

# V&V Reference Report

## L2 ASCDS Version : 10.2.4

Observation 16051 - L2 Version 2  
Chandra X-Ray Center

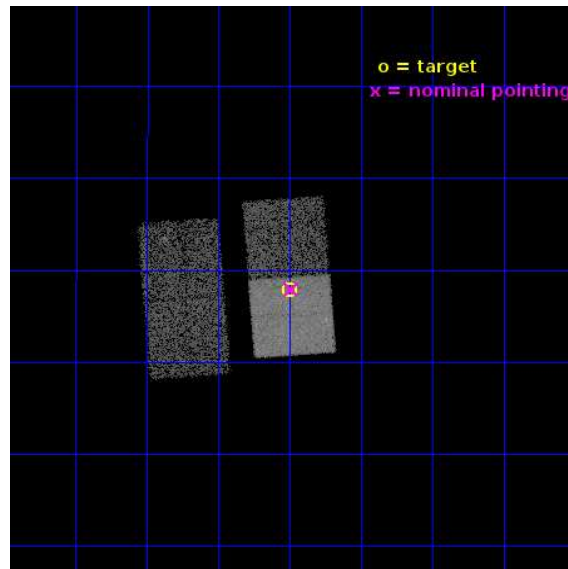
L2 Processing Date : Oct 14 2014

## 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>A</b>	<b>Summary</b>	<b>17</b>
A.1	Status . . . . .	17
A.2	Comments . . . . .	17

# 1 Front

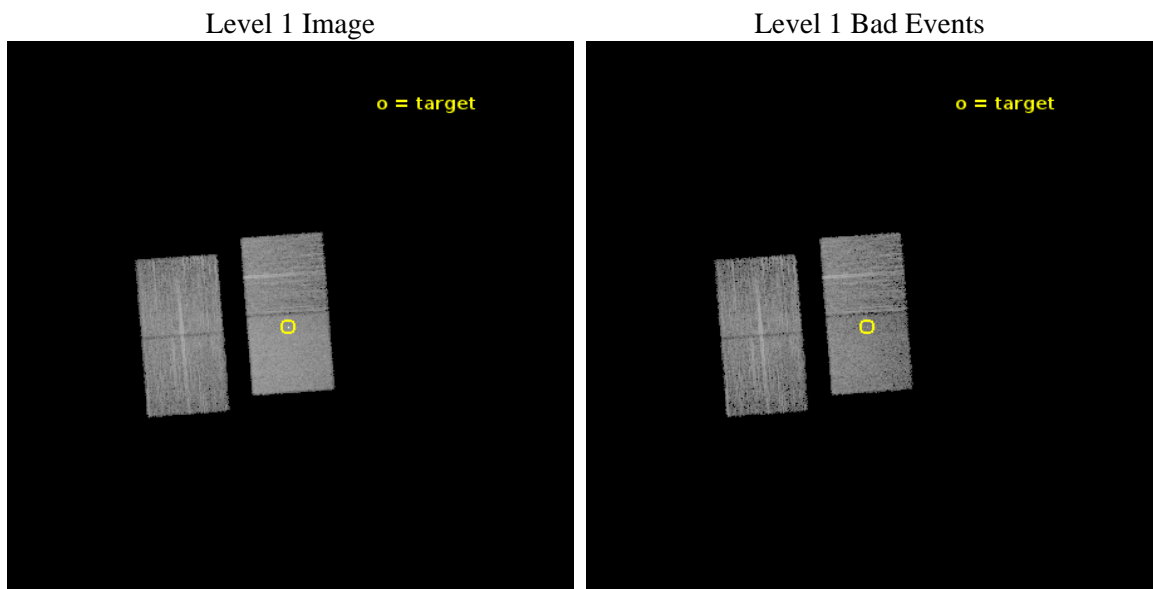
seq_num	702945	Sequence number
obs_id	16051	Observation id
title	Continuing the Chandra 3CR Snapshot Survey: 23 Radio Sources with 0.5	Proposal title
observer	Dr. Francesco Massaro	Principal investigator
object	3C93	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	55.875	Observer's specified target RA [deg]
dec_targ	4.963472	Observer's specified target Dec [deg]
ra_nom	55.872503304513	Nominal RA [deg]
dec_nom	4.9653853458814	Nominal Dec [deg]
roll_nom	85.700195140908	Nominal Roll [deg]
revision	2	Processing version of data
ontime	12079.593059778	Sum of GTIs [s]
livetime	11921.764283585	Livetime [s]
ontime2	12079.469939768	Sum of GTIs [s]
ontime3	12079.510979772	Sum of GTIs [s]
ontime6	12079.552019775	Sum of GTIs [s]
ontime7	12079.593059778	Sum of GTIs [s]
l2events	53054	Number of level 2 events



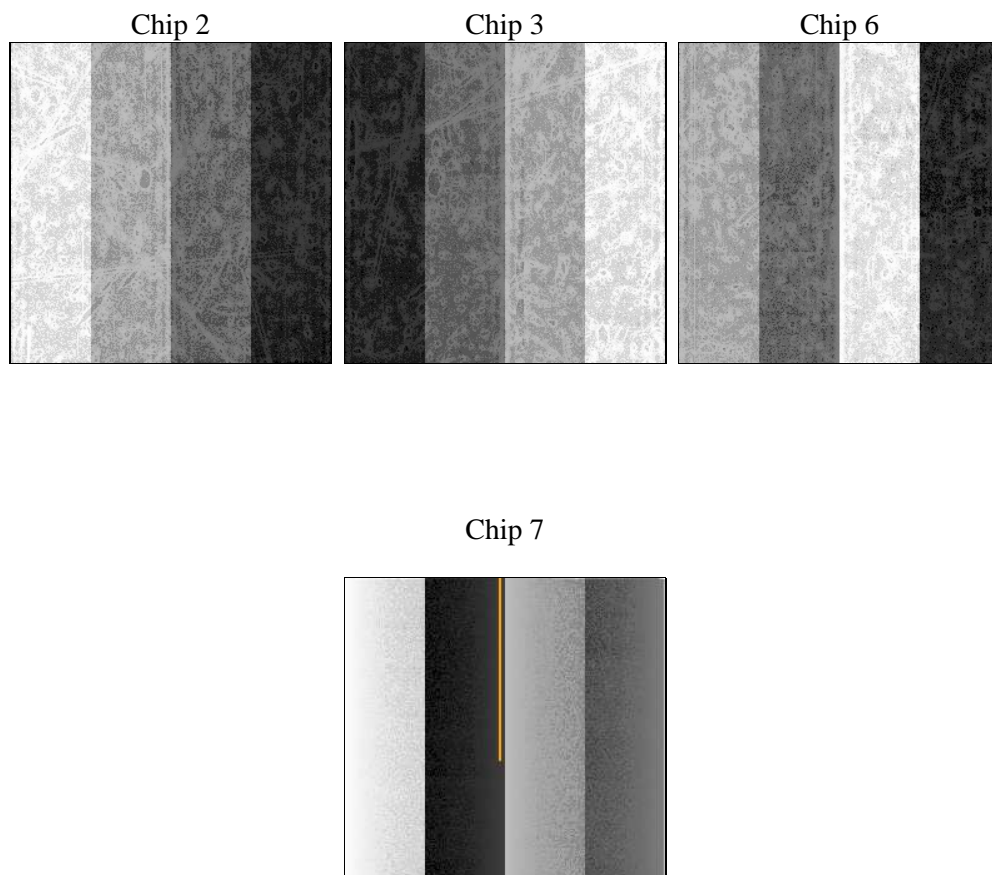
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	12000.000000	[s] Scheduled observation exposure time
ascdsver	10.2.4	Processing system revision	ontime	12079.593059778	Sum of GTIs [s]
caldsver	4.6.3	&#160	ontime2	12079.469939768	Sum of GTIs [s]
date	2014-10-14T20:46:41	Date and time of file creation	ontime3	12079.510979772	Sum of GTIs [s]
revision	2	Processing version of data	ontime6	12079.552019775	Sum of GTIs [s]
			ontime7	12079.593059778	Sum of GTIs [s]
			l1events	261140	Number of level 1 events

