

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 3282 - L2 Version 001  
Chandra X-Ray Center

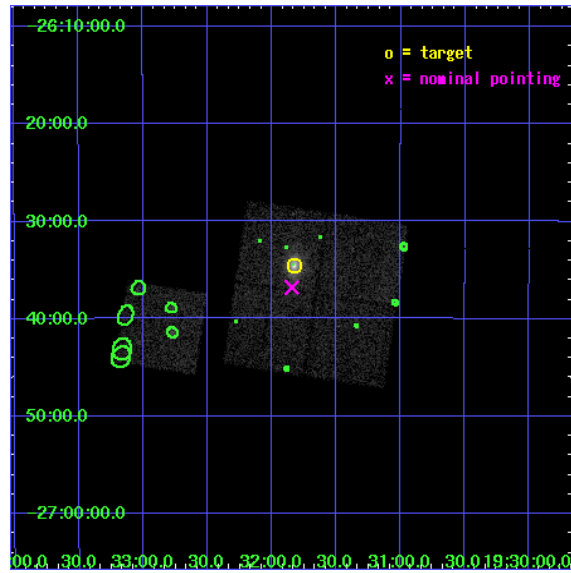
L2 Processing Date : Oct 7 2006

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# 1 Front

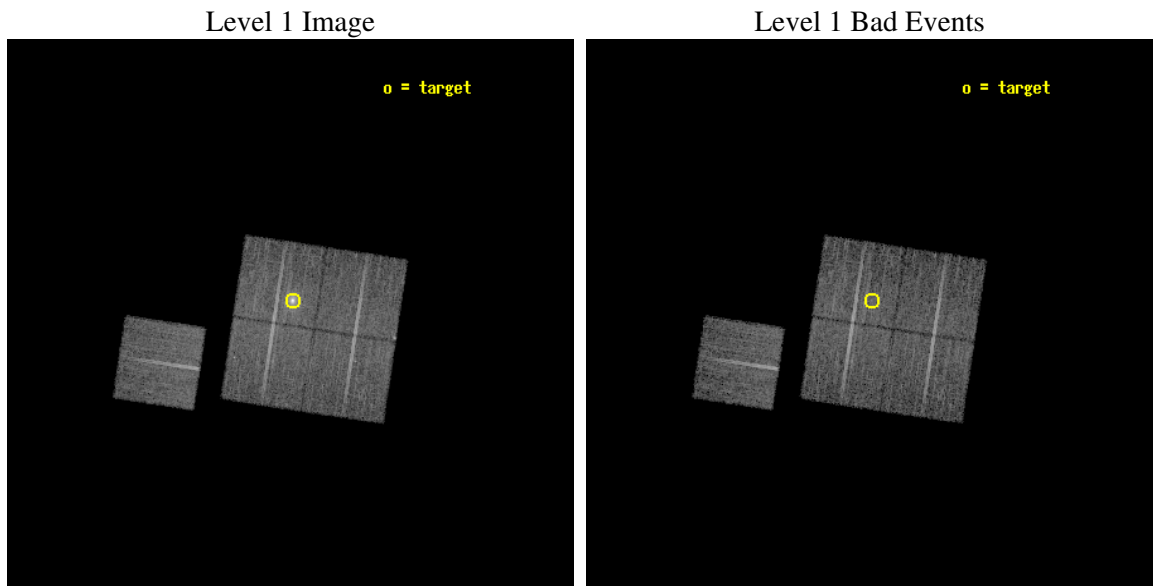
|          |   |
|----------|---|
| seq_num  | 800282  |
| obs_id   | 3282  |
| title    | MACS: THE X-RAY PROPERTIES OF THE MOST MASSIVE GALAXY CLUSTERS AT $Z>0.3$ |
| observer | Dr Harald Ebeling   |
| object   | MACSJ1931.8-2634  |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 292.957083  |
| dec_targ | -26.576111  |
| ra_nom   | 292.96125779375   |
| dec_nom  | -26.613624090666  |
| roll_nom | 278.62669888779   |
| revision | 2   |
| ontime   | 13773.299973518   |
| livetime | 13593.341669608   |
| ontime0  | 13773.299973518   |
| ontime1  | 13773.299973518   |
| ontime2  | 13773.299973518   |
| ontime3  | 13773.299973518   |
| ontime6  | 13767.018053055   |
| l2events | 43065   |



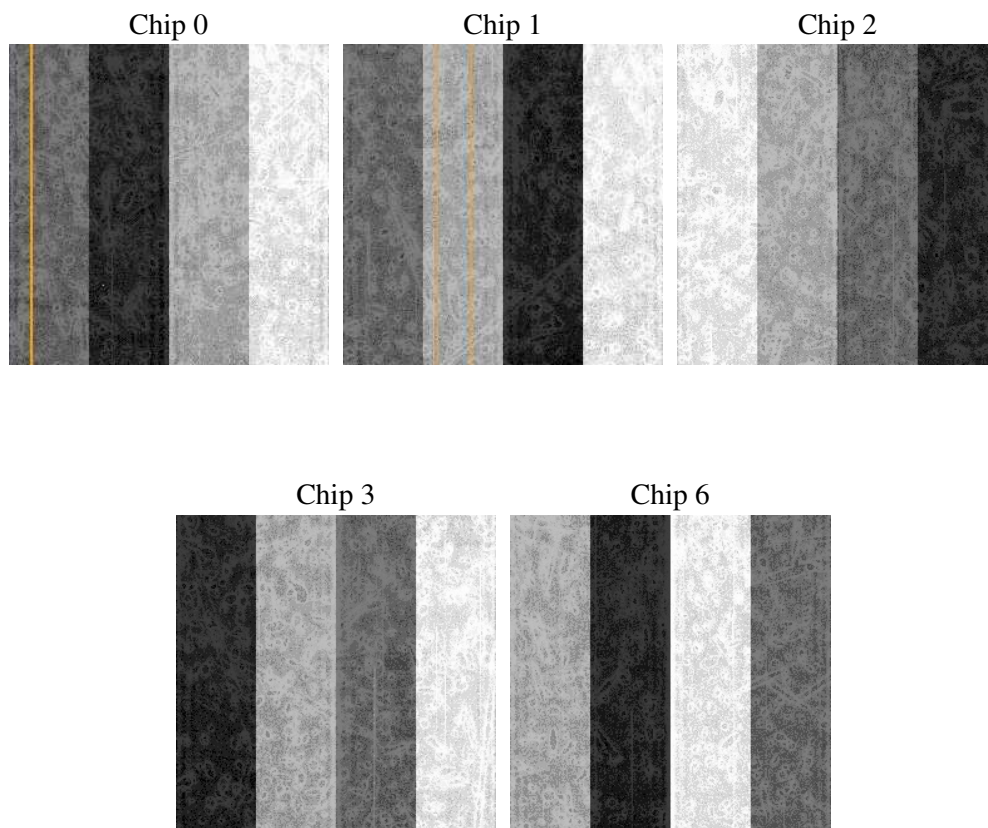
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.9               |
| caldbver | 3.2.3               |
| date     | 2006-10-07T11:23:05 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 14000.000000    |
| ontime         | 13776.431521893 |
| ontime0        | 13776.431521893 |
| ontime1        | 13776.4315418   |
| ontime2        | 13776.431521893 |
| ontime3        | 13776.431521893 |
| ontime6        | 13770.149621338 |
| l1events       | 362094          |

