

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 8127 - L2 Version 3  
Chandra X-Ray Center

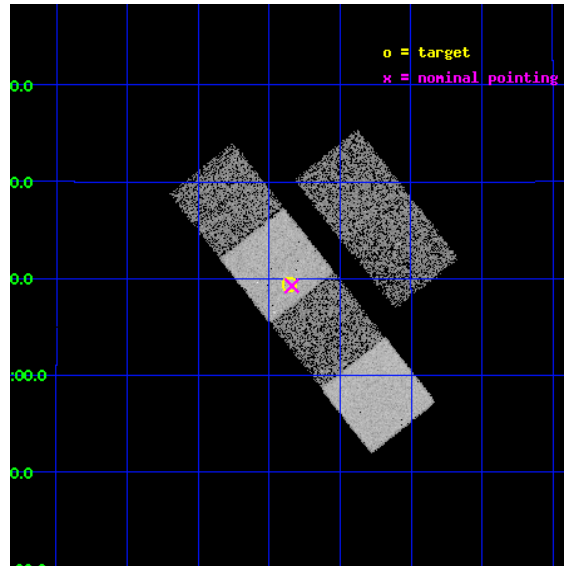
L2 Processing Date : Apr 23 2012

## 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

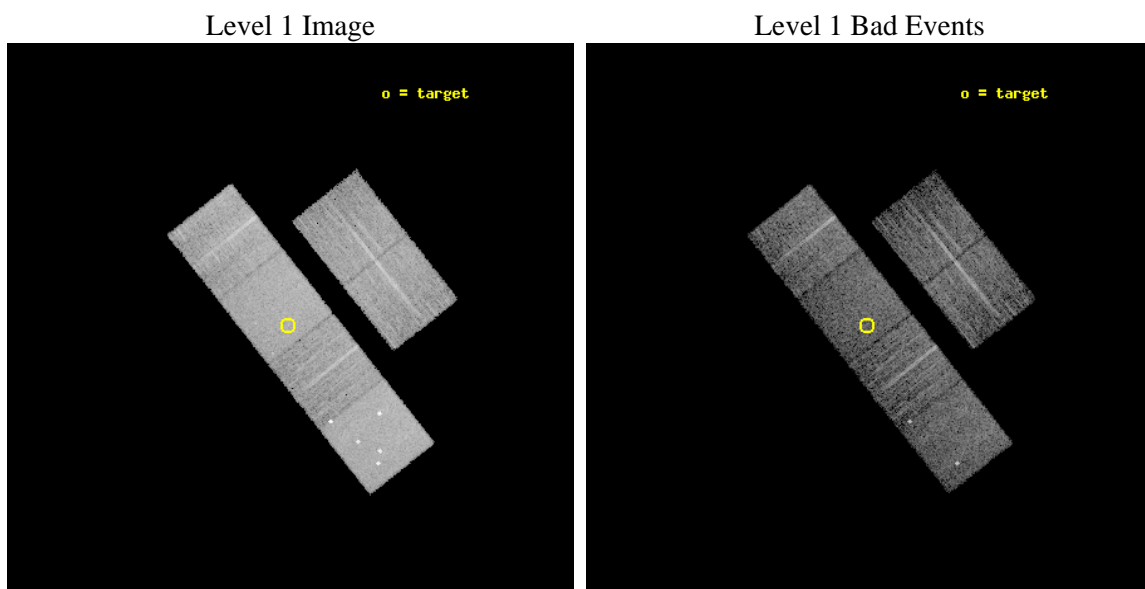
seq_num	900668	Sequence number
obs_id	8127	Observation id
title	The Duty Cycle of Supermassive Black Holes: X-raying Virgo	Proposa
observer	Prof Tommaso Treu	Principal investigator
object	1178	Source name
dtycle	0	&#160
cycle	P	events from which exps? Prim/Second/Both
ra_targ	187.33875	Observer's specified target RA [deg]
dec_targ	8.156389	Observer's specified target Dec [deg]
ra_nom	187.33494082306	Nominal RA [deg]
dec_nom	8.1541951445636	Nominal Dec [deg]
roll_nom	231.60664955413	Nominal Roll [deg]
revision	3	Processing version of data
ontime	5158.3999808431	Sum of GTIs [s]
livetime	5093.0812142701	Livetime [s]
ontime2	5158.3999808431	Sum of GTIs [s]
ontime3	5158.3999808431	Sum of GTIs [s]
ontime5	5158.3999808431	Sum of GTIs [s]
ontime6	5158.3999808431	Sum of GTIs [s]
ontime7	5158.3999808431	Sum of GTIs [s]
ontime8	5155.1589804888	Sum of GTIs [s]
l2events	81275	Number of level 2 events



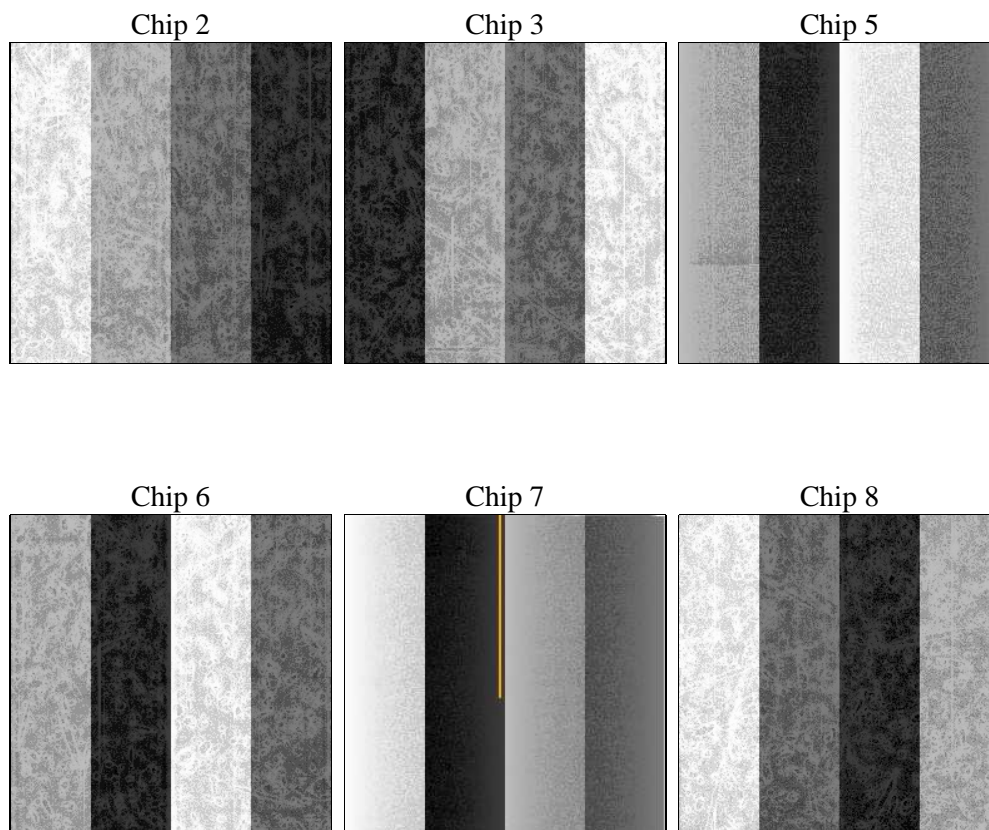
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

obi_num	0	Obi number	sched_exp_time	5400.000000	[s] Scheduled observation exposure time
ascdsver	8.4.4	Processing system revision	ontime	5158.3999808431	Sum of GTIs [s]
caldsver	4.4.9	&#160	ontime2	5158.3999808431	Sum of GTIs [s]
date	2012-04-23T21:19:04	Date and time of file creation	ontime3	5158.3999808431	Sum of GTIs [s]
revision	3	Processing version of data	ontime5	5158.3999808431	Sum of GTIs [s]
			ontime6	5158.3999808431	Sum of GTIs [s]
			ontime7	5158.3999808431	Sum of GTIs [s]
			ontime8	5155.1589804888	Sum of GTIs [s]
			l1events	356879	Number of level 1 events

