

# V&V Reference Report

## L2 ASCDS Version : 7.6.8

Observation 3943 - L2 Version 001  
Chandra X-Ray Center

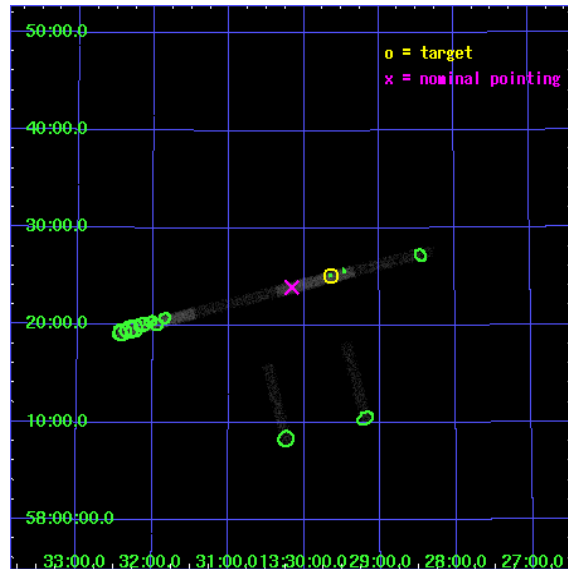
L2 Processing Date : Jul 1 2006

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# 1 Front

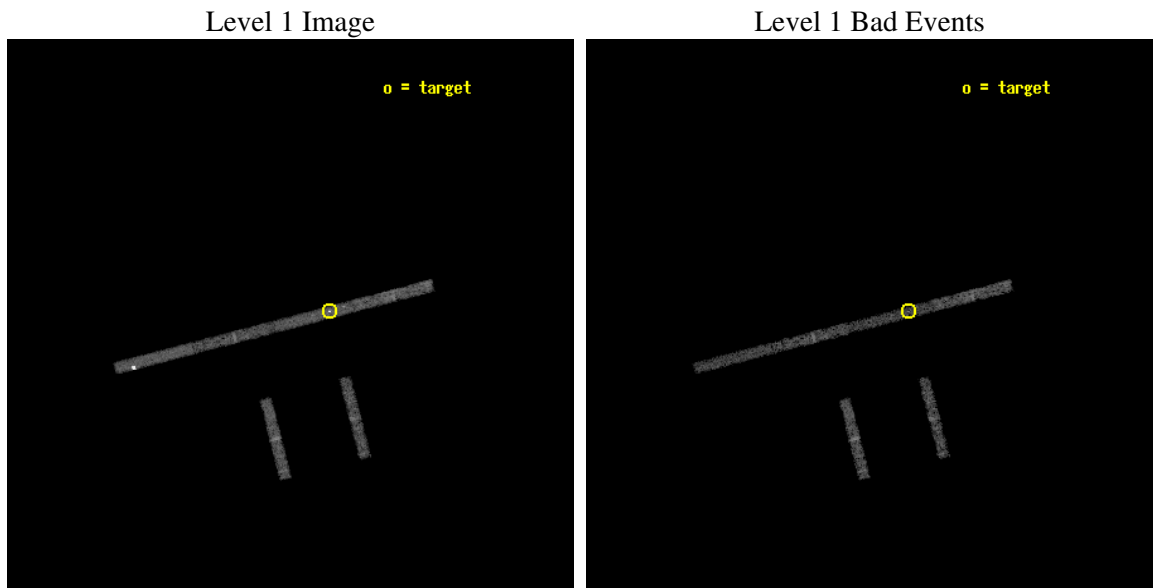
|          |   |
|----------|---|
| seq_num  | 600317  |
| obs_id   | 3943  |
| title    | PROBING THE SPECTRAL VARIABILITY OF THE ULTRALUMINOUS X-RAY SOURCE NGC 5204 X-1 |
| observer | Dr Timothy Roberts  |
| object   | NGC 5204 X-1  |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 202.410833  |
| dec_targ | 58.418333   |
| ra_nom   | 202.54052786344   |
| dec_nom  | 58.398987897225   |
| roll_nom | 345.49400911417   |
| revision | 2   |
| ontime   | 5183.4999117255   |
| livetime | 4896.4292591599   |
| ontime2  | 5183.4999117255   |
| ontime3  | 5183.4999117255   |
| ontime5  | 5183.4999117255   |
| ontime6  | 5183.4999117255   |
| ontime7  | 5183.4999117255   |
| ontime8  | 5183.4999117255   |
| l2events | 10475   |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 2

Chip 3

Chip 5



Chip 6

Chip 7

Chip 8



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.8               |
| caldsver | 3.2.2               |
| date     | 2006-07-01T16:05:29 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 5002.055000     |
| ontime         | 5599.9752605557 |
| ontime2        | 5599.9752605557 |
| ontime3        | 5599.9752605557 |
| ontime5        | 5599.9752605557 |
| ontime6        | 5599.9752605557 |
| ontime7        | 5599.9752605557 |
| ontime8        | 5599.9752605557 |
| l1events       | 52462           |

