

# V&V Reference Report

## L2 ASCDS Version : 10.4.1

Observation 17361 - L2 Version 1  
Chandra X-Ray Center

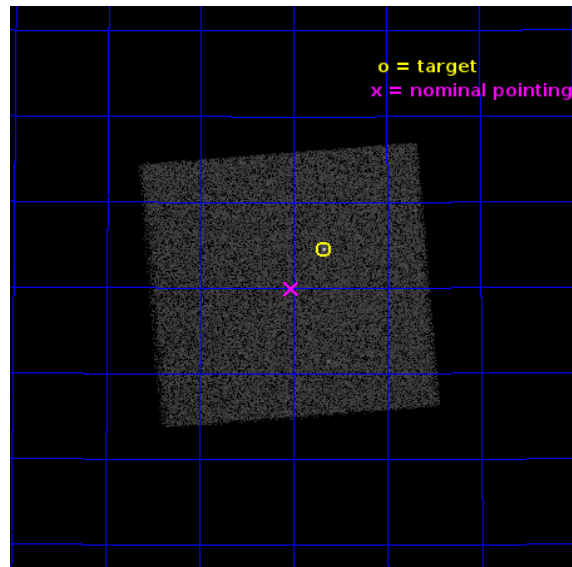
L2 Processing Date : Sep 27 2015

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# 1 Front

|          |  |                                       |
|----------|--|---------------------------------------|
| seq_num  | 291234   | Sequence number                       |
| obs_id   | 17361  | Observation id                        |
| title    | AO-16 Calibration Observations to Monitor the 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   | 332.25585314436  | Nominal RA [deg]                      |
| dec_nom  | 45.665151373447  | Nominal Dec [deg]                     |
| roll_nom | 220.29982904425  | Nominal Roll [deg]                    |
| revision | 1  | Processing version of data            |
| ontime   | 1181.8250665665  | [s]                                   |
| livetime | 1171.1990332539  | Ontime multiplied by DTCOR            |
| l2events | 87627  | Number of level 2 events              |

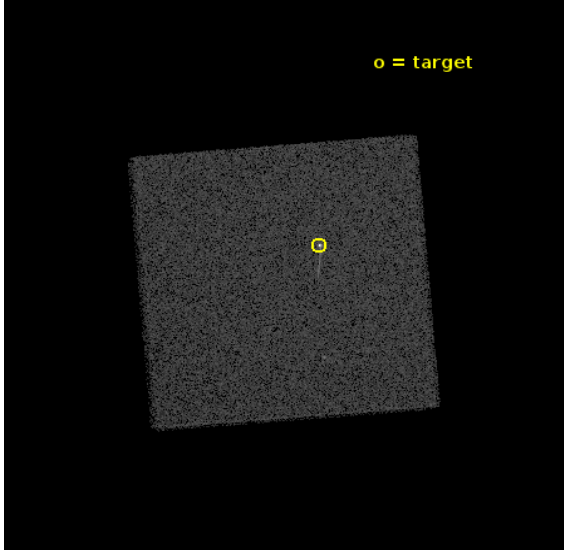


## 2 OBI

### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 1000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 10.4.1              | Processing system revision     | ontime         | 1181.8250665665 | [s]                                     |
| caldbver | 4.6.8               | &#160                          | l1events       | 148238          | Number of level 1 events                |
| date     | 2015-09-27T05:24:18 | Date and time of file creation |                |                 |   |
| revision | 1                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

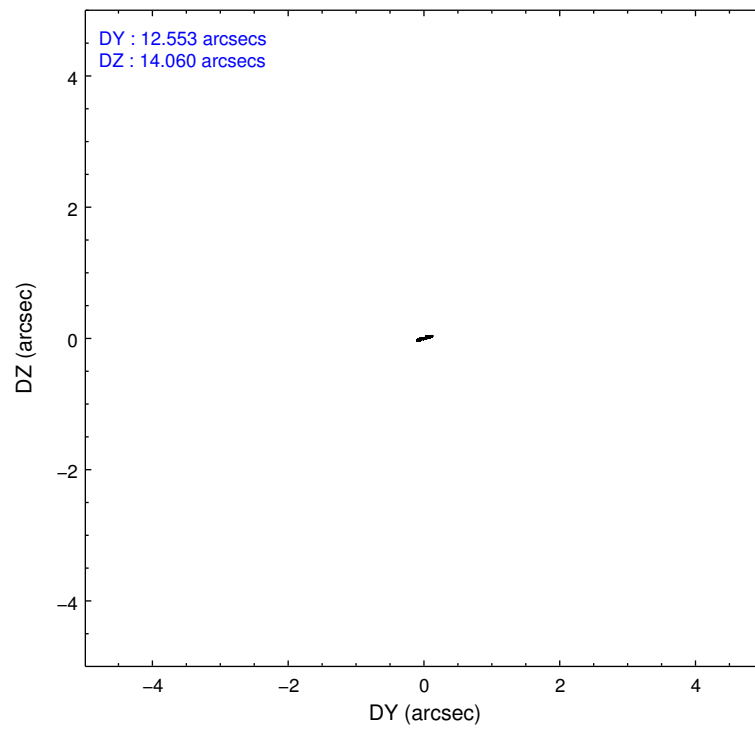
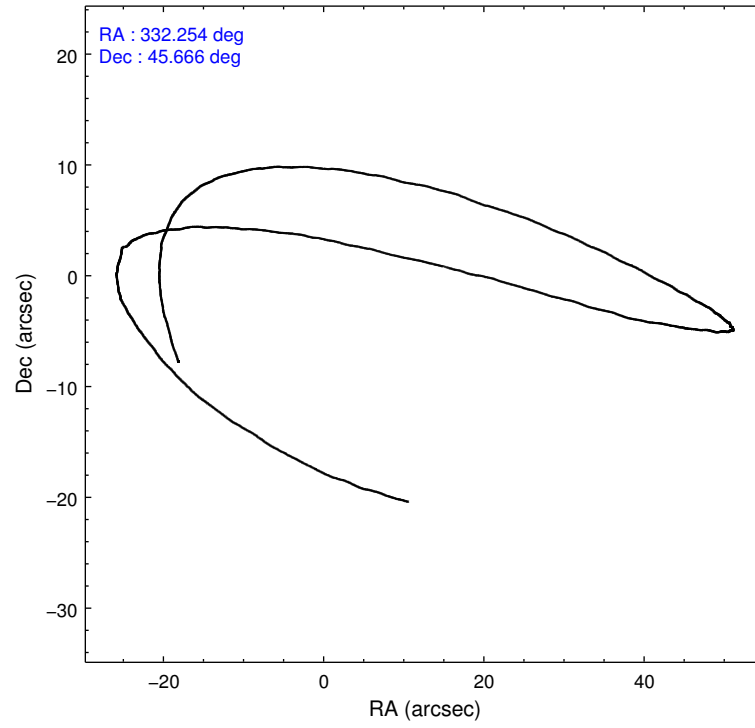
#### Level 1 Events