### 2.1.4 Events

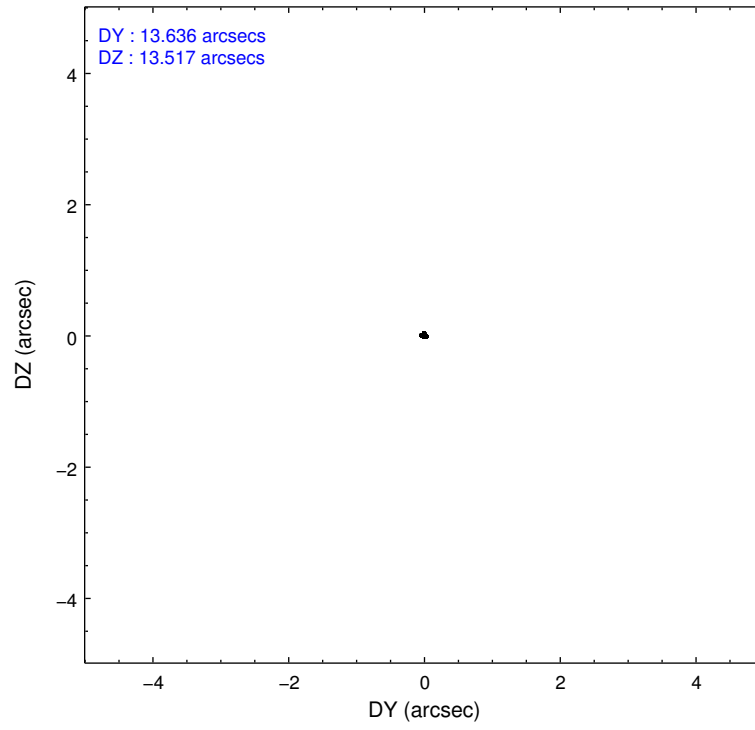
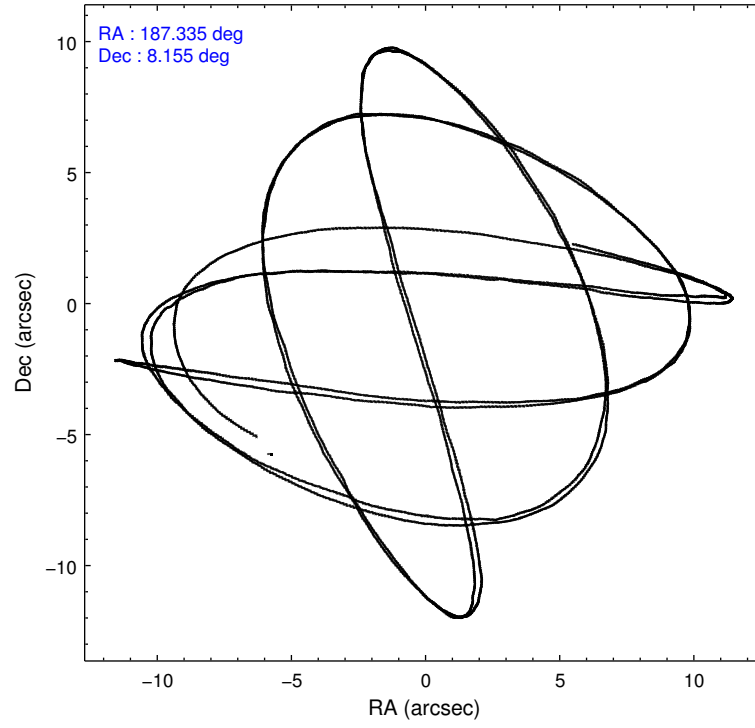
	ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8		ccd 2	ccd 3	ccd 5	ccd 6	ccd 7	ccd 8
level 1 events	50515	46628	79145	48918	67364	64309	grade 0 events	2412	2675	5711	2553	2603	4333
rejected events	44756	40623	40863	42733	39124	50095		4%	5%	7%	5%	3%	6%
rejected %	88%	87%	51%	87%	58%	77%	grade 1 events	42	34	148	24	64	63
								0%	0%	0%	0%	0%	0%
							grade 2 events	1243	1163	10889	1323	5814	3315
								2%	2%	13%	2%	8%	5%
							grade 3 events	558	559	1395	579	2364	1503
								1%	1%	1%	1%	3%	2%
							grade 4 events	511	593	1387	534	2369	1360
								1%	1%	1%	1%	3%	2%
							grade 5 events	1999	2184	5754	2256	6296	2919
								3%	4%	7%	4%	9%	4%
							grade 6 events	1037	1017	18932	1201	15106	3705
								2%	2%	23%	2%	22%	5%
							grade 7 events	42713	38403	34929	40448	32748	47111
								84%	82%	44%	82%	48%	73%

