

# V&V Reference Report

## L2 ASCDS Version : 8.5

Observation 4615 - L2 Version 3  
Chandra X-Ray Center

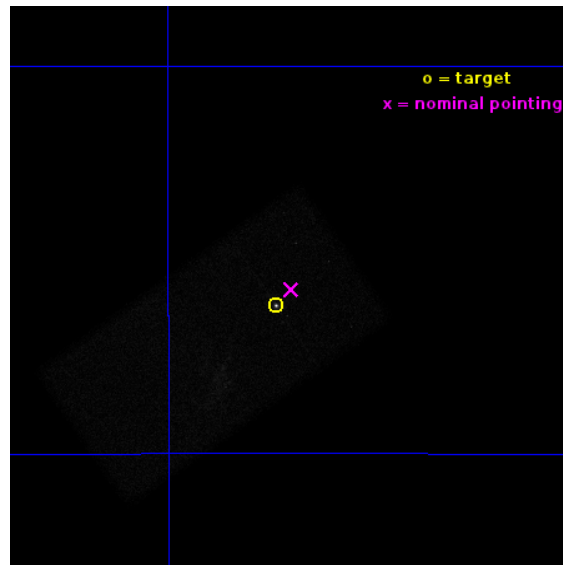
L2 Processing Date : Dec 6 2012

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# 1 Front

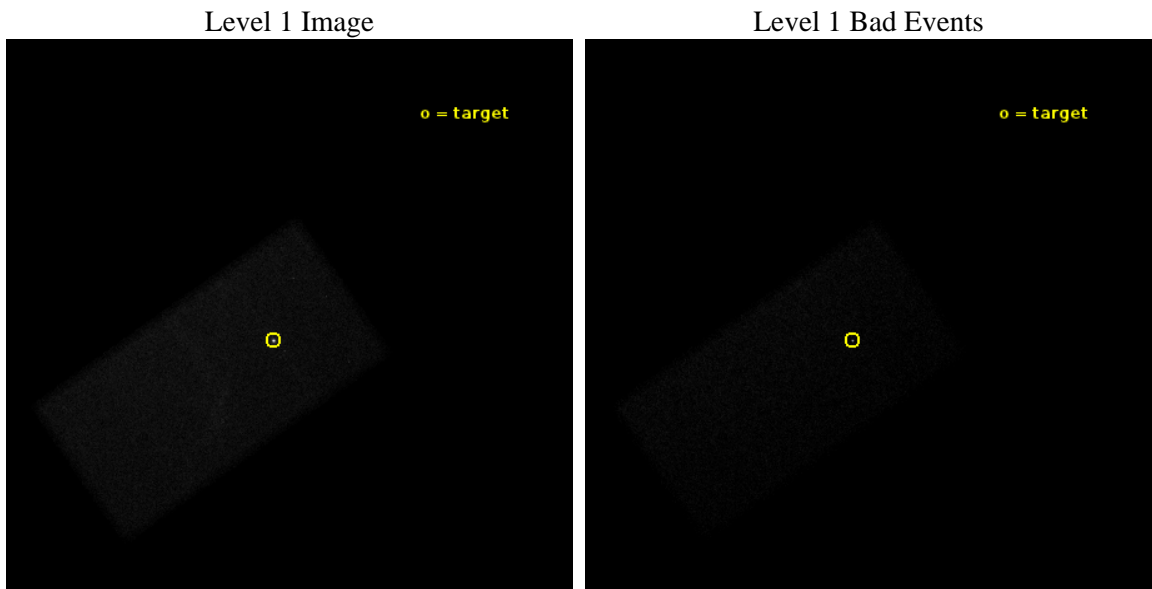
|          |  |   |
|----------|--|---|
| seq_num  | 500440   | Sequence number                             |
| obs_id   | 4615   | Observation id                              |
| title    | Chandra AO5 Monitoring Observations of SN1987A | Proposal title                              |
| observer | Prof. David Burrows                            | Principal investigator                      |
| object   | SNR1987A                                       | Source name                                 |
| dtycycle | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 83.866667                                      | Observer's specified target RA [deg]        |
| dec_targ | -69.26975                                      | Observer's specified target Dec [deg]       |
| ra_nom   | 83.847403961077                                | Nominal RA [deg]                            |
| dec_nom  | -69.262888842935                               | Nominal Dec [deg]                           |
| roll_nom | 144.91562301714                                | Nominal Roll [deg]                          |
| revision | 3  | Processing version of data                  |
| ontime   | 50167.5  | Sum of GTIs [s]                             |
| livetime | 48831.47095468                                 | Livetime [s]                                |
| ontime7  | 50167.5  | Sum of GTIs [s]                             |
| l2events | 140812   | Number of level 2 events                    |



## 2 OBI

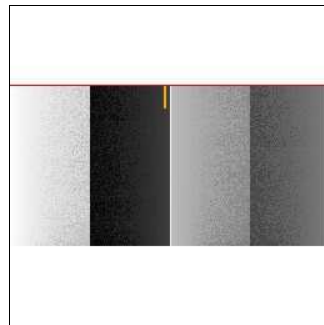
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |              |   |
|----------|---------------------|--------------------------------|----------------|--------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 50000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.5                 | Processing system revision     | ontime         | 50167.5      | Sum of GTIs [s]                         |
| caldbver | 4.5.4               | &#160                          | ontime7        | 50167.5      | Sum of GTIs [s]                         |
| date     | 2012-12-06T12:10:31 | Date and time of file creation | l1events       | 292292       | Number of level 1 events                |
| revision | 3                   | Processing version of data     |                |              |   |

### 2.1.4 Events

|                 | <b>ccd 7</b> |
|-----------------|--------------|
| level 1 events  | 292292       |
| rejected events | 148288       |
| rejected %      | 50%          |

|                | <b>ccd 7</b> |
|----------------|--------------|
| grade 0 events | 22344        |
|                | 7%           |
| grade 1 events | 568          |
|                | 0%           |
| grade 2 events | 31441        |
|                | 10%          |
| grade 3 events | 15378        |
|                | 5%           |
| grade 4 events | 15008        |
|                | 5%           |
| grade 5 events | 25816        |
|                | 8%           |
| grade 6 events | 62184        |
|                | 21%          |
| grade 7 events | 119553       |
|                | 40%          |

## 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                 | 83.924112           | 83.84740396107686    | Subarray requested                    | CUSTOM    | 1/2     |
| [deg] Pointing Dec                | -69.264923          | -69.26288884293459   | Subarray start row                    | 257       | 257     |
| [deg] Pointing Roll               | 144.830734          | 144.9156230171374    | Subarray row count                    | 512       | 512     |
| [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  | 1.5     |
| [mm] SIM translation stage pos    | -190.132523         | -190.1400660498719   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.00754346686406393  |                                       |           |         |
| [s] Observation start time (MET)  | 206852469.184000    | 206851269.64489      |                                       |           |         |
| Observation start date            | 2004-07-22T03:00:05 | 2004-07-22T02:41:09  |                                       |           |         |
| [s] Observation end time (MET)    | 206902469.184000    | 206903199.73469      |                                       |           |         |
| Observation end date              | 2004-07-22T16:53:25 | 2004-07-22T17:06:39  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect

