

V&V Reference Report

L2 ASCDS Version : 10.8

Observation 22263 - L2 Version 1
Chandra X-Ray Center

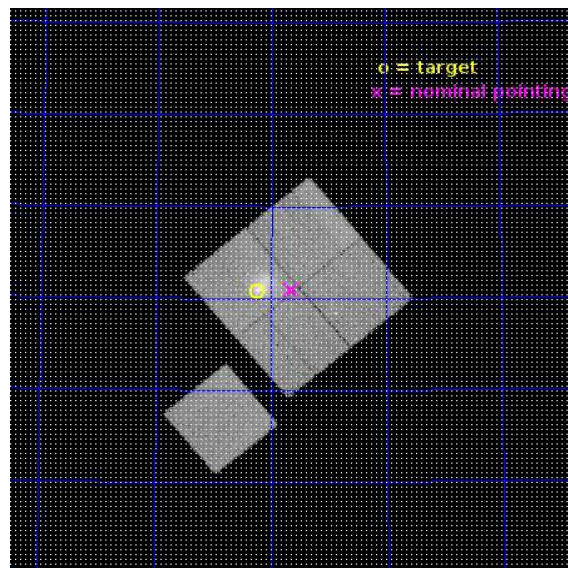
L2 Processing Date : Jun 28 2019

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1 Front

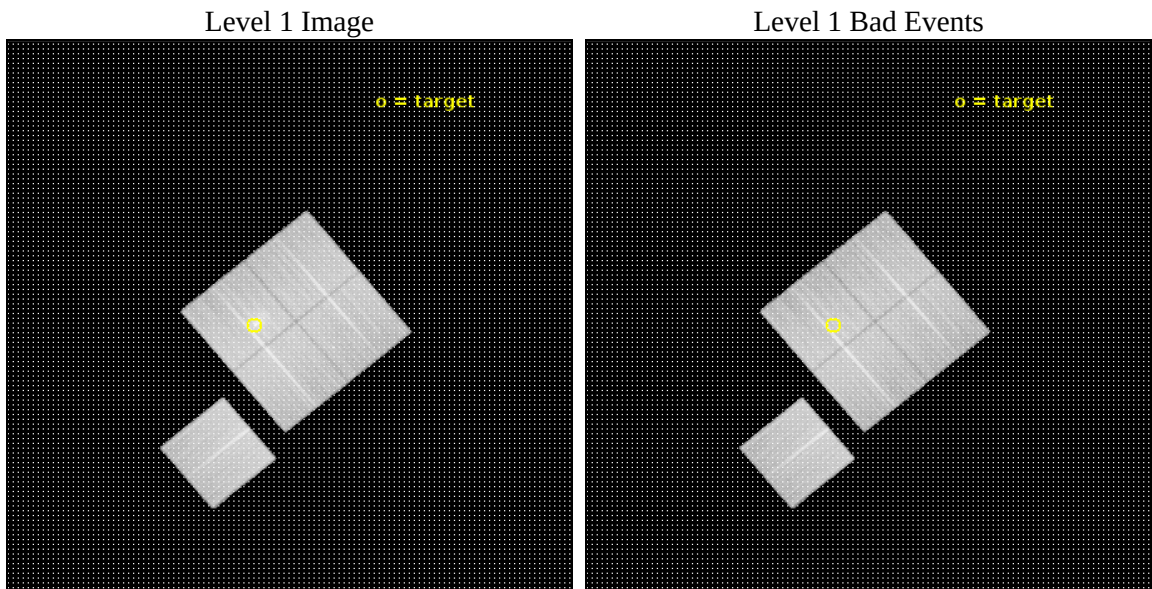
seq_num	801762	Sequence number
obs_id	22263	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.91250780663	Nominal RA [deg]
dec_nom	66.34919485253	Nominal Dec [deg]
roll_nom	230.34494058344	Nominal Roll [deg]
revision	1	Processing version of data
ontime	45244.500348091	Sum of GTIs [s]
livetime	44653.347642527	Livetime [s]
ontime0	45241.359347701	Sum of GTIs [s]
ontime1	45241.359337926	Sum of GTIs [s]
ontime2	45241.359347701	Sum of GTIs [s]
ontime3	45244.500348091	Sum of GTIs [s]
ontime6	45235.077496529	Sum of GTIs [s]
l2events	188368	Number of level 2 events



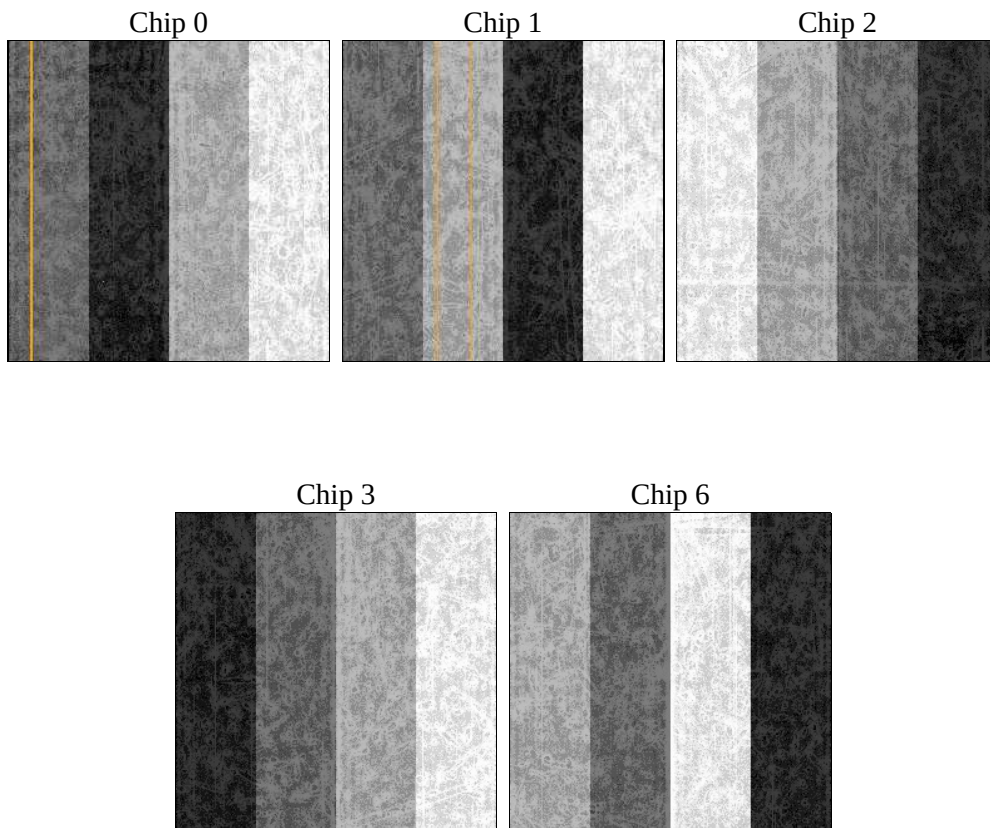
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	45178.909000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	45244.500348091	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	45241.359347701	Sum of GTIs [s]
date	2019-06-29T00:40:23	Date and time of file creation	ontime1	45241.359337926	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	45241.359347701	Sum of GTIs [s]
			ontime3	45244.500348091	Sum of GTIs [s]
			ontime6	45235.077496529	Sum of GTIs [s]
			l1events	1706618	Number of level 1 events

