

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 10018 - L2 Version 2  
Chandra X-Ray Center

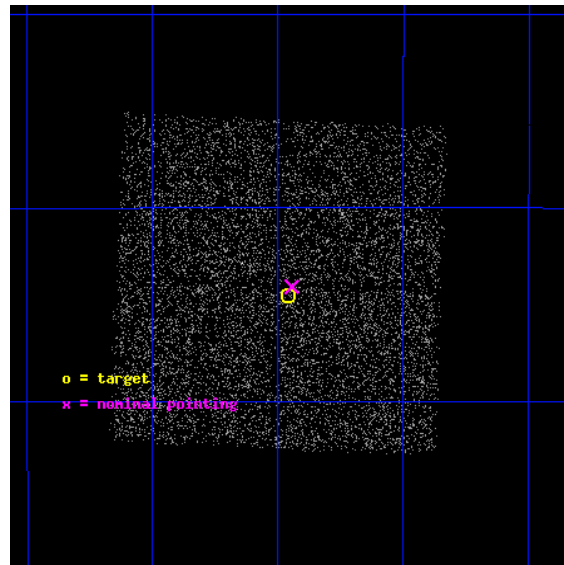
L2 Processing Date : Jun 1 2012

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# 1 Front

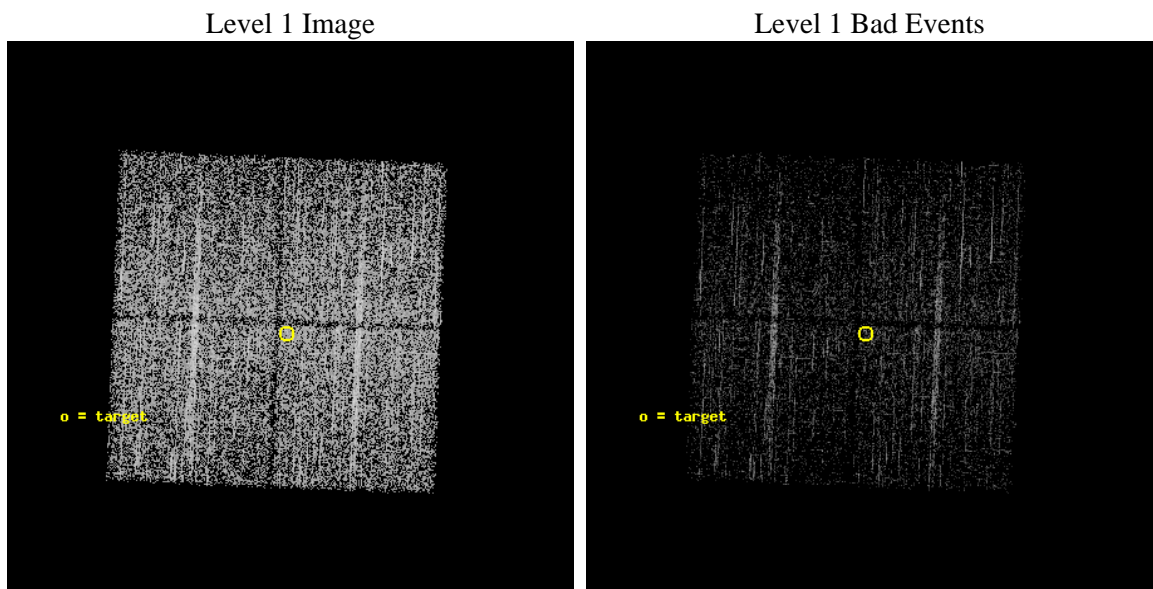
|          |  |   |
|----------|--|---|
| seq_num  | 400982   | Sequence number                             |
| obs_id   | 10018  | Observation id                              |
| title    | Completing the Galactic Bulge Survey: categorising the plethora of faint X-ray sources in the Galactic Bulge | Proposal title                              |
| observer | dr Peter Jonker  | Principal investigator                      |
| object   | GBS6-10  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 263.864125   | Observer's specified target RA [deg]        |
| dec_targ | -28.908917   | Observer's specified target Dec [deg]       |
| ra_nom   | 263.86103337011  | Nominal RA [deg]                            |
| dec_nom  | -28.901350791862   | Nominal Dec [deg]                           |
| roll_nom | 92.288831812866  | Nominal Roll [deg]                          |
| revision | 2  | Processing version of data                  |
| ontime   | 2185.5000168085  | Sum of GTIs [s]                             |
| livetime | 2156.9448501472  | Livetime [s]                                |
| ontime0  | 2185.5000168085  | Sum of GTIs [s]                             |
| ontime1  | 2185.5000168085  | Sum of GTIs [s]                             |
| ontime2  | 2182.3590664864  | Sum of GTIs [s]                             |
| ontime3  | 2185.5000168085  | Sum of GTIs [s]                             |
| l2events | 10545  | Number of level 2 events                    |



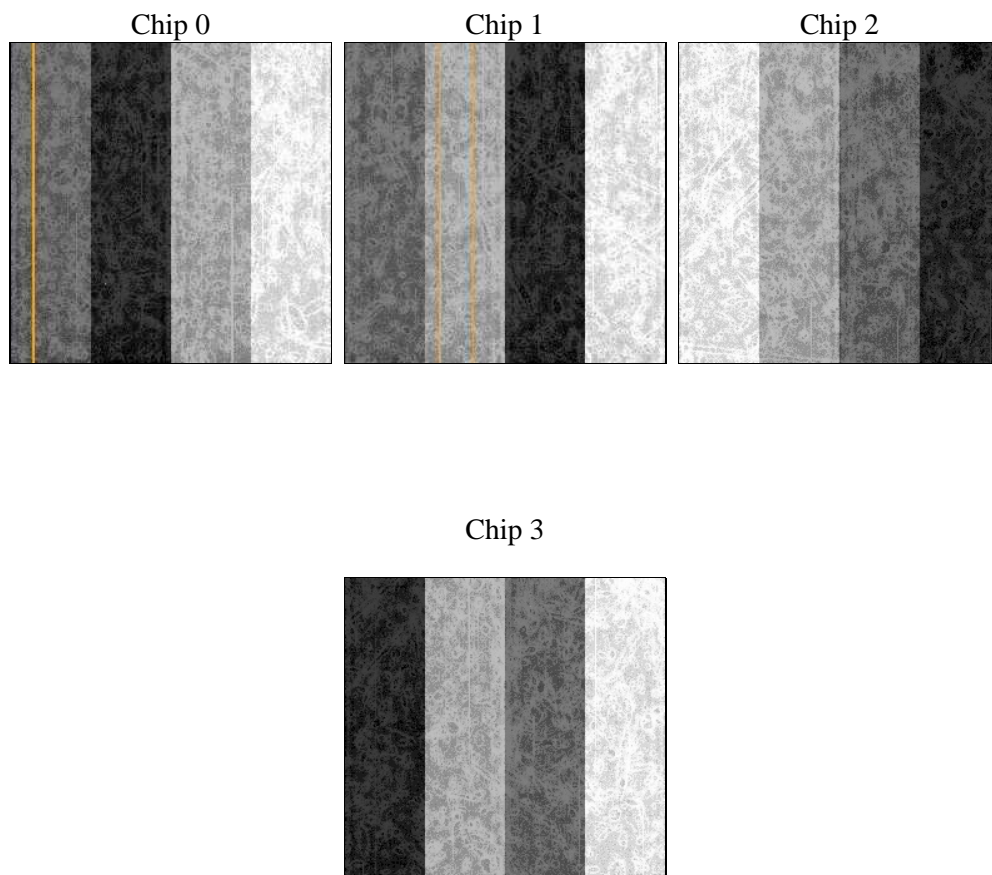
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 2000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.4               | Processing system revision     | ontime         | 2185.5000168085 | Sum of GTIs [s]                         |
| caldsver | 4.4.9               | &#160                          | ontime0        | 2185.5000168085 | Sum of GTIs [s]                         |
| date     | 2012-06-01T06:00:37 | Date and time of file creation | ontime1        | 2185.5000168085 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime2        | 2182.3590664864 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 2185.5000168085 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 98178           | Number of level 1 events                |

