

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 6057 - L2 Version 002  
Chandra X-Ray Center

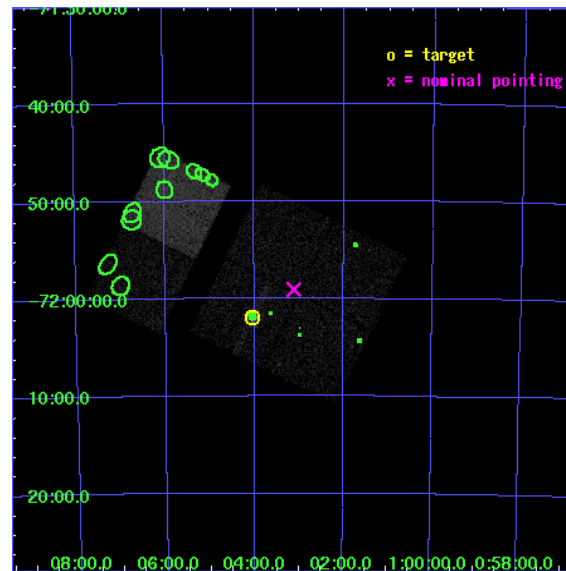
L2 Processing Date : Apr 8 2006

## 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>3</b> | <b>Point Sources</b>          | <b>17</b> |
| <b>A</b> | <b>Summary</b>                | <b>18</b> |
| A.1      | Status . . . . .              | 18        |
| A.2      | Comments . . . . .            | 18        |

# 1 Front

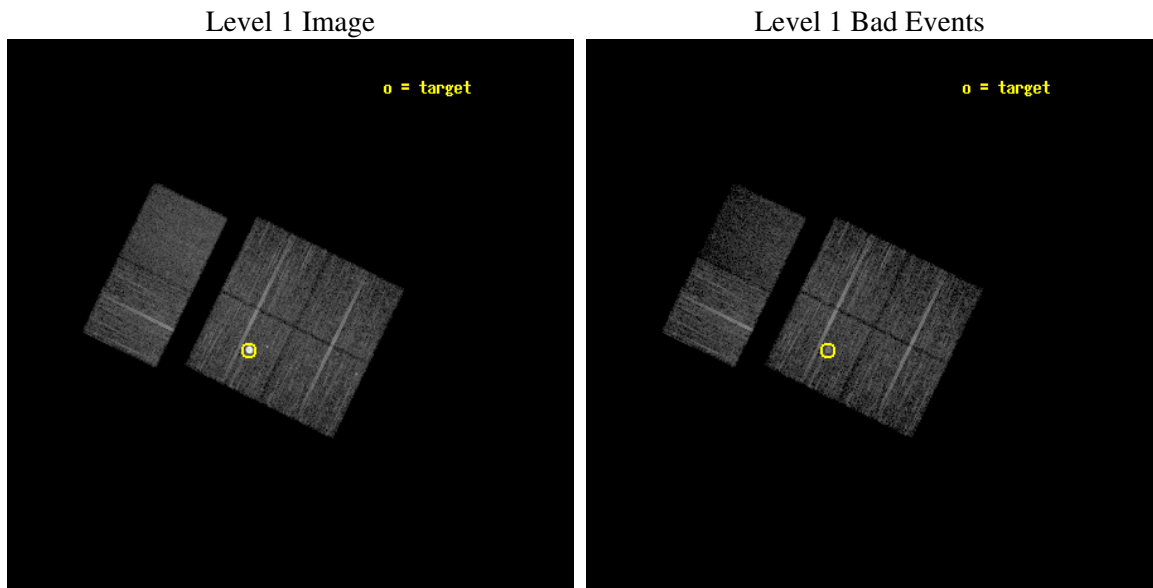
|          |  |
|----------|--|
| seq_num  | 590384   |
| obs_id   | 6057   |
| title    | AO6A ACIS-I Calibration Observations of E0102-72 |
| observer | Dr. CXC Calibration                              |
| object   | E0102-72[I2,-120,4.7,2.5,0]                      |
| dtcycle  | 0  |
| cycle    | P  |
| ra_targ  | 16.01  |
| dec_targ | -72.032028                                       |
| ra_nom   | 15.778265120033                                  |
| dec_nom  | -71.984440570599                                 |
| roll_nom | 296.09377169858                                  |
| revision | 2  |
| ontime   | 7955.1999703646                                  |
| livetime | 7854.4664382935                                  |
| ontime0  | 7955.1999703646                                  |
| ontime1  | 7955.1999703646                                  |
| ontime2  | 7955.1999703646                                  |
| ontime3  | 7955.1999703646                                  |
| ontime6  | 7955.1999703646                                  |
| ontime7  | 7955.1999703646                                  |
| l2events | 66152  |



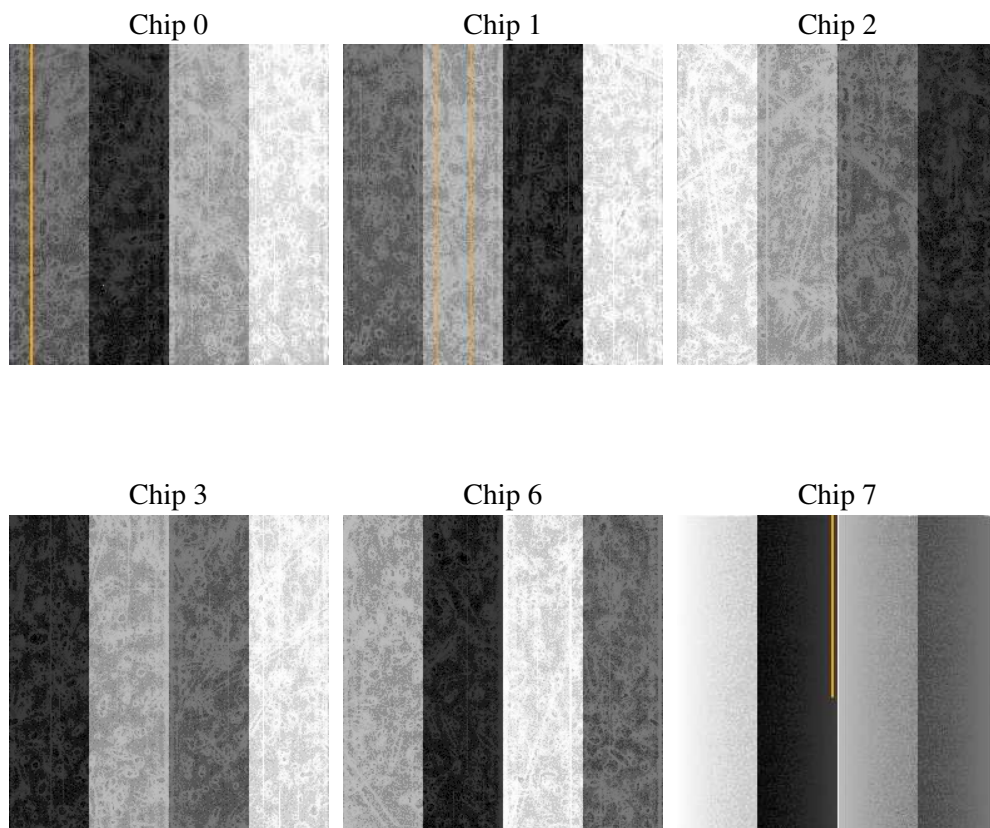
## 2 OBI

### 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     | 2006-04-08T10:50:04 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 8000.000000     |
| ontime         | 7959.8978086412 |
| ontime0        | 7959.8978086412 |
| ontime1        | 7959.8978086412 |
| ontime2        | 7959.8978086412 |
| ontime3        | 7959.8978086412 |
| ontime6        | 7959.8978086412 |
| ontime7        | 7959.8978385627 |
| l1events       | 310716          |

