

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3091 - L2 Version 3  
Chandra X-Ray Center

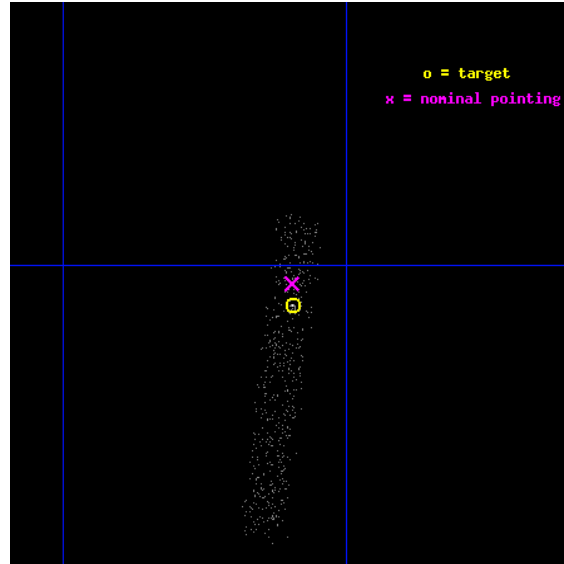
L2 Processing Date : Oct 13 2012

## 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>A</b> | <b>Summary</b>                | <b>17</b> |
| A.1      | Status . . . . .              | 17        |
| A.2      | Comments . . . . .            | 17        |

# 1 Front

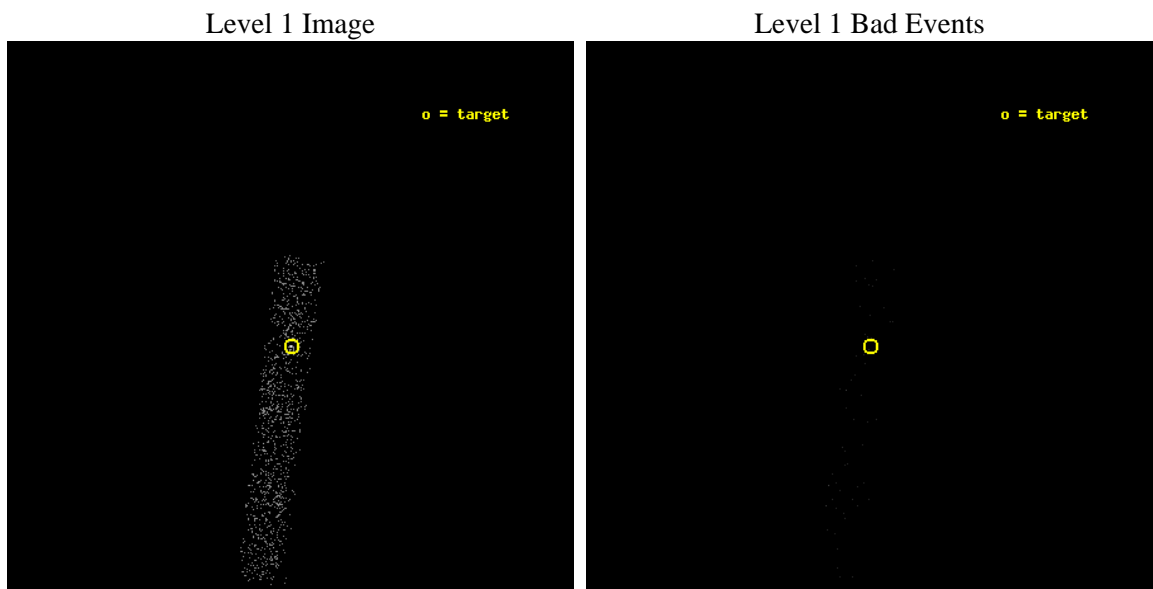
|          |  |   |
|----------|--|---|
| seq_num  | 700530   | Sequence number                             |
| obs_id   | 3091   | Observation id                              |
| title    | THE X-RAY SPECTRA OF RED QUASARS SELECTED FROM 2MASS AND FIRST | Pro   |
| observer | Dr Mark Lacy   | Principal investigator                      |
| object   | FTM0134-0931   | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 23.648333  | Observer's specified target RA [deg]        |
| dec_targ | -9.5175  | Observer's specified target Dec [deg]       |
| ra_nom   | 23.649029141086  | Nominal RA [deg]                            |
| dec_nom  | -9.5082273799992   | Nominal Dec [deg]                           |
| roll_nom | 97.022637868151  | Nominal Roll [deg]                          |
| revision | 3  | Processing version of data                  |
| ontime   | 1188.0000176728  | Sum of GTIs [s]                             |
| livetime | 1077.4533082467  | Livetime [s]                                |
| ontime7  | 1188.0000176728  | Sum of GTIs [s]                             |
| l2events | 676  | Number of level 2 events                    |



## 2 OBI

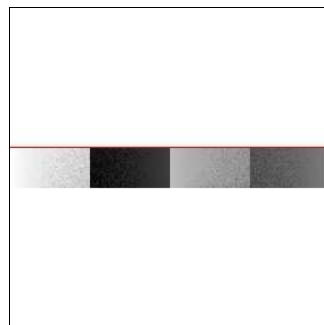
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 1000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 1188.0000176728 | Sum of GTIs [s]                         |
| caldsver | 4.5.2               | &#160                          | ontime7        | 1188.0000176728 | Sum of GTIs [s]                         |
| date     | 2012-10-14T00:38:11 | Date and time of file creation | l1events       | 2123            | Number of level 1 events                |
| revision | 3                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

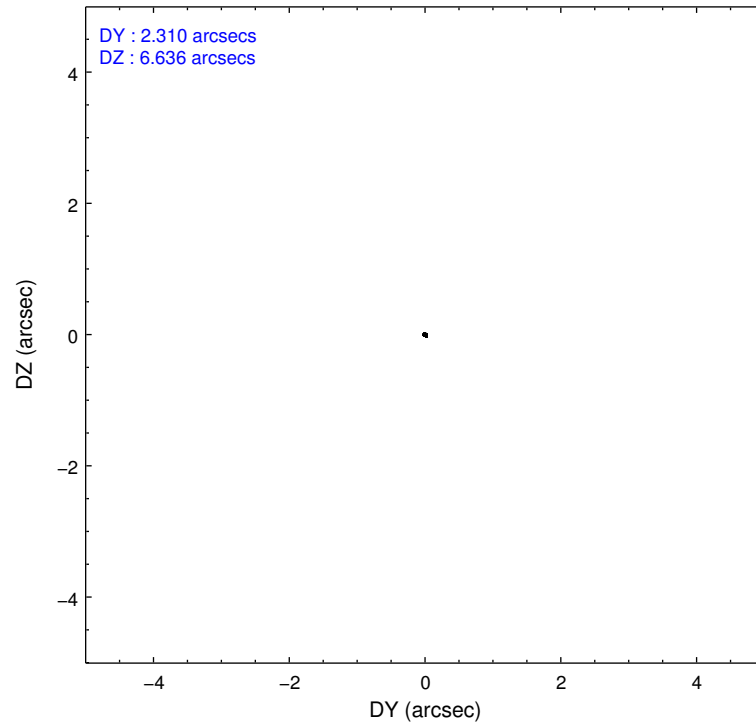
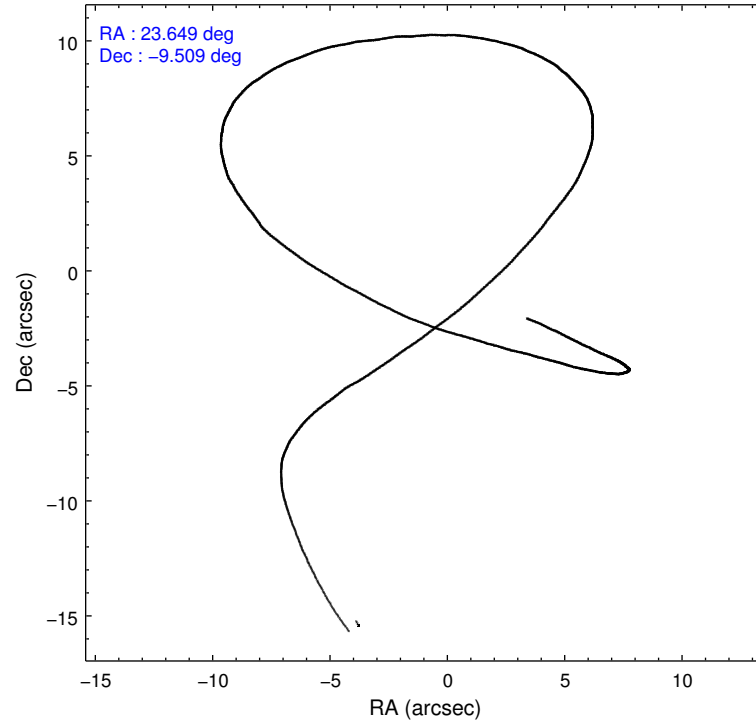
|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 2123         |
| rejected events | 1414         |
| rejected %      | 66%          |

