

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22228 - L2 Version 1
Chandra X-Ray Center

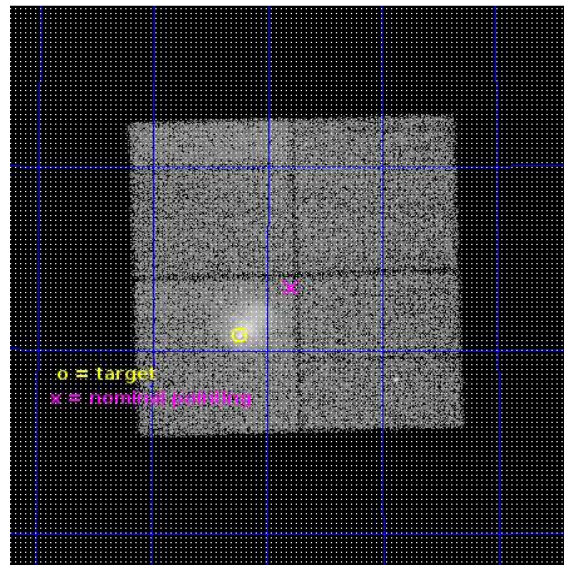
L2 Processing Date : May 22 2019

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1 Front

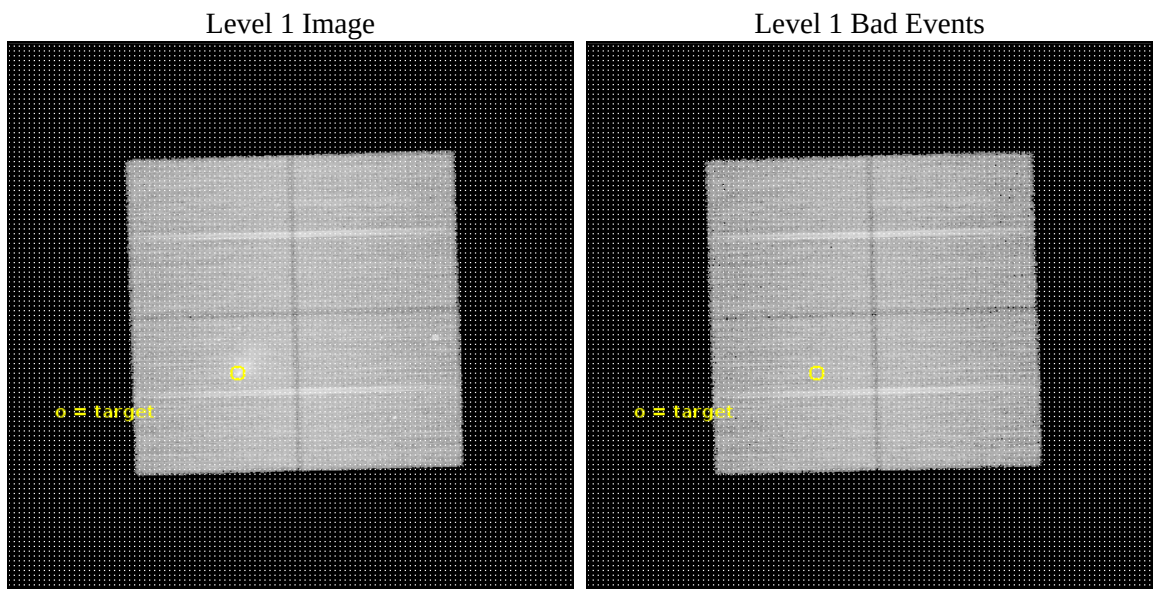
seq_num	801762	Sequence number
obs_id	22228	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.94804304266	Nominal RA [deg]
dec_nom	66.39058233082	Nominal Dec [deg]
roll_nom	178.31241114512	Nominal Roll [deg]
revision	1	Processing version of data
ontime	42953.280078411	Sum of GTIs [s]
livetime	42392.063852442	Livetime [s]
ontime0	42956.297898889	Sum of GTIs [s]
ontime1	42953.197948813	Sum of GTIs [s]
ontime2	42946.957068205	Sum of GTIs [s]
ontime3	42953.280078411	Sum of GTIs [s]
l2events	142284	Number of level 2 events



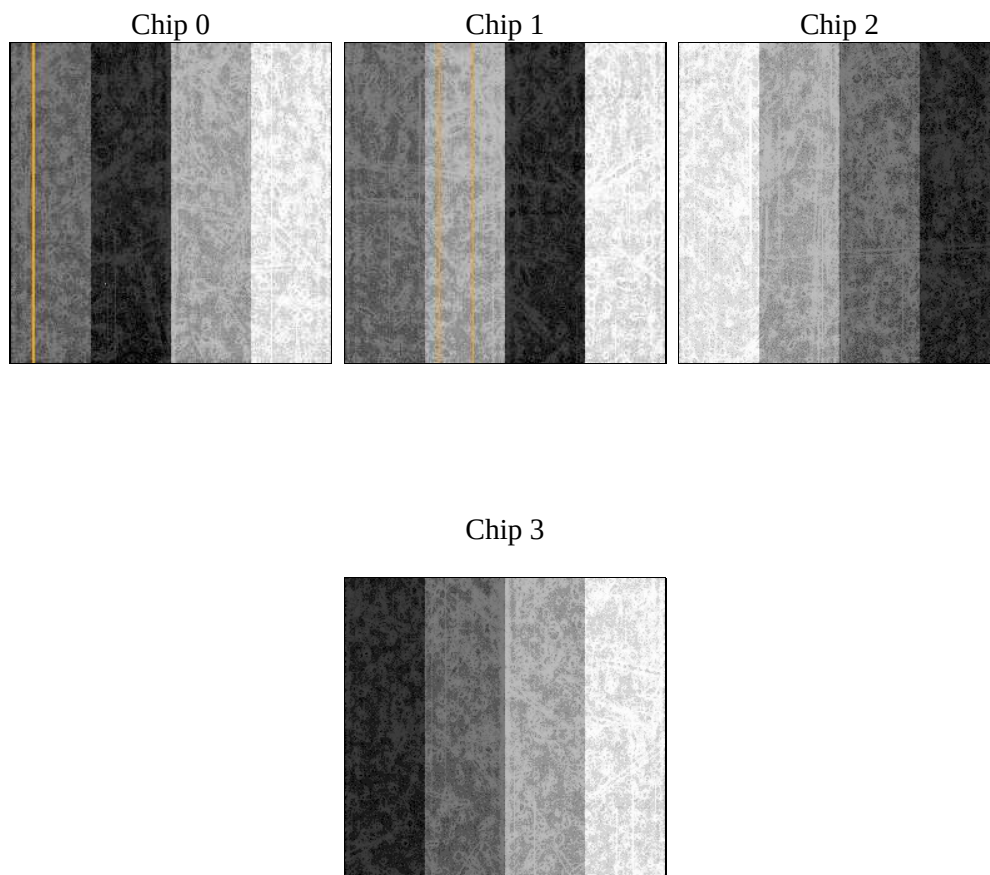
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	42879.557000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	42953.280078411	Sum of GTIs [s]
caldsver	4.8.2	 	ontime0	42956.297898889	Sum of GTIs [s]
date	2019-05-22T22:14:01	Date and time of file creation	ontime1	42953.197948813	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	42946.957068205	Sum of GTIs [s]
			ontime3	42953.280078411	Sum of GTIs [s]
			l1events	1252578	Number of level 1 events

