

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 2559 - L2 Version 001  
Chandra X-Ray Center

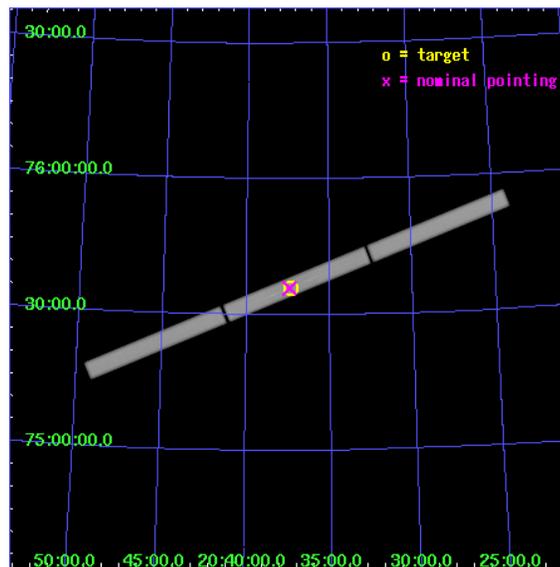
L2 Processing Date : Jan 23 2007

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# 1 Front

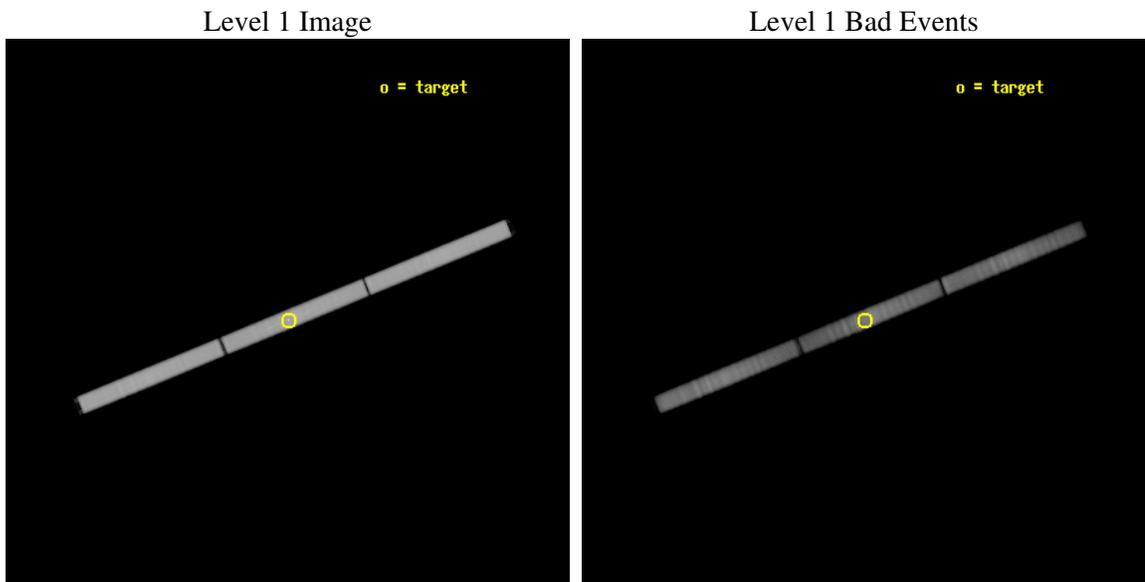
|          |   |
|----------|---|
| seq_num  | 200167  |
| obs_id   | 2559  |
| title    | X-RAY DOPPLER IMAGING OF CONTACT BINARIES: THE PARTIALLY ECLIPSING VW CEP |
| observer | Dr. Nancy Brickhouse  |
| object   | VW CEP  |
| ra_targ  | 309.339583  |
| dec_targ | 75.600417   |
| ra_nom   | 309.35690111487   |
| dec_nom  | 75.598495194168   |
| roll_nom | 337.68380206577   |
| revision | 2   |
| ontime   | 101814.53533086   |
| livetime | 101187.31156993   |
| l2events | 4750356   |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



## 2.1.2 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 1                   |
| ascdsver | 7.6.10              |
| caldbver | 3.3.0               |
| date     | 2007-01-23T16:35:11 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 102000.000000   |
| ontime         | 101814.53534086 |
| l1events       | 6934481         |

## 2.1.3 Events

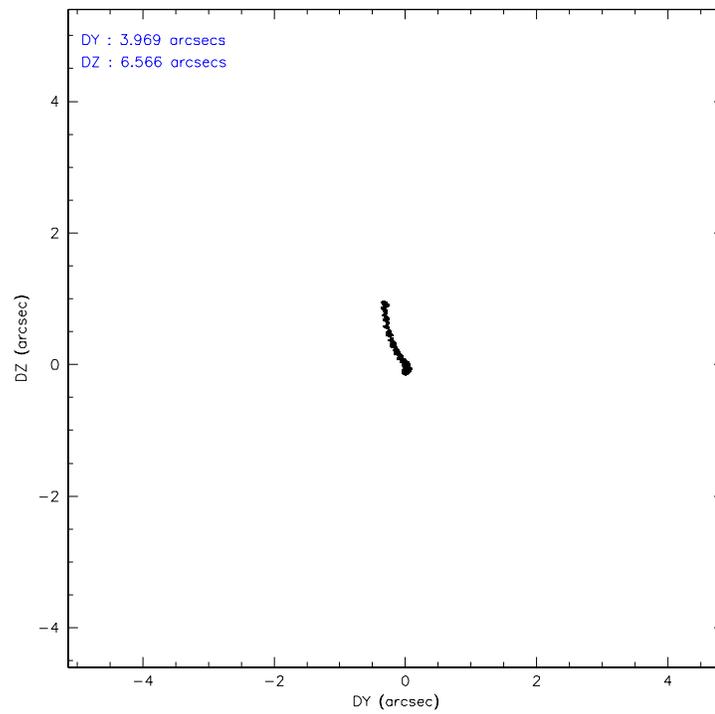
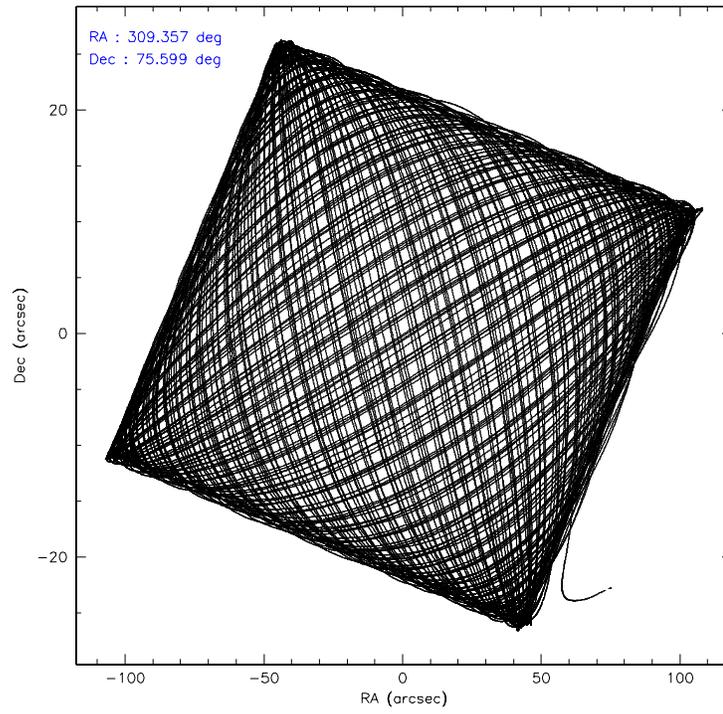
### Level 1 Events

