

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 3807 - L2 Version 3  
Chandra X-Ray Center

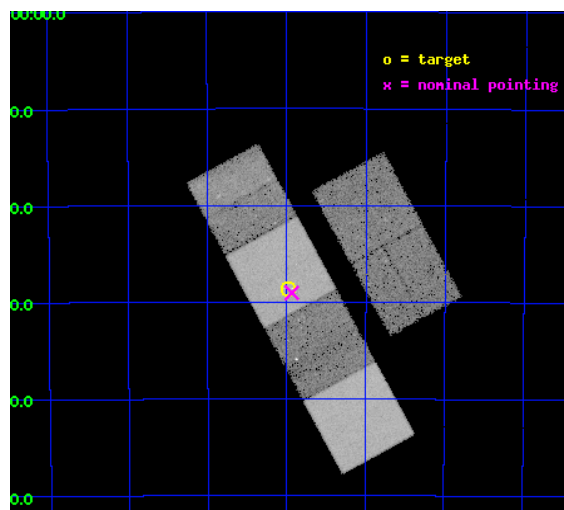
L2 Processing Date : Oct 14 2012

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# 1 Front

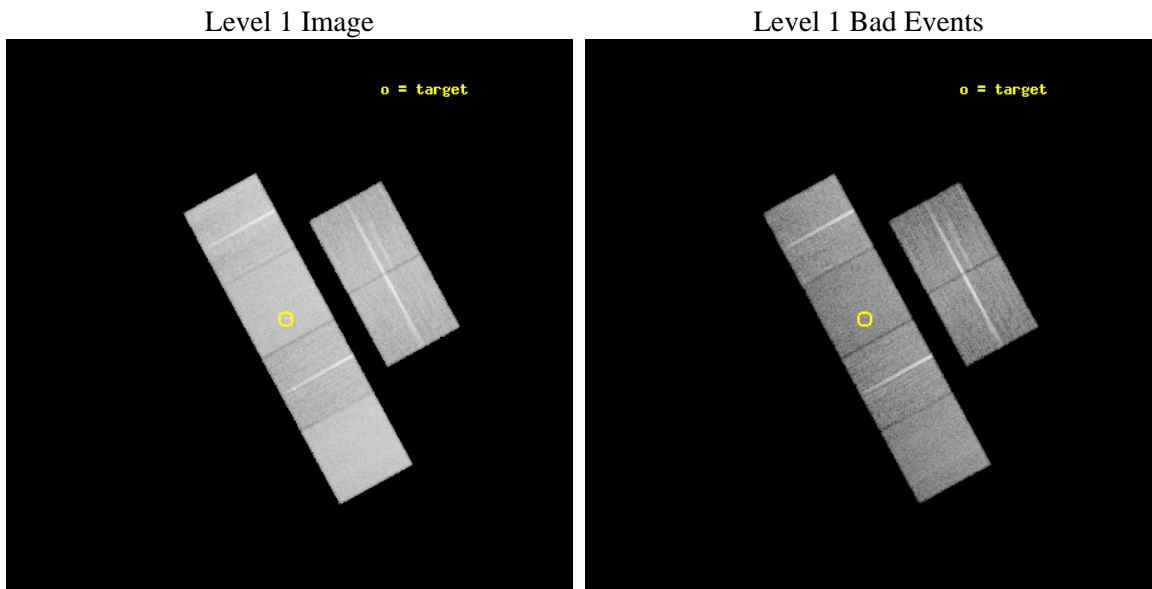
|          |  |   |
|----------|--|---|
| seq_num  | 400294   | Sequence number                             |
| obs_id   | 3807   | Observation id                              |
| title    | JET INTERACTIONS AROUND THE BLACK HOLE XTE J1550-564 | Proposal titl                               |
| observer | Prof. Stephane CORBEL                                | Principal investigator                      |
| object   | XTE J1550-564 (JET)                                  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 237.744583   | Observer's specified target RA [deg]        |
| dec_targ | -56.476556   | Observer's specified target Dec [deg]       |
| ra_nom   | 237.73362746231                                      | Nominal RA [deg]                            |
| dec_nom  | -56.484112674194                                     | Nominal Dec [deg]                           |
| roll_nom | 241.40242330275                                      | Nominal Roll [deg]                          |
| revision | 3  | Processing version of data                  |
| ontime   | 24751.999907792                                      | Sum of GTIs [s]                             |
| livetime | 24438.575181094                                      | Livetime [s]                                |
| ontime2  | 24751.999907792                                      | Sum of GTIs [s]                             |
| ontime3  | 24751.999907792                                      | Sum of GTIs [s]                             |
| ontime5  | 24751.999907792                                      | Sum of GTIs [s]                             |
| ontime6  | 24751.999907792                                      | Sum of GTIs [s]                             |
| ontime7  | 24751.999907792                                      | Sum of GTIs [s]                             |
| ontime8  | 24751.999907792                                      | Sum of GTIs [s]                             |
| l2events | 256549   | Number of level 2 events                    |



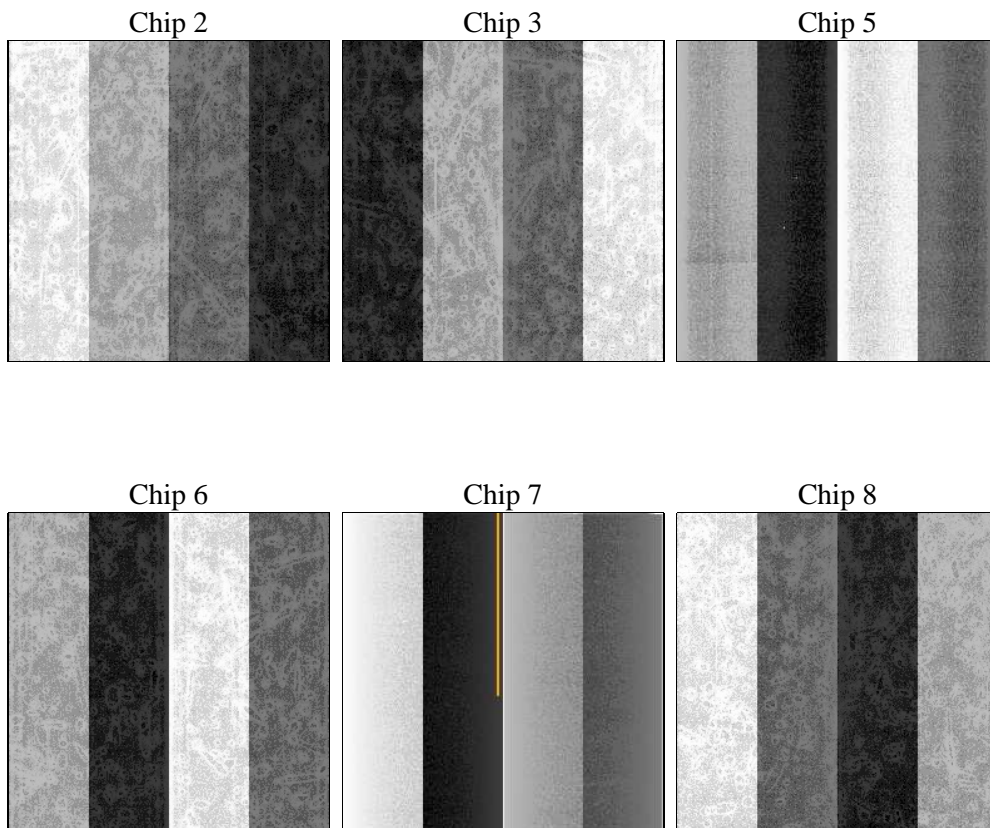
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 25000.000000    | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 24751.999907792 | Sum of GTIs [s]                         |
| caldbver | 4.5.2               | &#160                          | ontime2        | 24751.999907792 | Sum of GTIs [s]                         |
| date     | 2012-10-14T20:28:17 | Date and time of file creation | ontime3        | 24751.999907792 | Sum of GTIs [s]                         |
| revision | 3                   | Processing version of data     | ontime5        | 24751.999907792 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 24751.999907792 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 24751.999907792 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 24751.999907792 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1098185         | Number of level 1 events                |

