

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 5697 - L2 Version 3  
Chandra X-Ray Center

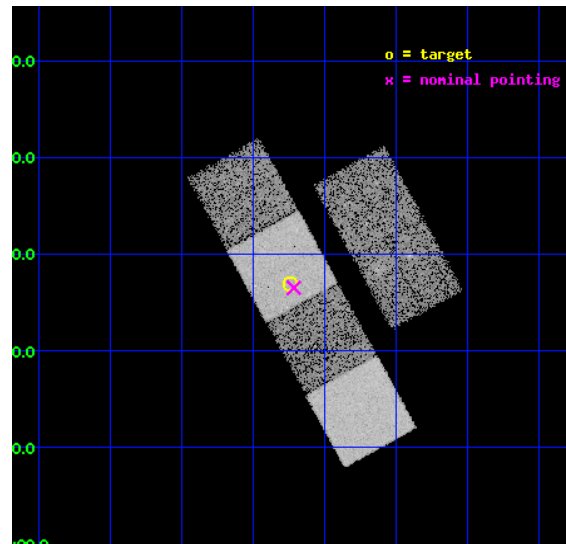
L2 Processing Date : Dec 21 2012

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# 1 Front

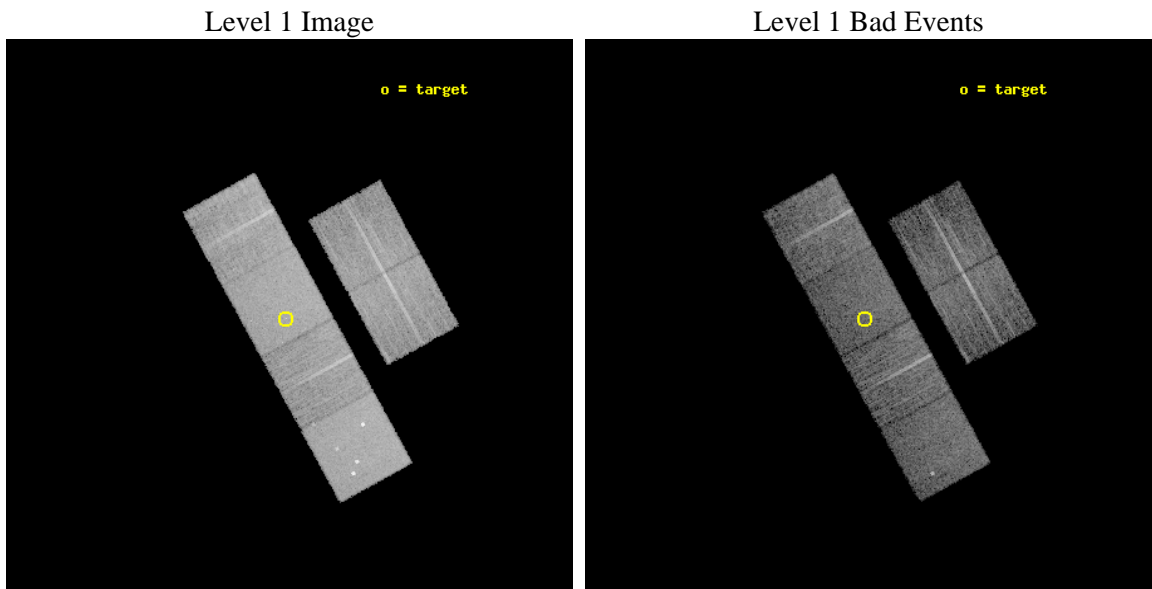
|          |   |   |
|----------|---|---|
| seq_num  | 701119  | Sequence number                             |
| obs_id   | 5697  | Observation id                              |
| title    | Studying the X-ray properties of SDSS candidate Type II quasars with exploratory Chandra observations | Proposal title                              |
| observer | Dr Cristian Vignali   | Principal investigator                      |
| object   | SDSS J115314.36+032658.6  | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 178.31  | Observer's specified target RA<br>[deg]     |
| dec_targ | 3.449611  | Observer's specified target Dec<br>[deg]    |
| ra_nom   | 178.30385602957   | Nominal RA [deg]                            |
| dec_nom  | 3.4420411148066   | Nominal Dec [deg]                           |
| roll_nom | 241.18081592295   | Nominal Roll [deg]                          |
| revision | 3   | Processing version of data                  |
| ontime   | 8278.3999691606   | Sum of GTIs [s]                             |
| livetime | 8173.573884097  | Livetime [s]                                |
| ontime2  | 8278.3999691606   | Sum of GTIs [s]                             |
| ontime3  | 8278.3999691606   | Sum of GTIs [s]                             |
| ontime5  | 8278.3999691606   | Sum of GTIs [s]                             |
| ontime6  | 8278.3999691606   | Sum of GTIs [s]                             |
| ontime7  | 8278.3999691606   | Sum of GTIs [s]                             |
| ontime8  | 8278.3999691606   | Sum of GTIs [s]                             |
| l2events | 103208  | Number of level 2 events                    |



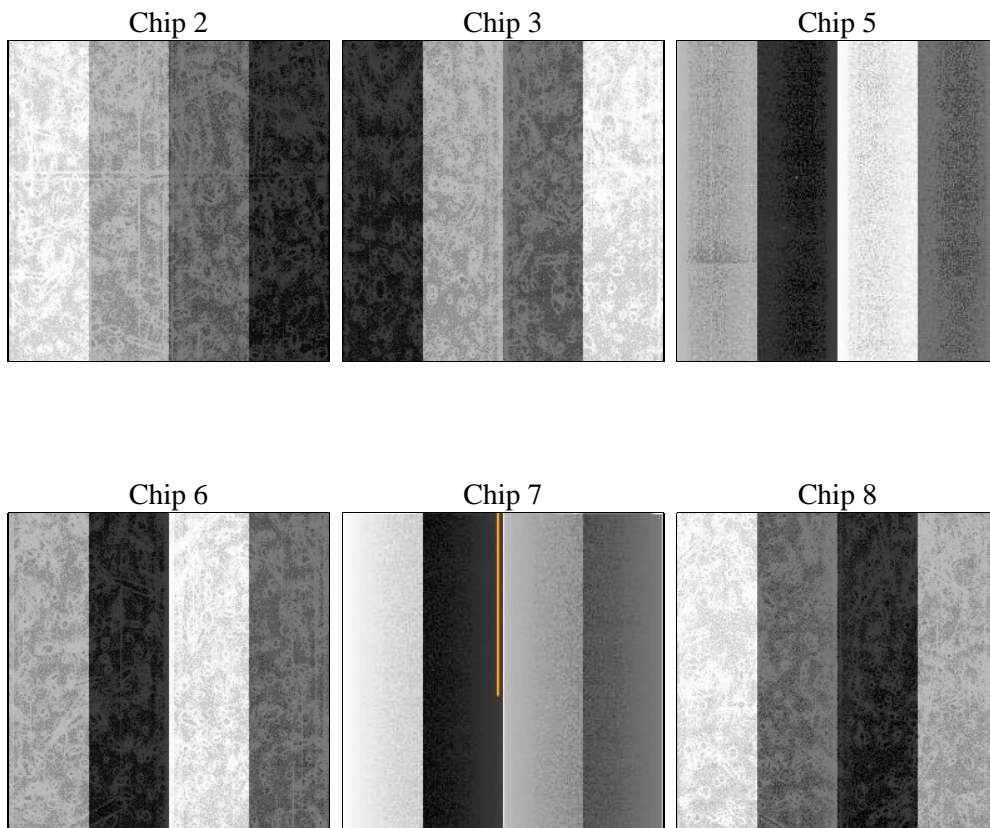
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 8100.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.5.1.1             | Processing system revision     | ontime         | 8278.3999691606 | Sum of GTIs [s]                         |
| caldsver | 4.5.5               | &#160                          | ontime2        | 8278.3999691606 | Sum of GTIs [s]                         |
| date     | 2012-12-22T00:51:33 | Date and time of file creation | ontime3        | 8278.3999691606 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime5        | 8278.3999691606 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 8278.3999691606 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 8278.3999691606 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 8278.3999691606 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 507539          | Number of level 1 events                |

