

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 13083 - L2 Version 4  
Chandra X-Ray Center

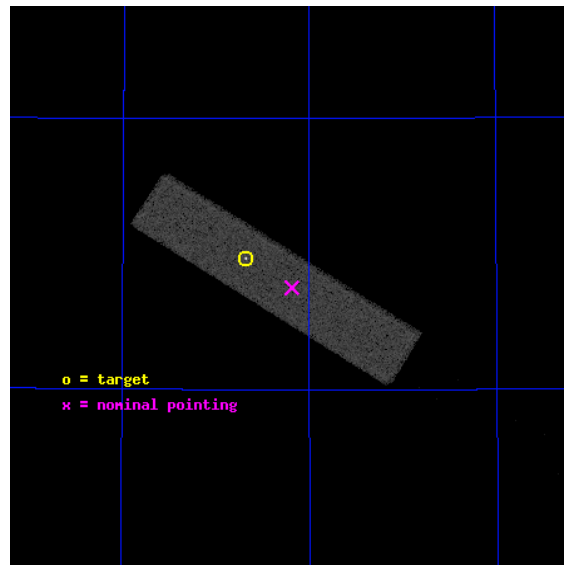
L2 Processing Date : Aug 9 2012

## 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

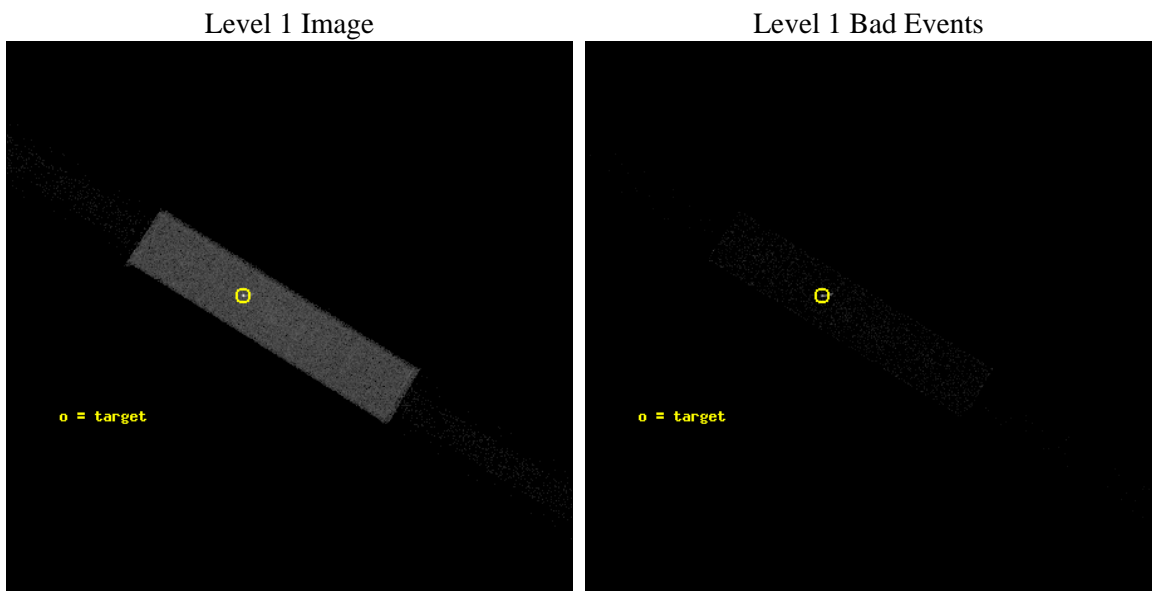
|          |  |                                       |
|----------|--|---------------------------------------|
| seq_num  | 291002   | Sequence number                       |
| obs_id   | 13083  | Observation id                        |
| title    | AO-12 Calibration Observations to Monitor the Spatial 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   | 332.04662058347  | Nominal RA [deg]                      |
| dec_nom  | 45.688058000002  | Nominal Dec [deg]                     |
| roll_nom | 211.67577561349  | Nominal Roll [deg]                    |
| revision | 4  | Processing version of data            |
| ontime   | 1161.5813109279  | [s]                                   |
| livetime | 1153.3972273407  | Ontime multiplied by DTCOR            |
| l2events | 61489  | 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         | 1161.5813109279 | [s]                                     |
| caldbver | 4.5.1.1             | &#160                          | l1events       | 94554           | Number of level 1 events                |
| date     | 2012-08-10T02:41:48 | Date and time of file creation |                |                 |   |
| revision | 4                   | Processing version of data     |                |                 |   |

### 2.1.3 Events

Level 1 Events

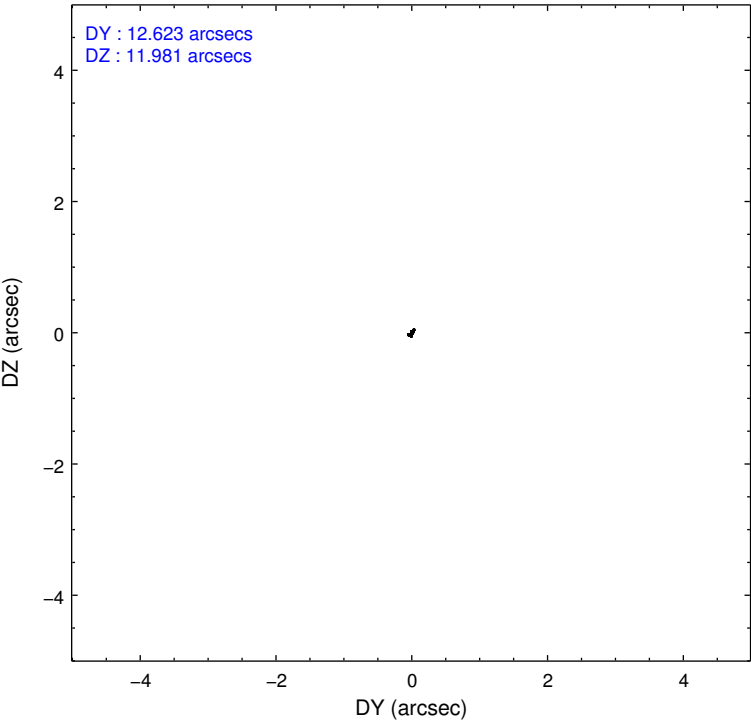
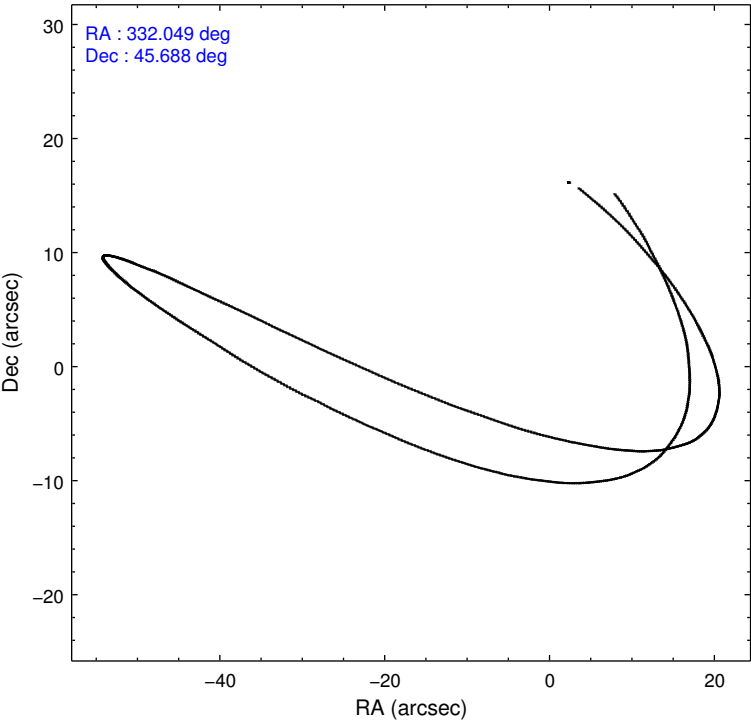
|                 | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events  | 832                  | 92841                | 881                  |
| rejected events | 832                  | 20691                | 869                  |
| rejected %      | 100%                 | 22%                  | 98%                  |

