

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17319 - L2 Version 1  
Chandra X-Ray Center

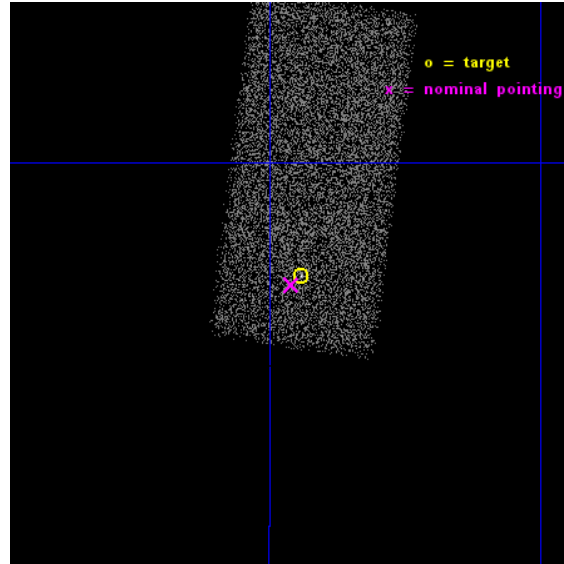
L2 Processing Date : Mar 2 2015

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# 1 Front

|          |  |   |
|----------|--|---|
| seq_num  | 201019   | Sequence number                             |
| obs_id   | 17319  | Observation id                              |
| title    | The MUSCLES Treasury Survey: Measurements of the Ultraviolet Spectral Characteristics of Low-mass Exoplanetary Systems | Proposal title                              |
| observer | Dr. Kevin France   | Principal investigator                      |
| object   | GJ176  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 70.735417  | Observer's specified target RA [deg]        |
| dec_targ | 18.953528  | Observer's specified target Dec [deg]       |
| ra_nom   | 70.739601457164  | Nominal RA [deg]                            |
| dec_nom  | 18.949807406807  | Nominal Dec [deg]                           |
| roll_nom | 277.79565016219  | Nominal Roll [deg]                          |
| revision | 1  | Processing version of data                  |
| ontime   | 20130.0  | Sum of GTIs [s]                             |
| livetime | 19593.910605825  | Livetime [s]                                |
| ontime7  | 20130.0  | Sum of GTIs [s]                             |
| l2events | 16898  | Number of level 2 events                    |

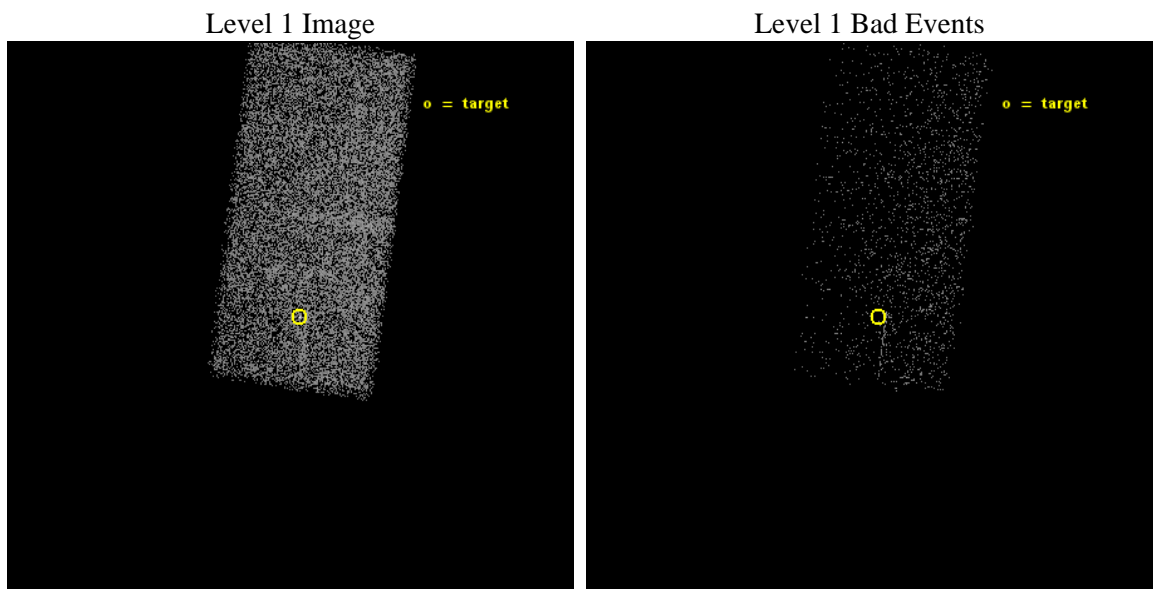




## 2 OBI

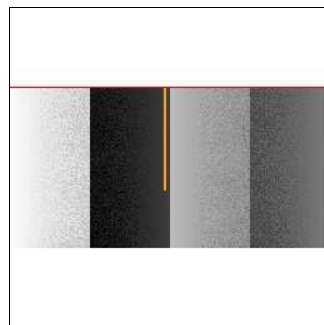
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |              |   |
|----------|---------------------|--------------------------------|----------------|--------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 20000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.3.3              | Processing system revision     | ontime         | 20130.0      | Sum of GTIs [s]                         |
| caldsver | 4.6.7               | &#160                          | ontime7        | 20130.0      | Sum of GTIs [s]                         |
| date     | 2015-03-03T03:20:01 | Date and time of file creation | l1events       | 30699        | Number of level 1 events                |
| revision | 1                   | Processing version of data     |                |              |   |