2.1.4 Events

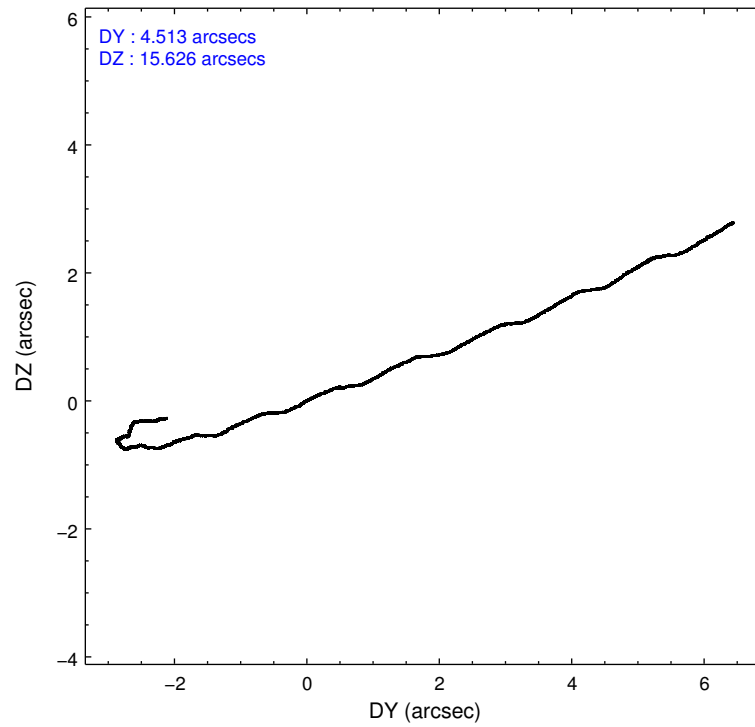
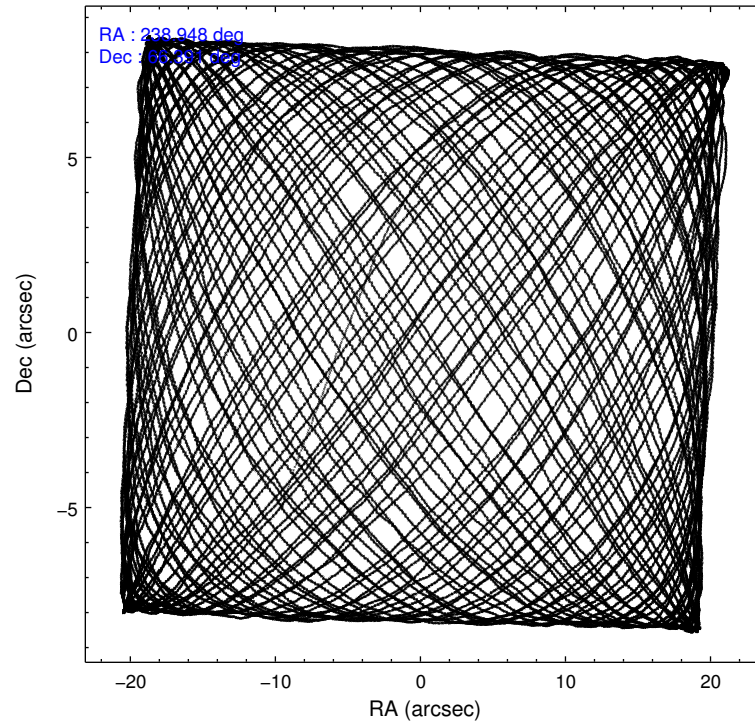
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	293473	299246	323220	336639
rejected events	257101	259122	286197	281700
rejected %	87%	86%	88%	83%

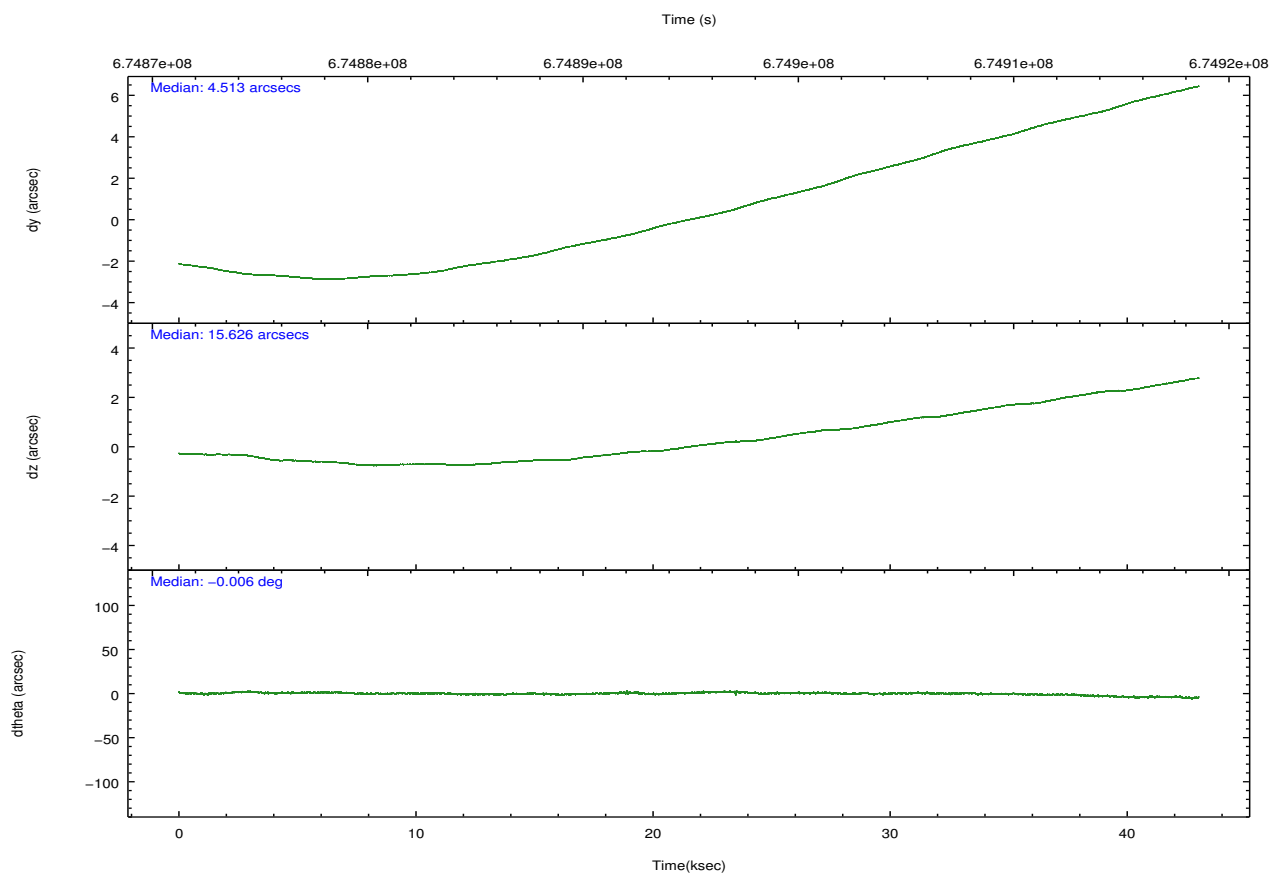
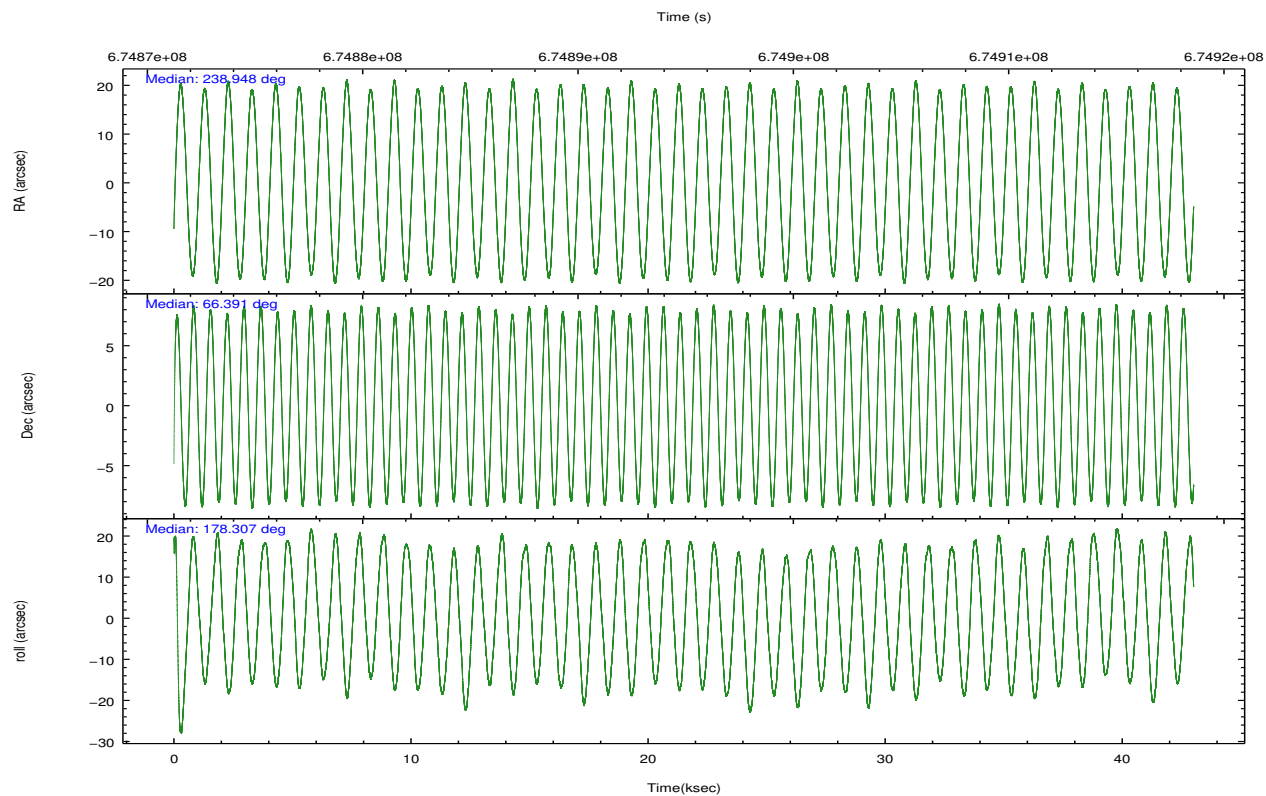
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	12204	13008	13739	28619
	4%	4%	4%	8%
grade 1 events	182	178	208	272
	0%	0%	0%	0%
grade 2 events	9391	10599	9079	9900
	3%	3%	2%	2%
grade 3 events	3723	3856	3542	4356
	1%	1%	1%	1%
grade 4 events	3409	3705	3559	4261
	1%	1%	1%	1%
grade 5 events	14140	14438	13057	15728
	4%	4%	4%	4%
grade 6 events	7653	8960	7107	7811
	2%	2%	2%	2%
grade 7 events	242771	244502	272929	265692
	82%	81%	84%	78%

