

# V&V Reference Report

## L2 ASCDS Version : 8.4.5

Observation 10124 - L2 Version 2  
Chandra X-Ray Center

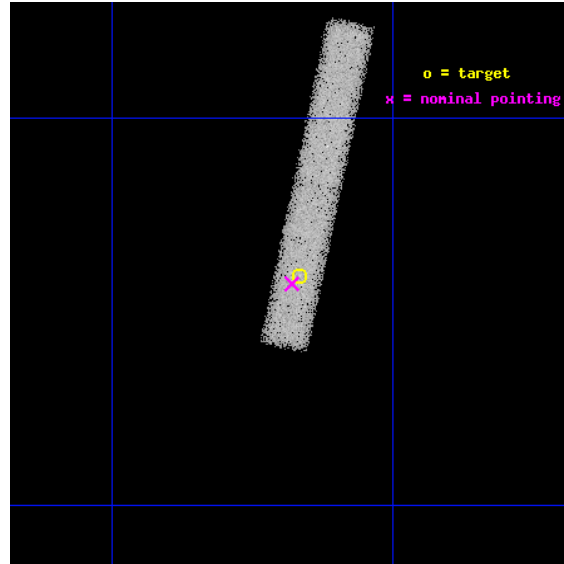
L2 Processing Date : Jun 14 2012

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# 1 Front

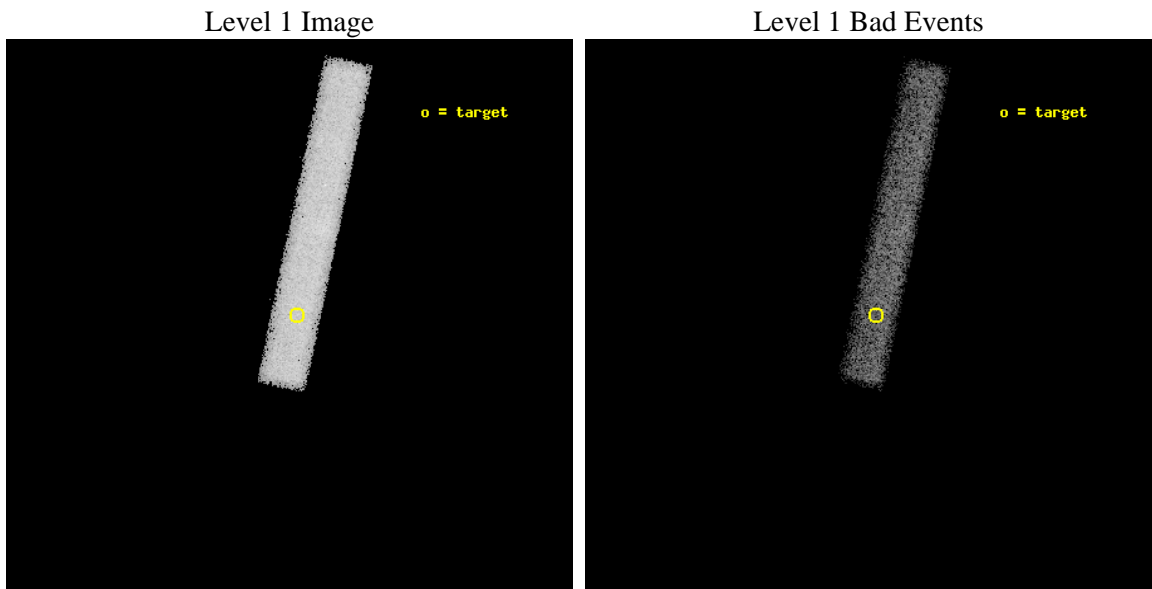
|          |   |   |
|----------|---|---|
| seq_num  | 501051  | Sequence number                             |
| obs_id   | 10124   | Observation id                              |
| title    | X-ray emission from the double neutron star binary J1537+1155:<br>Powered by the pulsar wind? | Proposal title                              |
| observer | Dr Oleg Kargaltsev  | Principal investigator                      |
| object   | PSR J1537+1155  | Source name                                 |
| dtcycle  | 0   | &#160                                       |
| cycle    | P   | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 234.291667  | Observer's specified target RA<br>[deg]     |
| dec_targ | 11.932083   | Observer's specified target Dec<br>[deg]    |
| ra_nom   | 234.29508053265   | Nominal RA [deg]                            |
| dec_nom  | 11.928574926253   | Nominal Dec [deg]                           |
| roll_nom | 281.91075380476   | Nominal Roll [deg]                          |
| revision | 2   | Processing version of data                  |
| ontime   | 38182.797724128   | Sum of GTIs [s]                             |
| livetime | 34629.782082467   | Livetime [s]                                |
| ontime7  | 38182.797724128   | Sum of GTIs [s]                             |
| l2events | 33054   | Number of level 2 events                    |



## 2 OBI

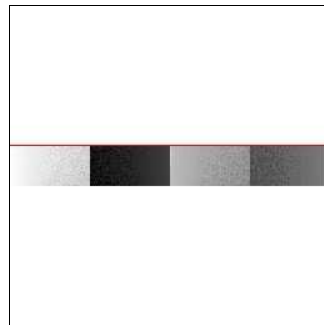
### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias

Chip 7



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 38000.000000    | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5               | Processing system revision     | ontime         | 38182.797724128 | Sum of GTIs [s]                         |
| caldsver | 4.4.10              | &#160                          | ontime7        | 38182.797724128 | Sum of GTIs [s]                         |
| date     | 2012-06-14T13:26:02 | Date and time of file creation | l1events       | 75416           | Number of level 1 events                |
| revision | 2                   | Processing version of data     |                |                 |   |

### 2.1.4 Events

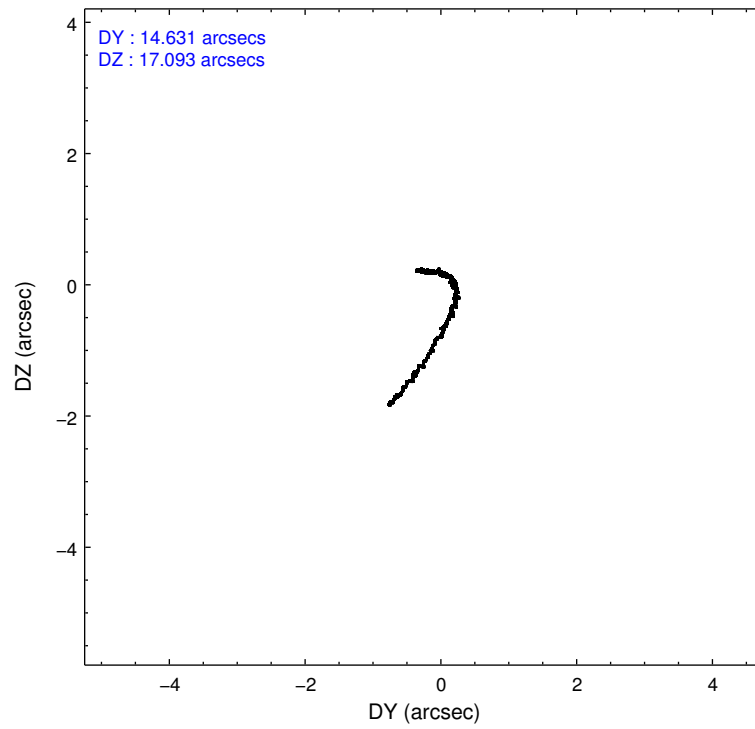
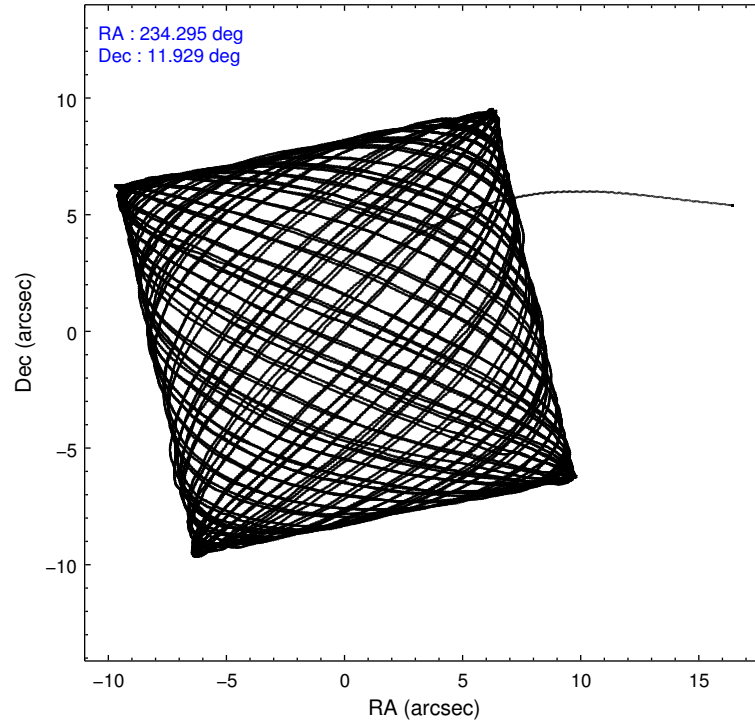
|                 | <b>ccd 7</b> |
|-----------------|--------------|
| level 1 events  | 75416        |
| rejected events | 41004        |
| rejected %      | 54%          |

