

# V&V Reference Report

## L2 ASCDS Version : 8.1.2

Observation 167 - L2 Version 4

Chandra X-Ray Center

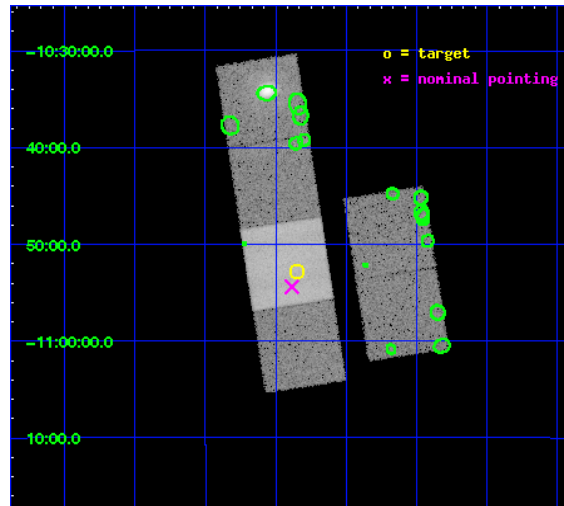
L2 Processing Date : Dec 14 2009

## Contents

<b>1</b>	<b>Front</b>	<b>2</b>
<b>2</b>	<b>OBI</b>	<b>3</b>
2.1	OBI . . . . .	3
2.1.1	Images . . . . .	3
2.1.2	Bias . . . . .	3
2.1.3	Parameters . . . . .	4
2.1.4	Events . . . . .	4
2.2	Compared Parameters . . . . .	5
2.3	Aspect . . . . .	6
2.4	Star Slots . . . . .	9
2.4.1	Slot 3 . . . . .	9
2.4.2	Slot 4 . . . . .	10
2.4.3	Slot 5 . . . . .	11
2.4.4	Slot 6 . . . . .	12
2.4.5	Slot 7 . . . . .	13
2.5	FID Slots . . . . .	14
2.5.1	Slot 0 . . . . .	14
2.5.2	Slot 1 . . . . .	15
2.5.3	Slot 2 . . . . .	16
<b>3</b>	<b>Point Sources</b>	<b>17</b>
<b>A</b>	<b>Summary</b>	<b>18</b>
A.1	Status . . . . .	18
A.2	Comments . . . . .	18

# 1 Front

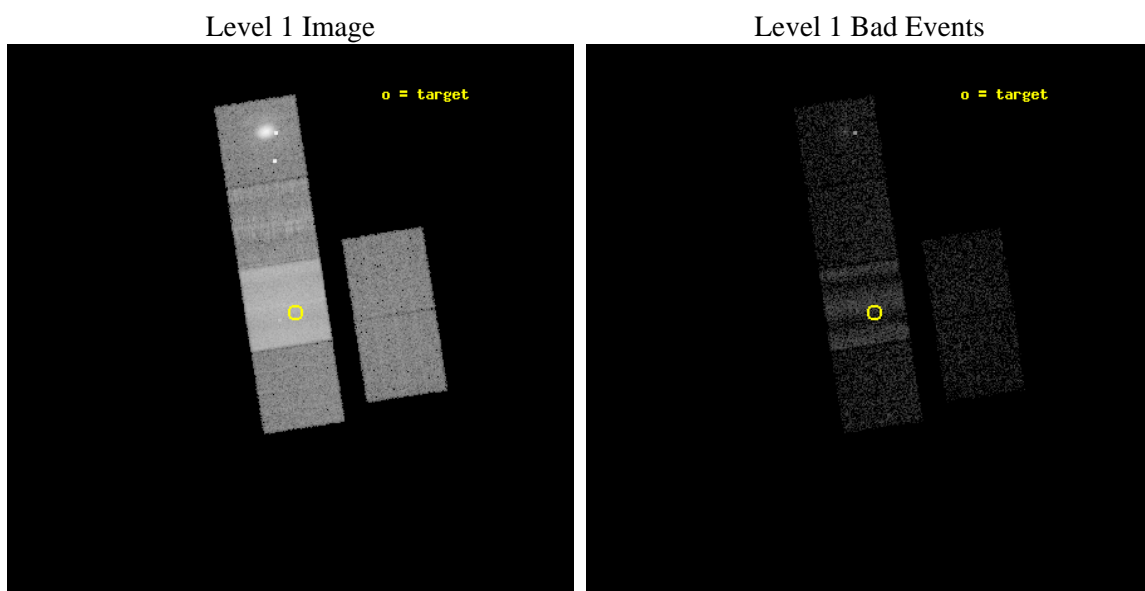
seq_num	590035	Sequence number
obs_id	167	Observation id
title	ACIS CHIP RESPONSE TO A CONTINUUM SOURCE	Proposal title
observer	Dr. CXC Calibration	Principal investigator
object	G21.5-0.9 [Chip S5, T=100, Offsets=-19,0,0]	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	278.336589	Observer's specified target RA
dec_targ	-10.880885	Observer's specified target Dec
ra_nom	278.34628339482	Nominal RA
dec_nom	-10.906919590657	Nominal Dec
roll_nom	261.22218298671	Nominal Roll
revision	4	Processing version of data
ontime	9753.6000090837	Sum of GTIs [s]
livetime	9630.0940528559	Livetime [s]
ontime2	9753.6000090837	Sum of GTIs [s]
ontime3	9753.6000090837	Sum of GTIs [s]
ontime6	9753.6000090837	Sum of GTIs [s]
ontime7	9753.6000090837	Sum of GTIs [s]
ontime8	9753.6000090837	Sum of GTIs [s]
ontime9	9753.6000090837	Sum of GTIs [s]
l2events	201599	Number of level 2 events



