

# V&V Reference Report

## L2 ASCDS Version : 10.1.1

Observation 15678 - L2 Version 3  
Chandra X-Ray Center

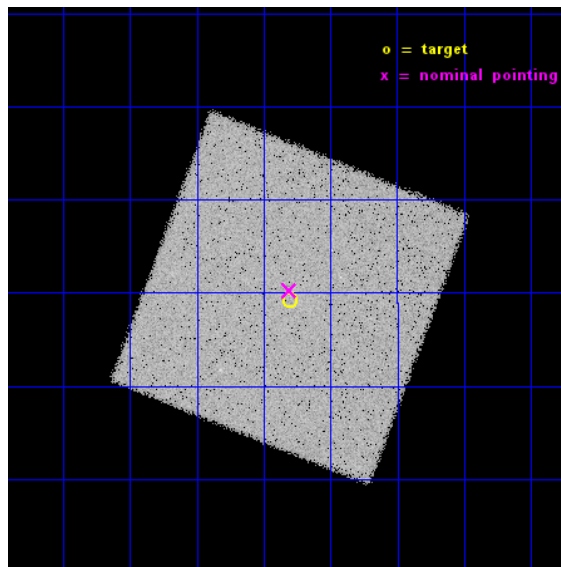
L2 Processing Date : Dec 7 2014

## 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	Parameters . . . . .	4
2.1.3	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

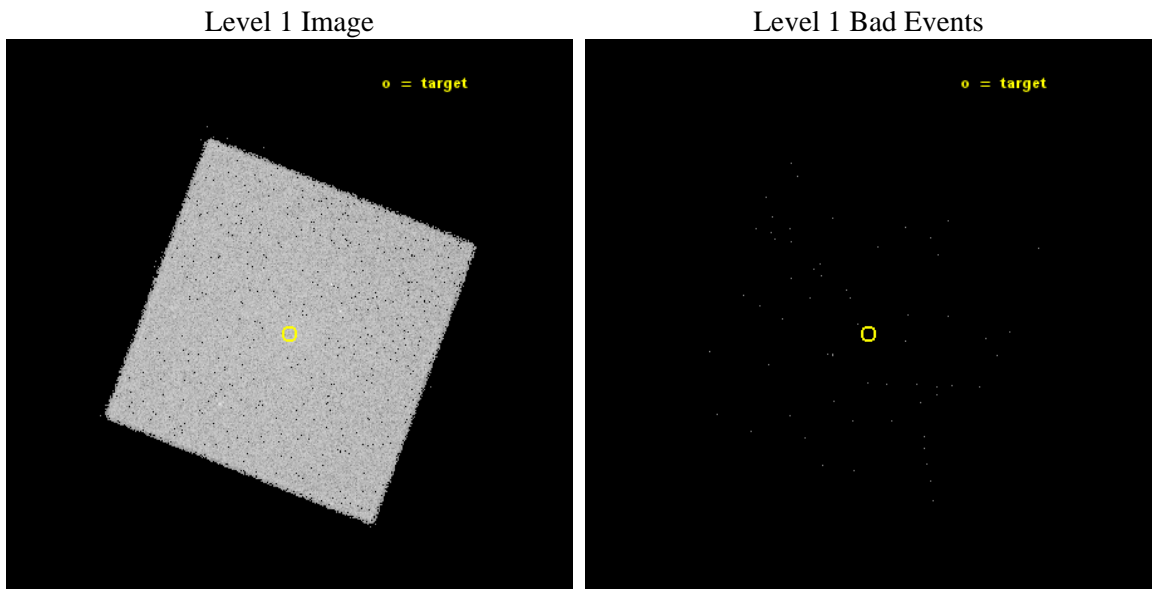
seq_num	100107	Sequence number
obs_id	15678	Observation id
title	Plumbing the Heights of the Solar Wind With Comet ISON	Proposal ti
observer	Dr. Carey Lisse	Principal investigator
object	Comet C/2012 S1 (ISON)	Source name
ra_targ	175.7	Observer's specified target RA [deg]
dec_targ	2.32	Observer's specified target Dec [deg]
ra_nom	175.70167349644	Nominal RA [deg]
dec_nom	2.3379054432405	Nominal Dec [deg]
roll_nom	66.145101108247	Nominal Roll [deg]
revision	3	Processing version of data
ontime	3153.9251728058	[s]
livetime	3129.2806778209	Ontime multiplied by DTCOR
l2events	190567	Number of level 2 events



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

obi_num	0	Obi number	sched_exp_time	3000.000000	[s] Scheduled observation exposure time
ascdsver	10.3.1	Processing system revision	ontime	3153.9251728058	[s]
caldsver	4.6.4	&#160	l1events	331444	Number of level 1 events
date	2014-12-07T21:05:40	Date and time of file creation			
revision	3	Processing version of data			

### 2.1.3 Events

#### Level 1 Events

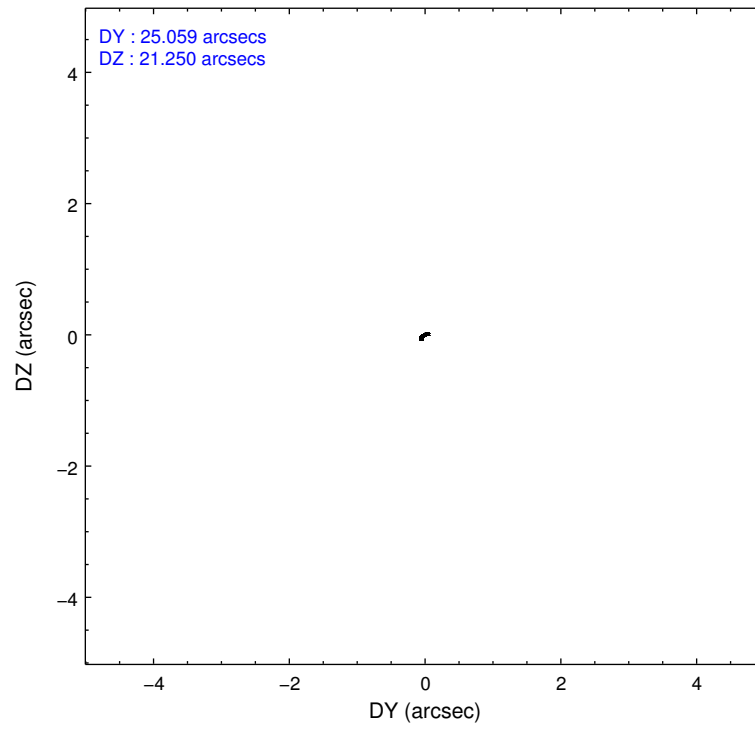
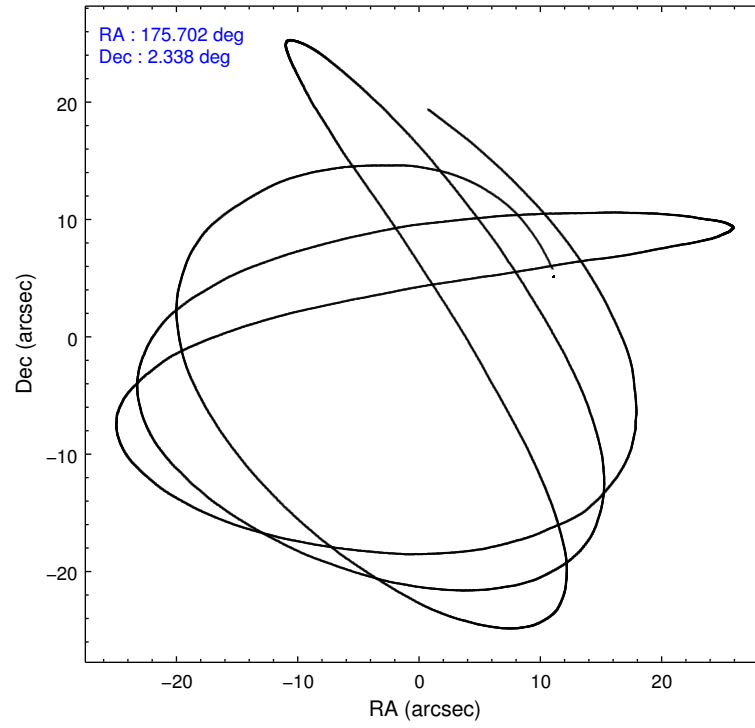
	<b>segment 0</b>
level 1 events	331444
rejected events	74324
rejected %	22%