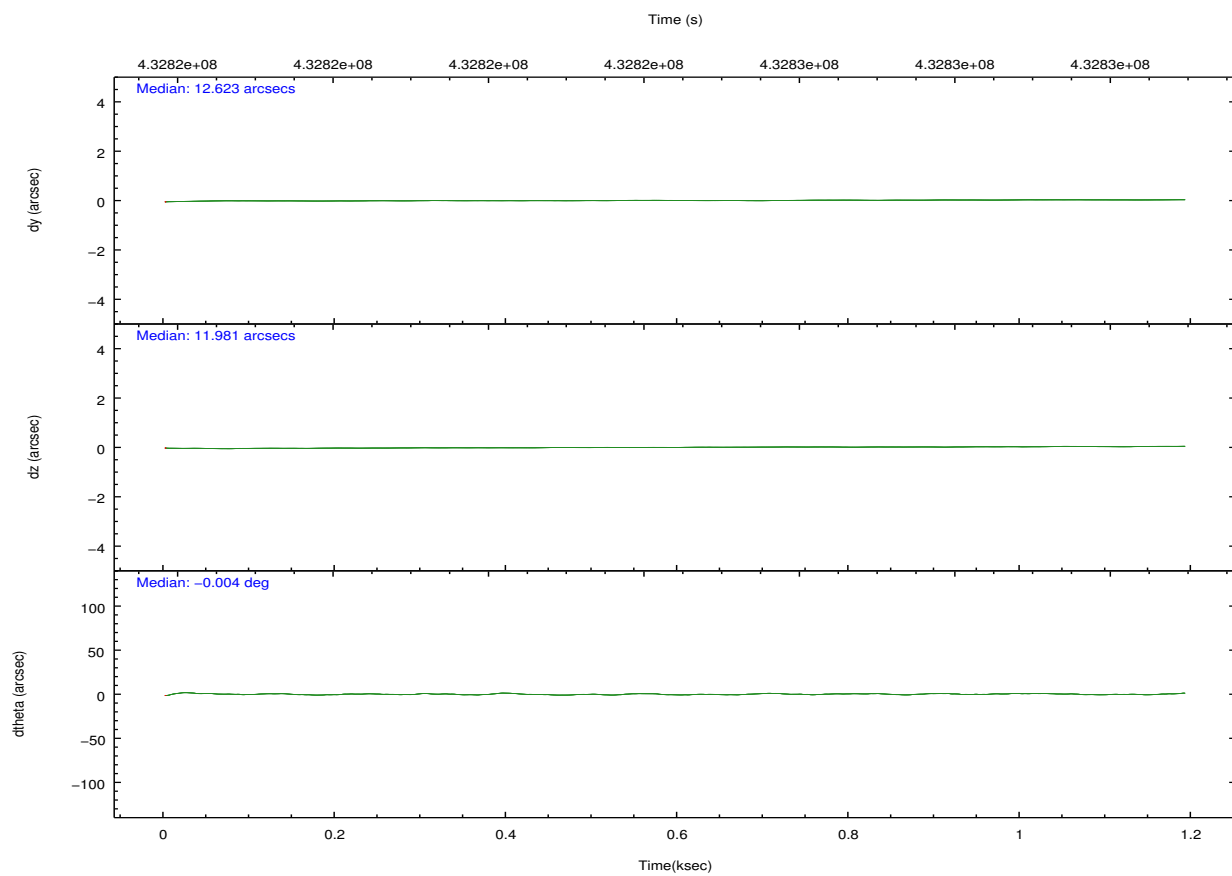
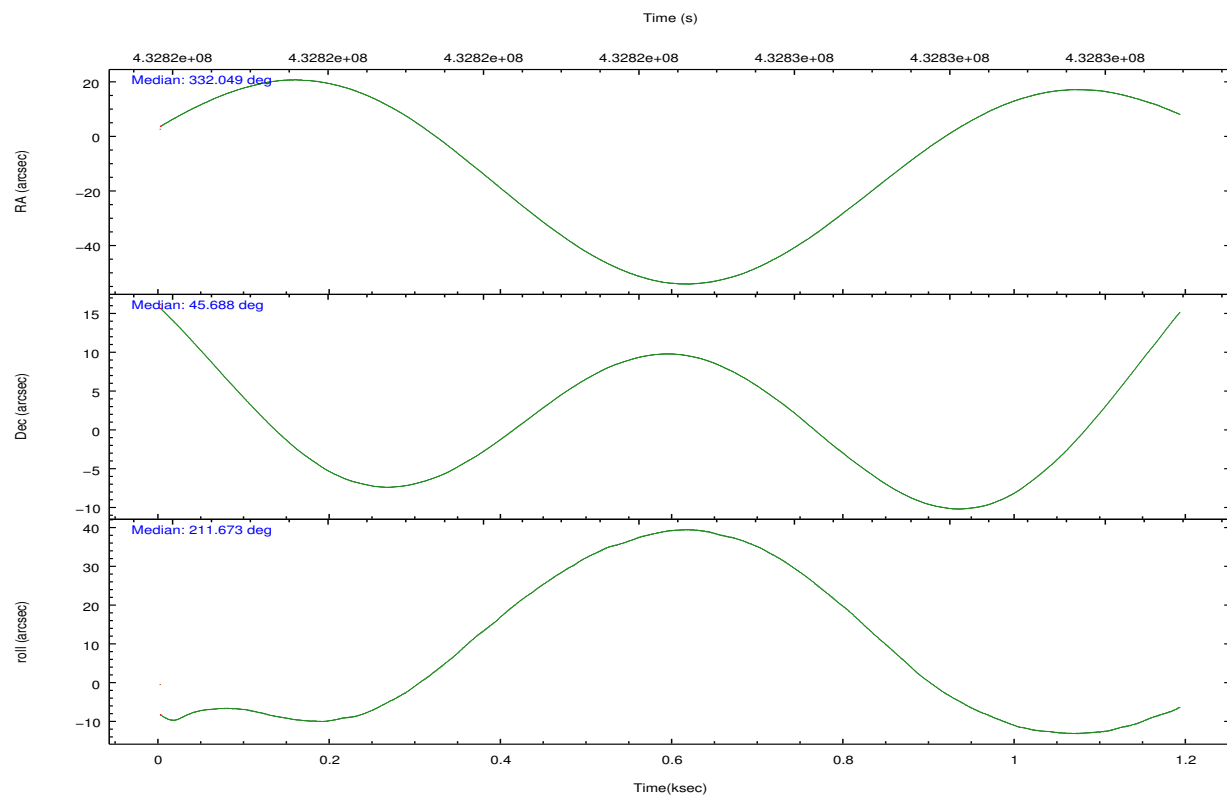
## 2.2 Compared Parameters

