

# V&V Reference Report

## L2 ASCDS Version : 10.3.3

Observation 17091 - L2 Version 1  
Chandra X-Ray Center

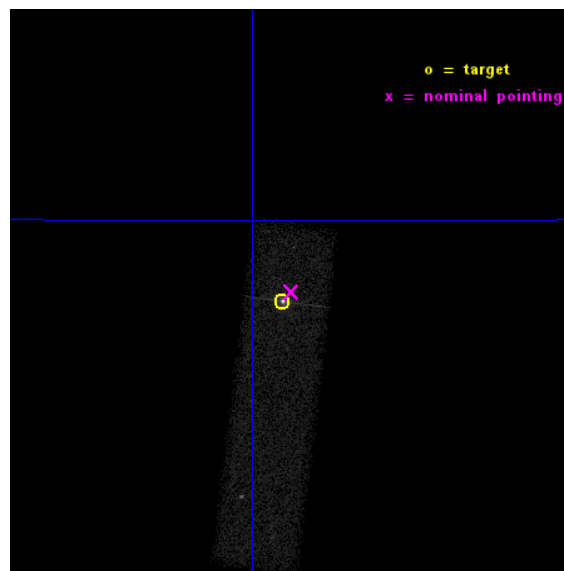
L2 Processing Date : Apr 19 2015

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# 1 Front

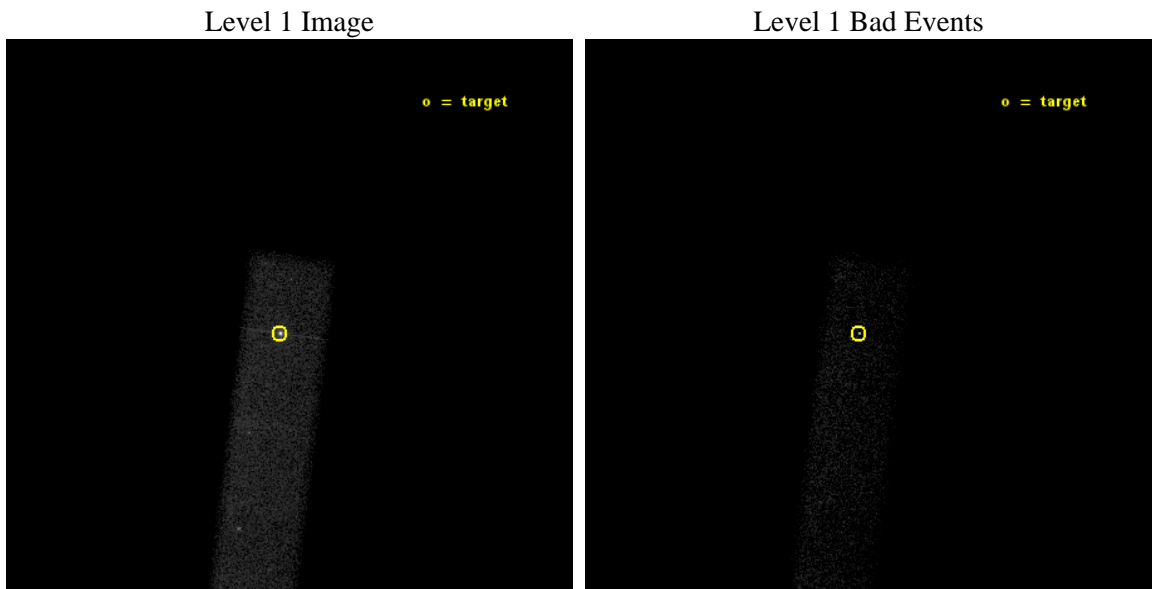
|          |  |   |
|----------|--|---|
| seq_num  | 703095   | Sequence number                             |
| obs_id   | 17091  | Observation id                              |
| title    | Solving the X-ray Origin Problem in Large-scale Jets with Chandra and Fermi Observations | Proposal title                              |
| observer | Dr Eileen Meyer  | Principal investigator                      |
| object   | 1928+738   | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 291.952083   | Observer's specified target RA [deg]        |
| dec_targ | 73.967222  | Observer's specified target Dec [deg]       |
| ra_nom   | 291.93786881285  | Nominal RA [deg]                            |
| dec_nom  | 73.970988924413  | Nominal Dec [deg]                           |
| roll_nom | 97.354394008346  | Nominal Roll [deg]                          |
| revision | 1  | Processing version of data                  |
| ontime   | 37199.997782707  | Sum of GTIs [s]                             |
| livetime | 35384.759614484  | Livetime [s]                                |
| ontime7  | 37199.997782707  | Sum of GTIs [s]                             |
| l2events | 47398  | Number of level 2 events                    |



## 2 OBI

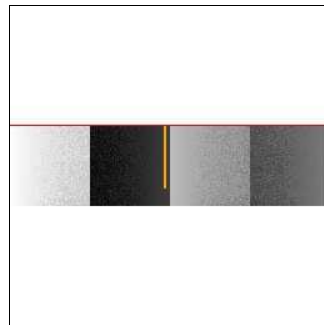
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 1                   | Obi number                     | sched_exp_time | 37139.154000    | [s] Scheduled observation exposure time |
| ascdsver | 10.3.3              | Processing system revision     | ontime         | 37199.997782707 | Sum of GTIs [s]                         |
| caldbver | 4.6.7               | &#160                          | ontime7        | 37199.997782707 | Sum of GTIs [s]                         |
| date     | 2015-04-19T21:09:26 | Date and time of file creation | l1events       | 74609           | Number of level 1 events                |
| revision | 1                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

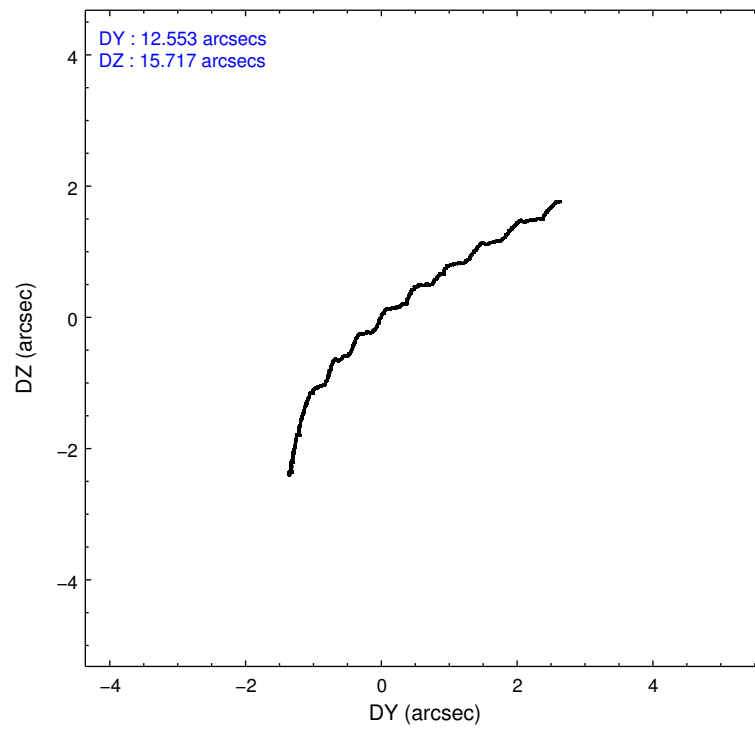
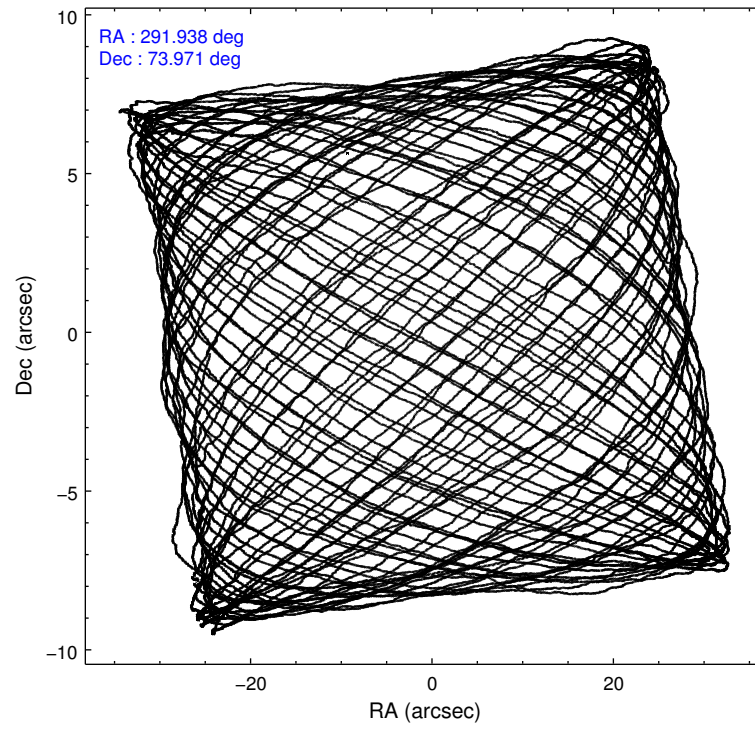
|                 | <b>ccd 7</b> |
|-----------------|--------------|
| level 1 events  | 74609        |
| rejected events | 26279        |
| rejected %      | 35%          |

