

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 14263 - L2 Version 1  
Chandra X-Ray Center

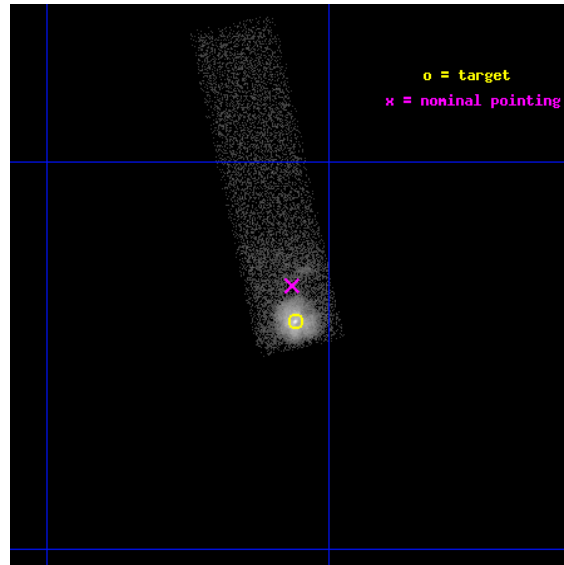
L2 Processing Date : Aug 8 2012

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# 1 Front

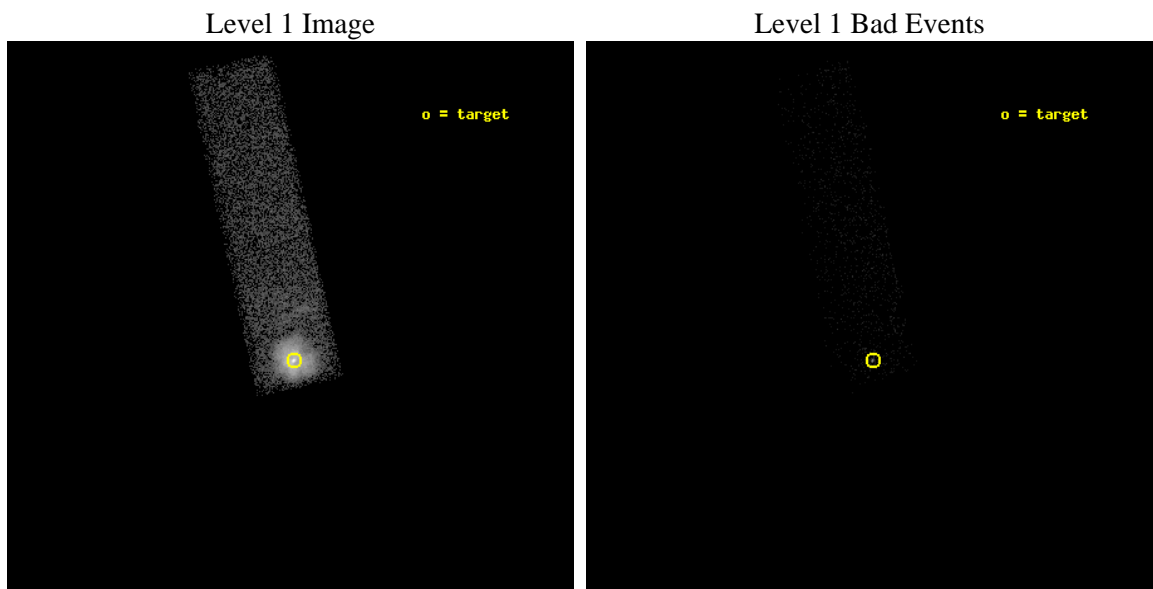
|          |  |   |
|----------|--|---|
| seq_num  | 590516   | Sequence number                             |
| obs_id   | 14263  | Observation id                              |
| title    | AO-13 ACIS Calibration Observations of G21.5-09. | Proposal title                              |
| observer | Dr. CXC Calibration                              | Principal investigator                      |
| object   | G21.5-09   | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 278.389583                                       | Observer's specified target RA [deg]        |
| dec_targ | -10.568528                                       | Observer's specified target Dec [deg]       |
| ra_nom   | 278.39129836152                                  | Nominal RA [deg]                            |
| dec_nom  | -10.553525685                                    | Nominal Dec [deg]                           |
| roll_nom | 257.64761802901                                  | Nominal Roll [deg]                          |
| revision | 1  | Processing version of data                  |
| ontime   | 10060.782674968                                  | Sum of GTIs [s]                             |
| livetime | 9569.8494007118                                  | Livetime [s]                                |
| ontime7  | 10060.782674968                                  | Sum of GTIs [s]                             |
| l2events | 37502  | Number of level 2 events                    |



## 2 OBI

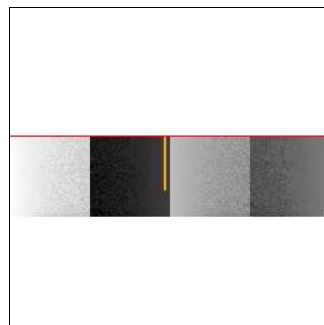
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 10000.000000    | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 10060.782674968 | Sum of GTIs [s]                         |
| caldsver | 4.5.1               | &#160                          | ontime7        | 10060.782674968 | Sum of GTIs [s]                         |
| date     | 2012-08-08T22:23:52 | Date and time of file creation | l1events       | 44943           | Number of level 1 events                |
| revision | 1                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 44943        |
| rejected events | 7157         |
| rejected %      | 15%          |