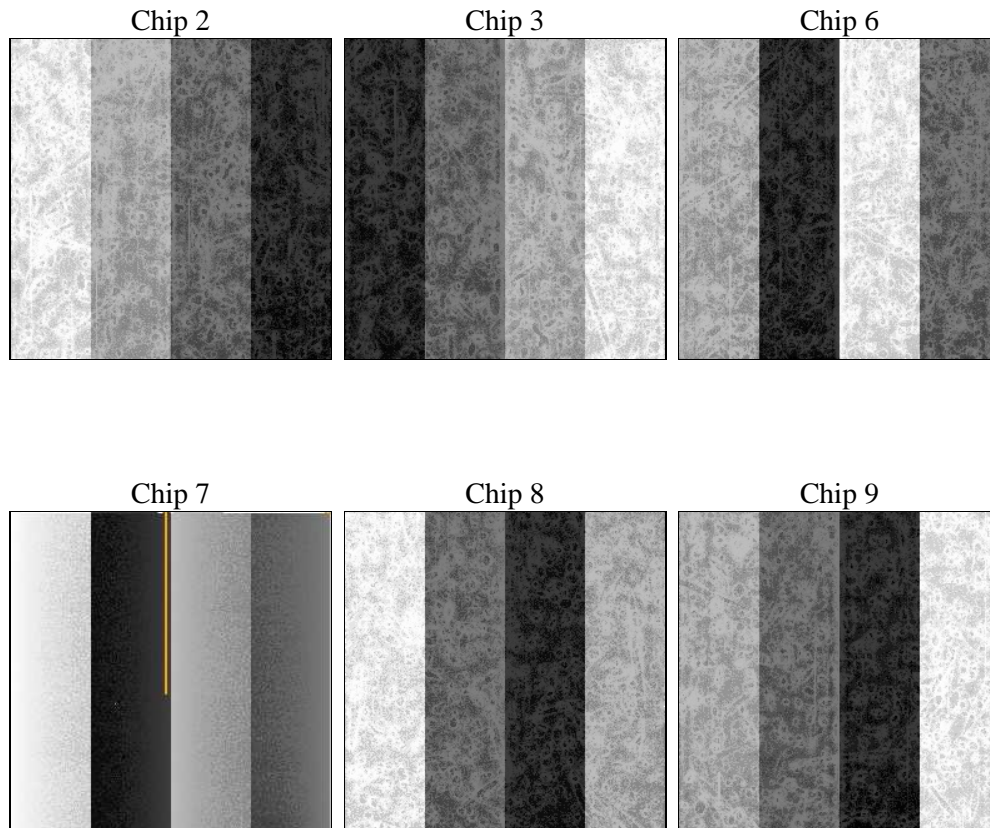
## 2 OBI

### 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	Scheduled observation exposure time
ascdsver	8.1.2	ASCDS version number	ontime	9753.6000090837	Sum of GTIs [s]
caldbver	4.1.4	&#160	ontime2	9753.6000090837	Sum of GTIs [s]
date	2009-12-14T06:28:44	Date and time of file creation	ontime3	9753.6000090837	Sum of GTIs [s]
revision	3	Processing version of data	ontime6	9753.6000090837	Sum of GTIs [s]
			ontime7	9753.6000090837	Sum of GTIs [s]
			ontime8	9753.6000090837	Sum of GTIs [s]
			ontime9	9753.6000090837	Sum of GTIs [s]
			l1events	272768	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9
level 1 events	24111	24151	27202	110972	36603	49729
rejected events	6420	6794	7832	13160	7879	7964
rejected %	26%	28%	28%	11%	21%	16%

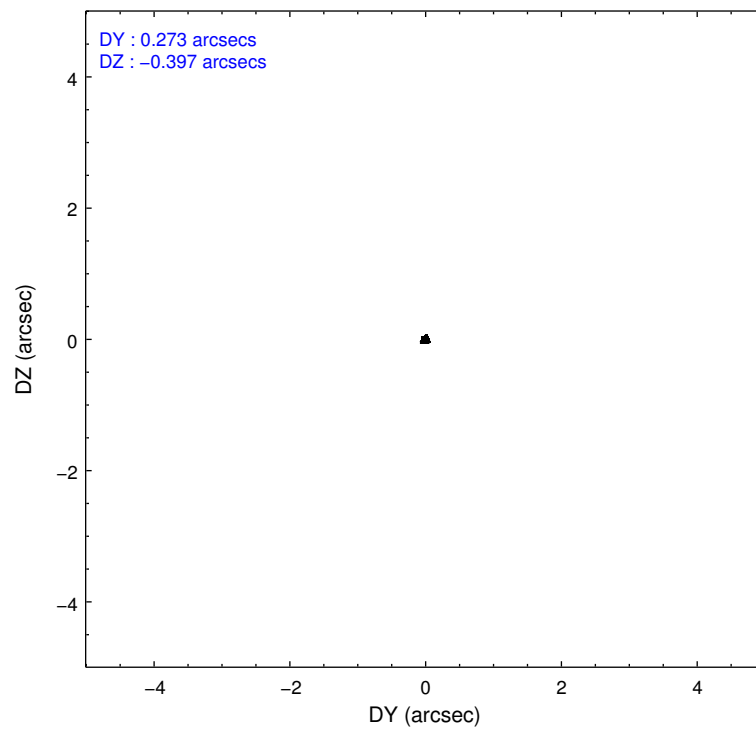
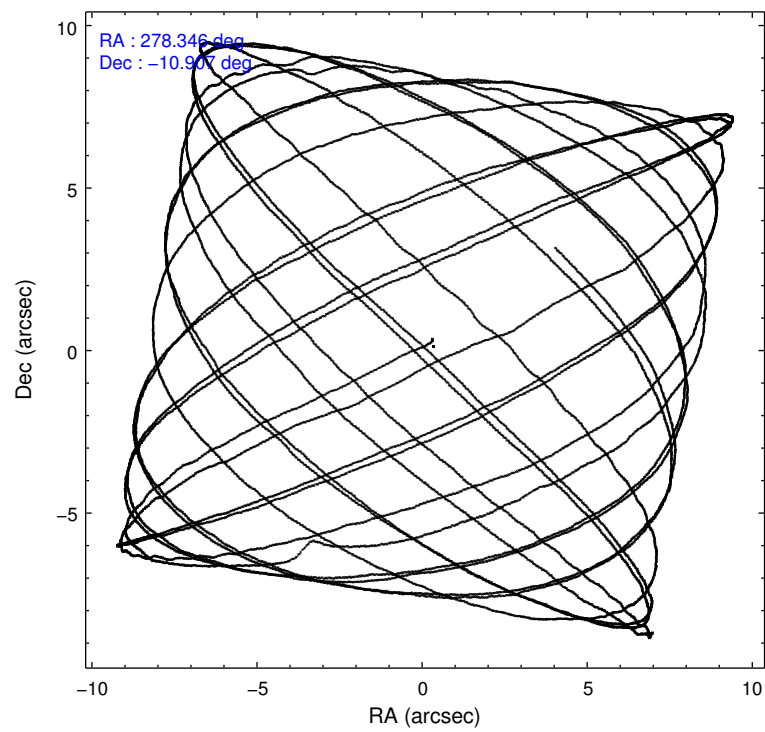
	ccd 2	ccd 3	ccd 6	ccd 7	ccd 8	ccd 9
grade 0 events	4715	4538	5010	7032	7414	21846
	19%	18%	18%	6%	20%	43%
grade 1 events	51	38	33	61	71	287
	0%	0%	0%	0%	0%	0%
grade 2 events	3606	3561	3821	12809	6856	6289
	14%	14%	14%	11%	18%	12%
grade 3 events	1692	1690	1749	7667	2514	2516
	7%	6%	6%	6%	6%	5%
grade 4 events	1553	1559	1687	6433	2283	3297
	6%	6%	6%	5%	6%	6%
grade 5 events	6362	6755	7790	13079	7801	7662
	26%	27%	28%	11%	21%	15%
grade 6 events	6132	6010	7112	63891	9664	7832
	25%	24%	26%	57%	26%	15%
grade 7 events	0	0	0	0	0	0
	0%	0%	0%	0%	0%	0%

