

# V&V Reference Report

## L2 ASCDS Version : 10.6.4.1

Observation 20444 - L2 Version 1  
Chandra X-Ray Center

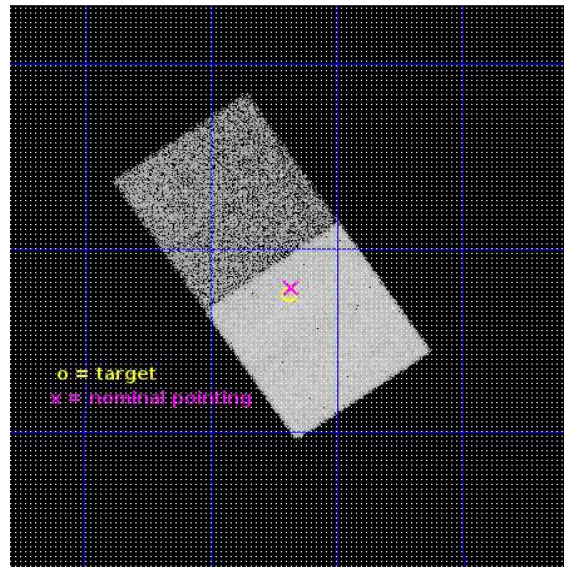
L2 Processing Date : Oct 1 2018

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# 1 Front

|          |                                                                                                                        |                                             |
|----------|------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| seq_num  | 703549                                                                                                                 | Sequence number                             |
| obs_id   | 20444                                                                                                                  | Observation id                              |
| title    | Do the outflow properties in the most luminous quasars correlate with X-ray radiative output and host dynamical state? | Proposal title                              |
| observer | Luca Zappacosta                                                                                                        | Principal investigator                      |
| object   | SDSS J0958+2827                                                                                                        | Source name                                 |
| dtcycle  | 0                                                                                                                      | &#160                                       |
| cycle    | P                                                                                                                      | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 149.671667                                                                                                             | Observer's specified target RA [deg]        |
| dec_targ | 28.458194                                                                                                              | Observer's specified target Dec [deg]       |
| ra_nom   | 149.67008889804                                                                                                        | Nominal RA [deg]                            |
| dec_nom  | 28.46432439023                                                                                                         | Nominal Dec [deg]                           |
| roll_nom | 55.657383885639                                                                                                        | Nominal Roll [deg]                          |
| revision | 1                                                                                                                      | Processing version of data                  |
| ontime   | 30078.0                                                                                                                | Sum of GTIs [s]                             |
| livetime | 29672.085865362                                                                                                        | Livetime [s]                                |
| ontime6  | 30071.918049216                                                                                                        | Sum of GTIs [s]                             |
| ontime7  | 30078.0                                                                                                                | Sum of GTIs [s]                             |
| l2events | 143960                                                                                                                 | Number of level 2 events                    |

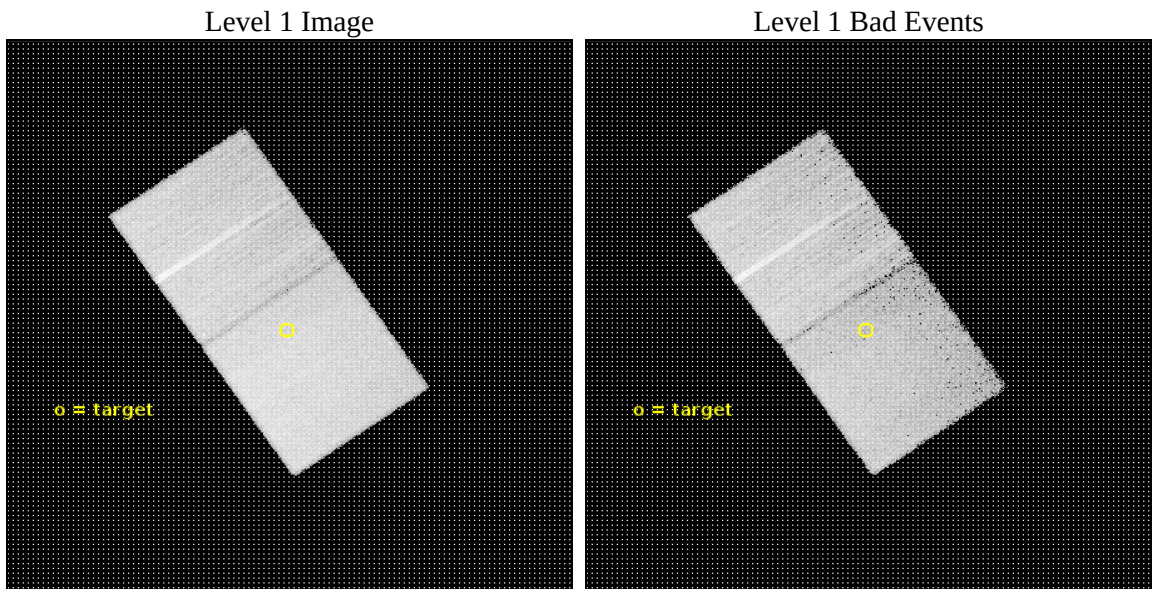




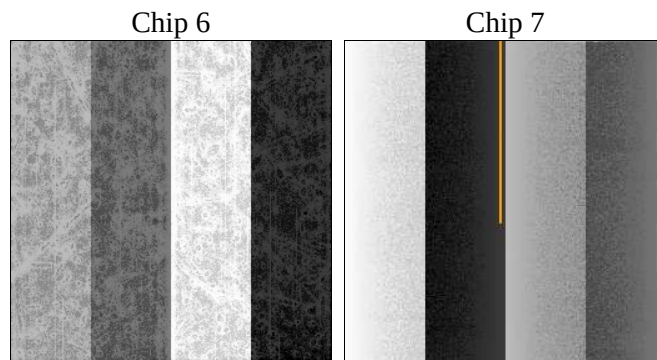
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |                                         |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 30000.000000    | [s] Scheduled observation exposure time |
| ascdsver | 10.6.4.1            | Processing system revision     | ontime         | 30078.0         | Sum of GTIs [s]                         |
| caldsver | 4.8.0               | &#160                          | ontime6        | 30071.918049216 | Sum of GTIs [s]                         |
| date     | 2018-10-01T13:44:58 | Date and time of file creation | ontime7        | 30078.0         | Sum of GTIs [s]                         |
| revision | 1                   | Processing version of data     | l1events       | 521275          | Number of level 1 events                |

