

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10726 - L2 Version 3  
Chandra X-Ray Center

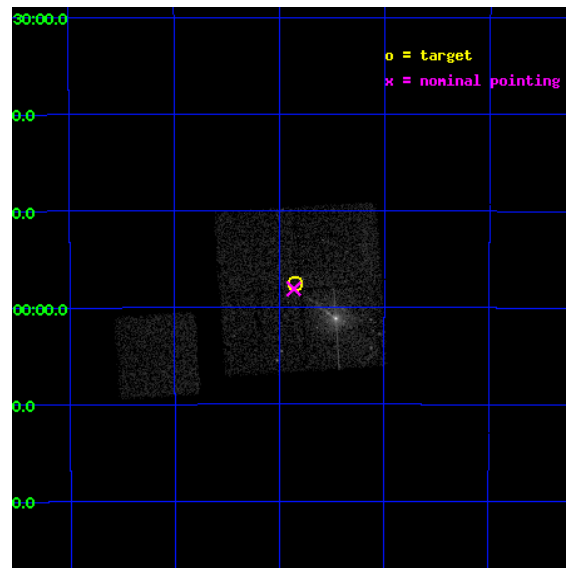
L2 Processing Date : Jun 22 2012

## 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

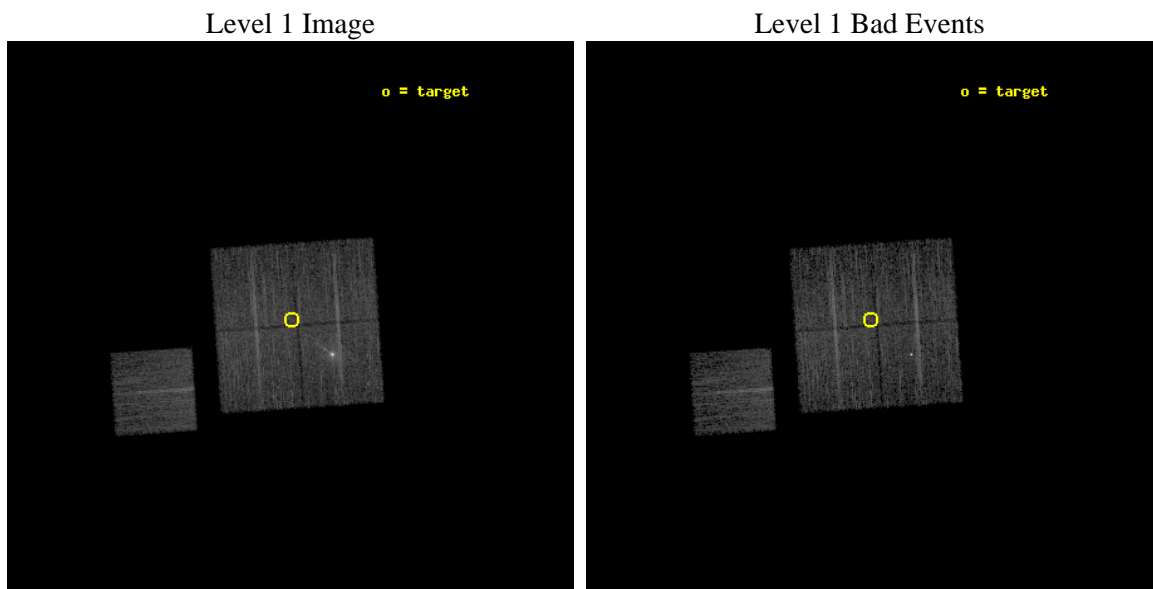
seq_num	701956	Sequence number
obs_id	10726	Observation id
title	Longterm Monitoring of the Centaurus A Jet, ULXs, and Low Mass X-ray Binary Population	Proposal title
observer	Dr. Stephen Murray	Principal investigator
object	Centaurus A	Source name
dtcycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	201.46285	Observer's specified target RA [deg]
dec_targ	-42.960089	Observer's specified target Dec [deg]
ra_nom	201.46533080401	Nominal RA [deg]
dec_nom	-42.967992027013	Nominal Dec [deg]
roll_nom	266.11582325643	Nominal Roll [deg]
revision	3	Processing version of data
ontime	5149.1000396013	Sum of GTIs [s]
livetime	5081.8232568716	Livetime [s]
ontime0	5149.1000396013	Sum of GTIs [s]
ontime1	5149.1000396013	Sum of GTIs [s]
ontime2	5149.1000396013	Sum of GTIs [s]
ontime3	5149.1000396013	Sum of GTIs [s]
ontime6	5149.1000396013	Sum of GTIs [s]
l2events	37098	Number of level 2 events



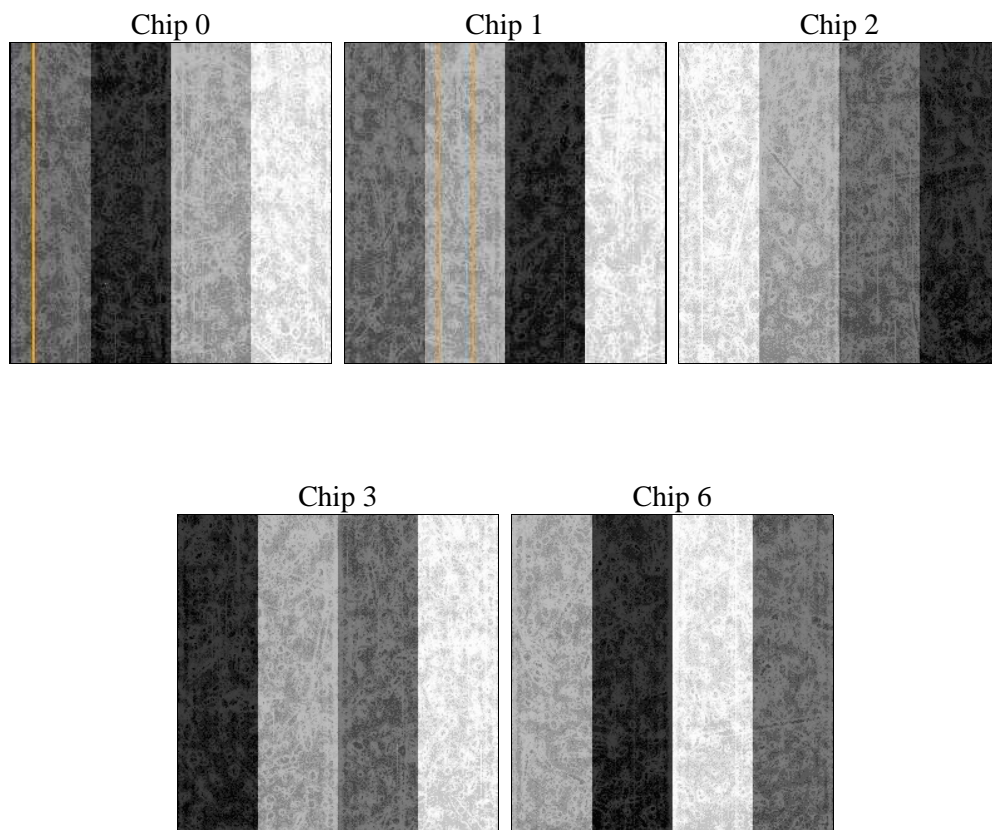
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5000.000000	[s] Scheduled observation exposure time
ascdsver	8.4.5	Processing system revision	ontime	5149.1000396013	Sum of GTIs [s]
caldsver	4.4.10	&#160	ontime0	5149.1000396013	Sum of GTIs [s]
date	2012-06-22T14:06:11	Date and time of file creation	ontime1	5149.1000396013	Sum of GTIs [s]
revision	3	Processing version of data	ontime2	5149.1000396013	Sum of GTIs [s]
			ontime3	5149.1000396013	Sum of GTIs [s]
			ontime6	5149.1000396013	Sum of GTIs [s]
			l1events	276998	Number of level 1 events

