

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 16117 - L2 Version 1  
Chandra X-Ray Center

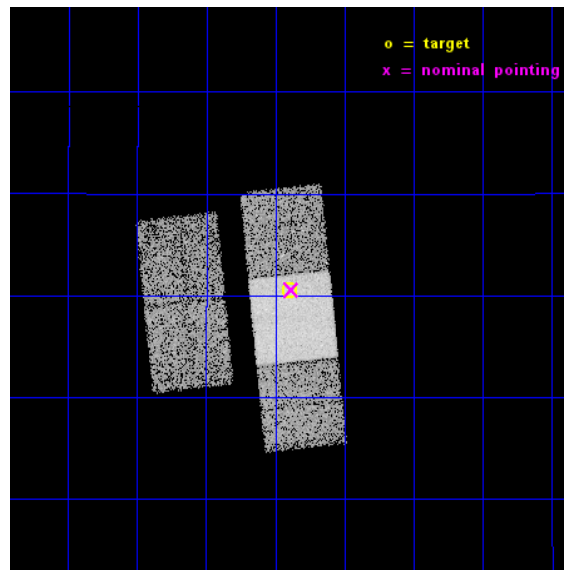
L2 Processing Date : Feb 4 2015

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# 1 Front

|          |                                                                   |                                             |
|----------|-------------------------------------------------------------------|---------------------------------------------|
| seq_num  | 703005                                                            | Sequence number                             |
| obs_id   | 16117                                                             | Observation id                              |
| title    | A Pilot Search for Spatially Offset AGN in Galaxy Merger Remnants | &#160                                       |
| observer | Dr. Julia Comerford                                               | Principal investigator                      |
| object   | SDSS J105553.64+152027.4                                          | Source name                                 |
| dtcycle  | 0                                                                 | &#160                                       |
| cycle    | P                                                                 | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 163.973333                                                        | Observer's specified target RA<br>[deg]     |
| dec_targ | 15.340944                                                         | Observer's specified target Dec<br>[deg]    |
| ra_nom   | 163.97082201835                                                   | Nominal RA [deg]                            |
| dec_nom  | 15.342909588202                                                   | Nominal Dec [deg]                           |
| roll_nom | 84.036159088656                                                   | Nominal Roll [deg]                          |
| revision | 1                                                                 | Processing version of data                  |
| ontime   | 15066.000115991                                                   | Sum of GTIs [s]                             |
| livetime | 14869.151733047                                                   | Livetime [s]                                |
| ontime2  | 15065.839598894                                                   | Sum of GTIs [s]                             |
| ontime3  | 15065.921678901                                                   | Sum of GTIs [s]                             |
| ontime6  | 15065.962718964                                                   | Sum of GTIs [s]                             |
| ontime7  | 15066.000115991                                                   | Sum of GTIs [s]                             |
| ontime8  | 15065.880638957                                                   | Sum of GTIs [s]                             |
| l2events | 69053                                                             | Number of level 2 events                    |

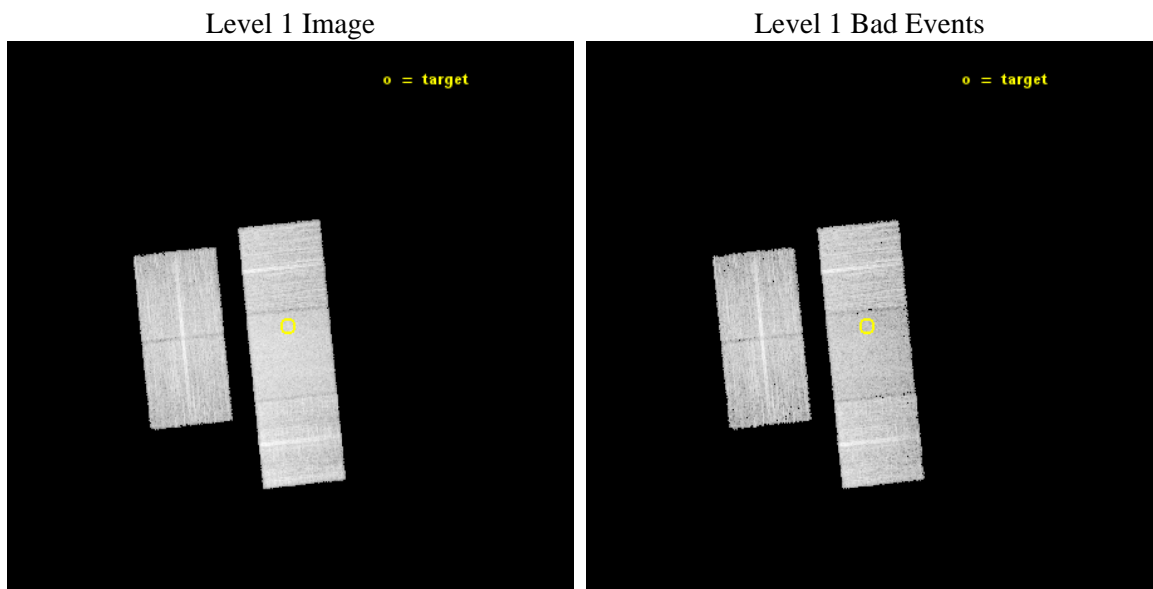




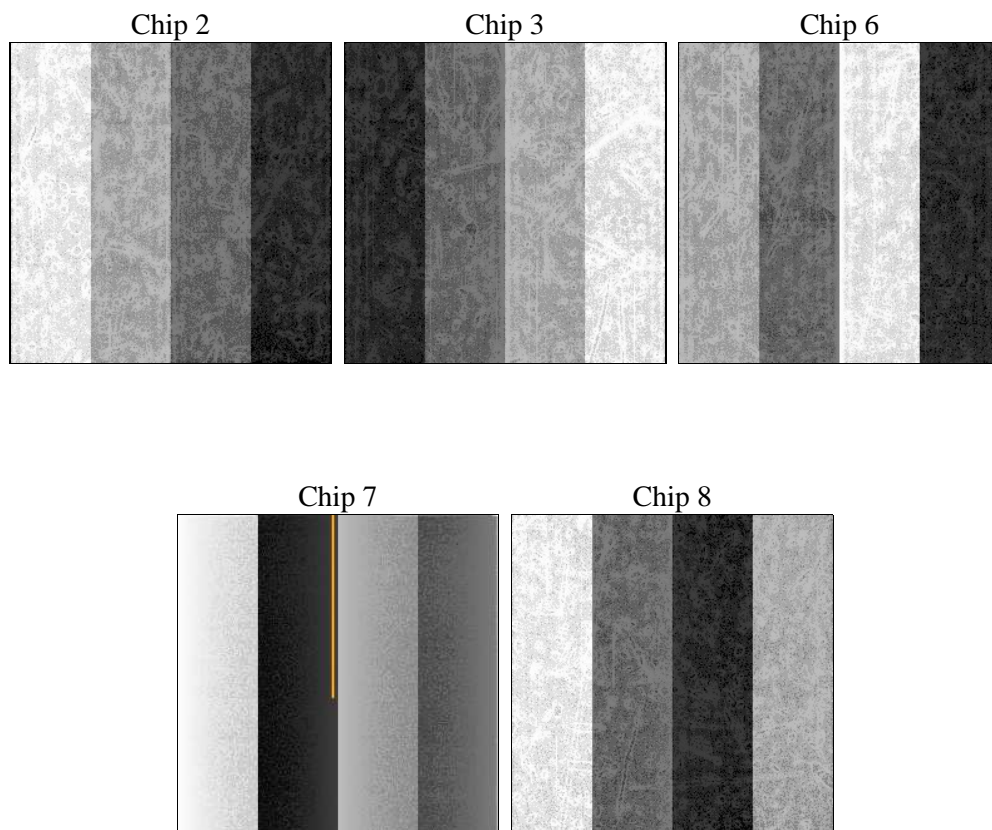
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |                                         |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 15000.639000    | [s] Scheduled observation exposure time |
| ascdsver | 10.3.3              | Processing system revision     | ontime         | 15066.000115991 | Sum of GTIs [s]                         |
| caldbver | 4.6.6               | &#160                          | ontime2        | 15065.839598894 | Sum of GTIs [s]                         |
| date     | 2015-02-04T16:29:58 | Date and time of file creation | ontime3        | 15065.921678901 | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | ontime6        | 15065.962718964 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 15066.000115991 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 15065.880638957 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 413100          | Number of level 1 events                |