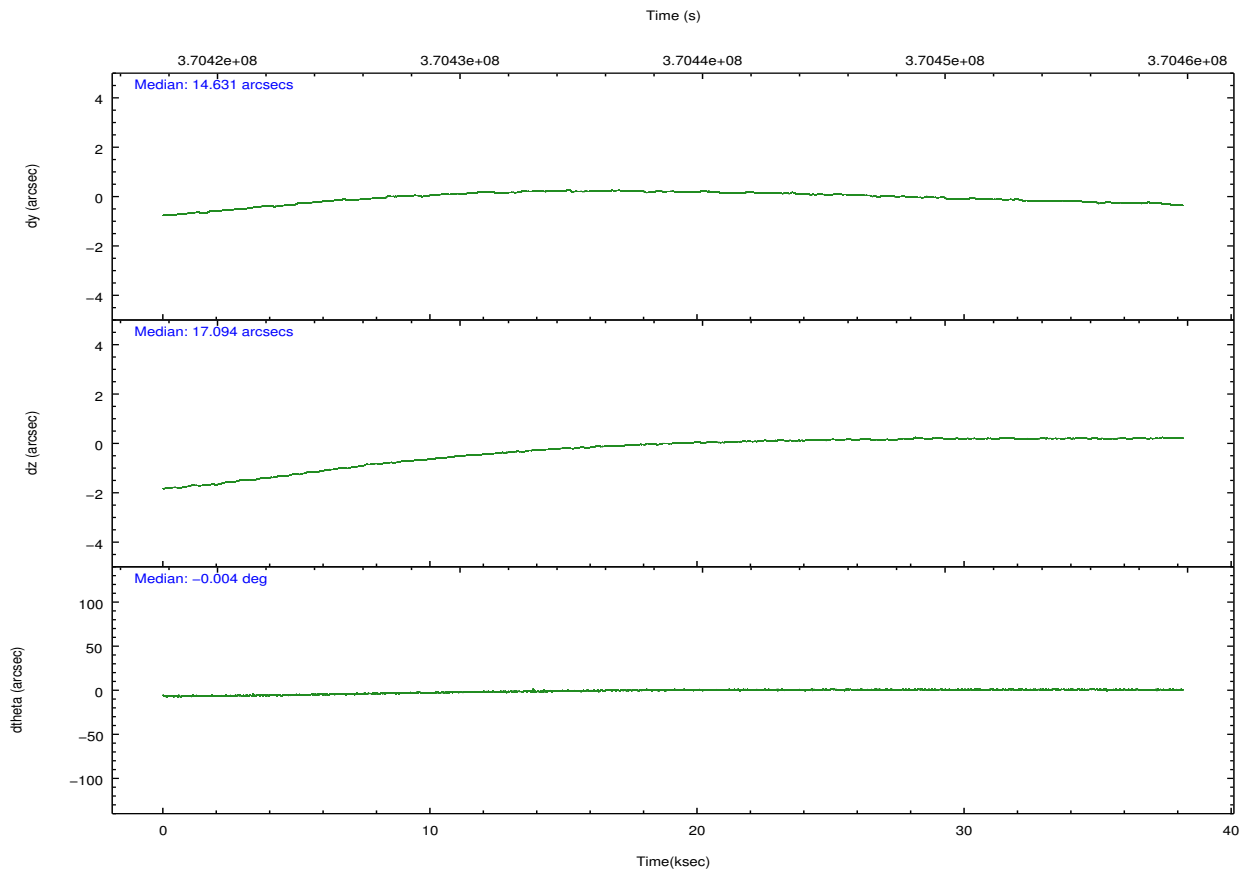
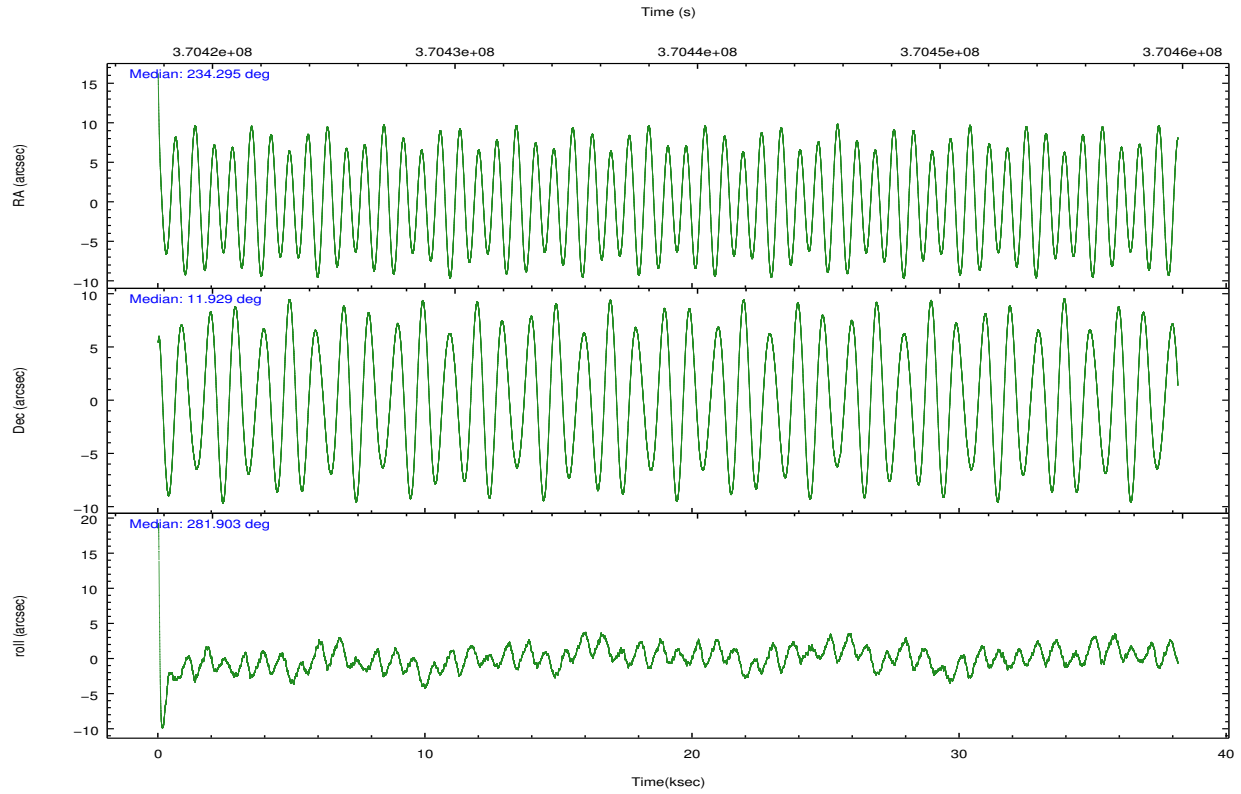
|                | <b>ccd 7</b> |
|----------------|--------------|
| grade 0 events | 3408         |
|                | 4%           |
| grade 1 events | 112          |
|                | 0%           |
| grade 2 events | 6895         |
|                | 9%           |
| grade 3 events | 4370         |
|                | 5%           |
| grade 4 events | 4249         |
|                | 5%           |
| grade 5 events | 6973         |
|                | 9%           |
| grade 6 events | 16142        |
|                | 21%          |
| grade 7 events | 33267        |
|                | 44%          |

