

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 1581 - L2 Version 001  
Chandra X-Ray Center

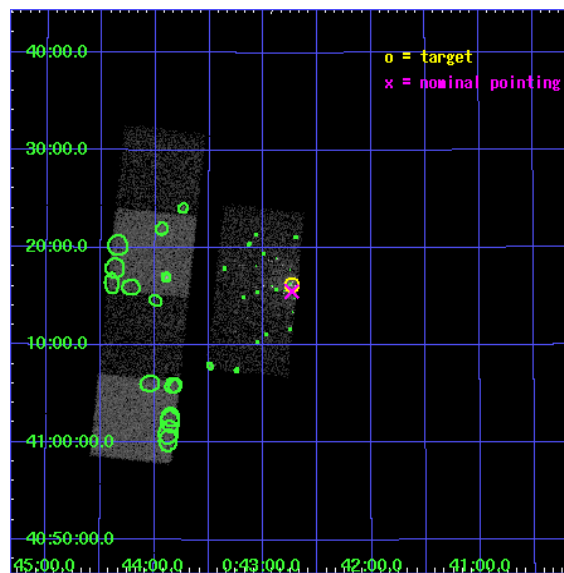
L2 Processing Date : Jun 20 2007

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# 1 Front

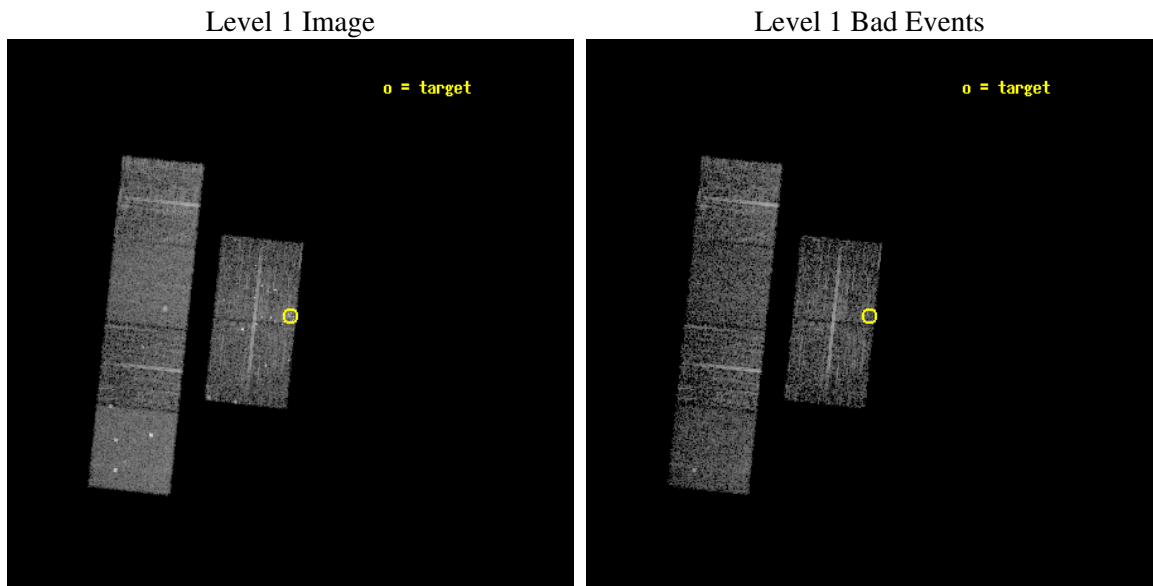
|          |                                   |
|----------|-----------------------------------|
| seq_num  | 600138                            |
| obs_id   | 1581                              |
| title    | MONITORING THE M31 NUCLEAR REGION |
| observer | Dr. Stephen Murray                |
| object   | M31 NUCLEUS/TRANS                 |
| dtcycle  | 0                                 |
| cycle    | P                                 |
| ra_targ  | 10.685                            |
| dec_targ | 41.268972                         |
| ra_nom   | 10.68382458814                    |
| dec_nom  | 41.258883513741                   |
| roll_nom | 275.99613667776                   |
| revision | 2                                 |
| ontime   | 4457.6000041515                   |
| livetime | 4401.1551888544                   |
| ontime2  | 4457.6000041515                   |
| ontime3  | 4457.6000041515                   |
| ontime5  | 4457.6000041515                   |
| ontime6  | 4457.6000041515                   |
| ontime7  | 4457.6000041515                   |
| ontime8  | 4457.6000041515                   |
| l2events | 48427                             |



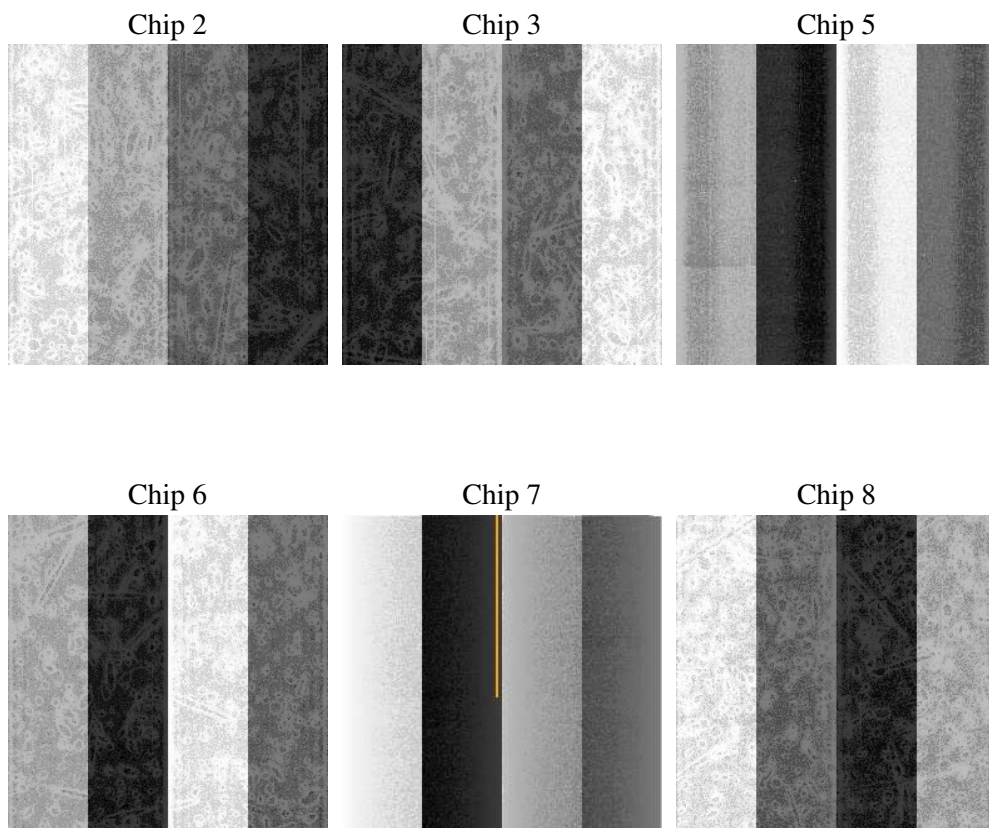
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.10              |
| caldsver | 3.4.0               |
| date     | 2007-06-20T03:20:55 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 4505.000000     |
| ontime         | 4457.6000041515 |
| ontime2        | 4457.6000041515 |
| ontime3        | 4457.6000041515 |
| ontime5        | 4457.6000041515 |
| ontime6        | 4457.6000041515 |
| ontime7        | 4457.6000041515 |
| ontime8        | 4457.6000041515 |
| l1events       | 192703          |

