

V&V Reference Report

L2 ASCDS Version : 10.7.1

Observation 22242 - L2 Version 1
Chandra X-Ray Center

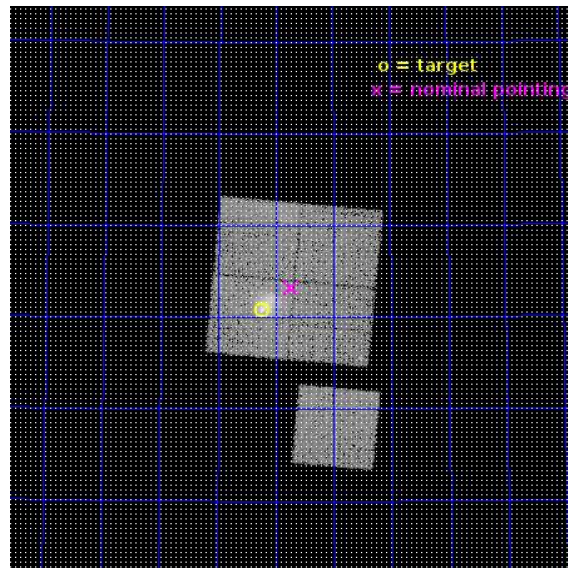
L2 Processing Date : Jun 7 2019

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1 Front

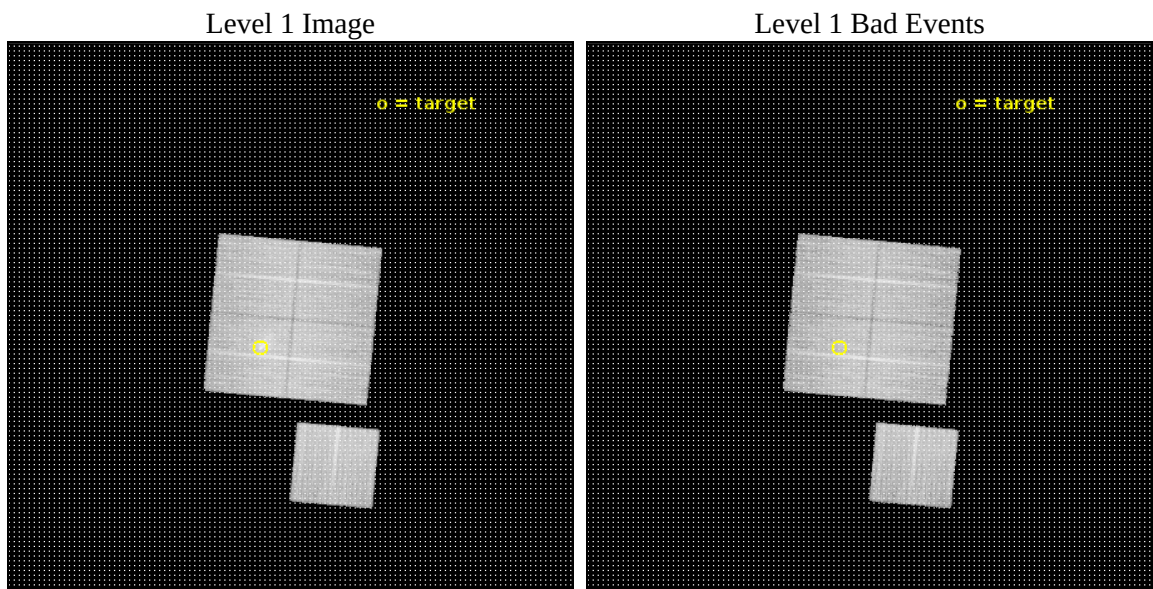
seq_num	801762	Sequence number
obs_id	22242	Observation id
title	Shock structure, the electron-ion equilibration timescale and the disintegrating cool core in A2146	Proposal title
observer	Helen Russell	Principal investigator
object	Abell 2146	Source name
dtcycle	0	
cycle	P	events from which exps? Prim/Second/Both
ra_targ	239.06125	Observer's specified target RA [deg]
dec_targ	66.346917	Observer's specified target Dec [deg]
ra_nom	238.9325449737	Nominal RA [deg]
dec_nom	66.387473046319	Nominal Dec [deg]
roll_nom	185.32659761912	Nominal Roll [deg]
revision	1	Processing version of data
ontime	20962.099951625	Sum of GTIs [s]
livetime	20688.214683683	Livetime [s]
ontime0	20968.258772135	Sum of GTIs [s]
ontime1	20968.299812078	Sum of GTIs [s]
ontime2	20968.340852141	Sum of GTIs [s]
ontime3	20962.099951625	Sum of GTIs [s]
ontime6	20965.076741934	Sum of GTIs [s]
l2events	85983	Number of level 2 events



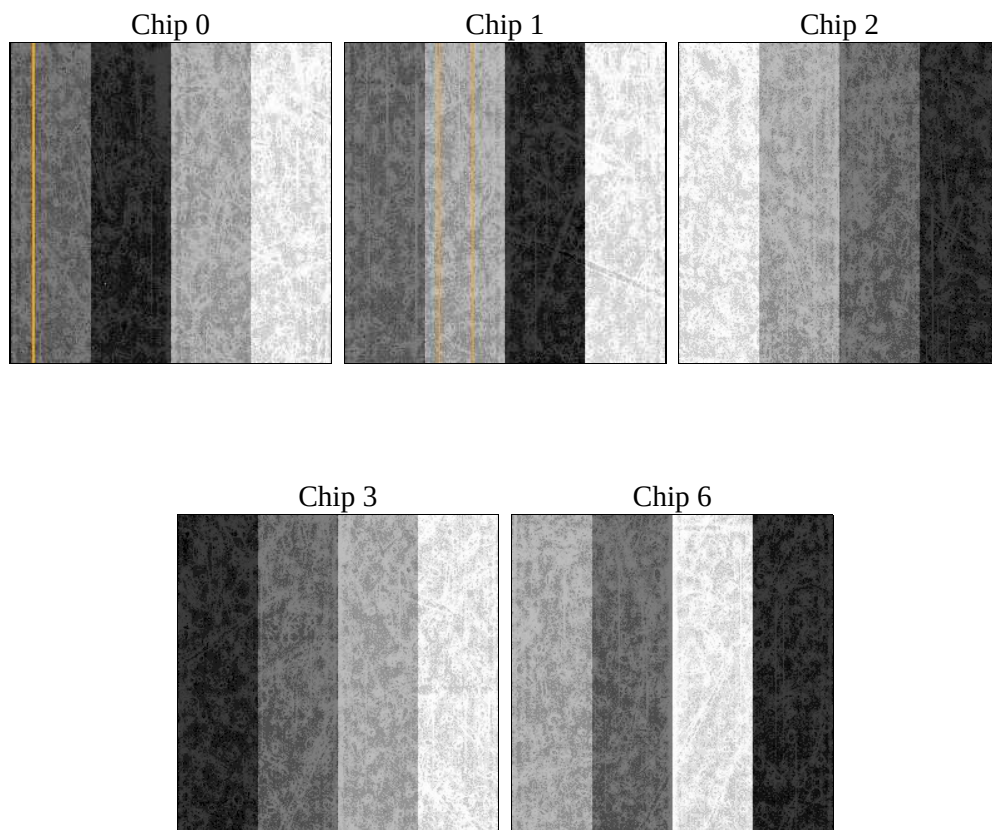
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	20899.202000	[s] Scheduled observation exposure time
ascdsver	10.7.1	Processing system revision	ontime	20962.099951625	Sum of GTIs [s]
caldsver	4.8.3	 	ontime0	20968.258772135	Sum of GTIs [s]
date	2019-06-07T13:29:00	Date and time of file creation	ontime1	20968.299812078	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	20968.340852141	Sum of GTIs [s]
			ontime3	20962.099951625	Sum of GTIs [s]
			ontime6	20965.076741934	Sum of GTIs [s]
			l1events	785611	Number of level 1 events