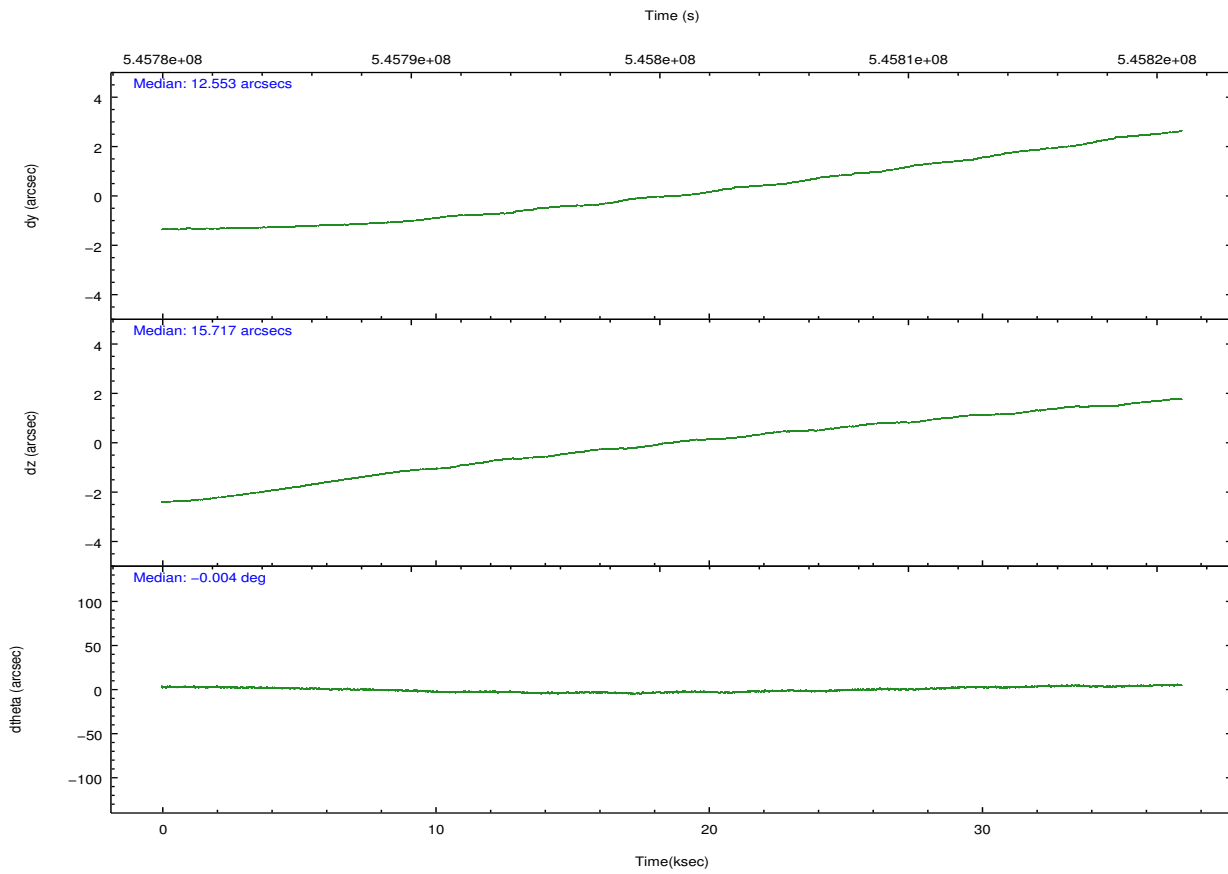
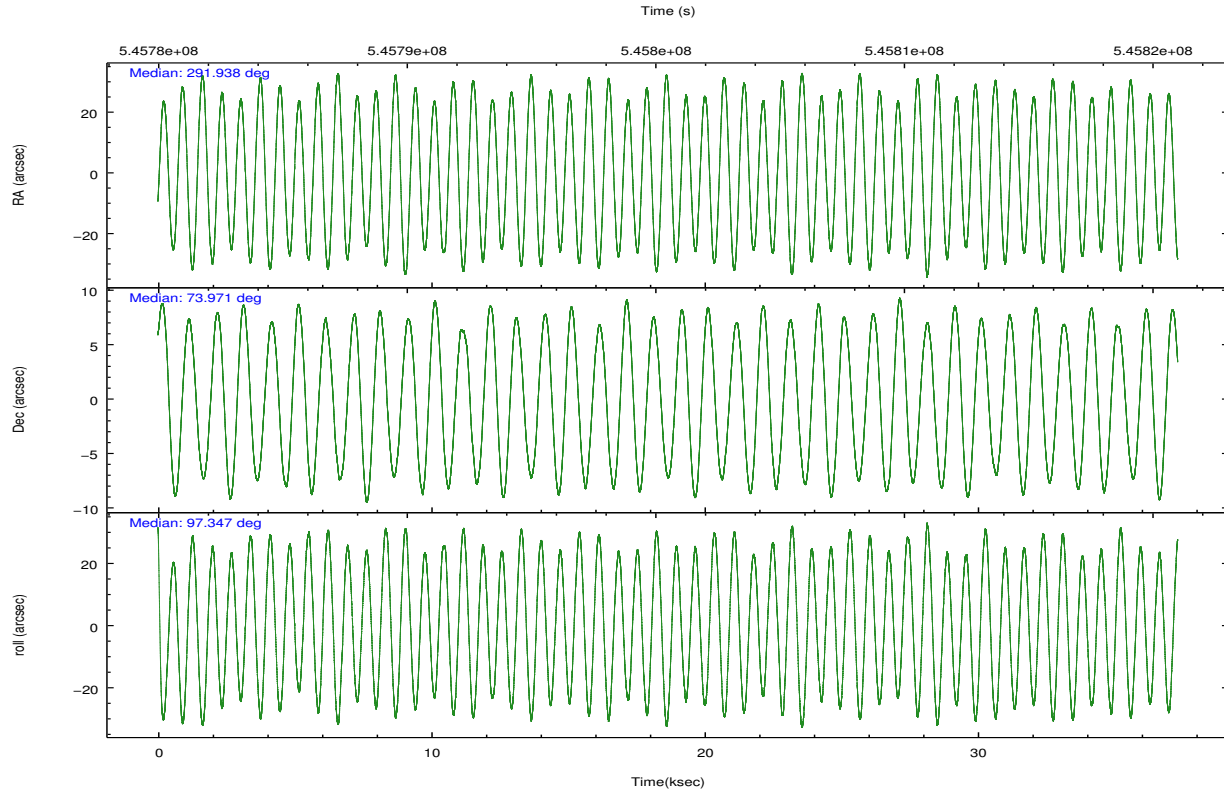
|                | <b>ccd 7</b> |
|----------------|--------------|
| grade 0 events | 8003         |
|                | 10%          |
| grade 1 events | 335          |
|                | 0%           |
| grade 2 events | 11108        |
|                | 14%          |
| grade 3 events | 5444         |
|                | 7%           |
| grade 4 events | 5423         |
|                | 7%           |
| grade 5 events | 6443         |
|                | 8%           |
| grade 6 events | 18353        |
|                | 24%          |
| grade 7 events | 19500        |
|                | 26%          |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-7              | ACIS-7               | 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                 | 291.999089          | 291.9378688128543    | Subarray requested                    | CUSTOM    | 1/4     |
| [deg] Pointing Dec                | 73.949377           | 73.97098892441311    | Subarray start row                    | 385       | 385     |
| [deg] Pointing Roll               | 97.138931           | 97.35439400834603    | Subarray row count                    | 256       | 256     |
| [mm] SIM focus pos                | -0.684267           | -0.6828225247311905  | Alternating exposures requested       | N         | N       |
| [mm] SIM defocus                  | 0                   | 0.001444936568705701 | [s] Primary exposure time             | 0.000000  | 0.8     |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 545781975.184000    | 545780967.02317      |                                       |           |         |
| Observation start date            | 2015-04-18T22:05:08 | 2015-04-18T21:49:27  |                                       |           |         |
| [s] Observation end time (MET)    | 545819114.184000    | 545819339.43782      |                                       |           |         |
| Observation end date              | 2015-04-19T08:24:07 | 2015-04-19T08:28:59  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect





