

V&V Reference Report

L2 ASCDS Version : 8.4.3

Observation 12415 - L2 Version 3
Chandra X-Ray Center

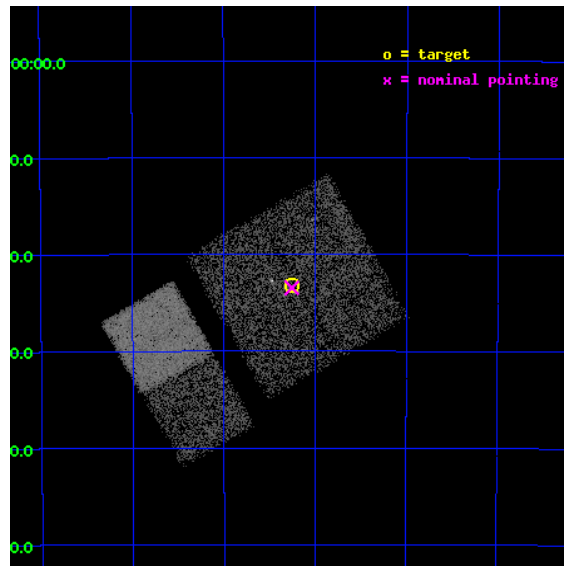
L2 Processing Date : Feb 26 2012

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1 Front

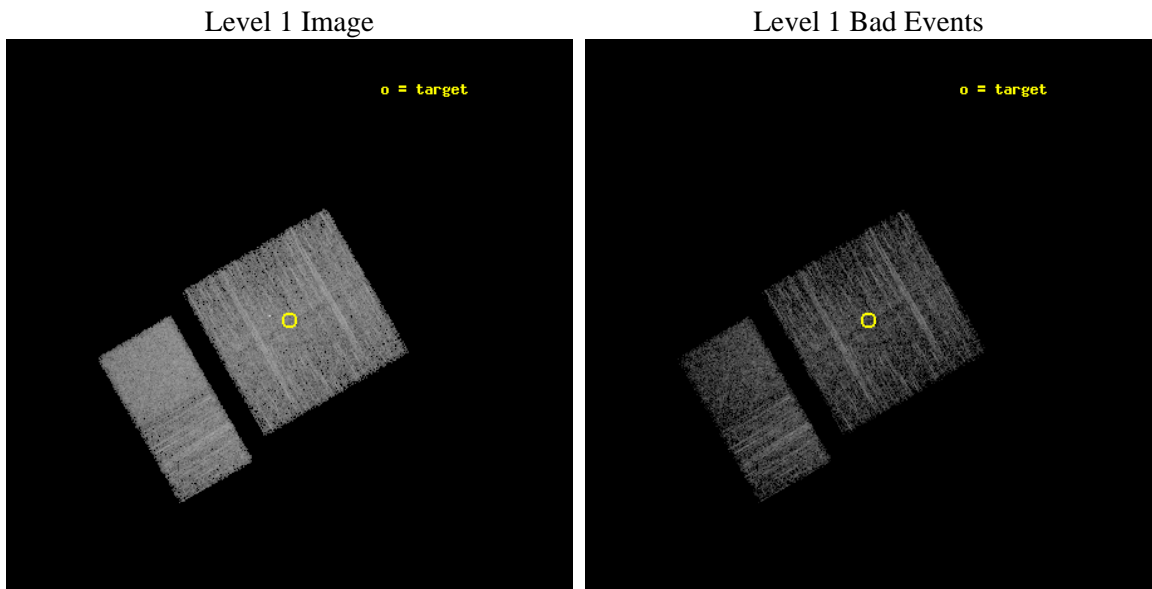
| | | |
|----------|--|---|
| seq_num | 401156 | Sequence number |
| obs_id | 12415 | Observation id |
| title | The Nature of INTEGRAL Sources in the Galactic Plane | Proposal titl |
| observer | Dr. John Tomsick | Principal investigator |
| object | IGR J16173-5023 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 244.314167 | Observer's specified target RA [deg] |
| dec_targ | -50.386 | Observer's specified target Dec [deg] |
| ra_nom | 244.31338617913 | Nominal RA [deg] |
| dec_nom | -50.39115017858 | Nominal Dec [deg] |
| roll_nom | 239.94016531295 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 5052.7999812365 | Sum of GTIs [s] |
| livetime | 4988.8183854432 | Livetime [s] |
| ontime0 | 5052.7999812365 | Sum of GTIs [s] |
| ontime1 | 5052.7999812365 | Sum of GTIs [s] |
| ontime2 | 5052.7999812365 | Sum of GTIs [s] |
| ontime3 | 5052.7999812365 | Sum of GTIs [s] |
| ontime6 | 5052.7999812365 | Sum of GTIs [s] |
| ontime7 | 5052.7999812365 | Sum of GTIs [s] |
| l2events | 33872 | Number of level 2 events |



