

# V&V Reference Report

## L2 ASCDS Version : 8.4.3

Observation 5878 - L2 Version 2  
Chandra X-Ray Center

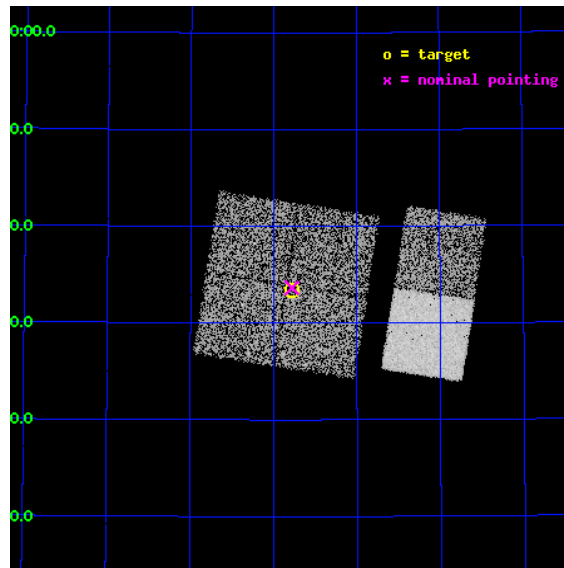
L2 Processing Date : Mar 27 2012

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# 1 Front

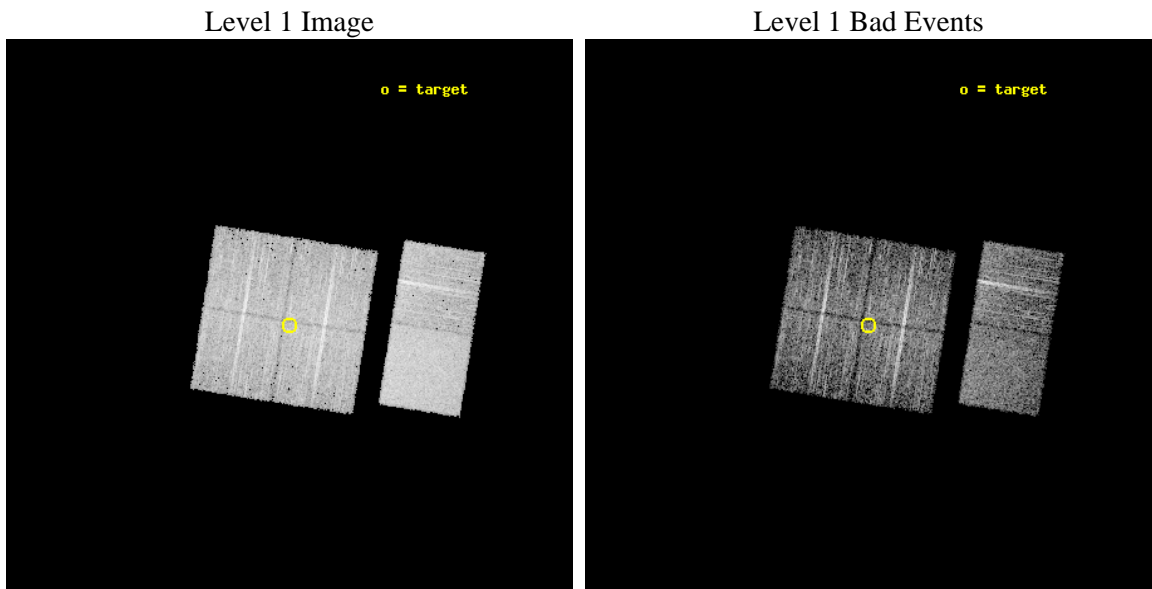
|          |  |   |
|----------|--|---|
| seq_num  | 900378   | Sequence number                             |
| obs_id   | 5878   | Observation id                              |
| title    | The Spectral Energy Distributions of AGN: A Shallow Survey of the ELAIS-N1 Field | Proposal title                              |
| observer | Prof Kirpal Nandra   | Principal investigator                      |
| object   | N1_24  | Source name                                 |
| dtcycle  | 0  | &#160                                       |
| cycle    | P  | events from which exps?<br>Prim/Second/Both |
| ra_targ  | 242.94375  | Observer's specified target RA [deg]        |
| dec_targ | 54.556194  | Observer's specified target Dec [deg]       |
| ra_nom   | 242.94550173825  | Nominal RA [deg]                            |
| dec_nom  | 54.56076854599   | Nominal Dec [deg]                           |
| roll_nom | 99.037869645368  | Nominal Roll [deg]                          |
| revision | 2  | Processing version of data                  |
| ontime   | 4755.1999822855  | Sum of GTIs [s]                             |
| livetime | 4694.9867768721  | Livetime [s]                                |
| ontime0  | 4751.9590019882  | Sum of GTIs [s]                             |
| ontime1  | 4755.1999822855  | Sum of GTIs [s]                             |
| ontime2  | 4755.1999822855  | Sum of GTIs [s]                             |
| ontime3  | 4755.1999822855  | Sum of GTIs [s]                             |
| ontime6  | 4755.1999822855  | Sum of GTIs [s]                             |
| ontime7  | 4755.1999822855  | Sum of GTIs [s]                             |
| l2events | 43714  | Number of level 2 events                    |



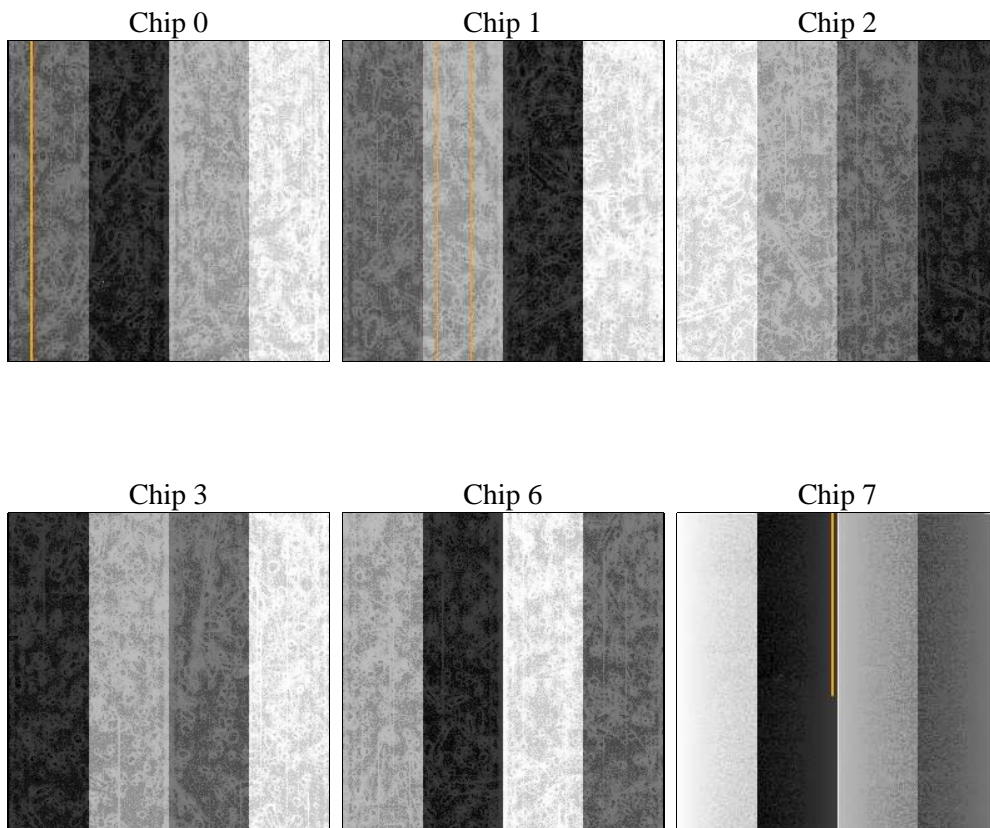
## 2 OBI

### 2.1 OBI

#### 2.1.1 Images



#### 2.1.2 Bias



### 2.1.3 Parameters

|          |                     |                                |                |                 |   |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num  | 0                   | Obi number                     | sched_exp_time | 5000.000000     | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3               | Processing system revision     | ontime         | 4755.1999822855 | Sum of GTIs [s]                         |
| caldsver | 4.4.8               | &#160                          | ontime0        | 4751.9590019882 | Sum of GTIs [s]                         |
| date     | 2012-03-27T03:50:59 | Date and time of file creation | ontime1        | 4755.1999822855 | Sum of GTIs [s]                         |
| revision | 2                   | Processing version of data     | ontime2        | 4755.1999822855 | Sum of GTIs [s]                         |
|          |                     |                                | ontime3        | 4755.1999822855 | Sum of GTIs [s]                         |
|          |                     |                                | ontime6        | 4755.1999822855 | Sum of GTIs [s]                         |
|          |                     |                                | ontime7        | 4755.1999822855 | Sum of GTIs [s]                         |
|          |                     |                                | l1events       | 255956          | Number of level 1 events                |