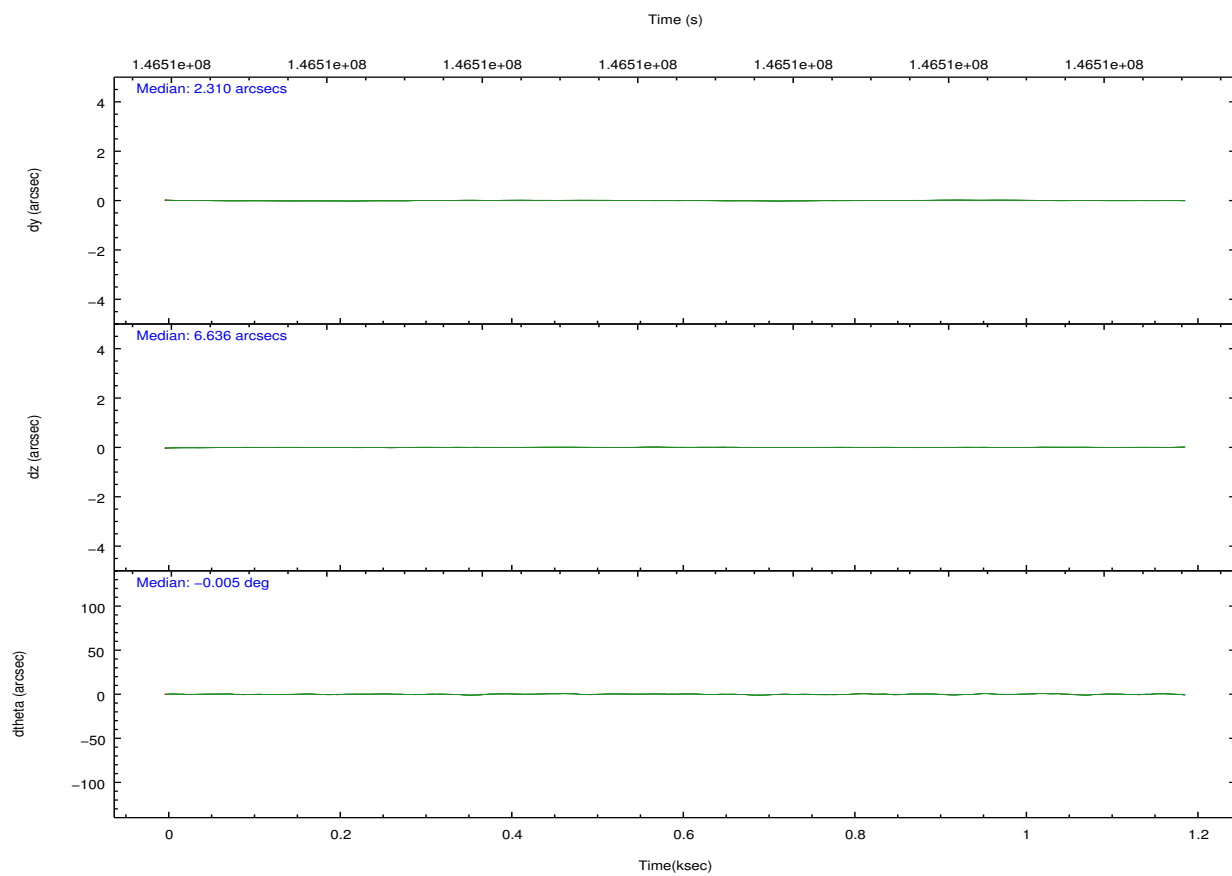
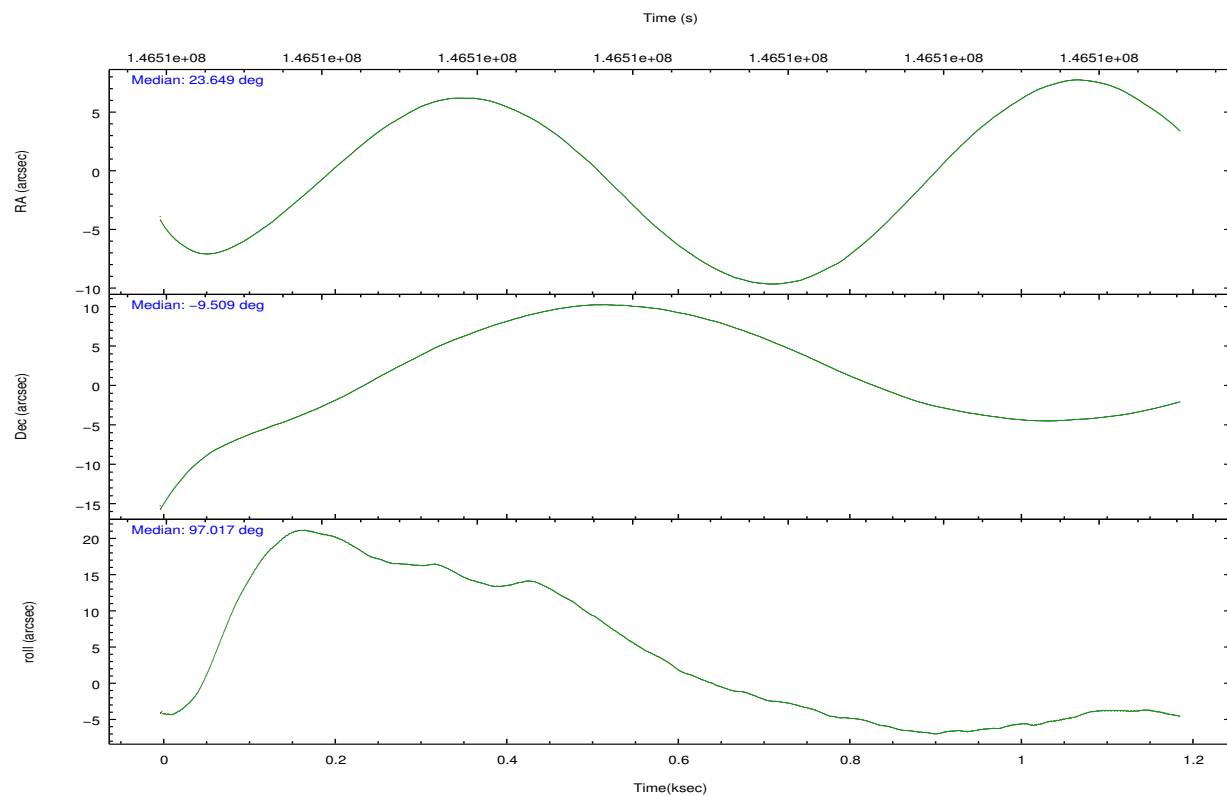
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 126          |
|                | 5%           |
| grade 1 events | 3            |
|                | 0%           |
| grade 2 events | 198          |
|                | 9%           |
| grade 3 events | 129          |
|                | 6%           |
| grade 4 events | 130          |
|                | 6%           |
| grade 5 events | 167          |
|                | 7%           |
| grade 6 events | 482          |
|                | 22%          |
| grade 7 events | 888          |
|                | 41%          |