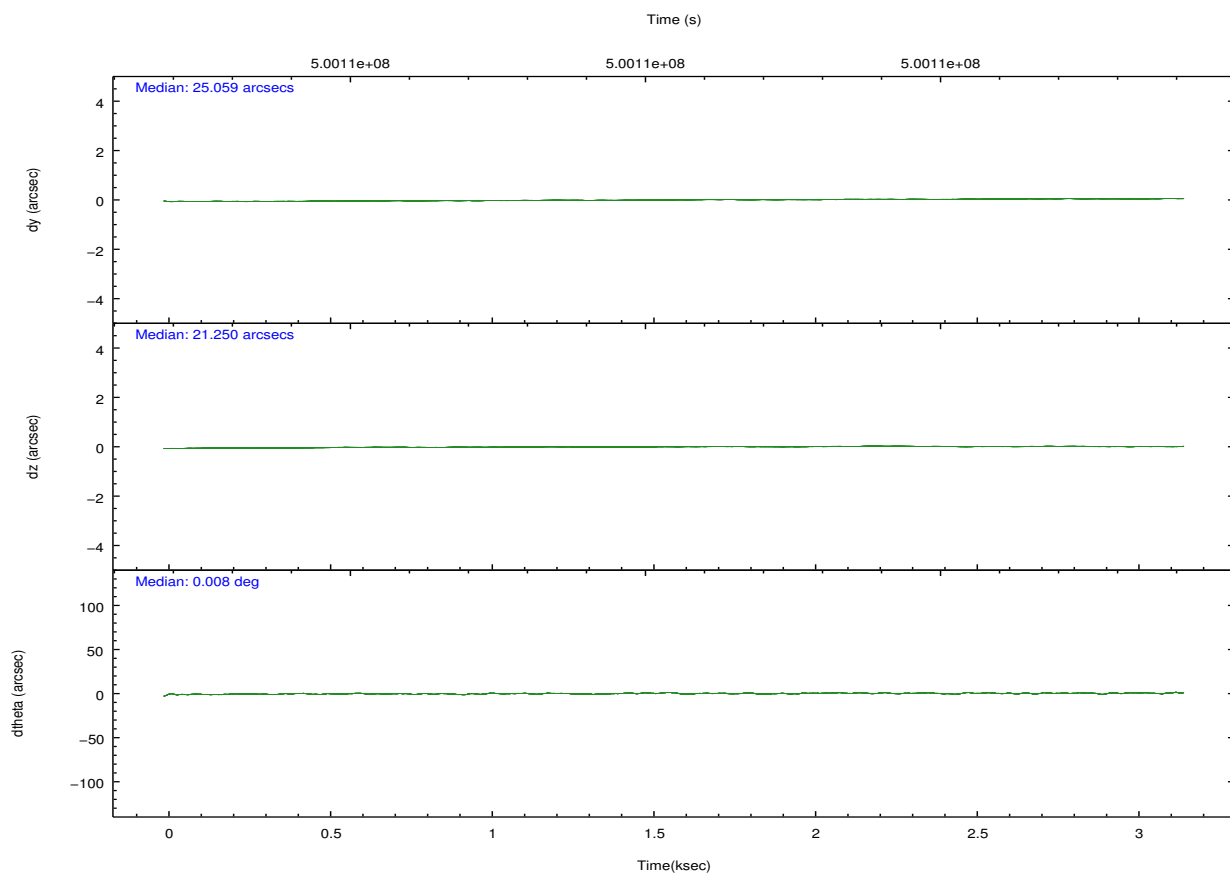
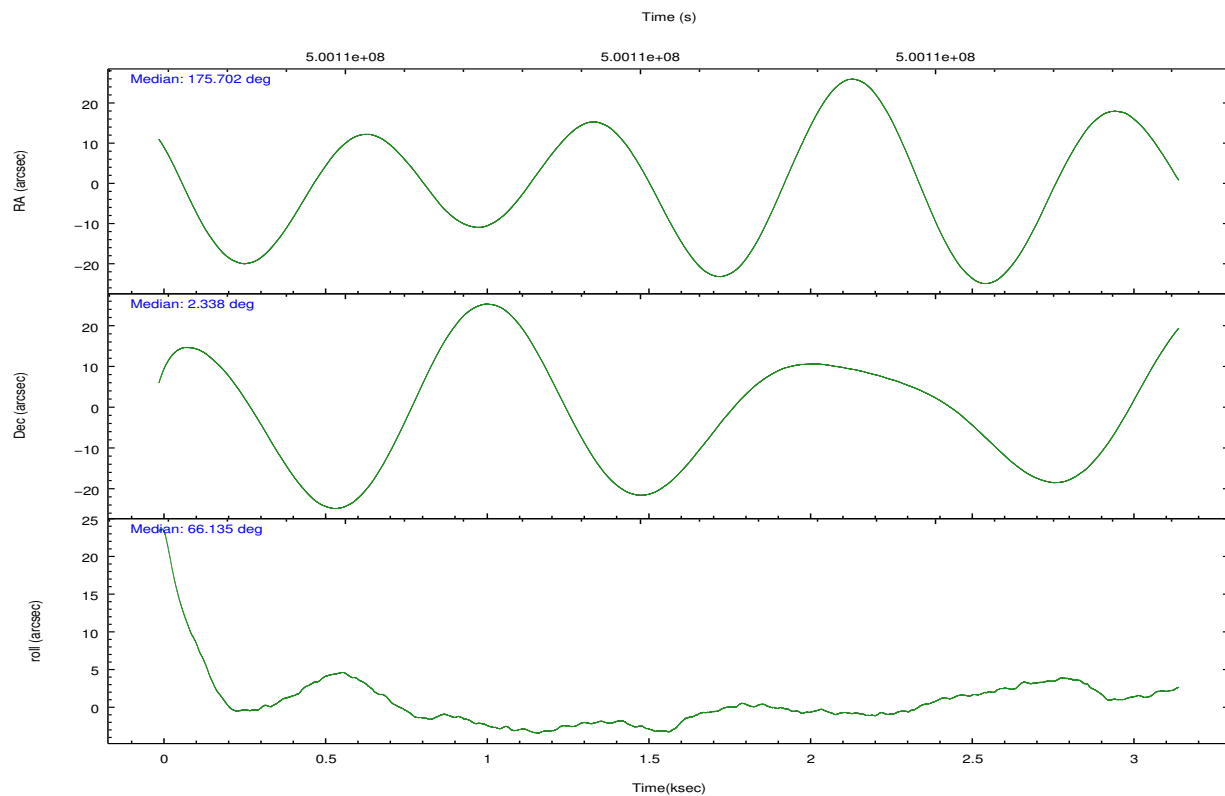
## 2.2 Compared Parameters

