

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5615 - L2 Version 002  
Chandra X-Ray Center

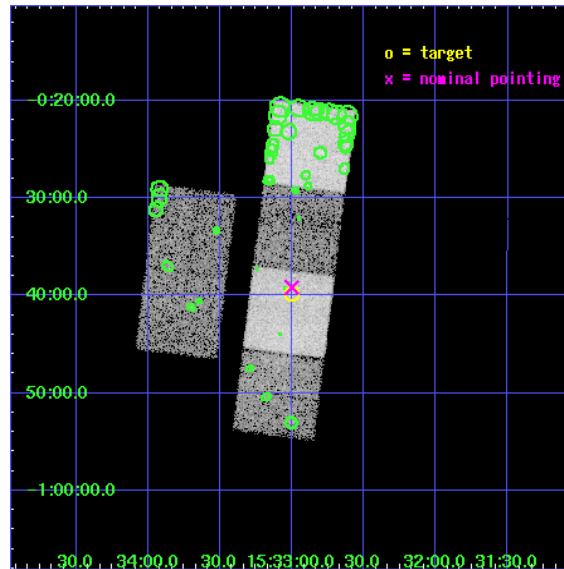
L2 Processing Date : Mar 17 2006

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# 1 Front

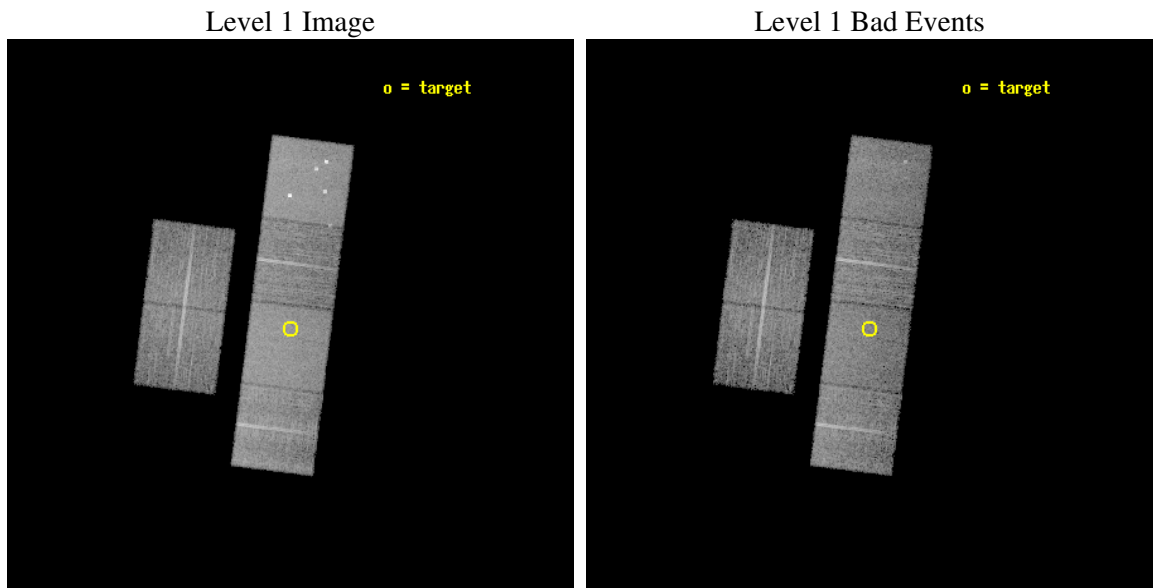
|          |  |
|----------|--|
| seq_num  | 701038   |
| obs_id   | 5615   |
| title    | A Chandra Survey of the Most Distant Quasars: X-raying the First Massive Black Holes |
| observer | Prof. William Brandt   |
| object   | SDSS J1532-0039  |
| dtcycle  | 0  |
| cycle    | P  |
| ra_targ  | 233.249583   |
| dec_targ | -0.66225   |
| ra_nom   | 233.25009241722  |
| dec_nom  | -0.65260993878607  |
| roll_nom | 97.206529154408  |
| revision | 2  |
| ontime   | 9955.199962914   |
| livetime | 9829.1412266818  |
| ontime2  | 9955.199962914   |
| ontime3  | 9955.199962914   |
| ontime5  | 9955.199962914   |
| ontime6  | 9955.199962914   |
| ontime7  | 9955.199962914   |
| ontime8  | 9955.199962914   |
| l2events | 119193   |



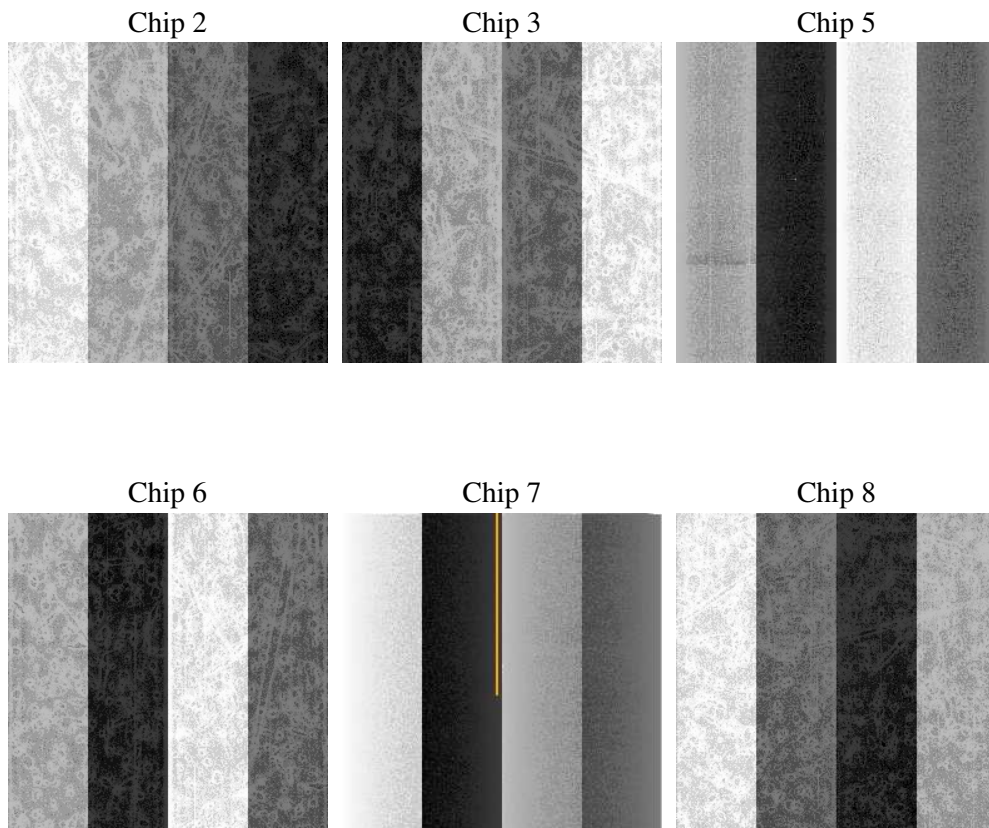
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.7.1             |
| caldbver | 3.2.1               |
| date     | 2006-03-17T22:36:39 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 10000.000000    |
| ontime         | 9959.6316025853 |
| ontime2        | 9959.6316025853 |
| ontime3        | 9959.6316025853 |
| ontime5        | 9959.6316025853 |
| ontime6        | 9959.6316025853 |
| ontime7        | 9959.6316025853 |
| ontime8        | 9959.6316025853 |
| l1events       | 531227          |