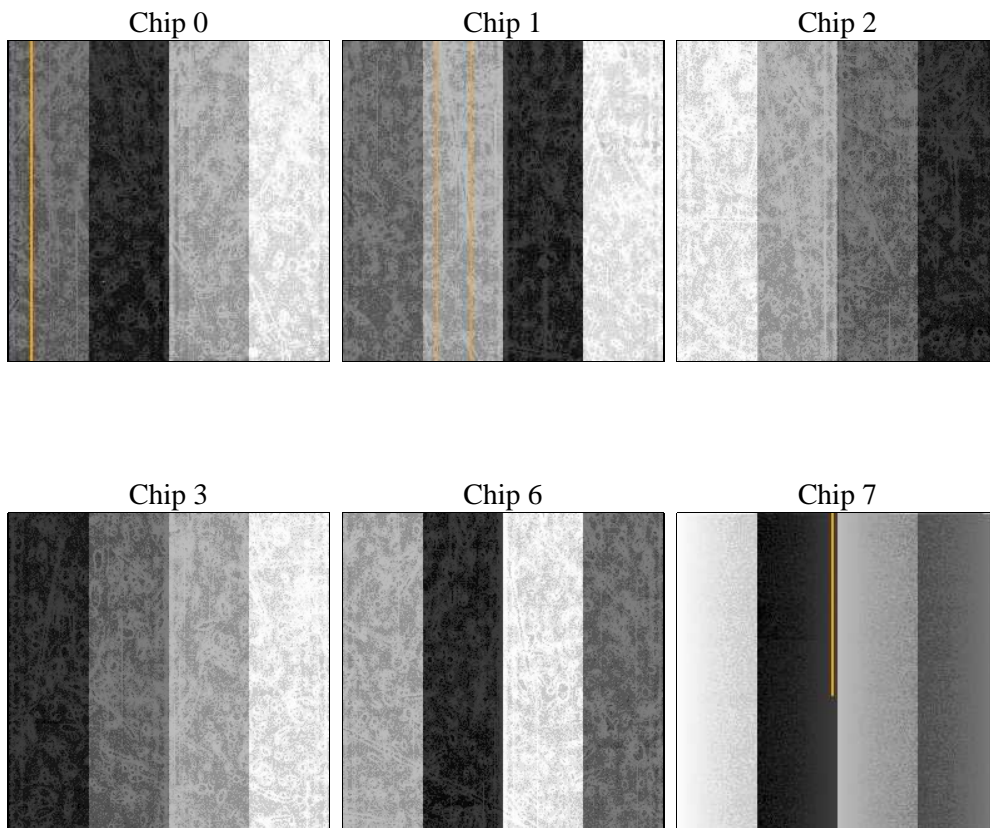
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 5000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.3 | Processing system revision | ontime | 5052.7999812365 | Sum of GTIs [s] |
| caldsver | 4.4.8 | | ontime0 | 5052.7999812365 | Sum of GTIs [s] |
| date | 2012-02-26T22:06:49 | Date and time of file creation | ontime1 | 5052.7999812365 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime2 | 5052.7999812365 | Sum of GTIs [s] |
| | | | ontime3 | 5052.7999812365 | Sum of GTIs [s] |
| | | | ontime6 | 5052.7999812365 | Sum of GTIs [s] |
| | | | ontime7 | 5052.7999812365 | Sum of GTIs [s] |
| | | | l1events | 186152 | Number of level 1 events |

2.1.4 Events

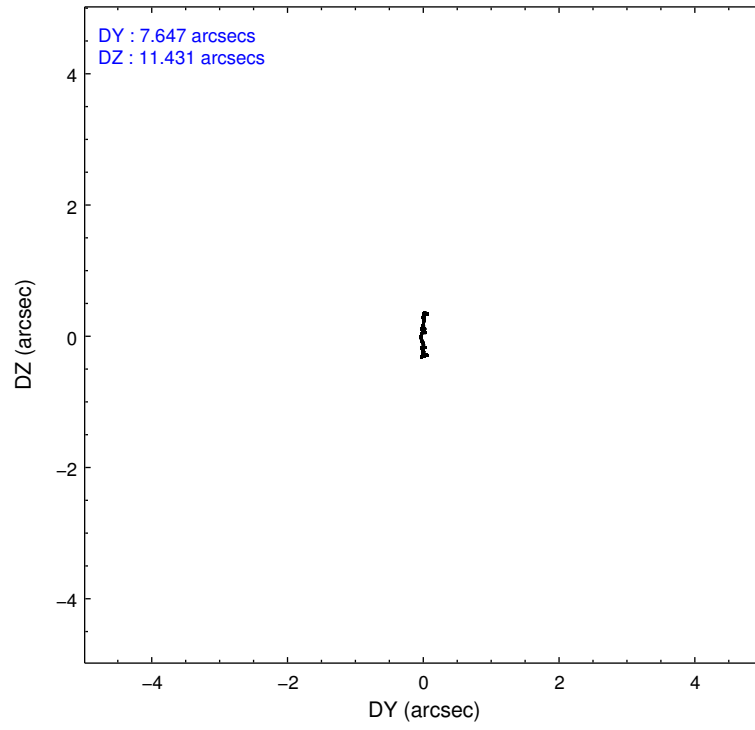
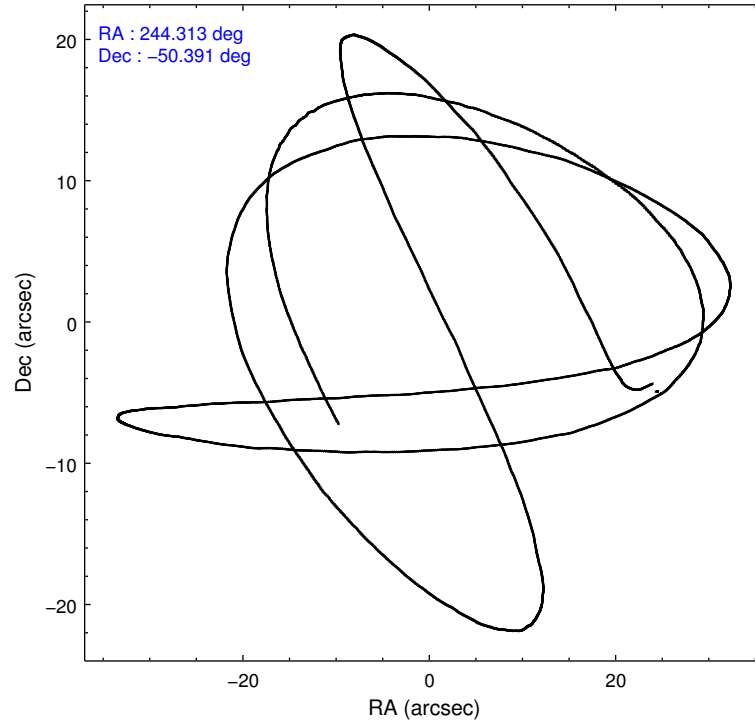
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 26879 | 30287 | 28054 | 30161 | 31516 | 39255 | grade 0 events | 1418 | 1555 | 1453 | 1938 | 1494 | 1629 |
| rejected events | 23144 | 26197 | 24502 | 25770 | 27610 | 21884 | | 5% | 5% | 5% | 6% | 4% | 4% |
| rejected % | 86% | 86% | 87% | 85% | 87% | 55% | grade 1 events | 18 | 26 | 25 | 39 | 16 | 48 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 852 | 910 | 803 | 880 | 841 | 3547 |
| | | | | | | | | 3% | 3% | 2% | 2% | 2% | 9% |
| | | | | | | | grade 3 events | 378 | 388 | 344 | 397 | 363 | 1465 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 4 events | 350 | 351 | 328 | 450 | 405 | 1441 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 5 events | 1311 | 1384 | 1222 | 1508 | 1465 | 4045 |
| | | | | | | | | 4% | 4% | 4% | 4% | 4% | 10% |
| | | | | | | | grade 6 events | 748 | 898 | 632 | 732 | 811 | 9316 |
| | | | | | | | | 2% | 2% | 2% | 2% | 2% | 23% |
| | | | | | | | grade 7 events | 21804 | 24775 | 23247 | 24217 | 26121 | 17764 |
| | | | | | | | | 81% | 81% | 82% | 80% | 82% | 45% |

