

# V&V Reference Report

## L2 ASCDS Version : 7.6.7.1

Observation 5948 - L2 Version 002  
Chandra X-Ray Center

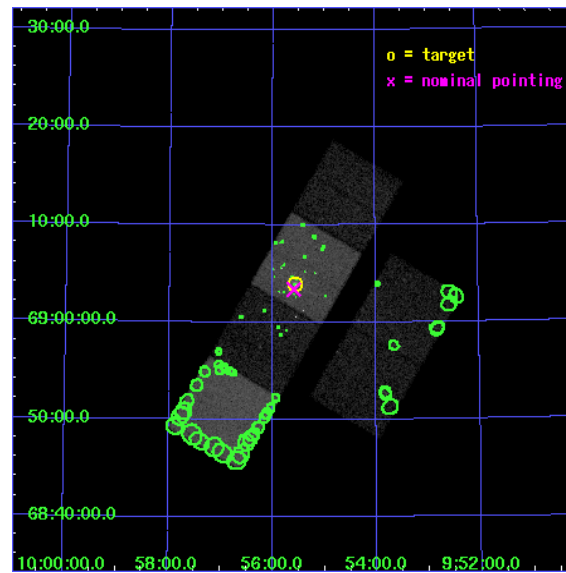
L2 Processing Date : Mar 11 2006

## 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

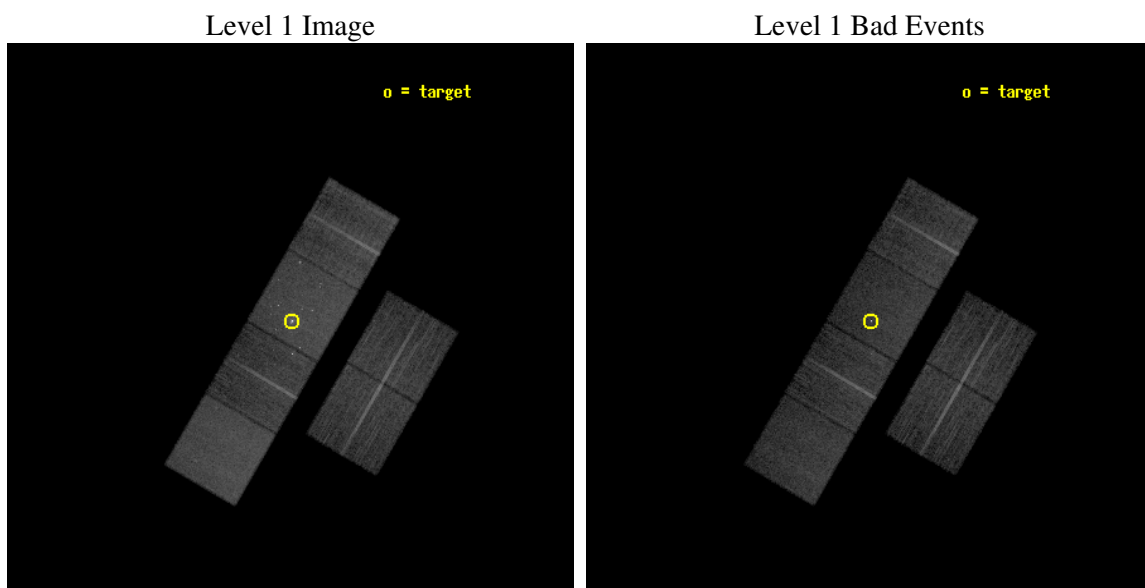
|          |   |
|----------|---|
| seq_num  | 600467  |
| obs_id   | 5948  |
| title    | An Unprecedented View of a Galaxy's Dynamic X-ray Source Population |
| observer | Dr. David Pooley  |
| object   | M81   |
| dtcycle  | 0   |
| cycle    | P   |
| ra_targ  | 148.888333  |
| dec_targ | 69.065306   |
| ra_nom   | 148.8976718936  |
| dec_nom  | 69.056260506952   |
| roll_nom | 300.14790287929   |
| revision | 2   |
| ontime   | 12182.399954617   |
| livetime | 12028.139071031   |
| ontime2  | 12182.399954617   |
| ontime3  | 12182.399954617   |
| ontime5  | 12182.399954617   |
| ontime6  | 12182.399954617   |
| ontime7  | 12182.399954617   |
| ontime8  | 12182.399954617   |
| l2events | 158313  |



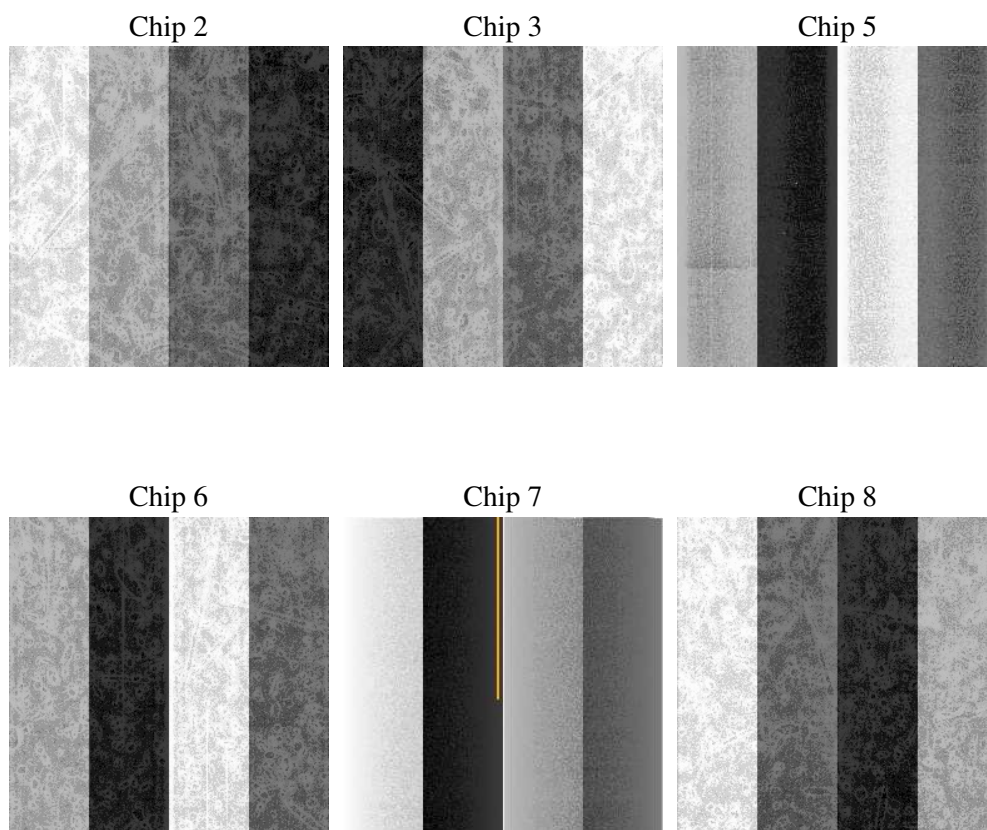
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 0                   |
| ascdsver | 7.6.7.1             |
| caldbver | 3.2.1               |
| date     | 2006-03-12T01:06:28 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 12000.000000    |
| ontime         | 13252.446086168 |
| ontime2        | 13252.446066231 |
| ontime3        | 13252.446086168 |
| ontime5        | 13252.446086168 |
| ontime6        | 13252.446086168 |
| ontime7        | 13252.446086168 |
| ontime8        | 13252.446086168 |
| l1events       | 749595          |

