

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 6210 - L2 Version 4  
Chandra X-Ray Center

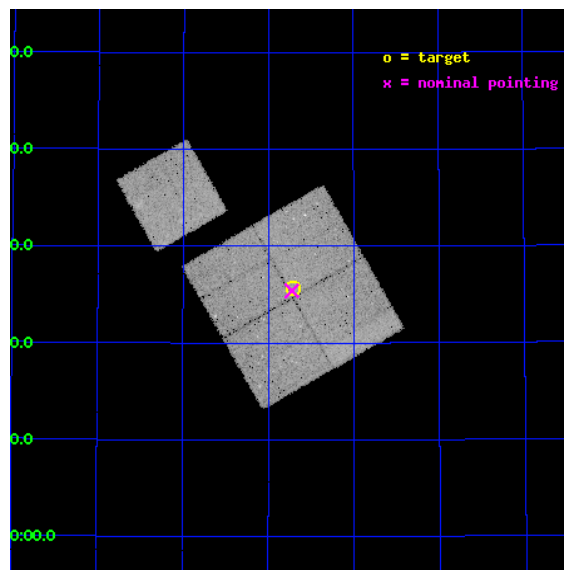
L2 Processing Date : Mar 7 2013

## 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

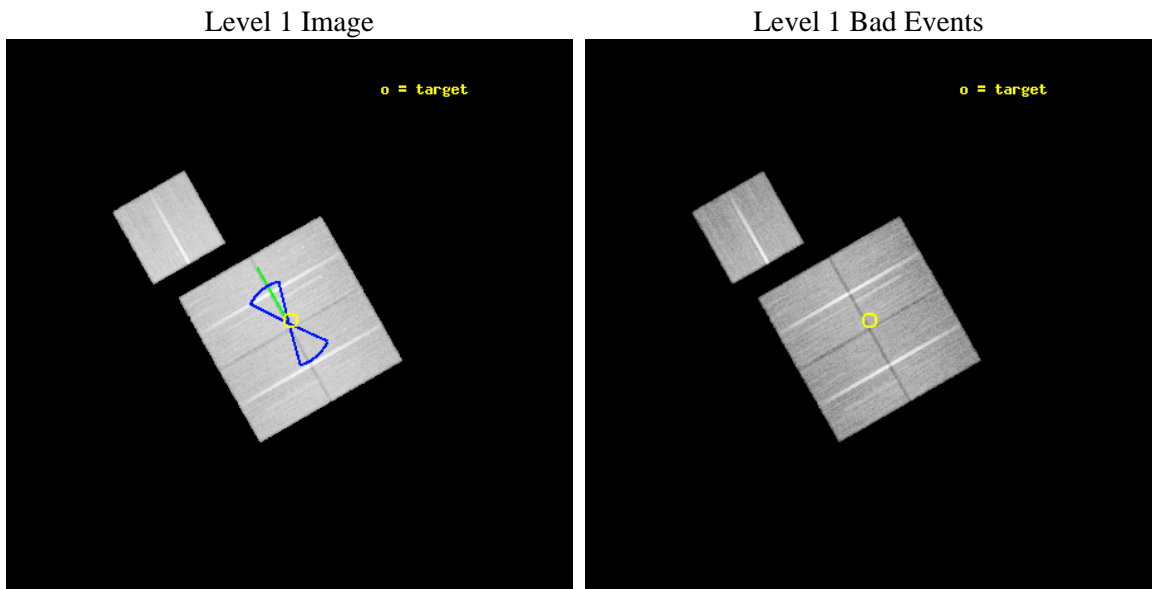
seq_num	900348	Sequence number
obs_id	6210	Observation id
title	Deep Chandra Imaging of the Extended Groth Strip: The Co-evolution of Black Holes and Galaxies	Proposal title
observer	Prof Kirpal Nandra	Principal investigator
object	EGS-1	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	215.676254	Observer's specified target RA [deg]
dec_targ	53.427086	Observer's specified target Dec [deg]
ra_nom	215.68097641761	Nominal RA [deg]
dec_nom	53.423391693895	Nominal Dec [deg]
roll_nom	330.30120258041	Nominal Roll [deg]
revision	4	Processing version of data
ontime	46549.558920294	Sum of GTIs [s]
livetime	45941.354663714	Livetime [s]
ontime0	46540.136009514	Sum of GTIs [s]
ontime1	46546.417979926	Sum of GTIs [s]
ontime2	46540.135949731	Sum of GTIs [s]
ontime3	46549.558920294	Sum of GTIs [s]
ontime6	46546.417969972	Sum of GTIs [s]
l2events	122136	Number of level 2 events



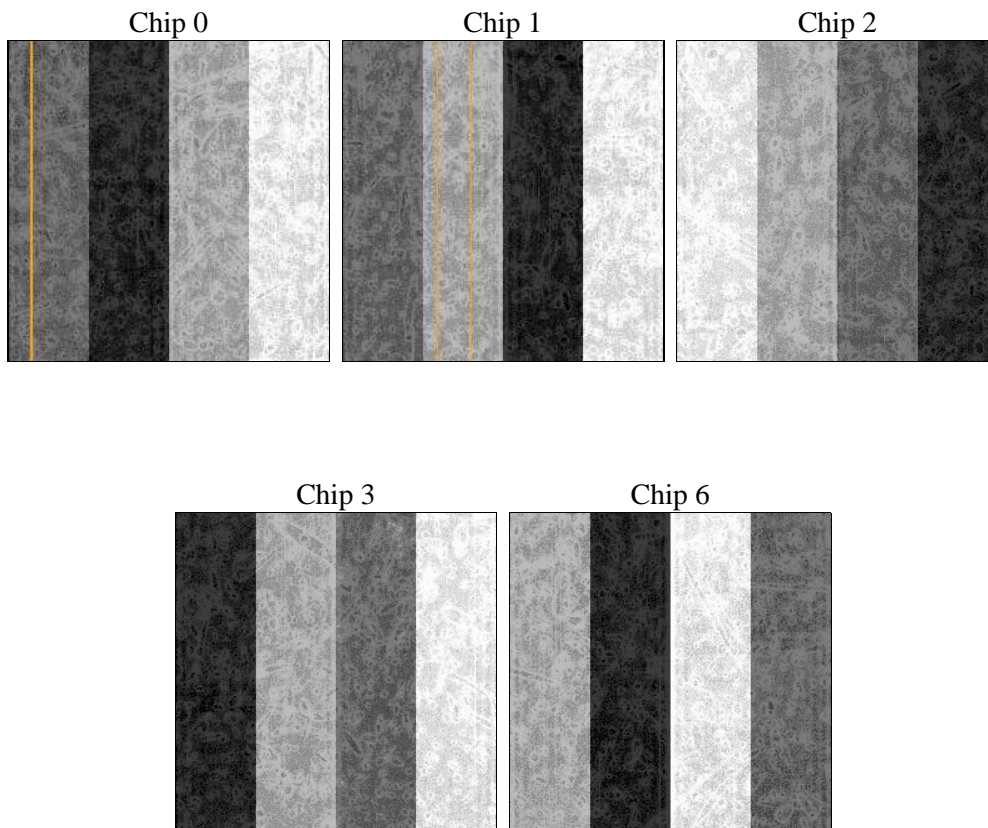
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	46400.000000	[s] Scheduled observation exposure time
ascdsver	8.5.1.1	Processing system revision	ontime	46549.558920294	Sum of GTIs [s]
caldsver	4.5.6	&#160	ontime0	46540.136009514	Sum of GTIs [s]
date	2013-03-07T19:03:45	Date and time of file creation	ontime1	46546.417979926	Sum of GTIs [s]
revision	4	Processing version of data	ontime2	46540.135949731	Sum of GTIs [s]
			ontime3	46549.558920294	Sum of GTIs [s]
			ontime6	46546.417969972	Sum of GTIs [s]
			l1events	1415011	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	270850	269164	301876	286529	286592
rejected events	241776	237019	273320	258936	256688
rejected %	89%	88%	90%	90%	89%

