

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 88 - L2 Version 4  
Chandra X-Ray Center

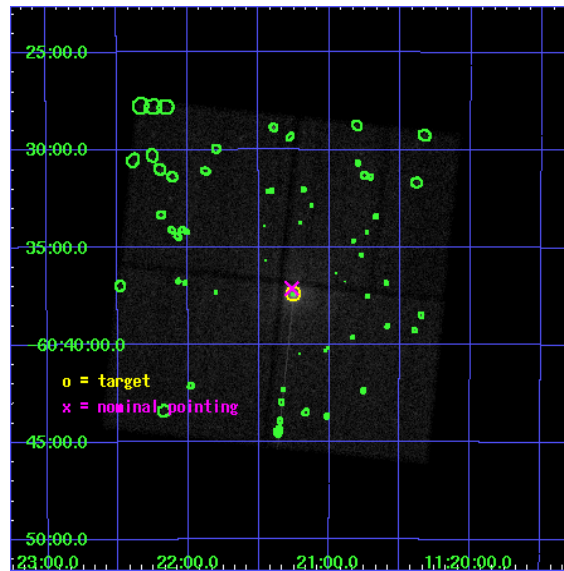
L2 Processing Date : Oct 22 2007

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# 1 Front

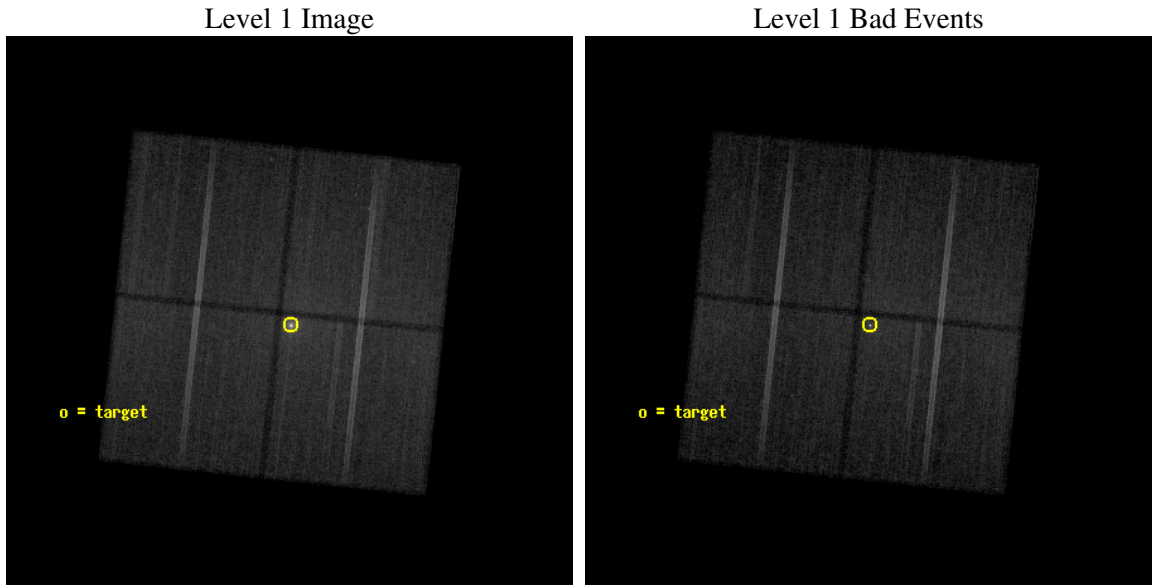
|          |  |
|----------|--|
| seq_num  | 400001   |
| obs_id   | 88   |
| title    | ECLIPSING BINARY X-RAY HALOS AND INTERSTELLAR GRAIN PROPERTIES |
| observer | Prof. Gordon Garmire   |
| object   | CEN X-3  |
| dtcycle  | 0  |
| cycle    | P  |
| ra_targ  | 170.313333   |
| dec_targ | -60.623333   |
| ra_nom   | 170.31623535141  |
| dec_nom  | -60.618704492876   |
| roll_nom | 96.067194016328  |
| revision | 4  |
| ontime   | 40144.000037387  |
| livetime | 39635.672537099  |
| ontime0  | 40144.000037387  |
| ontime1  | 40144.000037387  |
| ontime2  | 40140.759077147  |
| ontime3  | 40144.000037387  |
| l2events | 222248   |



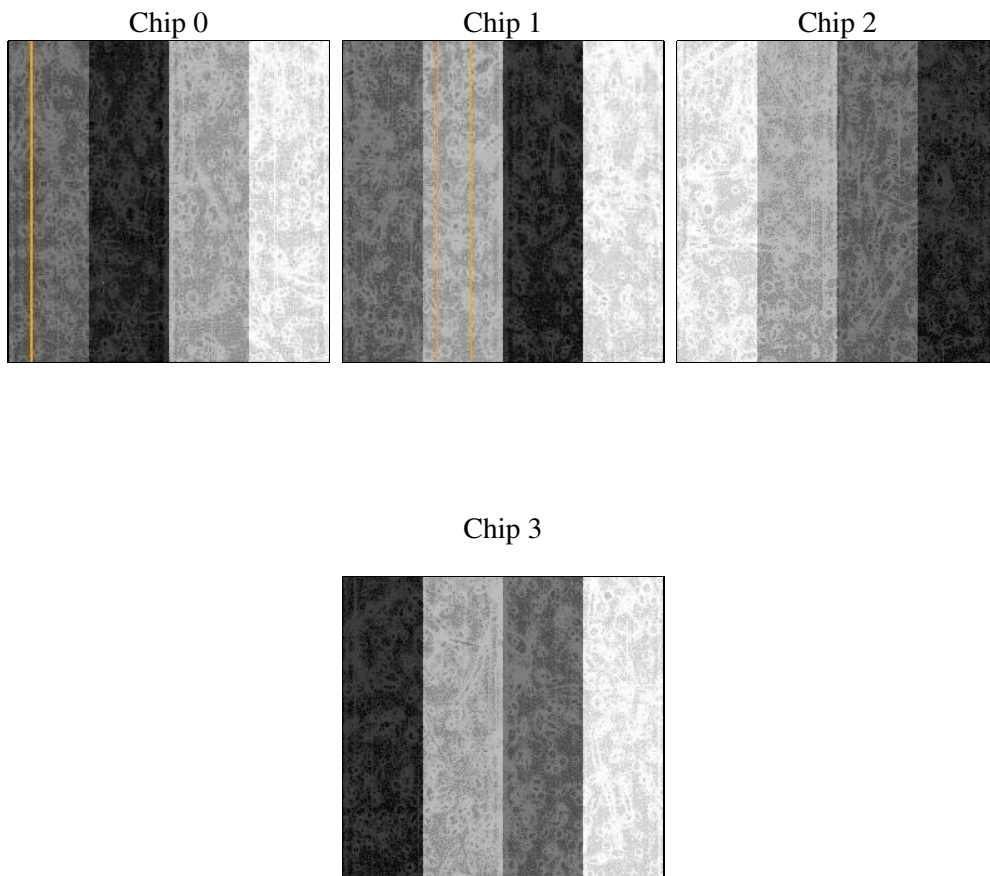
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 1                   |
| ascdsver | 7.6.11.2            |
| caldbver | 3.4.1               |
| date     | 2007-10-22T20:19:37 |
| revision | 4                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 40000.000000    |
| ontime         | 40144.000037387 |
| ontime0        | 40144.000037387 |
| ontime1        | 40144.000037387 |
| ontime2        | 40140.759077147 |
| ontime3        | 40144.000037387 |
| l1events       | 1295247         |