### 2.1.4 Events

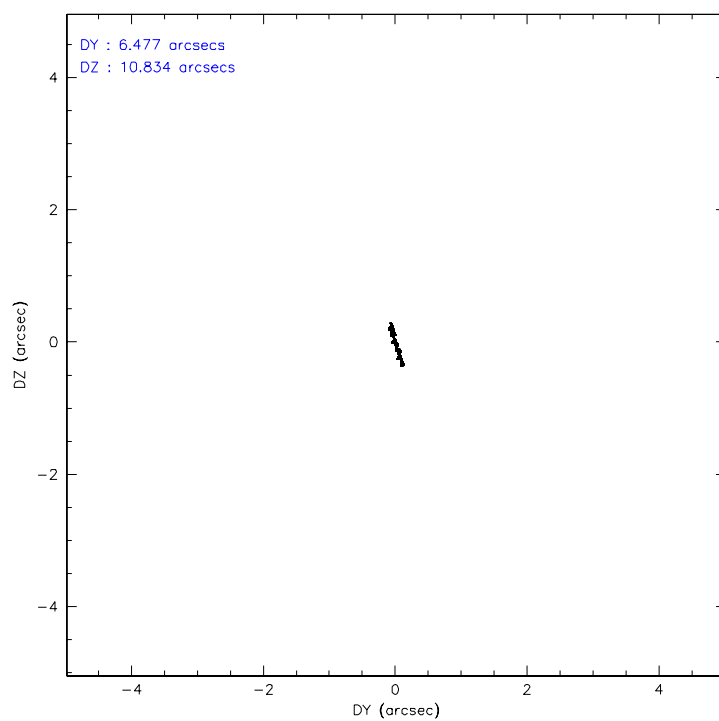
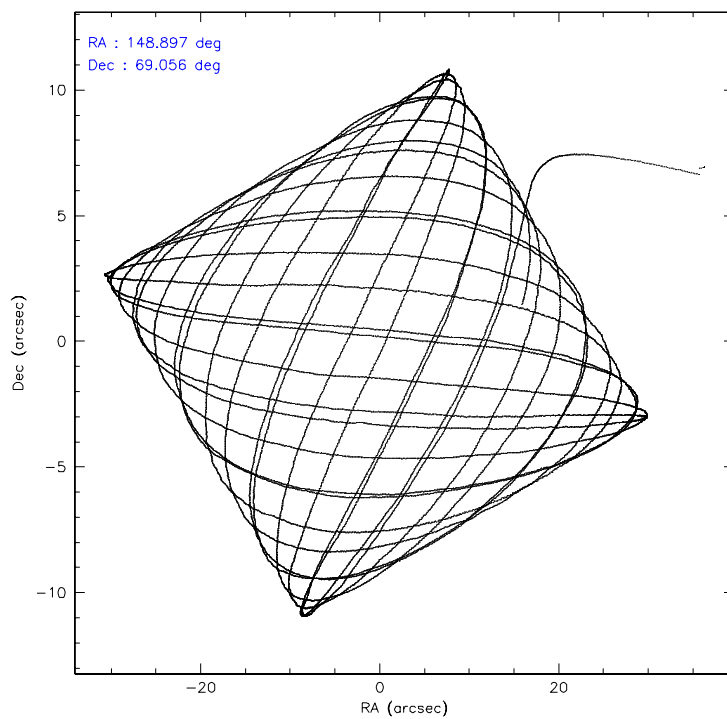
|                 | ccd 2  | ccd 3  | ccd 5  | ccd 6  | ccd 7  | ccd 8  |
|-----------------|--------|--------|--------|--------|--------|--------|
| level 1 events  | 103250 | 103719 | 152667 | 107154 | 153566 | 129239 |
| rejected events | 92039  | 92657  | 92470  | 93965  | 95585  | 103885 |
| rejected %      | 89%    | 89%    | 60%    | 87%    | 62%    | 80%    |