### 2.1.4 Events

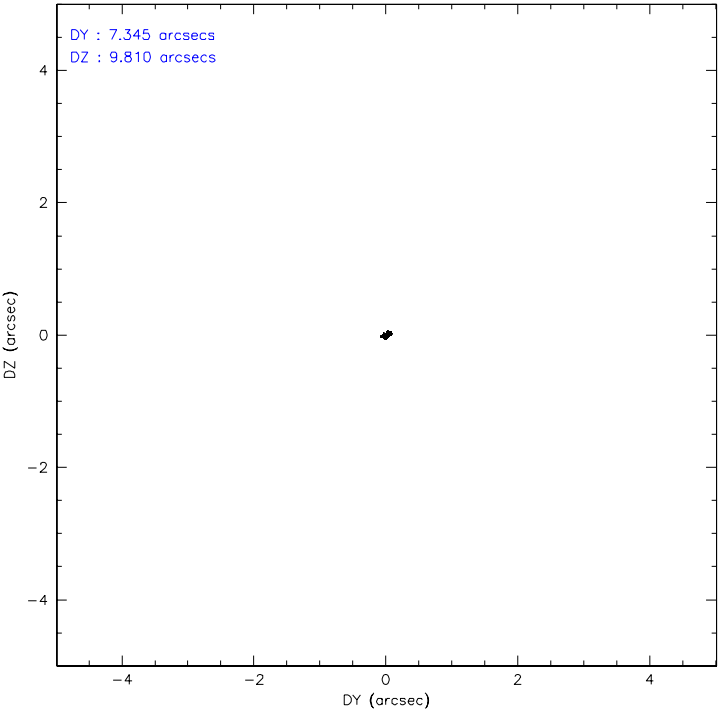
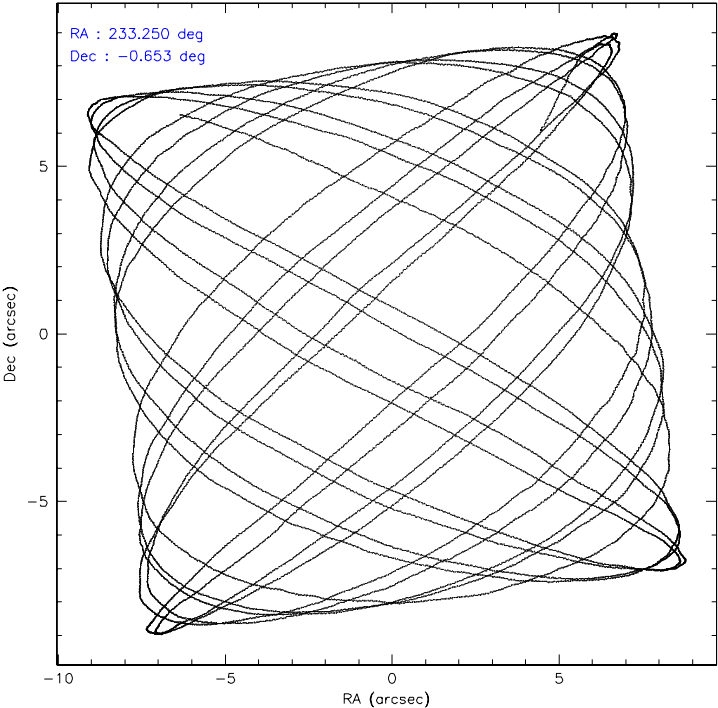
|                 | ccd 2 | ccd 3 | ccd 5  | ccd 6 | ccd 7  | ccd 8 |
|-----------------|-------|-------|--------|-------|--------|-------|
| level 1 events  | 72287 | 68595 | 115998 | 75758 | 103177 | 95412 |
| rejected events | 63347 | 59713 | 62451  | 66668 | 63093  | 74267 |
| rejected %      | 87%   | 87%   | 53%    | 88%   | 61%    | 77%   |