### 2.1.4 Events

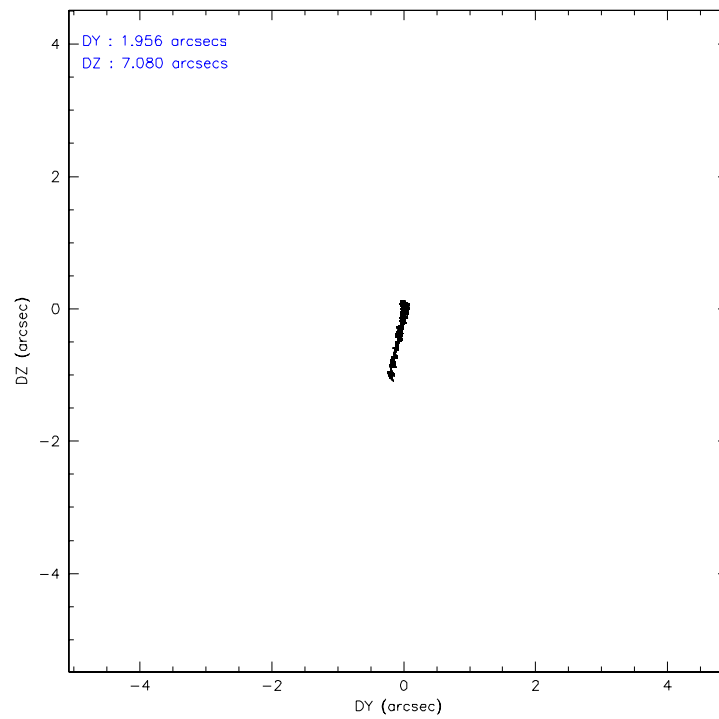
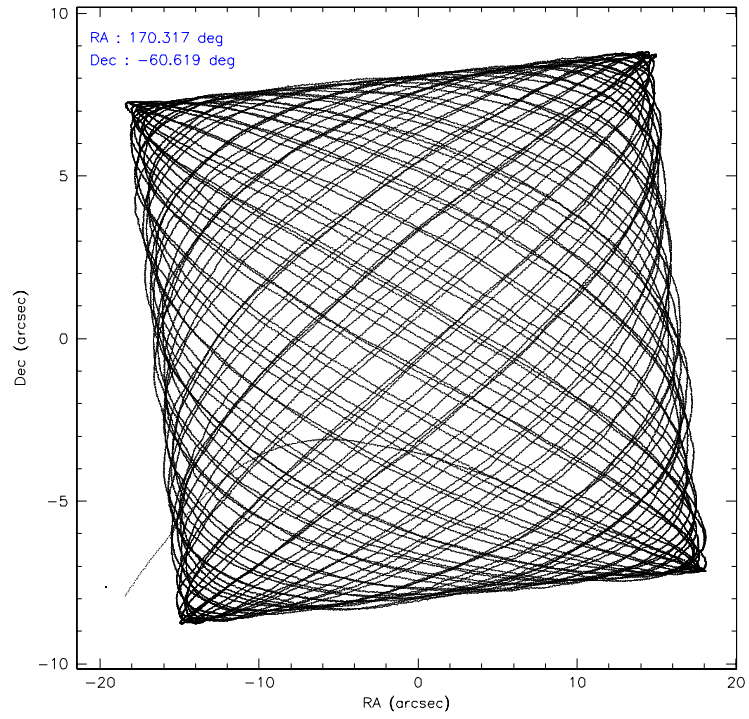
|                 | ccd 0  | ccd 1  | ccd 2  | ccd 3  |
|-----------------|--------|--------|--------|--------|
| level 1 events  | 292466 | 303162 | 341765 | 357854 |
| rejected events | 232549 | 243848 | 277950 | 280321 |
| rejected %      | 79%    | 80%    | 81%    | 78%    |

