

# V&V Reference Report

## L2 ASCDS Version : 10.8

Observation 21485 - L2 Version 1  
Chandra X-Ray Center

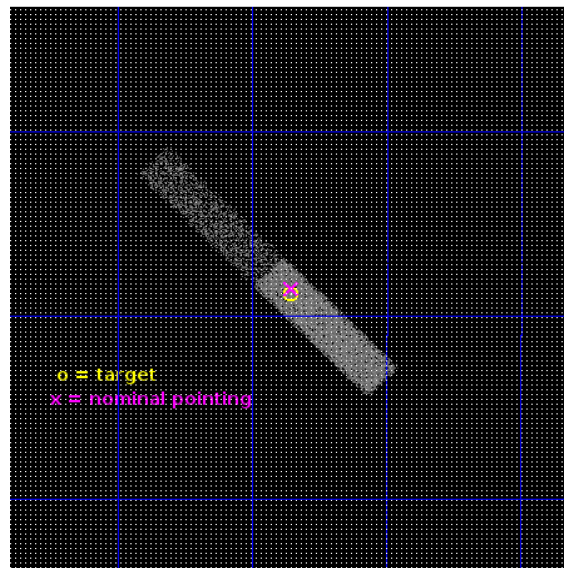
L2 Processing Date : Sep 11 2019

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# 1 Front

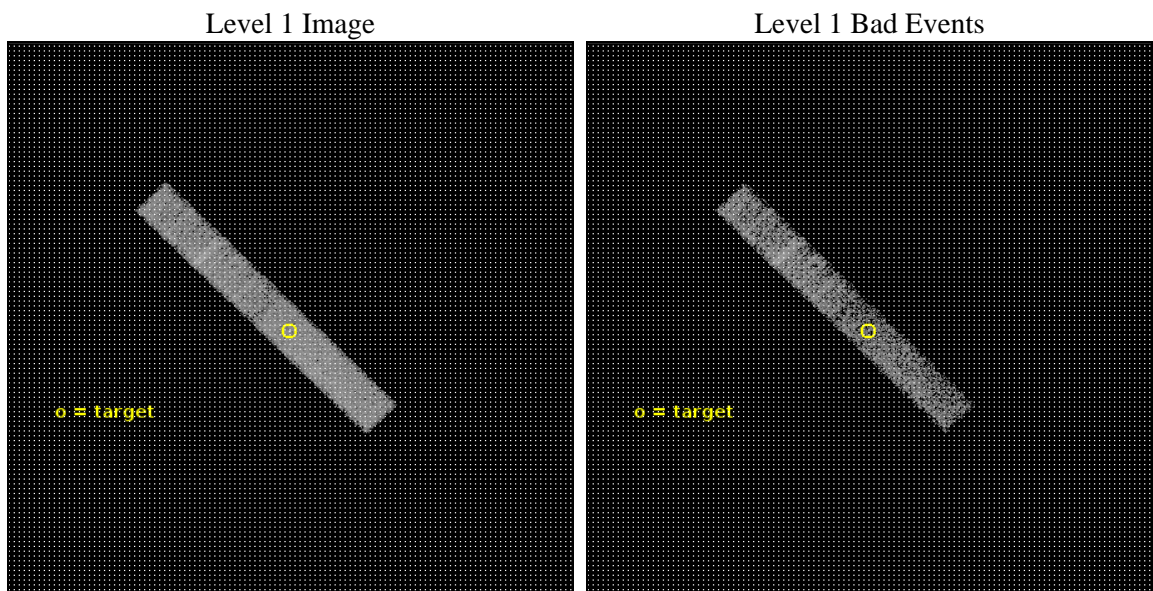
seq_num	703778	Sequence number
obs_id	21485	Observation id
title	Synchrotron emission in low-redshift quasars	Proposal title
observer	Mark Birkinshaw	Principal investigator
object	MRC0017-207	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	5.089583	Observer's specified target RA [deg]
dec_targ	-20.480889	Observer's specified target Dec [deg]
ra_nom	5.0886836842657	Nominal RA [deg]
dec_nom	-20.475930569458	Nominal Dec [deg]
roll_nom	45.156314765246	Nominal Roll [deg]
revision	1	Processing version of data
ontime	10104.095872045	Sum of GTIs [s]
livetime	9663.4428768597	Livetime [s]
ontime6	10103.113801956	Sum of GTIs [s]
ontime7	10104.095872045	Sum of GTIs [s]
l2events	15226	Number of level 2 events



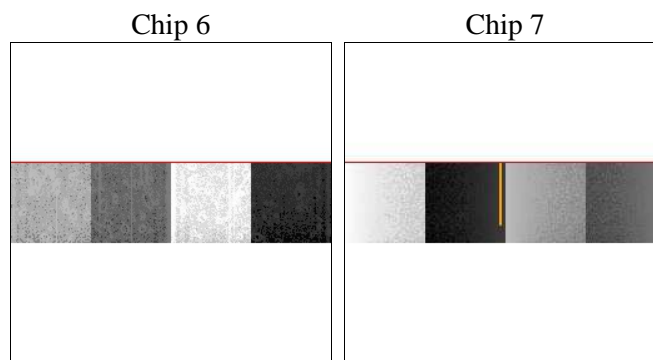
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	10000.000000	[s] Scheduled observation exposure time
ascdsver	10.8	Processing system revision	ontime	10104.095872045	Sum of GTIs [s]
caldbver	4.8.4.1	&#160	ontime6	10103.113801956	Sum of GTIs [s]
date	2019-09-11T13:55:38	Date and time of file creation	ontime7	10104.095872045	Sum of GTIs [s]
revision	1	Processing version of data	l1events	49472	Number of level 1 events

### 2.1.4 Events

	<b>ccd 6</b>	<b>ccd 7</b>
level 1 events	22555	26917
rejected events	19744	13655
rejected %	87%	50%

