

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 4312 - L2 Version 3  
Chandra X-Ray Center

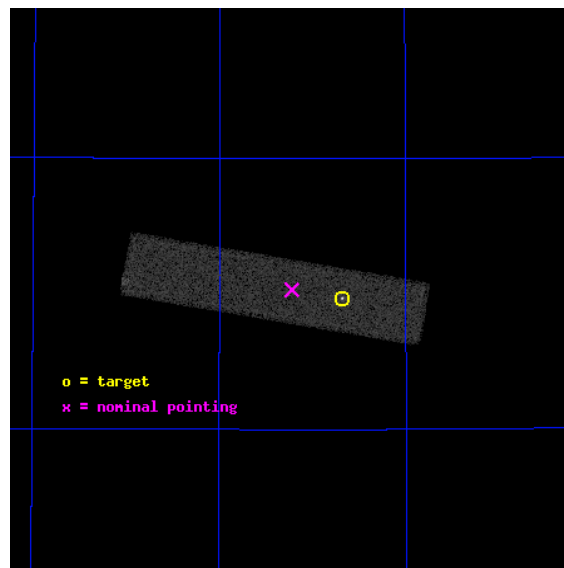
L2 Processing Date : Nov 2 2012

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# 1 Front

|          |   |                                       |
|----------|---|---------------------------------------|
| seq_num  | 290272  | Sequence number                       |
| obs_id   | 4312  | Observation id                        |
| title    | AO4B CALIBRATION OBSERVATIONS TO MONITOR 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   | 332.30536486555   | Nominal RA [deg]                      |
| dec_nom  | 45.758063786139   | Nominal Dec [deg]                     |
| roll_nom | 189.56383537984   | Nominal Roll [deg]                    |
| revision | 3   | Processing version of data            |
| ontime   | 1141.0812988579   | [s]                                   |
| livetime | 1135.2979439156   | Ontime multiplied by DTCOR            |
| l2events | 40760   | Number of level 2 events              |

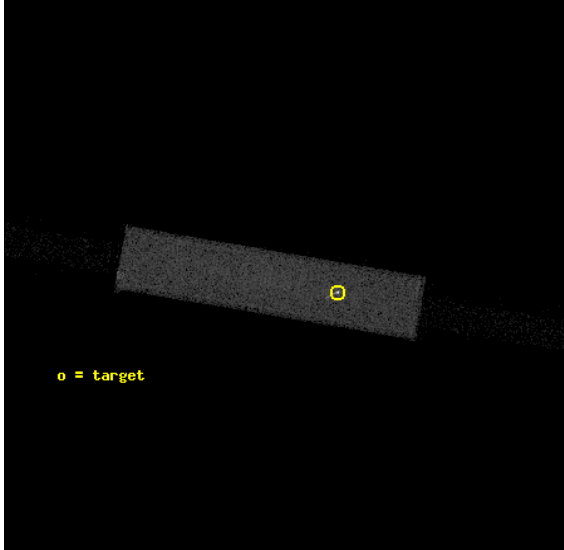


## 2 OBI

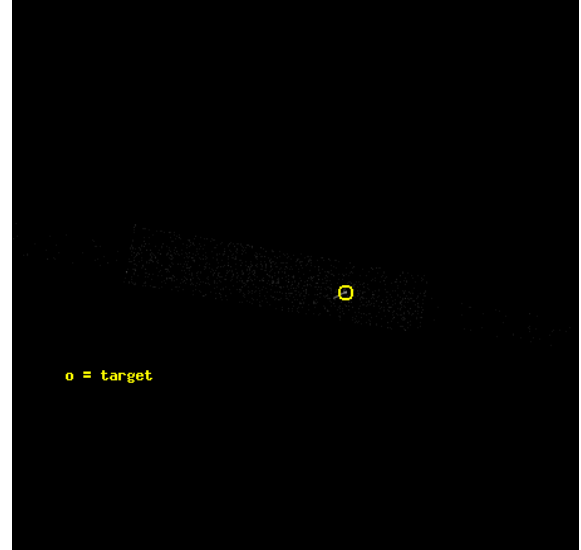
### 2.1 OBI

#### 2.1.1 Images

Level 1 Image



Level 1 Bad Events



### 2.1.2 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 1000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 1141.0812988579 | [s]                                     |
| caldbver | 4.5.2               | &#160                          | l1events       | 67761           | Number of level 1 events                |
| date     | 2012-11-02T16:20:36 | Date and time of file creation |                |                 |   |
| revision | 3                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

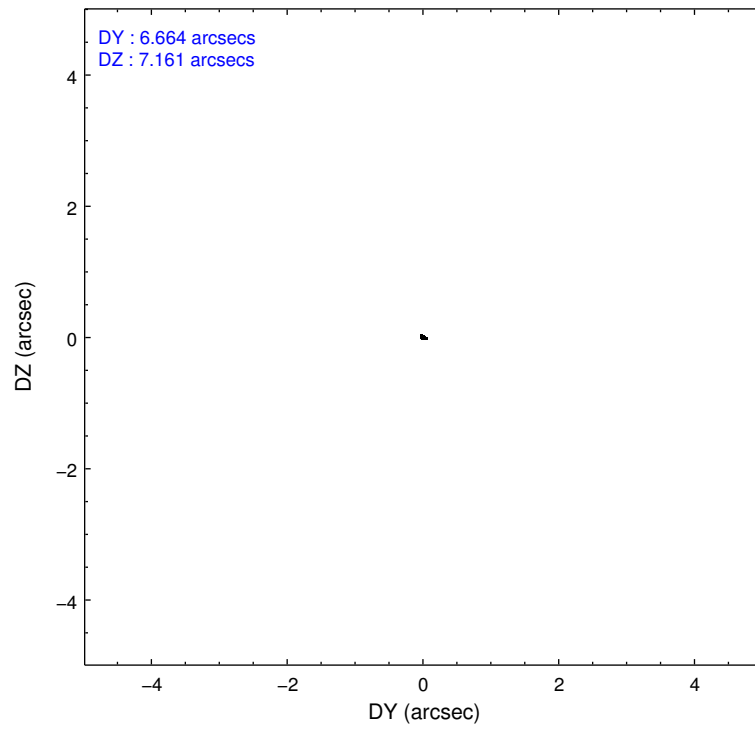
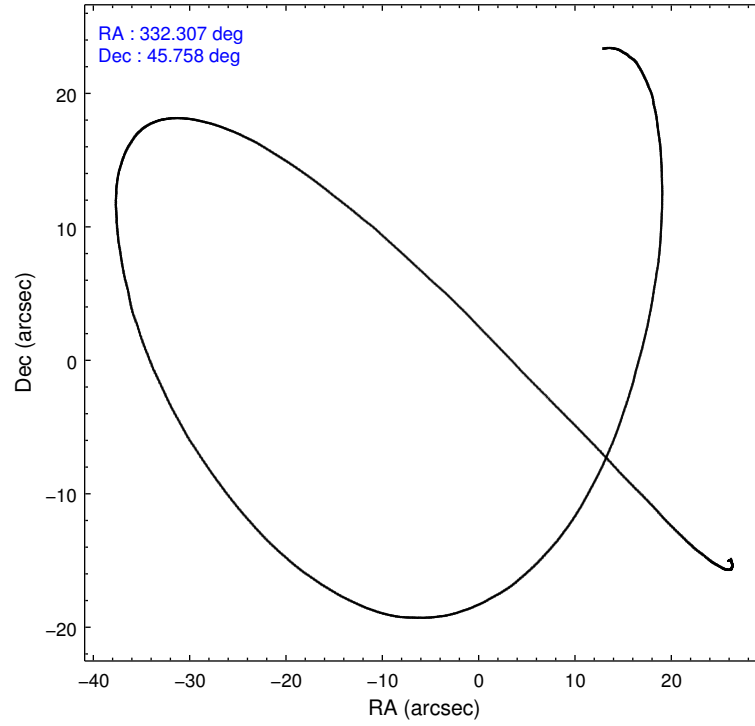
Level 1 Events

