

# V&V Reference Report

## L2 ASCDS Version : 10.7

Observation 21973 - L2 Version 1  
Chandra X-Ray Center

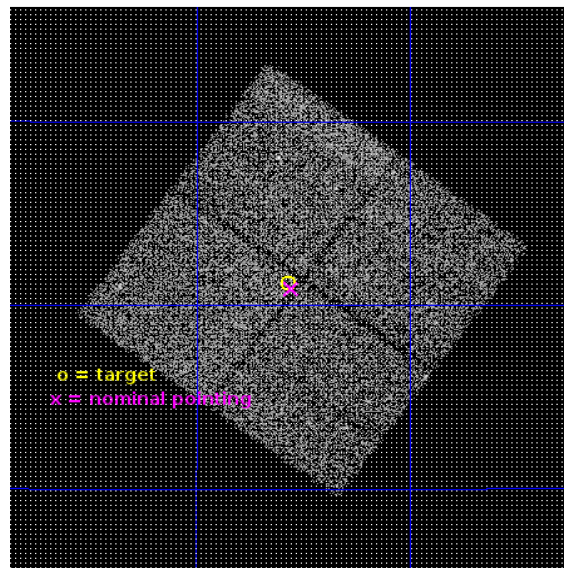
L2 Processing Date : Nov 30 2018

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# 1 Front

seq_num	801813	Sequence number
obs_id	21973	Observation id
title	Is there an enormous cold front at the virial radius of the Perseus cluster?	Proposal title
observer	Stephen Walker	Principal investigator
object	Perseus_west_cf_2	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	48.392083	Observer's specified target RA [deg]
dec_targ	41.854	Observer's specified target Dec [deg]
ra_nom	48.388611212319	Nominal RA [deg]
dec_nom	41.848480201145	Nominal Dec [deg]
roll_nom	216.21095640597	Nominal Roll [deg]
revision	1	Processing version of data
ontime	14579.300112247	Sum of GTIs [s]
livetime	14388.810823156	Livetime [s]
ontime0	14579.300112247	Sum of GTIs [s]
ontime1	14573.018101931	Sum of GTIs [s]
ontime2	14576.159092069	Sum of GTIs [s]
ontime3	14579.300112247	Sum of GTIs [s]
l2events	43598	Number of level 2 events

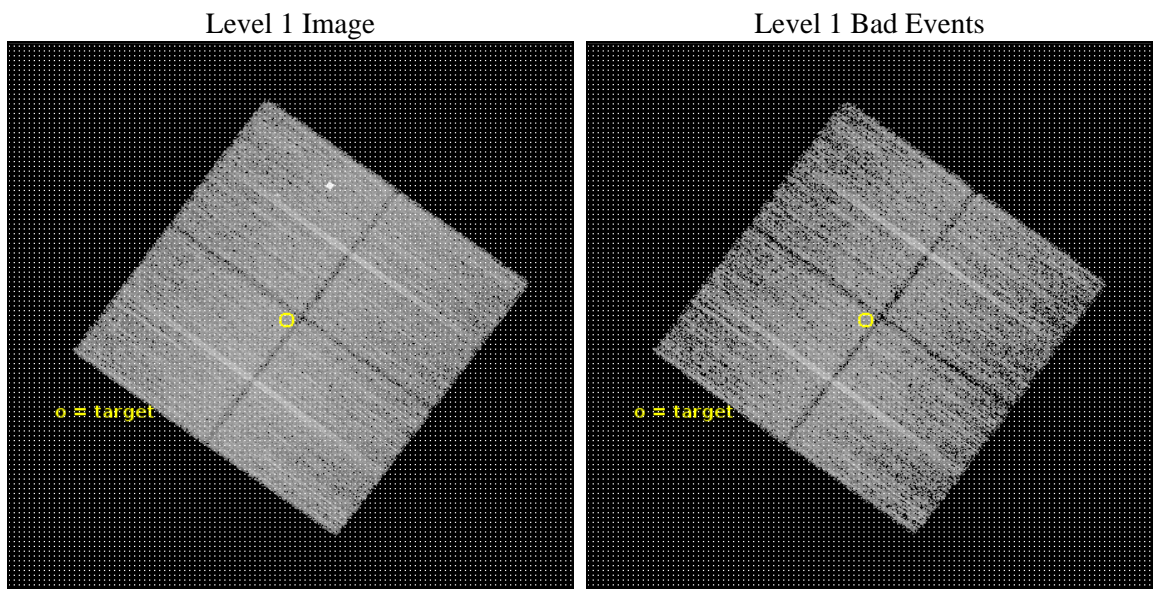




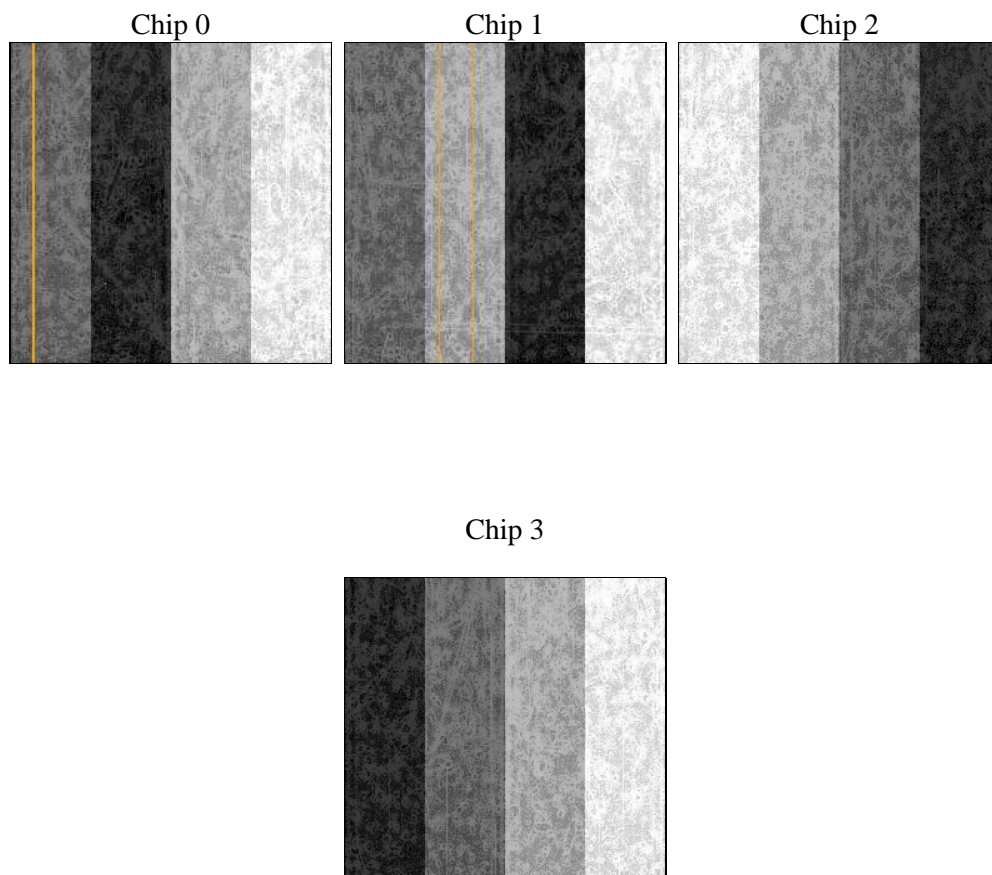
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	14500.000000	[s] Scheduled observation exposure time
ascdsver	10.7	Processing system revision	ontime	14579.300112247	Sum of GTIs [s]
caldsver	4.8.0.1	&#160	ontime0	14579.300112247	Sum of GTIs [s]
date	2018-11-30T17:49:02	Date and time of file creation	ontime1	14573.018101931	Sum of GTIs [s]
revision	1	Processing version of data	ontime2	14576.159092069	Sum of GTIs [s]
			ontime3	14579.300112247	Sum of GTIs [s]
			l1events	429904	Number of level 1 events

