

# V&V Reference Report

## L2 ASCDS Version : 7.6.10

Observation 2173 - L2 Version 001  
Chandra X-Ray Center

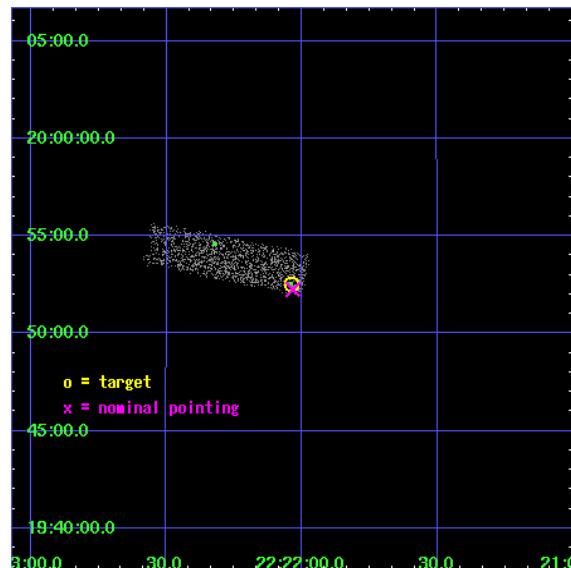
L2 Processing Date : Jan 12 2007

## 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

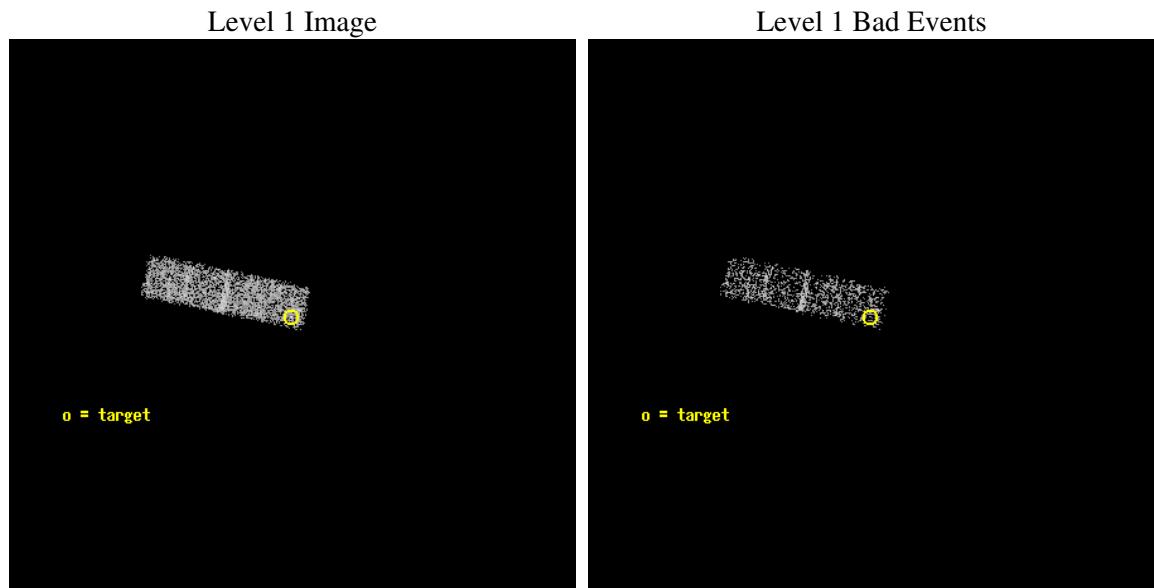
|          |                                      |
|----------|--------------------------------------|
| seq_num  | 700363                               |
| obs_id   | 2173                                 |
| title    | RED QUASARS AND THE X-RAY BACKGROUND |
| observer | Dr. BELINDA WILKES                   |
| object   | 2MASSJ222202+1952                    |
| dtycycle | 0                                    |
| cycle    | P                                    |
| ra_targ  | 335.509167                           |
| dec_targ | 19.875417                            |
| ra_nom   | 335.50825824567                      |
| dec_nom  | 19.870979231955                      |
| roll_nom | 281.75022963955                      |
| revision | 2                                    |
| ontime   | 2534.3999905586                      |
| livetime | 2410.7295639291                      |
| ontime3  | 2534.3999905586                      |
| l2events | 1658                                 |



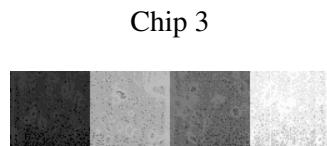
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |
|----------|---------------------|
| obi_num  | 5                   |
| ascdsver | 7.6.10              |
| caldbver | 3.3.0               |
| date     | 2007-01-12T09:06:05 |
| revision | 2                   |

|                |                 |
|----------------|-----------------|
| sched_exp_time | 2200.000000     |
| ontime         | 2534.3999905586 |
| ontime3        | 2534.3999905586 |
| l1events       | 9442            |

