

# V&V Reference Report

## L2 ASCDS Version : 7.6.8.1

Observation 2760 - L2 Version 001  
Chandra X-Ray Center

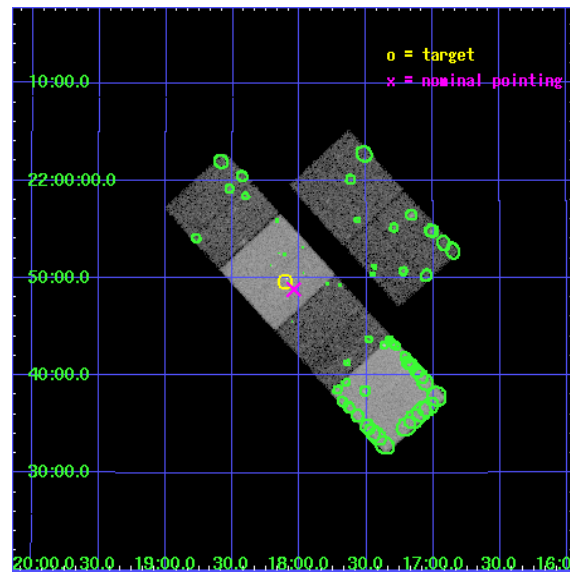
L2 Processing Date : Sep 6 2006

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# 1 Front

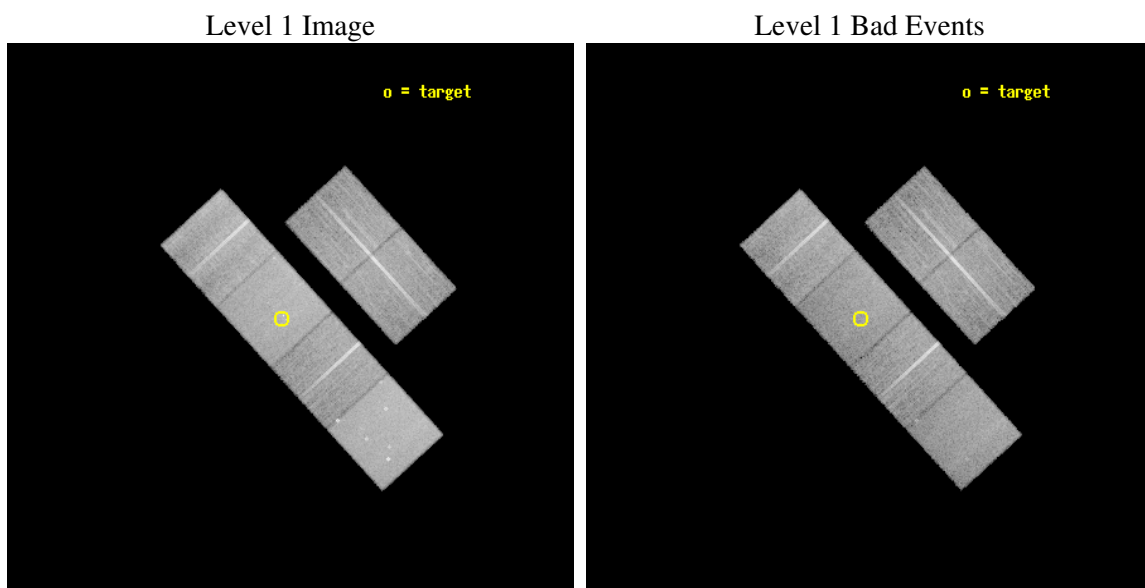
|          |  |
|----------|--|
| seq_num  | 500210   |
| obs_id   | 2760   |
| title    | CHANDRA TOO OBSERVATIONS OF TYPE IA SUPERNOVAE |
| observer | Prof. John Hughes                              |
| object   | SN2002BO                                       |
| dtcycle  | 0  |
| cycle    | P  |
| ra_targ  | 154.527083                                     |
| dec_targ | 21.82825                                       |
| ra_nom   | 154.51059587362                                |
| dec_nom  | 21.814156406902                                |
| roll_nom | 227.45511113759                                |
| revision | 2  |
| ontime   | 20064.000018686                                |
| livetime | 19809.937569359                                |
| ontime2  | 20064.000018686                                |
| ontime3  | 20060.758998603                                |
| ontime5  | 20064.000018686                                |
| ontime6  | 20060.759038433                                |
| ontime7  | 20064.000018686                                |
| ontime8  | 20057.518187761                                |
| l2events | 199829   |



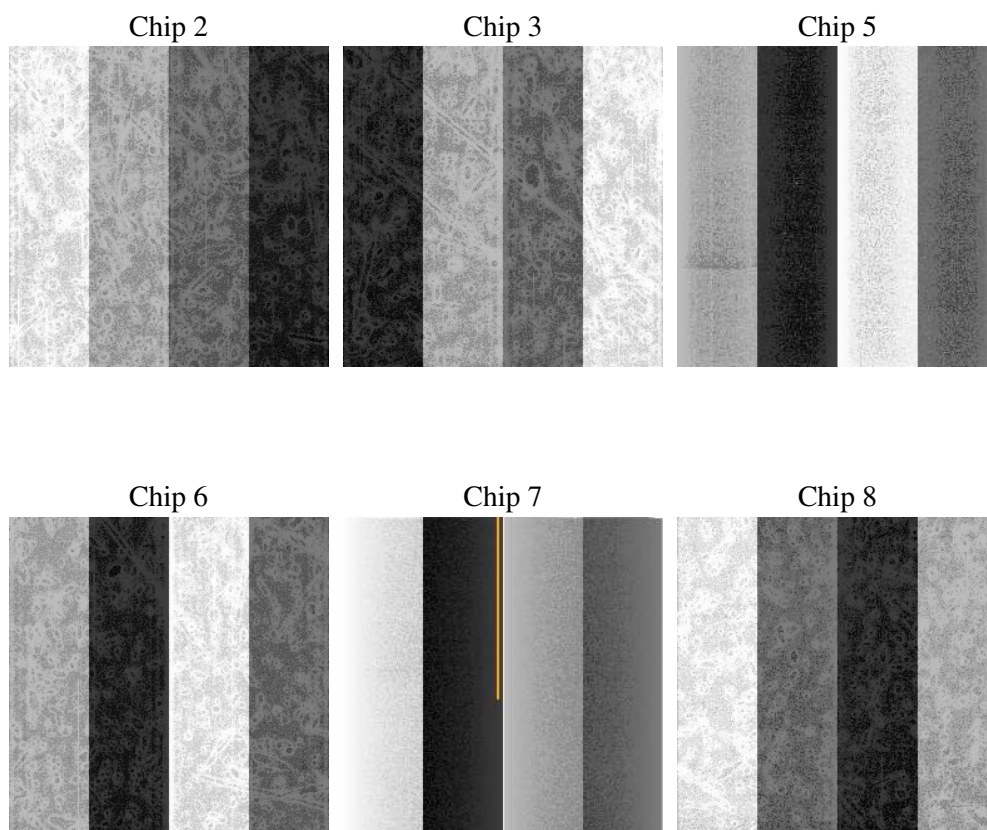
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.8.1             |
| caldsver | 3.2.3               |
| date     | 2006-09-06T18:58:53 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 20313.903000    |
| ontime         | 20071.554052725 |
| ontime2        | 20071.554052725 |
| ontime3        | 20071.554052725 |
| ontime5        | 20071.554072633 |
| ontime6        | 20068.313072473 |
| ontime7        | 20071.554052725 |
| ontime8        | 20068.313152209 |
| l1events       | 937367          |