### 2.1.4 Events

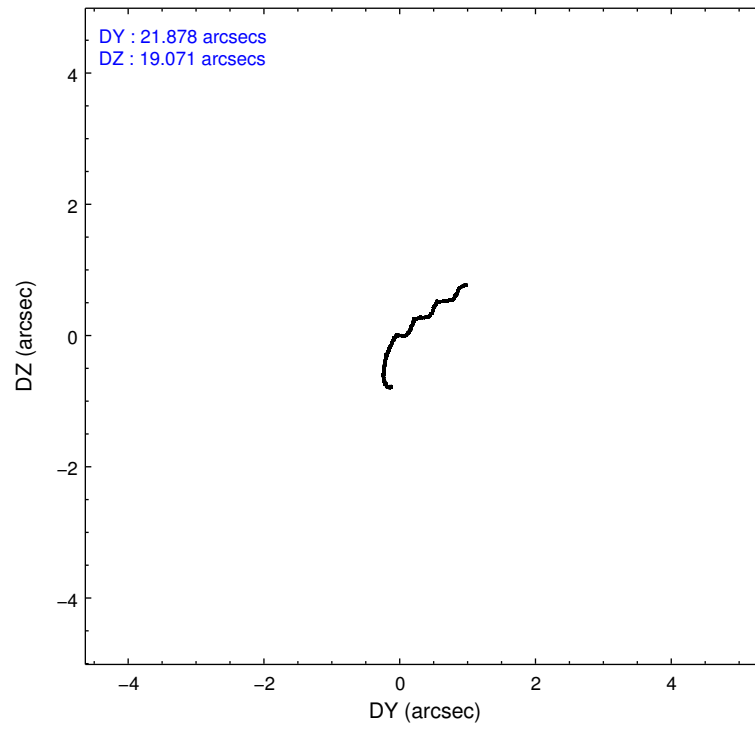
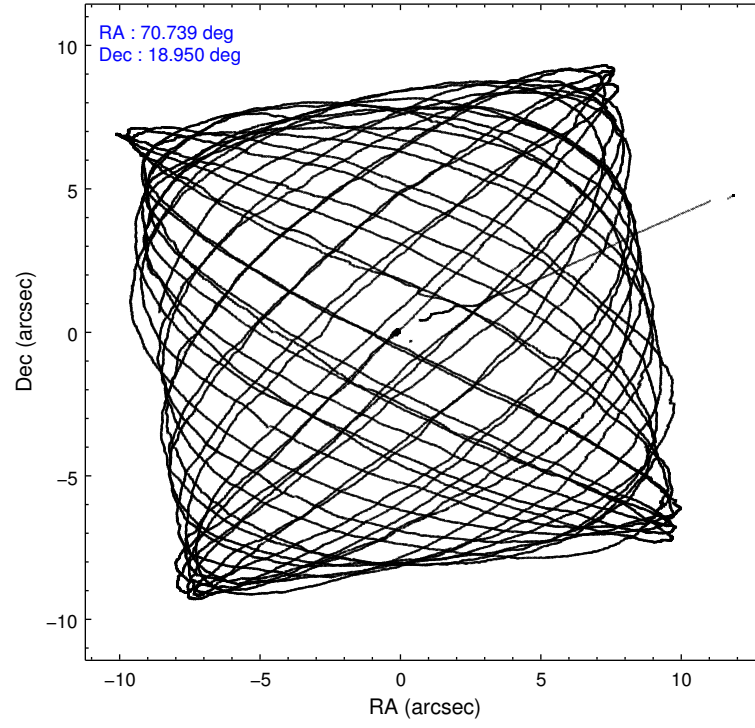
|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 30699        |
| rejected events | 13135        |
| rejected %      | 42%          |

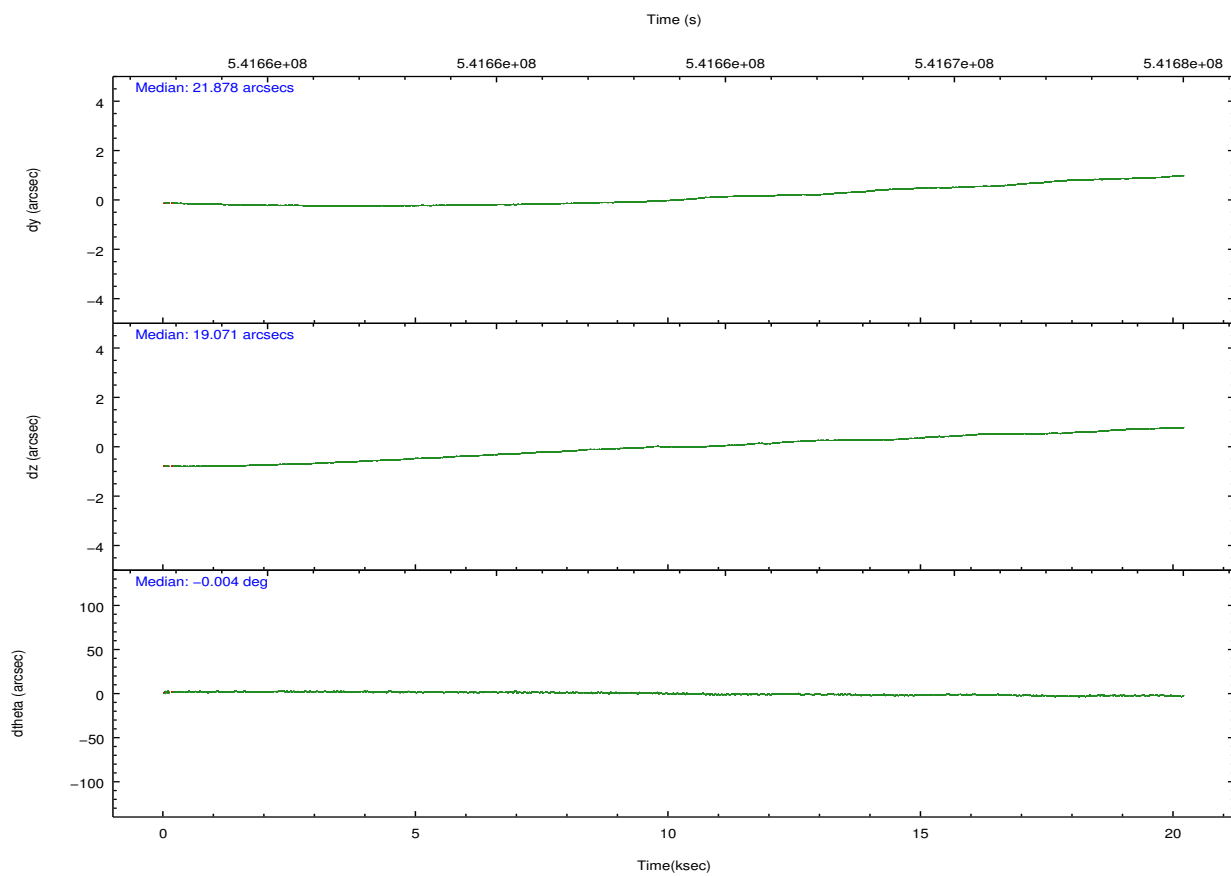
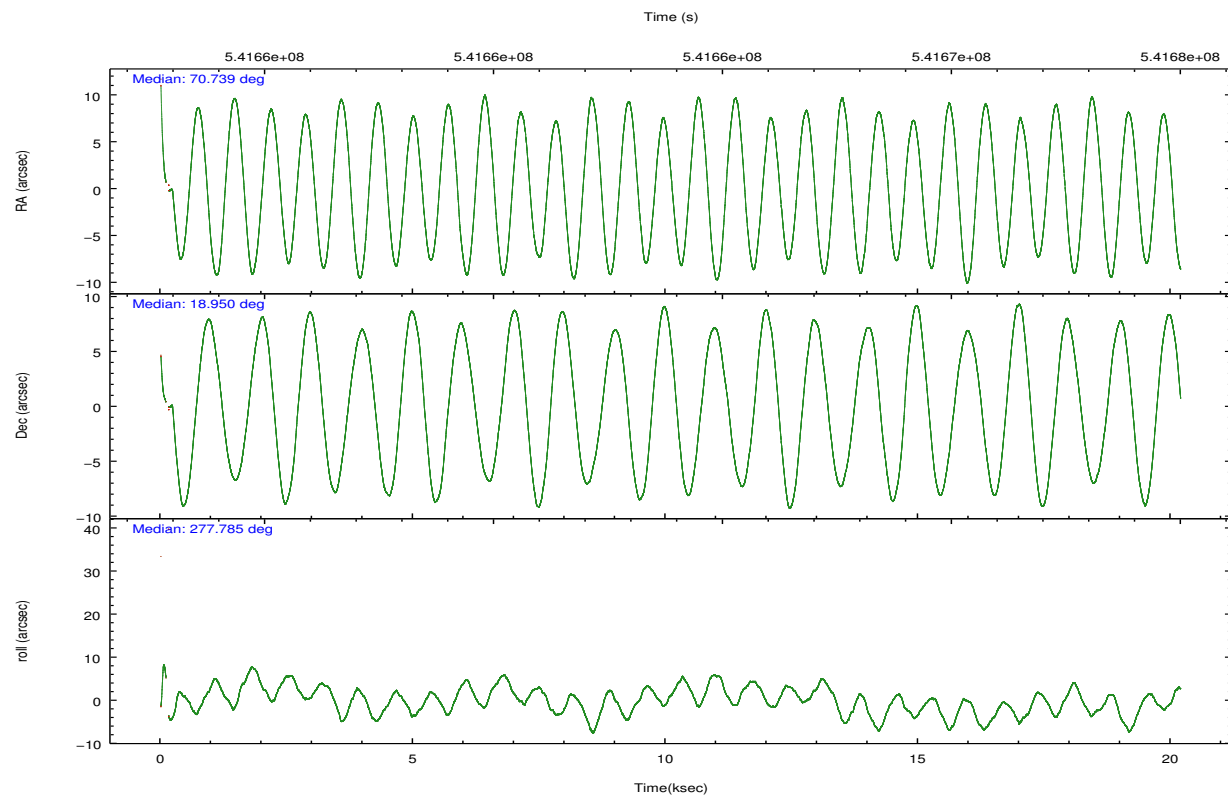
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 2469         |
|                | 8%           |
| grade 1 events | 68           |
|                | 0%           |
| grade 2 events | 4287         |
|                | 13%          |
| grade 3 events | 1937         |
|                | 6%           |
| grade 4 events | 1965         |
|                | 6%           |
| grade 5 events | 3285         |
|                | 10%          |
| grade 6 events | 7358         |
|                | 23%          |
| grade 7 events | 9330         |
|                | 30%          |

