

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 11855 - L2 Version 2  
Chandra X-Ray Center

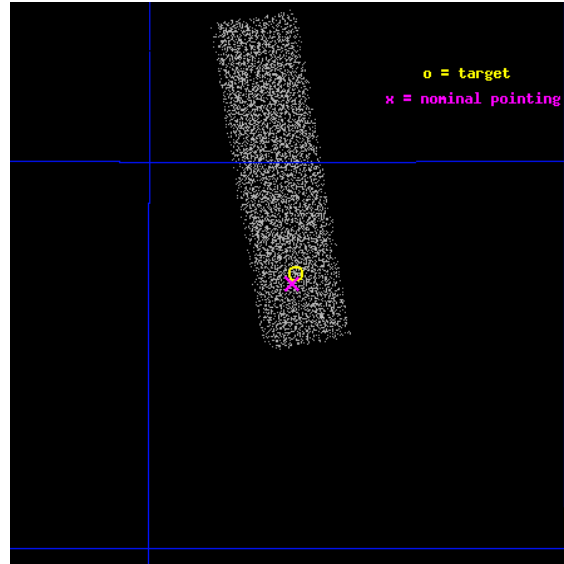
L2 Processing Date : Jun 30 2012

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# 1 Front

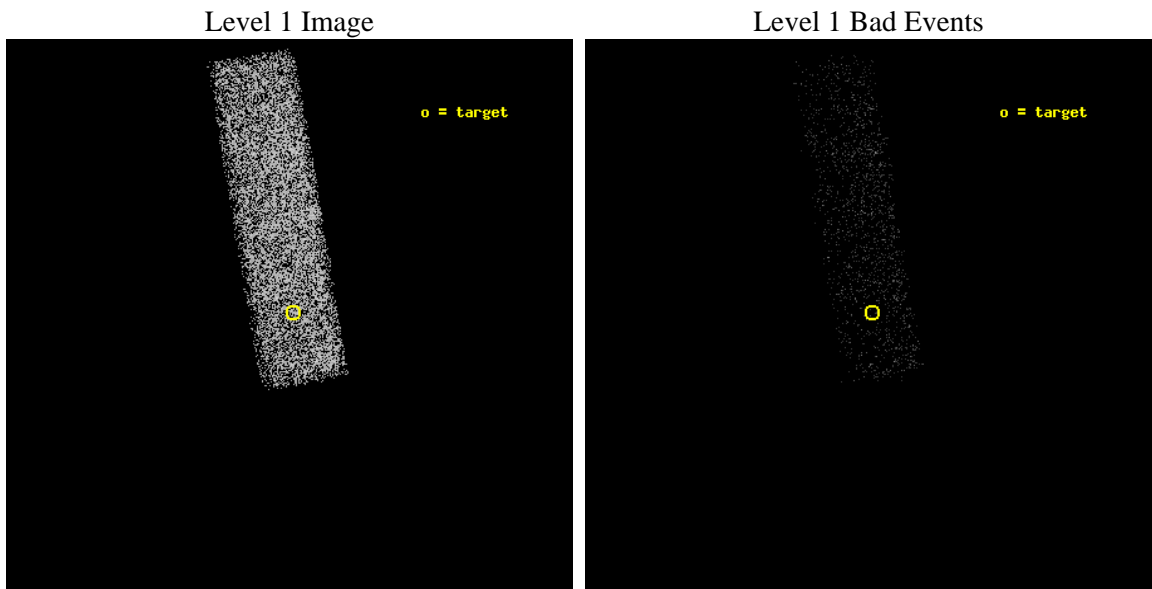
|          |  |   |
|----------|--|---|
| seq_num  | 702302   | Sequence number                             |
| obs_id   | 11855  | Observation id                              |
| title    | A Survey of X-ray Variability in Bright Broad Absorption Line Quasars Over Multi-Year Timescales | Proposal title                              |
| observer | Professor Gordon Garmire   | Principal investigator                      |
| object   | IRAS 14026+4341  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 211.161667   | Observer's specified target RA [deg]        |
| dec_targ | 43.451944  | Observer's specified target Dec [deg]       |
| ra_nom   | 211.16414403   | Nominal RA [deg]                            |
| dec_nom  | 43.447487340186  | Nominal Dec [deg]                           |
| roll_nom | 260.3815492984   | Nominal Roll [deg]                          |
| revision | 2  | Processing version of data                  |
| ontime   | 7026.4001047611  | Sum of GTIs [s]                             |
| livetime | 6683.5347710084  | Livetime [s]                                |
| ontime7  | 7026.4001047611  | Sum of GTIs [s]                             |
| l2events | 7795   | Number of level 2 events                    |



## 2 OBI

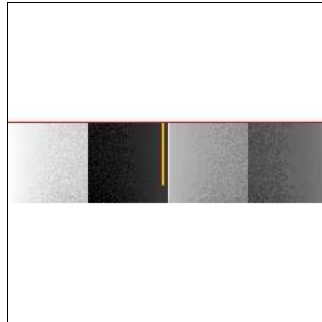
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 7000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 7026.4001047611 | Sum of GTIs [s]                         |
| caldsver | 4.5.0               | &#160                          | ontime7        | 7026.4001047611 | Sum of GTIs [s]                         |
| date     | 2012-06-30T15:14:38 | Date and time of file creation | l1events       | 16435           | Number of level 1 events                |
| revision | 2                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