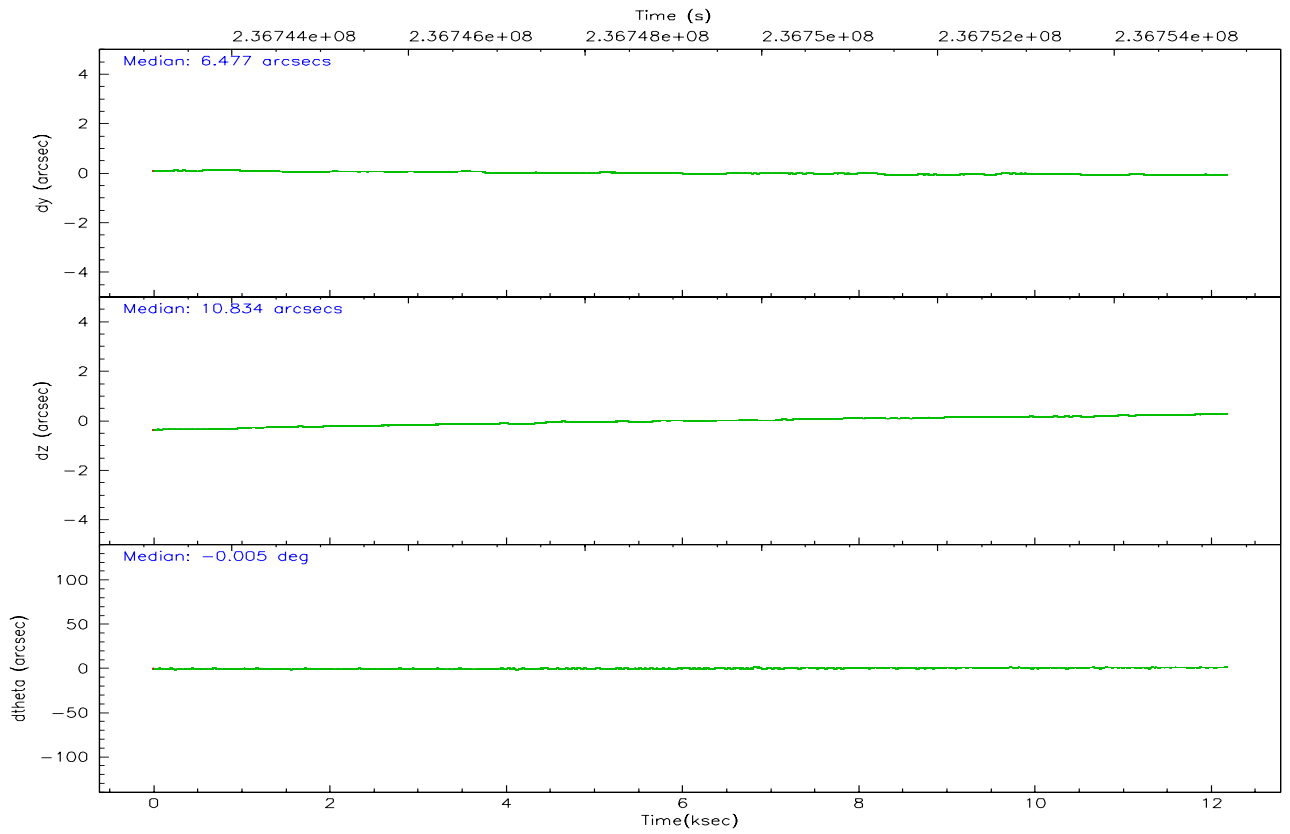
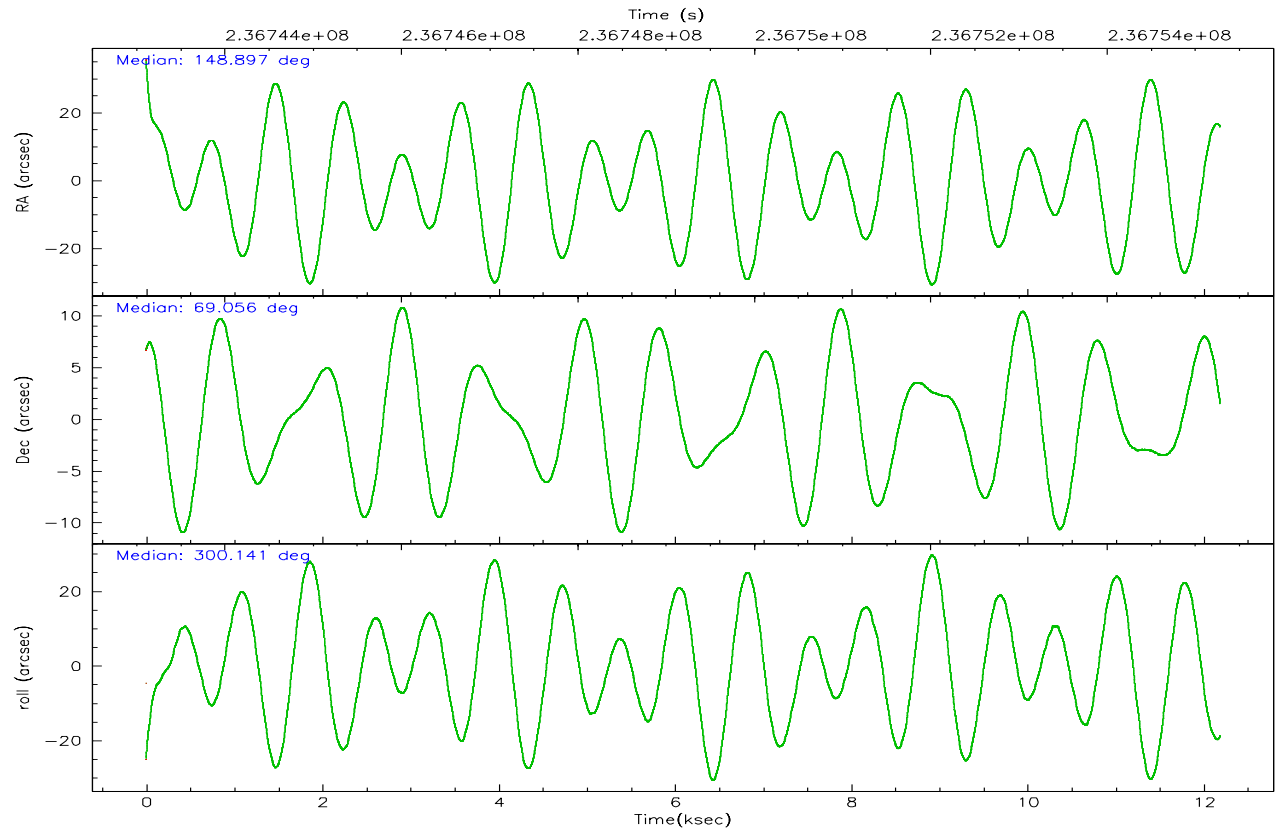
|                | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 5434  | 5216  | 2931  | 6468  | 5183  | 8950  |
|                | 5%    | 5%    | 1%    | 6%    | 3%    | 6%    |
| grade 1 events | 60    | 65    | 118   | 74    | 176   | 82    |
|                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
| grade 2 events | 2468  | 2253  | 20776 | 2708  | 15672 | 6139  |
|                | 2%    | 2%    | 13%   | 2%    | 10%   | 4%    |
| grade 3 events | 1191  | 1171  | 1456  | 1273  | 3534  | 2958  |
|                | 1%    | 1%    | 0%    | 1%    | 2%    | 2%    |
| grade 4 events | 1112  | 1209  | 1320  | 1223  | 3409  | 2766  |
|                | 1%    | 1%    | 0%    | 1%    | 2%    | 2%    |
| grade 5 events | 3992  | 4707  | 7407  | 4772  | 9683  | 6501  |
|                | 3%    | 4%    | 4%    | 4%    | 6%    | 5%    |
| grade 6 events | 1996  | 2140  | 39297 | 2505  | 34681 | 6977  |
|                | 1%    | 2%    | 25%   | 2%    | 22%   | 5%    |
| grade 7 events | 86997 | 86958 | 79362 | 88131 | 81228 | 94866 |
|                | 84%   | 83%   | 51%   | 82%   | 52%   | 73%   |

## 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                | On-chip summing requested       | N         | N       |
| Observation mode                  | POINTING            | POINTING             | Subarray requested              | NONE      | NONE    |
| Pointing RA                       | 148.831001          | 148.8976718935983    | Alternating exposures requested | N         | N       |
| Pointing Dec                      | 69.069437           | 69.05626050695243    | Primary exposure time           | 0.000000  | 3.2     |
| Pointing Roll                     | 300.053551          | 300.147902879292     |                                 |           |         |
| 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            | 236743284.184000    | 236741677.80512      |                                 |           |         |
| Observation start date            | 2005-07-03T02:00:20 | 2005-07-03T01:34:37  |                                 |           |         |
| Observation end time              | 236755284.184000    | 236756389.11829      |                                 |           |         |
| Observation end date              | 2005-07-03T05:20:20 | 2005-07-03T05:39:49  |                                 |           |         |
| Read mode                         | TIMED               | TIMED                |                                 |           |         |

