

# V&V Reference Report

## L2 ASCDS Version : 7.6.9

Observation 2788 - L2 Version 001  
Chandra X-Ray Center

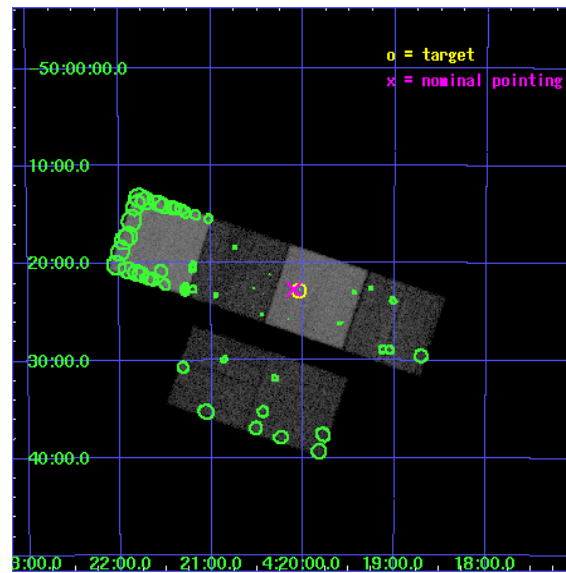
L2 Processing Date : Oct 9 2006

## 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    | Bias . . . . .                | 3         |
| 2.1.3    | Parameters . . . . .          | 4         |
| 2.1.4    | 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

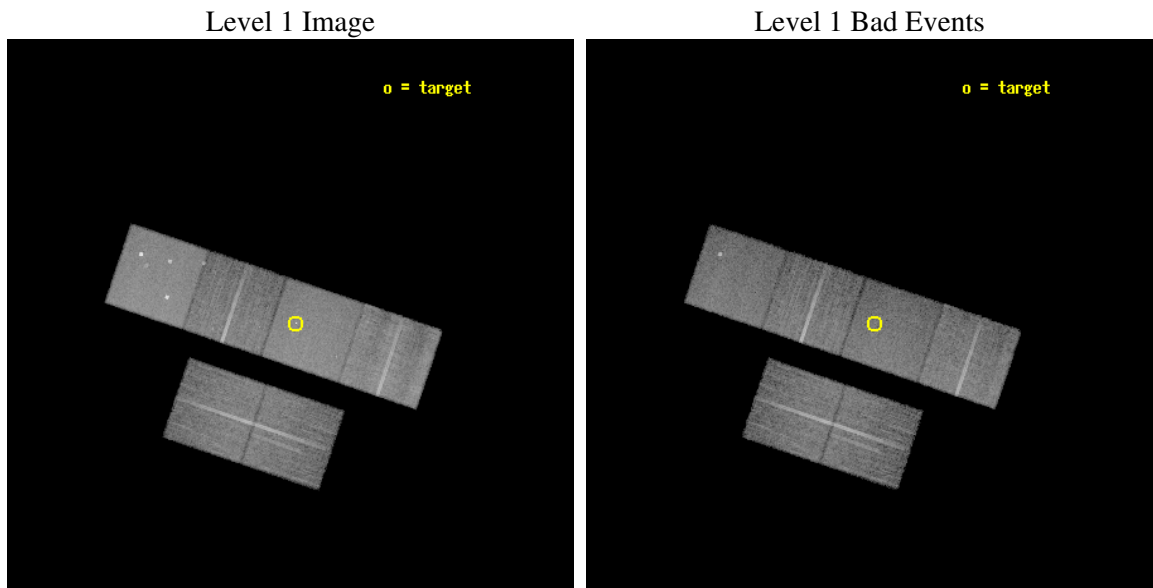
|          |   |
|----------|---|
| seq_num  | 500238                                      |
| obs_id   | 2788  |
| title    | ASTROMETRIC STUDY OF ISOLATED NEUTRON STARS |
| observer | Dr Christian Motch                          |
| object   | RX J0420-5022                               |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 65.01                                       |
| dec_targ | -50.380417                                  |
| ra_nom   | 65.024969829844                             |
| dec_nom  | -50.379001774712                            |
| roll_nom | 18.650353156915                             |
| revision | 2   |
| ontime   | 19622.399926901                             |
| livetime | 19373.929283836                             |
| ontime2  | 19622.399926901                             |
| ontime3  | 19622.399926901                             |
| ontime5  | 19622.399926901                             |
| ontime6  | 19622.399926901                             |
| ontime7  | 19622.399926901                             |
| ontime8  | 19622.399926901                             |
| l2events | 187529                                      |



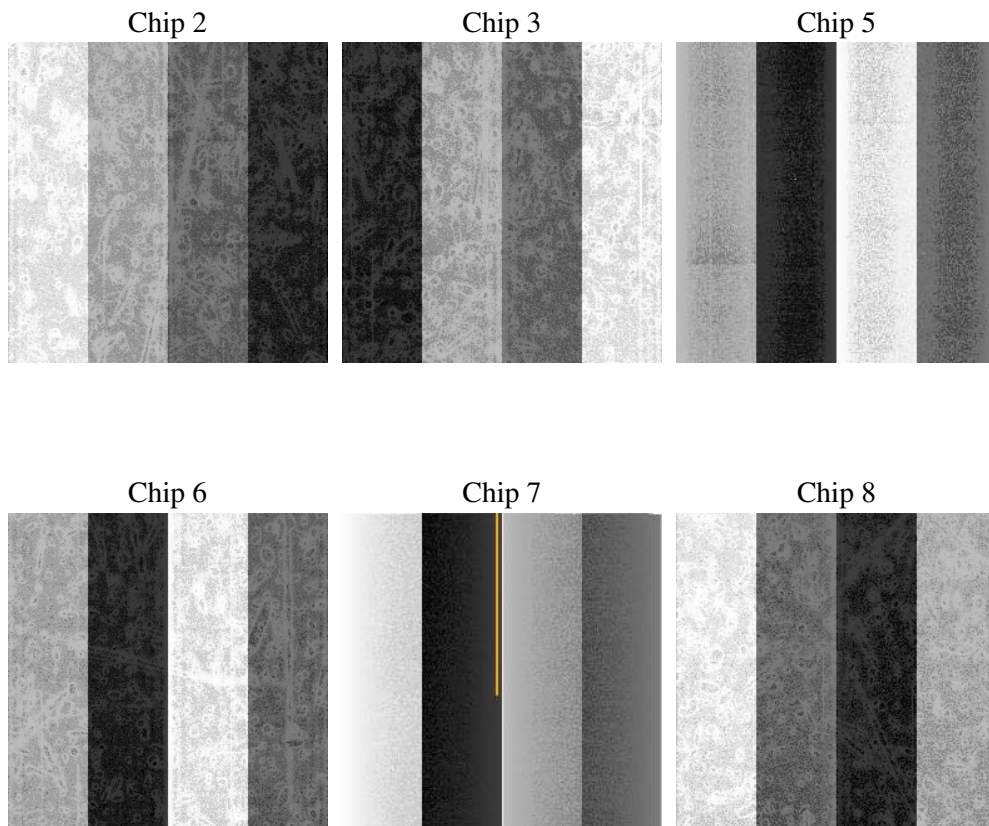
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 1                   |
| ascdsver | 7.6.9               |
| caldsver | 3.2.3               |
| date     | 2006-10-09T12:22:00 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 19500.000000    |
| ontime         | 19627.520436674 |
| ontime2        | 19627.520436674 |
| ontime3        | 19627.520436674 |
| ontime5        | 19627.520456582 |
| ontime6        | 19627.520436674 |
| ontime7        | 19627.520436674 |
| ontime8        | 19627.520436674 |
| l1events       | 853366          |