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	10117	11691	10278	9951	10472
	3%	4%	3%	3%	3%
grade 1 events	150	145	154	153	134
	0%	0%	0%	0%	0%
grade 2 events	6955	7145	7009	6174	6482
	2%	2%	2%	2%	2%
grade 3 events	3421	3595	3135	3114	3394
	1%	1%	1%	1%	1%
grade 4 events	3176	3450	3220	3065	3404
	1%	1%	1%	1%	1%
grade 5 events	10075	11252	9542	11647	12029
	3%	4%	3%	4%	4%
grade 6 events	5678	6539	5184	5530	6435
	2%	2%	1%	1%	2%
grade 7 events	231278	225347	263354	246895	244242
	85%	83%	87%	86%	85%

## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-01236	ACIS-01236	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	215.635023	215.6809764176086	Subarray requested	NONE	NONE
[deg] Pointing Dec	53.423136	53.42339169389525	Alternating exposures requested	N	N
[deg] Pointing Roll	330.129414	330.3012025804055	[s] Primary exposure time	0.000000	3.1
[deg] Roll angle	50.756000	50.756000			
[deg] Roll tolerance	25.000000	25.000000			
Roll constraint allows 180D rotation	Y	Y			
[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)	244739794.184000	244738610.29692			
Observation start date	2005-10-03T15:15:30	2005-10-03T14:56:50			
[s] Observation end time (MET)	244786194.184000	244786564.92412			
Observation end date	2005-10-04T04:08:50	2005-10-04T04:16:04			
Read mode	TIMED	TIMED			

## 2.3 Aspect

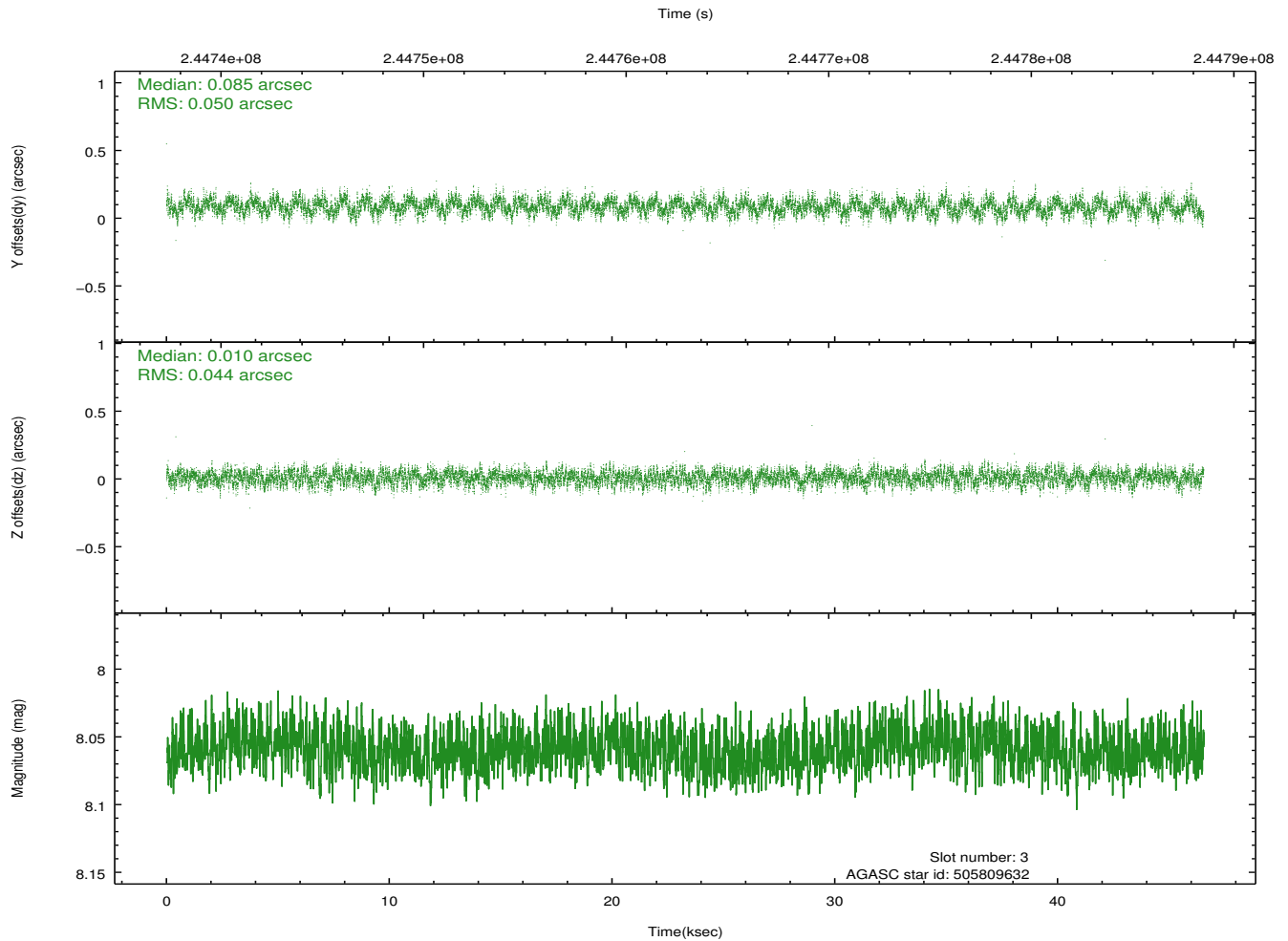
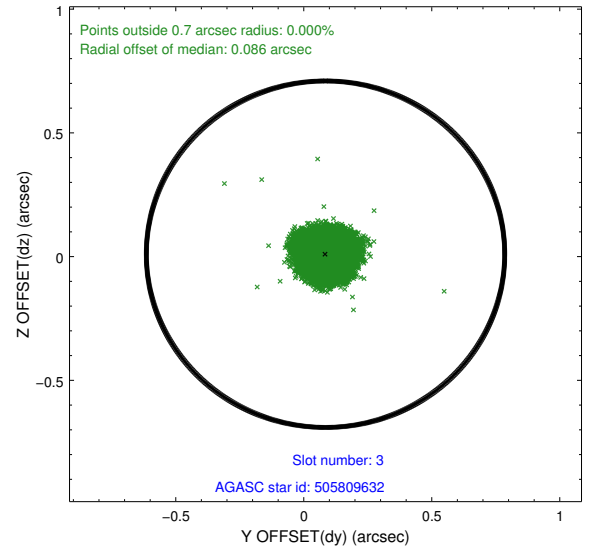
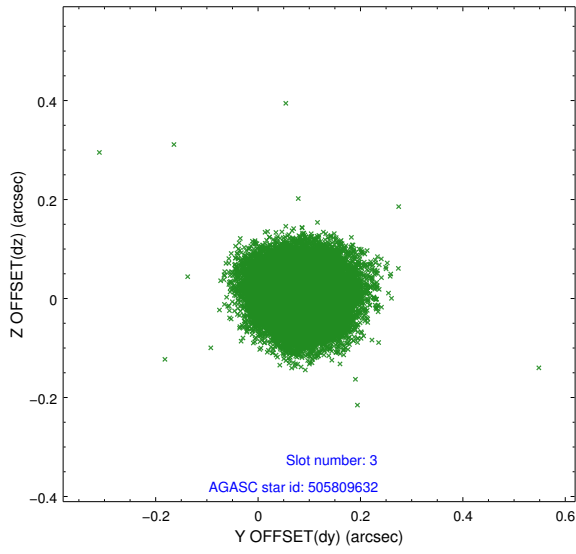


