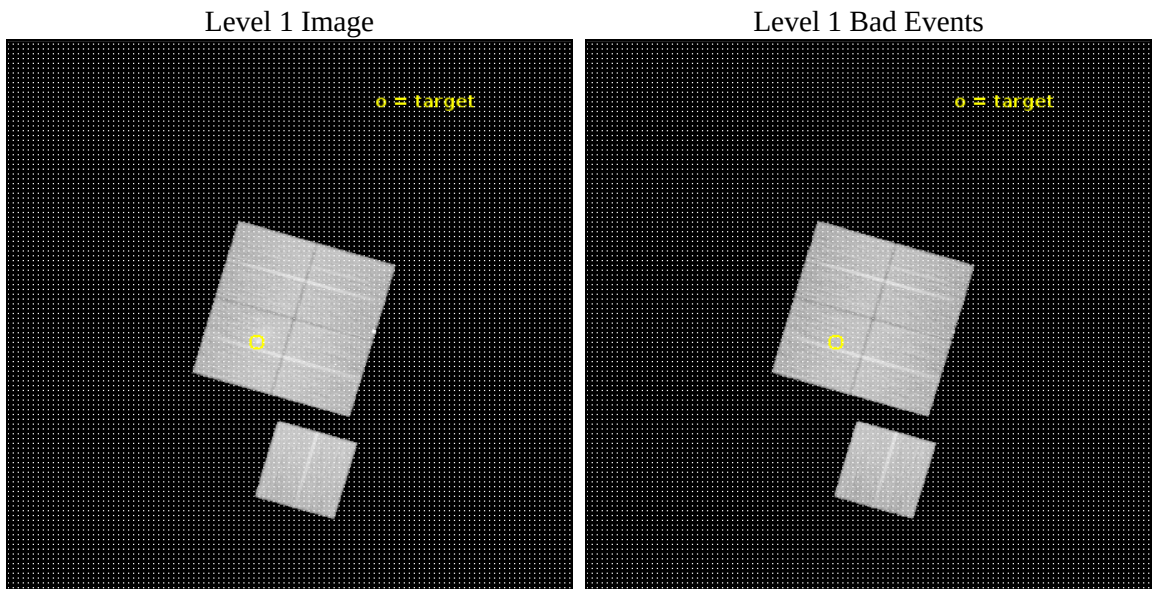
seq_num	801762	Sequence number
obs_id	20561	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.92176201977	Nominal RA [deg]
dec_nom	66.380135534378	Nominal Dec [deg]
roll_nom	196.33651237103	Nominal Roll [deg]
revision	1	Processing version of data
ontime	32065.346269011	Sum of GTIs [s]
livetime	31646.388913842	Livetime [s]
ontime0	32065.223178983	Sum of GTIs [s]
ontime1	32068.405189157	Sum of GTIs [s]
ontime2	32068.446229219	Sum of GTIs [s]
ontime3	32065.346269011	Sum of GTIs [s]
ontime6	32068.32310915	Sum of GTIs [s]
l2events	132300	Number of level 2 events



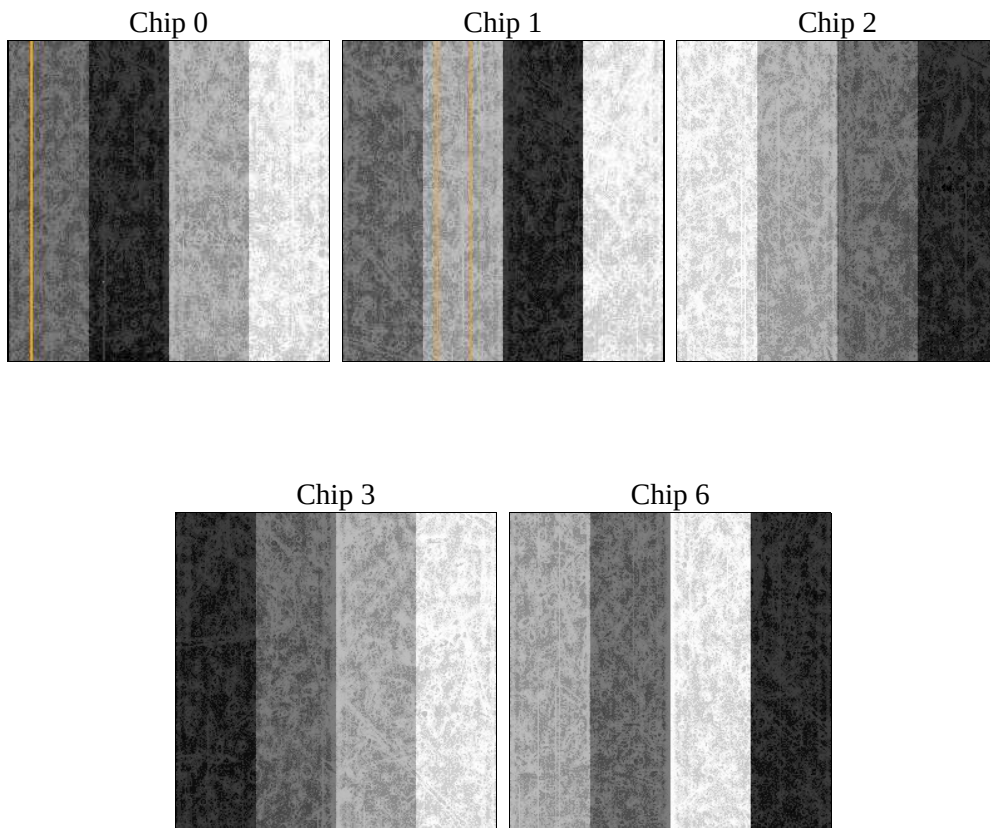
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	32000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	32065.346269011	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	32065.223178983	Sum of GTIs [s]
date	2019-06-24T23:04:37	Date and time of file creation	ontime1	32068.405189157	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	32068.446229219	Sum of GTIs [s]
			ontime3	32065.346269011	Sum of GTIs [s]
			ontime6	32068.32310915	Sum of GTIs [s]
			l1events	1243592	Number of level 1 events

2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	233054	236213	257644	260543	256138
rejected events	202838	205553	230236	219743	228453
rejected %	87%	87%	89%	84%	89%