### 2.1.4 Events

|                 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events  | 70591 | 69611 | 78416 | 96959 | 97523 |
| rejected events | 62963 | 61984 | 69778 | 55870 | 74296 |
| rejected %      | 89%   | 89%   | 88%   | 57%   | 76%   |

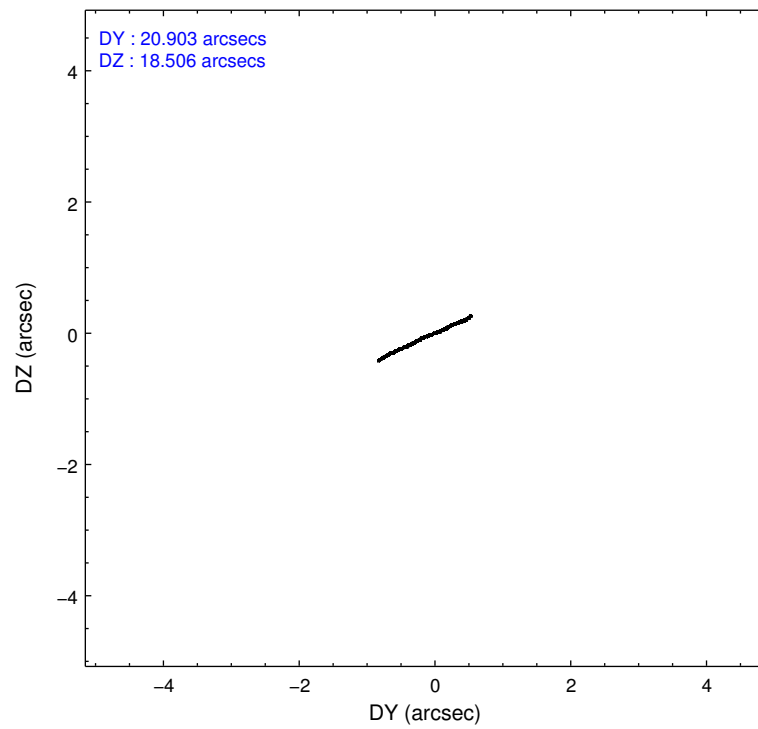
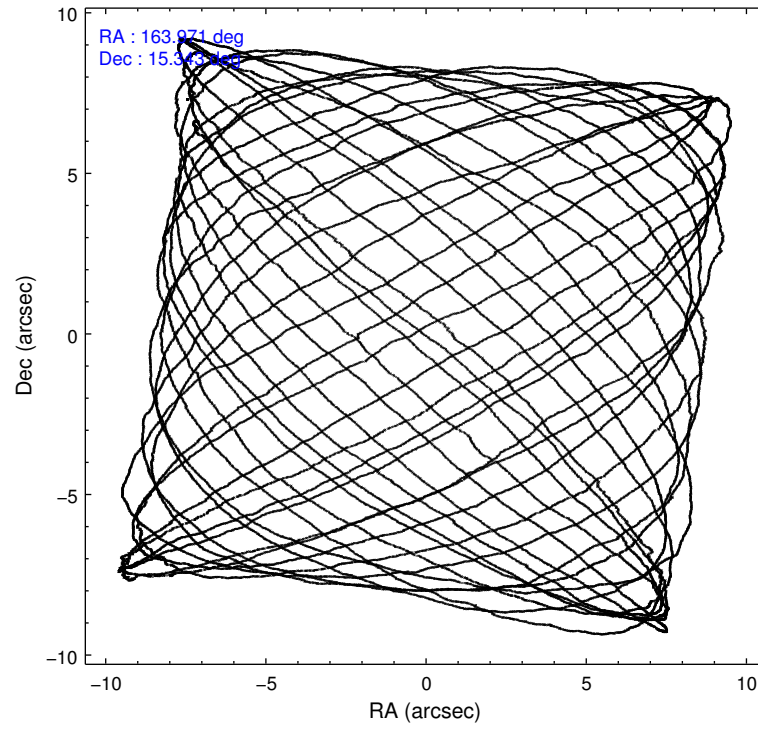
|                | ccd 2 | ccd 3 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 2654  | 2632  | 2769  | 3415  | 6393  |
|                | 3%    | 3%    | 3%    | 3%    | 6%    |
| grade 1 events | 41    | 43    | 27    | 130   | 66    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 1847  | 1675  | 2047  | 8364  | 5653  |
|                | 2%    | 2%    | 2%    | 8%    | 5%    |
| grade 3 events | 799   | 794   | 856   | 3236  | 2556  |
|                | 1%    | 1%    | 1%    | 3%    | 2%    |
| grade 4 events | 753   | 872   | 809   | 3155  | 2414  |
|                | 1%    | 1%    | 1%    | 3%    | 2%    |
| grade 5 events | 2969  | 3756  | 3607  | 9452  | 5428  |
|                | 4%    | 5%    | 4%    | 9%    | 5%    |
| grade 6 events | 1581  | 1658  | 2158  | 22940 | 6223  |
|                | 2%    | 2%    | 2%    | 23%   | 6%    |
| grade 7 events | 59947 | 58181 | 66143 | 46267 | 68790 |
|                | 84%   | 83%   | 84%   | 47%   | 70%   |

