

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 6079 - L2 Version 002  
Chandra X-Ray Center

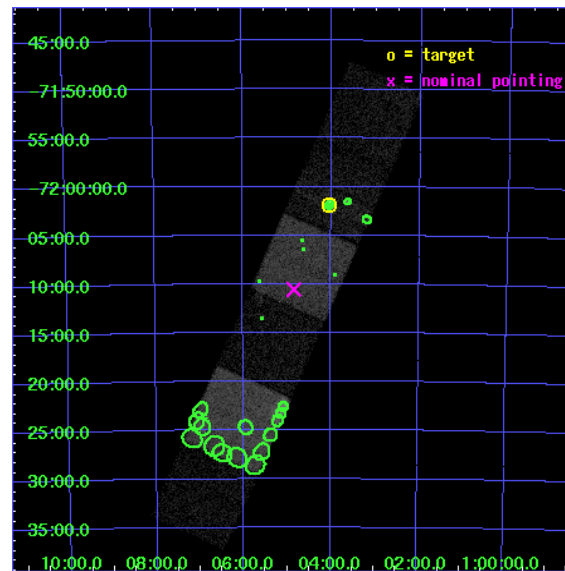
L2 Processing Date : Apr 7 2006

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# 1 Front

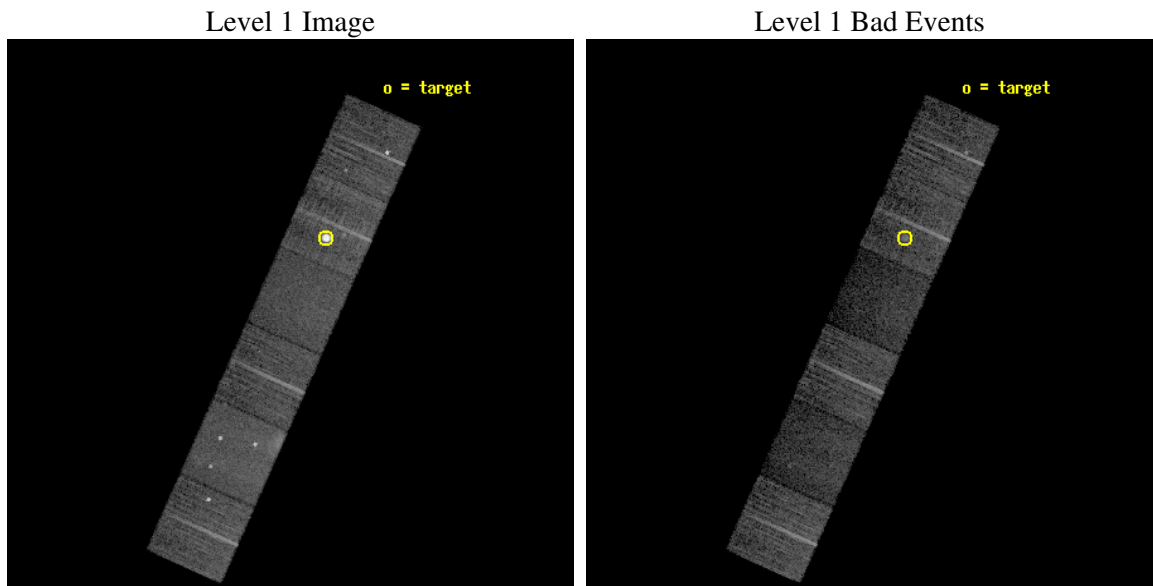
|          |  |
|----------|--|
| seq_num  | 590406   |
| obs_id   | 6079   |
| title    | AO6A ACIS-S Calibration Observations of E0102-72 |
| observer | Dr. CXC Calibration                              |
| object   | E0102-72[S4,-120,-9.15,0,0]                      |
| dtcycle  | 0  |
| cycle    | P  |
| ra_targ  | 16.01  |
| dec_targ | -72.032028                                       |
| ra_nom   | 16.21010188802                                   |
| dec_nom  | -72.175968091895                                 |
| roll_nom | 293.97522685453                                  |
| revision | 2  |
| ontime   | 7955.1999703646                                  |
| livetime | 7854.4664382935                                  |
| ontime4  | 7951.9590000808                                  |
| ontime5  | 7955.1999703646                                  |
| ontime6  | 7955.1999703646                                  |
| ontime7  | 7955.1999703646                                  |
| ontime8  | 7955.1999703646                                  |
| ontime9  | 7955.1999703646                                  |
| l2events | 94838  |



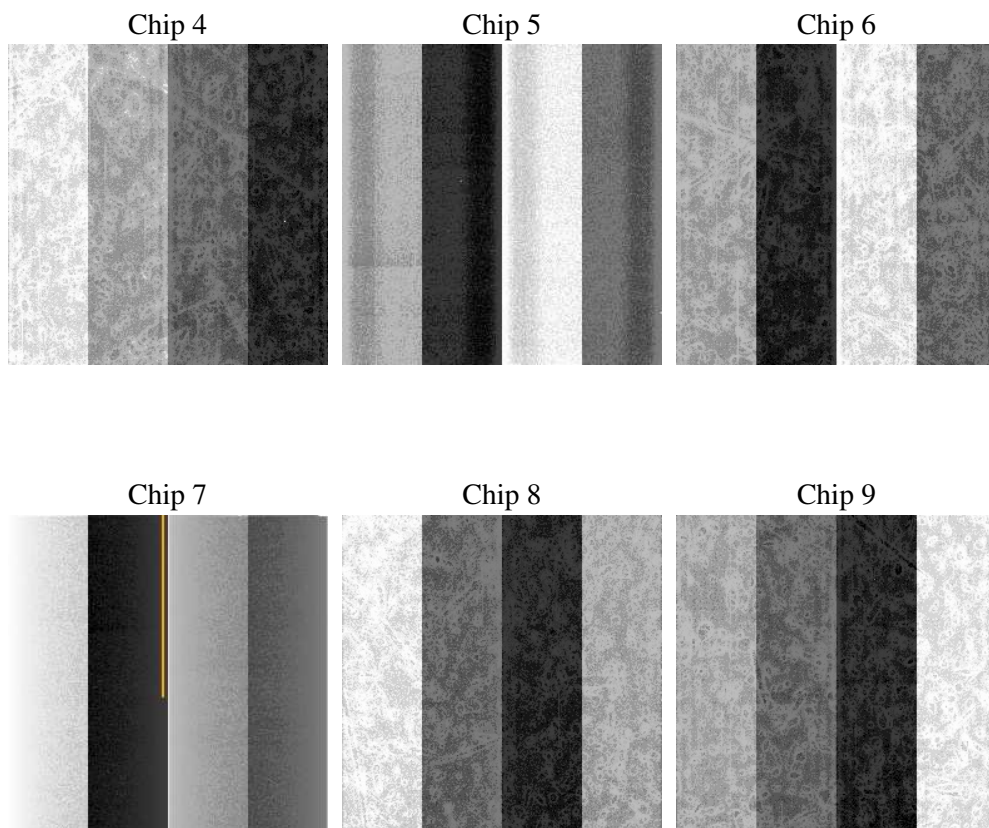
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 1                   |
| ascdsver | 7.6.7.1             |
| caldbver | 3.2.1               |
| date     | 2006-04-07T07:48:12 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 8000.000000     |
| ontime         | 7959.8984487057 |
| ontime4        | 7956.6574784219 |
| ontime5        | 7959.8984487057 |
| ontime6        | 7959.8984487057 |
| ontime7        | 7959.8984487057 |
| ontime8        | 7959.8984487057 |
| ontime9        | 7959.8984487057 |
| l1events       | 355430          |