## 2.3 Aspect





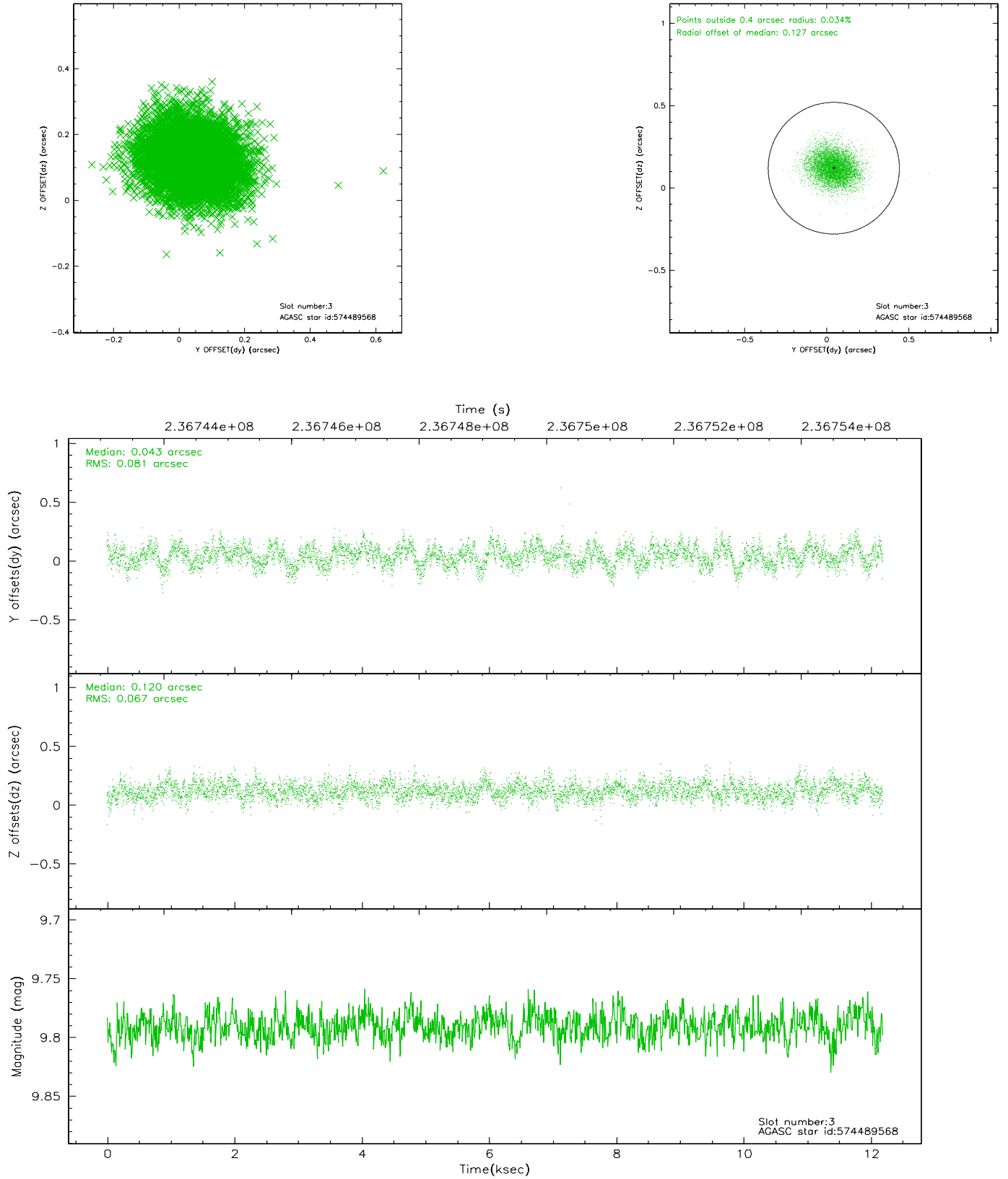
### Slot Statistics

| slot | status | id        | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|-------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-S-1  | 7.18  | 2972  | -0.016 | -0.039 | 0.011 | 0.018 | 0.000000   | 0.000000  | 936.79   | -1727.76 |
| 1    | FID    | ACIS-S-4  | 7.20  | 2973  | 0.026  | 0.039  | 0.008 | 0.013 | 0.000000   | 0.000000  | 2154.47  | 176.06   |
| 2    | FID    | ACIS-S-5  | 7.23  | 2971  | -0.037 | 0.013  | 0.006 | 0.010 | 0.000000   | 0.000000  | -1811.57 | 170.09   |
| 3    | GUIDE  | 574489568 | 9.79  | 5942  | 0.043  | 0.120  | 0.112 | 0.180 | 147.223974 | 69.438157 | -2188.98 | -1080.13 |
| 4    | GUIDE  | 574490960 | 9.72  | 5936  | -0.026 | -0.015 | 0.142 | 0.225 | 148.185918 | 69.658768 | -2244.37 | 365.75   |
| 5    | GUIDE  | 574491280 | 9.35  | 5945  | -0.015 | -0.066 | 0.084 | 0.137 | 148.611567 | 69.450135 | -1325.55 | 446.07   |
| 6    | GUIDE  | 574497600 | 10.45 | 5937  | 0.033  | -0.040 | 0.179 | 0.312 | 147.824120 | 68.451903 | 1248.55  | -2259.69 |
| 7    | GUIDE  | 574491184 | 9.06  | 5942  | -0.037 | 0.001  | 0.076 | 0.123 | 148.582453 | 69.768699 | -2334.08 | 993.05   |