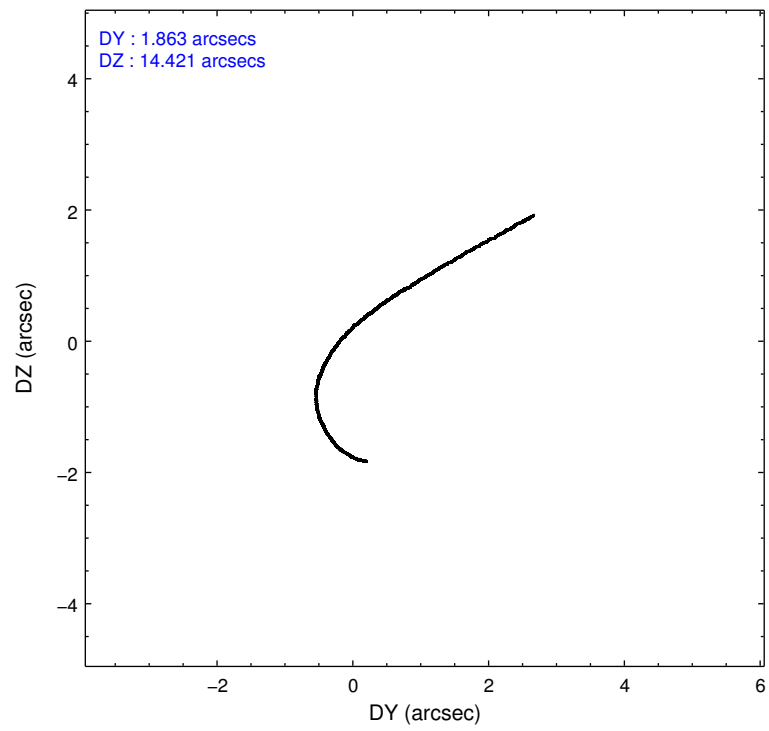
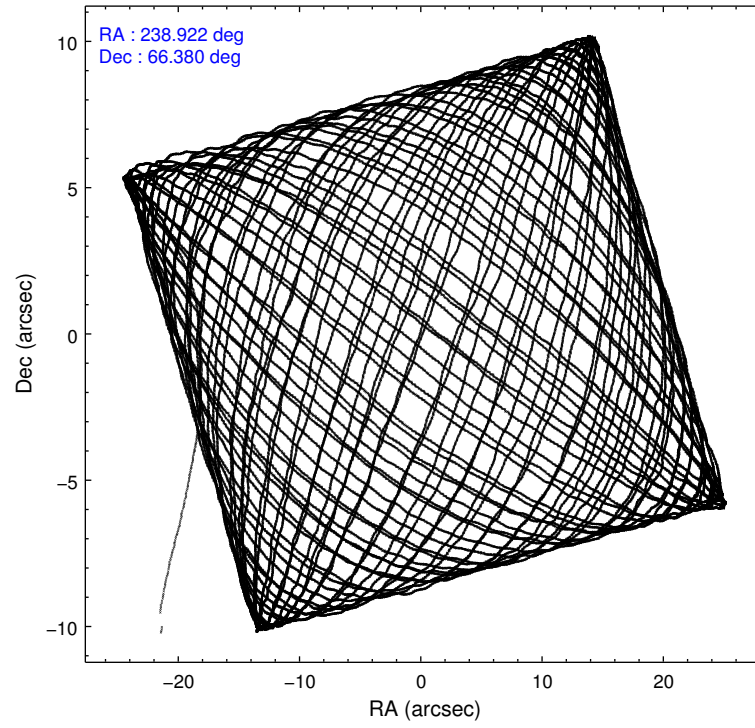
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	9163	9827	9815	20616	8688
	3%	4%	3%	7%	3%
grade 1 events	126	116	162	194	114
	0%	0%	0%	0%	0%
grade 2 events	7259	8205	6924	7554	6843
	3%	3%	2%	2%	2%
grade 3 events	2768	2839	2582	3185	2678
	1%	1%	1%	1%	1%
grade 4 events	2622	2657	2670	3218	2623
	1%	1%	1%	1%	1%
grade 5 events	10573	10898	10237	12099	11371
	4%	4%	3%	4%	4%
grade 6 events	8405	7135	5419	6232	6857
	3%	3%	2%	2%	2%
grade 7 events	192138	194536	219835	207445	216964
	82%	82%	85%	79%	84%

