

# V&V Reference Report

## L2 ASCDS Version : 8.5.1.1

Observation 976 - L2 Version 4  
Chandra X-Ray Center

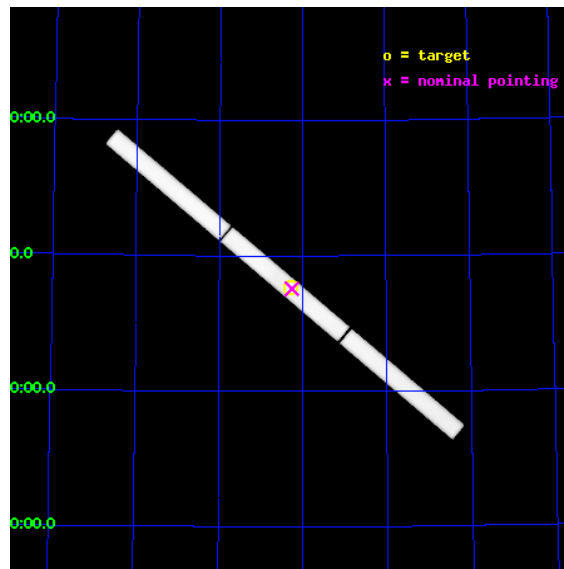
L2 Processing Date : Jan 14 2013

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# 1 Front

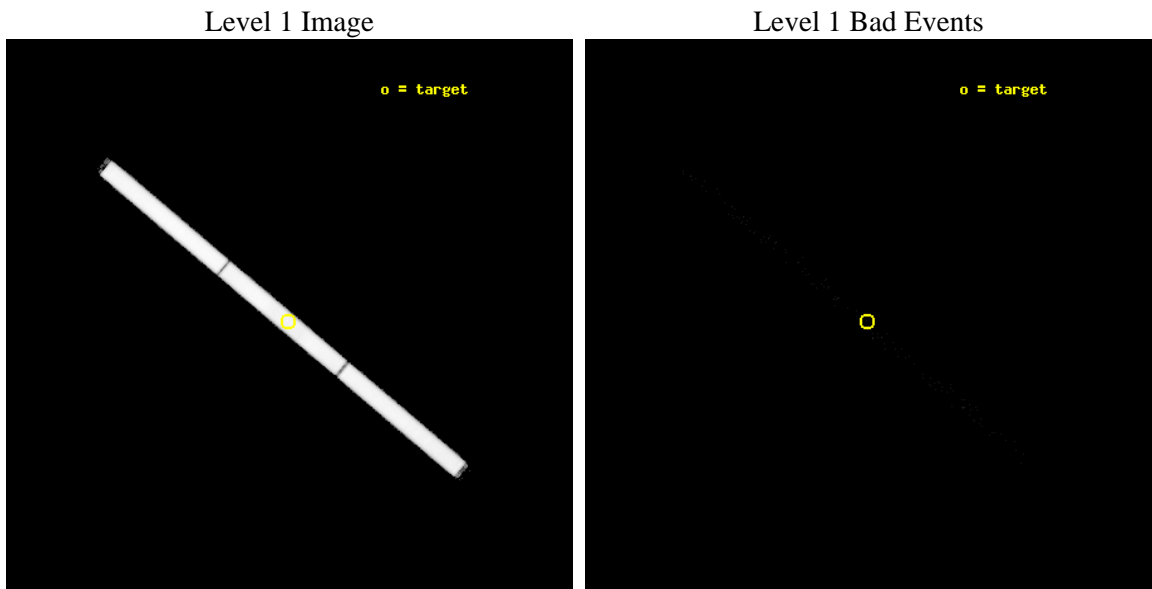
|          |   |                                       |
|----------|---|---------------------------------------|
| seq_num  | 200083  | Sequence number                       |
| obs_id   | 976   | Observation id                        |
| title    | IS THE HOT DO WHITE DWARF KPD0005+5106 REALLY A CORONAL X-RAY SOURCE? | Proposal title                        |
| observer | Dr. Stephen Murray  | Principal investigator                |
| object   | KPD0005+5106  | Source name                           |
| ra_targ  | 2.070833  | Observer's specified target RA [deg]  |
| dec_targ | 51.381667   | Observer's specified target Dec [deg] |
| ra_nom   | 2.0645698148348   | Nominal RA [deg]                      |
| dec_nom  | 51.378734660917   | Nominal Dec [deg]                     |
| roll_nom | 220.03391016102   | Nominal Roll [deg]                    |
| revision | 4   | Processing version of data            |
| ontime   | 19434.256984279   | [s]                                   |
| livetime | 16619.983130231   | Ontime multiplied by DTCOR            |
| l2events | 2418161   | Number of level 2 events              |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



## 2.1.2 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 19298.889000    | [s] Scheduled observation exposure time |
| ascdsver | 8.5.1.1             | Processing system revision     | ontime         | 19434.256984279 | [s]                                     |
| caldsver | 4.5.5               | &#160                          | l1events       | 2961437         | Number of level 1 events                |
| date     | 2013-01-15T00:38:24 | Date and time of file creation |                |                 |   |
| revision | 4                   | Processing version of data     |                |                 |   |