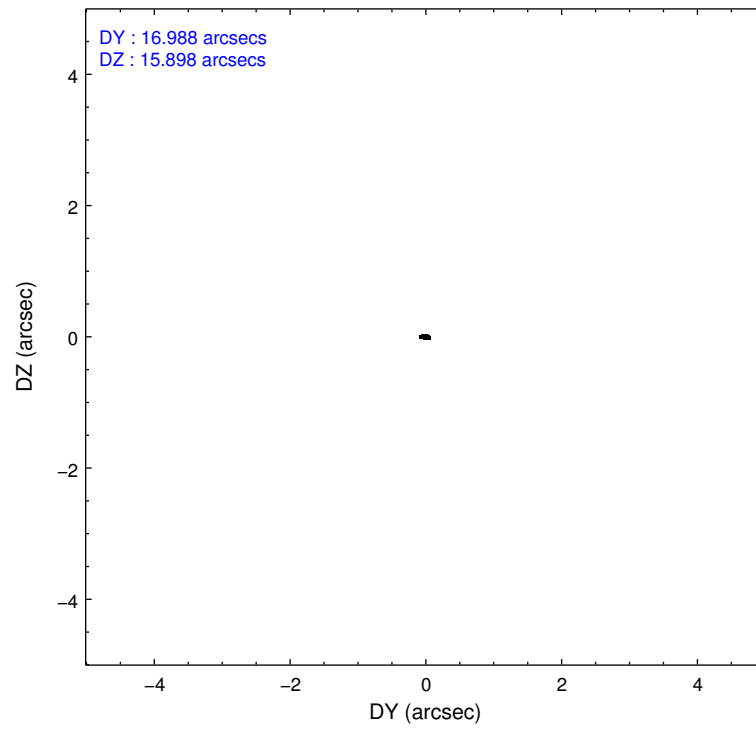
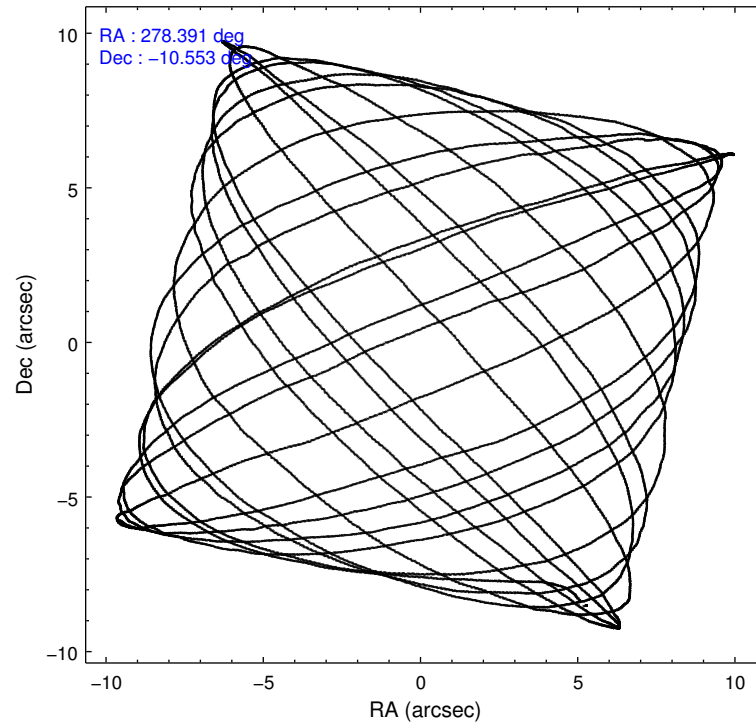
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 6312         |
|                | 14%          |
| grade 1 events | 43           |
|                | 0%           |
| grade 2 events | 9176         |
|                | 20%          |
| grade 3 events | 3994         |
|                | 8%           |
| grade 4 events | 4002         |
|                | 8%           |
| grade 5 events | 1713         |
|                | 3%           |
| grade 6 events | 14306        |
|                | 31%          |
| grade 7 events | 5397         |
|                | 12%          |

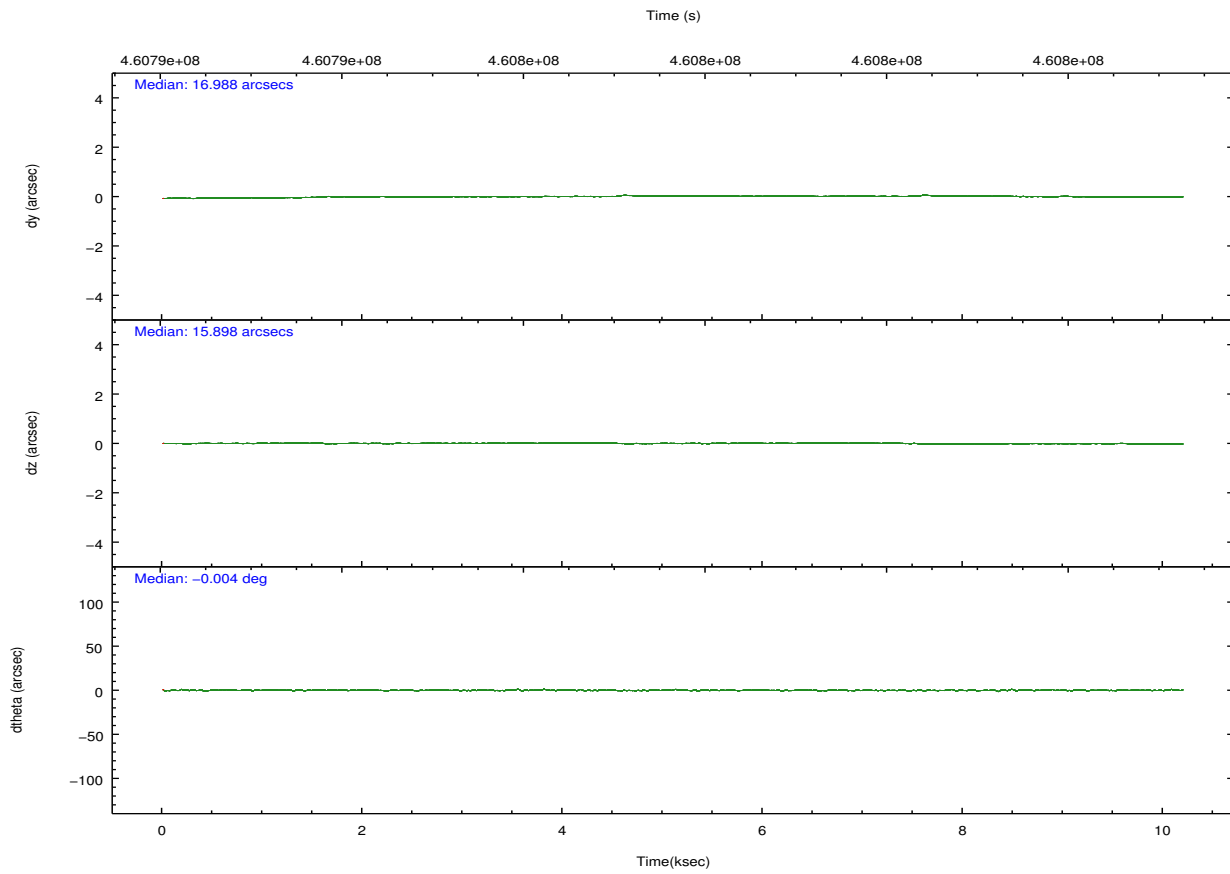
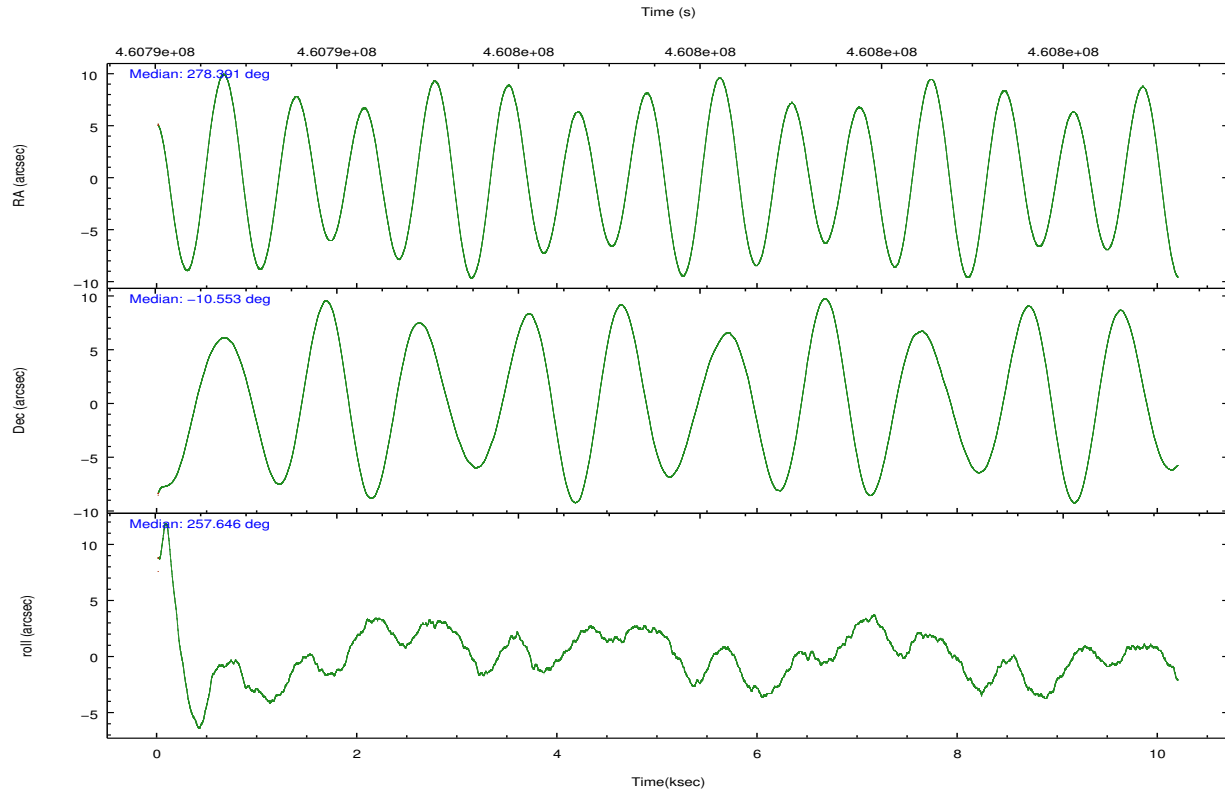


## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-7              | ACIS-7               | 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       |
| [deg] Pointing RA                 | 278.382511          | 278.3912983615168    | Subarray requested                    | CUSTOM    | 1/4     |
| [deg] Pointing Dec                | -10.527550          | -10.55352568499987   | Subarray start row                    | 360       | 360     |
| [deg] Pointing Roll               | 257.489386          | 257.647618029014     | Subarray row count                    | 256       | 256     |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  | Alternating exposures requested       | N         | N       |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 | [s] Primary exposure time             | 0.000000  | 0.8     |
| [mm] SIM translation stage pos    | -190.132523         | -190.145094680475    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01257209746719923  |                                       |           |         |
| [s] Observation start time (MET)  | 460792750.184000    | 460791994.20267      |                                       |           |         |
| Observation start date            | 2012-08-08T05:58:03 | 2012-08-08T05:46:34  |                                       |           |         |
| [s] Observation end time (MET)    | 460802750.184000    | 460803500.34078      |                                       |           |         |
| Observation end date              | 2012-08-08T08:44:43 | 2012-08-08T08:58:20  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



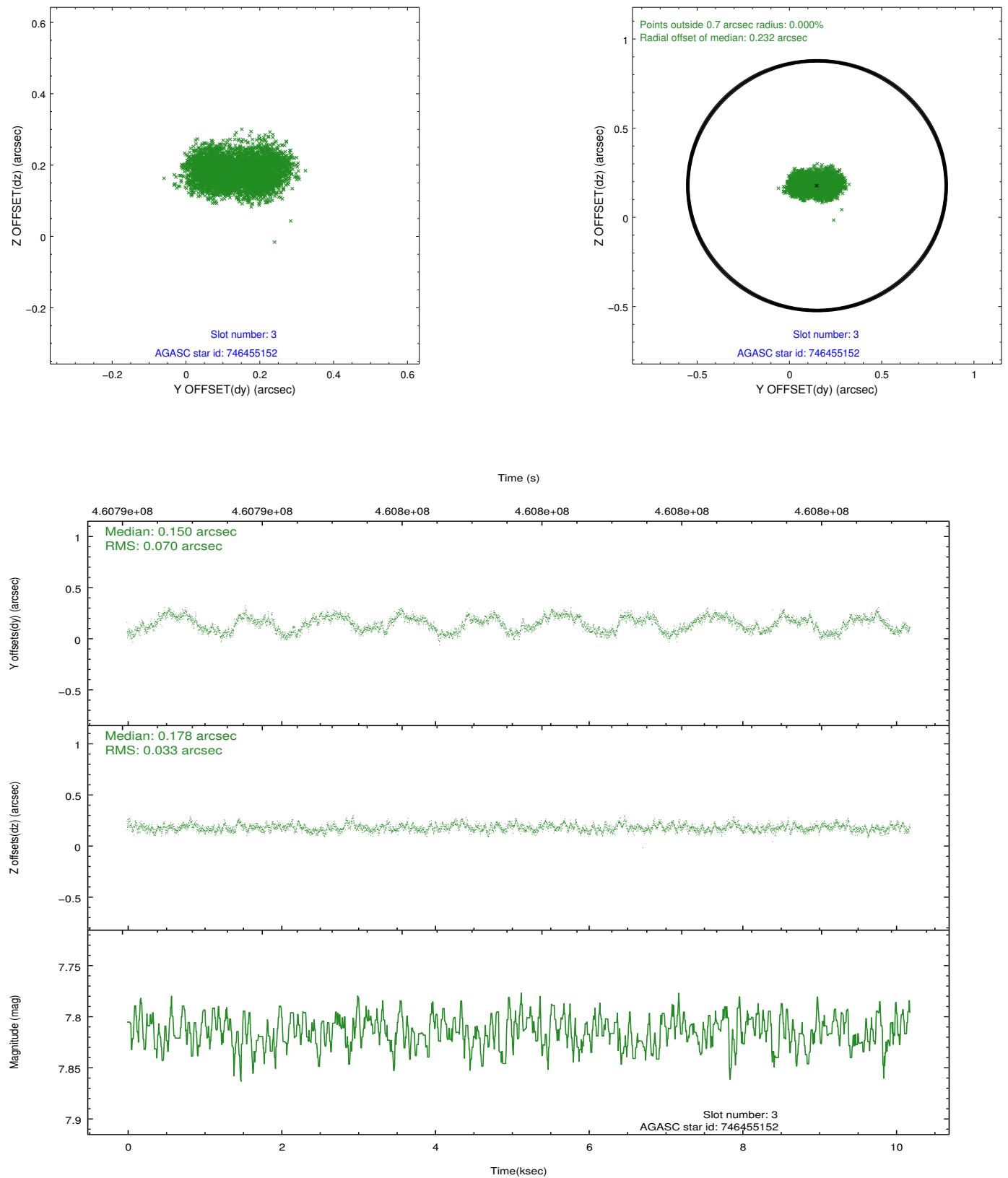


### Slot Statistics

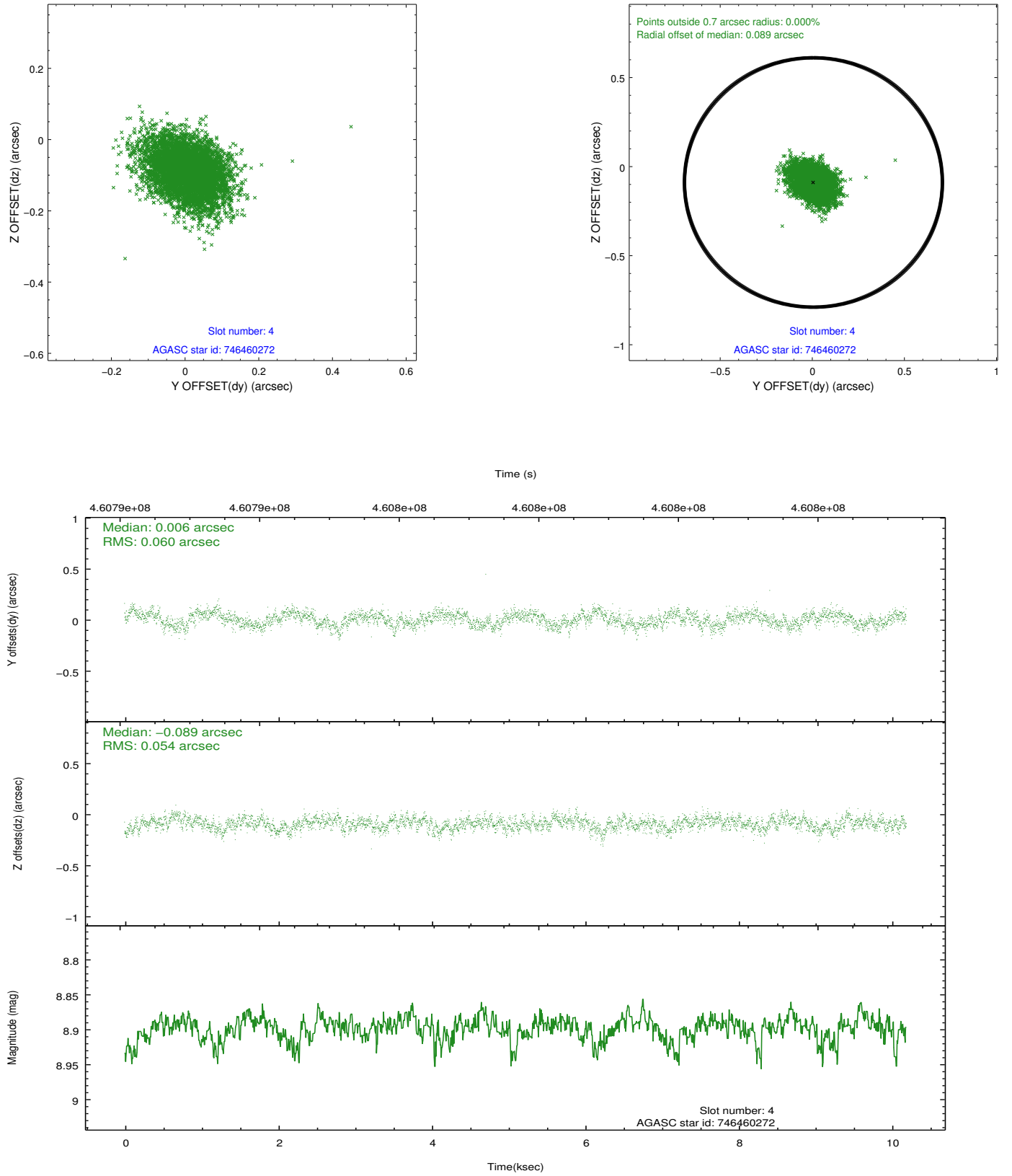
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.02 | 2486  | -0.118 | -0.019 | 0.006 | 0.011 | 0.000000   | 0.000000   | -770.11  | -1737.22 |
| 1    | FID    | ACIS-S-4  | 7.10 | 2486  | 0.246  | 0.062  | 0.005 | 0.009 | 0.000000   | 0.000000   | 2143.28  | 170.82   |
| 2    | FID    | ACIS-S-5  | 7.13 | 2486  | -0.160 | -0.035 | 0.006 | 0.011 | 0.000000   | 0.000000   | -1822.35 | 164.97   |
| 3    | GUIDE  | 746455152 | 7.82 | 4971  | 0.150  | 0.178  | 0.086 | 0.129 | 278.447893 | -9.976732  | -1985.88 | -203.01  |
| 4    | GUIDE  | 746460272 | 8.90 | 4968  | 0.006  | -0.089 | 0.086 | 0.139 | 278.847488 | -10.152127 | -1675.62 | 1316.05  |
| 5    | GUIDE  | 746461728 | 9.77 | 4964  | -0.049 | -0.010 | 0.127 | 0.204 | 278.986921 | -10.530755 | -450.56  | 2091.73  |
| 6    | GUIDE  | 746462456 | 8.39 | 4971  | 0.090  | 0.008  | 0.066 | 0.108 | 278.652171 | -10.530173 | -195.55  | 935.15   |
| 7    | GUIDE  | 746462680 | 8.98 | 4967  | -0.192 | -0.090 | 0.099 | 0.158 | 278.660755 | -10.782756 | 683.97   | 1159.98  |

