

# V&V Reference Report

## L2 ASCDS Version : 10.4.2.1

Observation 16964 - L2 Version 1  
Chandra X-Ray Center

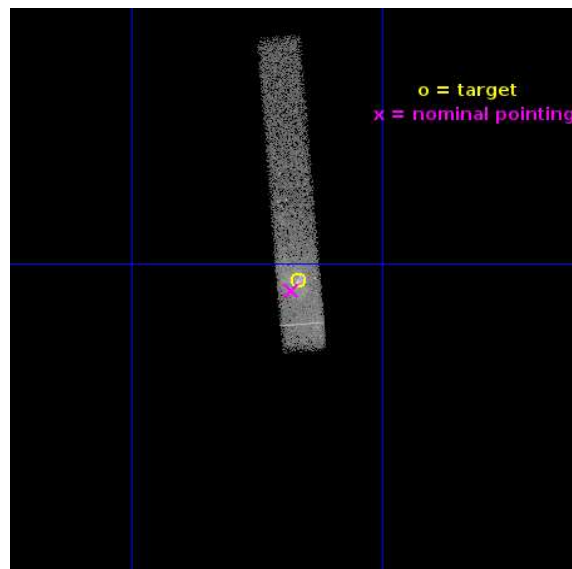
L2 Processing Date : Oct 21 2015

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# 1 Front

|          |                                                                               |                                             |
|----------|-------------------------------------------------------------------------------|---------------------------------------------|
| seq_num  | 601157                                                                        | Sequence number                             |
| obs_id   | 16964                                                                         | Observation id                              |
| title    | Monitoring the Tidal Interaction of the Dusty Object G2<br>Approaching Sgr A* | Proposal title                              |
| observer | Dr. Gordon Garmire                                                            | Principal investigator                      |
| object   | SgrA*                                                                         | Source name                                 |
| dtcycle  | 0                                                                             | &#160                                       |
| cycle    | P                                                                             | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 266.416667                                                                    | Observer's specified<br>target RA [deg]     |
| dec_targ | -29.007833                                                                    | Observer's specified<br>target Dec [deg]    |
| ra_nom   | 266.42018957915                                                               | Nominal RA [deg]                            |
| dec_nom  | -29.012312663803                                                              | Nominal Dec [deg]                           |
| roll_nom | 265.47458636454                                                               | Nominal Roll [deg]                          |
| revision | 1                                                                             | Processing version of<br>data               |
| ontime   | 24947.998512864                                                               | Sum of GTIs [s]                             |
| livetime | 22626.517787833                                                               | Livetime [s]                                |
| ontime7  | 24947.998512864                                                               | Sum of GTIs [s]                             |
| l2events | 29963                                                                         | Number of level 2 events                    |

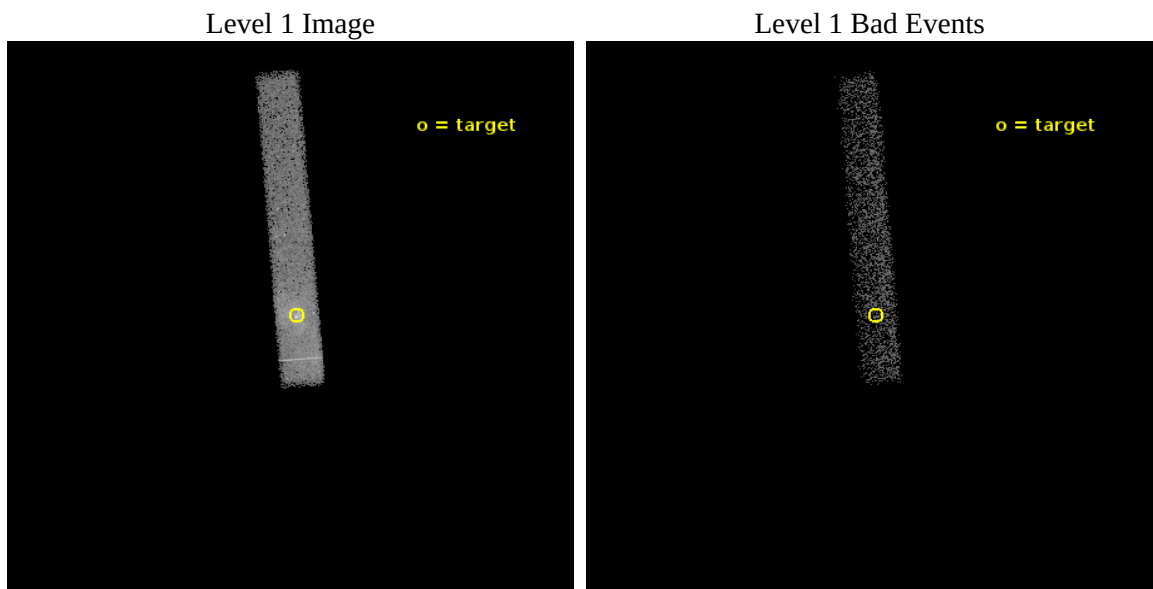




## 2 OBI

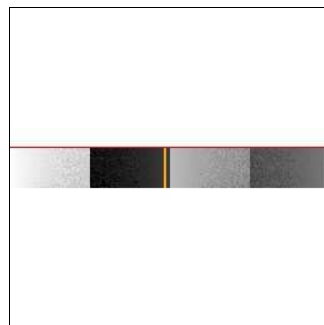
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |                                         |
|----------|---------------------|--------------------------------|----------------|-----------------|-----------------------------------------|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 24878.717000    | [s] Scheduled observation exposure time |
| ascdsver | 10.4.2.1            | Processing system revision     | ontime         | 24947.998512864 | Sum of GTIs [s]                         |
| caldbver | 4.6.10a             | &#160                          | ontime7        | 24947.998512864 | Sum of GTIs [s]                         |
| date     | 2015-10-21T19:55:17 | Date and time of file creation | l1events       | 43148           | Number of level 1 events                |
| revision | 1                   | Processing version of data     |                |                 |                                         |