### 2.1.4 Events

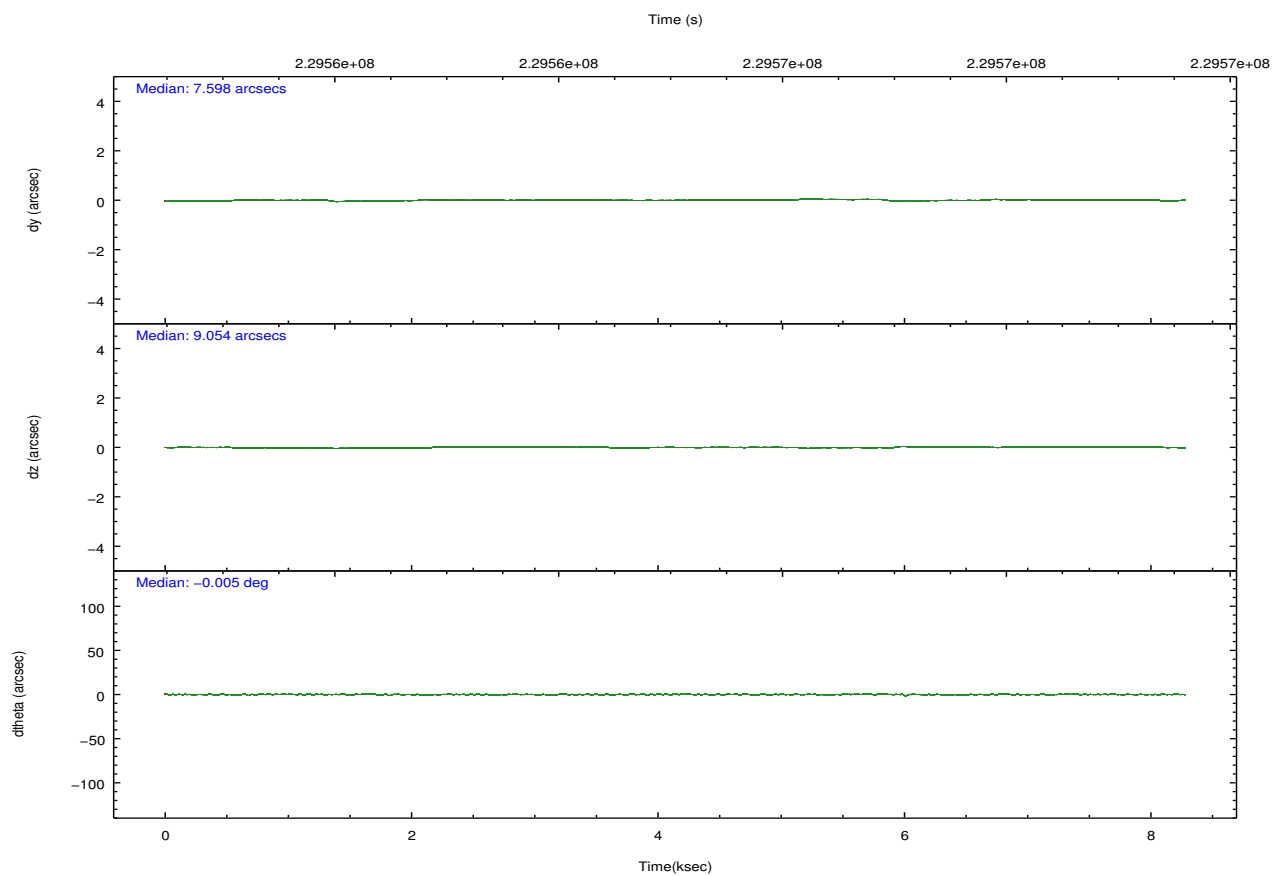
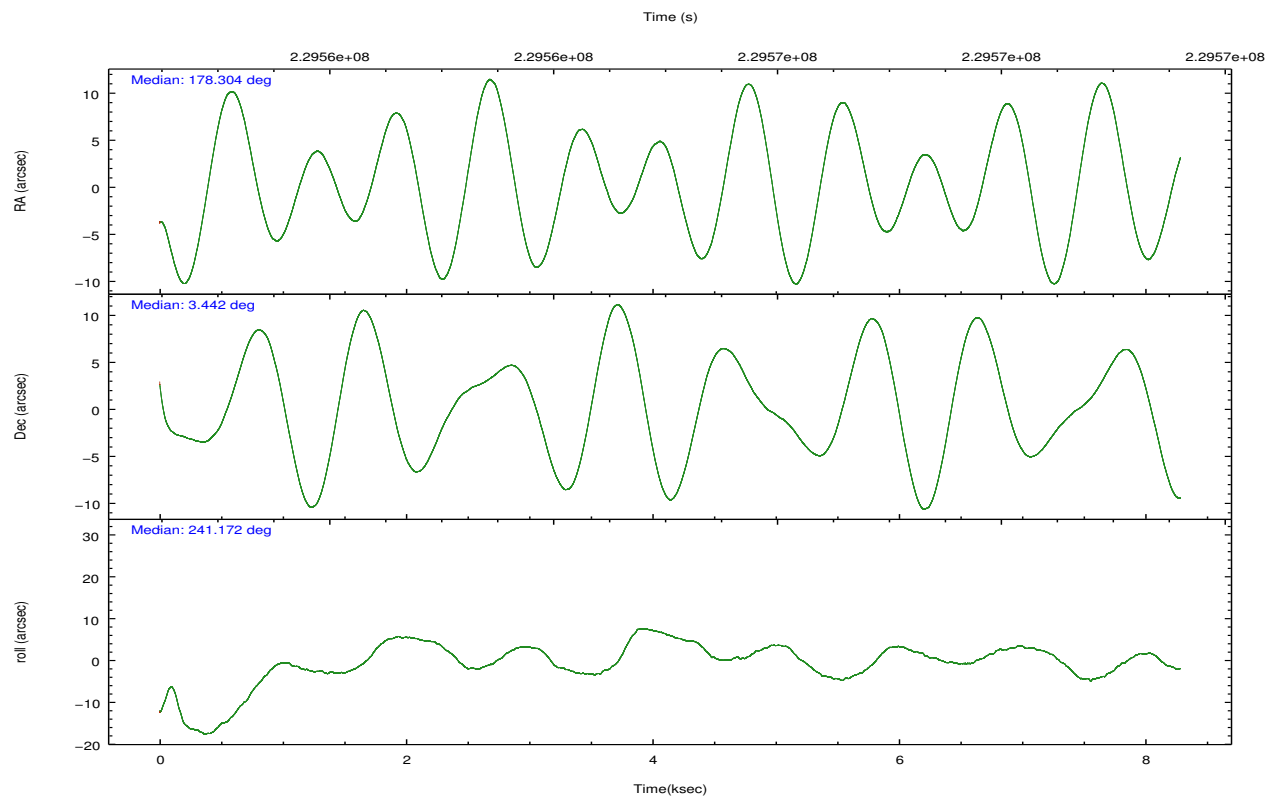
|                 | ccd 2 | ccd 3 | ccd 5  | ccd 6 | ccd 7 | ccd 8 |                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 71605 | 66427 | 109664 | 73580 | 96787 | 89476 | grade 0 events | 4347  | 3717  | 7407  | 3519  | 3853  | 6207  |
| rejected events | 63519 | 58843 | 63188  | 65932 | 61011 | 72278 |                | 6%    | 5%    | 6%    | 4%    | 3%    | 6%    |
| rejected %      | 88%   | 88%   | 57%    | 89%   | 63%   | 80%   | grade 1 events | 39    | 41    | 186   | 40    | 87    | 59    |
|                 |       |       |        |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |        |       |       |       | grade 2 events | 1717  | 1657  | 15293 | 1797  | 8057  | 4343  |
|                 |       |       |        |       |       |       |                | 2%    | 2%    | 13%   | 2%    | 8%    | 4%    |
|                 |       |       |        |       |       |       | grade 3 events | 751   | 825   | 1860  | 777   | 3519  | 2050  |
|                 |       |       |        |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 2%    |
|                 |       |       |        |       |       |       | grade 4 events | 774   | 794   | 1759  | 842   | 3455  | 2003  |
|                 |       |       |        |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 2%    |
|                 |       |       |        |       |       |       | grade 5 events | 2856  | 3207  | 7799  | 3272  | 9081  | 4470  |
|                 |       |       |        |       |       |       |                | 3%    | 4%    | 7%    | 4%    | 9%    | 4%    |
|                 |       |       |        |       |       |       | grade 6 events | 1344  | 1462  | 25542 | 1762  | 21299 | 5075  |
|                 |       |       |        |       |       |       |                | 1%    | 2%    | 23%   | 2%    | 22%   | 5%    |
|                 |       |       |        |       |       |       | grade 7 events | 59777 | 54724 | 49818 | 61571 | 47436 | 65269 |
|                 |       |       |        |       |       |       |                | 83%   | 82%   | 45%   | 83%   | 49%   | 72%   |



