

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 676 - L2 Version 001  
Chandra X-Ray Center

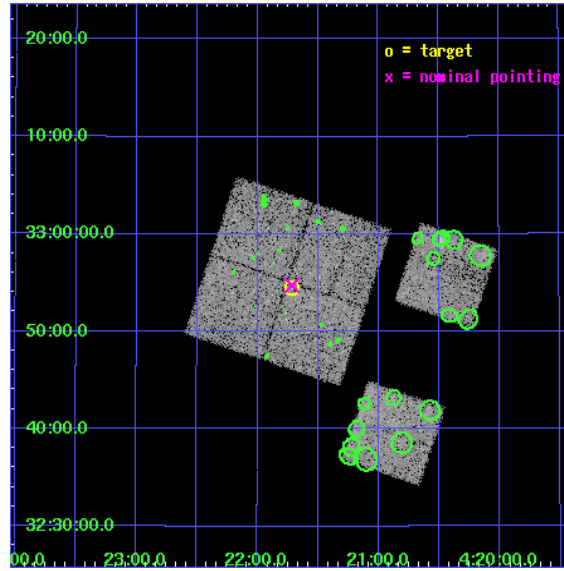
L2 Processing Date : Jun 9 2007

## 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

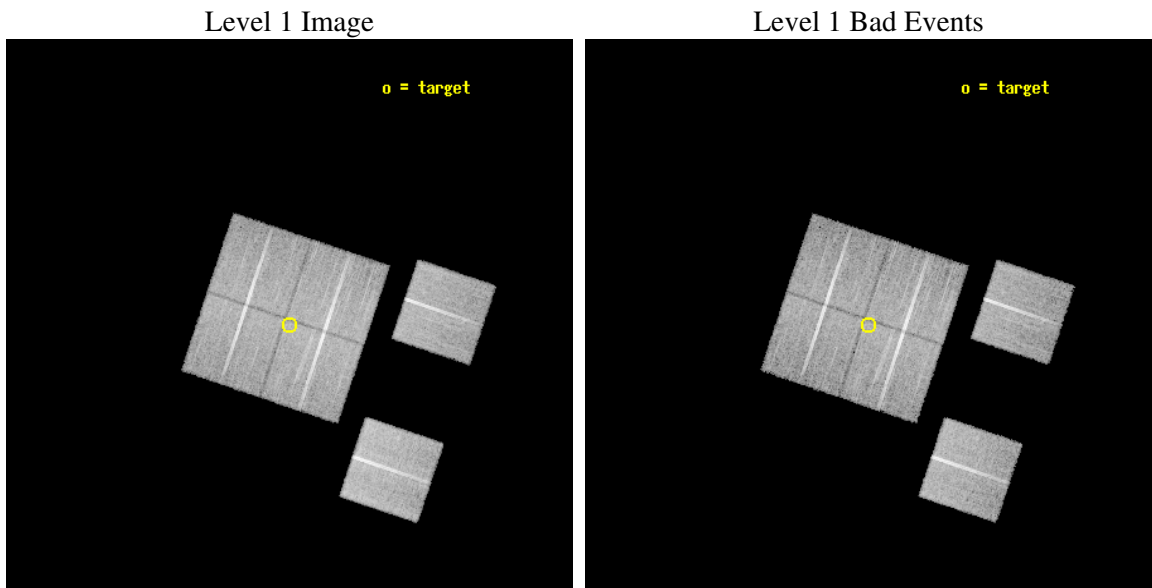
|          |   |
|----------|---|
| seq_num  | 400043  |
| obs_id   | 676   |
| title    | BLACK HOLE EVENT HORIZONS AND ADVECTION-DOMINATED ACCRETION |
| observer | Dr. Jeffrey McClintock                                      |
| object   | GRO J0422+32  |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 65.428333   |
| dec_targ | 32.9075   |
| ra_nom   | 65.428779519028   |
| dec_nom  | 32.912350656397   |
| roll_nom | 108.55935362508   |
| revision | 2   |
| ontime   | 19033.55904749  |
| livetime | 18792.544662198   |
| ontime0  | 19036.800017729   |
| ontime1  | 19033.559077412   |
| ontime2  | 19033.55904749  |
| ontime3  | 19033.55904749  |
| ontime6  | 19033.55904749  |
| ontime8  | 19033.559057474   |
| l2events | 68037   |



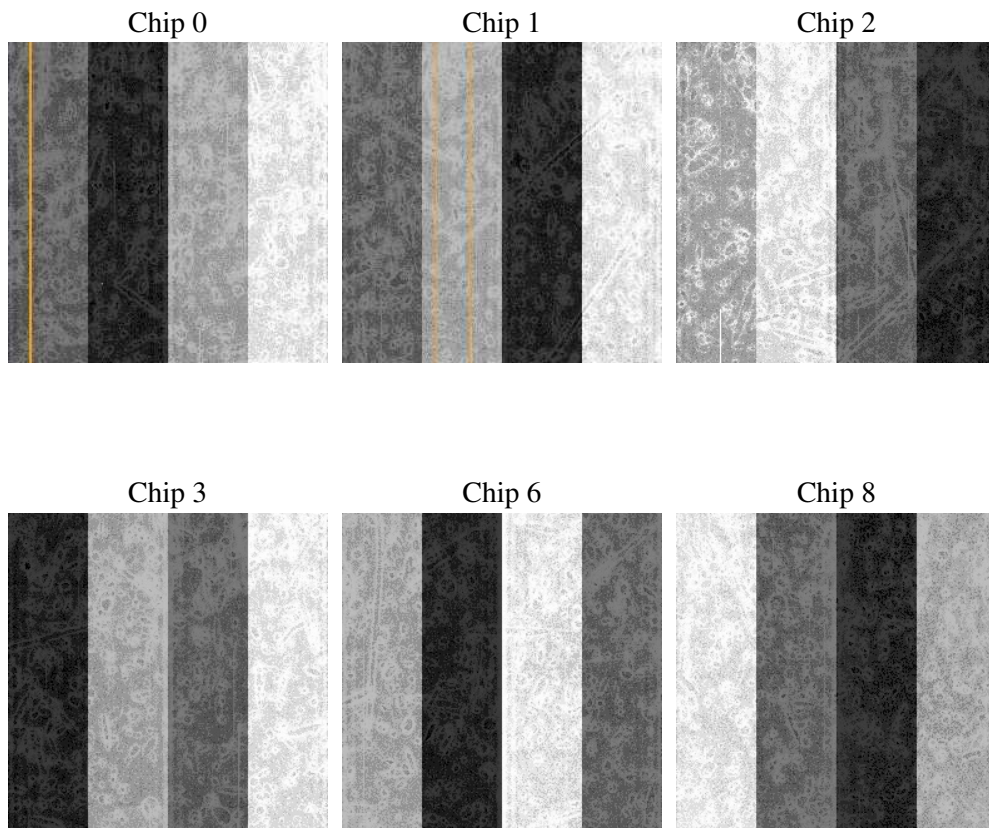
## 2 OBI

### 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     | 2007-06-09T21:54:09 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 19000.000000    |
| ontime         | 19033.55904749  |
| ontime0        | 19036.800017729 |
| ontime1        | 19033.559077412 |
| ontime2        | 19033.55904749  |
| ontime3        | 19033.55904749  |
| ontime6        | 19033.55904749  |
| ontime8        | 19033.559057474 |
| l1events       | 710701          |