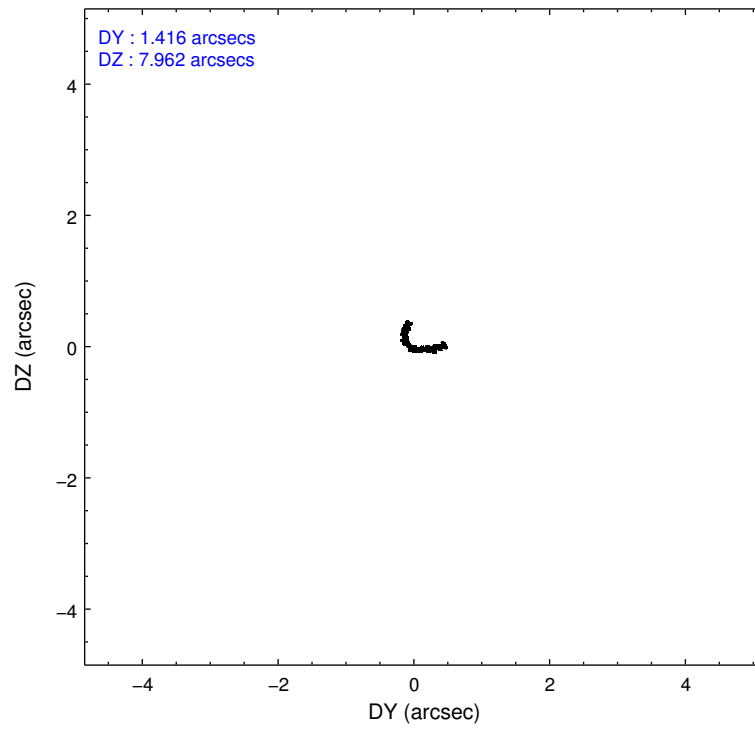
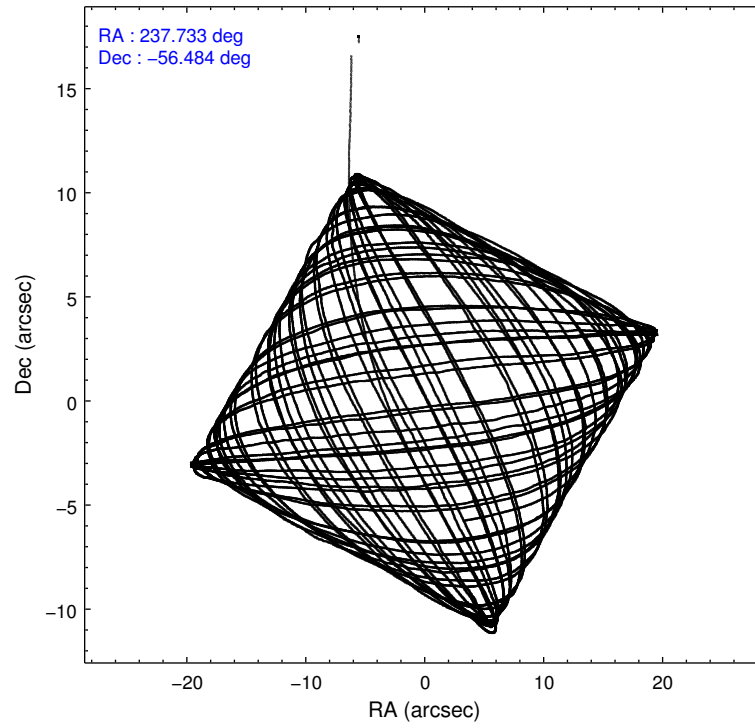
### 2.1.4 Events

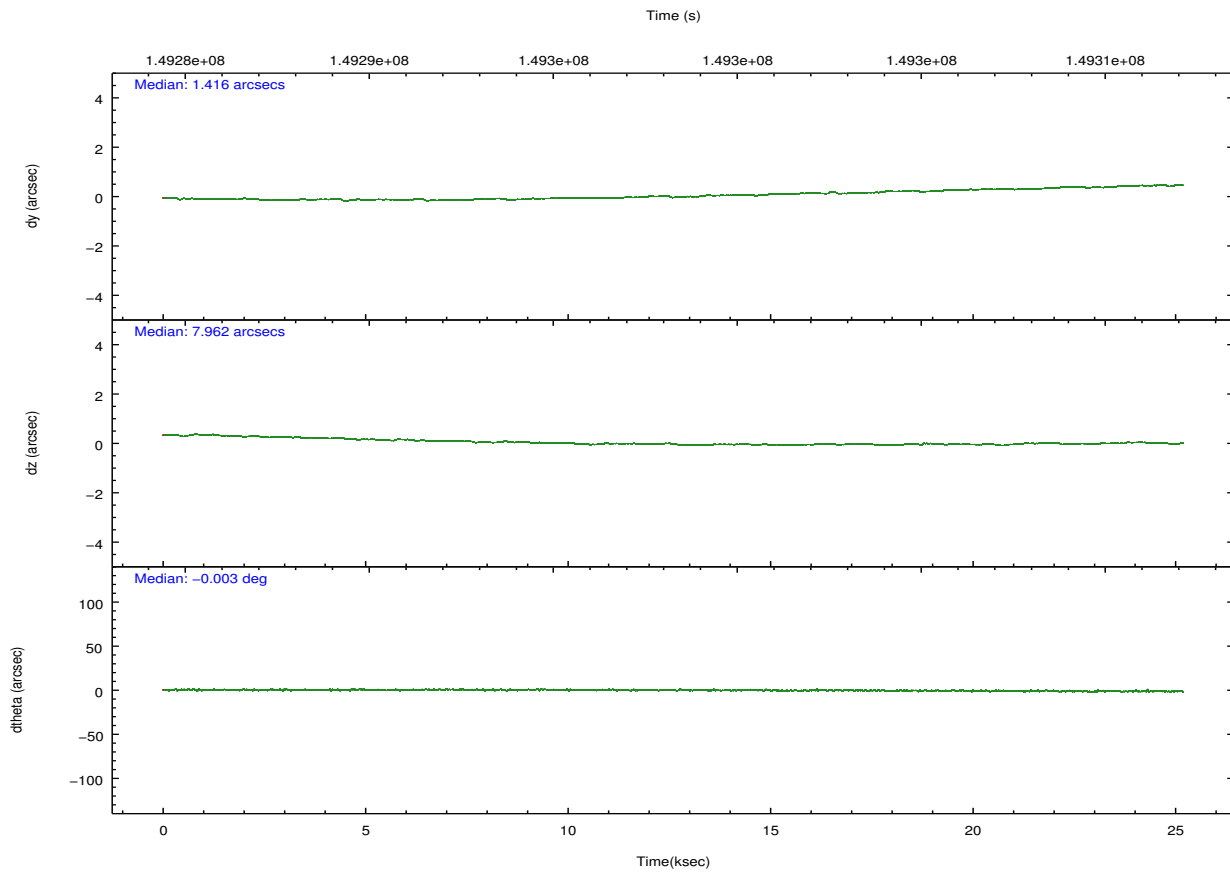
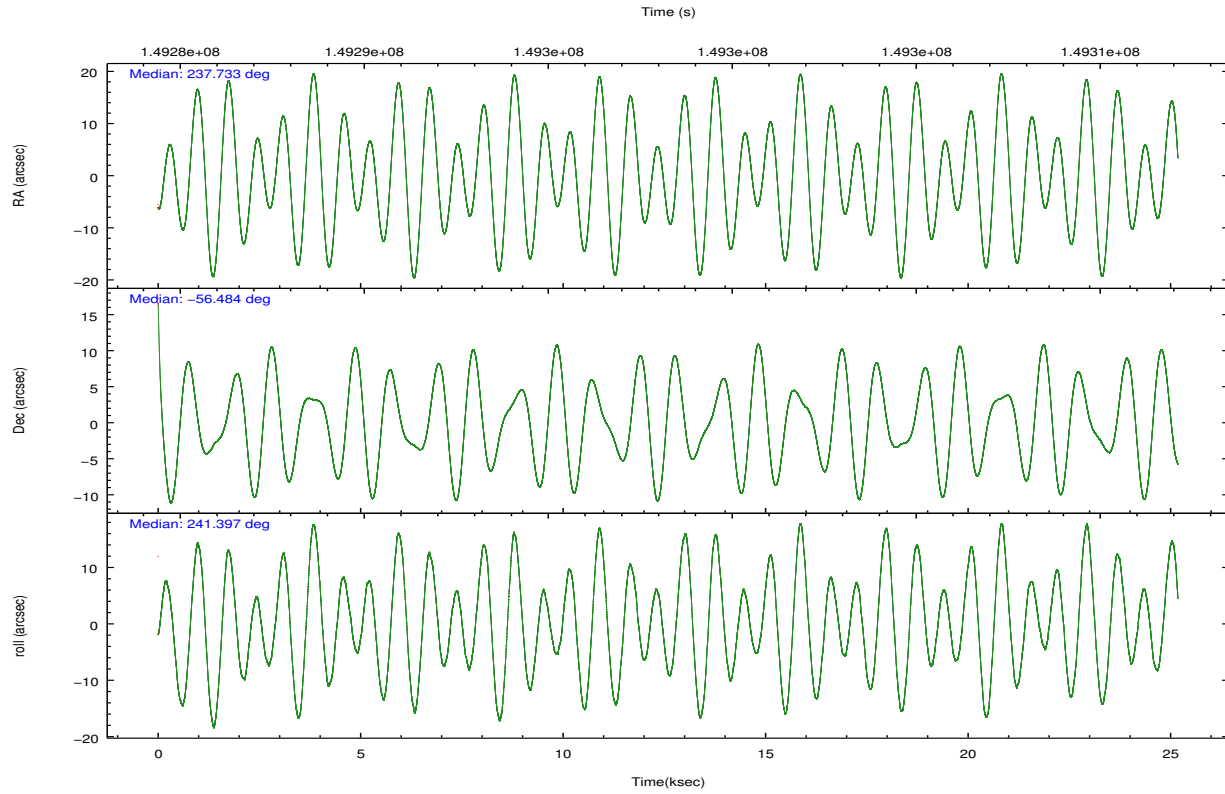
|                 | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |                | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7 | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|-------|--------|
| level 1 events  | 156145 | 149572 | 219731 | 157982 | 206334 | 208421 | grade 0 events | 8772   | 8689   | 6819   | 8829   | 8576  | 20407  |
| rejected events | 137326 | 130973 | 122171 | 138138 | 119465 | 159891 |                | 5%     | 5%     | 3%     | 5%     | 4%    | 9%     |
| rejected %      | 87%    | 87%    | 55%    | 87%    | 57%    | 76%    | grade 1 events | 96     | 106    | 238    | 73     | 201   | 158    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%    | 0%     |
|                 |        |        |        |        |        |        | grade 2 events | 3616   | 3318   | 28985  | 3781   | 17395 | 9114   |
|                 |        |        |        |        |        |        |                | 2%     | 2%     | 13%    | 2%     | 8%    | 4%     |
|                 |        |        |        |        |        |        | grade 3 events | 1792   | 1753   | 4422   | 1857   | 7896  | 4460   |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 2%     | 1%     | 3%    | 2%     |
|                 |        |        |        |        |        |        | grade 4 events | 1709   | 1792   | 4222   | 1788   | 7835  | 4146   |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 3%    | 1%     |
|                 |        |        |        |        |        |        | grade 5 events | 5975   | 6300   | 17069  | 6894   | 19518 | 8816   |
|                 |        |        |        |        |        |        |                | 3%     | 4%     | 7%     | 4%     | 9%    | 4%     |
|                 |        |        |        |        |        |        | grade 6 events | 2936   | 3053   | 53131  | 3594   | 45197 | 10418  |
|                 |        |        |        |        |        |        |                | 1%     | 2%     | 24%    | 2%     | 21%   | 4%     |
|                 |        |        |        |        |        |        | grade 7 events | 131249 | 124561 | 104845 | 131166 | 99716 | 150902 |
|                 |        |        |        |        |        |        |                | 84%    | 83%    | 47%    | 83%    | 48%   | 72%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-235678         | ACIS-235678          | 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                 | 237.731767          | 237.7336274623122    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | -56.456887          | -56.4841126741941    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 241.244248          | 241.4024233027526    | [s] Primary exposure time             | 0.000000  | 3.2     |
| [s] Window start time (MET)       | 149126464.184000    | 149126464.184000     |                                       |           |         |
| [s] Window stop time (MET)        | 150249664.184000    | 150249664.184000     |                                       |           |         |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 |                                       |           |         |
| [mm] SIM translation stage pos    | -190.132523         | -190.1400660498719   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.00754346686406393  |                                       |           |         |
| [s] Observation start time (MET)  | 149285846.184000    | 149284820.50195      |                                       |           |         |
| Observation start date            | 2002-09-24T20:16:22 | 2002-09-24T20:00:20  |                                       |           |         |
| [s] Observation end time (MET)    | 149310846.184000    | 149311807.21557      |                                       |           |         |
| Observation end date              | 2002-09-25T03:13:02 | 2002-09-25T03:30:07  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