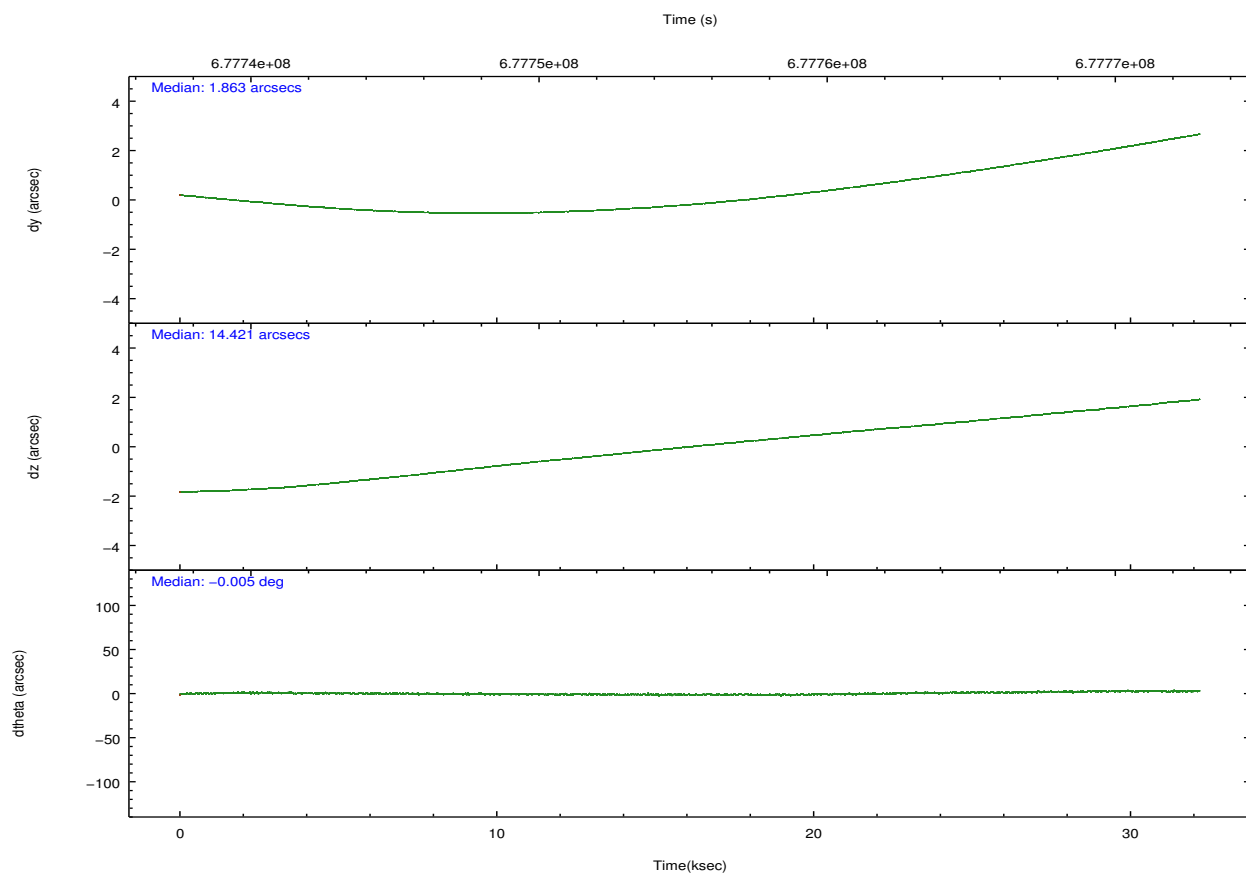
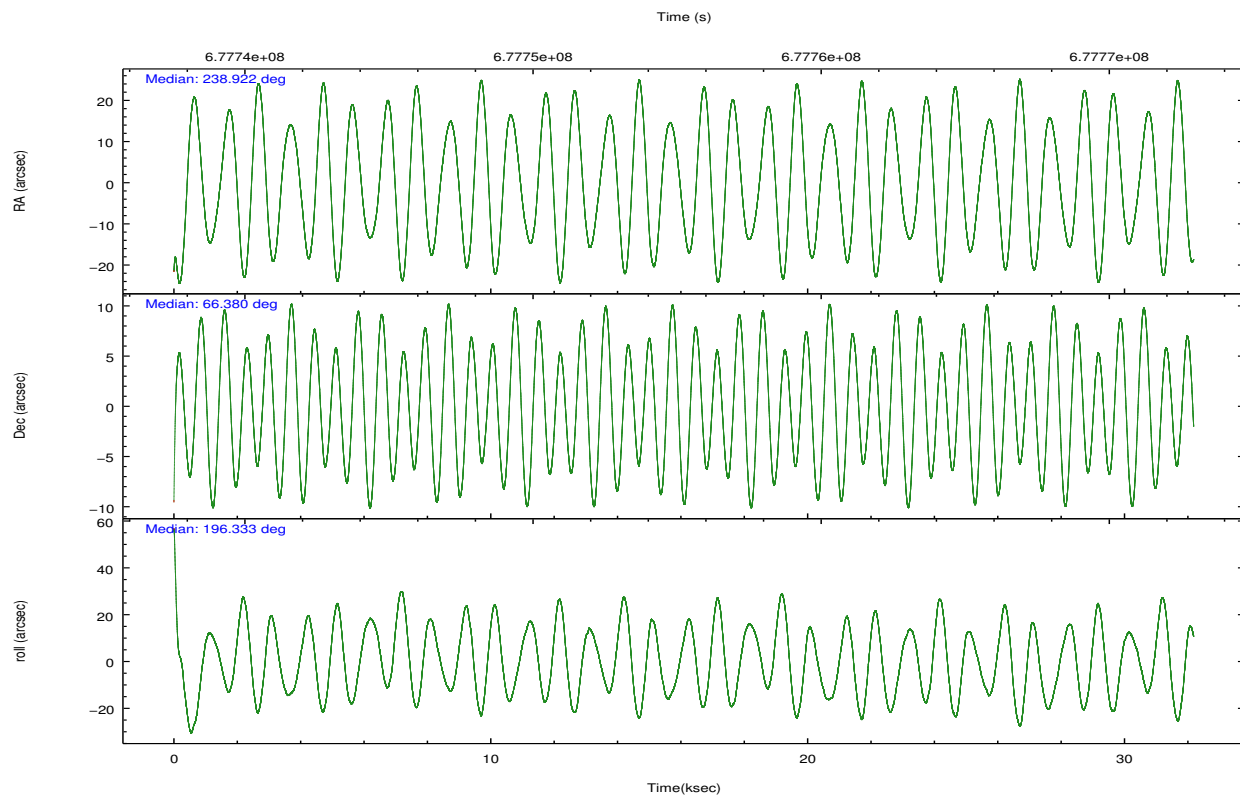
2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	ACIS	ACIS
Detector	ACIS-01236	ACIS-01236
Grating	NONE	NONE
Data mode	VFAINT	VFAINT
Observation mode	POINTING	POINTING
[deg] Pointing RA	238.969217	238.9217620197749
[deg] Pointing Dec	66.400155	66.38013553437766
[deg] Pointing Roll	196.084325	196.3365123710291
[mm] SIM focus pos	-0.782348	-0.7809083437167272
[mm] SIM defocus	0	0.001439871863259334
[mm] SIM translation stage pos	-233.592463	-233.5874344608287
[mm] SIM translation stage offset	0	-0.005018542100998502
[s] Observation start time (MET)	677739338.184000	677738256.26271
Observation start date	2019-06-24T04:54:29	2019-06-24T04:37:36
[s] Observation end time (MET)	677771338.184000	677771998.7522399
Observation end date	2019-06-24T13:47:49	2019-06-24T13:59:58
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	Y	Y
CCD I1 on	Y	Y
CCD I2 on	Y	Y
CCD I3 on	Y	Y
CCD S0 on	N	N
CCD S1 on	N	N
CCD S2 on	O1	Y
CCD S3 on	N	N
CCD S4 on	N	N
CCD S5 on	N	N
Number of optional ACIS chips dropped	0	0
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