## 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                 | 178.302982          | 178.3038560295727    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 3.469302            | 3.442041114806625    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 241.024242          | 241.1808159229471    | [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         | -190.145094680475    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01257209746719923  |                                       |           |         |
| [s] Observation start time (MET)  | 229561077.184000    | 229559545.0153       |                                       |           |         |
| Observation start date            | 2005-04-10T22:56:53 | 2005-04-10T22:32:25  |                                       |           |         |
| [s] Observation end time (MET)    | 229569177.184000    | 229570140.44078      |                                       |           |         |
| Observation end date              | 2005-04-11T01:11:53 | 2005-04-11T01:29:00  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect

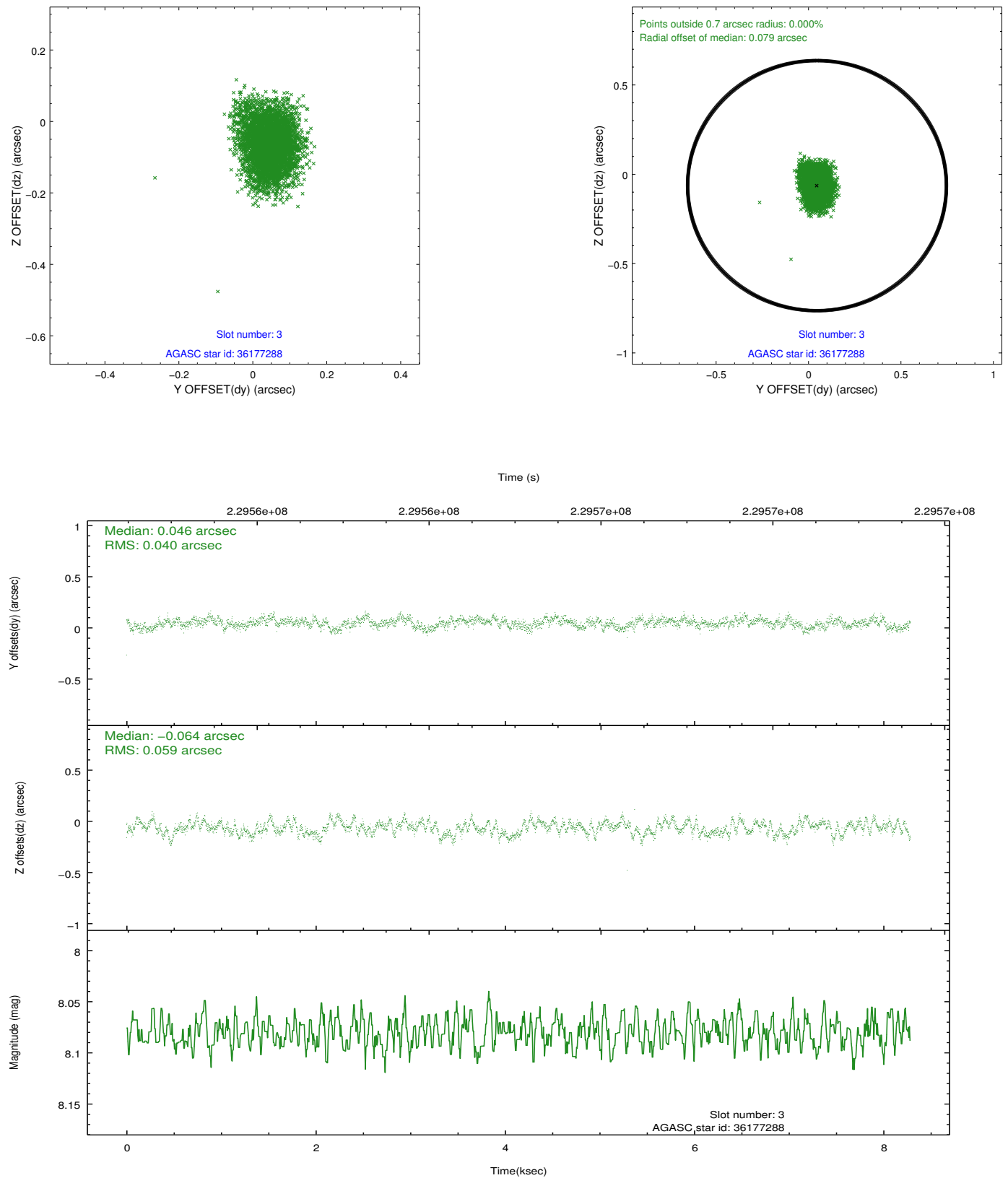


### Slot Statistics

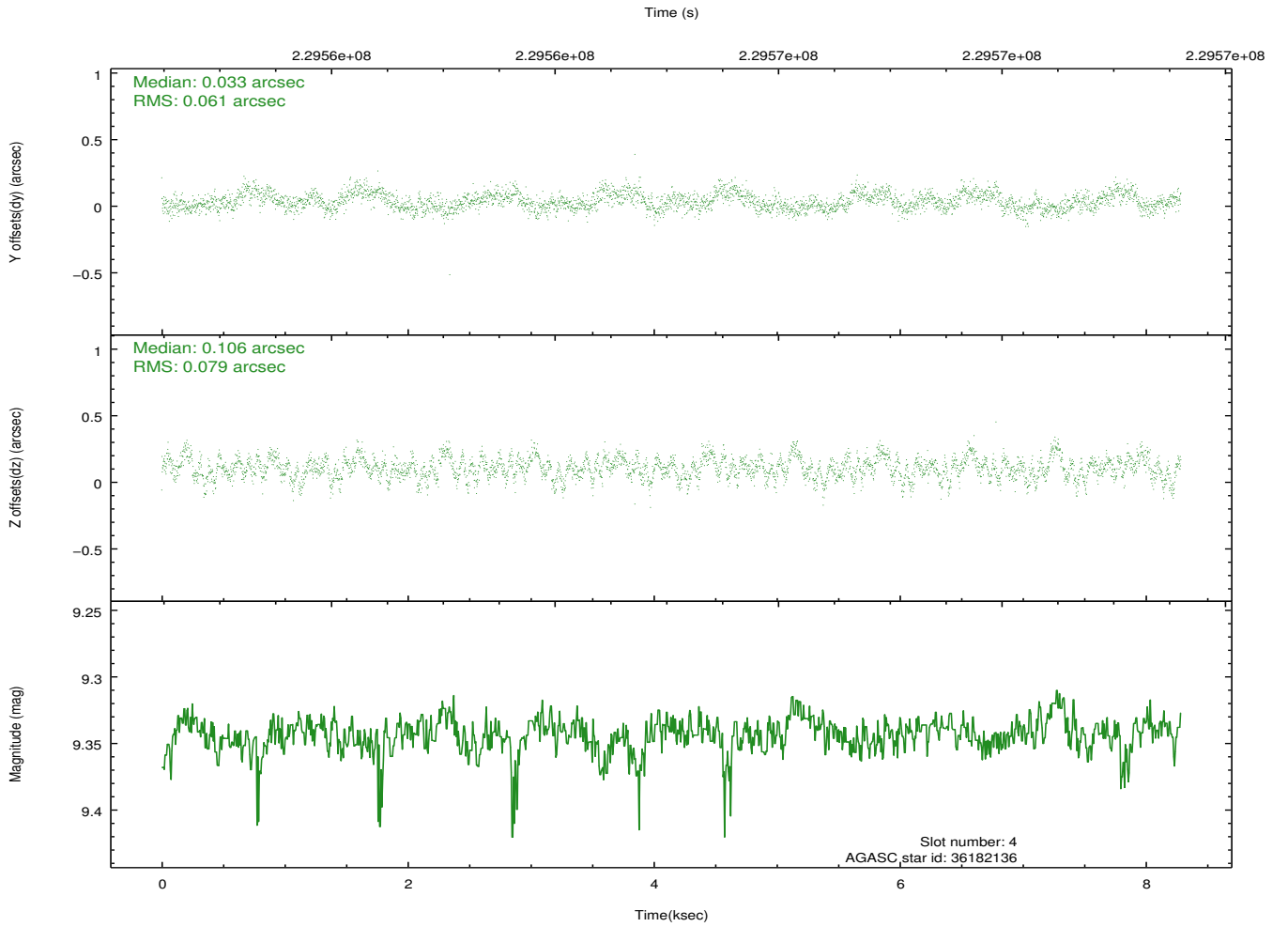
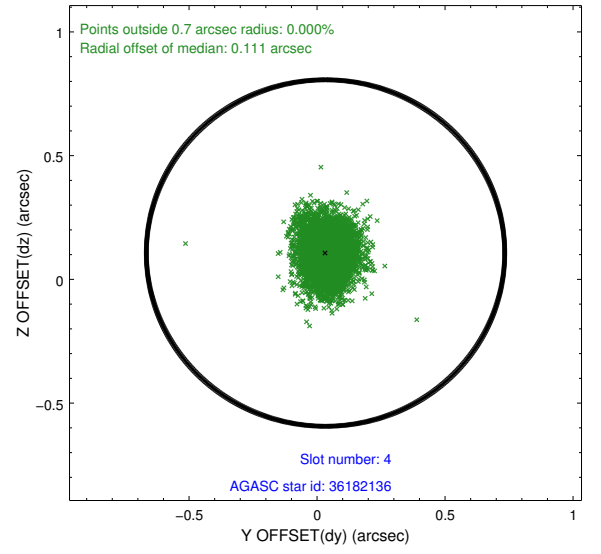