### 2.1.4 Events

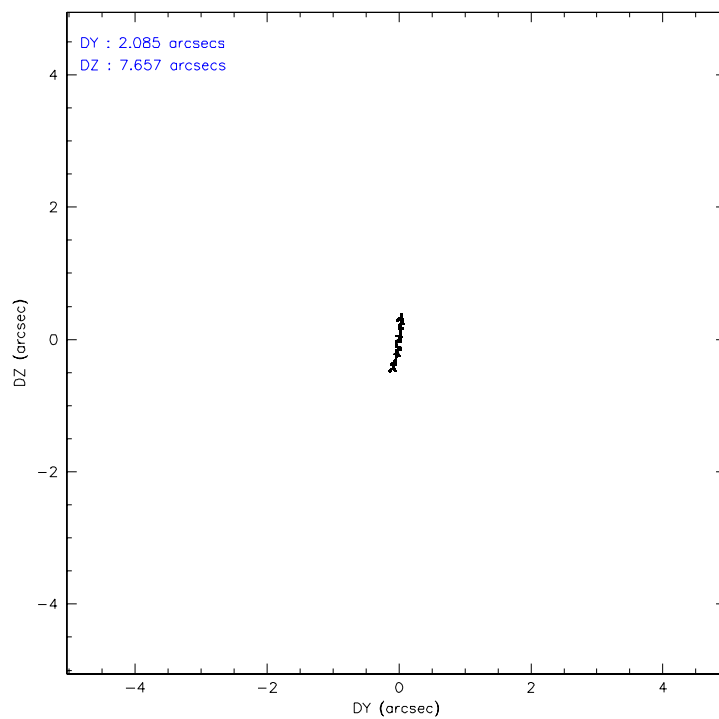
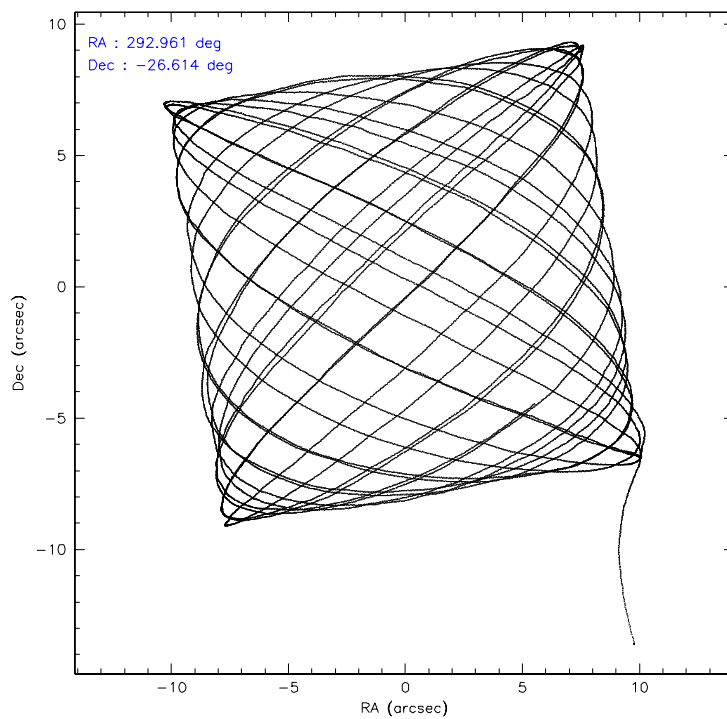
|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events  | 67001 | 66610 | 73515 | 82140 | 72828 |
| rejected events | 59598 | 57910 | 65599 | 64729 | 64827 |
| rejected %      | 88%   | 86%   | 89%   | 78%   | 89%   |