2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-0123	ACIS-0123	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	239.008630	238.9480430426608	CCD I2 on	Y	Y
[deg] Pointing Dec	66.403749	66.39058233081963	CCD I3 on	Y	Y
[deg] Pointing Roll	178.048220	178.3124111451209	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	N
[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)	674873530.184000	674872092.66583	CCD S5 on	N	N
Observation start date	2019-05-22T00:51:01	2019-05-22T00:28:12	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	674916409.184000	674917805.10607	On-chip summing requested	N	N
Observation end date	2019-05-22T12:45:40	2019-05-22T13:10:05	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



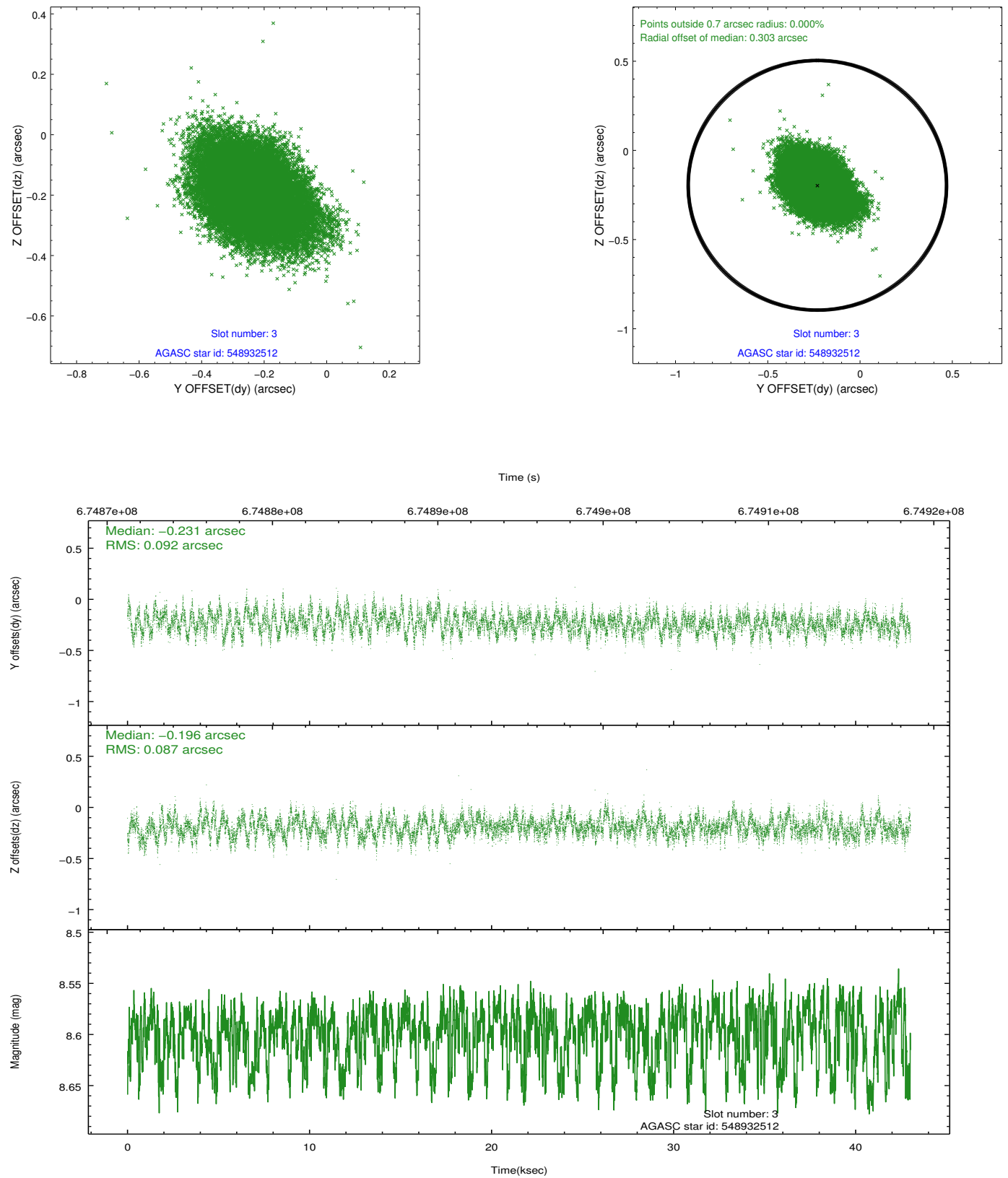


Slot Statistics

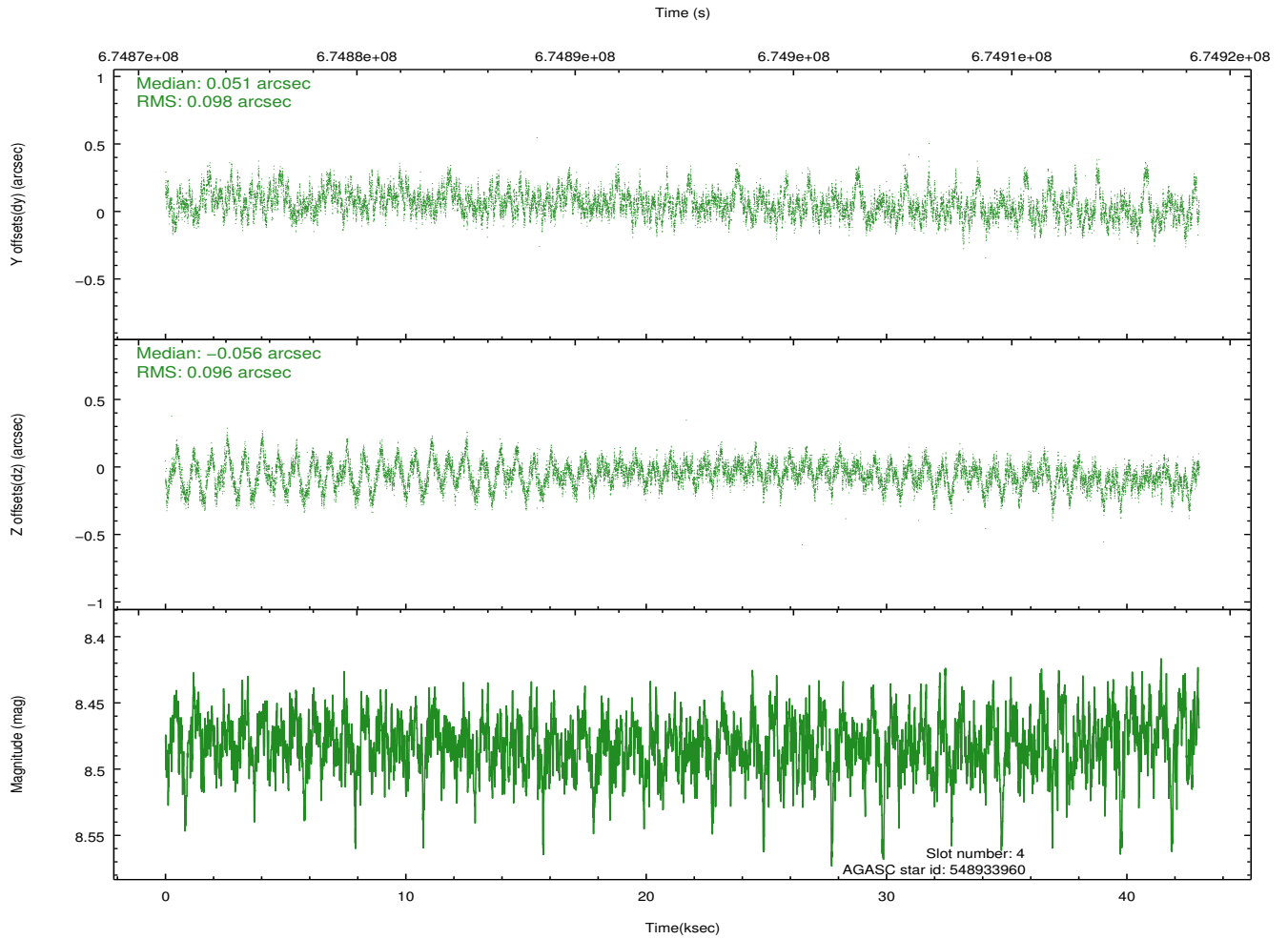
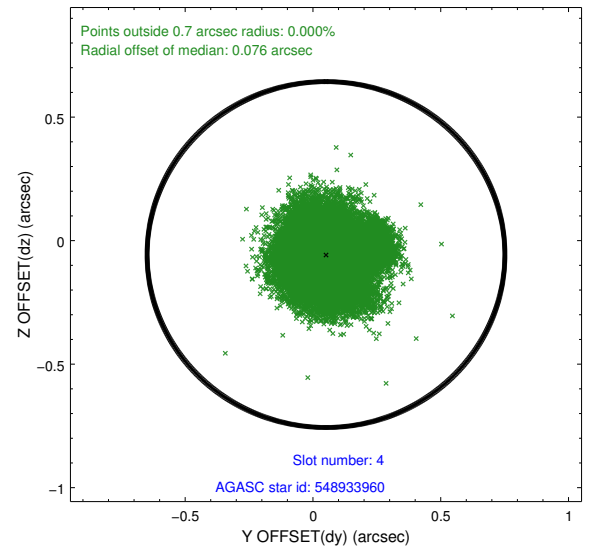
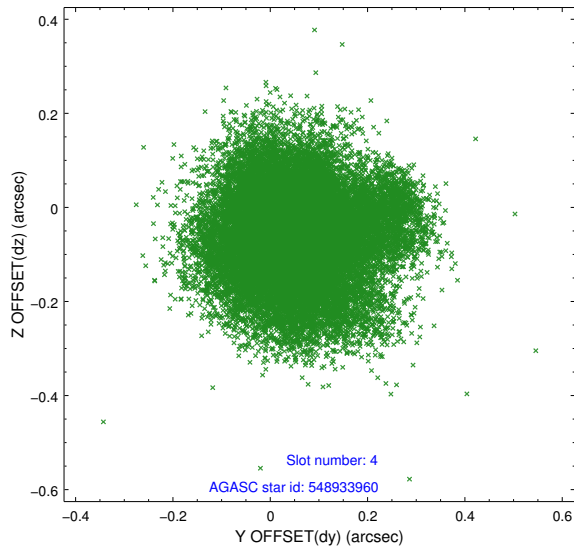
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.16	10491	1.000	0.109	-0.089	0.038	0.065	0.000000	0.000000	934.76	-839
1	FID		ACIS-I-5	7.12	10491	1.000	-0.396	0.048	0.034	0.044	0.000000	0.000000	-1813.99	1057
2	FID		ACIS-I-6	7.13	10492	1.000	0.193	0.108	0.051	0.071	0.000000	0.000000	400.21	1702
3	GUIDE	used	548932512	8.60	20967	1.000	-0.231	-0.196	0.135	0.220	239.727627	66.054972	-1092.48	1212
4	GUIDE	used	548933960	8.48	20973	1.000	0.051	-0.056	0.148	0.235	237.671184	66.428675	1928.47	-43
5	GUIDE	used	548937184	9.88	20904	1.000	0.031	0.044	0.217	0.357	238.771821	66.565432	359.17	-570
6	GUIDE	used	548939872	10.32	20671	1.000	-0.005	-0.130	0.296	0.550	238.964867	66.978384	132.56	-2065
7	GUIDE	used	549849072	9.11	20963	1.000	0.160	0.330	0.160	0.265	240.420863	66.802816	-1950.69	-1526

