

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 890 - L2 Version 001  
Chandra X-Ray Center

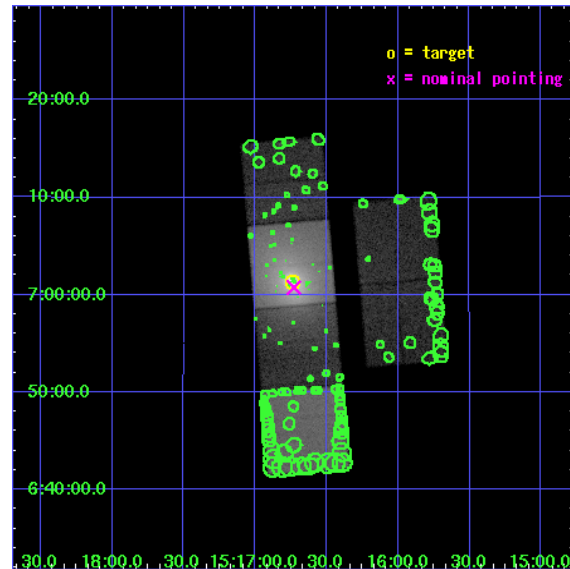
L2 Processing Date : Jun 6 2007

## 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    | 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

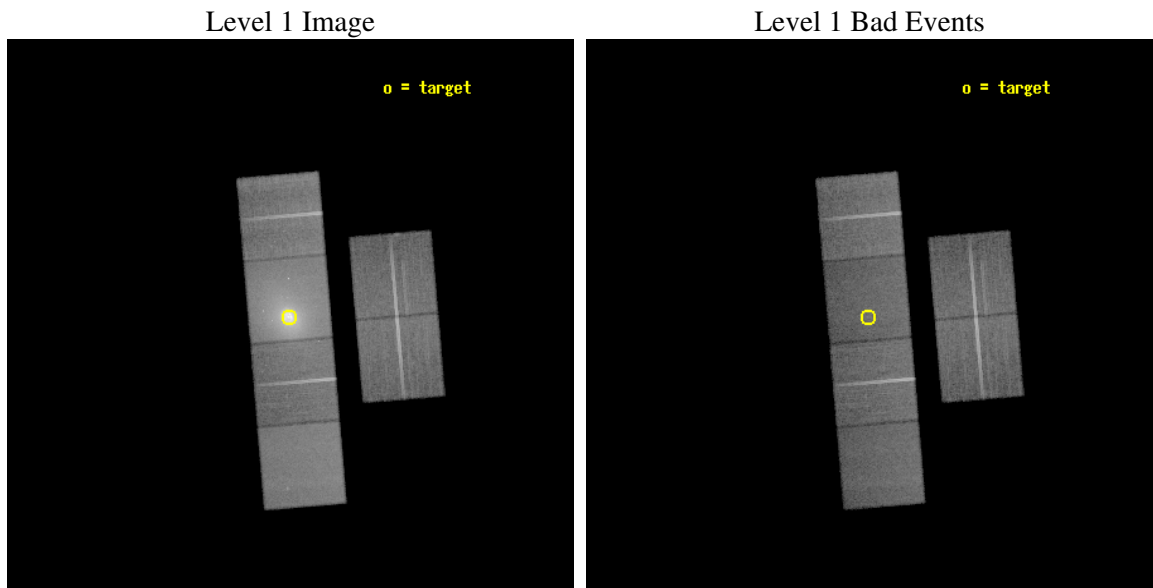
|          |   |
|----------|---|
| seq_num  | 800066  |
| obs_id   | 890   |
| title    | THE INTERACTION BETWEEN CLUSTER CENTRAL RADIO SOURCES AND COOLING FLOWS |
| observer | Dr. Craig Sarazin   |
| object   | A2052   |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 229.185   |
| dec_targ | 7.022222  |
| ra_nom   | 229.18236208194   |
| dec_nom  | 7.0126669117783   |
| roll_nom | 265.13413232627   |
| revision | 2   |
| ontime   | 37225.600034669   |
| livetime | 36754.227072465   |
| ontime2  | 37215.877183959   |
| ontime3  | 37219.118094265   |
| ontime5  | 37222.359074429   |
| ontime6  | 37225.600034669   |
| ontime7  | 37225.600034669   |
| ontime8  | 37219.11809428  |
| l2events | 689490  |



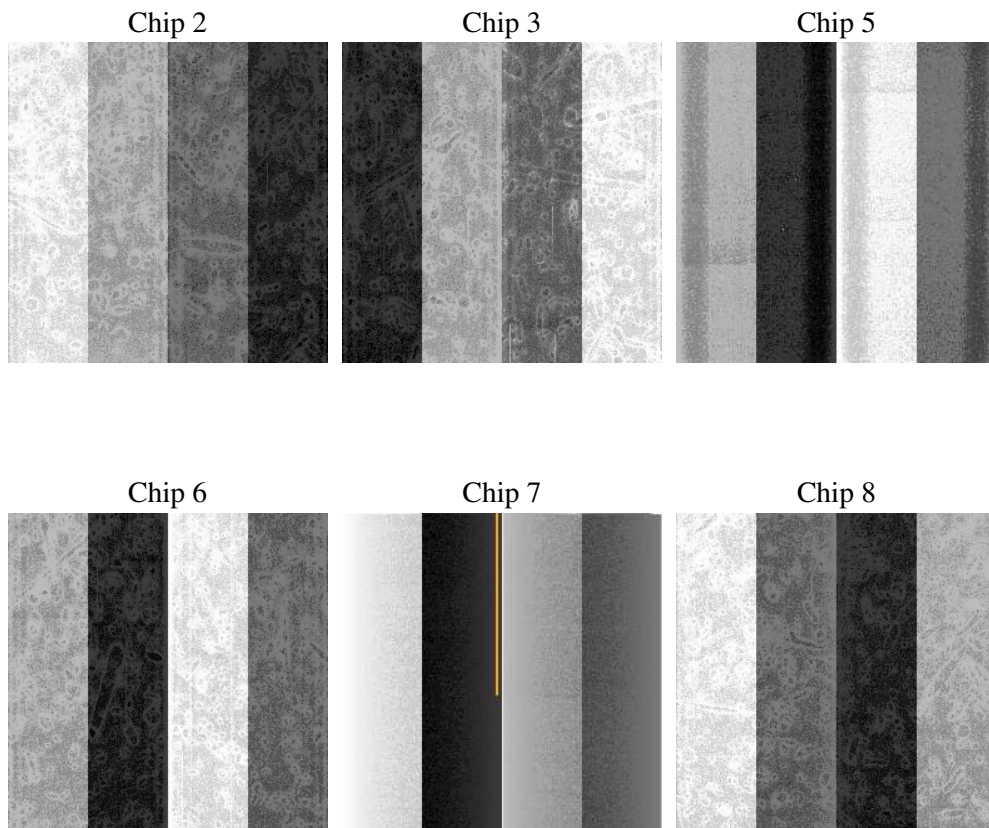
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.10              |
| caldsver | 3.4.0               |
| date     | 2007-06-06T17:03:57 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 37270.000000    |
| ontime         | 37225.600034669 |
| ontime2        | 37215.877183959 |
| ontime3        | 37219.118094265 |
| ontime5        | 37222.359074429 |
| ontime6        | 37225.600034669 |
| ontime7        | 37225.600034669 |
| ontime8        | 37219.11809428  |
| l1events       | 1876056         |