### 2.1.4 Events

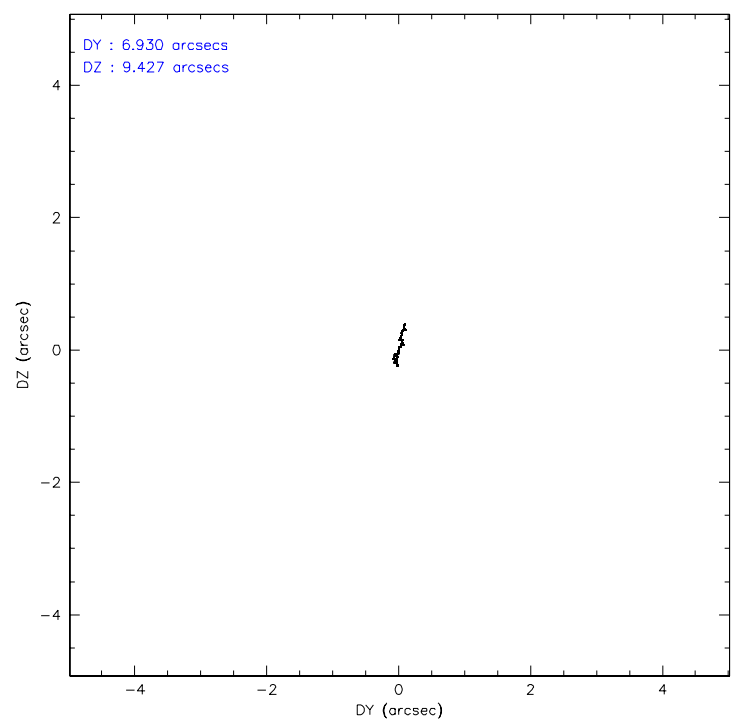
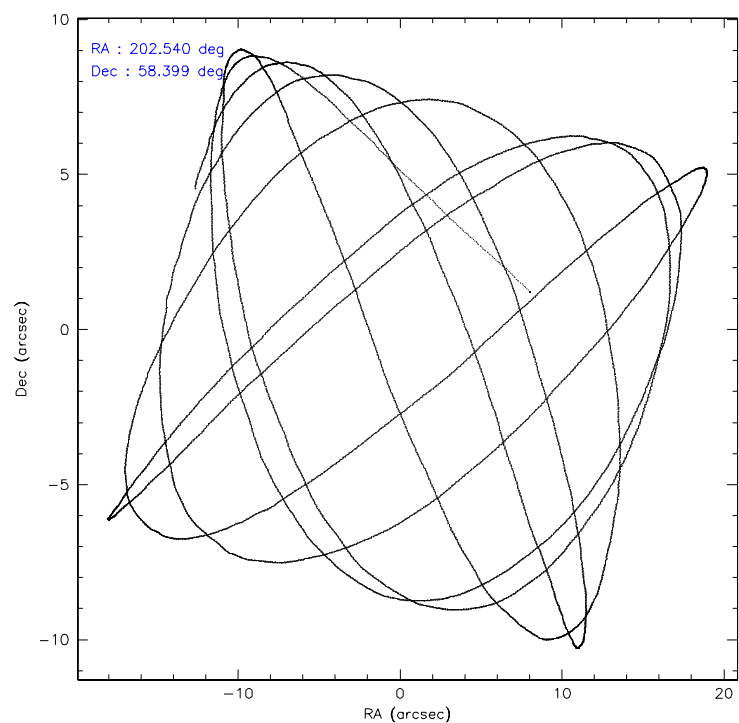
|                 | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 7153  | 5957  | 14662 | 6248  | 9702  | 8740  |
| rejected events | 6393  | 5374  | 4921  | 5572  | 4510  | 7266  |
| rejected %      | 89%   | 90%   | 33%   | 89%   | 46%   | 83%   |

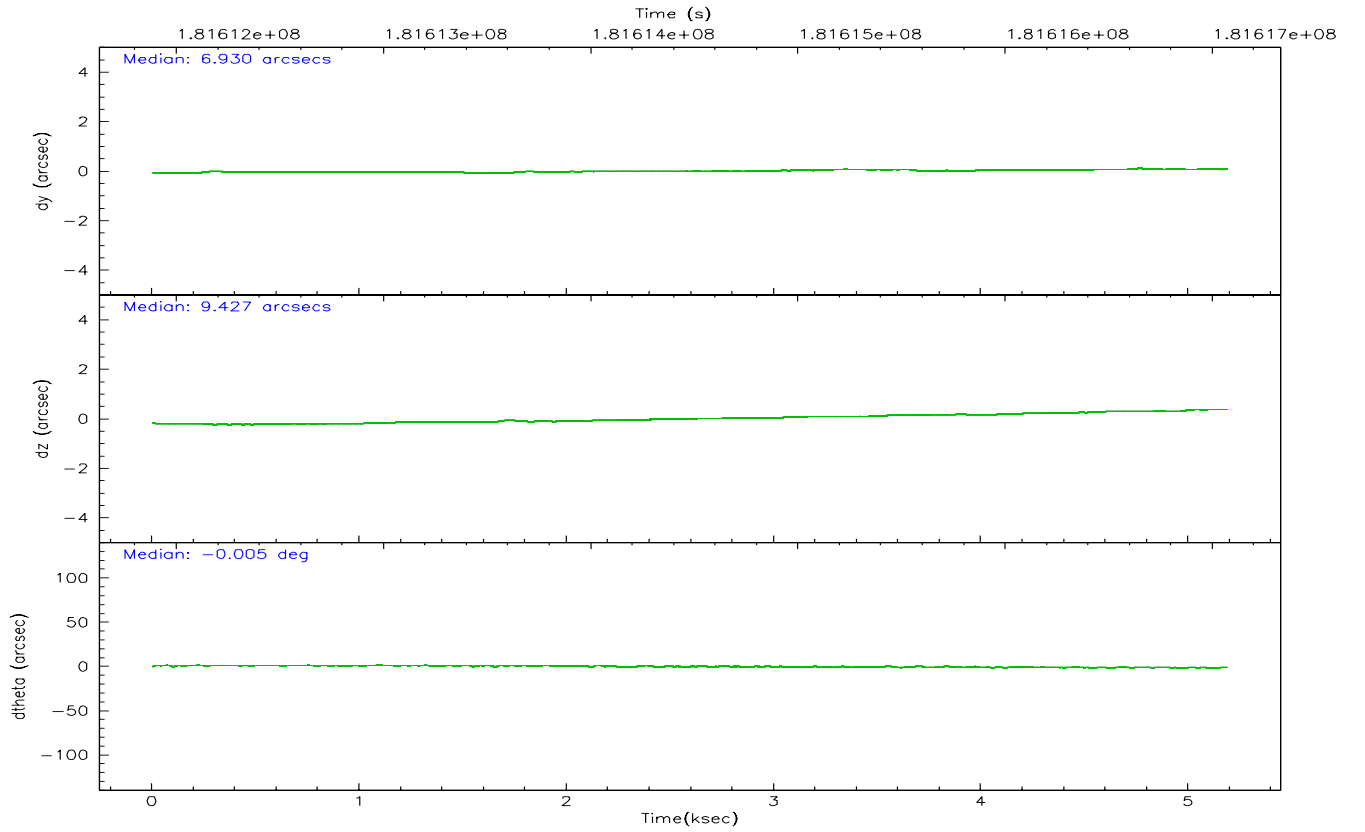
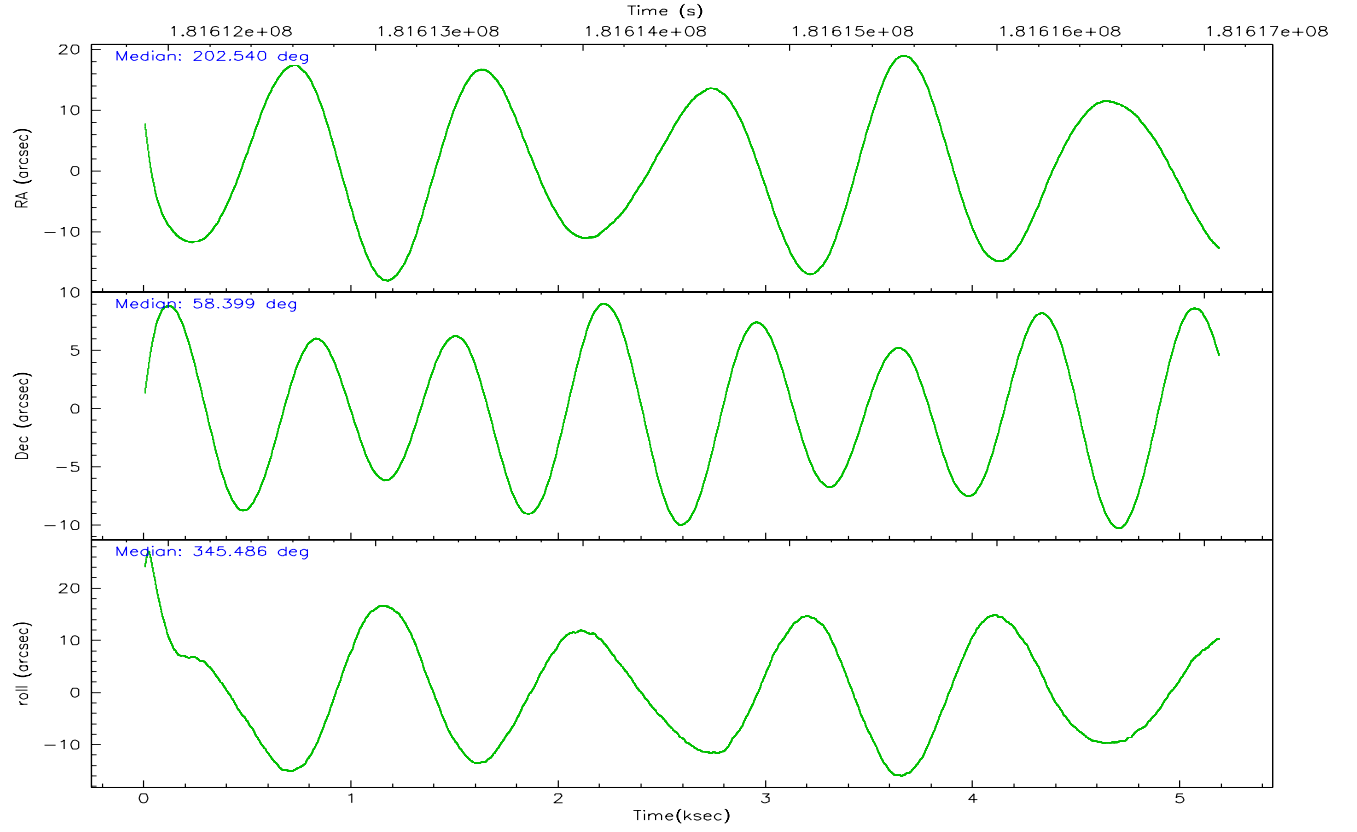
|                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 296   | 262   | 6083  | 285   | 1035  | 440   |
|                | 4%    | 4%    | 41%   | 4%    | 10%   | 5%    |
| grade 1 events | 2     | 2     | 33    | 0     | 19    | 1     |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 130   | 93    | 2091  | 121   | 1241  | 296   |
|                | 1%    | 1%    | 14%   | 1%    | 12%   | 3%    |
| grade 3 events | 129   | 94    | 138   | 105   | 538   | 178   |
|                | 1%    | 1%    | 0%    | 1%    | 5%    | 2%    |
| grade 4 events | 126   | 80    | 305   | 101   | 506   | 185   |
|                | 1%    | 1%    | 2%    | 1%    | 5%    | 2%    |
| grade 5 events | 194   | 230   | 380   | 203   | 539   | 250   |
|                | 2%    | 3%    | 2%    | 3%    | 5%    | 2%    |
| grade 6 events | 127   | 106   | 1868  | 131   | 2148  | 470   |
|                | 1%    | 1%    | 12%   | 2%    | 22%   | 5%    |
| grade 7 events | 6149  | 5090  | 3764  | 5302  | 3676  | 6920  |
|                | 85%   | 85%   | 25%   | 84%   | 37%   | 79%   |