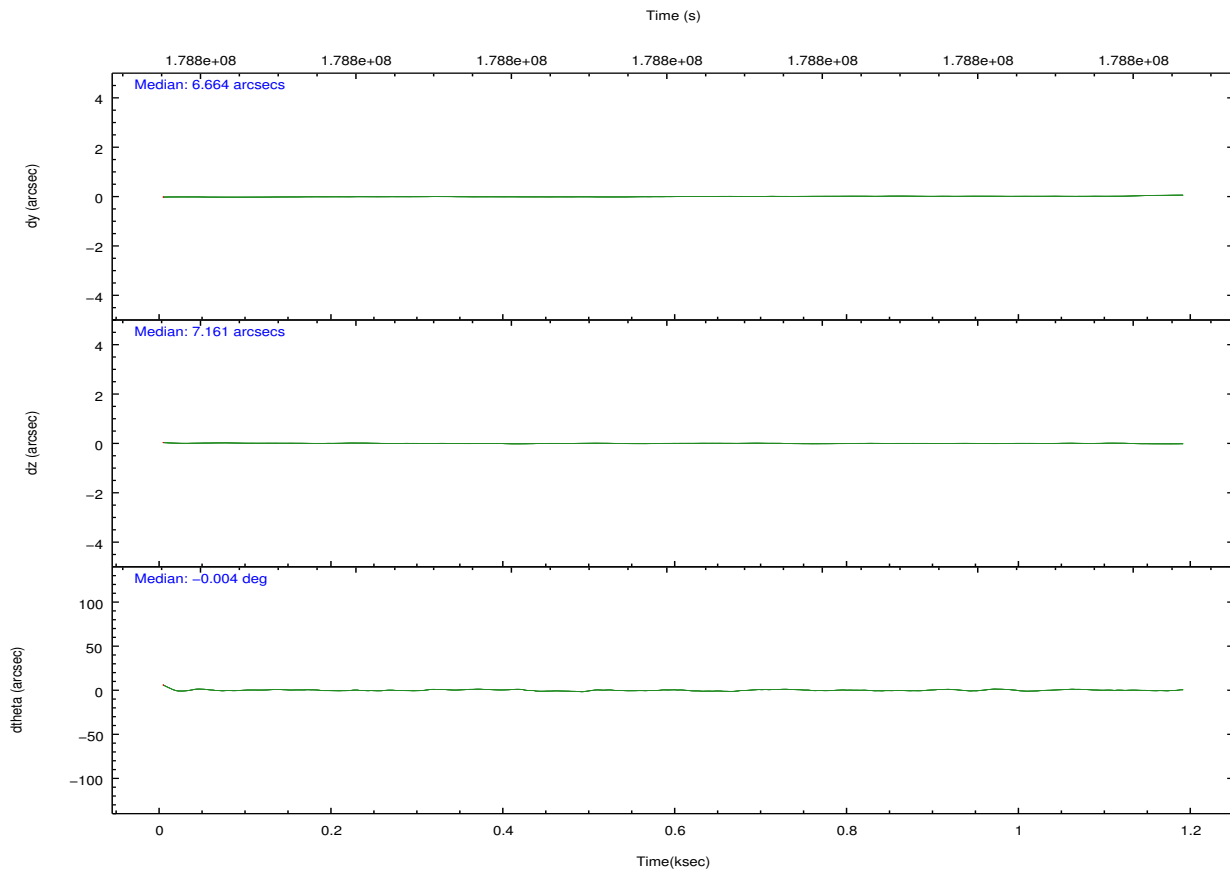
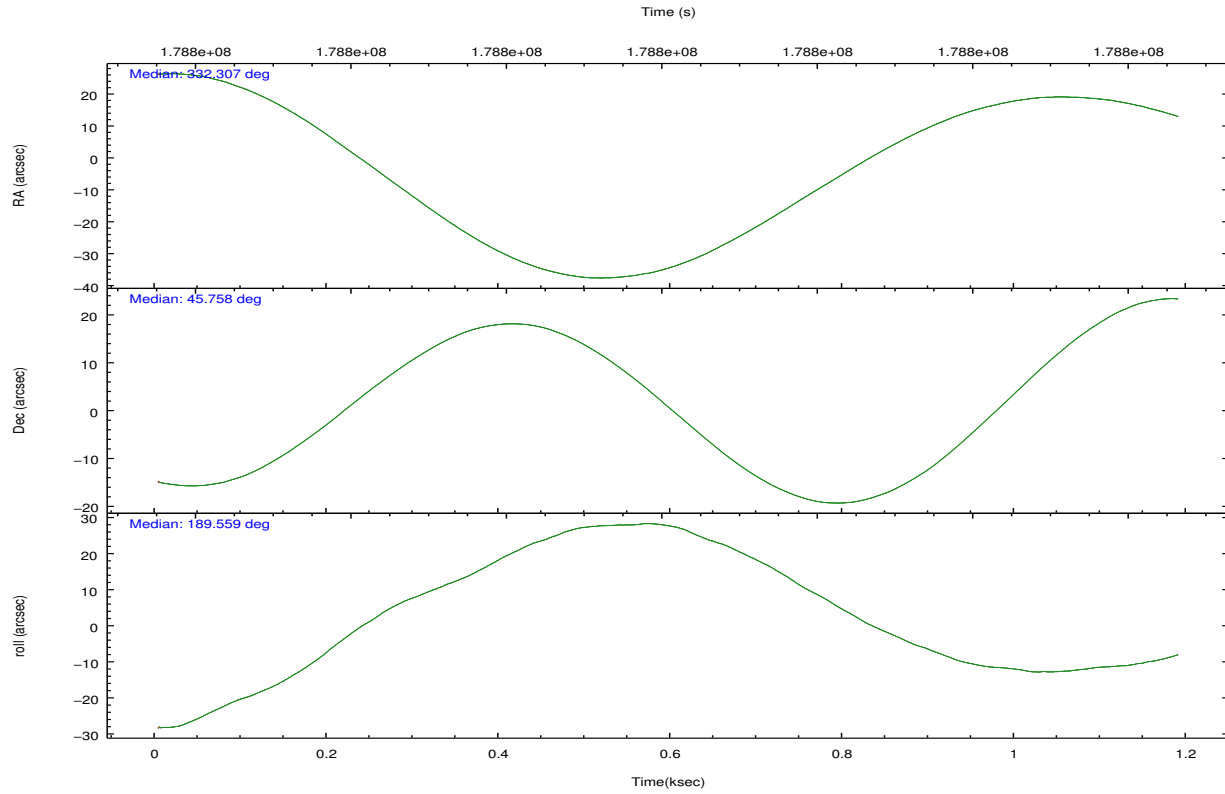
|                 | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events  | 1070                 | 65581                | 1110                 |
| rejected events | 1070                 | 15469                | 1110                 |
| rejected %      | 100%                 | 23%                  | 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                 | 332.334968          | 332.3053648655548    |                              |           |         |
| [deg] Pointing Dec                | 45.777518           | 45.75806378613866    |                              |           |         |
| [deg] Pointing Roll               | 189.475296          | 189.5638353798433    |                              |           |         |
| [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)  | 178799408.184000    | 178799032.54459      |                              |           |         |
| Observation start date            | 2003-09-01T10:29:04 | 2003-09-01T10:23:52  |                              |           |         |
| [s] Observation end time (MET)    | 178800408.184000    | 178800542.36966      |                              |           |         |
| Observation end date              | 2003-09-01T10:45:44 | 2003-09-01T10:49:02  |                              |           |         |