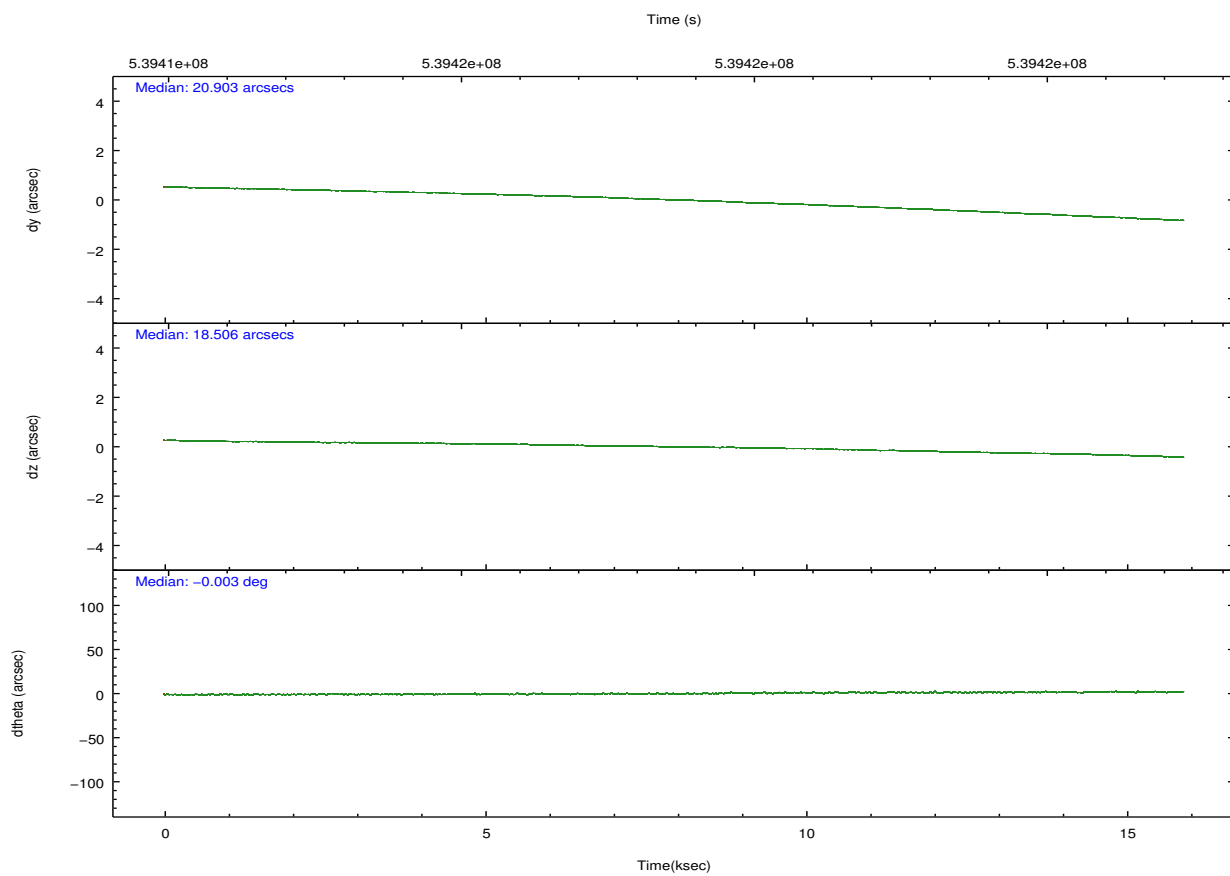
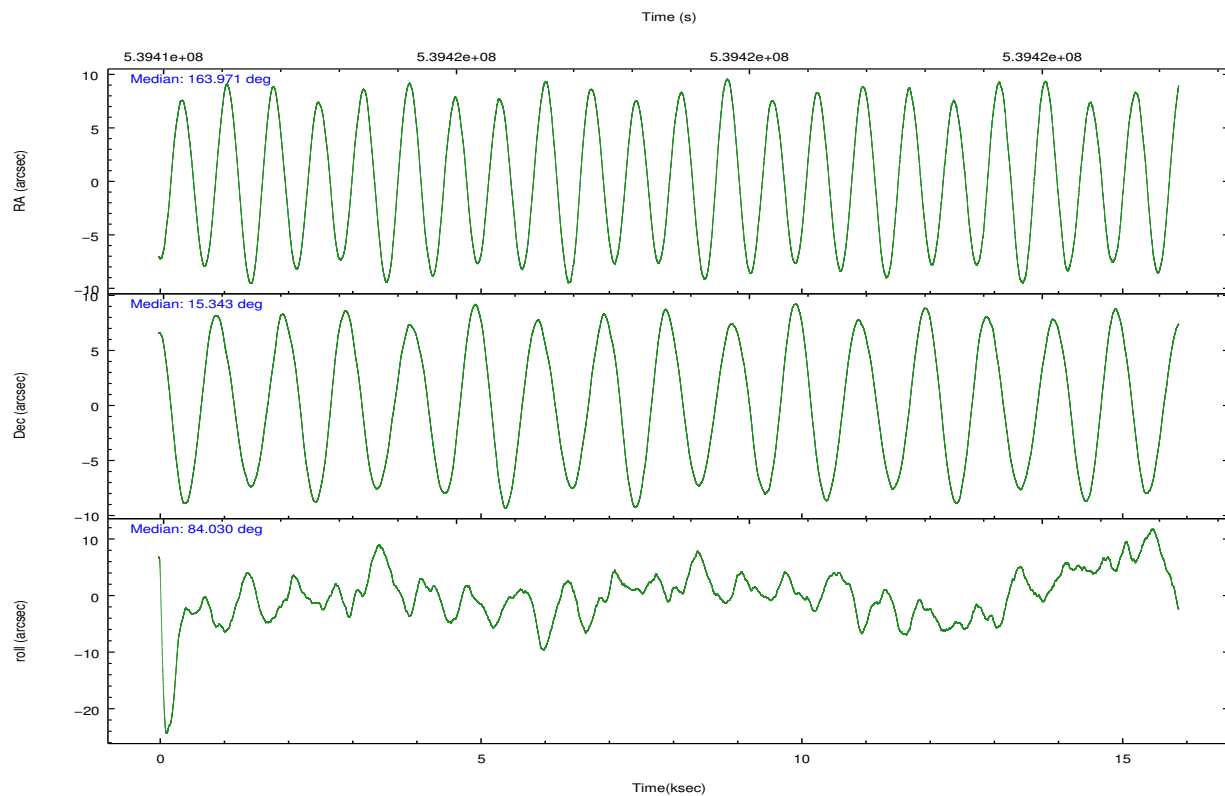
## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               |
|-----------------------------------|---------------------|----------------------|
| Instrument                        | ACIS                | ACIS                 |
| Detector                          | ACIS-23678          | ACIS-23678           |
| Grating                           | NONE                | NONE                 |
| Data mode                         | FAINT               | FAINT                |
| Observation mode                  | POINTING            | POINTING             |
| [deg] Pointing RA                 | 163.982776          | 163.9708220183492    |
| [deg] Pointing Dec                | 15.318013           | 15.34290958820236    |
| [deg] Pointing Roll               | 83.876342           | 84.03615908865564    |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |
| [s] Observation start time (MET)  | 539411560.184000    | 539410266.74182      |
| Observation start date            | 2015-02-04T04:31:33 | 2015-02-04T04:11:06  |
| [s] Observation end time (MET)    | 539426560.184000    | 539426786.1552401    |
| Observation end date              | 2015-02-04T08:41:33 | 2015-02-04T08:46:26  |
| Read mode                         | TIMED               | TIMED                |

| Parameter                             | Planned   | Actual  |
|---------------------------------------|-----------|---------|
| Obspar format version number          | 7         | 7       |
| Obspar file type                      | PREDICTED | ACTUAL  |
| Obspar update status                  | NONE      | UPDATED |
| CCD I0 on                             | N         | N       |
| CCD I1 on                             | N         | N       |
| CCD I2 on                             | O1        | Y       |
| CCD I3 on                             | O4        | Y       |
| CCD S0 on                             | N         | N       |
| CCD S1 on                             | N         | N       |
| CCD S2 on                             | O2        | Y       |
| CCD S3 on                             | Y         | Y       |
| CCD S4 on                             | O3        | Y       |
| CCD S5 on                             | N         | N       |
| Number of optional ACIS chips dropped | 0         | 0       |
| On-chip summing requested             | N         | N       |
| Subarray requested                    | NONE      | NONE    |
| Alternating exposures requested       | N         | N       |
| [s] Primary exposure time             | 0.000000  | 3.1     |

## 2.3 Aspect



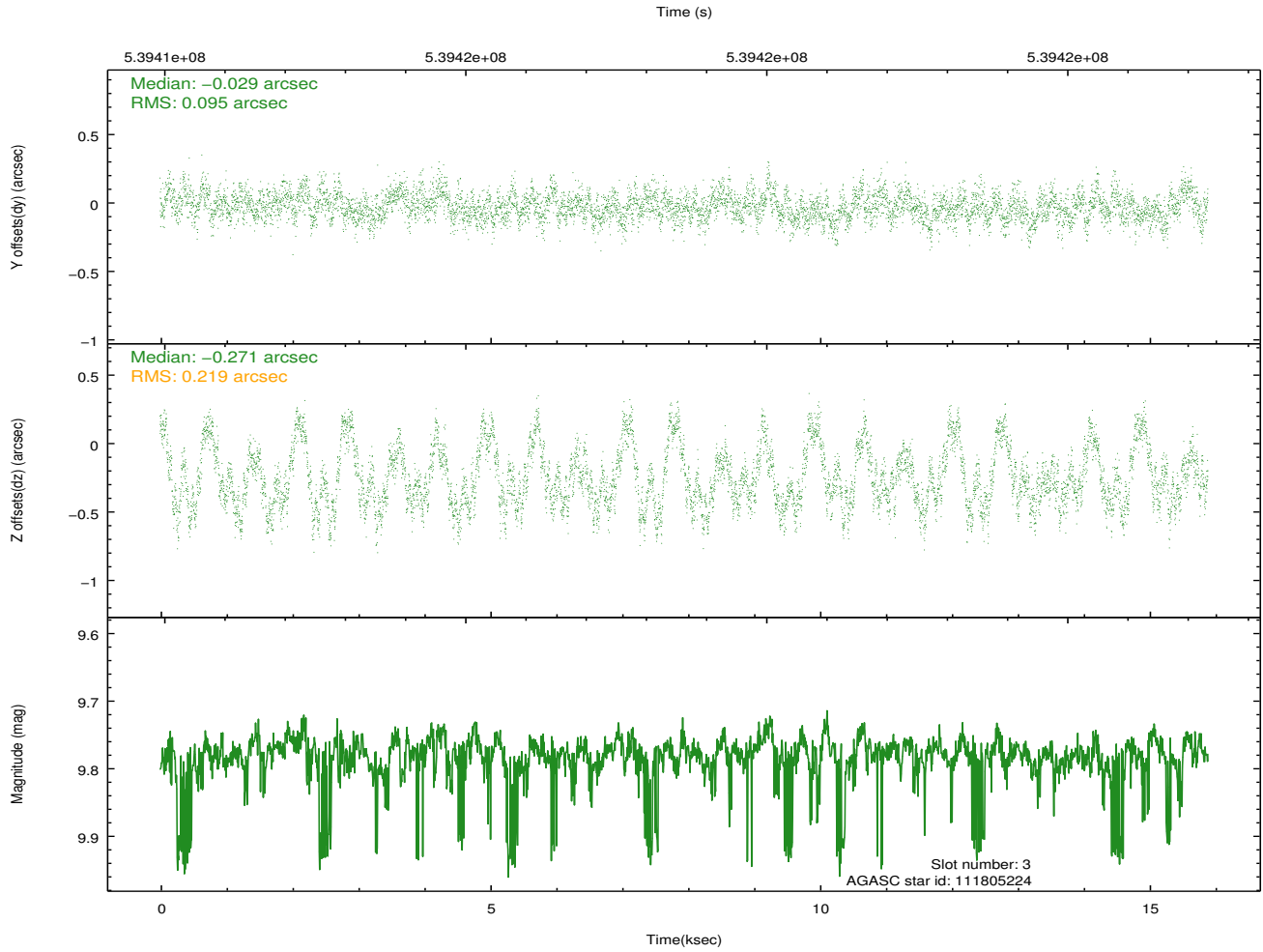
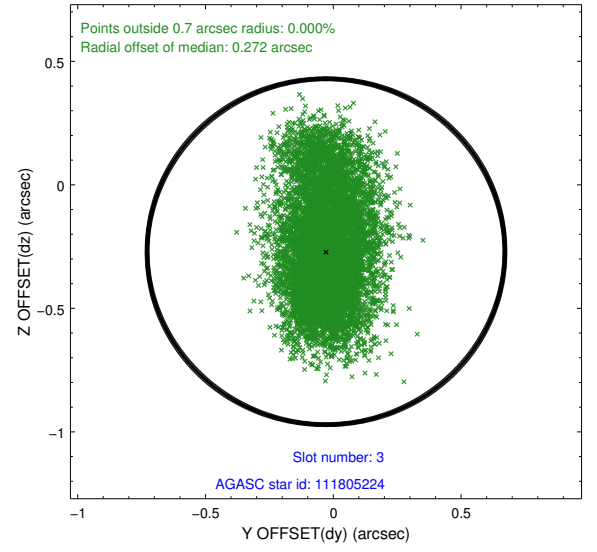
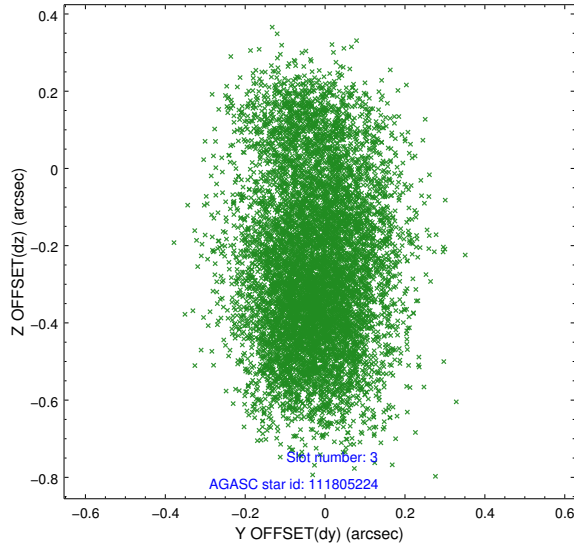