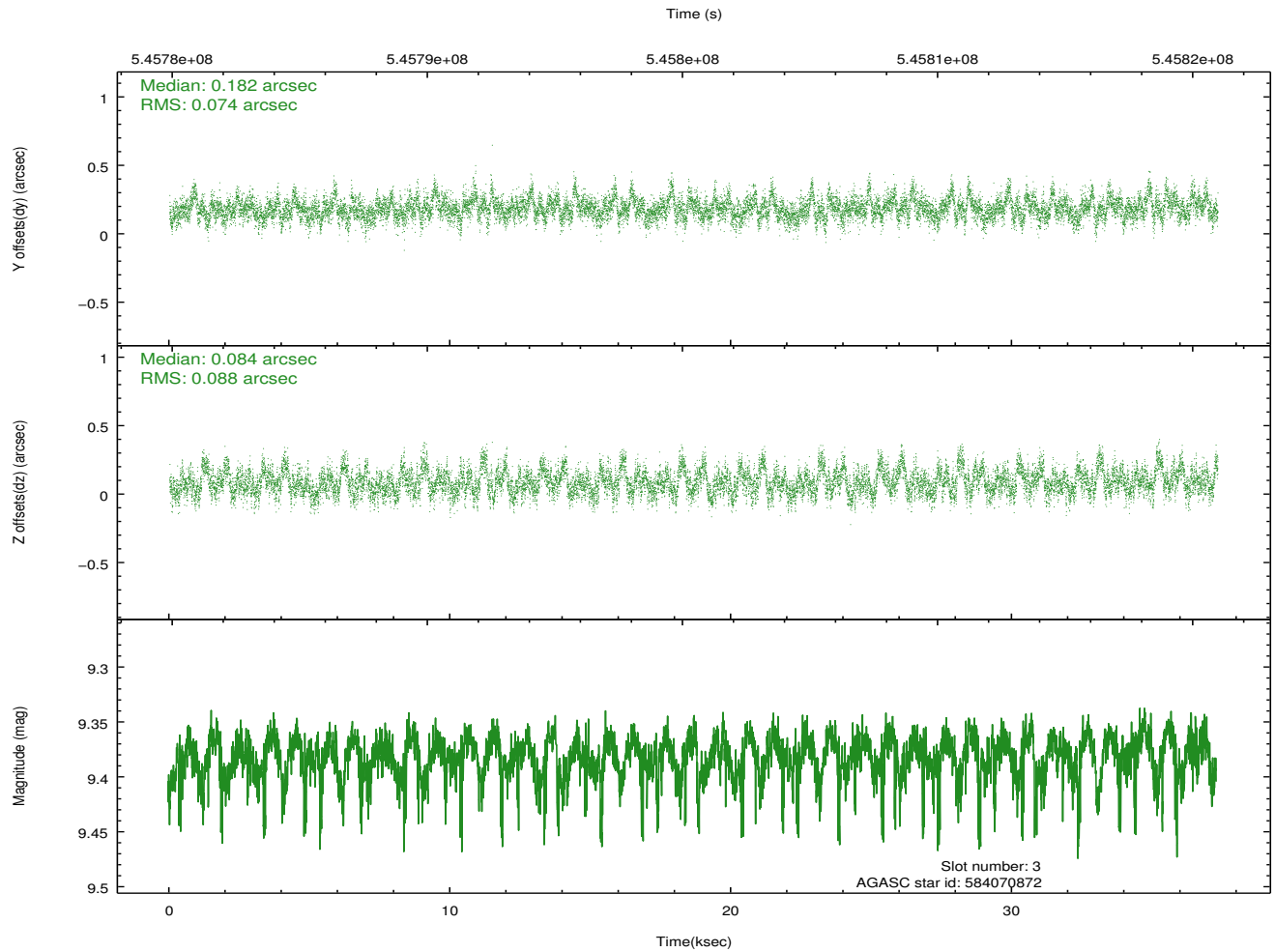
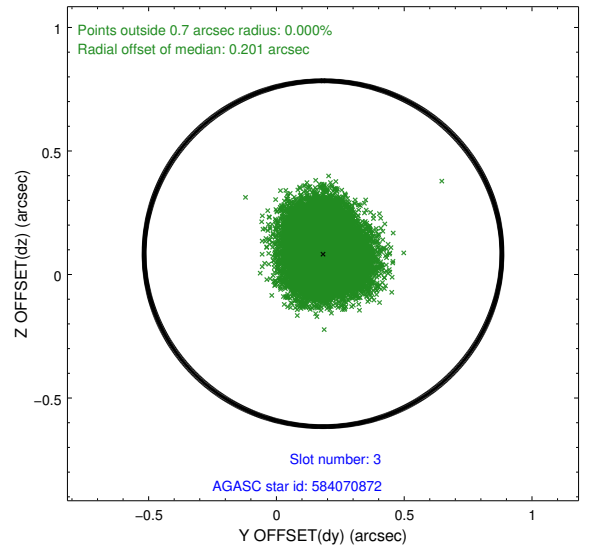
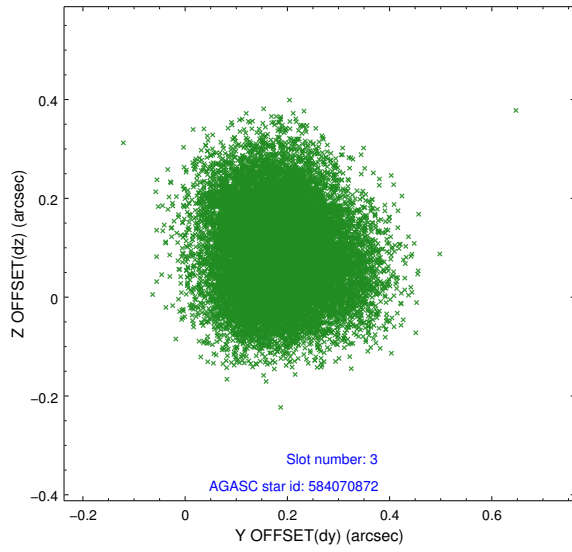
### Slot Statistics

| slot | status | used | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    |      | ACIS-S-2  | 7.05 | 9102  | -0.079 | -0.043 | 0.023 | 0.036 | 0.000000   | 0.000000  | -765.74  | -1736.98 |
| 1    | FID    |      | ACIS-S-4  | 7.15 | 9103  | 0.250  | 0.051  | 0.031 | 0.058 | 0.000000   | 0.000000  | 2147.85  | 171.59   |
| 2    | FID    |      | ACIS-S-5  | 7.18 | 9101  | -0.206 | 0.004  | 0.036 | 0.053 | 0.000000   | 0.000000  | -1818.69 | 165.22   |
| 3    | GUIDE  | used | 584070872 | 9.38 | 18188 | 0.182  | 0.084  | 0.123 | 0.197 | 292.547035 | 73.360860 | -2168.27 | -297.46  |
| 4    | GUIDE  | used | 584073696 | 6.86 | 18205 | 0.042  | 0.137  | 0.075 | 0.121 | 293.792631 | 74.377476 | 1339.63  | -1919.66 |
| 5    | GUIDE  | used | 584201808 | 9.25 | 18196 | 0.105  | 0.124  | 0.148 | 0.237 | 294.356276 | 73.524770 | -1768.06 | -2203.41 |
| 6    | GUIDE  | used | 584060056 | 8.58 | 18203 | -0.160 | -0.194 | 0.097 | 0.156 | 289.622660 | 74.497909 | 2288.25  | 2017.52  |
| 7    | GUIDE  | used | 584061240 | 8.87 | 18196 | -0.170 | -0.152 | 0.106 | 0.180 | 289.635081 | 74.472168 | 2195.30  | 2020.98  |