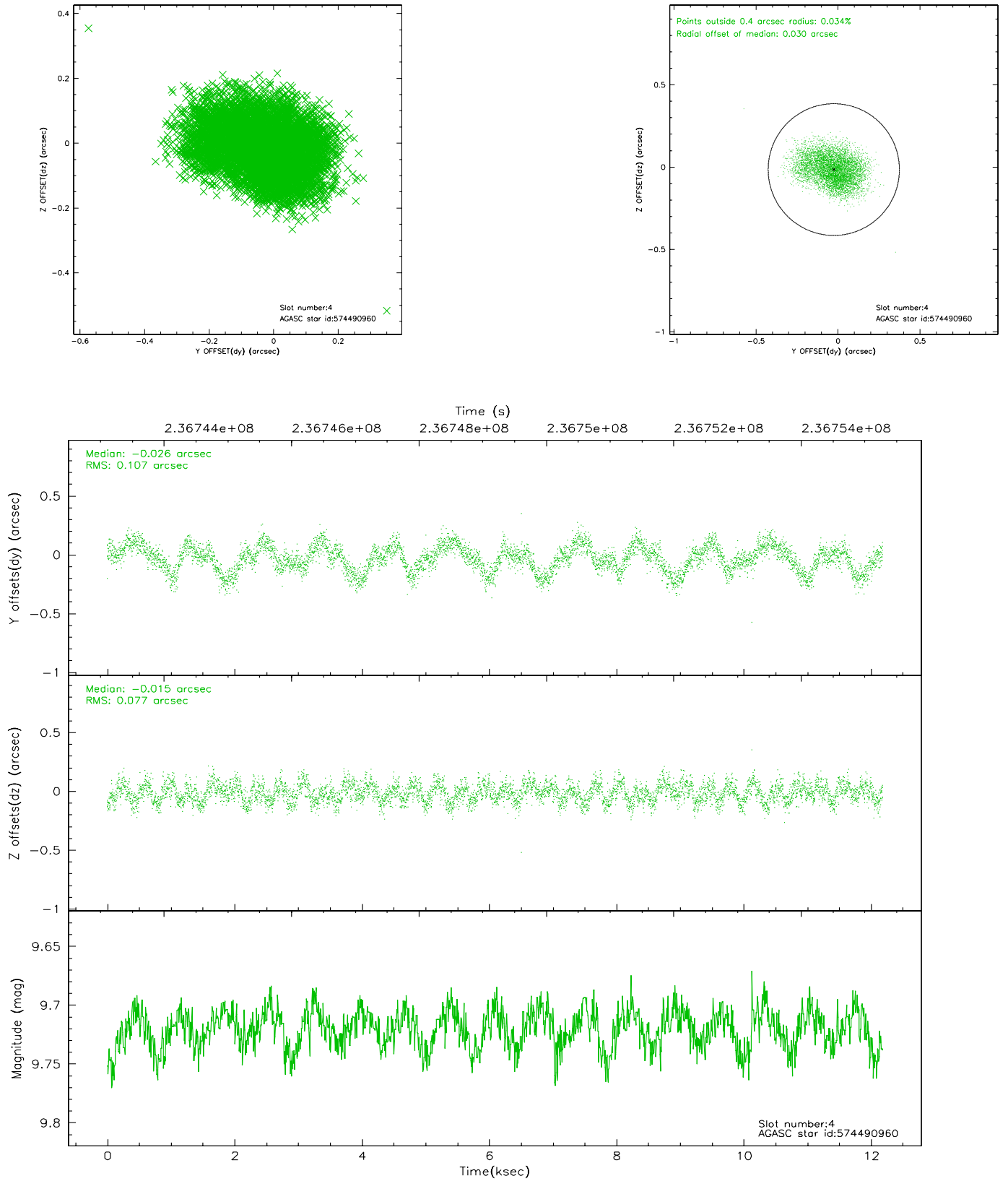


## 2.4 Star Slots

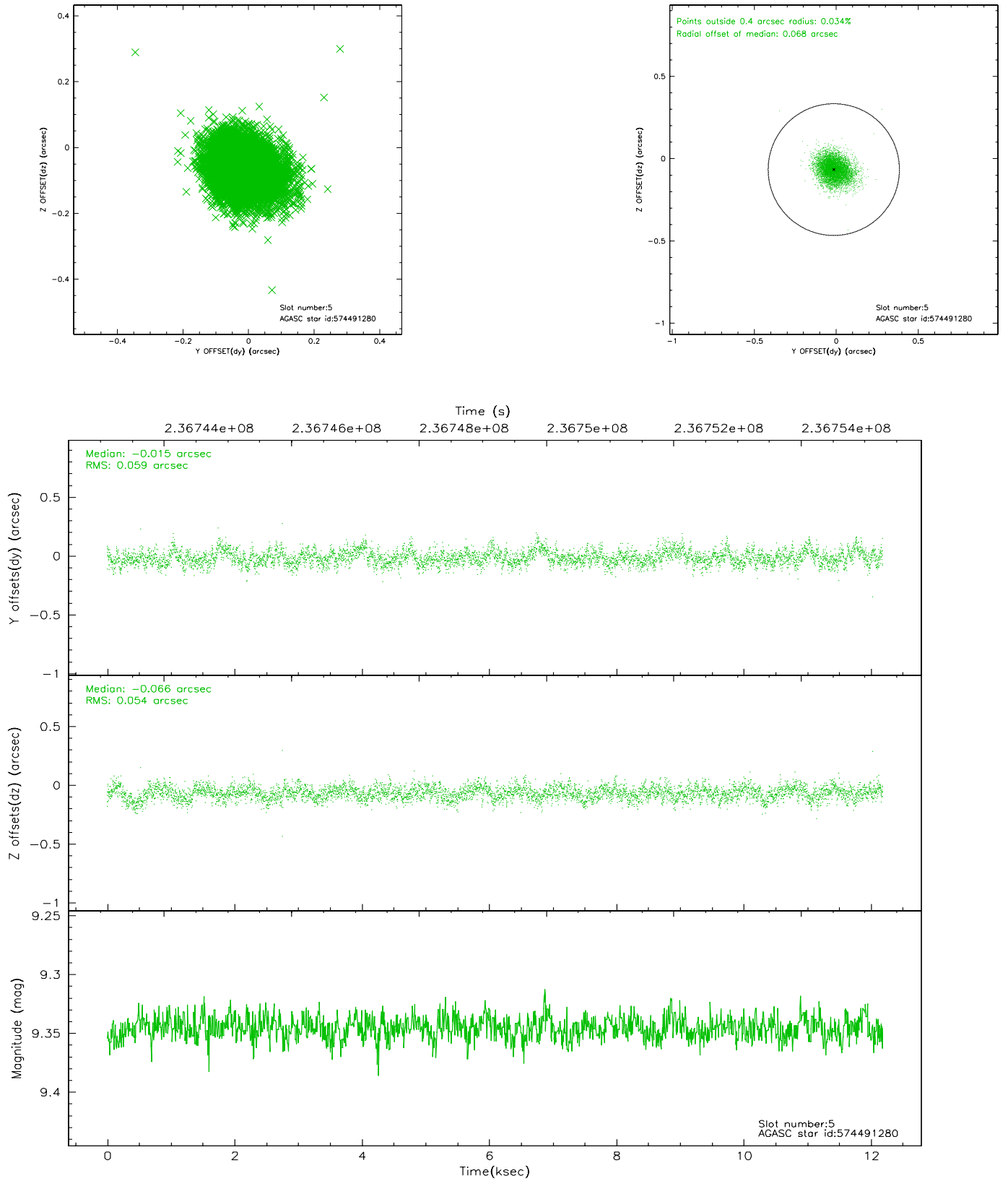
### 2.4.1 Slot 3