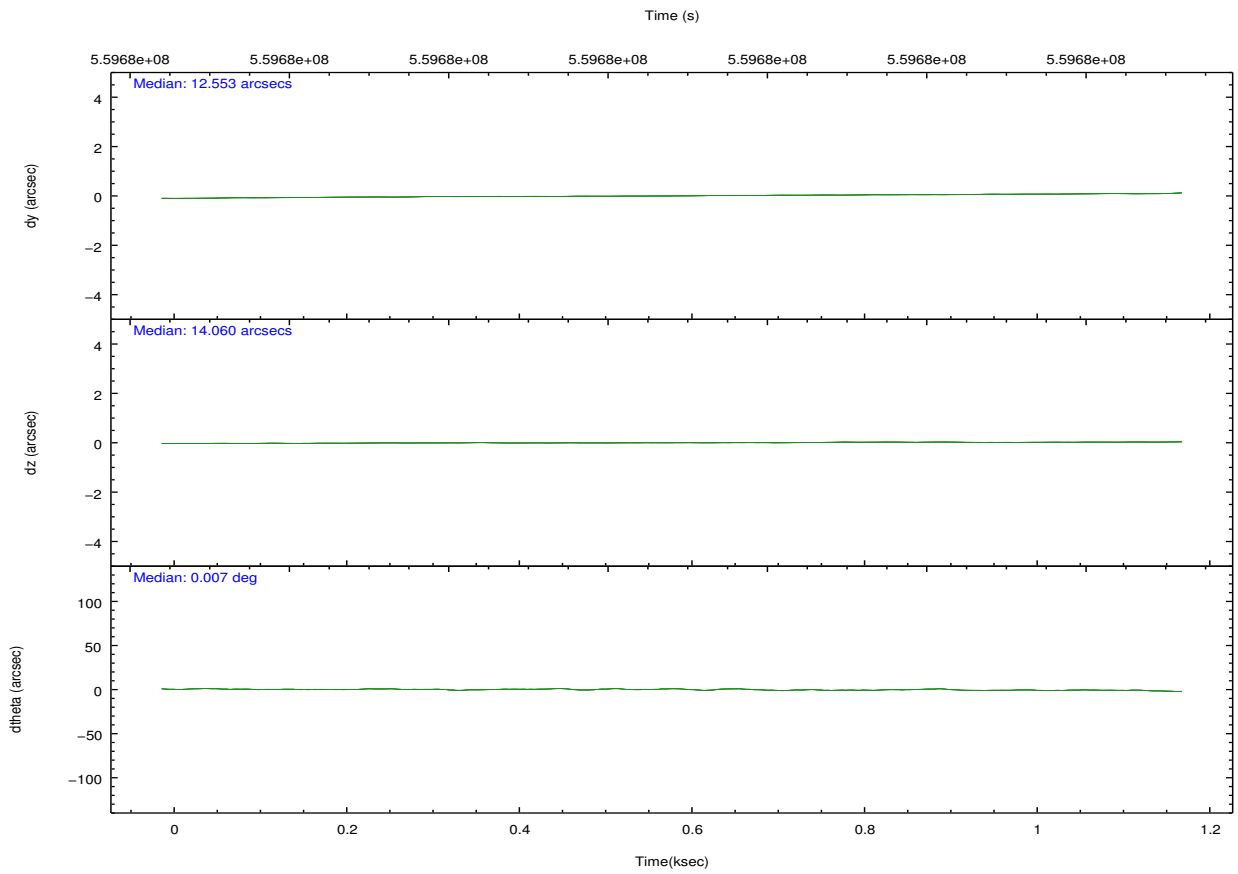
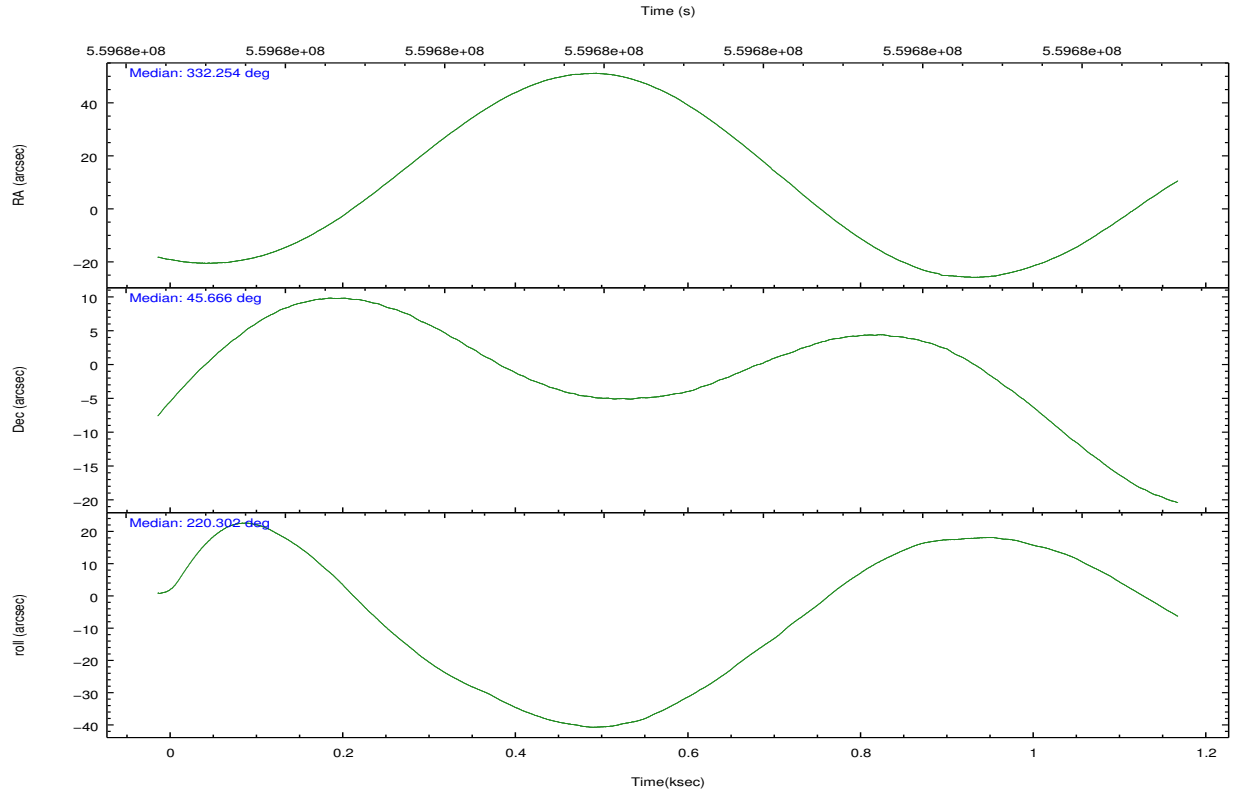
|                 | <b>segment<br/>0</b> |
|-----------------|----------------------|
| level 1 events  | 148238               |
| rejected events | 32278                |
| rejected %      | 21%                  |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                    | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|------------------------------|-----------|---------|
| Instrument                        | HRC                 | HRC                  | Obspar format version number | 7         | 7       |
| Detector                          | HRC-I               | HRC-I                | Obspar file type             | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status         | NONE      | UPDATED |
| Data mode                         | OBSERVING           | OBSERVING            |                              |           |         |
| Observation mode                  | POINTING            | POINTING             |                              |           |         |
| [deg] Pointing RA                 | 332.269390          | 332.2558531443644    |                              |           |         |
| [deg] Pointing Dec                | 45.690636           | 45.66515137344683    |                              |           |         |
| [deg] Pointing Roll               | 220.385667          | 220.2998290442502    |                              |           |         |
| [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)  | 559684072.184000    | 559683696.51928      |                              |           |         |
| Observation start date            | 2015-09-26T19:46:44 | 2015-09-26T19:41:36  |                              |           |         |
| [s] Observation end time (MET)    | 559685072.184000    | 559685206.34437      |                              |           |         |
| Observation end date              | 2015-09-26T20:03:24 | 2015-09-26T20:06:46  |                              |           |         |