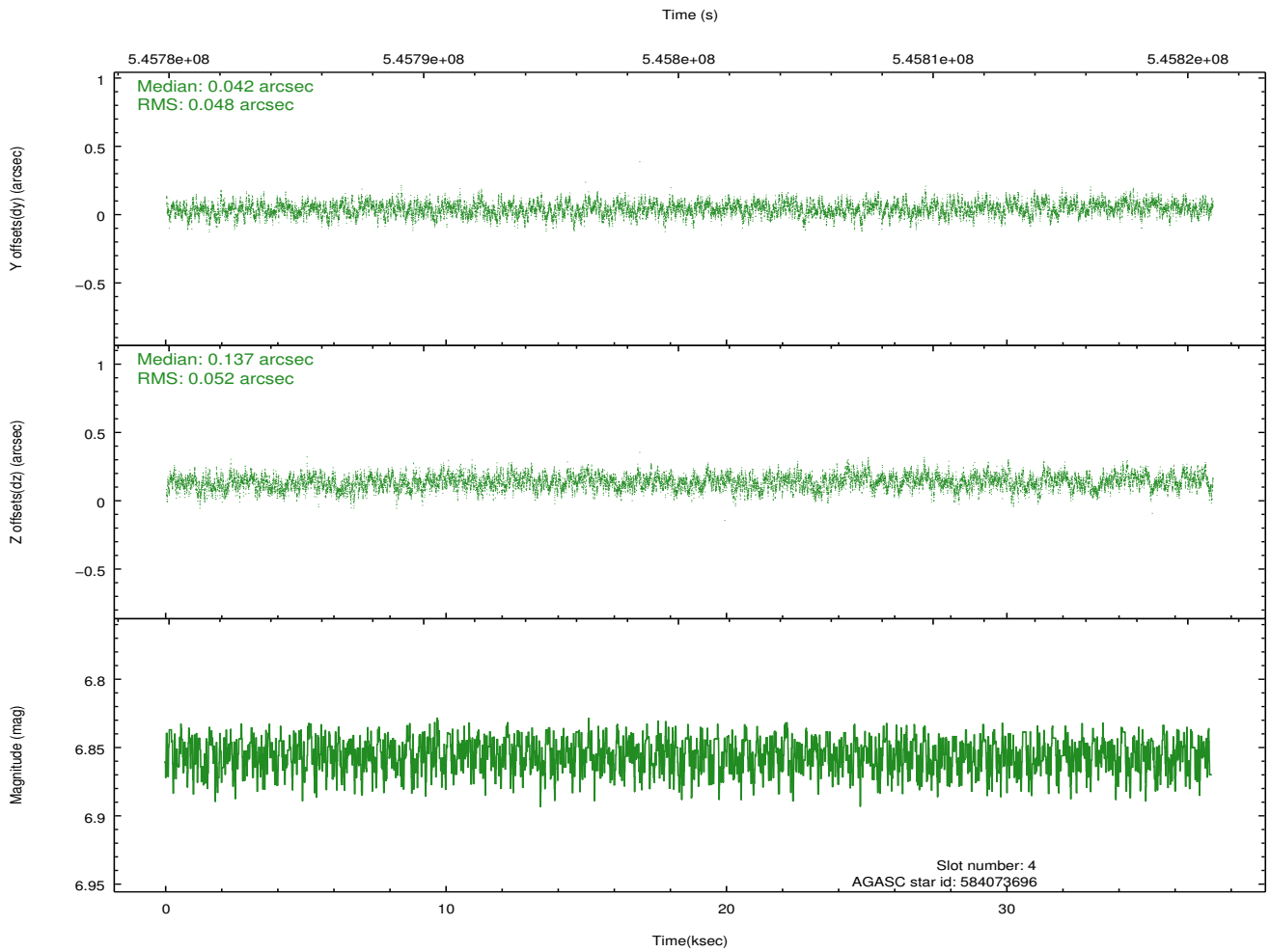
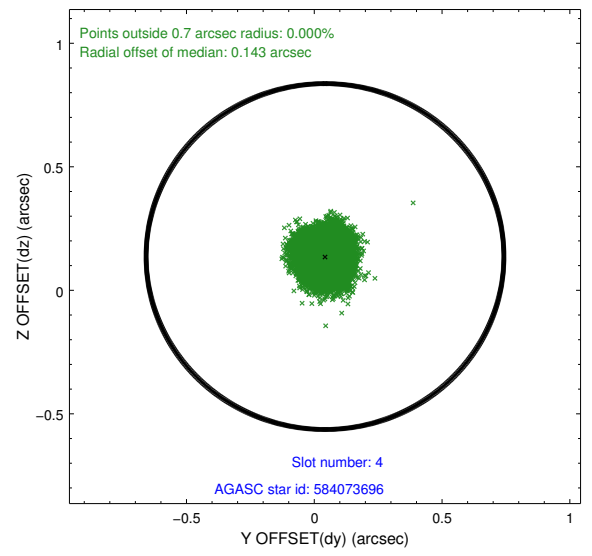
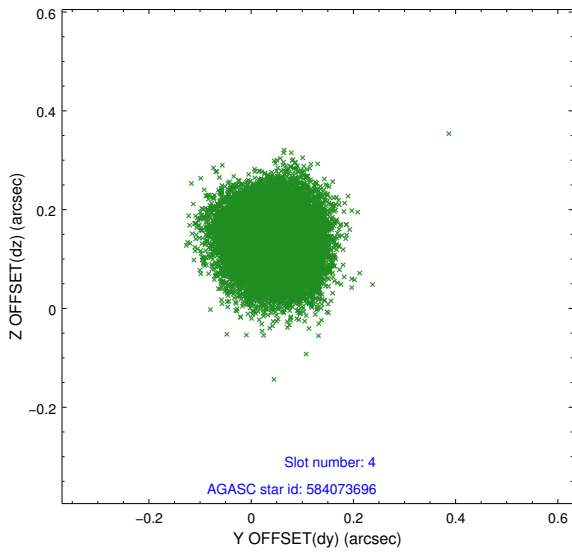
∞