### 2.1.4 Events

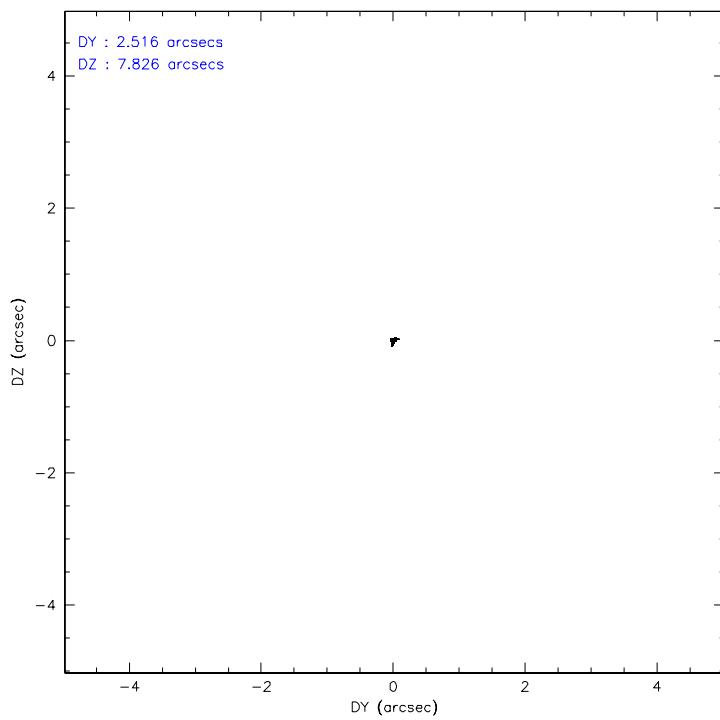
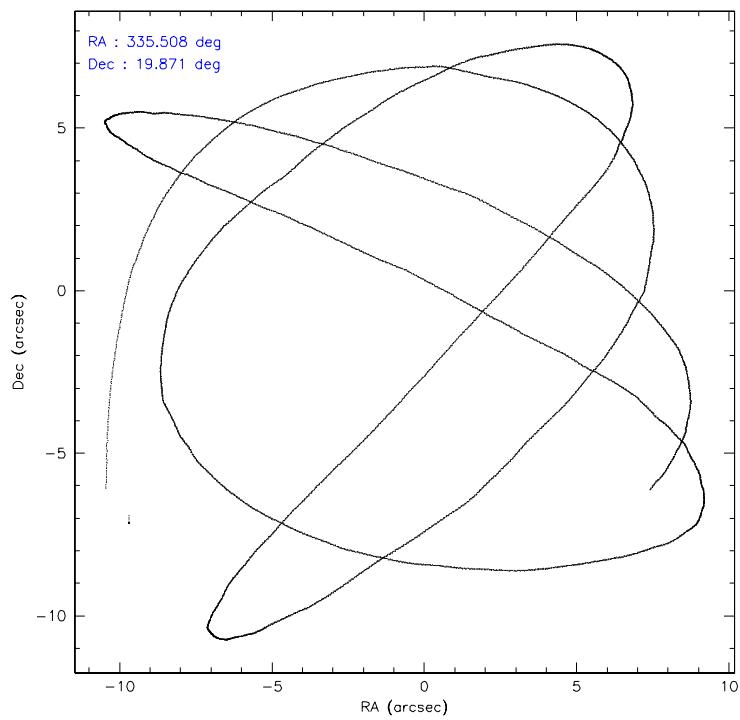
| ccd 3           |      |
|-----------------|------|
| level 1 events  | 9442 |
| rejected events | 7645 |
| rejected %      | 80%  |

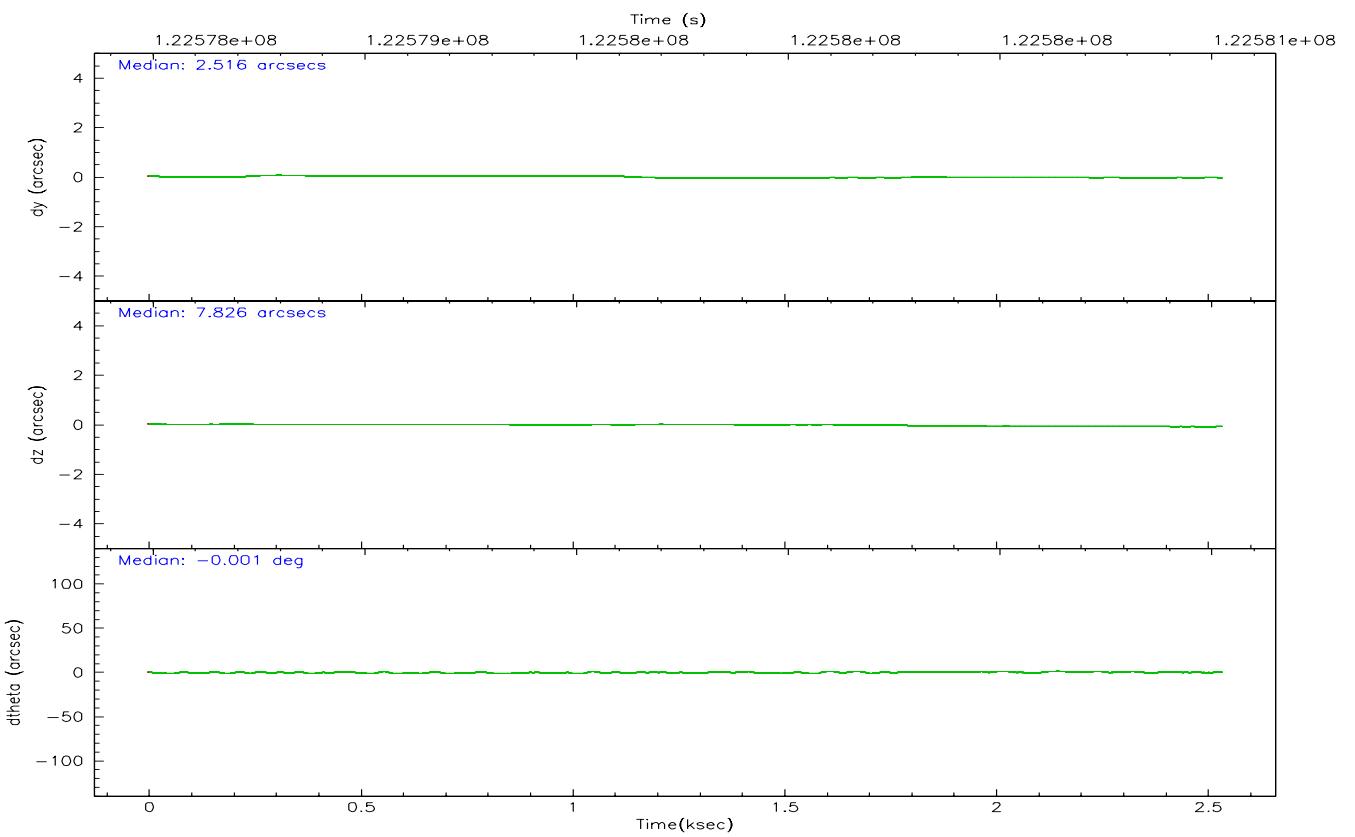
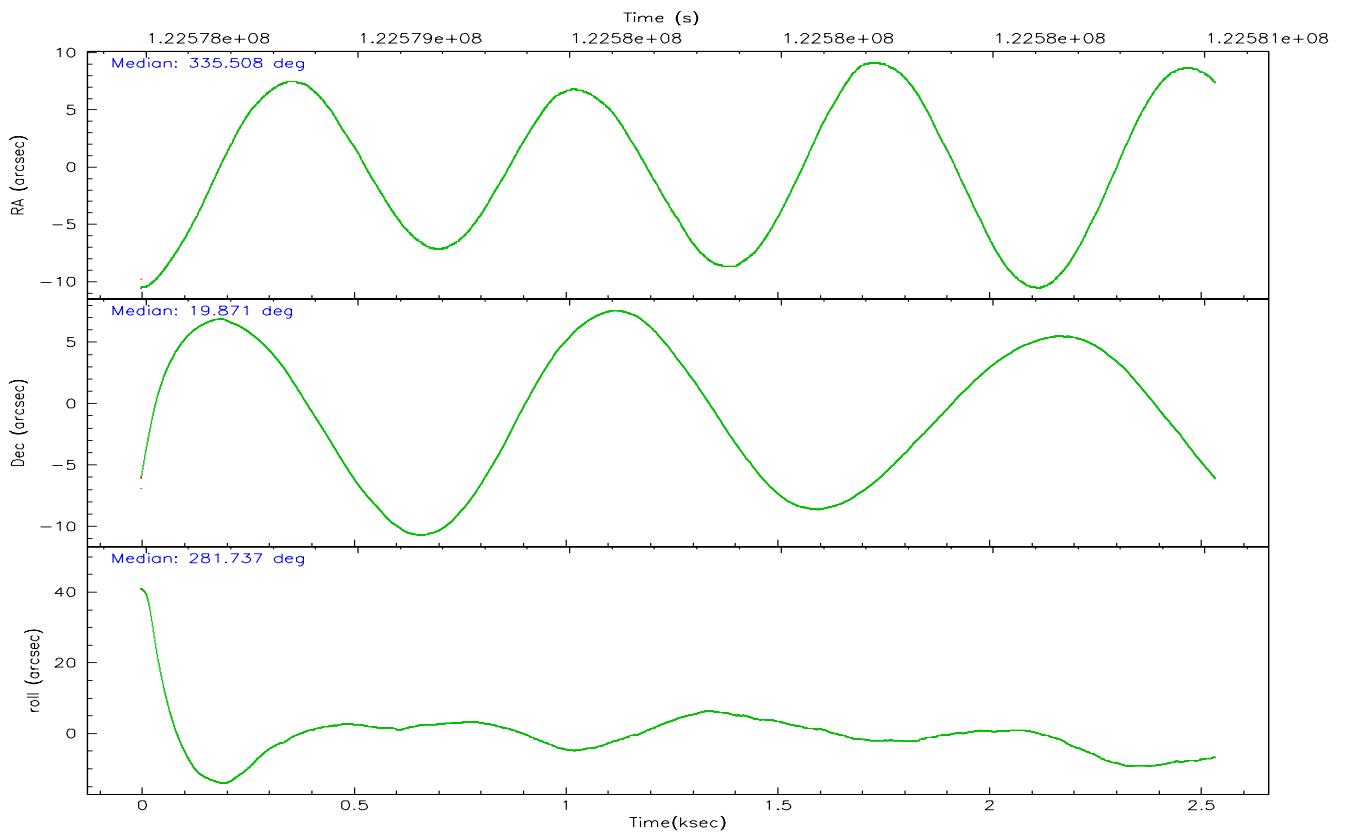
| ccd 3          |      |
|----------------|------|
| grade 0 events | 822  |
|                | 8%   |
| grade 1 events | 1    |
|                | 0%   |
| grade 2 events | 569  |
|                | 6%   |
| grade 3 events | 131  |
|                | 1%   |
| grade 4 events | 141  |
|                | 1%   |
| grade 5 events | 211  |
|                | 2%   |
| grade 6 events | 330  |
|                | 3%   |
| grade 7 events | 7237 |
|                | 76%  |

## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 6         | 6       |
| Detector                          | ACIS-3              | ACIS-3                | Obspar file type                      | PREDICTED | ACTUAL  |
| Grating                           | NONE                | NONE                  | Obspar update status                  | NONE      | UPDATED |
| Data mode                         | VFAINT              | VFAINT                | Number of optional ACIS chips dropped | 0         | 0       |
| Observation mode                  | POINTING            | POINTING              | On-chip summing requested             | N         | N       |
| Pointing RA                       | 335.488728          | 335.5082582456702     | Subarray requested                    | 1/4       | 1/4     |
| Pointing Dec                      | 19.891225           | 19.87097923195479     | Subarray start row                    | 0         | 769     |
| Pointing Roll                     | 281.547940          | 281.7502296395498     | Subarray row count                    | 1024      | 256     |
| SIM focus pos (mm)                | -0.782348           | -0.7809083437167272   | Alternating exposures requested       | N         | N       |
| SIM defocus (mm)                  | 0                   | 0.001439871863259334  | Primary exposure time                 | 0.000000  | 0.8     |
| SIM translation stage pos (mm)    | -233.592463         | -233.5874344608287    |                                       |           |         |
| SIM translation stage offset (mm) | 0                   | -0.005018542100998502 |                                       |           |         |
| Observation start time            | 122578821.184000    | 122577783.80306       |                                       |           |         |
| Observation start date            | 2001-11-19T17:39:17 | 2001-11-19T17:23:03   |                                       |           |         |
| Observation end time              | 122581021.184000    | 122581615.25321       |                                       |           |         |
| Observation end date              | 2001-11-19T18:15:57 | 2001-11-19T18:26:55   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect



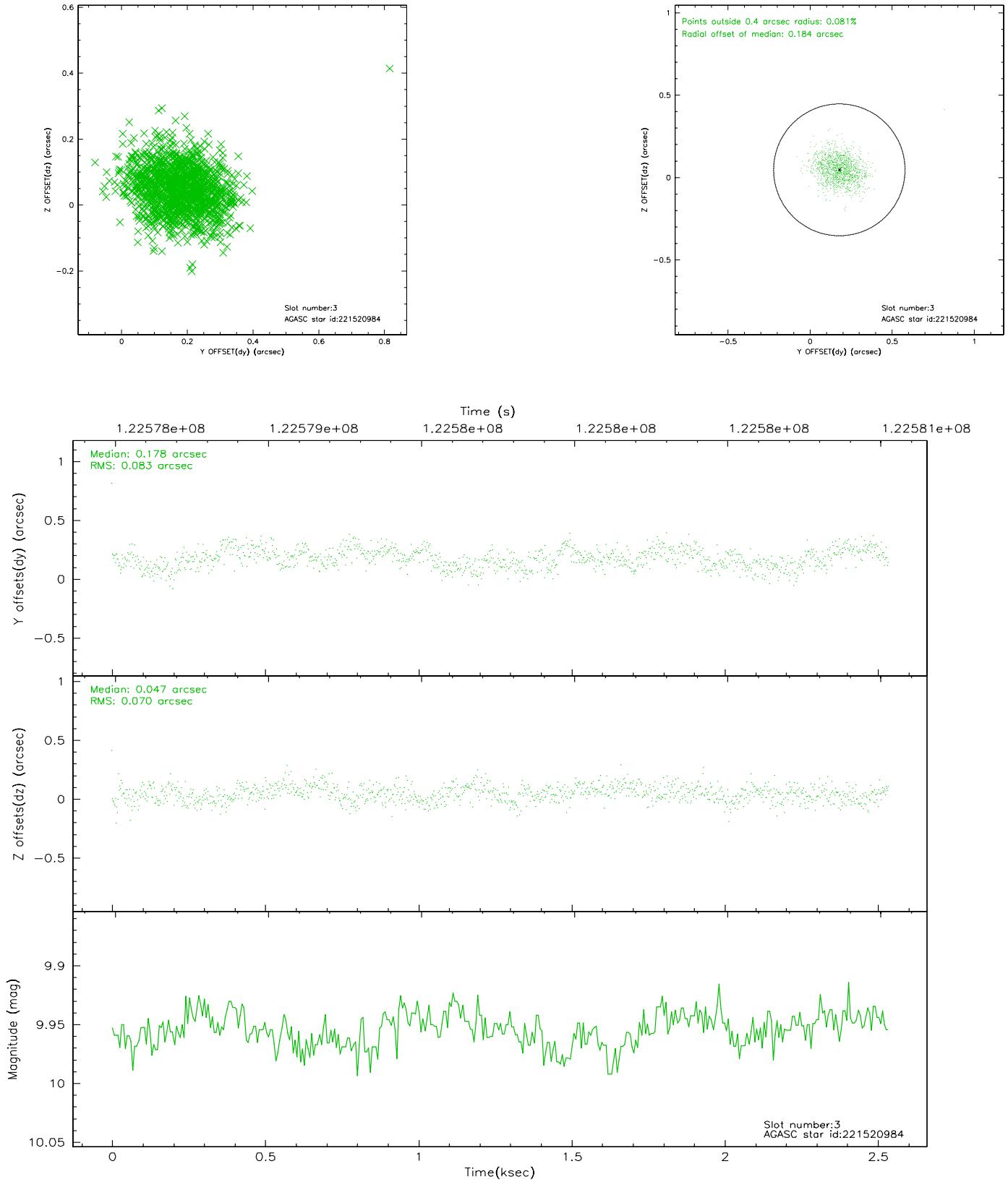


### Slot Statistics

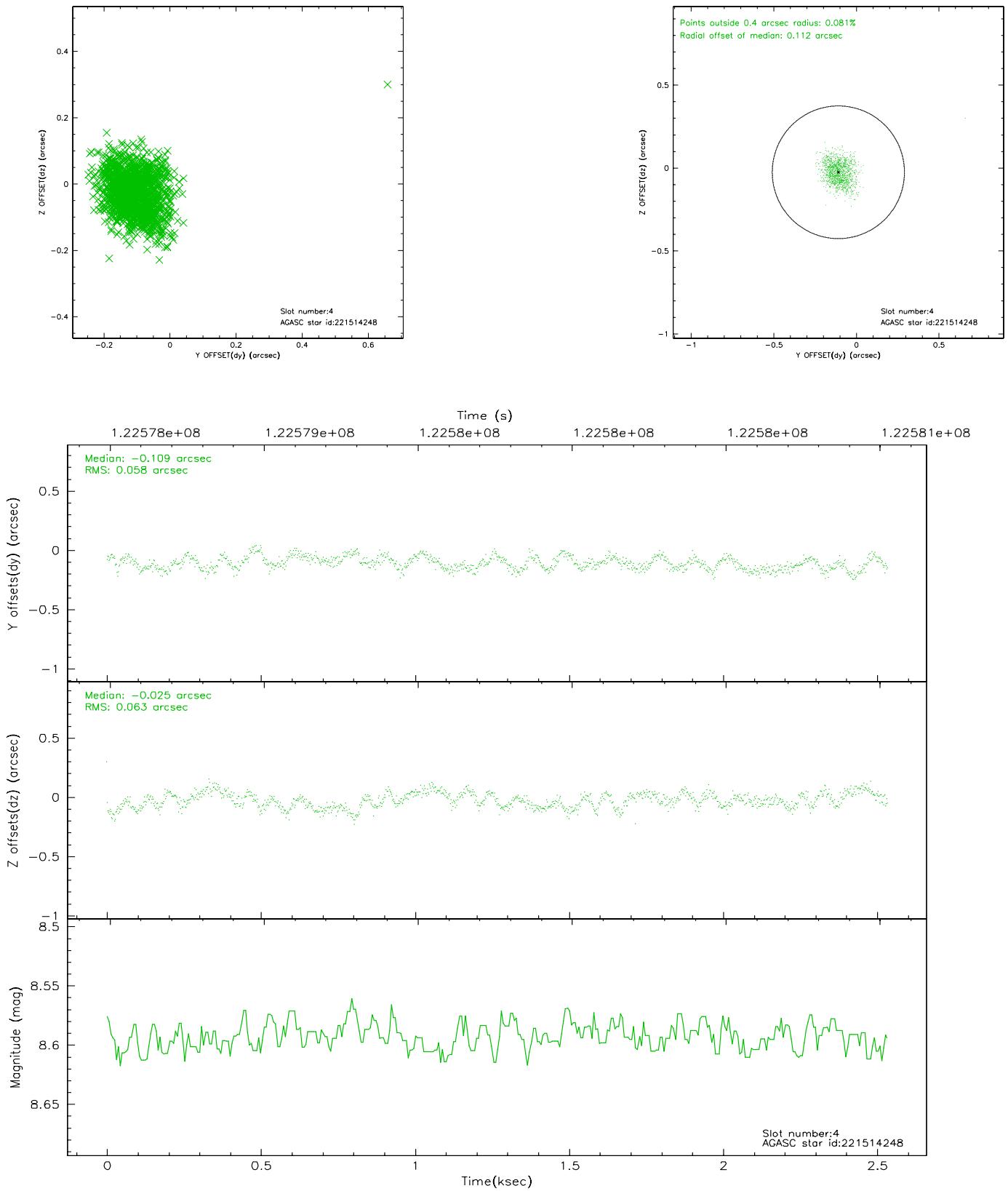
| slot | status | id        | mag   | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|-------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-I-1  | 7.24  | 619   | -0.047 | 0.085  | 0.006 | 0.010 | 0.000000   | 0.000000  | 937.22   | -831.16  |
| 1    | FID    | ACIS-I-5  | 7.23  | 619   | 0.006  | 0.031  | 0.006 | 0.011 | 0.000000   | 0.000000  | -1809.38 | 1065.05  |
| 2    | FID    | ACIS-I-6  | 7.26  | 619   | -0.050 | -0.045 | 0.006 | 0.009 | 0.000000   | 0.000000  | 400.05   | 1712.33  |
| 3    | GUIDE  | 221520984 | 9.95  | 1238  | 0.178  | 0.047  | 0.114 | 0.180 | 335.753306 | 19.593324 | 1231.03  | 664.49   |
| 4    | GUIDE  | 221514248 | 8.59  | 1238  | -0.109 | -0.025 | 0.089 | 0.138 | 334.808098 | 19.800222 | -142.33  | -2323.35 |
| 5    | GUIDE  | 221515368 | 10.26 | 1228  | -0.079 | -0.012 | 0.130 | 0.227 | 334.817041 | 20.235054 | -1669.80 | -1977.01 |
| 6    | GUIDE  | 223220768 | 8.79  | 1238  | -0.126 | 0.005  | 0.132 | 0.208 | 336.138894 | 20.276133 | -922.94  | 2427.08  |
| 7    | GUIDE  | 221524824 | 9.70  | 1237  | 0.131  | -0.019 | 0.100 | 0.163 | 335.185669 | 19.540573 | 1031.09  | -1258.20 |