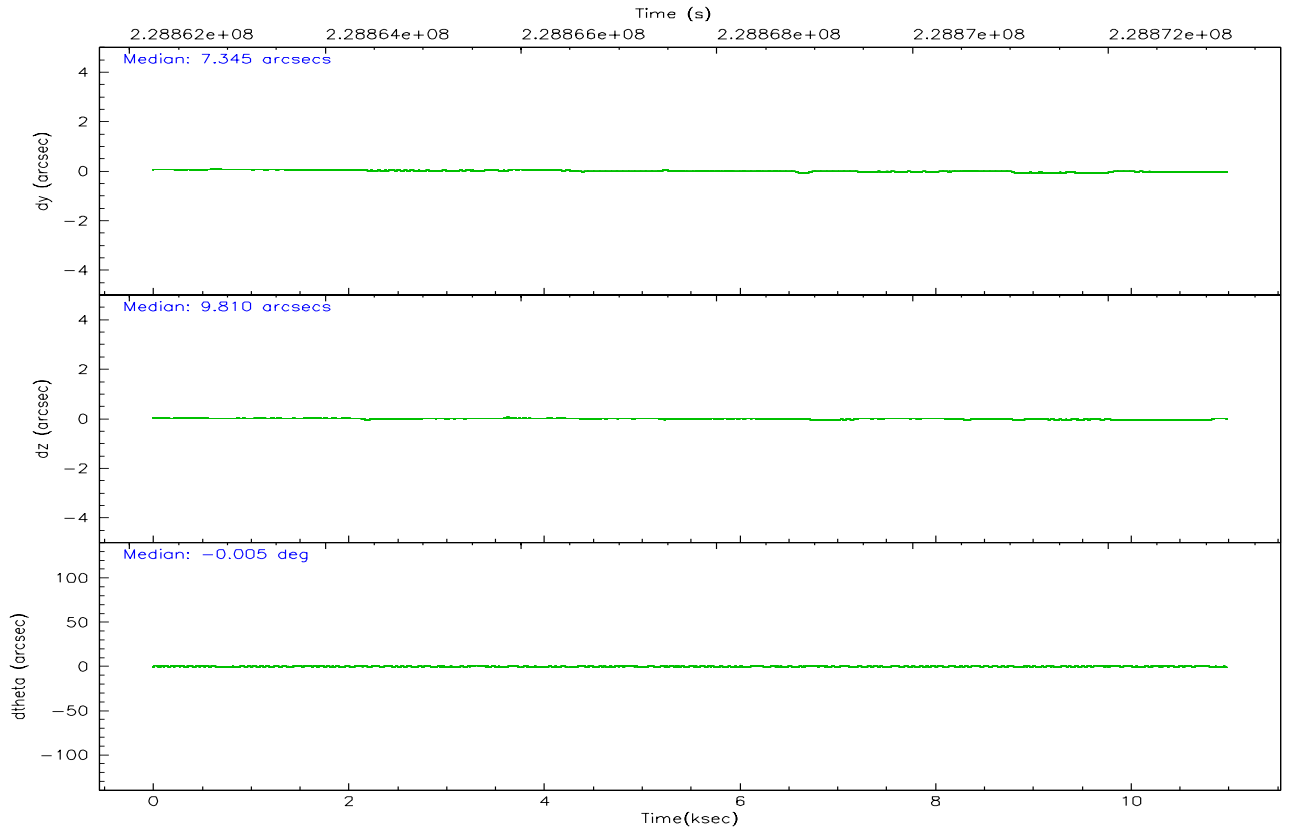
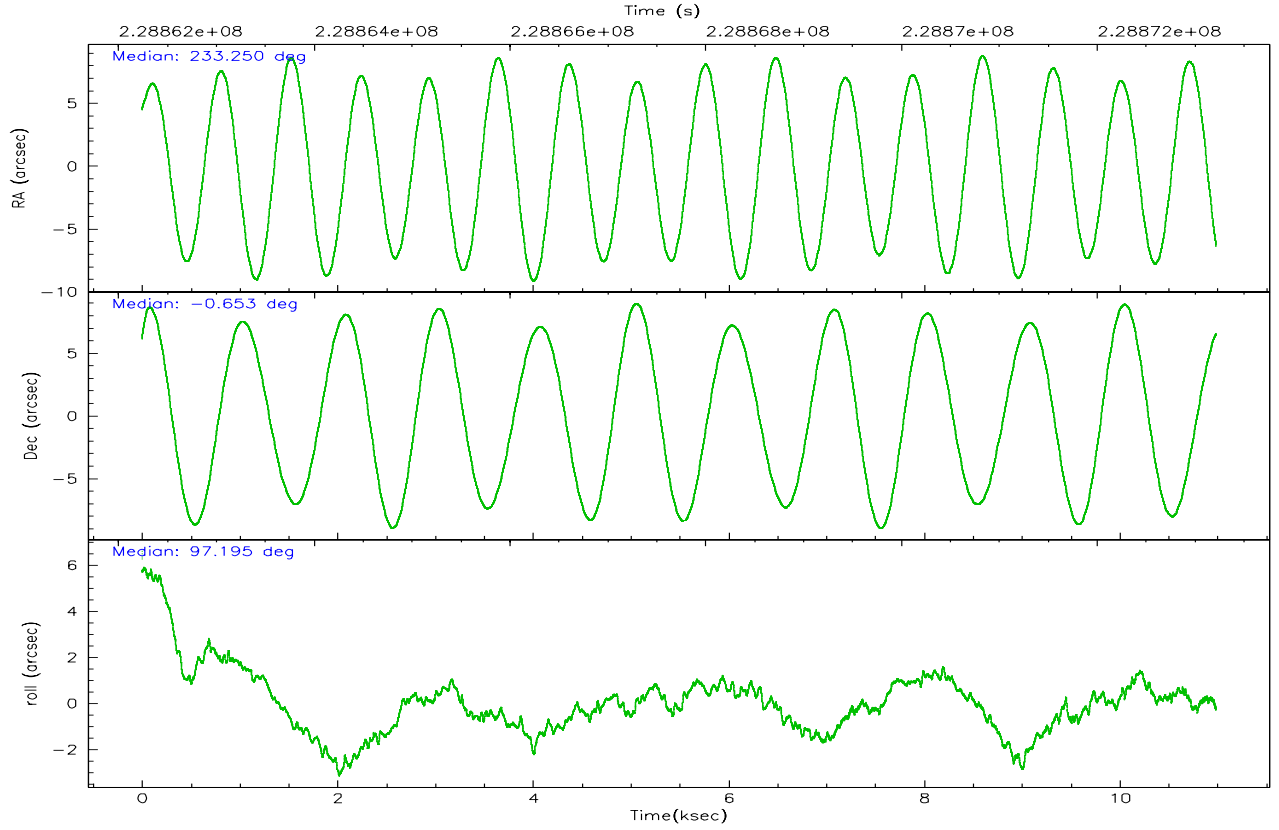
|                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 3952  | 3923  | 7643  | 3684  | 2647  | 7540  |
|                | 5%    | 5%    | 6%    | 4%    | 2%    | 7%    |
| grade 1 events | 53    | 39    | 363   | 35    | 55    | 74    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 1883  | 1706  | 15469 | 1862  | 10148 | 4455  |
|                | 2%    | 2%    | 13%   | 2%    | 9%    | 4%    |
| grade 3 events | 863   | 897   | 1023  | 863   | 1982  | 2123  |
|                | 1%    | 1%    | 0%    | 1%    | 1%    | 2%    |
| grade 4 events | 793   | 850   | 1033  | 810   | 2081  | 2032  |
|                | 1%    | 1%    | 0%    | 1%    | 2%    | 2%    |
| grade 5 events | 3045  | 3338  | 5370  | 3435  | 6547  | 4672  |
|                | 4%    | 4%    | 4%    | 4%    | 6%    | 4%    |
| grade 6 events | 1452  | 1512  | 28401 | 1875  | 23246 | 5000  |
|                | 2%    | 2%    | 24%   | 2%    | 22%   | 5%    |
| grade 7 events | 60246 | 56330 | 56696 | 63194 | 56471 | 69516 |
|                | 83%   | 82%   | 48%   | 83%   | 54%   | 72%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                       | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number    | 6         | 6       |
| Detector                          | ACIS-235678         | ACIS-235678          | Obspar file type                | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status            | NONE      | UPDATED |
| Data mode                         | FAINT               | FAINT                | On-chip summing requested       | N         | N       |
| Observation mode                  | POINTING            | POINTING             | Subarray requested              | NONE      | NONE    |
| Pointing RA                       | 233.266828          | 233.2500924172212    | Alternating exposures requested | N         | N       |
| Pointing Dec                      | -0.674057           | -0.6526099387860743  | Primary exposure time           | 0.000000  | 3.2     |
| Pointing Roll                     | 97.050091           | 97.20652915440778    |                                 |           |         |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  |                                 |           |         |
| SIM defocus (mm)                  | 0                   | 0.001444936568705701 |                                 |           |         |
| SIM translation stage pos (mm)    | -190.132523         | -190.1400660498719   |                                 |           |         |
| SIM translation stage offset (mm) | 0                   | 0.00754346686406393  |                                 |           |         |
| Observation start time            | 228863223.184000    | 228861861.30859      |                                 |           |         |
| Observation start date            | 2005-04-02T21:05:59 | 2005-04-02T20:44:21  |                                 |           |         |
| Observation end time              | 228873223.184000    | 228873582.69662      |                                 |           |         |
| Observation end date              | 2005-04-02T23:52:39 | 2005-04-02T23:59:42  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