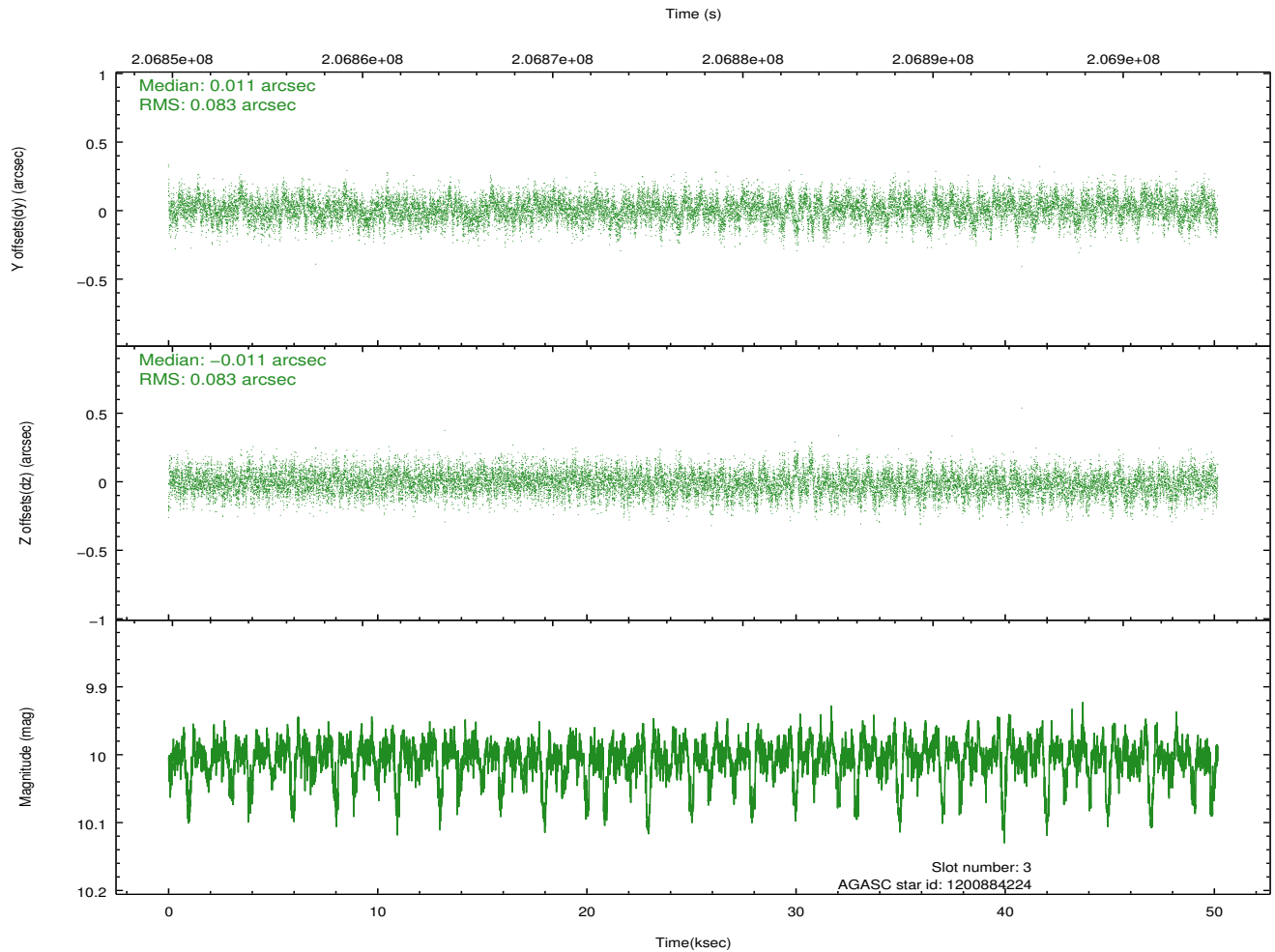
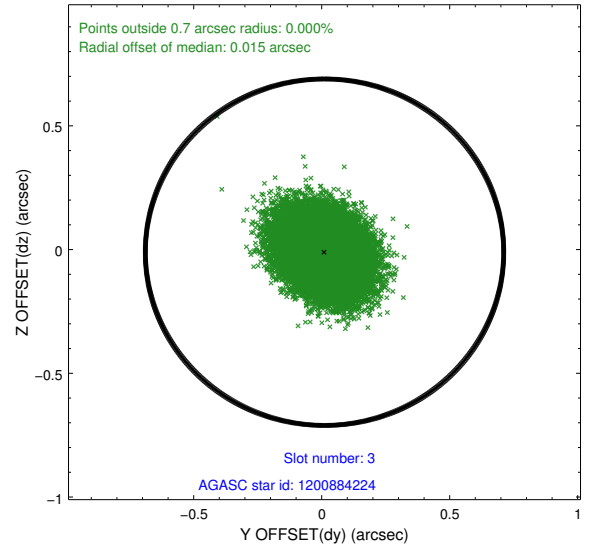
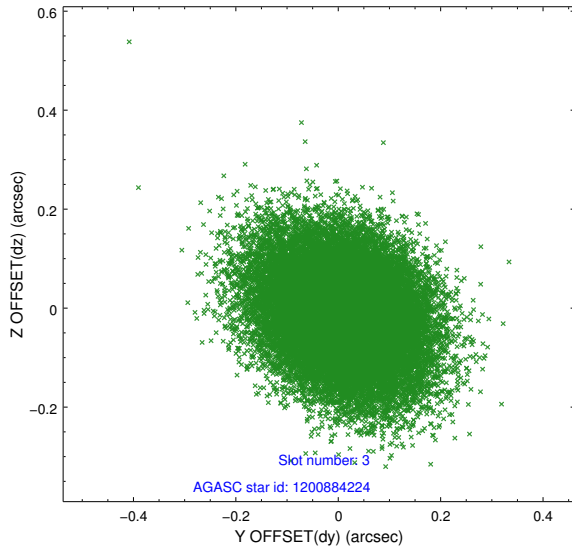


