

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 7199 - L2 Version 3  
Chandra X-Ray Center

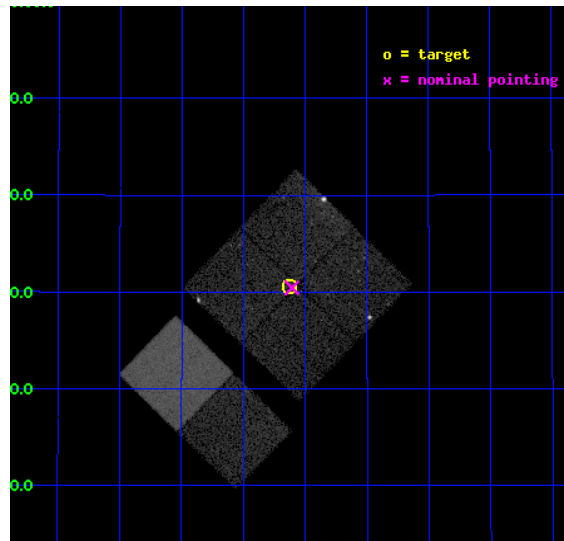
L2 Processing Date : Dec 31 2012

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# 1 Front

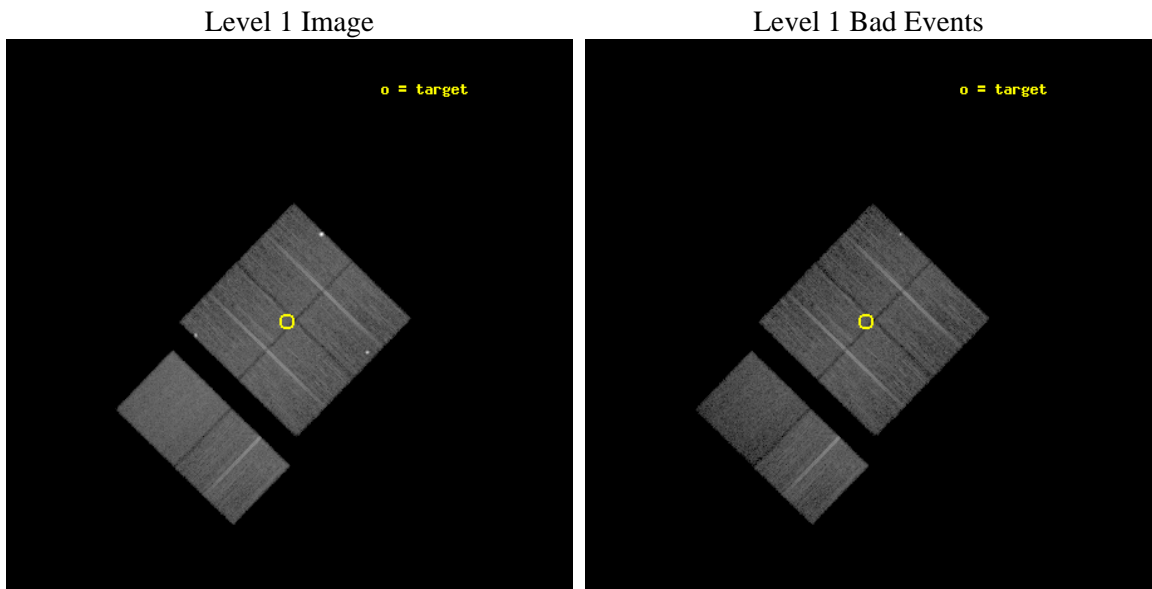
|          |   |   |
|----------|---|---|
| seq_num  | 600488  | Sequence number                             |
| obs_id   | 7199  | Observation id                              |
| title    | The Chandra ACIS Survey of M33 (ChASem33): A Deep Survey of the Nearest Face-on Spiral Galaxy | Proposal title                              |
| observer | Dr Manami Sasaki  | Principal investigator                      |
| object   | M33 Field 6   | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 23.532083   | Observer's specified target RA [deg]        |
| dec_targ | 30.509111   | Observer's specified target Dec [deg]       |
| ra_nom   | 23.527015840969   | Nominal RA [deg]                            |
| dec_nom  | 30.507418529165   | Nominal Dec [deg]                           |
| roll_nom | 224.2112601722  | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 15010.899449617   | Sum of GTIs [s]                             |
| livetime | 14820.822402307   | Livetime [s]                                |
| ontime0  | 15014.017309934   | Sum of GTIs [s]                             |
| ontime1  | 15010.817349702   | Sum of GTIs [s]                             |
| ontime2  | 15010.858409643   | Sum of GTIs [s]                             |
| ontime3  | 15010.899449617   | Sum of GTIs [s]                             |
| ontime6  | 15010.981539637   | Sum of GTIs [s]                             |
| ontime7  | 15014.181469917   | Sum of GTIs [s]                             |
| l2events | 107146  | Number of level 2 events                    |



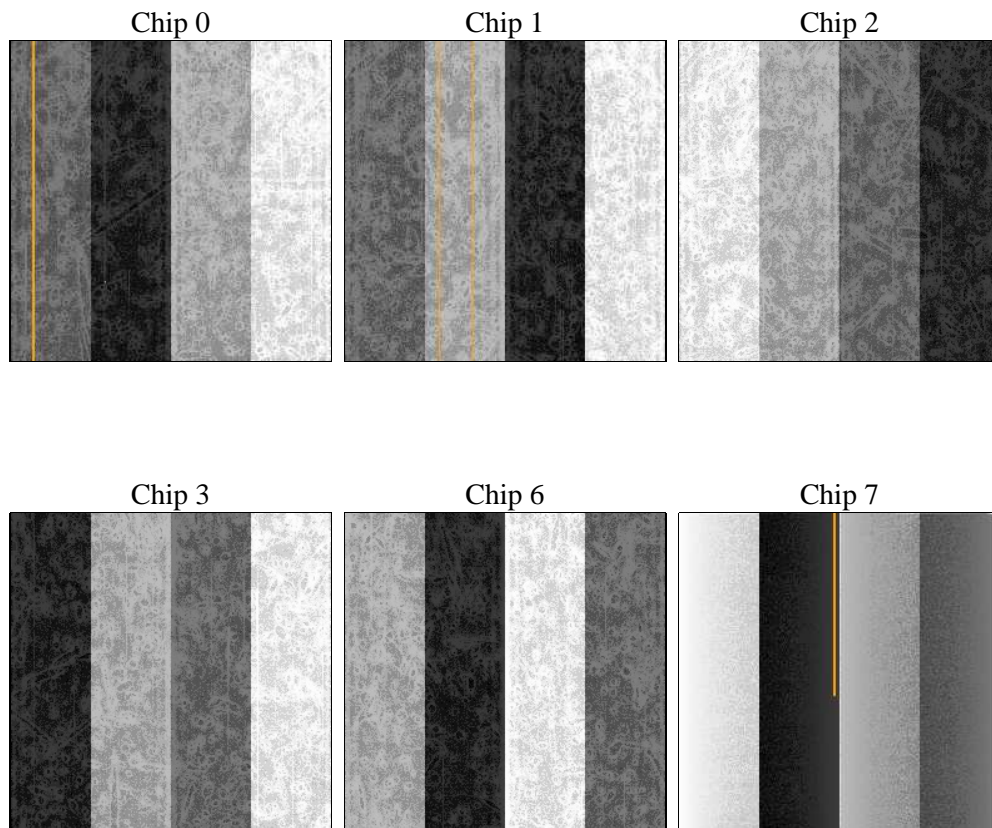
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 14965.063000    | [s] Scheduled observation exposure time |
| ascdsver | 8.5.1.1             | Processing system revision     | ontime         | 15010.899449617 | Sum of GTIs [s]                         |
| caldsver | 4.5.5               | &#160                          | ontime0        | 15014.017309934 | Sum of GTIs [s]                         |
| date     | 2012-12-31T10:12:05 | Date and time of file creation | ontime1        | 15010.817349702 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime2        | 15010.858409643 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 15010.899449617 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 15010.981539637 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 15014.181469917 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 620921          | Number of level 1 events                |