## 2.3 Aspect





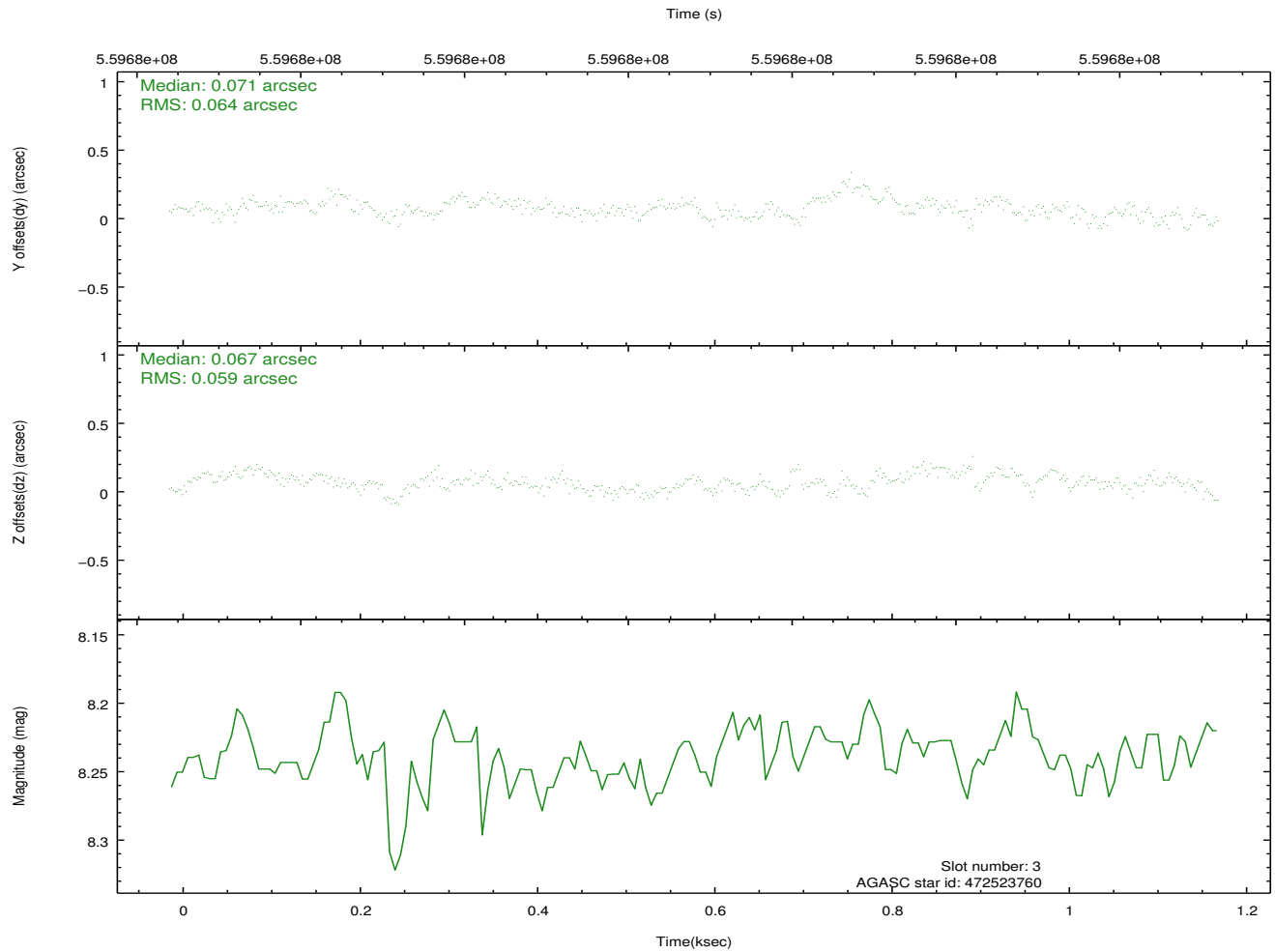
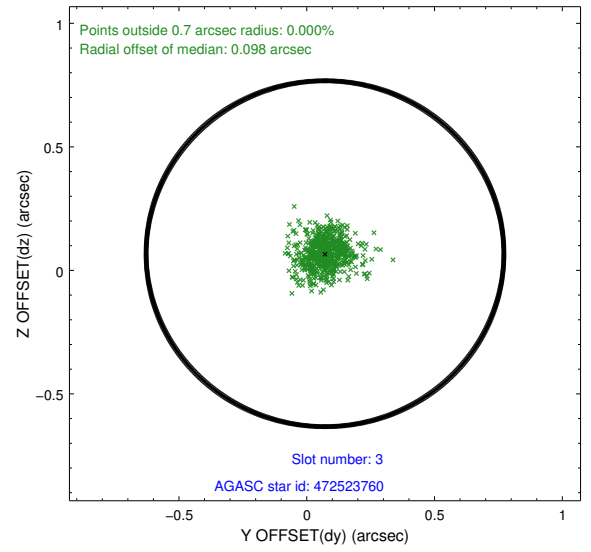
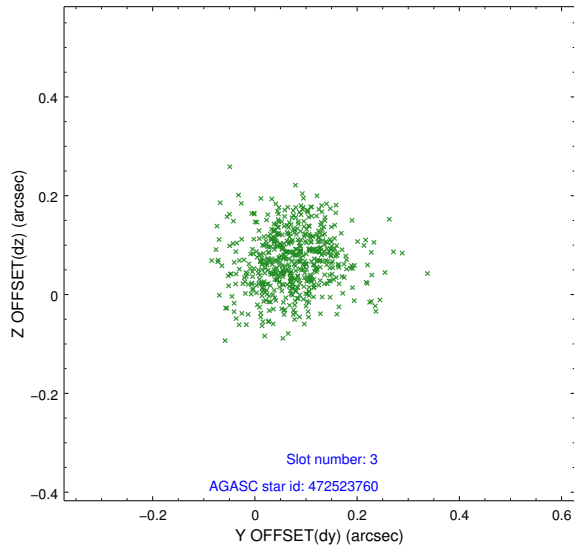
### Slot Statistics

| slot | status | used | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    |      | HRC-I-1   | 6.99 | 289   | -0.157 | -0.006 | 0.008 | 0.012 | 0.000000   | 0.000000  | -768.42  | -1302.14 |
| 1    | FID    |      | HRC-I-2   | 7.03 | 289   | 0.329  | -0.140 | 0.007 | 0.012 | 0.000000   | 0.000000  | 842.04   | -1308.31 |
| 2    | FID    |      | HRC-I-3   | 7.09 | 289   | -0.052 | 0.057  | 0.010 | 0.018 | 0.000000   | 0.000000  | -1193.94 | 997.96   |
| 3    | GUIDE  | used | 472523760 | 8.24 | 578   | 0.071  | 0.067  | 0.090 | 0.155 | 331.645363 | 45.403260 | 1867.04  | -235.22  |
| 4    | GUIDE  | used | 472655152 | 9.41 | 578   | 0.092  | -0.080 | 0.183 | 0.302 | 332.504239 | 45.862991 | -848.67  | -88.68   |
| 5    | GUIDE  | used | 472659832 | 9.44 | 577   | -0.044 | 0.143  | 0.123 | 0.193 | 332.780399 | 46.098139 | -1927.34 | -290.57  |
| 6    | GUIDE  | used | 472665256 | 8.99 | 578   | 0.277  | -0.048 | 0.121 | 0.215 | 332.808125 | 46.195041 | -2206.11 | -513.87  |
| 7    | GUIDE  | used | 472525528 | 6.64 | 577   | -0.396 | -0.080 | 0.077 | 0.133 | 331.551102 | 45.248694 | 2407.08  | 28.52    |