## 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                 | 70.721523           | 70.73960145716438    | Subarray requested                    | CUSTOM    | 1/2     |
| [deg] Pointing Dec                | 18.971273           | 18.94980740680686    | Subarray start row                    | 257       | 257     |
| [deg] Pointing Roll               | 277.644902          | 277.7956501621862    | Subarray row count                    | 512       | 512     |
| [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  | 1.5     |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 541653972.184000    | 541652673.20465      |                                       |           |         |
| Observation start date            | 2015-03-02T03:25:05 | 2015-03-02T03:04:33  |                                       |           |         |
| [s] Observation end time (MET)    | 541673972.184000    | 541674724.03088      |                                       |           |         |
| Observation end date              | 2015-03-02T08:58:25 | 2015-03-02T09:12:04  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



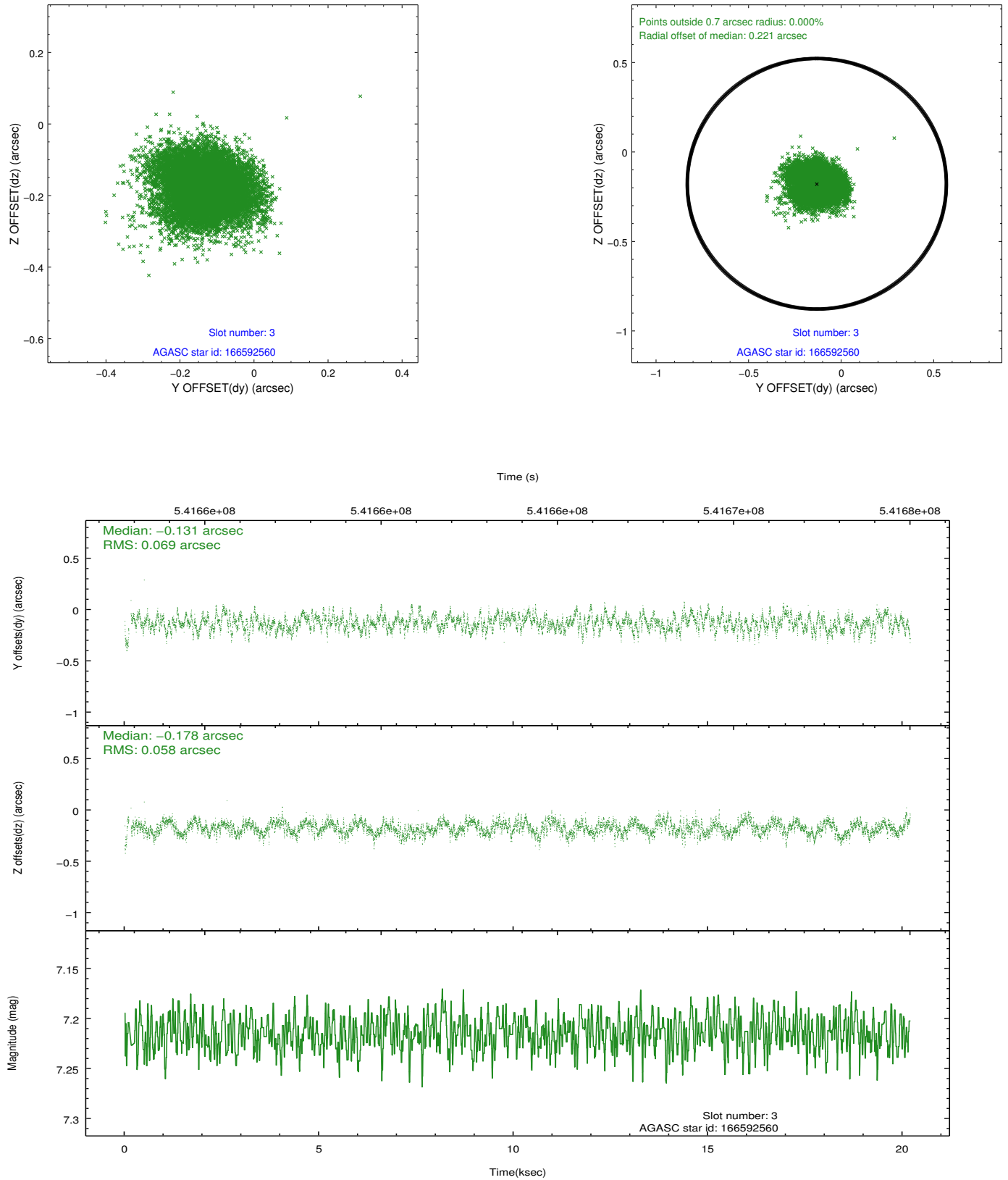


### Slot Statistics

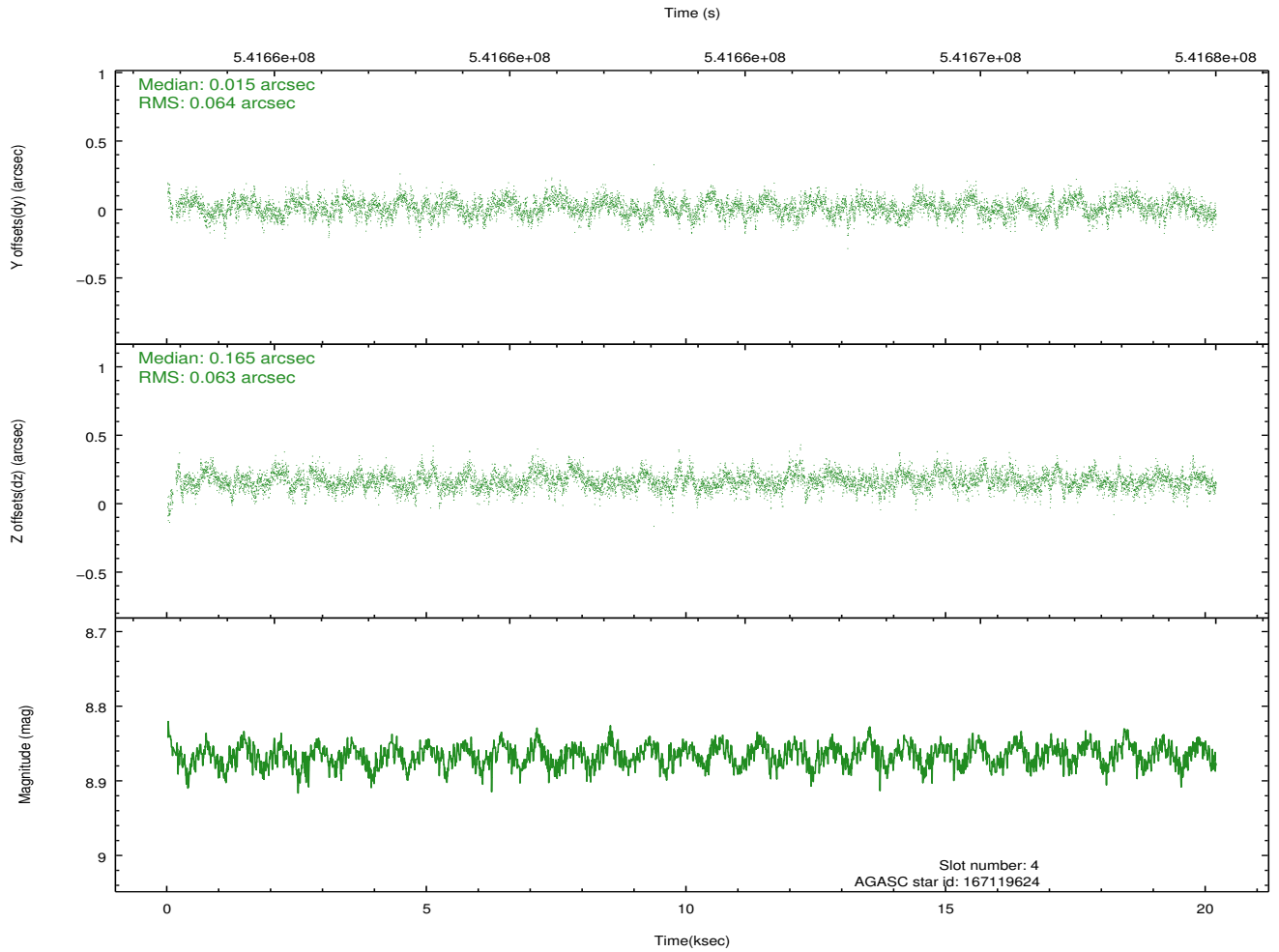
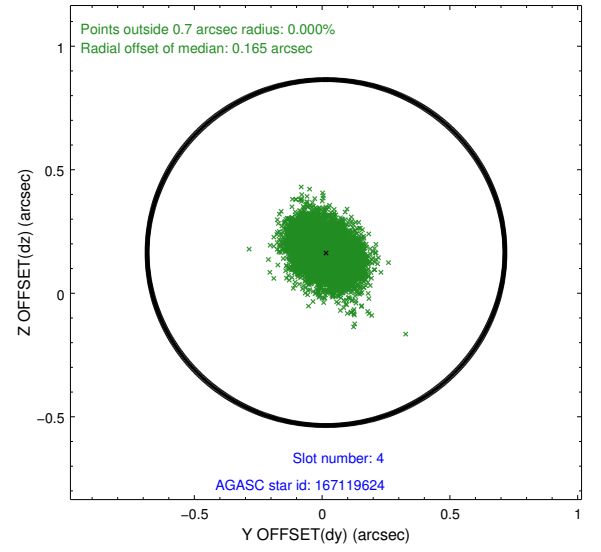