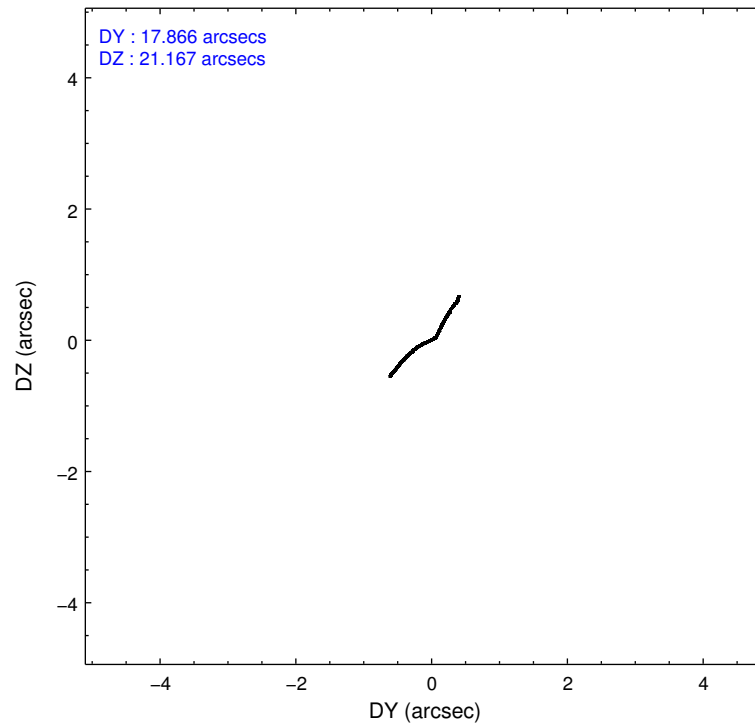
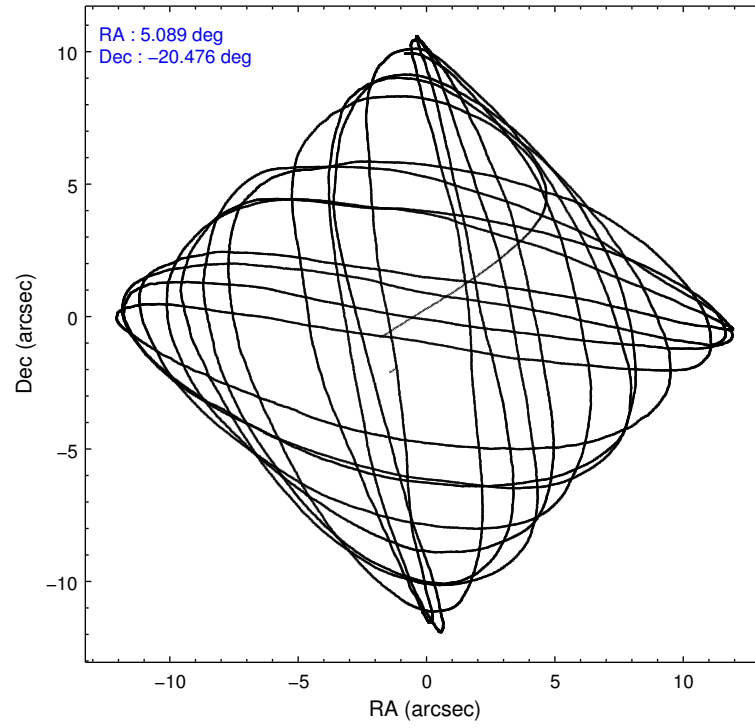
	<b>ccd 6</b>	<b>ccd 7</b>
grade 0 events	881	1404
	3%	5%
grade 1 events	8	48
	0%	0%
grade 2 events	542	2783
	2%	10%
grade 3 events	420	1444