2.1.4 Events

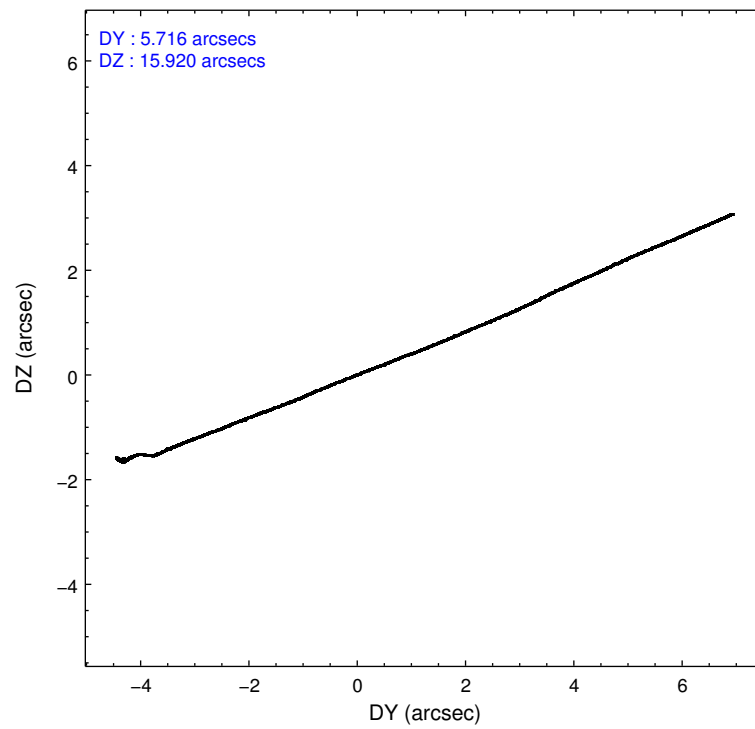
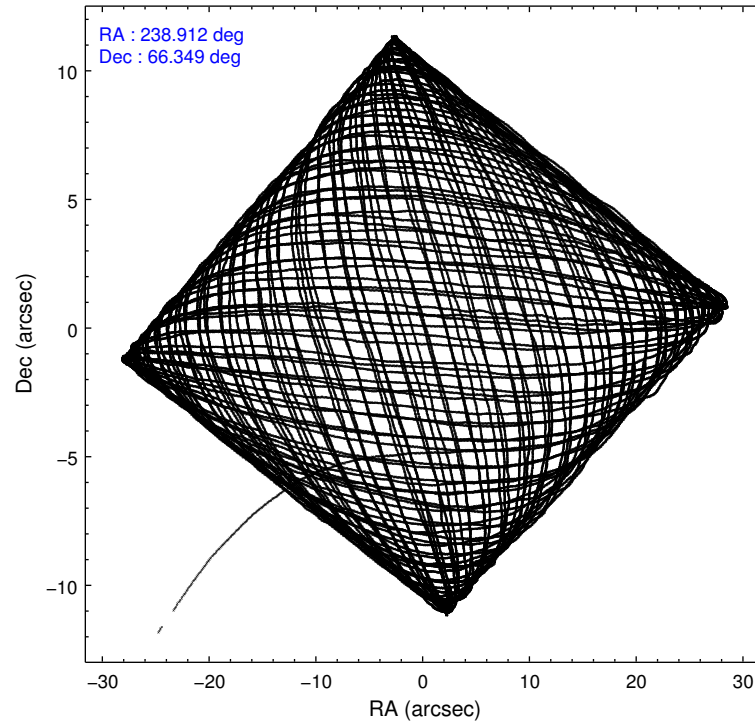
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	313926	324419	345962	365590	356721
rejected events	274083	280094	307394	306979	317507
rejected %	87%	86%	88%	83%	89%

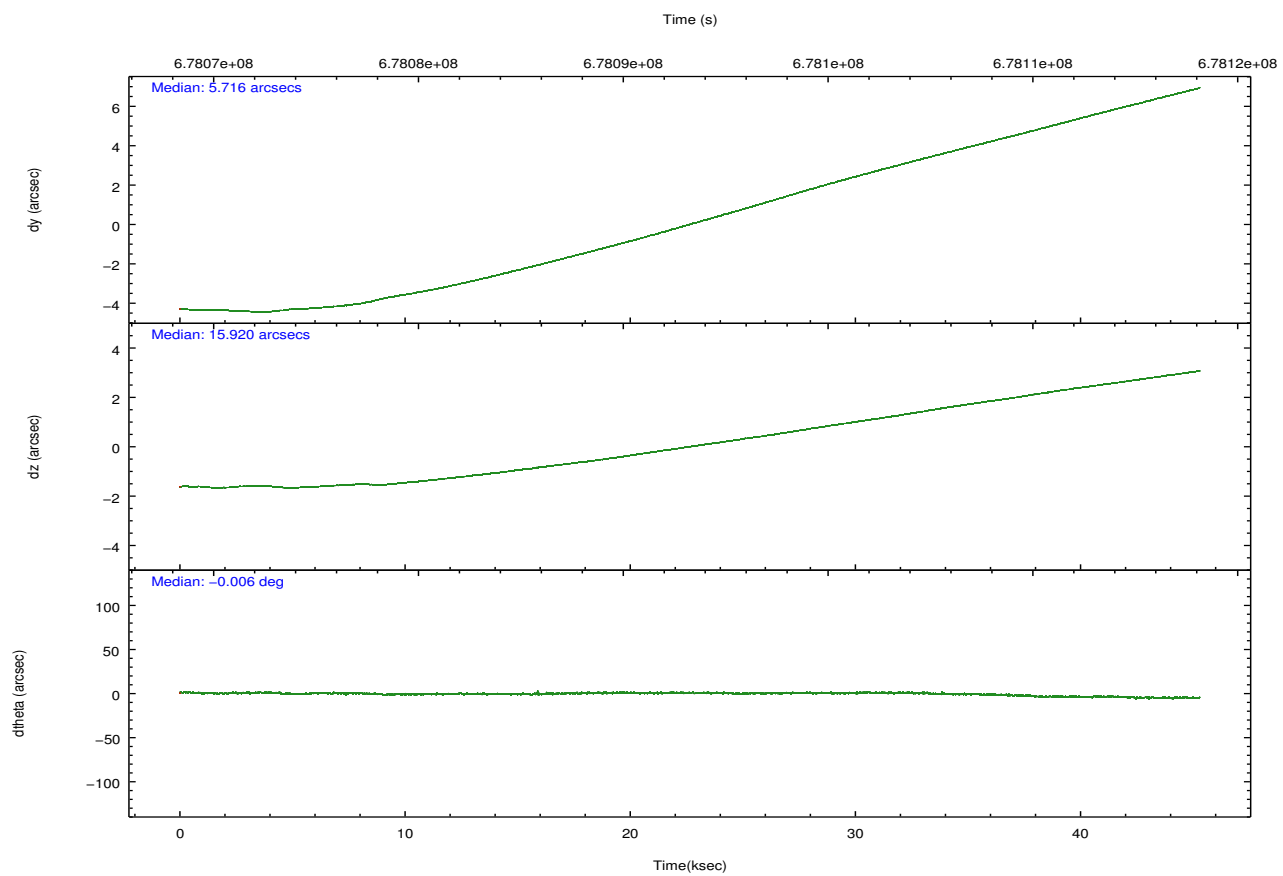
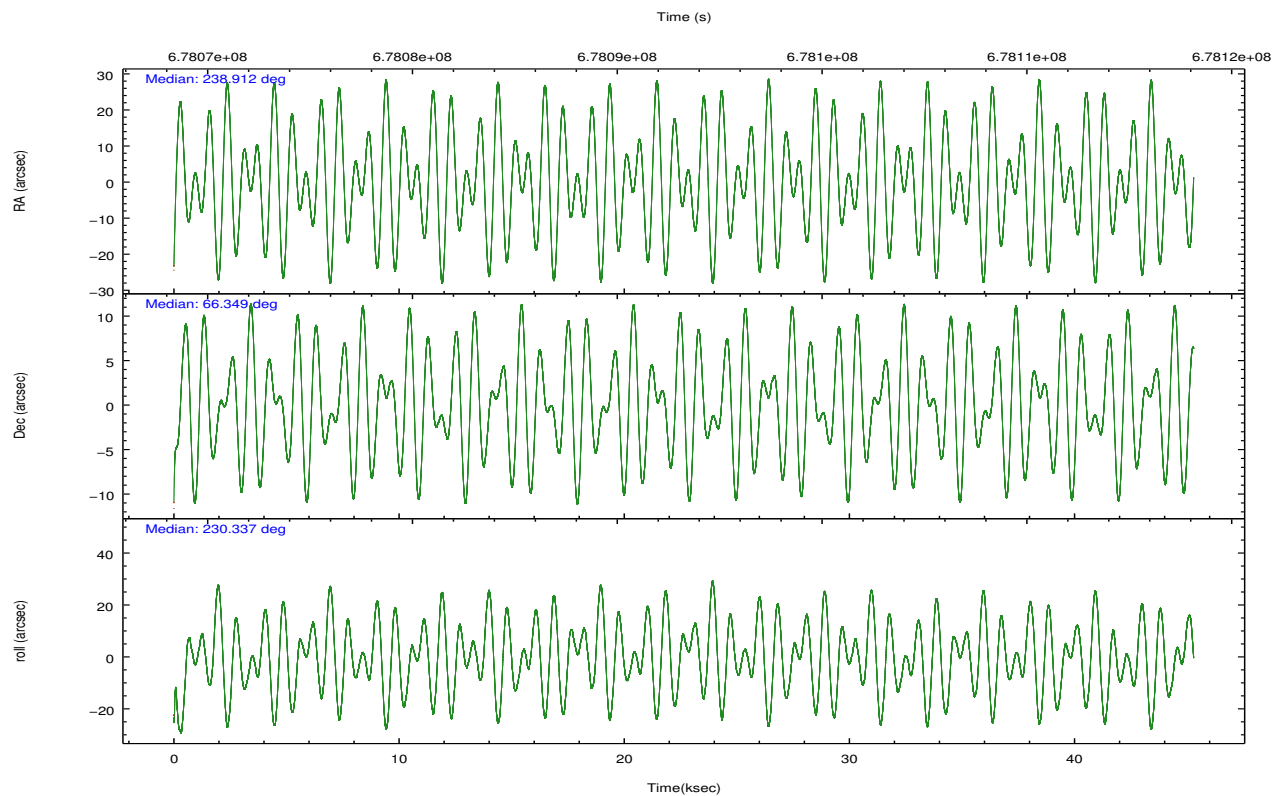
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	13724	15447	13606	30580	12891
	4%	4%	3%	8%	3%
grade 1 events	204	182	213	295	169
	0%	0%	0%	0%	0%
grade 2 events	10204	11349	9843	10482	9325
	3%	3%	2%	2%	2%
grade 3 events	3887	4030	3644	4532	3855
	1%	1%	1%	1%	1%
grade 4 events	3767	3965	3853	4541	3813
	1%	1%	1%	1%	1%
grade 5 events	15174	15645	14718	17075	16162
	4%	4%	4%	4%	4%
grade 6 events	8265	9544	7625	8483	9339
	2%	2%	2%	2%	2%
grade 7 events	258701	264257	292460	289602	301167
	82%	81%	84%	79%	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	238.923831	238.9125078066311	CCD I2 on	Y	Y
[deg] Pointing Dec	66.376420	66.34919485253013	CCD I3 on	Y	Y
[deg] Pointing Roll	230.125886	230.3449405834447	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)	678070733.184000	678069356.9076101	CCD S5 on	N	N
Observation start date	2019-06-28T00:57:44	2019-06-28T00:35:56	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	678115911.184000	678116861.56046	On-chip summing requested	N	N
Observation end date	2019-06-28T13:30:42	2019-06-28T13:47:41	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



