

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1582 - L2 Version 3
Chandra X-Ray Center

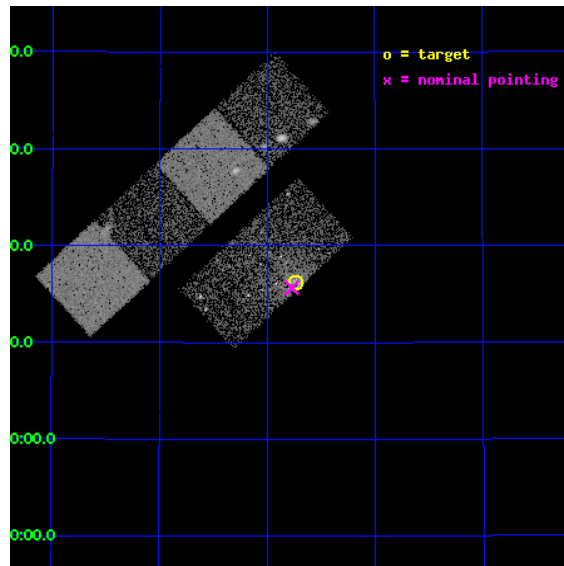
L2 Processing Date : Sep 16 2012

Contents

| | | |
|----------|-------------------------------|-----------|
| 1 | Front | 2 |
| 2 | OBI | 3 |
| 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 |
| A | Summary | 17 |
| A.1 | Status | 17 |
| A.2 | Comments | 17 |

1 Front

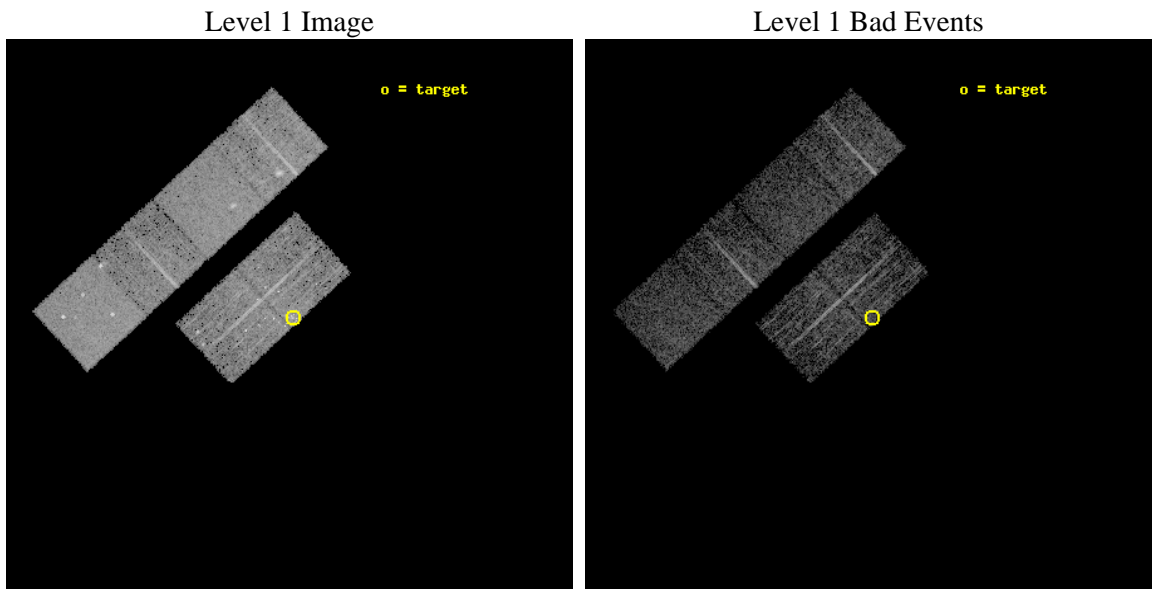
| | | |
|-----------|-----------------------------------|---|
| seq_num | 600139 | Sequence number |
| obs_id | 1582 | Observation id |
| title | MONITORING THE M31 NUCLEAR REGION | Proposal title |
| observer | Dr. Stephen Murray | Principal investigator |
| object | M31 NUCLEUS/TRANS | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 10.685 | Observer's specified target RA [deg] |
| dec_targ | 41.268972 | Observer's specified target Dec [deg] |
| ra_nom | 10.692964942406 | Nominal RA [deg] |
| dec_nom | 41.260842232045 | Nominal Dec [deg] |
| roll_nom | 317.22498989451 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 4357.9519872516 | Sum of GTIs [s] |
| liveltime | 4302.7689751454 | Livetime [s] |
| ontime2 | 4357.9109472483 | Sum of GTIs [s] |
| ontime3 | 4357.9519872516 | Sum of GTIs [s] |
| ontime5 | 4357.99302724 | Sum of GTIs [s] |
| ontime6 | 4357.869907245 | Sum of GTIs [s] |
| ontime7 | 4358.0340672433 | Sum of GTIs [s] |
| ontime8 | 4358.0751072466 | Sum of GTIs [s] |
| l2events | 50614 | Number of level 2 events |



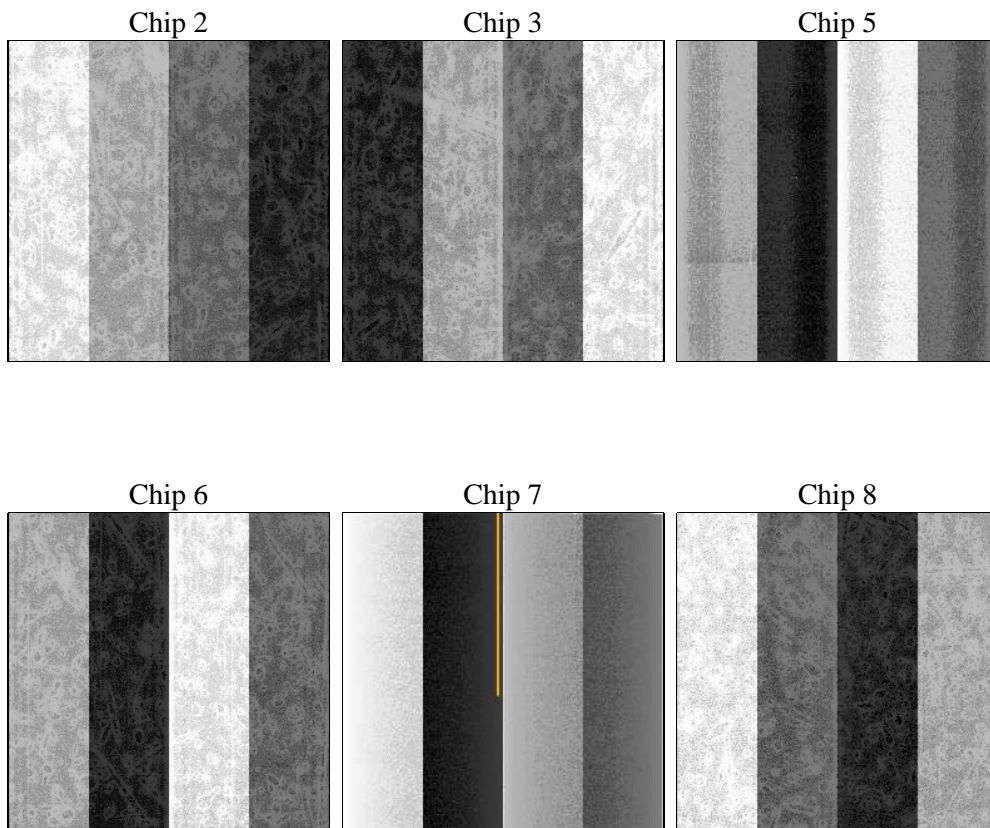
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 4500.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 4357.9519872516 | Sum of GTIs [s] |
| caldsver | 4.5.1.1 | | ontime2 | 4357.9109472483 | Sum of GTIs [s] |
| date | 2012-09-16T05:08:42 | Date and time of file creation | ontime3 | 4357.9519872516 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime5 | 4357.99302724 | Sum of GTIs [s] |
| | | | ontime6 | 4357.869907245 | Sum of GTIs [s] |
| | | | ontime7 | 4358.0340672433 | Sum of GTIs [s] |
| | | | ontime8 | 4358.0751072466 | Sum of GTIs [s] |
| | | | l1events | 199290 | Number of level 1 events |

