

# V&V Reference Report

## L2 ASCDS Version : 8.4.4

Observation 9609 - L2 Version 2  
Chandra X-Ray Center

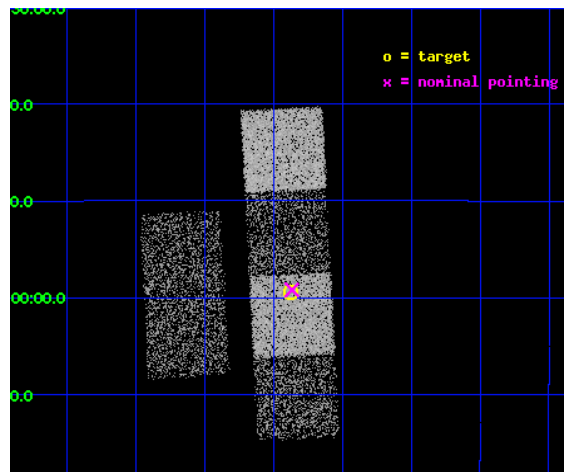
L2 Processing Date : May 9 2012

## Contents

|          |                               |           |
|----------|-------------------------------|-----------|
| <b>1</b> | <b>Front</b>                  | <b>2</b>  |
| <b>2</b> | <b>OBI</b>                    | <b>3</b>  |
| 2.1      | OBI . . . . .                 | 3         |
| 2.1.1    | Images . . . . .              | 3         |
| 2.1.2    | Bias . . . . .                | 3         |
| 2.1.3    | Parameters . . . . .          | 4         |
| 2.1.4    | Events . . . . .              | 4         |
| 2.2      | Compared Parameters . . . . . | 5         |
| 2.3      | Aspect . . . . .              | 6         |
| 2.4      | Star Slots . . . . .          | 9         |
| 2.4.1    | Slot 3 . . . . .              | 9         |
| 2.4.2    | Slot 4 . . . . .              | 10        |
| 2.4.3    | Slot 5 . . . . .              | 11        |
| 2.4.4    | Slot 6 . . . . .              | 12        |
| 2.4.5    | Slot 7 . . . . .              | 13        |
| 2.5      | FID Slots . . . . .           | 14        |
| 2.5.1    | Slot 0 . . . . .              | 14        |
| 2.5.2    | Slot 1 . . . . .              | 15        |
| 2.5.3    | Slot 2 . . . . .              | 16        |
| <b>A</b> | <b>Summary</b>                | <b>17</b> |
| A.1      | Status . . . . .              | 17        |
| A.2      | Comments . . . . .            | 17        |

# 1 Front

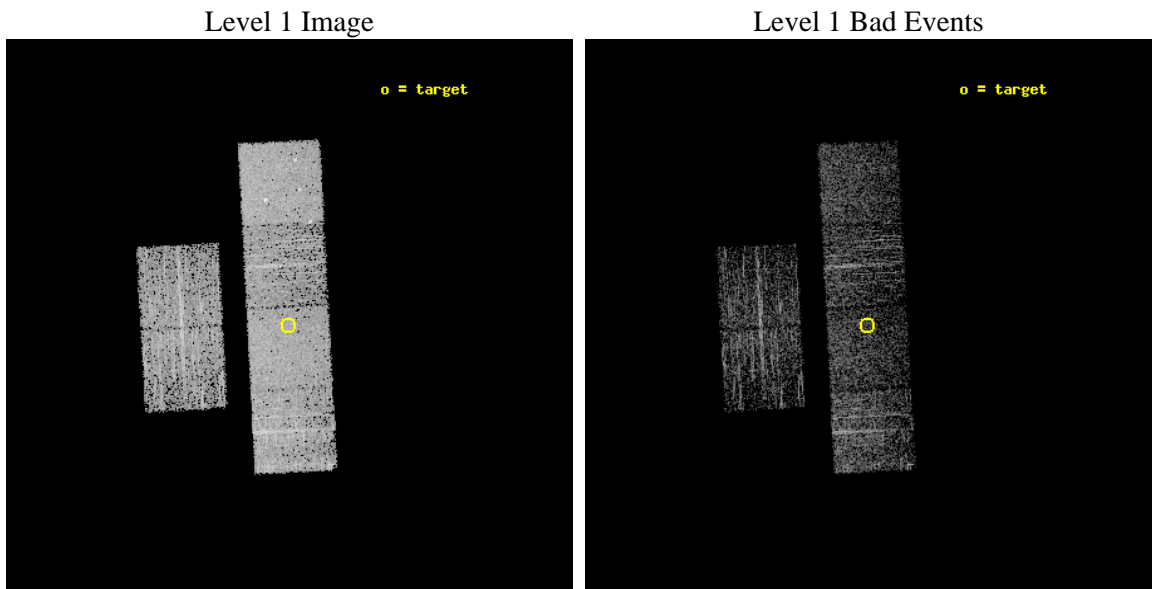
|          |  |   |
|----------|--|---|
| seq_num  | 900851   | Sequence number                             |
| obs_id   | 9609   | Observation id                              |
| title    | GTO ChICAGO: Chandra Identification of Compact ASCA Galactic Objects | &#160                                       |
| observer | Dr. Stephen Murray   | Principal investigator                      |
| object   | AX J181852-1559  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 274.719167   | Observer's specified<br>target RA [deg]     |
| dec_targ | -15.991  | Observer's specified<br>target Dec [deg]    |
| ra_nom   | 274.71673741364  | Nominal RA [deg]                            |
| dec_nom  | -15.986703157343   | Nominal Dec [deg]                           |
| roll_nom | 86.941122047682  | Nominal Roll [deg]                          |
| revision | 2  | Processing version of<br>data               |
| ontime   | 1654.3999938965  | Sum of GTIs [s]                             |
| livetime | 1633.4509850137  | Livetime [s]                                |
| ontime2  | 1654.3999938965  | Sum of GTIs [s]                             |
| ontime3  | 1654.3999938965  | Sum of GTIs [s]                             |
| ontime5  | 1654.3999938965  | Sum of GTIs [s]                             |
| ontime6  | 1654.3999938965  | Sum of GTIs [s]                             |
| ontime7  | 1654.3999938965  | Sum of GTIs [s]                             |
| ontime8  | 1651.1590236425  | Sum of GTIs [s]                             |
| l2events | 27557  | Number of level 2<br>events                 |



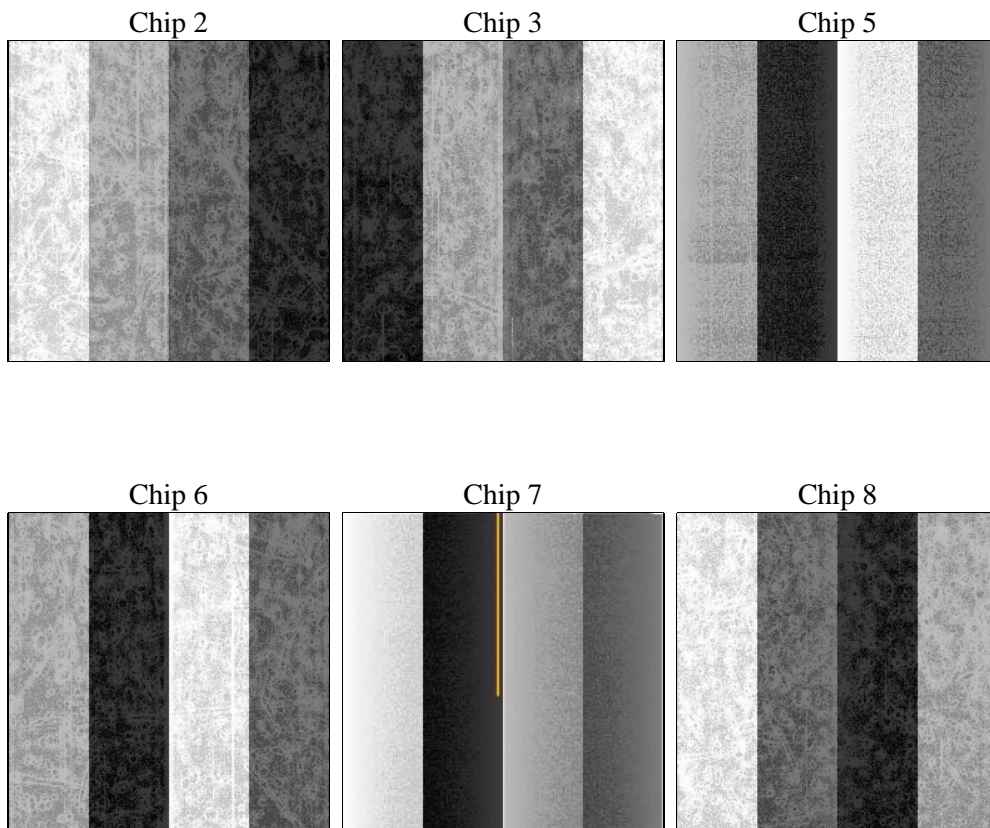
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 1900.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.4               | Processing system revision     | ontime         | 1654.3999938965 | Sum of GTIs [s]                         |
| caldsver | 4.4.9               | &#160                          | ontime2        | 1654.3999938965 | Sum of GTIs [s]                         |
| date     | 2012-05-09T19:09:32 | Date and time of file creation | ontime3        | 1654.3999938965 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime5        | 1654.3999938965 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 1654.3999938965 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 1654.3999938965 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 1651.1590236425 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 120206          | Number of level 1 events                |