## 2.1.3 Events

### Level 1 Events

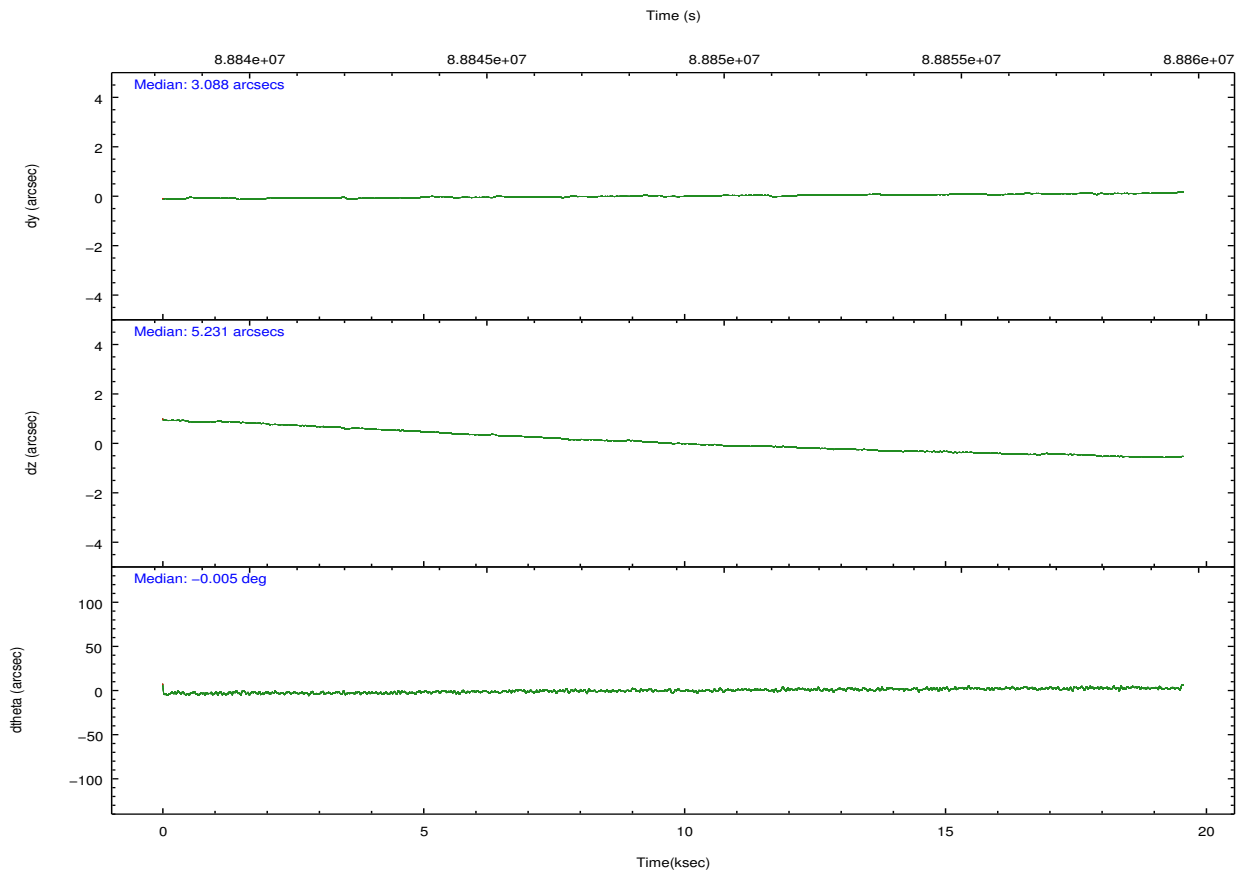
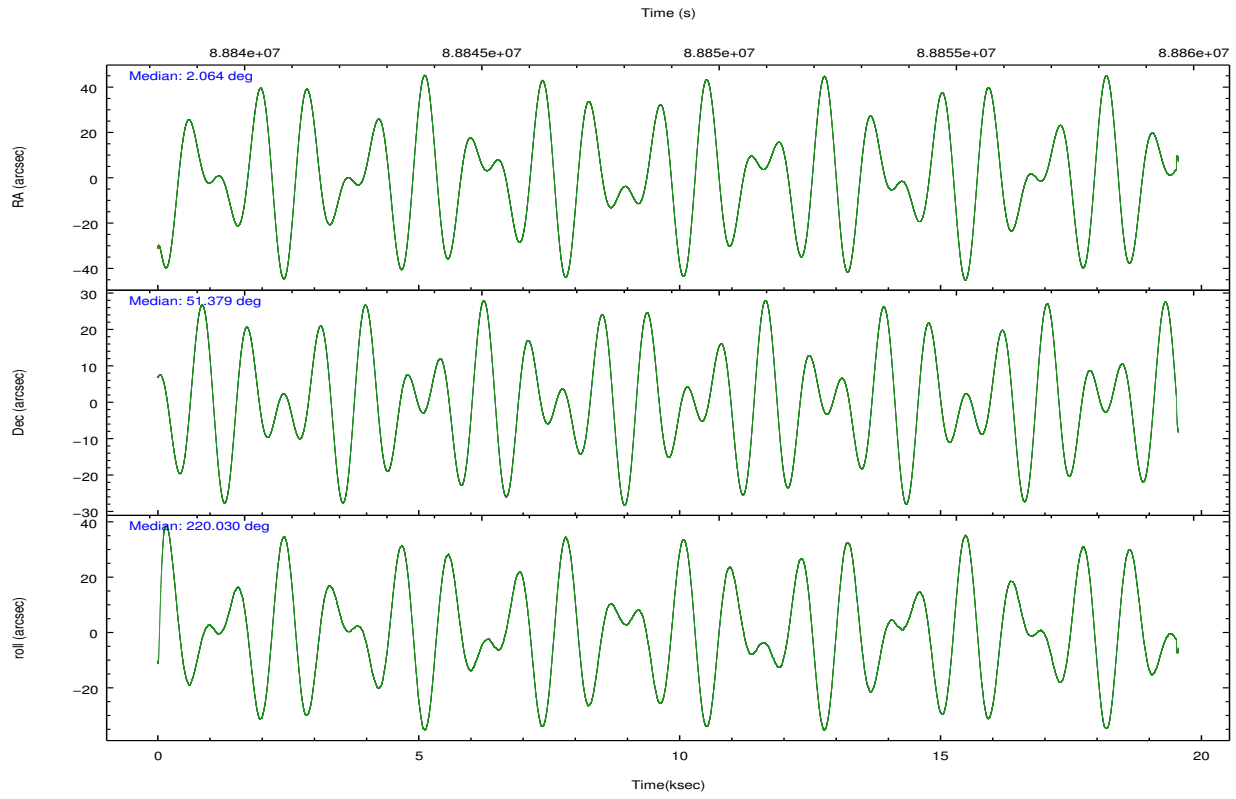
|                 | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|-----------------|----------------------|----------------------|----------------------|
| level 1 events  | 1075607              | 973564               | 912266               |
| rejected events | 40426                | 34026                | 35696                |
| rejected %      | 3%                   | 3%                   | 3%                   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               |
|-----------------------------------|---------------------|----------------------|
| Instrument                        | HRC                 | HRC                  |
| Detector                          | HRC-S               | HRC-S                |
| Grating                           | LETG                | LETG                 |
| Data mode                         | OBSERVING           | OBSERVING            |
| Observation mode                  | POINTING            | POINTING             |
| [deg] Pointing RA                 | 2.078447            | 2.064569814834812    |
| [deg] Pointing Dec                | 51.406097           | 51.3787346609173     |
| [deg] Pointing Roll               | 219.955759          | 220.0339101610238    |
| [mm] SIM focus pos                | -1.429586           | -1.428180813131781   |
| [mm] SIM defocus                  | 0.1037507710433287  | 0.1051558262725154   |
| [mm] SIM translation stage pos    | 250.455976          | 250.466033080201     |
| [mm] SIM translation stage offset | 0                   | -0.01005468664627074 |
| [s] Observation start time (MET)  | 88839285.184000     | 88838203.940616      |
| Observation start date            | 2000-10-25T05:33:41 | 2000-10-25T05:16:43  |
| [s] Observation end time (MET)    | 88858583.184000     | 88859562.891423      |
| Observation end date              | 2000-10-25T10:55:19 | 2000-10-25T11:12:42  |

| Parameter                    | Planned   | Actual  |
|------------------------------|-----------|---------|
| Obspar format version number | 7         | 7       |
| Obspar file type             | PREDICTED | ACTUAL  |
| Obspar update status         | NONE      | UPDATED |

