

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 995 - L2 Version 001  
Chandra X-Ray Center

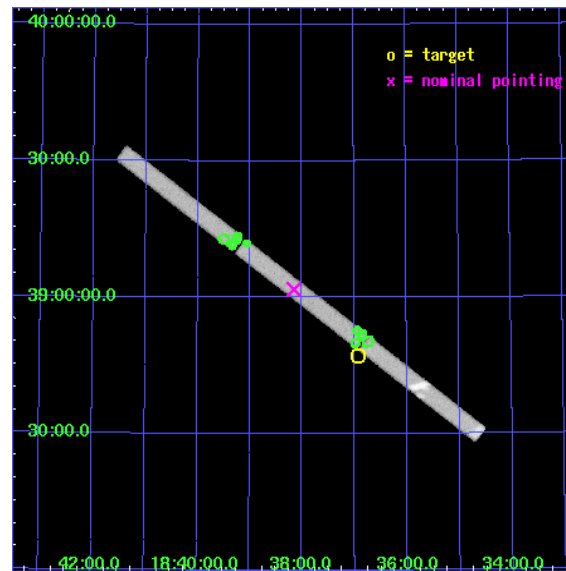
L2 Processing Date : Nov 6 2006

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# 1 Front

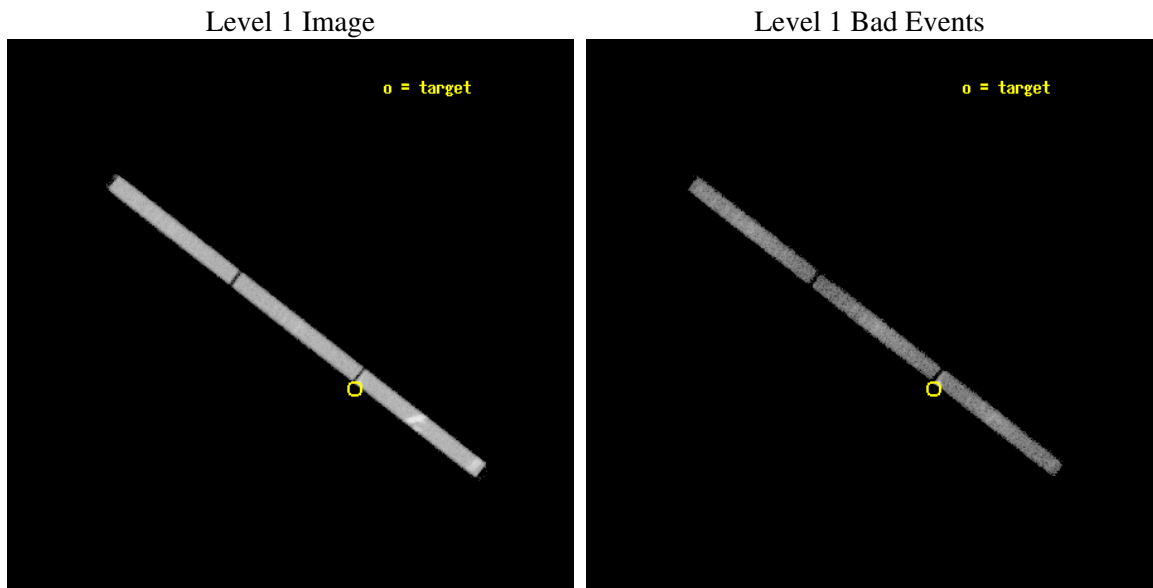
|          |                                                                                                        |
|----------|--------------------------------------------------------------------------------------------------------|
| seq_num  | 290076                                                                                                 |
| obs_id   | 995                                                                                                    |
| title    | CALIBRATION OBSERVATIONS OF VEGA TO MONITOR THE TRANSMISSION OF THE OPTICAL/UV FILTERS ON ACIS AND HRC |
| observer | Dr. CXC Calibration                                                                                    |
| object   | VEGA, HRC-S, AO2                                                                                       |
| ra_targ  | 279.234792                                                                                             |
| dec_targ | 38.783778                                                                                              |
| ra_nom   | 279.53854962686                                                                                        |
| dec_nom  | 39.029764773753                                                                                        |
| roll_nom | 37.657316946064                                                                                        |
| revision | 4                                                                                                      |
| ontime   | 2694.9813537896                                                                                        |
| livetime | 2679.4624913396                                                                                        |
| l2events | 118190                                                                                                 |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.9               |
| caldbver | 3.2.3               |
| date     | 2006-11-06T11:39:15 |
| revision | 3                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 2500.000000     |
| ontime         | 2696.0063538253 |
| l1events       | 196426          |