## 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              | 1/8       | 1/8     |
| Pointing RA                       | 202.490739          | 202.5405278634422    | Subarray start row              | 0         | 449     |
| Pointing Dec                      | 58.391242           | 58.39898789722483    | Subarray row count              | 1024      | 128     |
| Pointing Roll                     | 345.379720          | 345.4940091141666    | Alternating exposures requested | N         | N       |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  | Primary exposure time           | 0.000000  | 0.7     |
| 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            | 181612077.184000    | 181611074.04019      |                                 |           |         |
| Observation start date            | 2003-10-03T23:46:53 | 2003-10-03T23:31:14  |                                 |           |         |
| Observation end time              | 181617079.184000    | 181617393.67796      |                                 |           |         |
| Observation end date              | 2003-10-04T01:10:15 | 2003-10-04T01:16:33  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

## 2.3 Aspect





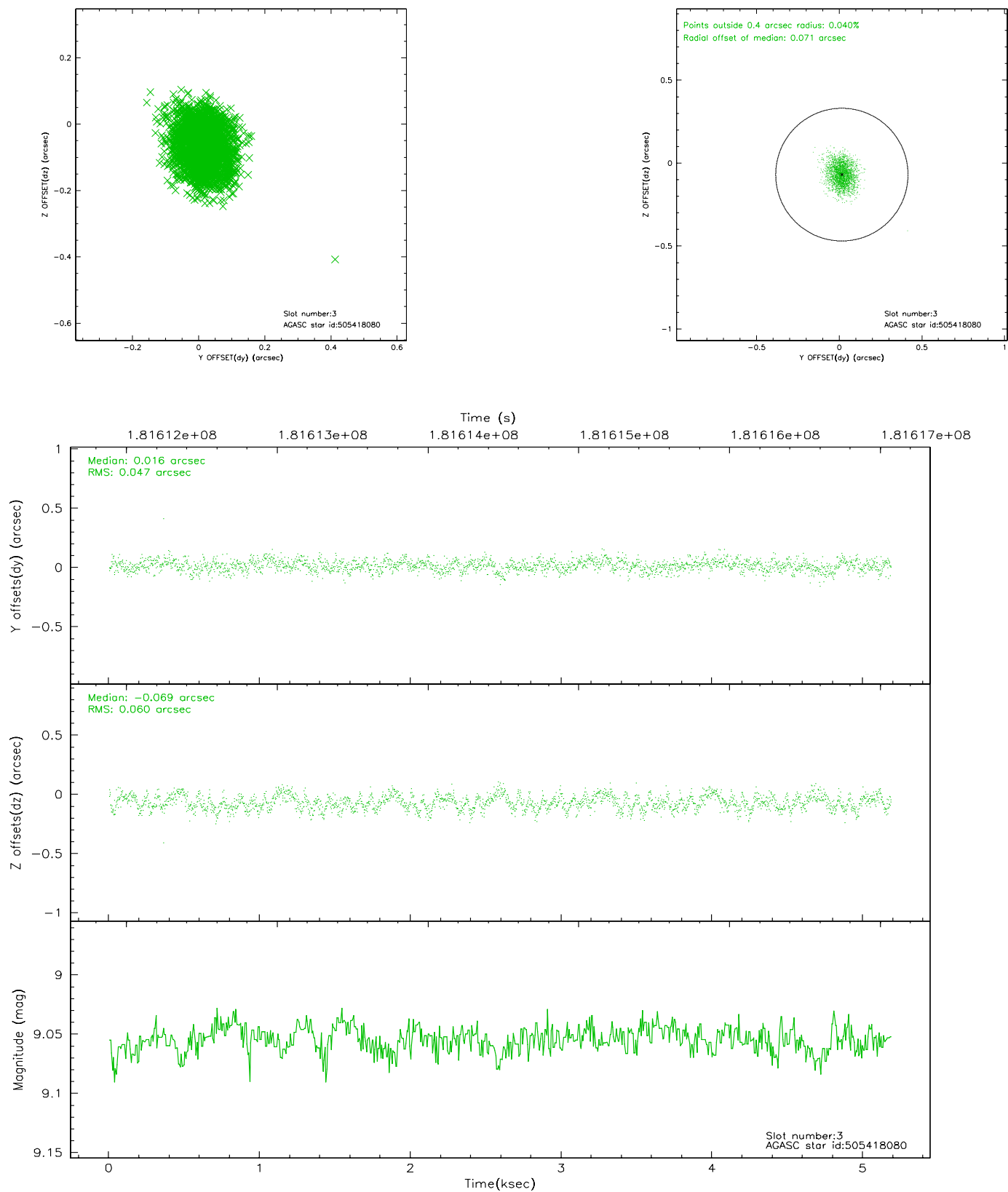
### Slot Statistics

| 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  | 1265  | -0.035 | -0.013 | 0.008 | 0.013 | 0.000000   | 0.000000  | -759.70  | -1730.65 |
| 1    | FID    | ACIS-S-4  | 7.20  | 1265  | 0.035  | 0.020  | 0.006 | 0.011 | 0.000000   | 0.000000  | 2153.10  | 176.69   |
| 2    | FID    | ACIS-S-5  | 7.23  | 1265  | -0.031 | 0.001  | 0.007 | 0.012 | 0.000000   | 0.000000  | -1811.06 | 171.63   |
| 3    | GUIDE  | 505418080 | 9.05  | 2528  | 0.016  | -0.069 | 0.081 | 0.128 | 201.533017 | 58.898788 | -2187.44 | 1330.56  |
| 4    | GUIDE  | 505419952 | 10.12 | 2526  | 0.049  | -0.047 | 0.109 | 0.180 | 201.880700 | 58.804366 | -1477.95 | 1157.38  |
| 5    | GUIDE  | 505421936 | 8.87  | 2530  | -0.027 | 0.102  | 0.076 | 0.125 | 201.854843 | 57.887820 | -721.40  | -2054.66 |
| 6    | GUIDE  | 505421968 | 8.21  | 2530  | 0.026  | -0.035 | 0.070 | 0.111 | 202.022601 | 58.209270 | -694.26  | -855.86  |
| 7    | GUIDE  | 505422344 | 8.62  | 2528  | -0.061 | 0.048  | 0.061 | 0.098 | 202.767077 | 57.846963 | 1007.04  | -1761.36 |