## 2.3 Aspect



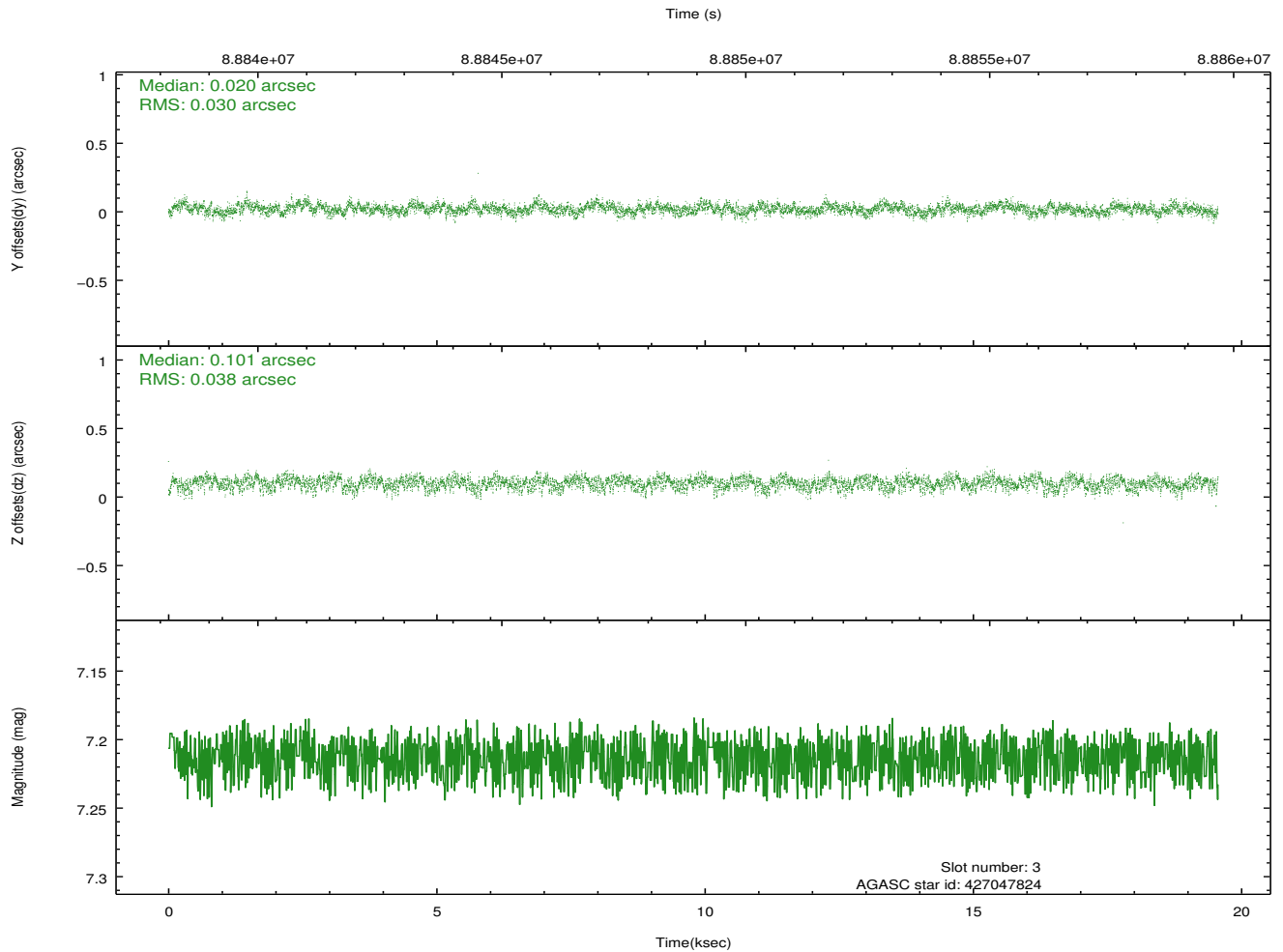
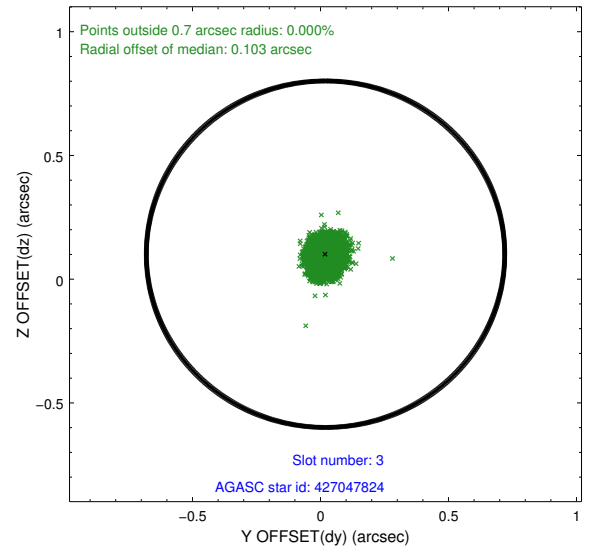
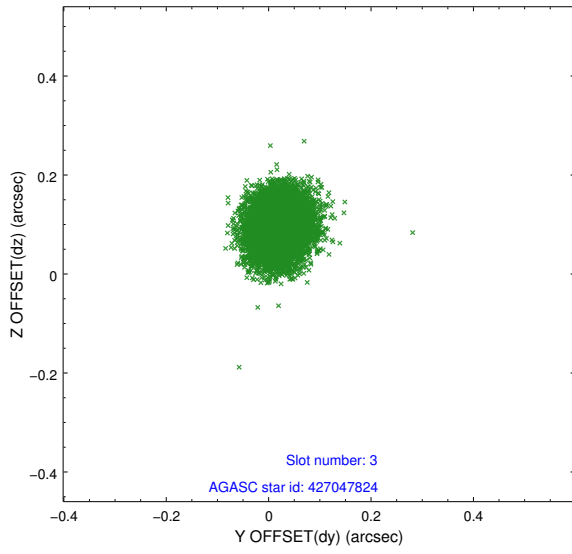
### Slot Statistics

|       | status | id        | mag      | n_pts    | med_dy | med_dz | dr1   |
|-------|--------|-----------|----------|----------|--------|--------|-------|
|       | FID    | HRC-S-1   | 6.99     | 4762     | 0.103  | -0.163 | 0.012 |
|       | FID    | HRC-S-3   | 7.01     | 4760     | 0.152  | -0.044 | 0.014 |
|       | FID    | HRC-S-4   | 6.95     | 4760     | 0.133  | -0.089 | 0.006 |
|       | GUIDE  | 427047824 | 7.21     | 9533     | 0.020  | 0.101  | 0.051 |
|       | GUIDE  | 427032656 | 7.38     | 9530     | -0.023 | -0.058 | 0.049 |
|       | GUIDE  | 427046032 | 7.63     | 9529     | 0.014  | -0.078 | 0.056 |
|       | GUIDE  | 427035504 | 7.91     | 9532     | -0.011 | 0.036  | 0.053 |
| 0.000 | 0.000  | 0.000     | 0.000000 | 0.000000 | 0.00   | 0.00   |       |

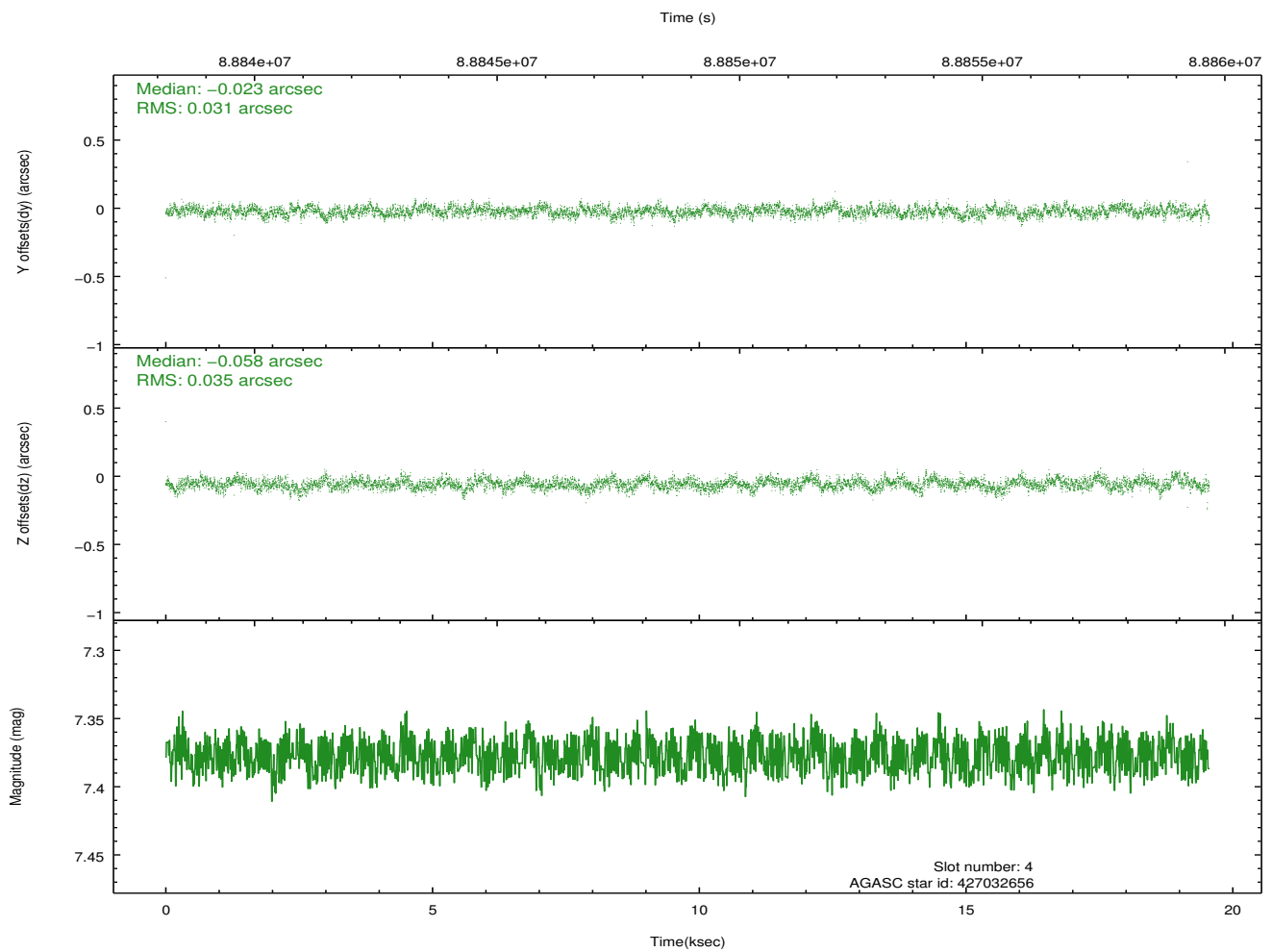
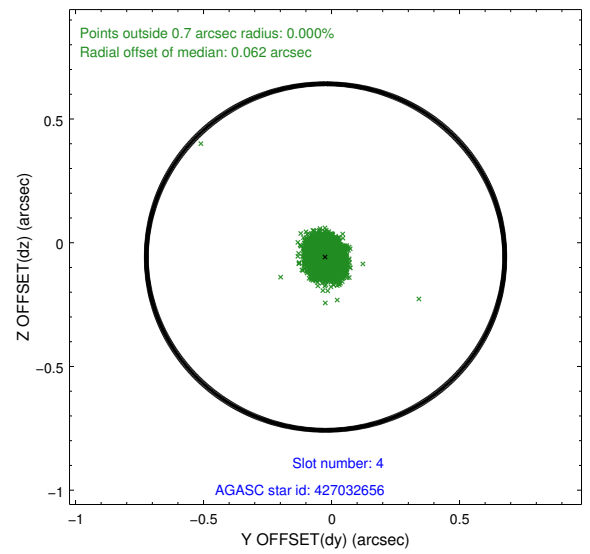
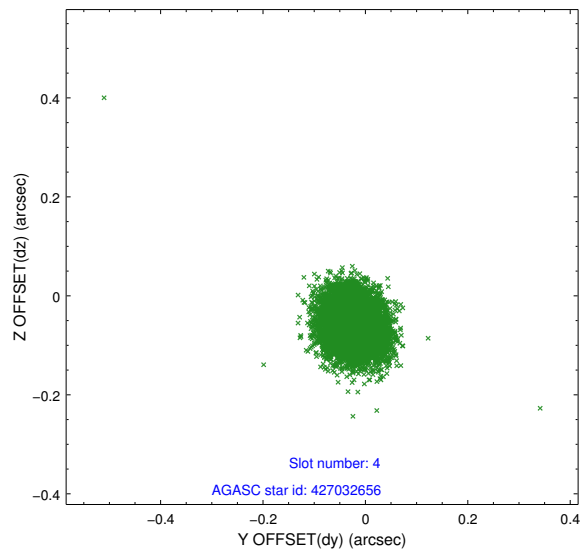
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## 2.4 Star Slots

