

# V&V Reference Report

## L2 ASCDS Version : 8.2.1

Observation 1120 - L2 Version 3

Chandra X-Ray Center

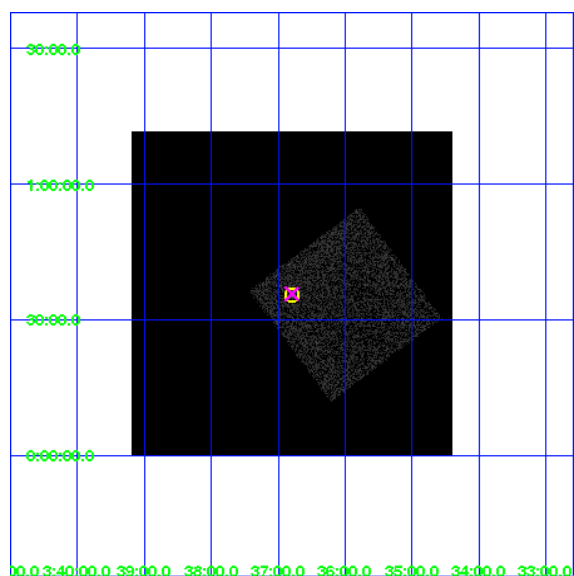
L2 Processing Date : Jan 12 2010

## Contents

|          |                               |           |
|----------|-------------------------------|-----------|
| <b>1</b> | <b>Front</b>                  | <b>2</b>  |
| <b>2</b> | <b>OBI</b>                    | <b>3</b>  |
| 2.1      | OBI . . . . .                 | 3         |
| 2.1.1    | Images . . . . .              | 3         |
| 2.1.2    | Parameters . . . . .          | 4         |
| 2.1.3    | Events . . . . .              | 4         |
| 2.2      | Compared Parameters . . . . . | 5         |
| 2.3      | Aspect . . . . .              | 6         |
| 2.4      | Star Slots . . . . .          | 9         |
| 2.4.1    | Slot 3 . . . . .              | 9         |
| 2.4.2    | Slot 4 . . . . .              | 10        |
| 2.4.3    | Slot 5 . . . . .              | 11        |
| 2.4.4    | Slot 6 . . . . .              | 12        |
| 2.4.5    | Slot 7 . . . . .              | 13        |
| 2.5      | FID Slots . . . . .           | 14        |
| 2.5.1    | Slot 0 . . . . .              | 14        |
| 2.5.2    | Slot 1 . . . . .              | 15        |
| 2.5.3    | Slot 2 . . . . .              | 16        |
| <b>3</b> | <b>Point Sources</b>          | <b>17</b> |
| <b>A</b> | <b>Summary</b>                | <b>18</b> |
| A.1      | Status . . . . .              | 18        |
| A.2      | Comments . . . . .            | 18        |

# 1 Front

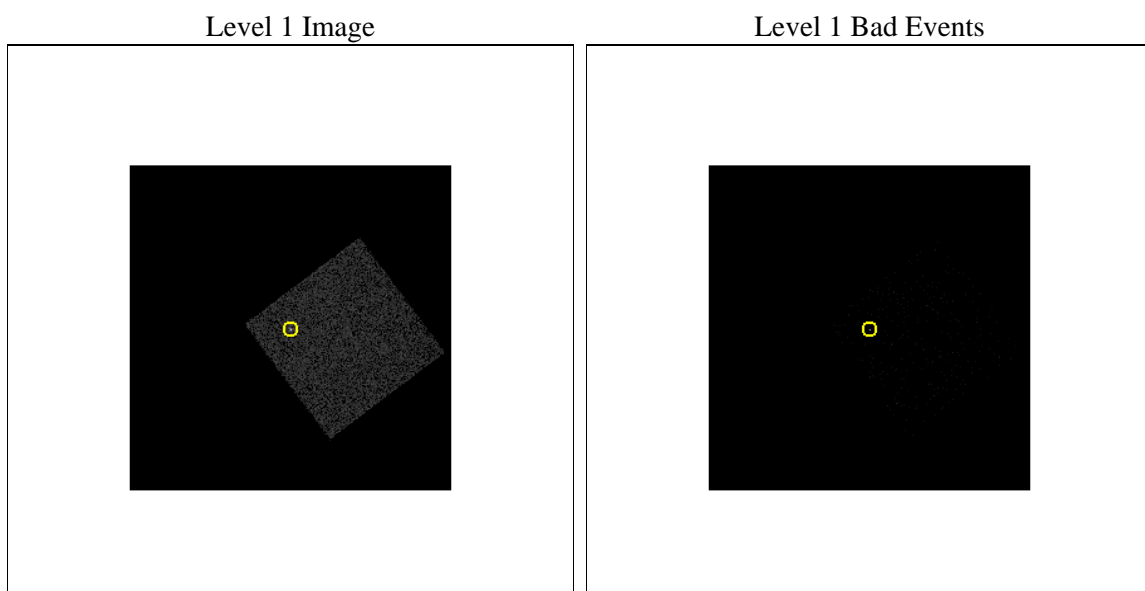
|          |                     |                                 |
|----------|---------------------|---------------------------------|
| seq_num  | 280070              | Sequence number                 |
| obs_id   | 1120                | Observation id                  |
| title    | &#160               | Proposal title                  |
| observer | Dr. CXC Calibration | Principal investigator          |
| object   | HR1099              | Source name                     |
| ra_targ  | 54.197083           | Observer's specified target RA  |
| dec_targ | 0.589972            | Observer's specified target Dec |
| ra_nom   | 54.198517254277     | Nominal RA                      |
| dec_nom  | 0.59545833139096    | Nominal Dec                     |
| roll_nom | 98.236160440012     | Nominal Roll                    |
| revision | 3                   | Processing version of data      |
| ontime   | 295.4562606141      | [s]                             |
| livetime | 292.85161297689     | Ontime multiplied by DTCOR      |
| l2events | 13849               | 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 | 500.000000     | Scheduled observation exposure time |
| ascdsver | 8.2.1               | Processing system revision     | ontime         | 295.4562606141 | [s]                                 |
| caldbver | 4.1.5               | &#160                          | 11events       | 24917          | Number of level 1 events            |
| date     | 2010-01-12T20:24:27 | Date and time of file creation |                |                |                                     |
| revision | 3                   | Processing version of data     |                |                |                                     |

