

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4302 - L2 Version 4  
Chandra X-Ray Center

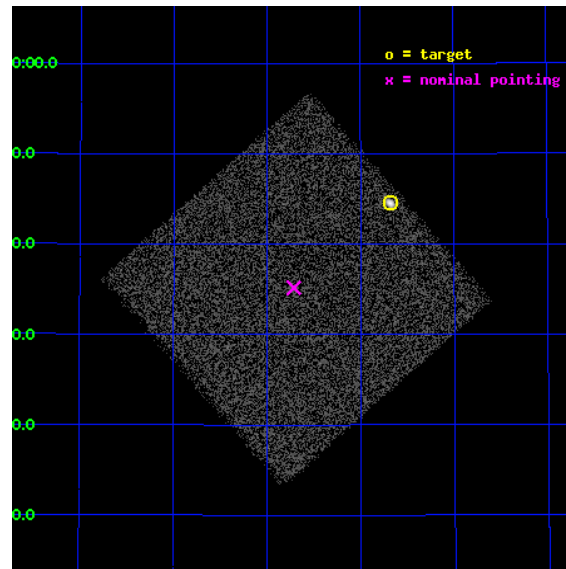
L2 Processing Date : Oct 23 2012

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# 1 Front

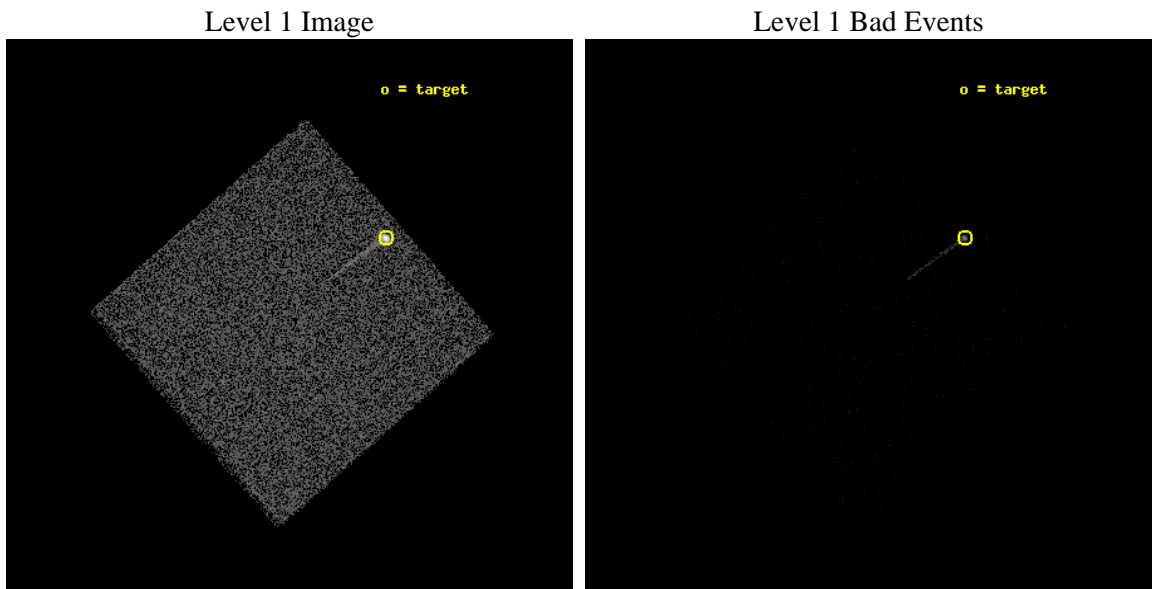
|          |  |                                       |
|----------|--|---------------------------------------|
| seq_num  | 290262   | Sequence number                       |
| obs_id   | 4302   | Observation id                        |
| title    | AO4 CALIBRATION OBSERVATIONS TO MONITOR SPATIAL VARIATIONS IN THE HRC-I 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   | 332.42831464297  | Nominal RA [deg]                      |
| dec_nom  | 45.586541885528  | Nominal Dec [deg]                     |
| roll_nom | 3.5273490874394  | Nominal Roll [deg]                    |
| revision | 4  | Processing version of data            |
| ontime   | 1179.7750496268  | [s]                                   |
| livetime | 1173.1806683231  | Ontime multiplied by DTCOR            |
| l2events | 37661  | 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 | 1000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 1179.7750496268 | [s]                                     |
| caldbver | 4.5.2               | &#160                          | l1events       | 69316           | Number of level 1 events                |
| date     | 2012-10-23T09:28:22 | Date and time of file creation |                |                 |   |
| revision | 4                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

#### Level 1 Events

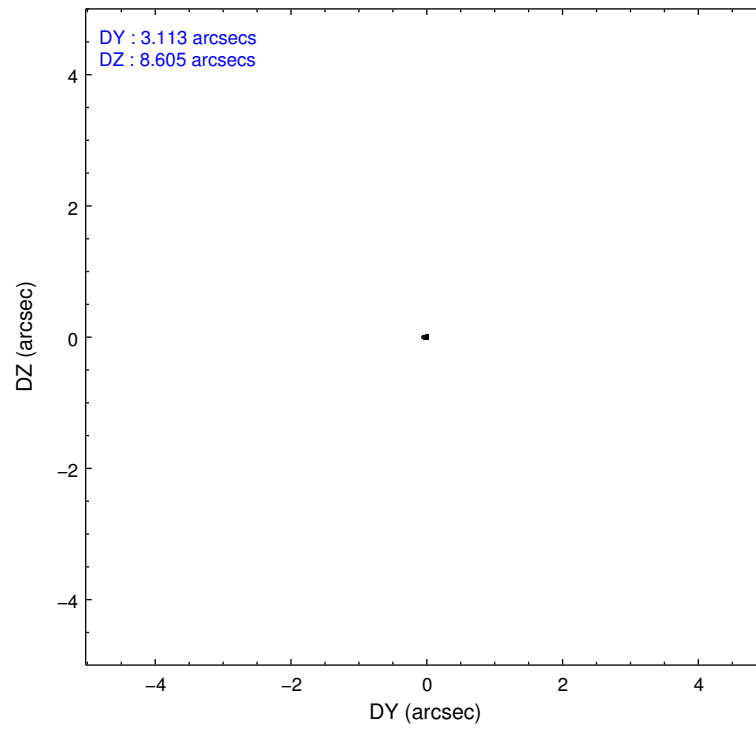
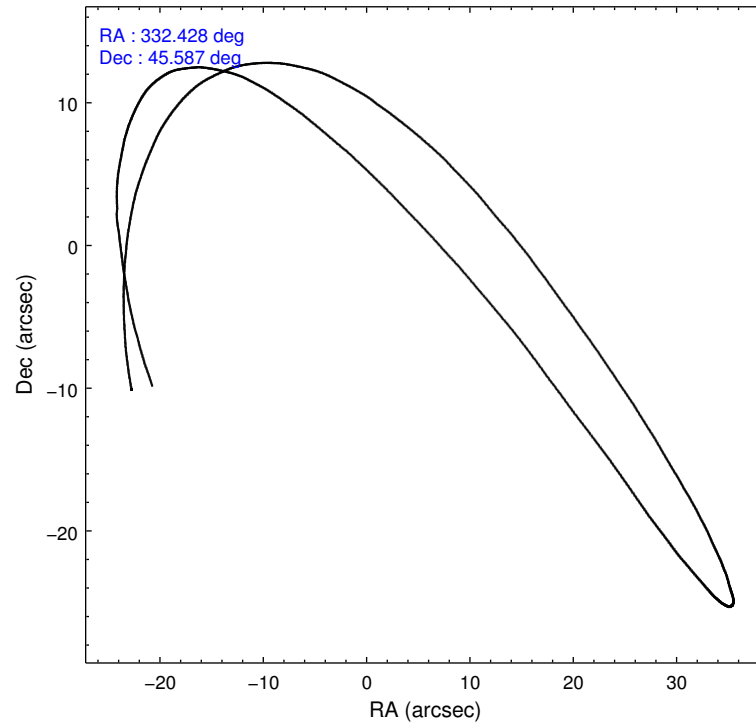
|                 |                      |
|-----------------|----------------------|
|                 | <b>segment<br/>0</b> |
| level 1 events  | 69316                |
| rejected events | 15485                |
| rejected %      | 22%                  |