### 2.1.4 Events

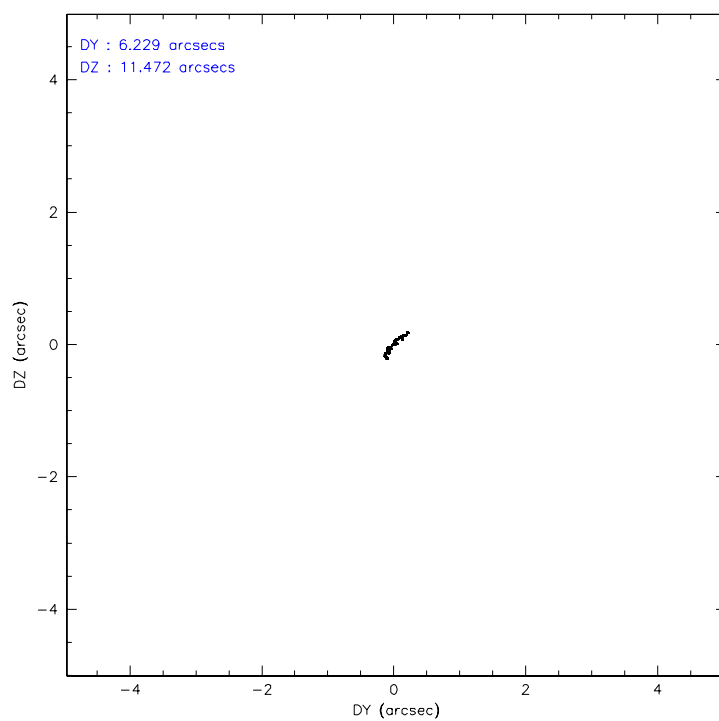
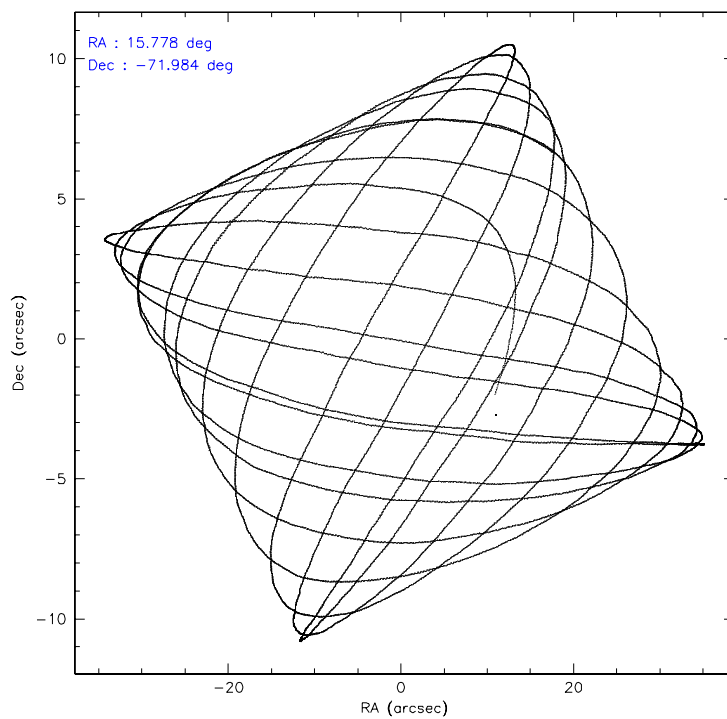
|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 45214 | 43688 | 76159 | 48195 | 50252 | 47208 |
| rejected events | 39995 | 38711 | 46749 | 43744 | 45358 | 24947 |
| rejected %      | 88%   | 88%   | 61%   | 90%   | 90%   | 52%   |

