

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 6603 - L2 Version 3  
Chandra X-Ray Center

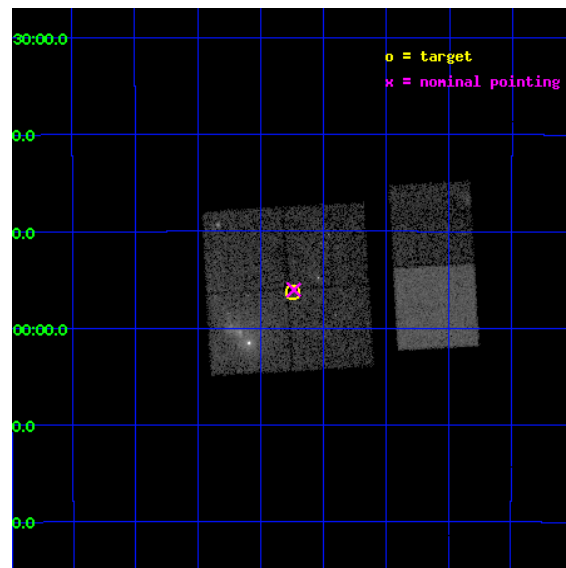
L2 Processing Date : Apr 22 2012

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# 1 Front

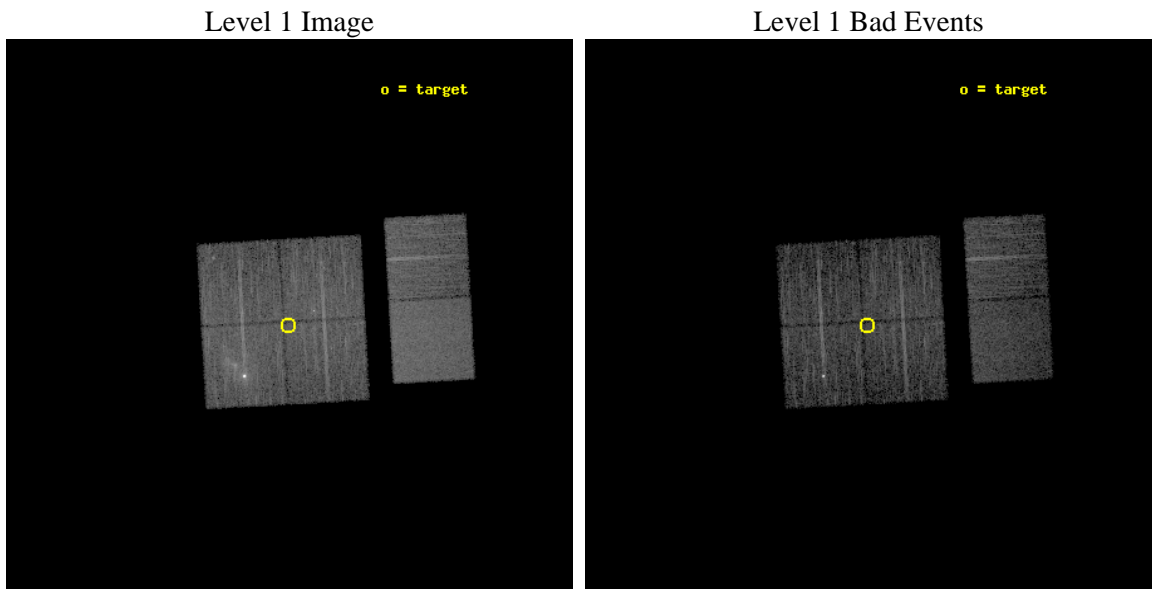
|          |  |   |
|----------|--|---|
| seq_num  | 400508   | Sequence number                             |
| obs_id   | 6603   | Observation id                              |
| title    | Chandra observations of enigmatic X-ray and radio transients | Propo                                       |
| observer | Dr. Rudy Wijnands  | Principal investigator                      |
| object   | GRS 1741.9-2853  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 266.31125  | Observer's specified target RA [deg]        |
| dec_targ | -28.938889   | Observer's specified target Dec [deg]       |
| ra_nom   | 266.3088530684   | Nominal RA [deg]                            |
| dec_nom  | -28.934280464318   | Nominal Dec [deg]                           |
| roll_nom | 86.751566548124  | Nominal Roll [deg]                          |
| revision | 3  | Processing version of data                  |
| ontime   | 4949.6090274453  | Sum of GTIs [s]                             |
| livetime | 4886.9340976431  | Livetime [s]                                |
| ontime0  | 4946.2449271679  | Sum of GTIs [s]                             |
| ontime1  | 4949.5269474387  | Sum of GTIs [s]                             |
| ontime2  | 4949.567987442   | Sum of GTIs [s]                             |
| ontime3  | 4949.6090274453  | Sum of GTIs [s]                             |
| ontime6  | 4949.6911074519  | Sum of GTIs [s]                             |
| ontime7  | 4949.6500674486  | Sum of GTIs [s]                             |
| l2events | 80172  | Number of level 2 events                    |



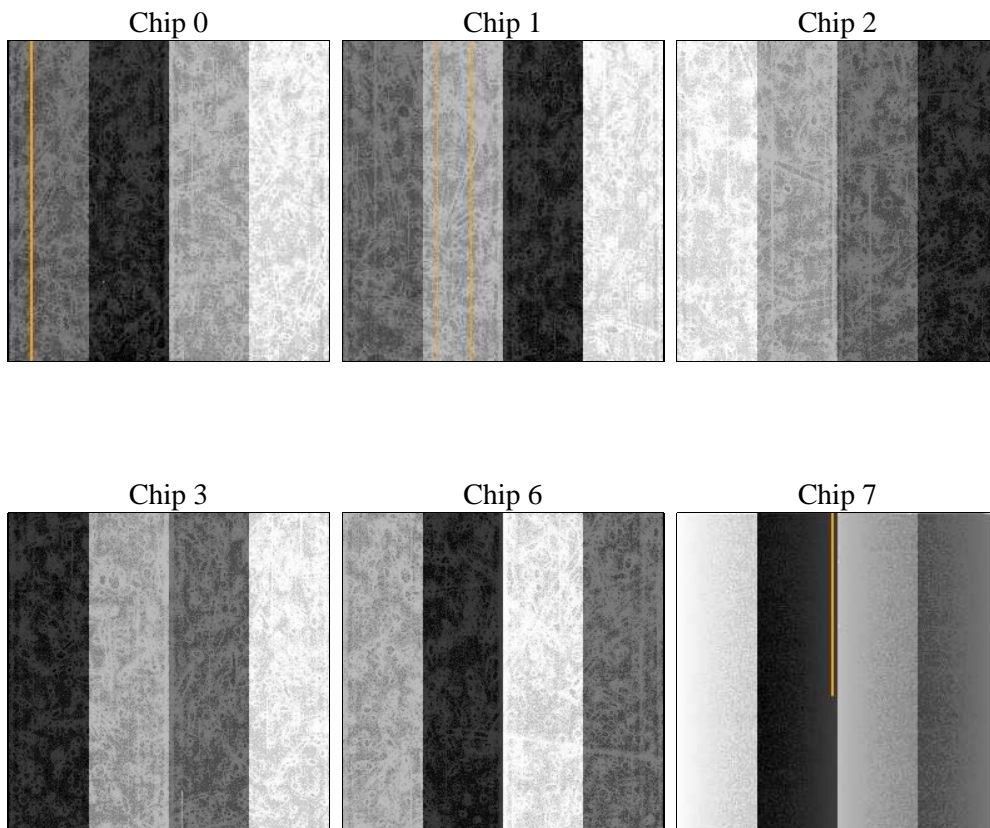
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 5000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.4               | Processing system revision     | ontime         | 4949.6090274453 | Sum of GTIs [s]                         |
| caldsver | 4.4.9               | &#160                          | ontime0        | 4946.2449271679 | Sum of GTIs [s]                         |
| date     | 2012-04-22T20:11:48 | Date and time of file creation | ontime1        | 4949.5269474387 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime2        | 4949.567987442  | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 4949.6090274453 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 4949.6911074519 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 4949.6500674486 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 328880          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 47356 | 68531 | 50973 | 47009 | 49879 | 65132 | grade 0 events | 4920  | 15320 | 4280  | 4032  | 2755  | 2536  |
| rejected events | 38073 | 41323 | 42742 | 39137 | 43362 | 37355 |                | 10%   | 22%   | 8%    | 8%    | 5%    | 3%    |
| rejected %      | 80%   | 60%   | 83%   | 83%   | 86%   | 57%   | grade 1 events | 42    | 618   | 64    | 42    | 27    | 67    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 1734  | 4855  | 1597  | 1441  | 1378  | 5546  |
|                 |       |       |       |       |       |       |                | 3%    | 7%    | 3%    | 3%    | 2%    | 8%    |
|                 |       |       |       |       |       |       | grade 3 events | 714   | 1761  | 635   | 622   | 586   | 2354  |
|                 |       |       |       |       |       |       |                | 1%    | 2%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 656   | 1813  | 603   | 648   | 567   | 2443  |
|                 |       |       |       |       |       |       |                | 1%    | 2%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1811  | 2675  | 1860  | 2221  | 2264  | 6145  |
|                 |       |       |       |       |       |       |                | 3%    | 3%    | 3%    | 4%    | 4%    | 9%    |
|                 |       |       |       |       |       |       | grade 6 events | 1265  | 3497  | 1128  | 1138  | 1240  | 14931 |
|                 |       |       |       |       |       |       |                | 2%    | 5%    | 2%    | 2%    | 2%    | 22%   |
|                 |       |       |       |       |       |       | grade 7 events | 36214 | 37992 | 40806 | 36865 | 41062 | 31110 |
|                 |       |       |       |       |       |       |                | 76%   | 55%   | 80%   | 78%   | 82%   | 47%   |