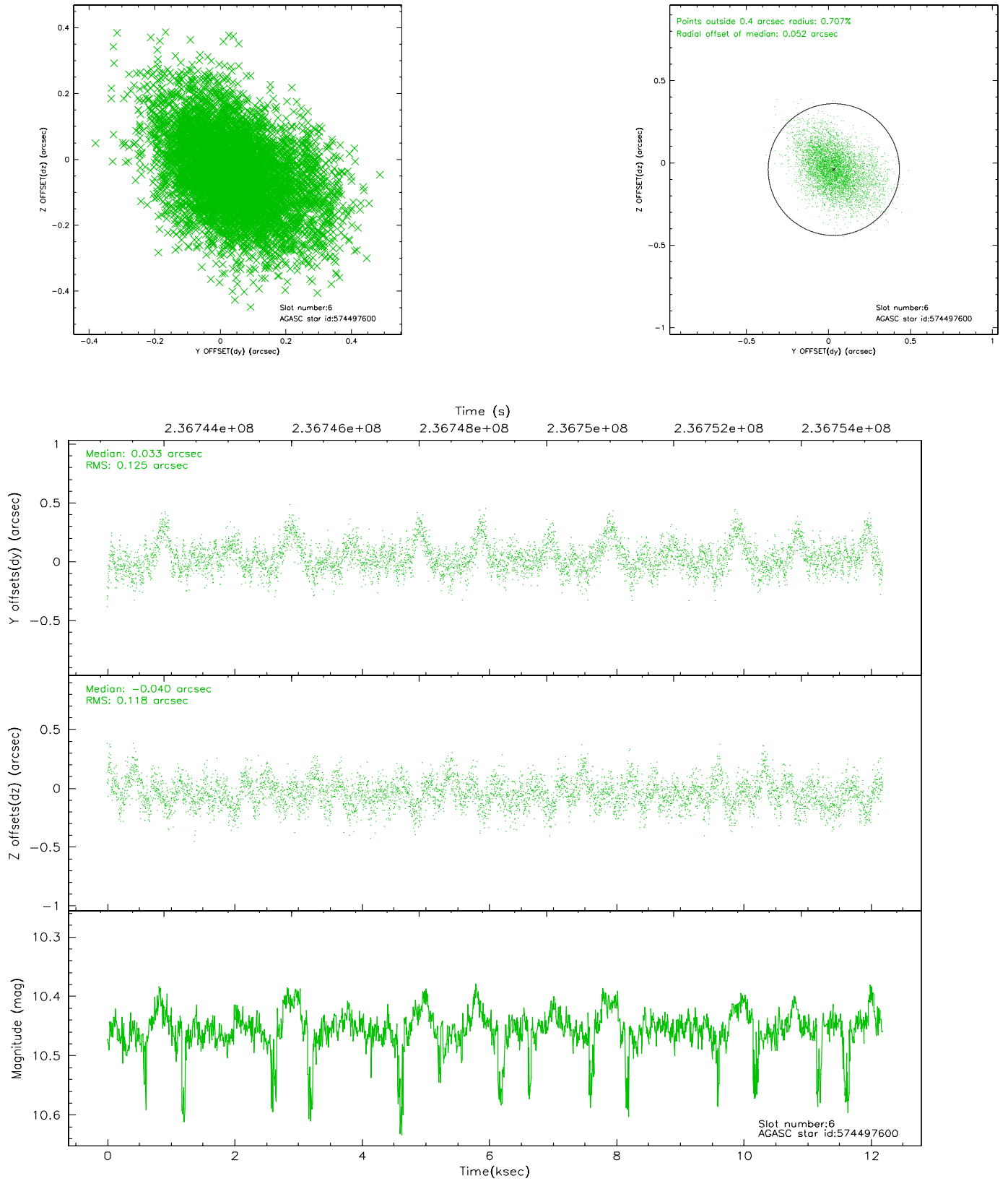
## 2.4.2 Slot 4



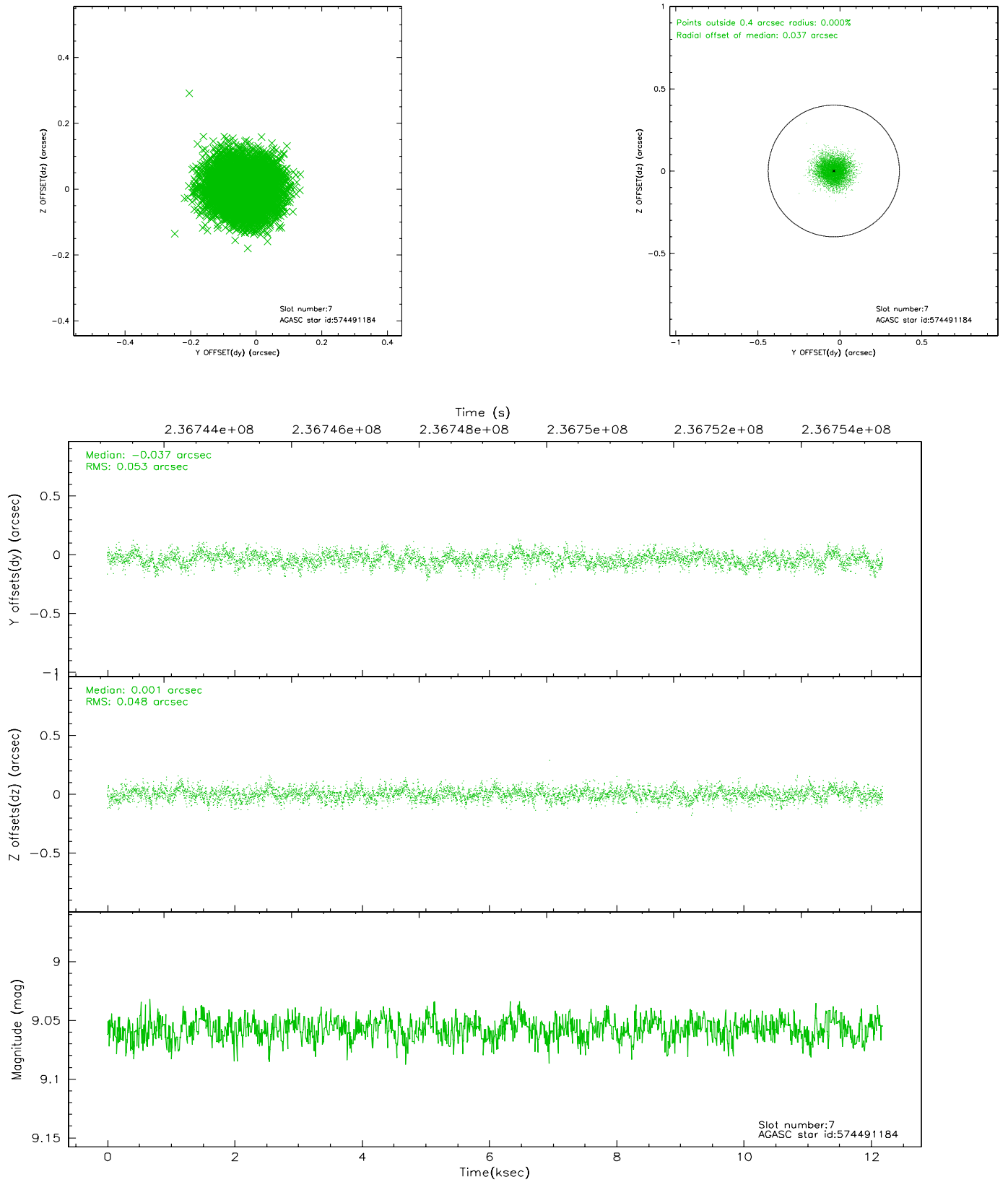
### 2.4.3 Slot 5



## 2.4.4 Slot 