## 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                 | 234.276137          | 234.2950805326533    | Subarray requested                    | CUSTOM    | 1/8     |
| [deg] Pointing Dec                | 11.948663           | 11.92857492625346    | Subarray start row                    | 449       | 449     |
| [deg] Pointing Roll               | 281.758036          | 281.9107538047594    | Subarray row count                    | 128       | 128     |
| [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  | 0.4     |
| [mm] SIM translation stage pos    | -190.132523         | -190.1425803651734   |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | 0.01005778216563158  |                                       |           |         |
| [s] Observation start time (MET)  | 370419876.184000    | 370418881.95719      |                                       |           |         |
| Observation start date            | 2009-09-27T06:23:30 | 2009-09-27T06:08:01  |                                       |           |         |
| [s] Observation end time (MET)    | 370457876.184000    | 370458455.15918      |                                       |           |         |
| Observation end date              | 2009-09-27T16:56:50 | 2009-09-27T17:07:35  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect



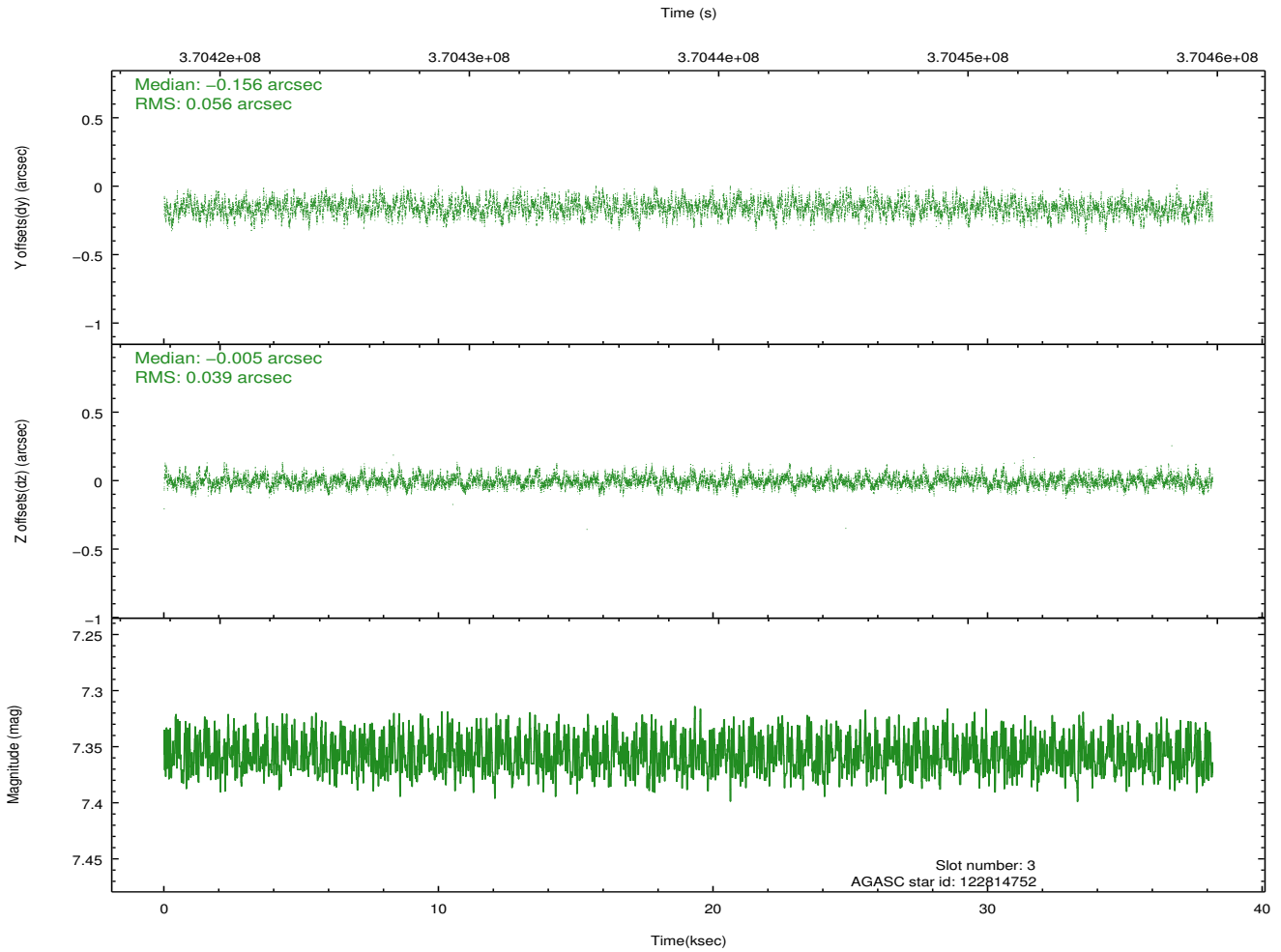
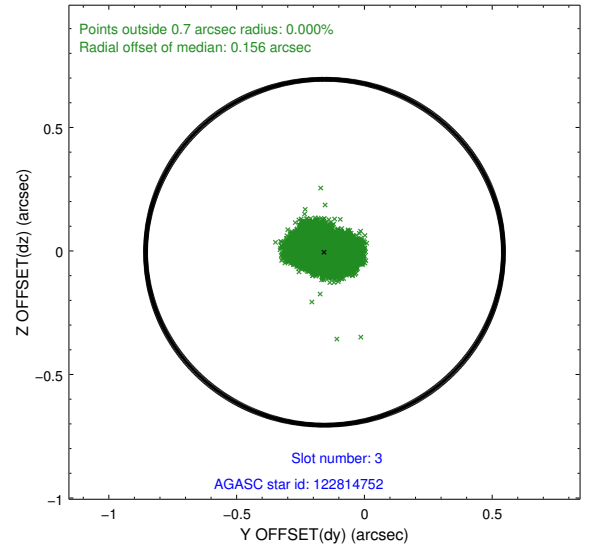
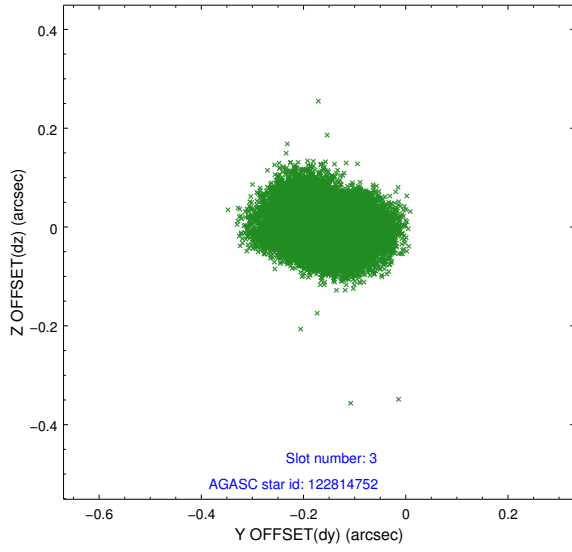