	1%	5%
grade 4 events	411	1410
	1%	5%
grade 5 events	958	2795
	4%	10%
grade 6 events	558	6224
	2%	23%
grade 7 events	18777	10809
	83%	40%

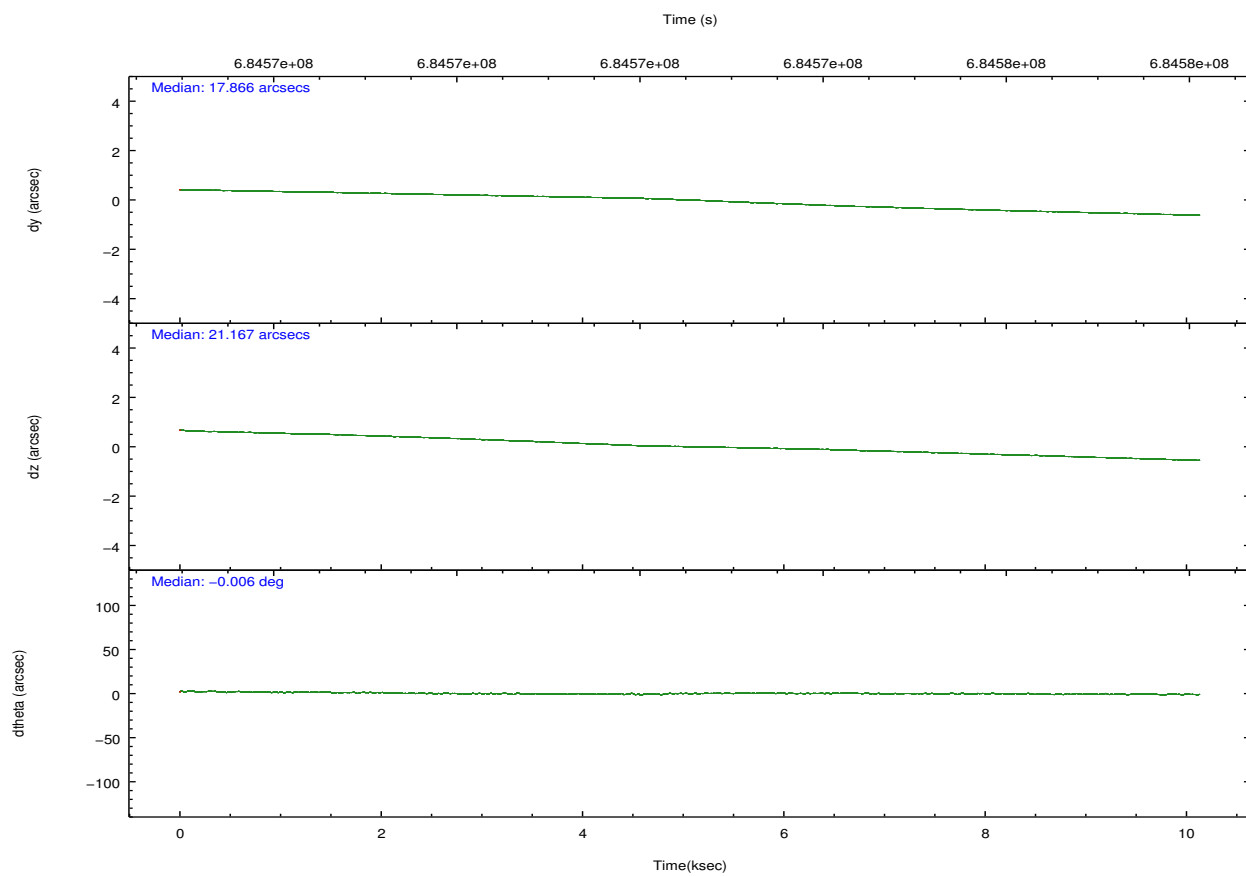
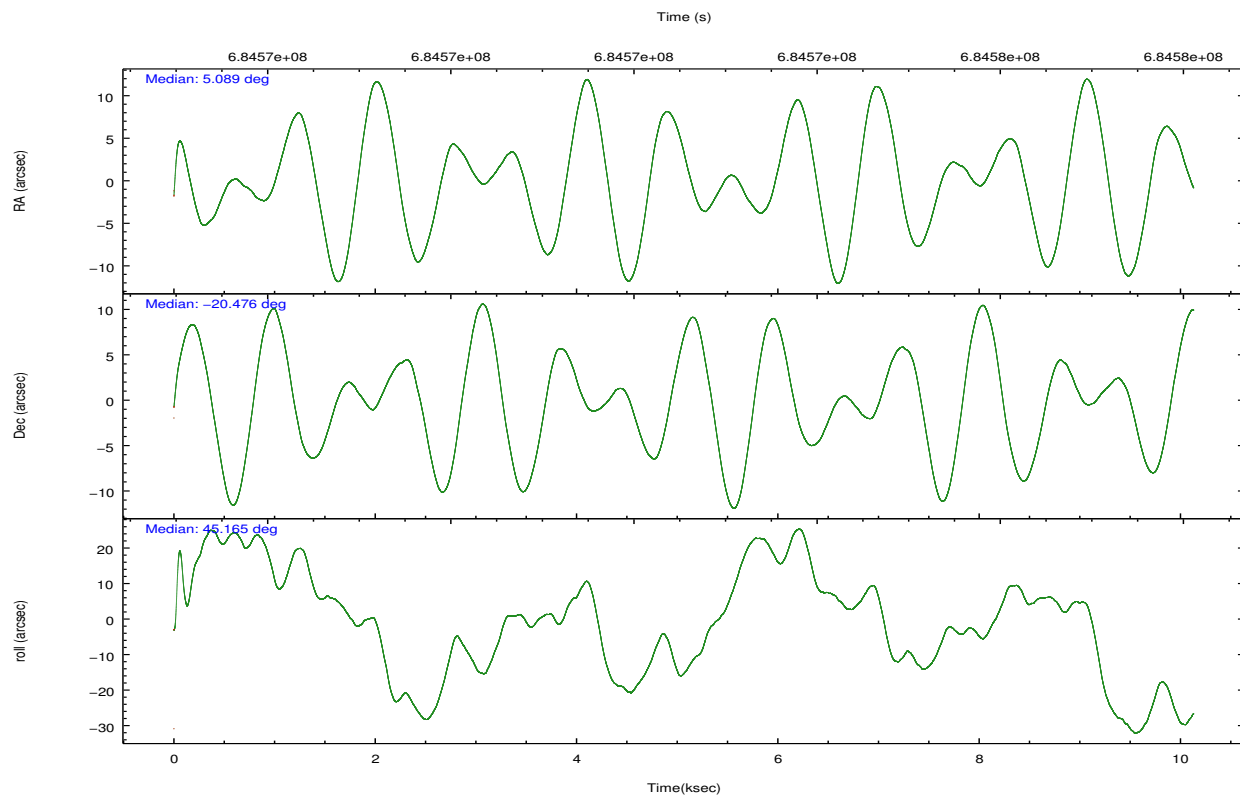