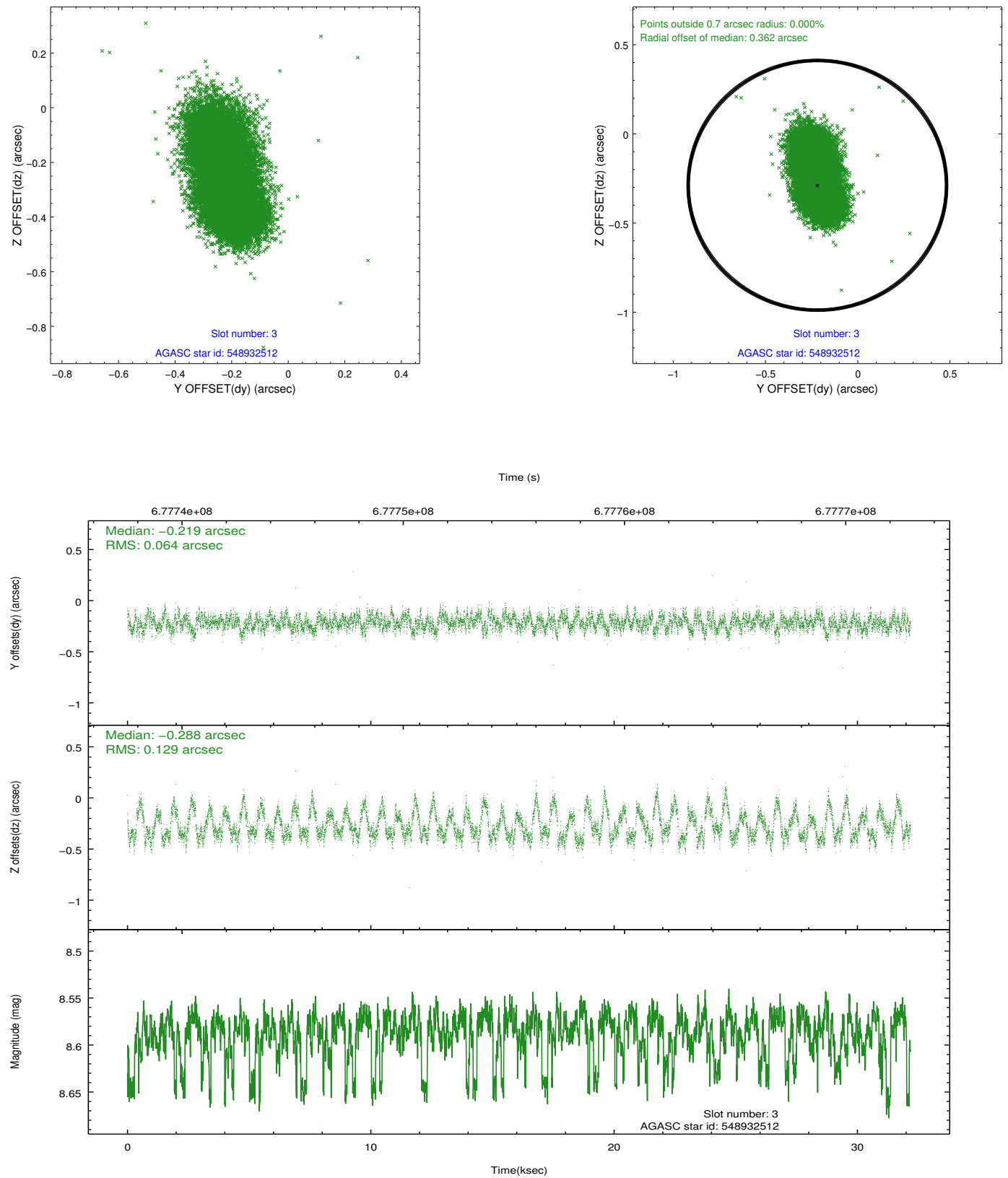


Slot Statistics

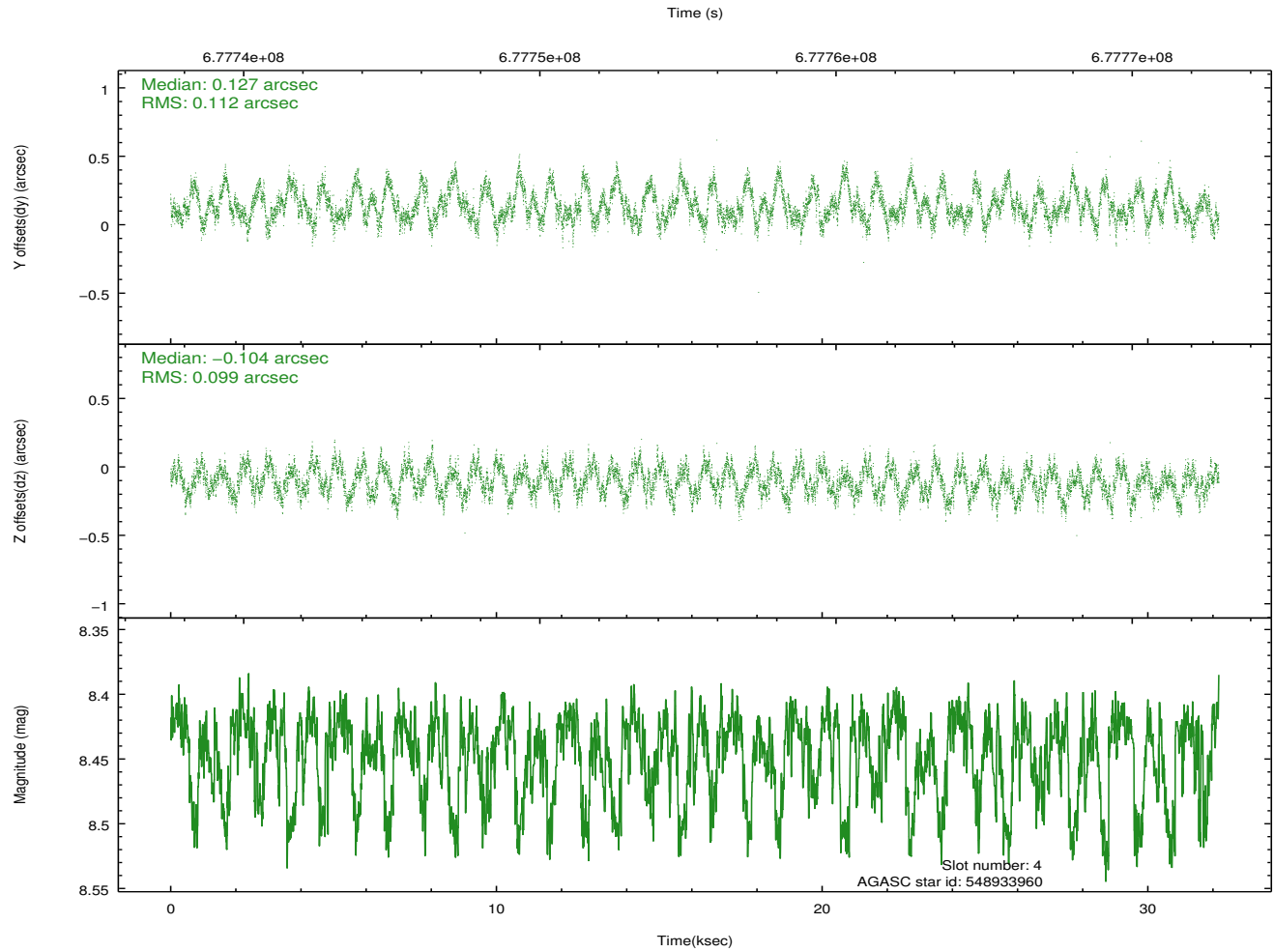
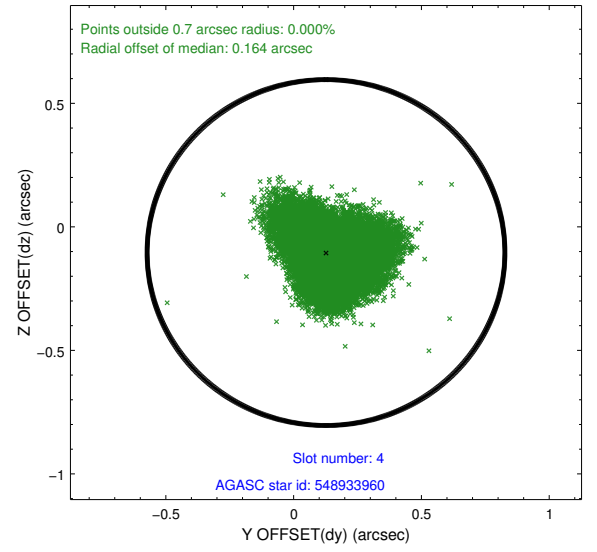
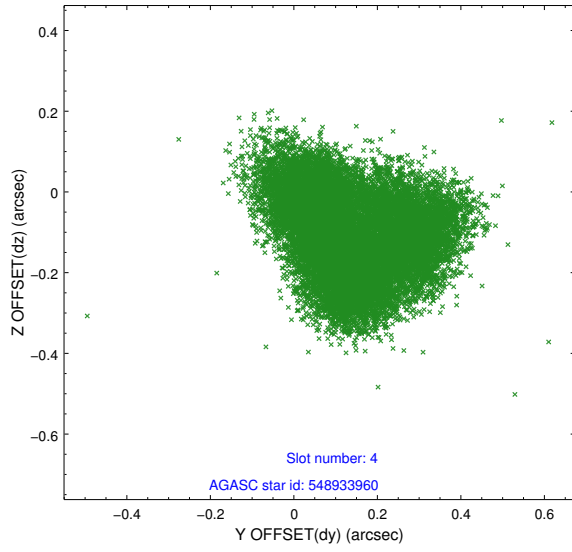
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.19	7848	1.000	0.130	-0.100	0.030	0.045	0.000000	0.000000	937.75	-838
1	FID		ACIS-I-5	7.15	7846	1.000	-0.373	0.072	0.022	0.035	0.000000	0.000000	-1810.95	1059
2	FID		ACIS-I-6	7.17	7850	1.000	0.164	0.090	0.034	0.059	0.000000	0.000000	403.11	1704
3	GUIDE	used	548932512	8.59	15683	1.000	-0.219	-0.288	0.147	0.261	239.727627	66.054972	-722.64	1494
4	GUIDE	used	548933960	8.44	15690	1.000	0.127	-0.104	0.162	0.245	237.671184	66.428675	1762.42	-633
5	GUIDE	used	548937184	9.84	15677	1.000	-0.019	0.157	0.179	0.306	238.771821	66.565432	106.78	-650
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	9.10	15687	1.000	0.100	0.215	0.112	0.186	240.420863	66.802816	-2385.43	-845

