

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 2269 - L2 Version 3  
Chandra X-Ray Center

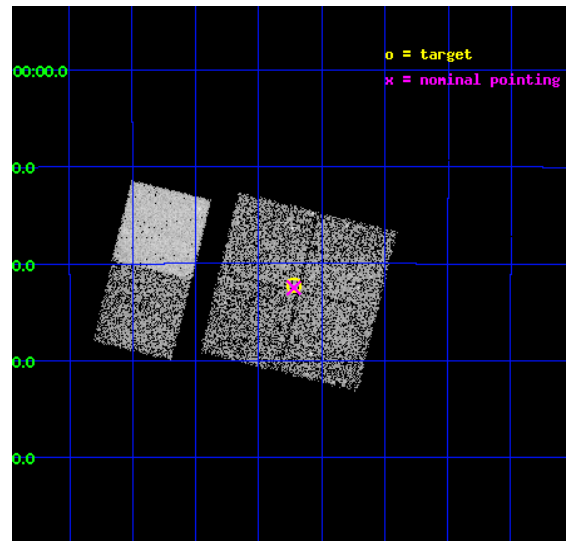
L2 Processing Date : Sep 20 2012

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# 1 Front

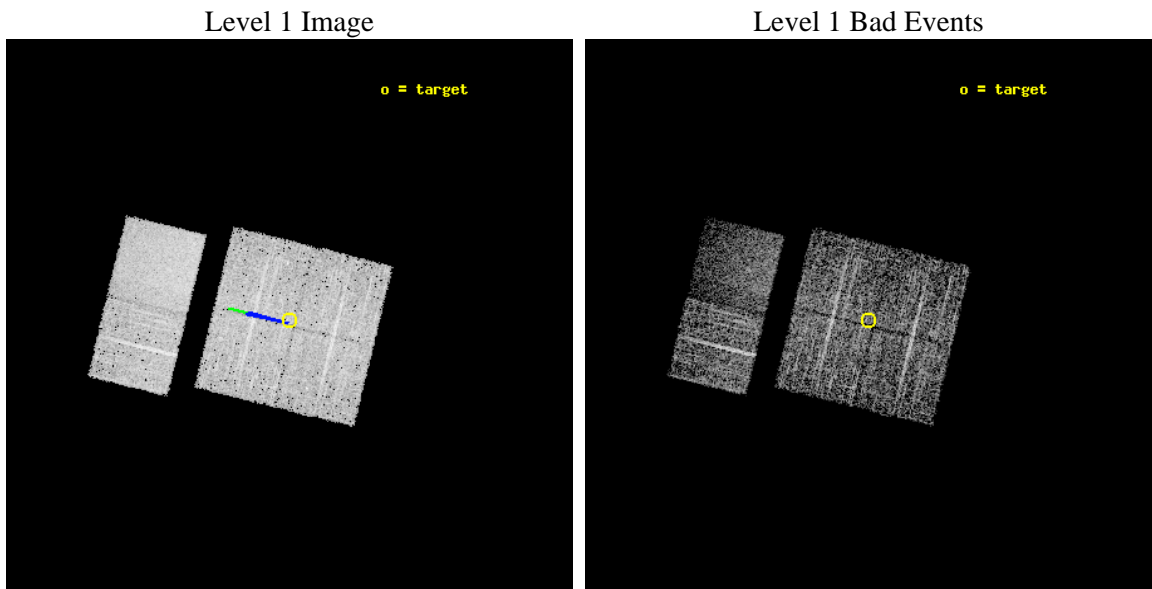
|          |  |   |
|----------|--|---|
| seq_num  | 900096   | Sequence number                             |
| obs_id   | 2269   | Observation id                              |
| title    | CHANDRA SURVEY OF THE GALACTIC RIDGE AROUND THE MILKY WAY CENTER | P   |
| observer | Prof. Q. Daniel Wang   | Principal investigator                      |
| object   | GCS 1  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 267.056  | Observer's specified target RA [deg]        |
| dec_targ | -28.3705   | Observer's specified target Dec [deg]       |
| ra_nom   | 267.05517748467  | Nominal RA [deg]                            |
| dec_nom  | -28.375208855065   | Nominal Dec [deg]                           |
| roll_nom | 283.80734636561  | Nominal Roll [deg]                          |
| revision | 3  | Processing version of data                  |
| ontime   | 10744.657471299  | Sum of GTIs [s]                             |
| livetime | 10608.602148742  | Livetime [s]                                |
| ontime0  | 10747.775331557  | Sum of GTIs [s]                             |
| ontime1  | 10747.81637156   | Sum of GTIs [s]                             |
| ontime2  | 10747.857411563  | Sum of GTIs [s]                             |
| ontime3  | 10744.657471299  | Sum of GTIs [s]                             |
| ontime6  | 10747.980531558  | Sum of GTIs [s]                             |
| ontime7  | 10747.939491555  | Sum of GTIs [s]                             |
| l2events | 41725  | Number of level 2 events                    |



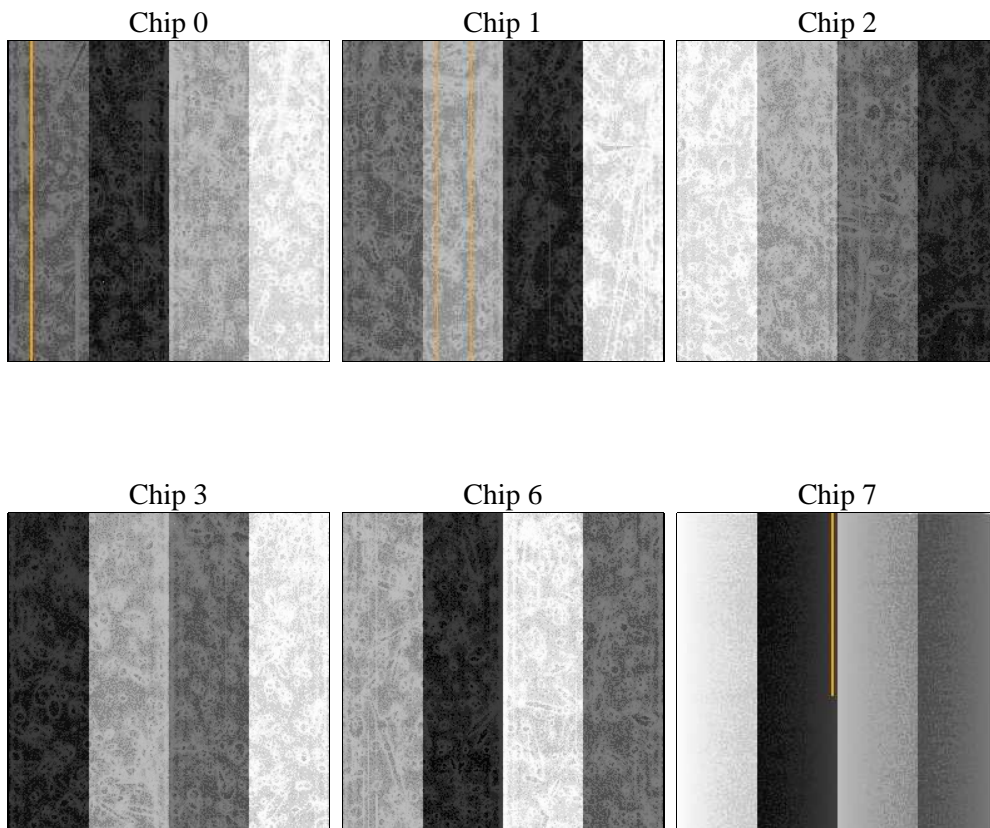
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 10800.000000    | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 10744.657471299 | Sum of GTIs [s]                         |
| caldsver | 4.5.1.1             | &#160                          | ontime0        | 10747.775331557 | Sum of GTIs [s]                         |
| date     | 2012-09-20T13:21:14 | Date and time of file creation | ontime1        | 10747.81637156  | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime2        | 10747.857411563 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 10744.657471299 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 10747.980531558 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 10747.939491555 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 174800          | 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  | 25968 | 27088 | 29110 | 28089 | 29184 | 35361 | grade 0 events | 2520  | 2592  | 2306  | 2450  | 2186  | 1876  |
| rejected events | 20618 | 21297 | 24400 | 22787 | 24374 | 16757 |                | 9%    | 9%    | 7%    | 8%    | 7%    | 5%    |
| rejected %      | 79%   | 78%   | 83%   | 81%   | 83%   | 47%   | grade 1 events | 21    | 32    | 31    | 40    | 23    | 36    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 1082  | 1122  | 906   | 1109  | 999   | 3726  |
|                 |       |       |       |       |       |       |                | 4%    | 4%    | 3%    | 3%    | 3%    | 10%   |
|                 |       |       |       |       |       |       | grade 3 events | 439   | 485   | 416   | 429   | 376   | 1790  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 5%    |
|                 |       |       |       |       |       |       | grade 4 events | 469   | 520   | 360   | 445   | 387   | 1834  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 5%    |
|                 |       |       |       |       |       |       | grade 5 events | 1101  | 1192  | 1011  | 1264  | 1367  | 4082  |
|                 |       |       |       |       |       |       |                | 4%    | 4%    | 3%    | 4%    | 4%    | 11%   |
|                 |       |       |       |       |       |       | grade 6 events | 844   | 1072  | 727   | 870   | 863   | 9388  |
|                 |       |       |       |       |       |       |                | 3%    | 3%    | 2%    | 3%    | 2%    | 26%   |
|                 |       |       |       |       |       |       | grade 7 events | 19492 | 20073 | 23353 | 21482 | 22983 | 12629 |
|                 |       |       |       |       |       |       |                | 75%   | 74%   | 80%   | 76%   | 78%   | 35%   |