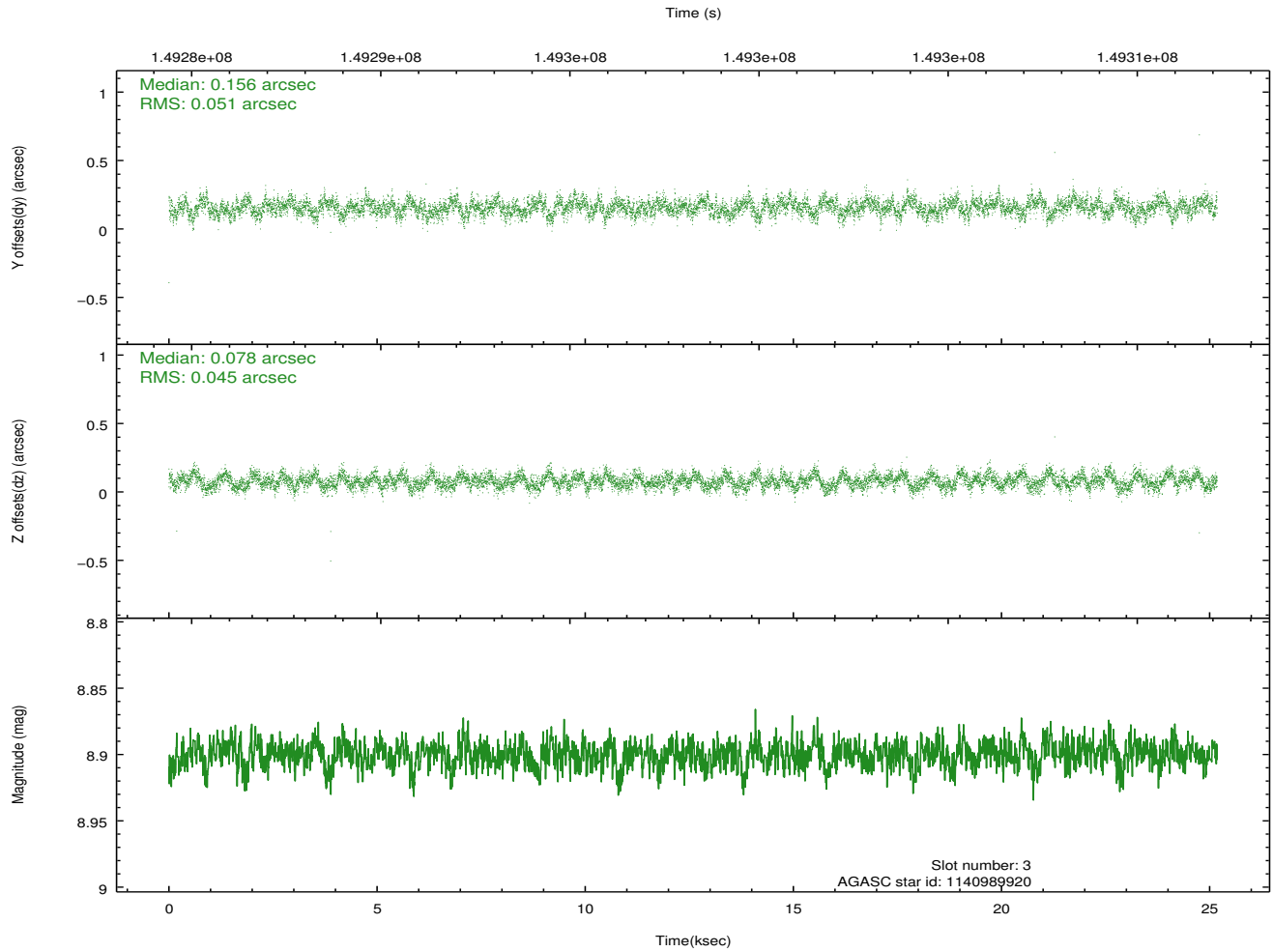
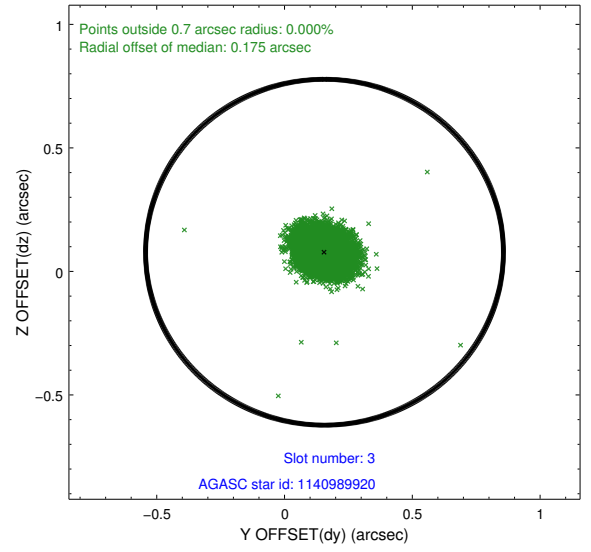
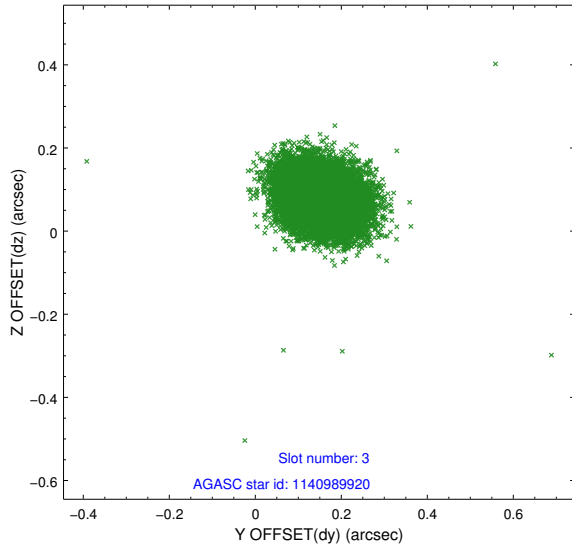