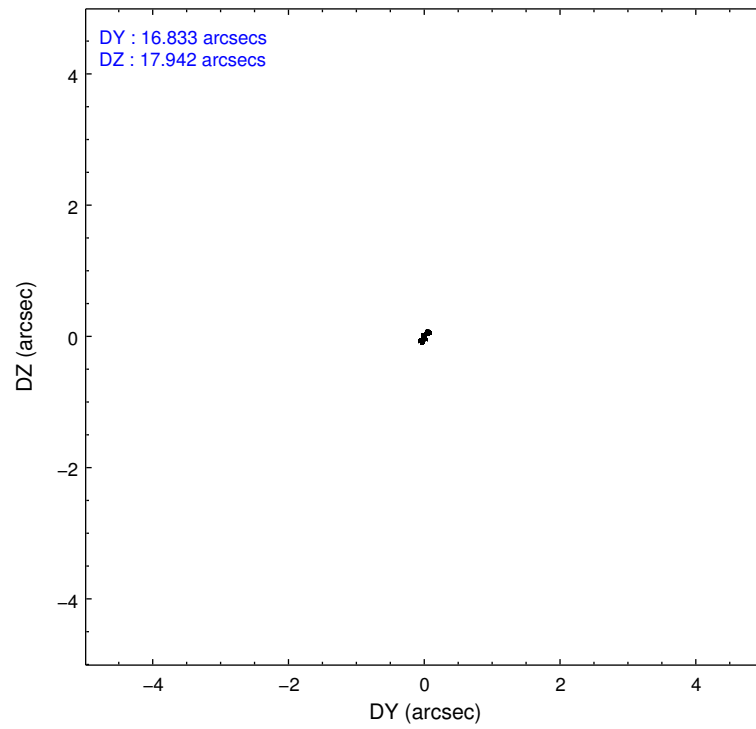
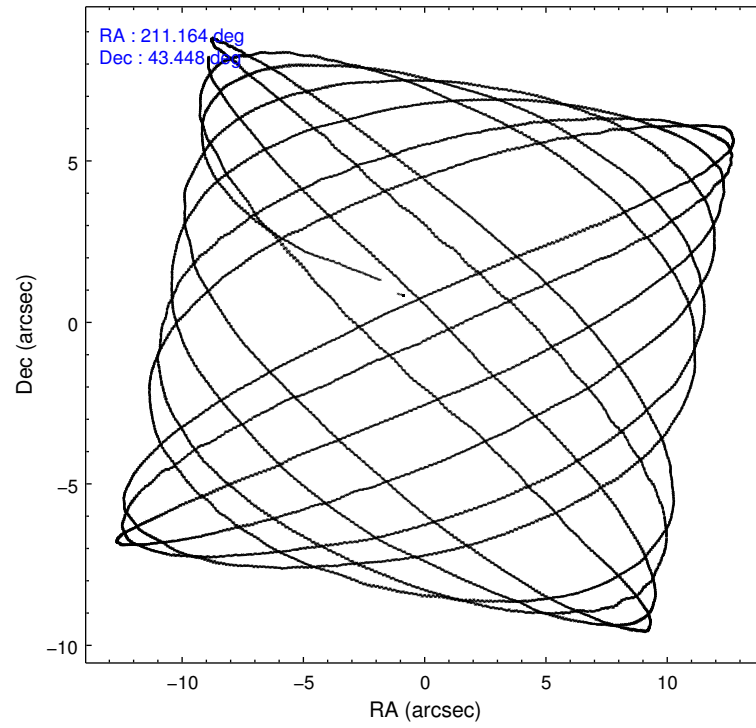
|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 16435        |
| rejected events | 8339         |
| rejected %      | 50%          |

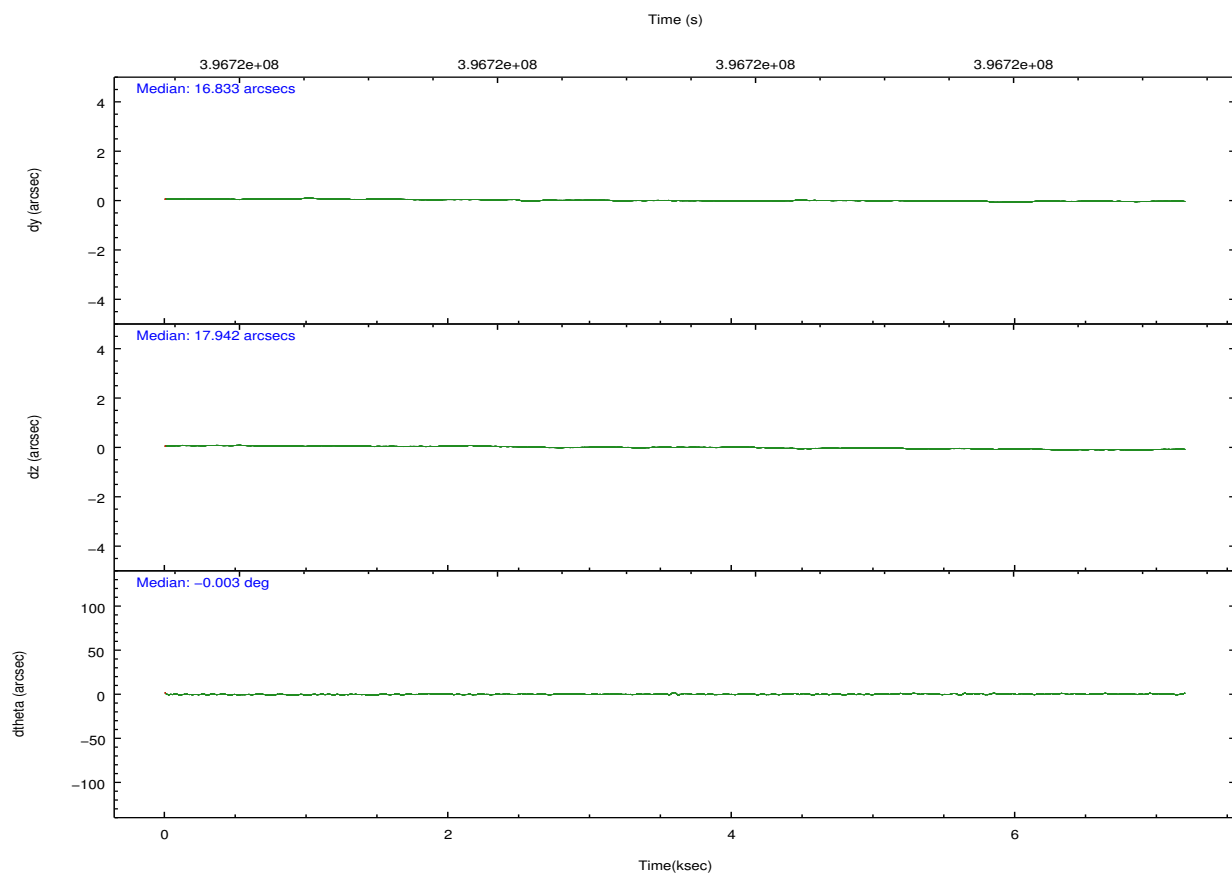
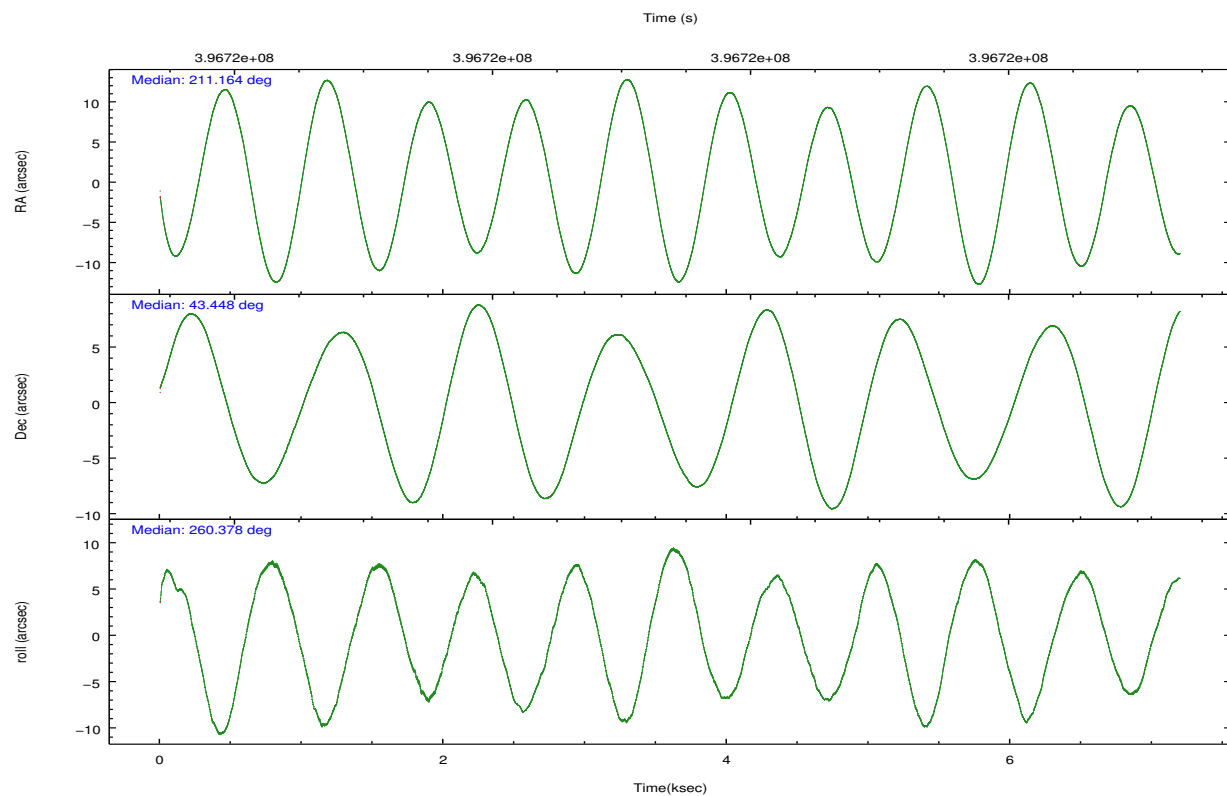
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 855          |
|                | 5%           |
| grade 1 events | 26           |
|                | 0%           |
| grade 2 events | 1657         |
|                | 10%          |
| grade 3 events | 941          |
|                | 5%           |
| grade 4 events | 953          |
|                | 5%           |
| grade 5 events | 1767         |
|                | 10%          |
| grade 6 events | 3692         |
|                | 22%          |
| grade 7 events | 6544         |
|                | 39%          |