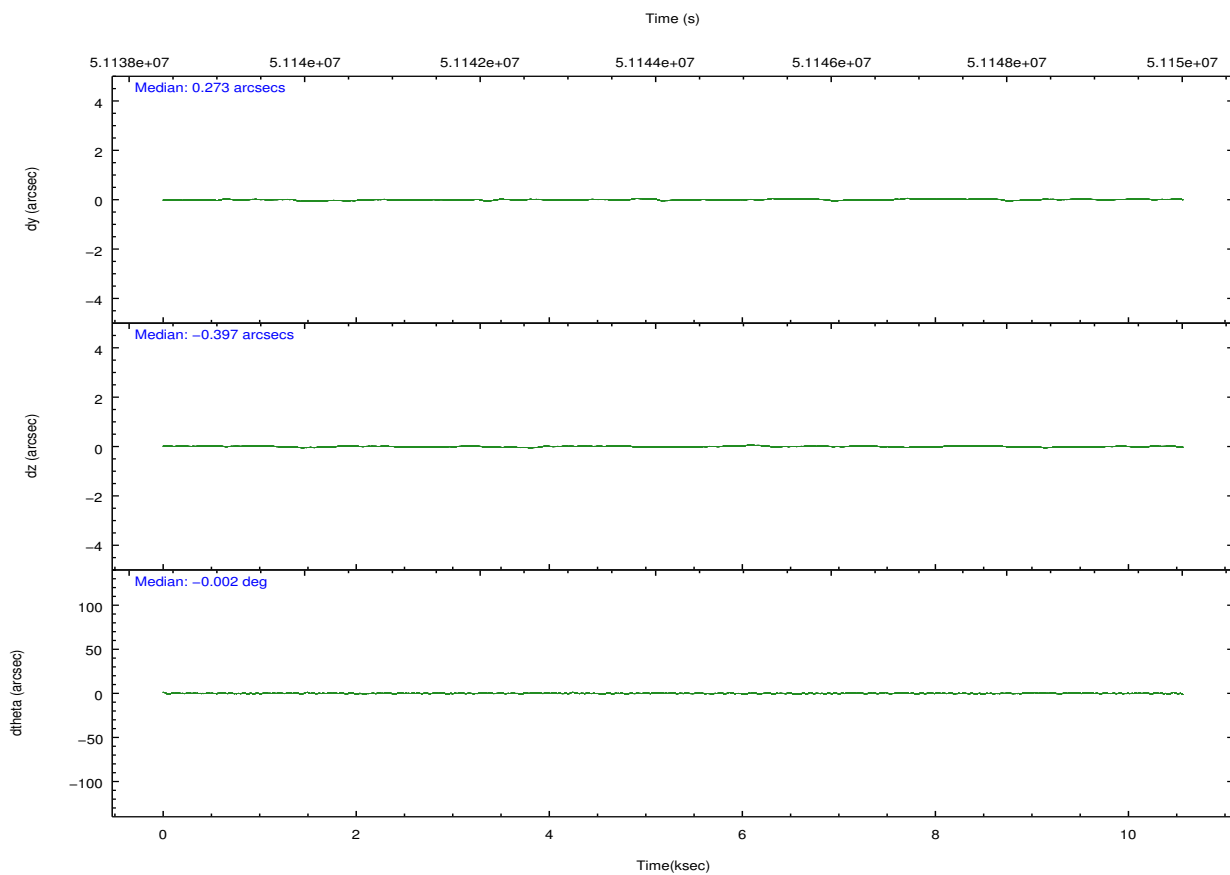
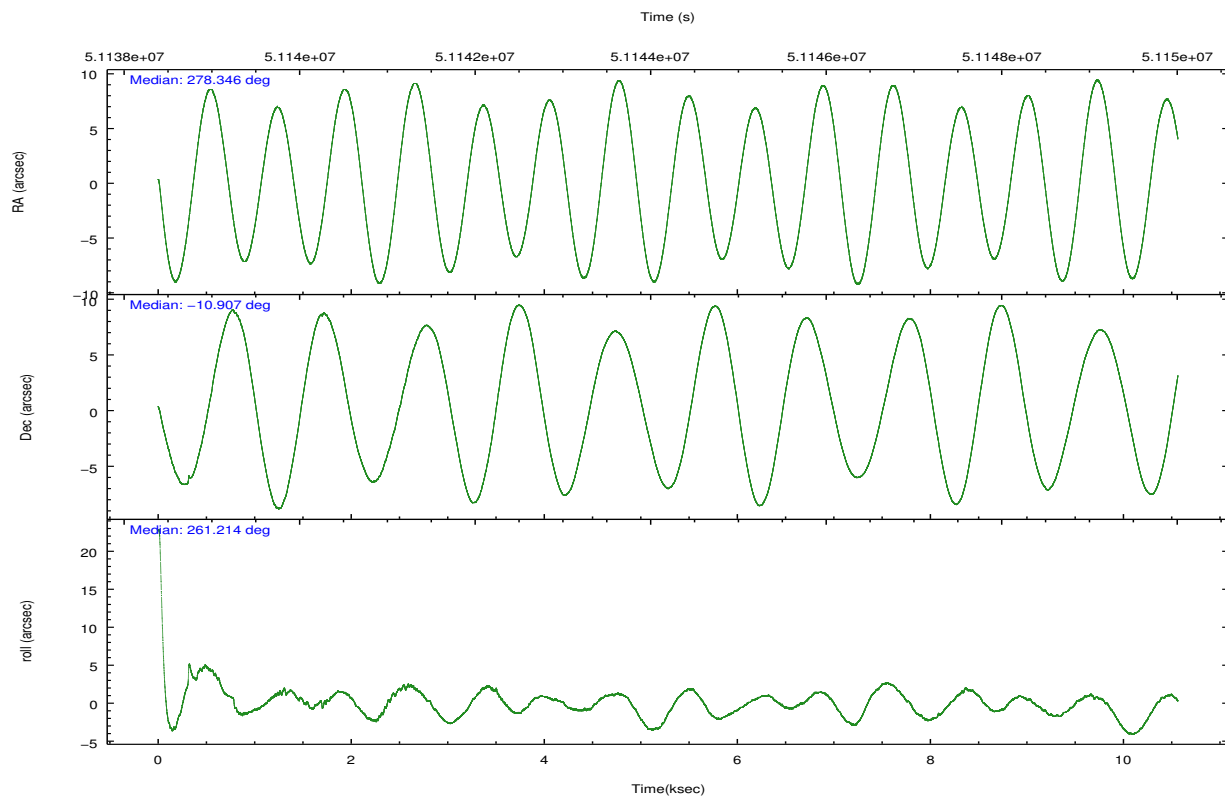


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	6	6
Detector	ACIS-236789	ACIS-236789	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
Pointing RA	278.336586	278.3462833948161	Subarray requested	NONE	NONE
Pointing Dec	-10.880889	-10.90691959065735	Alternating exposures requested	N	N
Pointing Roll	261.063688	261.2221829867143	Primary exposure time	0.000000	3.2
SIM focus pos (mm)	-0.684267	0.255451383487682			
SIM defocus (mm)	0	0.9397188447875782			
SIM translation stage pos (mm)	-190.132523	-190.1325231039672			
SIM translation stage offset (mm)	0	5.209593894051068e-07			
Observation start time	51139413.184000	51138758.928763			
Observation start date	1999-08-15T21:22:29	1999-08-15T21:12:38			
Observation end time	51149413.184000	51149480.941641			
Observation end date	1999-08-16T00:09:09	1999-08-16T00:11:20			
Read mode	TIMED	TIMED			