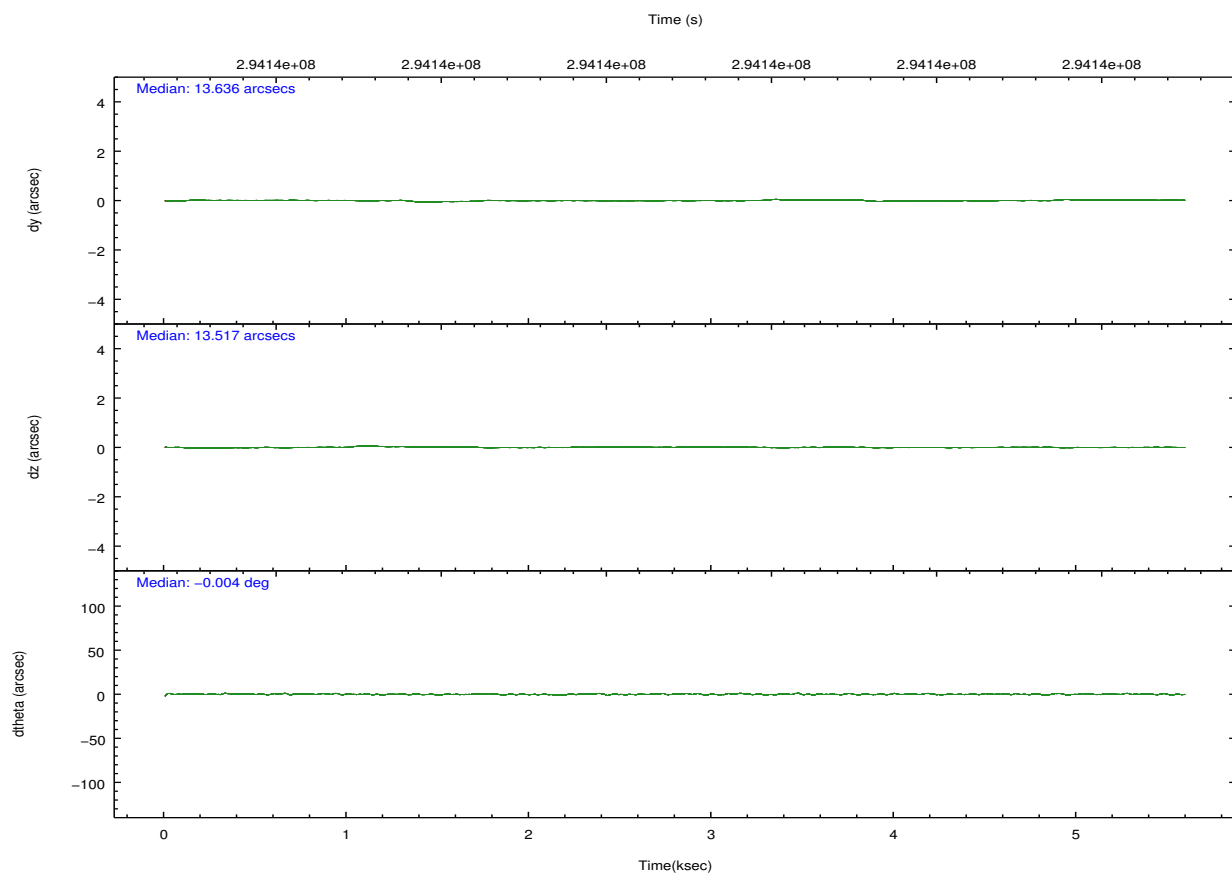
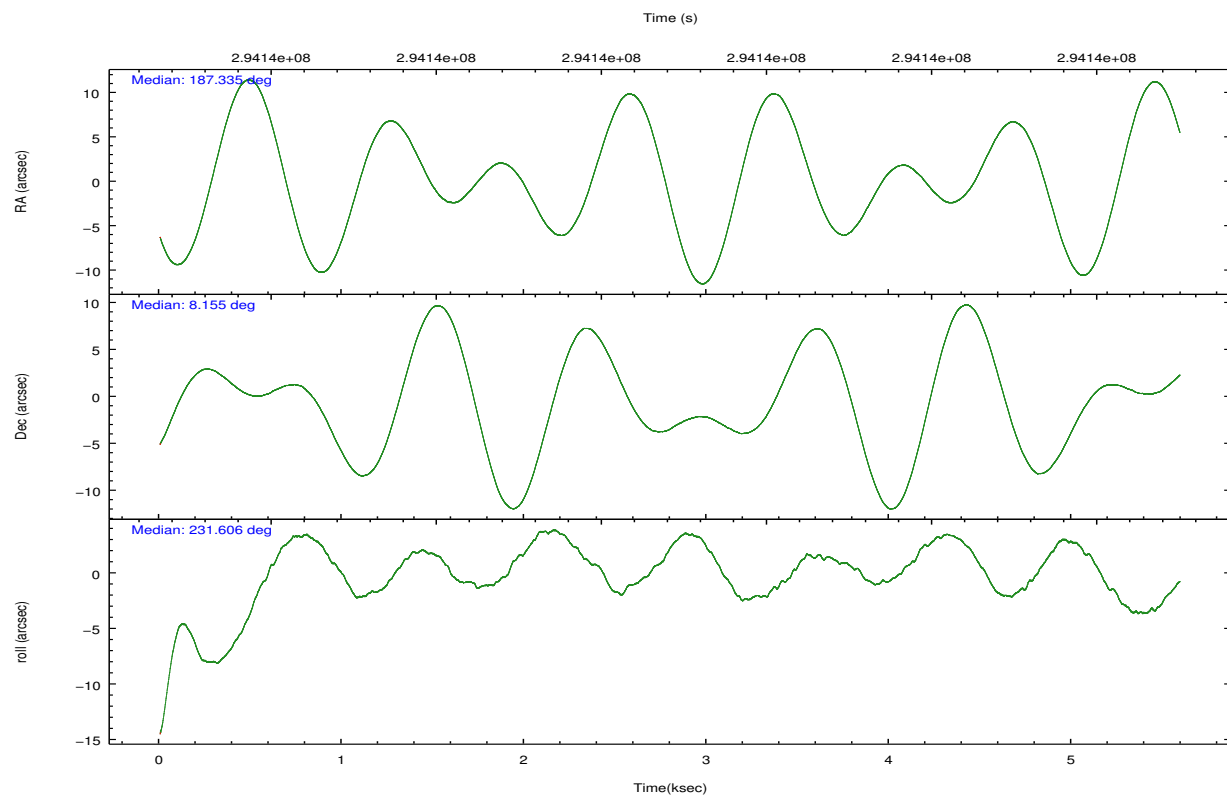


## 2.2 Compared Parameters

Parameter	Planned	Actual	Parameter	Planned	Actual
Instrument	ACIS	ACIS	Obspar format version number	7	7
Detector	ACIS-235678	ACIS-235678	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	187.338548	187.3349408230611	Subarray requested	NONE	NONE
[deg] Pointing Dec	8.181270	8.15419514456355	Alternating exposures requested	N	N
[deg] Pointing Roll	231.449503	231.6066495541285	[s] Primary exposure time	0.000000	3.2
[mm] SIM focus pos	-0.684267	-0.6828225247311905			
[mm] SIM defocus	0	0.001444936568705701			
[mm] SIM translation stage pos	-190.132523	-190.1425803651734			
[mm] SIM translation stage offset	0	0.01005778216563158			
[s] Observation start time (MET)	294135815.184000	294135301.3995			
Observation start date	2007-04-28T08:22:30	2007-04-28T08:15:01			
[s] Observation end time (MET)	294141215.184000	294142703.43735			
Observation end date	2007-04-28T09:52:30	2007-04-28T10:18:23			
Read mode	TIMED	TIMED			