### 2.1.4 Events

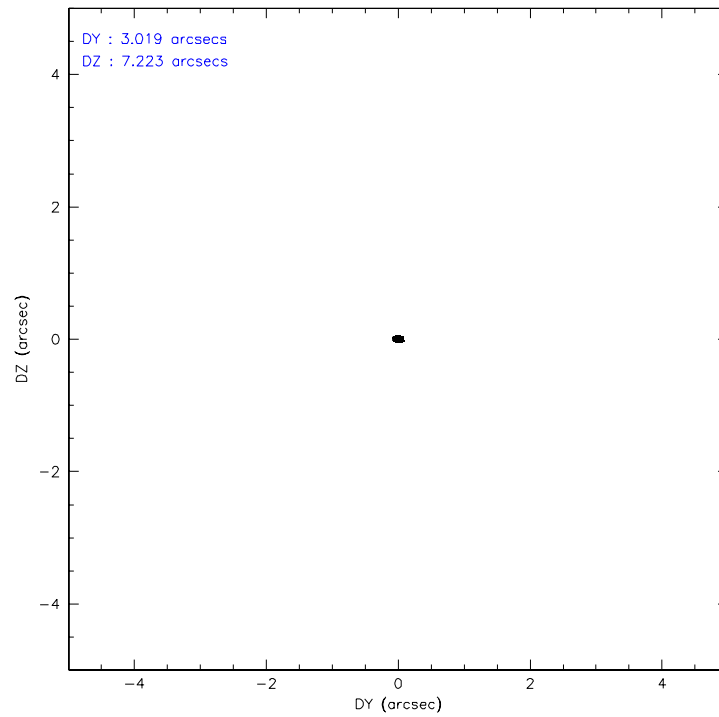
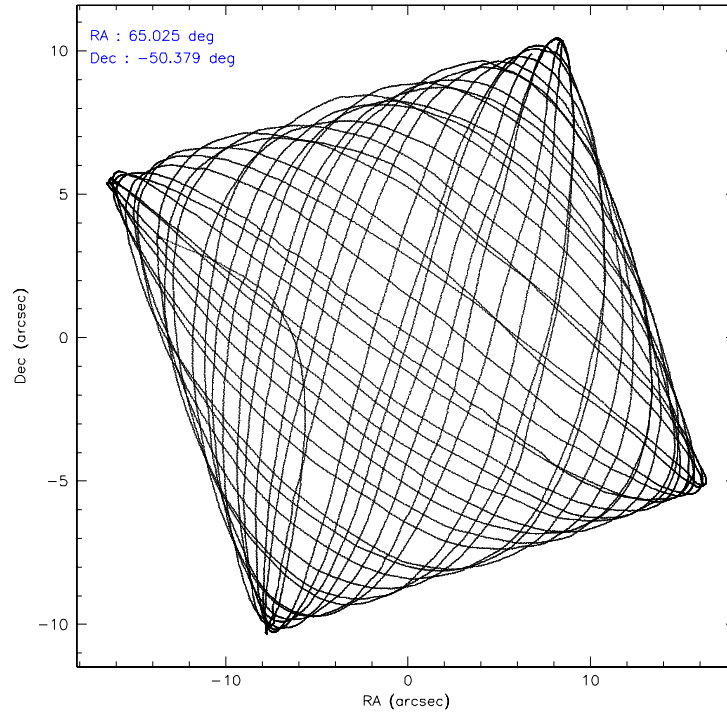
|                 | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 120142 | 113976 | 177335 | 122507 | 157985 | 161421 |
| rejected events | 105460 | 99677  | 96256  | 106992 | 96299  | 118664 |
| rejected %      | 87%    | 87%    | 54%    | 87%    | 60%    | 73%    |