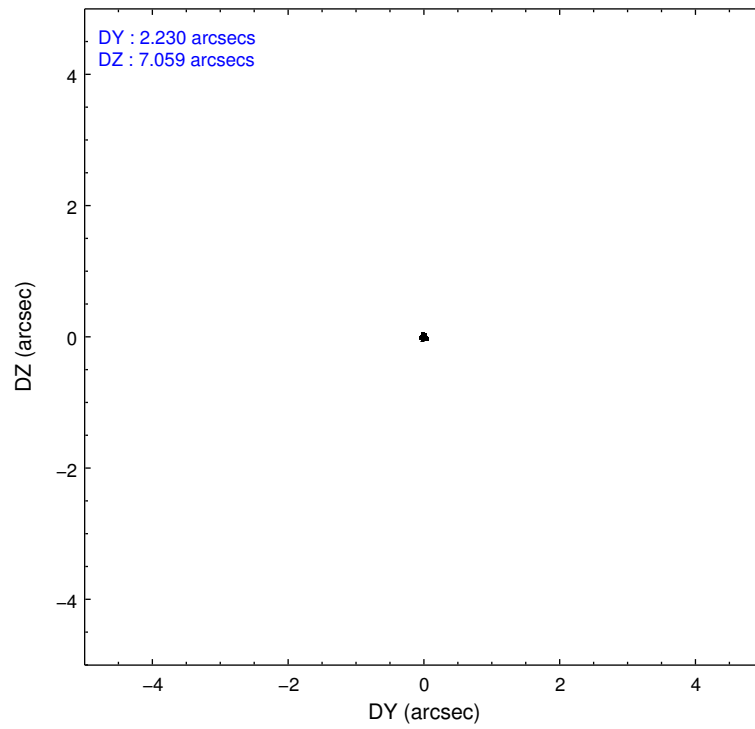
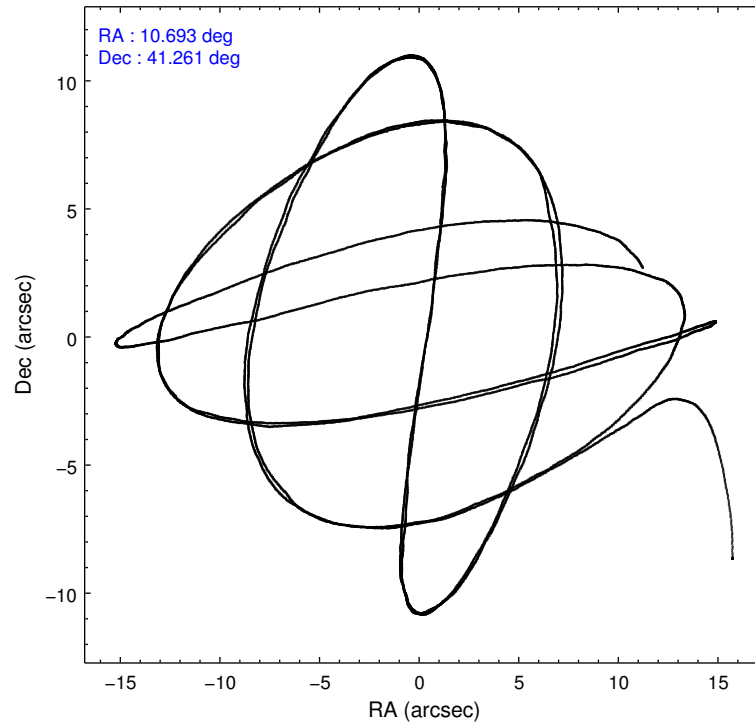
2.1.4 Events