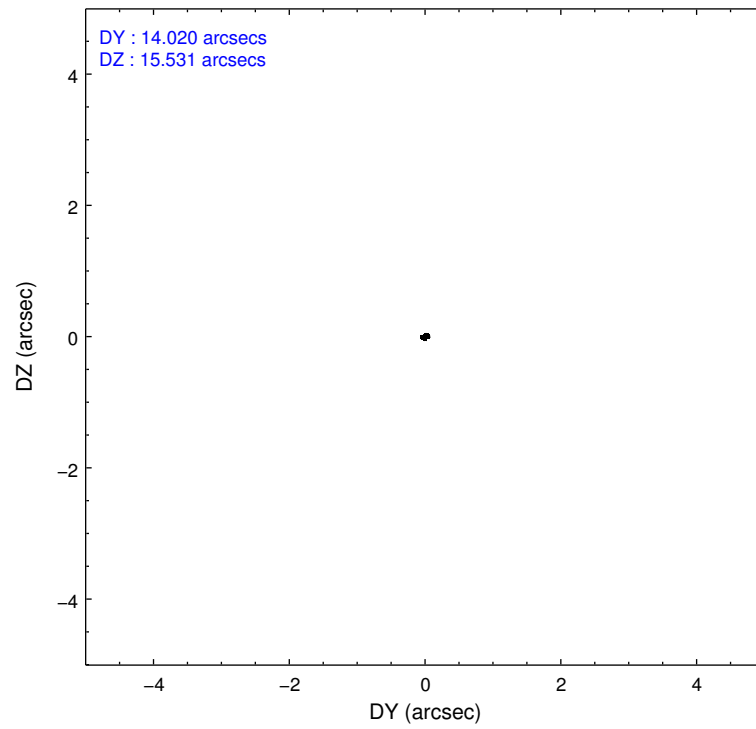
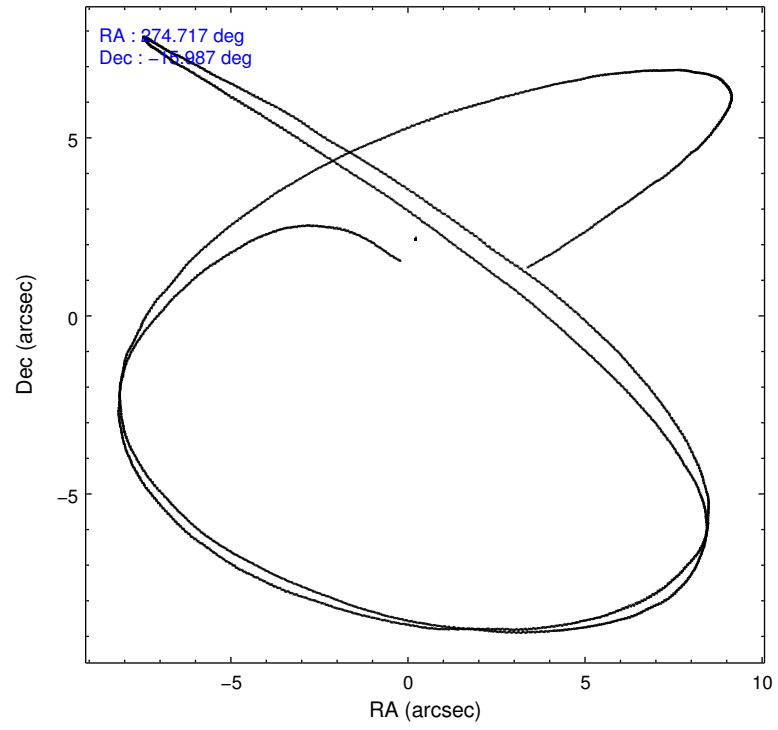
### 2.1.4 Events