### 2.1.4 Events

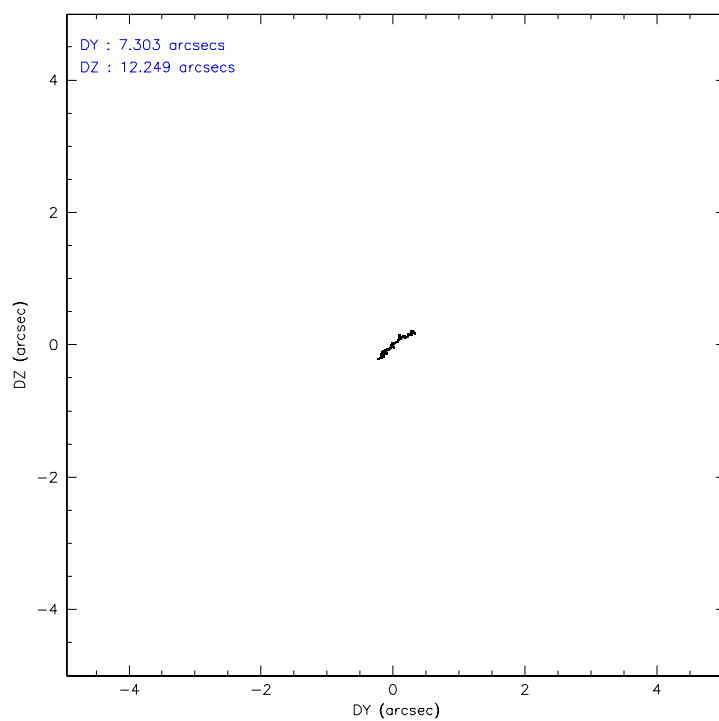
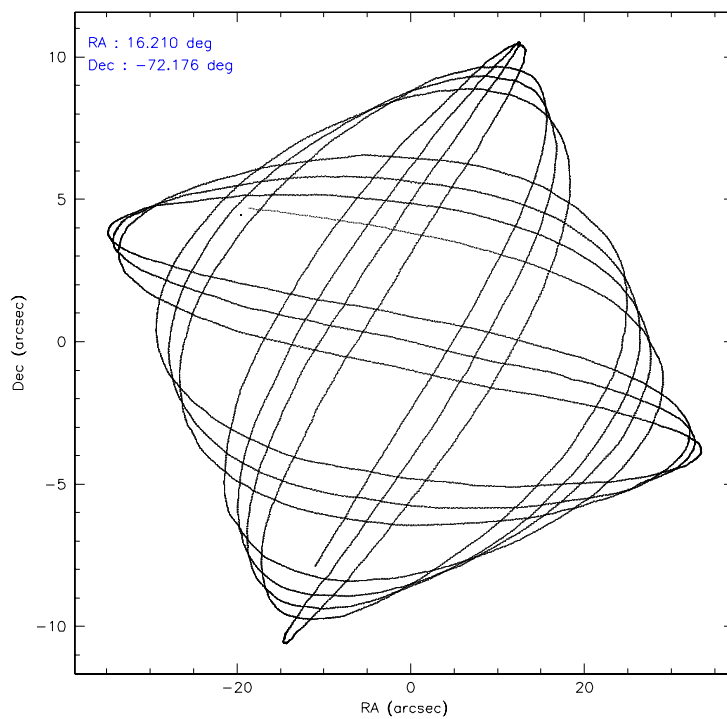
|                 | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 57777 | 63484 | 50768 | 47295 | 85450 | 50656 |
| rejected events | 51065 | 28583 | 45662 | 24916 | 45986 | 42966 |
| rejected %      | 88%   | 45%   | 89%   | 52%   | 53%   | 84%   |