### 2.1.4 Events

	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
level 1 events	70354	49376	54758	50873	51637
rejected events	48919	43515	49619	46130	46609
rejected %	69%	88%	90%	90%	90%

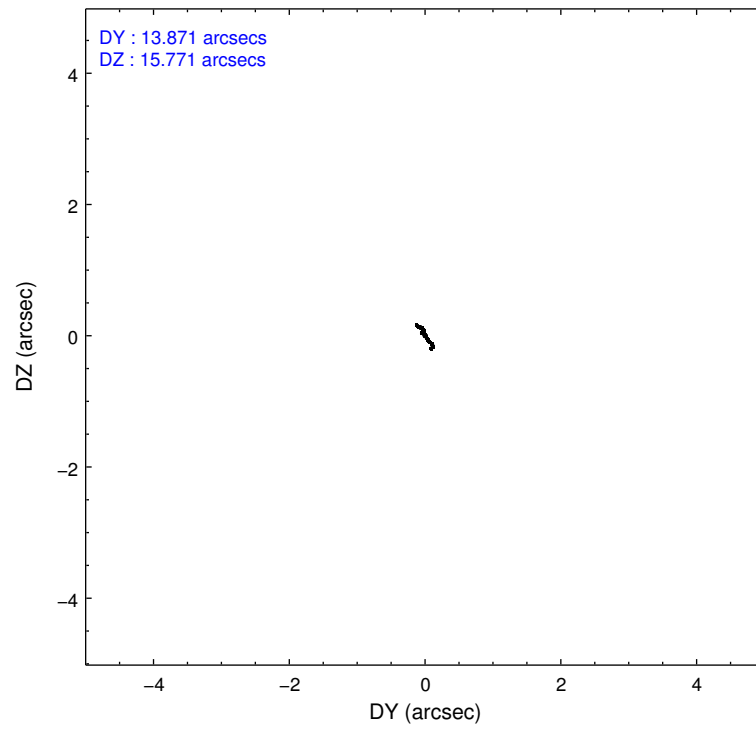
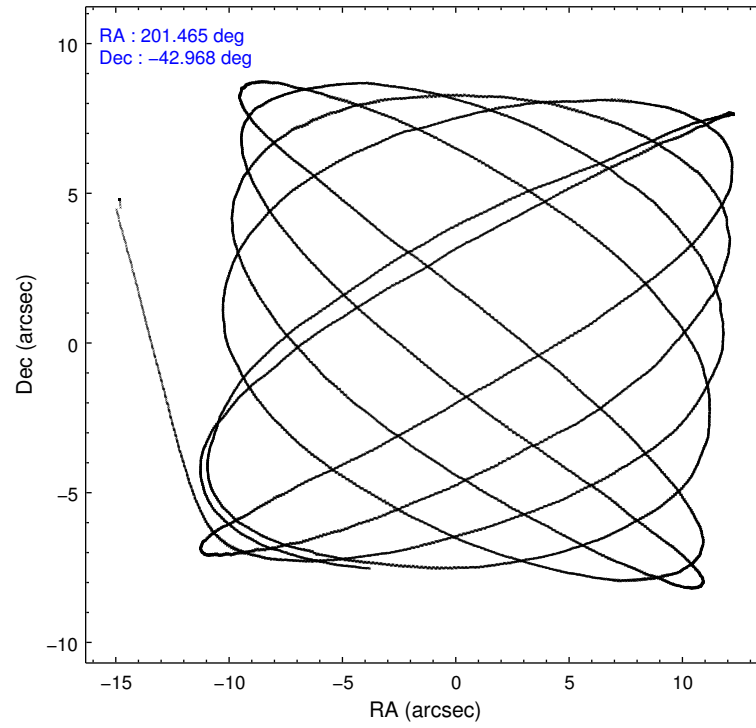
	ccd 0	ccd 1	ccd 2	ccd 3	ccd 6
grade 0 events	12203	2681	2418	2066	2098
	17%	5%	4%	4%	4%
grade 1 events	1337	29	37	34	33
	1%	0%	0%	0%	0%
grade 2 events	4109	1396	1303	1151	1257
	5%	2%	2%	2%	2%
grade 3 events	1591	642	562	584	576
	2%	1%	1%	1%	1%
grade 4 events	1579	662	579	561	612
	2%	1%	1%	1%	1%
grade 5 events	3263	1930	1703	2176	2154
	4%	3%	3%	4%	4%
grade 6 events	3287	1232	906	1003	1103
	4%	2%	1%	1%	2%
grade 7 events	42985	40804	47250	43298	43804
	61%	82%	86%	85%	84%