### 2.1.4 Events

	ccd 2	ccd 3	ccd 6	ccd 7
level 1 events	61332	55840	60742	83226
rejected events	54447	49471	53520	47060
rejected %	88%	88%	88%	56%

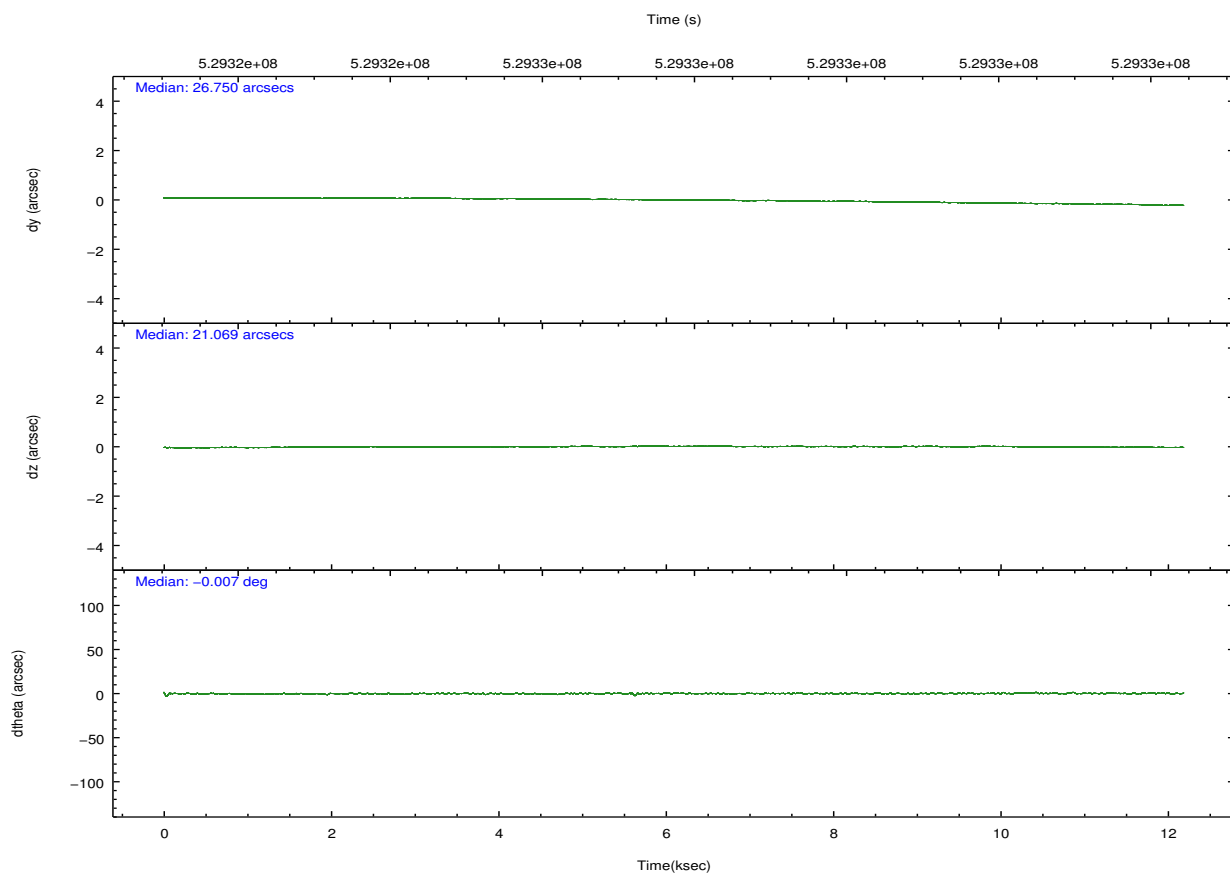
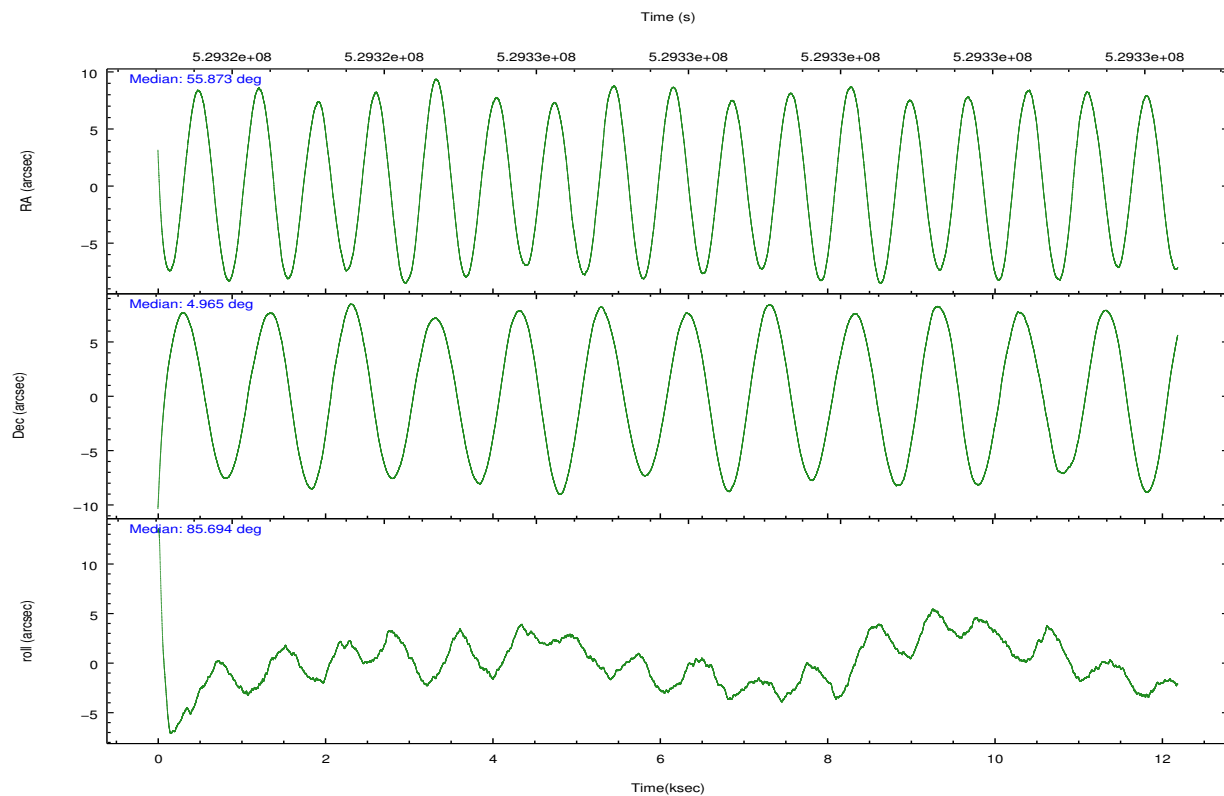
	ccd 2	ccd 3	ccd 6	ccd 7
grade 0 events	2479	2146	2305	3260
	4%	3%	3%	3%
grade 1 events	29	26	26	99
	0%	0%	0%	0%
grade 2 events	1715	1404	1644	7604
	2%	2%	2%	9%
grade 3 events	733	672	753	2999
	1%	1%	1%	3%
grade 4 events	679	673	748	2889
	1%	1%	1%	3%
grade 5 events	2644	3085	3187	8311
	4%	5%	5%	9%
grade 6 events	1281	1475	1776	19422
	2%	2%	2%	23%
grade 7 events	51772	46359	50303	38642
	84%	83%	82%	46%



## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-2367	ACIS-2367	Obspar file type	PREDICTED	ACTUAL
Grating	NONE	NONE	Obspar update status	NONE	UPDATED
Data mode	FAINT	FAINT	CCD I0 on	N	N
Observation mode	POINTING	POINTING	CCD I1 on	N	N
[deg] Pointing RA	55.884801	55.87250330451312	CCD I2 on	O1	Y
[deg] Pointing Dec	4.940811	4.965385345881369	CCD I3 on	O2	Y
[deg] Pointing Roll	85.542483	85.70019514090771	CCD S0 on	N	N
[mm] SIM focus pos	-0.684267	-0.6828225247311905	CCD S1 on	N	N
[mm] SIM defocus	0	0.001444936568705701	CCD S2 on	Y	Y
[mm] SIM translation stage pos	-190.132523	-190.1425803651734	CCD S3 on	Y	Y
[mm] SIM translation stage offset	0	0.01005778216563158	CCD S4 on	N	N
[s] Observation start time (MET)	529321816.184000	529320933.39217	CCD S5 on	N	N
Observation start date	2014-10-10T09:49:09	2014-10-10T09:35:33	Number of optional ACIS chips dropped	0	0
[s] Observation end time (MET)	529333816.184000	529334455.70543	On-chip summing requested	N	N
Observation end date	2014-10-10T13:09:09	2014-10-10T13:20:55	Subarray requested	NONE	NONE
Read mode	TIMED	TIMED	Alternating exposures requested	N	N
			[s] Primary exposure time	0.000000	3.1