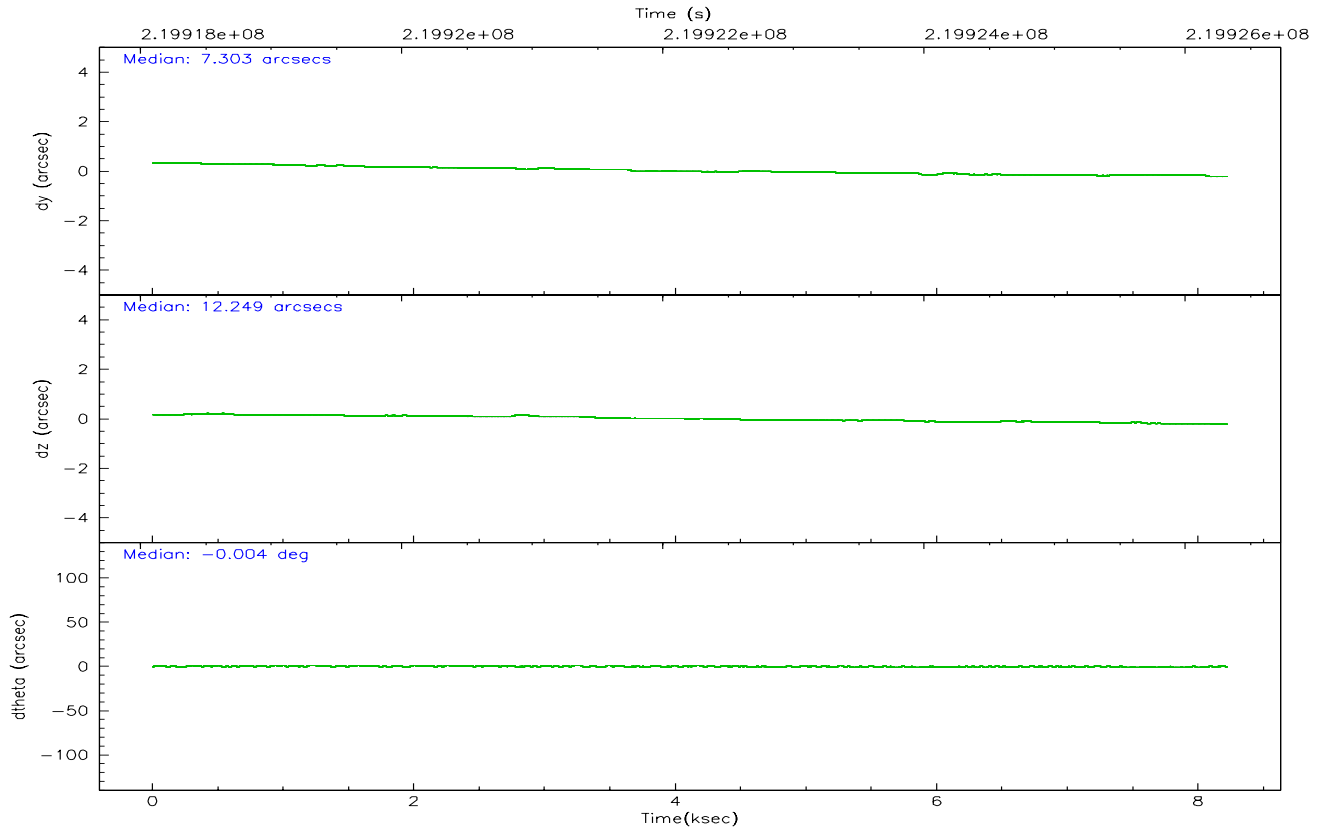
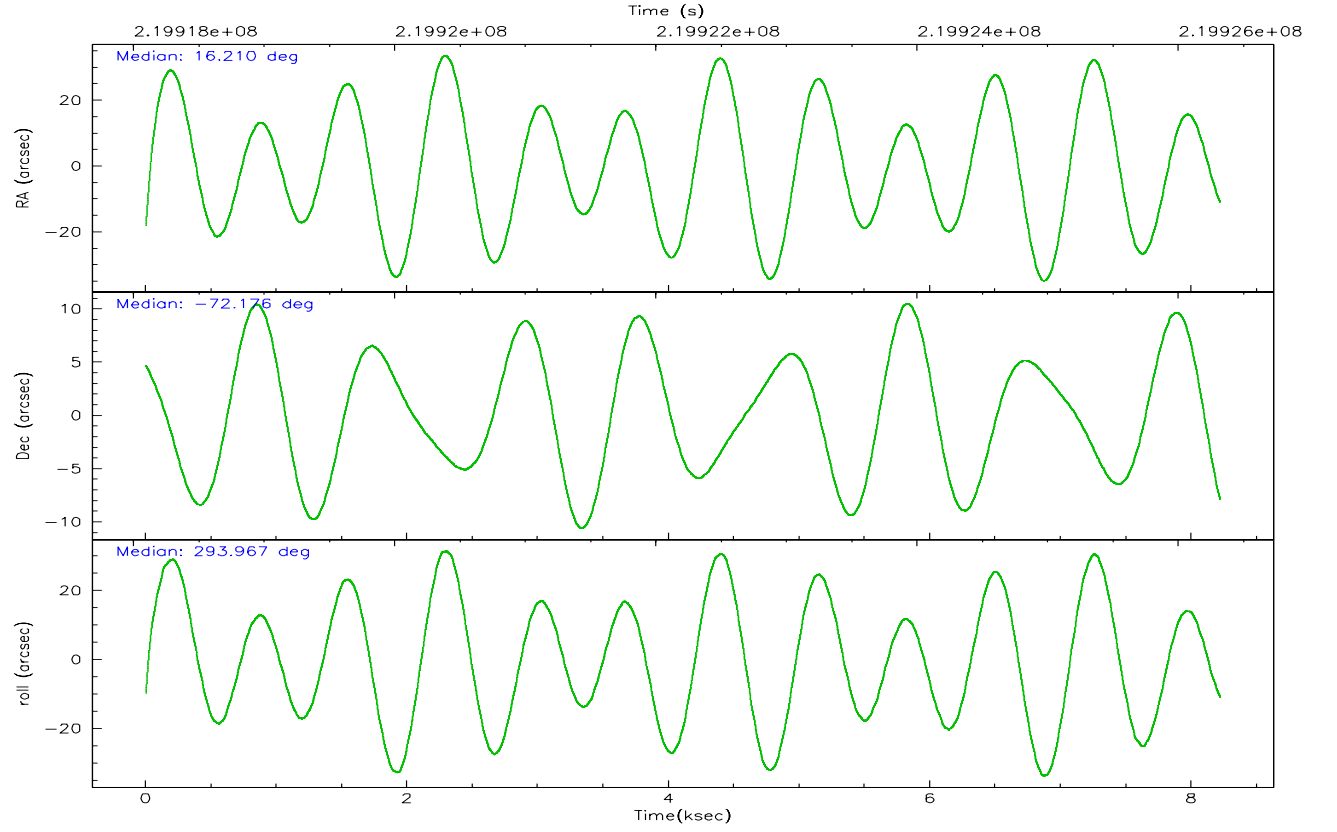
|                | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 3597  | 5750  | 1994  | 1899  | 26467 | 2055  |
|                | 6%    | 9%    | 3%    | 4%    | 30%   | 4%    |
| grade 1 events | 63    | 122   | 22    | 32    | 208   | 252   |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 1231  | 10315 | 1053  | 5722  | 5135  | 3439  |
|                | 2%    | 16%   | 2%    | 12%   | 6%    | 6%    |
| grade 3 events | 565   | 978   | 587   | 1487  | 1963  | 585   |
|                | 0%    | 1%    | 1%    | 3%    | 2%    | 1%    |
| grade 4 events | 536   | 964   | 547   | 1470  | 1904  | 599   |
|                | 0%    | 1%    | 1%    | 3%    | 2%    | 1%    |
| grade 5 events | 1611  | 3327  | 1597  | 3605  | 2500  | 1766  |
|                | 2%    | 5%    | 3%    | 7%    | 2%    | 3%    |
| grade 6 events | 784   | 16912 | 927   | 11808 | 4011  | 1014  |
|                | 1%    | 26%   | 1%    | 24%   | 4%    | 2%    |
| grade 7 events | 49390 | 25116 | 44041 | 21272 | 43262 | 40946 |
|                | 85%   | 39%   | 86%   | 44%   | 50%   | 80%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                       | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number    | 6         | 6       |
| Detector                          | ACIS-456789         | ACIS-456789          | Obspar file type                | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status            | NONE      | UPDATED |
| Data mode                         | VFAINT              | VFAINT               | On-chip summing requested       | N         | N       |
| Observation mode                  | POINTING            | POINTING             | Subarray requested              | NONE      | NONE    |
| Pointing RA                       | 16.137364           | 16.21010188801983    | Alternating exposures requested | N         | N       |
| Pointing Dec                      | -72.160260          | -72.17596809189482   | Primary exposure time           | 0.000000  | 3.2     |
| Pointing Roll                     | 293.749345          | 293.9752268545345    |                                 |           |         |
| Window start time                 | 215654464.184000    | 215654464.184000     |                                 |           |         |
| Window stop time                  | 220838464.184000    | 220838464.184000     |                                 |           |         |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  |                                 |           |         |
| SIM defocus (mm)                  | 0                   | 0.001444936568705701 |                                 |           |         |
| SIM translation stage pos (mm)    | -190.132523         | -190.1425803651734   |                                 |           |         |
| SIM translation stage offset (mm) | 0                   | 0.01005778216563158  |                                 |           |         |
| Observation start time            | 219918320.184000    | 219917340.36662      |                                 |           |         |
| Observation start date            | 2004-12-20T08:24:16 | 2004-12-20T08:09:00  |                                 |           |         |
| Observation end time              | 219926320.184000    | 219926454.15453      |                                 |           |         |
| Observation end date              | 2004-12-20T10:37:36 | 2004-12-20T10:40:54  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