### Slot Statistics

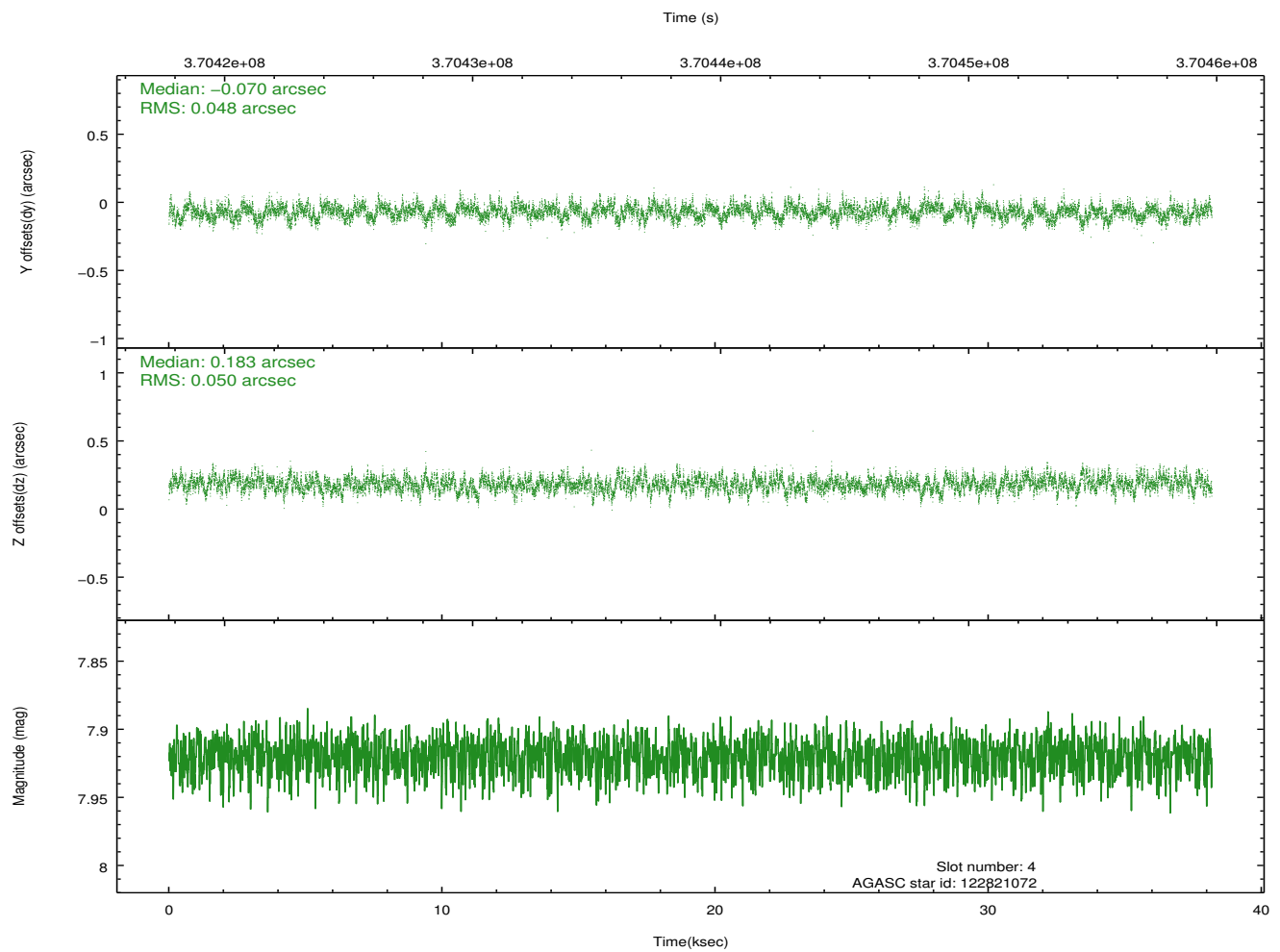
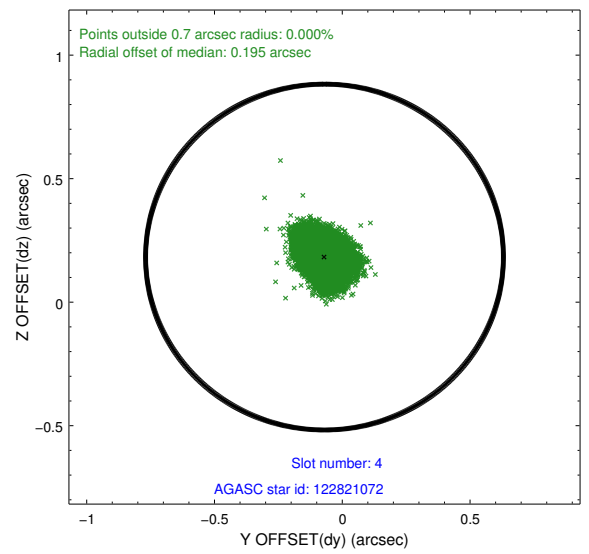
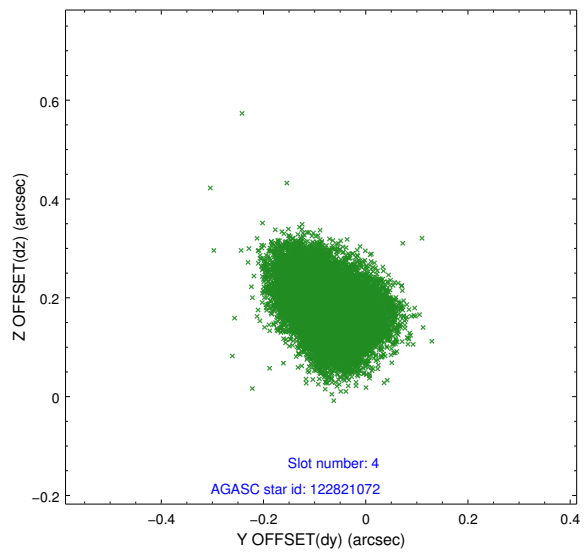
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-1  | 6.92 | 9313  | 0.054  | -0.058 | 0.018 | 0.039 | 0.000000   | 0.000000  | 928.52   | -1733.86 |
| 1    | FID    | ACIS-S-4  | 6.93 | 9312  | 0.120  | 0.018  | 0.013 | 0.031 | 0.000000   | 0.000000  | 2146.04  | 170.33   |
| 2    | FID    | ACIS-S-5  | 6.96 | 9312  | -0.198 | 0.052  | 0.019 | 0.029 | 0.000000   | 0.000000  | -1820.54 | 164.04   |
| 3    | GUIDE  | 122814752 | 7.36 | 18623 | -0.156 | -0.005 | 0.074 | 0.119 | 234.348228 | 12.301633 | -1192.70 | 506.59   |
| 4    | GUIDE  | 122821072 | 7.92 | 18619 | -0.070 | 0.183  | 0.074 | 0.120 | 234.683443 | 12.253214 | -782.30  | 1626.55  |
| 5    | GUIDE  | 122821656 | 7.44 | 18627 | 0.024  | 0.072  | 0.053 | 0.086 | 234.186532 | 11.600903 | 1162.27  | -564.24  |
| 6    | GUIDE  | 122822448 | 8.10 | 18621 | -0.006 | -0.125 | 0.066 | 0.103 | 234.440969 | 11.603217 | 1336.77  | 315.58   |
| 7    | GUIDE  | 122293128 | 9.02 | 18518 | 0.210  | -0.125 | 0.089 | 0.151 | 234.009057 | 11.238754 | 2310.42  | -1444.77 |