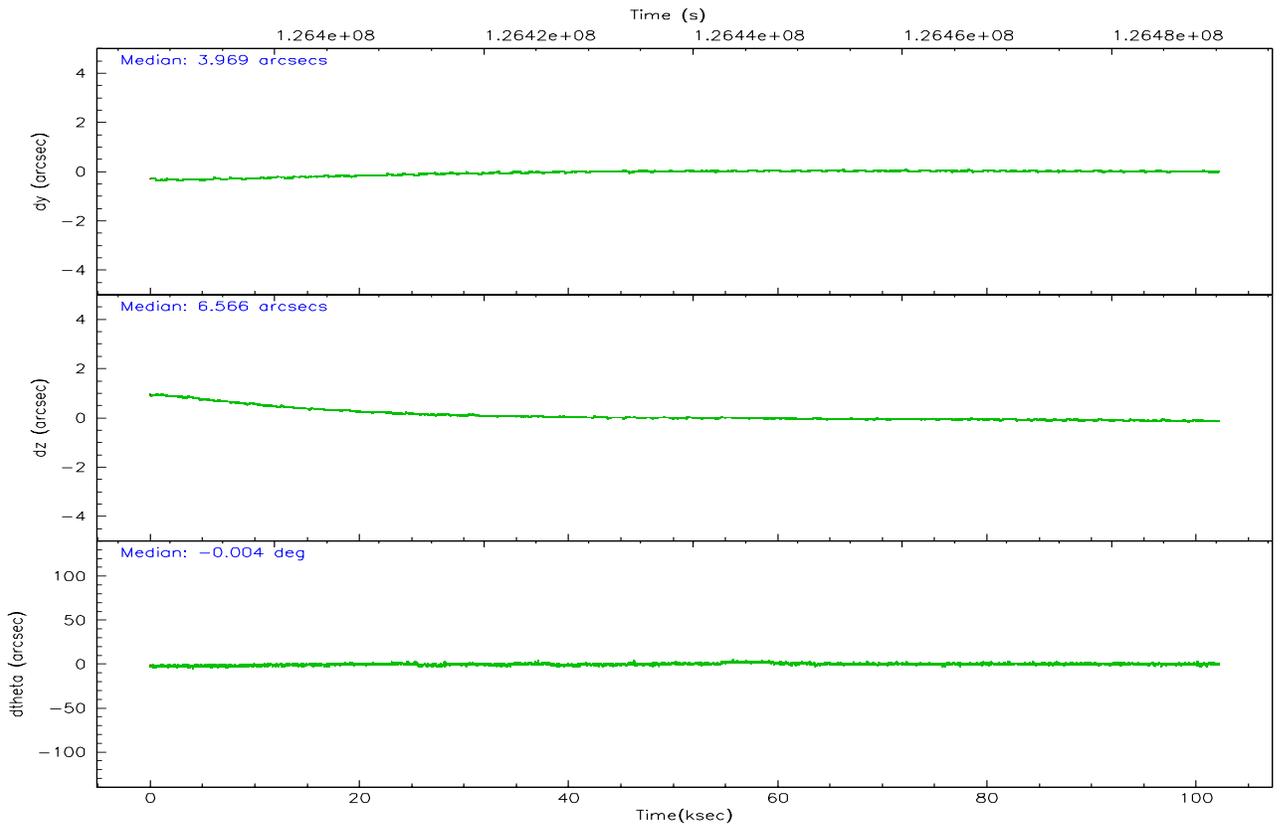
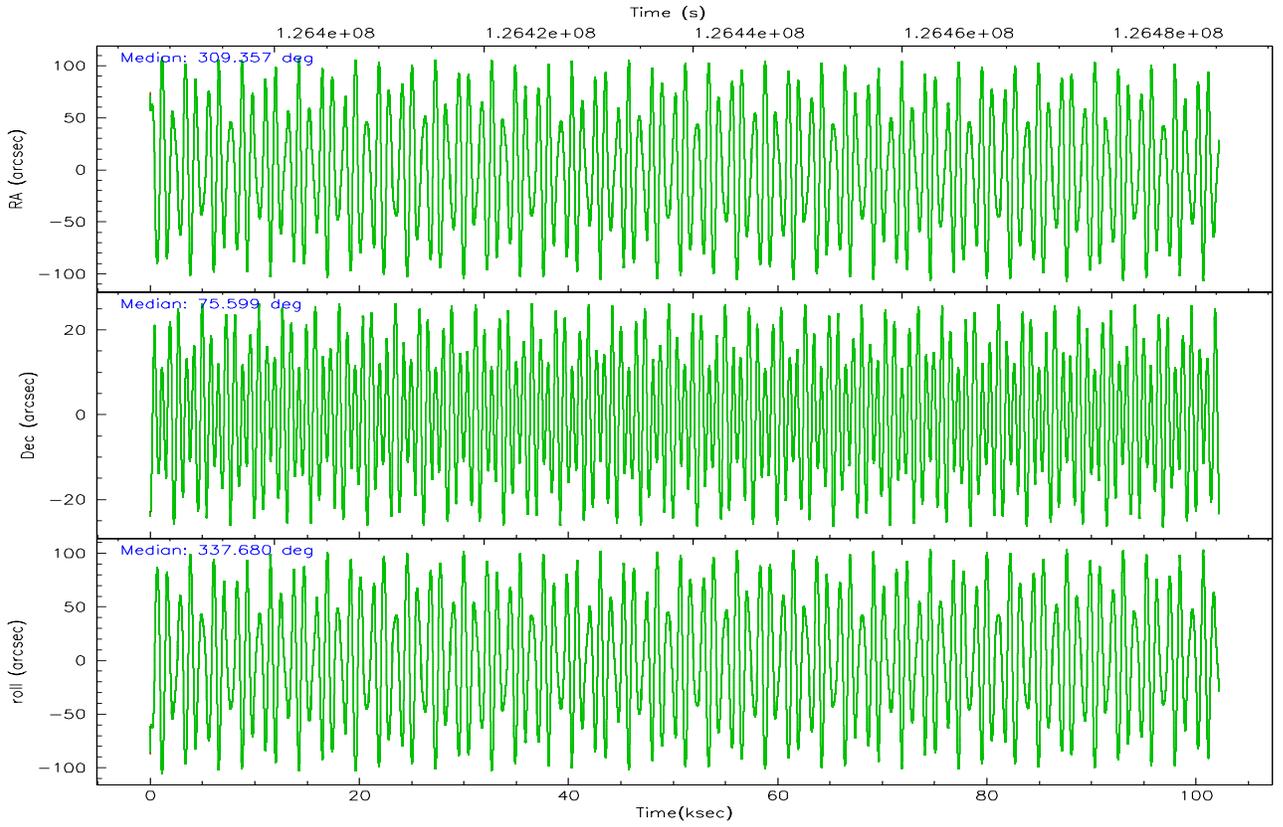
|                    | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|--------------------|----------------------|----------------------|----------------------|
| level 1<br>events  | 2374890              | 2237706              | 2321885              |
| rejected<br>events | 466001               | 502740               | 577115               |
| rejected %         | 19%                  | 22%                  | 24%                  |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                    | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|------------------------------|-----------|---------|
| Instrument                        | HRC                 | HRC                   | Obspar format version number | 6         | 6       |
| Detector                          | HRC-S               | HRC-S                 | Obspar file type             | PREDICTED | ACTUAL  |
| Grating                           | LETG                | LETG                  | Obspar update status         | NONE      | UPDATED |
| Data mode                         | OBSERVING           | OBSERVING             |                              |           |         |
| Observation mode                  | POINTING            | POINTING              |                              |           |         |
| Pointing RA                       | 309.243759          | 309.3569011148725     |                              |           |         |
| Pointing Dec                      | 75.593254           | 75.59849519416815     |                              |           |         |
| Pointing Roll                     | 337.726058          | 337.6838020657657     |                              |           |         |
| SIM focus pos (mm)                | -1.429586           | -1.428180813131781    |                              |           |         |
| SIM defocus (mm)                  | 0.1037507710433287  | 0.1051558262725154    |                              |           |         |
| SIM translation stage pos (mm)    | 250.455976          | 250.4635187648994     |                              |           |         |
| SIM translation stage offset (mm) | 0                   | -0.007540371344731511 |                              |           |         |
| Observation start time            | 126388296.184000    | 126387256.41814       |                              |           |         |
| Observation start date            | 2002-01-02T19:50:32 | 2002-01-02T19:34:16   |                              |           |         |
| Observation end time              | 126490296.184000    | 126490983.34731       |                              |           |         |
| Observation end date              | 2002-01-04T00:10:32 | 2002-01-04T00:23:03   |                              |           |         |