### Slot Statistics

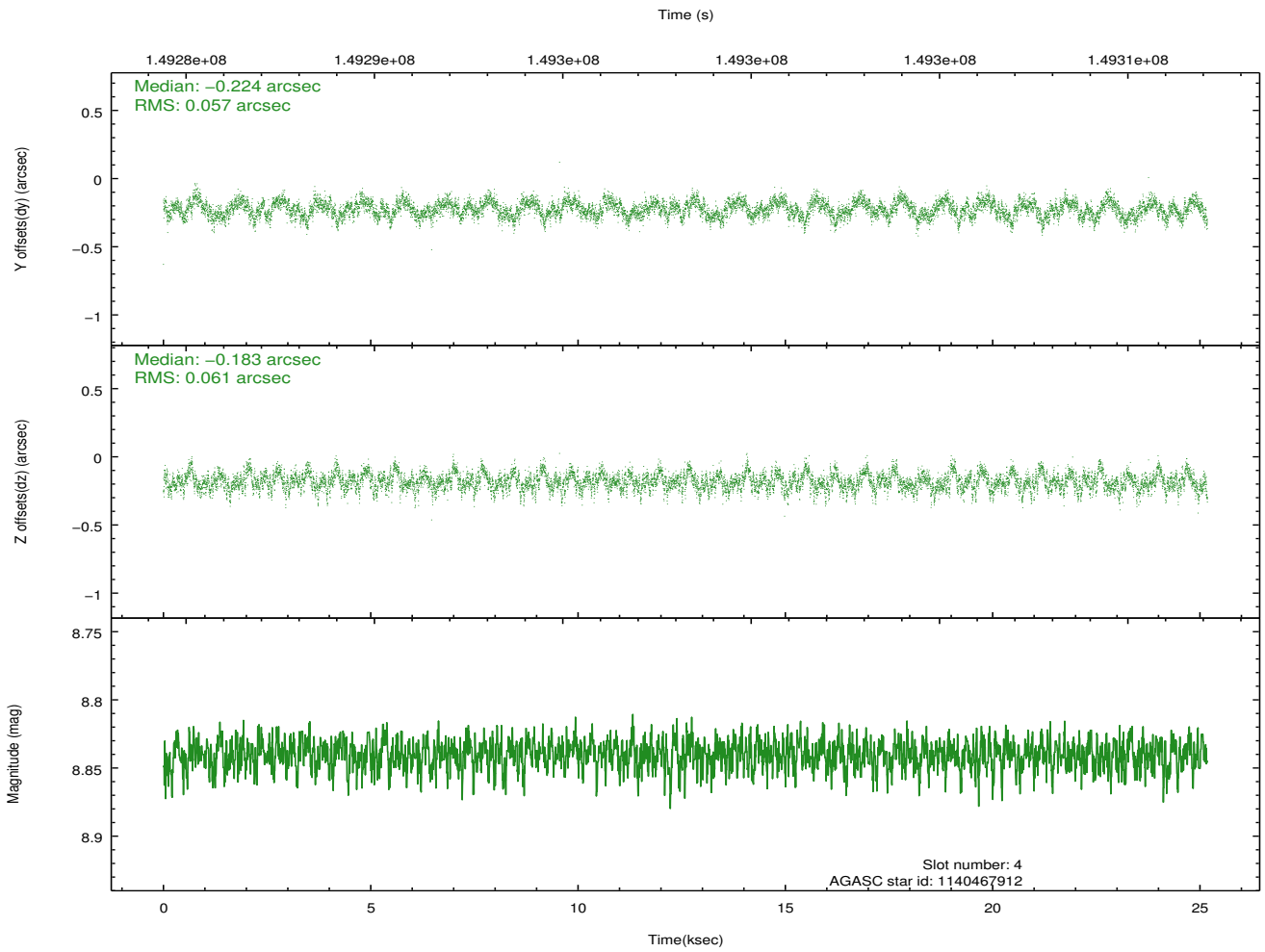
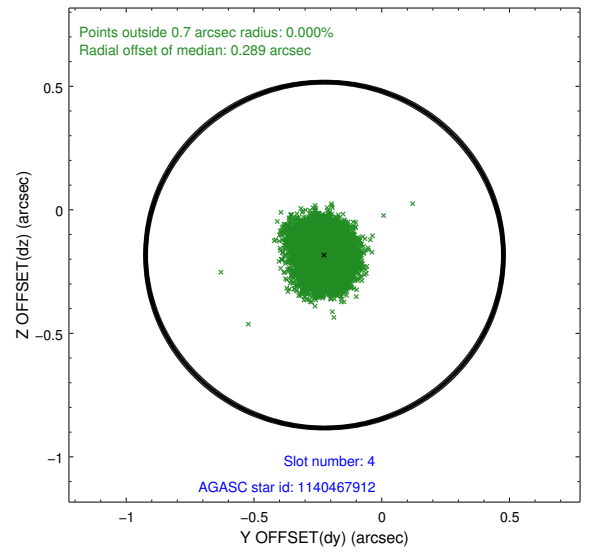
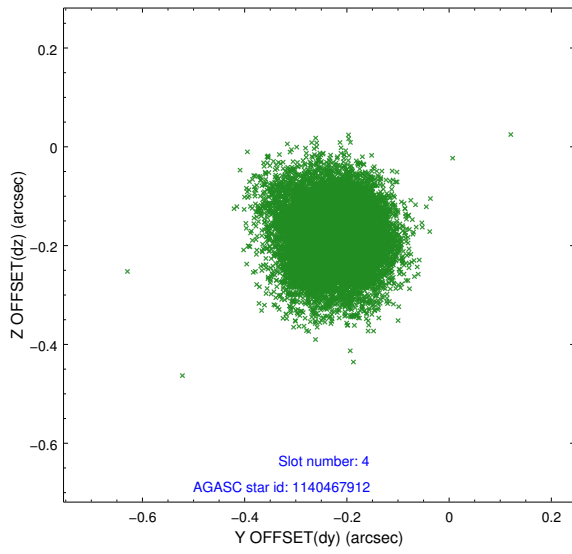
| slot | status | id         | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    | ACIS-S-2   | 7.11 | 6141  | -0.016 | 0.002  | 0.006 | 0.011 | 0.000000   | 0.000000   | -754.12  | -1729.20 |
| 1    | FID    | ACIS-S-4   | 7.20 | 6141  | -0.003 | 0.014  | 0.008 | 0.013 | 0.000000   | 0.000000   | 2159.14  | 179.14   |
| 2    | FID    | ACIS-S-6   | 7.36 | 6141  | -0.009 | -0.009 | 0.008 | 0.014 | 0.000000   | 0.000000   | 408.05   | 816.67   |
| 3    | GUIDE  | 1140989920 | 8.90 | 12276 | 0.156  | 0.078  | 0.071 | 0.116 | 237.647305 | -57.151120 | 2270.32  | 1058.64  |
| 4    | GUIDE  | 1140467912 | 8.84 | 12281 | -0.224 | -0.183 | 0.089 | 0.142 | 237.351144 | -55.585312 | -2376.45 | -2187.24 |
| 5    | GUIDE  | 1140468800 | 8.93 | 12274 | -0.018 | 0.139  | 0.182 | 0.257 | 238.884268 | -56.158674 | -2036.37 | 1518.77  |
| 6    | GUIDE  | 1140861088 | 9.08 | 12275 | 0.126  | -0.058 | 0.105 | 0.166 | 236.443591 | -56.463656 | 1274.79  | -2221.97 |
| 7    | GUIDE  | 1140998784 | 9.19 | 12274 | -0.045 | 0.020  | 0.102 | 0.158 | 238.683224 | -56.839204 | 316.29   | 2311.28  |