### 2.1.3 Events

#### Level 1 Events

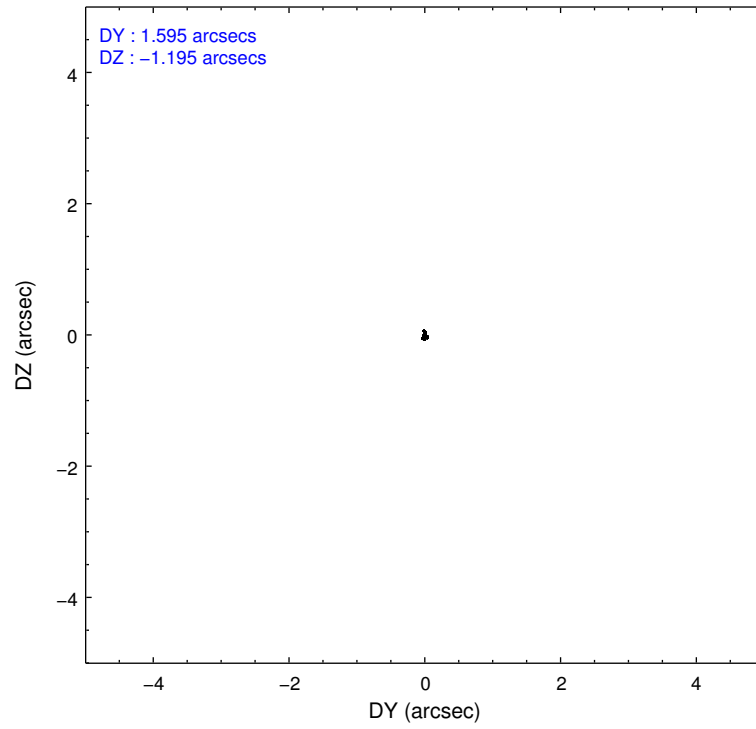
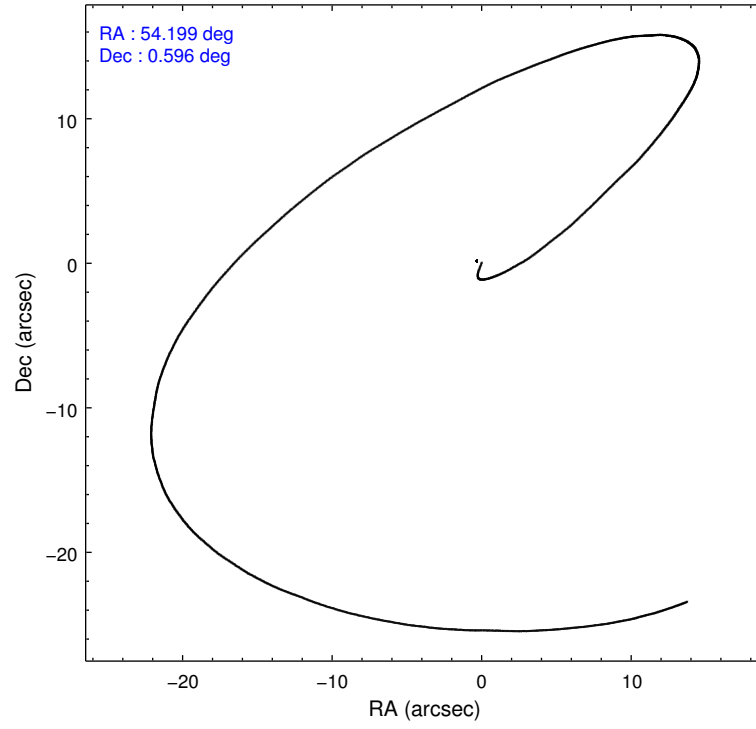
|                 |                      |
|-----------------|----------------------|
|                 | <b>segment<br/>0</b> |
| level 1 events  | 24917                |
| rejected events | 3402                 |
| rejected %      | 13%                  |

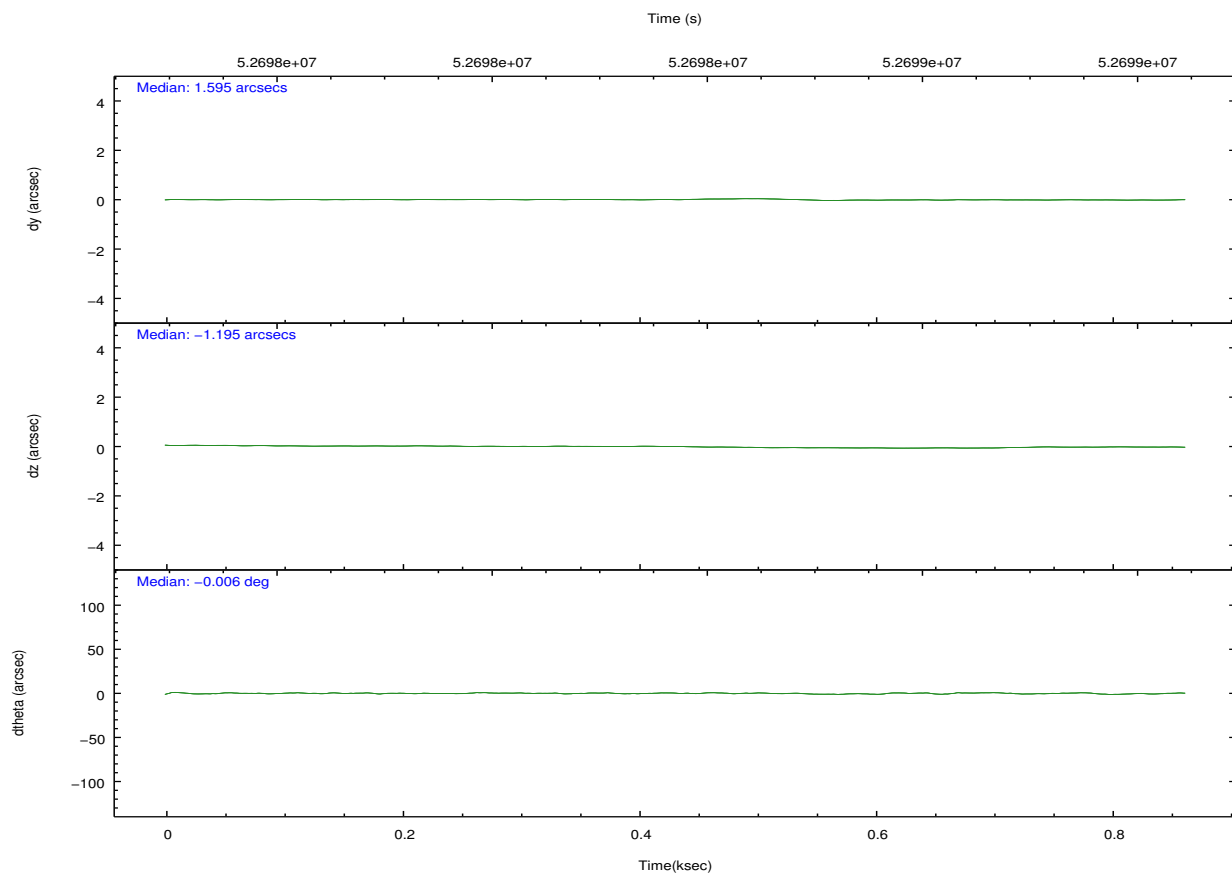
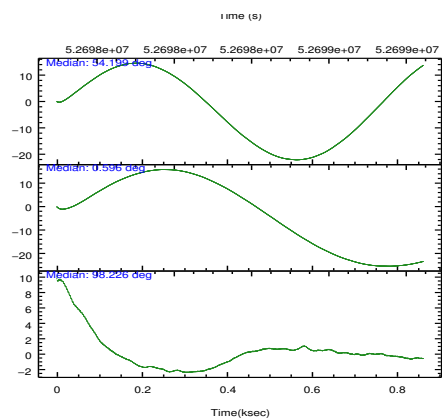
## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual              |
|-----------------------------------|---------------------|---------------------|
| Instrument                        | HRC                 | HRC                 |
| Detector                          | HRC-I               | HRC-I               |
| Grating                           | NONE                | NONE                |
| Data mode                         | OBSERVING           | OBSERVING           |
| Observation mode                  | POINTING            | POINTING            |
| Pointing RA                       | 54.215389           | 54.19851725427655   |
| Pointing Dec                      | 0.573109            | 0.5954583313909552  |
| Pointing Roll                     | 98.331358           | 98.23616044001172   |
| SIM focus pos (mm)                | -1.040293           | -1.300001029371461  |
| SIM defocus (mm)                  | 0                   | -0.259708408712586  |
| SIM translation stage pos (mm)    | 91.869942           | 91.86553817309772   |
| SIM translation stage offset (mm) | 35.115552           | 35.11995071850384   |
| Observation start time            | 52698302.184000     | 52696958.293281     |
| Observation start date            | 1999-09-02T22:23:58 | 1999-09-02T22:02:38 |
| Observation end time              | 52698802.184000     | 52698935.518352     |
| Observation end date              | 1999-09-02T22:32:18 | 1999-09-02T22:35:35 |

