

# V&V Reference Report

## L2 ASCDS Version : 8.4.3.1

Observation 6401 - L2 Version 2  
Chandra X-Ray Center

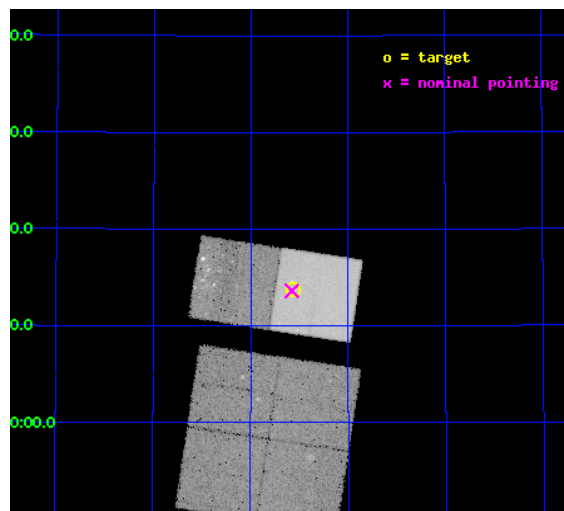
L2 Processing Date : Mar 26 2012

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# 1 Front

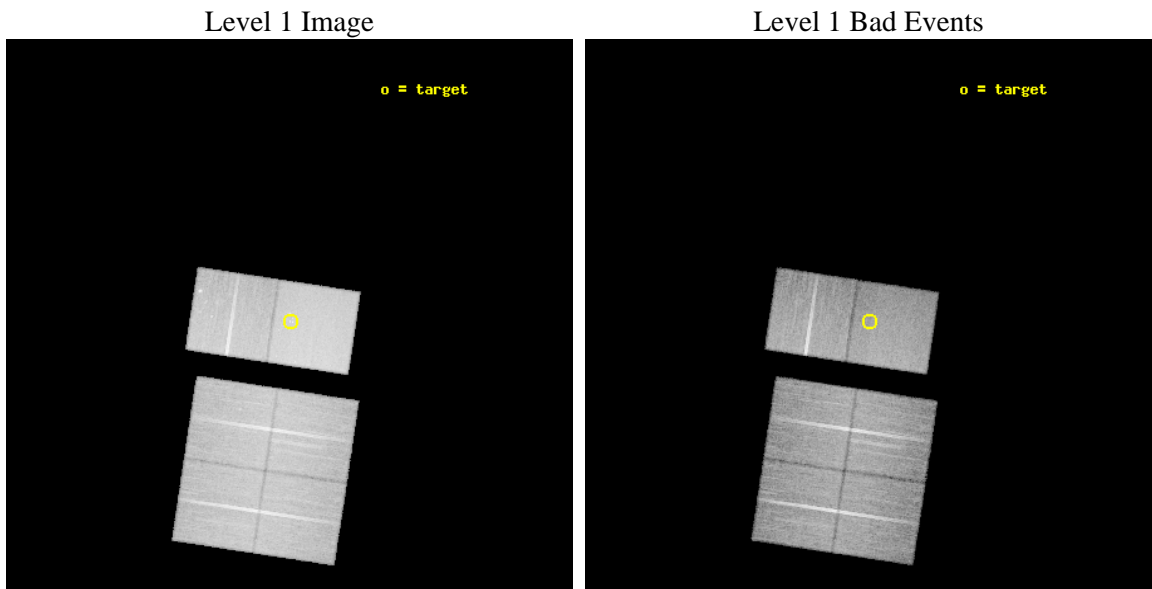
|          |   |   |
|----------|---|---|
| seq_num  | 200378  | Sequence number                             |
| obs_id   | 6401  | Observation id                              |
| title    | On the origin of X-ray emission from Herbig Ae/Be stars | Proposal t                                  |
| observer | Dr Beate Stelzer  | Principal investigator                      |
| object   | AS 477  | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 328.142083  | Observer's specified target RA [deg]        |
| dec_targ | 47.228778   | Observer's specified target Dec [deg]       |
| ra_nom   | 328.14427218838   | Nominal RA [deg]                            |
| dec_nom  | 47.227312256642   | Nominal Dec [deg]                           |
| roll_nom | 8.6401795740883   | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 26911.999899745   | Sum of GTIs [s]                             |
| livetime | 26571.223952554   | Livetime [s]                                |
| ontime0  | 26908.758929431   | Sum of GTIs [s]                             |
| ontime1  | 26911.999899745   | Sum of GTIs [s]                             |
| ontime2  | 26908.758929461   | Sum of GTIs [s]                             |
| ontime3  | 26911.999899745   | Sum of GTIs [s]                             |
| ontime6  | 26911.999899745   | Sum of GTIs [s]                             |
| ontime7  | 26911.999899745   | Sum of GTIs [s]                             |
| l2events | 248044  | Number of level 2 events                    |



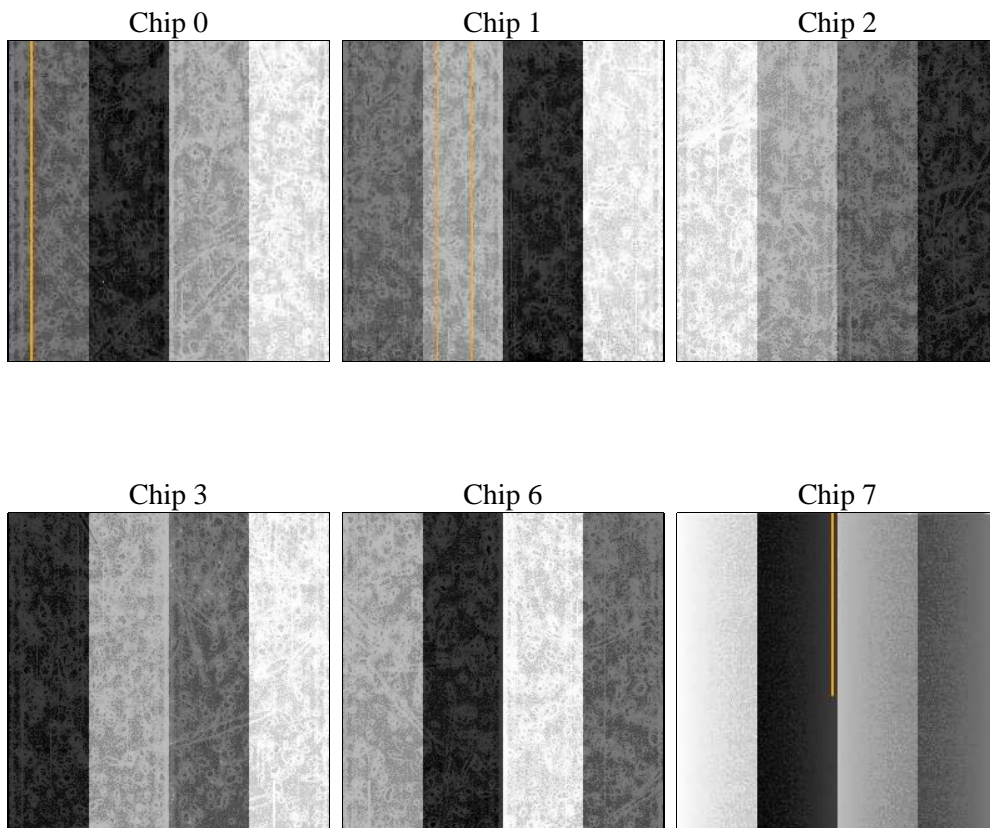
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 26764.778000    | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3               | Processing system revision     | ontime         | 26911.999899745 | Sum of GTIs [s]                         |
| caldbver | 4.4.8               | &#160                          | ontime0        | 26908.758929431 | Sum of GTIs [s]                         |
| date     | 2012-03-26T06:45:11 | Date and time of file creation | ontime1        | 26911.999899745 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime2        | 26908.758929461 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 26911.999899745 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 26911.999899745 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 26911.999899745 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 1433885         | Number of level 1 events                |