### 2.1.4 Events

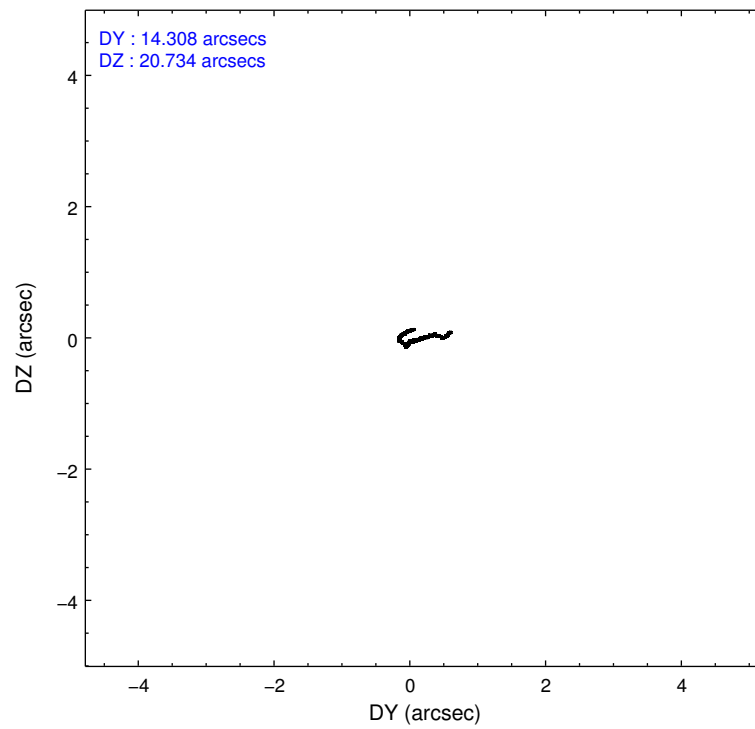
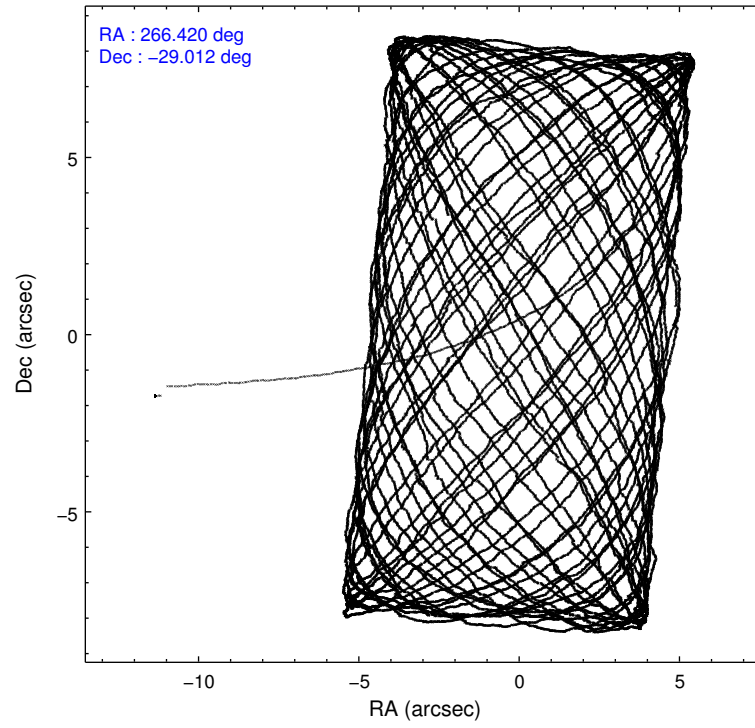
|                 |              |
|-----------------|--------------|
|                 | <b>ccd 7</b> |
| level 1 events  | 43148        |
| rejected events | 12519        |
| rejected %      | 29%          |

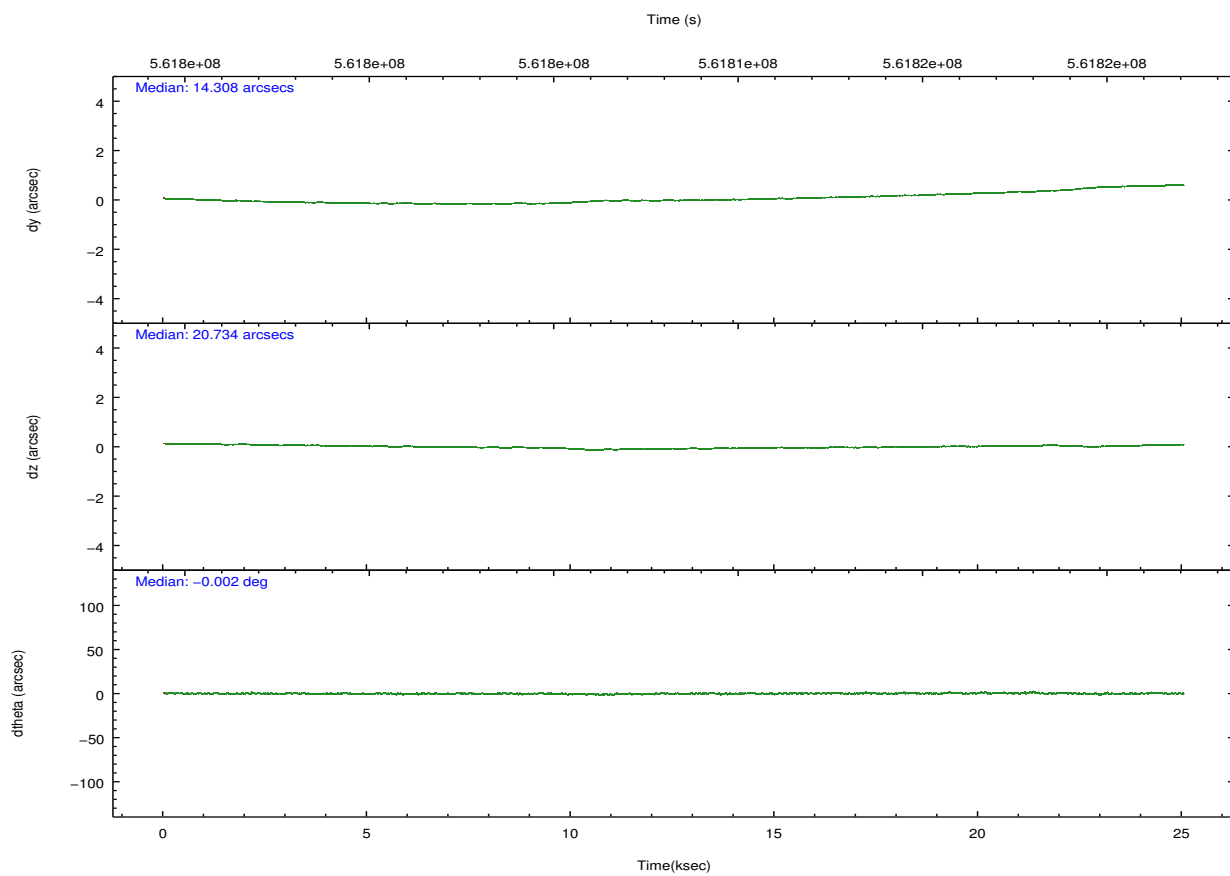
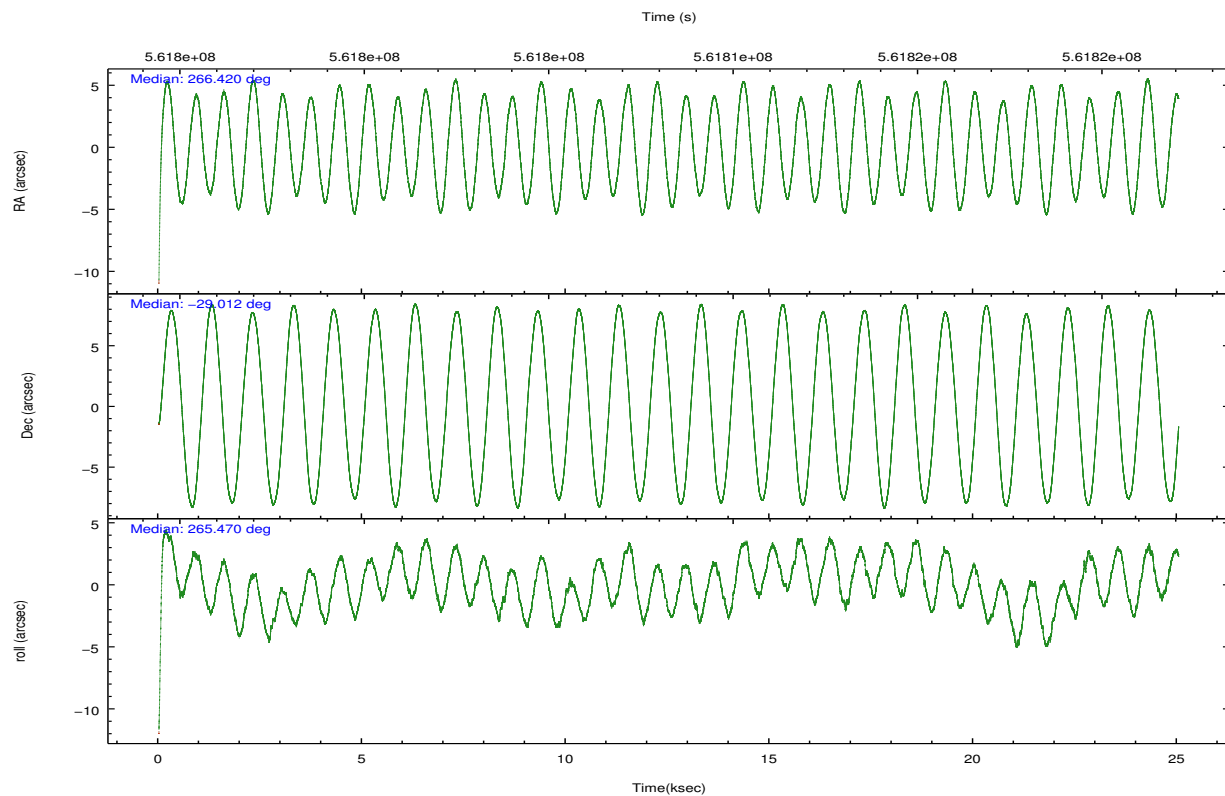
|                |              |
|----------------|--------------|
|                | <b>ccd 7</b> |
| grade 0 events | 4953         |
|                | 11%          |
| grade 1 events | 50           |
|                | 0%           |
| grade 2 events | 6689         |
|                | 15%          |
| grade 3 events | 3594         |
|                | 8%           |
| grade 4 events | 3593         |
|                | 8%           |
| grade 5 events | 2604         |
|                | 6%           |
| grade 6 events | 11800        |
|                | 27%          |
| grade 7 events | 9865         |
|                | 22%          |