### 2.1.4 Events

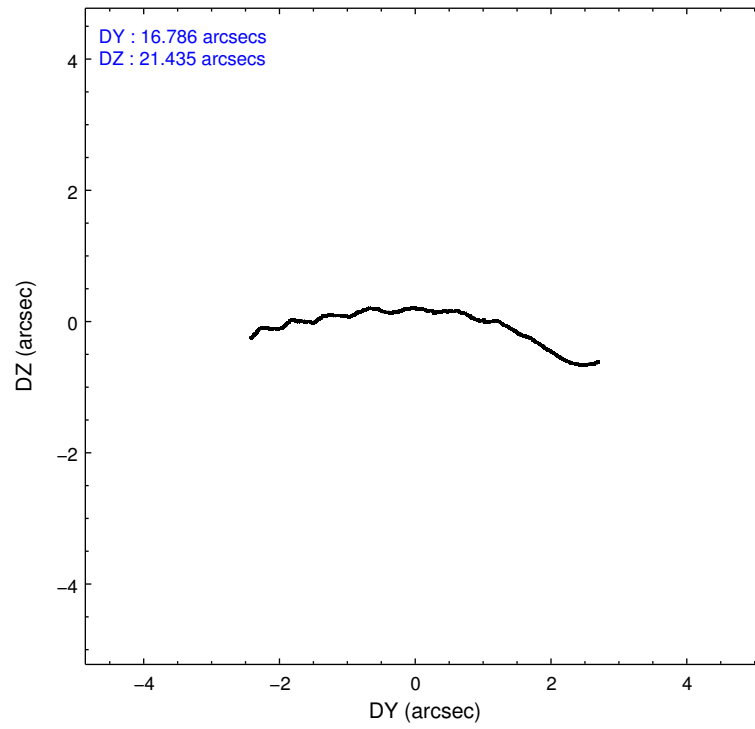
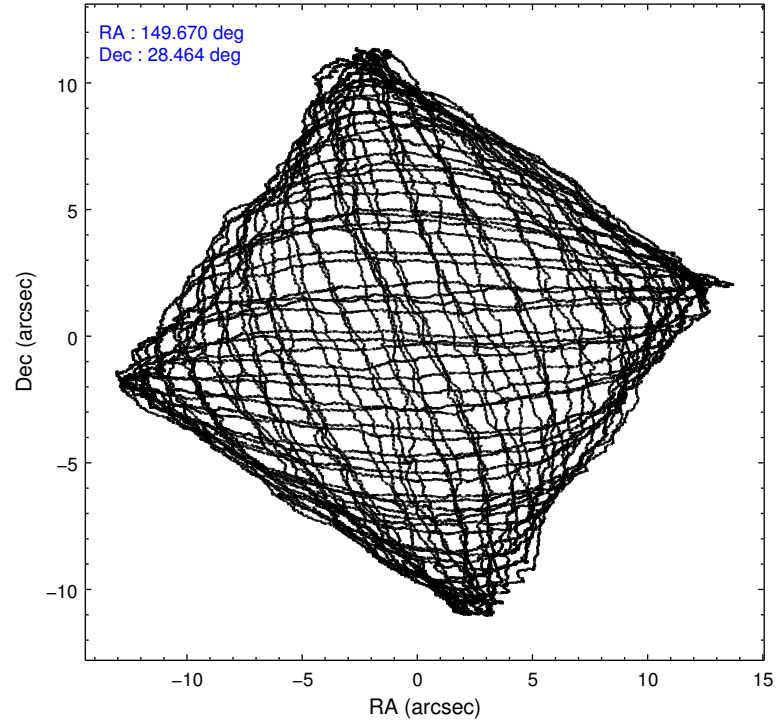
|                 | ccd 6  | ccd 7  |
|-----------------|--------|--------|
| level 1 events  | 234925 | 286350 |
| rejected events | 209201 | 161737 |
| rejected %      | 89%    | 56%    |

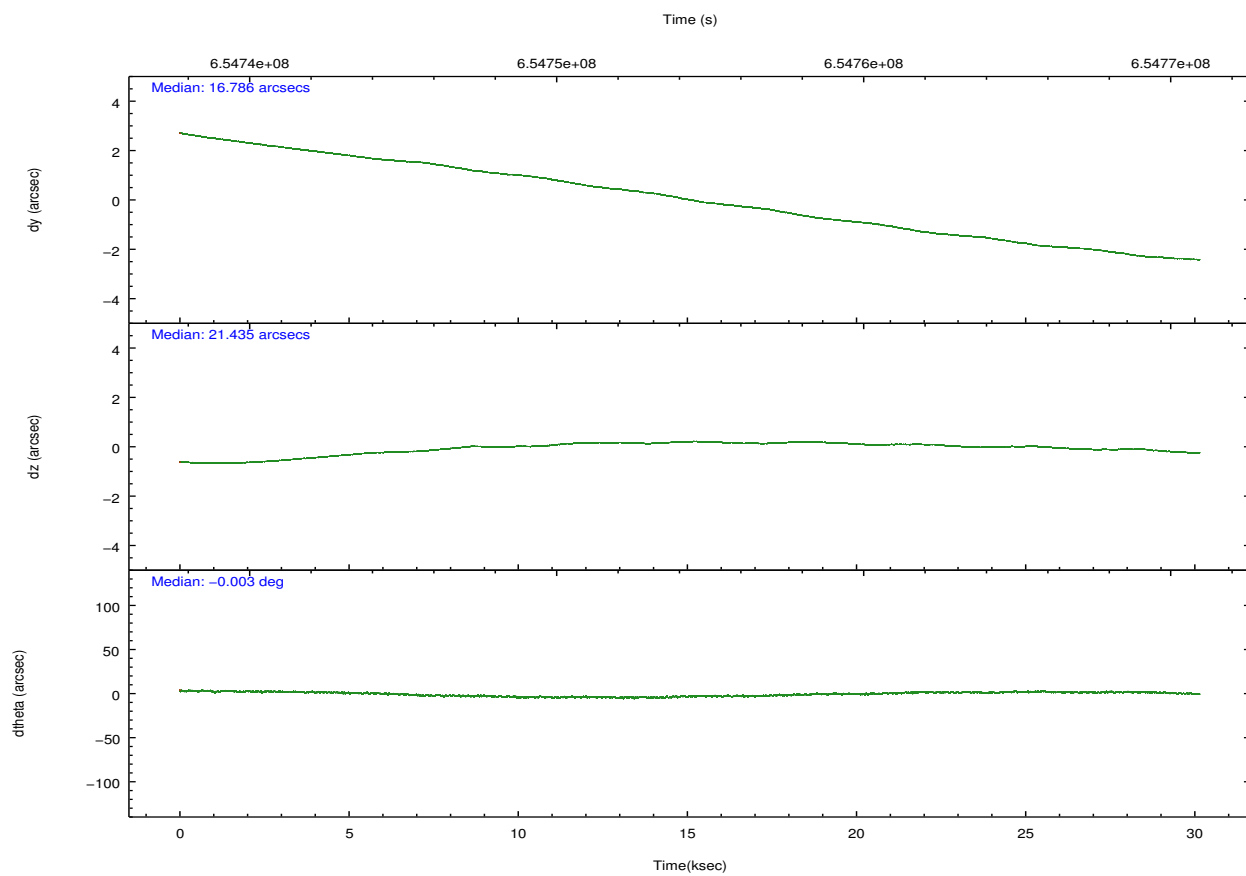
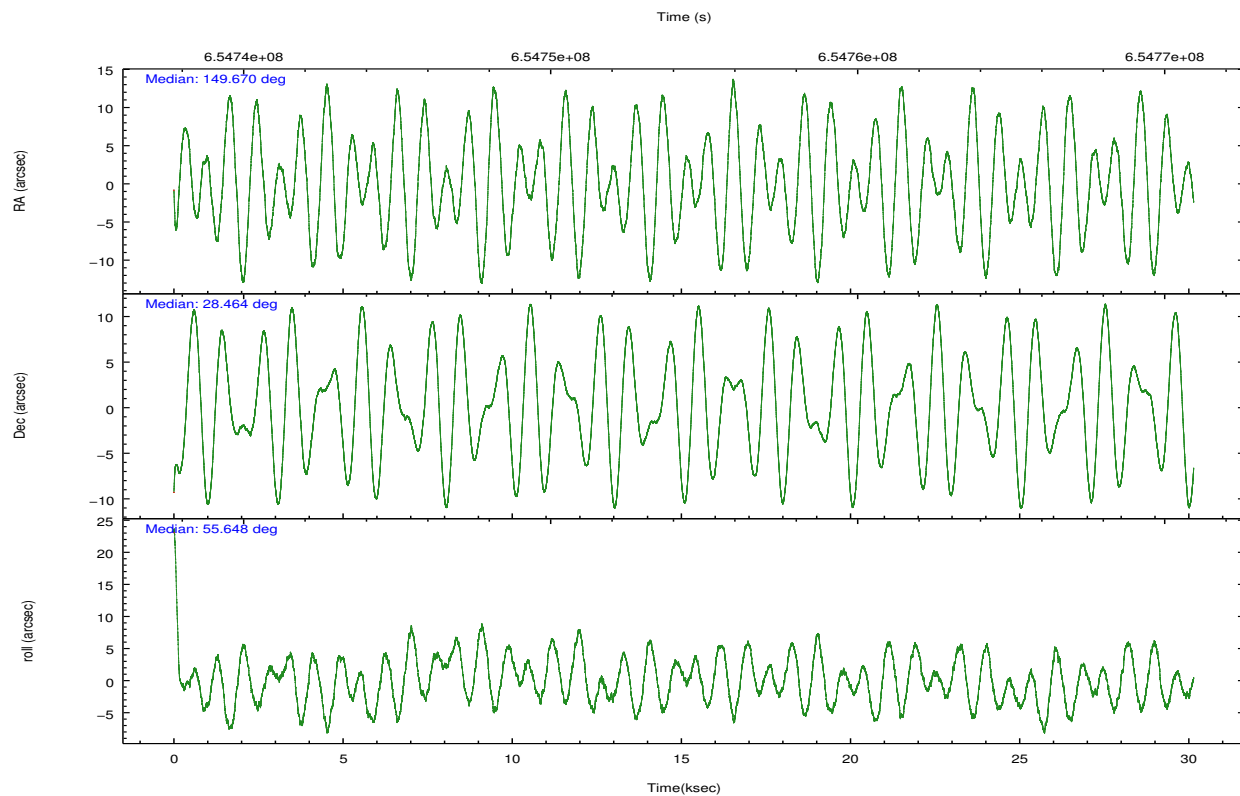
|                | ccd 6  | ccd 7  |
|----------------|--------|--------|
| grade 0 events | 8086   | 10403  |
|                | 3%     | 3%     |
| grade 1 events | 99     | 400    |
|                | 0%     | 0%     |
| grade 2 events | 6423   | 26636  |
|                | 2%     | 9%     |
| grade 3 events | 2387   | 9626   |
|                | 1%     | 3%     |
| grade 4 events | 2336   | 9389   |
|                | 0%     | 3%     |
| grade 5 events | 10200  | 27976  |
|                | 4%     | 9%     |
| grade 6 events | 6499   | 68582  |
|                | 2%     | 23%    |
| grade 7 events | 198895 | 133338 |
|                | 84%    | 46%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-67             | ACIS-67              | 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                 | 149.668121          | 149.6700888980436    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 28.436955           | 28.46432439022965    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 55.501686           | 55.6573838856393     | [s] Primary exposure time             | 0.000000  | 3       |
| [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)  | 654739408.184000    | 654738079.93387      |                                       |           |         |
| Observation start date            | 2018-10-01T00:02:19 | 2018-09-30T23:41:19  |                                       |           |         |
| [s] Observation end time (MET)    | 654769408.184000    | 654770539.1233       |                                       |           |         |
| Observation end date              | 2018-10-01T08:22:19 | 2018-10-01T08:42:19  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