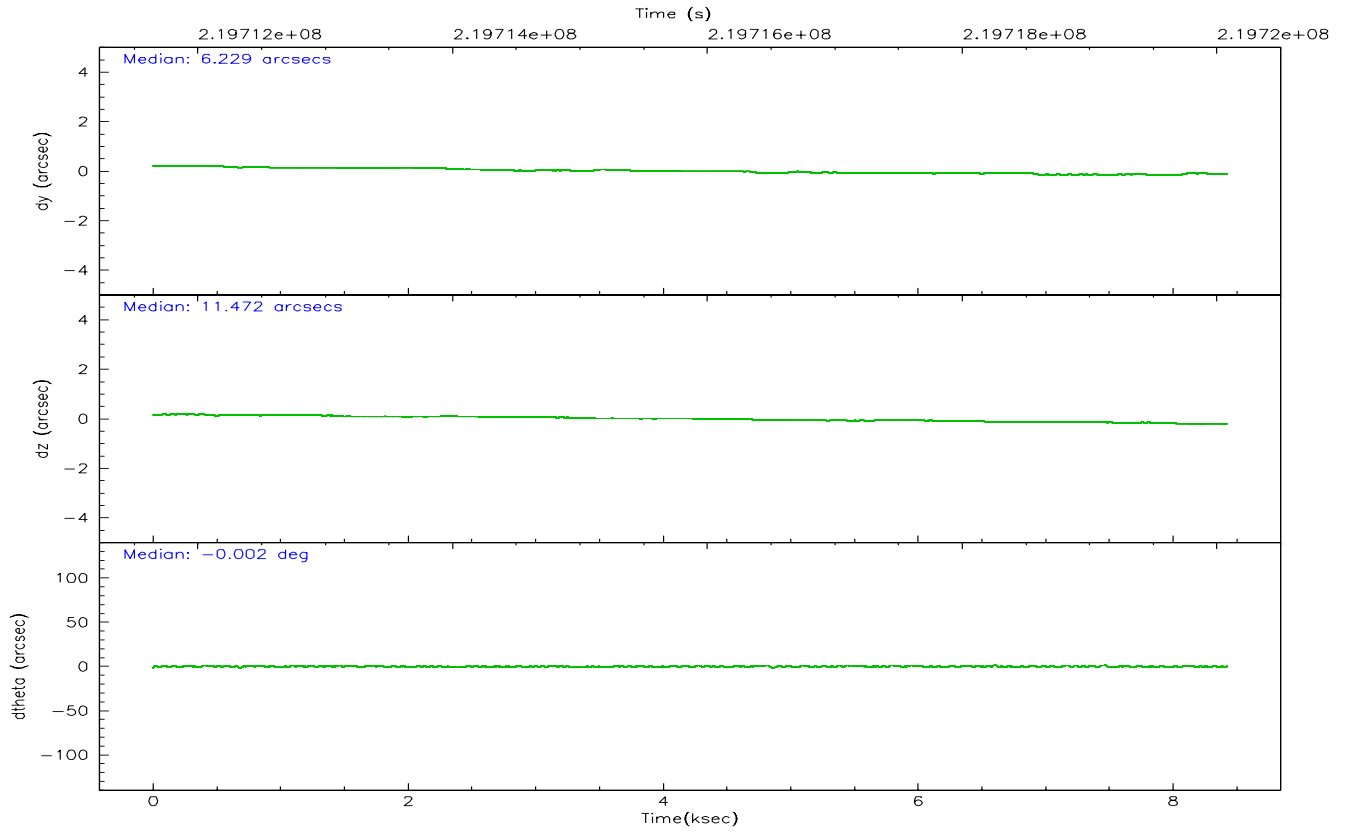
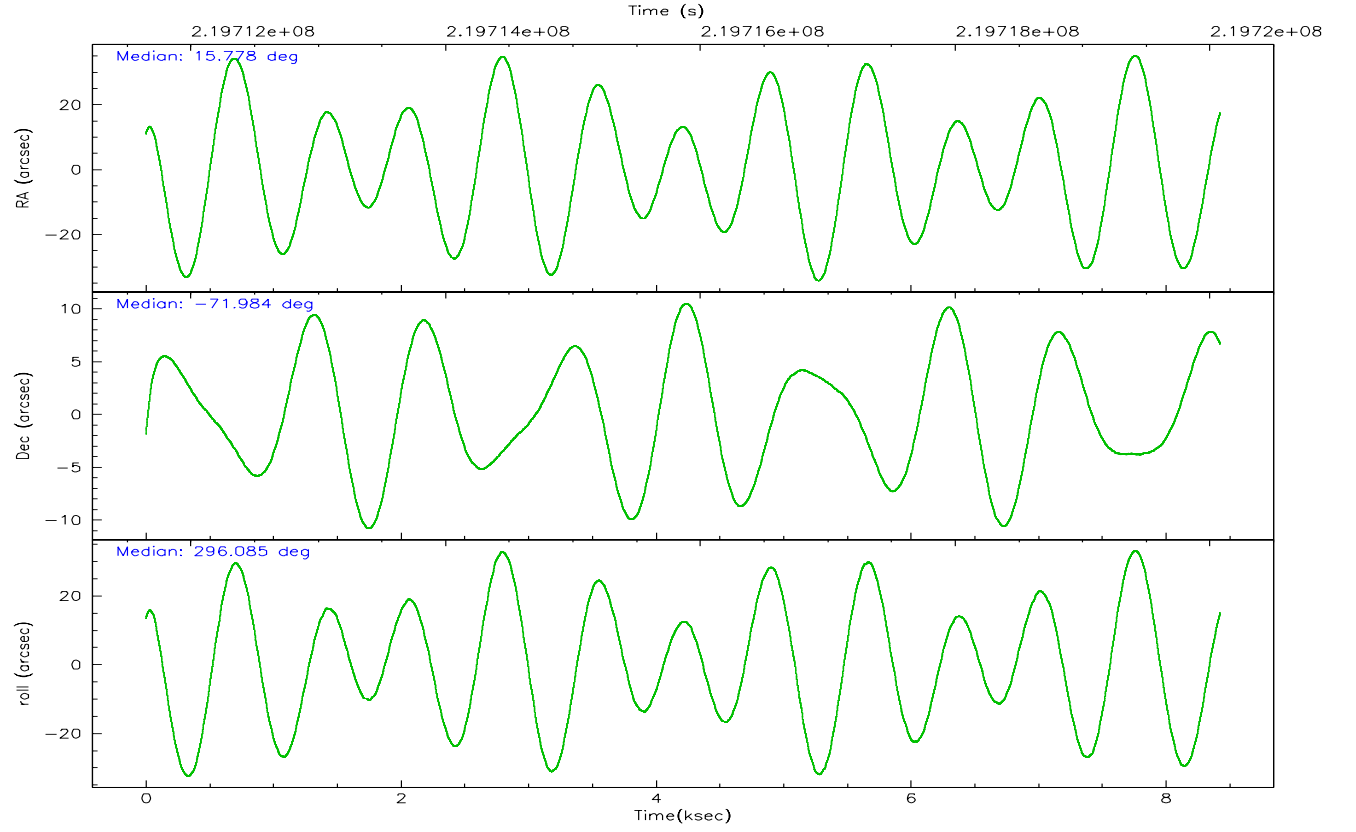
|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 2079  | 1802  | 23744 | 1651  | 1843  | 1612  |
|                | 4%    | 4%    | 31%   | 3%    | 3%    | 3%    |
| grade 1 events | 24    | 32    | 239   | 21    | 32    | 27    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 1168  | 1045  | 2820  | 950   | 1070  | 5742  |
|                | 2%    | 2%    | 3%    | 1%    | 2%    | 12%   |
| grade 3 events | 593   | 589   | 947   | 496   | 547   | 1421  |
|                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
| grade 4 events | 529   | 632   | 961   | 511   | 517   | 1276  |
|                | 1%    | 1%    | 1%    | 1%    | 1%    | 2%    |
| grade 5 events | 1436  | 1533  | 1428  | 1550  | 1630  | 3653  |
|                | 3%    | 3%    | 1%    | 3%    | 3%    | 7%    |
| grade 6 events | 854   | 914   | 962   | 845   | 921   | 12230 |
|                | 1%    | 2%    | 1%    | 1%    | 1%    | 25%   |
| grade 7 events | 38531 | 37141 | 45058 | 42171 | 43692 | 21247 |
|                | 85%   | 85%   | 59%   | 87%   | 86%   | 45%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                       | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number    | 6         | 6       |
| Detector                          | ACIS-012367         | ACIS-012367           | 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                       | 15.704817           | 15.77826512003282     | Alternating exposures requested | N         | N       |
| Pointing Dec                      | -71.969309          | -71.98444057059918    | Primary exposure time           | 0.000000  | 3.2     |
| Pointing Roll                     | 295.815250          | 296.0937716985758     |                                 |           |         |
| Window start time                 | 215654464.184000    | 215654464.184000      |                                 |           |         |
| Window stop time                  | 220838464.184000    | 220838464.184000      |                                 |           |         |
| SIM focus pos (mm)                | -0.782348           | -0.7809083437167272   |                                 |           |         |
| SIM defocus (mm)                  | 0                   | 0.001439871863259334  |                                 |           |         |
| SIM translation stage pos (mm)    | -233.592463         | -233.5874344608287    |                                 |           |         |
| SIM translation stage offset (mm) | 0                   | -0.005018542100998502 |                                 |           |         |
| Observation start time            | 219712073.184000    | 219710986.84482       |                                 |           |         |
| Observation start date            | 2004-12-17T23:06:49 | 2004-12-17T22:49:46   |                                 |           |         |
| Observation end time              | 219720073.184000    | 219720222.60774       |                                 |           |         |
| Observation end date              | 2004-12-18T01:20:09 | 2004-12-18T01:23:42   |                                 |           |         |
| Read mode                         | TIMED               | TIMED                 |                                 |           |         |