## 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                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| [deg] Pointing RA                 | 266.406311          | 266.4201895791465    | Subarray requested                    | CUSTOM    | 1/8     |
| [deg] Pointing Dec                | -28.987693          | -29.01231266380262   | Subarray start row                    | 449       | 449     |
| [deg] Pointing Roll               | 265.311240          | 265.4745863645403    | Subarray row count                    | 128       | 128     |
| [s] Window start time (MET)       | 560044868.184000    | 560044868.184000     | Alternating exposures requested       | N         | N       |
| [s] Window stop time (MET)        | 562032068.184000    | 562032068.184000     | [s] Primary exposure time             | 0.000000  | 0.4     |
| [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)  | 561795891.184000    | 561794697.46369      |                                       |           |         |
| Observation start date            | 2015-10-21T06:23:43 | 2015-10-21T06:04:57  |                                       |           |         |
| [s] Observation end time (MET)    | 561820770.184000    | 561821002.55268      |                                       |           |         |
| Observation end date              | 2015-10-21T13:18:22 | 2015-10-21T13:23:22  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



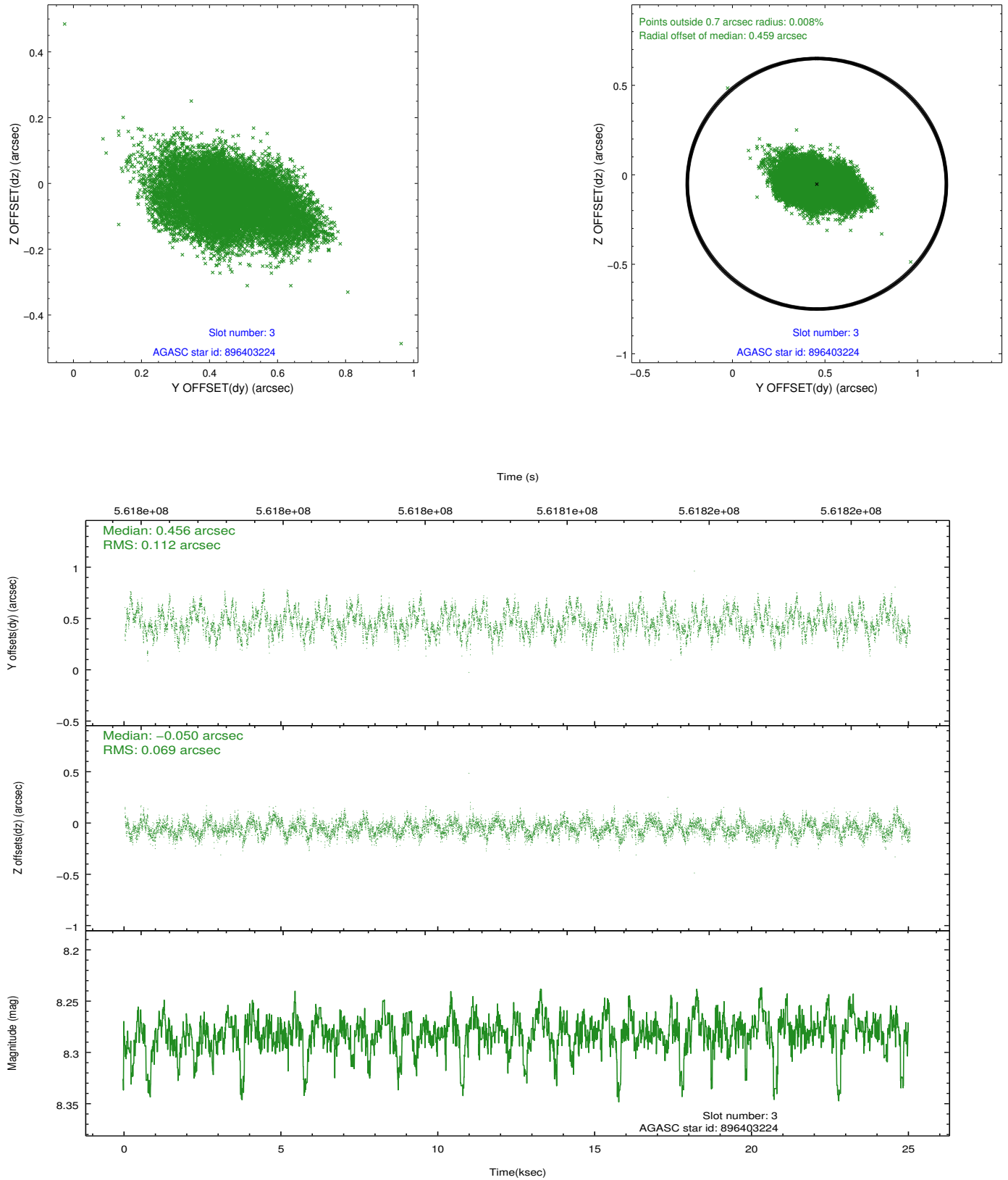


# Slot Statistics

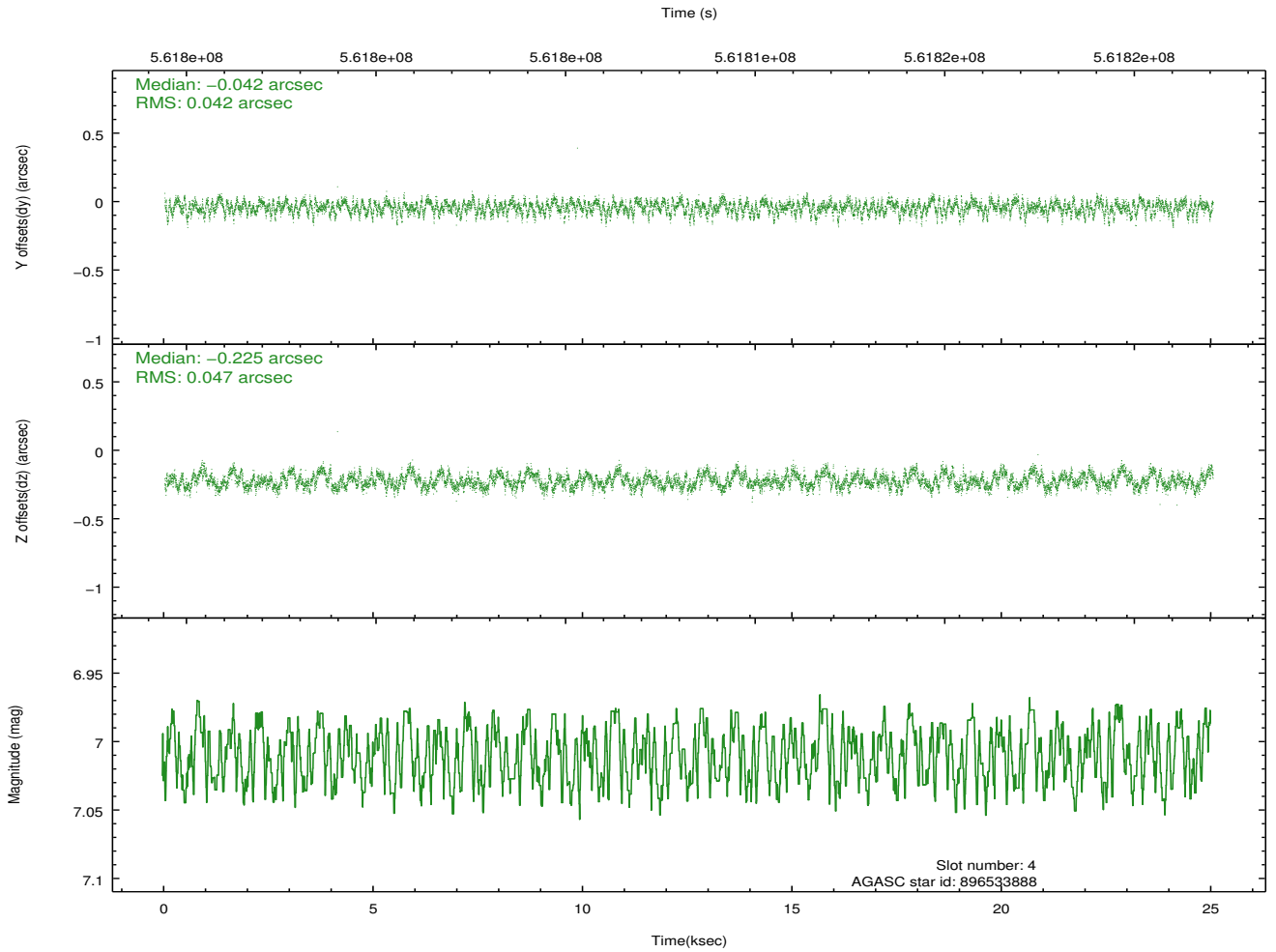
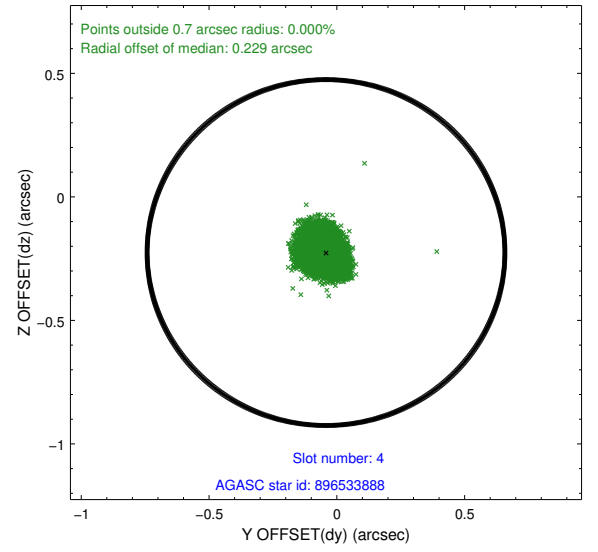
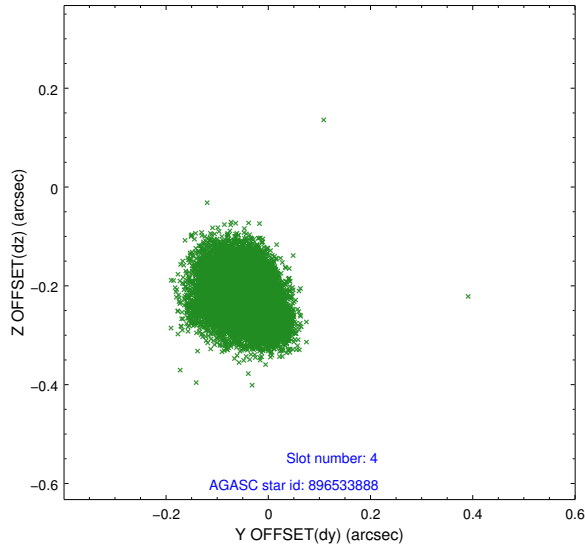
| slot | status | used | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec        | mean_y   | mean_z   |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0    | FID    |      | ACIS-S-2  | 7.11 | 6105  | -0.244 | -0.169 | 0.009 | 0.016 | 0.000000   | 0.000000   | -767.65  | -1742.40 |
| 1    | FID    |      | ACIS-S-4  | 7.21 | 6105  | 0.267  | 0.133  | 0.009 | 0.015 | 0.000000   | 0.000000   | 2146.16  | 166.14   |
| 2    | FID    |      | ACIS-S-6  | 7.34 | 6105  | -0.051 | 0.043  | 0.009 | 0.015 | 0.000000   | 0.000000   | 394.78   | 803.65   |
| 3    | GUIDE  | used | 896403224 | 8.28 | 12206 | 0.456  | -0.050 | 0.140 | 0.229 | 265.612825 | -29.438915 | 1832.07  | -2345.69 |
| 4    | GUIDE  | used | 896533888 | 7.01 | 12208 | -0.042 | -0.225 | 0.068 | 0.106 | 266.666434 | -29.392757 | 1387.90  | 932.20   |
| 5    | GUIDE  | used | 896541576 | 8.16 | 12208 | -0.210 | -0.012 | 0.120 | 0.176 | 267.051055 | -28.762912 | -967.30  | 1962.22  |
| 6    | GUIDE  | used | 896538696 | 6.81 | 12210 | -0.085 | 0.402  | 0.060 | 0.101 | 266.298470 | -28.325572 | -2347.38 | -535.07  |
| 7    | GUIDE  | used | 896537776 | 7.53 | 12205 | -0.121 | -0.120 | 0.055 | 0.092 | 266.655684 | -29.665673 | 2369.55  | 977.18   |

