

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 5110 - L2 Version 3  
Chandra X-Ray Center

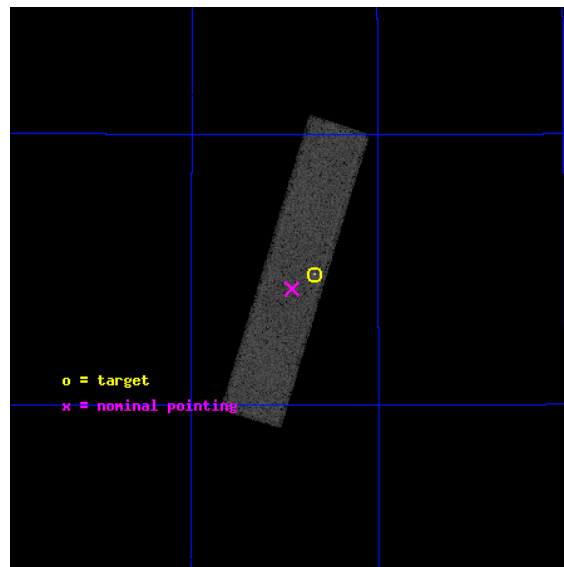
L2 Processing Date : Dec 12 2012

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# 1 Front

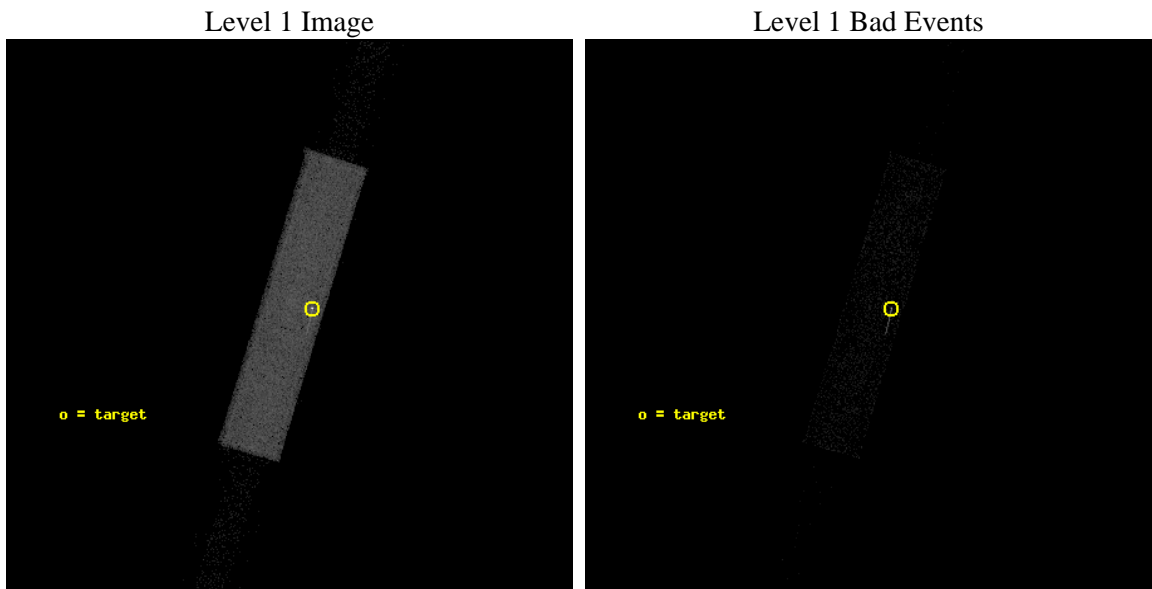
|          |   |                                       |
|----------|---|---------------------------------------|
| seq_num  | 290383  | Sequence number                       |
| obs_id   | 5110  | Observation id                        |
| title    | AO5B Calibration Observations to Monitor the Spatial Variations in the HRC-S Gain | Proposal title                        |
| observer | Dr. CXC Calibration   | Principal investigator                |
| object   | ArLac   | Source name                           |
| ra_targ  | 332.17  | Observer's specified target RA [deg]  |
| dec_targ | 45.742306   | Observer's specified target Dec [deg] |
| ra_nom   | 332.23071441291   | Nominal RA [deg]                      |
| dec_nom  | 45.715428267579   | Nominal Dec [deg]                     |
| roll_nom | 286.92736902187   | Nominal Roll [deg]                    |
| revision | 3   | Processing version of data            |
| ontime   | 1054.9812974334   | [s]                                   |
| livetime | 1047.1568505665   | Ontime multiplied by DTCOR            |
| l2events | 55992   | Number of level 2 events              |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 900.000000      | [s] Scheduled observation exposure time |
| ascdsver | 8.5                 | Processing system revision     | ontime         | 1054.9812974334 | [s]                                     |
| caldbver | 4.5.4               | &#160                          | l1events       | 90486           | Number of level 1 events                |
| date     | 2012-12-12T00:11:13 | Date and time of file creation |                |                 |   |
| revision | 3                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

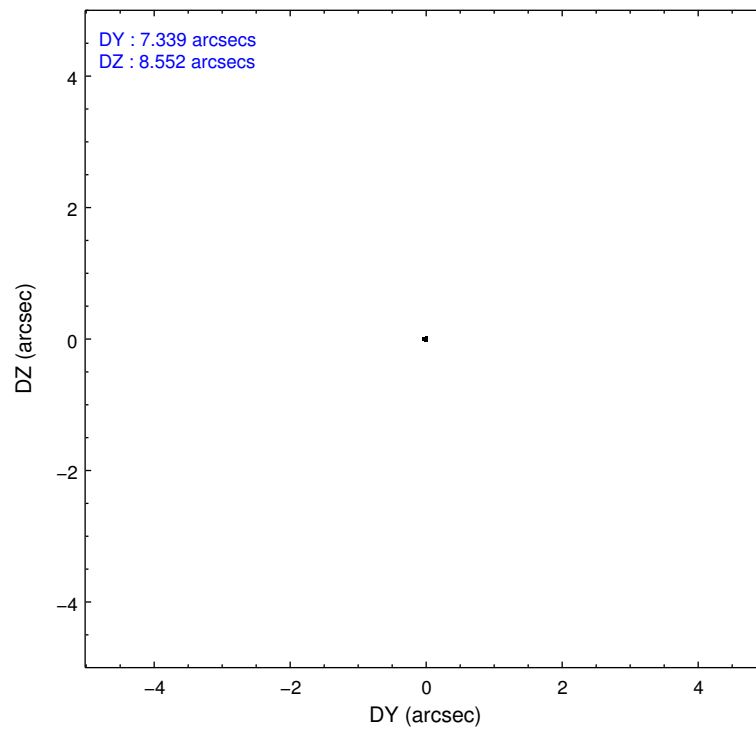
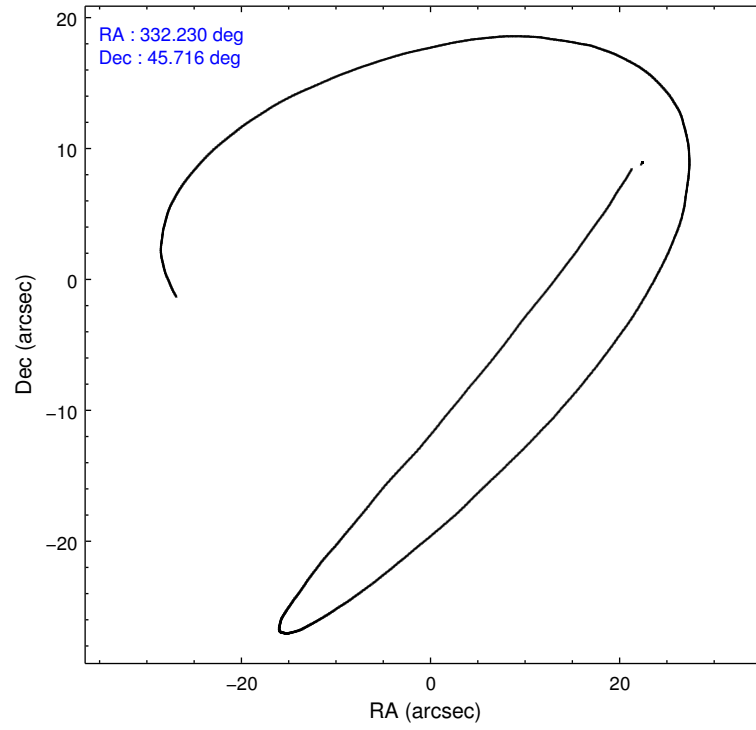
Level 1 Events