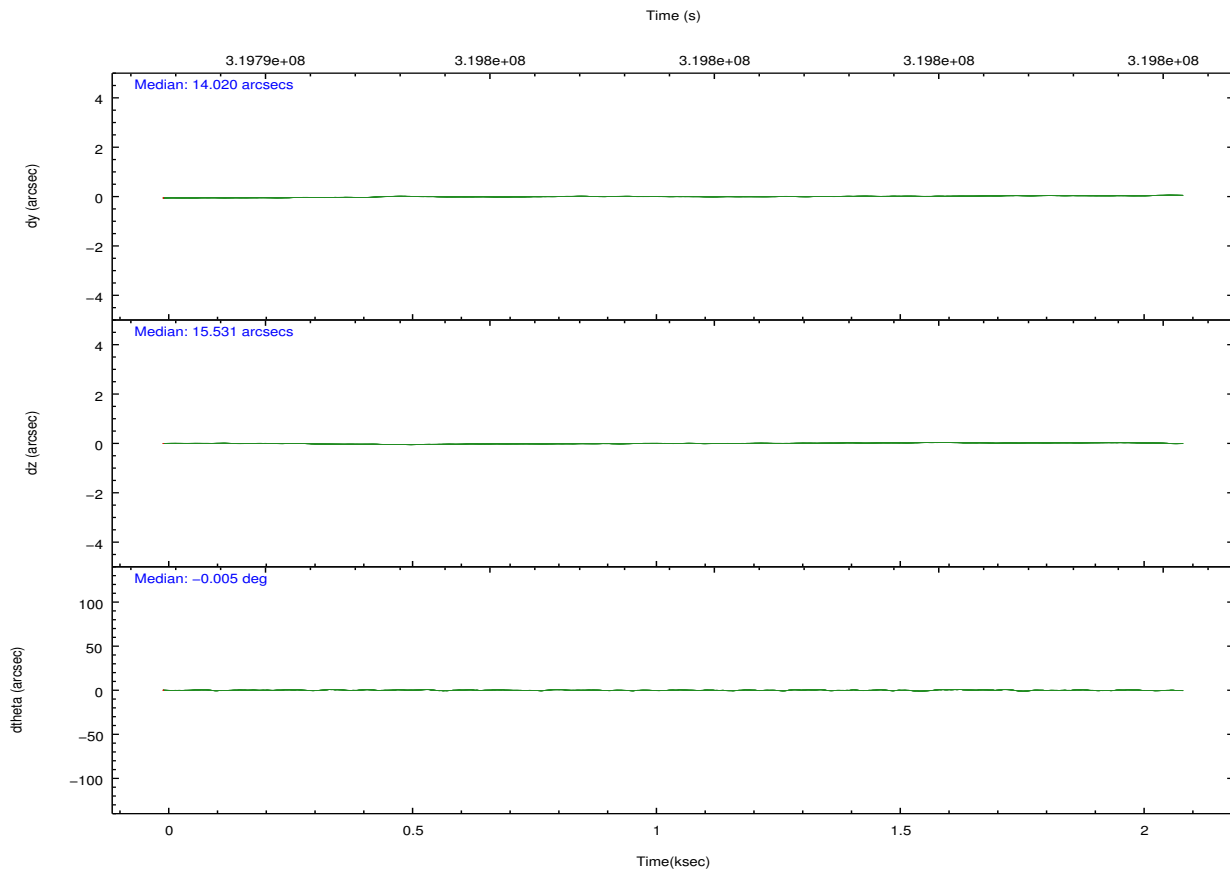
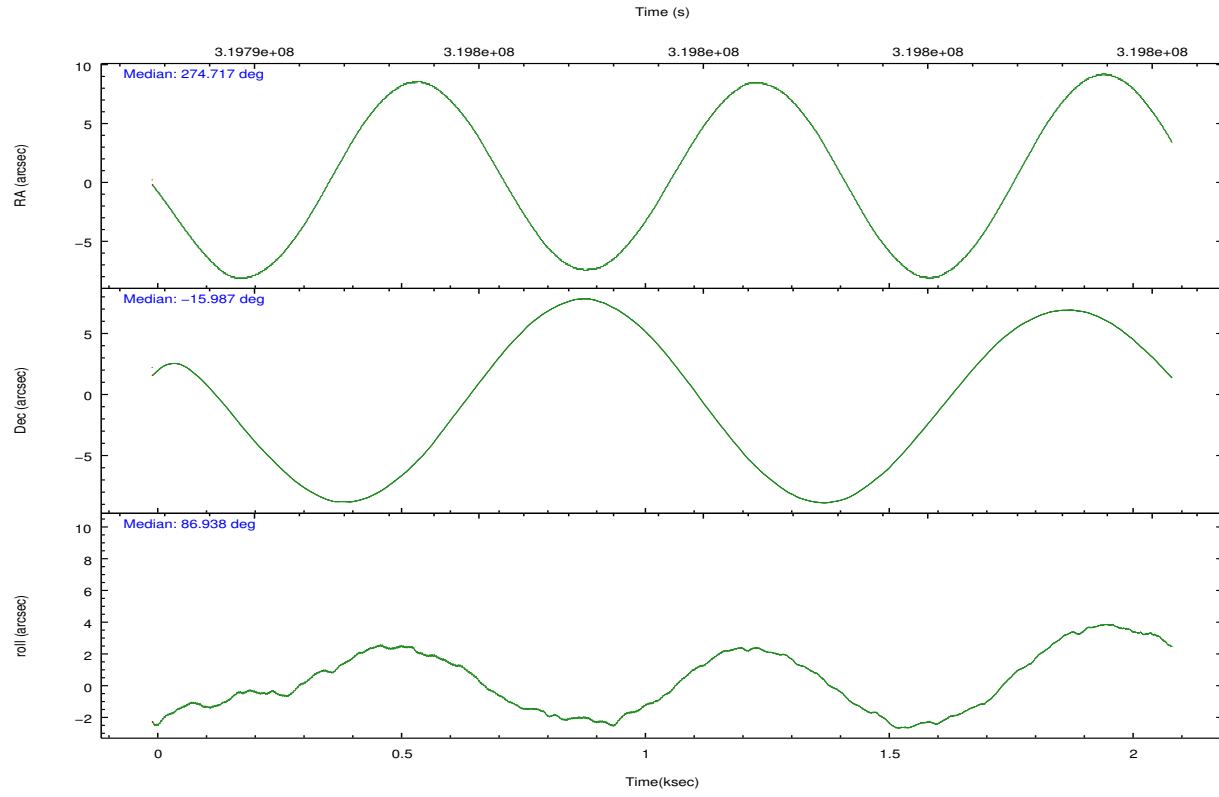
|                 | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 15915 | 16384 | 25569 | 16528 | 22433 | 23377 | grade 0 events | 907   | 911   | 1459  | 877   | 885   | 1492  |
| rejected events | 13870 | 14442 | 13498 | 14460 | 12866 | 18736 |                | 5%    | 5%    | 5%    | 5%    | 3%    | 6%    |
| rejected %      | 87%   | 88%   | 52%   | 87%   | 57%   | 80%   | grade 1 events | 10    | 7     | 65    | 14    | 17    | 28    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 458   | 373   | 3529  | 433   | 2054  | 1115  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 13%   | 2%    | 9%    | 4%    |
|                 |       |       |       |       |       |       | grade 3 events | 177   | 187   | 394   | 189   | 821   | 422   |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 1%    |
|                 |       |       |       |       |       |       | grade 4 events | 175   | 176   | 468   | 196   | 798   | 431   |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 3%    | 1%    |
|                 |       |       |       |       |       |       | grade 5 events | 639   | 691   | 1720  | 824   | 2104  | 948   |
|                 |       |       |       |       |       |       |                | 4%    | 4%    | 6%    | 4%    | 9%    | 4%    |
|                 |       |       |       |       |       |       | grade 6 events | 331   | 302   | 6240  | 378   | 5039  | 1183  |
|                 |       |       |       |       |       |       |                | 2%    | 1%    | 24%   | 2%    | 22%   | 5%    |
|                 |       |       |       |       |       |       | grade 7 events | 13218 | 13737 | 11694 | 13617 | 10715 | 17758 |
|                 |       |       |       |       |       |       |                | 83%   | 83%   | 45%   | 82%   | 47%   | 75%   |

## 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                | CCD I0 on                             | N         | N       |
| Observation mode                  | POINTING            | POINTING             | CCD I1 on                             | N         | N       |
| [deg] Pointing RA                 | 274.729984          | 274.7167374136374    | CCD I2 on                             | O2        | Y       |
| [deg] Pointing Dec                | -16.010941          | -15.98670315734271   | CCD I3 on                             | O3        | Y       |
| [deg] Pointing Roll               | 86.788186           | 86.94112204768176    | CCD S0 on                             | N         | N       |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  | CCD S1 on                             | O1        | Y       |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 | CCD S2 on                             | O5        | Y       |
| [mm] SIM translation stage pos    | -190.132523         | -190.1400660498719   | CCD S3 on                             | Y         | Y       |
| [mm] SIM translation stage offset | 0                   | 0.00754346686406393  | CCD S4 on                             | O4        | Y       |
| [s] Observation start time (MET)  | 319794547.184000    | 319793880.6095       | CCD S5 on                             | N         | N       |
| Observation start date            | 2008-02-19T07:48:02 | 2008-02-19T07:38:00  | Number of optional ACIS chips dropped | 0         | 0       |
| [s] Observation end time (MET)    | 319796447.184000    | 319797388.15967      | On-chip summing requested             | N         | N       |
| Observation end date              | 2008-02-19T08:19:42 | 2008-02-19T08:36:28  | Subarray requested                    | NONE      | NONE    |
| Read mode                         | TIMED               | TIMED                | Alternating exposures requested       | N         | N       |
|                                   |                     |                      | [s] Primary exposure time             | 0.000000  | 3.2     |