### 2.1.4 Events

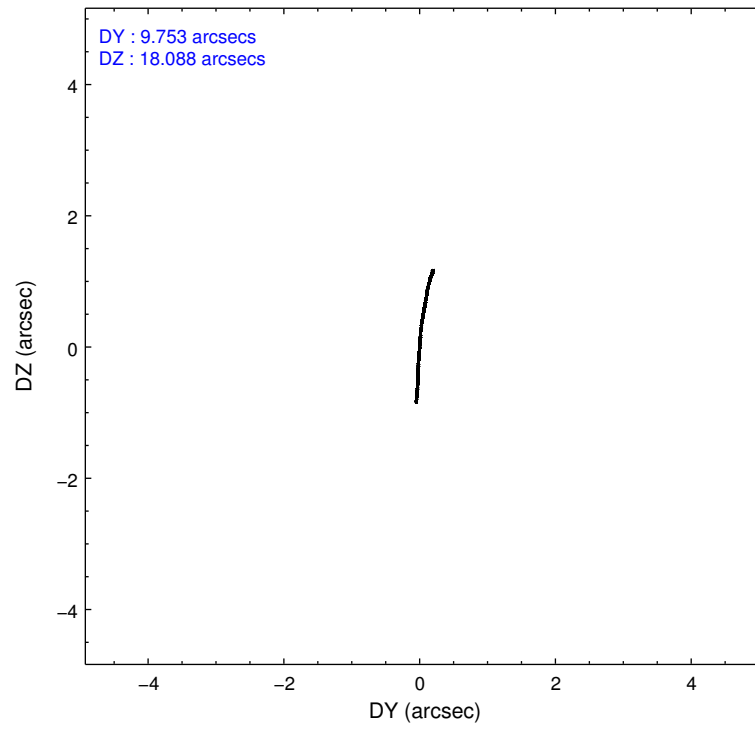
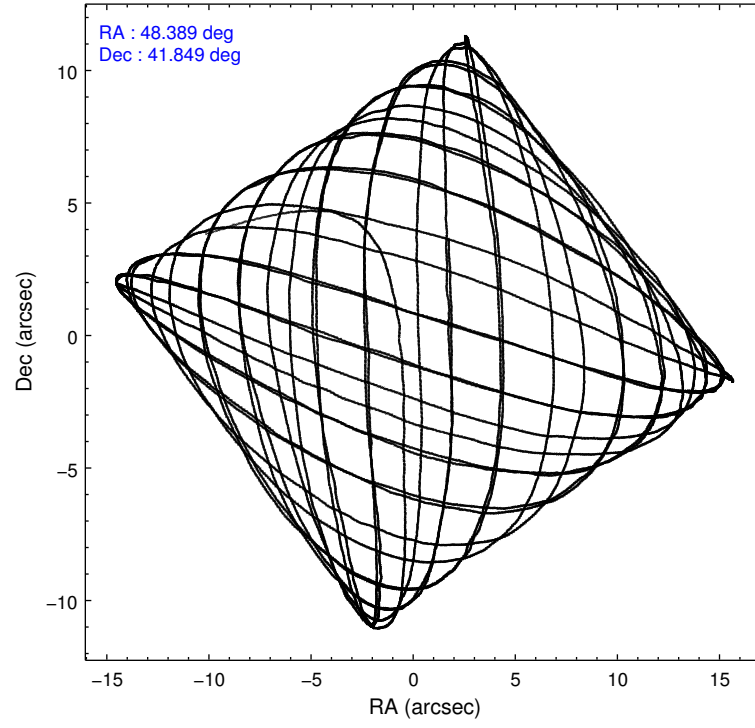
	ccd 0	ccd 1	ccd 2	ccd 3
level 1 events	98355	108600	112199	110750
rejected events	85354	90447	99750	98280
rejected %	86%	83%	88%	88%

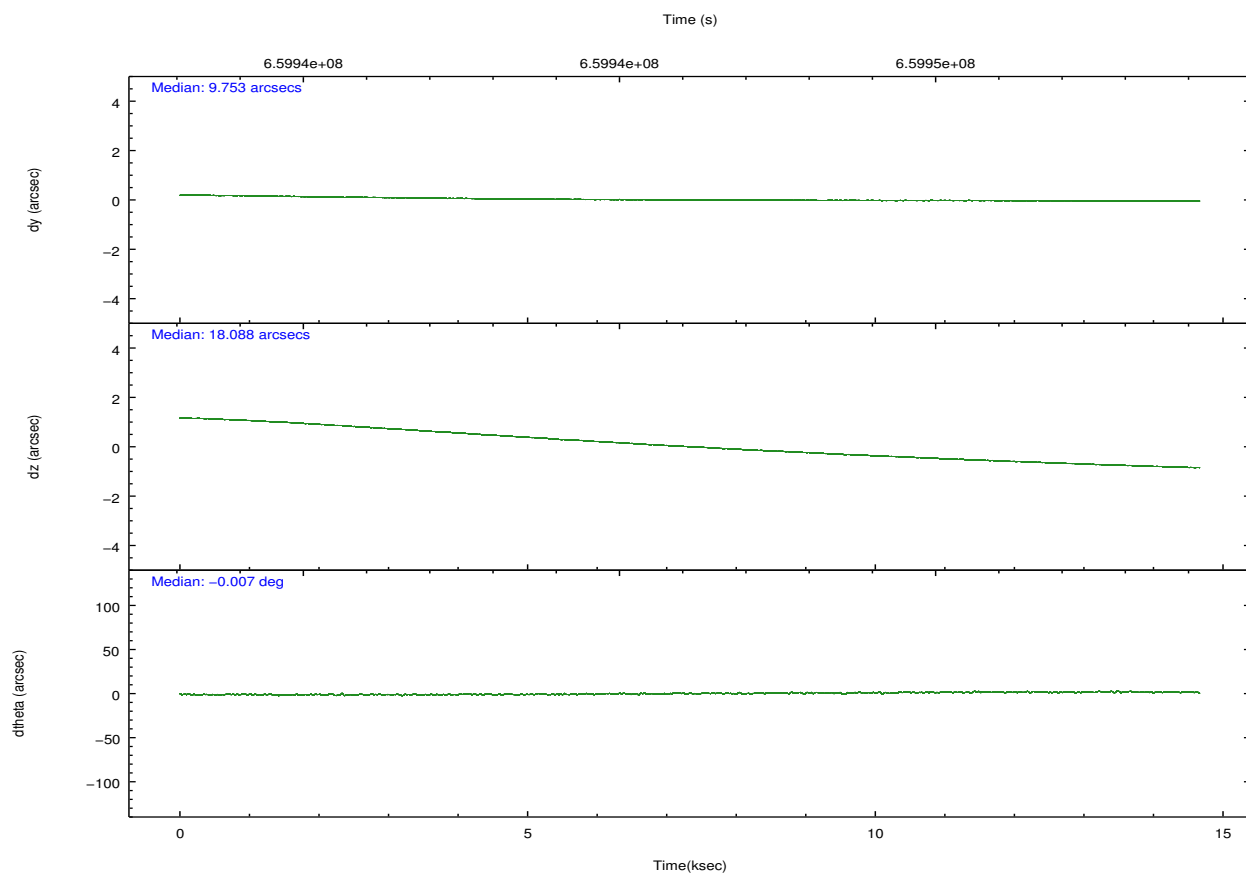
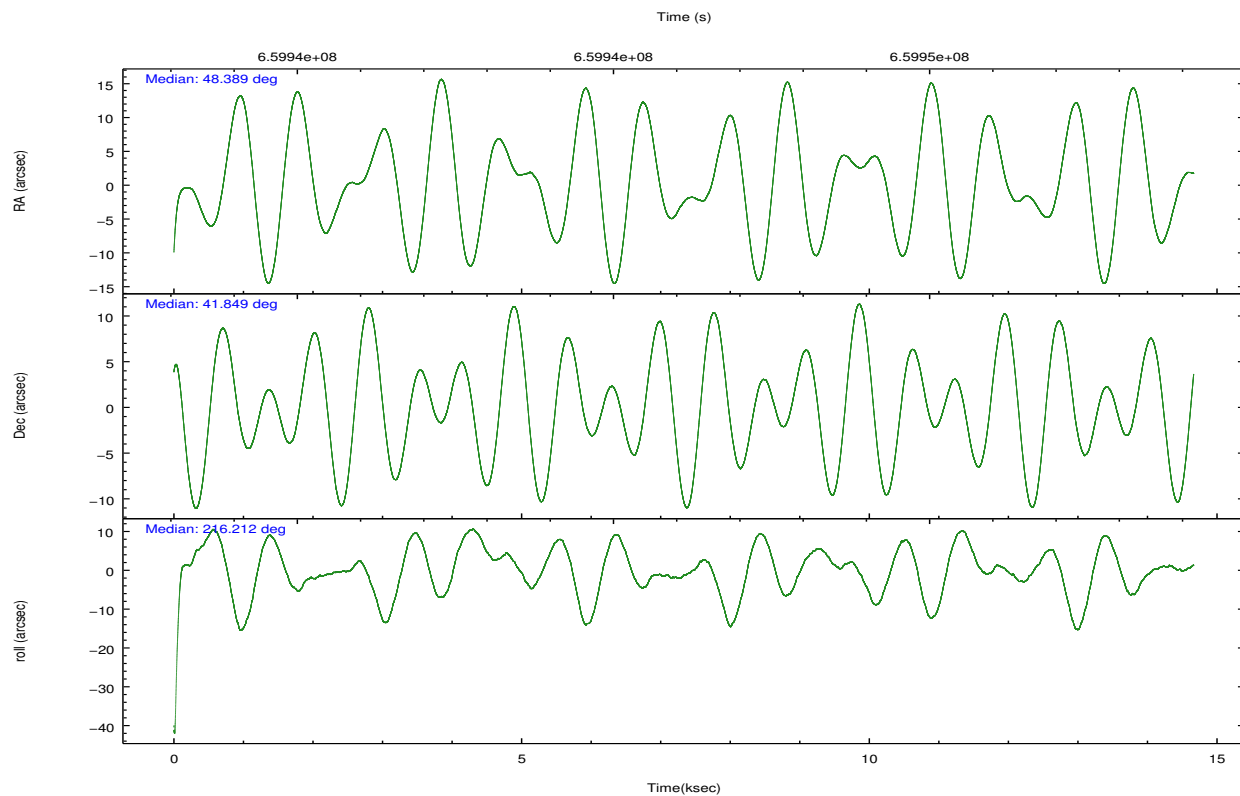
	ccd 0	ccd 1	ccd 2	ccd 3
grade 0 events	4463	8888	4482	4613
	4%	8%	3%	4%
grade 1 events	68	72	74	54
	0%	0%	0%	0%
grade 2 events	3395	3596	3105	2715
	3%	3%	2%	2%
grade 3 events	1332	1307	1188	1253
	1%	1%	1%	1%
grade 4 events	1213	1313	1282	1289
	1%	1%	1%	1%
grade 5 events	4864	5084	4634	5456
	4%	4%	4%	4%
grade 6 events	2600	3052	2396	2600
	2%	2%	2%	2%
grade 7 events	80420	85288	95038	92770
	81%	78%	84%	83%