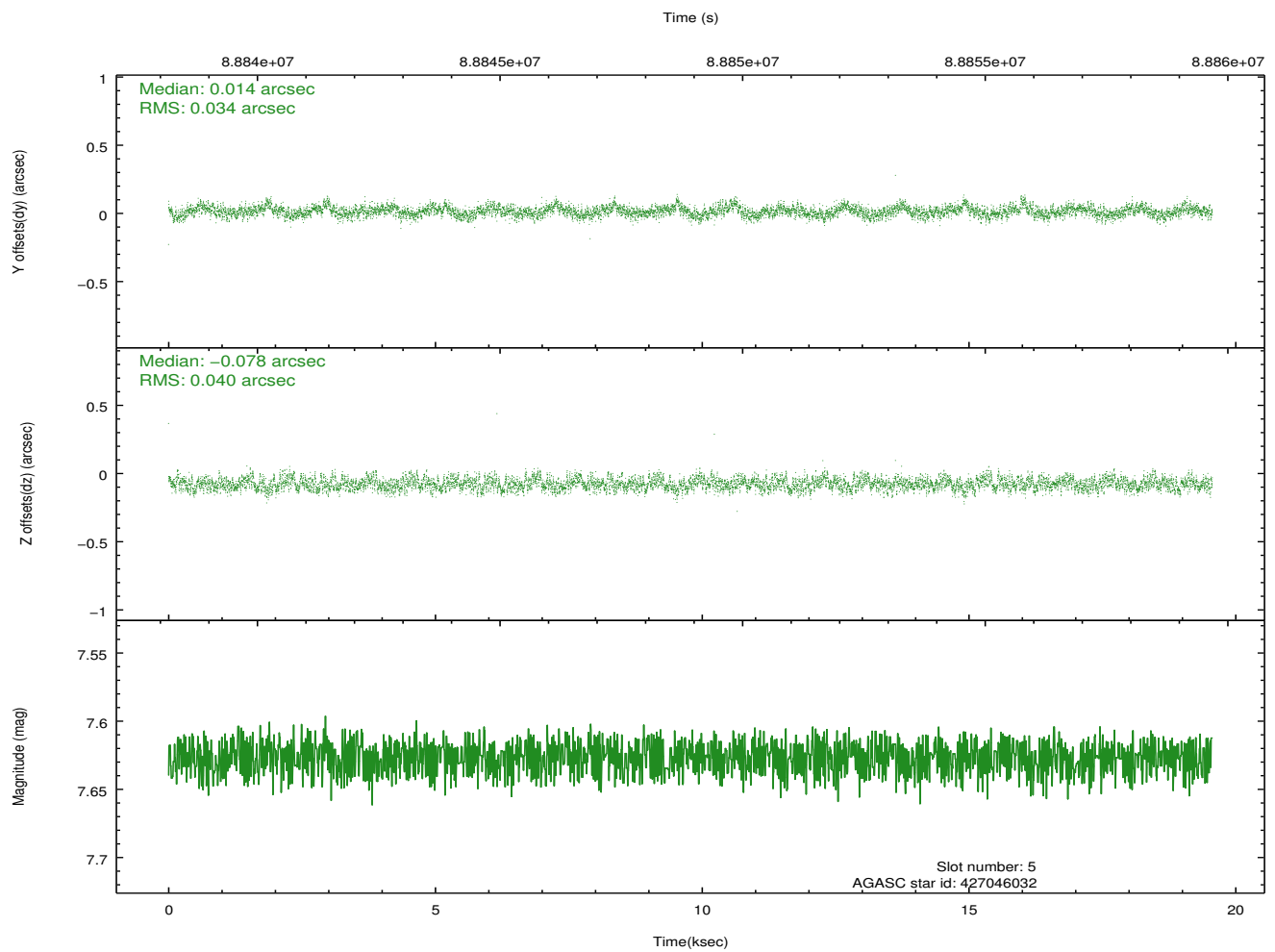
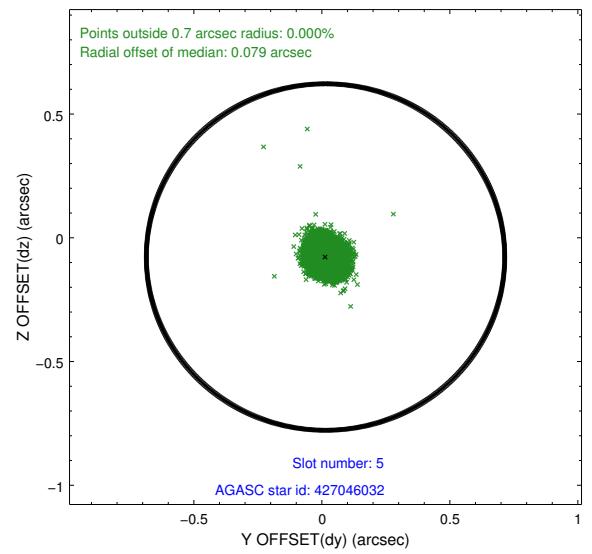
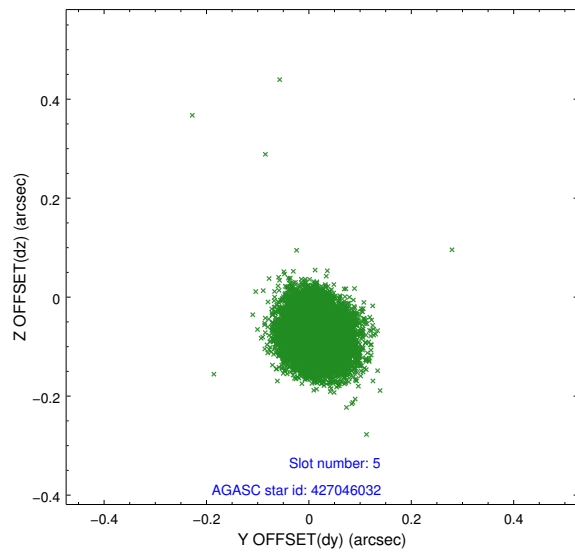
### 2.4.1 Slot 3