### 2.1.4 Events

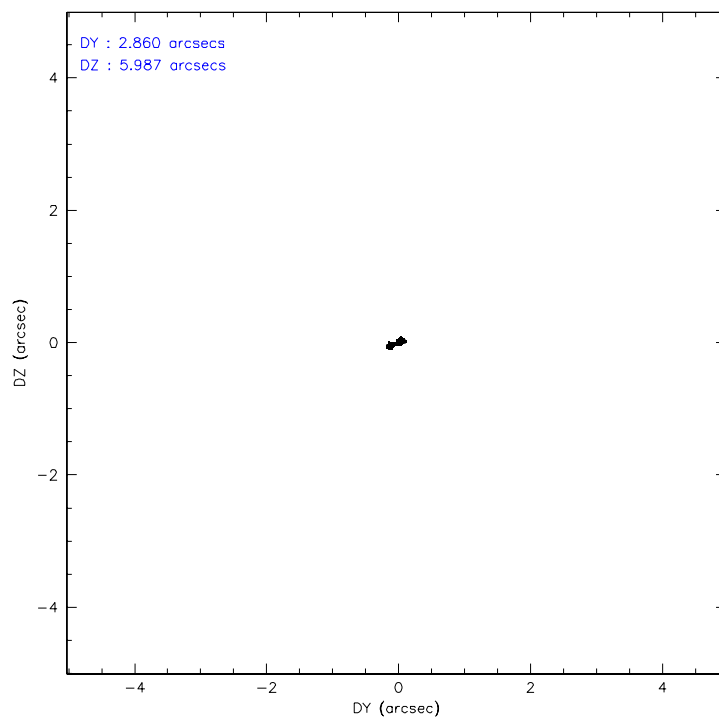
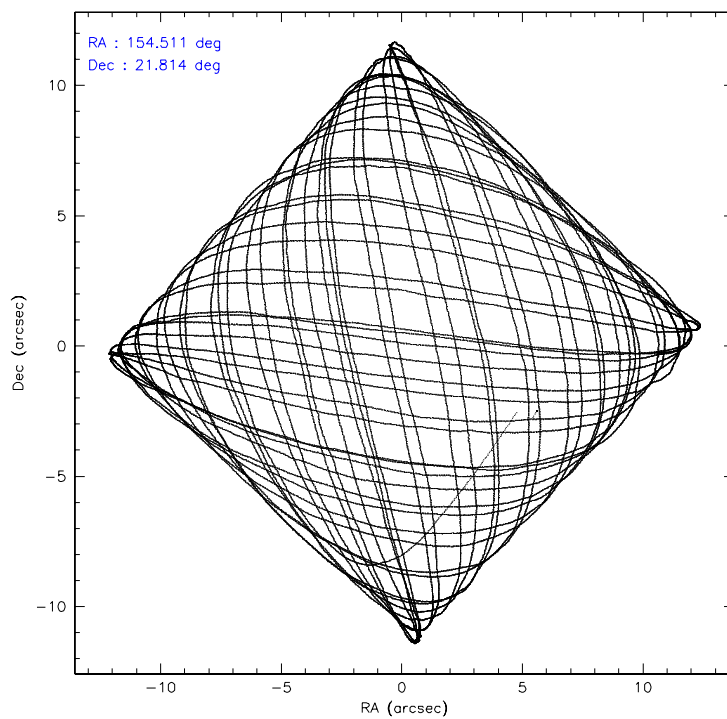
|                 | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 136319 | 130934 | 191103 | 134853 | 174943 | 169215 |
| rejected events | 120701 | 116014 | 107974 | 119171 | 107553 | 134534 |
| rejected %      | 88%    | 88%    | 56%    | 88%    | 61%    | 79%    |