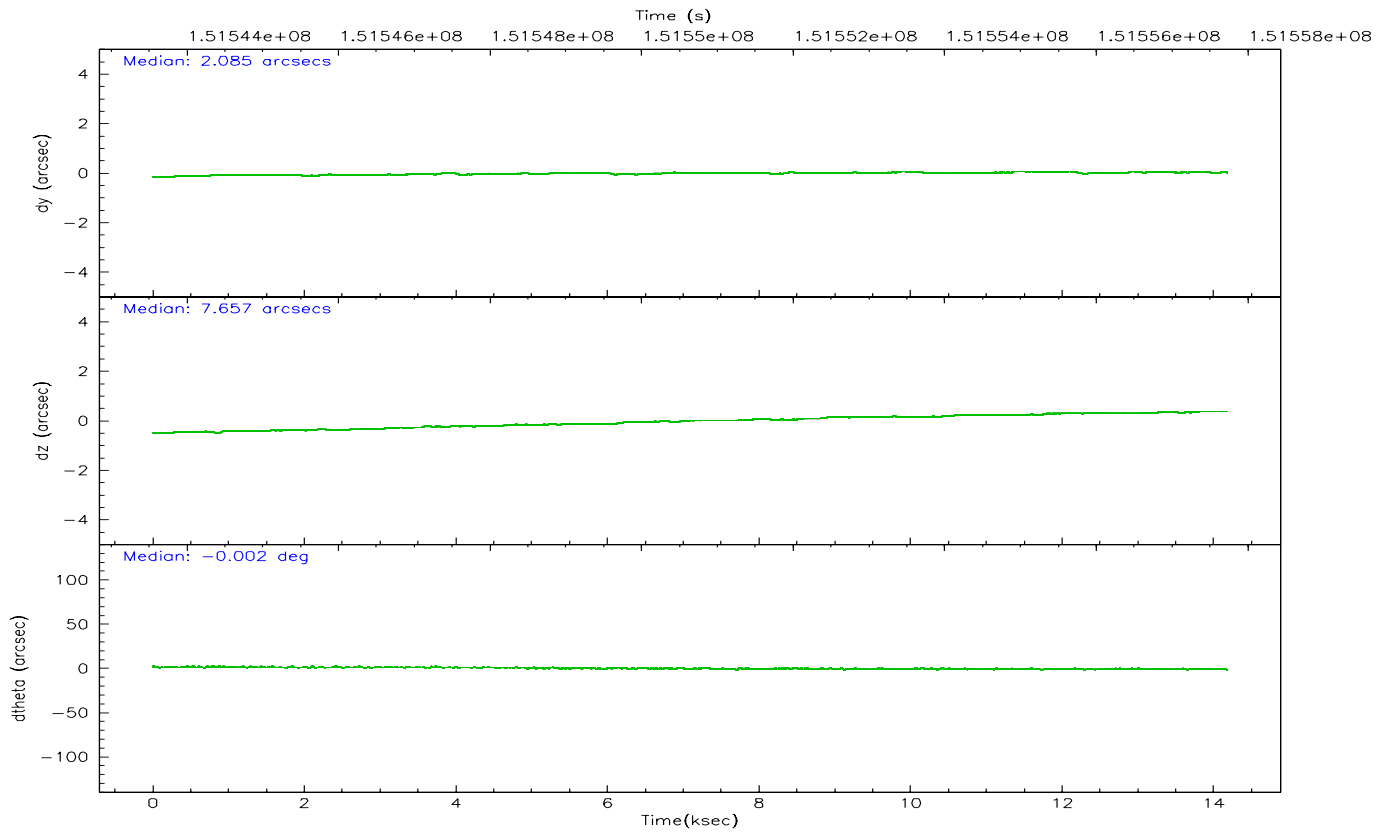
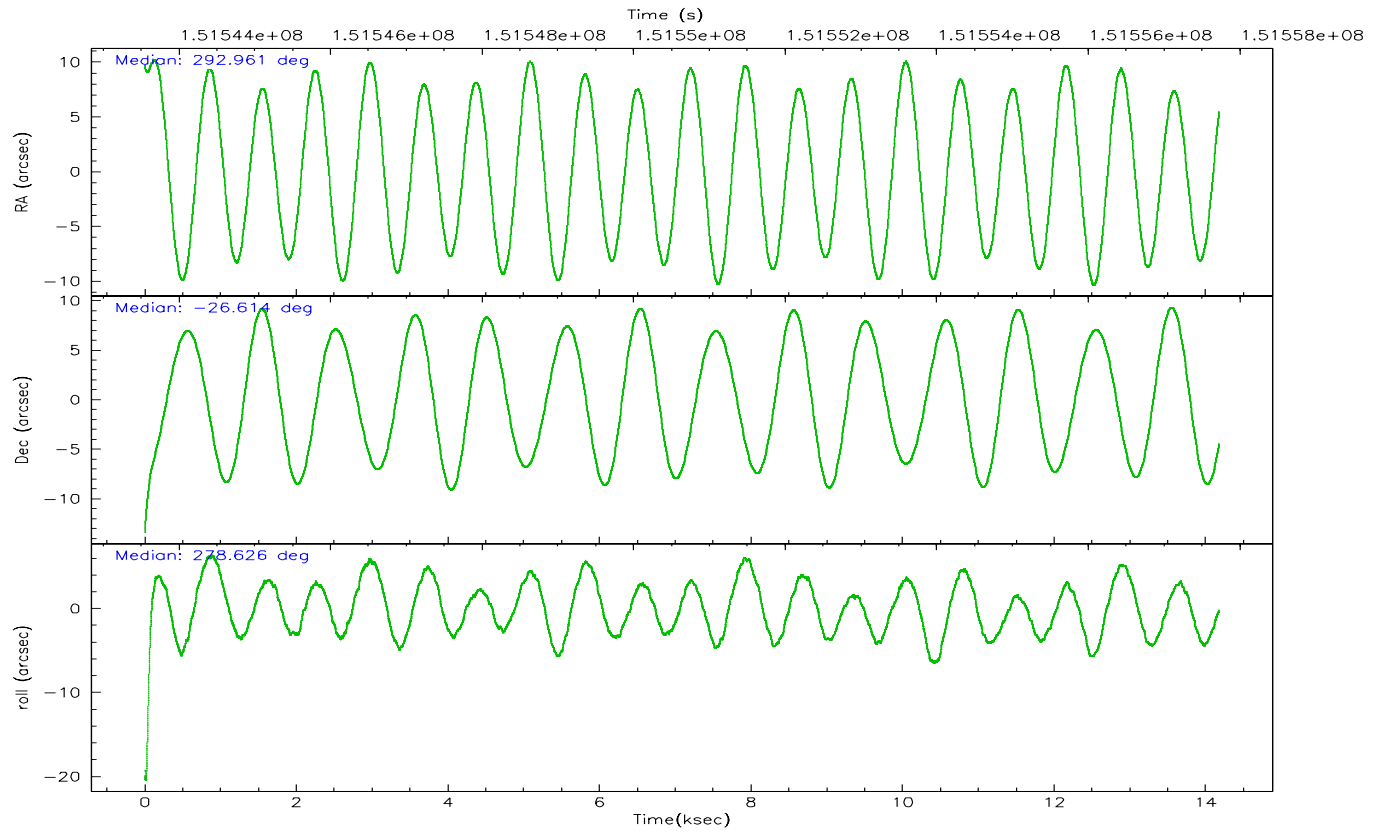
|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 2978  | 3696  | 3390  | 11382 | 3249  |
|                | 4%    | 5%    | 4%    | 13%   | 4%    |
| grade 1 events | 28    | 28    | 52    | 85    | 33    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 1615  | 1654  | 1713  | 2359  | 1523  |
|                | 2%    | 2%    | 2%    | 2%    | 2%    |
| grade 3 events | 782   | 857   | 752   | 1078  | 845   |
|                | 1%    | 1%    | 1%    | 1%    | 1%    |
| grade 4 events | 776   | 898   | 821   | 1138  | 831   |
|                | 1%    | 1%    | 1%    | 1%    | 1%    |
| grade 5 events | 2359  | 2490  | 2305  | 2639  | 2713  |
|                | 3%    | 3%    | 3%    | 3%    | 3%    |
| grade 6 events | 1254  | 1598  | 1242  | 1458  | 1554  |
|                | 1%    | 2%    | 1%    | 1%    | 2%    |
| grade 7 events | 57209 | 55389 | 63240 | 62001 | 62080 |
|                | 85%   | 83%   | 86%   | 75%   | 85%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 6         | 6       |
| Detector                          | ACIS-01236          | ACIS-01236           | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | VFAINT              | VFAINT               | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| Pointing RA                       | 292.942035          | 292.961257793753     | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | -26.592251          | -26.61362409066589   | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 278.409426          | 278.6266988877926    | Primary exposure time                 | 0.000000  | 3.1     |
| SIM focus pos (mm)                | -0.782348           | -0.7809083437167272  |                                       |           |         |
| SIM defocus (mm)                  | 0                   | 0.001439871863259334 |                                       |           |         |
| SIM translation stage pos (mm)    | -227.742463         | -227.734108438797    |                                       |           |         |
| SIM translation stage offset (mm) | -5.85               | -5.858344564132665   |                                       |           |         |
| Observation start time            | 151543735.184000    | 151542413.333        |                                       |           |         |
| Observation start date            | 2002-10-20T23:27:51 | 2002-10-20T23:06:53  |                                       |           |         |
| Observation end time              | 151557735.184000    | 151558148.10866      |                                       |           |         |
| Observation end date              | 2002-10-21T03:21:11 | 2002-10-21T03:29:08  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect





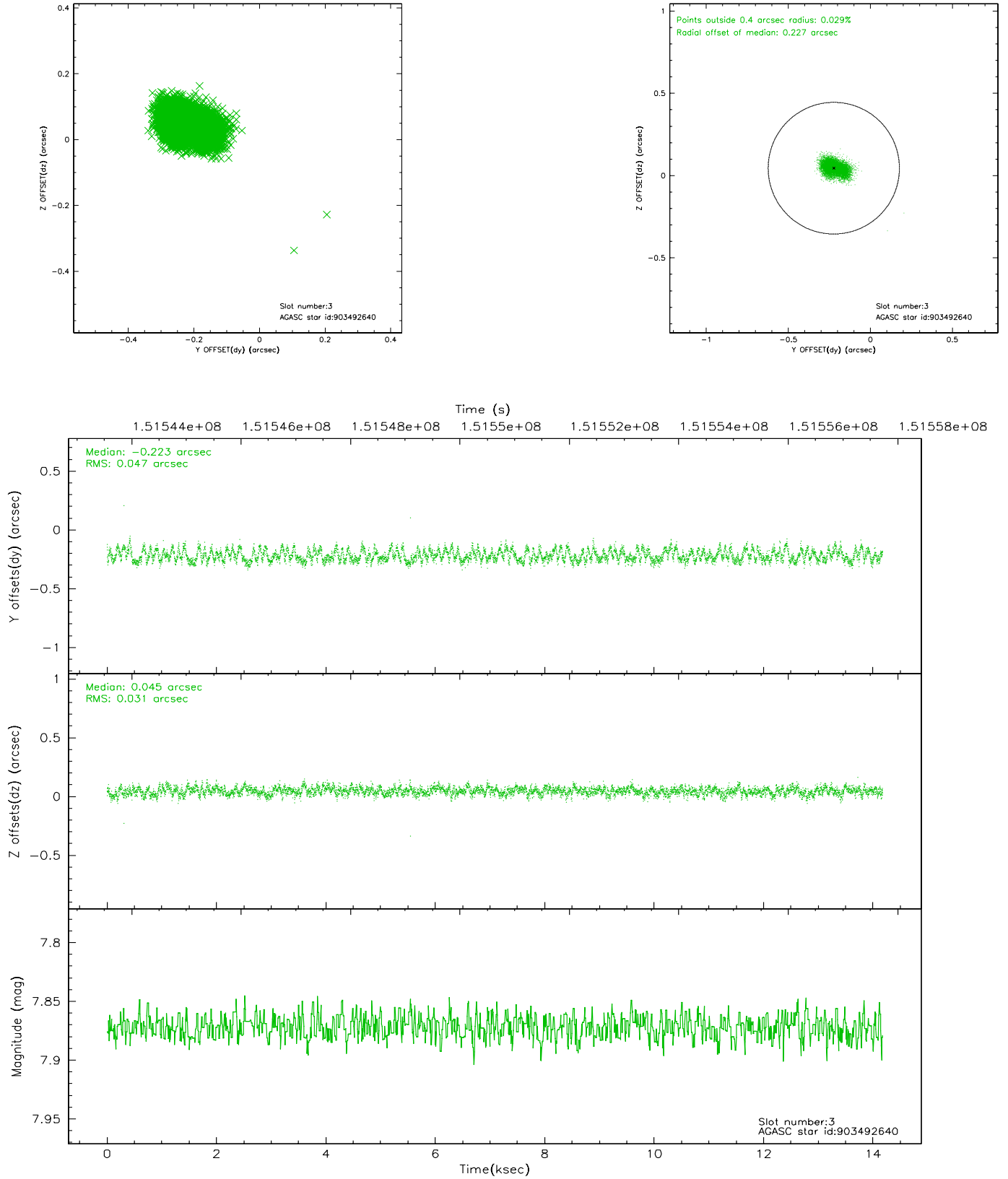
### Slot Statistics

| 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 | 3458  | 0.015  | 0.033  | 0.011 | 0.017 | 0.000000   | 0.000000   | 937.65   | -951.25  |
| 1    | FID    | ACIS-I-5  | 7.23 | 3458  | -0.103 | 0.058  | 0.010 | 0.016 | 0.000000   | 0.000000   | -1810.38 | 946.09   |
| 2    | FID    | ACIS-I-6  | 7.25 | 3458  | -0.004 | -0.021 | 0.009 | 0.014 | 0.000000   | 0.000000   | 402.83   | 1590.87  |
| 3    | GUIDE  | 903492640 | 7.87 | 6917  | -0.223 | 0.045  | 0.060 | 0.095 | 293.220458 | -26.028115 | -1877.40 | 1187.91  |
| 4    | GUIDE  | 904014544 | 8.11 | 6917  | 0.076  | 0.090  | 0.048 | 0.078 | 293.603626 | -27.152462 | 2309.54  | 1801.06  |
| 5    | GUIDE  | 902318016 | 8.76 | 6916  | 0.033  | -0.100 | 0.062 | 0.101 | 292.480935 | -26.857630 | 730.81   | -1604.91 |
| 6    | GUIDE  | 901787584 | 8.90 | 6915  | -0.181 | -0.051 | 0.064 | 0.104 | 292.918738 | -25.994222 | -2141.56 | 240.00   |
| 7    | GUIDE  | 904012680 | 8.98 | 6913  | 0.290  | 0.016  | 0.072 | 0.114 | 293.487334 | -27.163859 | 2294.02  | 1426.47  |