### 2.1.4 Events

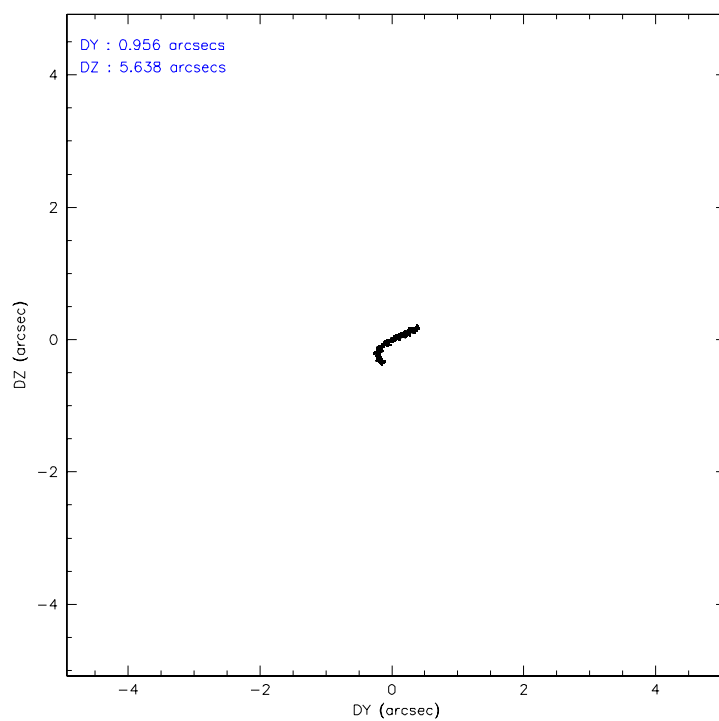
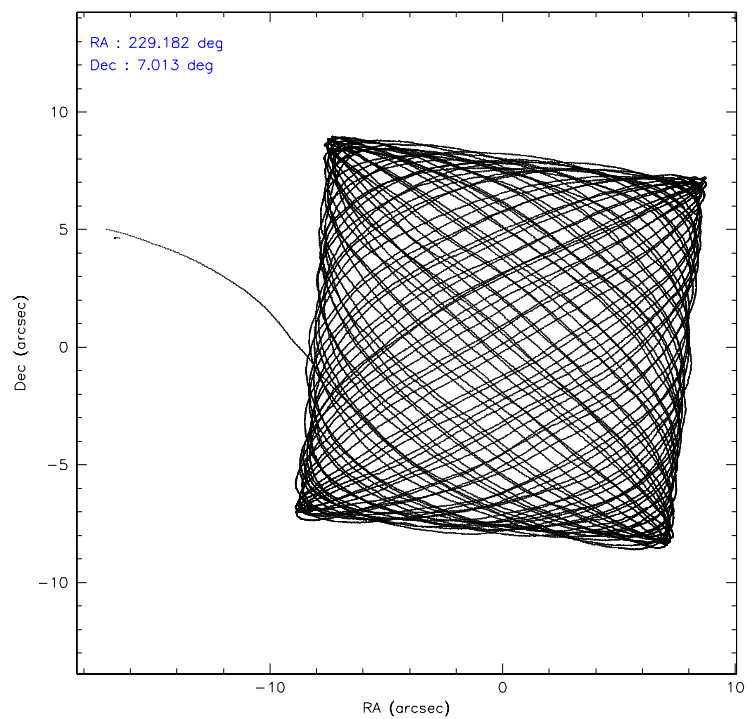
|                 | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 231790 | 217874 | 302113 | 256361 | 582381 | 285537 |
| rejected events | 203093 | 189701 | 160875 | 200459 | 160384 | 223718 |
| rejected %      | 87%    | 87%    | 53%    | 78%    | 27%    | 78%    |