## 2.3 Aspect





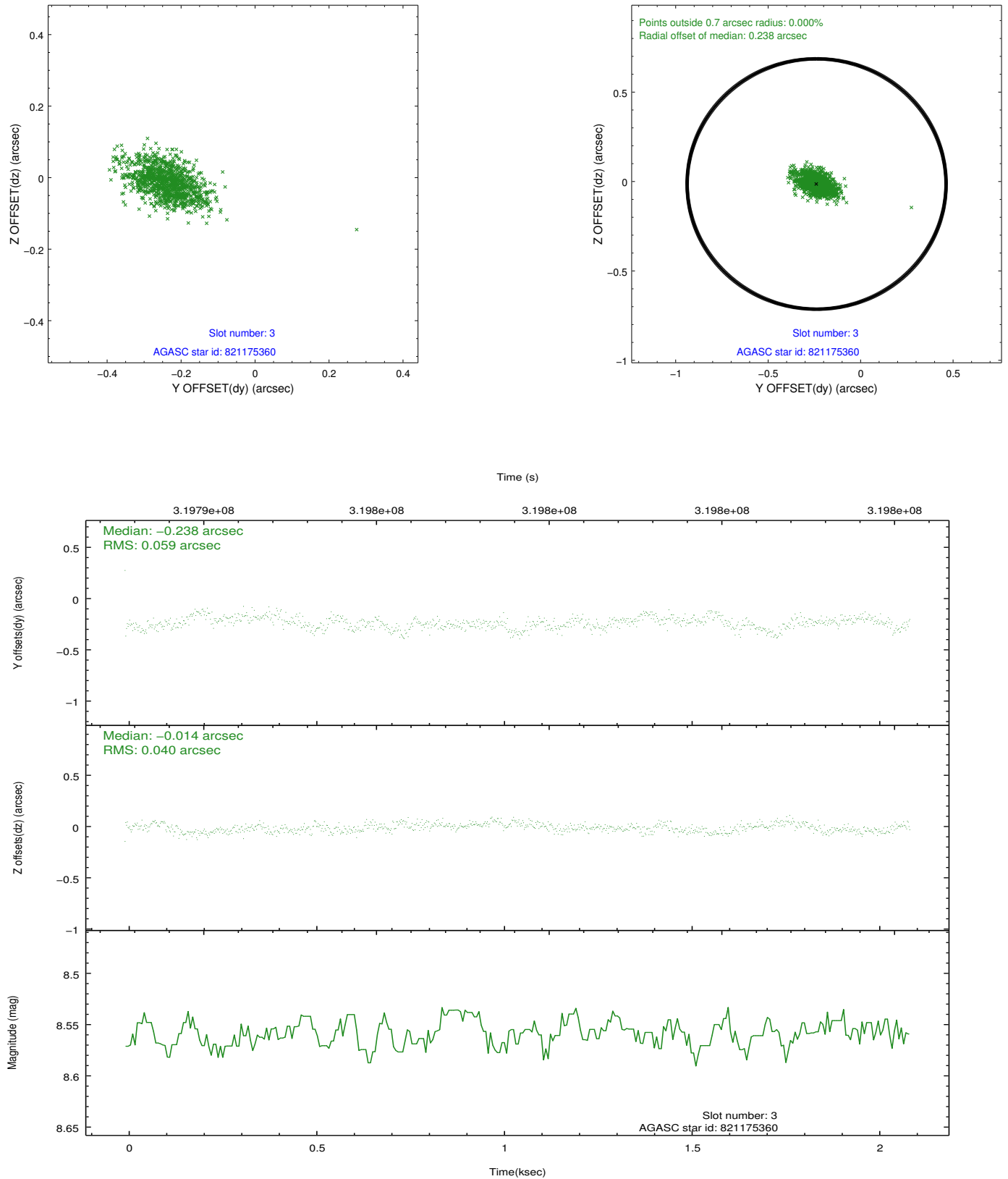
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.09 | 511   | -0.062 | -0.018 | 0.008 | 0.014 | 0.000000   | 0.000000   | -767.01  | -1736.95 |
| 1    | FID    | ACIS-S-4  | 7.19 | 511   | 0.173  | 0.035  | 0.009 | 0.017 | 0.000000   | 0.000000   | 2145.06  | 168.37   |
| 2    | FID    | ACIS-S-5  | 7.21 | 511   | -0.141 | -0.008 | 0.009 | 0.016 | 0.000000   | 0.000000   | -1815.95 | 165.52   |
| 3    | GUIDE  | 821175360 | 8.56 | 1021  | -0.238 | -0.014 | 0.071 | 0.123 | 275.121622 | -15.398191 | 2277.29  | -1233.55 |
| 4    | GUIDE  | 821179256 | 7.34 | 1021  | -0.174 | 0.102  | 0.054 | 0.084 | 274.840900 | -15.612800 | 1454.69  | -304.64  |
| 5    | GUIDE  | 821183504 | 8.36 | 1021  | 0.157  | -0.280 | 0.057 | 0.096 | 274.206900 | -16.517860 | -1923.91 | 1699.65  |
| 6    | GUIDE  | 821186736 | 7.94 | 1021  | 0.196  | -0.006 | 0.061 | 0.098 | 274.765126 | -16.656680 | -2315.79 | -249.65  |
| 7    | GUIDE  | 821169272 | 7.12 | 1020  | 0.059  | 0.188  | 0.085 | 0.133 | 275.312025 | -16.375484 | -1202.52 | -2080.95 |

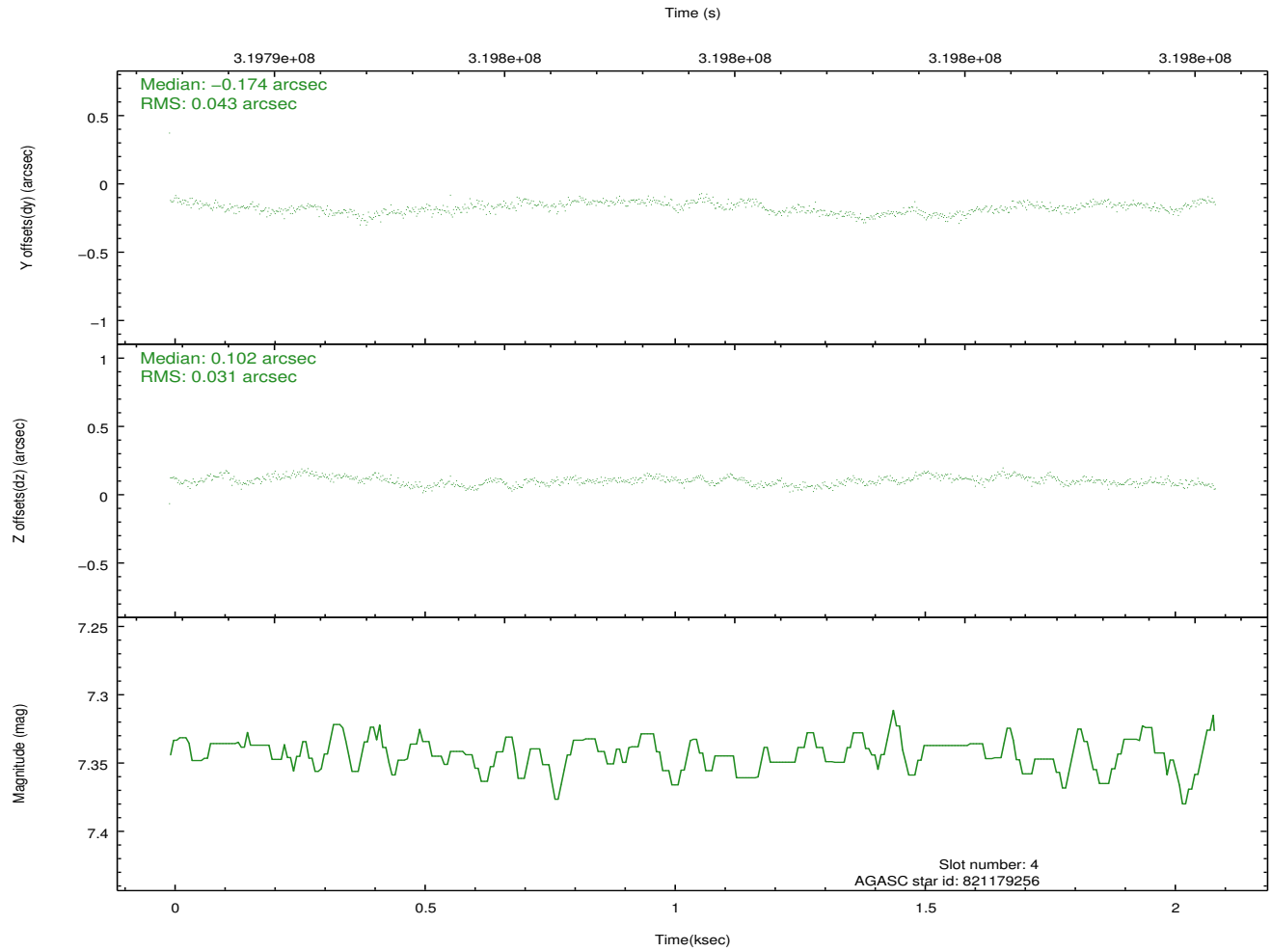
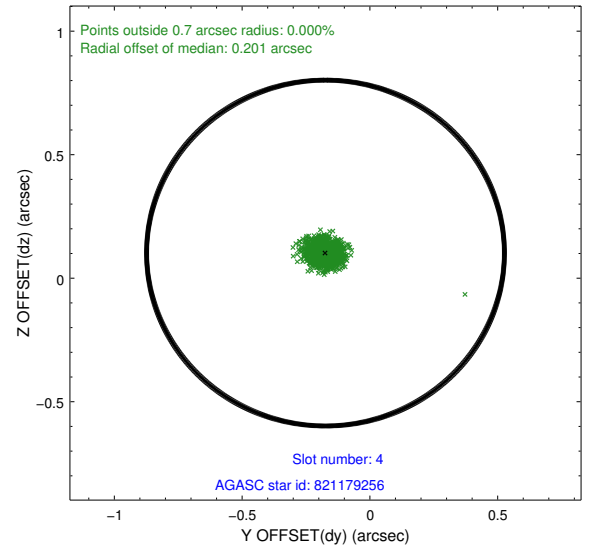
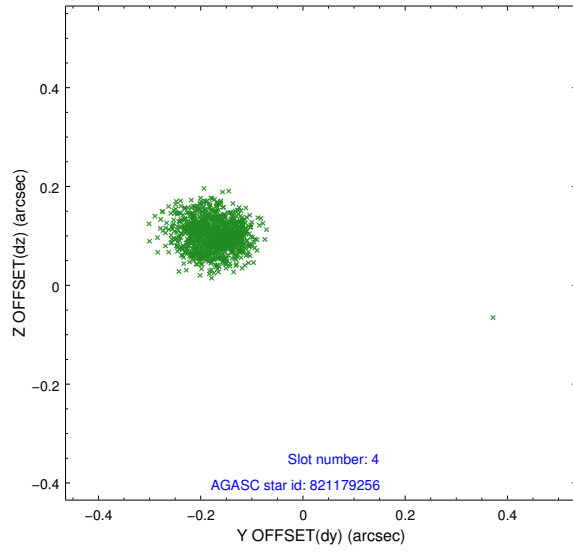