### 2.1.4 Events

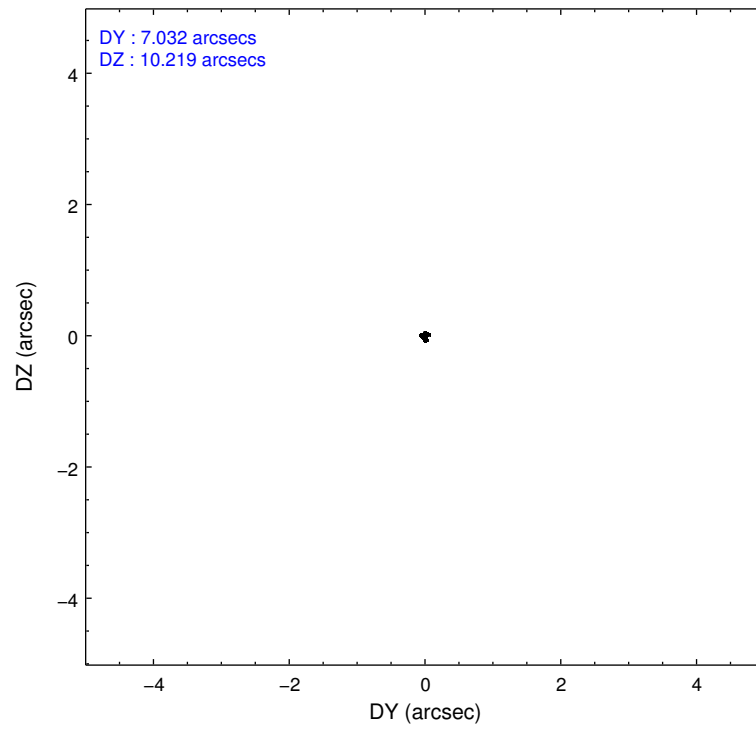
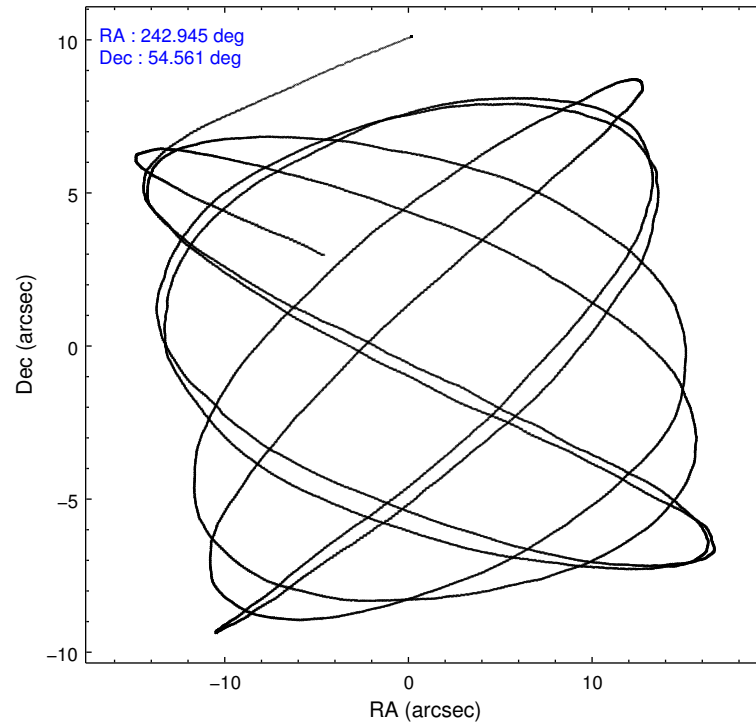
|                 | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |                | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events  | 38659 | 37787 | 40928 | 40585 | 41754 | 56243 | grade 0 events | 2089  | 2032  | 2171  | 2028  | 1845  | 2009  |
| rejected events | 33830 | 32610 | 36149 | 35797 | 36834 | 33161 |                | 5%    | 5%    | 5%    | 4%    | 4%    | 3%    |
| rejected %      | 87%   | 86%   | 88%   | 88%   | 88%   | 58%   | grade 1 events | 33    | 19    | 24    | 23    | 23    | 63    |
|                 |       |       |       |       |       |       |                | 0%    | 0%    | 0%    | 0%    | 0%    | 0%    |
|                 |       |       |       |       |       |       | grade 2 events | 1001  | 1131  | 997   | 953   | 1082  | 4533  |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 2%    | 2%    | 2%    | 8%    |
|                 |       |       |       |       |       |       | grade 3 events | 460   | 481   | 432   | 454   | 520   | 2009  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 4 events | 417   | 509   | 441   | 481   | 435   | 1926  |
|                 |       |       |       |       |       |       |                | 1%    | 1%    | 1%    | 1%    | 1%    | 3%    |
|                 |       |       |       |       |       |       | grade 5 events | 1631  | 1732  | 1531  | 1825  | 1916  | 5210  |
|                 |       |       |       |       |       |       |                | 4%    | 4%    | 3%    | 4%    | 4%    | 9%    |
|                 |       |       |       |       |       |       | grade 6 events | 869   | 1027  | 741   | 881   | 1039  | 12623 |
|                 |       |       |       |       |       |       |                | 2%    | 2%    | 1%    | 2%    | 2%    | 22%   |
|                 |       |       |       |       |       |       | grade 7 events | 32159 | 30856 | 34591 | 33940 | 34894 | 27870 |
|                 |       |       |       |       |       |       |                | 83%   | 81%   | 84%   | 83%   | 83%   | 49%   |

