

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 5058 - L2 Version 3  
Chandra X-Ray Center

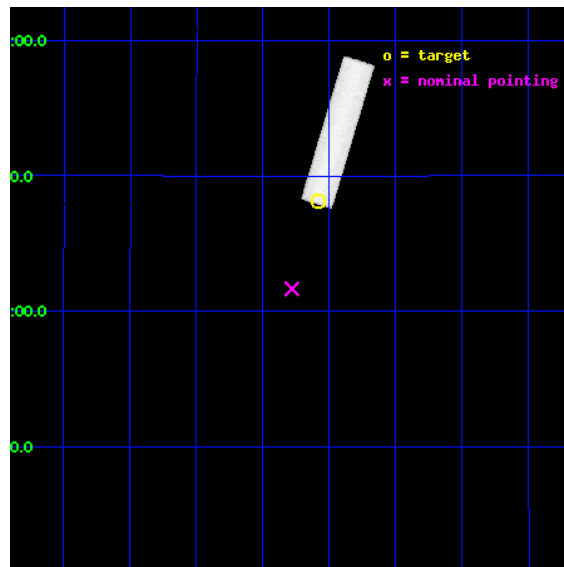
L2 Processing Date : Nov 11 2012

## 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    | 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

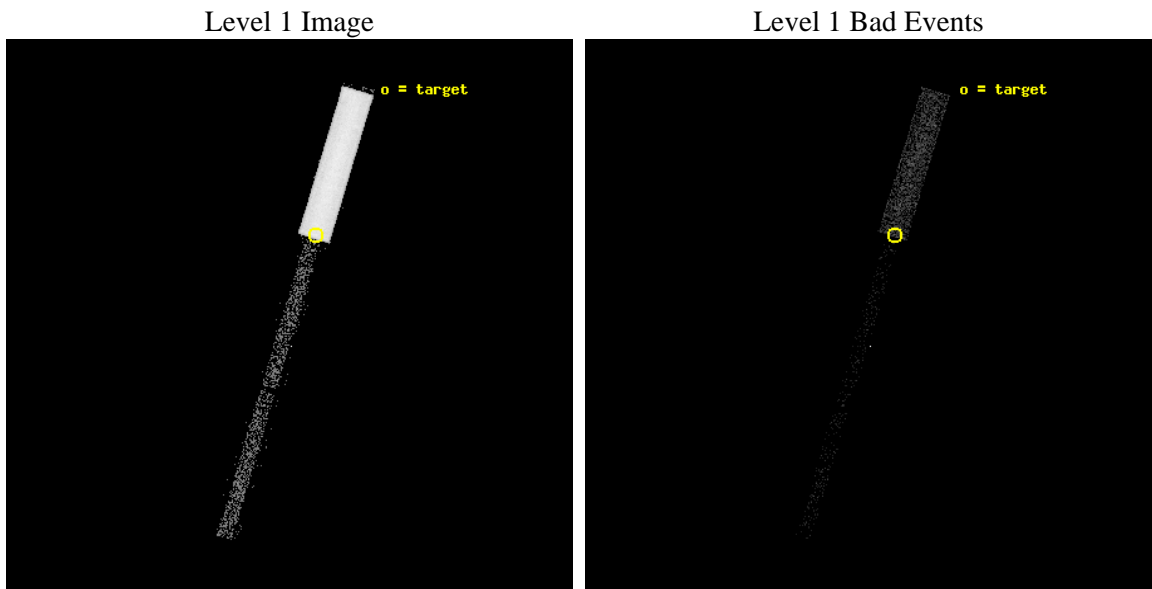
|          |  |                                       |
|----------|--|---------------------------------------|
| seq_num  | 290331   | Sequence number                       |
| obs_id   | 5058   | Observation id                        |
| title    | AO5 Measurements of the optical/UV Transmission of the HRC and ACIS Filters. | Proposal title                        |
| observer | Dr. CXC Calibration  | Principal investigator                |
| object   | Betelgeuse   | Source name                           |
| ra_targ  | 88.792917  | Observer's specified target RA [deg]  |
| dec_targ | 7.407056   | Observer's specified target Dec [deg] |
| ra_nom   | 88.890610591799  | Nominal RA [deg]                      |
| dec_nom  | 7.0832632471294  | Nominal Dec [deg]                     |
| roll_nom | 286.73682922076  | Nominal Roll [deg]                    |
| revision | 3  | Processing version of data            |
| ontime   | 2245.0063481331  | [s]                                   |
| livetime | 2222.8302268504  | Ontime multiplied by DTCOR            |
| l2events | 102695   | 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 | 2102.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 2245.0063481331 | [s]                                     |
| caldbver | 4.5.2               | &#160                          | l1events       | 142808          | Number of level 1 events                |
| date     | 2012-11-11T14:28:11 | Date and time of file creation |                |                 |   |
| revision | 3                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

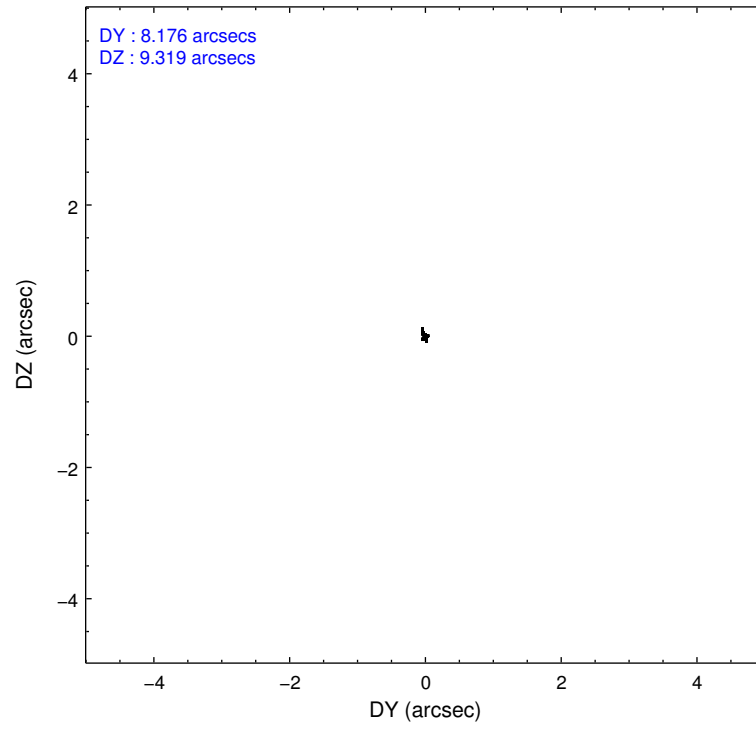
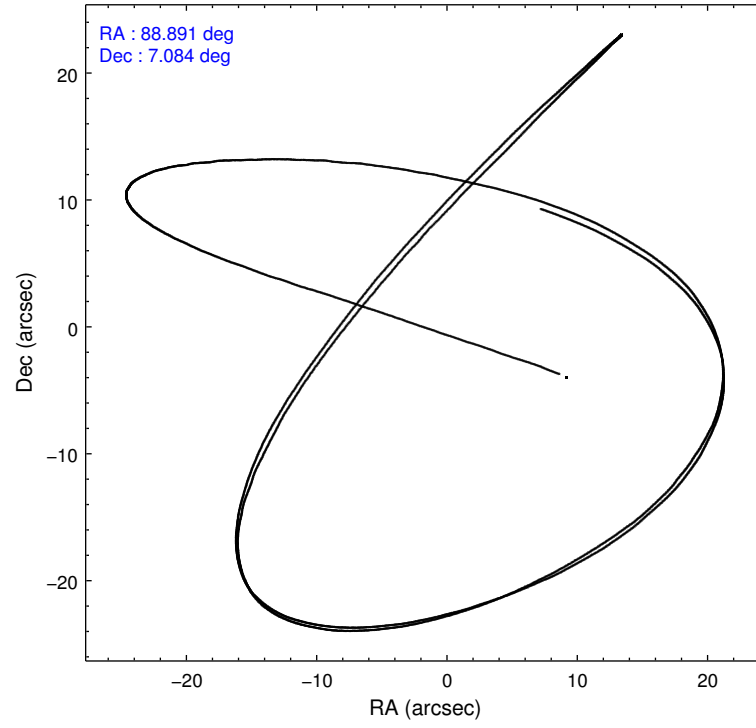
Level 1 Events