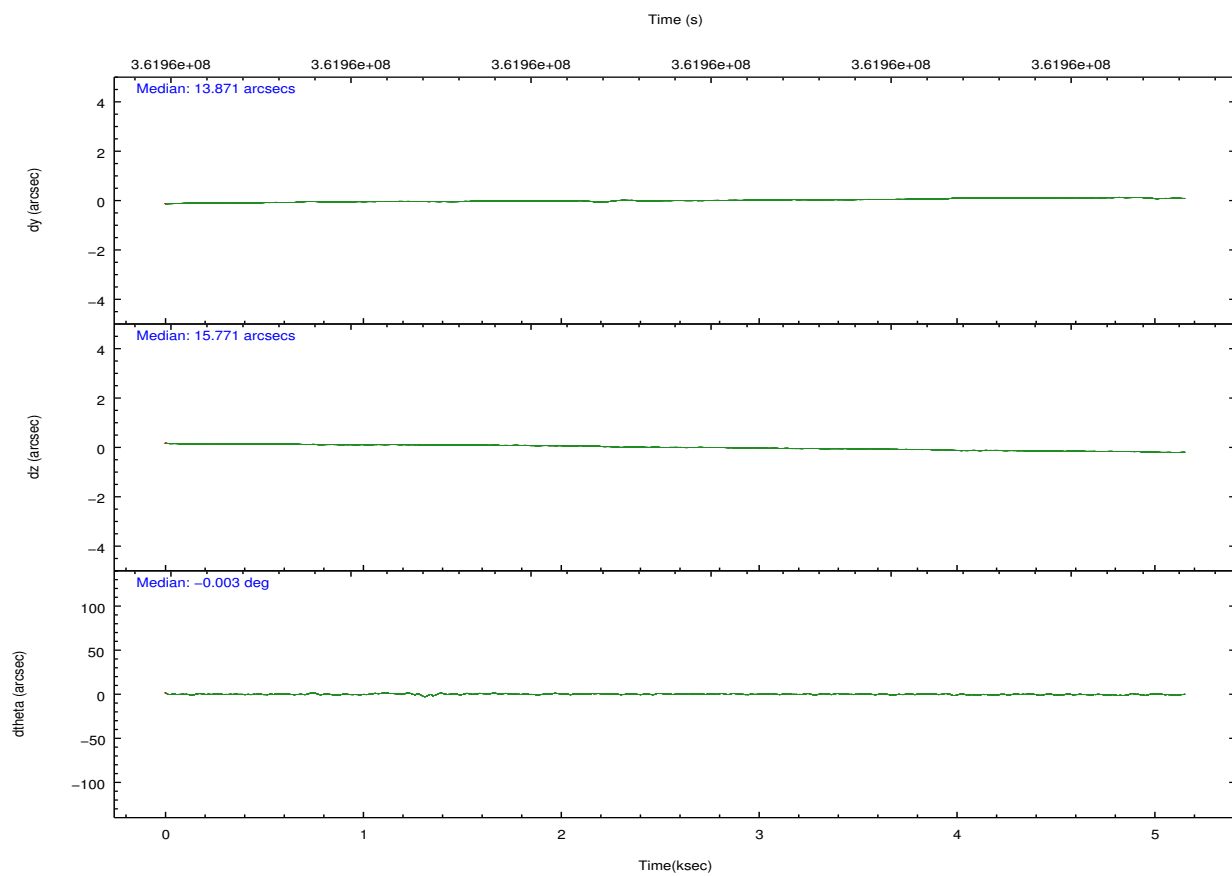
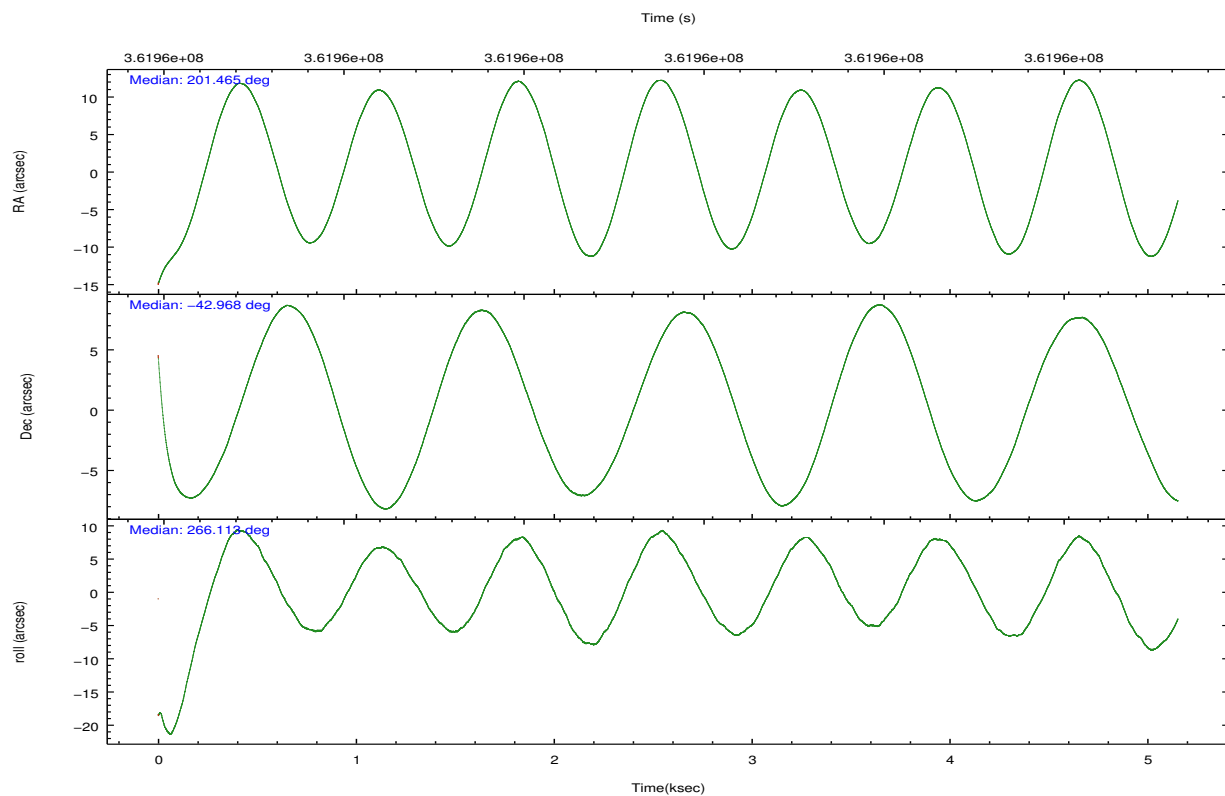


## 2.2 Compared Parameters

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	FAINT	FAINT	Number of optional ACIS chips dropped	0	0
Observation mode	POINTING	POINTING	On-chip summing requested	N	N
[deg] Pointing RA	201.448734	201.465330804009	Subarray requested	NONE	NONE
[deg] Pointing Dec	-42.943309	-42.96799202701276	Alternating exposures requested	N	N
[deg] Pointing Roll	265.895808	266.1158232564302	[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)	361956376.184000	361955052.17075			
Observation start date	2009-06-21T07:25:10	2009-06-21T07:04:12			
[s] Observation end time (MET)	361961376.184000	361962595.65863			
Observation end date	2009-06-21T08:48:30	2009-06-21T09:09:55			
Read mode	TIMED	TIMED			