### 2.1.3 Events

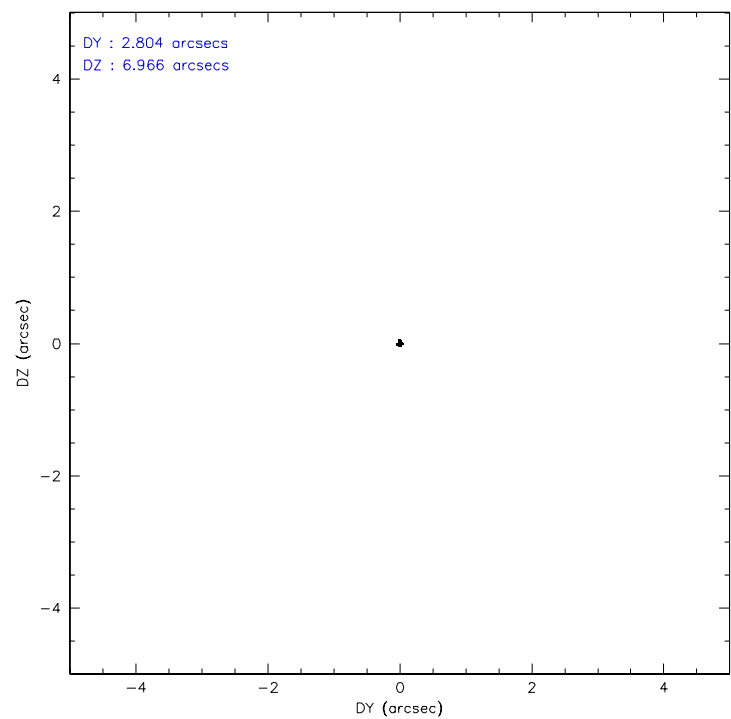
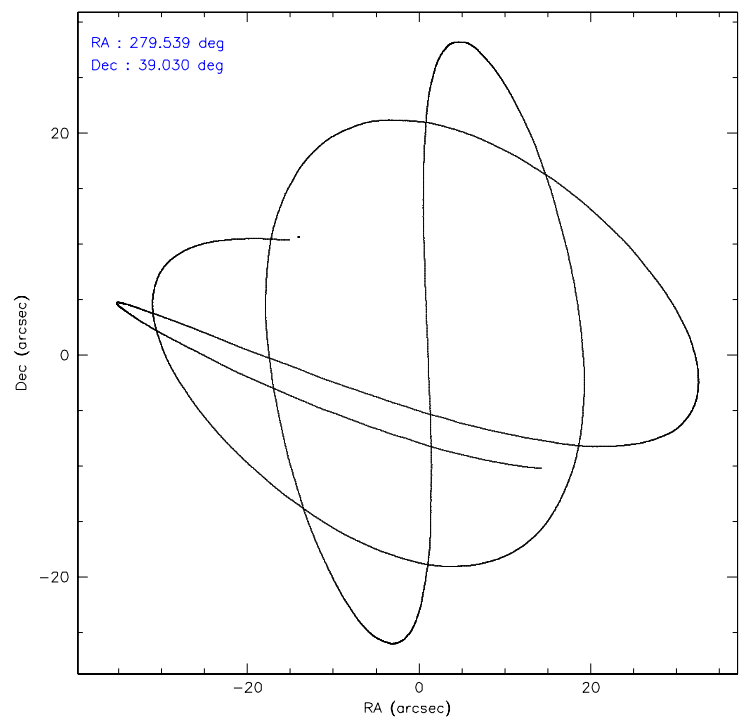
Level 1 Events

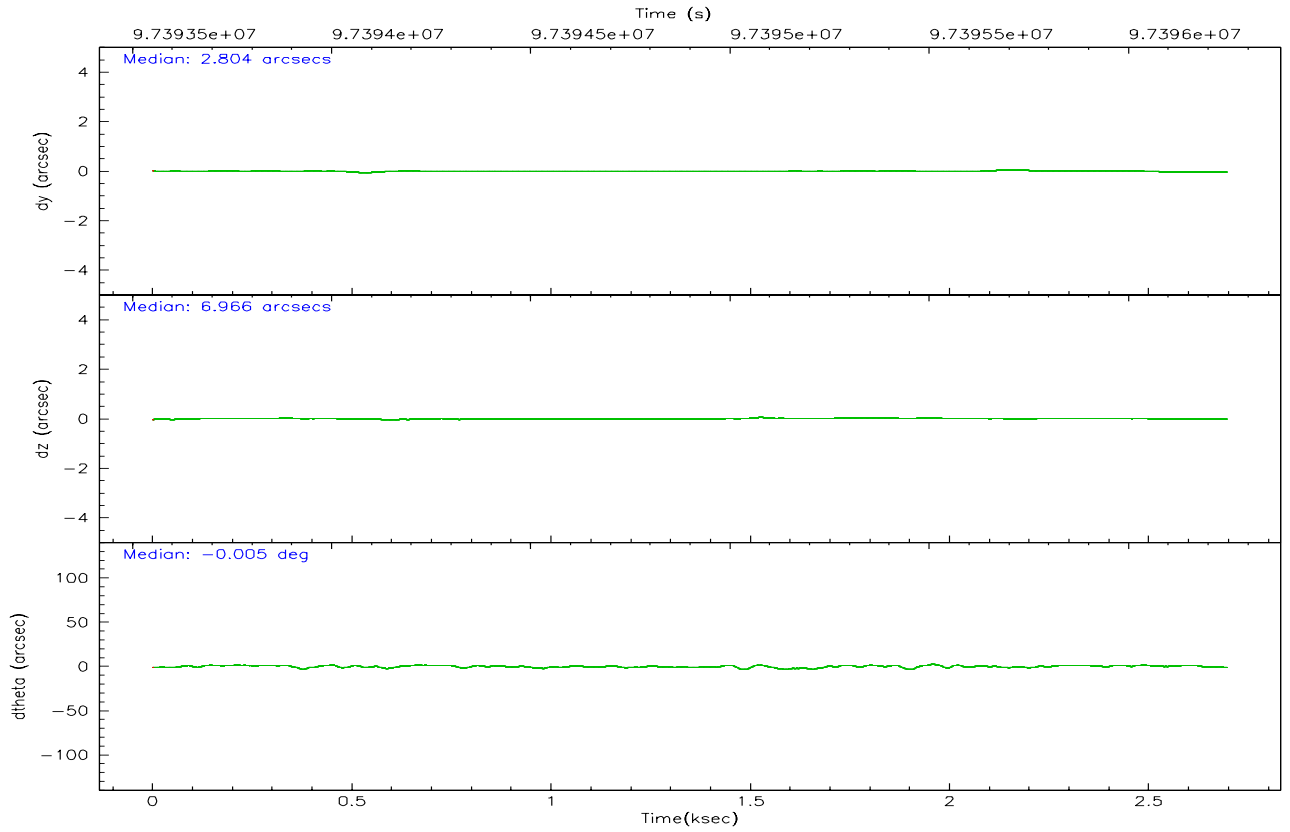
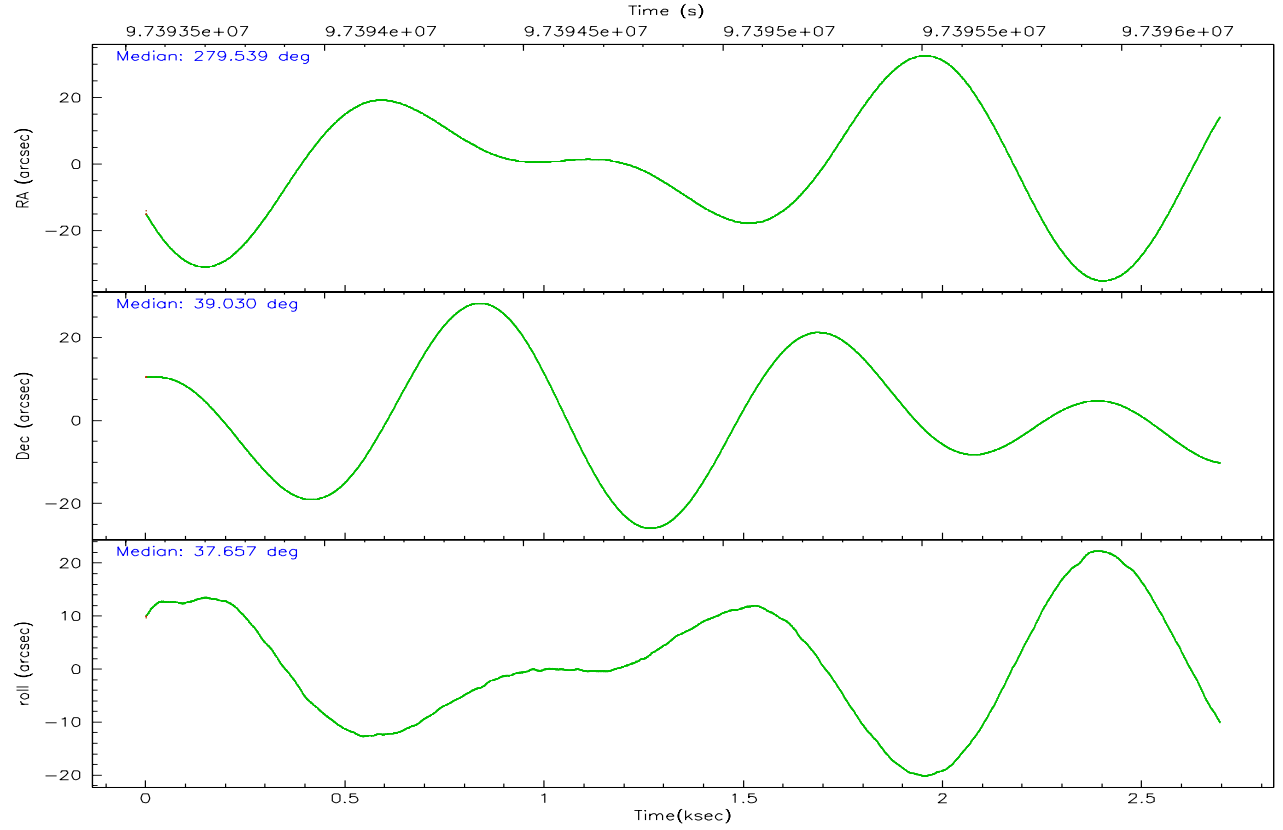
|                    | <b>segment<br/>1</b> | <b>segment<br/>2</b> | <b>segment<br/>3</b> |
|--------------------|----------------------|----------------------|----------------------|
| level 1<br>events  | 75960                | 58626                | 61840                |
| rejected<br>events | 21996                | 19506                | 21958                |
| rejected<br>%      | 28%                  | 33%                  | 35%                  |