## 2.4 Star Slots

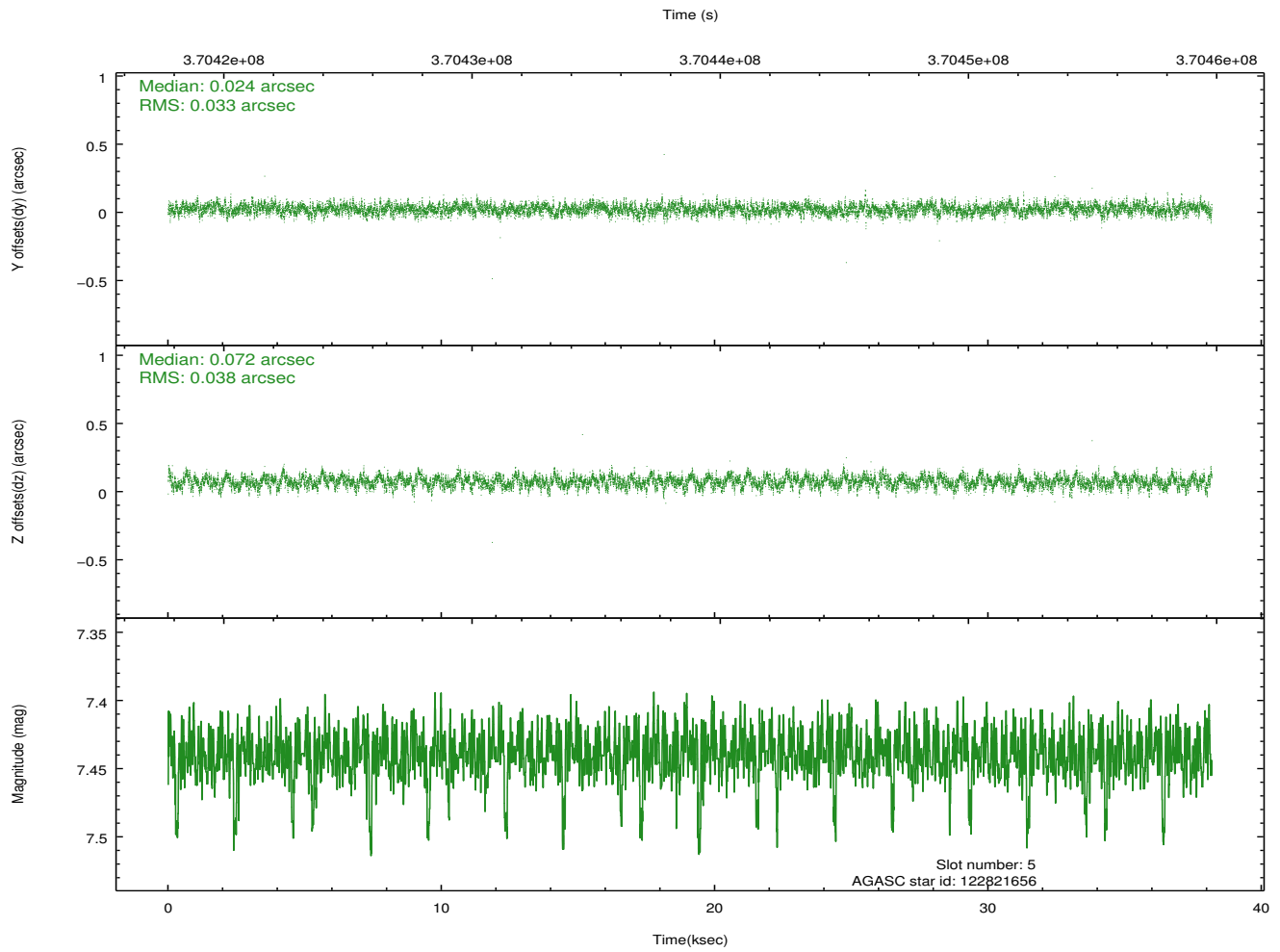
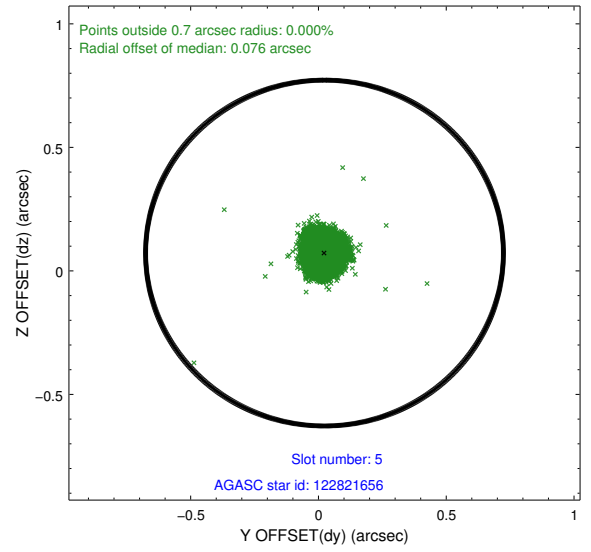
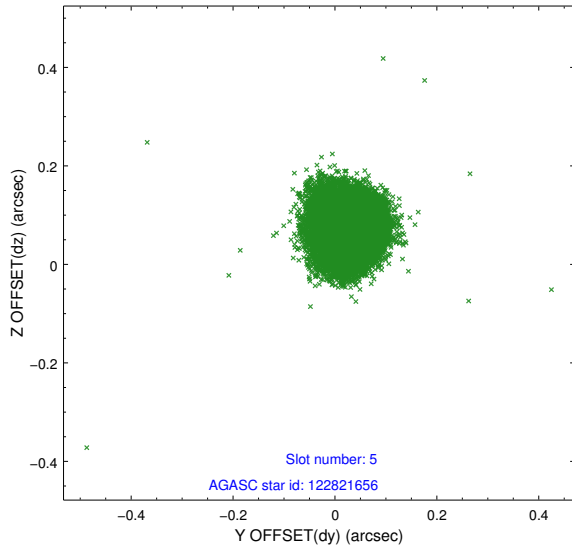
### 2.4.1 Slot 3



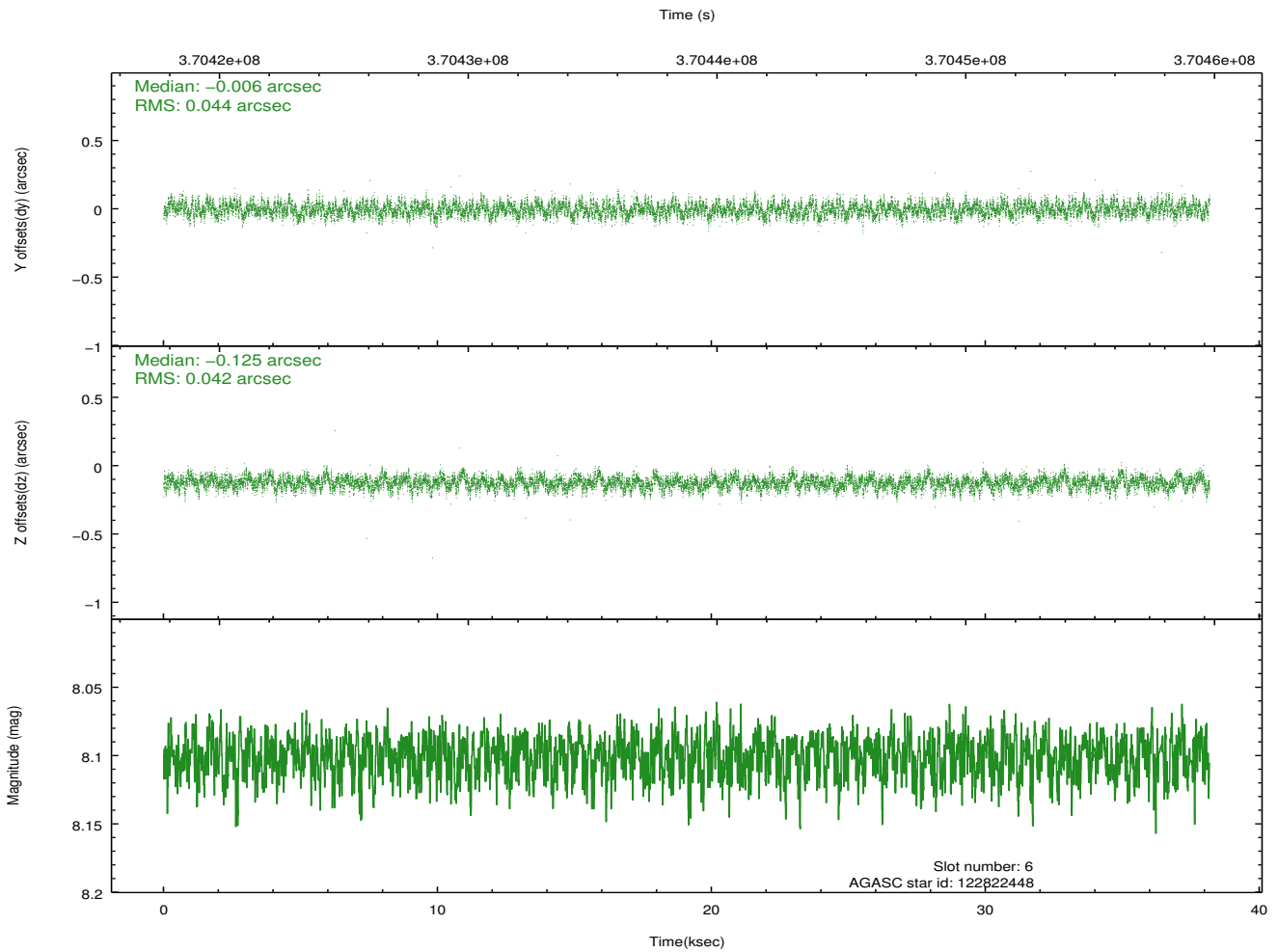
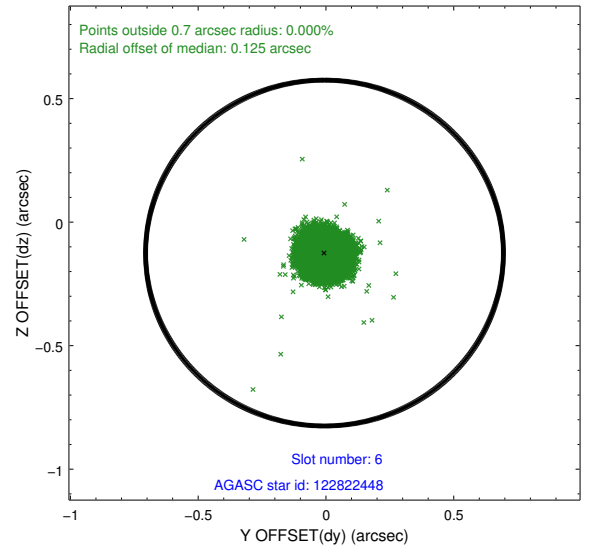
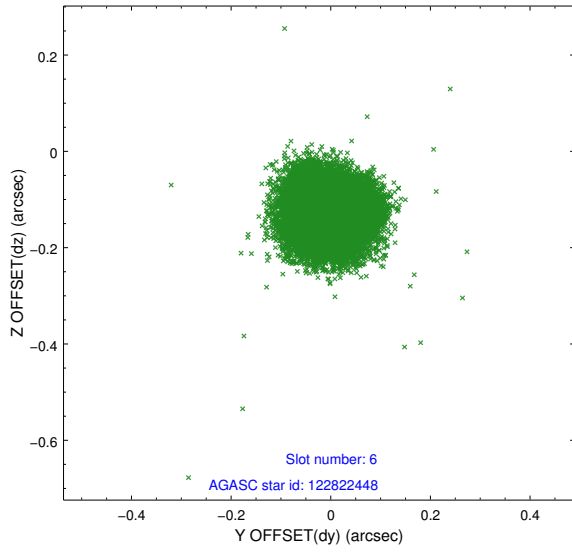
## 2.4.2 Slot 4