## 2.3 Aspect





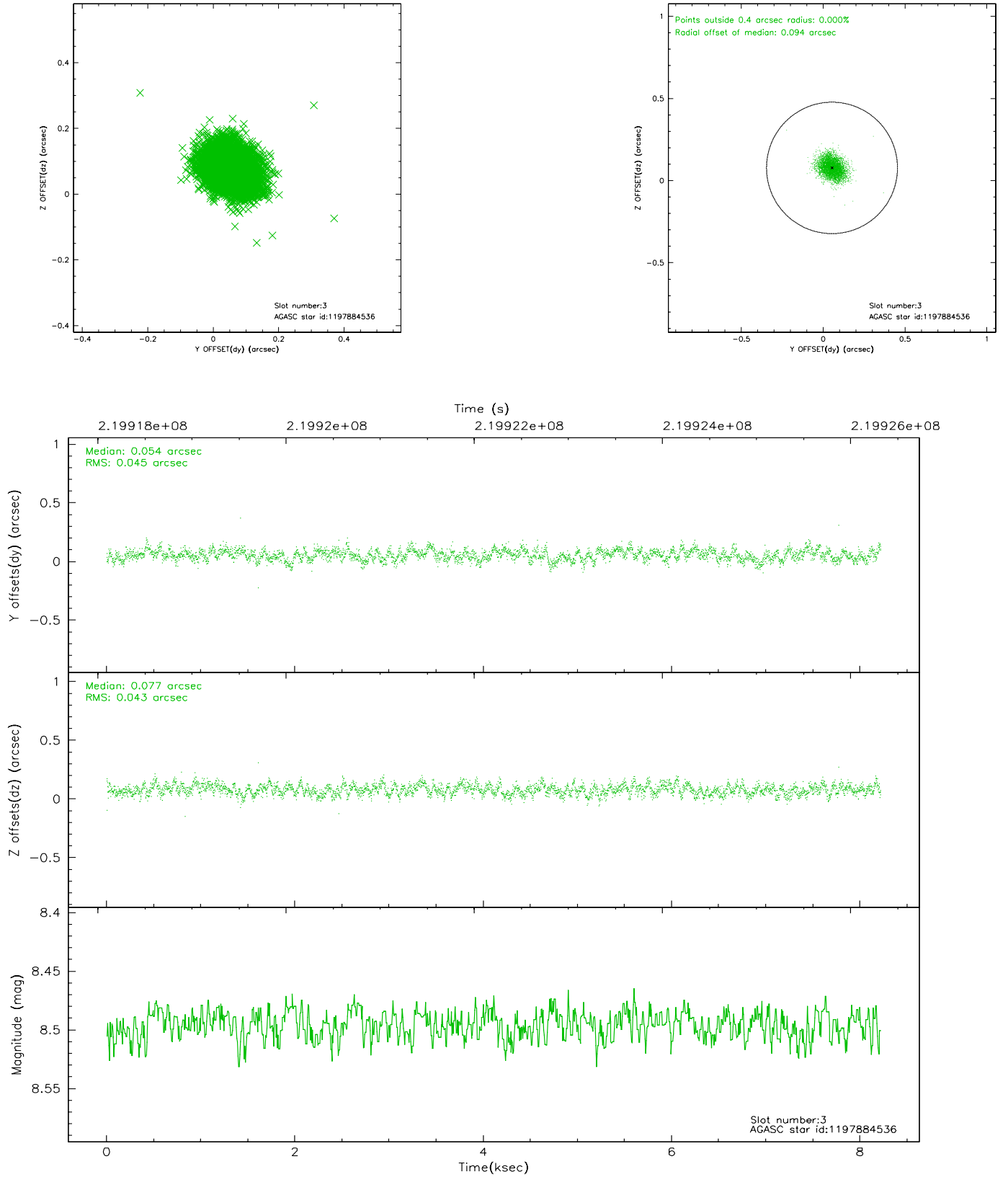
### Slot Statistics

| 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 | 2005  | -0.006 | -0.007 | 0.009 | 0.014 | 0.000000  | 0.000000   | -760.11  | -1733.51 |
| 1    | FID    | ACIS-S-4   | 7.20 | 2005  | 0.019  | 0.005  | 0.006 | 0.012 | 0.000000  | 0.000000   | 2152.89  | 174.27   |
| 2    | FID    | ACIS-S-5   | 7.23 | 2005  | -0.043 | 0.010  | 0.011 | 0.020 | 0.000000  | 0.000000   | -1812.11 | 168.73   |
| 3    | GUIDE  | 1197884536 | 8.50 | 4010  | 0.054  | 0.077  | 0.066 | 0.105 | 17.160729 | -71.835289 | -599.40  | 1518.44  |
| 4    | GUIDE  | 1197884712 | 8.31 | 4009  | 0.059  | 0.077  | 0.066 | 0.102 | 16.087398 | -72.252690 | 282.60   | -183.71  |
| 5    | GUIDE  | 1197885328 | 7.23 | 4010  | -0.010 | -0.051 | 0.054 | 0.086 | 16.283090 | -71.733943 | -1338.30 | 768.81   |
| 6    | GUIDE  | 1198189696 | 7.37 | 4010  | -0.097 | -0.017 | 0.050 | 0.081 | 15.223750 | -72.697522 | 1383.25  | -1676.90 |
| 7    | GUIDE  | 1197750936 | 7.55 | 4009  | -0.012 | -0.086 | 0.054 | 0.086 | 15.387940 | -71.549550 | -2350.73 | 100.90   |