### 2.1.4 Events

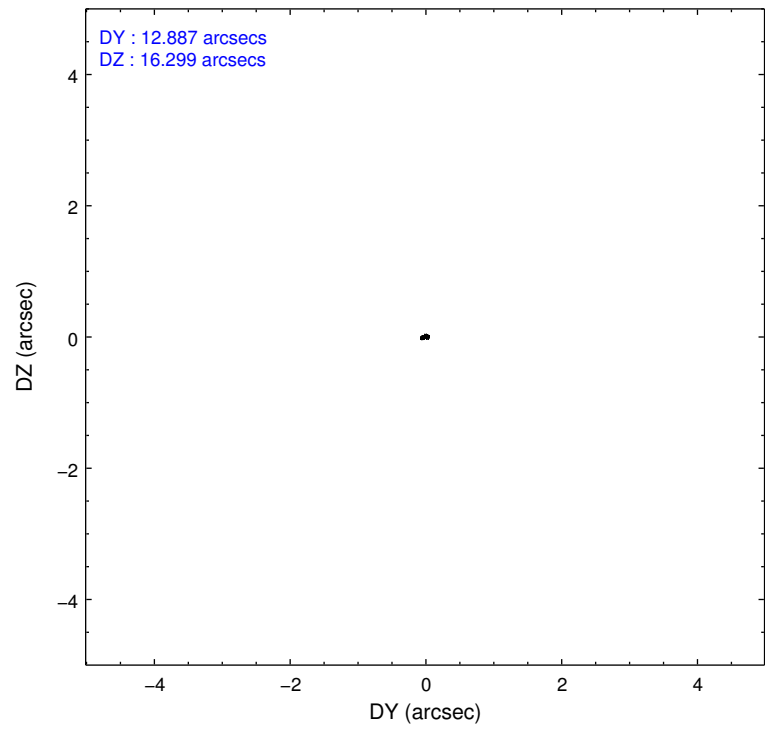
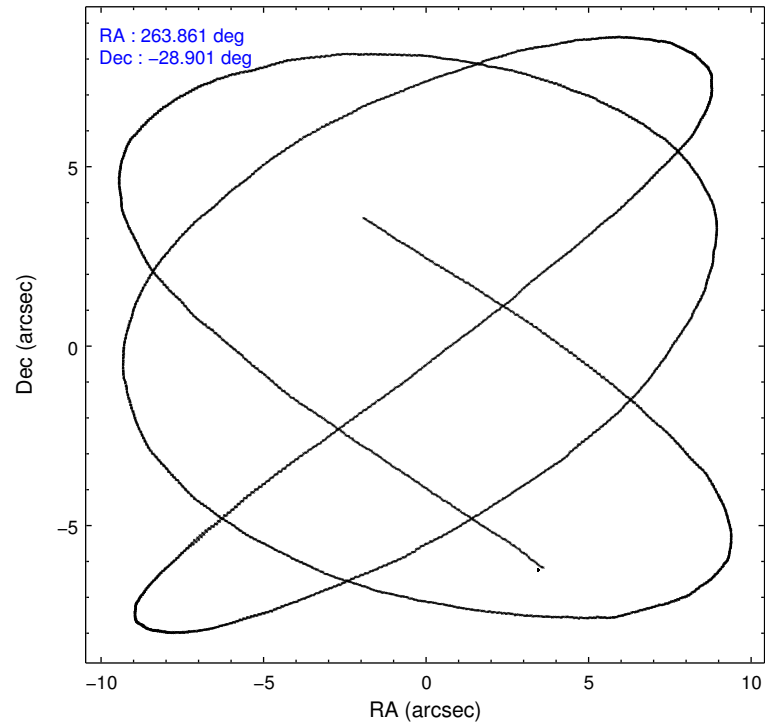
|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|-----------------|-------|-------|-------|-------|
| level 1 events  | 22488 | 24730 | 25500 | 25460 |
| rejected events | 19379 | 21592 | 22594 | 22476 |
| rejected %      | 86%   | 87%   | 88%   | 88%   |