## 2.3 Aspect

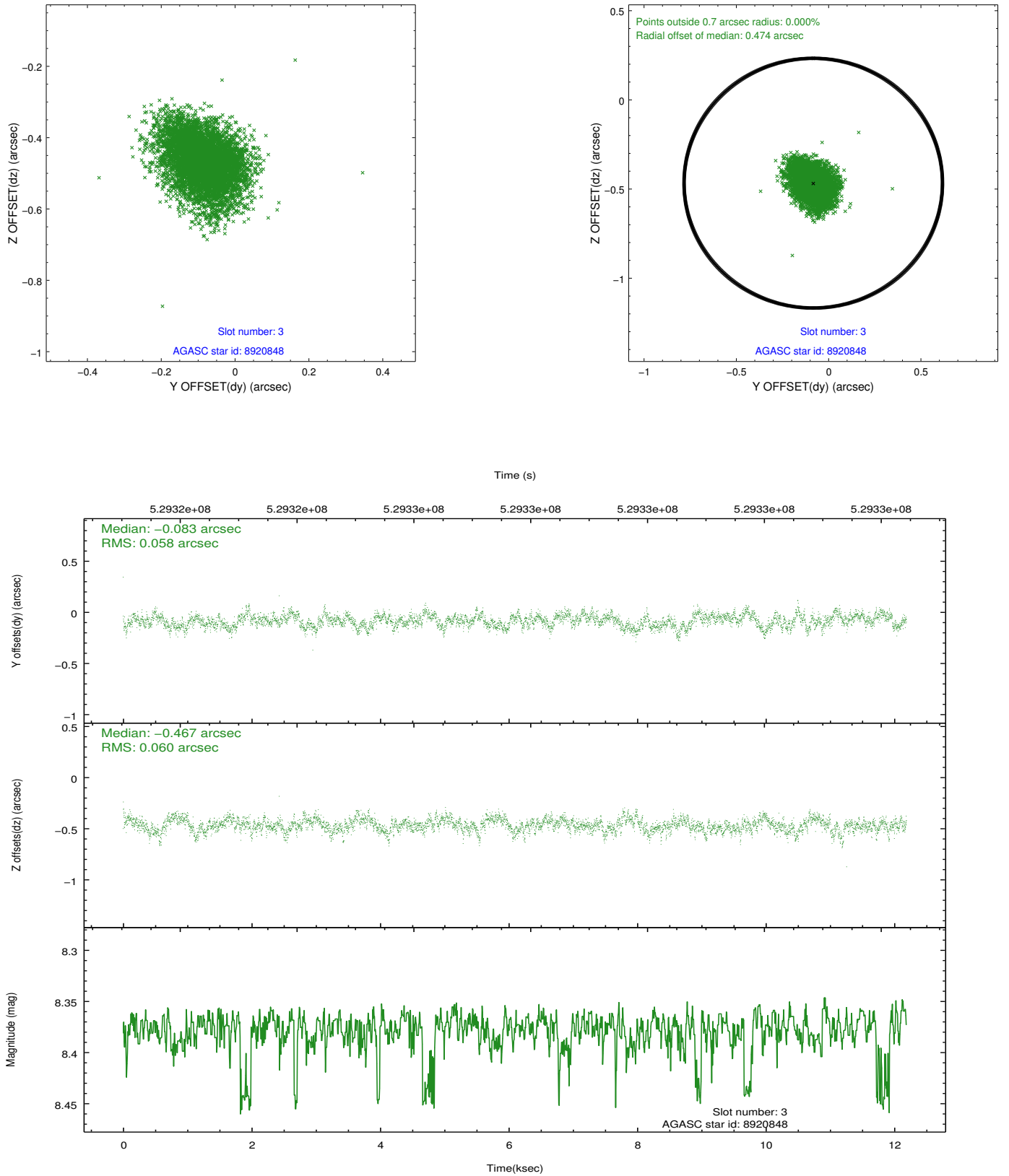


### Slot Statistics

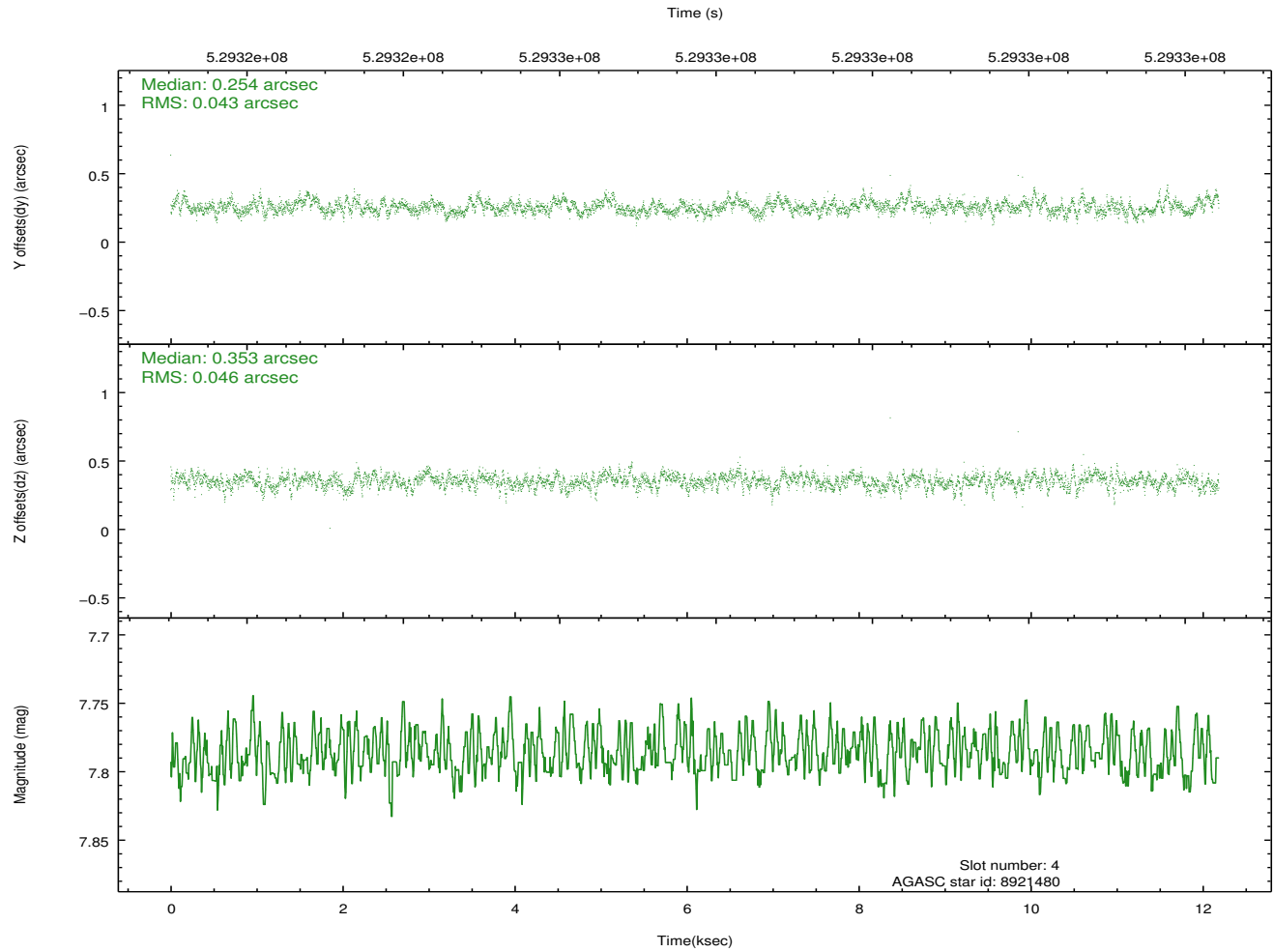
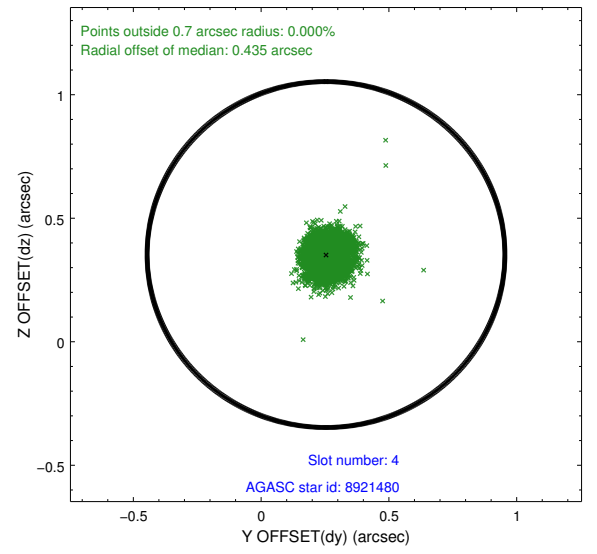
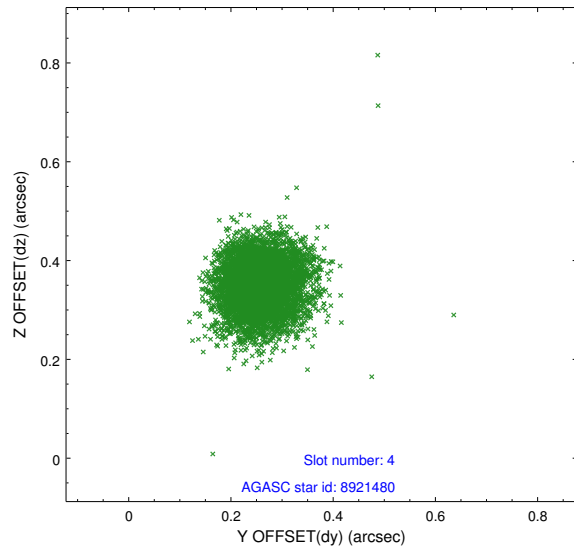
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-1	7.13	2973	0.011	-0.084	0.008	0.013	0.000000	0.000000	916.07	-1738.25
1	FID	ACIS-S-4	7.13	2972	0.321	0.058	0.006	0.010	0.000000	0.000000	2133.95	165.66
2	FID	ACIS-S-5	7.16	2973	-0.358	0.039	0.007	0.013	0.000000	0.000000	-1832.70	159.59
3	GUIDE	8920848	8.38	5944	-0.083	-0.467	0.088	0.147	55.323335	4.633318	-1259.36	1922.19
4	GUIDE	8921480	7.79	5946	0.254	0.353	0.066	0.109	56.323124	4.437934	-1681.16	-1708.93
5	GUIDE	8922856	8.51	5945	0.259	0.432	0.102	0.162	56.408546	4.593255	-1100.85	-1970.72
6	GUIDE	9307816	9.18	5942	-0.332	-0.505	0.113	0.179	55.657699	5.478506	1867.64	962.07
7	GUIDE	9312608	8.58	5941	-0.105	0.193	0.100	0.155	56.252848	5.066740	555.64	-1279.97