## 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	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	48.403466	48.38861121231935	Subarray requested	NONE	NONE
[deg] Pointing Dec	41.873832	41.84848020114529	Alternating exposures requested	N	N
[deg] Pointing Roll	215.992404	216.2109564059655	[s] Primary exposure time	0.000000	3.1
[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)	659938949.184000	659937674.18566			
Observation start date	2018-11-30T04:21:20	2018-11-30T04:01:14			
[s] Observation end time (MET)	659953449.184000	659954345.29916			
Observation end date	2018-11-30T08:23:00	2018-11-30T08:39:05			
Read mode	TIMED	TIMED			

## 2.3 Aspect



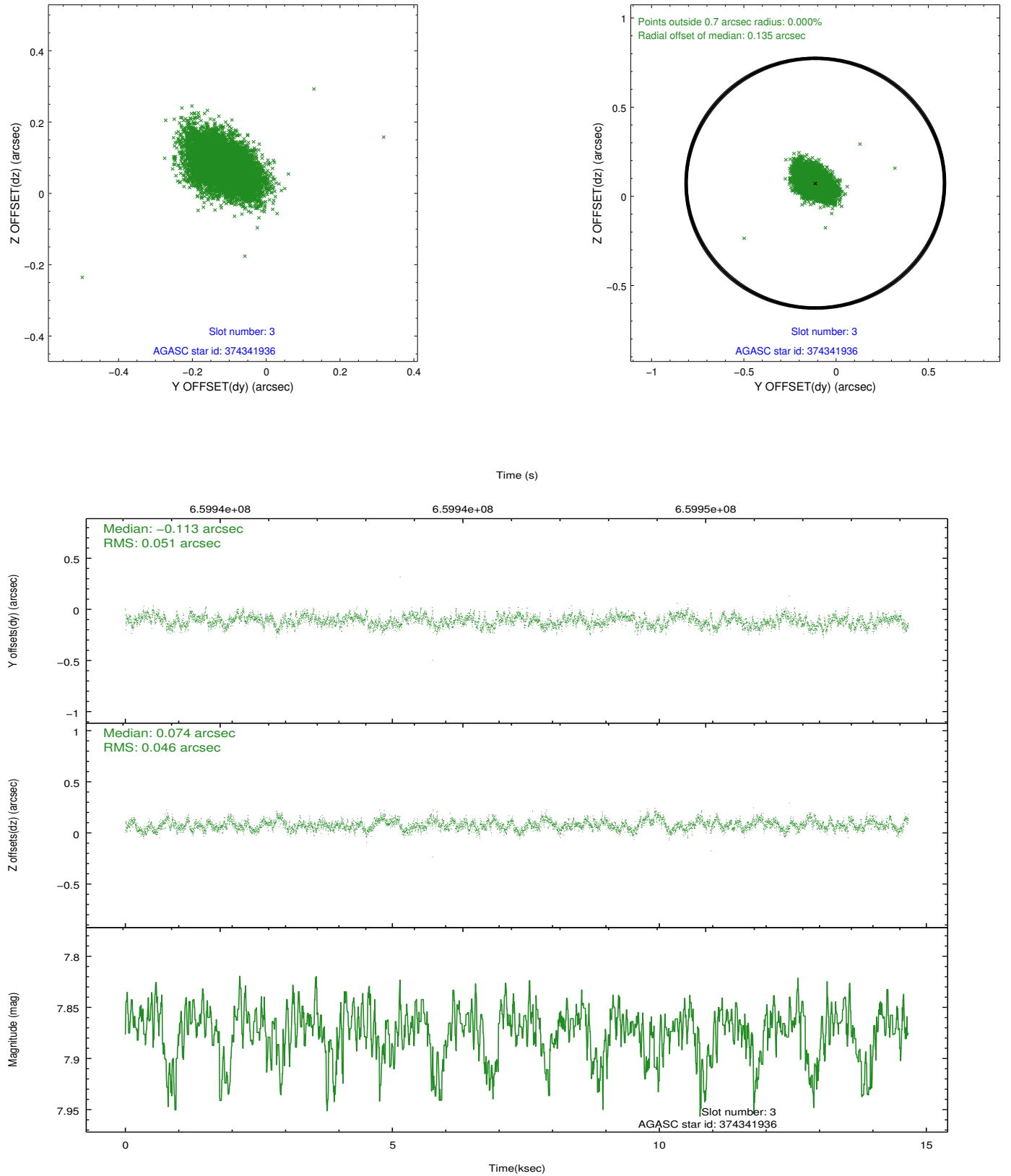


Slot Statistics

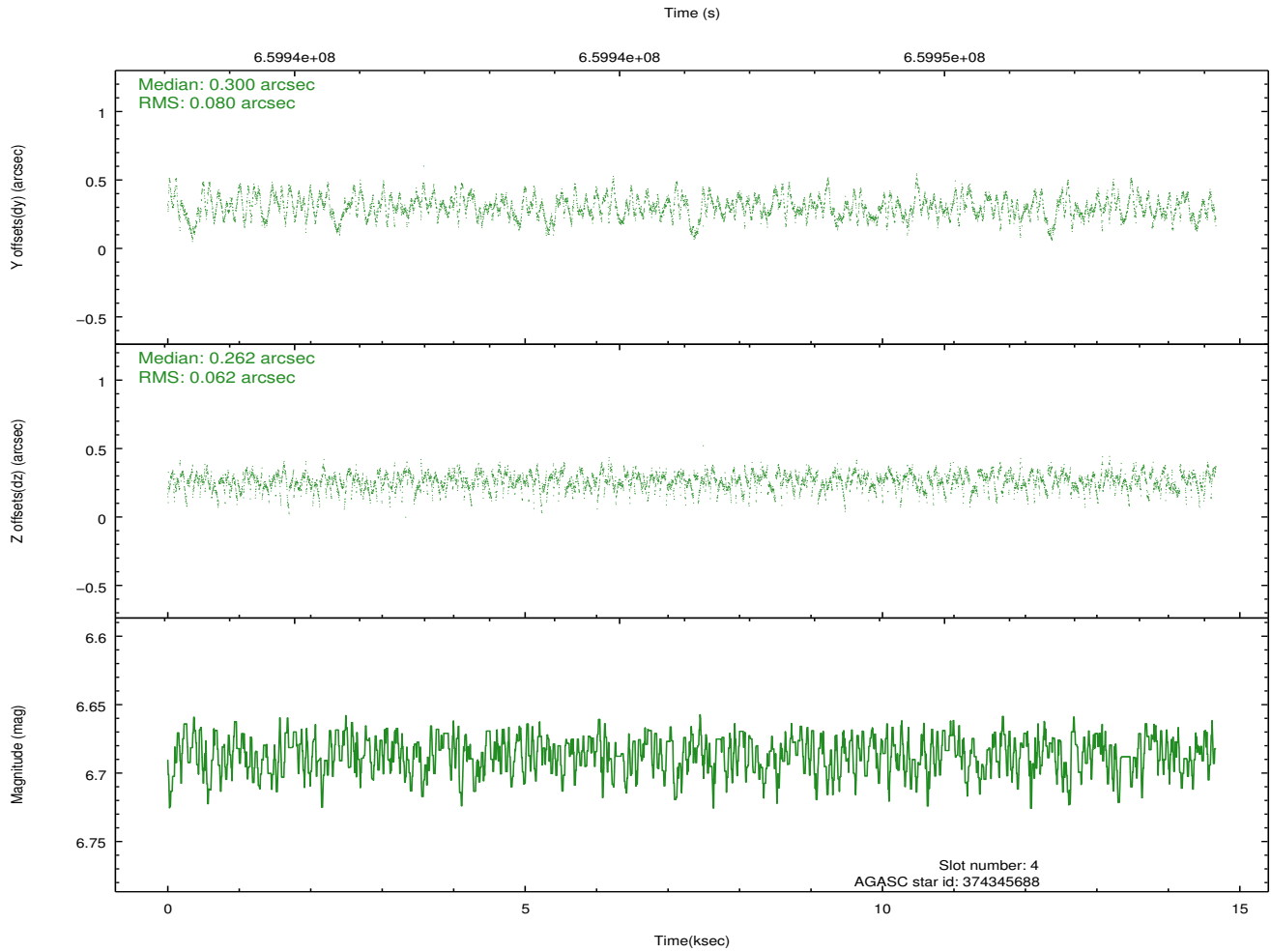
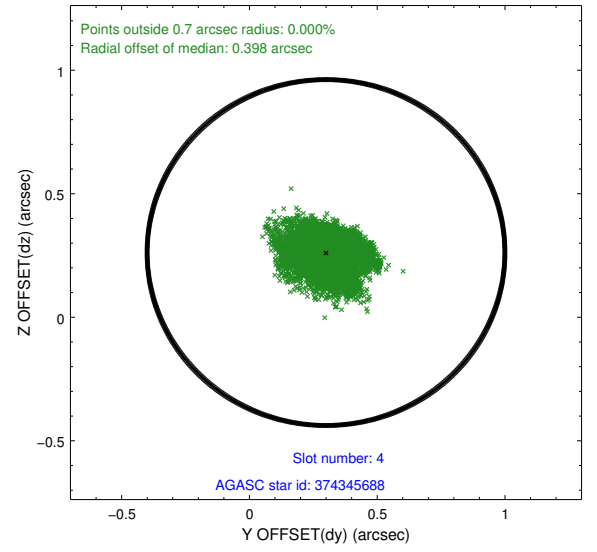
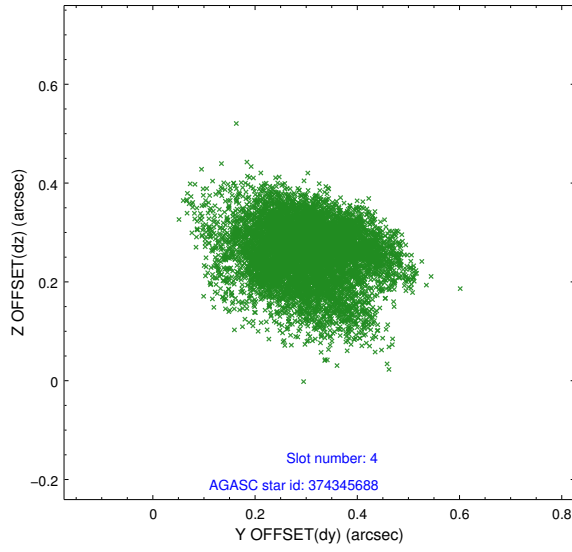
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-I-1	7.19	3577	1.000	0.099	-0.066	0.033	0.057	0.000000	0.000000	929.99	-841
1	FID		ACIS-I-5	7.16	3577	1.000	-0.461	0.025	0.010	0.015	0.000000	0.000000	-1818.66	1055
2	FID		ACIS-I-6	7.15	3577	1.000	0.271	0.111	0.028	0.057	0.000000	0.000000	395.16	1700
3	GUIDE	used	374341936	7.87	7152	1.000	-0.113	0.074	0.071	0.119	47.693096	41.597853	2126.75	-326
4	GUIDE	used	374345688	6.69	7155	1.000	0.300	0.262	0.106	0.177	48.039816	42.375903	-280.25	-2031
5	GUIDE	used	374353904	8.32	7151	1.000	-0.059	-0.317	0.105	0.157	48.175092	41.439059	1417.96	903
6	GUIDE	used	374355168	8.52	7146	1.000	-0.209	-0.191	0.105	0.169	48.517523	41.466988	611.52	1366
7	GUIDE	used	374358688	9.22	7139	1.000	0.079	0.177	0.169	0.278	49.259903	42.100043	-2335.78	676