2.4 Star Slots

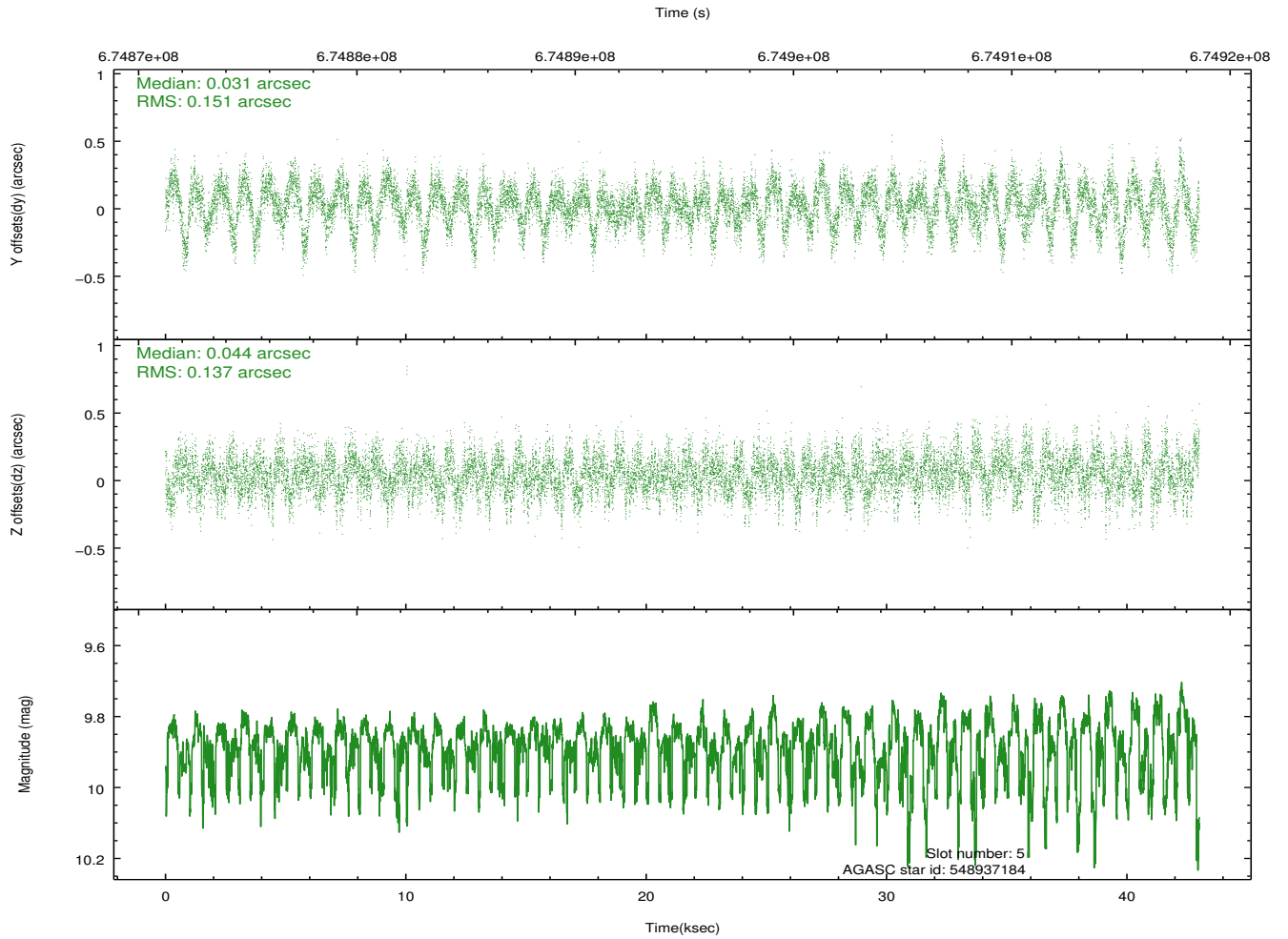
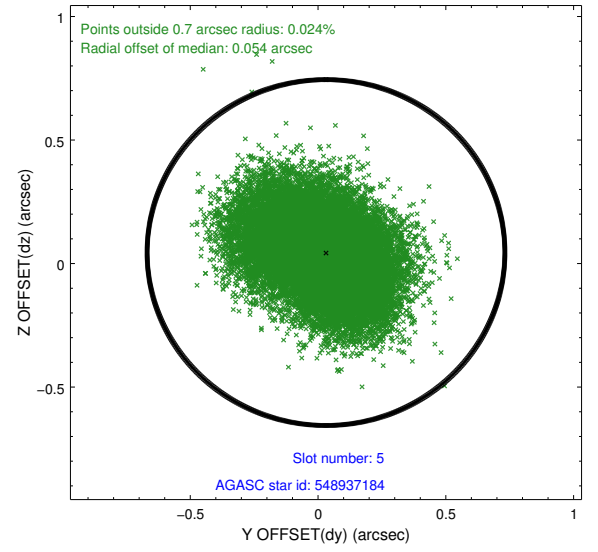
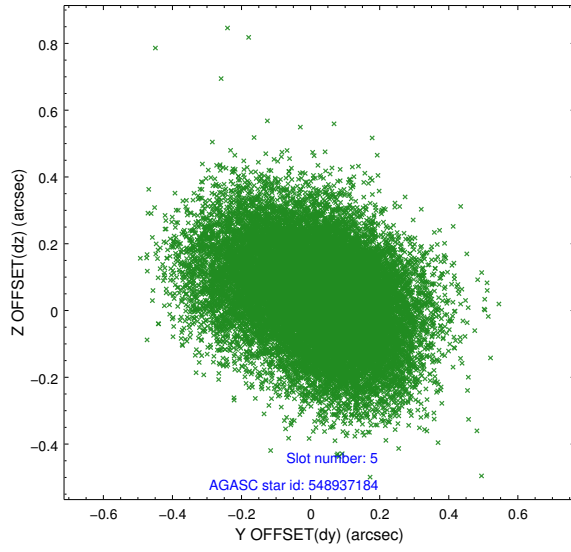
2.4.1 Slot 3