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-67	ACIS-67	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	5.081568	5.088683684265746	Subarray requested	CUSTOM	1/4
[deg] Pointing Dec	-20.502585	-20.47593056945791	Subarray start row	385	385
[deg] Pointing Roll	44.997191	45.15631476524597	Subarray row count	256	256
[mm] SIM focus pos	-0.684267	-0.6828225247311905	Alternating exposures requested	N	N
[mm] SIM defocus	0	0.001444936568705701	[s] Primary exposure time	0.000000	0.9
[mm] SIM translation stage pos	-190.132523	-190.1400660498719			
[mm] SIM translation stage offset	0	0.00754346686406393			
[s] Observation start time (MET)	684567616.184000	684566321.33561			
Observation start date	2019-09-11T05:39:07	2019-09-11T05:18:41			
[s] Observation end time (MET)	684577616.184000	684578410.18633			
Observation end date	2019-09-11T08:25:47	2019-09-11T08:40:10			
Read mode	TIMED	TIMED			

## 2.3 Aspect



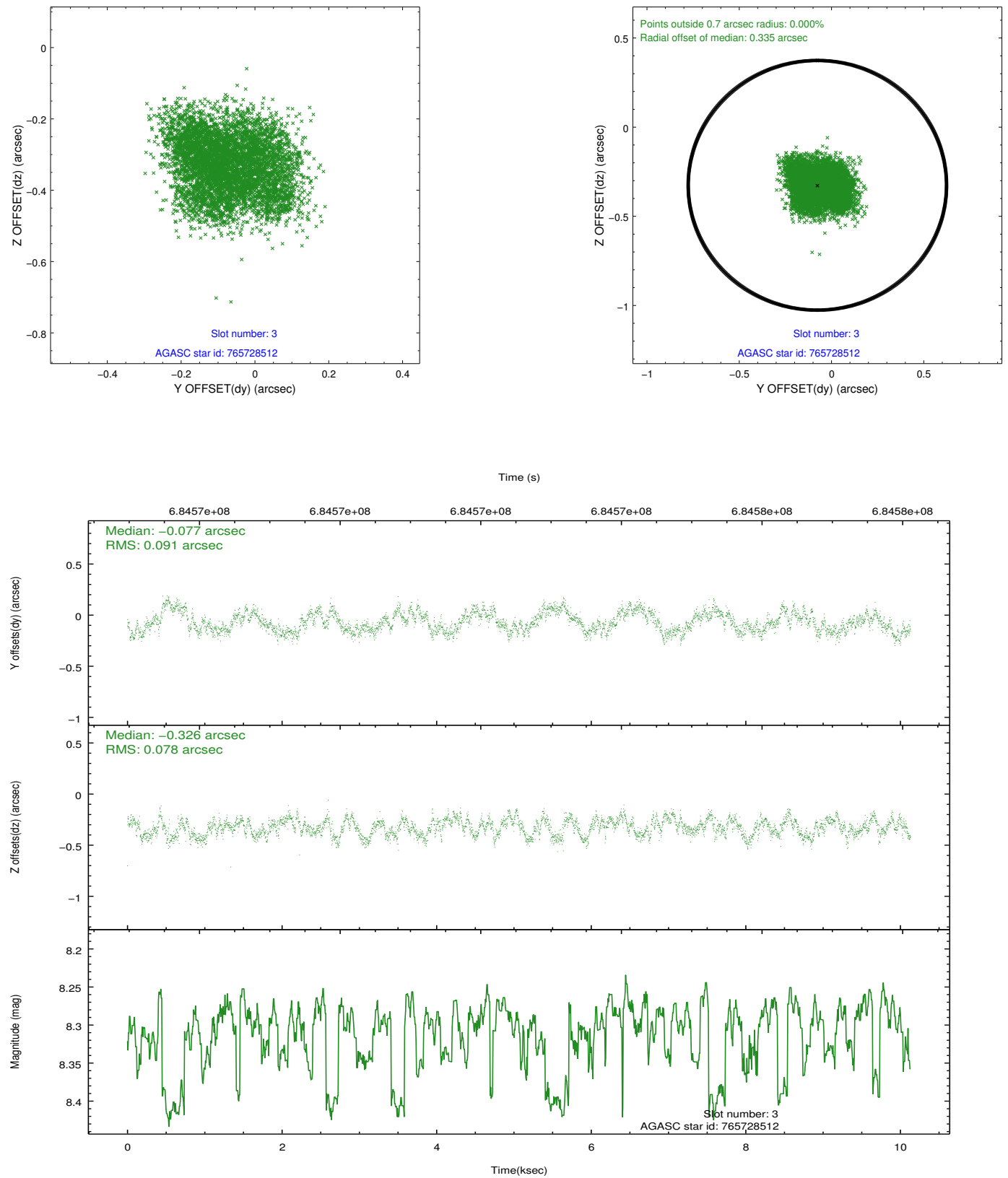