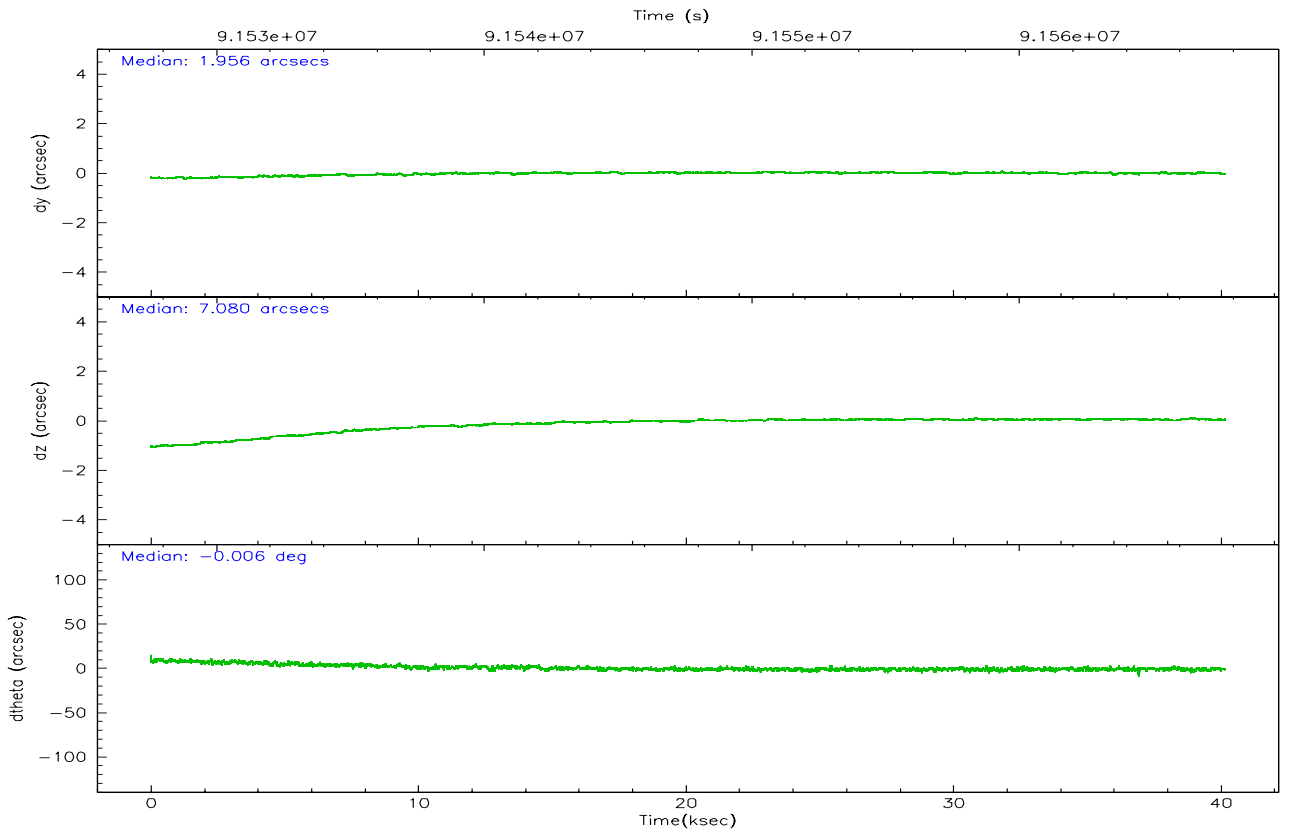
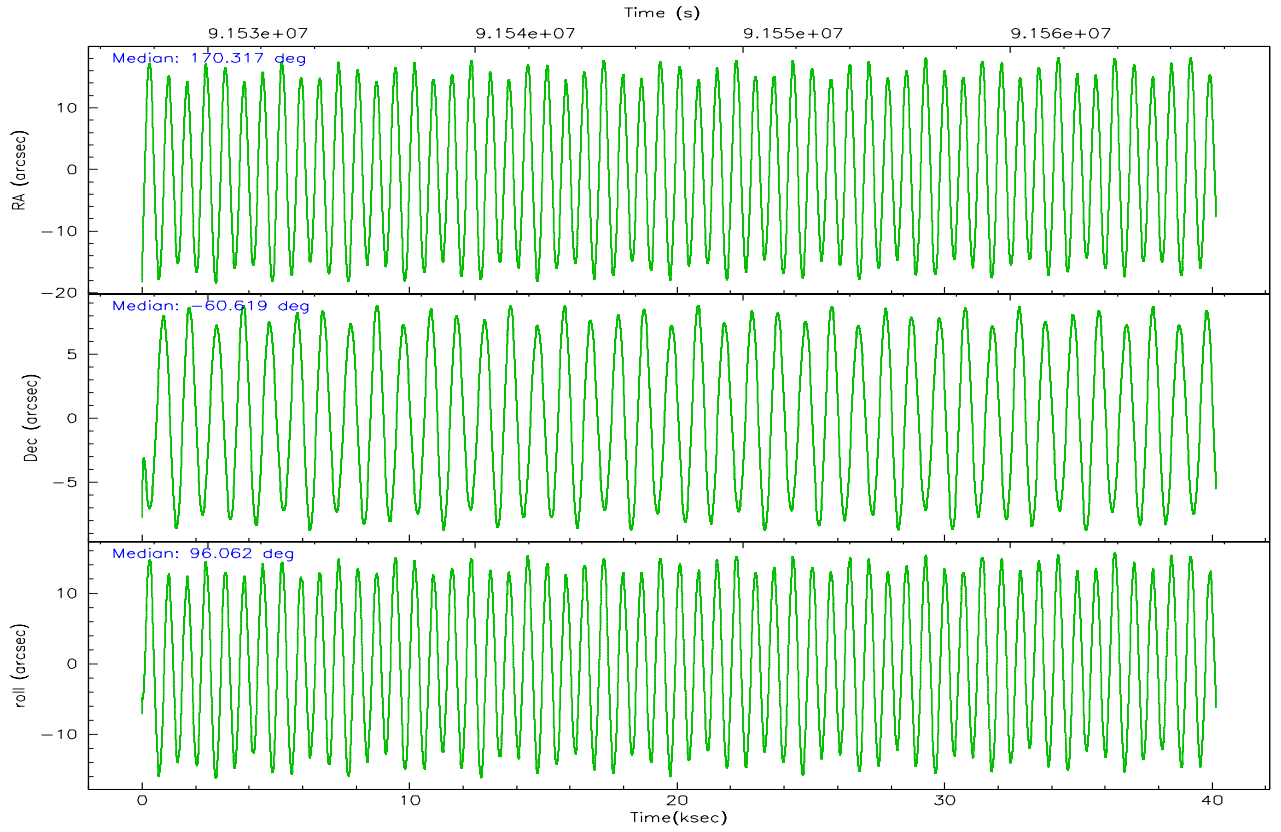
|                | ccd 0  | ccd 1  | ccd 2  | ccd 3  |
|----------------|--------|--------|--------|--------|
| grade 0 events | 29020  | 27684  | 31929  | 38955  |
|                | 9%     | 9%     | 9%     | 10%    |
| grade 1 events | 209    | 181    | 233    | 943    |
|                | 0%     | 0%     | 0%     | 0%     |
| grade 2 events | 15342  | 13949  | 14660  | 16929  |
|                | 5%     | 4%     | 4%     | 4%     |
| grade 3 events | 3456   | 3965   | 3518   | 4478   |
|                | 1%     | 1%     | 1%     | 1%     |
| grade 4 events | 3562   | 4038   | 4415   | 4722   |
|                | 1%     | 1%     | 1%     | 1%     |
| grade 5 events | 8577   | 9255   | 8349   | 10403  |
|                | 2%     | 3%     | 2%     | 2%     |
| grade 6 events | 9793   | 11052  | 10569  | 13769  |
|                | 3%     | 3%     | 3%     | 3%     |
| grade 7 events | 222507 | 233038 | 268092 | 267655 |
|                | 76%    | 76%    | 78%    | 74%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 6         | 6       |
| Detector                          | ACIS-0123           | ACIS-0123             | 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                       | 170.349149          | 170.3162353514089     | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | -60.640965          | -60.61870449287601    | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 95.887193           | 96.06719401632822     | 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            | 91527701.184000     | 91526251.16764399     |                                       |           |         |
| Observation start date            | 2000-11-25T08:20:37 | 2000-11-25T07:57:31   |                                       |           |         |
| Observation end time              | 91567701.184000     | 91568543.18176        |                                       |           |         |
| Observation end date              | 2000-11-25T19:27:17 | 2000-11-25T19:42:23   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect



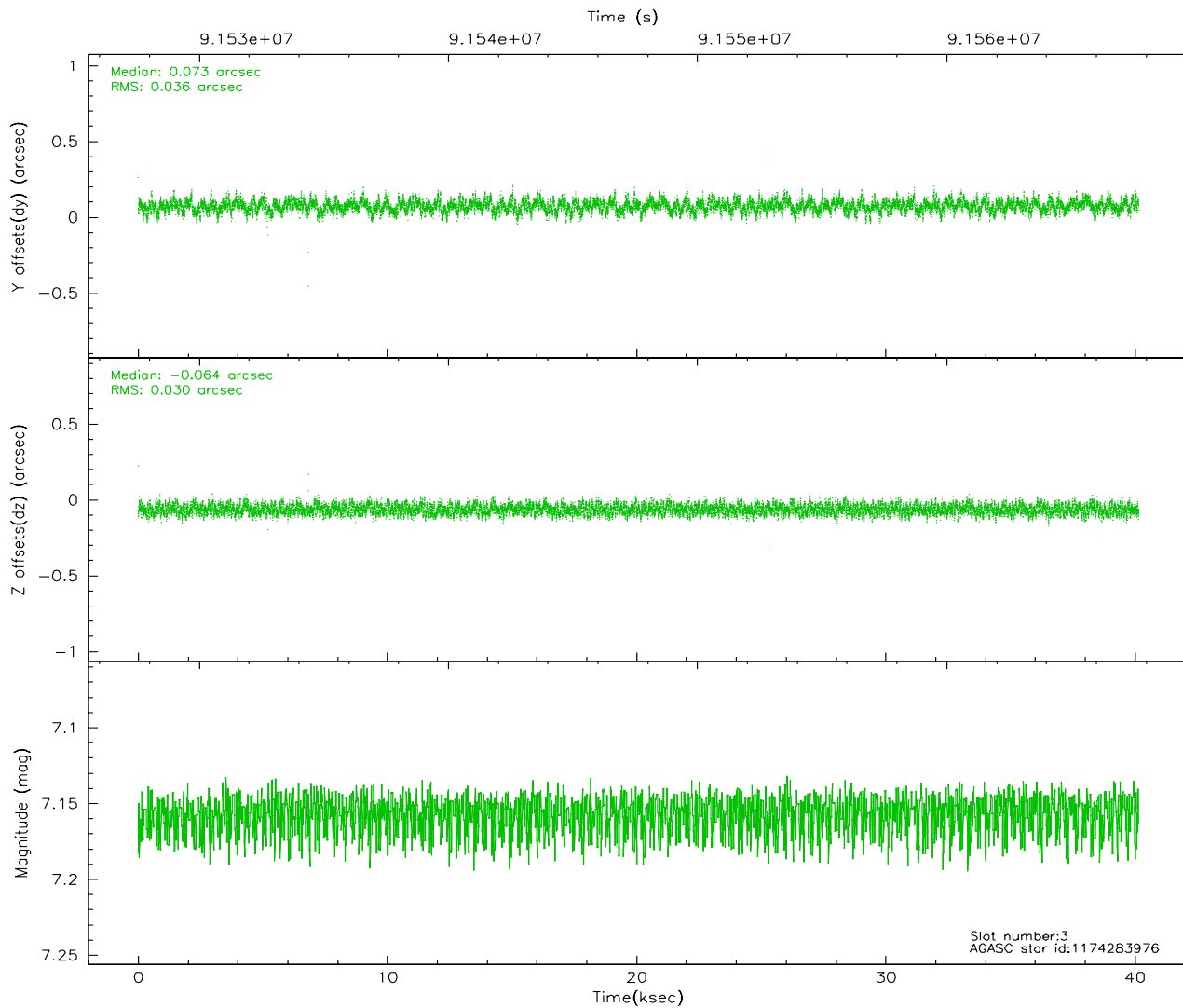
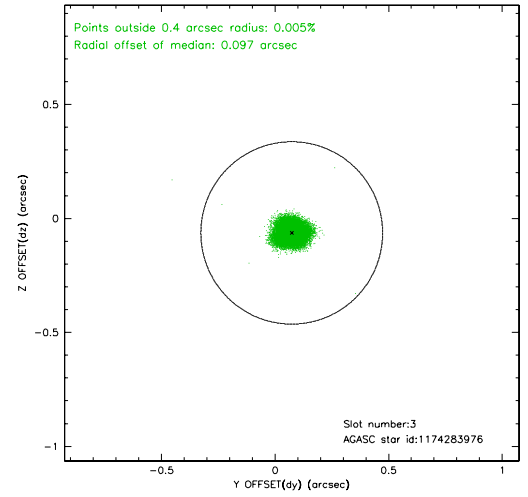
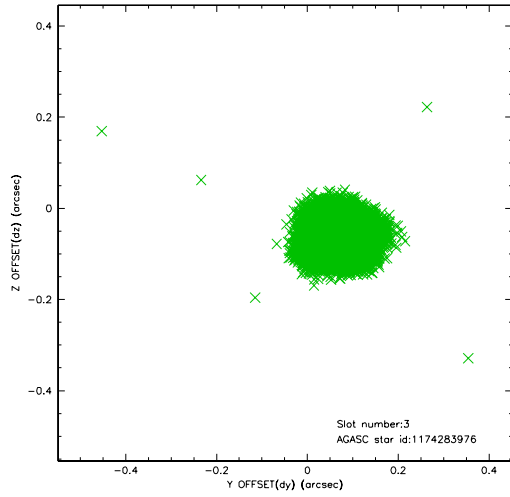