### Slot Statistics

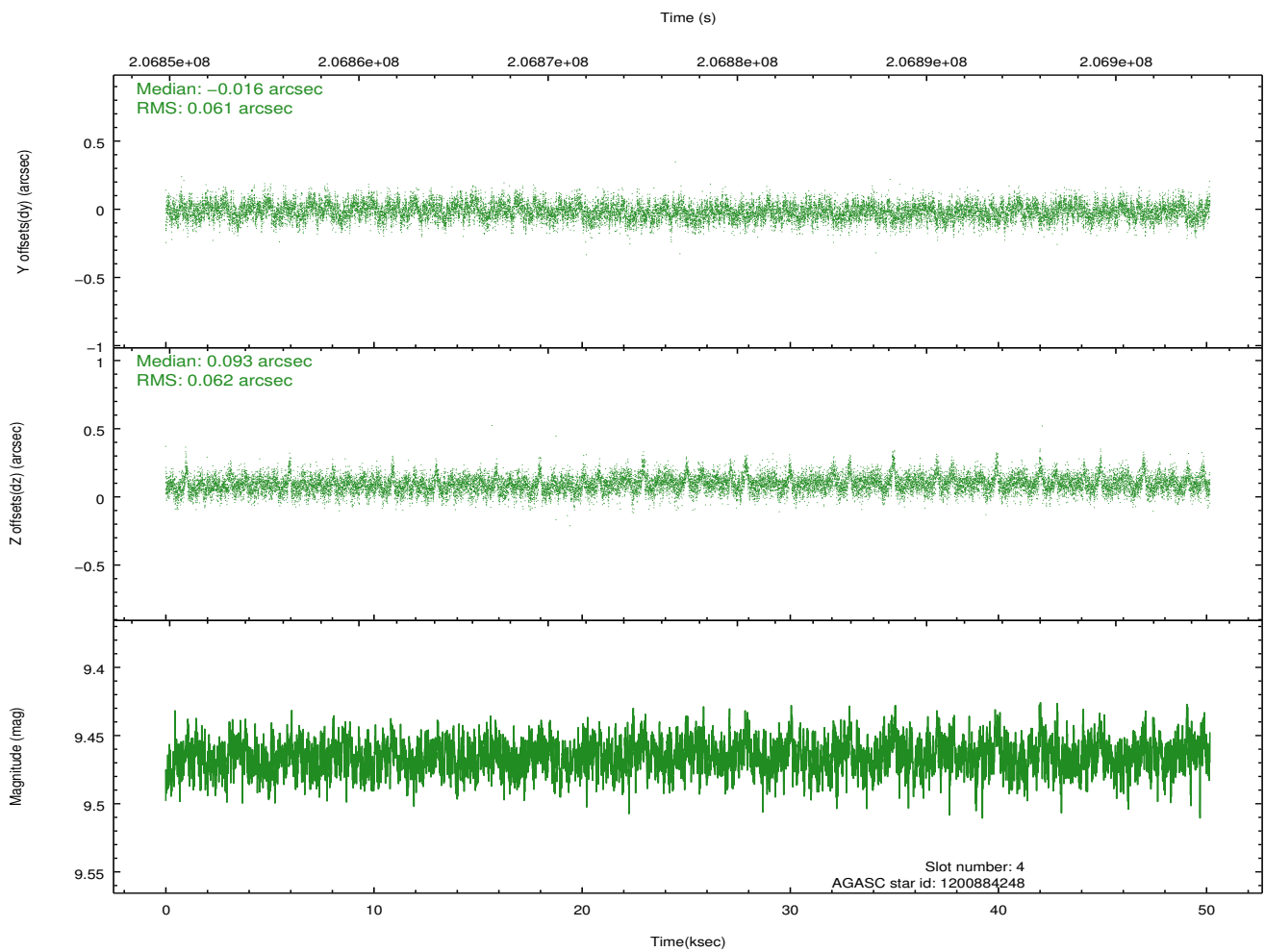
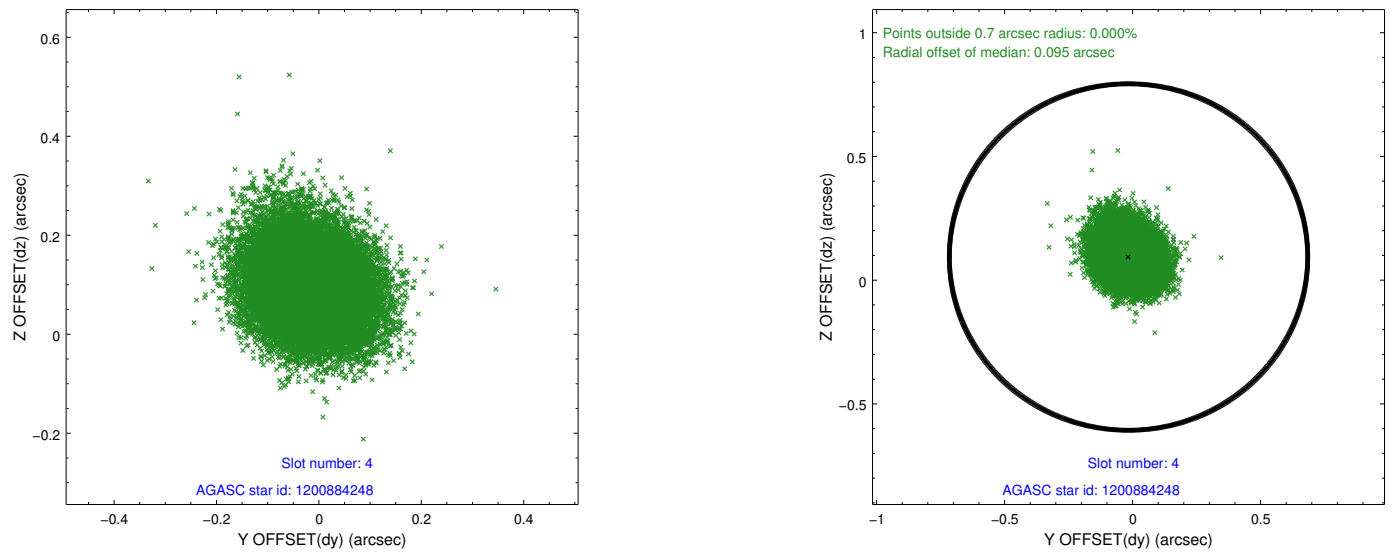
| slot | status | id         | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec        | mean_y   | mean_z   |
|------|--------|------------|-------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0    | FID    | ACIS-S-2   | 7.10  | 12236 | -0.066 | -0.036 | 0.011 | 0.018 | 0.000000  | 0.000000   | -758.33  | -1731.12 |
| 1    | FID    | ACIS-S-4   | 7.20  | 12235 | 0.103  | 0.041  | 0.026 | 0.036 | 0.000000  | 0.000000   | 2155.11  | 177.50   |
| 2    | FID    | ACIS-S-5   | 7.23  | 12236 | -0.071 | 0.003  | 0.017 | 0.028 | 0.000000  | 0.000000   | -1811.23 | 171.06   |
| 3    | GUIDE  | 1200884224 | 10.00 | 24448 | 0.011  | -0.011 | 0.125 | 0.205 | 83.314443 | -68.577335 | 2079.30  | -1557.98 |
| 4    | GUIDE  | 1200884248 | 9.47  | 24454 | -0.016 | 0.093  | 0.092 | 0.151 | 83.880915 | -68.565170 | 1498.03  | -2026.19 |
| 5    | GUIDE  | 1200885760 | 9.46  | 24455 | -0.038 | -0.020 | 0.105 | 0.173 | 83.723637 | -68.777667 | 1224.09  | -1282.75 |
| 6    | GUIDE  | 1201542672 | 8.19  | 24467 | 0.067  | -0.073 | 0.079 | 0.129 | 84.492488 | -69.957531 | -2010.90 | 1636.18  |
| 7    | GUIDE  | 1201018312 | 9.59  | 24458 | -0.027 | 0.012  | 0.136 | 0.207 | 86.298231 | -69.115627 | -2214.05 | -2145.60 |