2.1.4 Events

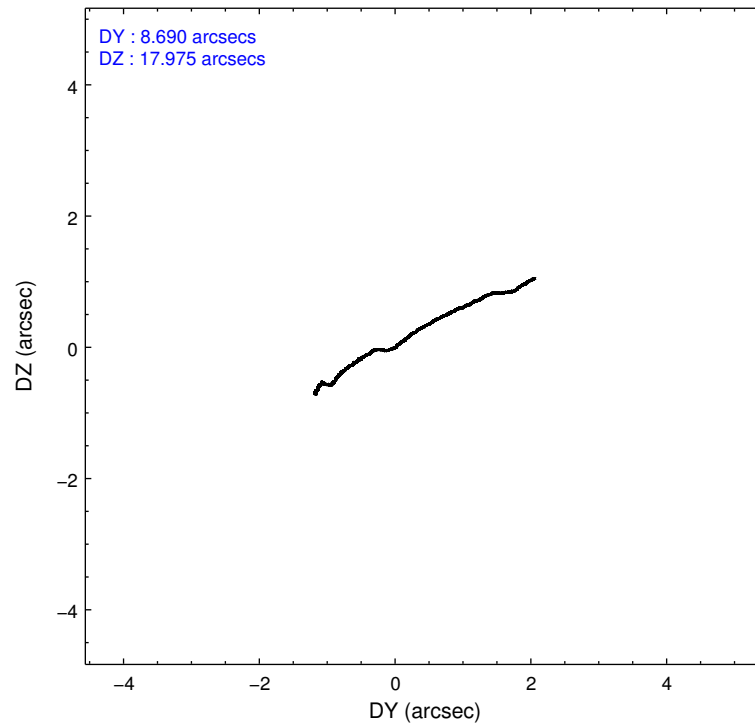
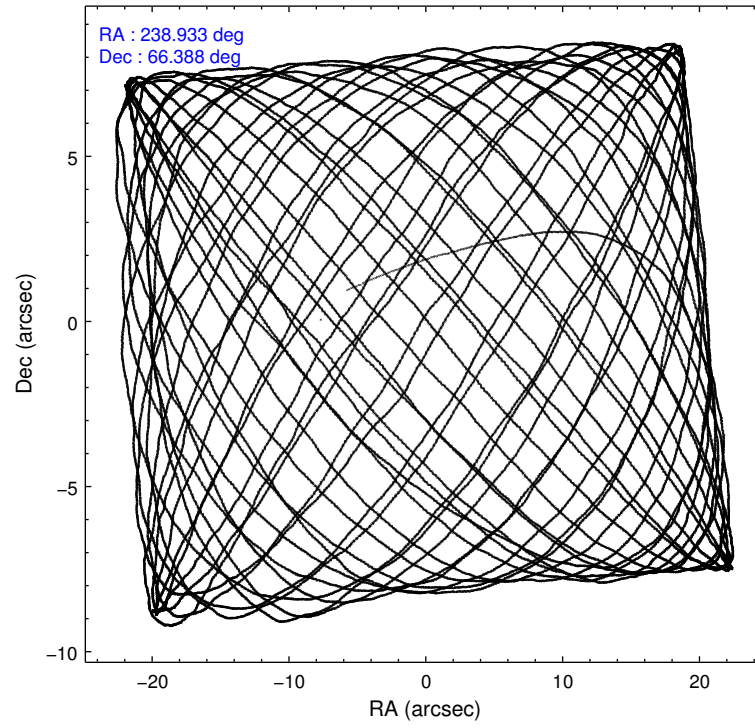
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	143504	151472	164523	166533	159579
rejected events	125541	131367	146835	139690	141713
rejected %	87%	86%	89%	83%	88%

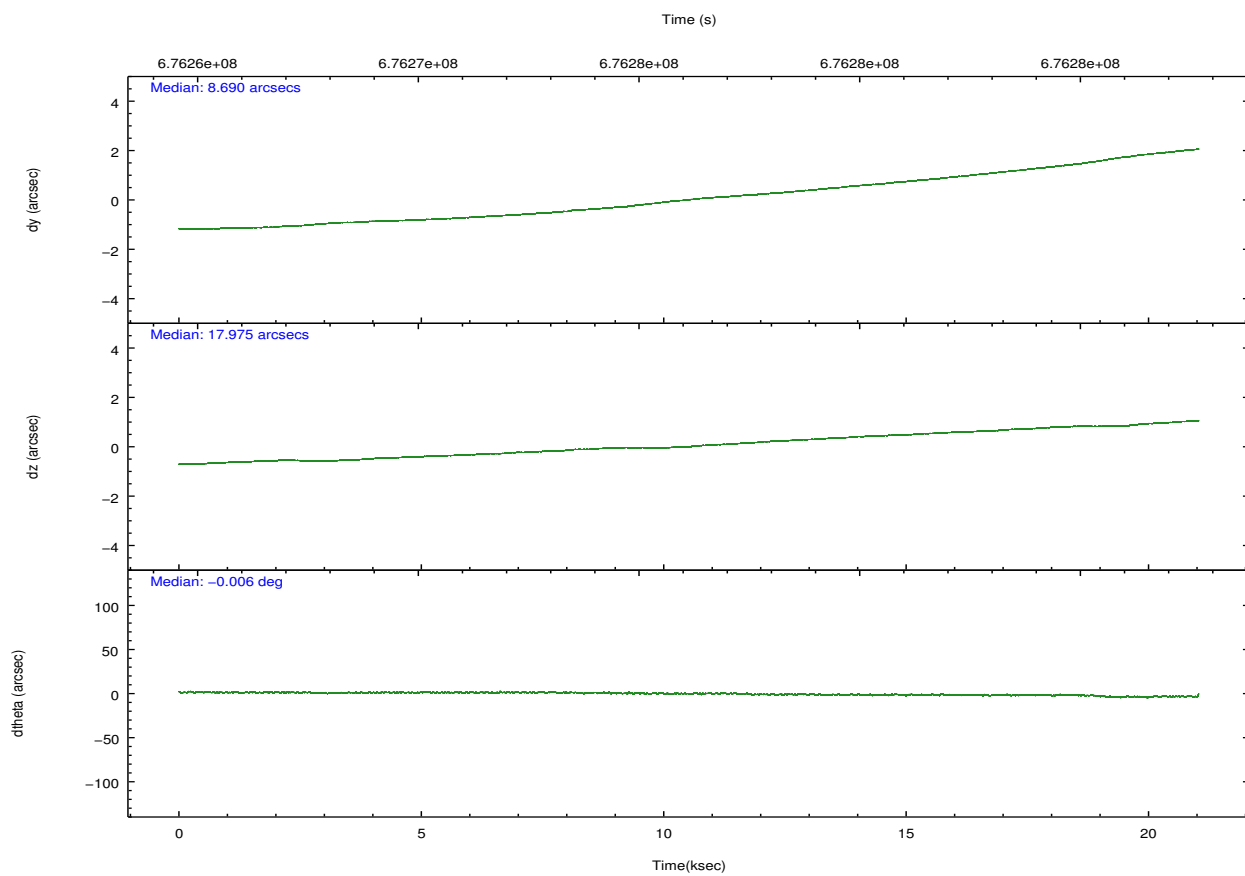
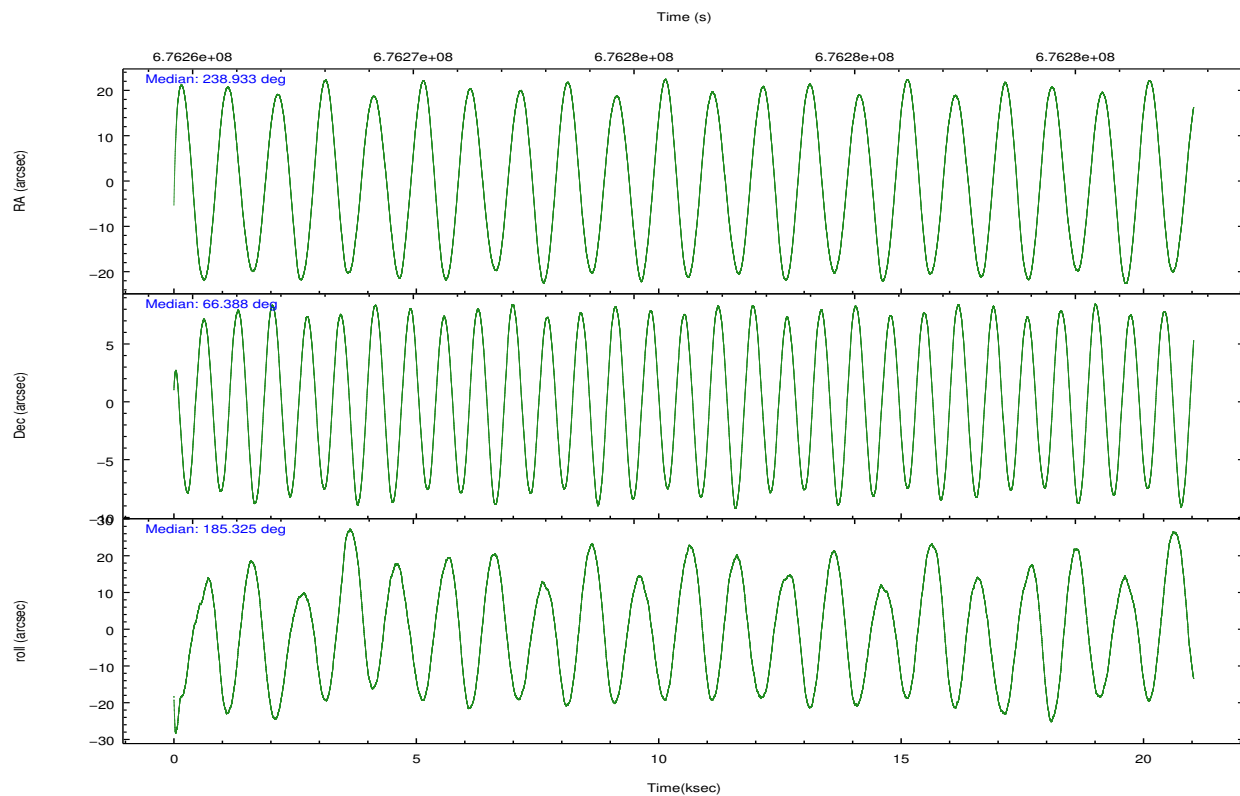
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	6061	6544	6271	13869	5774
	4%	4%	3%	8%	3%
grade 1 events	94	87	112	159	65
	0%	0%	0%	0%	0%
grade 2 events	4529	5431	4321	4889	4286
	3%	3%	2%	2%	2%
grade 3 events	1858	1785	1776	2102	1816
	1%	1%	1%	1%	1%
grade 4 events	1740	1735	1839	2077	1632
	1%	1%	1%	1%	1%
grade 5 events	6902	6978	6539	7647	7261
	4%	4%	3%	4%	4%
grade 6 events	3779	4612	3482	3907	4360
	2%	3%	2%	2%	2%
grade 7 events	118541	124300	140183	131883	134385
	82%	82%	85%	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	238.988655	238.9325449736972	CCD I2 on	Y	Y
[deg] Pointing Dec	66.403538	66.38747304631907	CCD I3 on	Y	Y
[deg] Pointing Roll	185.066515	185.3265976191223	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)	676265755.184000	676264434.2993	CCD S5 on	N	N
Observation start date	2019-06-07T03:34:46	2019-06-07T03:13:54	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	676286654.184000	676287548.0506901	On-chip summing requested	N	N
Observation end date	2019-06-07T09:23:05	2019-06-07T09:39:08	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

