

# V&V Reference Report

## L2 ASCDS Version : 10.7.1

Observation 21318 - L2 Version 1  
Chandra X-Ray Center

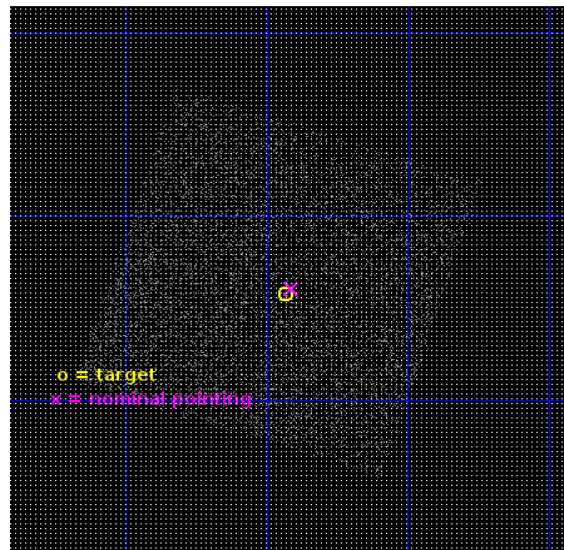
L2 Processing Date : May 9 2019

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# 1 Front

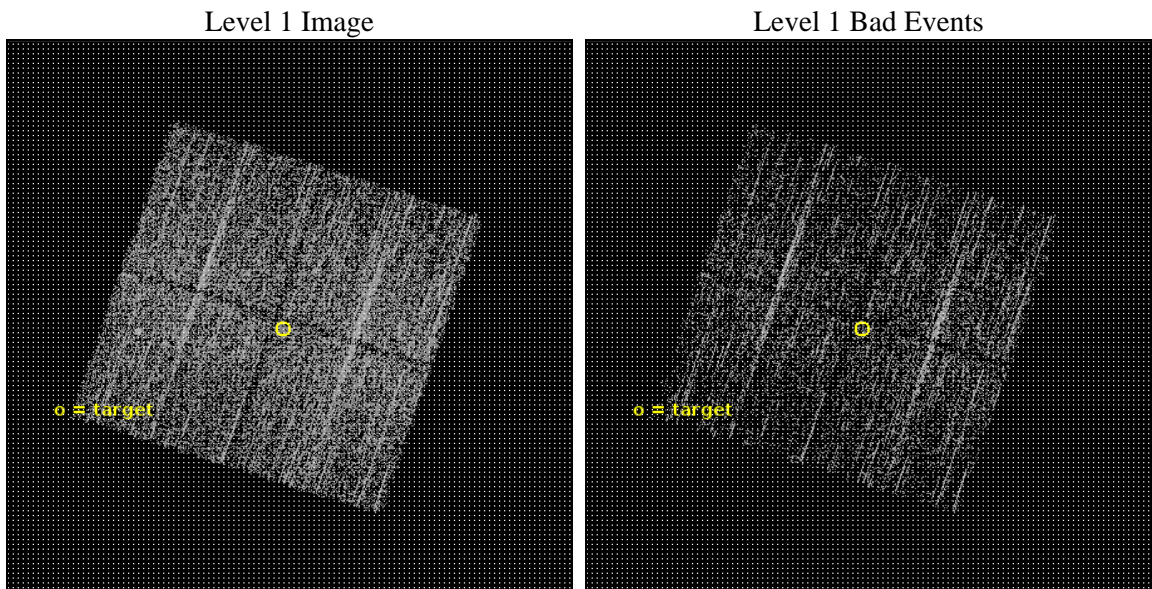
|          |   |   |
|----------|---|---|
| seq_num  | 503090  | Sequence number                             |
| obs_id   | 21318   | Observation id                              |
| title    | Chandra ToO observations of Swift Galactic Plane Survey sources | Pr  |
| observer | Chryssa Kouveliotou   | Principal investigator                      |
| object   | 3XMM J182855.9-095413   | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which<br>exps? Prim/Second/Both |
| ra_targ  | 277.233265  | Observer's specified<br>target RA [deg]     |
| dec_targ | -9.903789   | Observer's specified<br>target Dec [deg]    |
| ra_nom   | 277.22818570339   | Nominal RA [deg]                            |
| dec_nom  | -9.8990513369646  | Nominal Dec [deg]                           |
| roll_nom | 108.20780020245   | Nominal Roll [deg]                          |
| revision | 1   | Processing version of<br>data               |
| ontime   | 2408.7000186443   | Sum of GTIs [s]                             |
| livetime | 2377.2285796416   | Livetime [s]                                |
| ontime0  | 2408.7000186443   | Sum of GTIs [s]                             |
| ontime1  | 2408.7000186443   | Sum of GTIs [s]                             |
| ontime2  | 2408.7000186443   | Sum of GTIs [s]                             |
| ontime3  | 2408.7000186443   | Sum of GTIs [s]                             |
| l2events | 7058  | Number of level 2<br>events                 |



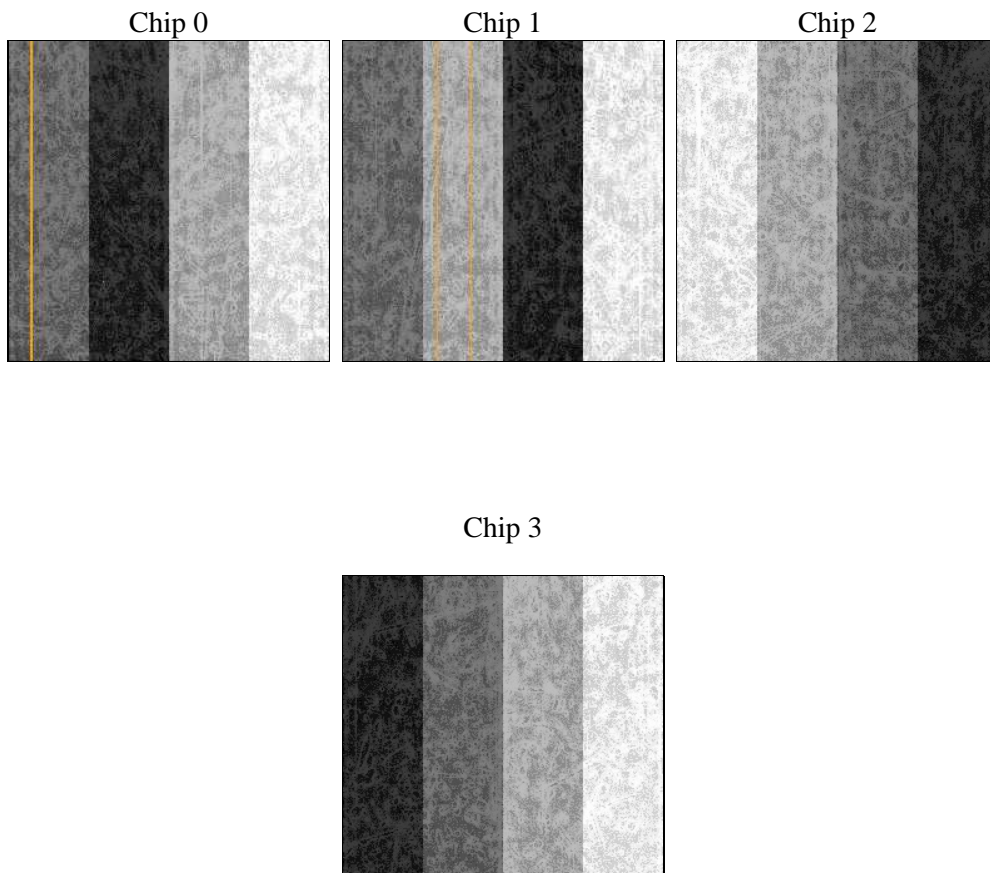
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 2500.000000     | [s] Scheduled observation exposure time |
| ascdsver | 10.7.1              | Processing system revision     | ontime         | 2408.7000186443 | Sum of GTIs [s]                         |
| caldsver | 4.8.2               | &#160                          | ontime0        | 2408.7000186443 | Sum of GTIs [s]                         |
| date     | 2019-05-09T08:47:12 | Date and time of file creation | ontime1        | 2408.7000186443 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime2        | 2408.7000186443 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 2408.7000186443 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 72215           | Number of level 1 events                |