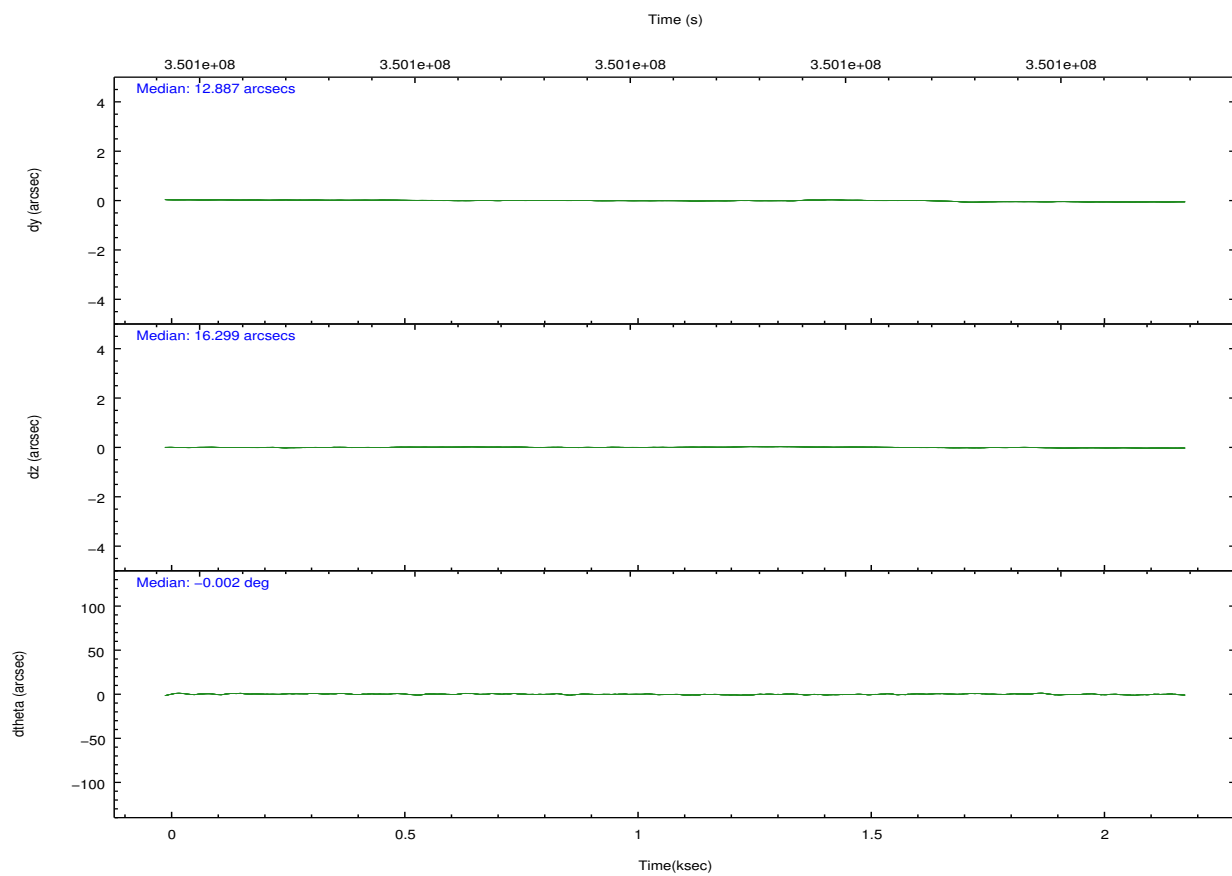
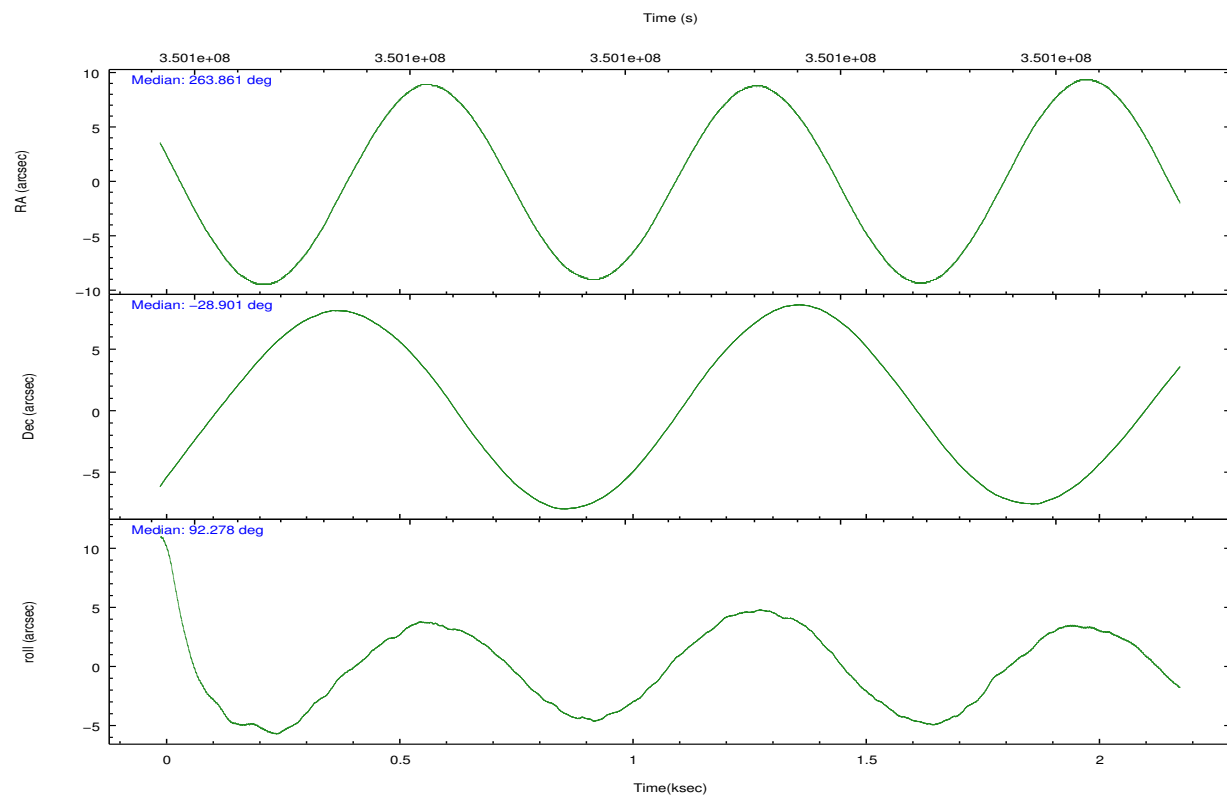
|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|----------------|-------|-------|-------|-------|
| grade 0 events | 1590  | 1476  | 1556  | 1586  |
|                | 7%    | 5%    | 6%    | 6%    |
| grade 1 events | 30    | 15    | 21    | 19    |
|                | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 799   | 859   | 689   | 673   |
|                | 3%    | 3%    | 2%    | 2%    |
| grade 3 events | 291   | 300   | 282   | 292   |
|                | 1%    | 1%    | 1%    | 1%    |
| grade 4 events | 296   | 312   | 293   | 304   |
|                | 1%    | 1%    | 1%    | 1%    |
| grade 5 events | 1108  | 1155  | 1035  | 1254  |
|                | 4%    | 4%    | 4%    | 4%    |
| grade 6 events | 576   | 685   | 525   | 553   |
|                | 2%    | 2%    | 2%    | 2%    |
| grade 7 events | 17798 | 19928 | 21099 | 20779 |
|                | 79%   | 80%   | 82%   | 81%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-0123           | ACIS-0123             | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                  | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | VFAINT              | VFAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING              | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 263.877920          | 263.861033370112      | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | -28.924485          | -28.9013507918621     | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 92.088307           | 92.28883181286587     | [s] Primary exposure time             | 0.000000  | 3.1     |
| [mm] SIM focus pos                | -0.782348           | -0.7809083437167272   |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001439871863259334  |                                       |           |         |
| [mm] SIM translation stage pos    | -233.592463         | -233.5874344608287    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.005018542100998502 |                                       |           |         |
| [s] Observation start time (MET)  | 350102188.184000    | 350101812.18103       |                                       |           |         |
| Observation start date            | 2009-02-04T02:35:22 | 2009-02-04T02:30:12   |                                       |           |         |
| [s] Observation end time (MET)    | 350104188.184000    | 350104322.40616       |                                       |           |         |
| Observation end date              | 2009-02-04T03:08:42 | 2009-02-04T03:12:02   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect





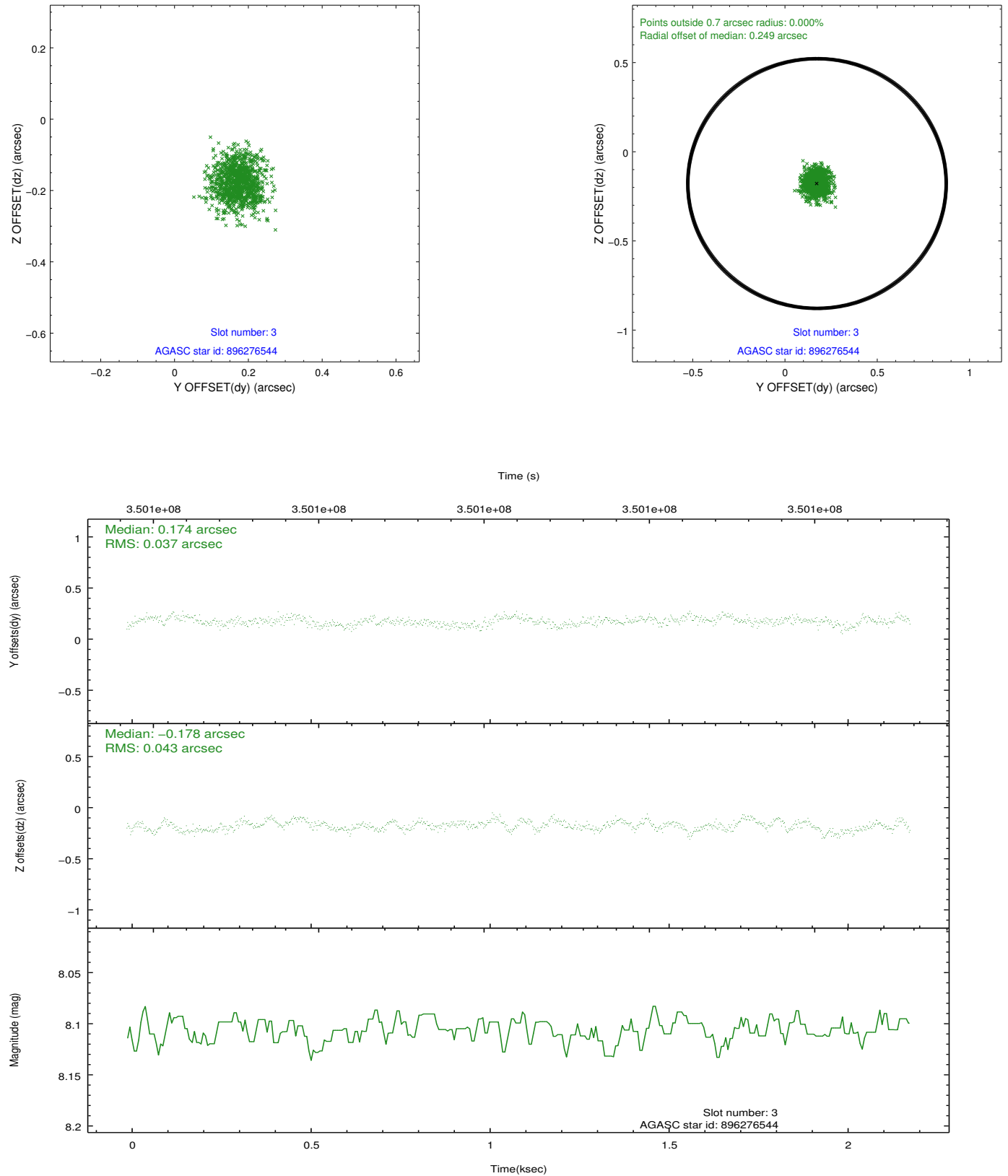
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-I-1  | 6.99 | 534   | -0.015 | -0.076 | 0.007 | 0.012 | 0.000000   | 0.000000   | 926.62   | -840.01  |
| 1    | FID    | ACIS-I-4  | 6.93 | 534   | 0.158  | 0.083  | 0.006 | 0.013 | 0.000000   | 0.000000   | 2148.49  | 1058.45  |
| 2    | FID    | ACIS-I-5  | 6.99 | 534   | -0.240 | 0.063  | 0.006 | 0.013 | 0.000000   | 0.000000   | -1817.77 | 1059.68  |
| 3    | GUIDE  | 896276544 | 8.11 | 1066  | 0.174  | -0.178 | 0.061 | 0.097 | 263.666616 | -29.255819 | -1167.86 | 706.43   |
| 4    | GUIDE  | 896278088 | 7.61 | 1068  | 0.167  | -0.232 | 0.061 | 0.099 | 263.476198 | -29.223388 | -1032.16 | 1300.93  |
| 5    | GUIDE  | 896403960 | 8.60 | 1065  | -0.065 | 0.103  | 0.084 | 0.142 | 264.379044 | -28.245612 | 2380.88  | -1675.34 |
| 6    | GUIDE  | 896406568 | 8.26 | 1068  | -0.091 | 0.075  | 0.080 | 0.132 | 264.435951 | -28.437282 | 1687.29  | -1830.24 |
| 7    | GUIDE  | 896405976 | 9.11 | 1066  | -0.184 | 0.234  | 0.109 | 0.164 | 264.638127 | -28.604395 | 1058.74  | -2444.03 |