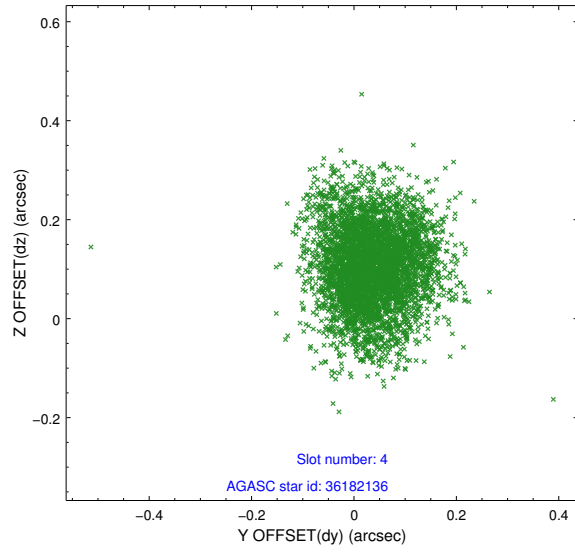
| slot | status | id       | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec      | mean_y   | mean_z   |
|------|--------|----------|------|-------|--------|--------|-------|-------|------------|----------|----------|----------|
| 0    | FID    | ACIS-S-2 | 7.11 | 2021  | -0.022 | -0.038 | 0.007 | 0.012 | 0.000000   | 0.000000 | -760.37  | -1730.21 |
| 1    | FID    | ACIS-S-4 | 7.21 | 2021  | 0.082  | 0.021  | 0.005 | 0.010 | 0.000000   | 0.000000 | 2152.69  | 177.66   |
| 2    | FID    | ACIS-S-5 | 7.24 | 2019  | -0.091 | 0.026  | 0.007 | 0.012 | 0.000000   | 0.000000 | -1812.43 | 172.07   |
| 3    | GUIDE  | 36177288 | 8.08 | 4042  | 0.046  | -0.064 | 0.075 | 0.124 | 178.779743 | 3.218634 | -41.19   | 1936.11  |
| 4    | GUIDE  | 36182136 | 9.34 | 4035  | 0.033  | 0.106  | 0.105 | 0.173 | 177.980361 | 3.762317 | -361.14  | -1524.37 |
| 5    | GUIDE  | 36183400 | 9.33 | 4034  | 0.043  | -0.002 | 0.085 | 0.135 | 178.147022 | 3.151997 | 1270.95  | 62.83    |
| 6    | GUIDE  | 36183880 | 8.53 | 4041  | 0.013  | -0.042 | 0.099 | 0.149 | 178.107077 | 3.094976 | 1521.15  | 36.74    |
| 7    | GUIDE  | 36185104 | 9.35 | 4041  | -0.122 | 0.016  | 0.218 | 0.311 | 178.492899 | 3.230860 | 420.44   | 1013.15  |