## 2.3 Aspect



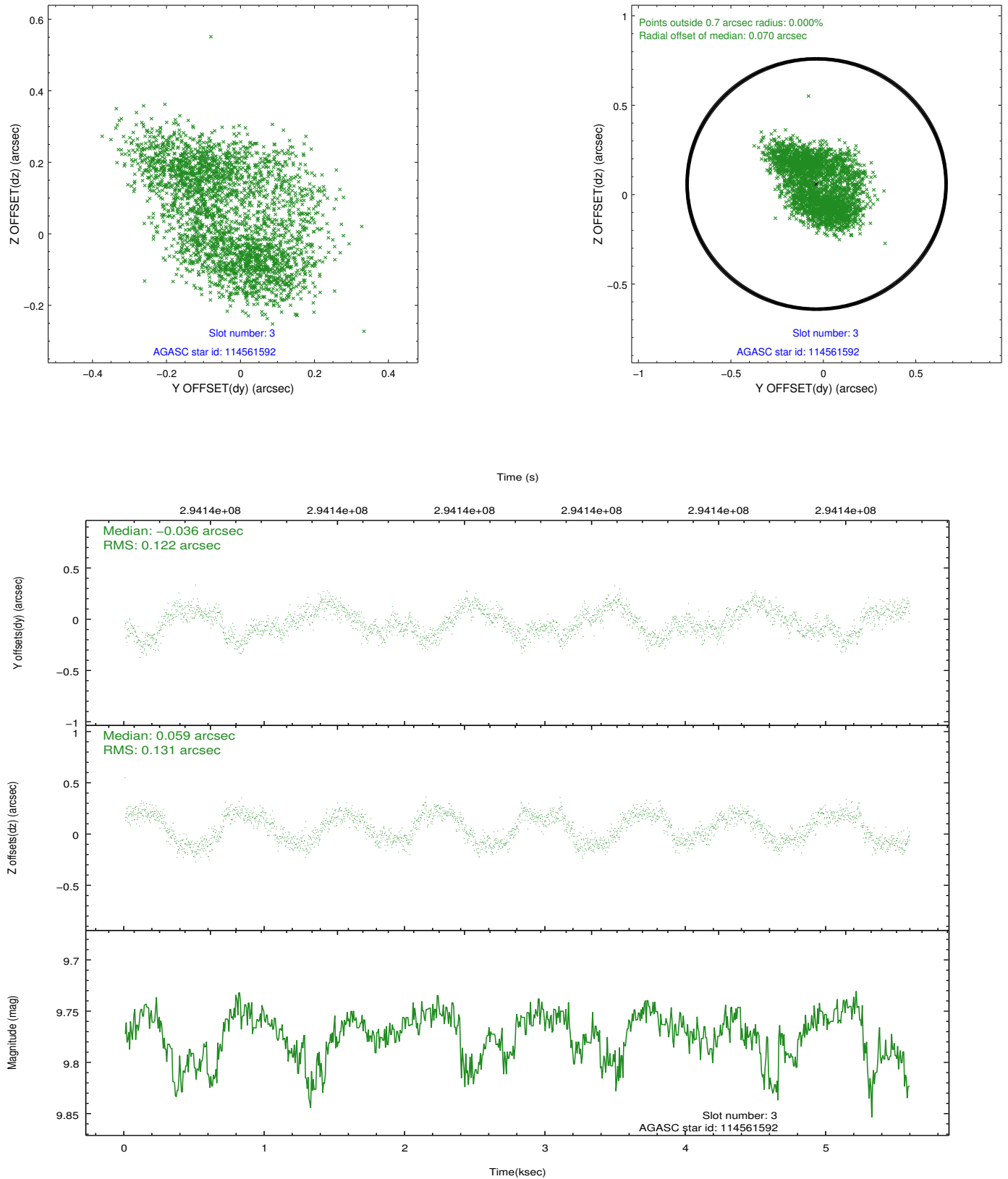


### Slot Statistics

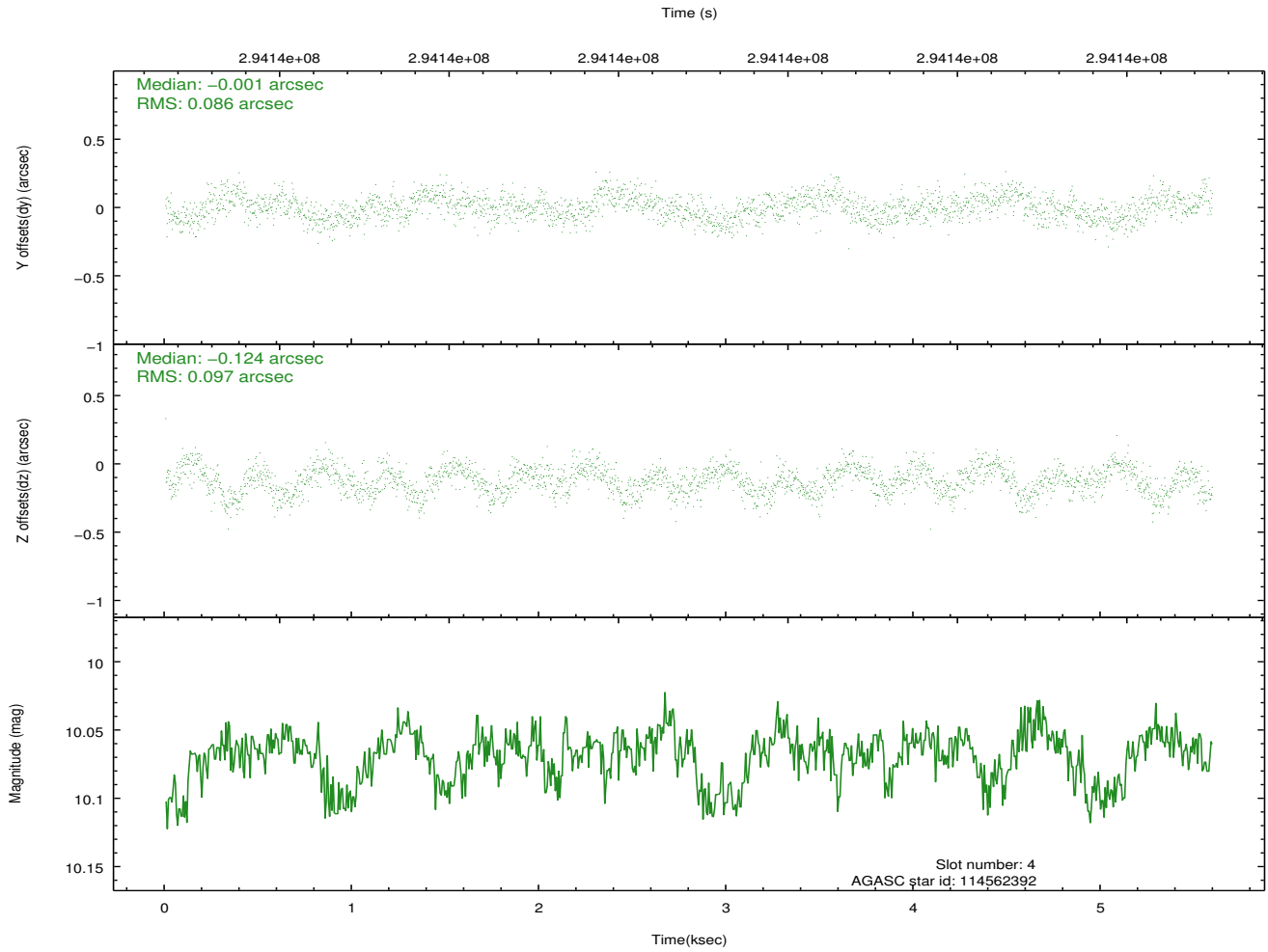
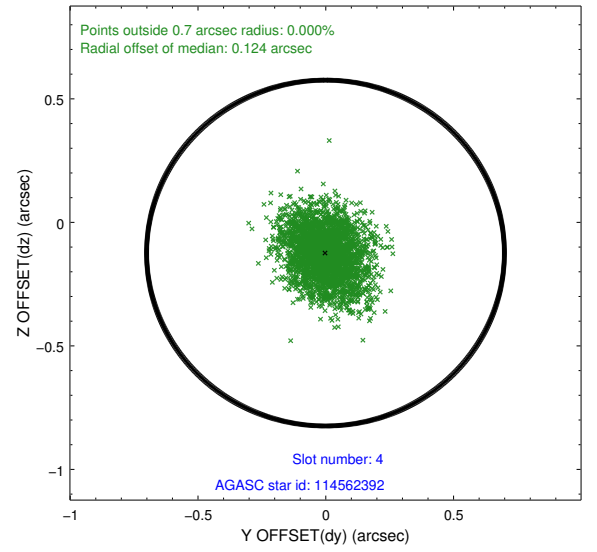
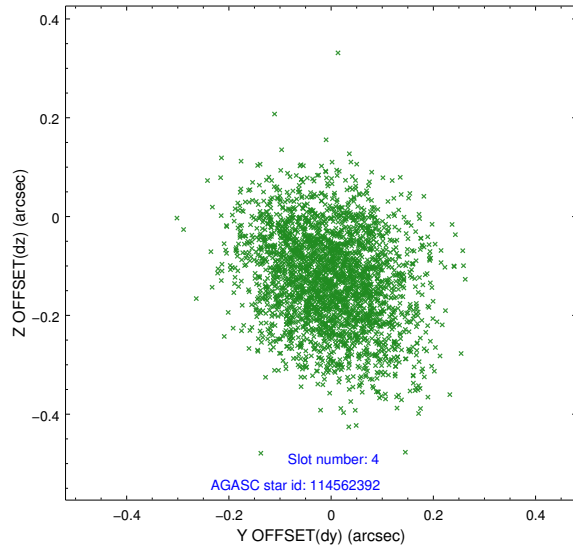
slot	status	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID	ACIS-S-2	7.10	1364	-0.107	-0.076	0.005	0.010	0.000000	0.000000	-766.69	-1734.88
1	FID	ACIS-S-4	7.19	1364	0.127	0.047	0.006	0.009	0.000000	0.000000	2146.35	172.59
2	FID	ACIS-S-6	7.34	1364	-0.048	0.036	0.007	0.012	0.000000	0.000000	396.75	811.21
3	GUIDE	114561592	9.77	2720	-0.036	0.059	0.195	0.284	187.709505	8.445382	-1566.71	440.35
4	GUIDE	114562392	10.07	2717	-0.001	-0.124	0.139	0.220	187.662769	8.522526	-1680.48	137.03
5	GUIDE	114563576	7.88	2728	-0.001	0.010	0.069	0.106	186.867039	8.012388	1522.70	-936.28
6	GUIDE	114563648	9.75	2724	0.238	0.129	0.338	0.461	187.009208	7.938475	1416.40	-374.06
7	GUIDE	114565400	6.31	2727	-0.190	-0.044	0.080	0.113	186.925333	8.610343	-291.03	-2113.22