| Parameter                    | Planned   | Actual  |
|------------------------------|-----------|---------|
| Obspar format version number | 6         | 6       |
| Obspar file type             | PREDICTED | ACTUAL  |
| Obspar update status         | NONE      | UPDATED |

## 2.3 Aspect





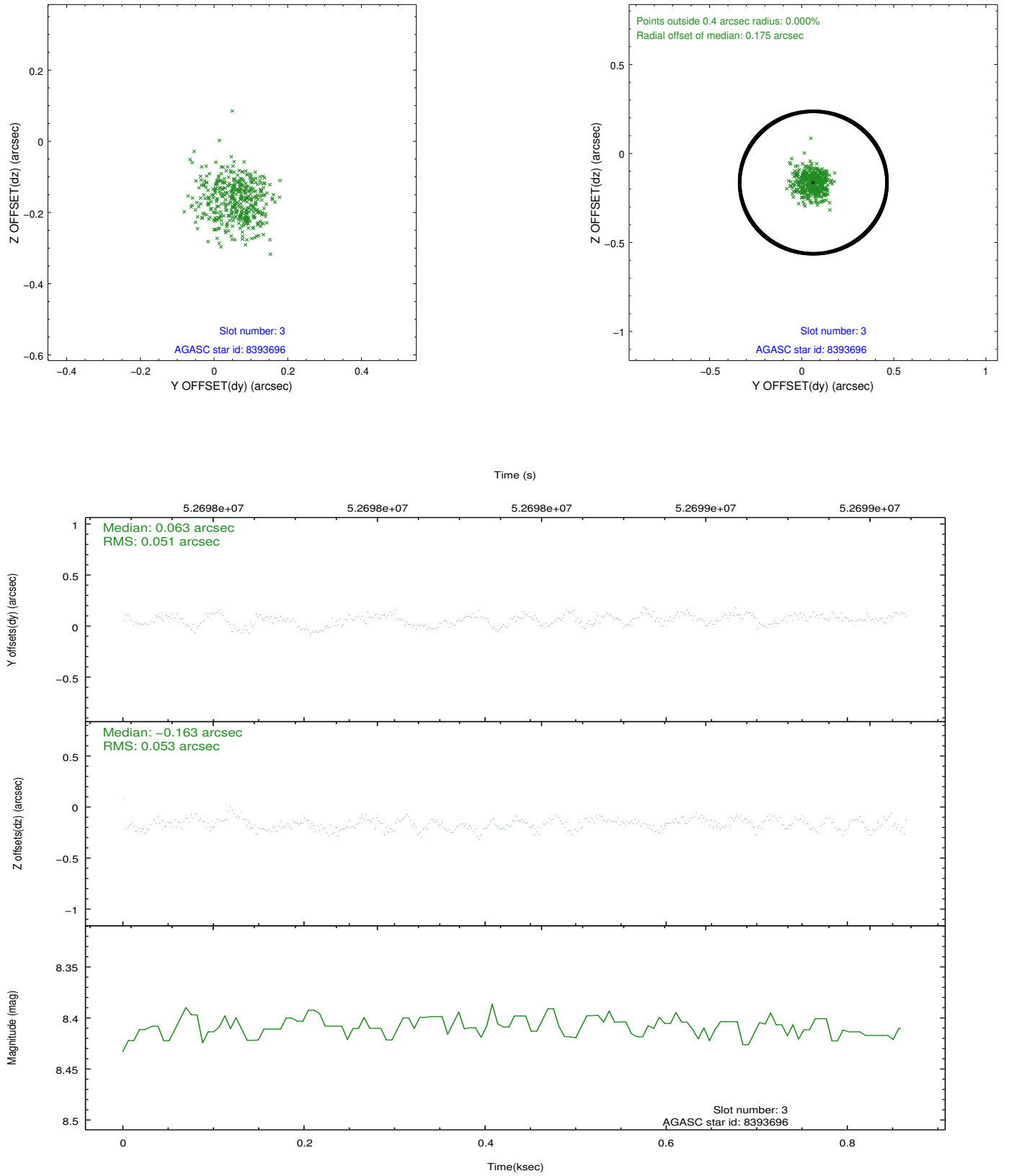
Slot Statistics

| slot | status | id      | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec      | mean_y   | mean_z   |
|------|--------|---------|------|-------|--------|--------|-------|-------|-----------|----------|----------|----------|
| 0    | FID    | HRC-I-1 | 6.98 | 422   | -0.267 | -0.160 | 0.008 | 0.013 | 0.000000  | 0.000000 | -755.74  | -568.56  |
| 1    | FID    | HRC-I-3 | 7.02 | 422   | 0.247  | -0.206 | 0.008 | 0.012 | 0.000000  | 0.000000 | -1188.12 | 1738.25  |