Parameter	Planned	Actual
Instrument	HRC	HRC
Detector	HRC-I	HRC-I
Grating	NONE	NONE
Data mode	OBSERVING	OBSERVING
Observation mode	POINTING	POINTING
[deg] Pointing RA	175.705301	175.7016734964405
[deg] Pointing Dec	2.311121	2.337905443240495
[deg] Pointing Roll	66.240418	66.14510110824733
[mm] SIM focus pos	-1.040293	-1.038866356238299
[mm] SIM defocus	0	0.001426264420575141
[mm] SIM translation stage pos	126.985494	126.9829799899862
[mm] SIM translation stage offset	0	0.002508901615314585
[s] Observation start time (MET)	500110667.184000	500109625.3926
Observation start date	2013-11-06T07:36:40	2013-11-06T07:20:25
[s] Observation end time (MET)	500113667.184000	500113895.54283
Observation end date	2013-11-06T08:26:40	2013-11-06T08:31:35

Parameter	Planned	Actual
Obspar format version number	7	7
Obspar file type	PREDICTED	ACTUAL
Obspar update status	NONE	UPDATED

## 2.3 Aspect





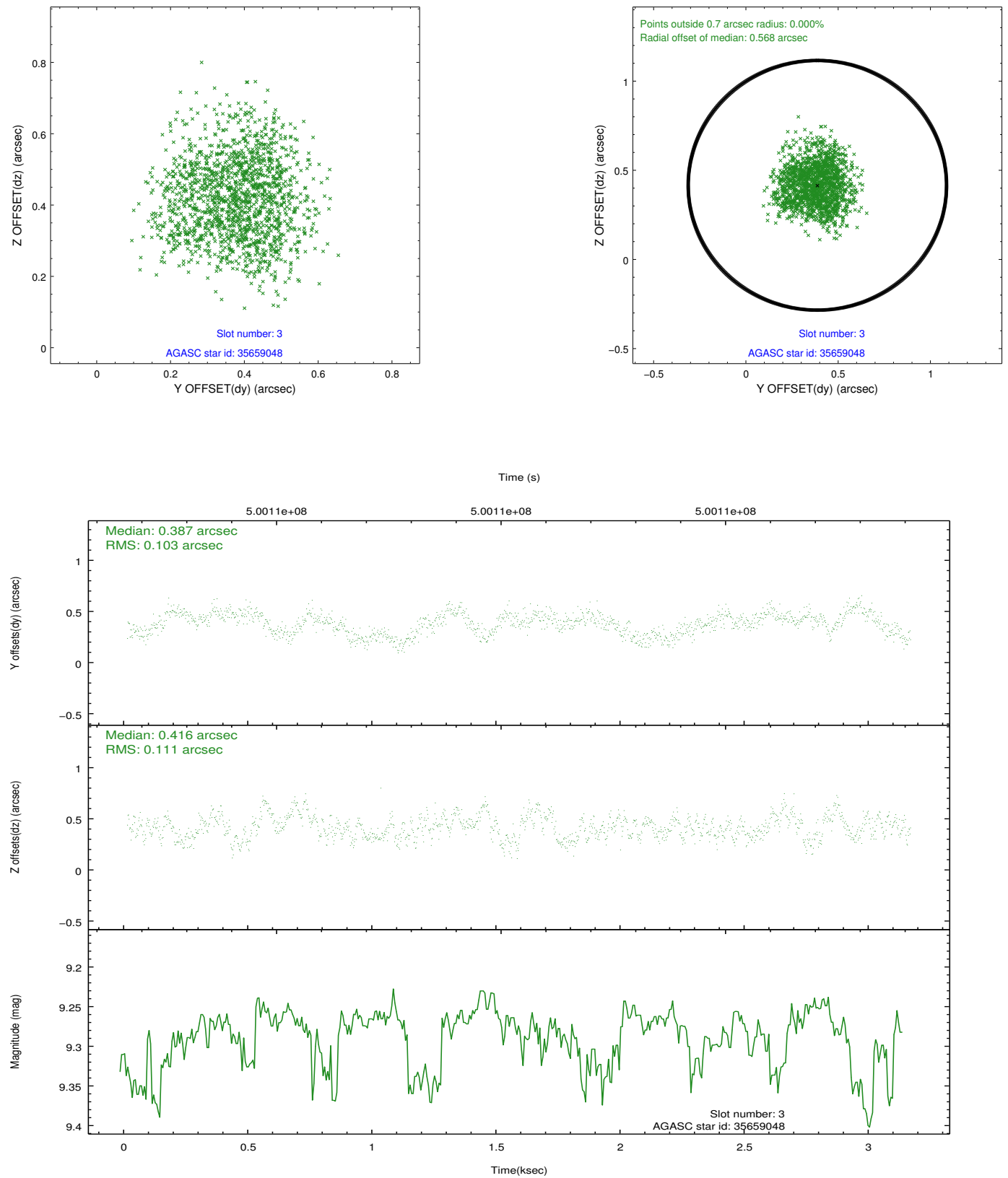
### Slot Statistics

slot	status	used	id	mag	n_pts	med_dy	med_dz	dr1	dr2	ra	dec	mean_y	mean_z
0	FID		HRC-I-2	7.07	770	0.068	-0.098	0.006	0.011	0.000000	0.000000	831.59	-1311.16
1	FID		HRC-I-3	7.11	770	-0.224	0.009	0.006	0.009	0.000000	0.000000	-1208.78	993.34
2	FID		HRC-I-4	7.04	770	0.276	0.003	0.007	0.010	0.000000	0.000000	1260.35	993.97
3	GUIDE	used	35659048	9.28	1540	0.387	0.416	0.166	0.248	175.742282	2.054880	-789.15	-492.94
4	GUIDE	used	36045208	8.32	1538	0.061	0.088	0.103	0.167	176.375467	2.647599	2079.32	-1716.31
5	GUIDE	used	36045264	8.55	1539	-0.324	-0.475	0.101	0.157	175.420365	2.870668	1432.55	1748.71
6	GUIDE	used	36045680	8.88	1540	-0.185	0.423	0.110	0.185	175.537896	2.878377	1628.13	1375.60
7	GUIDE	used	36048664	9.36	1537	0.077	-0.450	0.133	0.212	175.377330	3.006558	1817.80	2089.41