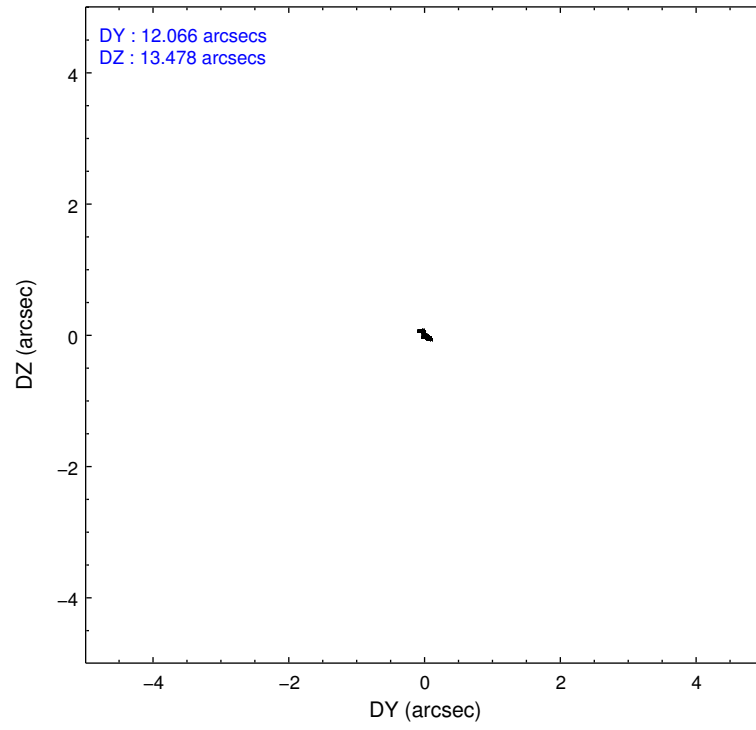
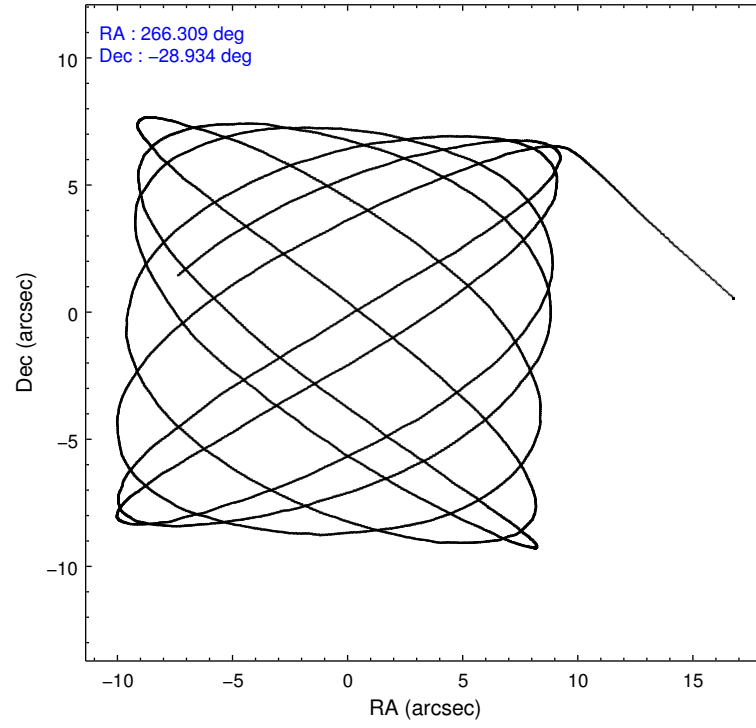