## 2.3 Aspect



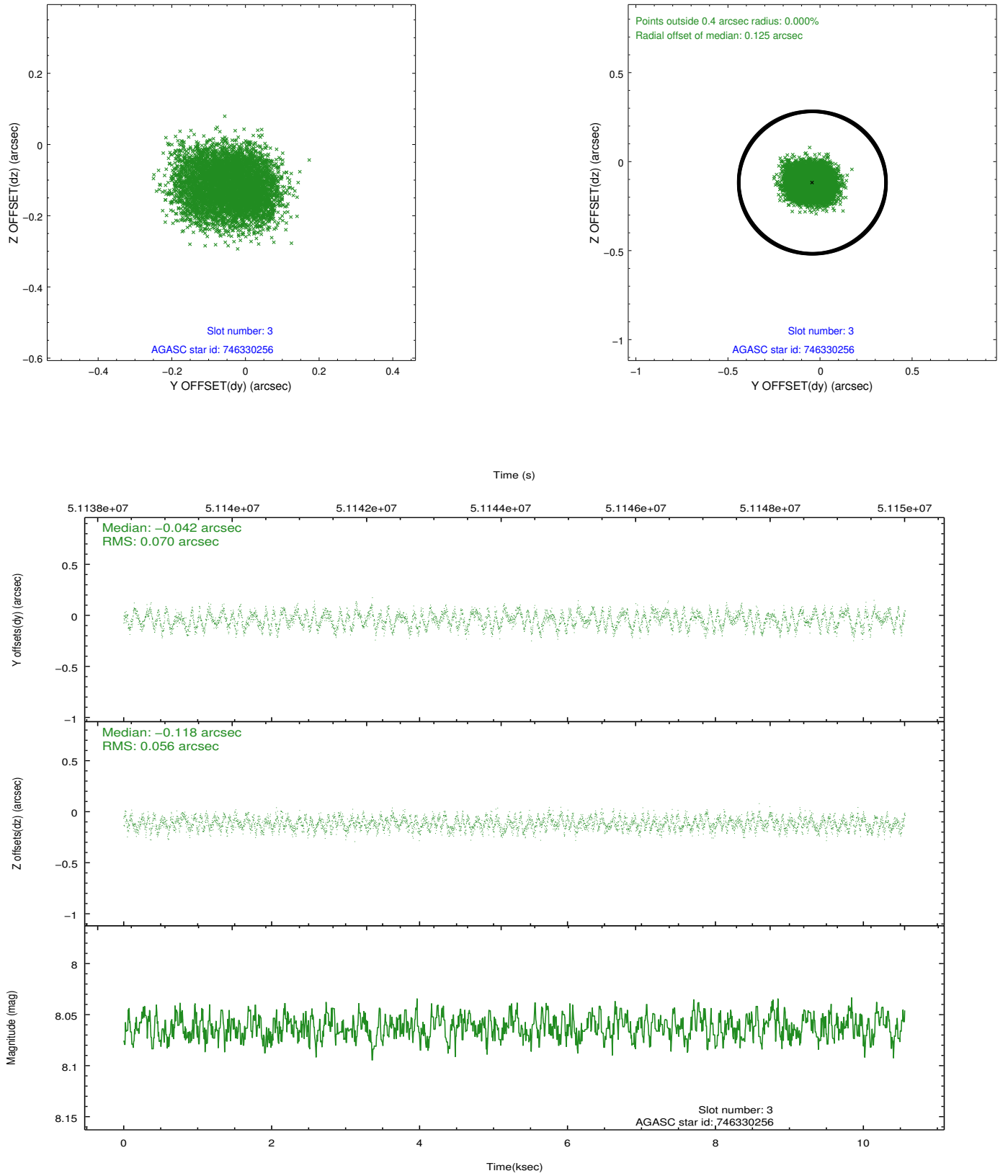


Slot Statistics

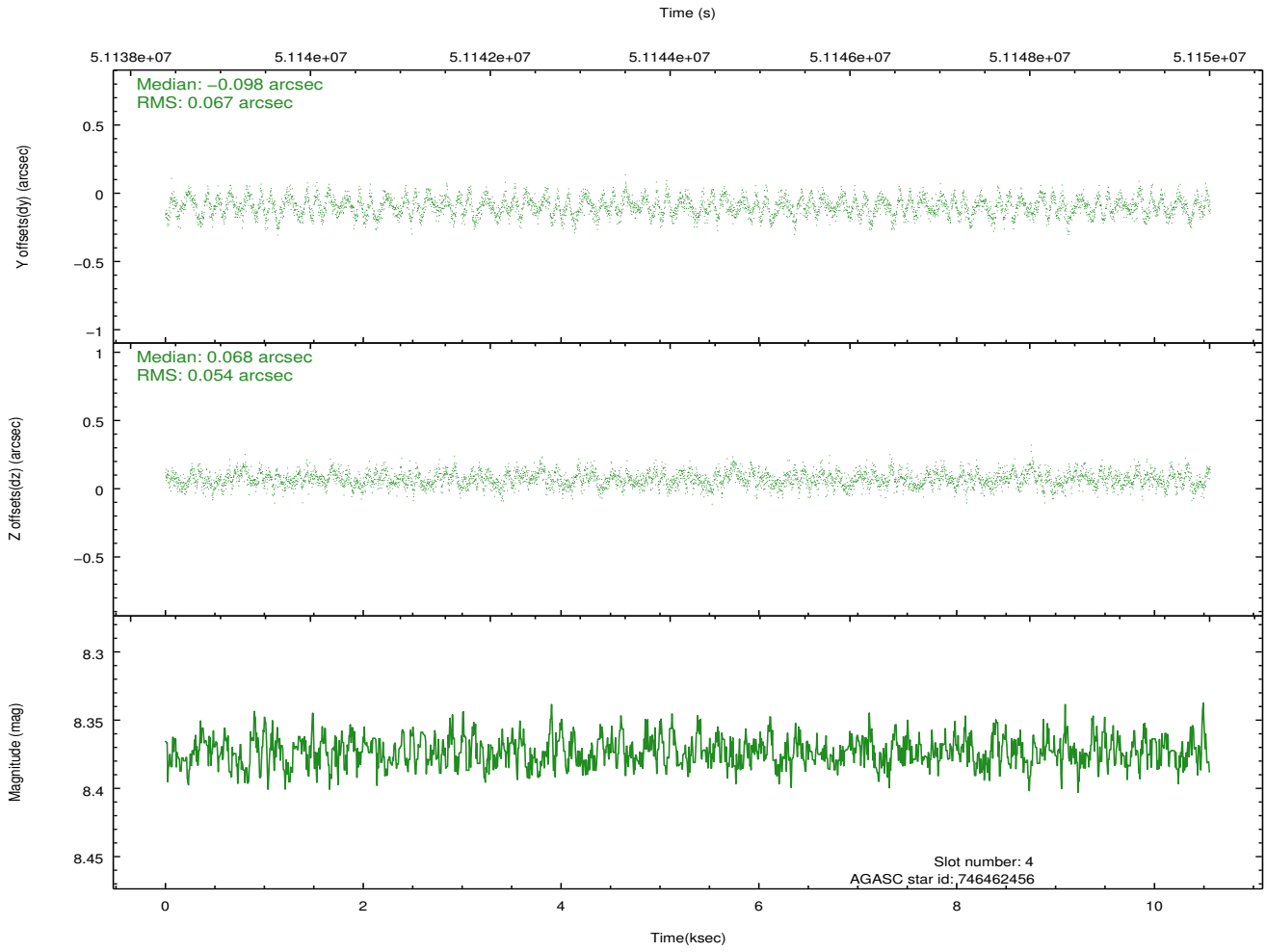
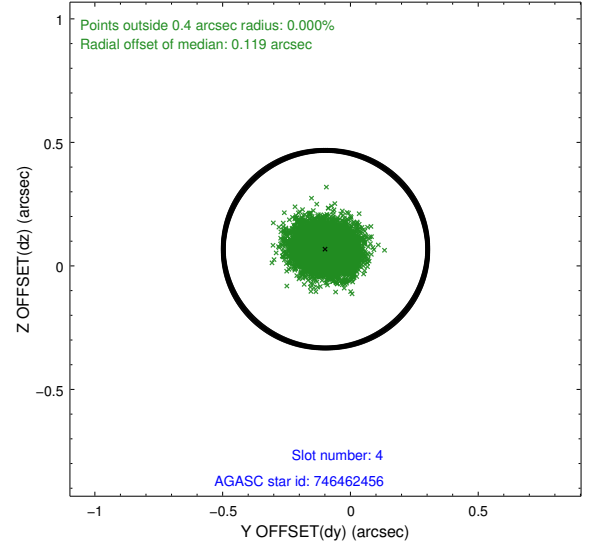
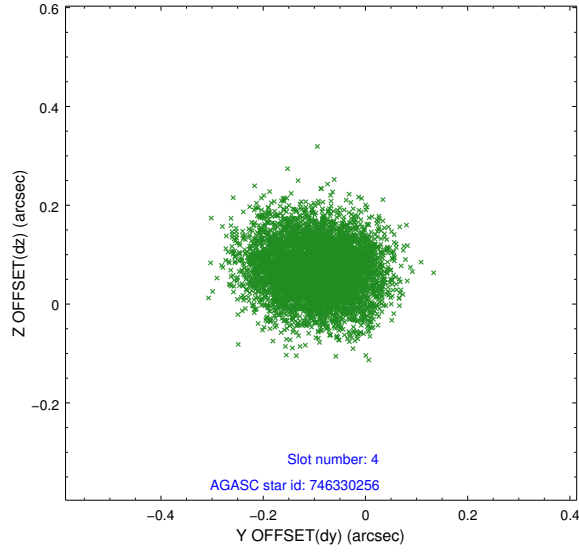
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-4	7.23	5154	0.081	-0.053	0.005	0.008	0.000000	0.000000	2160.79	187.82
1	FID	ACIS-S-5	7.27	5154	-0.072	-0.031	0.004	0.008	0.000000	0.000000	-1805.70	181.49
2	FID	ACIS-S-6	7.37	5153	-0.038	0.099	0.006	0.010	0.000000	0.000000	408.61	825.34
3	GUIDE	746330256	8.06	5153	-0.042	-0.118	0.098	0.147	277.634401	-10.863955	329.34	-2461.14
4	GUIDE	746462456	8.37	5153	-0.098	0.068	0.094	0.147	278.652171	-10.530173	-1419.61	907.16
5	GUIDE	746995400	9.66	5147	0.144	0.007	0.144	0.227	278.078957	-11.289885	1596.95	-668.95
6	GUIDE	746461728	9.80	5150	-0.125	0.060	0.185	0.299	278.986921	-10.530755	-1599.66	2078.56
7	GUIDE	746456864	9.68	5151	0.111	-0.021	0.130	0.214	278.447021	-11.192395	1047.82	560.39