## 2.3 Aspect





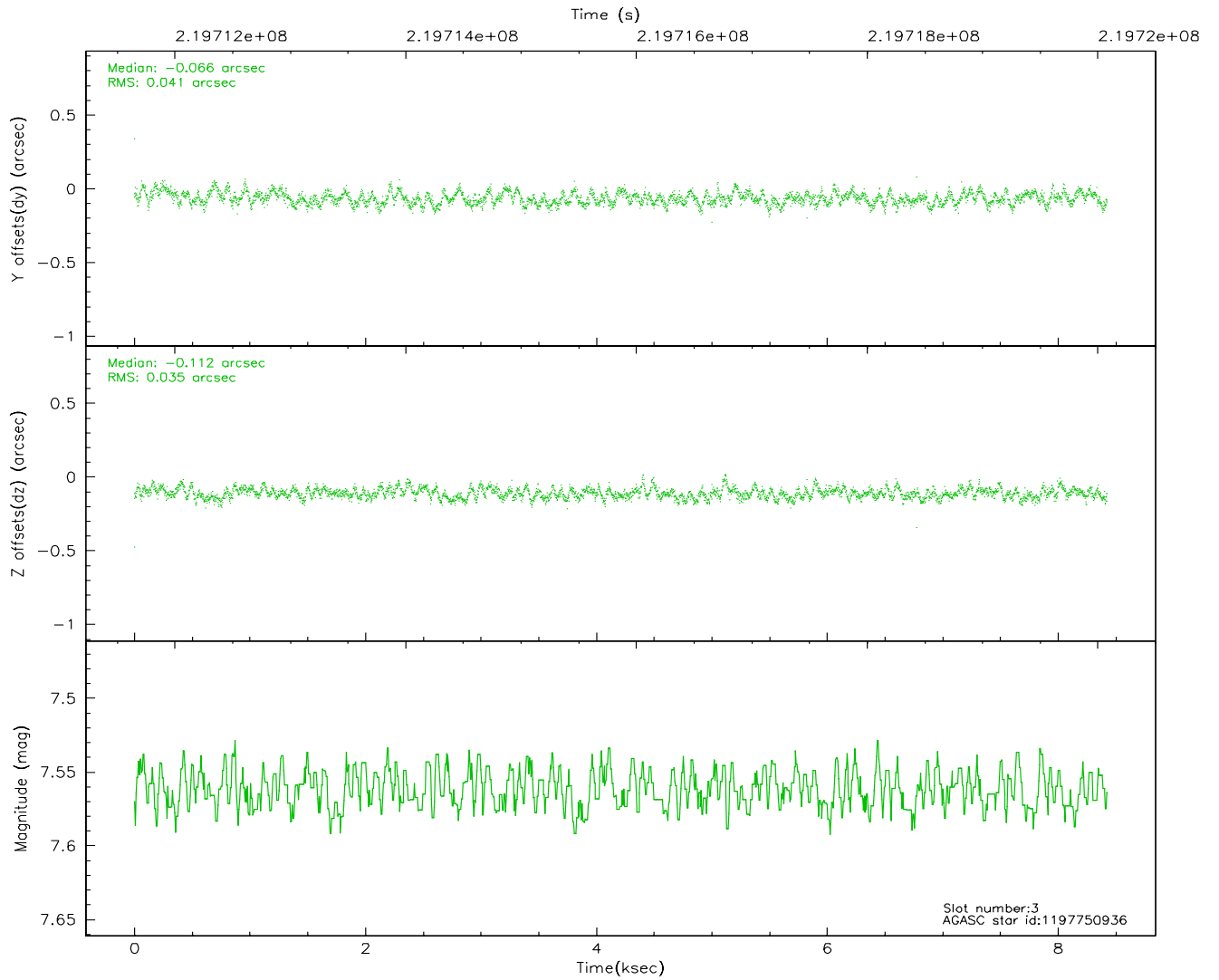
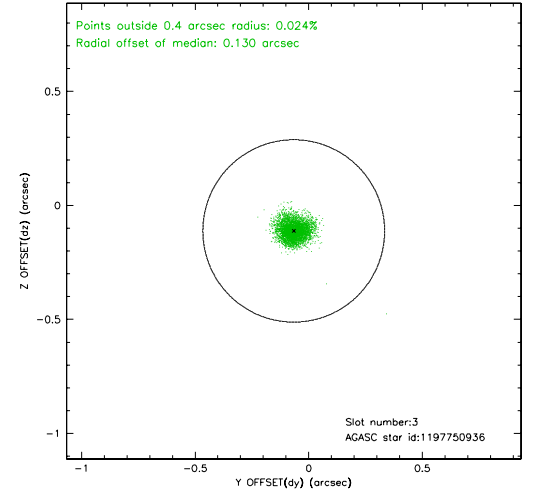
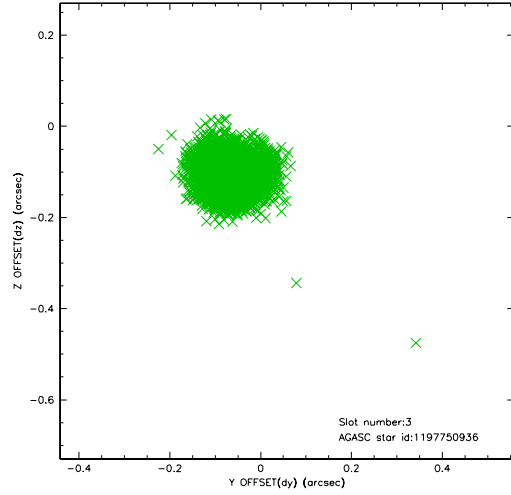
### Slot Statistics

| slot | status | id         | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec        | mean_y   | mean_z   |
|------|--------|------------|------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0    | FID    | ACIS-I-1   | 7.24 | 2055  | -0.012 | -0.062 | 0.009 | 0.017 | 0.000000  | 0.000000   | 933.45   | -835.04  |
| 1    | FID    | ACIS-I-4   | 7.18 | 2056  | 0.040  | 0.072  | 0.008 | 0.014 | 0.000000  | 0.000000   | 2153.91  | 1064.57  |
| 2    | FID    | ACIS-I-5   | 7.22 | 2056  | -0.127 | 0.060  | 0.007 | 0.021 | 0.000000  | 0.000000   | -1813.81 | 1063.16  |
| 3    | GUIDE  | 1197750936 | 7.56 | 4111  | -0.066 | -0.112 | 0.057 | 0.092 | 15.387940 | -71.549550 | -1516.18 | 332.28   |
| 4    | GUIDE  | 1197884536 | 8.49 | 4112  | -0.066 | 0.106  | 0.067 | 0.107 | 17.160729 | -71.835289 | 294.64   | 1672.52  |
| 5    | GUIDE  | 1197885104 | 9.35 | 4112  | 0.156  | 0.027  | 0.089 | 0.144 | 17.845067 | -72.189368 | 1777.51  | 1758.31  |
| 6    | GUIDE  | 1197885328 | 7.24 | 4112  | 0.024  | -0.019 | 0.058 | 0.090 | 16.283090 | -71.733943 | -475.07  | 955.91   |
| 7    | GUIDE  | 1198189696 | 7.37 | 4111  | -0.045 | -0.002 | 0.057 | 0.090 | 15.223750 | -72.697522 | 2138.12  | -1605.62 |

