

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 1550 - L2 Version 3  
Chandra X-Ray Center

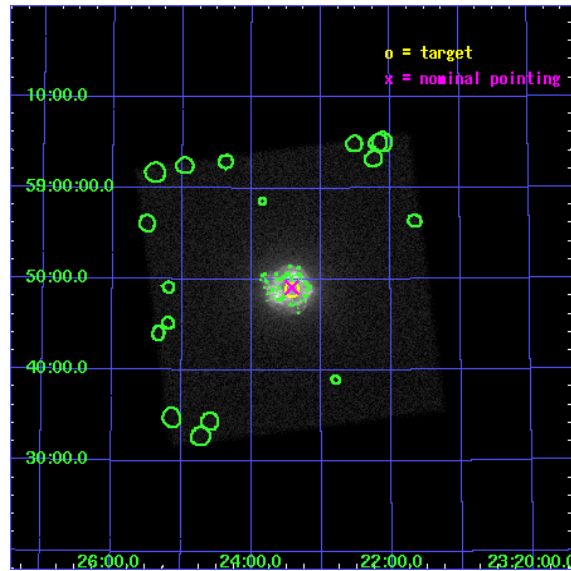
L2 Processing Date : Nov 20 2007

## 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

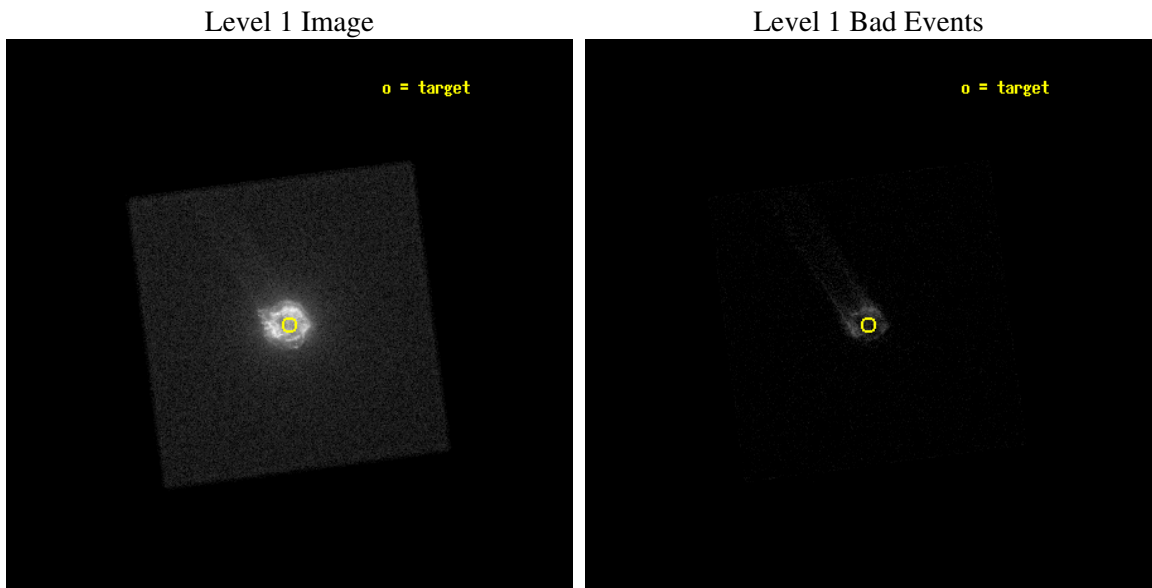
|          |   |
|----------|---|
| seq_num  | 590159  |
| obs_id   | 1550  |
| title    | CALIBRATION OBSERVATIONS OF THE STANDARD CANDLE CAS A |
| observer | Dr. CXC Calibration                                   |
| object   | CAS A [HRC-I, Offsets=0,0,0 HRC-I, AO2B]              |
| ra_targ  | 350.8575  |
| dec_targ | 58.814833   |
| ra_nom   | 350.85539093089                                       |
| dec_nom  | 58.818674511829                                       |
| roll_nom | 127.55904060675                                       |
| revision | 3   |
| ontime   | 4871.0564405471                                       |
| livetime | 4813.2168975871                                       |
| l2events | 561066  |



## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



### 2.1.2 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.11.2            |
| caldbver | 3.4.1               |
| date     | 2007-11-20T17:42:19 |
| revision | 3                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 5000.000000     |
| ontime         | 4871.0564405471 |
| l1events       | 706796          |

### 2.1.3 Events

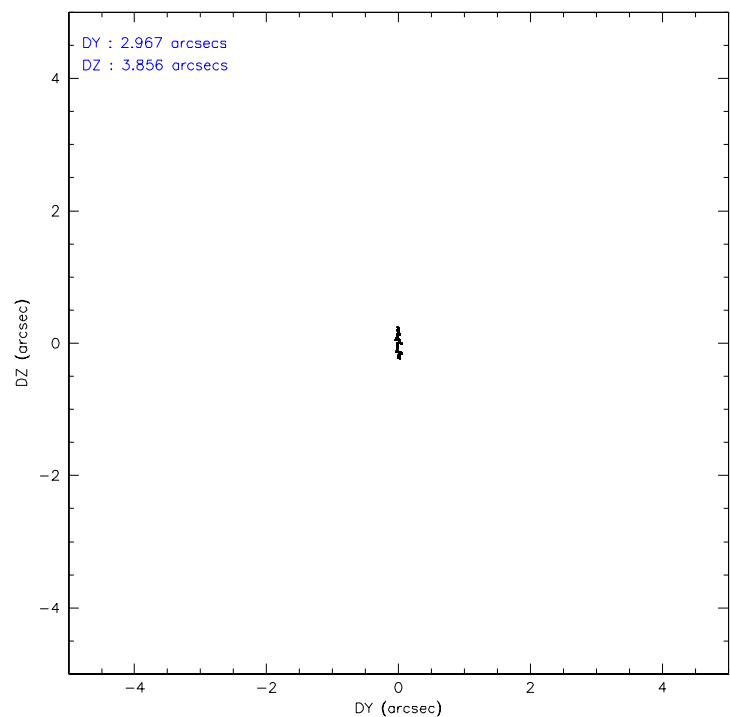
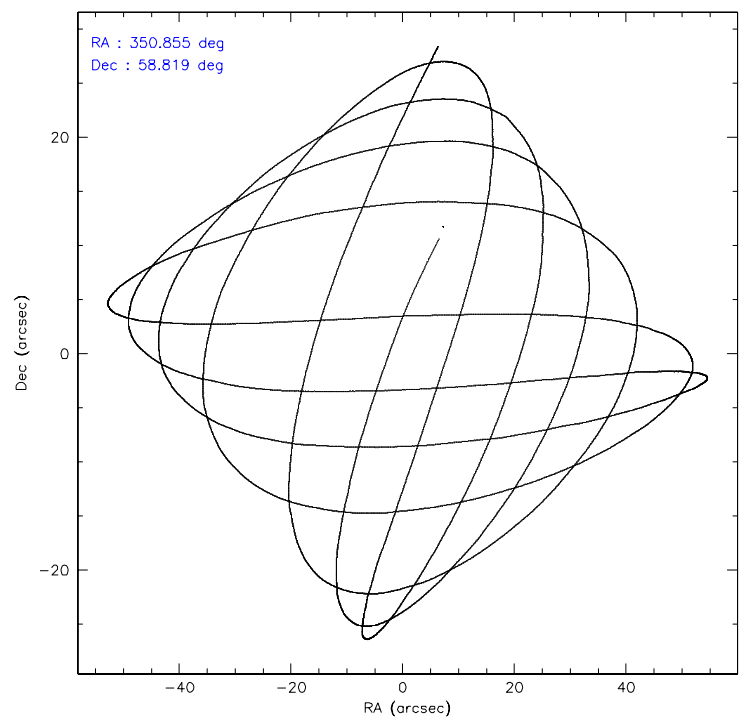
#### Level 1 Events