## 2.4 Star Slots

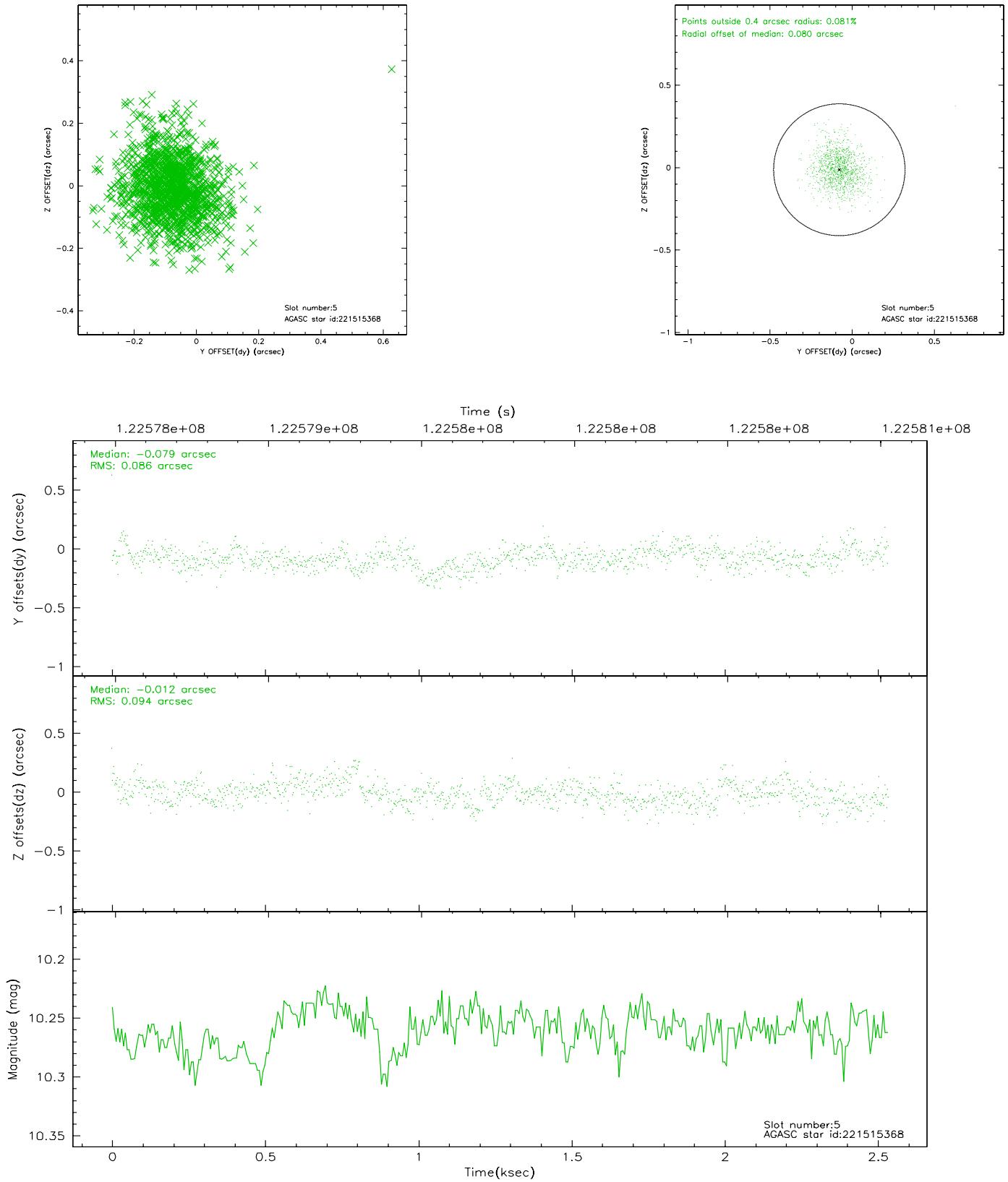
### 2.4.1 Slot 3



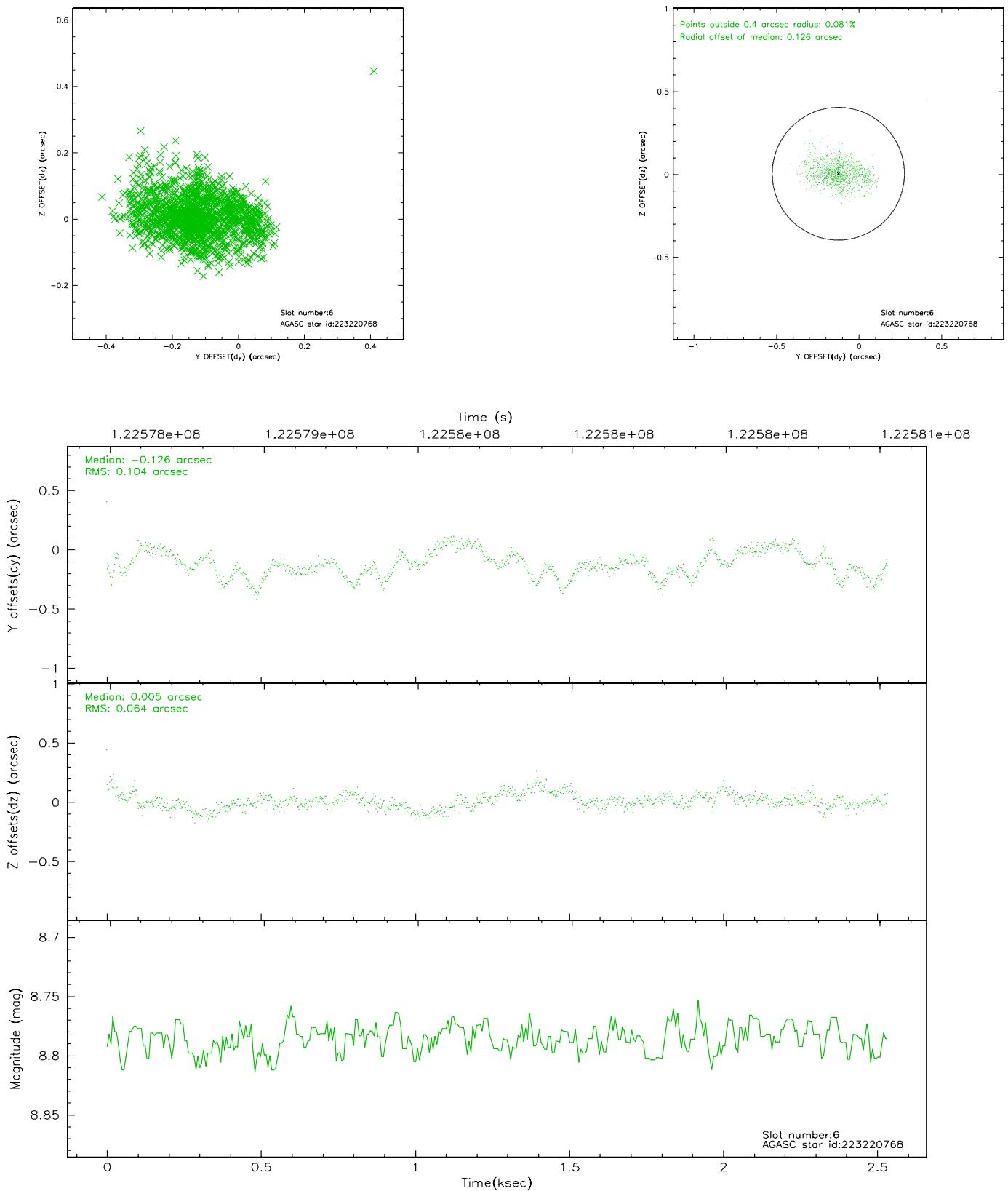
## 2.4.2 Slot 4



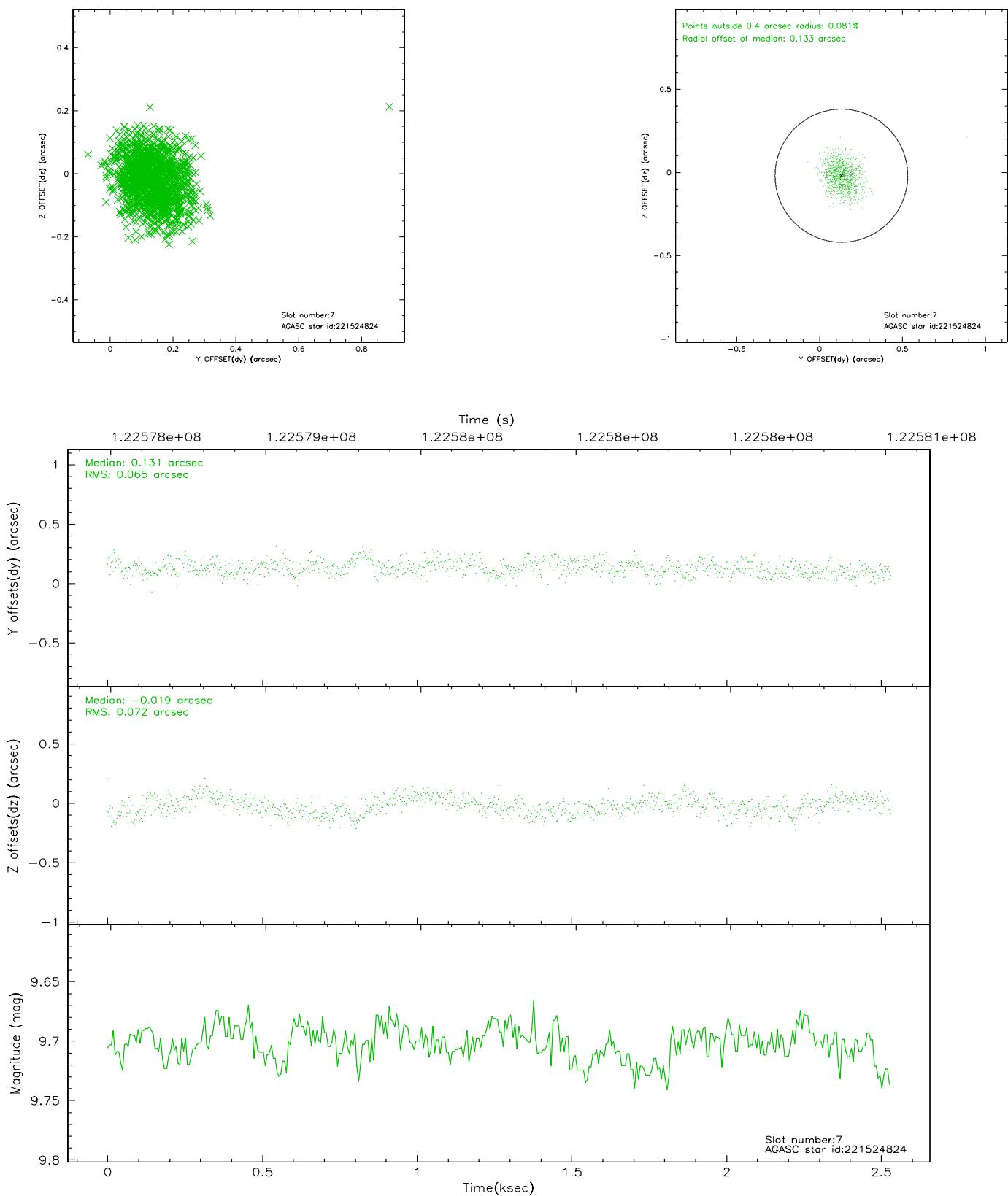
### 2.4.3 Slot 5



## 2.4.4 Slot 6

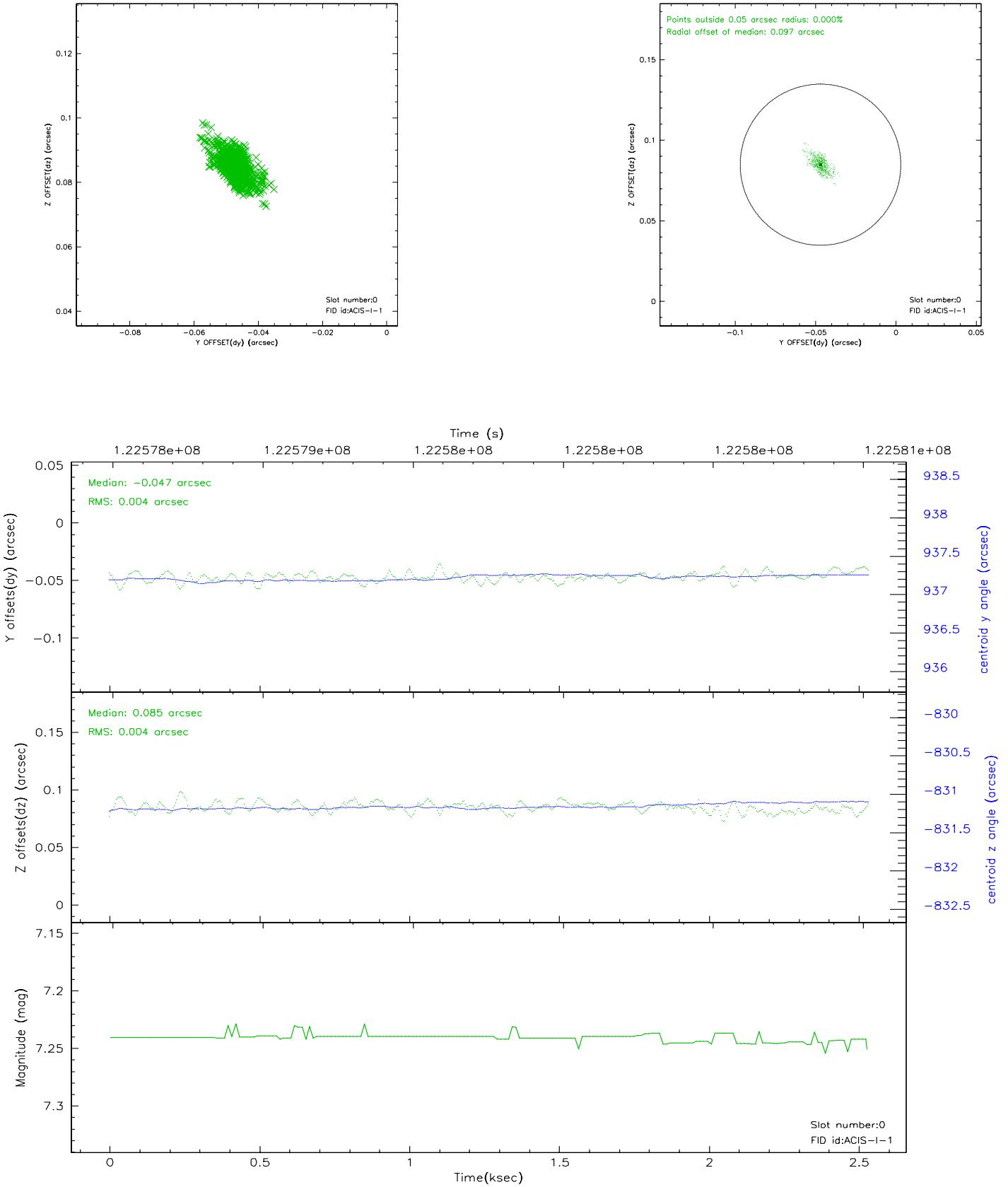