## 2.3 Aspect



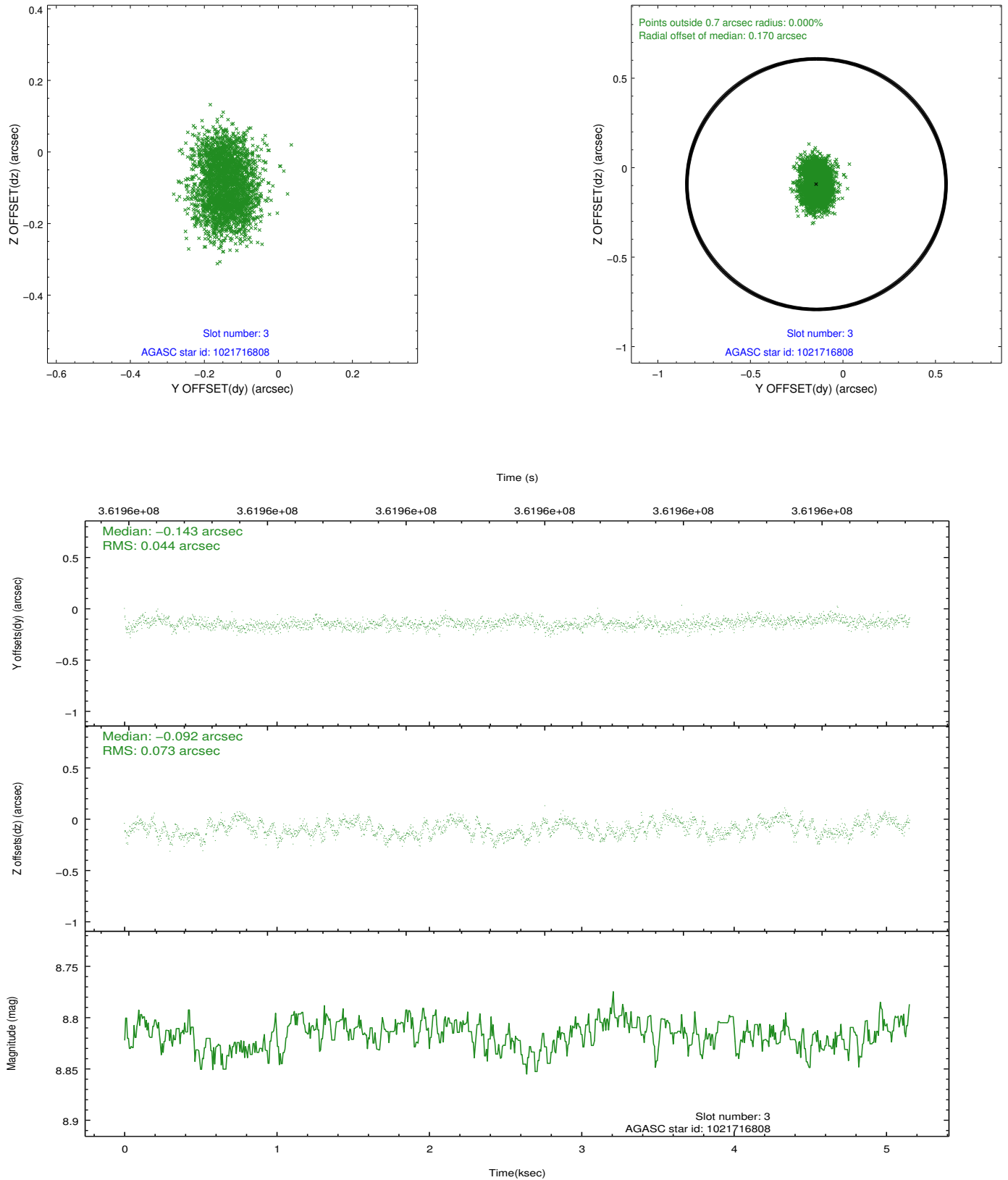


### Slot Statistics

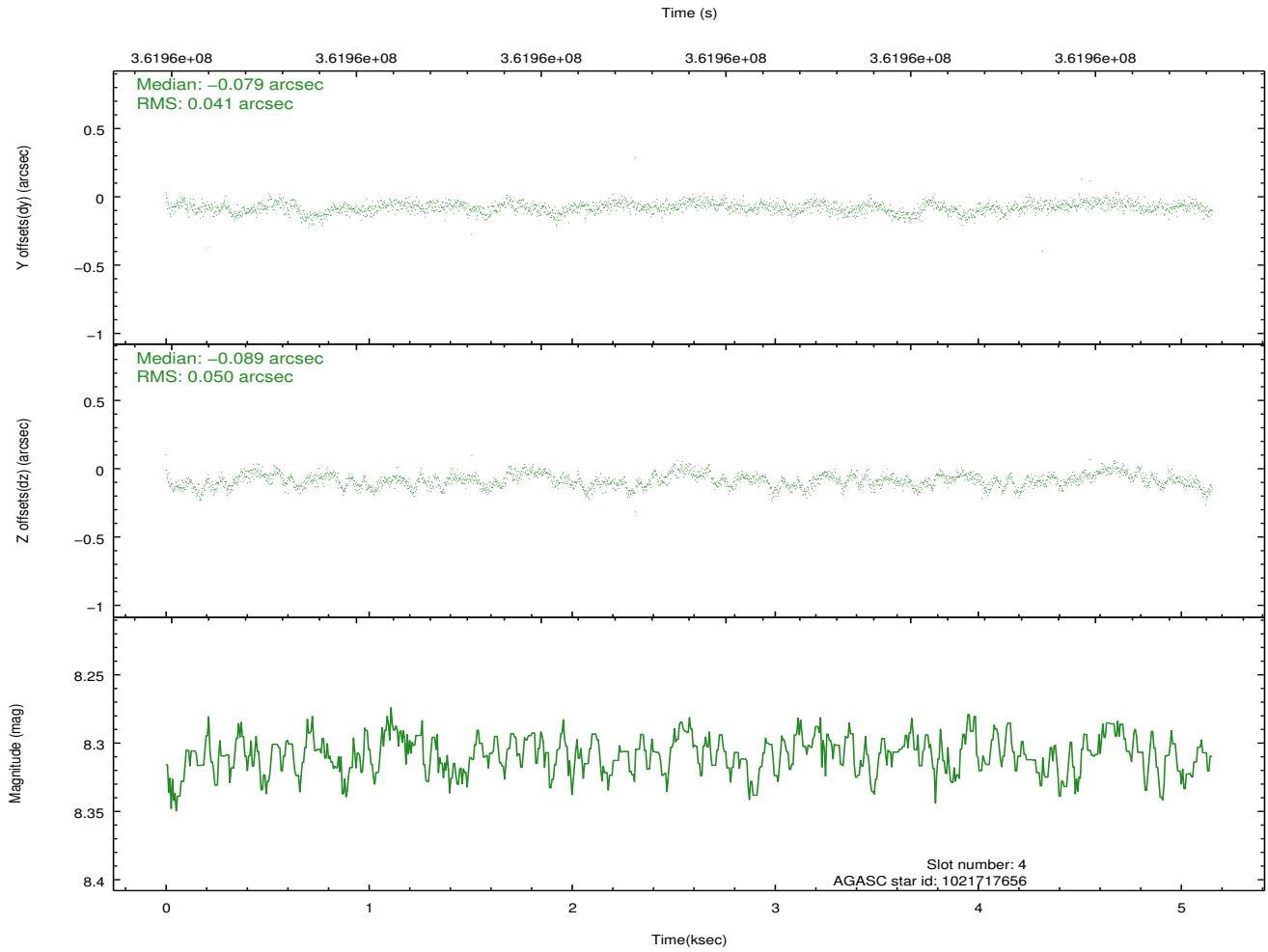
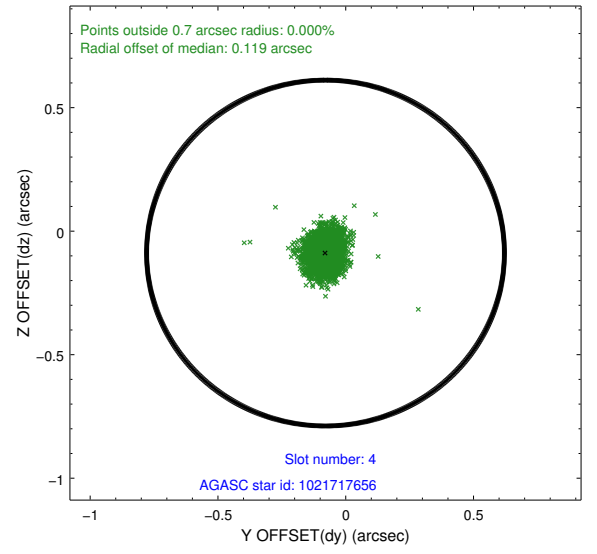
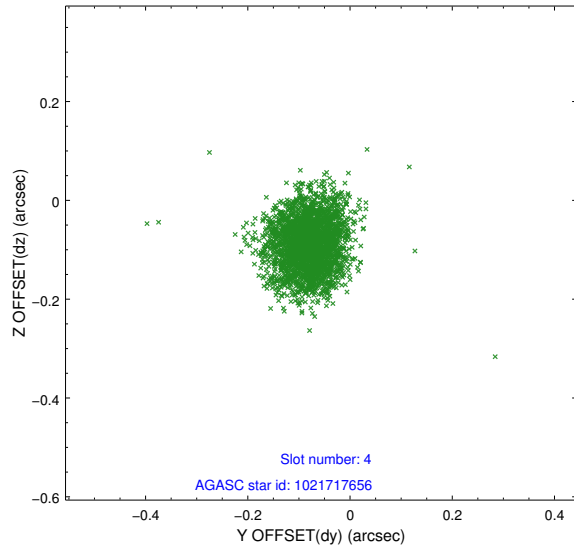
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-I-1	6.99	1258	-0.002	-0.051	0.014	0.029	0.000000	0.000000	925.62	-839.43
1	FID	ACIS-I-4	6.91	1258	0.136	0.060	0.013	0.024	0.000000	0.000000	2146.43	1059.91
2	FID	ACIS-I-5	6.98	1258	-0.232	0.062	0.011	0.023	0.000000	0.000000	-1821.12	1059.06
3	GUIDE	1021716808	8.82	2511	-0.143	-0.092	0.092	0.143	200.901189	-42.531395	-1370.09	-1554.62
4	GUIDE	1021717656	8.31	2515	-0.079	-0.089	0.068	0.109	201.139642	-43.082878	560.50	-774.87
5	GUIDE	1021721672	9.53	2510	-0.198	0.025	0.132	0.203	201.740358	-43.079729	436.62	800.12
6	GUIDE	1022235840	9.45	2506	0.424	0.176	0.132	0.211	201.679306	-43.544276	2116.55	756.01
7	GUIDE	1021719704	7.57	2513	-0.007	-0.019	0.079	0.130	200.511976	-43.050426	576.04	-2428.59