## 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                 | 23.665789           | 23.64902914108632    | Subarray requested                    | CUSTOM    | 1/8     |
| [deg] Pointing Dec                | -9.529360           | -9.508227379999232   | Subarray start row                    | 449       | 449     |
| [deg] Pointing Roll               | 96.868876           | 97.02263786815138    | Subarray row count                    | 128       | 128     |
| [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  | 0.4     |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 146509641.184000    | 146508637.61228      |                                       |           |         |
| Observation start date            | 2002-08-23T17:06:17 | 2002-08-23T16:50:37  |                                       |           |         |
| [s] Observation end time (MET)    | 146510641.184000    | 146511491.2124       |                                       |           |         |
| Observation end date              | 2002-08-23T17:22:57 | 2002-08-23T17:38:11  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect





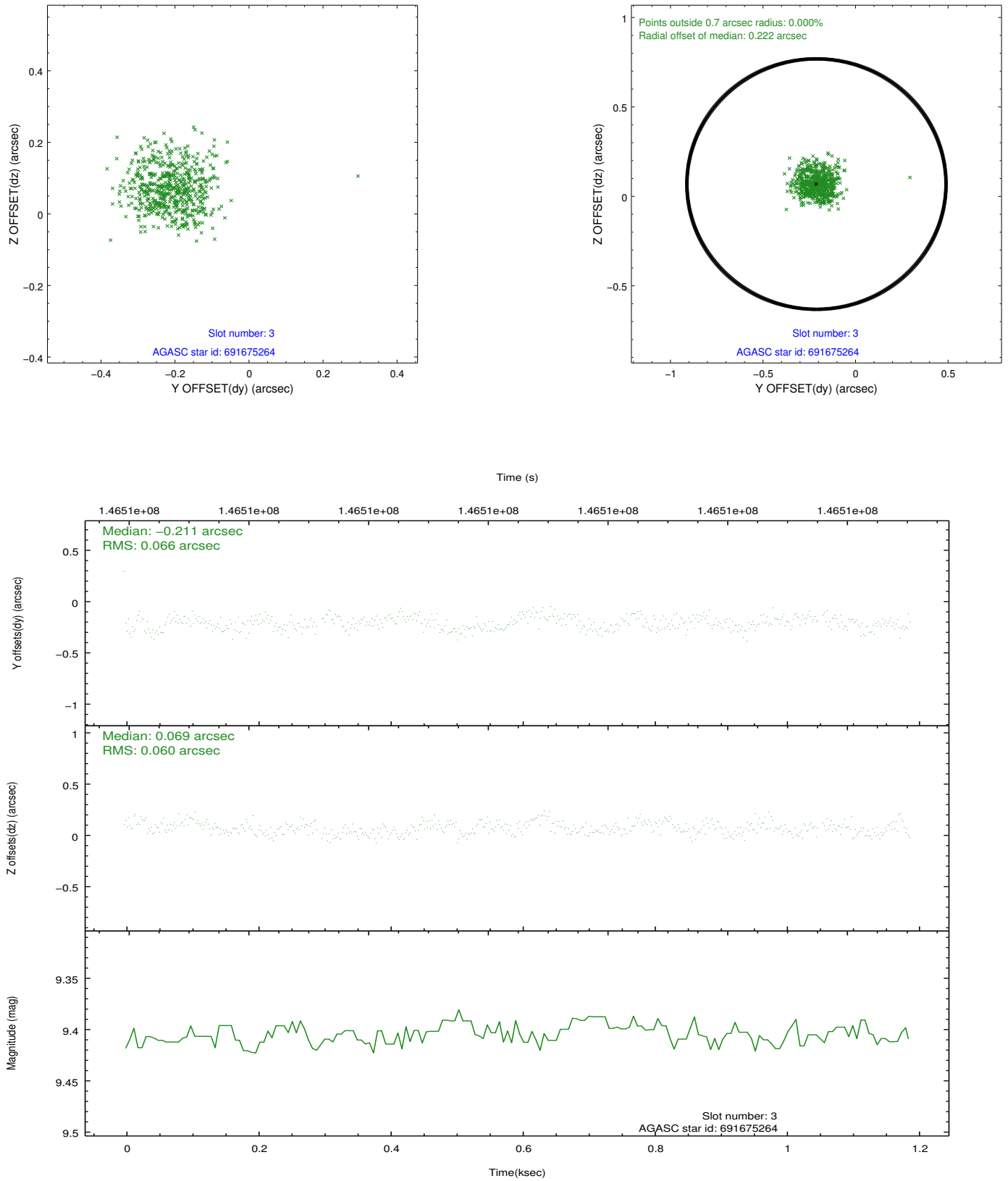
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.11 | 291   | -0.030 | 0.017  | 0.006 | 0.013 | 0.000000  | 0.000000  | -754.94  | -1727.73 |
| 1    | FID    | ACIS-S-4  | 7.20 | 291   | -0.028 | 0.010  | 0.006 | 0.011 | 0.000000  | 0.000000  | 2155.79  | 175.00   |
| 2    | FID    | ACIS-S-5  | 7.24 | 291   | 0.026  | -0.018 | 0.006 | 0.011 | 0.000000  | 0.000000  | -1800.54 | 174.96   |
| 3    | GUIDE  | 691675264 | 9.40 | 575   | -0.211 | 0.069  | 0.095 | 0.145 | 24.091328 | -8.877320 | 2150.84  | -1781.88 |
| 4    | GUIDE  | 691672696 | 9.56 | 581   | -0.054 | -0.122 | 0.106 | 0.168 | 23.104505 | -9.503214 | 335.87   | 1965.59  |
| 5    | GUIDE  | 691674048 | 9.89 | 579   | 0.008  | -0.127 | 0.114 | 0.177 | 23.416511 | -9.388251 | 612.70   | 822.97   |
| 6    | GUIDE  | 691679208 | 9.86 | 581   | 0.183  | 0.291  | 0.109 | 0.172 | 23.135239 | -8.982015 | 2183.83  | 1640.84  |
| 7    | GUIDE  | 691672512 | 9.77 | 580   | 0.060  | -0.108 | 0.086 | 0.149 | 23.394300 | -9.515118 | 171.82   | 954.99   |