## 2.4 Star Slots

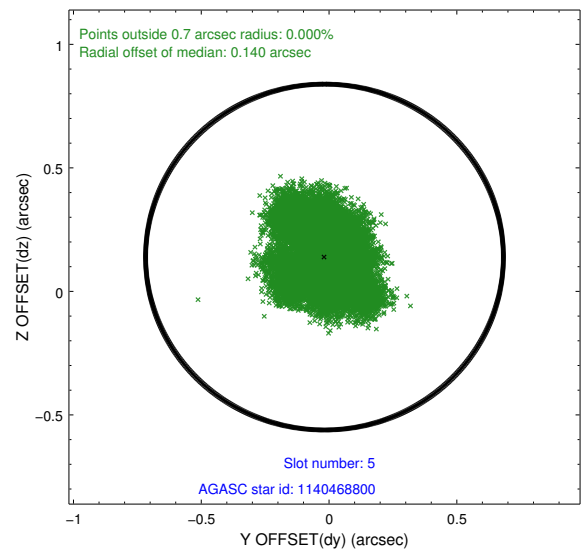
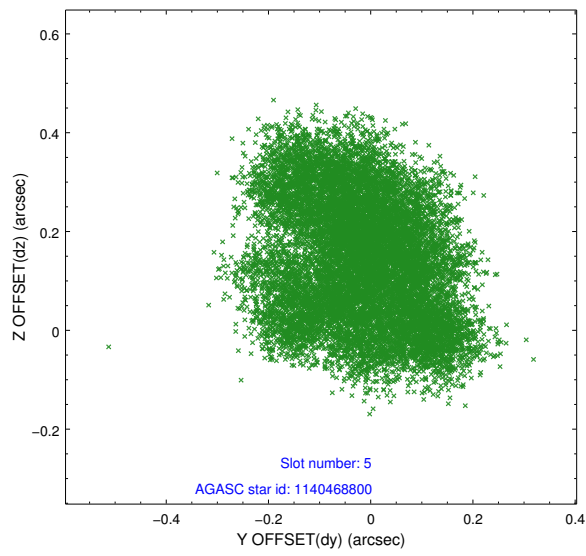
### 2.4.1 Slot 3



