

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 237 - L2 Version 4  
Chandra X-Ray Center

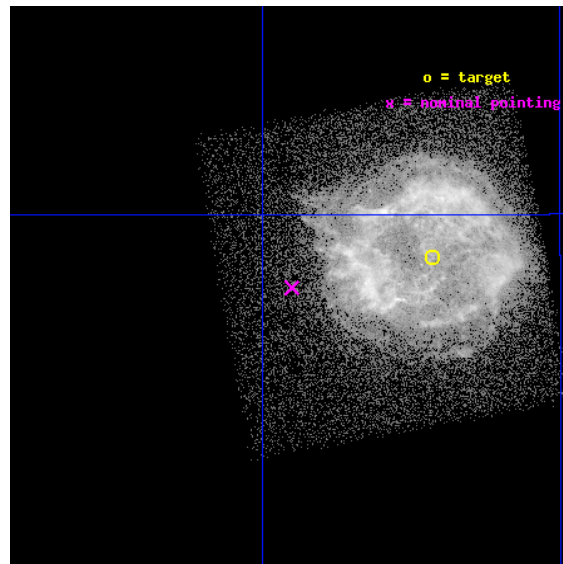
L2 Processing Date : Aug 23 2012

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# 1 Front

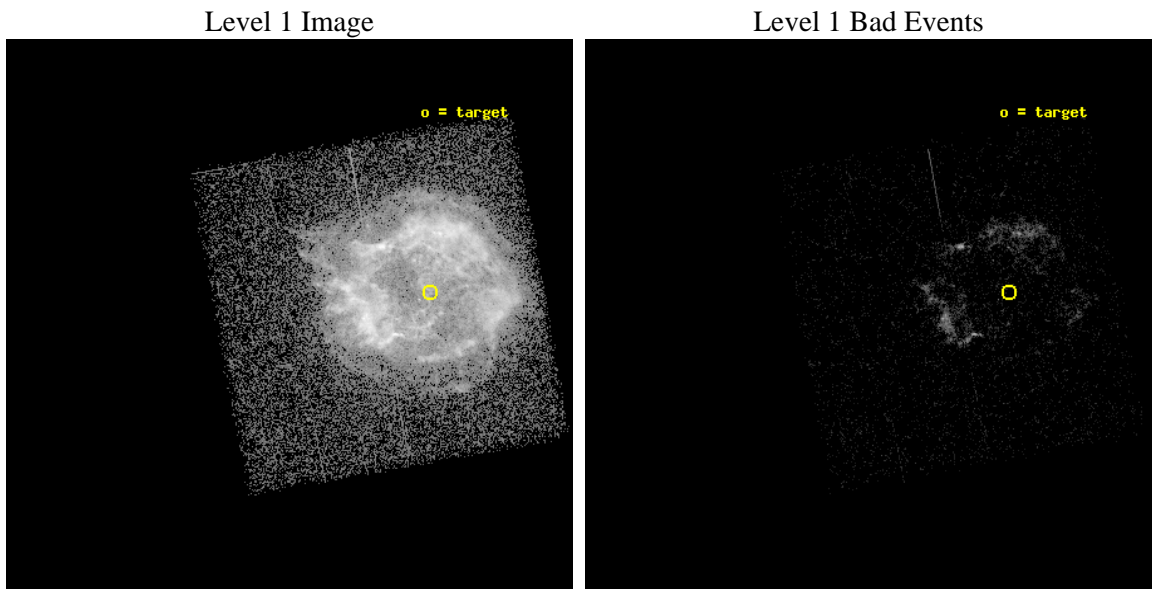
|          |   |   |
|----------|---|---|
| seq_num  | 590105                                  | Sequence number                             |
| obs_id   | 237                                     | Observation id                              |
| title    | ACIS CHIP RESPONSE TO CAS A,<br>APR. 99 | Proposal title                              |
| observer | Dr. CXC Calibration                     | Principal investigator                      |
| object   | CAS A [Chip S3, T=120, Offsets=-3,0,0]  | Source name                                 |
| dtcycle  | 0                                       | &#160                                       |
| cycle    | P                                       | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 350.8575                                | Observer's specified target RA [deg]        |
| dec_targ | 58.814833                               | Observer's specified target Dec [deg]       |
| ra_nom   | 350.97580184864                         | Nominal RA [deg]                            |
| dec_nom  | 58.801631414842                         | Nominal Dec [deg]                           |
| roll_nom | 349.69911767962                         | Nominal Roll [deg]                          |
| revision | 4                                       | Processing version of data                  |
| ontime   | 972.30825844407                         | Sum of GTIs [s]                             |
| livetime | 959.99630582191                         | Livetime [s]                                |
| ontime4  | 1445.4883111715                         | Sum of GTIs [s]                             |
| ontime5  | 1755.9557193369                         | Sum of GTIs [s]                             |
| ontime6  | 1720.1409769356                         | Sum of GTIs [s]                             |
| ontime7  | 972.30825844407                         | Sum of GTIs [s]                             |
| ontime8  | 1661.8858827502                         | Sum of GTIs [s]                             |
| ontime9  | 1652.1220517457                         | Sum of GTIs [s]                             |
| l2events | 306061                                  | Number of level 2 events                    |



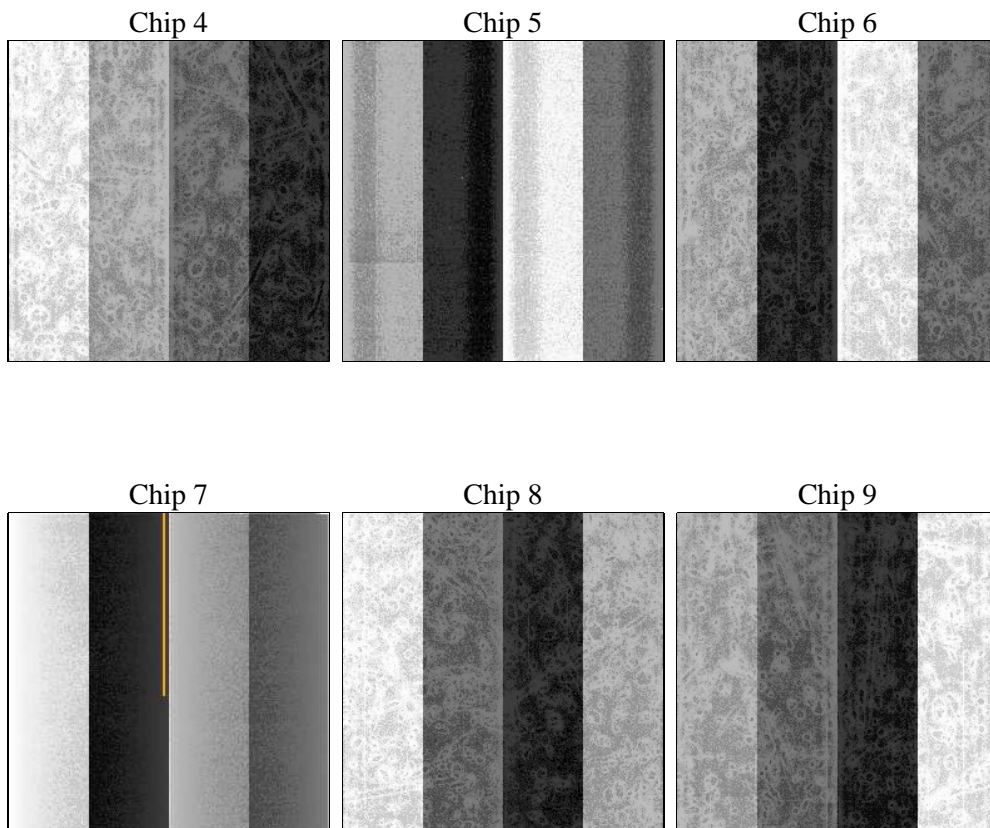
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 2000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 972.30825844407 | Sum of GTIs [s]                         |
| caldsver | 4.5.1.1             | &#160                          | ontime4        | 1445.4883111715 | Sum of GTIs [s]                         |
| date     | 2012-08-23T19:07:41 | Date and time of file creation | ontime5        | 1755.9557193369 | Sum of GTIs [s]                         |
| revision | 4                   | Processing version of data     | ontime6        | 1720.1409769356 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 972.30825844407 | Sum of GTIs [s]                         |
|          |                     |                                | ontime8        | 1661.8858827502 | Sum of GTIs [s]                         |
|          |                     |                                | ontime9        | 1652.1220517457 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 344997          | Number of level 1 events                |