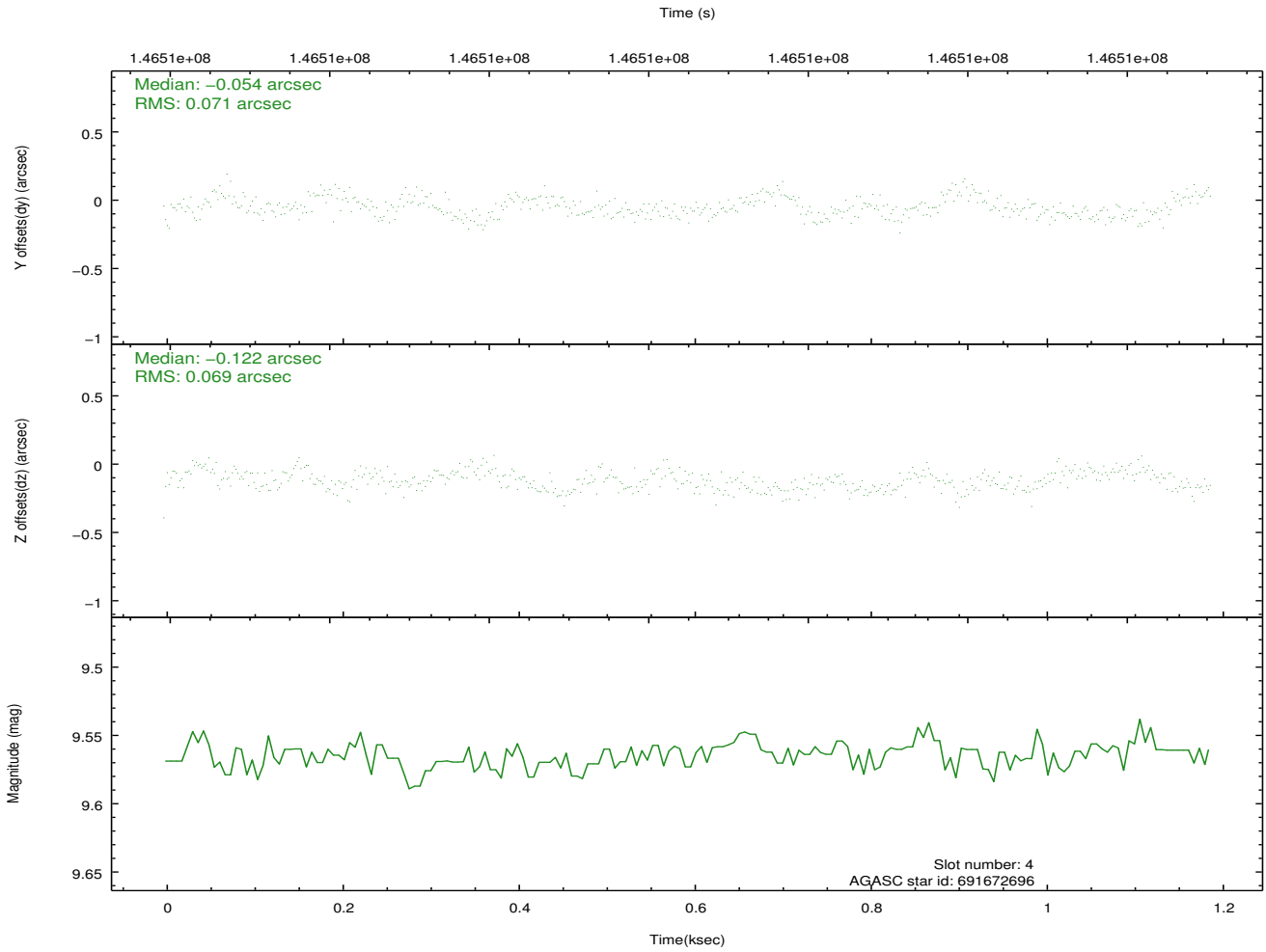
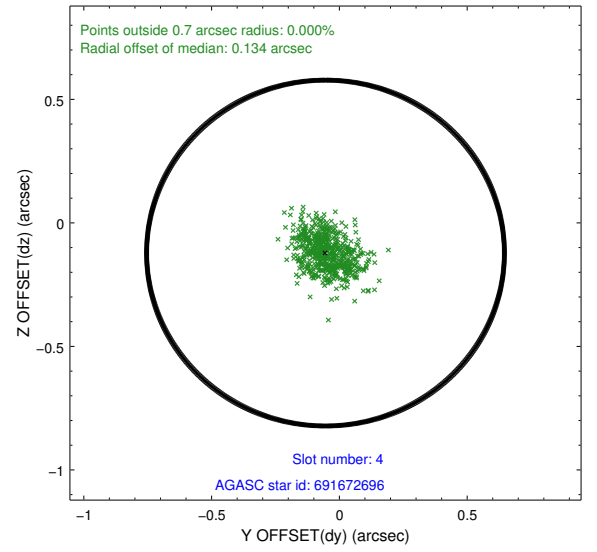
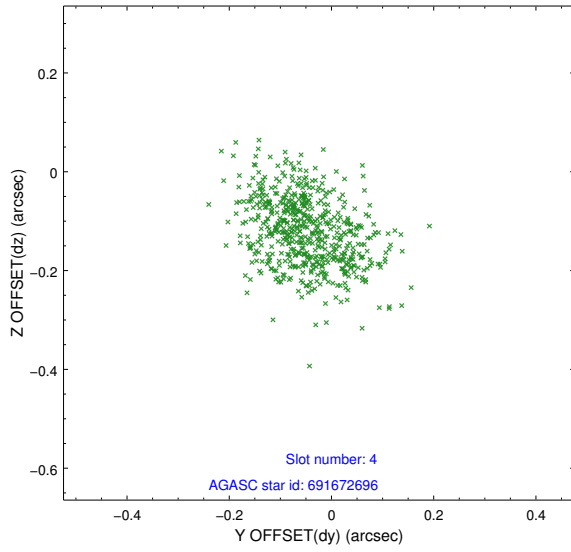