### 2.1.4 Events

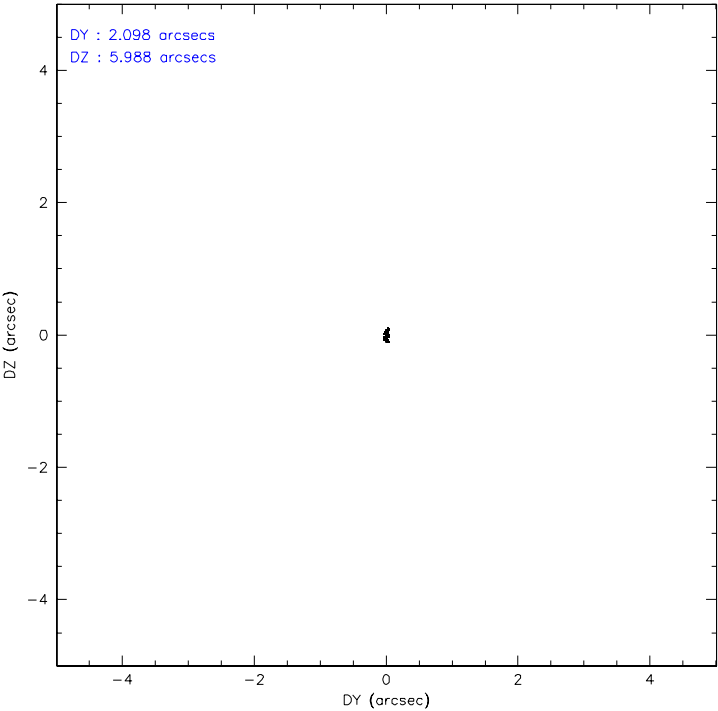
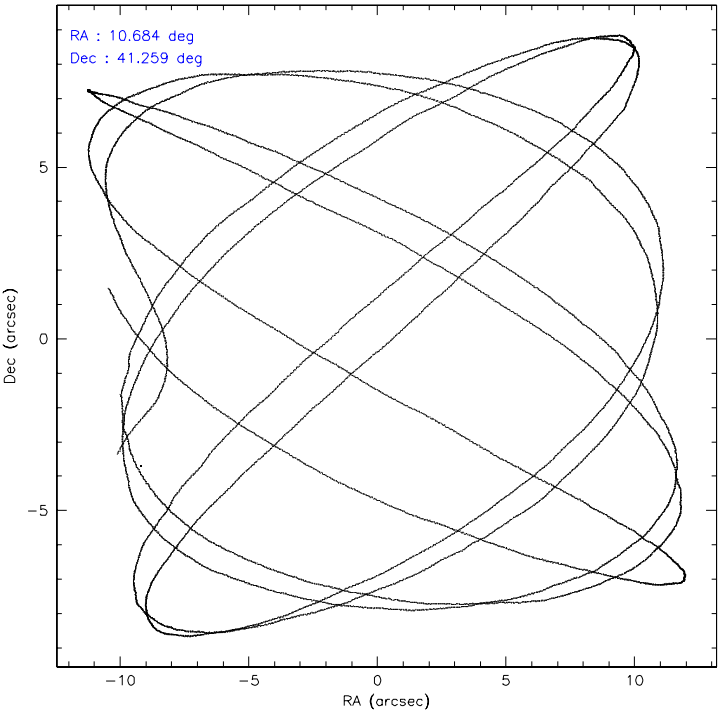
|                 | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 27330 | 31261 | 38106 | 26078 | 34413 | 35515 |
| rejected events | 22162 | 22875 | 19769 | 22949 | 19696 | 28623 |
| rejected %      | 81%   | 73%   | 51%   | 88%   | 57%   | 80%   |