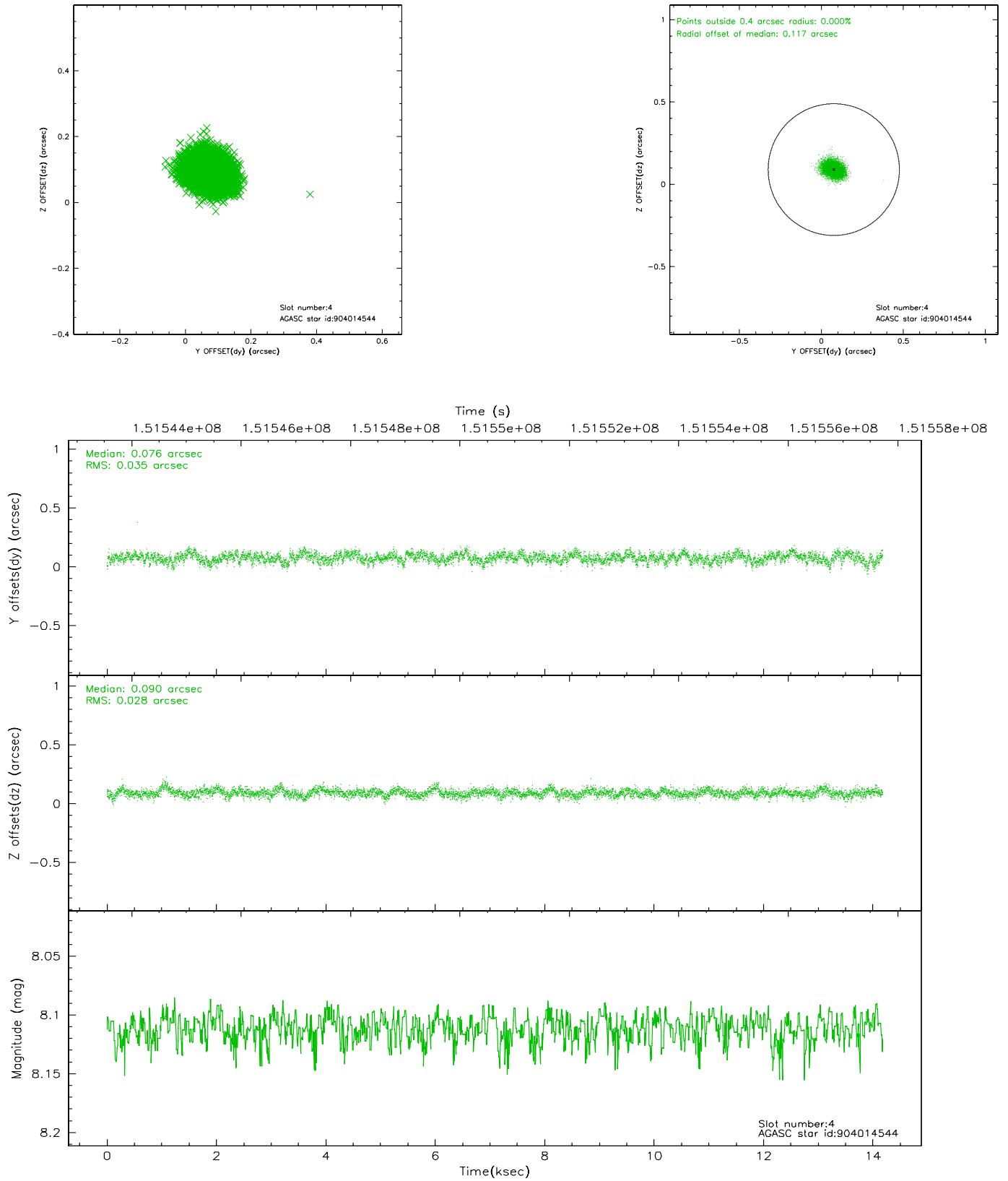


## 2.4 Star Slots

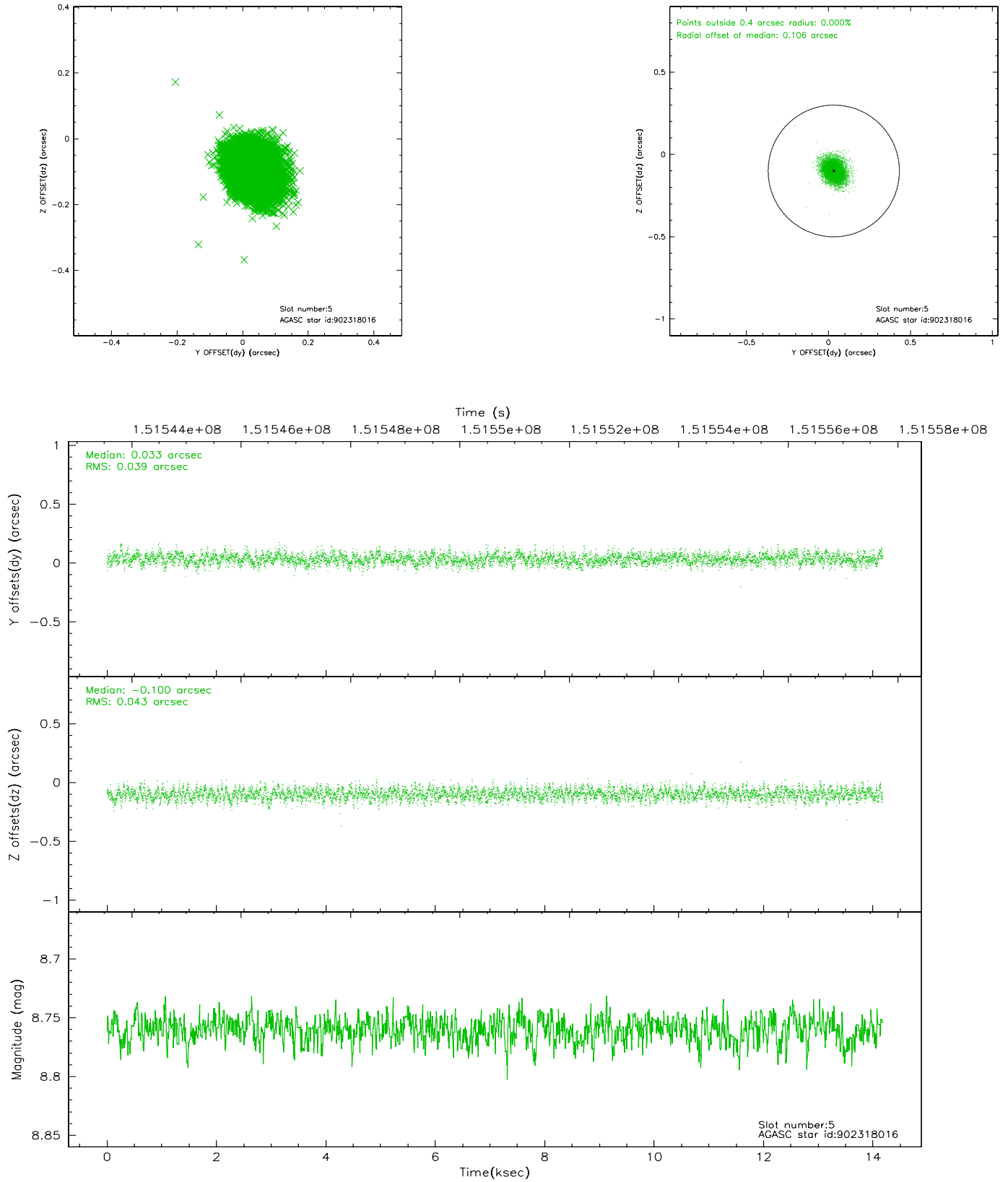
### 2.4.1 Slot 3



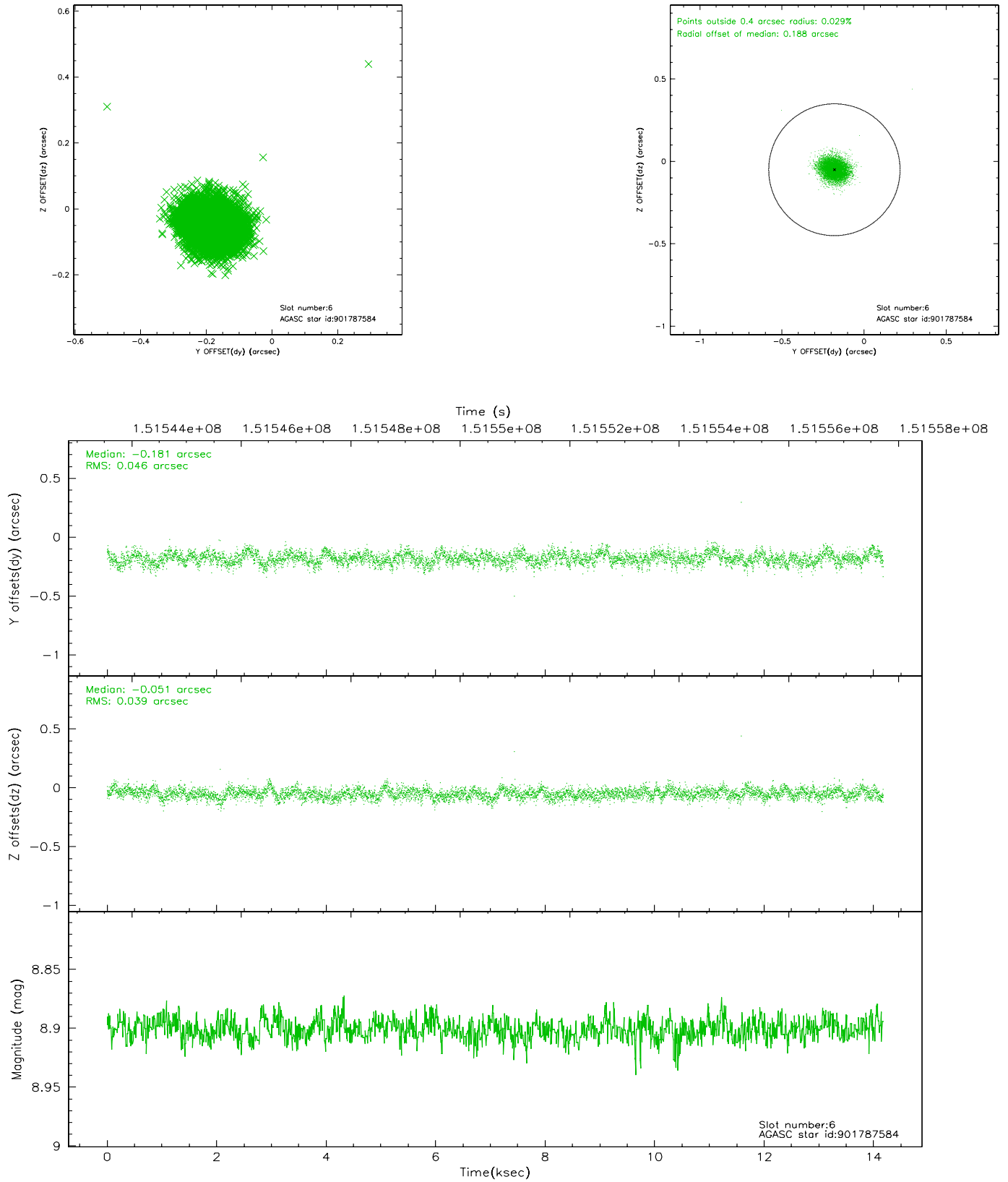