### Slot Statistics

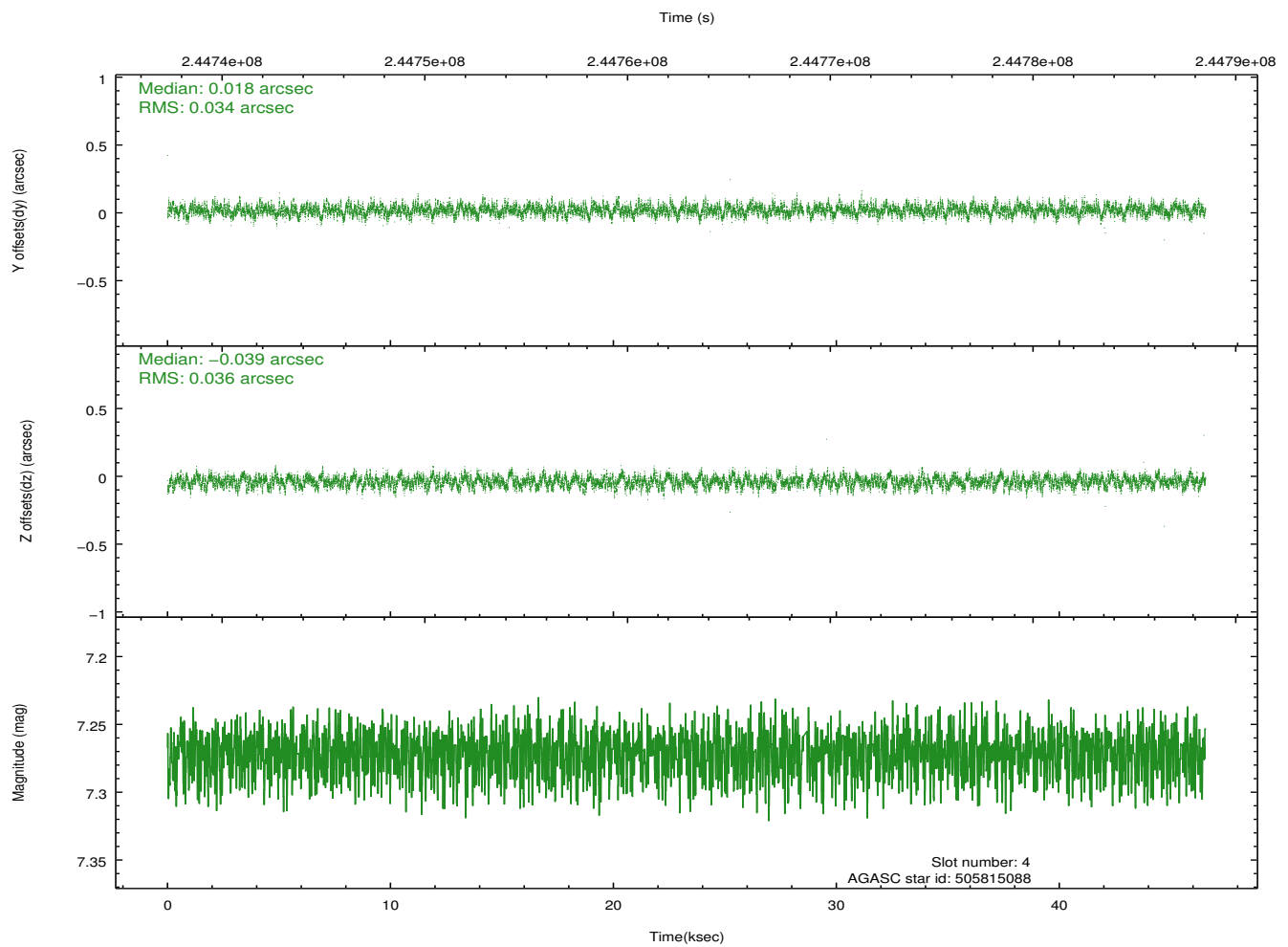
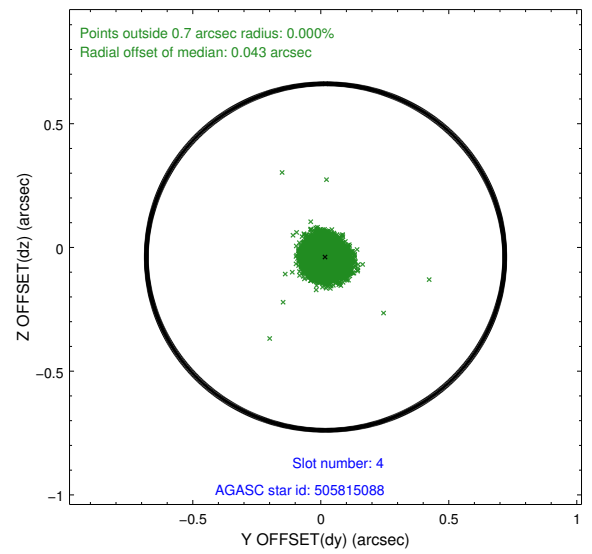
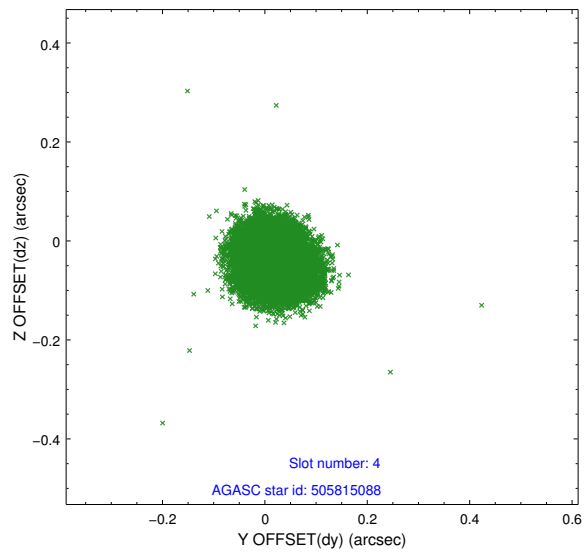
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-2	7.14	11353	-0.068	-0.104	0.020	0.042	0.000000	0.000000	-760.72	-841.19
1	FID	ACIS-I-4	7.18	11355	0.100	0.072	0.011	0.020	0.000000	0.000000	2153.51	1065.15
2	FID	ACIS-I-5	7.22	11355	-0.132	0.101	0.015	0.034	0.000000	0.000000	-1814.62	1063.03
3	GUIDE	505809632	8.06	22707	0.085	0.010	0.072	0.111	215.499426	53.521185	-427.24	161.84
4	GUIDE	505815088	7.27	22639	0.018	-0.039	0.054	0.085	216.315963	53.584954	969.10	1235.94
5	GUIDE	505815928	8.33	22704	-0.056	0.153	0.057	0.091	216.234742	53.074559	1747.33	-437.03
6	GUIDE	505817176	8.24	22709	-0.013	-0.052	0.071	0.115	216.408138	53.717379	896.16	1746.68
7	GUIDE	505817384	8.09	22707	-0.035	-0.072	0.052	0.083	216.827424	53.311152	2413.42	947.08