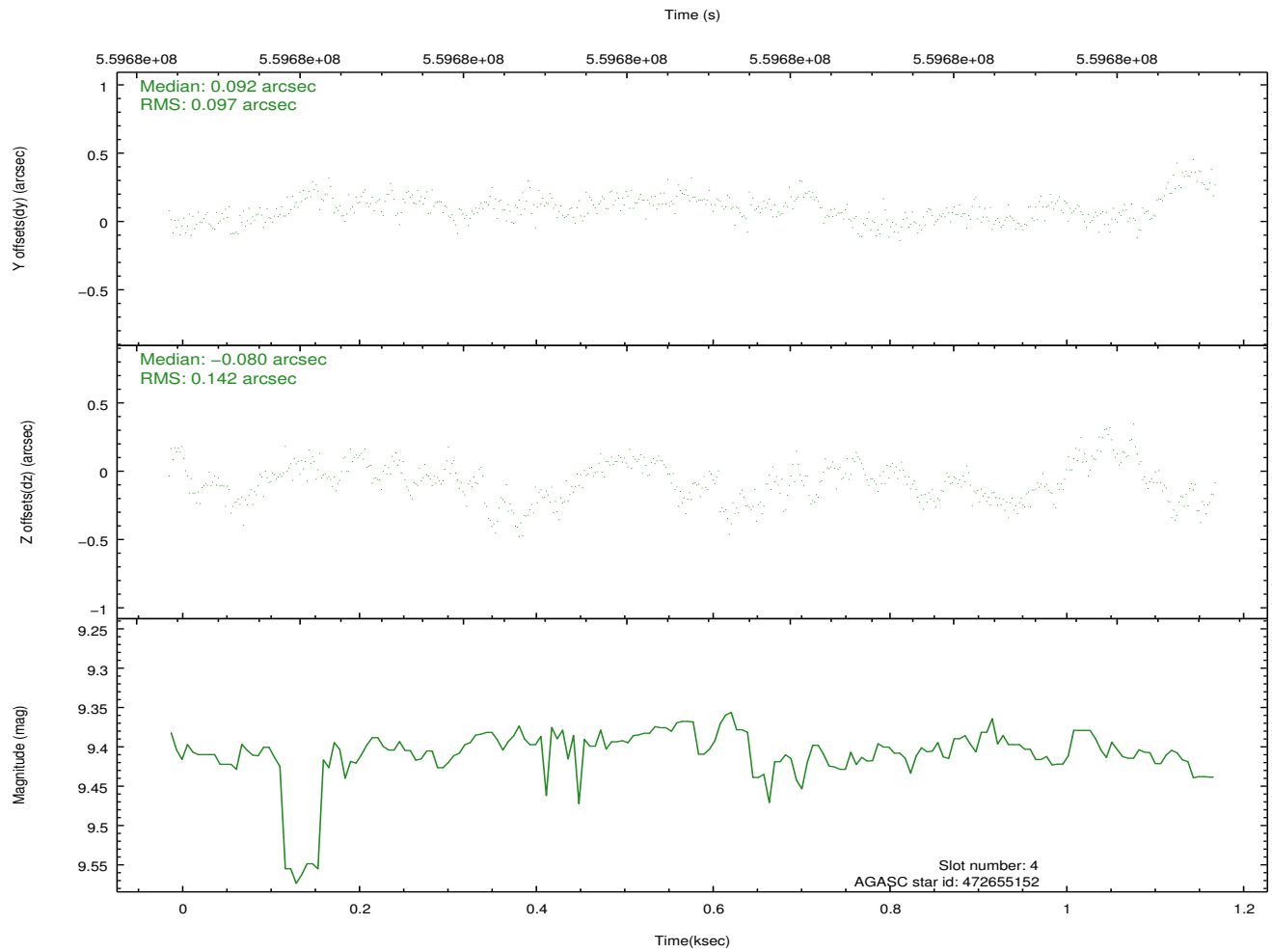
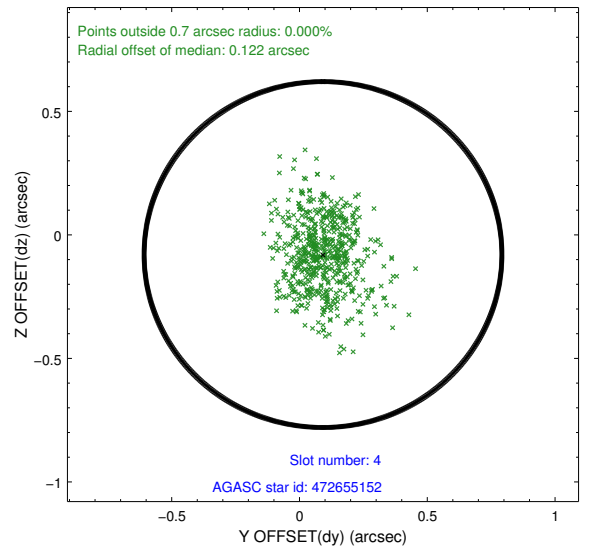
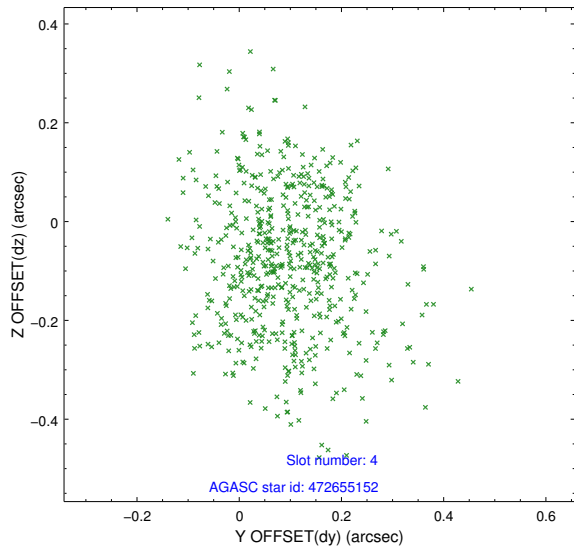
∞

## 2.4 Star Slots

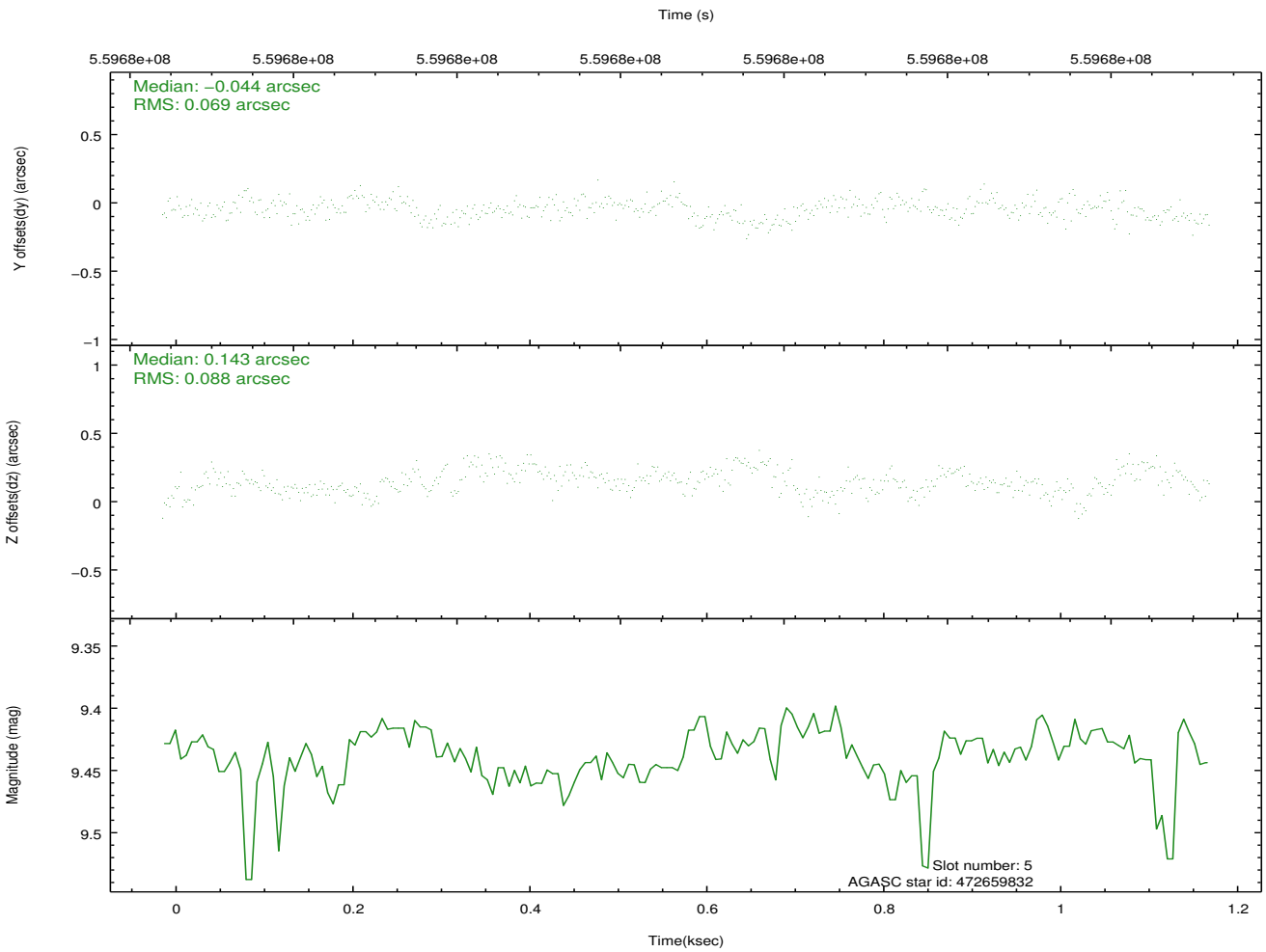
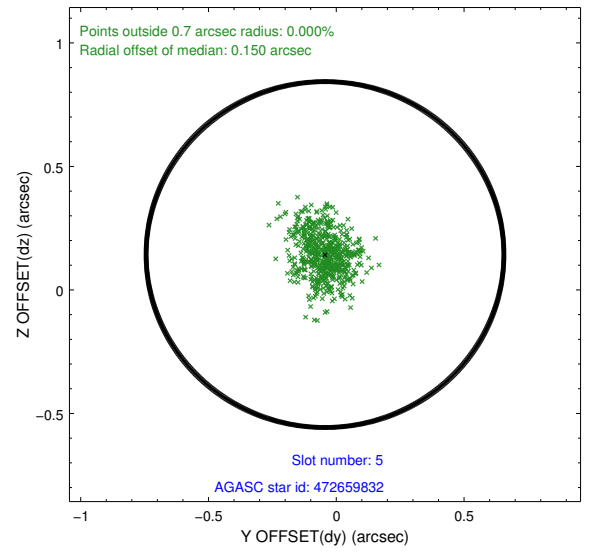
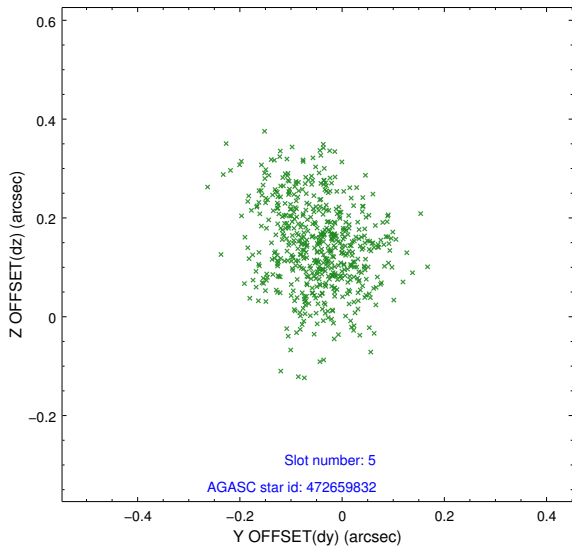
### 2.4.1 Slot 3