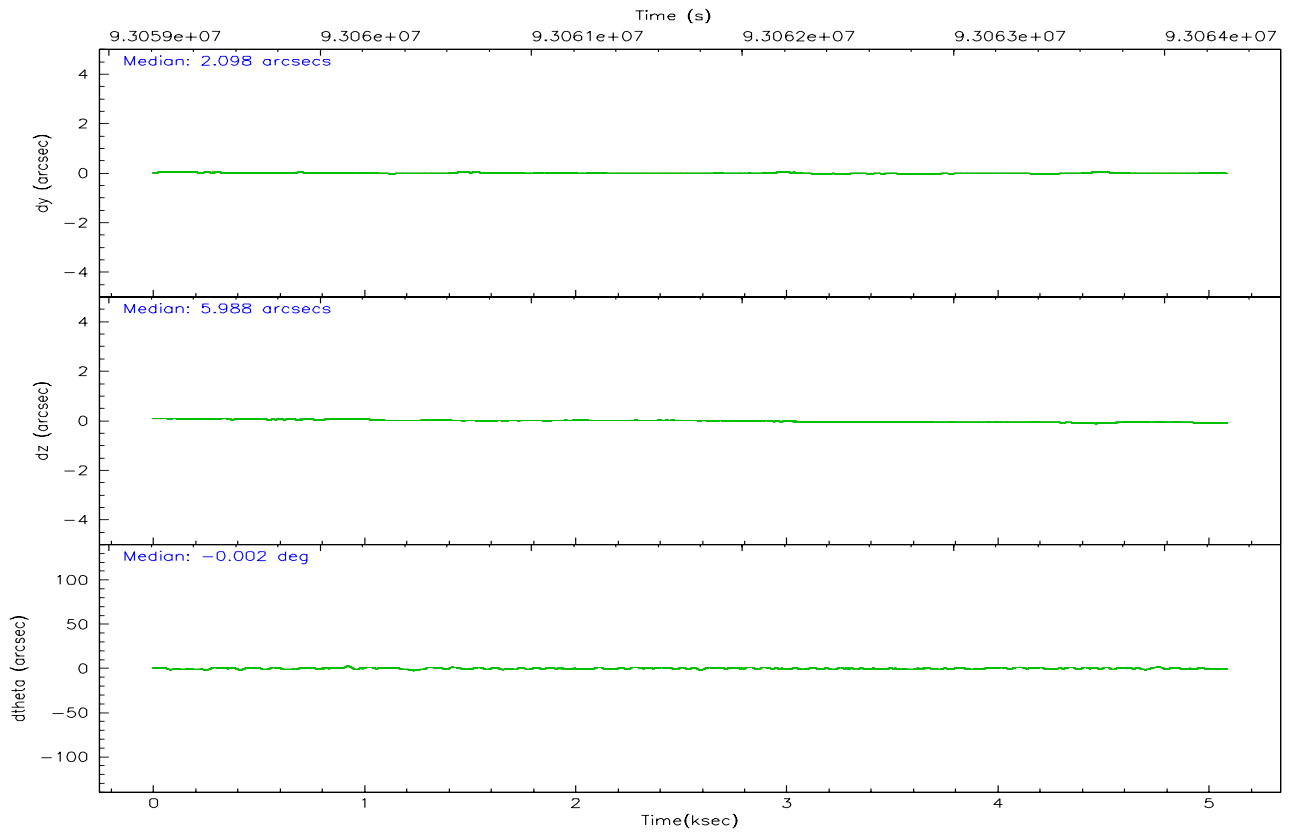
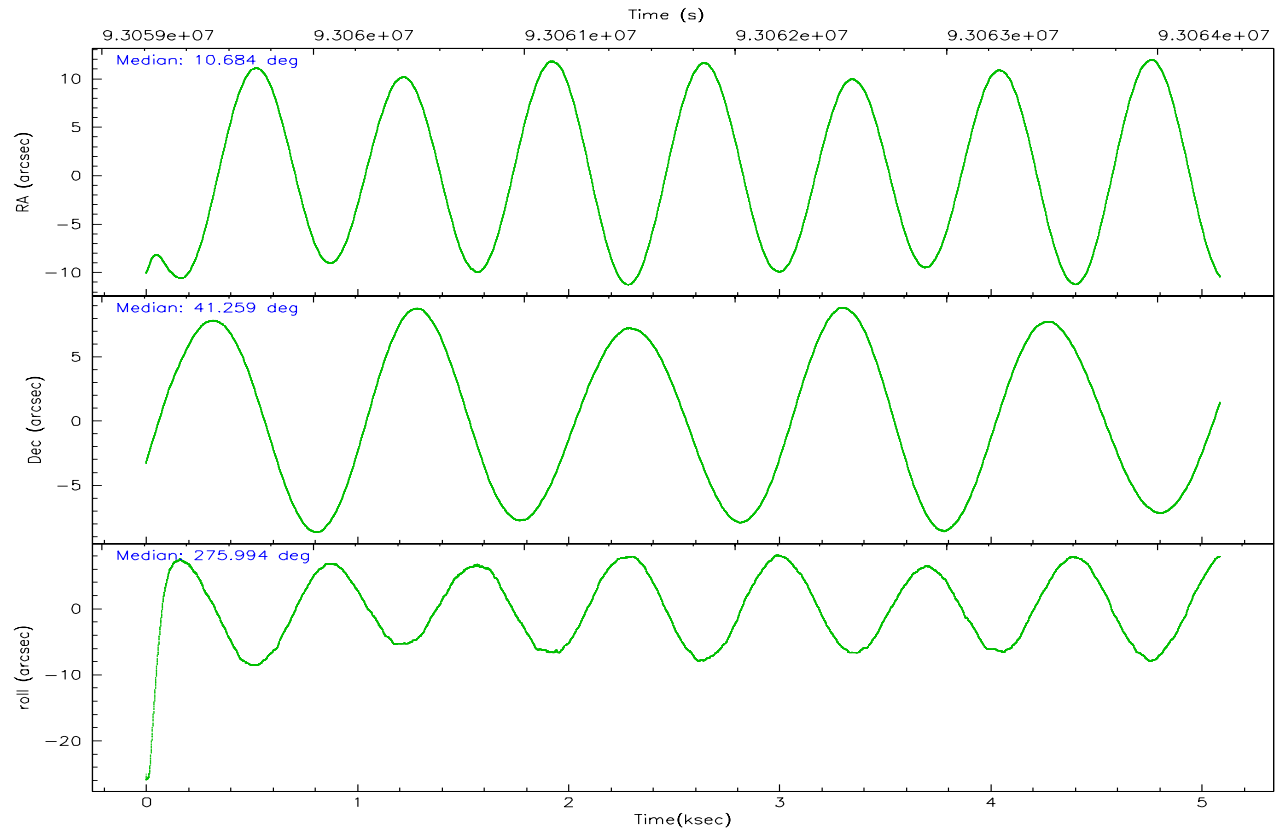
|                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 3171  | 5812  | 2965  | 1340  | 1552  | 2274  |
|                | 11%   | 18%   | 7%    | 5%    | 4%    | 6%    |
| grade 1 events | 20    | 82    | 42    | 21    | 35    | 18    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 804   | 1074  | 5086  | 585   | 2987  | 1480  |
|                | 2%    | 3%    | 13%   | 2%    | 8%    | 4%    |
| grade 3 events | 369   | 437   | 713   | 304   | 1340  | 827   |
|                | 1%    | 1%    | 1%    | 1%    | 3%    | 2%    |
| grade 4 events | 294   | 405   | 698   | 302   | 1304  | 761   |
|                | 1%    | 1%    | 1%    | 1%    | 3%    | 2%    |
| grade 5 events | 849   | 1016  | 2800  | 1104  | 3138  | 1407  |
|                | 3%    | 3%    | 7%    | 4%    | 9%    | 3%    |
| grade 6 events | 536   | 664   | 8889  | 600   | 7557  | 1560  |
|                | 1%    | 2%    | 23%   | 2%    | 21%   | 4%    |
| grade 7 events | 21287 | 21771 | 16913 | 21822 | 16500 | 27188 |
|                | 77%   | 69%   | 44%   | 83%   | 47%   | 76%   |

## 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                 | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING              | On-chip summing requested             | N         | N       |
| Pointing RA                       | 10.662404           | 10.6838245881403      | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | 41.281149           | 41.25888351374121     | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 275.801647          | 275.9961366777594     | Primary exposure time                 | 0.000000  | 3.2     |
| 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            | 93059791.184000     | 93058631.863681       |                                       |           |         |
| Observation start date            | 2000-12-13T01:55:27 | 2000-12-13T01:37:11   |                                       |           |         |
| Observation end time              | 93064296.184000     | 93065283.60143501     |                                       |           |         |
| Observation end date              | 2000-12-13T03:10:32 | 2000-12-13T03:28:03   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