## 2.4 Star Slots

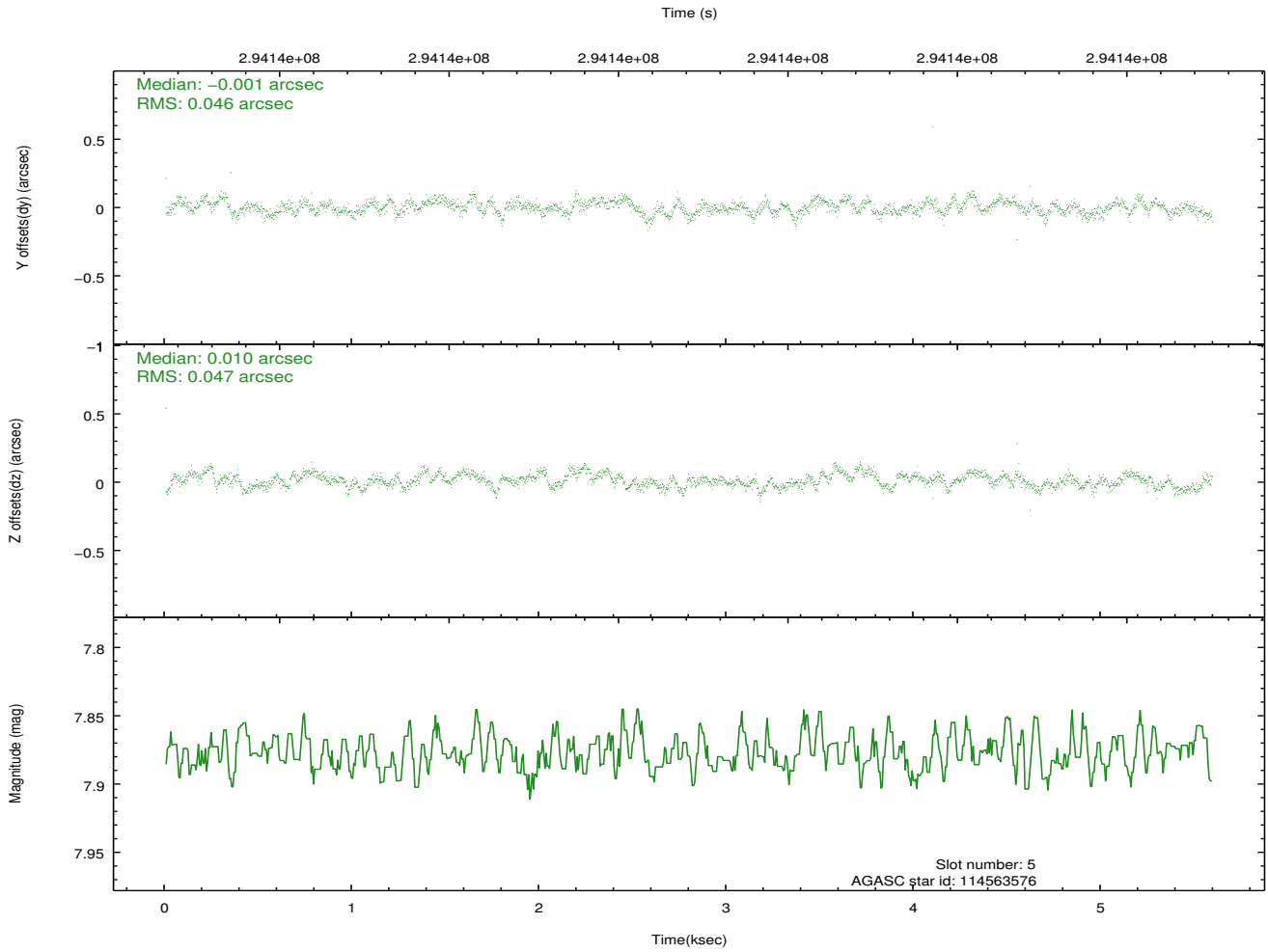
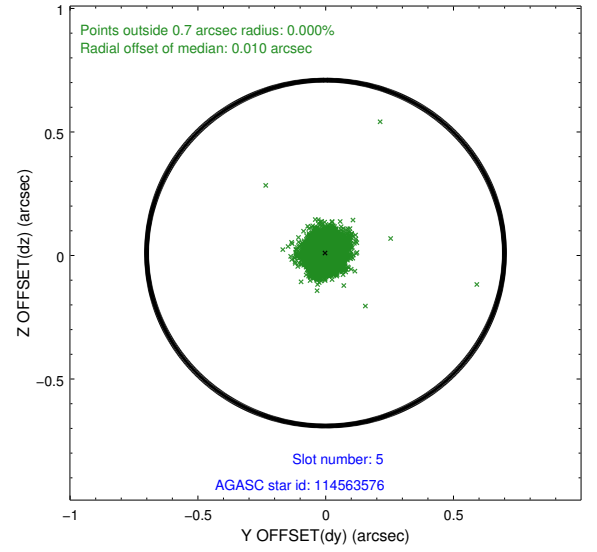
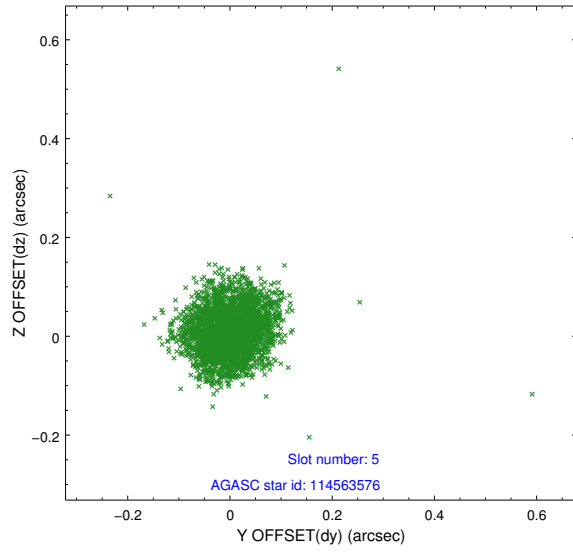
### 2.4.1 Slot 3



