

# V&V Reference Report

## L2 ASCDS Version : 10.5.2

Observation 19943 - L2 Version 1  
Chandra X-Ray Center

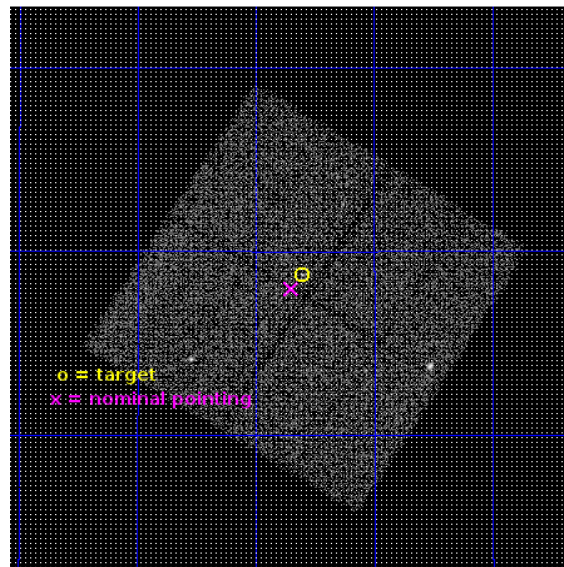
L2 Processing Date : Nov 16 2016

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# 1 Front

seq_num	901343	Sequence number
obs_id	19943	Observation id
title	Are runaway O-star bow shocks able to accelerate cosmic rays?	Prop
observer	Dr. Blagoy Rangelov	Principal investigator
object	Ae Aur	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	79.075833	Observer's specified target RA [deg]
dec_targ	34.312306	Observer's specified target Dec [deg]
ra_nom	79.087299832121	Nominal RA [deg]
dec_nom	34.299484445586	Nominal Dec [deg]
roll_nom	122.20224954592	Nominal Roll [deg]
revision	1	Processing version of data
ontime	15078.35903585	Sum of GTIs [s]
livetime	14881.34917452	Livetime [s]
ontime0	15078.35903585	Sum of GTIs [s]
ontime1	15081.50011611	Sum of GTIs [s]
ontime2	15081.50011611	Sum of GTIs [s]
ontime3	15081.50011611	Sum of GTIs [s]
l2events	40402	Number of level 2 events

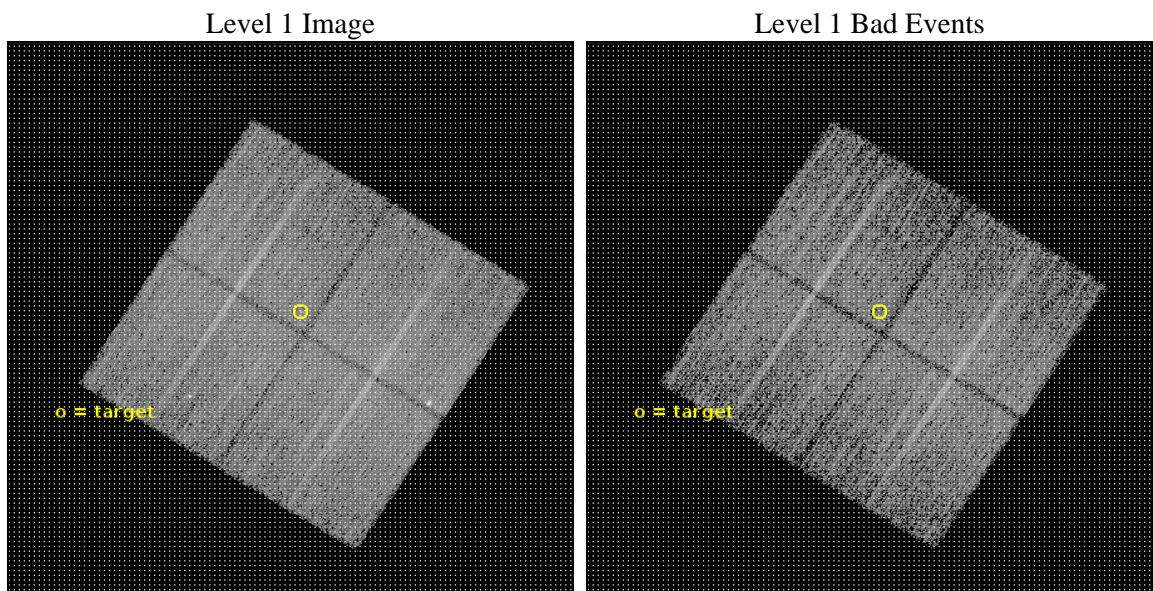




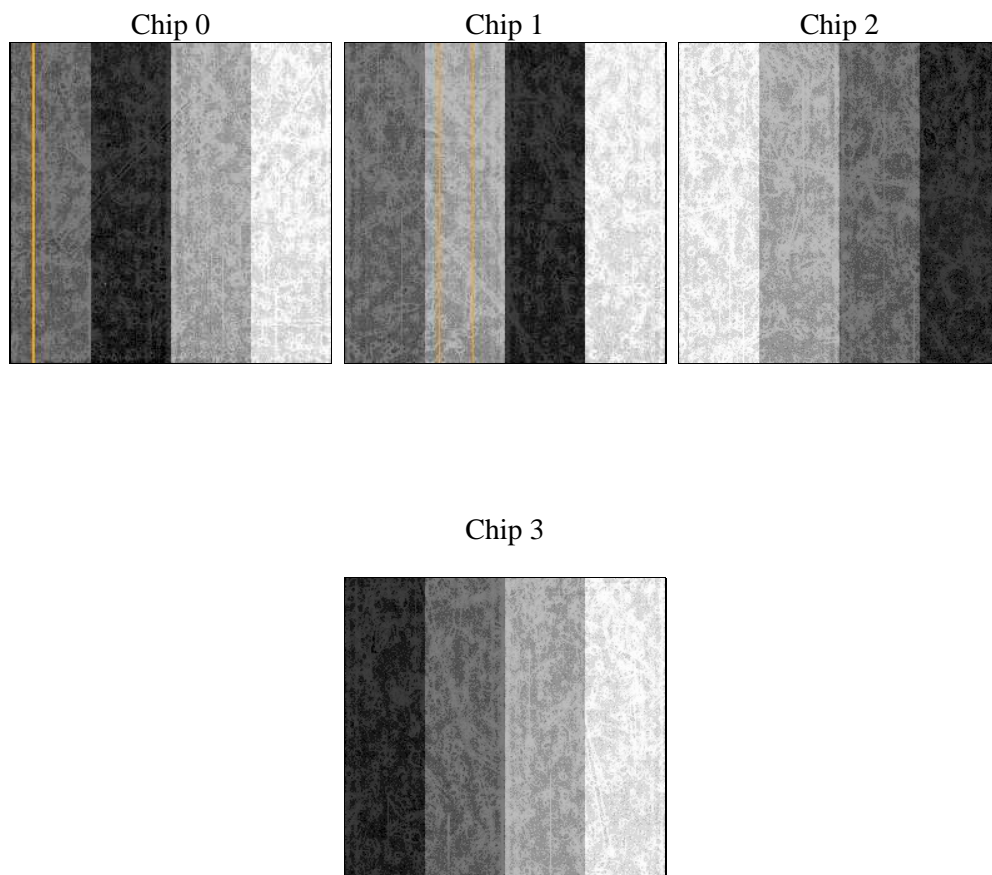
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	15000.000000	[s] Scheduled observation exposure time
ascdsver	10.5.2	Processing system revision	ontime	15078.35903585	Sum of GTIs [s]
caldsver	4.7.2	&#160	ontime0	15078.35903585	Sum of GTIs [s]
date	2016-11-17T01:57:59	Date and time of file creation	ontime1	15081.50011611	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	15081.50011611	Sum of GTIs [s]
			ontime3	15081.50011611	Sum of GTIs [s]
			l1events	407981	Number of level 1 events