## 2.4 Star Slots

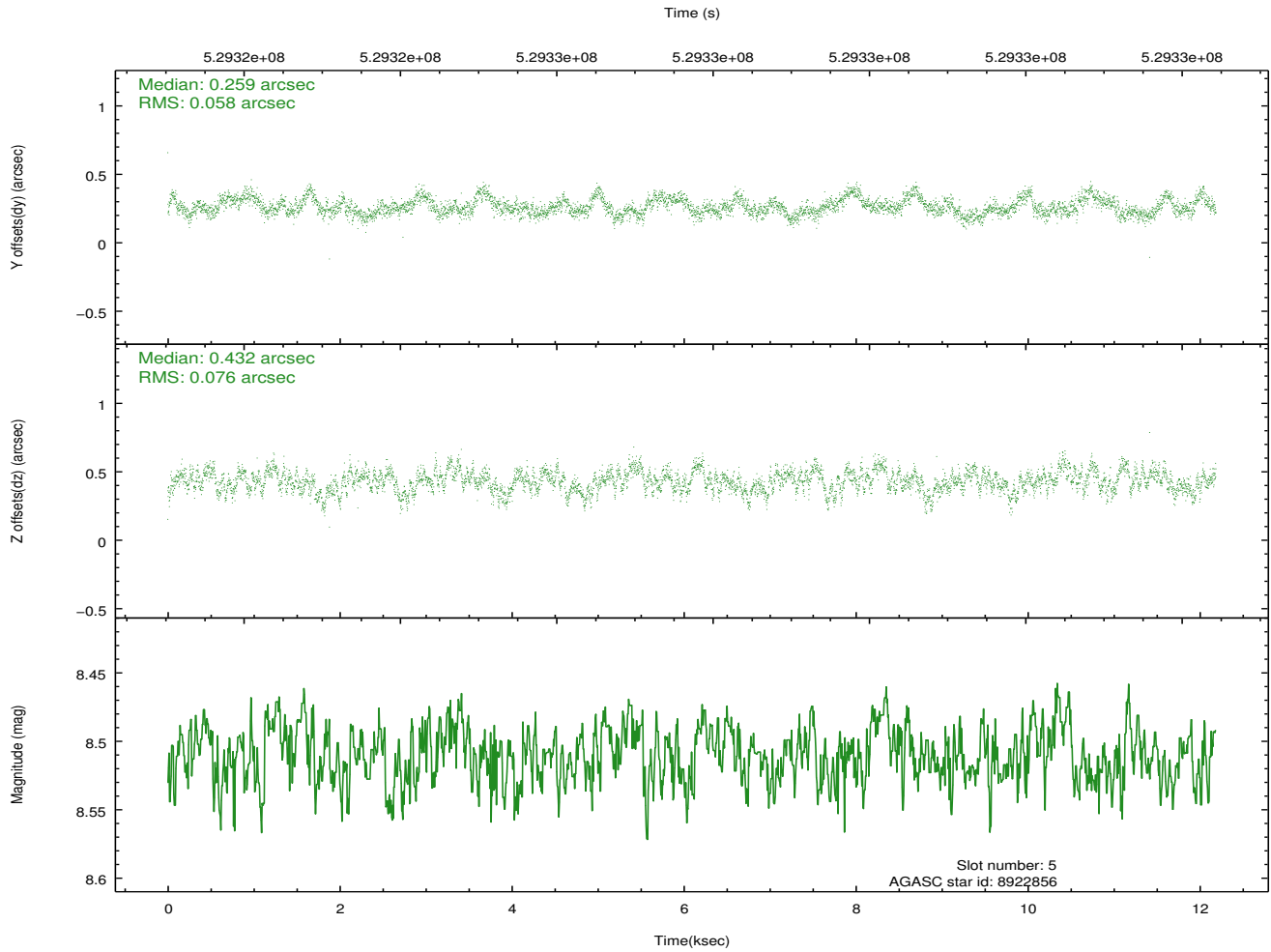
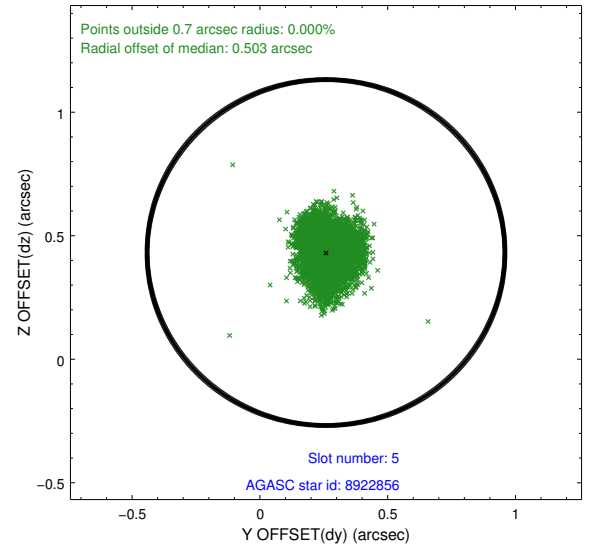
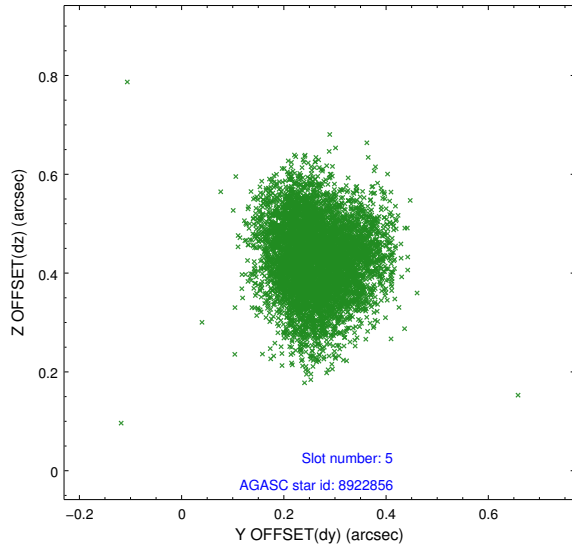
### 2.4.1 Slot 3



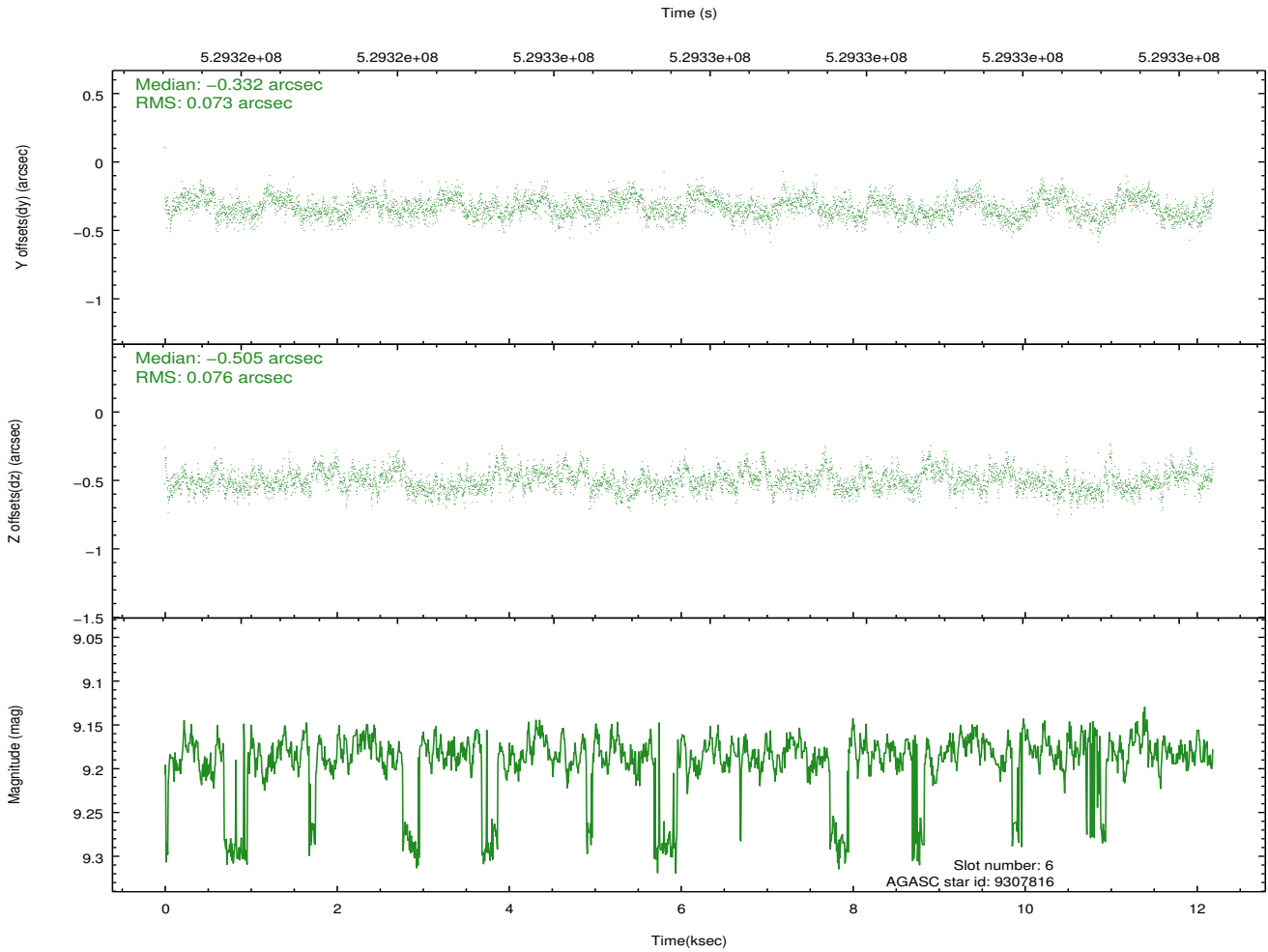
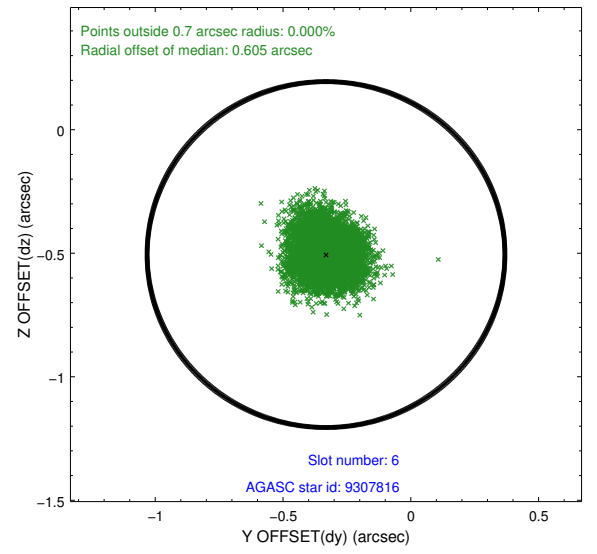
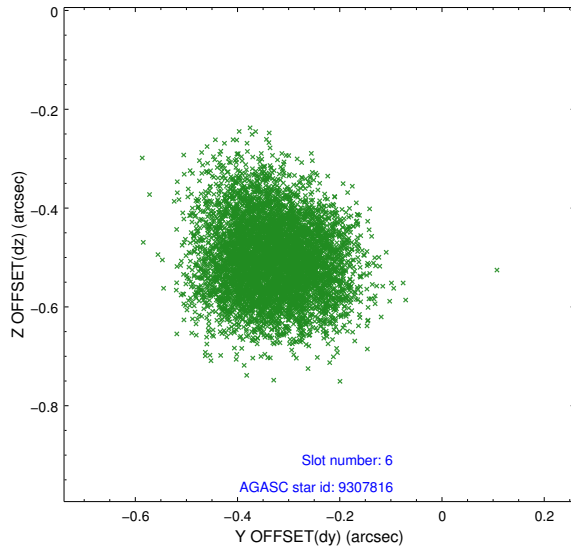
## 2.4.2 Slot 4