| Parameter                         | Planned               | Actual                |
|-----------------------------------|-----------------------|-----------------------|
| Instrument                        | HRC                   | HRC                   |
| Detector                          | HRC-S                 | HRC-S                 |
| Grating                           | NONE                  | NONE                  |
| Data mode                         | OBSERVING             | OBSERVING             |
| Observation mode                  | POINTING              | POINTING              |
| [deg] Pointing RA                 | 332.062830            | 332.0466205834745     |
| [deg] Pointing Dec                | 45.714750             | 45.68805800000246     |
| [deg] Pointing Roll               | 211.596829            | 211.6757756134875     |
| [mm] SIM focus pos                | -1.533336             | -1.526339935833849    |
| [mm] SIM defocus                  | 7.710433287538843e-07 | 0.006996703570447904  |
| [mm] SIM translation stage pos    | 250.455976            | 250.4635187648994     |
| [mm] SIM translation stage offset | 0                     | -0.007540371344731511 |
| [s] Observation start time (MET)  | 432824642.184000      | 432824265.75054       |
| Observation start date            | 2011-09-19T13:02:56   | 2011-09-19T12:57:45   |
| [s] Observation end time (MET)    | 432825642.184000      | 432825775.57561       |
| Observation end date              | 2011-09-19T13:19:36   | 2011-09-19T13:22:55   |

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

2.3 Aspect





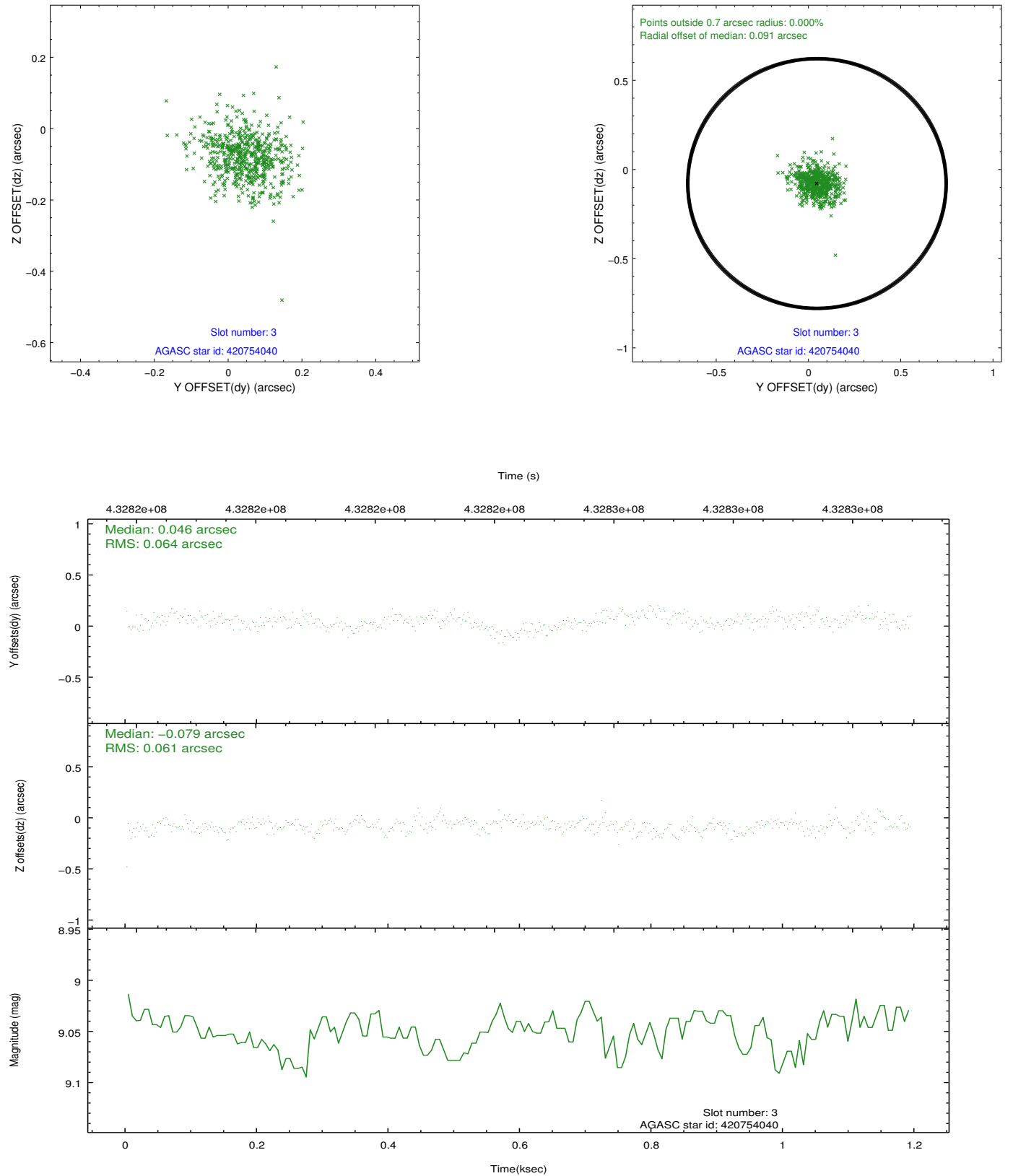
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-S-1   | 6.99 | 291   | 0.053  | -0.117 | 0.007 | 0.011 | 0.000000   | 0.000000  | -1166.98 | -460.66  |
| 1    | FID    | HRC-S-2   | 6.98 | 291   | 0.274  | -0.129 | 0.005 | 0.010 | 0.000000   | 0.000000  | 1228.89  | -454.86  |
| 2    | FID    | HRC-S-3   | 6.99 | 291   | 0.062  | -0.056 | 0.006 | 0.010 | 0.000000   | 0.000000  | -1165.49 | 567.35   |
| 3    | GUIDE  | 420754040 | 9.05 | 582   | 0.046  | -0.079 | 0.091 | 0.156 | 331.917939 | 44.882543 | 1885.11  | 2354.15  |
| 4    | GUIDE  | 472523760 | 8.22 | 582   | 0.095  | -0.131 | 0.086 | 0.127 | 331.645363 | 45.403260 | 1490.35  | 399.81   |
| 5    | GUIDE  | 472525528 | 6.63 | 582   | -0.328 | 0.035  | 0.089 | 0.149 | 331.551102 | 45.248694 | 1985.89  | 742.72   |
| 6    | GUIDE  | 472533912 | 9.15 | 582   | 0.107  | 0.212  | 0.108 | 0.184 | 331.791136 | 46.368695 | -653.67  | -2362.37 |
| 7    | GUIDE  | 472655152 | 9.42 | 580   | 0.086  | -0.035 | 0.121 | 0.206 | 332.504239 | 45.862991 | -1222.78 | 114.56   |