### 2.1.4 Events

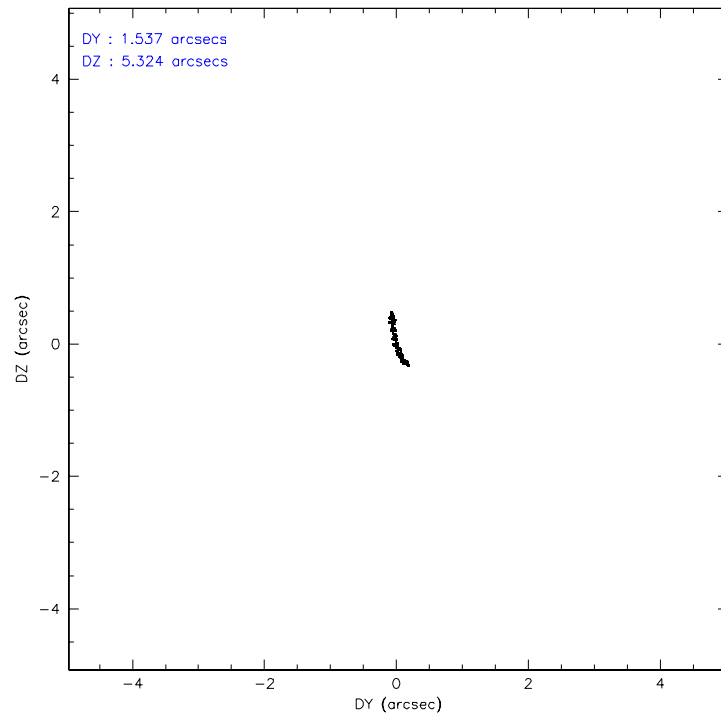
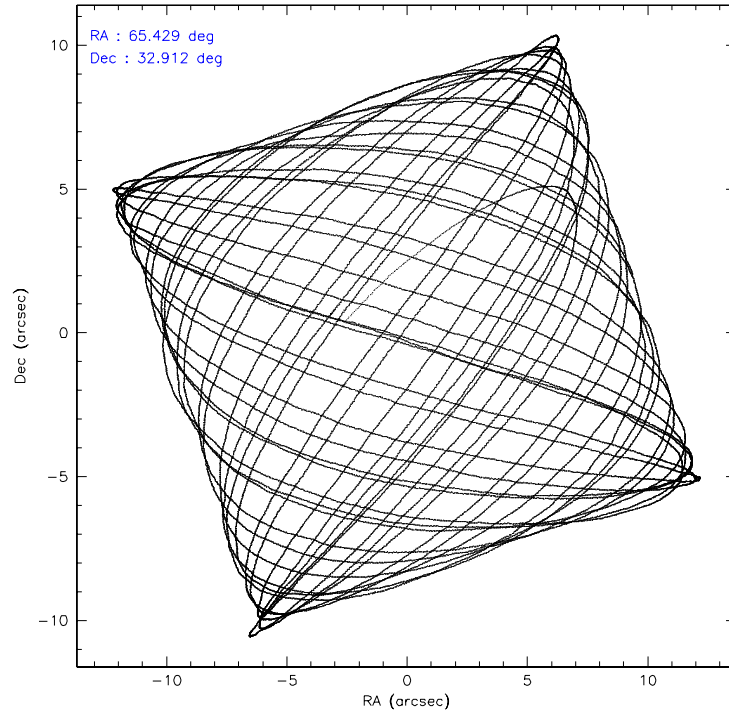
|                 | ccd 0  | ccd 1  | ccd 2  | ccd 3  | ccd 6  | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 105694 | 106885 | 119409 | 119759 | 113382 | 145572 |
| rejected events | 92697  | 93424  | 106892 | 106961 | 100629 | 117986 |
| rejected %      | 87%    | 87%    | 89%    | 89%    | 88%    | 81%    |