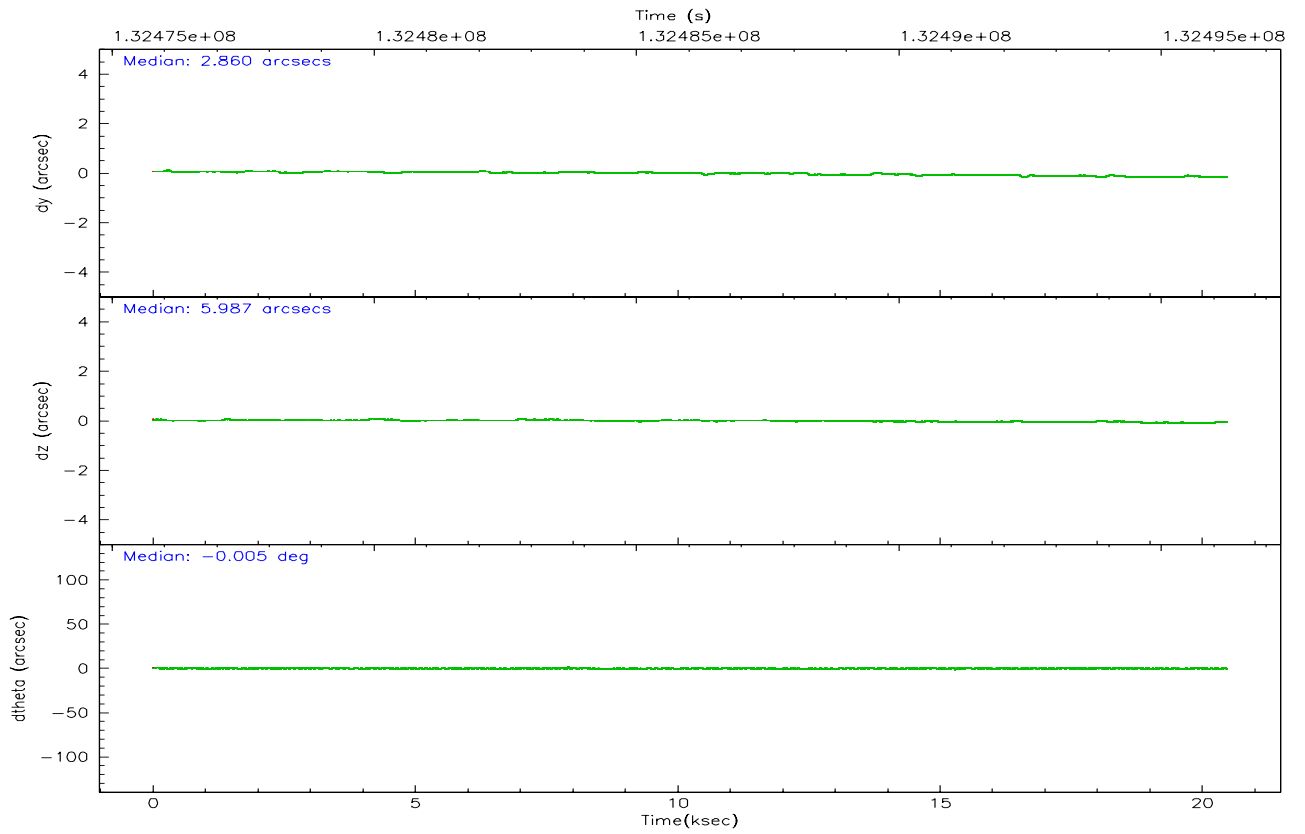
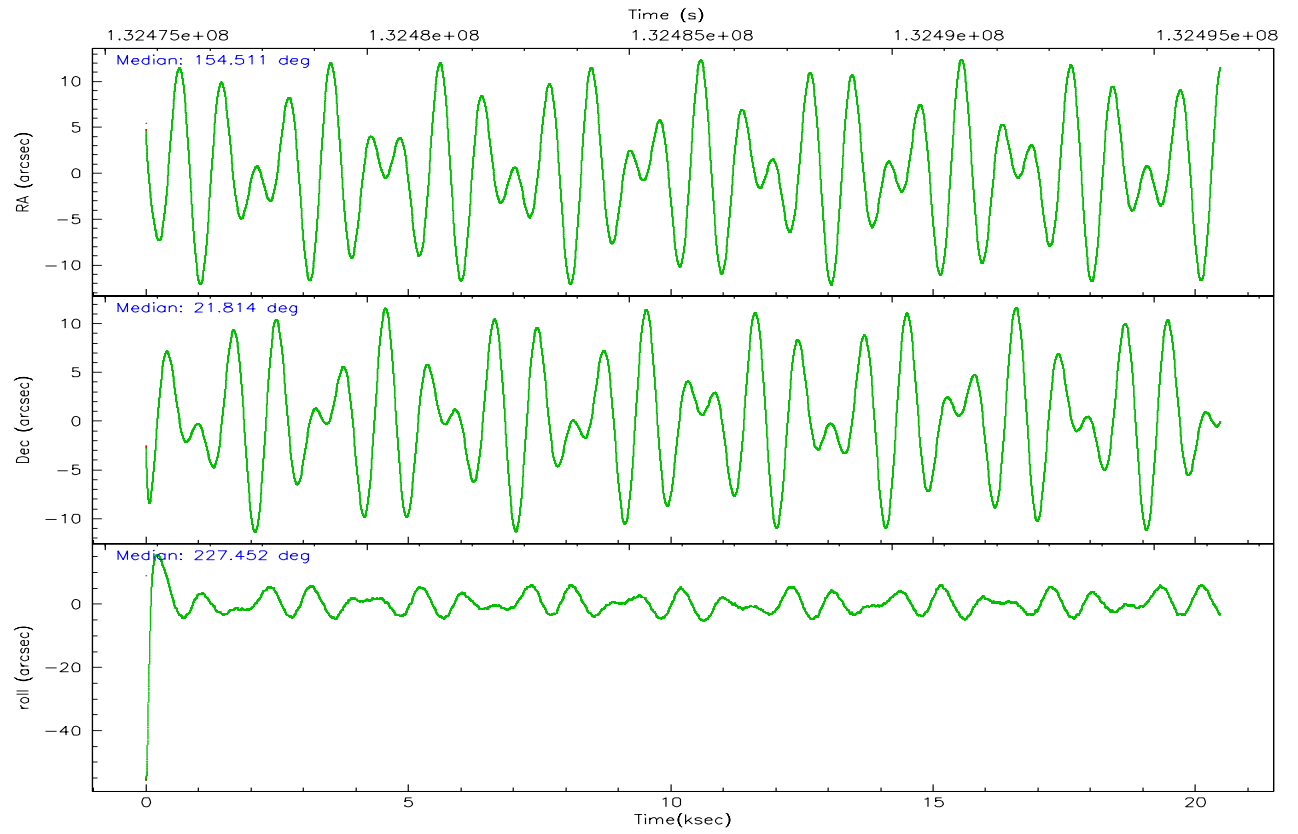
|                | ccd 2  | ccd 3  | ccd 5 | ccd 6  | ccd 7 | ccd 8  |
|----------------|--------|--------|-------|--------|-------|--------|
| grade 0 events | 6792   | 6357   | 5489  | 6276   | 4463  | 11317  |
|                | 4%     | 4%     | 2%    | 4%     | 2%    | 6%     |
| grade 1 events | 67     | 59     | 235   | 71     | 104   | 108    |
|                | 0%     | 0%     | 0%    | 0%     | 0%    | 0%     |
| grade 2 events | 3337   | 3053   | 25612 | 3139   | 16651 | 7382   |
|                | 2%     | 2%     | 13%   | 2%     | 9%    | 4%     |
| grade 3 events | 1389   | 1395   | 2055  | 1521   | 3502  | 3820   |
|                | 1%     | 1%     | 1%    | 1%     | 2%    | 2%     |
| grade 4 events | 1413   | 1484   | 1748  | 1577   | 3338  | 3507   |
|                | 1%     | 1%     | 0%    | 1%     | 1%    | 2%     |
| grade 5 events | 4743   | 5274   | 9546  | 5858   | 11169 | 7075   |
|                | 3%     | 4%     | 4%    | 4%     | 6%    | 4%     |
| grade 6 events | 2692   | 2638   | 48257 | 3174   | 39469 | 8667   |
|                | 1%     | 2%     | 25%   | 2%     | 22%   | 5%     |
| grade 7 events | 115886 | 110674 | 98161 | 113237 | 96247 | 127339 |
|                | 85%    | 84%    | 51%   | 83%    | 55%   | 75%    |

## 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                       | 154.516623          | 154.5105958736248    | Alternating exposures requested | N         | N       |
| Pointing Dec                      | 21.840836           | 21.81415640690211    | Primary exposure time           | 0.000000  | 3.2     |
| Pointing Roll                     | 227.296286          | 227.4551111375896    |                                 |           |         |
| 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            | 132475941.184000    | 132474859.78868      |                                 |           |         |
| Observation start date            | 2002-03-14T06:51:17 | 2002-03-14T06:34:19  |                                 |           |         |
| Observation end time              | 132496255.184000    | 132496570.31456      |                                 |           |         |
| Observation end date              | 2002-03-14T12:29:51 | 2002-03-14T12:36:10  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