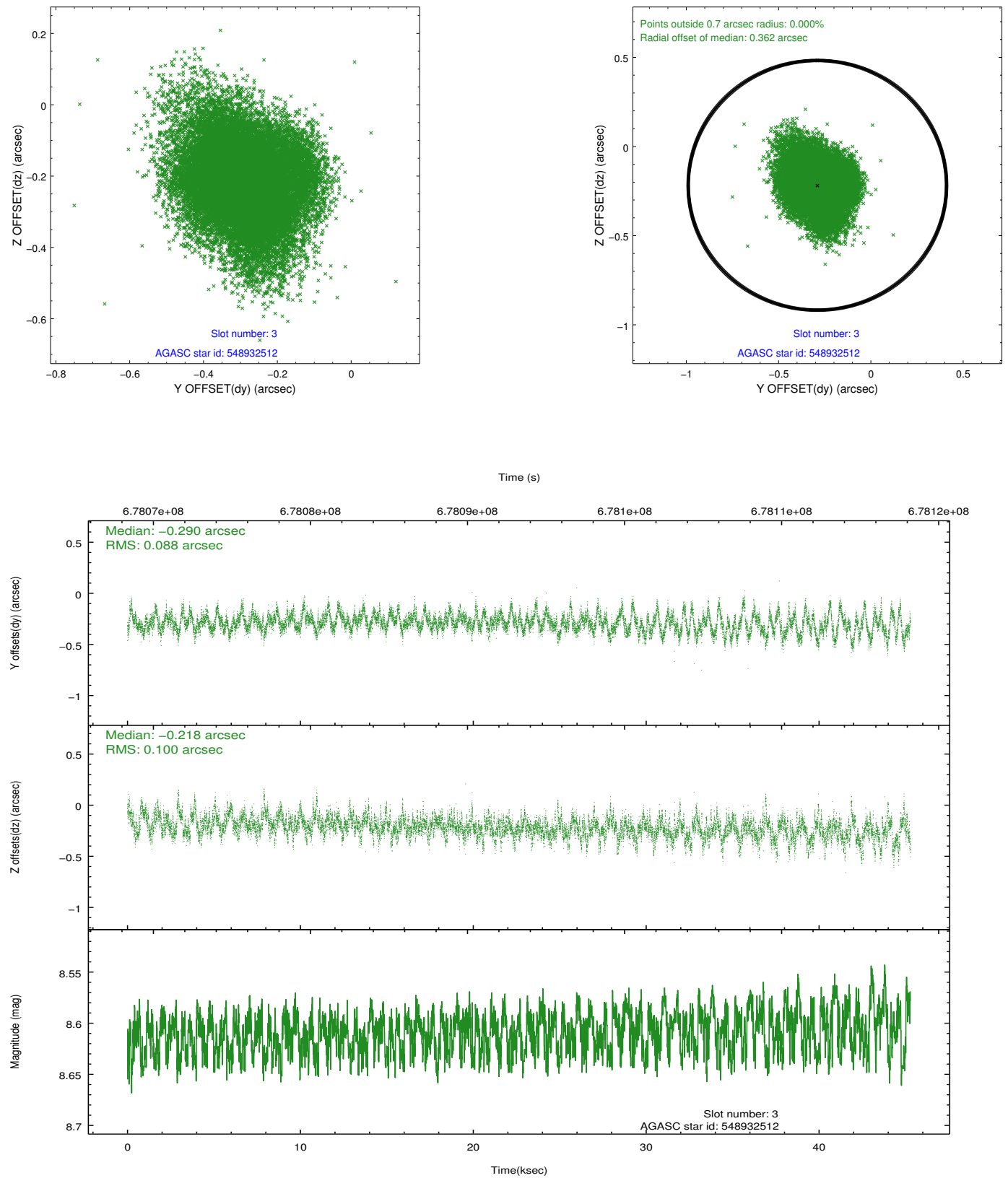


Slot Statistics

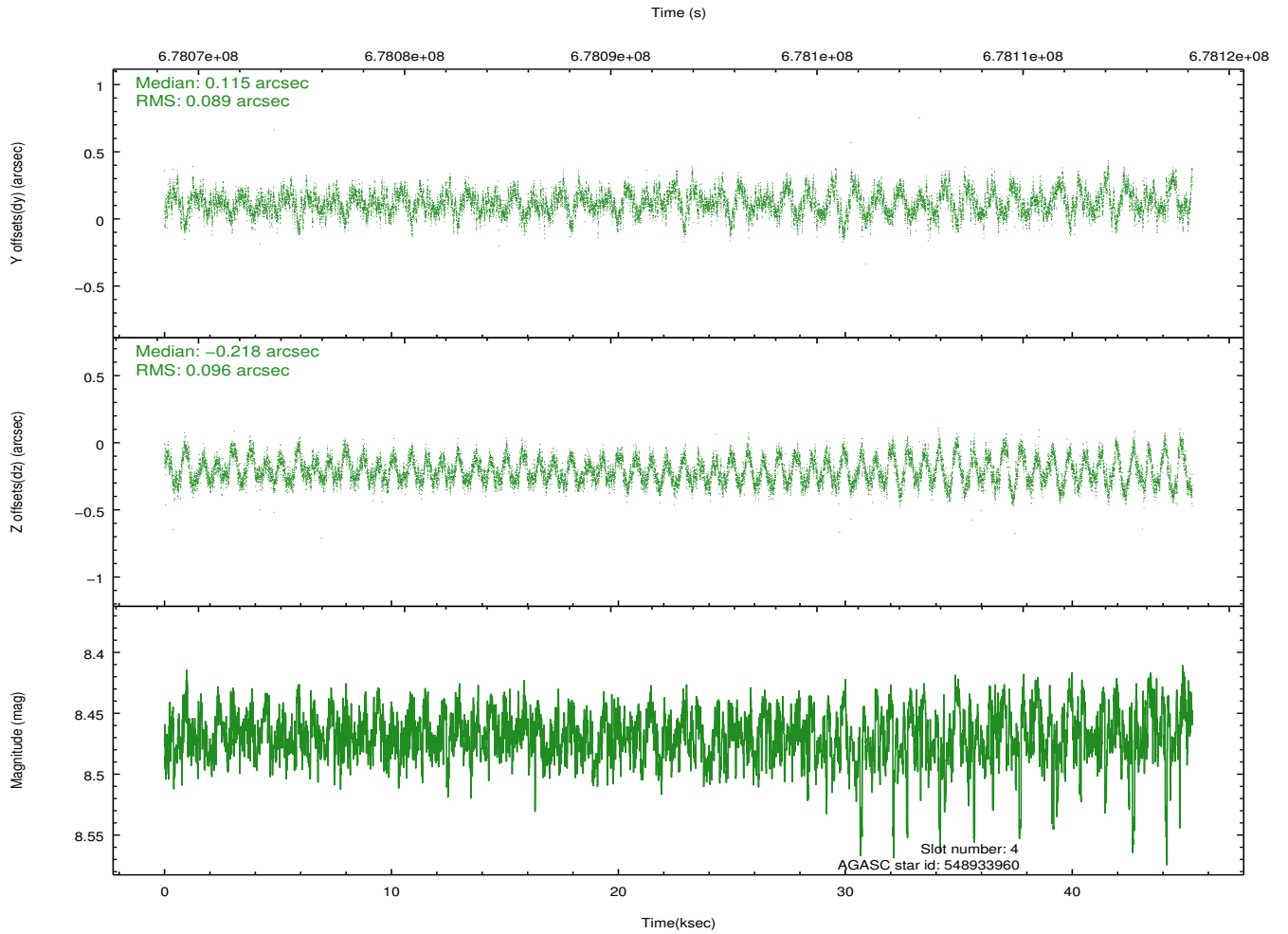
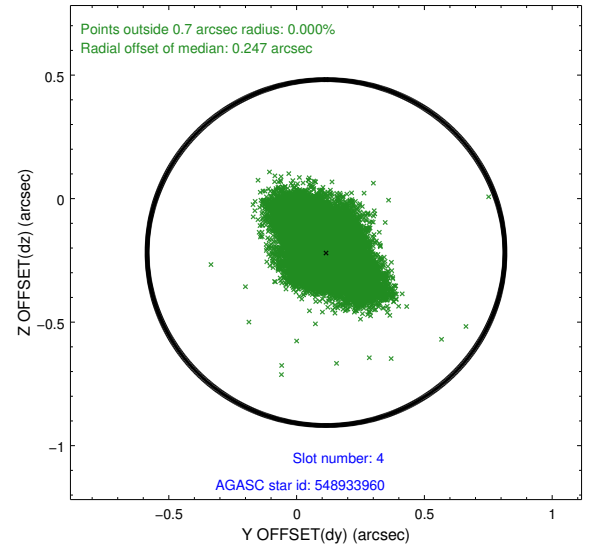
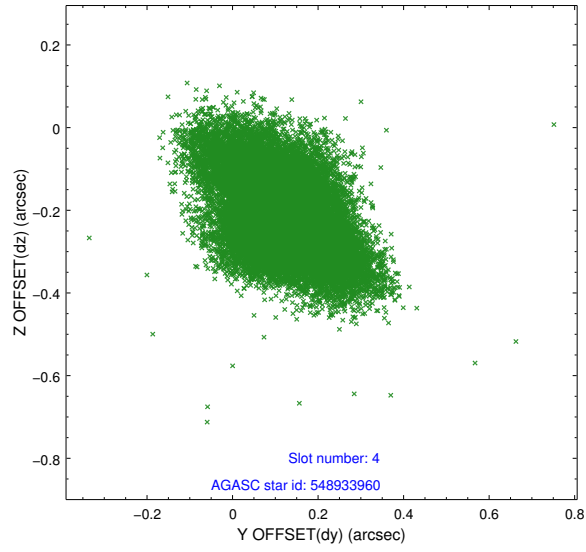
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.16	11046	1.000	0.115	-0.077	0.057	0.074	0.000000	0.000000	933.84	-839
1	FID		ACIS-I-5	7.12	11044	1.000	-0.403	0.058	0.042	0.056	0.000000	0.000000	-1814.92	1057
2	FID		ACIS-I-6	7.13	11045	1.000	0.186	0.089	0.062	0.075	0.000000	0.000000	399.28	1702
3	GUIDE	used	548932512	8.61	22082	1.000	-0.290	-0.218	0.142	0.234	239.727627	66.054972	128.76	1638
4	GUIDE	used	548933960	8.47	22082	1.000	0.115	-0.218	0.136	0.231	237.671184	66.428675	999.52	-1515
5	GUIDE	used	548937184	9.83	22044	1.000	0.226	0.193	0.247	0.387	238.771821	66.565432	-382.35	-602
6	GUIDE	used	548939872	10.28	21862	1.000	-0.056	0.202	0.254	0.408	238.964867	66.978384	-1699.88	-1344
7	GUIDE	used	549850840	9.29	22054	1.000	0.001	0.027	0.184	0.325	241.038865	66.468628	-2242.84	2087