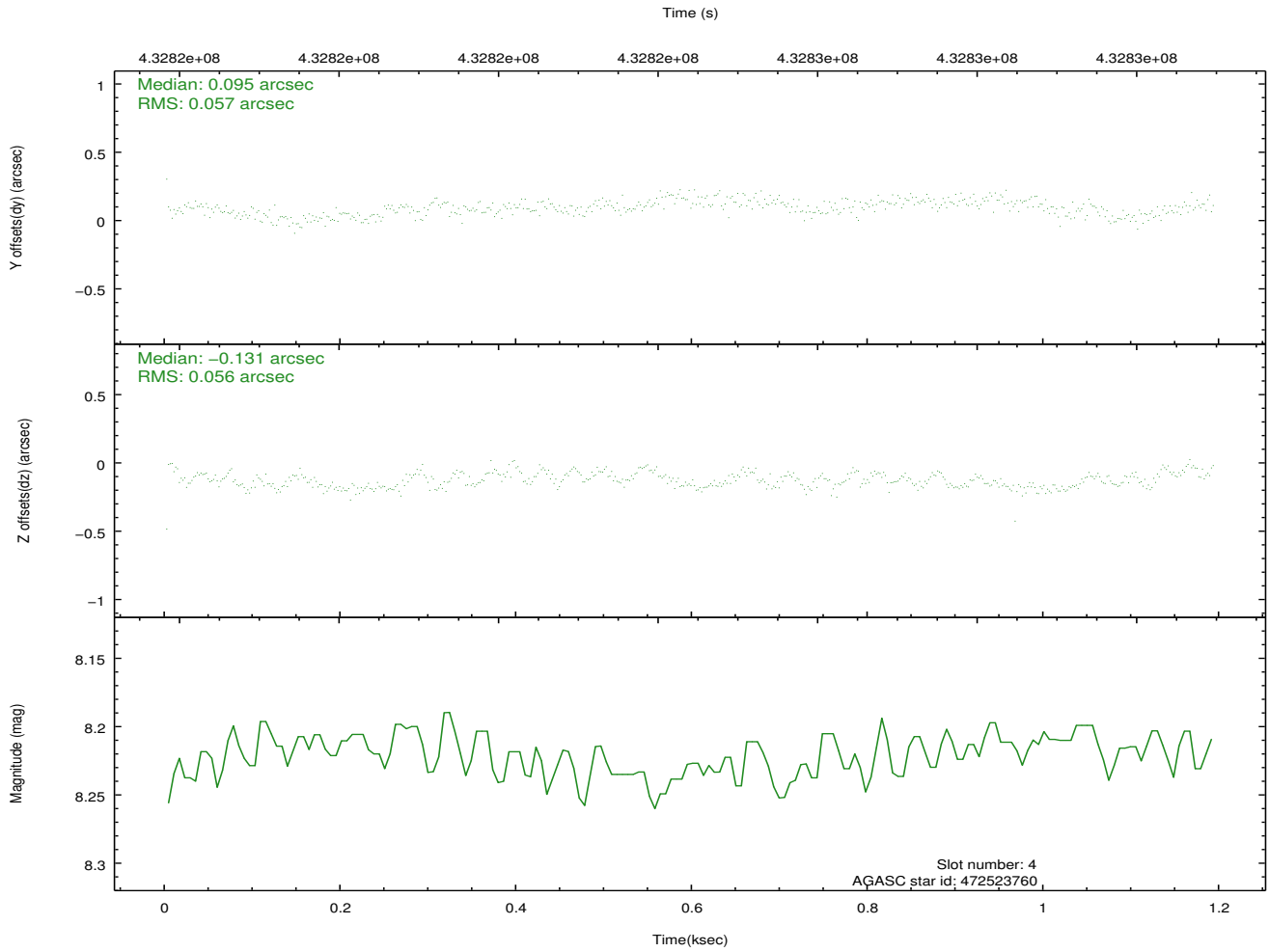
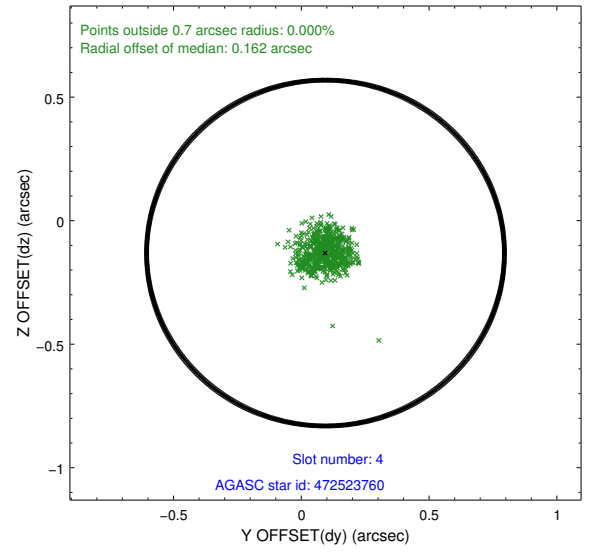
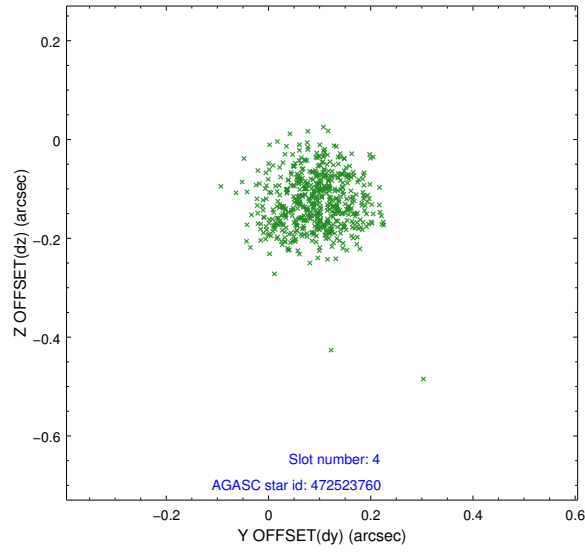