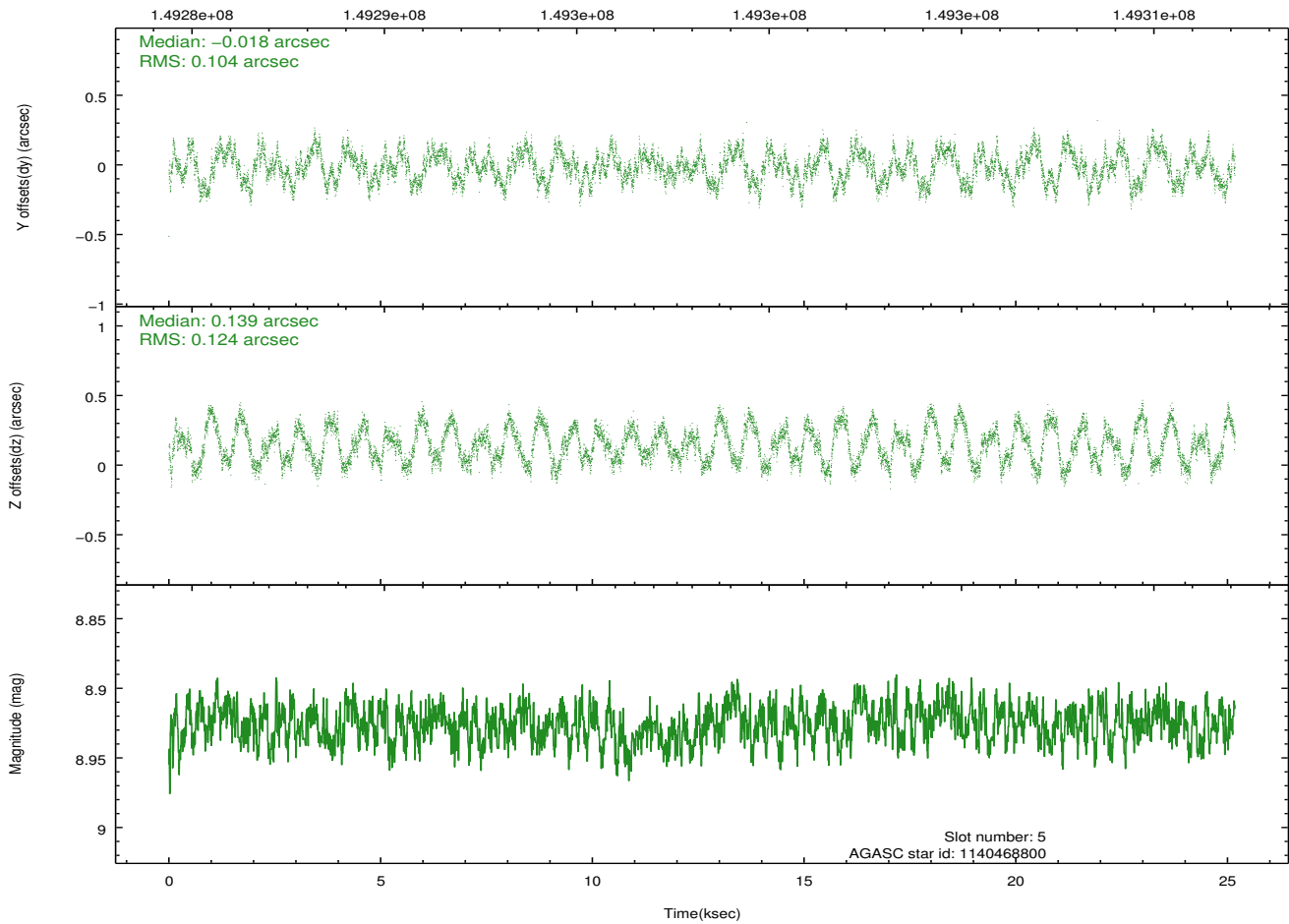
## 2.4.2 Slot 4



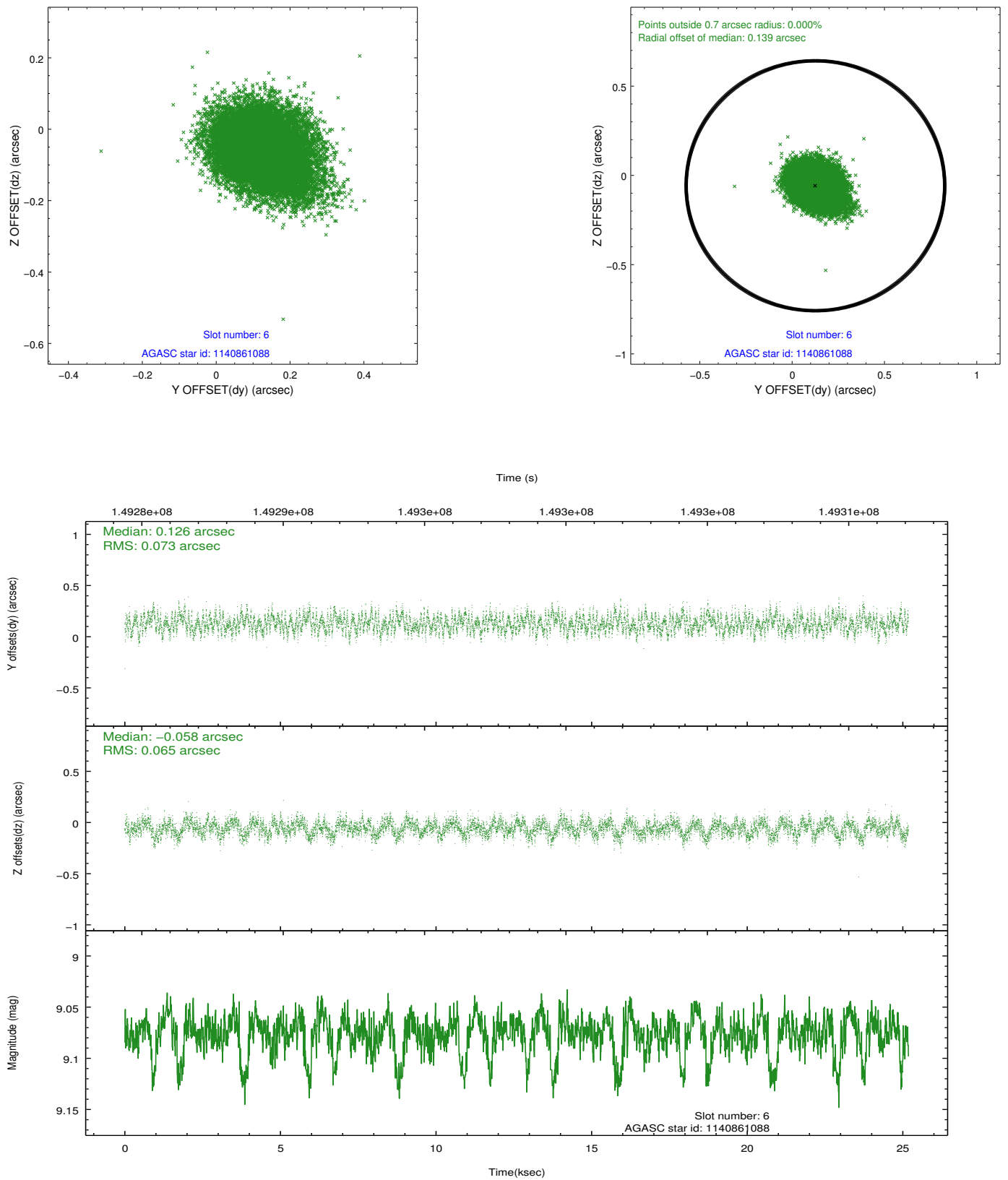
### 2.4.3 Slot 5



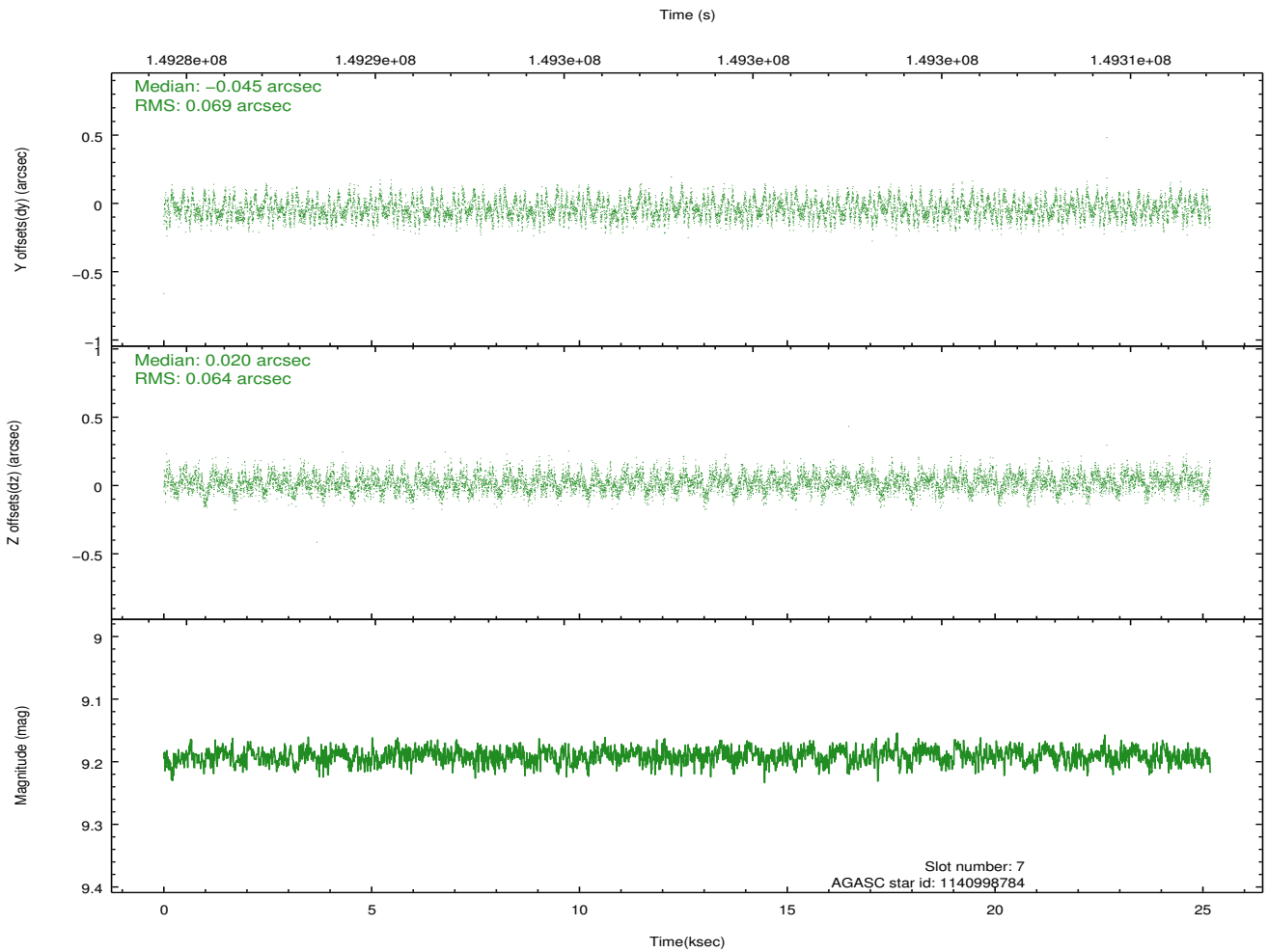
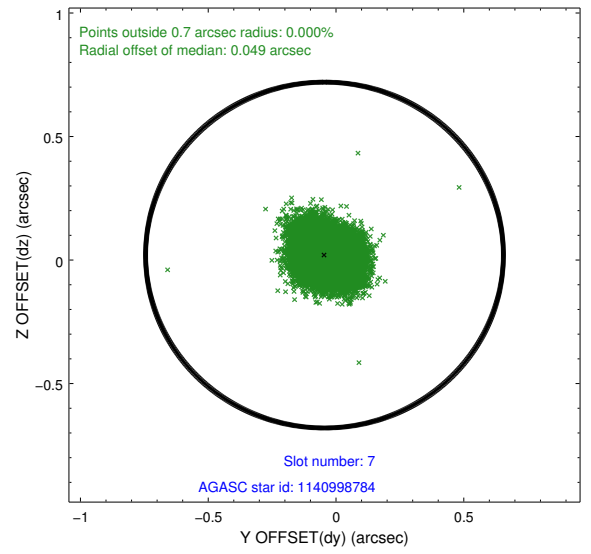
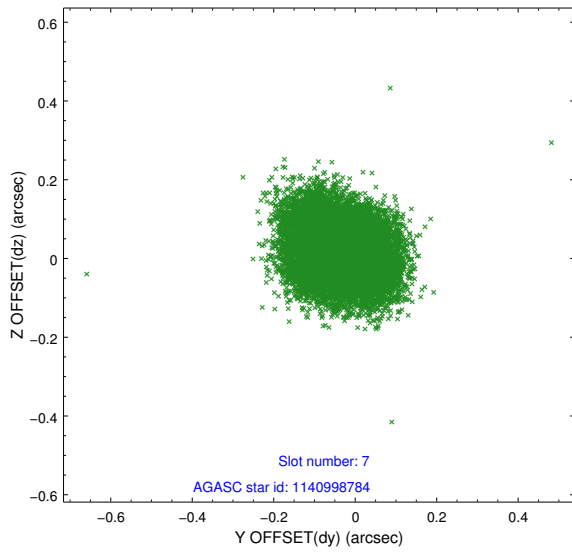
Time (s)