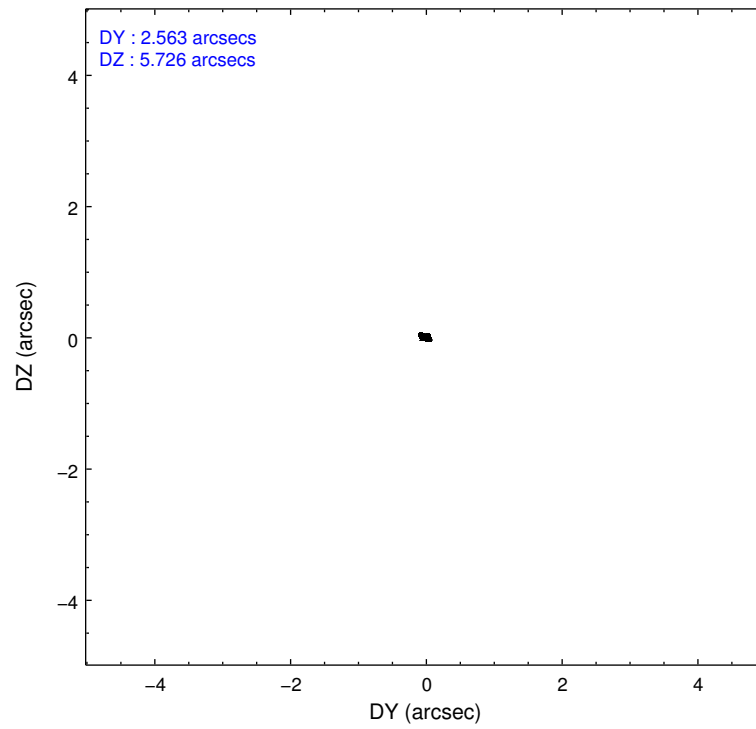
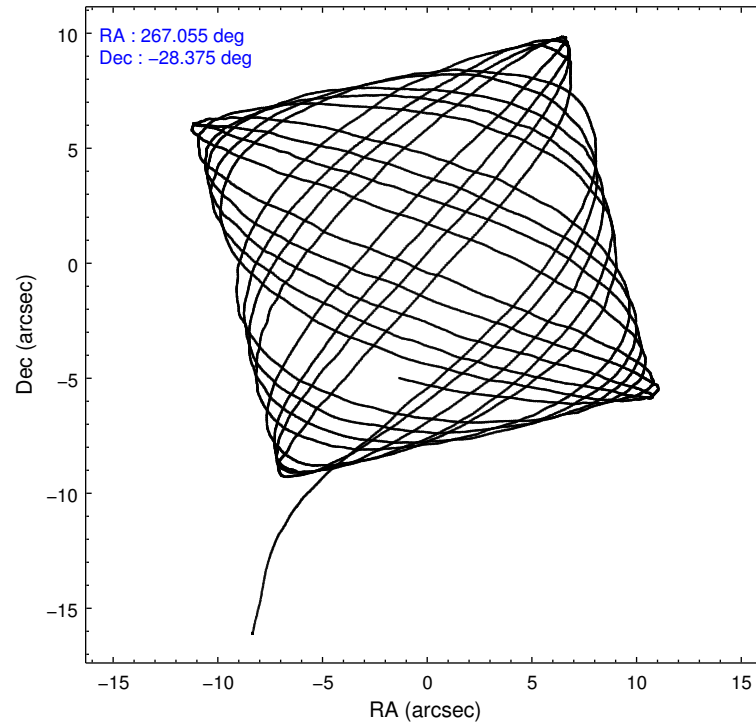