## 2.4 Star Slots

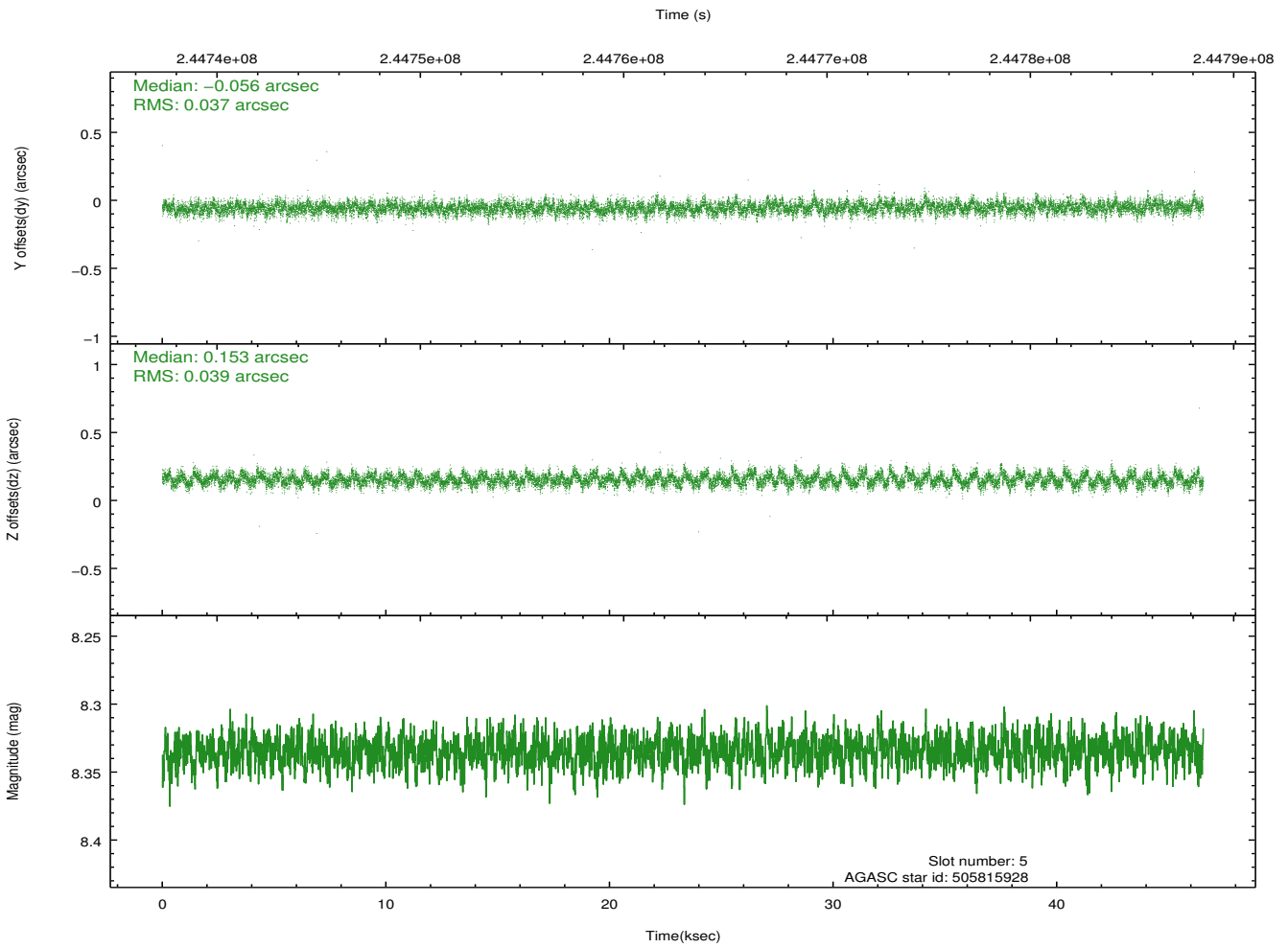
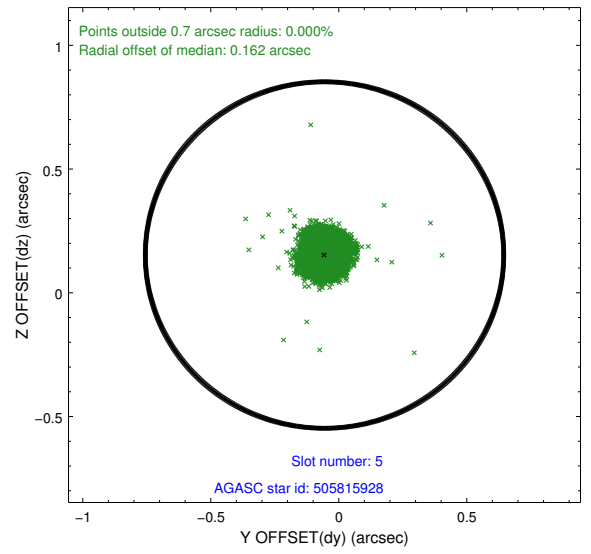
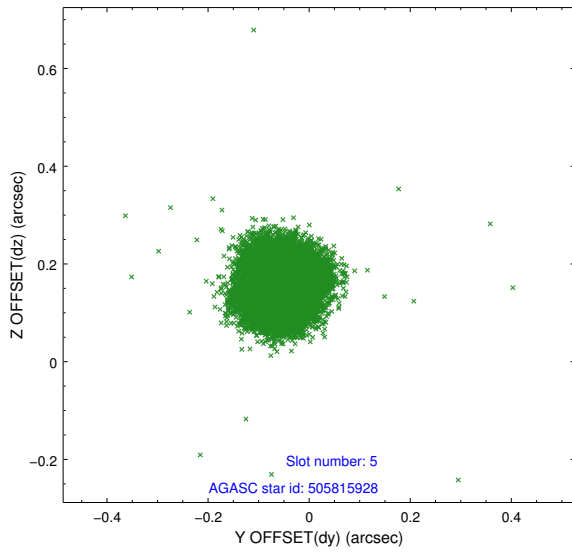
### 2.4.1 Slot 3