Slot Statistics

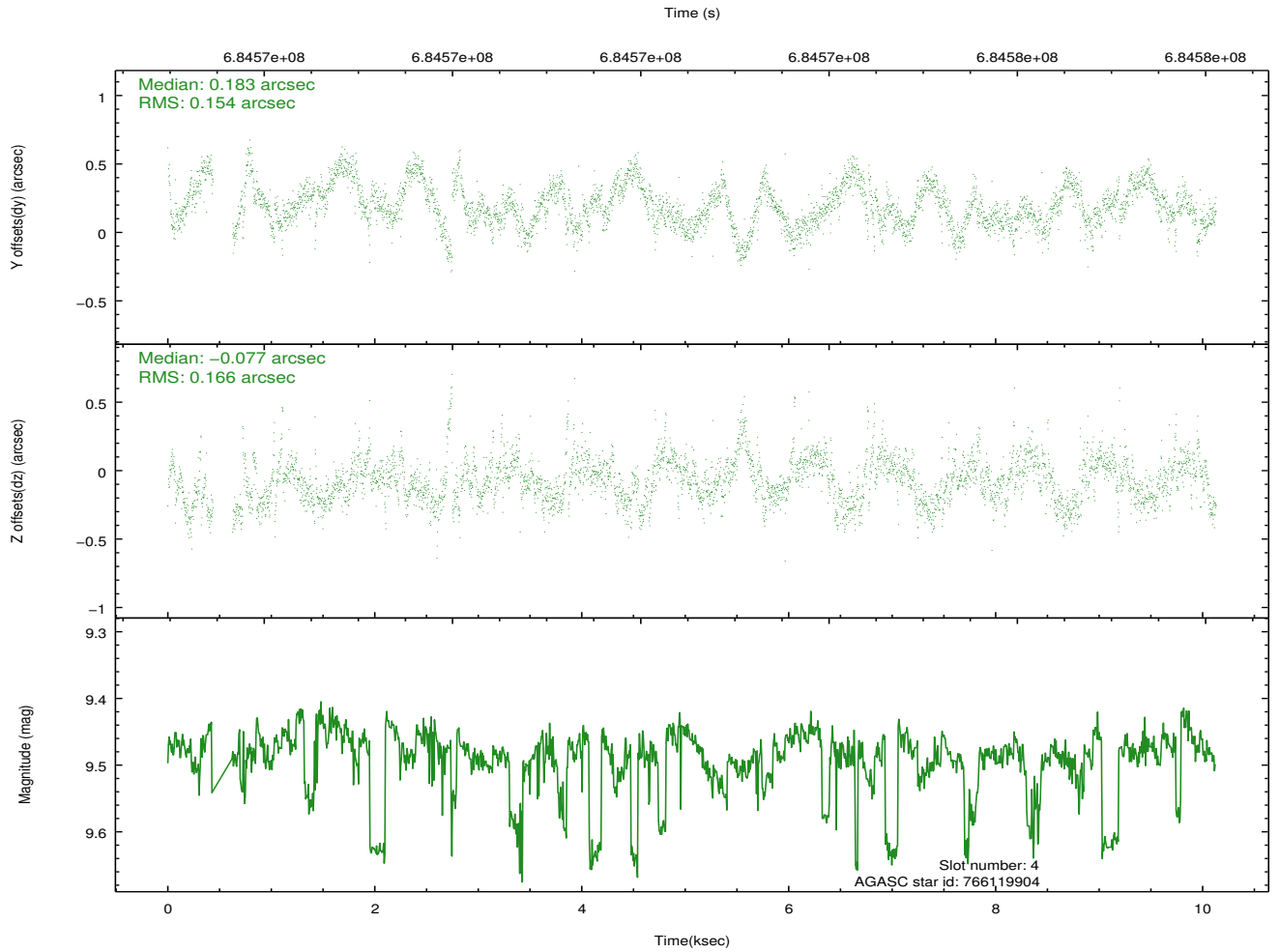
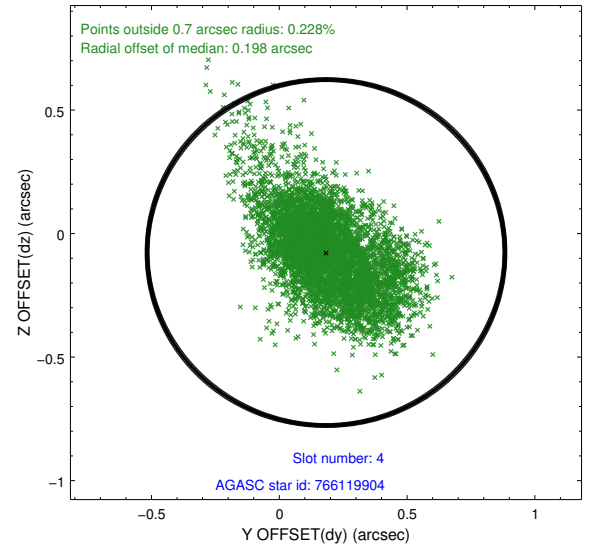
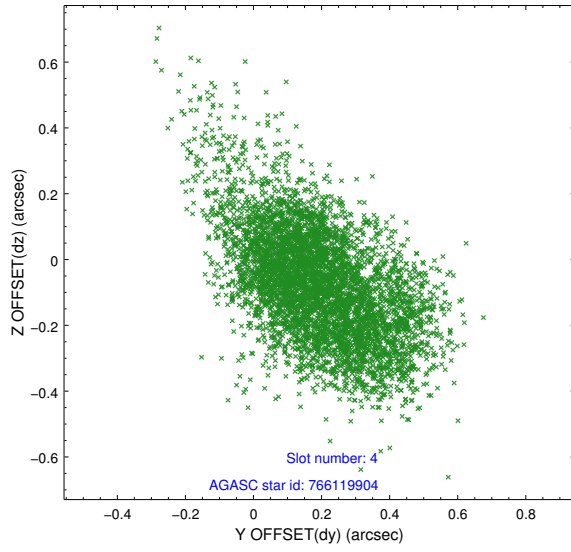
pt	status	used	id	mag	n_pts	frac_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mea
0	FID		ACIS-S-2	6.93	2471	1.000	-0.309	-0.224	0.019	0.030	0.000000	0.000000	-771.09	-1743
1	FID		ACIS-S-4	7.03	2472	1.000	0.774	0.208	0.010	0.016	0.000000	0.000000	2142.96	165
2	FID		ACIS-S-5	6.99	2472	1.000	-0.497	0.024	0.014	0.023	0.000000	0.000000	-1823.52	159
3	GUIDE	used	765728512	8.31	4943	1.000	-0.077	-0.326	0.132	0.197	5.218081	-19.931218	1779.35	1125
4	GUIDE	used	766119904	9.48	4818	1.000	0.183	-0.077	0.232	0.394	4.491948	-20.307319	-913.17	1901
5	GUIDE	used	766119944	9.56	4909	1.000	-0.372	0.300	0.263	0.406	4.967939	-20.184699	535.62	1079
6	OMITTED			0.00	0	0.000	0.000	0.000	0.000	0.000	0.000000	0.000000	0.00	0
7	GUIDE	used	766247912	8.97	4934	1.000	0.249	0.086	0.130	0.230	5.527707	-20.188656	1862.90	-268