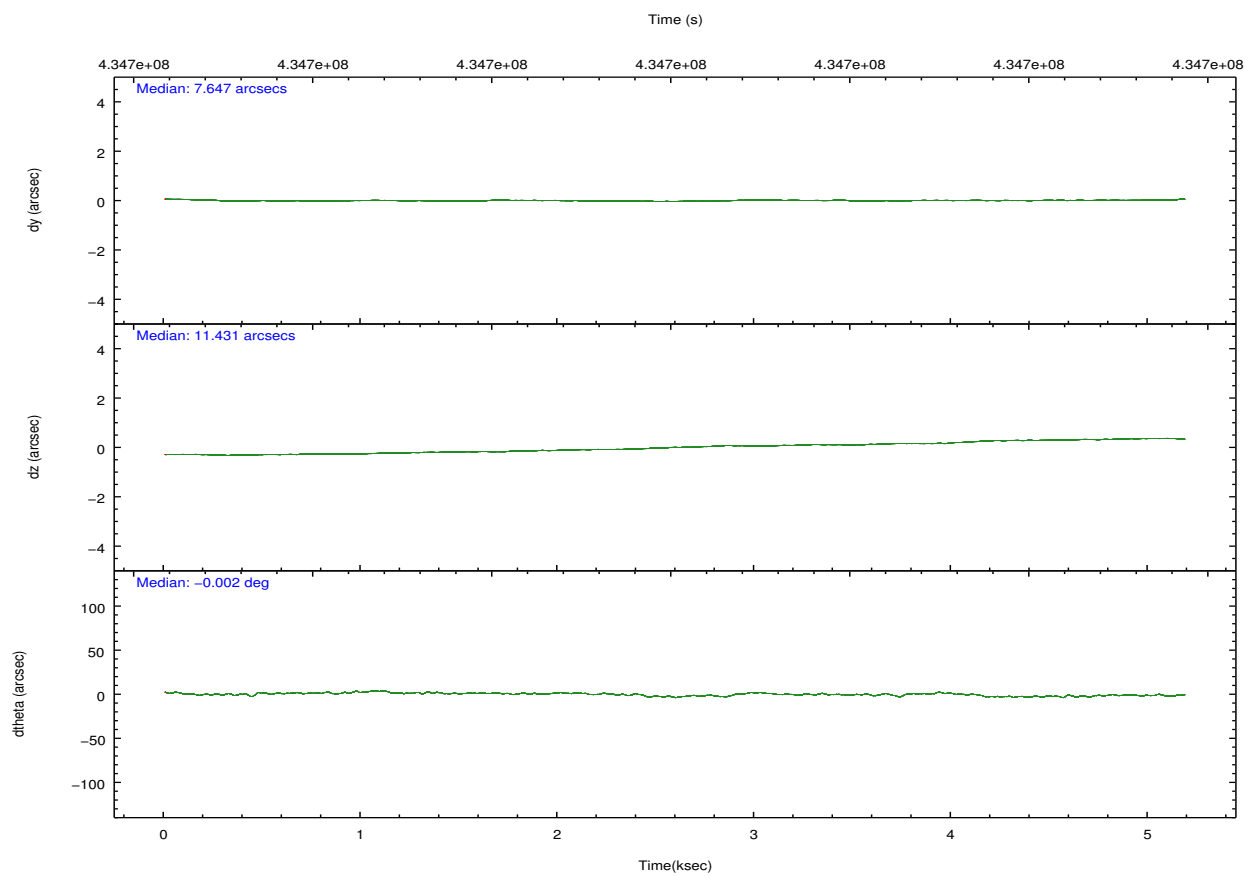
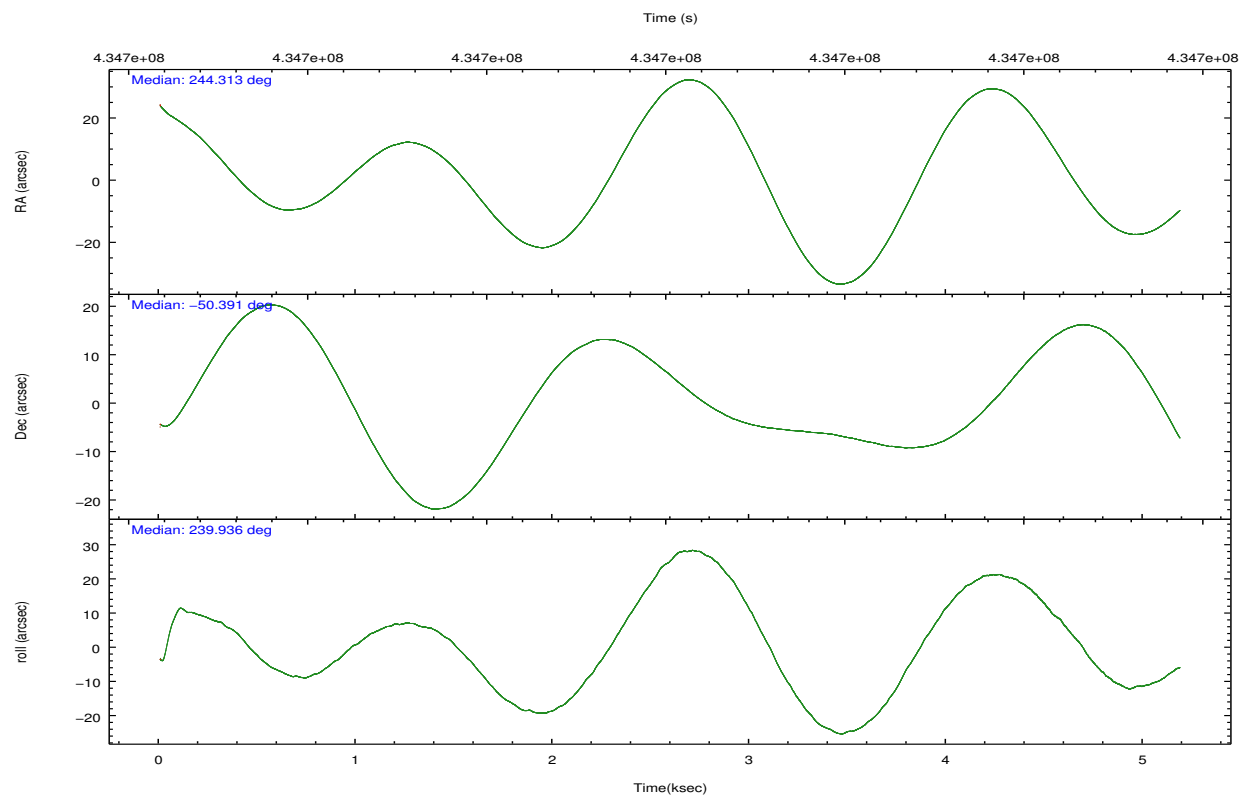
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|-----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-012367 | ACIS-012367 |
| Grating | NONE | NONE |
| Data mode | FAINT | FAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 244.313208 | 244.3133861791325 |
| [deg] Pointing Dec | -50.364219 | -50.39115017858029 |
| [deg] Pointing Roll | 239.731397 | 239.9401653129546 |
| [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) | 434698625.184000 | 434697399.0238 |
| Observation start date | 2011-10-11T05:35:59 | 2011-10-11T05:16:39 |
| [s] Observation end time (MET) | 434703625.184000 | 434704051.78665 |
| Observation end date | 2011-10-11T06:59:19 | 2011-10-11T07:07:31 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| CCD I0 on | Y | Y |
| CCD I1 on | Y | Y |
| CCD I2 on | Y | Y |
| CCD I3 on | Y | Y |
| CCD S0 on | N | N |
| CCD S1 on | N | N |
| CCD S2 on | O1 | Y |
| CCD S3 on | O2 | Y |
| CCD S4 on | N | N |
| CCD S5 on | N | N |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



