

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 1915 - L2 Version 3  
Chandra X-Ray Center

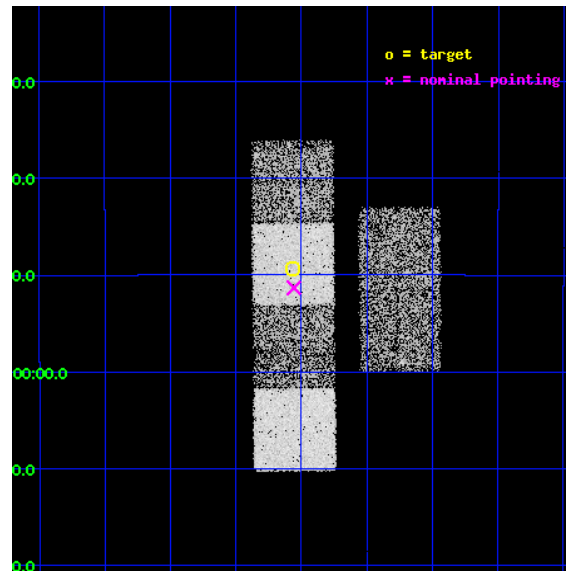
L2 Processing Date : Sep 25 2012

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# 1 Front

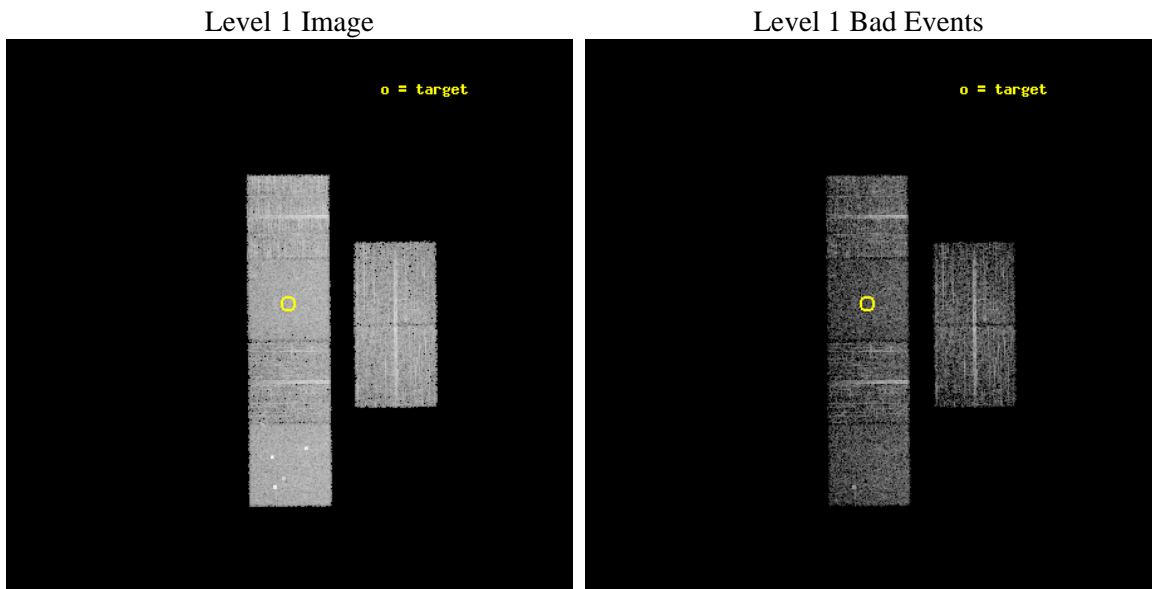
|          |   |   |
|----------|---|---|
| seq_num  | 400128  | Sequence number                             |
| obs_id   | 1915  | Observation id                              |
| title    | X-RAY BURSTERS WITH LOW PERSISTENT X-RAY LUMINOSITIES | Proposal tit                                |
| observer | PROF FRANK VERBUNT                                    | Principal investigator                      |
| object   | SAX J1753.5-2349                                      | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 268.391667  | Observer's specified target RA [deg]        |
| dec_targ | -23.823333  | Observer's specified target Dec [deg]       |
| ra_nom   | 268.38931999917                                       | Nominal RA [deg]                            |
| dec_nom  | -23.855672054681                                      | Nominal Dec [deg]                           |
| roll_nom | 269.45966110289                                       | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 5171.2000048012                                       | Sum of GTIs [s]                             |
| livetime | 5105.7191566175                                       | Livetime [s]                                |
| ontime2  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| ontime3  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| ontime5  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| ontime6  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| ontime7  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| ontime8  | 5171.2000048012                                       | Sum of GTIs [s]                             |
| l2events | 51629   | Number of level 2 events                    |



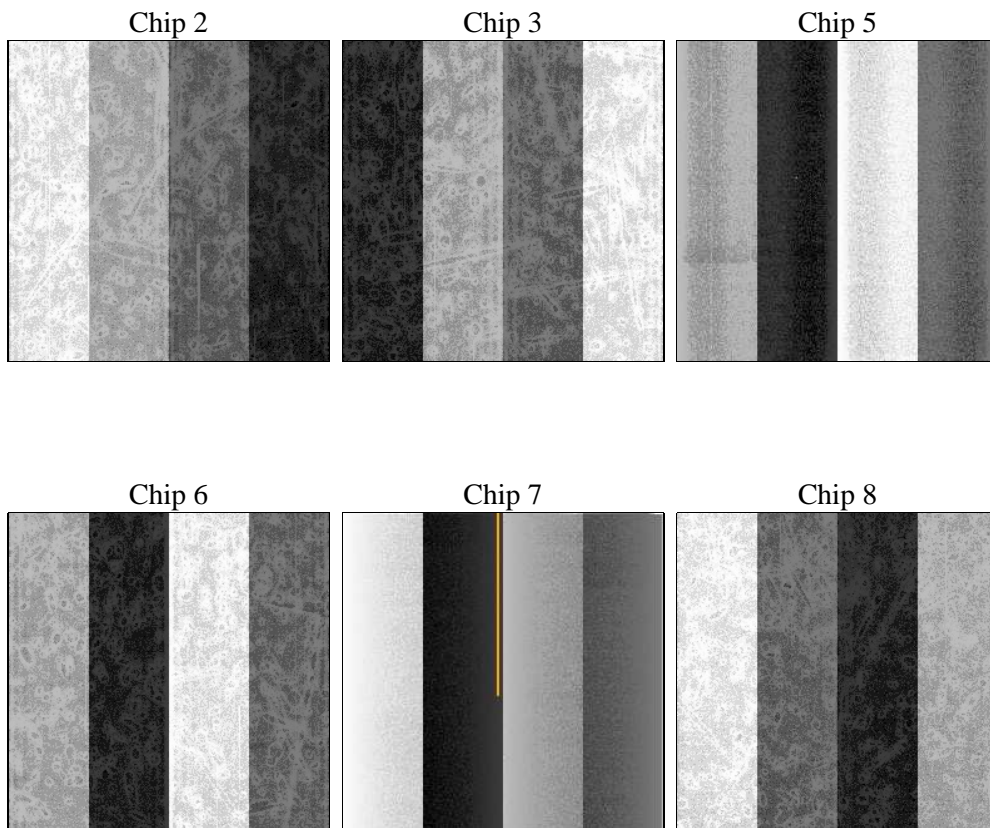
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 5000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 5171.2000048012 | Sum of GTIs [s]                         |
| caldsver | 4.5.1.1             | &#160                          | ontime2        | 5171.2000048012 | Sum of GTIs [s]                         |
| date     | 2012-09-25T03:46:15 | Date and time of file creation | ontime3        | 5171.2000048012 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime5        | 5171.2000048012 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 5171.2000048012 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 5171.2000048012 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 5171.2000048012 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 230132          | Number of level 1 events                |