## 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                           | NONE                | NONE                 | Obspar update status         | NONE      | UPDATED |
| Data mode                         | OBSERVING           | OBSERVING            |                              |           |         |
| Observation mode                  | POINTING            | POINTING             |                              |           |         |
| Pointing RA                       | 279.527085          | 279.538549626858     |                              |           |         |
| Pointing Dec                      | 39.002921           | 39.02976477375306    |                              |           |         |
| Pointing Roll                     | 37.597199           | 37.65731694606433    |                              |           |         |
| Window start time                 | 97372864.184000     | 97372864.184000      |                              |           |         |
| Window stop time                  | 99705664.184000     | 99705664.184000      |                              |           |         |
| SIM focus pos (mm)                | -1.429586           | -1.428180813131781   |                              |           |         |
| SIM defocus (mm)                  | 0.1037507710433287  | 0.1051558262725154   |                              |           |         |
| SIM translation stage pos (mm)    | 250.455976          | 250.466033080201     |                              |           |         |
| SIM translation stage offset (mm) | 0                   | -0.01005468664627074 |                              |           |         |
| Observation start time            | 97393749.184000     | 97393373.42994399    |                              |           |         |
| Observation start date            | 2001-02-01T05:48:05 | 2001-02-01T05:42:53  |                              |           |         |
| Observation end time              | 97396249.184000     | 97396382.83005901    |                              |           |         |
| Observation end date              | 2001-02-01T06:29:45 | 2001-02-01T06:33:02  |                              |           |         |