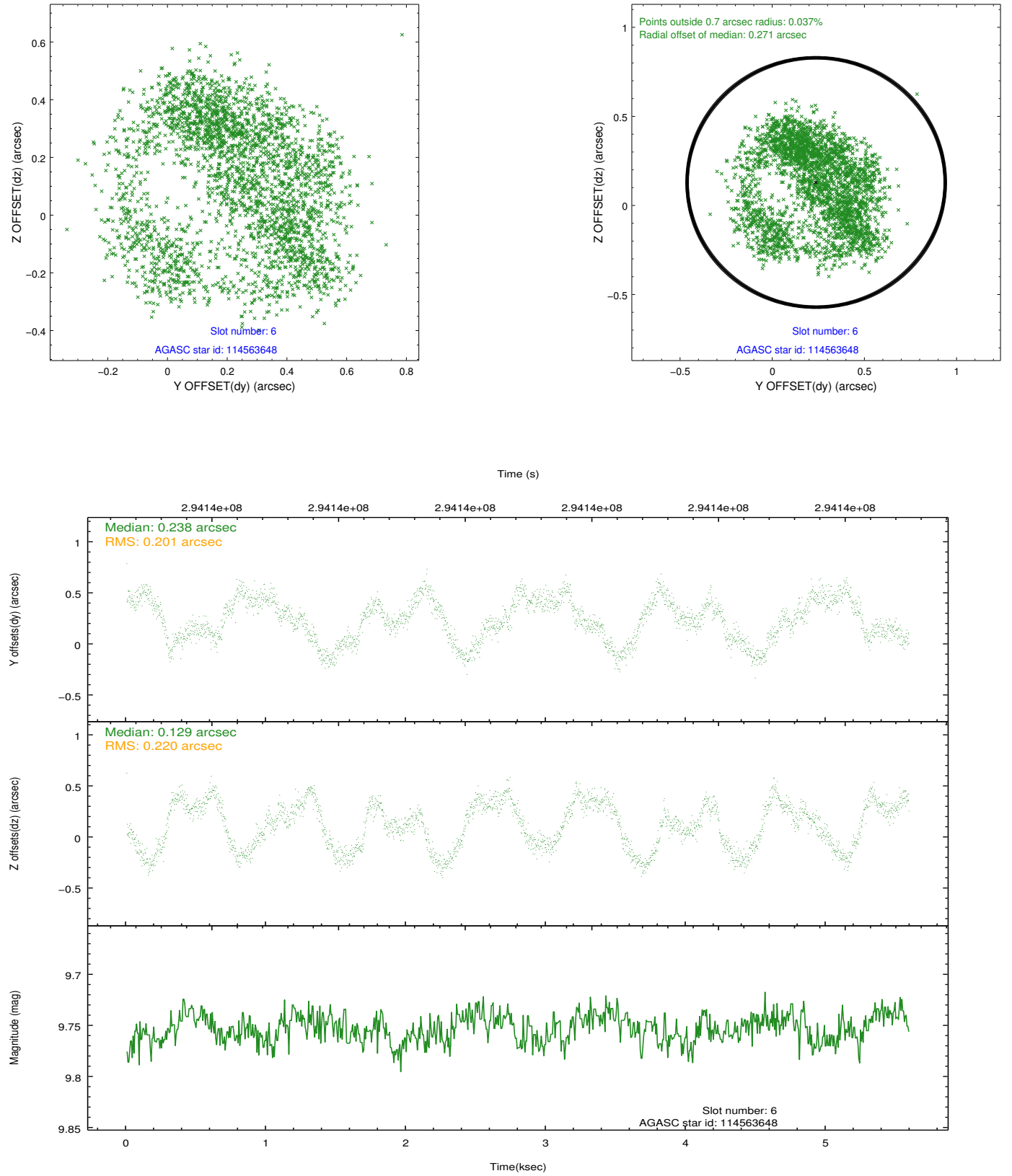
## 2.4.2 Slot 4



### 2.4.3 Slot 5

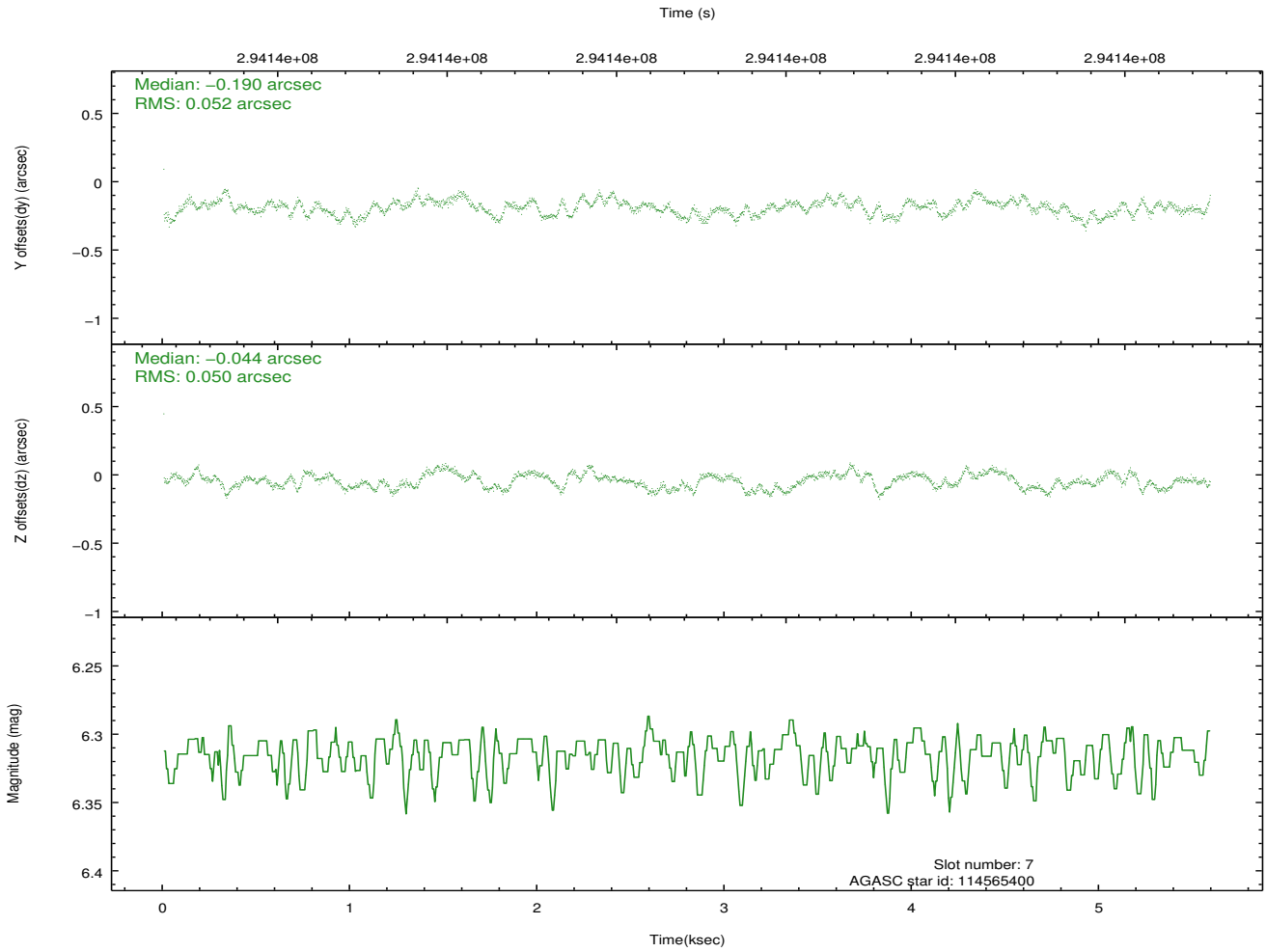
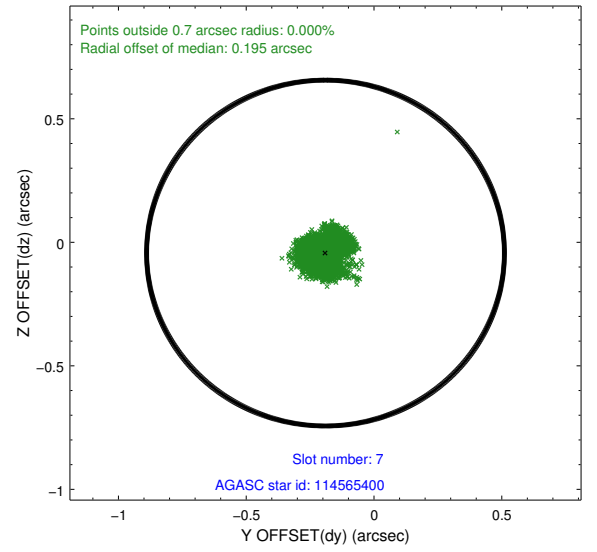
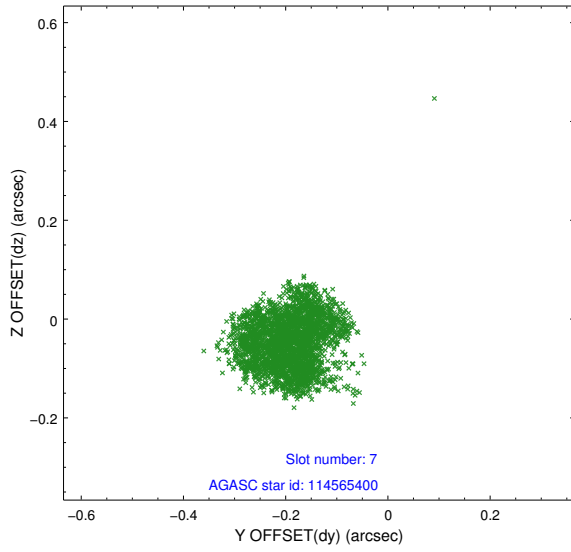