### 2.1.4 Events

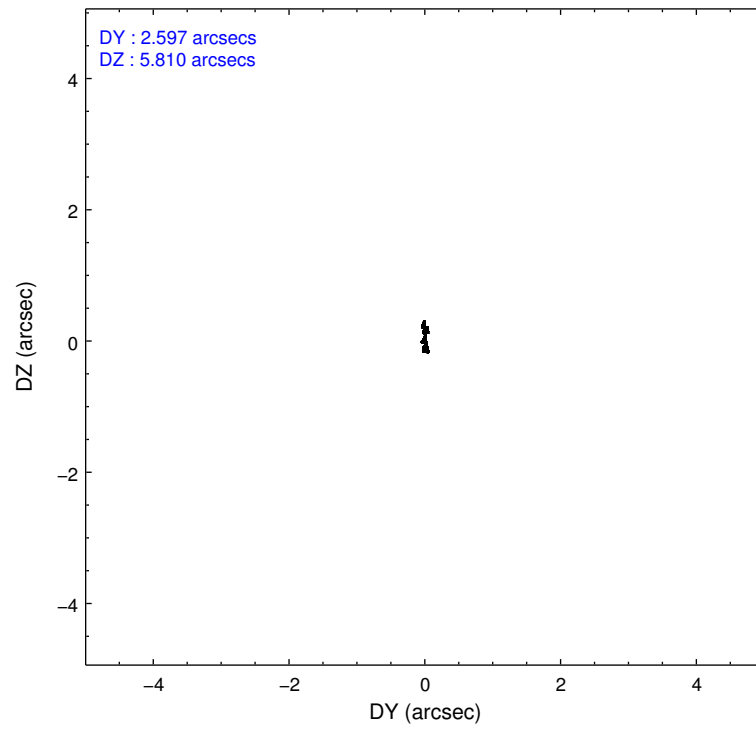
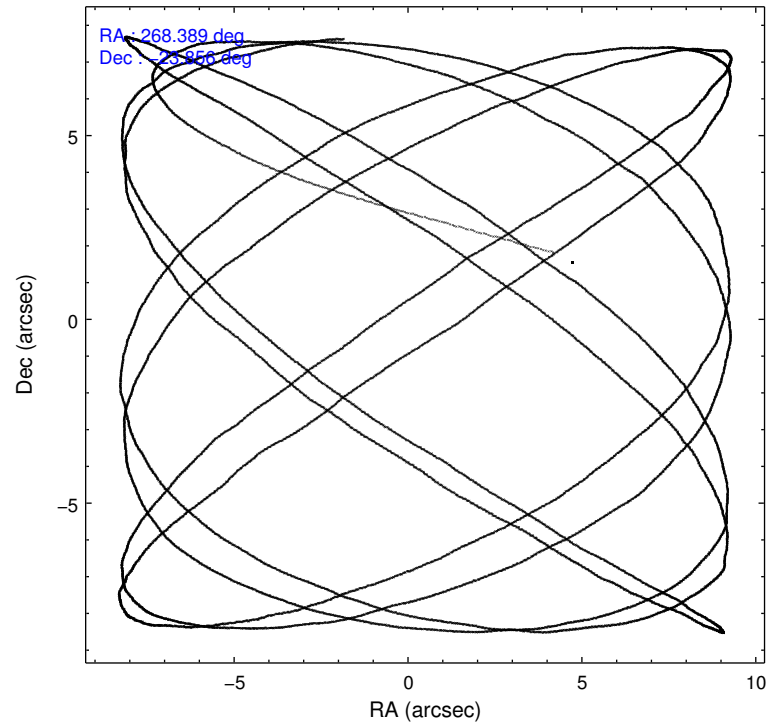
|                 | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 32216 | 31987 | 46592 | 33368 | 40704 | 45265 | grade 0 events | 1888  | 1841  | 4174  | 1929  | 1747  | 4078  |
| rejected events | 28034 | 27868 | 24058 | 28973 | 23294 | 32832 |                | 5%    | 5%    | 8%    | 5%    | 4%    | 9%    |
| rejected %      | 87%   | 87%   | 51%   | 86%   | 57%   | 72%   | grade 1 events | 14    | 18    | 201   | 19    | 37    | 33    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 877   | 852   | 6069  | 908   | 3525  | 2401  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 13%   | 2%    | 8%    | 5%    |
|                 |       |       |       |       |       |       | grade 3 events | 357   | 357   | 916   | 387   | 1601  | 1490  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 342   | 373   | 882   | 375   | 1559  | 1381  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1077  | 1271  | 3173  | 1322  | 3932  | 1763  |
|                 |       |       |       |       |       |       |                | 3%    | 3%    | 6%    | 3%    | 9%    | 3%    |
|                 |       |       |       |       |       |       | grade 6 events | 722   | 705   | 10530 | 802   | 9017  | 3097  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 22%   | 2%    | 22%   | 6%    |
|                 |       |       |       |       |       |       | grade 7 events | 26939 | 26570 | 20647 | 27626 | 19286 | 31022 |
|                 |       |       |       |       |       |       |                | 83%   | 83%   | 44%   | 82%   | 47%   | 68%   |