| 2    | FID    | HRC-I-4 | 6.88 | 422   | 0.136  | 0.274  | 0.005 | 0.008 | 0.000000  | 0.000000 | 1281.97  | 1742.43  |
| 3    | GUIDE  | 8393696 | 8.41 | 421   | 0.063  | -0.163 | 0.078 | 0.122 | 53.645666 | 0.680479 | 676.56   | 1973.85  |
| 4    | GUIDE  | 8398800 | 8.69 | 422   | 0.103  | 0.103  | 0.056 | 0.087 | 54.242352 | 0.922024 | 1227.60  | -272.35  |
| 5    | GUIDE  | 8390744 | 9.03 | 422   | -0.055 | -0.116 | 0.071 | 0.112 | 53.677290 | 0.926294 | 1538.48  | 1732.48  |
| 6    | GUIDE  | 8395104 | 8.66 | 422   | 0.023  | 0.218  | 0.066 | 0.104 | 54.744893 | 0.796520 | 520.81   | -1997.34 |
| 7    | GUIDE  | 8399352 | 9.96 | 421   | -0.109 | -0.032 | 0.123 | 0.204 | 53.946831 | 1.204693 | 2387.84  | 623.29   |

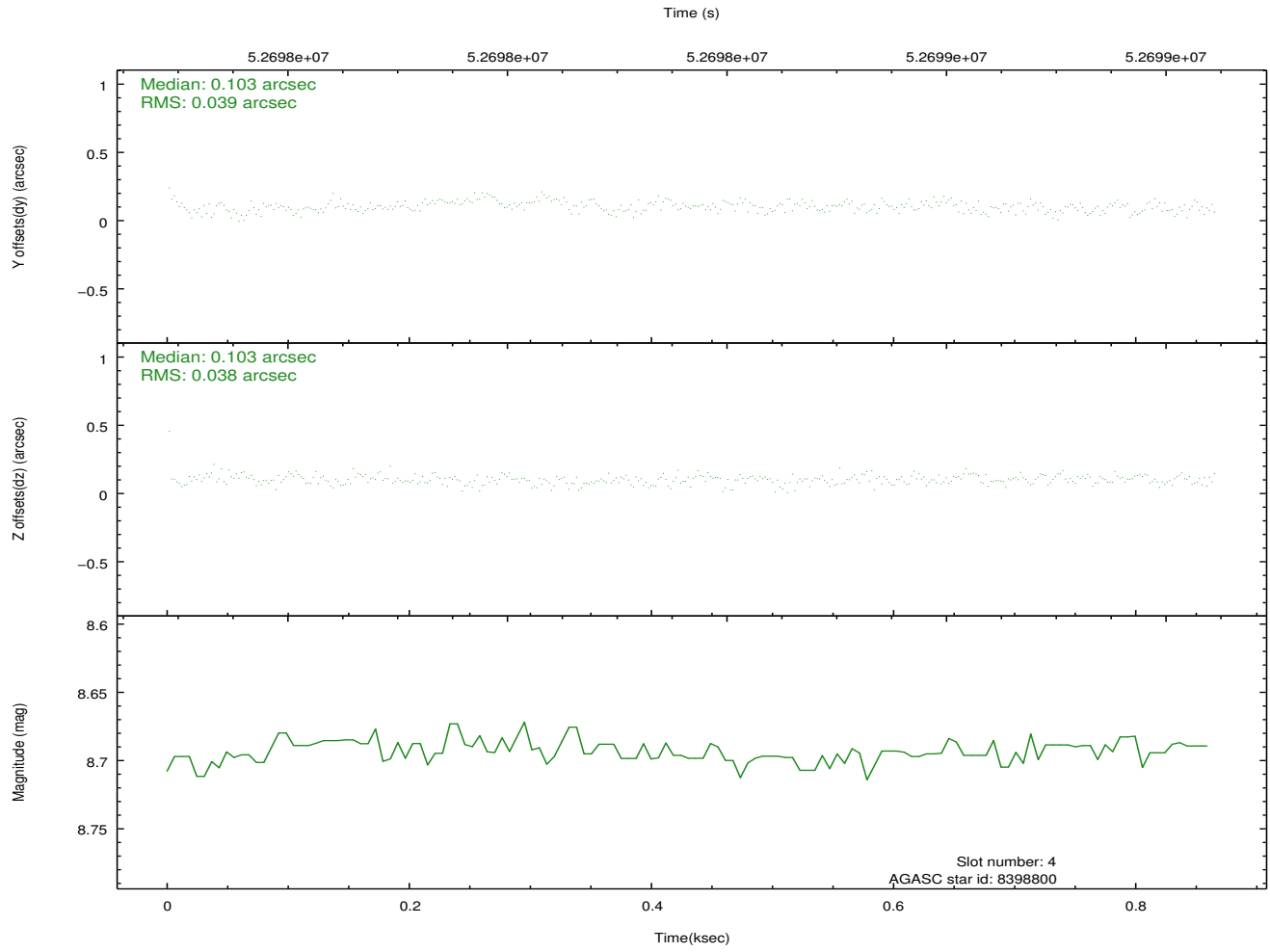
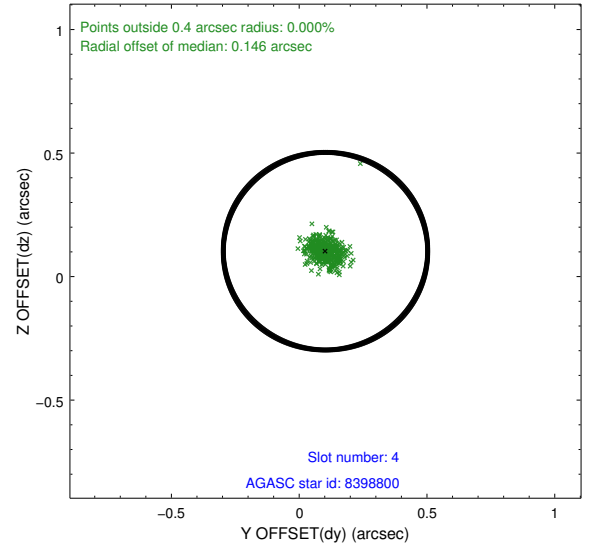
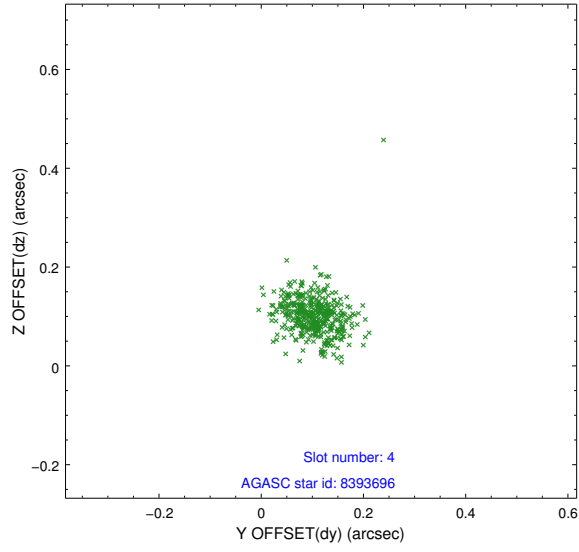