## 2.4.4 Slot 6

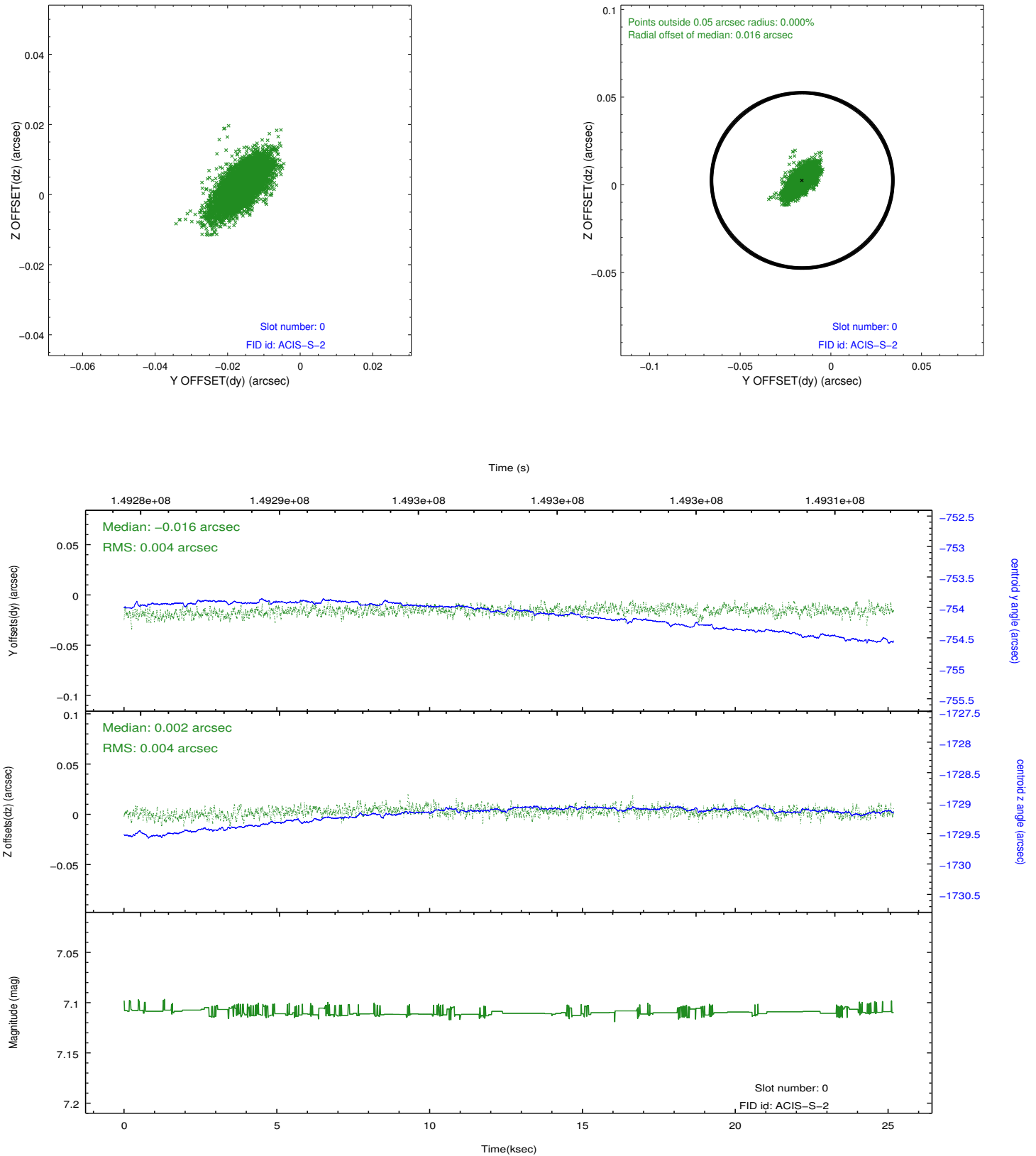


### 2.4.5 Slot 7

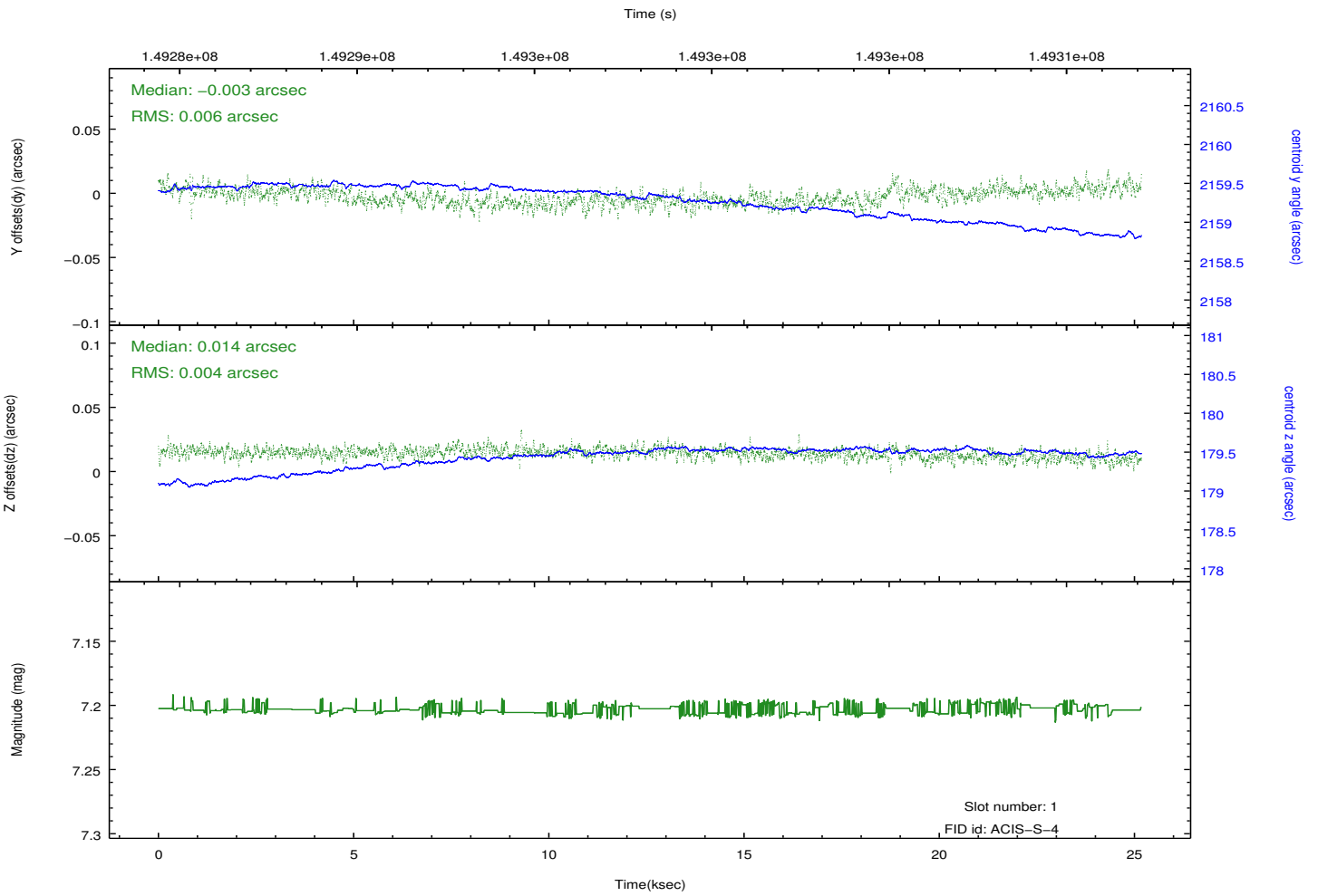
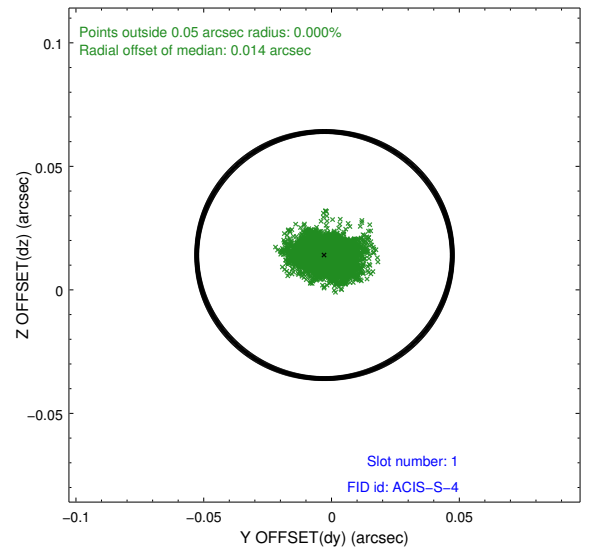
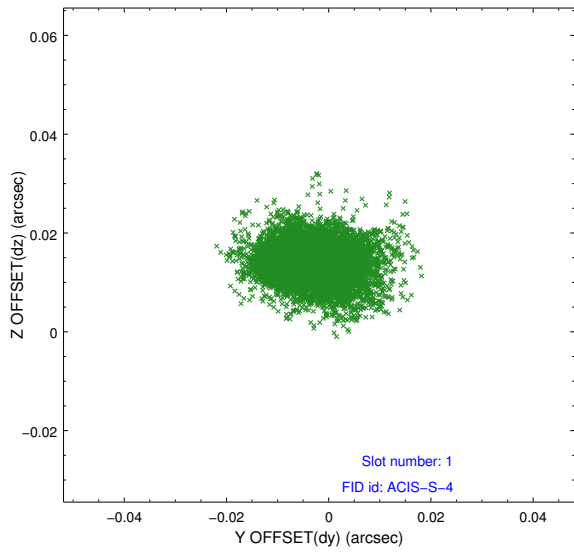