## 2.4 Star Slots

### 2.4.1 Slot 3

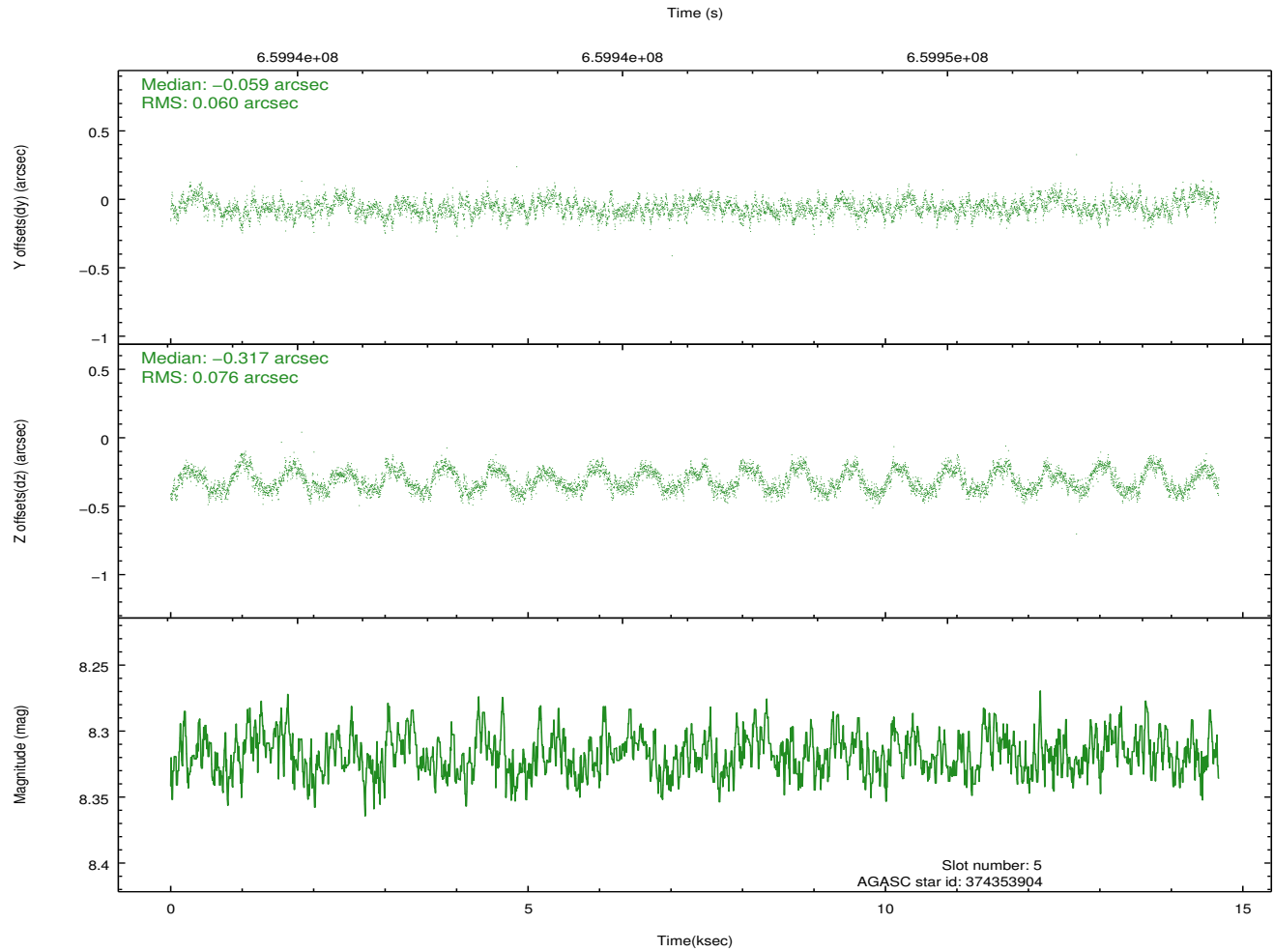
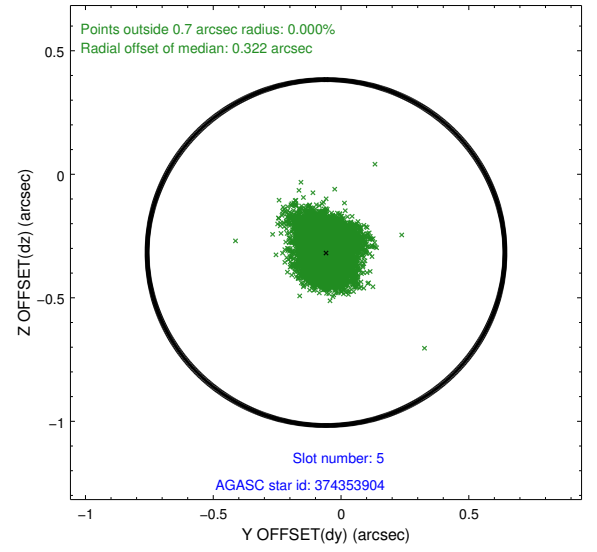
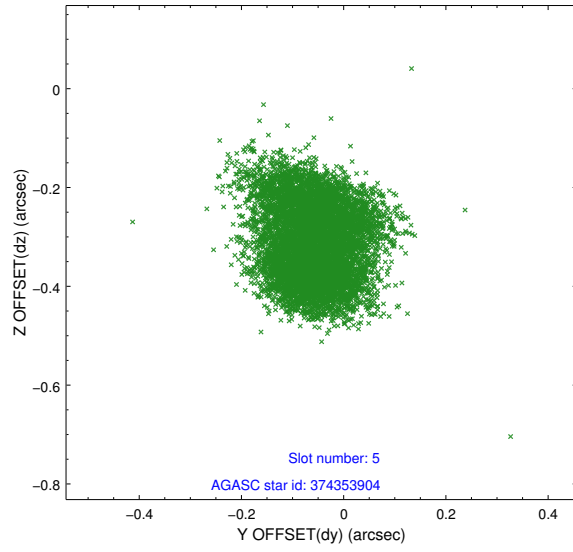