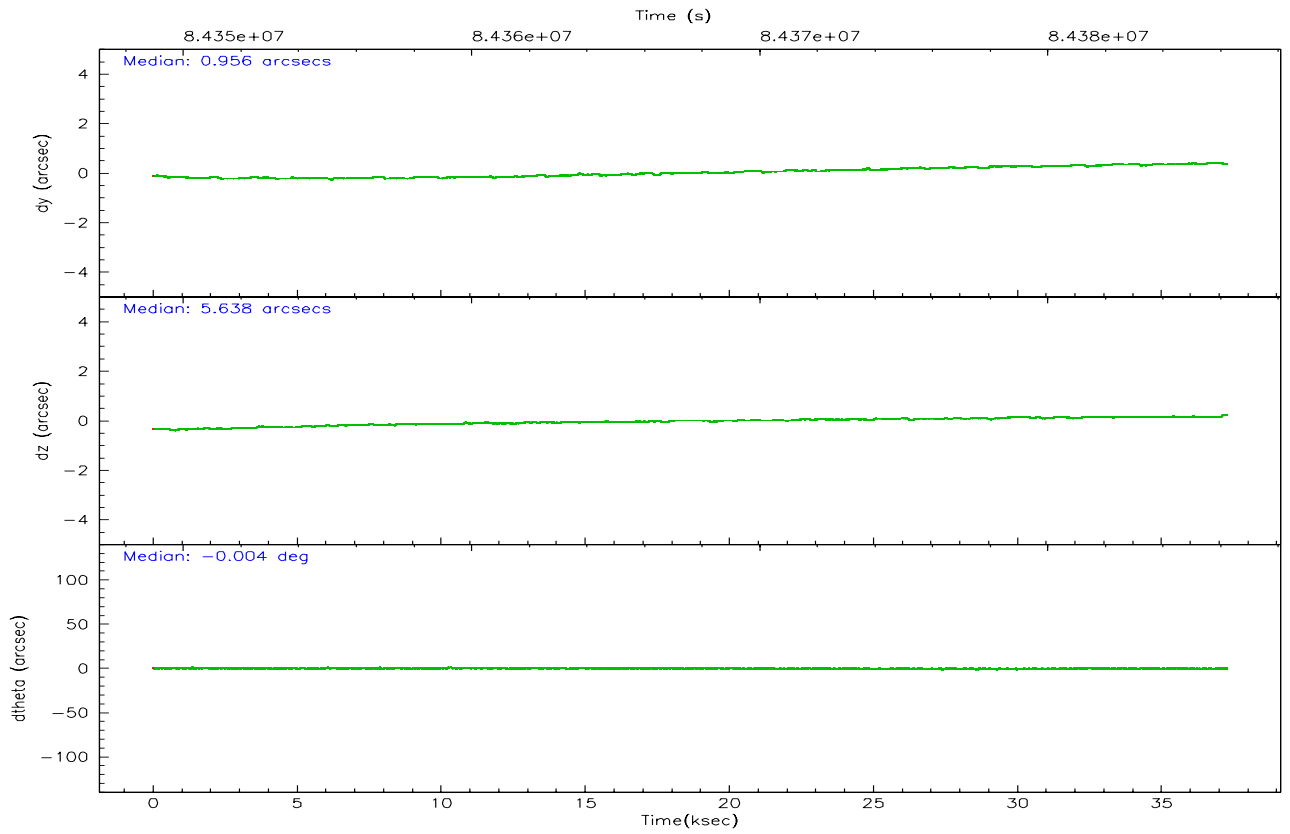
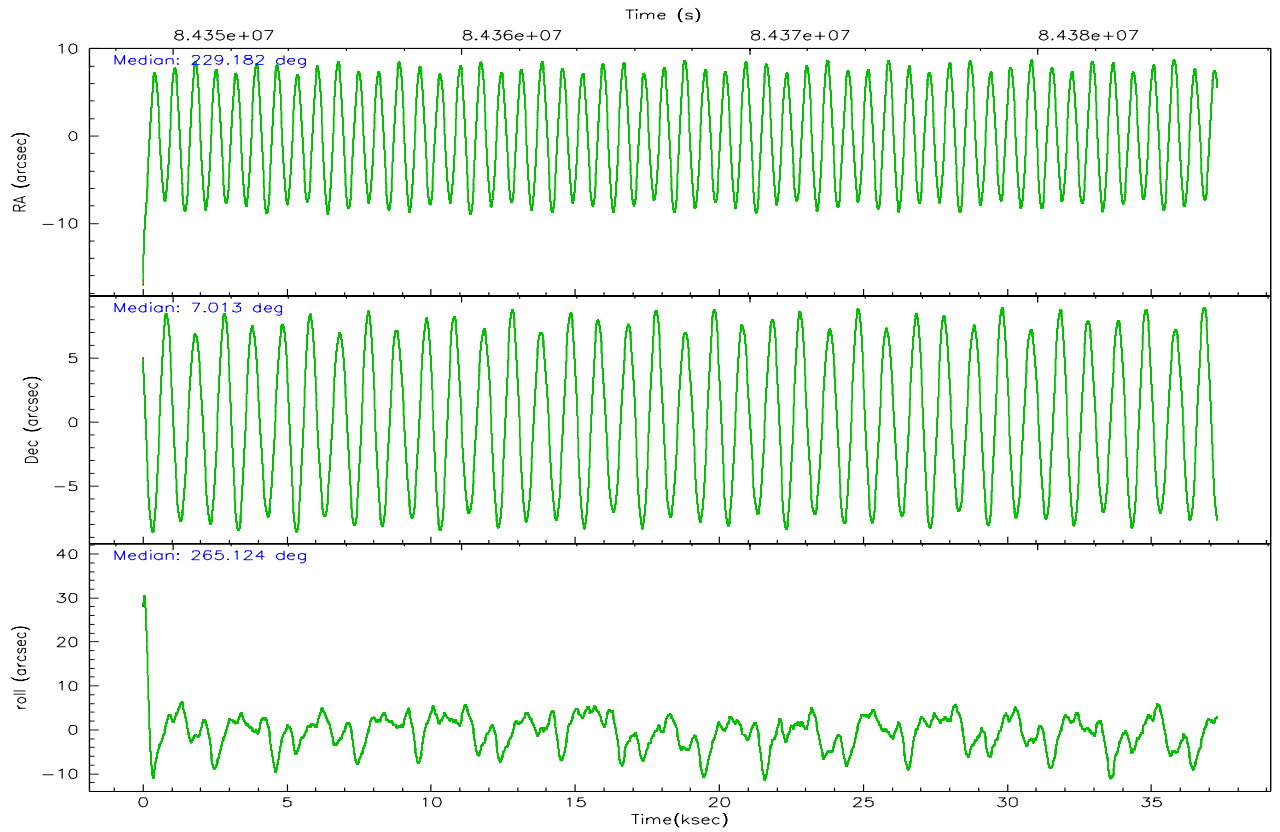
|                | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |
|----------------|--------|--------|--------|--------|--------|--------|
| grade 0 events | 13867  | 13995  | 14221  | 36198  | 112408 | 24342  |
|                | 5%     | 6%     | 4%     | 14%    | 19%    | 8%     |
| grade 1 events | 124    | 84     | 297    | 200    | 333    | 164    |
|                | 0%     | 0%     | 0%     | 0%     | 0%     | 0%     |
| grade 2 events | 5720   | 4978   | 41063  | 7658   | 102893 | 12435  |
|                | 2%     | 2%     | 13%    | 2%     | 17%    | 4%     |
| grade 3 events | 2435   | 2517   | 7081   | 3410   | 46425  | 5663   |
|                | 1%     | 1%     | 2%     | 1%     | 7%     | 1%     |
| grade 4 events | 2427   | 2425   | 6757   | 3246   | 45848  | 5453   |
|                | 1%     | 1%     | 2%     | 1%     | 7%     | 1%     |
| grade 5 events | 7495   | 7750   | 23405  | 9115   | 28491  | 11356  |
|                | 3%     | 3%     | 7%     | 3%     | 4%     | 3%     |
| grade 6 events | 4251   | 4265   | 72124  | 5398   | 114458 | 13938  |
|                | 1%     | 1%     | 23%    | 2%     | 19%    | 4%     |
| grade 7 events | 195471 | 181860 | 137165 | 191136 | 131525 | 212186 |
|                | 84%    | 83%    | 45%    | 74%    | 22%    | 74%    |

## 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                       | 229.170493          | 229.1823620819426    | Subarray requested                    | NONE      | NONE    |
| Pointing Dec                      | 7.037370            | 7.012666911778288    | Alternating exposures requested       | N         | N       |
| Pointing Roll                     | 264.978955          | 265.1341323262716    | Primary exposure time                 | 3.200000  | 3.2     |
| SIM focus pos (mm)                | -0.684267           | -0.6828225247311905  |                                       |           |         |
| SIM defocus (mm)                  | 0                   | 0.001444936568705701 |                                       |           |         |
| SIM translation stage pos (mm)    | -190.132523         | -190.1400660498719   |                                       |           |         |
| SIM translation stage offset (mm) | 0                   | 0.00754346686406393  |                                       |           |         |
| Observation start time            | 84348953.184000     | 84348082.6214        |                                       |           |         |
| Observation start date            | 2000-09-03T06:14:49 | 2000-09-03T06:01:22  |                                       |           |         |
| Observation end time              | 84386223.184000     | 84386845.56035601    |                                       |           |         |
| Observation end date              | 2000-09-03T16:35:59 | 2000-09-03T16:47:25  |                                       |           |         |
| Read mode                         | TIMED               | TIMED                |                                       |           |         |