### 2.1.4 Events

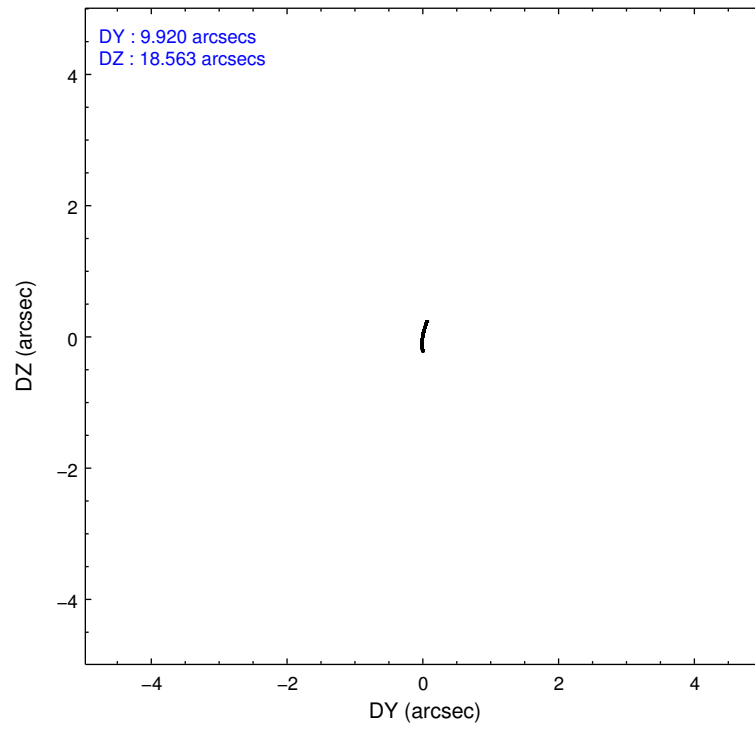
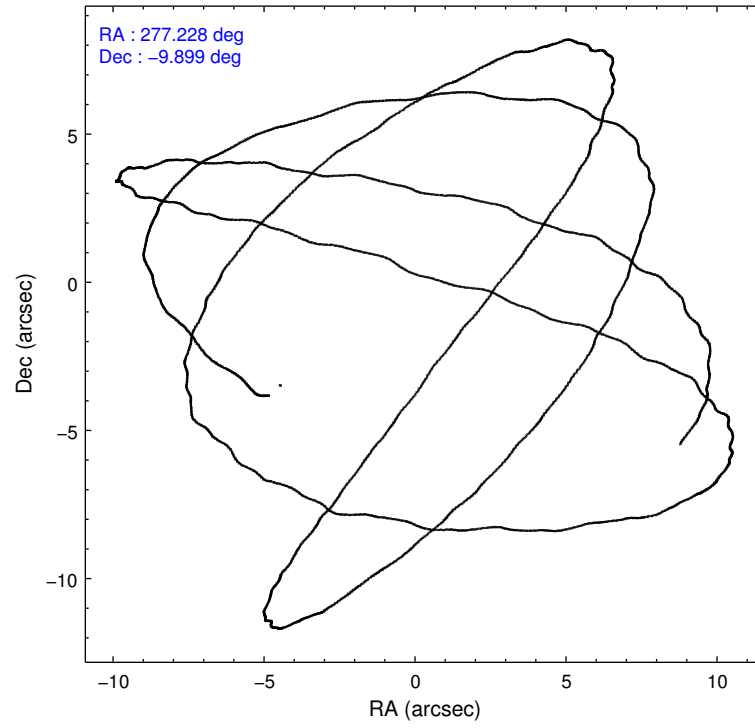
|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|-----------------|-------|-------|-------|-------|
| level 1 events  | 16779 | 17187 | 19653 | 18596 |
| rejected events | 14734 | 14812 | 17673 | 16524 |
| rejected %      | 87%   | 86%   | 89%   | 88%   |