### 2.1.4 Events

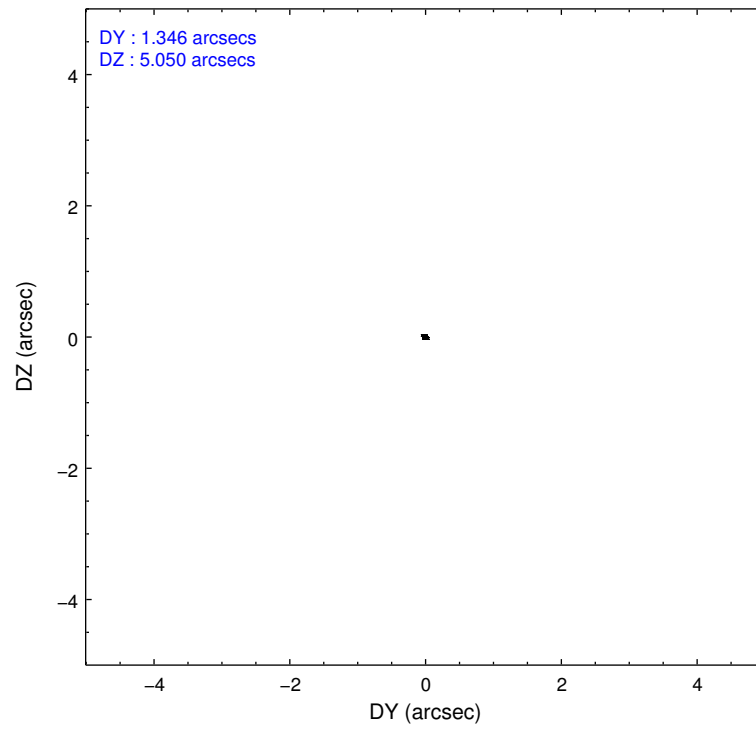
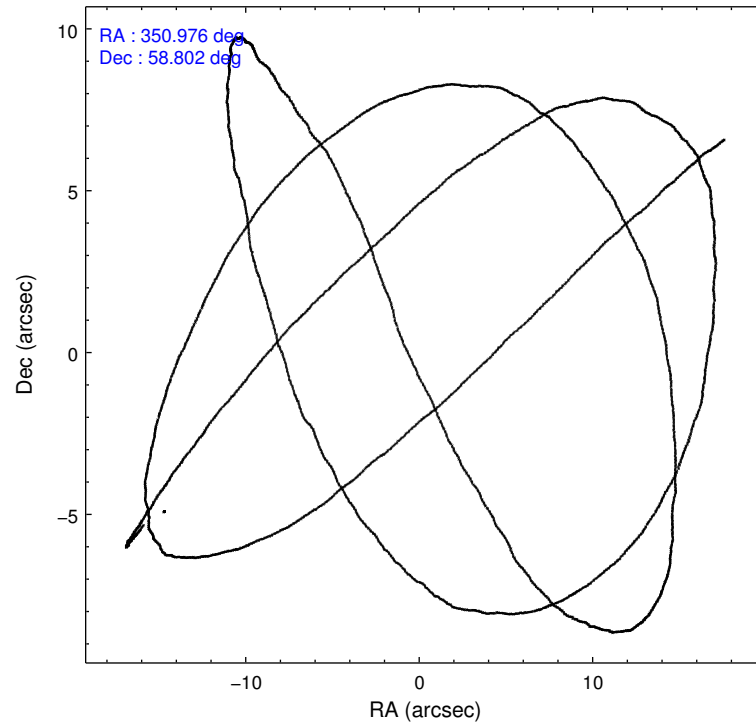
|                 | ccd 4 | ccd 5 | ccd 6 | ccd 7  | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|--------|-------|-------|
| level 1 events  | 0     | 0     | 0     | 344997 | 0     | 0     |
| rejected events | 0     | 0     | 0     | 34930  | 0     | 0     |
| rejected %      | 0%    | 0%    | 0%    | 10%    | 0%    | 0%    |