### Slot Statistics

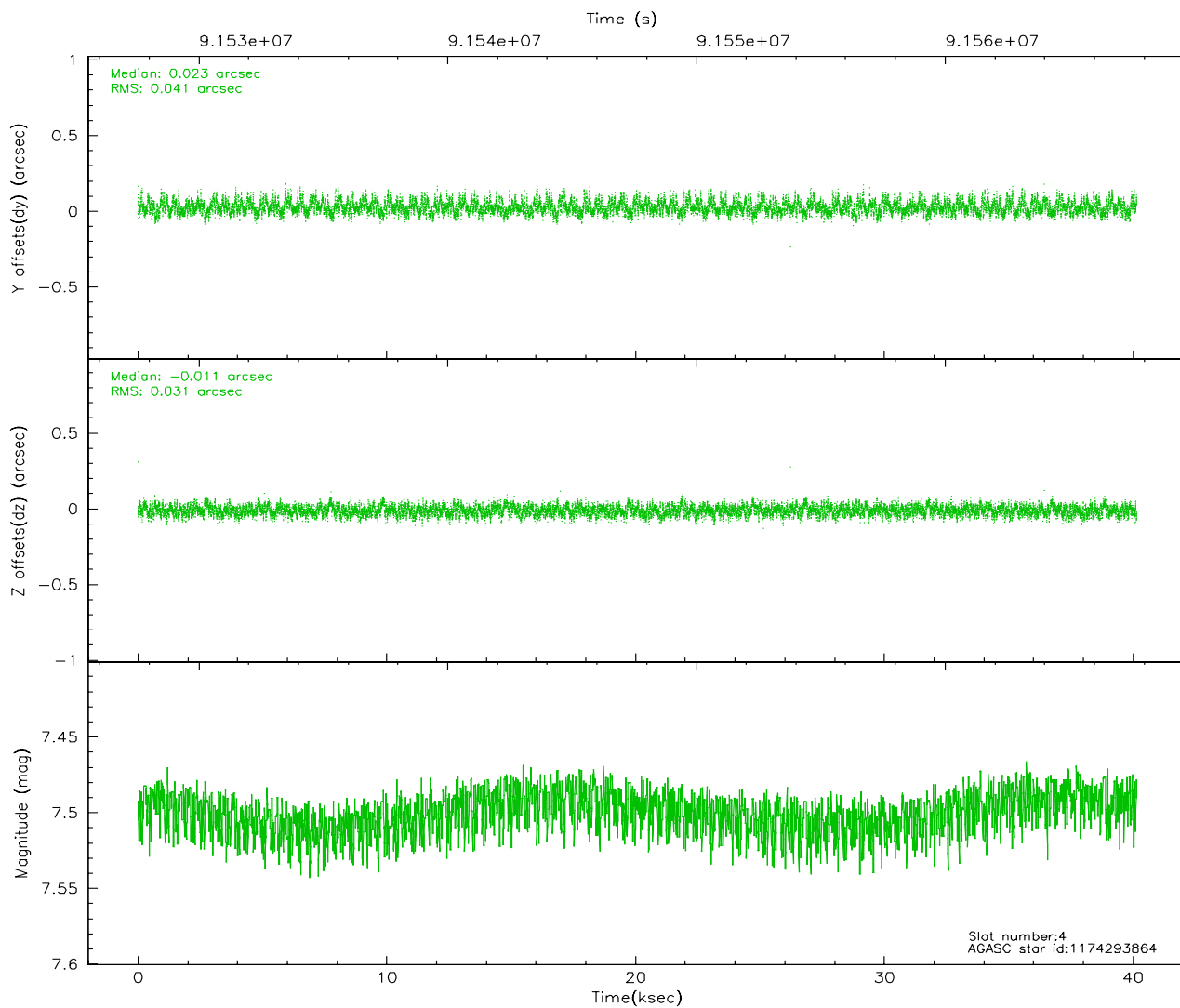
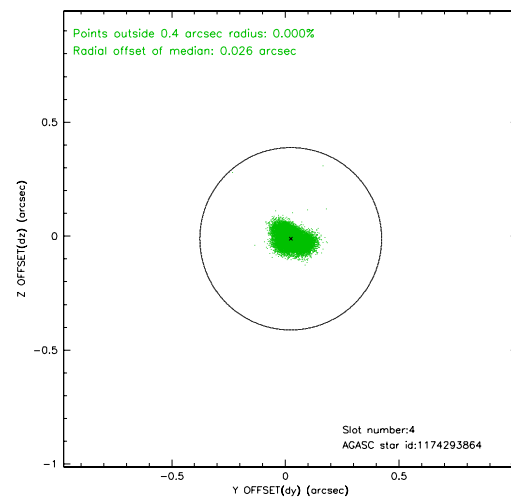
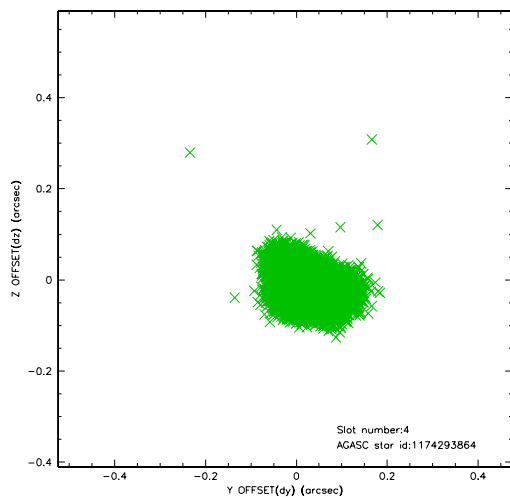
| slot | status  | id         | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|---------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | OMITTED |            | 0.00 | 0     | 0.000  | 0.000  | 0.000 | 0.000 | 0.000000   | 0.000000   | 0.00     | 0.00     |
| 1    | FID     | ACIS-I-4   | 7.18 | 9792  | -0.061 | 0.029  | 0.006 | 0.012 | 0.000000   | 0.000000   | 2157.73  | 1069.72  |
| 2    | FID     | ACIS-I-6   | 7.26 | 9793  | -0.007 | 0.012  | 0.006 | 0.012 | 0.000000   | 0.000000   | 403.71   | 1711.72  |
| 3    | GUIDE   | 1174283976 | 7.16 | 19584 | 0.073  | -0.064 | 0.051 | 0.080 | 170.390254 | -61.226219 | -2103.20 | 145.80   |
| 4    | GUIDE   | 1174293864 | 7.50 | 19585 | 0.023  | -0.011 | 0.054 | 0.089 | 170.089015 | -61.097044 | -1587.99 | 619.36   |
| 5    | GUIDE   | 1174285376 | 7.73 | 19584 | 0.020  | -0.088 | 0.052 | 0.082 | 169.630551 | -60.244001 | 1545.93  | 1132.13  |
| 6    | GUIDE   | 1174291288 | 8.38 | 19583 | 0.011  | 0.026  | 0.058 | 0.092 | 171.098092 | -60.555450 | 162.84   | -1348.35 |
| 7    | GUIDE   | 1174293608 | 8.85 | 19581 | -0.129 | 0.135  | 0.082 | 0.133 | 171.337887 | -60.017603 | 2036.51  | -1997.24 |