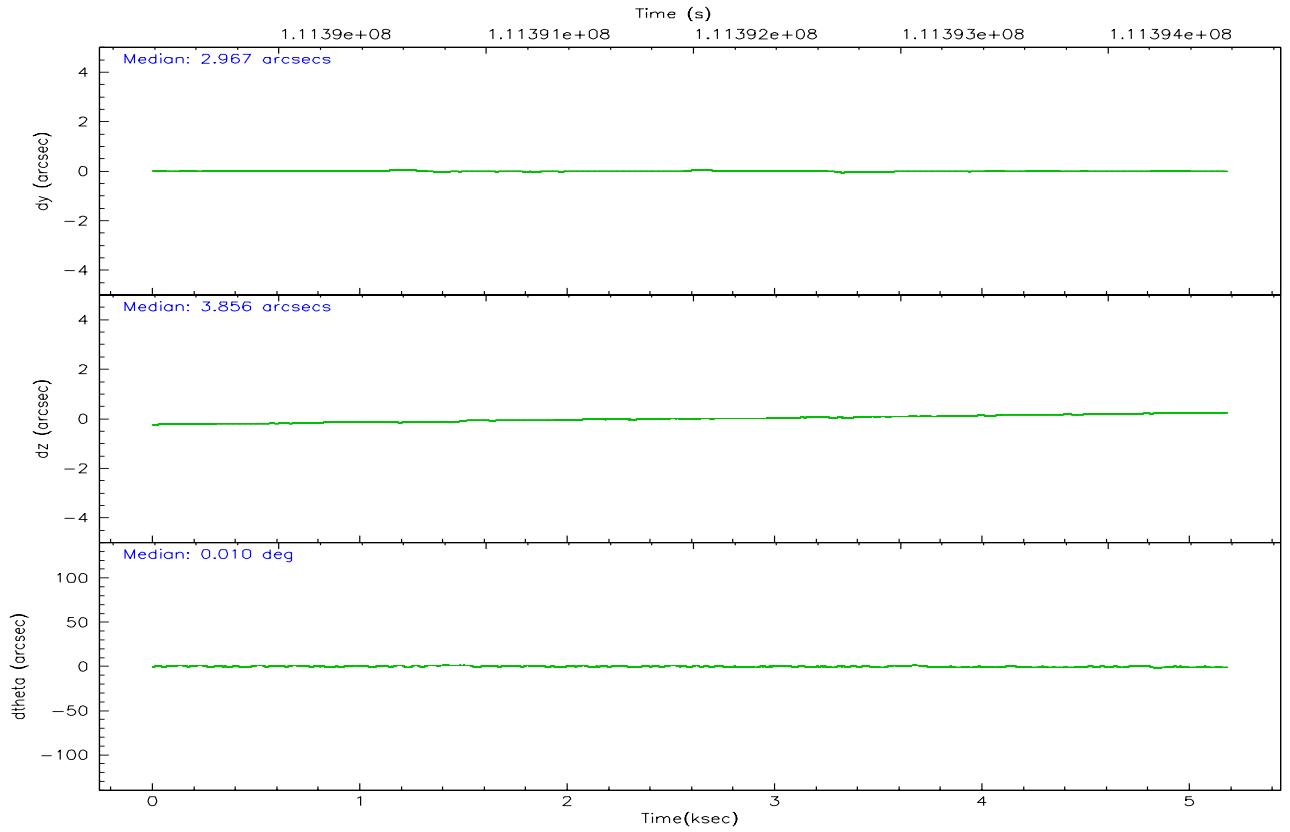
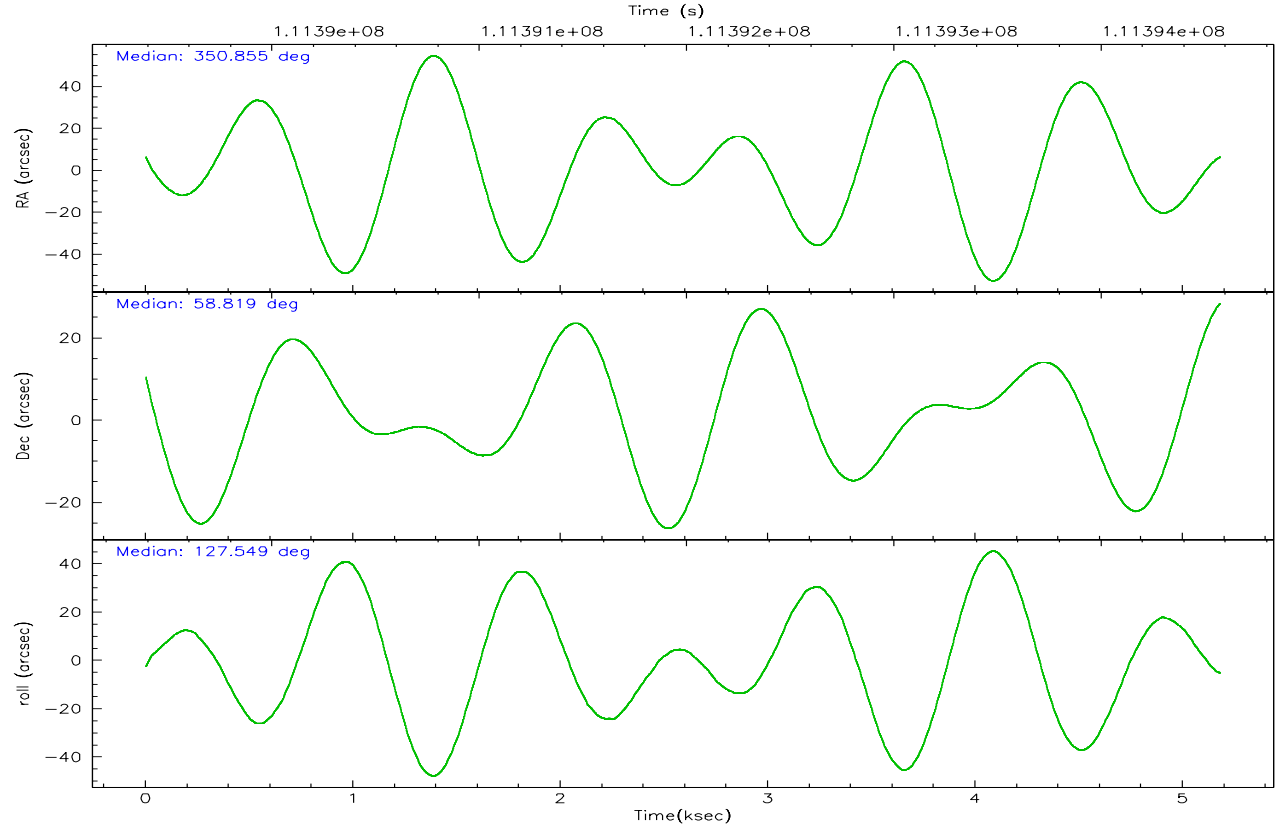
|                    |                      |
|--------------------|----------------------|
|                    | <b>segment<br/>0</b> |
| level 1<br>events  | 706796               |
| rejected<br>events | 42656                |
| rejected %         | 6%                   |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                    | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|------------------------------|-----------|---------|
| Instrument                        | HRC                 | HRC                  | Obspar format version number | 6         | 6       |
| Detector                          | HRC-I               | HRC-I                | Obspar file type             | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status         | NONE      | UPDATED |
| Data mode                         | OBSERVING           | OBSERVING            |                              |           |         |
| Observation mode                  | POINTING            | POINTING             |                              |           |         |
| Pointing RA                       | 350.904257          | 350.8553909308883    |                              |           |         |
| Pointing Dec                      | 58.809102           | 58.81867451182892    |                              |           |         |
| Pointing Roll                     | 127.612732          | 127.5590406067544    |                              |           |         |
| Window start time                 | 110332864.184000    | 110332864.184000     |                              |           |         |
| Window stop time                  | 112838464.184000    | 112838464.184000     |                              |           |         |
| SIM focus pos (mm)                | -1.040293           | -1.038866356238299   |                              |           |         |
| SIM defocus (mm)                  | 0                   | 0.001426264420575141 |                              |           |         |
| SIM translation stage pos (mm)    | 126.985494          | 126.9829799899862    |                              |           |         |
| SIM translation stage offset (mm) | 0                   | 0.002508901615314585 |                              |           |         |
| Observation start time            | 111389575.184000    | 111389163.18548      |                              |           |         |
| Observation start date            | 2001-07-13T05:31:51 | 2001-07-13T05:26:03  |                              |           |         |
| Observation end time              | 111394575.184000    | 111395263.47321      |                              |           |         |
| Observation end date              | 2001-07-13T06:55:11 | 2001-07-13T07:07:43  |                              |           |         |