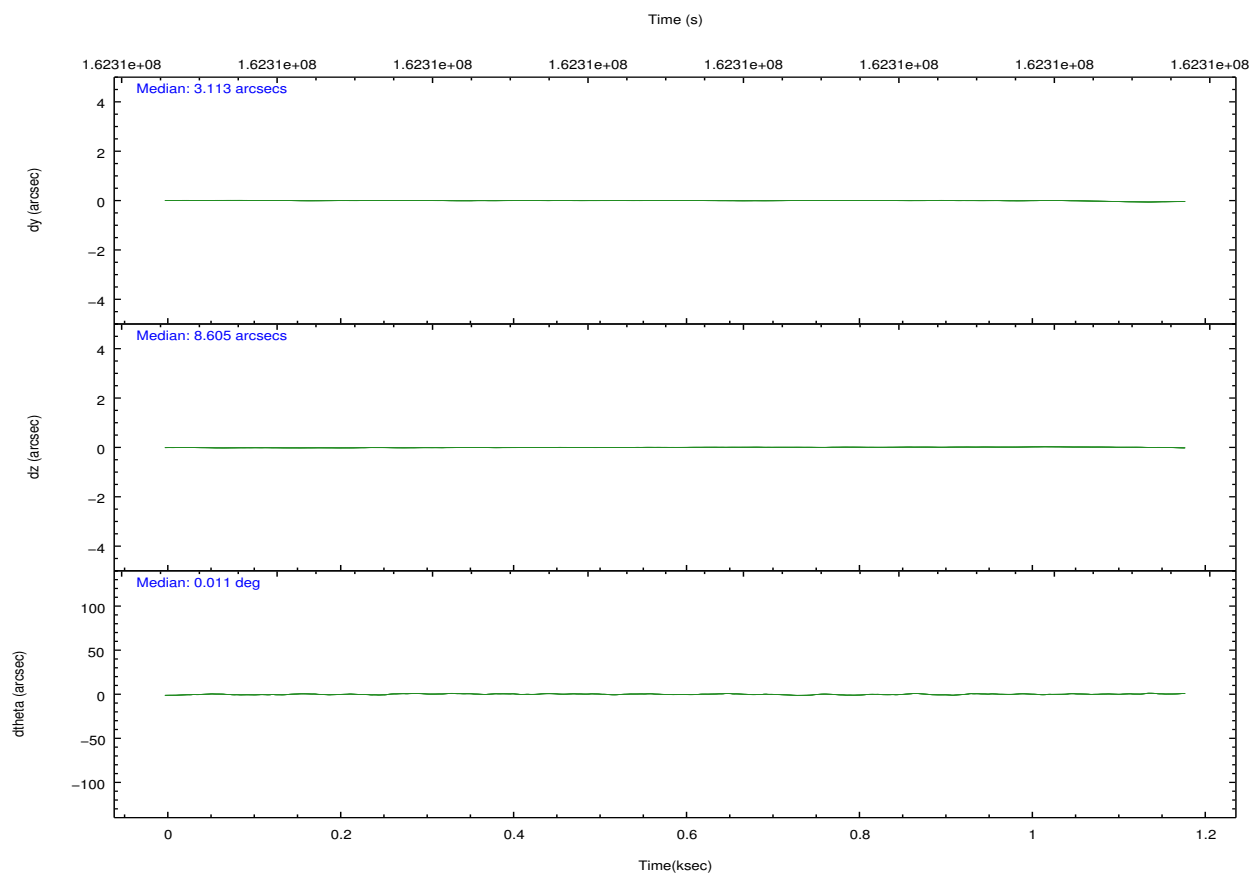
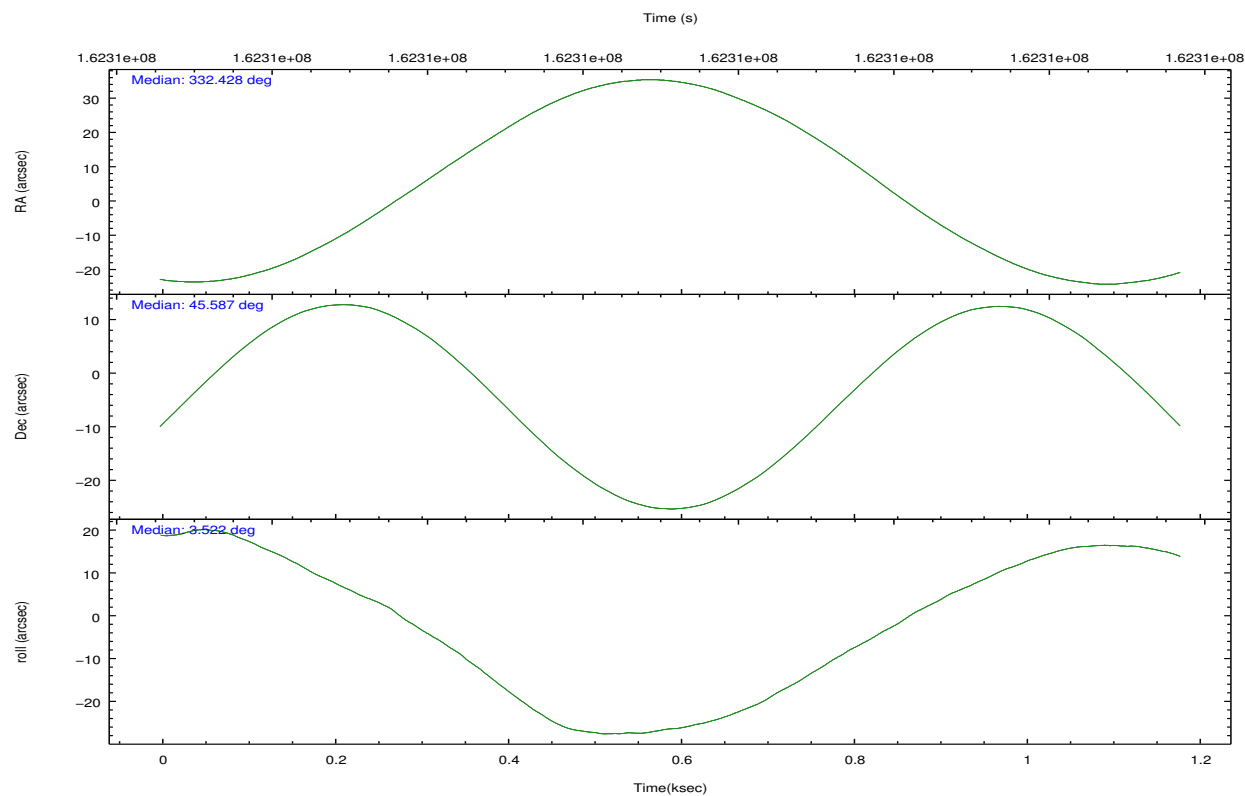
## 2.2 Compared Parameters