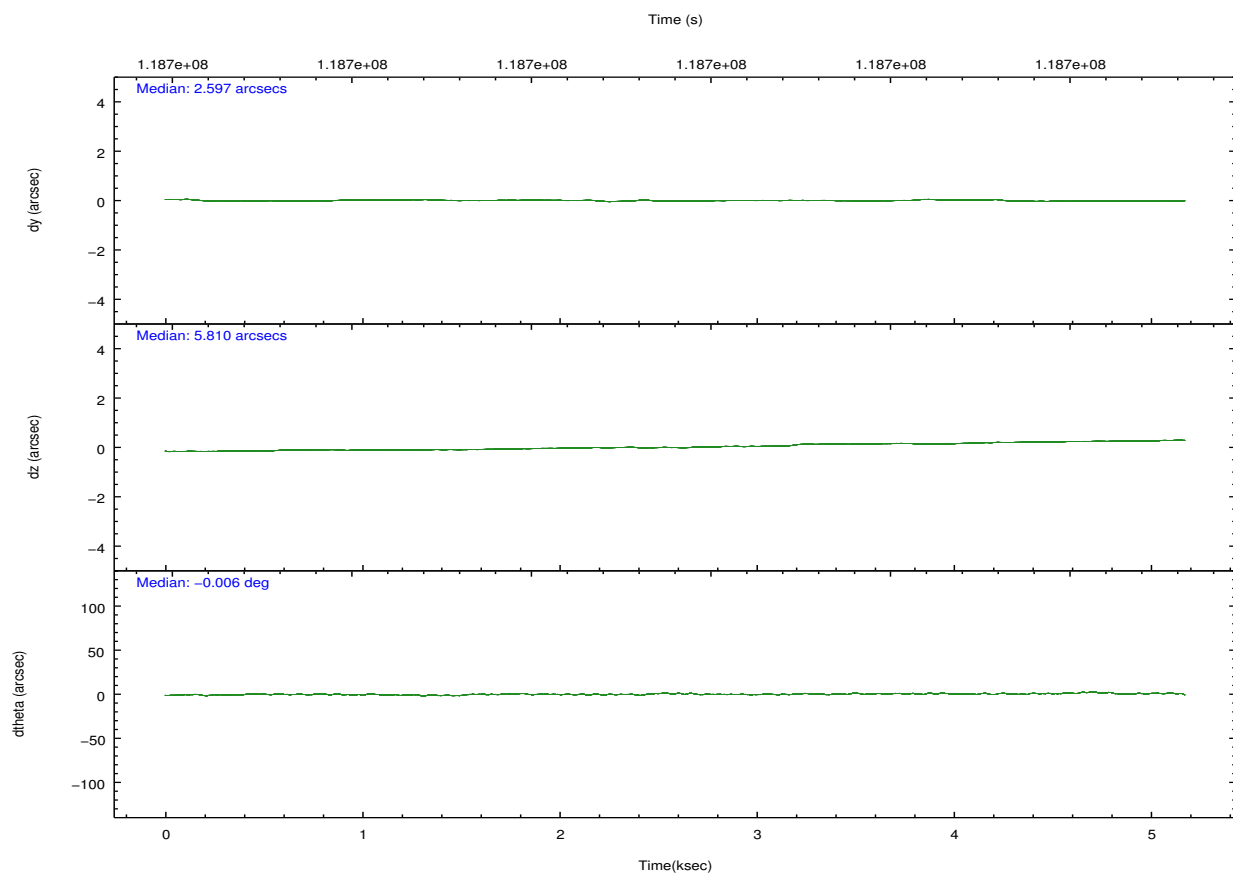
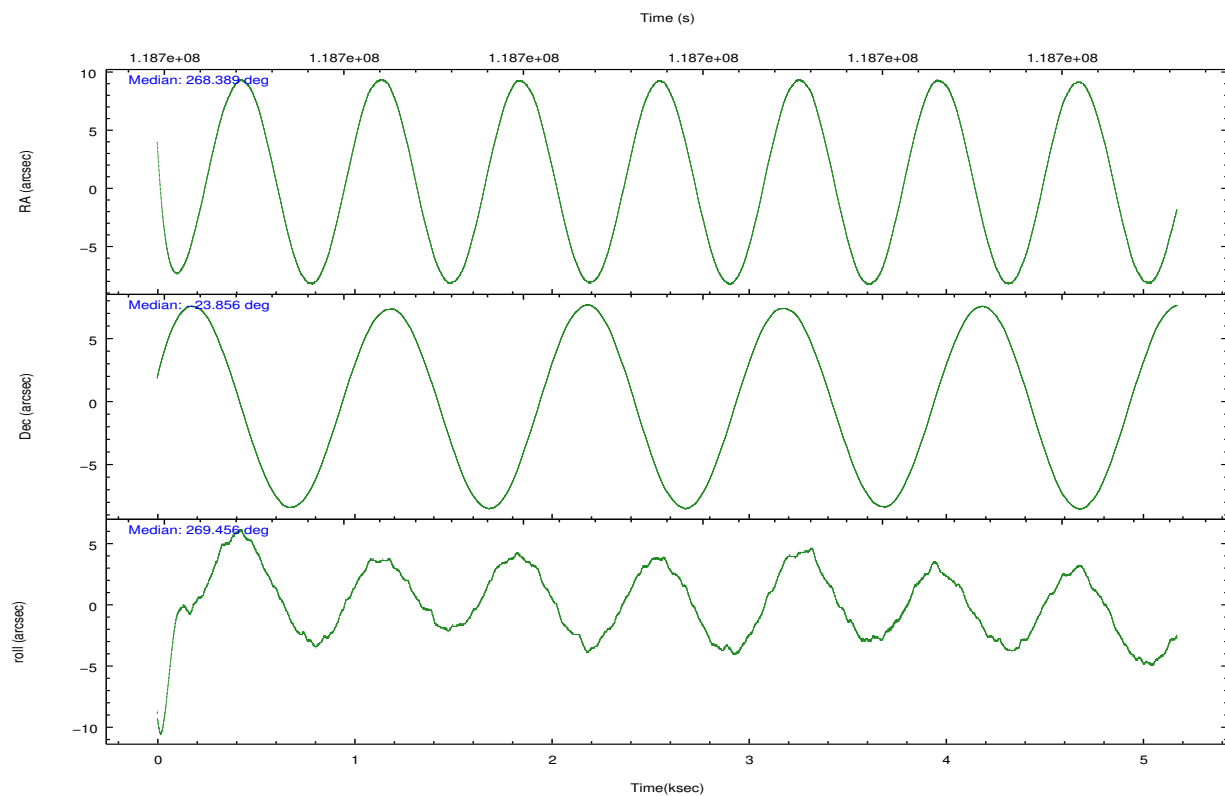


## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-235678         | ACIS-235678          | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 268.374421          | 268.389319999174     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | -23.832146          | -23.8556720546812    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 269.297049          | 269.459661102888     | [s] Primary exposure time             | 0.000000  | 3.2     |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 |                                       |           |         |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 118700386.184000    | 118699310.74878      |                                       |           |         |
| Observation start date            | 2001-10-05T20:18:42 | 2001-10-05T20:01:50  |                                       |           |         |
| [s] Observation end time (MET)    | 118705386.184000    | 118705924.56155      |                                       |           |         |
| Observation end date              | 2001-10-05T21:42:02 | 2001-10-05T21:52:04  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