Slot Statistics

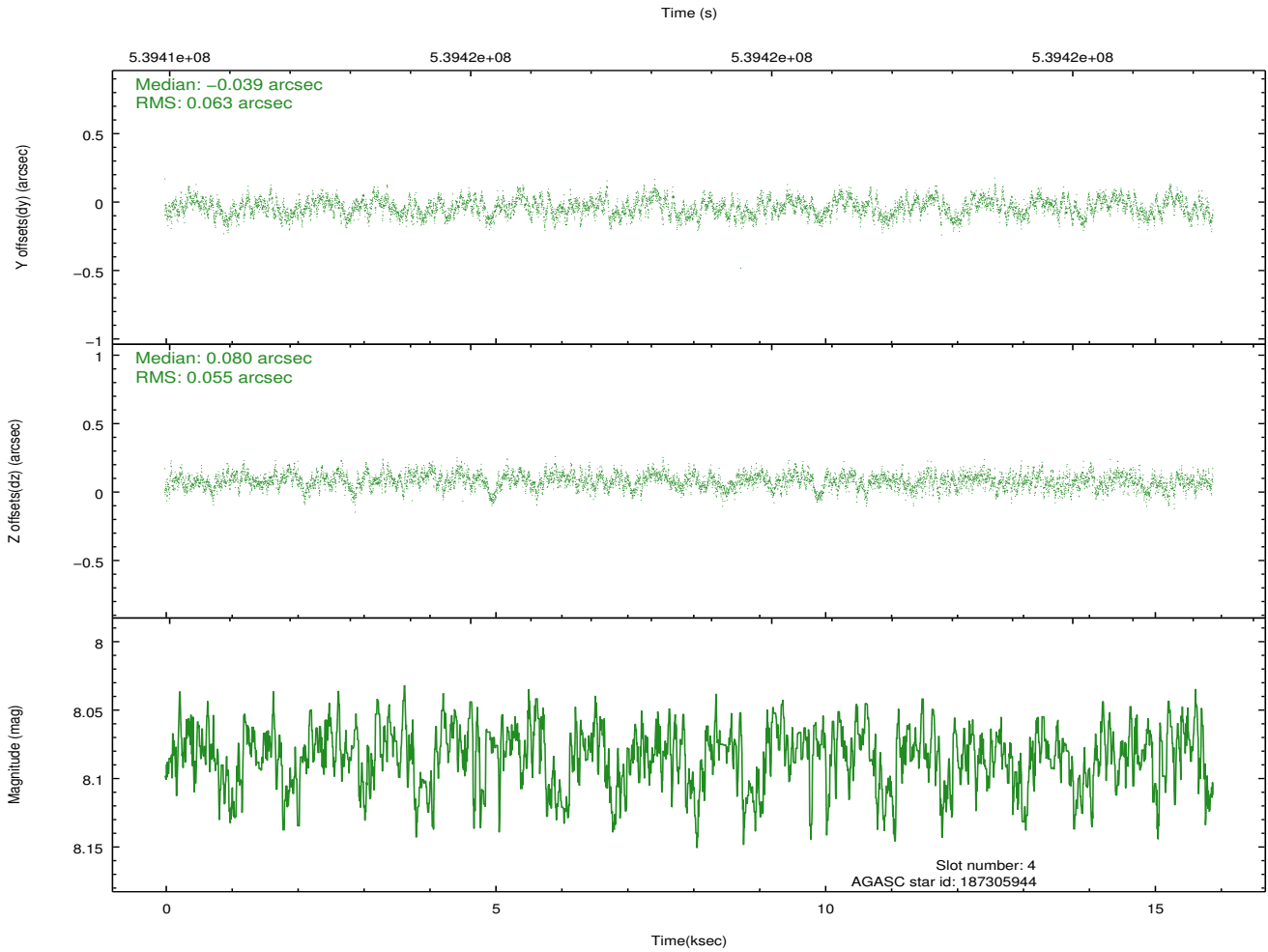
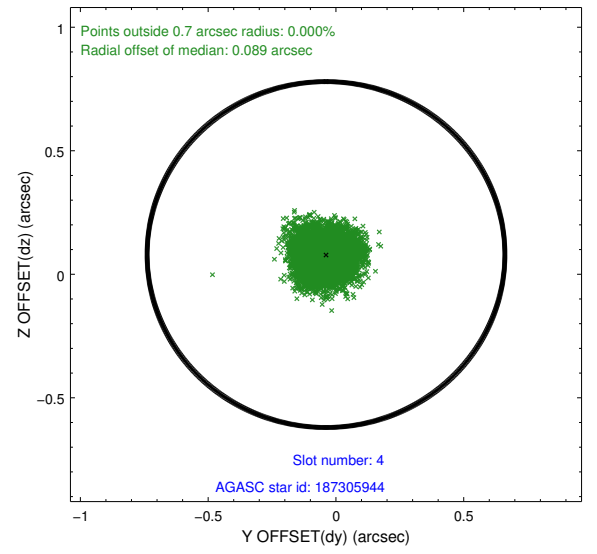
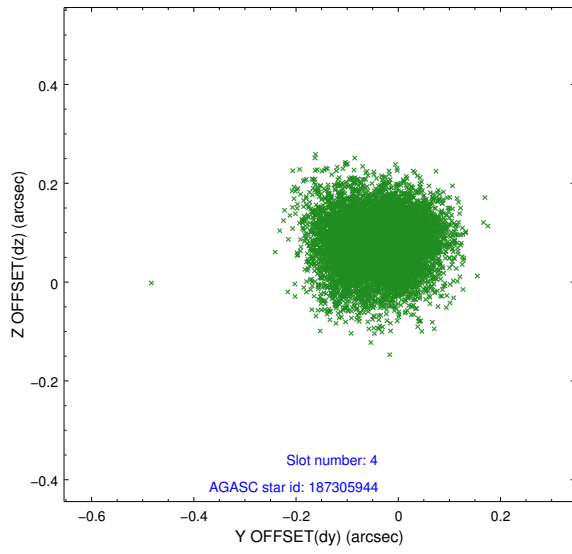
| lot | status | used | id        | mag  | n_pts | med_dy | med_dz | drl   | dr2   | ra         | dec       | mean_y   | mean_x   |
|-----|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0   | FID    |      | ACIS-S-2  | 7.11 | 3877  | -0.157 | -0.131 | 0.007 | 0.012 | 0.000000   | 0.000000  | -774.16  | -1740.02 |
| 1   | FID    |      | ACIS-S-4  | 7.21 | 3877  | 0.394  | 0.111  | 0.009 | 0.017 | 0.000000   | 0.000000  | 2139.57  | 168.38   |
| 2   | FID    |      | ACIS-S-5  | 7.21 | 3877  | -0.269 | 0.029  | 0.011 | 0.017 | 0.000000   | 0.000000  | -1826.74 | 162.33   |
| 3   | GUIDE  | used | 111805224 | 9.78 | 7748  | -0.029 | -0.271 | 0.251 | 0.433 | 163.661817 | 14.985576 | -1307.92 | 981.96   |
| 4   | GUIDE  | used | 187305944 | 8.08 | 7751  | -0.039 | 0.080  | 0.091 | 0.141 | 164.407625 | 15.761243 | 1744.24  | -1291.43 |
| 5   | GUIDE  | used | 187307000 | 8.46 | 7752  | -0.286 | -0.175 | 0.122 | 0.206 | 163.691792 | 15.196891 | -540.46  | 958.43   |
| 6   | GUIDE  | used | 187310264 | 9.21 | 7745  | 0.007  | 0.146  | 0.158 | 0.270 | 164.542594 | 15.477316 | 779.96   | -1869.22 |
| 7   | BAD    | used | 187305256 | 9.92 | 7425  | 0.353  | 0.203  | 0.180 | 0.309 | 163.329770 | 15.067063 | -1137.12 | 2160.25  |