### 2.3 Aspect





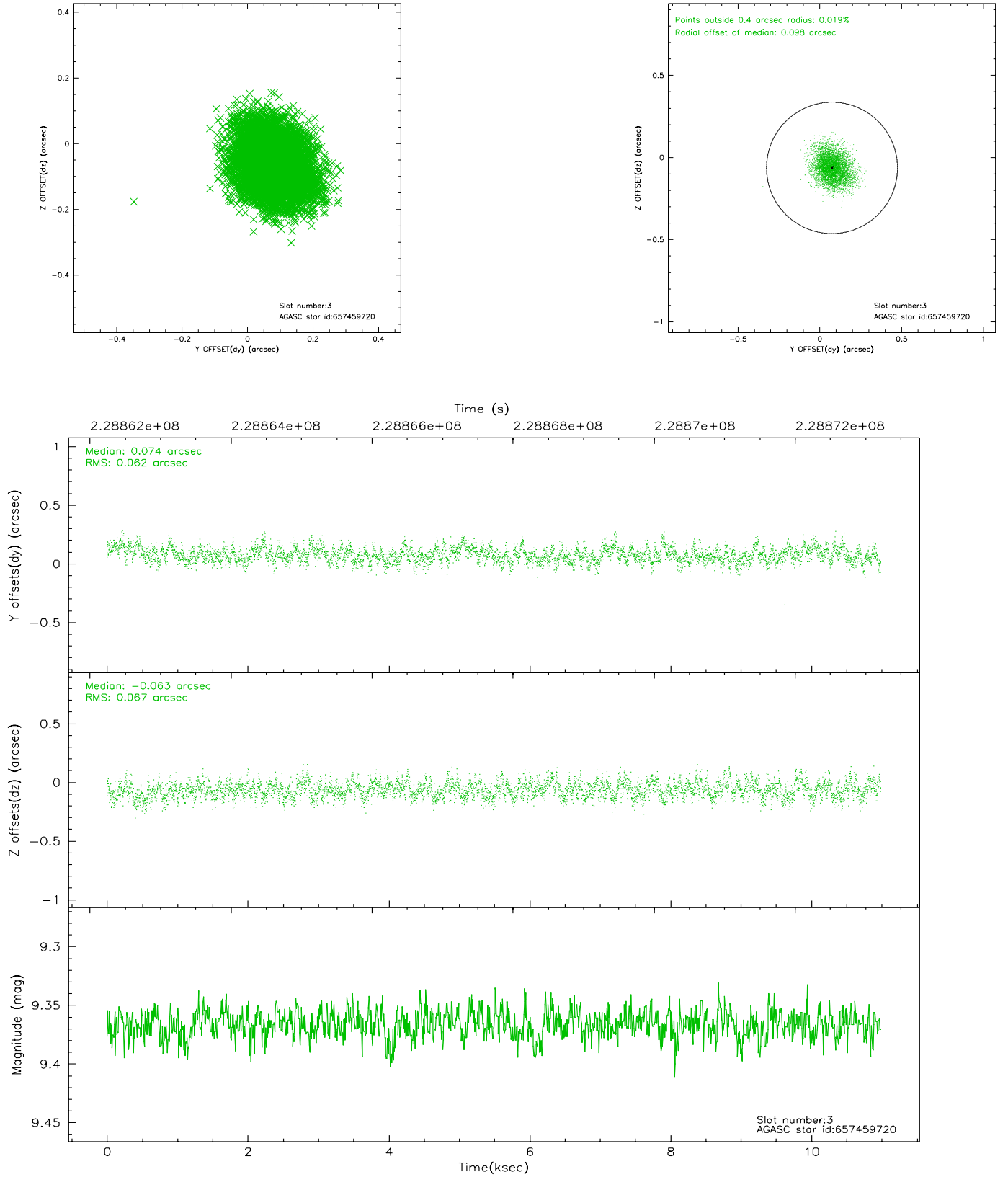
# Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.10 | 2680  | -0.037 | -0.019 | 0.007 | 0.015 | 0.000000   | 0.000000  | -760.11  | -1731.08 |
| 1    | FID    | ACIS-S-4  | 7.21 | 2680  | 0.074  | 0.023  | 0.006 | 0.021 | 0.000000   | 0.000000  | 2153.02  | 177.02   |
| 2    | FID    | ACIS-S-5  | 7.23 | 2680  | -0.067 | 0.004  | 0.007 | 0.015 | 0.000000   | 0.000000  | -1812.42 | 171.12   |
| 3    | GUIDE  | 657459720 | 9.37 | 5353  | 0.074  | -0.063 | 0.098 | 0.157 | 232.649919 | -0.849723 | -355.36  | 2281.39  |
| 4    | GUIDE  | 657460256 | 8.59 | 5357  | -0.008 | -0.122 | 0.061 | 0.101 | 232.775604 | -0.780171 | -162.41  | 1802.16  |
| 5    | GUIDE  | 657461368 | 7.41 | 5361  | -0.172 | 0.219  | 0.063 | 0.101 | 233.706562 | -0.146540 | 1690.76  | -1803.24 |
| 6    | GUIDE  | 657461824 | 9.48 | 5358  | 0.032  | 0.110  | 0.119 | 0.202 | 233.607297 | -0.096573 | 1913.60  | -1471.54 |
| 7    | GUIDE  | 657463000 | 9.17 | 5359  | 0.071  | -0.140 | 0.080 | 0.130 | 233.155519 | -0.333918 | 1265.01  | 247.33   |