## 2.4 Star Slots

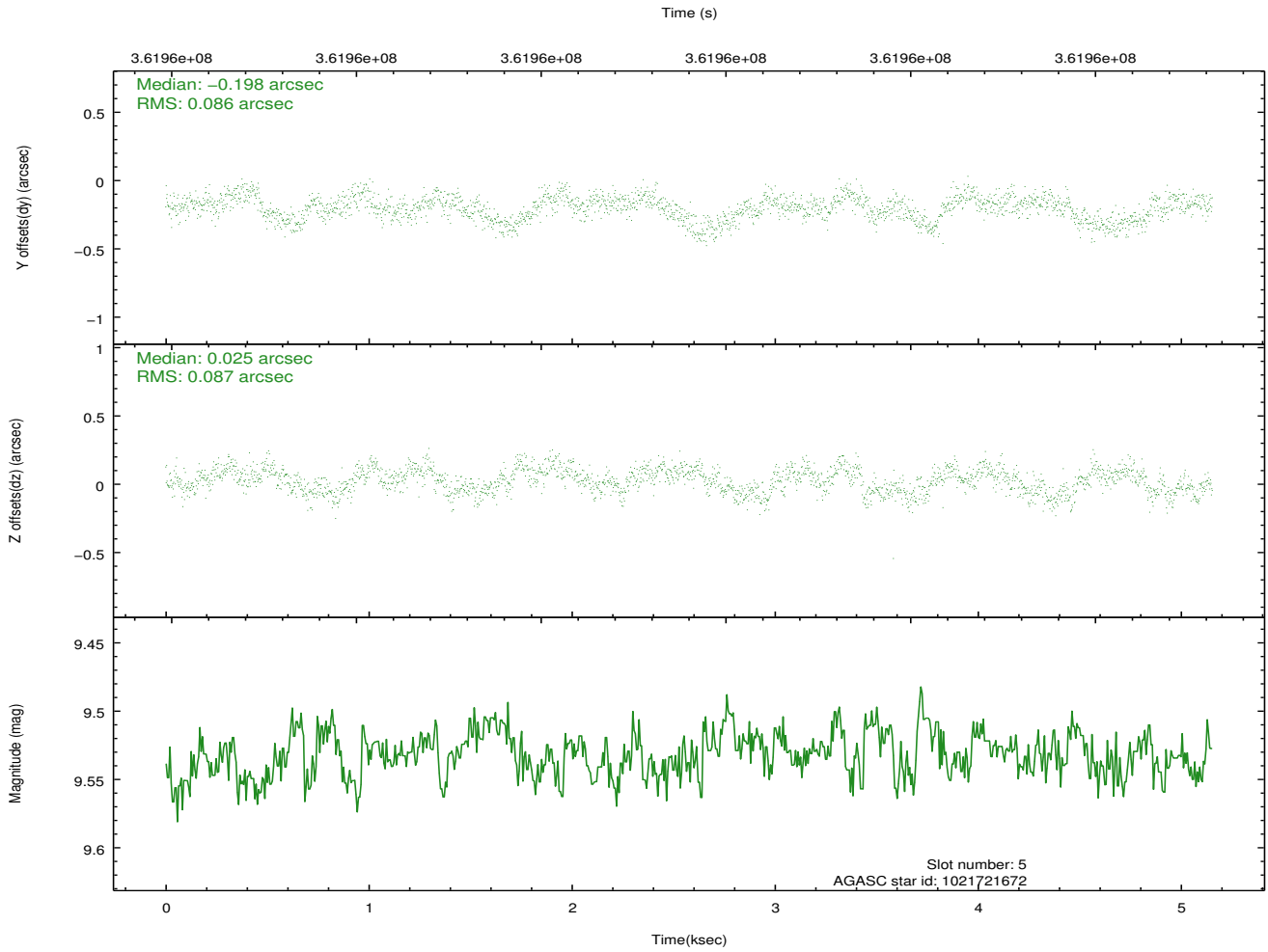
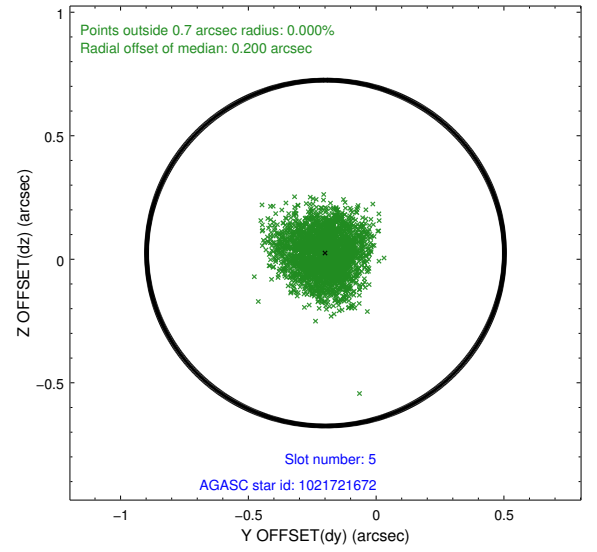
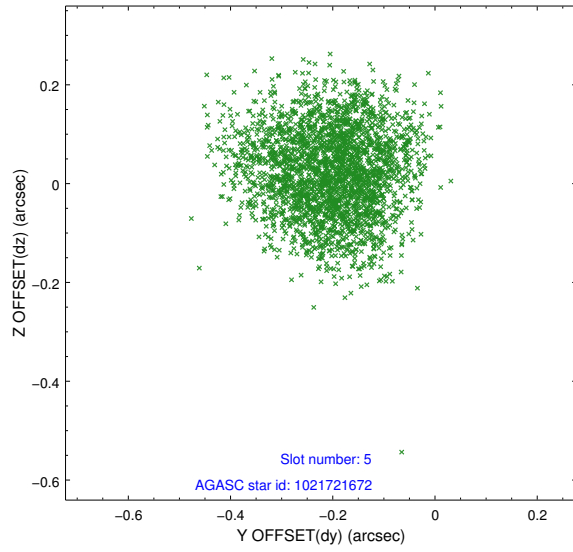
### 2.4.1 Slot 3