## 2.4 Star Slots

### 2.4.1 Slot 3

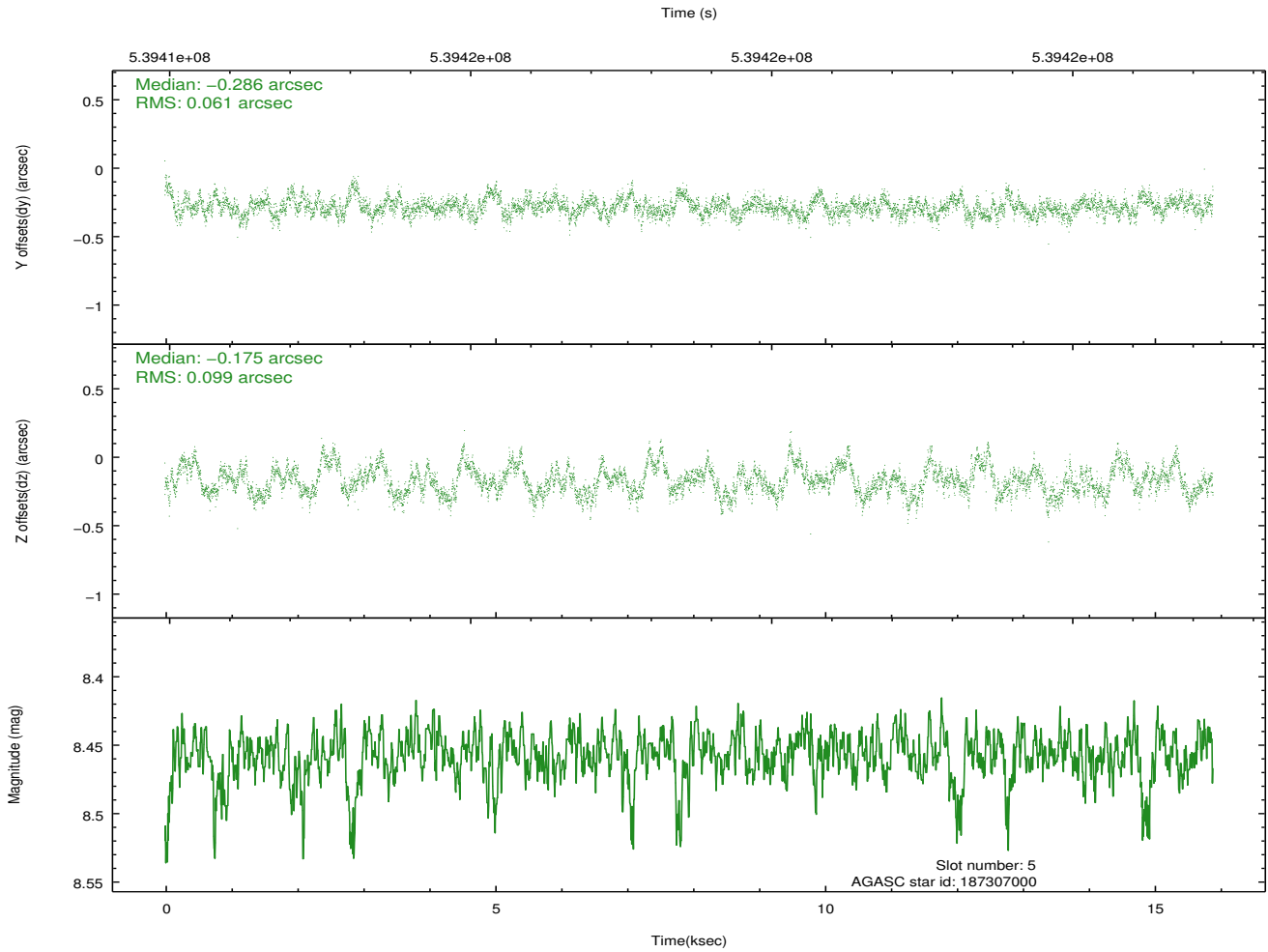
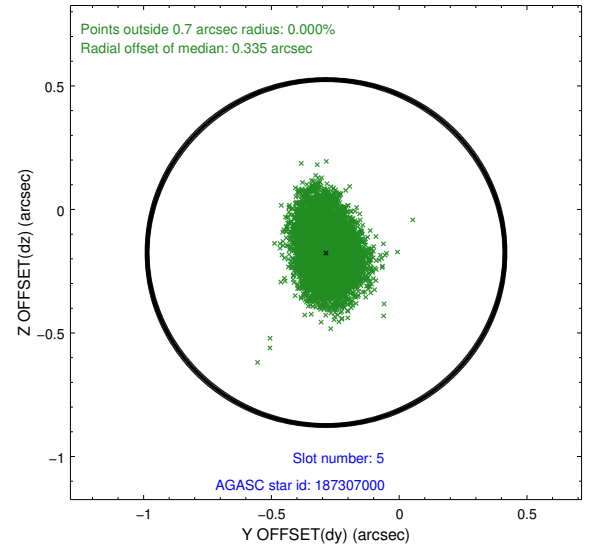
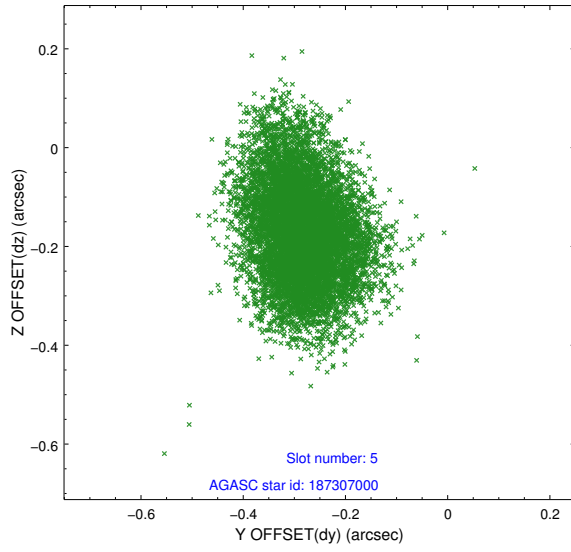