## 2.4 Star Slots

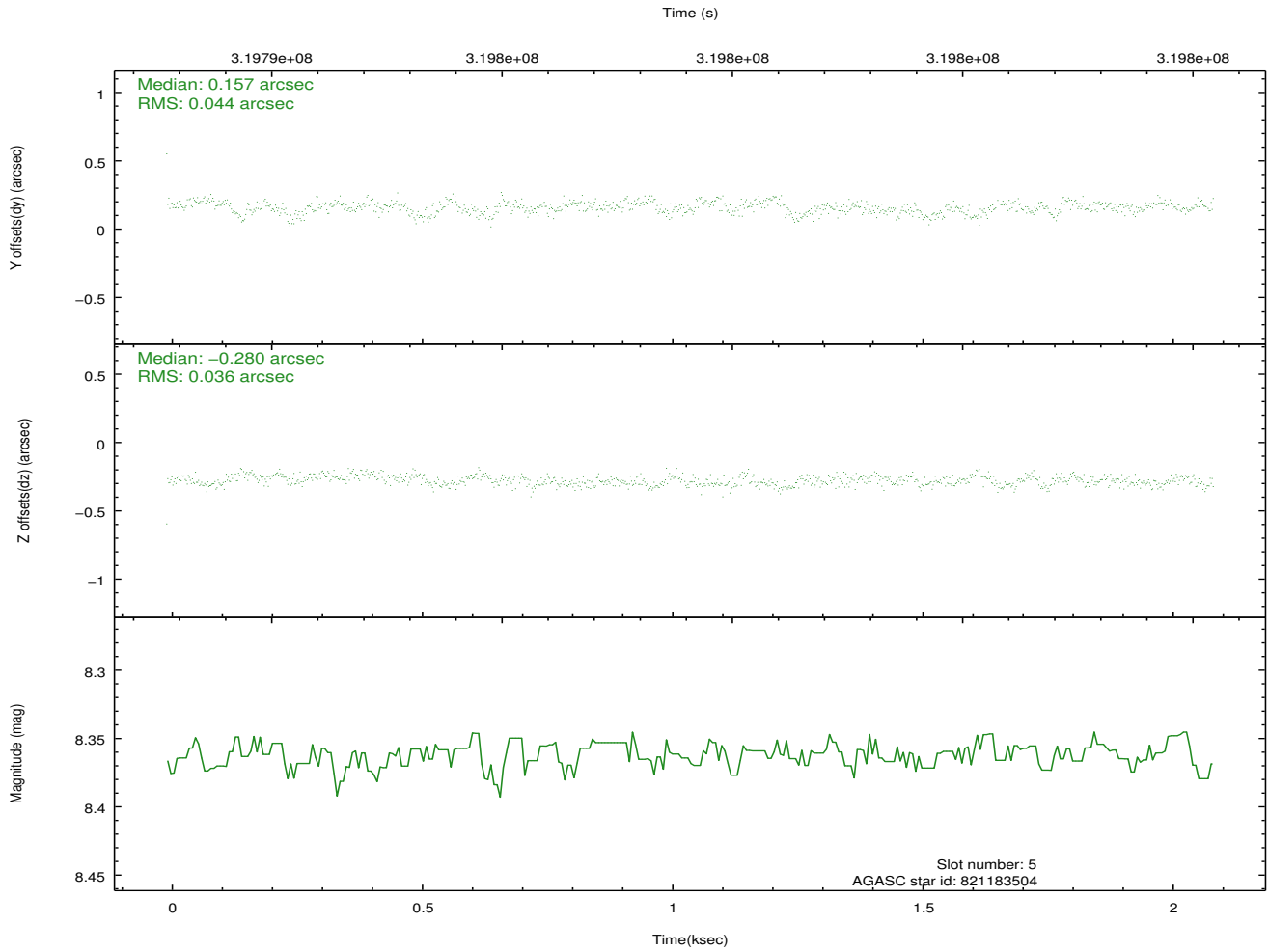
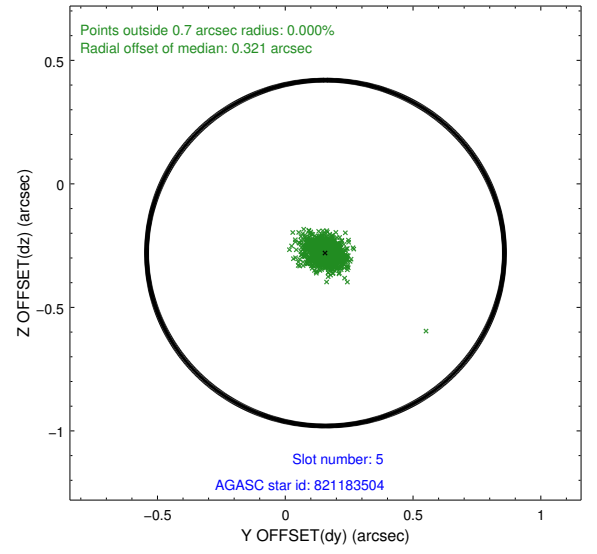
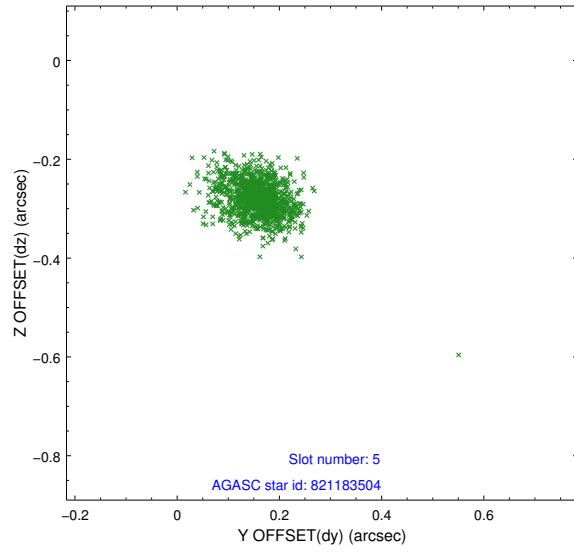
### 2.4.1 Slot 3