## 2.4 Star Slots

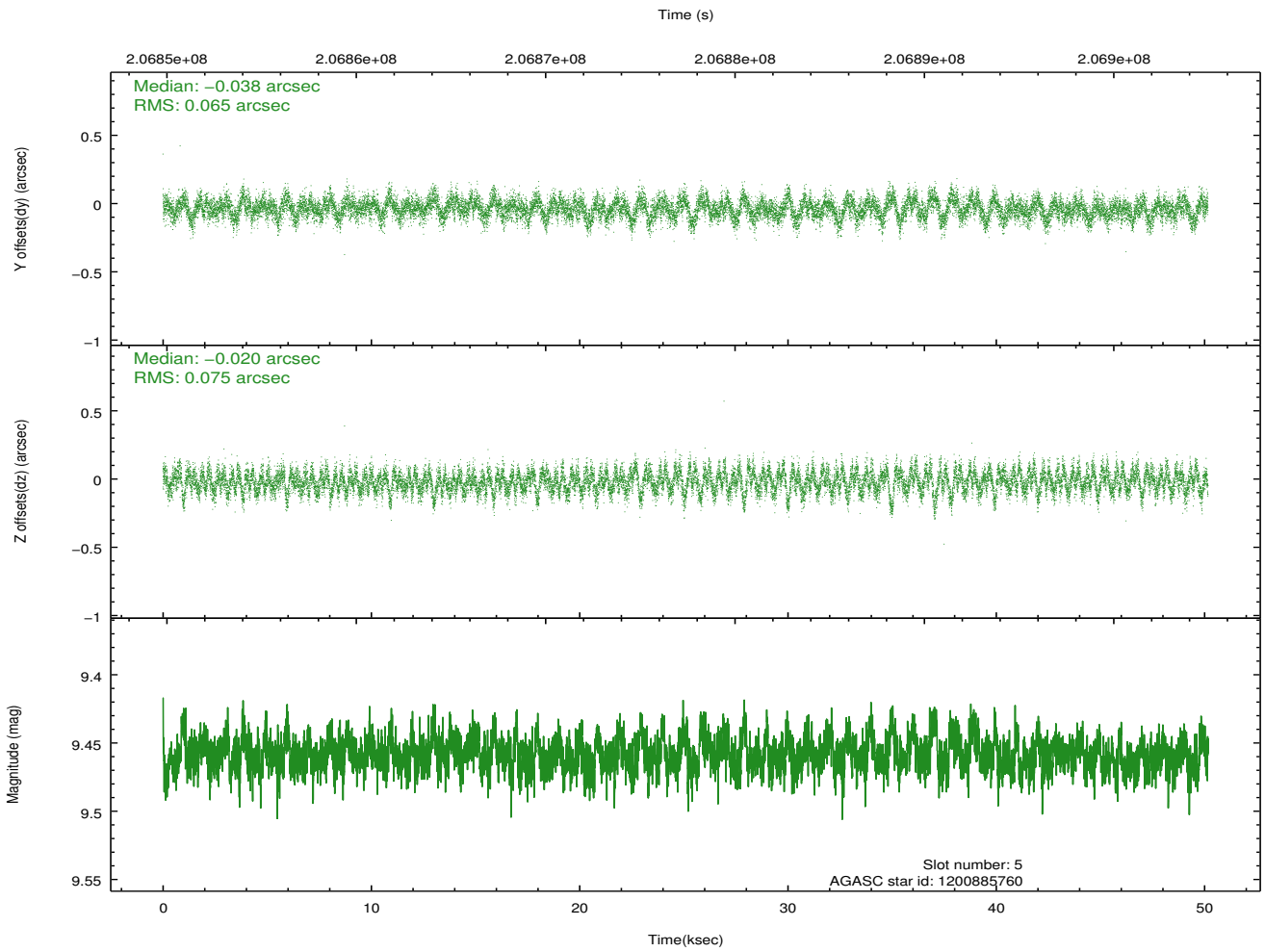
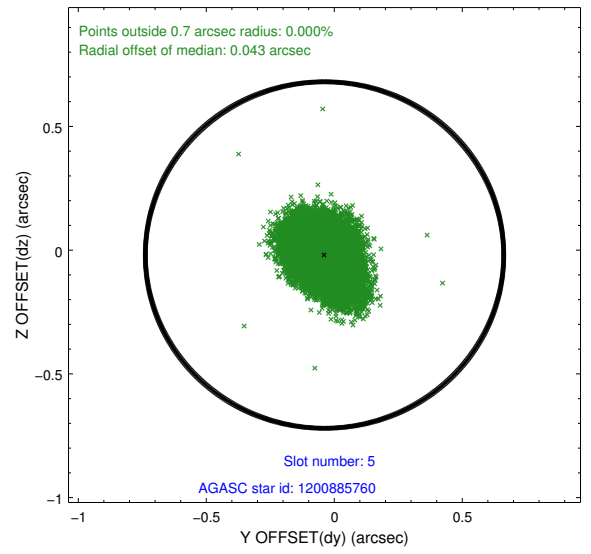
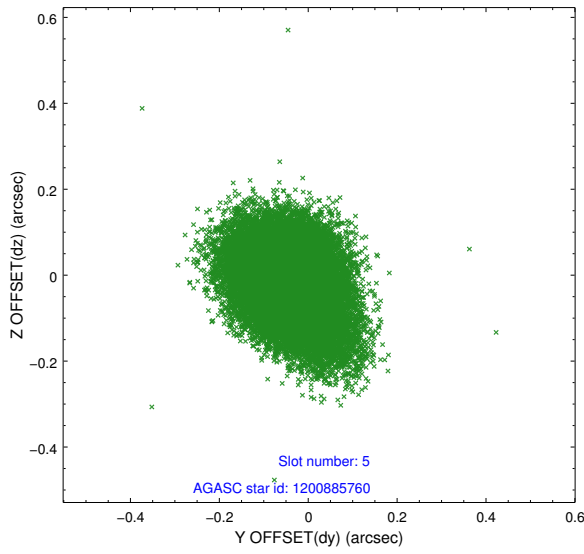
### 2.4.1 Slot 3