2.4 Star Slots

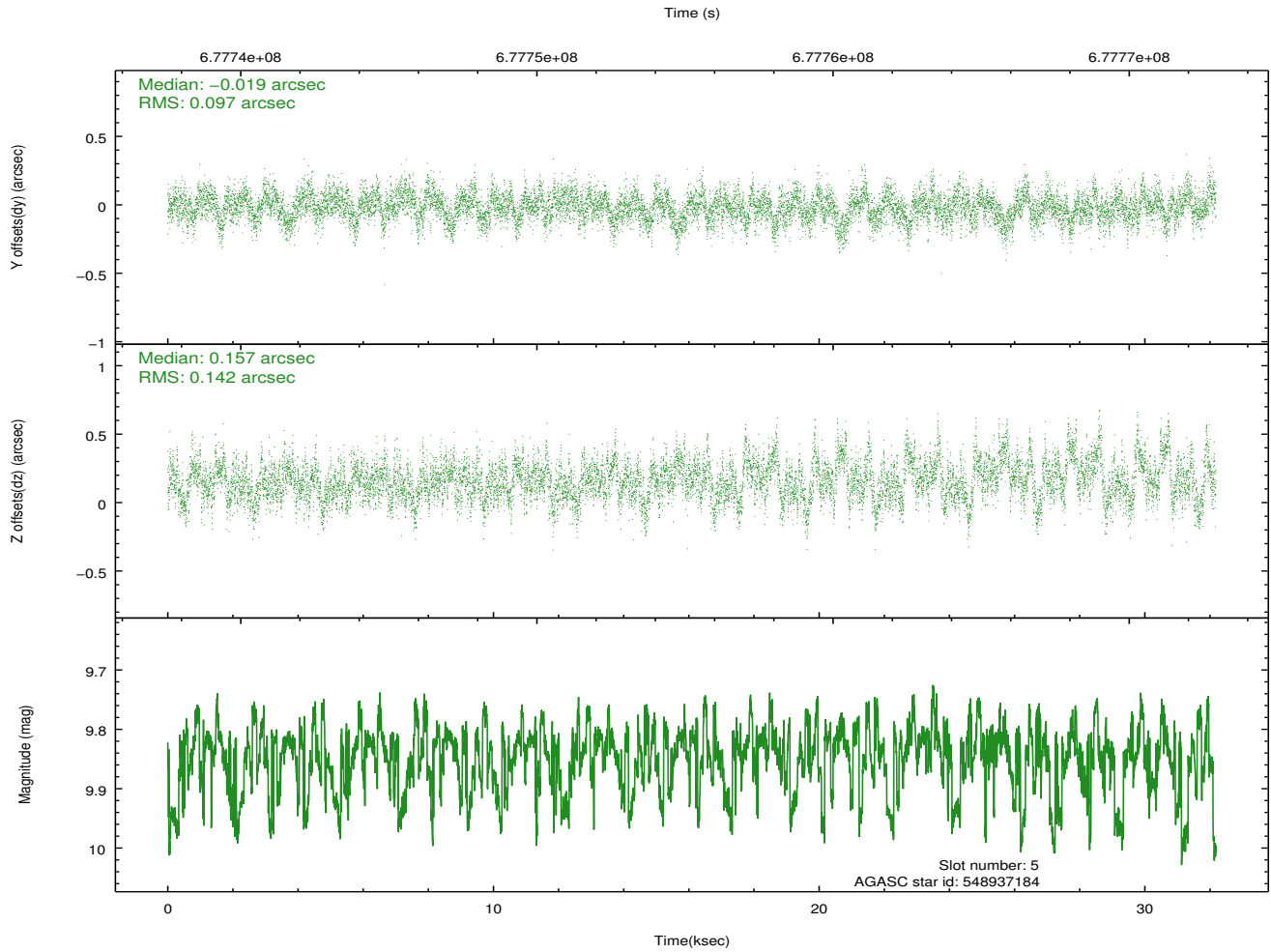
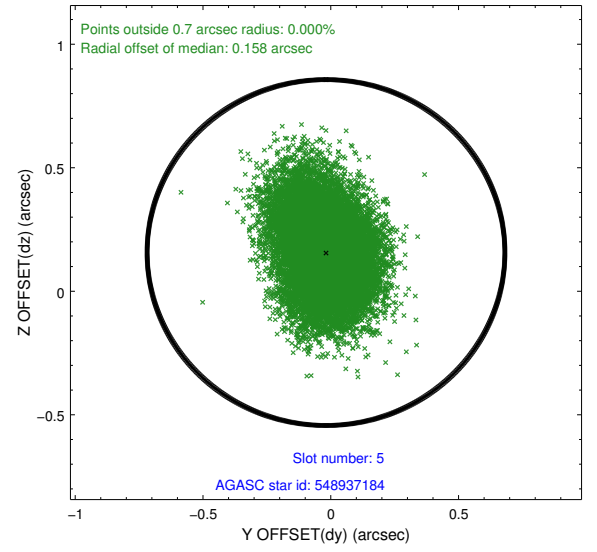
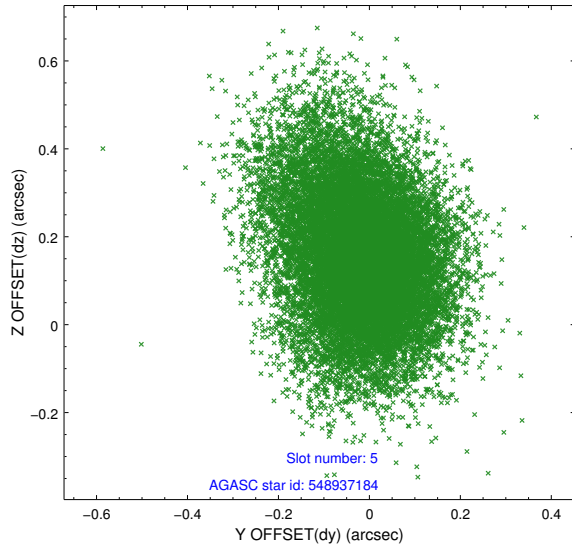
2.4.1 Slot 3