## 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                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 211.150579          | 211.1641440299998    | Subarray requested                    | CUSTOM    | 1/4     |
| [deg] Pointing Dec                | 43.472949           | 43.44748734018563    | Subarray start row                    | 385       | 385     |
| [deg] Pointing Roll               | 260.234258          | 260.3815492984011    | 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         | -190.1400660498719   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.00754346686406393  |                                       |           |         |
| [s] Observation start time (MET)  | 396715977.184000    | 396715235.74048      |                                       |           |         |
| Observation start date            | 2010-07-28T14:51:51 | 2010-07-28T14:40:35  |                                       |           |         |
| [s] Observation end time (MET)    | 396722977.184000    | 396723364.5034       |                                       |           |         |
| Observation end date              | 2010-07-28T16:48:31 | 2010-07-28T16:56:04  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



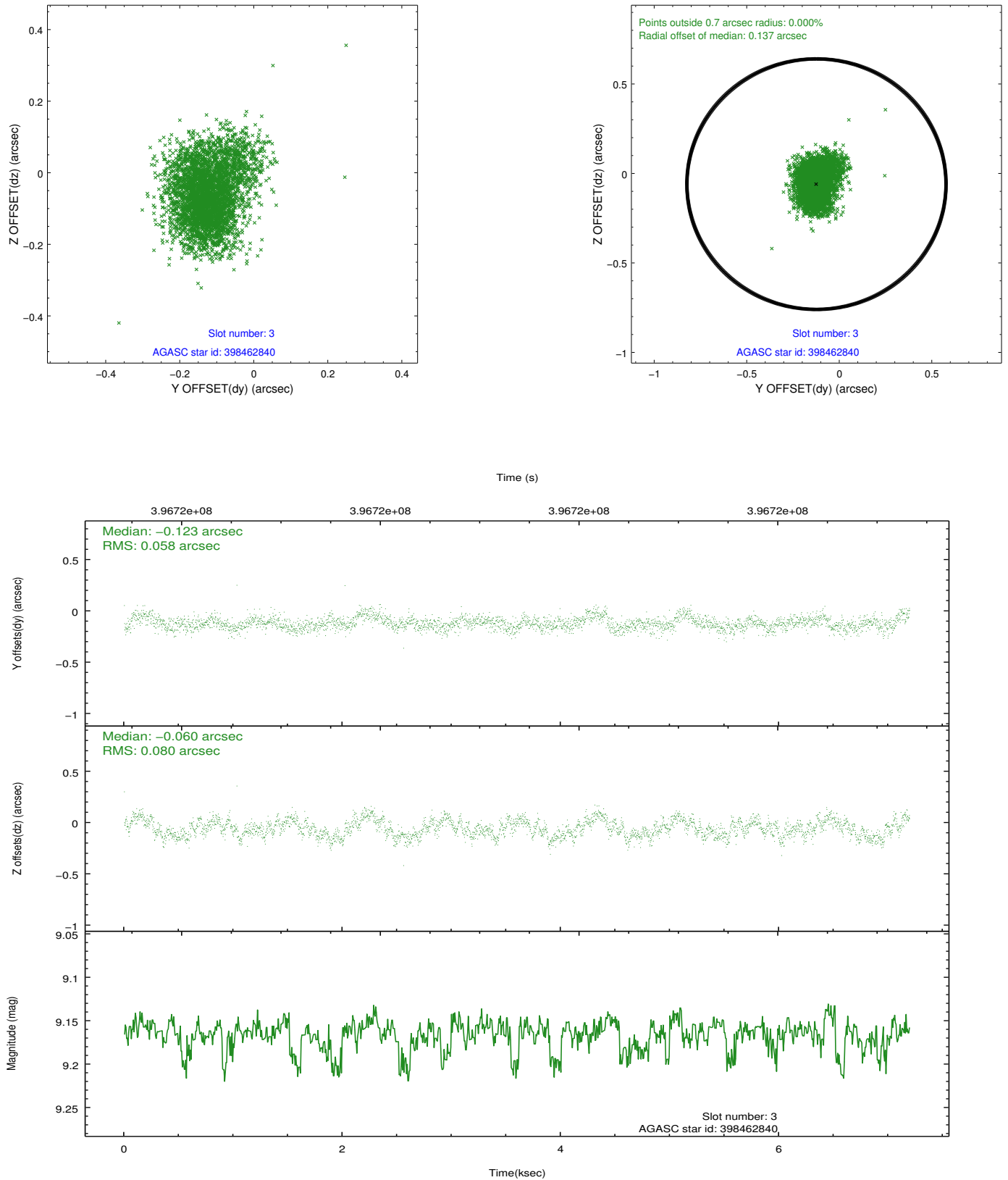


### Slot Statistics

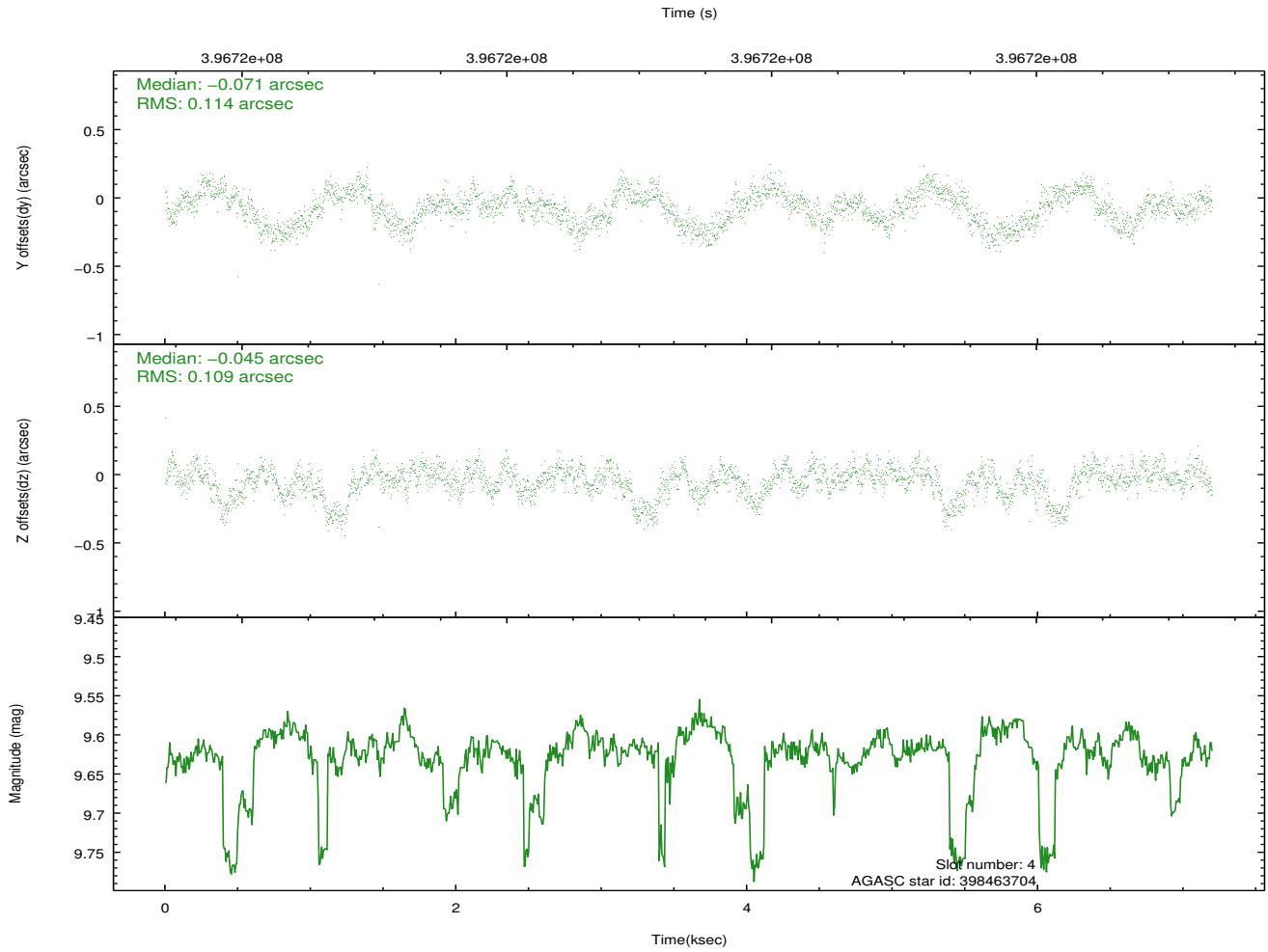
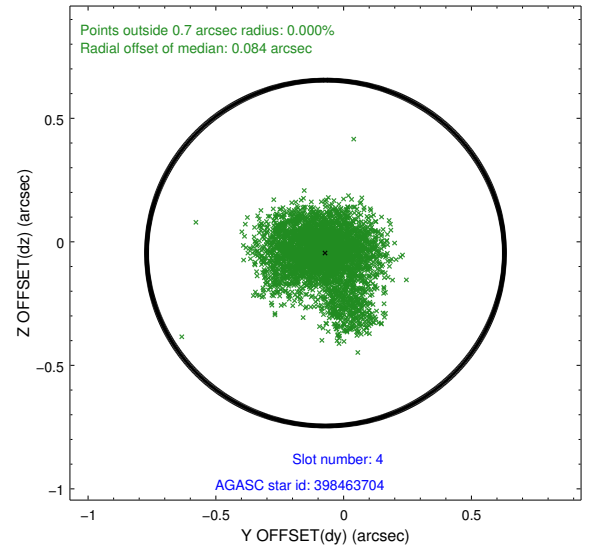
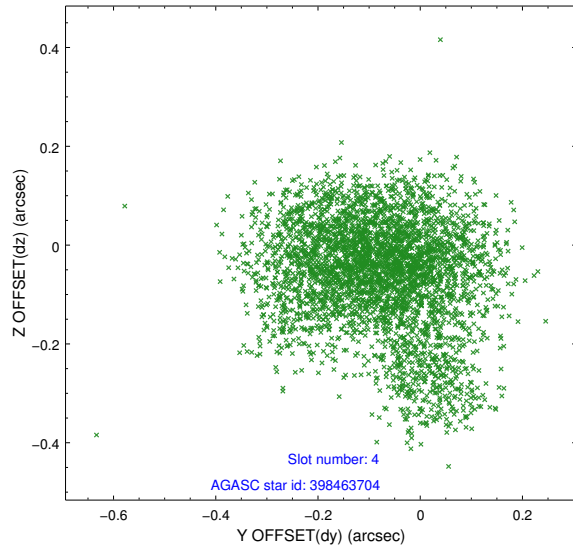
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-2  | 6.86 | 1756  | -0.051 | -0.018 | 0.007 | 0.011 | 0.000000   | 0.000000  | -769.95  | -1739.40 |
| 1    | FID    | ACIS-S-4  | 6.94 | 1756  | 0.127  | 0.030  | 0.005 | 0.010 | 0.000000   | 0.000000  | 2143.18  | 168.24   |
| 2    | FID    | ACIS-S-5  | 6.98 | 1756  | -0.108 | -0.002 | 0.007 | 0.012 | 0.000000   | 0.000000  | -1821.79 | 162.87   |
| 3    | GUIDE  | 398462840 | 9.17 | 3492  | -0.123 | -0.060 | 0.105 | 0.170 | 211.367156 | 43.895513 | -1594.80 | 295.49   |
| 4    | GUIDE  | 398463704 | 9.62 | 3492  | -0.071 | -0.045 | 0.169 | 0.275 | 211.803567 | 42.974585 | 1469.49  | 1998.67  |
| 5    | GUIDE  | 398466568 | 8.59 | 3510  | 0.027  | 0.134  | 0.146 | 0.212 | 210.621429 | 43.989239 | -1602.66 | -1665.80 |
| 6    | GUIDE  | 398466888 | 9.54 | 3507  | 0.033  | -0.067 | 0.255 | 0.450 | 211.850253 | 43.442539 | -209.78  | 1818.90  |
| 7    | GUIDE  | 398467312 | 9.89 | 3506  | 0.156  | 0.018  | 0.157 | 0.246 | 211.187325 | 42.801771 | 2365.18  | 506.78   |