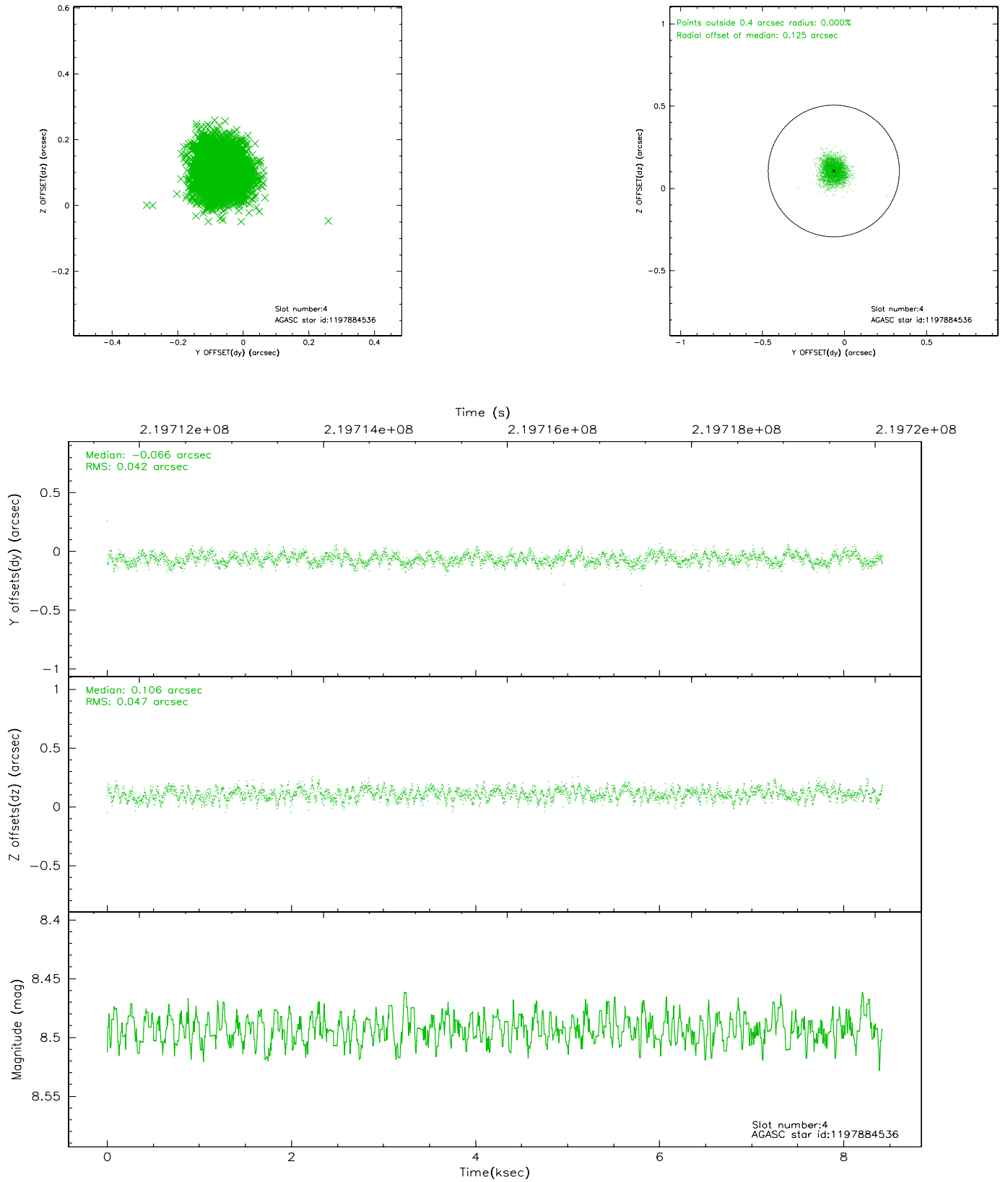


## 2.4 Star Slots

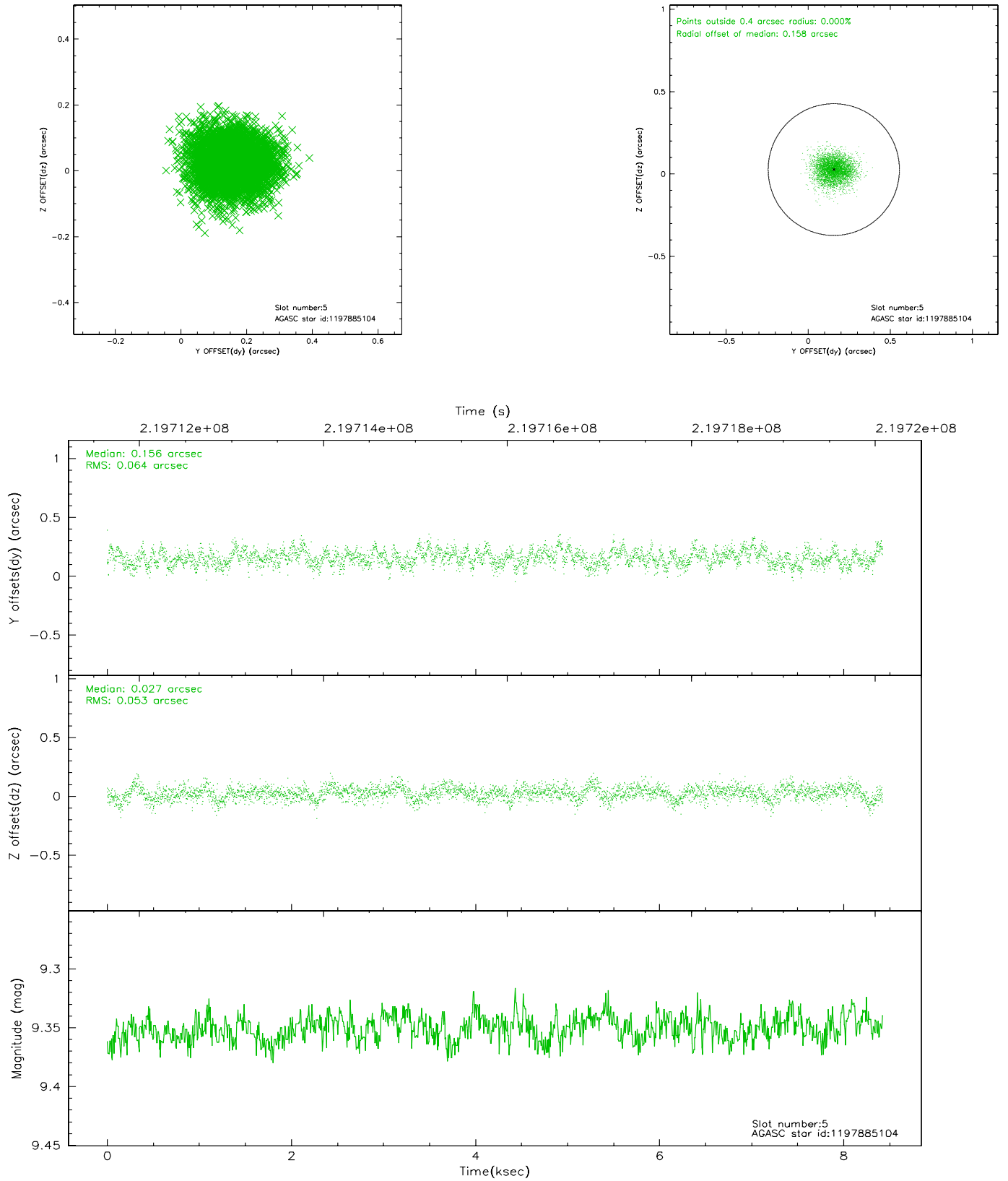
### 2.4.1 Slot 3



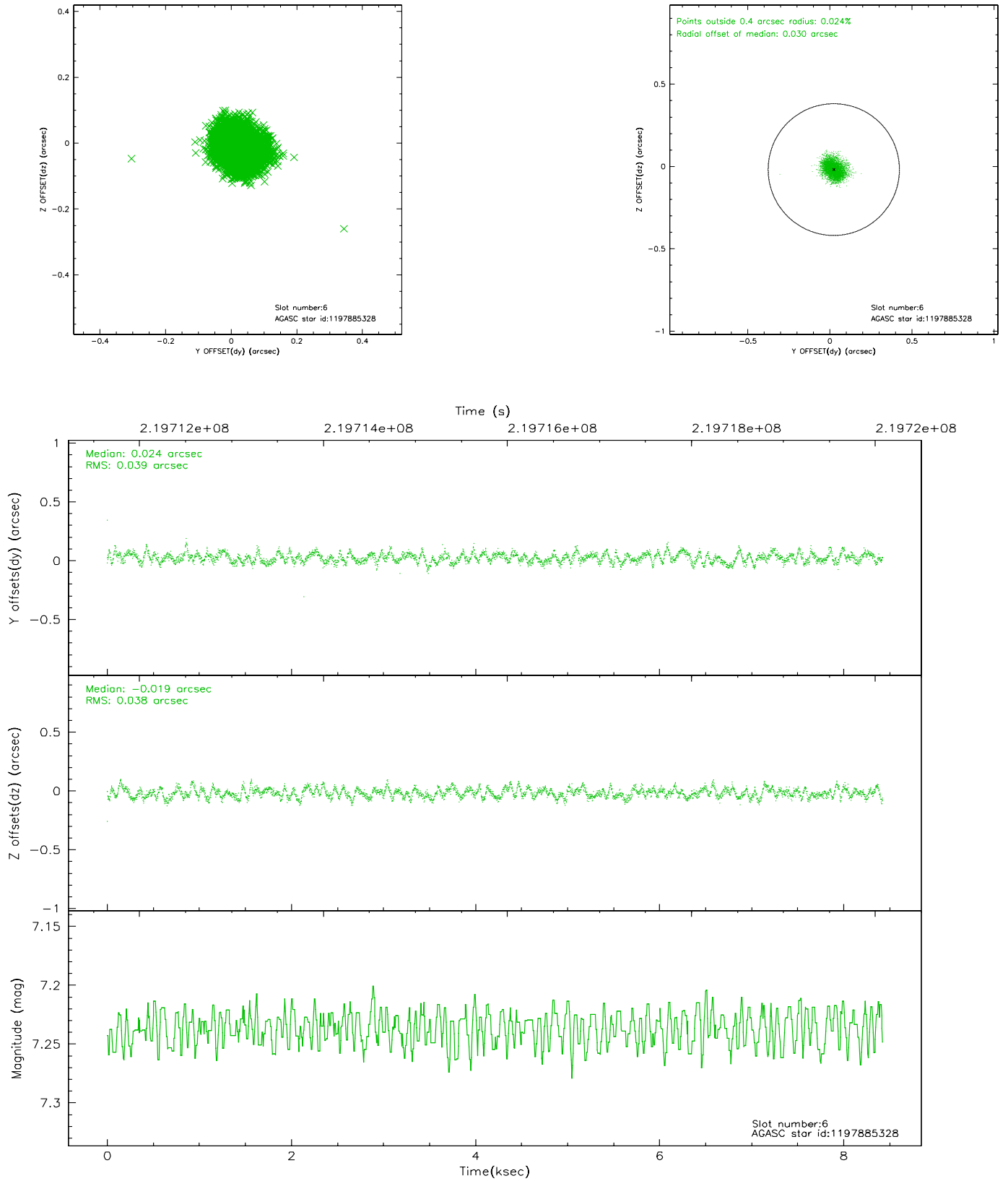