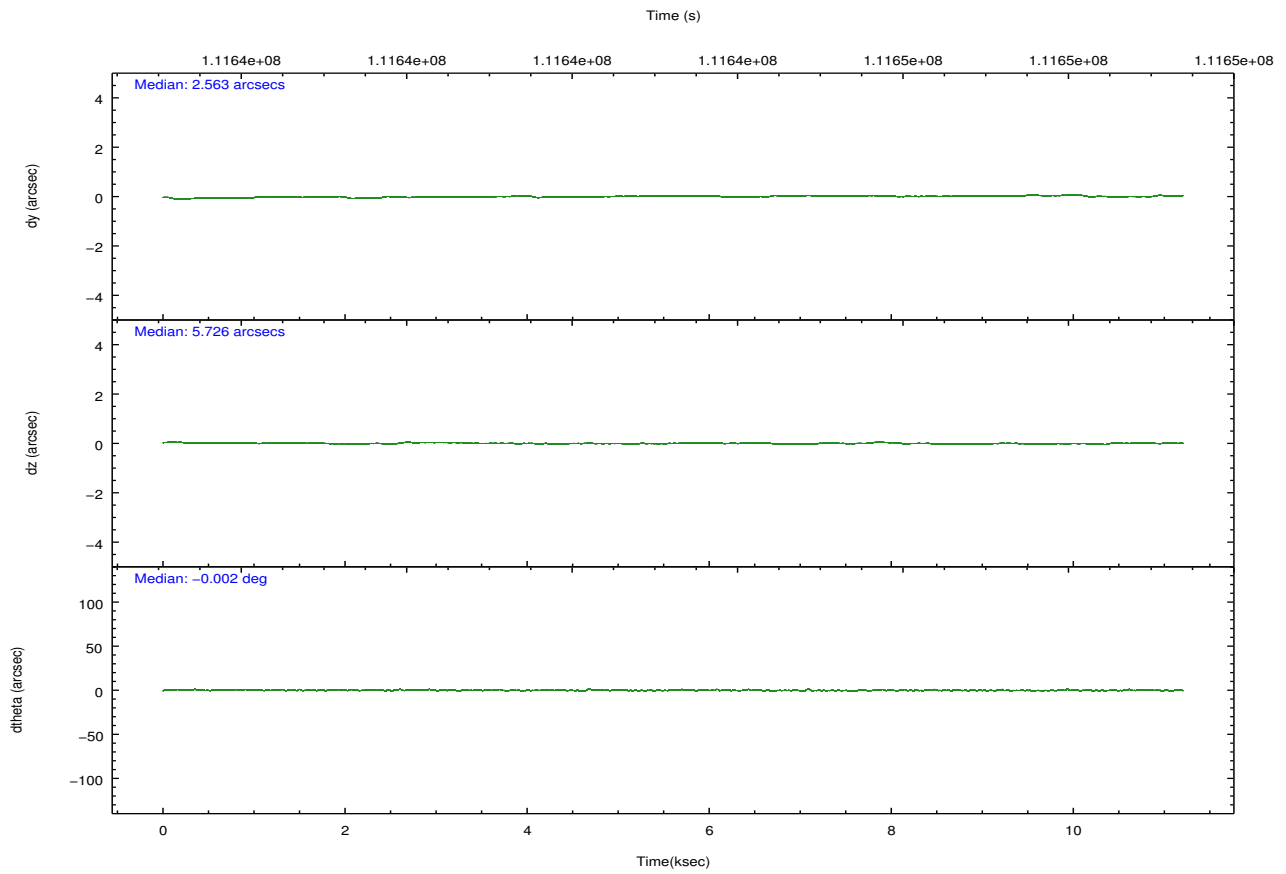
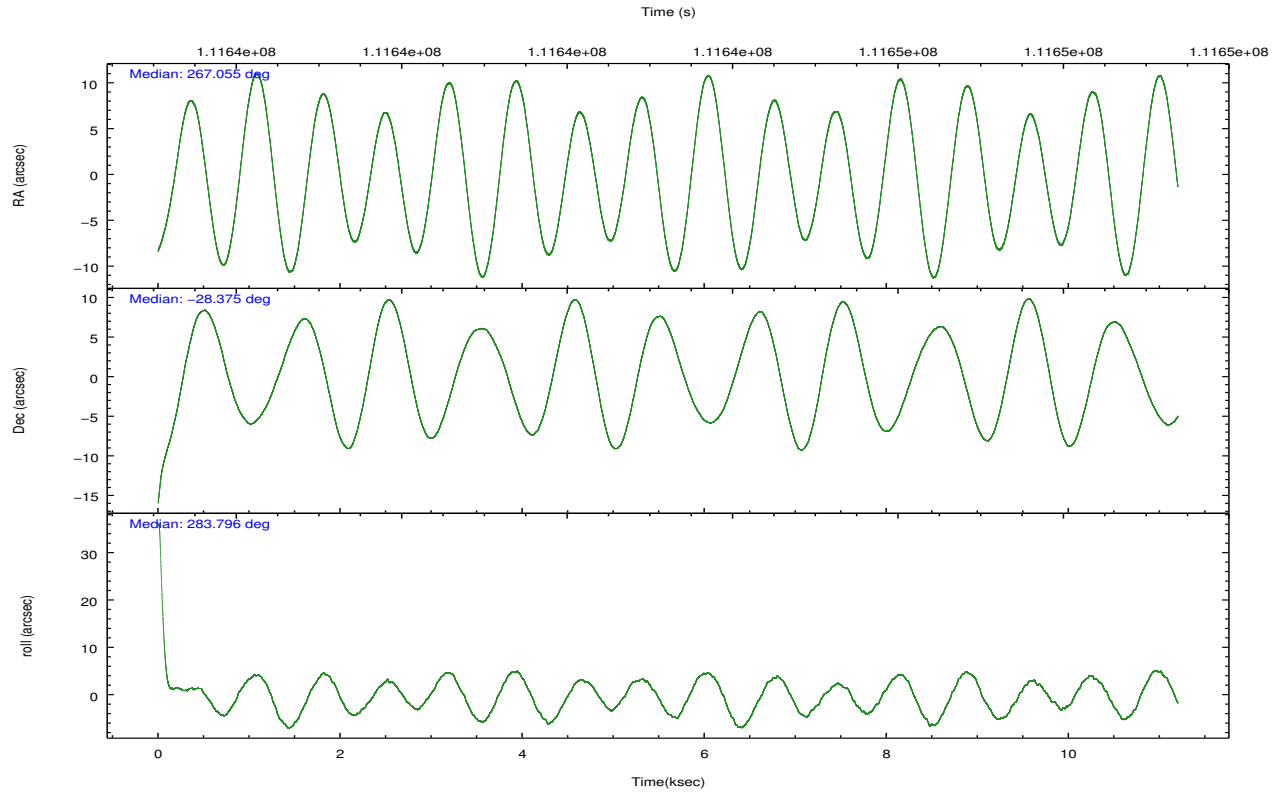
## 2.2 Compared Parameters

| 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                    | 267.033535          | 267.0551774846715     |
| [deg] Pointing Dec                   | -28.355391          | -28.37520885506514    |
| [deg] Pointing Roll                  | 283.588331          | 283.8073463656063     |
| [deg] Roll angle                     | 283.600000          | 283.600000            |
| [deg] Roll tolerance                 | 2.000000            | 2.000000              |
| Roll constraint allows 180D rotation | N                   | N                     |
| [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)     | 111638022.184000    | 111636950.79517       |
| Observation start date               | 2001-07-16T02:32:38 | 2001-07-16T02:15:50   |
| [s] Observation end time (MET)       | 111648822.184000    | 111648955.59564       |
| Observation end date                 | 2001-07-16T05:32:38 | 2001-07-16T05:35:55   |
| Read mode                            | TIMED               | TIMED                 |

| Parameter                             | Planned   | Actual  |
|---------------------------------------|-----------|---------|
| Obspar format version number          | 7         | 7       |
| Obspar file type                      | PREDICTED | ACTUAL  |
| Obspar update status                  | NONE      | UPDATED |
| 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