## 2.4 Star Slots

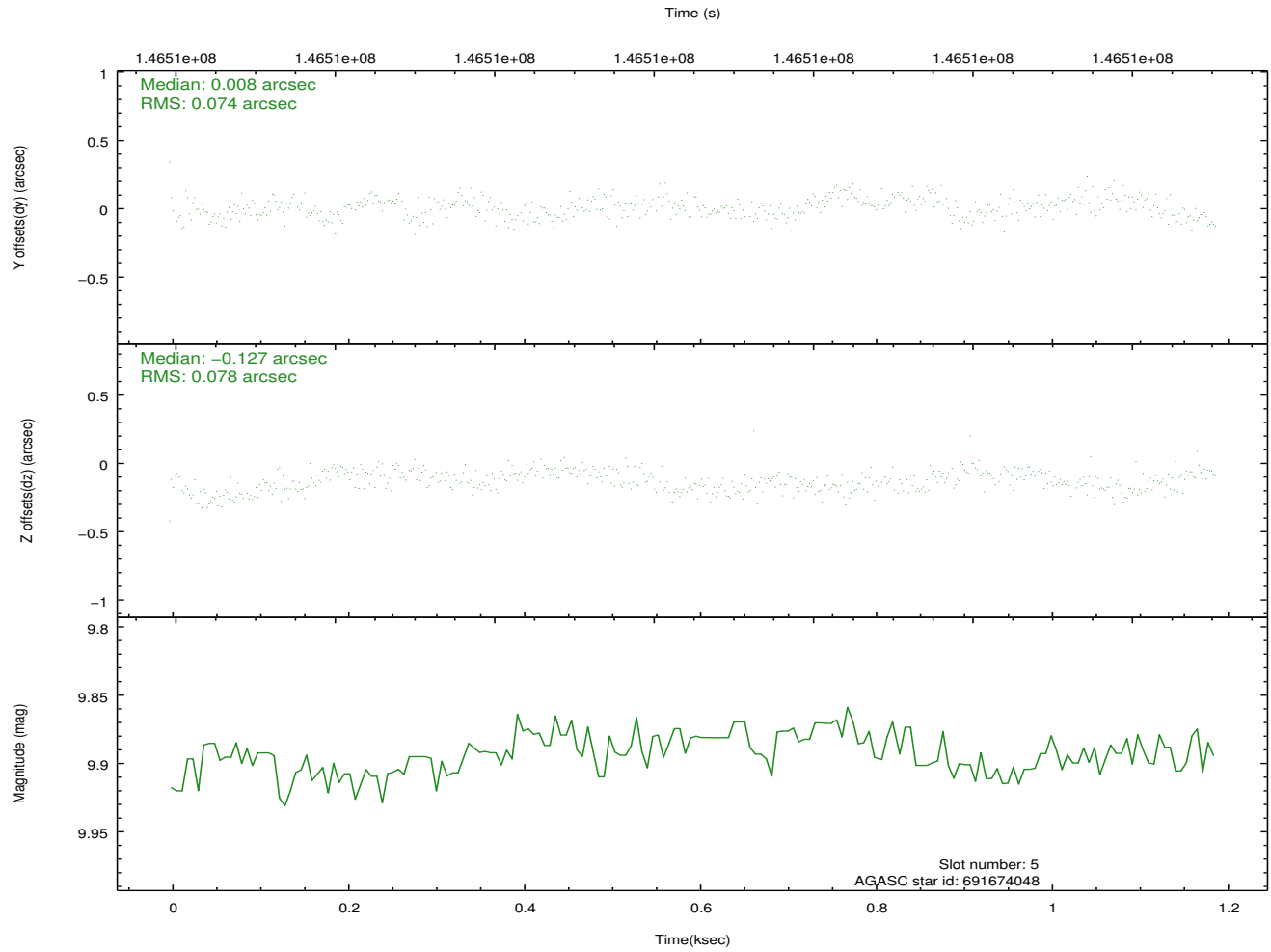
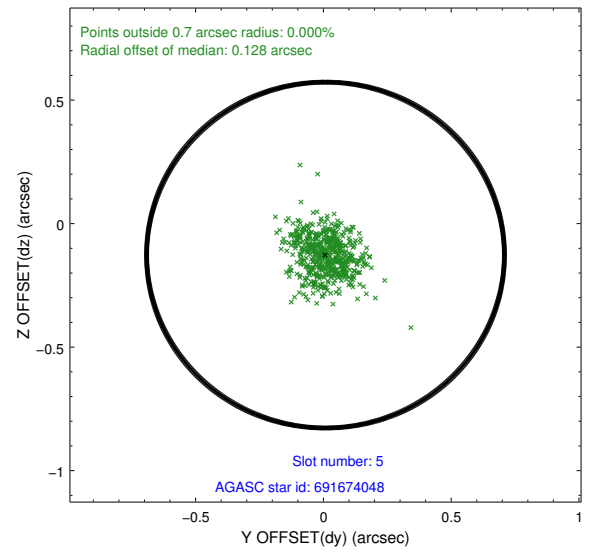
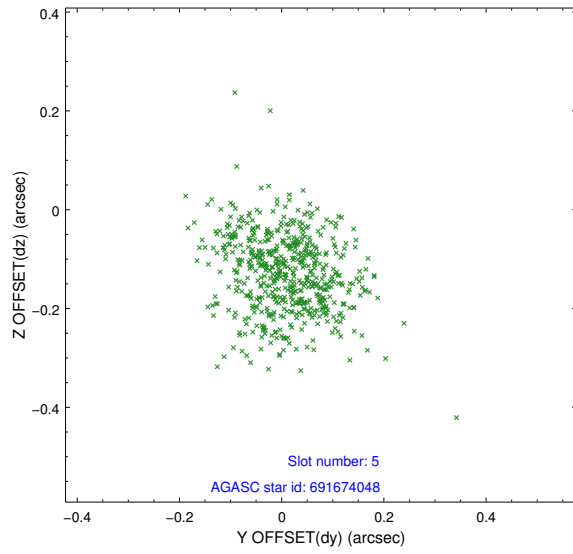
### 2.4.1 Slot 3