## 2.4.2 Slot 4



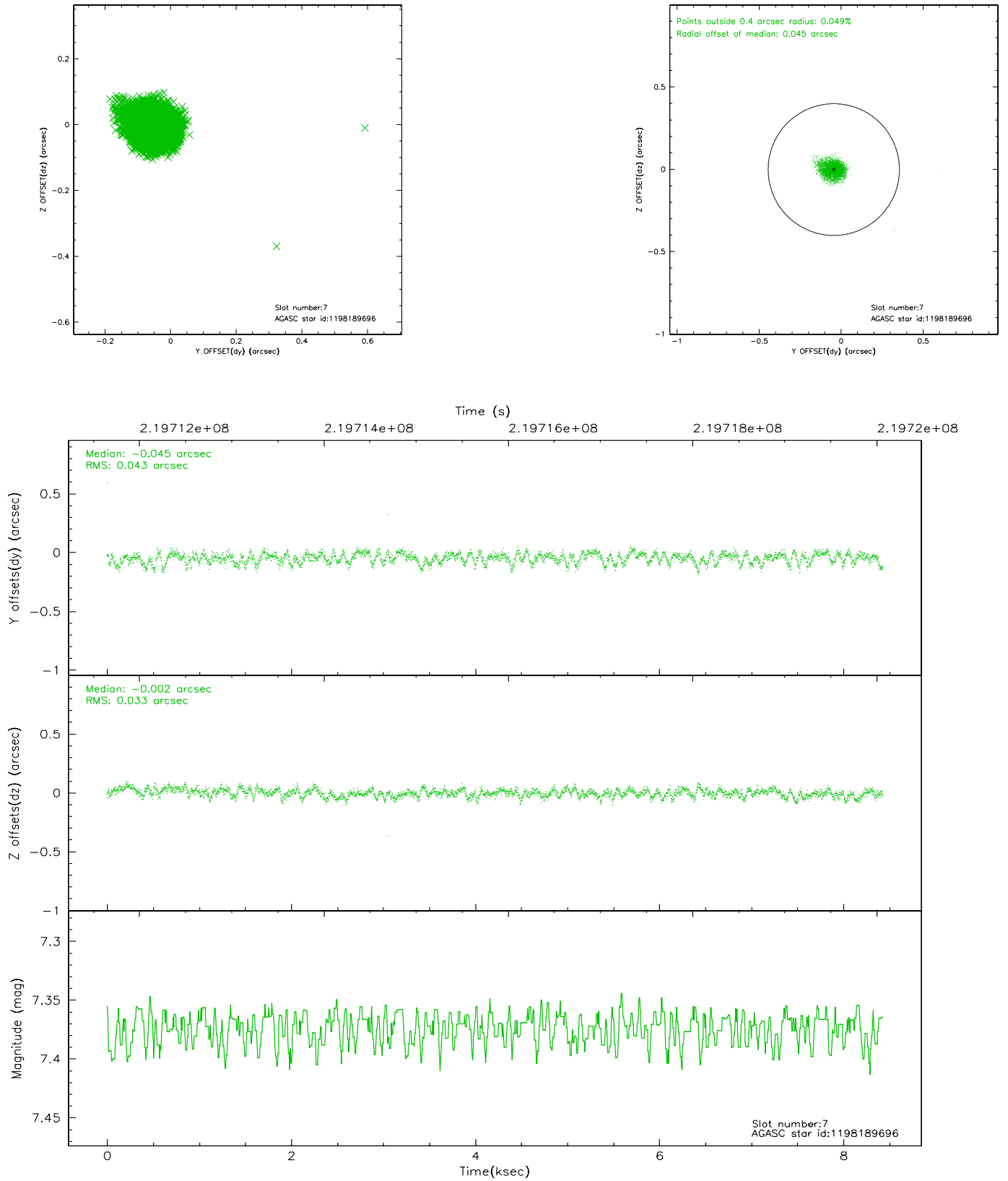
### 2.4.3 Slot 5



## 2.4.4 Slot 6

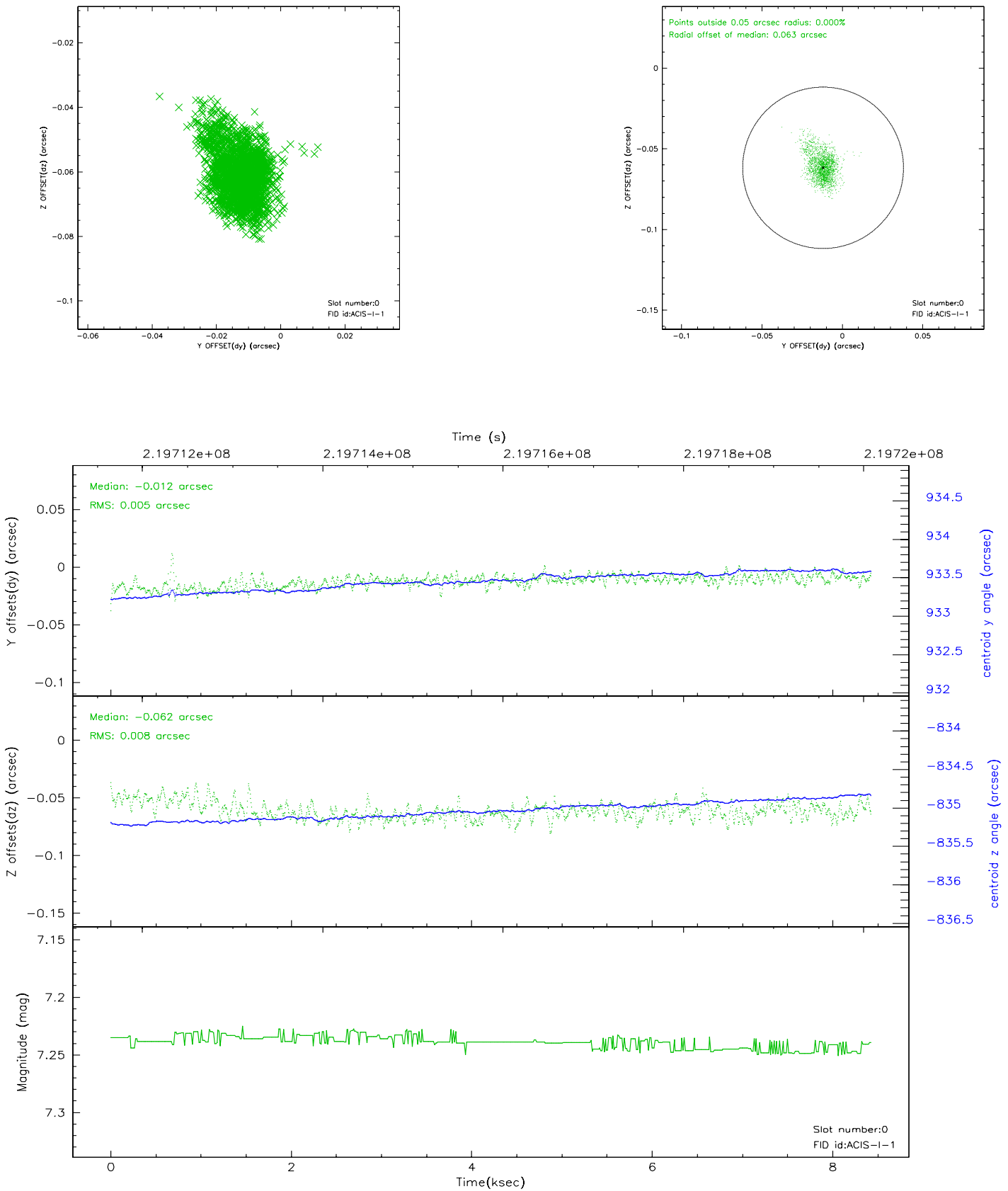


## 2.4.5 Slot 7