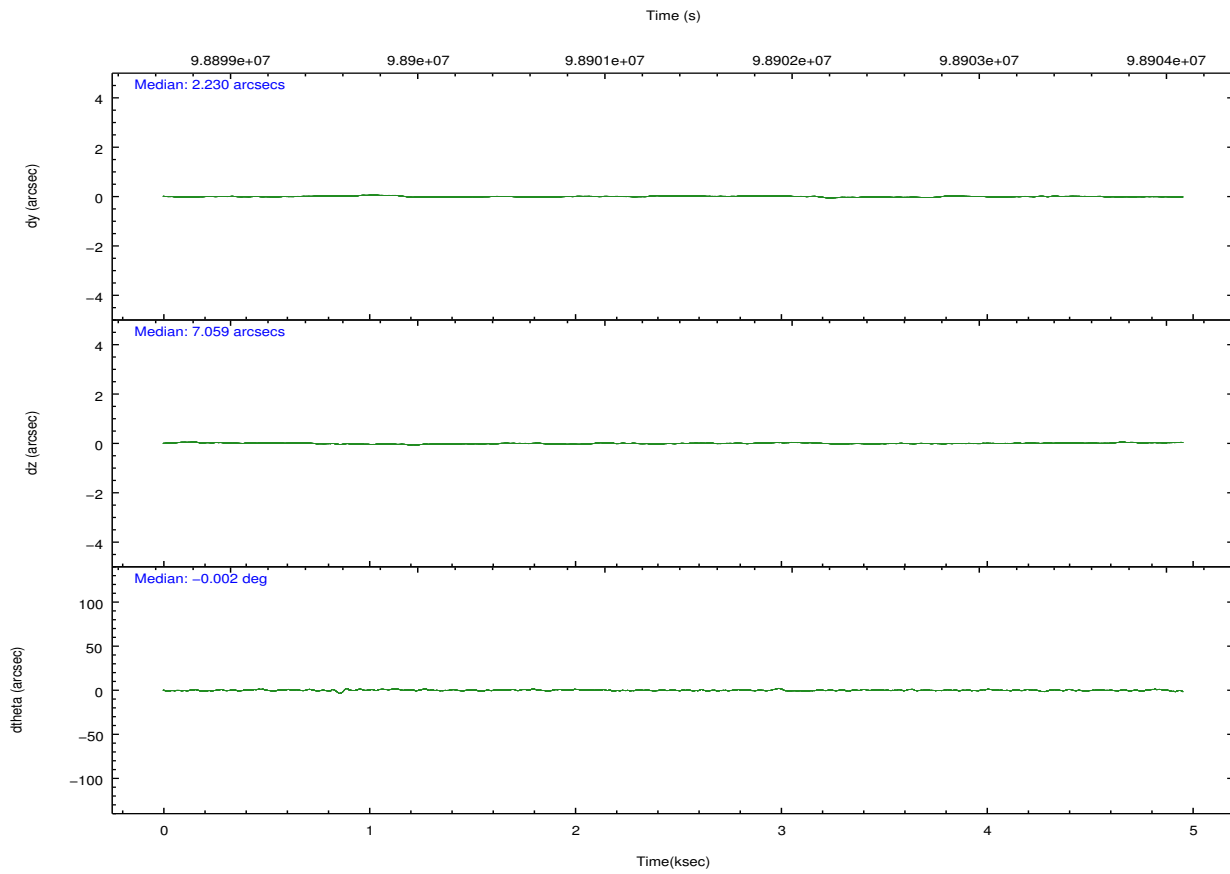
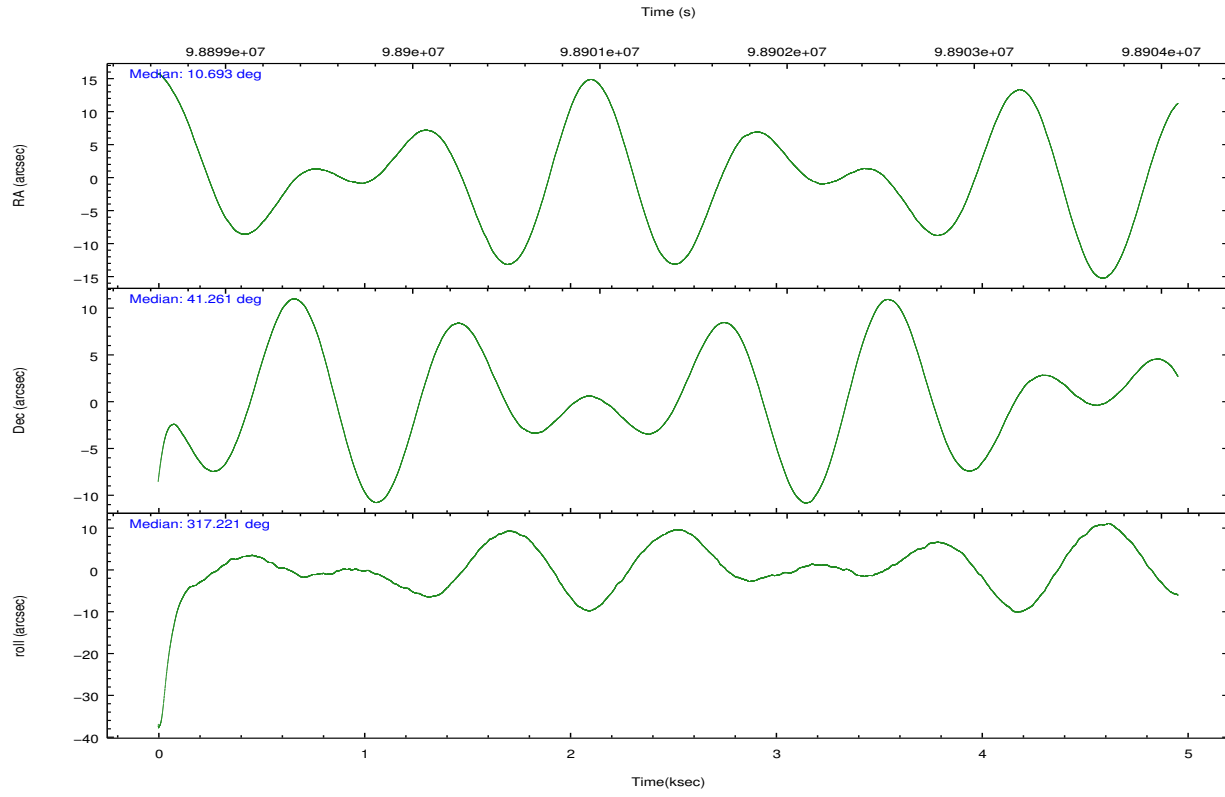
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 30994 | 30542 | 39762 | 26239 | 35356 | 36397 | grade 0 events | 4093 | 4441 | 3131 | 1558 | 1629 | 3399 |
| rejected events | 24541 | 23751 | 20785 | 22796 | 20489 | 27825 | | 13% | 14% | 7% | 5% | 4% | 9% |
| rejected % | 79% | 77% | 52% | 86% | 57% | 76% | grade 1 events | 60 | 44 | 90 | 14 | 34 | 17 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 968 | 942 | 5178 | 675 | 2950 | 1634 |
| | | | | | | | | 3% | 3% | 13% | 2% | 8% | 4% |
| | | | | | | | grade 3 events | 382 | 380 | 772 | 315 | 1387 | 795 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 4 events | 394 | 351 | 773 | 318 | 1412 | 749 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 5 events | 931 | 1058 | 2945 | 1143 | 3345 | 1465 |
| | | | | | | | | 3% | 3% | 7% | 4% | 9% | 4% |
| | | | | | | | grade 6 events | 622 | 684 | 9145 | 583 | 7503 | 1998 |
| | | | | | | | | 2% | 2% | 22% | 2% | 21% | 5% |
| | | | | | | | grade 7 events | 23544 | 22642 | 17728 | 21633 | 17096 | 26340 |
| | | | | | | | | 75% | 74% | 44% | 82% | 48% | 72% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| 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 |
| [deg] Pointing RA | 10.657327 | 10.69296494240632 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 41.266937 | 41.26084223204514 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 317.039887 | 317.2249898945101 | [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) | 98899339.184000 | 98898241.587928 | | | |
| Observation start date | 2001-02-18T16:01:15 | 2001-02-18T15:44:01 | | | |
| [s] Observation end time (MET) | 98903839.184000 | 98904864.11318401 | | | |
| Observation end date | 2001-02-18T17:16:15 | 2001-02-18T17:34:24 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