## 2.4 Star Slots

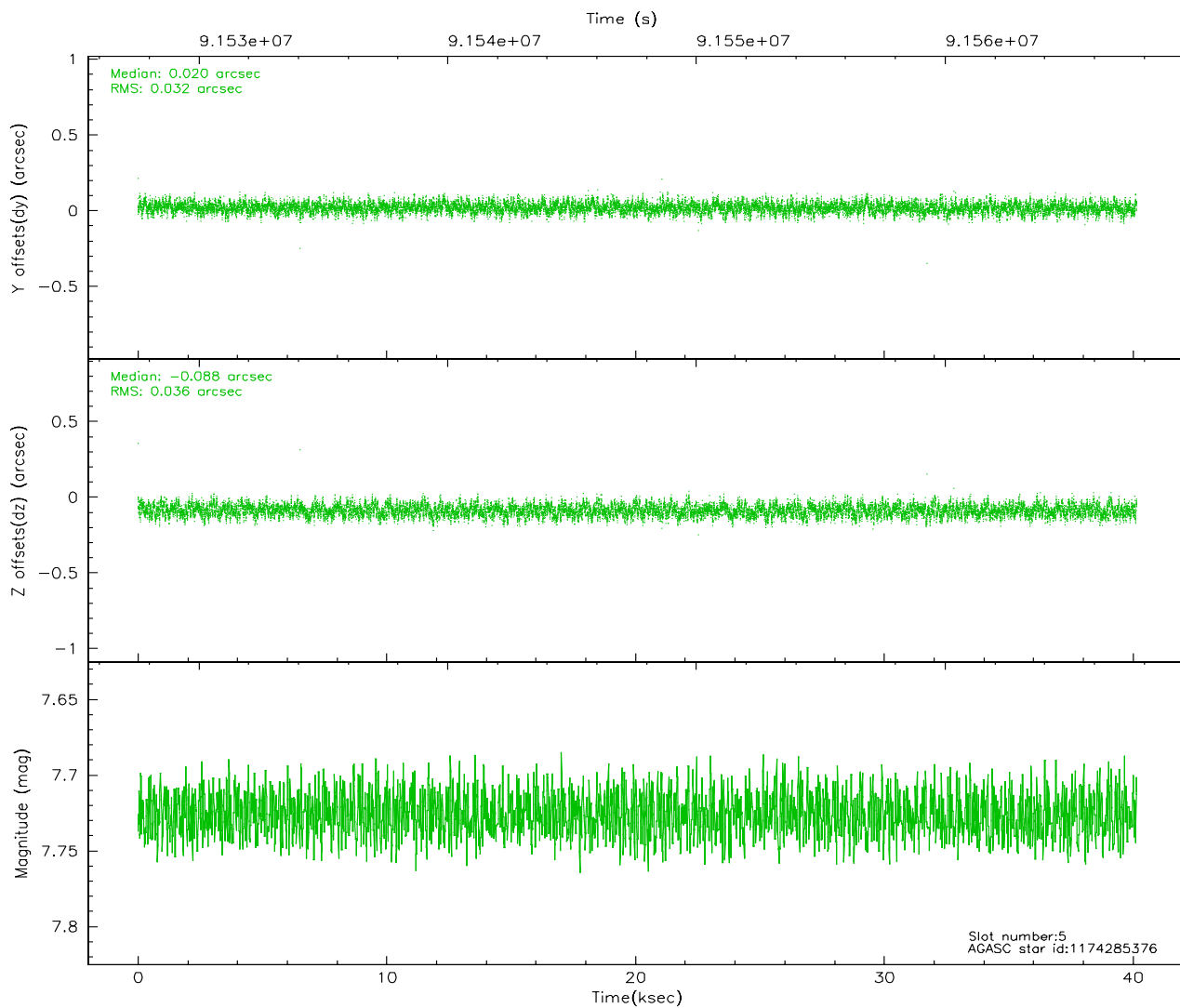
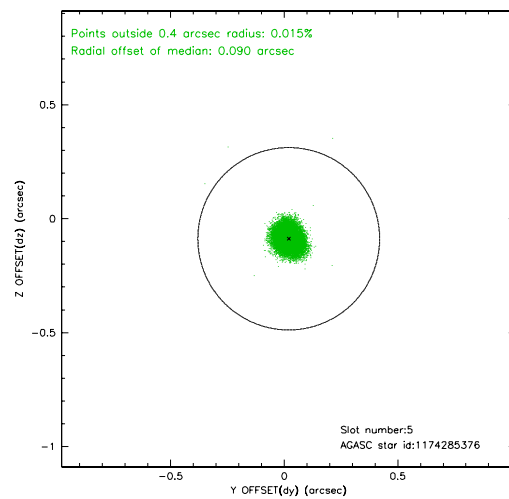
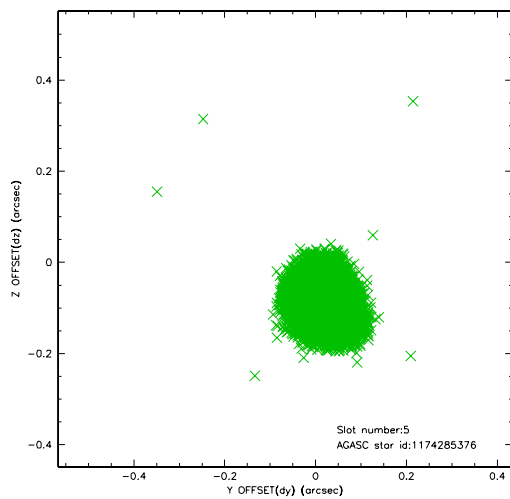
### 2.4.1 Slot 3