## 2.3 Aspect





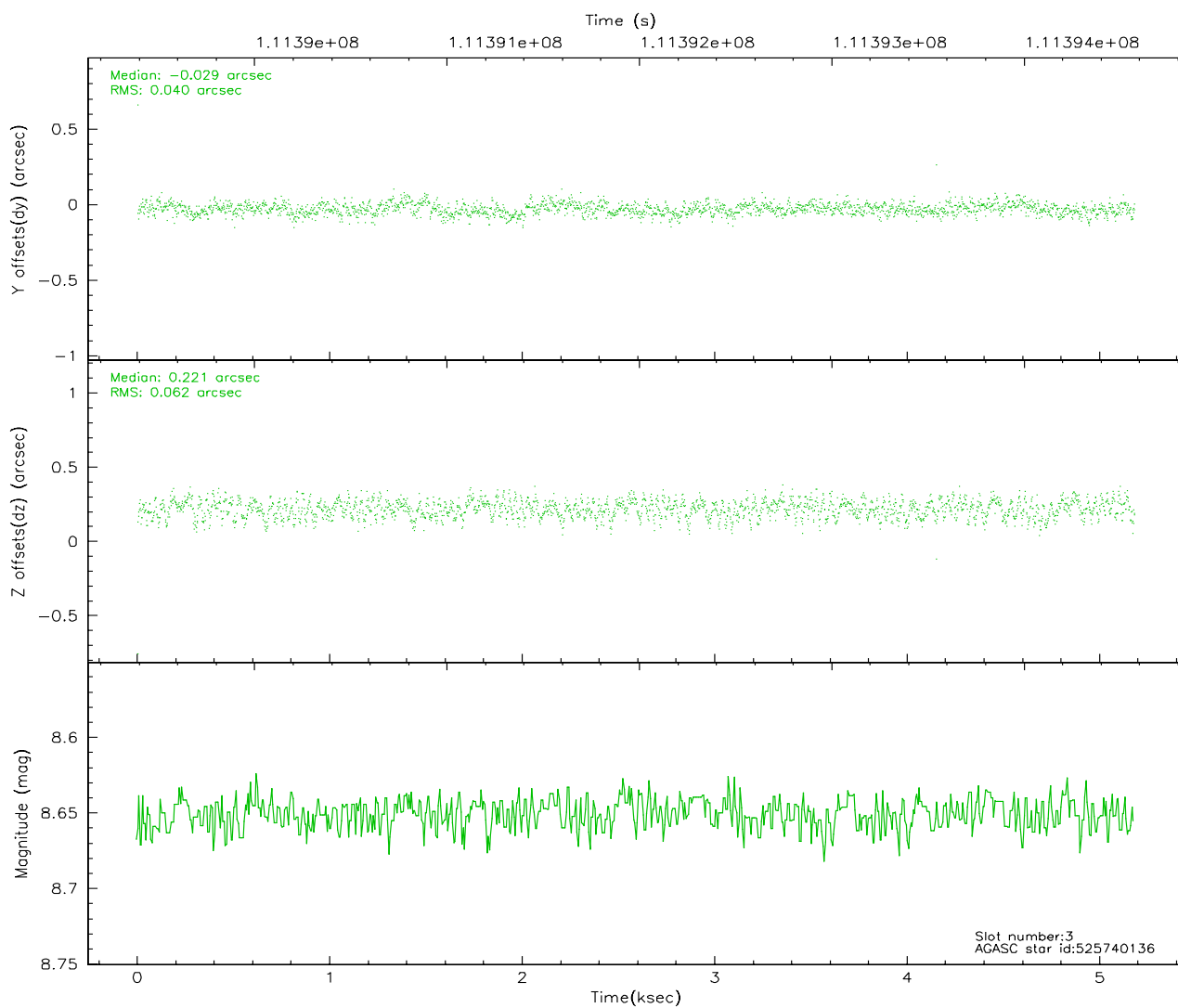
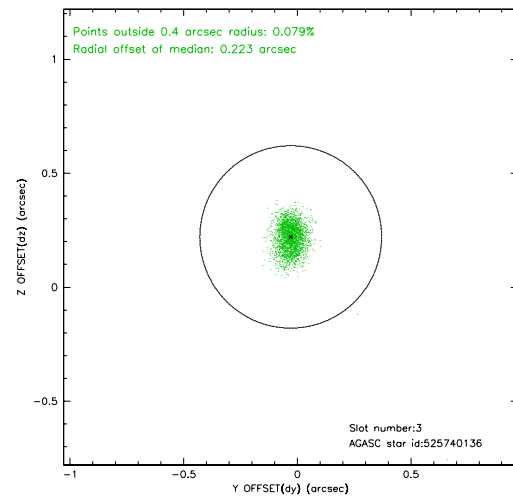
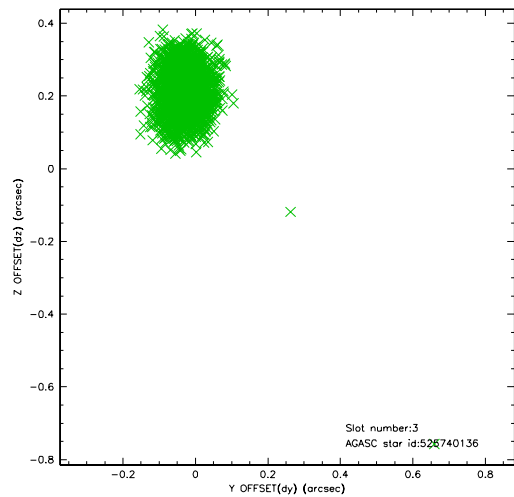
### Slot Statistics

| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | HRC-I-1   | 6.96 | 1264  | 0.063  | 0.059  | 0.008 | 0.014 | 0.000000   | 0.000000  | -758.42  | -1291.53 |
| 1    | FID    | HRC-I-3   | 7.04 | 1264  | 0.006  | -0.078 | 0.010 | 0.017 | 0.000000   | 0.000000  | -1187.50 | 1011.88  |
| 2    | FID    | HRC-I-4   | 6.99 | 1264  | 0.046  | -0.069 | 0.006 | 0.012 | 0.000000   | 0.000000  | 1283.48  | 1011.25  |
| 3    | GUIDE  | 525740136 | 8.65 | 2528  | -0.029 | 0.221  | 0.075 | 0.122 | 352.585881 | 58.767876 | -2001.10 | -2420.07 |
| 4    | GUIDE  | 525732488 | 8.42 | 2527  | -0.096 | -0.140 | 0.081 | 0.126 | 350.087090 | 58.516915 | 111.12   | 1852.02  |
| 5    | GUIDE  | 525735976 | 8.89 | 2527  | 0.054  | -0.320 | 0.089 | 0.139 | 350.142956 | 58.277622 | -629.47  | 2304.48  |
| 6    | GUIDE  | 525736400 | 9.07 | 2528  | 0.030  | 0.058  | 0.072 | 0.117 | 350.974563 | 59.175145 | 965.23   | -906.02  |
| 7    | GUIDE  | 525732528 | 9.36 | 2526  | 0.036  | 0.182  | 0.105 | 0.165 | 351.607241 | 59.298932 | 615.01   | -2104.11 |