## 2.4 Star Slots

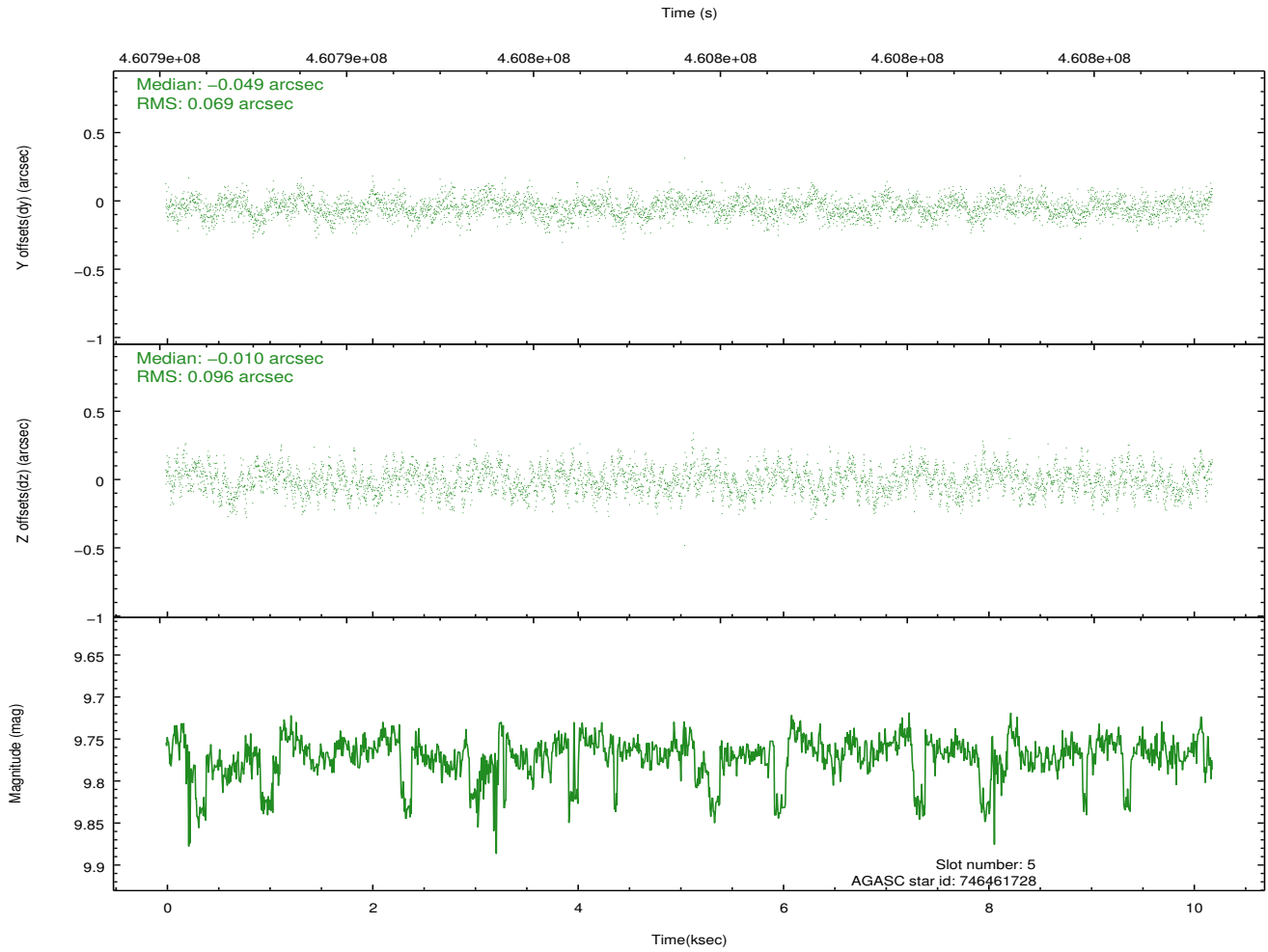
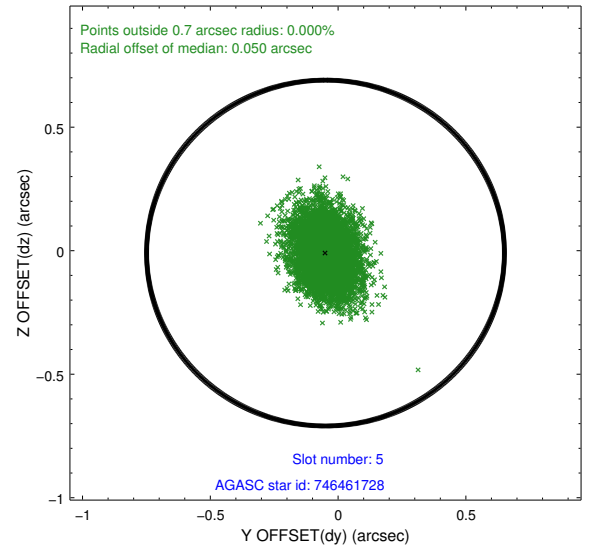
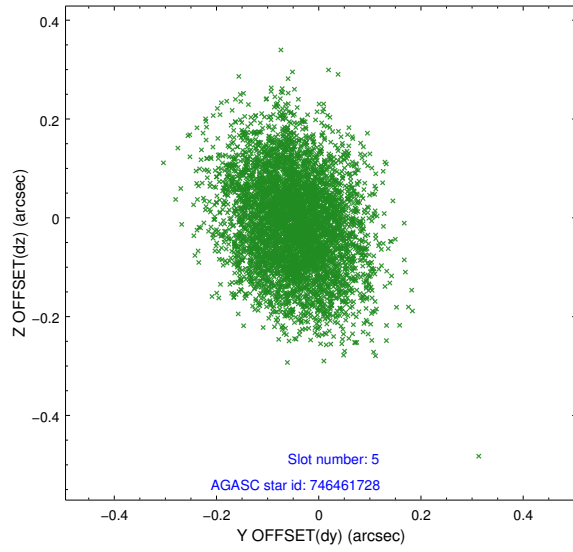
### 2.4.1 Slot 3