### 2.1.4 Events

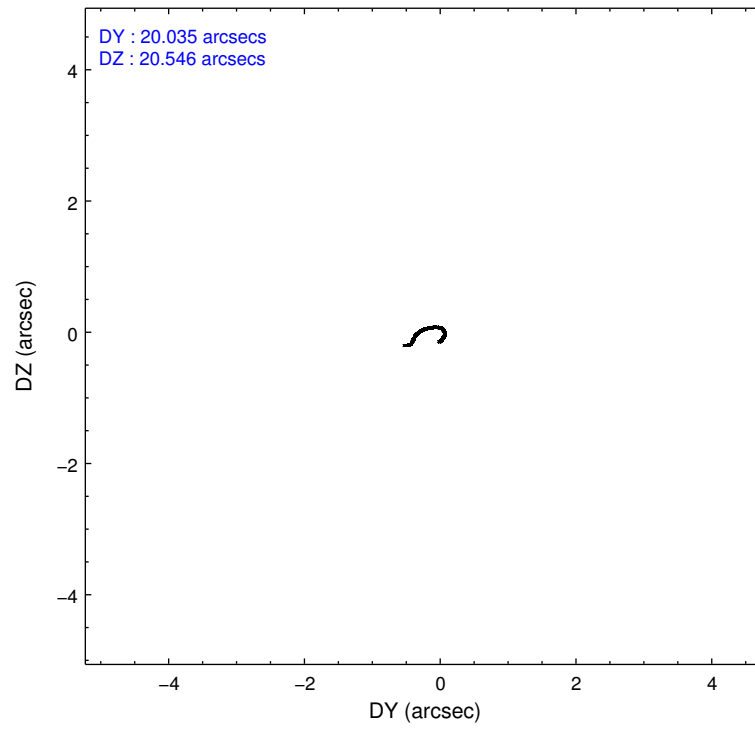
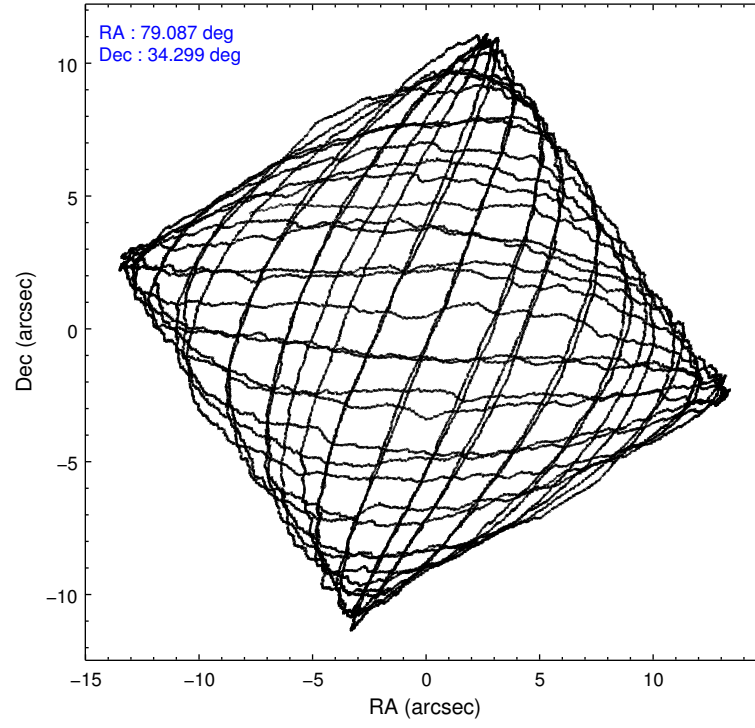
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	95367	101329	107905	103380
rejected events	83457	88153	95535	92719
rejected %	87%	86%	88%	89%

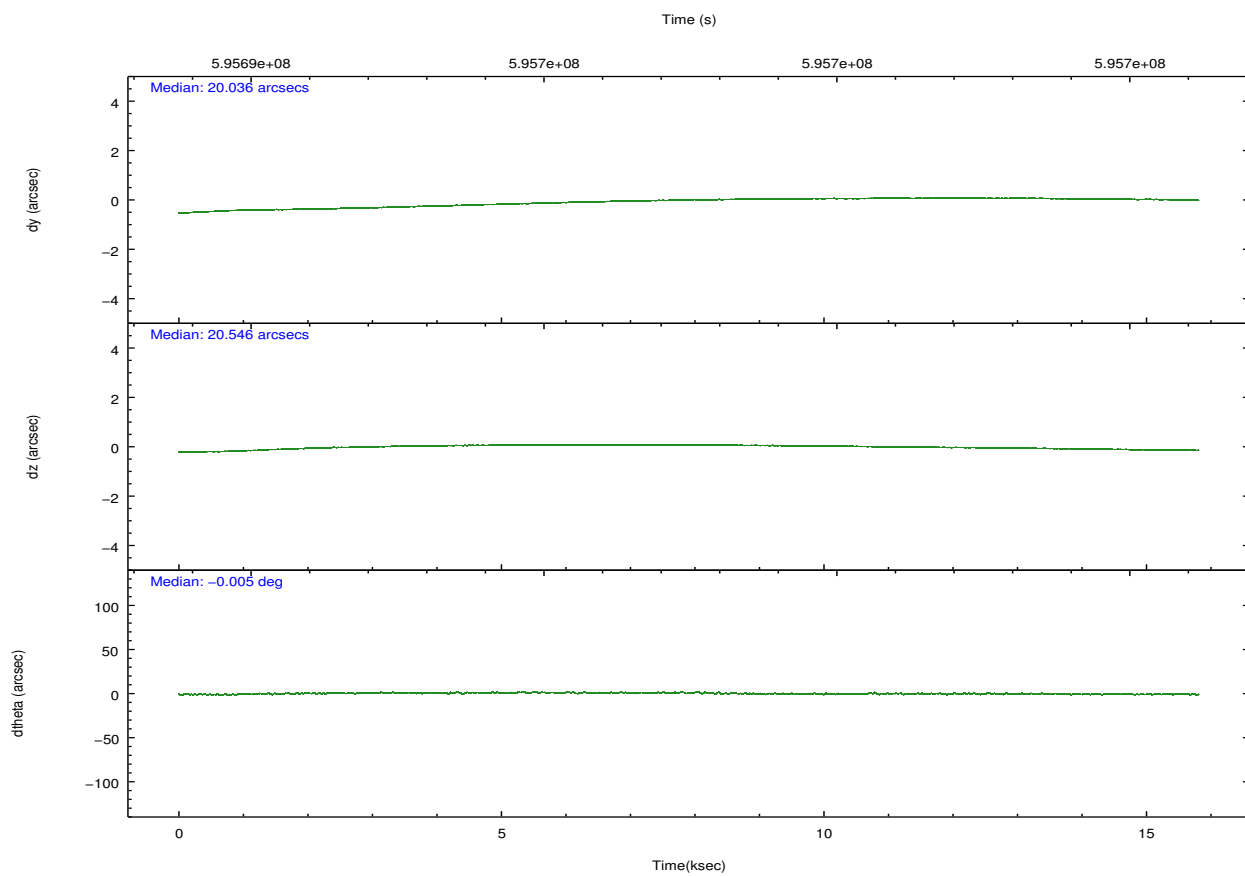
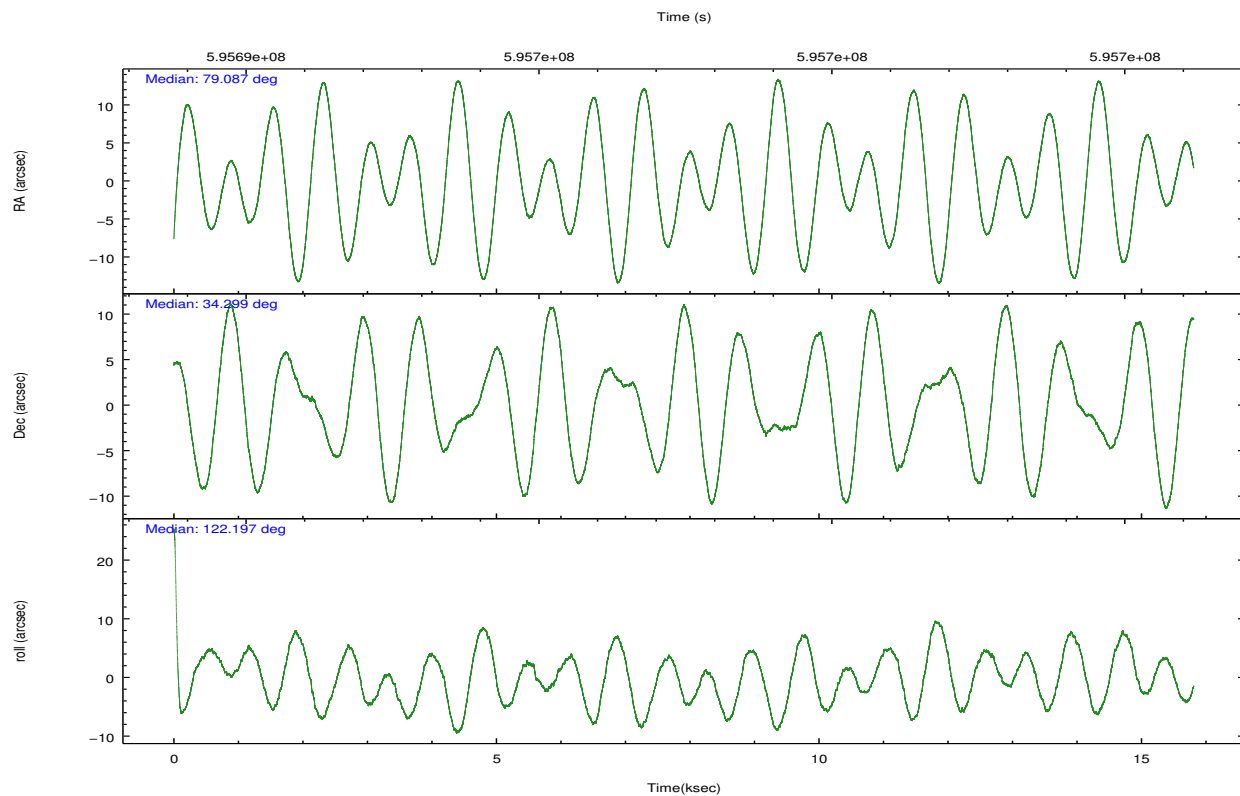
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	4293	4673	4875	3716
	4%	4%	4%	3%
grade 1 events	55	53	77	56
	0%	0%	0%	0%
grade 2 events	2865	3137	2833	2309
	3%	3%	2%	2%
grade 3 events	1209	1249	1235	1166
	1%	1%	1%	1%
grade 4 events	1076	1276	1151	1139
	1%	1%	1%	1%
grade 5 events	4445	4606	4246	4932
	4%	4%	3%	4%
grade 6 events	2467	2842	2277	2333
	2%	2%	2%	2%
grade 7 events	78957	83493	91211	87729
	82%	82%	84%	84%