## 2.4.5 Slot 7

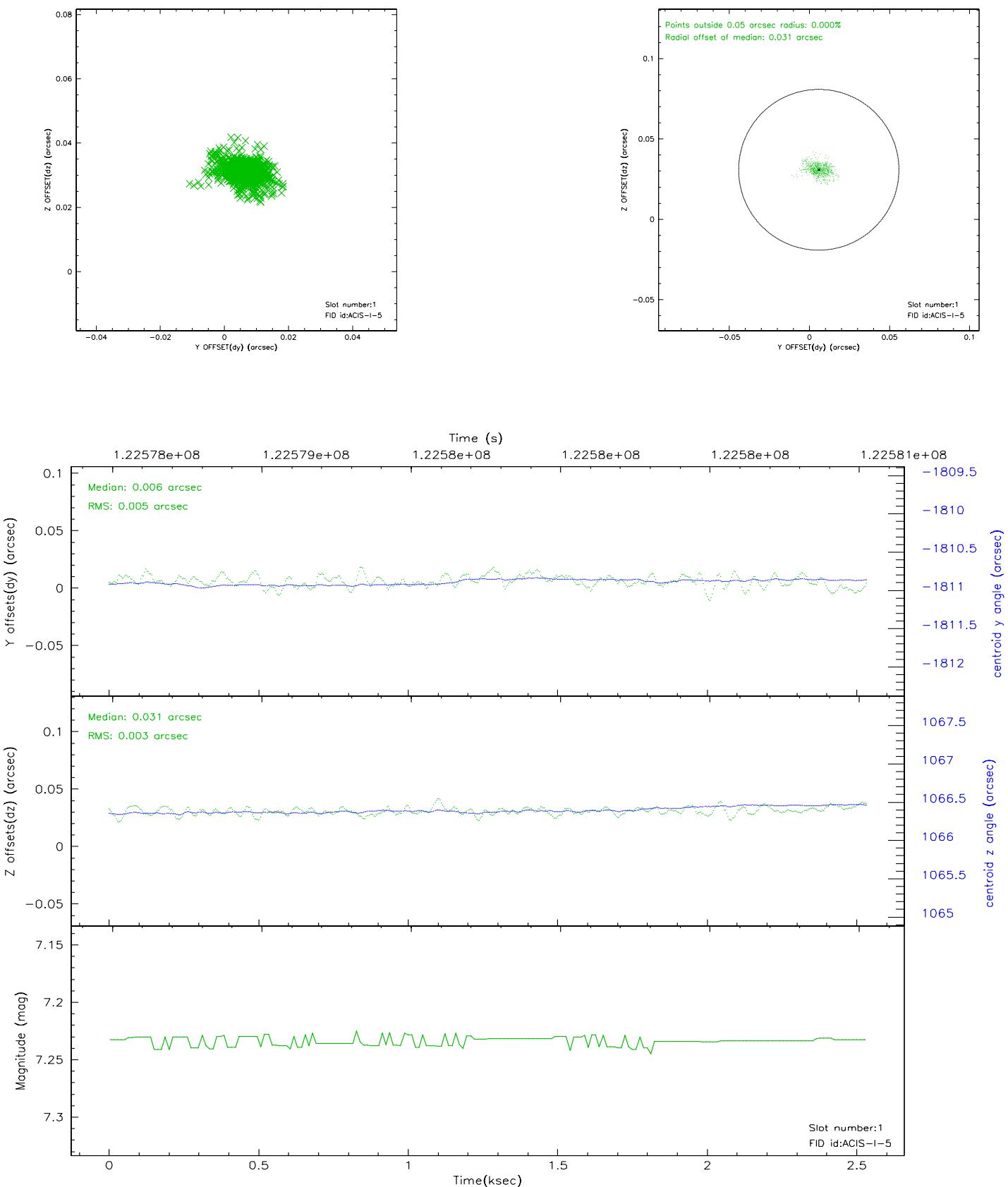


## 2.5 FID Slots

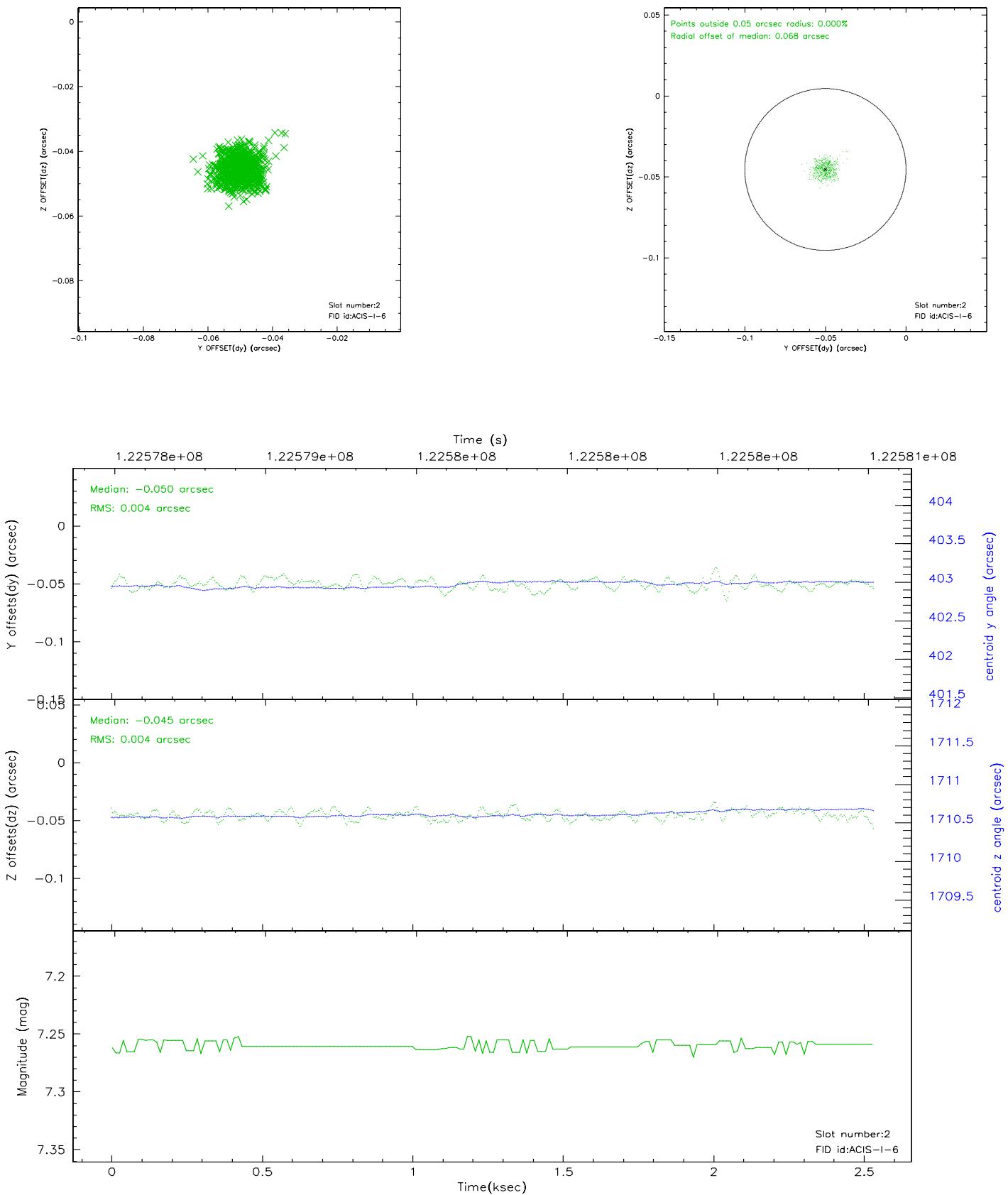
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



### 3 Point Sources

4.65 arcmin



# A Summary

## A.1 Status

|                            |               |
|----------------------------|---------------|
| V&V Scientist              | Beth Sundheim |
| V&V Date (YYYY-MM-DD)      | 2007.01.12    |
| V&V Edition                | 1             |
| V&V Disposition and Status | OK            |
| V&V Charge Time            | 2.534         |

## A.2 Comments