## 2.4.2 Slot 4

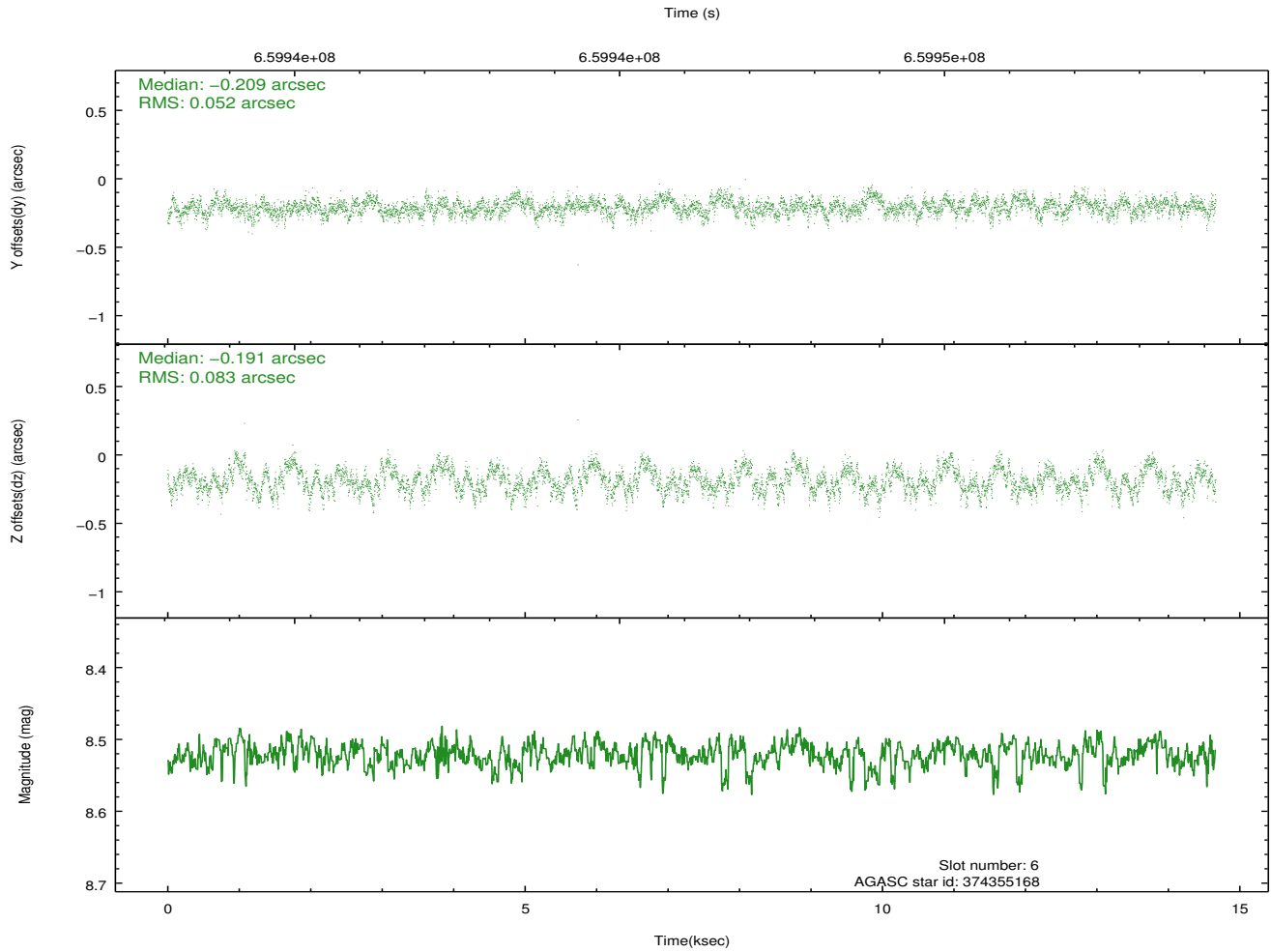
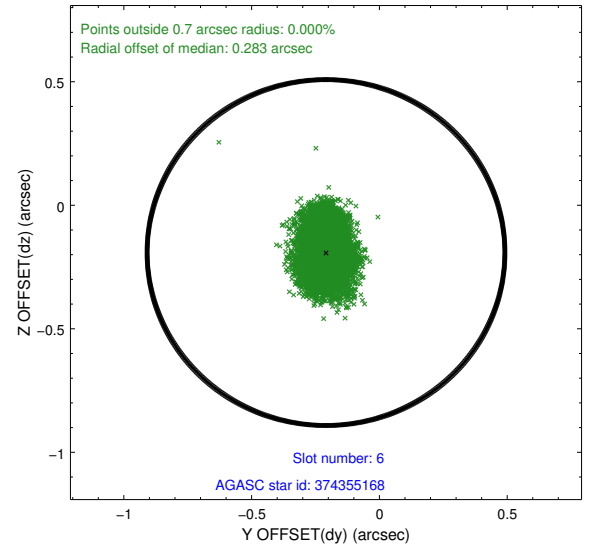
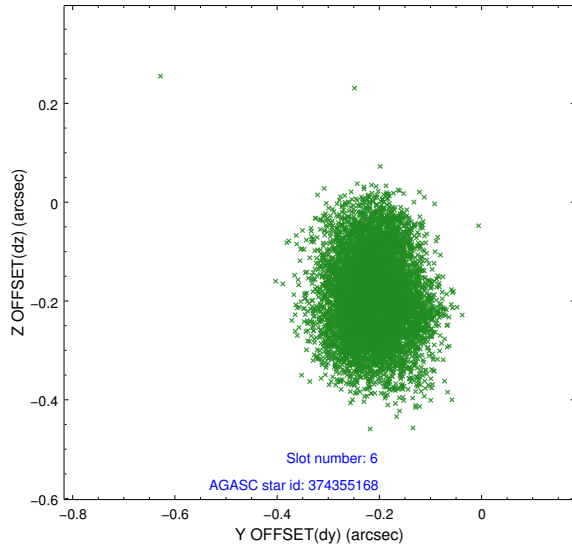