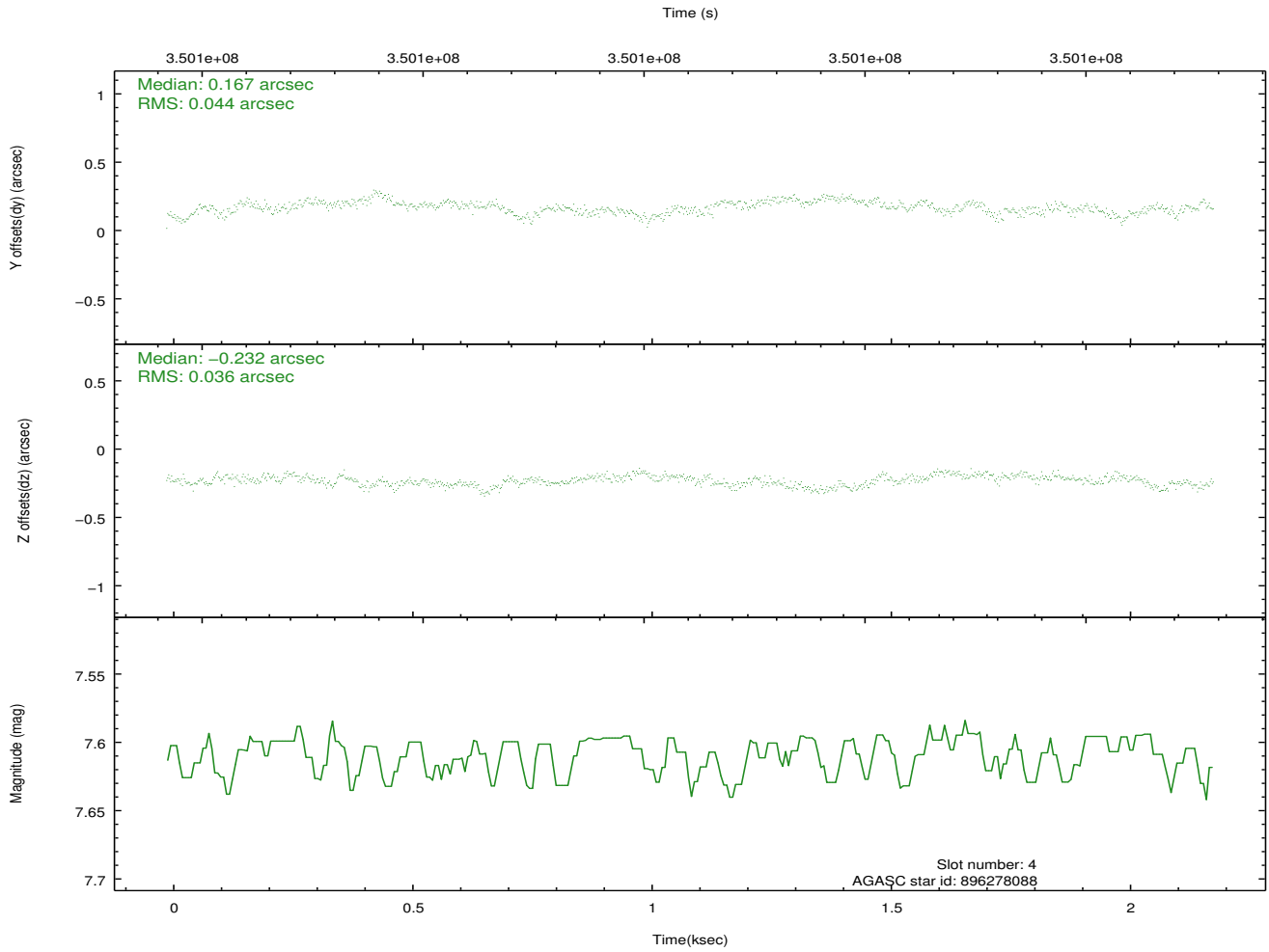
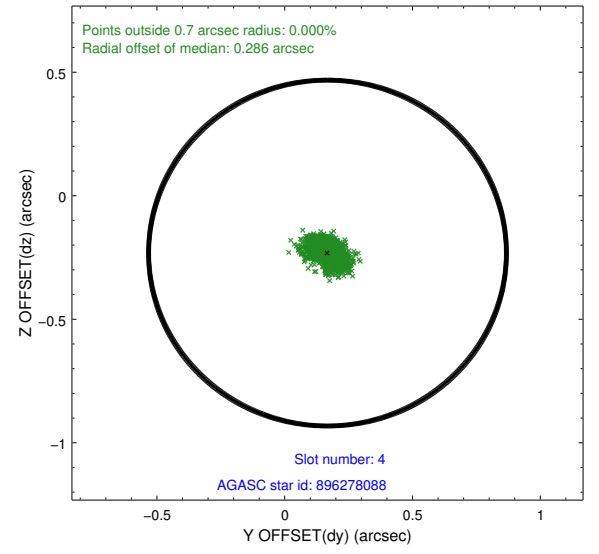
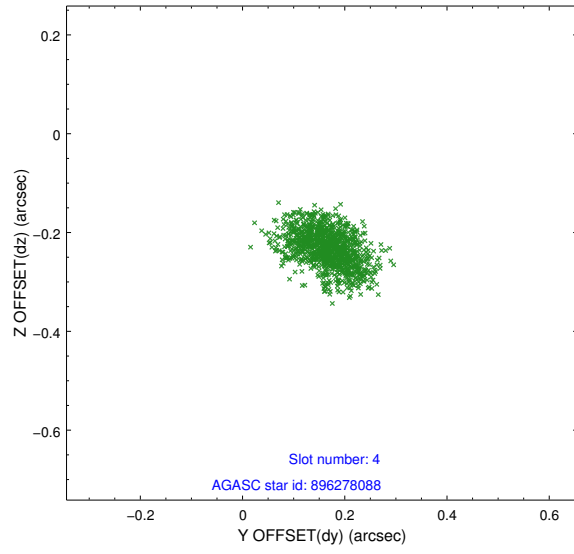