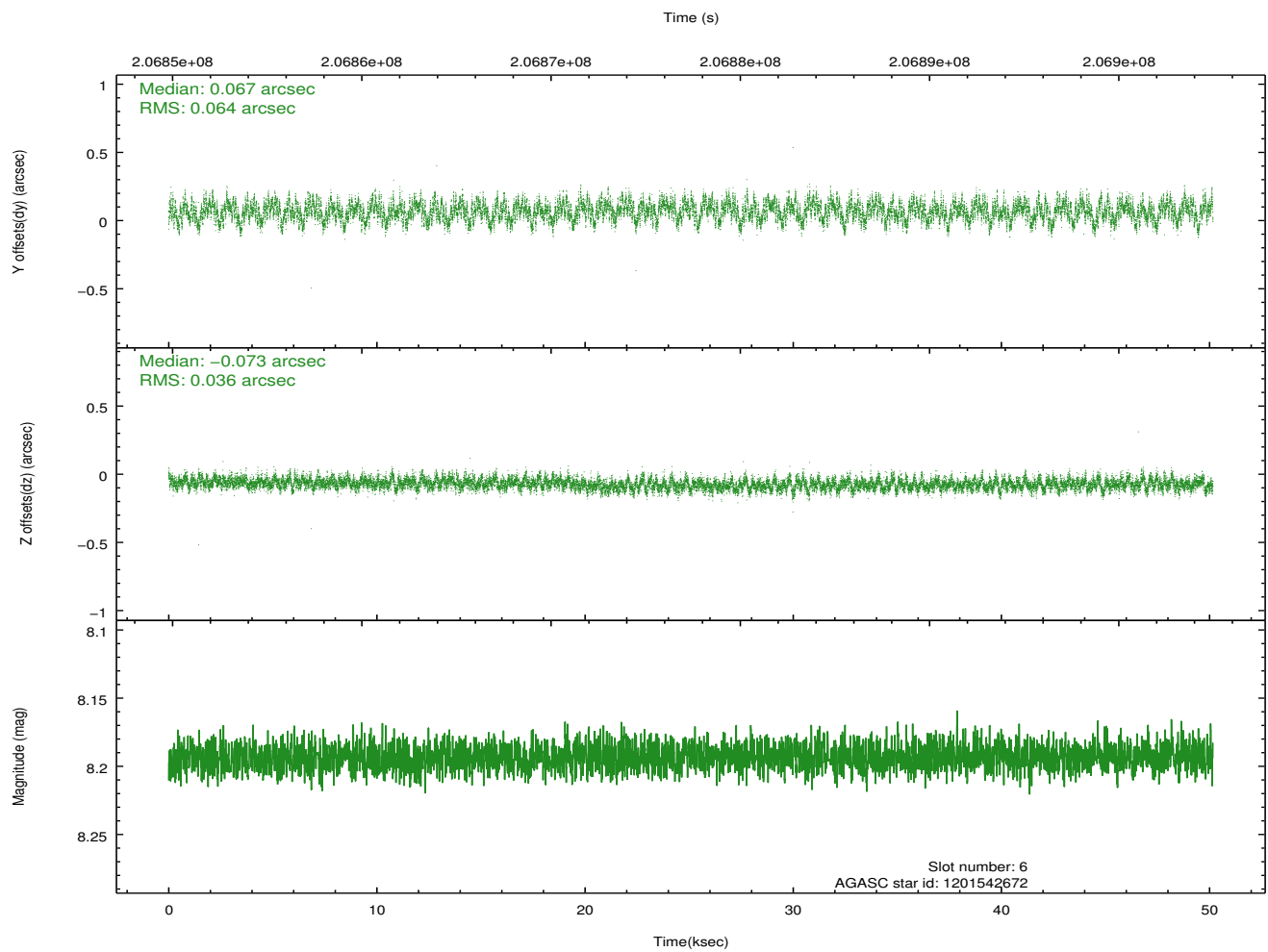
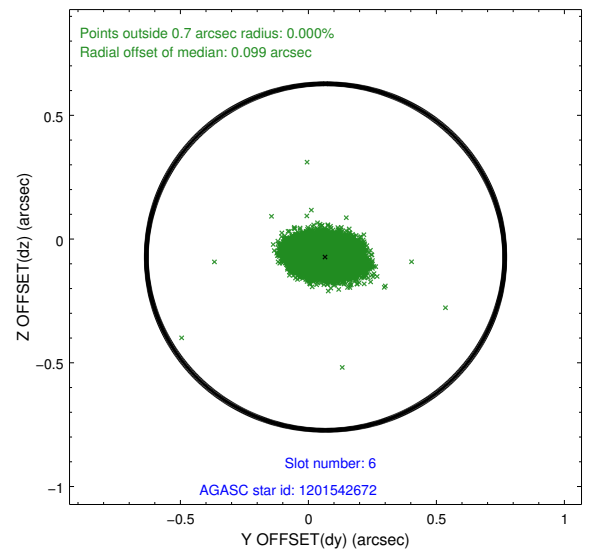
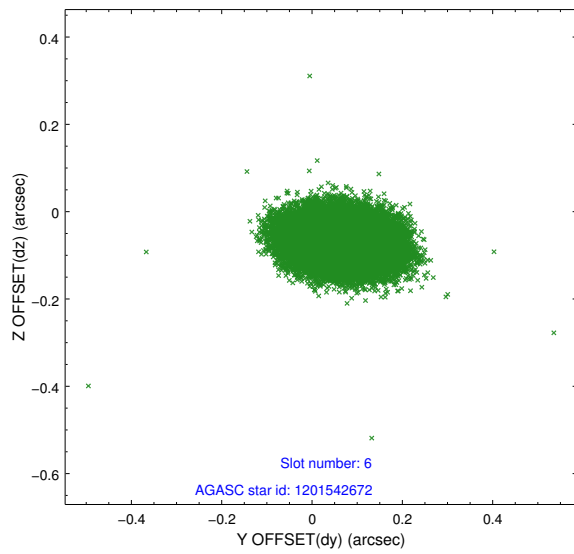
## 2.4.2 Slot 4