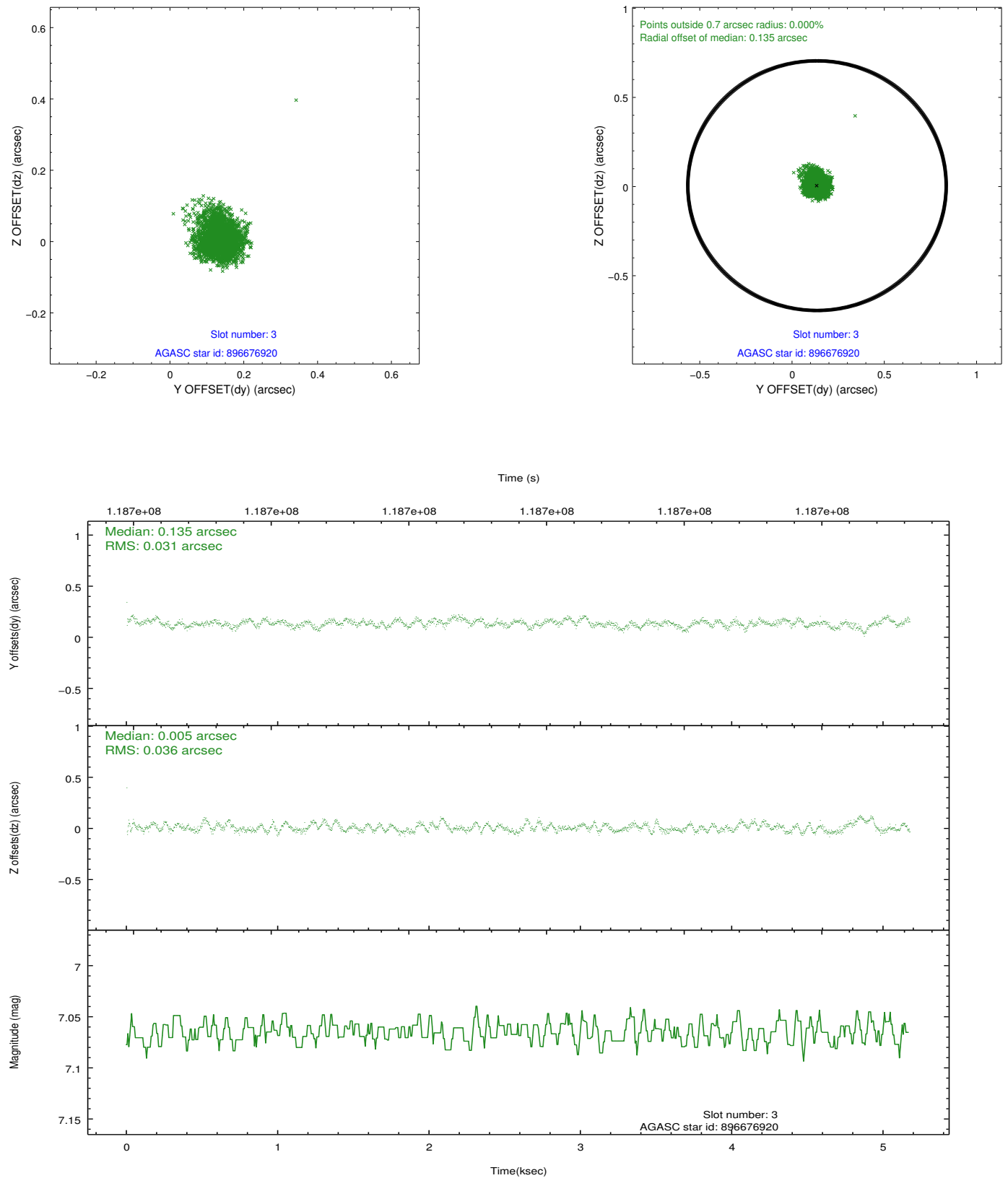


### Slot Statistics

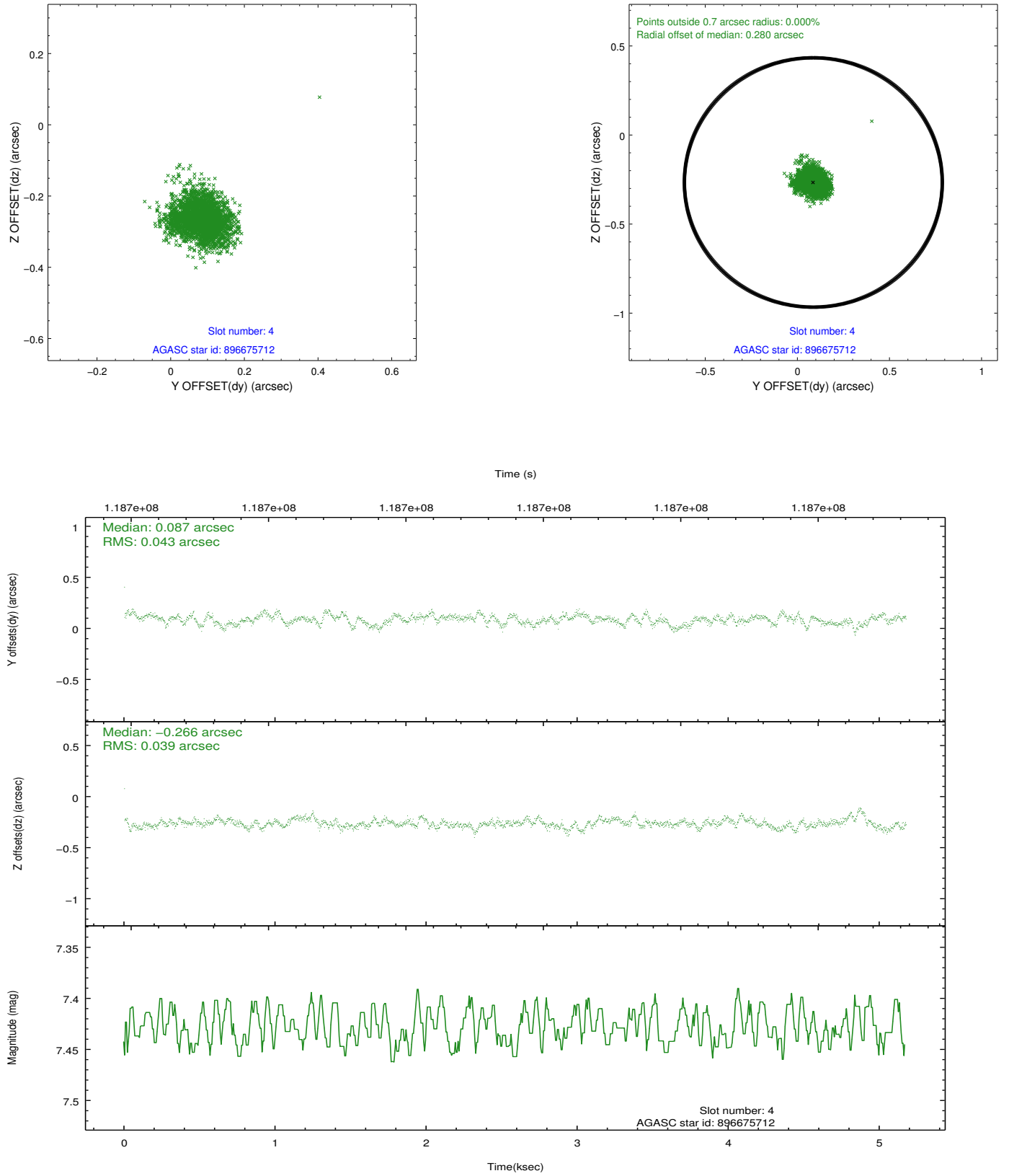
| slot | status | id        | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|-------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-S-1  | 7.19  | 1262  | -0.005 | -0.024 | 0.013 | 0.021 | 0.000000   | 0.000000   | 940.81   | -1722.57 |
| 1    | FID    | ACIS-S-5  | 7.24  | 1262  | 0.014  | 0.006  | 0.007 | 0.012 | 0.000000   | 0.000000   | -1807.51 | 173.79   |
| 2    | FID    | ACIS-S-6  | 7.35  | 1262  | -0.030 | 0.030  | 0.011 | 0.016 | 0.000000   | 0.000000   | 405.07   | 819.11   |
| 3    | GUIDE  | 896676920 | 7.07  | 2525  | 0.135  | 0.005  | 0.050 | 0.082 | 268.229437 | -24.215089 | 1385.31  | -458.08  |
| 4    | GUIDE  | 896675712 | 7.43  | 2525  | 0.087  | -0.266 | 0.060 | 0.099 | 267.913019 | -23.677453 | -534.42  | -1527.48 |
| 5    | GUIDE  | 896675664 | 7.88  | 2524  | -0.119 | -0.100 | 0.048 | 0.085 | 268.725617 | -23.486931 | -1255.32 | 1144.39  |
| 6    | GUIDE  | 896676832 | 8.77  | 2525  | 0.126  | 0.010  | 0.064 | 0.105 | 268.764867 | -24.199321 | 1307.91  | 1299.70  |
| 7    | GUIDE  | 896663656 | 10.03 | 2453  | -0.231 | 0.355  | 0.134 | 0.222 | 268.852145 | -23.189863 | -2327.97 | 1554.13  |