## 2.4 Star Slots

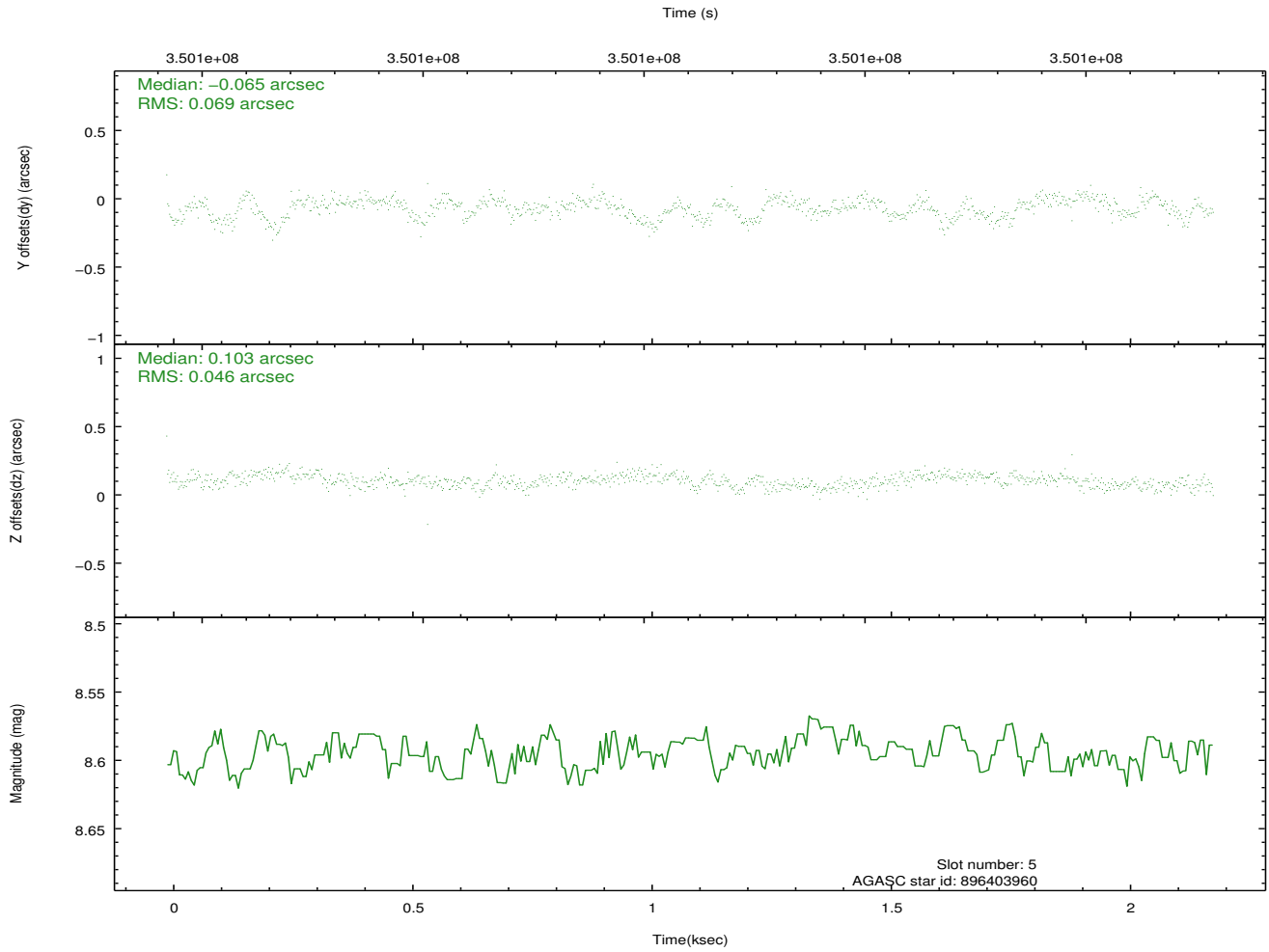
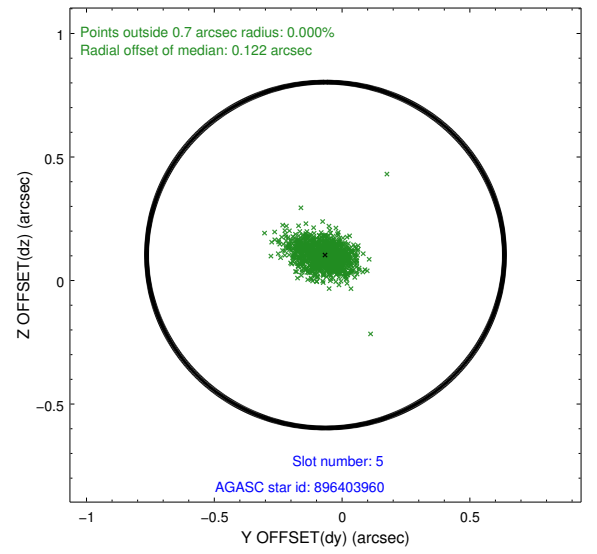
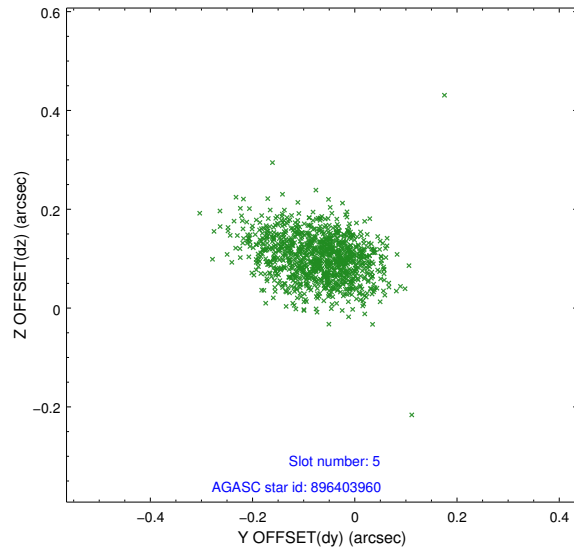
### 2.4.1 Slot 3