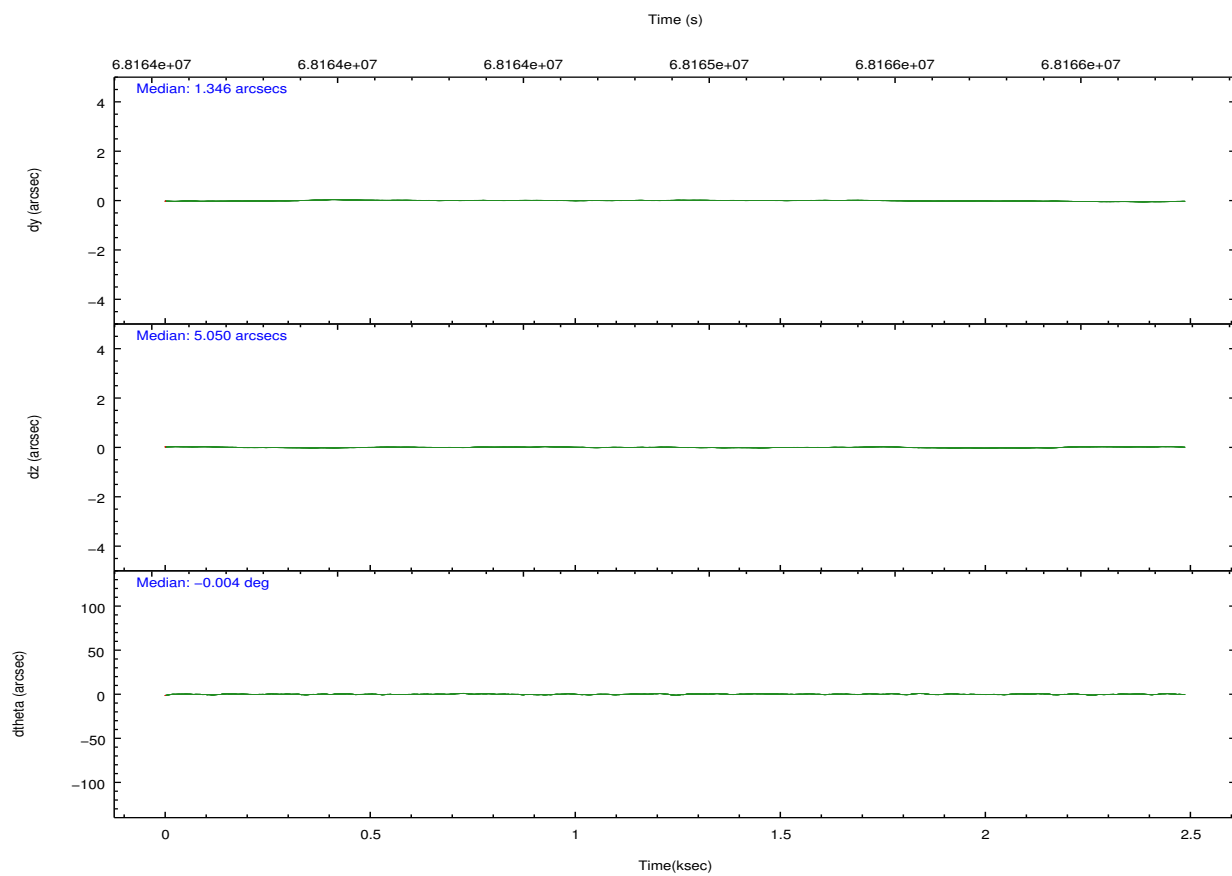
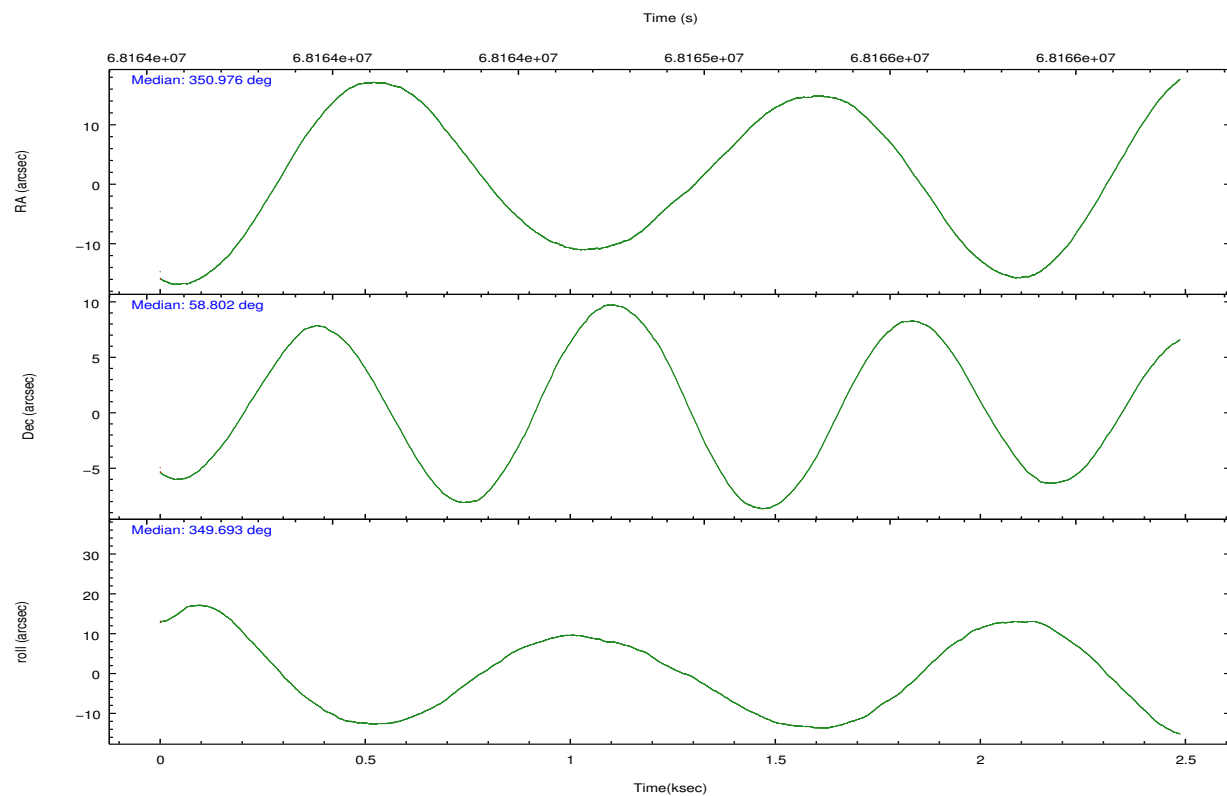
|                | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 0     | 0     | 0     | 79579 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 23%   | 0%    | 0%    |
| grade 1 events | 0     | 0     | 0     | 1640  | 0     | 0     |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 0     | 0     | 0     | 82732 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 23%   | 0%    | 0%    |
| grade 3 events | 0     | 0     | 0     | 37019 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 10%   | 0%    | 0%    |
| grade 4 events | 0     | 0     | 0     | 36542 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 10%   | 0%    | 0%    |
| grade 5 events | 0     | 0     | 0     | 6687  | 0     | 0     |
|                | 0%    | 0%    | 0%    | 1%    | 0%    | 0%    |
| grade 6 events | 0     | 0     | 0     | 75197 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 21%   | 0%    | 0%    |
| grade 7 events | 0     | 0     | 0     | 25601 | 0     | 0     |
|                | 0%    | 0%    | 0%    | 7%    | 0%    | 0%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-456789         | ACIS-456789          | 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                 | 350.926103          | 350.9758018486448    | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 58.792388           | 58.80163141484186    | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 349.585016          | 349.6991176796226    | [s] Primary exposure time             | 0.000000  | 3.2     |
| [s] Window start time (MET)       | 65750464.184000     | 65750464.184000      |                                       |           |         |
| [s] Window stop time (MET)        | 68256064.184000     | 68256064.184000      |                                       |           |         |
| [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)  | 68164150.184000     | 68163484.237049      |                                       |           |         |
| Observation start date            | 2000-02-28T22:28:06 | 2000-02-28T22:18:04  |                                       |           |         |
| [s] Observation end time (MET)    | 68166150.184000     | 68166284.53715099    |                                       |           |         |
| Observation end date              | 2000-02-28T23:01:26 | 2000-02-28T23:04:44  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