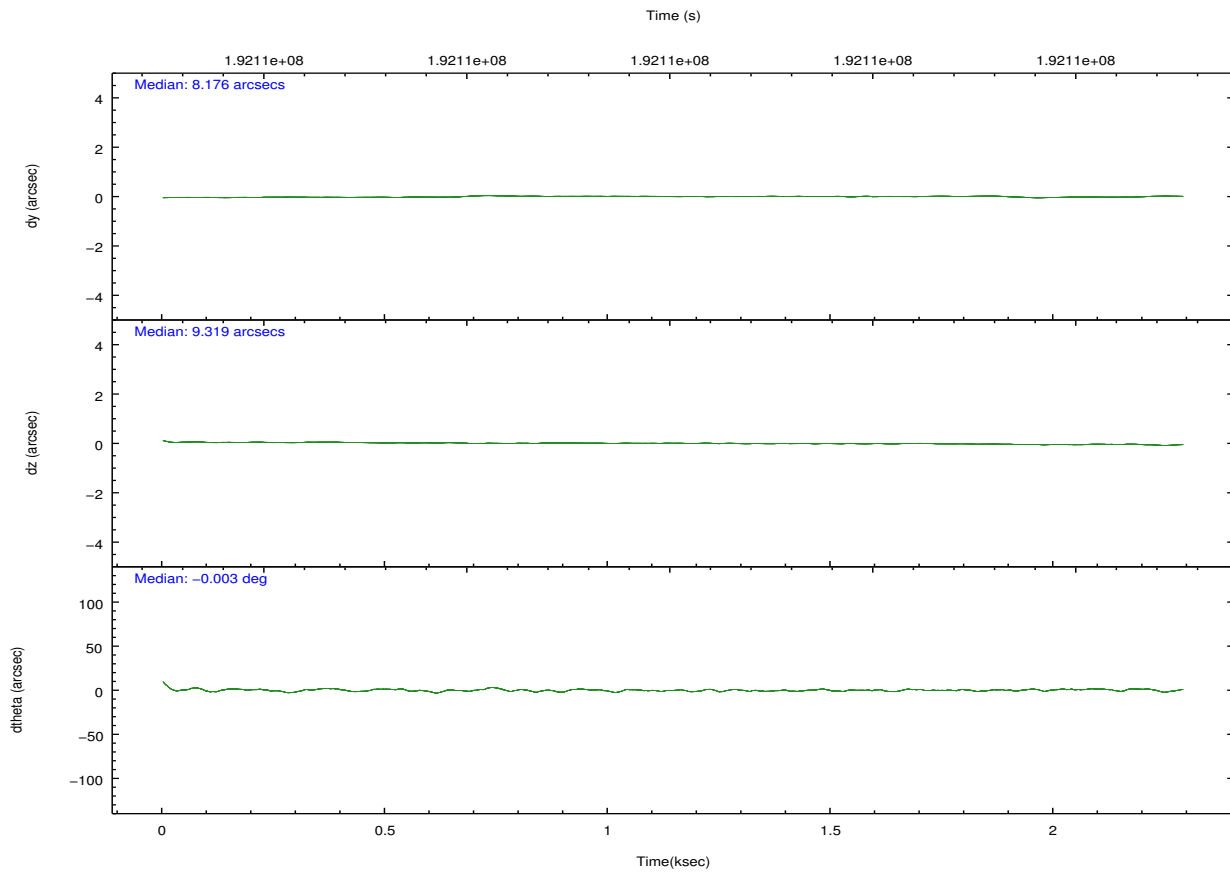
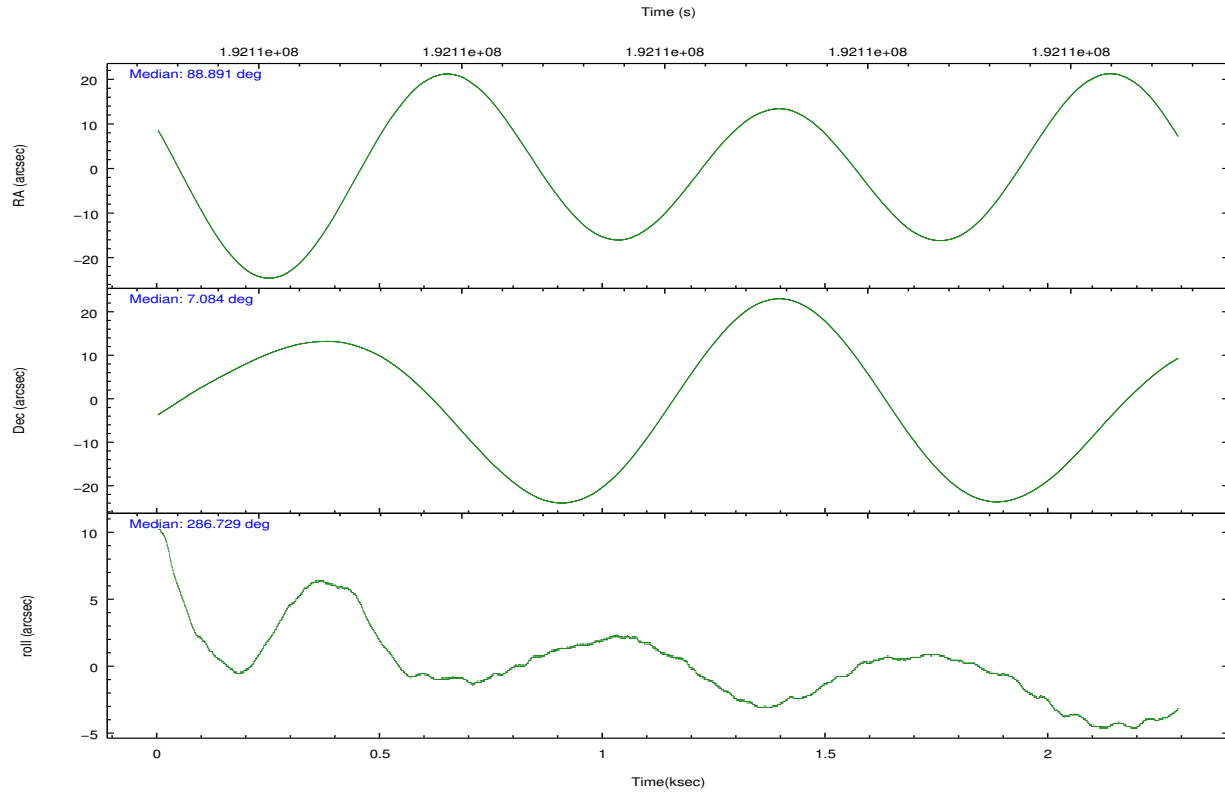
|                 | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events  | 131450               | 10309                | 1049                 |
| rejected events | 6573                 | 10278                | 1049                 |
| rejected %      | 5%                   | 99%                  | 100%                 |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                    | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|------------------------------|-----------|---------|
| Instrument                        | HRC                 | HRC                  | Obspar format version number | 7         | 7       |
| Detector                          | HRC-S               | HRC-S                | Obspar file type             | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status         | NONE      | UPDATED |
| Data mode                         | OBSERVING           | OBSERVING            |                              |           |         |
| Observation mode                  | POINTING            | POINTING             |                              |           |         |
| [deg] Pointing RA                 | 88.868622           | 88.89061059179853    |                              |           |         |
| [deg] Pointing Dec                | 7.101770            | 7.083263247129447    |                              |           |         |
| [deg] Pointing Roll               | 286.672179          | 286.7368292207635    |                              |           |         |
| [s] Window start time (MET)       | 191980864.184000    | 191980864.184000     |                              |           |         |
| [s] Window stop time (MET)        | 197078464.184000    | 197078464.184000     |                              |           |         |
| [mm] SIM focus pos                | -1.429586           | -1.428180813131781   |                              |           |         |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.1051558262725154   |                              |           |         |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |                              |           |         |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |                              |           |         |
| [s] Observation start time (MET)  | 192111055.184000    | 192110678.39539      |                              |           |         |
| Observation start date            | 2004-02-02T12:09:51 | 2004-02-02T12:04:38  |                              |           |         |
| [s] Observation end time (MET)    | 192113157.184000    | 192113291.1205       |                              |           |         |
| Observation end date              | 2004-02-02T12:44:53 | 2004-02-02T12:48:11  |                              |           |         |