## 2.4 Star Slots

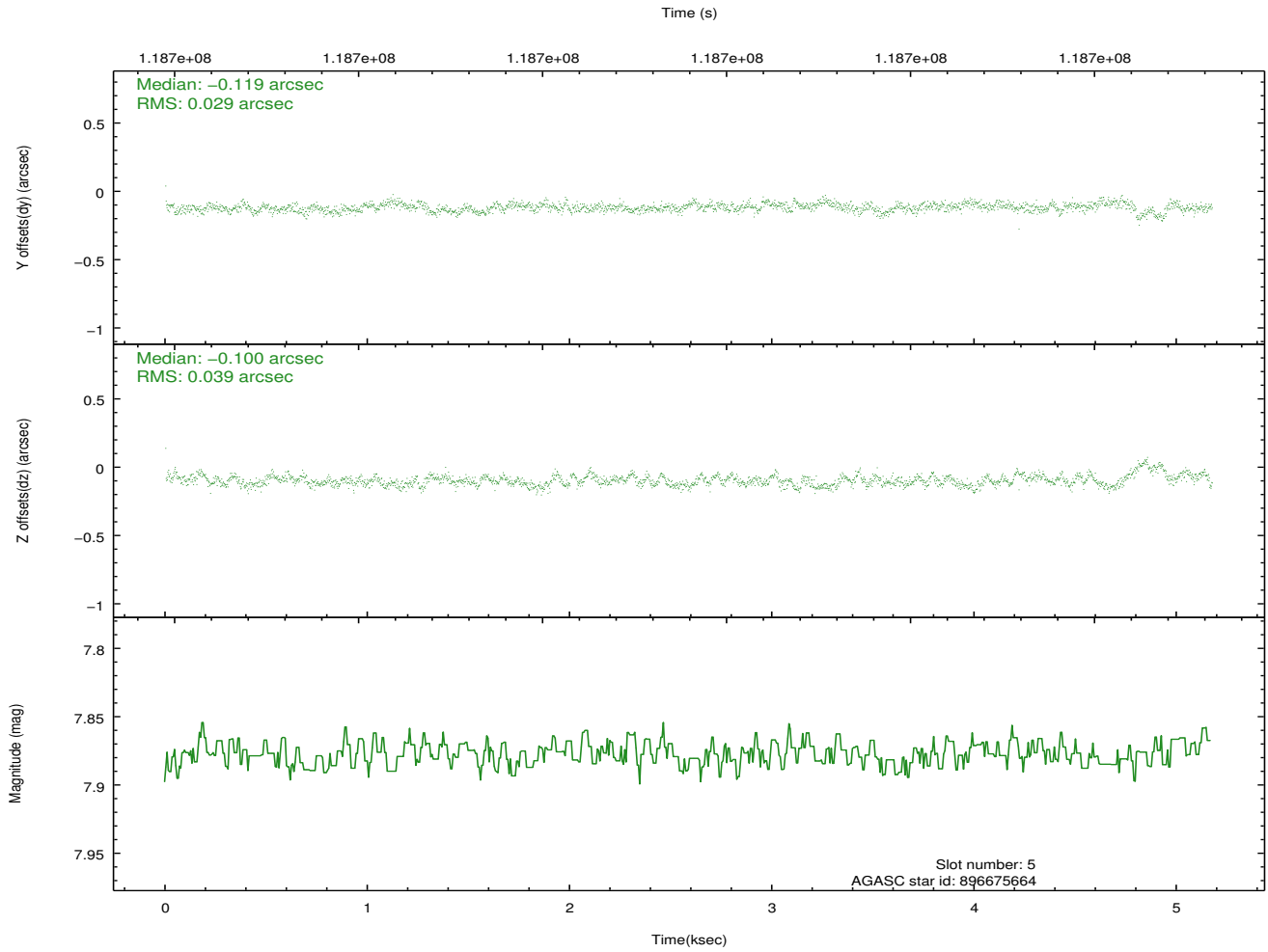
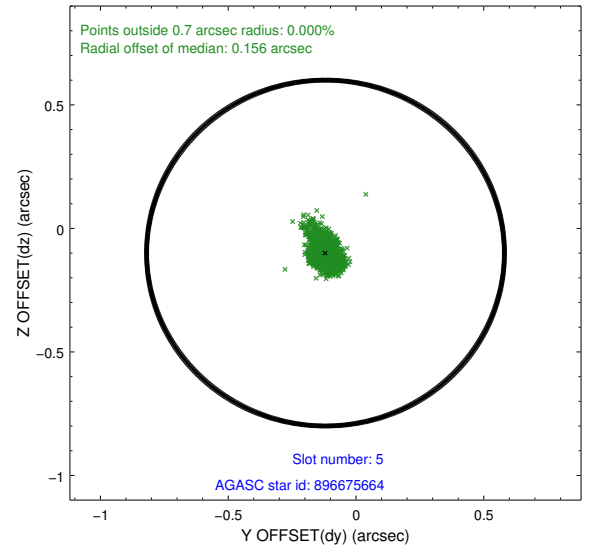
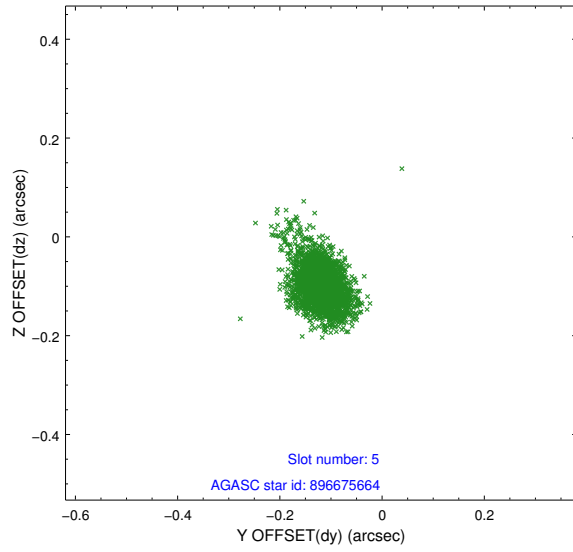
### 2.4.1 Slot 3