## 2.4 Star Slots

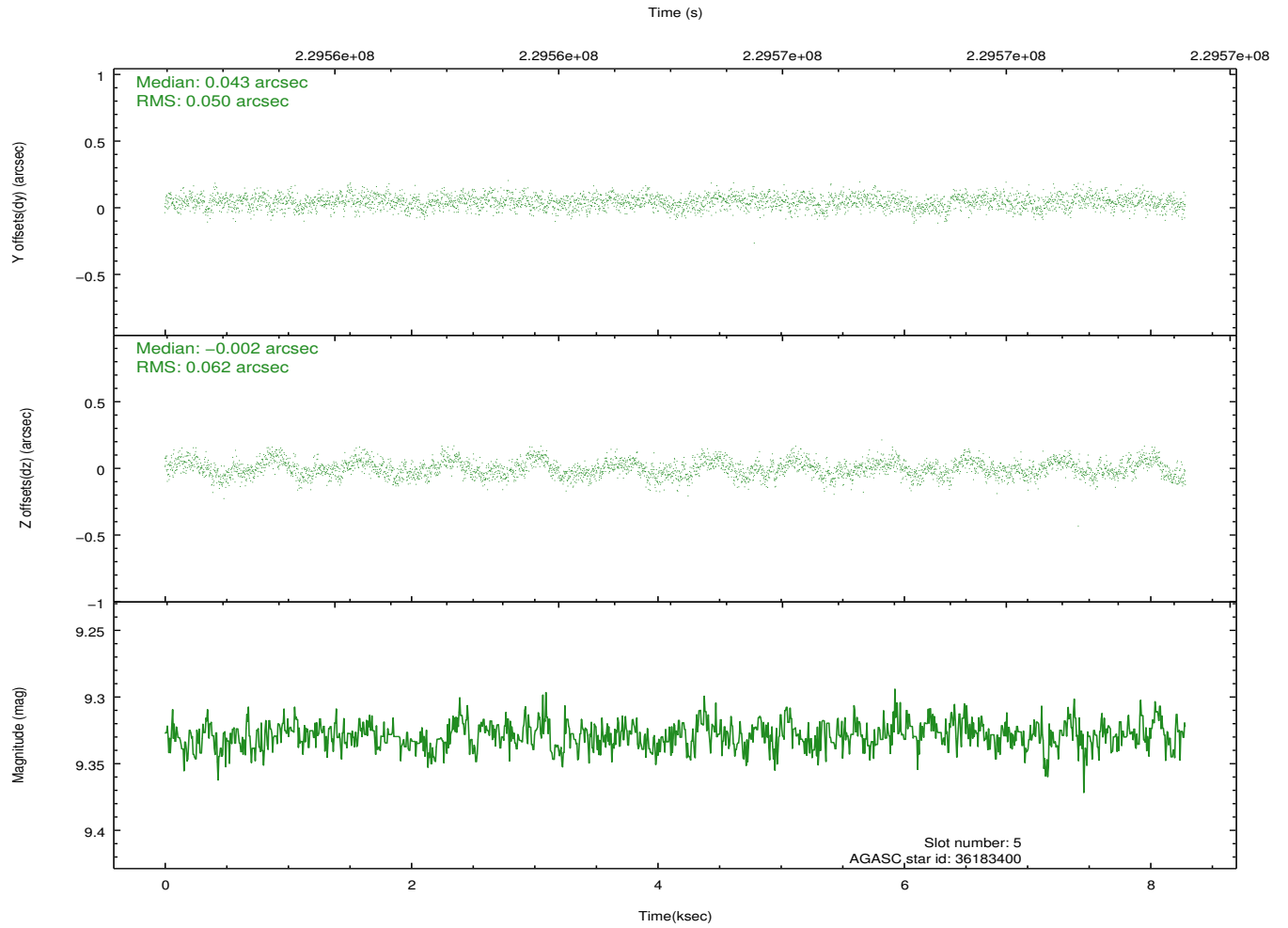
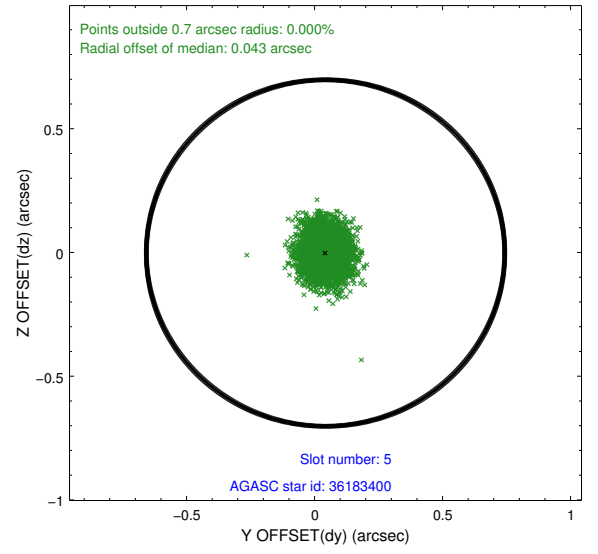
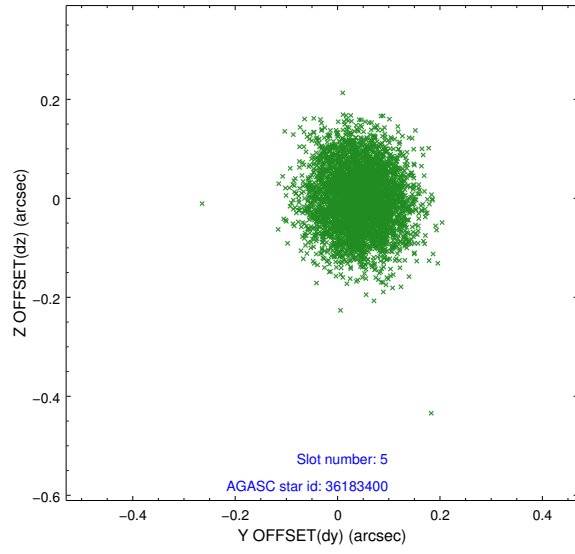
### 2.4.1 Slot 3