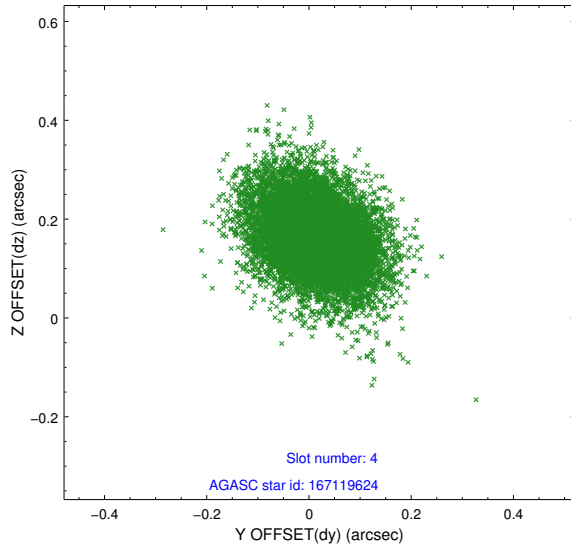
| slot | status  | used   | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec       | mean_y   | mean_z   |
|------|---------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0    | FID     |        | ACIS-S-2  | 7.04 | 4912  | -0.146 | -0.094 | 0.013 | 0.032 | 0.000000  | 0.000000  | -775.33  | -1740.57 |
| 1    | FID     |        | ACIS-S-4  | 7.13 | 4912  | 0.366  | 0.096  | 0.015 | 0.032 | 0.000000  | 0.000000  | 2138.37  | 167.91   |
| 2    | FID     |        | ACIS-S-5  | 7.15 | 4912  | -0.253 | 0.007  | 0.014 | 0.031 | 0.000000  | 0.000000  | -1828.05 | 161.70   |
| 3    | GUIDE   | used   | 166592560 | 7.21 | 9823  | -0.131 | -0.178 | 0.096 | 0.153 | 70.715443 | 18.720435 | 893.99   | -138.90  |
| 4    | GUIDE   | used   | 167119624 | 8.87 | 9823  | 0.015  | 0.165  | 0.094 | 0.159 | 71.128044 | 19.593356 | -2037.75 | 1664.88  |
| 5    | GUIDE   | used   | 167126616 | 9.02 | 9822  | 0.164  | 0.135  | 0.124 | 0.196 | 70.032978 | 19.091113 | -743.12  | -2263.04 |
| 6    | GUIDE   | used   | 167117272 | 9.22 | 9816  | -0.063 | -0.123 | 0.136 | 0.224 | 71.365906 | 19.348872 | -1058.34 | 2352.31  |
| 7    | MONITOR | unused |           | 0.00 | 0     | 0.000  | 0.000  | 0.000 | 0.000 | 0.000000  | 0.000000  | 0.00     | 0.00     |