## 2.3 Aspect





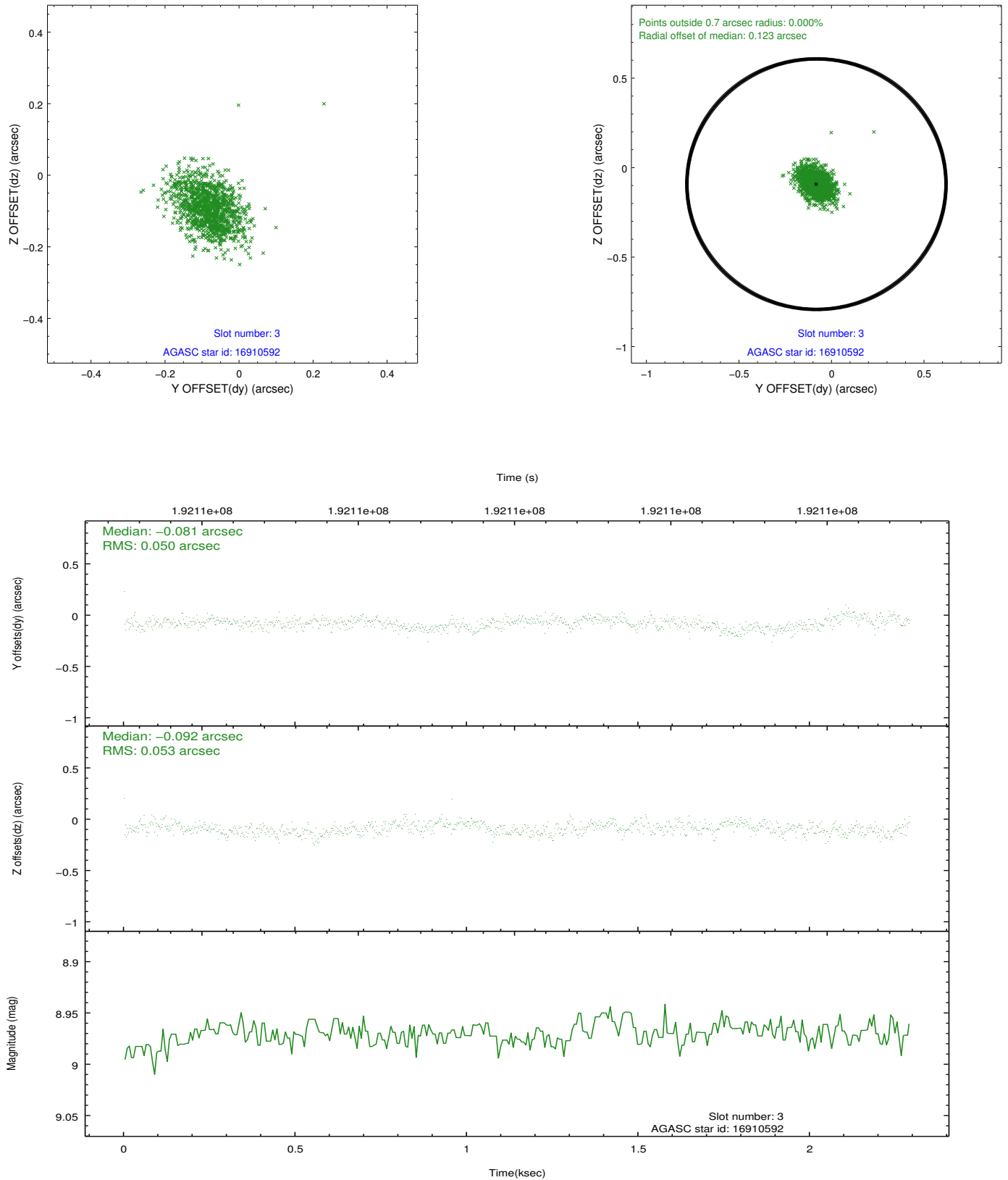
### Slot Statistics

| slot | status | id       | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec      | mean_y   | mean_z   |
|------|--------|----------|------|-------|--------|--------|-------|-------|-----------|----------|----------|----------|
| 0    | FID    | HRC-S-1  | 7.08 | 558   | 0.126  | -0.215 | 0.009 | 0.016 | 0.000000  | 0.000000 | -1162.36 | -458.03  |
| 1    | FID    | HRC-S-3  | 7.08 | 559   | 0.069  | 0.017  | 0.009 | 0.020 | 0.000000  | 0.000000 | -1167.20 | 570.92   |
| 2    | FID    | HRC-S-4  | 7.06 | 559   | 0.193  | -0.098 | 0.006 | 0.010 | 0.000000  | 0.000000 | 1233.89  | 575.17   |