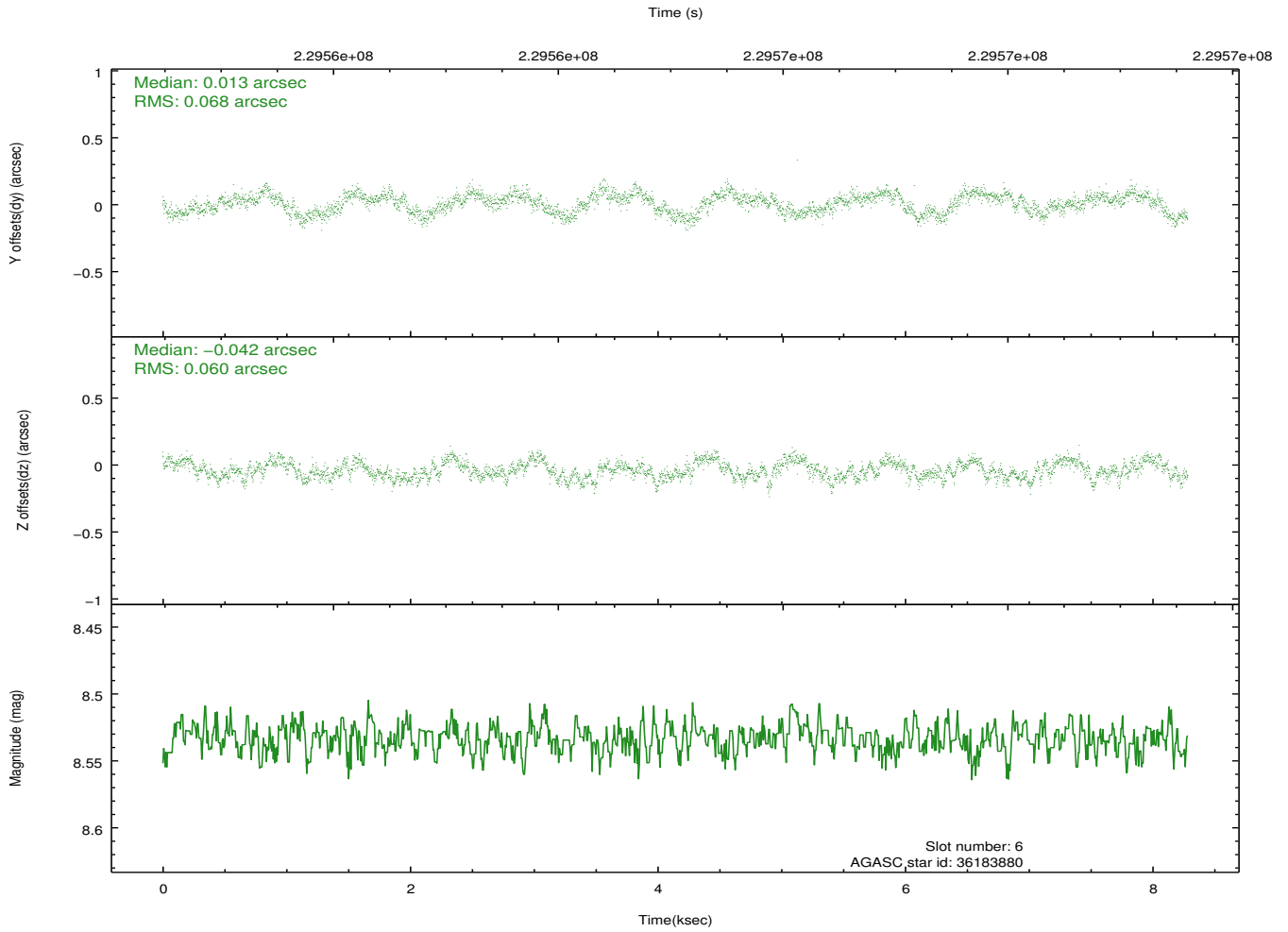
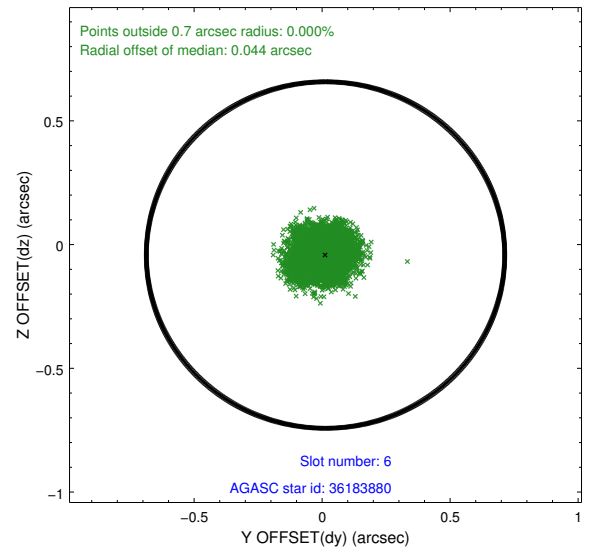
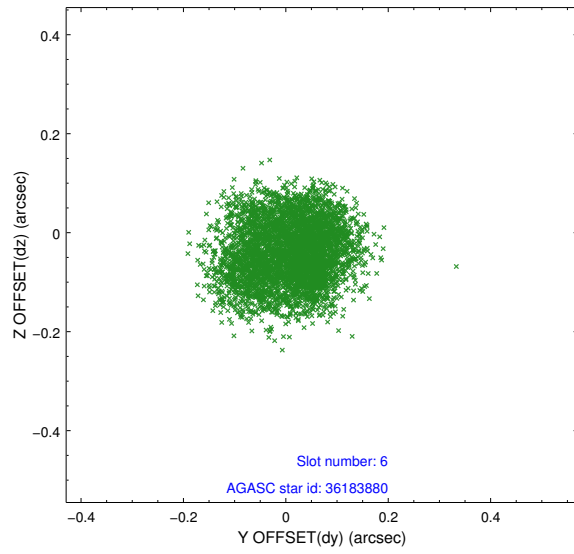
## 2.4.2 Slot 4