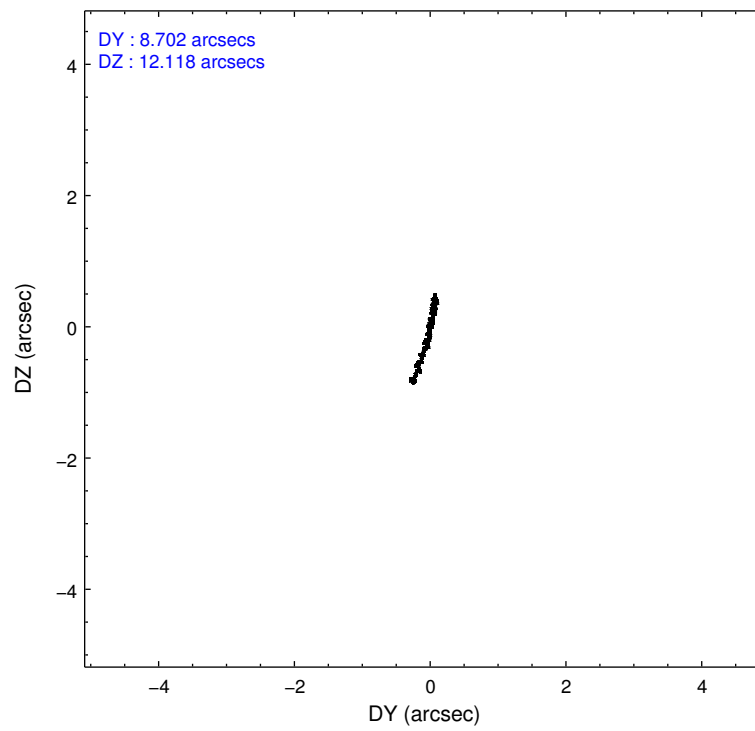
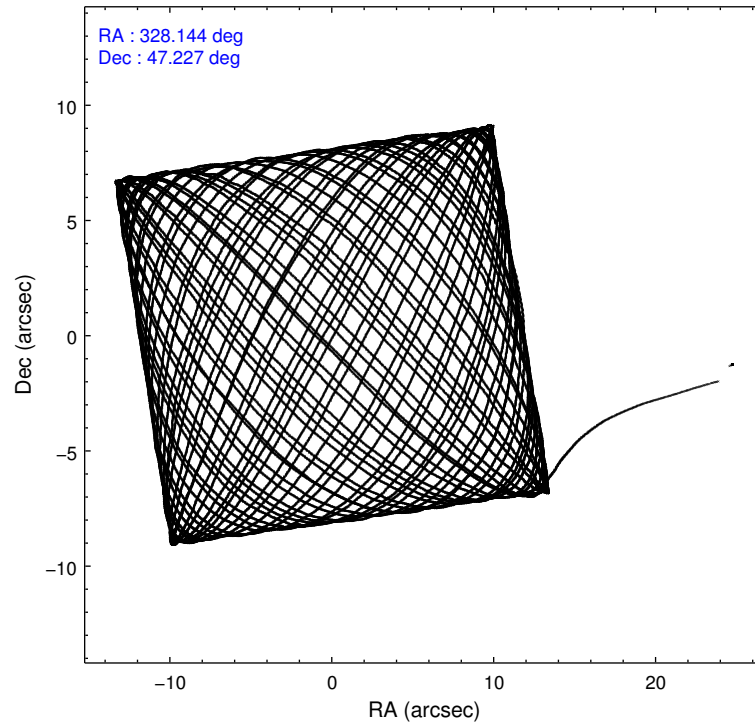
### 2.1.4 Events

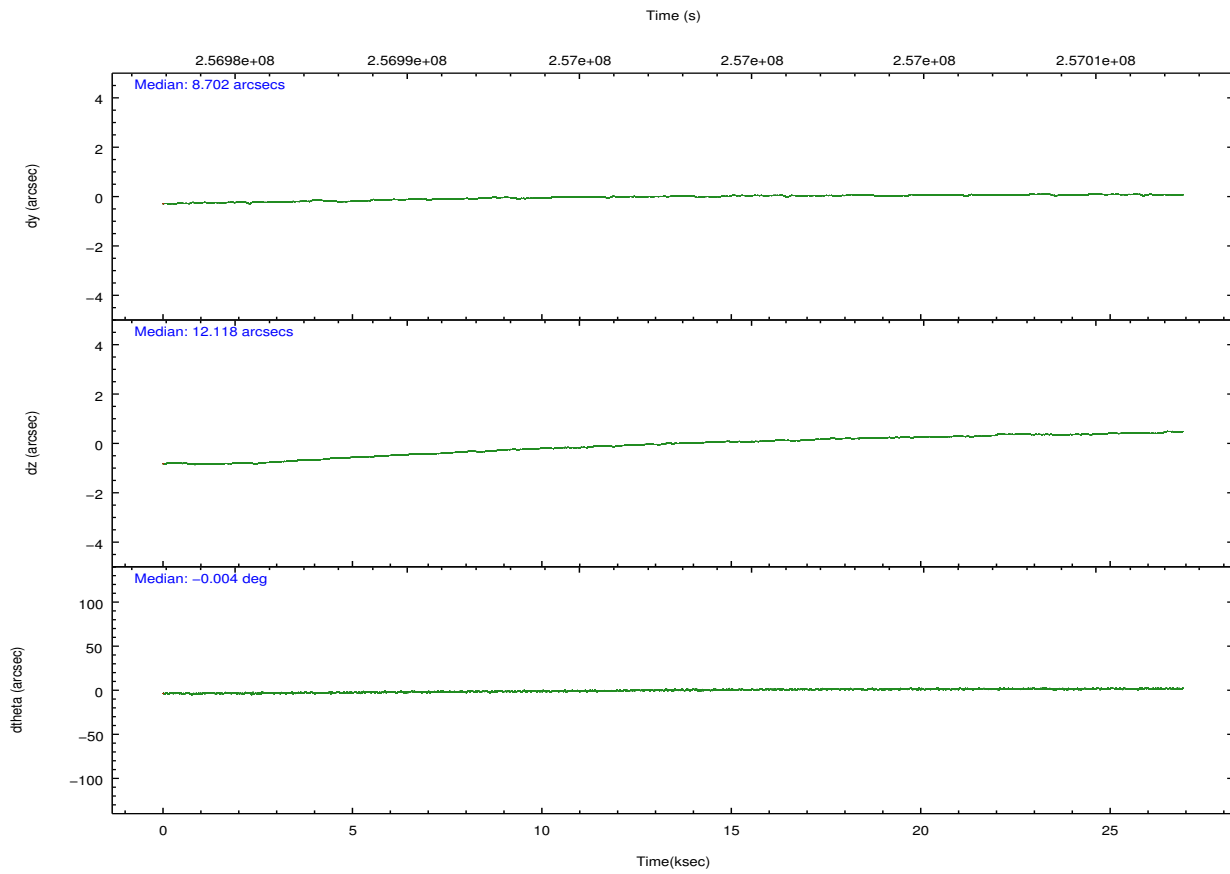
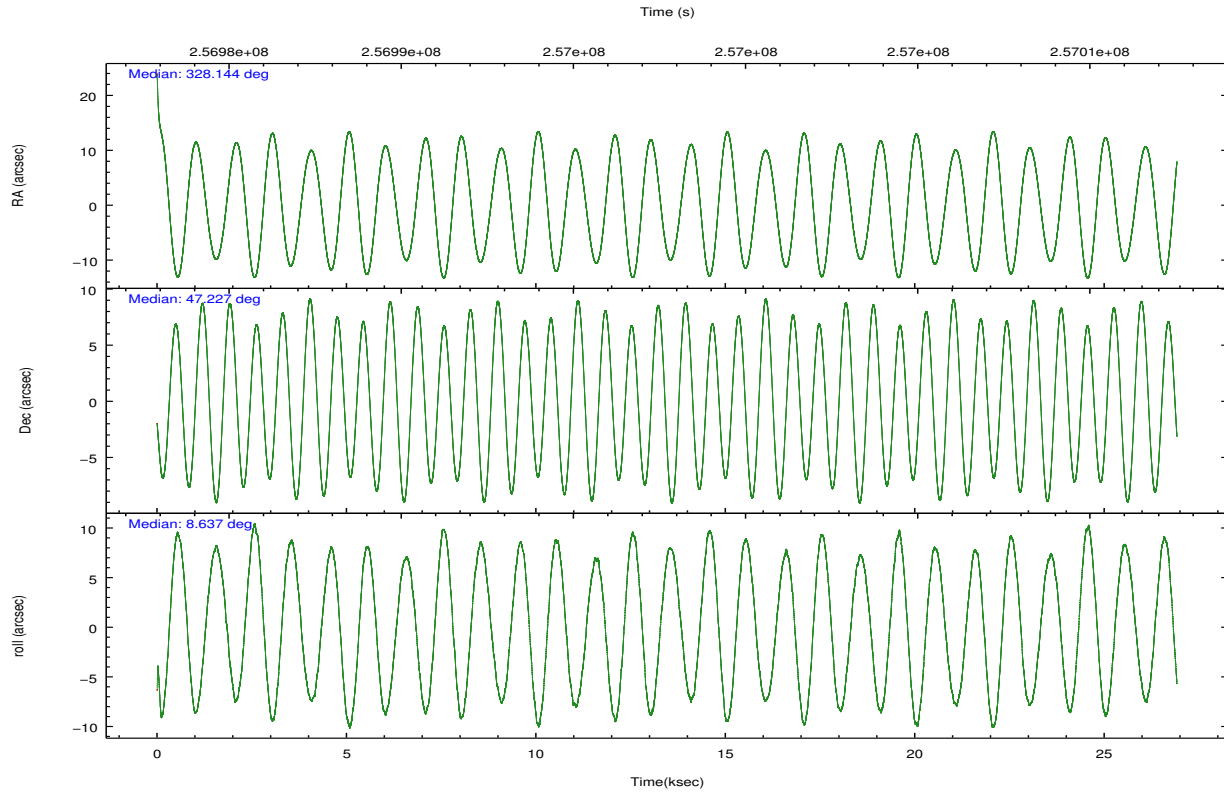
|                 | ccd 0  | ccd 1  | ccd 2  | ccd 3  | ccd 6  | ccd 7  |                | ccd 0  | ccd 1  | ccd 2  | ccd 3  | ccd 6  | ccd 7  |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 220620 | 209660 | 225650 | 223913 | 237865 | 316177 | grade 0 events | 11777  | 11324  | 12360  | 11870  | 13070  | 11544  |
| rejected events | 192950 | 181094 | 198456 | 197178 | 207913 | 186076 |                | 5%     | 5%     | 5%     | 5%     | 5%     | 3%     |
| rejected %      | 87%    | 86%    | 87%    | 88%    | 87%    | 58%    | grade 1 events | 149    | 98     | 124    | 141    | 135    | 321    |
|                 |        |        |        |        |        |        |                | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
|                 |        |        |        |        |        |        | grade 2 events | 6203   | 6417   | 5592   | 5204   | 6264   | 26546  |
|                 |        |        |        |        |        |        |                | 2%     | 3%     | 2%     | 2%     | 2%     | 8%     |
|                 |        |        |        |        |        |        | grade 3 events | 2695   | 2803   | 2549   | 2648   | 2717   | 11547  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%     | 3%     |
|                 |        |        |        |        |        |        | grade 4 events | 2550   | 2806   | 2609   | 2568   | 2704   | 11688  |
|                 |        |        |        |        |        |        |                | 1%     | 1%     | 1%     | 1%     | 1%     | 3%     |
|                 |        |        |        |        |        |        | grade 5 events | 9457   | 9674   | 8697   | 10447  | 10820  | 29920  |
|                 |        |        |        |        |        |        |                | 4%     | 4%     | 3%     | 4%     | 4%     | 9%     |
|                 |        |        |        |        |        |        | grade 6 events | 4821   | 5603   | 4455   | 4794   | 5632   | 70620  |
|                 |        |        |        |        |        |        |                | 2%     | 2%     | 1%     | 2%     | 2%     | 22%    |
|                 |        |        |        |        |        |        | grade 7 events | 182968 | 170935 | 189264 | 186241 | 196523 | 153991 |
|                 |        |        |        |        |        |        |                | 82%    | 81%    | 83%    | 83%    | 82%    | 48%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012367         | ACIS-012367          | 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                 | 328.113299          | 328.1442721883768    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 47.210011           | 47.22731225664243    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 8.506283            | 8.640179574088251    | [s] Primary exposure time             | 0.000000  | 3.2     |
| [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)  | 256984413.184000    | 256983168.10072      |                                       |           |         |
| Observation start date            | 2006-02-22T08:32:28 | 2006-02-22T08:12:48  |                                       |           |         |
| [s] Observation end time (MET)    | 257011178.184000    | 257011406.85203      |                                       |           |         |
| Observation end date              | 2006-02-22T15:58:33 | 2006-02-22T16:03:26  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