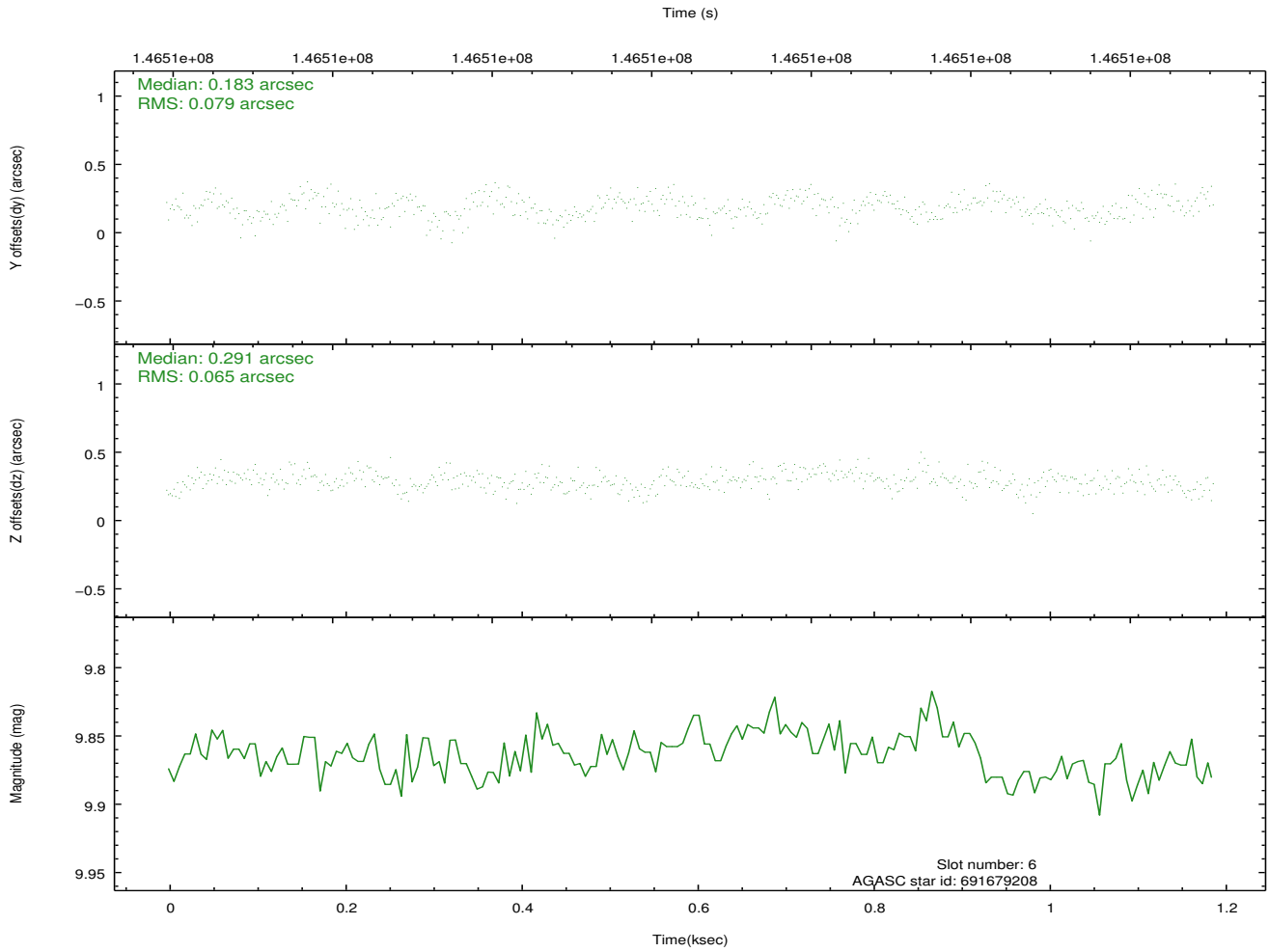
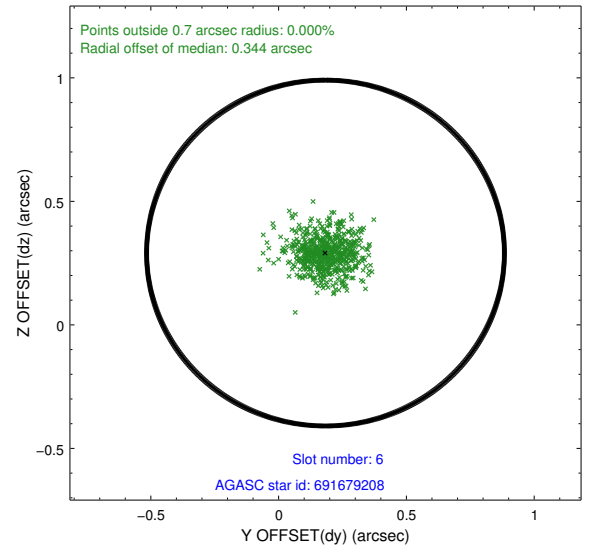
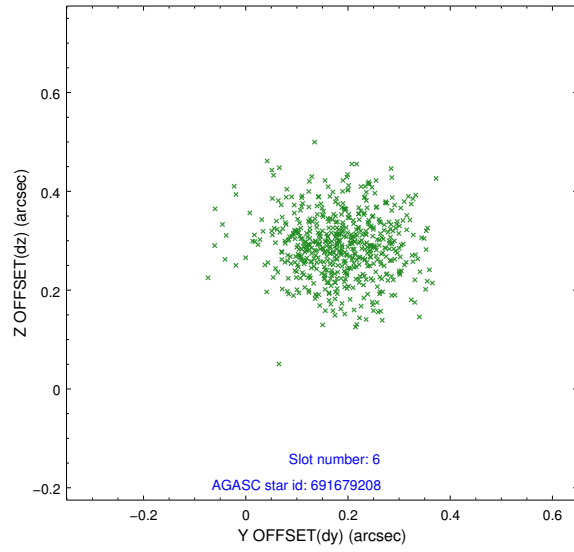