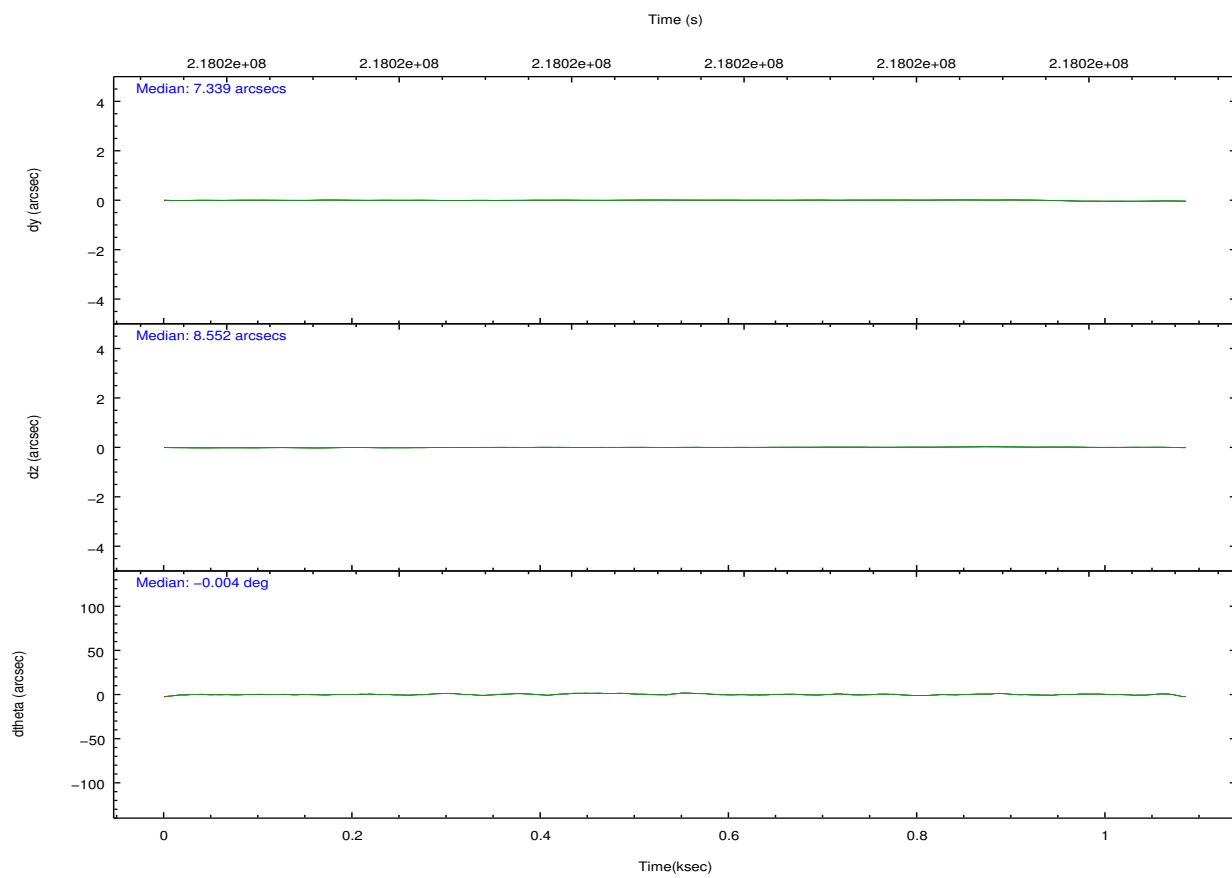
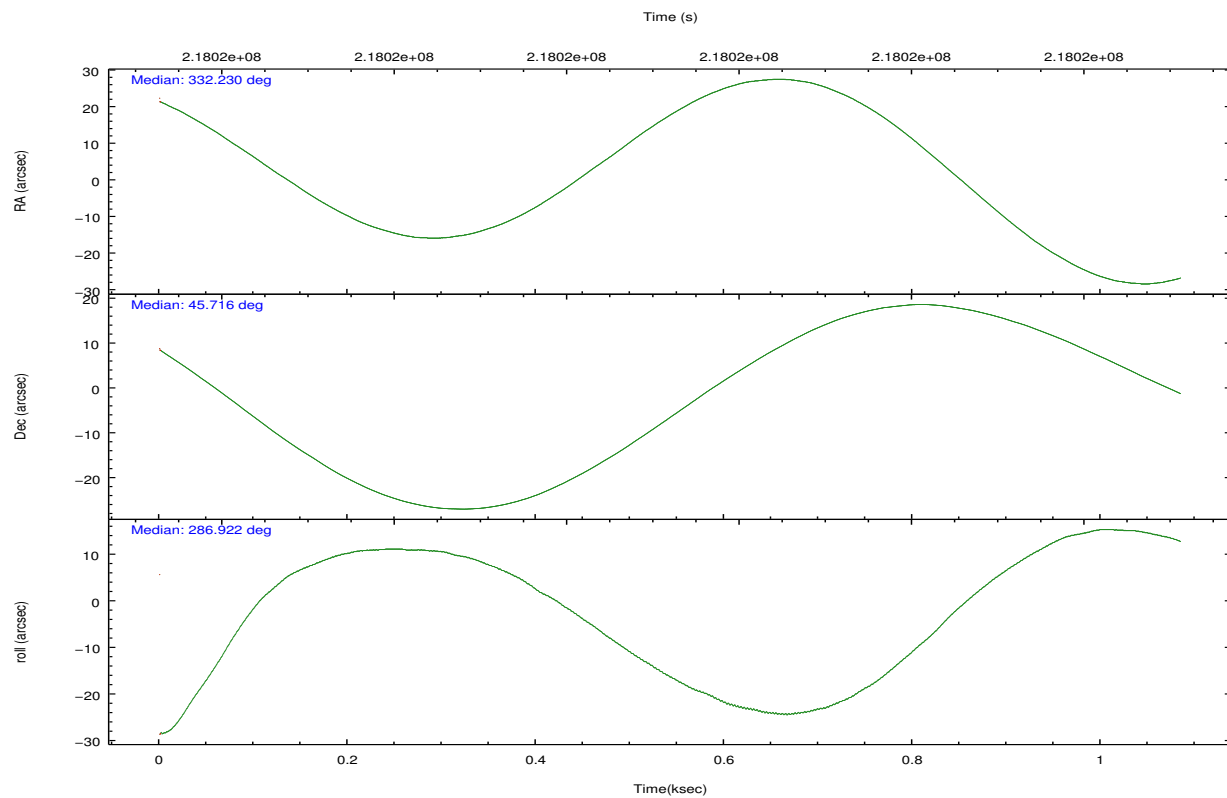
|                 | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events  | 806                  | 88888                | 792                  |
| rejected events | 806                  | 21827                | 792                  |
| rejected %      | 100%                 | 24%                  | 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                 | 332.200053          | 332.2307144129113    |                              |           |         |
| [deg] Pointing Dec                | 45.734039           | 45.71542826757886    |                              |           |         |
| [deg] Pointing Roll               | 286.882038          | 286.9273690218658    |                              |           |         |
| [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)  | 218019963.184000    | 218019587.11874      |                              |           |         |
| Observation start date            | 2004-11-28T09:04:59 | 2004-11-28T08:59:47  |                              |           |         |
| [s] Observation end time (MET)    | 218020863.184000    | 218020996.4938       |                              |           |         |
| Observation end date              | 2004-11-28T09:19:59 | 2004-11-28T09:23:16  |                              |           |         |