| 3    | GUIDE  | 16910592 | 8.97 | 1118  | -0.081 | -0.092 | 0.075 | 0.127 | 88.532936 | 6.726769 | 949.13   | -1536.88 |
| 4    | GUIDE  | 16910760 | 9.08 | 1116  | -0.081 | 0.014  | 0.084 | 0.133 | 89.059695 | 7.486642 | -1130.68 | 1049.35  |
| 5    | GUIDE  | 16912728 | 9.10 | 1118  | 0.165  | -0.005 | 0.093 | 0.145 | 88.844647 | 6.730340 | 1256.06  | -464.68  |
| 6    | GUIDE  | 16913360 | 8.35 | 1118  | -0.047 | 0.034  | 0.061 | 0.098 | 89.178373 | 7.247125 | -182.89  | 1209.51  |
| 7    | GUIDE  | 16917248 | 8.71 | 1117  | 0.049  | 0.047  | 0.062 | 0.105 | 89.306967 | 6.774731 | 1576.93  | 1164.96  |

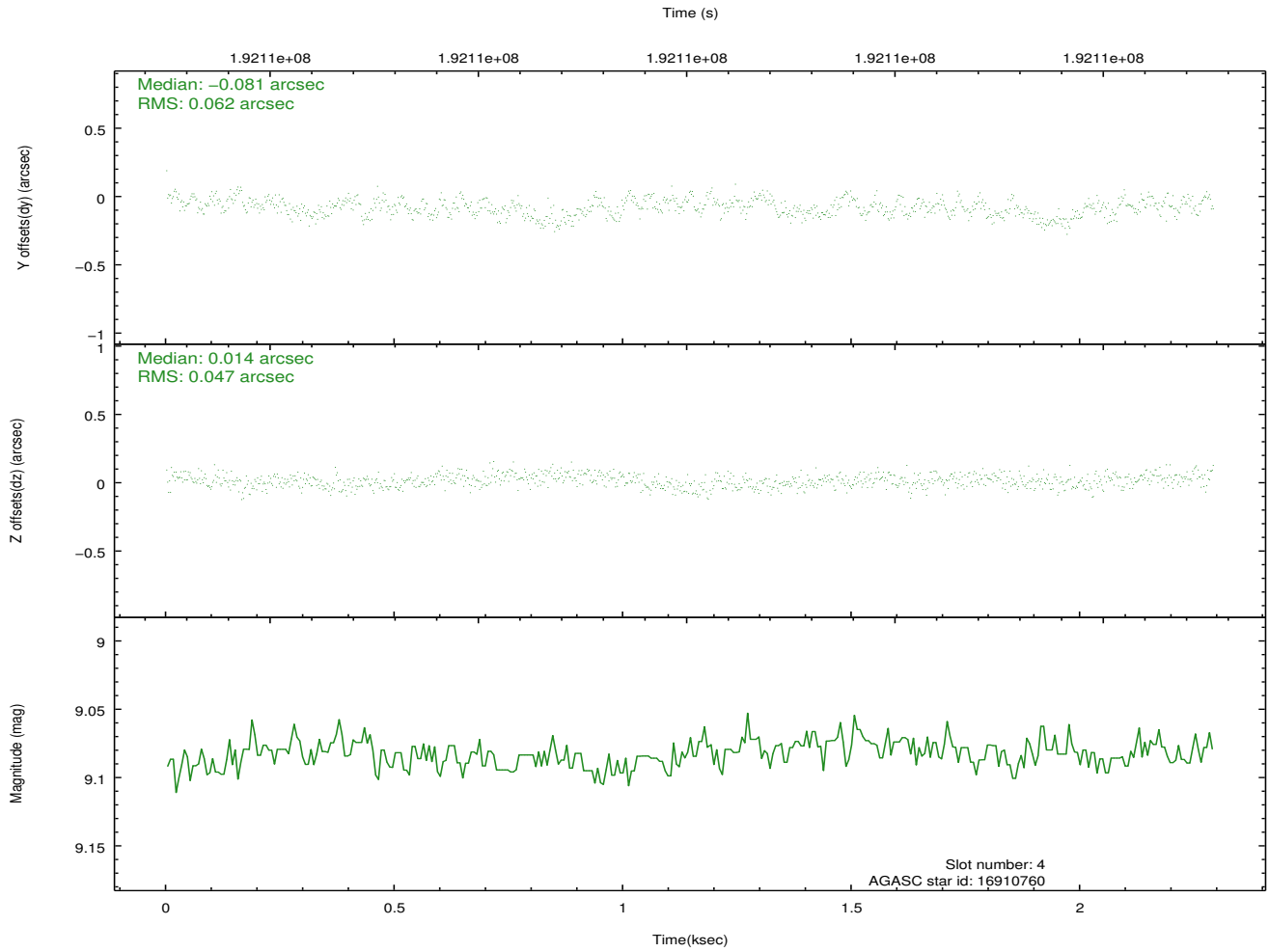
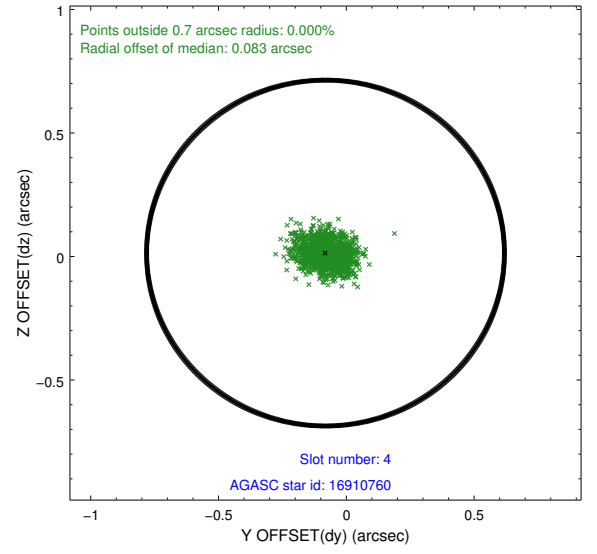
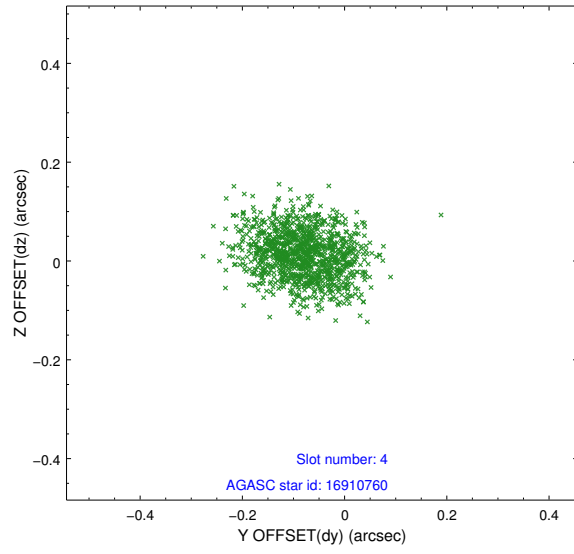