## 2.4.2 Slot 4

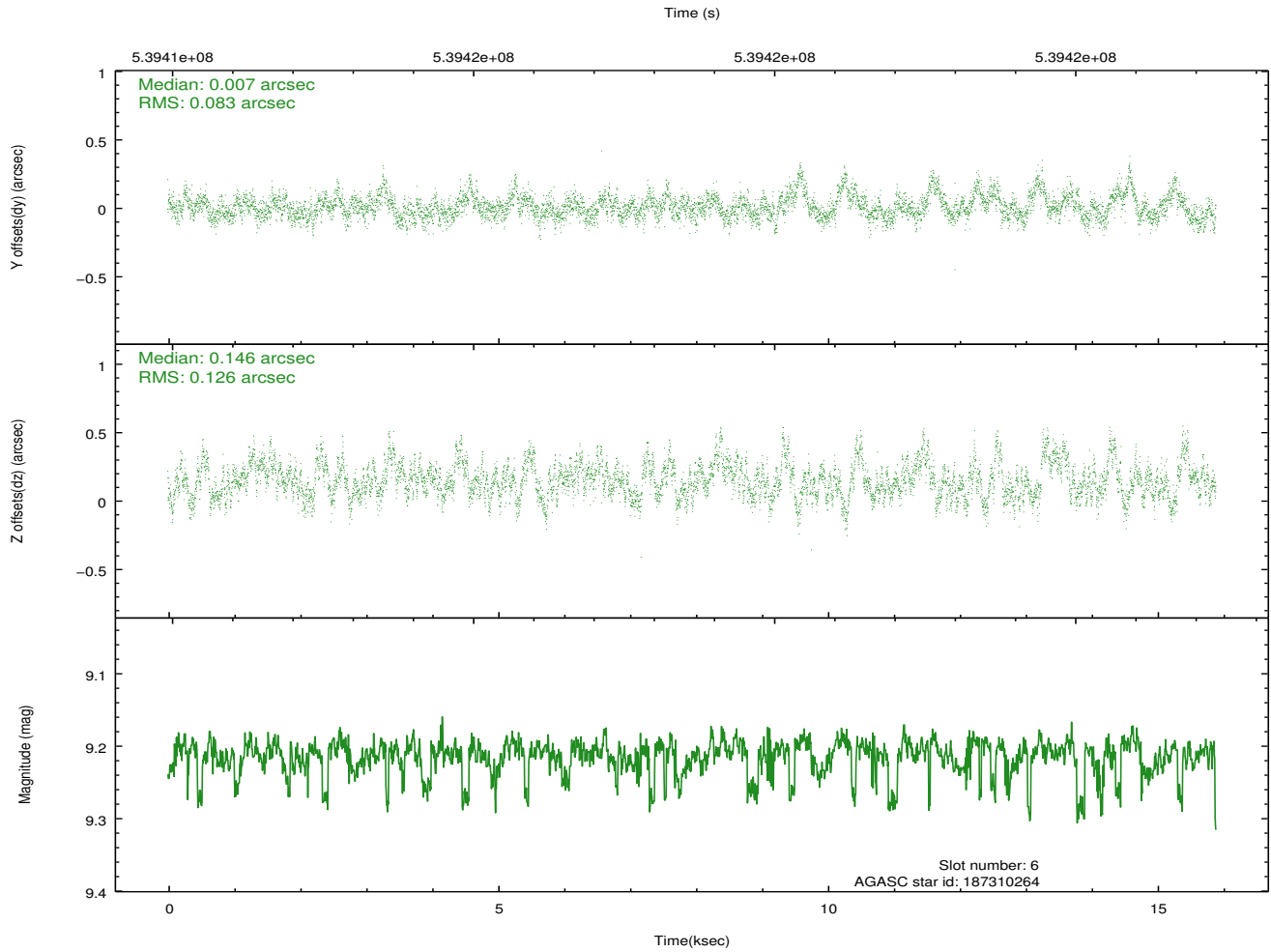
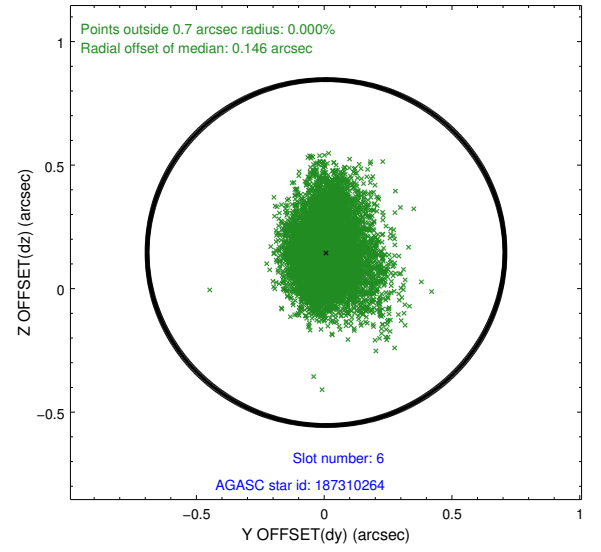
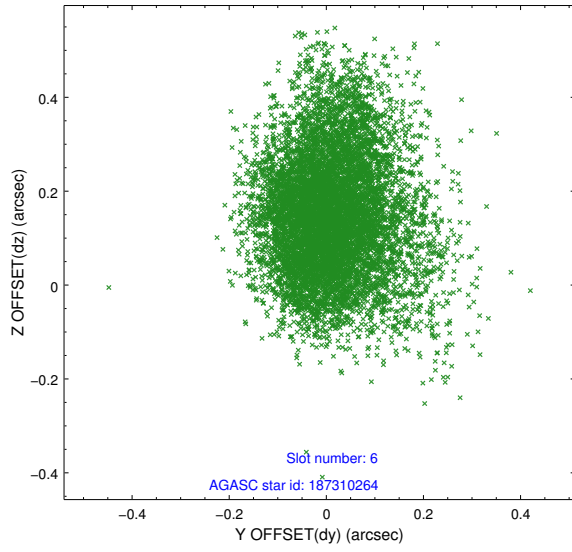