## 2.3 Aspect





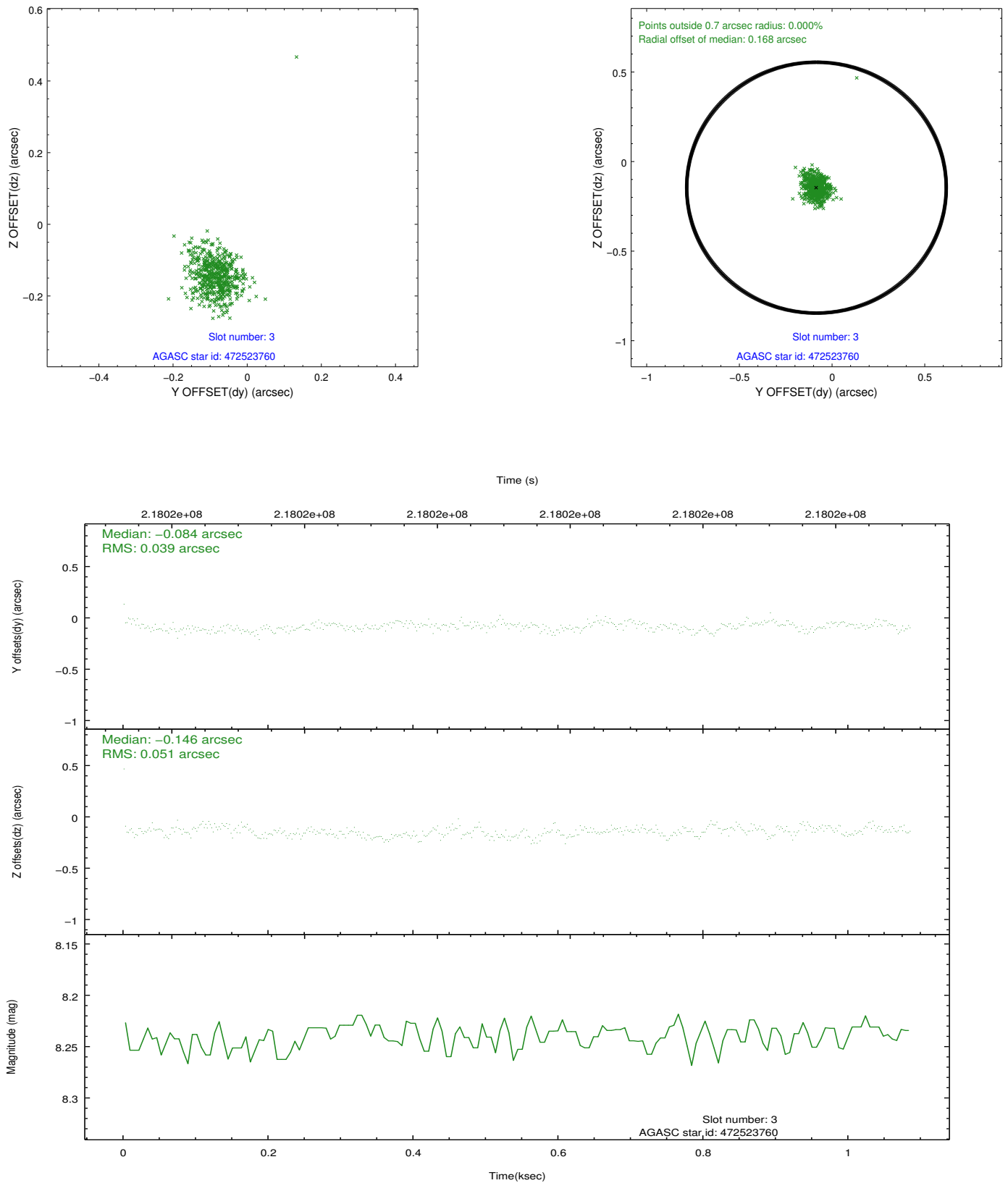
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-S-1   | 7.04 | 265   | 0.134  | -0.139 | 0.006 | 0.011 | 0.000000   | 0.000000  | -1161.49 | -457.18  |
| 1    | FID    | HRC-S-2   | 7.04 | 265   | 0.166  | -0.118 | 0.005 | 0.009 | 0.000000   | 0.000000  | 1233.84  | -451.52  |
| 2    | FID    | HRC-S-3   | 7.04 | 265   | 0.090  | -0.045 | 0.006 | 0.009 | 0.000000   | 0.000000  | -1159.60 | 570.74   |
| 3    | GUIDE  | 472523760 | 8.24 | 530   | -0.084 | -0.146 | 0.061 | 0.101 | 331.645363 | 45.403260 | 728.27   | -1684.27 |
| 4    | GUIDE  | 472654568 | 9.44 | 530   | 0.112  | 0.031  | 0.119 | 0.192 | 332.194449 | 45.063576 | 2307.53  | -715.62  |
| 5    | GUIDE  | 472655152 | 9.44 | 530   | -0.007 | 0.074  | 0.102 | 0.169 | 332.504239 | 45.862991 | -219.41  | 865.53   |
| 6    | GUIDE  | 472659832 | 9.46 | 530   | -0.062 | 0.087  | 0.113 | 0.180 | 332.780399 | 46.098139 | -838.86  | 1771.97  |
| 7    | GUIDE  | 472527720 | 7.02 | 529   | 0.033  | -0.033 | 0.103 | 0.174 | 331.460205 | 45.112509 | 1586.19  | -2440.62 |