## 2.4 Star Slots

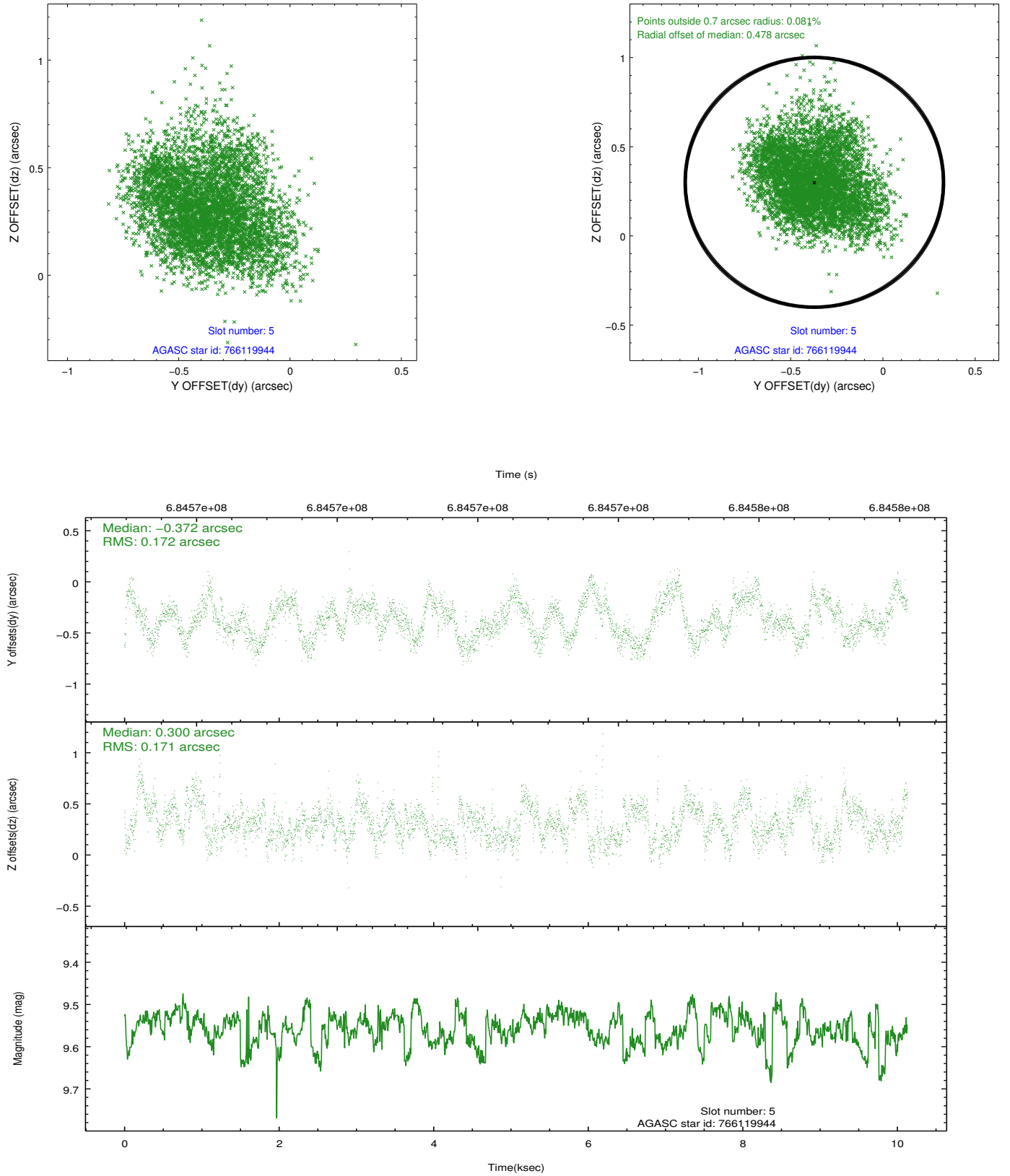
### 2.4.1 Slot 3



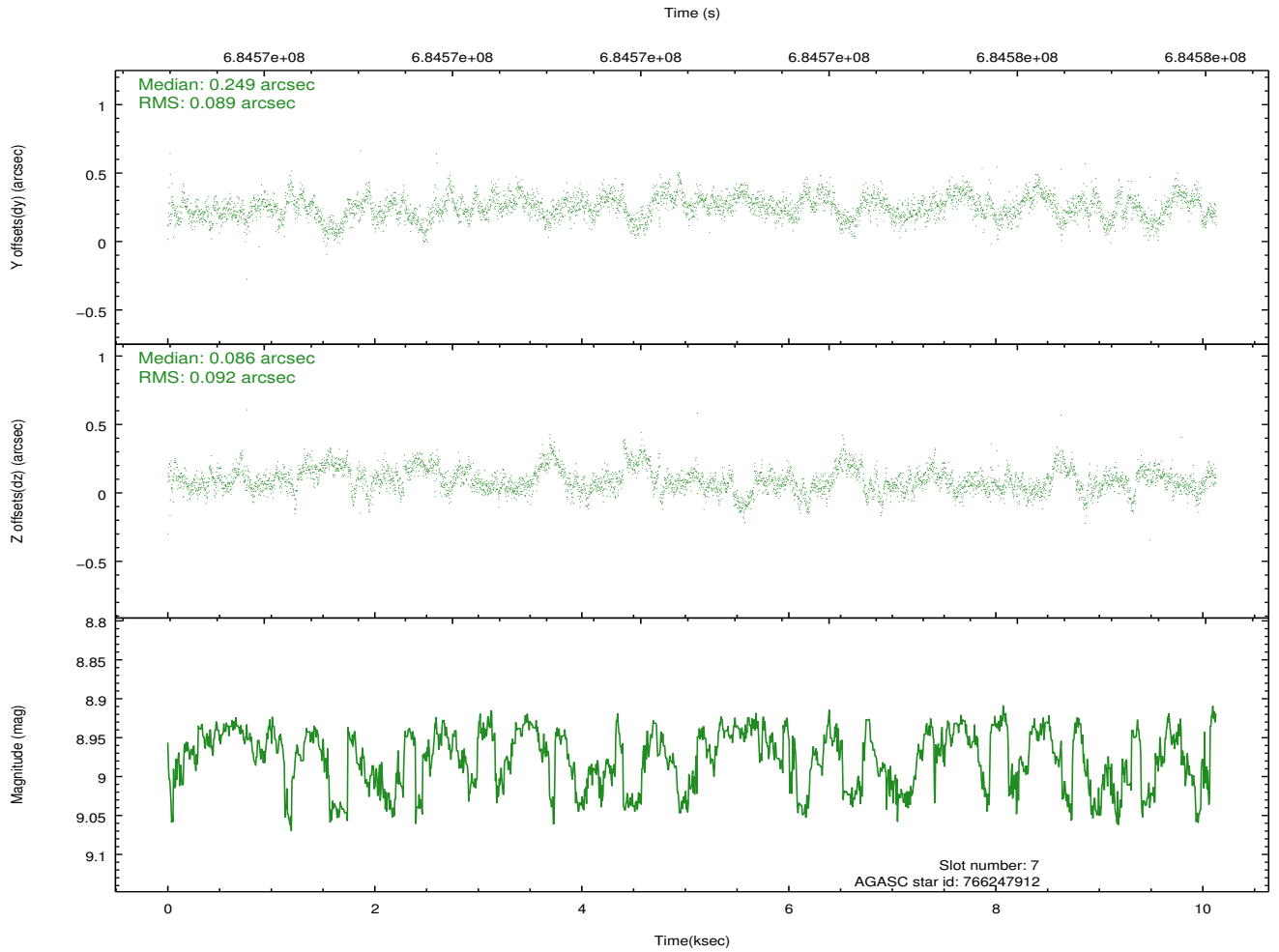
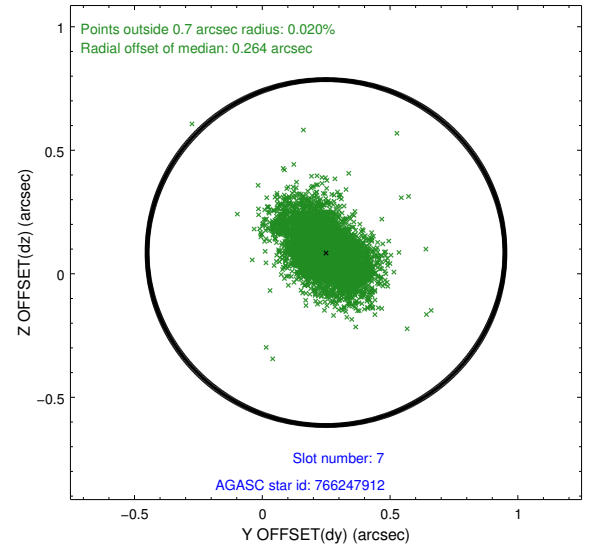
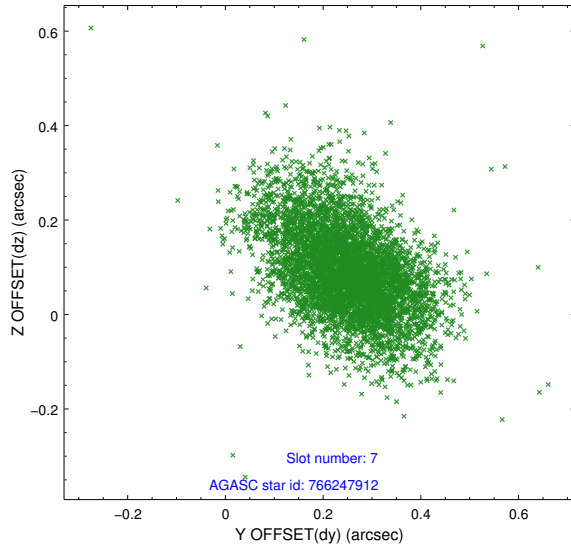
## 2.4.2 Slot 4