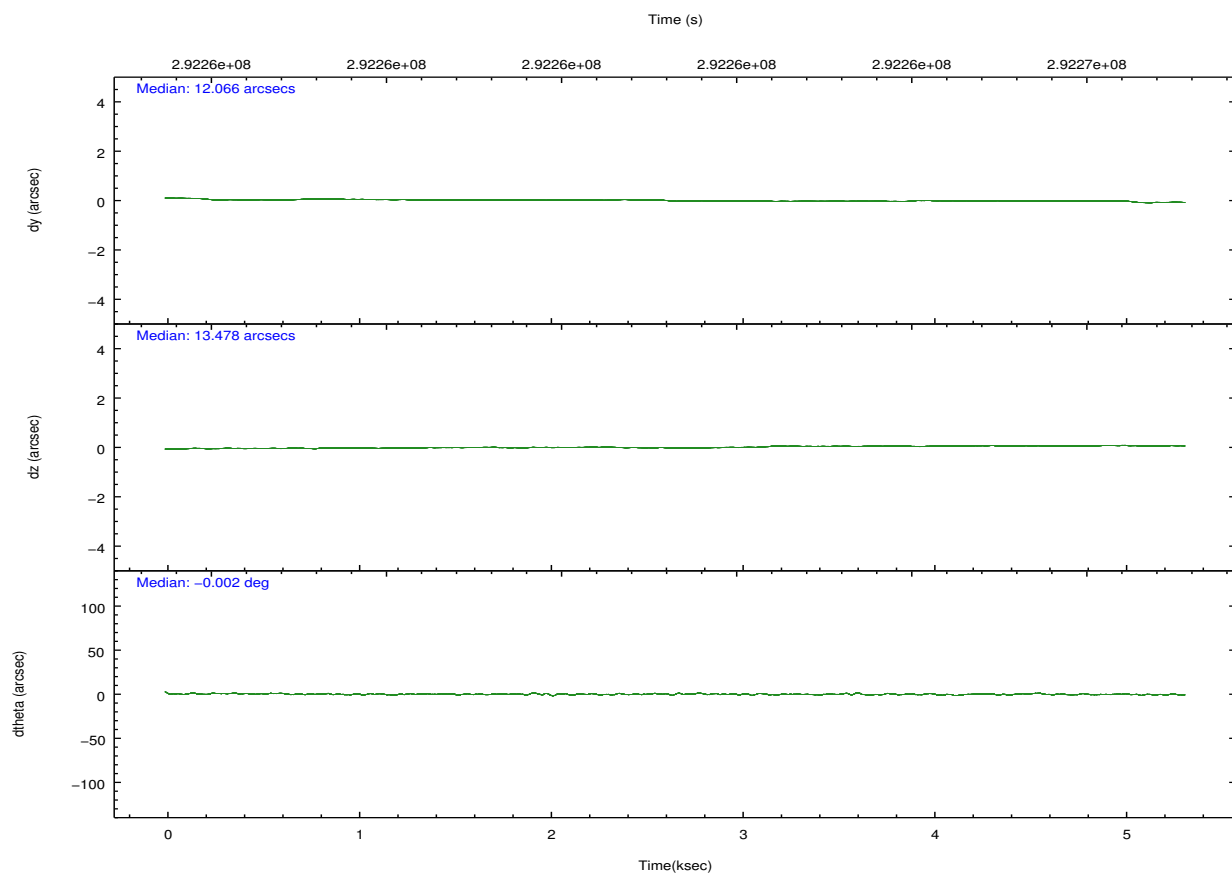
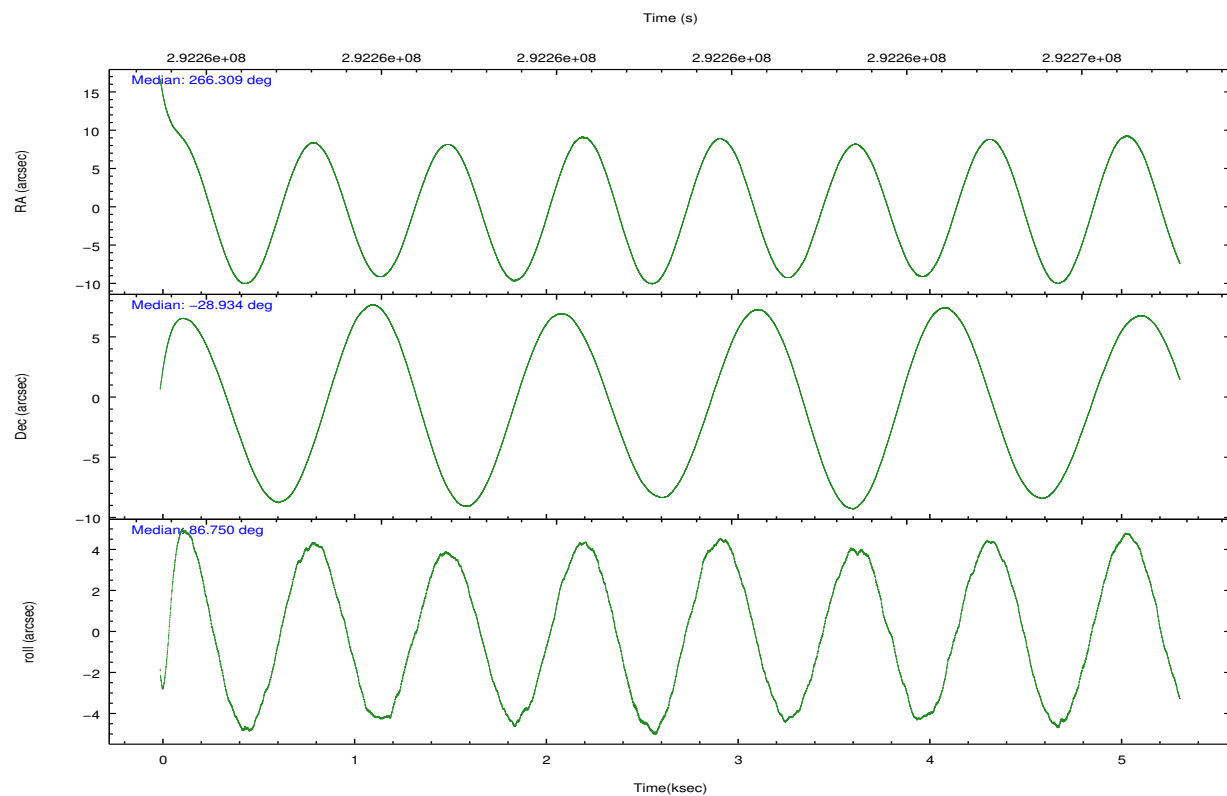
## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                |
|-----------------------------------|---------------------|-----------------------|
| Instrument                        | ACIS                | ACIS                  |
| Detector                          | ACIS-012367         | ACIS-012367           |
| Grating                           | NONE                | NONE                  |
| Data mode                         | FAINT               | FAINT                 |
| Observation mode                  | POINTING            | POINTING              |
| [deg] Pointing RA                 | 266.323039          | 266.3088530683997     |
| [deg] Pointing Dec                | -28.958881          | -28.9342804643183     |
| [deg] Pointing Roll               | 86.549772           | 86.75156654812432     |
| [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)  | 292261296.184000    | 292260267.2726        |
| Observation start date            | 2007-04-06T15:40:31 | 2007-04-06T15:24:27   |
| [s] Observation end time (MET)    | 292266296.184000    | 292267177.82293       |
| Observation end date              | 2007-04-06T17:03:51 | 2007-04-06T17:19:37   |
| Read mode                         | TIMED               | TIMED                 |

| Parameter                             | Planned   | Actual  |
|---------------------------------------|-----------|---------|
| Obspar format version number          | 7         | 7       |
| Obspar file type                      | PREDICTED | ACTUAL  |
| Obspar update status                  | NONE      | UPDATED |
| CCD I0 on                             | Y         | Y       |
| CCD I1 on                             | Y         | Y       |
| CCD I2 on                             | Y         | Y       |
| CCD I3 on                             | Y         | Y       |
| CCD S0 on                             | N         | N       |
| CCD S1 on                             | N         | N       |
| CCD S2 on                             | O1        | Y       |
| CCD S3 on                             | O2        | Y       |
| CCD S4 on                             | N         | N       |
| CCD S5 on                             | N         | N       |
| Number of optional ACIS chips dropped | 0         | 0       |
| On-chip summing requested             | N         | N       |
| Subarray requested                    | NONE      | NONE    |
| Alternating exposures requested       | N         | N       |
| [s] Primary exposure time             | 0.000000  | 3.2     |