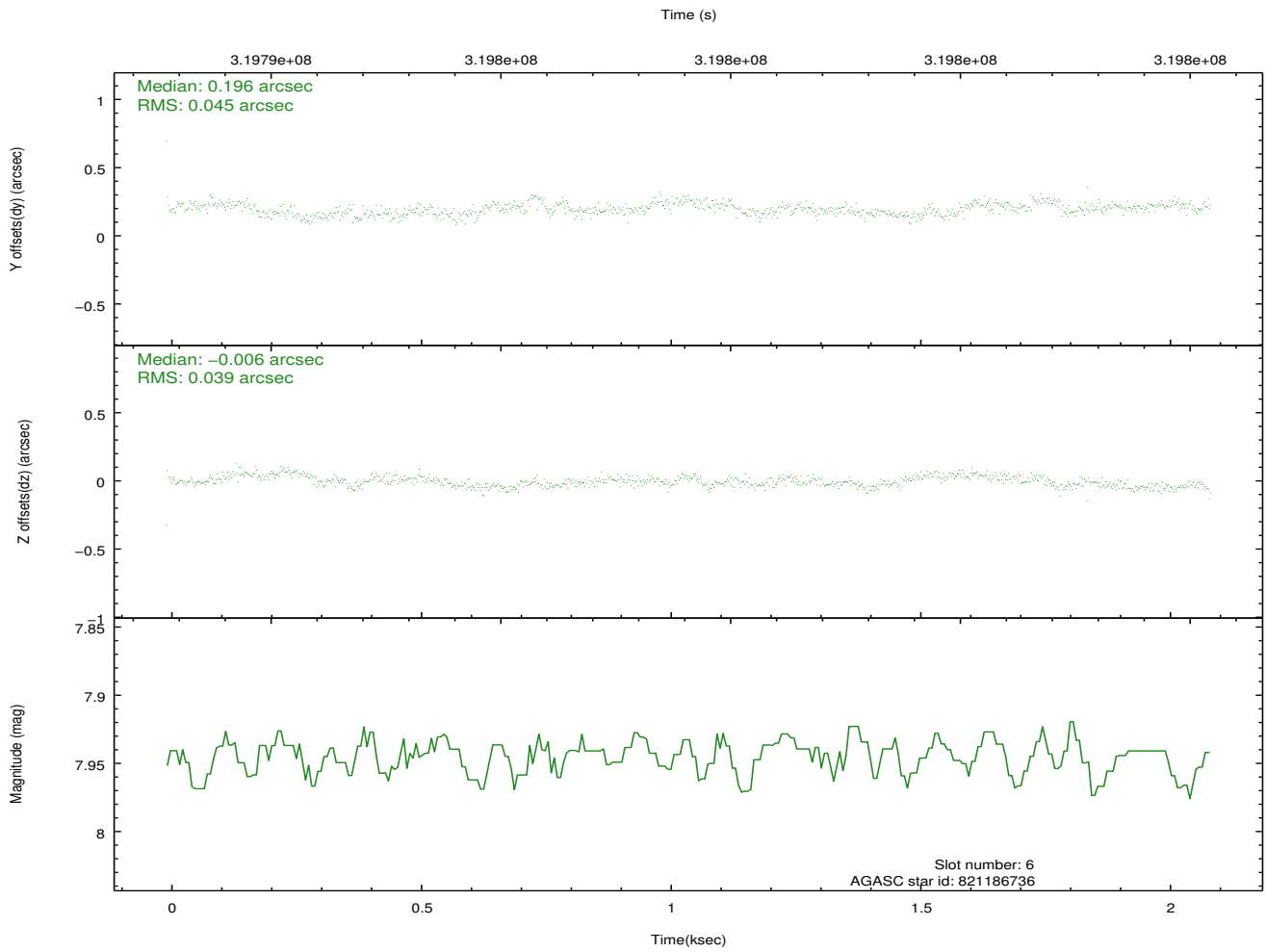
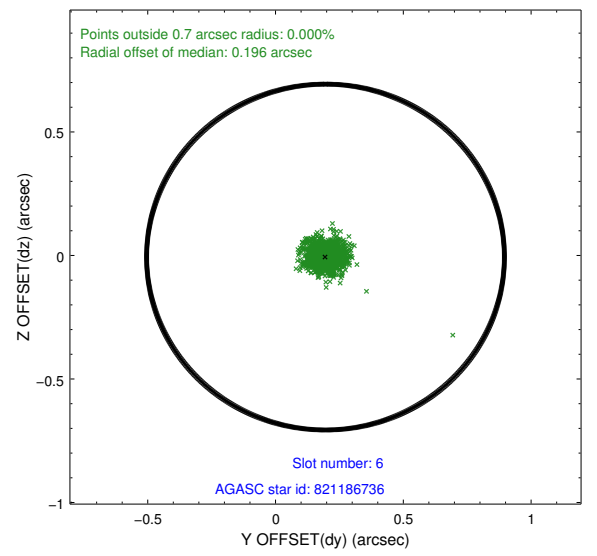
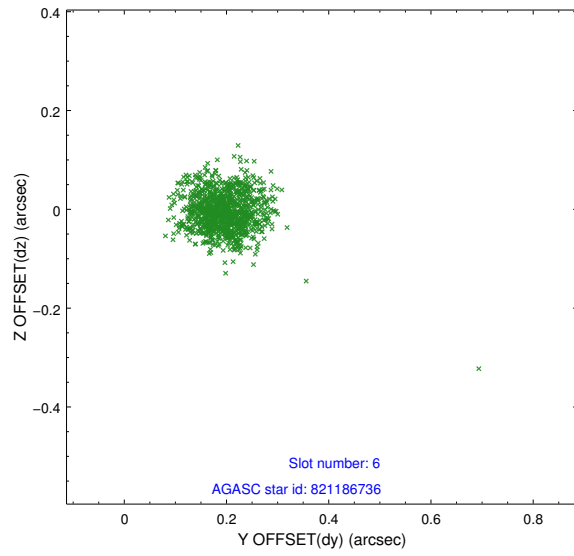
## 2.4.2 Slot 4