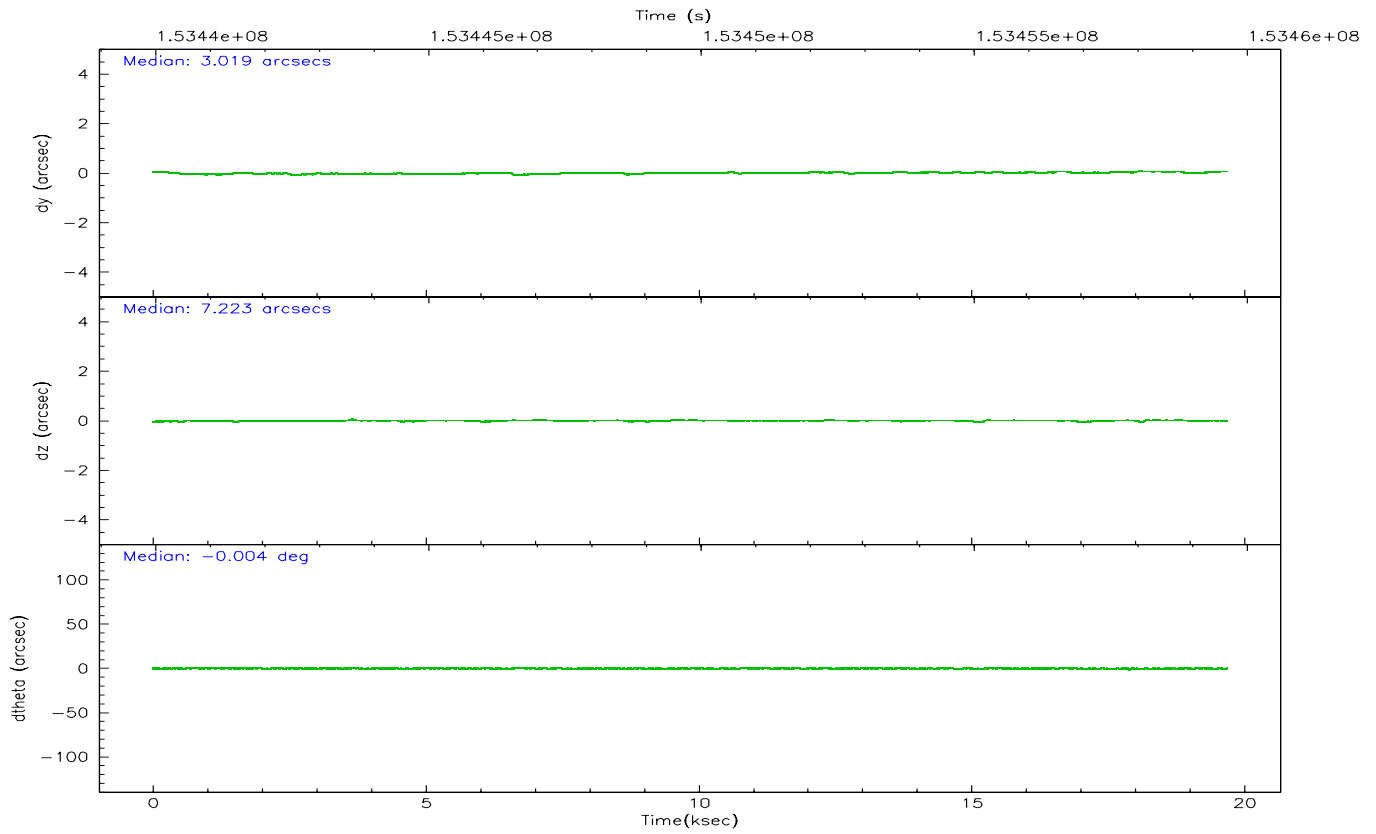
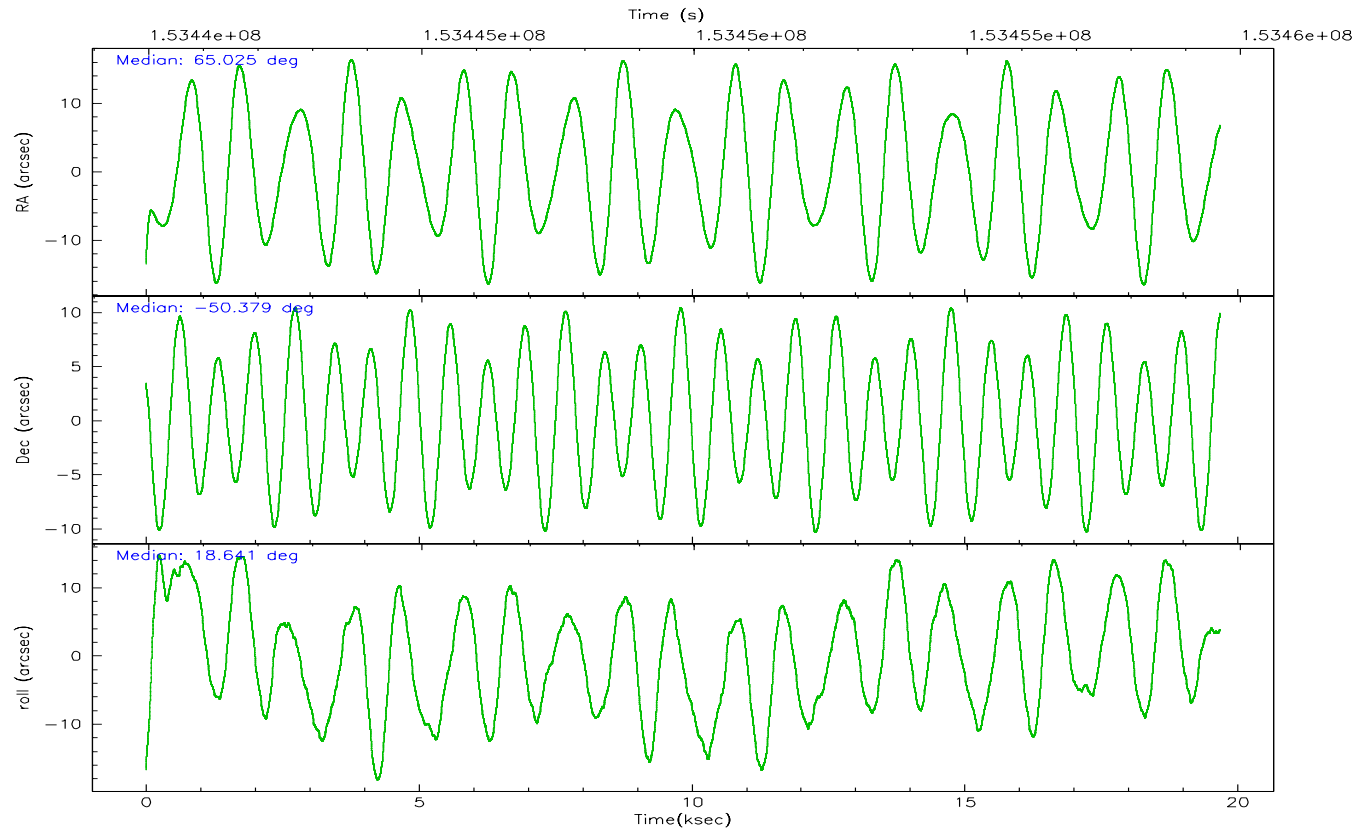
|                | ccd 2  | ccd 3 | ccd 5 | ccd 6  | ccd 7 | ccd 8  |
|----------------|--------|-------|-------|--------|-------|--------|
| grade 0 events | 6557   | 6380  | 8696  | 6575   | 4424  | 13824  |
|                | 5%     | 5%    | 4%    | 5%     | 2%    | 8%     |
| grade 1 events | 77     | 66    | 168   | 56     | 109   | 137    |
|                | 0%     | 0%    | 0%    | 0%     | 0%    | 0%     |
| grade 2 events | 3024   | 2726  | 24687 | 3198   | 14921 | 8213   |
|                | 2%     | 2%    | 13%   | 2%     | 9%    | 5%     |
| grade 3 events | 1343   | 1341  | 2121  | 1422   | 3154  | 5483   |
|                | 1%     | 1%    | 1%    | 1%     | 1%    | 3%     |
| grade 4 events | 1341   | 1347  | 1813  | 1417   | 3067  | 4875   |
|                | 1%     | 1%    | 1%    | 1%     | 1%    | 3%     |
| grade 5 events | 4402   | 4881  | 8293  | 5196   | 9940  | 6757   |
|                | 3%     | 4%    | 4%    | 4%     | 6%    | 4%     |
| grade 6 events | 2421   | 2509  | 43782 | 2904   | 36140 | 10366  |
|                | 2%     | 2%    | 24%   | 2%     | 22%   | 6%     |
| grade 7 events | 100977 | 94726 | 87775 | 101739 | 86230 | 111766 |
|                | 84%    | 83%   | 49%   | 83%    | 54%   | 69%    |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual               | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                 | Obspar format version number          | 6         | 6       |
| Detector                          | ACIS-235678         | ACIS-235678          | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                 | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | FAINT               | FAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING             | On-chip summing requested             | N         | N       |
| Pointing RA                       | 64.997214           | 65.02496982984422    | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | -50.399649          | -50.37900177471176   | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 18.472344           | 18.65035315691513    | Primary exposure time                 | 0.000000  | 3.2     |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  |                                       |           |         |
| SIM defocus (mm)                  | 0                   | 0.001444936568705701 |                                       |           |         |
| SIM translation stage pos (mm)    | -190.132523         | -190.1425803651734   |                                       |           |         |
| SIM translation stage offset (mm) | 0                   | 0.01005778216563158  |                                       |           |         |
| Observation start time            | 153440129.184000    | 153439072.89935      |                                       |           |         |
| Observation start date            | 2002-11-11T22:14:25 | 2002-11-11T21:57:52  |                                       |           |         |
| Observation end time              | 153459629.184000    | 153460038.25022      |                                       |           |         |
| Observation end date              | 2002-11-12T03:39:25 | 2002-11-12T03:47:18  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect





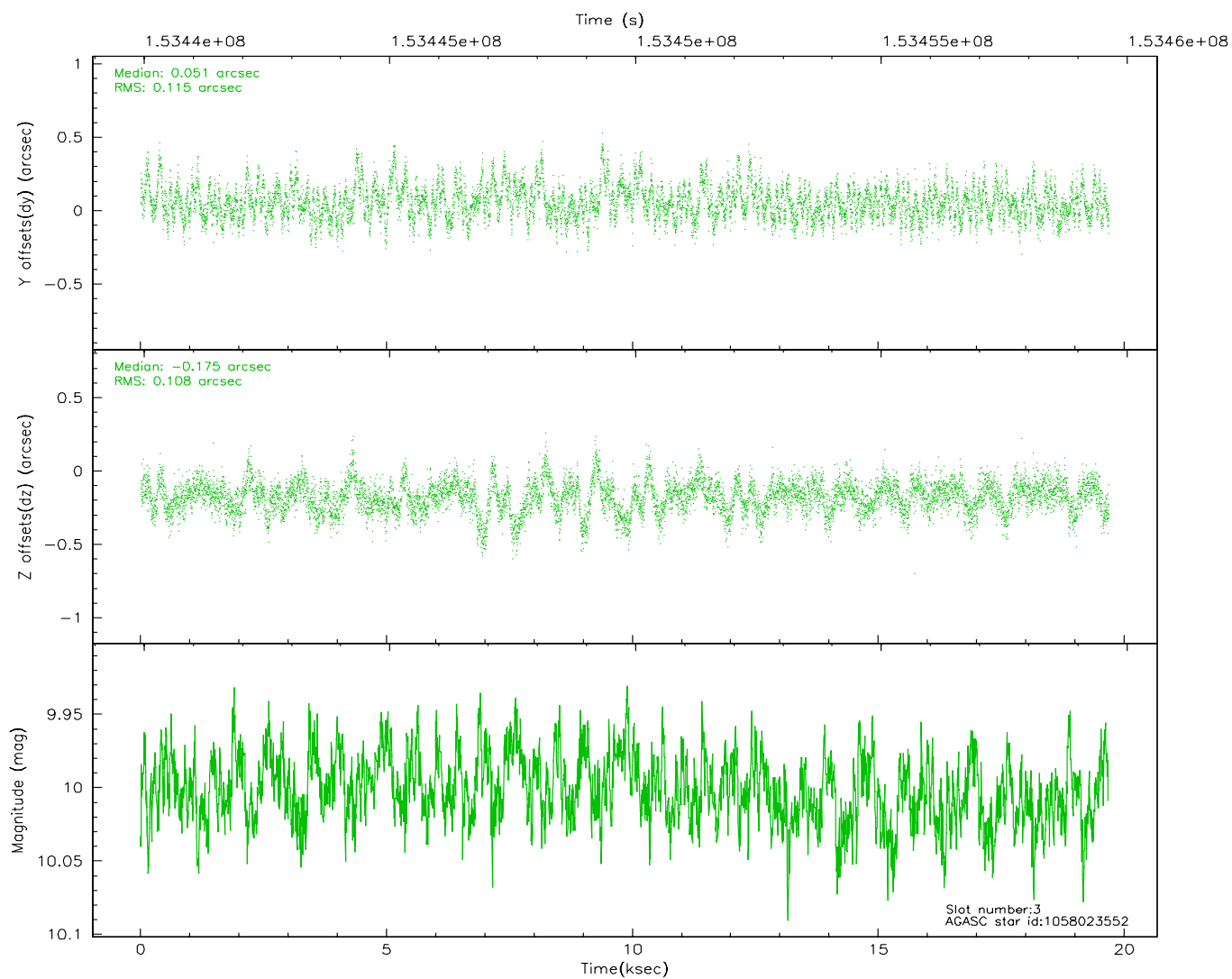
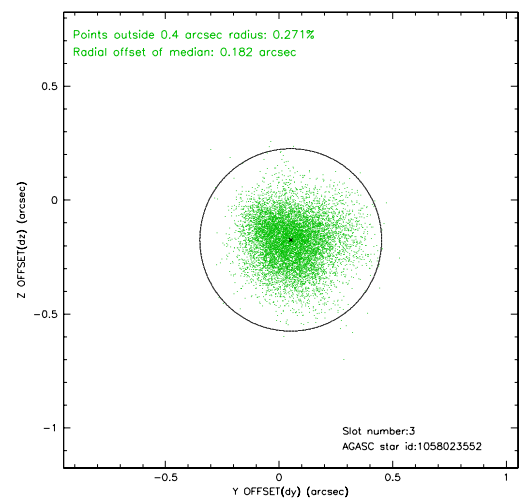
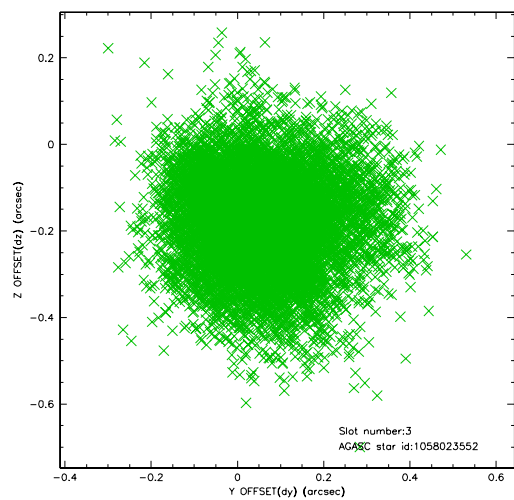
### Slot Statistics

| slot | status | id         | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra        | dec        | mean_y   | mean_z   |
|------|--------|------------|-------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0    | FID    | ACIS-S-2   | 7.11  | 4802  | -0.007 | 0.023  | 0.006 | 0.011 | 0.000000  | 0.000000   | -755.67  | -1728.32 |
| 1    | FID    | ACIS-S-4   | 7.20  | 4801  | -0.038 | -0.003 | 0.005 | 0.009 | 0.000000  | 0.000000   | 2157.49  | 179.94   |
| 2    | FID    | ACIS-S-5   | 7.24  | 4801  | 0.014  | -0.011 | 0.006 | 0.011 | 0.000000  | 0.000000   | -1808.24 | 173.82   |
| 3    | GUIDE  | 1058023552 | 10.00 | 9593  | 0.051  | -0.175 | 0.165 | 0.280 | 64.133515 | -49.952760 | -1392.12 | 2148.42  |
| 4    | GUIDE  | 1058412288 | 9.21  | 9597  | 0.132  | 0.061  | 0.111 | 0.174 | 65.457997 | -50.004198 | 1460.75  | 1009.86  |
| 5    | GUIDE  | 1058417992 | 9.78  | 9529  | 0.046  | -0.039 | 0.188 | 0.301 | 65.253028 | -50.204198 | 781.43   | 479.82   |
| 6    | GUIDE  | 1058418424 | 9.57  | 9600  | -0.105 | 0.095  | 0.113 | 0.194 | 65.947855 | -50.664334 | 1751.11  | -1603.85 |
| 7    | GUIDE  | 1058419656 | 7.75  | 9603  | -0.112 | 0.068  | 0.074 | 0.121 | 66.211277 | -50.622190 | 2368.57  | -1660.02 |