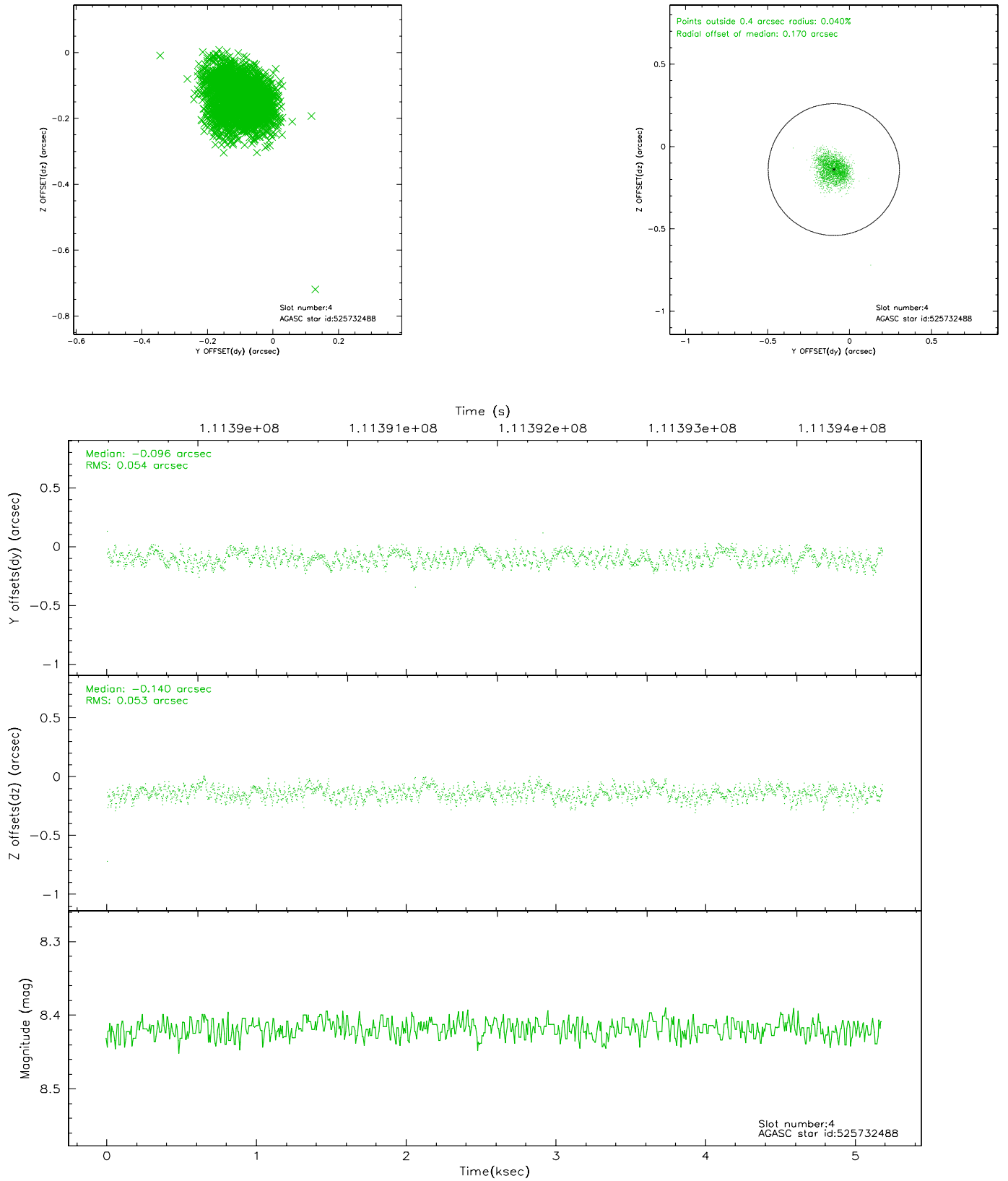


## 2.4 Star Slots

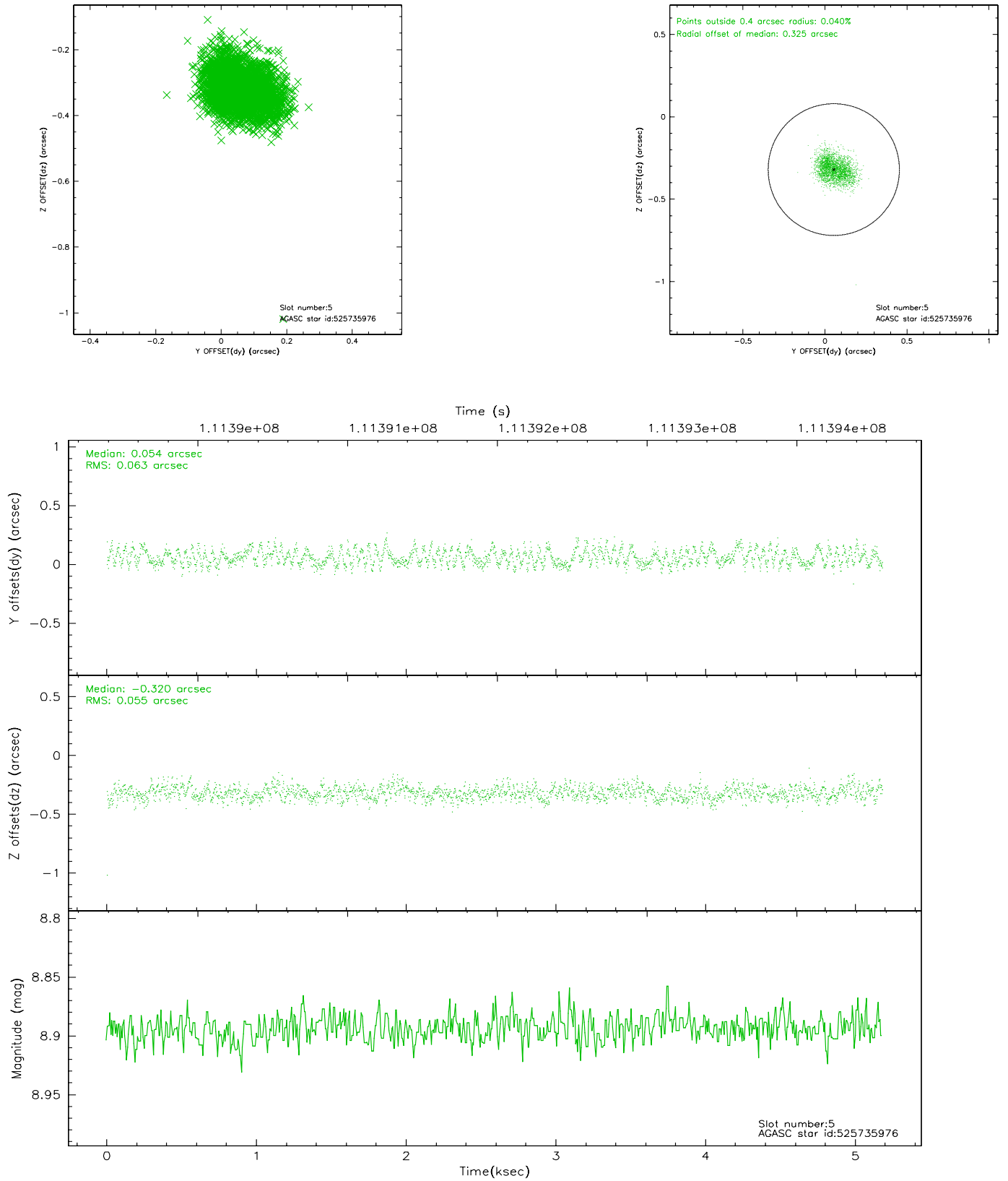
### 2.4.1 Slot 3