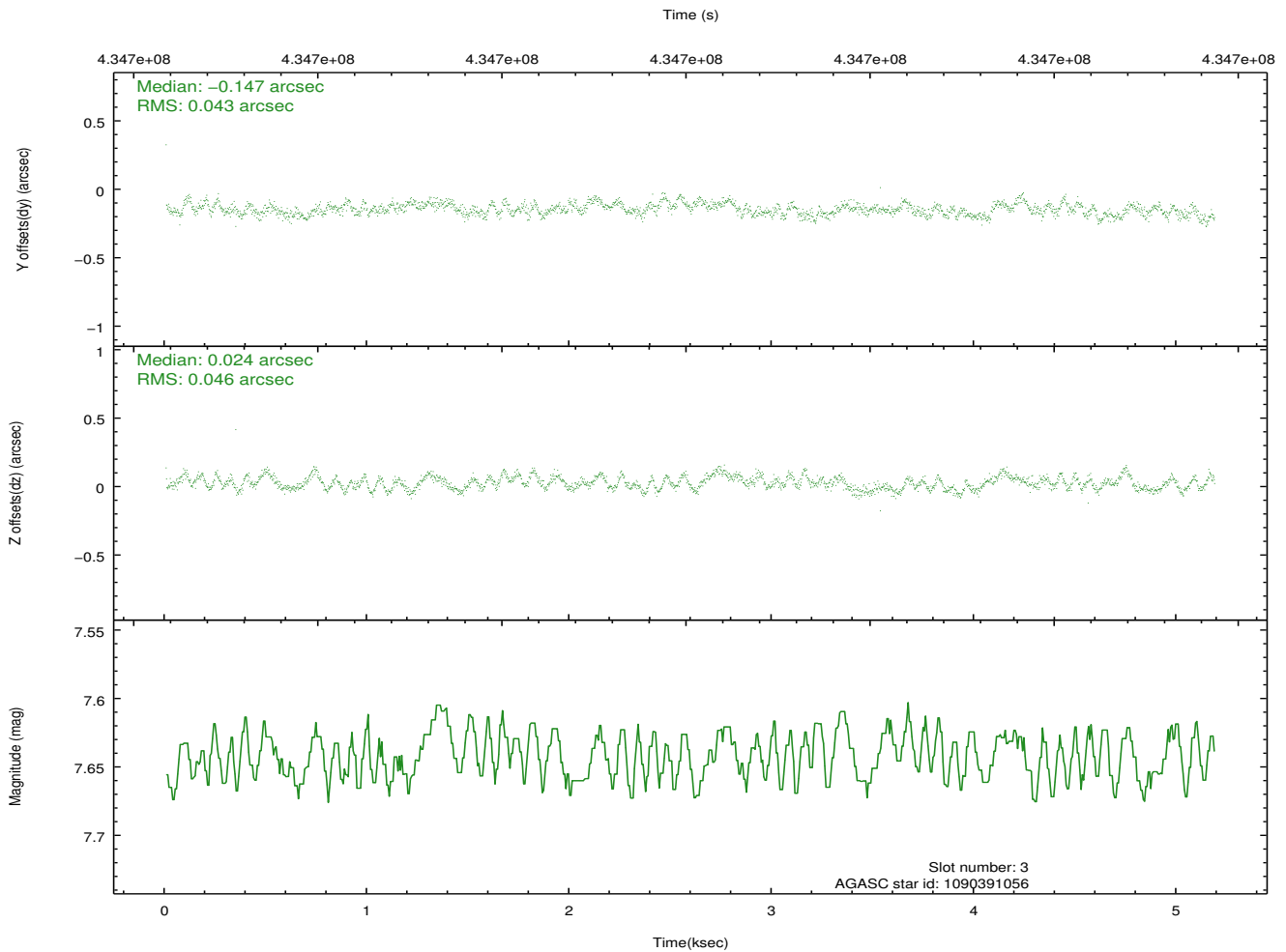
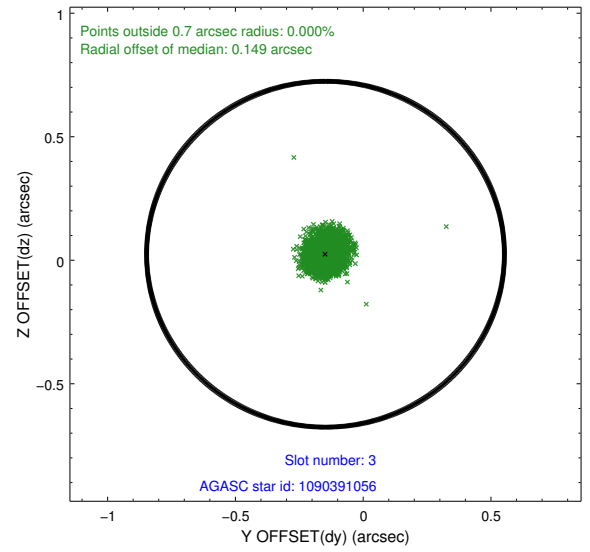
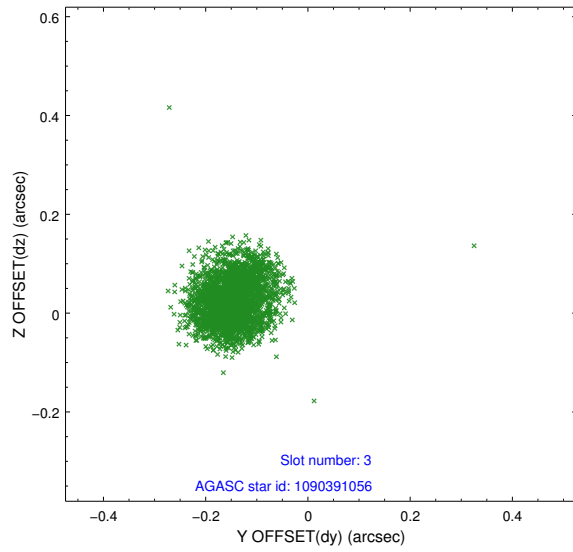