## 2.3 Aspect





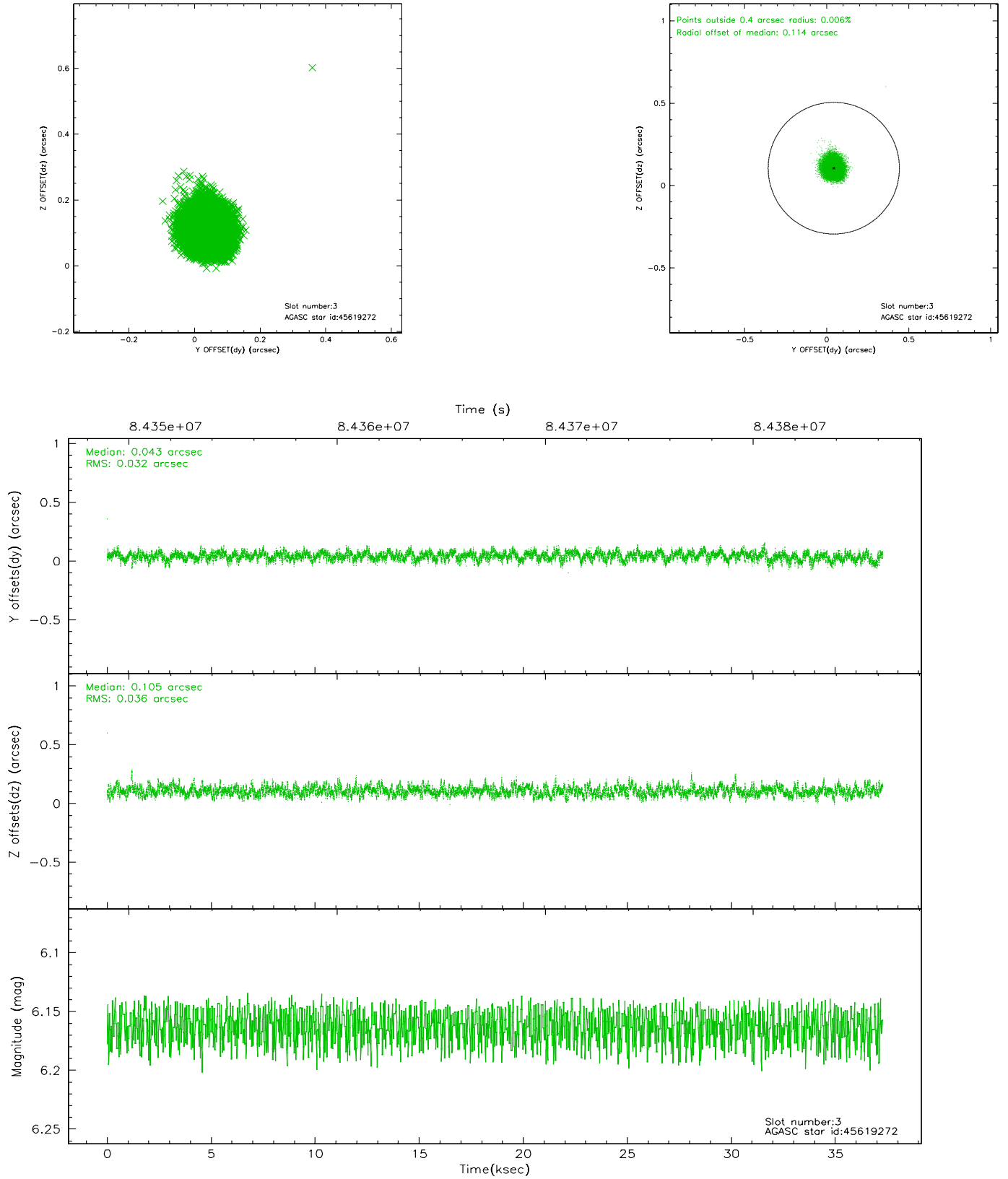
### Slot Statistics

| 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  | 9091  | -0.012 | -0.017 | 0.006 | 0.032 | 0.000000   | 0.000000 | -753.59  | -1726.75 |
| 1    | FID    | ACIS-S-4  | 7.21  | 9086  | -0.026 | 0.003  | 0.008 | 0.023 | 0.000000   | 0.000000 | 2159.66  | 181.72   |
| 2    | FID    | ACIS-S-6  | 7.35  | 9088  | 0.009  | 0.020  | 0.008 | 0.014 | 0.000000   | 0.000000 | 408.45   | 819.17   |
| 3    | GUIDE  | 45619272  | 6.16  | 18177 | 0.043  | 0.105  | 0.052 | 0.083 | 228.973190 | 6.464840 | 2114.85  | -521.10  |
| 4    | GUIDE  | 45485440  | 10.27 | 18162 | 0.035  | -0.216 | 0.132 | 0.220 | 228.571035 | 6.780820 | 1106.70  | -2052.99 |
| 5    | GUIDE  | 120599960 | 10.20 | 18132 | -0.161 | 0.229  | 0.135 | 0.217 | 229.604732 | 7.524393 | -1883.44 | 1391.30  |
| 6    | GUIDE  | 120598184 | 10.15 | 18162 | -0.034 | -0.029 | 0.129 | 0.213 | 228.939530 | 7.597810 | -1937.89 | -996.83  |
| 7    | GUIDE  | 45617816  | 10.08 | 18167 | 0.119  | -0.092 | 0.125 | 0.206 | 228.997066 | 7.166043 | -407.34  | -656.73  |