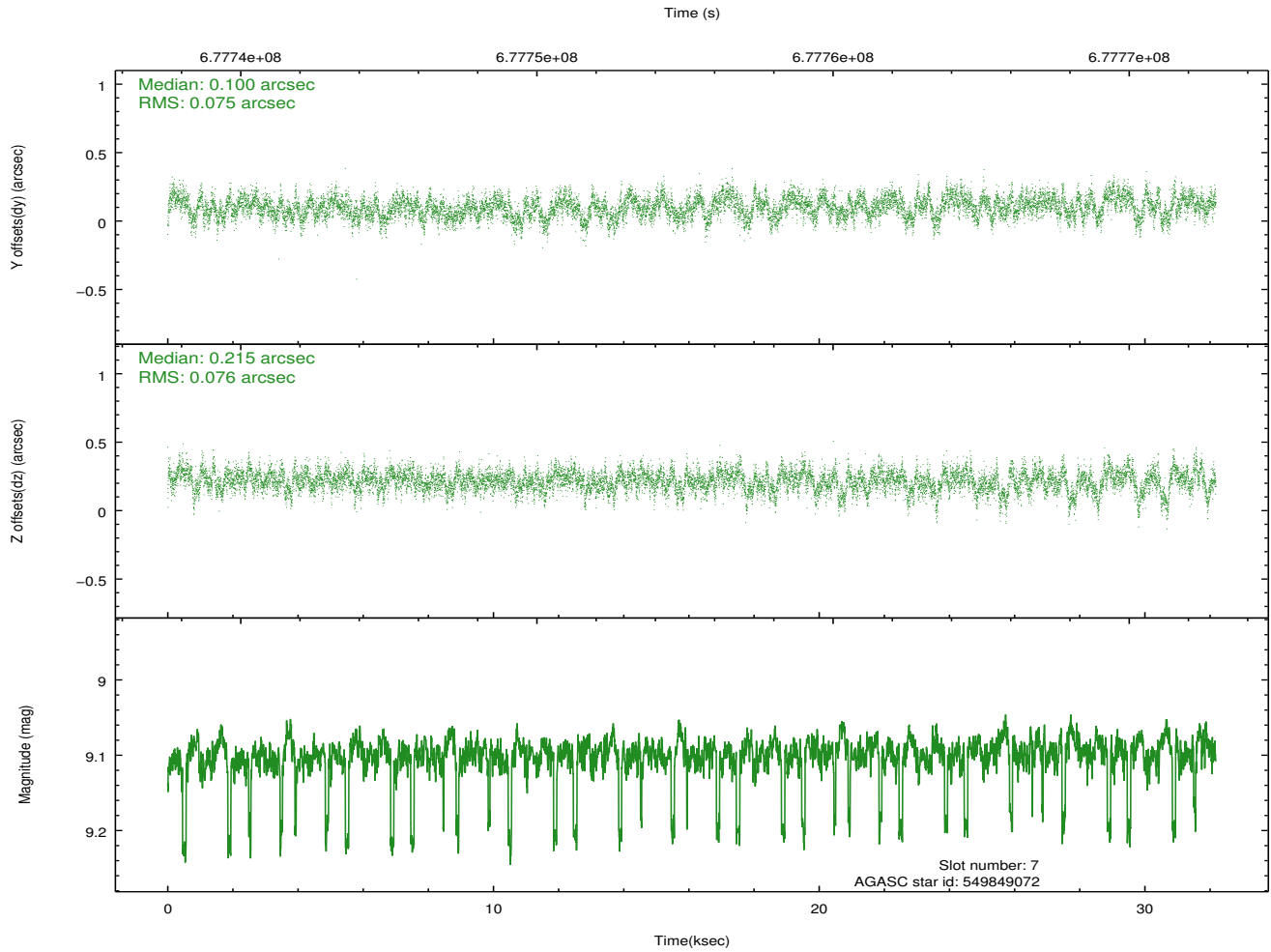
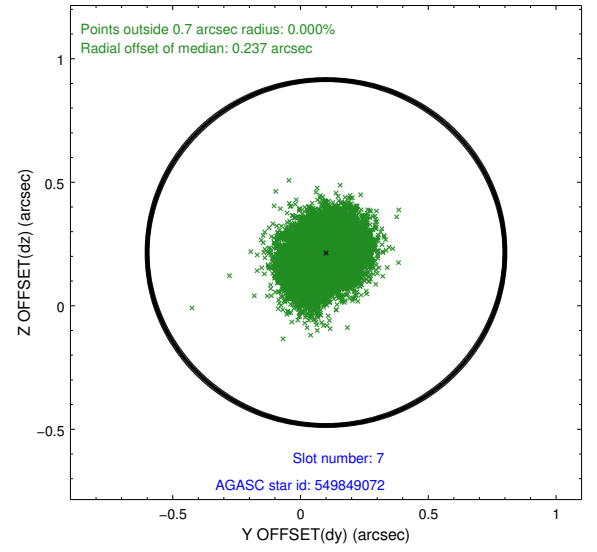
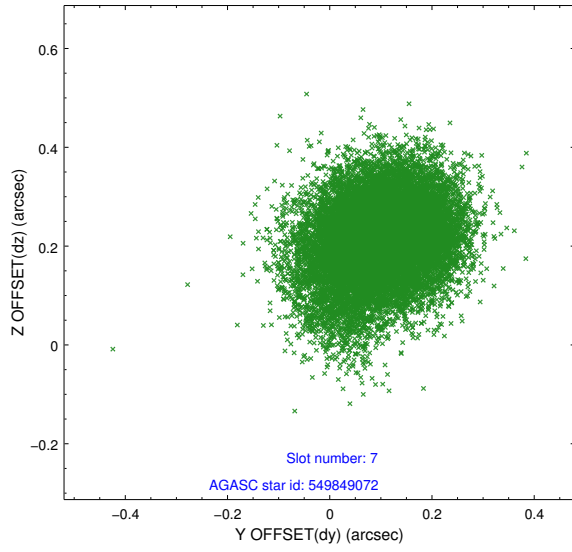
2.4.2 Slot 4