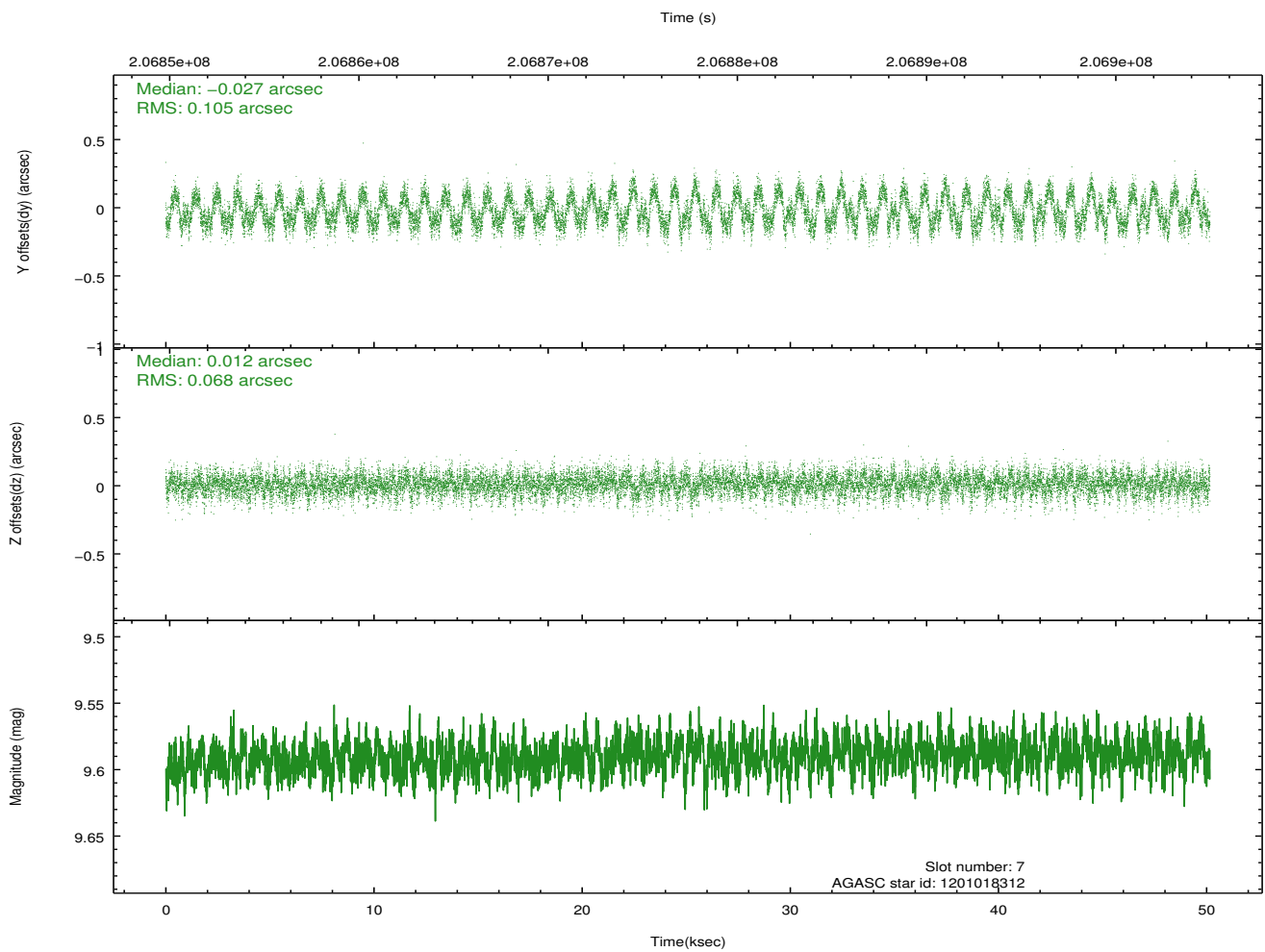
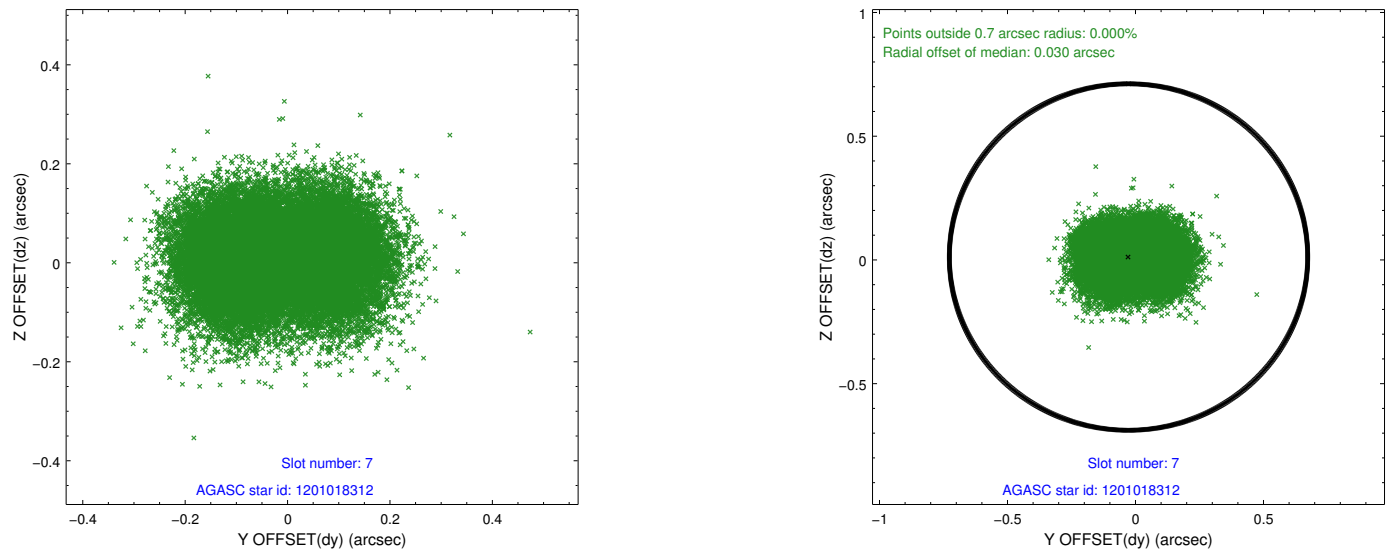
### 2.4.3 Slot 5