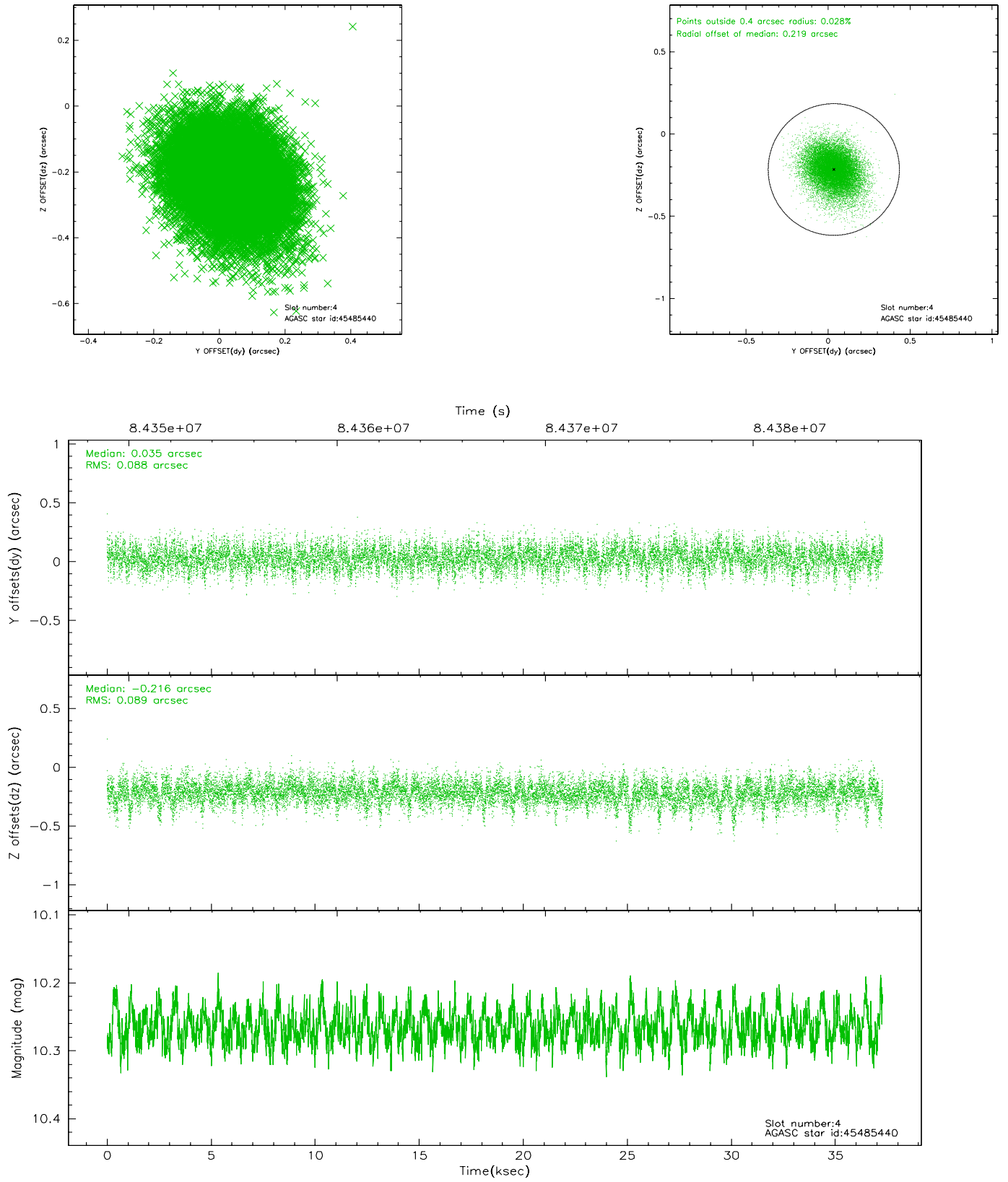


## 2.4 Star Slots

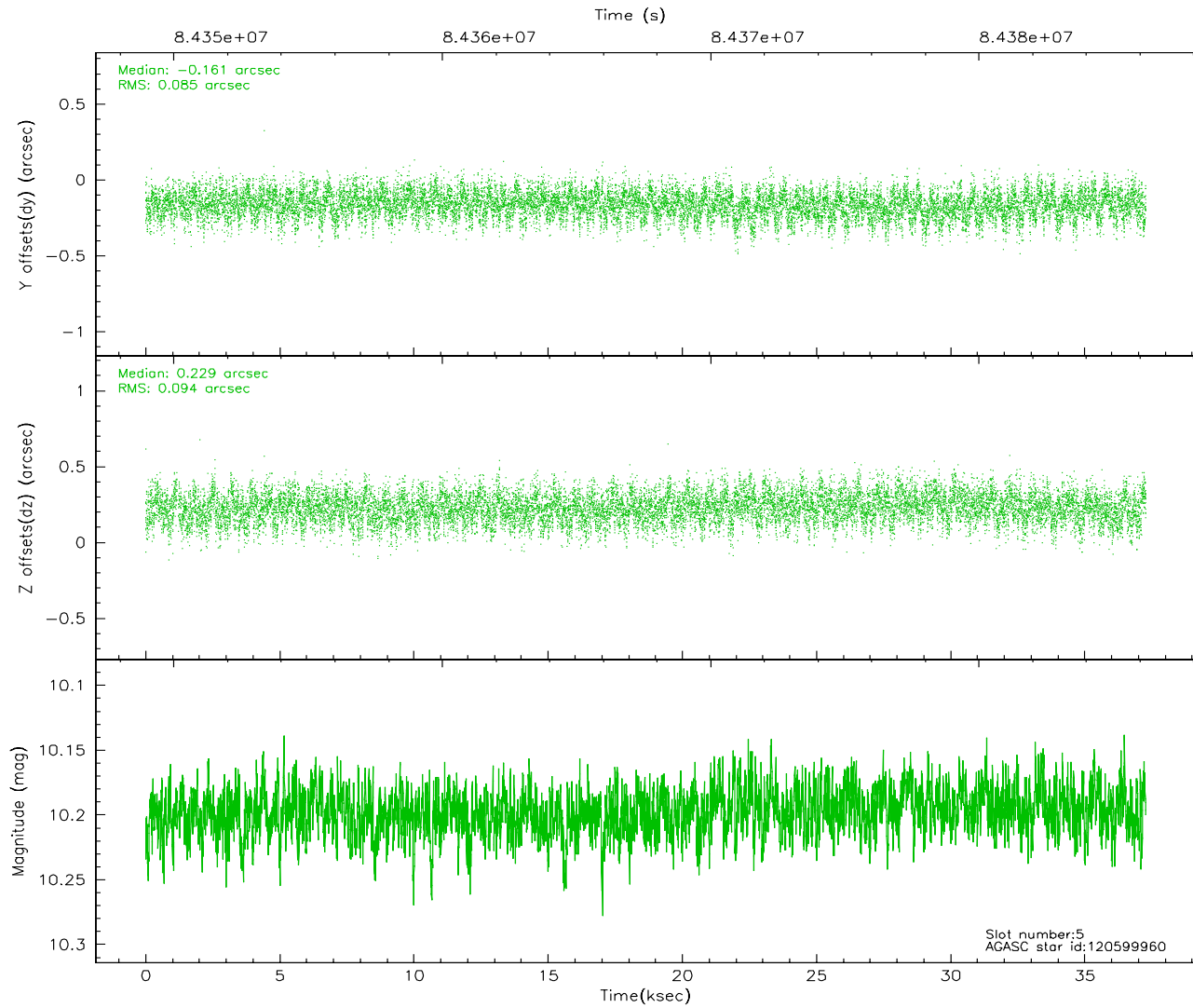
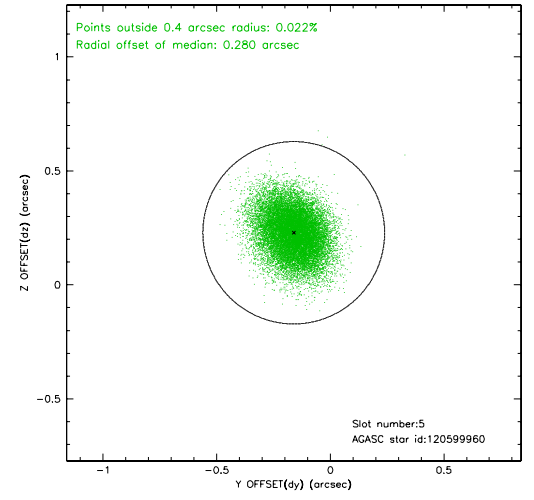
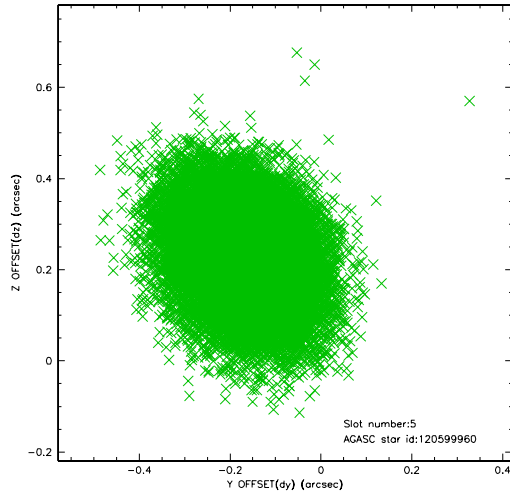
### 2.4.1 Slot 3