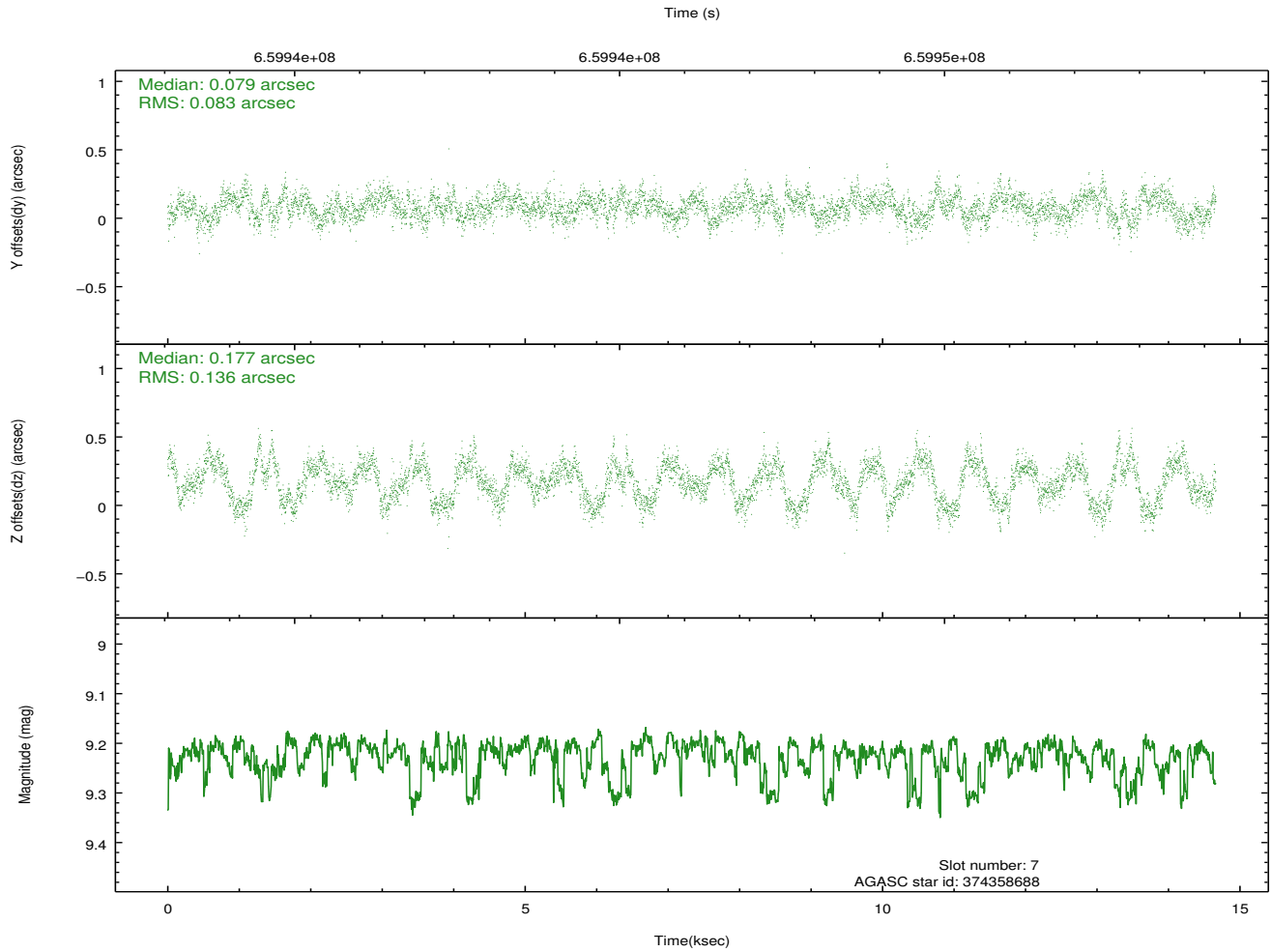
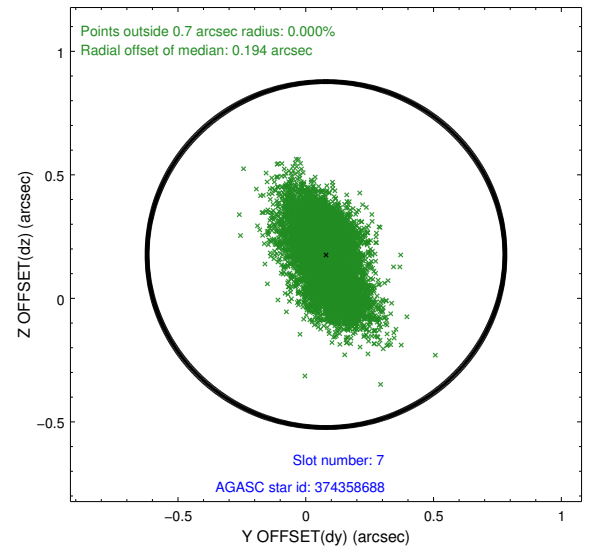
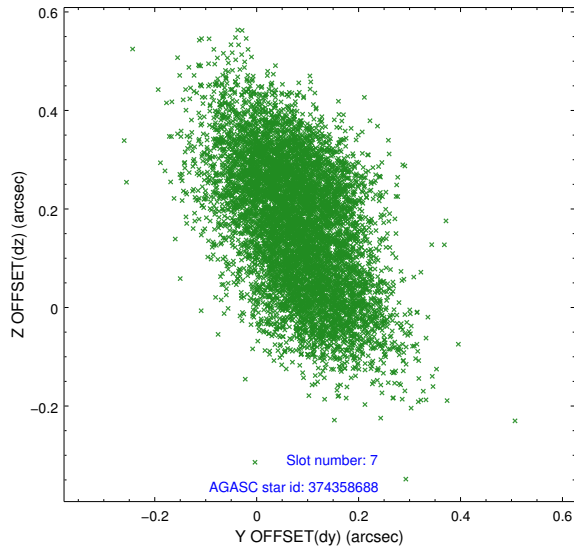
### 2.4.3 Slot 5