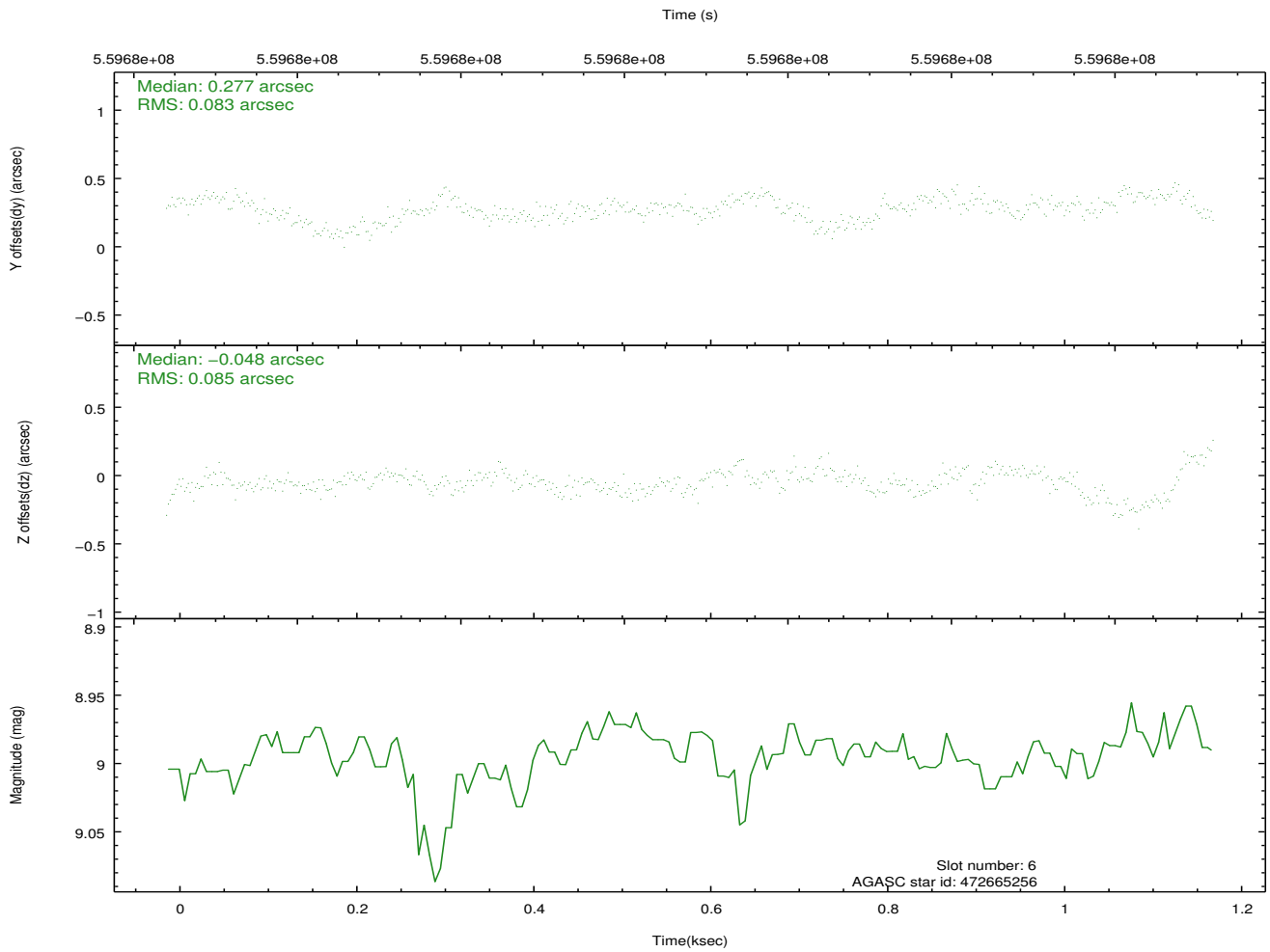
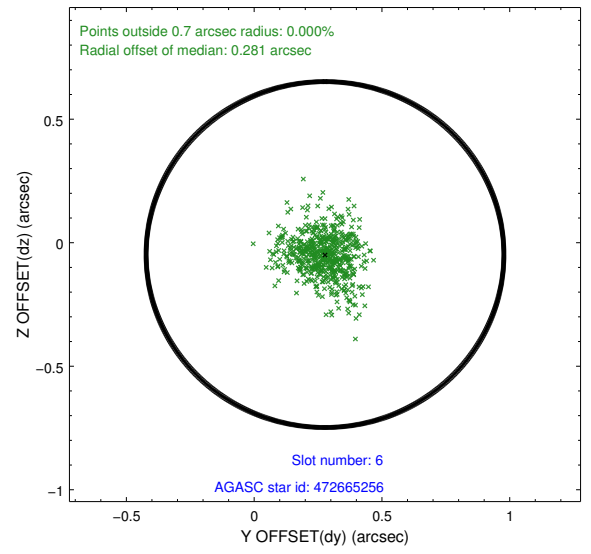
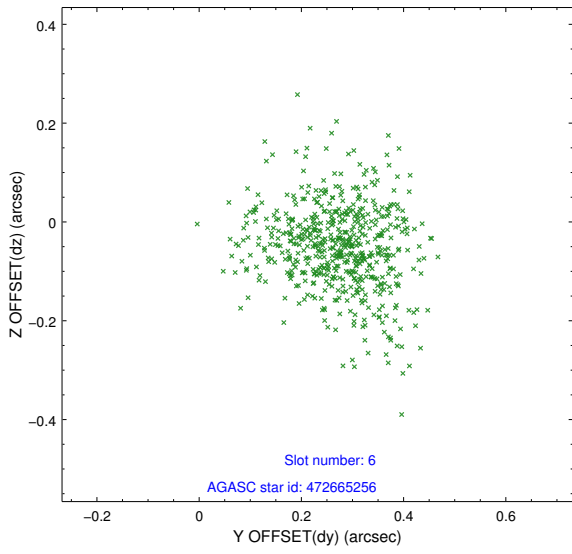
## 2.4.2 Slot 4