## 2.3 Aspect



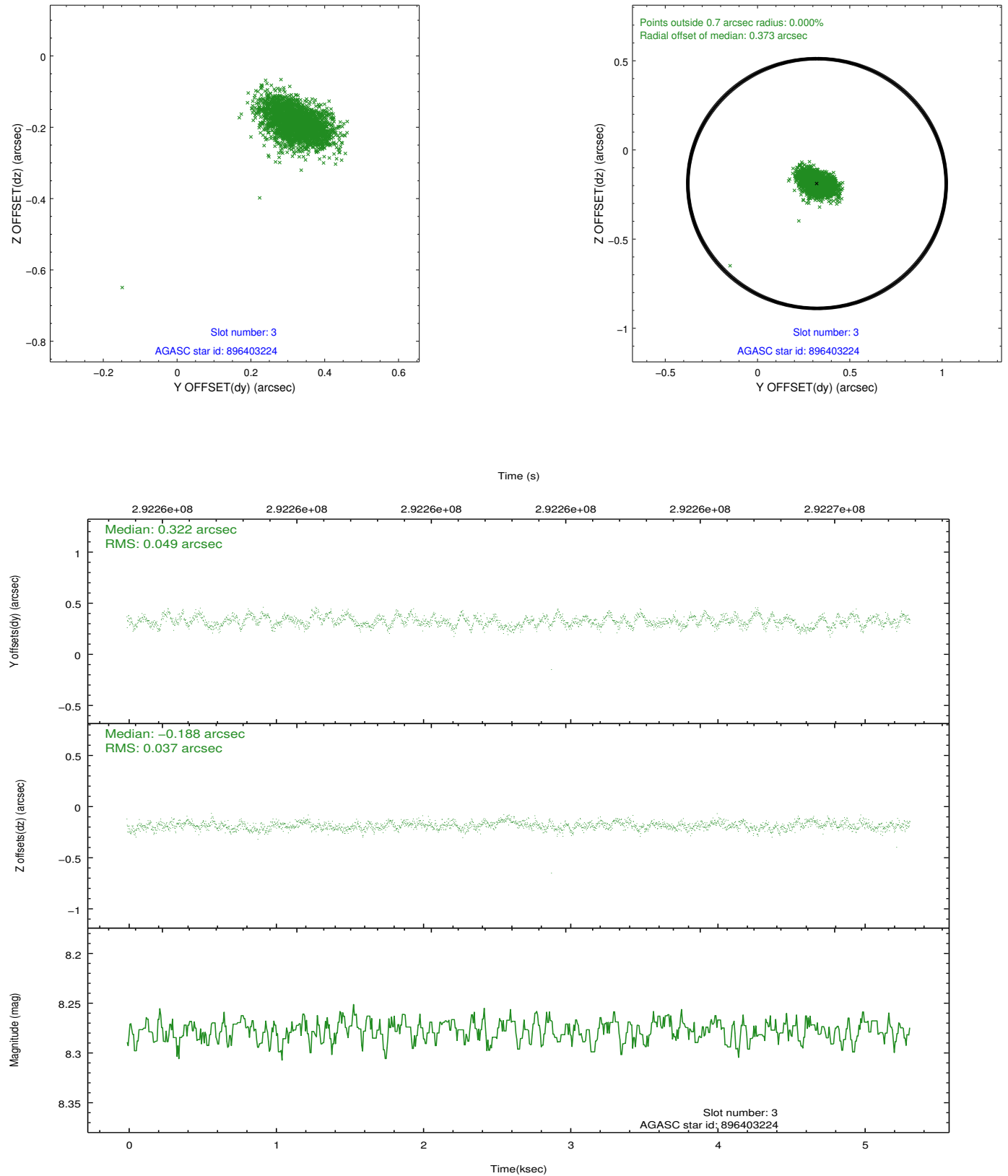


### Slot Statistics

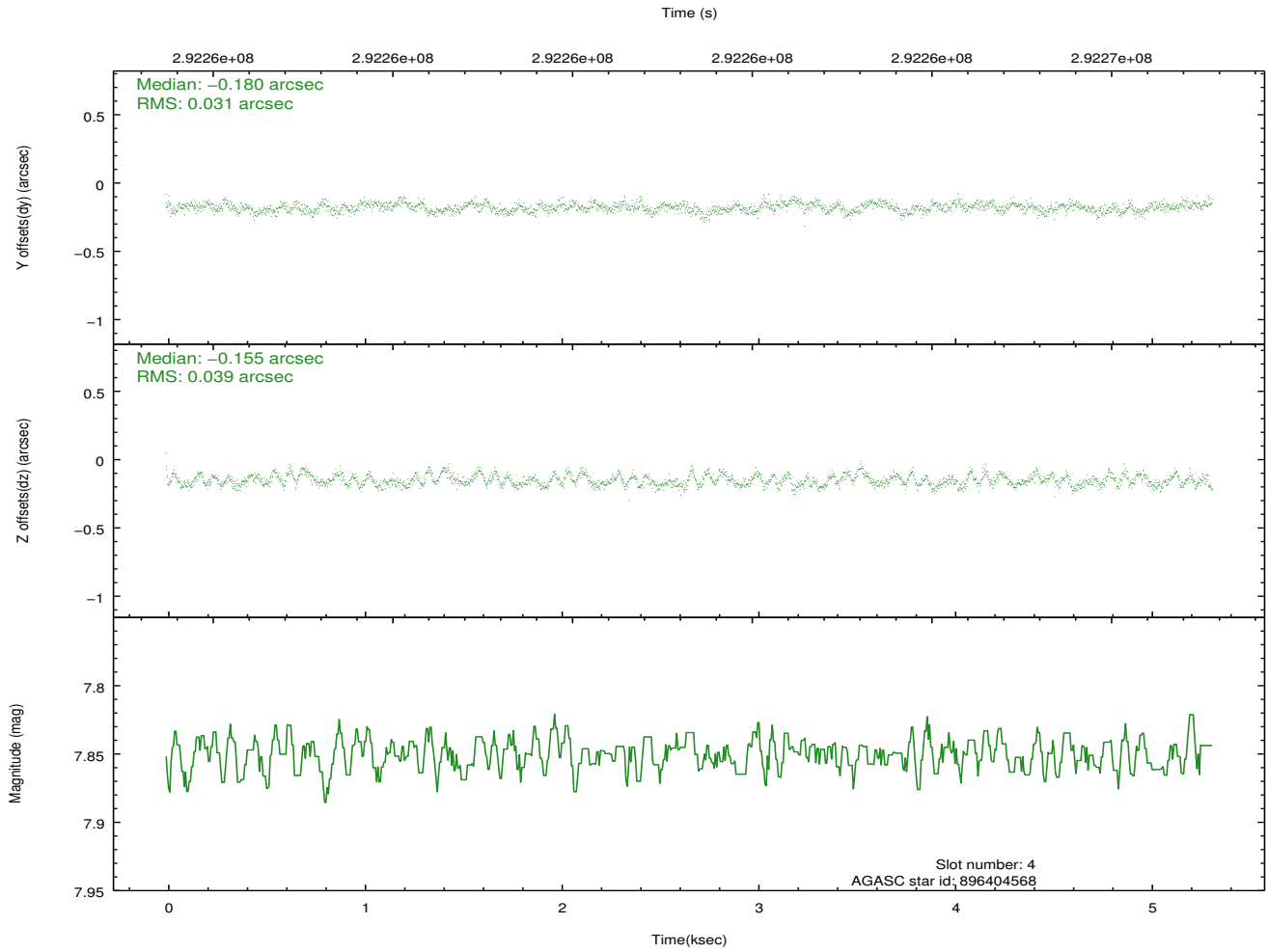
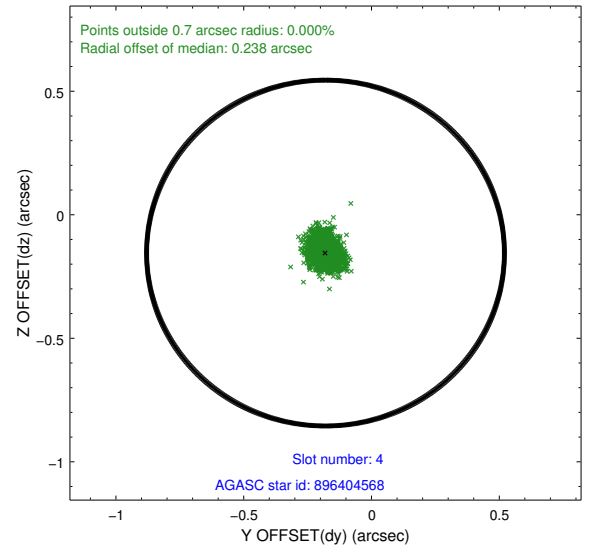
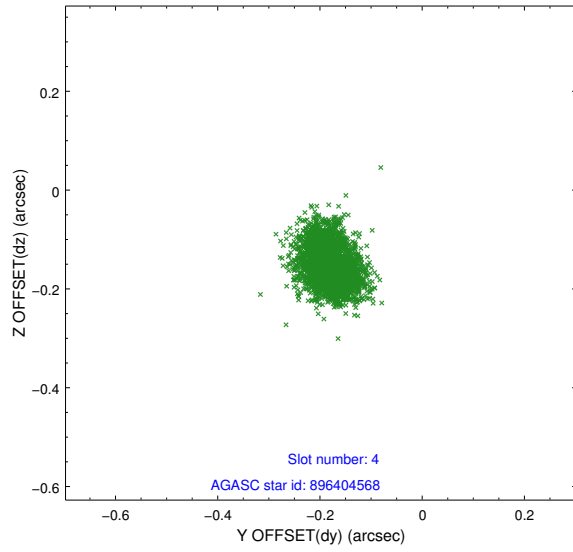
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-I-1  | 7.23 | 1298  | -0.023 | 0.026  | 0.008 | 0.013 | 0.000000   | 0.000000   | 927.44   | -837.03  |
| 1    | FID    | ACIS-I-4  | 7.17 | 1298  | 0.183  | 0.017  | 0.007 | 0.012 | 0.000000   | 0.000000   | 2148.33  | 1062.19  |
| 2    | FID    | ACIS-I-5  | 7.22 | 1297  | -0.258 | 0.028  | 0.007 | 0.013 | 0.000000   | 0.000000   | -1819.32 | 1061.37  |
| 3    | GUIDE  | 896403224 | 8.28 | 2595  | 0.322  | -0.188 | 0.064 | 0.104 | 265.612825 | -29.438915 | -1866.07 | 2118.20  |
| 4    | GUIDE  | 896404568 | 7.85 | 2596  | -0.180 | -0.155 | 0.053 | 0.086 | 265.687293 | -28.431080 | 1768.83  | 2124.01  |
| 5    | GUIDE  | 896533888 | 7.02 | 2596  | 0.288  | 0.324  | 0.053 | 0.077 | 266.666434 | -29.392757 | -1495.33 | -1167.93 |
| 6    | GUIDE  | 896538696 | 6.86 | 2596  | -0.314 | 0.027  | 0.043 | 0.068 | 266.298470 | -28.325572 | 2269.75  | 214.77   |
| 7    | GUIDE  | 896402272 | 7.60 | 2595  | -0.118 | -0.015 | 0.048 | 0.078 | 265.637294 | -28.313189 | 2183.60  | 2309.38  |