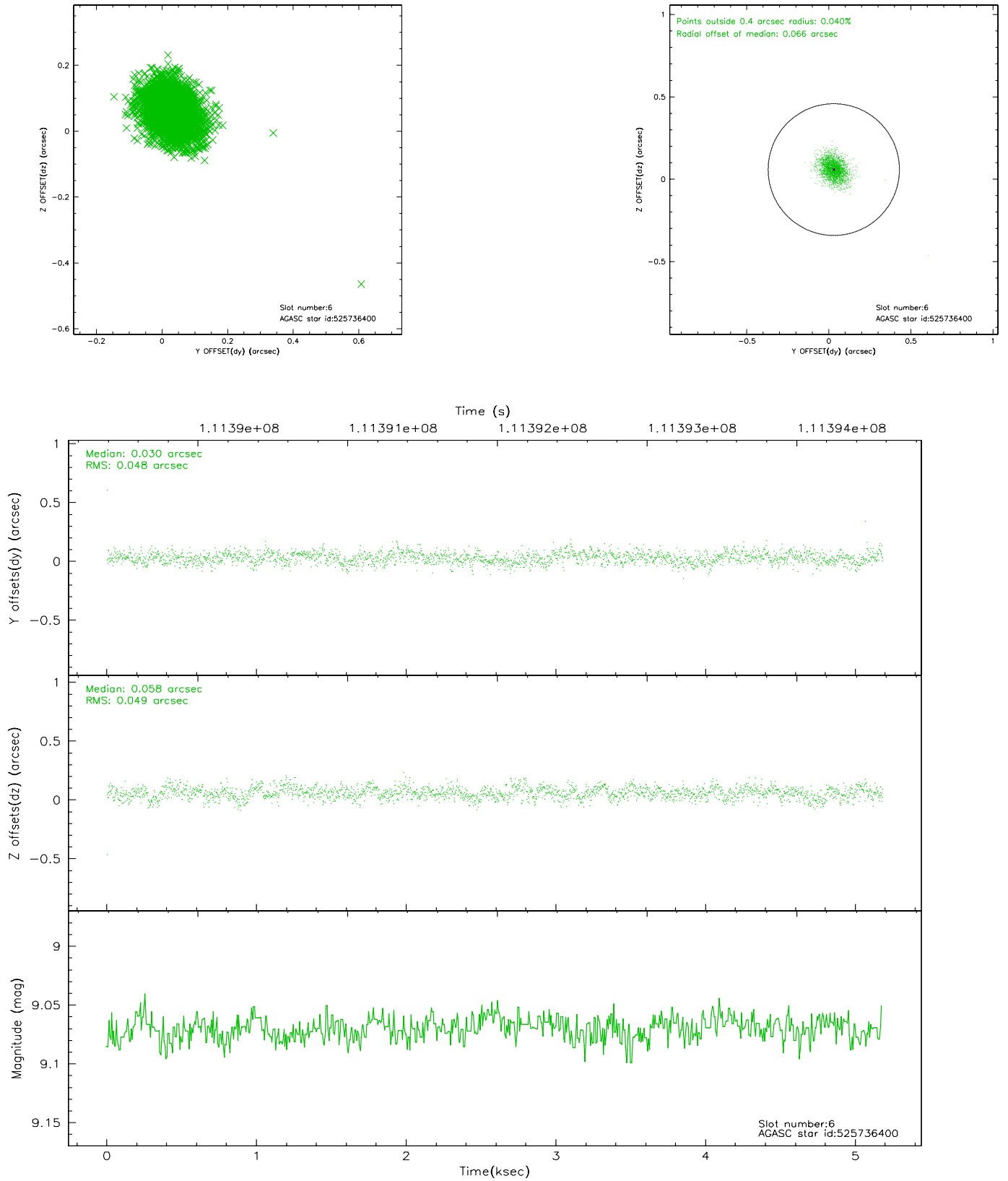
## 2.4.2 Slot 4



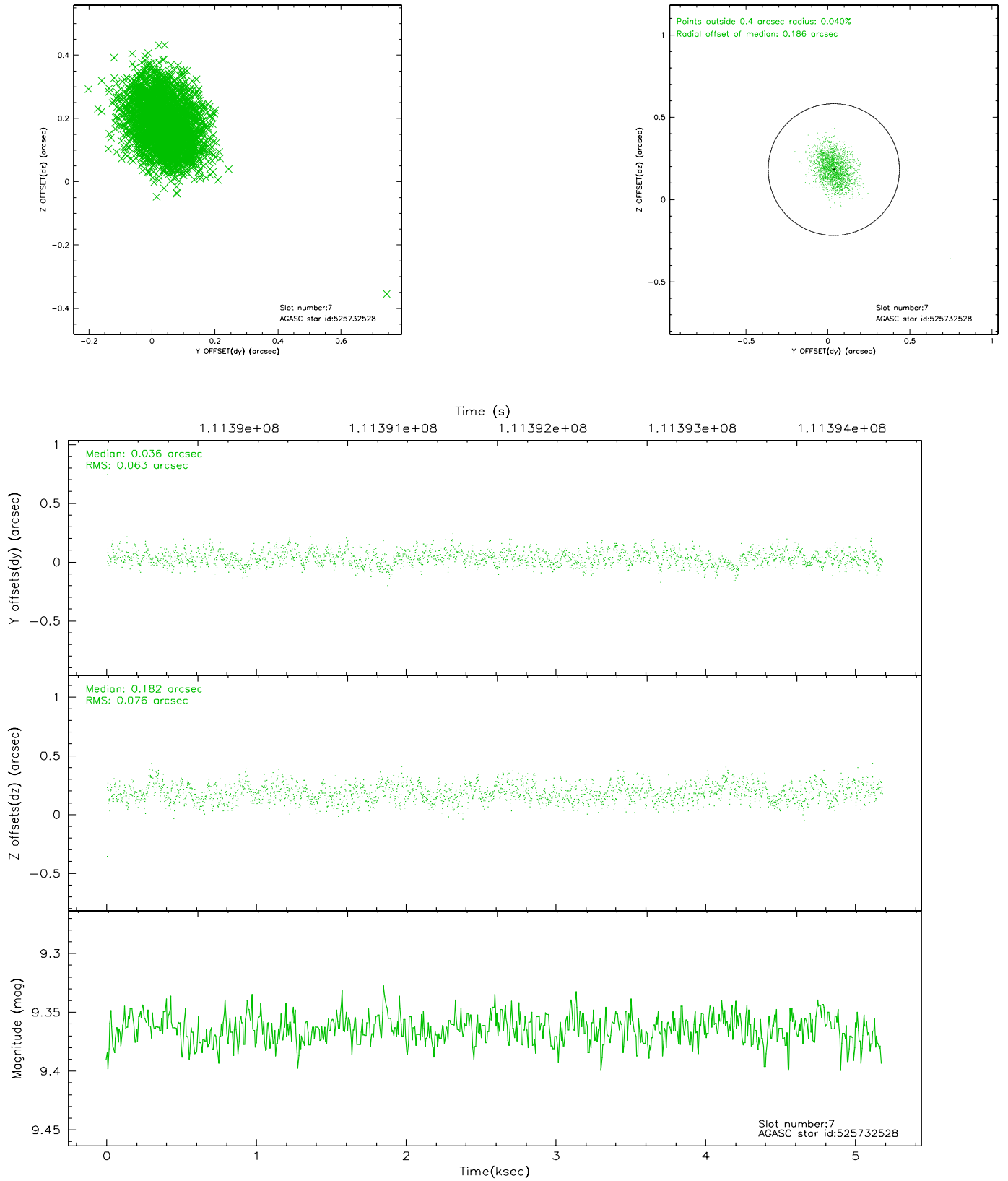
### 2.4.3 Slot 5



## 2.4.4 Slot 