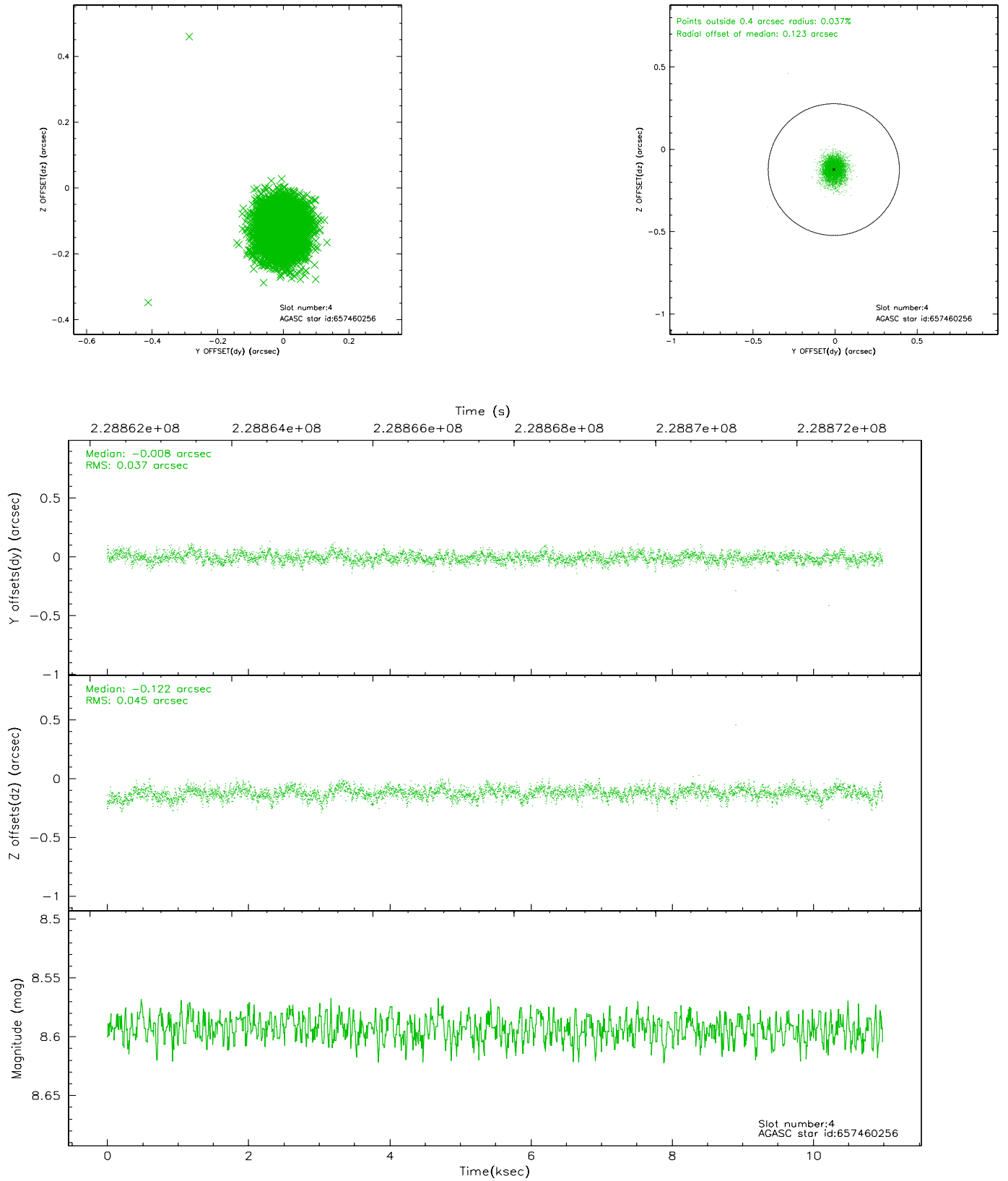


## 2.4 Star Slots

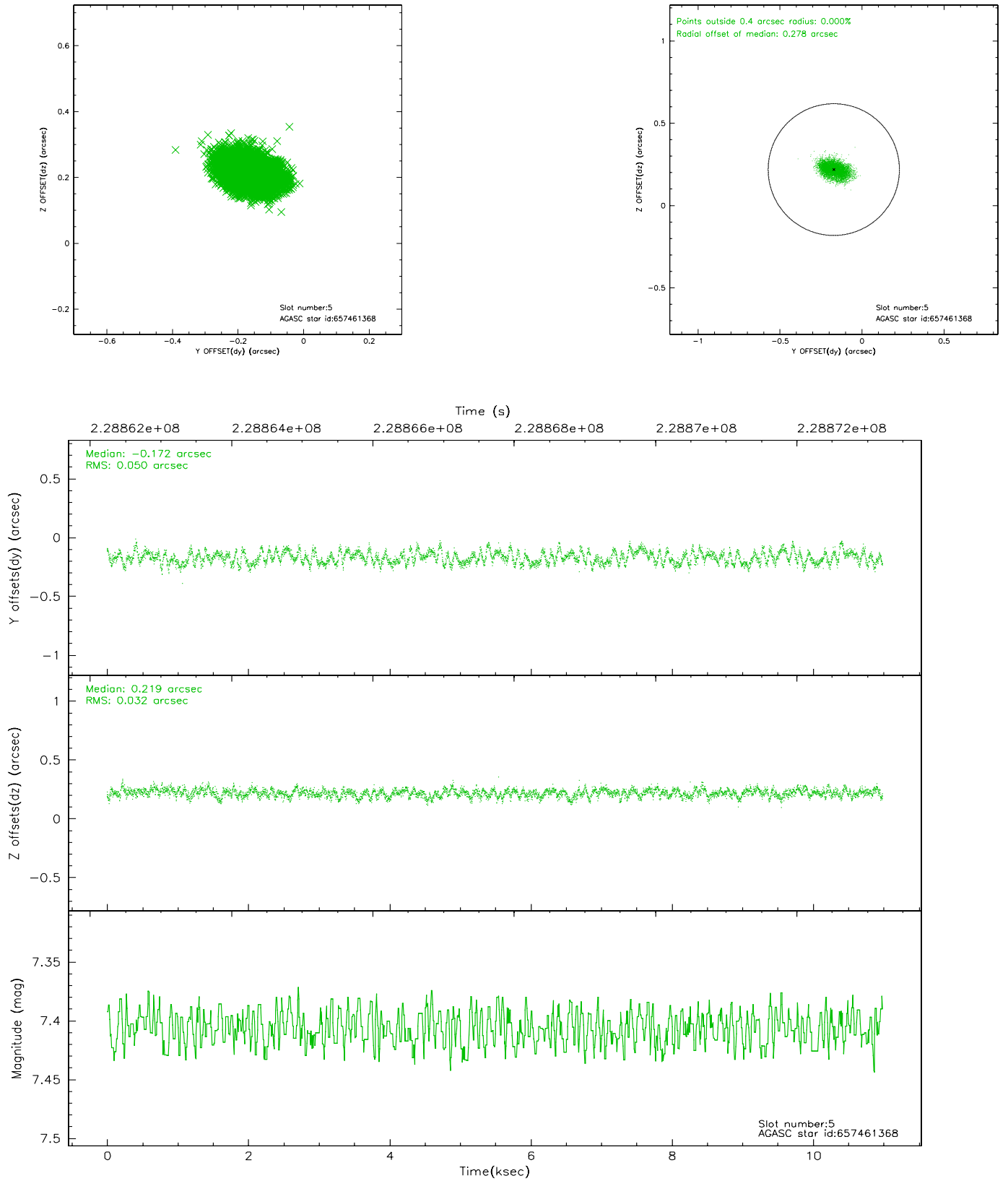
### 2.4.1 Slot 3