## 2.4 Star Slots

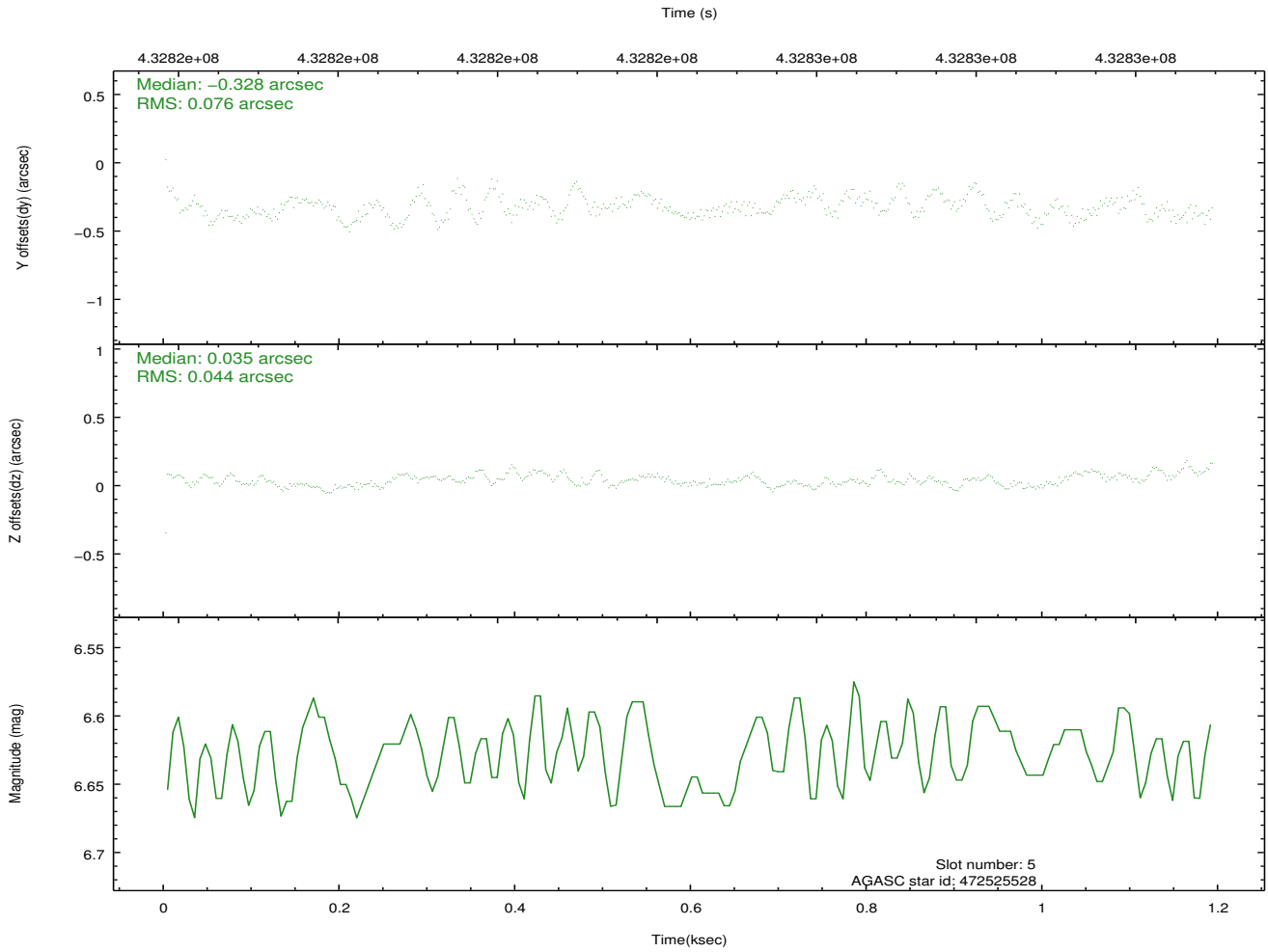
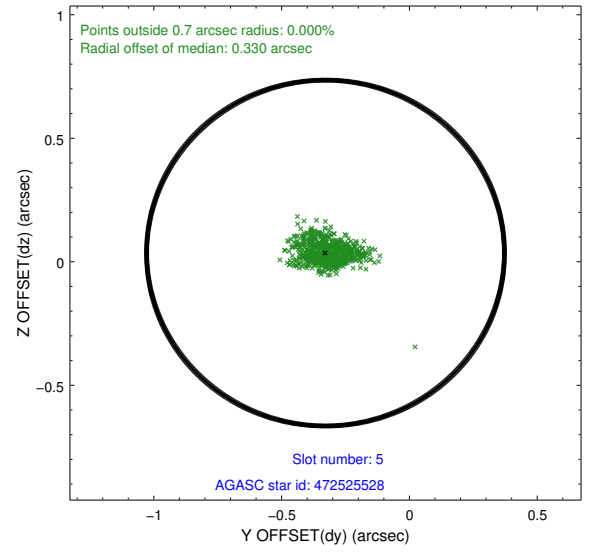
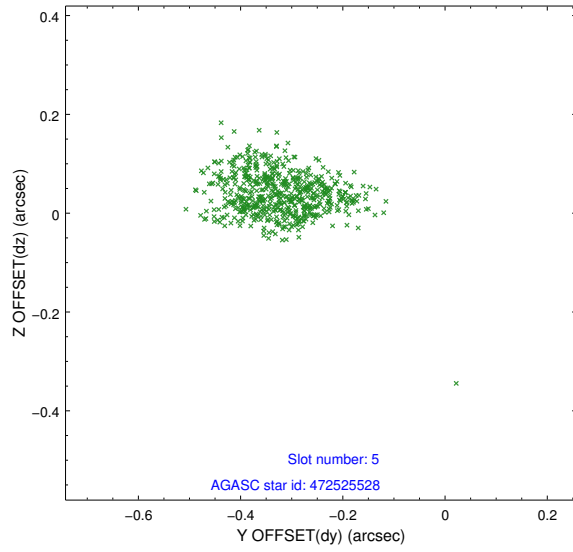
### 2.4.1 Slot 3