| 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                 | 332.397294          | 332.4283146429666      |
| [deg] Pointing Dec                | 45.569933           | 45.58654188552828      |
| [deg] Pointing Roll               | 3.645019            | 3.527349087439414      |
| [s] Window start time (MET)       | 161697664.184000    | 161697664.184000       |
| [s] Window stop time (MET)        | 165412864.184000    | 165412864.184000       |
| [mm] SIM focus pos                | -1.040293           | -1.038866356238299     |
| [mm] SIM defocus                  | 0                   | 0.001426264420575141   |
| [mm] SIM translation stage pos    | 126.985494          | 126.9854943052878      |
| [mm] SIM translation stage offset | 0                   | -5.413686238853188e-06 |
| [s] Observation start time (MET)  | 162311698.184000    | 162311321.5703         |
| Observation start date            | 2003-02-22T14:33:54 | 2003-02-22T14:28:41    |
| [s] Observation end time (MET)    | 162312698.184000    | 162312831.39537        |
| Observation end date              | 2003-02-22T14:50:34 | 2003-02-22T14:53:51    |

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

## 2.3 Aspect





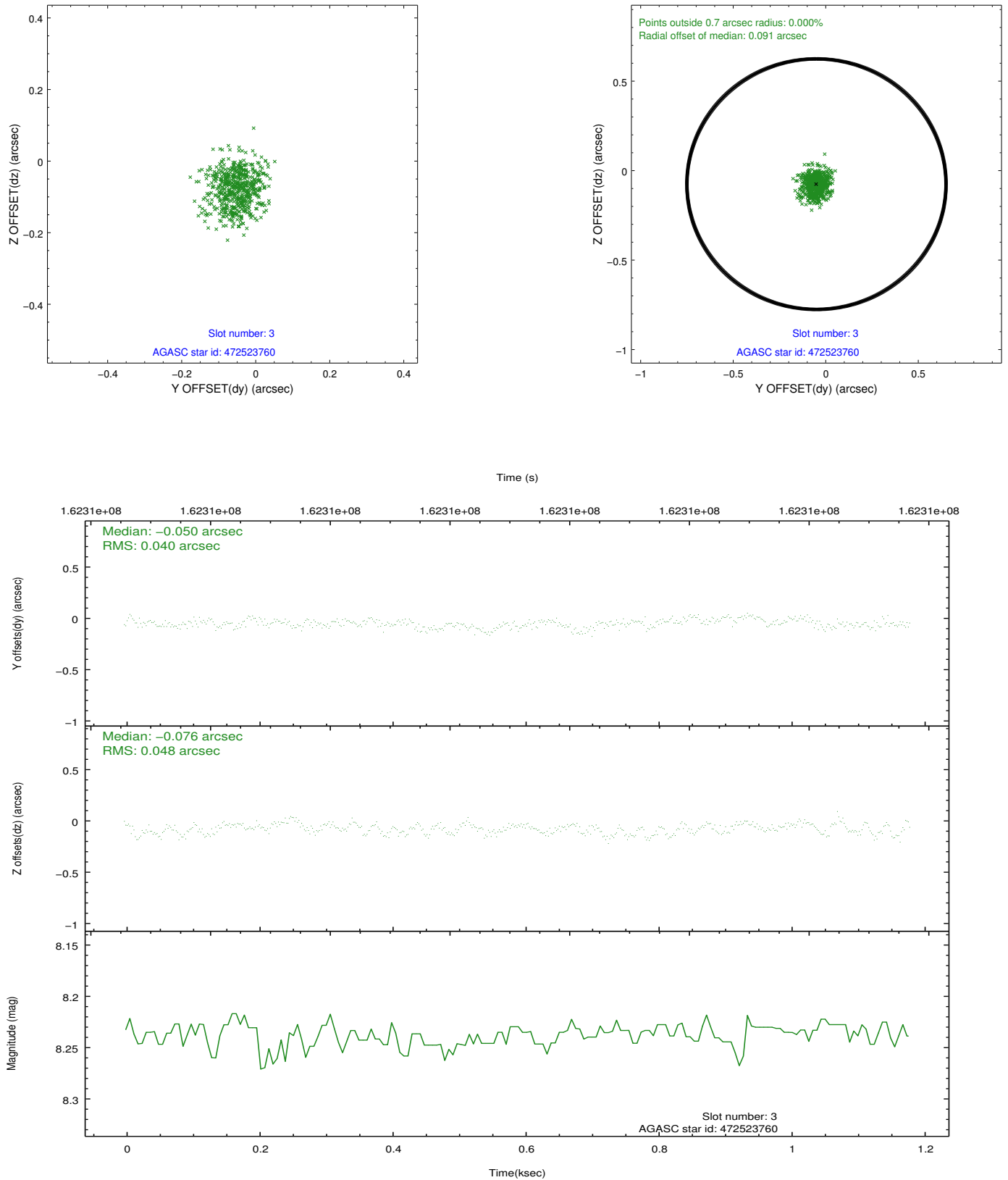
### Slot Statistics

| slot | status | id        | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|-------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-I-1   | 6.98  | 288   | 0.037  | 0.029  | 0.006 | 0.009 | 0.000000   | 0.000000  | -758.59  | -1296.49 |
| 1    | FID    | HRC-I-2   | 7.01  | 288   | 0.094  | -0.045 | 0.006 | 0.011 | 0.000000   | 0.000000  | 851.46   | -1302.69 |
| 2    | FID    | HRC-I-4   | 7.01  | 288   | -0.015 | -0.076 | 0.006 | 0.010 | 0.000000   | 0.000000  | 1287.18  | 1000.98  |
| 3    | GUIDE  | 472523760 | 8.24  | 577   | -0.050 | -0.076 | 0.067 | 0.109 | 331.645363 | 45.403260 | -1932.55 | -473.38  |
| 4    | GUIDE  | 472655152 | 9.43  | 577   | 0.044  | 0.062  | 0.095 | 0.149 | 332.504239 | 45.862991 | 333.04   | 1031.30  |
| 5    | GUIDE  | 472659832 | 9.46  | 575   | 0.014  | -0.030 | 0.107 | 0.173 | 332.780399 | 46.098139 | 1077.73  | 1837.05  |
| 6    | GUIDE  | 420754040 | 9.08  | 577   | -0.028 | 0.009  | 0.110 | 0.164 | 331.917939 | 44.882543 | -1373.19 | -2389.08 |
| 7    | GUIDE  | 472652872 | 10.12 | 576   | 0.027  | 0.036  | 0.125 | 0.215 | 332.255928 | 45.019274 | -485.48  | -1963.33 |