2.3 Aspect



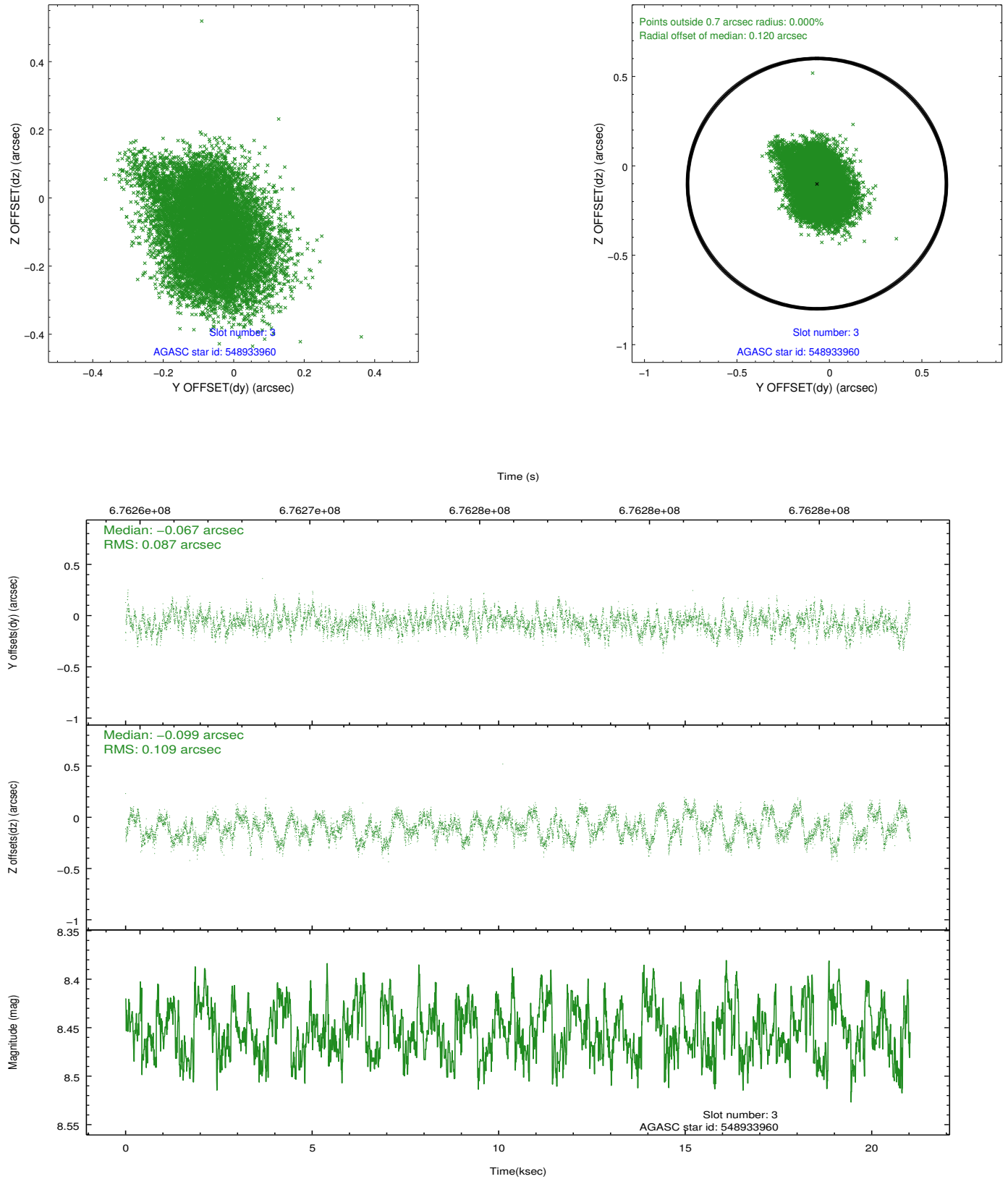


Slot Statistics

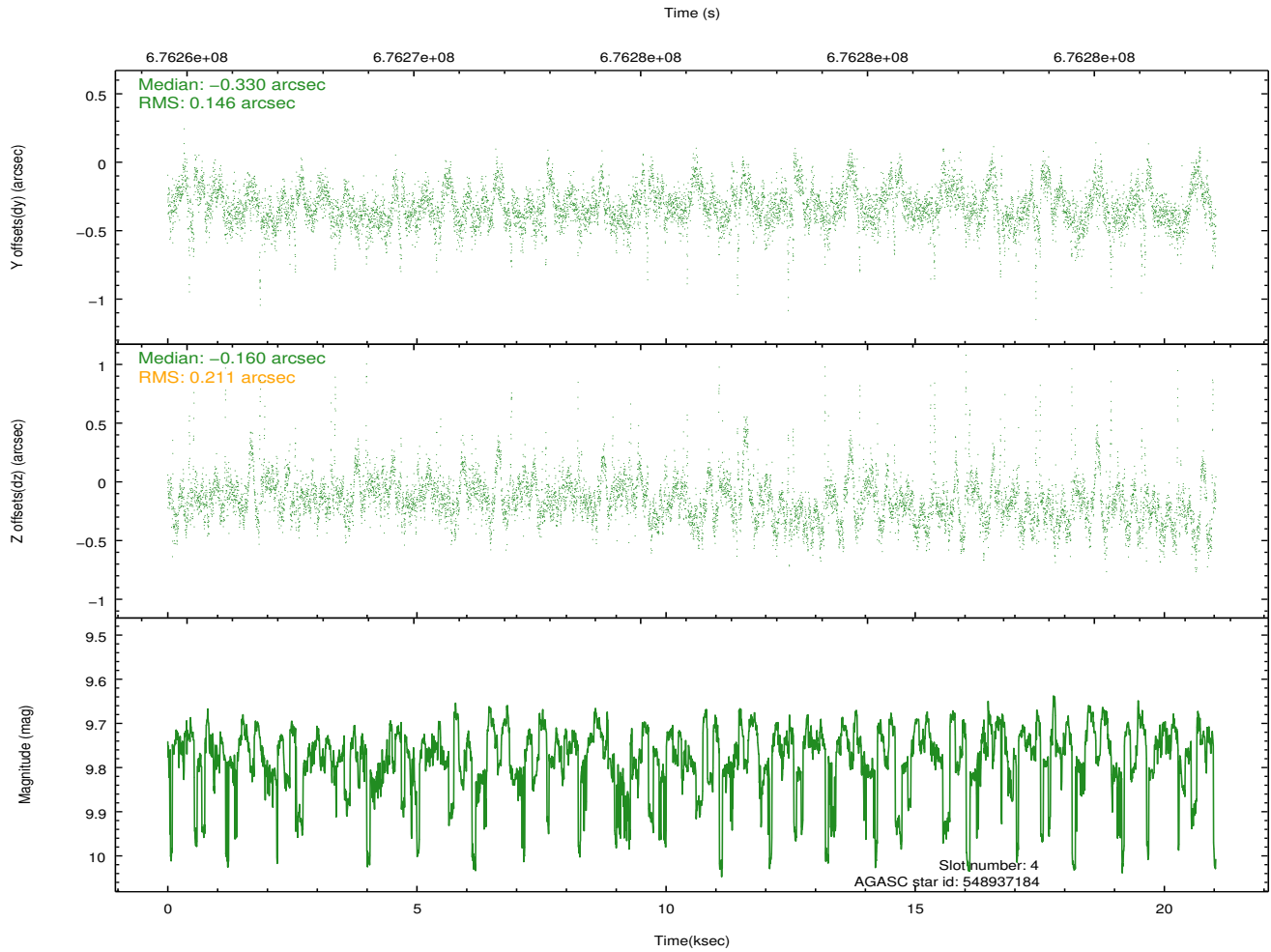
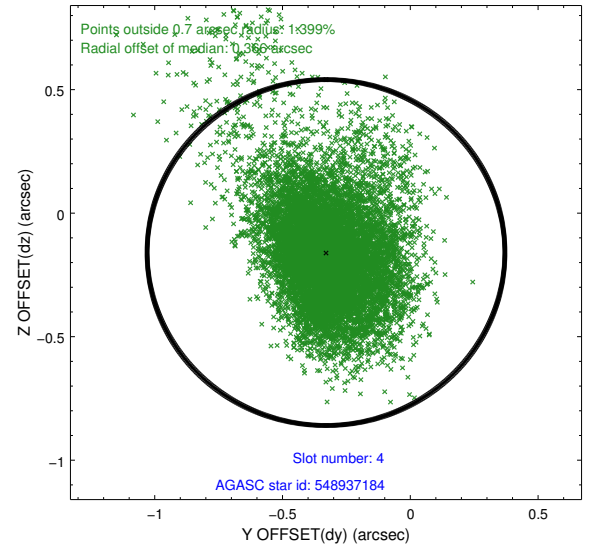
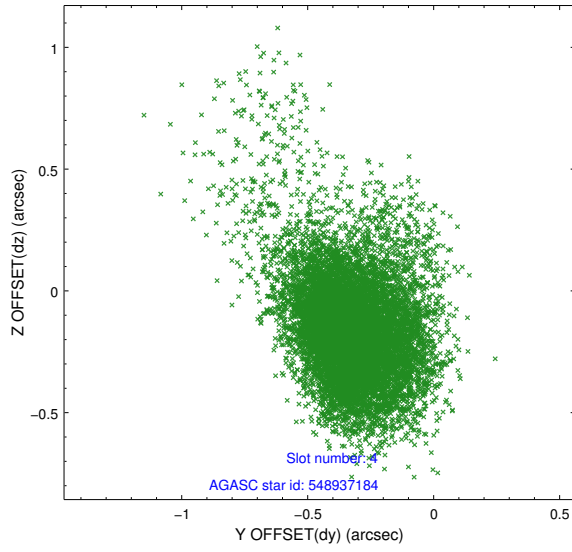
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.20	5131	1.000	0.100	-0.064	0.037	0.053	0.000000	0.000000	930.99	-841
1	FID		ACIS-I-5	7.17	5131	1.000	-0.443	0.032	0.012	0.020	0.000000	0.000000	-1817.71	1055
2	FID		ACIS-I-6	7.17	5131	1.000	0.252	0.099	0.028	0.042	0.000000	0.000000	396.31	1700
3	GUIDE	used	548933960	8.45	10253	1.000	-0.067	-0.099	0.151	0.234	237.671184	66.428675	1880.08	-275
4	GUIDE	used	548937184	9.77	10221	1.000	-0.330	-0.160	0.243	0.458	238.771821	66.565432	257.96	-608
5	GUIDE	used	548939872	10.29	10077	1.000	0.106	0.110	0.334	0.634	238.964867	66.978384	-148.76	-2063
6	GUIDE	used	549848472	8.84	10255	1.000	0.154	0.040	0.142	0.222	240.538609	67.119806	-2390.26	-2403
7	GUIDE	used	549849072	9.13	10232	1.000	0.138	0.076	0.170	0.274	240.420863	66.802816	-2151.20	-1275