## 2.4 Star Slots

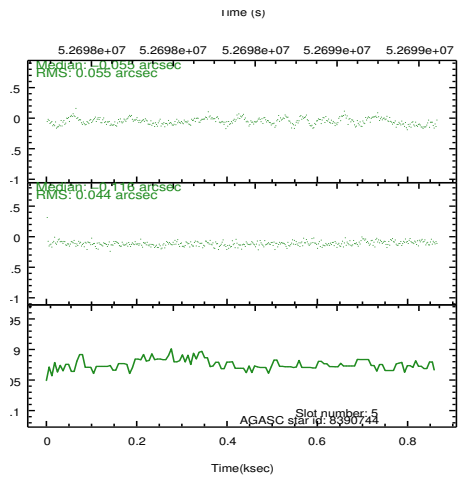
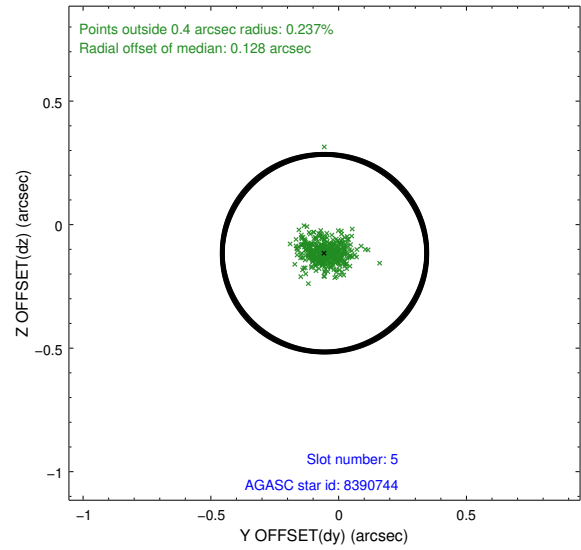
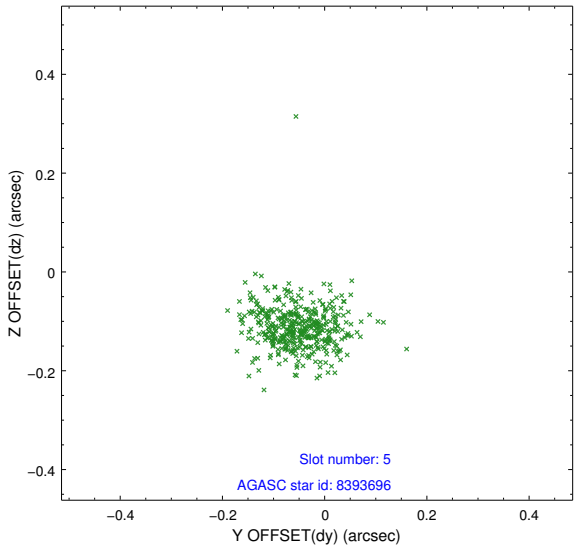
### 2.4.1 Slot 3



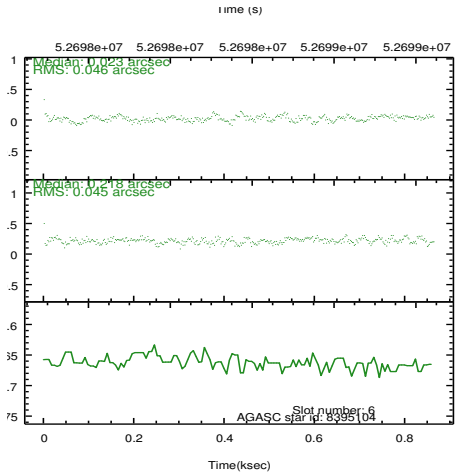
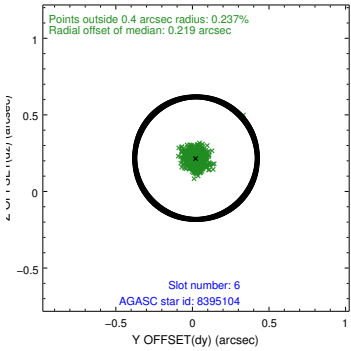
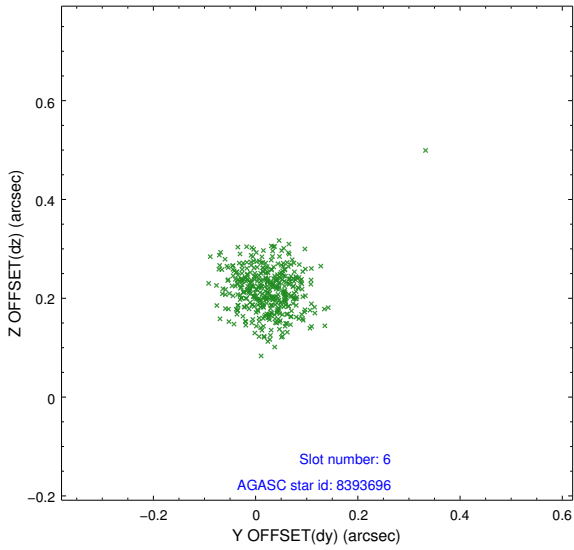
## 2.4.2 Slot 4