## 2.4 Star Slots

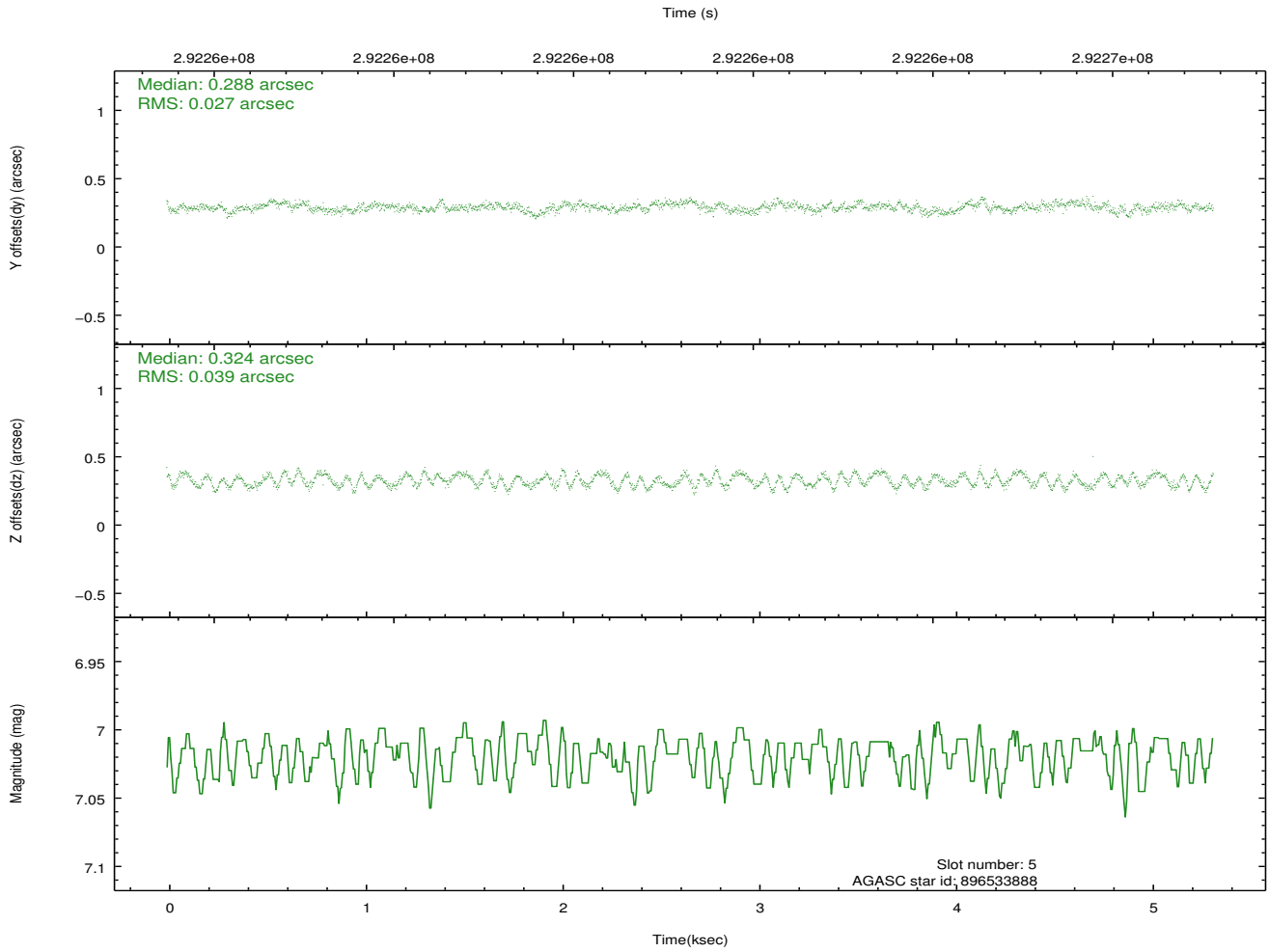
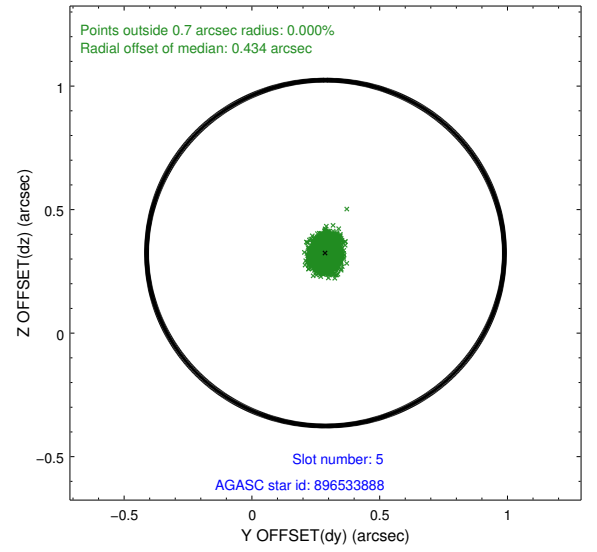
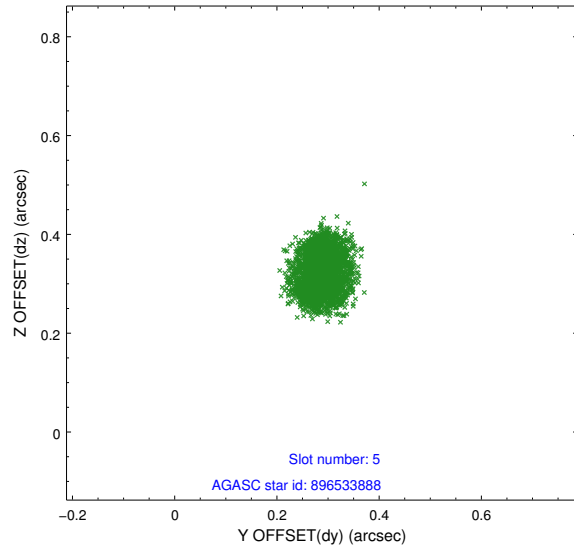
### 2.4.1 Slot 3