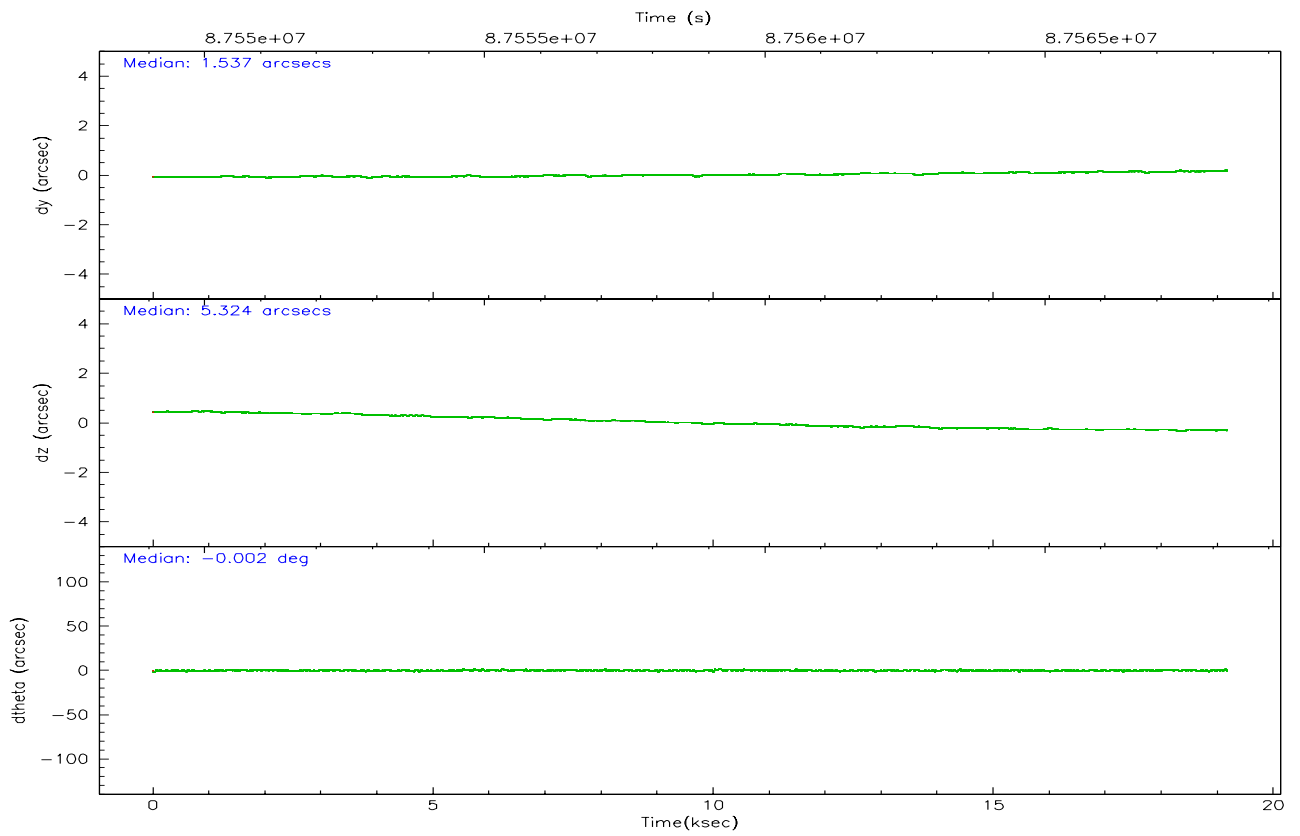
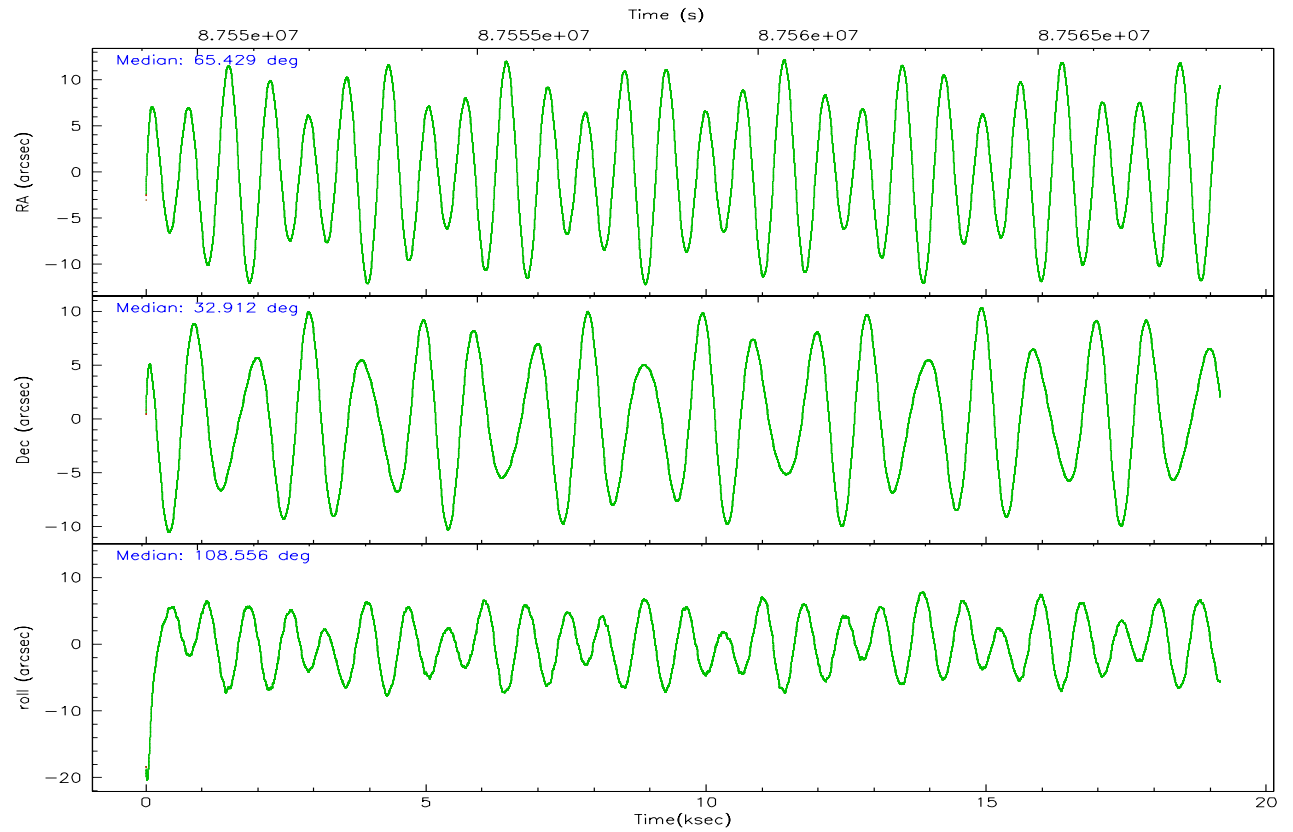
|                | ccd 0 | ccd 1 | ccd 2  | ccd 3  | ccd 6 | ccd 8  |
|----------------|-------|-------|--------|--------|-------|--------|
| grade 0 events | 5641  | 5497  | 5223   | 5541   | 5256  | 8694   |
|                | 5%    | 5%    | 4%     | 4%     | 4%    | 5%     |
| grade 1 events | 54    | 58    | 63     | 50     | 48    | 85     |
|                | 0%    | 0%    | 0%     | 0%     | 0%    | 0%     |
| grade 2 events | 2588  | 2673  | 2643   | 2596   | 2530  | 5979   |
|                | 2%    | 2%    | 2%     | 2%     | 2%    | 4%     |
| grade 3 events | 1298  | 1382  | 1233   | 1188   | 1307  | 2954   |
|                | 1%    | 1%    | 1%     | 0%     | 1%    | 2%     |
| grade 4 events | 1210  | 1368  | 1233   | 1226   | 1285  | 2770   |
|                | 1%    | 1%    | 1%     | 1%     | 1%    | 1%     |
| grade 5 events | 3935  | 4163  | 3673   | 4245   | 4754  | 5967   |
|                | 3%    | 3%    | 3%     | 3%     | 4%    | 4%     |
| grade 6 events | 2265  | 2551  | 2188   | 2249   | 2379  | 7194   |
|                | 2%    | 2%    | 1%     | 1%     | 2%    | 4%     |
| grade 7 events | 88703 | 89193 | 103153 | 102664 | 95823 | 111929 |
|                | 83%   | 83%   | 86%    | 85%    | 84%   | 76%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 6         | 6       |
| Detector                          | ACIS-012368         | ACIS-012368           | 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                       | 65.453286           | 65.42877951902769     | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | 32.894085           | 32.9123506563969      | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 108.337364          | 108.5593536250765     | Primary exposure time                 | 3.200000  | 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            | 87549261.184000     | 87548228.06686801     |                                       |           |         |
| Observation start date            | 2000-10-10T07:13:17 | 2000-10-10T06:57:08   |                                       |           |         |
| Observation end time              | 87568261.184000     | 87568855.68014701     |                                       |           |         |
| Observation end date              | 2000-10-10T12:29:57 | 2000-10-10T12:40:55   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect





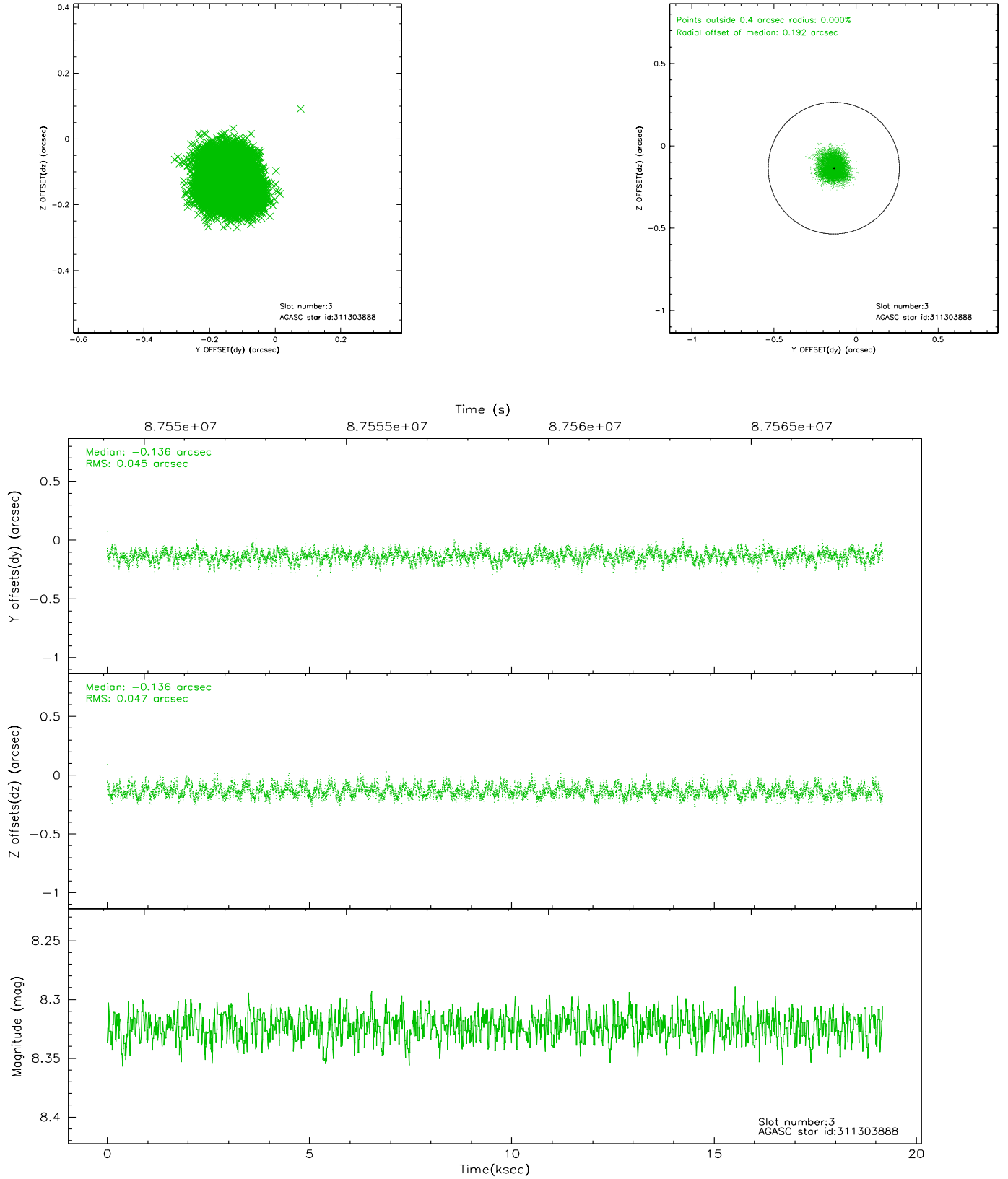
### Slot Statistics

| 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 | 4677  | -0.023 | -0.021 | 0.010 | 0.018 | 0.000000  | 0.000000  | -755.91  | -835.10  |
| 1    | FID    | ACIS-I-4  | 7.19 | 4678  | -0.082 | 0.028  | 0.009 | 0.015 | 0.000000  | 0.000000  | 2157.99  | 1071.03  |
| 2    | FID    | ACIS-I-5  | 7.23 | 4678  | 0.004  | 0.061  | 0.012 | 0.019 | 0.000000  | 0.000000  | -1809.46 | 1069.13  |
| 3    | GUIDE  | 311303888 | 8.32 | 9353  | -0.136 | -0.136 | 0.071 | 0.110 | 64.797103 | 33.042449 | 1137.01  | 1710.15  |
| 4    | GUIDE  | 311444504 | 7.83 | 9353  | 0.211  | 0.009  | 0.045 | 0.077 | 65.469013 | 32.222832 | -2307.20 | 715.43   |
| 5    | GUIDE  | 311435872 | 9.49 | 9350  | 0.008  | 0.199  | 0.085 | 0.139 | 65.981454 | 32.986957 | -179.40  | -1619.54 |
| 6    | GUIDE  | 311299048 | 9.33 | 9351  | -0.112 | -0.016 | 0.095 | 0.150 | 64.674197 | 33.386875 | 2430.18  | 1662.66  |
| 7    | GUIDE  | 311441728 | 9.54 | 9352  | 0.029  | -0.056 | 0.084 | 0.139 | 65.332263 | 33.004865 | 495.36   | 221.97   |