## 2.3 Aspect



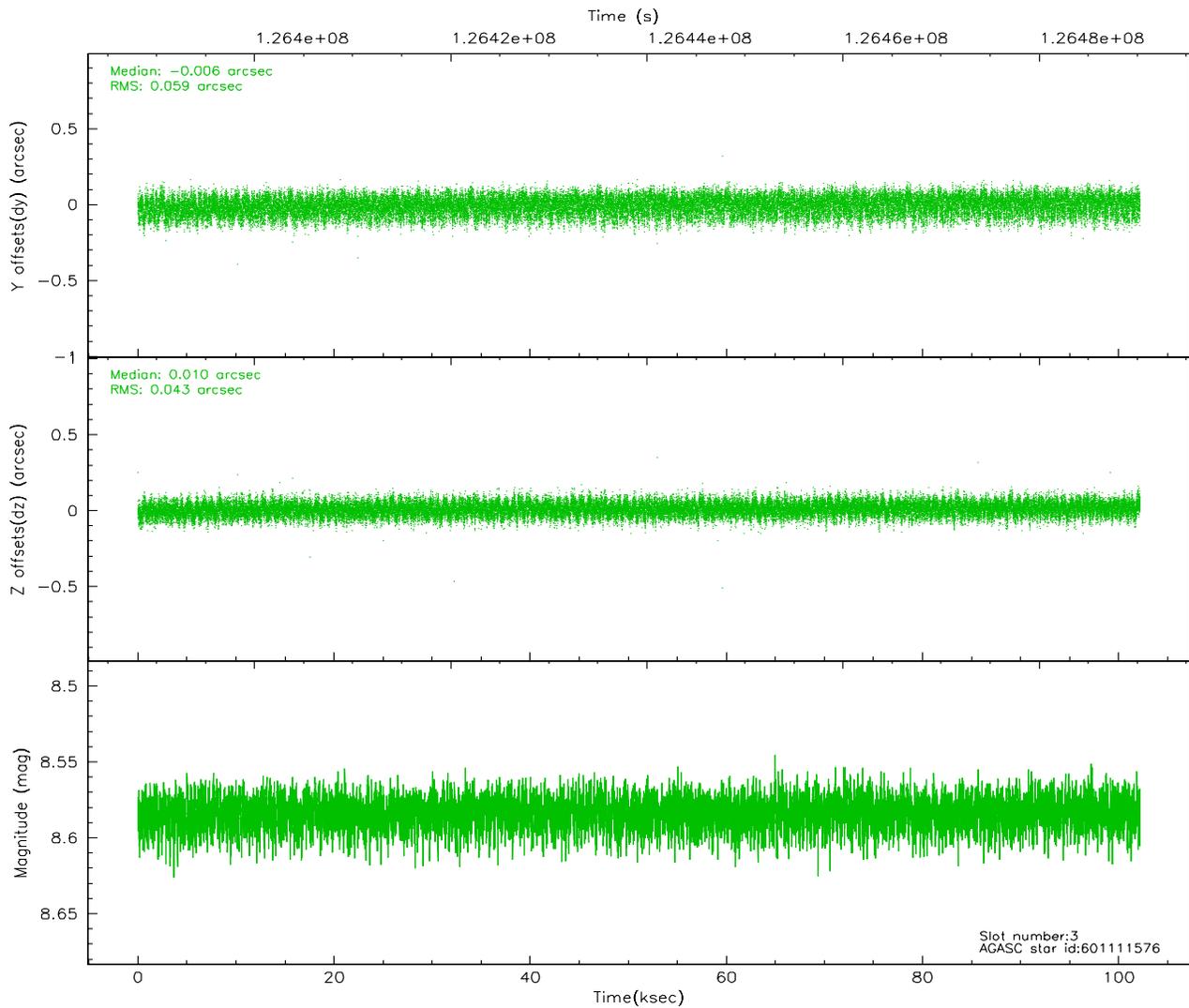
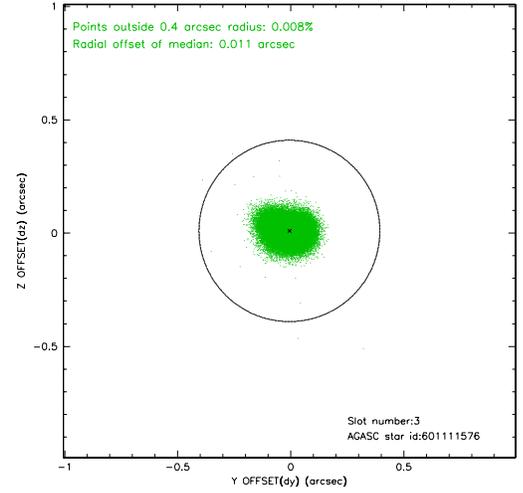
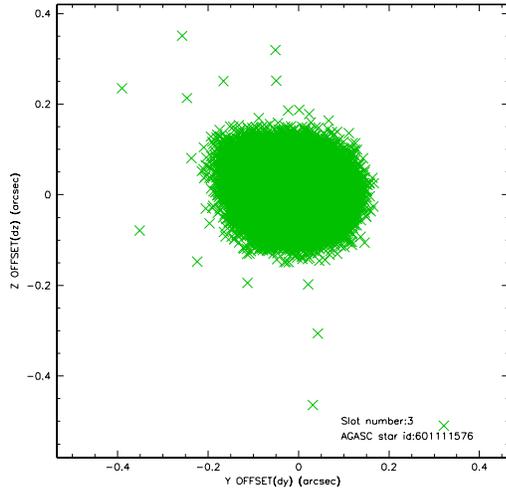


### Slot Statistics

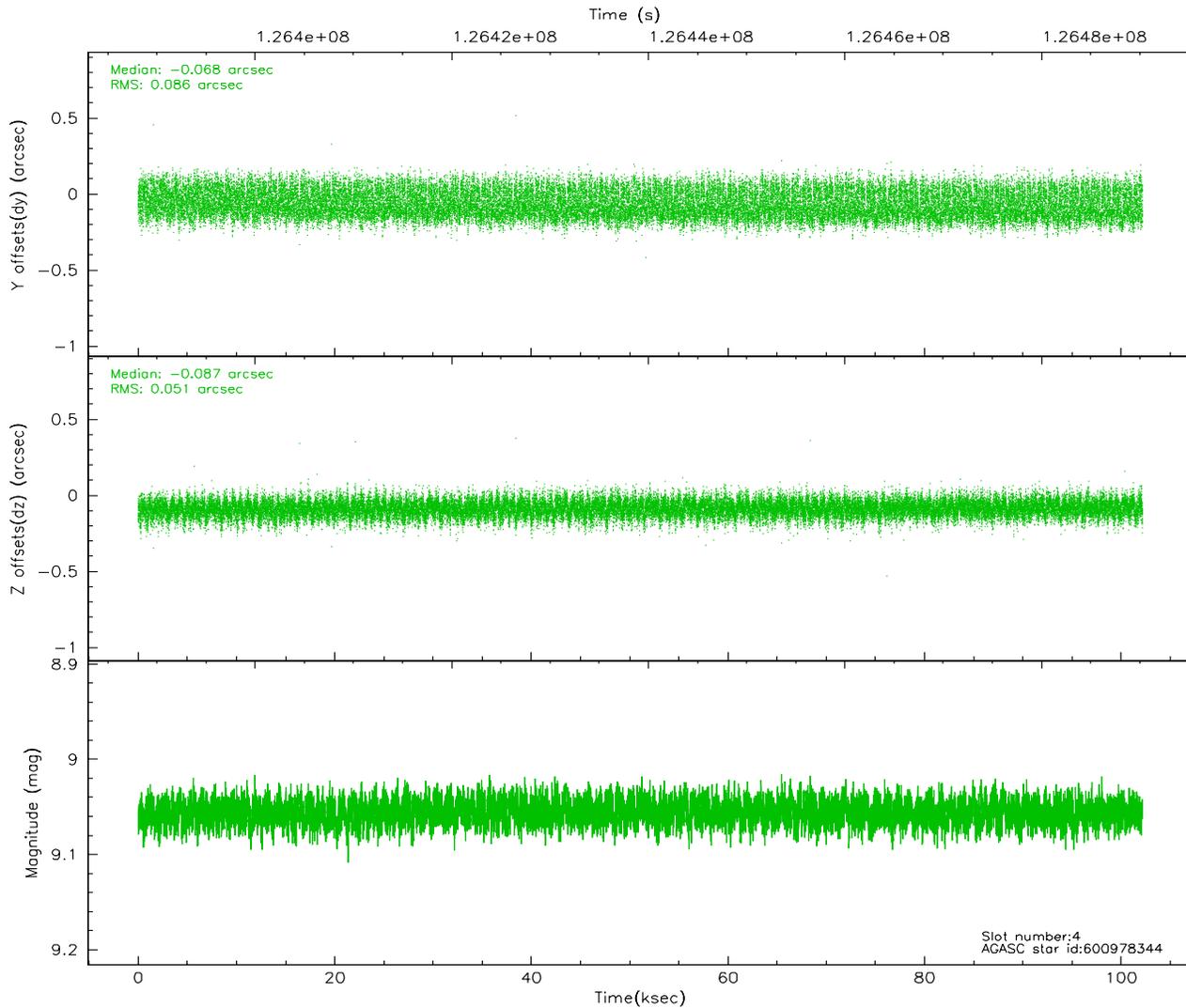
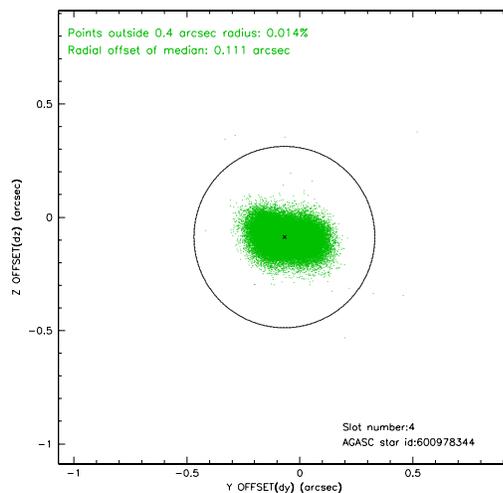
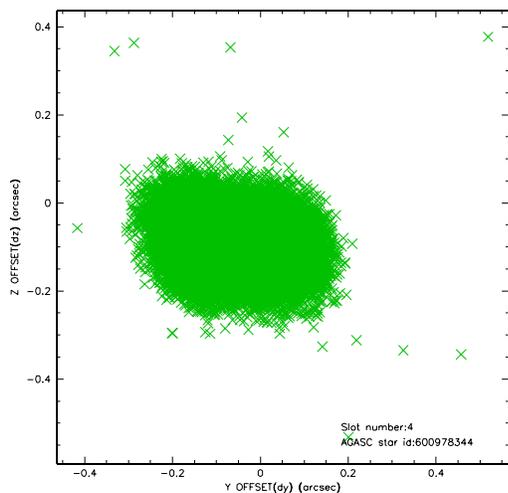
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-S-2   | 6.98 | 24910 | 0.090  | -0.152 | 0.017 | 0.035 | 0.000000   | 0.000000  | 1241.66  | -447.82  |
| 1    | FID    | HRC-S-3   | 7.00 | 24903 | 0.177  | -0.117 | 0.007 | 0.012 | 0.000000   | 0.000000  | -1160.61 | 574.34   |
| 2    | FID    | HRC-S-4   | 6.92 | 24908 | 0.138  | -0.026 | 0.018 | 0.034 | 0.000000   | 0.000000  | 1240.23  | 577.05   |
| 3    | GUIDE  | 601111576 | 8.58 | 49801 | -0.006 | 0.010  | 0.078 | 0.124 | 312.301231 | 75.993772 | 1891.65  | 2406.79  |
| 4    | GUIDE  | 600978344 | 9.06 | 49805 | -0.068 | -0.087 | 0.108 | 0.169 | 308.630470 | 76.361336 | -1530.89 | 2363.11  |
| 5    | GUIDE  | 601098528 | 9.12 | 49796 | -0.022 | -0.009 | 0.095 | 0.152 | 310.058226 | 75.008164 | 1498.64  | -1657.41 |
| 6    | GUIDE  | 601098832 | 9.09 | 49798 | 0.031  | -0.004 | 0.078 | 0.127 | 311.174638 | 75.586252 | 1600.06  | 657.96   |
| 7    | GUIDE  | 600983240 | 9.46 | 49793 | 0.062  | 0.090  | 0.107 | 0.174 | 307.643873 | 76.065844 | -1934.98 | 1065.39  |