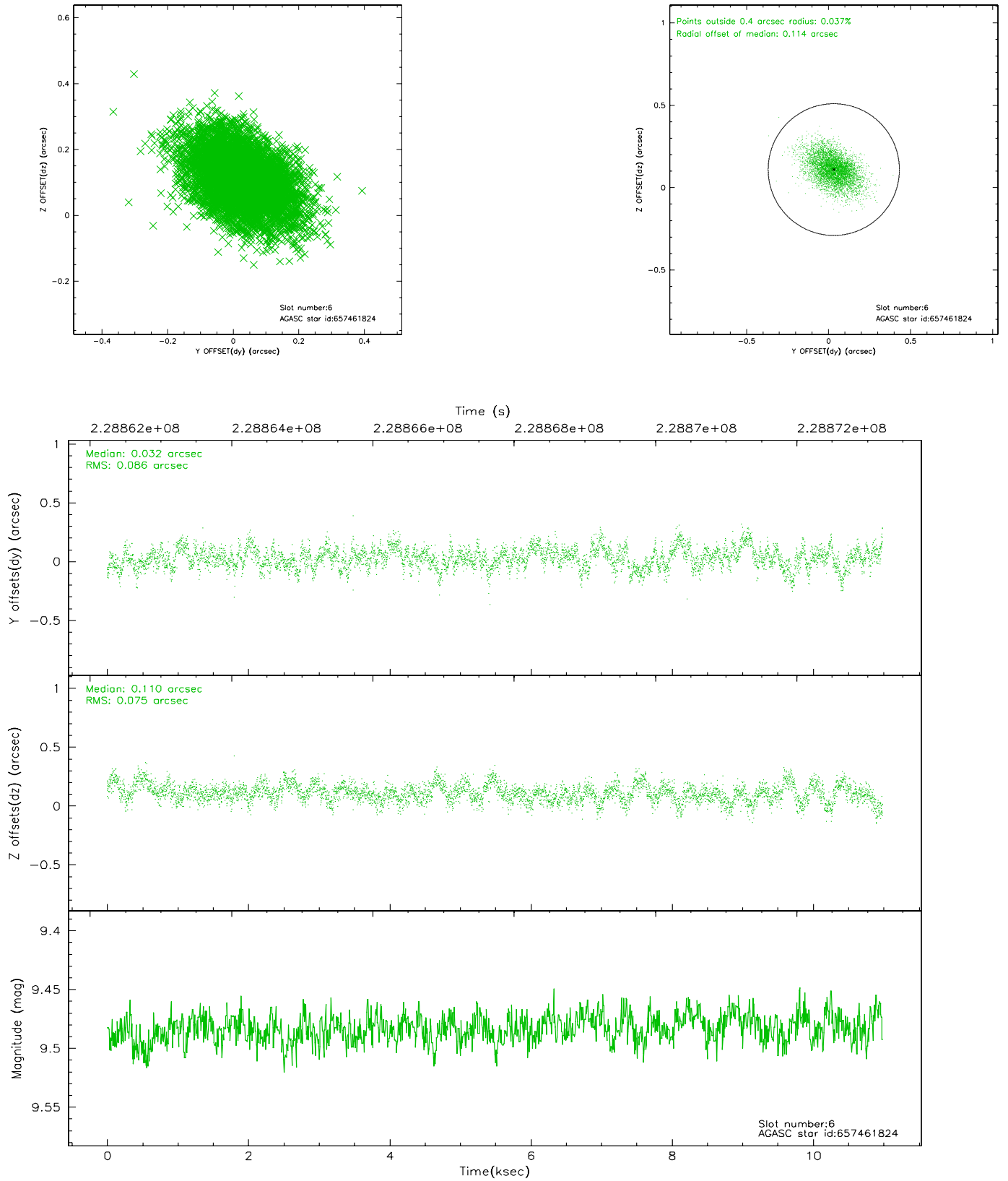
## 2.4.2 Slot 4



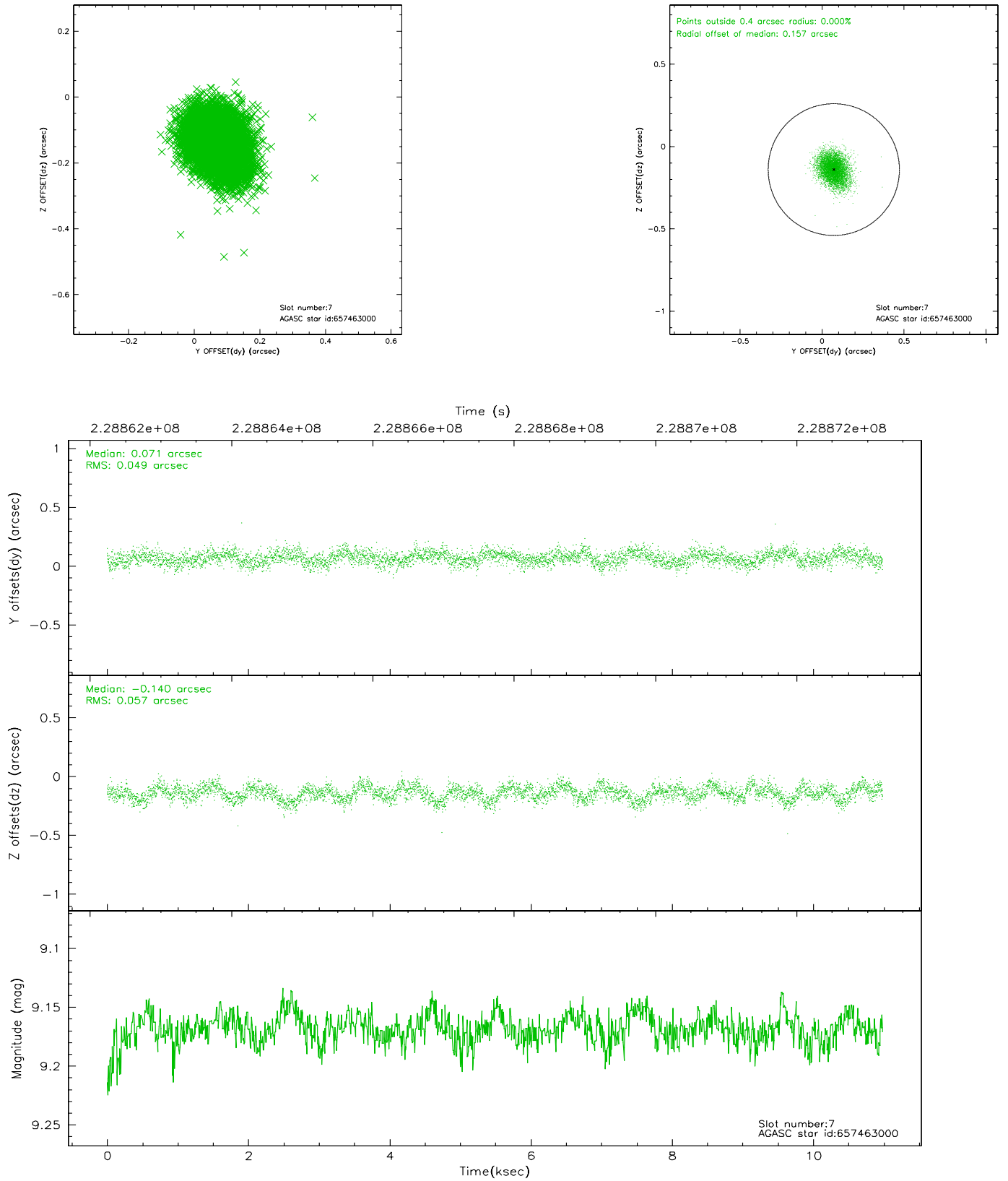
### 2.4.3 Slot 5



## 2.4.4 Slot 