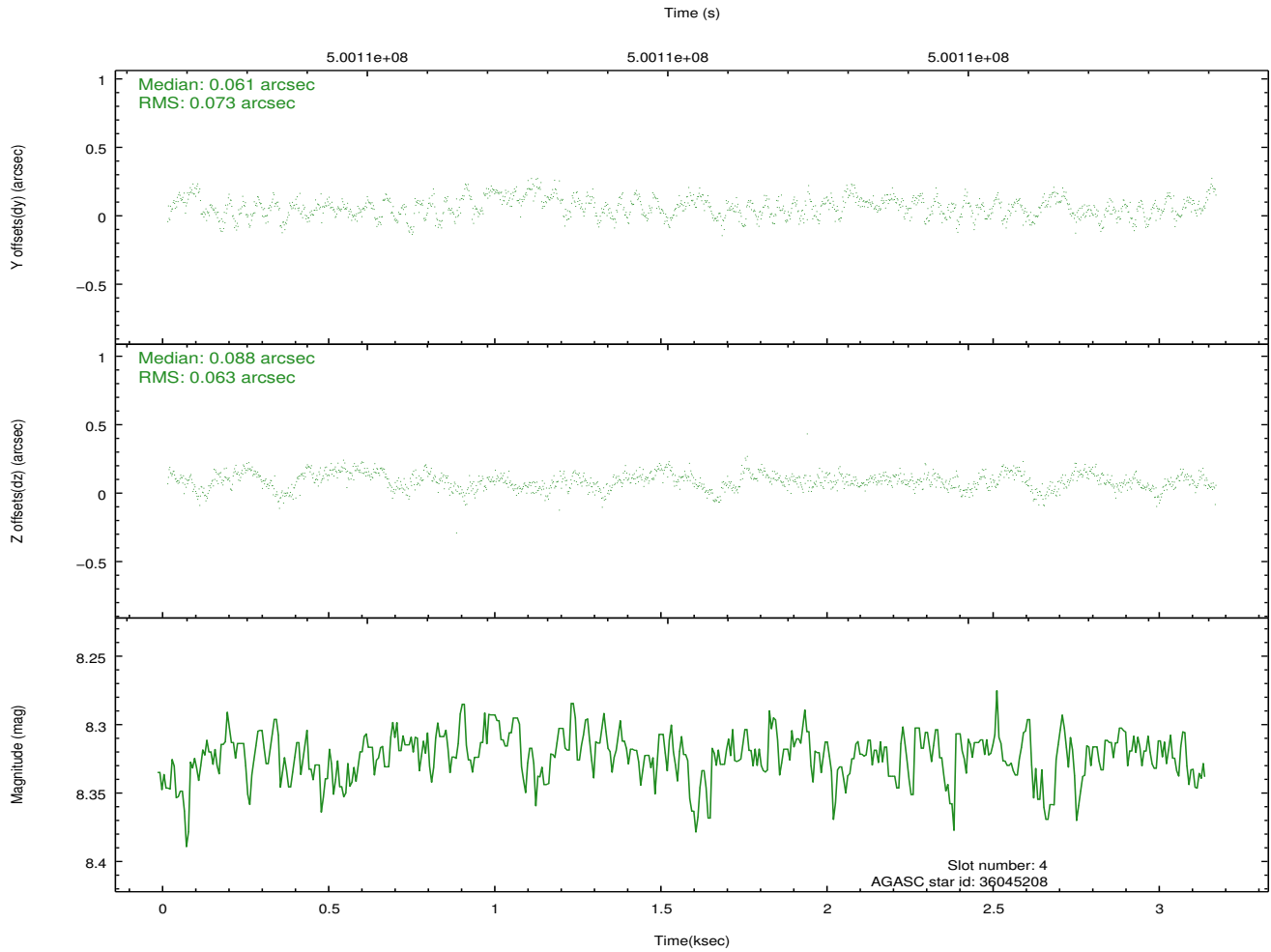
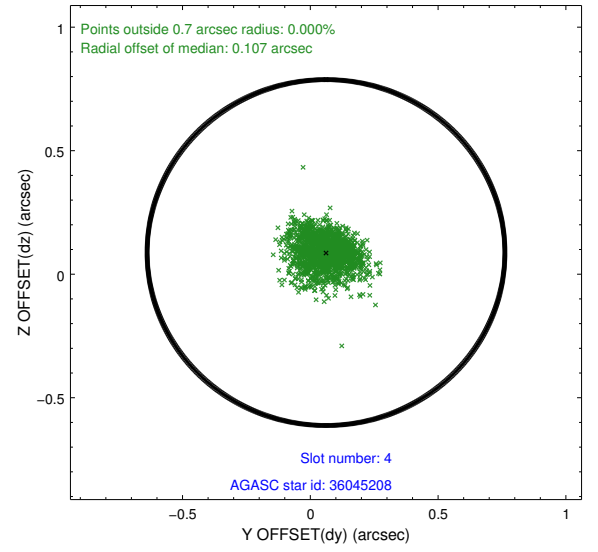
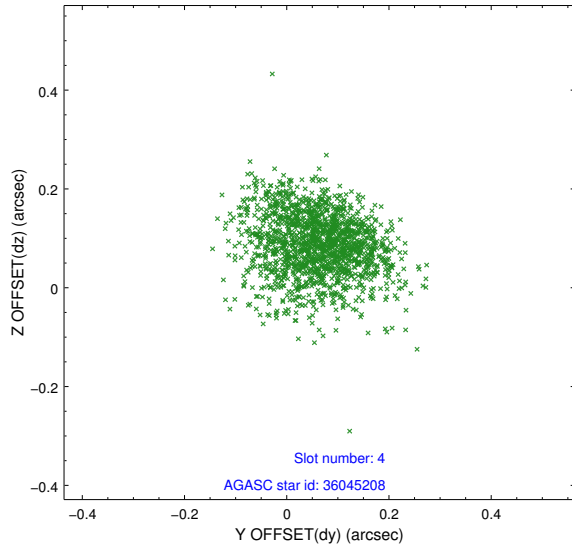