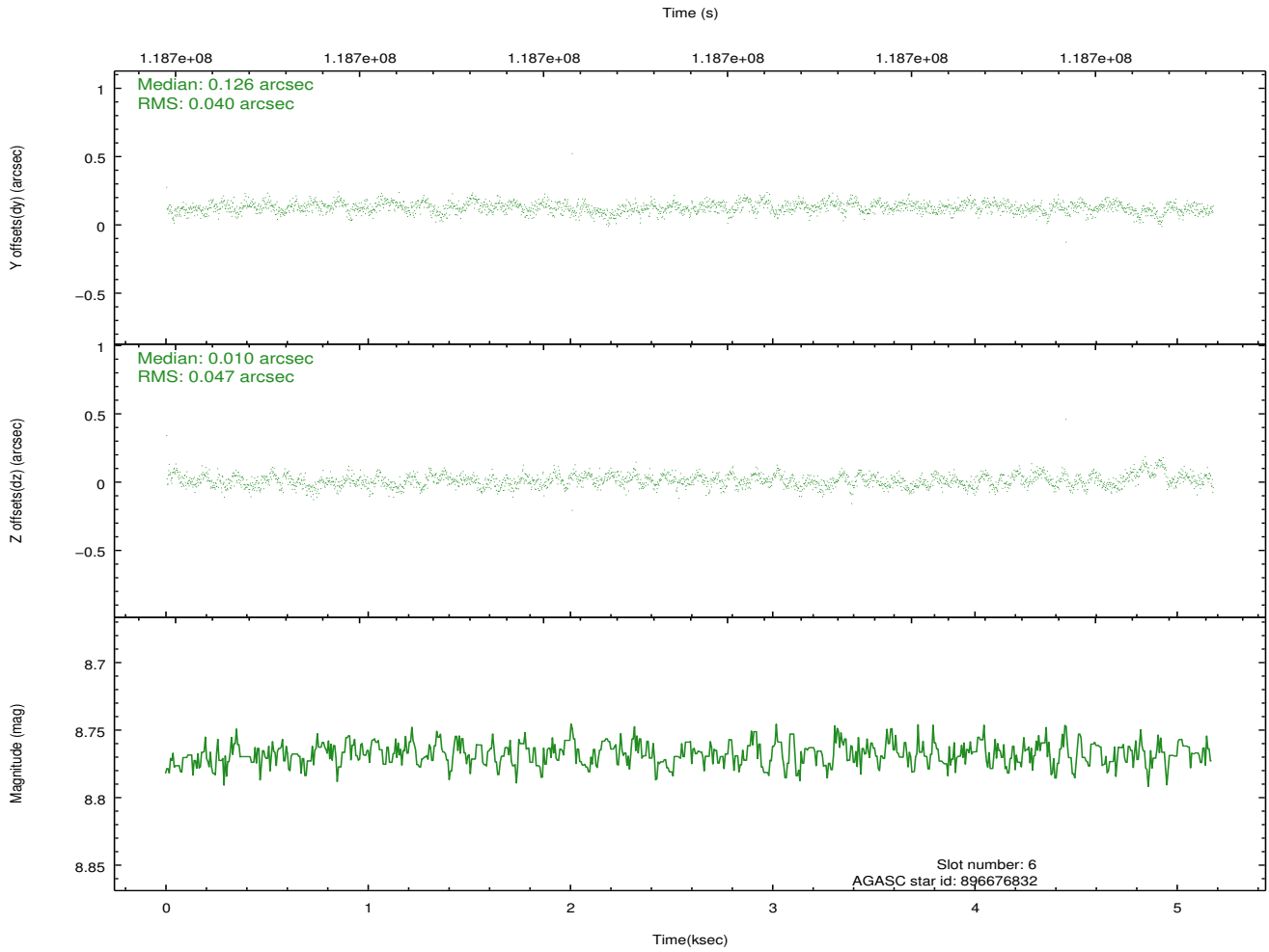
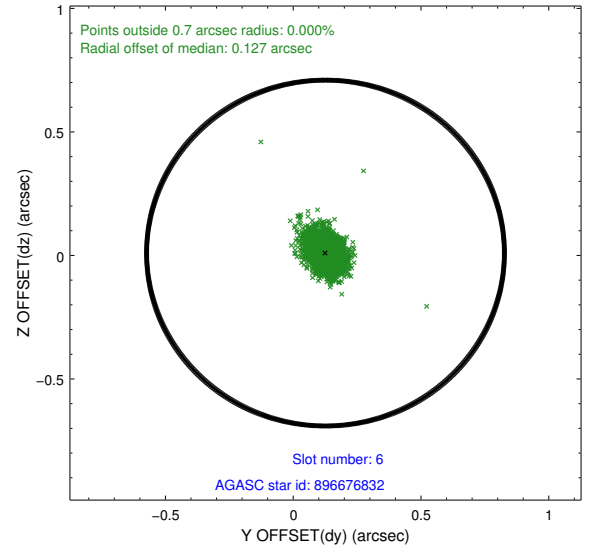
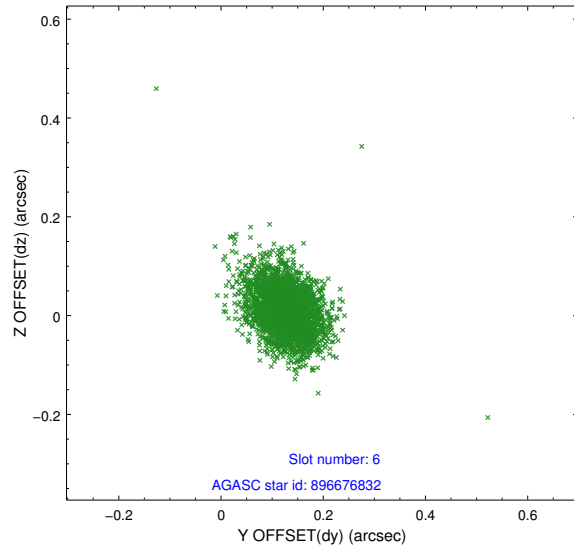
## 2.4.2 Slot 4