## 2.3 Aspect





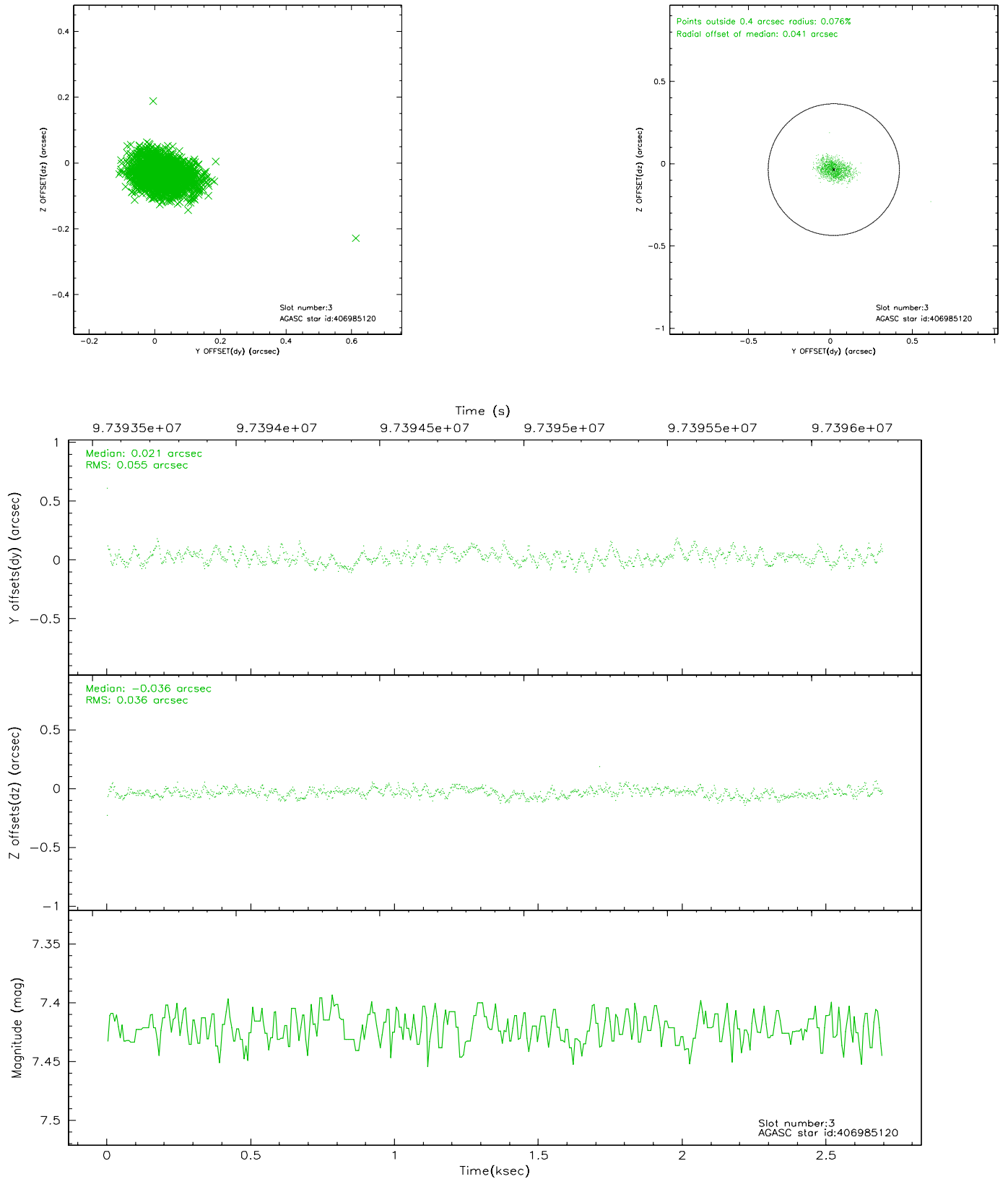
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z  |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|---------|
| 0    | FID    | HRC-S-1   | 6.97 | 658   | 0.103  | -0.087 | 0.006 | 0.010 | 0.000000   | 0.000000  | -1156.85 | -455.51 |
| 1    | FID    | HRC-S-3   | 7.00 | 658   | 0.152  | -0.121 | 0.007 | 0.013 | 0.000000   | 0.000000  | -1161.31 | 573.29  |
| 2    | FID    | HRC-S-4   | 6.93 | 658   | 0.133  | -0.089 | 0.005 | 0.009 | 0.000000   | 0.000000  | 1239.64  | 577.51  |
| 3    | GUIDE  | 406985120 | 7.42 | 1316  | 0.021  | -0.036 | 0.069 | 0.111 | 278.839732 | 38.894839 | -1756.18 | 870.76  |
| 4    | GUIDE  | 407513096 | 8.14 | 1316  | -0.171 | -0.080 | 0.052 | 0.082 | 279.928965 | 39.436841 | 1841.05  | 556.88  |
| 5    | GUIDE  | 406989616 | 8.22 | 1316  | 0.083  | 0.058  | 0.070 | 0.110 | 279.202881 | 38.520843 | -1777.21 | -817.86 |
| 6    | GUIDE  | 407521232 | 8.64 | 1315  | 0.035  | -0.003 | 0.065 | 0.105 | 279.628883 | 39.431715 | 1167.53  | 1048.23 |
| 7    | GUIDE  | 406983600 | 8.92 | 1314  | 0.025  | 0.067  | 0.062 | 0.098 | 279.940957 | 39.020708 | 961.44   | -654.34 |