### 2.1.4 Events

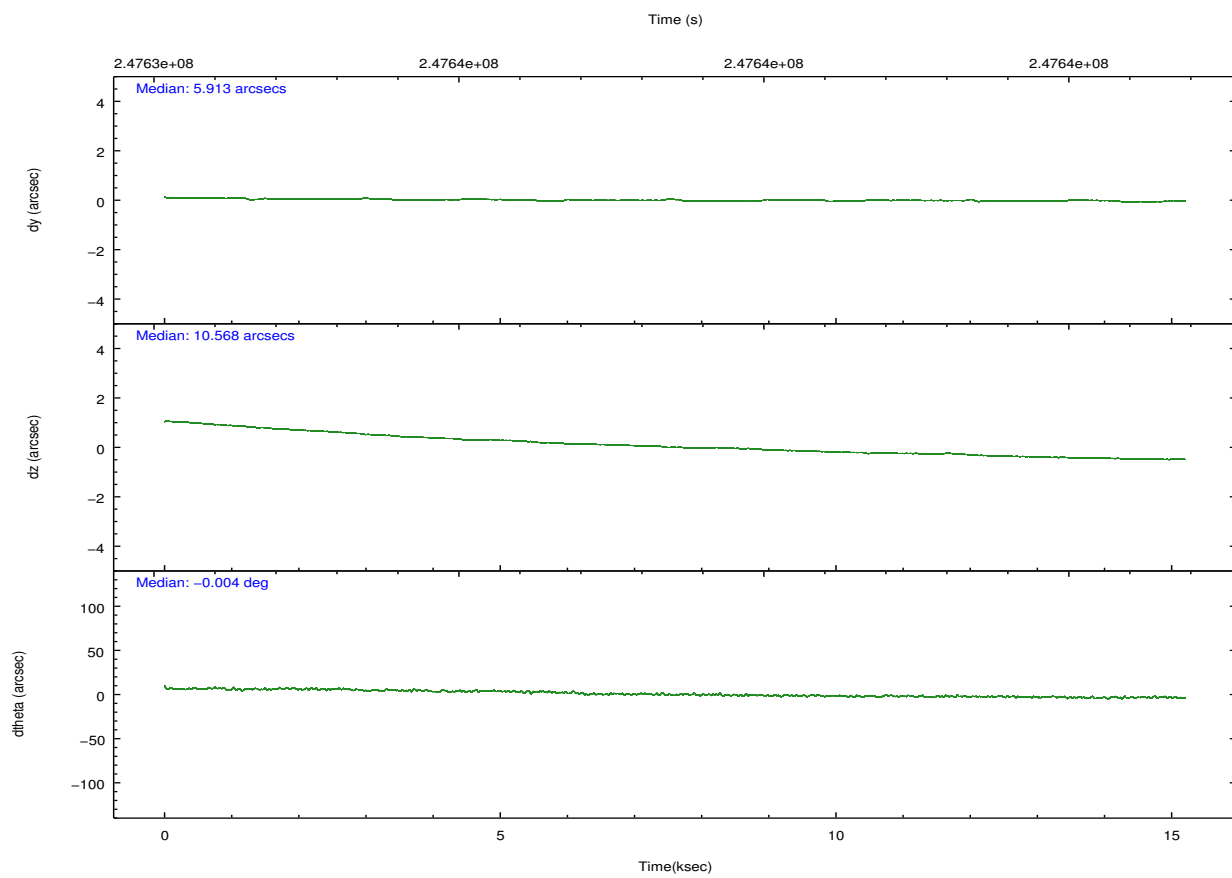
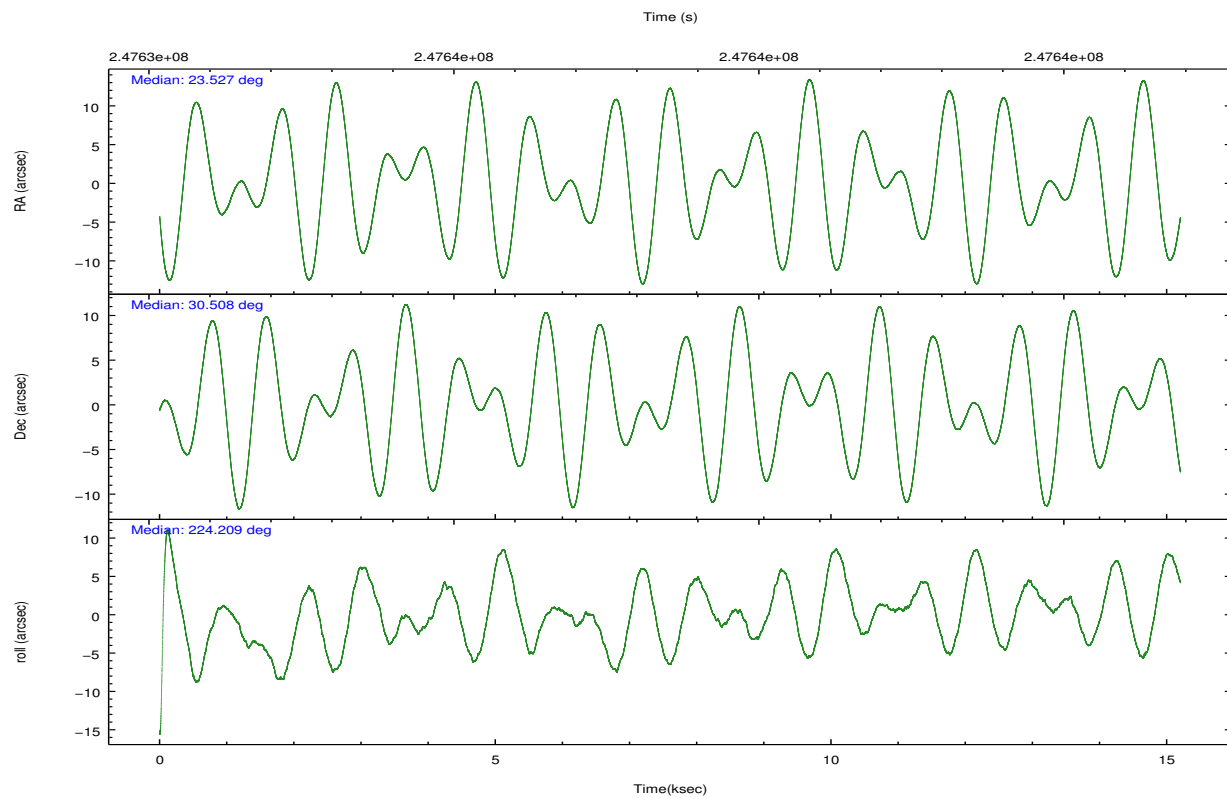
|                 | ccd 0 | ccd 1  | ccd 2  | ccd 3 | ccd 6  | ccd 7  |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|--------|--------|-------|--------|--------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 97968 | 107285 | 103066 | 97907 | 103903 | 110792 | grade 0 events | 6121  | 16846 | 3442  | 5037  | 3515  | 3993  |
| rejected events | 84896 | 80155  | 93726  | 86579 | 93842  | 61056  |                | 6%    | 15%   | 3%    | 5%    | 3%    | 3%    |
| rejected %      | 86%   | 74%    | 90%    | 88%   | 90%    | 55%    | grade 1 events | 69    | 316   | 45    | 58    | 55    | 96    |
|                 |       |        |        |       |        |        |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |        |        |       |        |        | grade 2 events | 2604  | 4182  | 2200  | 2166  | 2248  | 9718  |
|                 |       |        |        |       |        |        |                | 2%    | 3%    | 2%    | 2%    | 2%    | 8%    |
|                 |       |        |        |       |        |        | grade 3 events | 1240  | 1793  | 1020  | 1117  | 1089  | 4530  |
|                 |       |        |        |       |        |        |                | 1%    | 1%    | 0%    | 1%    | 1%    | 4%    |
|                 |       |        |        |       |        |        | grade 4 events | 1175  | 1721  | 1024  | 1095  | 1022  | 4726  |
|                 |       |        |        |       |        |        |                | 1%    | 1%    | 0%    | 1%    | 0%    | 4%    |
|                 |       |        |        |       |        |        | grade 5 events | 3317  | 4010  | 3074  | 3942  | 4191  | 11667 |
|                 |       |        |        |       |        |        |                | 3%    | 3%    | 2%    | 4%    | 4%    | 10%   |
|                 |       |        |        |       |        |        | grade 6 events | 1937  | 2594  | 1655  | 1915  | 2189  | 26780 |
|                 |       |        |        |       |        |        |                | 1%    | 2%    | 1%    | 1%    | 2%    | 24%   |
|                 |       |        |        |       |        |        | grade 7 events | 81505 | 75823 | 90606 | 82577 | 89594 | 49282 |
|                 |       |        |        |       |        |        |                | 83%   | 70%   | 87%   | 84%   | 86%   | 44%   |



## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012367         | ACIS-012367           | 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                 | 23.535589           | 23.52701584096928     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 30.533805           | 30.50741852916528     | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 223.998215          | 224.2112601721986     | [s] Primary exposure time             | 0.000000  | 3.2     |
| [mm] SIM focus pos                | -0.782348           | -0.7823481983384333   |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 1.724155329618782e-08 |                                       |           |         |
| [mm] SIM translation stage pos    | -233.592463         | -233.5874344608287    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.005018542100998502 |                                       |           |         |
| [s] Observation start time (MET)  | 247631185.184000    | 247630148.75514       |                                       |           |         |
| Observation start date            | 2005-11-06T02:25:21 | 2005-11-06T02:09:08   |                                       |           |         |
| [s] Observation end time (MET)    | 247646150.184000    | 247646387.83088       |                                       |           |         |
| Observation end date              | 2005-11-06T06:34:46 | 2005-11-06T06:39:47   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect

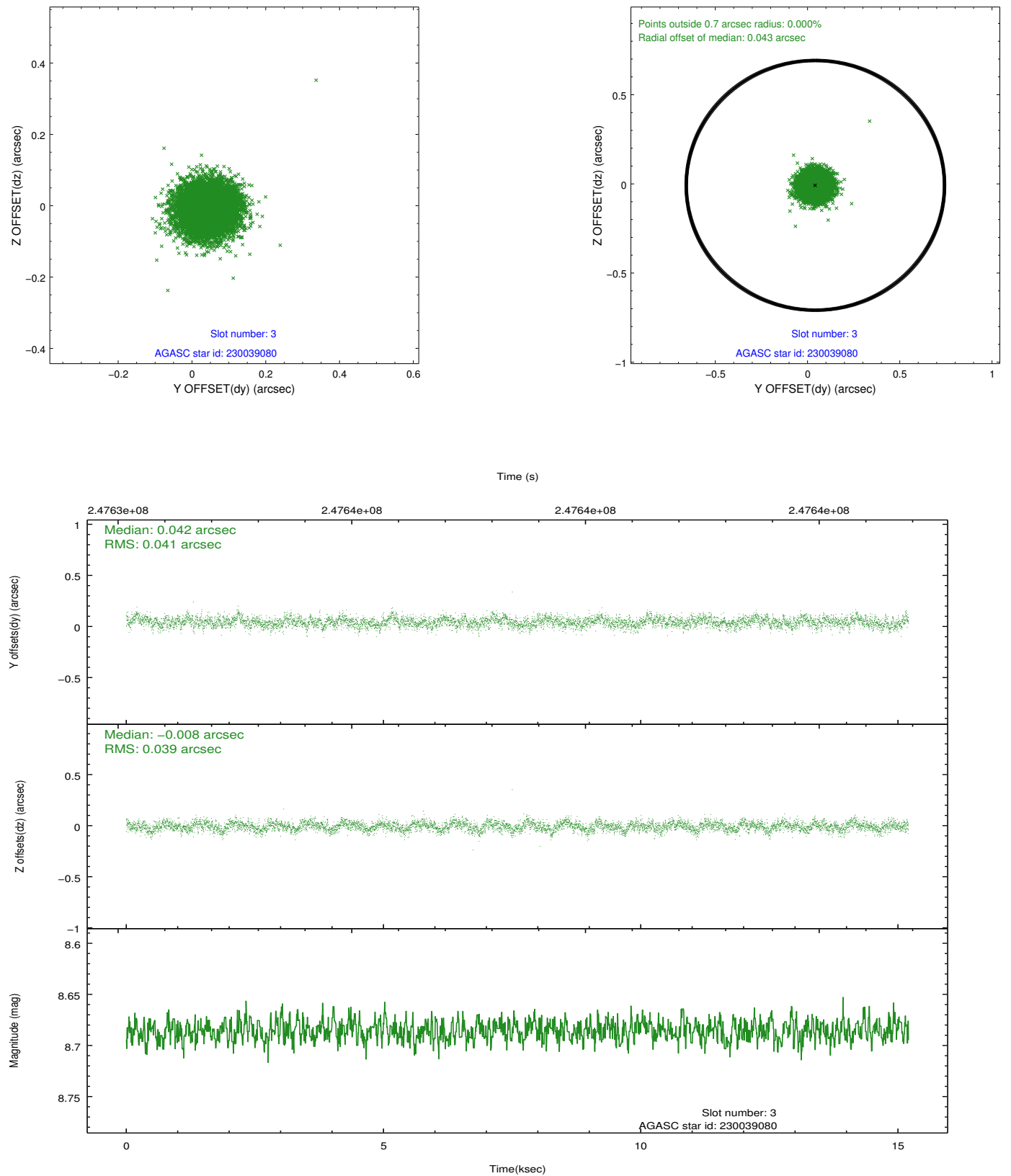


### Slot Statistics

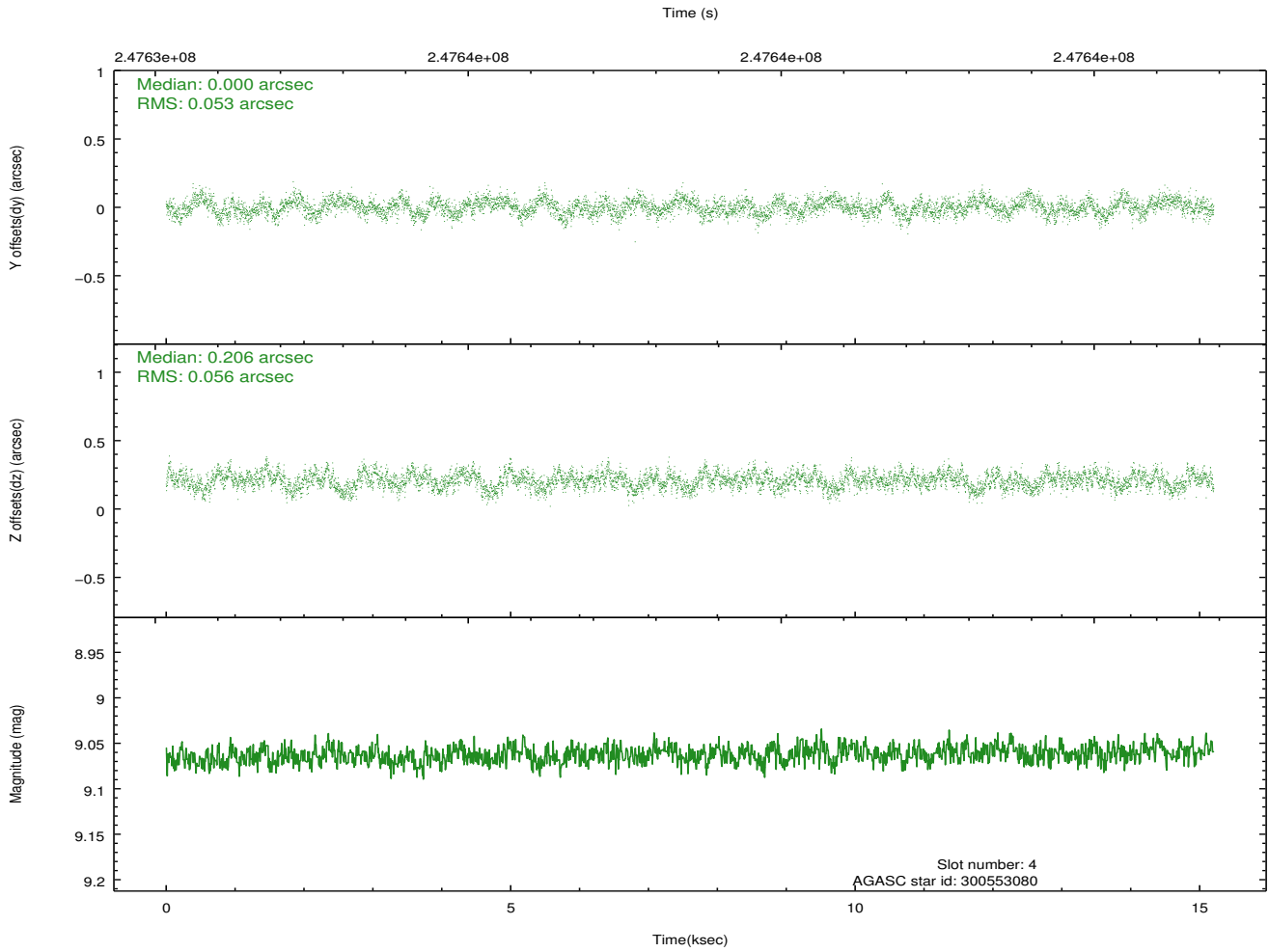
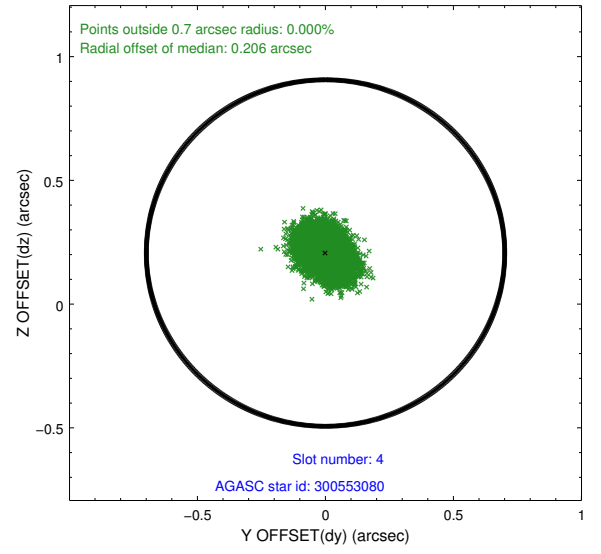
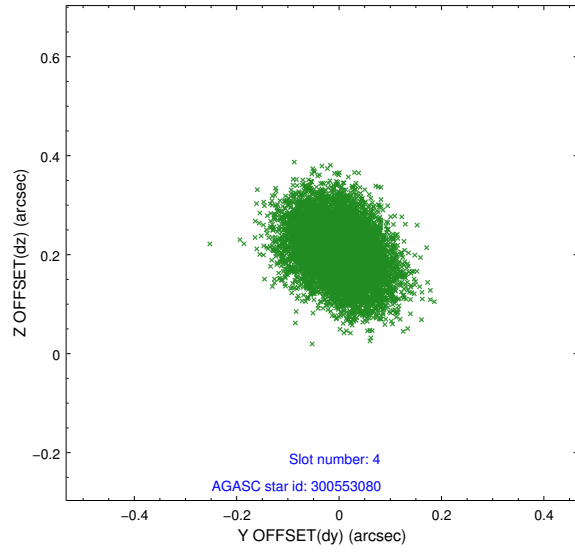
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0    | FID    | ACIS-I-1  | 7.25 | 3708  | 0.003  | 0.012  | 0.009 | 0.015 | 0.000000  | 0.000000  | 933.82   | -834.12  |
| 1    | FID    | ACIS-I-2  | 7.14 | 3709  | -0.081 | -0.021 | 0.009 | 0.020 | 0.000000  | 0.000000  | -760.19  | -840.79  |
| 2    | FID    | ACIS-I-6  | 7.24 | 3709  | -0.013 | 0.076  | 0.010 | 0.018 | 0.000000  | 0.000000  | 399.23   | 1707.60  |
| 3    | GUIDE  | 230039080 | 8.69 | 7415  | 0.042  | -0.008 | 0.060 | 0.098 | 23.320866 | 29.887774 | 2097.40  | 1207.63  |
| 4    | GUIDE  | 300553080 | 9.06 | 7412  | 0.000  | 0.206  | 0.082 | 0.131 | 23.777101 | 30.773227 | -1136.19 | -100.97  |
| 5    | GUIDE  | 300559160 | 9.41 | 7399  | 0.027  | -0.097 | 0.092 | 0.150 | 24.161026 | 30.632205 | -1643.48 | 1087.34  |
| 6    | GUIDE  | 300559832 | 7.88 | 7417  | -0.020 | -0.106 | 0.055 | 0.090 | 24.407732 | 30.552794 | -1999.94 | 1821.86  |
| 7    | GUIDE  | 300559960 | 7.88 | 7415  | -0.050 | 0.005  | 0.060 | 0.094 | 22.944463 | 30.624765 | 1086.31  | -1509.90 |