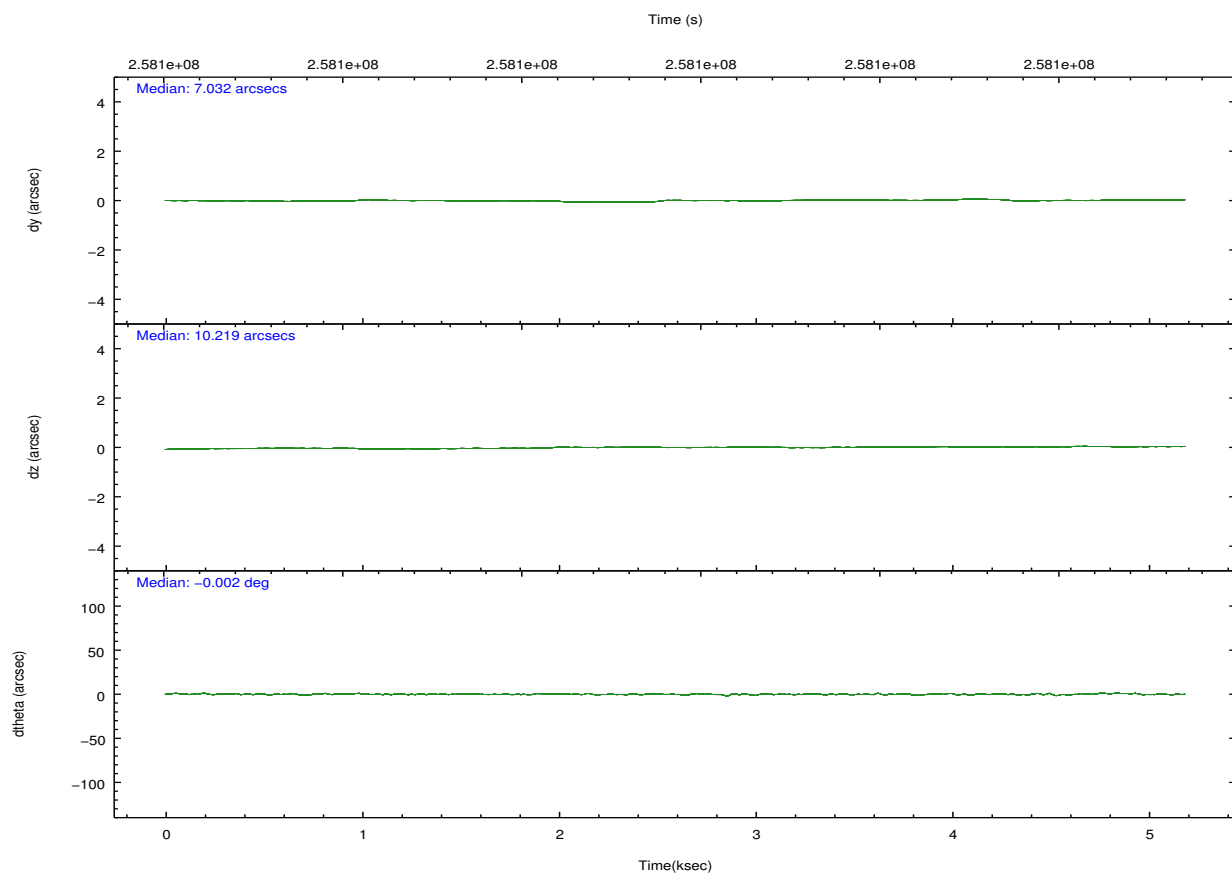
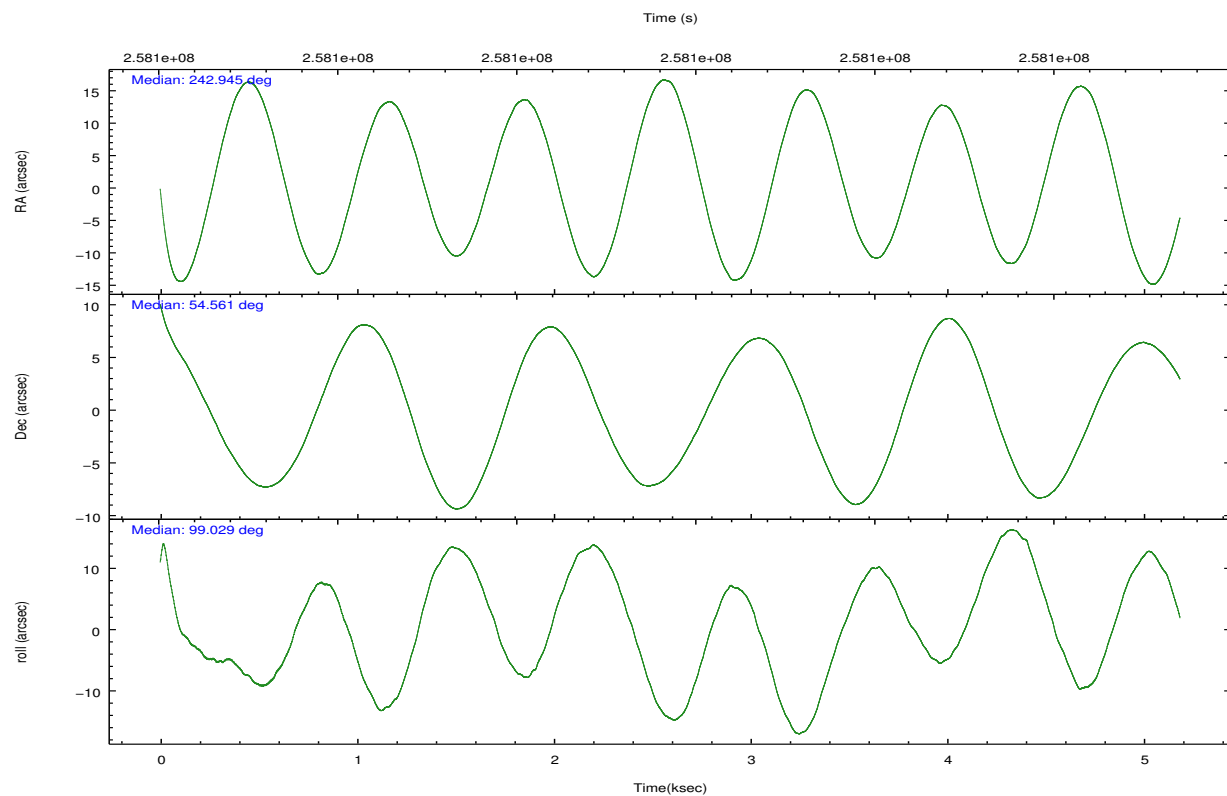


## 2.2 Compared Parameters

| Parameter                         | Planned             | Actual                | Parameter                             | Planned   | Actual  |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument                        | ACIS                | ACIS                  | Obspar format version number          | 7         | 7       |
| Detector                          | ACIS-012367         | ACIS-012367           | 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       |
| [deg] Pointing RA                 | 242.975559          | 242.9455017382546     | Subarray requested                    | NONE      | NONE    |
| [deg] Pointing Dec                | 54.539490           | 54.56076854599026     | Alternating exposures requested       | N         | N       |
| [deg] Pointing Roll               | 98.804623           | 99.03786964536806     | [s] Primary exposure time             | 0.000000  | 3.2     |
| [mm] SIM focus pos                | -0.782348           | -0.7809083437167272   |                                       |           |         |
| [mm] SIM defocus                  | 0                   | 0.001439871863259334  |                                       |           |         |
| [mm] SIM translation stage pos    | -233.592463         | -233.5874344608287    |                                       |           |         |
| [mm] SIM translation stage offset | 0                   | -0.005018542100998502 |                                       |           |         |
| [s] Observation start time (MET)  | 258097444.184000    | 258096553.90248       |                                       |           |         |
| Observation start date            | 2006-03-07T05:42:59 | 2006-03-07T05:29:13   |                                       |           |         |
| [s] Observation end time (MET)    | 258102444.184000    | 258102846.89027       |                                       |           |         |
| Observation end date              | 2006-03-07T07:06:19 | 2006-03-07T07:14:06   |                                       |           |         |
| Read mode                         | TIMED               | TIMED                 |                                       |           |         |