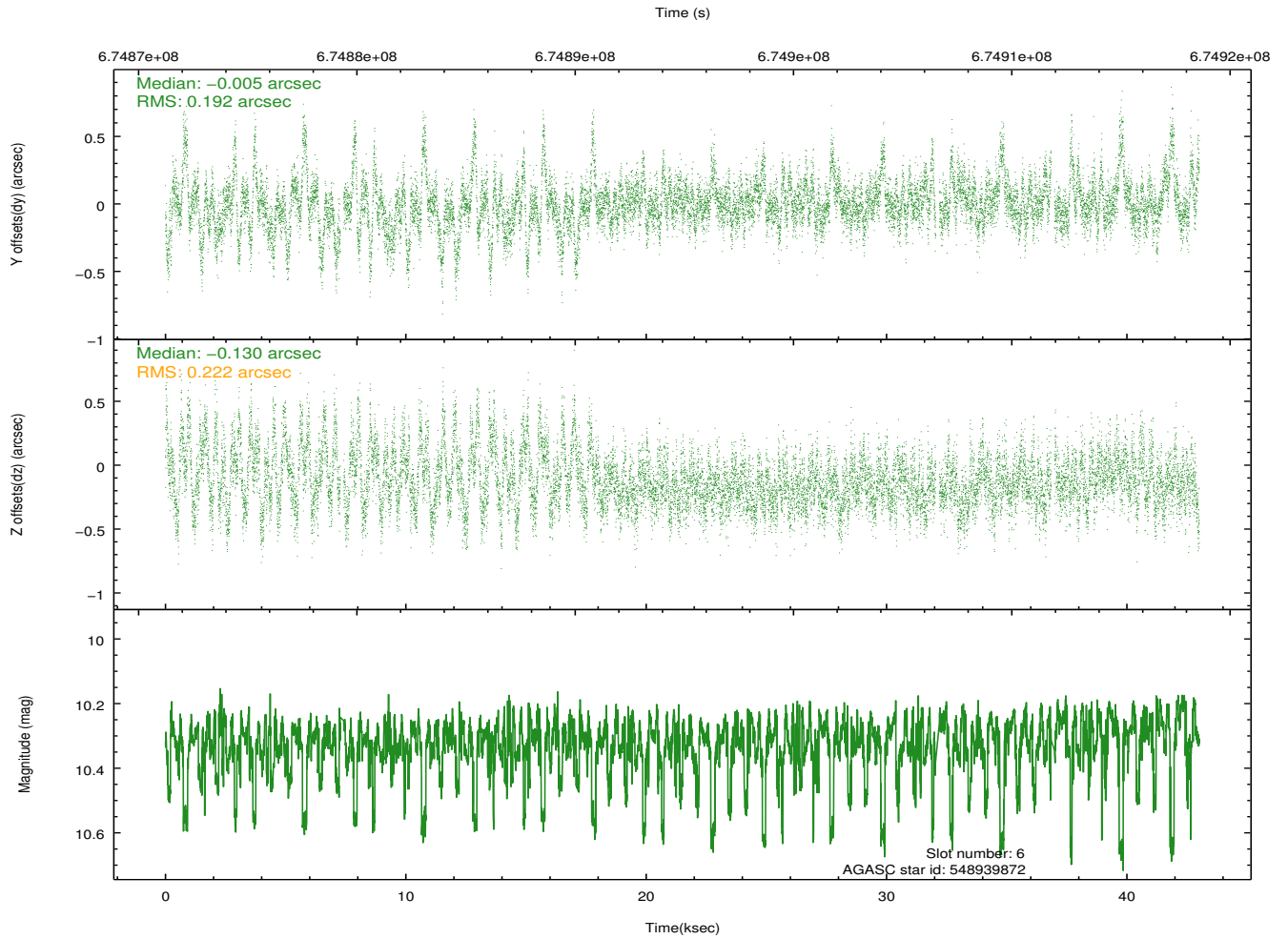
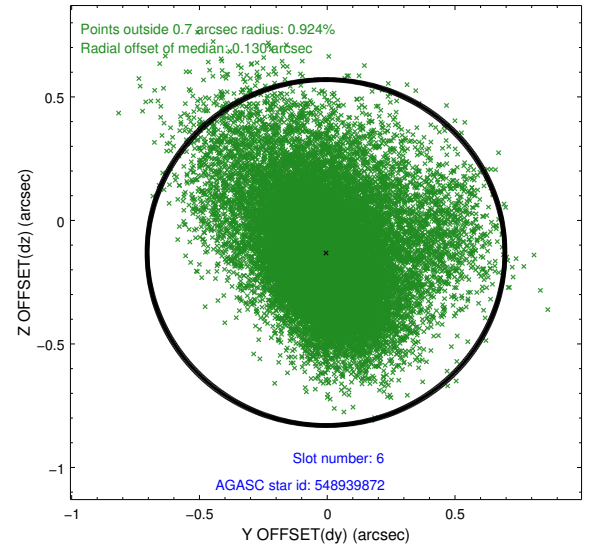
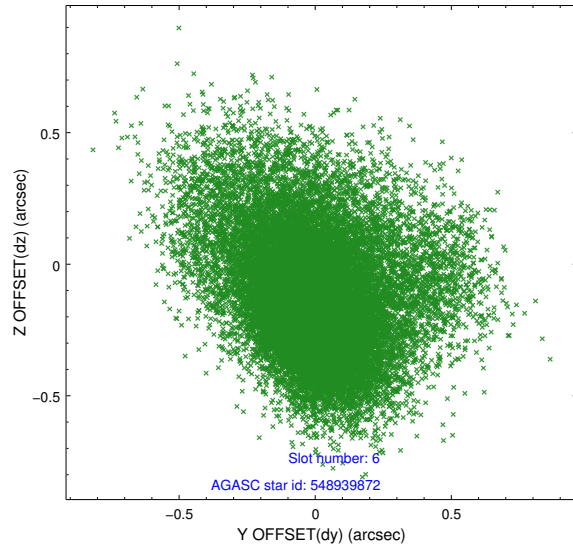
2.4.2 Slot 4