## 2.4.4 Slot 6



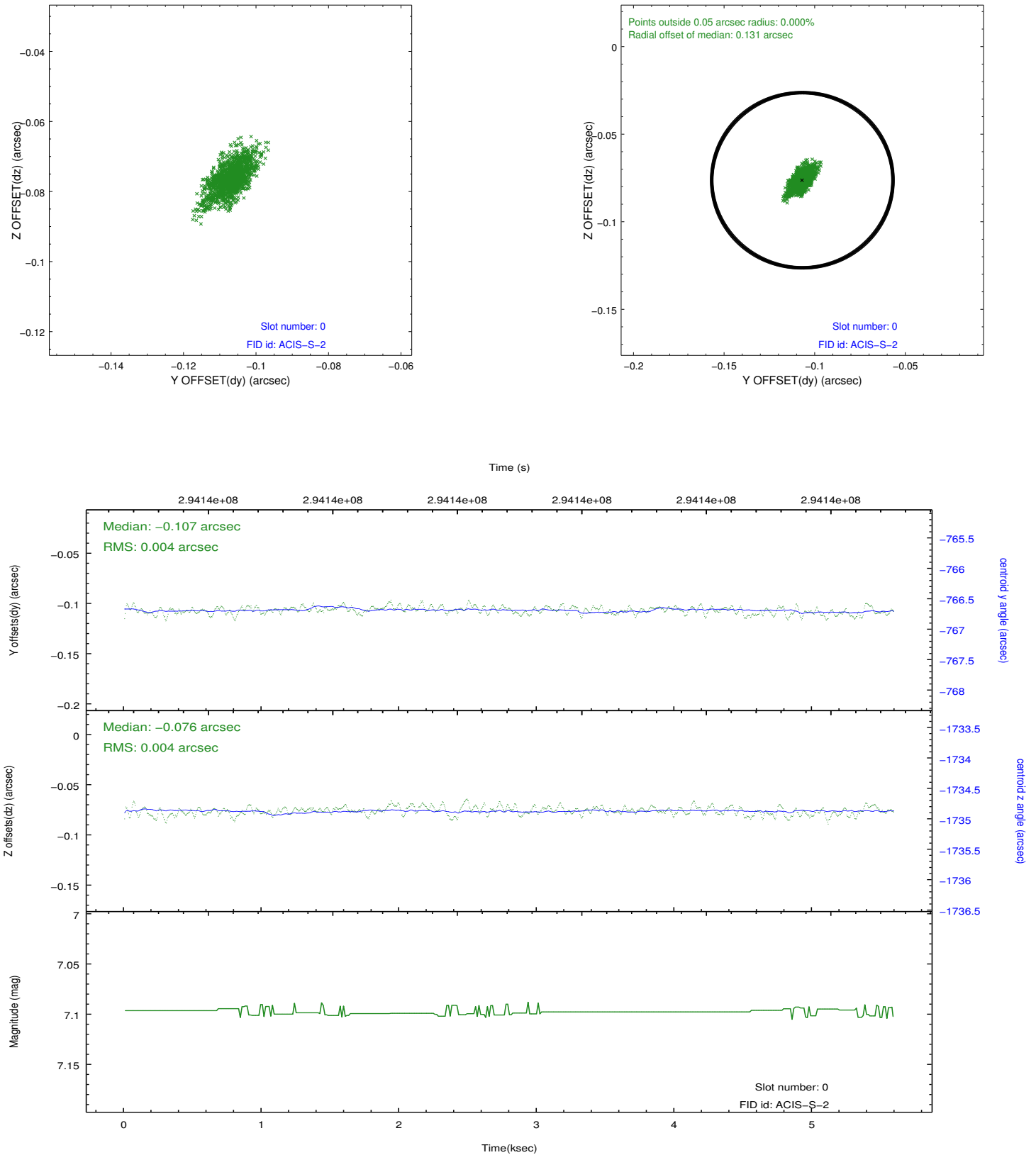


## 2.4.5 Slot 7

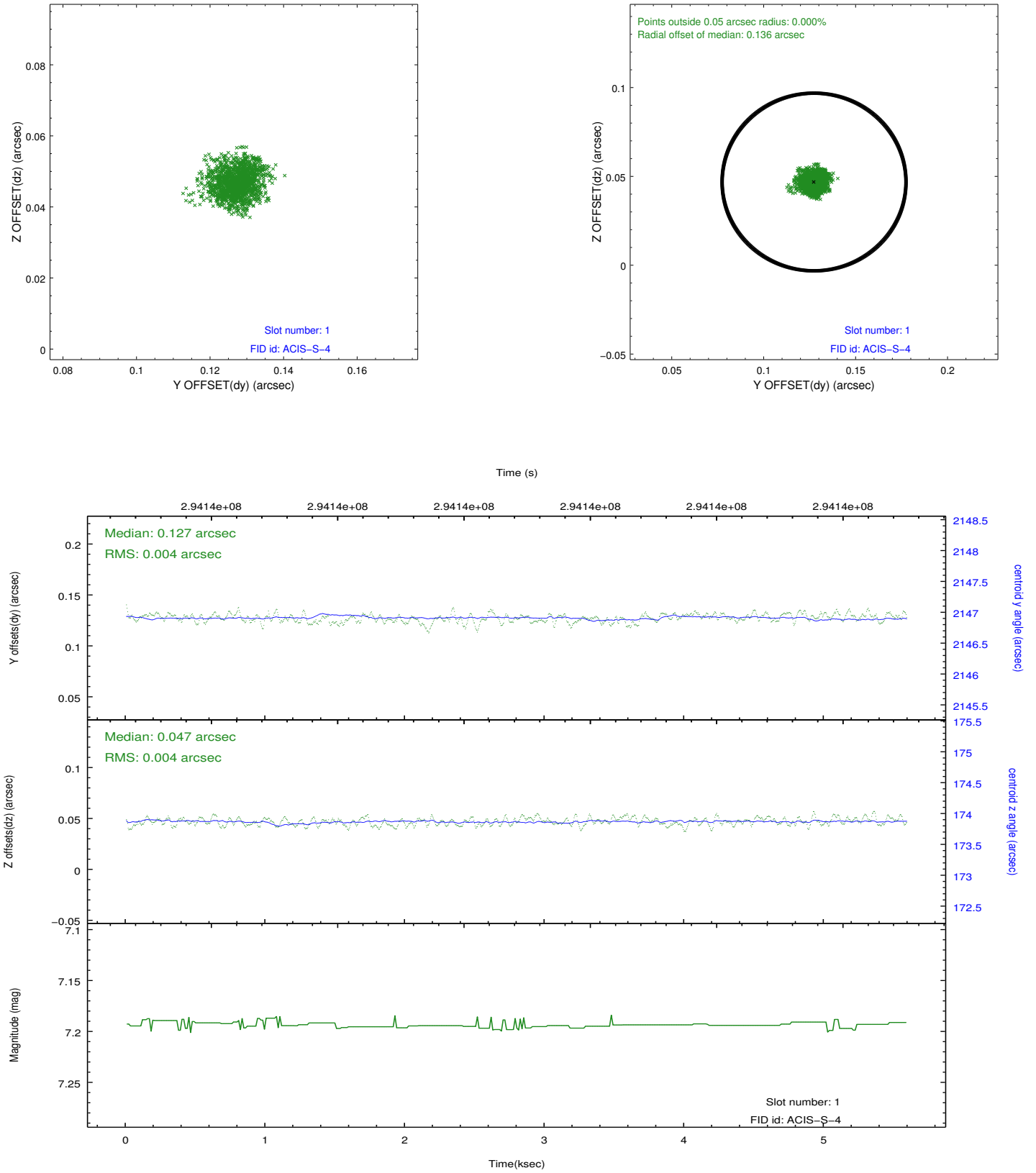


## 2.5 FID Slots

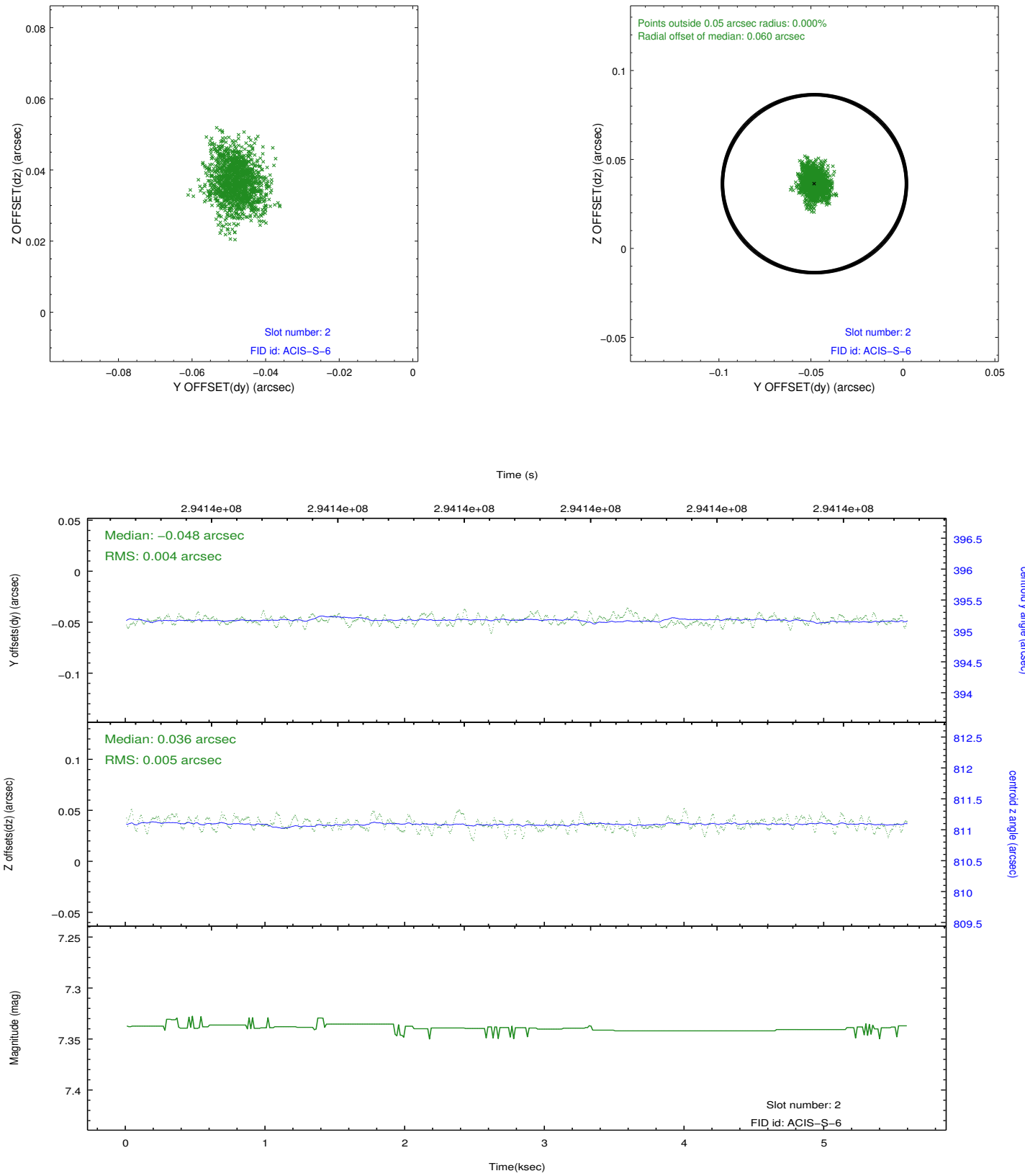
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

V&V Scientist	Joy Nichols
V&V Date (YYYY-MM-DD)	2012.04.24
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	5.15839998

### A.2 Comments