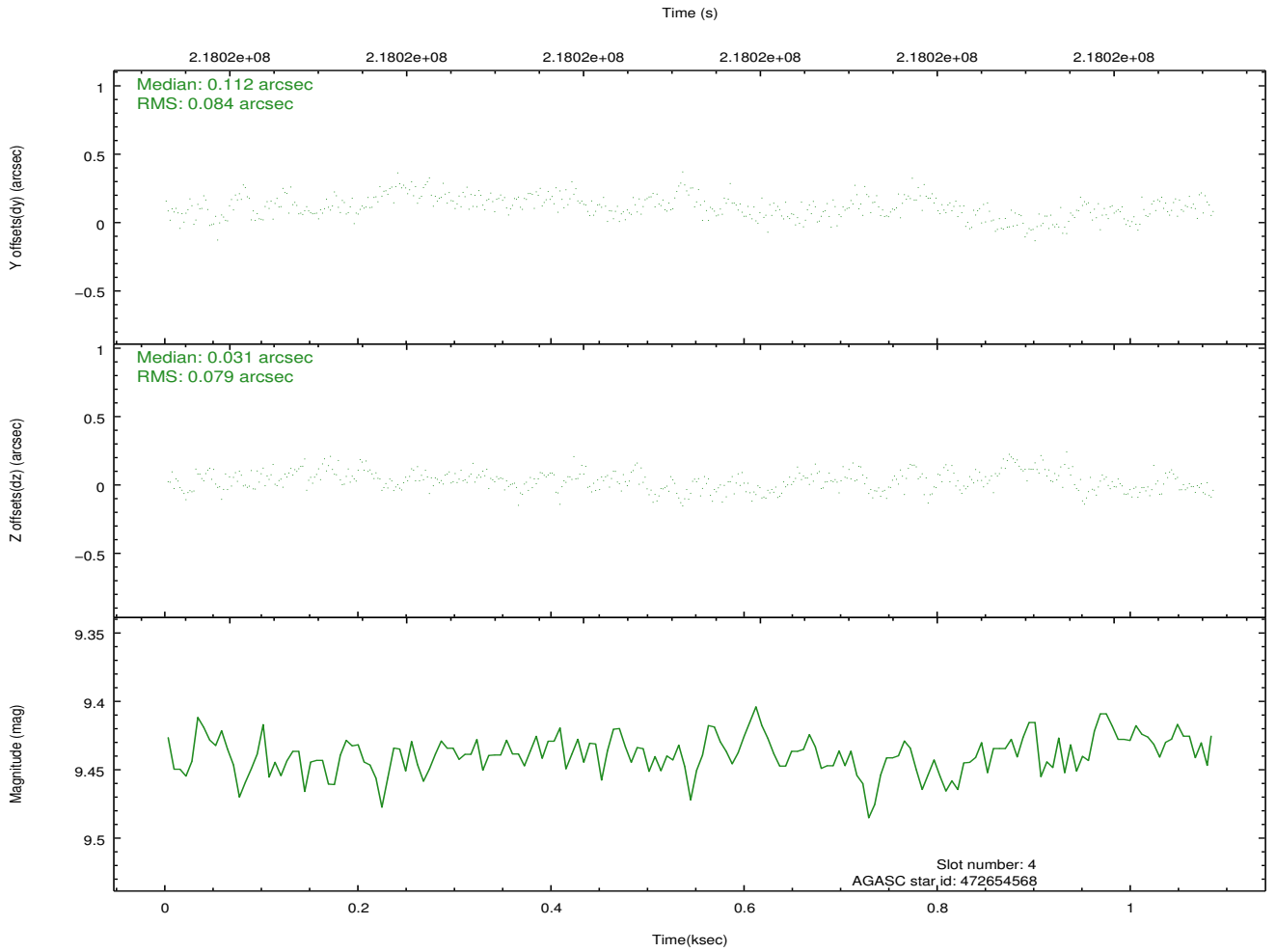
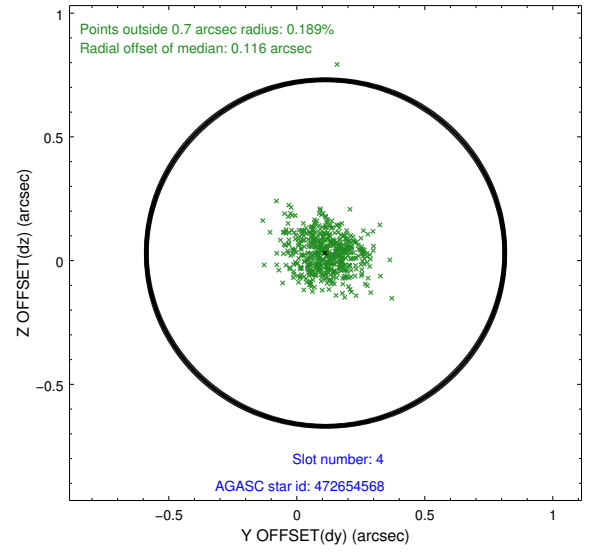
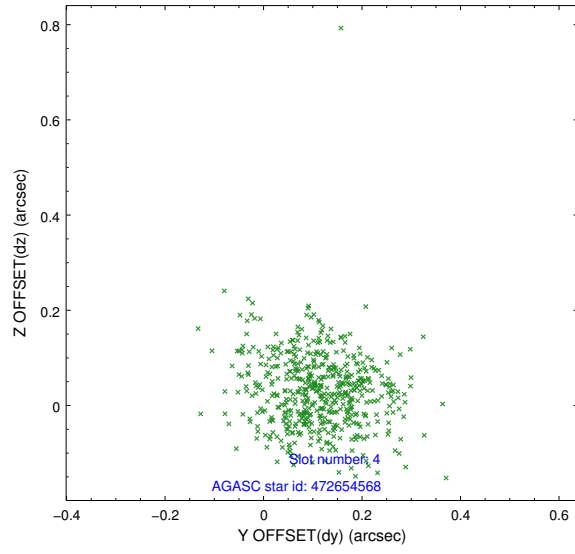