## 2.4 Star Slots

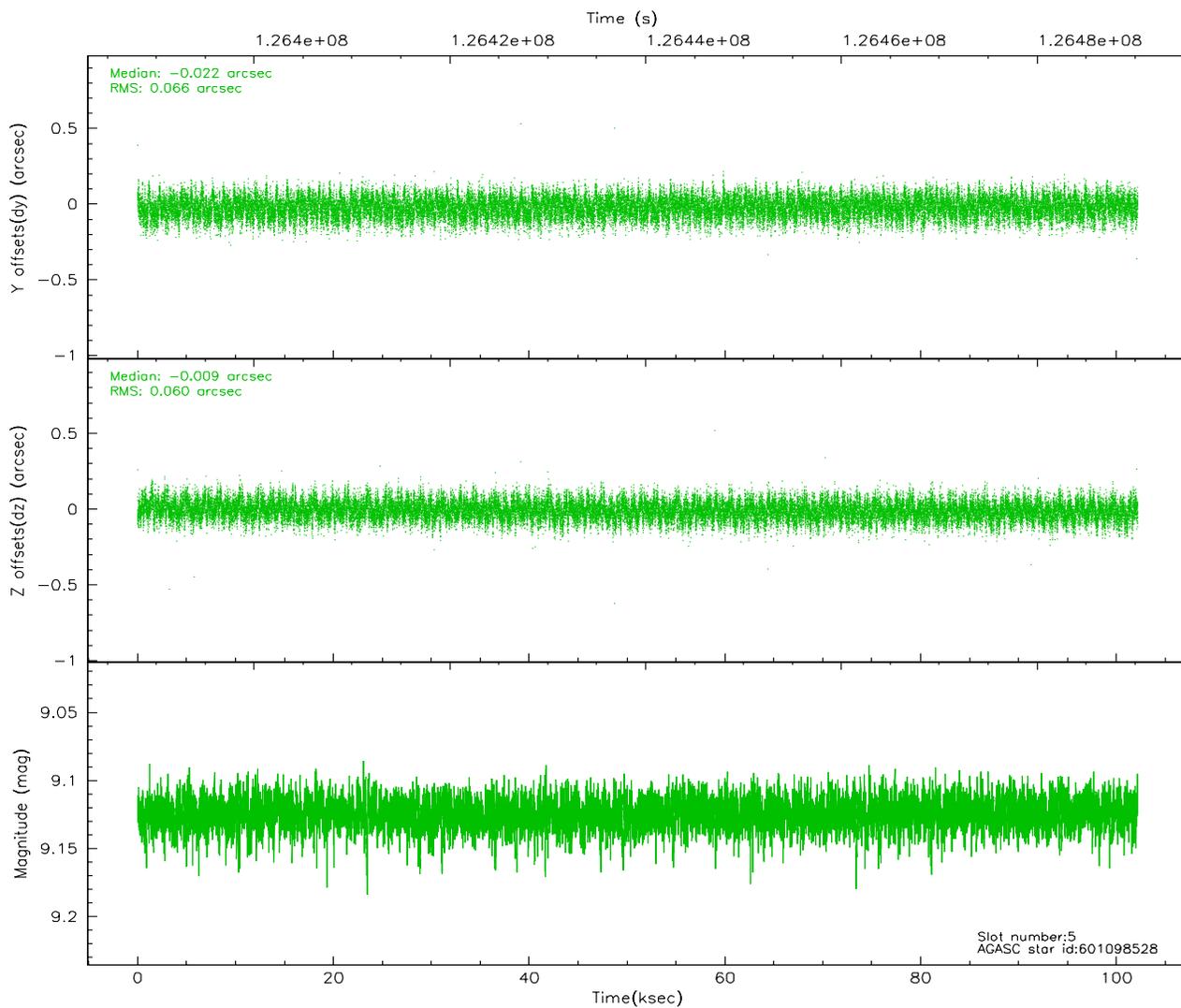
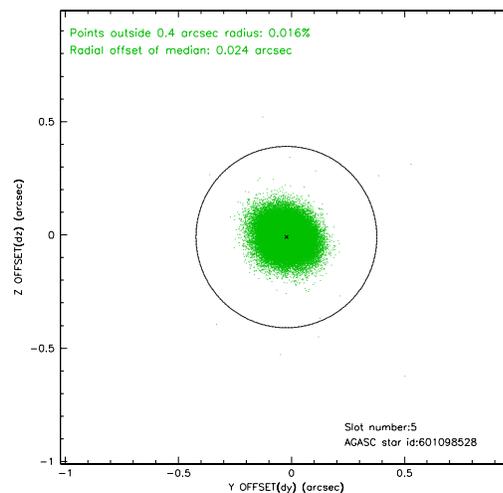
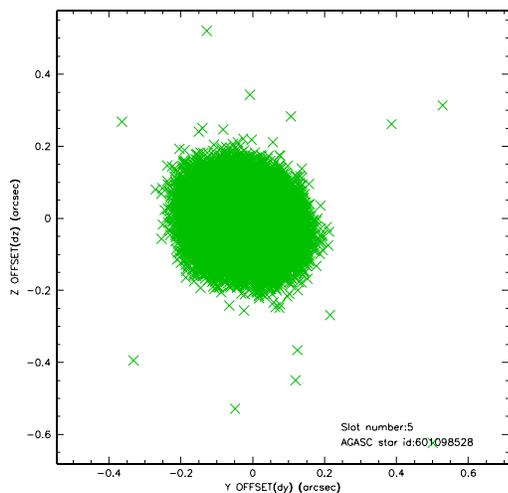
### 2.4.1 Slot 3