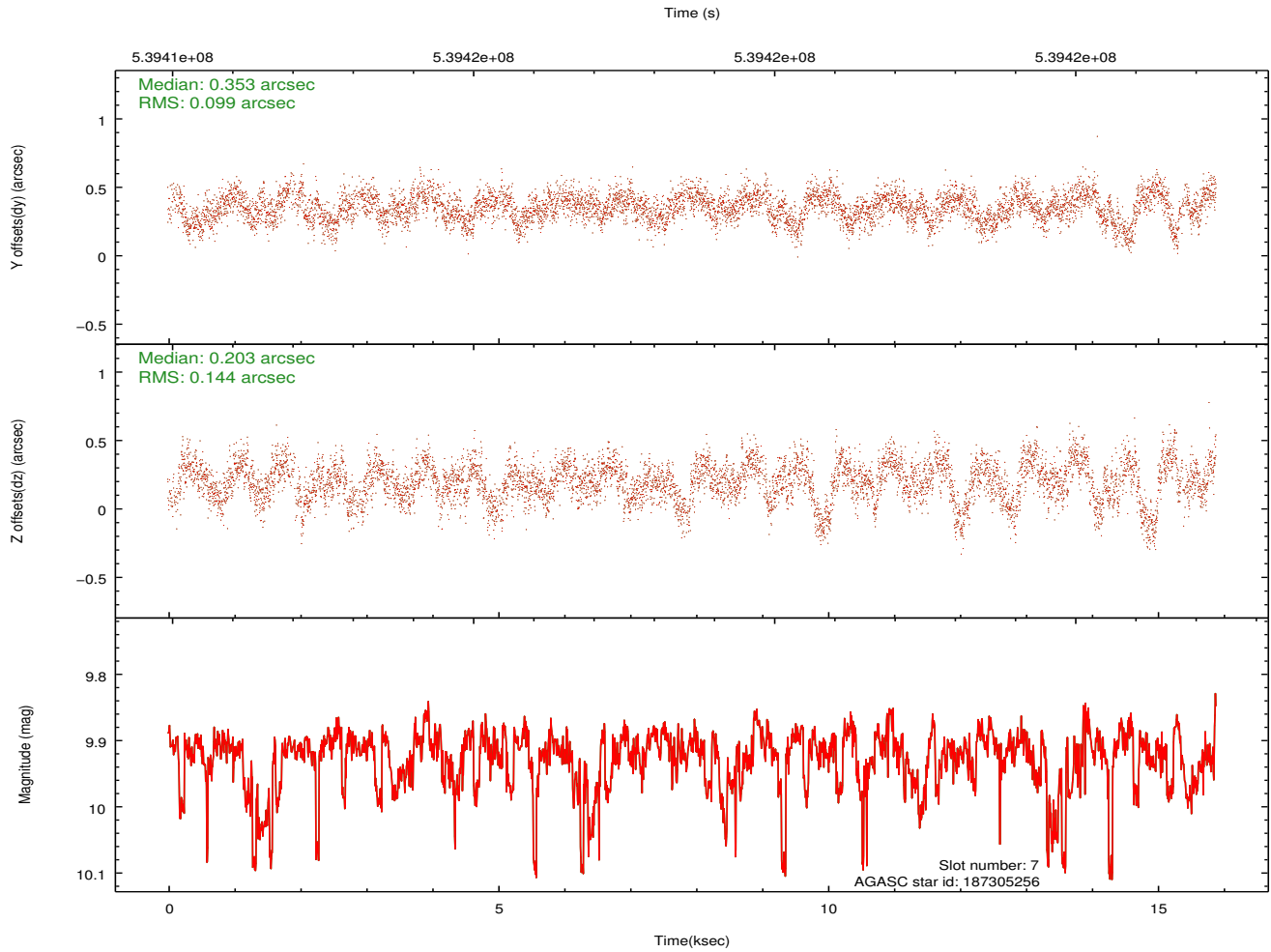
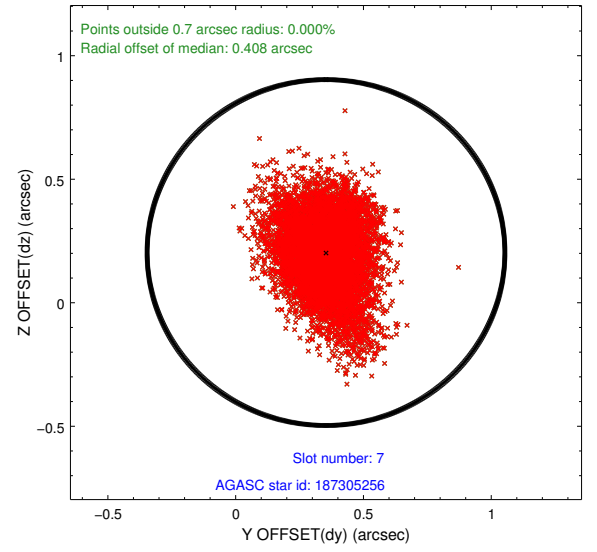
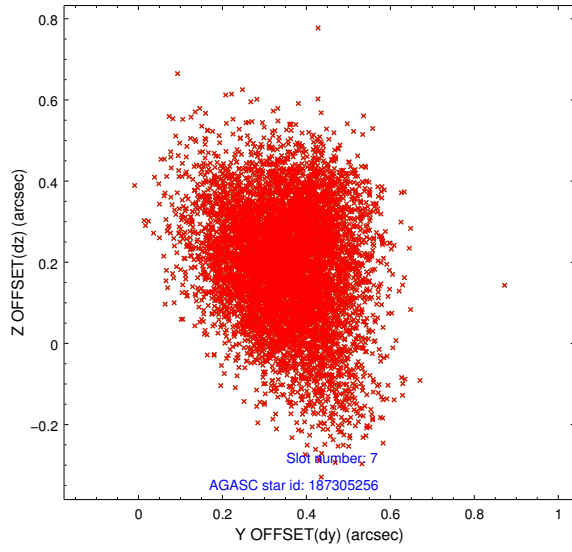
### 2.4.3 Slot 5