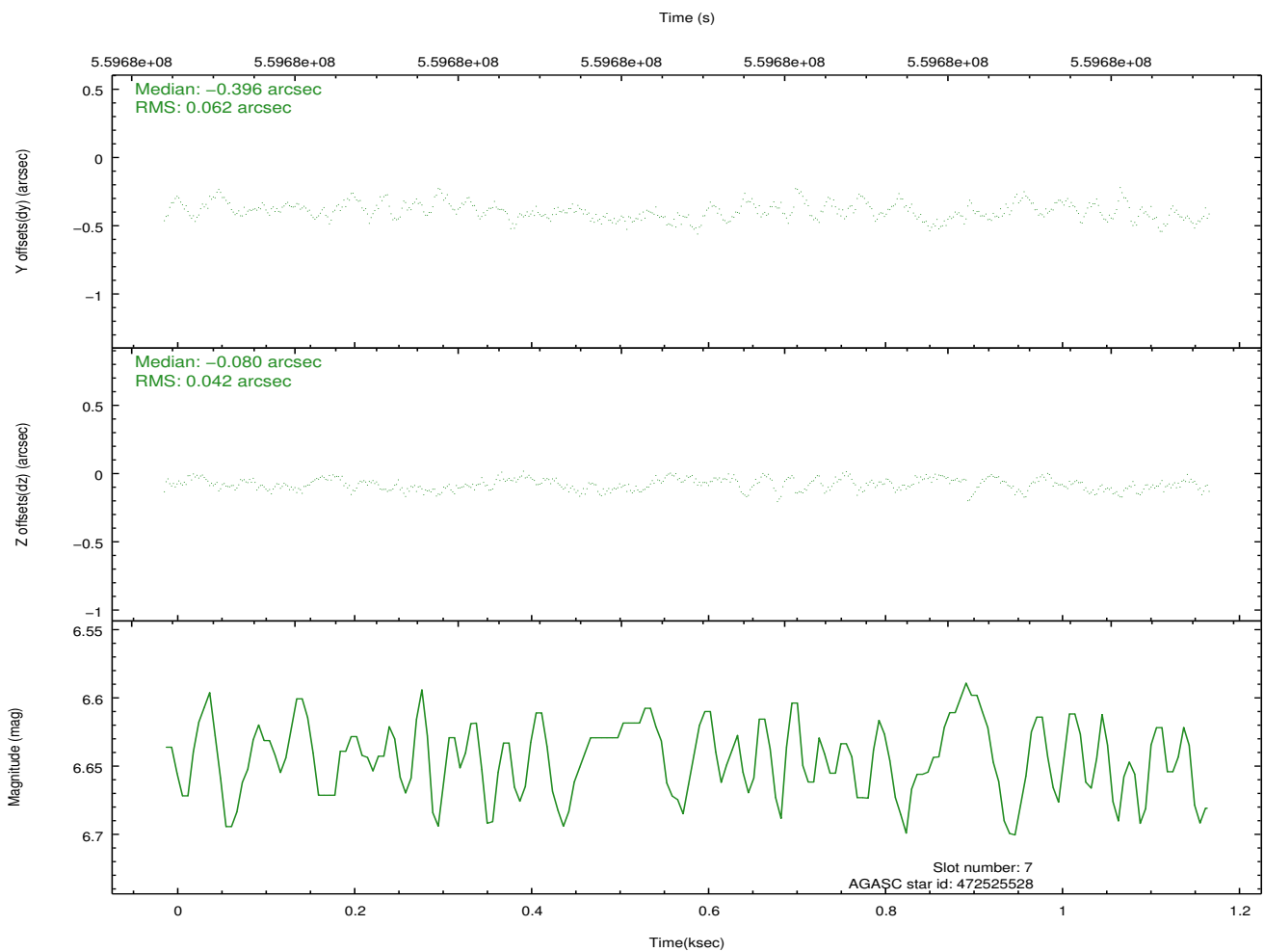
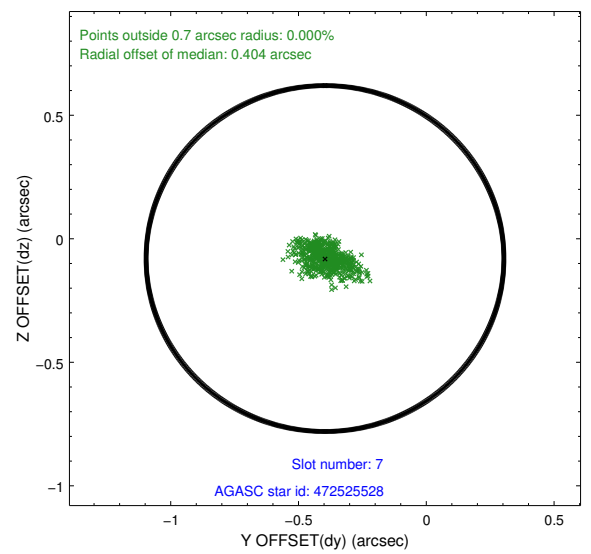
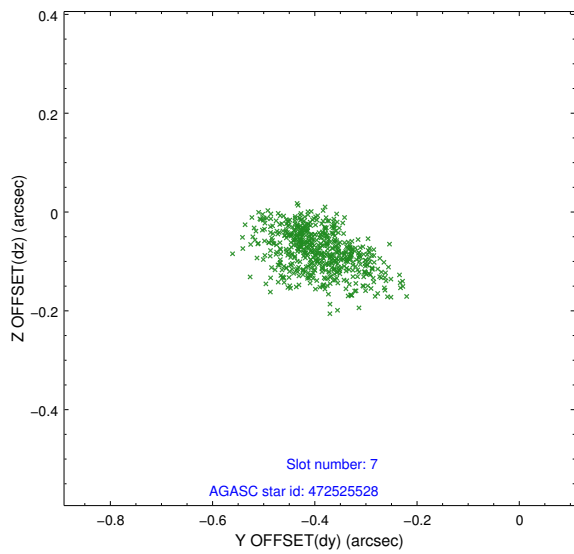
### 2.4.3 Slot 5