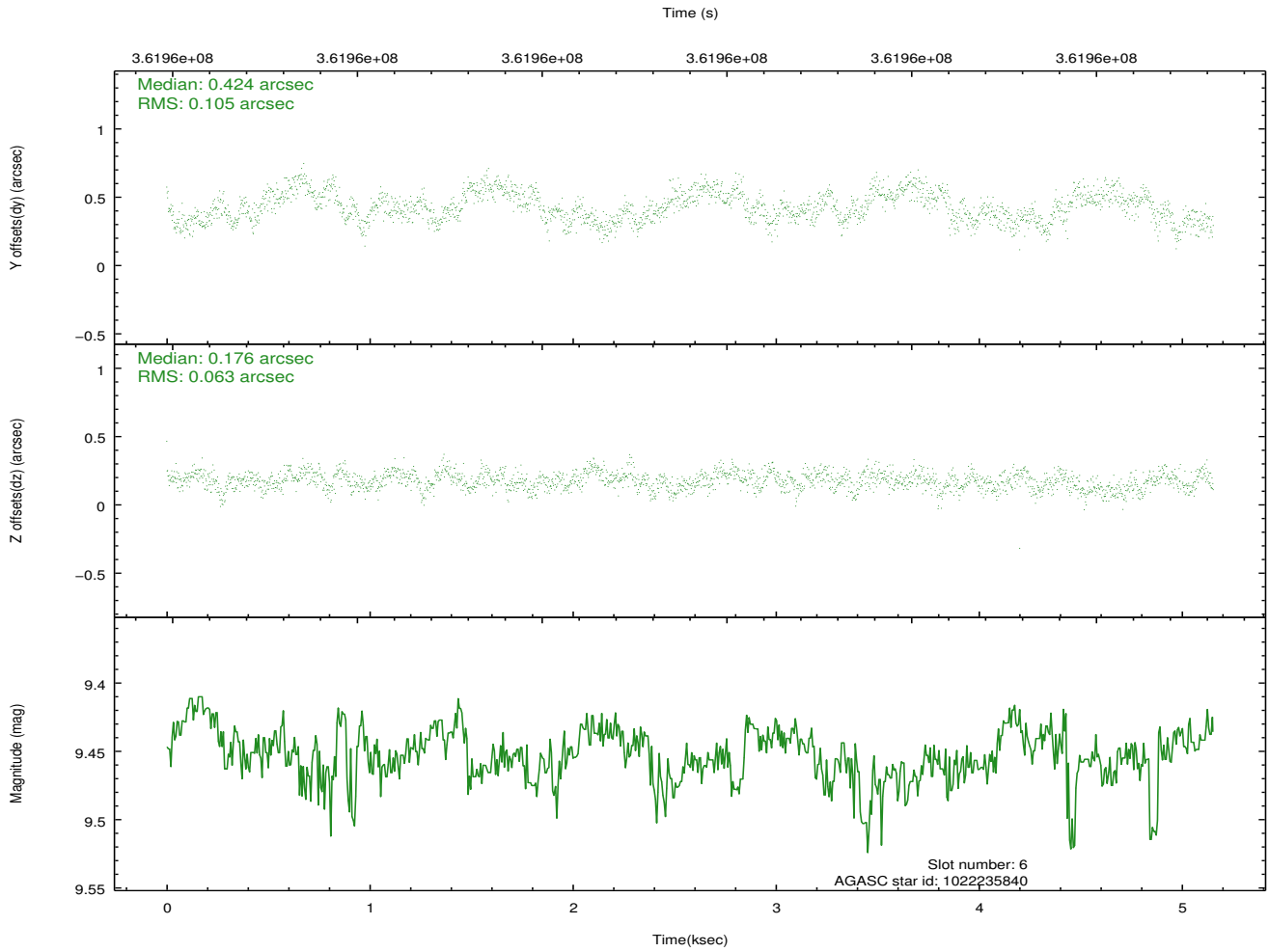
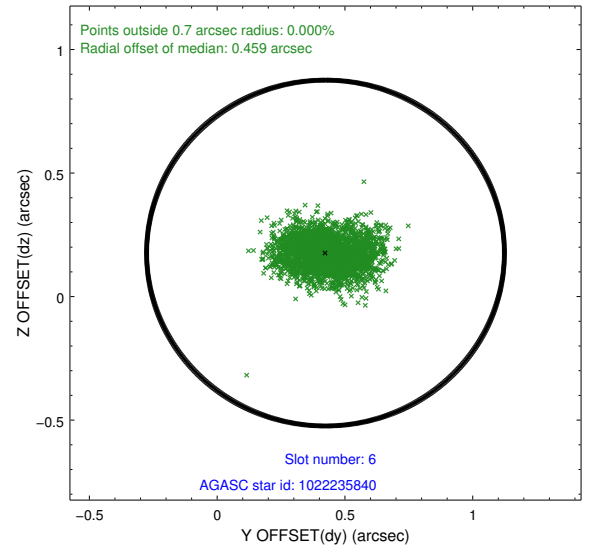
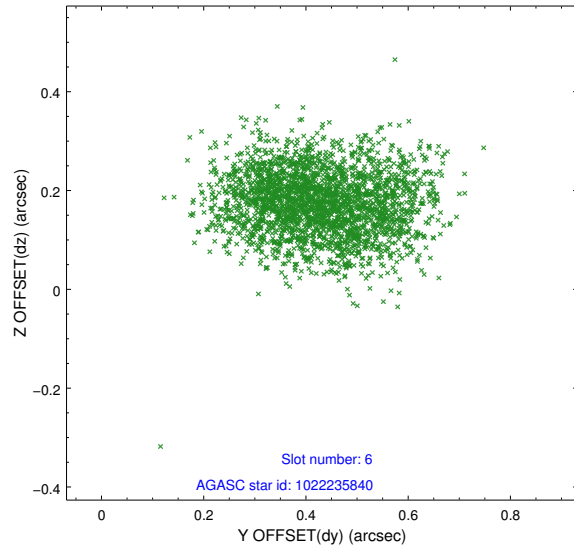
## 2.4.2 Slot 4