## 2.4 Star Slots

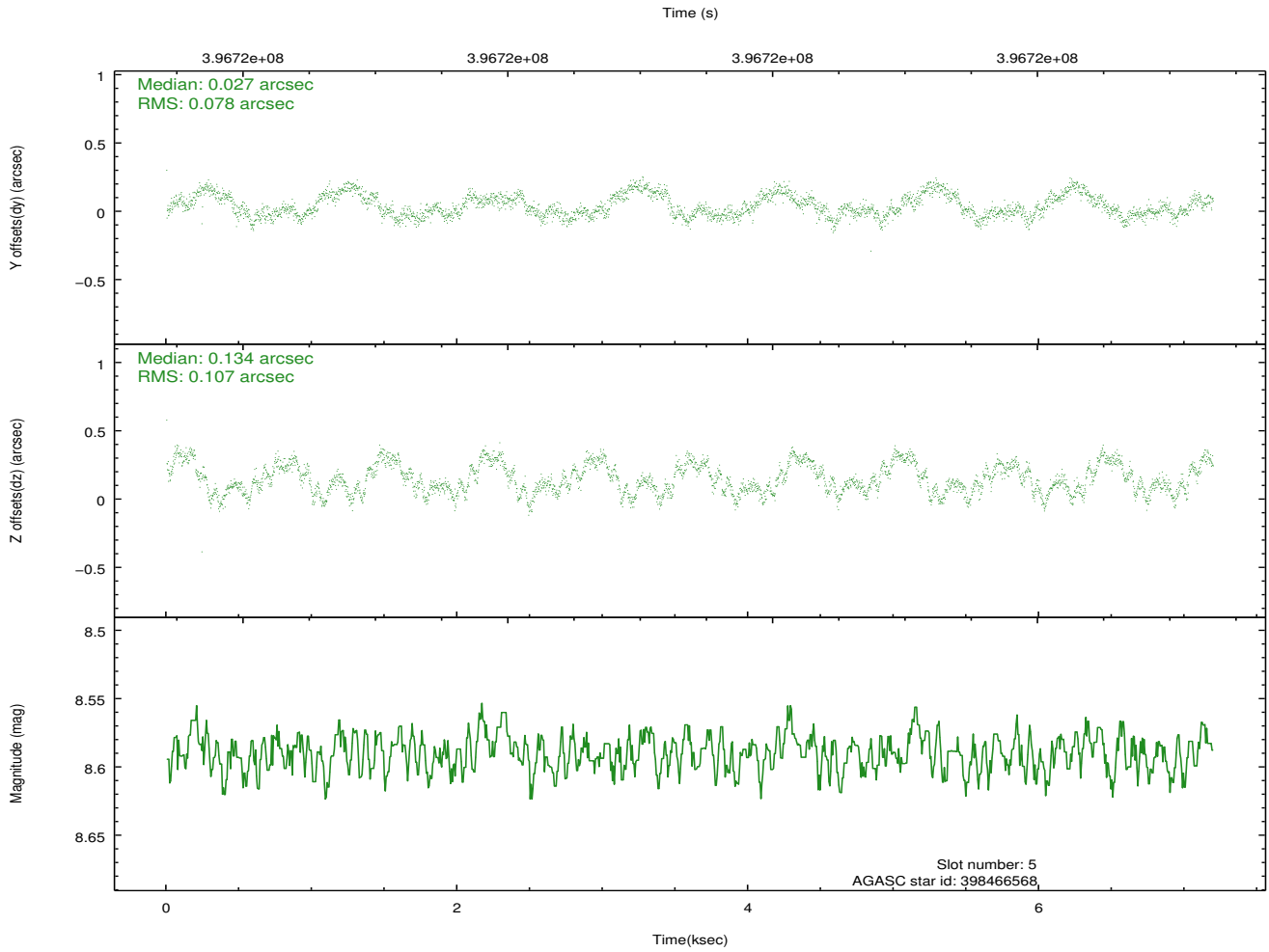
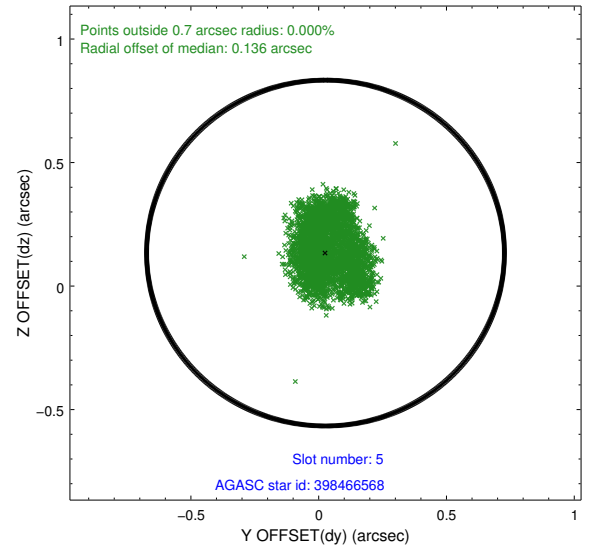
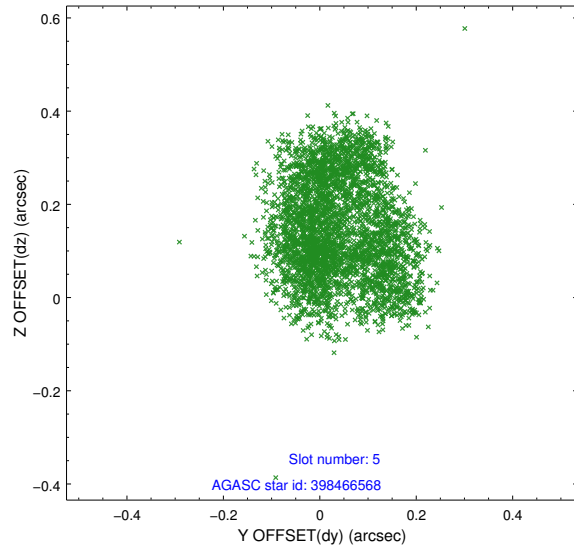
### 2.4.1 Slot 3