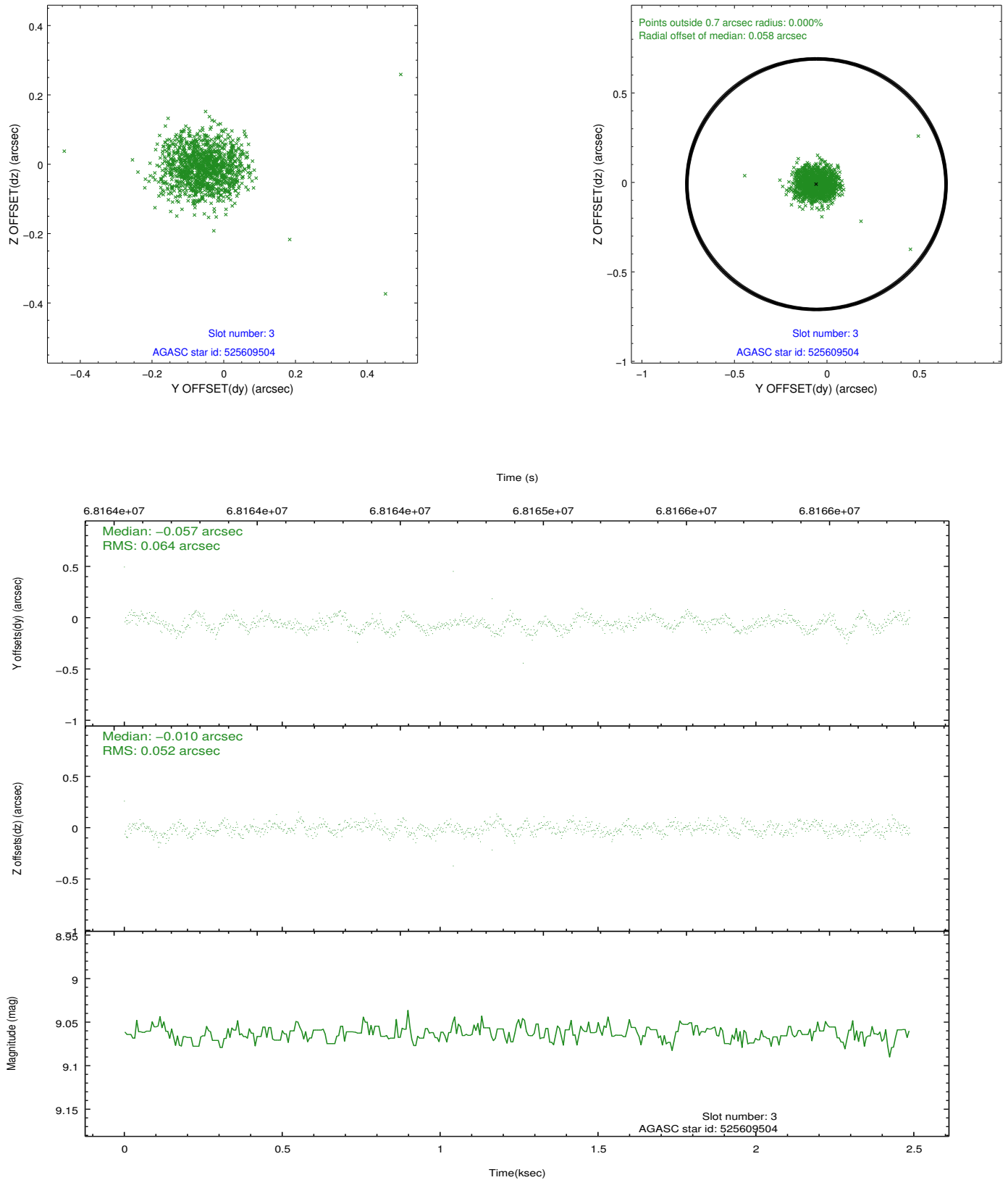


### Slot Statistics

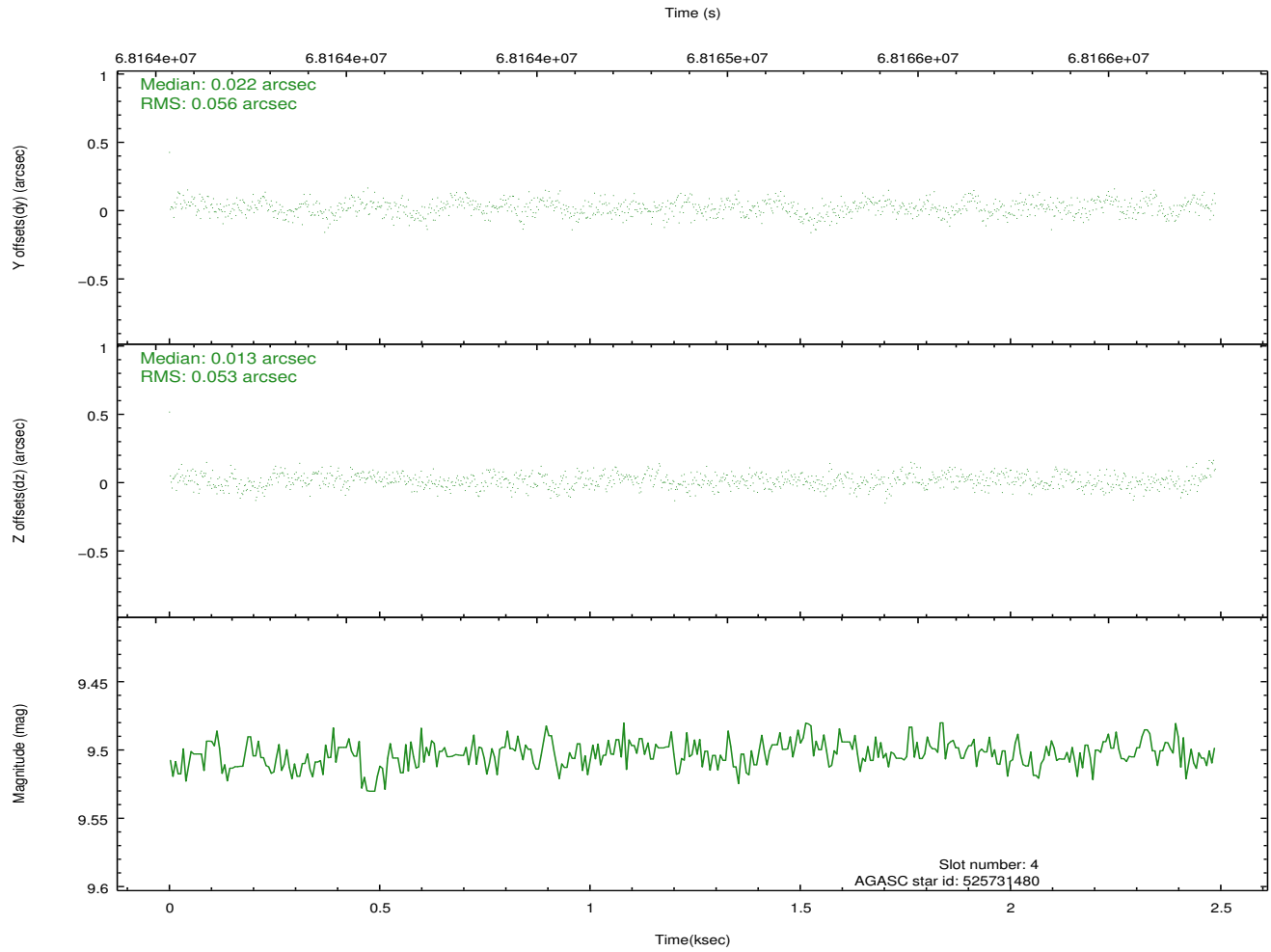
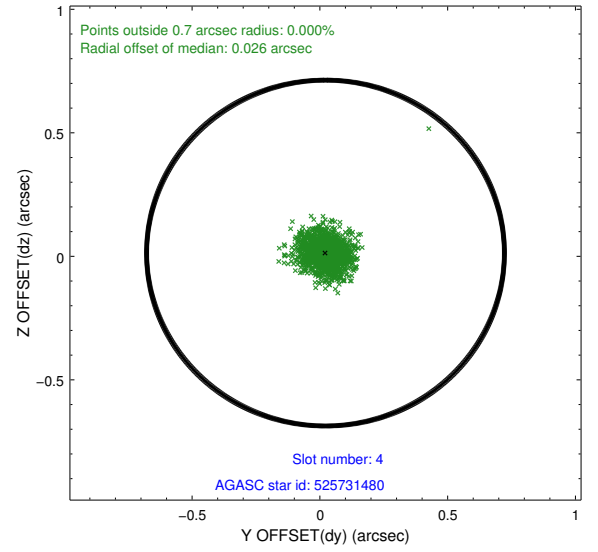
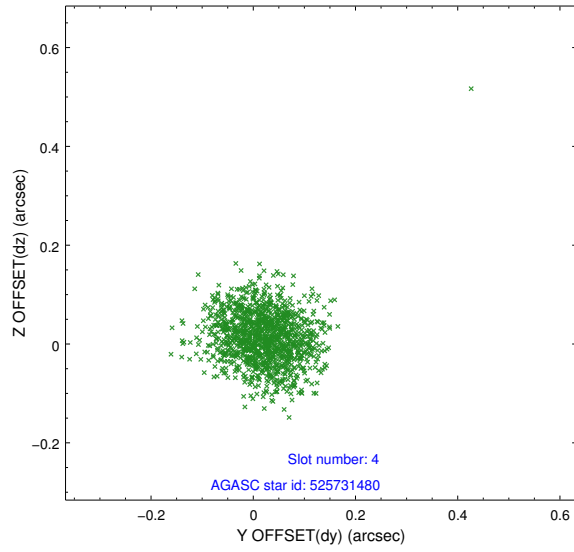
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-3  | 7.36 | 607   | -0.032 | -0.003 | 0.007 | 0.011 | 0.000000   | 0.000000  | 59.22    | -1855.18 |
| 1    | FID    | ACIS-S-4  | 7.21 | 607   | 0.011  | 0.019  | 0.006 | 0.011 | 0.000000   | 0.000000  | 2159.52  | 179.48   |
| 2    | FID    | ACIS-S-5  | 7.23 | 607   | -0.007 | -0.006 | 0.006 | 0.010 | 0.000000   | 0.000000  | -1803.43 | 176.32   |
| 3    | GUIDE  | 525609504 | 9.06 | 1212  | -0.057 | -0.010 | 0.086 | 0.131 | 349.896632 | 58.356658 | -1630.99 | -1879.98 |
| 4    | GUIDE  | 525731480 | 9.50 | 1212  | 0.022  | 0.013  | 0.081 | 0.128 | 351.647209 | 58.687294 | 1392.93  | -122.60  |
| 5    | GUIDE  | 525732528 | 9.37 | 1214  | 0.043  | 0.074  | 0.092 | 0.144 | 351.607241 | 59.298932 | 901.74   | 2026.05  |
| 6    | GUIDE  | 525601208 | 9.22 | 1214  | -0.165 | 0.089  | 0.102 | 0.159 | 349.910779 | 59.483724 | -2277.37 | 2127.59  |
| 7    | GUIDE  | 525207384 | 9.74 | 1212  | 0.154  | -0.171 | 0.102 | 0.169 | 351.880308 | 58.083642 | 2243.93  | -2166.83 |