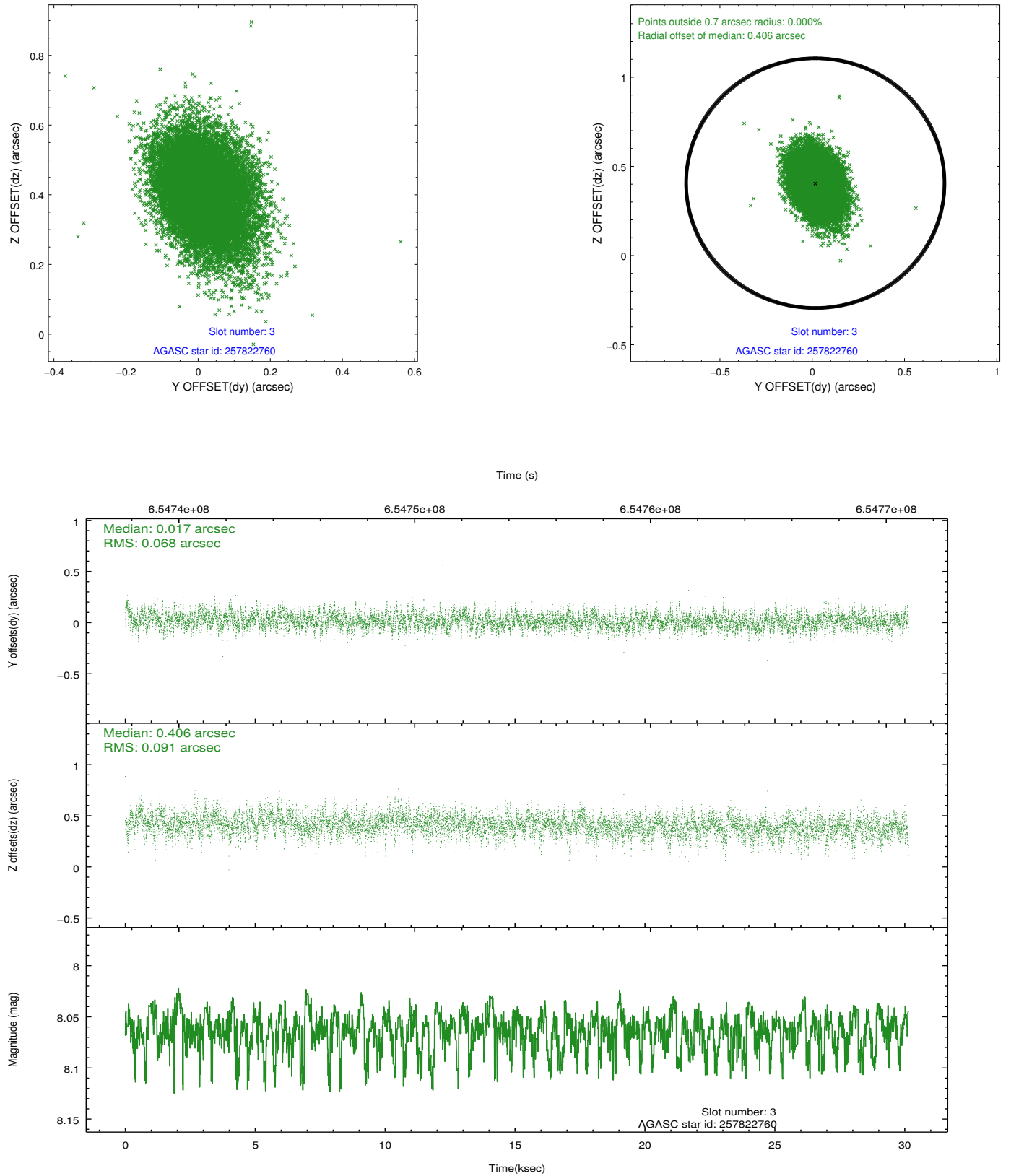


# Slot Statistics

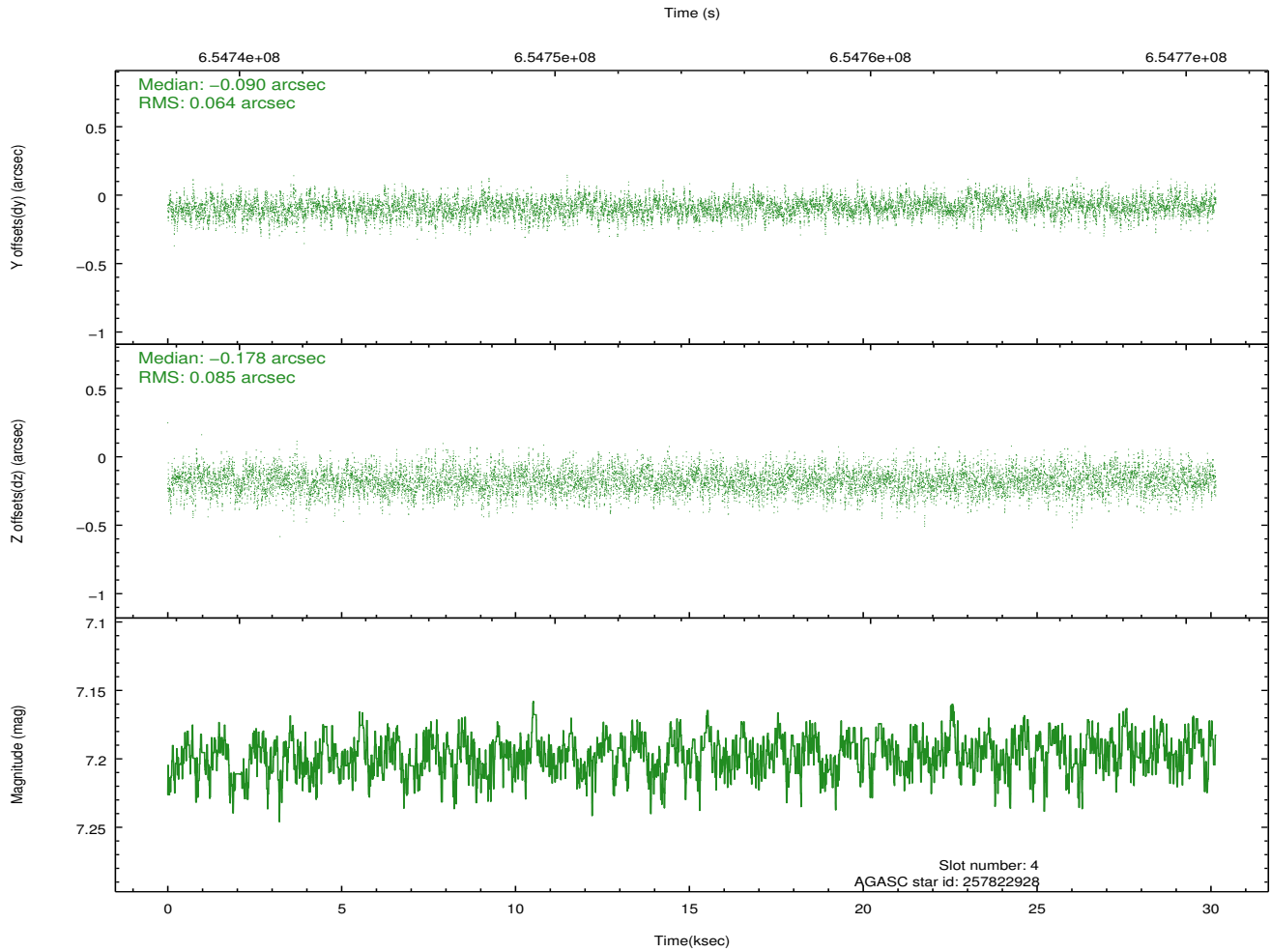
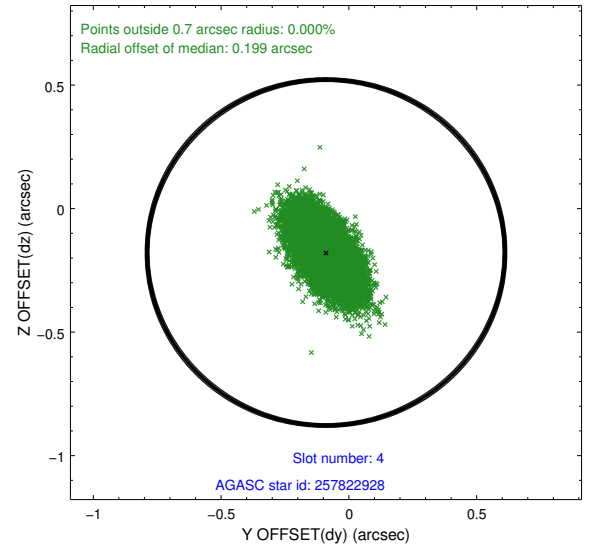
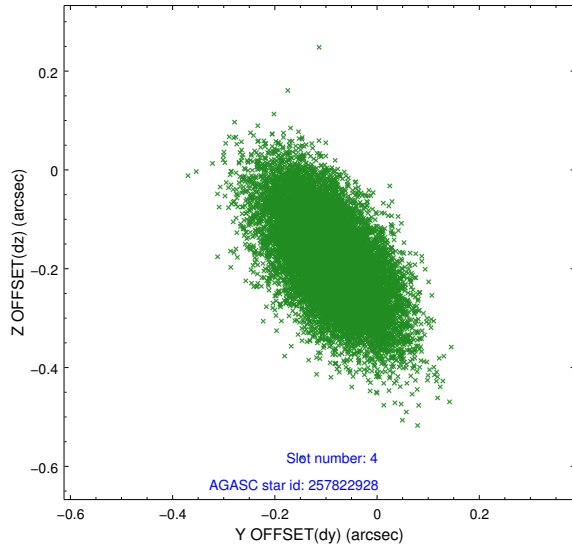
| pt | status | used | id        | mag  | n_pts | frac_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mea   |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0  | FID    |      | ACIS-S-1  | 7.17 | 7352  | 1.000    | 0.198  | 0.015  | 0.026 | 0.047 | 0.000000   | 0.000000  | 926.33   | -1738 |
| 1  | FID    |      | ACIS-S-2  | 7.09 | 7351  | 1.000    | -0.262 | -0.110 | 0.039 | 0.065 | 0.000000   | 0.000000  | -770.02  | -1743 |
| 2  | FID    |      | ACIS-S-6  | 7.35 | 7351  | 1.000    | 0.046  | 0.099  | 0.027 | 0.046 | 0.000000   | 0.000000  | 391.90   | 802   |
| 3  | GUIDE  | used | 257822760 | 8.06 | 14699 | 1.000    | 0.017  | 0.406  | 0.117 | 0.202 | 150.166199 | 28.173652 | 114.76   | -1837 |
| 4  | GUIDE  | used | 257822928 | 7.20 | 14698 | 1.000    | -0.090 | -0.178 | 0.109 | 0.195 | 149.311326 | 28.561285 | -268.80  | 1184  |
| 5  | GUIDE  | used | 257823520 | 8.37 | 14690 | 1.000    | 0.004  | 0.347  | 0.149 | 0.257 | 150.413966 | 28.521916 | 1595.24  | -1765 |
| 6  | GUIDE  | used | 257825600 | 7.85 | 14702 | 1.000    | 0.219  | 0.032  | 0.125 | 0.210 | 149.230872 | 28.096317 | -1795.44 | 450   |
| 7  | GUIDE  | used | 257828304 | 8.59 | 14695 | 1.000    | -0.152 | -0.610 | 0.142 | 0.239 | 149.365873 | 29.172027 | 1643.23  | 2282  |