## 2.4 Star Slots

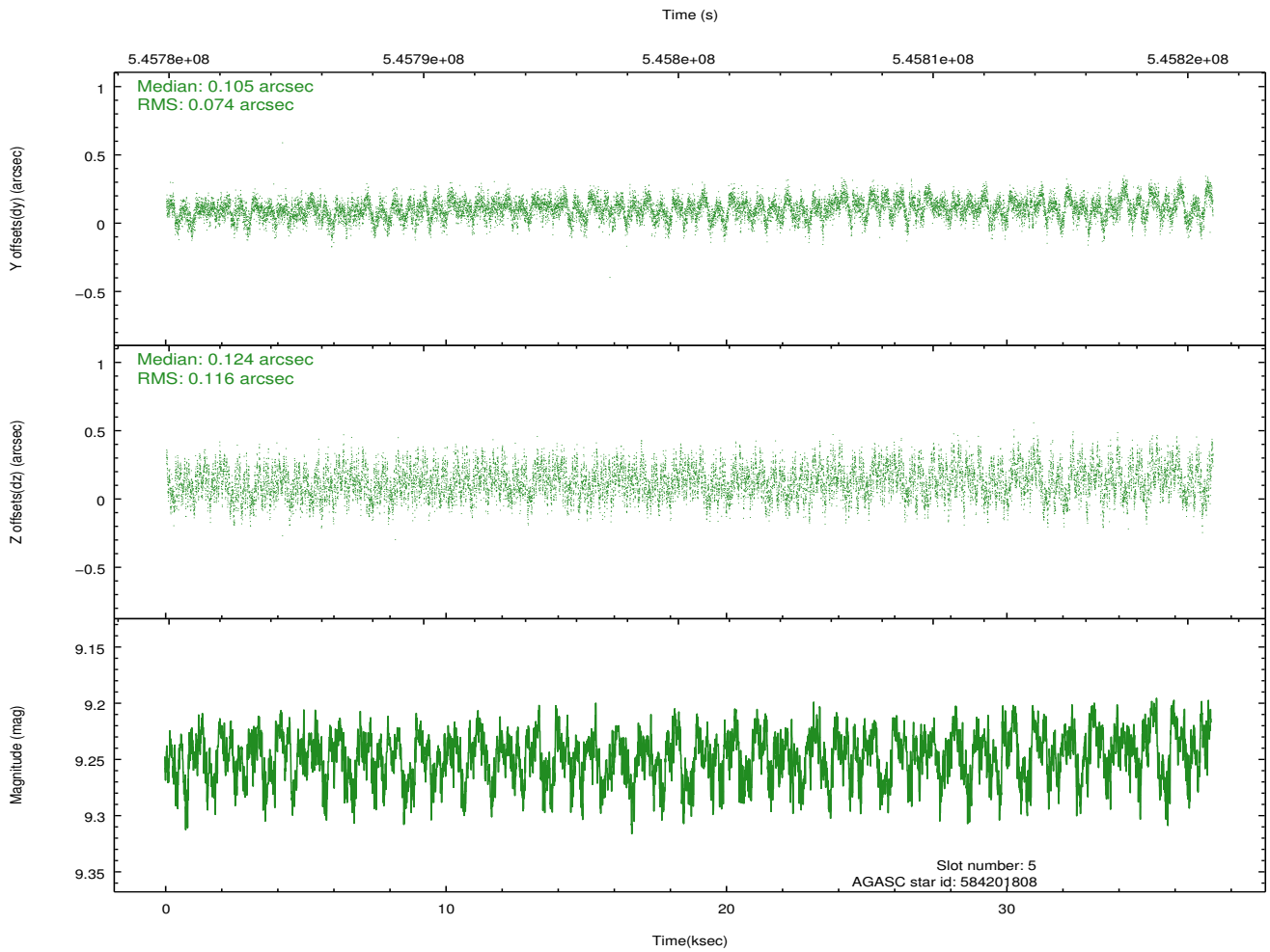
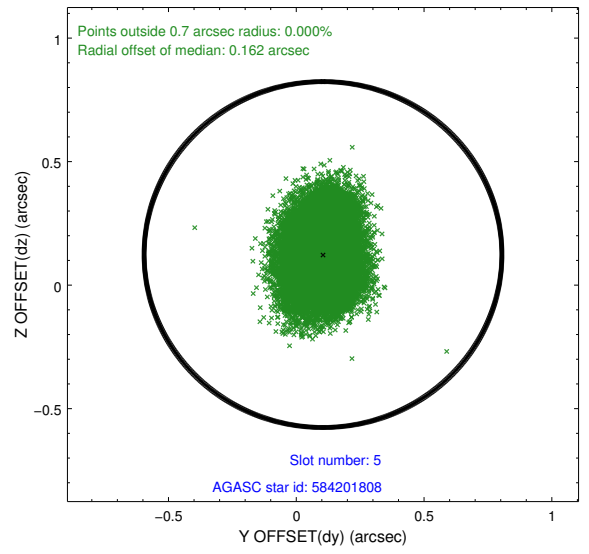
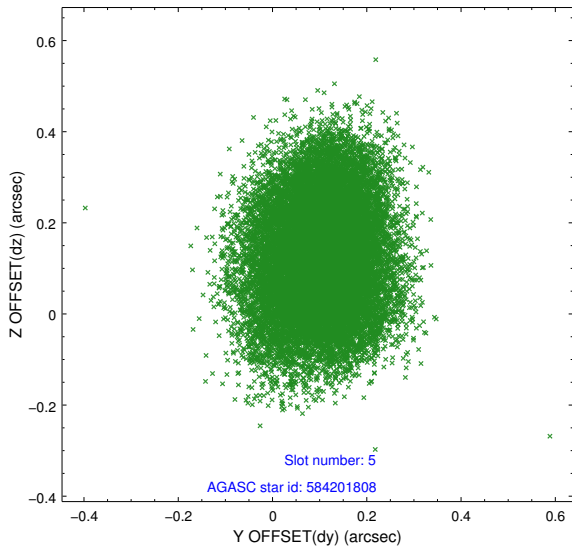
### 2.4.1 Slot 3



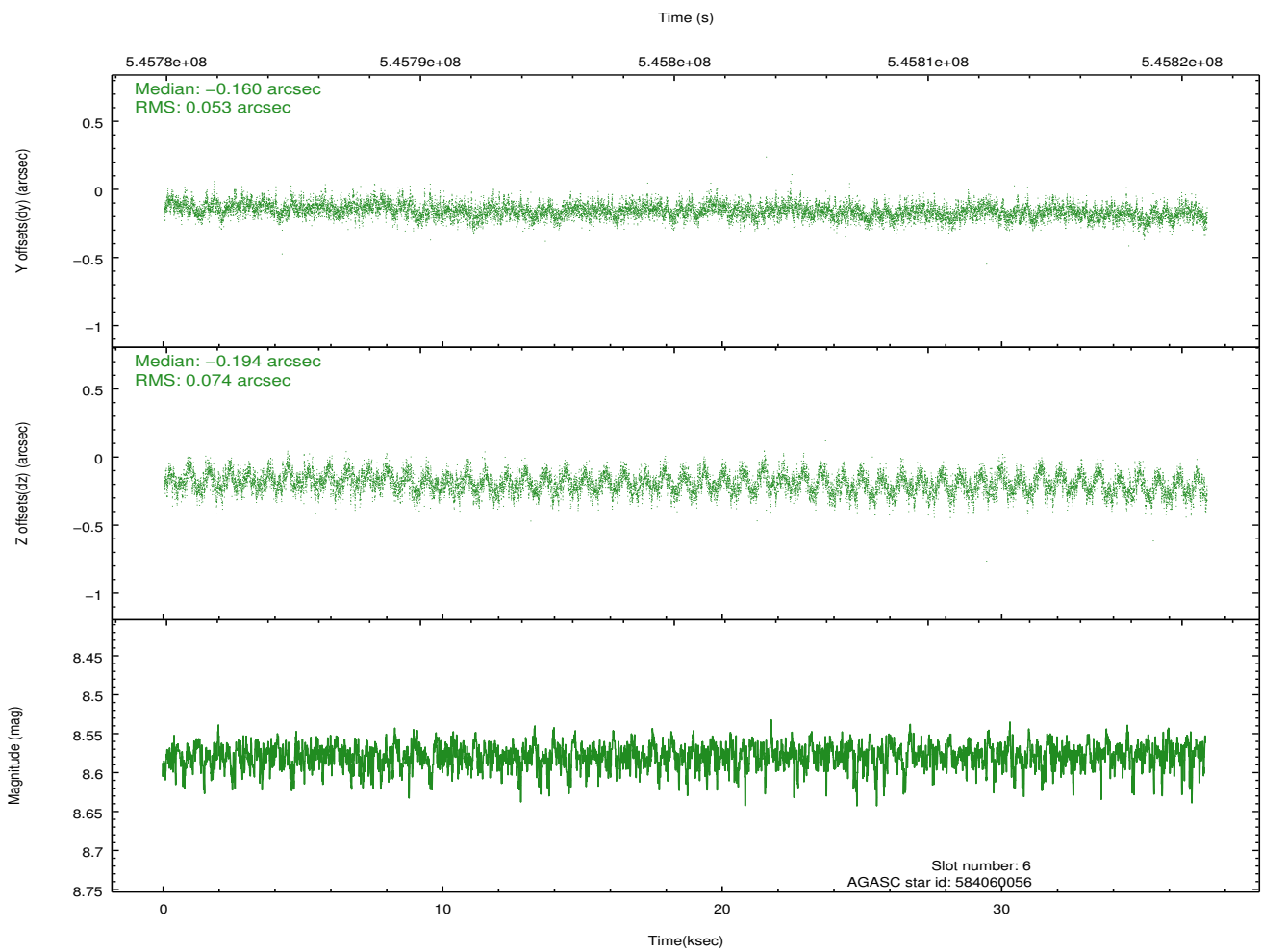
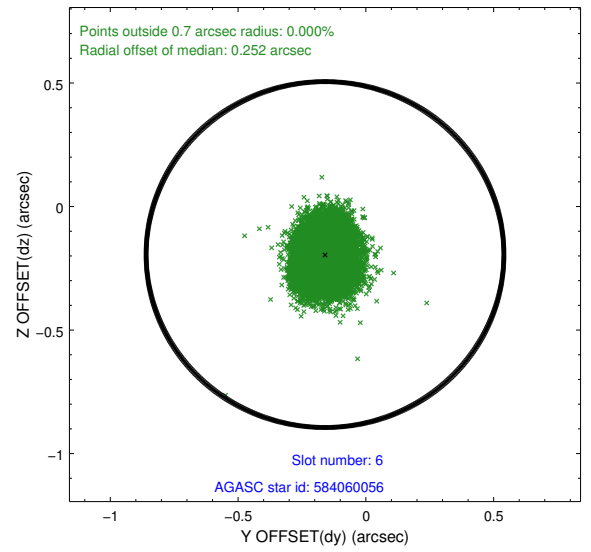
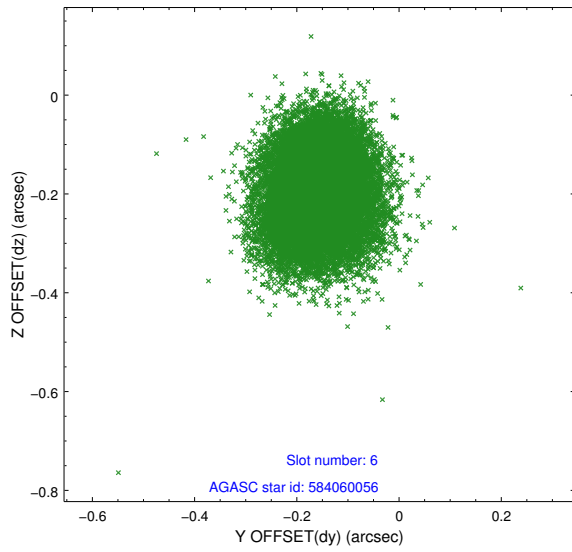
### 2.4.2 Slot 4