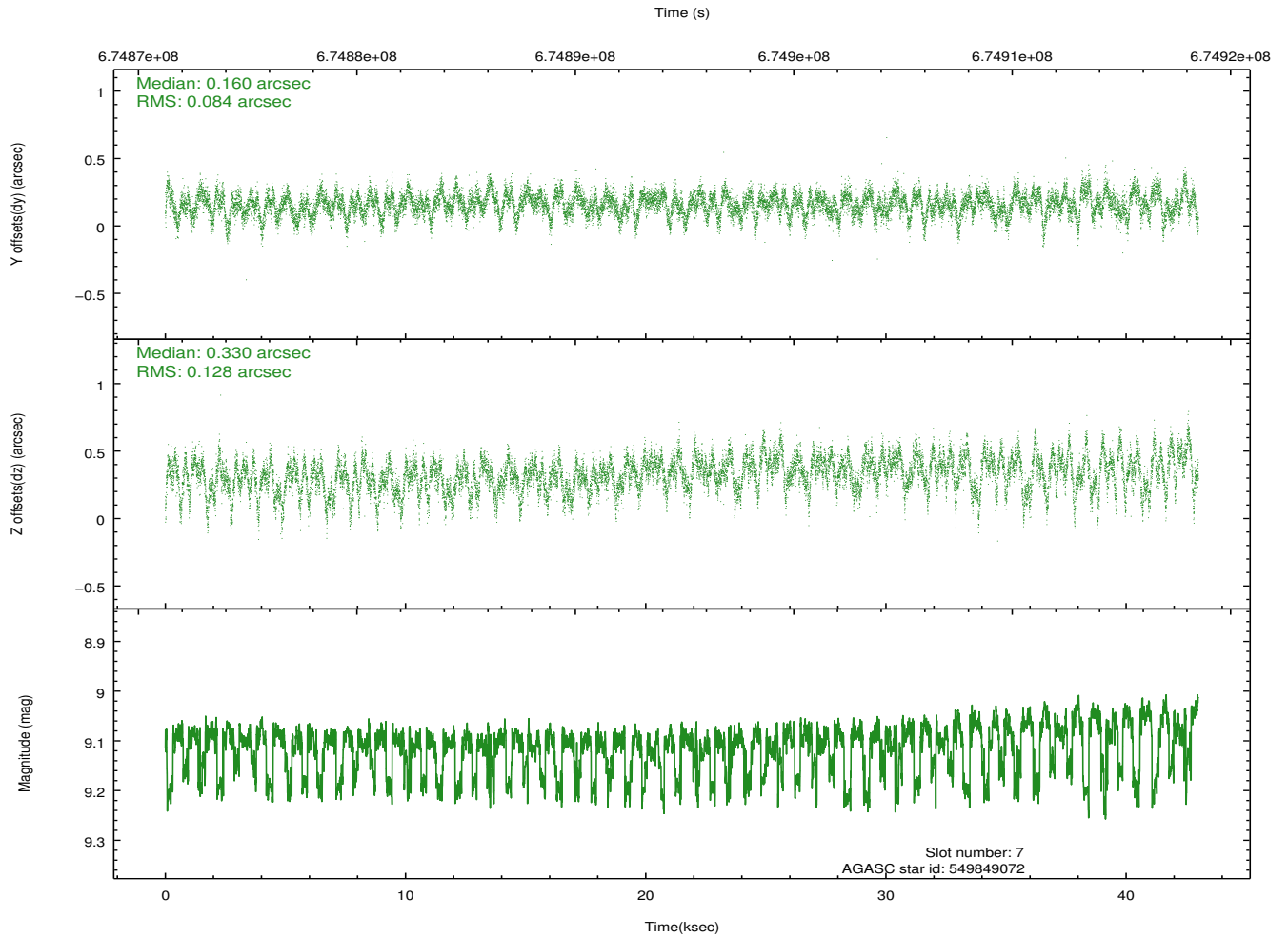
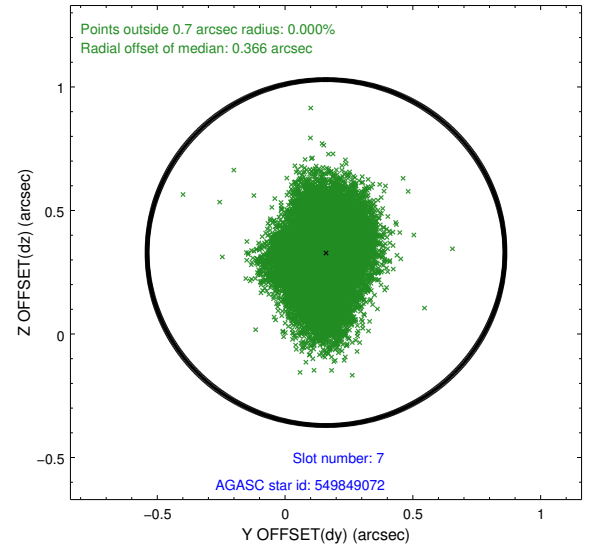
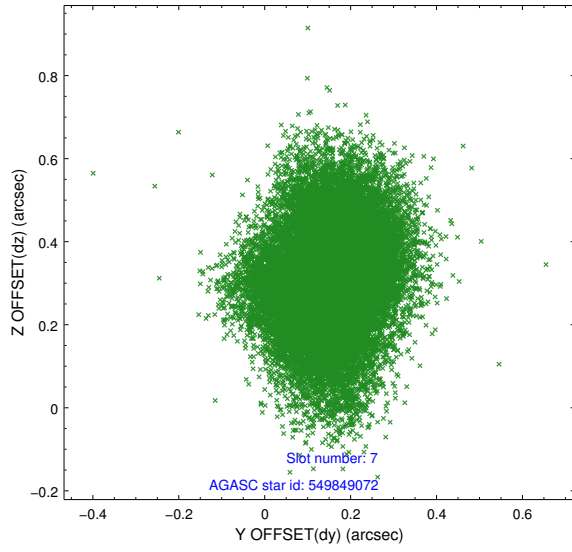
2.4.3 Slot 5