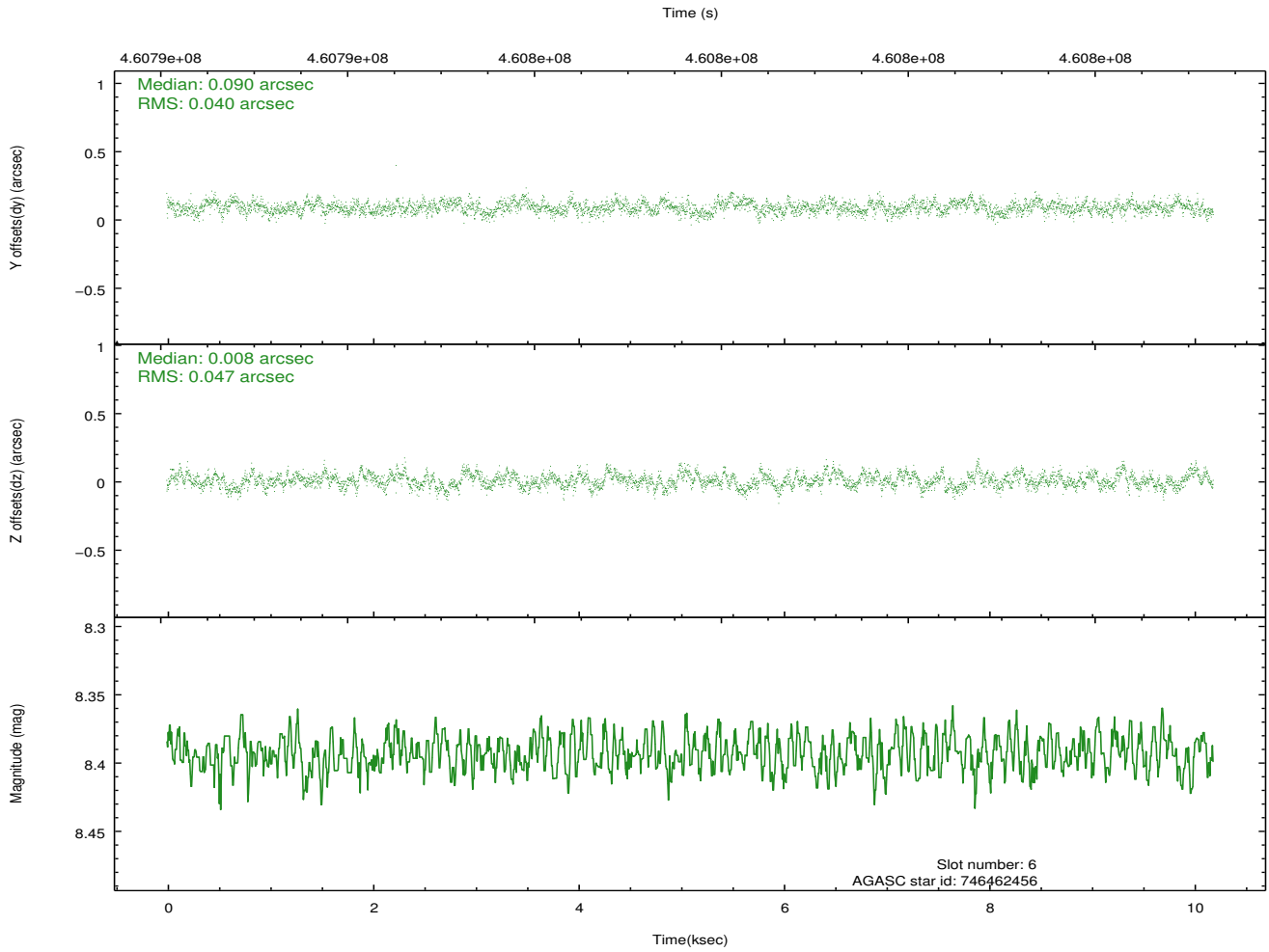
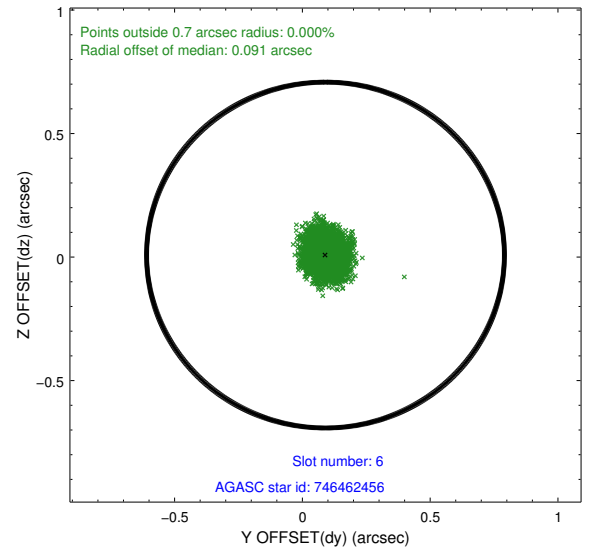
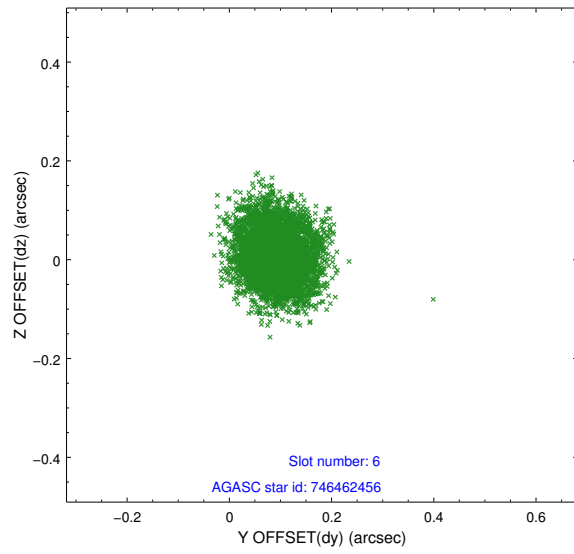