## 2.4 Star Slots

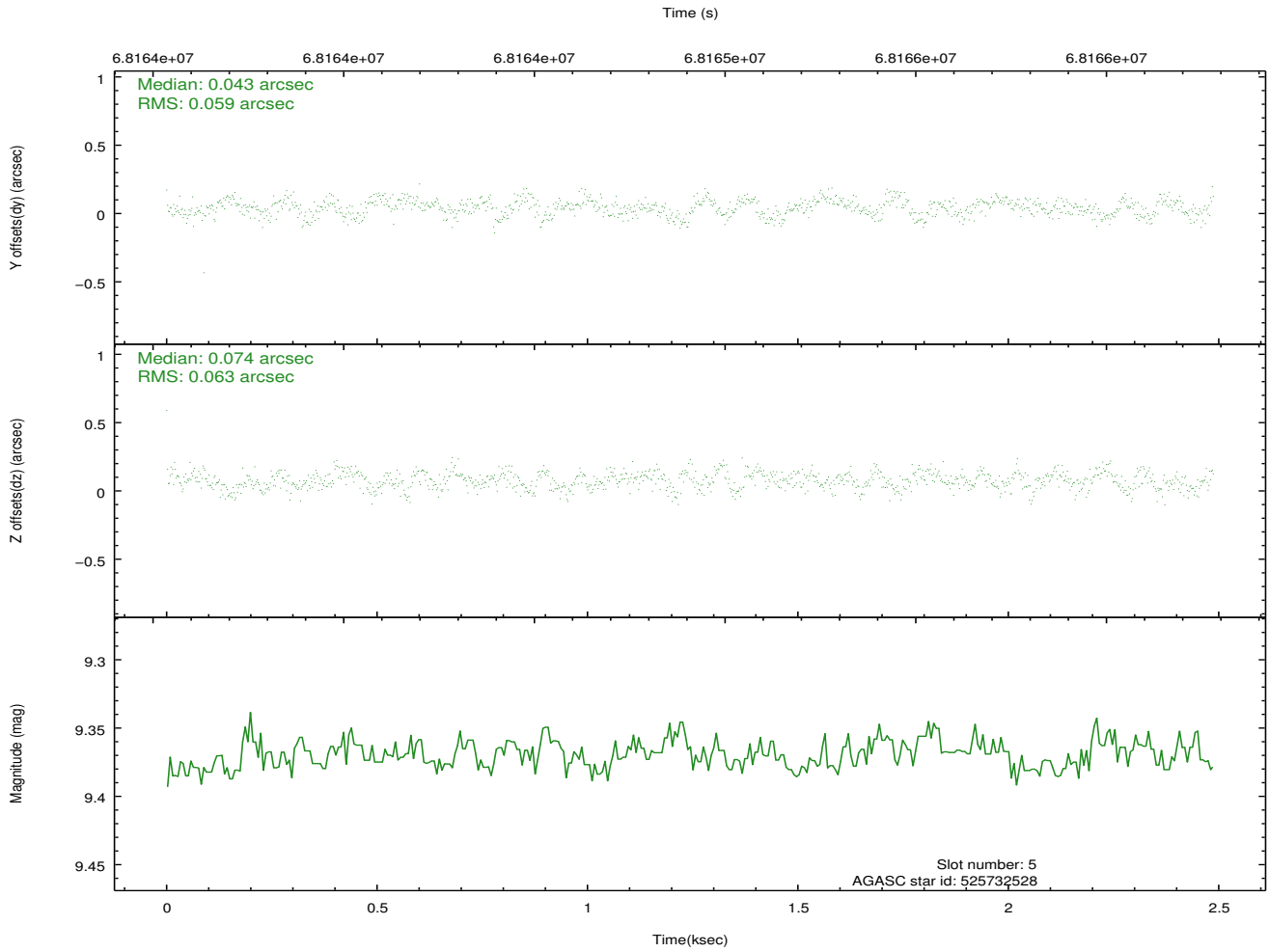
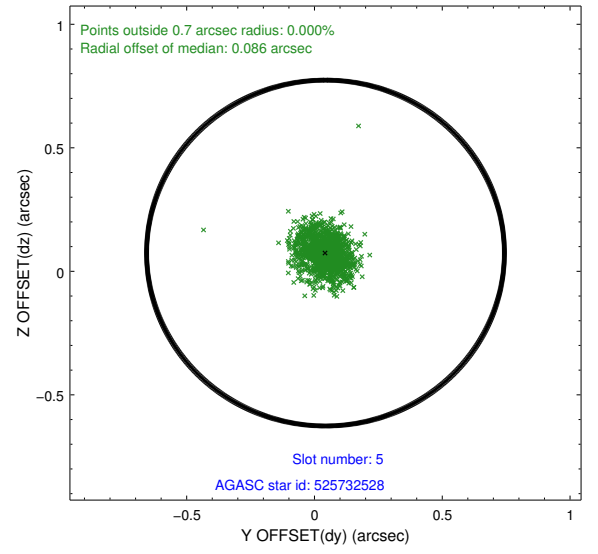
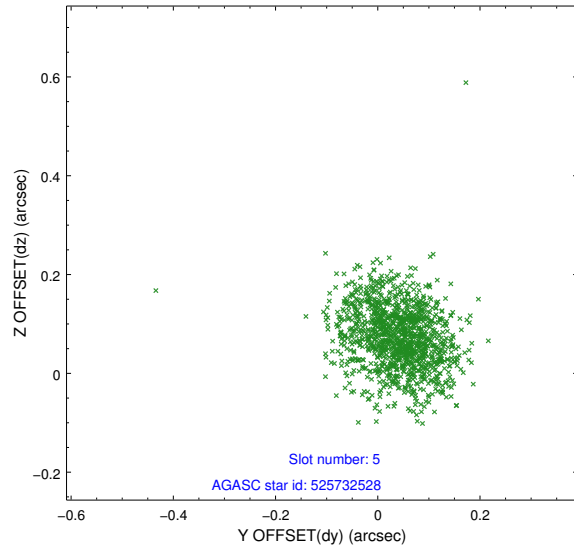
### 2.4.1 Slot 3