## 2.4.4 Slot 6

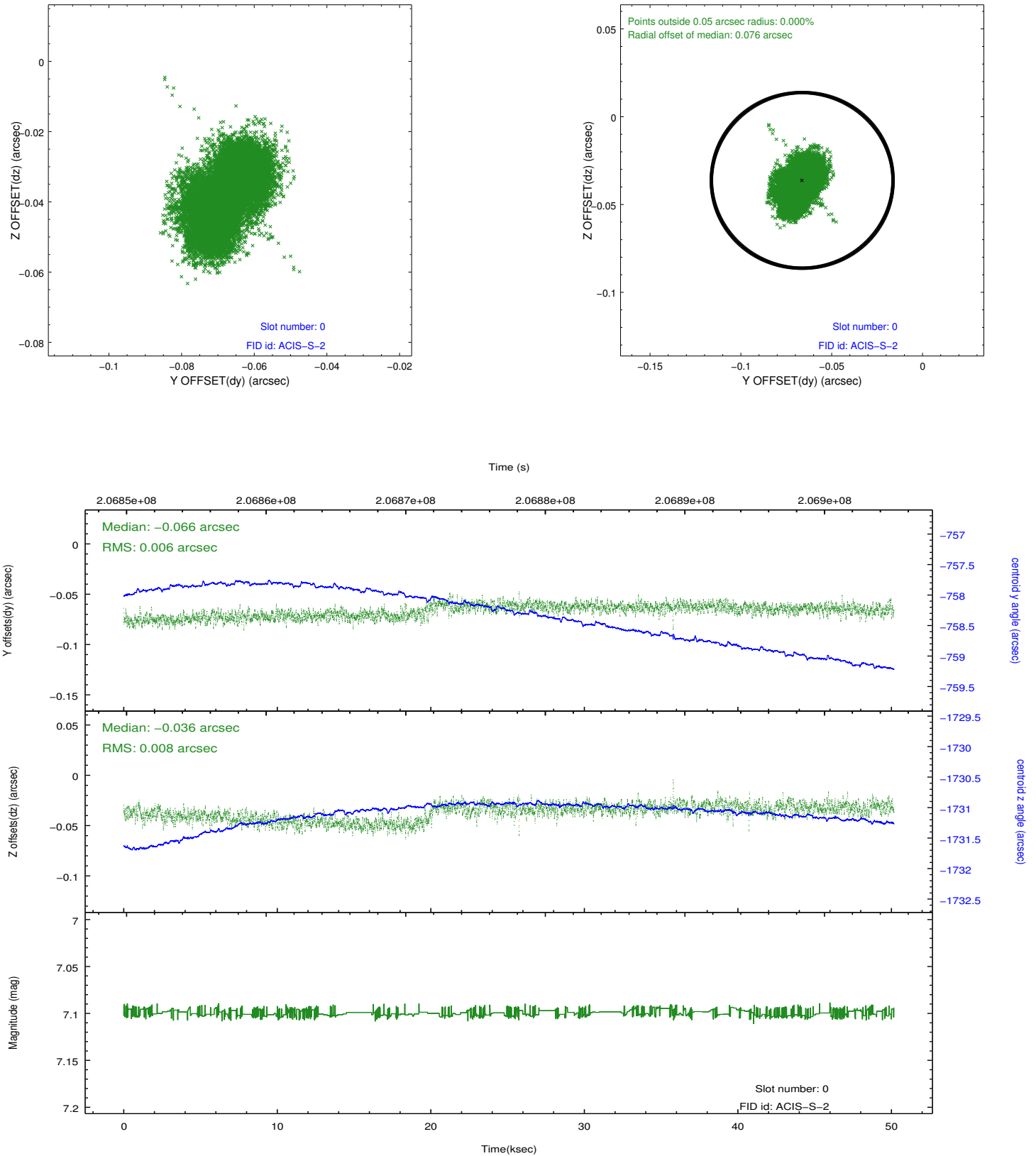


## 2.4.5 Slot 7

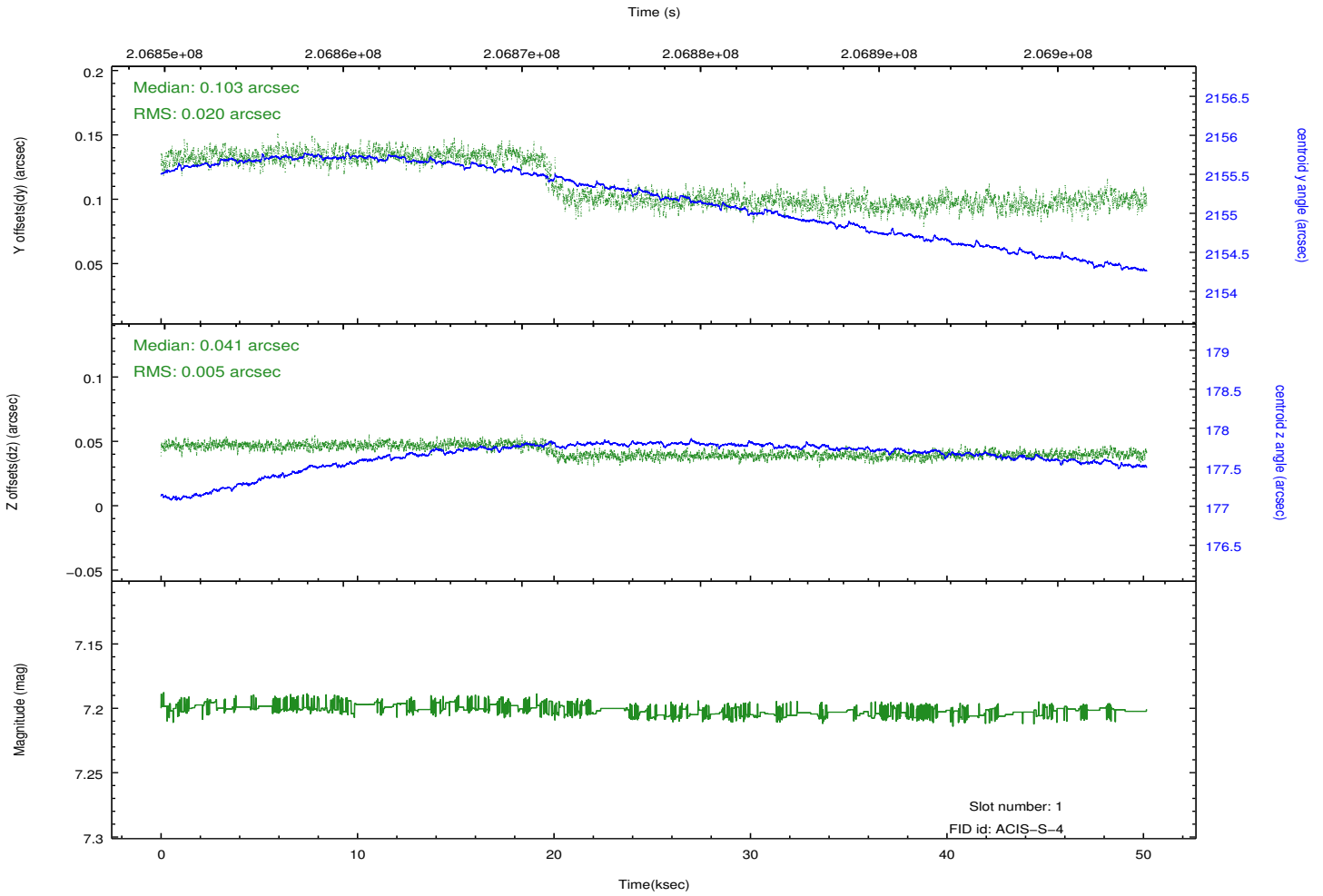
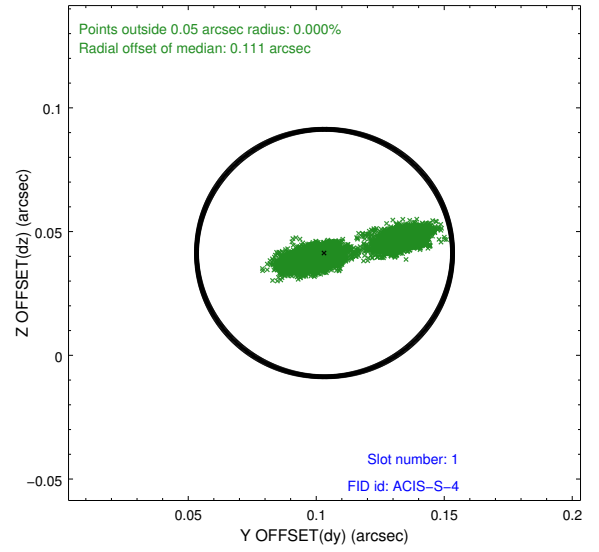
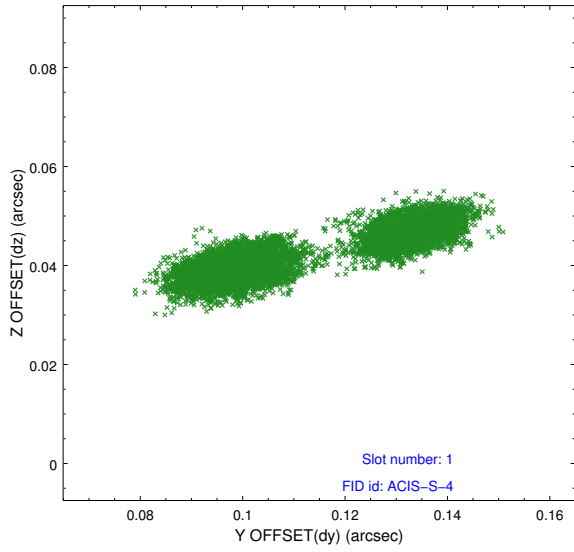