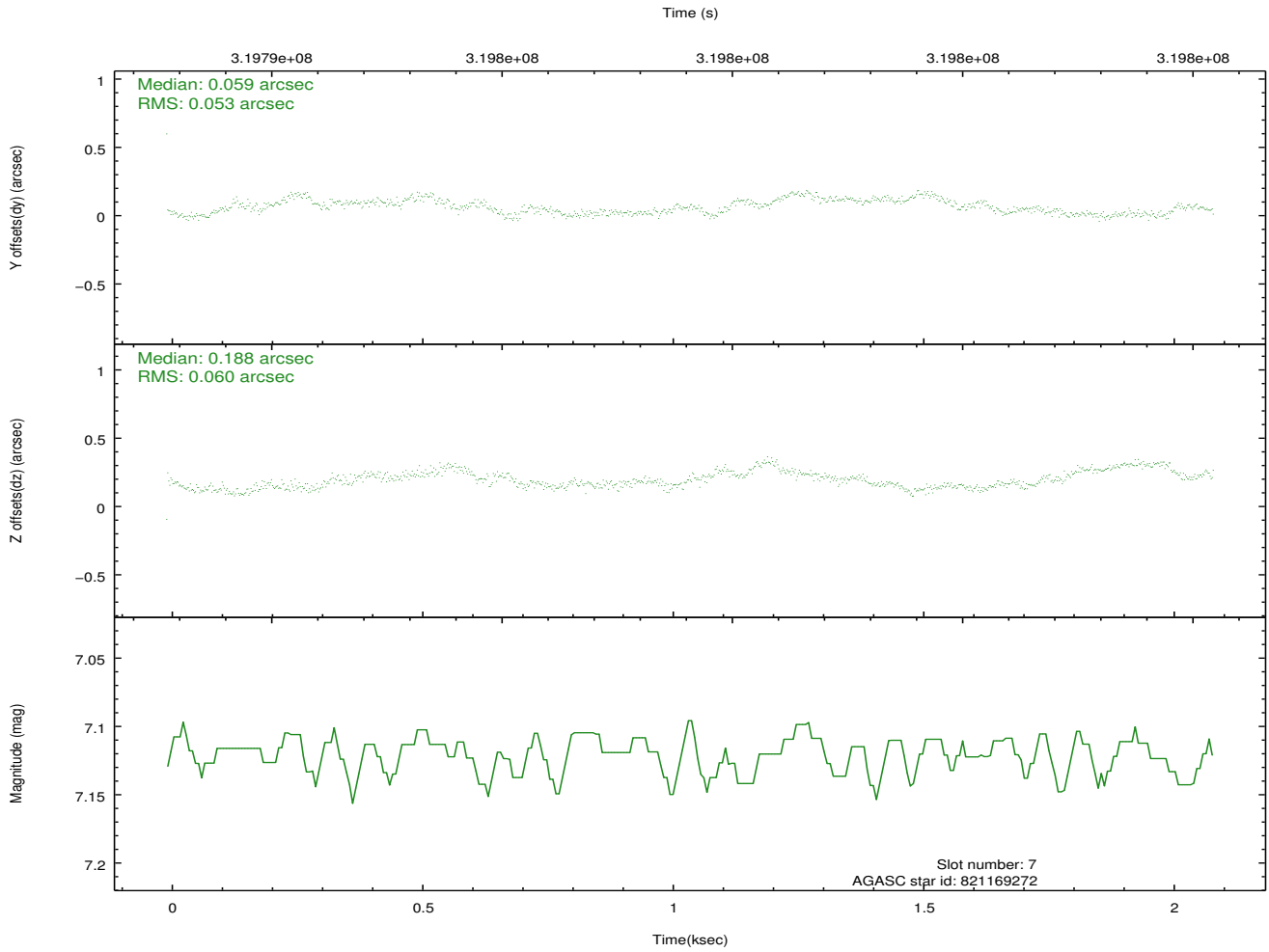
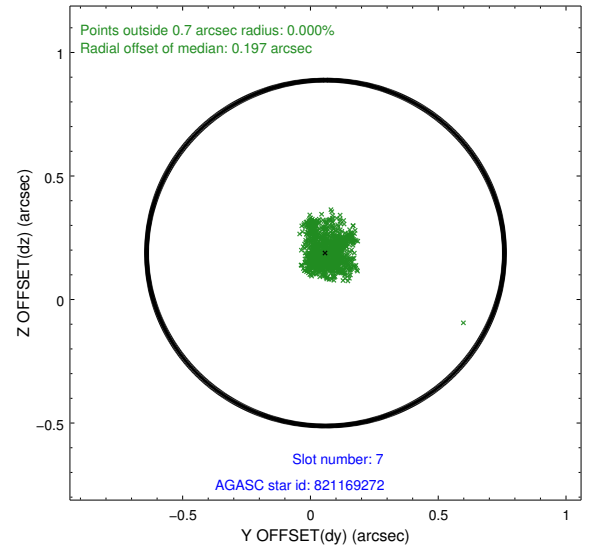
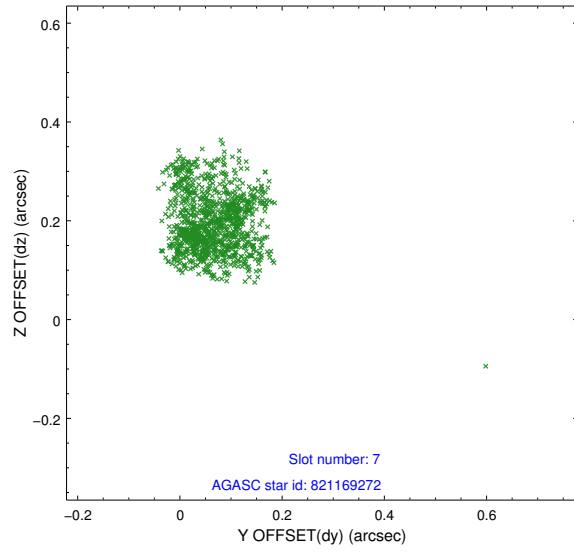
### 2.4.3 Slot 5