## 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	79.116881	79.08729983212126	CCD I2 on	Y	Y
[deg] Pointing Dec	34.286710	34.29948444558629	CCD I3 on	Y	Y
[deg] Pointing Roll	121.976875	122.2022495459217	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	N	N
[mm] SIM translation stage pos	-238.418713	-238.4149198398239	CCD S3 on	O1	N
[mm] SIM translation stage offset	4.82625	4.822466836894193	CCD S4 on	N	N
[s] Observation start time (MET)	595690386.184000	595688842.24895	CCD S5 on	N	N
Observation start date	2016-11-16T13:31:58	2016-11-16T13:07:22	Number of optional ACIS chips dropped	1	1
[s] Observation end time (MET)	595705386.184000	595706363.59996	On-chip summing requested	N	N
Observation end date	2016-11-16T17:41:58	2016-11-16T17:59:23	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect



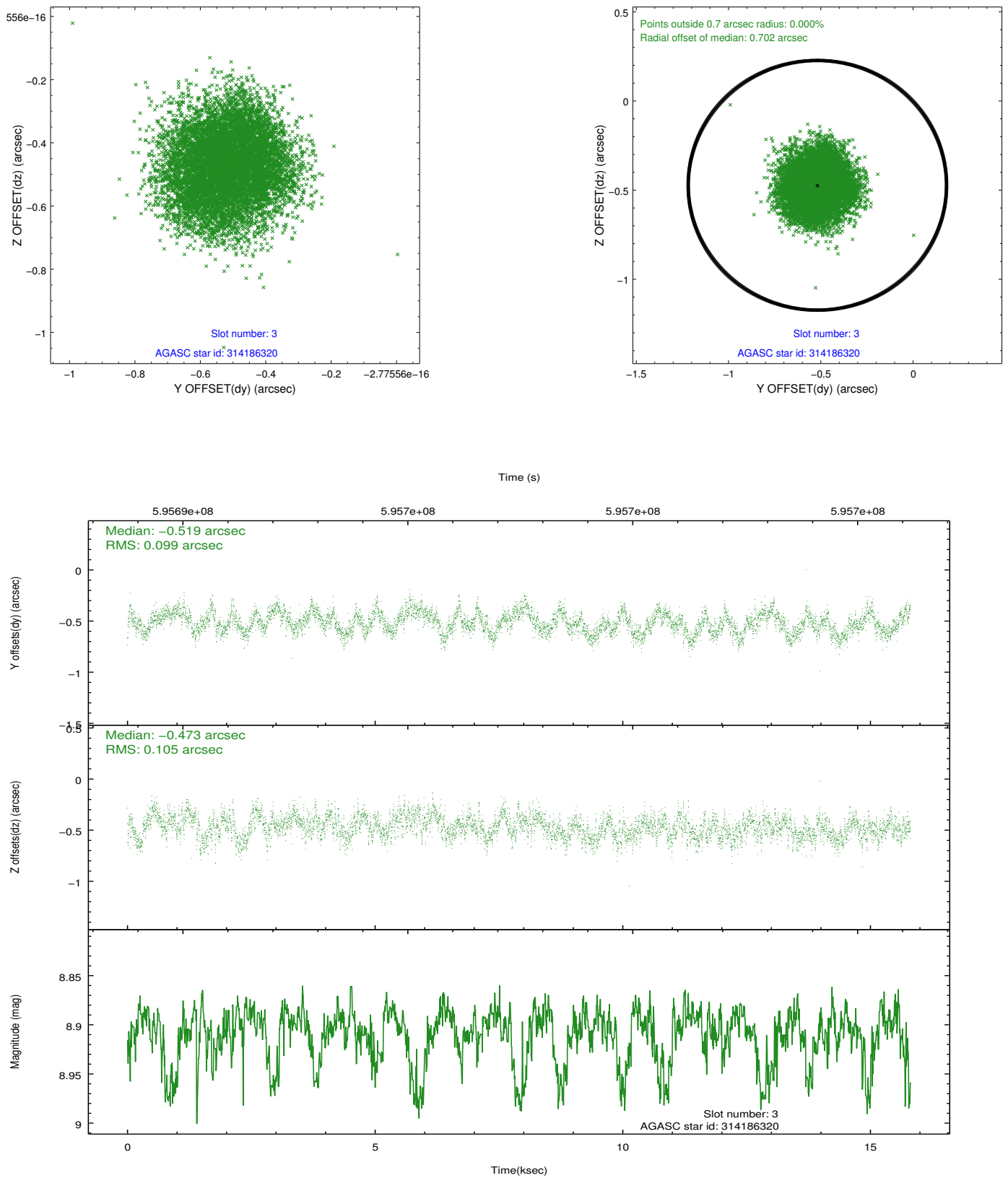


### Slot Statistics

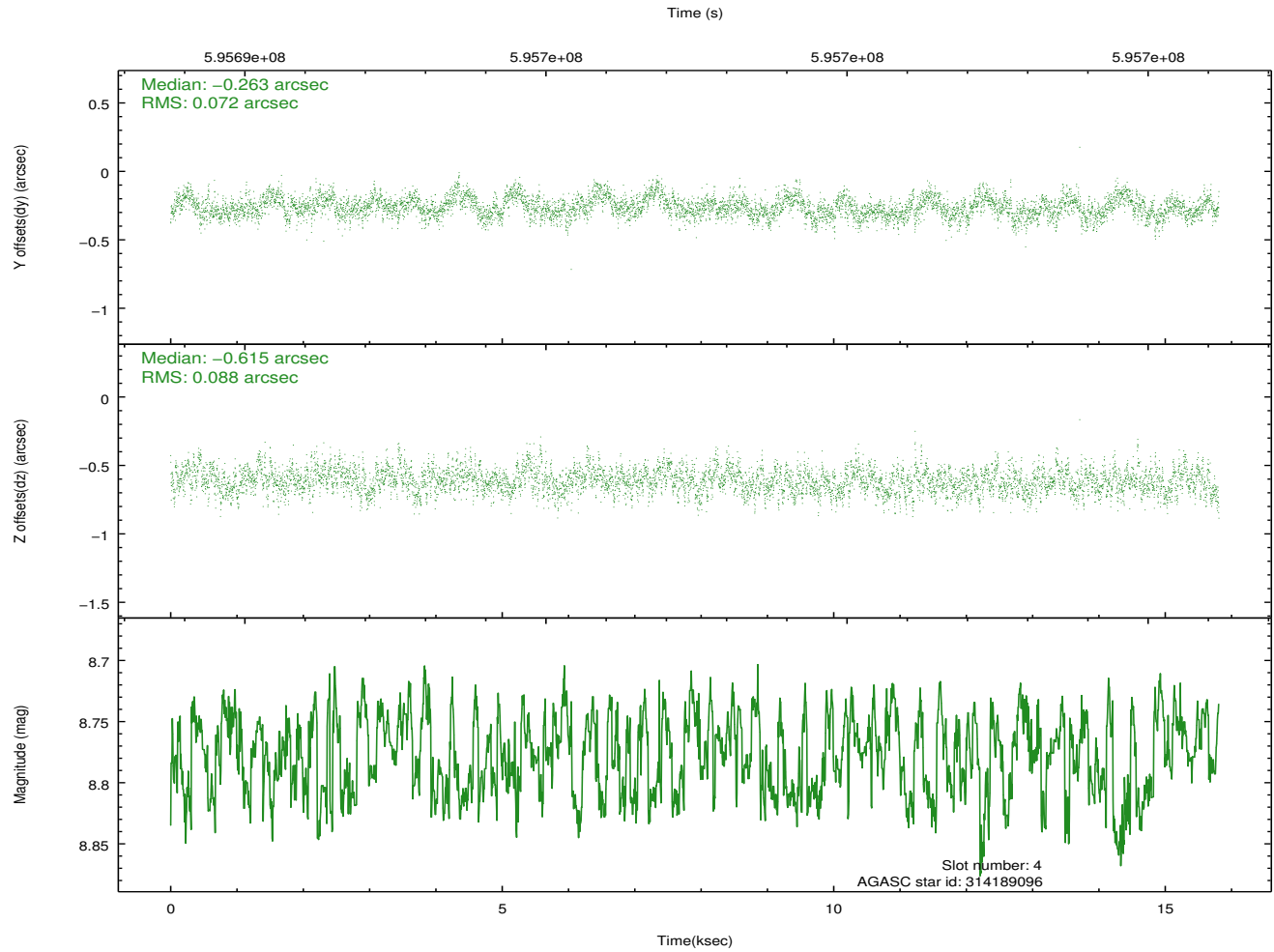
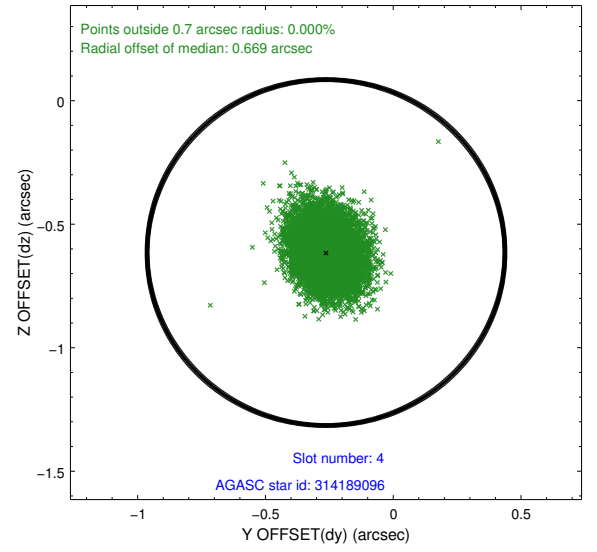
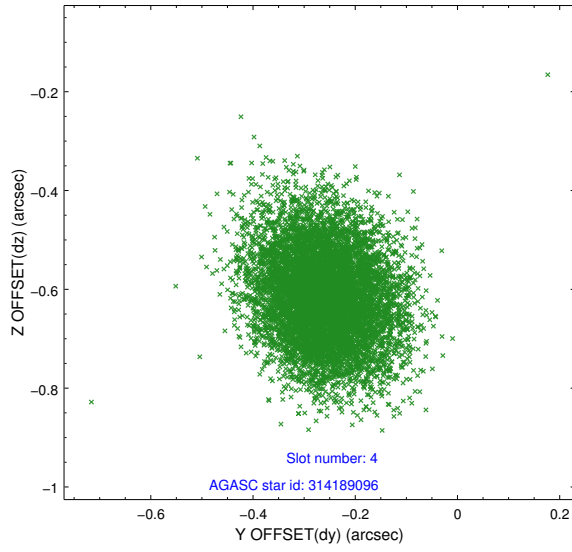
slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		ACIS-I-1	7.21	3856	0.045	-0.004	0.011	0.019	0.000000	0.000000	919.57	-745.06
1	FID		ACIS-I-5	7.18	3855	-0.352	0.012	0.011	0.021	0.000000	0.000000	-1828.89	1152.17
2	FID		ACIS-I-6	7.20	3855	0.213	0.062	0.011	0.016	0.000000	0.000000	384.83	1797.17
3	GUIDE	used	314186320	8.91	7704	-0.519	-0.473	0.157	0.239	78.294342	34.293553	1324.40	2056.78
4	GUIDE	used	314189096	8.78	7707	-0.263	-0.615	0.121	0.197	78.474947	34.295079	1041.73	1600.66
5	GUIDE	used	314317160	8.65	7708	0.422	0.343	0.134	0.215	79.818927	34.564727	-247.19	-2298.07
6	GUIDE	used	314318832	6.83	7712	0.053	0.309	0.155	0.234	79.848935	33.985406	-2070.77	-1283.66
7	GUIDE	used	314321208	8.71	7705	0.303	0.427	0.119	0.201	79.829709	33.968281	-2092.82	-1201.89