### 2.4.3 Slot 5

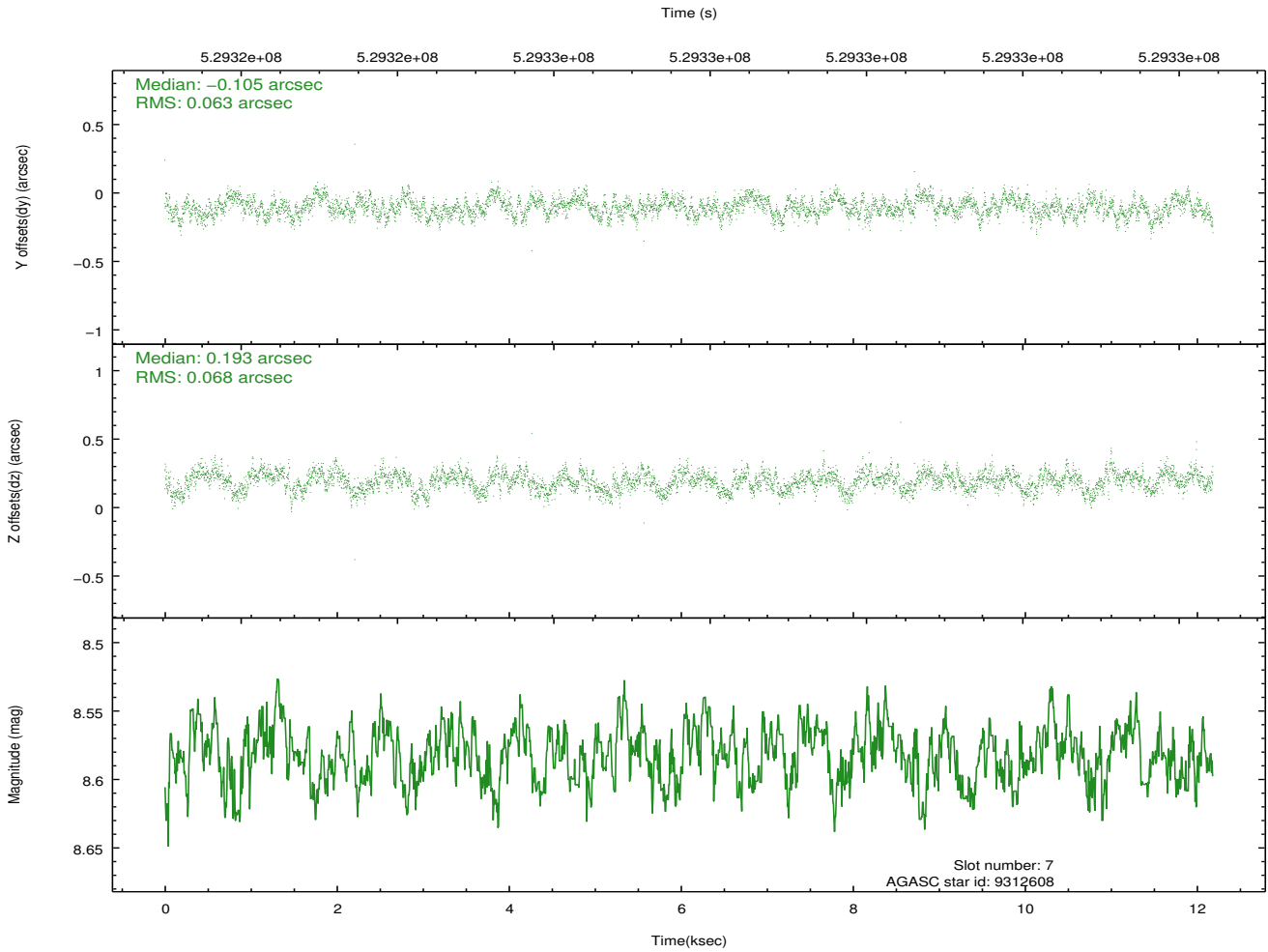
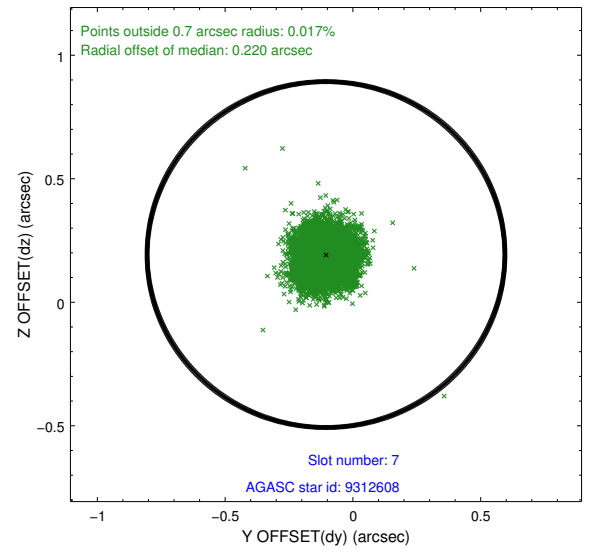
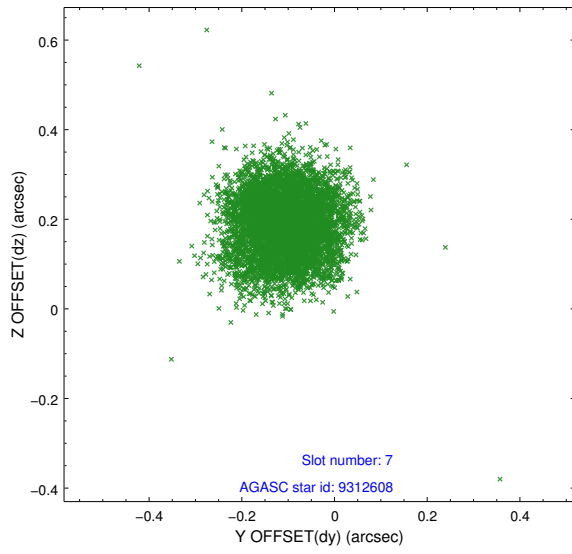