## 2.3 Aspect



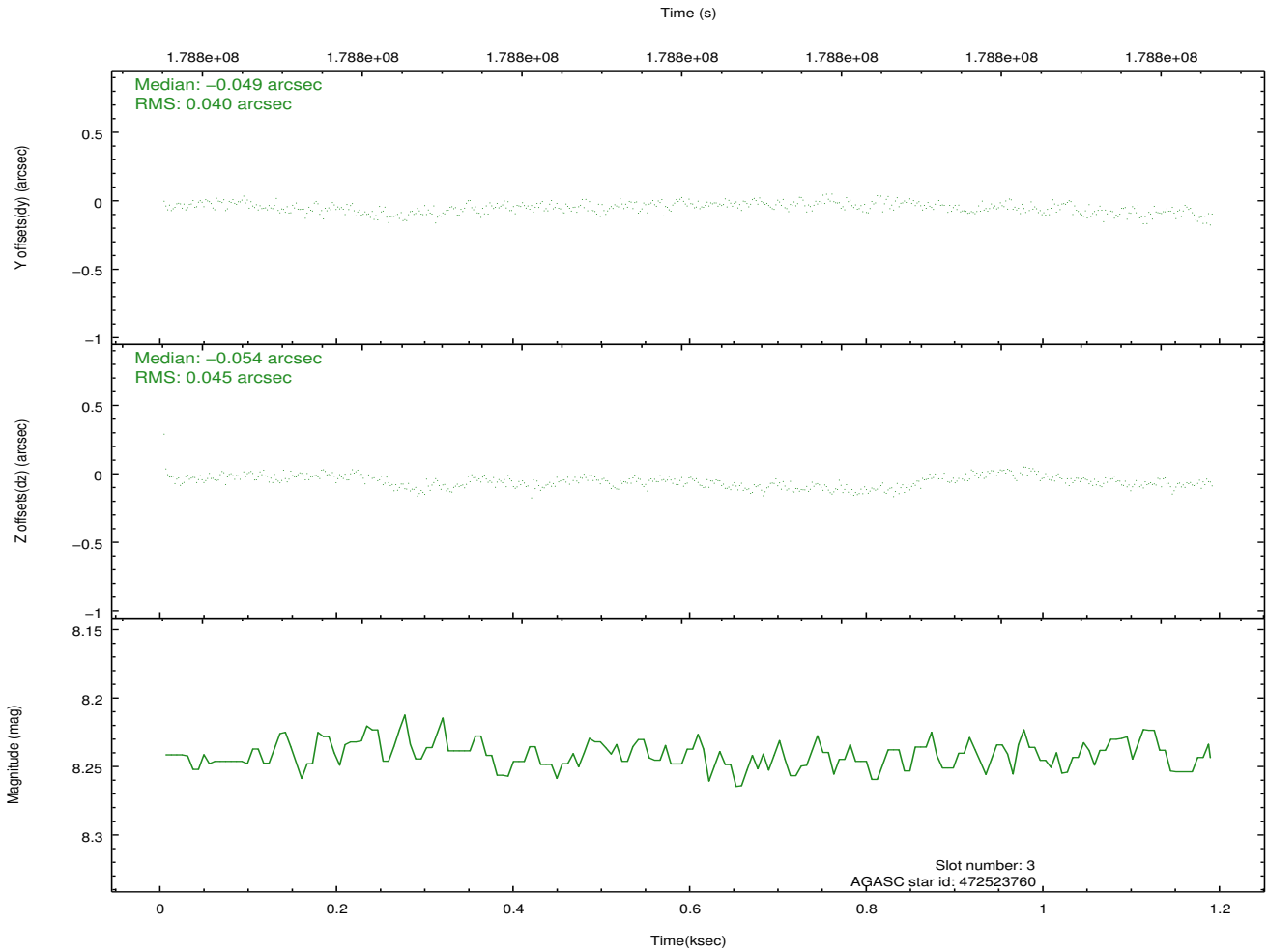
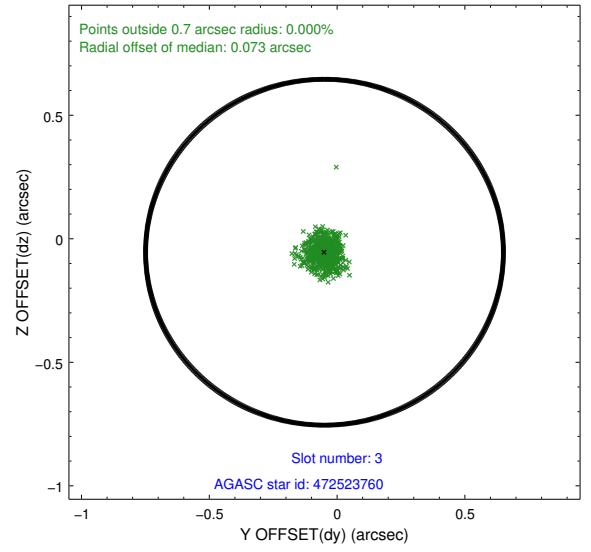
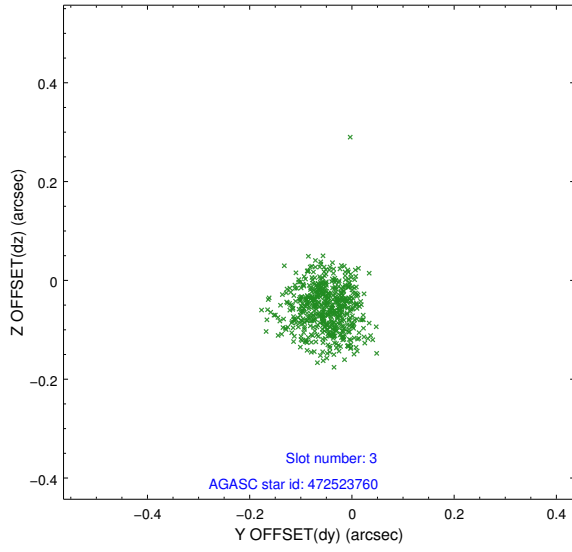