6

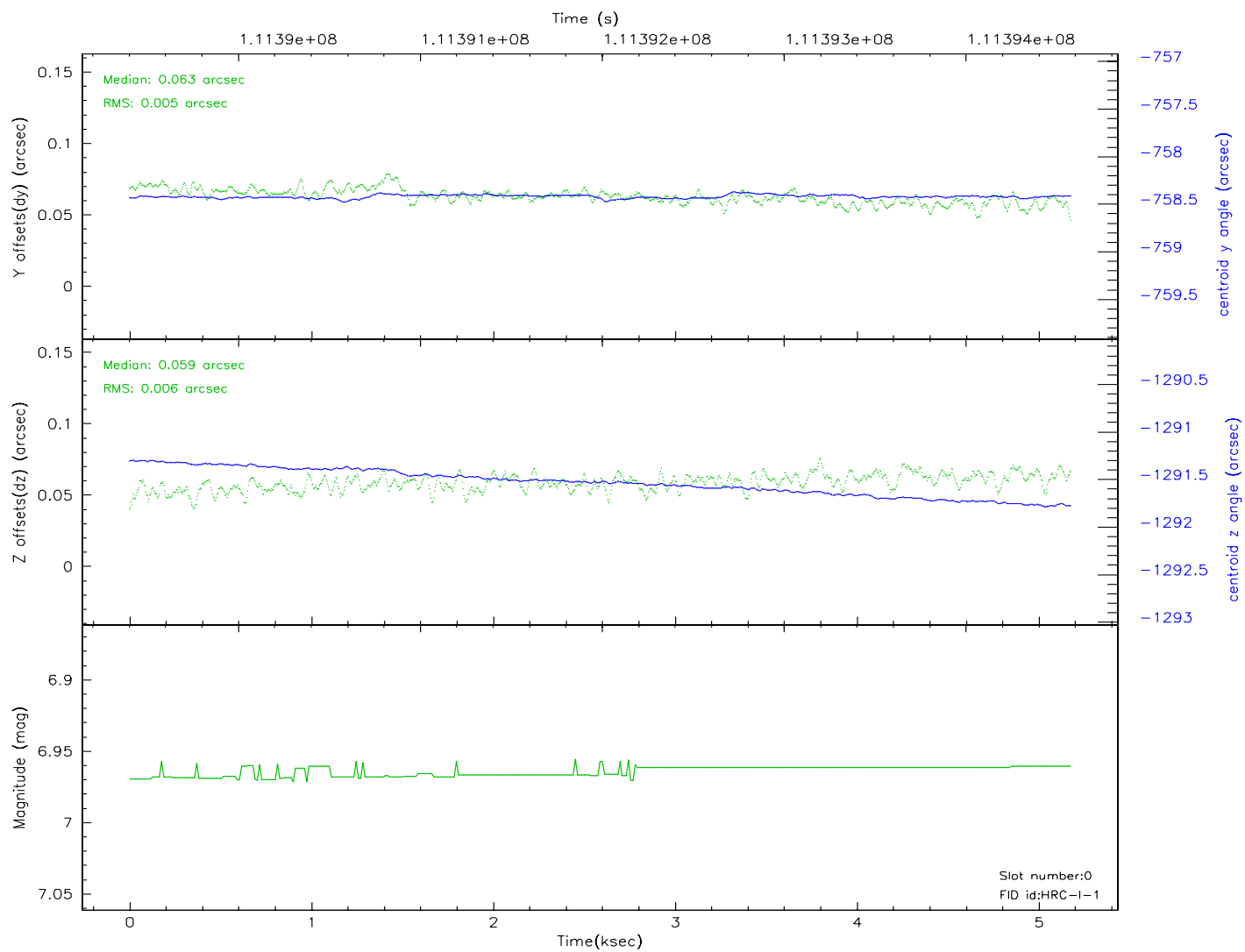
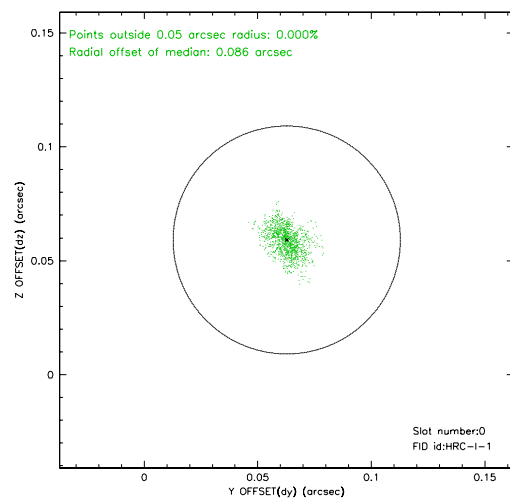
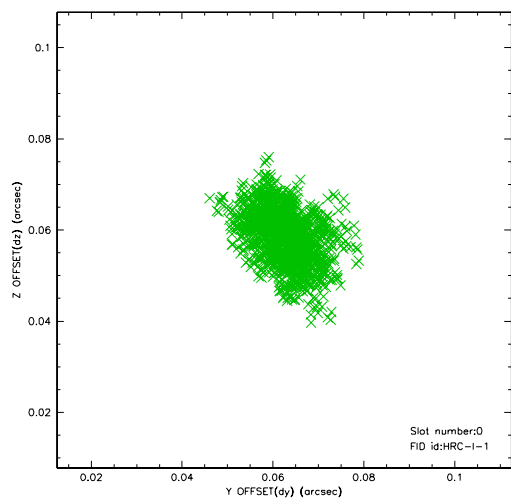