### 2.4.3 Slot 5

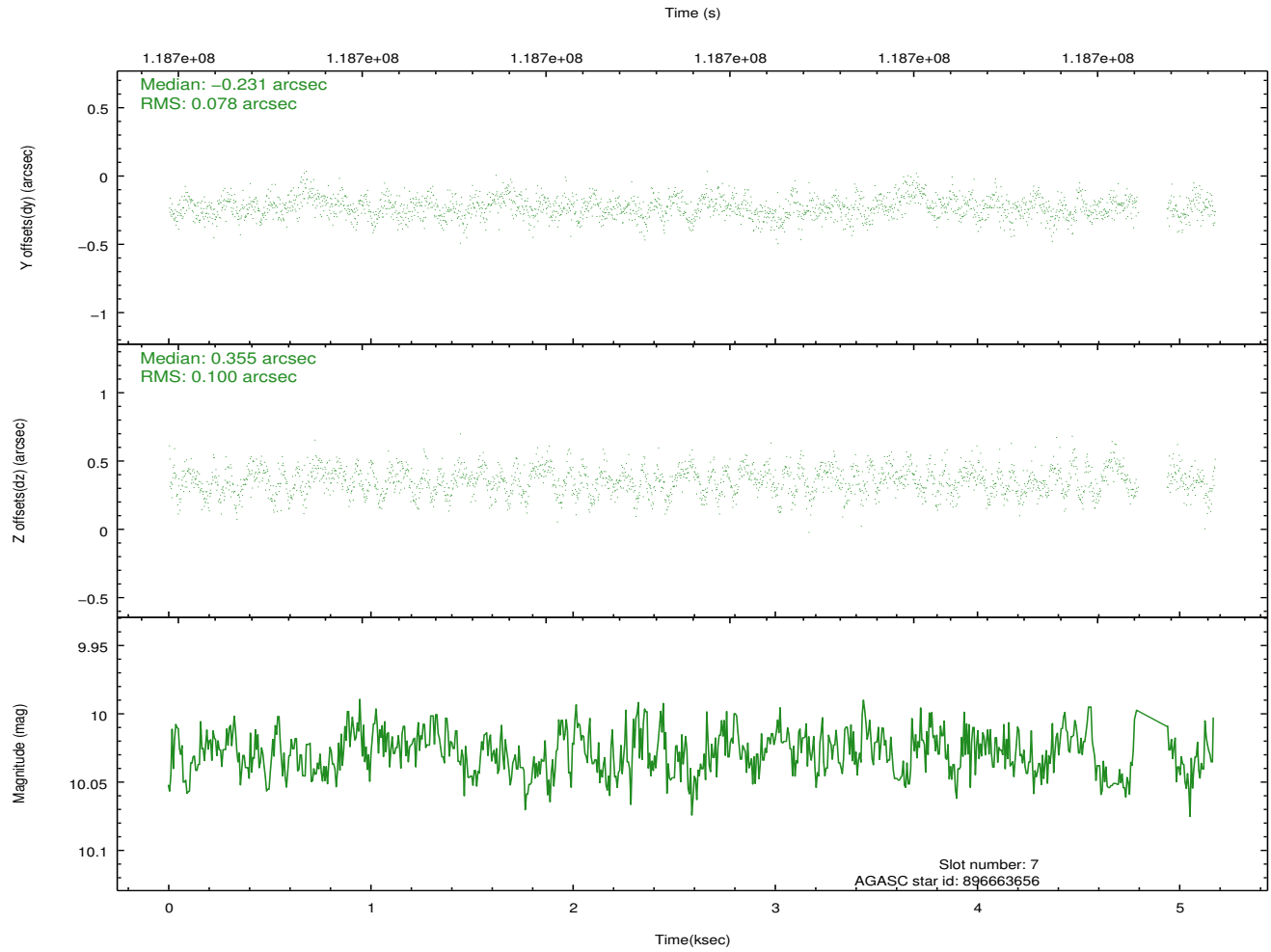
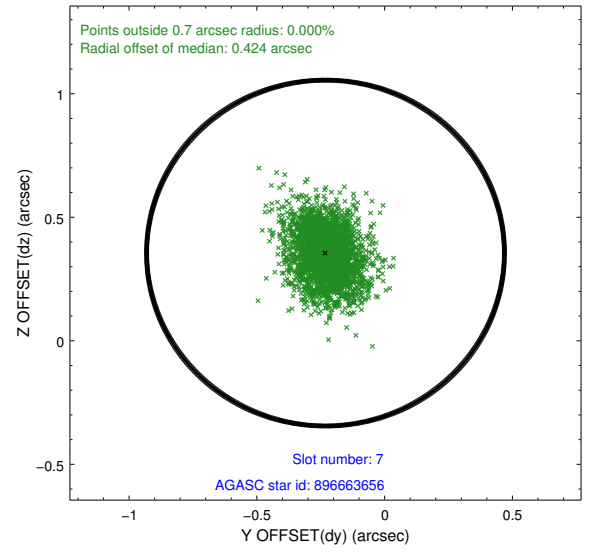
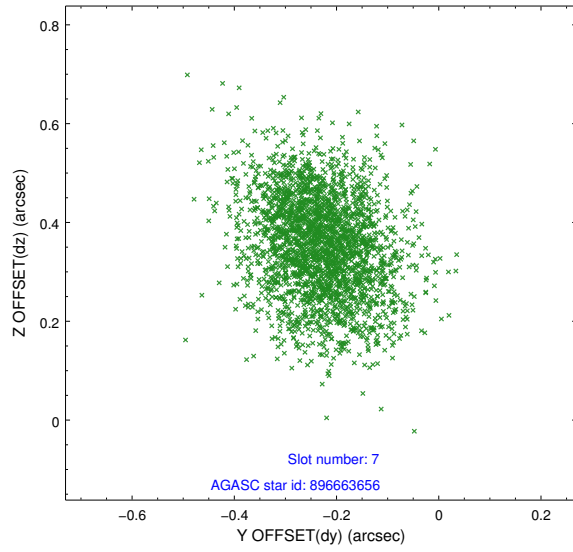