### 2.4.3 Slot 5



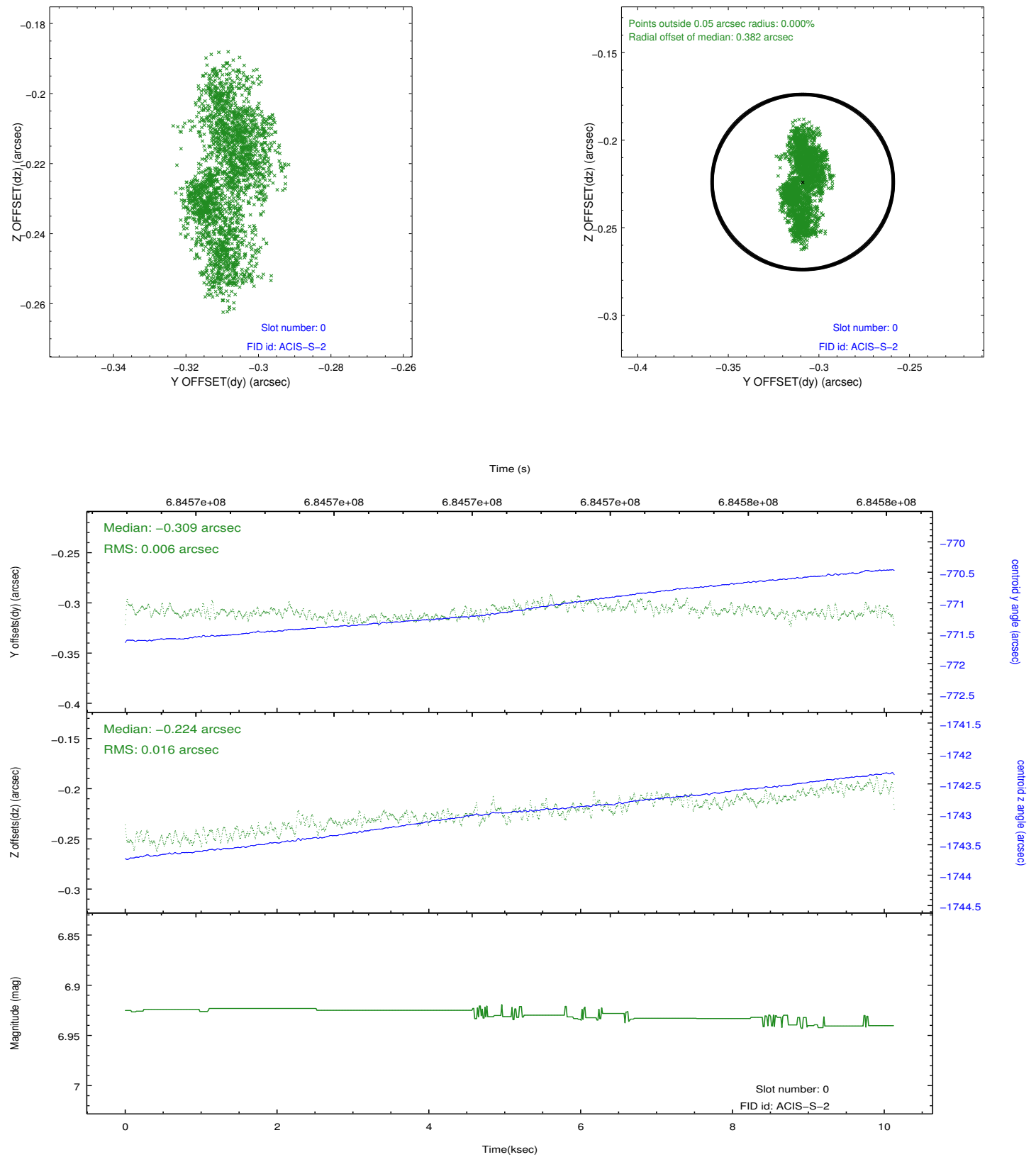
## 2.4.4 Slot 7



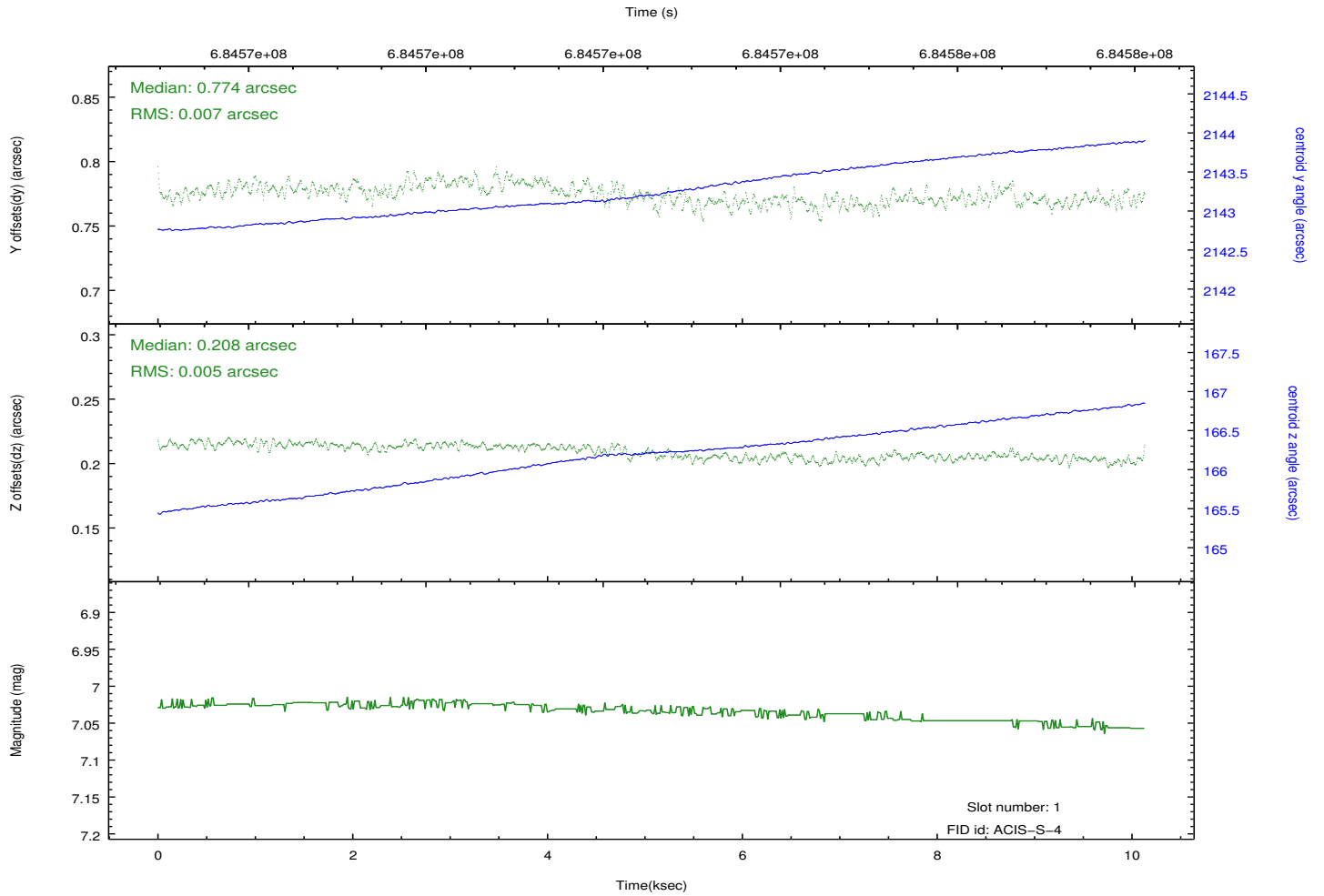
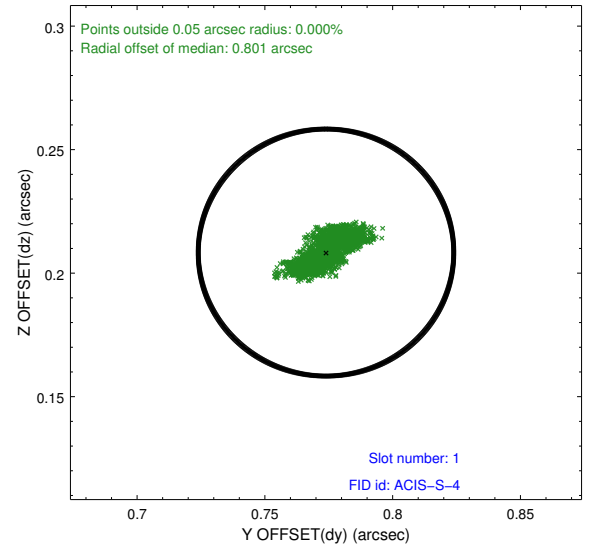
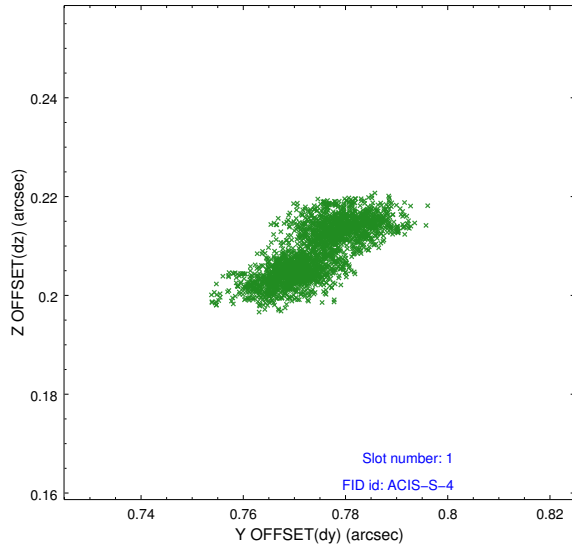