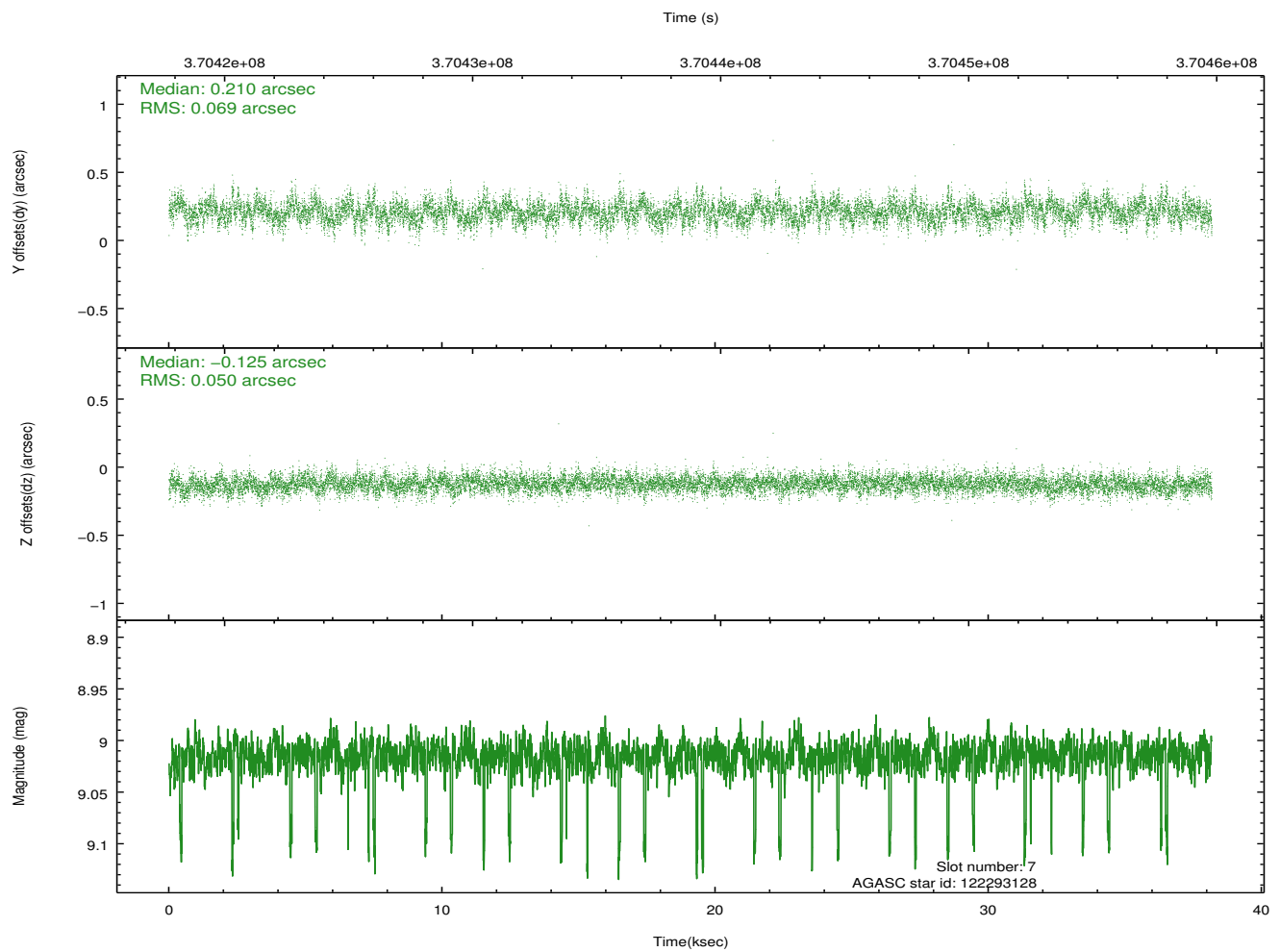
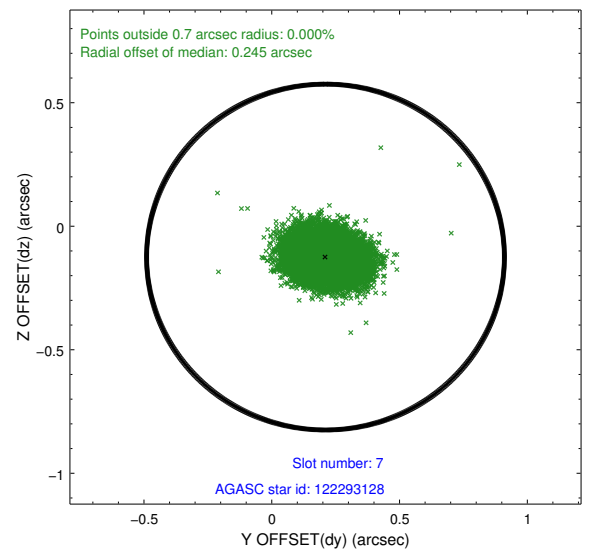
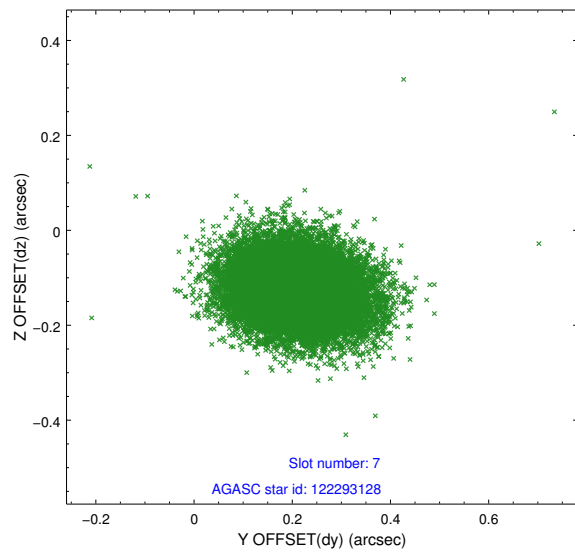
### 2.4.3 Slot 5