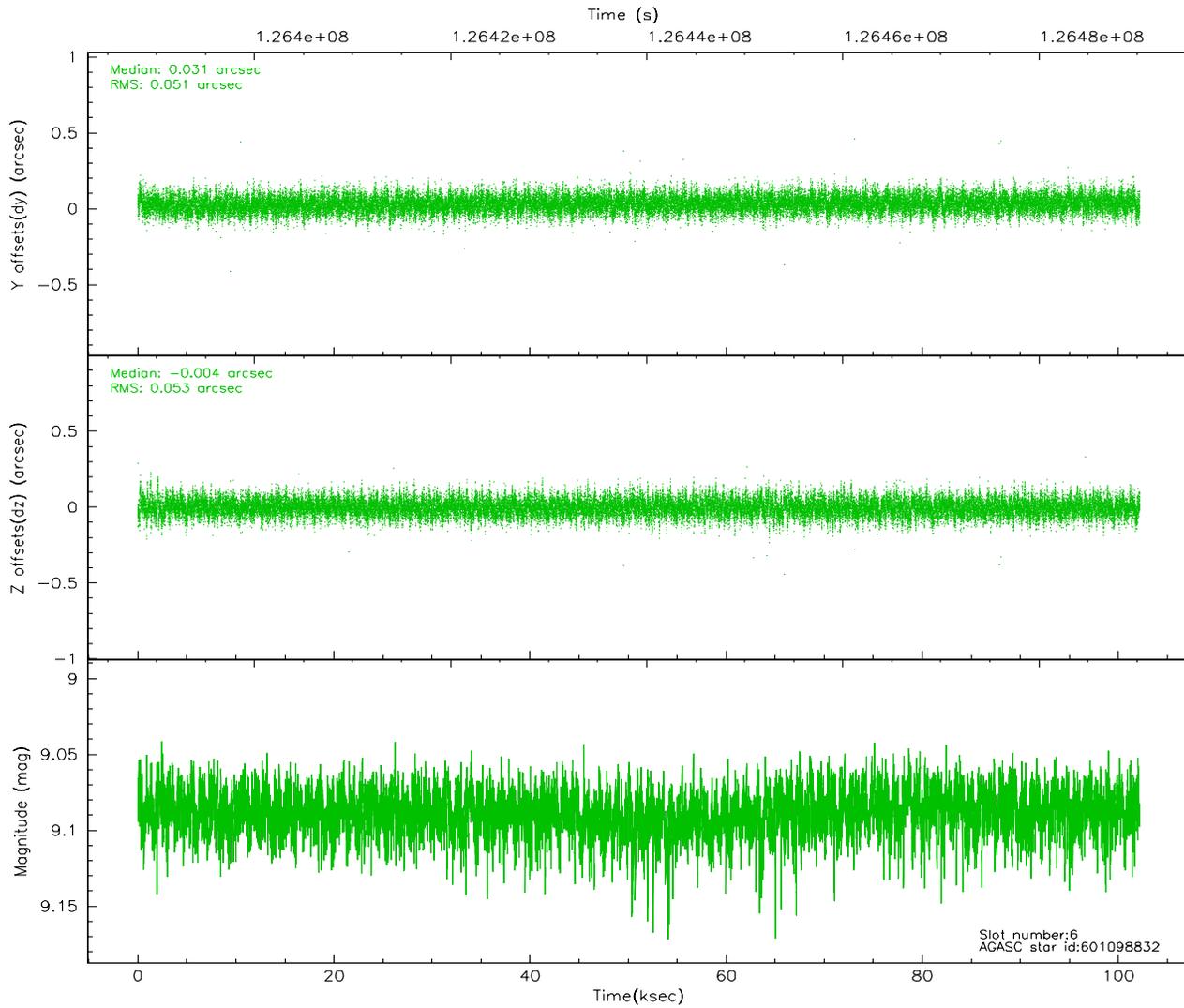
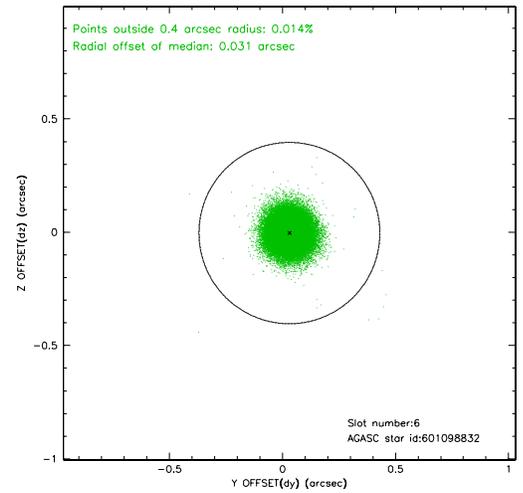
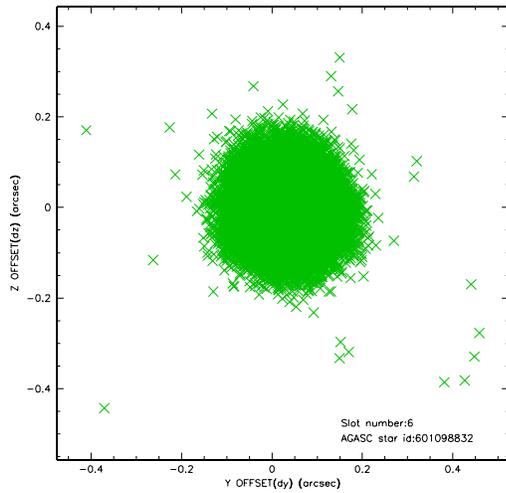
## 2.4.2 Slot 4



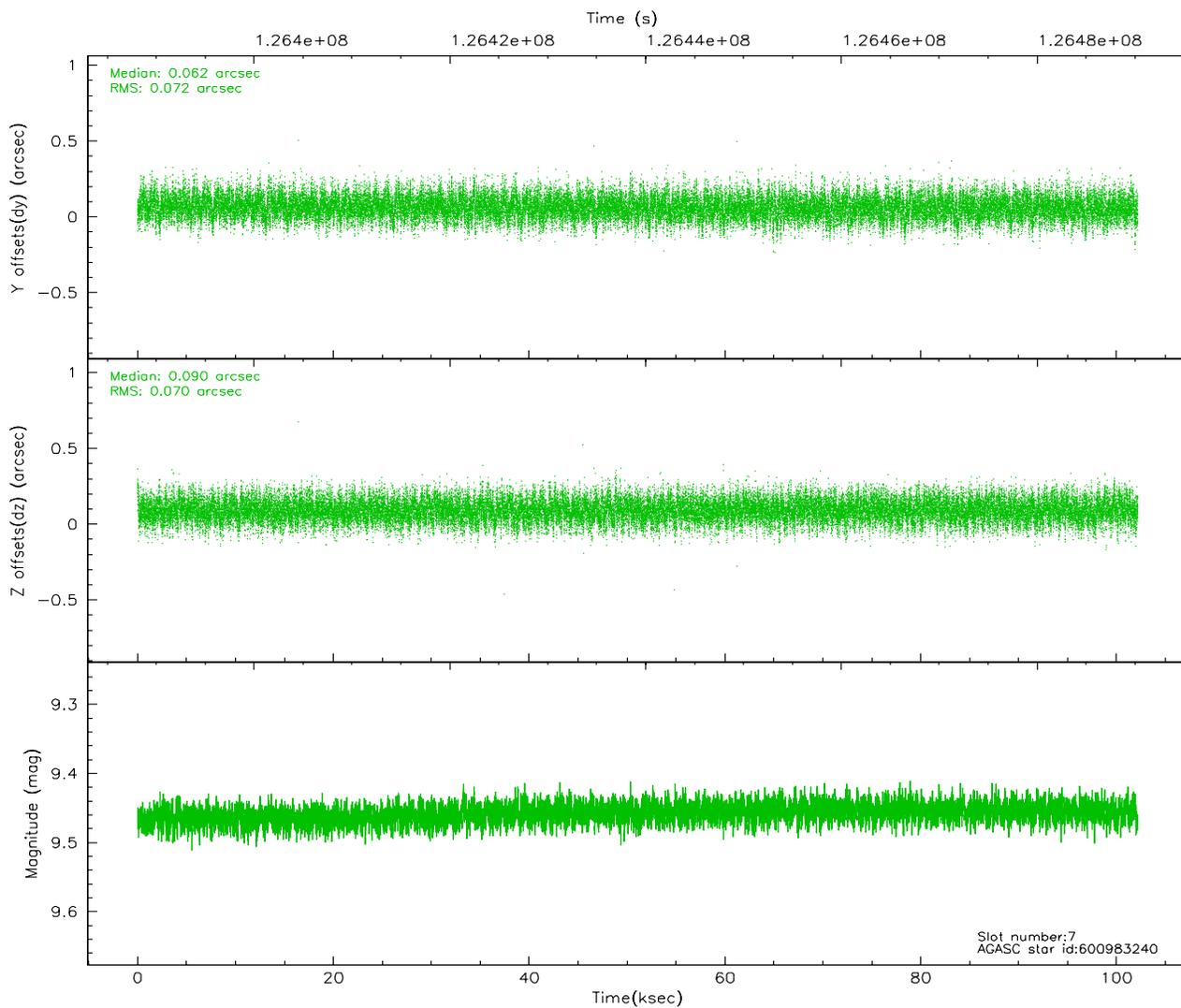
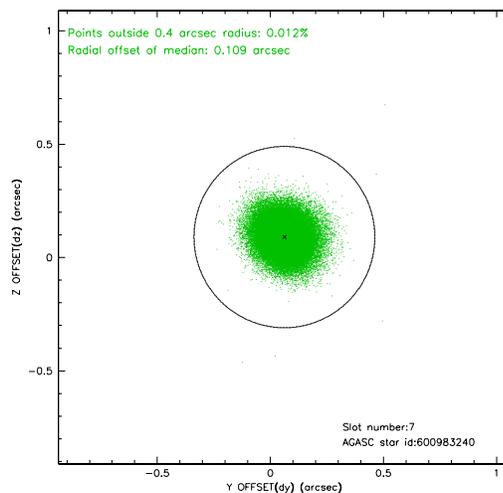
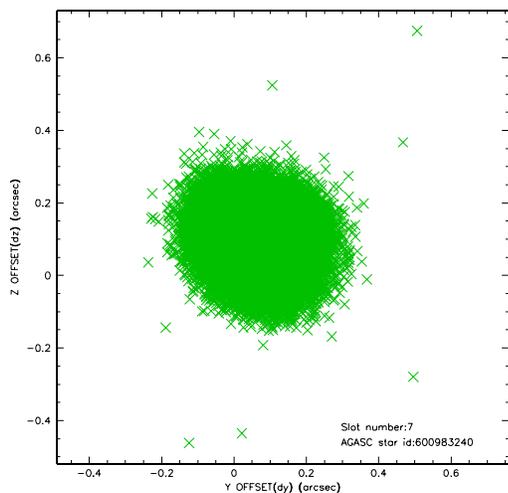
### 2.4.3 Slot 5