### 2.4.3 Slot 5

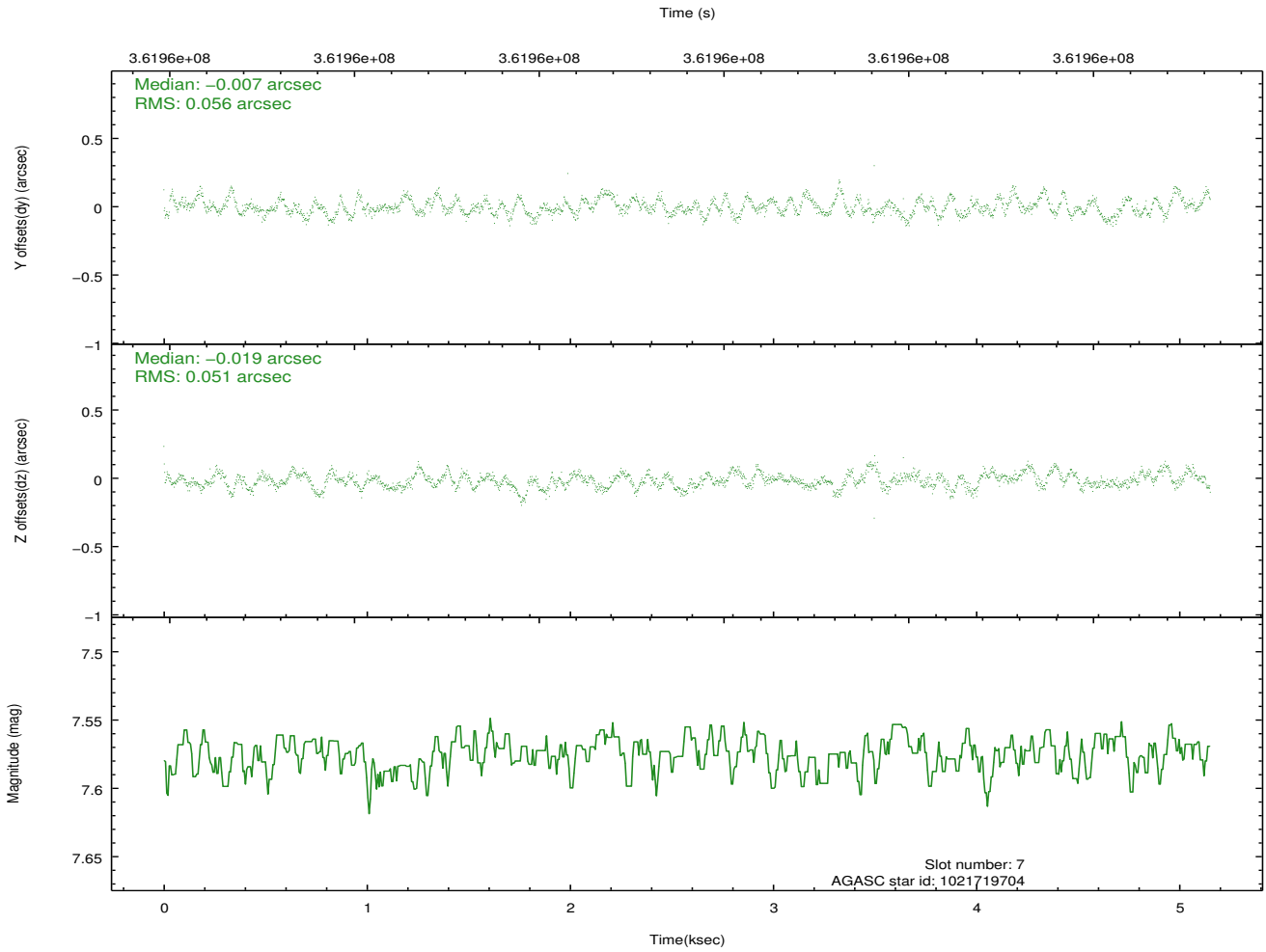
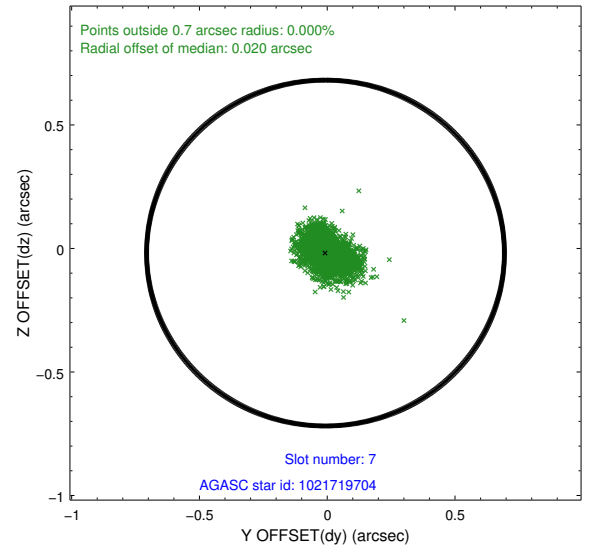
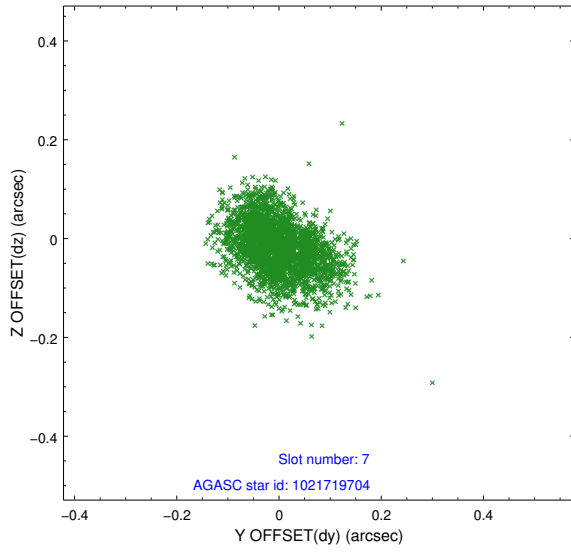