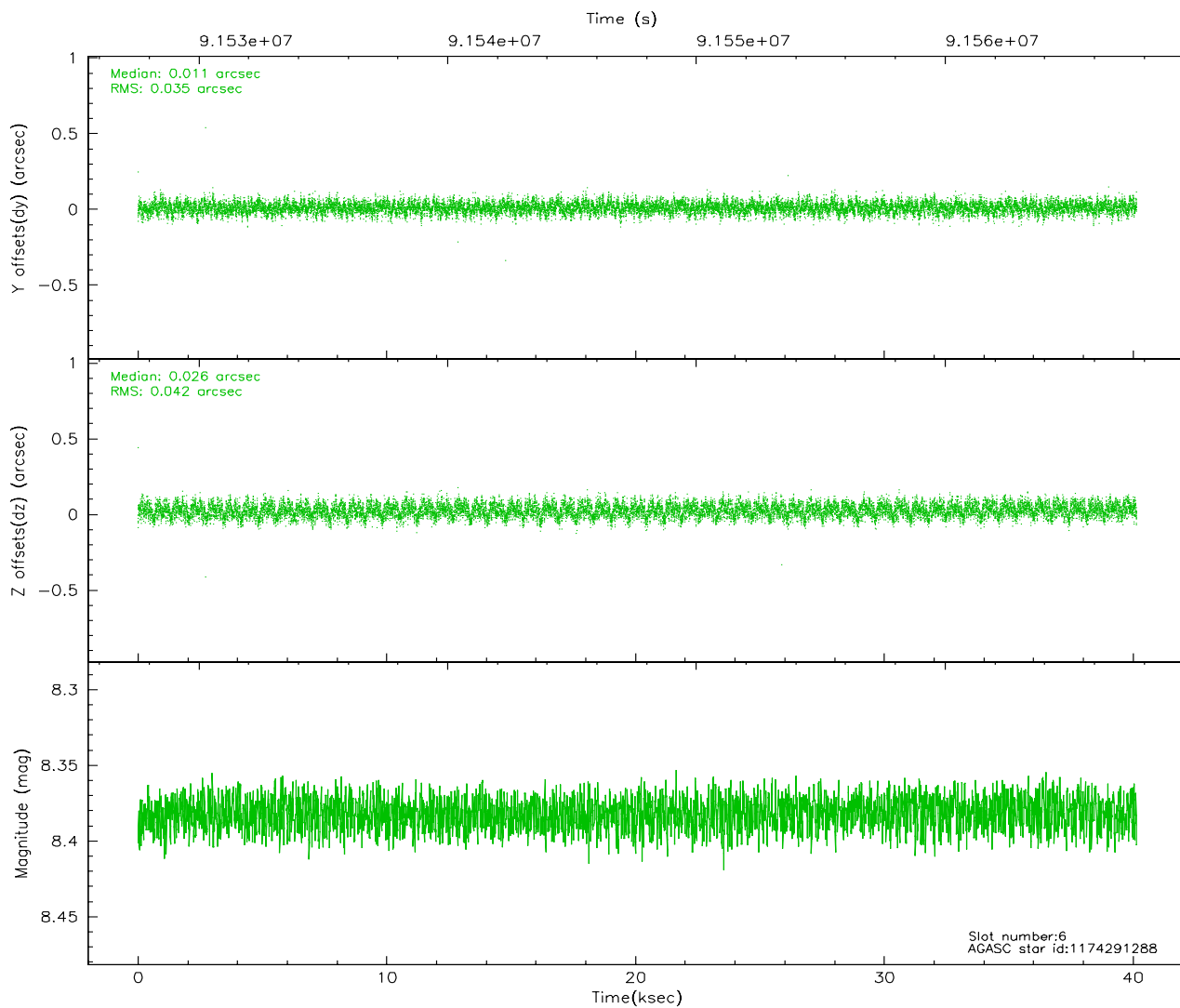
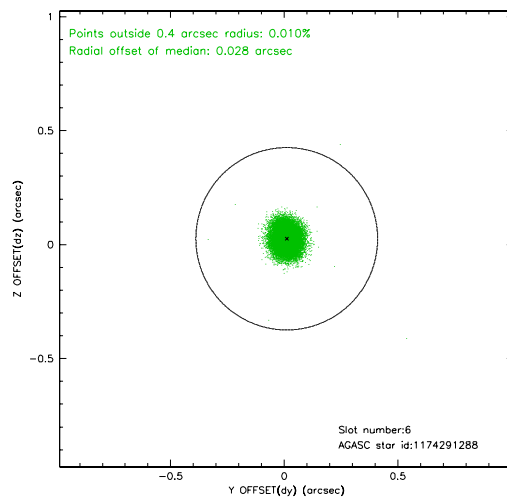
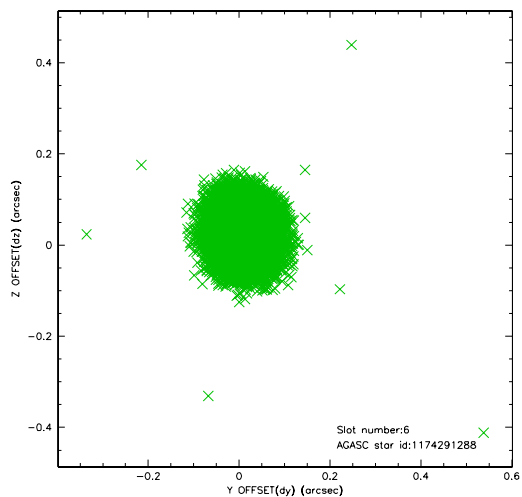
## 2.4.2 Slot 4