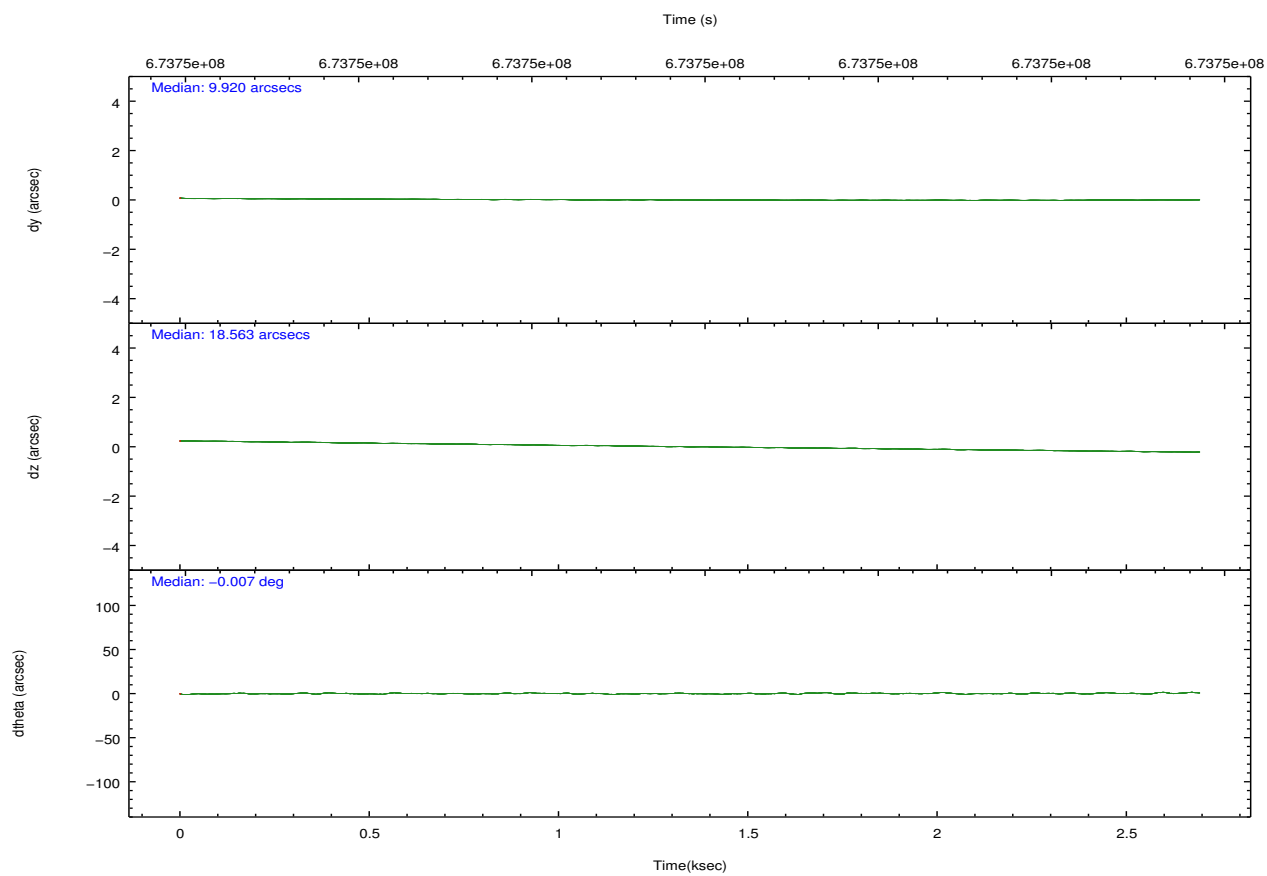
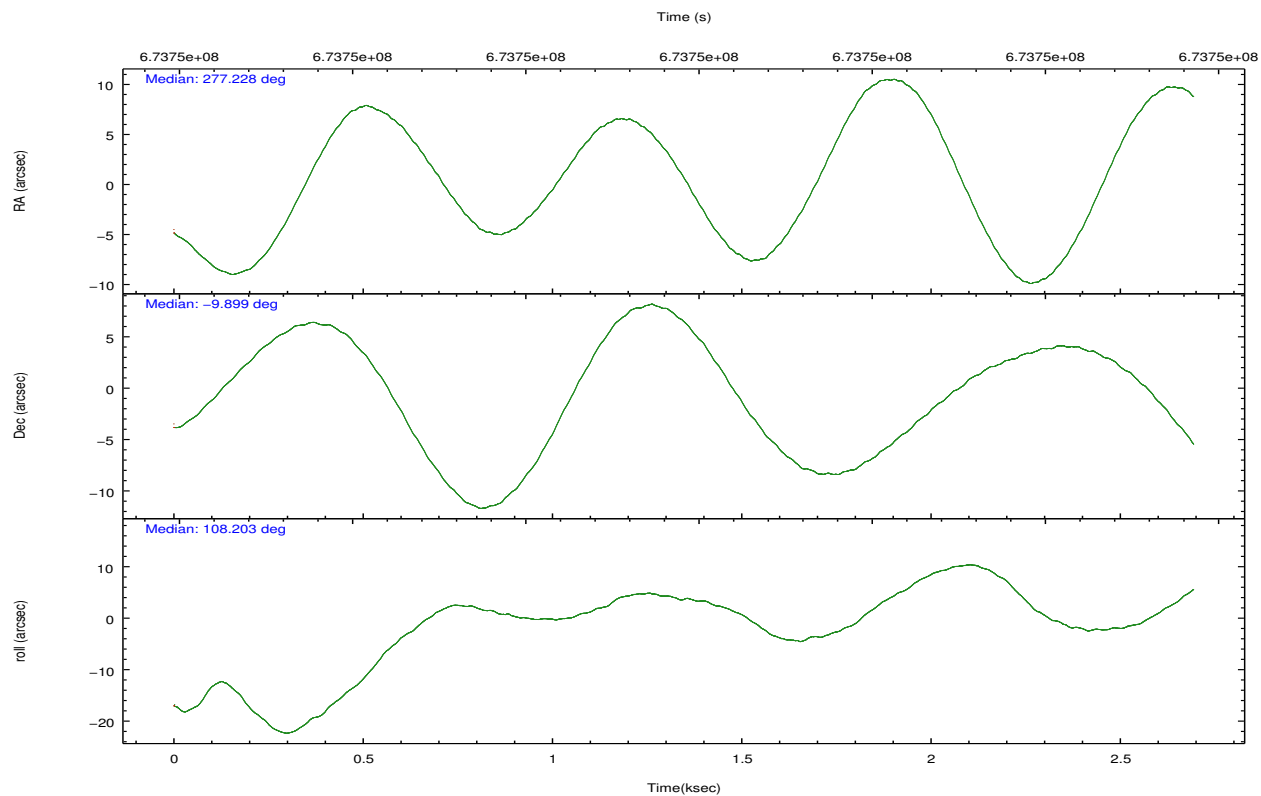
|                | ccd 0 | ccd 1 | ccd 2 | ccd 3 |
|----------------|-------|-------|-------|-------|
| grade 0 events | 705   | 888   | 766   | 846   |
|                | 4%    | 5%    | 3%    | 4%    |
| grade 1 events | 8     | 12    | 10    | 9     |
|                | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 508   | 578   | 453   | 440   |
|                | 3%    | 3%    | 2%    | 2%    |
| grade 3 events | 193   | 226   | 180   | 170   |
|                | 1%    | 1%    | 0%    | 0%    |
| grade 4 events | 169   | 191   | 193   | 198   |
|                | 1%    | 1%    | 0%    | 1%    |
| grade 5 events | 729   | 814   | 729   | 808   |
|                | 4%    | 4%    | 3%    | 4%    |
| grade 6 events | 473   | 493   | 390   | 421   |
|                | 2%    | 2%    | 1%    | 2%    |
| grade 7 events | 13994 | 13985 | 16932 | 15704 |
|                | 83%   | 81%   | 86%   | 84%   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 7         | 7       |
| 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       |
| [deg] Pointing RA                 | 277.249286          | 277.2281857033934     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | -9.917548           | -9.899051336964643    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 108.002754          | 108.2078002024545     | [s] Primary exposure time             | 0.000000  | 3.1     |
| [mm] SIM focus pos                | -0.782348           | -0.7809083437167272   |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001439871863259334  |                                       |           |         |
| [mm] SIM translation stage pos    | -233.592463         | -233.5874344608287    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.005018542100998502 |                                       |           |         |
| [s] Observation start time (MET)  | 673746307.184000    | 673745762.12334       |                                       |           |         |
| Observation start date            | 2019-05-08T23:43:58 | 2019-05-08T23:36:02   |                                       |           |         |
| [s] Observation end time (MET)    | 673748807.184000    | 673749703.24857       |                                       |           |         |
| Observation end date              | 2019-05-09T00:25:38 | 2019-05-09T00:41:43   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect





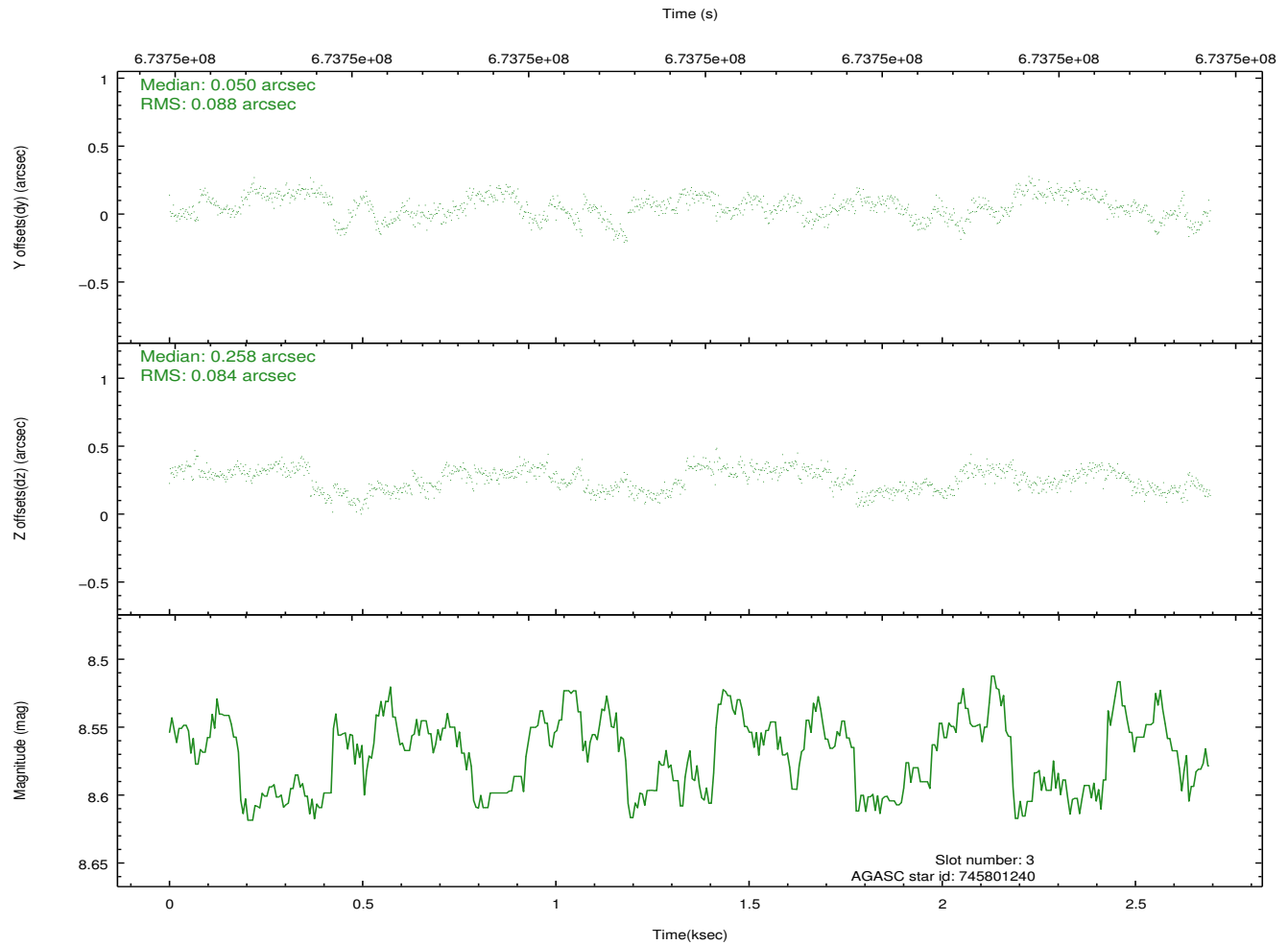
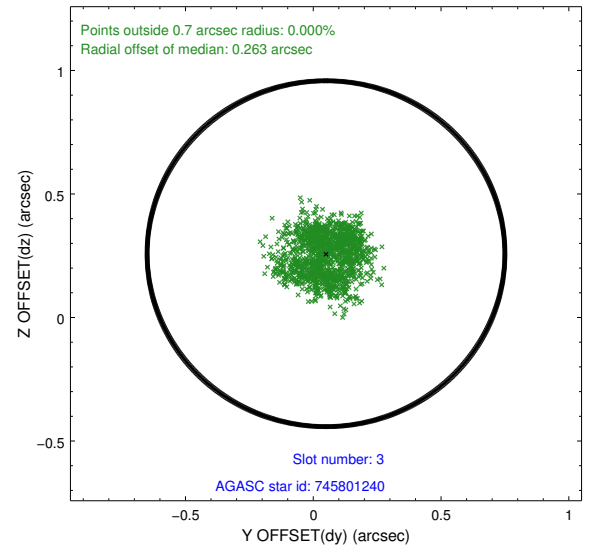
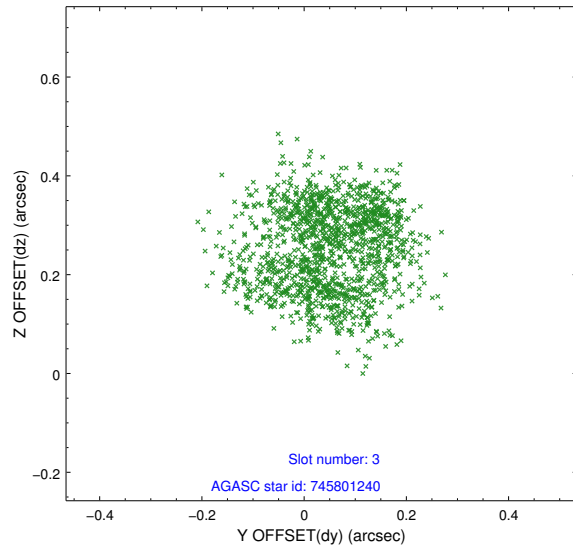
Slot Statistics

| pt | status  | used | id        | mag  | n_pts | frac_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mea   |
|----|---------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0  | FID     |      | ACIS-I-1  | 7.26 | 658   | 1.000    | 0.094  | -0.051 | 0.006 | 0.012 | 0.000000   | 0.000000   | 929.84   | -842  |
| 1  | FID     |      | ACIS-I-5  | 7.24 | 658   | 1.000    | -0.463 | 0.023  | 0.006 | 0.009 | 0.000000   | 0.000000   | -1817.67 | 1053  |
| 2  | FID     |      | ACIS-I-6  | 7.23 | 658   | 1.000    | 0.279  | 0.099  | 0.007 | 0.011 | 0.000000   | 0.000000   | 392.75   | 1701  |
| 3  | GUIDE   | used | 745801240 | 8.57 | 1315  | 1.000    | 0.050  | 0.258  | 0.132 | 0.196 | 277.395980 | -9.288585  | 1991.95  | -1195 |
| 4  | OMITTED |      |           | 0.00 | 0     | 0.000    | 0.000  | 0.000  | 0.000 | 0.000 | 0.000000   | 0.000000   | 0.00     | 0     |
| 5  | GUIDE   | used | 746337832 | 9.68 | 1302  | 1.000    | 0.052  | -0.309 | 0.191 | 0.314 | 276.813652 | -10.159195 | -350.36  | 1735  |
| 6  | GUIDE   | used | 746338464 | 9.40 | 1315  | 1.000    | 0.390  | 0.460  | 0.180 | 0.276 | 277.427613 | -10.292647 | -1479.92 | -181  |
| 7  | GUIDE   | used | 746340456 | 8.67 | 1312  | 1.000    | -0.481 | -0.402 | 0.100 | 0.156 | 276.503916 | -9.458649  | 2384.18  | 2007  |