2.4.3 Slot 5

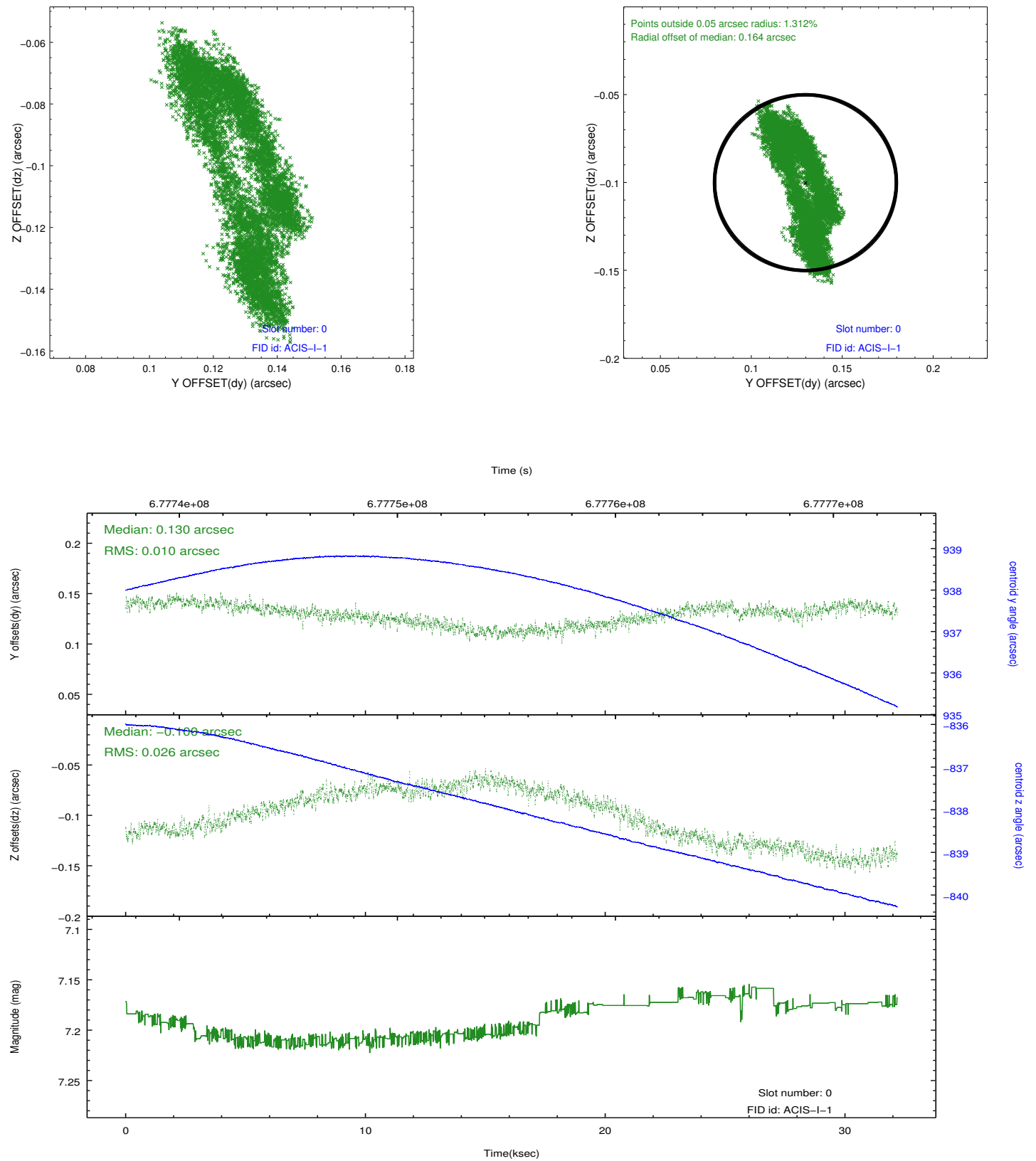


2.4.4 Slot 7

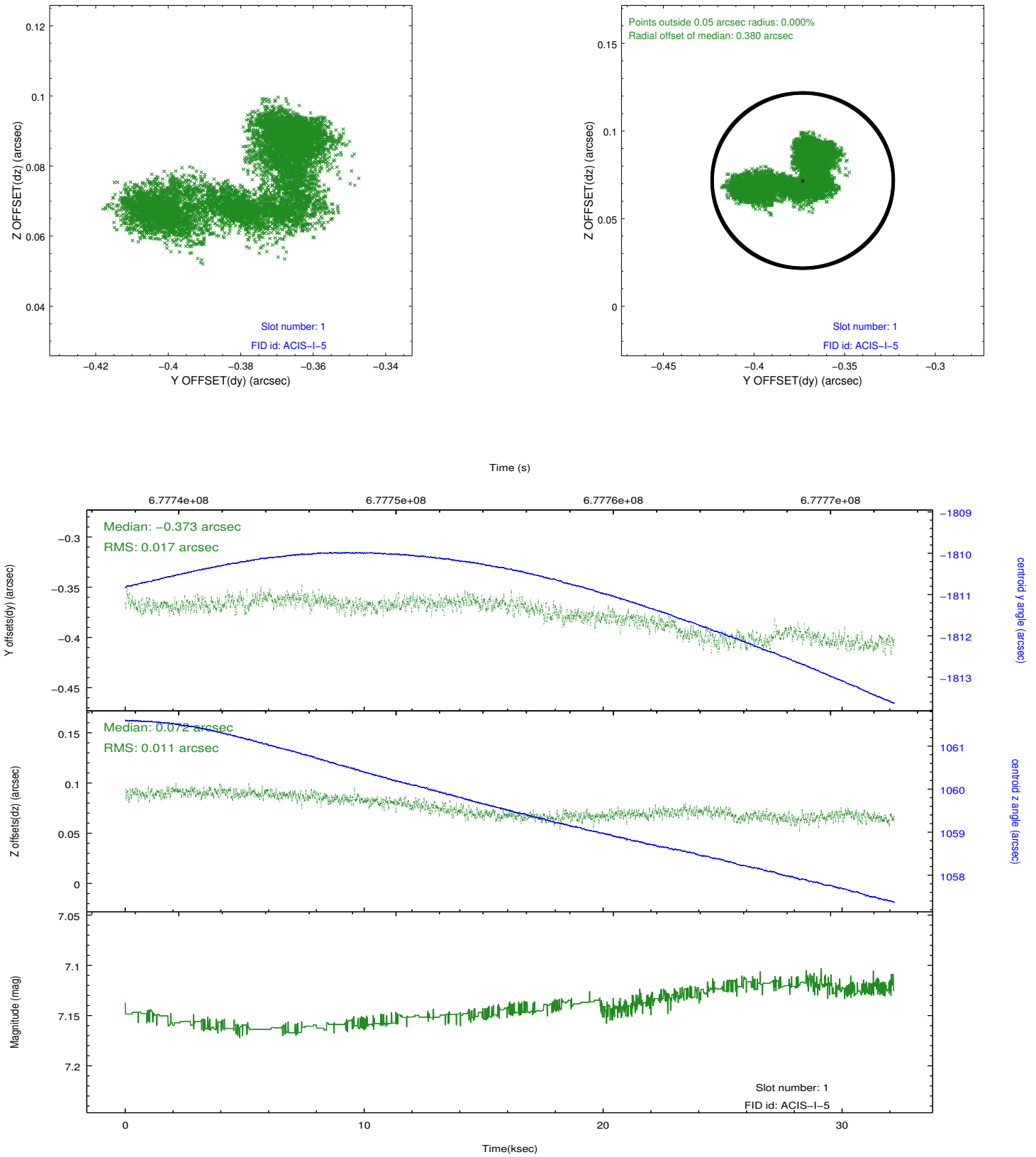


2.5 FID Slots

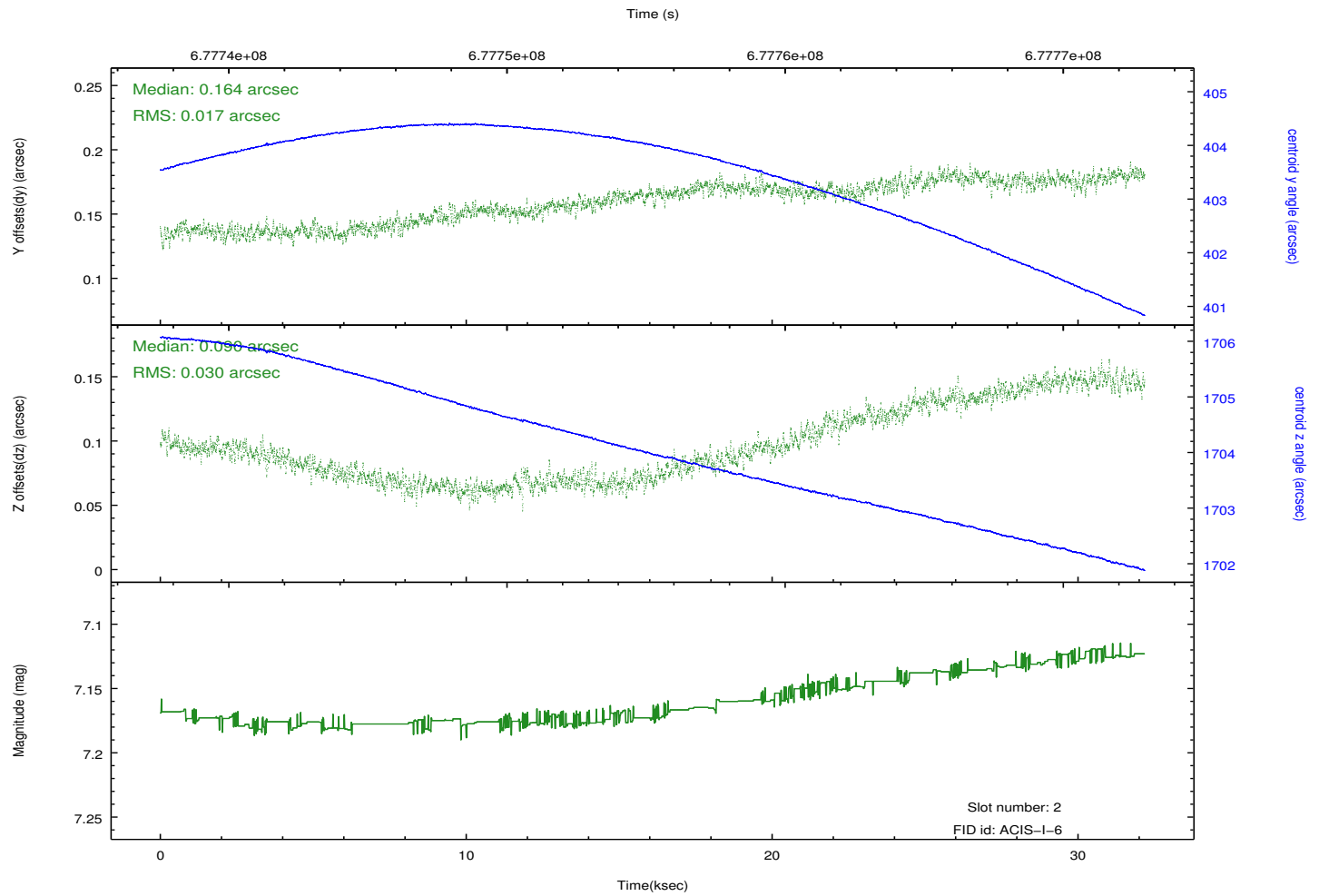
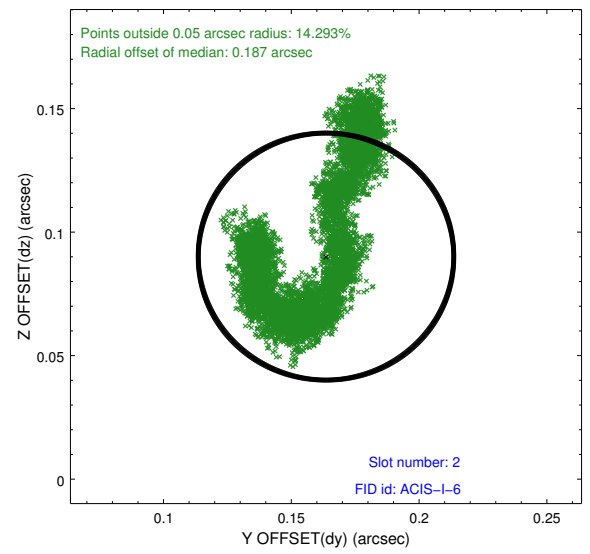
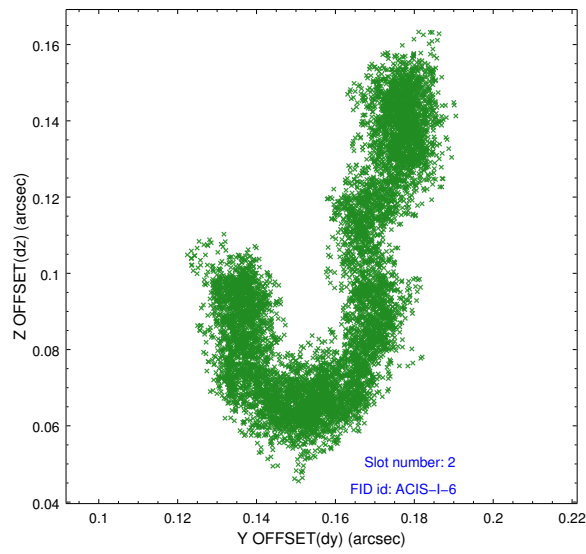
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

V&V Scientist	Beth Sundheim
V&V Date (YYYY-MM-DD)	2019.06.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	32.065346269011

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 slot from the solution.