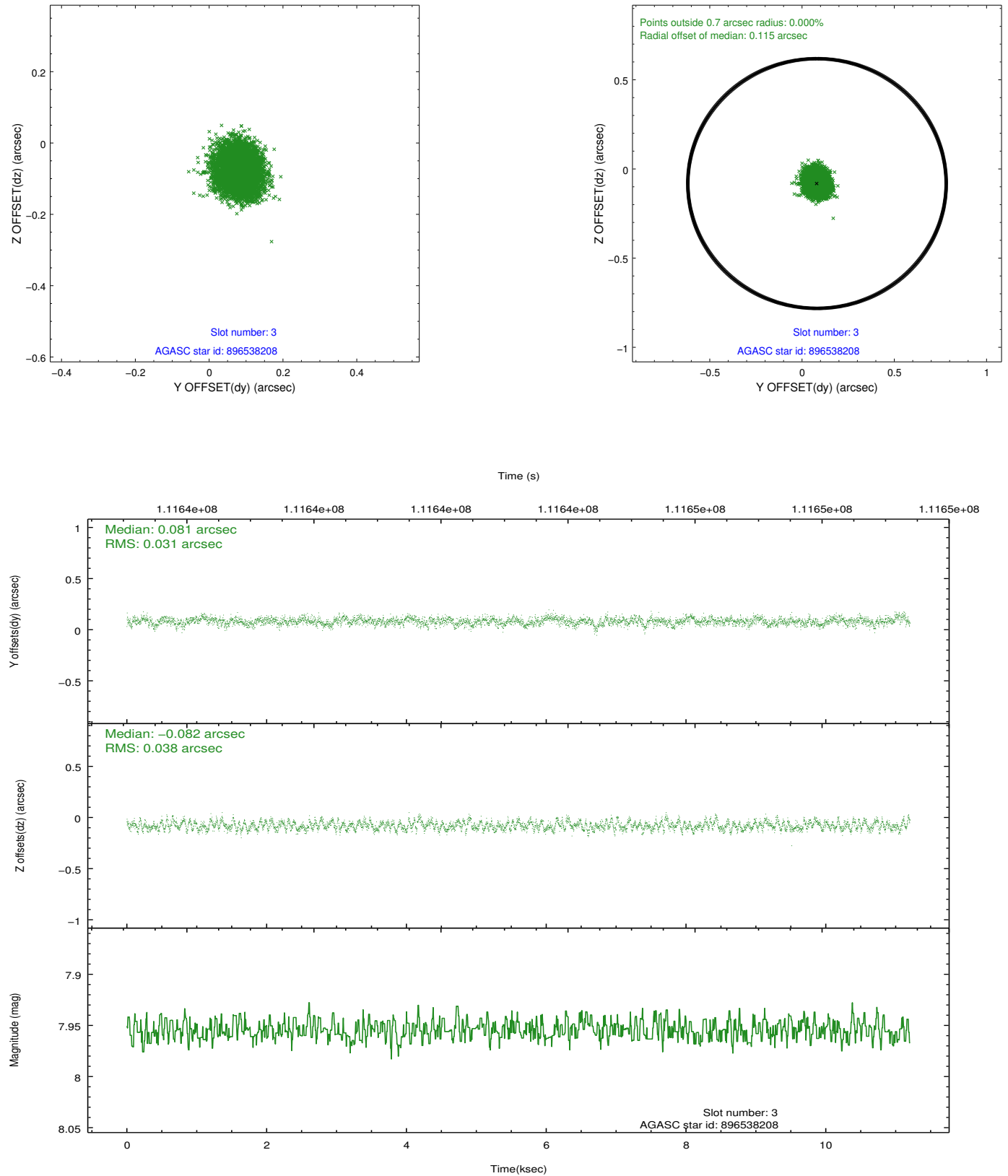


### Slot Statistics

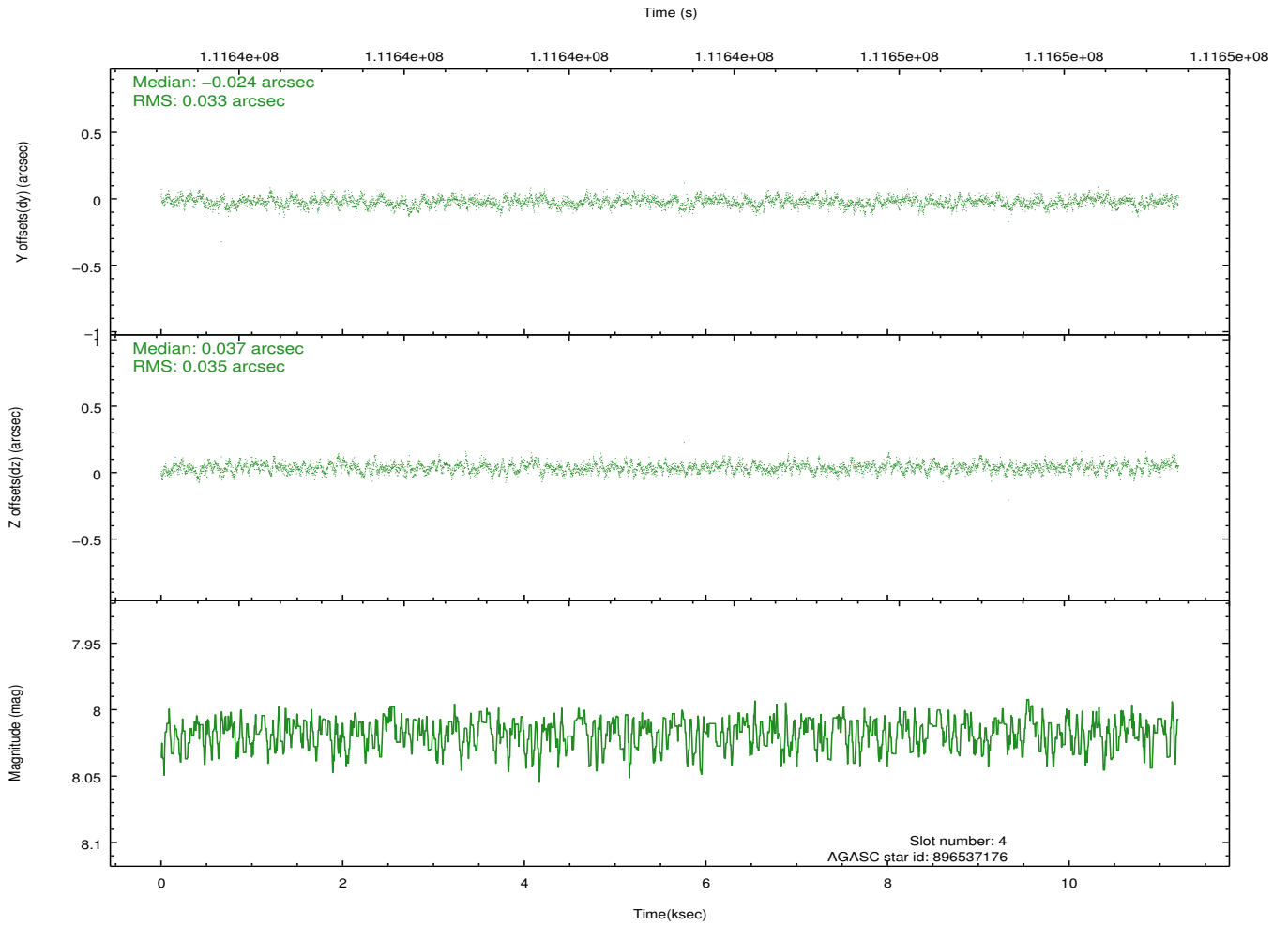
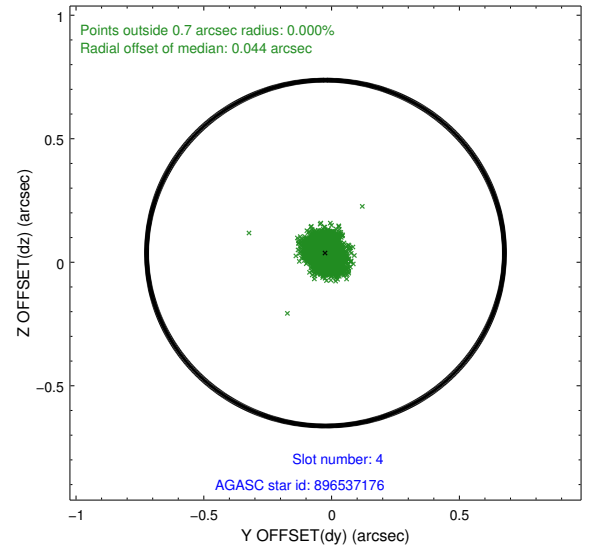
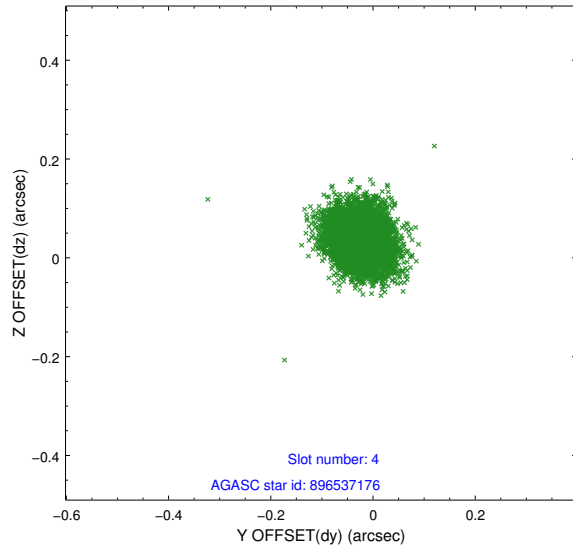
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-I-1  | 7.25 | 2733  | -0.028 | 0.032  | 0.006 | 0.010 | 0.000000   | 0.000000   | 937.21   | -829.06  |
| 1    | FID    | ACIS-I-5  | 7.24 | 2733  | -0.026 | 0.031  | 0.006 | 0.010 | 0.000000   | 0.000000   | -1810.63 | 1068.21  |
| 2    | FID    | ACIS-I-6  | 7.26 | 2733  | -0.037 | 0.007  | 0.007 | 0.011 | 0.000000   | 0.000000   | 402.26   | 1713.20  |
| 3    | GUIDE  | 896538208 | 7.95 | 5465  | 0.081  | -0.082 | 0.053 | 0.084 | 267.176969 | -28.671626 | 1214.02  | 173.38   |
| 4    | GUIDE  | 896537176 | 8.02 | 5466  | -0.024 | 0.037  | 0.052 | 0.083 | 266.498272 | -28.678259 | 737.55   | -1916.63 |
| 5    | GUIDE  | 896011040 | 7.68 | 5465  | -0.065 | -0.038 | 0.055 | 0.086 | 267.058469 | -28.014759 | -1172.64 | 364.89   |
| 6    | GUIDE  | 896535464 | 9.32 | 5461  | 0.053  | 0.025  | 0.083 | 0.135 | 266.962550 | -28.408631 | 134.13   | -263.04  |
| 7    | GUIDE  | 896532608 | 8.53 | 5464  | -0.041 | 0.055  | 0.058 | 0.093 | 267.503801 | -28.129741 | -435.68  | 1641.67  |