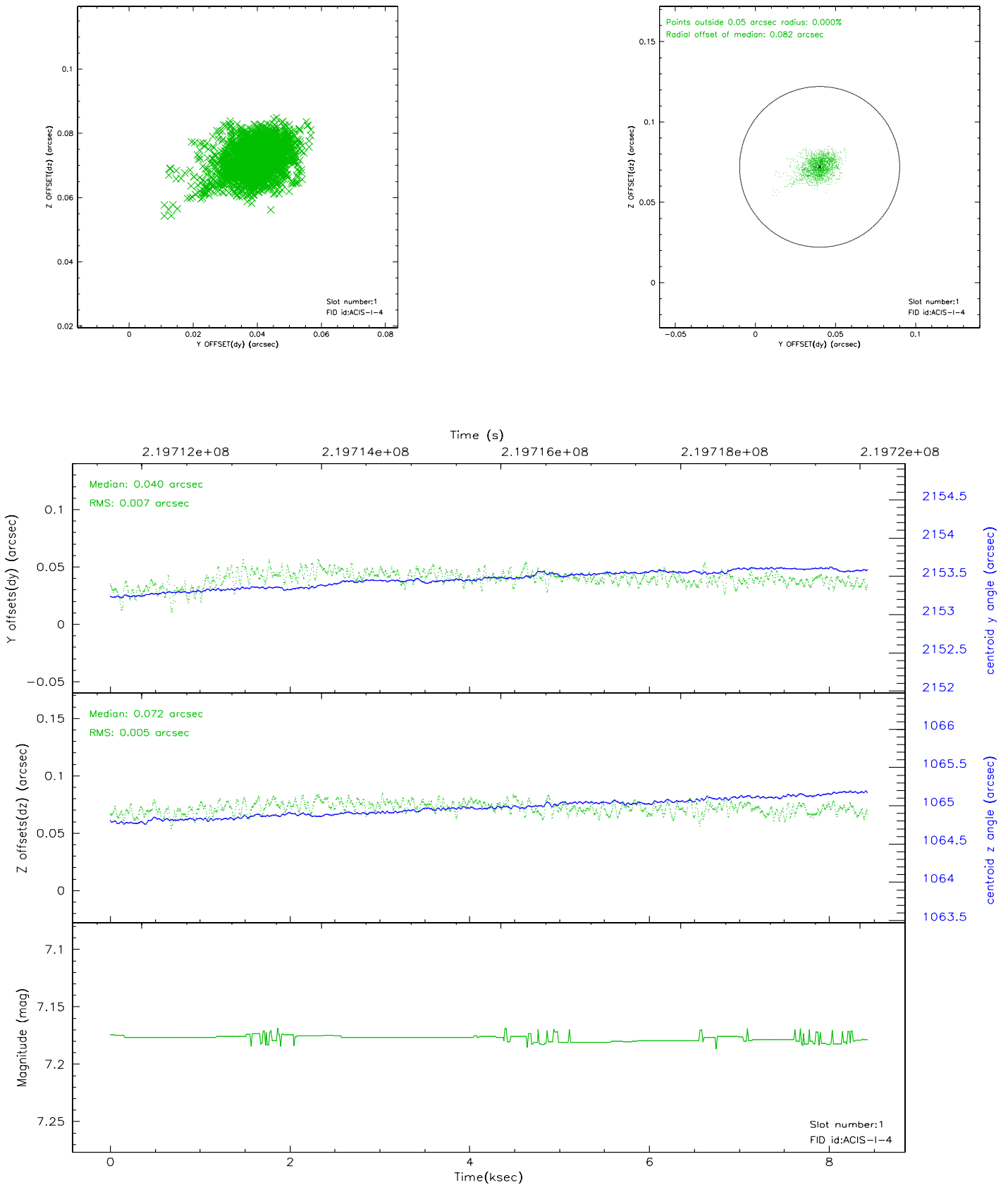


## 2.5 FID Slots

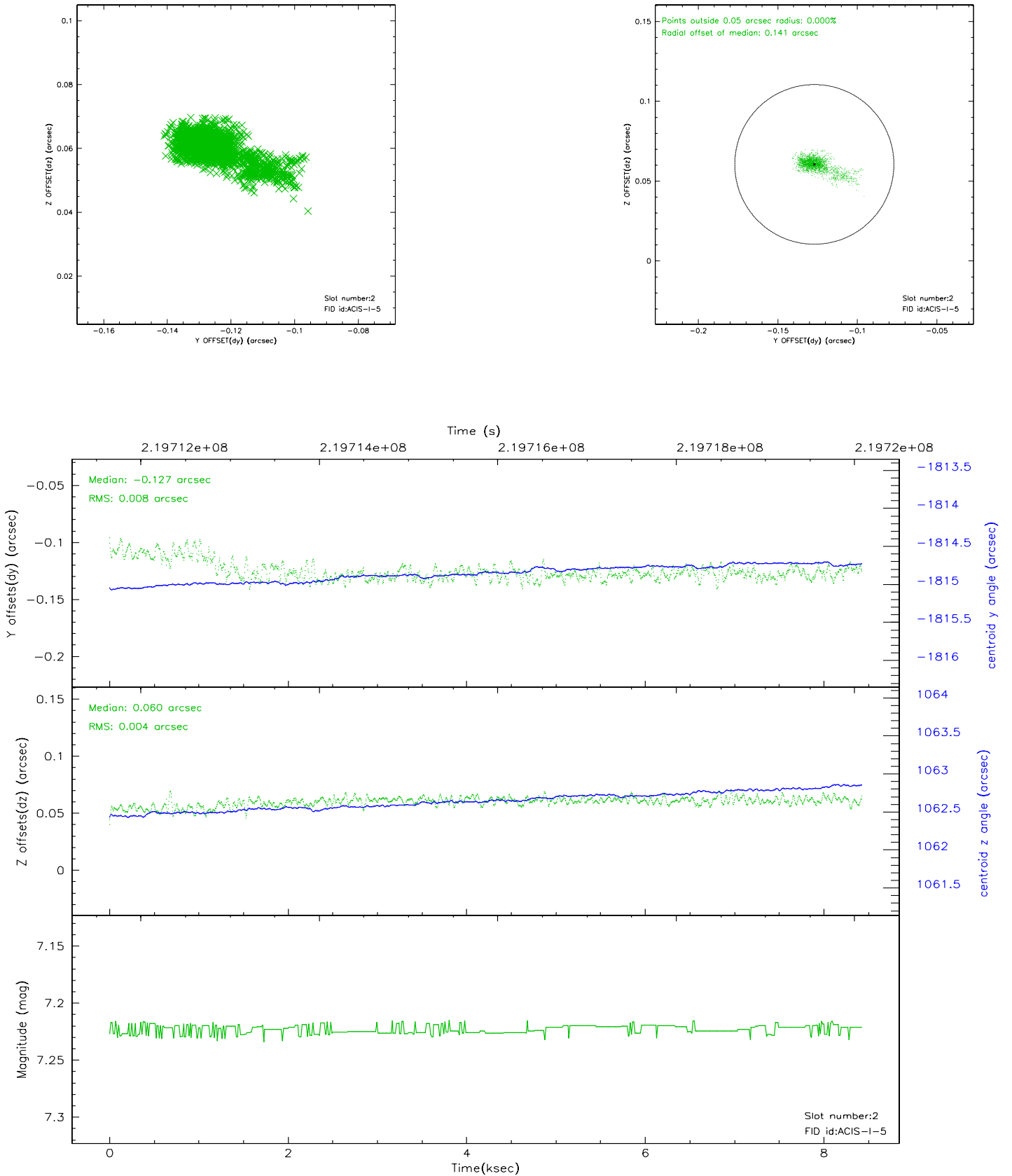
### 2.5.1 Slot 0



## 2.5.2 Slot 1

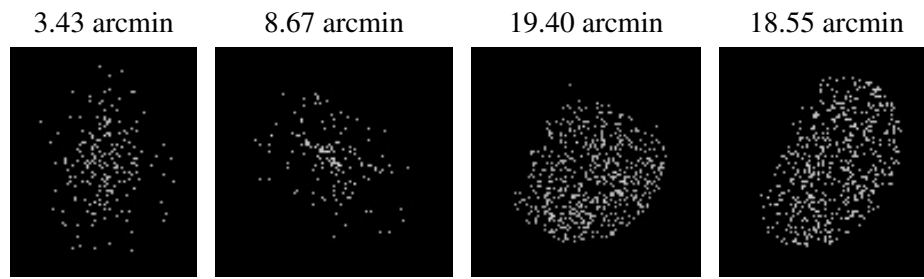


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.04.10 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 7.955199   |

### A.2 Comments

Window constraint met.