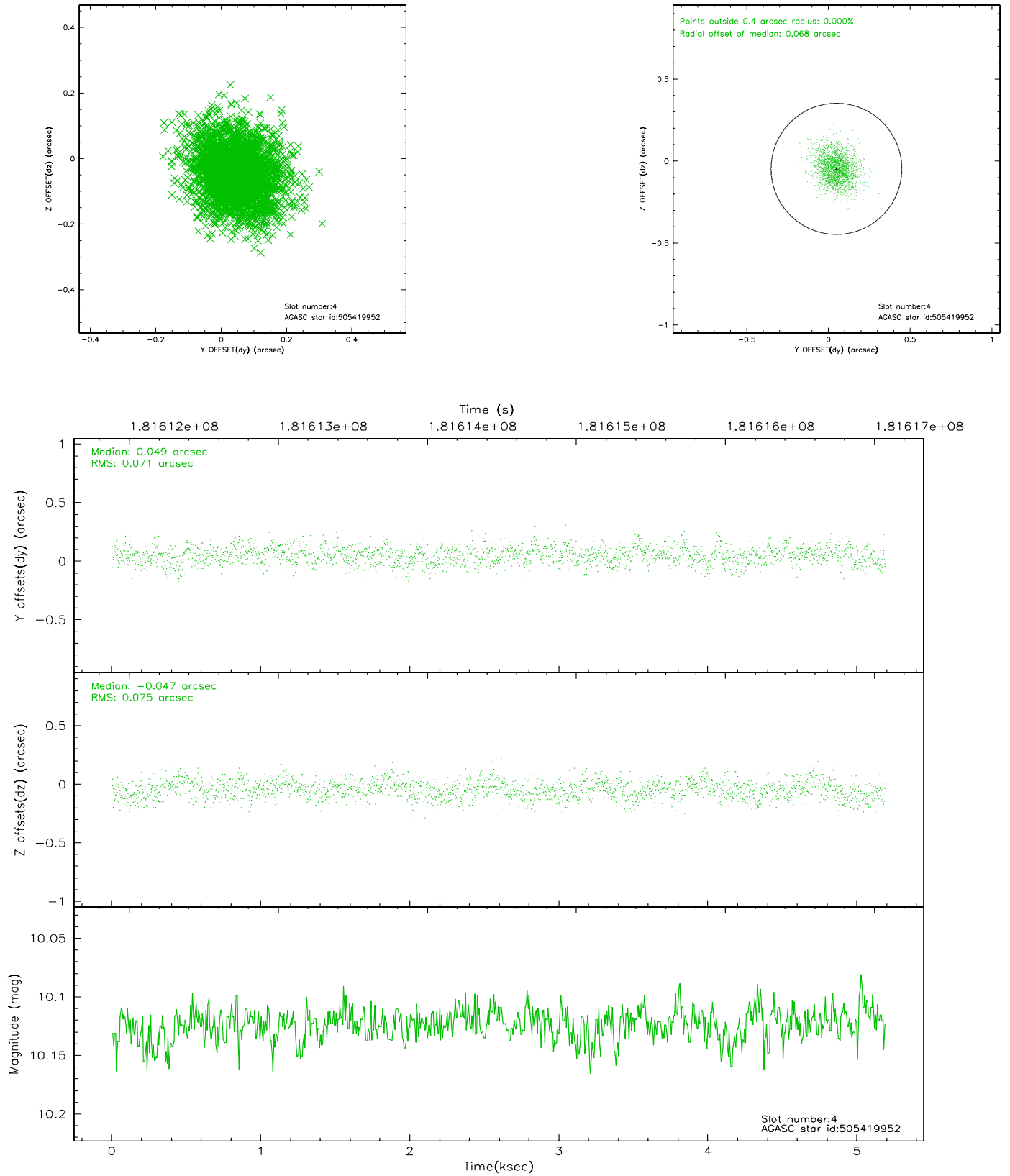


## 2.4 Star Slots

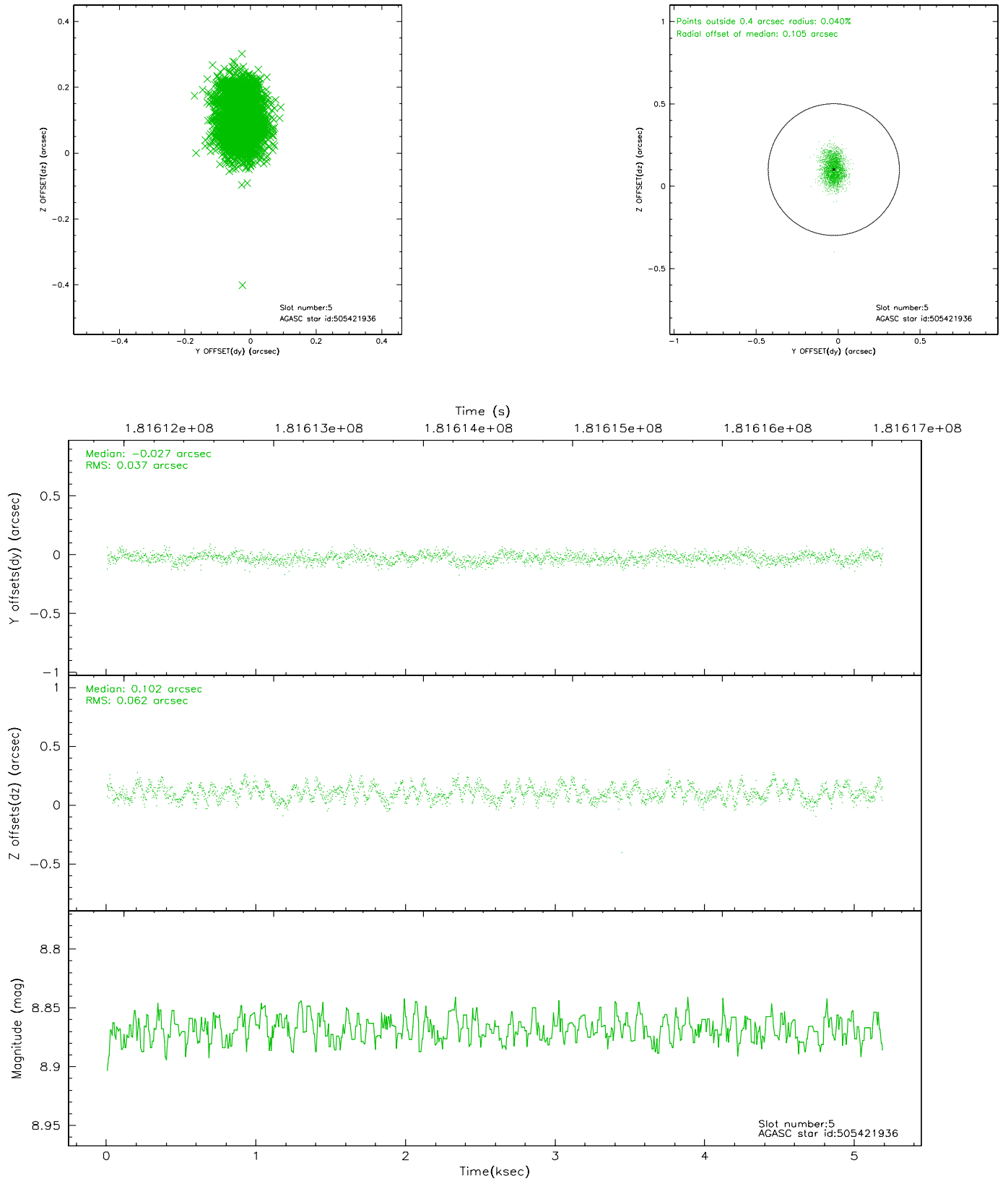
### 2.4.1 Slot 3