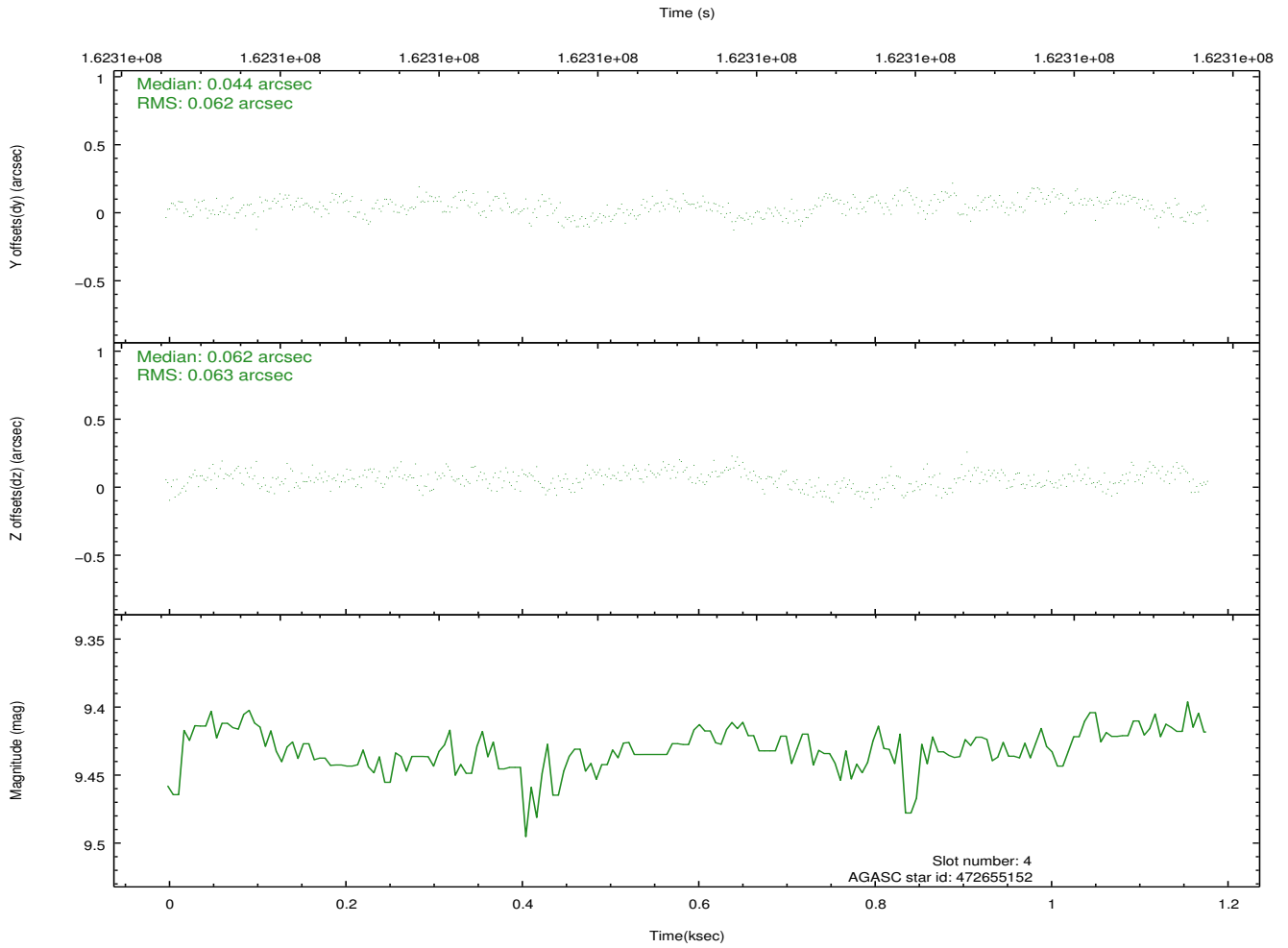
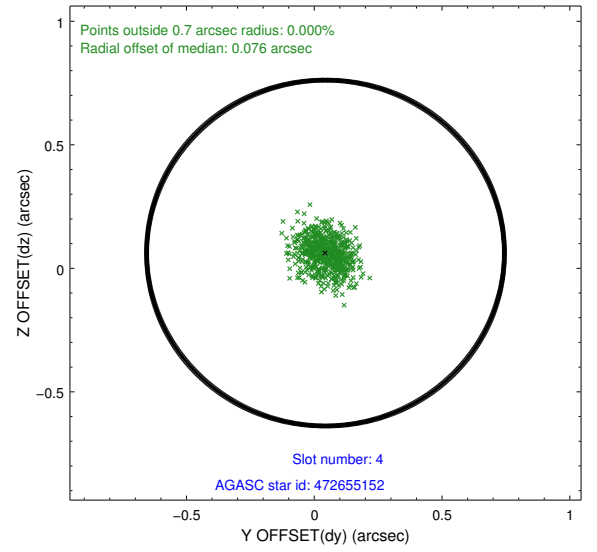
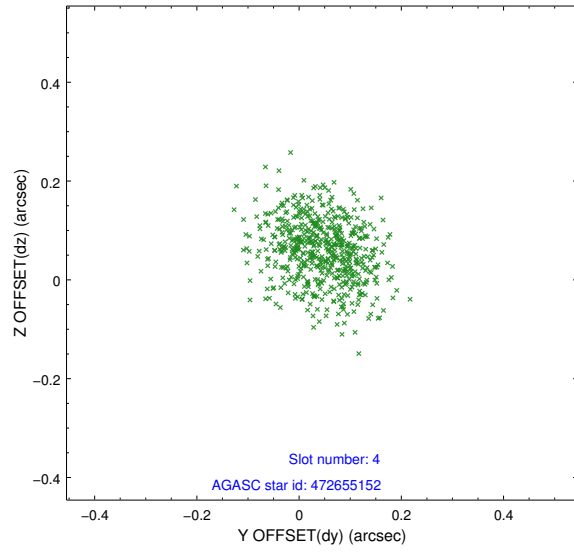