## 2.4 Star Slots

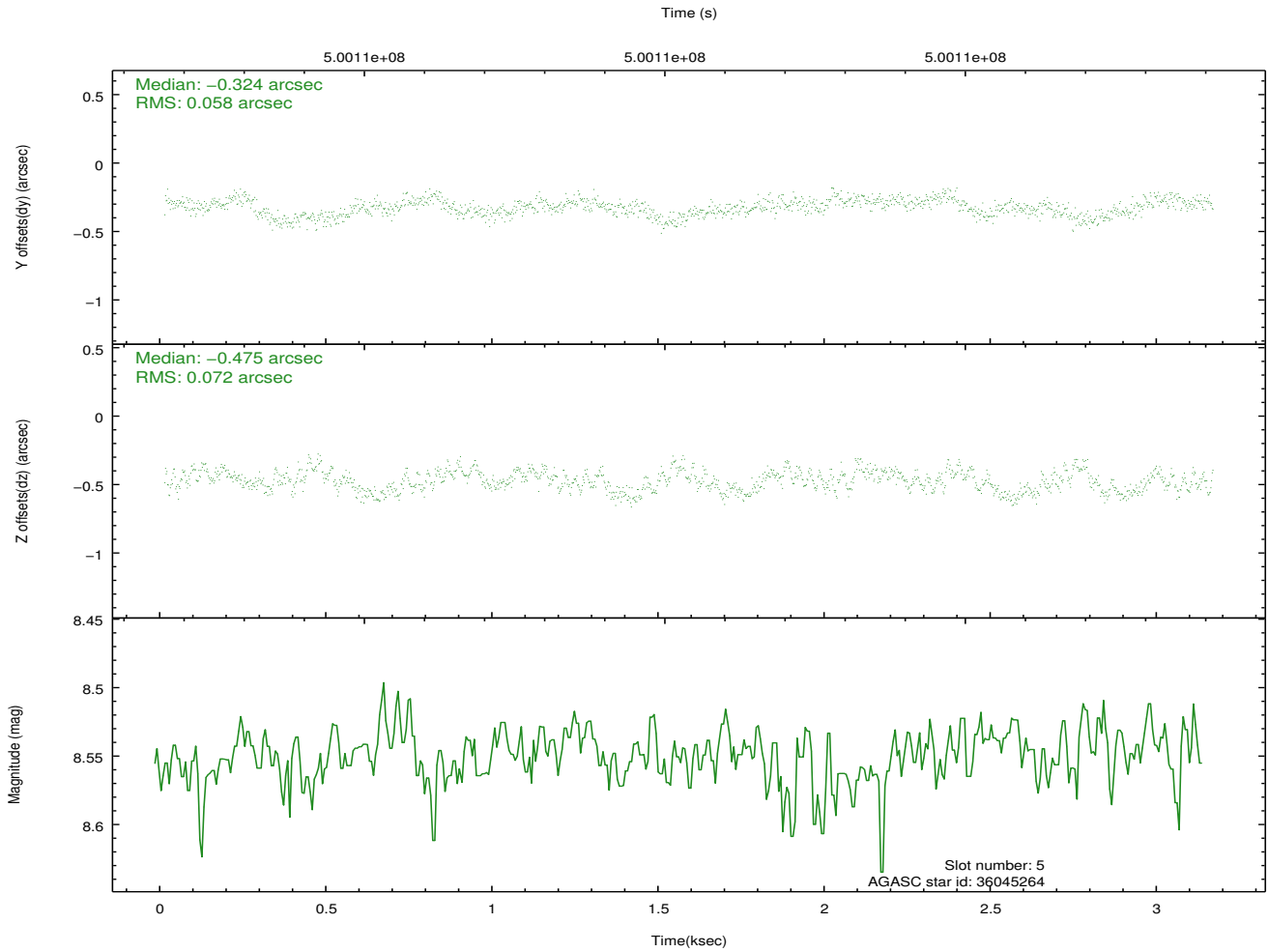
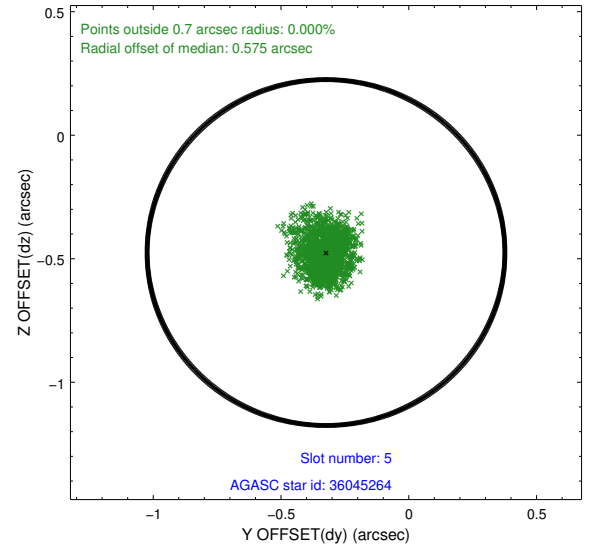
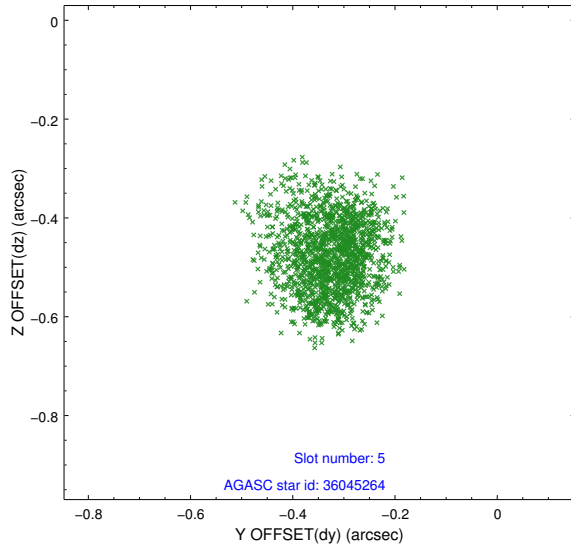
### 2.4.1 Slot 3