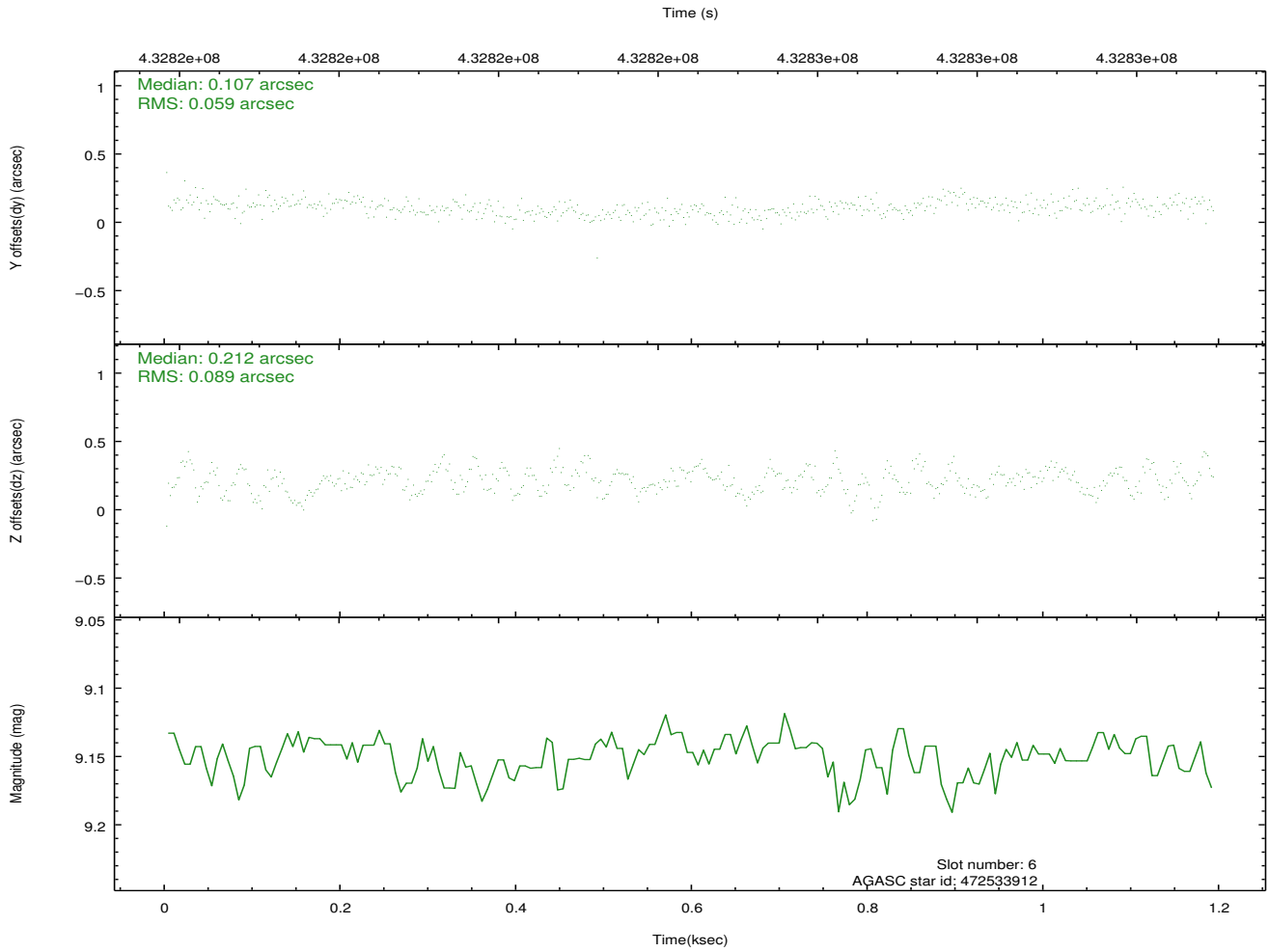
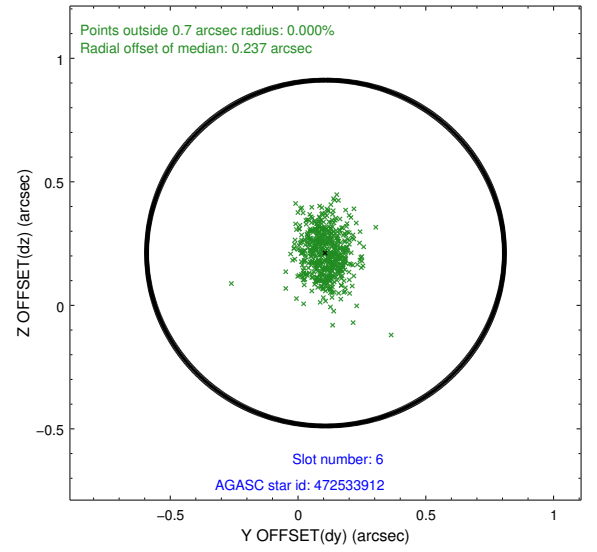
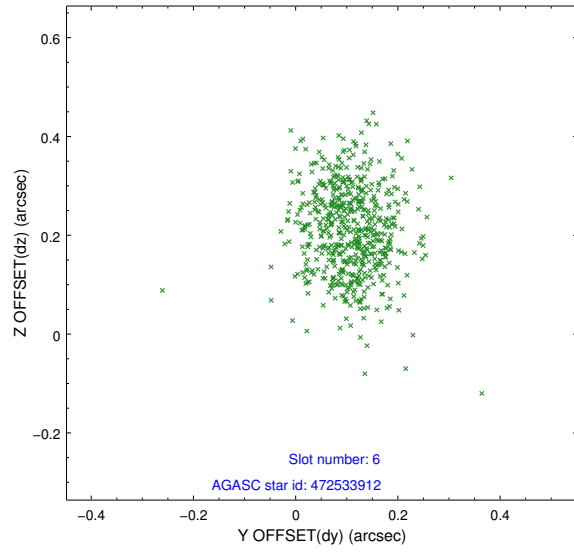