## 2.4 Star Slots

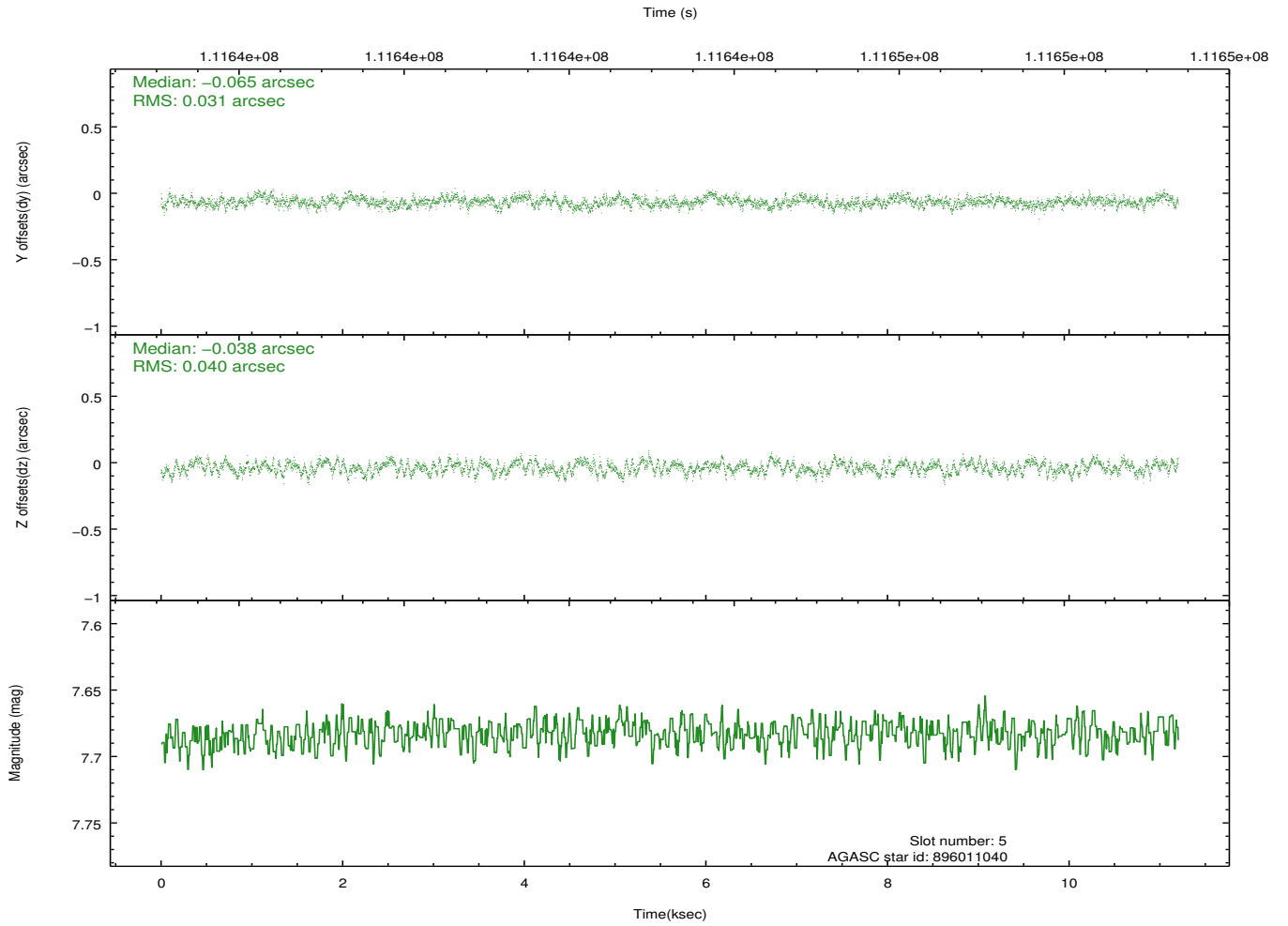
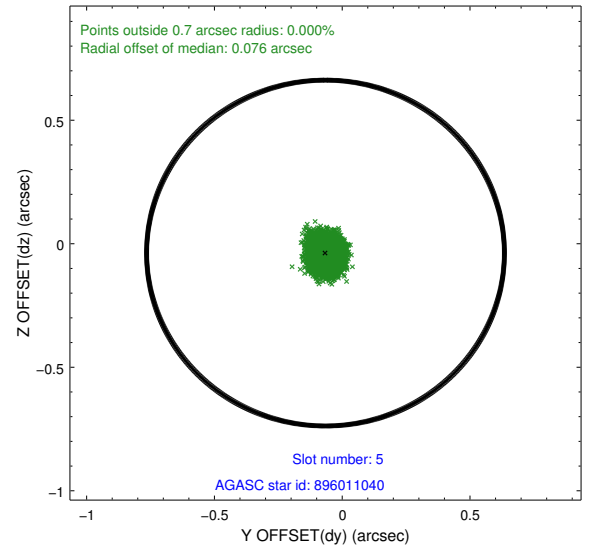
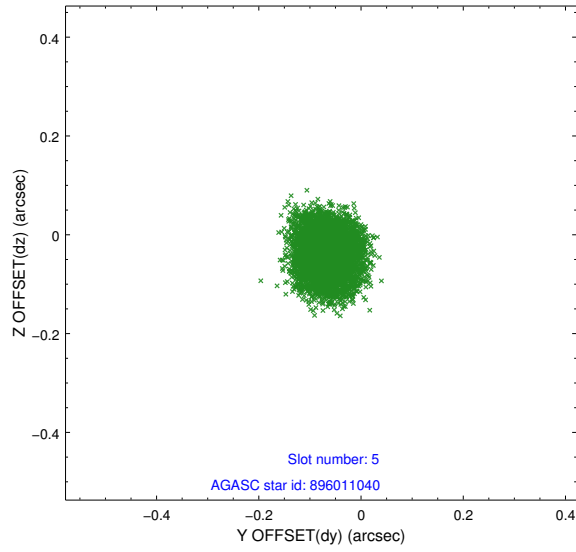
### 2.4.1 Slot 3