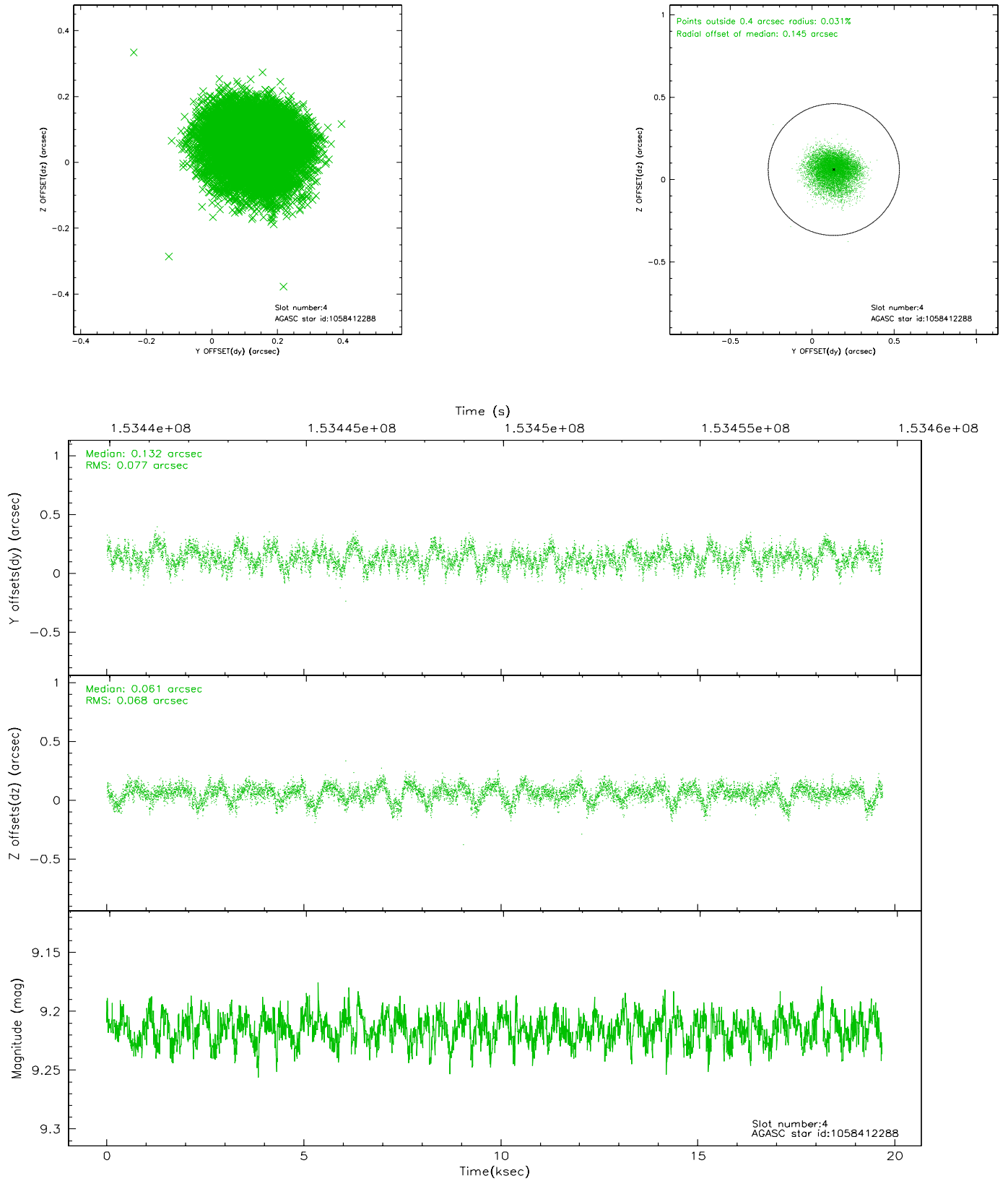


## 2.4 Star Slots

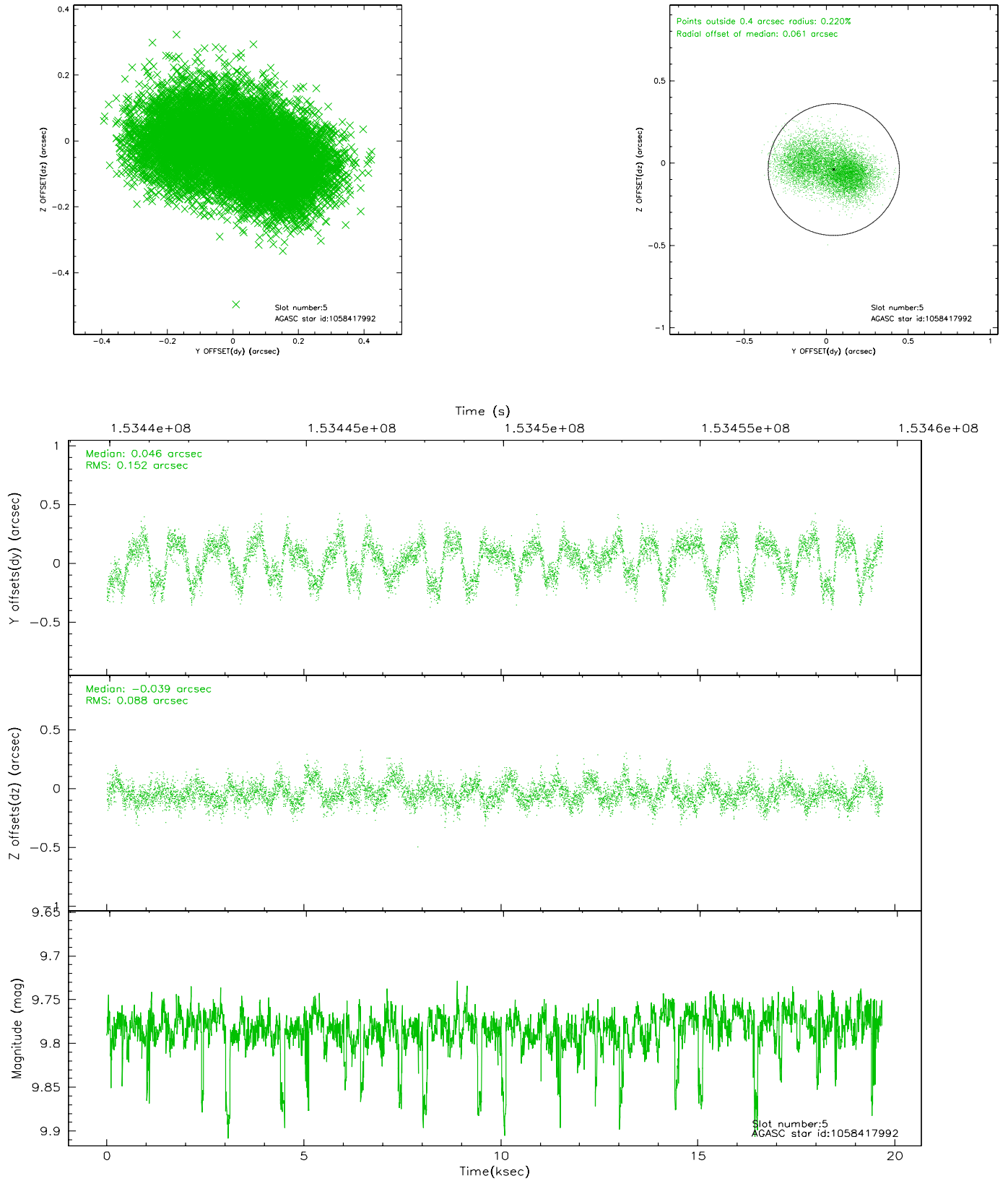
### 2.4.1 Slot 3



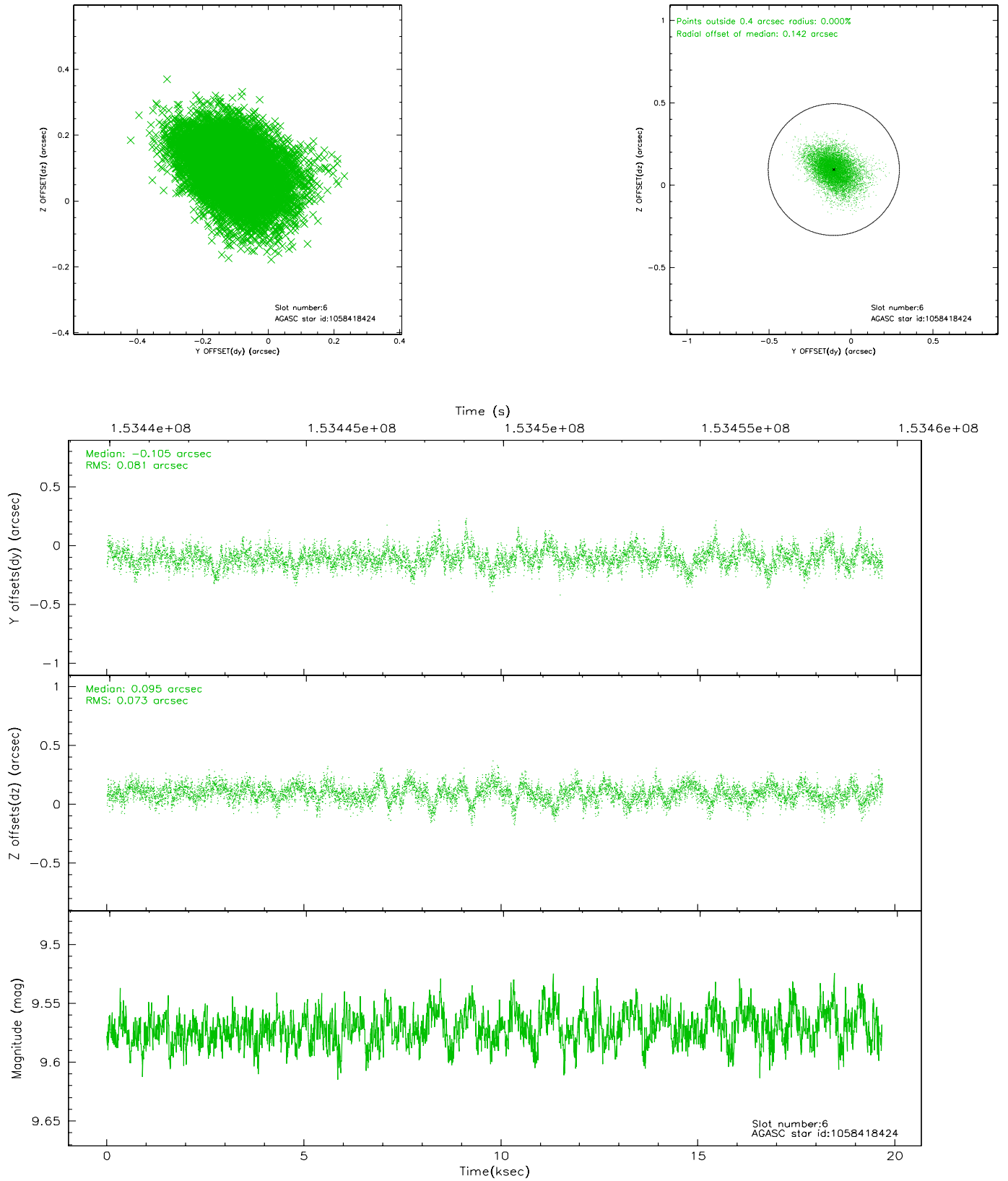