### 2.4.4 Slot 6

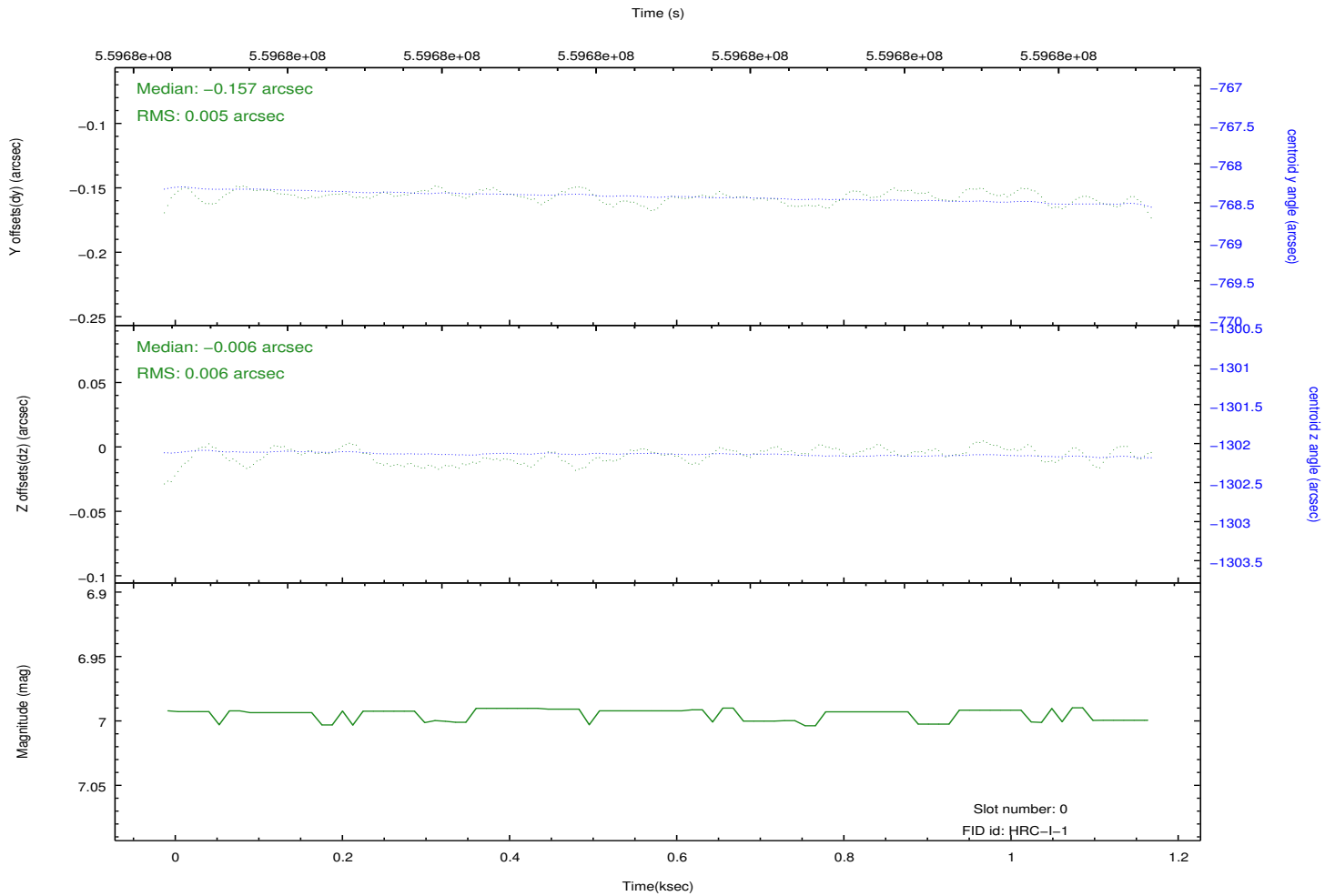
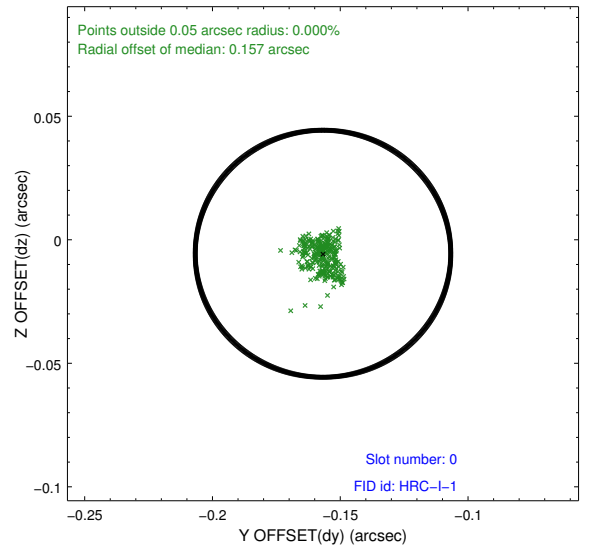
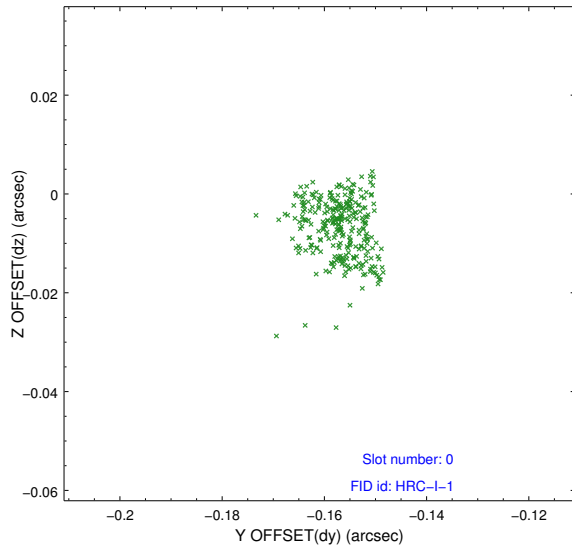


## 2.4.5 Slot 7

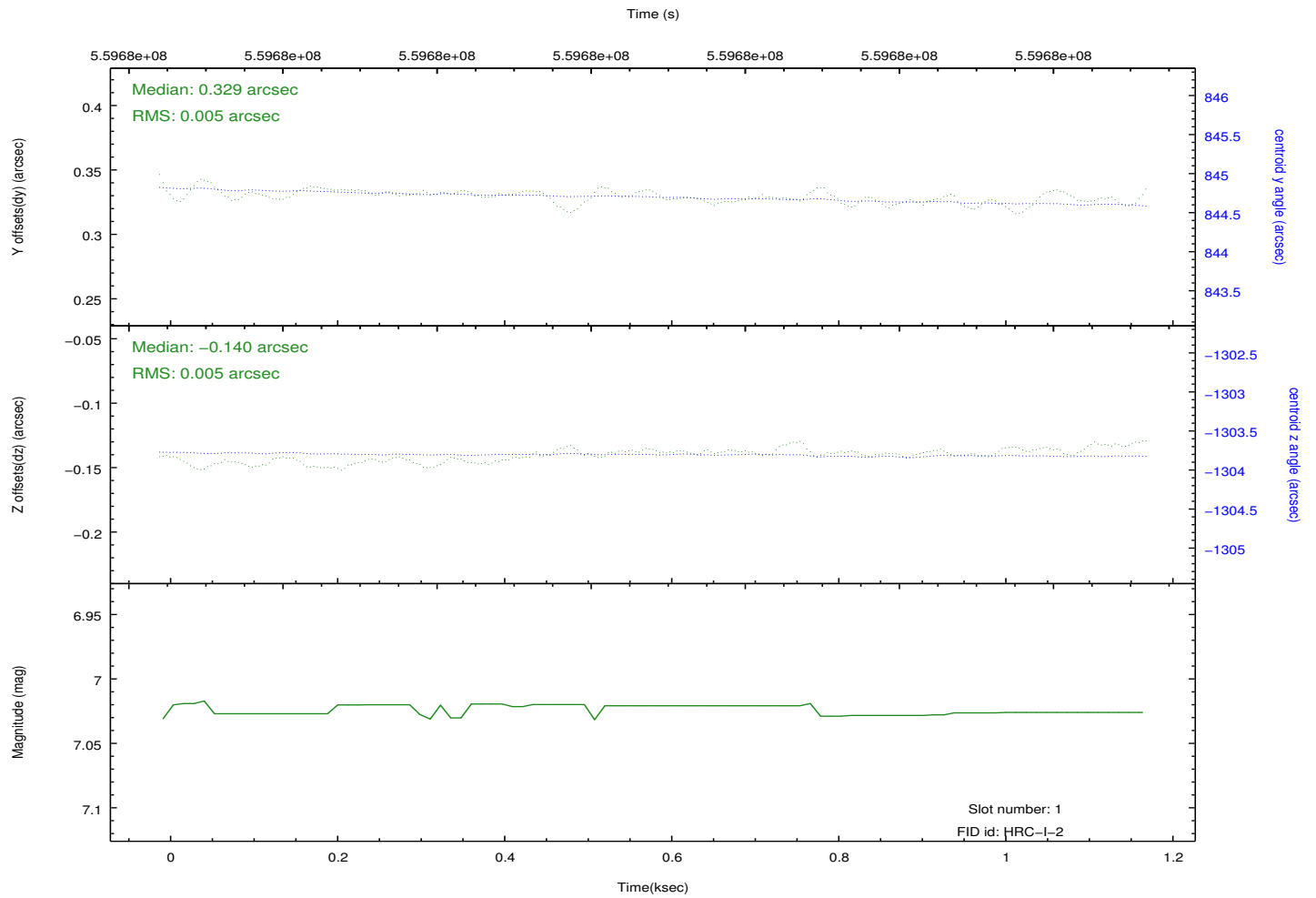
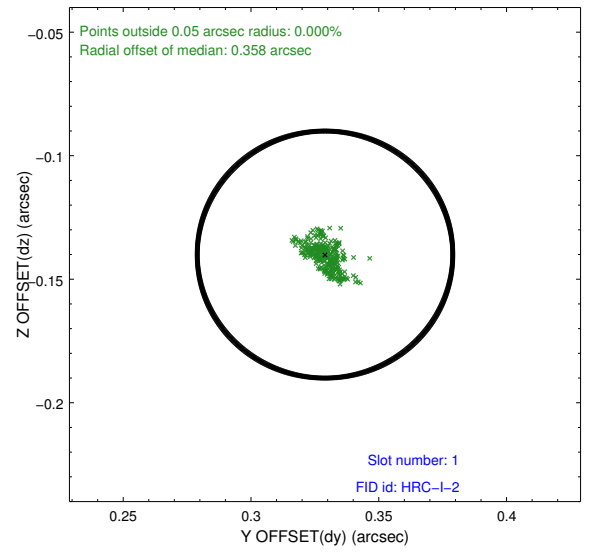
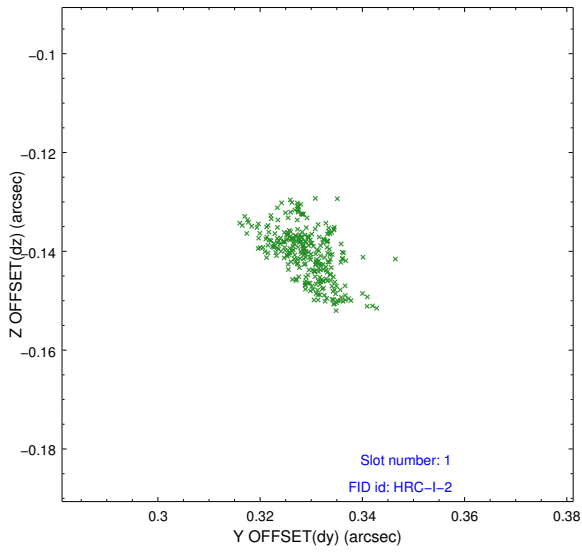