## 2.4.4 Slot 6



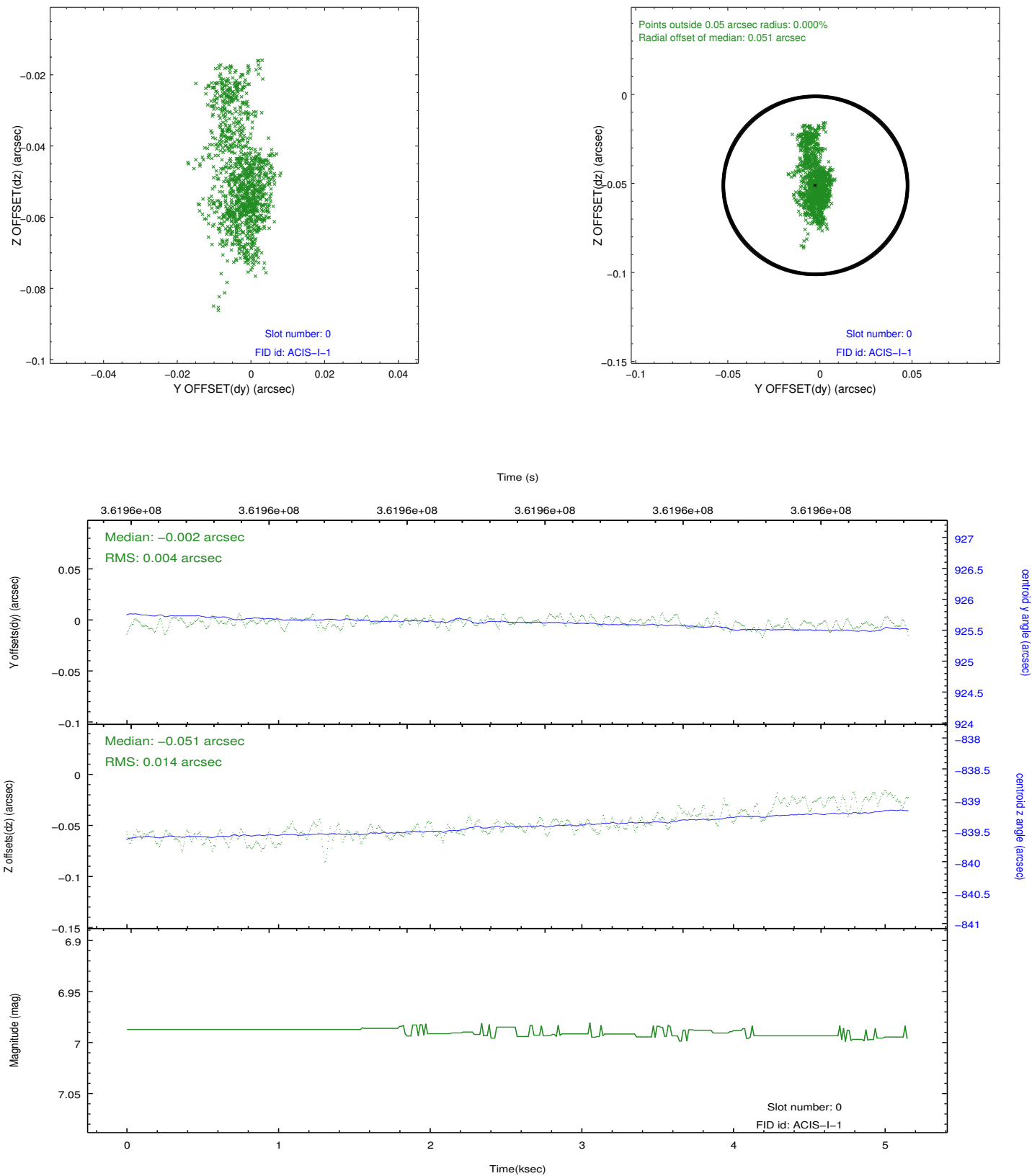


## 2.4.5 Slot 7

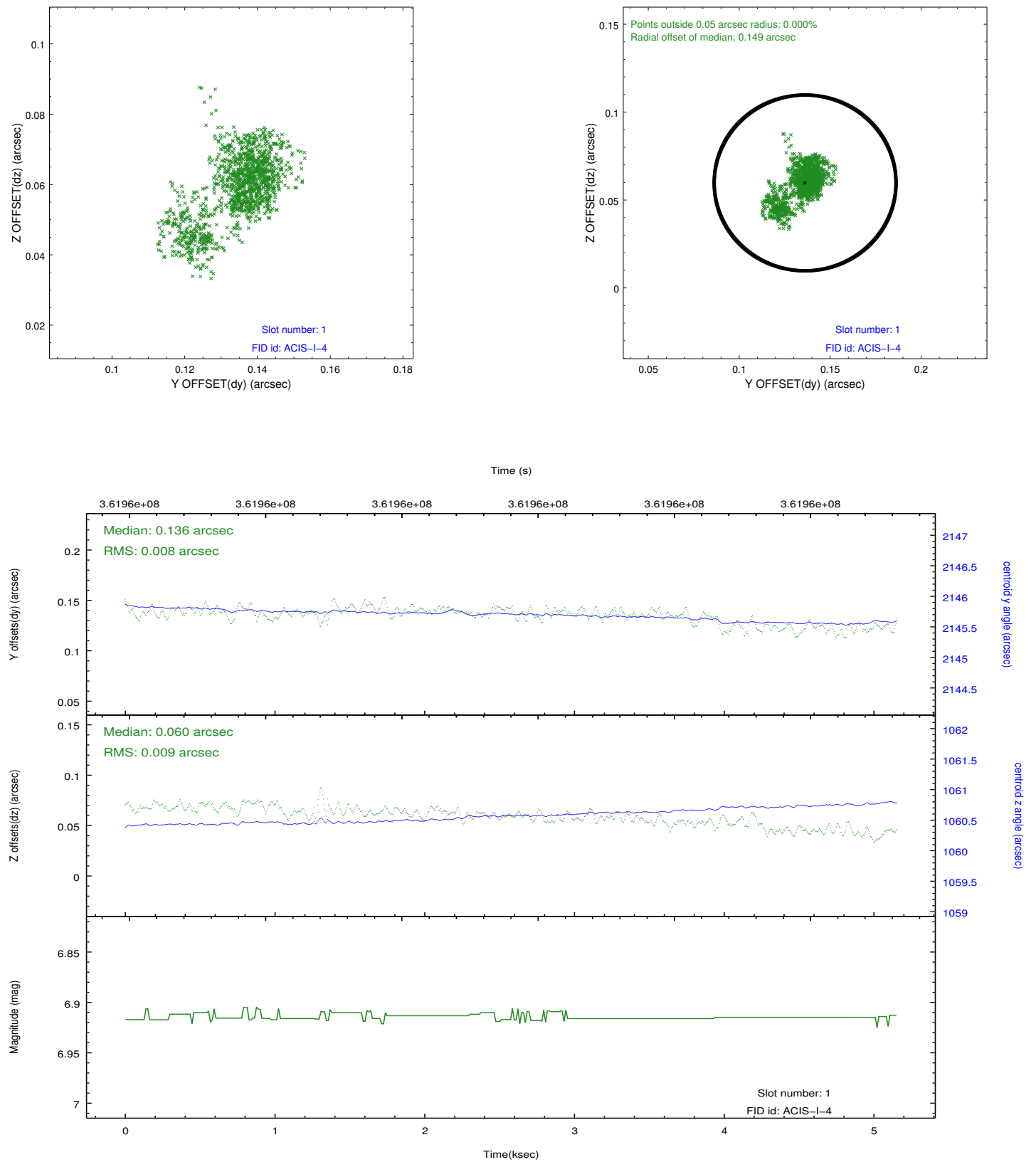


## 2.5 FID Slots

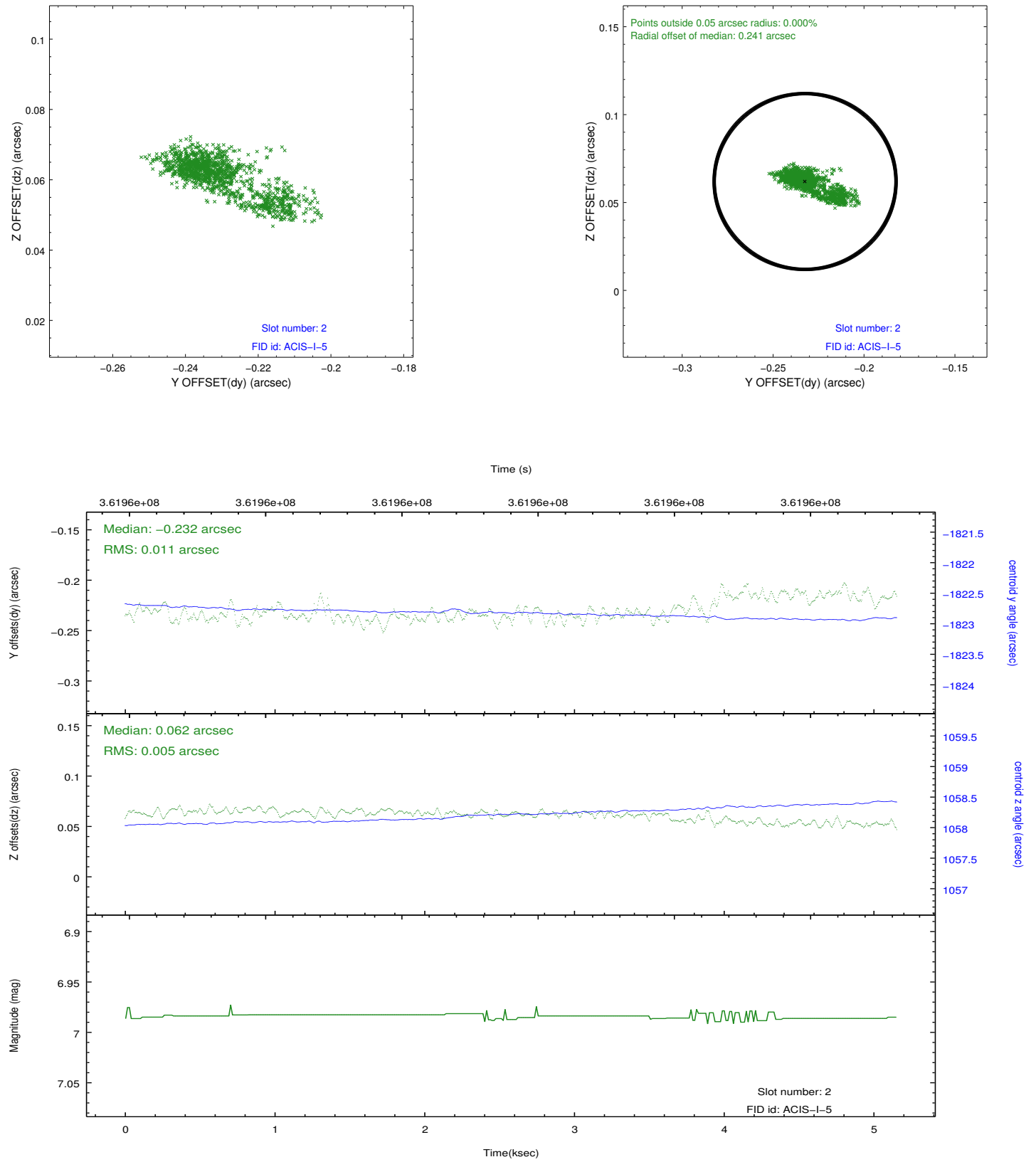
### 2.5.1 Slot 0



## 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)	2012.06.28
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.14910003

## A.2 Comments

A spatial region of the original bias map for CCD = 1 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 = 1 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:  
(201.43552, -42.84343), (201.42810, -42.84307), (201.41667, -42.96561), (201.42411, -42.96597)