2.3 Aspect





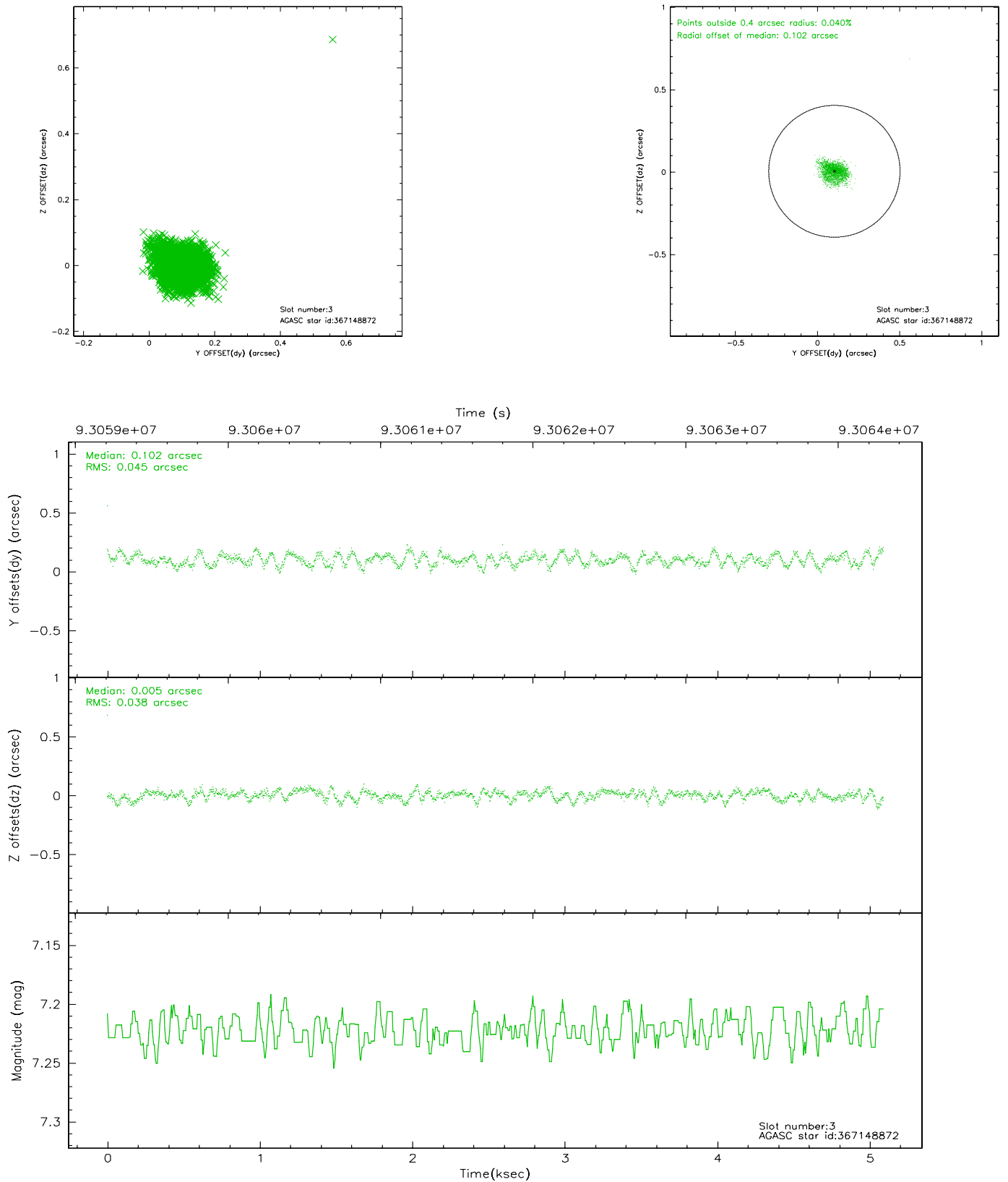
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec       | mean_y   | mean_z  |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|---------|
| 0    | FID    | ACIS-I-2  | 7.15 | 1242  | -0.023 | -0.043 | 0.009 | 0.017 | 0.000000  | 0.000000  | -756.47  | -835.76 |
| 1    | FID    | ACIS-I-4  | 7.18 | 1242  | -0.058 | 0.034  | 0.005 | 0.009 | 0.000000  | 0.000000  | 2157.00  | 1069.91 |
| 2    | FID    | ACIS-I-5  | 7.23 | 1242  | -0.020 | 0.078  | 0.009 | 0.015 | 0.000000  | 0.000000  | -1808.77 | 1069.14 |
| 3    | GUIDE  | 367148872 | 7.22 | 2483  | 0.102  | 0.005  | 0.062 | 0.095 | 10.505940 | 40.688258 | 2080.26  | -641.27 |
| 4    | GUIDE  | 367138920 | 7.73 | 2482  | 0.122  | 0.062  | 0.058 | 0.096 | 11.513485 | 40.808909 | 1915.68  | 2135.80 |
| 5    | GUIDE  | 367674552 | 8.84 | 2483  | -0.032 | 0.059  | 0.076 | 0.128 | 11.016238 | 41.570845 | -942.31  | 1053.97 |
| 6    | GUIDE  | 367663272 | 9.29 | 2483  | -0.097 | -0.084 | 0.082 | 0.133 | 10.656279 | 41.699429 | -1500.06 | 135.41  |
| 7    | GUIDE  | 367665472 | 9.47 | 2480  | -0.095 | -0.035 | 0.078 | 0.126 | 10.241611 | 41.730843 | -1728.16 | -961.51 |