## 2.3 Aspect





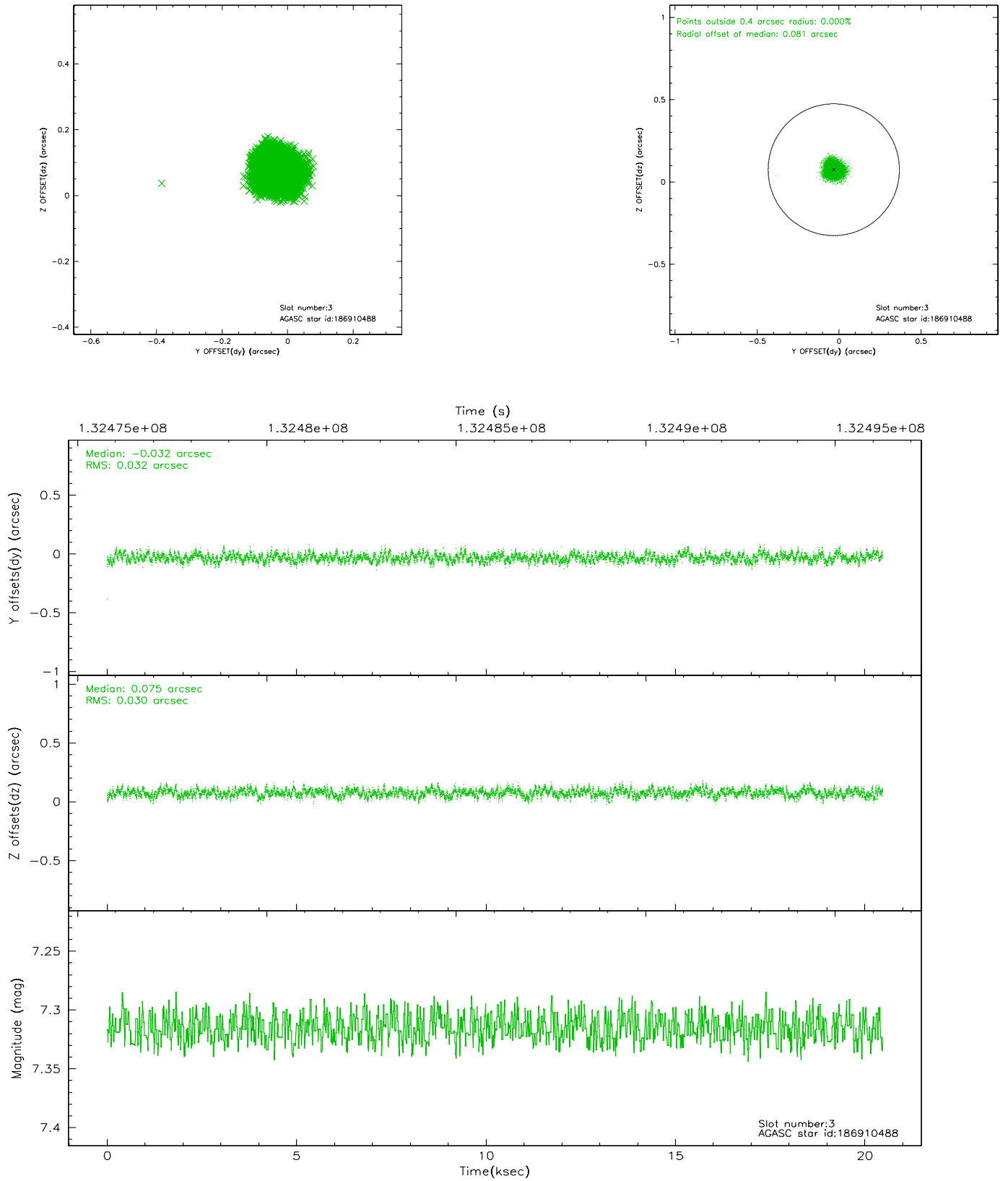
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.12 | 4994  | -0.025 | 0.035  | 0.006 | 0.011 | 0.000000   | 0.000000  | -755.46  | -1727.05 |
| 1    | FID    | ACIS-S-4  | 7.21 | 4994  | -0.063 | 0.003  | 0.006 | 0.010 | 0.000000   | 0.000000  | 2157.65  | 181.28   |
| 2    | FID    | ACIS-S-5  | 7.24 | 4994  | 0.056  | -0.029 | 0.007 | 0.013 | 0.000000   | 0.000000  | -1808.03 | 175.03   |
| 3    | GUIDE  | 186910488 | 7.32 | 9984  | -0.032 | 0.075  | 0.047 | 0.073 | 155.064237 | 22.011425 | -1691.94 | 924.51   |
| 4    | GUIDE  | 186778248 | 7.81 | 9984  | 0.058  | -0.050 | 0.055 | 0.086 | 154.251642 | 21.913046 | 409.94   | -826.95  |
| 5    | GUIDE  | 186784080 | 8.45 | 9986  | 0.078  | 0.038  | 0.061 | 0.098 | 153.932216 | 21.529554 | 2149.82  | -680.59  |
| 6    | GUIDE  | 186910328 | 8.79 | 9984  | -0.022 | -0.066 | 0.057 | 0.093 | 154.791807 | 22.043886 | -1158.92 | 178.32   |
| 7    | GUIDE  | 186779440 | 9.40 | 9977  | -0.082 | 0.004  | 0.093 | 0.151 | 154.357260 | 22.385713 | -1080.58 | -1720.36 |