## 2.4.2 Slot 4



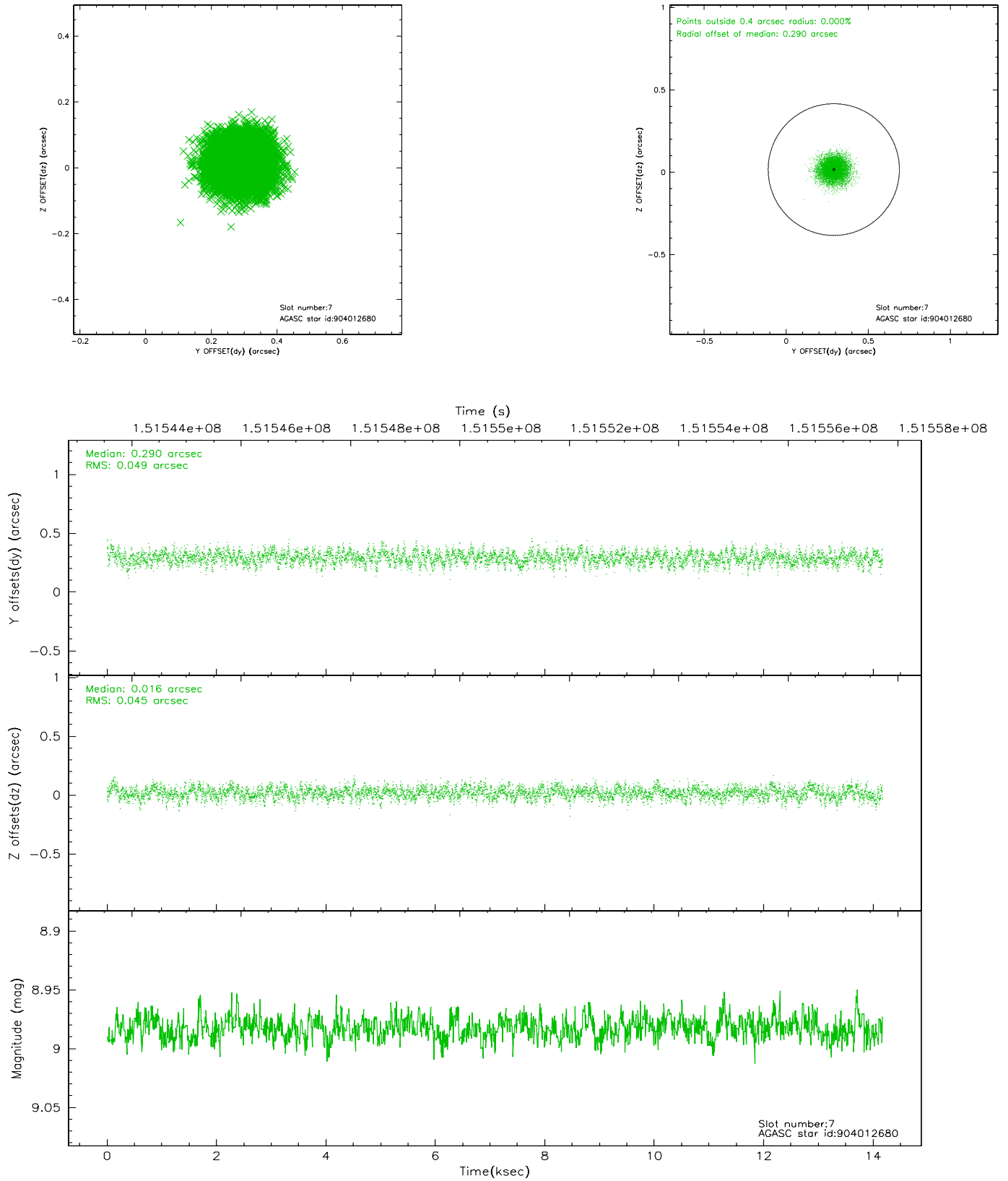
### 2.4.3 Slot 5



## 2.4.4 Slot 6

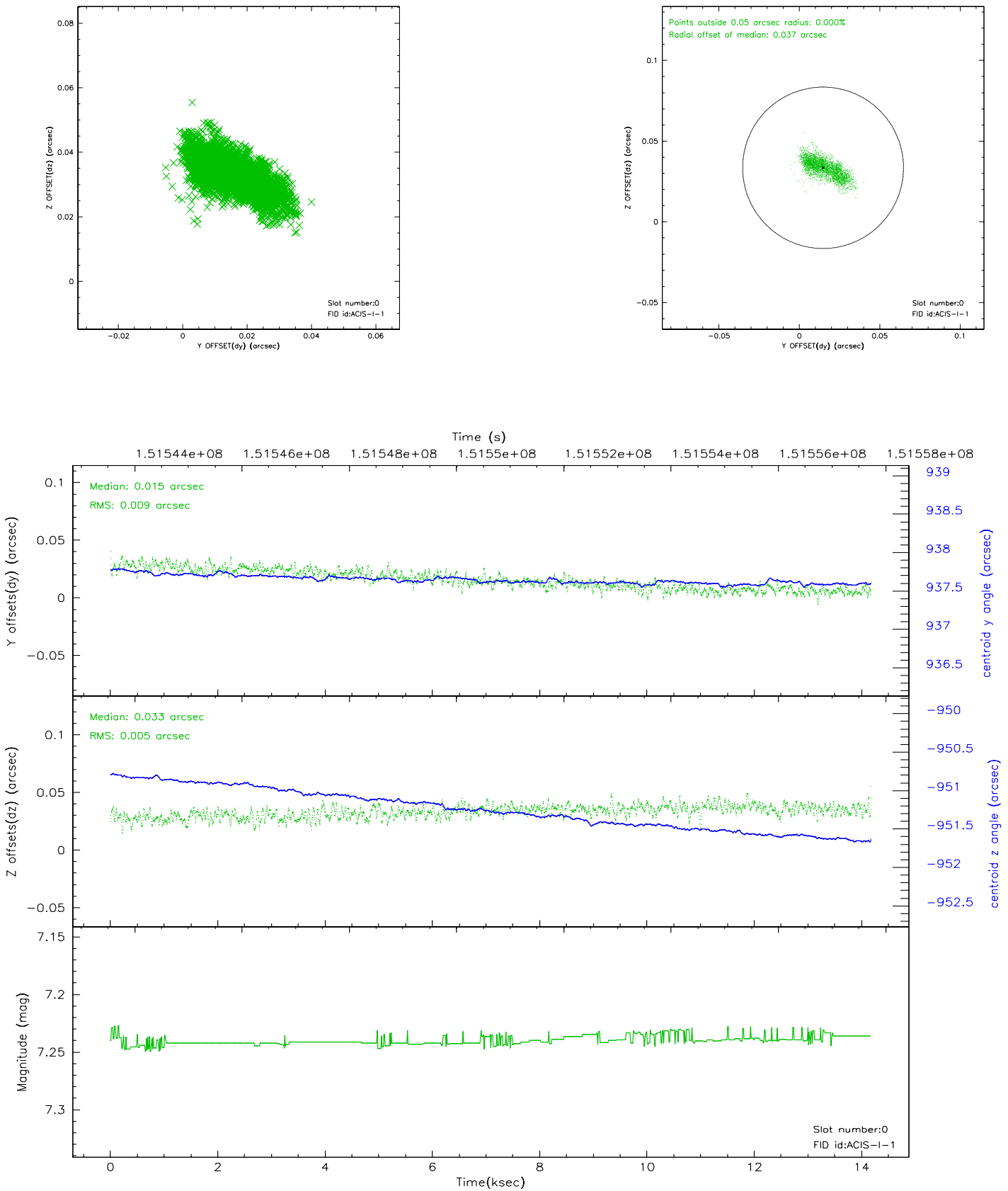