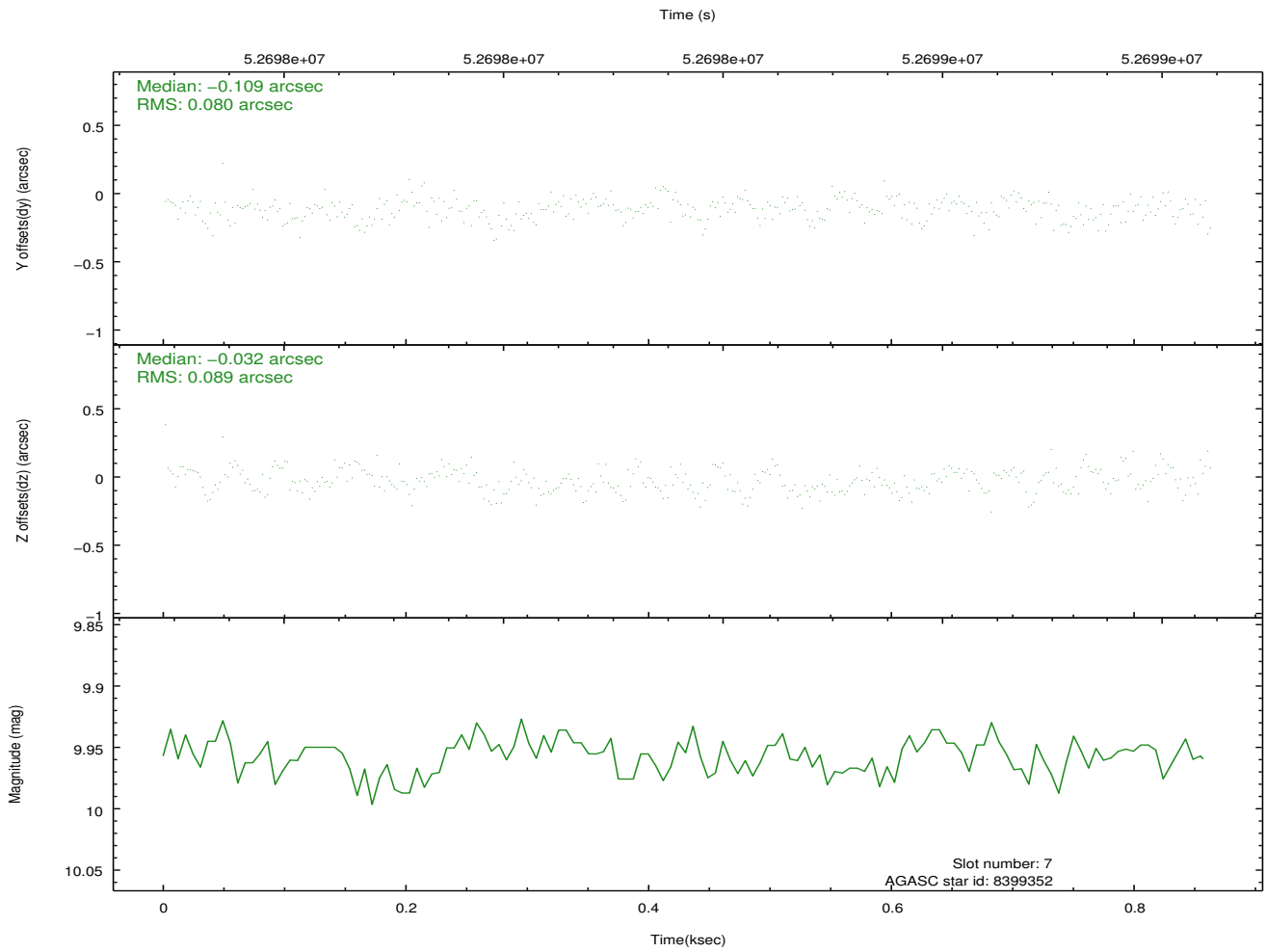
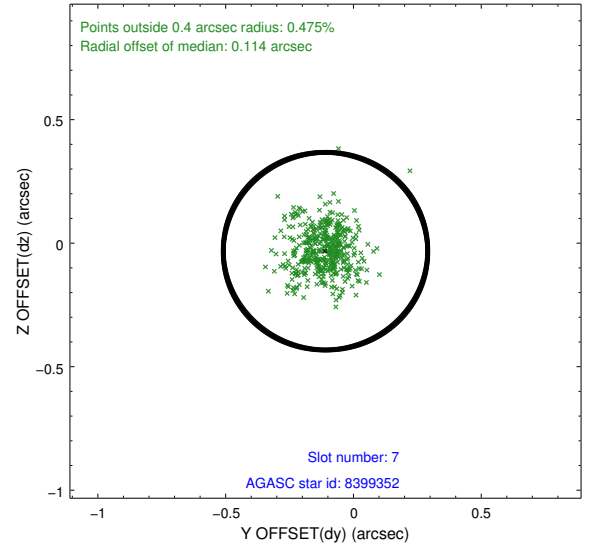
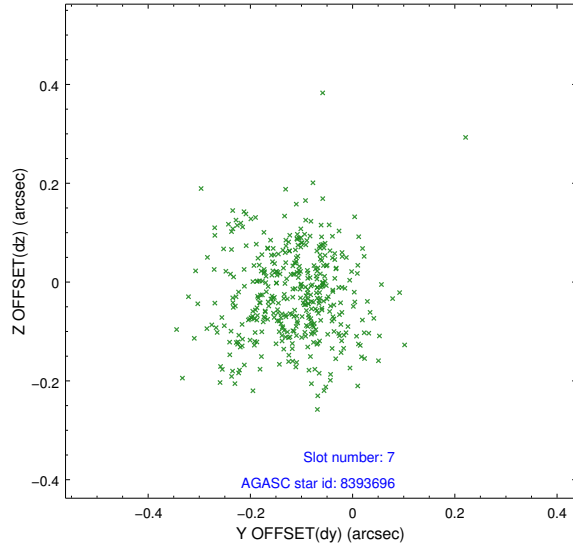
2.4.3 Slot 5