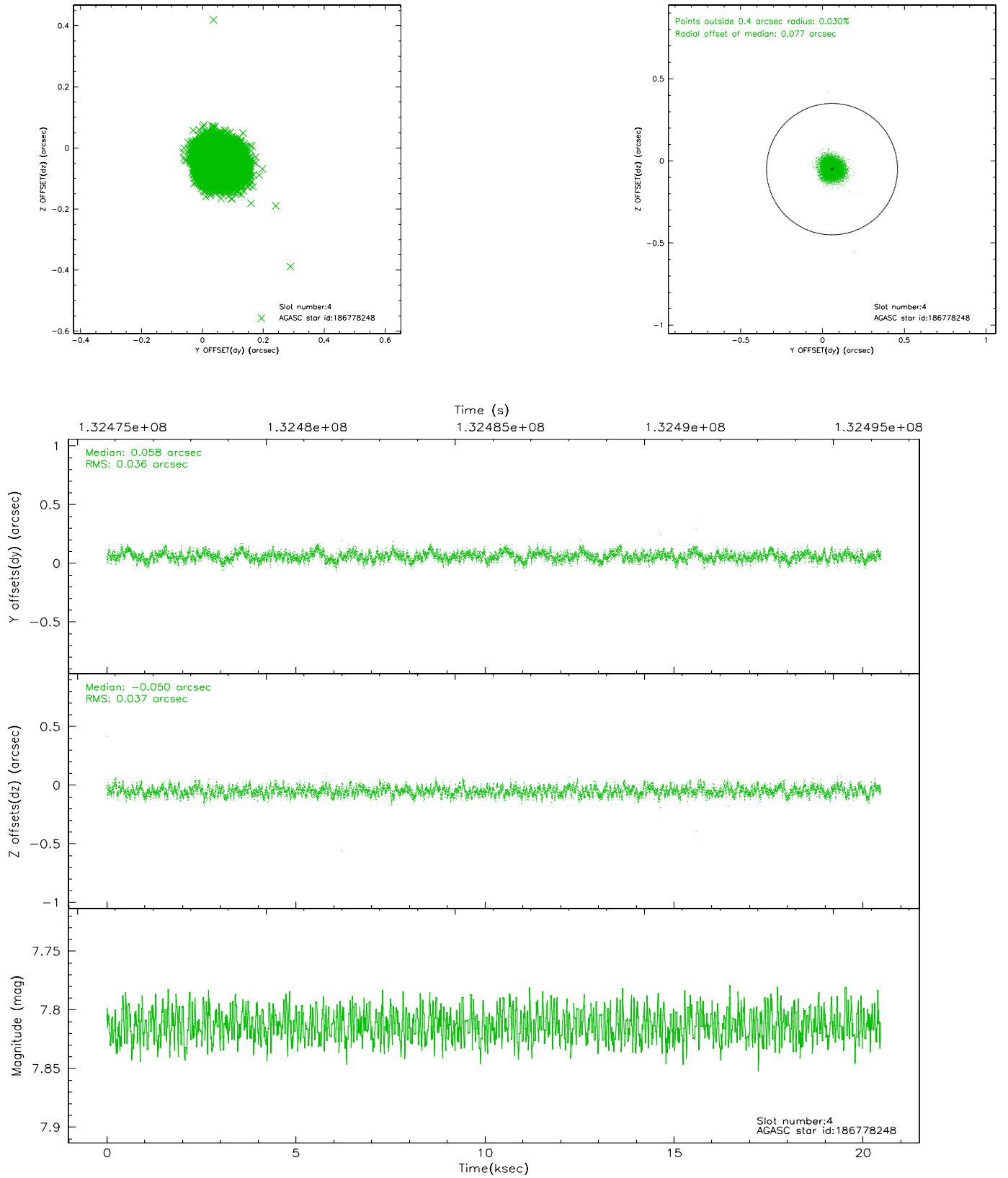


## 2.4 Star Slots

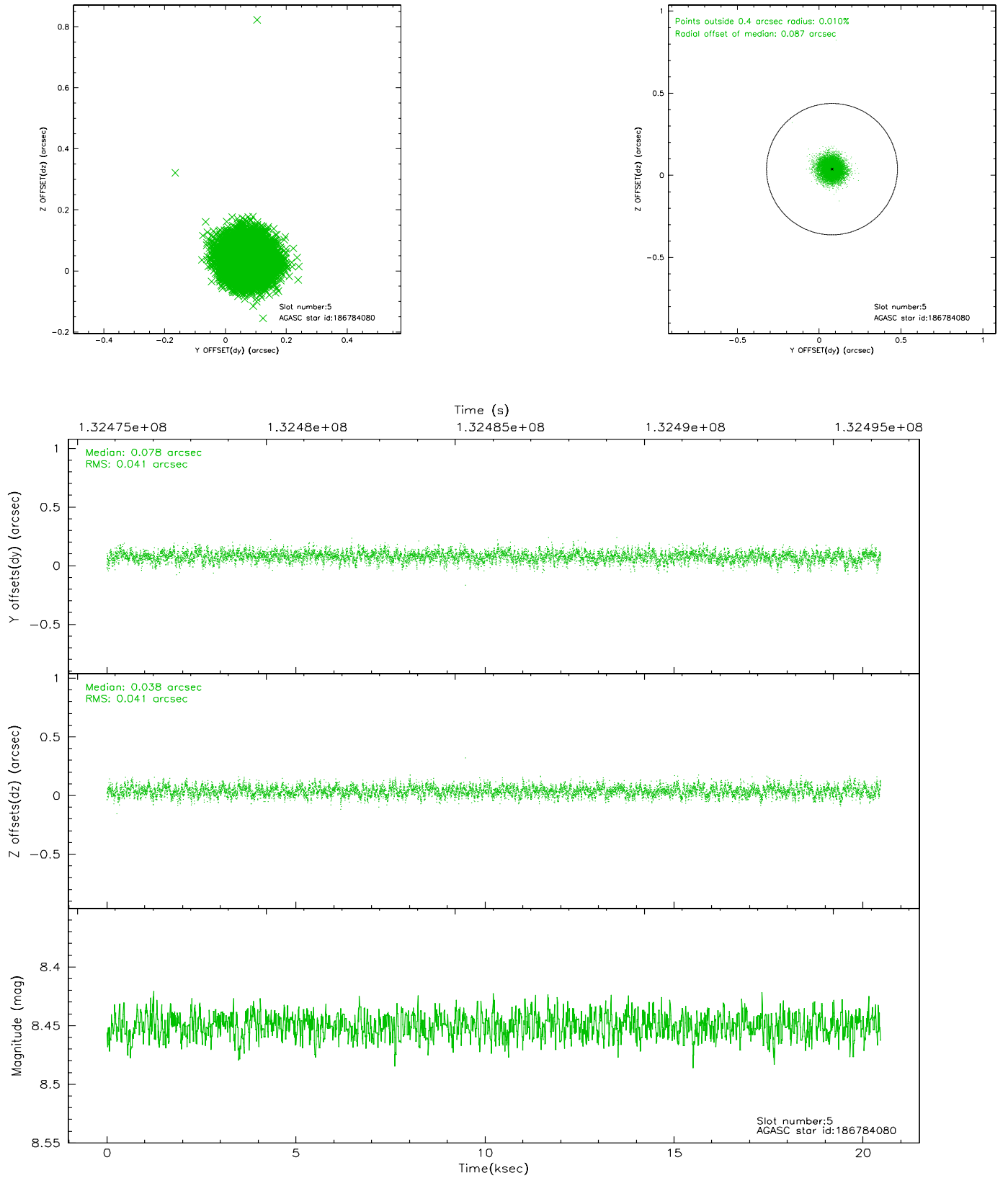
### 2.4.1 Slot 3



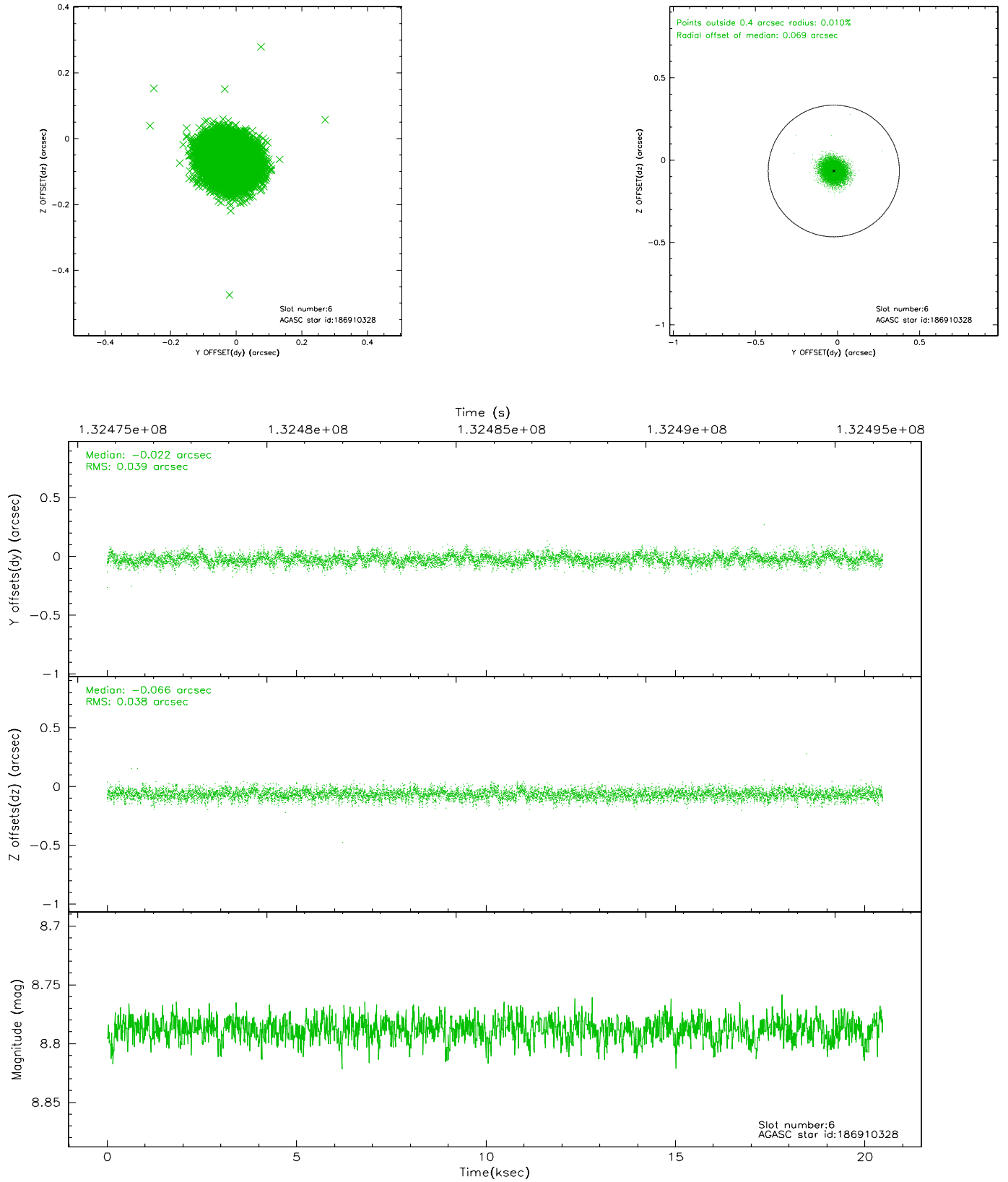