Slot Statistics

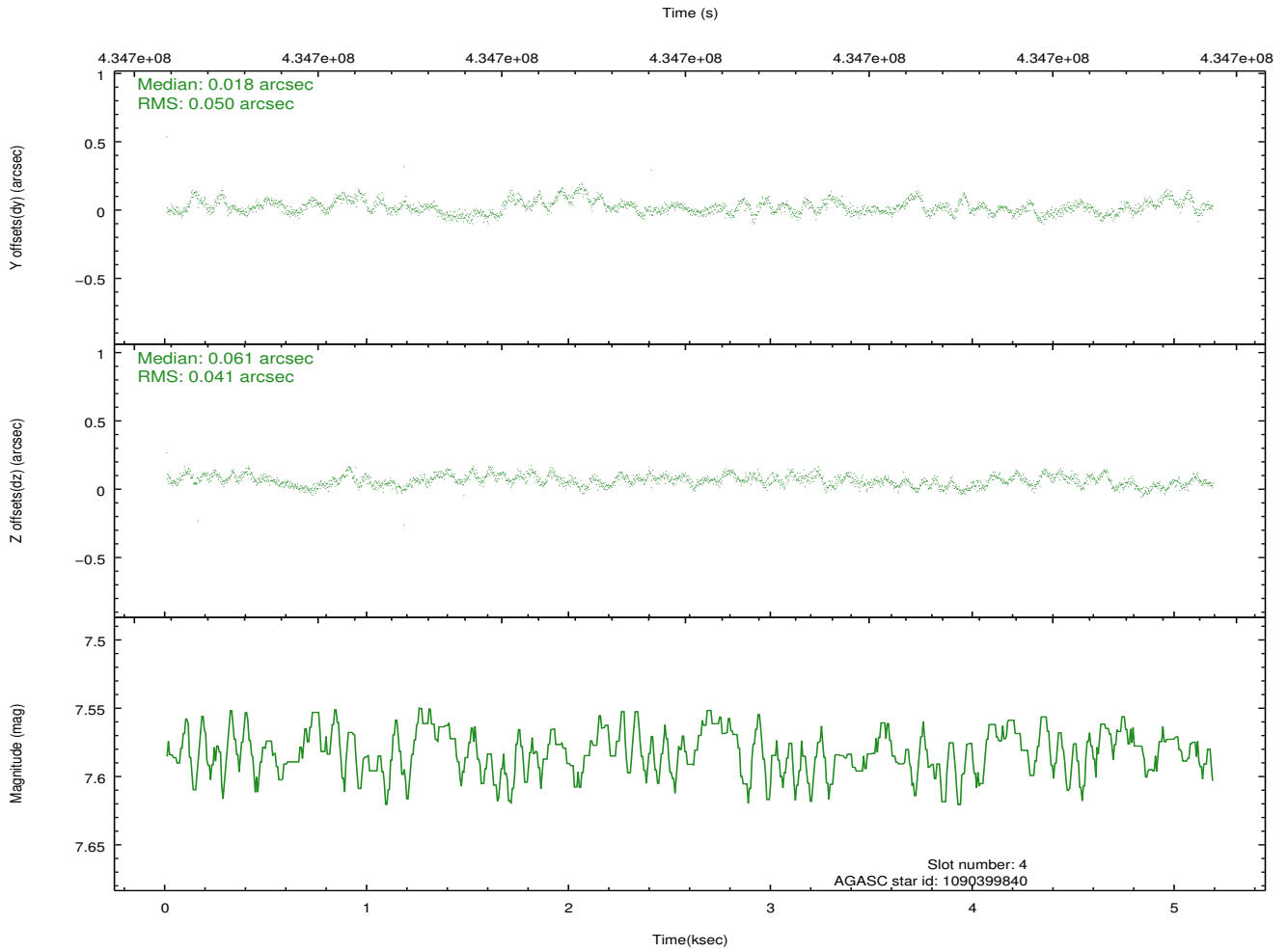
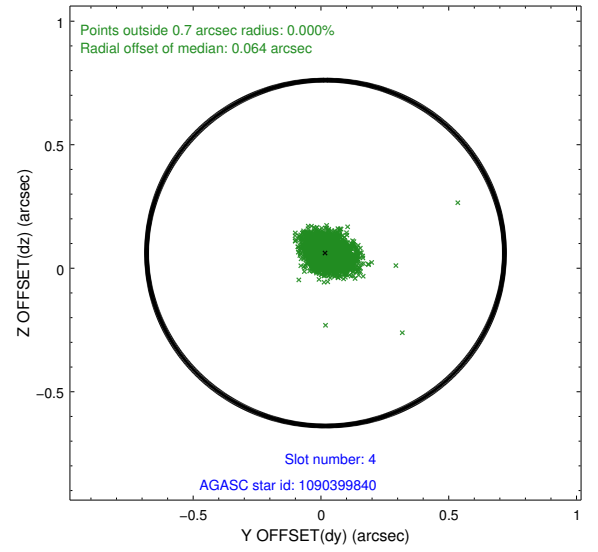
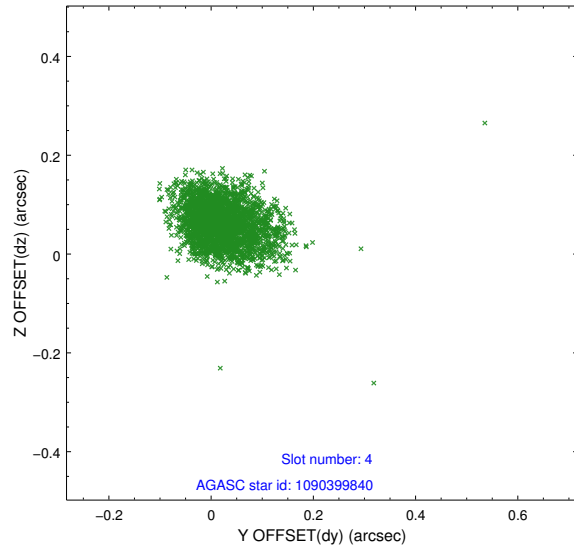
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|---------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | ACIS-I-1 | 7.14 | 1265 | -0.062 | -0.069 | 0.020 | 0.038 | 0.000000 | 0.000000 | 931.95 | -835.01 |
| 1 | FID | ACIS-I-4 | 7.07 | 1264 | 0.084 | 0.053 | 0.018 | 0.027 | 0.000000 | 0.000000 | 2152.80 | 1064.33 |
| 2 | FID | ACIS-I-6 | 7.14 | 1265 | -0.120 | 0.082 | 0.011 | 0.020 | 0.000000 | 0.000000 | 399.32 | 1707.88 |
| 3 | GUIDE | 1090391056 | 7.64 | 2529 | -0.147 | 0.024 | 0.067 | 0.102 | 244.221245 | -49.856754 | -1467.59 | -1104.17 |
| 4 | GUIDE | 1090399840 | 7.58 | 2529 | 0.018 | 0.061 | 0.066 | 0.112 | 243.797224 | -49.874464 | -914.03 | -1919.96 |
| 5 | OMITTED | | 0.00 | 0 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000000 | 0.000000 | 0.00 | 0.00 |
| 6 | GUIDE | 1090921440 | 8.94 | 2526 | 0.167 | -0.040 | 0.090 | 0.154 | 243.292741 | -50.752608 | 2395.23 | -1294.23 |
| 7 | GUIDE | 1091059112 | 9.05 | 2528 | -0.042 | -0.047 | 0.097 | 0.150 | 245.180420 | -50.736664 | 175.11 | 2388.51 |