6

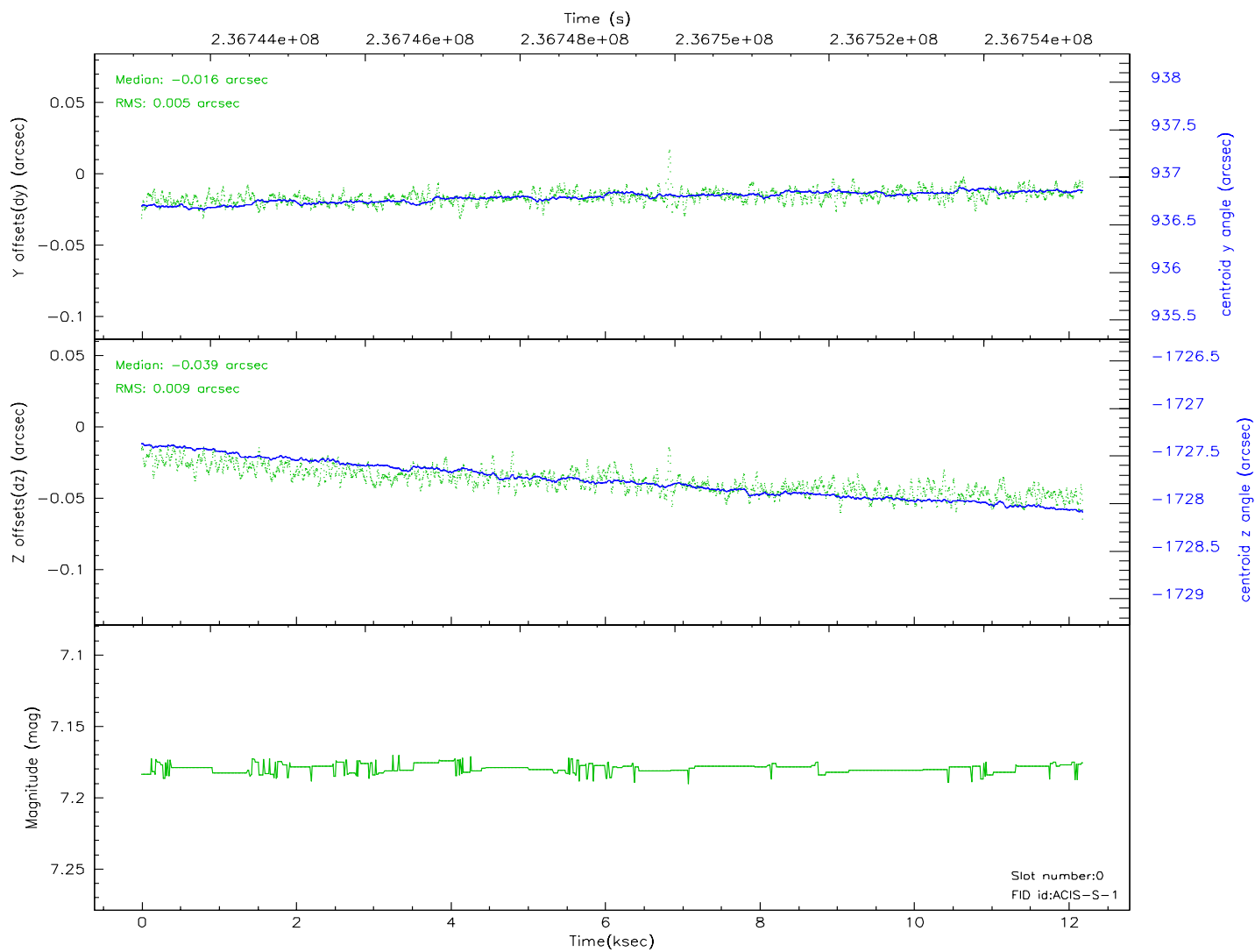
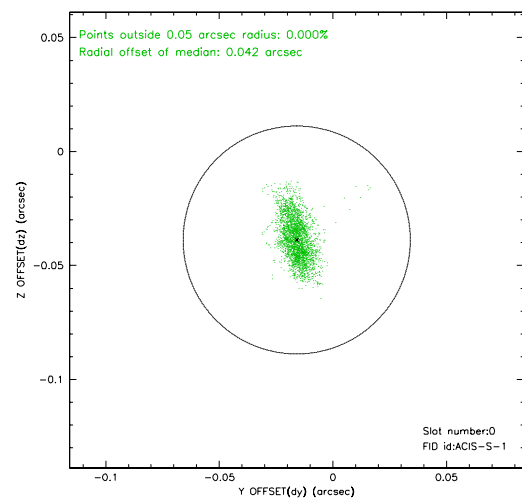
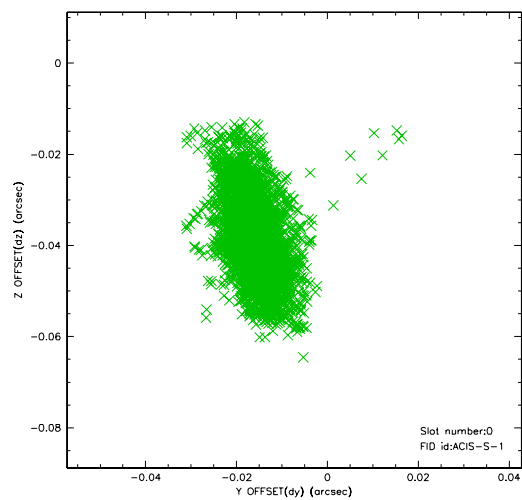