### 2.4.4 Slot 6

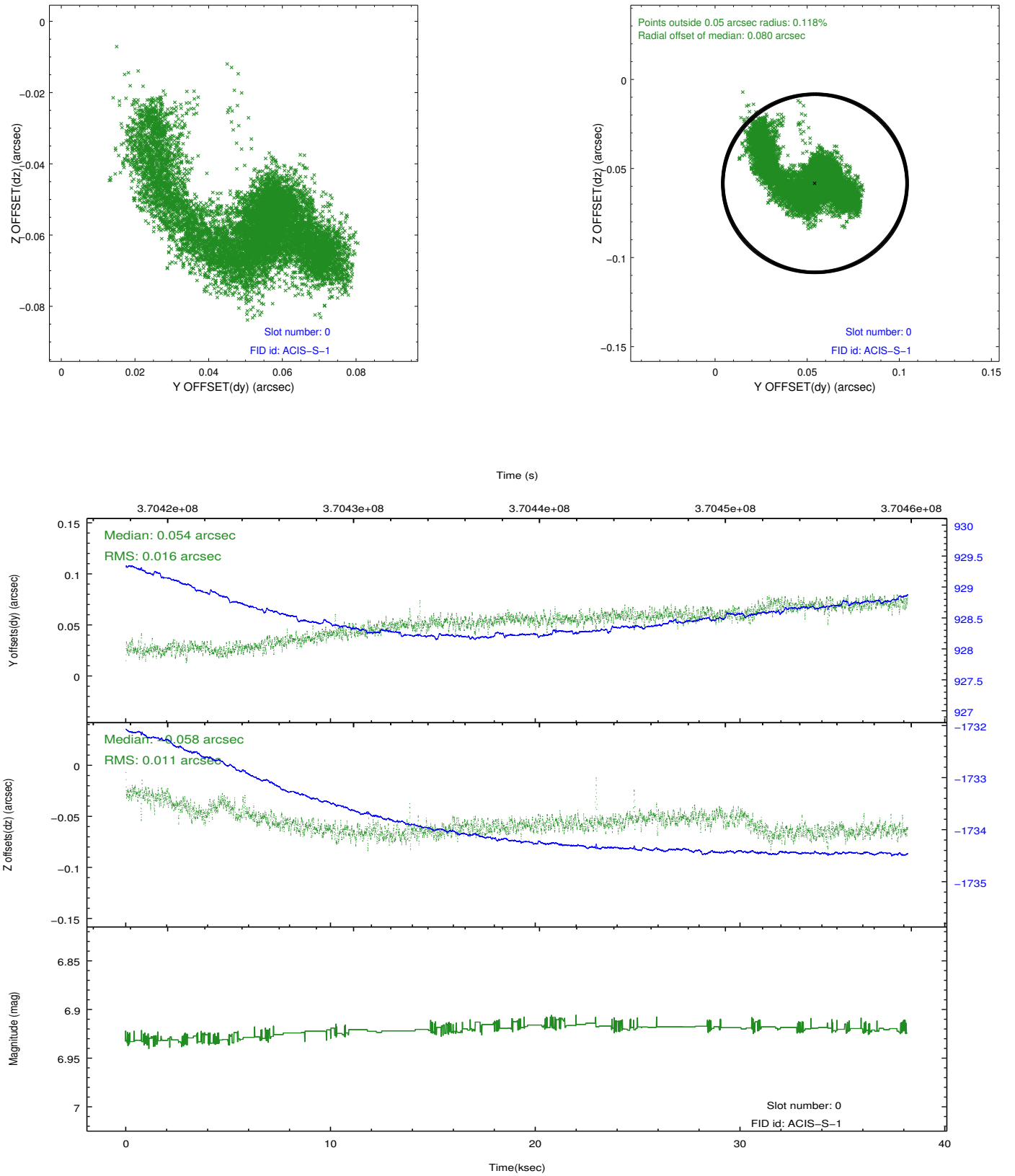


## 2.4.5 Slot 7

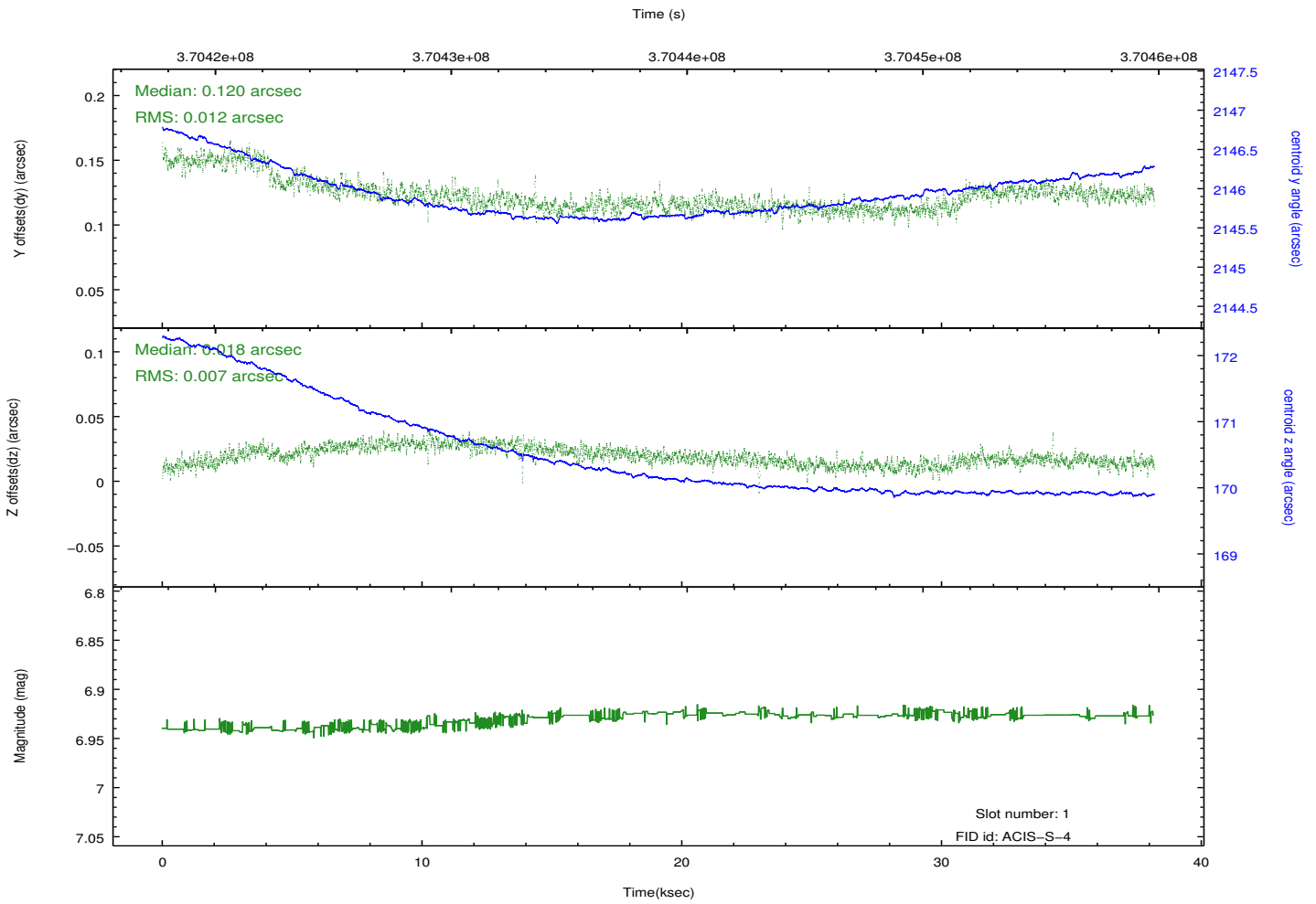
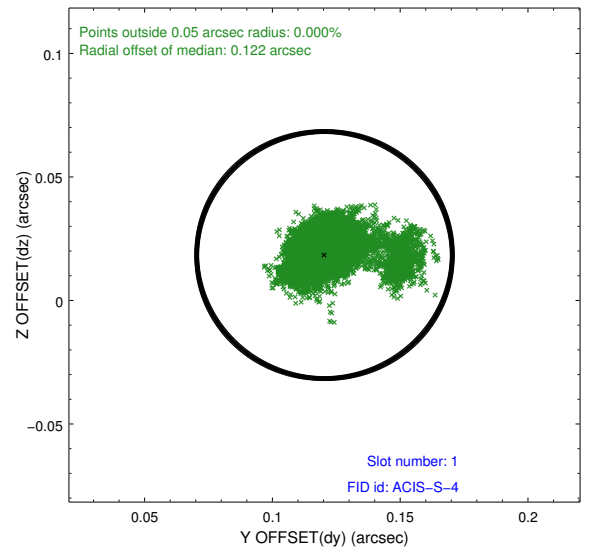
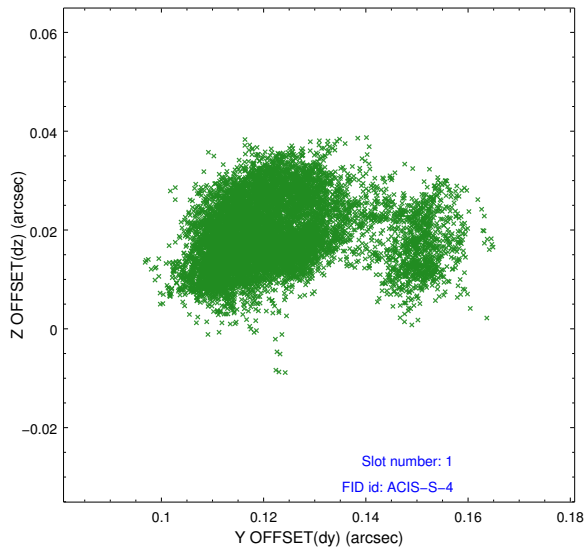