### Slot Statistics

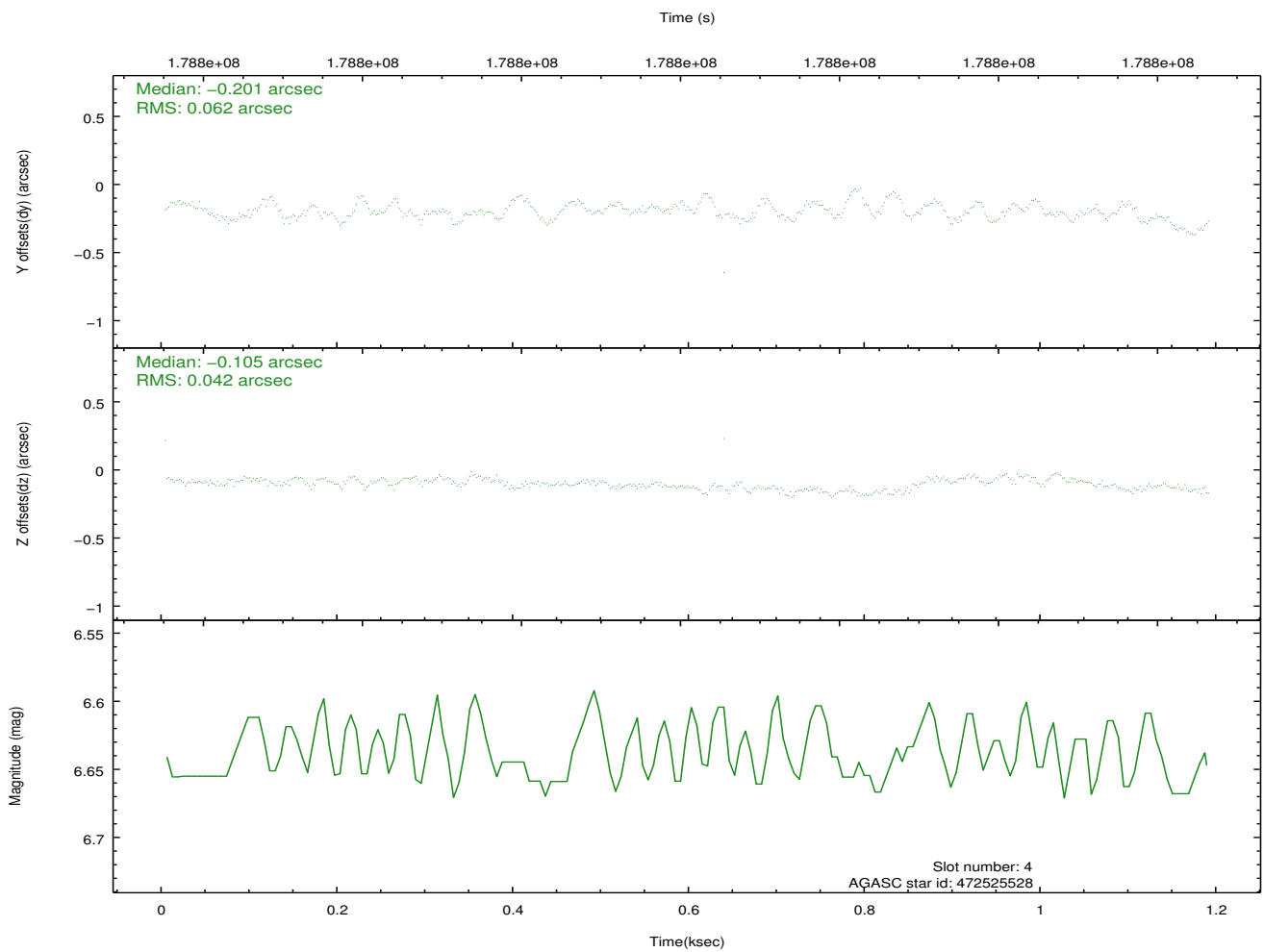
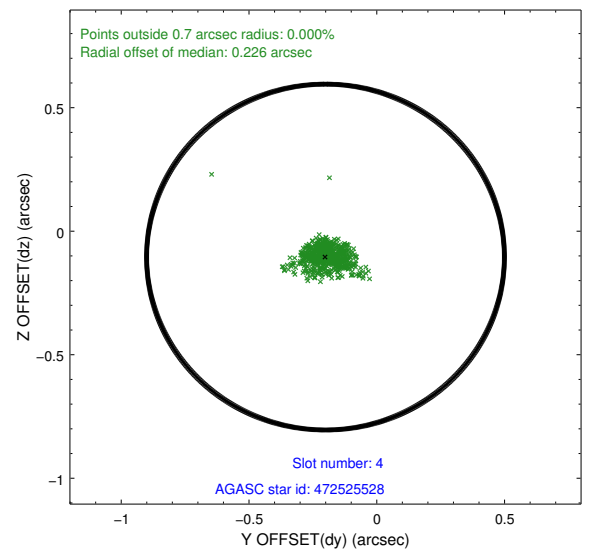
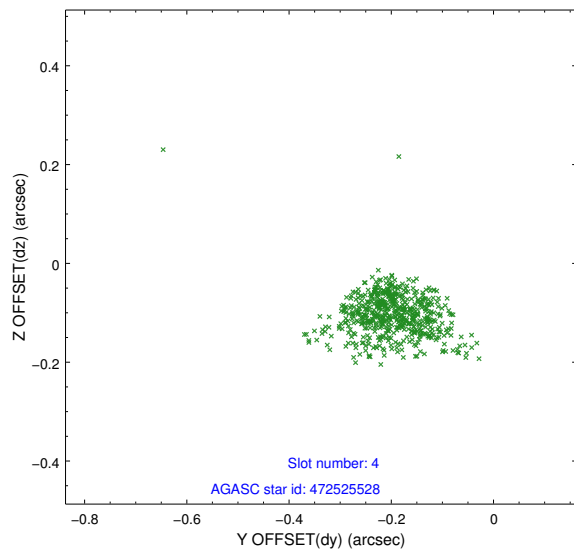
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-S-2   | 7.03 | 290   | 0.131  | -0.148 | 0.008 | 0.012 | 0.000000   | 0.000000  | 1238.88  | -448.38  |
| 1    | FID    | HRC-S-3   | 7.05 | 290   | 0.109  | -0.100 | 0.004 | 0.008 | 0.000000   | 0.000000  | -1159.29 | 572.27   |
| 2    | FID    | HRC-S-4   | 7.00 | 290   | 0.165  | -0.048 | 0.007 | 0.012 | 0.000000   | 0.000000  | 1233.48  | 578.42   |
| 3    | GUIDE  | 472523760 | 8.24 | 580   | -0.049 | -0.054 | 0.064 | 0.102 | 331.645363 | 45.403260 | 1941.57  | 1034.04  |
| 4    | GUIDE  | 472525528 | 6.64 | 580   | -0.201 | -0.105 | 0.073 | 0.130 | 331.551102 | 45.248694 | 2276.30  | 1542.37  |
| 5    | GUIDE  | 472533912 | 9.16 | 579   | -0.014 | 0.058  | 0.112 | 0.185 | 331.791136 | 46.368695 | 987.34   | -2324.04 |
| 6    | GUIDE  | 472655152 | 9.44 | 580   | 0.194  | 0.062  | 0.105 | 0.170 | 332.504239 | 45.862991 | -465.58  | -238.74  |
| 7    | GUIDE  | 472659832 | 9.46 | 579   | 0.067  | 0.071  | 0.104 | 0.172 | 332.780399 | 46.098139 | -1286.17 | -959.69  |

## 2.4 Star Slots

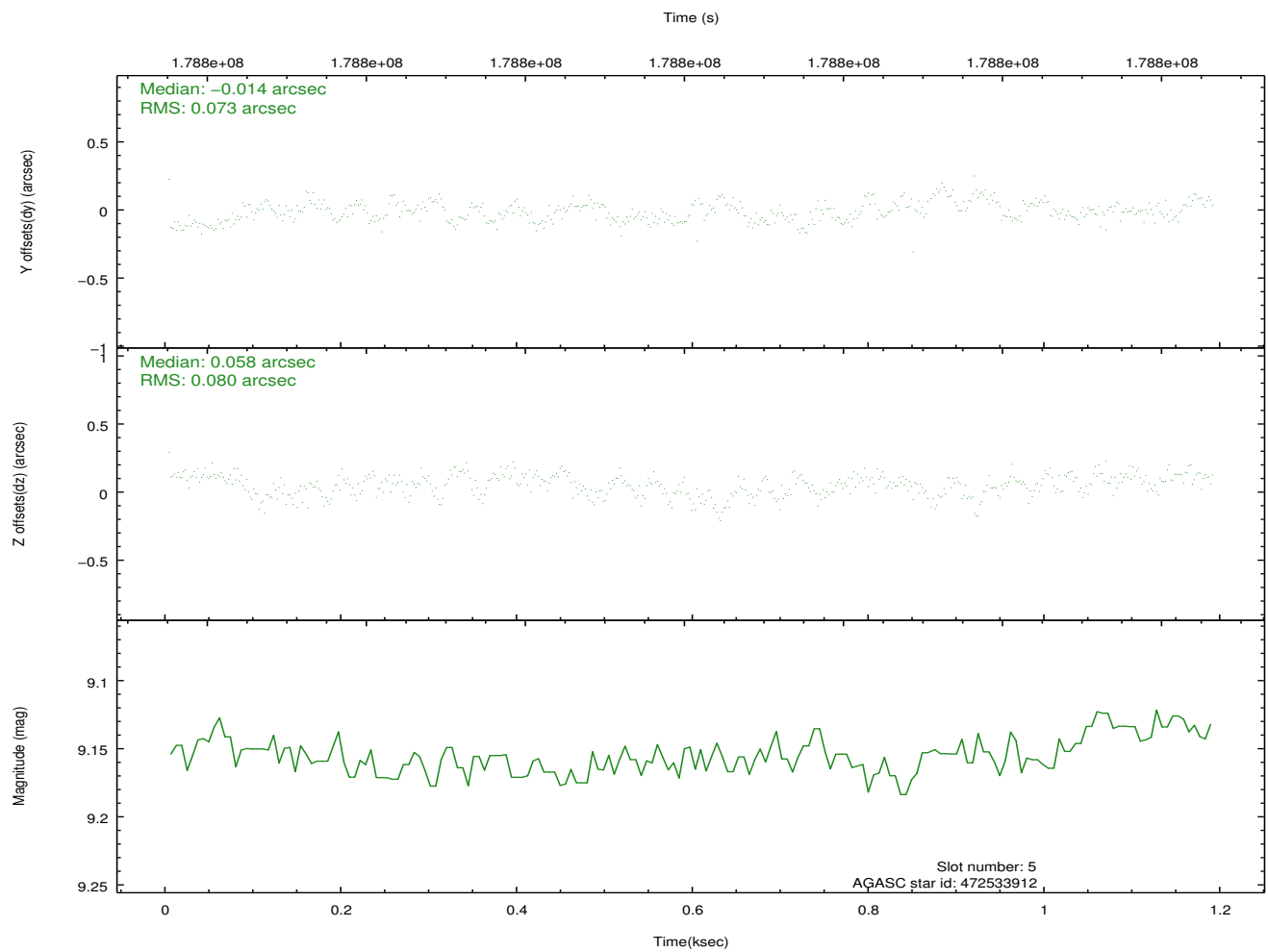
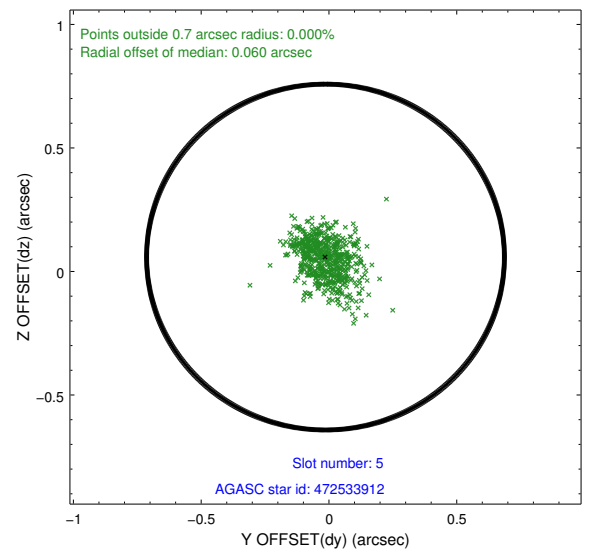
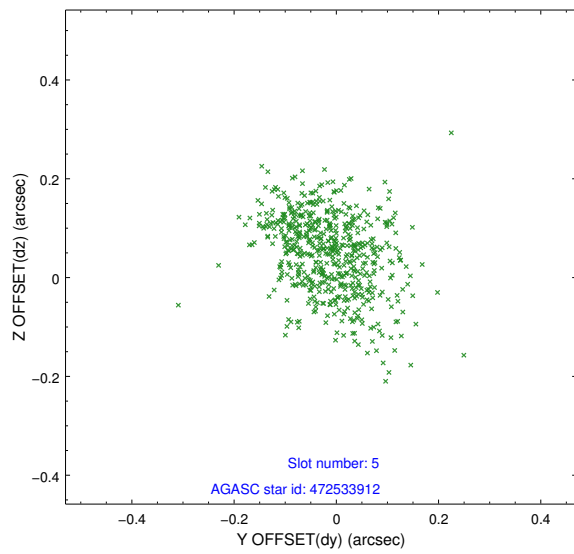
### 2.4.1 Slot 3