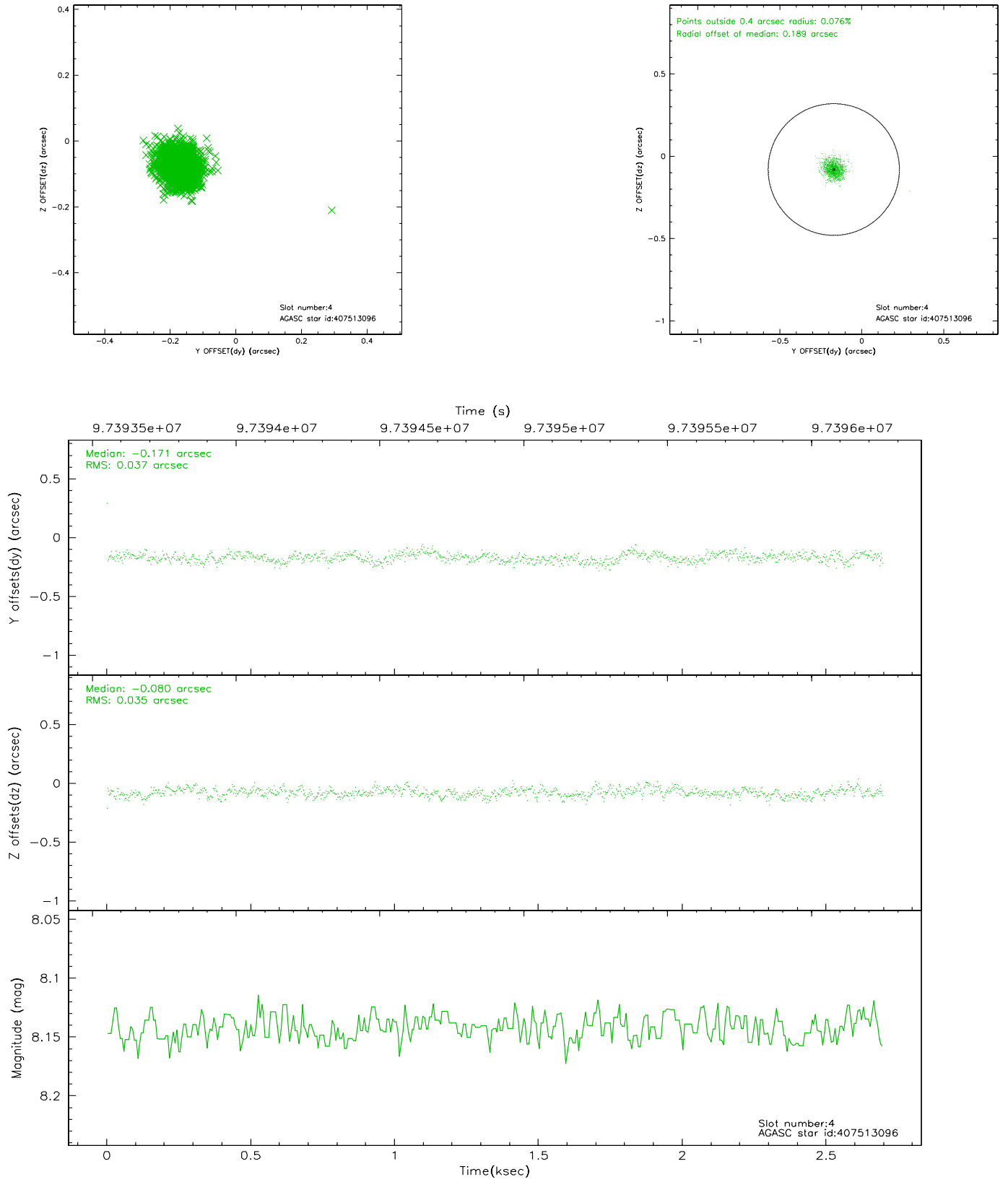


## 2.4 Star Slots

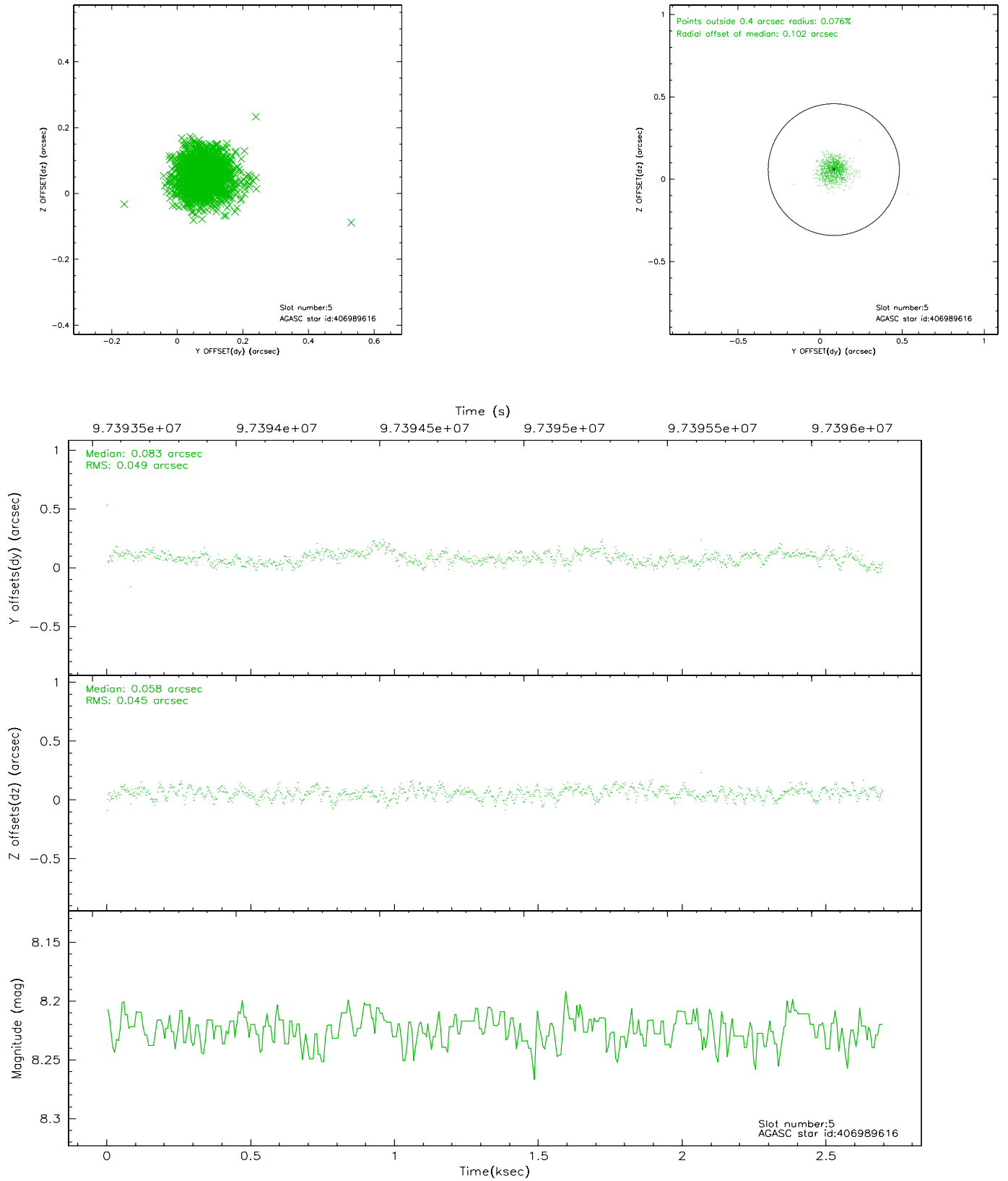
### 2.4.1 Slot 3



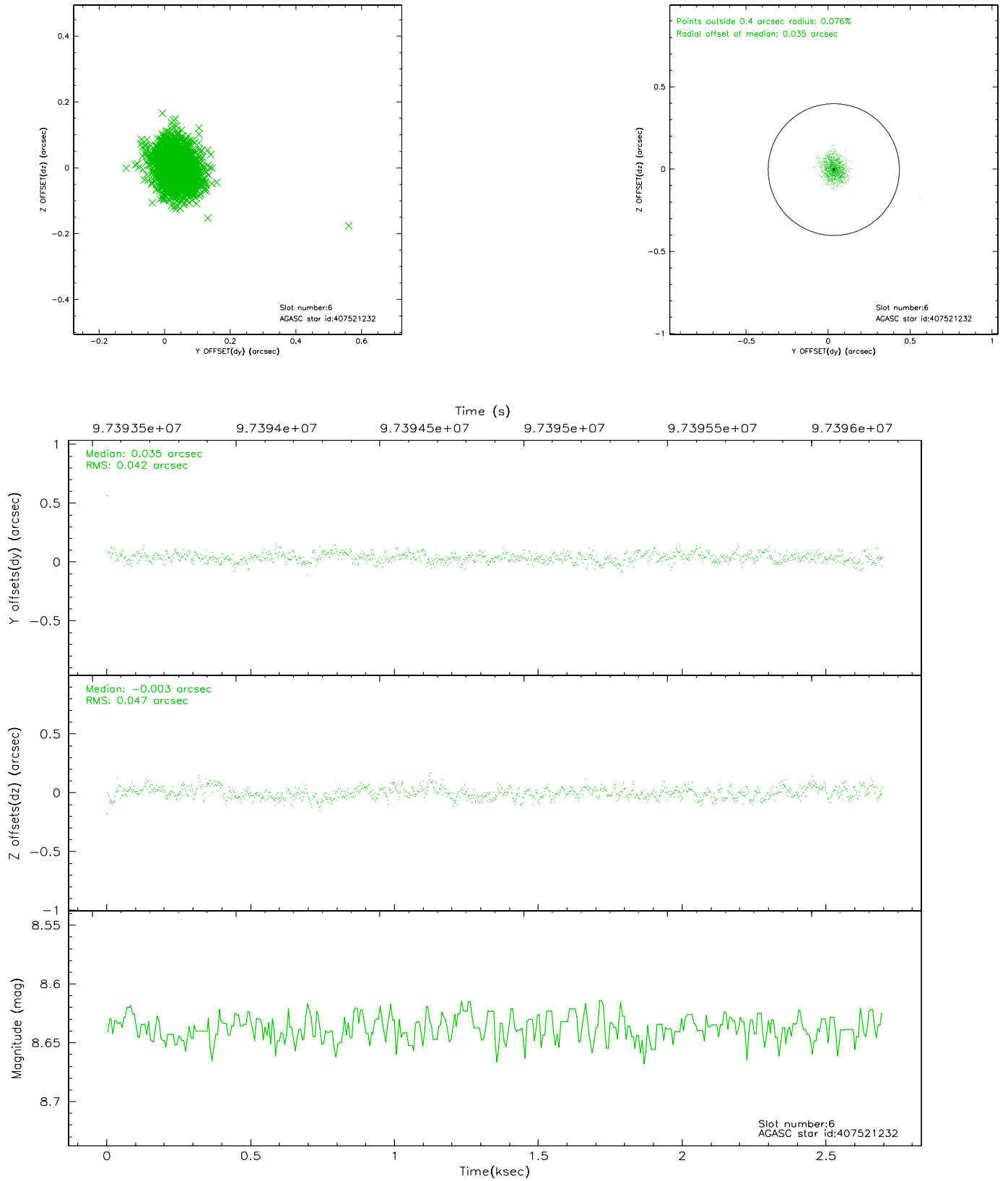
## 2.4.2 Slot 4



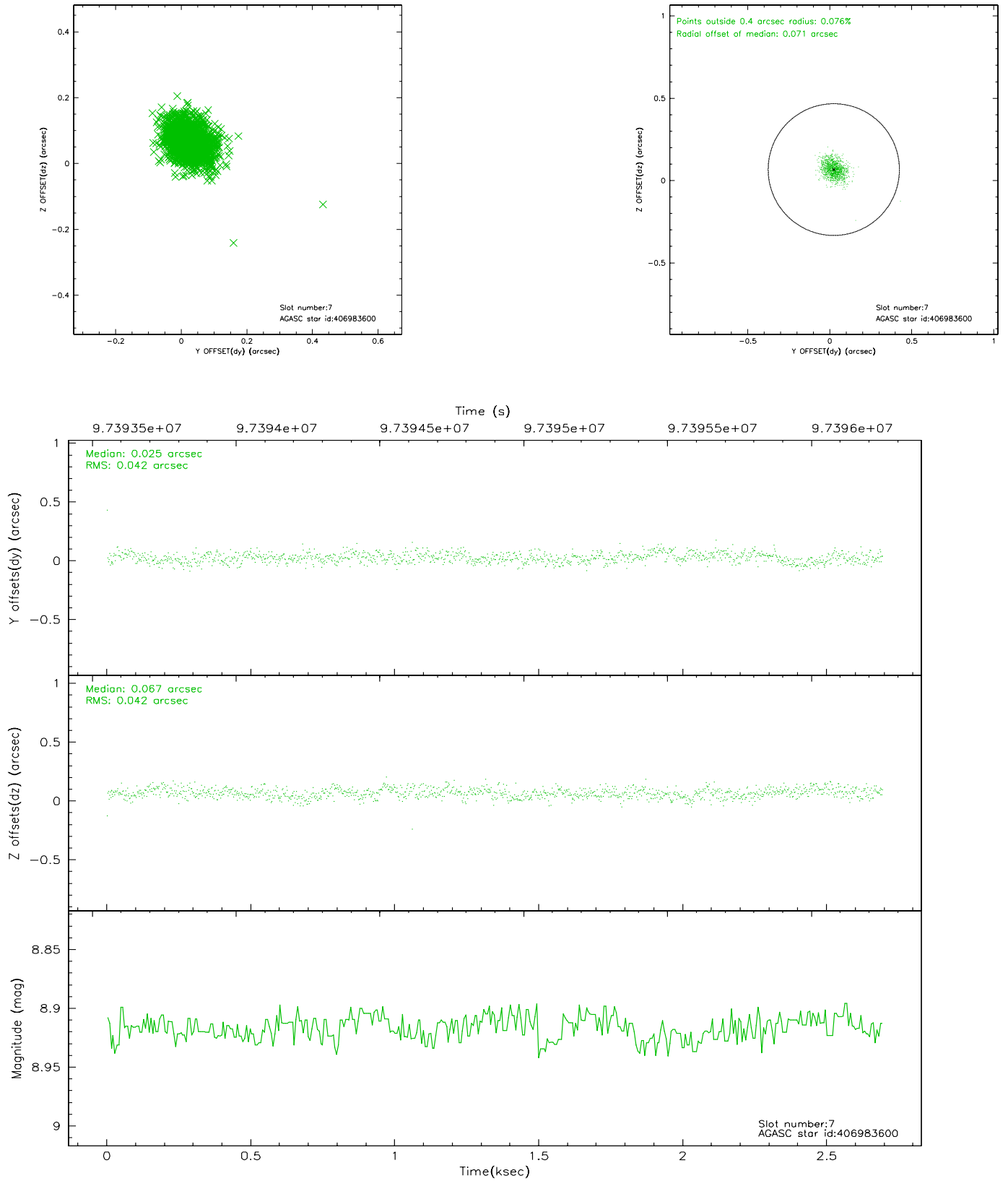