## 2.4 Star Slots

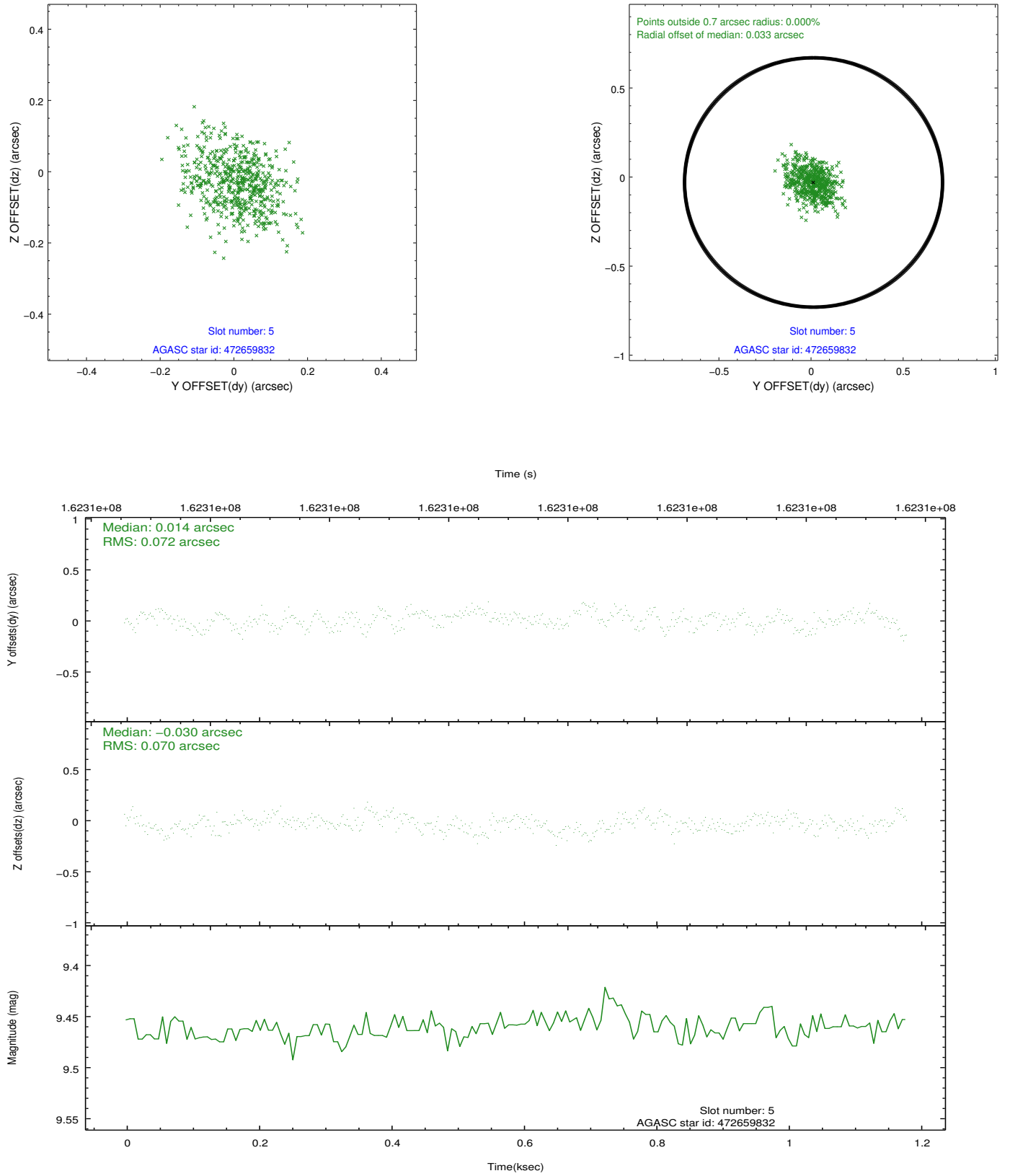
### 2.4.1 Slot 3



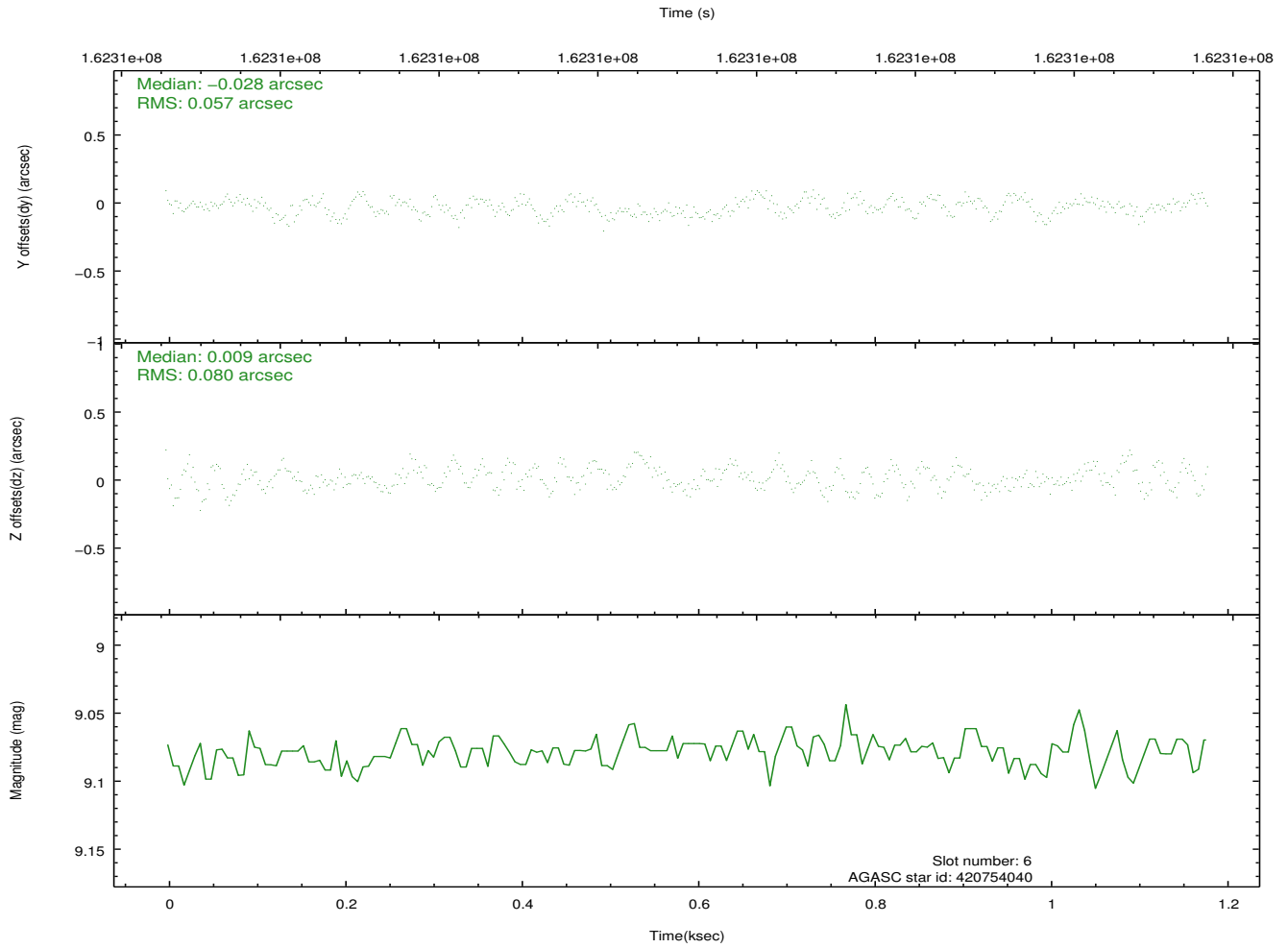
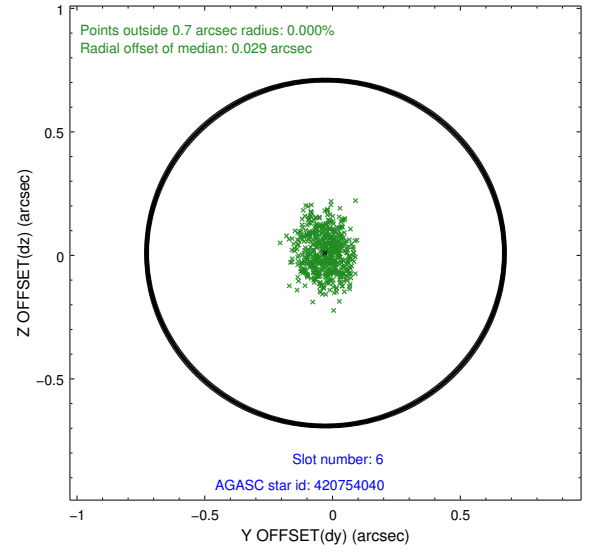
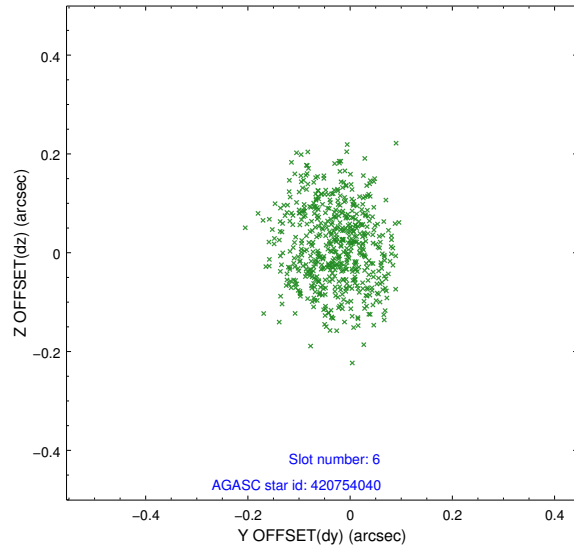
## 2.4.2 Slot 4