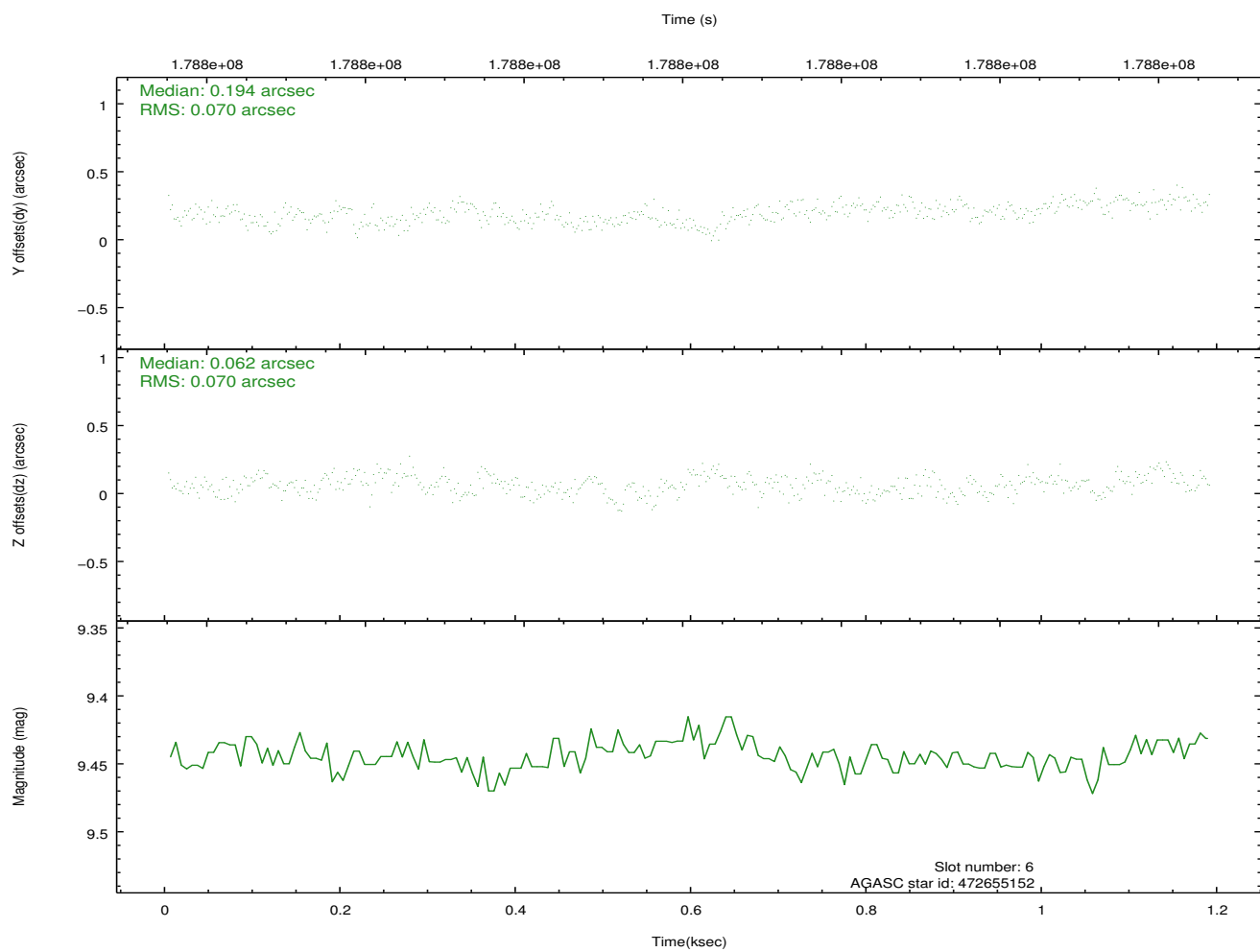
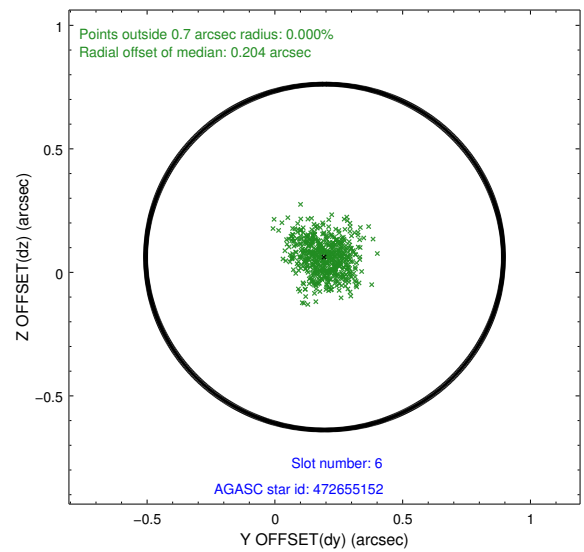
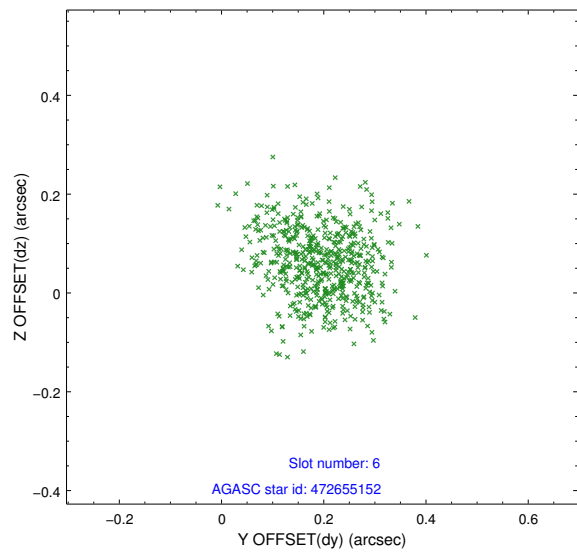
## 2.4.2 Slot 4