2.4 Star Slots

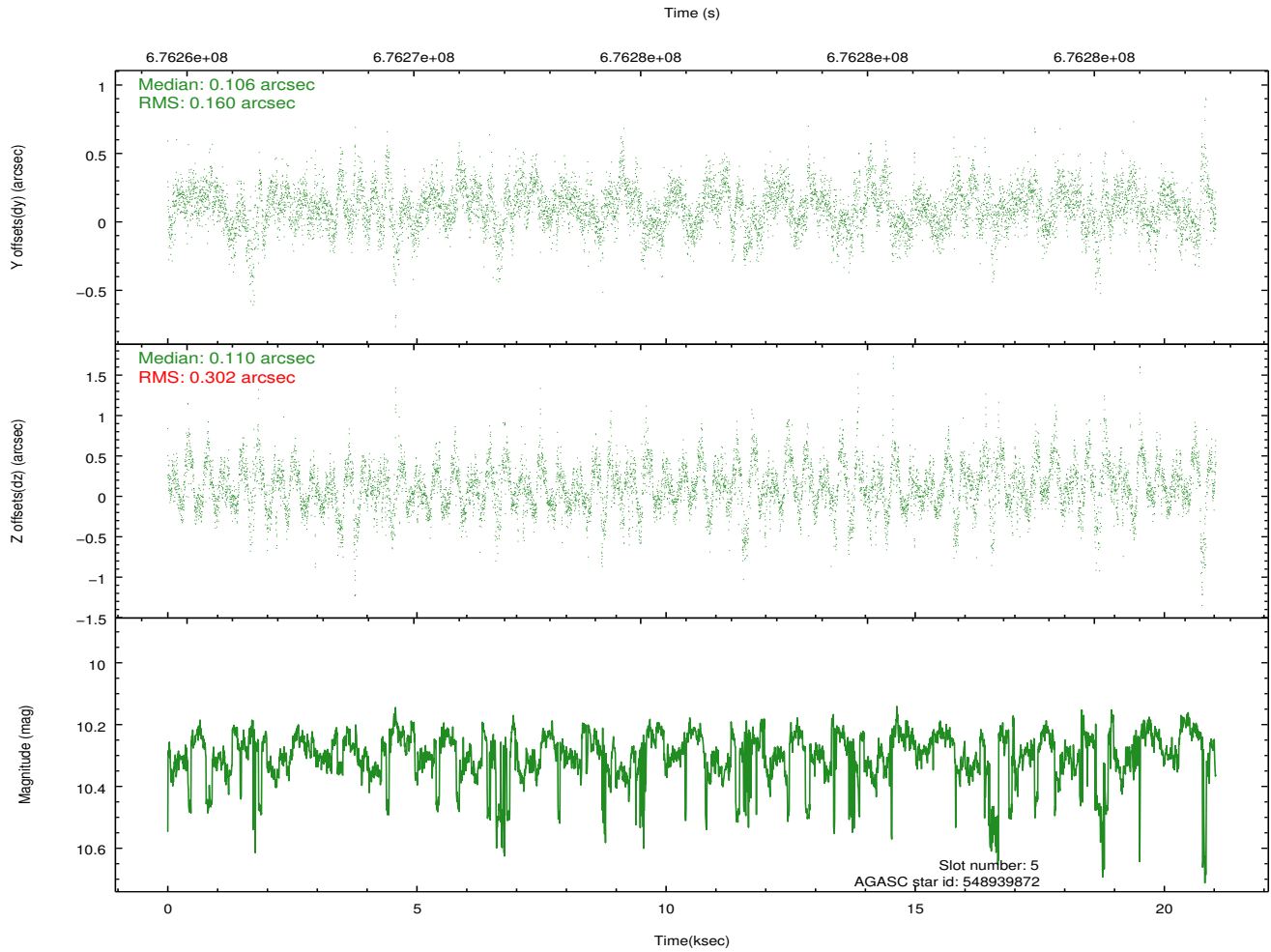
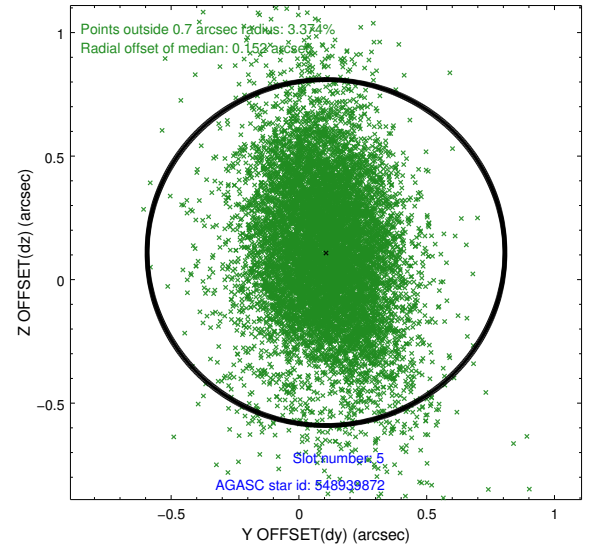
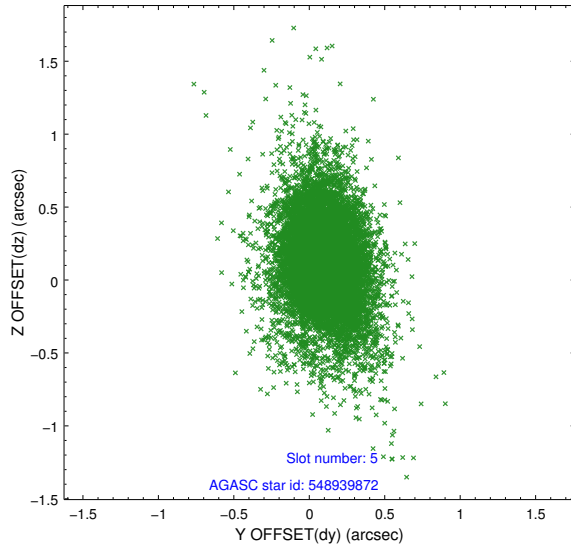
2.4.1 Slot 3