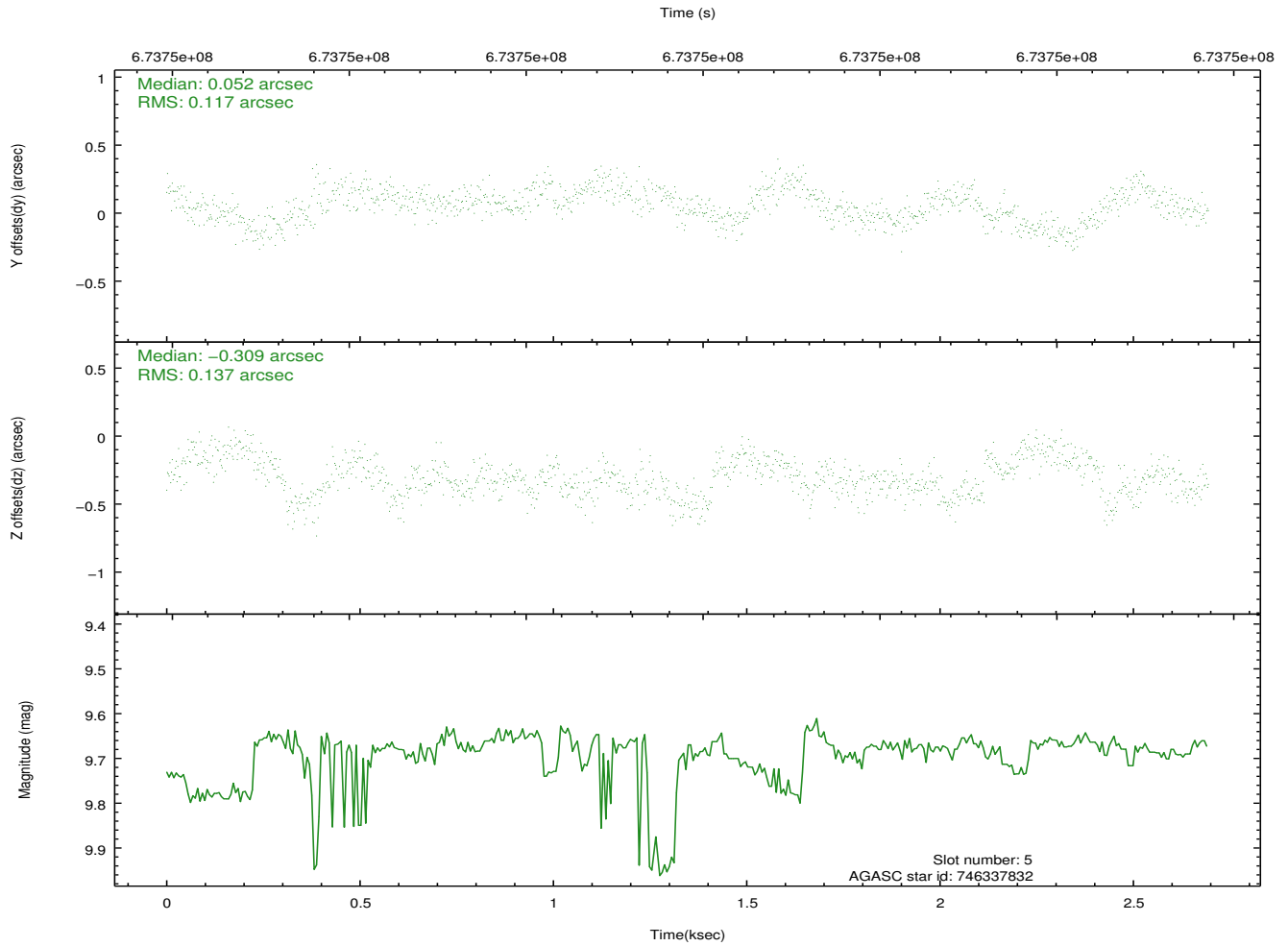
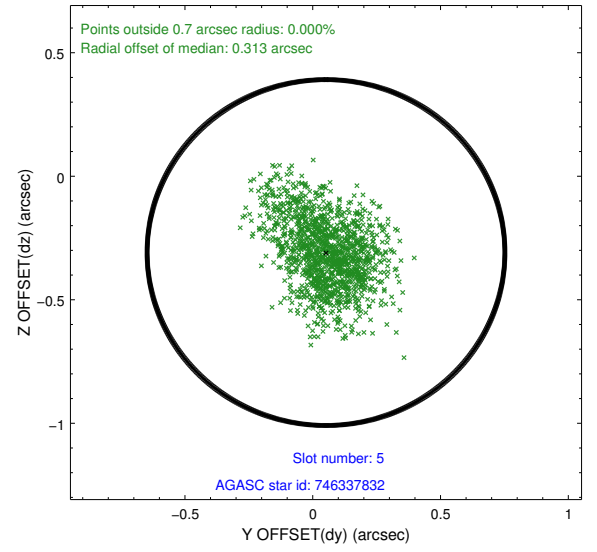
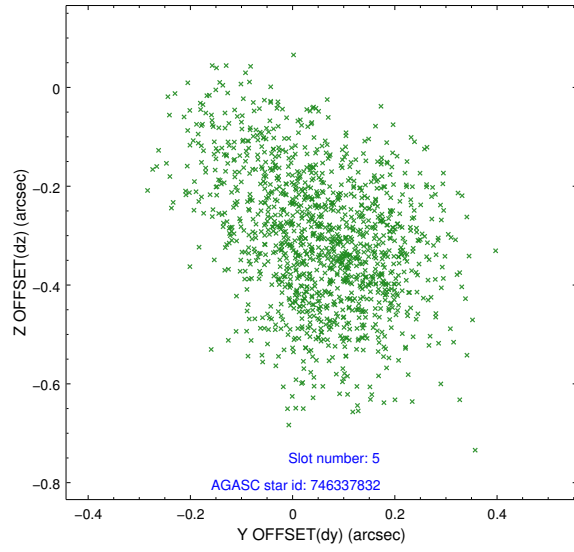


## 2.4 Star Slots

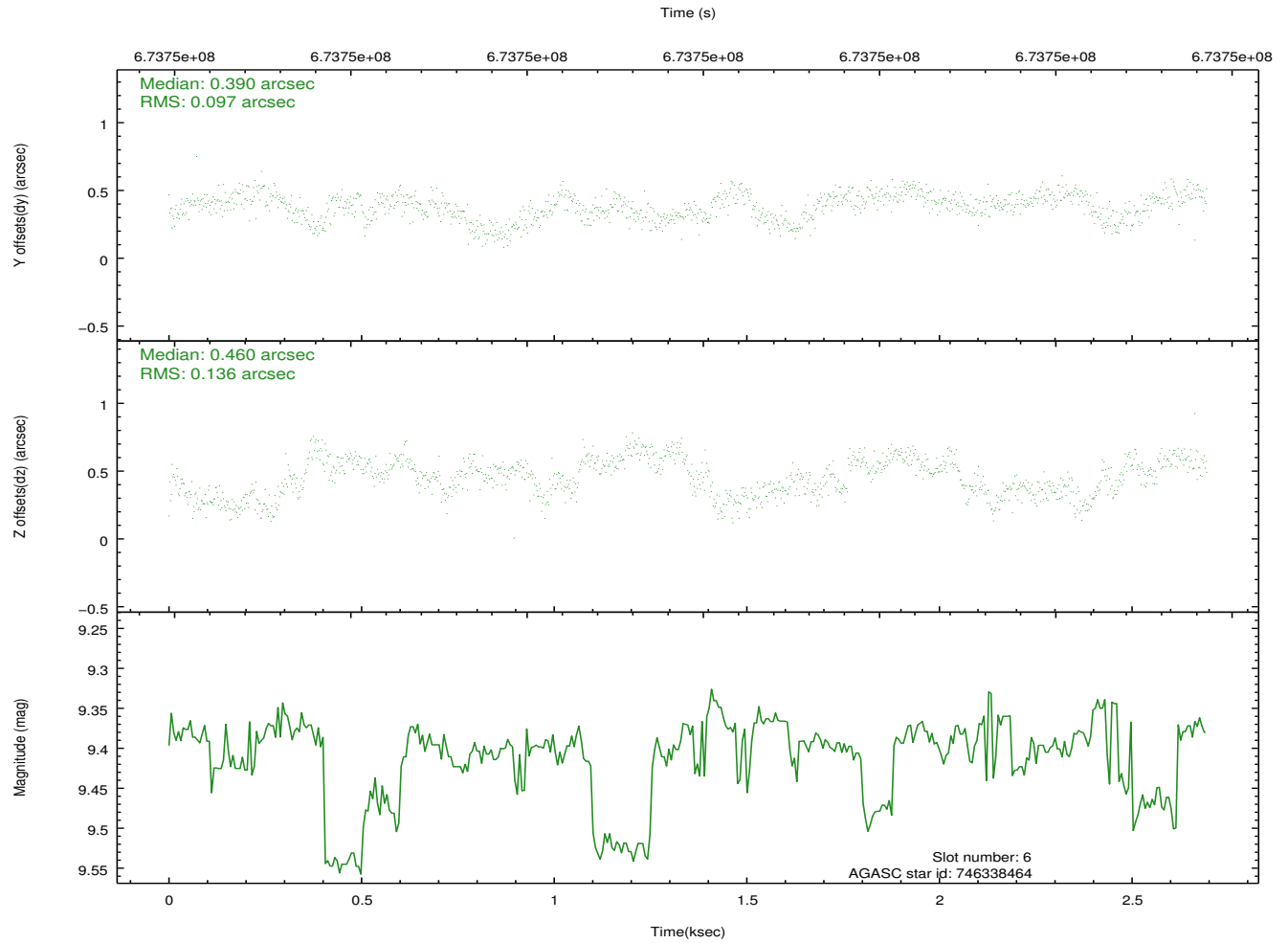
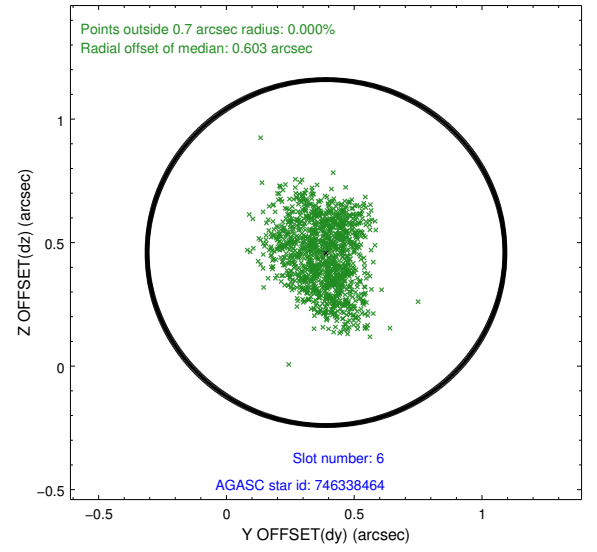
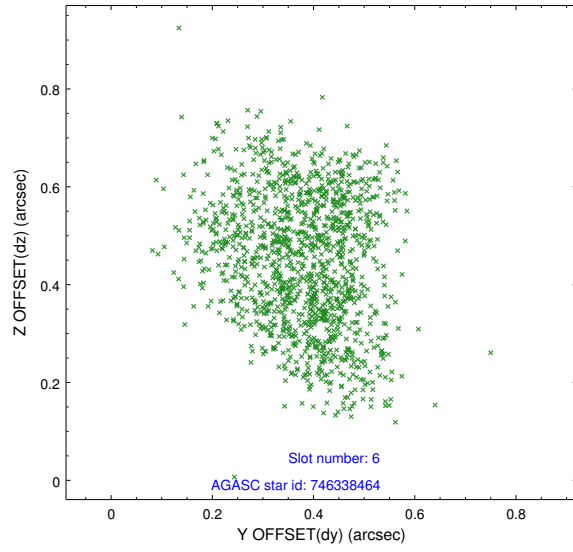
### 2.4.1 Slot 3