## 2.4 Star Slots

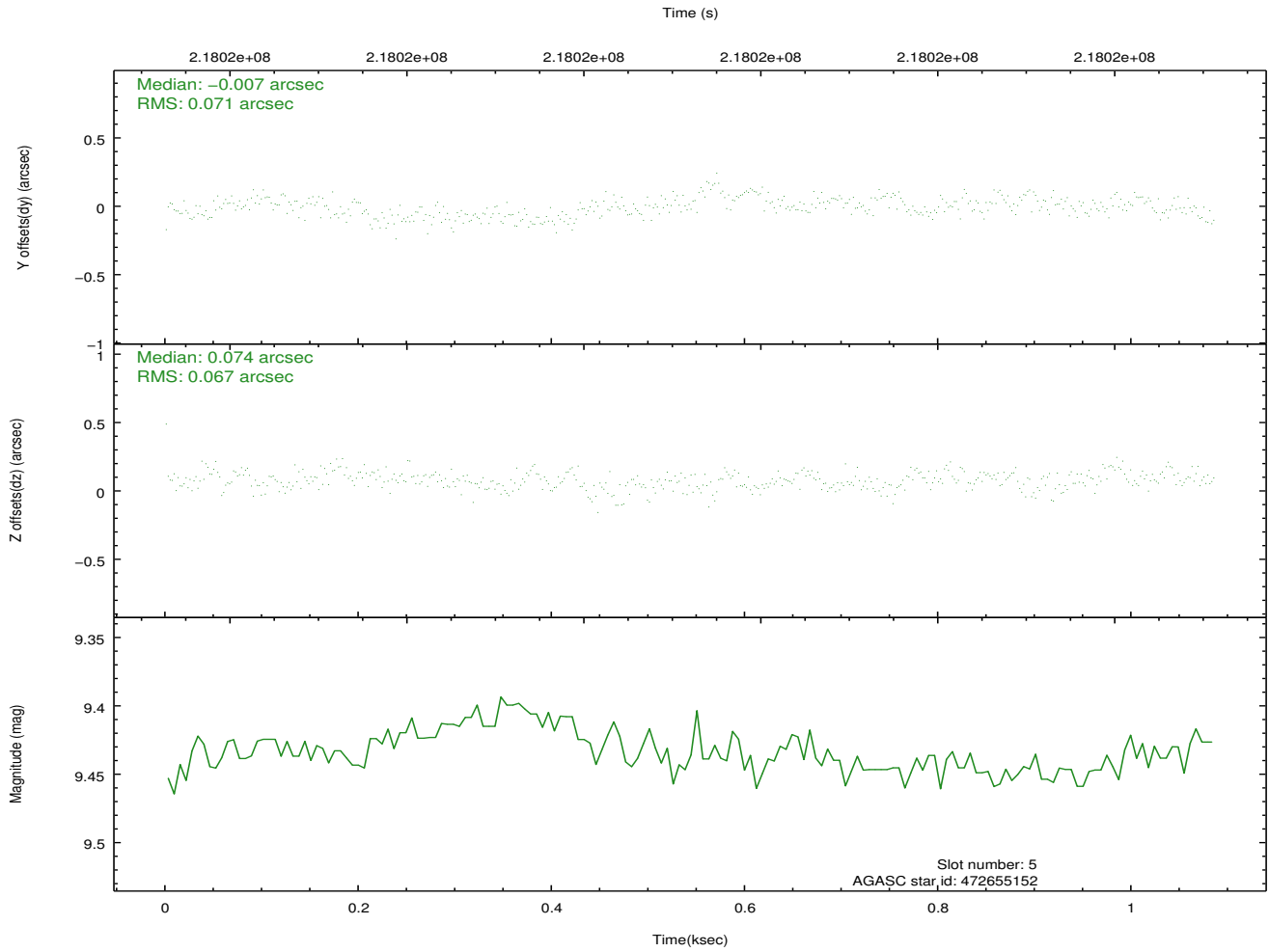
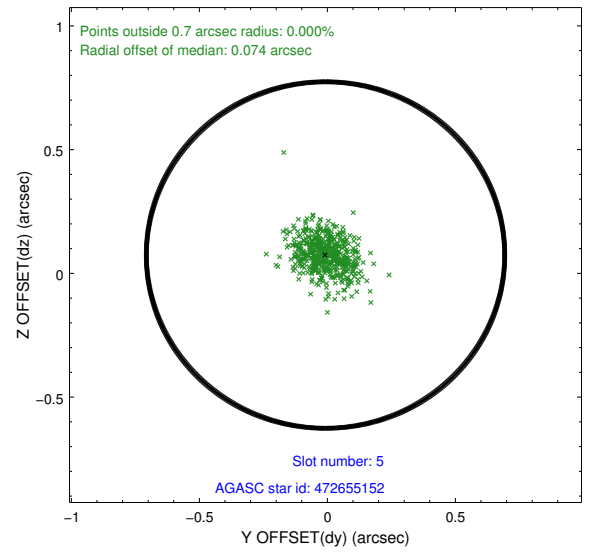
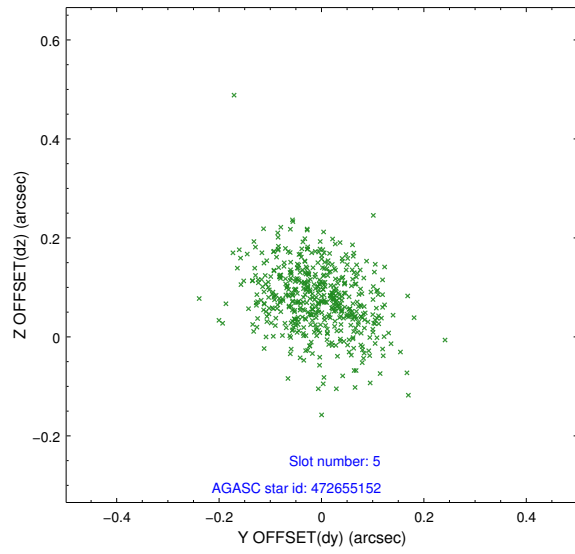
### 2.4.1 Slot 3