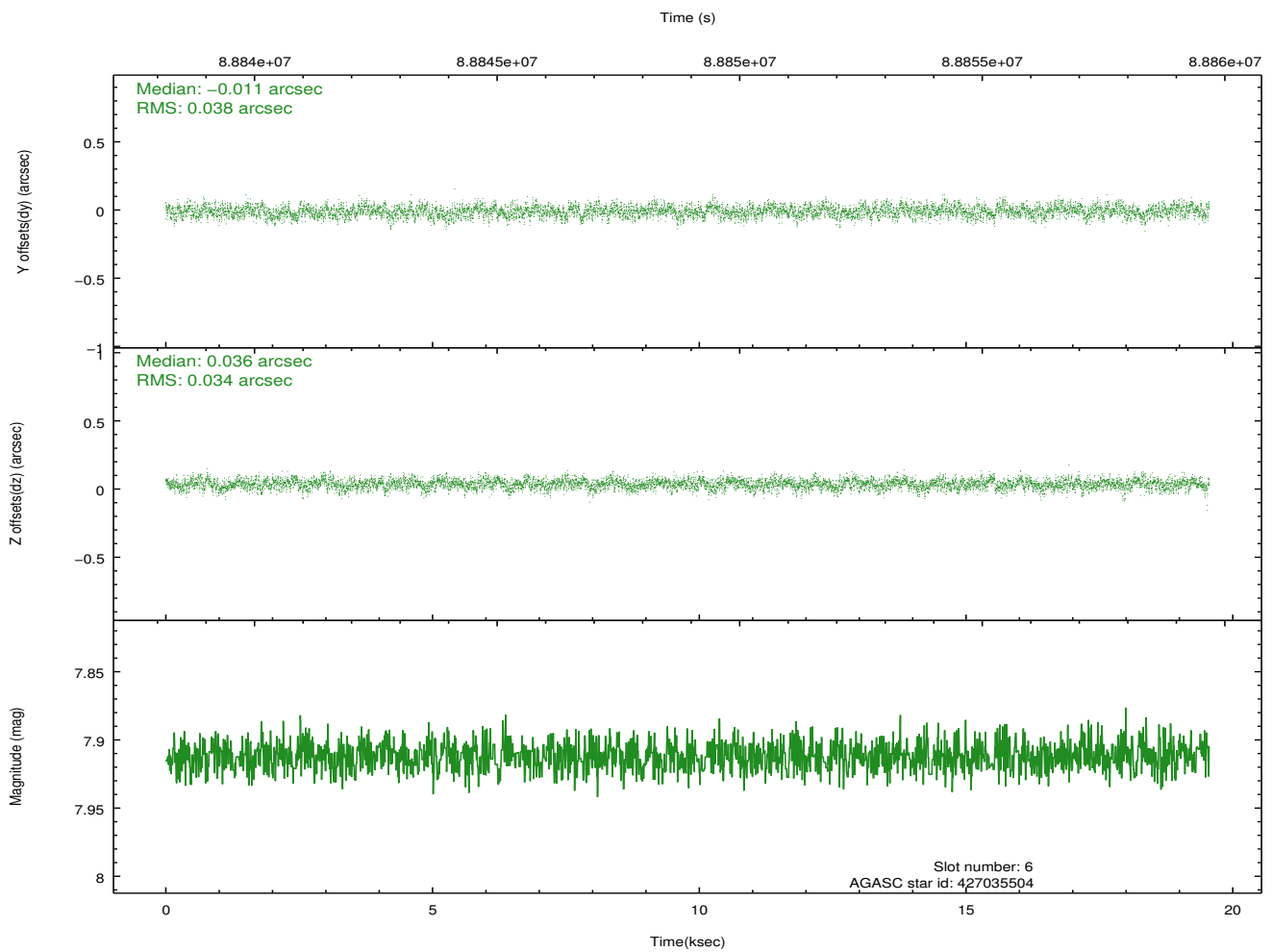
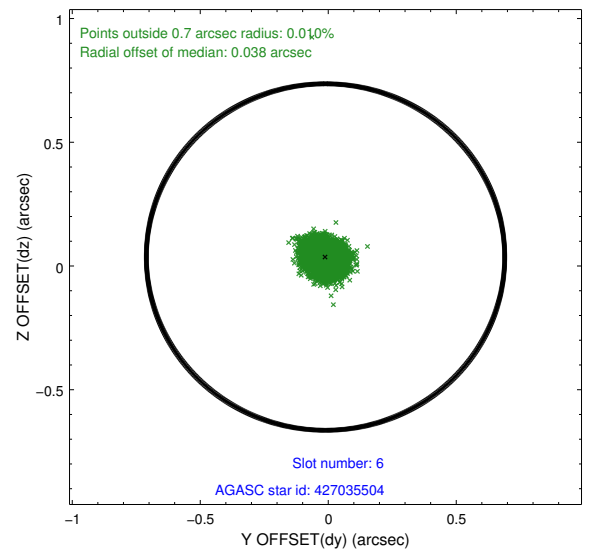
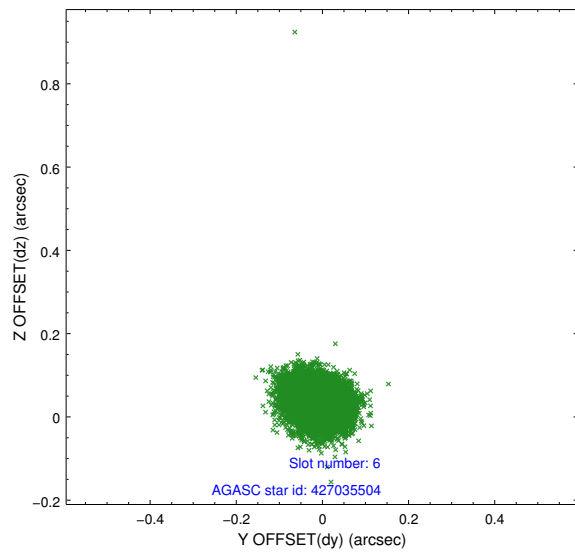
## 2.4.2 Slot 4