2.4 Star Slots

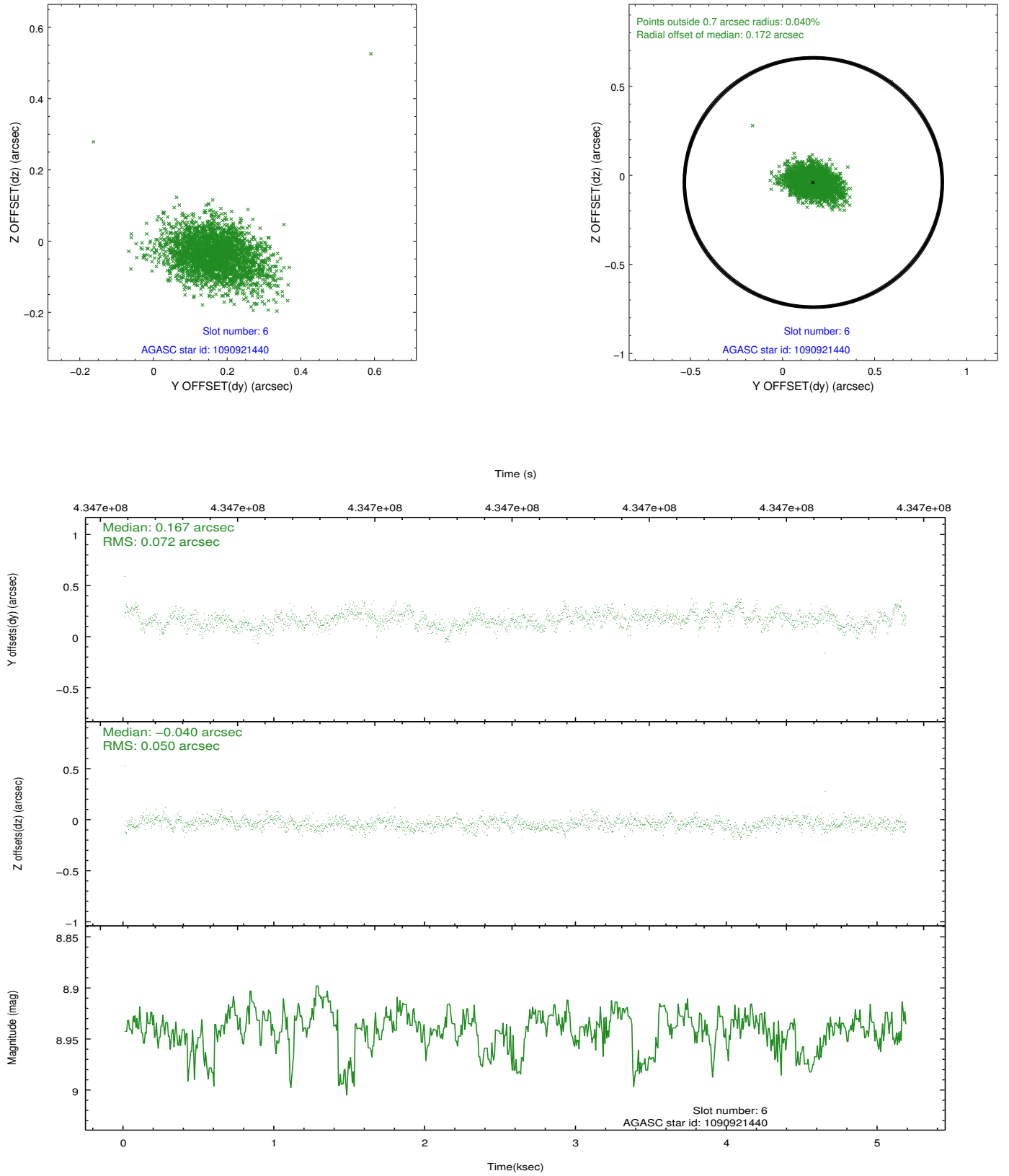
2.4.1 Slot 3



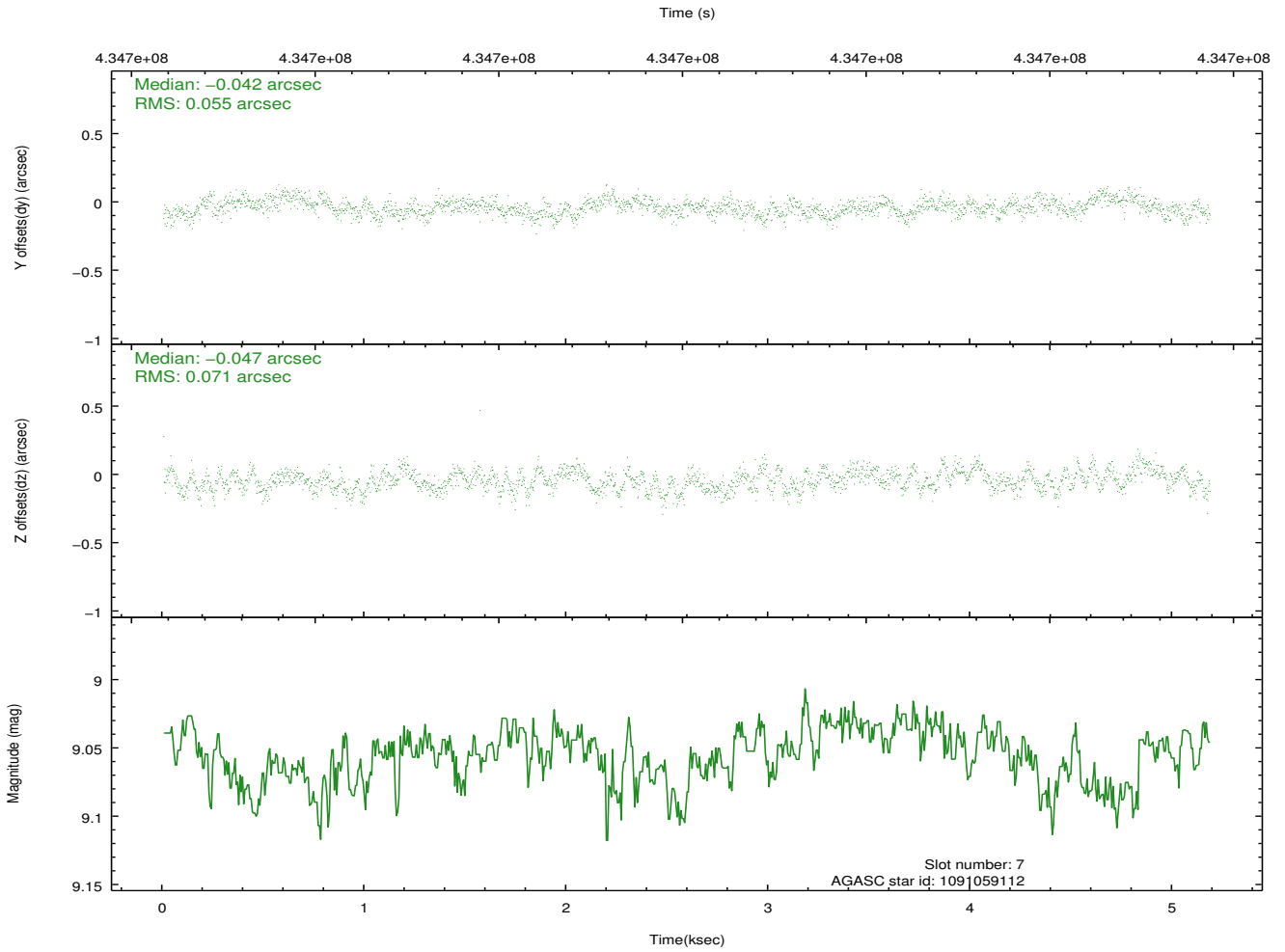