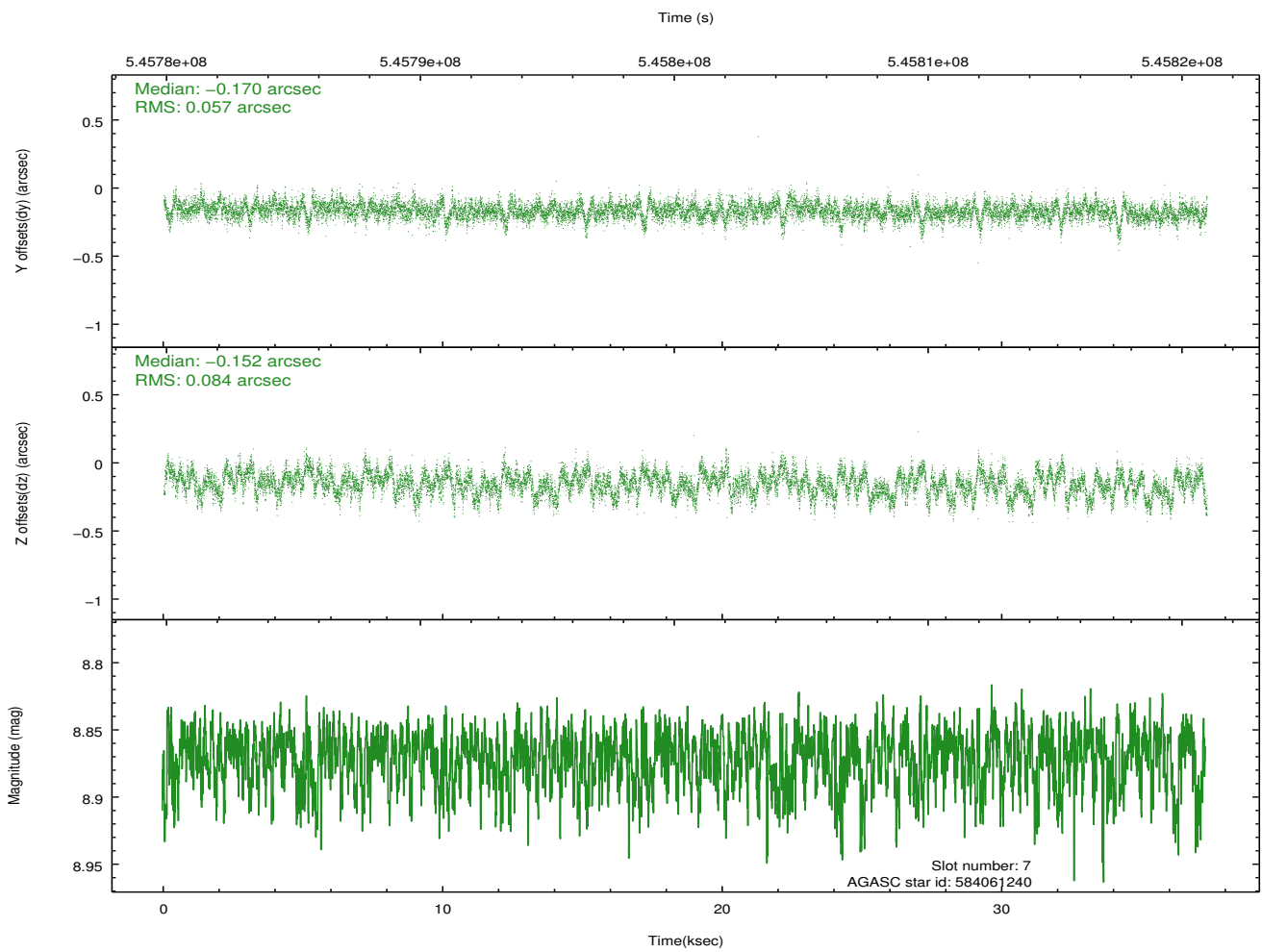
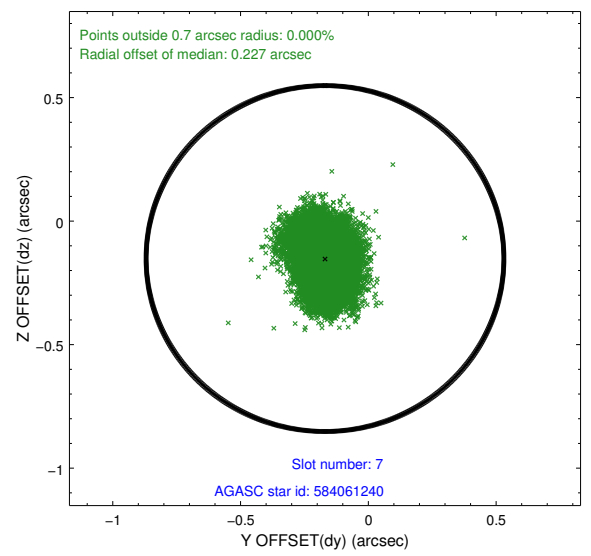
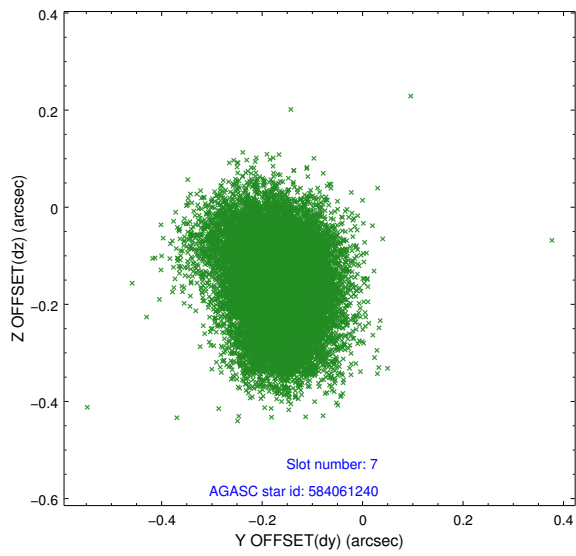
### 2.4.3 Slot 5