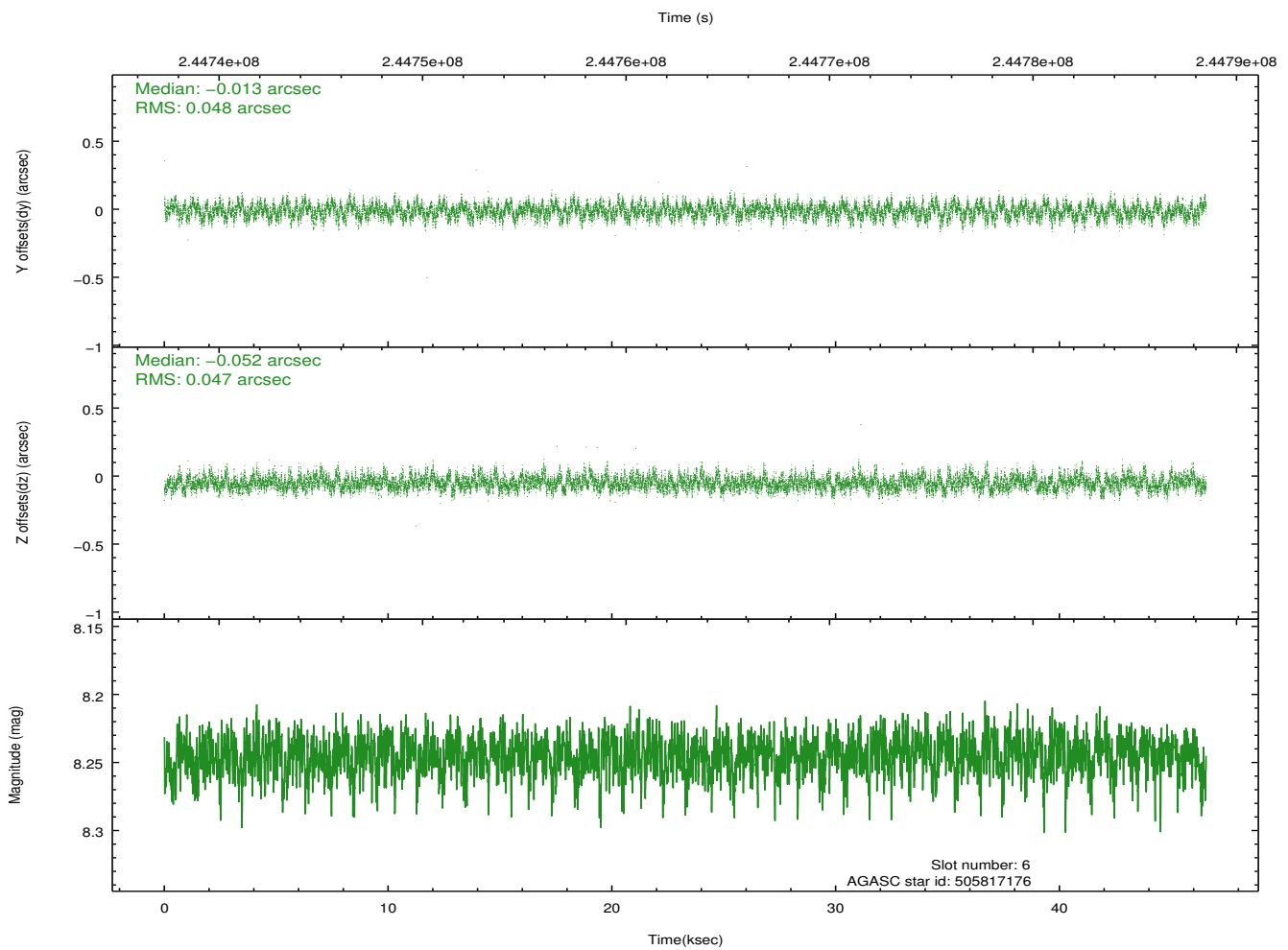
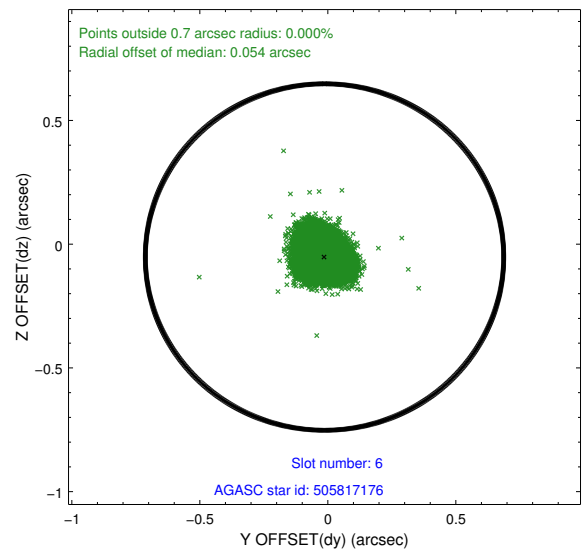
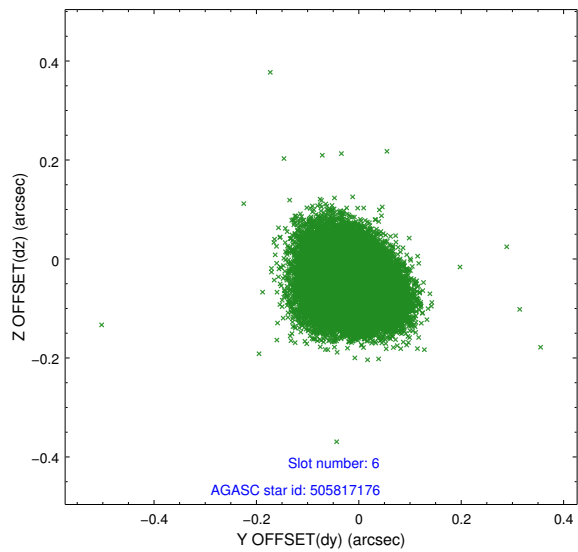
## 2.4.2 Slot 4