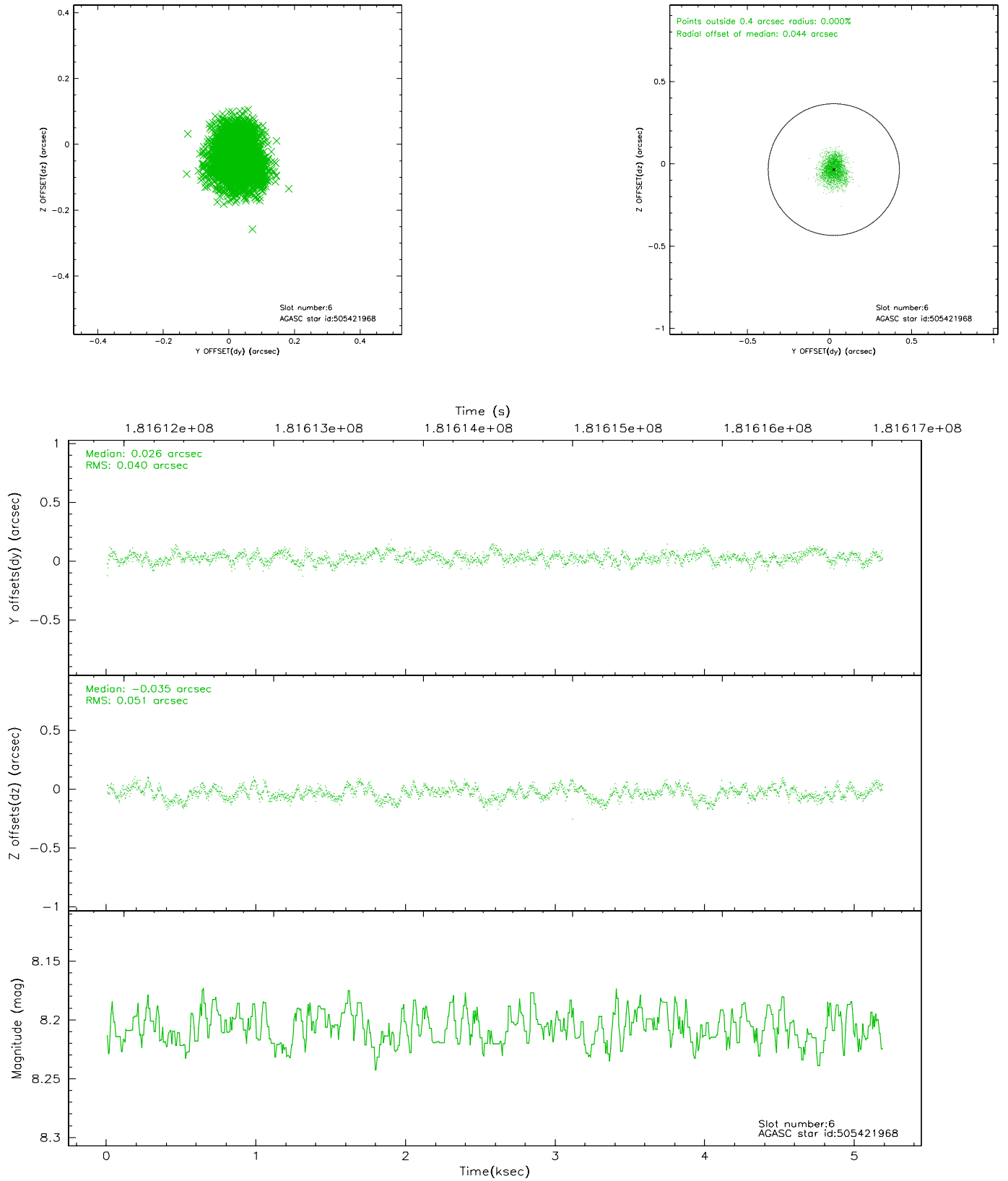
## 2.4.2 Slot 4



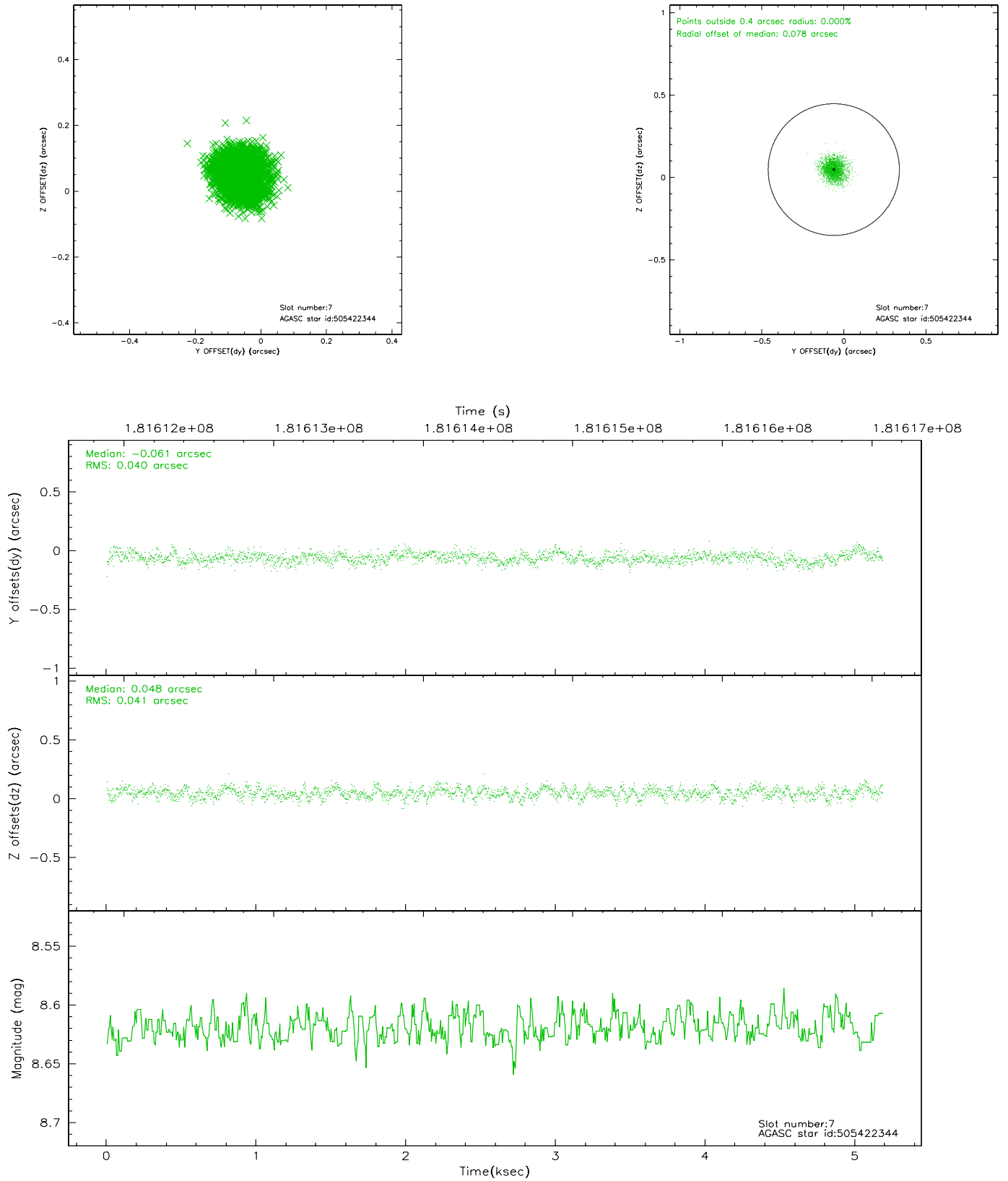
### 2.4.3 Slot 5



## 2.4.4 Slot 