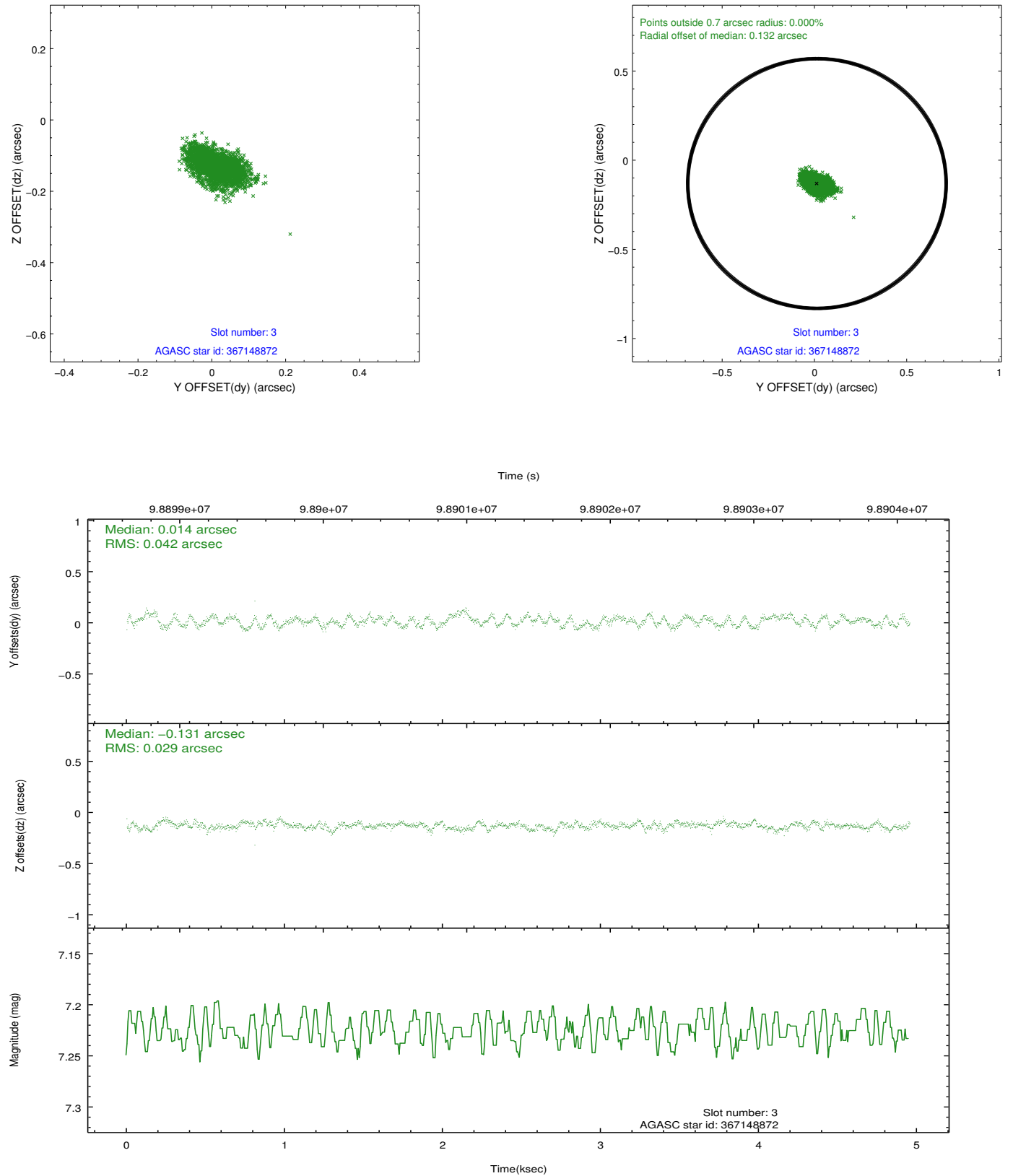


Slot Statistics

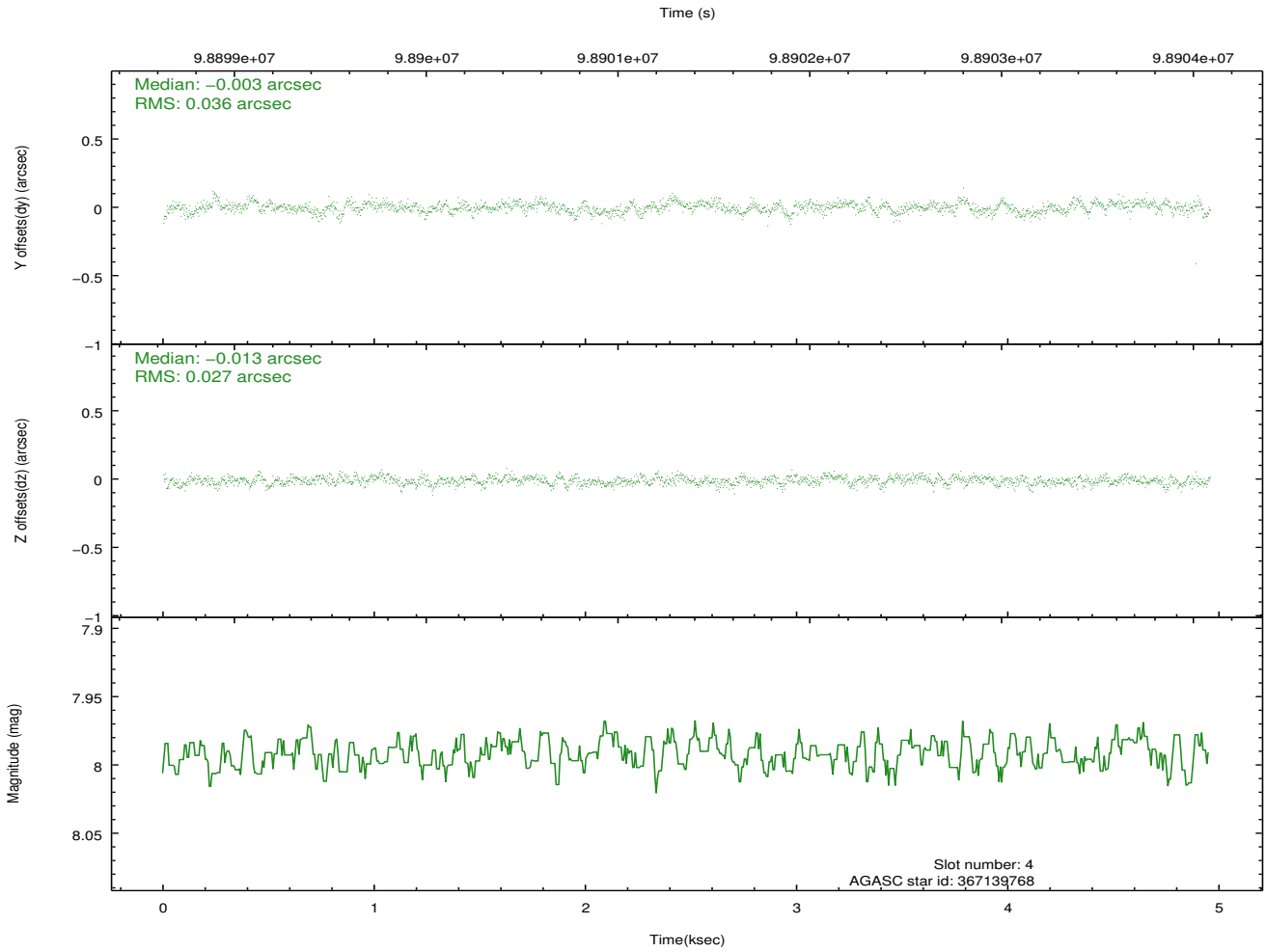
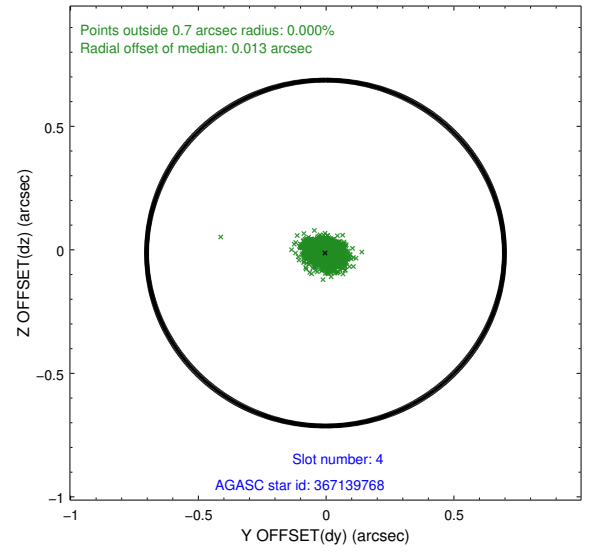
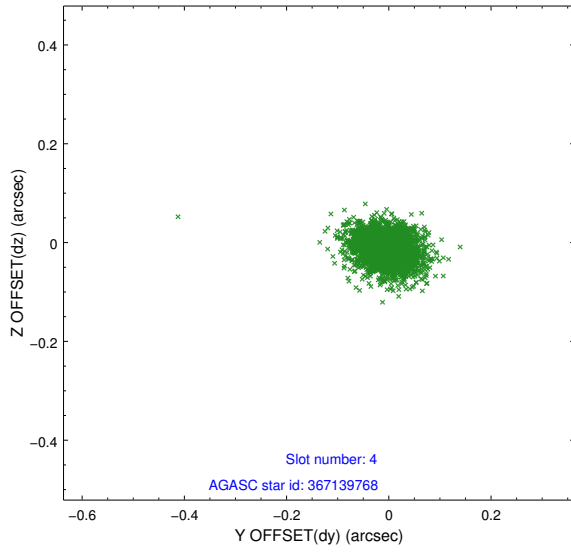
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0 | FID | ACIS-I-2 | 7.16 | 1209 | -0.049 | -0.068 | 0.008 | 0.014 | 0.000000 | 0.000000 | -756.63 | -836.89 |
| 1 | FID | ACIS-I-4 | 7.18 | 1209 | -0.008 | 0.053 | 0.006 | 0.010 | 0.000000 | 0.000000 | 2156.90 | 1068.80 |
| 2 | FID | ACIS-I-5 | 7.23 | 1209 | -0.044 | 0.084 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1808.88 | 1068.07 |
| 3 | GUIDE | 367148872 | 7.23 | 2416 | 0.014 | -0.131 | 0.054 | 0.086 | 10.505940 | 40.688258 | 1118.55 | -1805.81 |
| 4 | GUIDE | 367139768 | 7.99 | 2418 | -0.003 | -0.013 | 0.047 | 0.079 | 11.069715 | 40.685175 | 2251.20 | -763.91 |
| 5 | GUIDE | 367657272 | 8.42 | 2418 | 0.168 | 0.139 | 0.055 | 0.084 | 11.834471 | 41.298907 | 2239.07 | 2269.95 |
| 6 | GUIDE | 367671800 | 9.41 | 2417 | -0.124 | 0.037 | 0.085 | 0.137 | 10.554735 | 41.964935 | -1911.56 | 1653.08 |
| 7 | GUIDE | 367665472 | 9.49 | 2416 | -0.056 | -0.033 | 0.089 | 0.141 | 10.241611 | 41.730843 | -1956.87 | 463.84 |