### 2.4.4 Slot 6

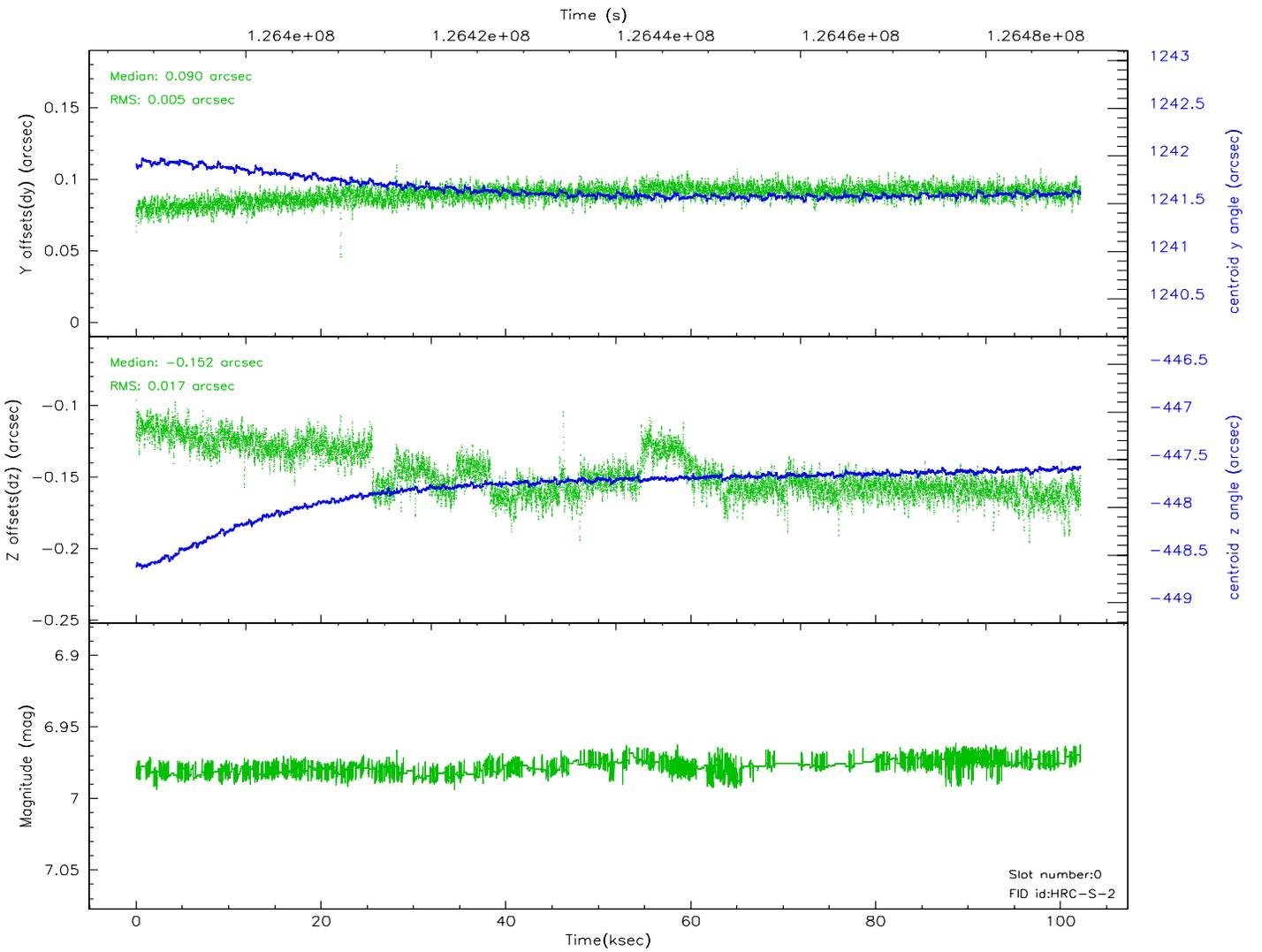
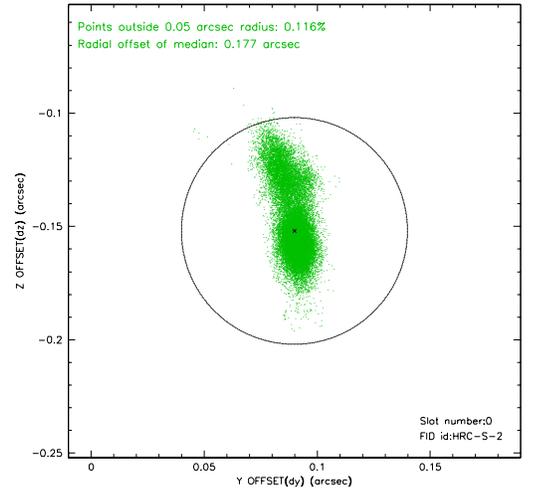
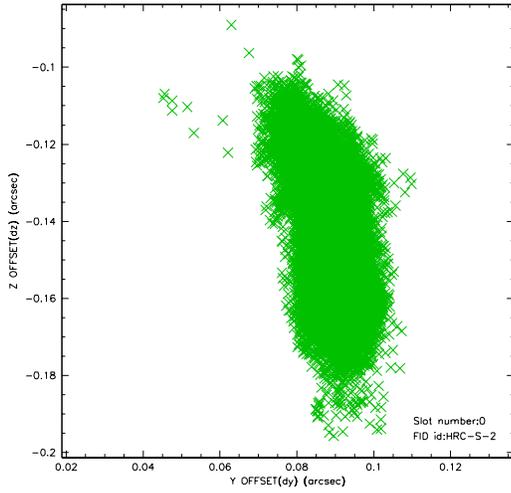