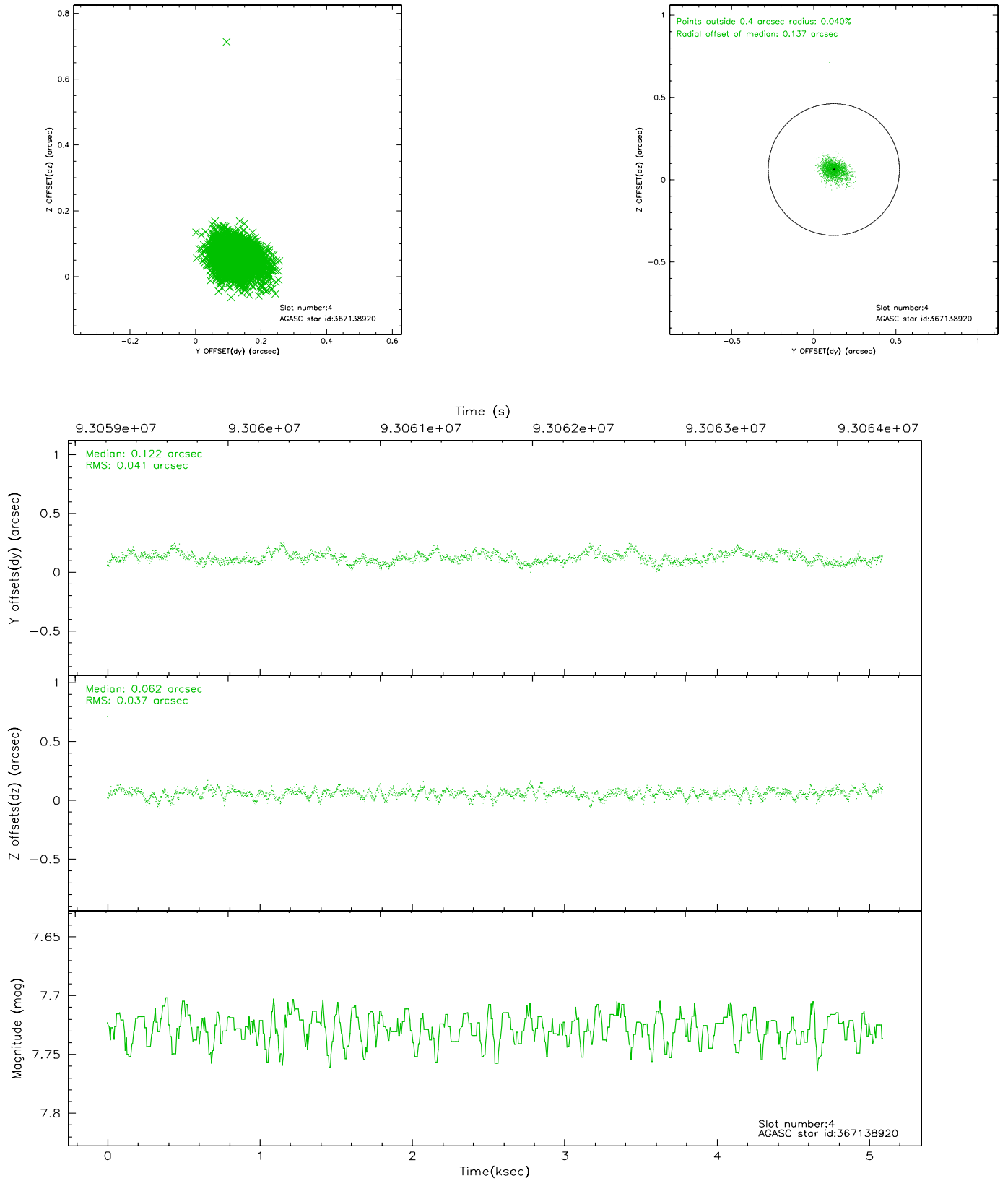


## 2.4 Star Slots

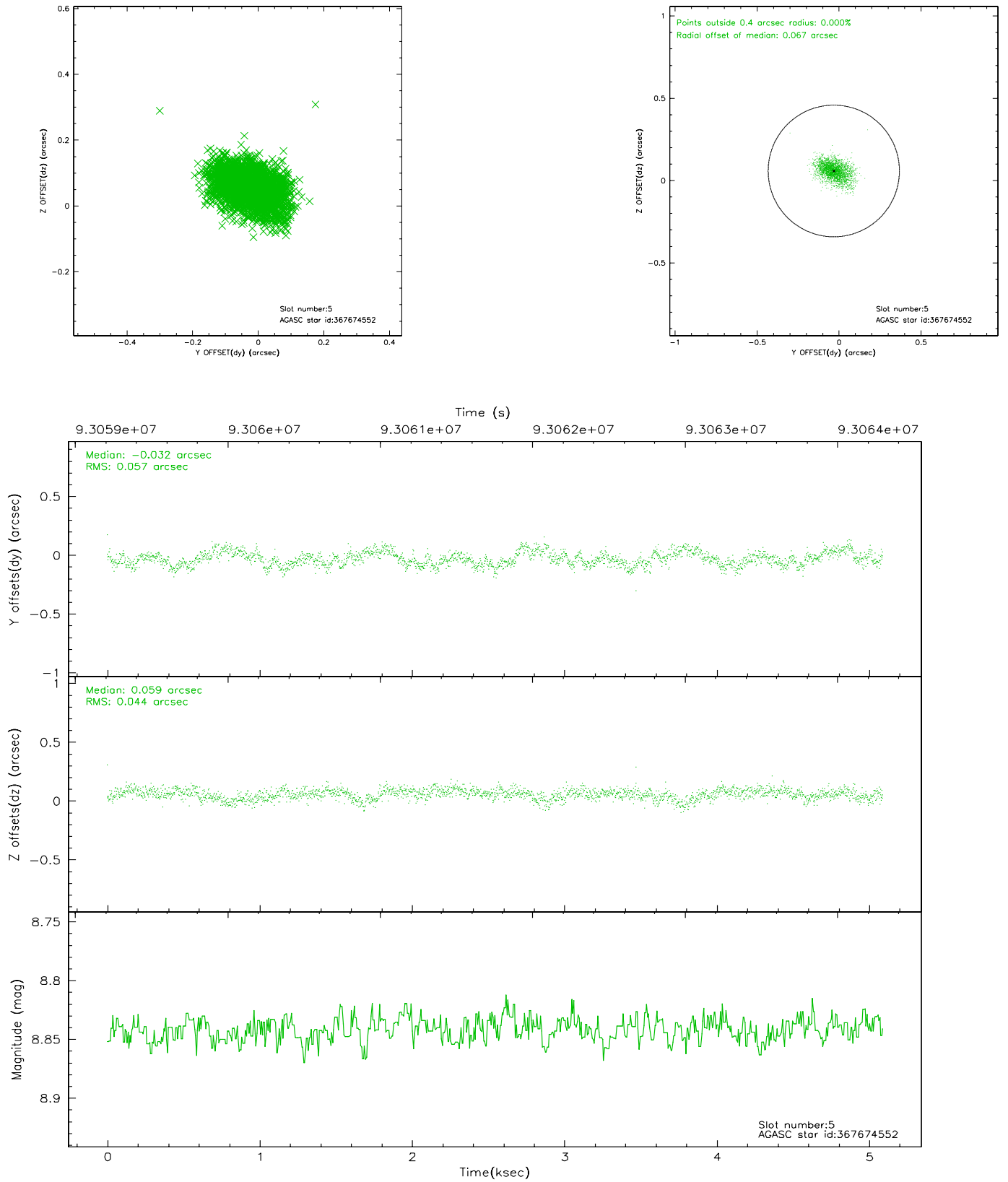
### 2.4.1 Slot 3



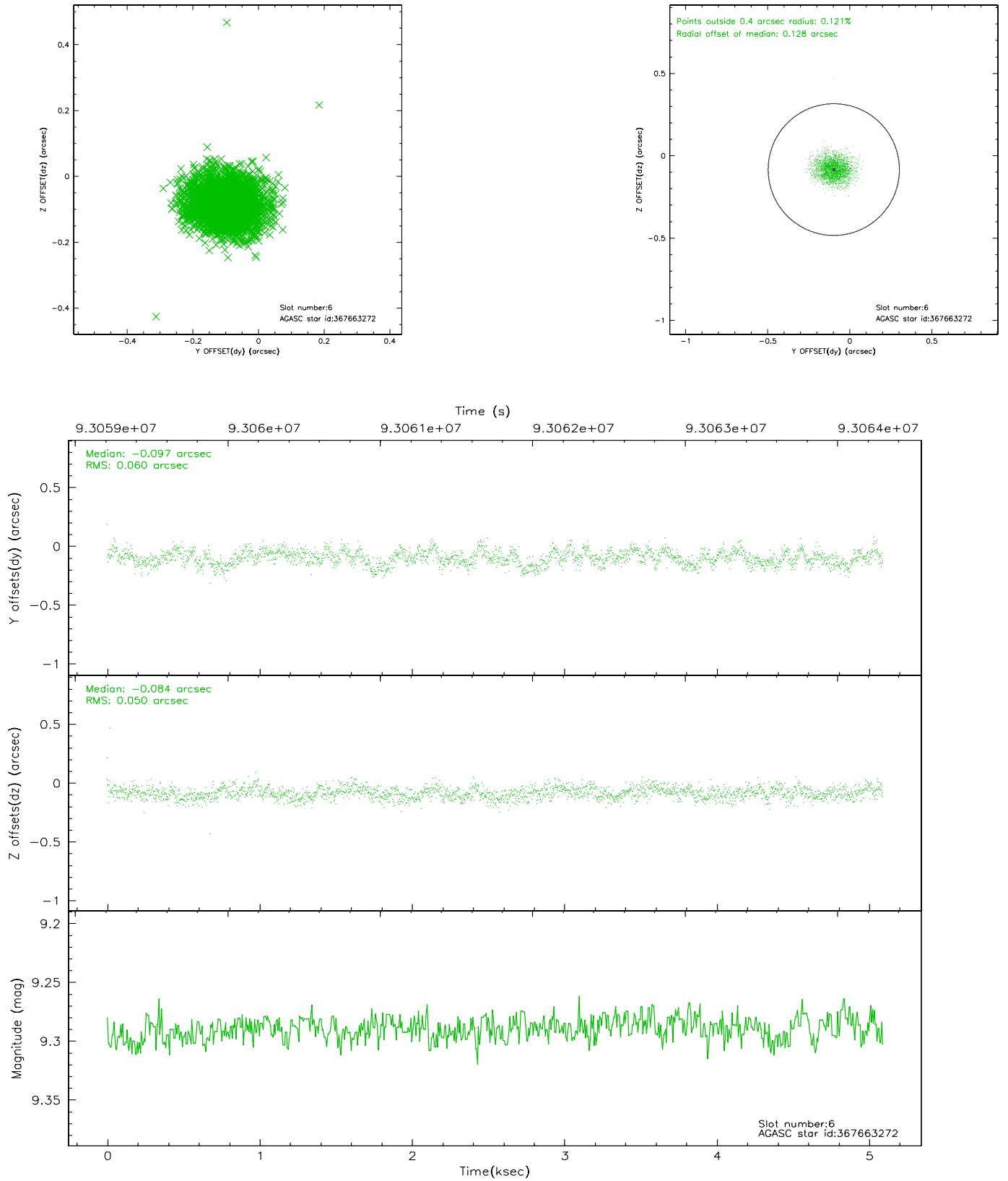