2.4 Star Slots

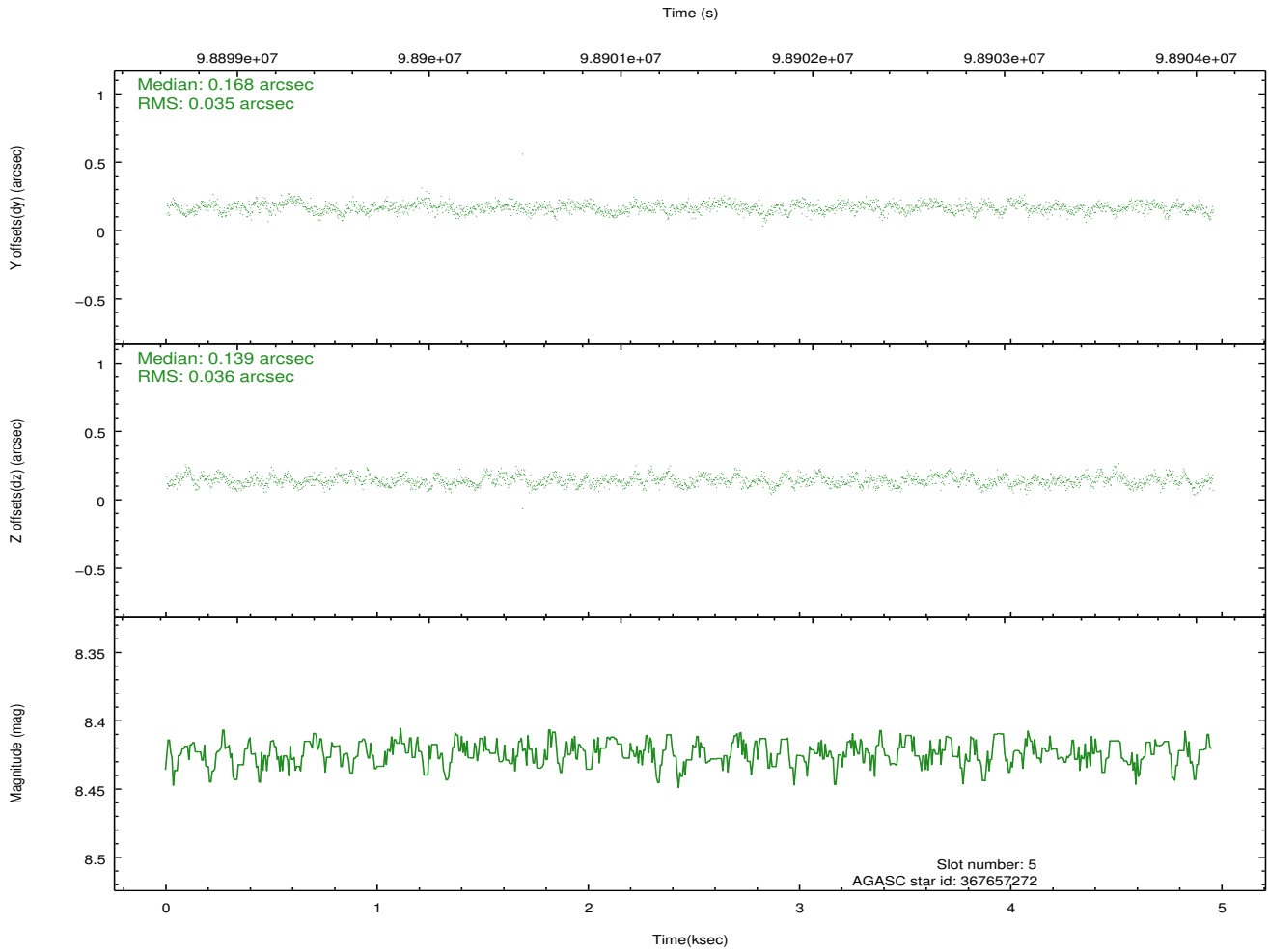
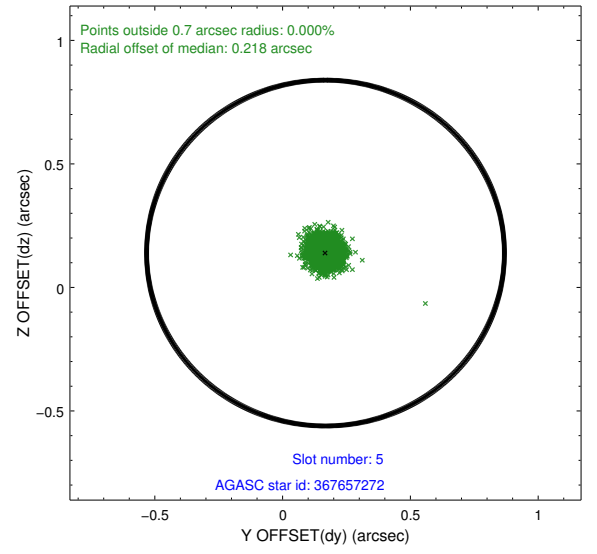
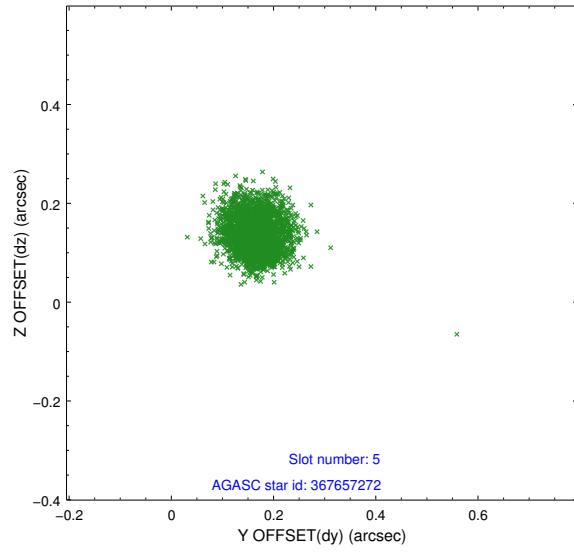
2.4.1 Slot 3