## 2.4 Star Slots

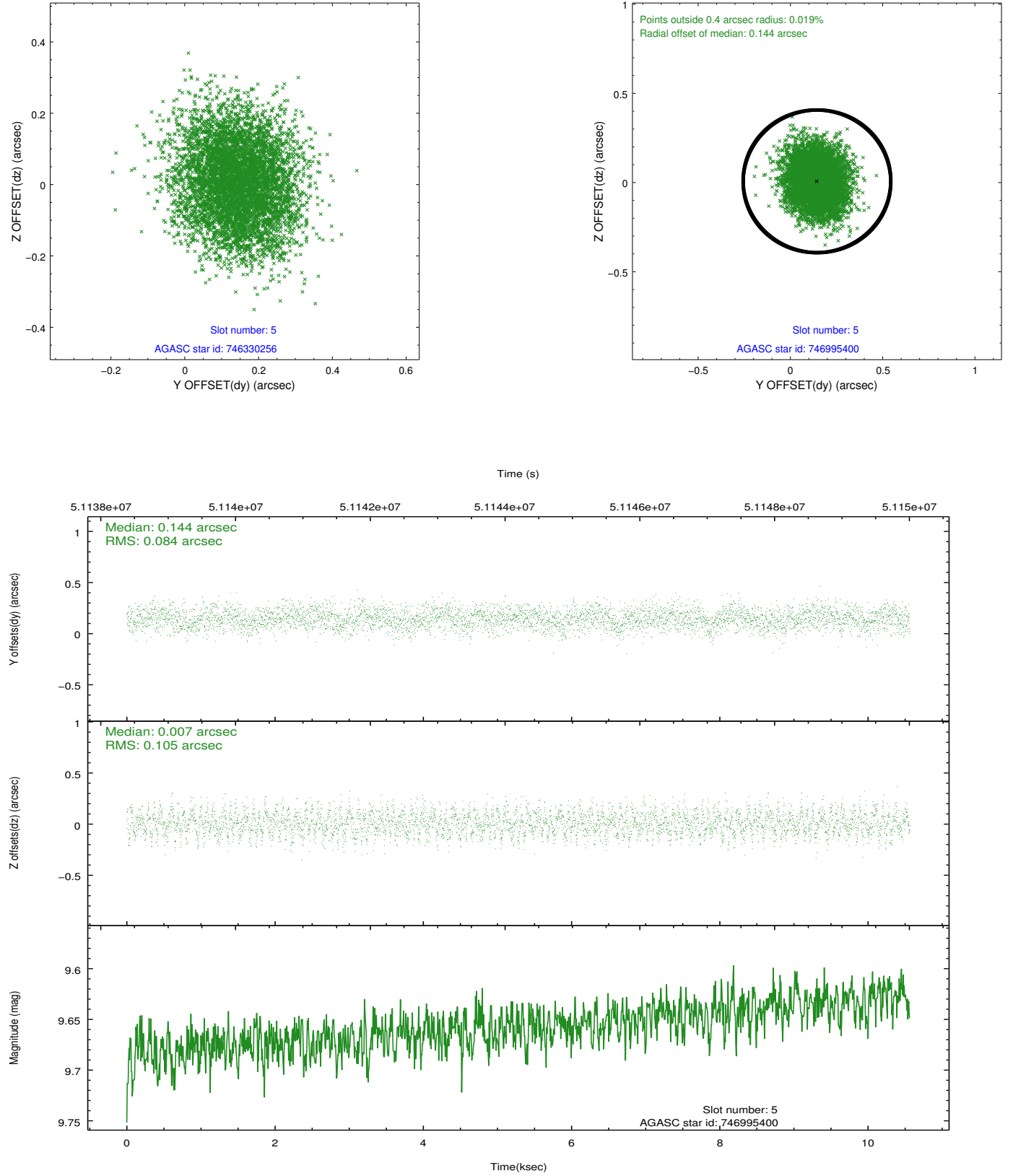
### 2.4.1 Slot 3



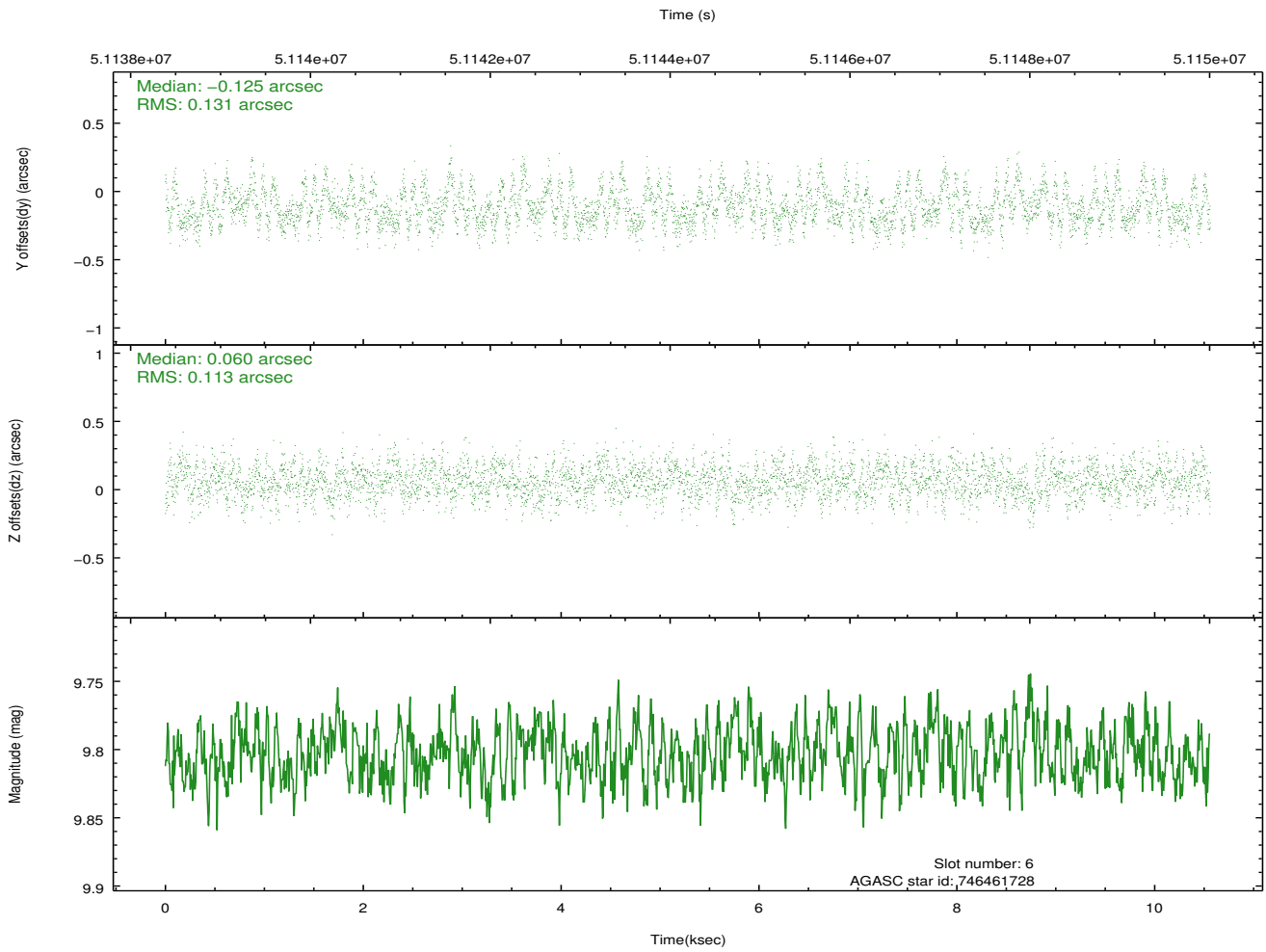
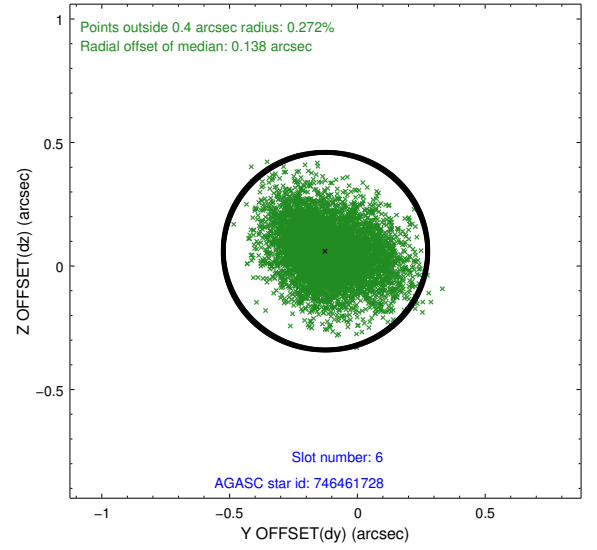