### 2.4.3 Slot 5

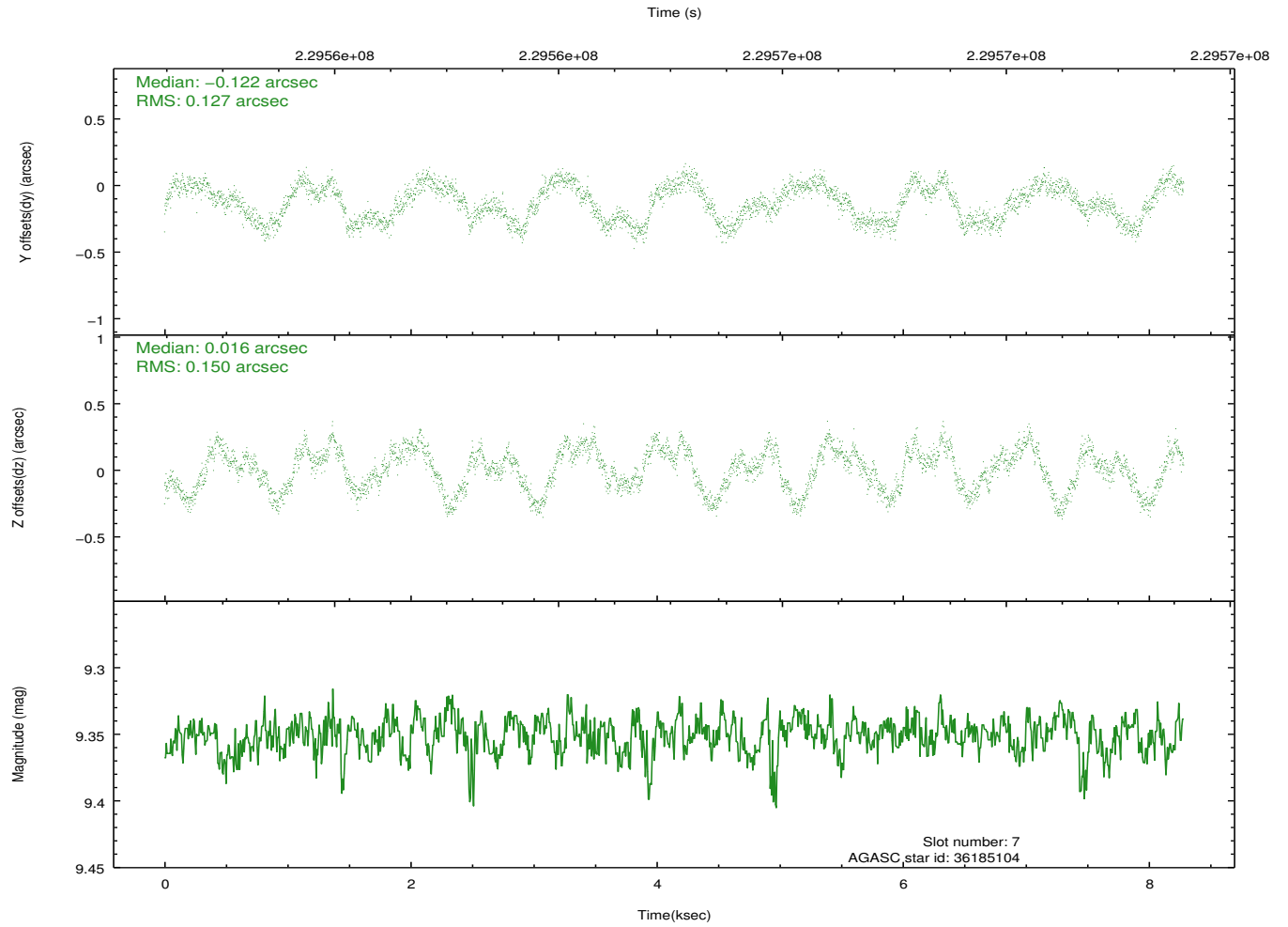
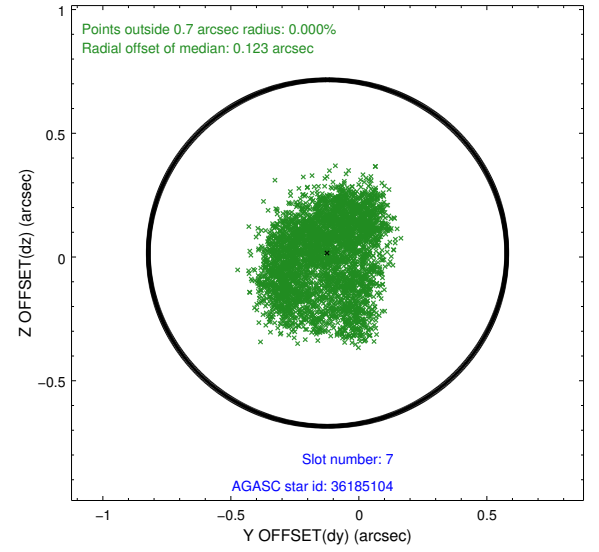
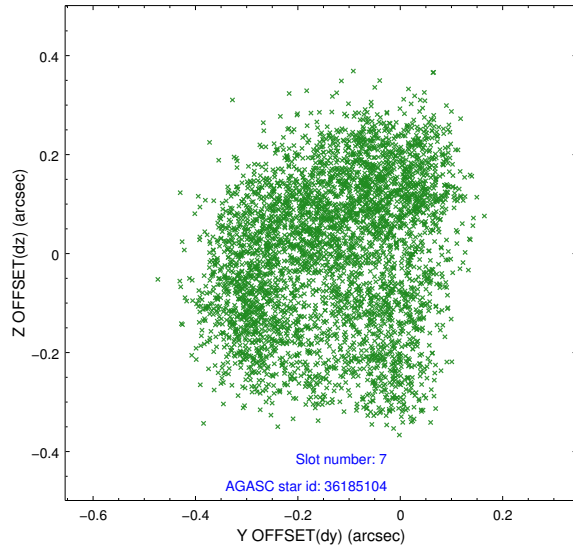