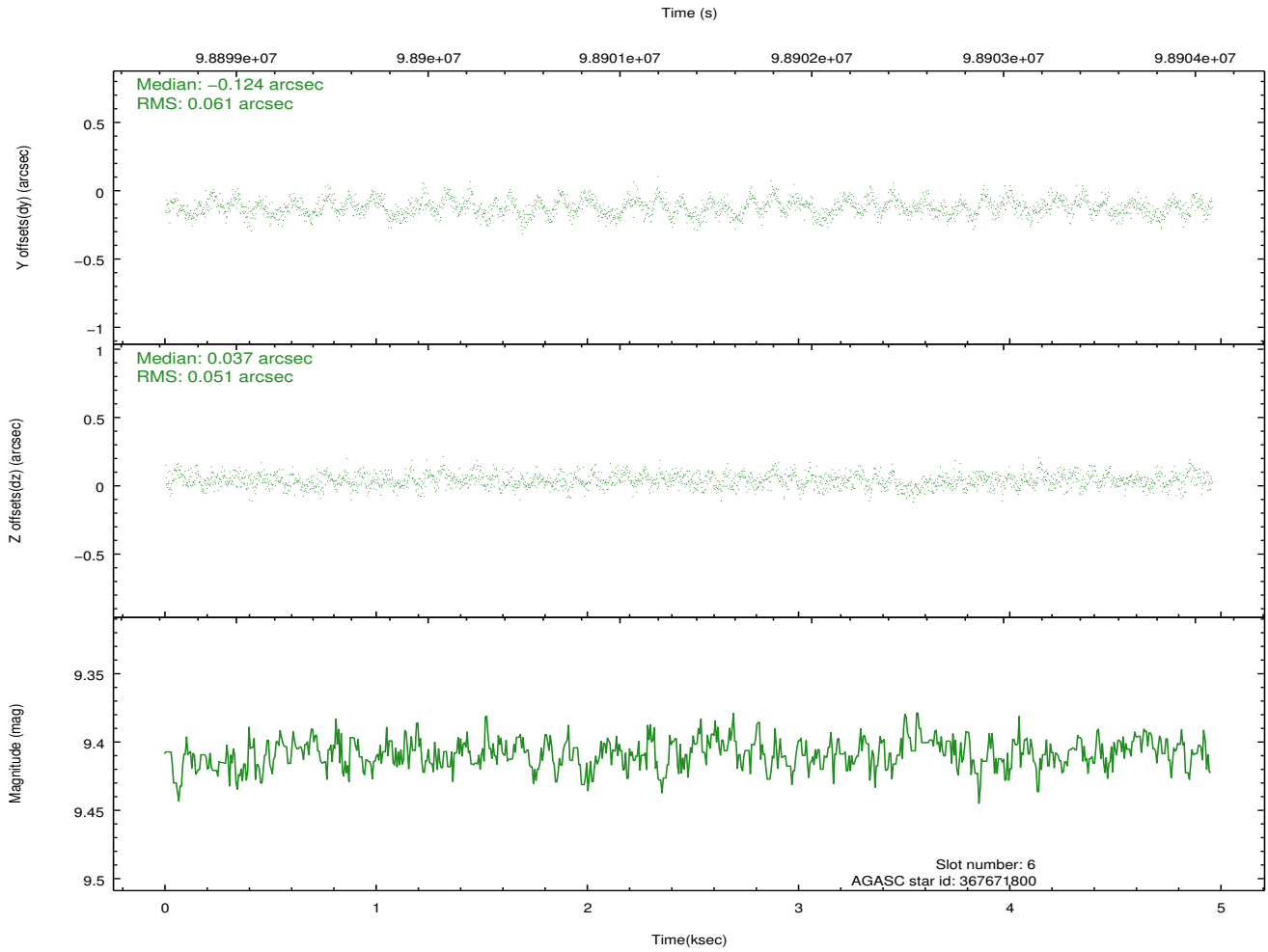
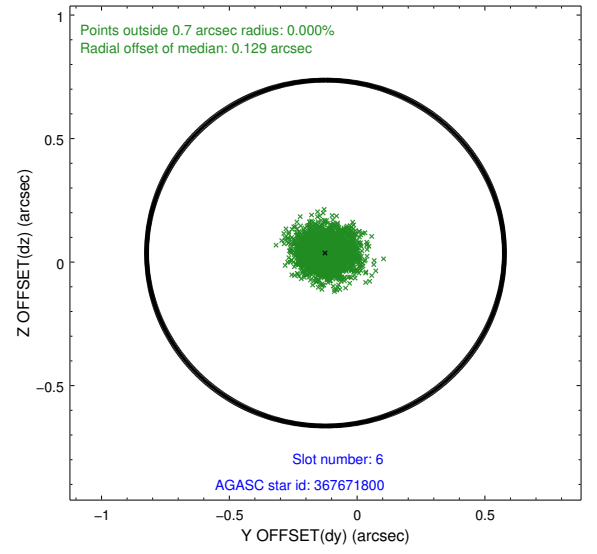
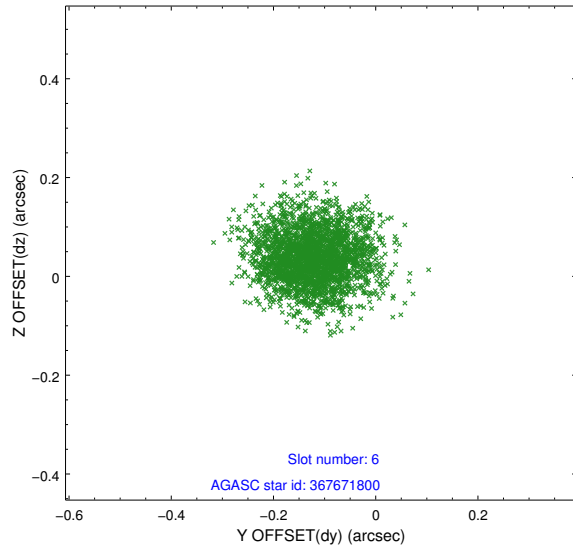
2.4.2 Slot 4