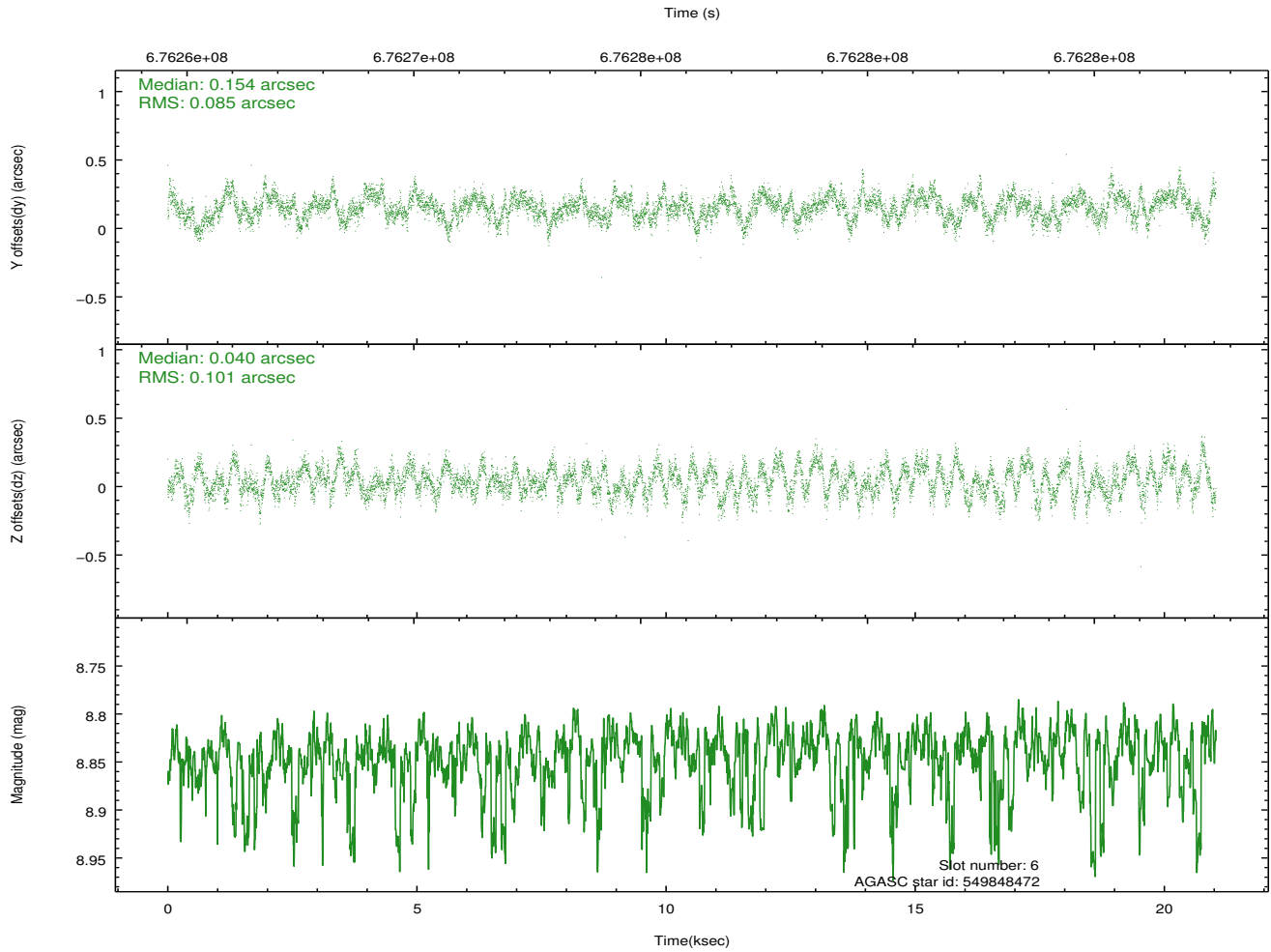
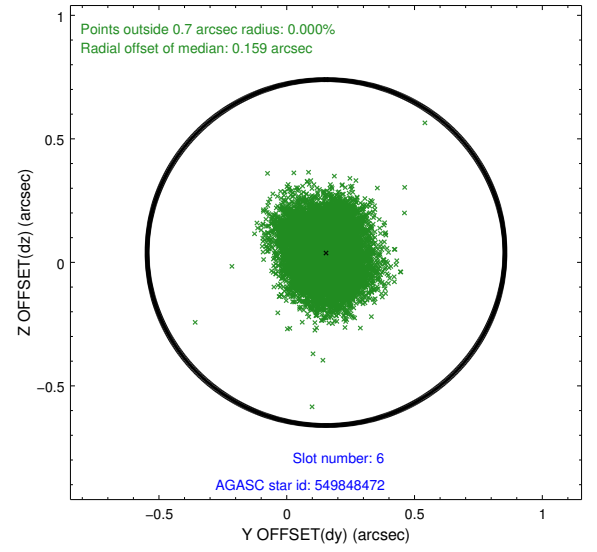
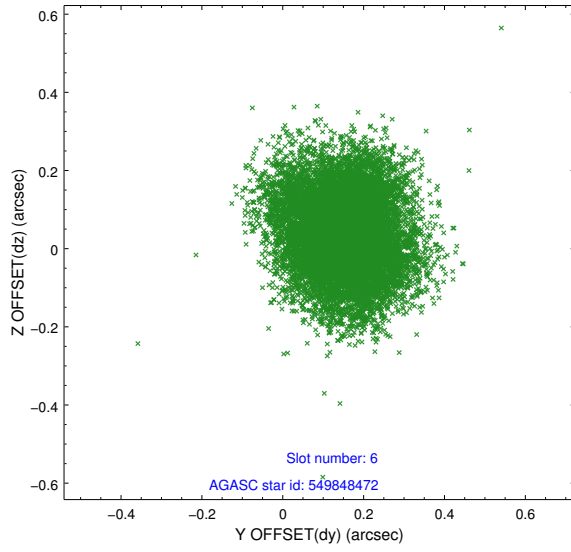
2.4.2 Slot 4