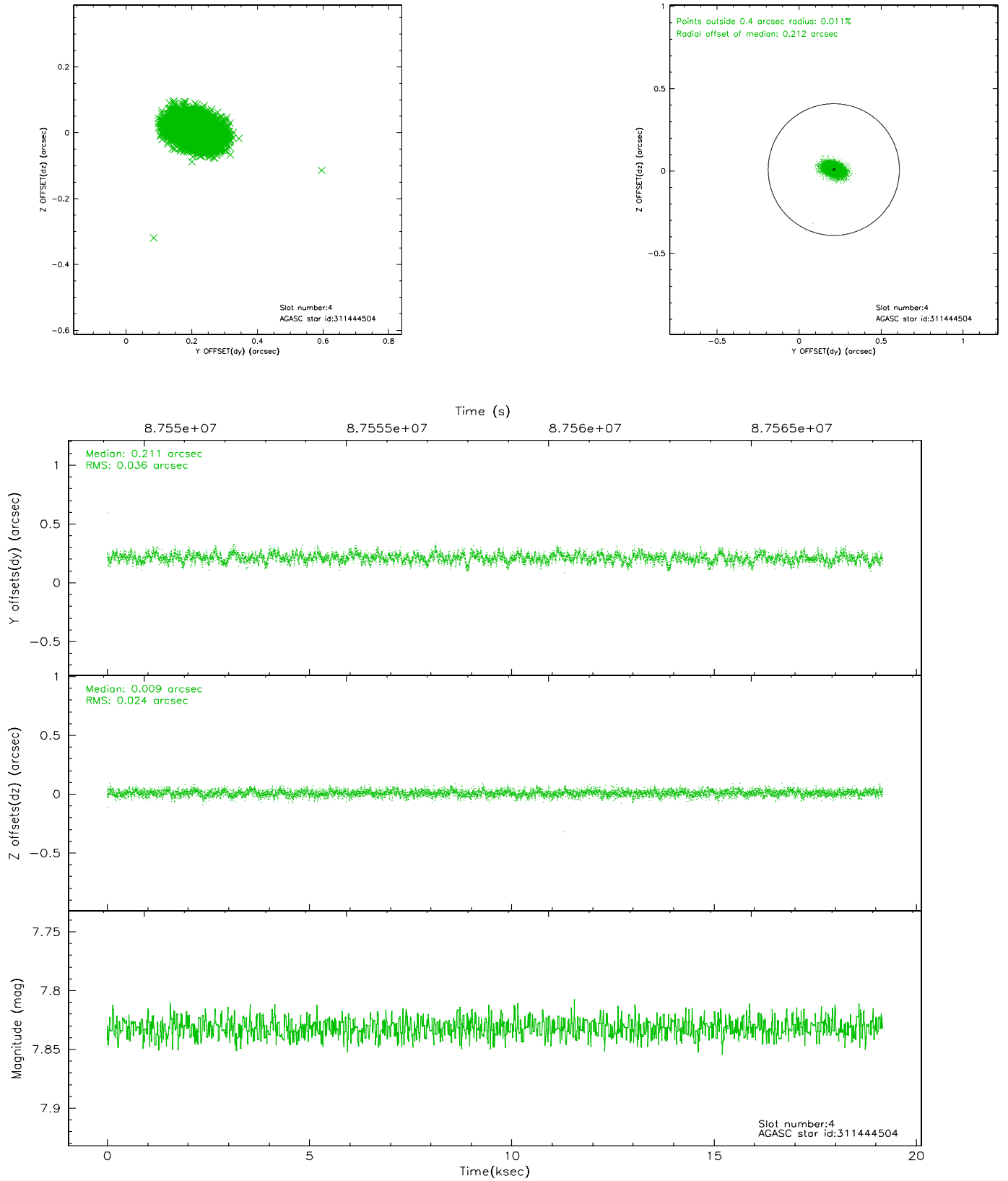


## 2.4 Star Slots

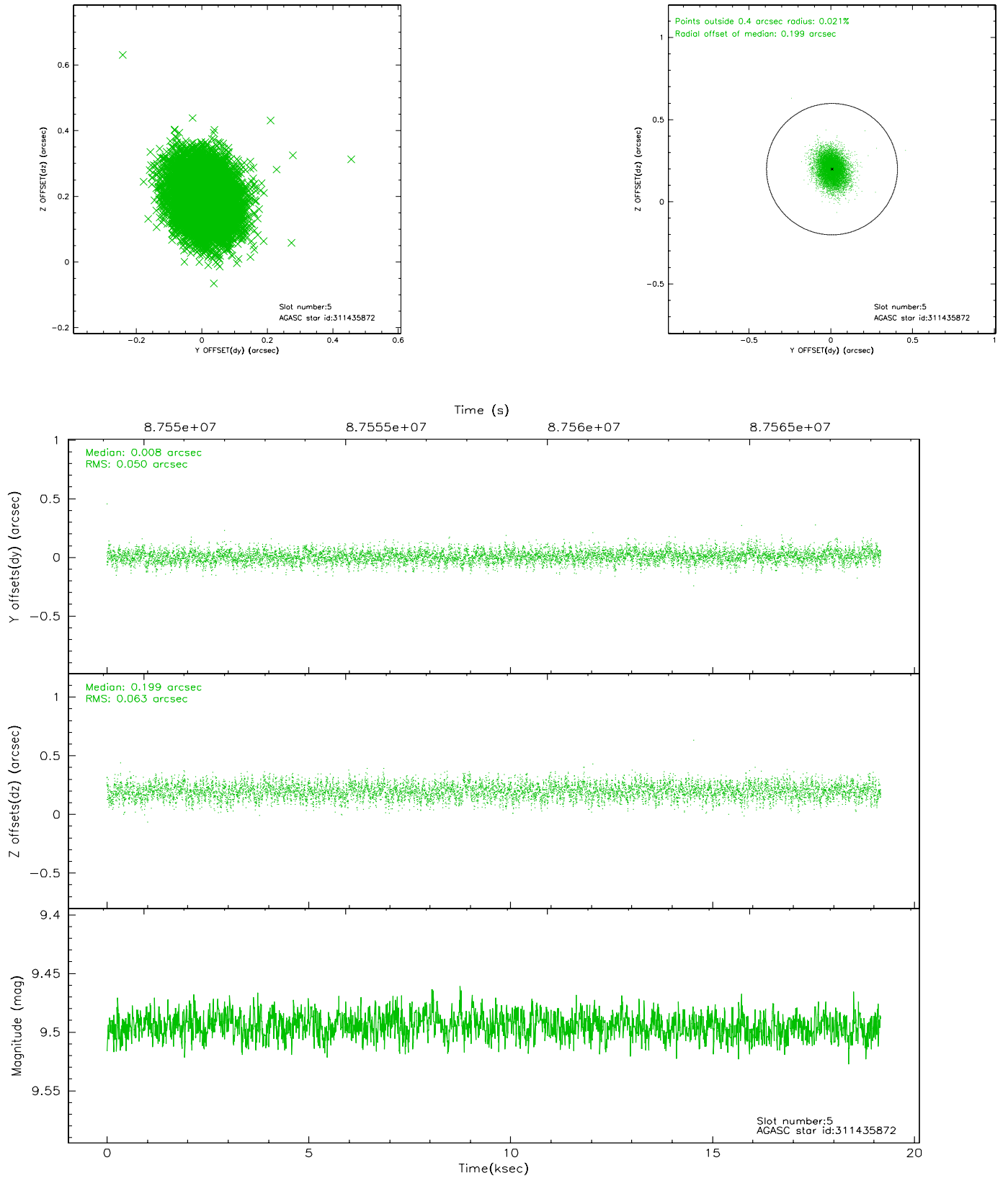
### 2.4.1 Slot 3