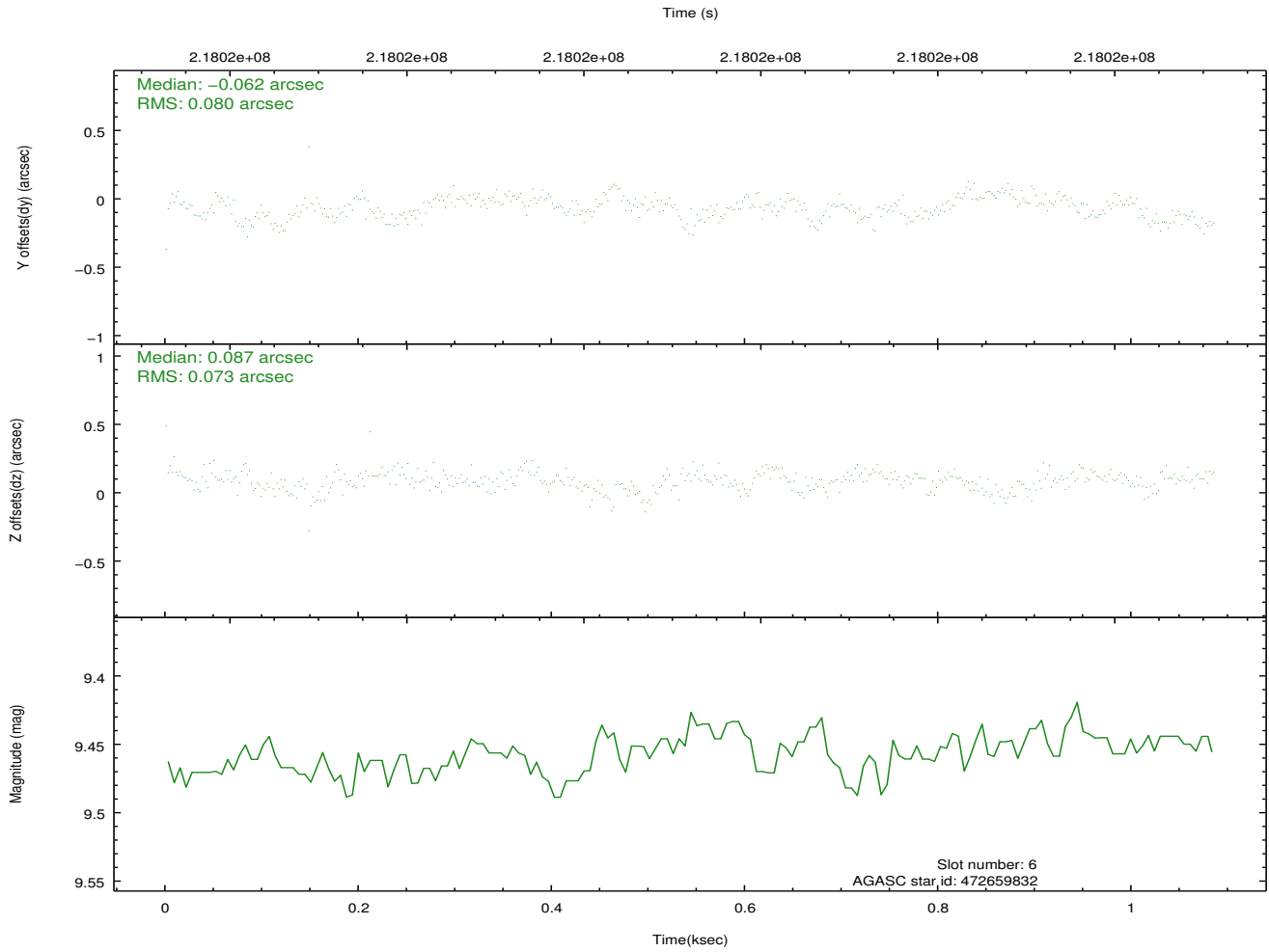
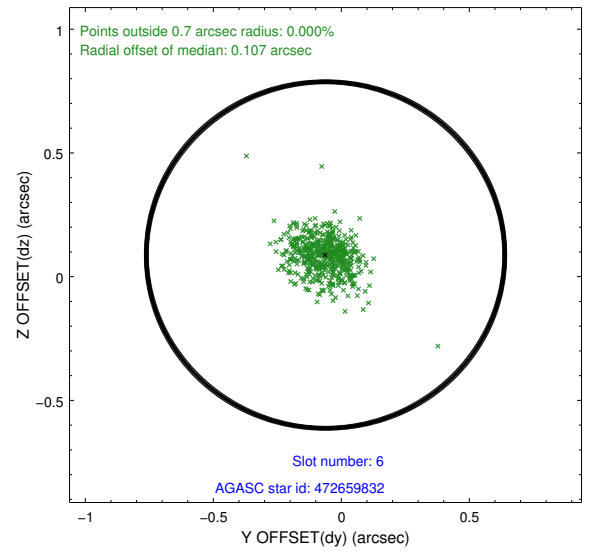
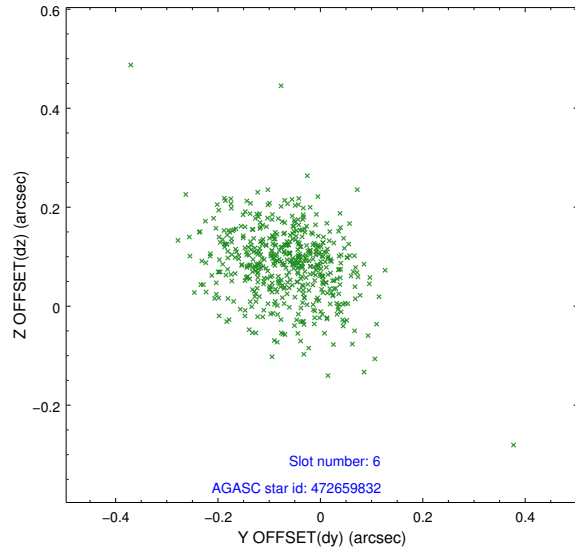