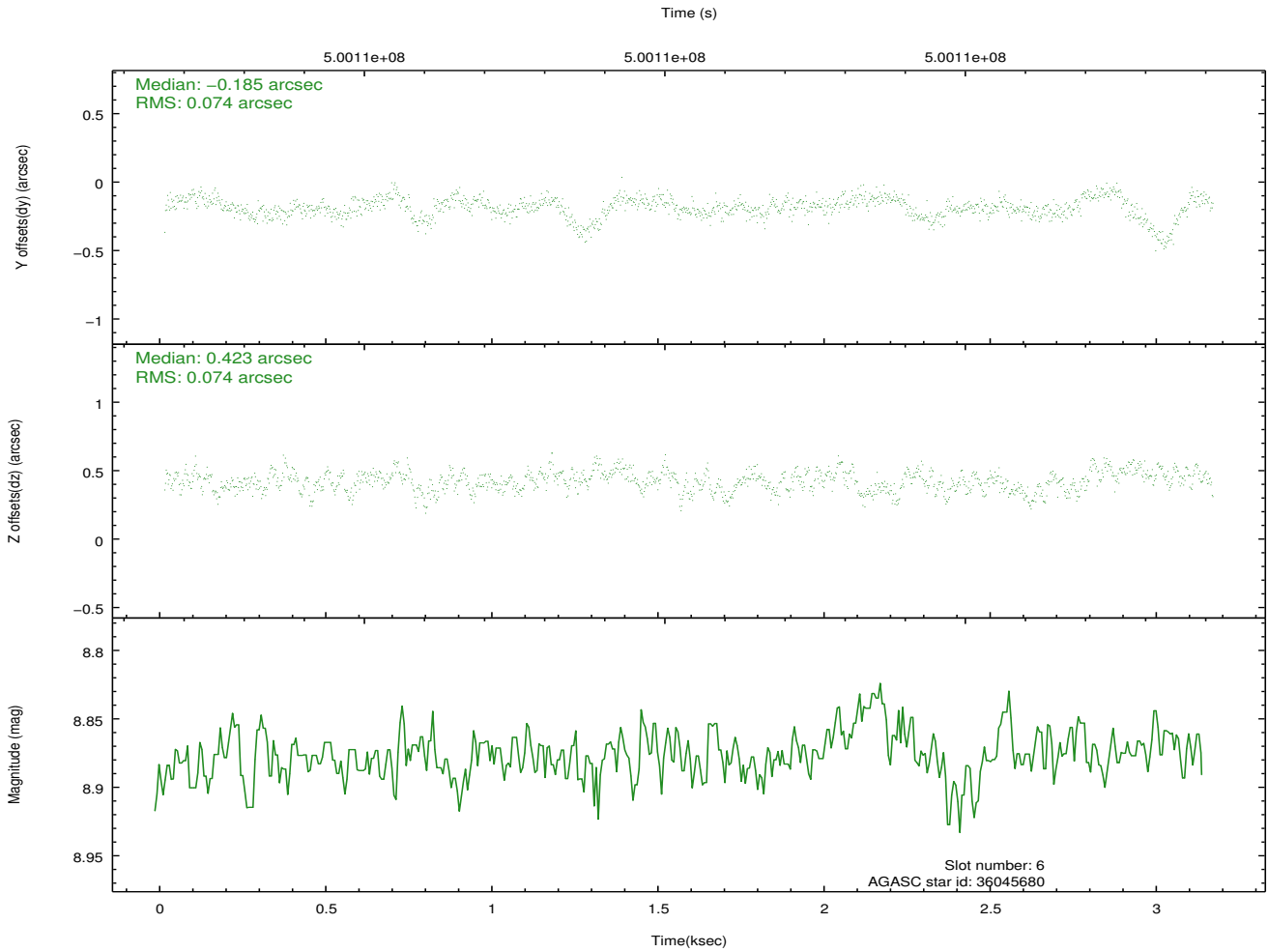
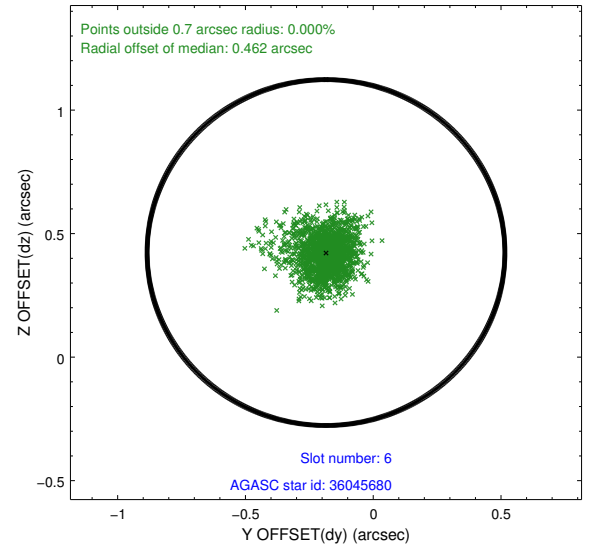
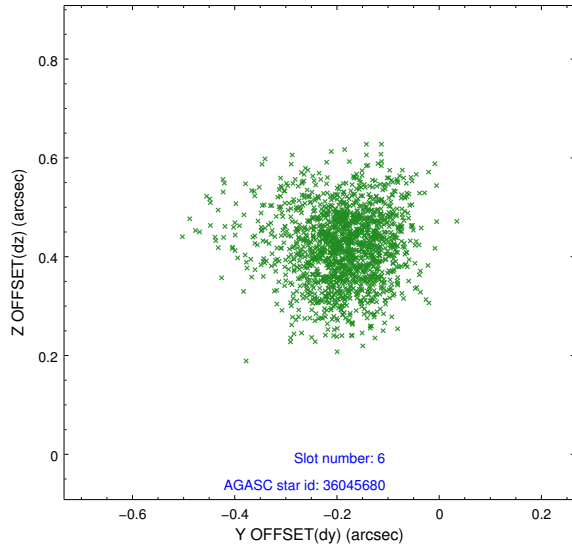
## 2.4.2 Slot 4



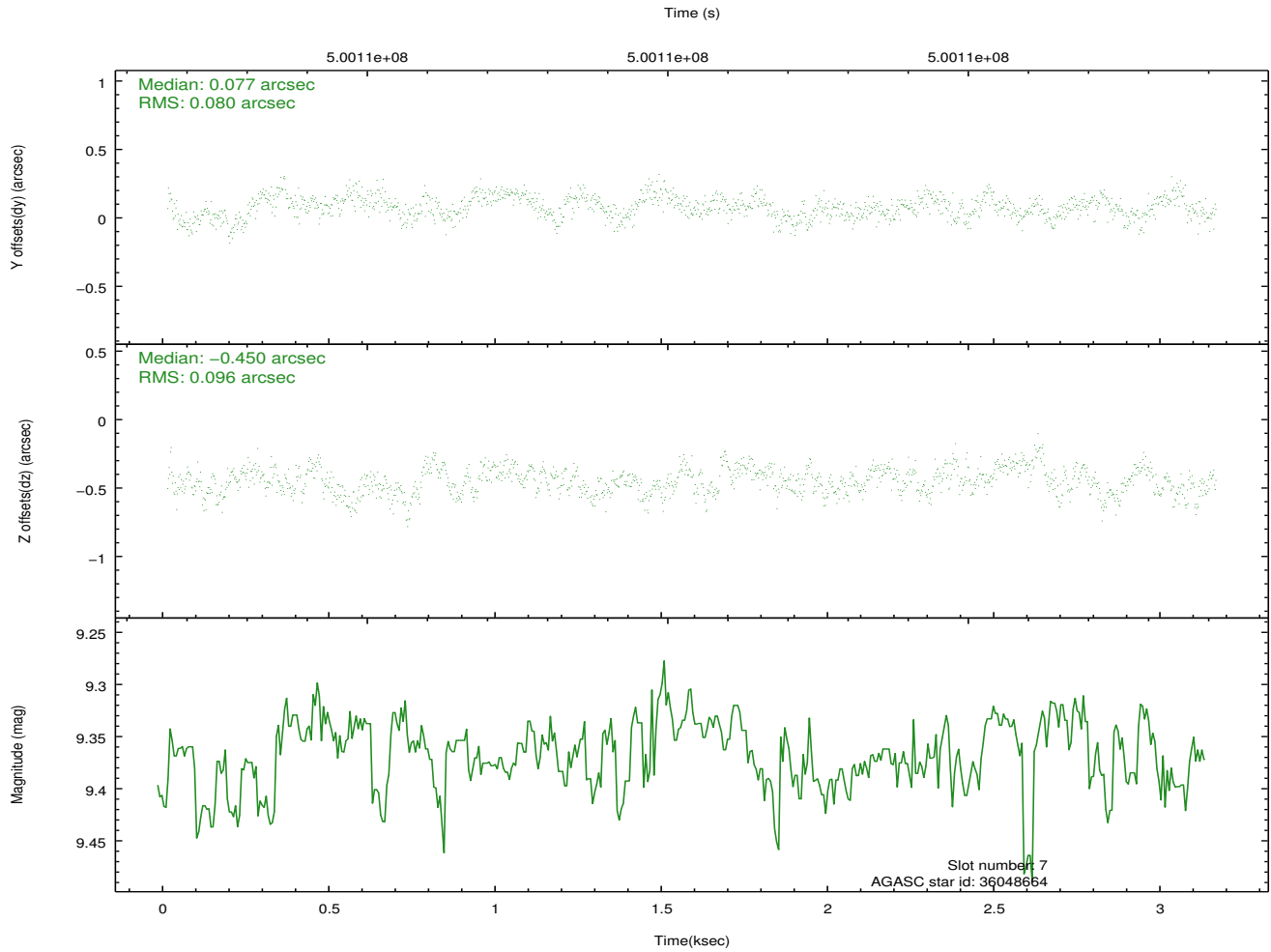
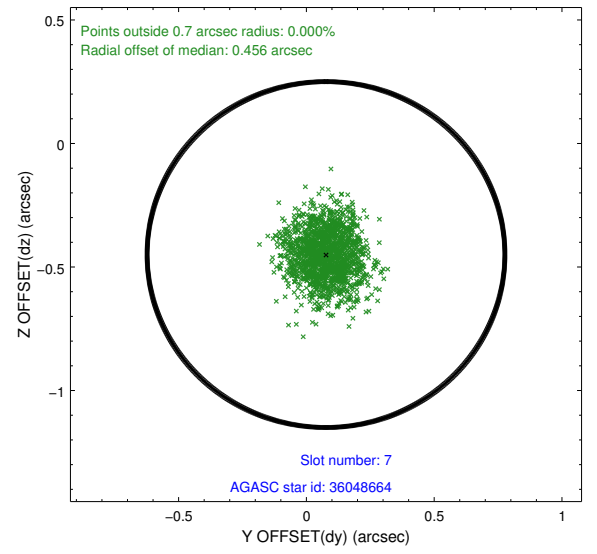
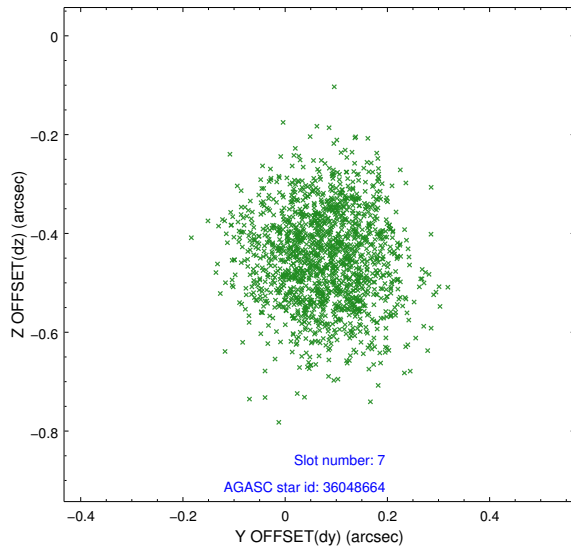
### 2.4.3 Slot 5