2.4 Star Slots

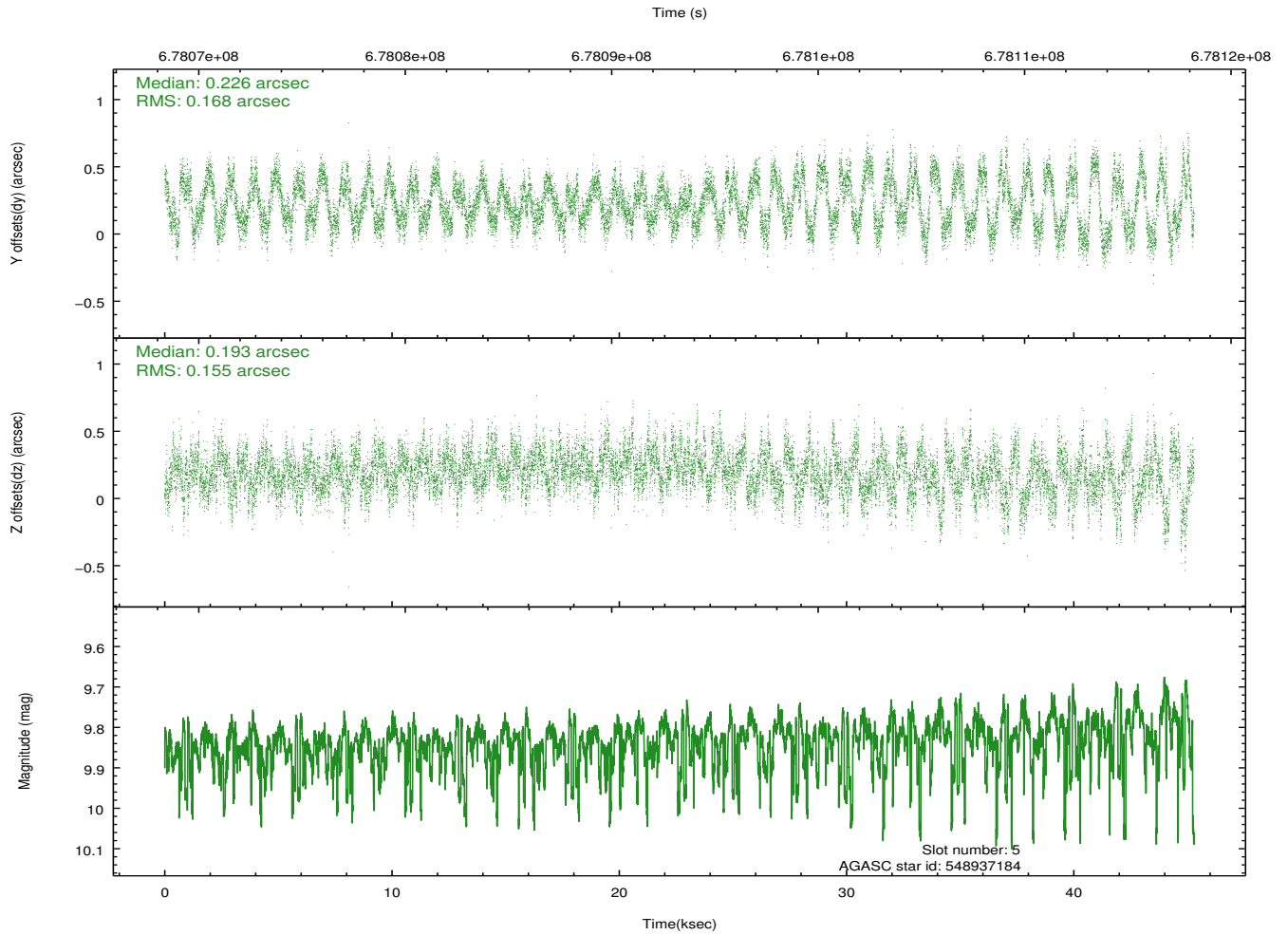
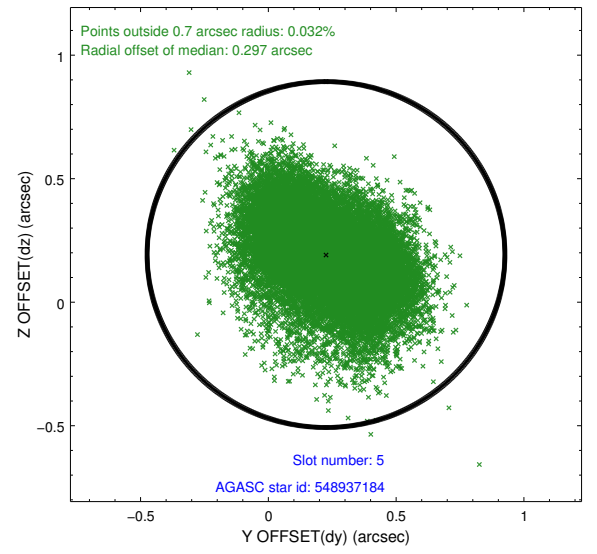
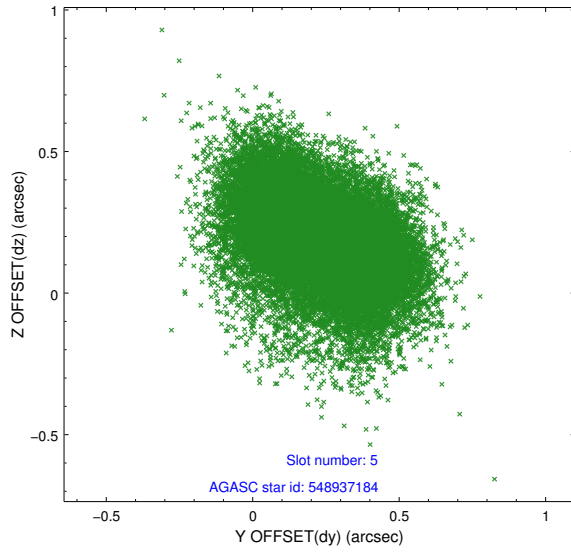
2.4.1 Slot 3



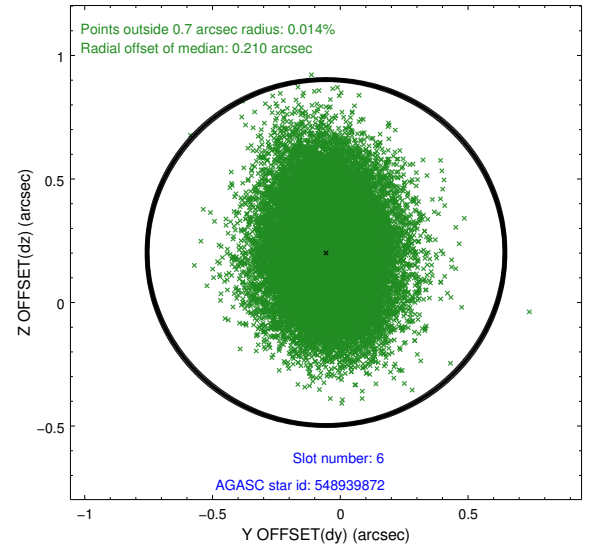
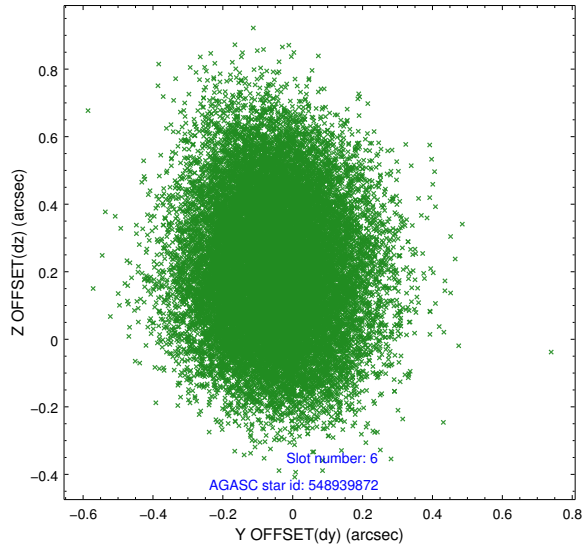
2.4.2 Slot 4