## 2.4.2 Slot 4



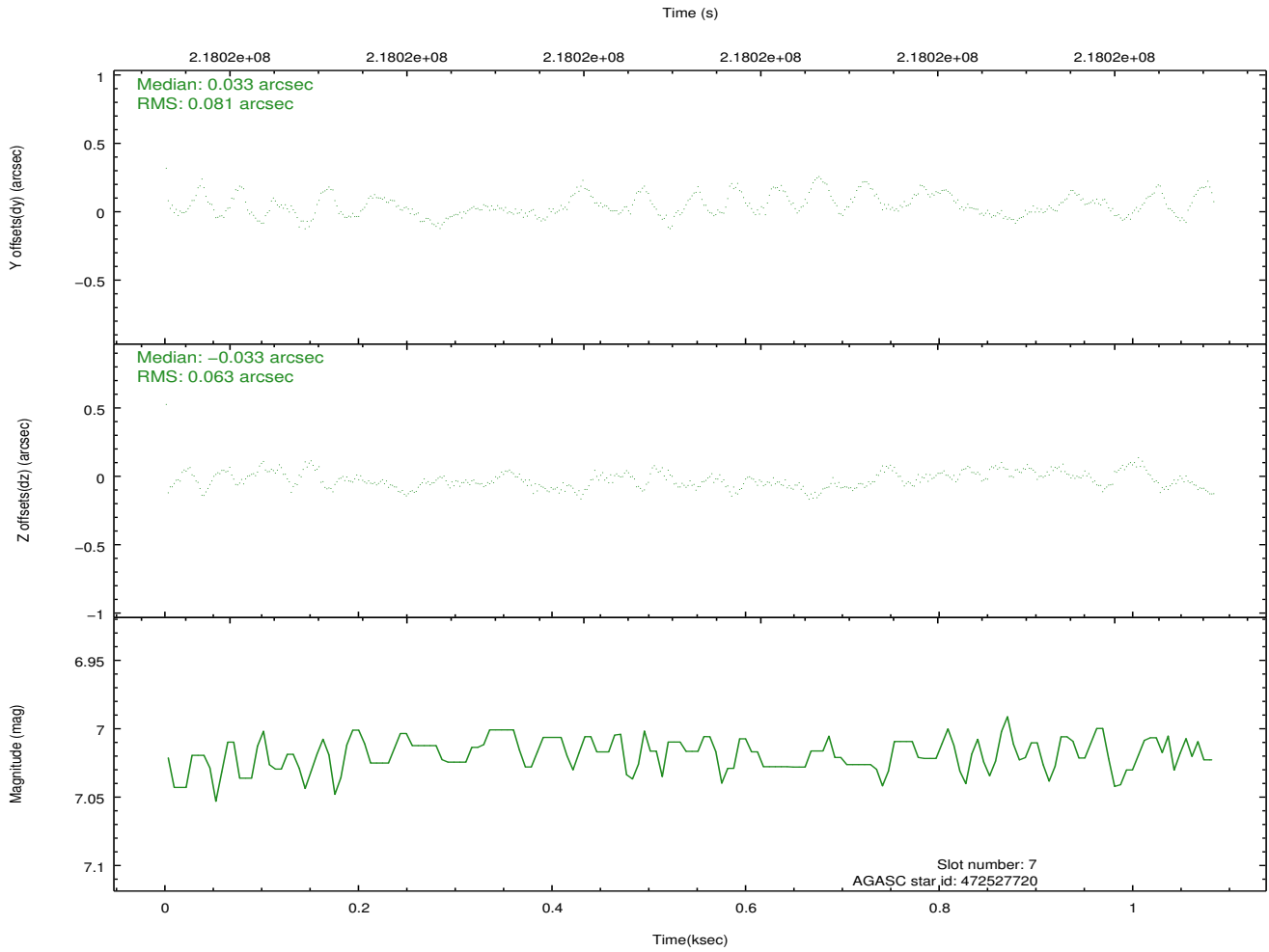
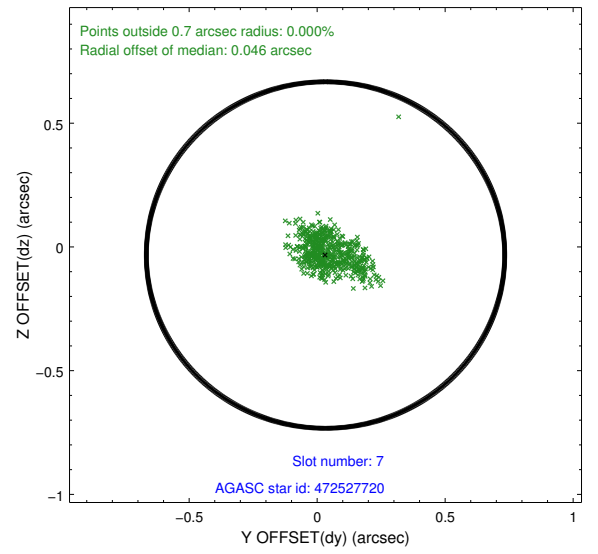
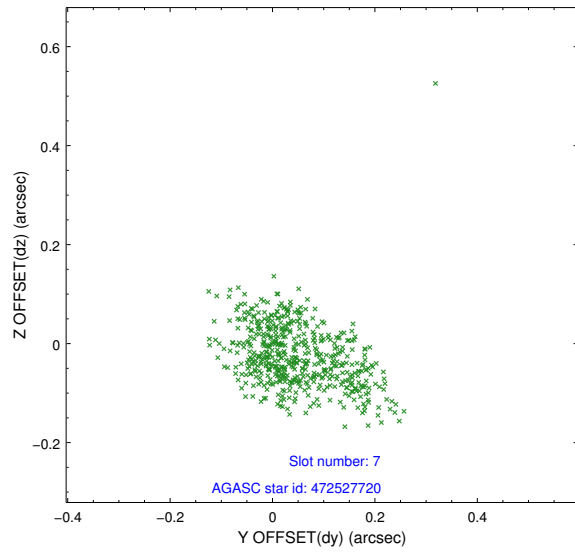
### 2.4.3 Slot 5