## 2.3 Aspect



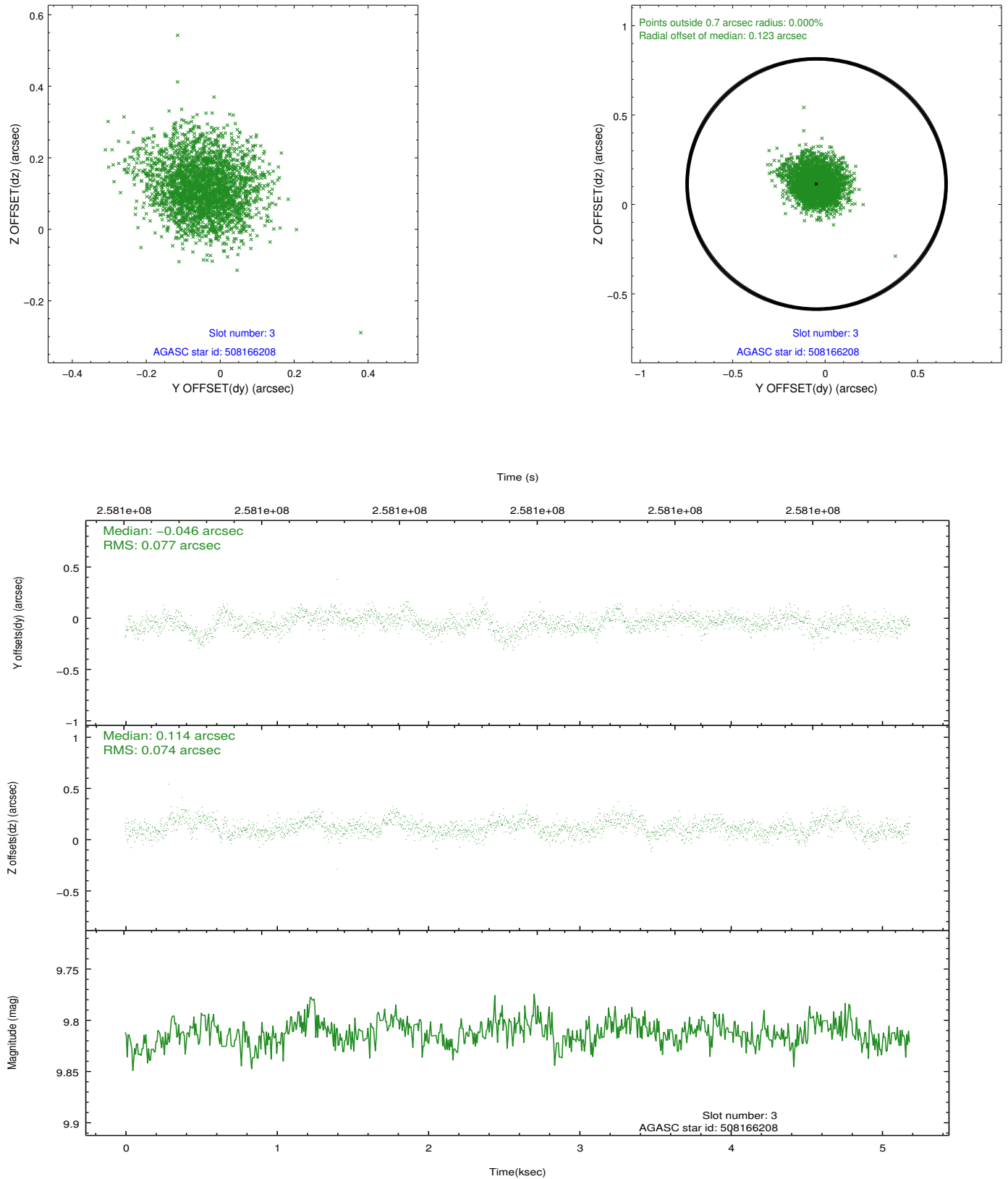


### Slot Statistics

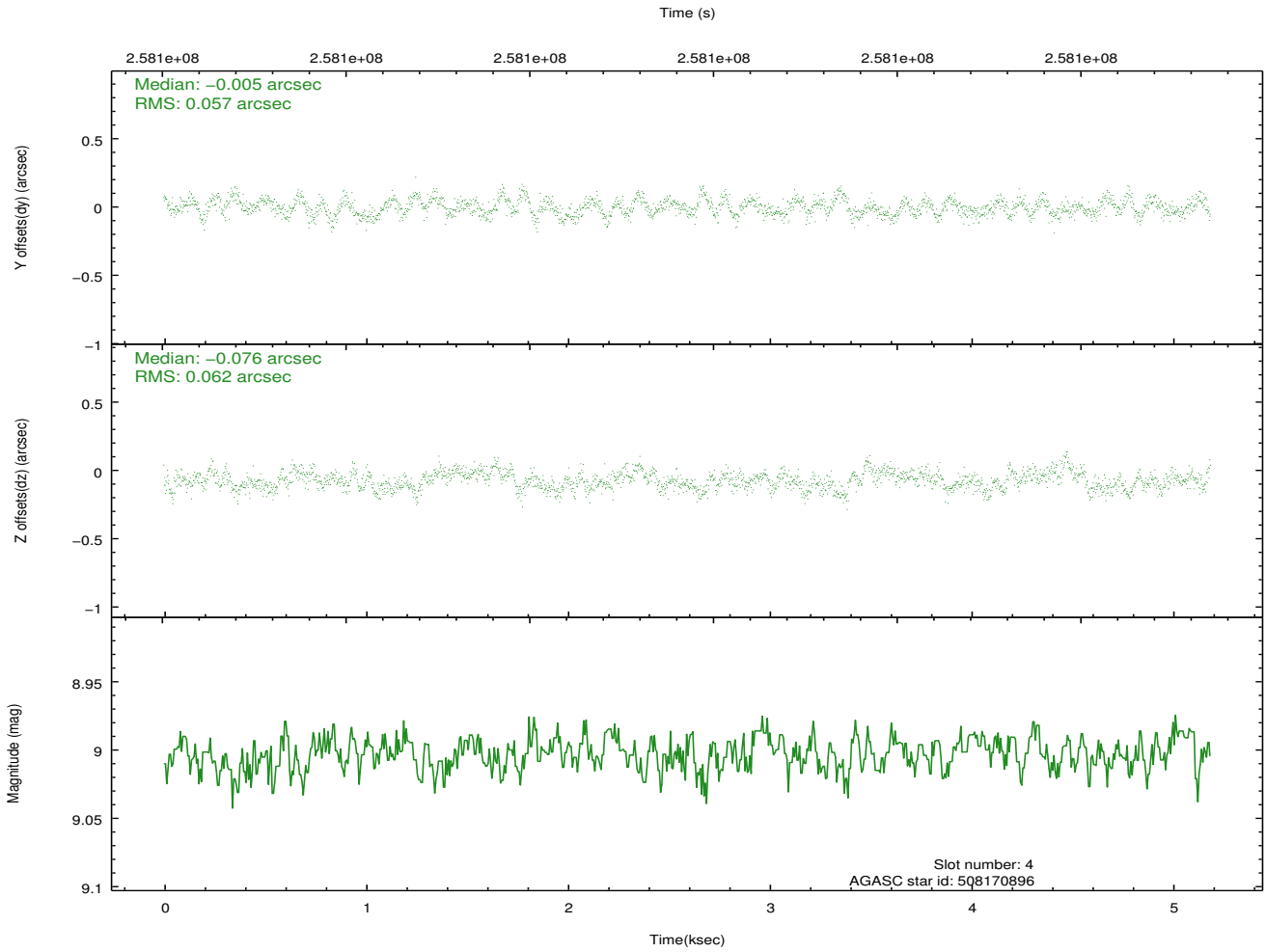
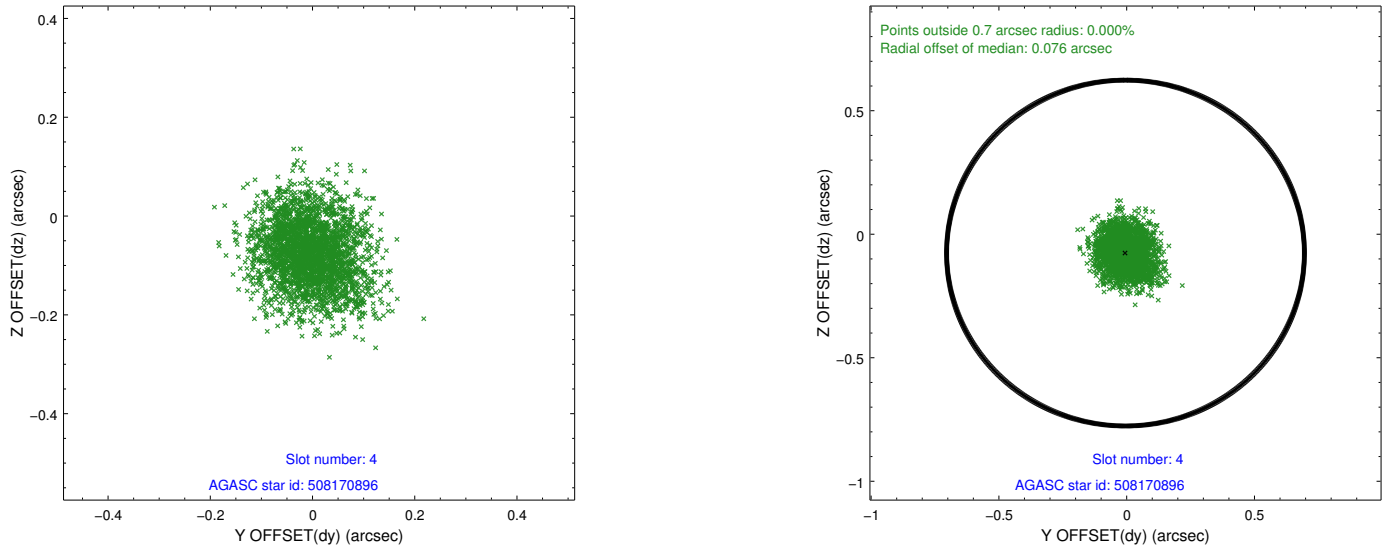
| slot | status | id        | mag  | n_pts | med_dy | med_dz | dr1   | dr2   | ra         | dec       | mean_y   | mean_z   |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0    | FID    | ACIS-I-1  | 7.25 | 1265  | -0.018 | 0.010  | 0.008 | 0.014 | 0.000000   | 0.000000  | 932.62   | -833.68  |
| 1    | FID    | ACIS-I-4  | 7.18 | 1265  | 0.123  | 0.026  | 0.008 | 0.013 | 0.000000   | 0.000000  | 2153.48  | 1065.55  |
| 2    | FID    | ACIS-I-5  | 7.22 | 1265  | -0.203 | 0.036  | 0.007 | 0.013 | 0.000000   | 0.000000  | -1814.04 | 1064.77  |
| 3    | GUIDE  | 508166208 | 9.81 | 2523  | -0.046 | 0.114  | 0.114 | 0.185 | 243.617118 | 54.978511 | 1365.02  | -1552.74 |
| 4    | GUIDE  | 508170896 | 9.00 | 2531  | -0.005 | -0.076 | 0.090 | 0.144 | 242.052968 | 54.527984 | 266.85   | 1908.10  |
| 5    | GUIDE  | 508172800 | 7.89 | 2530  | -0.146 | 0.011  | 0.046 | 0.074 | 242.573753 | 54.657892 | 551.53   | 761.84   |
| 6    | GUIDE  | 508183040 | 9.46 | 2529  | 0.068  | 0.065  | 0.131 | 0.205 | 243.957509 | 54.419234 | -727.90  | -1968.51 |
| 7    | GUIDE  | 508168152 | 9.45 | 2515  | 0.136  | -0.120 | 0.136 | 0.210 | 241.888534 | 54.357327 | -282.40  | 2350.02  |