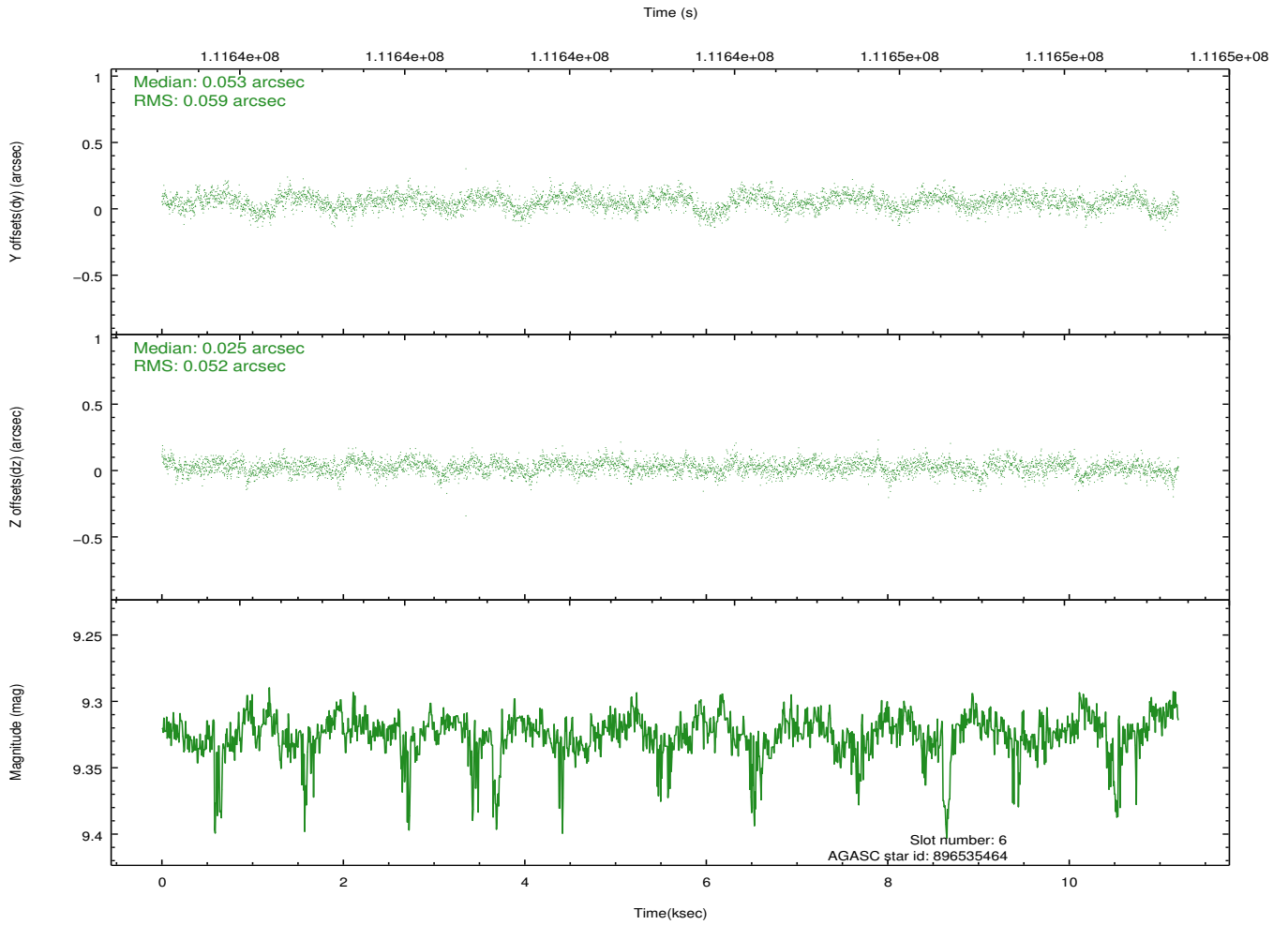
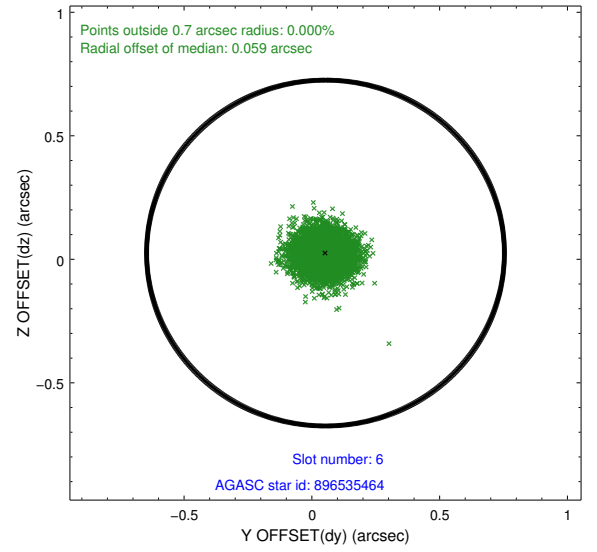
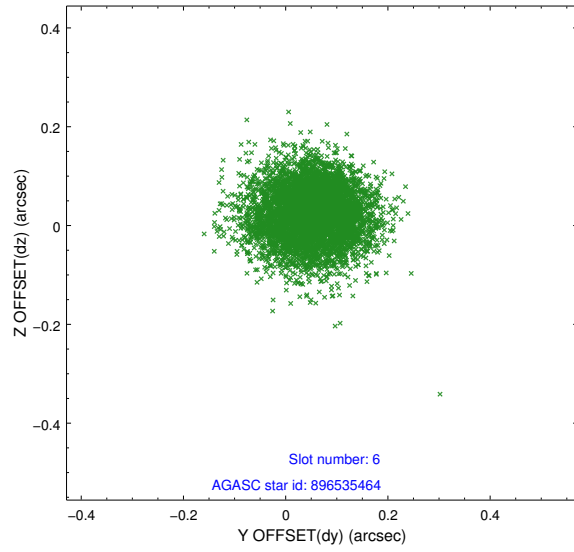
## 2.4.2 Slot 4