2.4.4 Slot 6

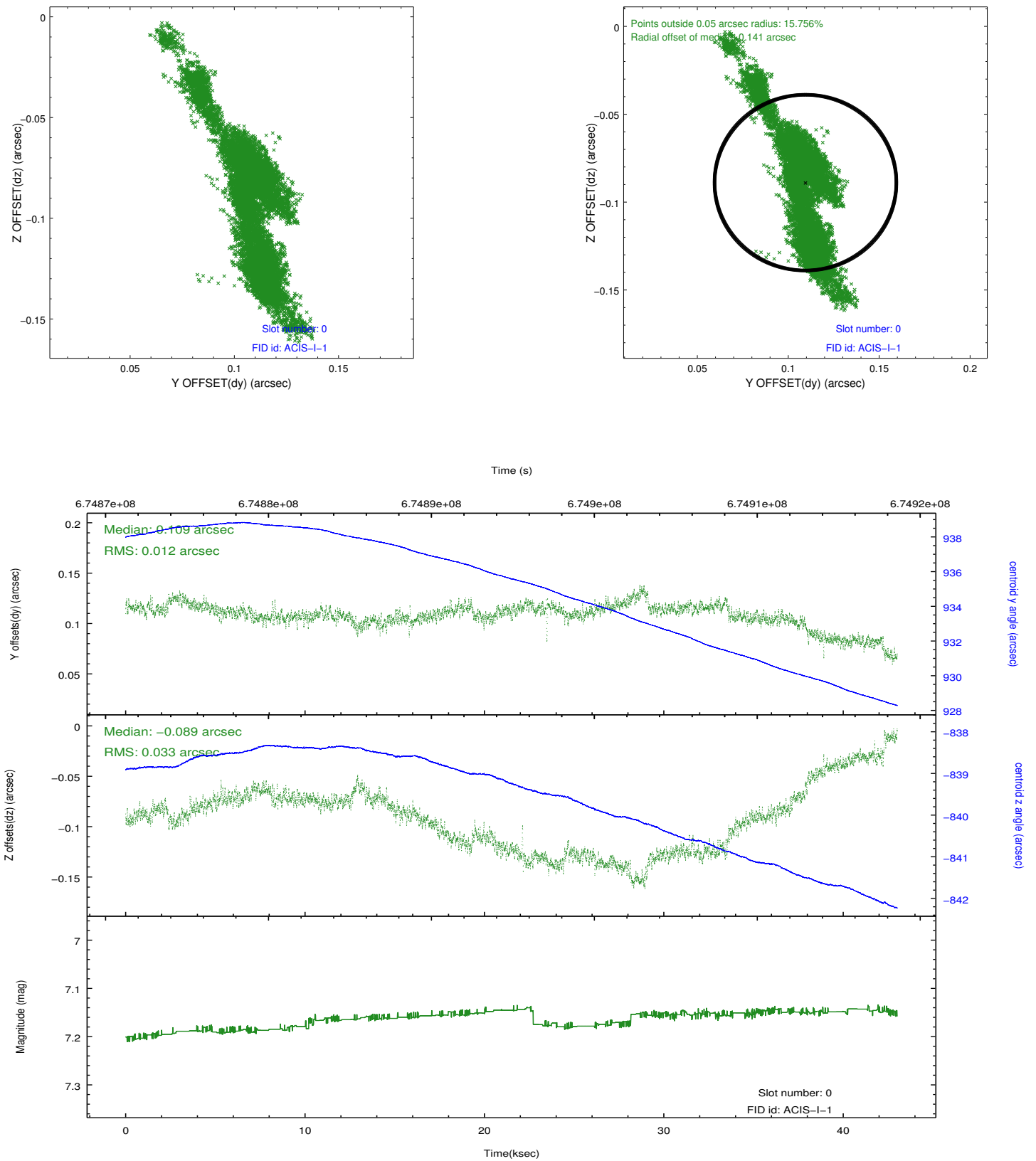


2.4.5 Slot 7

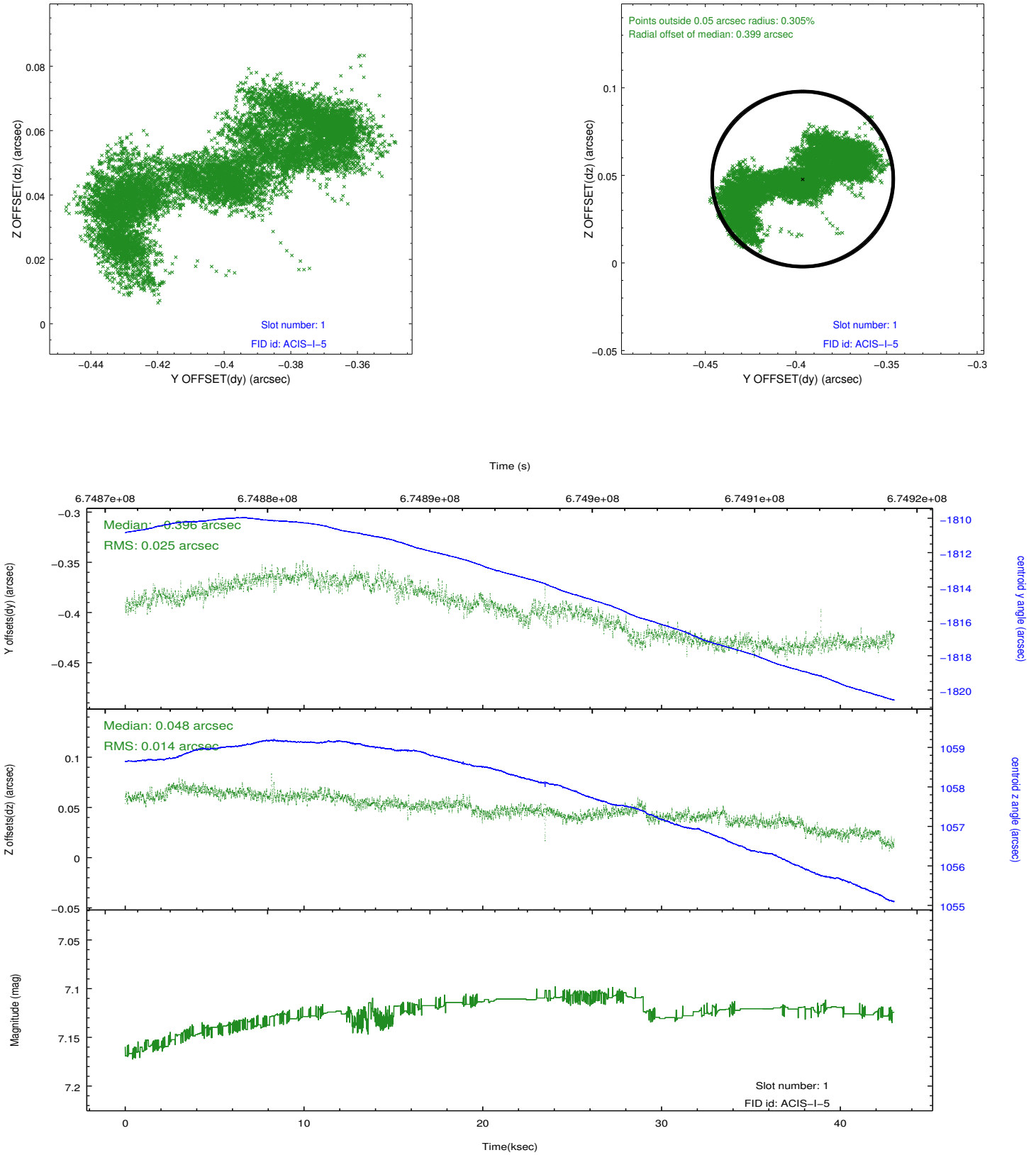


2.5 FID Slots

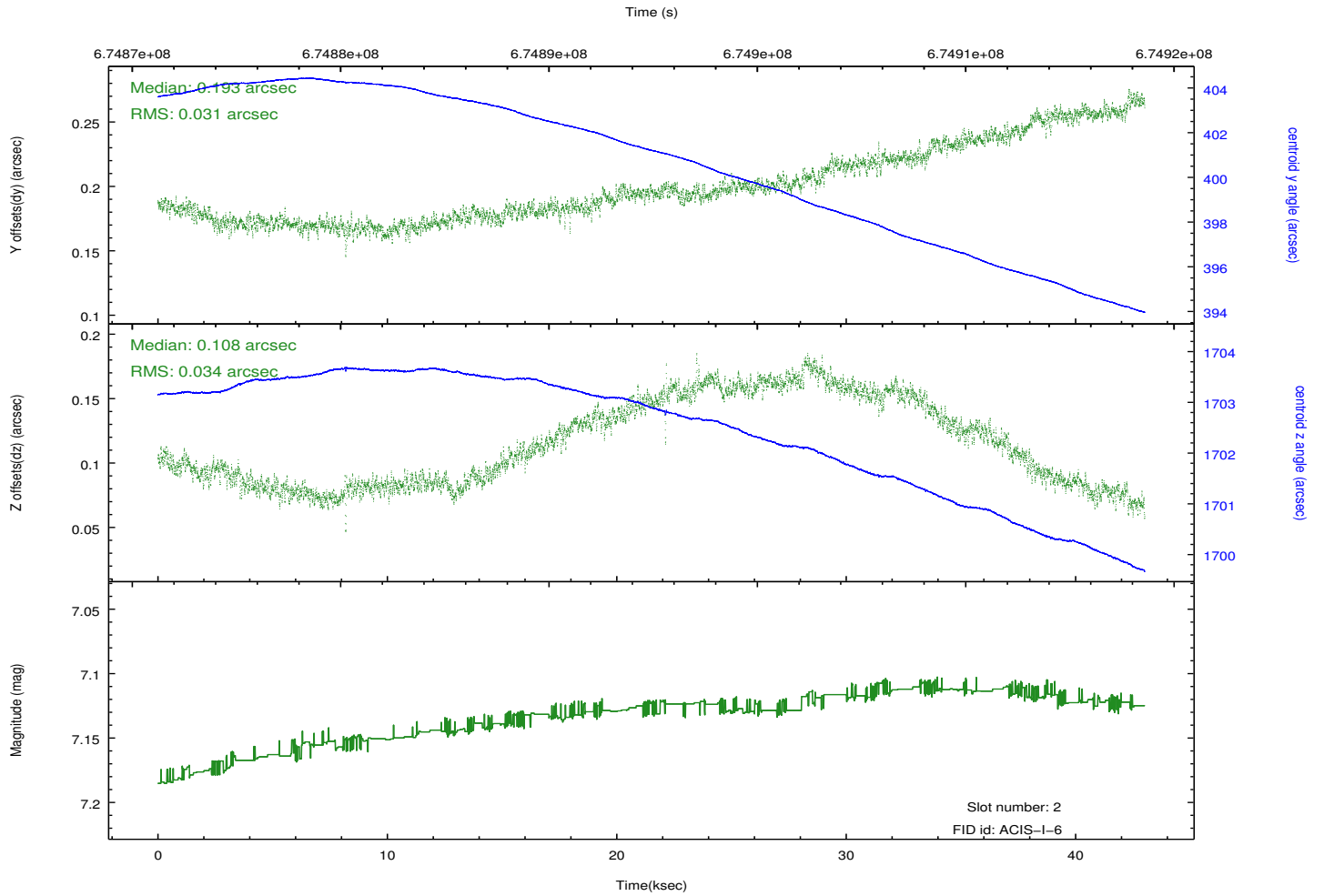
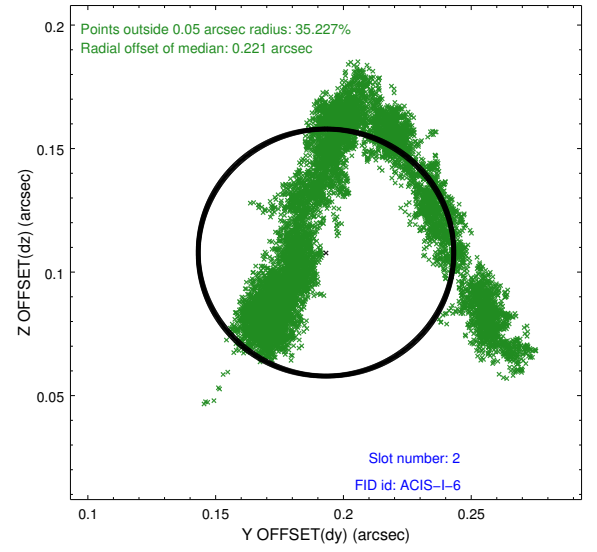
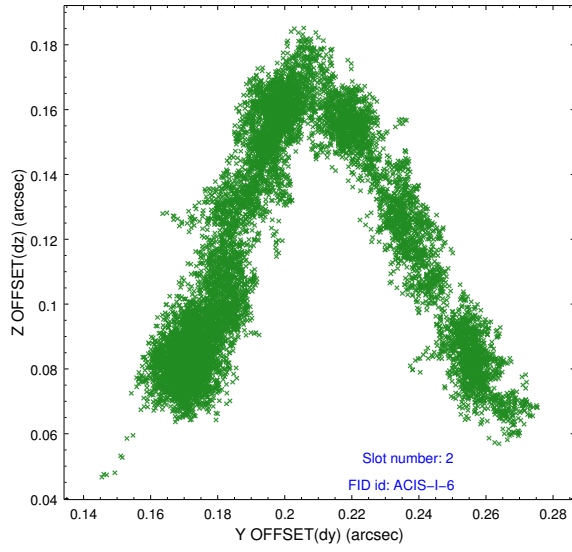
2.5.1 Slot 0



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)	2019.05.23
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	42.953280078411

A.2 Comments

One optional chip was dropped.