## 2.4.4 Slot 6

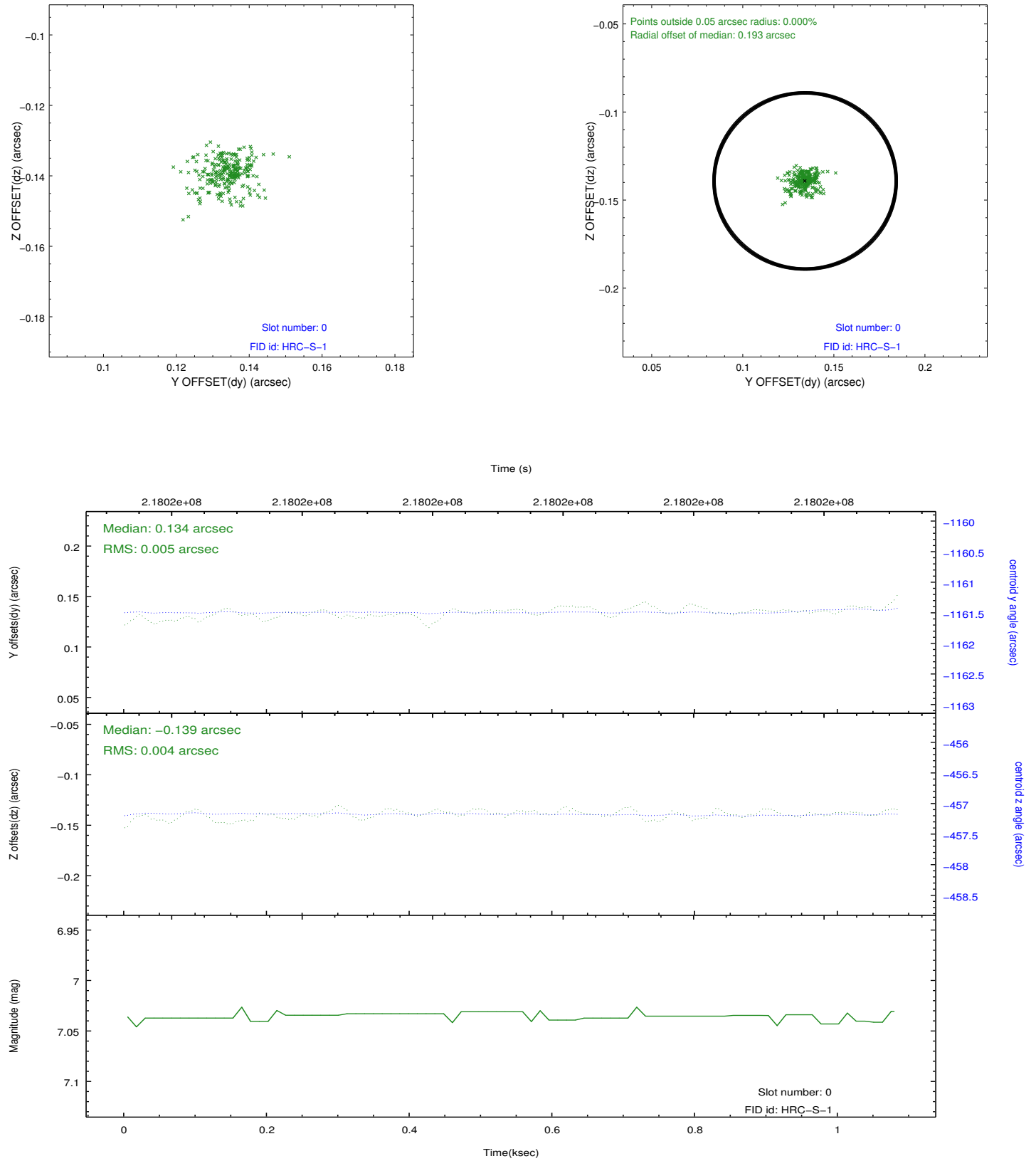


## 2.4.5 Slot 7

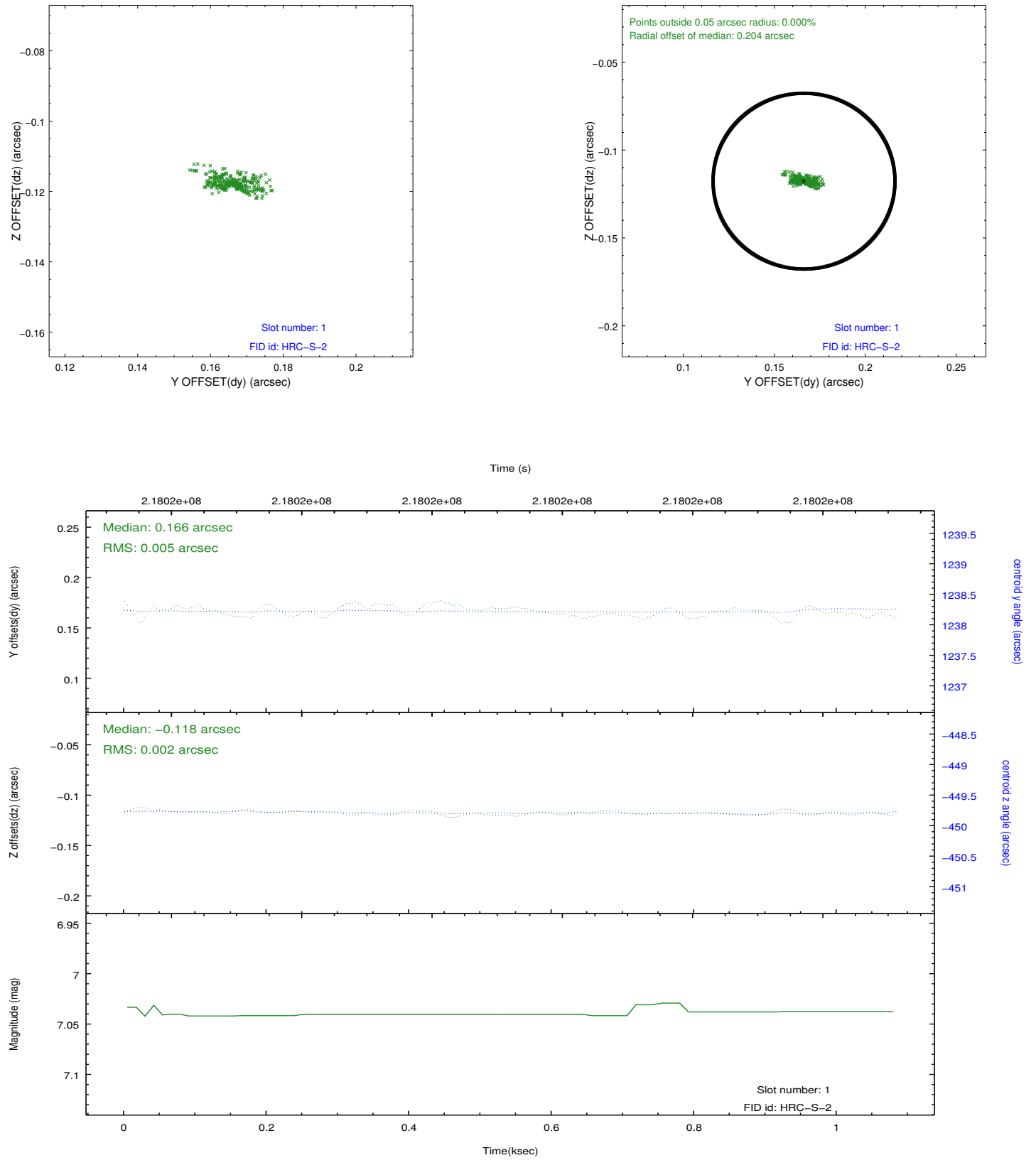


## 2.5 FID Slots

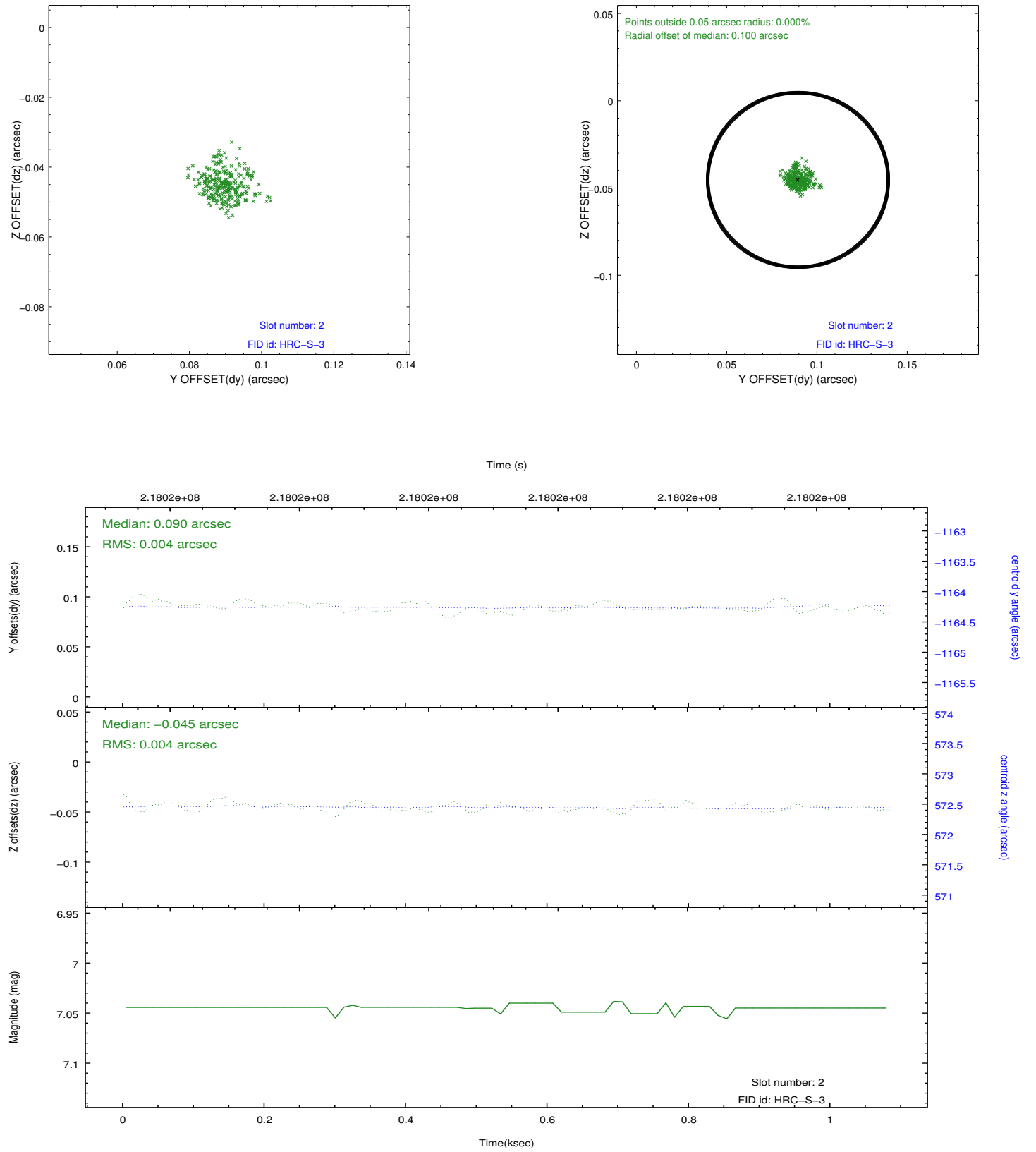
### 2.5.1 Slot 0



## 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)      | 2013.01.04 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 1.054981   |

### A.2 Comments