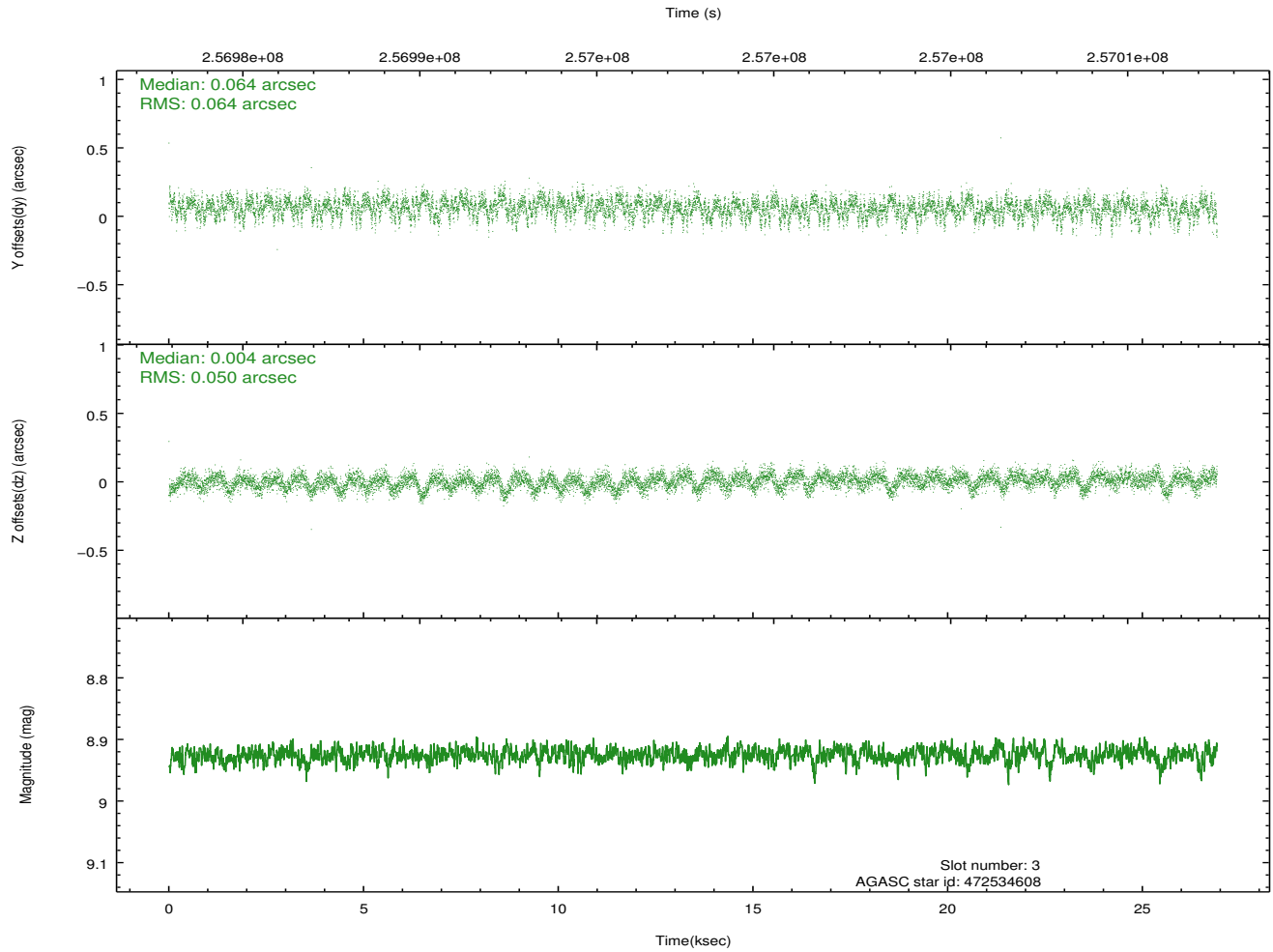
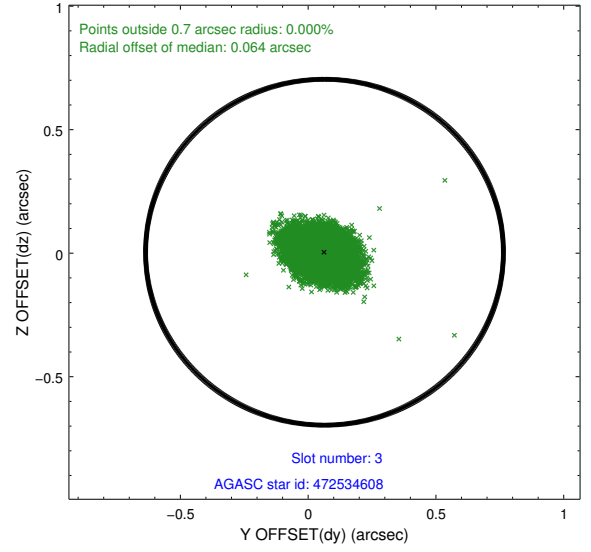
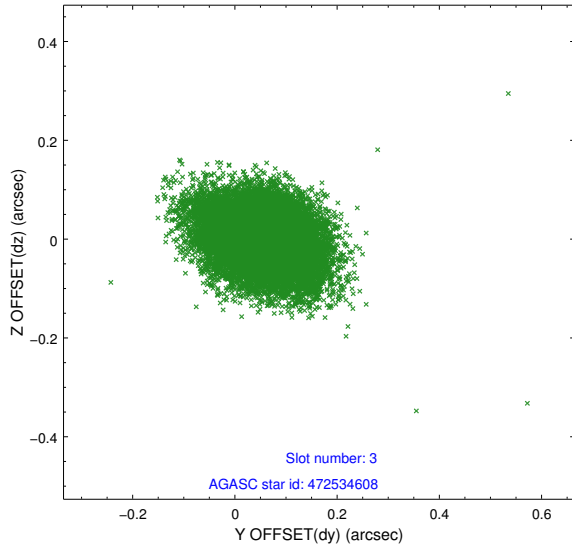