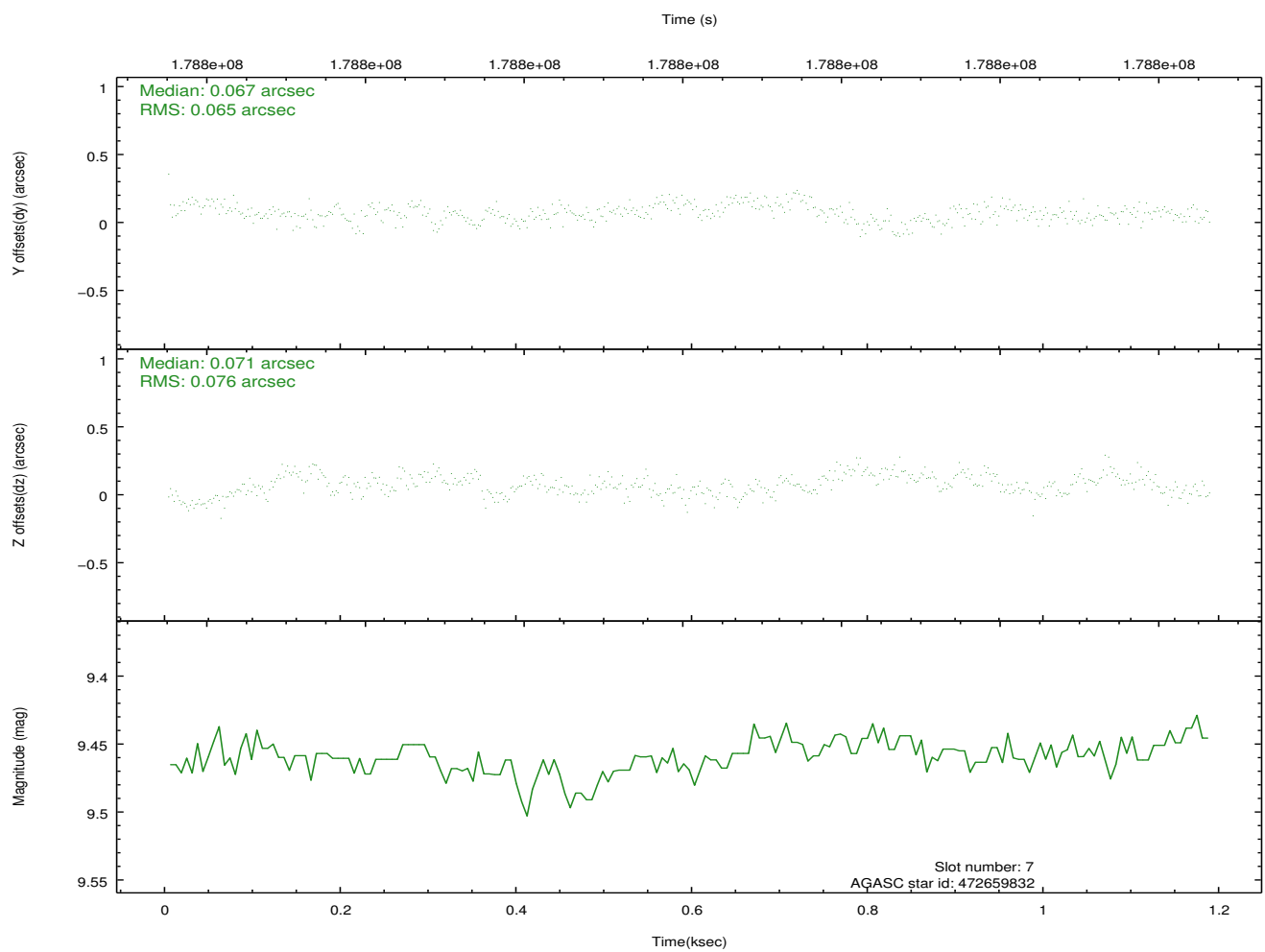
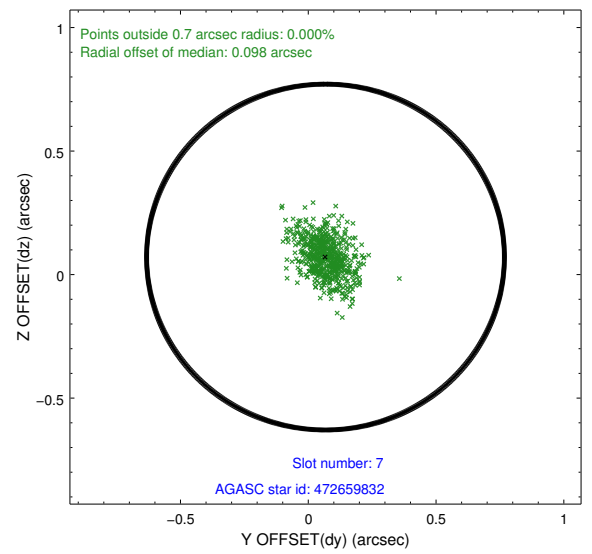
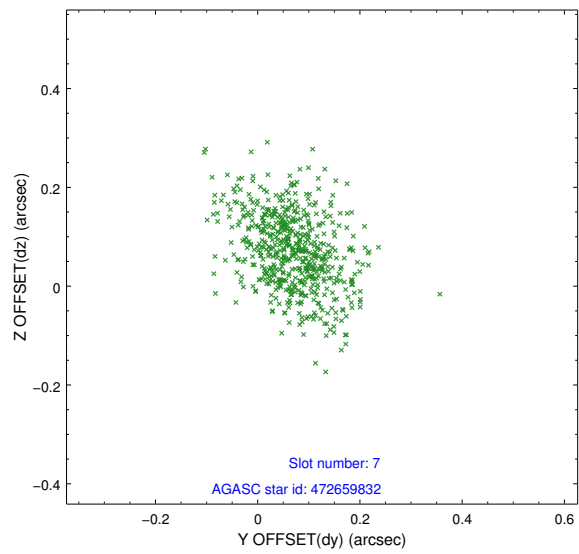
### 2.4.3 Slot 5