## 2.4.2 Slot 4



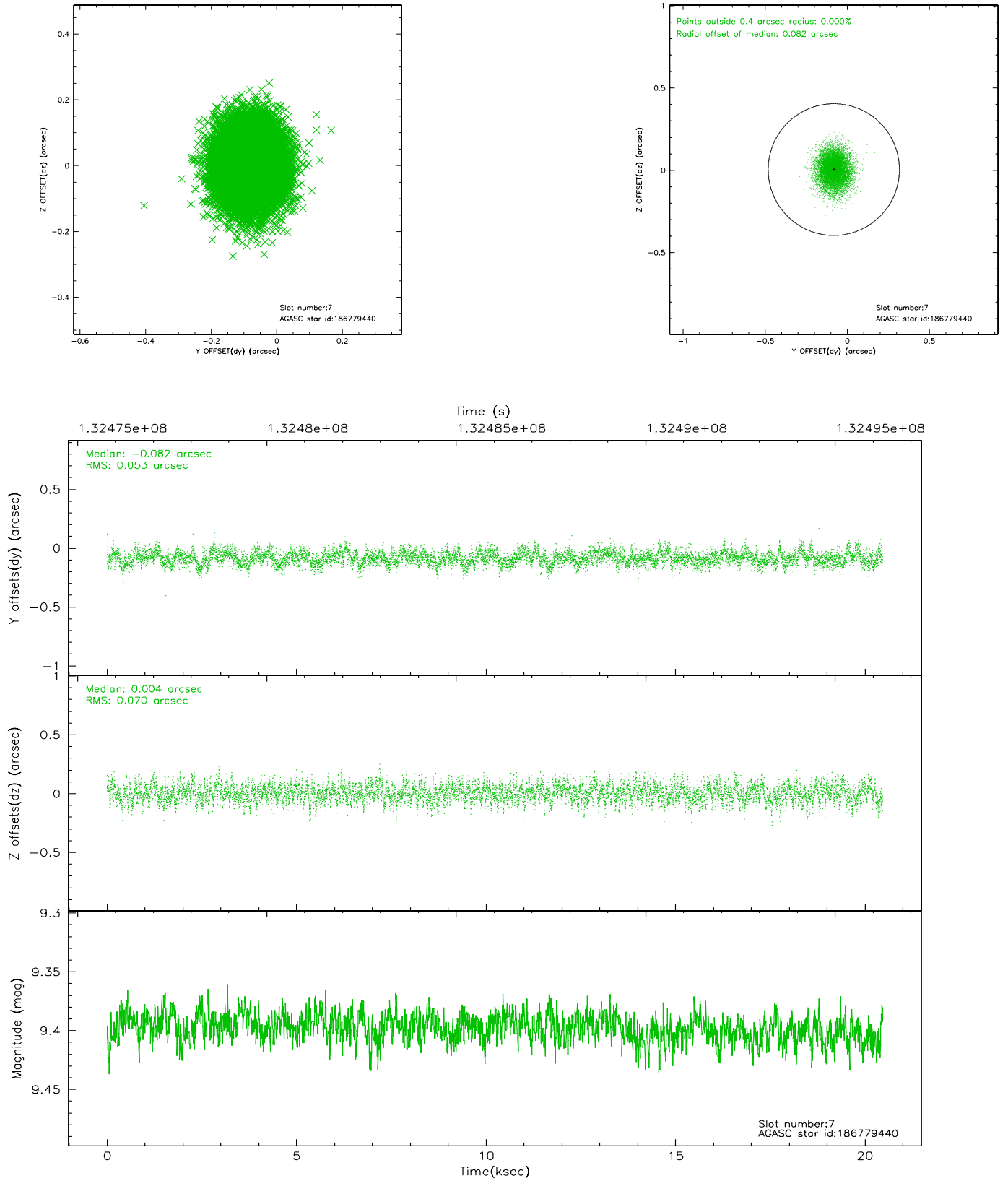
### 2.4.3 Slot 5



## 2.4.4 Slot 6

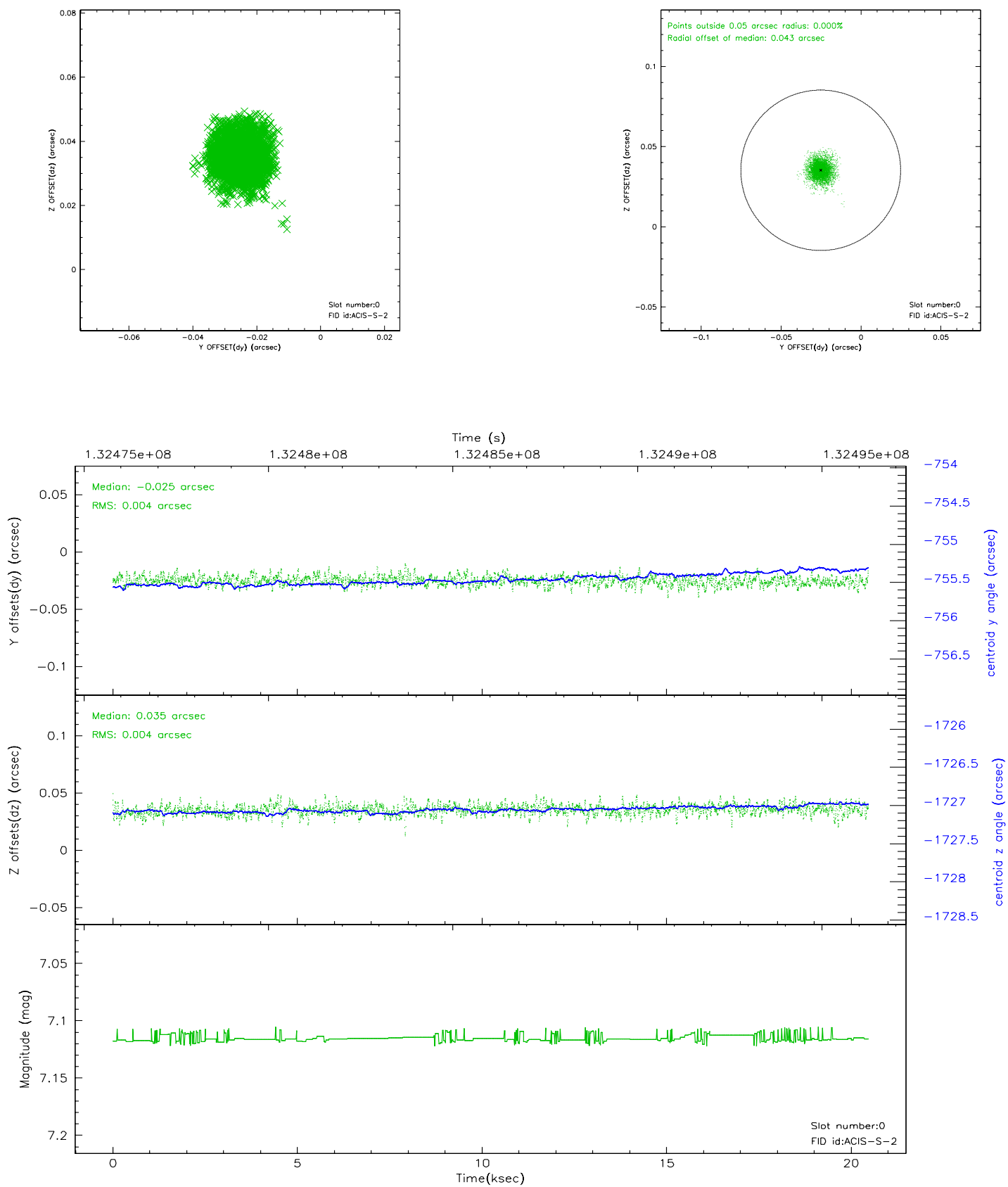


## 2.4.5 Slot 7

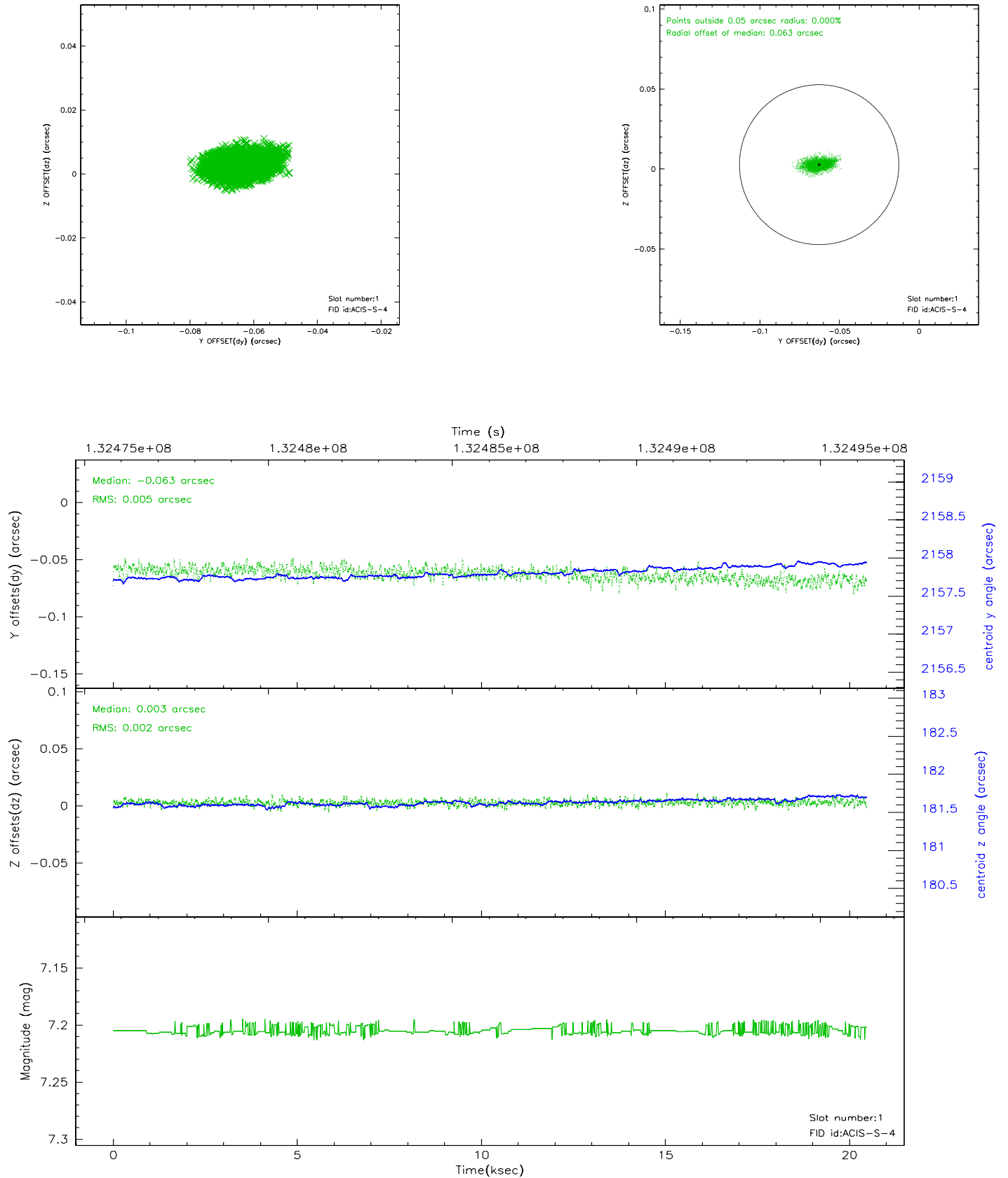