## 2.4.2 Slot 4



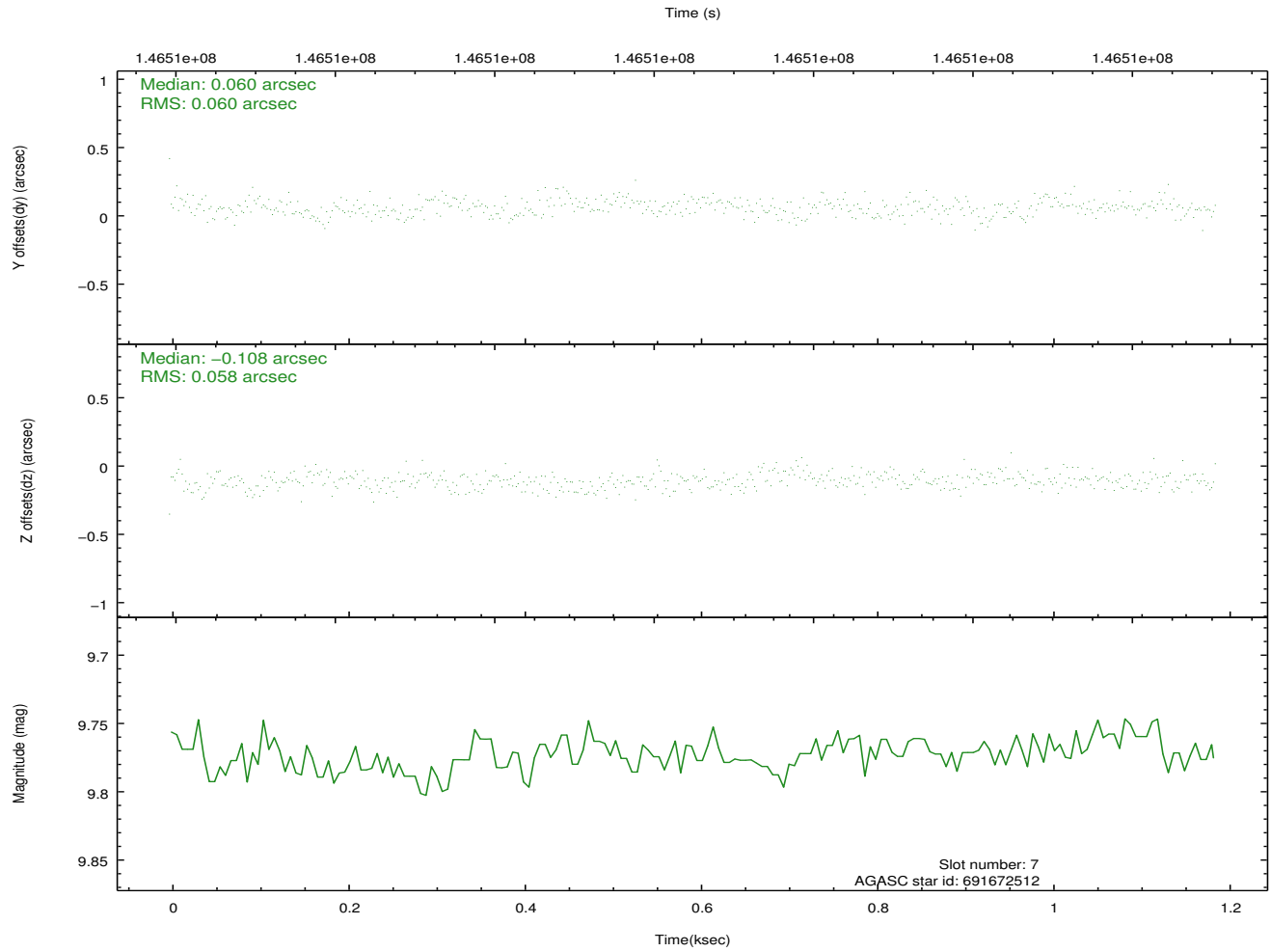
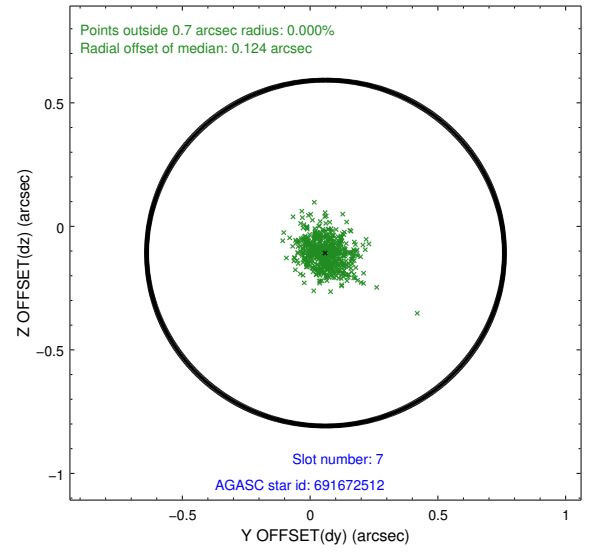
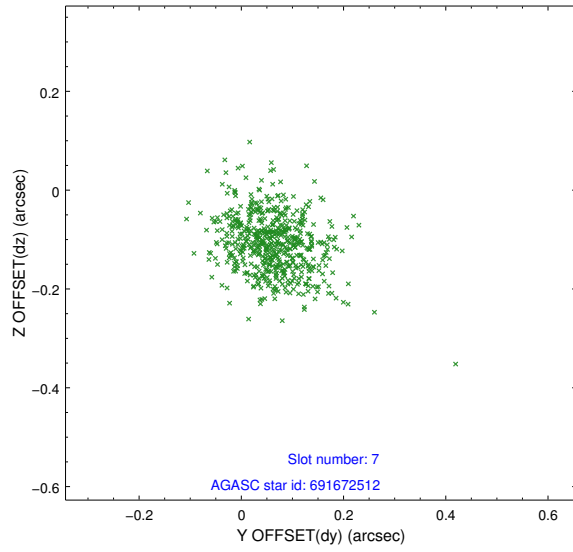
### 2.4.3 Slot 5