## 2.4 Star Slots

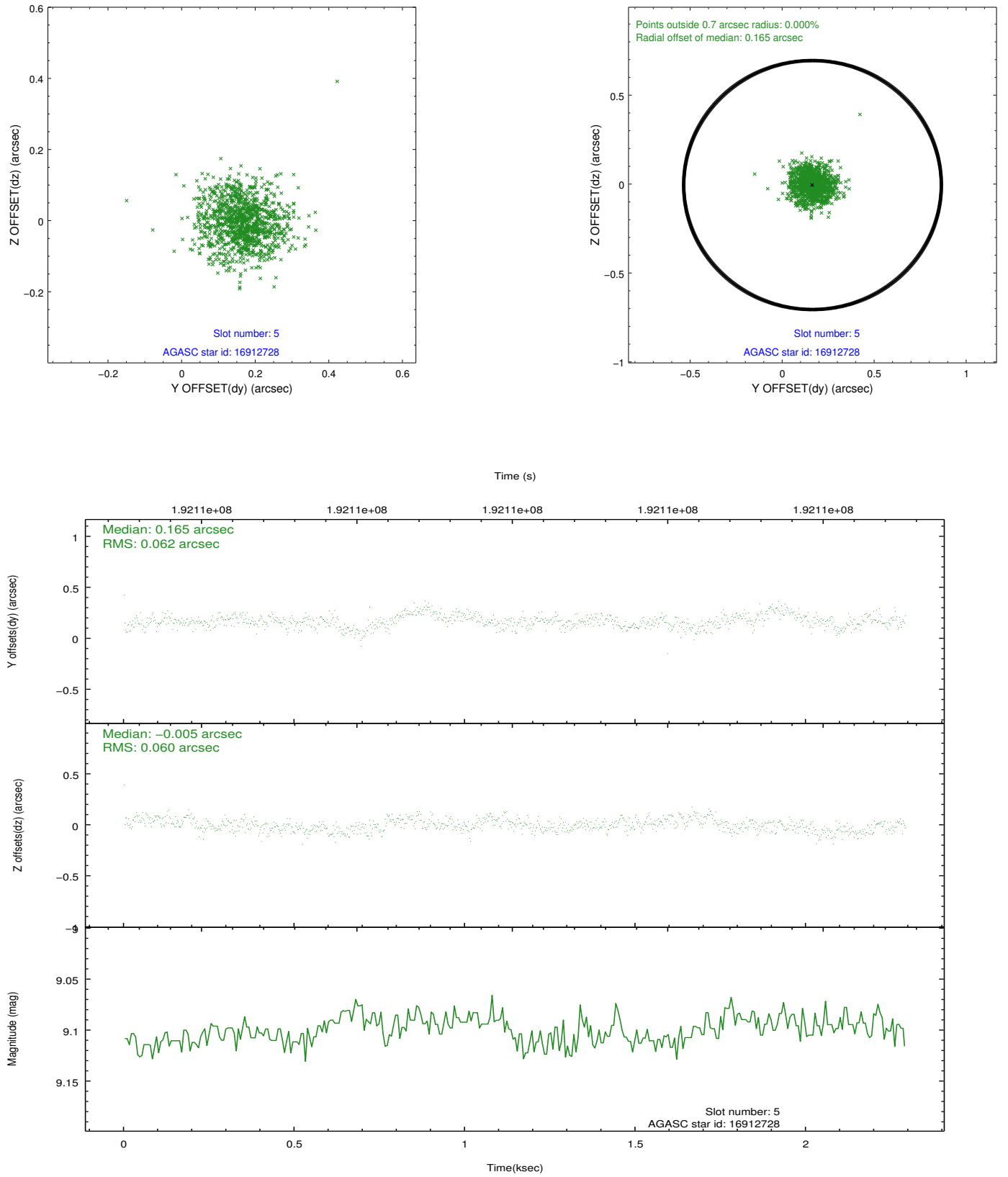
### 2.4.1 Slot 3



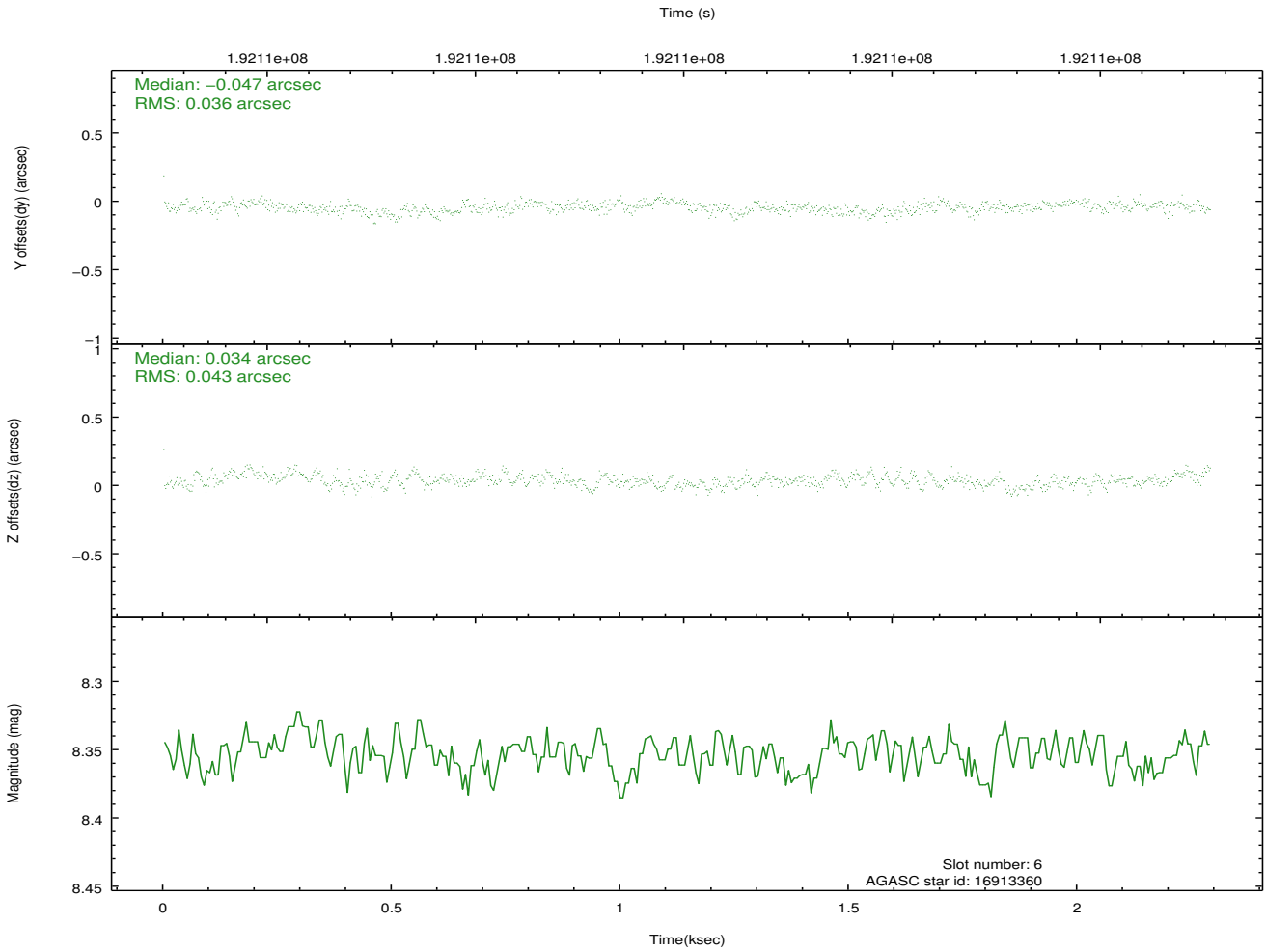
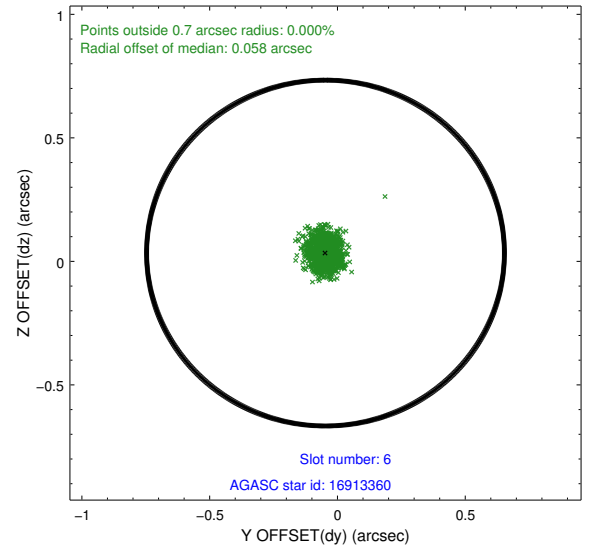