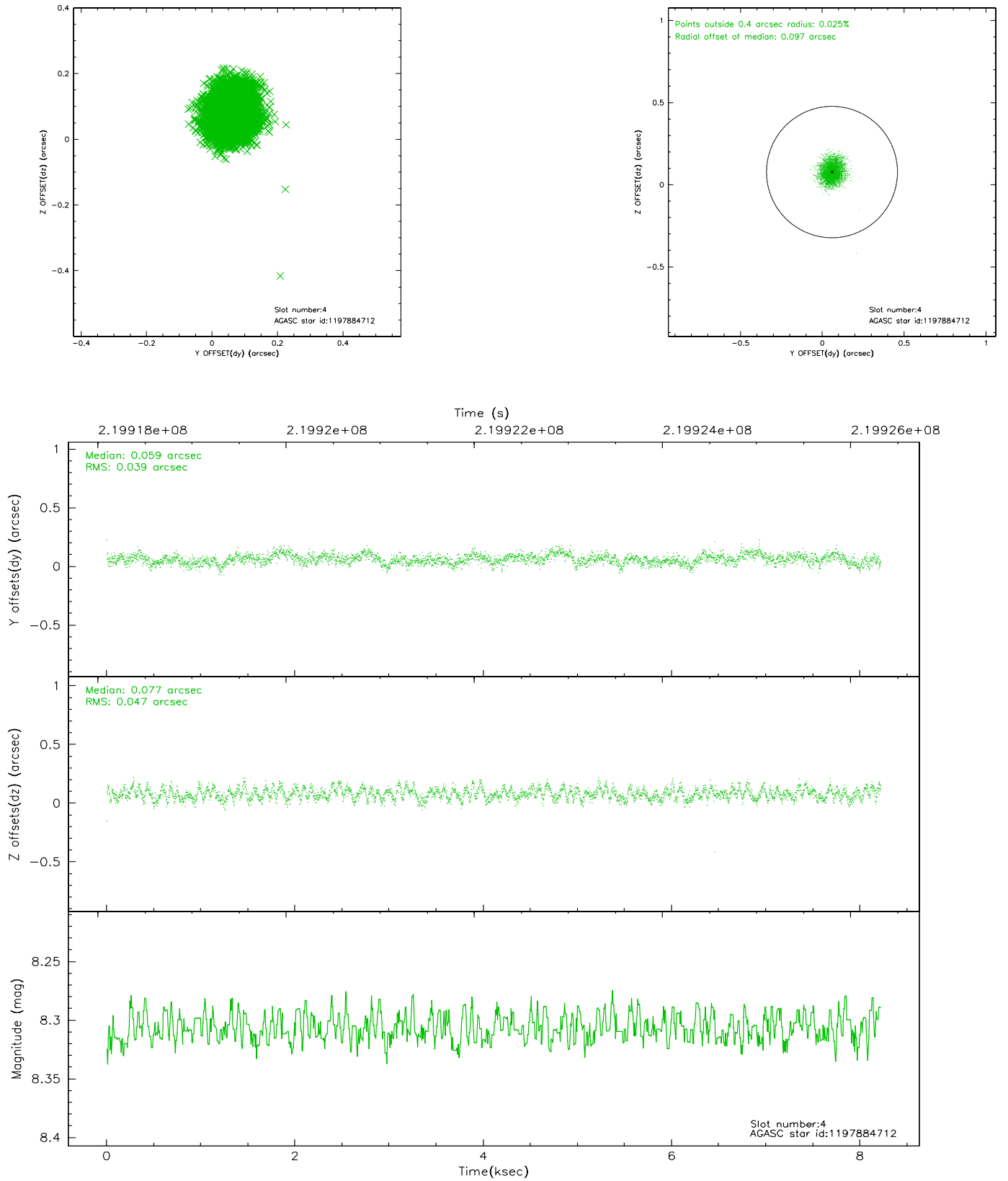


## 2.4 Star Slots

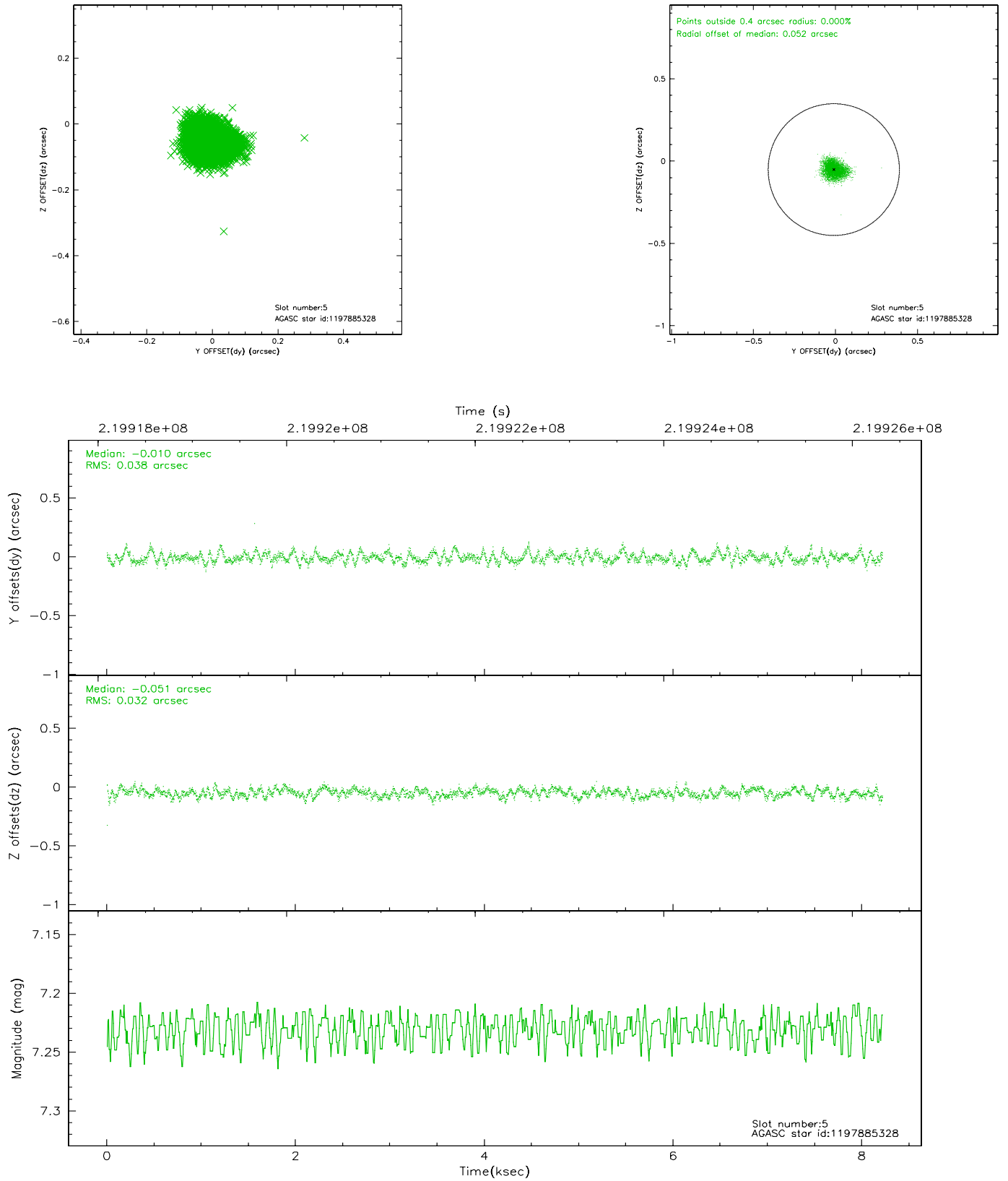
### 2.4.1 Slot 3