### 2.4.3 Slot 5

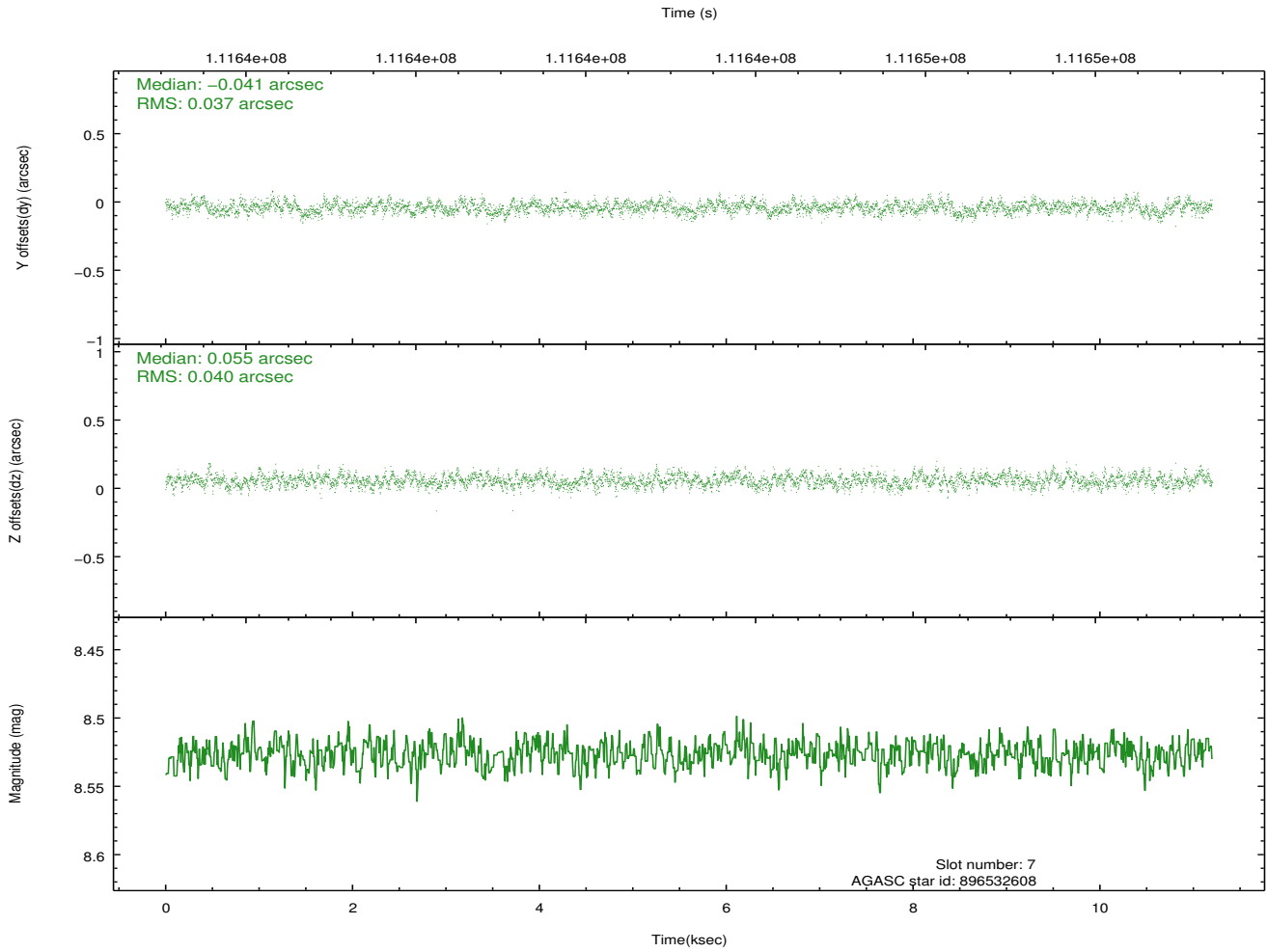
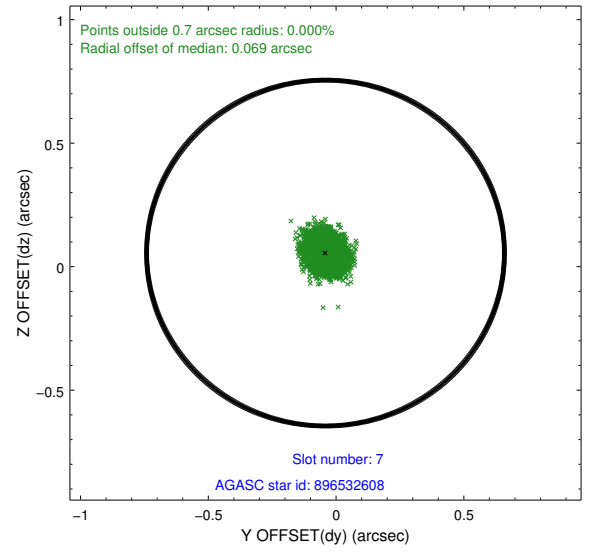
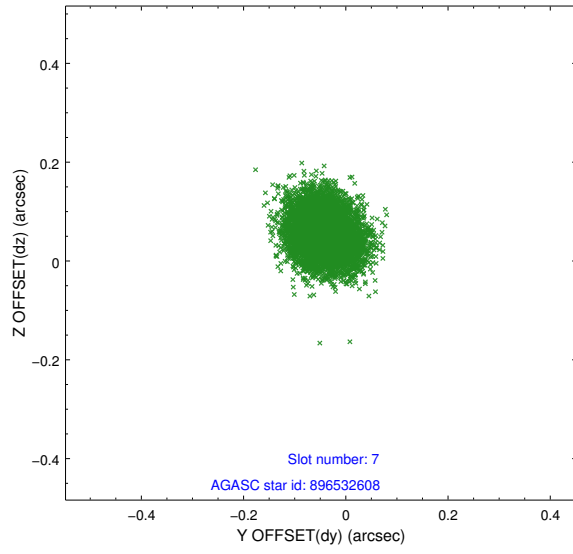