## 2.4.5 Slot 7

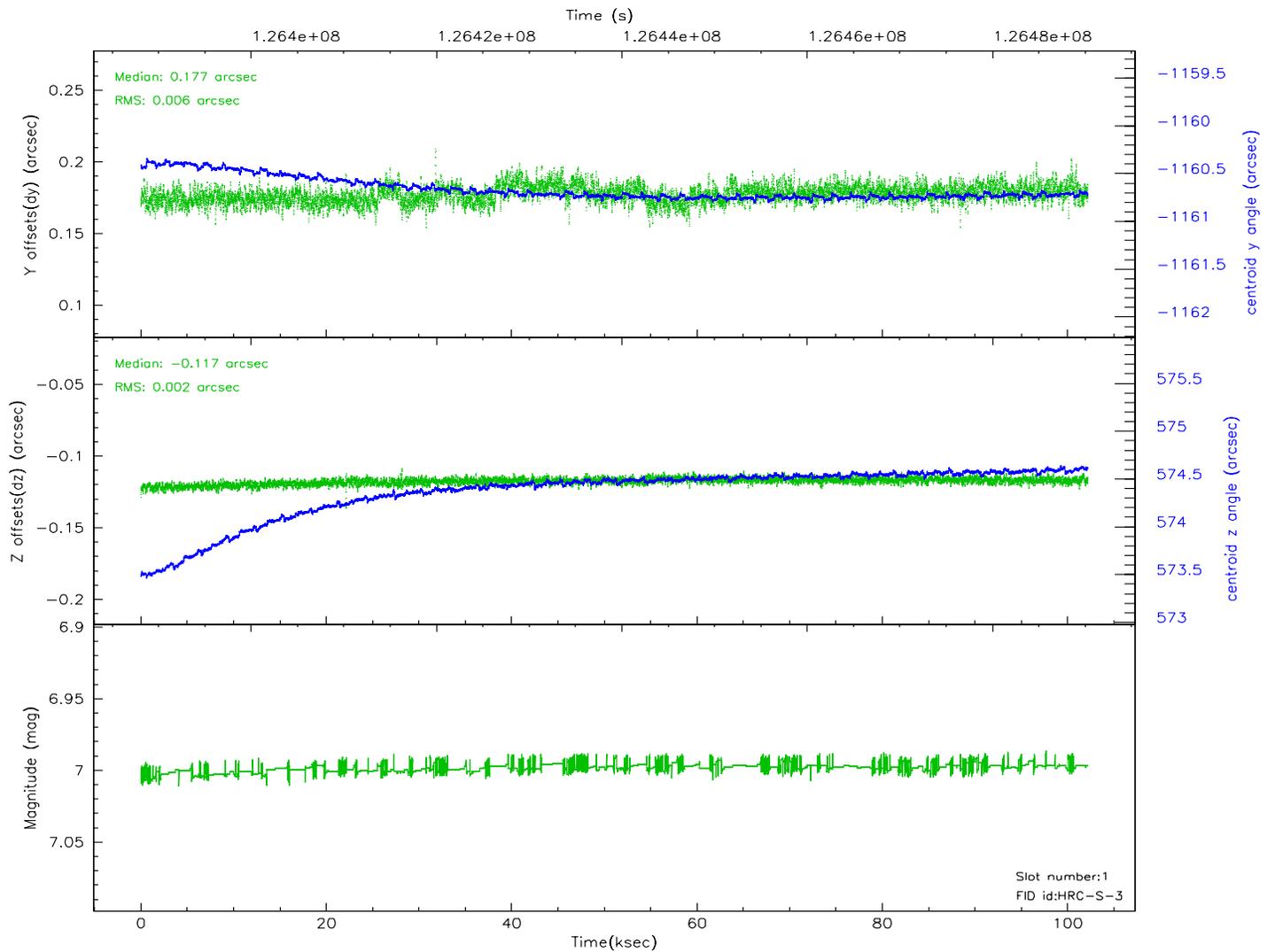
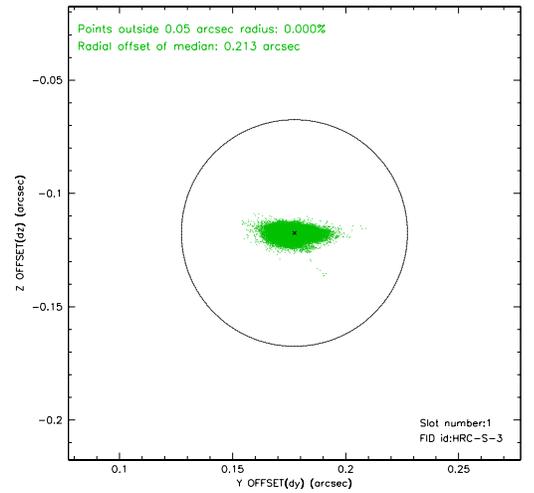
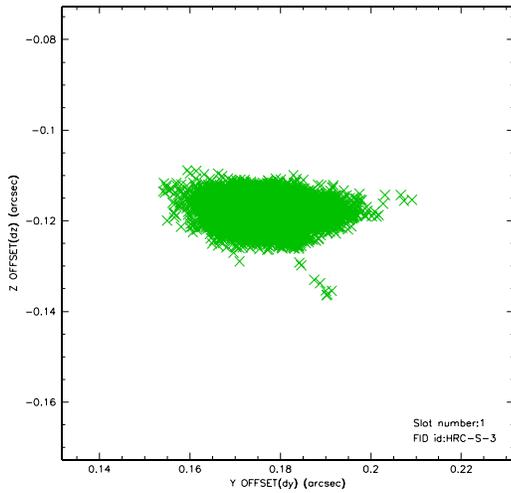


## 2.5 FID Slots

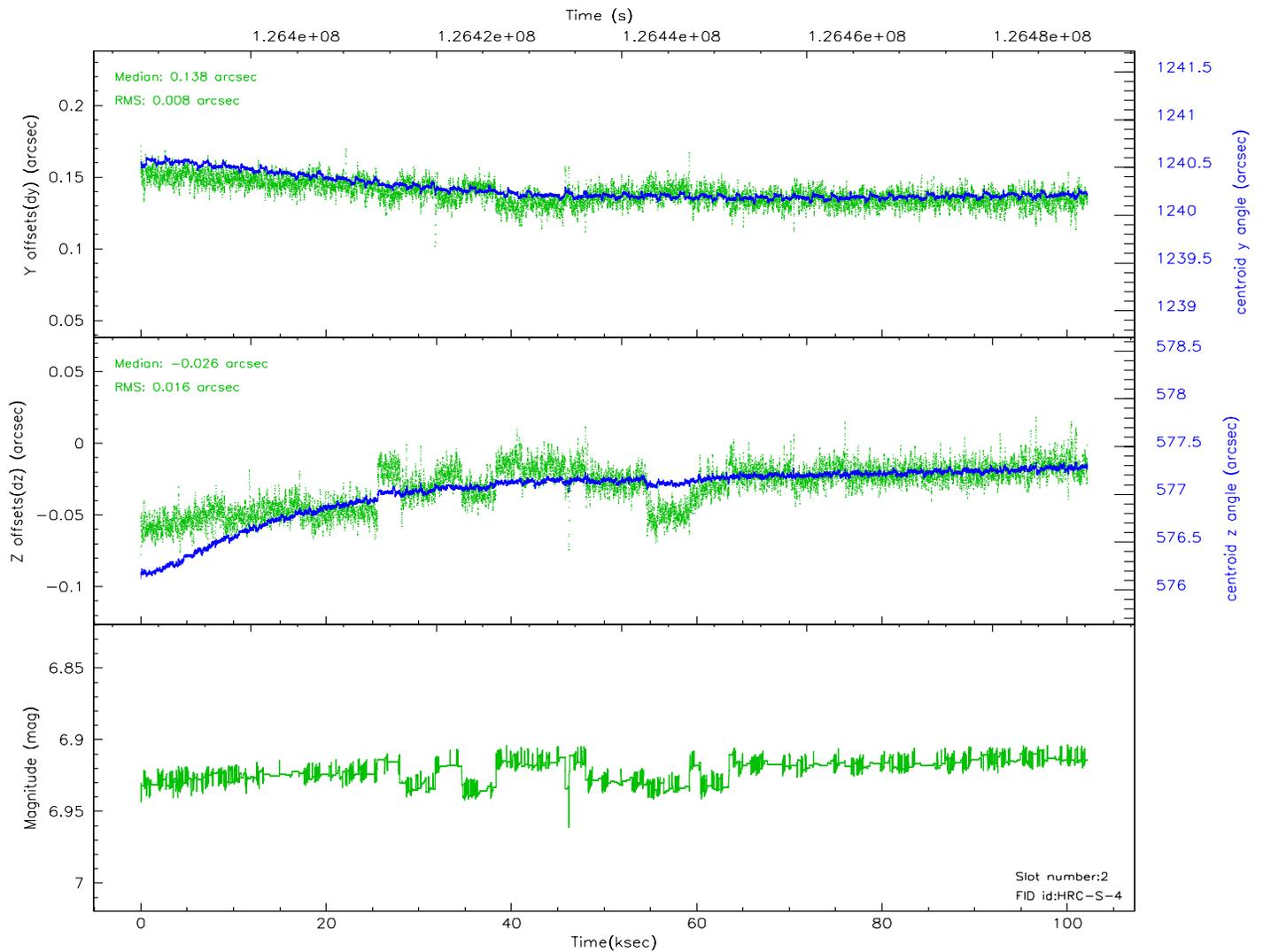
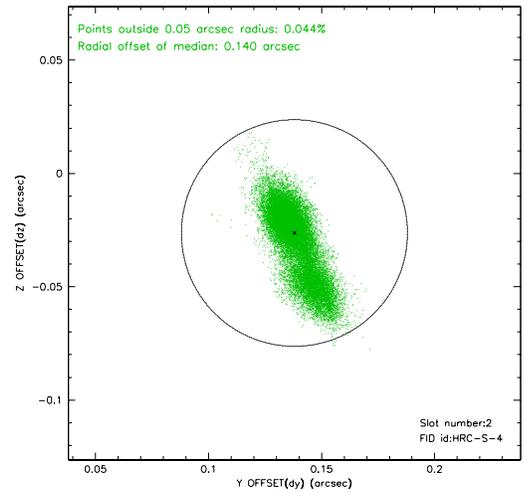
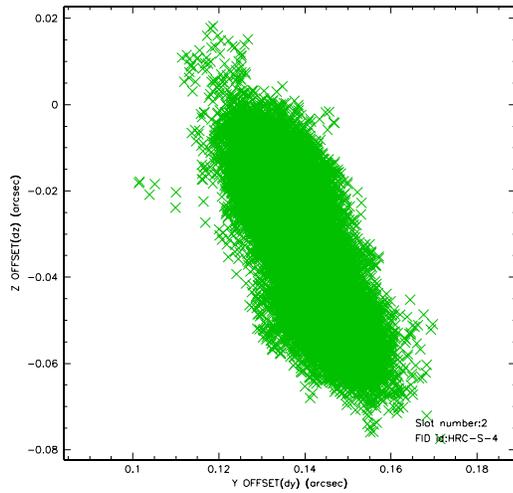
### 2.5.1 Slot 0