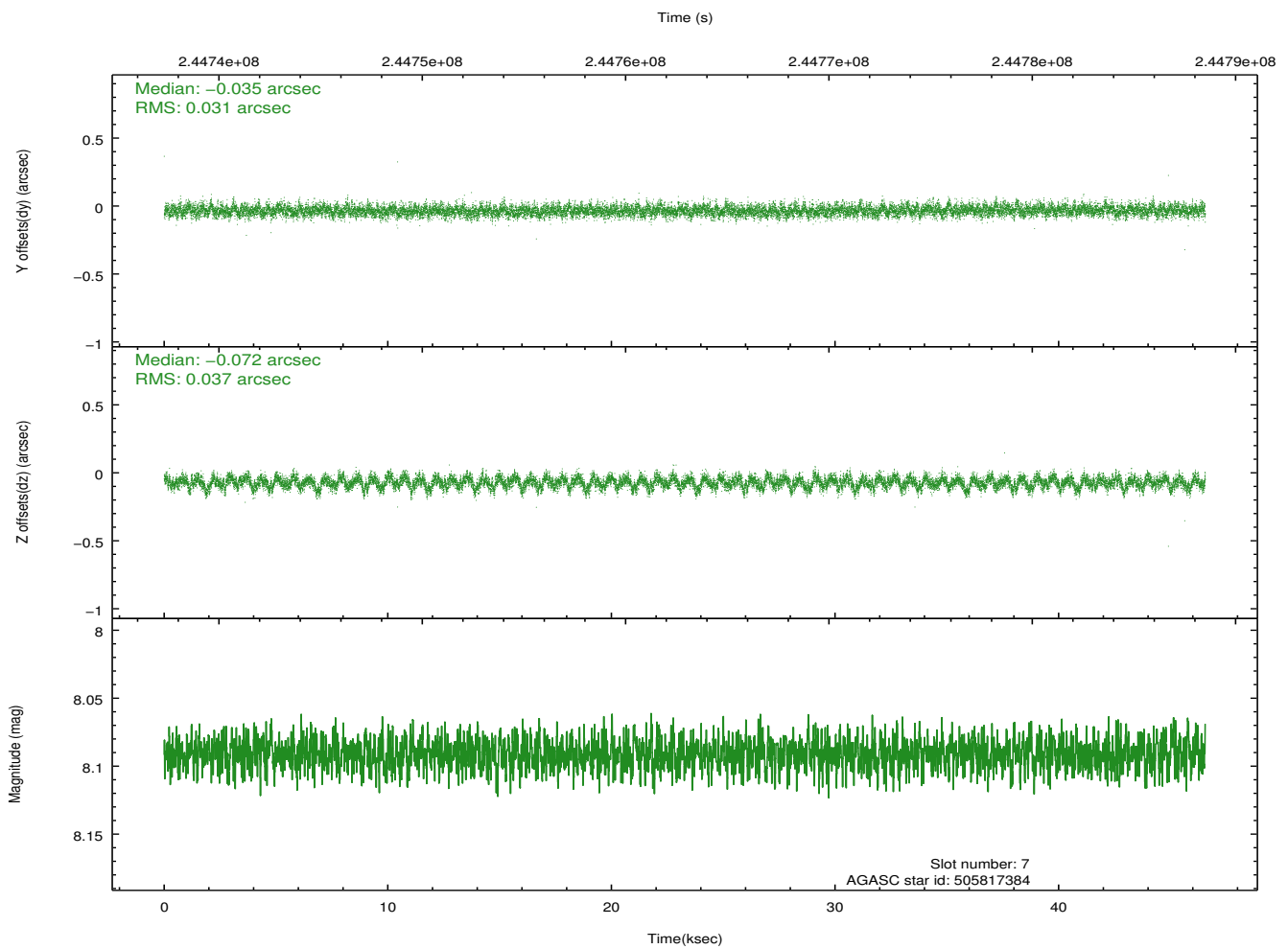
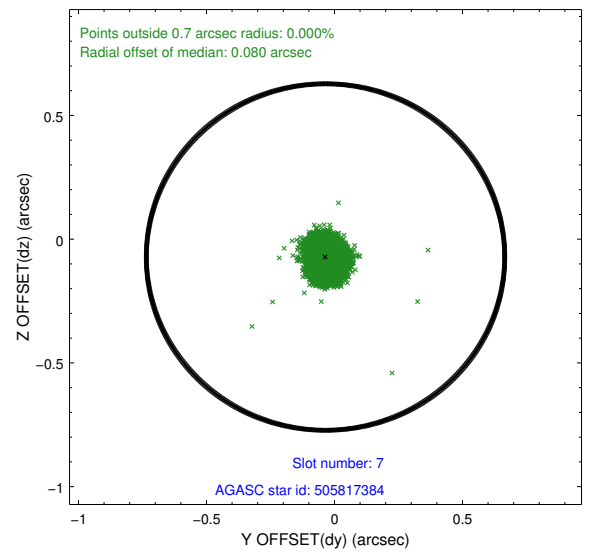
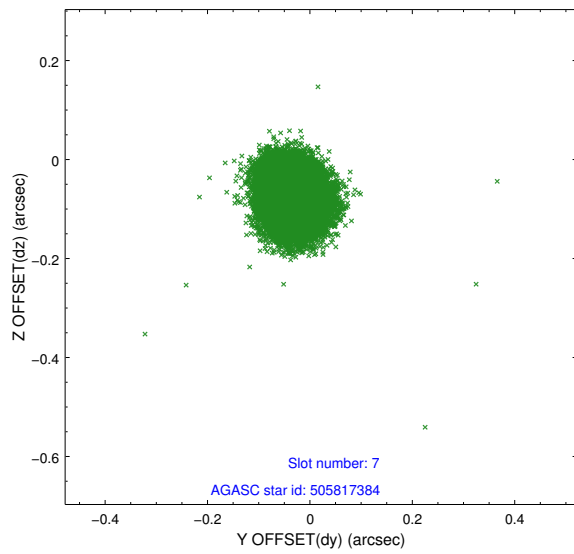
### 2.4.3 Slot 5