## 2.5 FID Slots

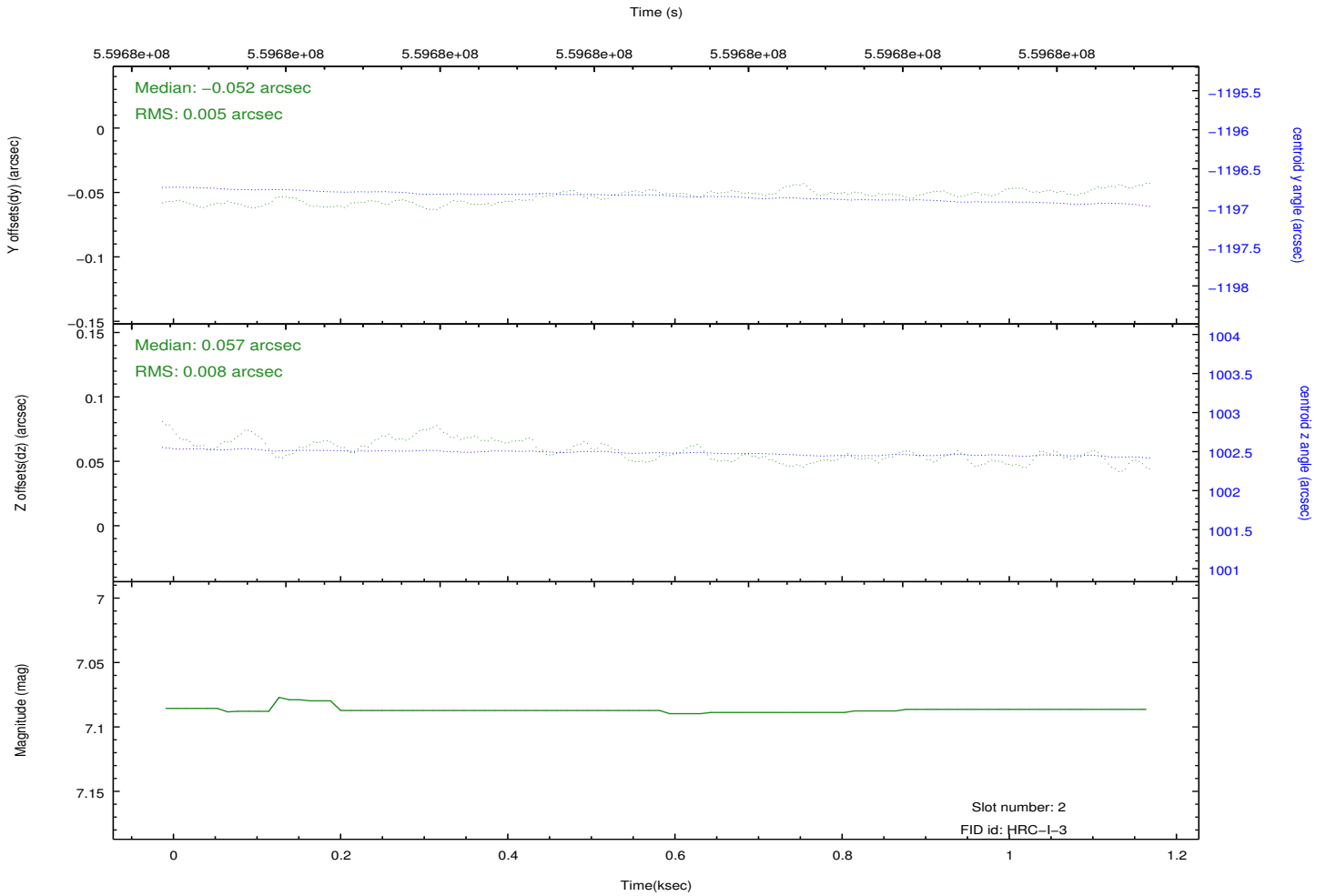
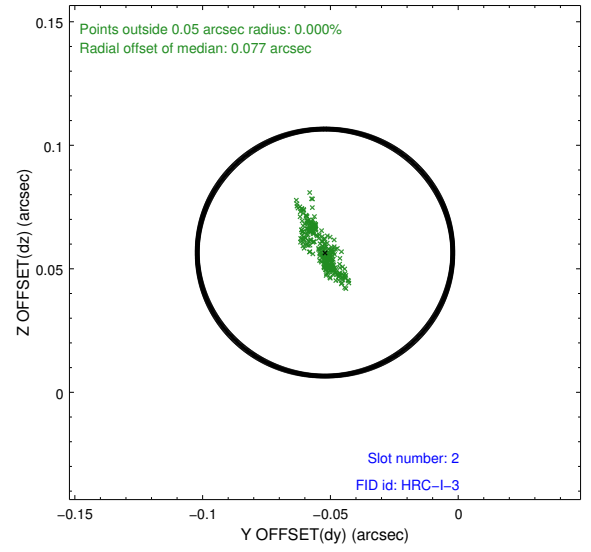
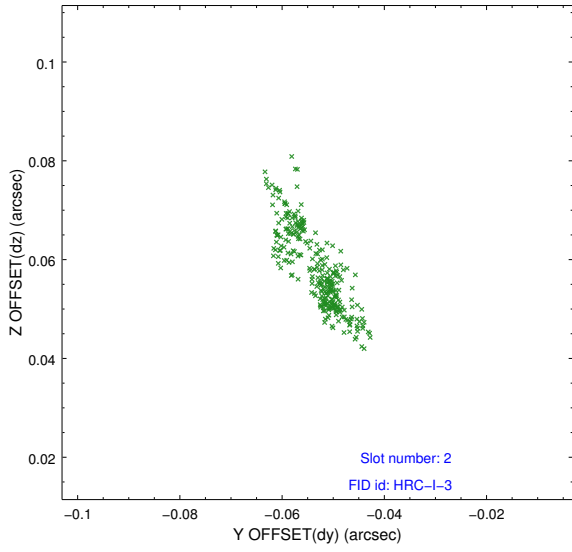
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Beth Sundheim   |
| V&V Date (YYYY-MM-DD)      | 2015.09.27      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 1.1818250665665 |

### A.2 Comments