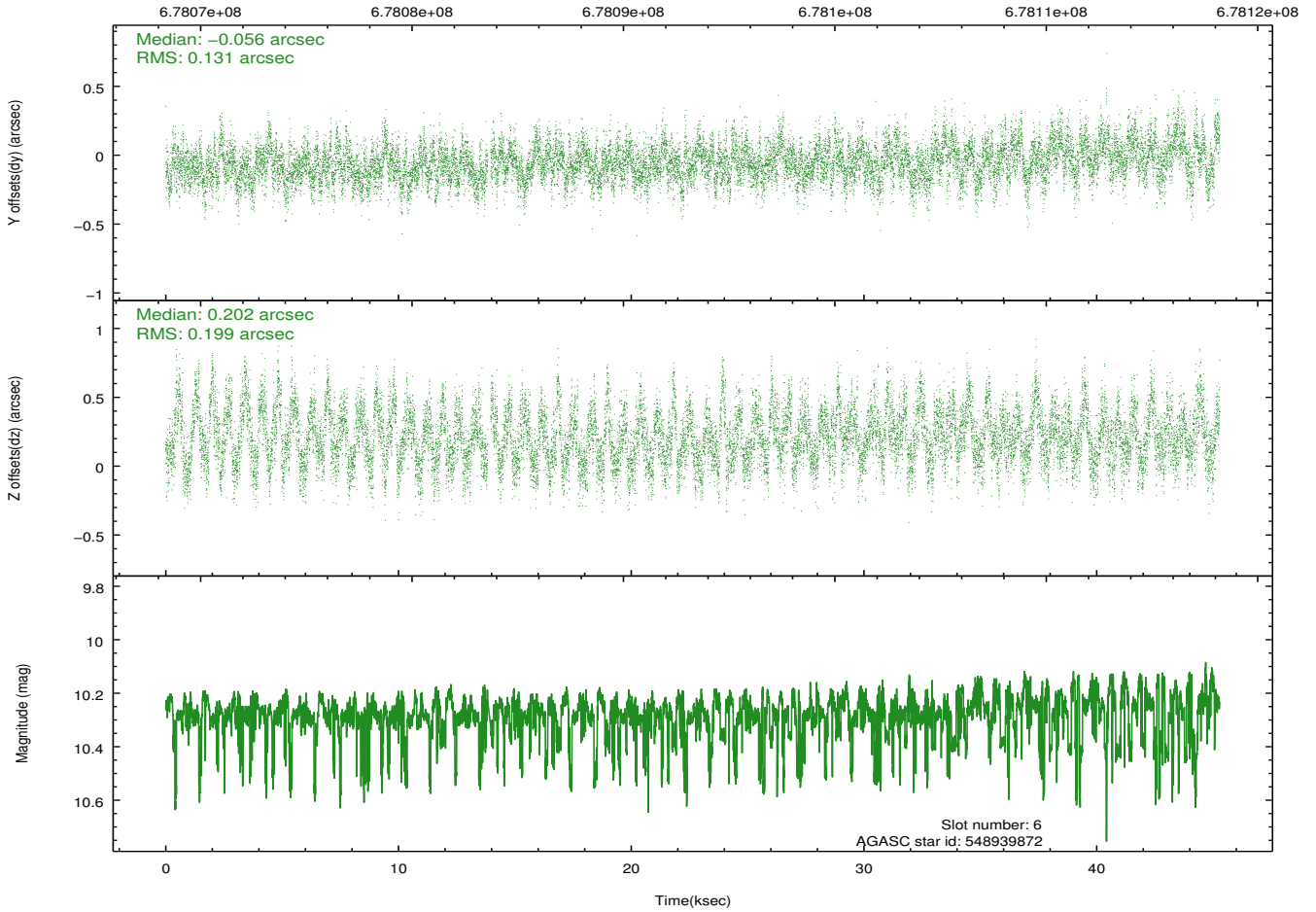
2.4.3 Slot 5



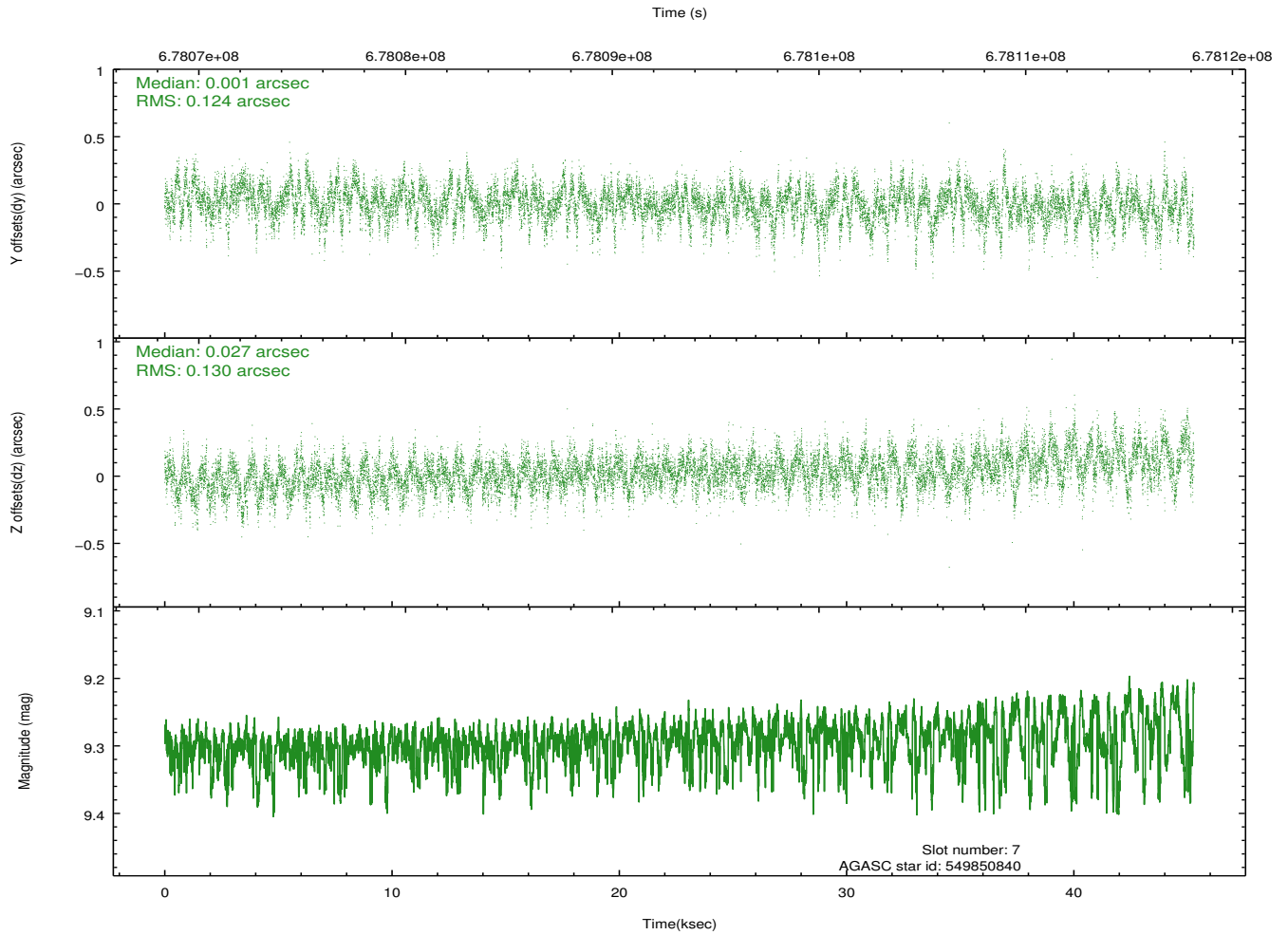
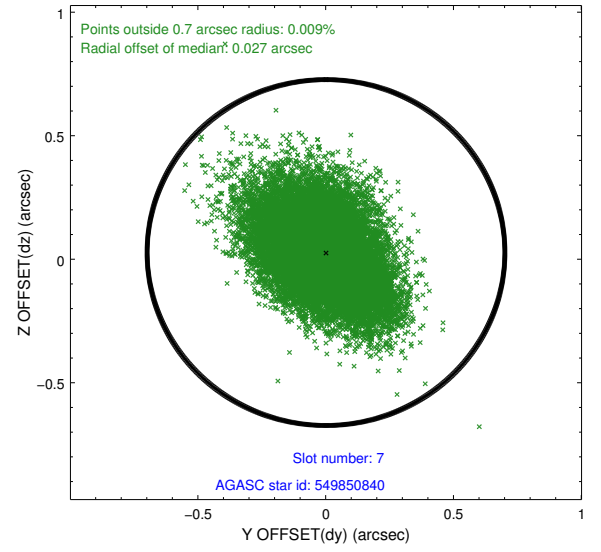
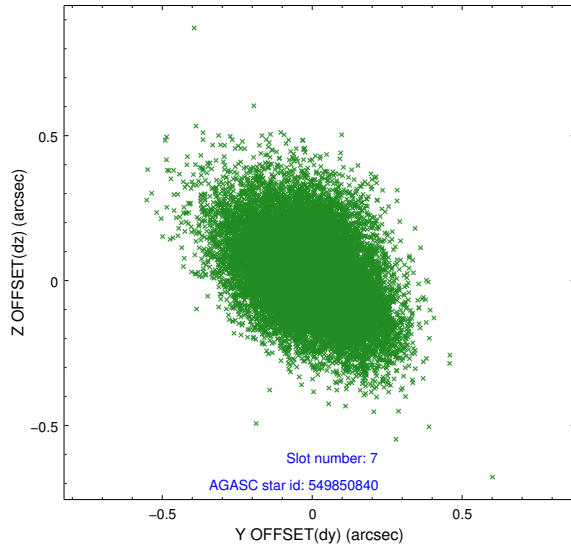
2.4.4 Slot 6