6

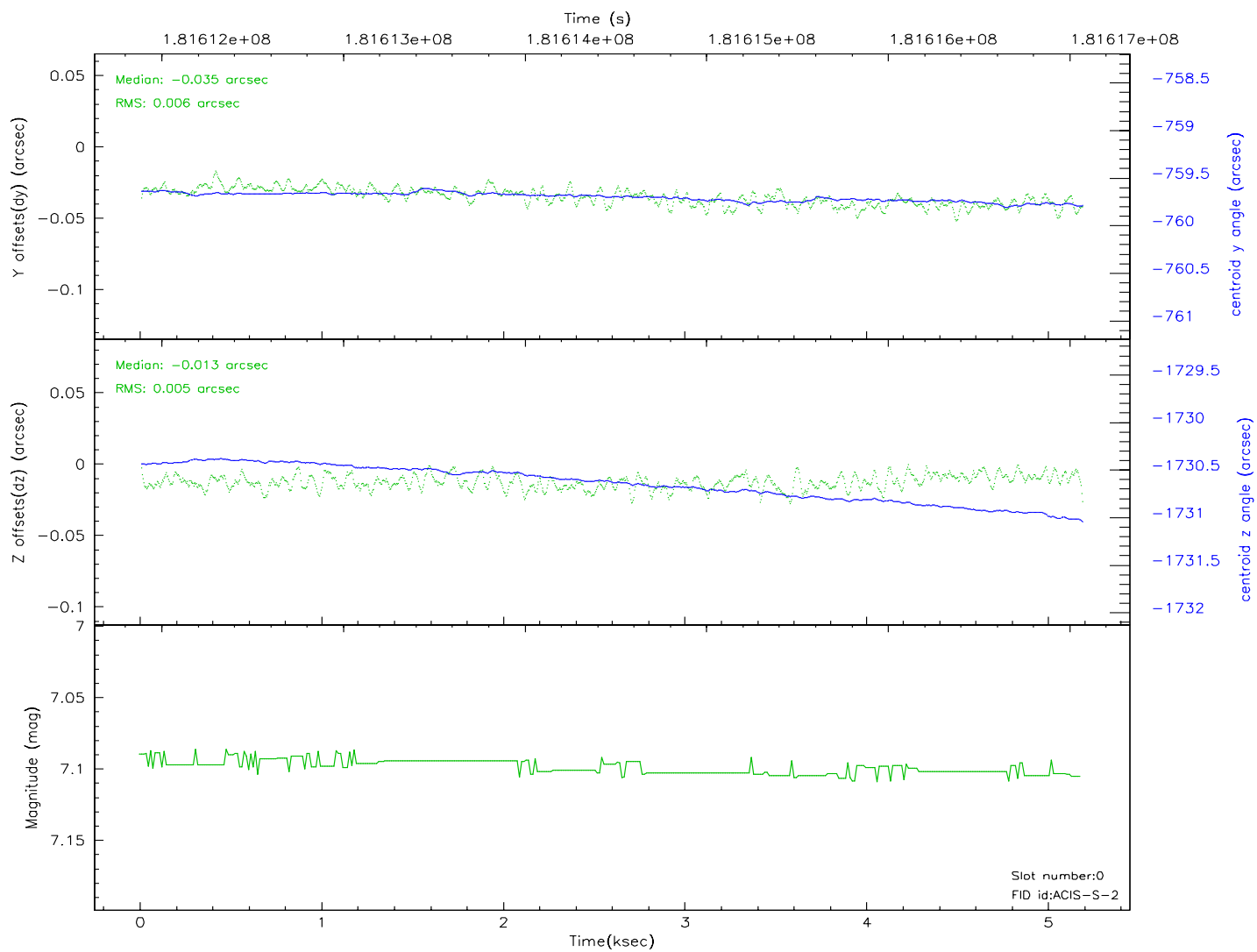
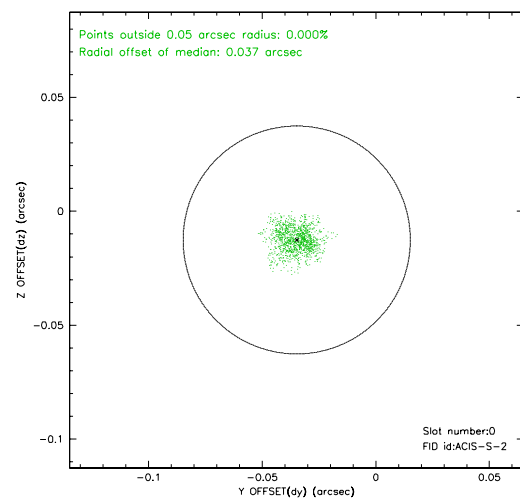
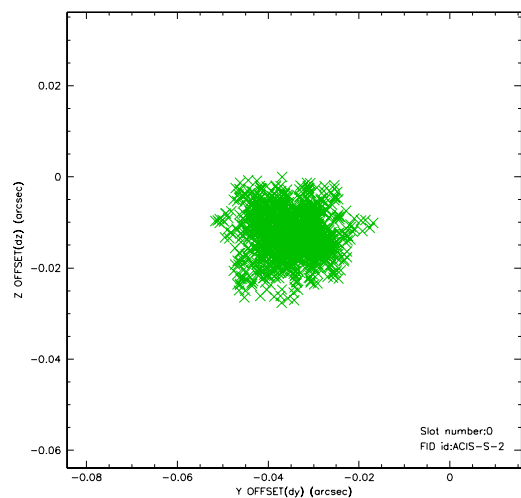