## 2.4 Star Slots

### 2.4.1 Slot 3

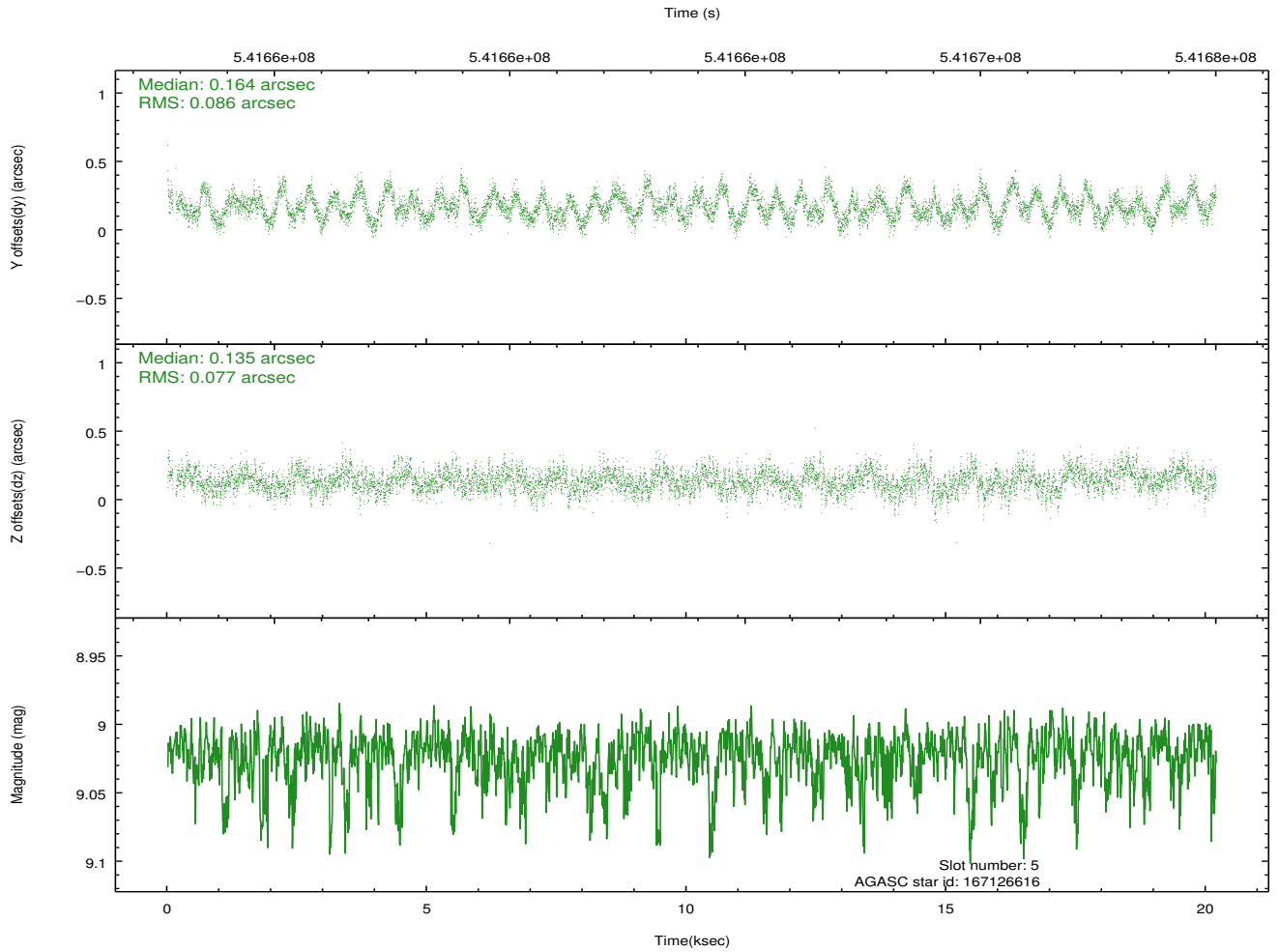
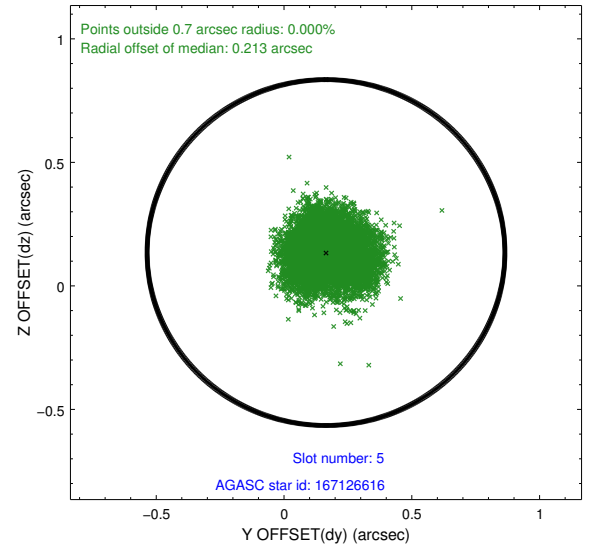
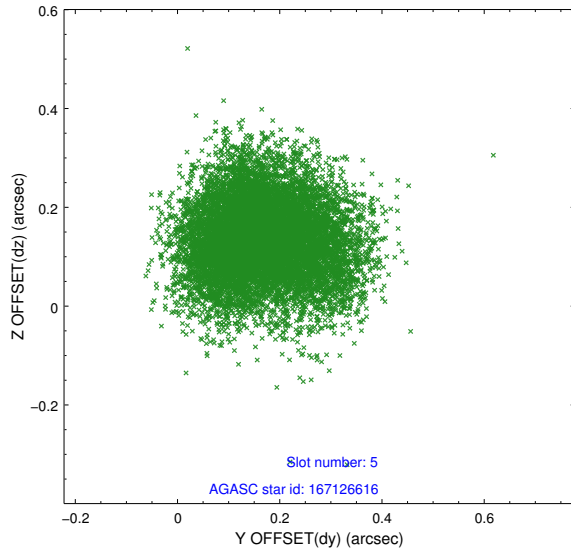