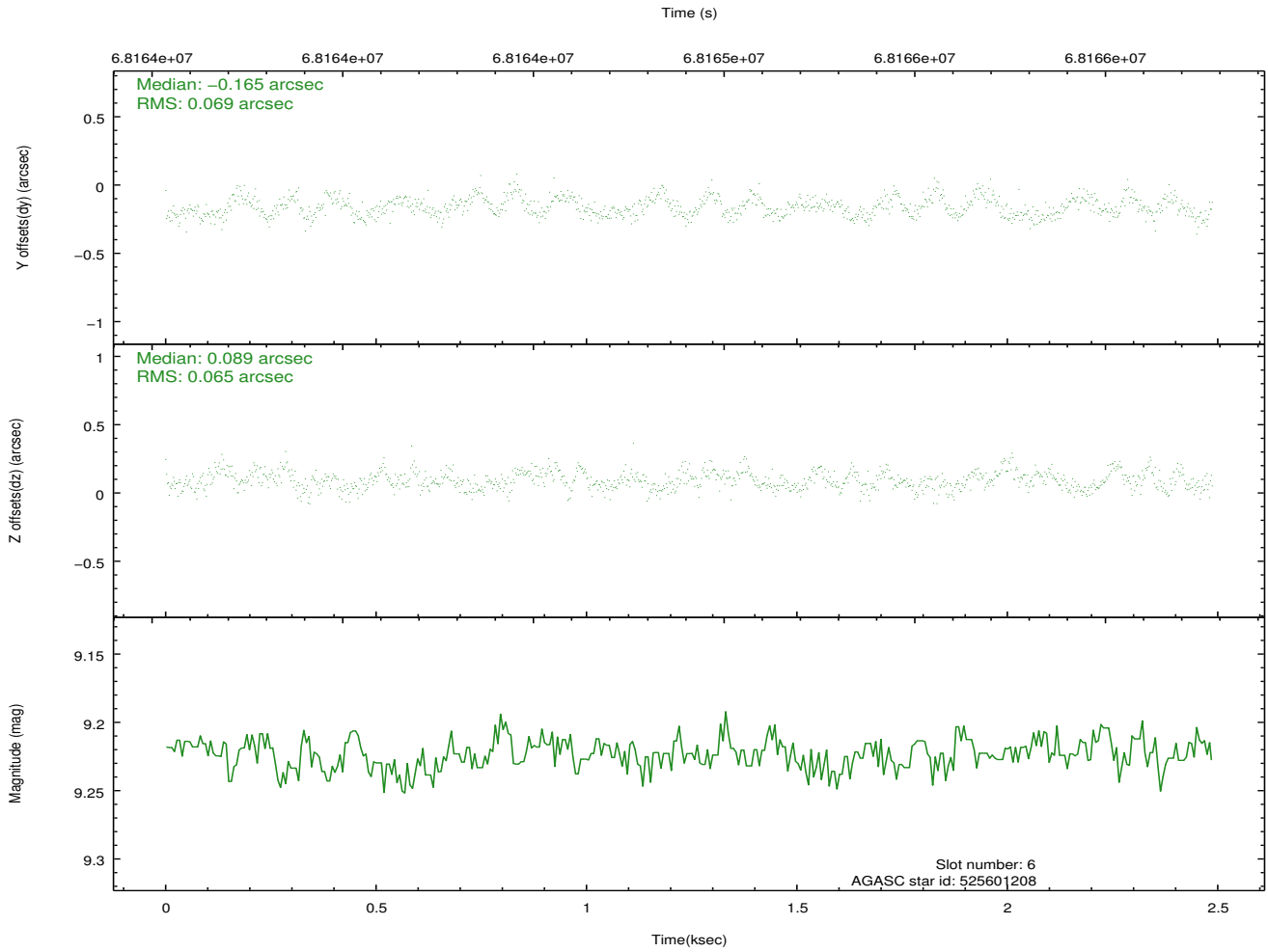
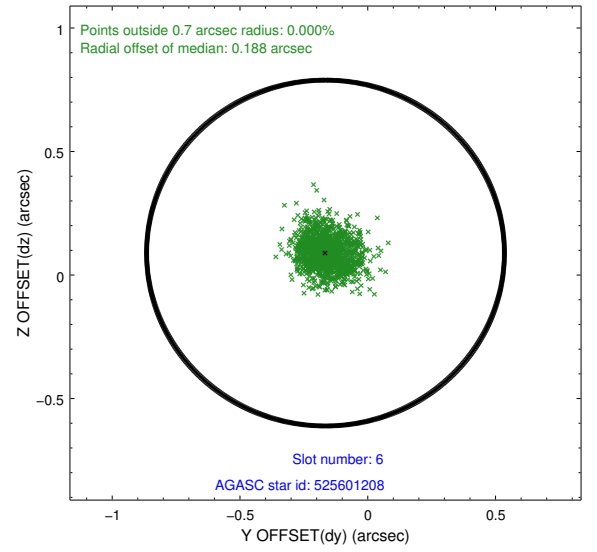
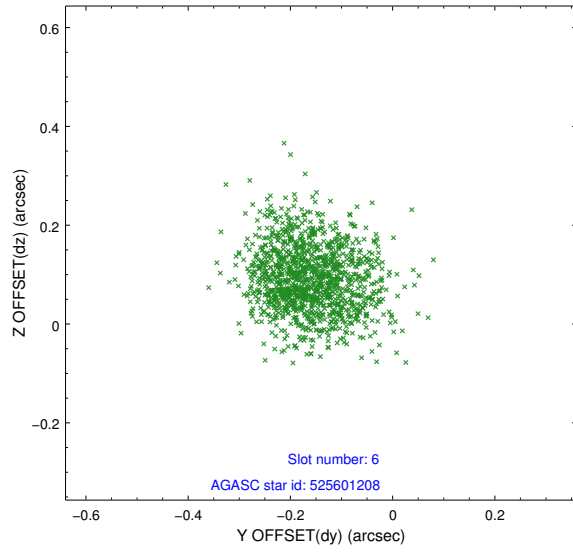
## 2.4.2 Slot 4