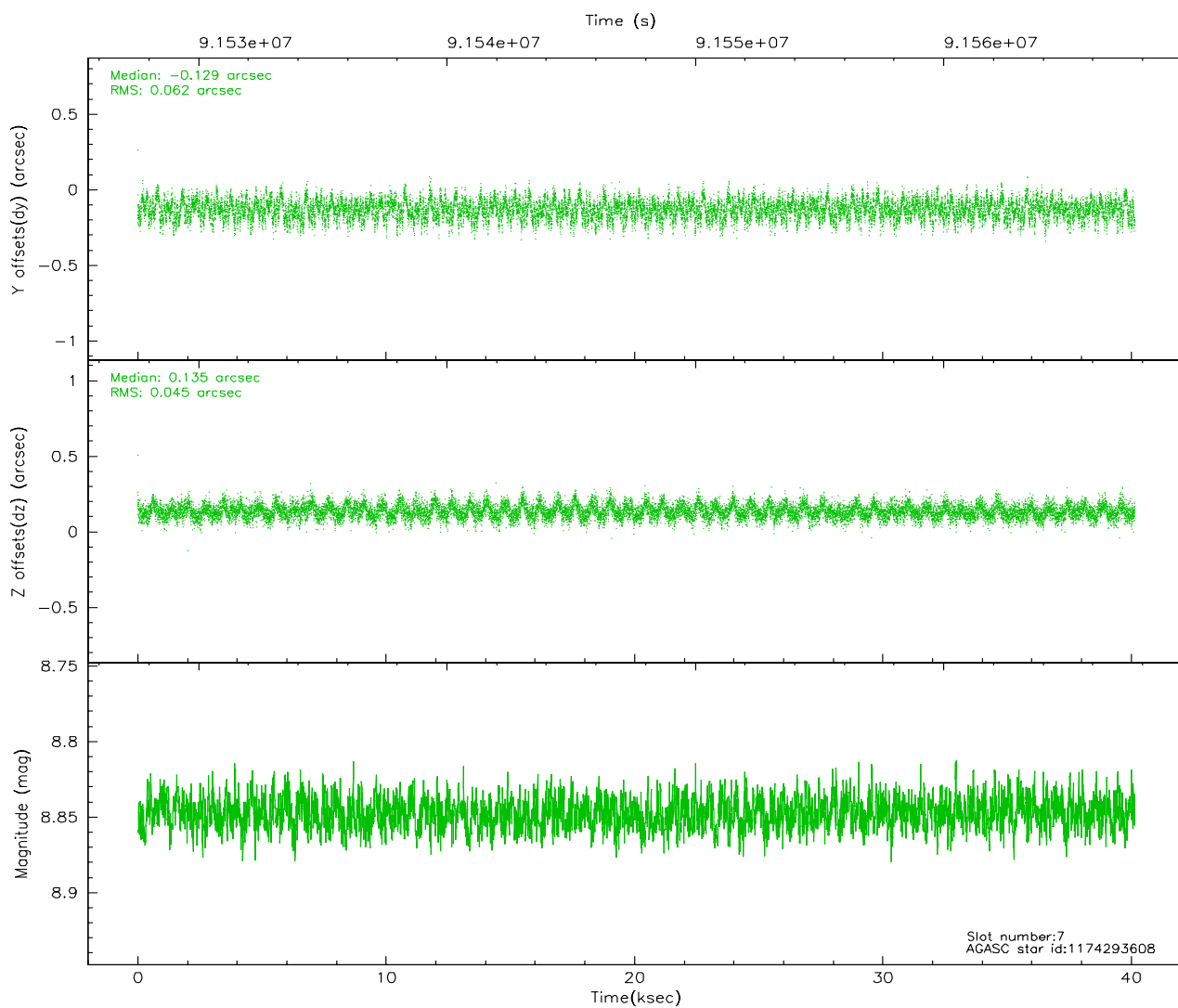
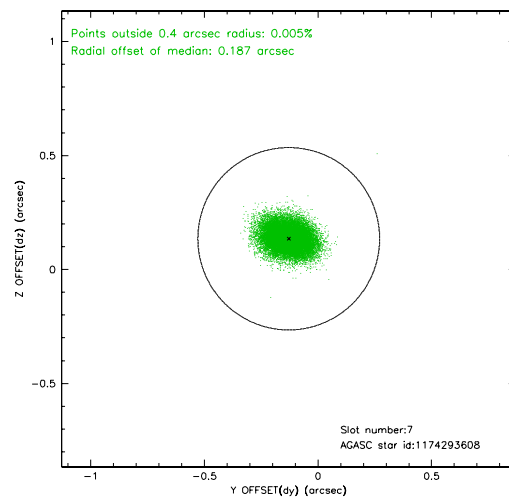
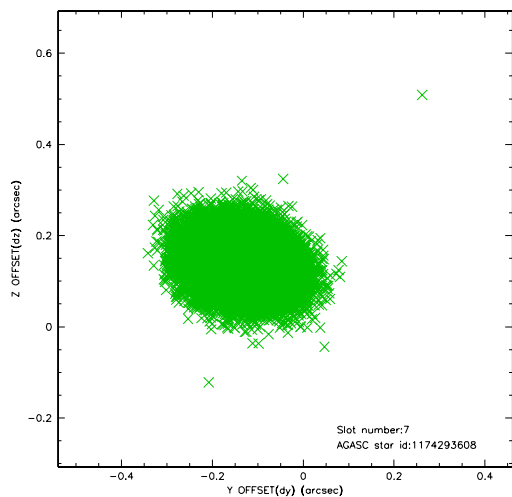
### 2.4.3 Slot 5



### 2.4.4 Slot 6

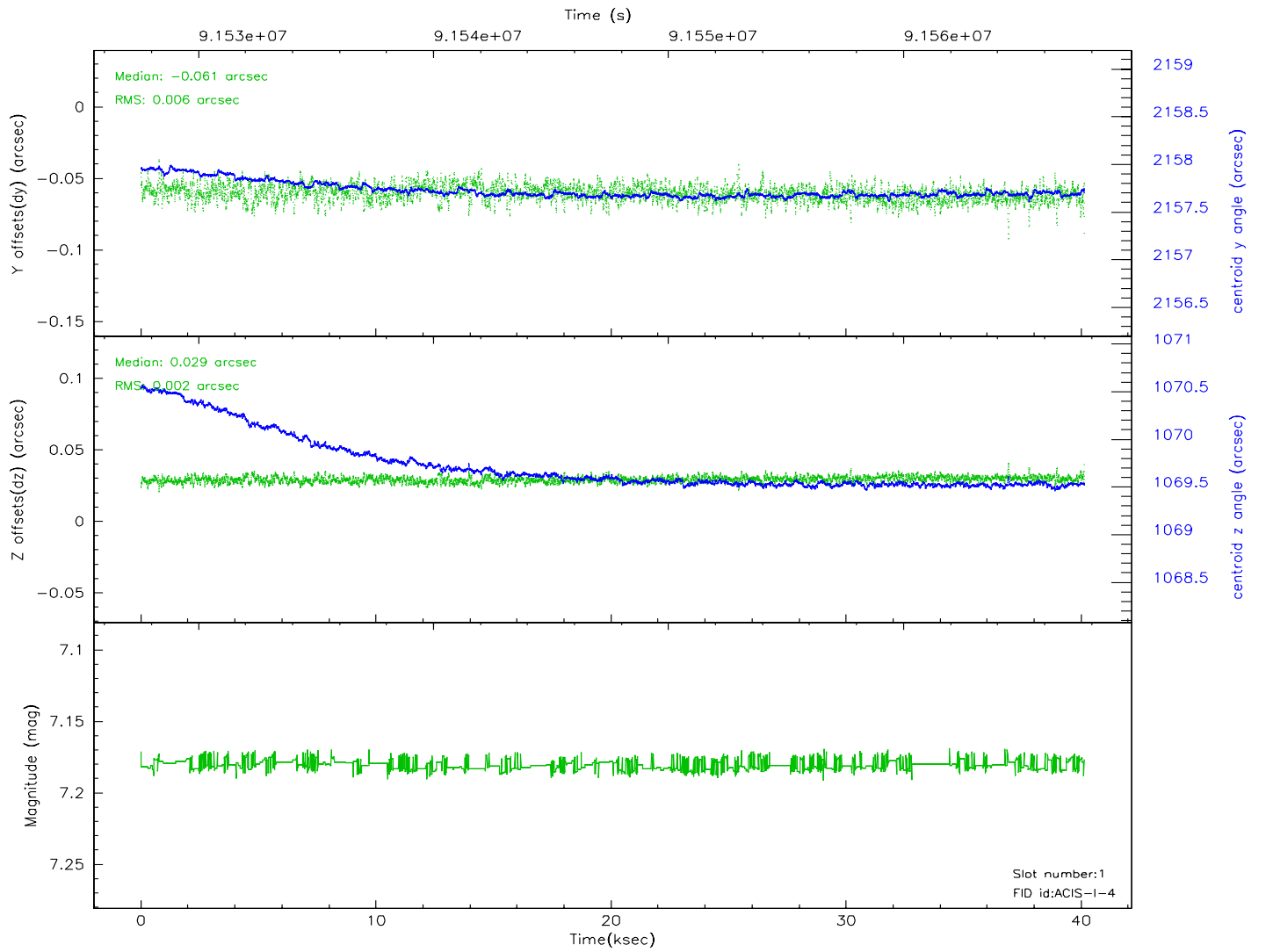
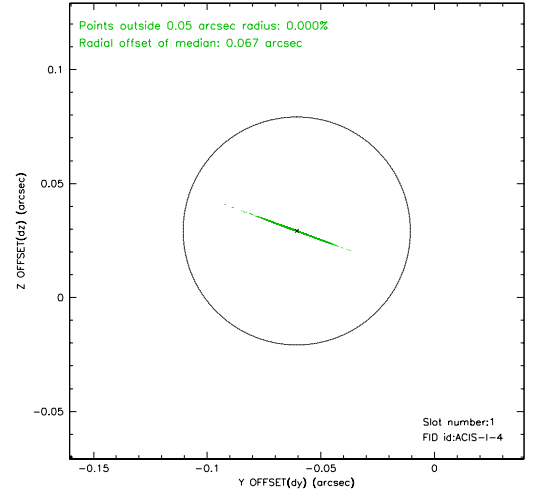
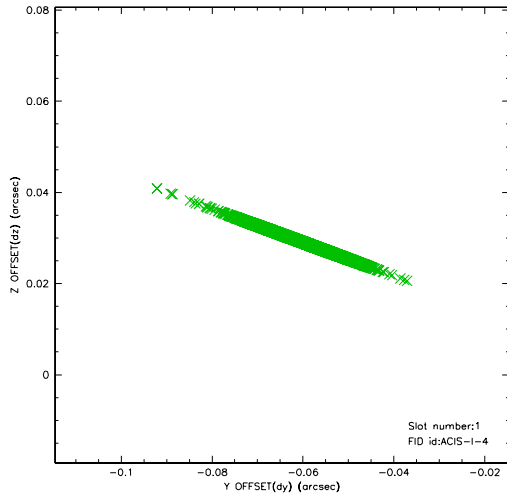