## 2.4 Star Slots

### 2.4.1 Slot 3

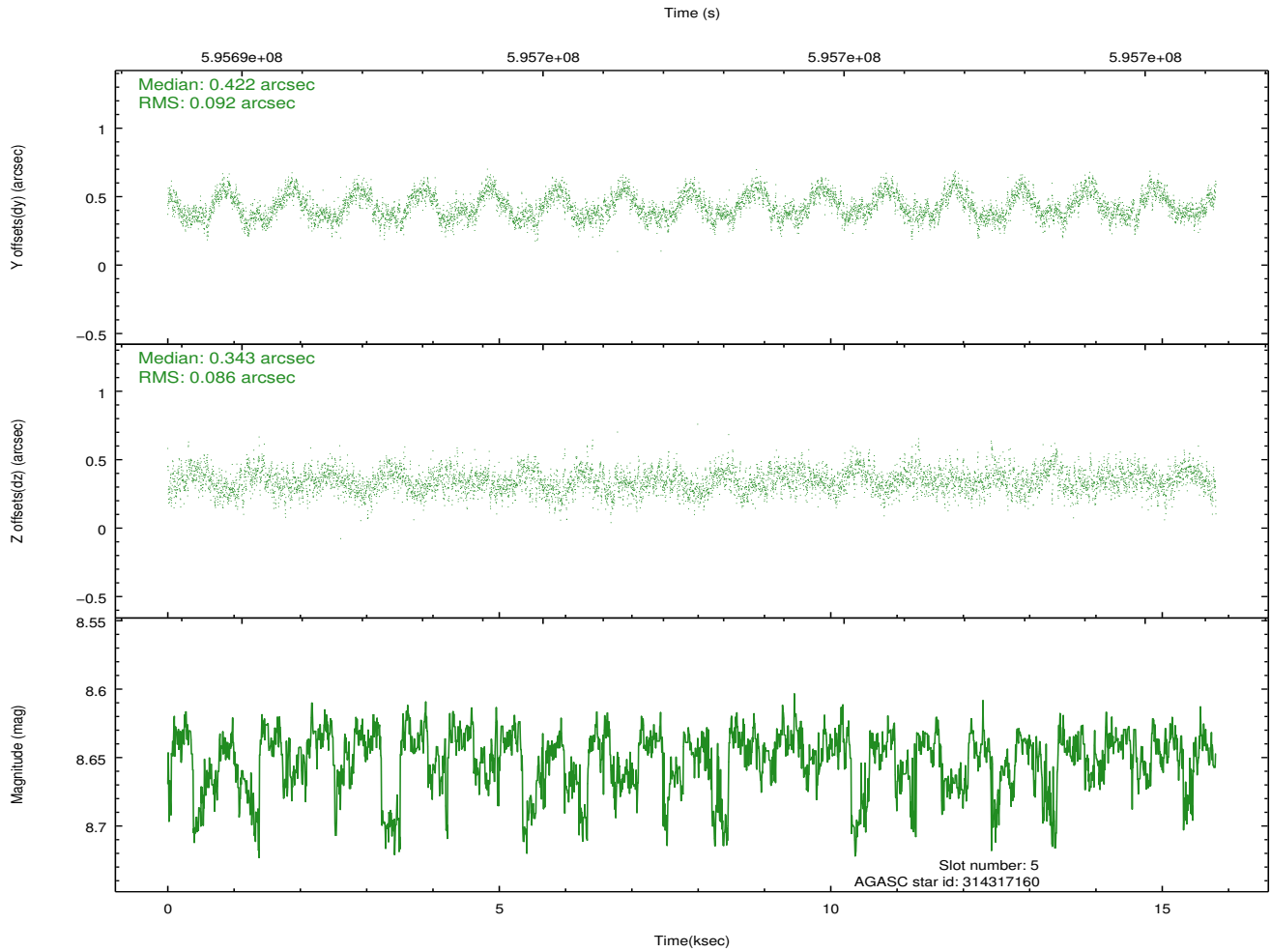
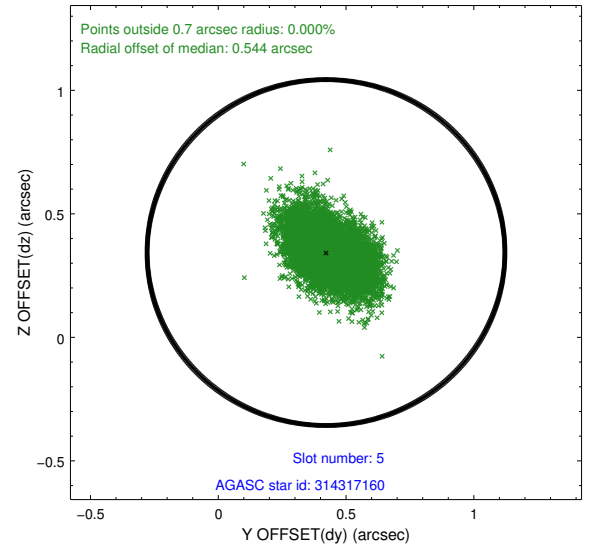
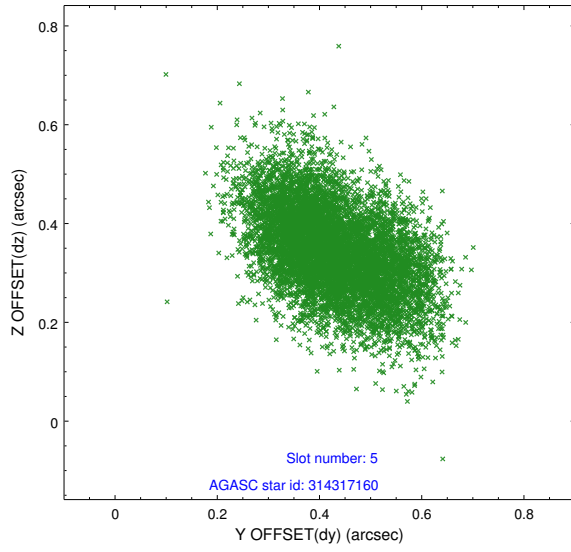