### 2.4.3 Slot 5

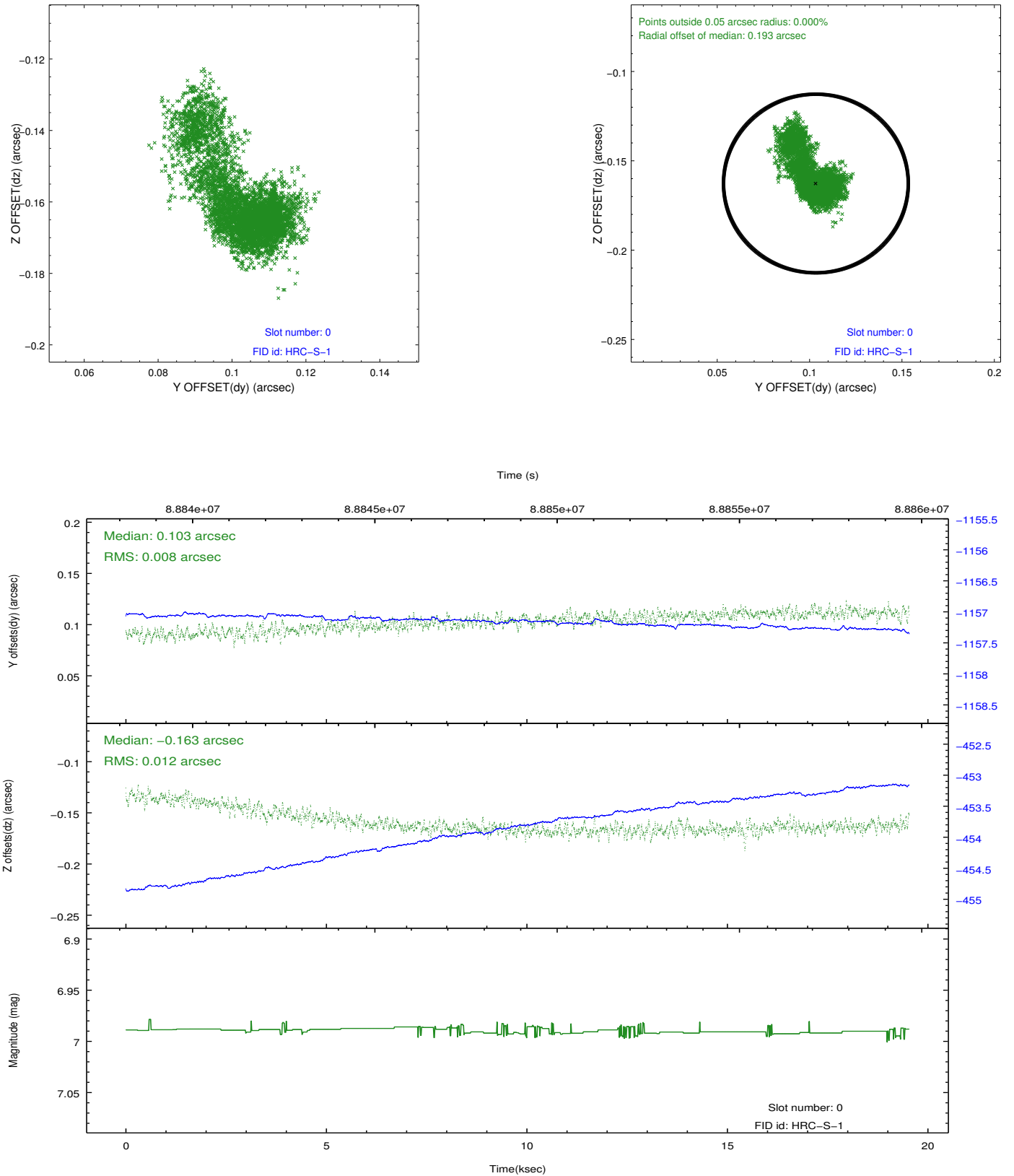


## 2.4.4 Slot 6

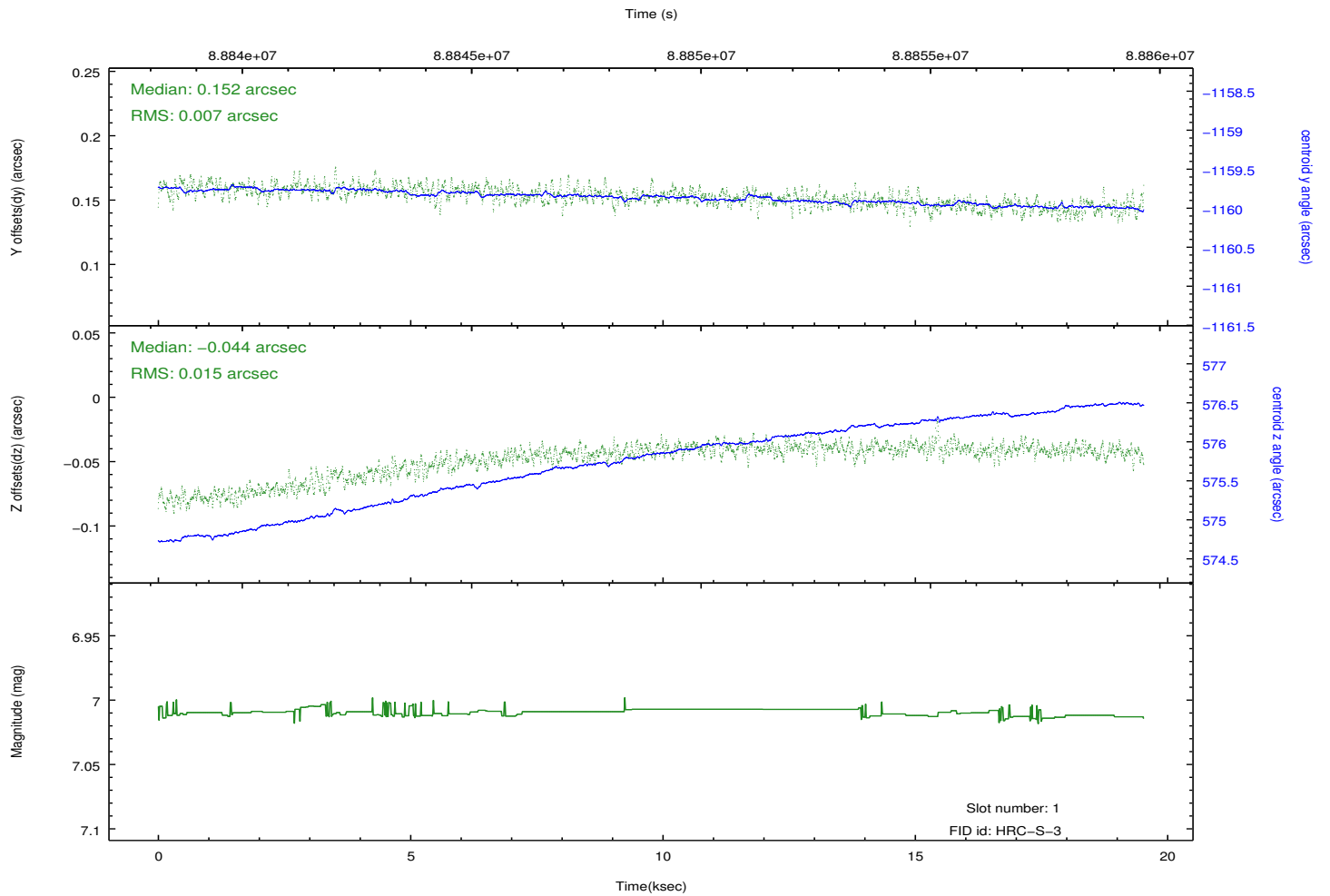
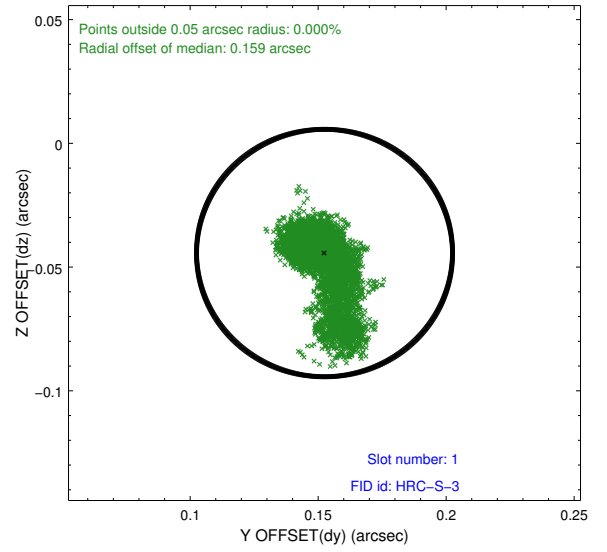
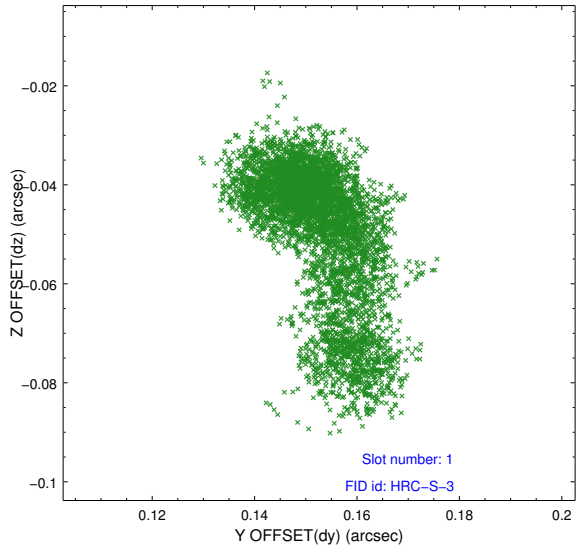