## 2.4 Star Slots

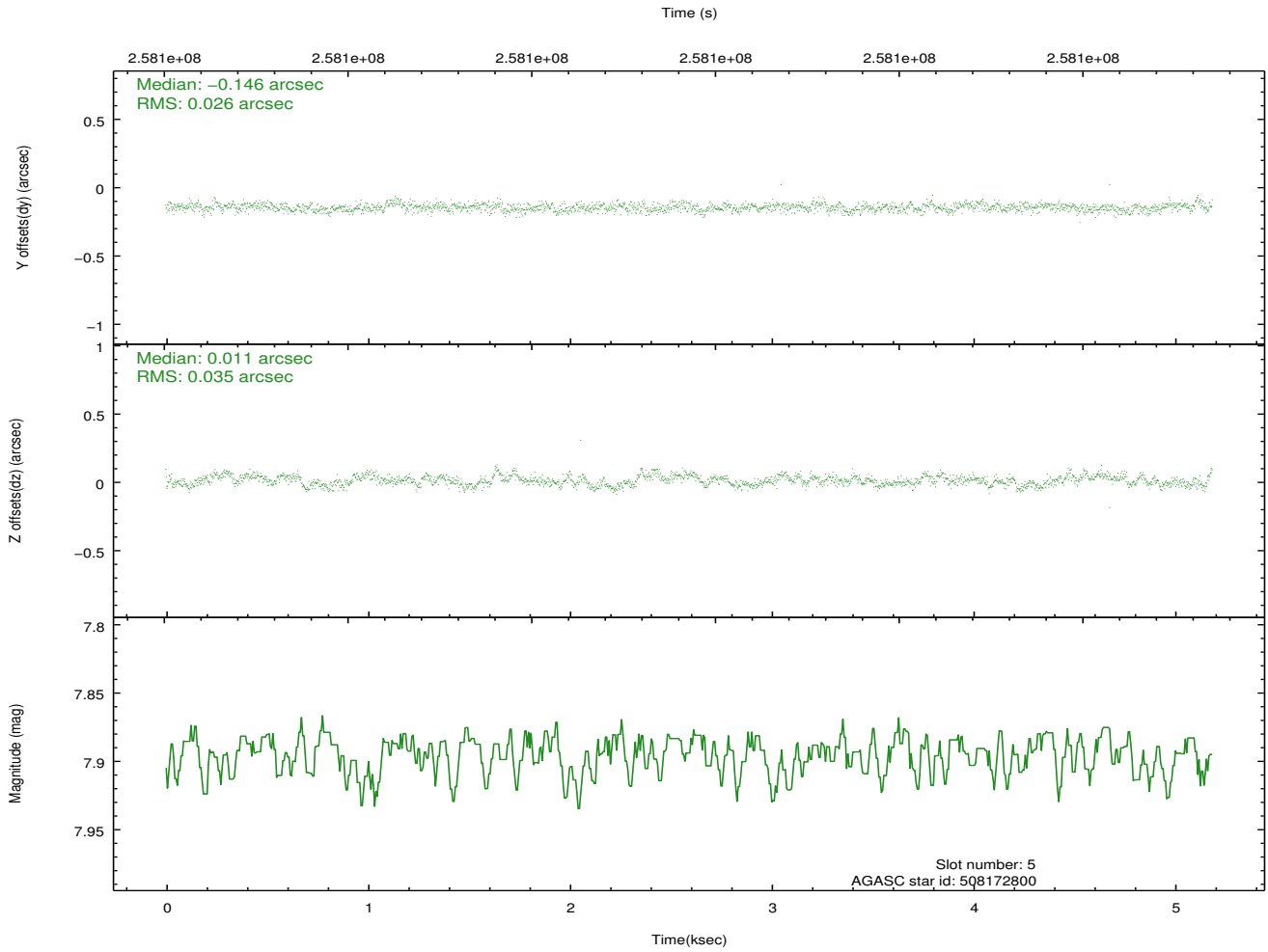
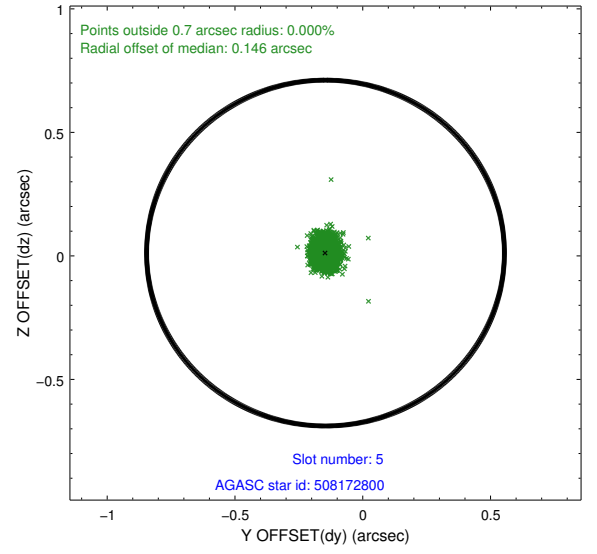
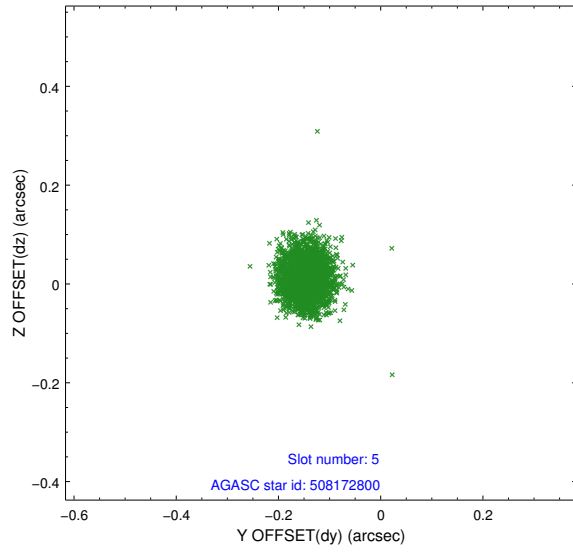
### 2.4.1 Slot 3