## 2.4.4 Slot 6



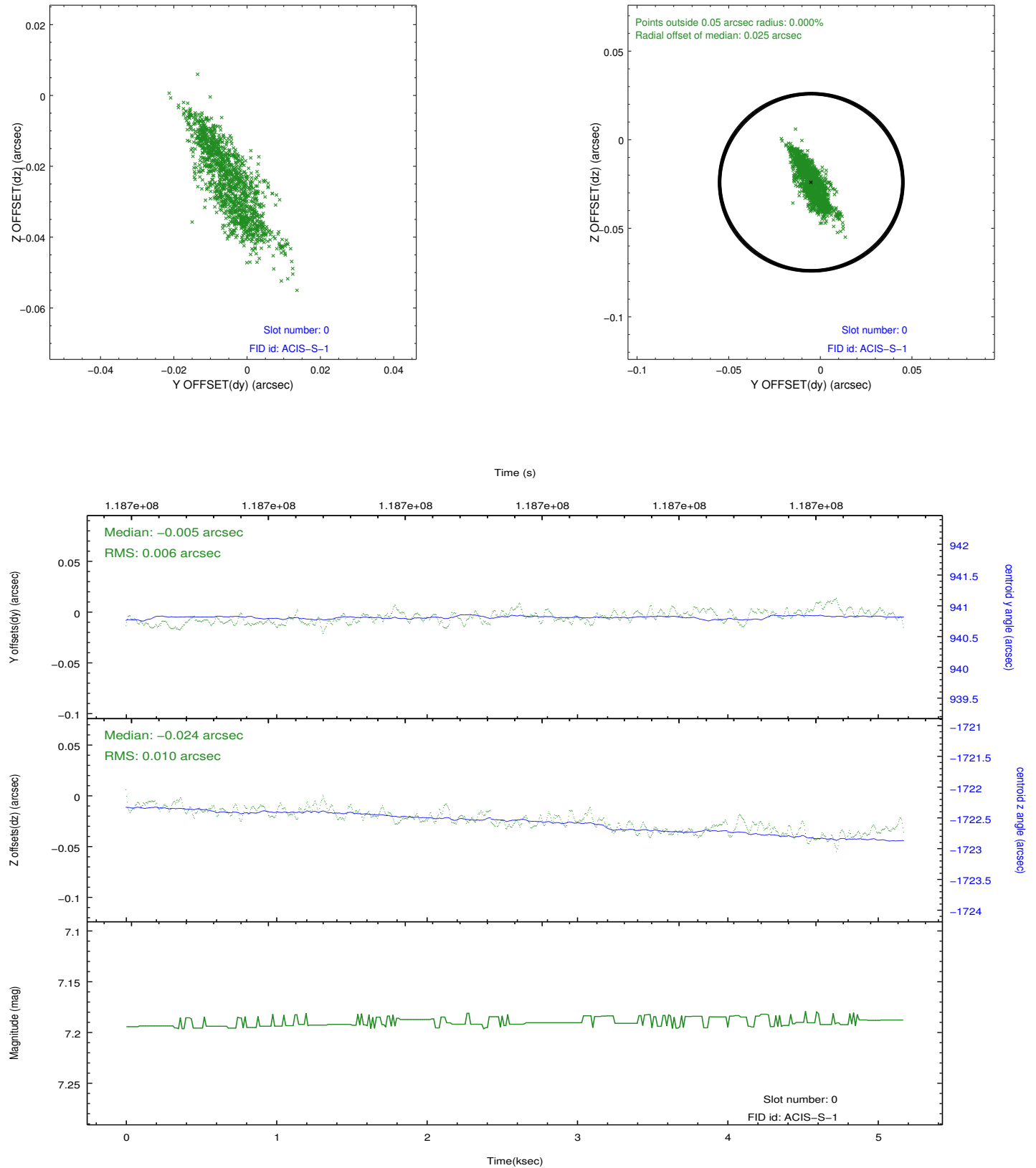


## 2.4.5 Slot 7

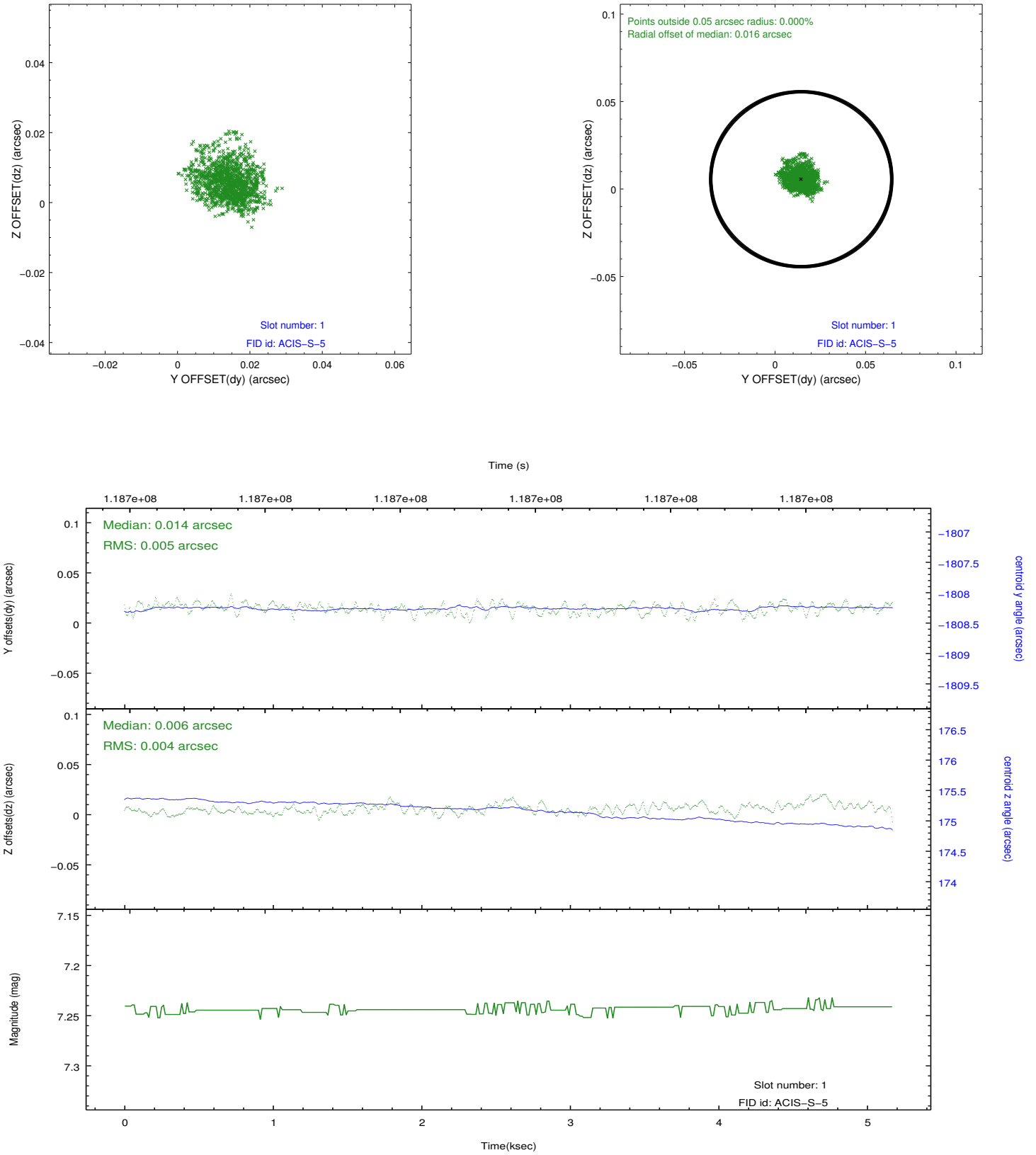


## 2.5 FID Slots

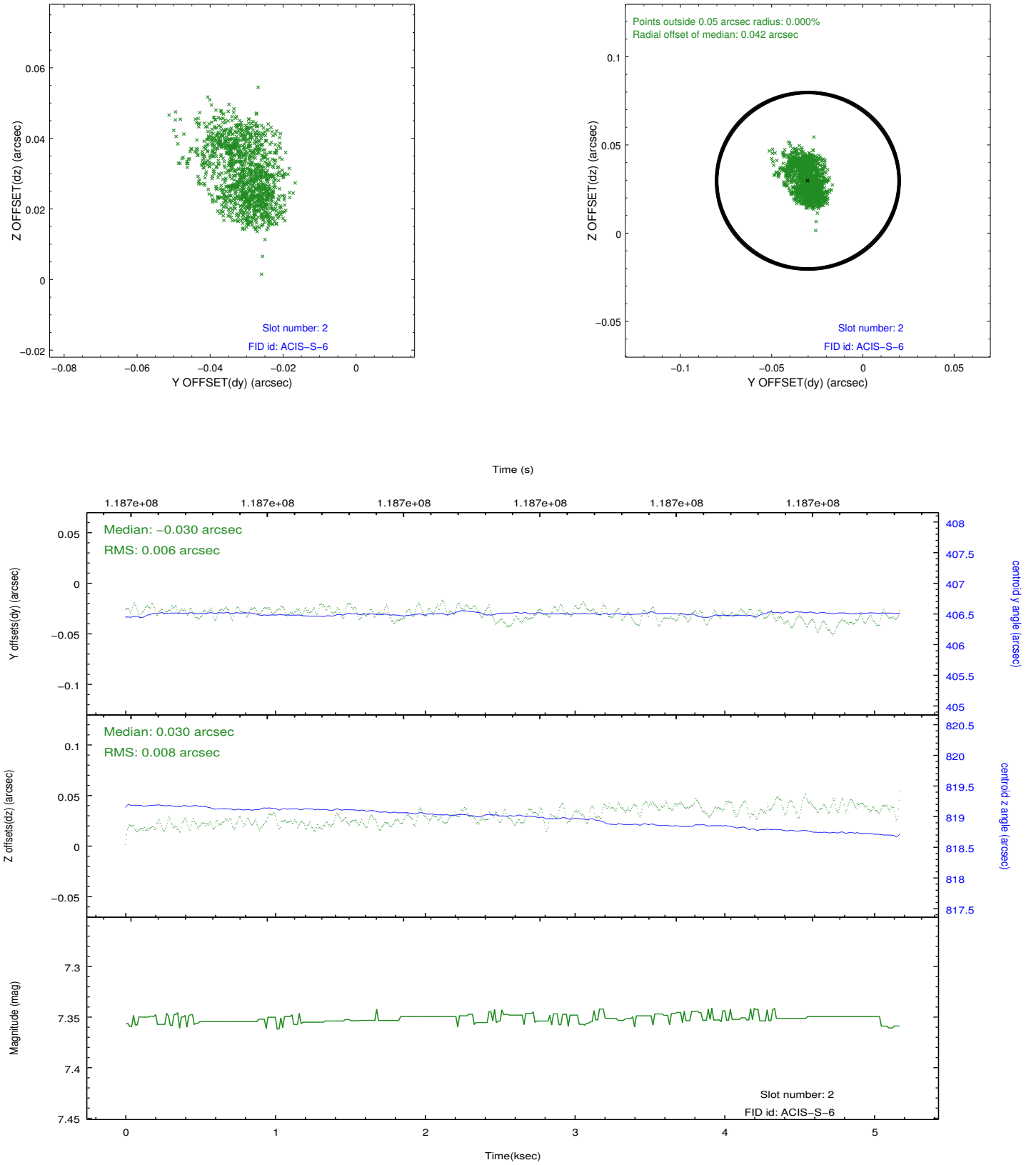
### 2.5.1 Slot 0



## 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)      | 2012.09.27 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 5.171      |

### **A.2 Comments**