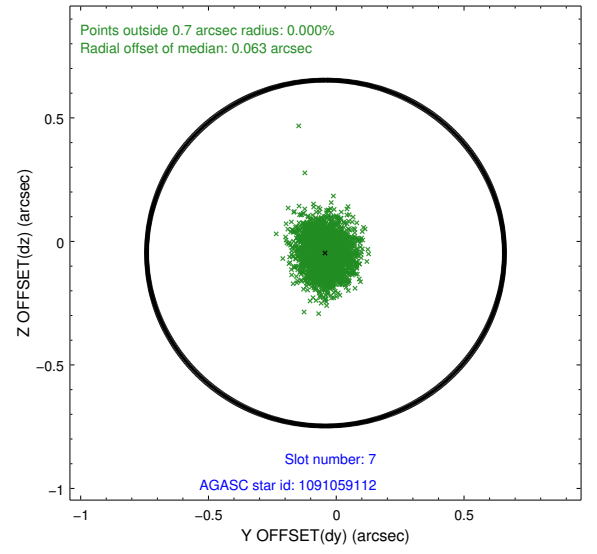
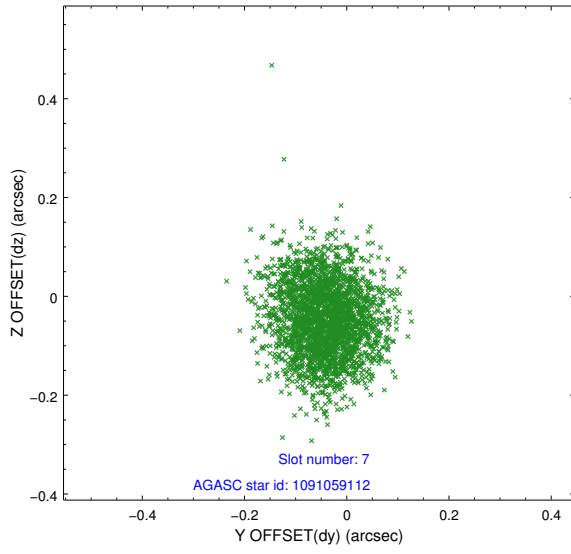
2.4.2 Slot 4