### Slot Statistics

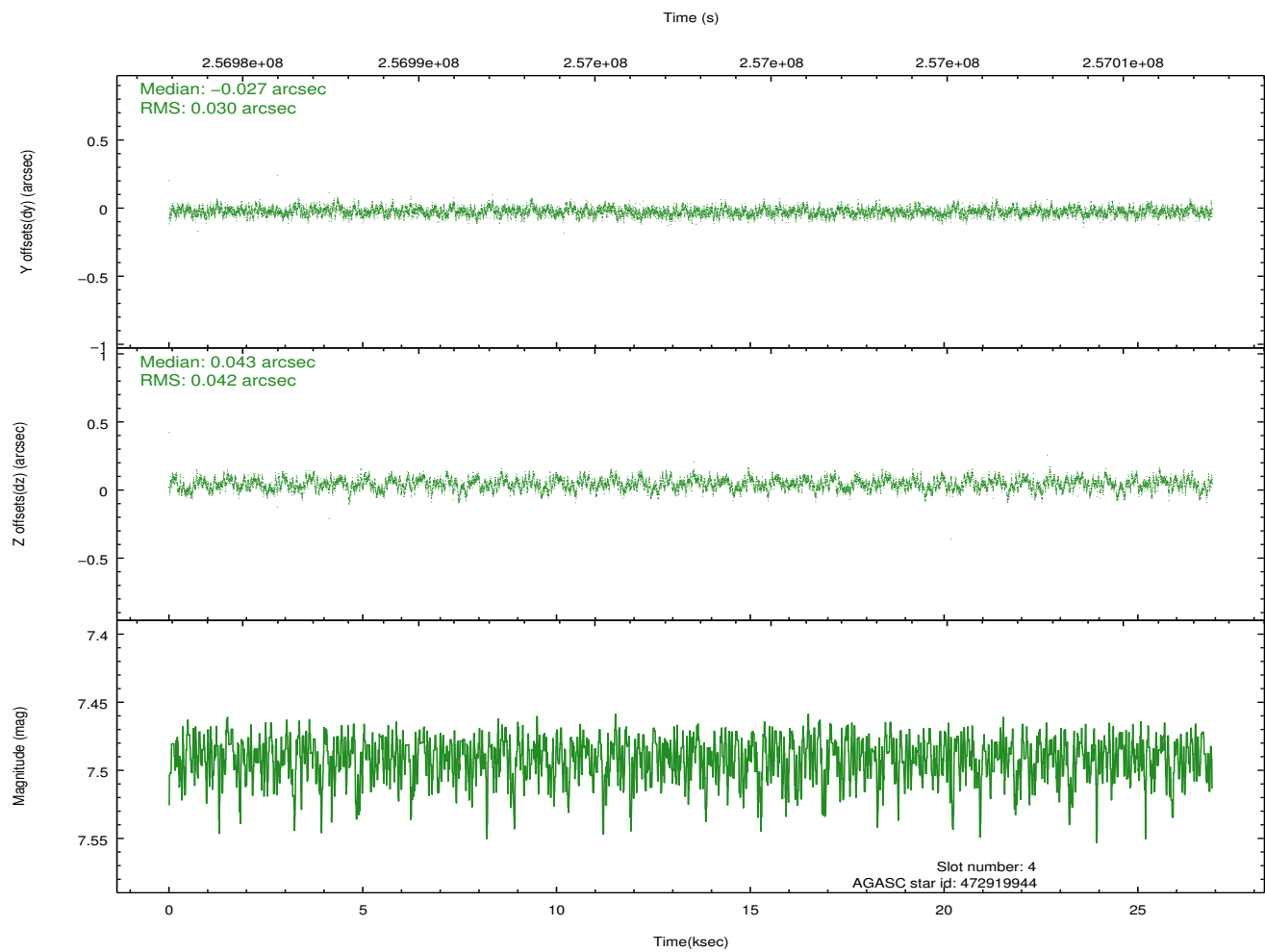
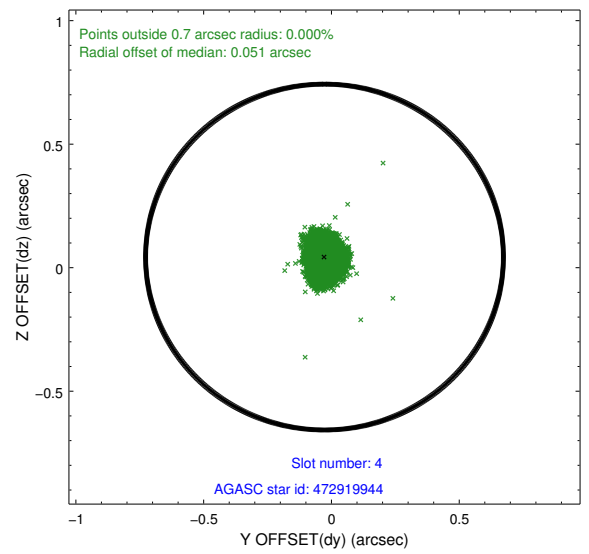
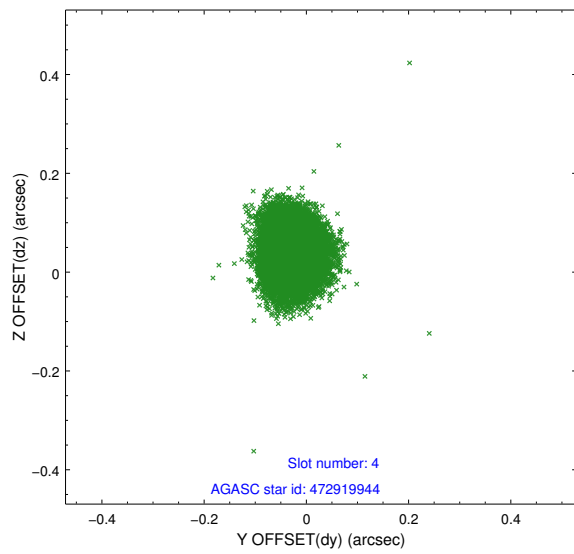
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-2  | 7.11 | 6566  | 0.020  | -0.029 | 0.016 | 0.023 | 0.000000   | 0.000000  | -761.44  | -1733.35 |
| 1    | FID    | ACIS-S-5  | 7.24 | 6565  | -0.096 | 0.028  | 0.013 | 0.023 | 0.000000   | 0.000000  | -1814.72 | 168.58   |
| 2    | FID    | ACIS-S-6  | 7.34 | 6564  | 0.050  | 0.006  | 0.022 | 0.033 | 0.000000   | 0.000000  | 400.09   | 812.58   |
| 3    | GUIDE  | 472534608 | 8.93 | 13124 | 0.064  | 0.004  | 0.086 | 0.140 | 329.093788 | 46.693777 | 2122.30  | -2180.95 |
| 4    | GUIDE  | 472919944 | 7.49 | 13131 | -0.027 | 0.043  | 0.054 | 0.088 | 328.566193 | 47.001346 | 989.37   | -904.33  |
| 5    | GUIDE  | 472920272 | 8.12 | 13131 | 0.034  | -0.067 | 0.056 | 0.090 | 328.801263 | 47.450533 | 1786.06  | 616.02   |
| 6    | GUIDE  | 472921760 | 8.21 | 13126 | -0.143 | -0.055 | 0.057 | 0.092 | 327.228074 | 46.903081 | -2314.59 | -758.53  |
| 7    | GUIDE  | 472917368 | 8.71 | 13126 | 0.075  | 0.079  | 0.069 | 0.112 | 327.923434 | 47.137070 | -498.33  | -190.19  |