## 2.4.4 Slot 6



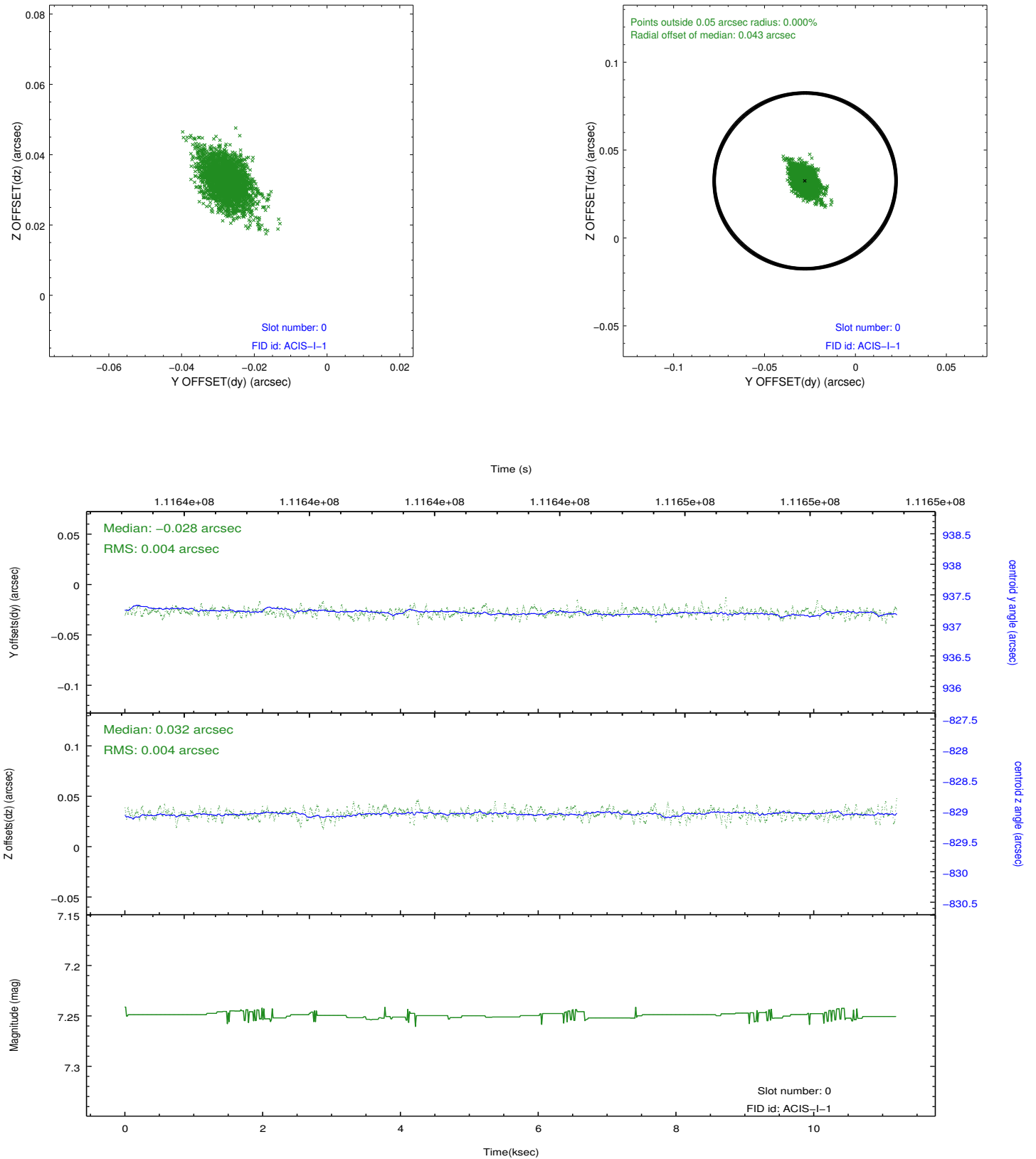


## 2.4.5 Slot 7

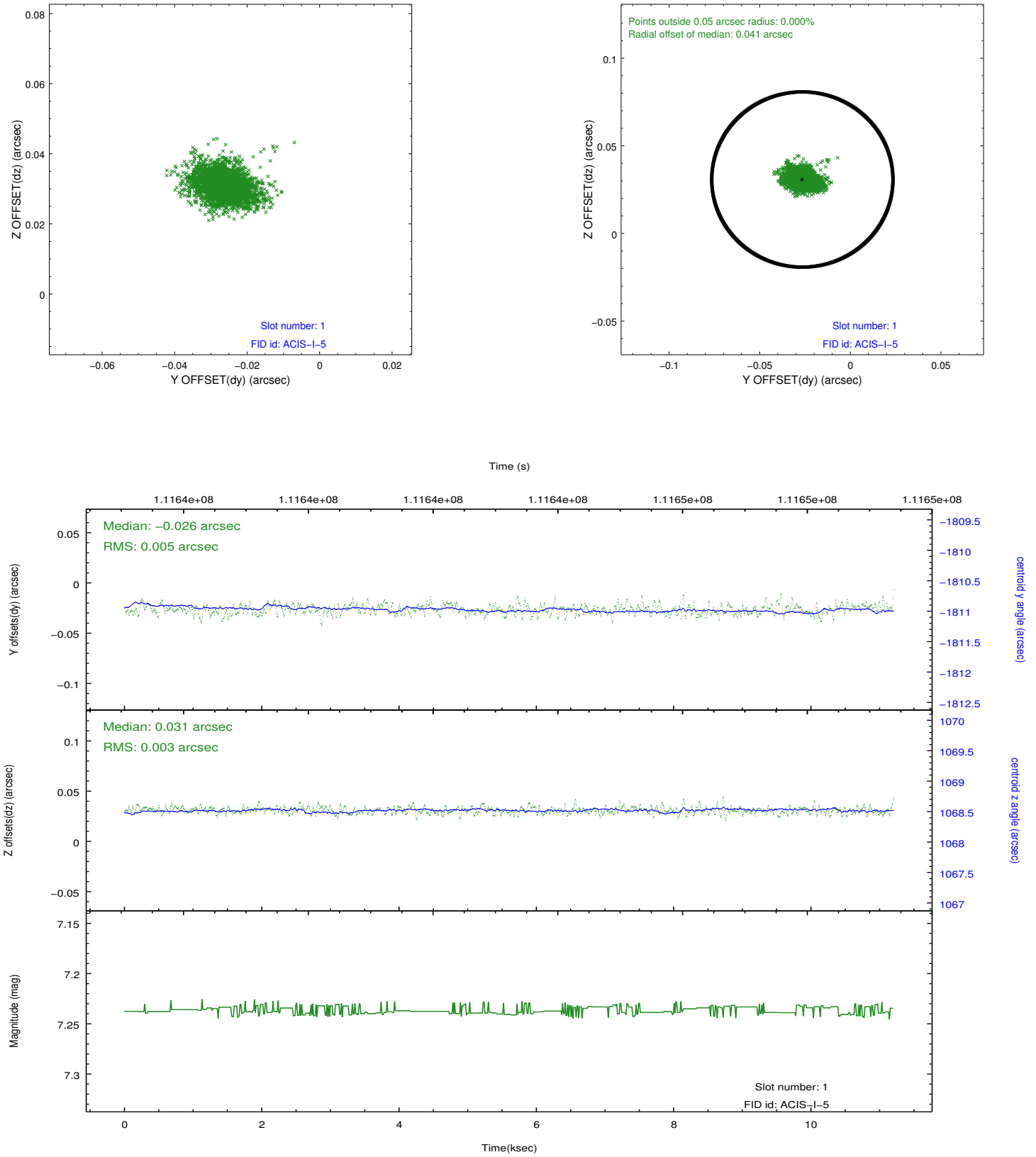


## 2.5 FID Slots

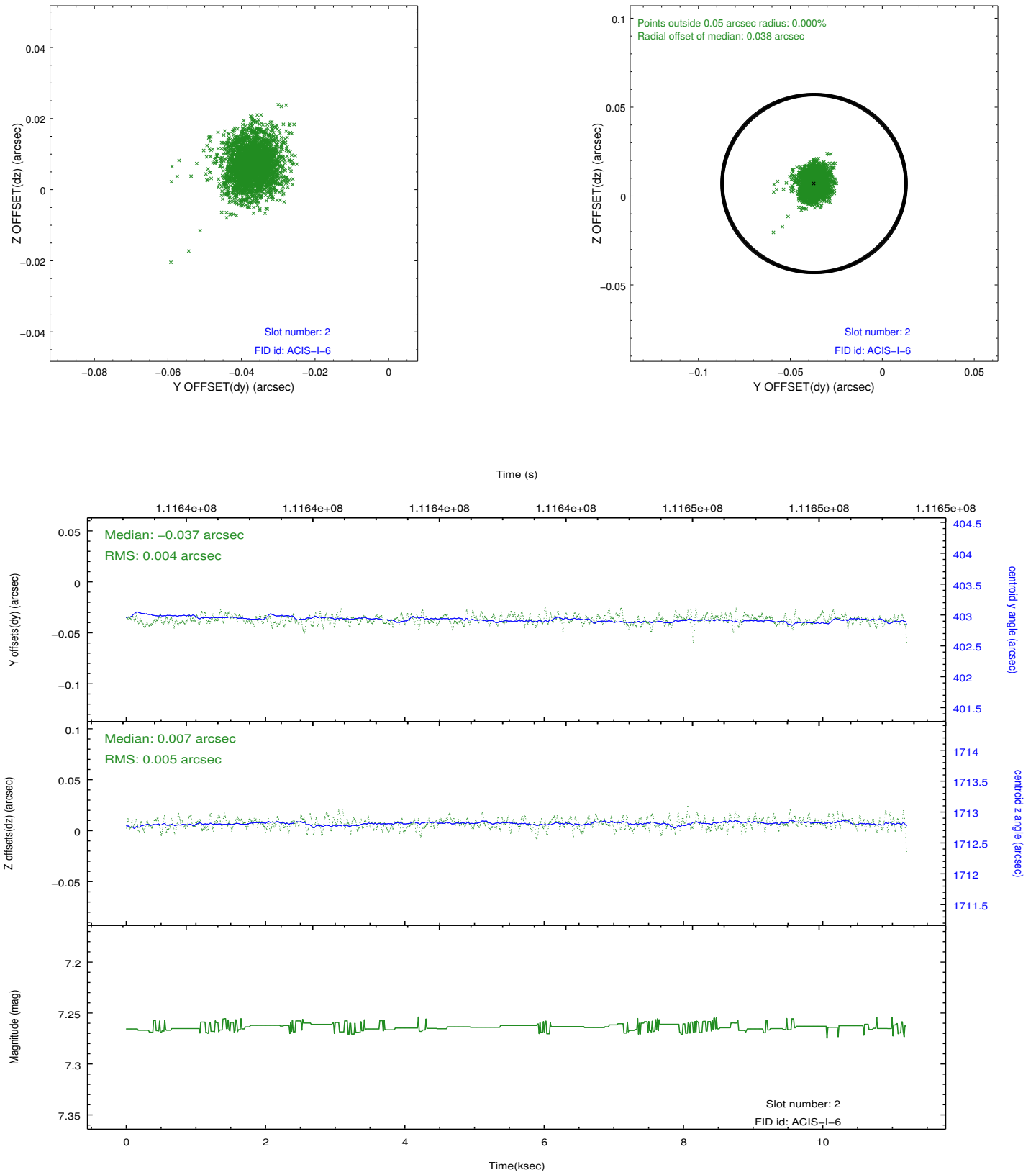
### 2.5.1 Slot 0



## 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)      | 2012.09.21    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 10.8          |

## A.2 Comments

Charge time for this observation remains at previous value of 10.8 ksec.

Roll preference met.