## 2.4.5 Slot 7

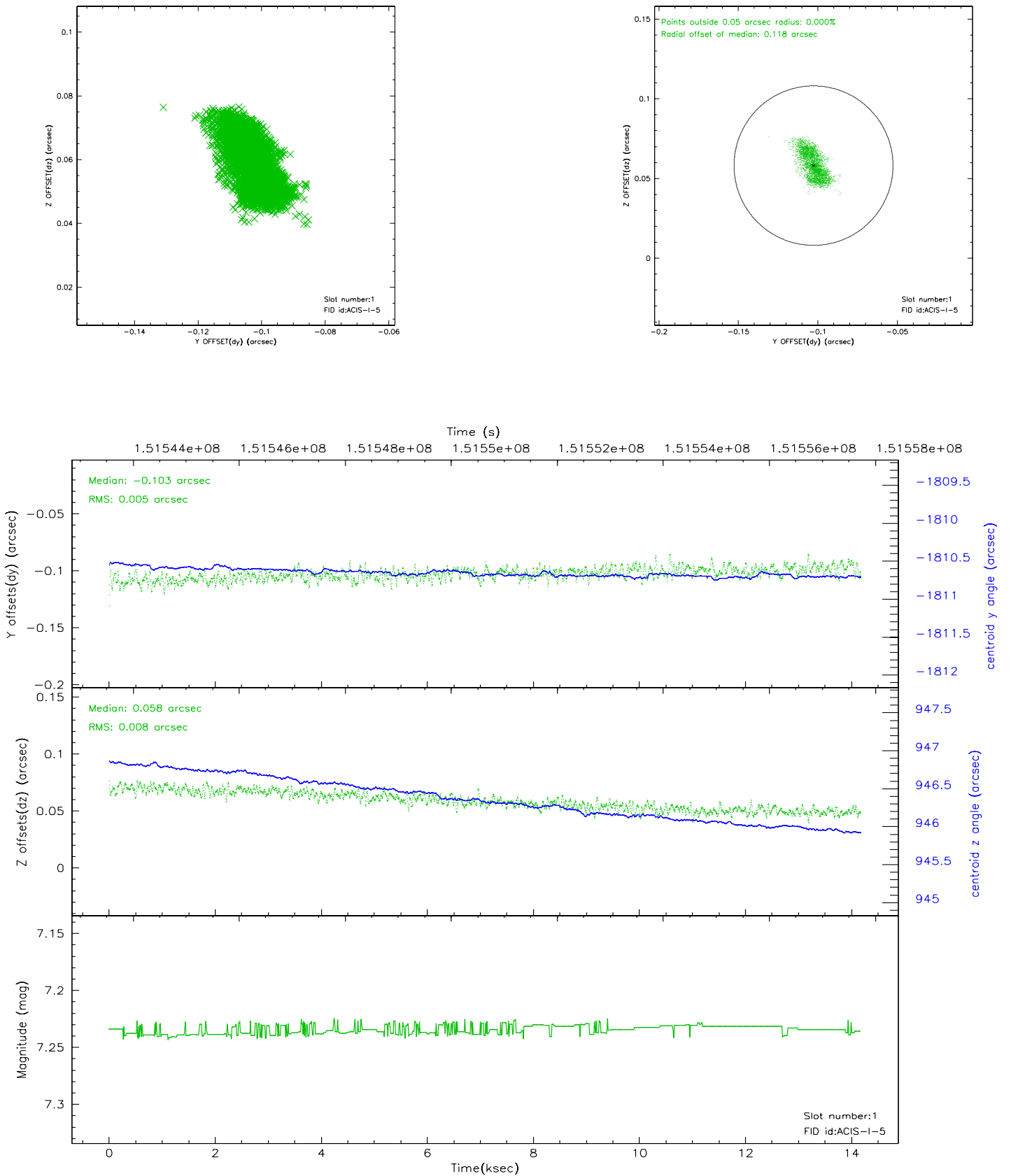


## 2.5 FID Slots

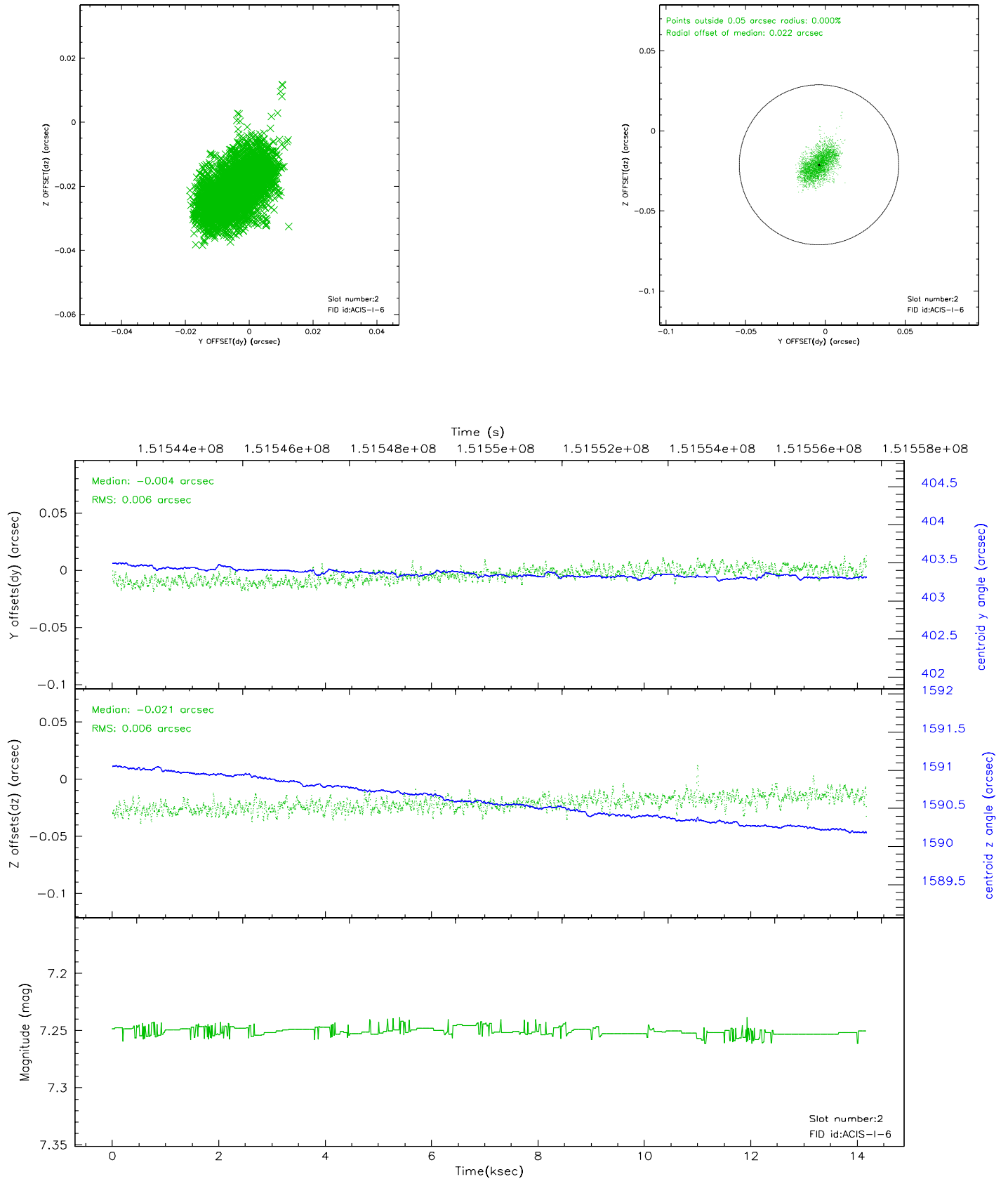
### 2.5.1 Slot 0



## 2.5.2 Slot 1

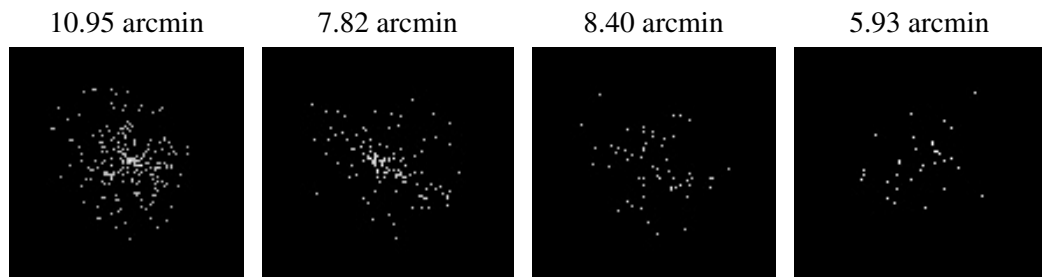


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.10.08 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 13.773     |

### A.2 Comments