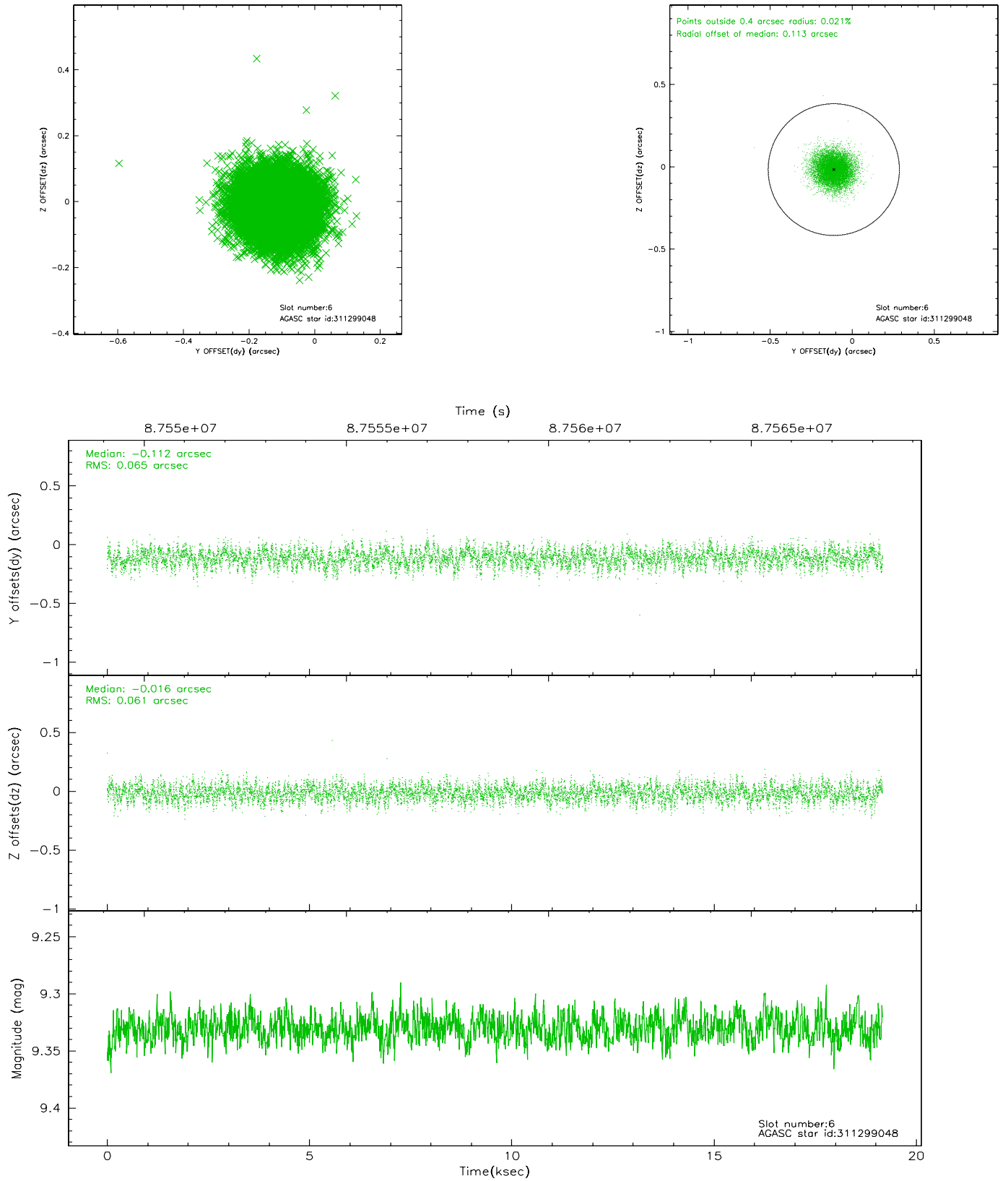
## 2.4.2 Slot 4



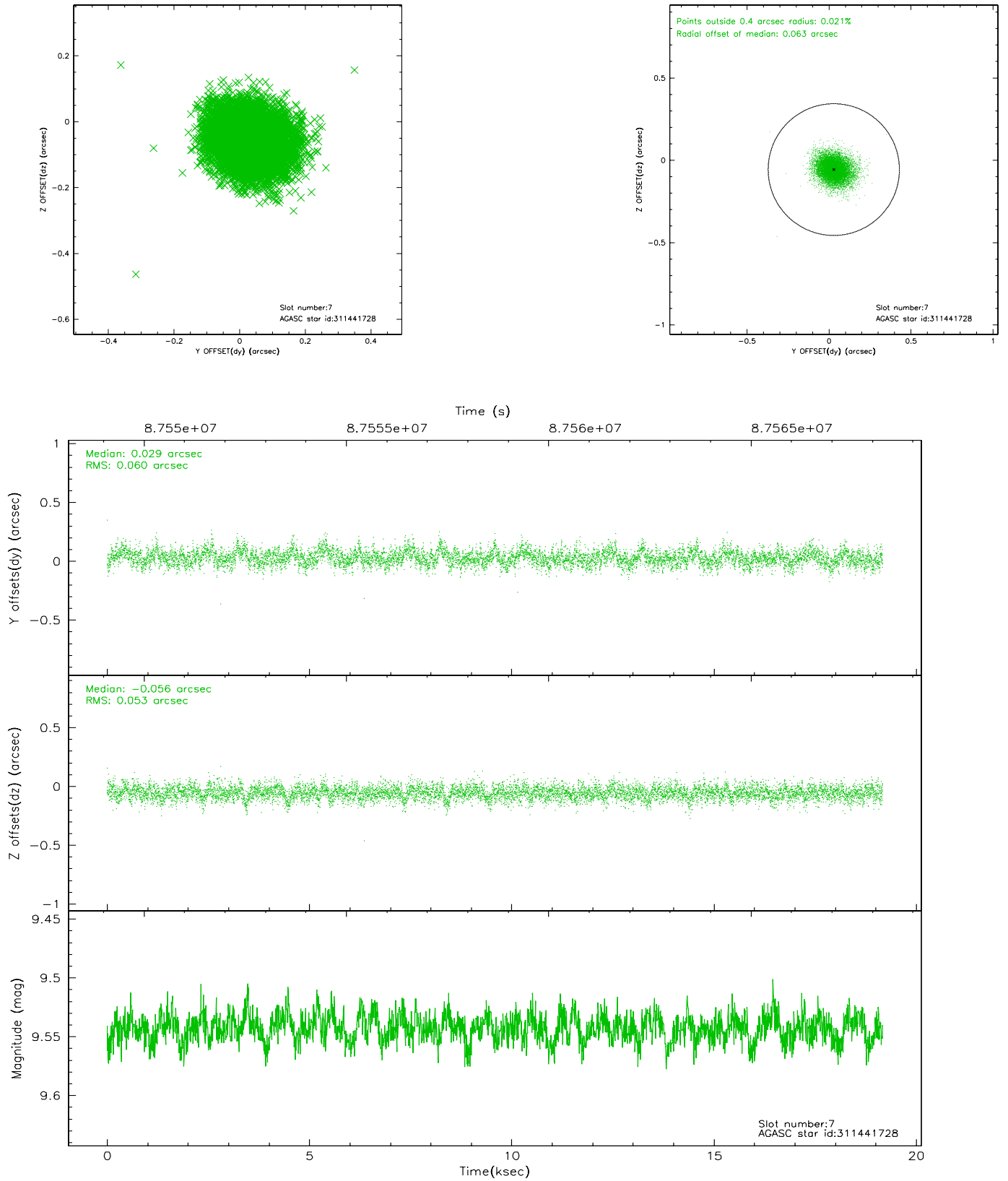
### 2.4.3 Slot 5



## 2.4.4 Slot 