## 2.4.2 Slot 4

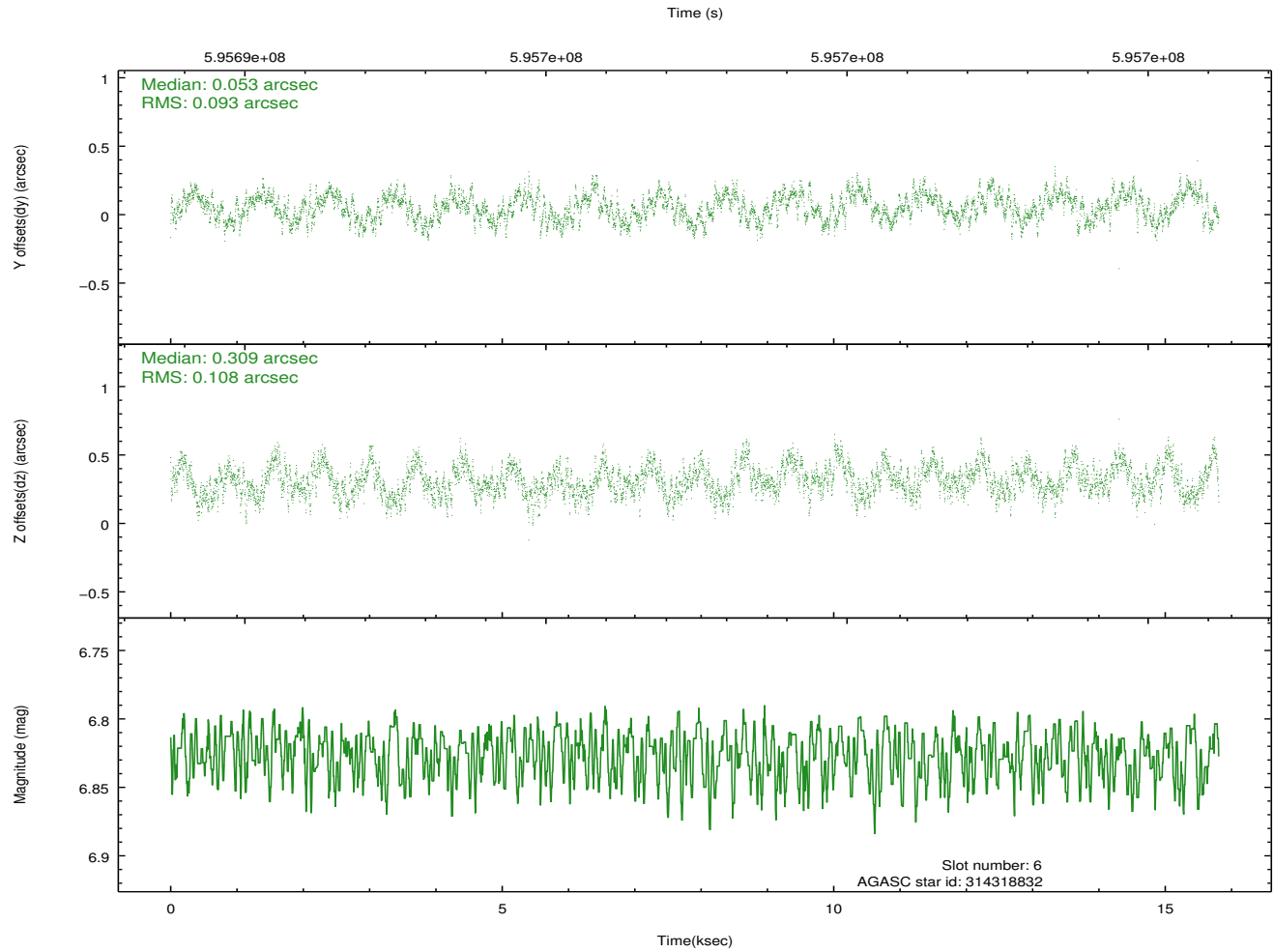
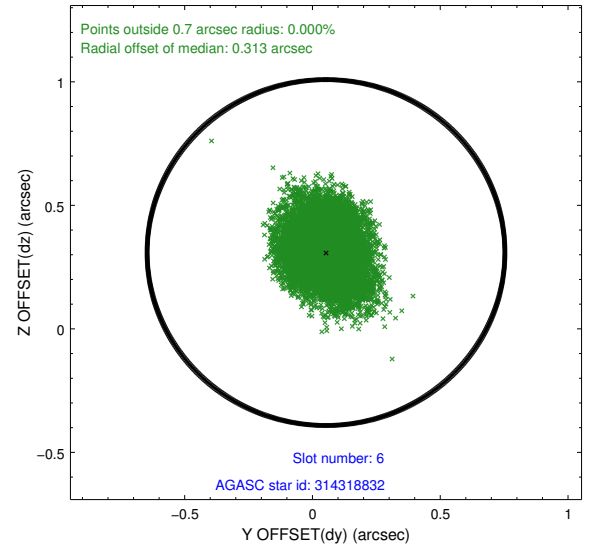
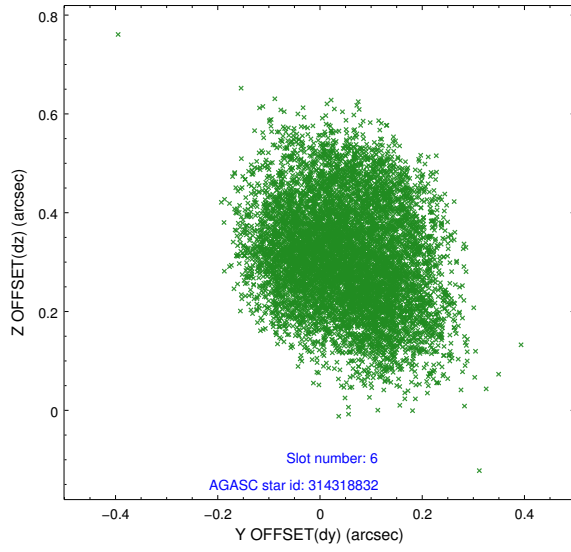