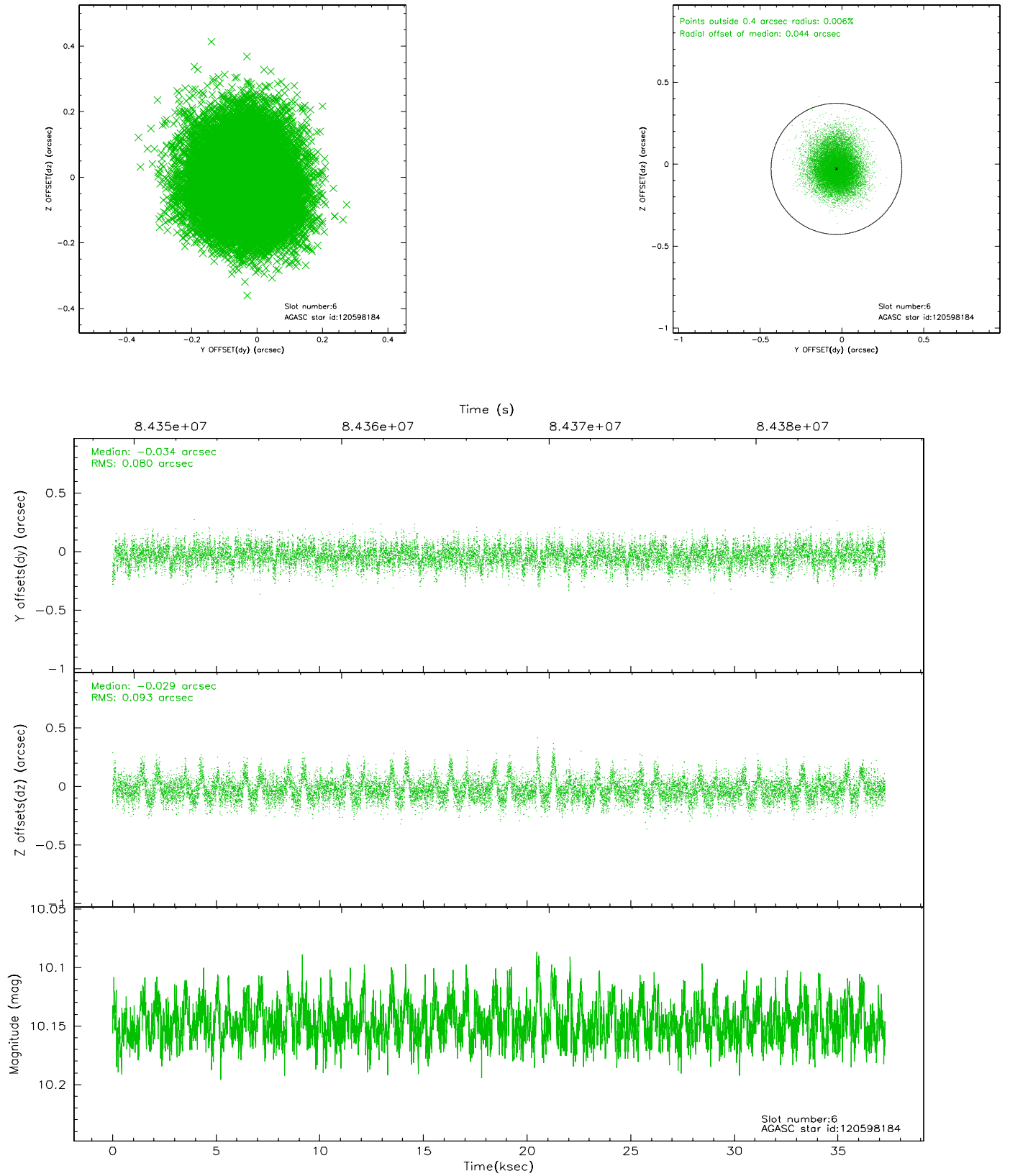
## 2.4.2 Slot 4



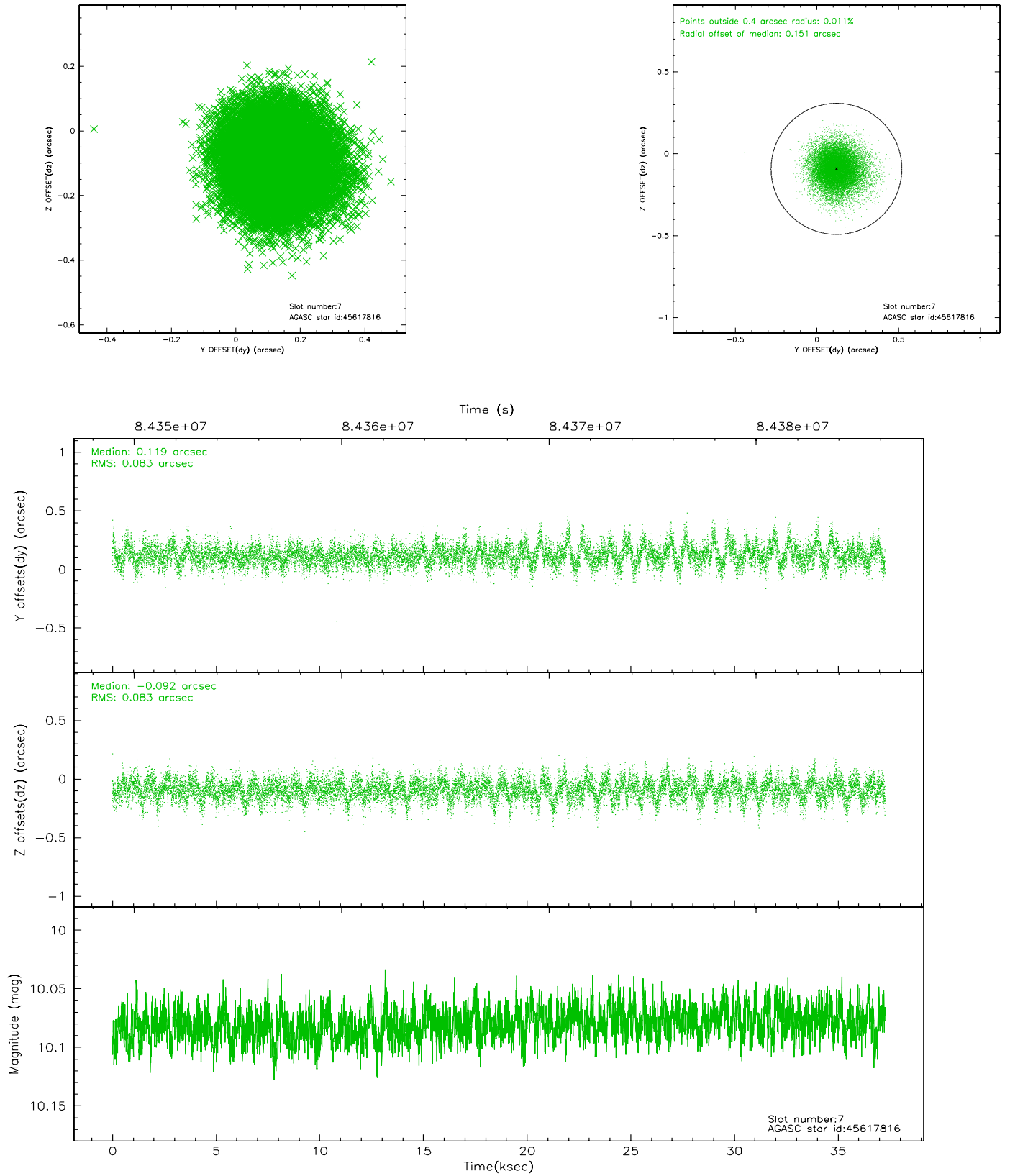
### 2.4.3 Slot 5



## 2.4.4 Slot 6

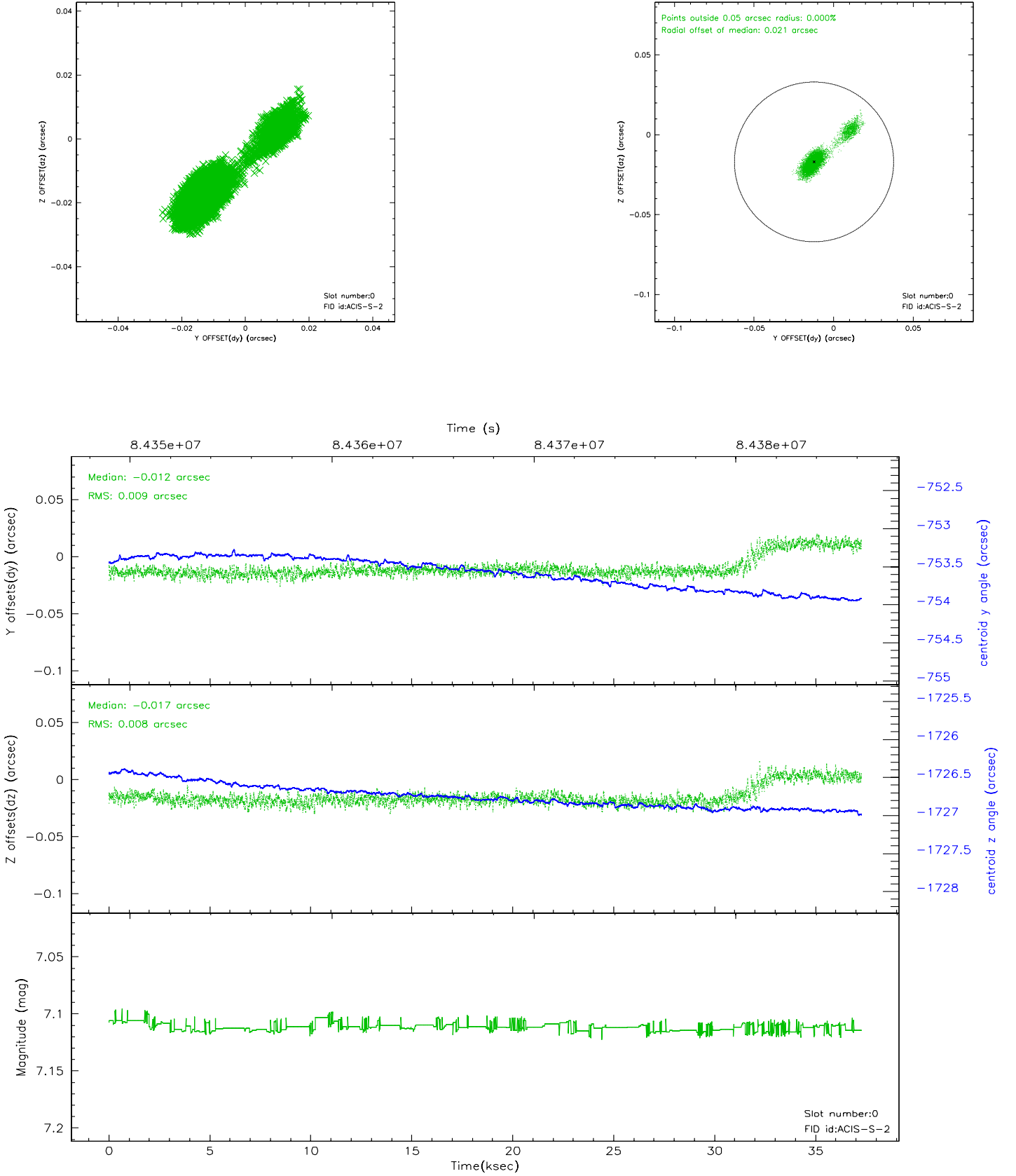