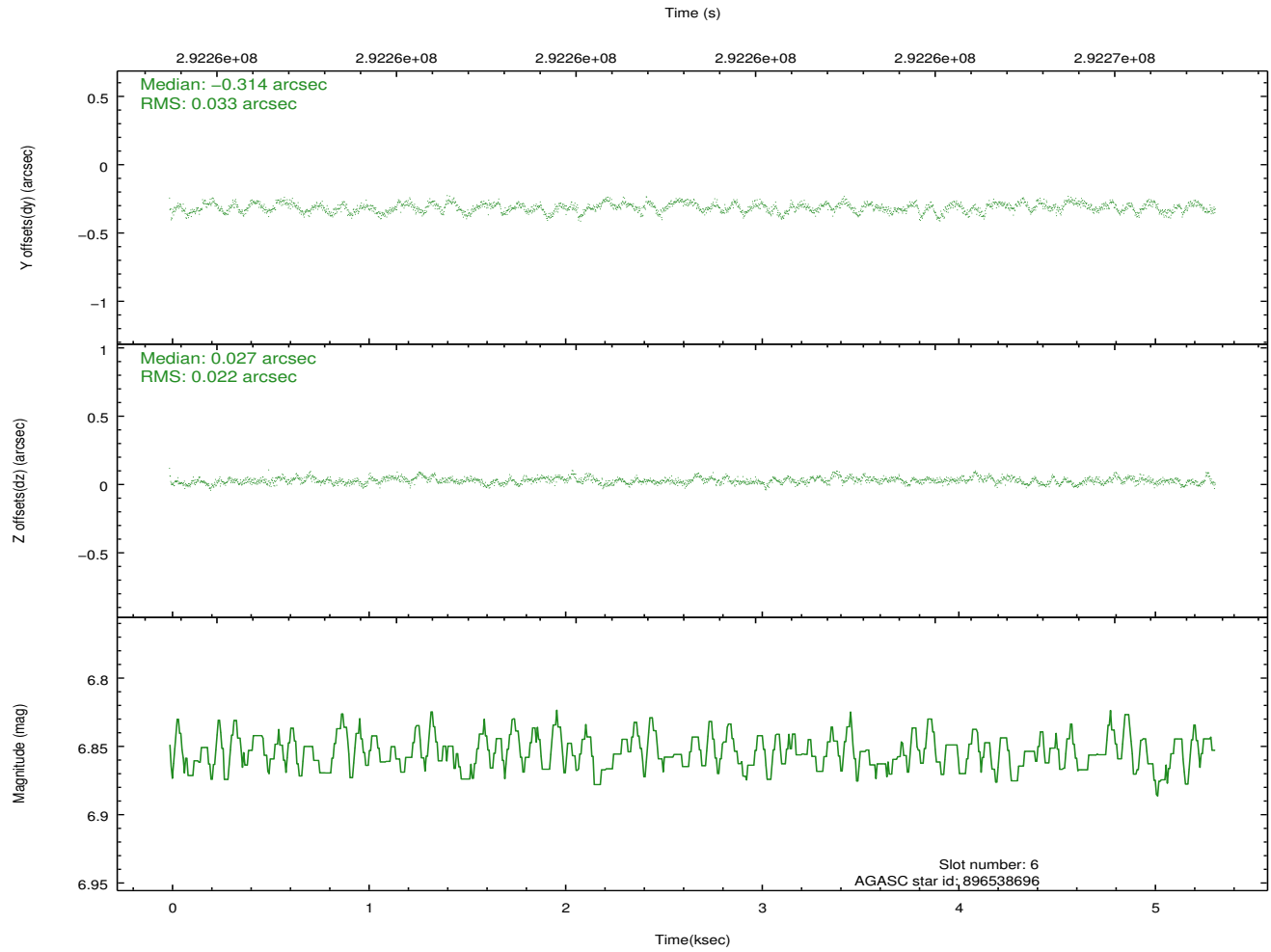
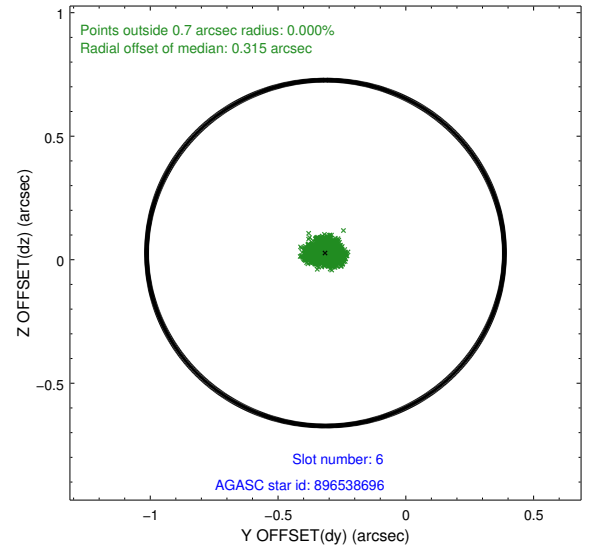
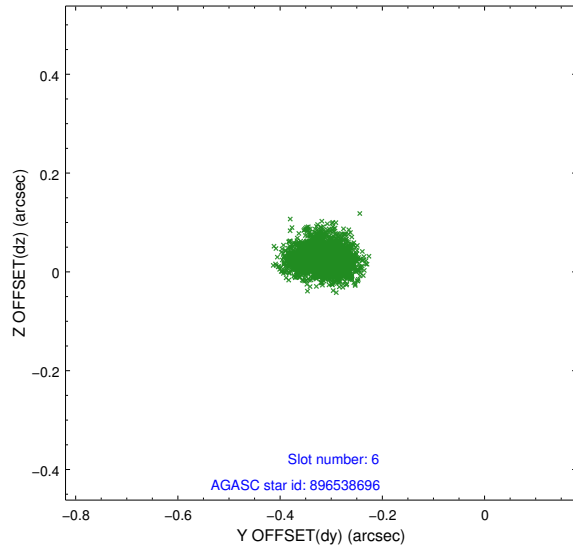
## 2.4.2 Slot 4



### 2.4.3 Slot 5

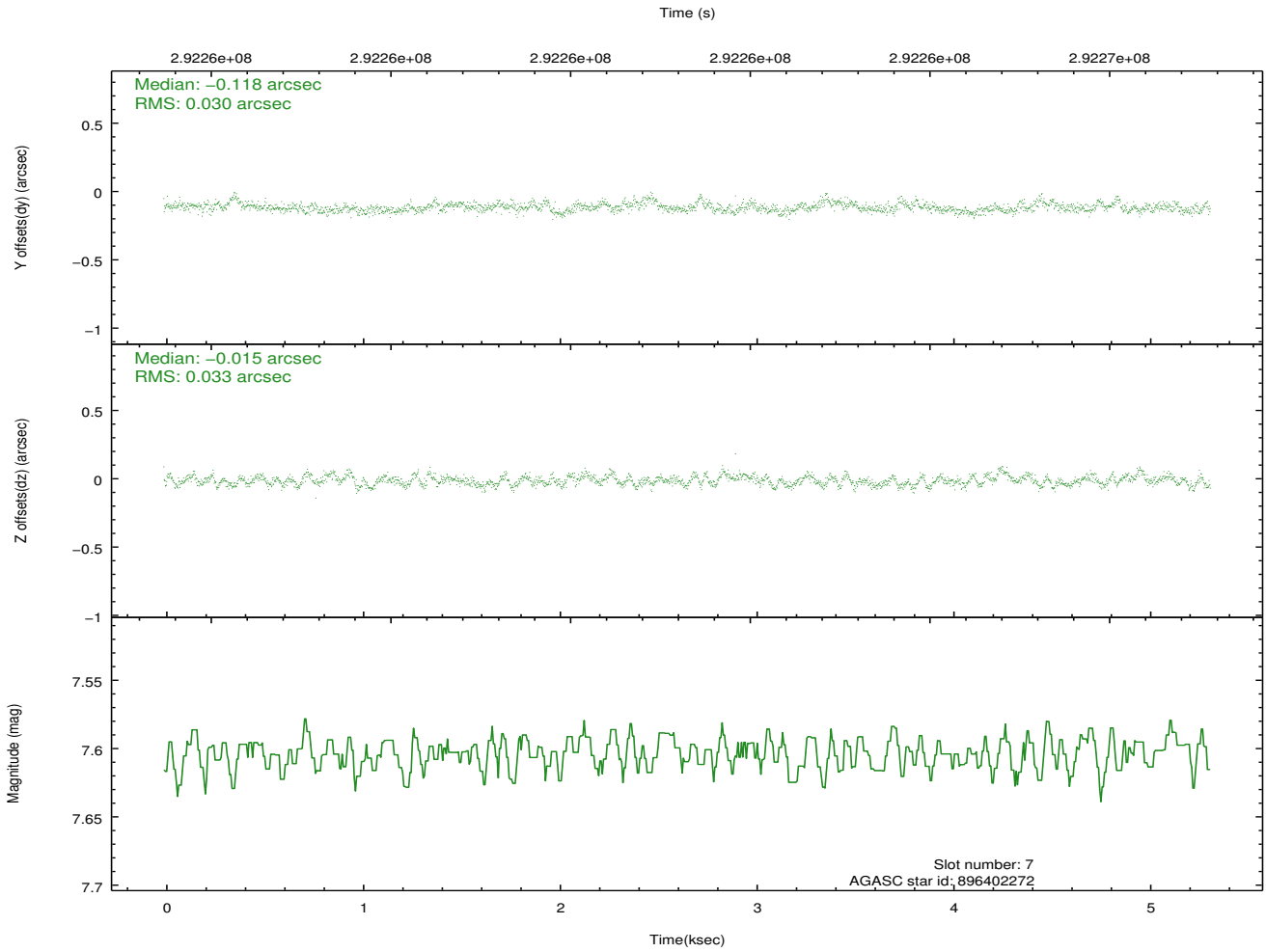
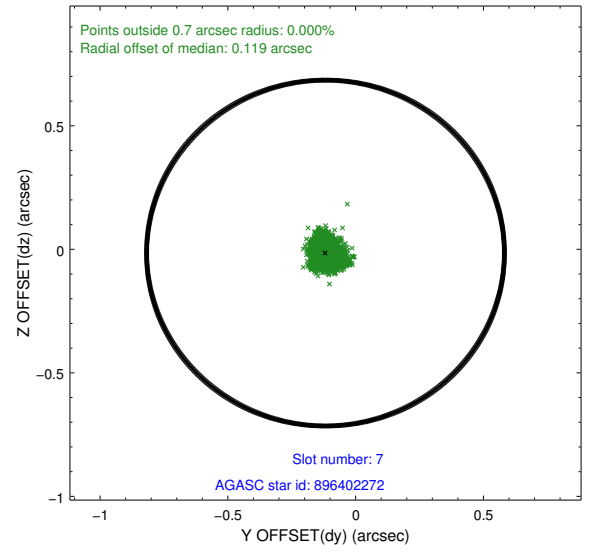
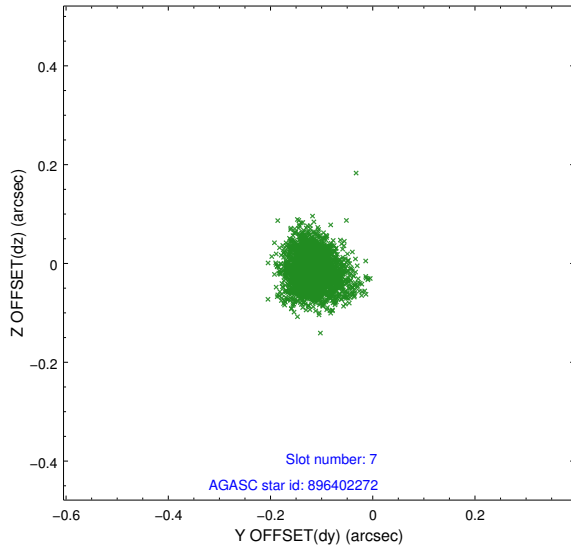