## 2.4.2 Slot 4



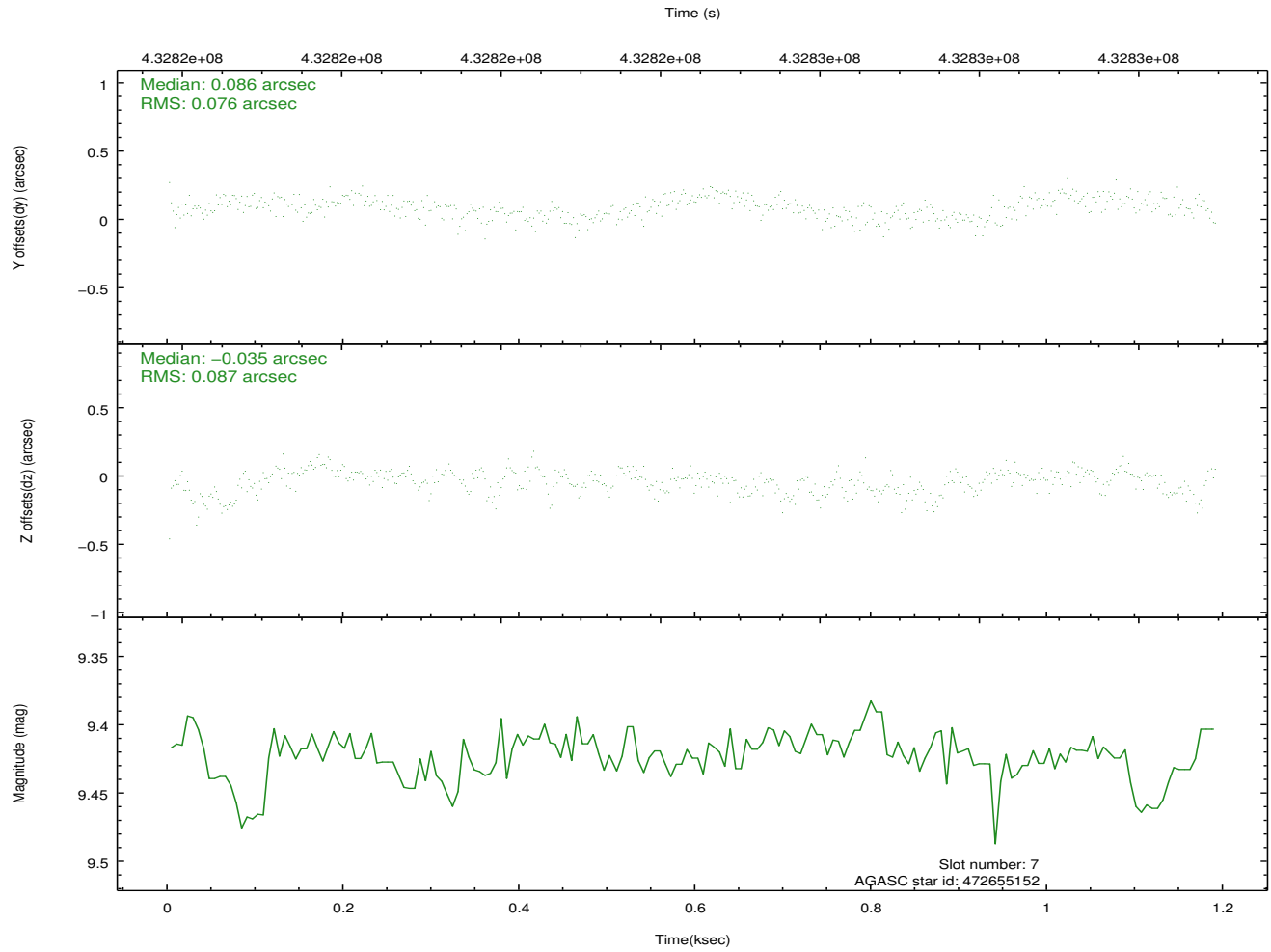
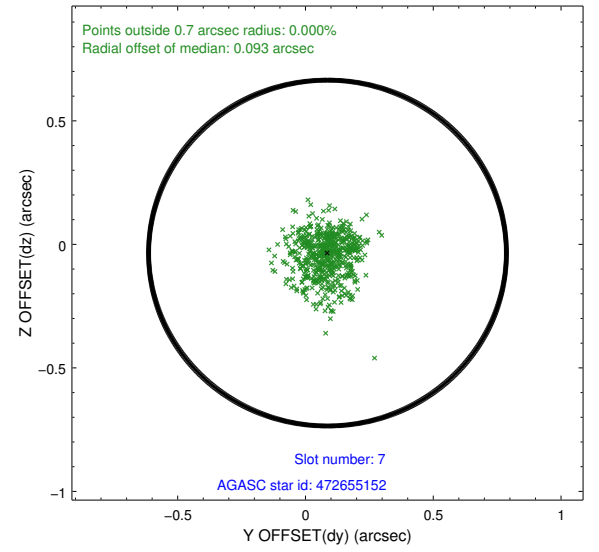
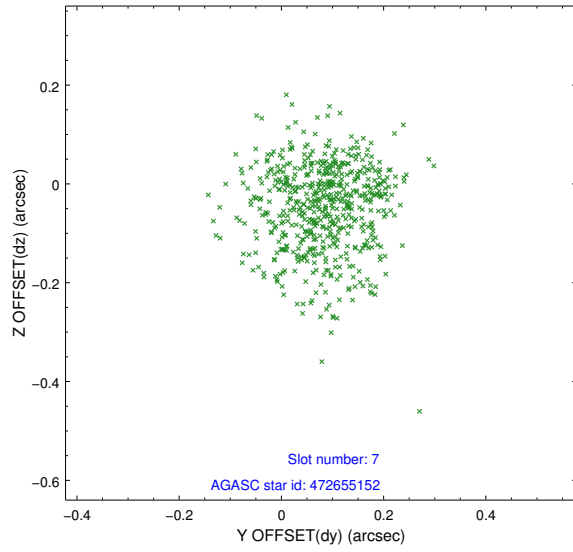
### 2.4.3 Slot 5