## 2.4.4 Slot 6

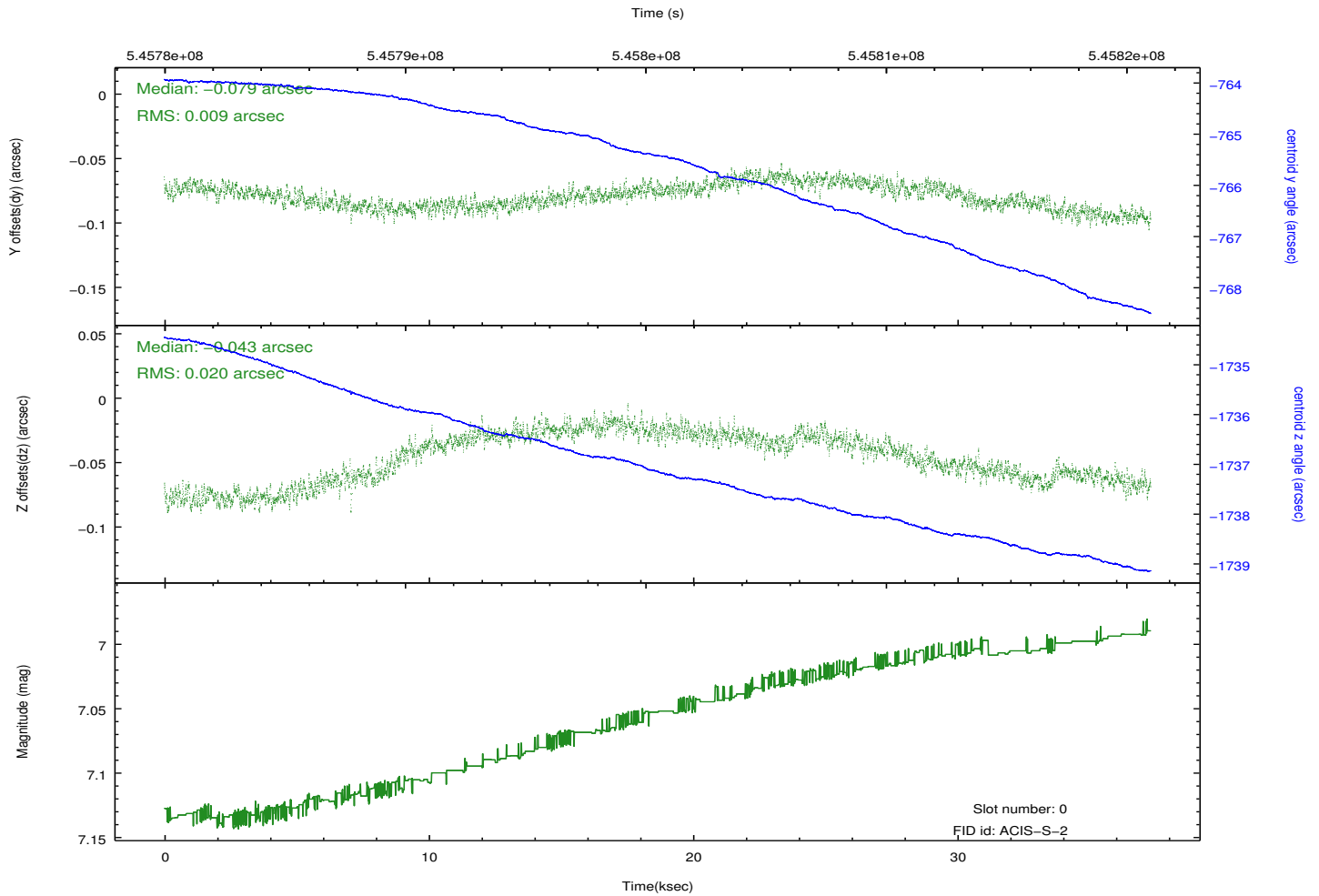
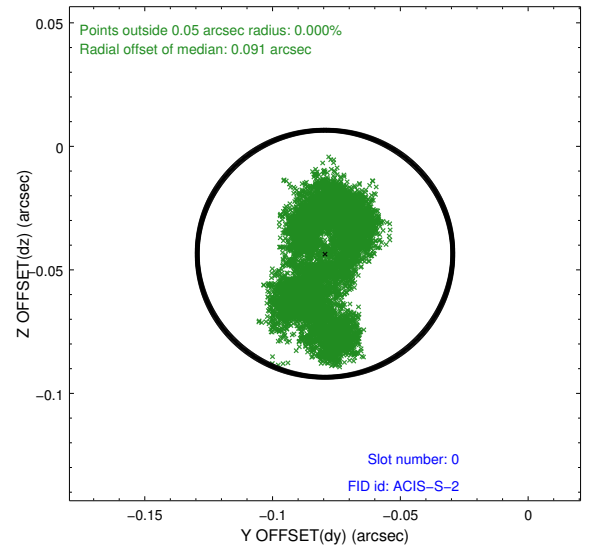
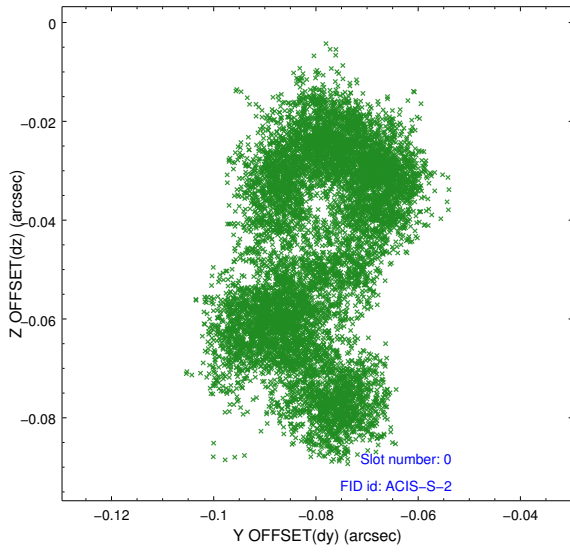


## 2.4.5 Slot 7

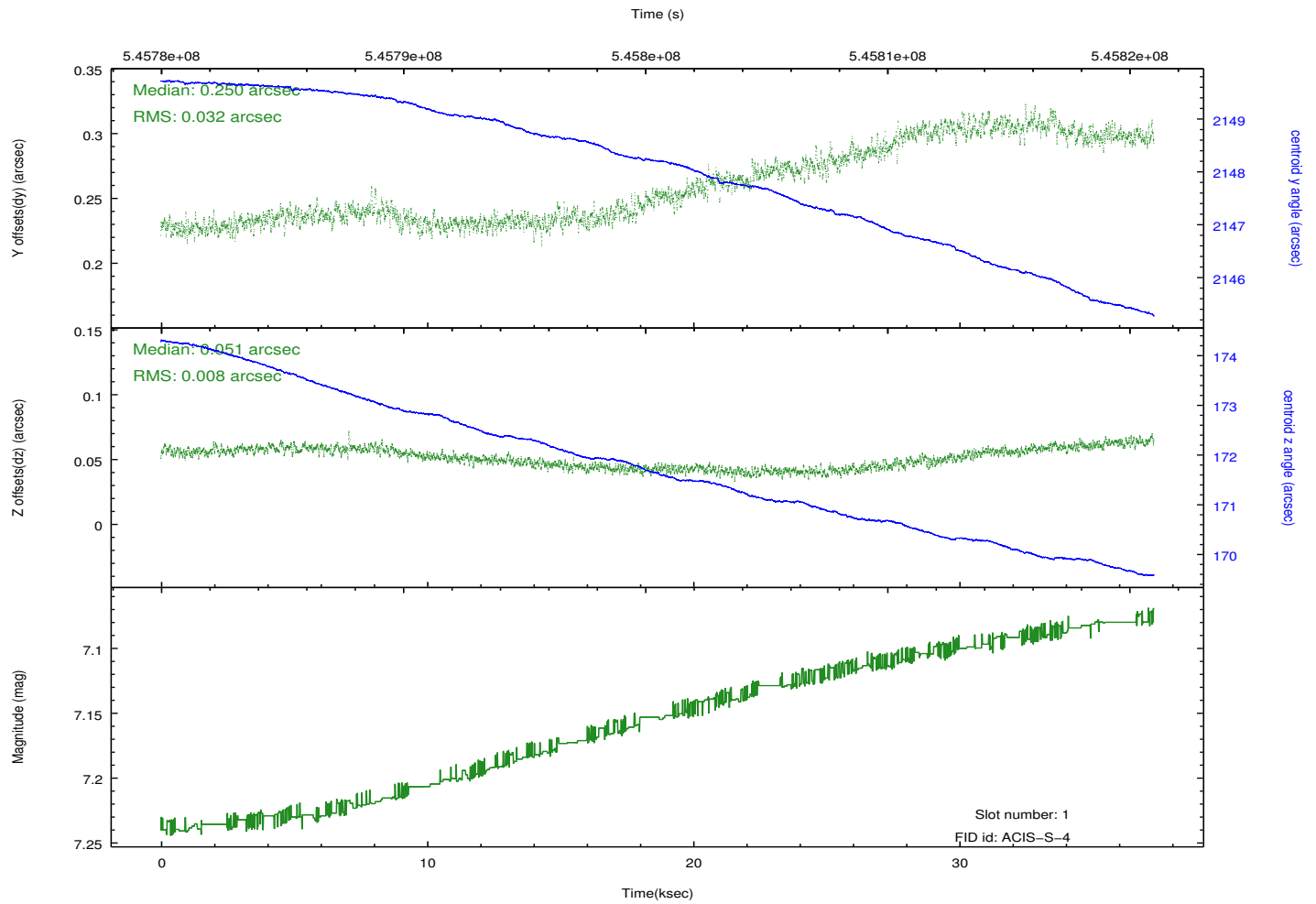
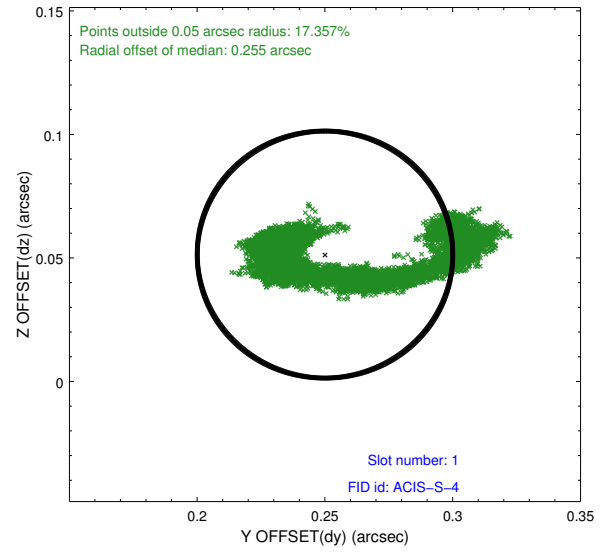
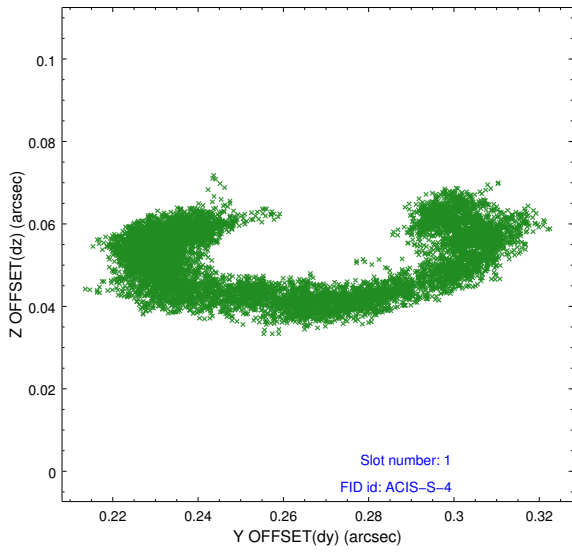