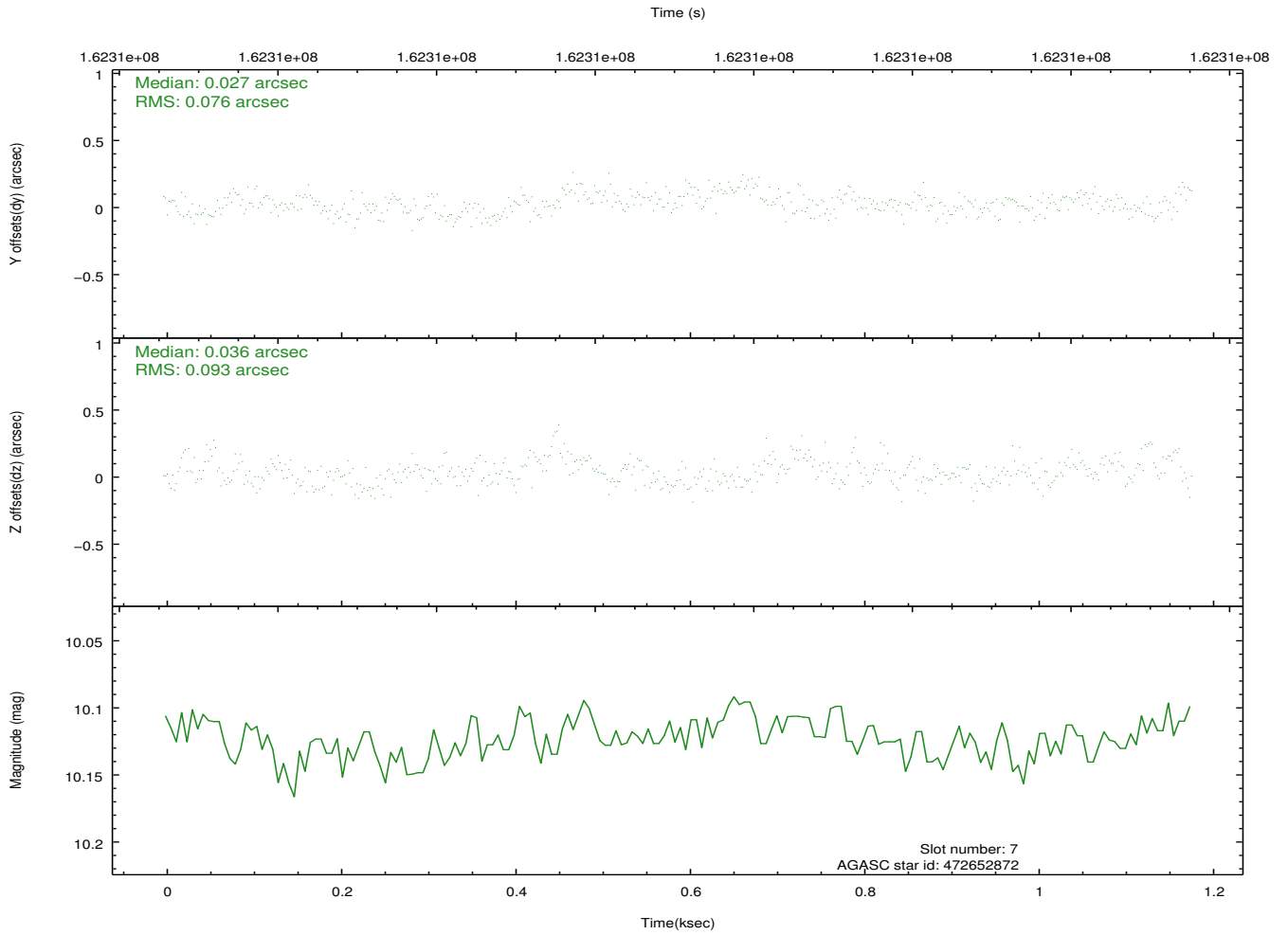
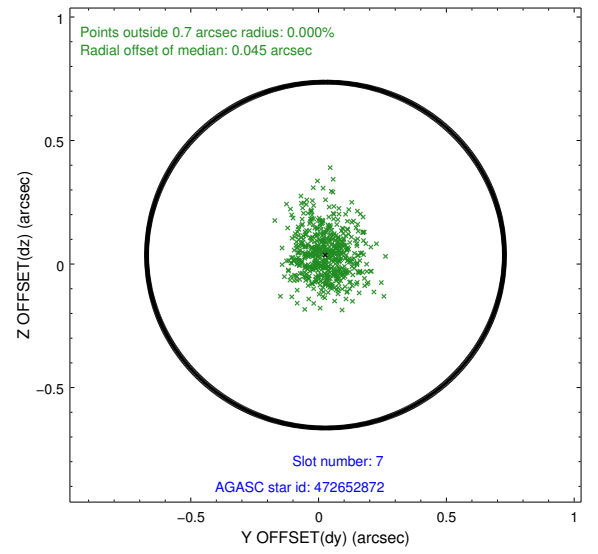
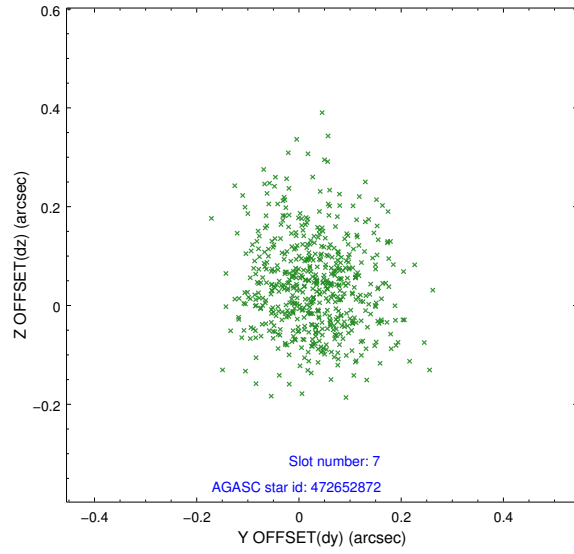
### 2.4.3 Slot 5