## 2.4.2 Slot 4



### 2.4.3 Slot 5

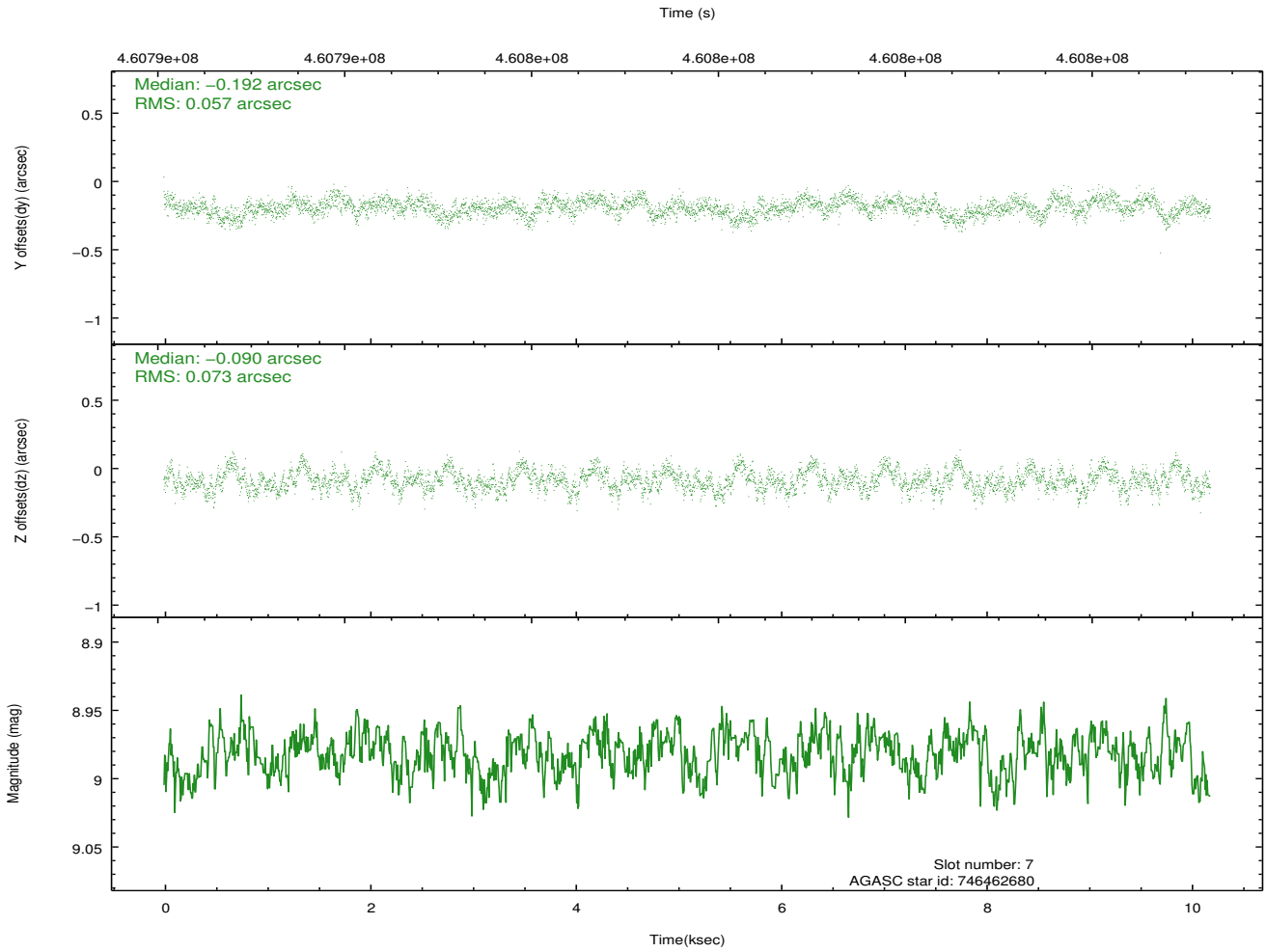
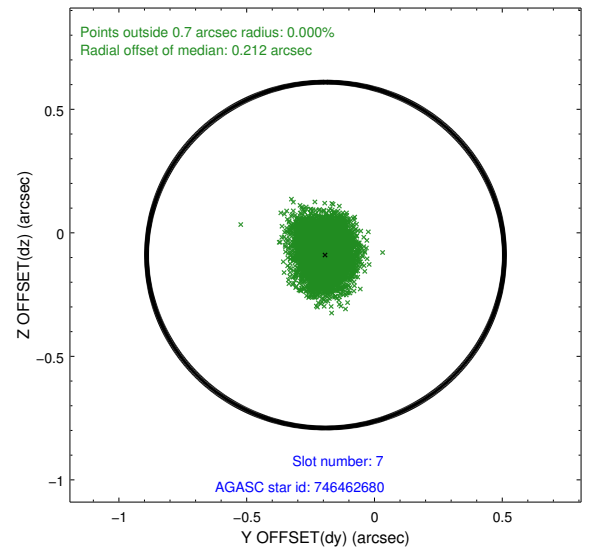
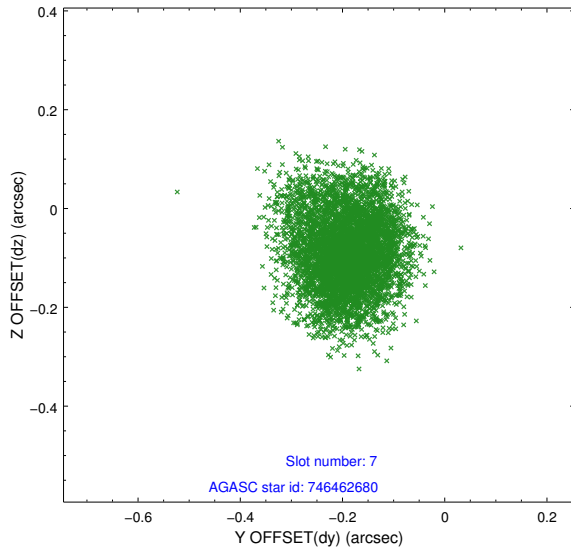