## 2.5 FID Slots

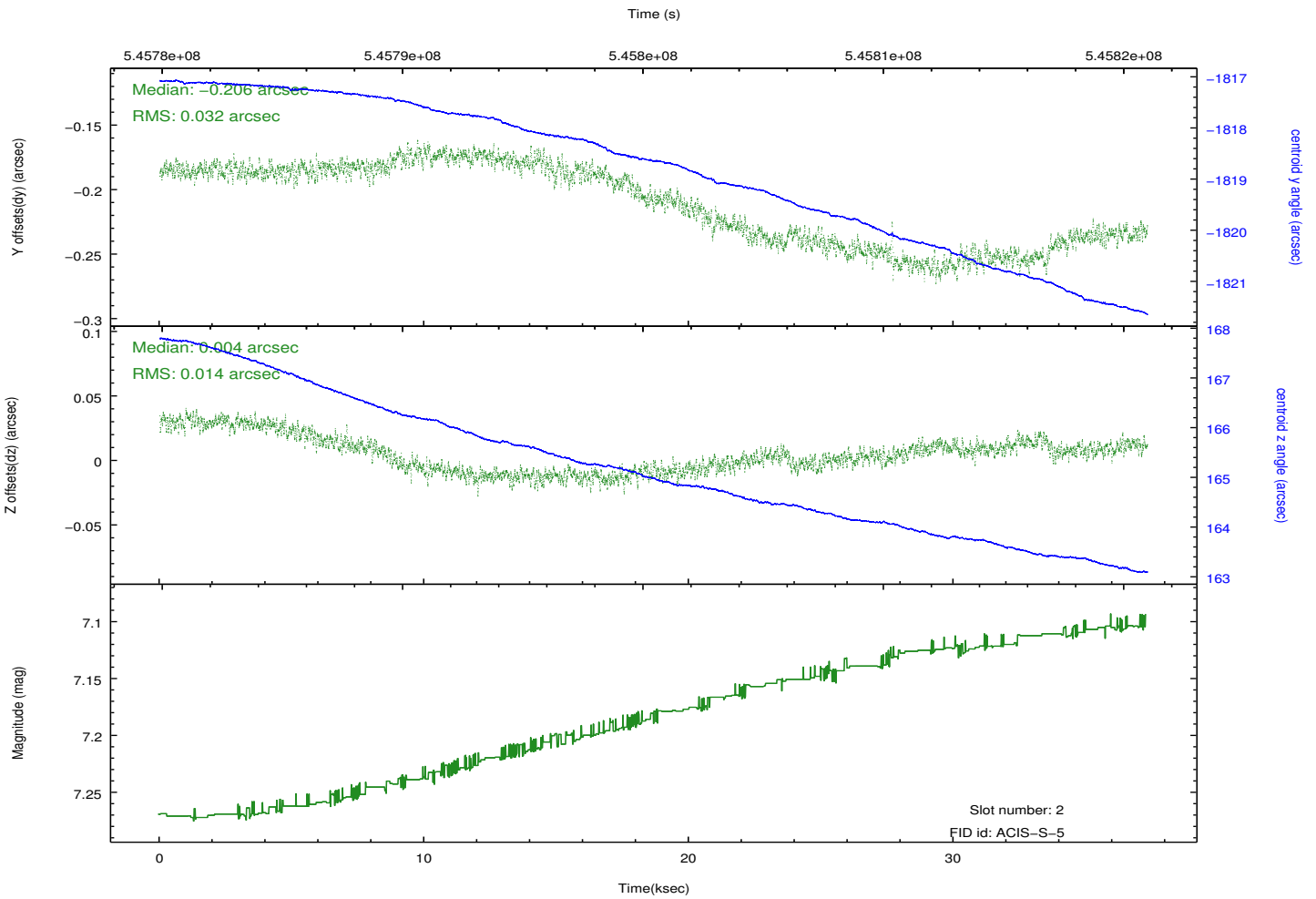
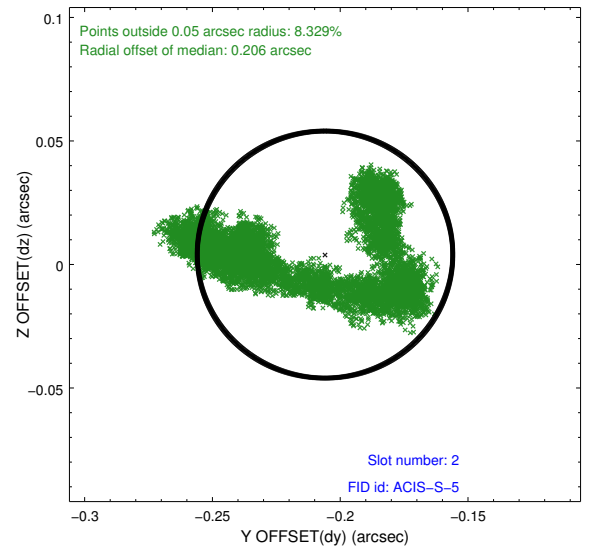
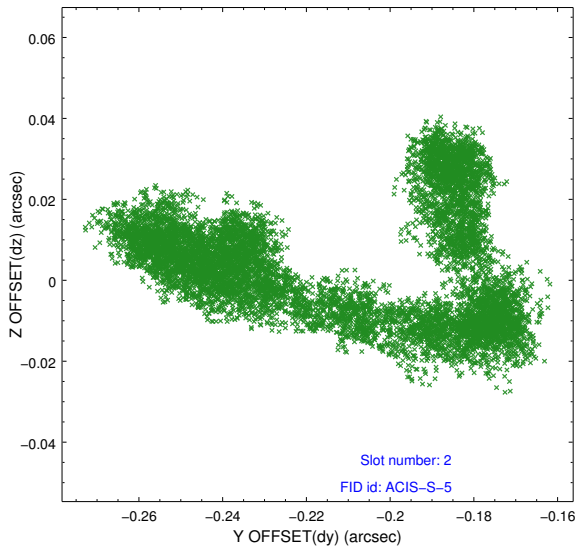
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

|                            |                 |
|----------------------------|-----------------|
| V&V Scientist              | Joy Nichols     |
| V&V Date (YYYY-MM-DD)      | 2015.04.20      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 37.199997782707 |

## A.2 Comments

Joint proposal with HST. Roll preference met.