## 2.4.4 Slot 6

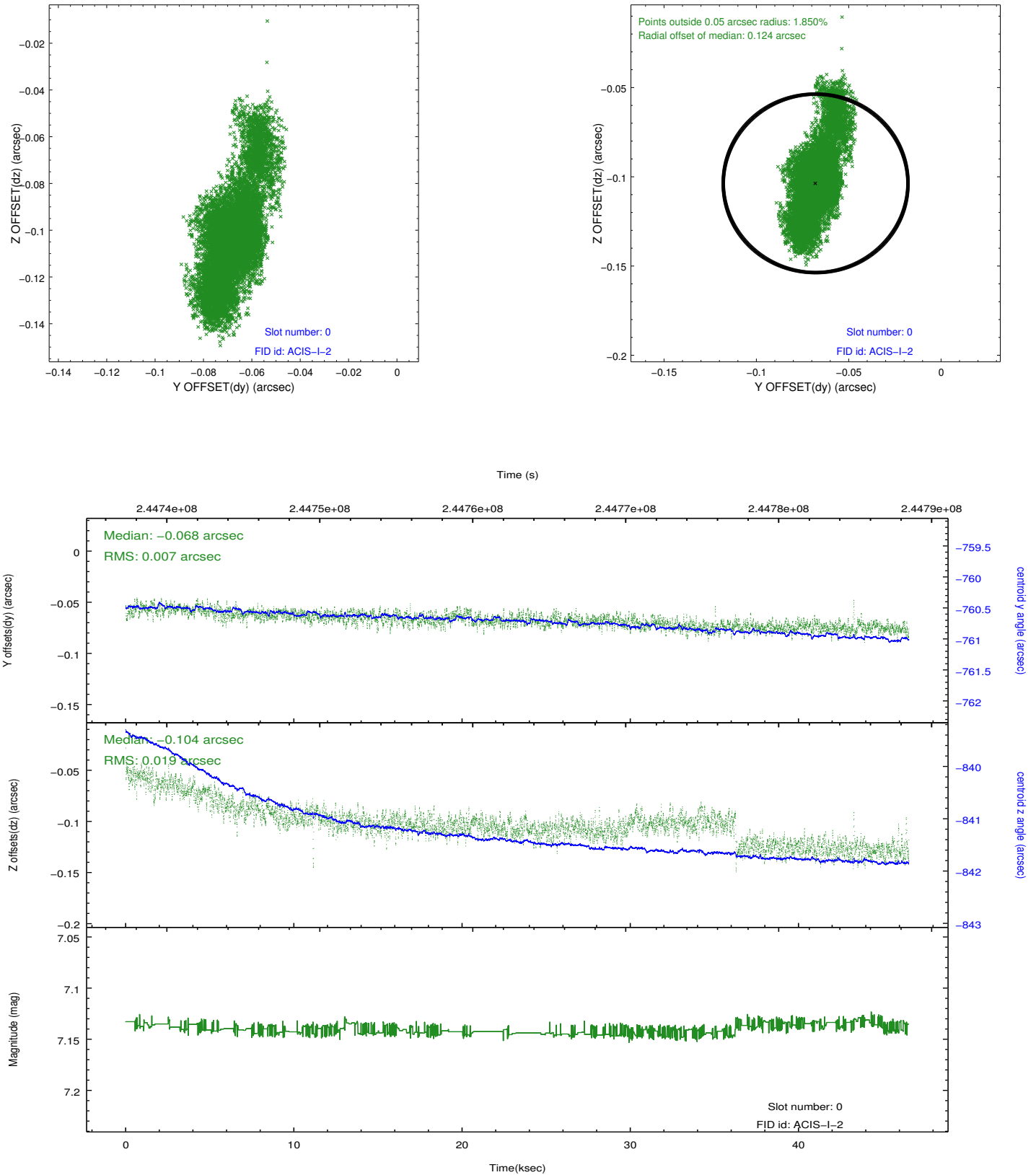


### 2.4.5 Slot 7

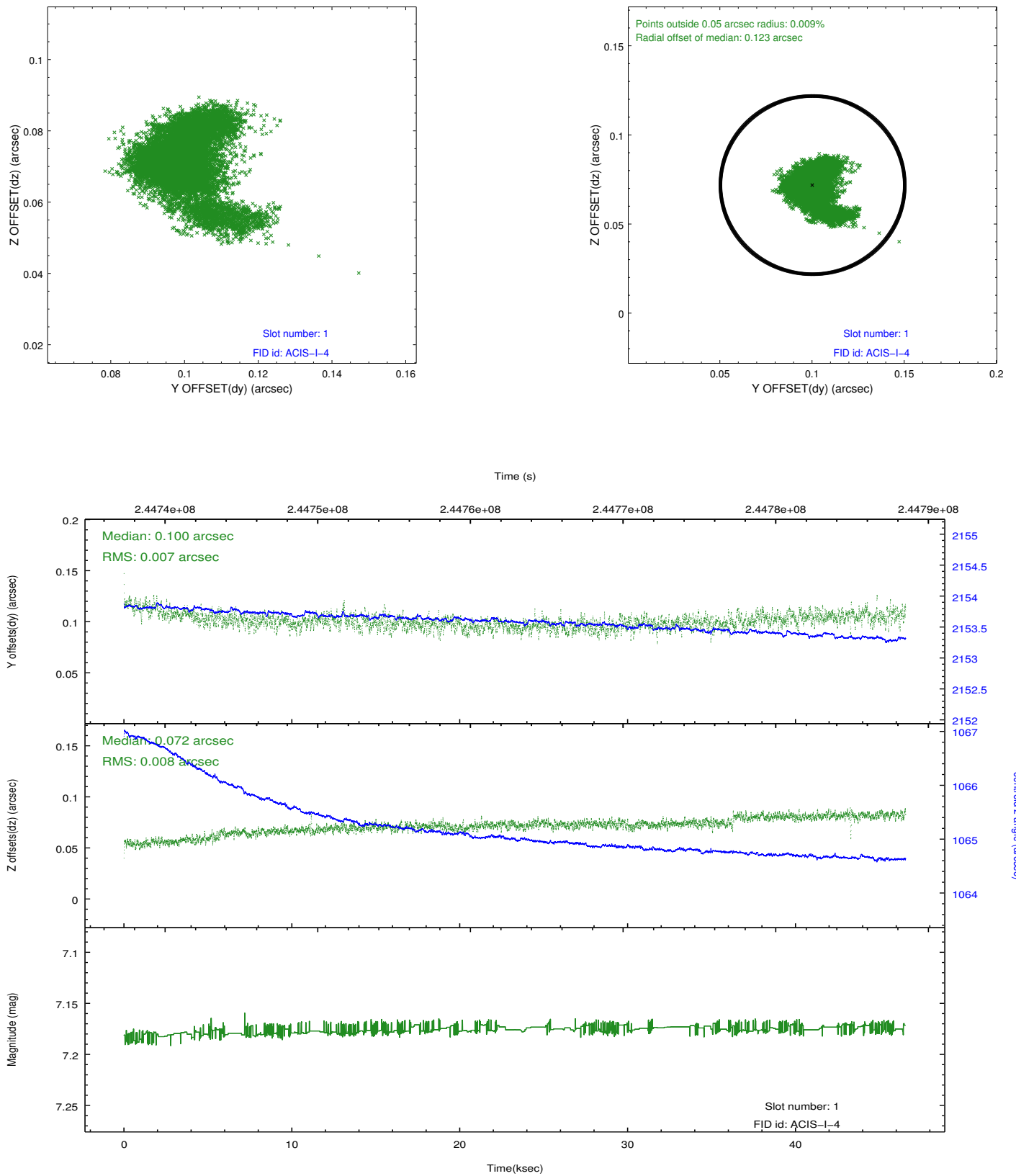


## 2.5 FID Slots

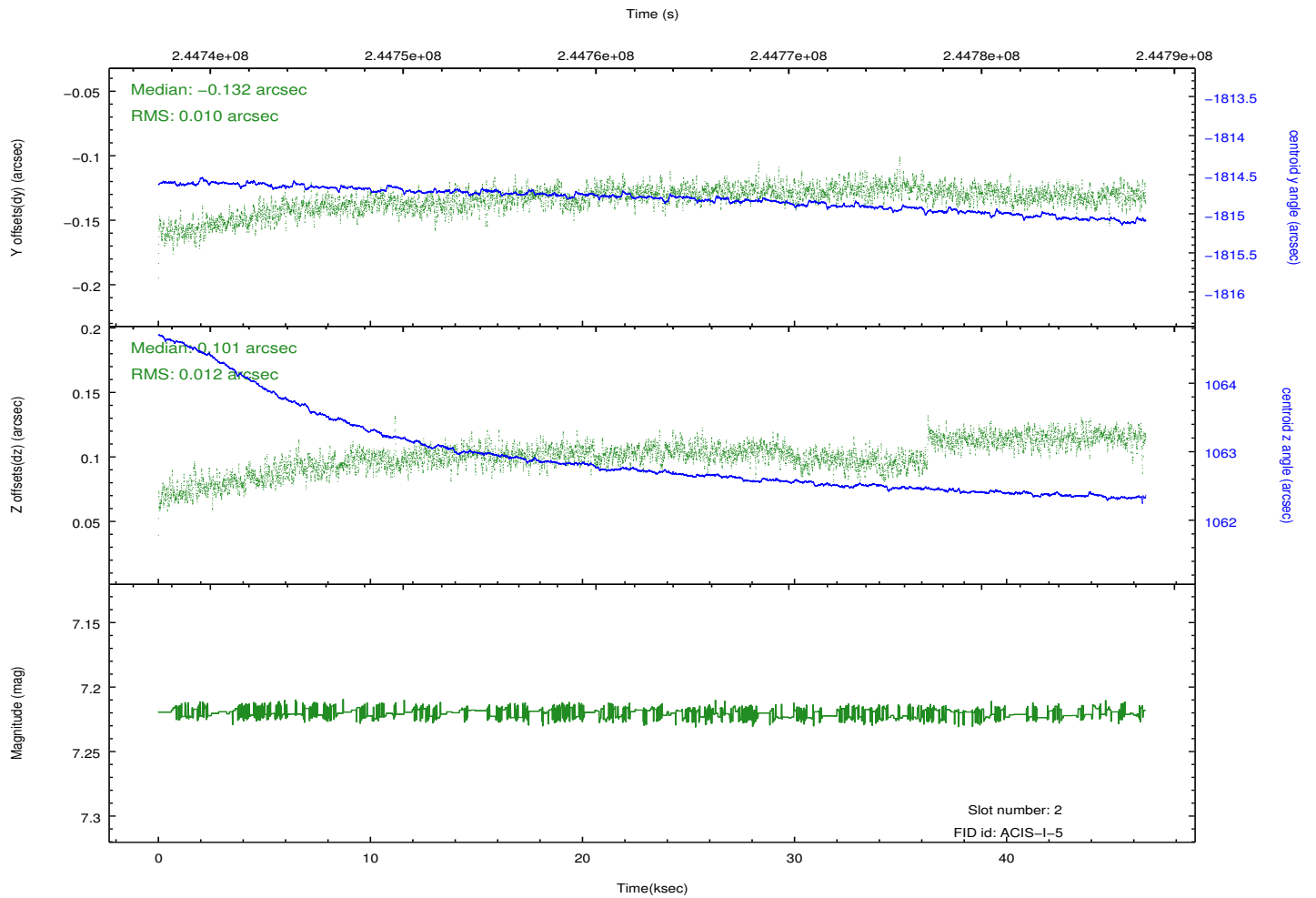
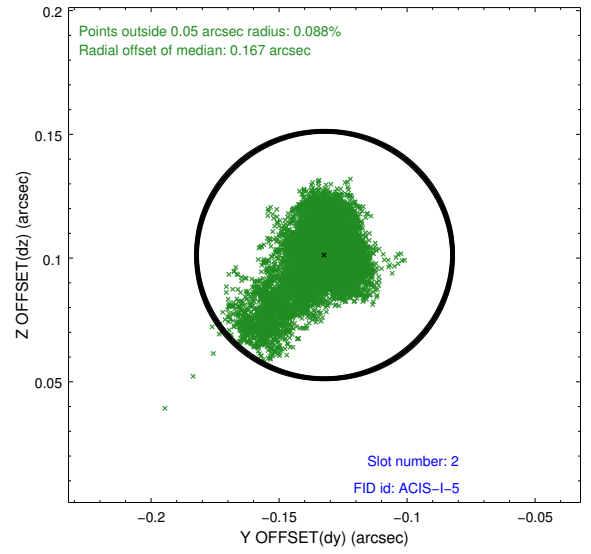
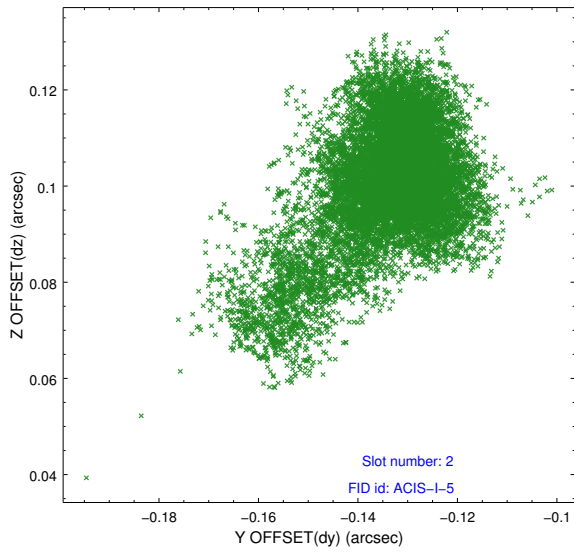
### 2.5.1 Slot 0



## 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)	2013.03.08
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	46.54955

## A.2 Comments

As a consequence of the DEA-A shutdown anomaly on Sep 15th (DOY258), the reported value of the ACIS FP temperature was ~1.3 degrees warmer than the actual temperature. The value for FP temperature reported in the headers of the Level 2 event file and the Mission Timeline files are incorrect by this amount for this processing. However, the temperature is corrected in the processing in order to obtain the correct temperature for the CTI correction. So the calibrated data are correct. If using the FP temp values in the headers of data files (some CIAO tools require this information), investigators should subtract 1.3 degrees from the reported temperature to determine the true temperature.

=====

Roll constraint met.