6

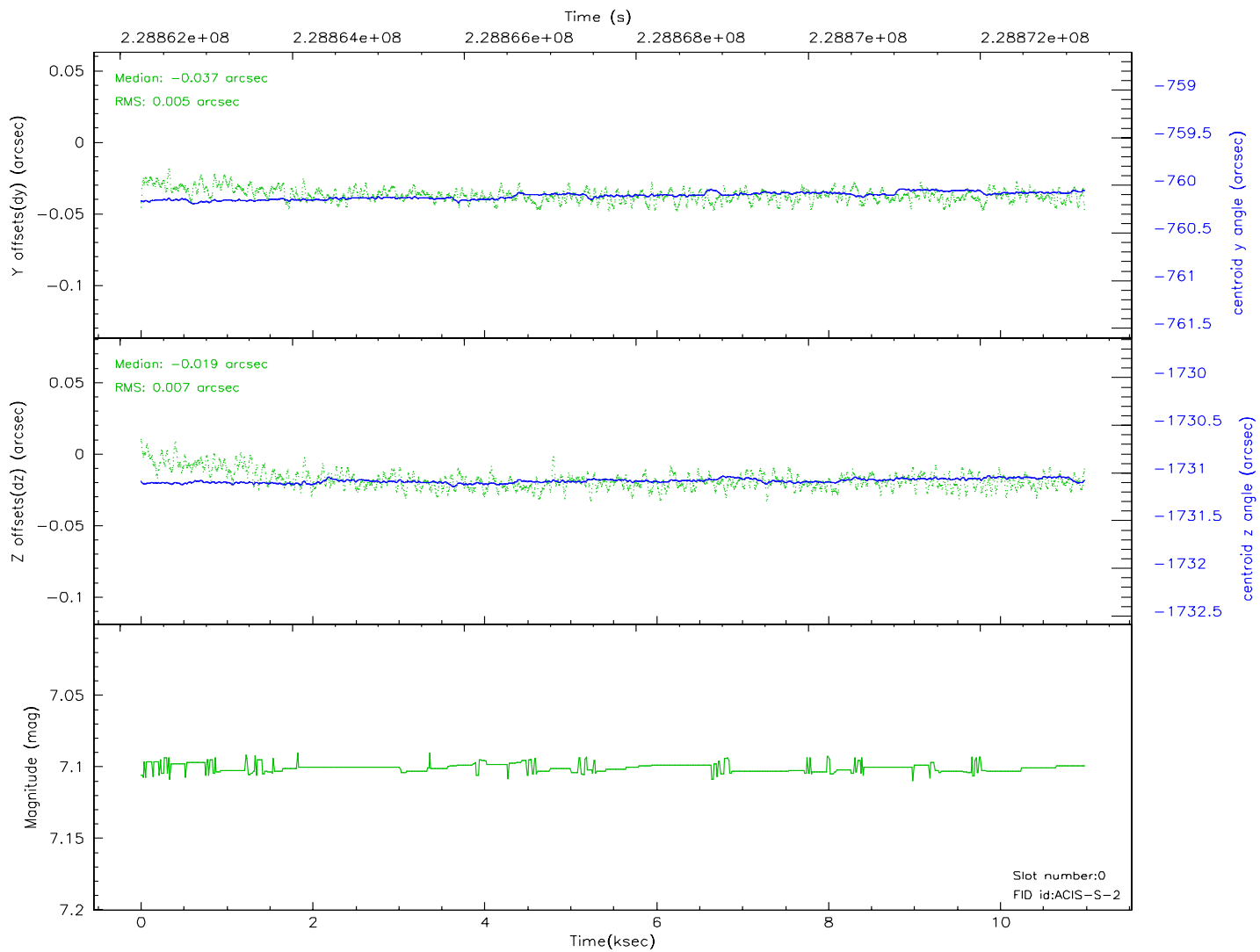
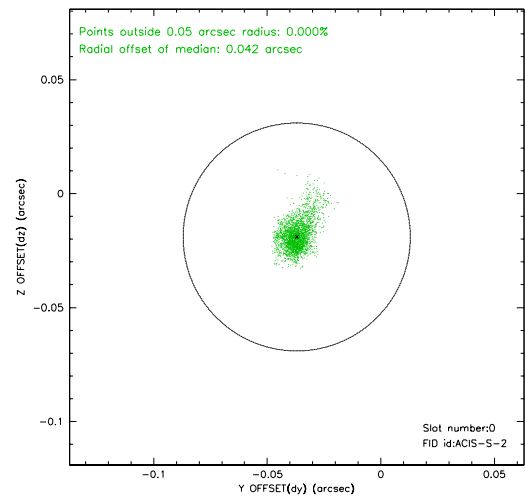
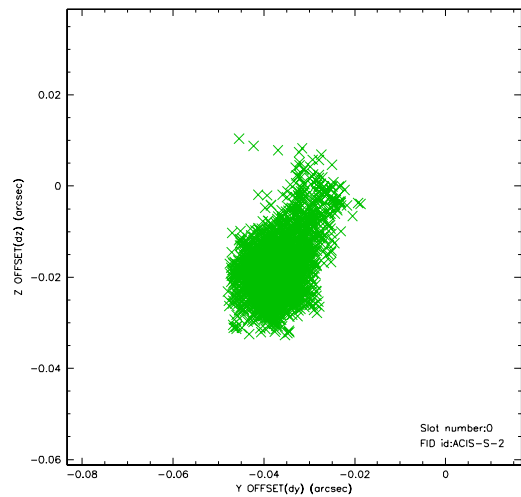