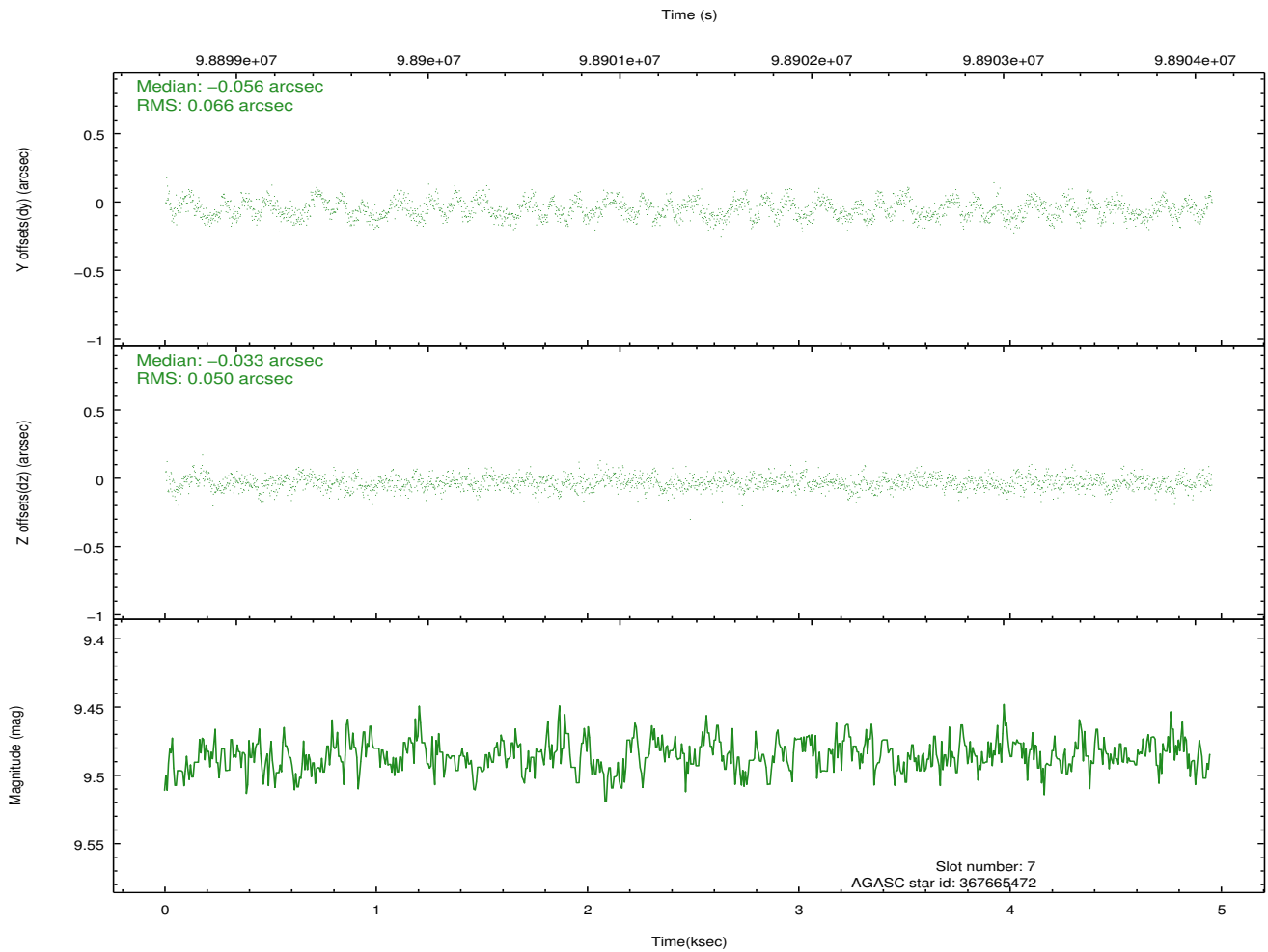
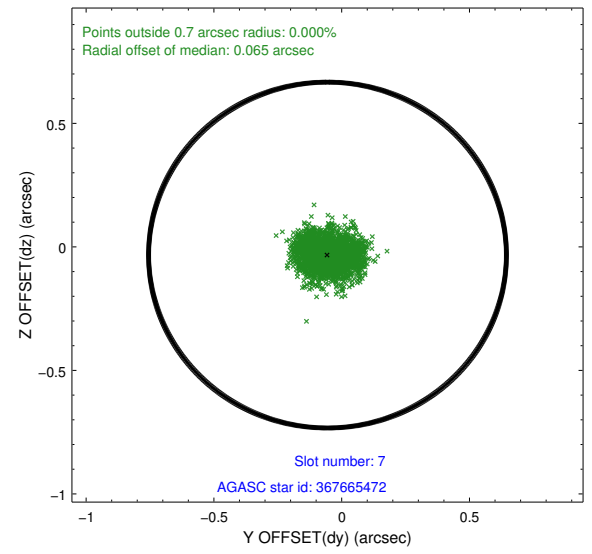
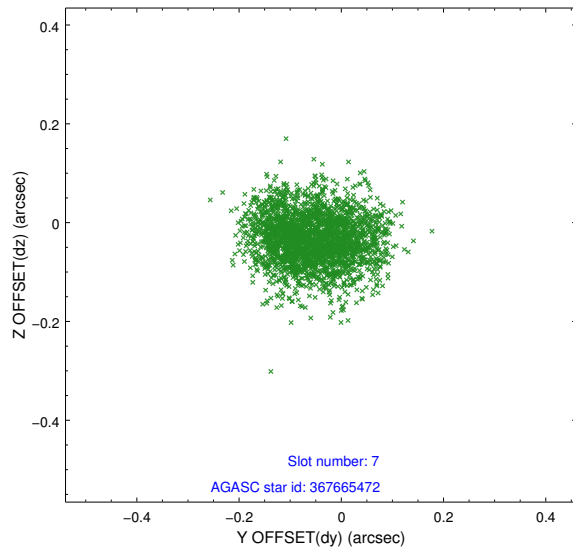
2.4.3 Slot 5