## 2.4 Star Slots

### 2.4.1 Slot 3

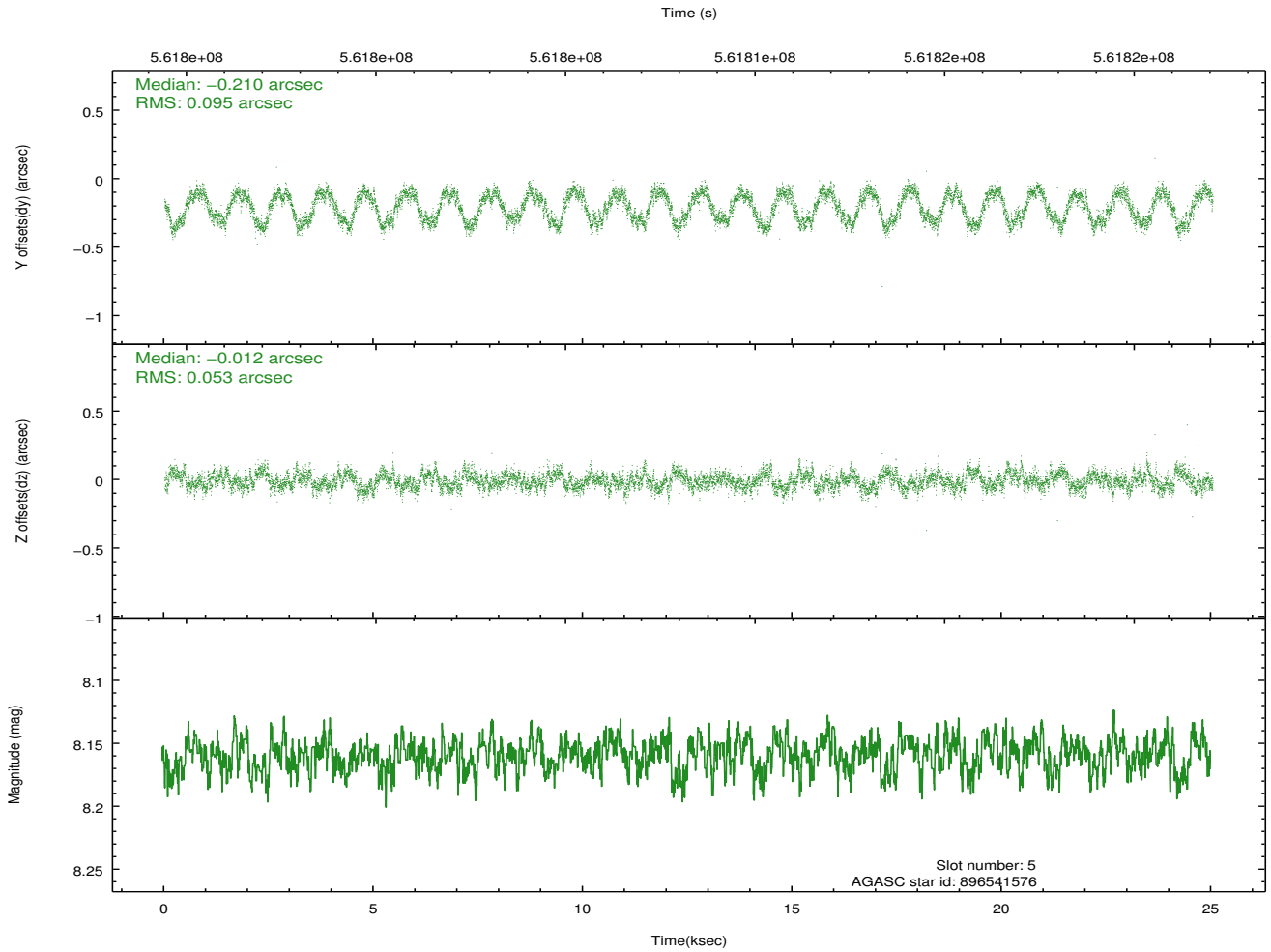
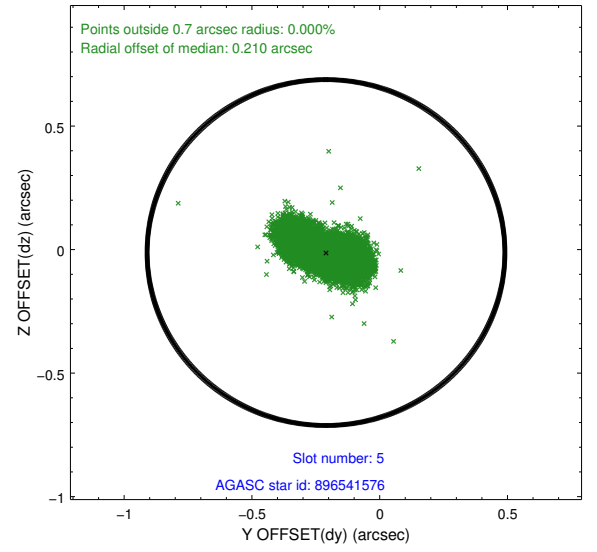
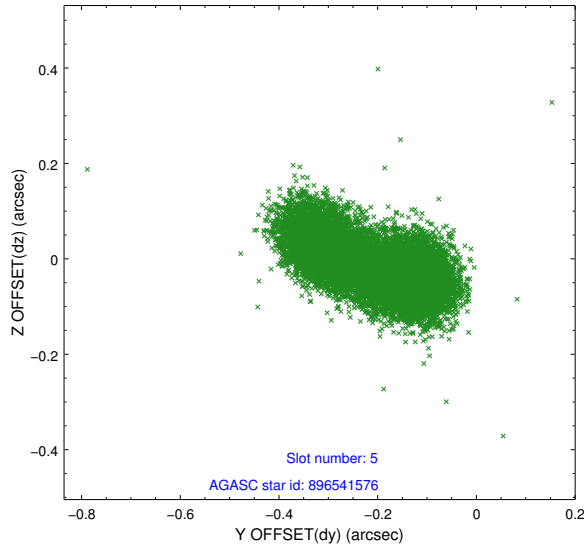