## 2.5.2 Slot 1

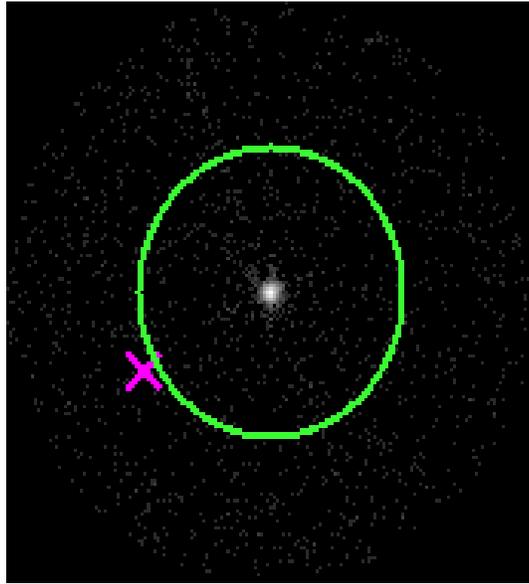


### 2.5.3 Slot 2



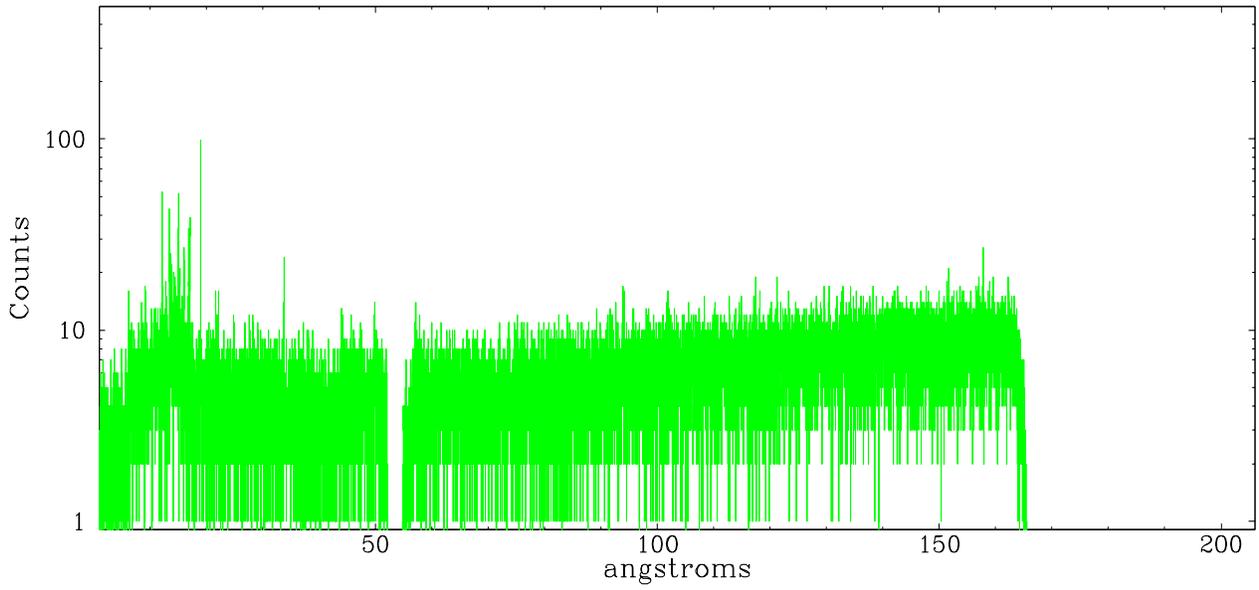
# 3 Gratings

## 3.1 LETG Arm

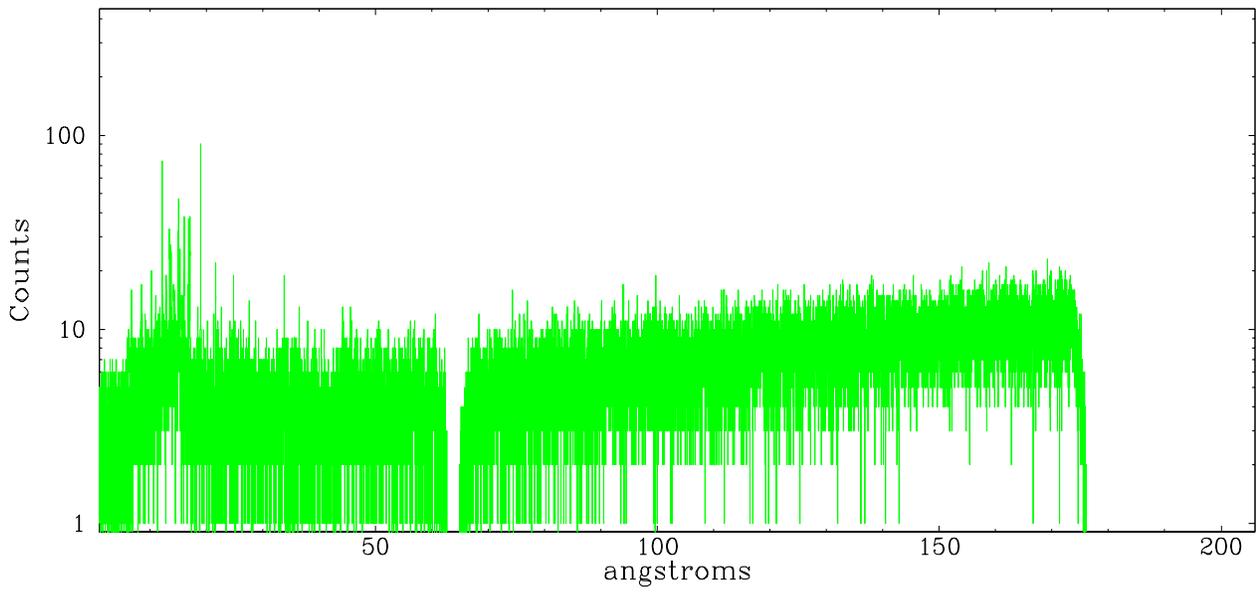


LETG Zero Order

leg order -1



leg order +1



# A Summary

## A.1 Status

|                            |             |
|----------------------------|-------------|
| V&V Scientist              | Joy Nichols |
| V&V Date (YYYY-MM-DD)      | 2007.02.22  |
| V&V Edition                | 1           |
| V&V Disposition and Status | OK          |
| V&V Charge Time            | 101.765     |

## A.2 Comments

Large variations in count rate during the first approximately 15 ksec of this observation are likely the result of a high radiation environment.