## 2.4.4 Slot 6

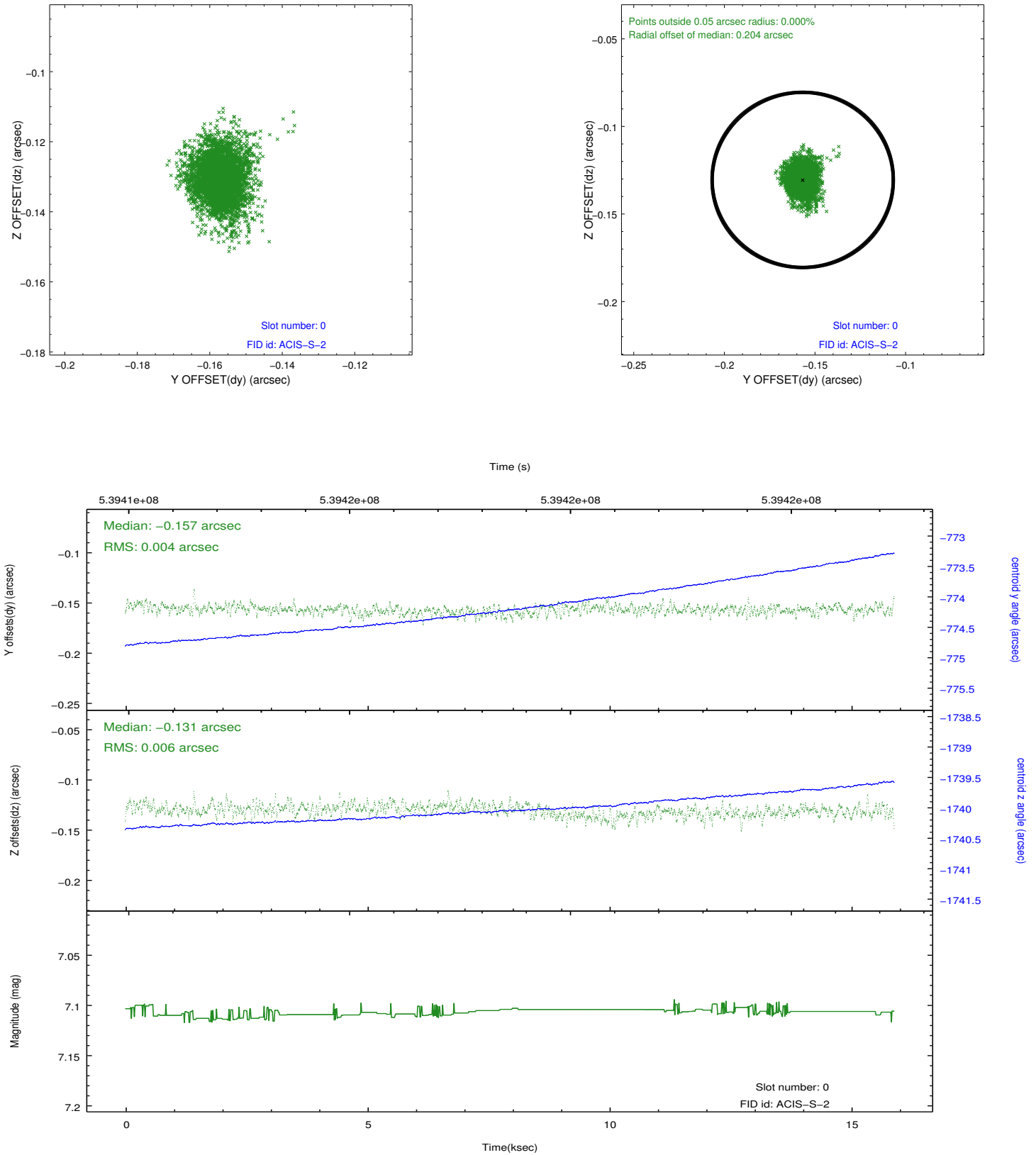


## 2.4.5 Slot 7

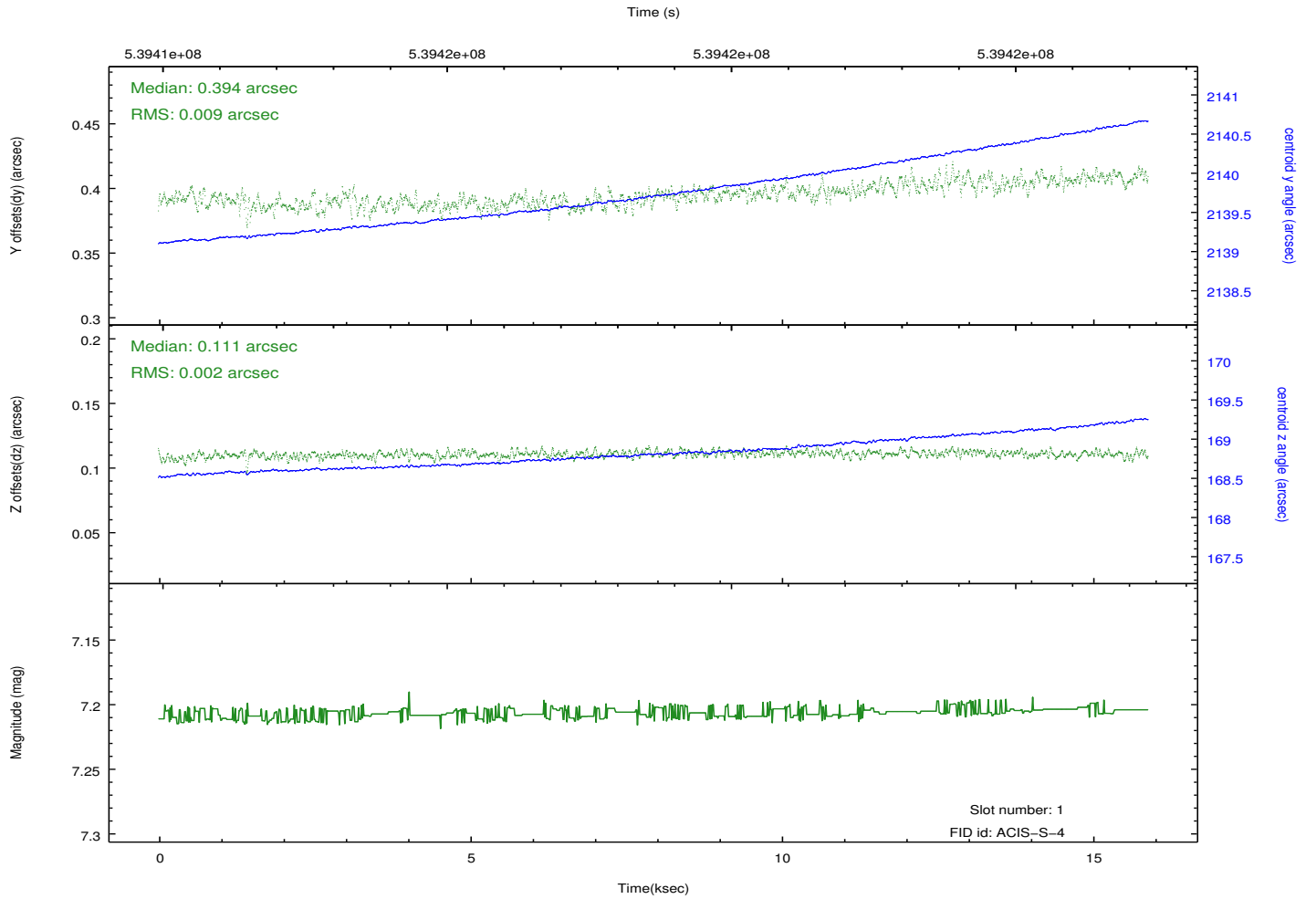
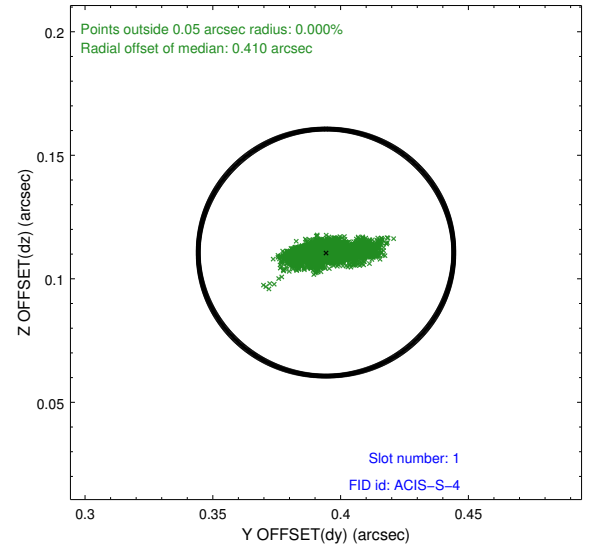
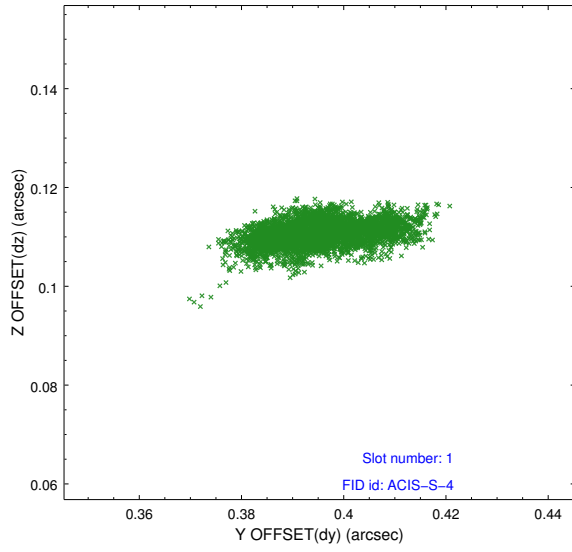


## 2.5 FID Slots

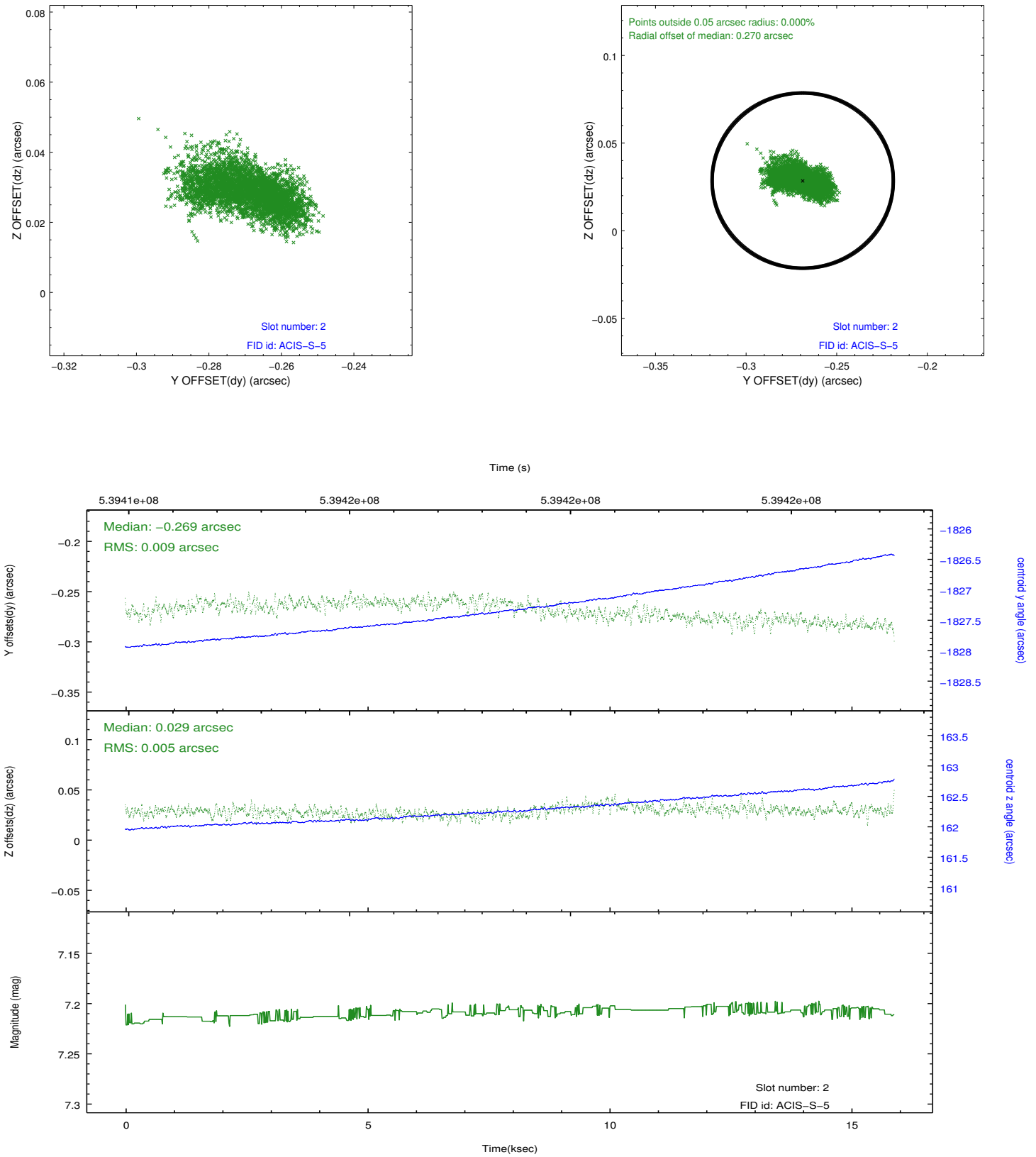
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



## A Summary

### A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Beth Sundheim   |
| V&V Date (YYYY-MM-DD)      | 2015.02.04      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 15.066000115991 |

### A.2 Comments

Joint proposal with HST.