## 2.4.2 Slot 4

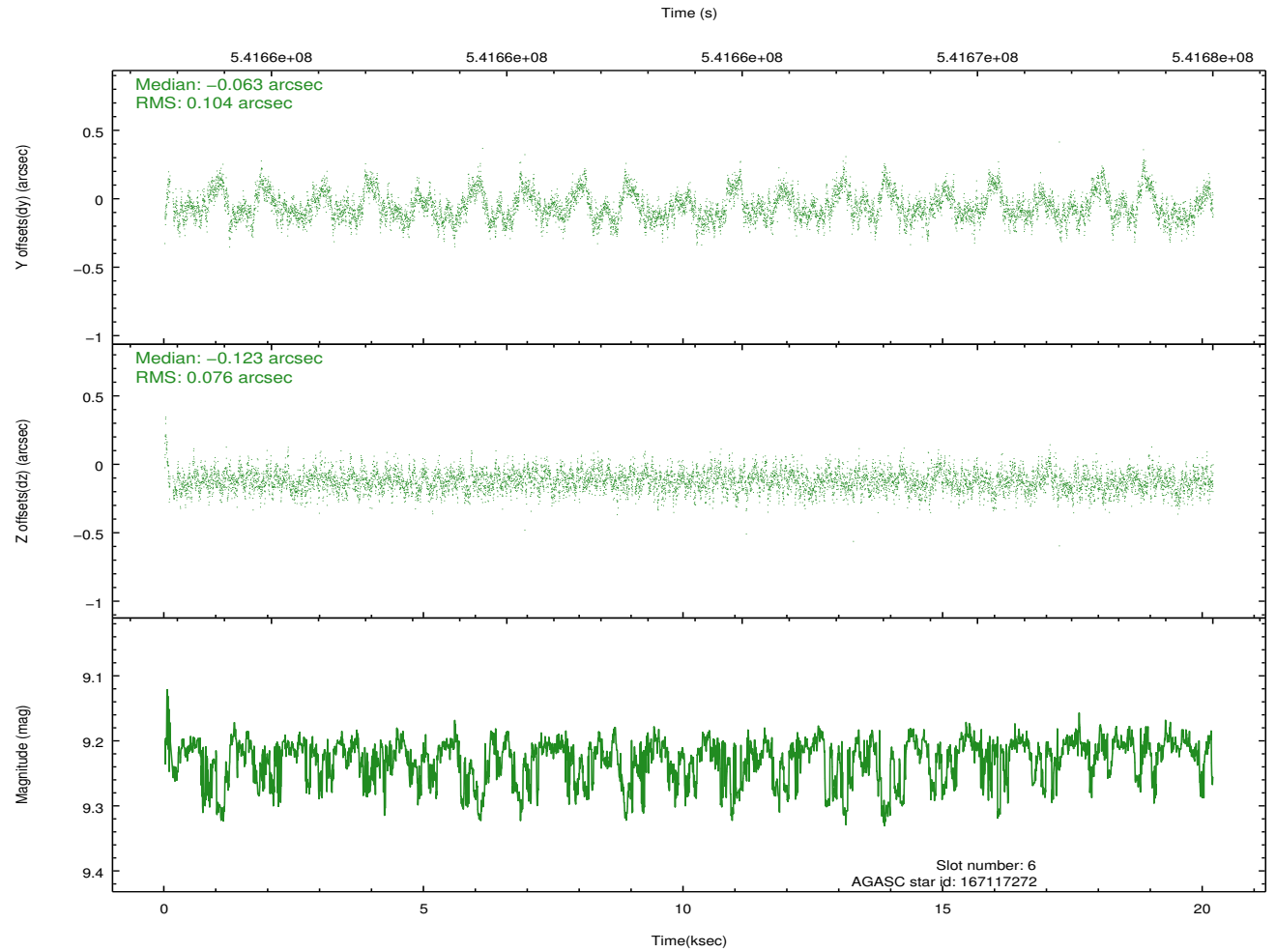
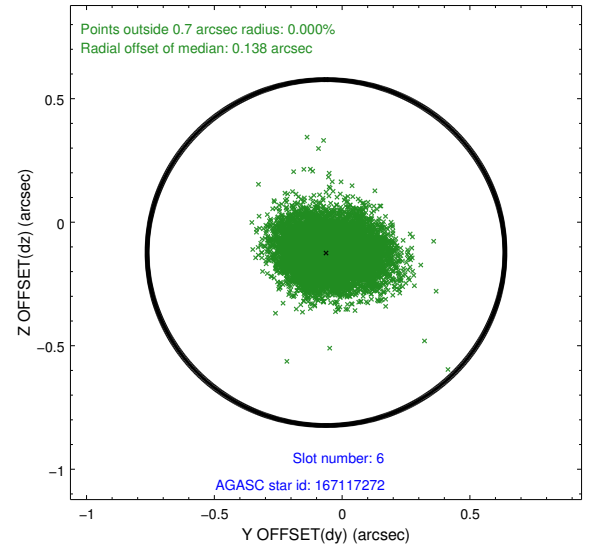
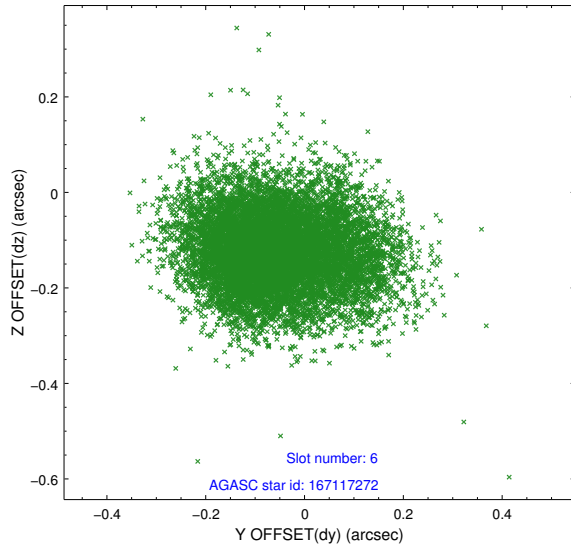