## 2.4 Star Slots

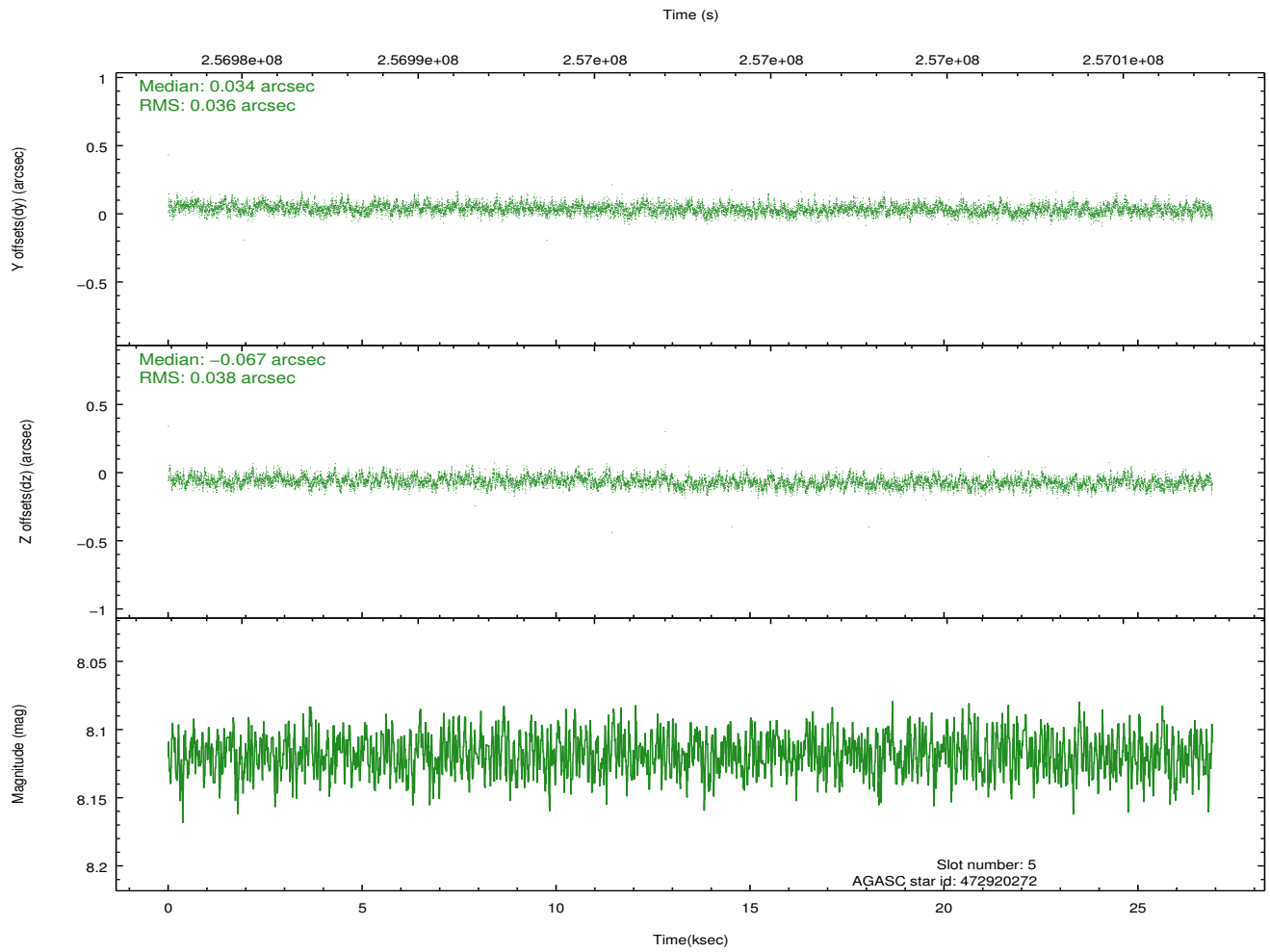
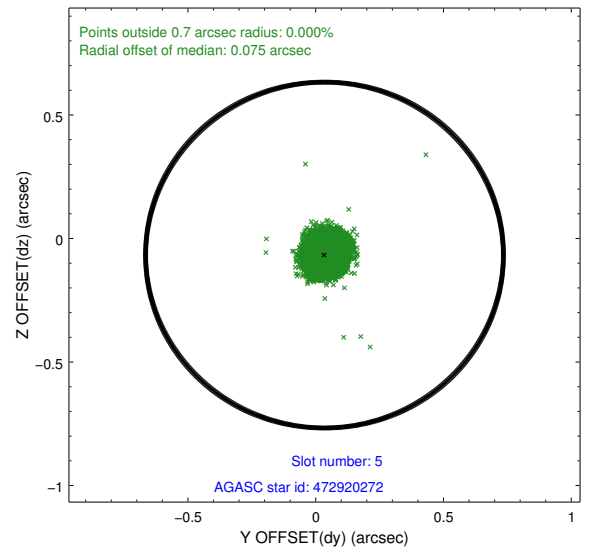
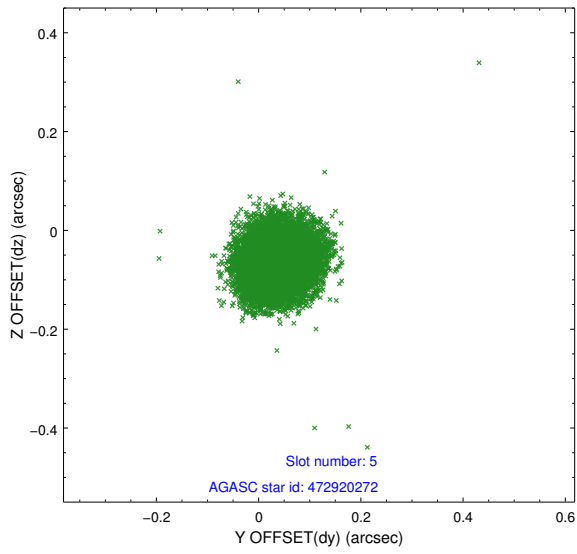
### 2.4.1 Slot 3