## 2.4 Star Slots

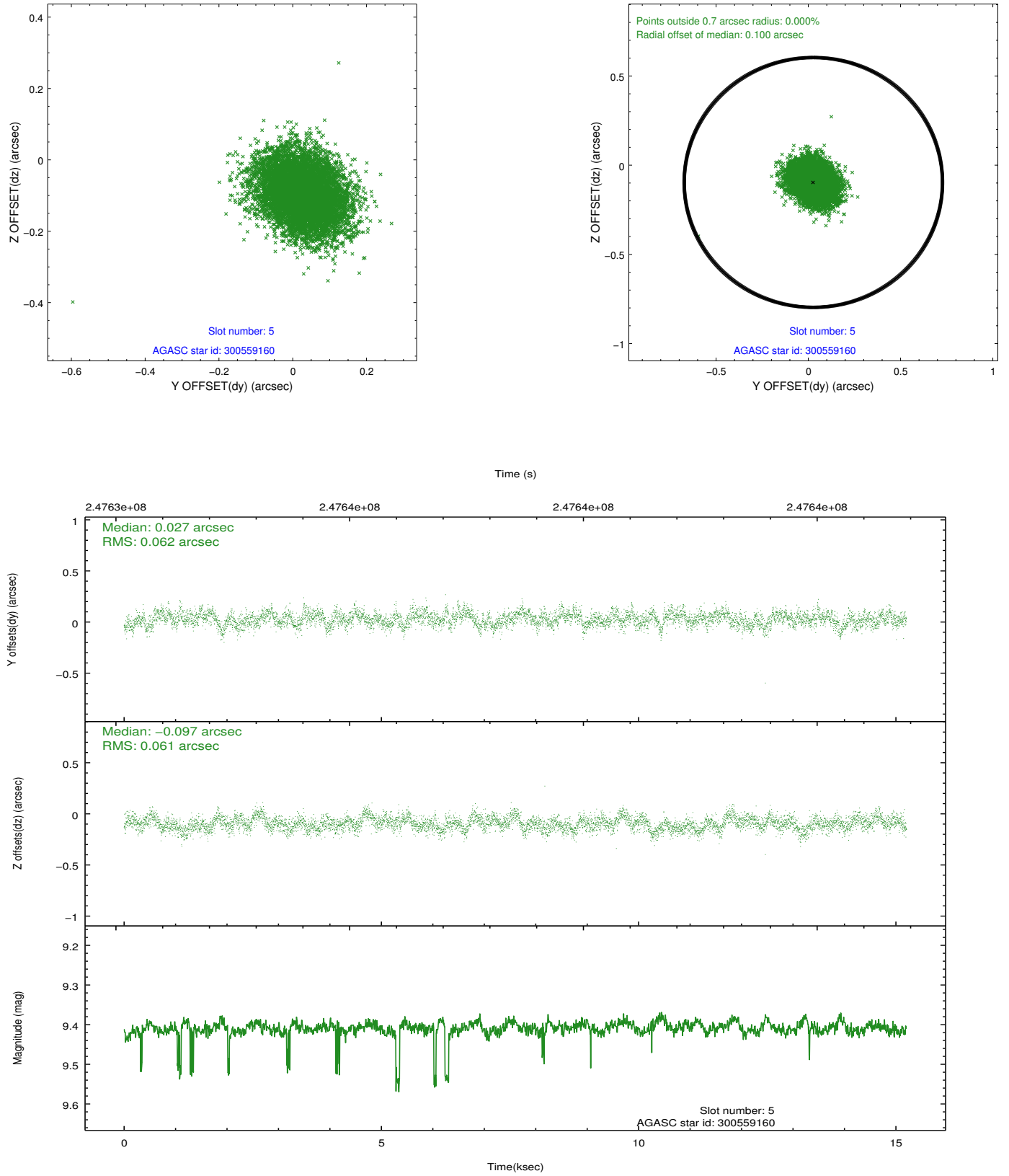
### 2.4.1 Slot 3



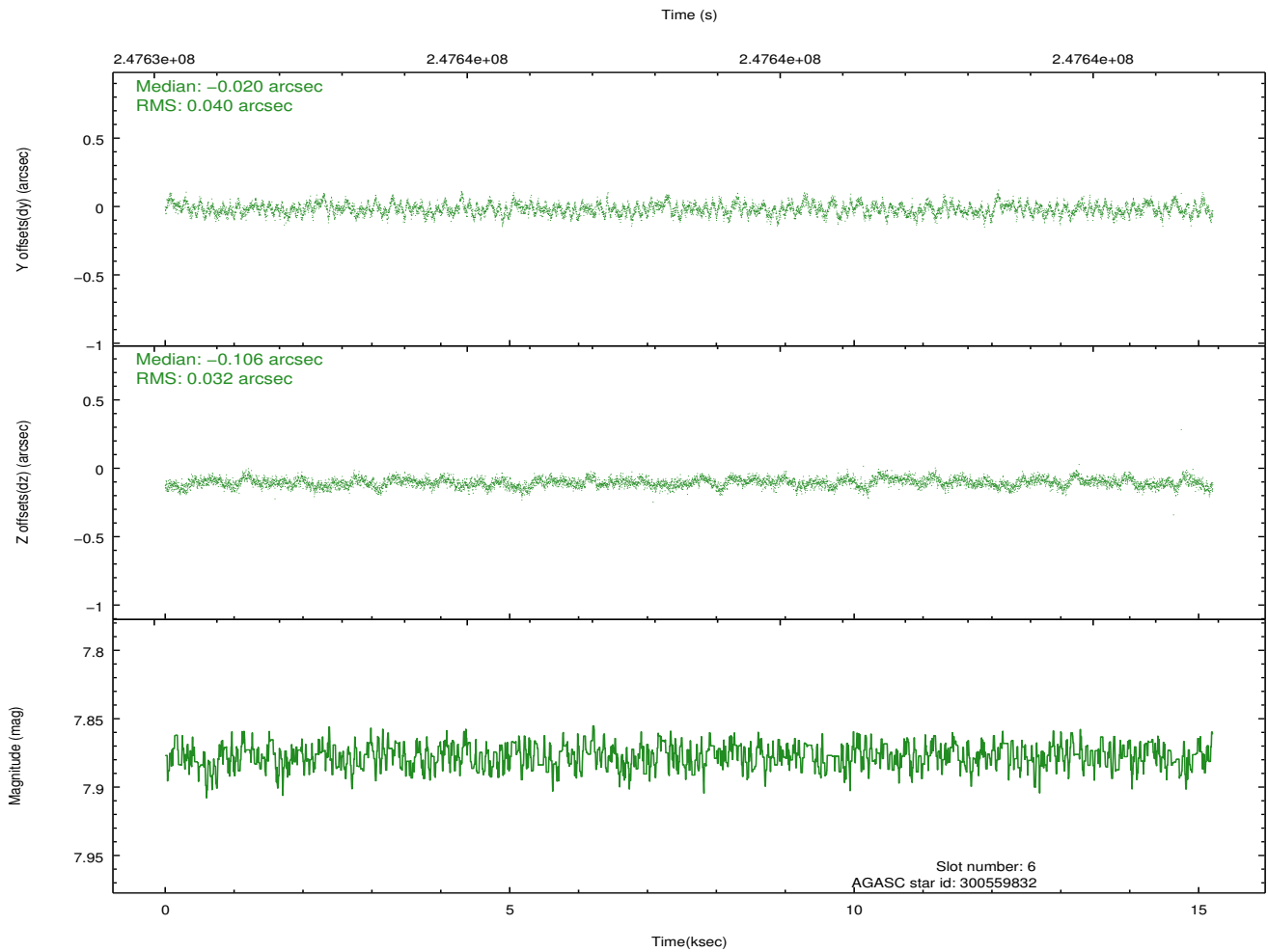
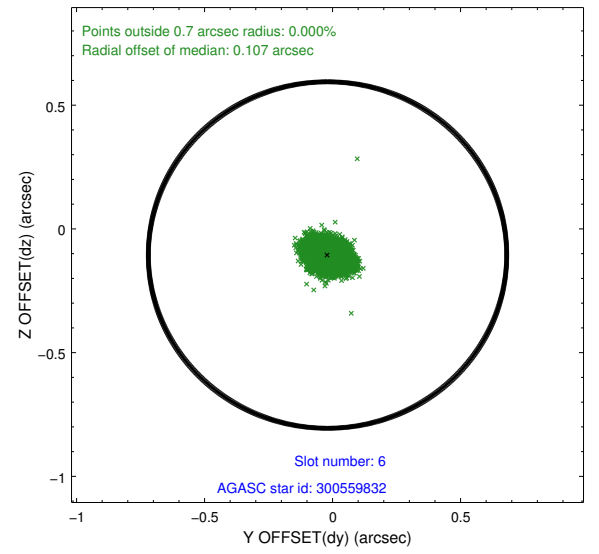
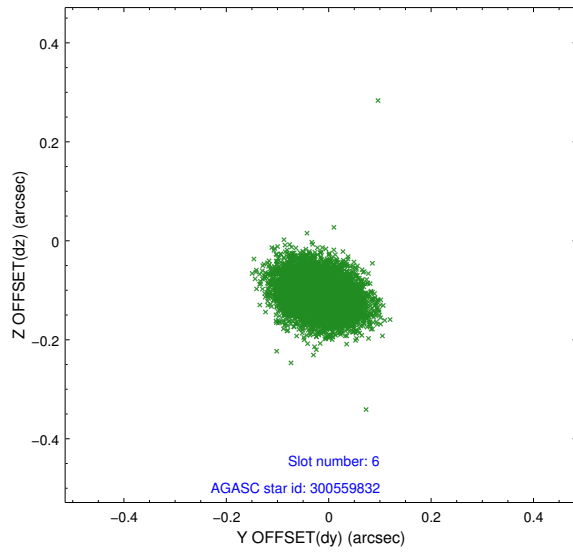
## 2.4.2 Slot 4