## 2.4.4 Slot 6

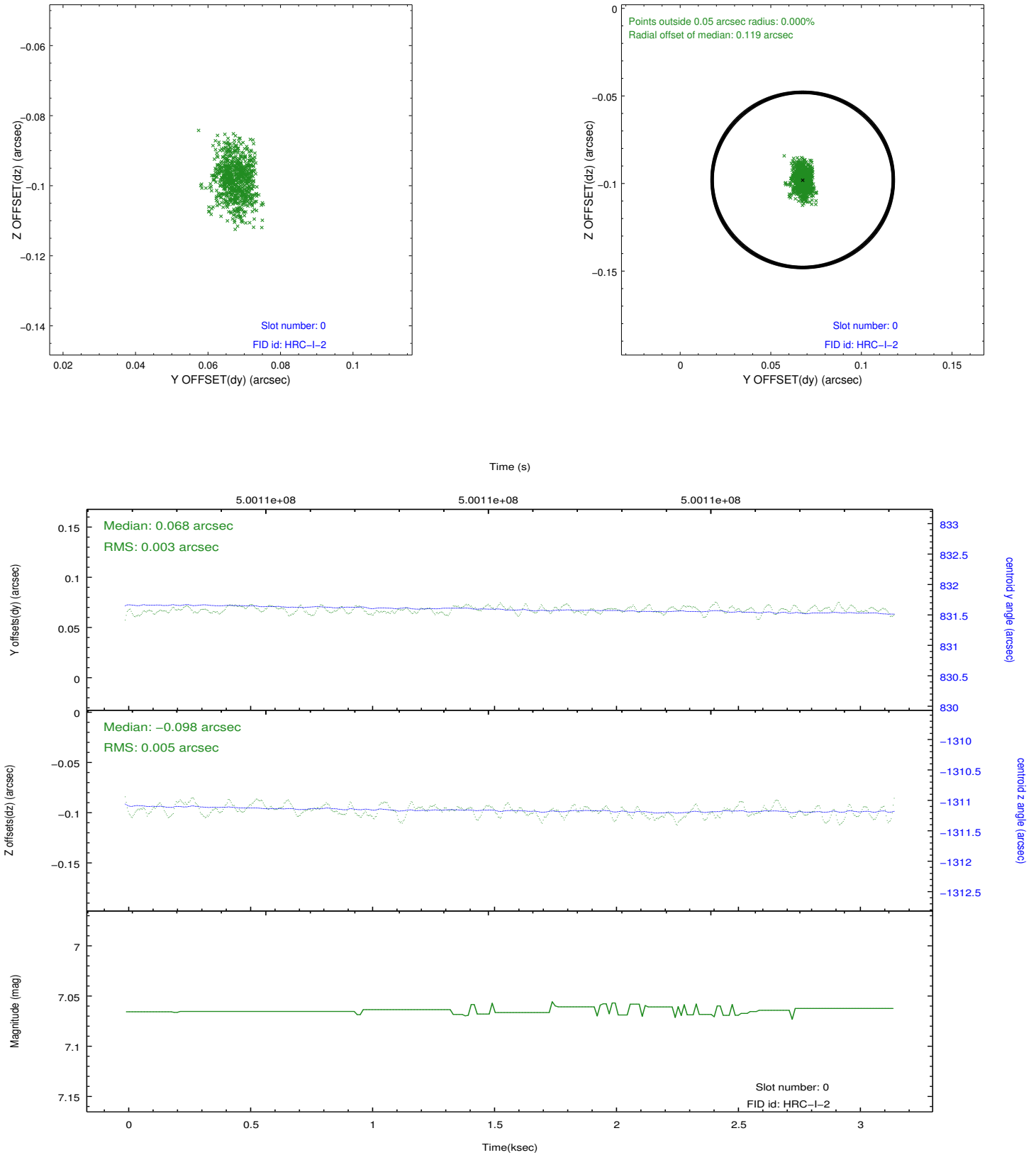


## 2.4.5 Slot 7

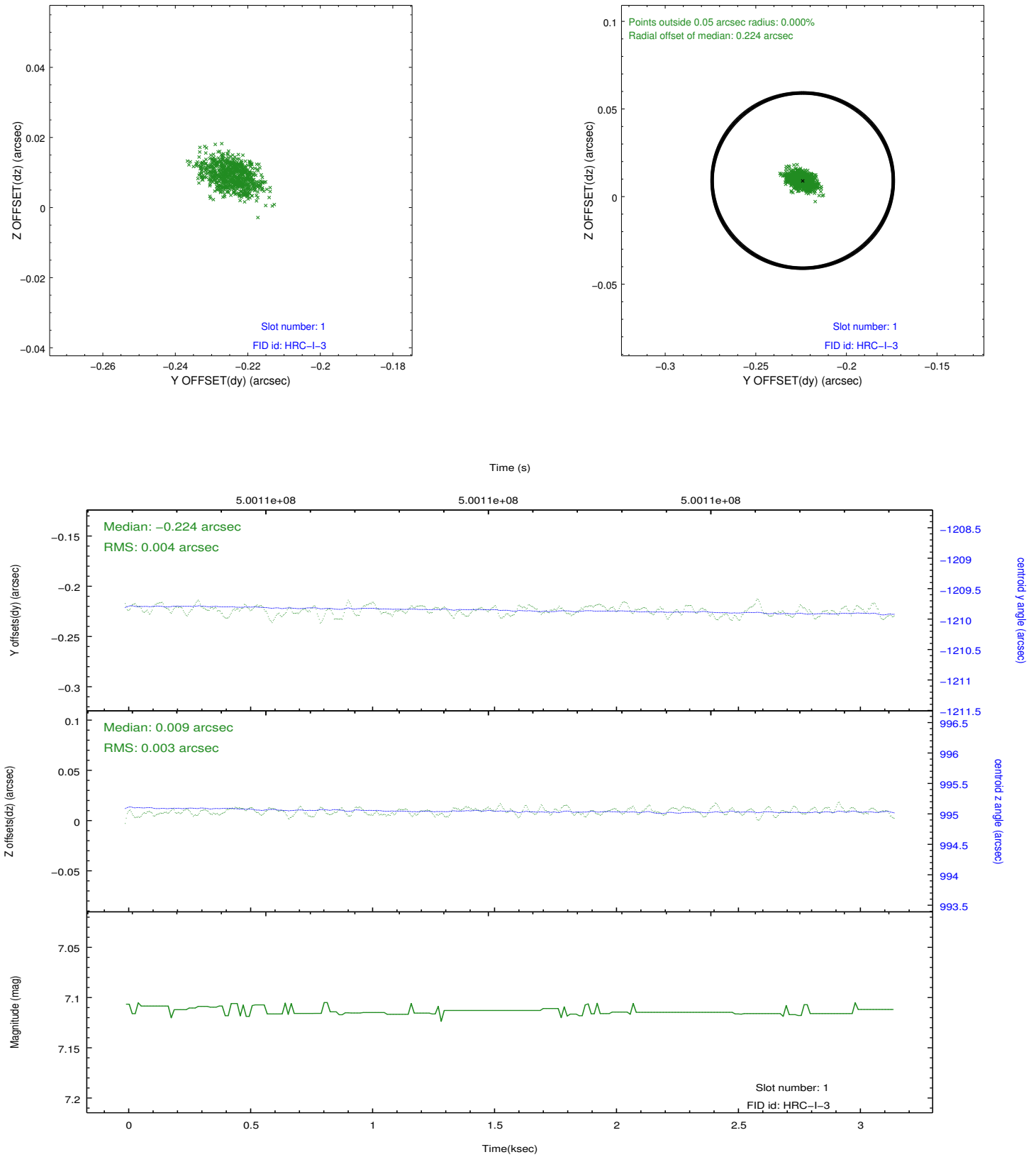


## 2.5 FID Slots

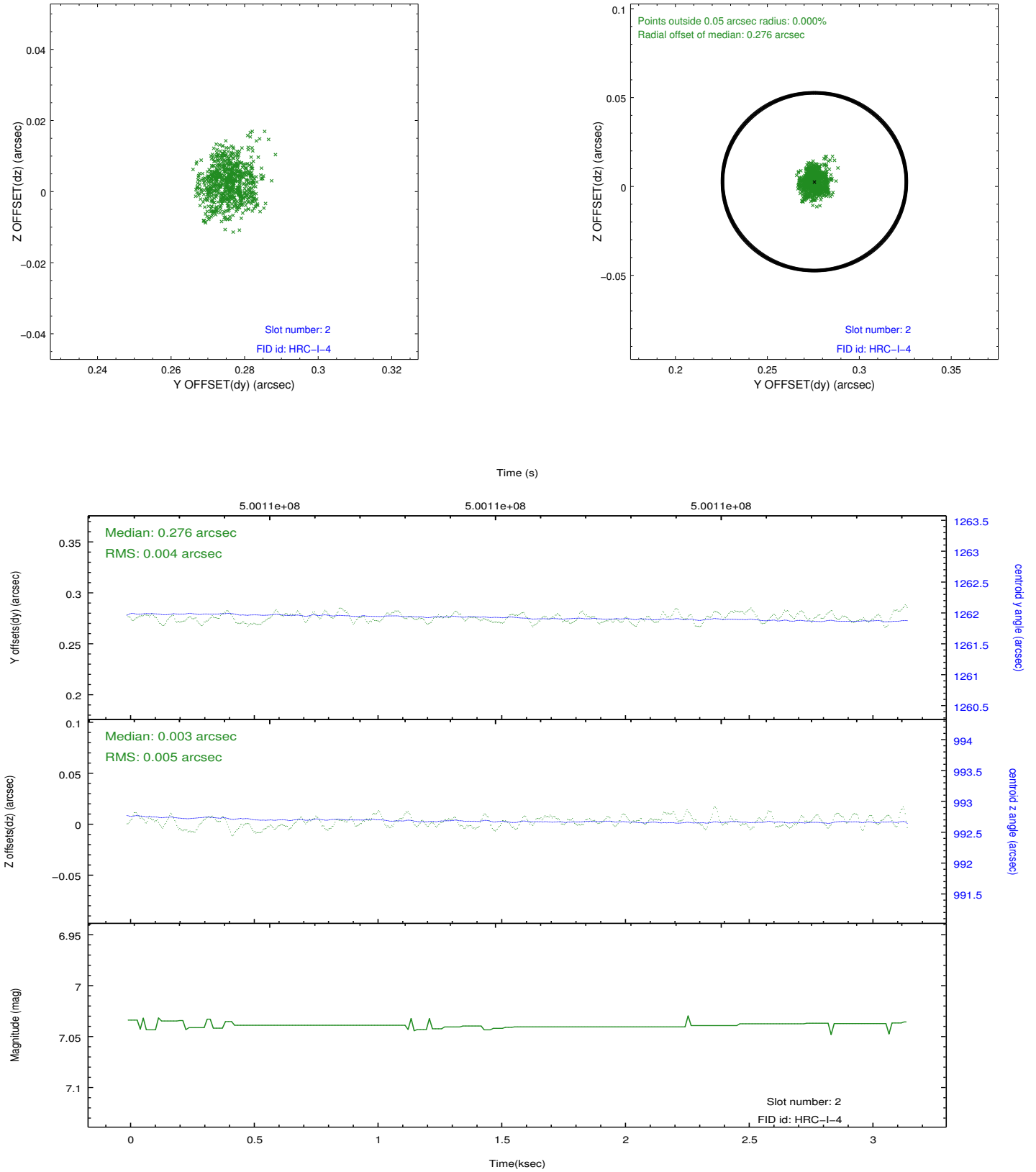
### 2.5.1 Slot 0



## 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)	2014.12.15
V&V Edition	1
V&V Disposition and Status	OK
V&V Charge Time	3.1539251728058

## A.2 Comments

This is a moving target. Users will need to run sso\_freeze or similar software to position the events in the reference frame of the target.

====

Monitor constraint met.

=====

These data have been reprocessed with new aspect alignment calibration files that correct small mean offsets (up to 0.4 arcsecs) and improve overall astrometric accuracy. The new calibration was determined using data from the time period being reprocessed and was performed using cross-correlation of X-ray sources with radio and optical counterparts.