## 2.5 FID Slots

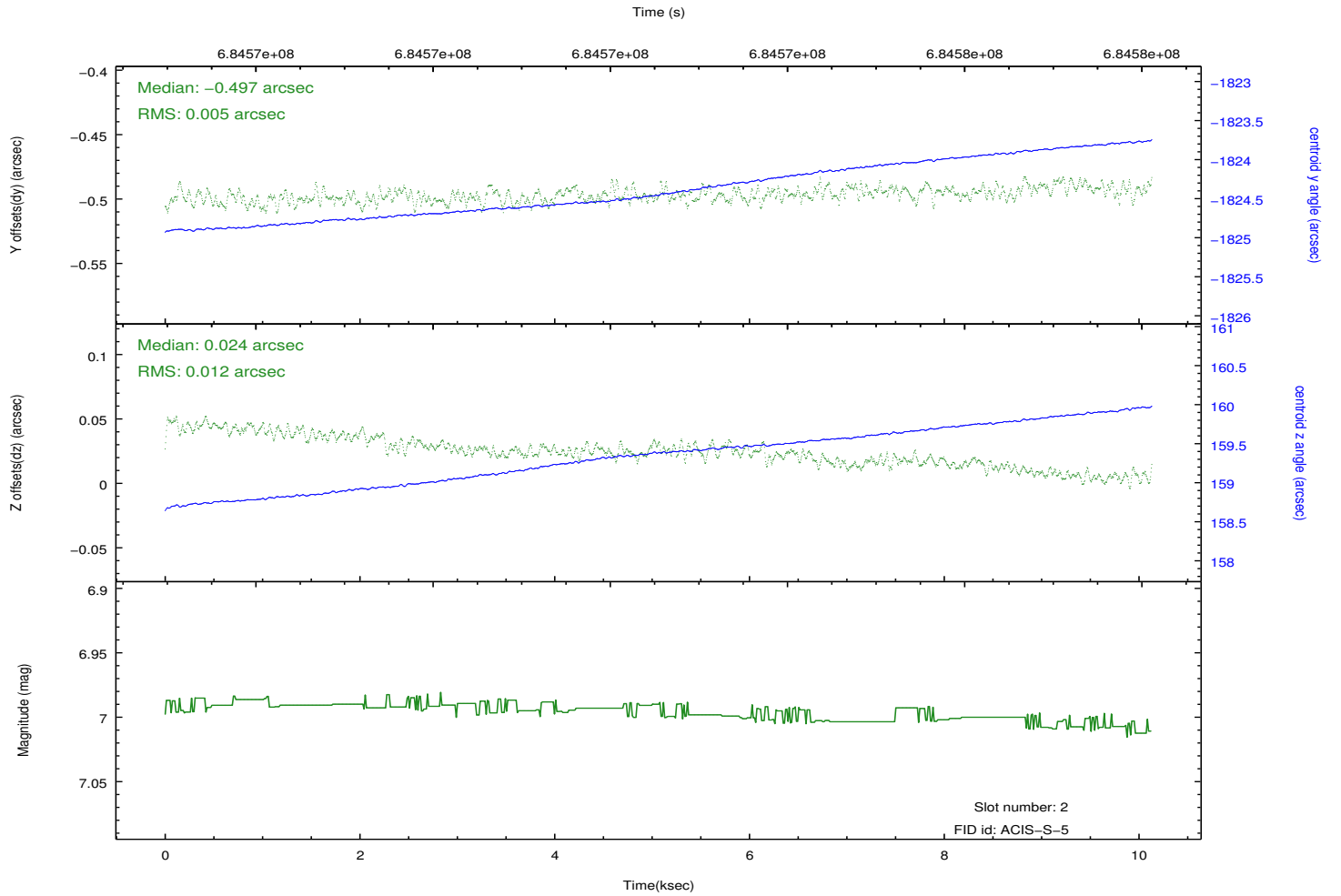
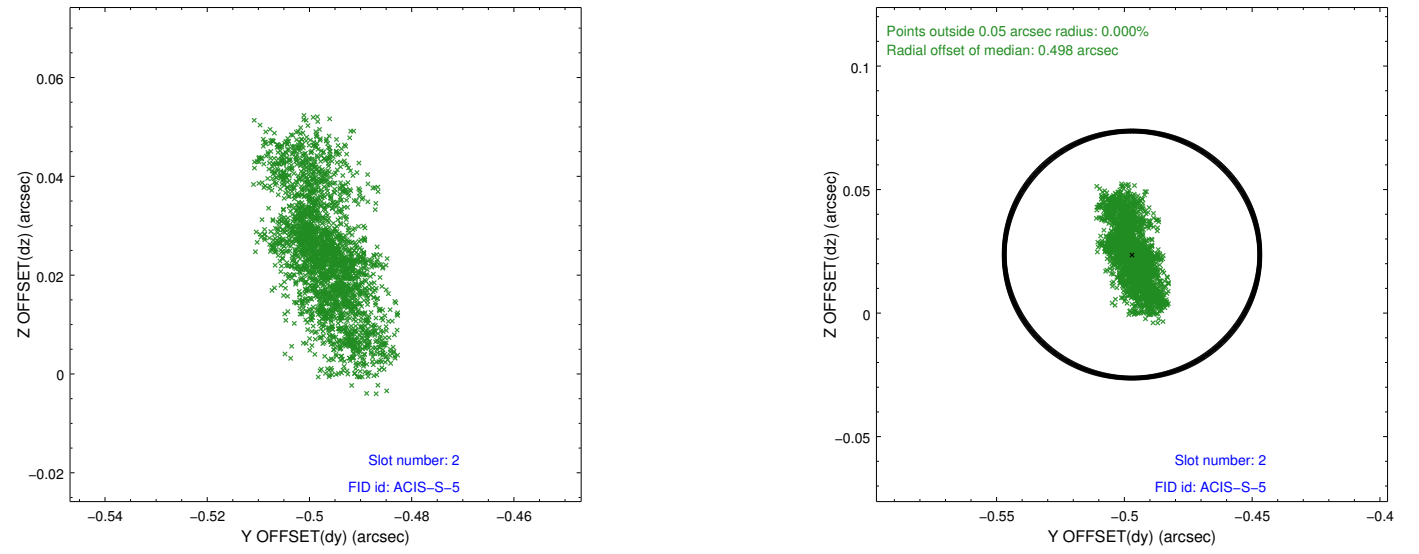
### 2.5.1 Slot 0



## 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)	2019.09.11
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	10.104095872045

### A.2 Comments

The guide star in slot 6 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this slot from the solution.