## 2.4 Star Slots

### 2.4.1 Slot 3

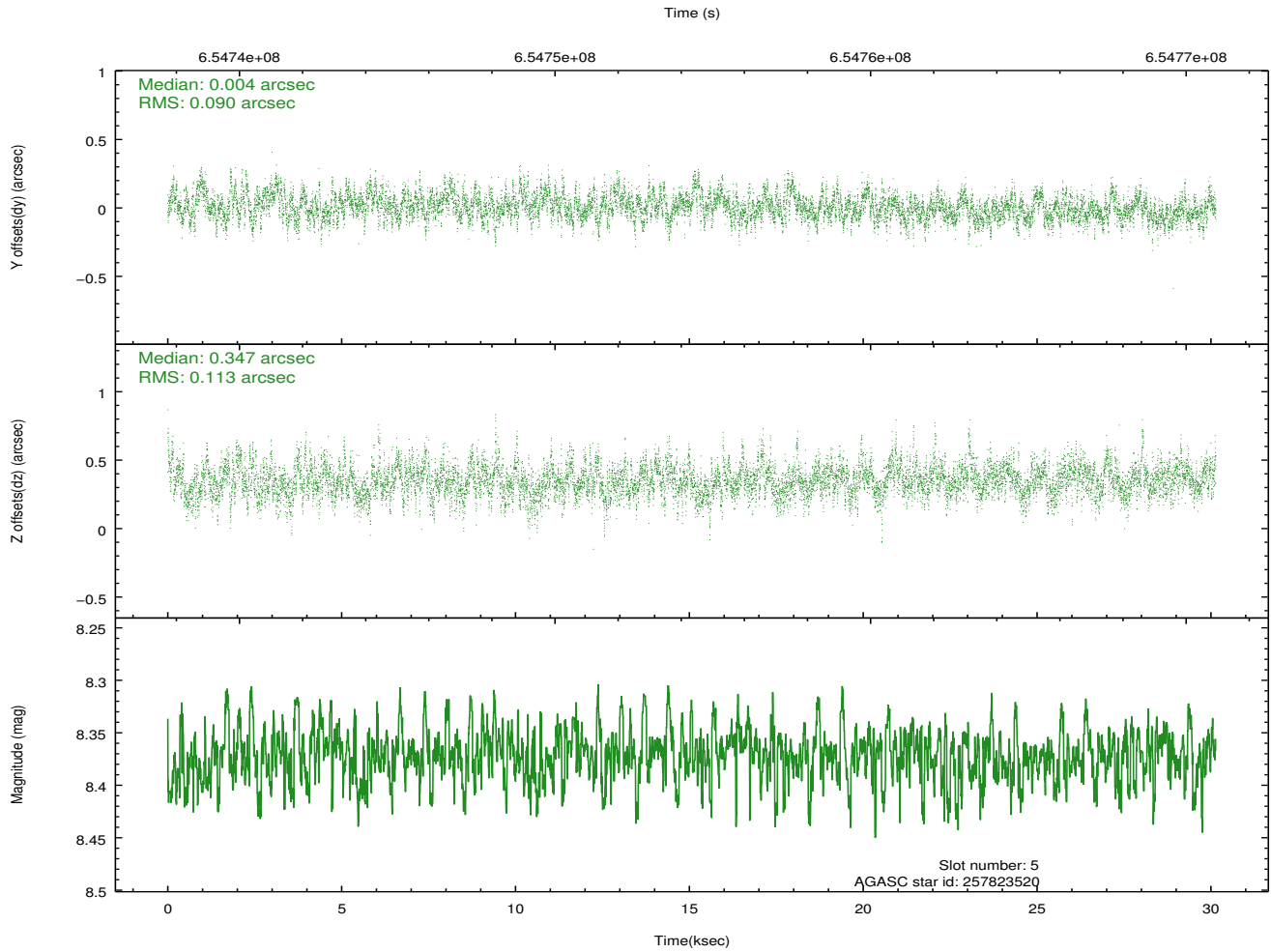
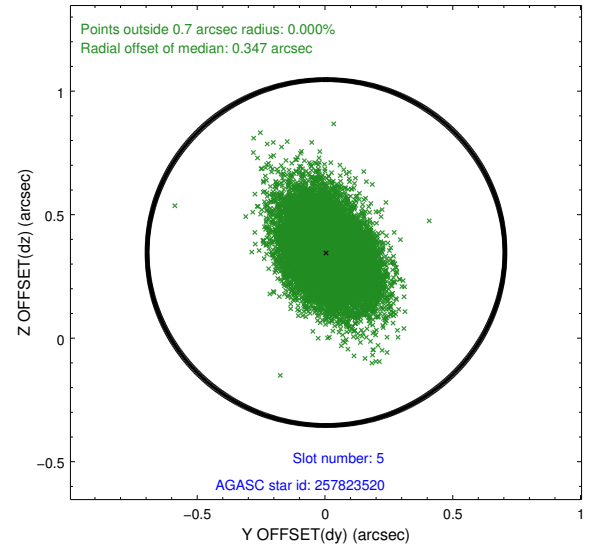
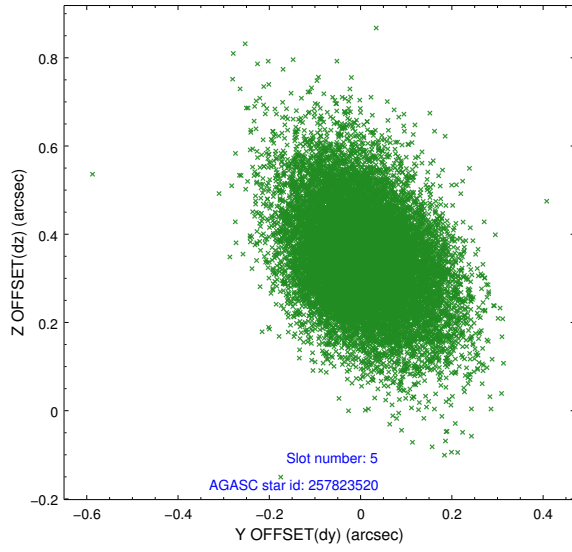