## 2.4.4 Slot 6



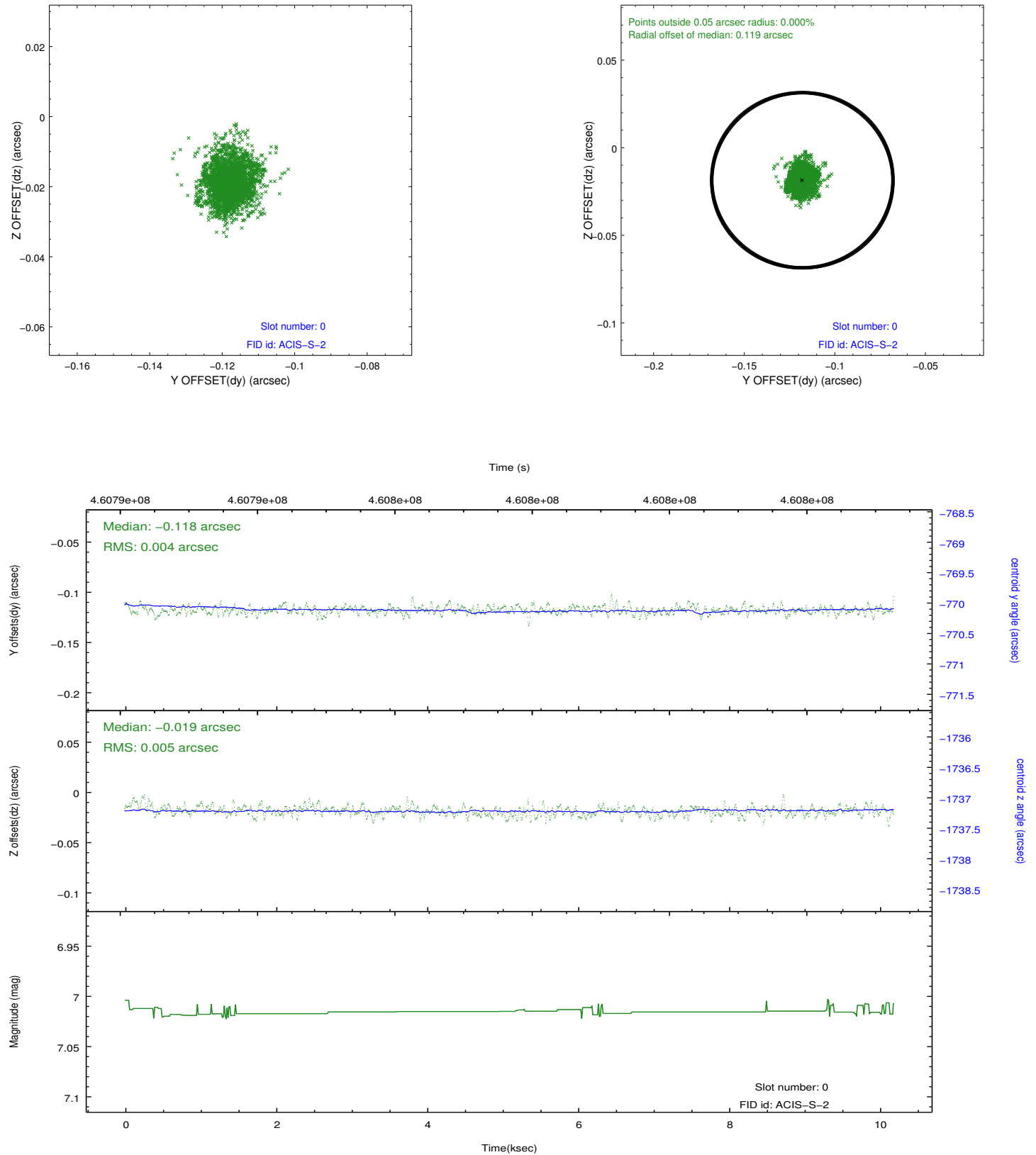


## 2.4.5 Slot 7

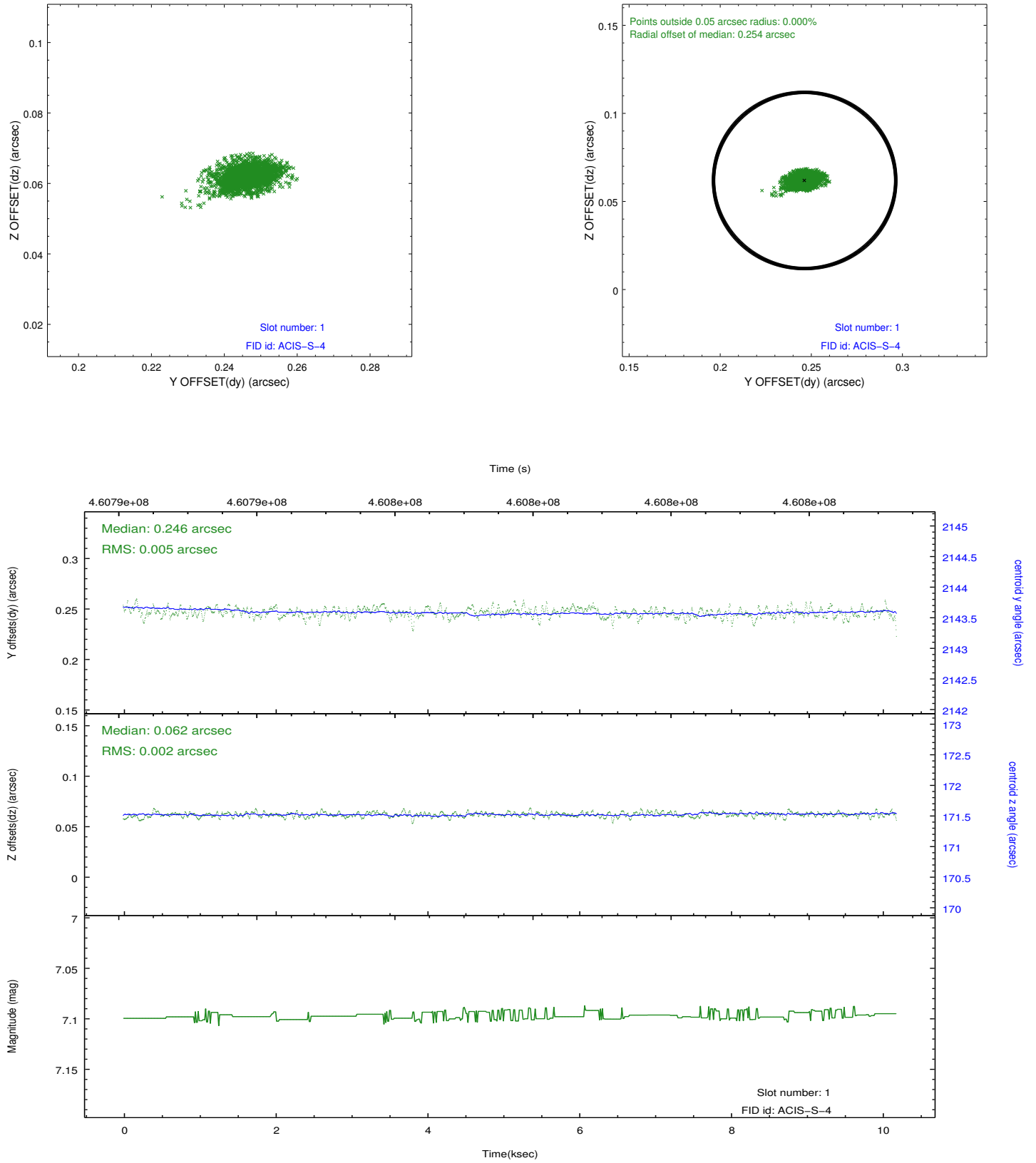


## 2.5 FID Slots

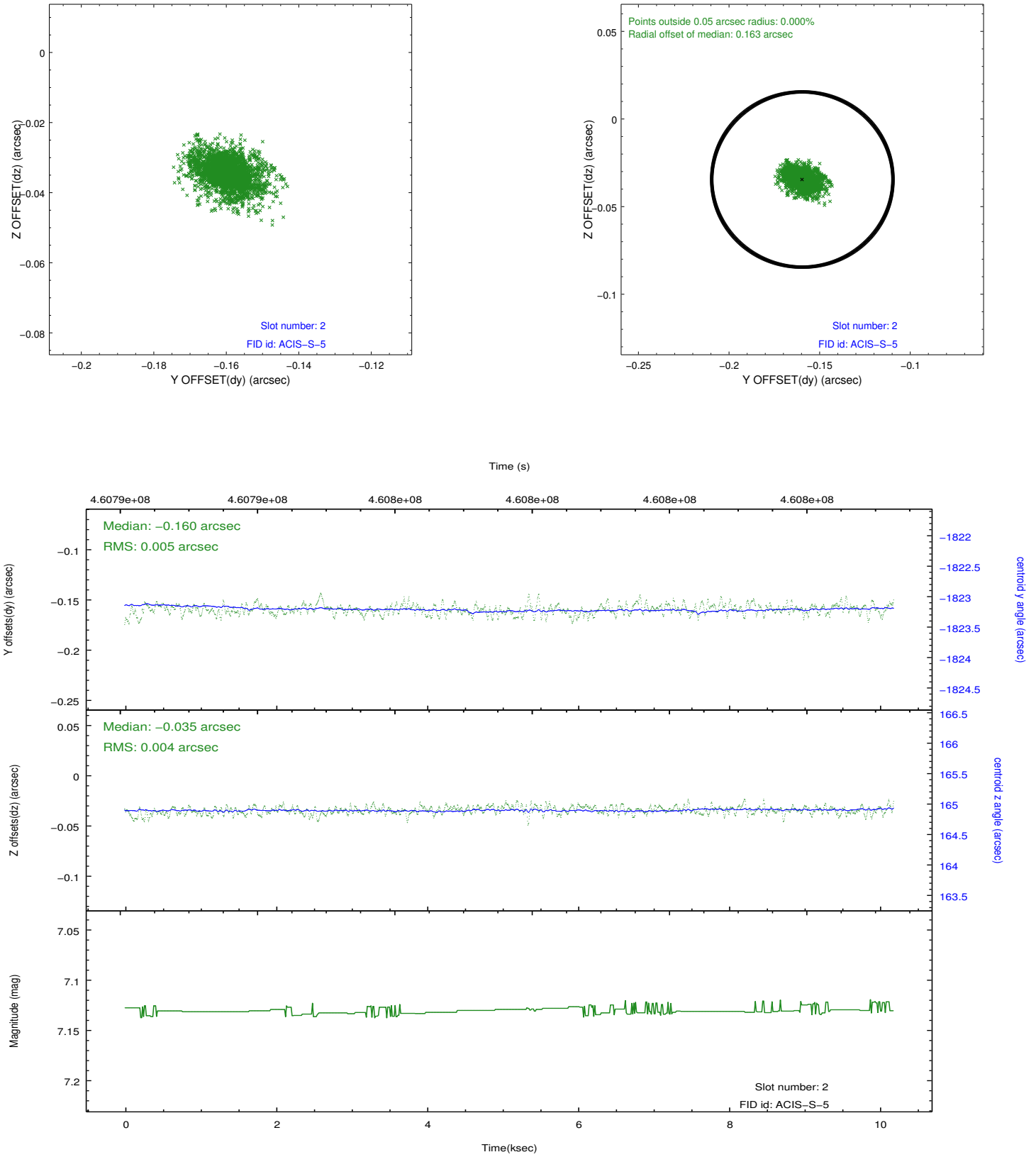
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Joy Nichols     |
| V&V Date (YYYY-MM-DD)      | 2012.08.09      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 10.060782674968 |

### A.2 Comments