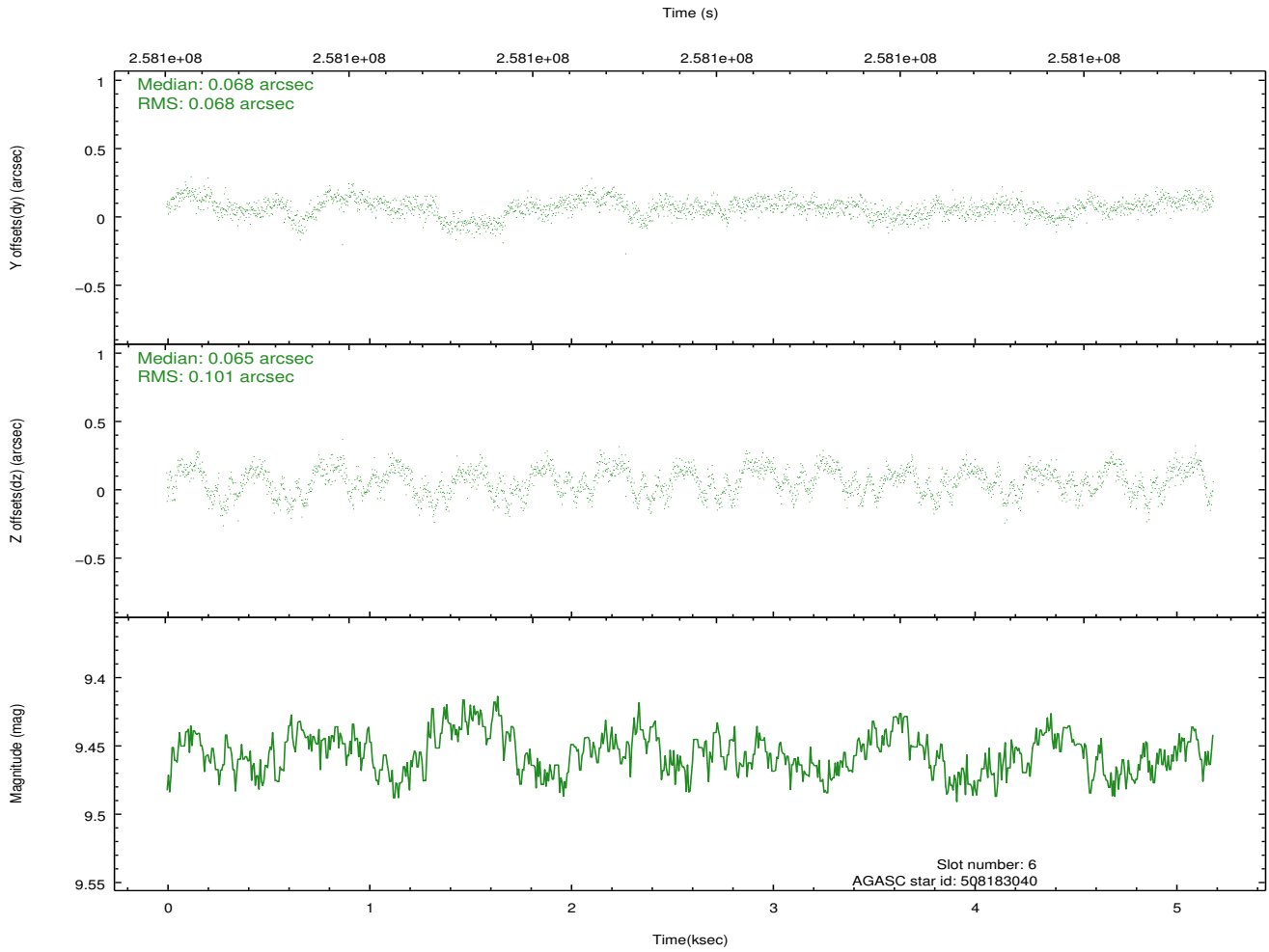
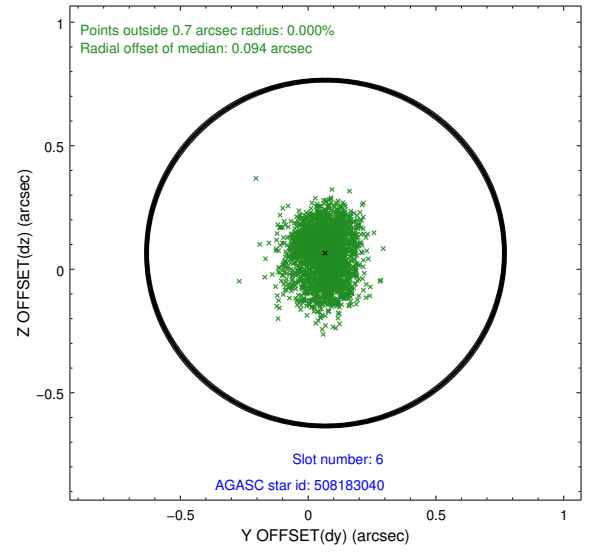
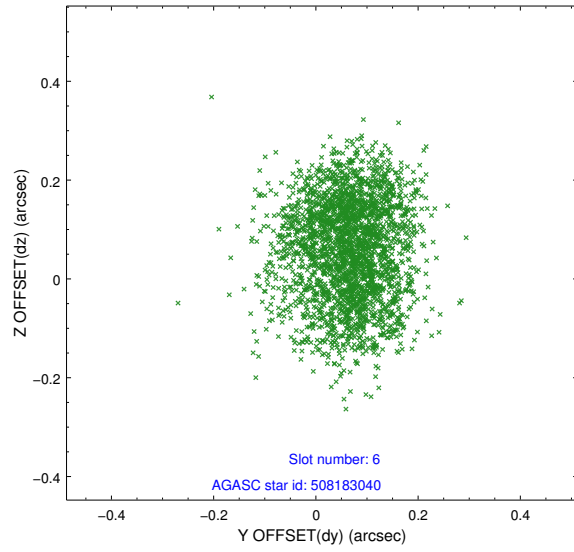
## 2.4.2 Slot 4