## 2.5 FID Slots

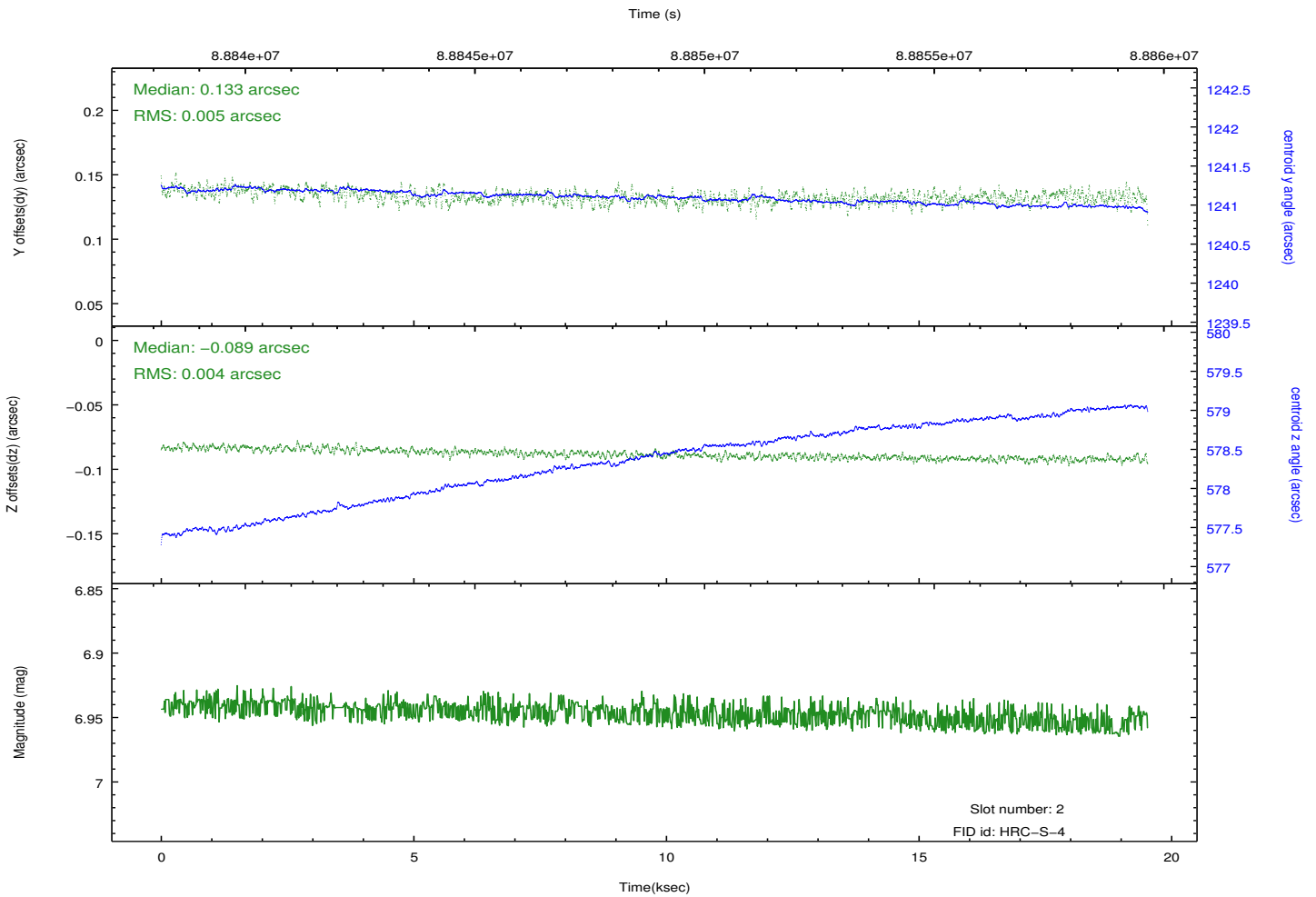
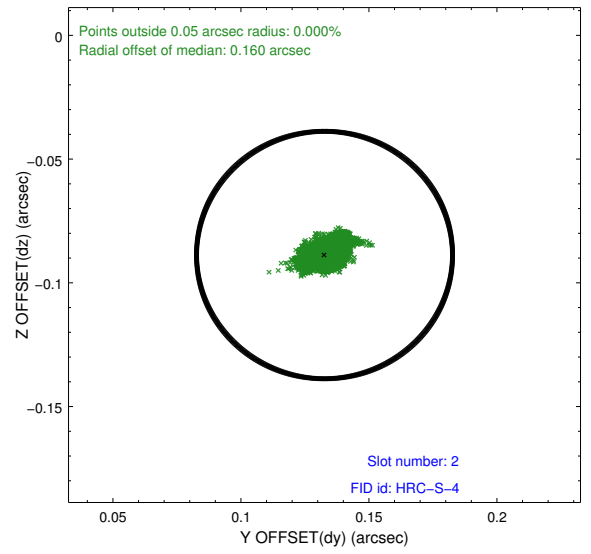
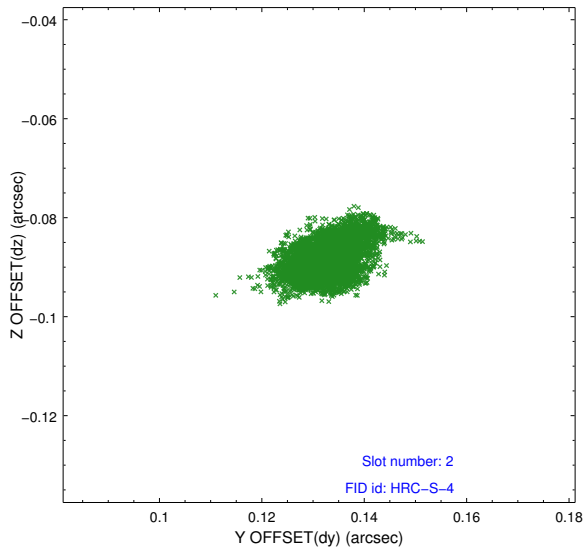
### 2.5.1 Slot 0