## 2.4.2 Slot 4

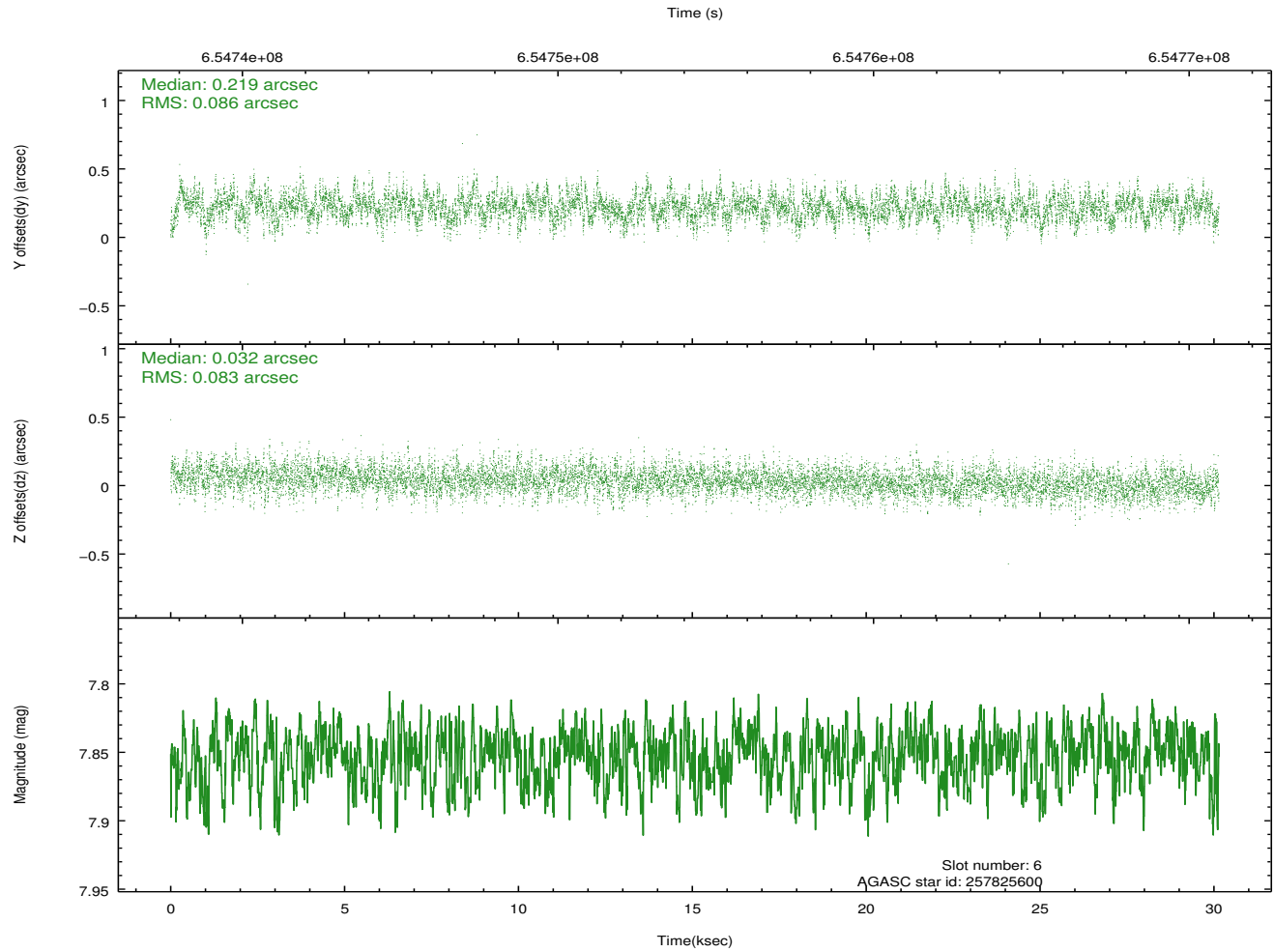
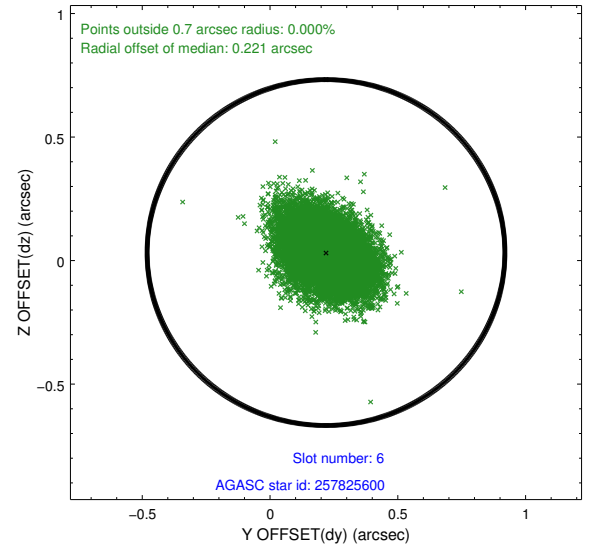
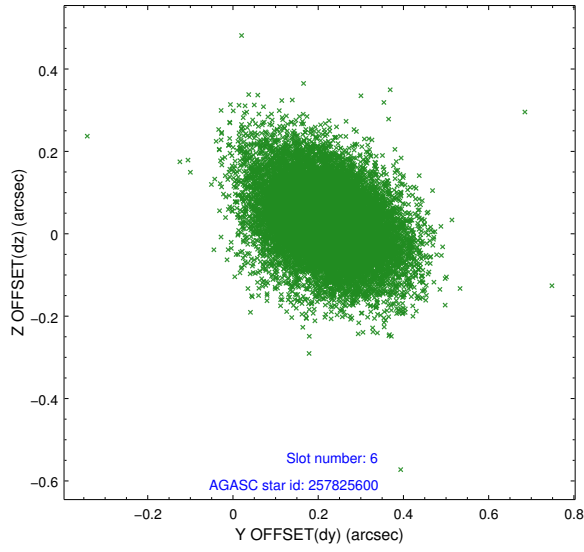