## 2.4.4 Slot 6

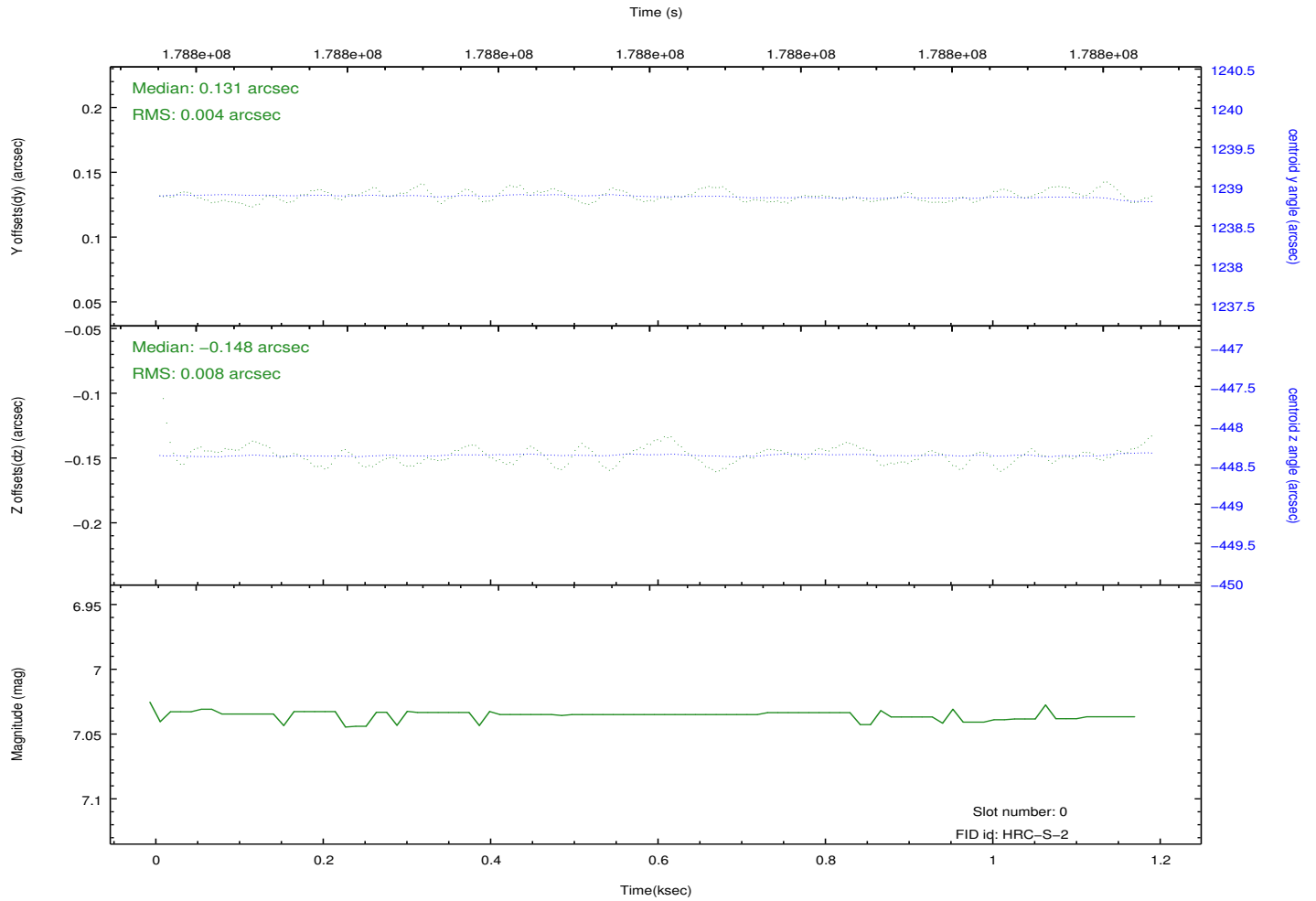
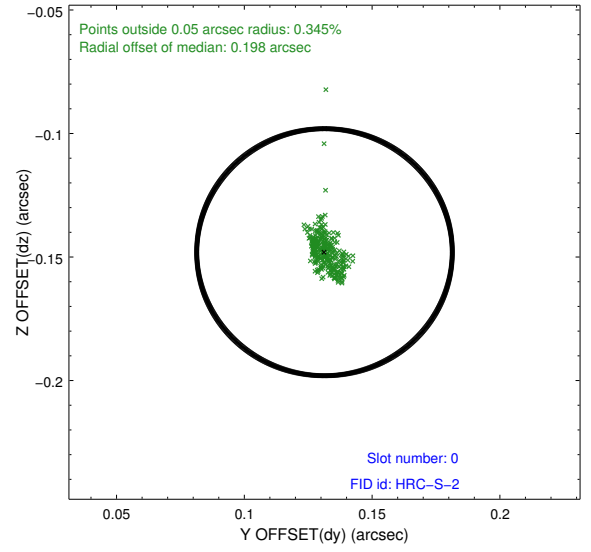
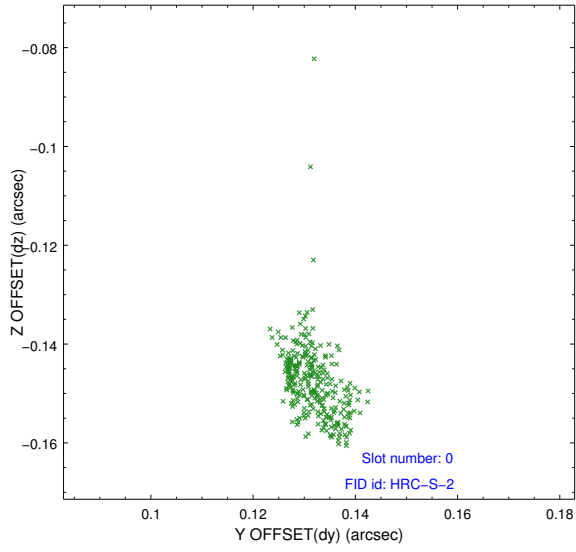


## 2.4.5 Slot 7

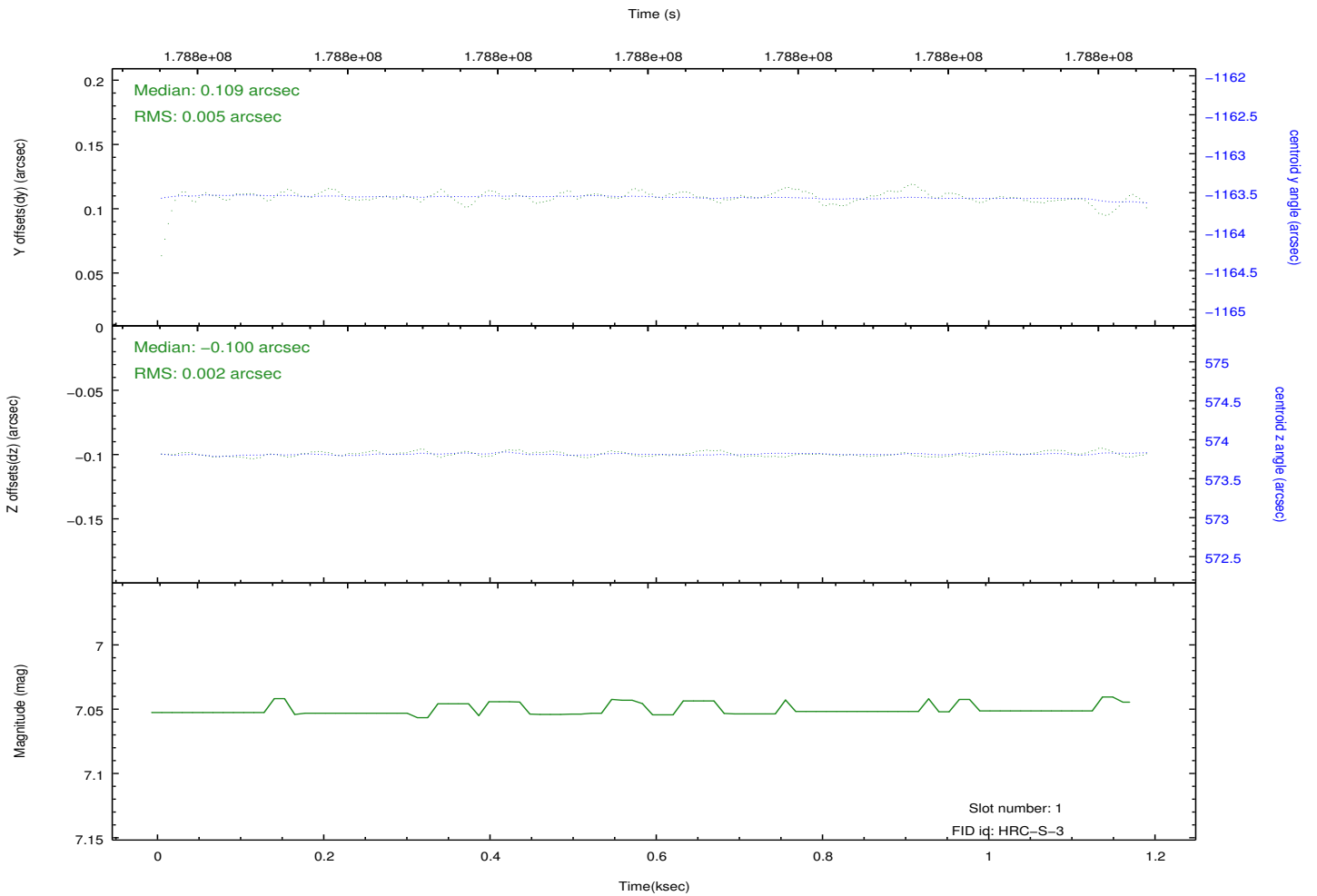
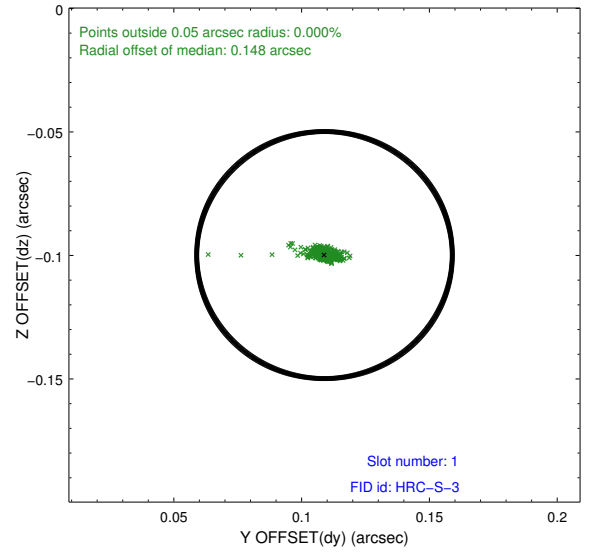
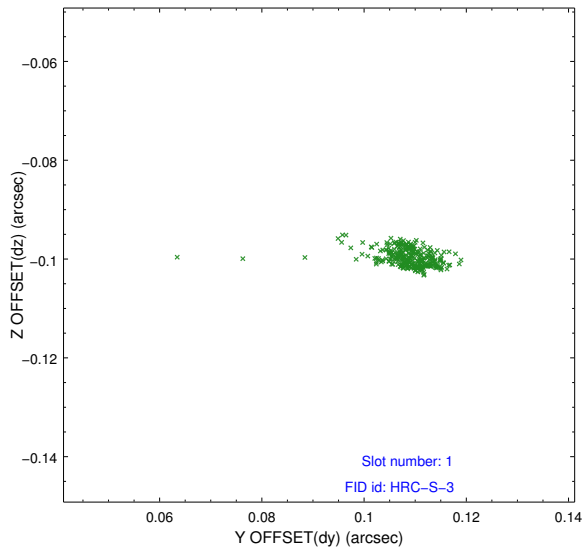