### 2.4.3 Slot 5

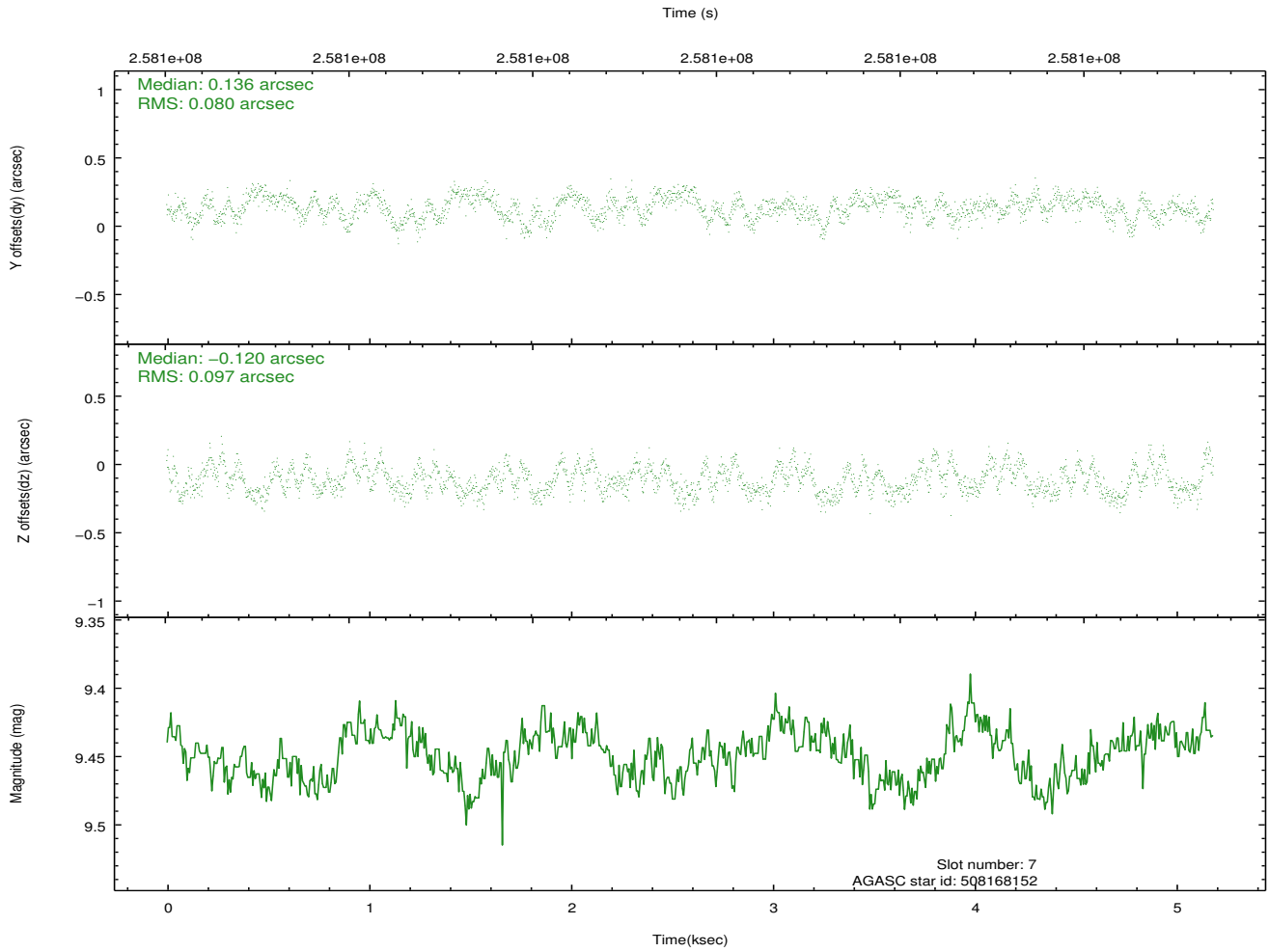
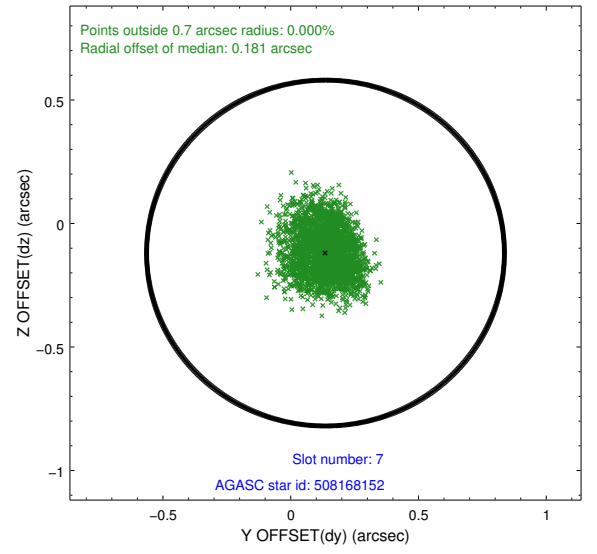
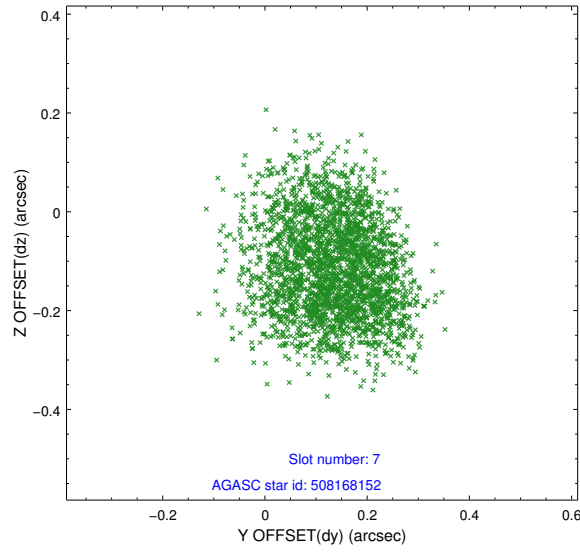