## 2.4.2 Slot 4



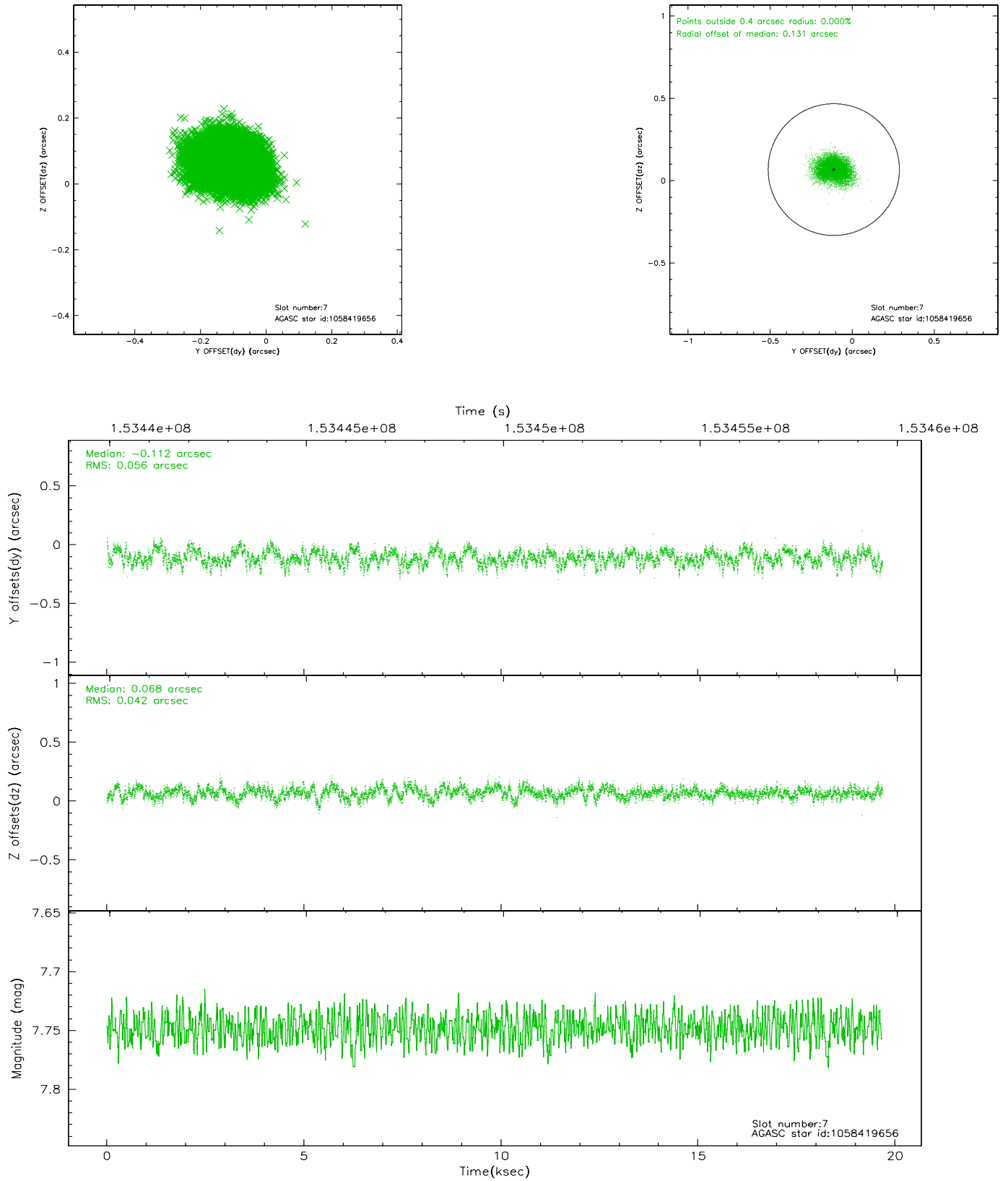
### 2.4.3 Slot 5



## 2.4.4 Slot 6

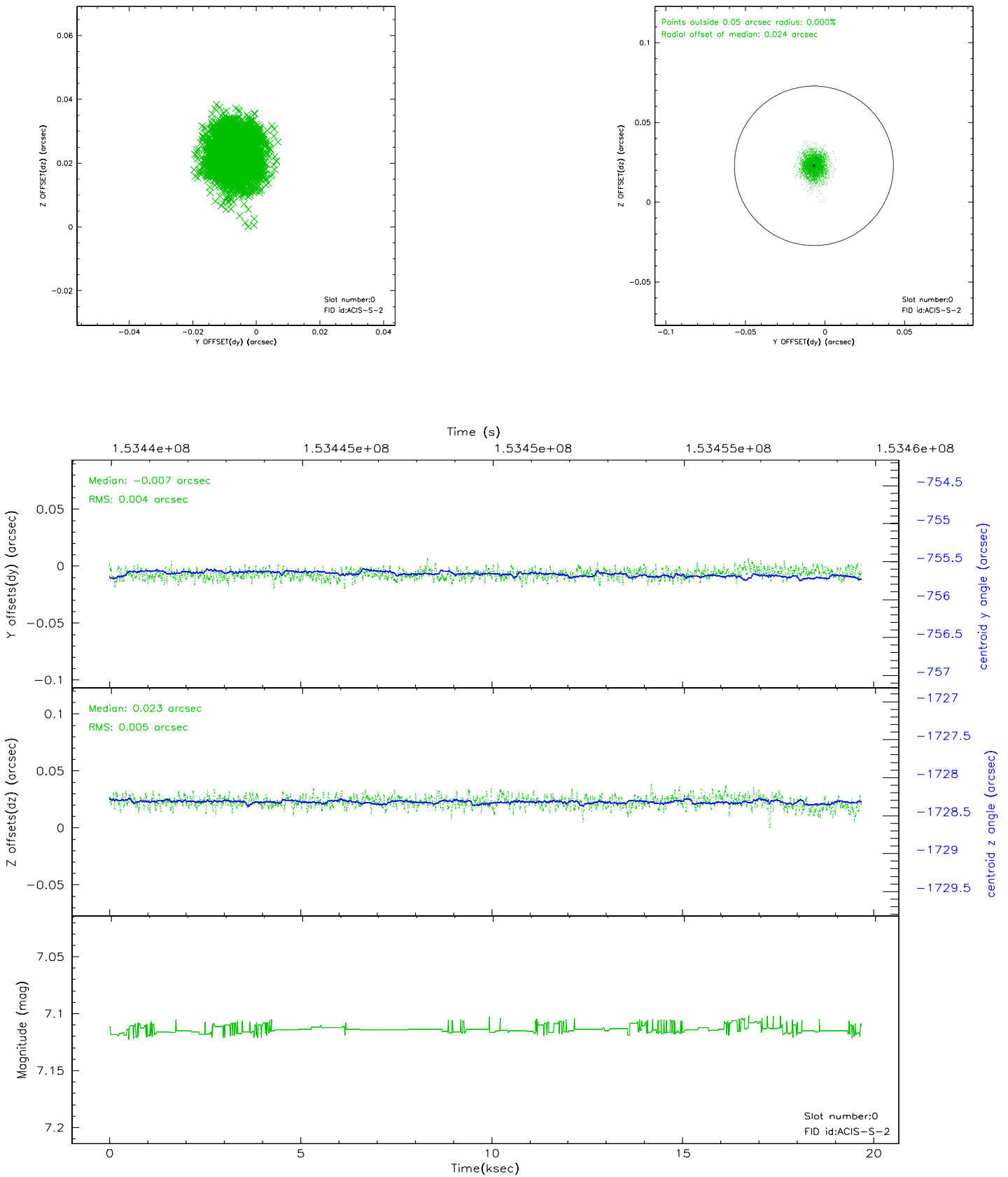