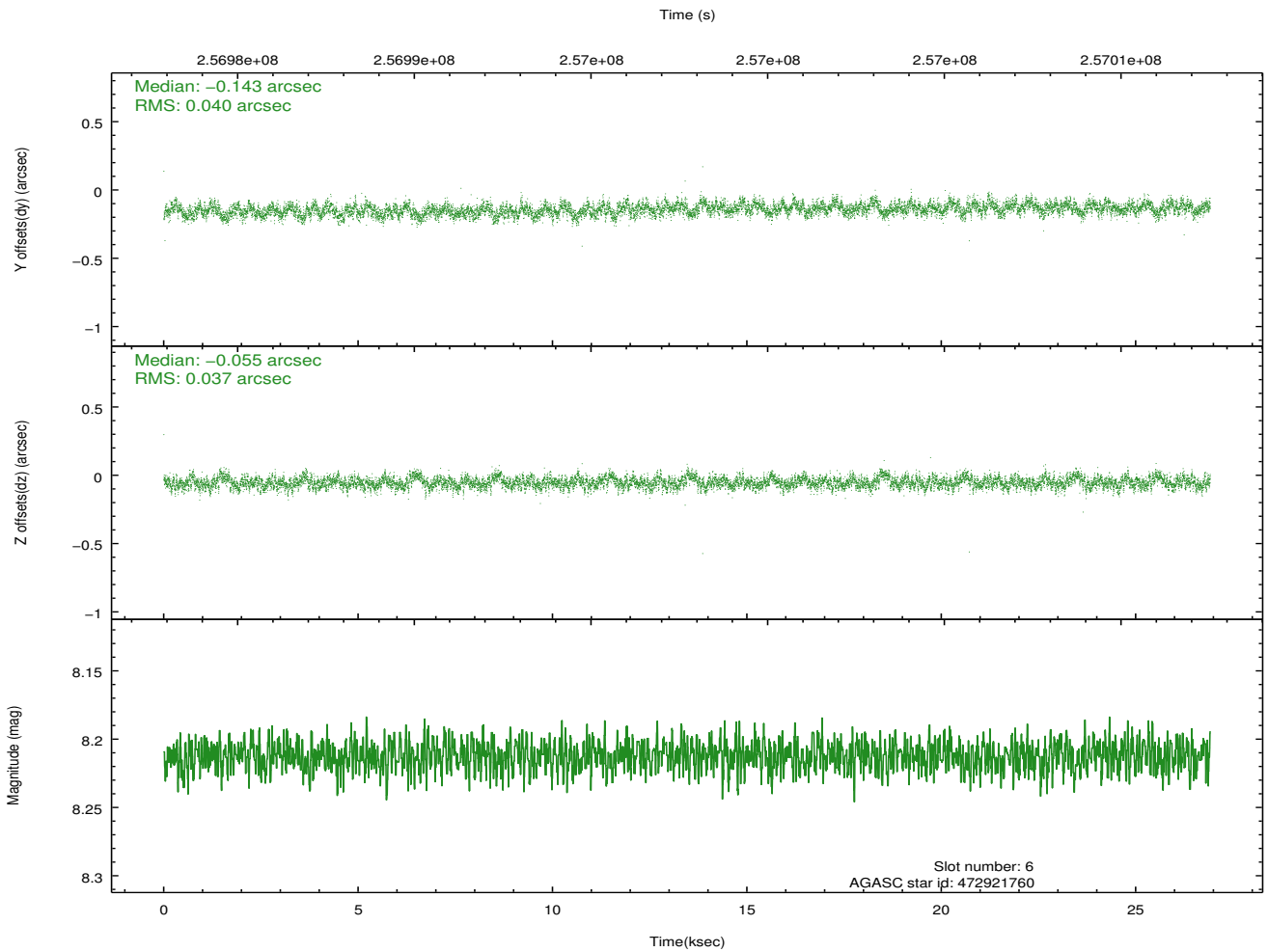
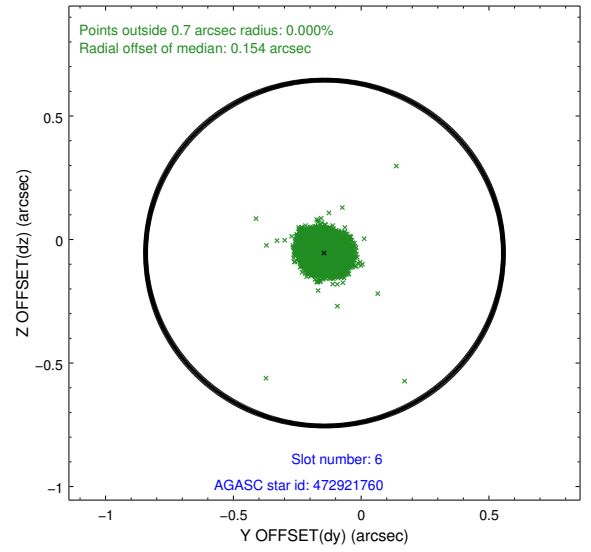
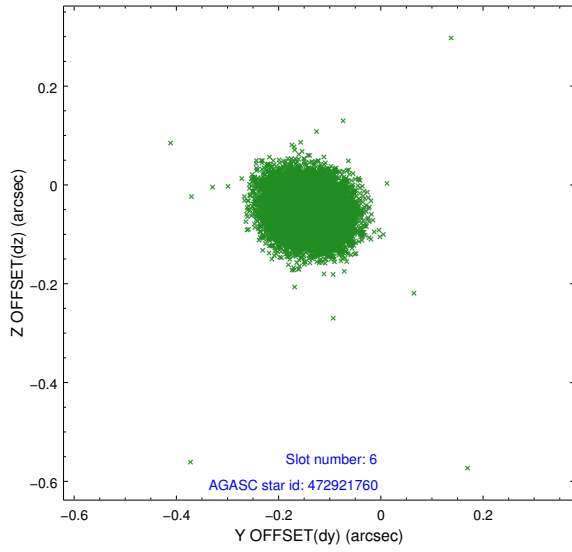
## 2.4.2 Slot 4



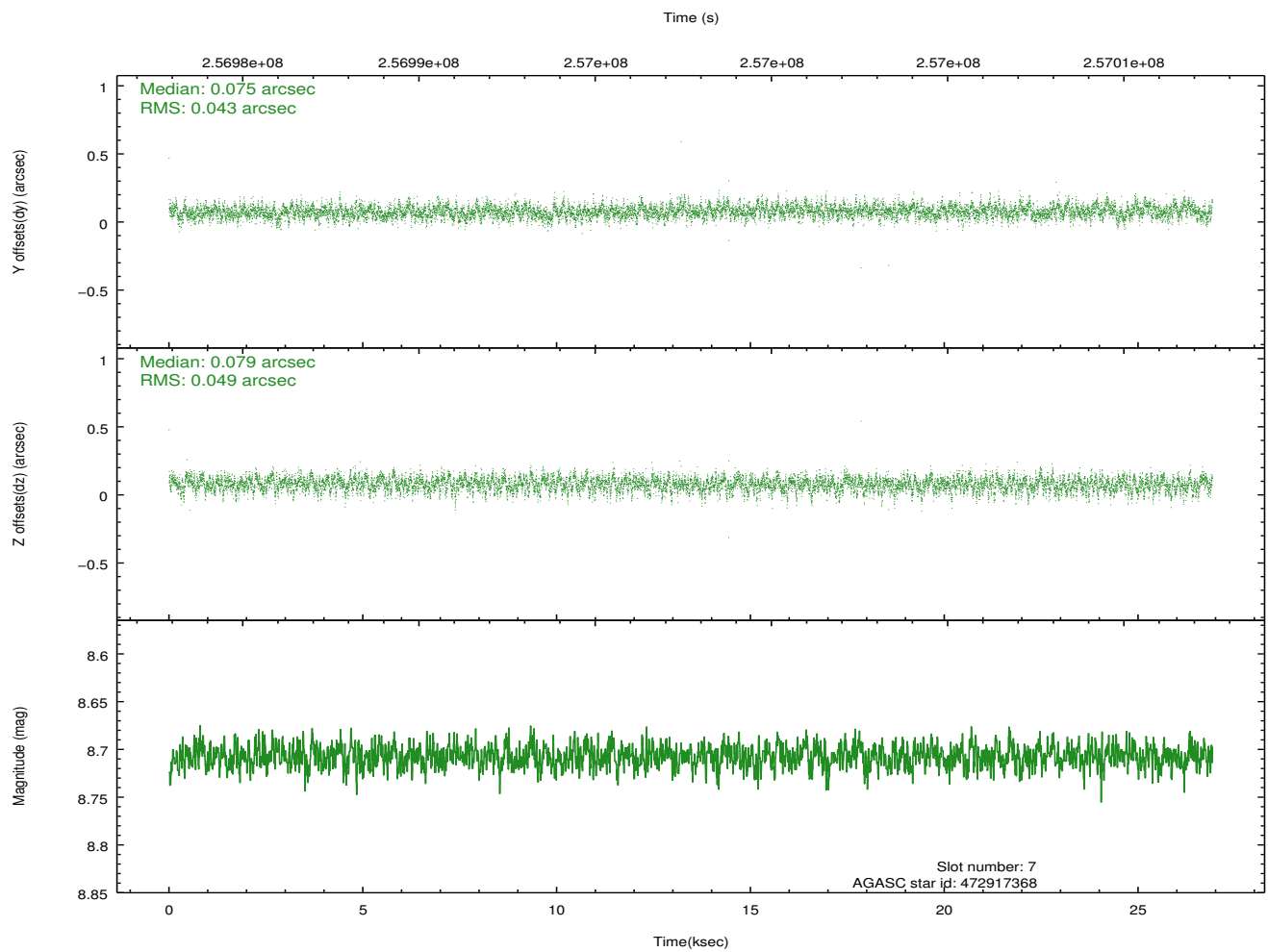
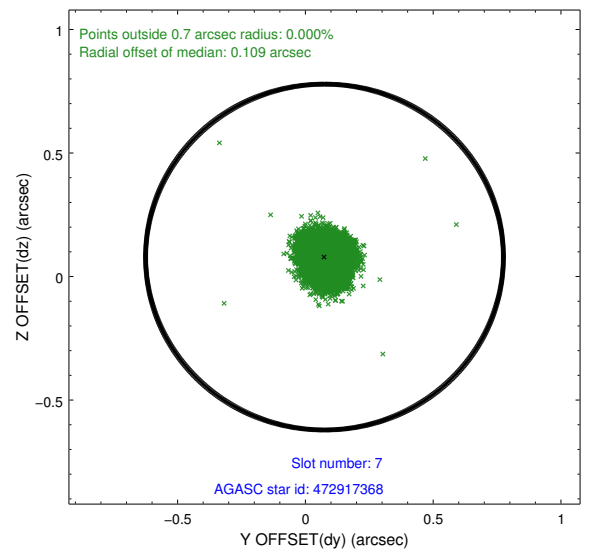
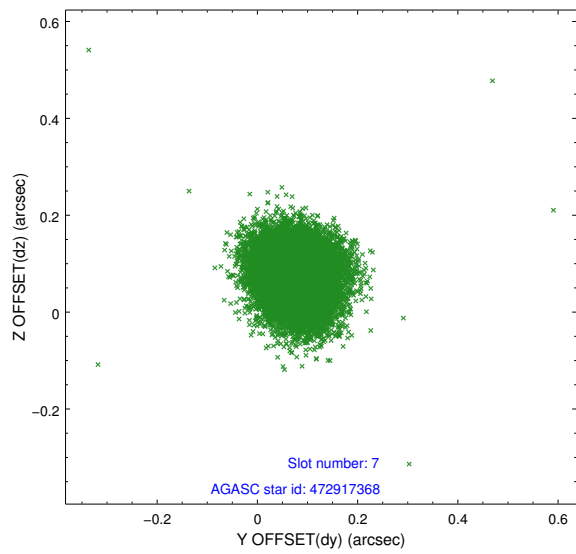
### 2.4.3 Slot 5