### 2.4.3 Slot 5

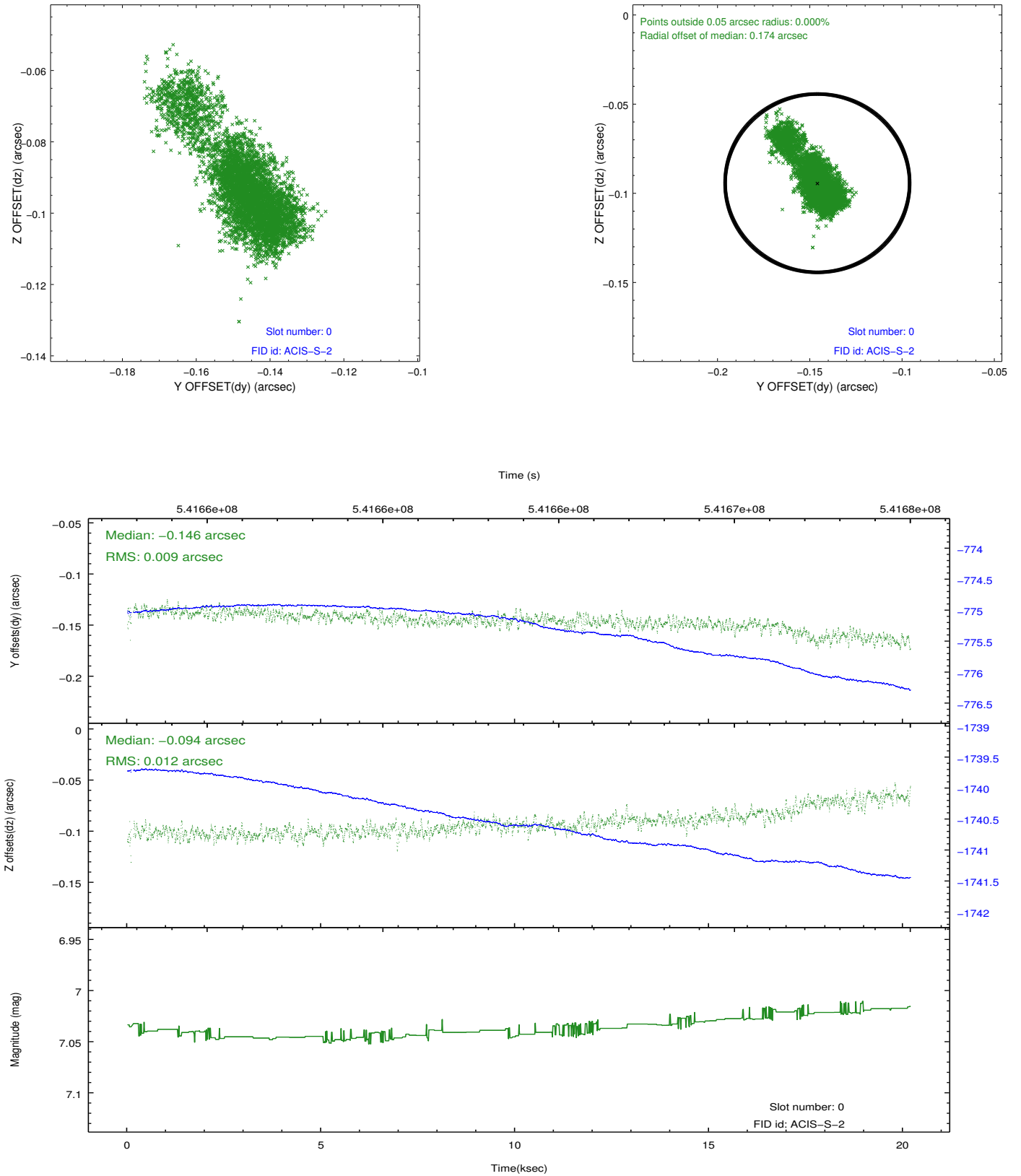


## 2.4.4 Slot 6

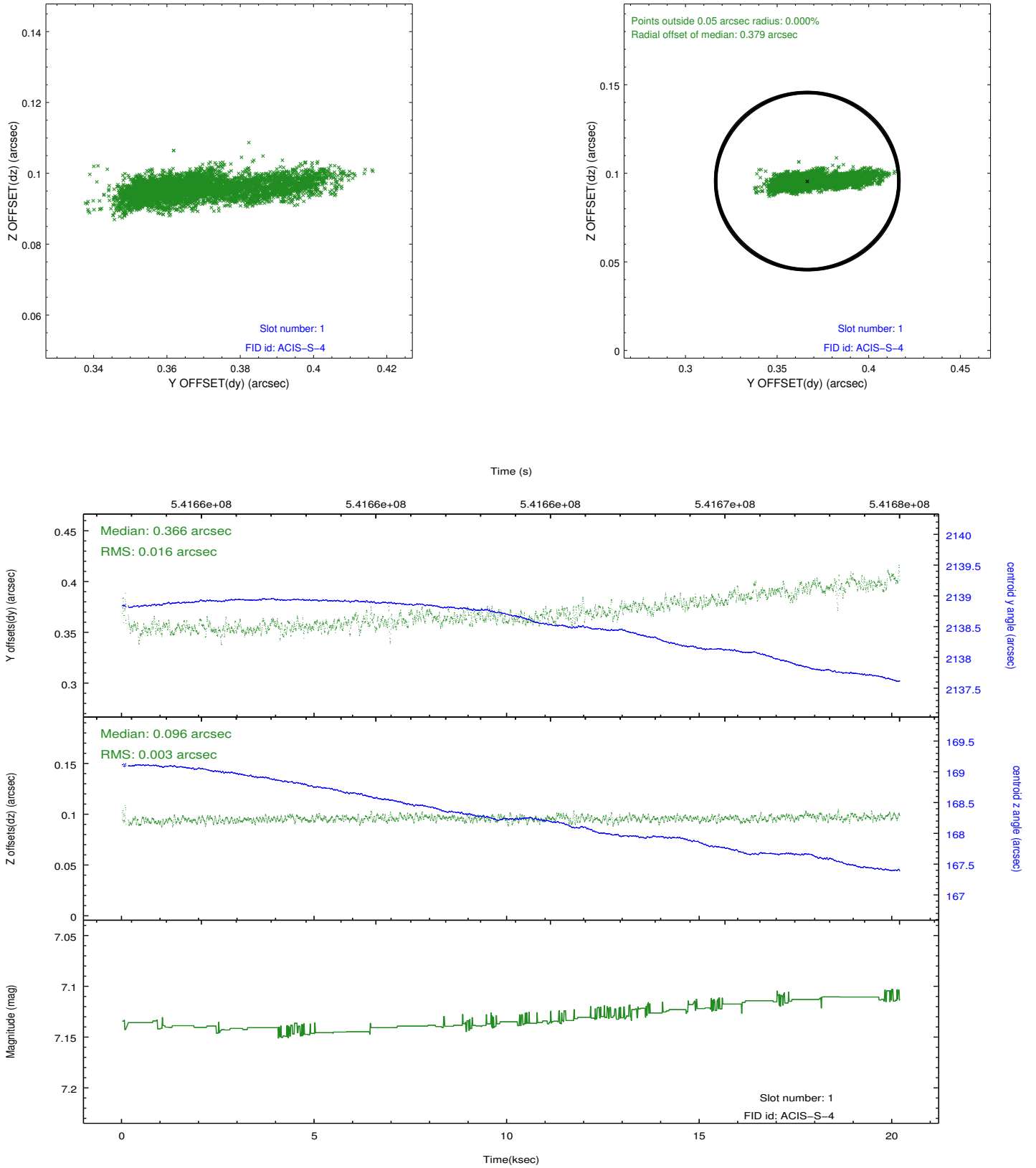


## 2.5 FID Slots

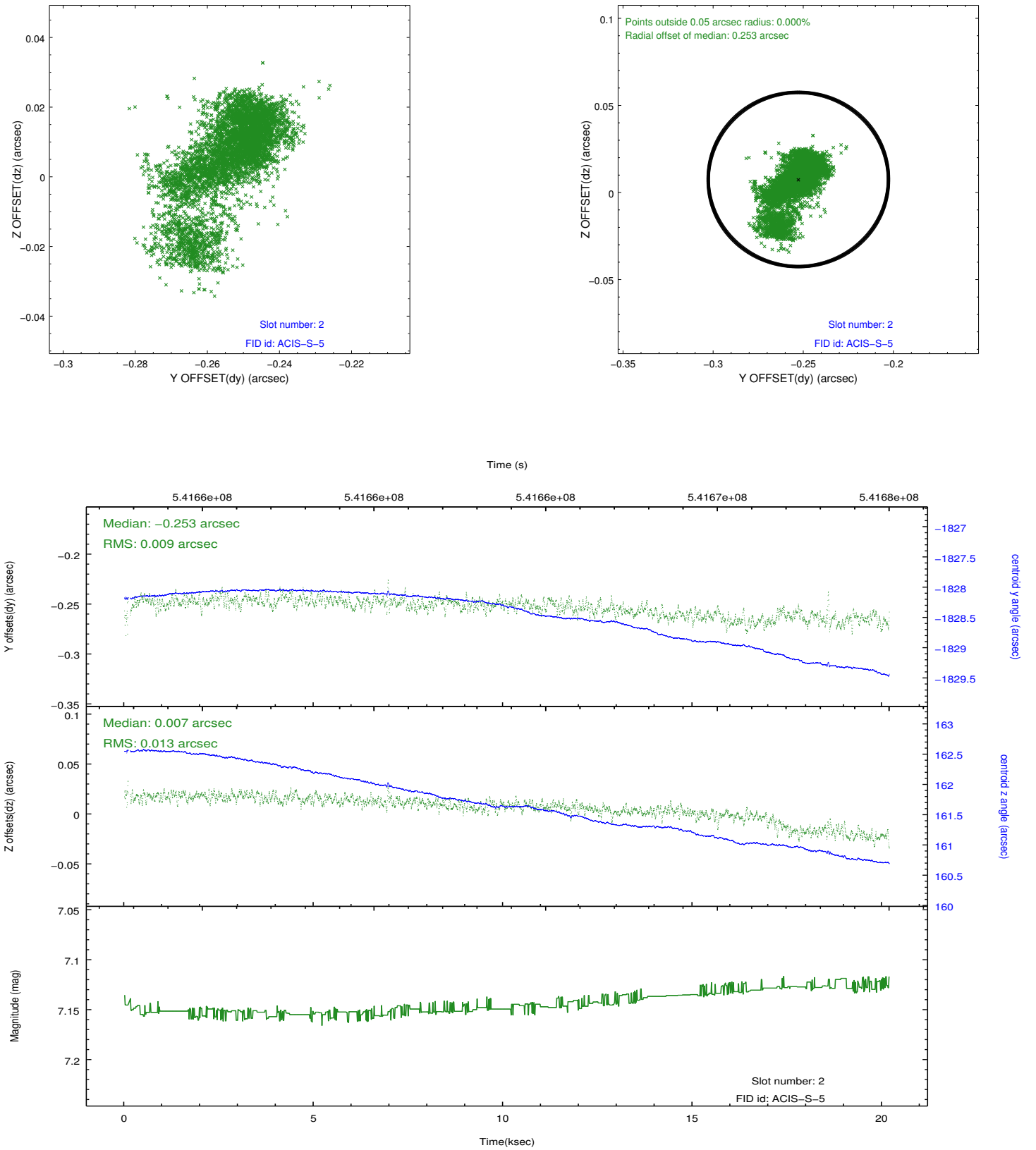
### 2.5.1 Slot 0



## 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)      | 2015.03.03  |
| V&V Edition                | 1           |
| V&V Disposition and Status | OK          |
| V&V Charge Time            | 20.13       |

### A.2 Comments

Target monitored in slot 7 with Aspect Camera.