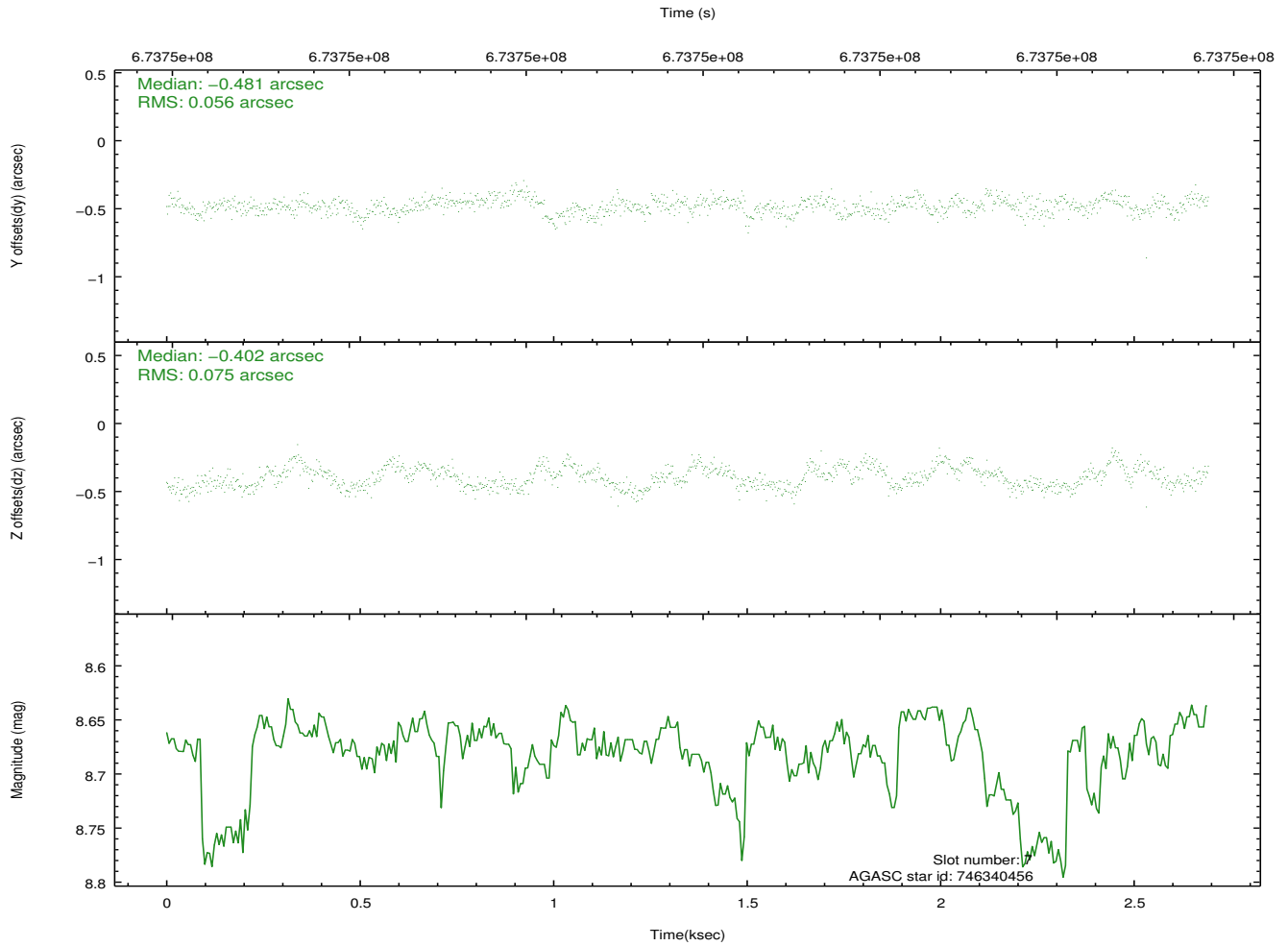
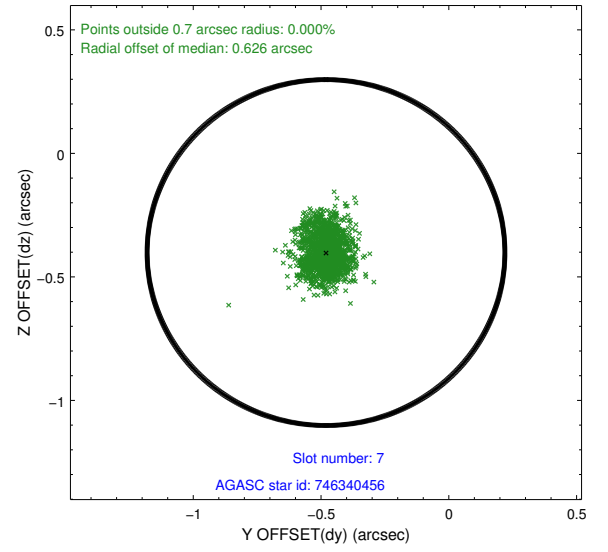
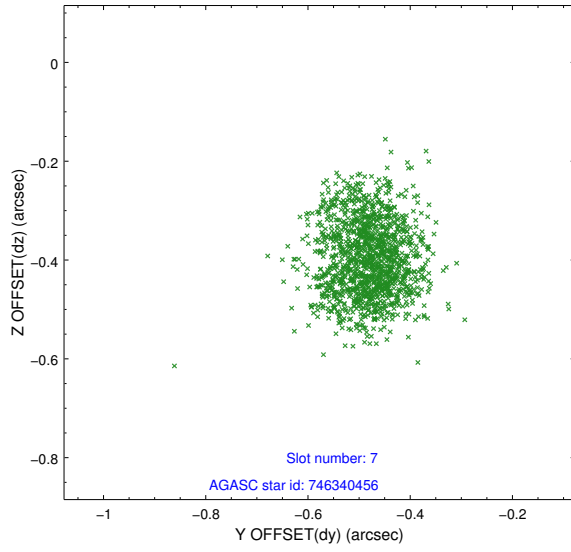
## 2.4.2 Slot 5