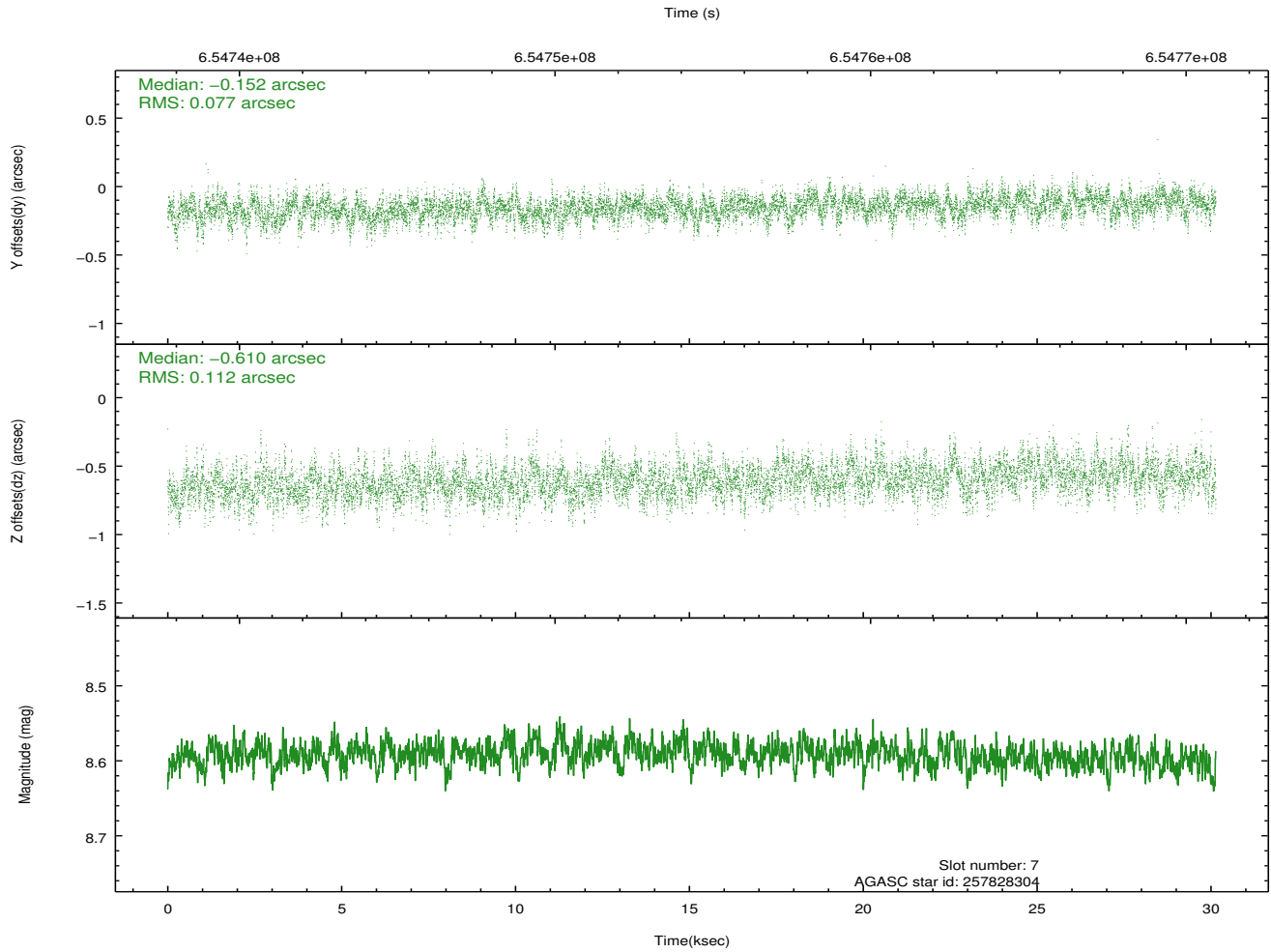
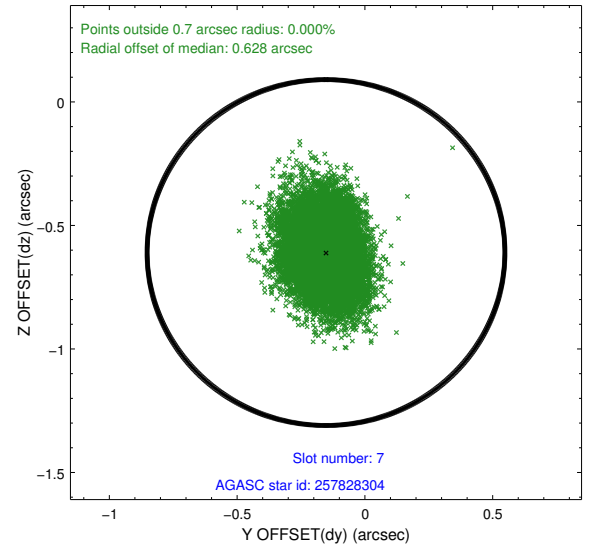
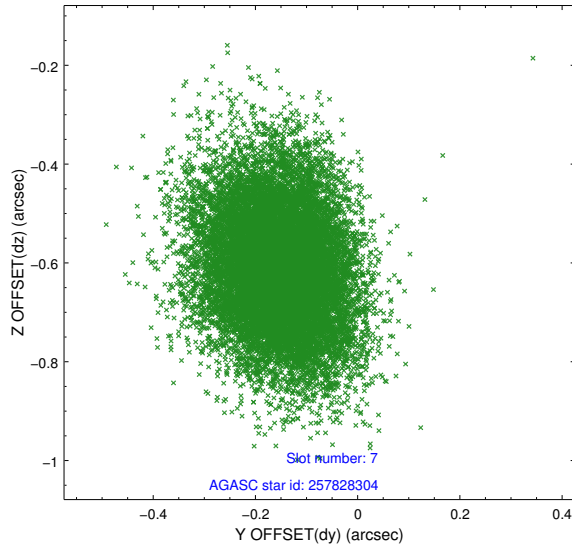
### 2.4.3 Slot 5