## 2.4.4 Slot 6

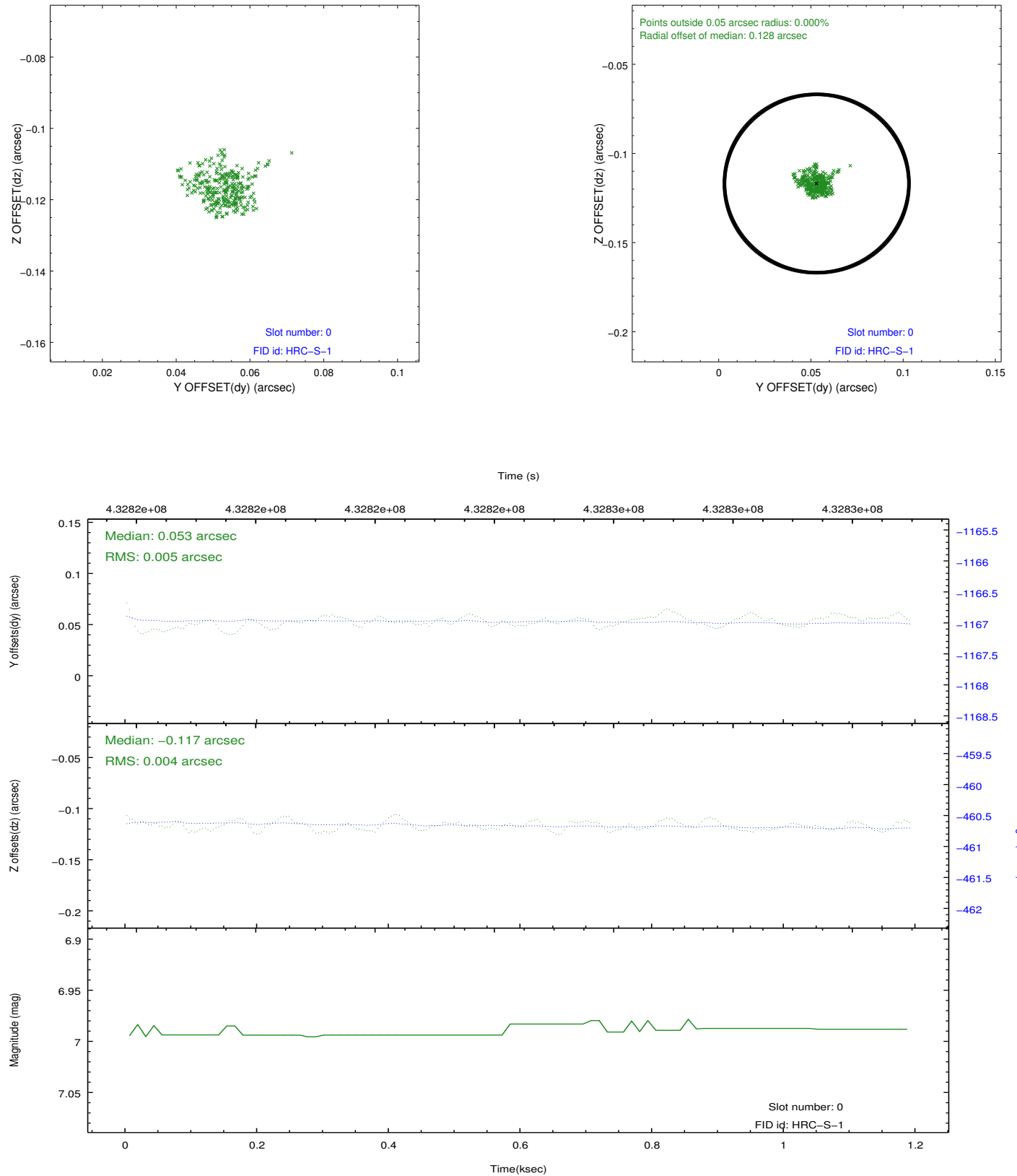


## 2.4.5 Slot 7

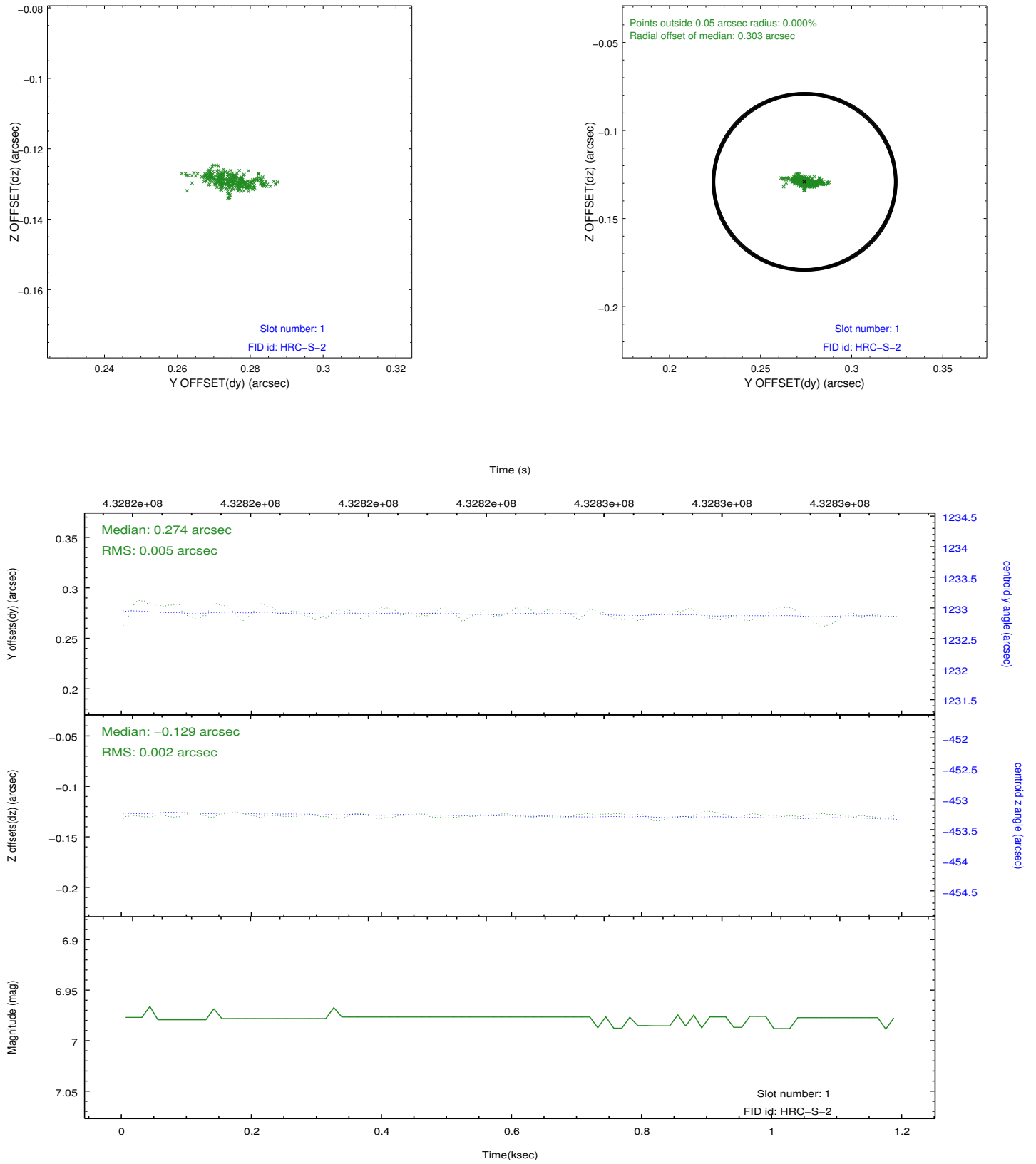


## 2.5 FID Slots

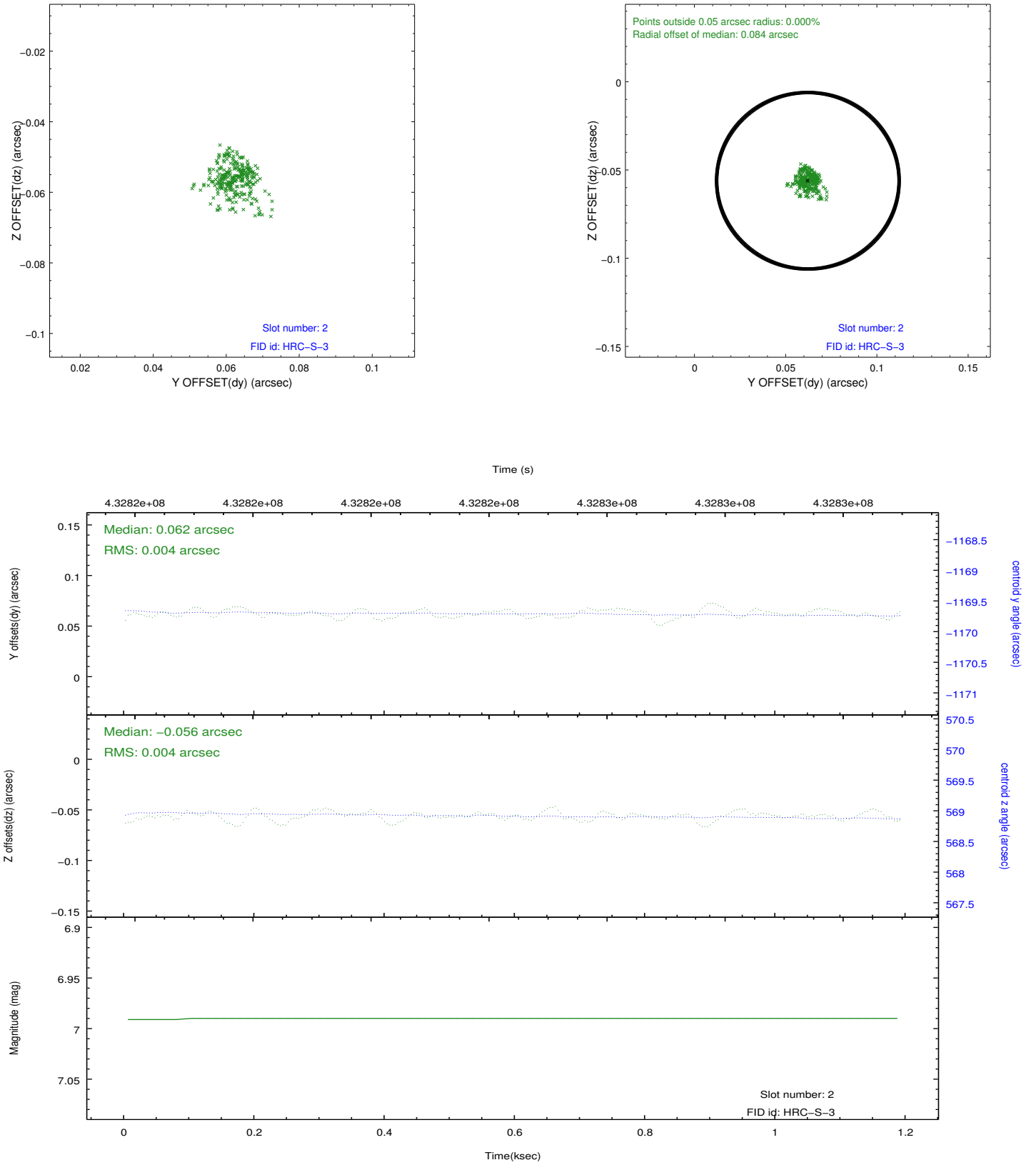
### 2.5.1 Slot 0



## 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)      | 2012.08.10      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 1.1615813108683 |

### A.2 Comments