### 2.4.3 Slot 5

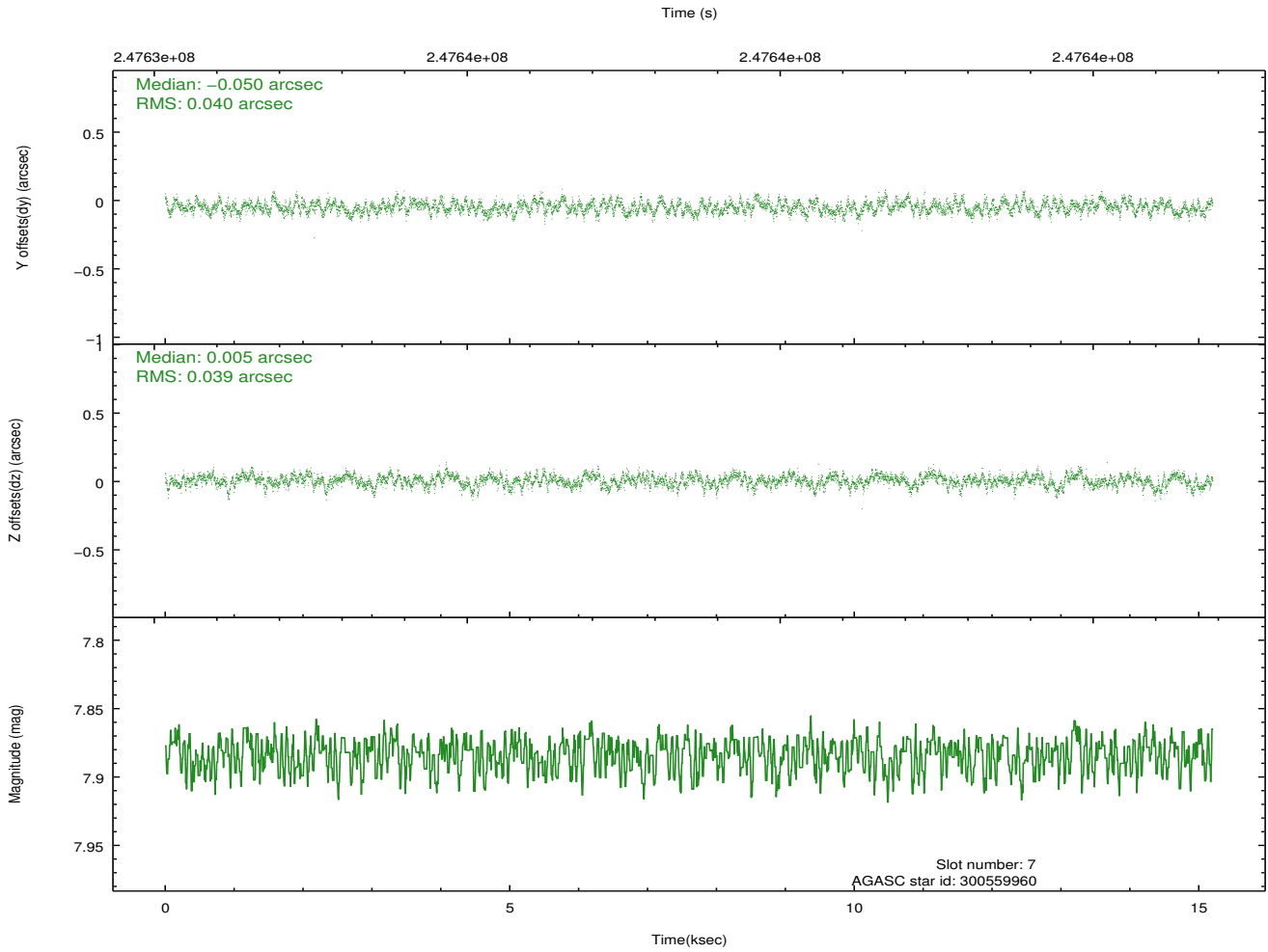
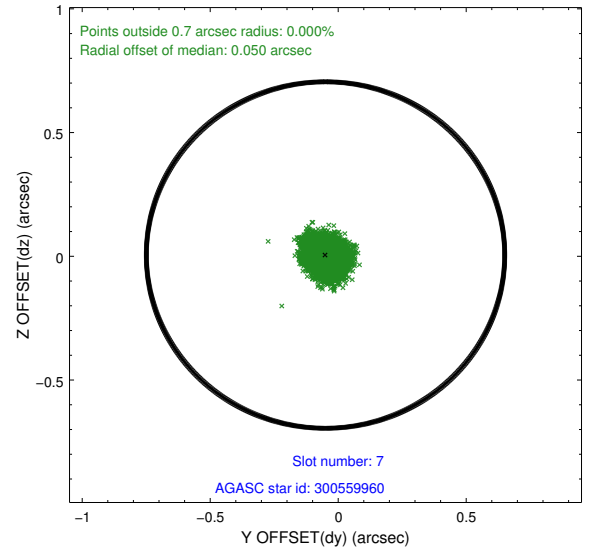
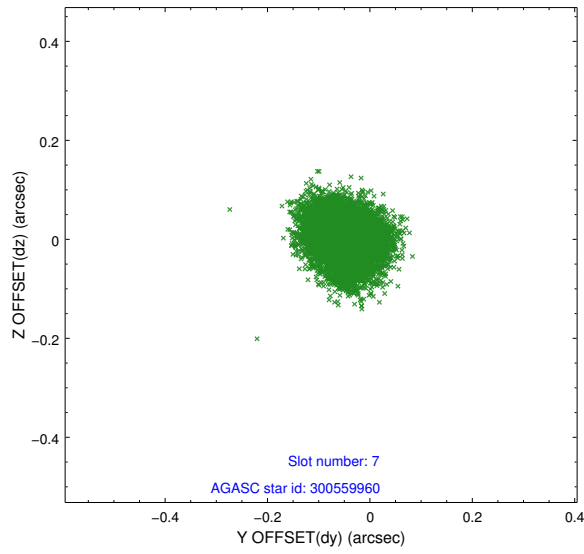