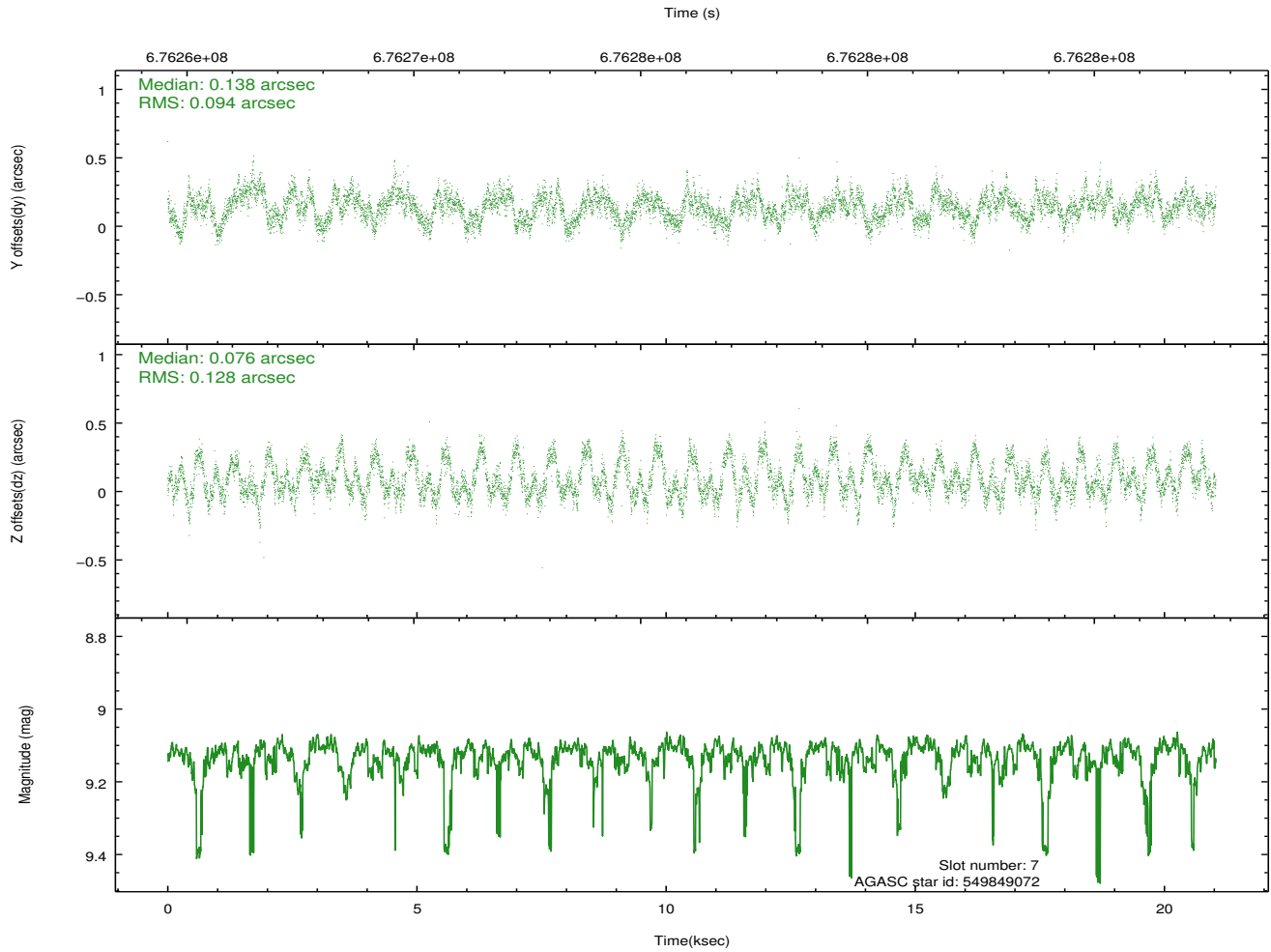
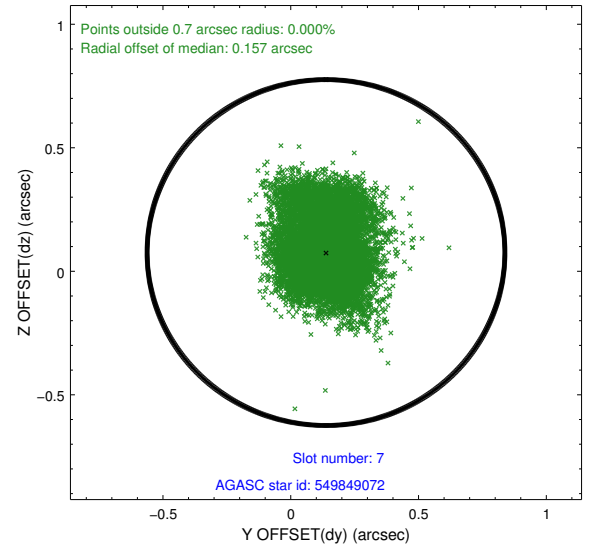
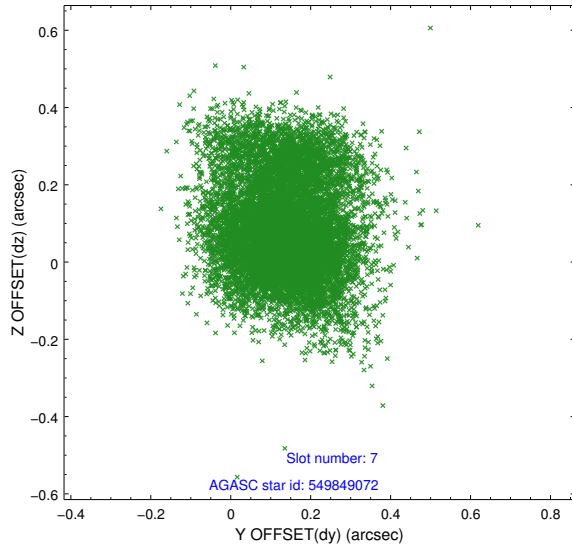
2.4.3 Slot 5