## 2.4.5 Slot 7

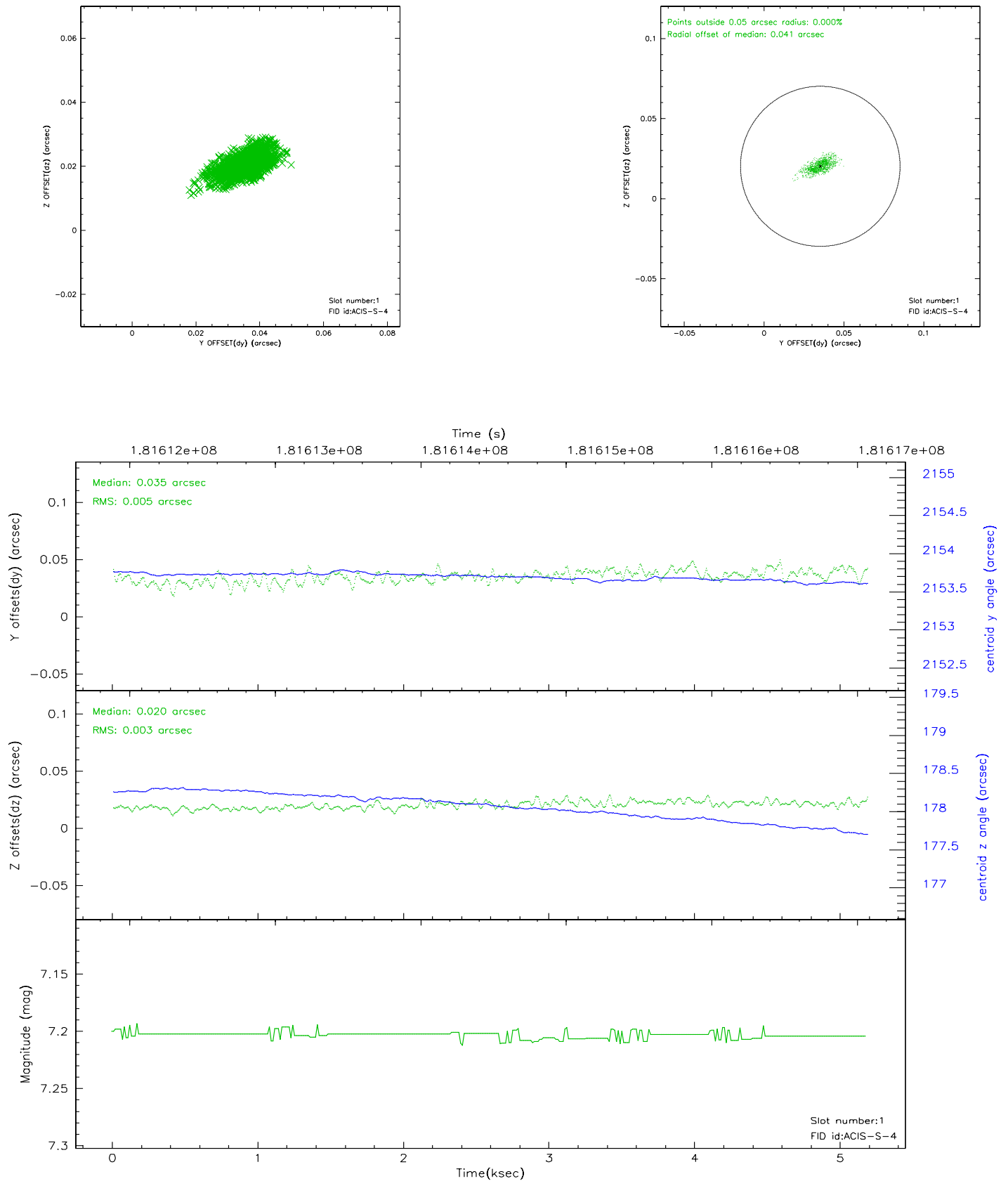


## 2.5 FID Slots

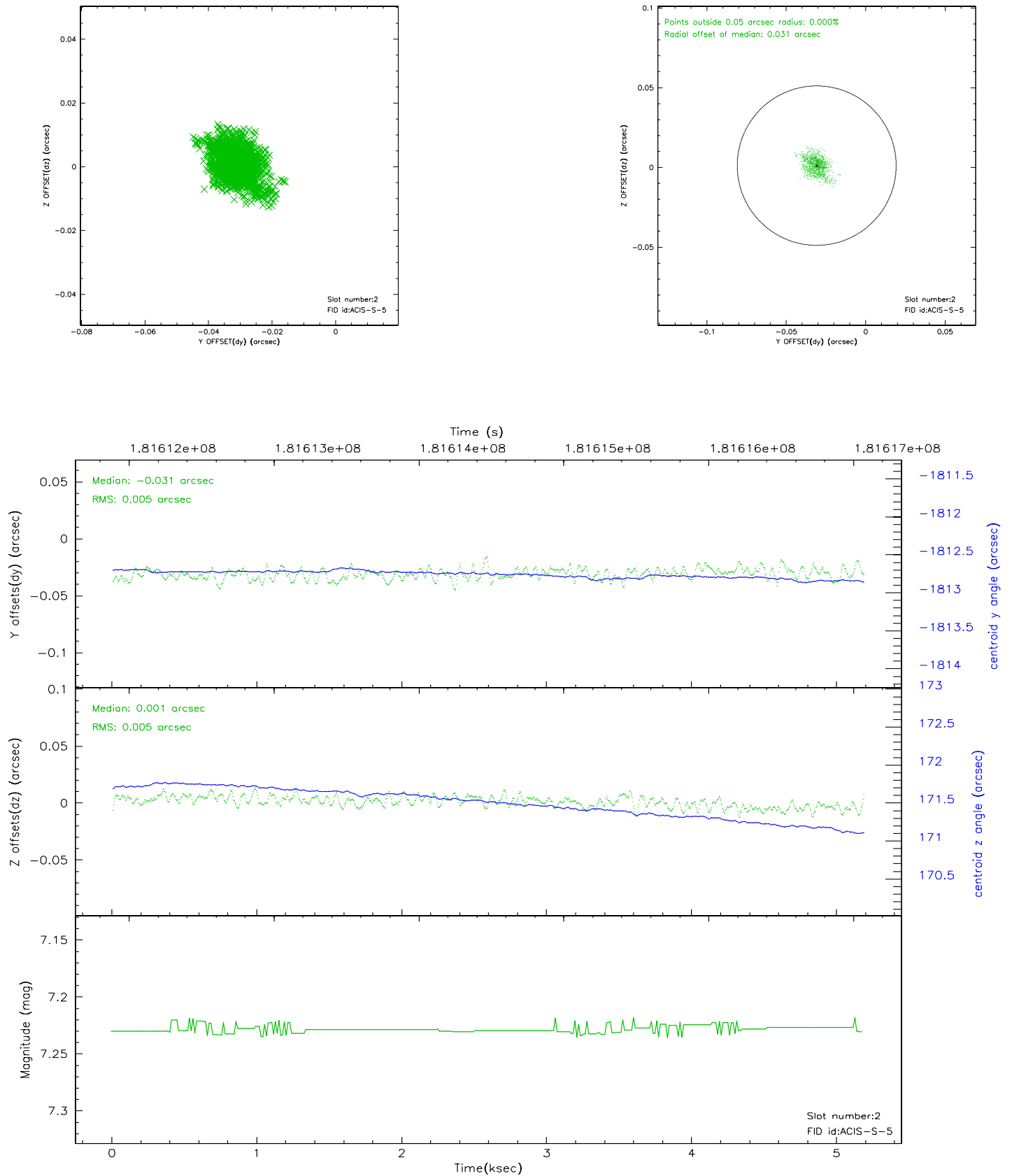
### 2.5.1 Slot 0



## 2.5.2 Slot 1

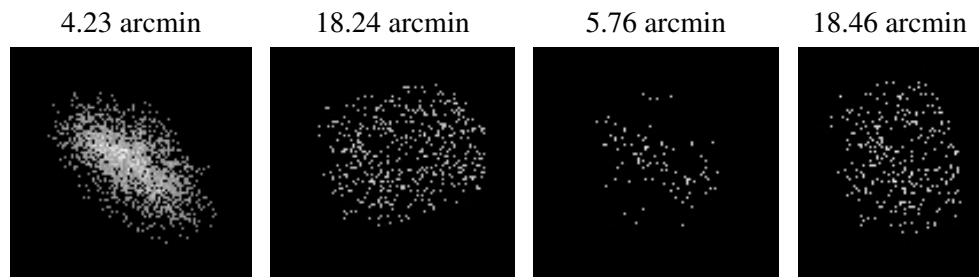


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2006.07.03    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 5.183         |

### A.2 Comments