## 2.4.4 Slot 6



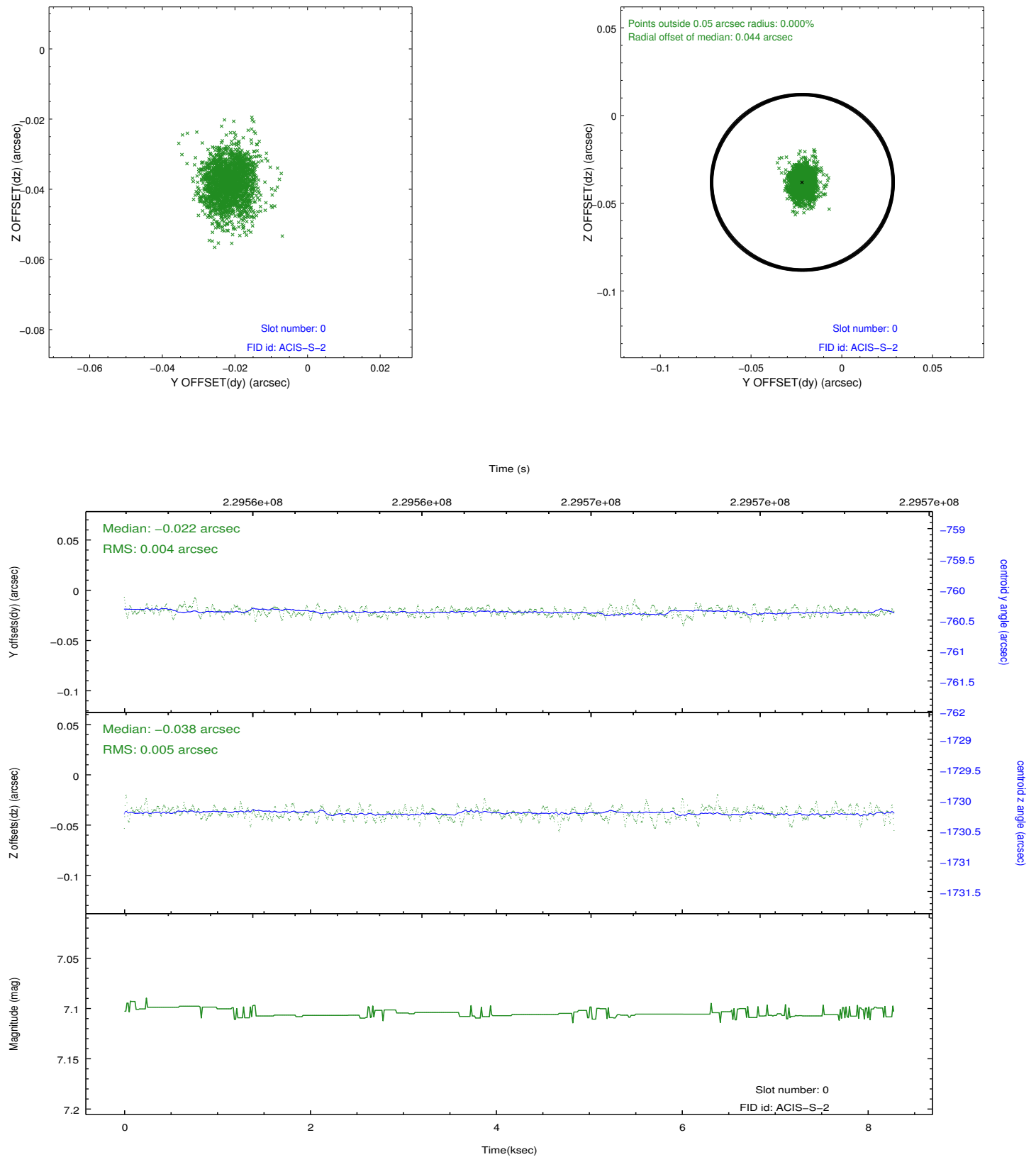


## 2.4.5 Slot 7

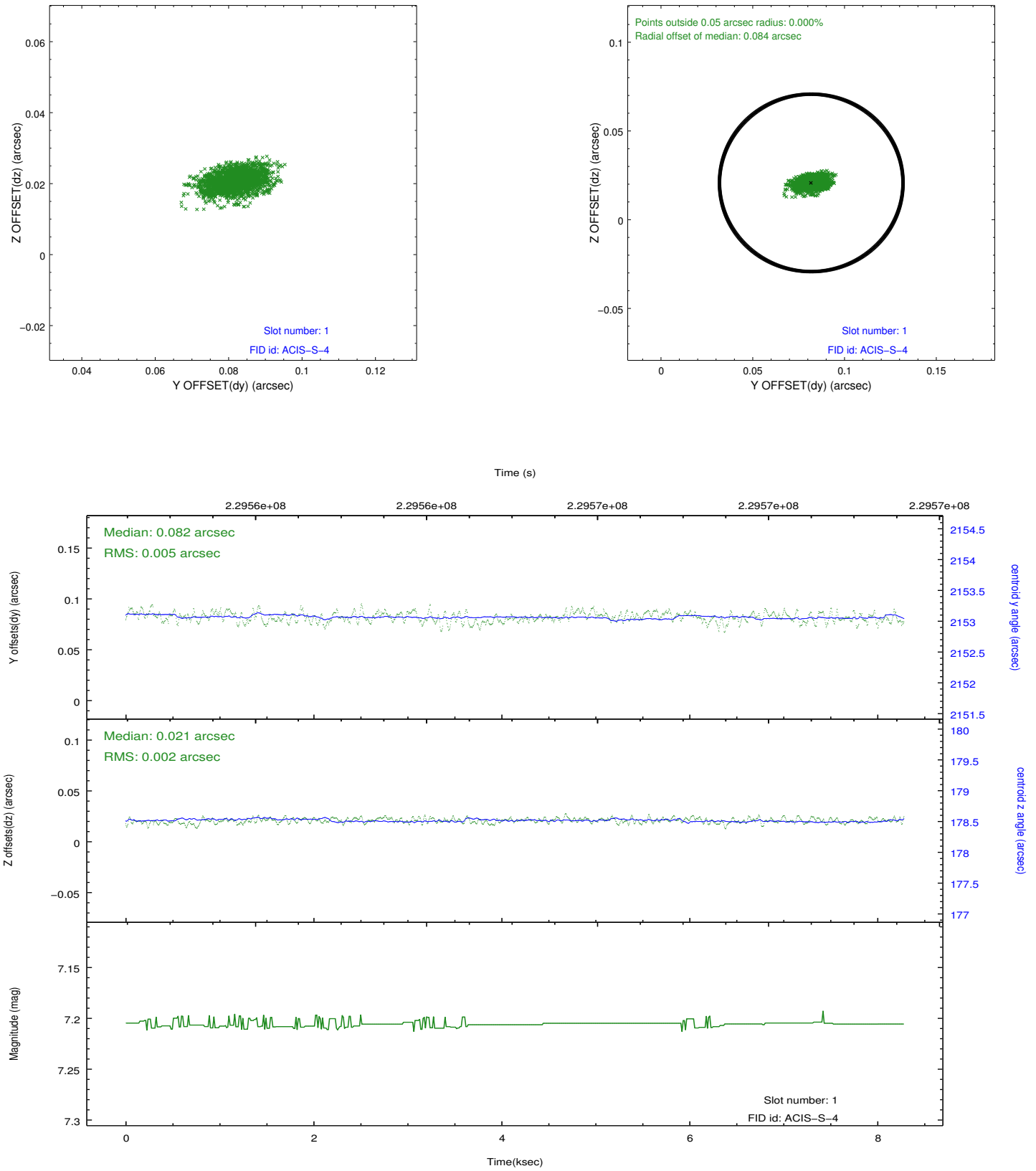


## 2.5 FID Slots

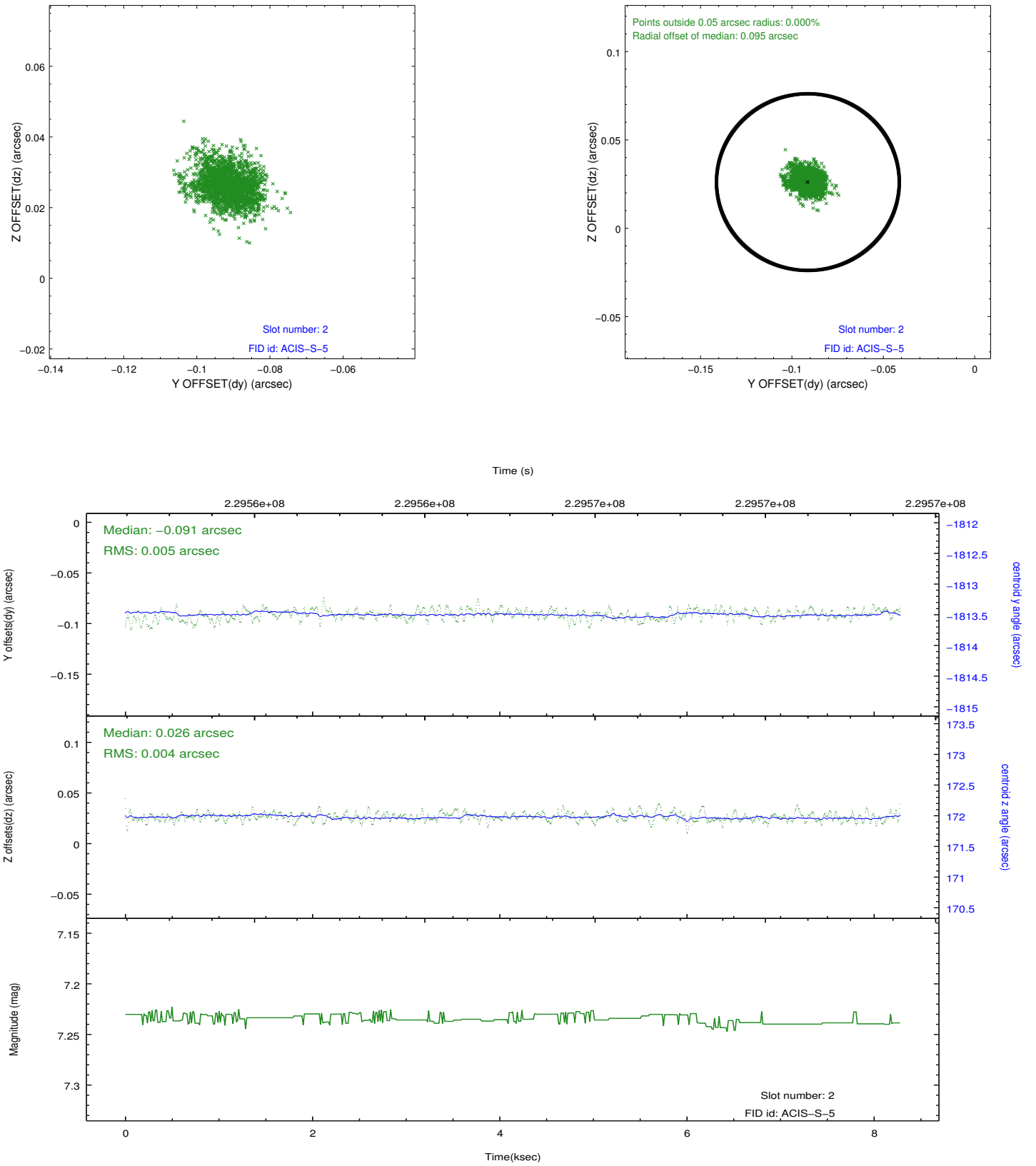
### 2.5.1 Slot 0



## 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)      | 2013.01.11    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 8.278399      |

### A.2 Comments