## 2.4.4 Slot 6

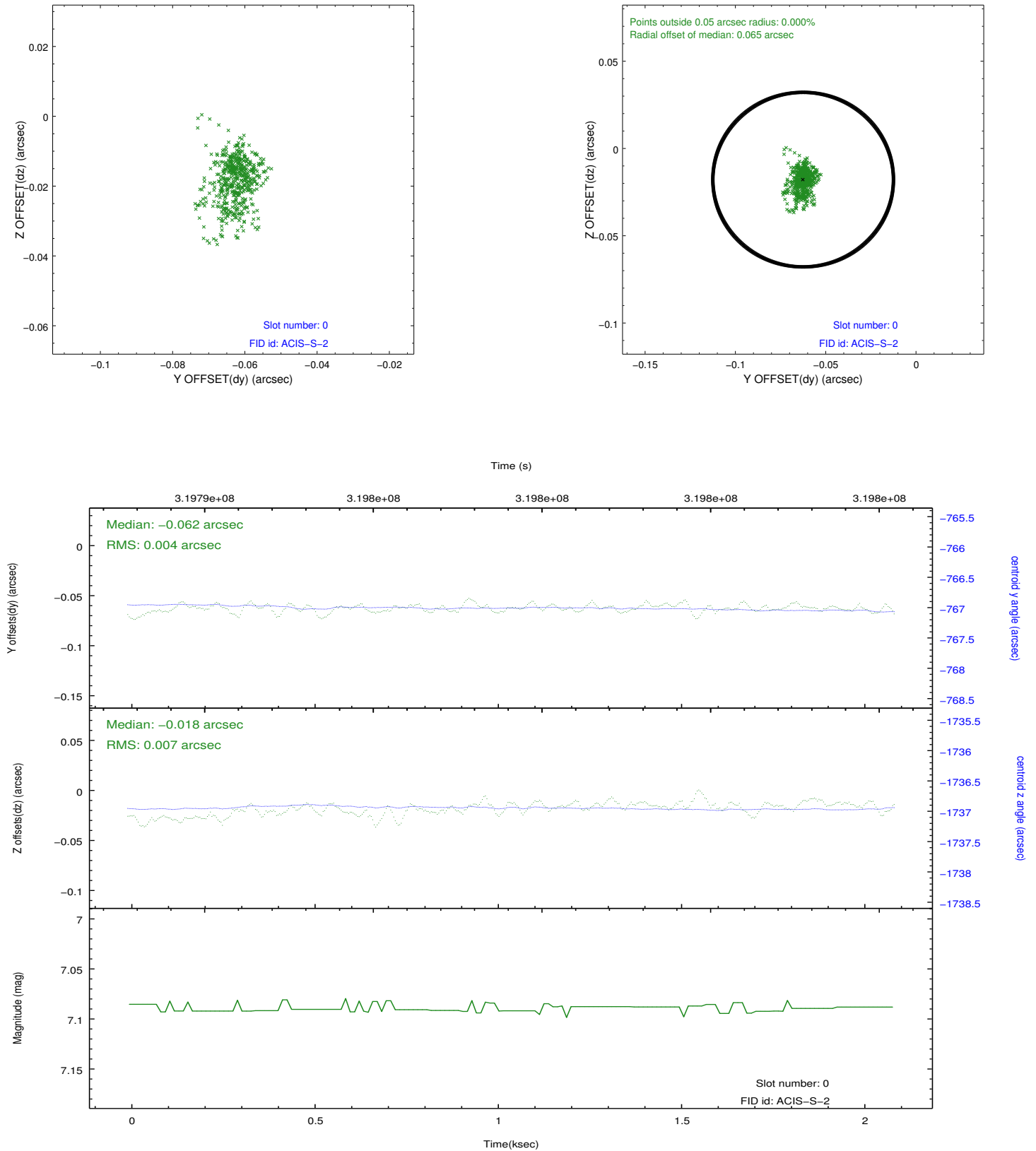


## 2.4.5 Slot 7

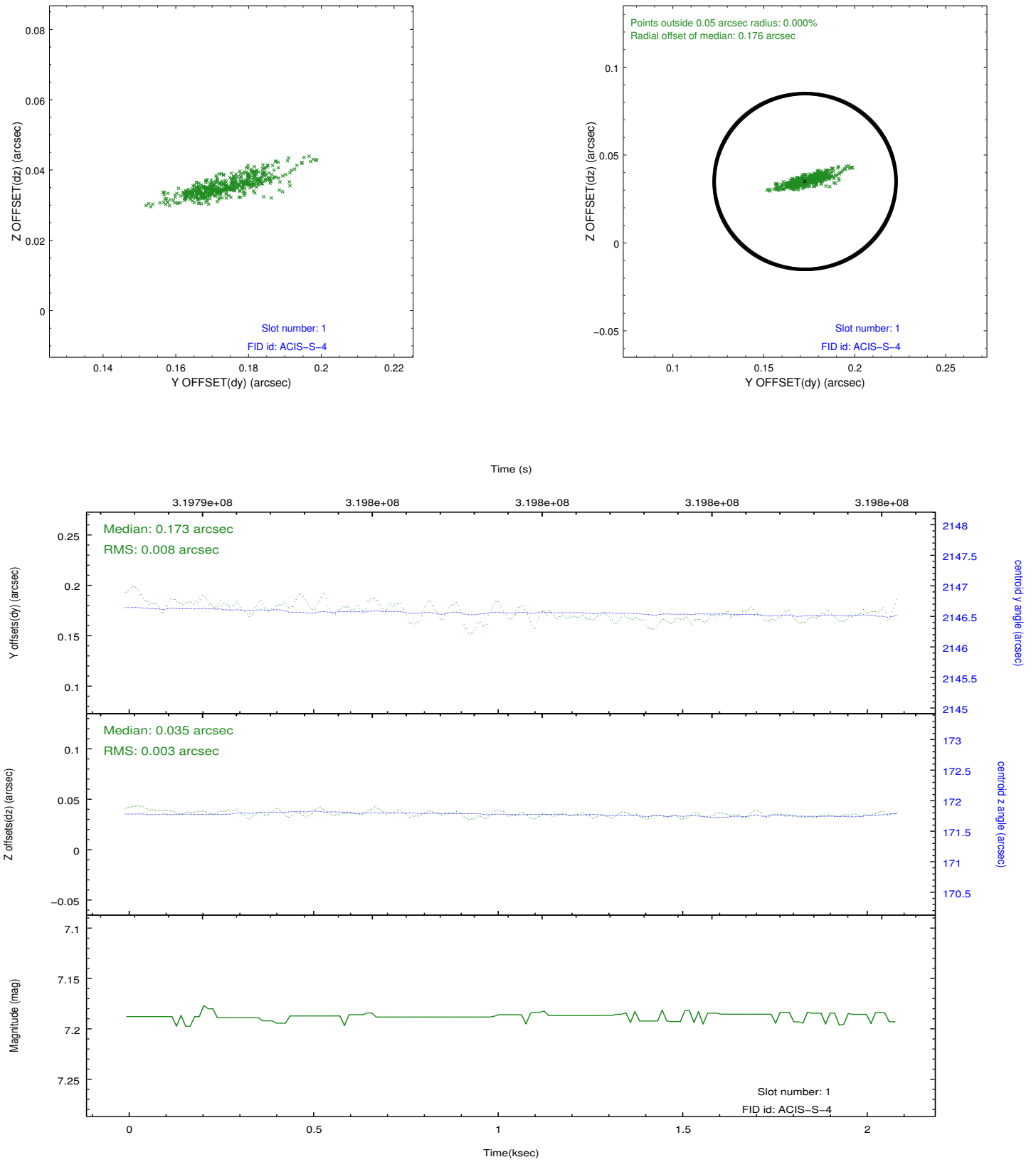


## 2.5 FID Slots

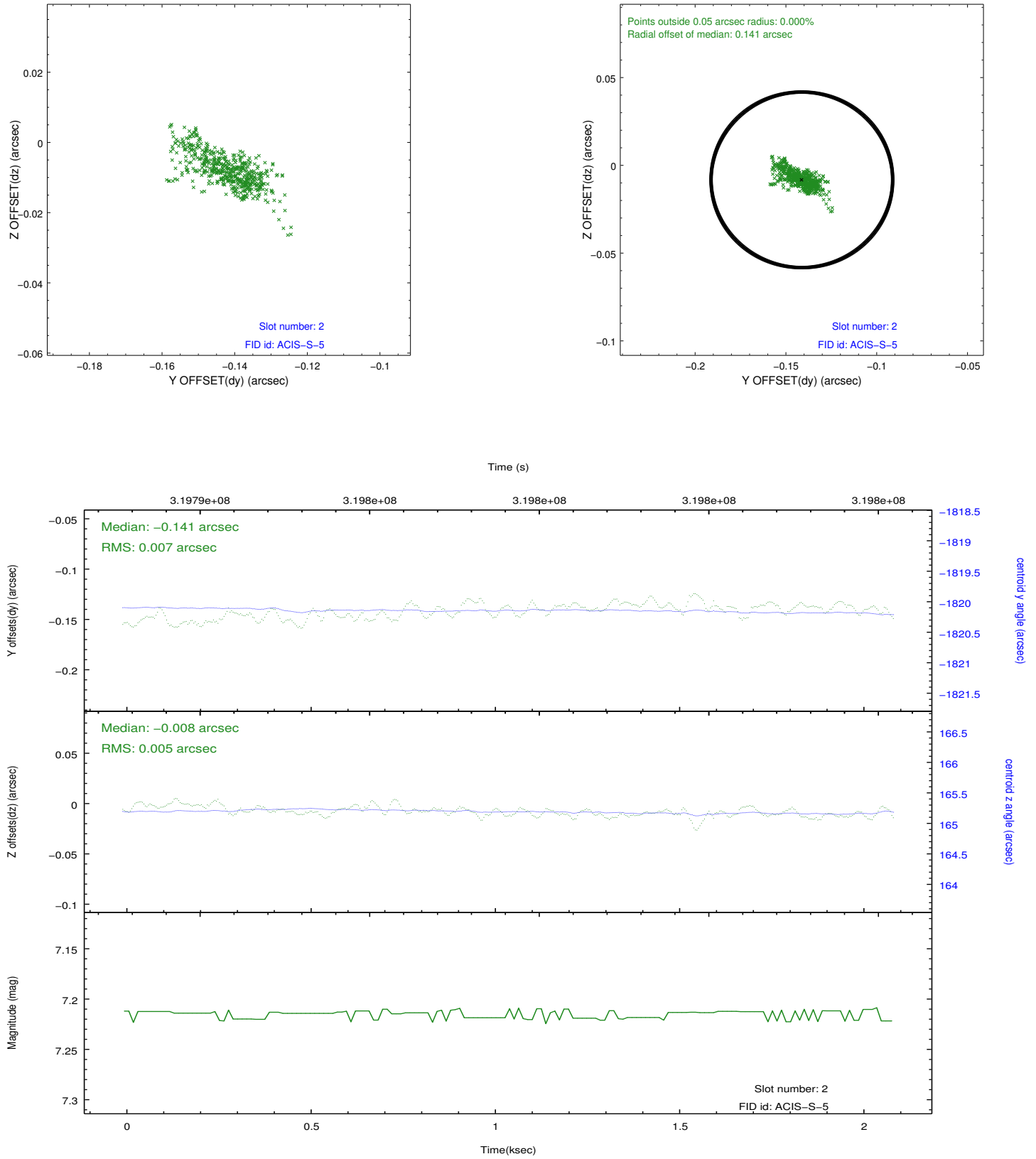
### 2.5.1 Slot 0



## 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)      | 2012.05.11 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 1.65439999 |

### A.2 Comments