### 2.4.3 Slot 6

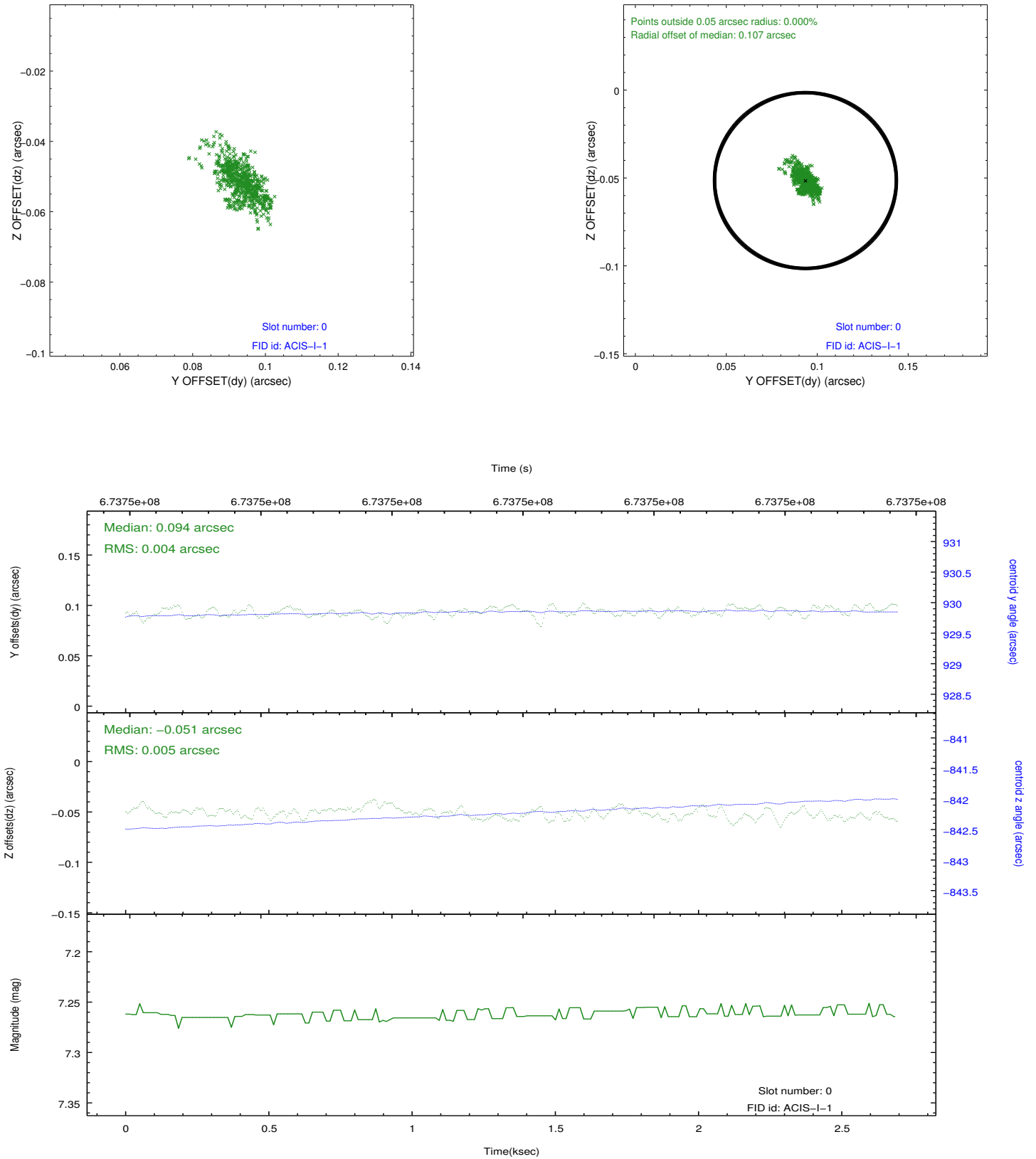


## 2.4.4 Slot 7

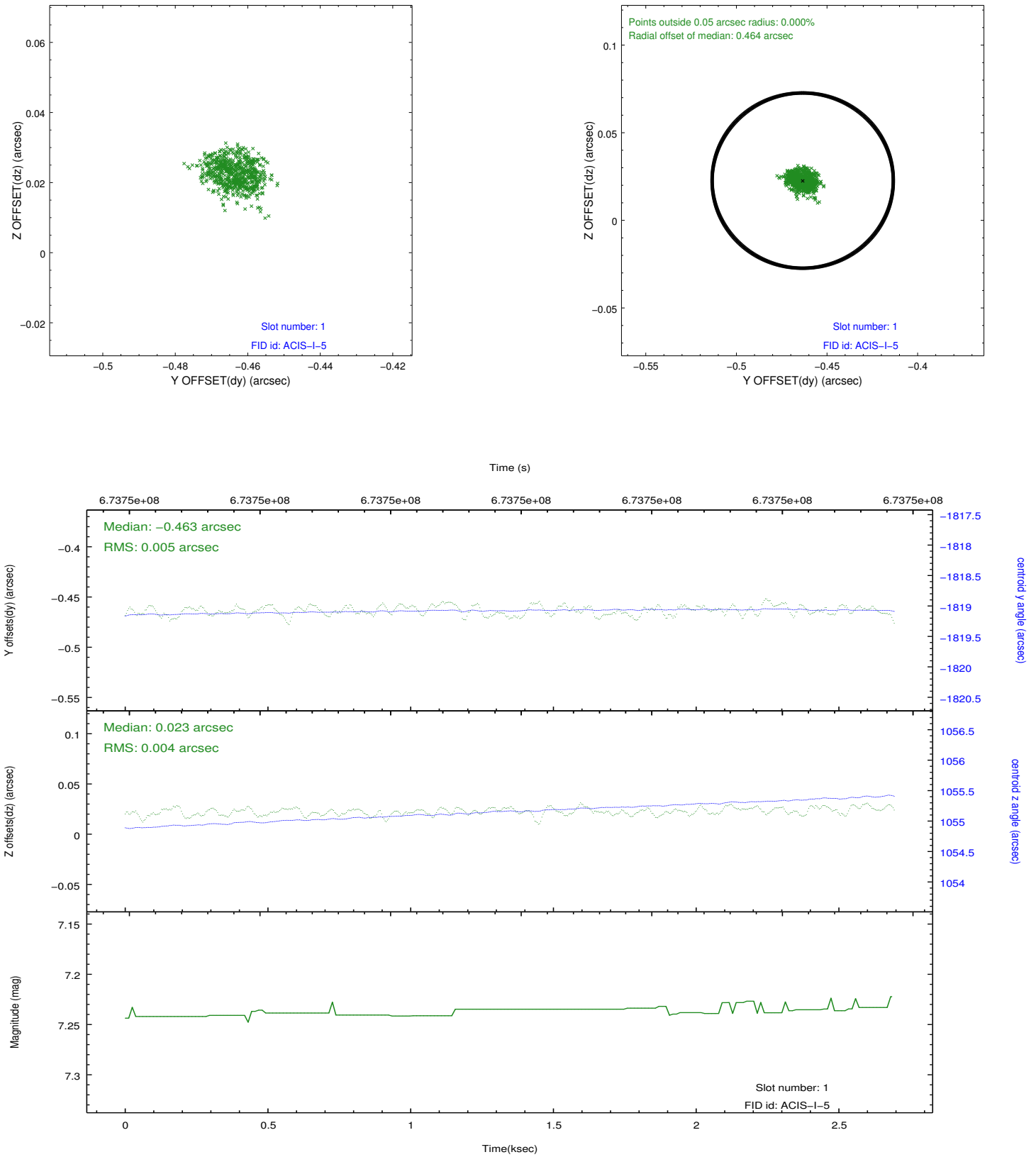


## 2.5 FID Slots

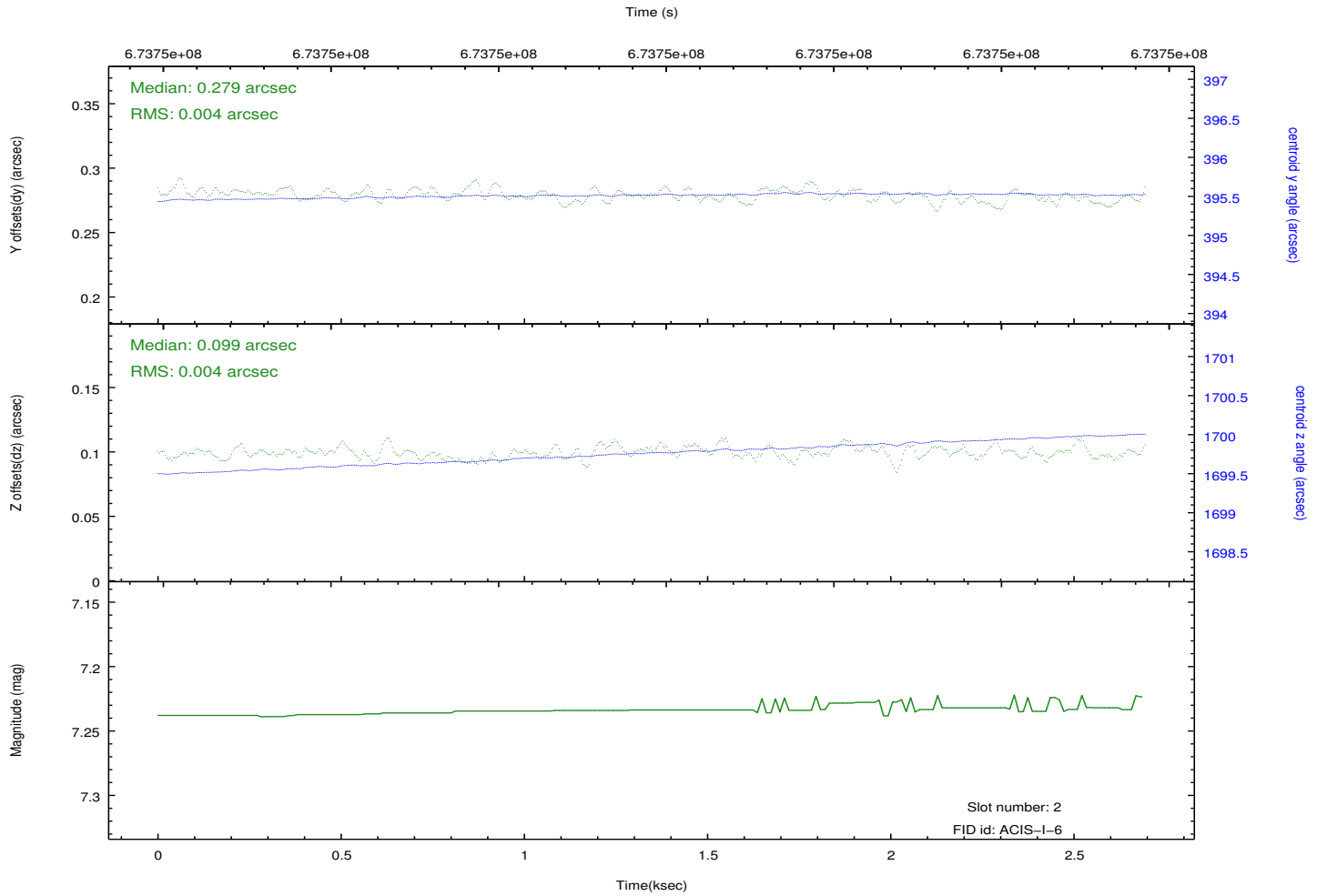
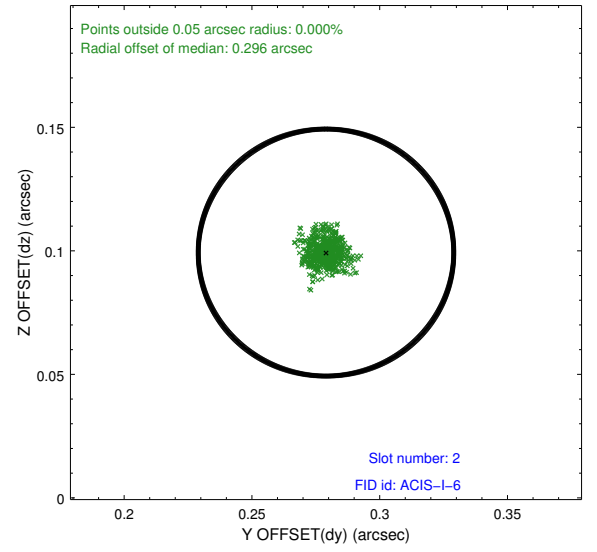
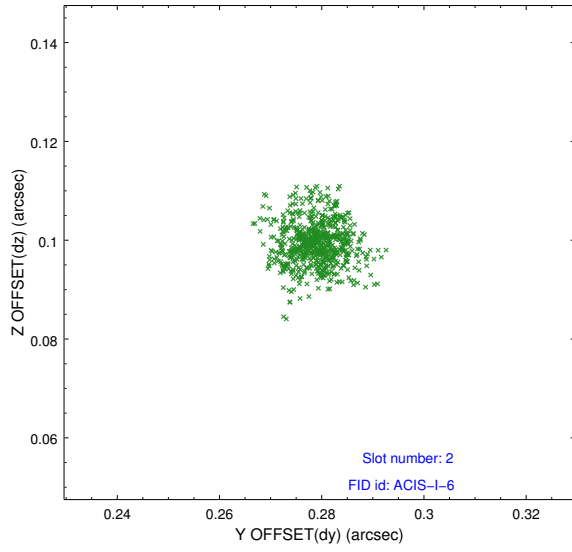
### 2.5.1 Slot 0



## 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)      | 2019.05.09      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 2.4087000186443 |

### A.2 Comments

The guide star in slot 4 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.