### 2.4.3 Slot 5



## 2.4.4 Slot 6

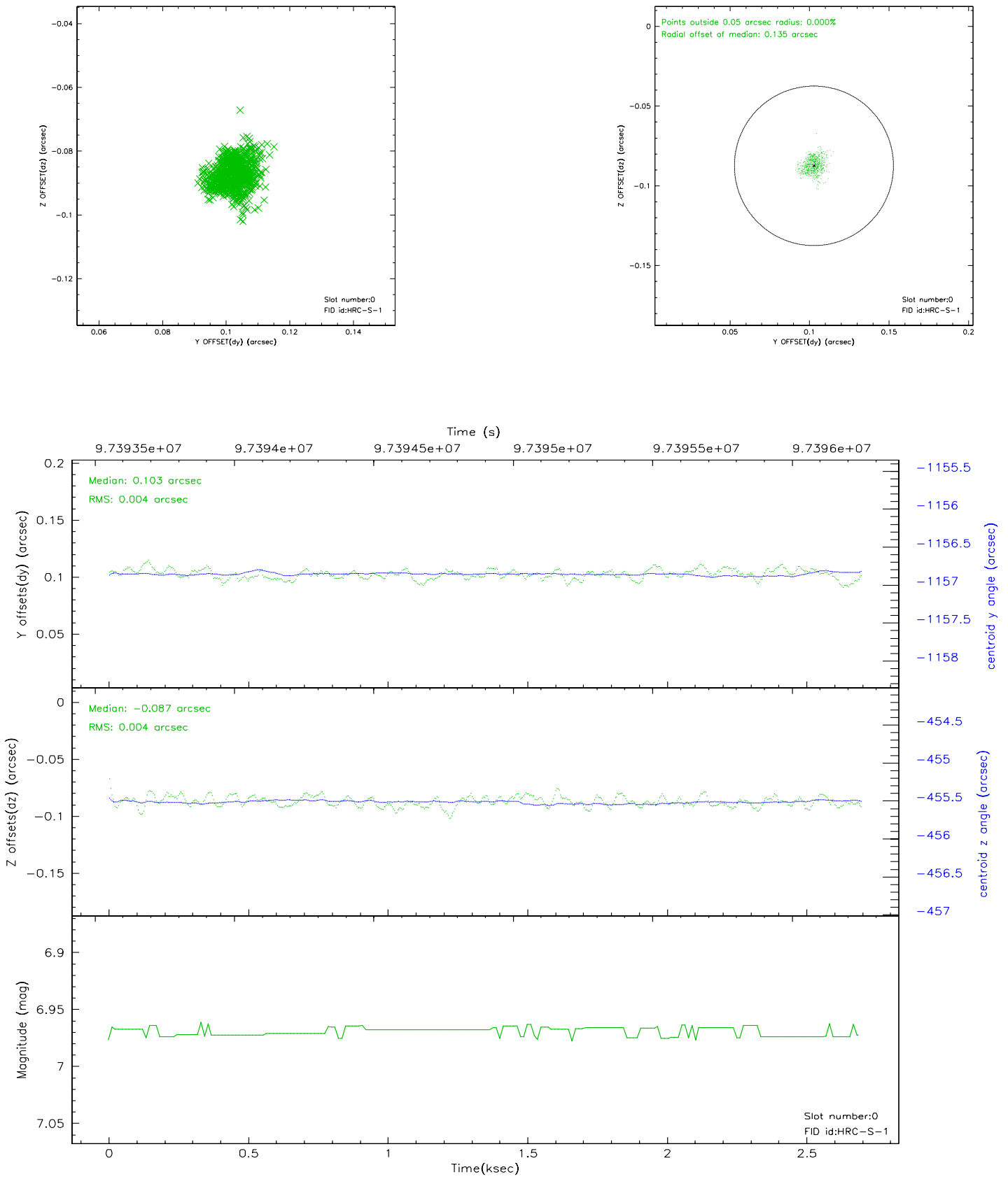


## 2.4.5 Slot 7

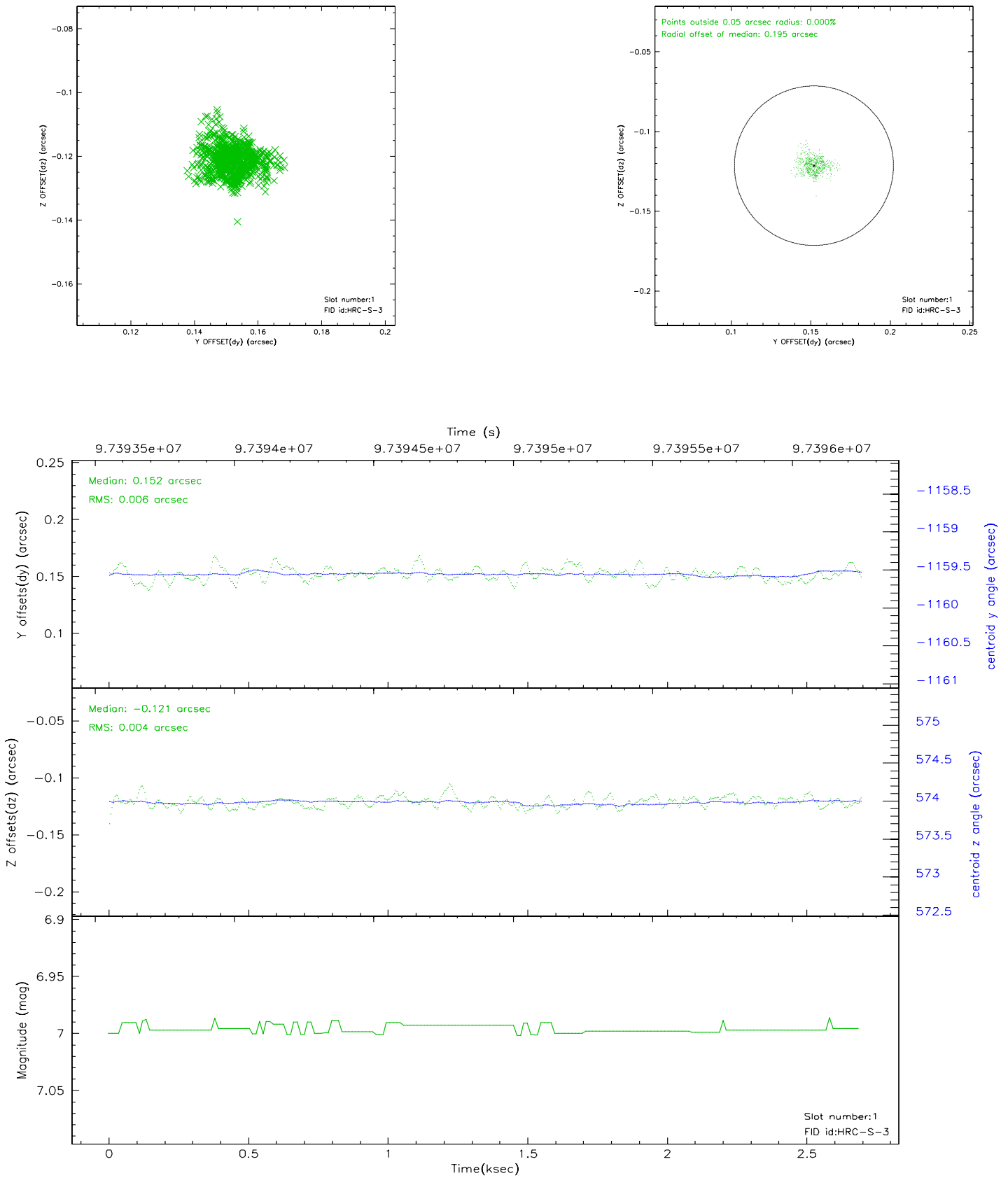


## 2.5 FID Slots

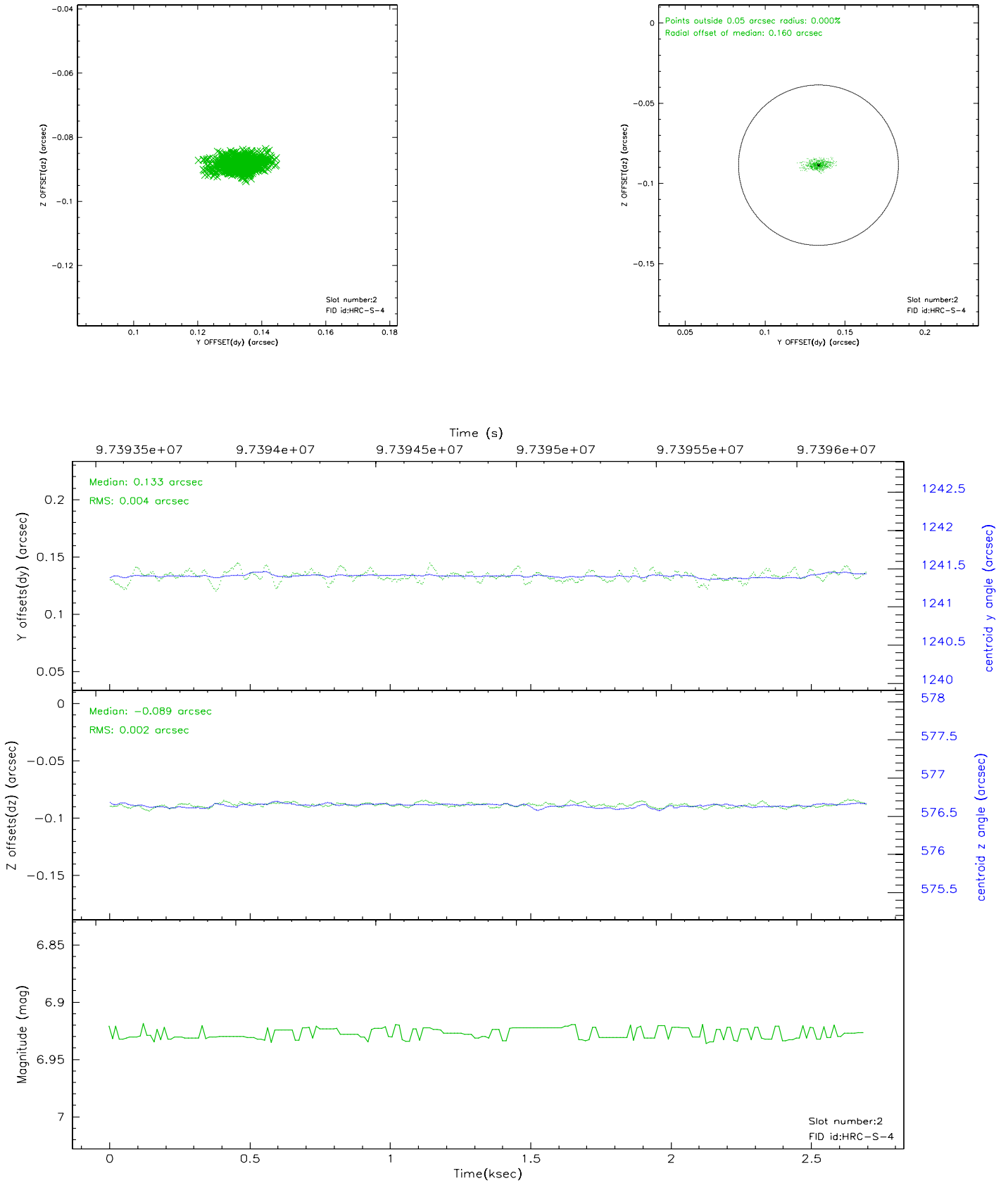
### 2.5.1 Slot 0



## 2.5.2 Slot 1

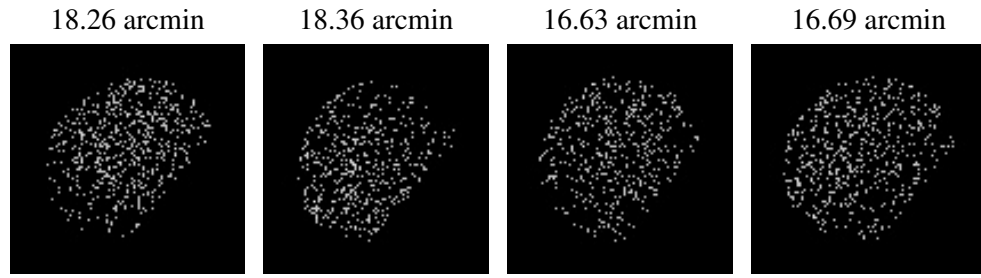


### 2.5.3 Slot 2





### 3 Point Sources



# A Summary

## A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.11.06 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 2.694      |

## A.2 Comments

Window constraint met.

The image is far off-axis and is therefore extended and distorted; additionally, internal reflections from the telescope fall onto the chip.