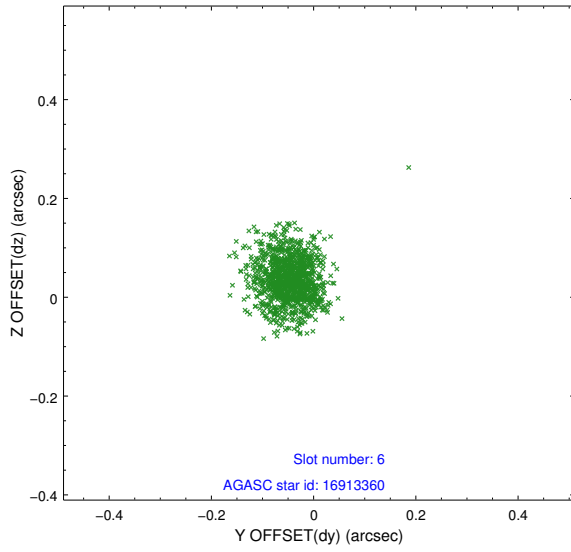
## 2.4.2 Slot 4



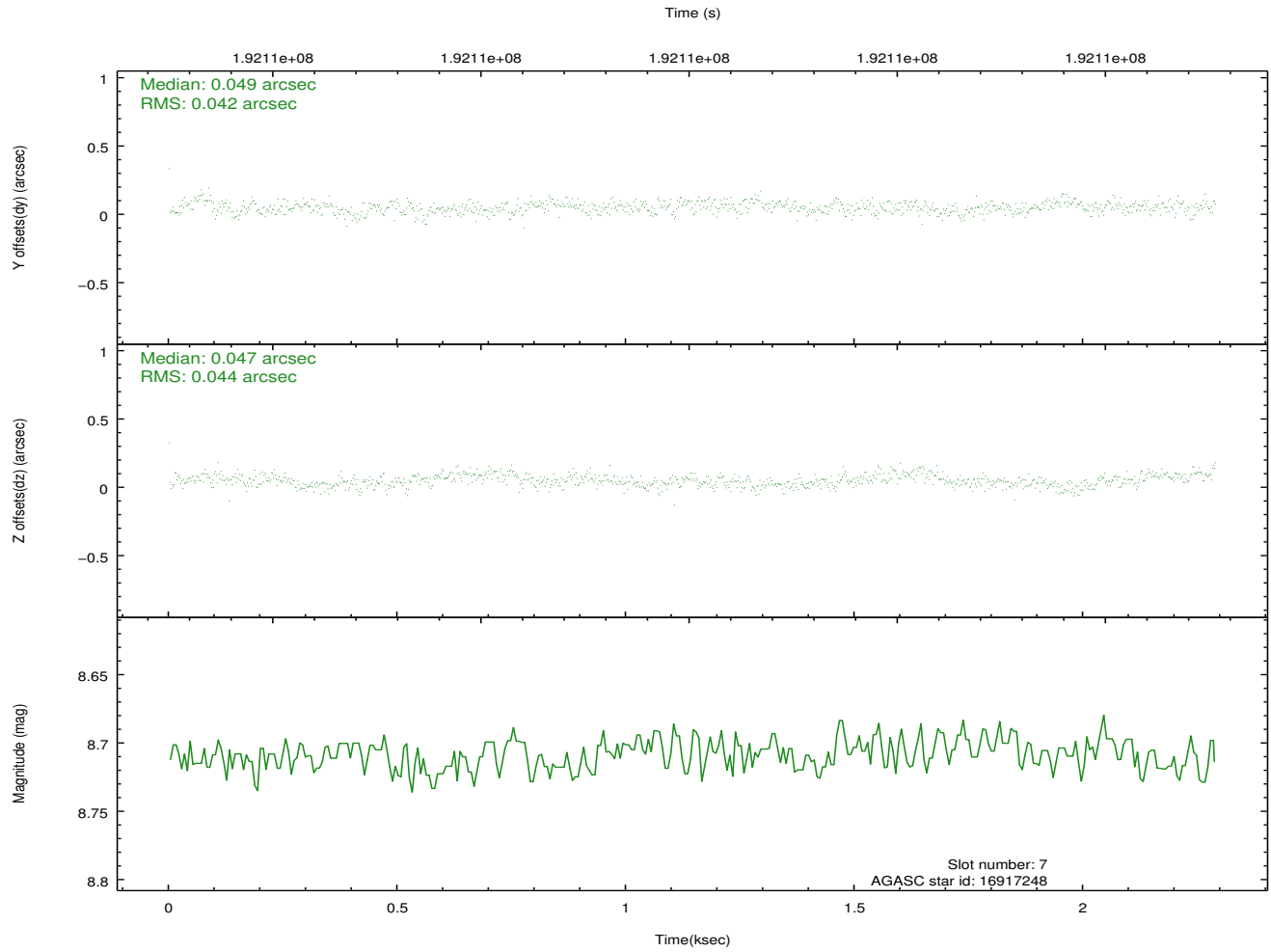
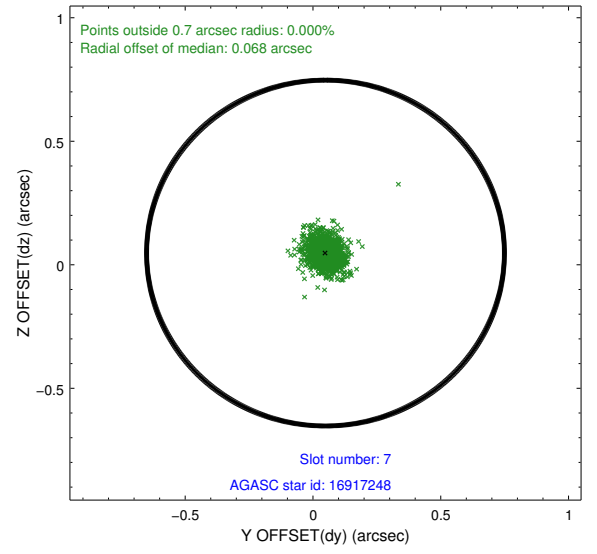
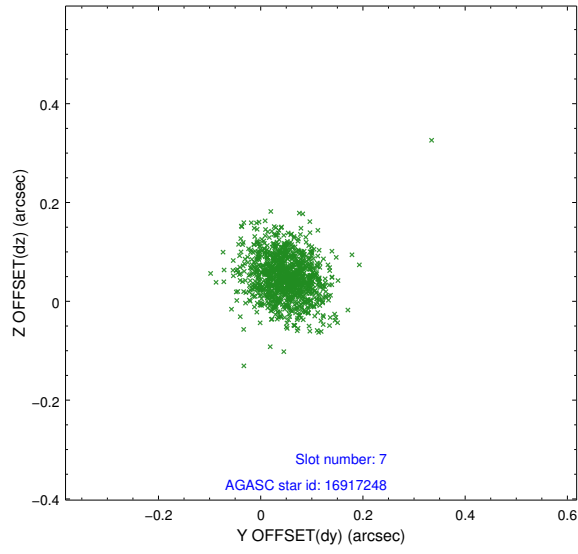
### 2.4.3 Slot 5