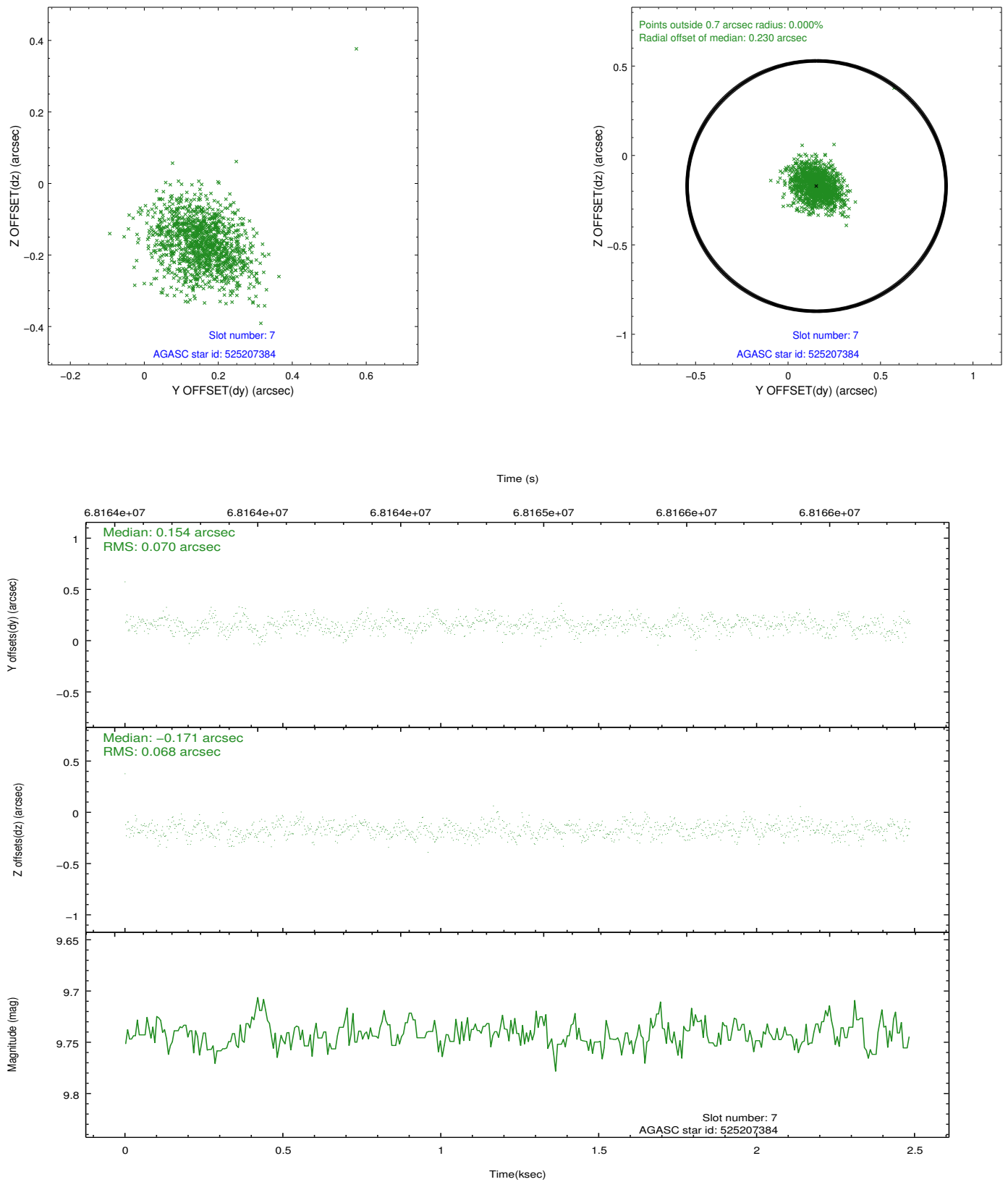
### 2.4.3 Slot 5



## 2.4.4 Slot 6

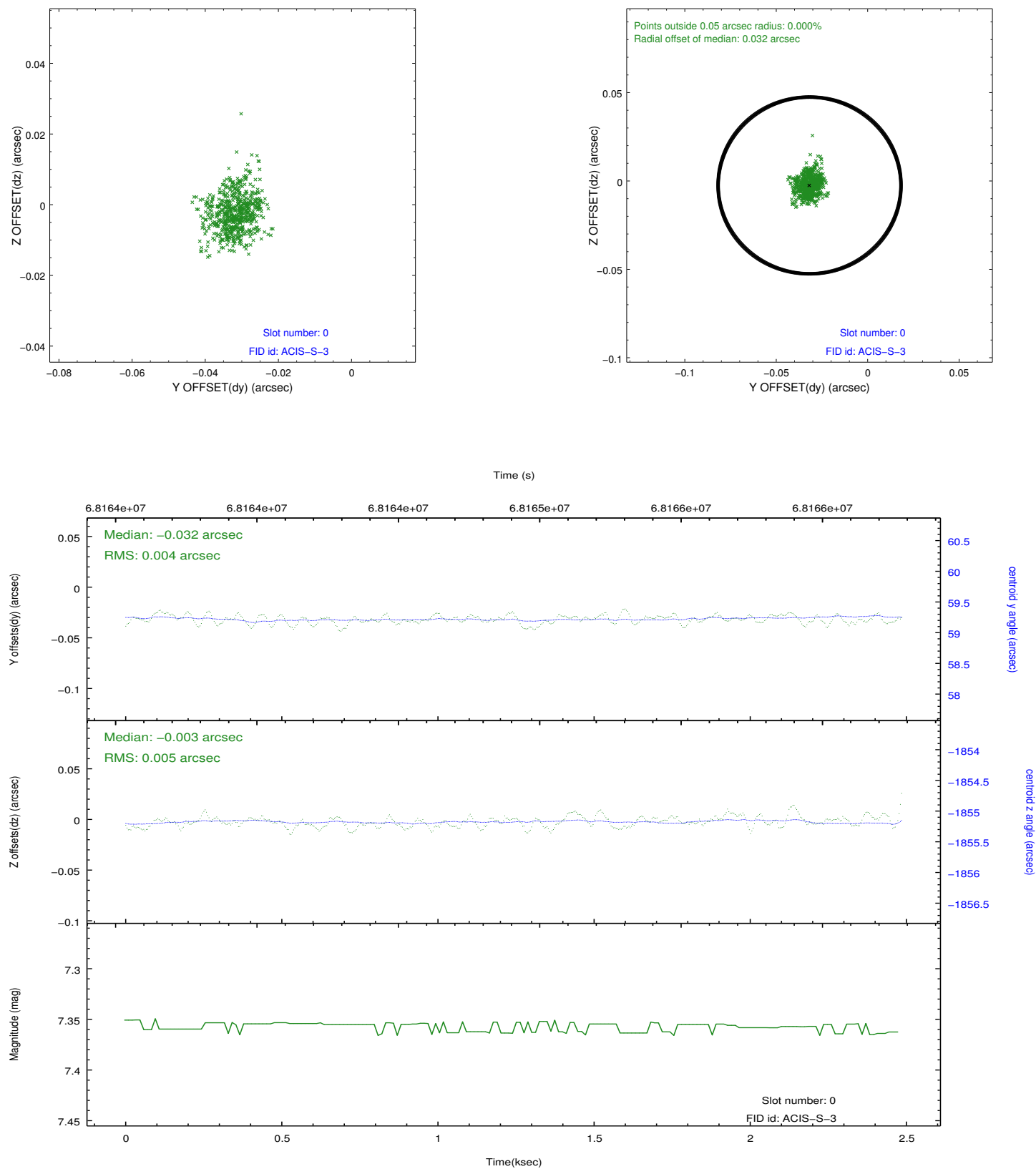


## 2.4.5 Slot 7

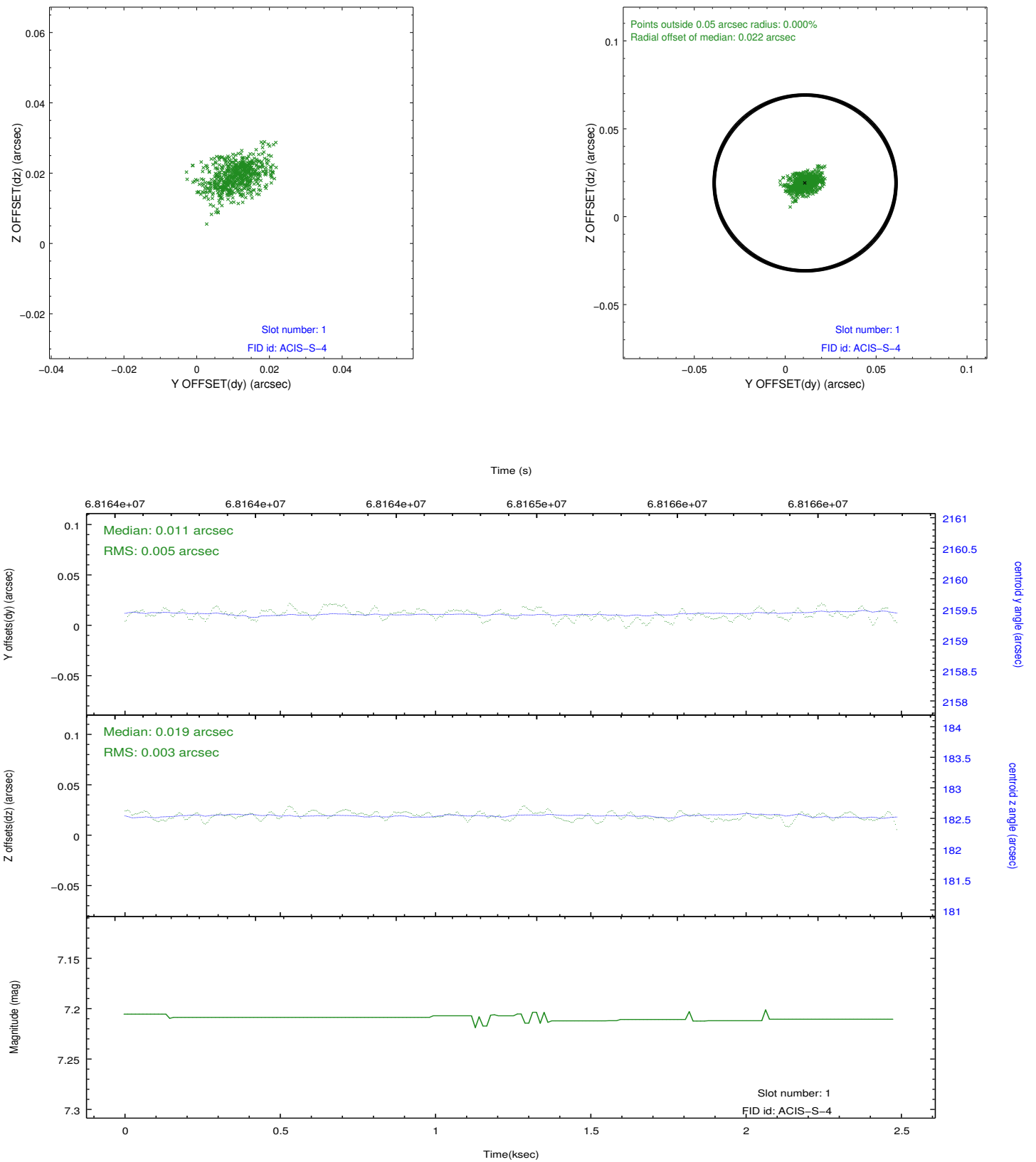


## 2.5 FID Slots

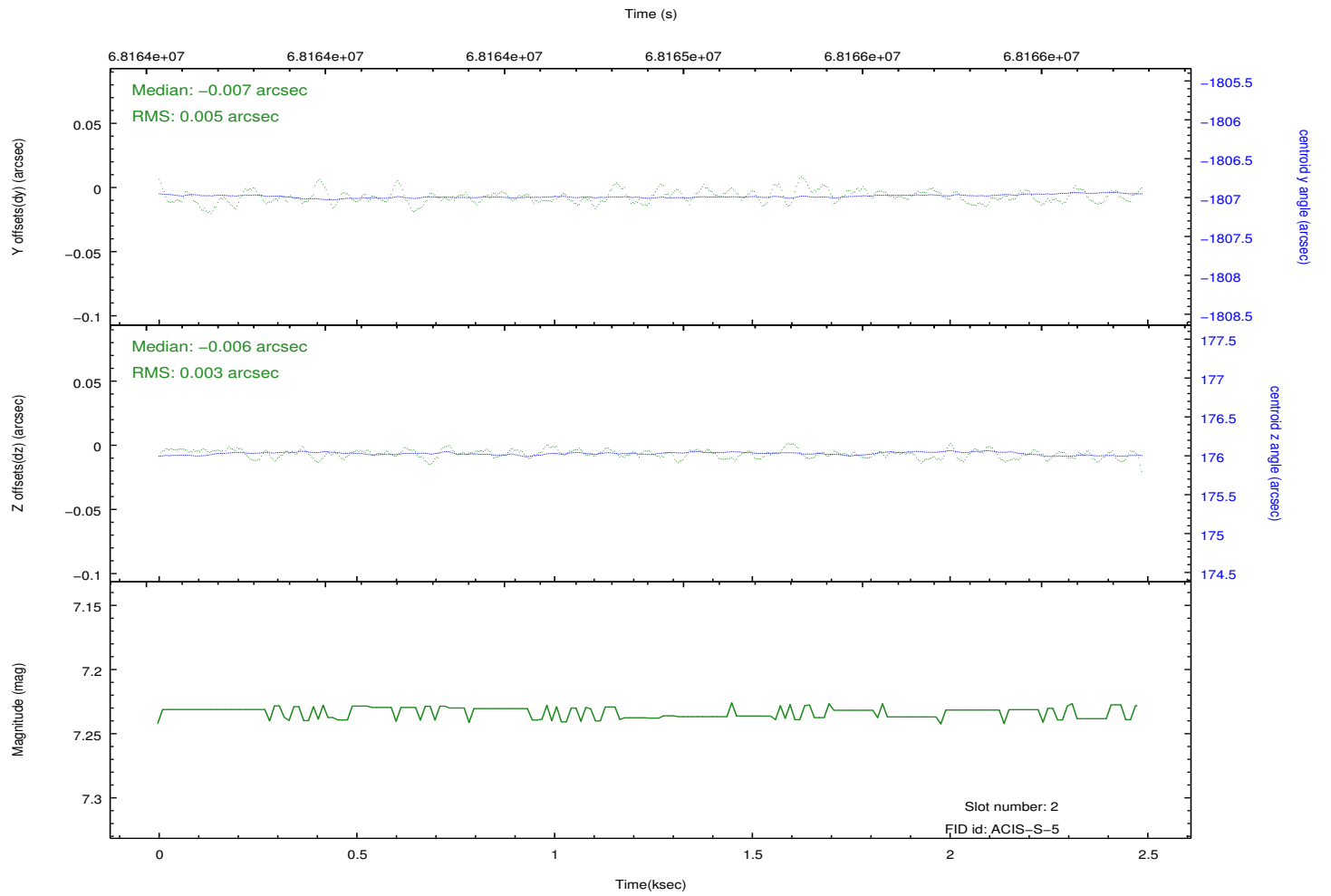
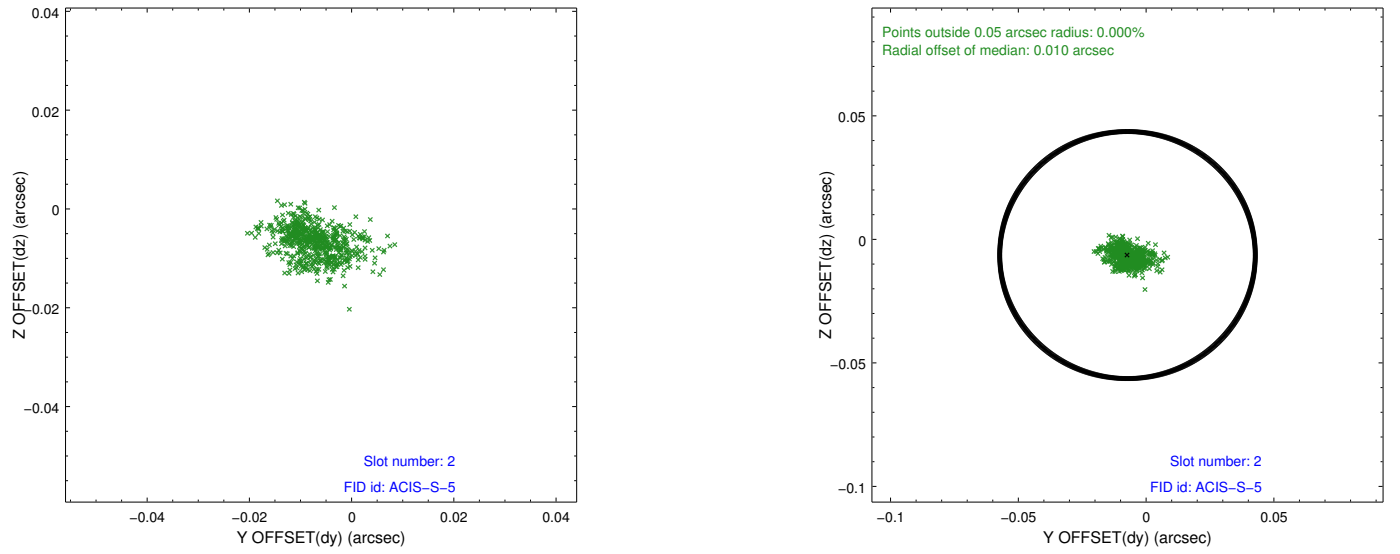
### 2.5.1 Slot 0



## 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)      | 2012.08.24 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 0.983      |

## A.2 Comments

Charge time for this ObsId remains at previous value of 0.983 ks, although with the current processing the charge time would have been 0.972 ksec. Window constraint met.