6

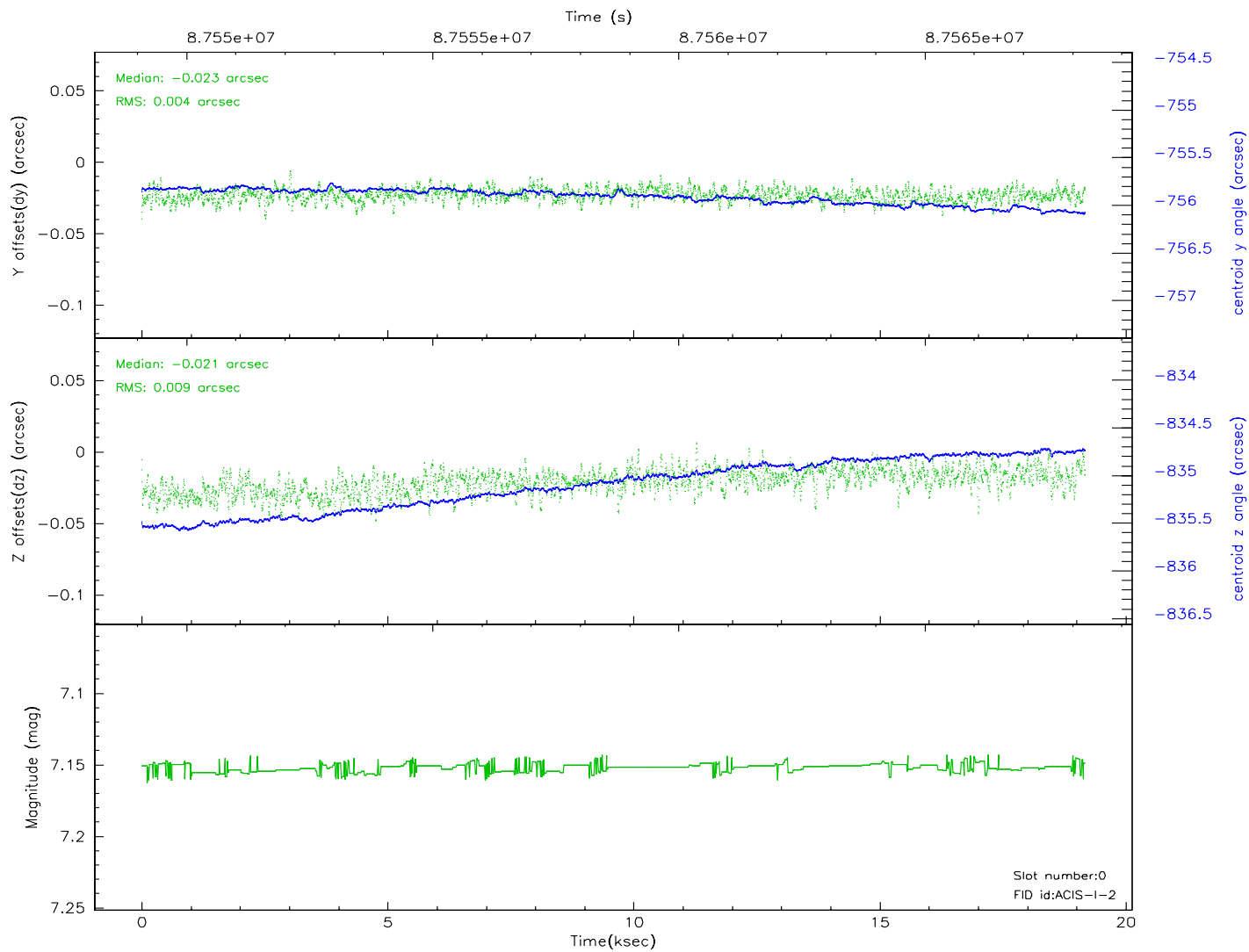
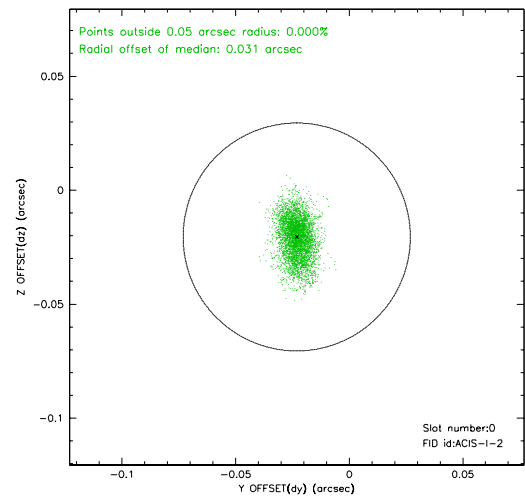
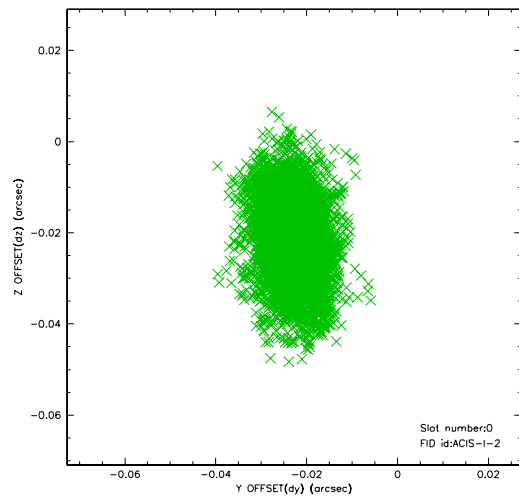