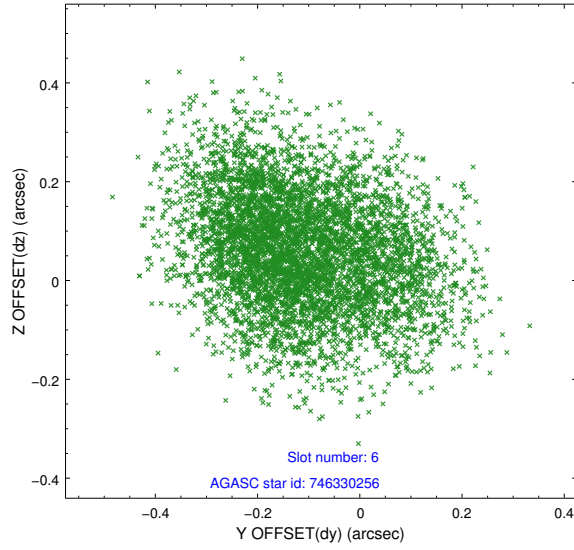
## 2.4.2 Slot 4



### 2.4.3 Slot 5

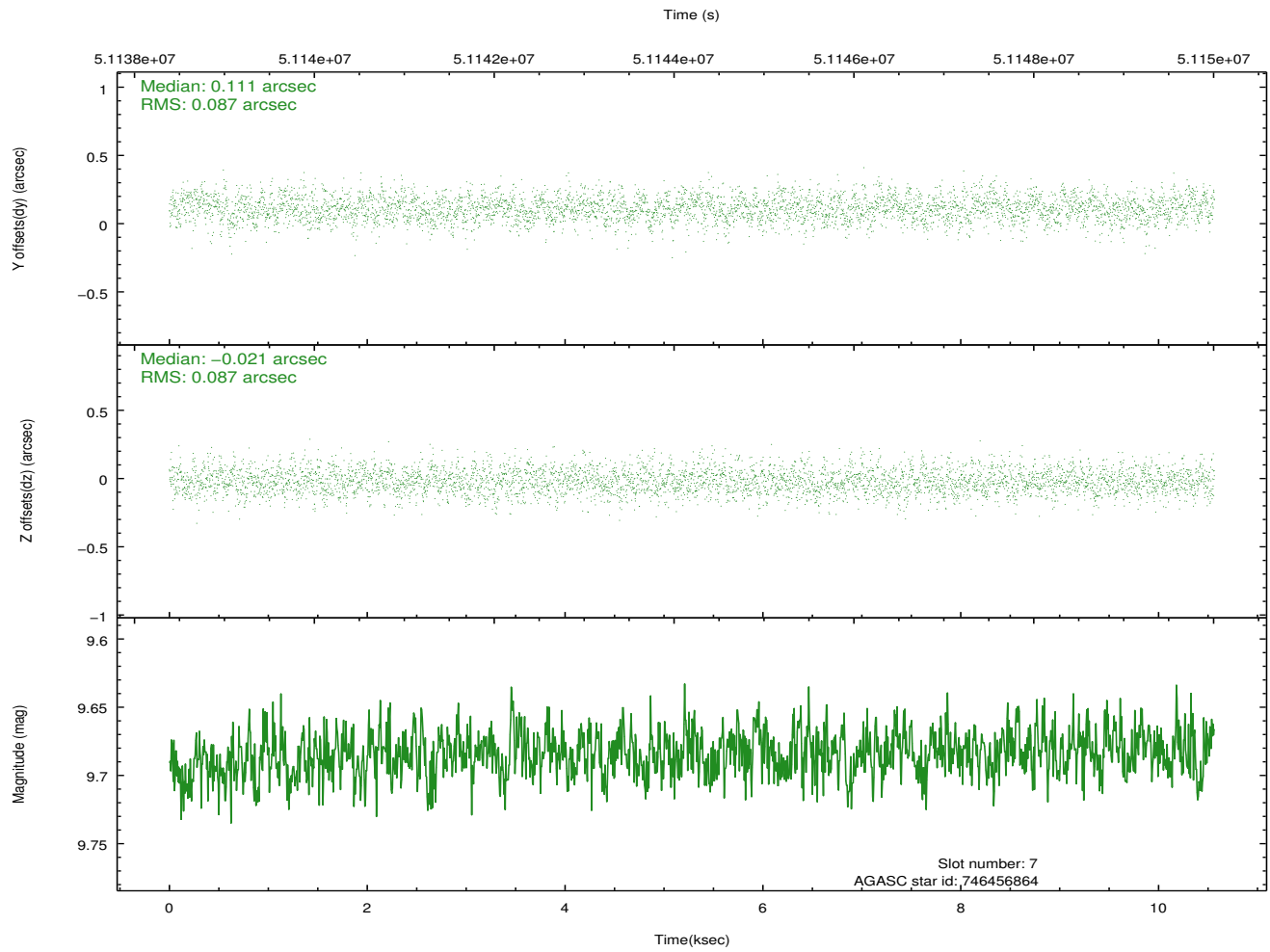
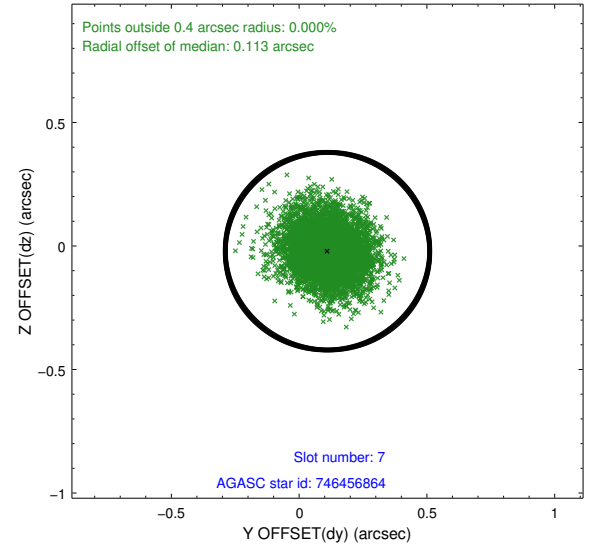
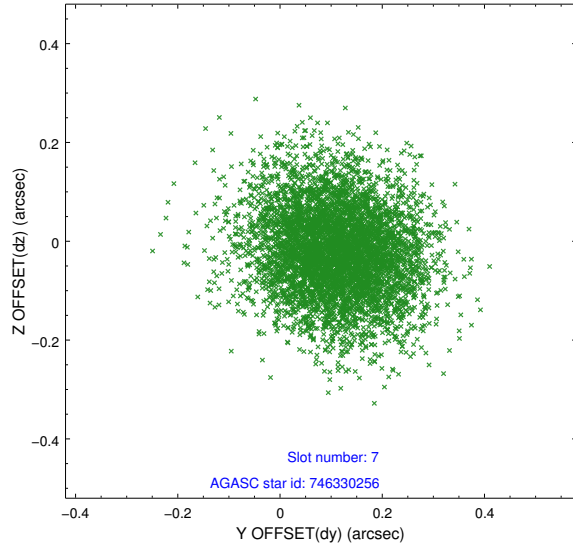