## 2.4.5 Slot 7

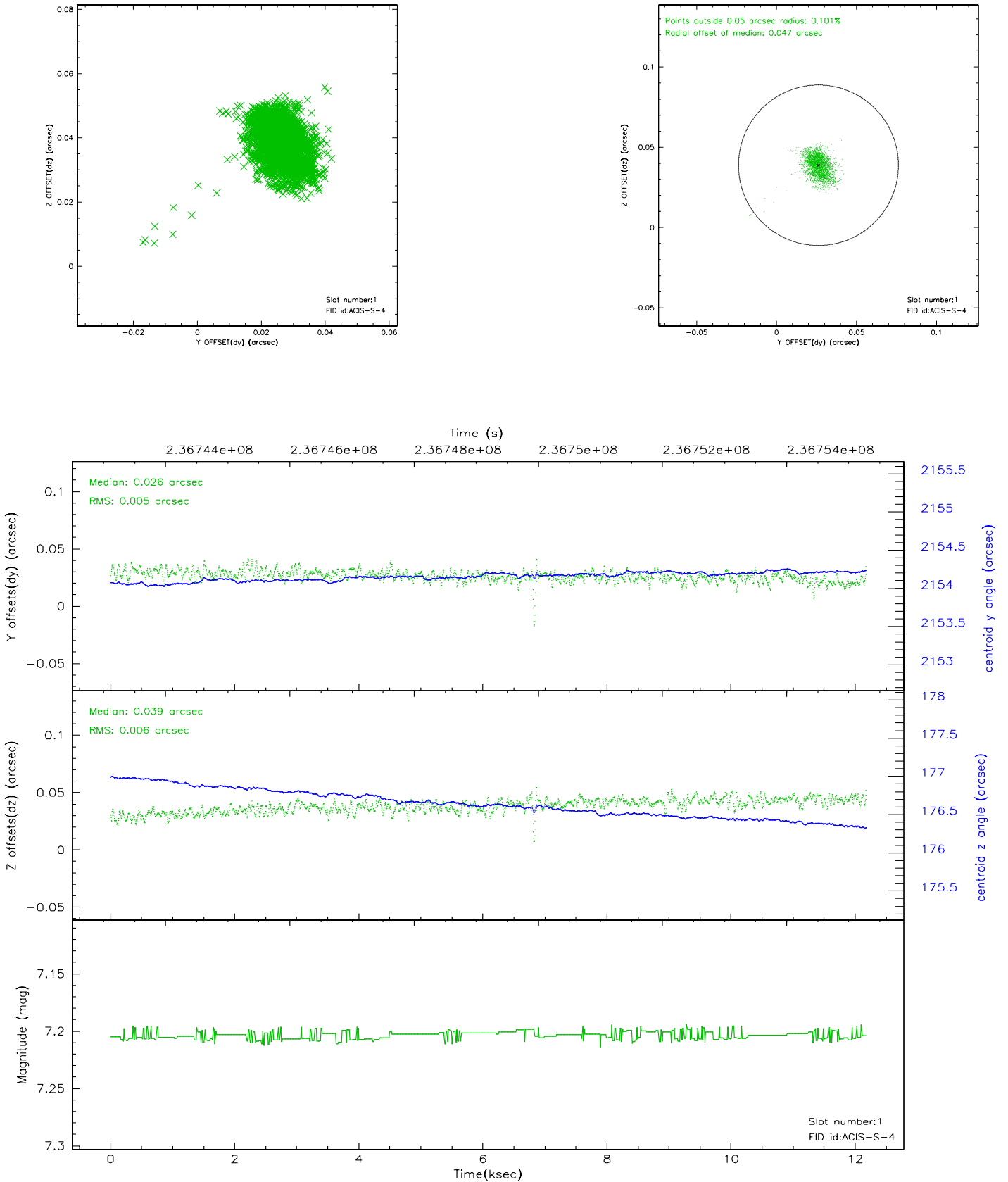


## 2.5 FID Slots

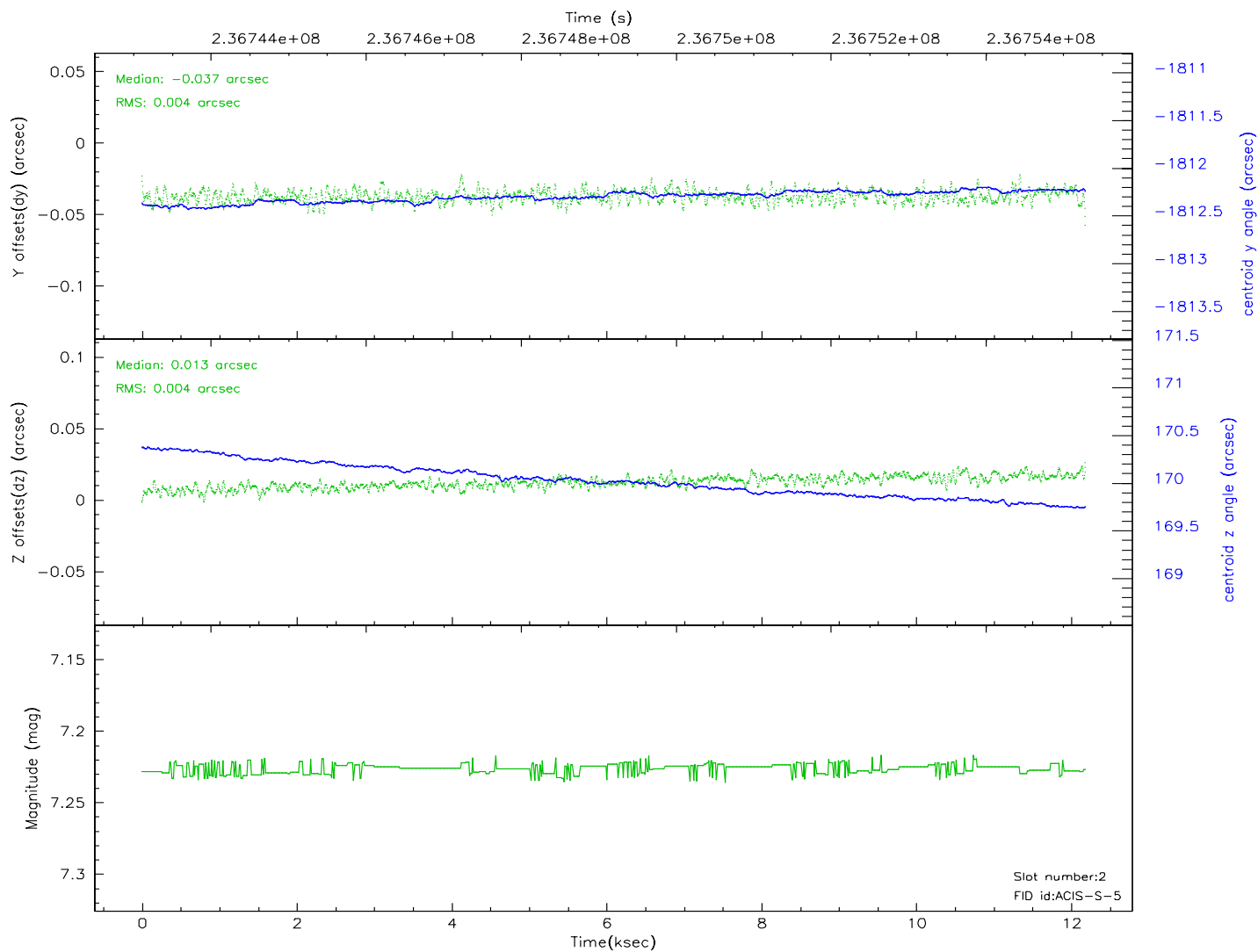
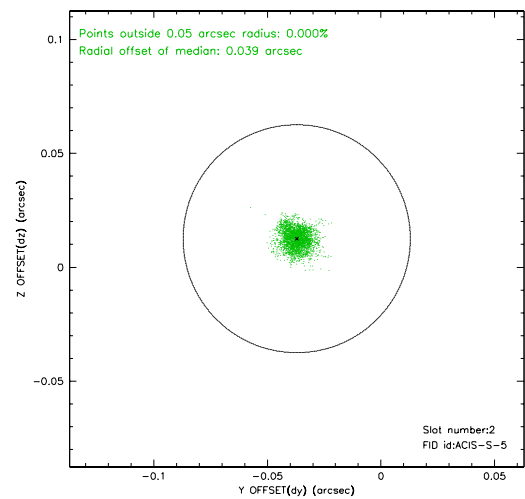
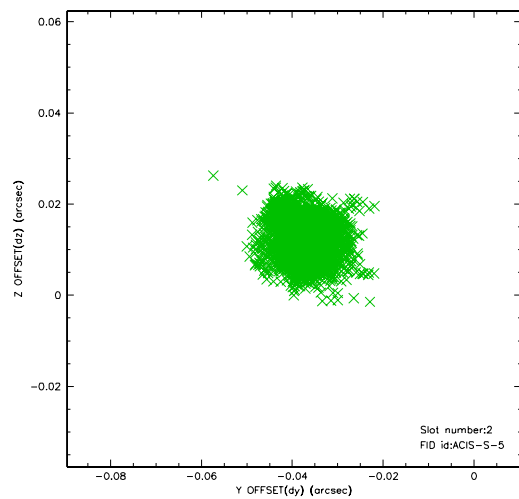
### 2.5.1 Slot 0



## 2.5.2 Slot 1

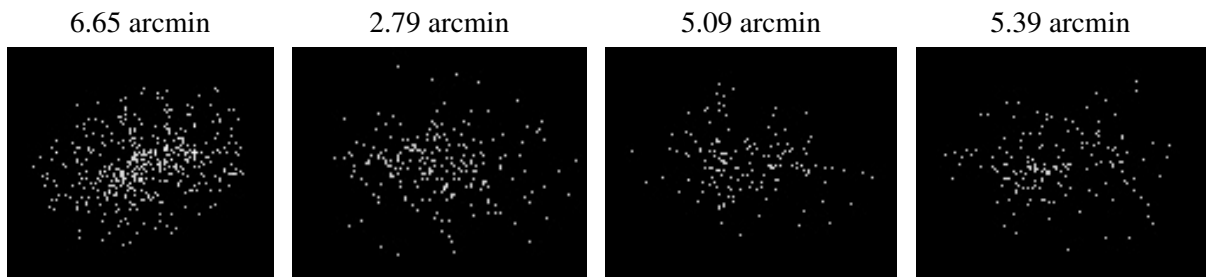


### 2.5.3 Slot 2





### 3 Point Sources



## A Summary

### A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2006.03.13    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 12.18239      |

### A.2 Comments