2.4.4 Slot 6

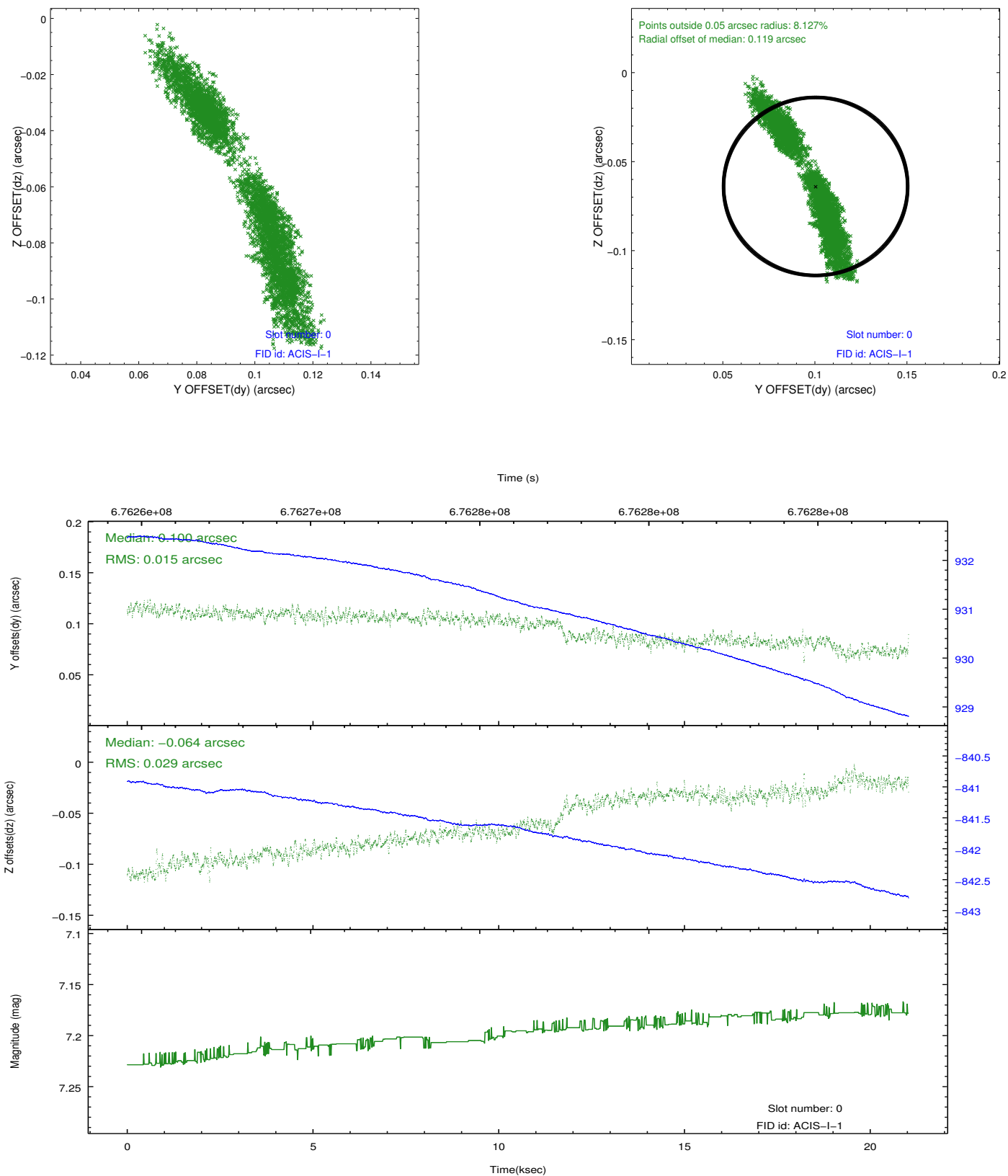


2.4.5 Slot 7

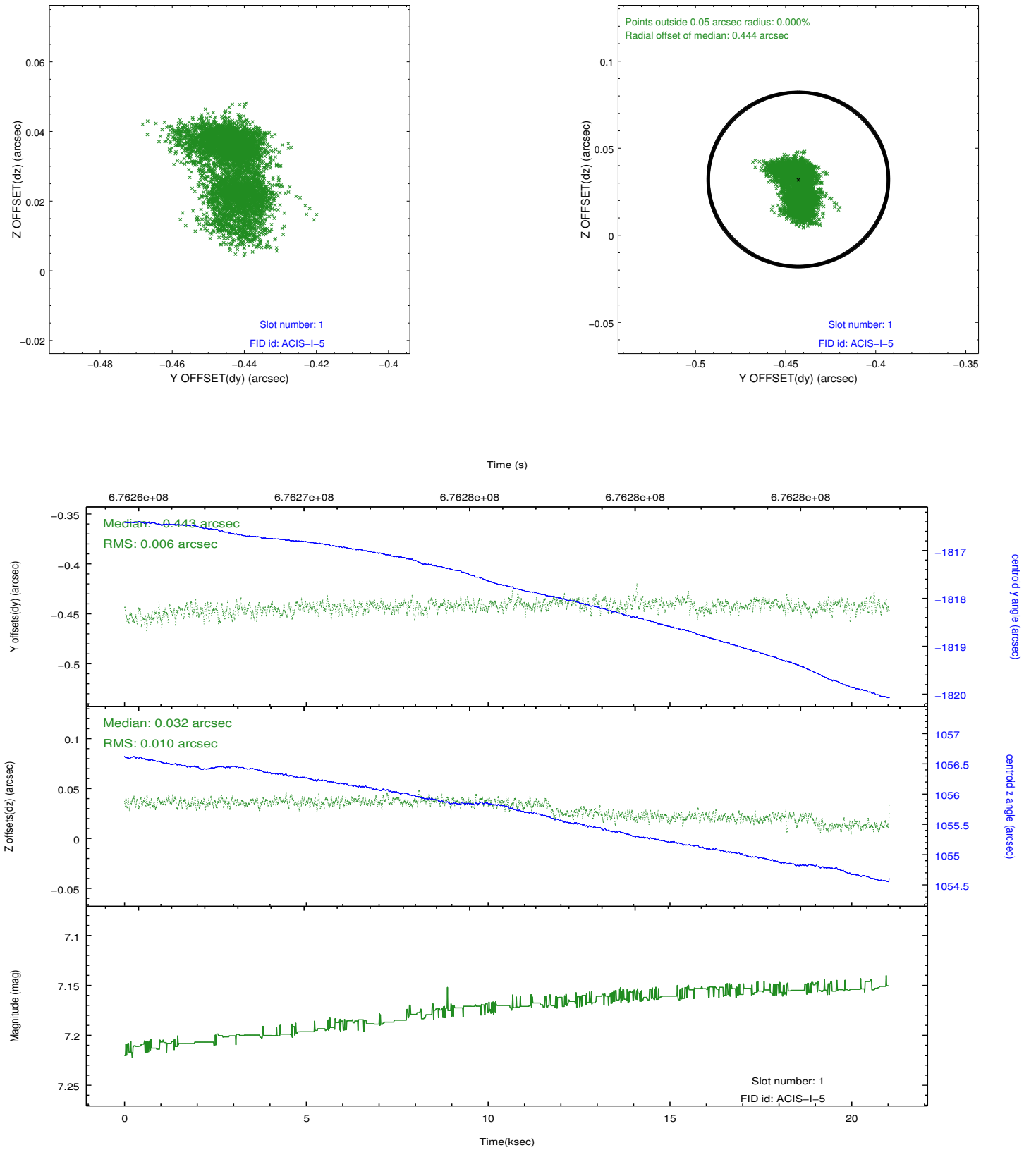


2.5 FID Slots

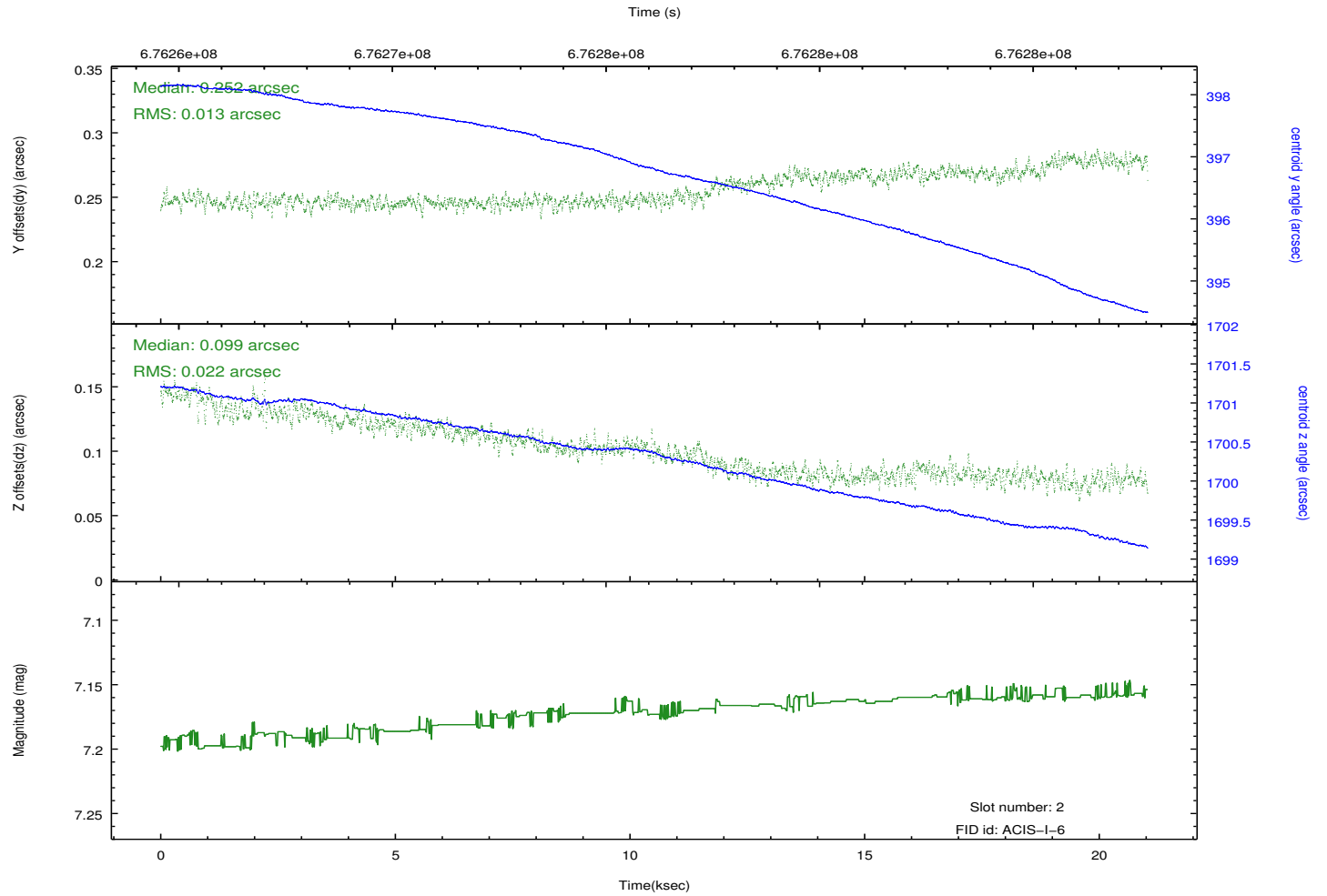
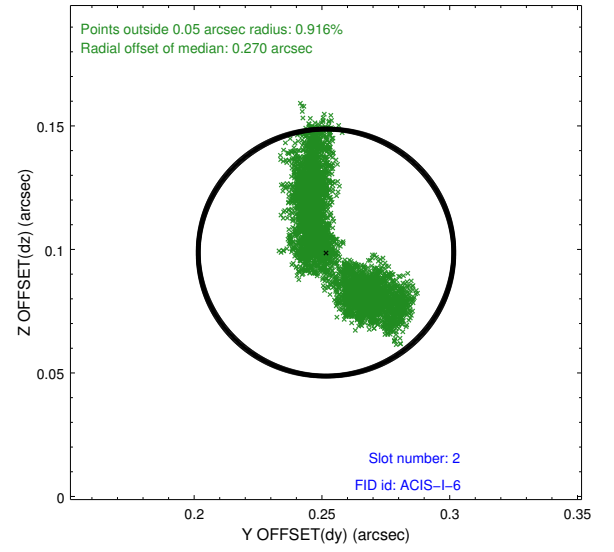
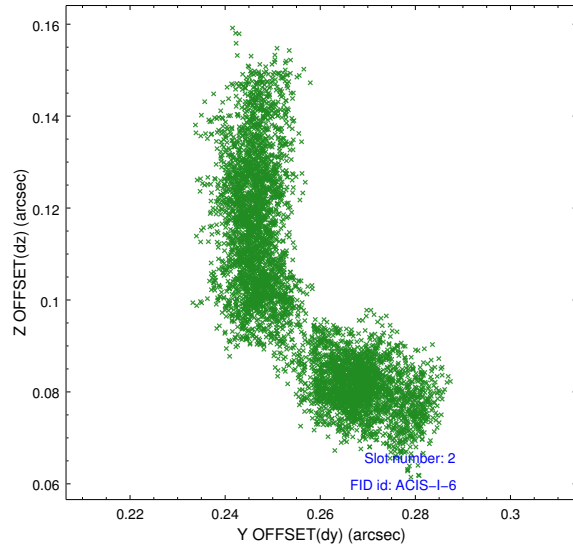
2.5.1 Slot 0



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)	2019.06.07
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	20.962099951625

A.2 Comments