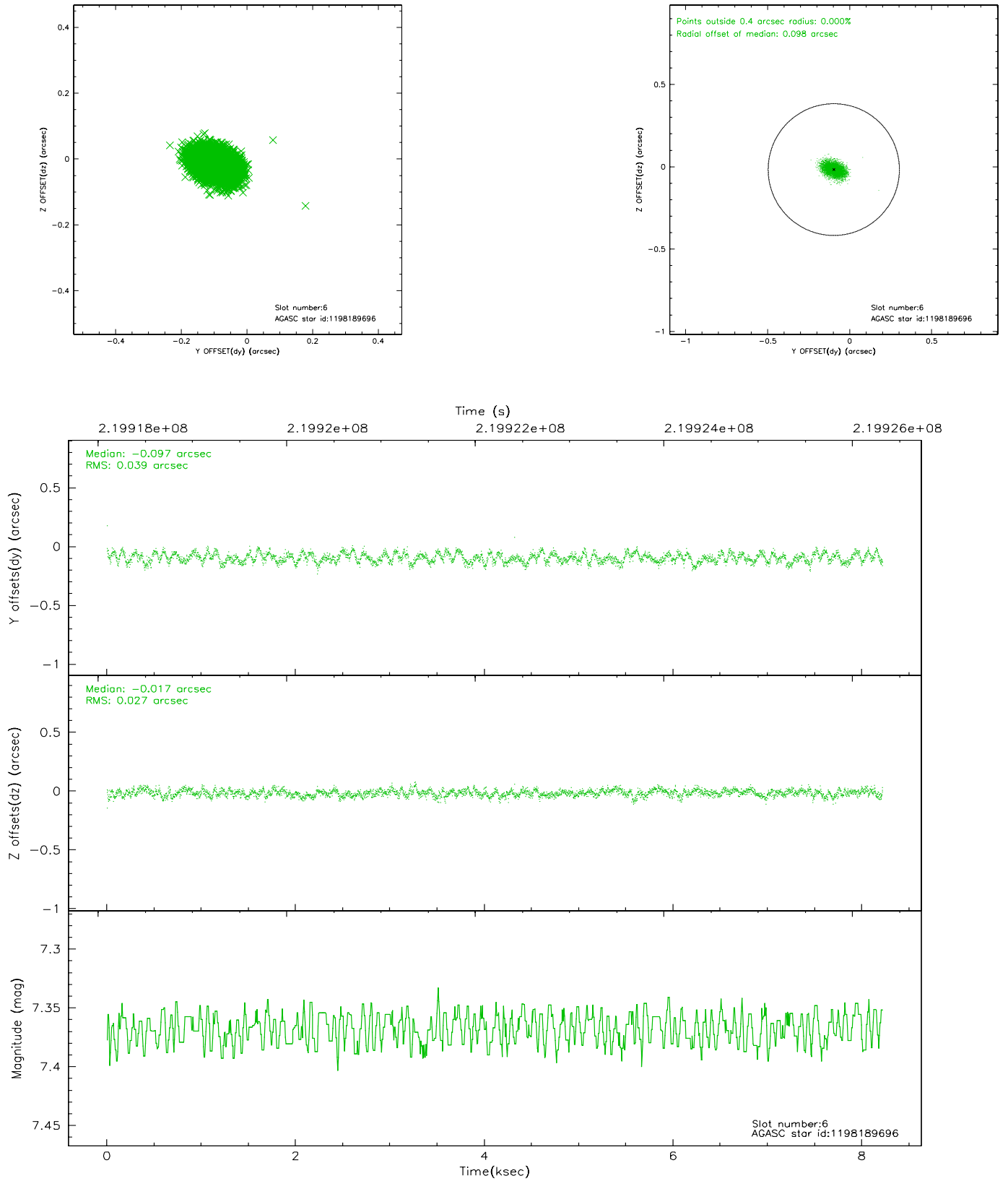
## 2.4.2 Slot 4



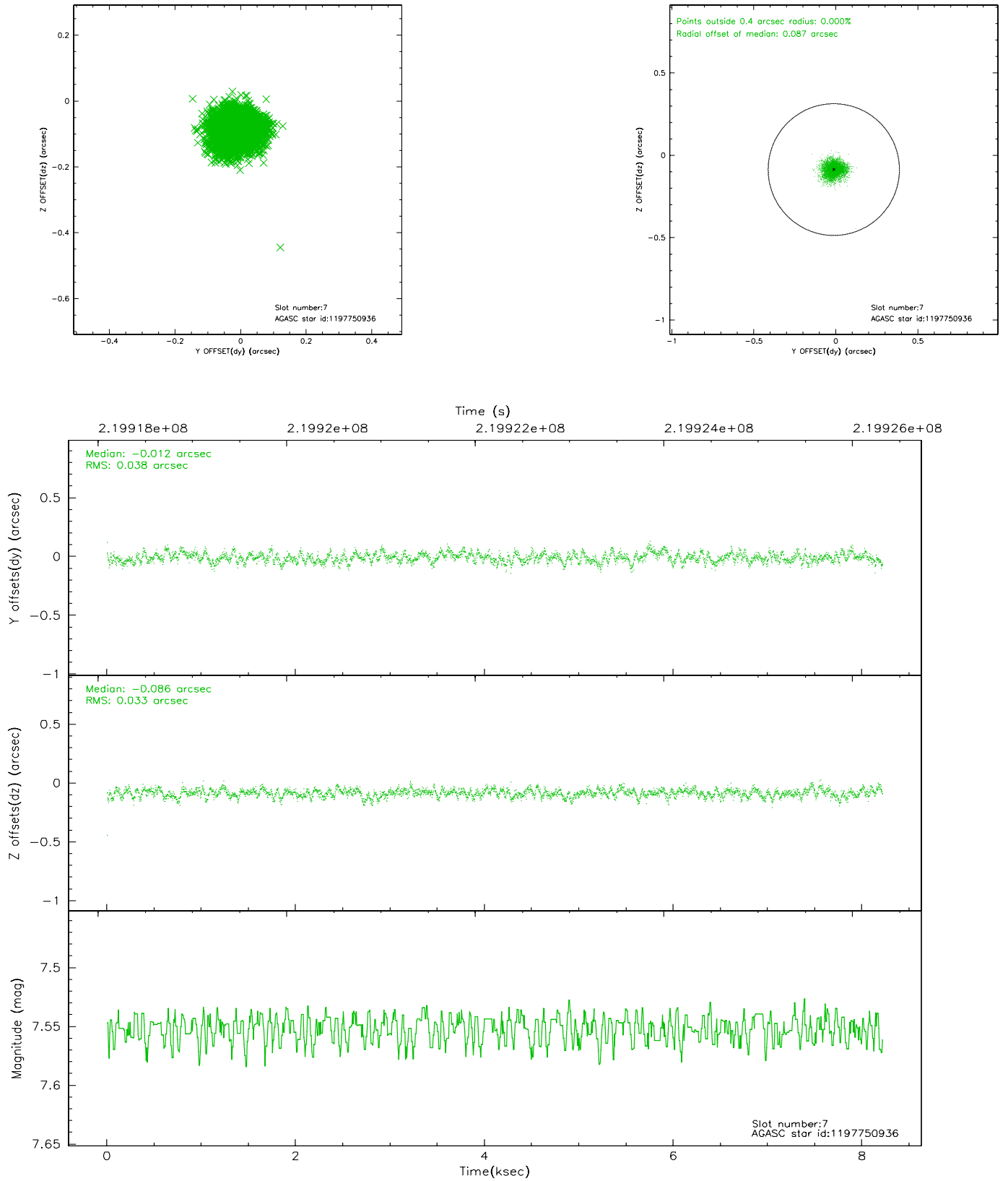
### 2.4.3 Slot 5



## 2.4.4 Slot 