Time (s)

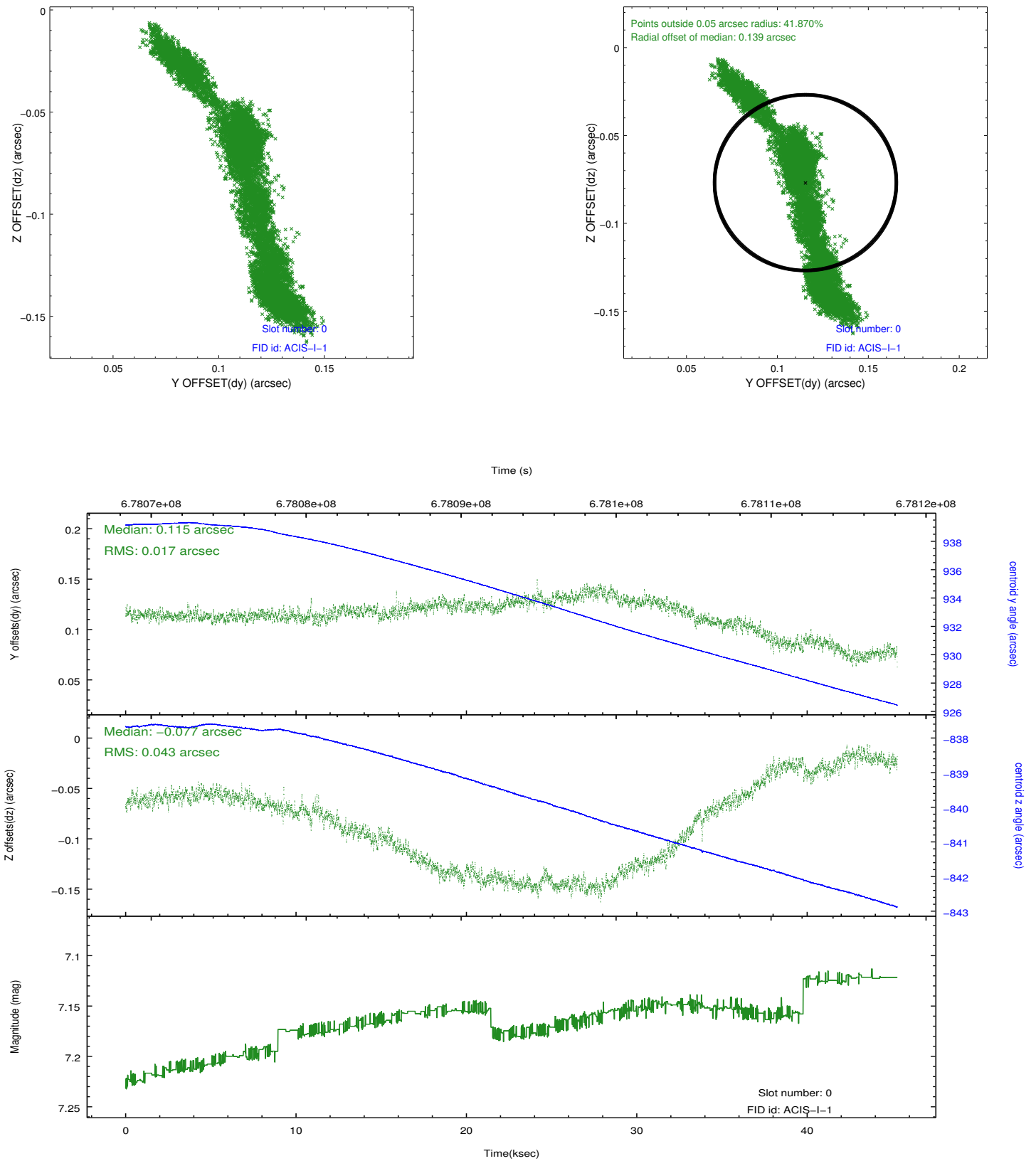


2.4.5 Slot 7

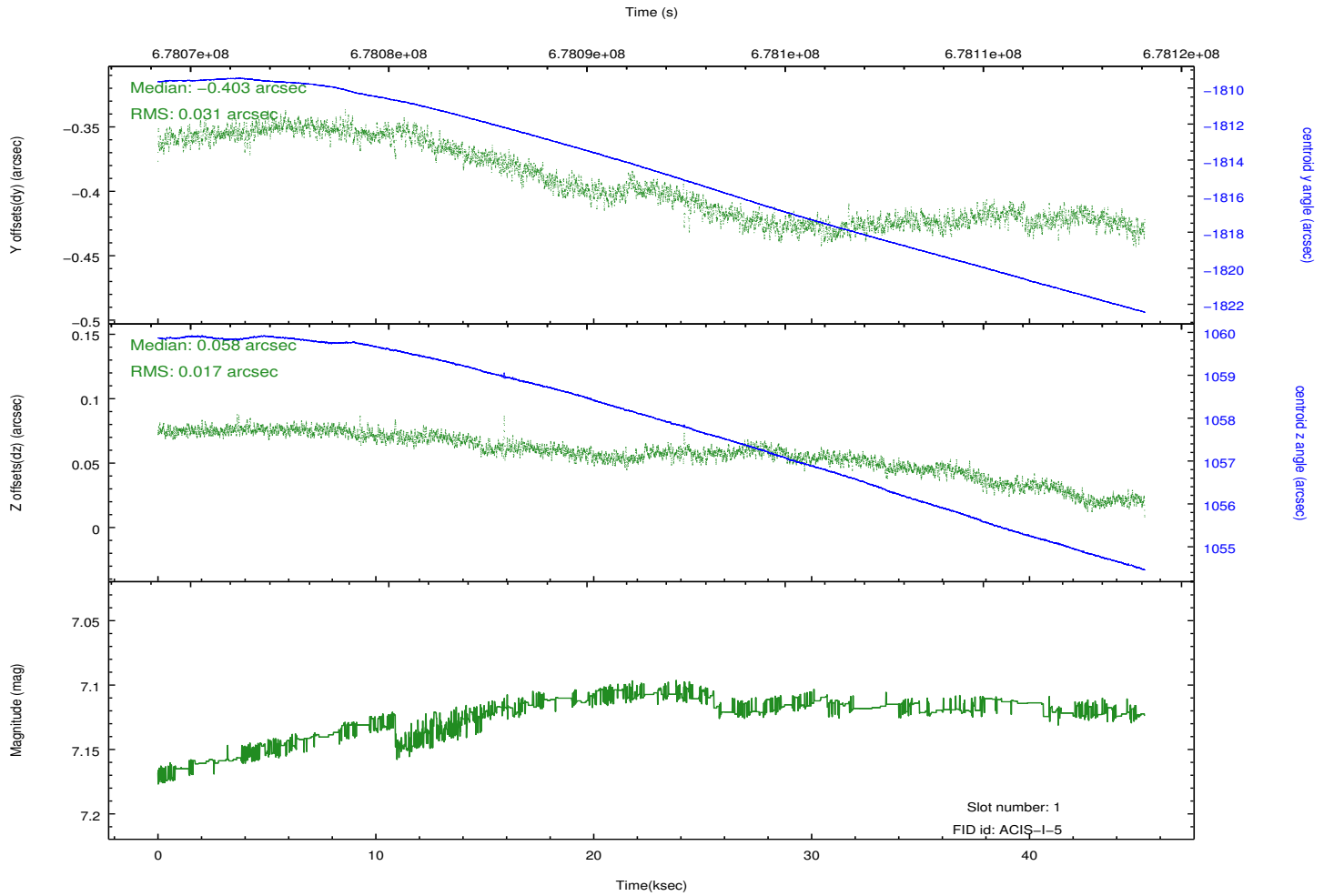
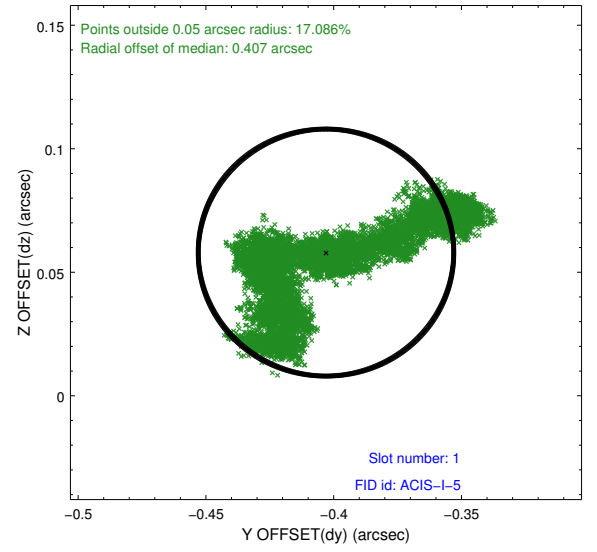
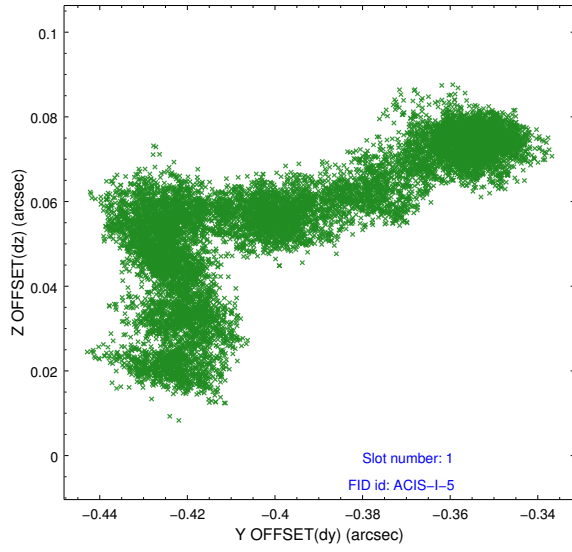