## 2.4.4 Slot 6



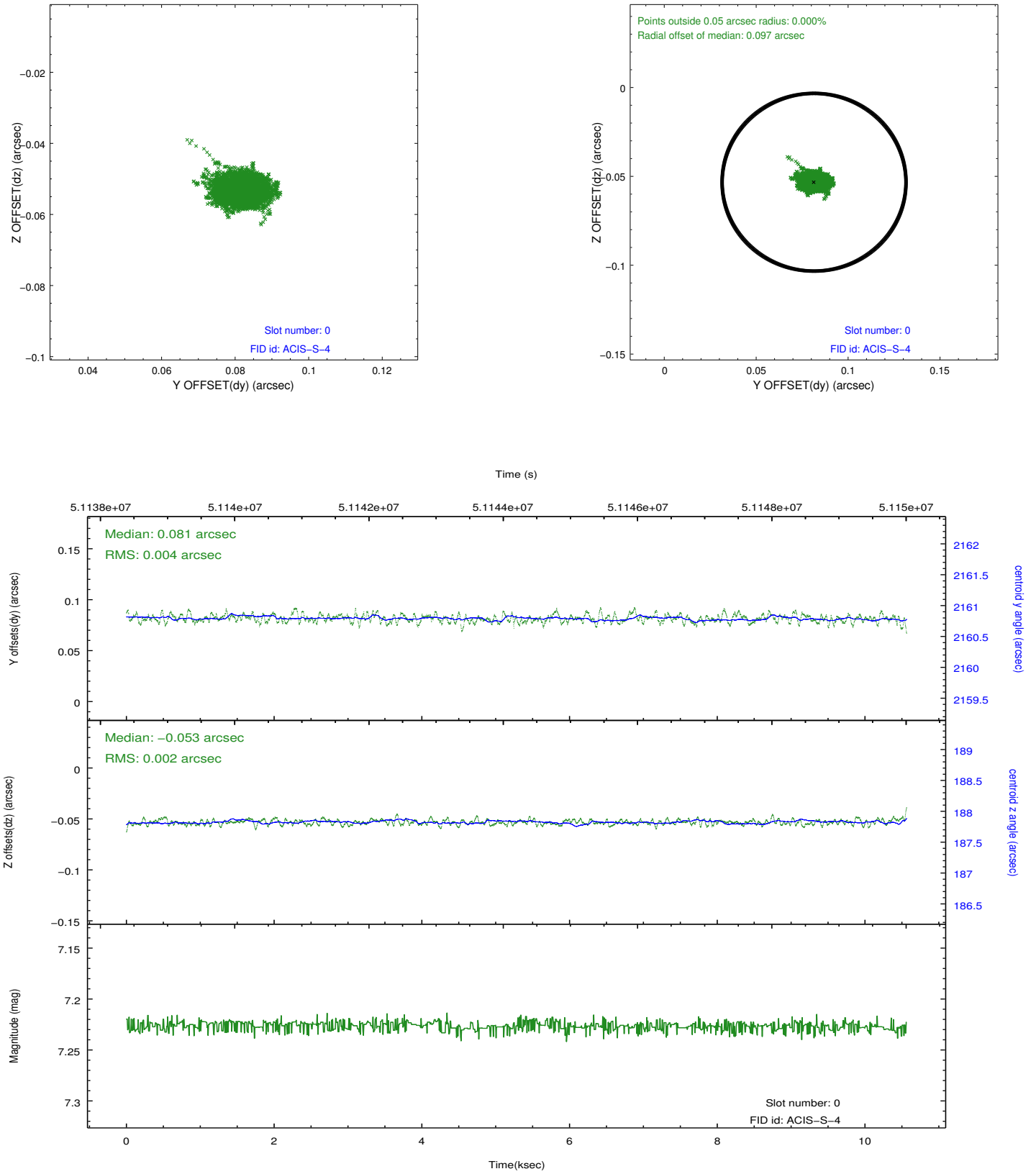


## 2.4.5 Slot 7

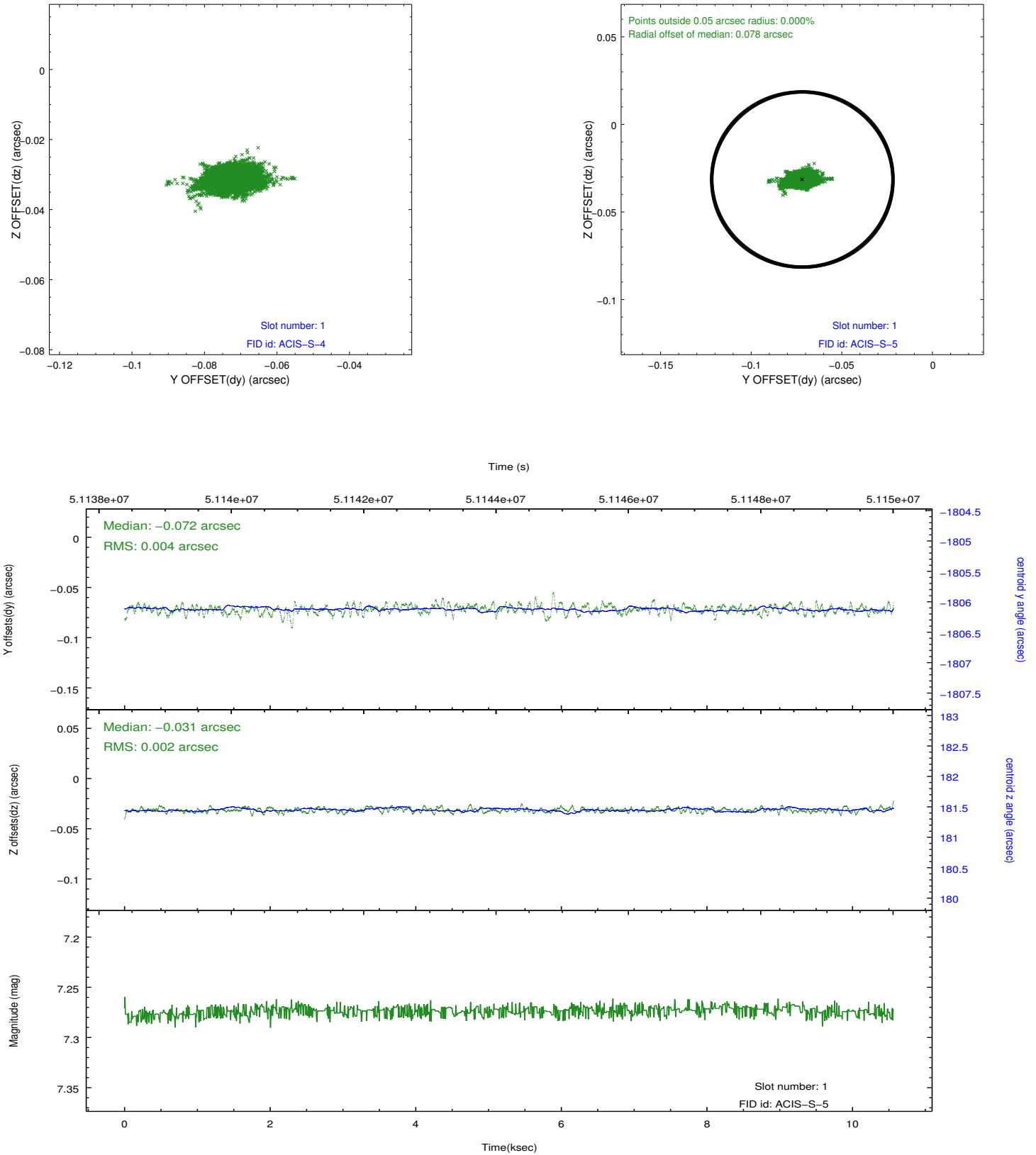


## 2.5 FID Slots

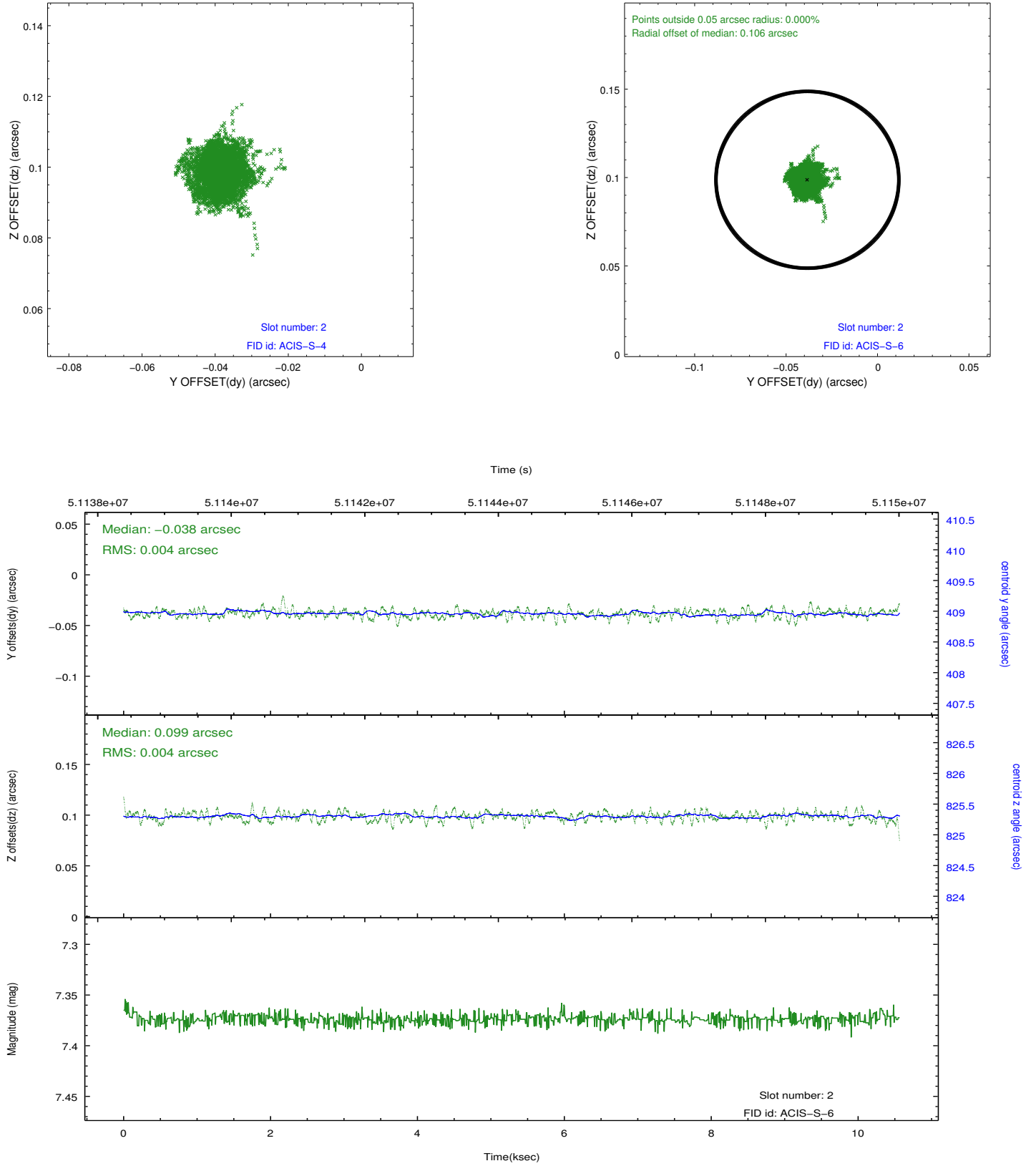
### 2.5.1 Slot 0



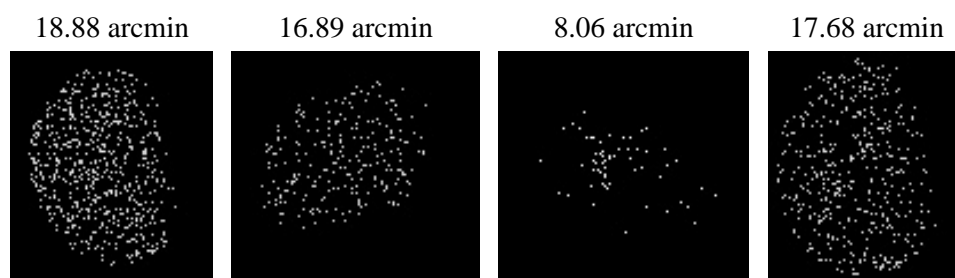
## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2010.03.29
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	9.756

## A.2 Comments

Off-axis effective area measurement on chip S5.

===

Elevated count rate during first 6 ksec of observation due to high radiation environment.

===

The focal plane temperature is approximately -100 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T\_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.