## 2.5 FID Slots

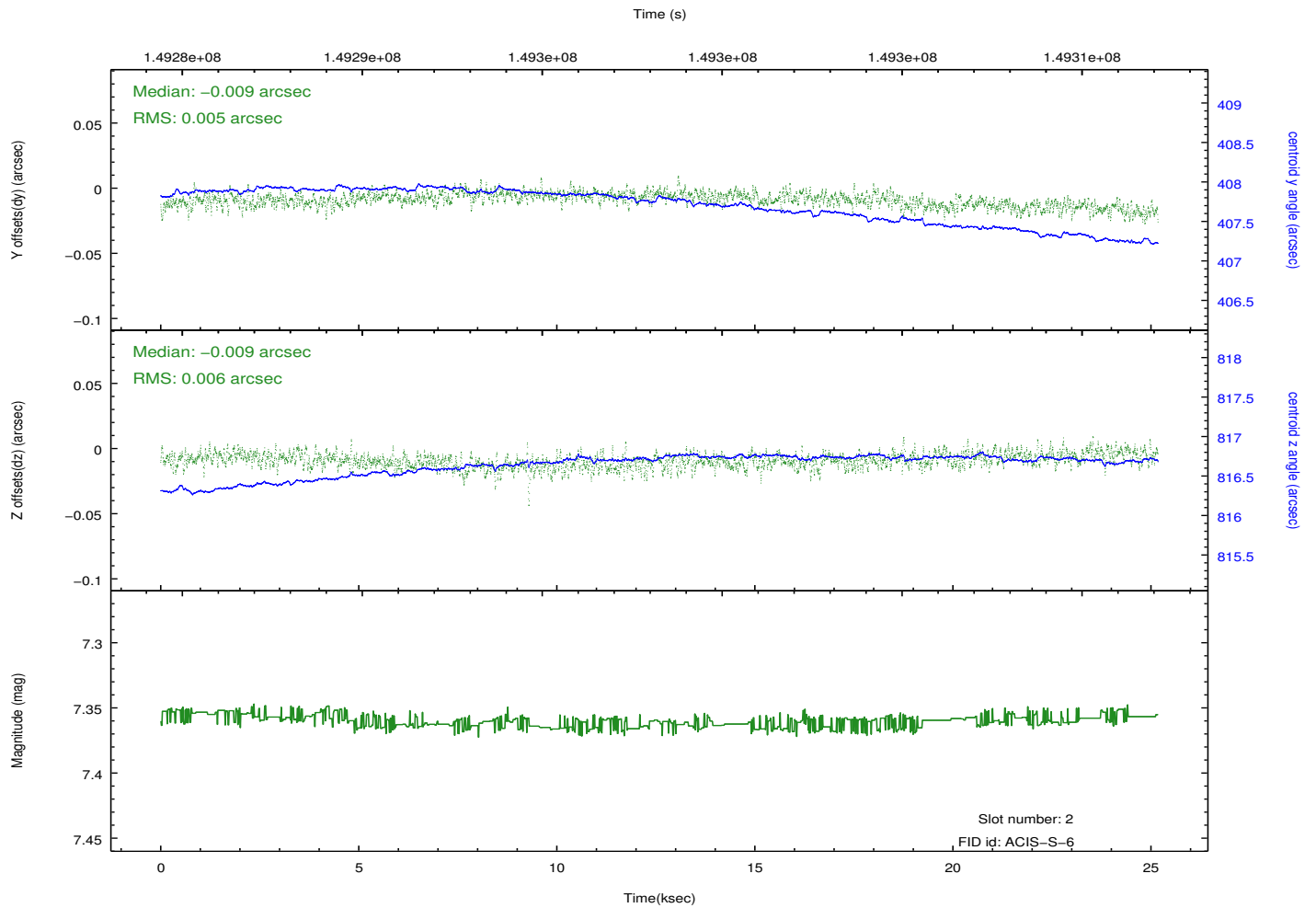
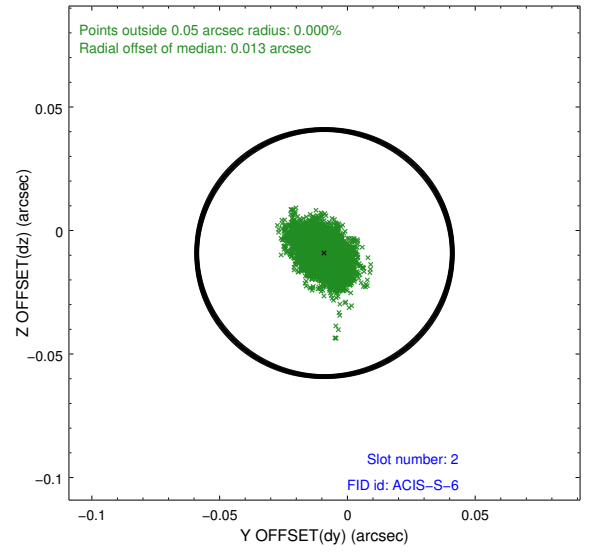
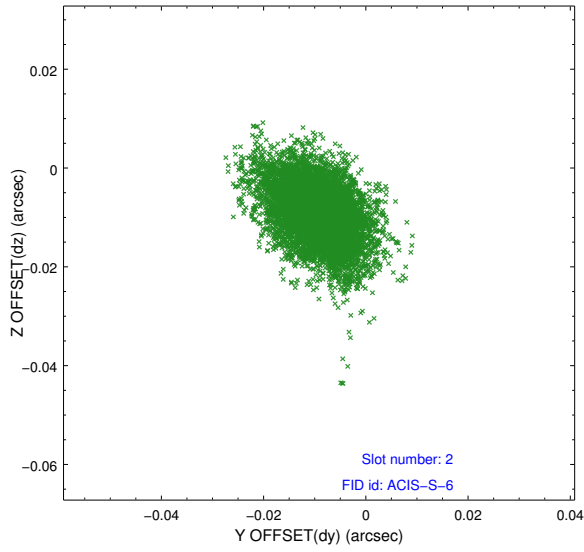
### 2.5.1 Slot 0



## 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)      | 2012.10.24    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 24.755        |

## A.2 Comments

Window preference met.