## 2.4.4 Slot 6

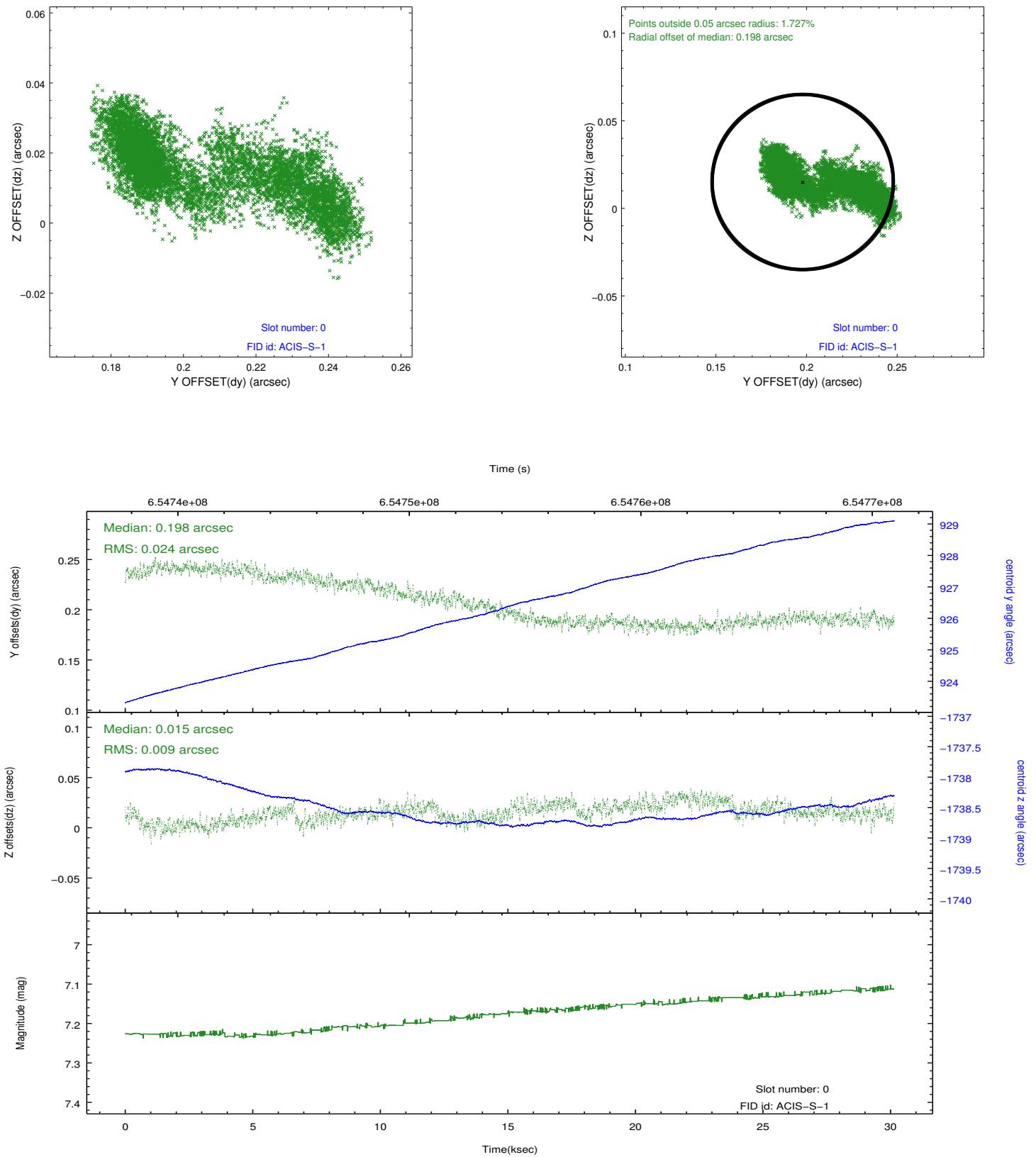


## 2.4.5 Slot 7

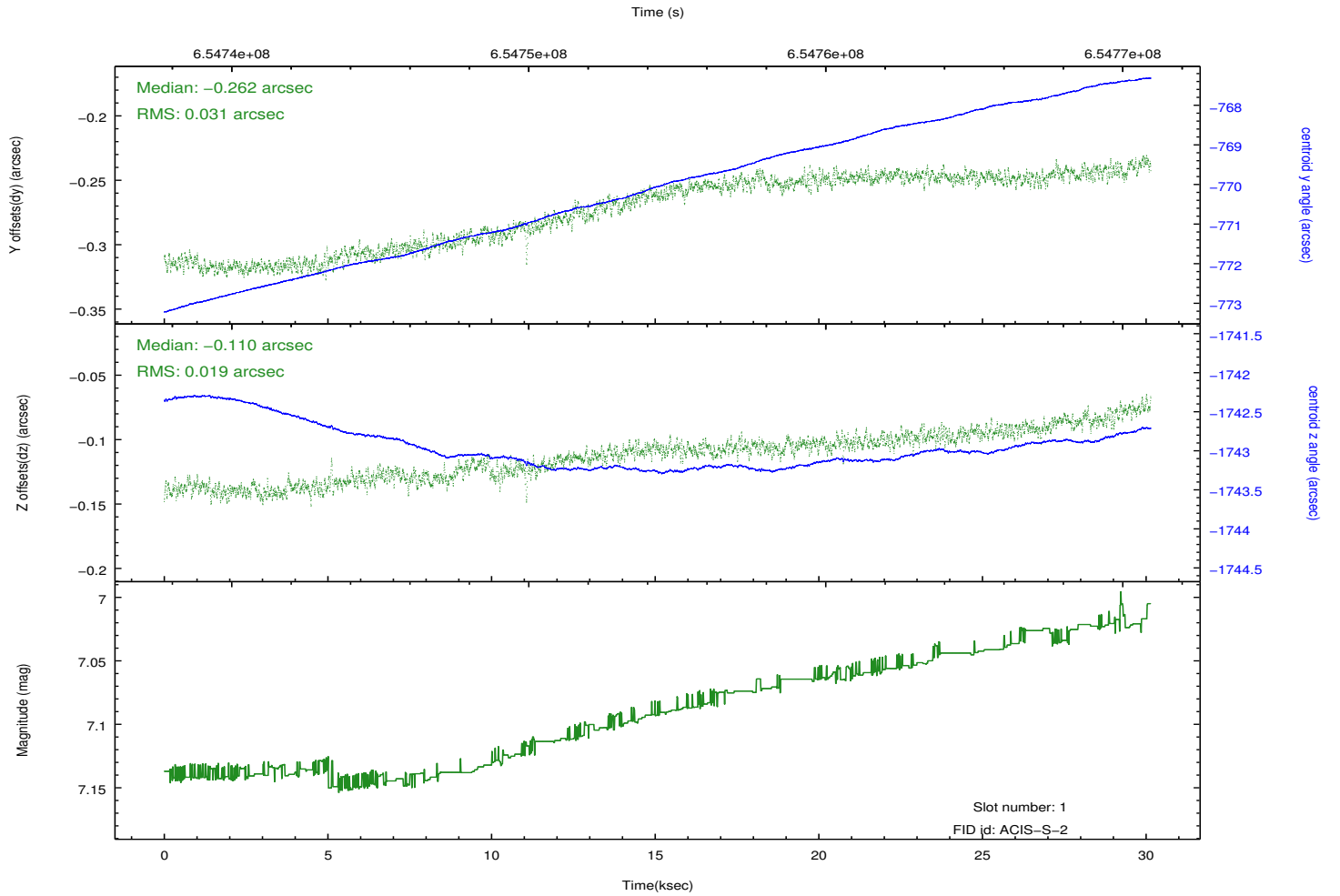
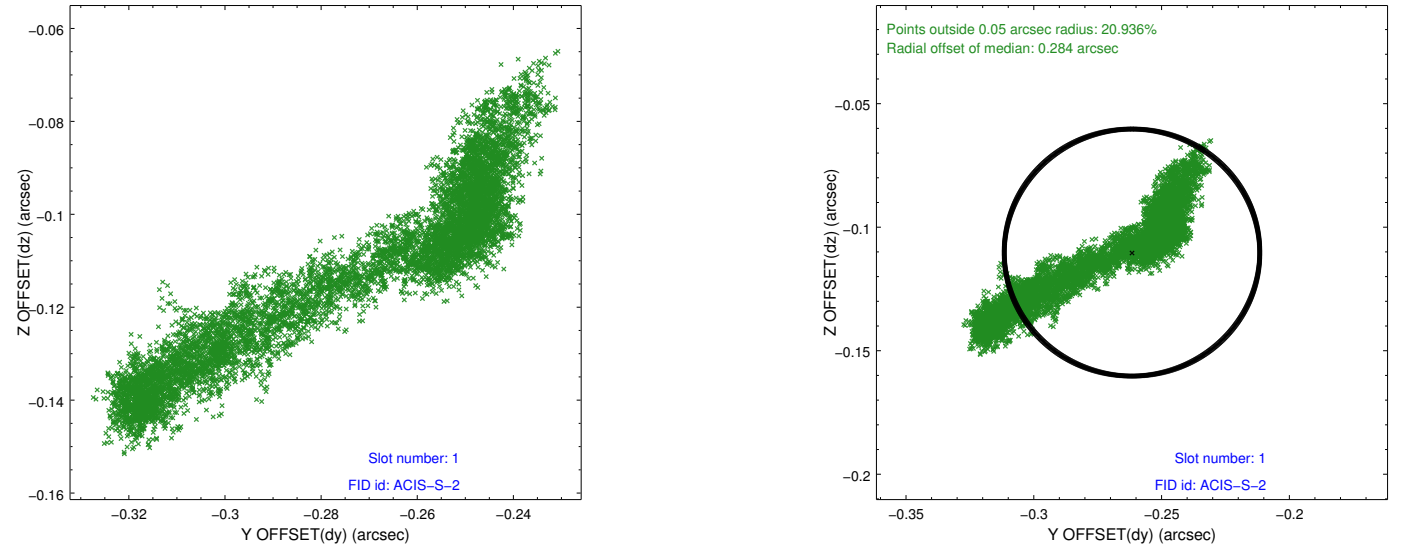


## 2.5 FID Slots

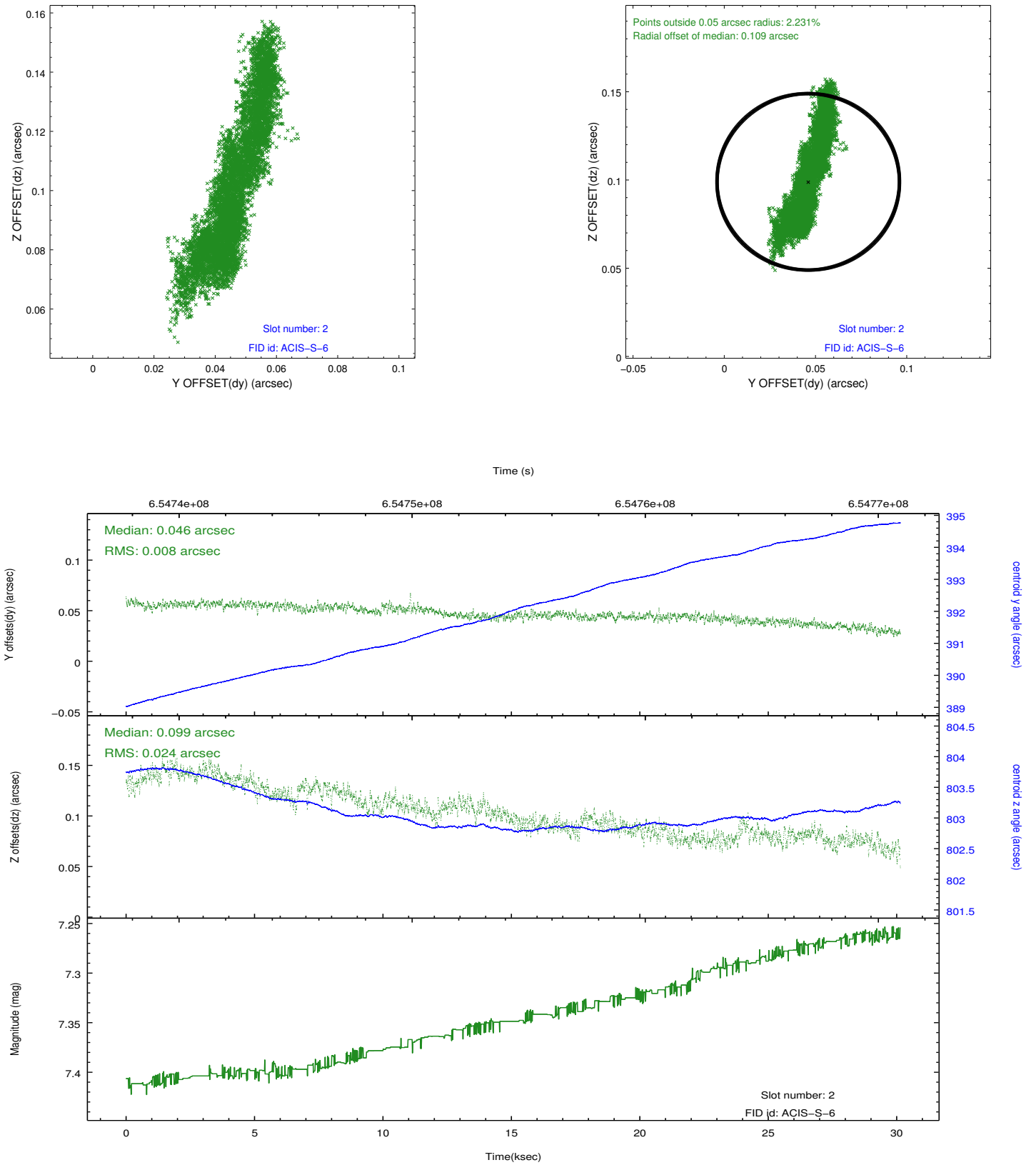
### 2.5.1 Slot 0



## 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)      | 2018.10.01 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 30.078     |

## A.2 Comments

Joint Proposal with HST