## 2.4.5 Slot 7

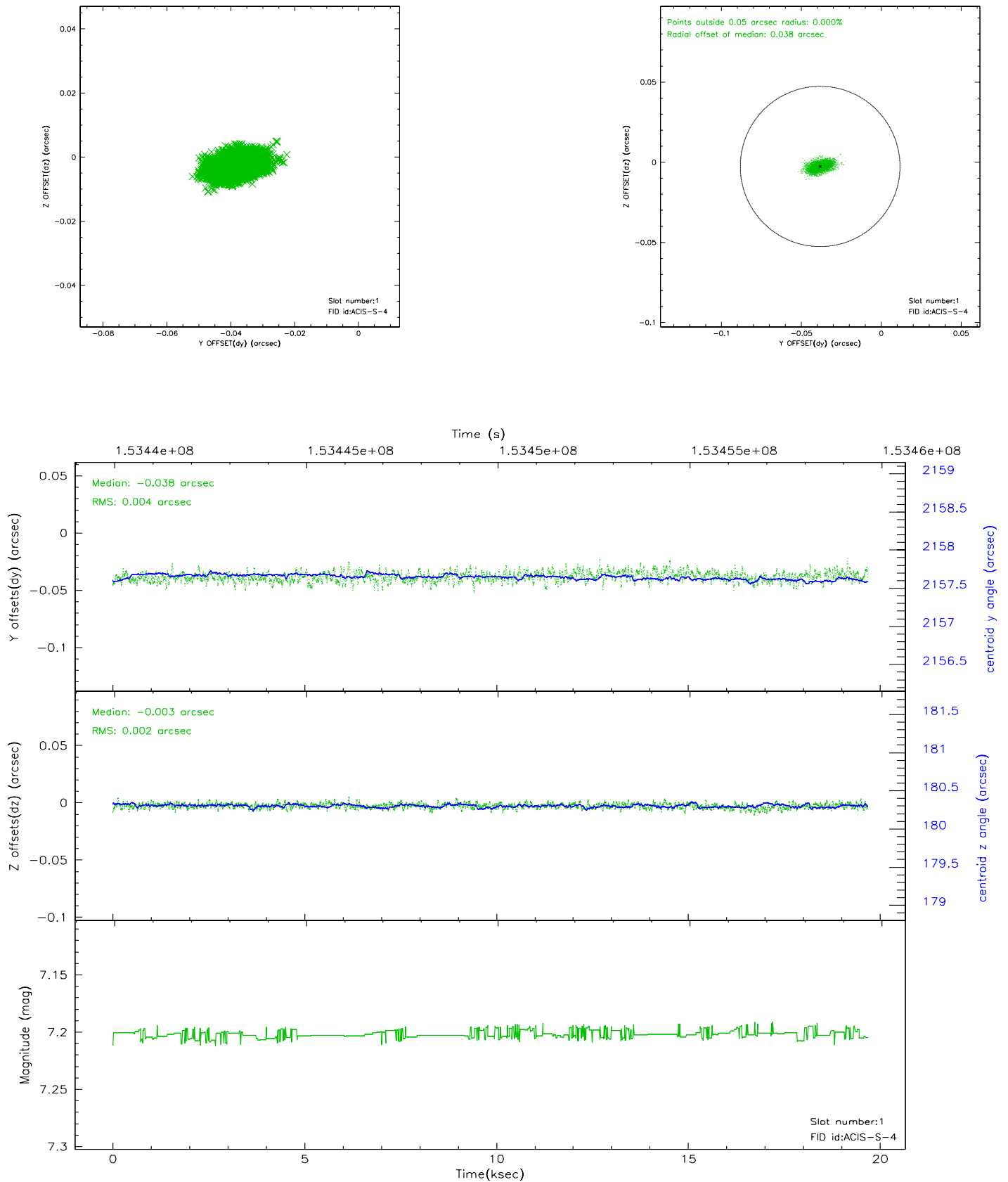


## 2.5 FID Slots

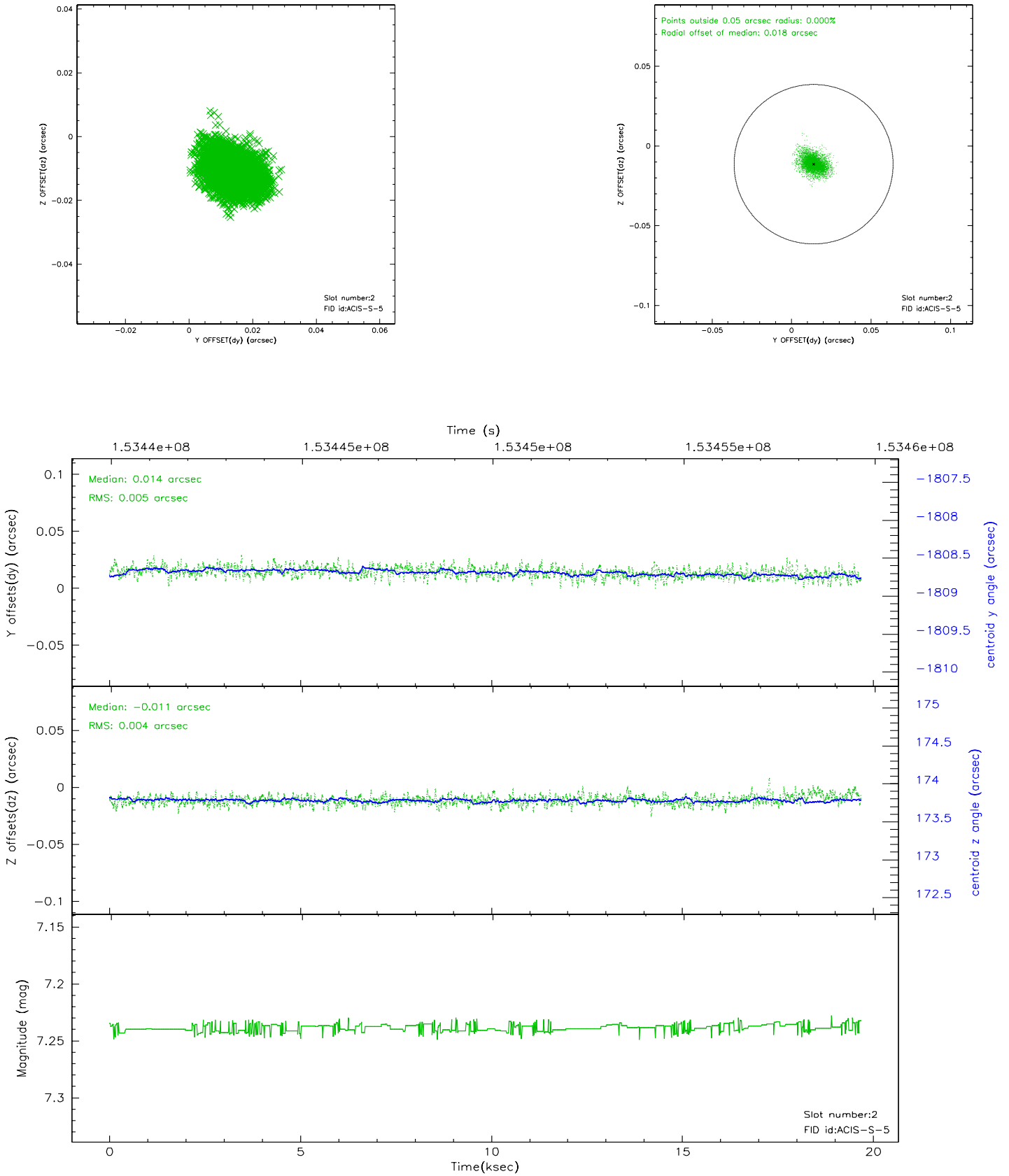
### 2.5.1 Slot 0



## 2.5.2 Slot 1

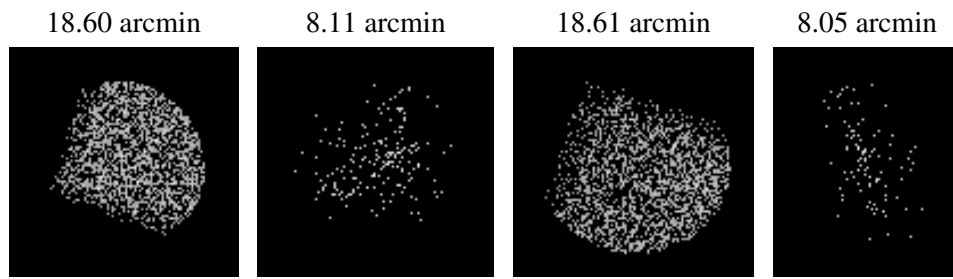


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2006.10.10 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 19.625     |

### A.2 Comments