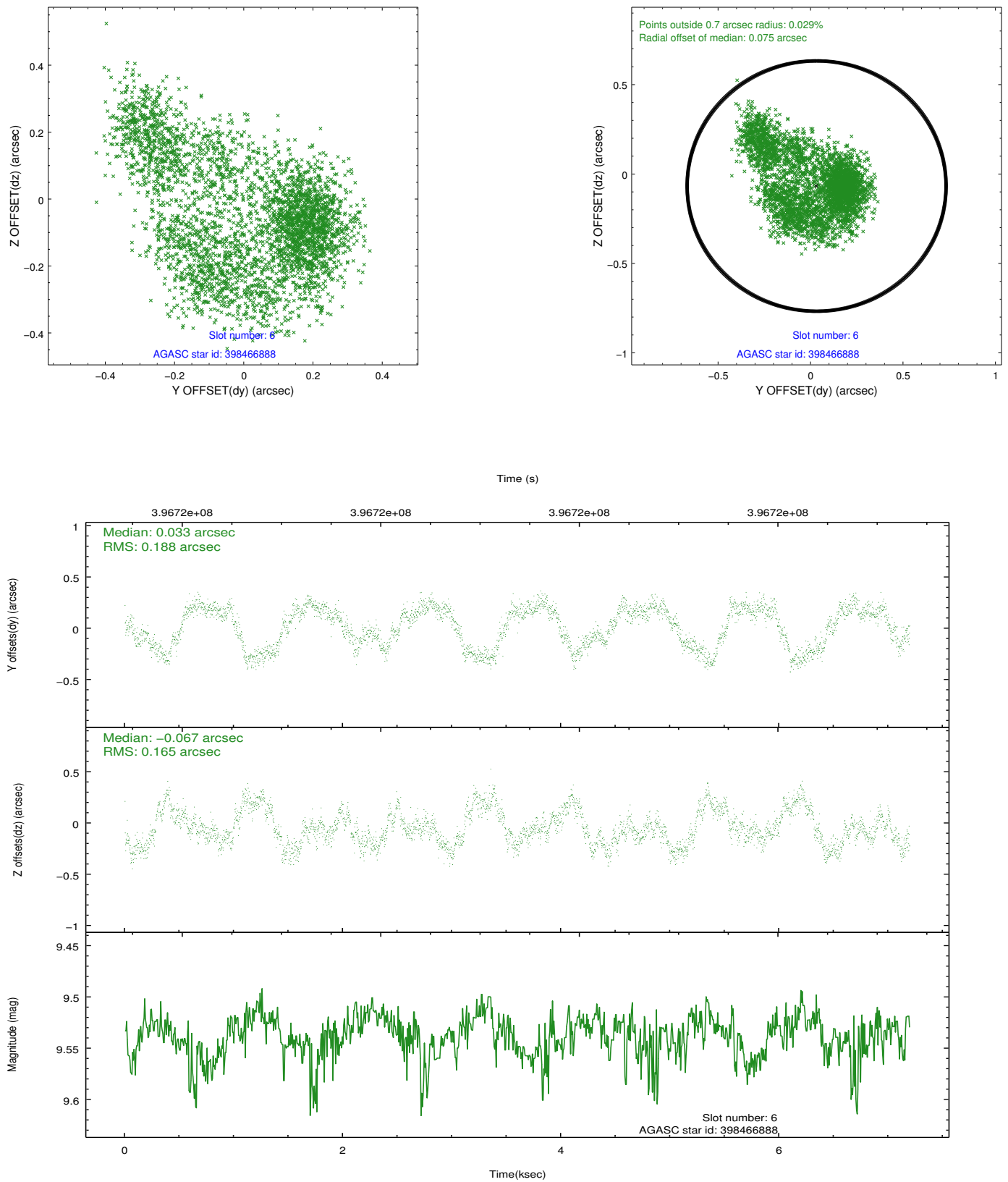
## 2.4.2 Slot 4



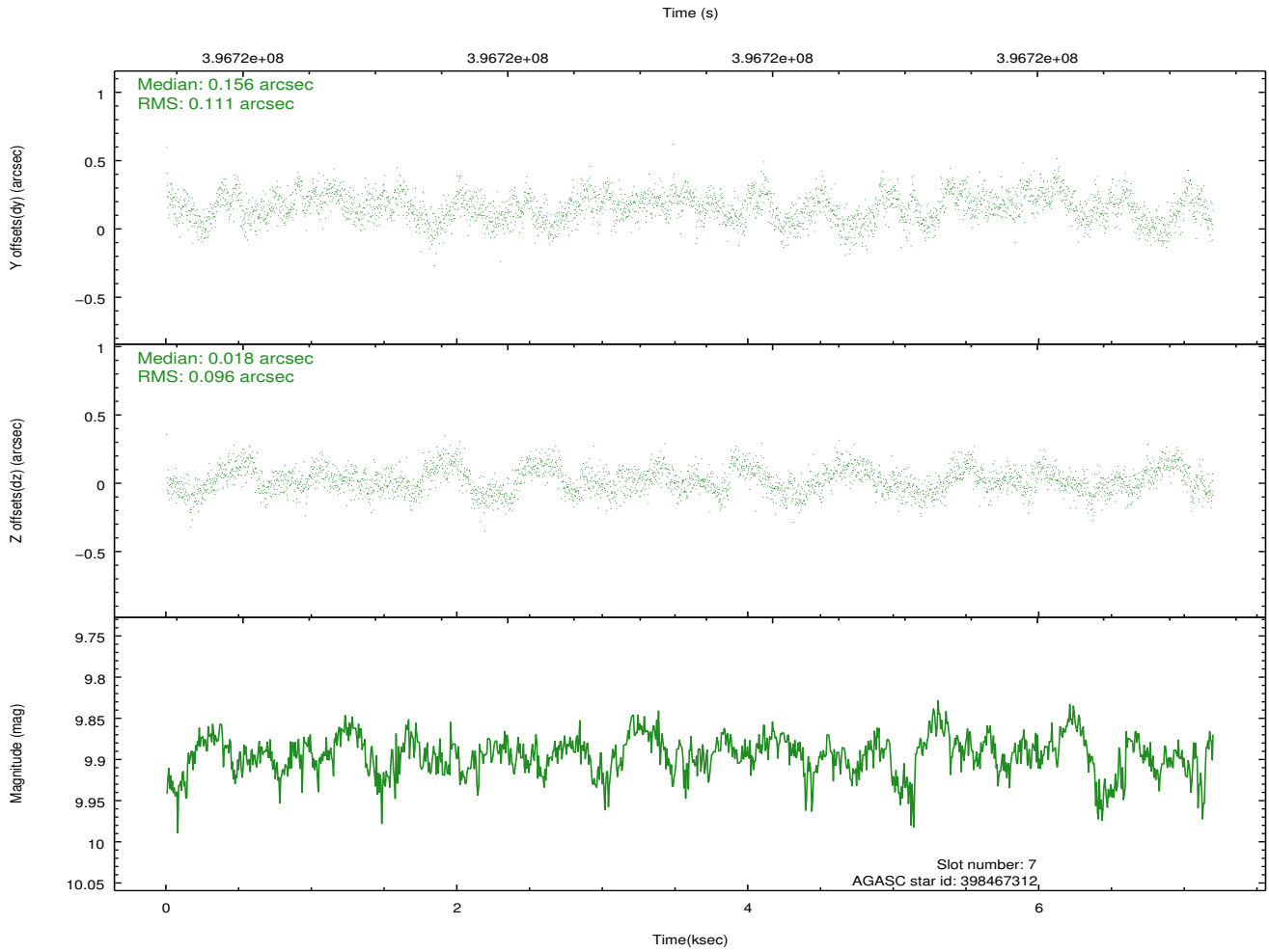
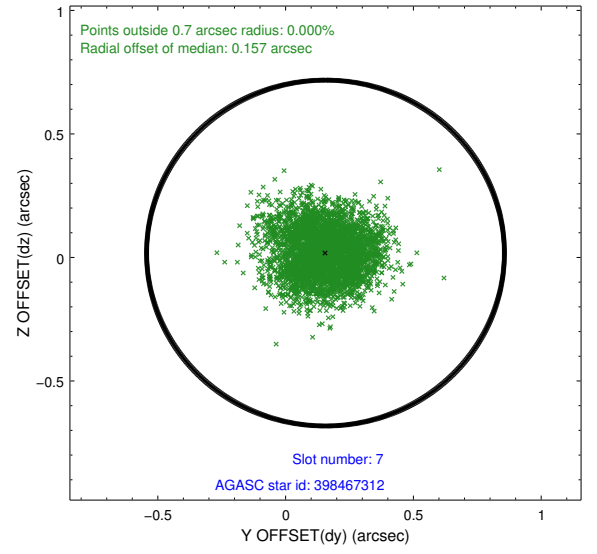
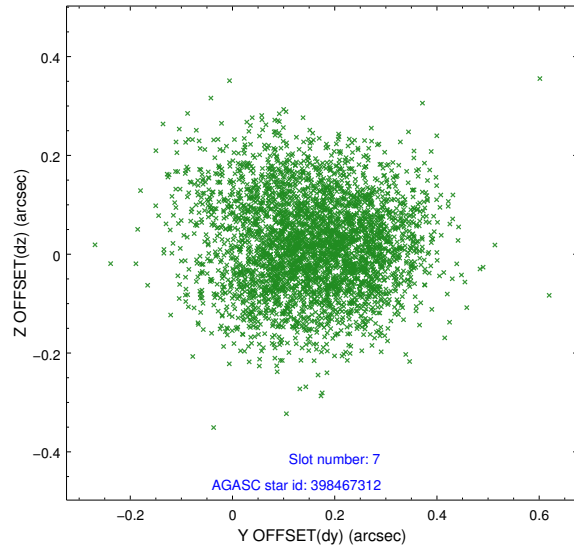
### 2.4.3 Slot 5