2.4.4 Slot 6

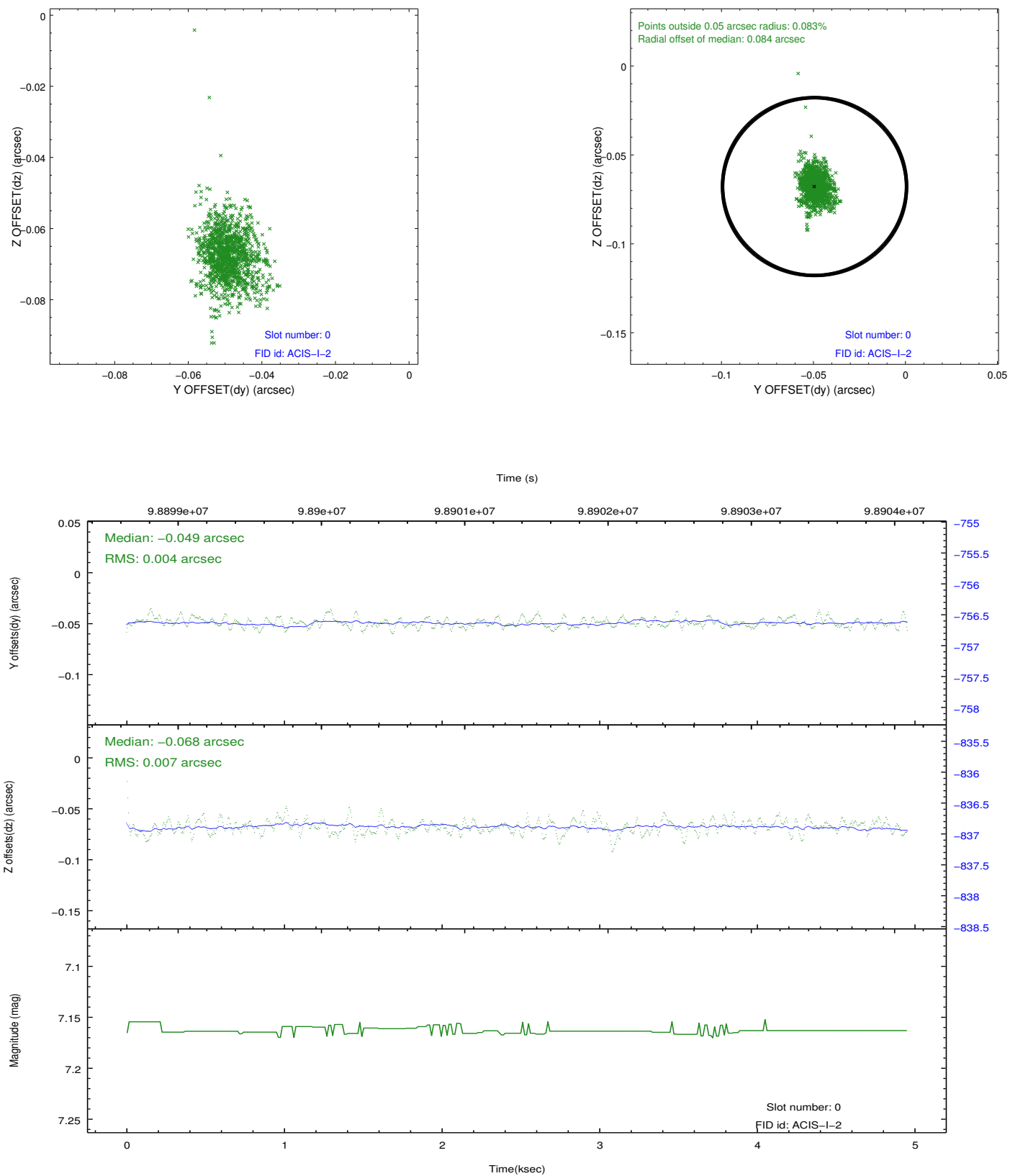


2.4.5 Slot 7

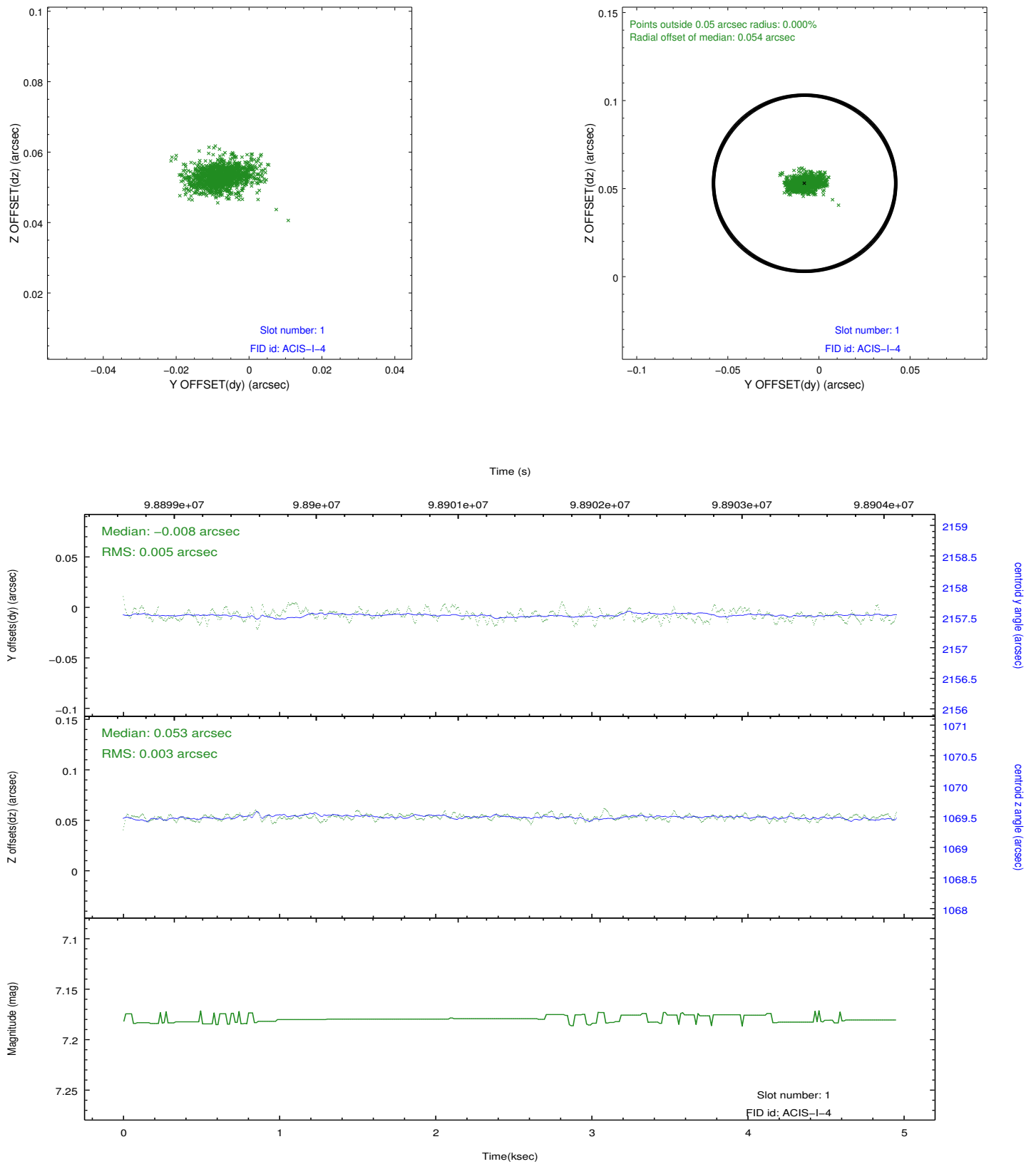


2.5 FID Slots

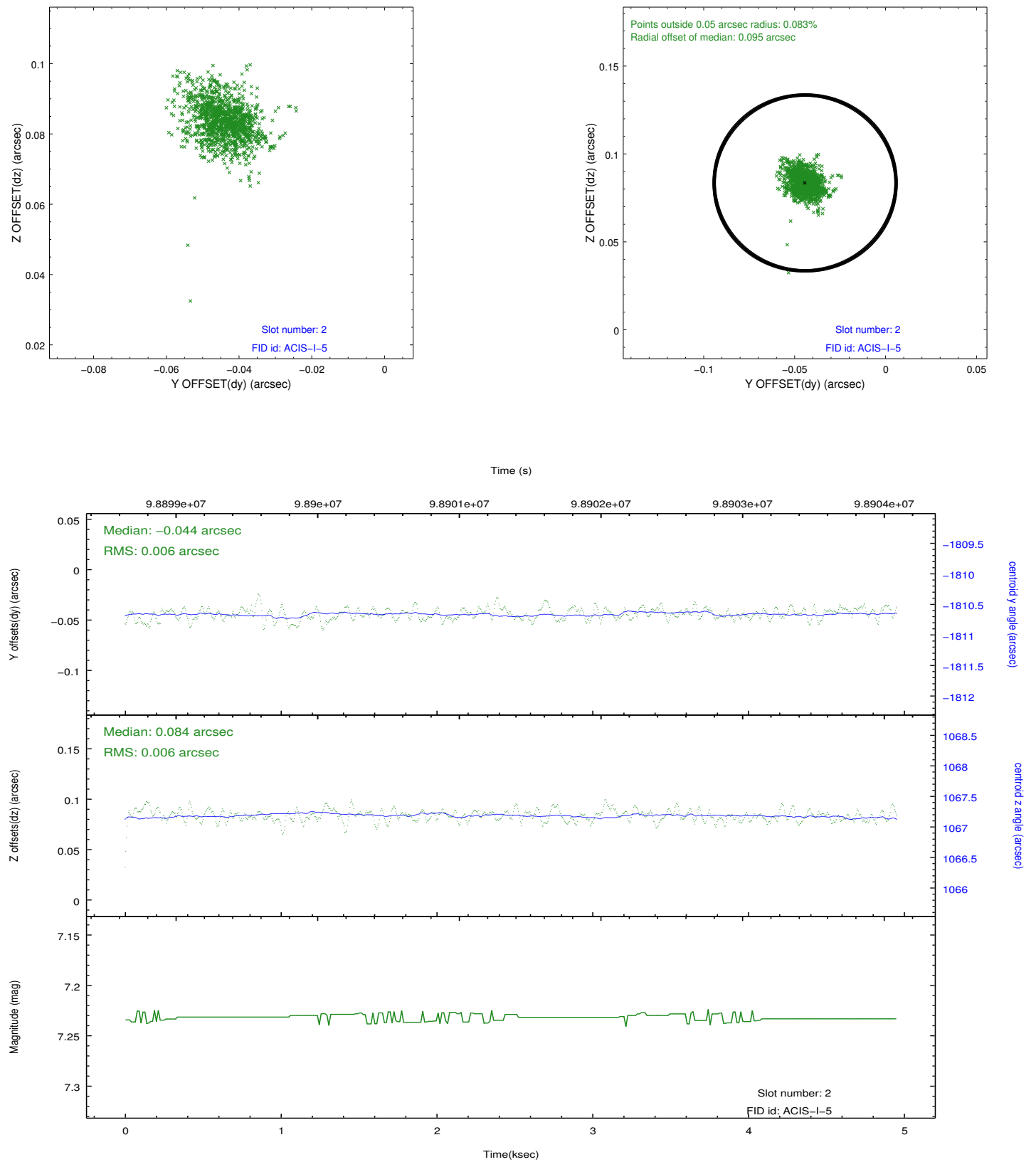
2.5.1 Slot 0



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) | 2012.09.19 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 4.358 |

A.2 Comments

Monitor constraint not satisfied. Requested monitor of 25 - 35 days after 1581, but observation occurred 66 days after 1581. CD0 in consultation with PI/coIs judges constraint as satisfied. Target near the edge of the chip.