## 2.4.4 Slot 6



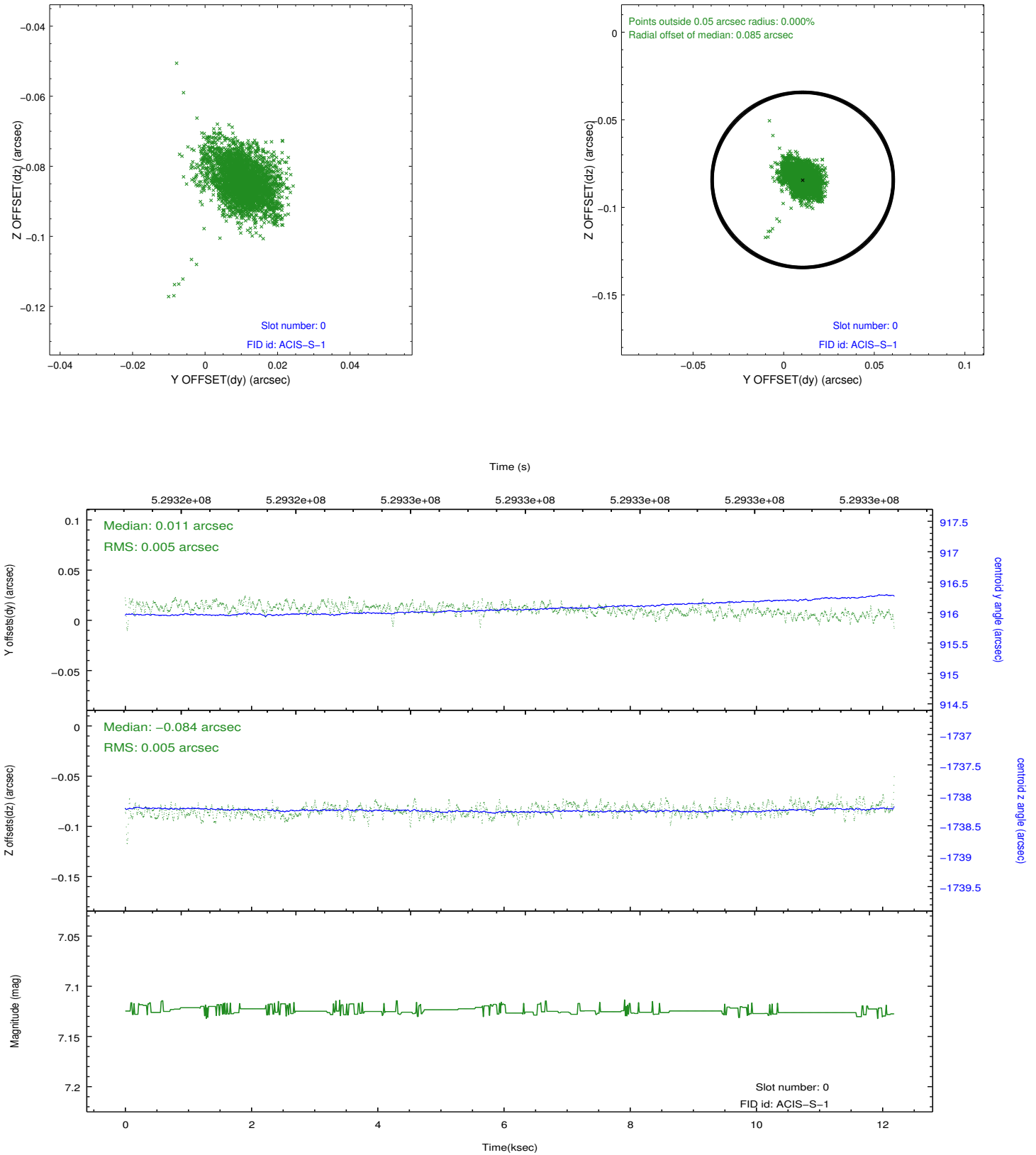


## 2.4.5 Slot 7

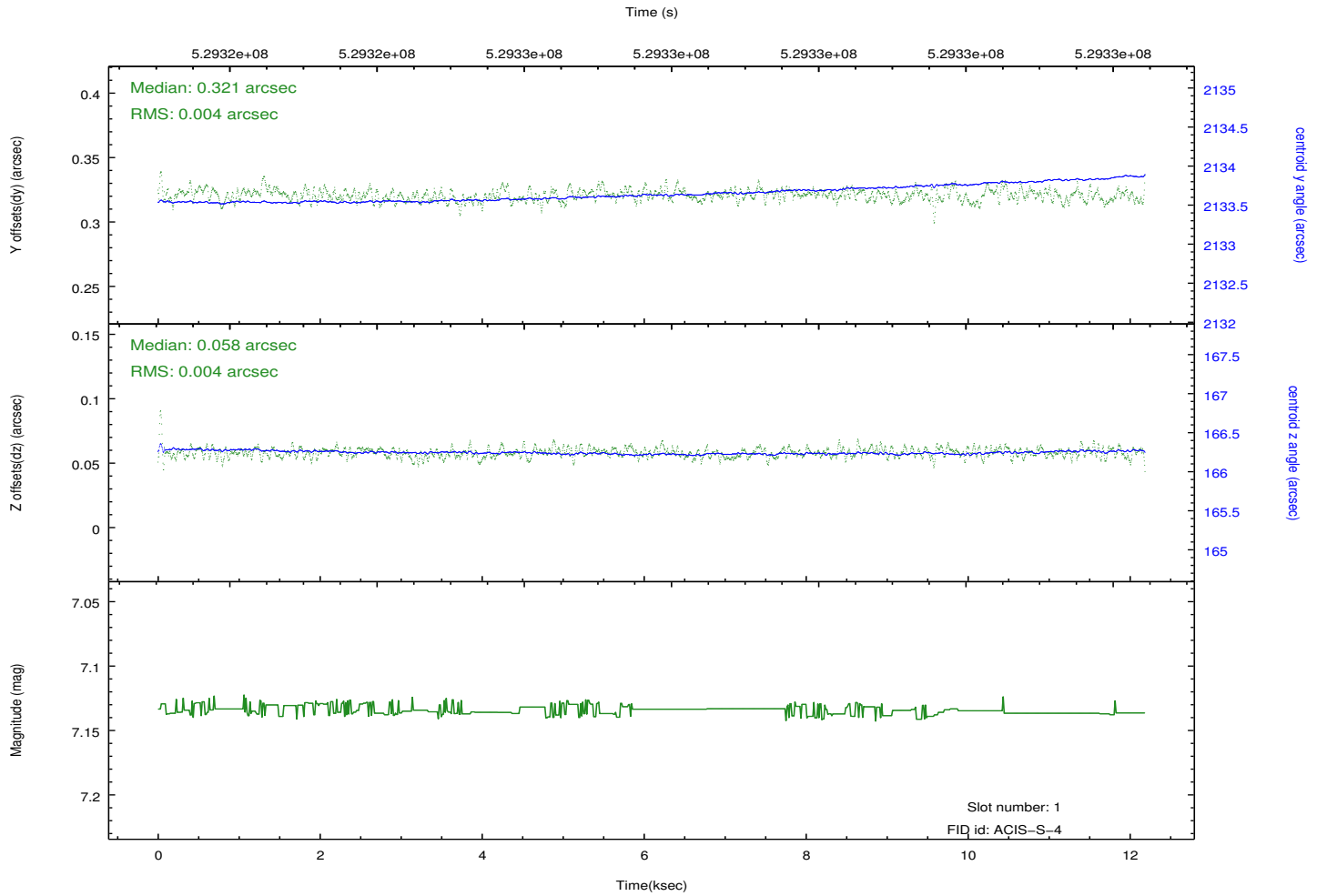
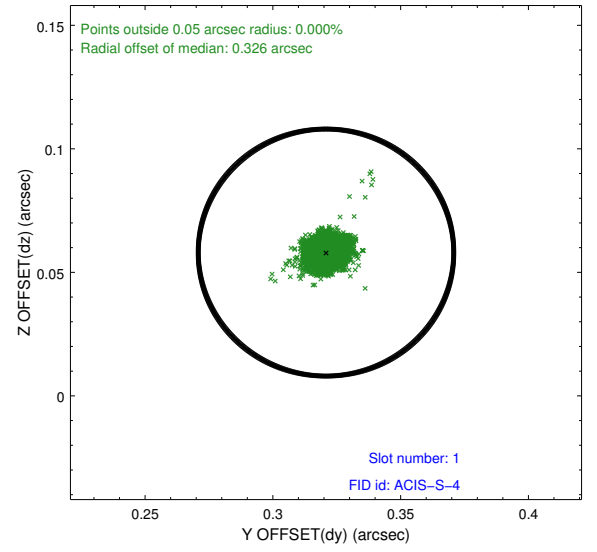
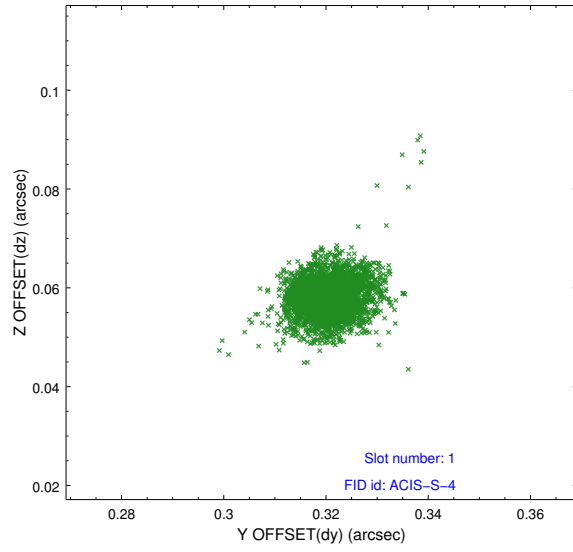


## 2.5 FID Slots

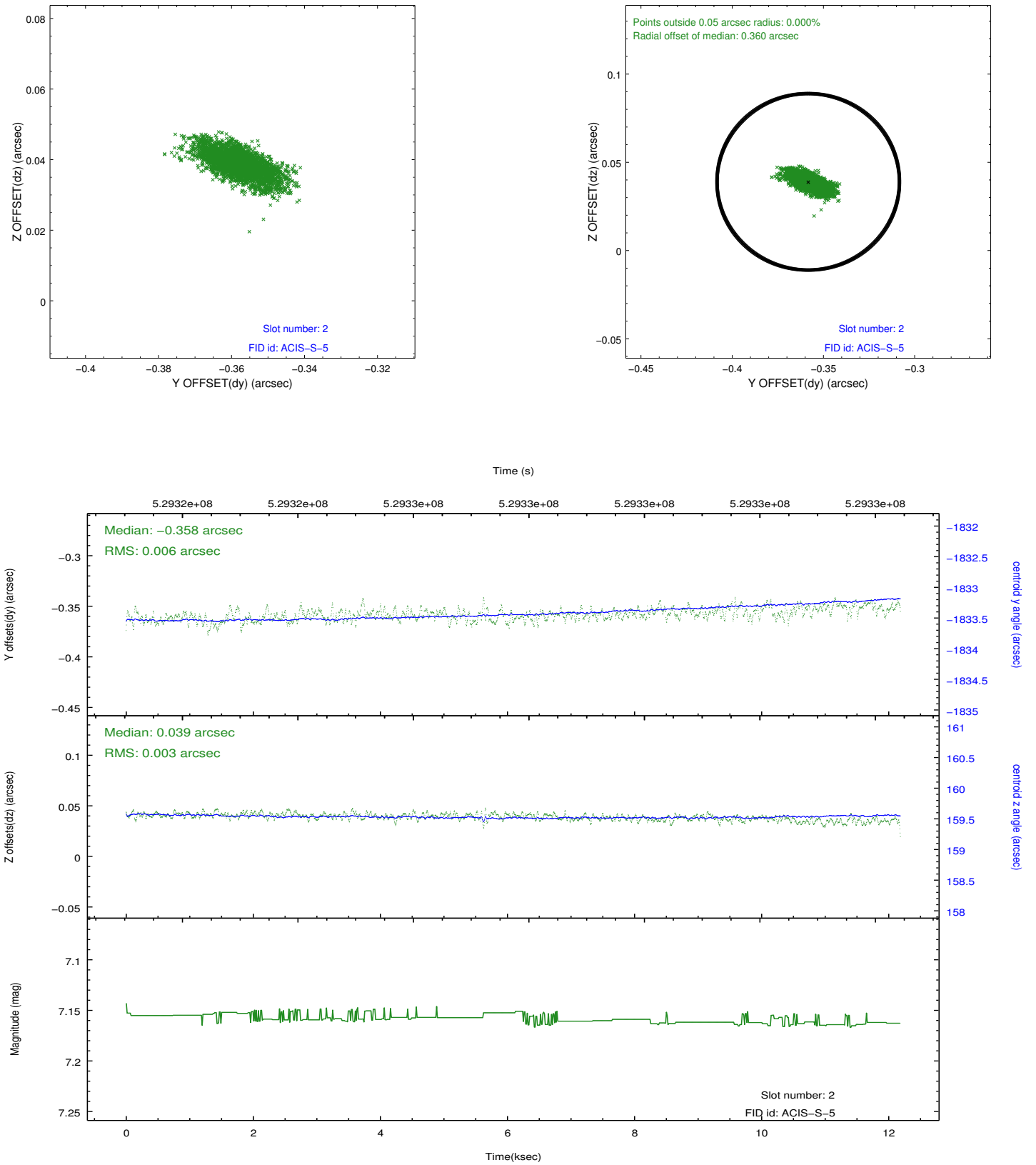
### 2.5.1 Slot 0



## 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)	2014.10.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	12.079593059778

## A.2 Comments

A spatial region of the original bias map for CCD = 3 suffered from anomalously high data values. Pixels in the event data that were bias-corrected by one of the original affected bias pixels may have an apparent energy shift. While the change in energy is expected to be small ( $\sim 20$  eV), it depends on many parameters that have not yet been fully explored for this bias anomaly. The bias map for CCD = 3 has been reconstructed for this processing to remove this anomaly using scaled data from a comparable bias map from another observation. The pixels affected by the anomaly are bounded by sky coords: (56.05567,4.80831), (56.05907,4.80805), (56.06676,4.90988), (56.06324,4.90865).