## 2.4.4 Slot 6

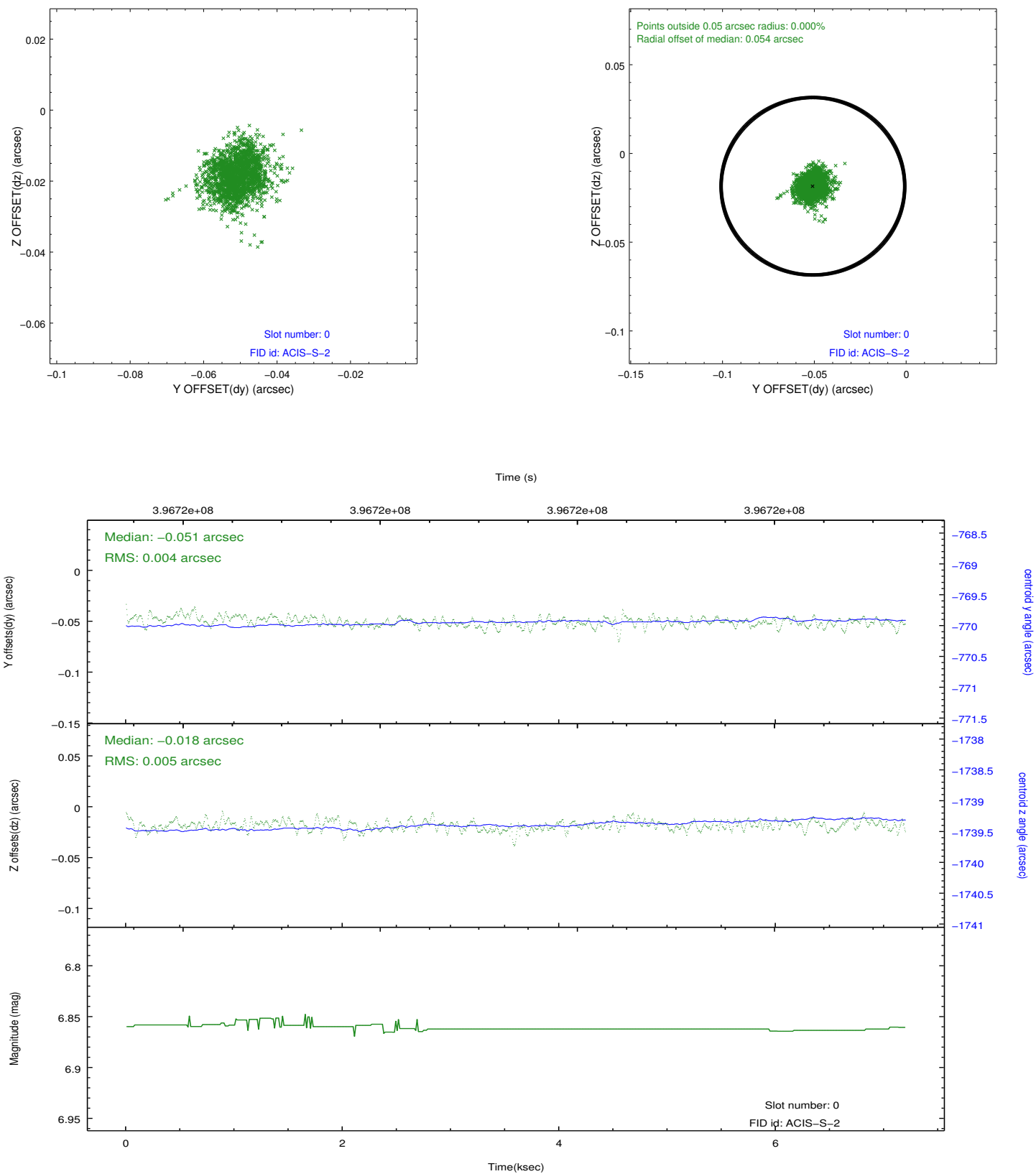


## 2.4.5 Slot 7

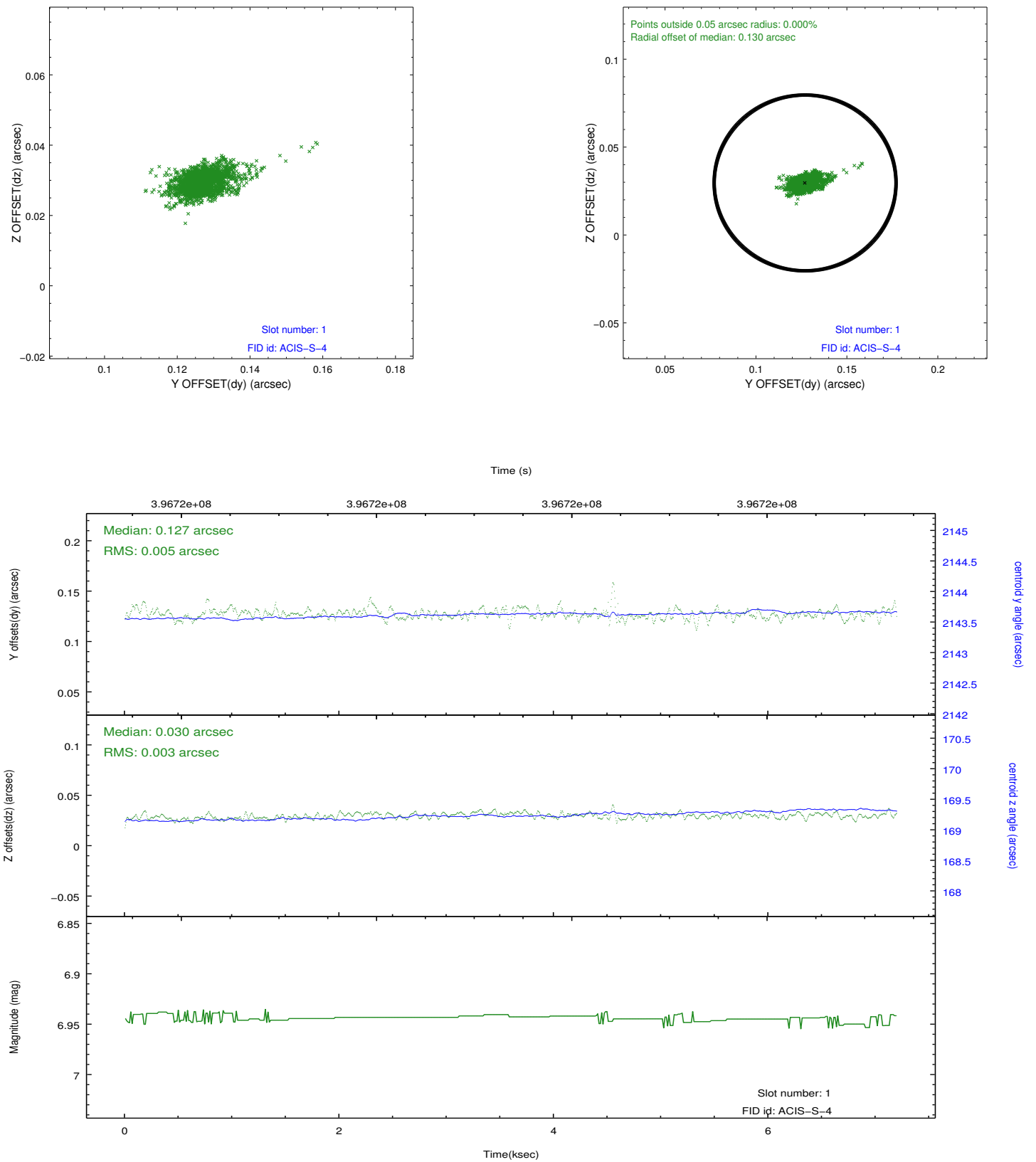


## 2.5 FID Slots

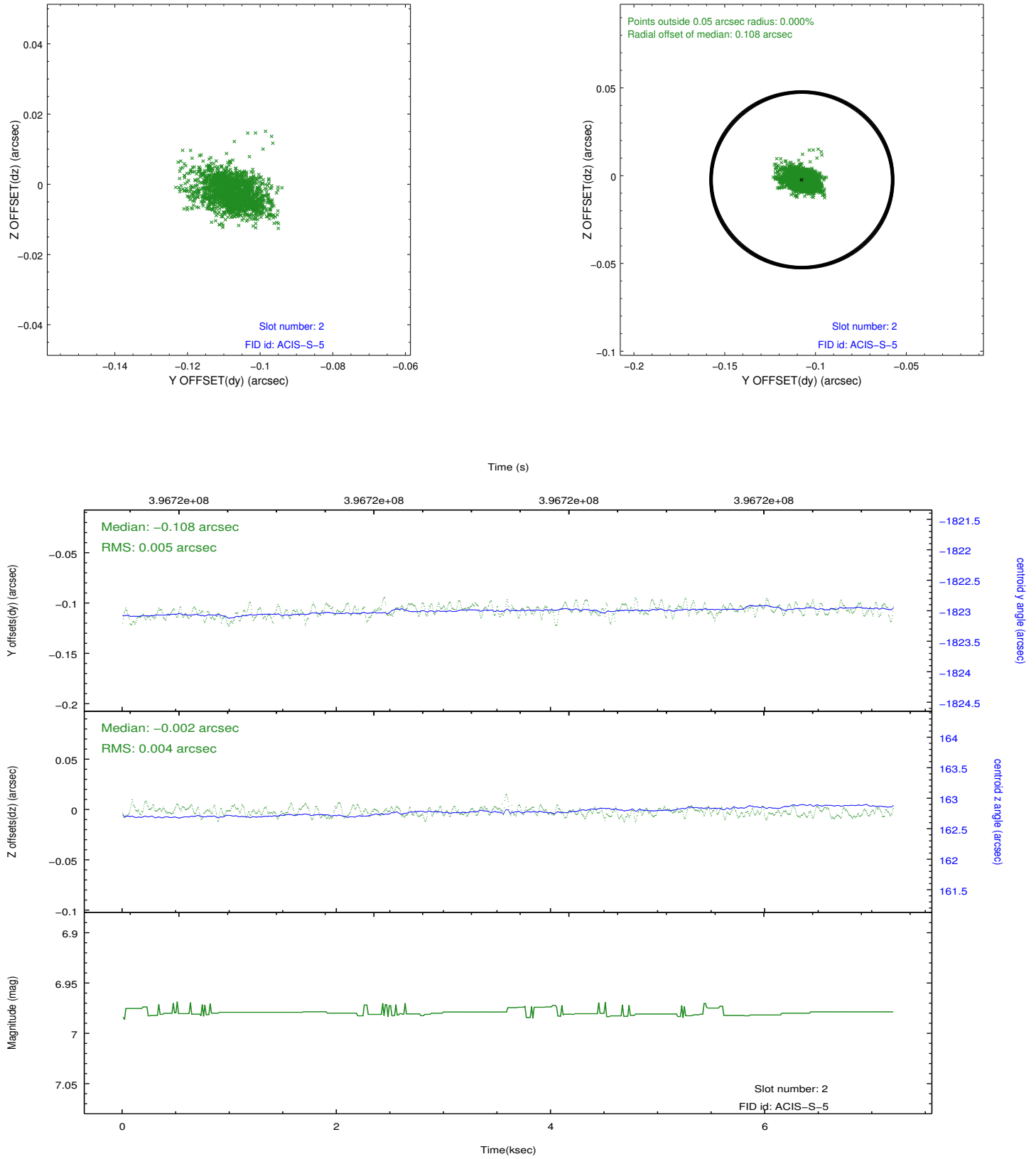
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## **A Summary**

### **A.1 Status**

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Jen Lauer       |
| V&V Date (YYYY-MM-DD)      | 2012.07.09      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 7.0264001047611 |

### **A.2 Comments**