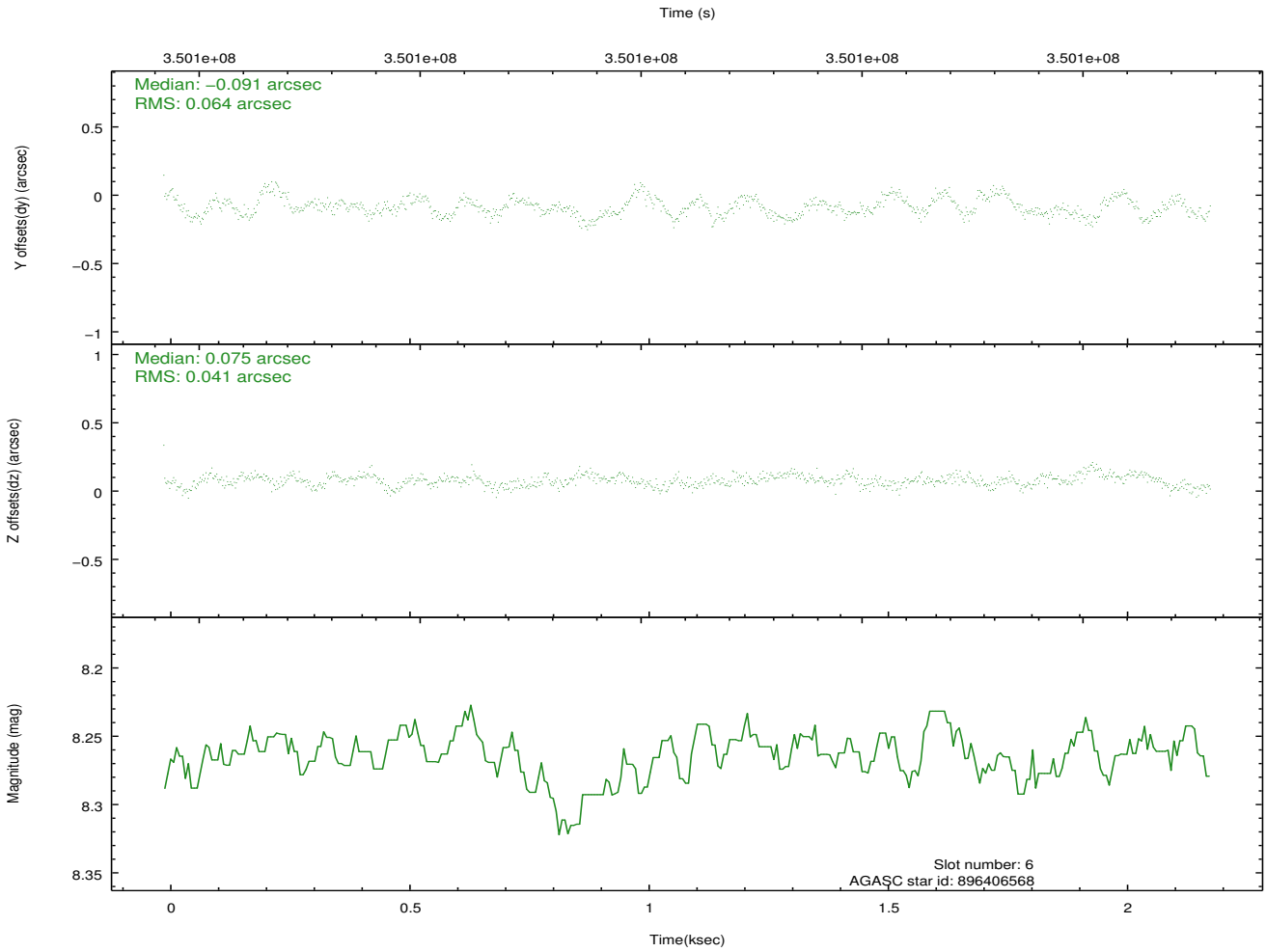
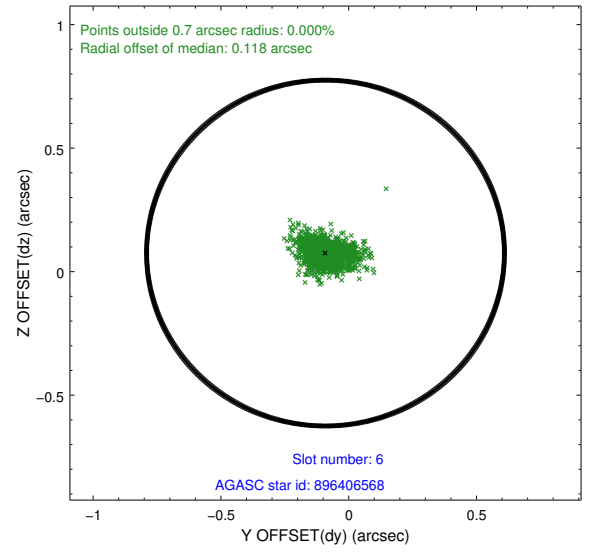
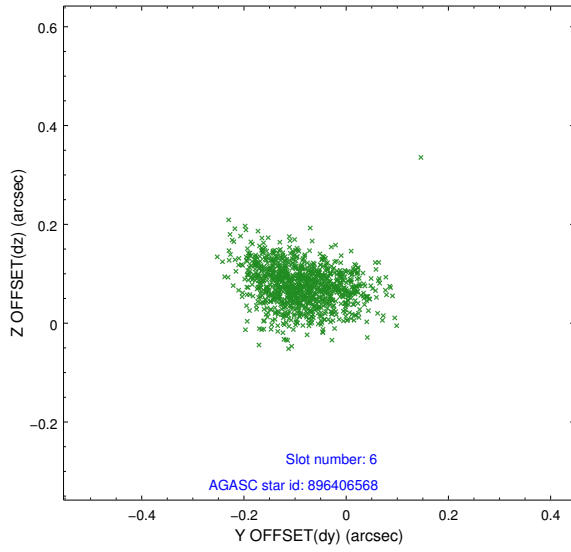
## 2.4.2 Slot 4



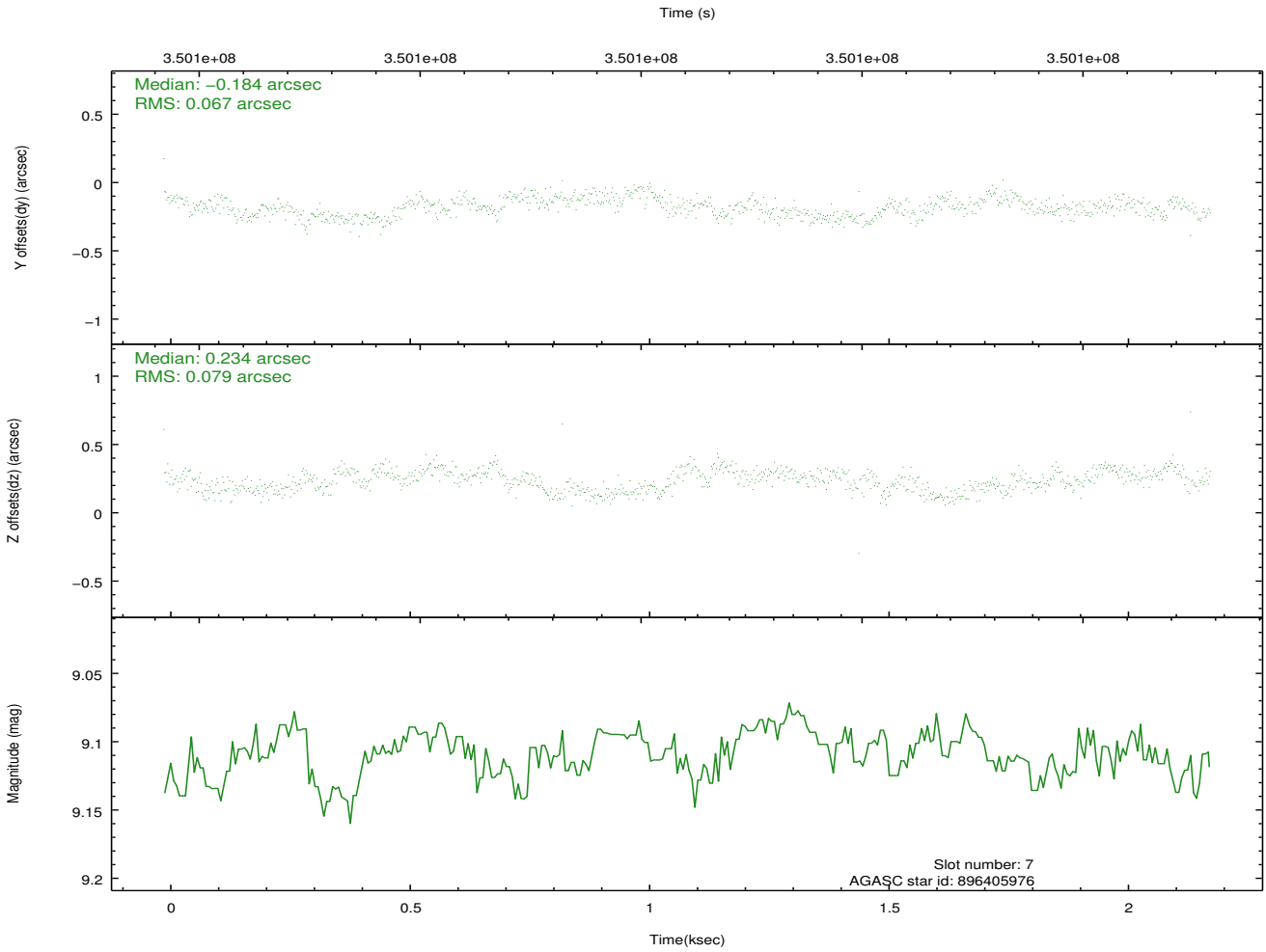
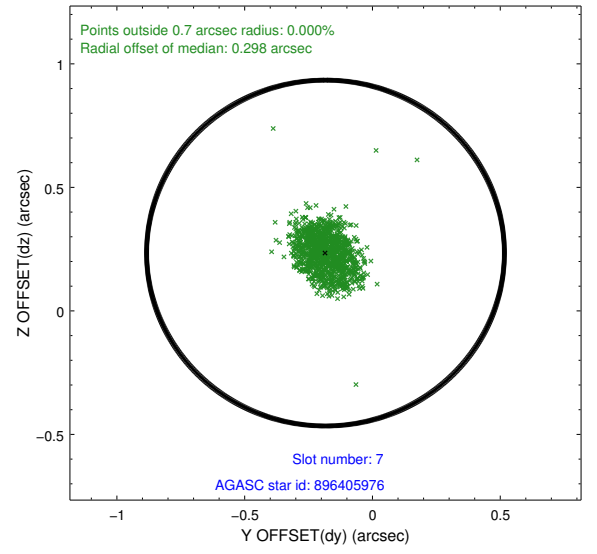
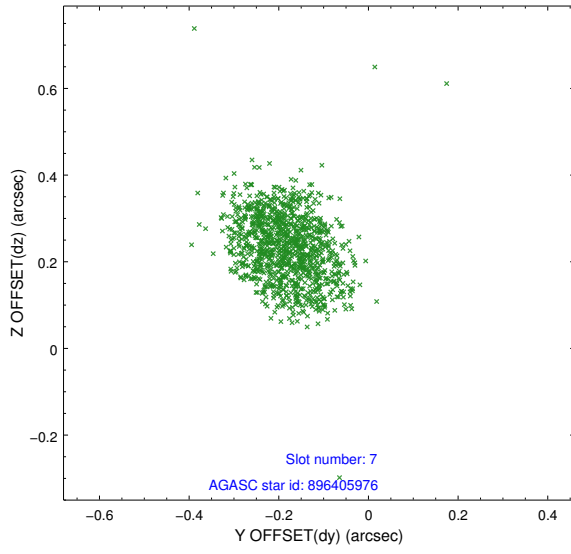
### 2.4.3 Slot 5