## 2.5.2 Slot 1

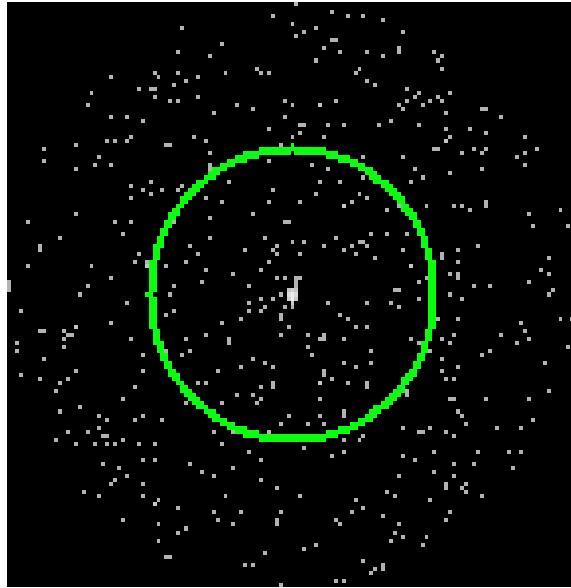


### 2.5.3 Slot 2

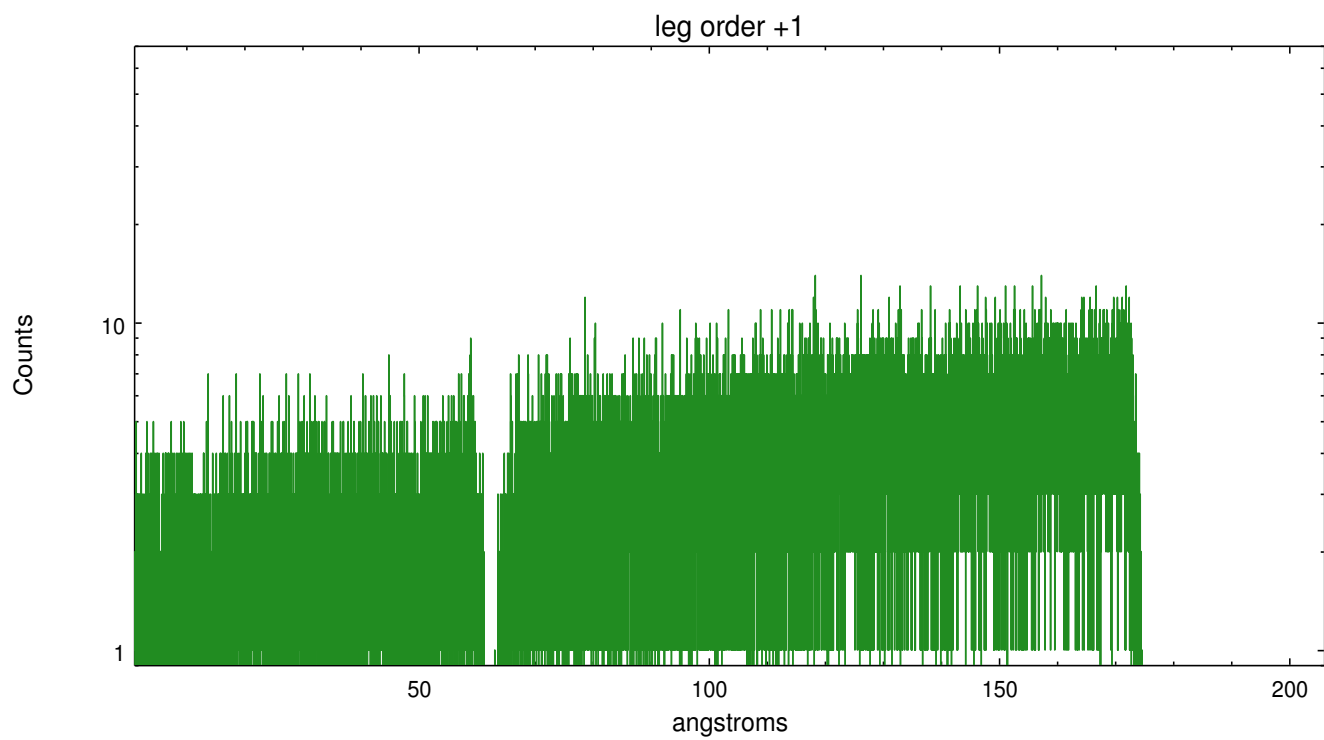
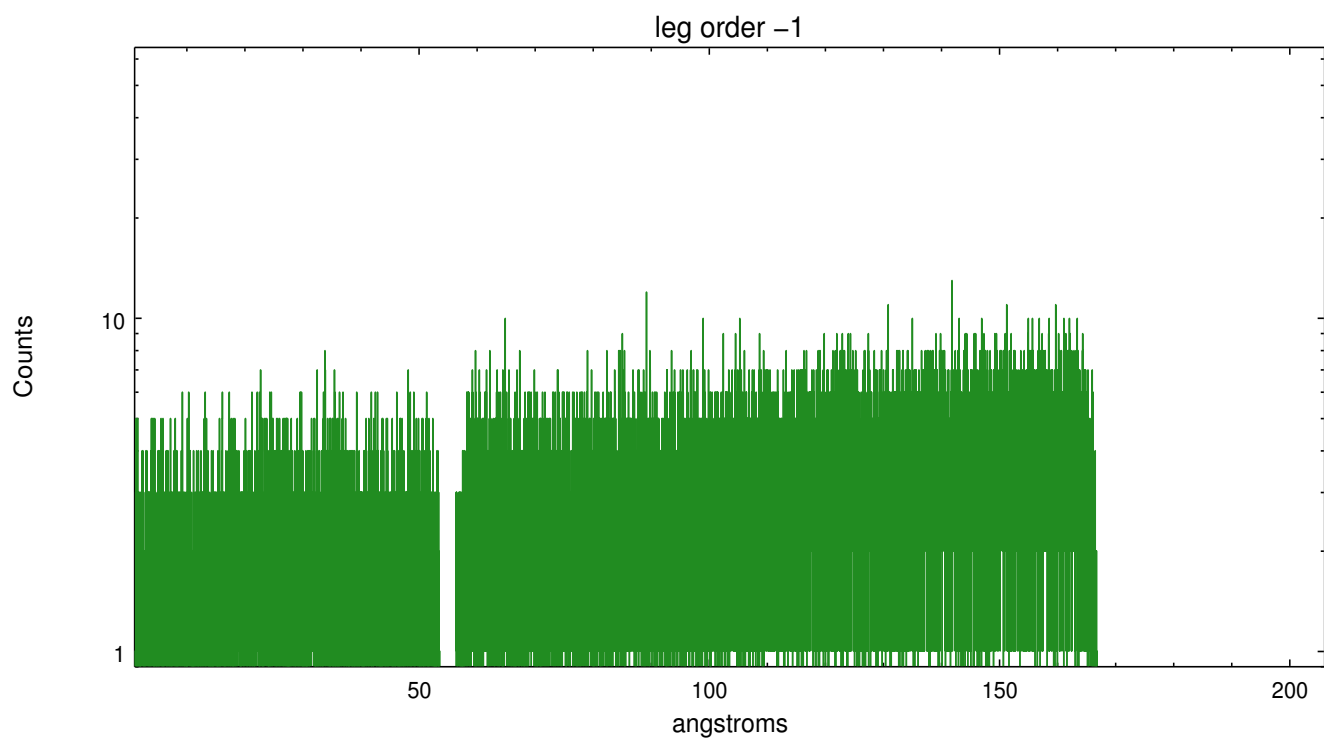


## 3 Gratings

### 3.1 LETG Arm



LETG Zero Order



# A Summary

## A.1 Status

|                            |             |
|----------------------------|-------------|
| V&V Scientist              | Joy Nichols |
| V&V Date (YYYY-MM-DD)      | 2013.01.24  |
| V&V Edition                | 1           |
| V&V Disposition and Status | OK          |
| V&V Charge Time            | 19.419      |

## A.2 Comments

The door to the HRC instrument was mistakenly closed while the spacecraft was still in KALMAN lock for this observation. However, the door was shut after the required exposure time had been acquired so there is no affect on the science

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Optical monitoring of the target in slot 7.

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WARNING: Zeroth order selected by pipeline tools is approximately centrally located in the source, which is extended. It is not at the position of the brightest X-ray emission. The user will need to select a region or source of interest, then use software tools such as CIAO to specify the coordinates of the zeroth order source of interest before running the tools to resolve the dispersed events. The spectral data supplied in this processing are only energy-calibrated for the particular zeroth order position selected.

===

WARNING: there are no standard ciao tools for analysis of grating spectra from extended sources. The shape of an emission 'line' will be the shape of the zero order spatial structure convolved with the instrumental LSF. Grating extractions can be used, but need to be combined with custom spatial-spectral analysis, since wavelength is multi-valued at any particular diffraction angle.