## 2.4.5 Slot 7

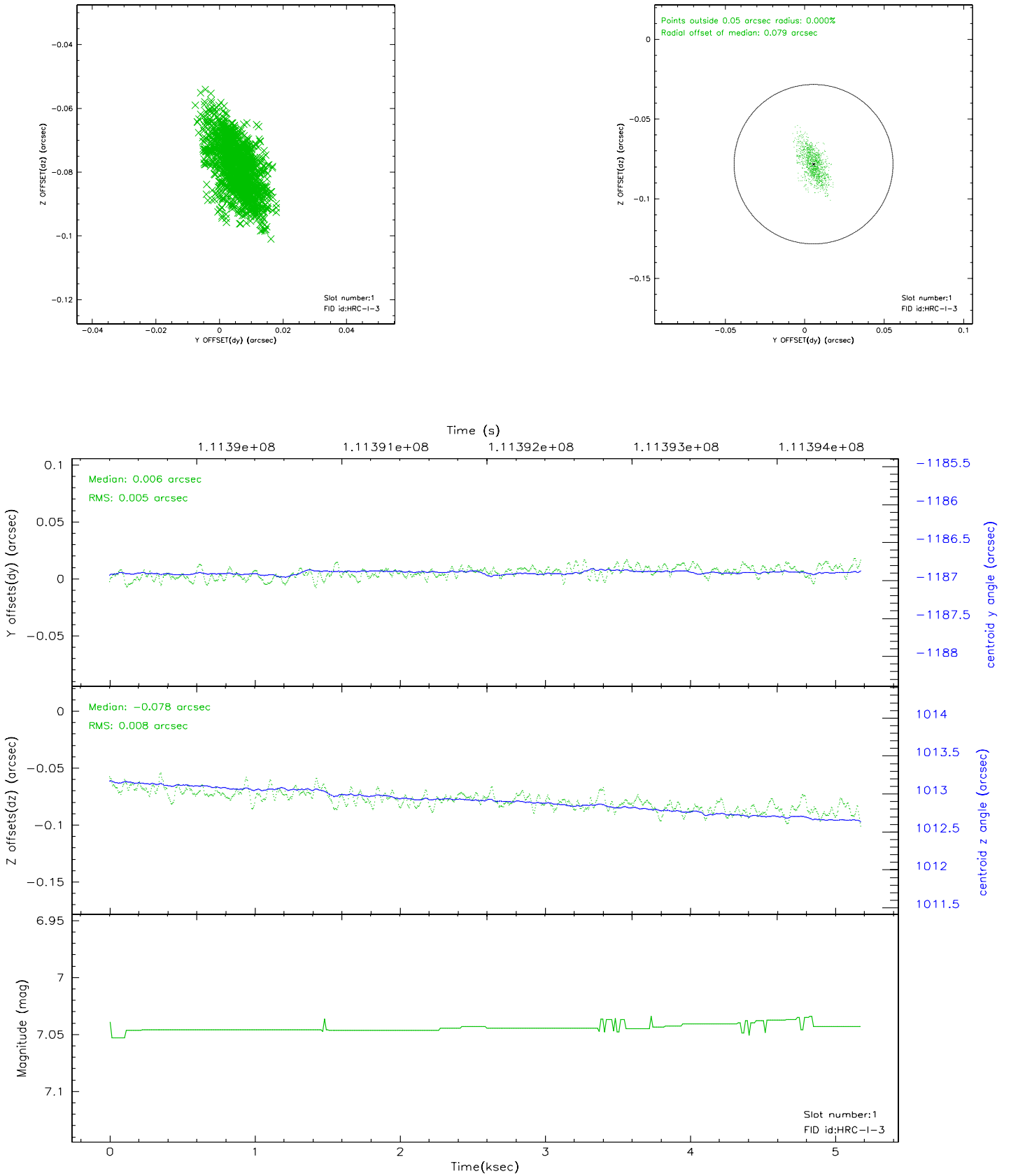


## 2.5 FID Slots

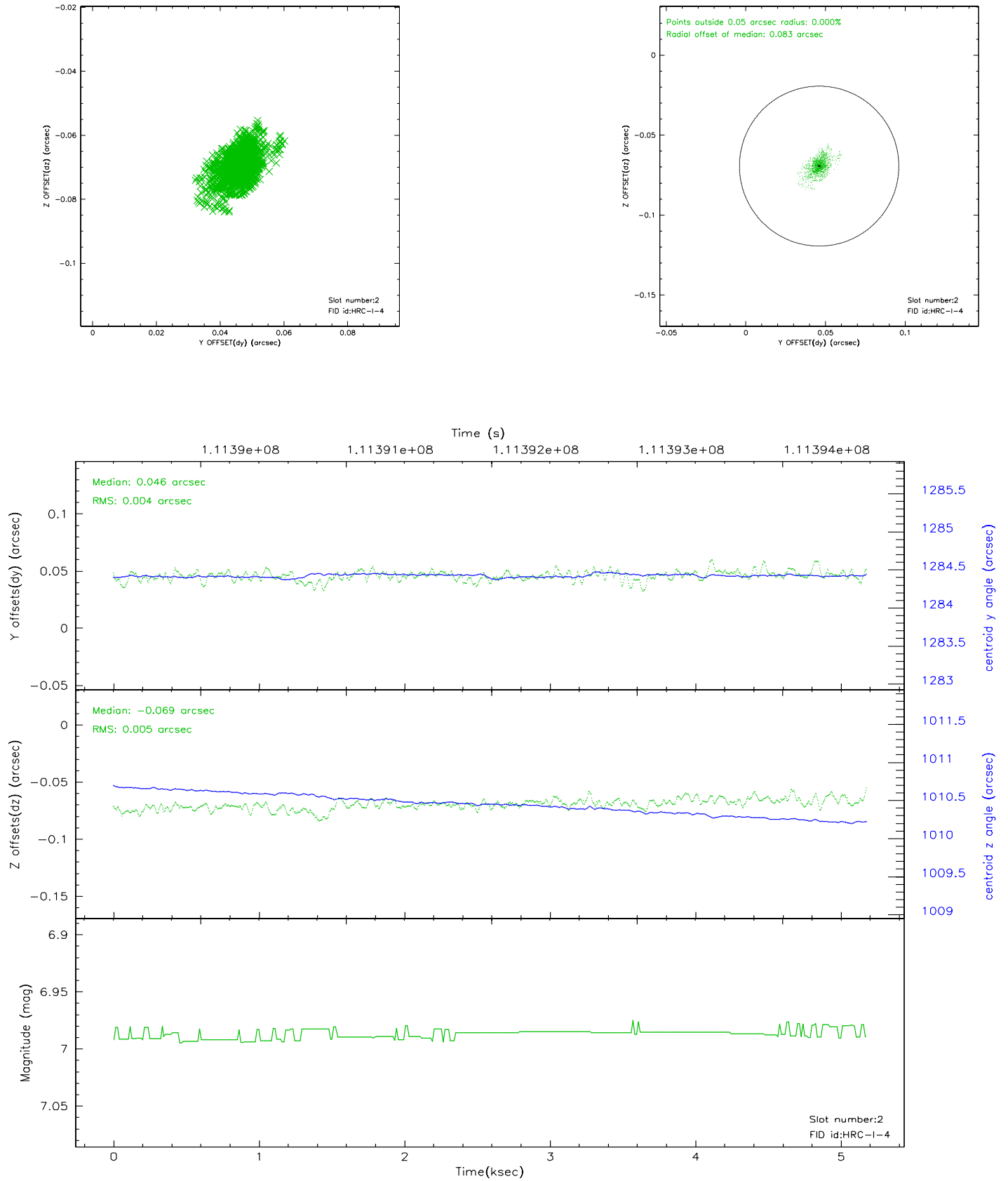
### 2.5.1 Slot 0



## 2.5.2 Slot 1

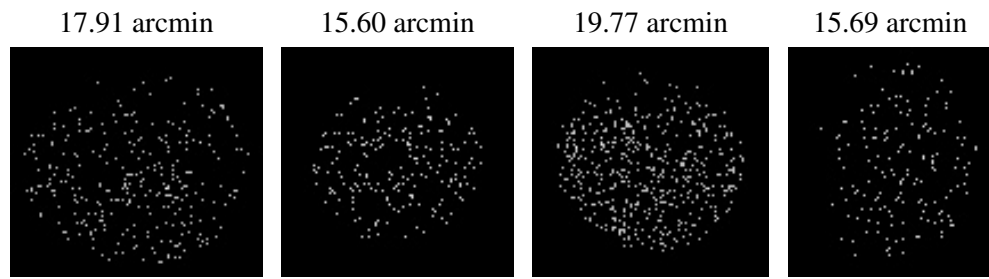


### 2.5.3 Slot 2





### 3 Point Sources



# A Summary

## A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2007.12.03 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 4.871      |

## A.2 Comments

Window constraint met.

The current observation has been reprocessed as part of Repro III ('C' supplement) the purpose of which is to update all HRC-I ObsIDs since Jan 2000 to the latest calibrations available for that configuration. Specifically, we are updating the DEGAP solution and the Gain Maps applied. For more information see the Repro IIIC web page at

<http://asc.harvard.edu/cda/repro3.html#IIIC>

and the associated links.