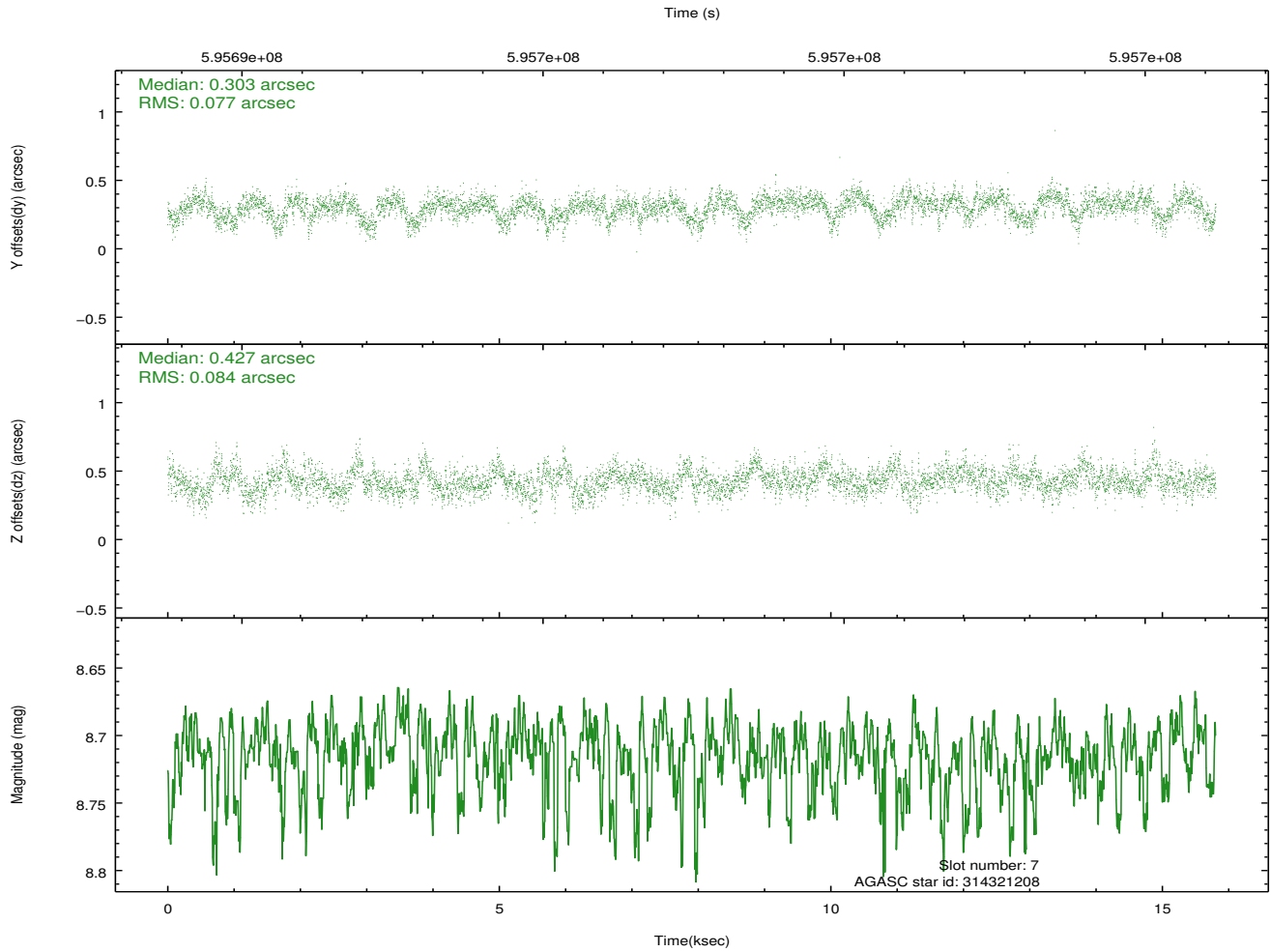
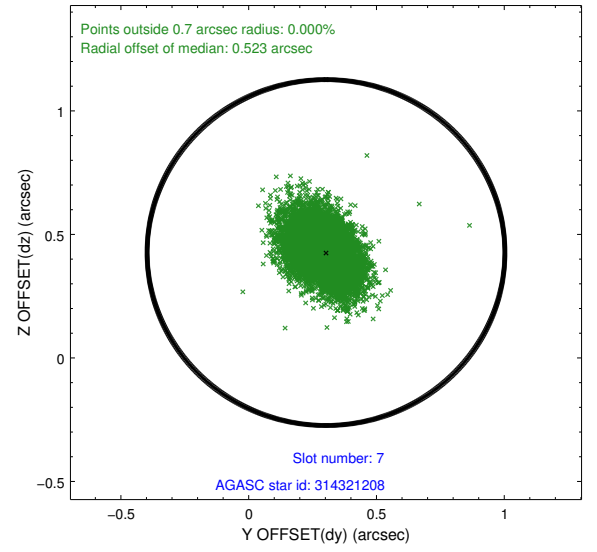
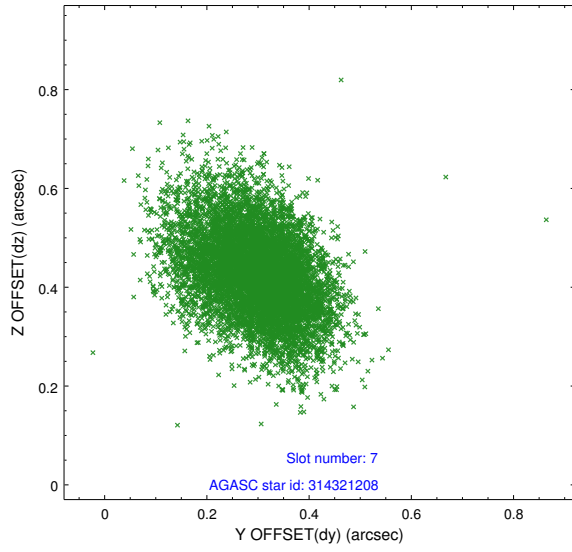
### 2.4.3 Slot 5