## 2.4.2 Slot 4



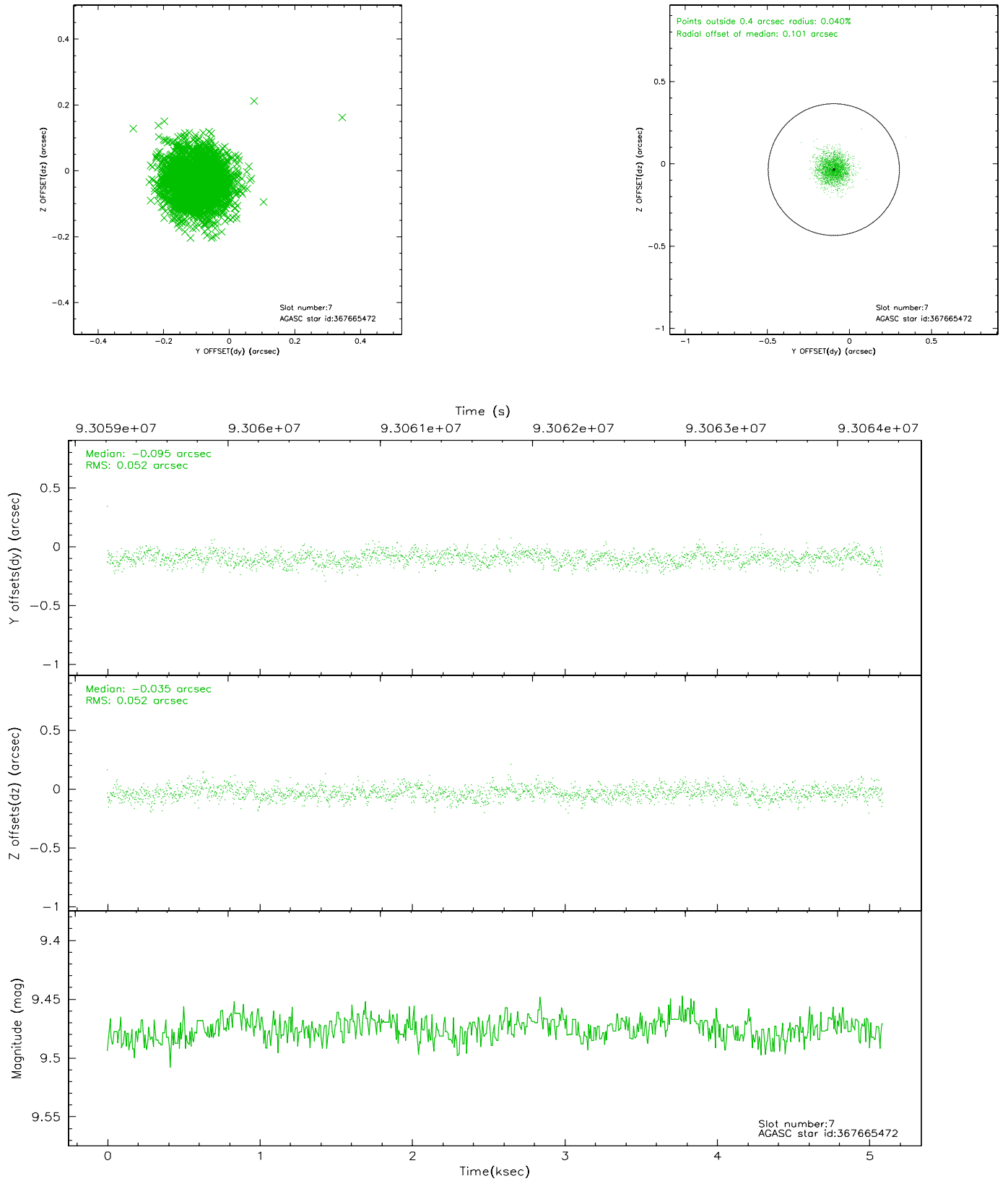
### 2.4.3 Slot 5



## 2.4.4 Slot 6

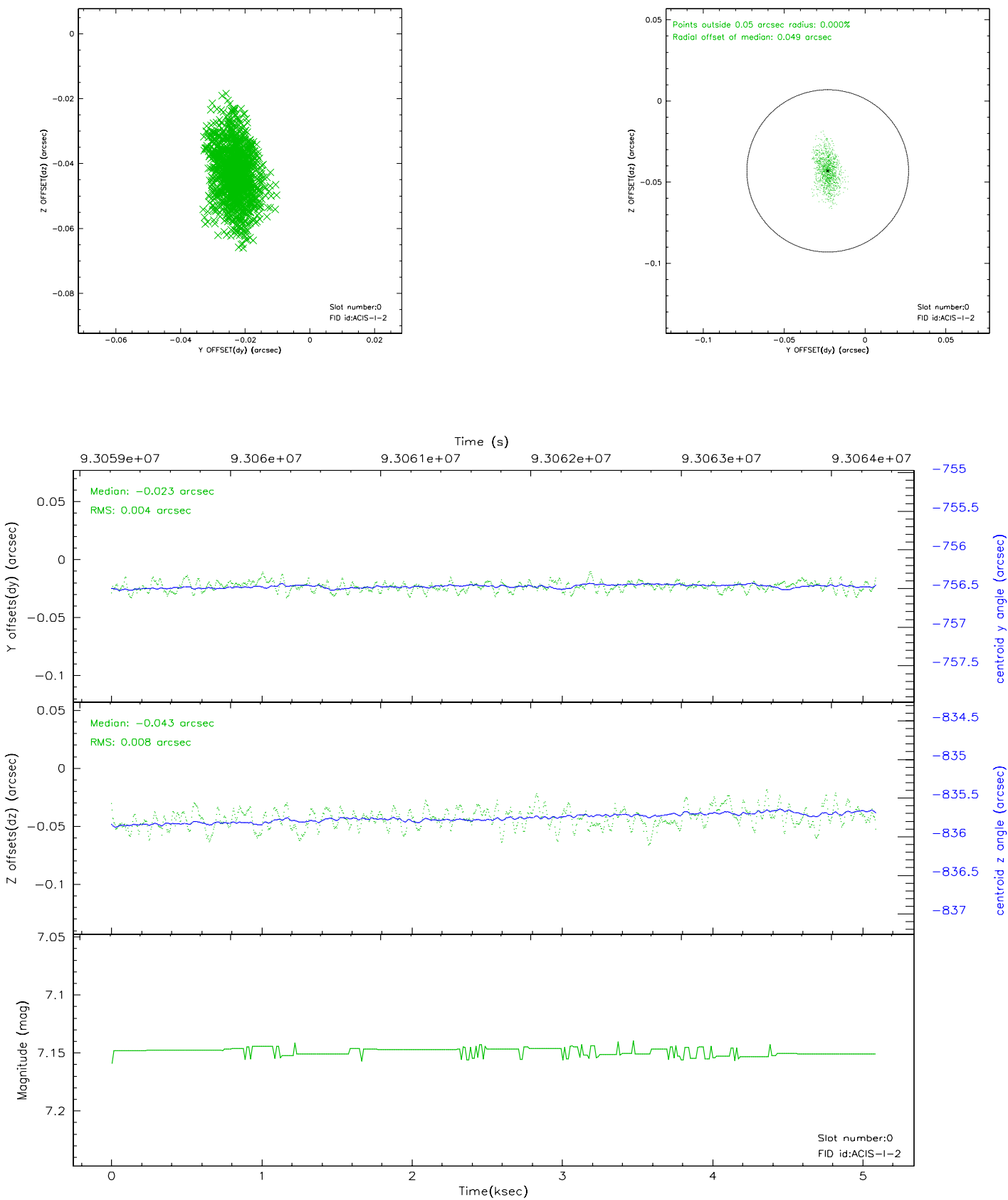