## 2.4.4 Slot 6



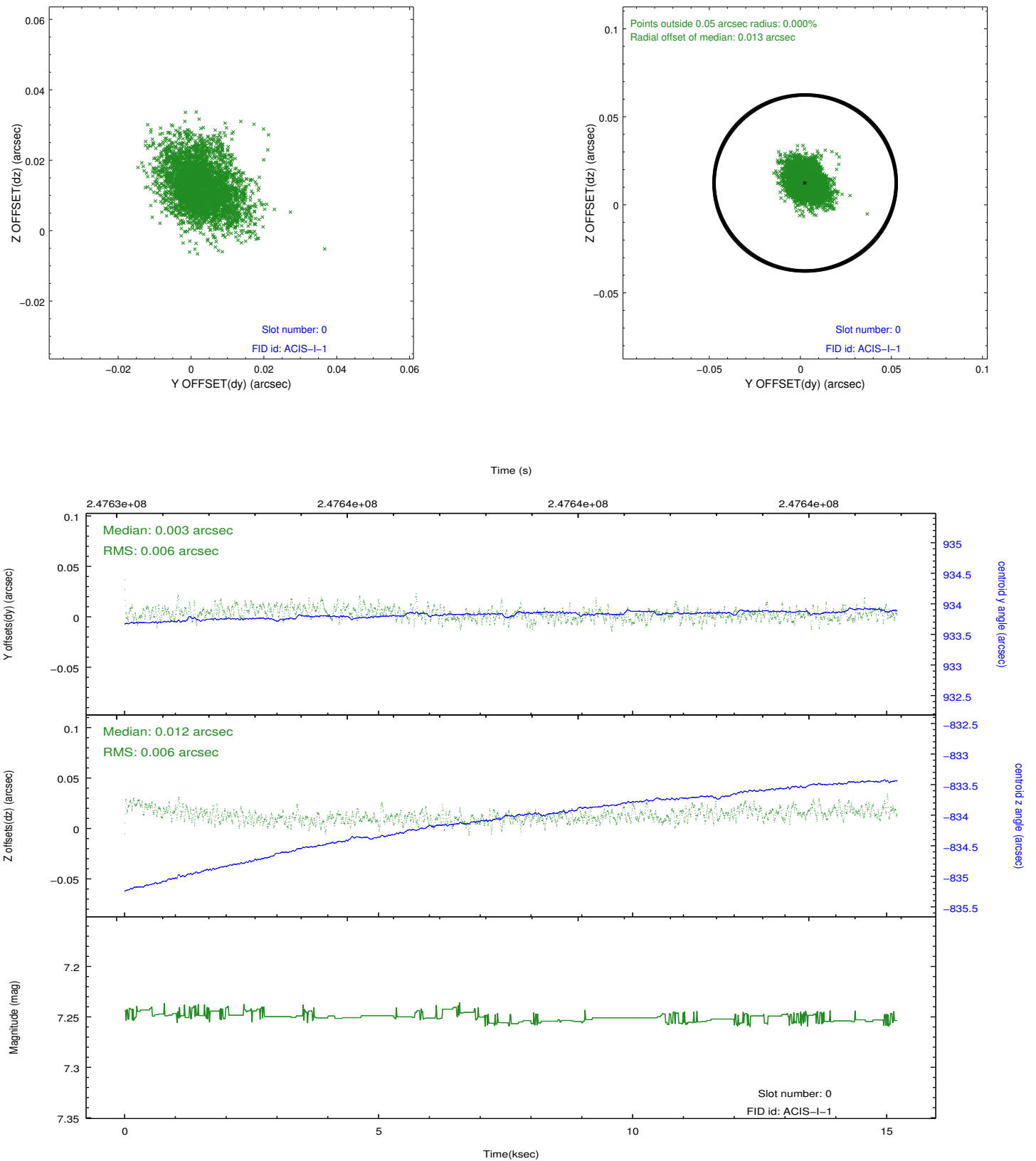


## 2.4.5 Slot 7

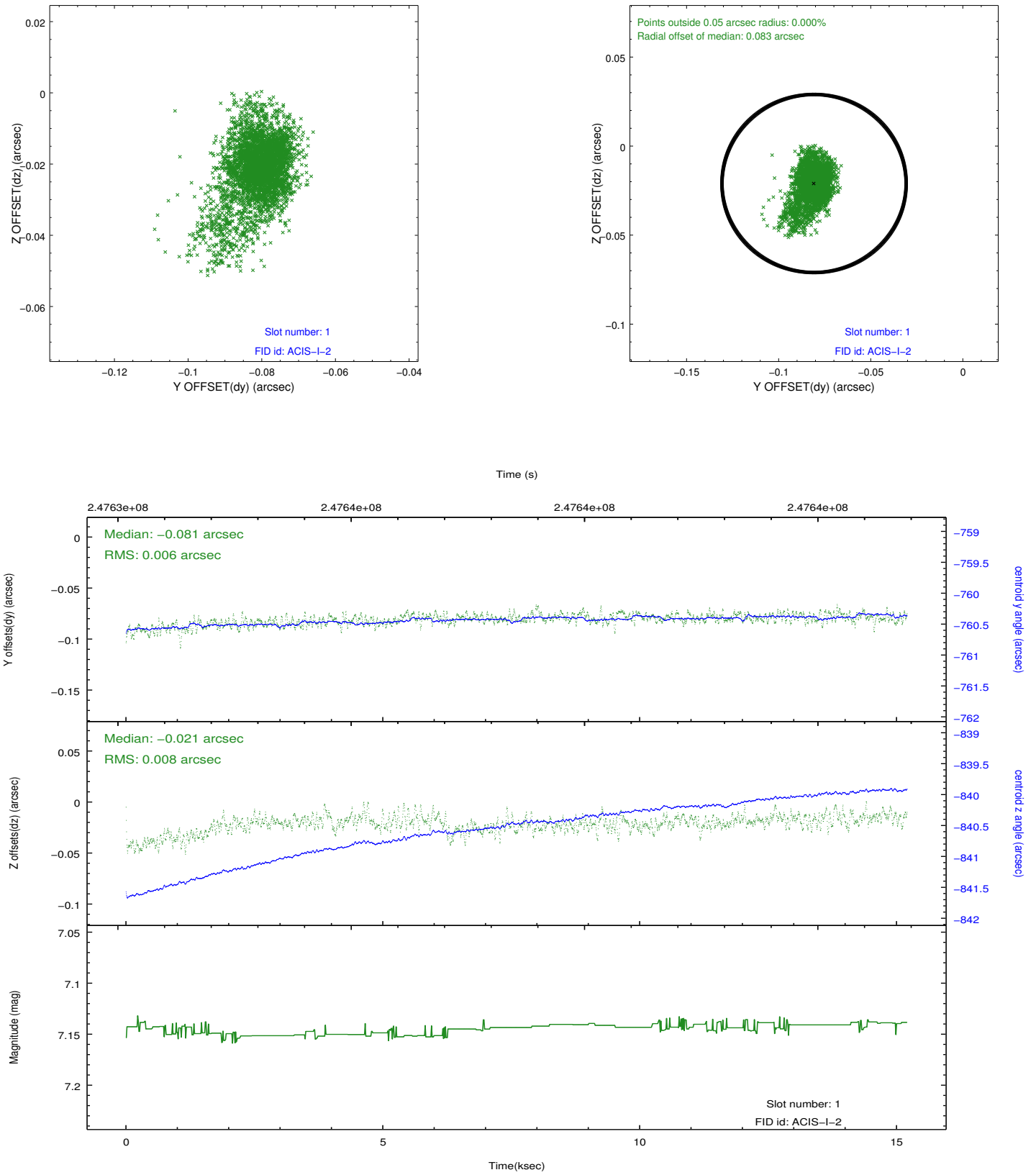


## 2.5 FID Slots

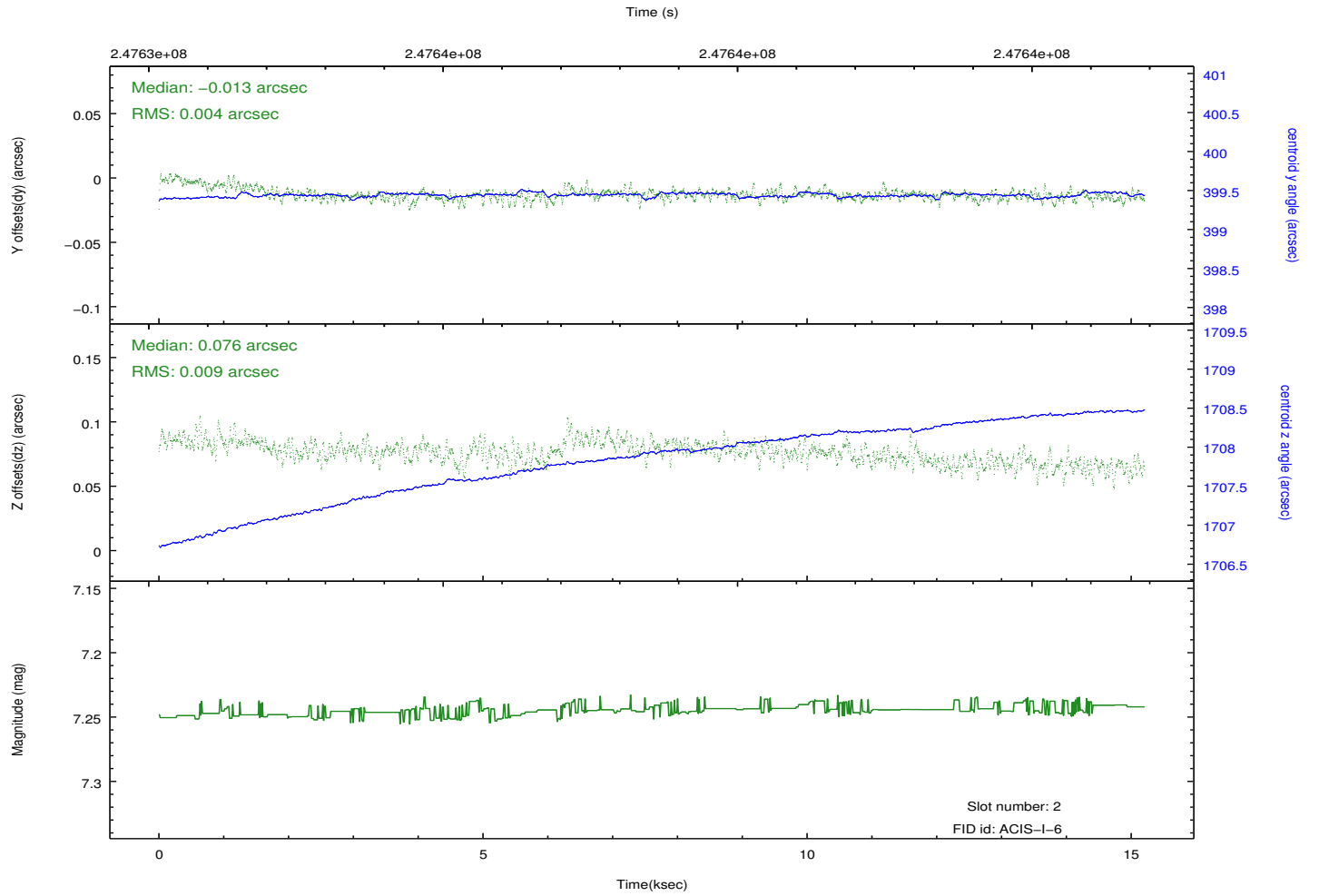
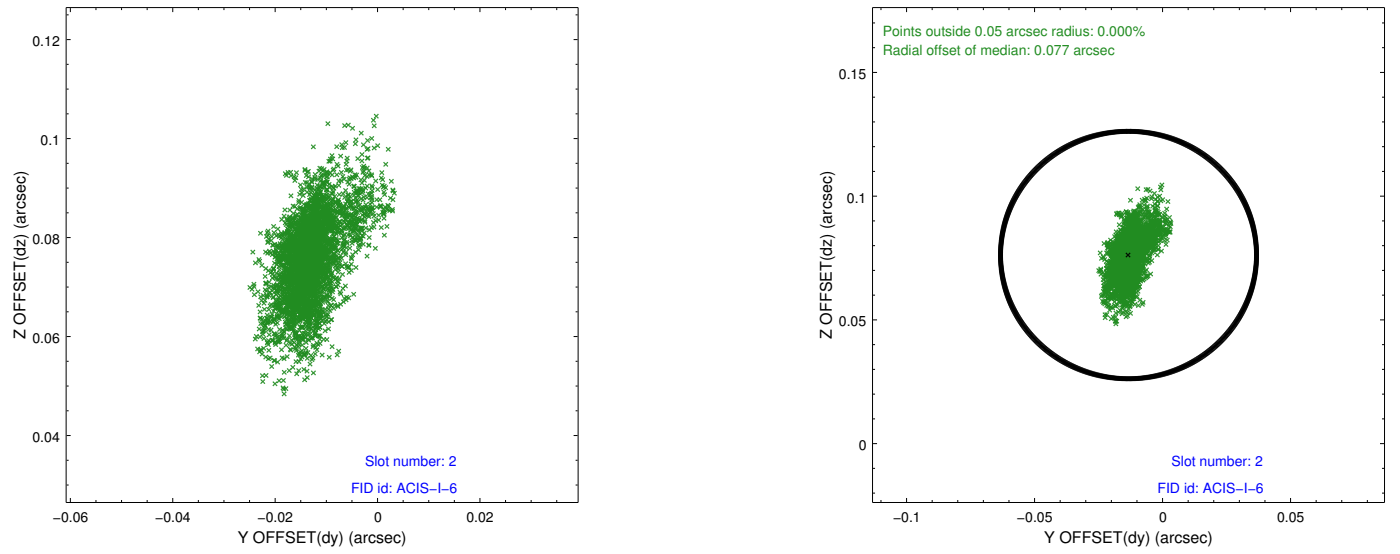
### 2.5.1 Slot 0



## 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)      | 2013.01.28 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 15.01115   |

### A.2 Comments

Roll preference met.