## 2.4.4 Slot 6

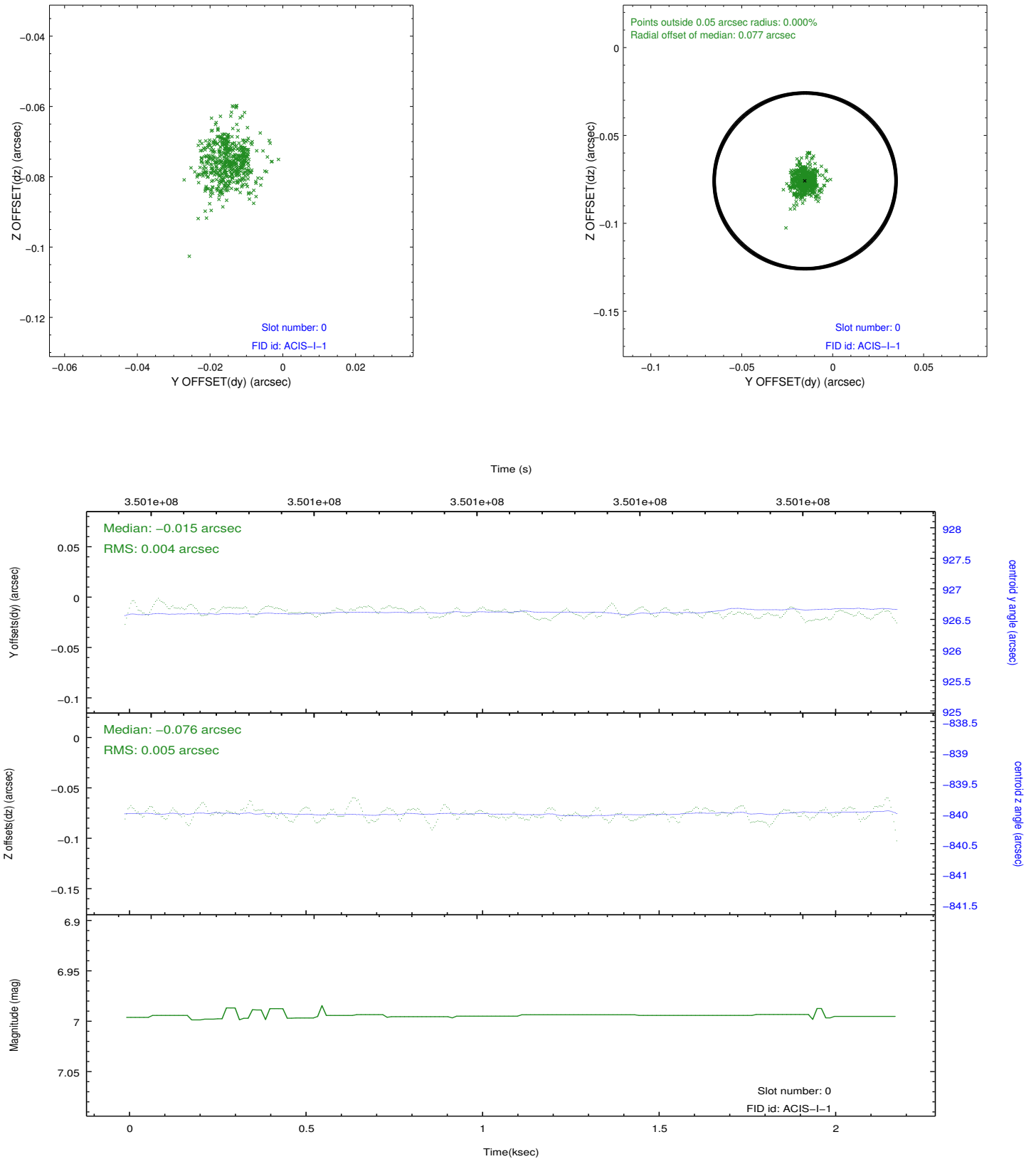


## 2.4.5 Slot 7

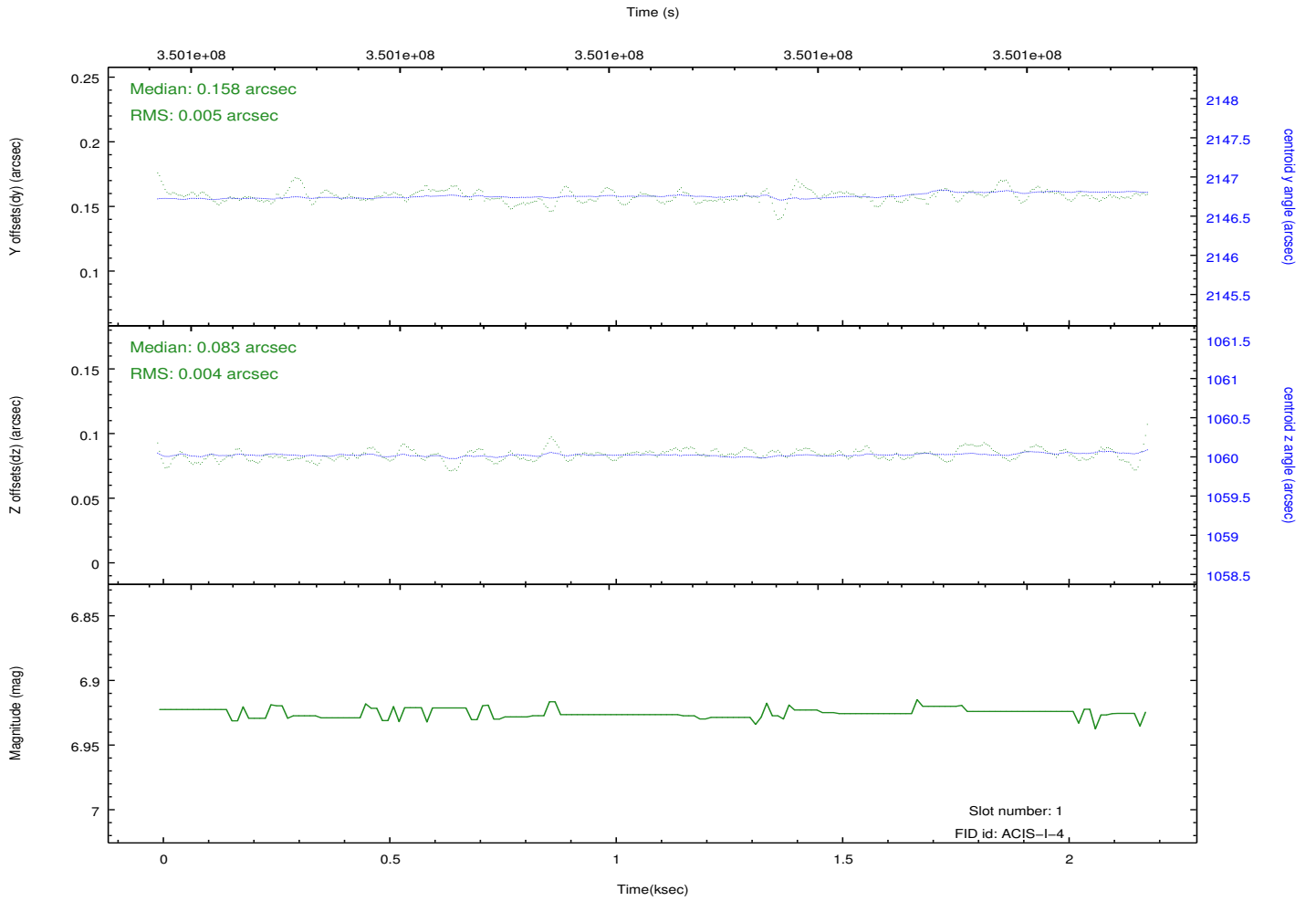
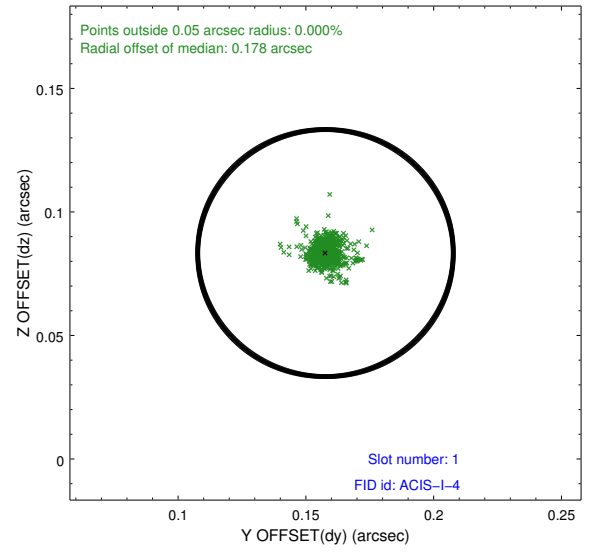
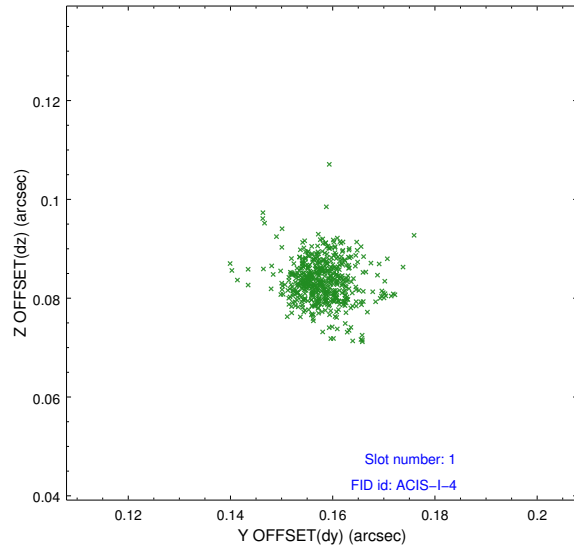


## 2.5 FID Slots

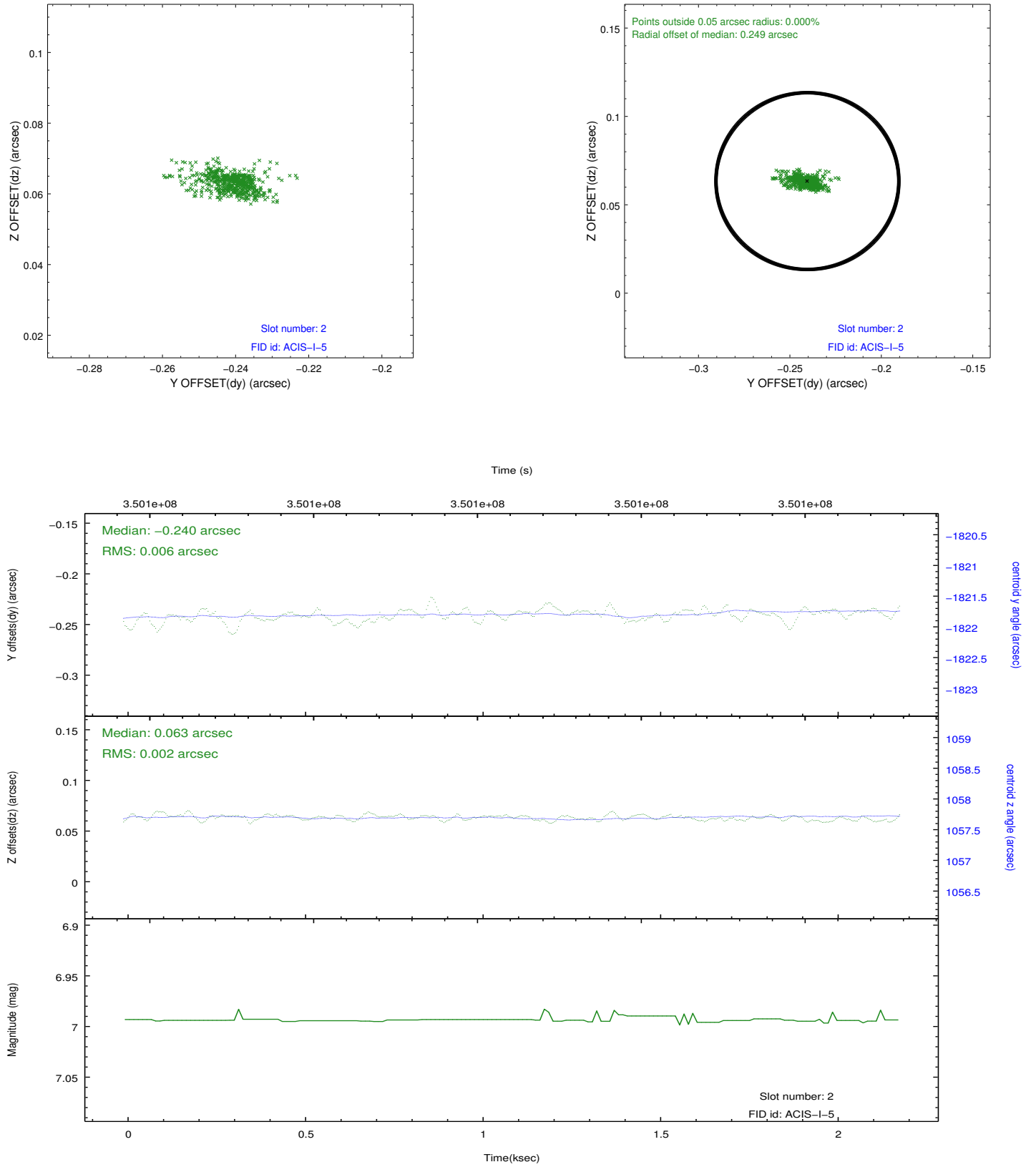
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2





## A Summary

### A.1 Status

|                            |             |
|----------------------------|-------------|
| V&V Scientist              | Joy Nichols |
| V&V Date (YYYY-MM-DD)      | 2012.06.06  |
| V&V Edition                | 1           |
| V&V Disposition and Status | OK          |
| V&V Charge Time            | 2.18550001  |

### A.2 Comments

Joint Proposal:NOAO