## 2.5 FID Slots

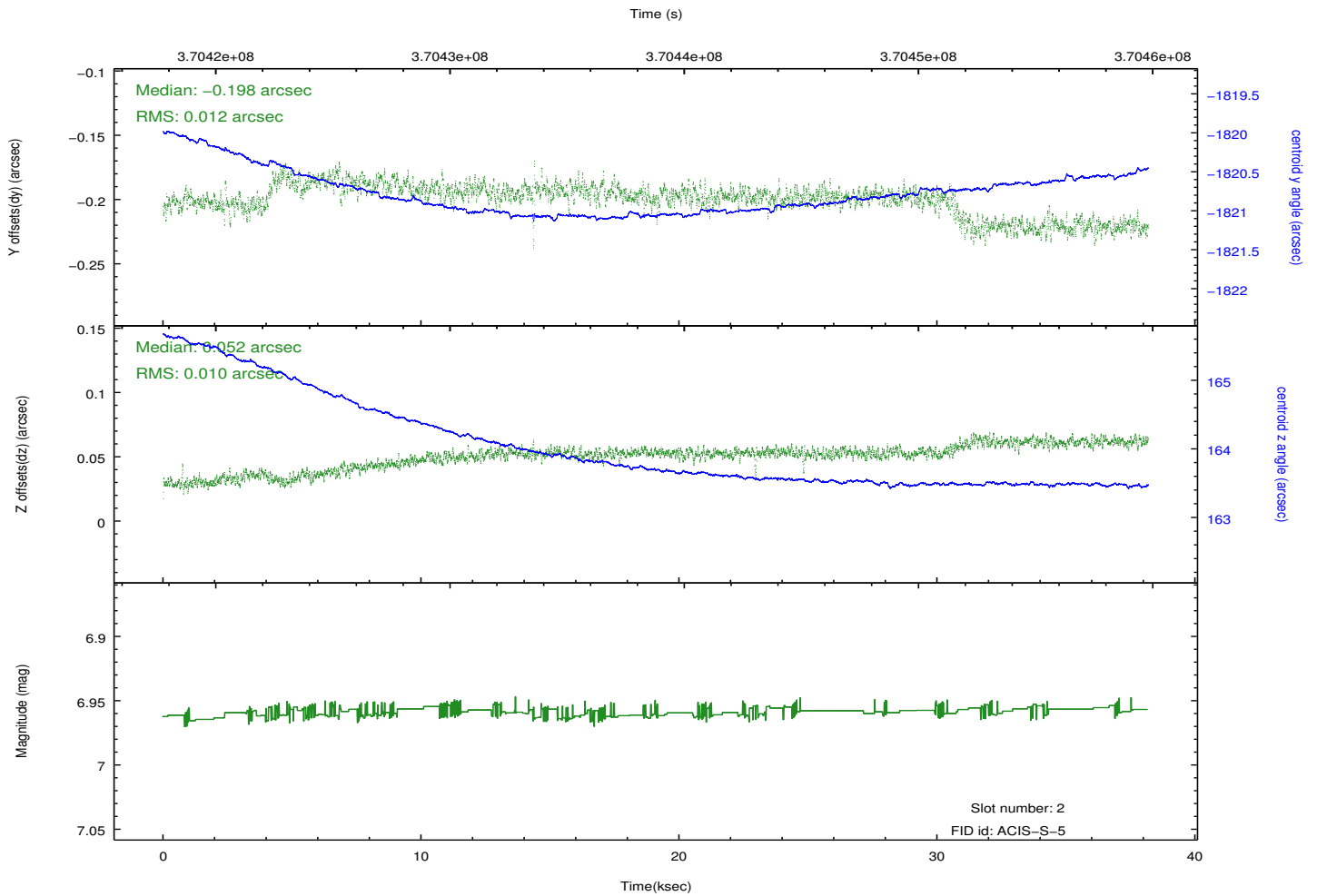
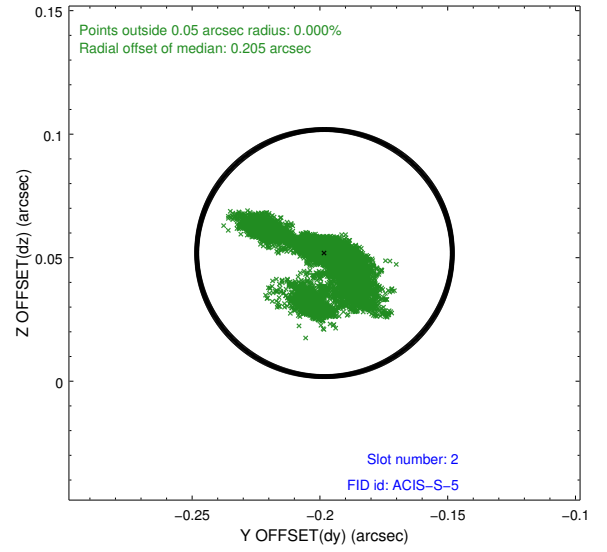
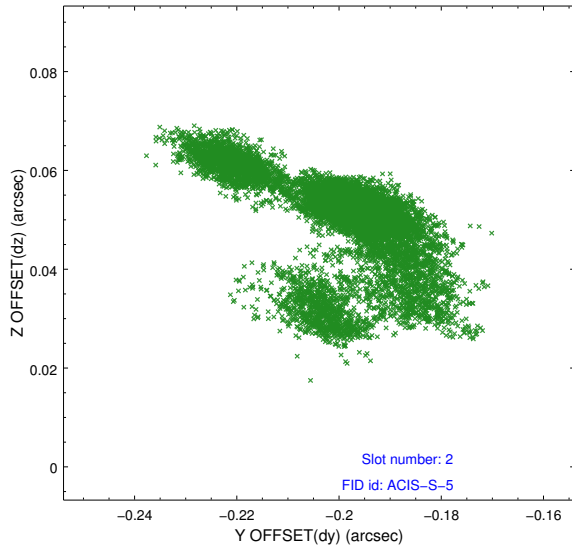
### 2.5.1 Slot 0



## 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)      | 2012.06.19      |
| V&V Edition                | 1               |
| V&V Disposition and Status | OK              |
| V&V Charge Time            | 38.182797724128 |

## A.2 Comments