## 2.4.5 Slot 7

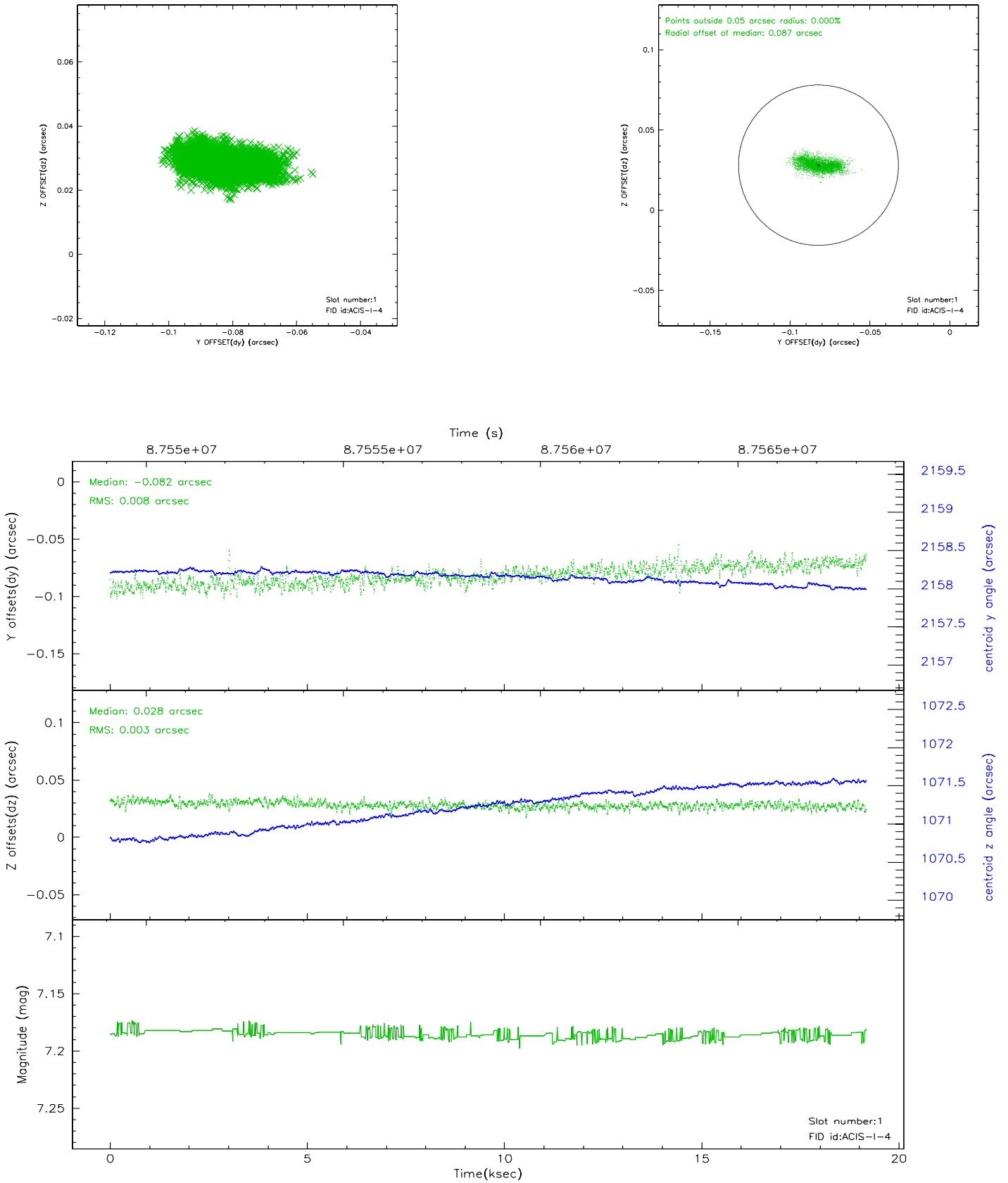


## 2.5 FID Slots

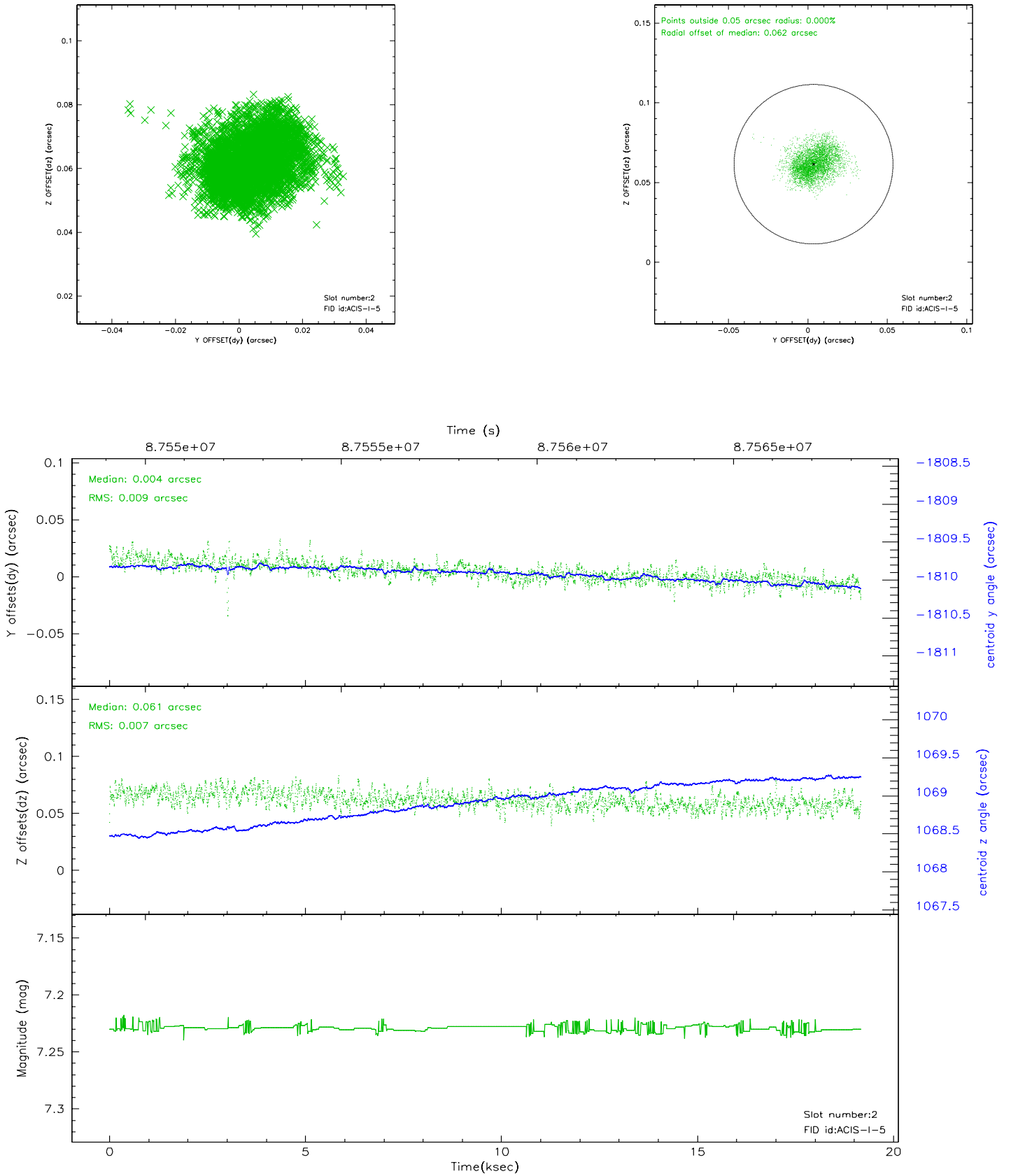
### 2.5.1 Slot 0



## 2.5.2 Slot 1

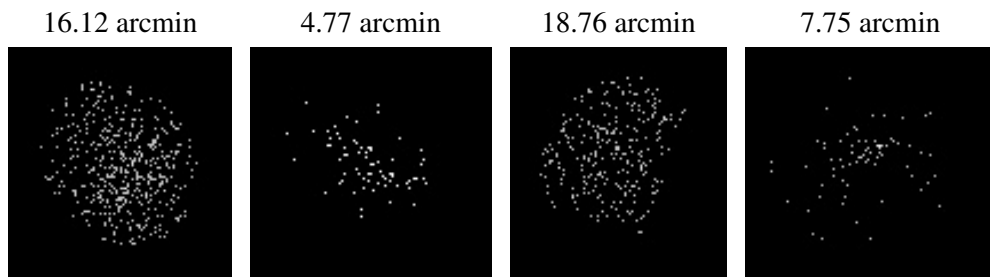


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2007.06.11 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 19.036     |

### A.2 Comments