## 2.5 FID Slots

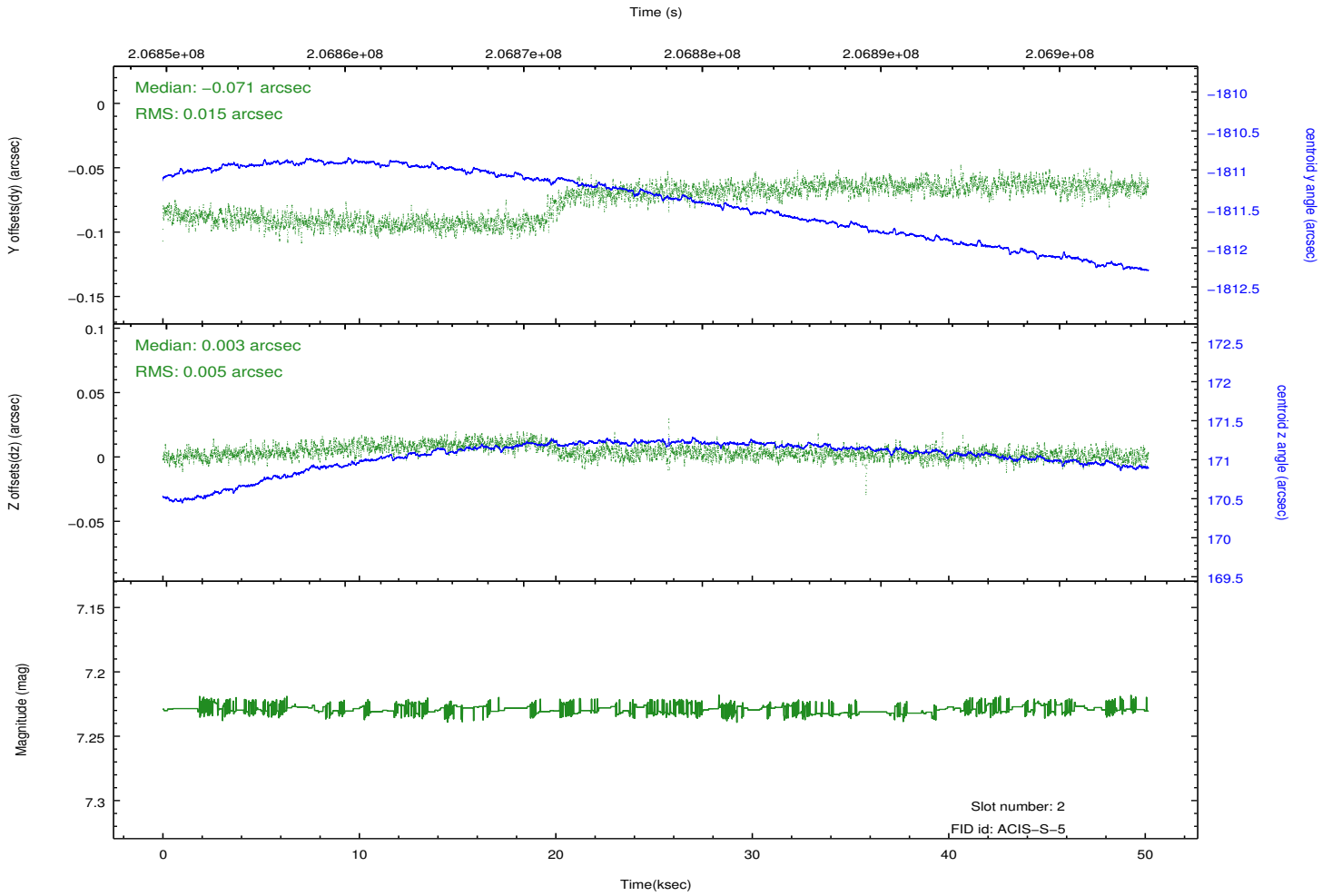
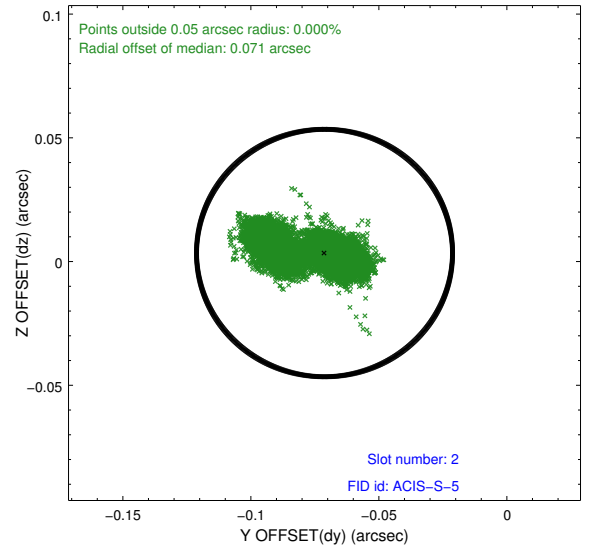
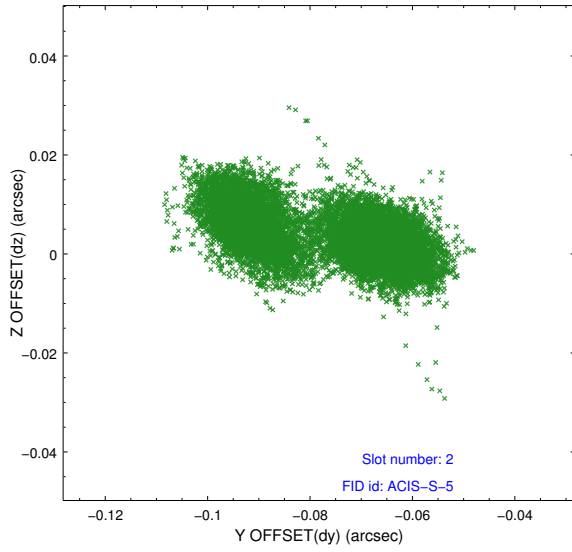
### 2.5.1 Slot 0



## 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)      | 2012.12.20 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 50.167     |

## A.2 Comments

Window preference met.