## 2.4.2 Slot 4

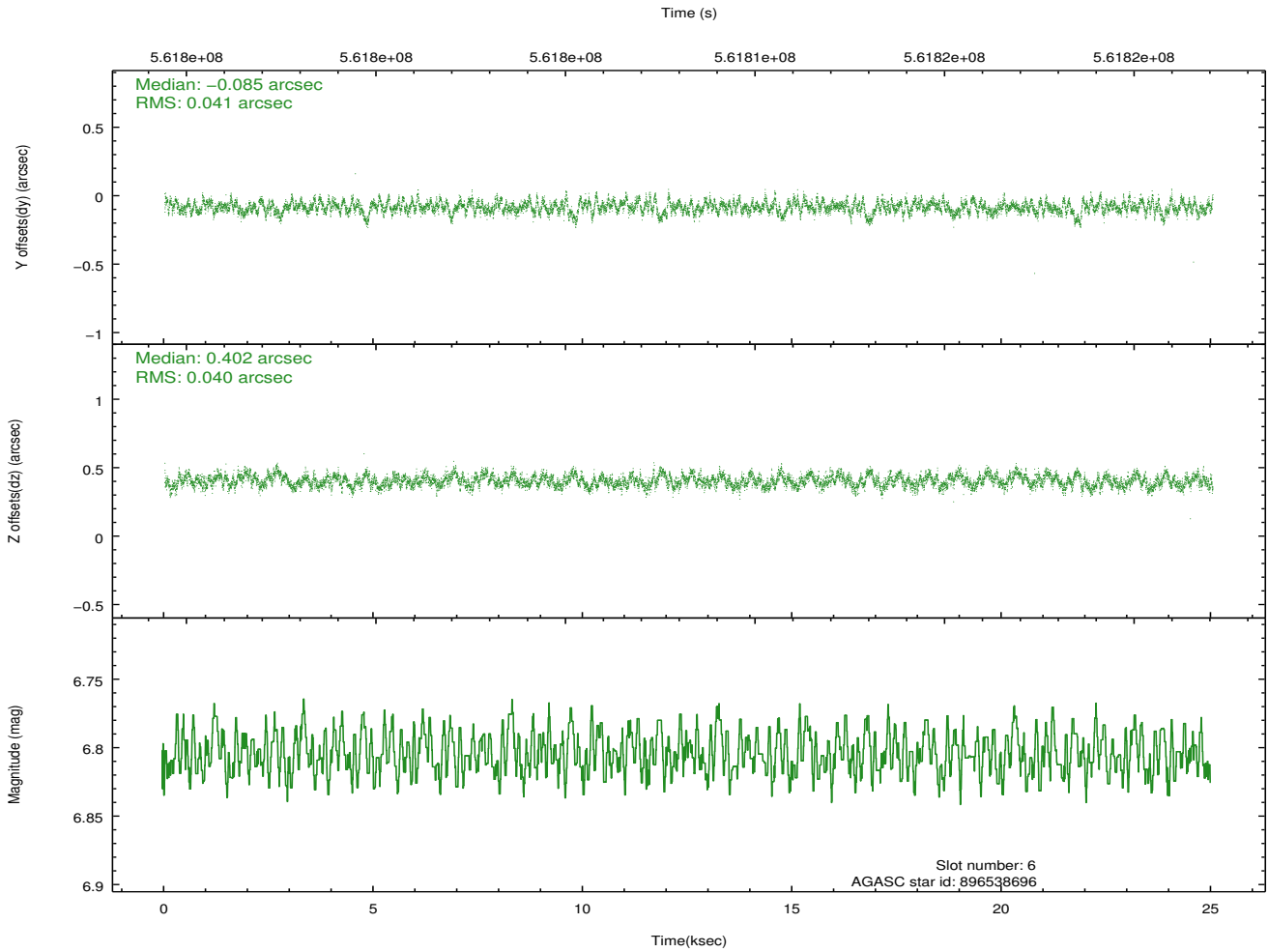
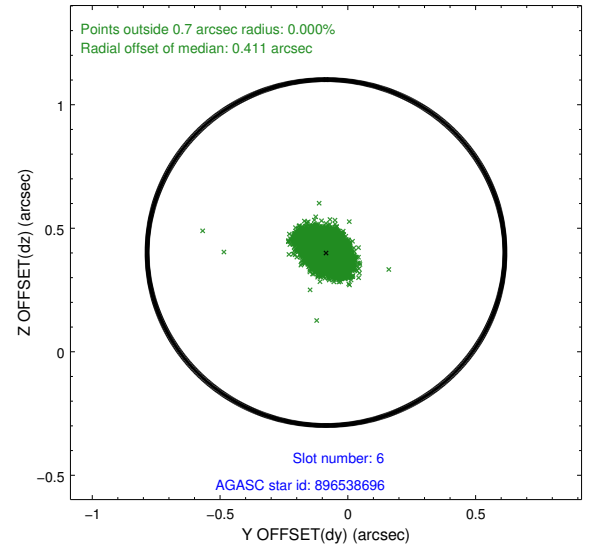
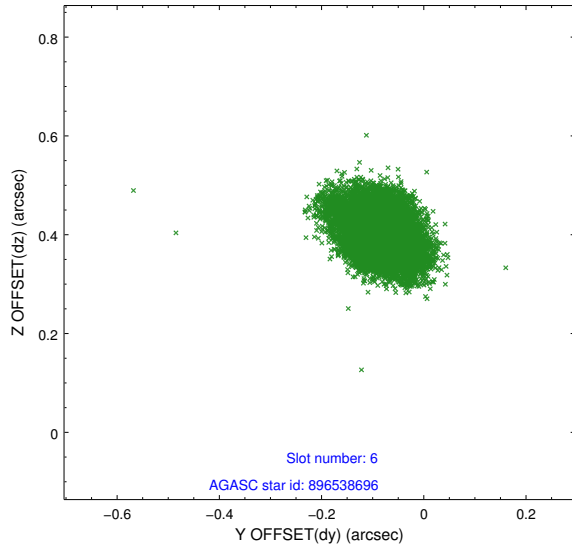




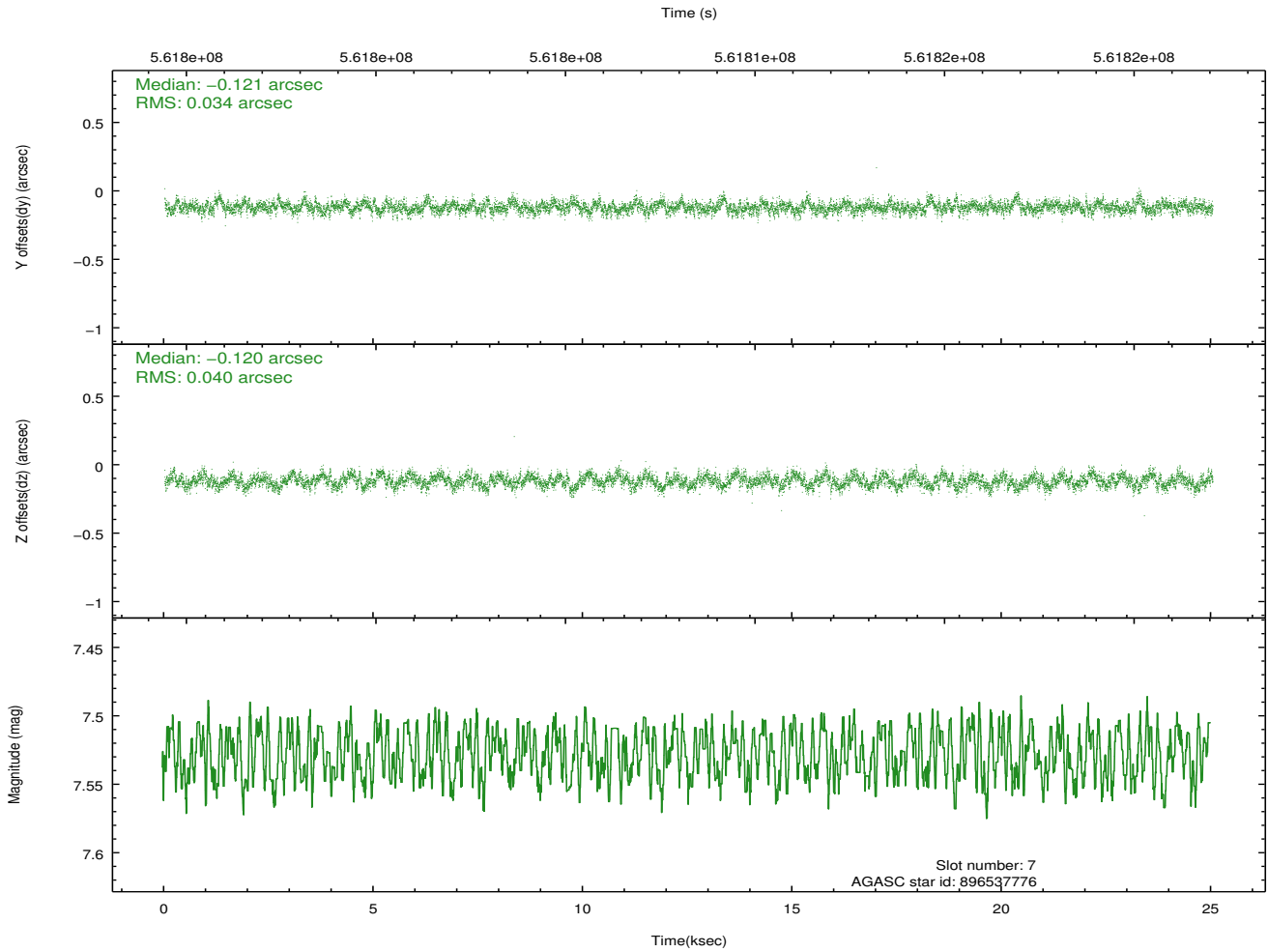
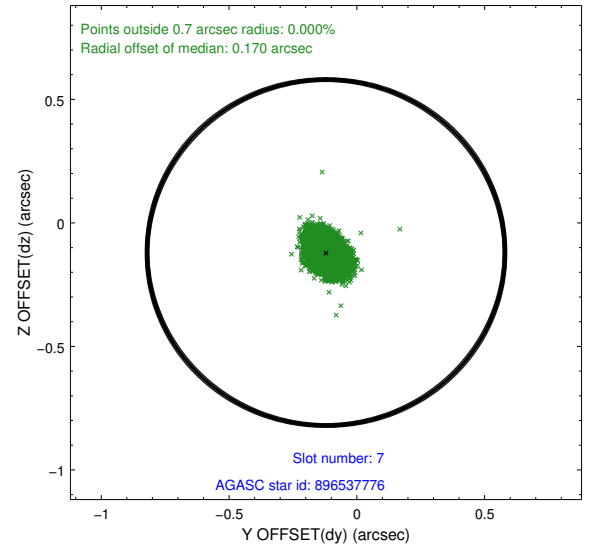
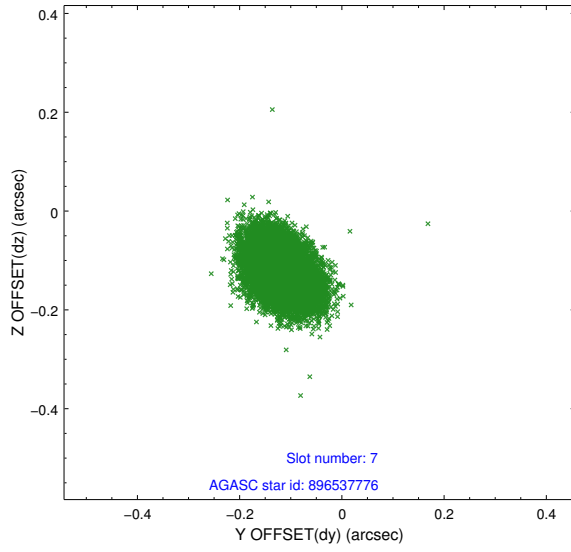
### 2.4.3 Slot 5