2.5 FID Slots

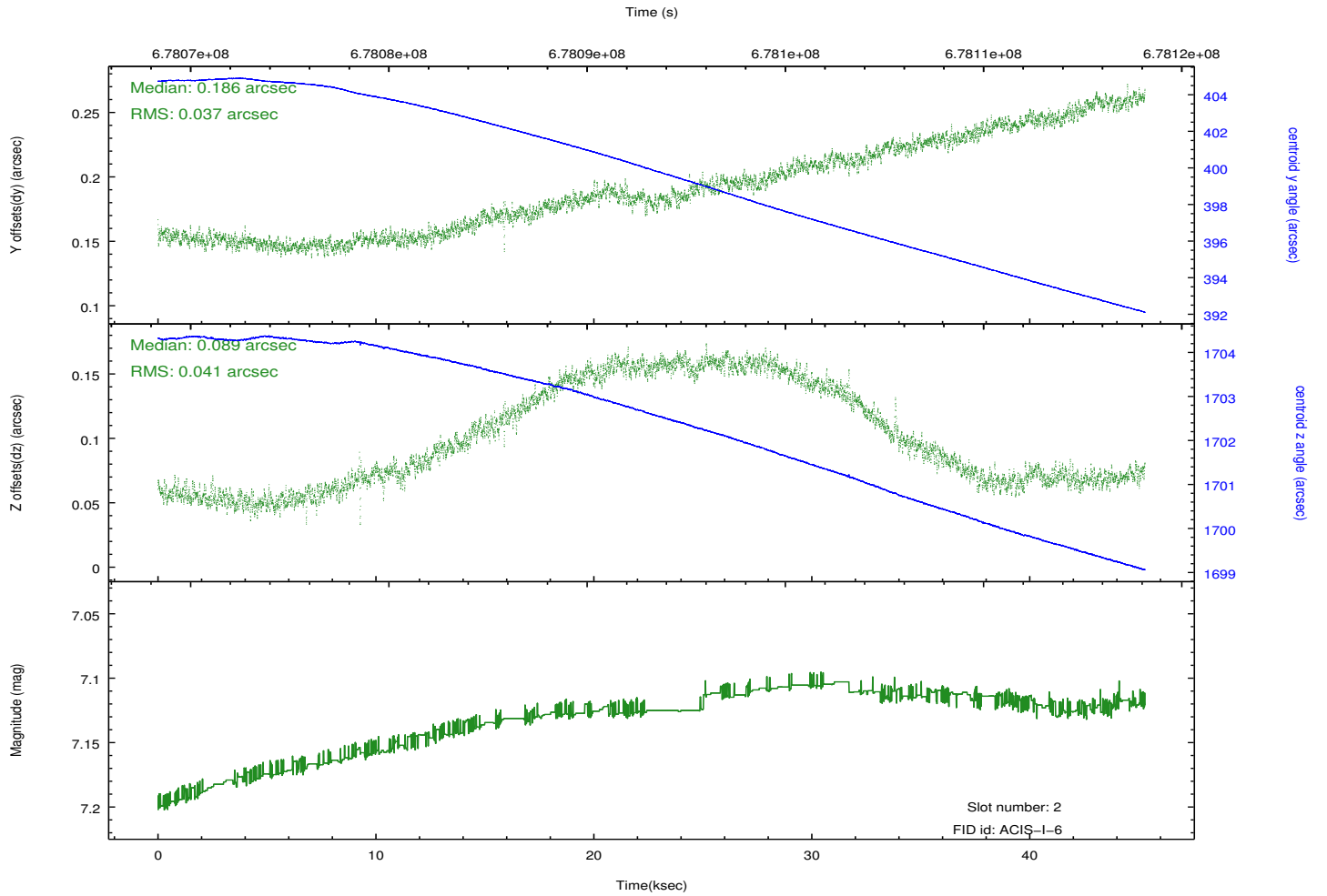
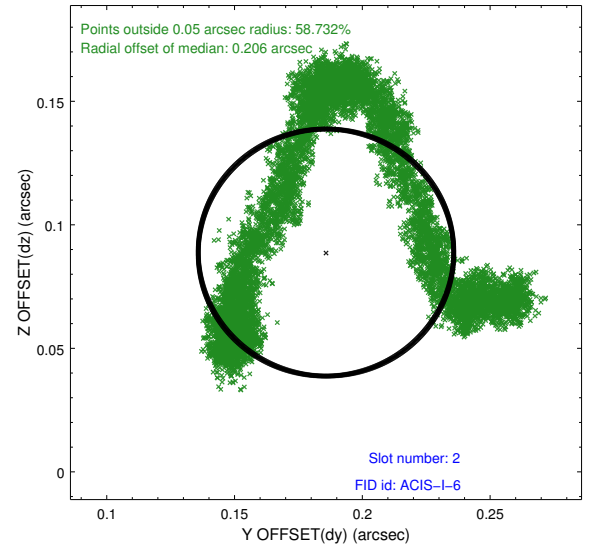
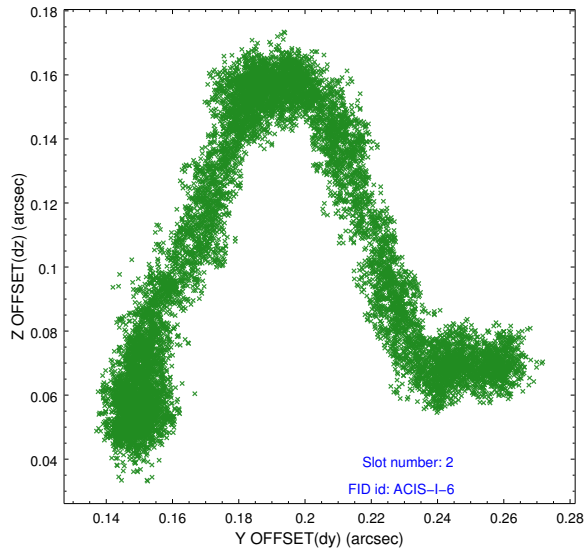
2.5.1 Slot 0



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)	2019.07.01
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	45.244500348091

A.2 Comments