## 2.4.5 Slot 7

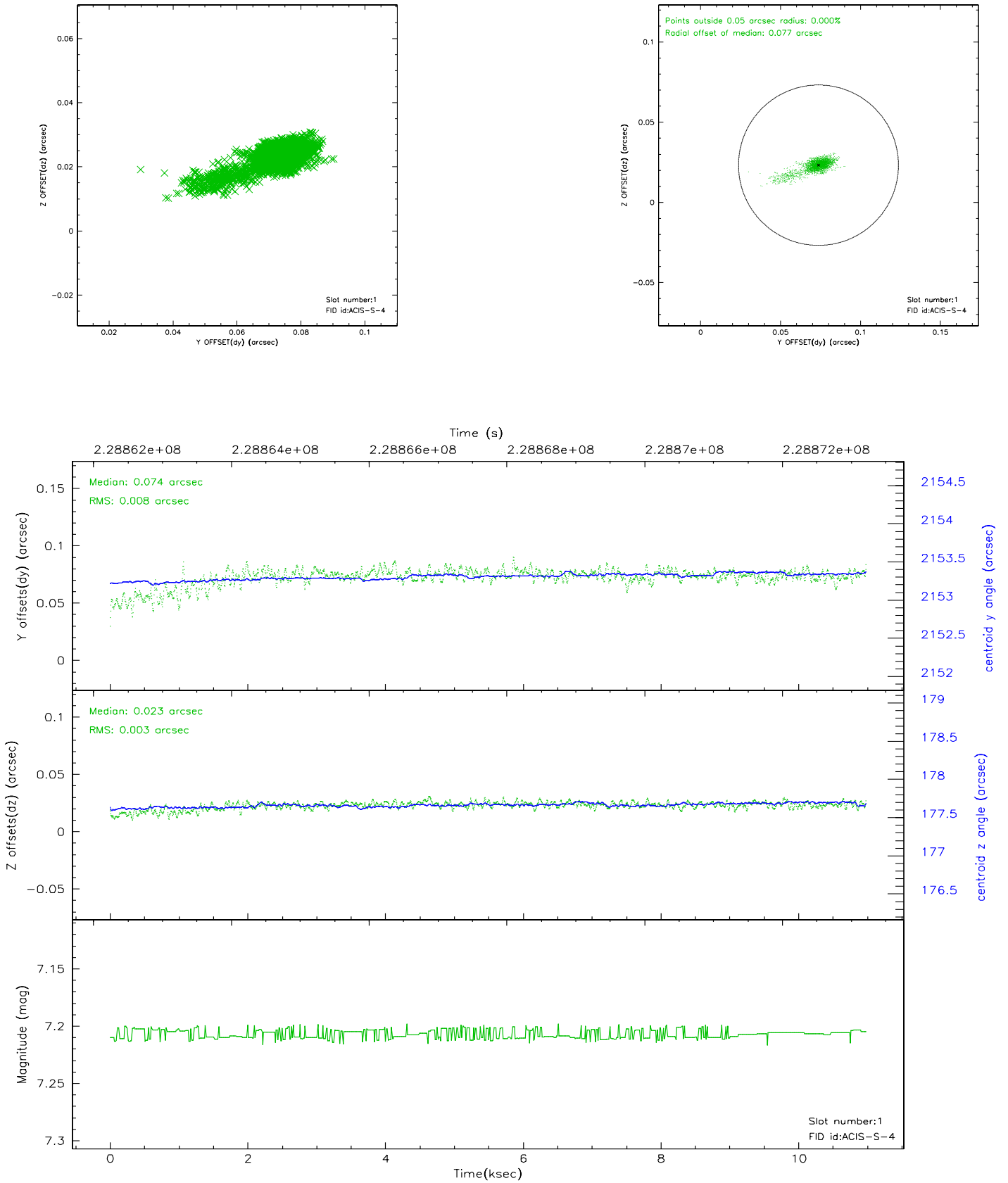


## 2.5 FID Slots

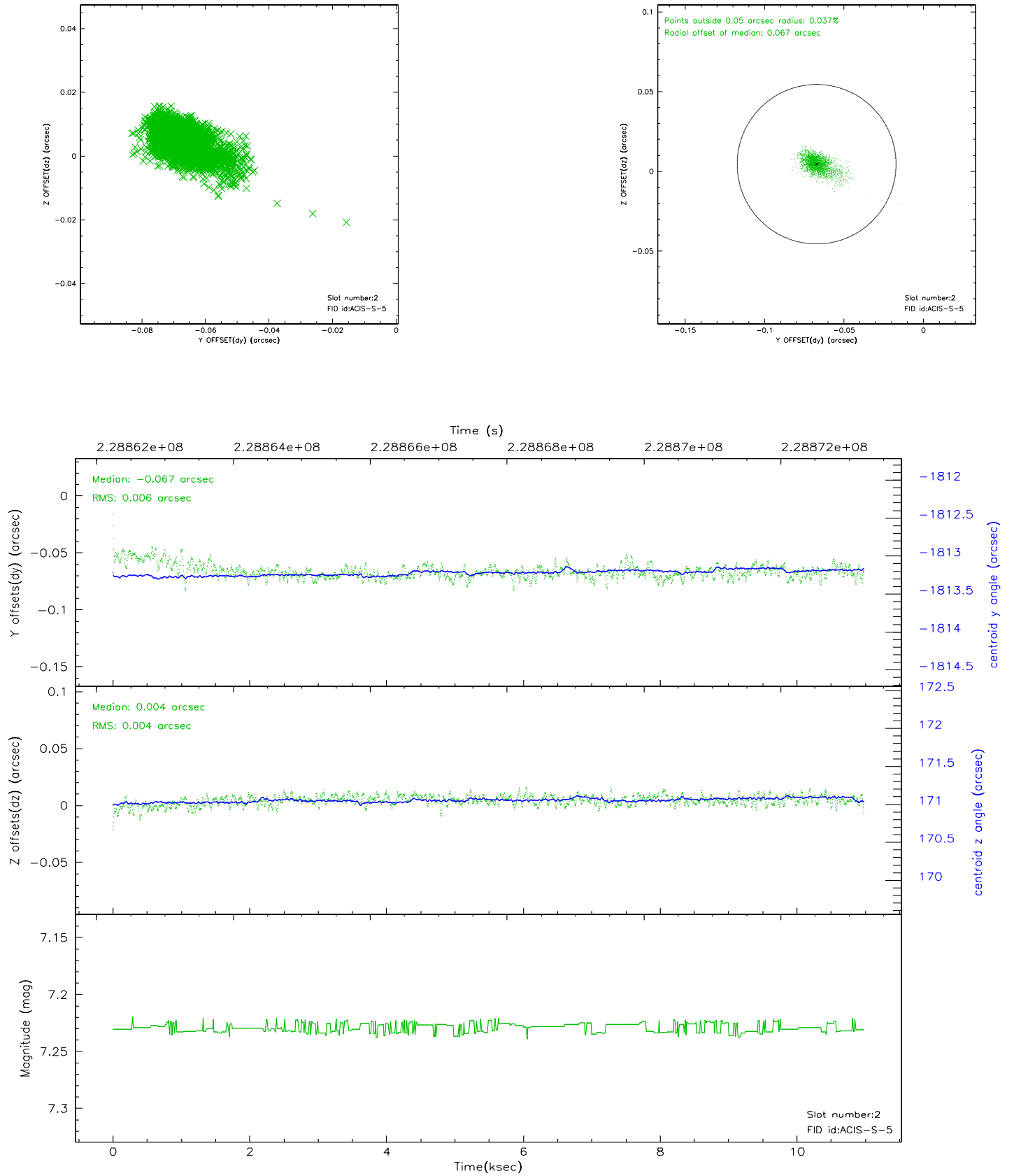
### 2.5.1 Slot 0



## 2.5.2 Slot 1

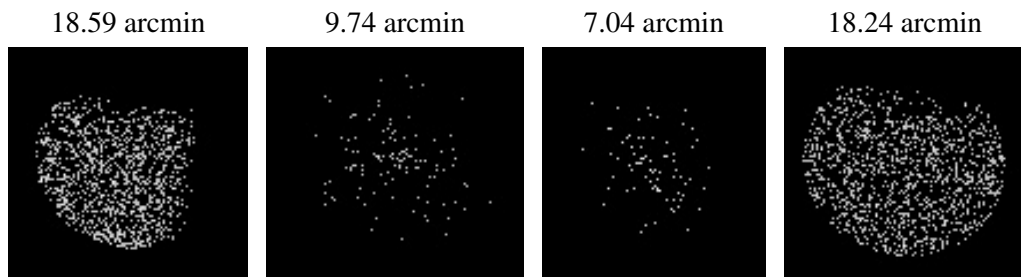


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.03.20 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 9.955199   |

### A.2 Comments