## 2.4.5 Slot 7

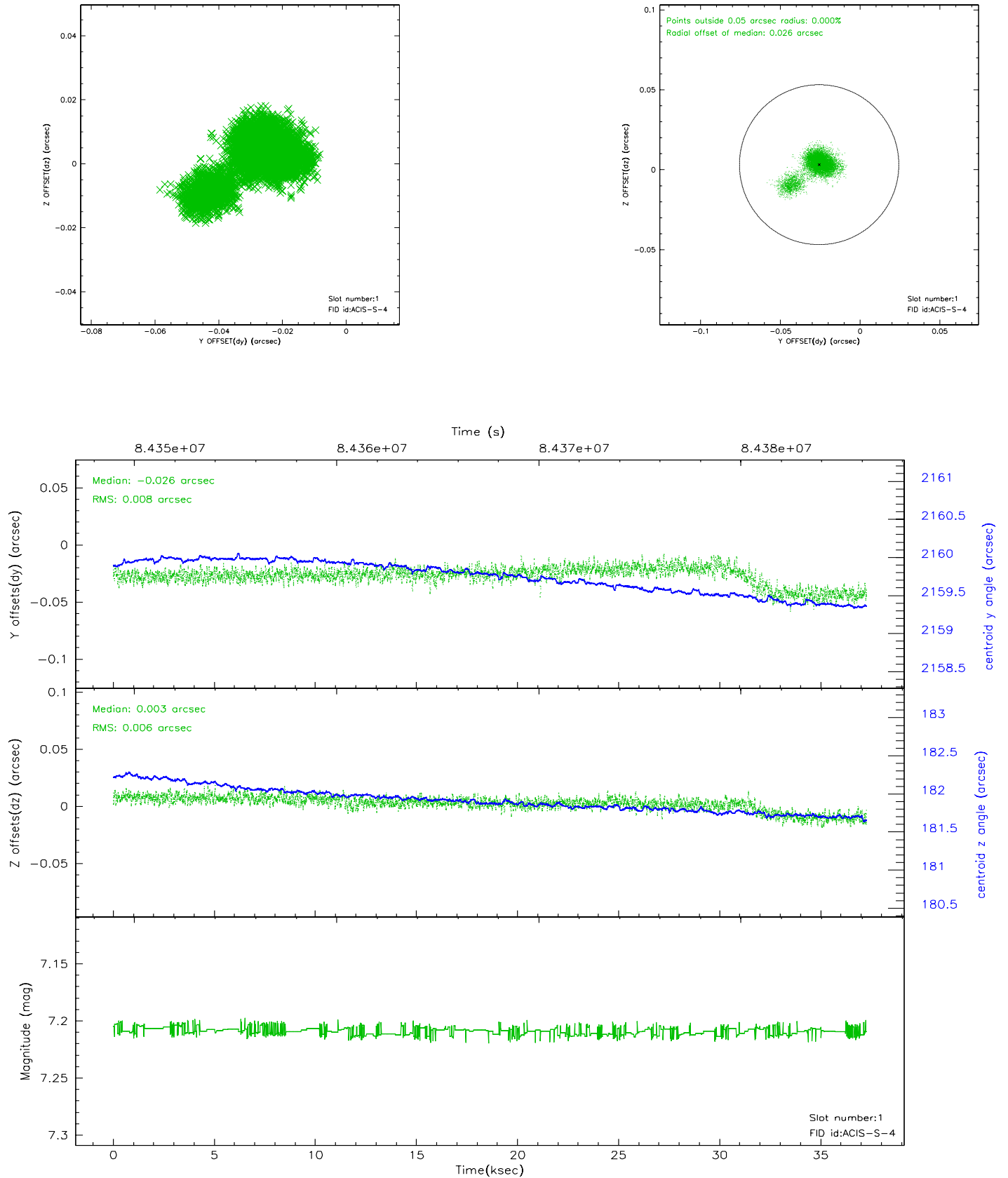


## 2.5 FID Slots

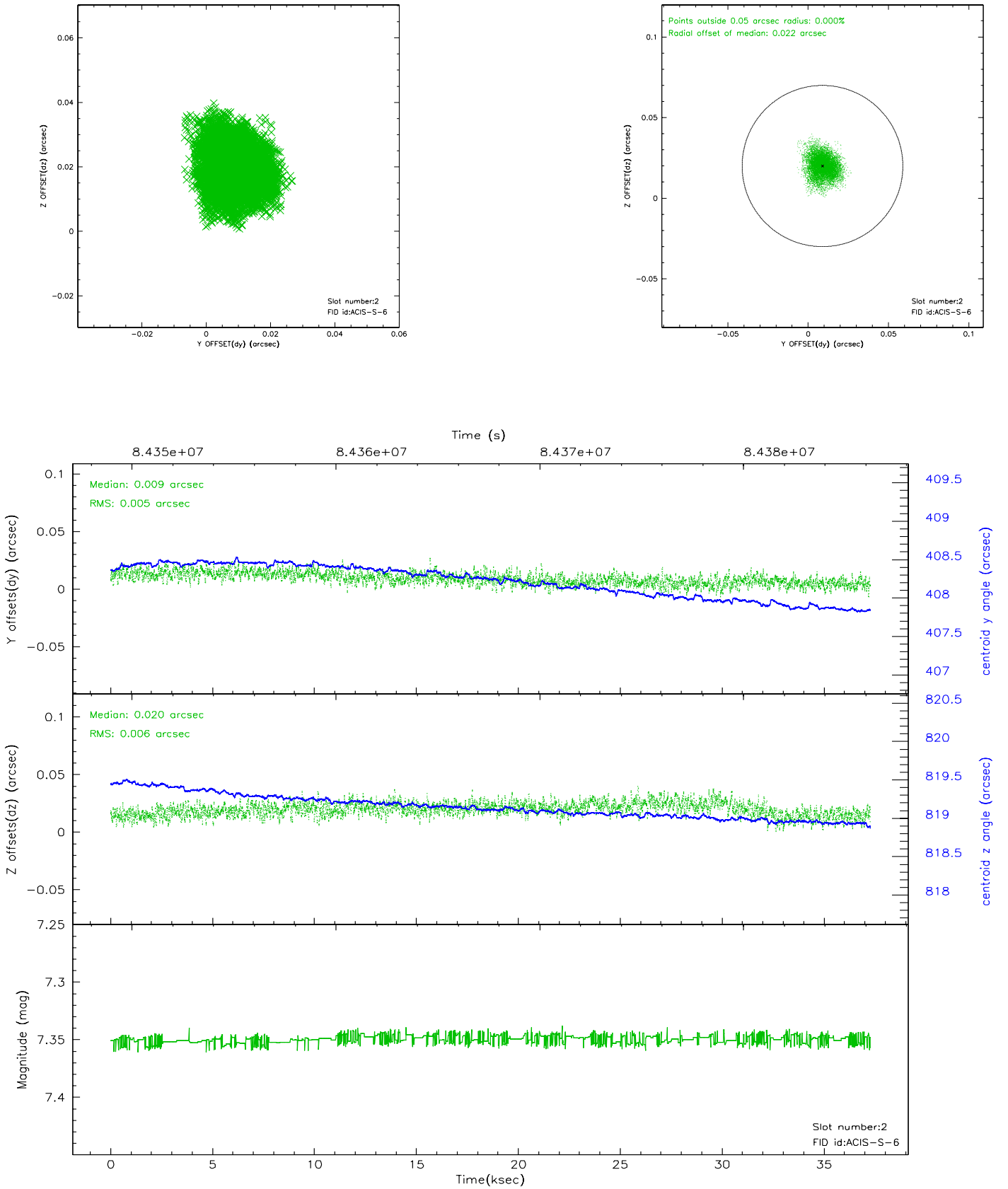
### 2.5.1 Slot 0



## 2.5.2 Slot 1

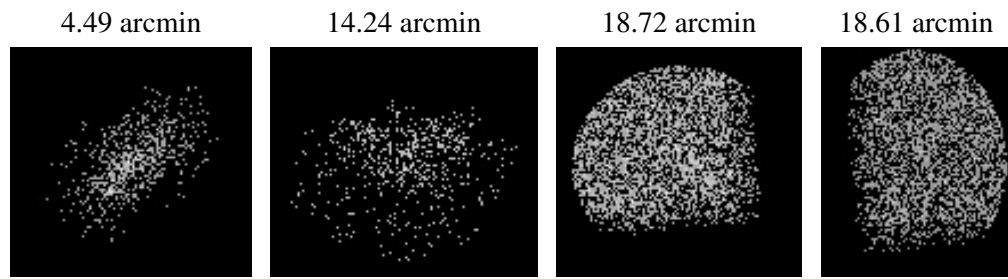


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2007.06.07 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 37.225     |

### A.2 Comments