## 2.4.4 Slot 6



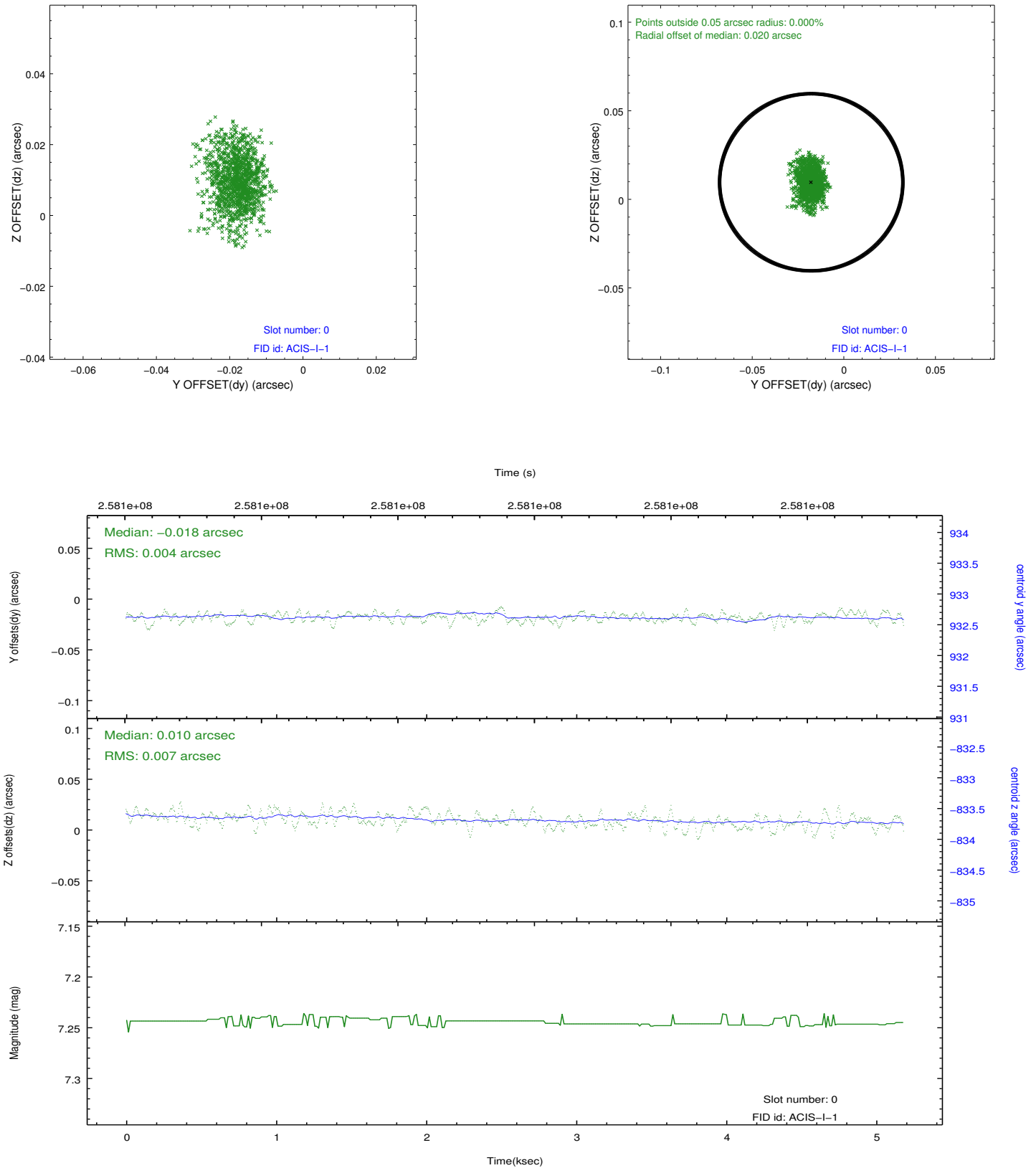


## 2.4.5 Slot 7

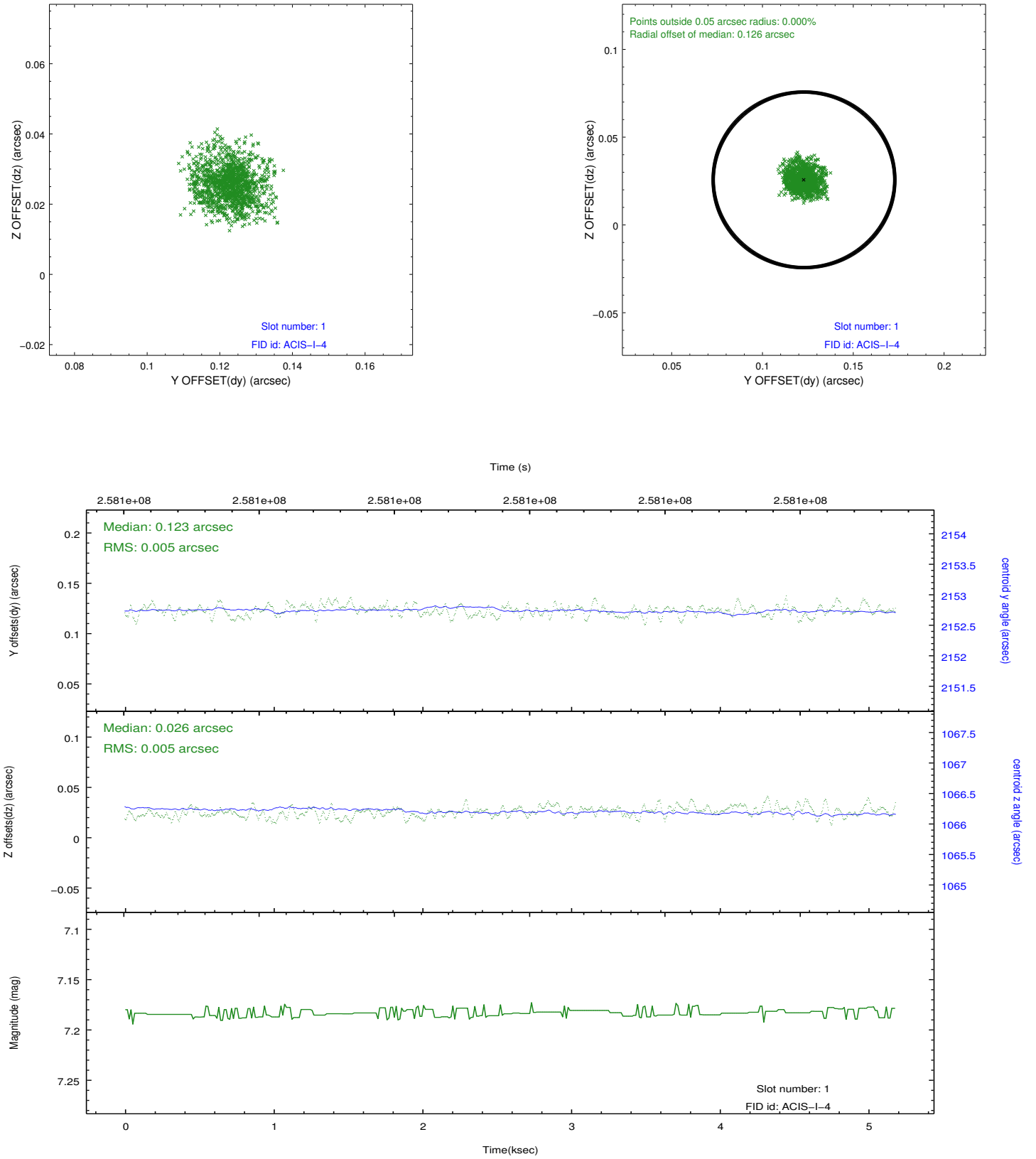


## 2.5 FID Slots

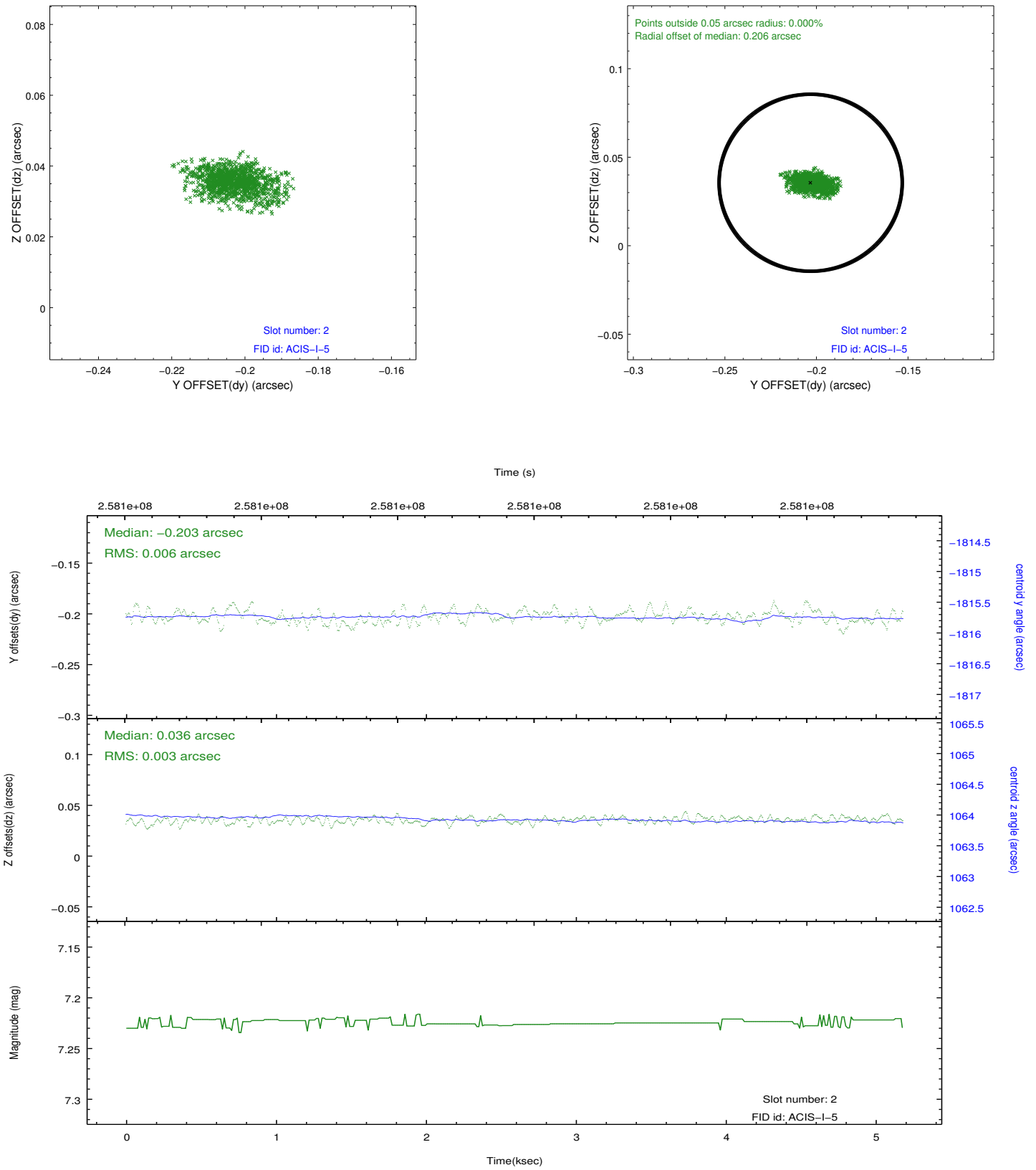
### 2.5.1 Slot 0



## 2.5.2 Slot 1



### 2.5.3 Slot 2



# A Summary

## A.1 Status

|                            |            |
|----------------------------|------------|
| V&V Scientist              | Jen Lauer  |
| V&V Date (YYYY-MM-DD)      | 2012.03.28 |
| V&V Edition                | 1          |
| V&V Disposition and Status | OK         |
| V&V Charge Time            | 4.75519998 |

## A.2 Comments

Joint Proposal: NOAO