6

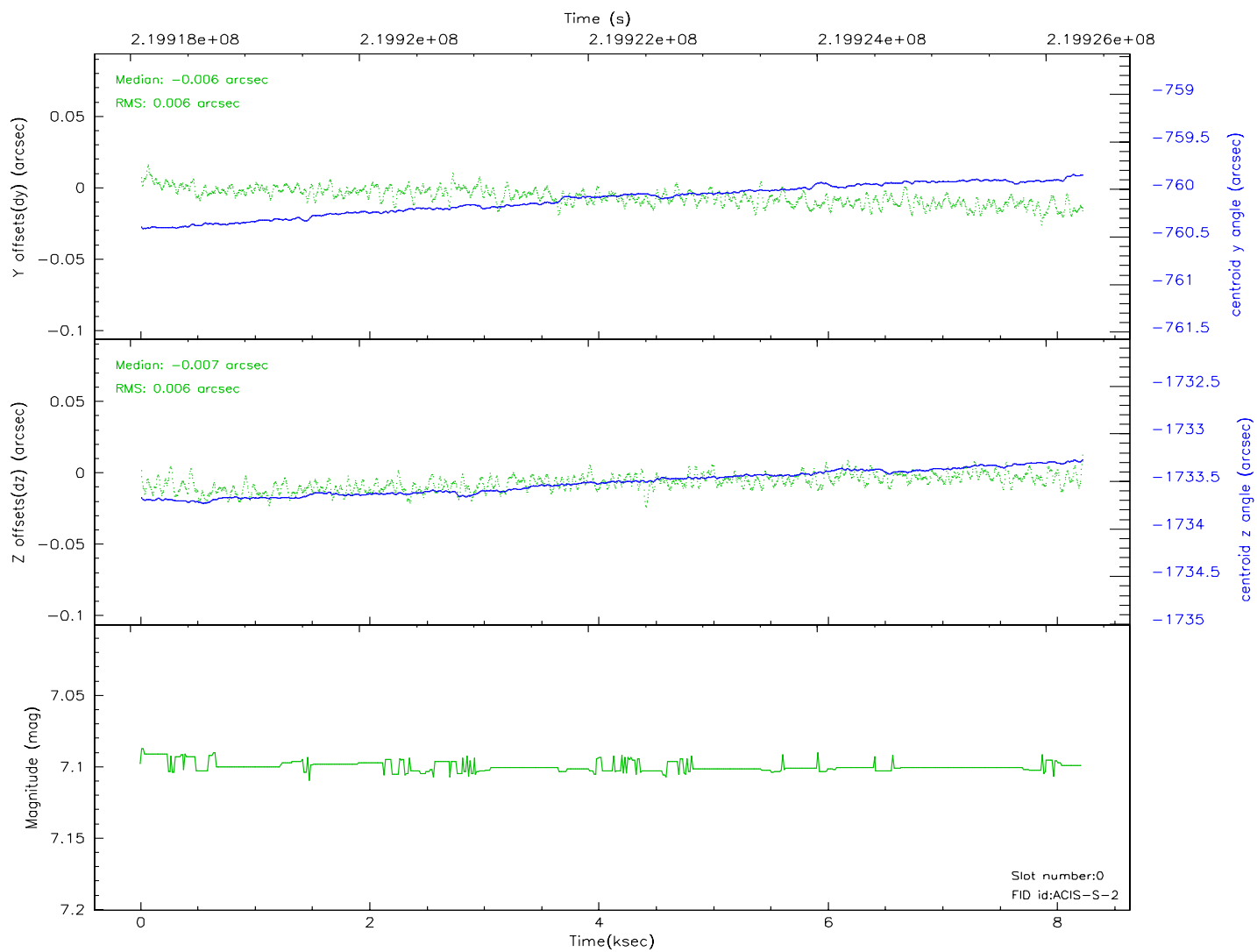
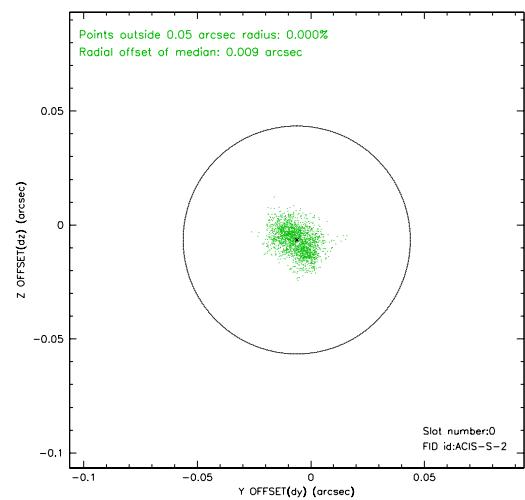
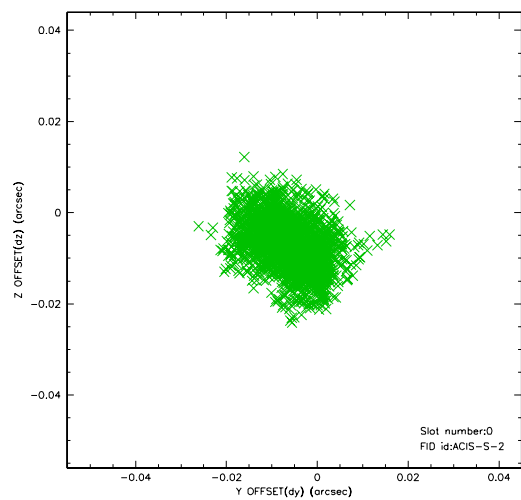