## 2.4.5 Slot 7

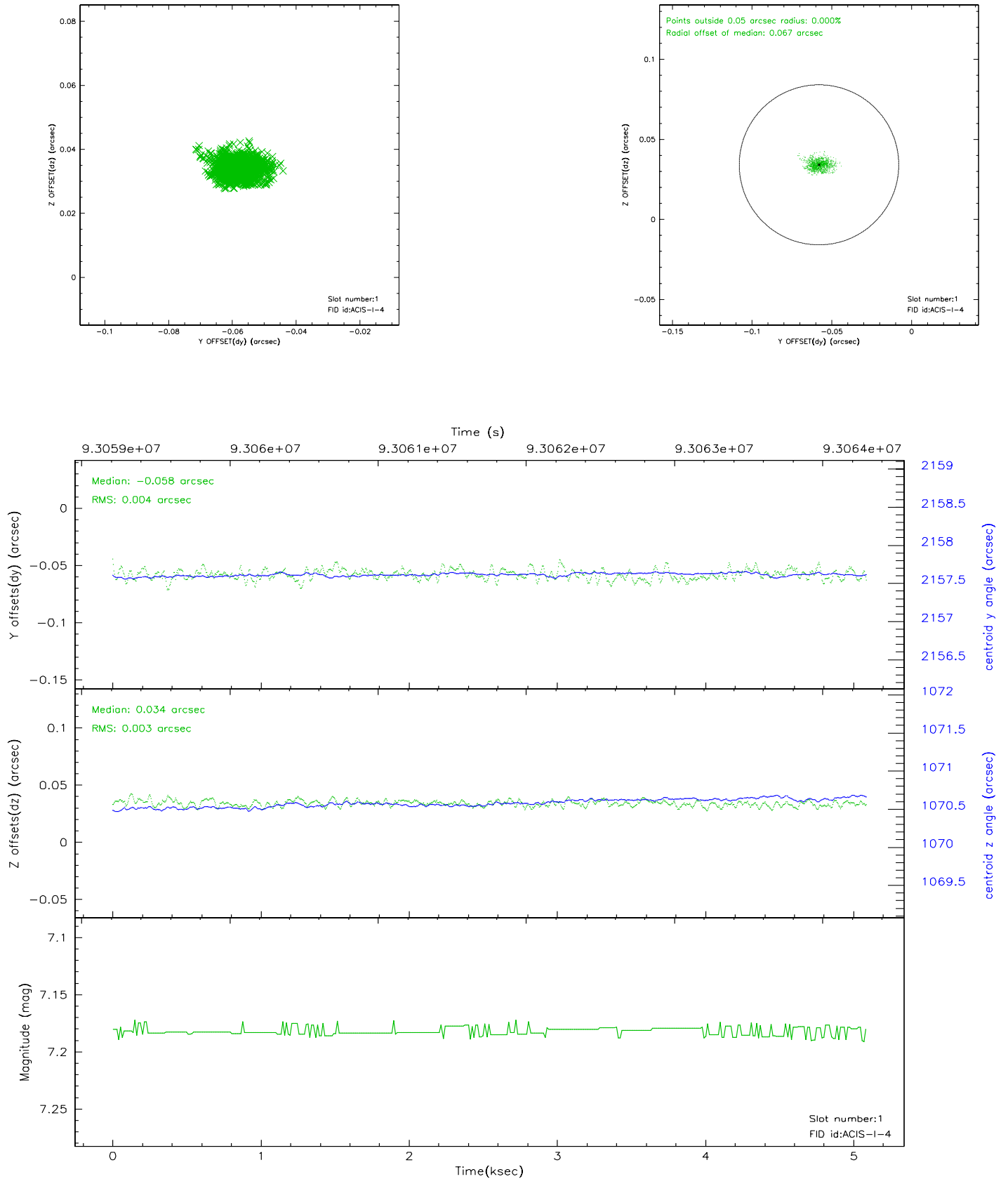


## 2.5 FID Slots

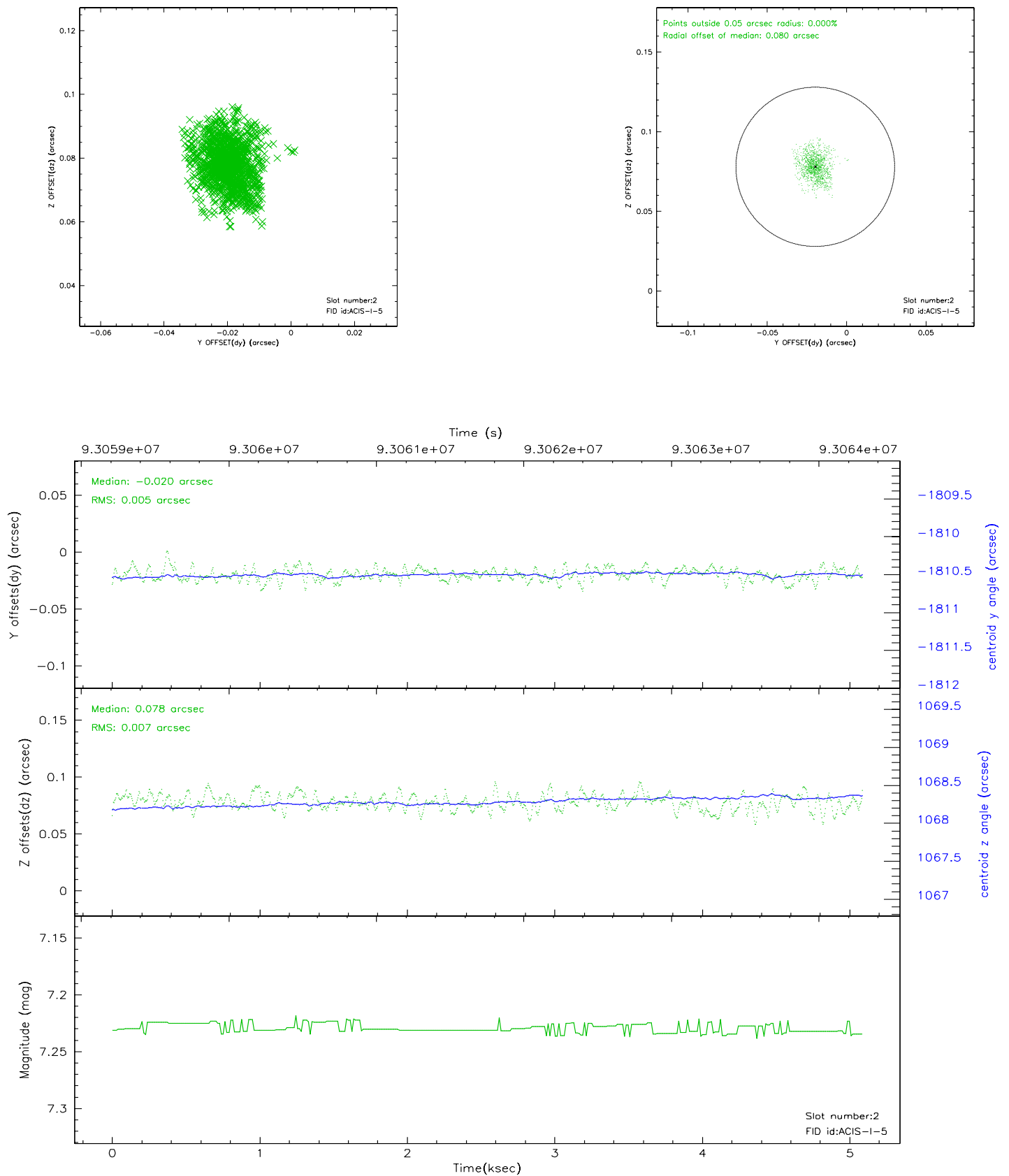
### 2.5.1 Slot 0



## 2.5.2 Slot 1

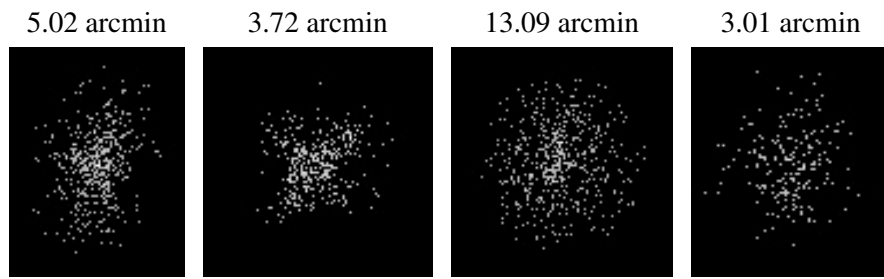


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2007.06.20    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 4.46          |

### A.2 Comments