## 2.5 FID Slots

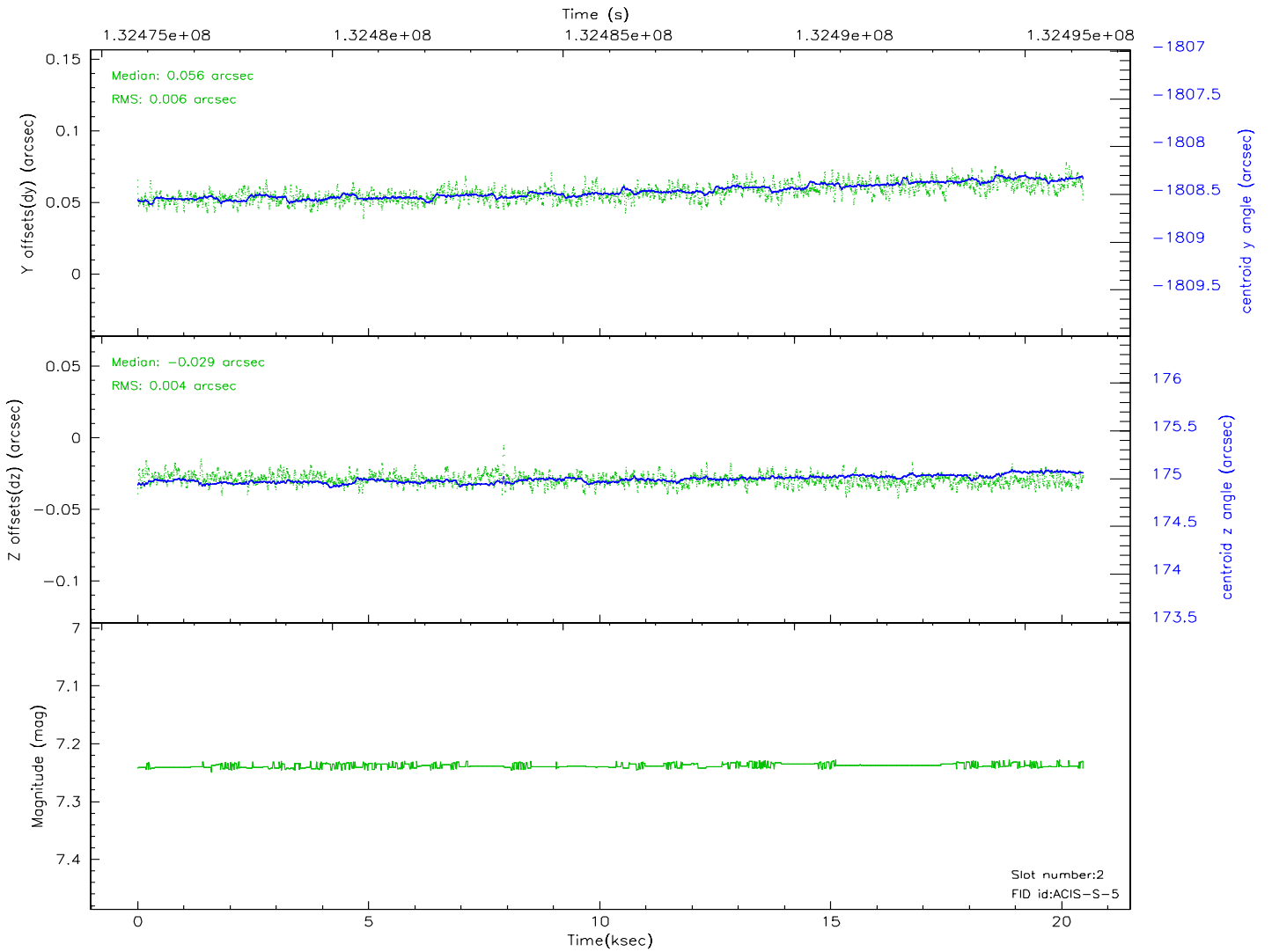
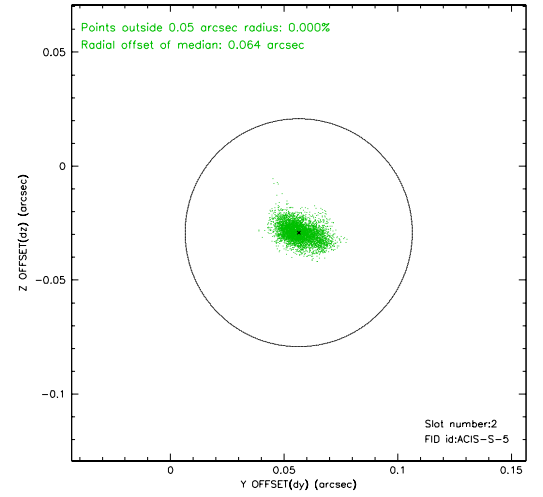
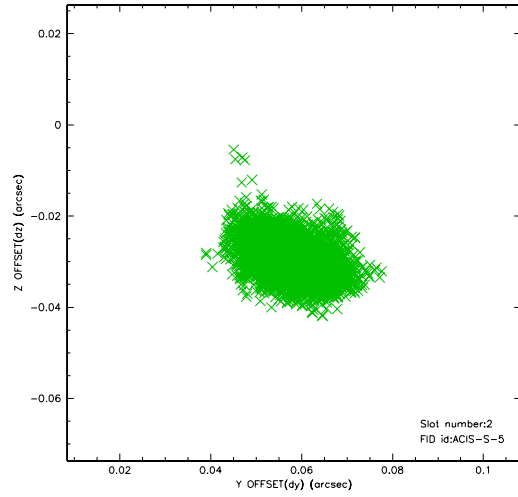
### 2.5.1 Slot 0



## 2.5.2 Slot 1

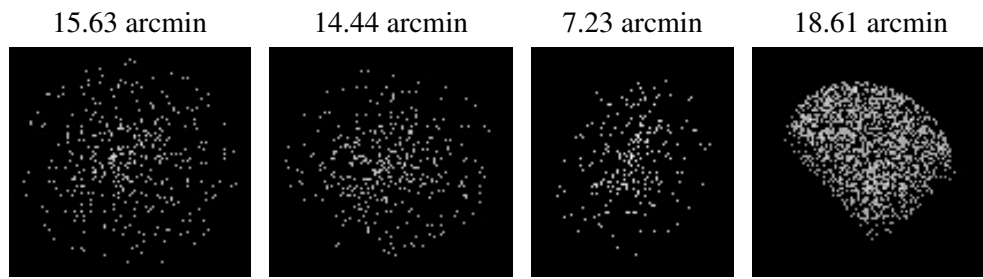


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.09.07 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 20.067     |

### A.2 Comments