## 2.4.4 Slot 6

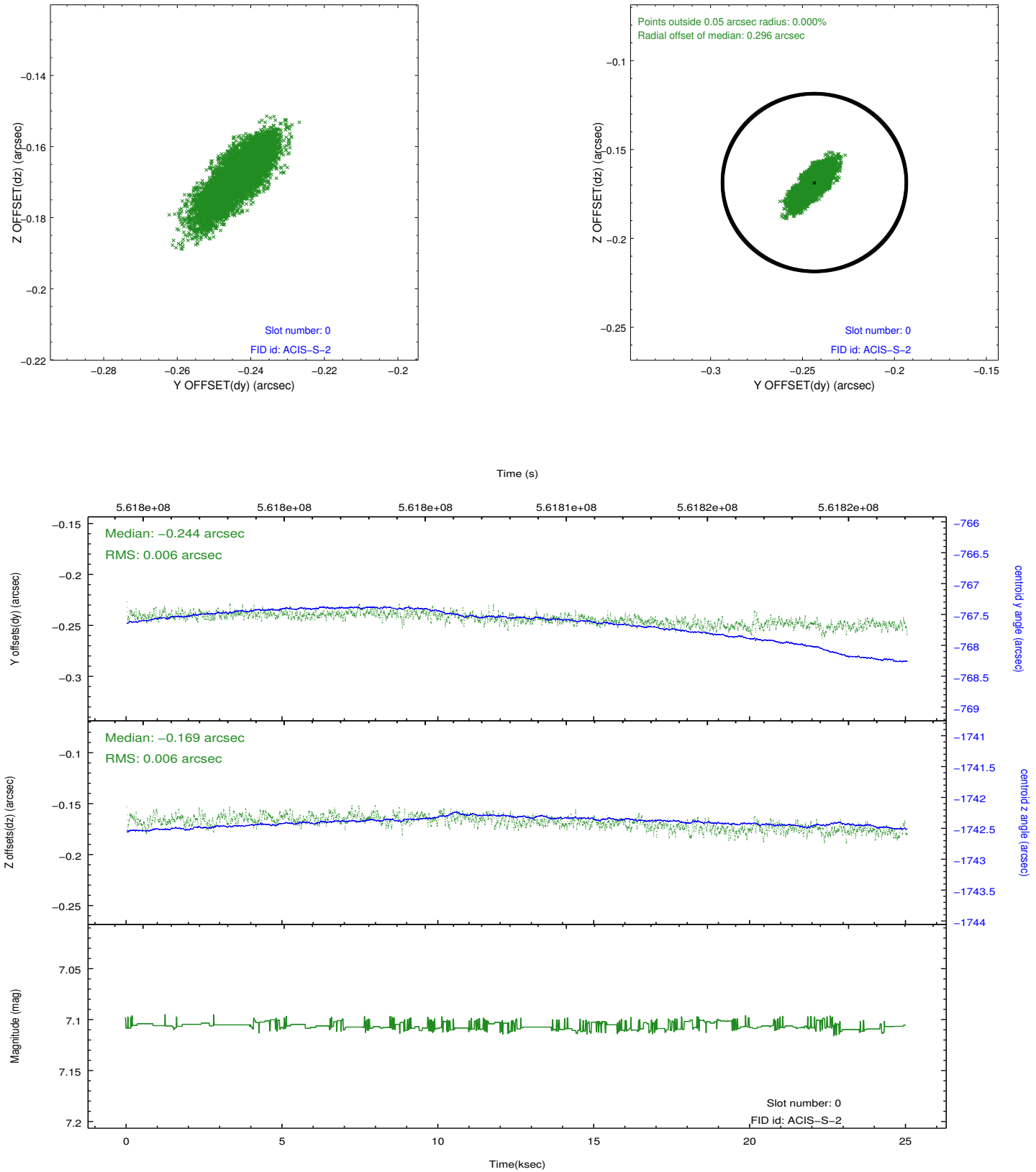


## 2.4.5 Slot 7

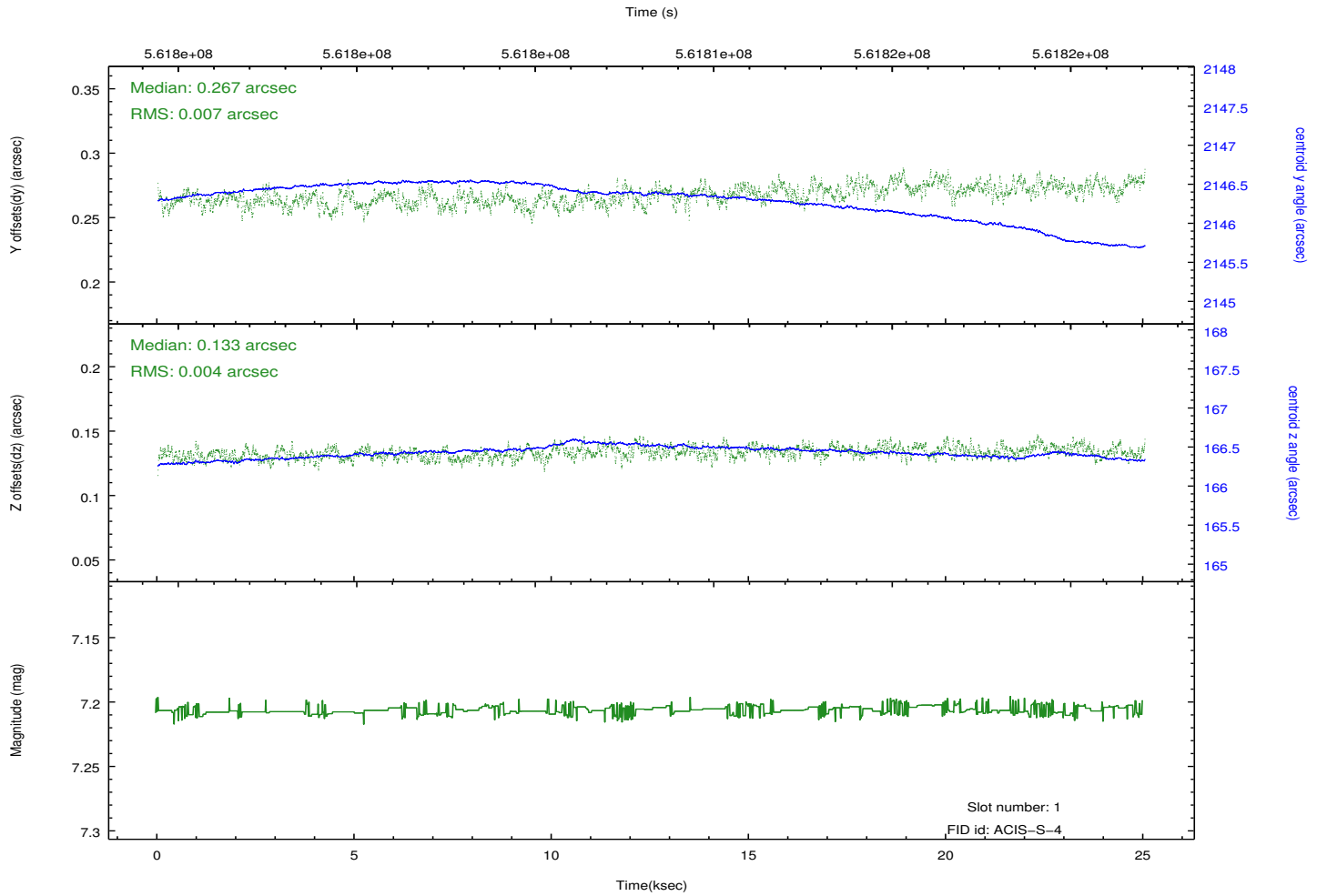
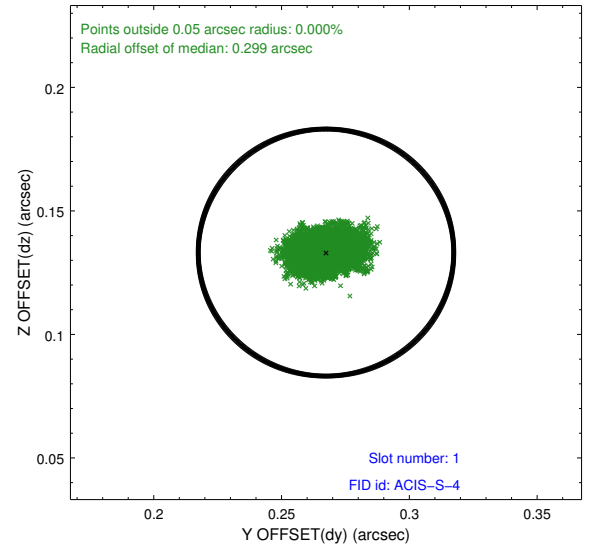
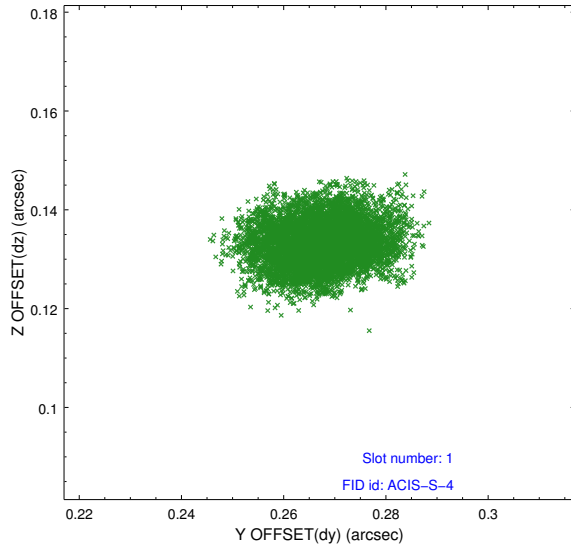


## 2.5 FID Slots

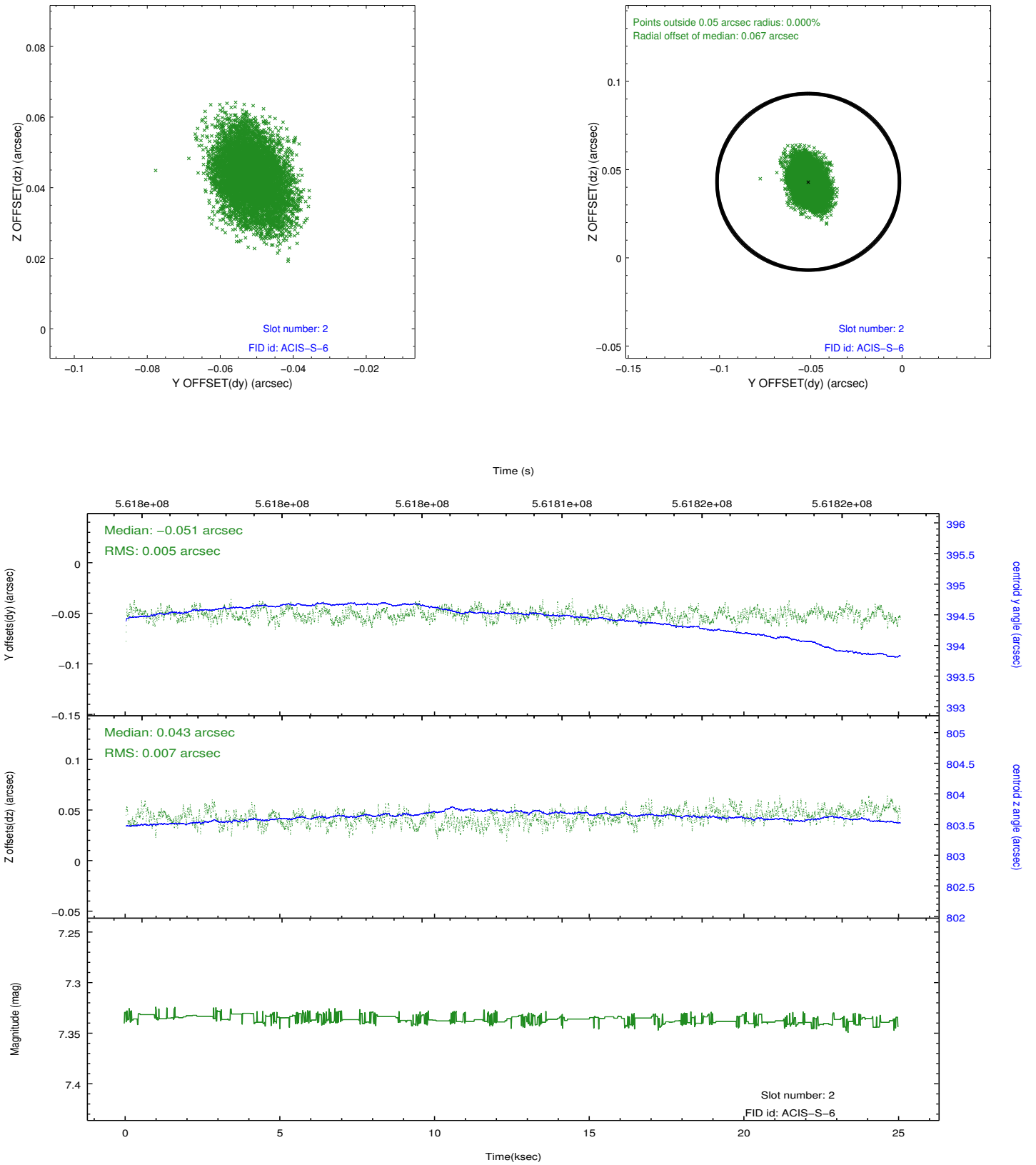
### 2.5.1 Slot 0



## 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)      | 2015.10.21      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 24.947998512864 |

### A.2 Comments

Window preference met.