## 2.4.4 Slot 6

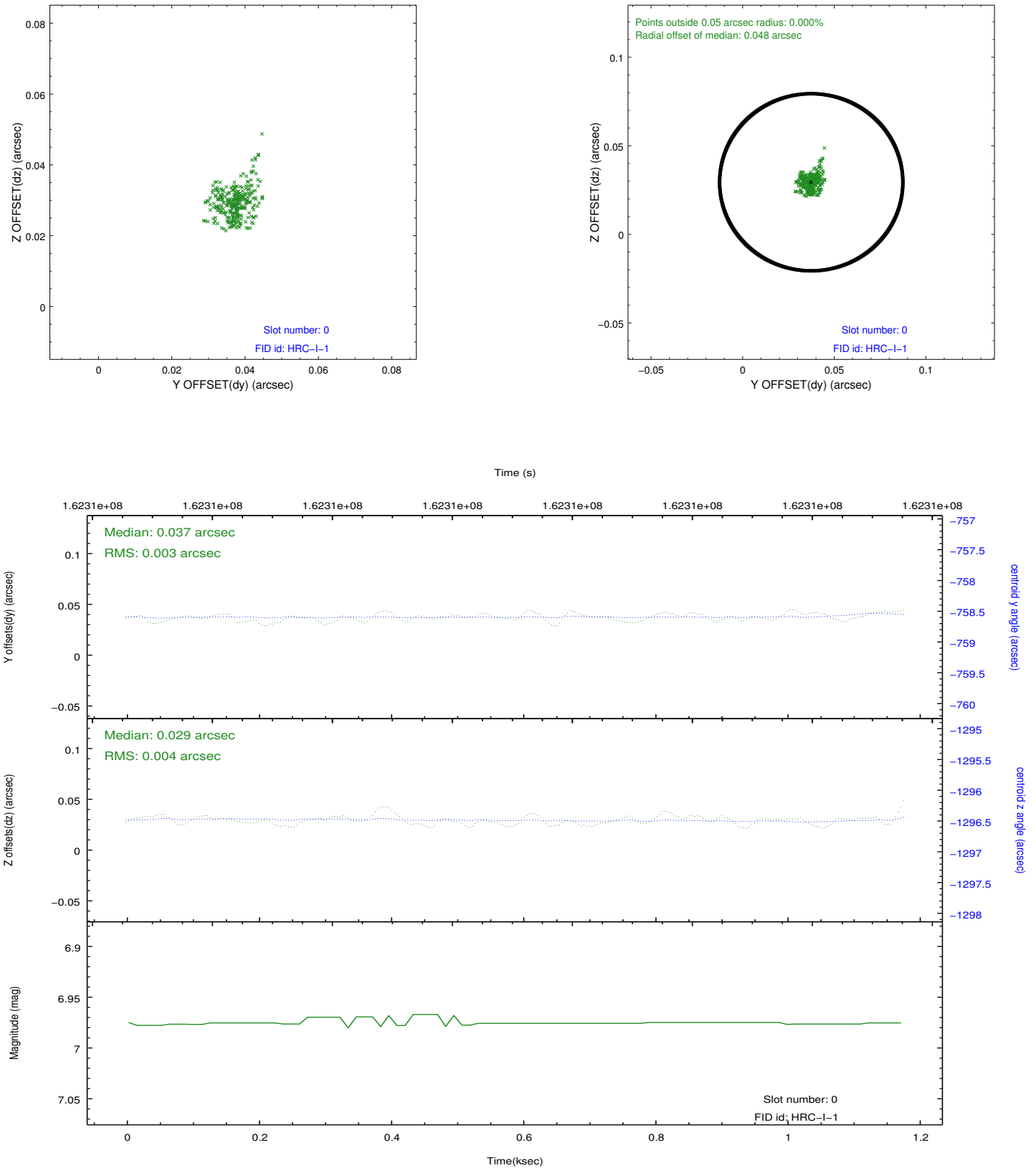


## 2.4.5 Slot 7

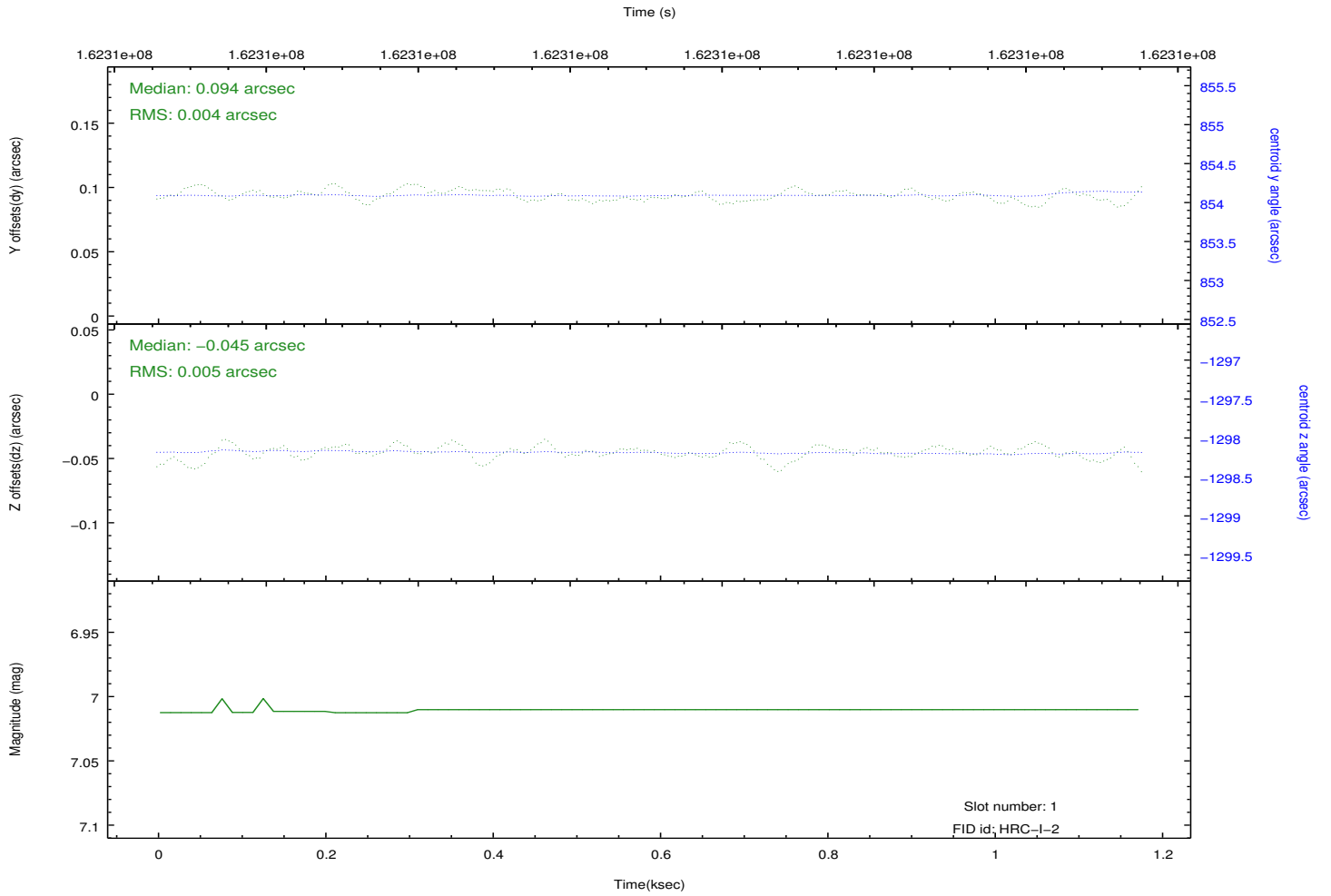
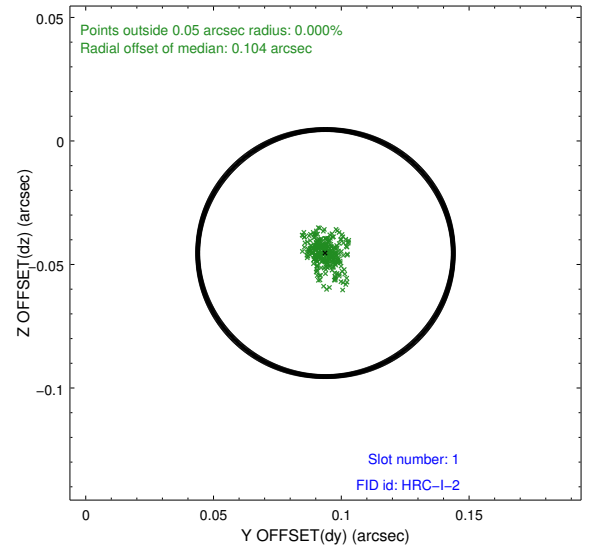
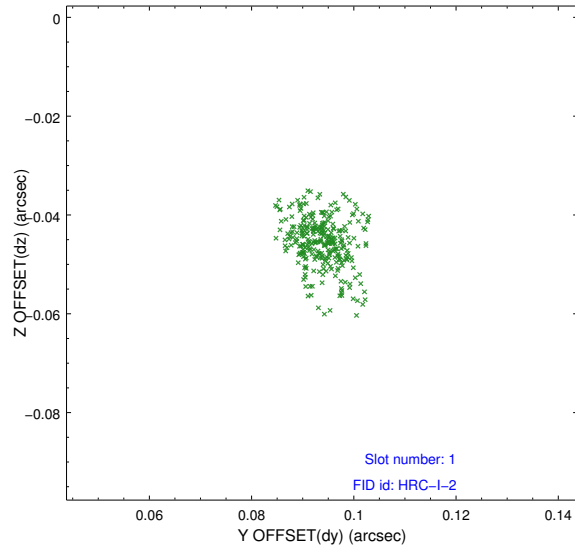


## 2.5 FID Slots

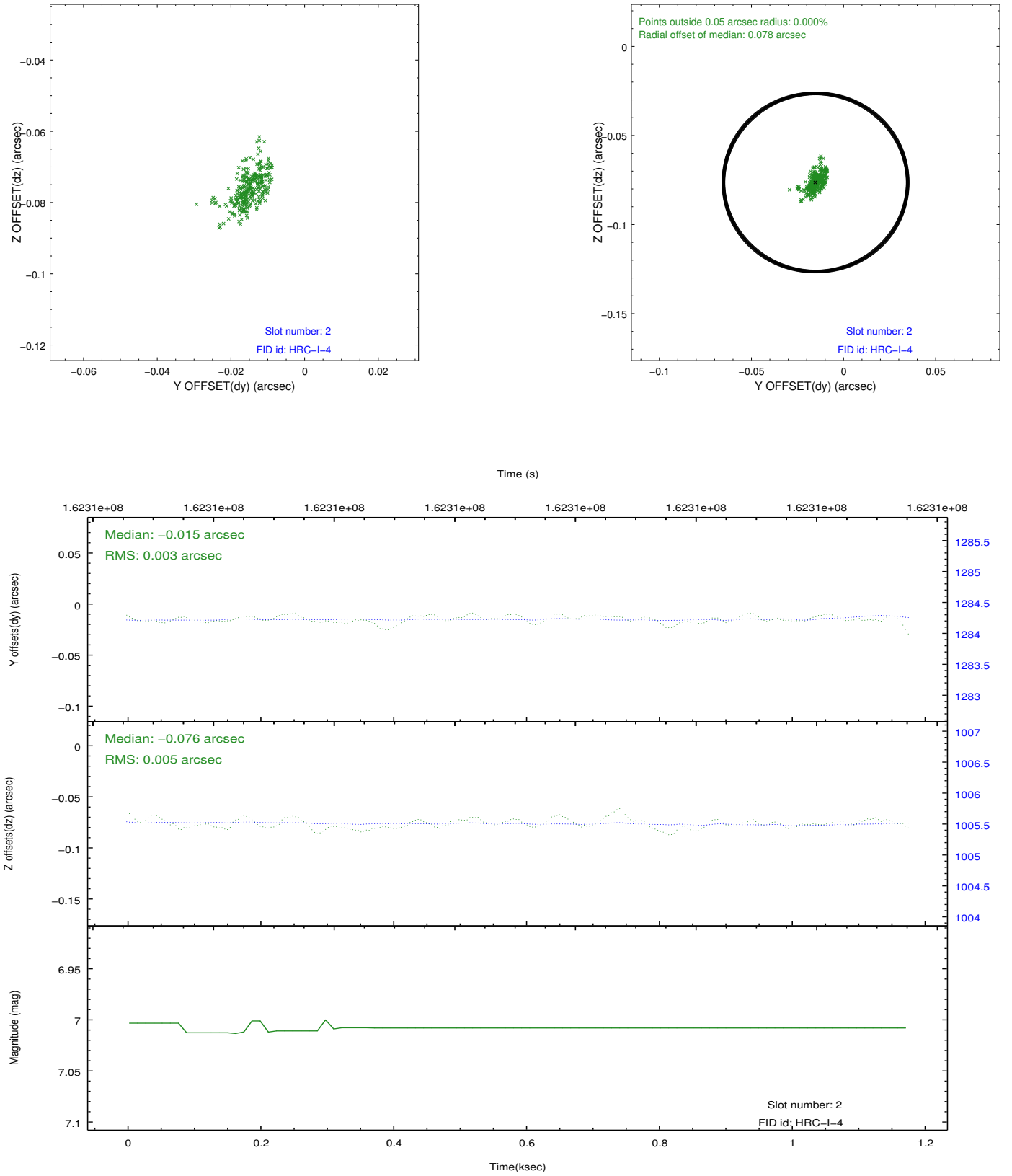
### 2.5.1 Slot 0



## 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)      | 2012.11.06 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 1.18       |

### A.2 Comments

Window constraint met.