2.4.4 Slot 6

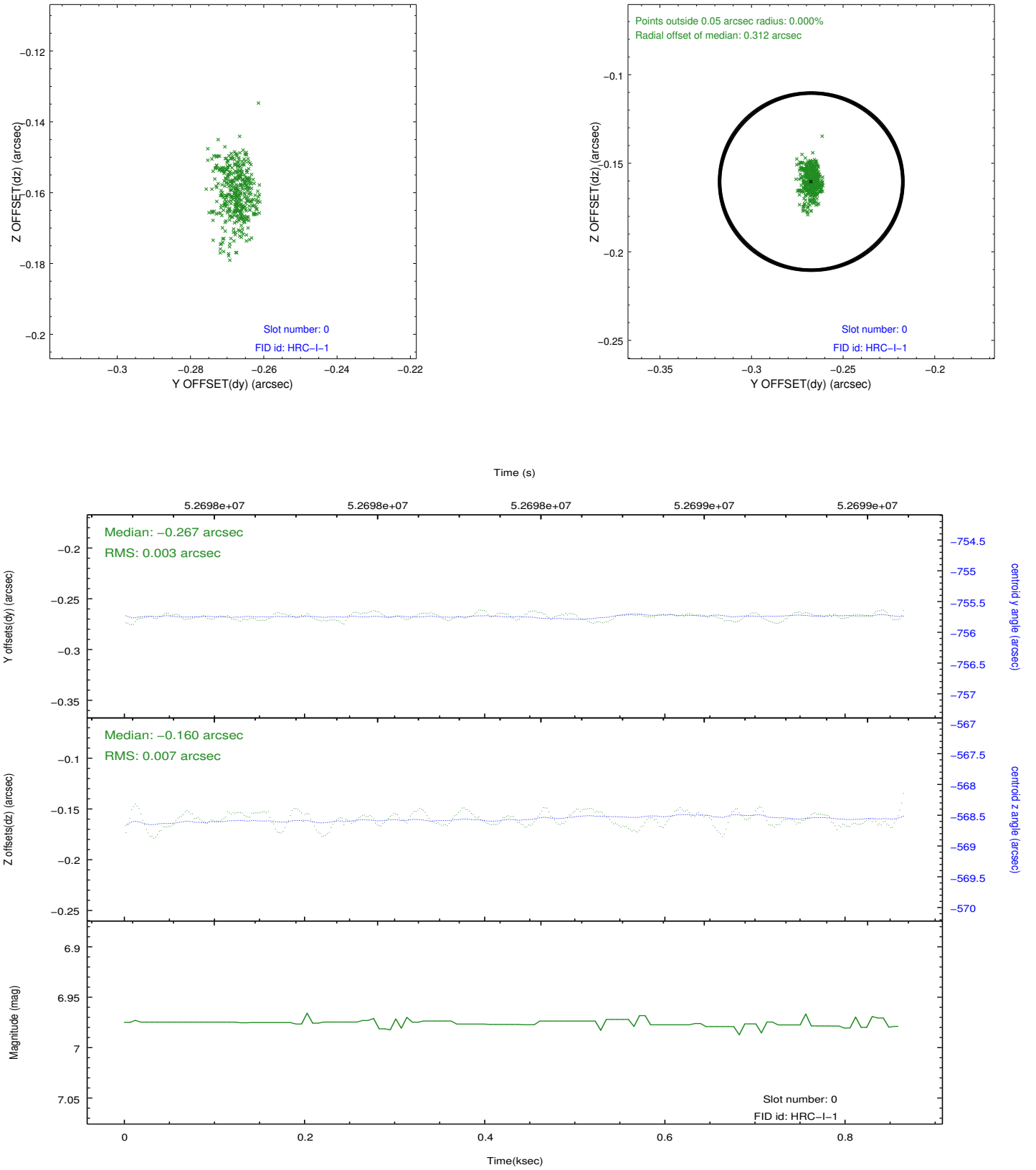


## 2.4.5 Slot 7

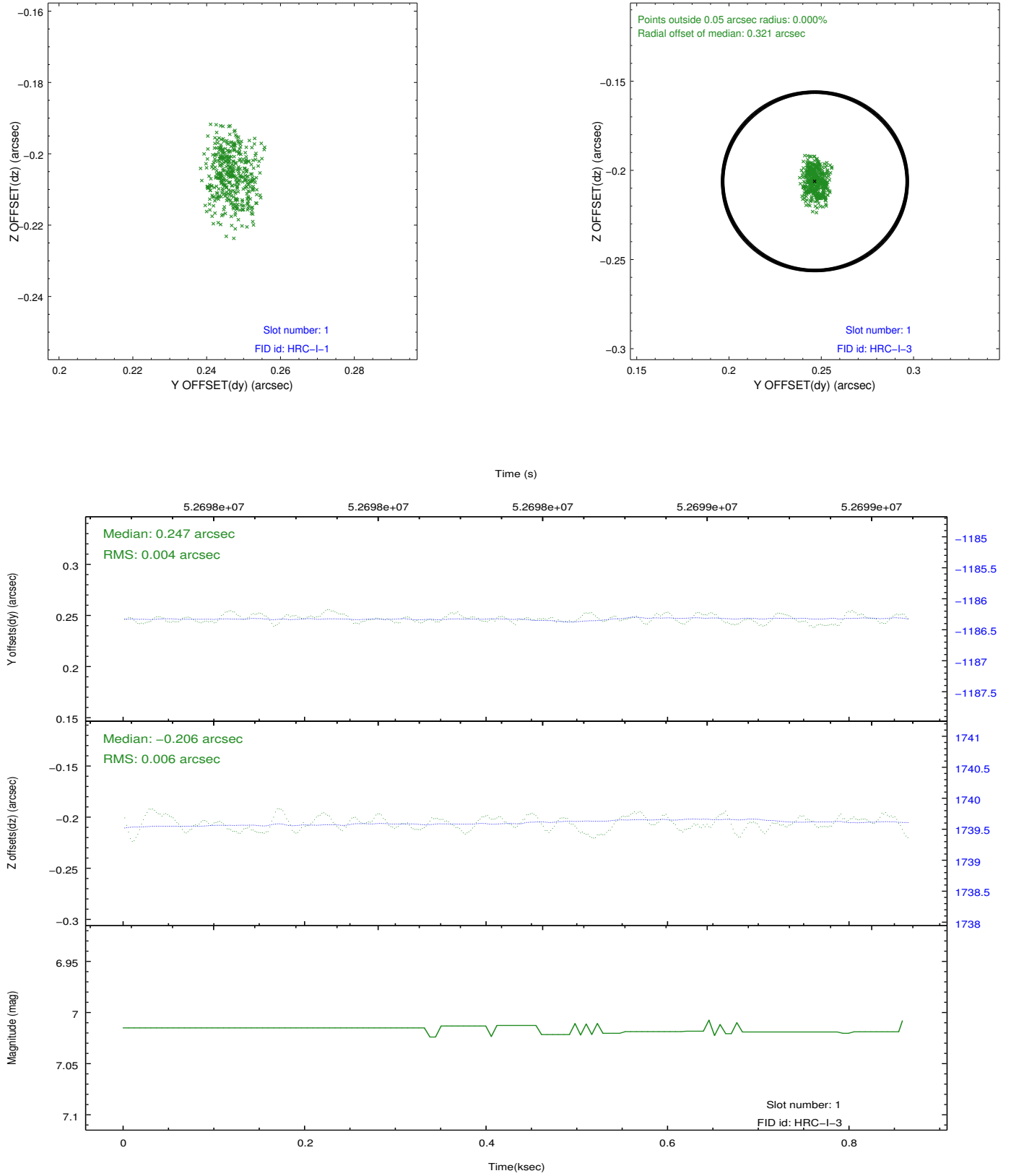


## 2.5 FID Slots

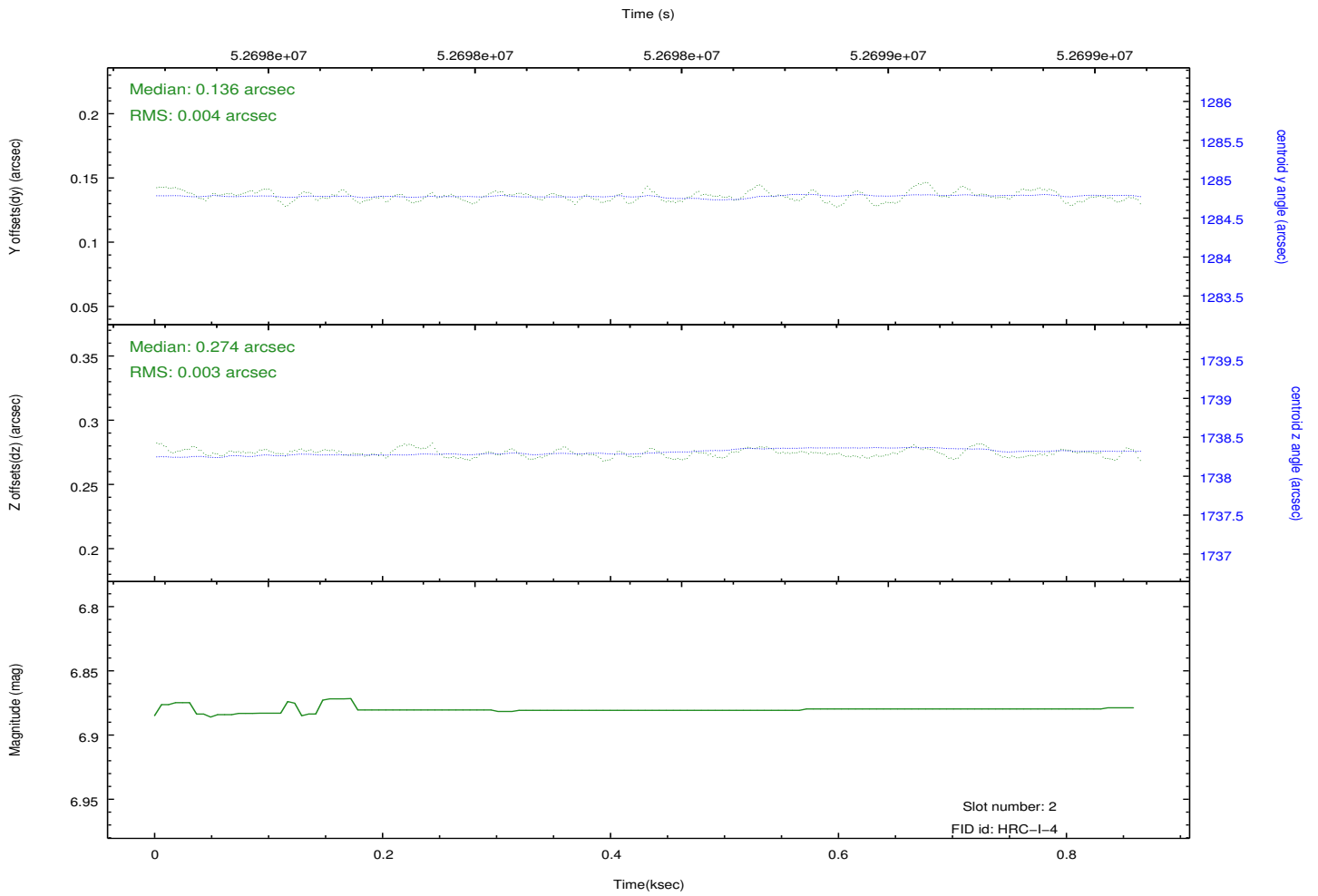
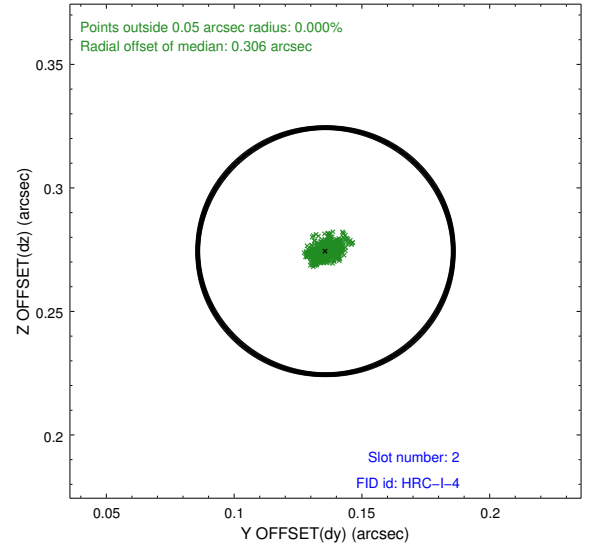
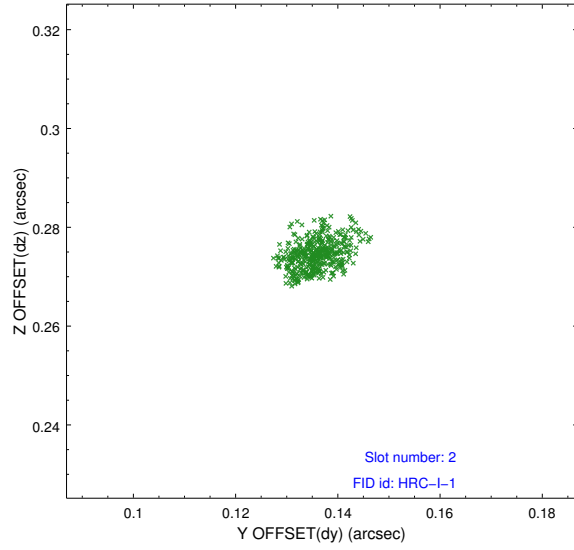
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2





### 3 Point Sources

# A Summary

## A.1 Status

|                            |             |
|----------------------------|-------------|
| V&V Scientist              | Joy Nichols |
| V&V Date (YYYY-MM-DD)      | 2010.01.22  |
| V&V Edition                | 1           |
| V&V Disposition and Status | OK          |
| V&V Charge Time            | 0.295       |

## A.2 Comments

Optical axis determination.

Target off-axis.

All three fid lights have radial offset violation.