## 2.4.5 Slot 7

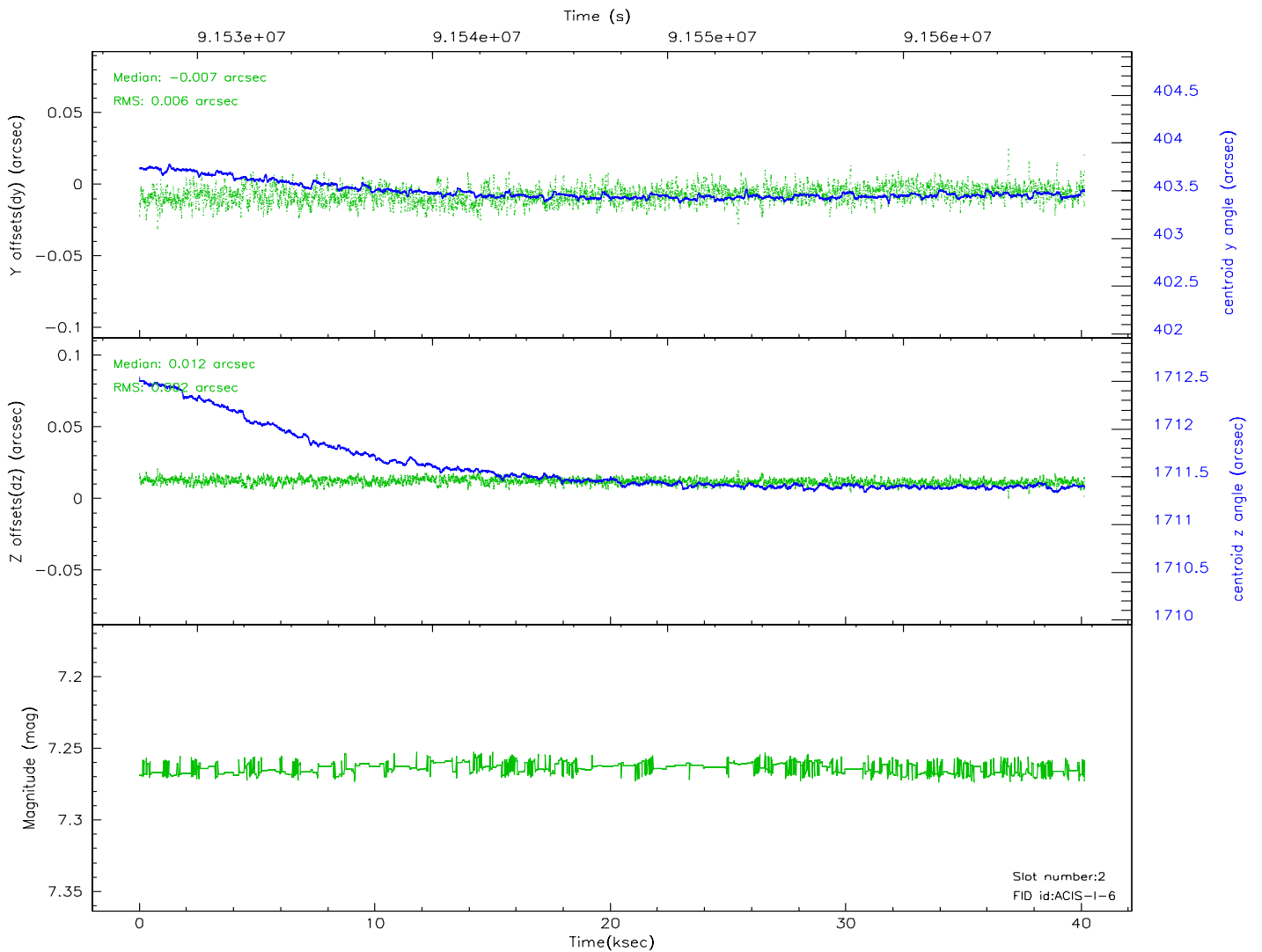
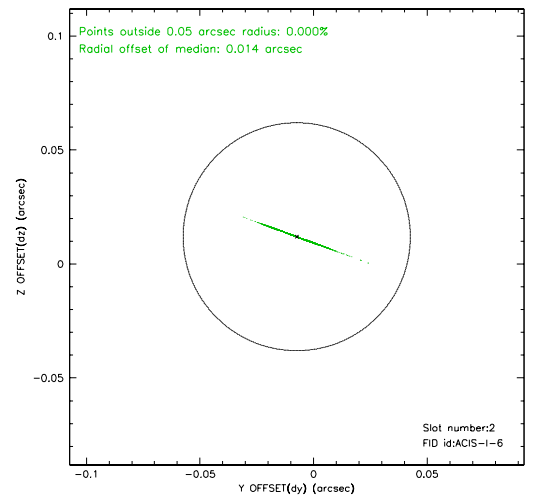
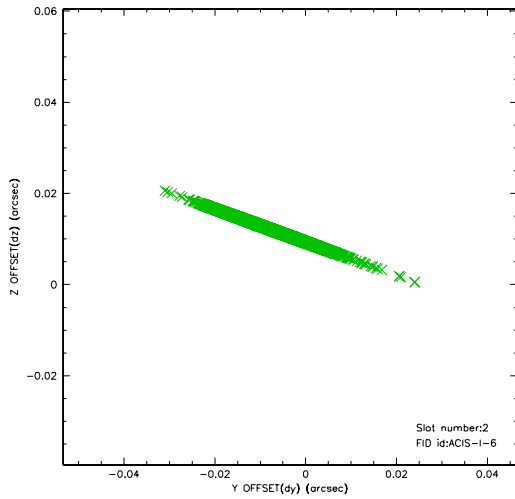


## 2.5 FID Slots

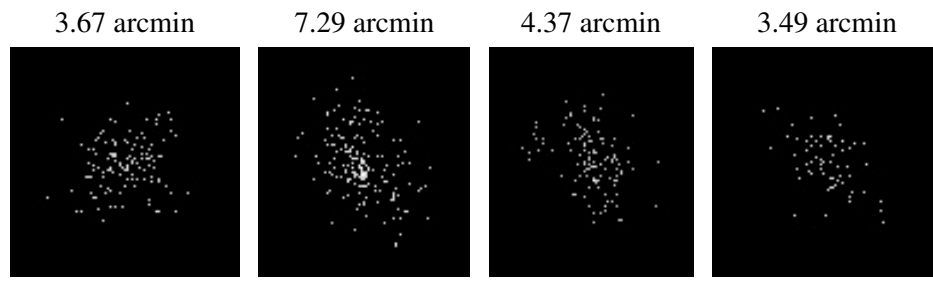
### 2.5.1 Slot 1



## 2.5.2 Slot 2



### 3 Point Sources



# A Summary

## A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2007.10.23    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 40.144        |

## A.2 Comments

The fid light in slot 0 was removed from the aspect solution due to poor data quality. The aspect solution is not expected to be degraded by removing one fid light or guide star from the solution.