## 2.4.4 Slot 6



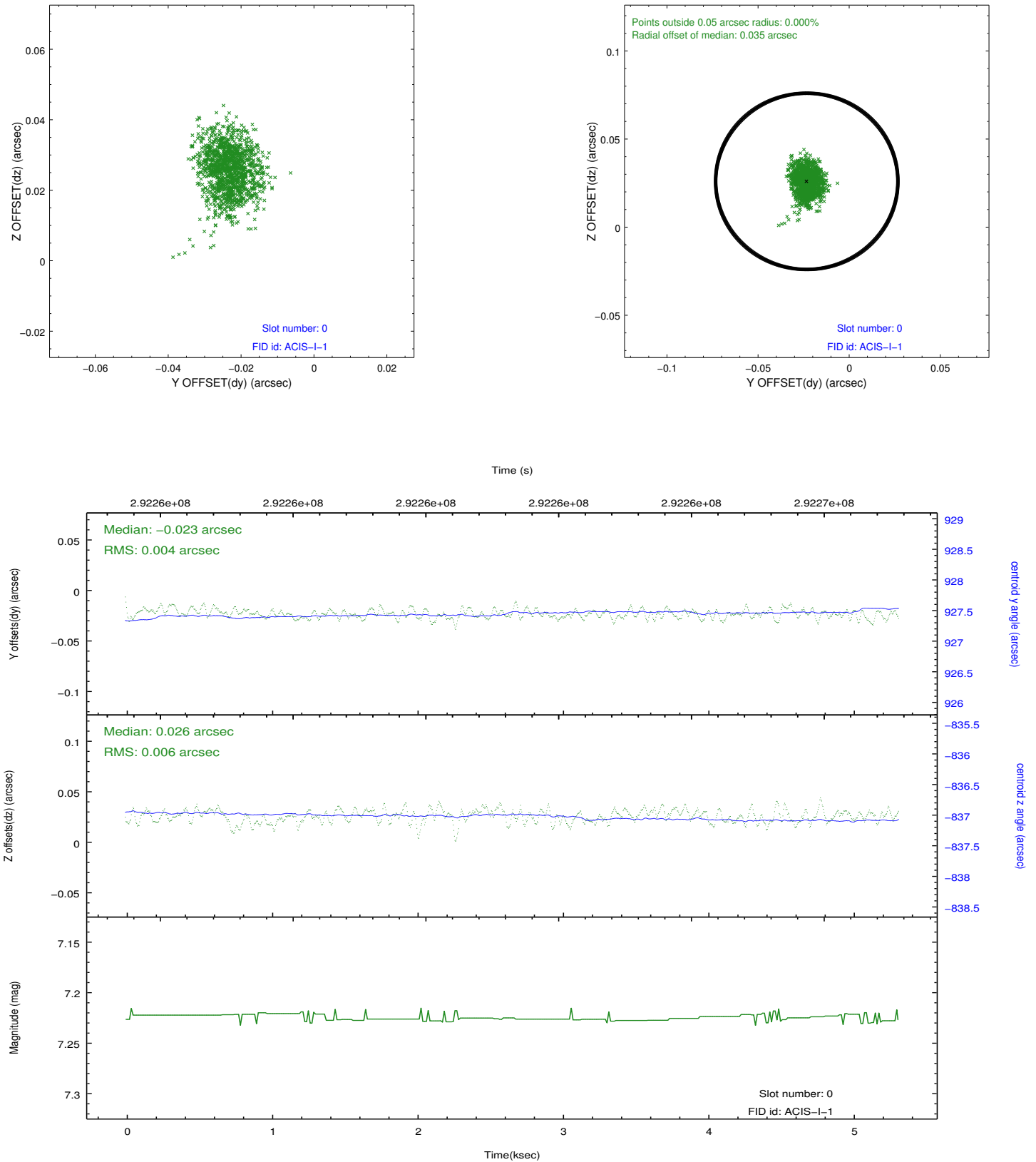


### 2.4.5 Slot 7

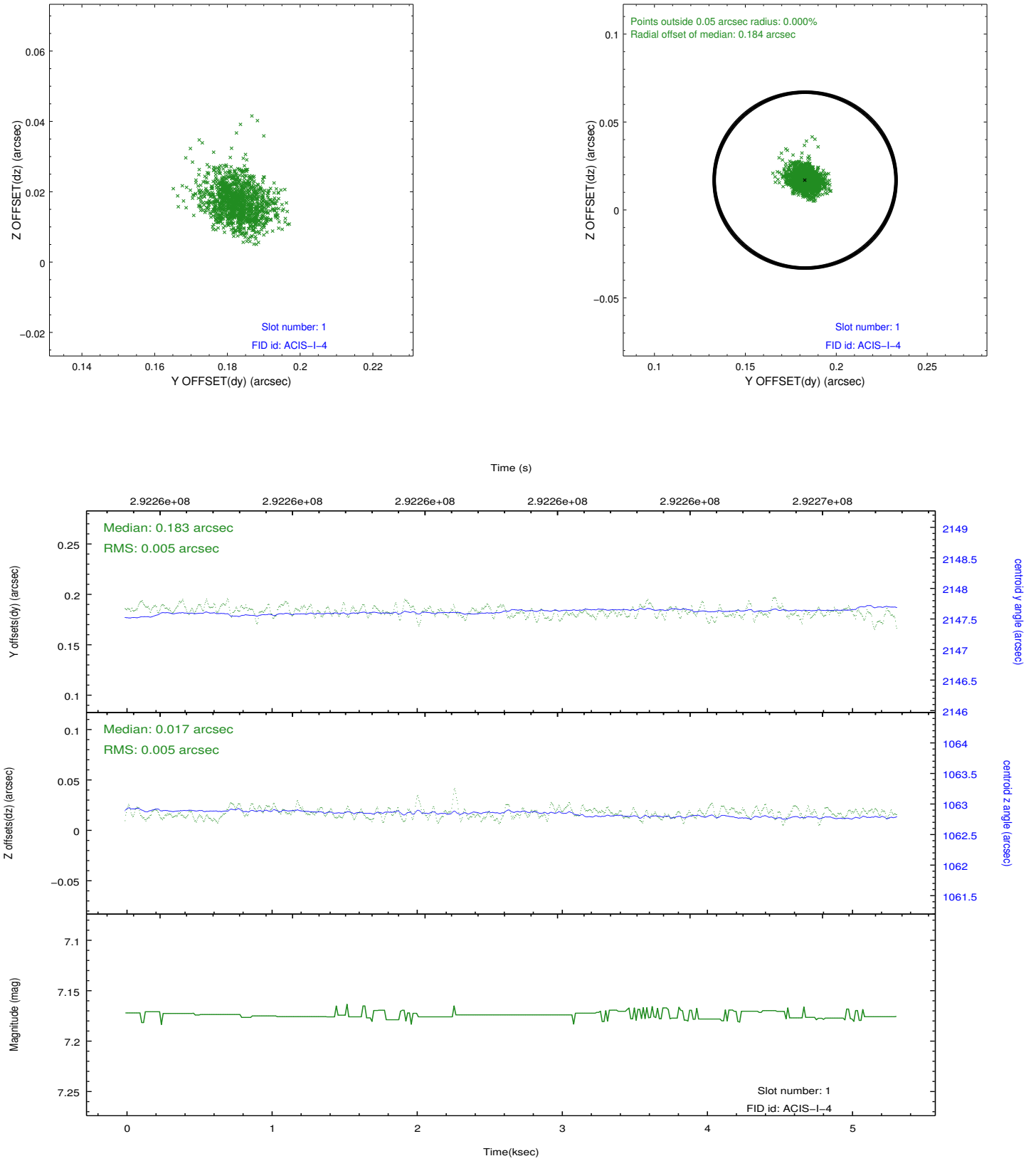


## 2.5 FID Slots

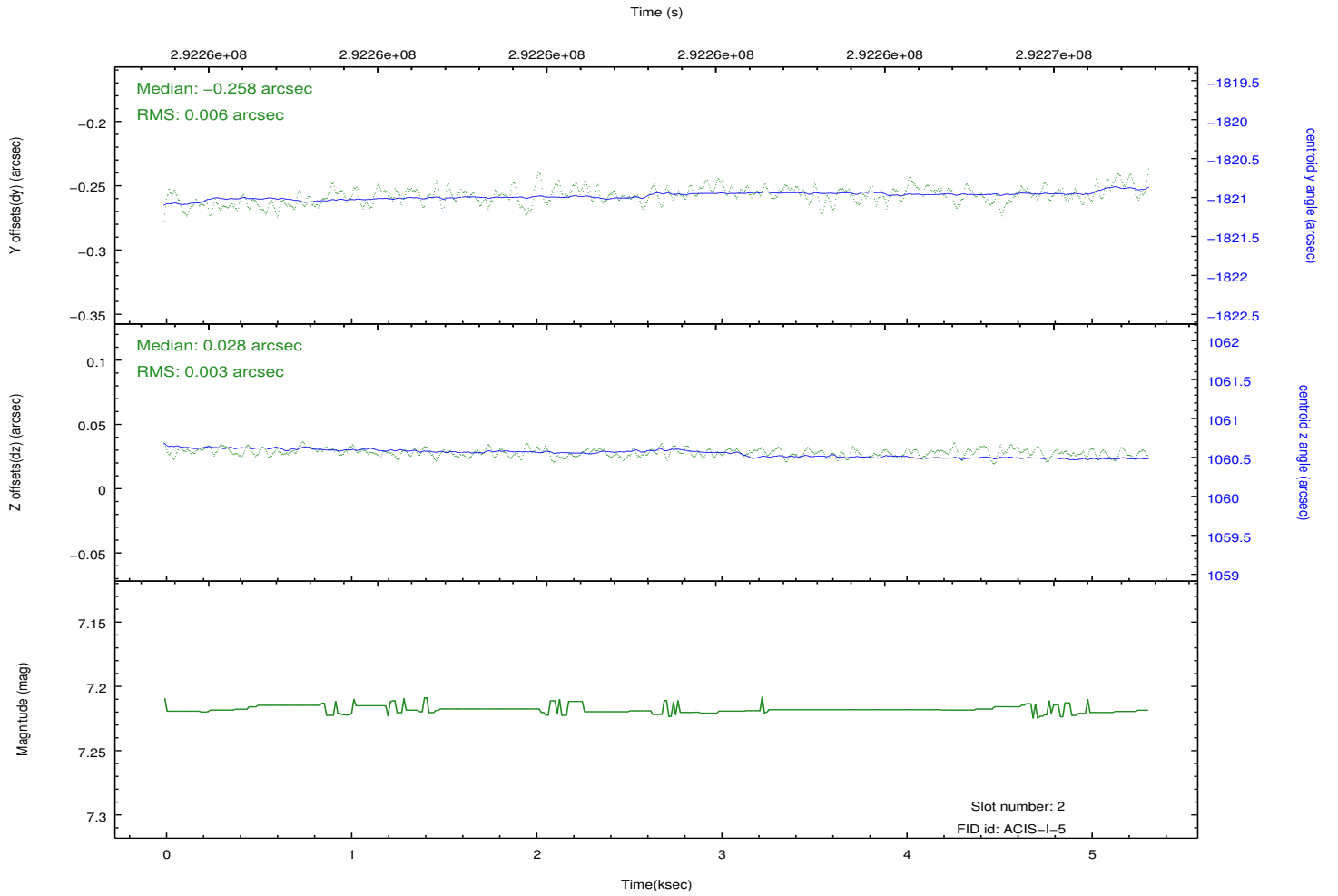
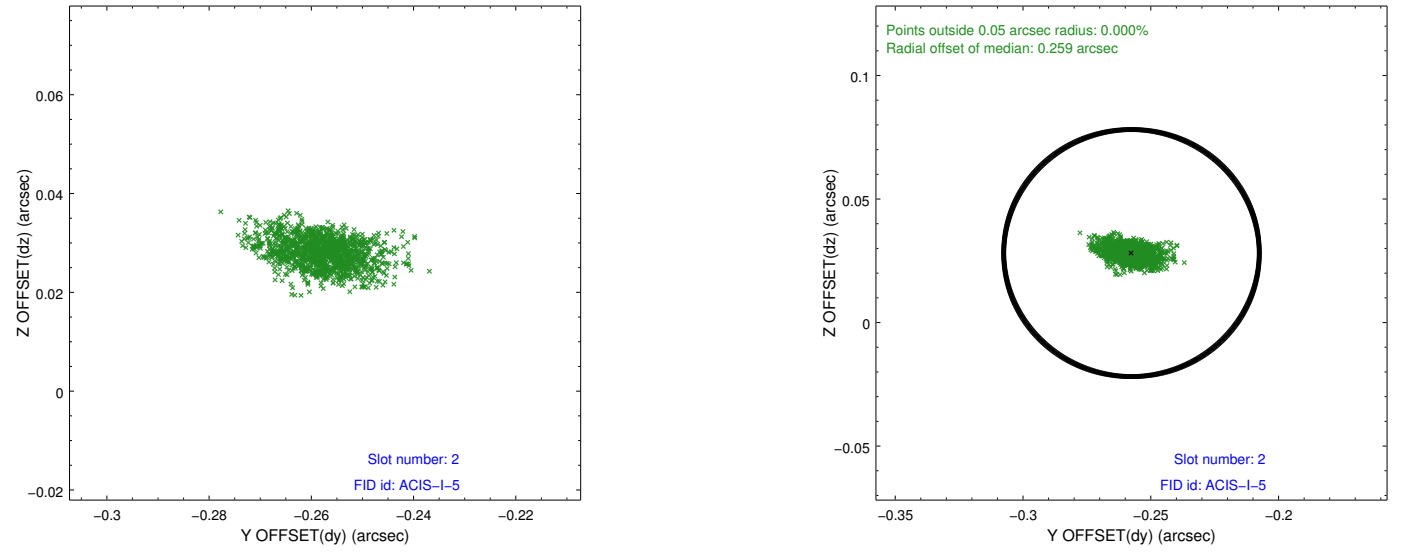
### 2.5.1 Slot 0



## 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)      | 2012.04.23 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 4.95039998 |

### A.2 Comments

This followup to the initial T00 observation was performed 25 days after the first observation, not 14 days as requested by the observer. Joint Proposal: NRAO