## 2.4.4 Slot 6

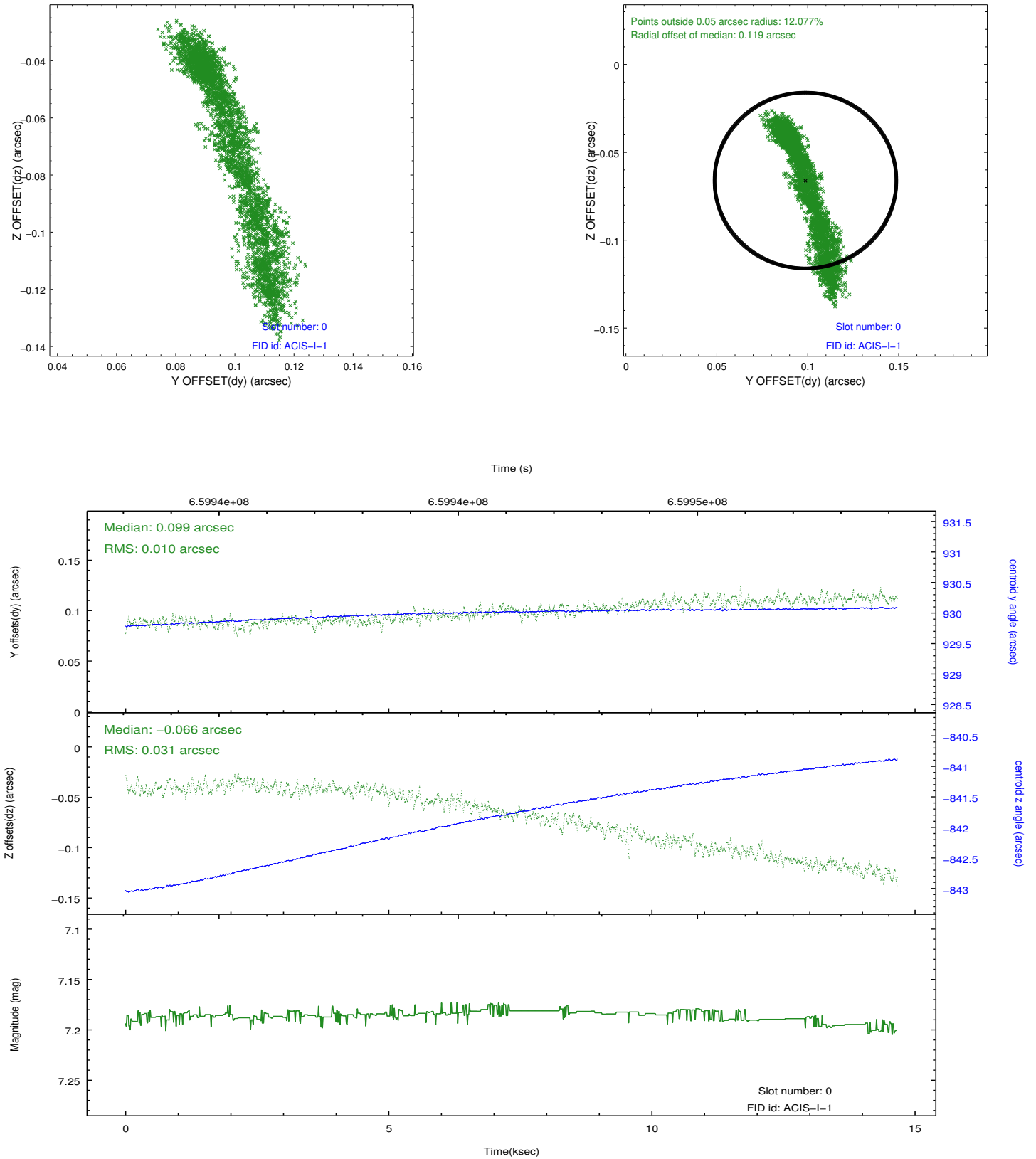


## 2.4.5 Slot 7

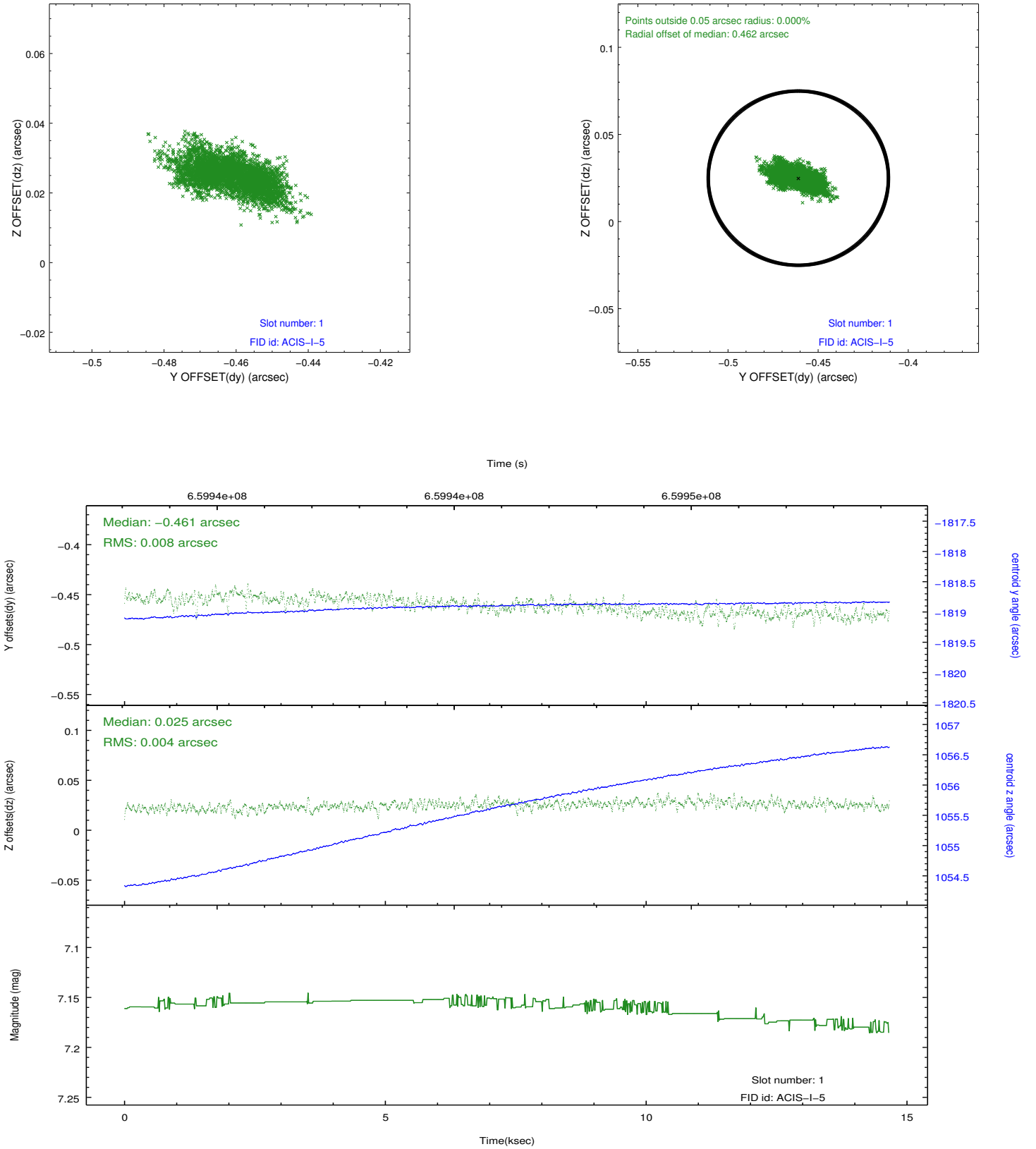


## 2.5 FID Slots

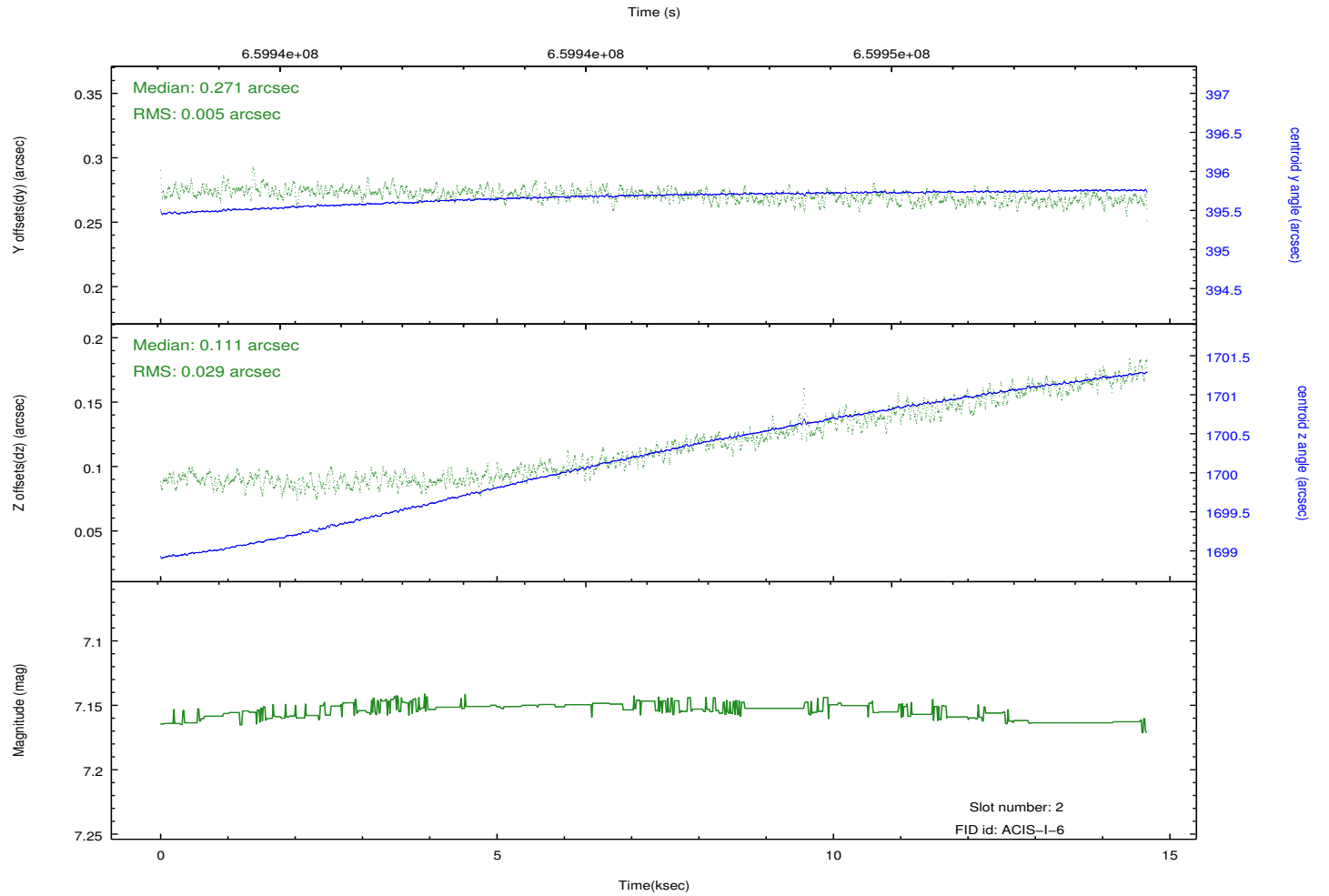
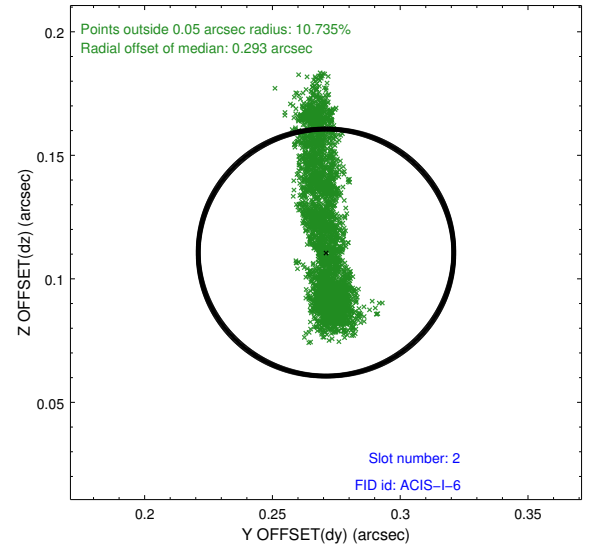
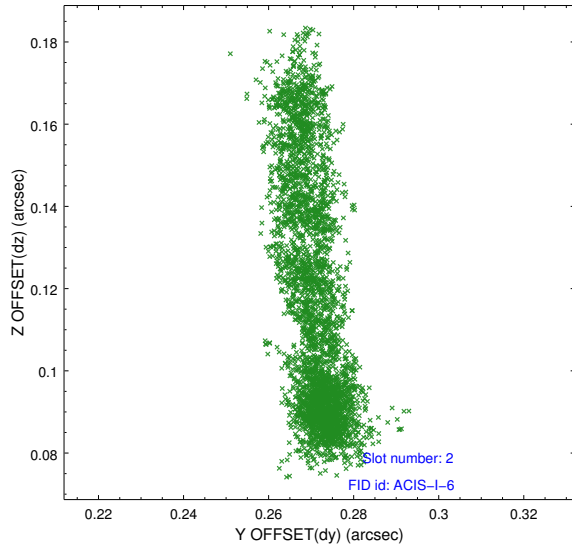
### 2.5.1 Slot 0



## 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)	2018.11.30
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	14.579300112247

### A.2 Comments