## 2.4.4 Slot 6

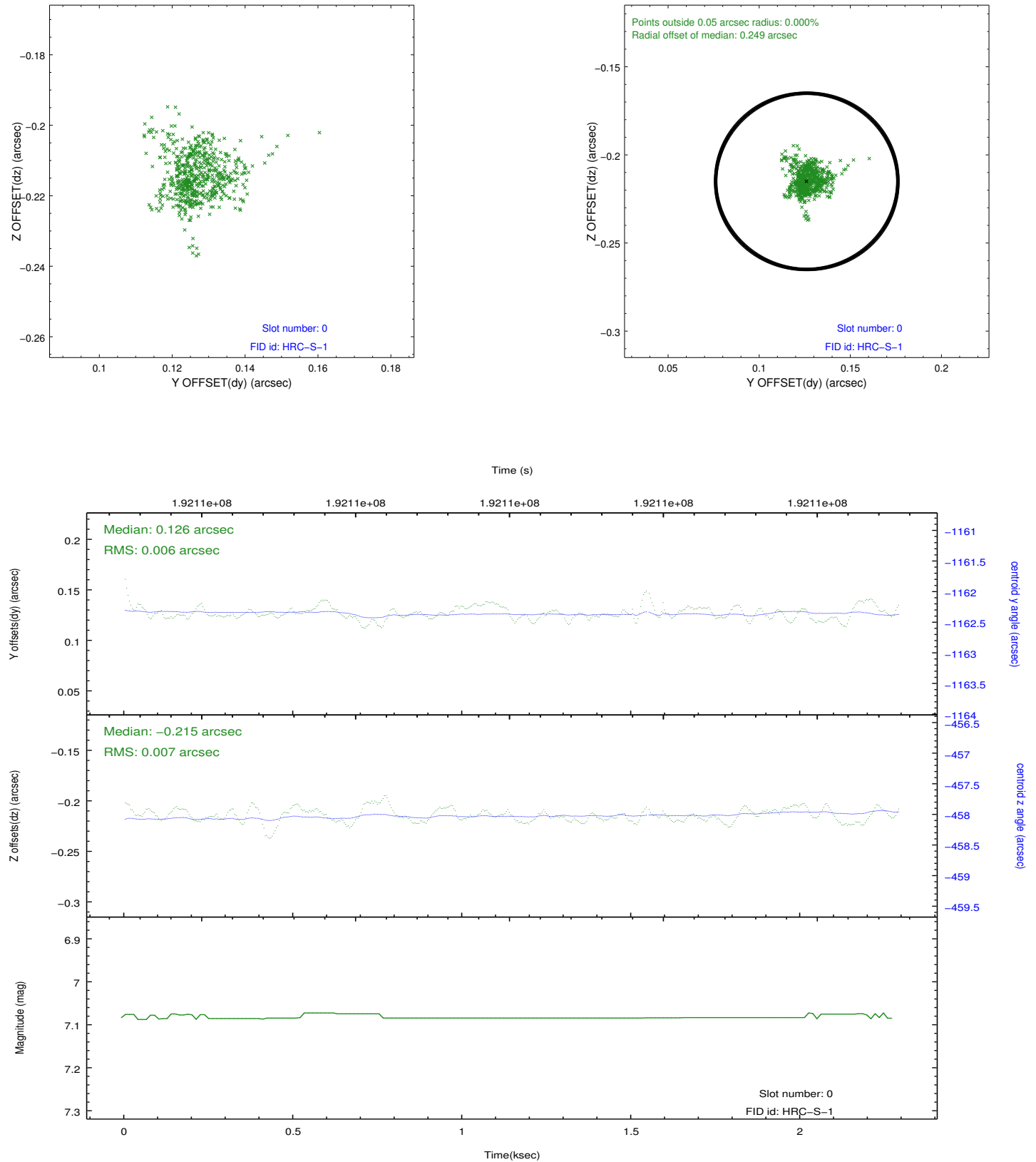


## 2.4.5 Slot 7

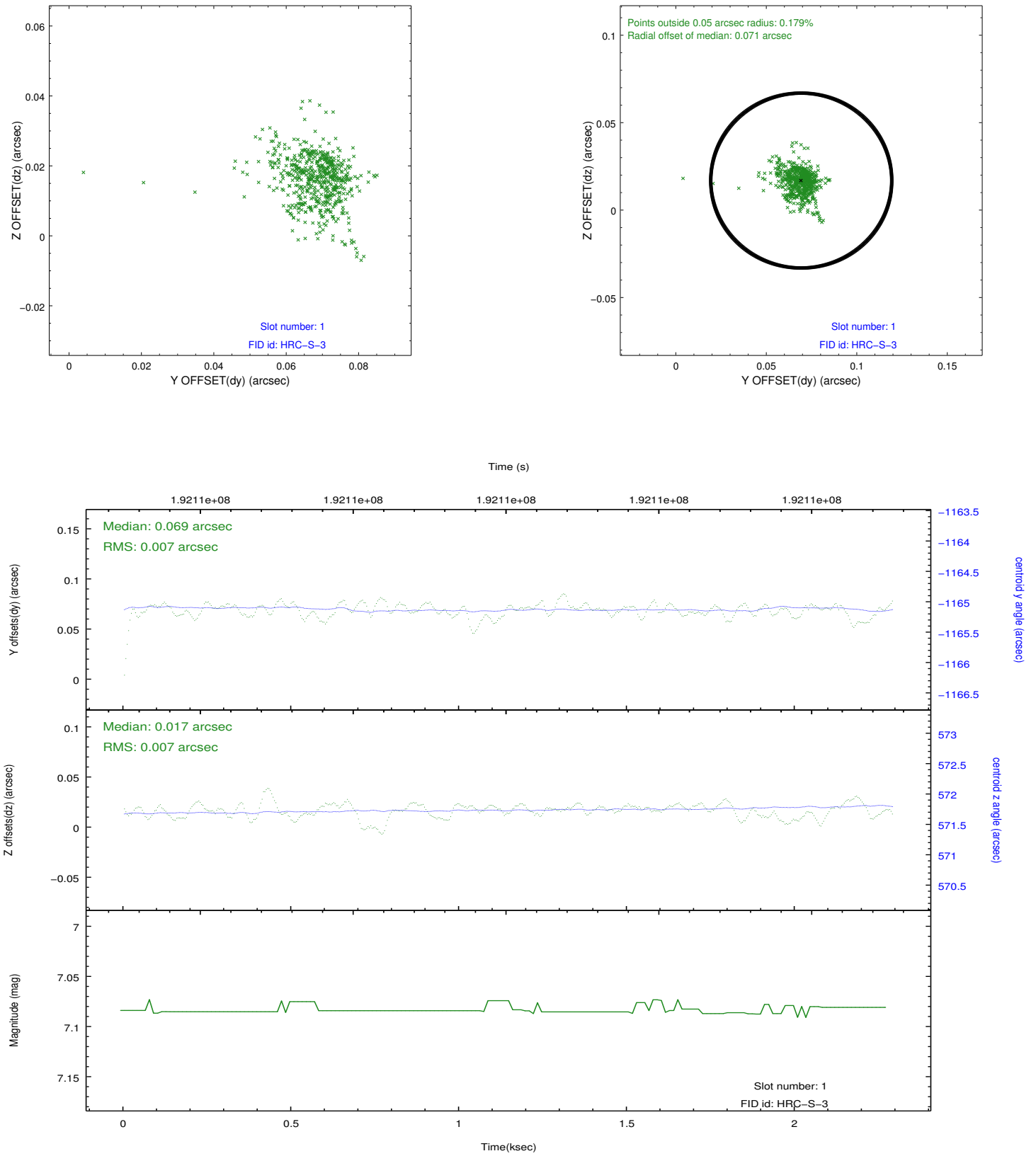


## 2.5 FID Slots

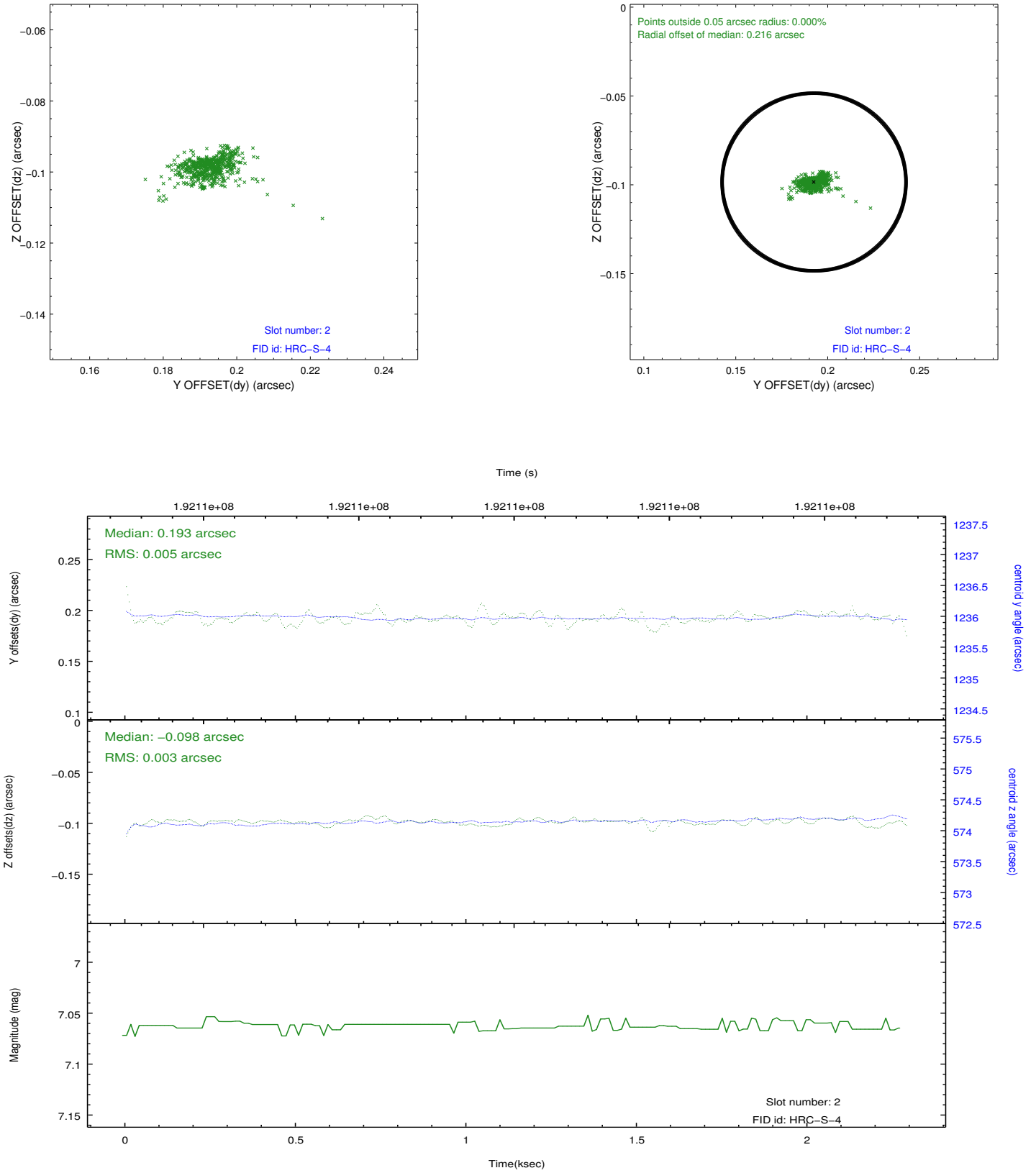
### 2.5.1 Slot 0



## 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)      | 2012.12.10 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 2.245      |

### A.2 Comments

Window constraint satisfied.