## 2.4.5 Slot 7

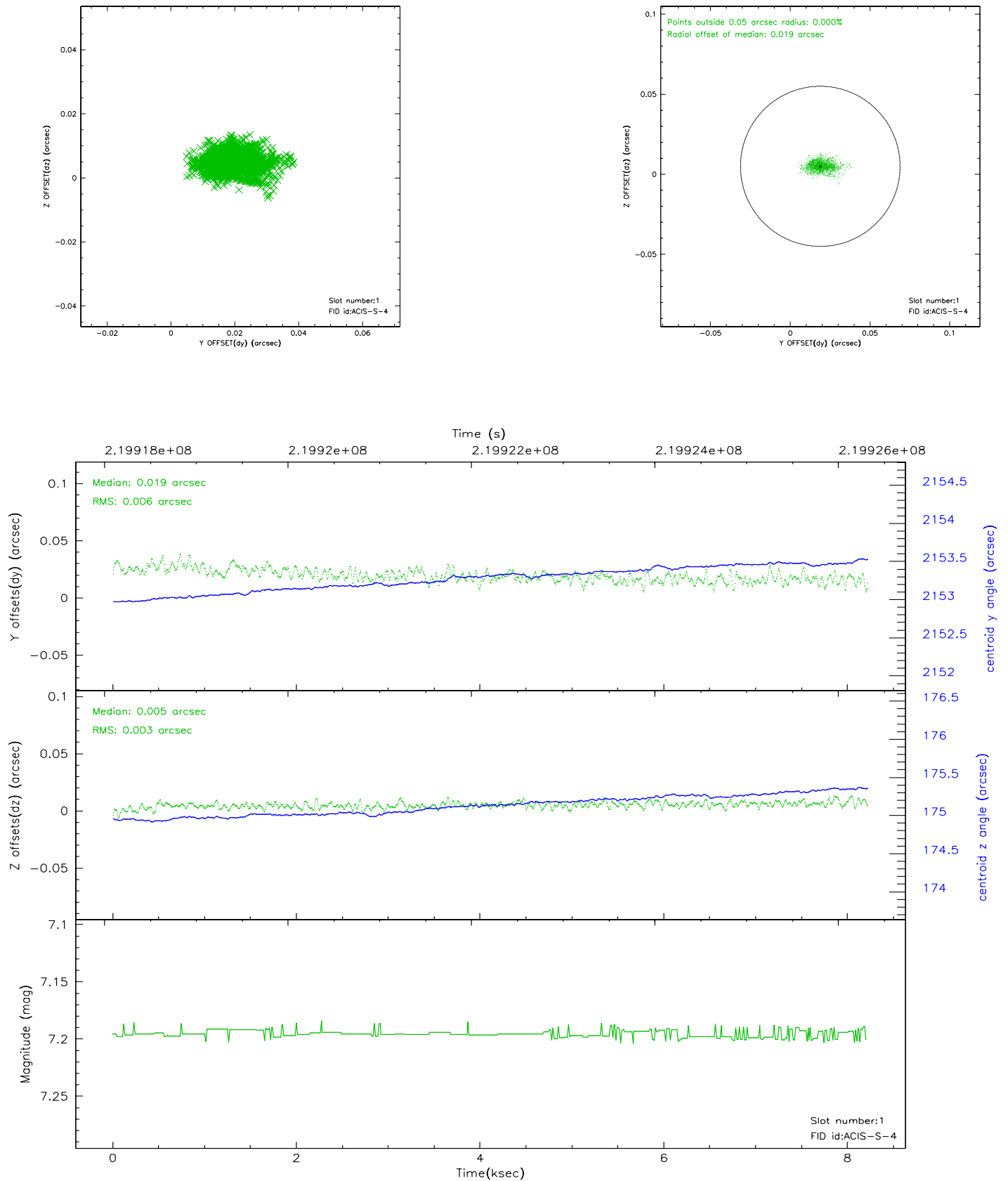


## 2.5 FID Slots

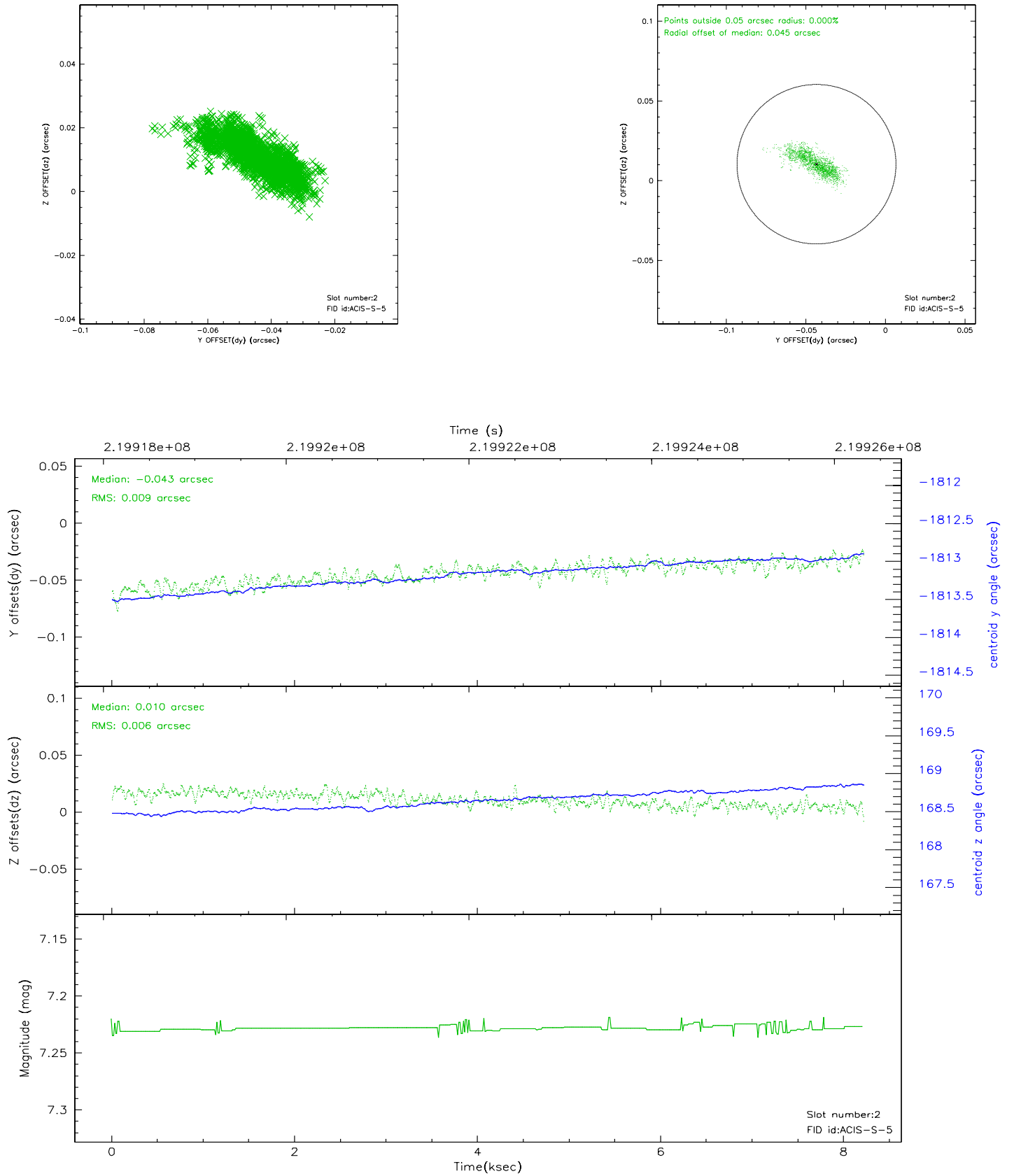
### 2.5.1 Slot 0



## 2.5.2 Slot 1

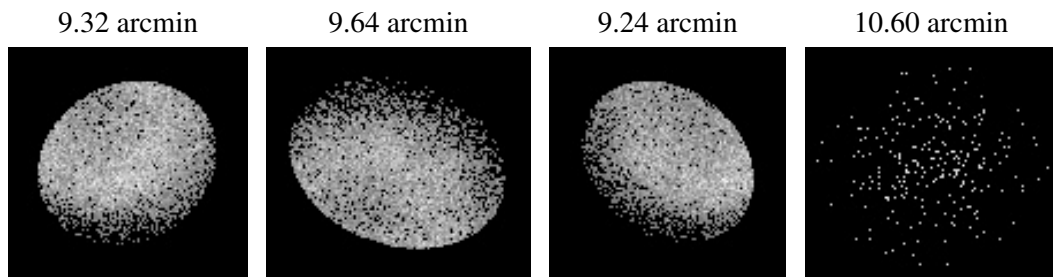


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2006.04.07    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 7.955199      |

### A.2 Comments

Window constraint satisfied.