### 2.4.4 Slot 6

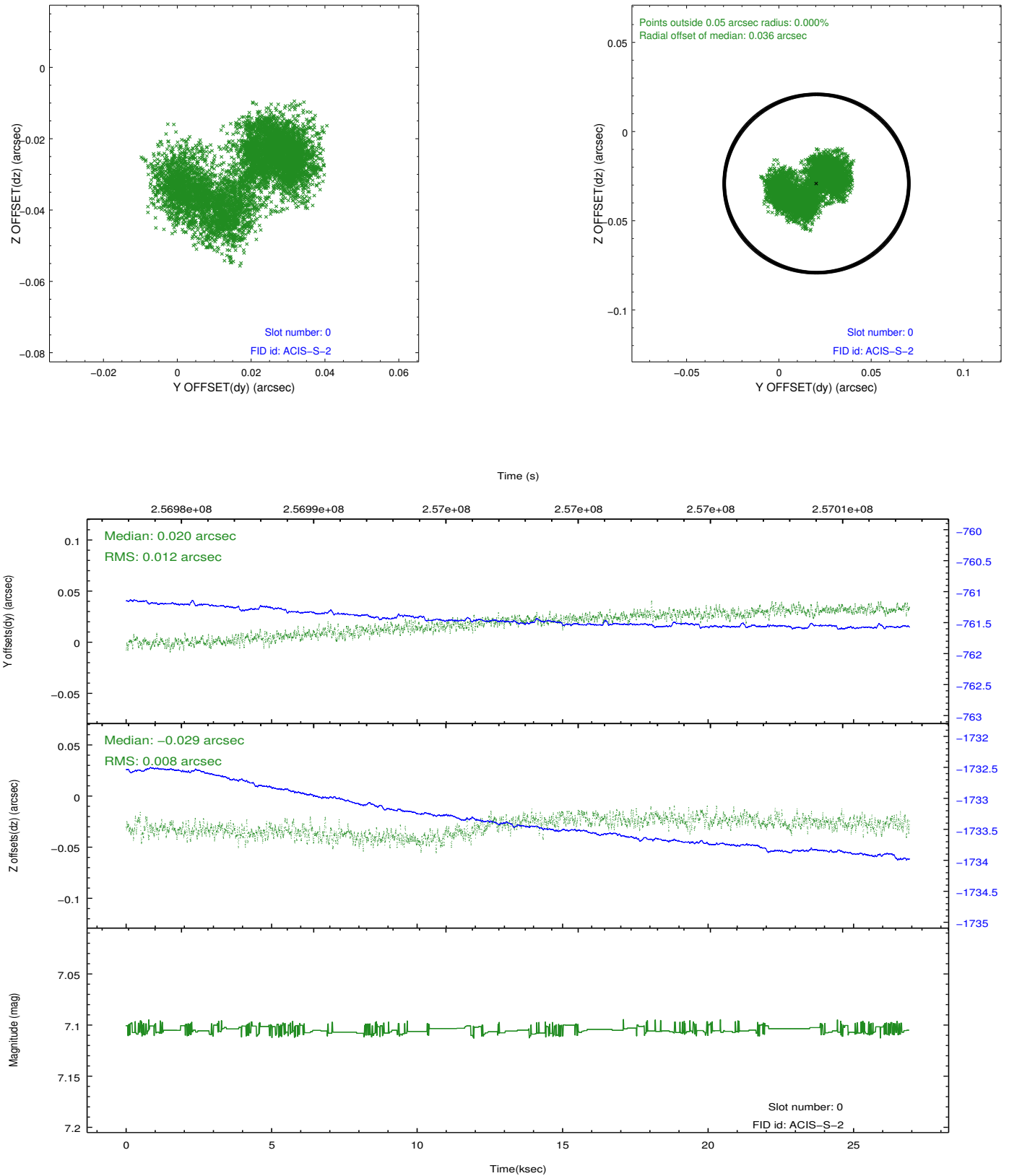


### 2.4.5 Slot 7

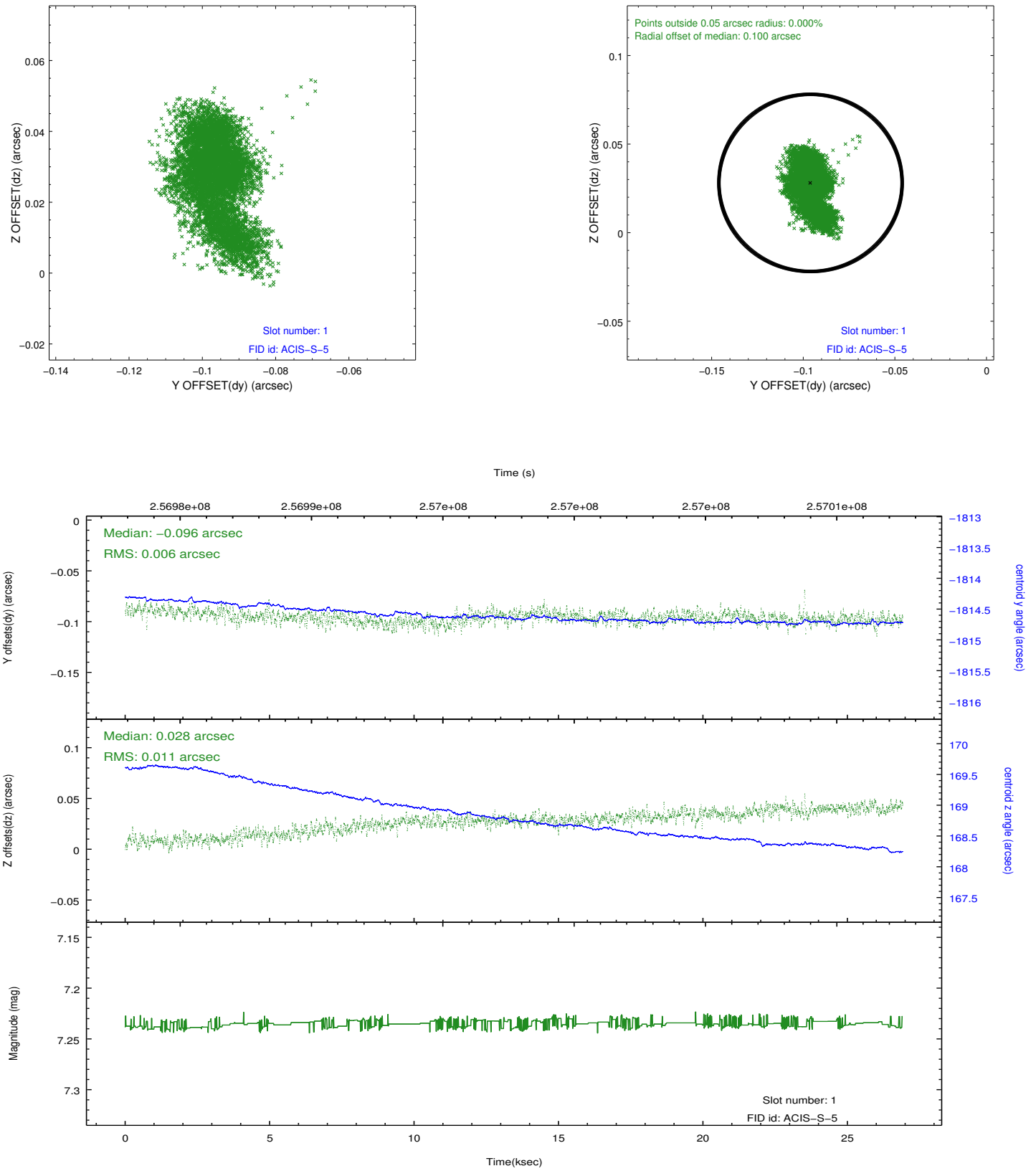


## 2.5 FID Slots

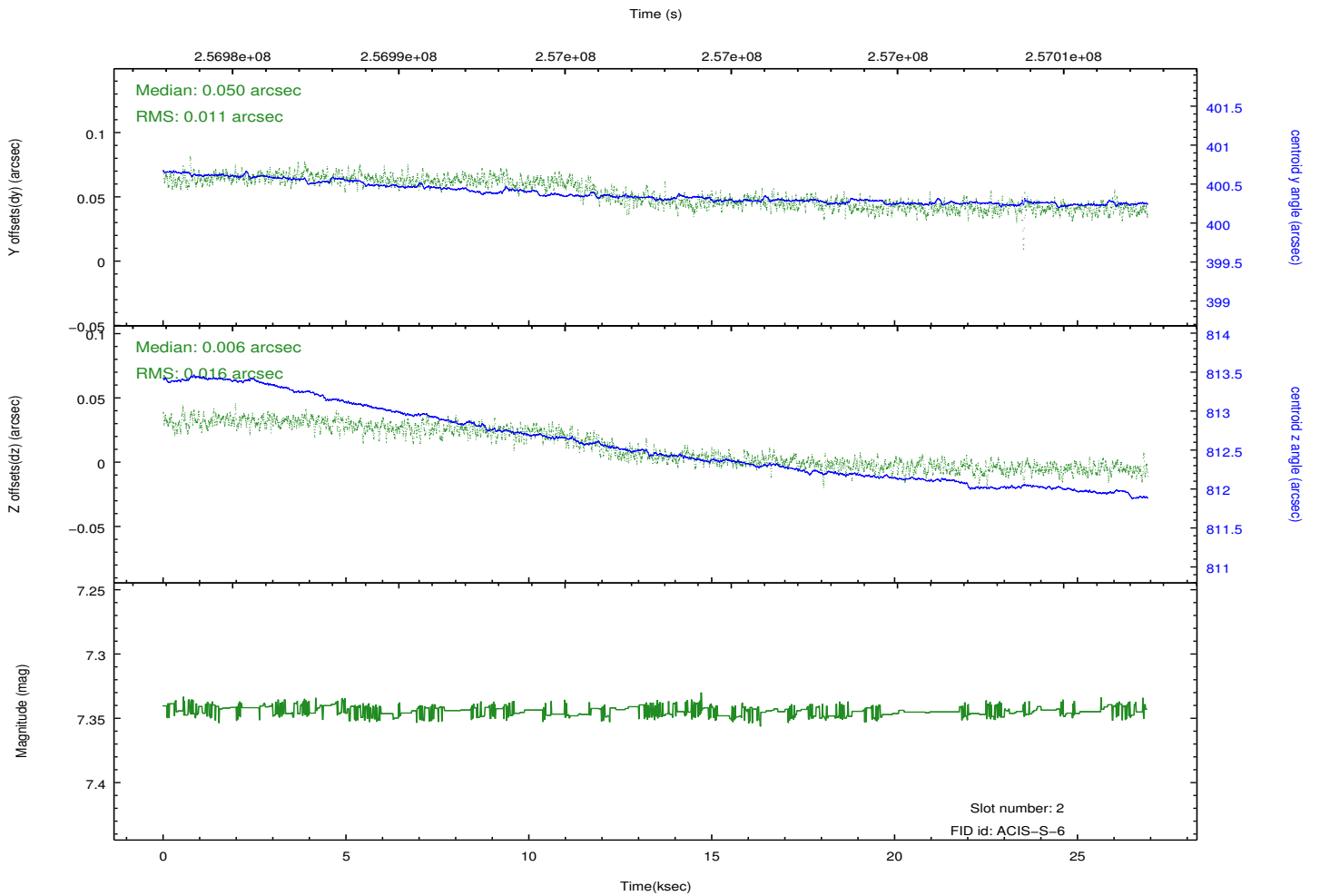
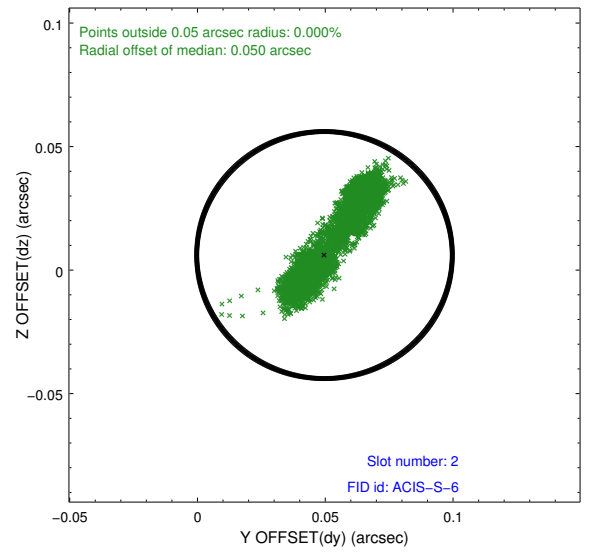
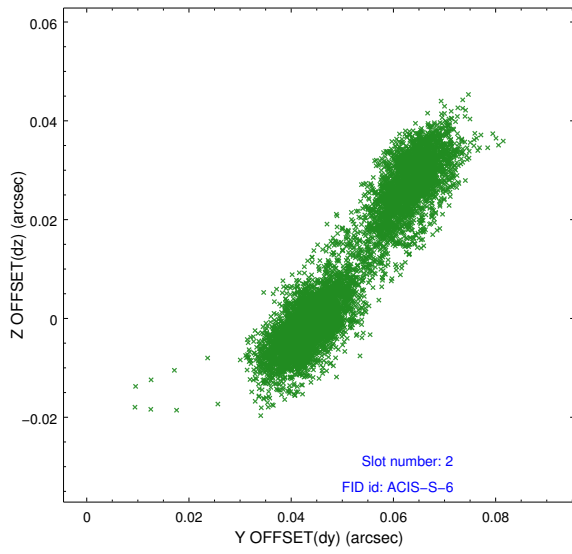
### 2.5.1 Slot 0



## 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)      | 2012.03.27    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 26.9119998    |

## A.2 Comments