## 2.4.4 Slot 6

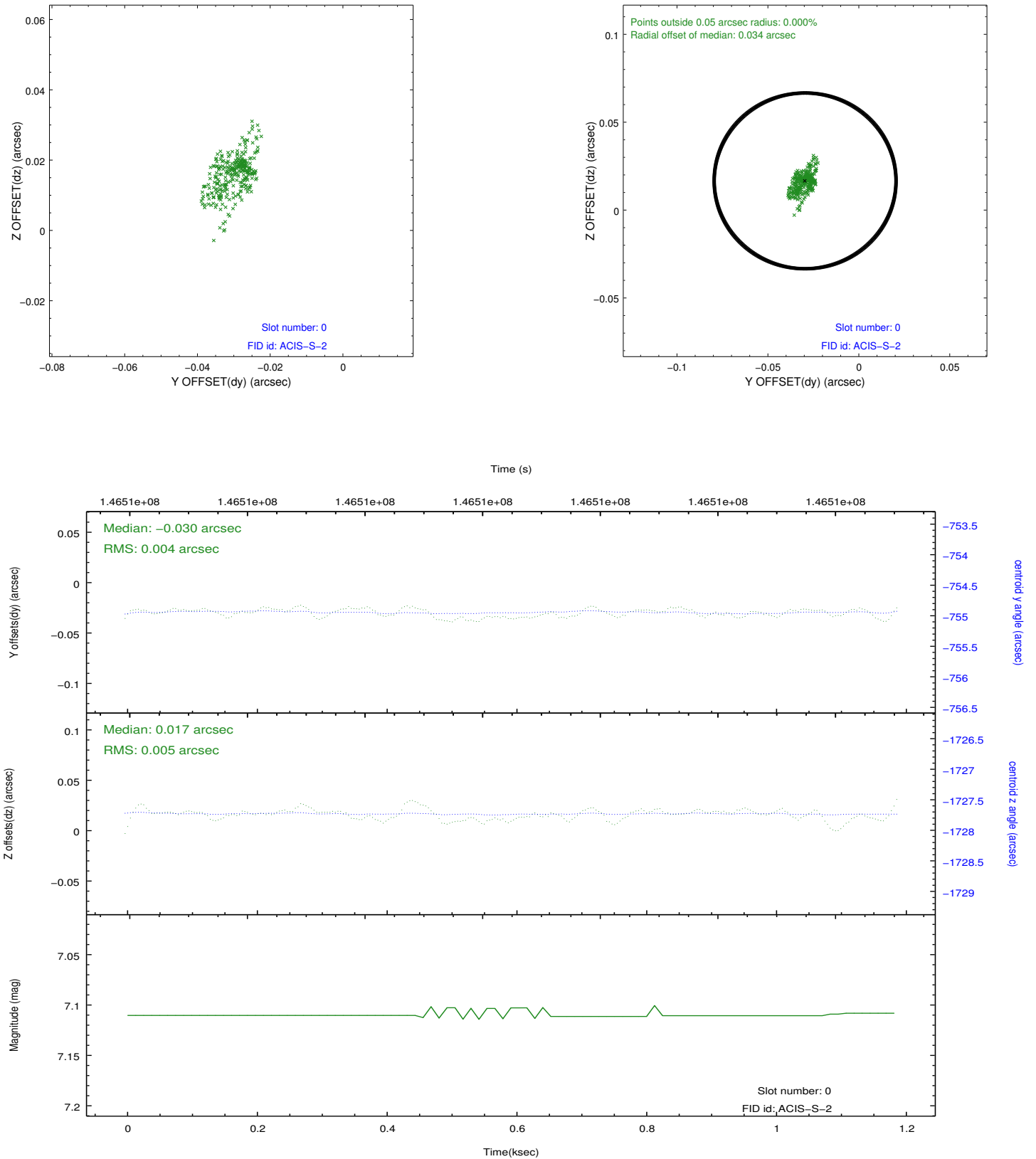


## 2.4.5 Slot 7

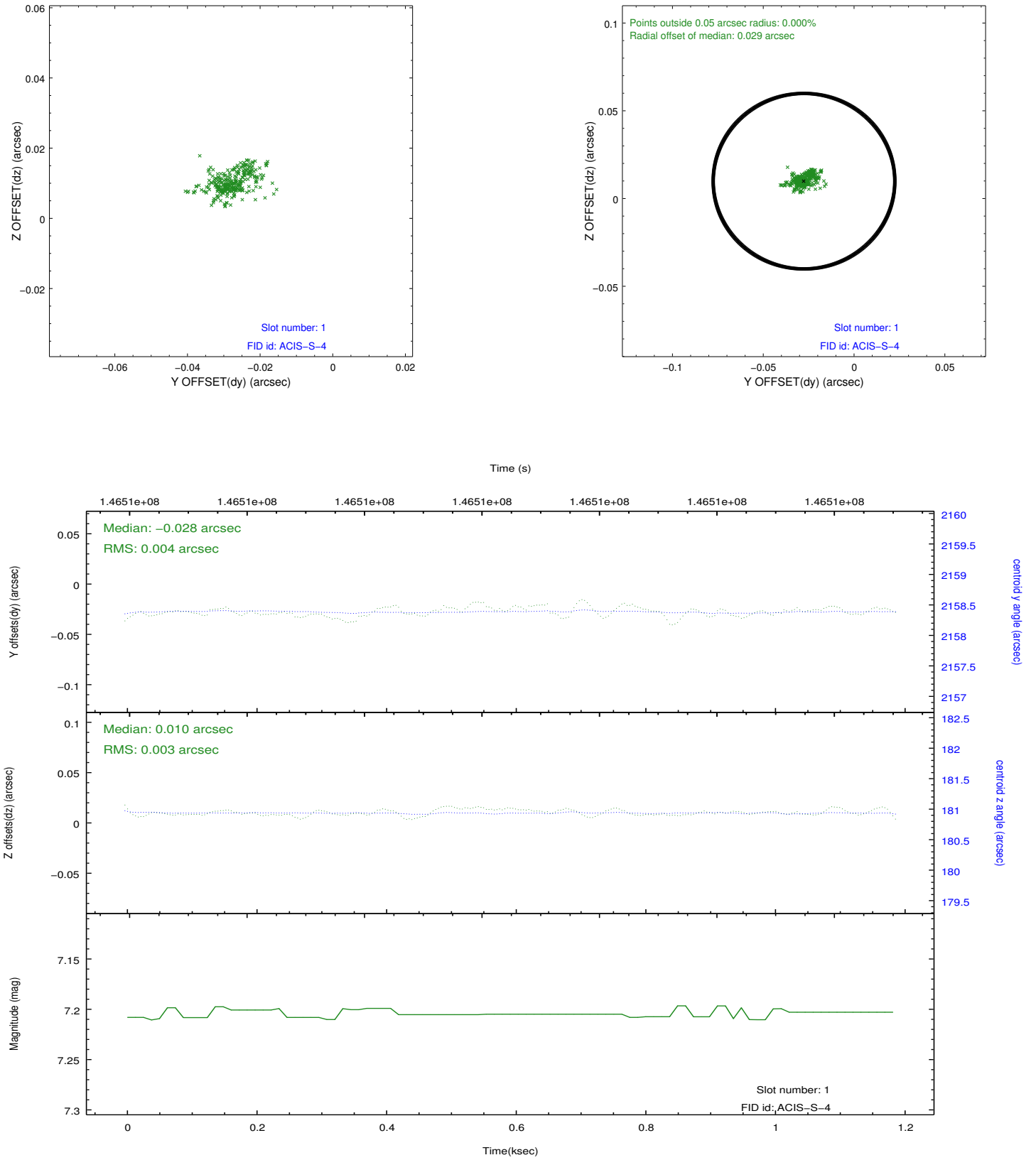


## 2.5 FID Slots

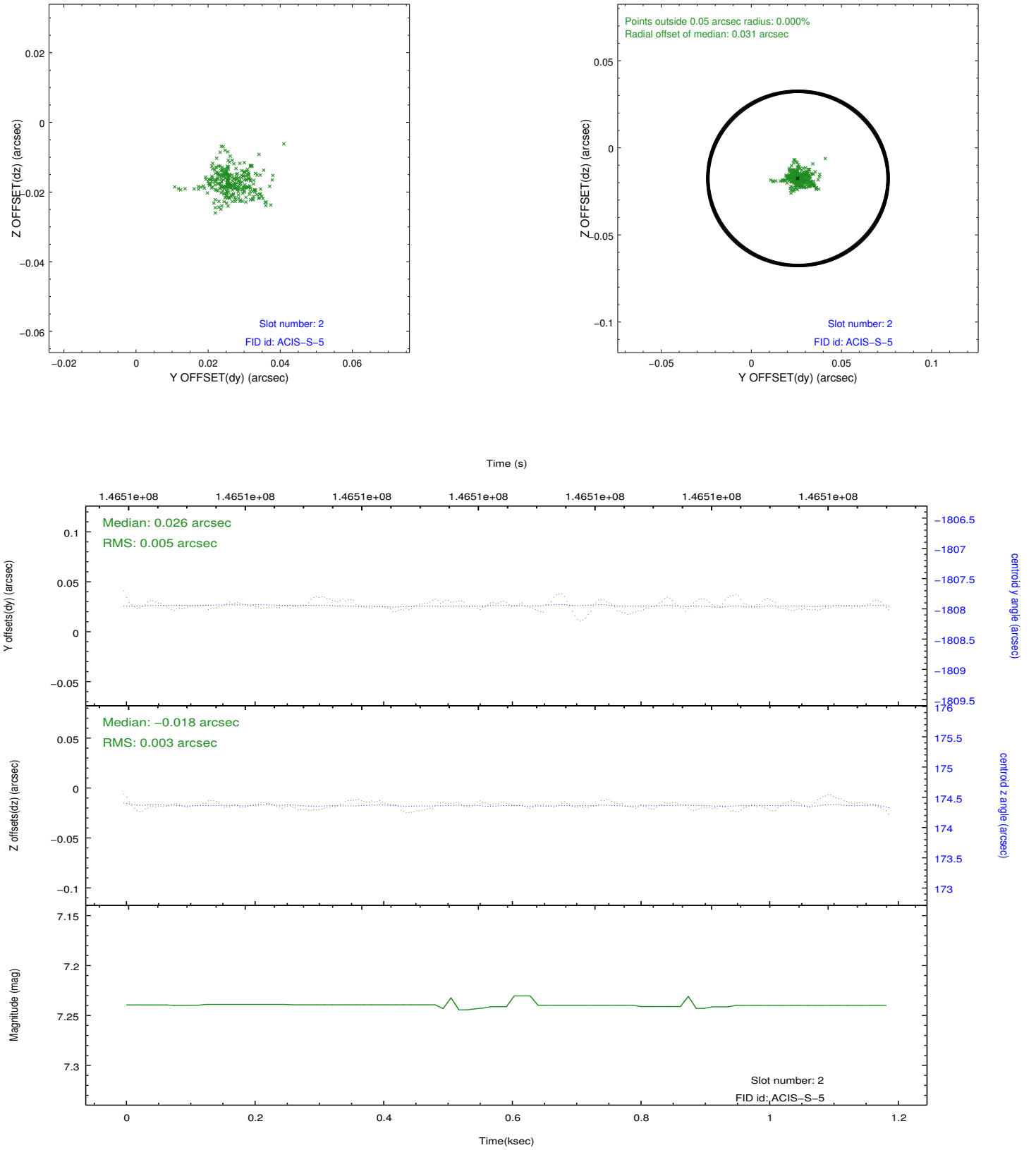
### 2.5.1 Slot 0



## 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)      | 2012.10.23 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 1.188      |

### **A.2 Comments**