## 2.5 FID Slots

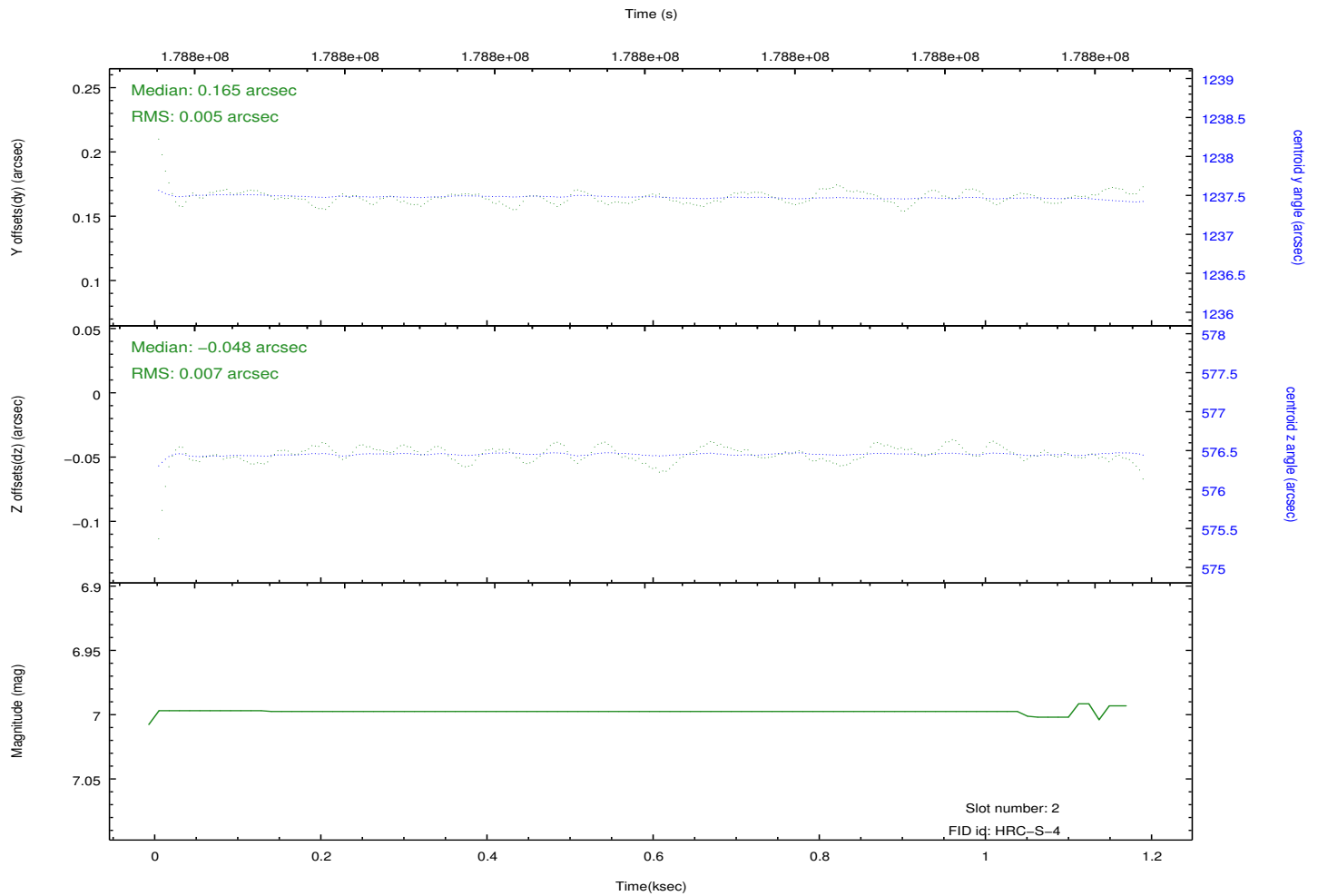
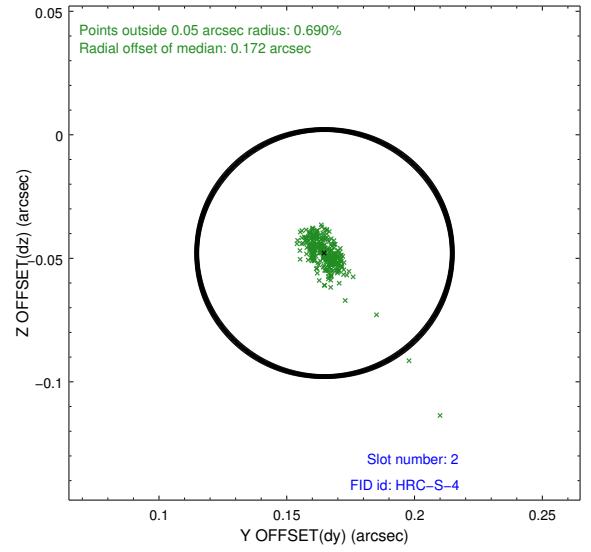
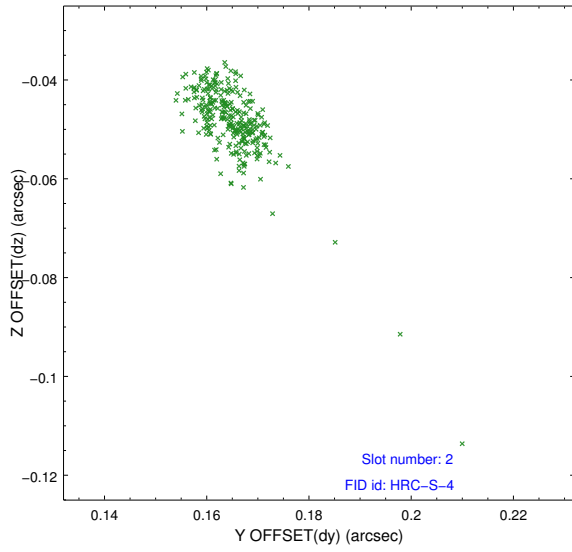
### 2.5.1 Slot 0



## 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)      | 2012.11.28 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 1.141      |

## A.2 Comments

Monitor constraint met.