## 2.4.4 Slot 6

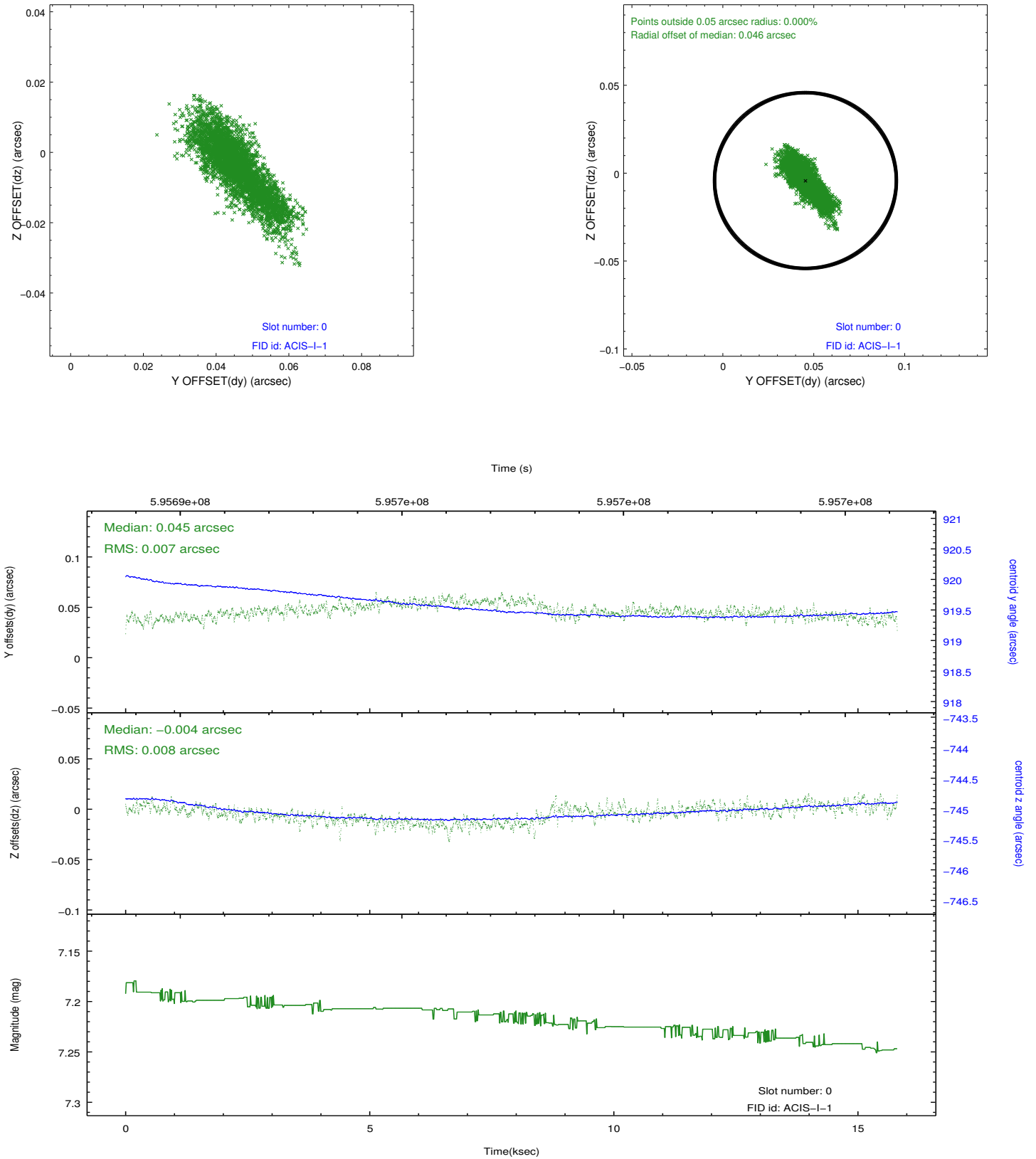


## 2.4.5 Slot 7

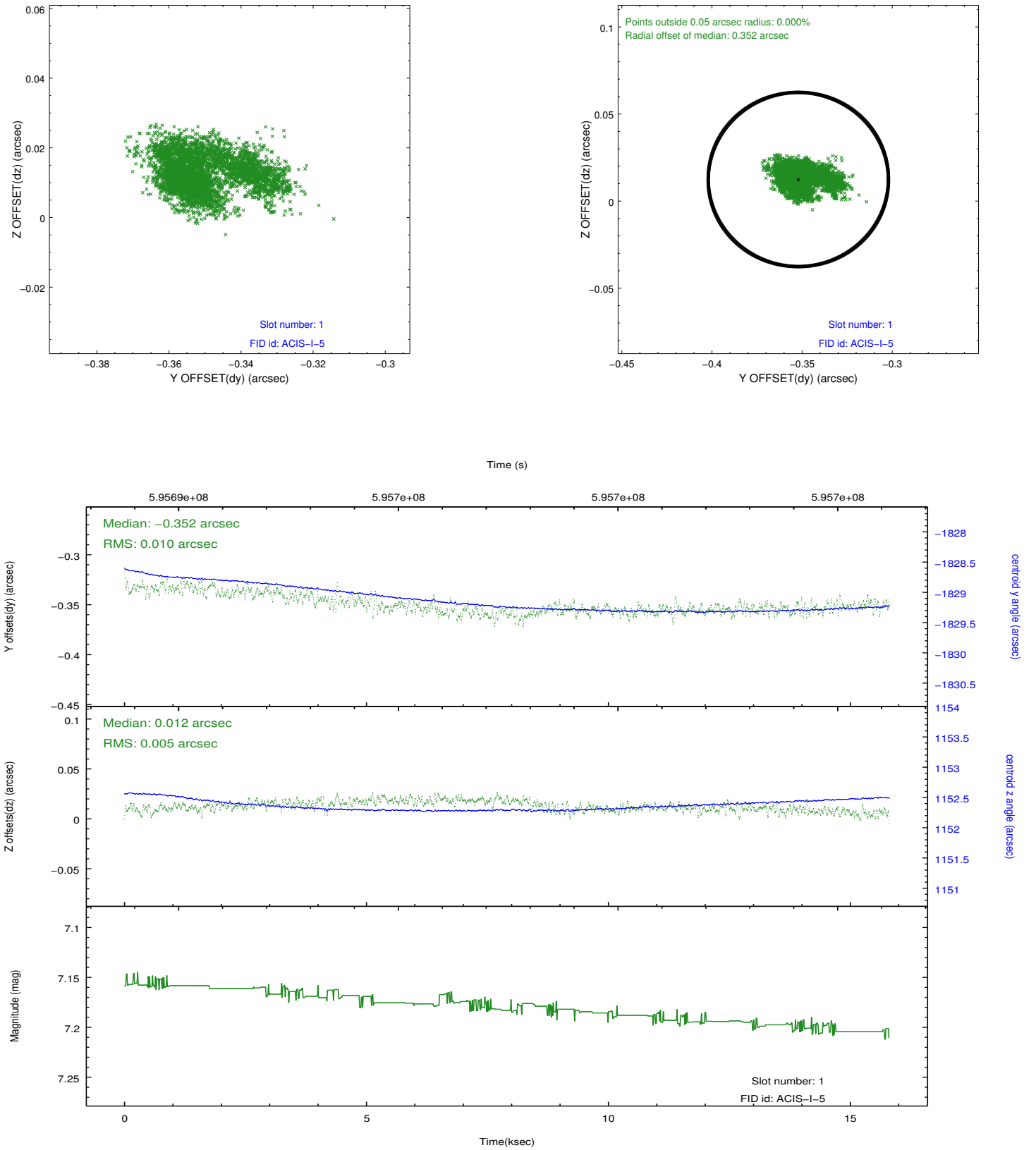


## 2.5 FID Slots

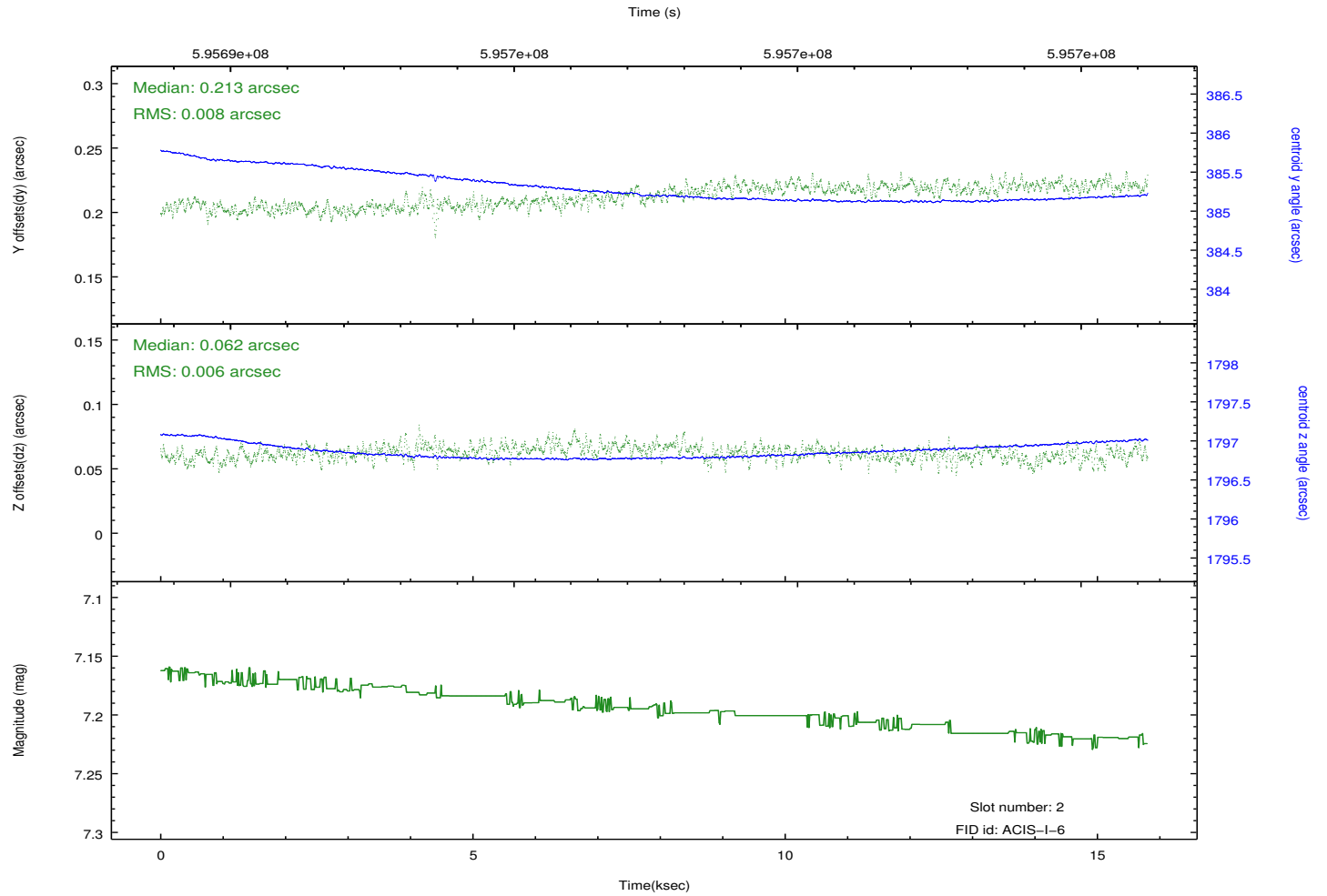
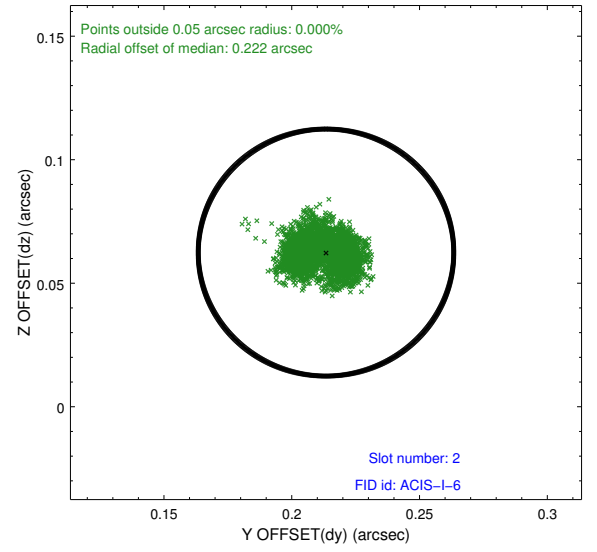
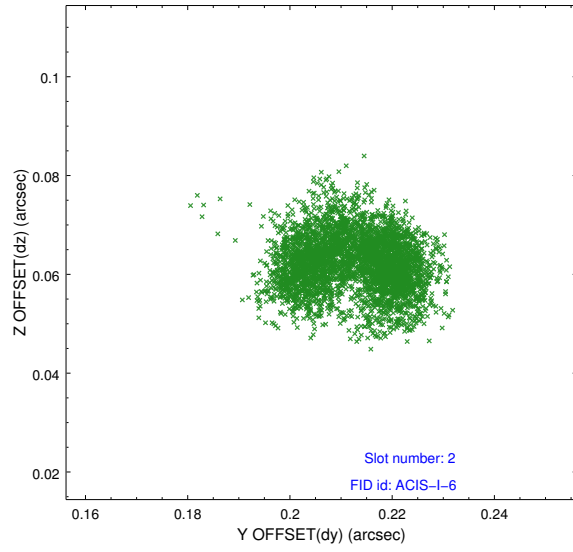
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Jen Lauer
V&V Date (YYYY-MM-DD)	2016.11.17
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	15.07835903585

### A.2 Comments

Optional chip S3 not included.