2.4.3 Slot 6

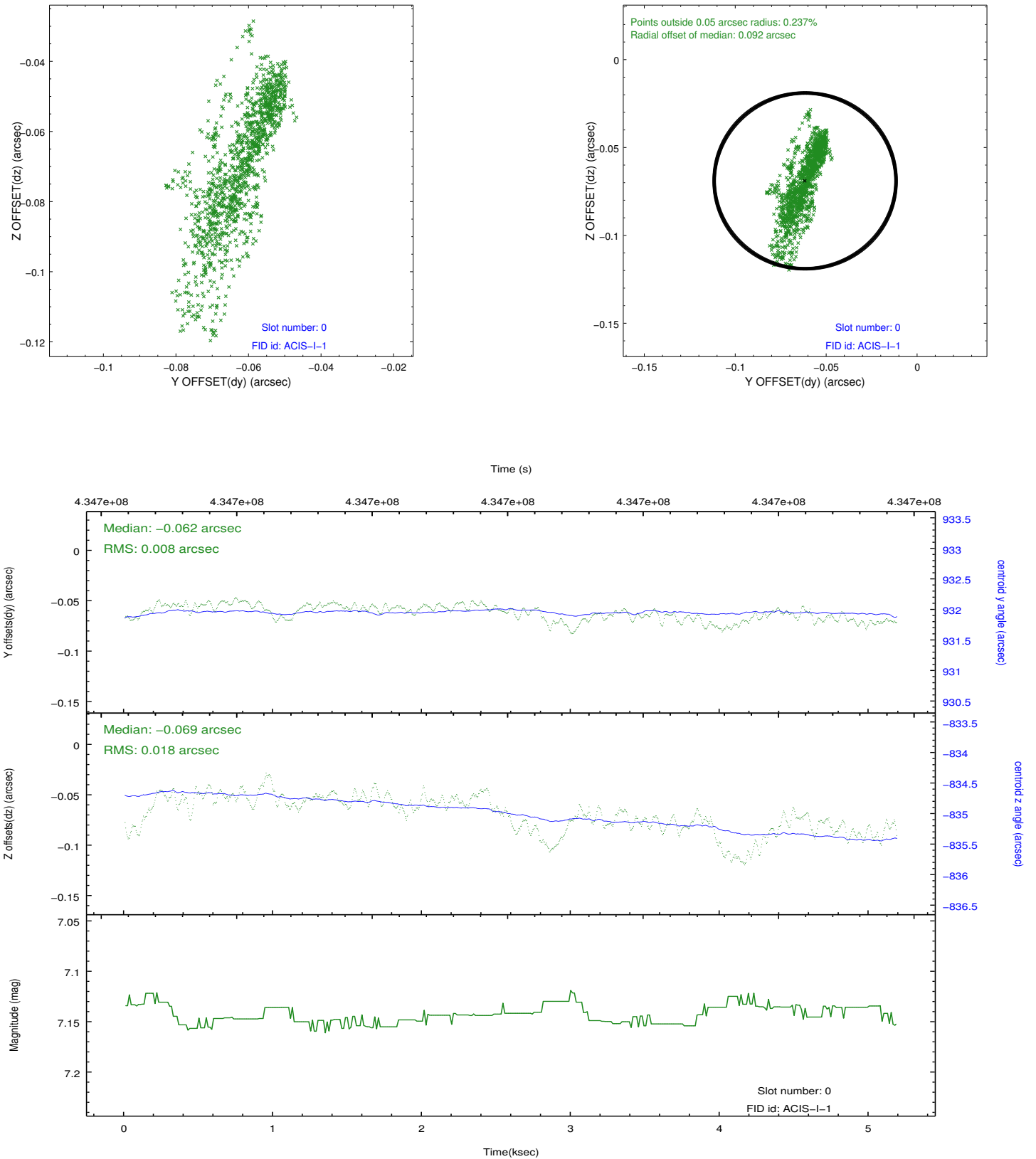


2.4.4 Slot 7

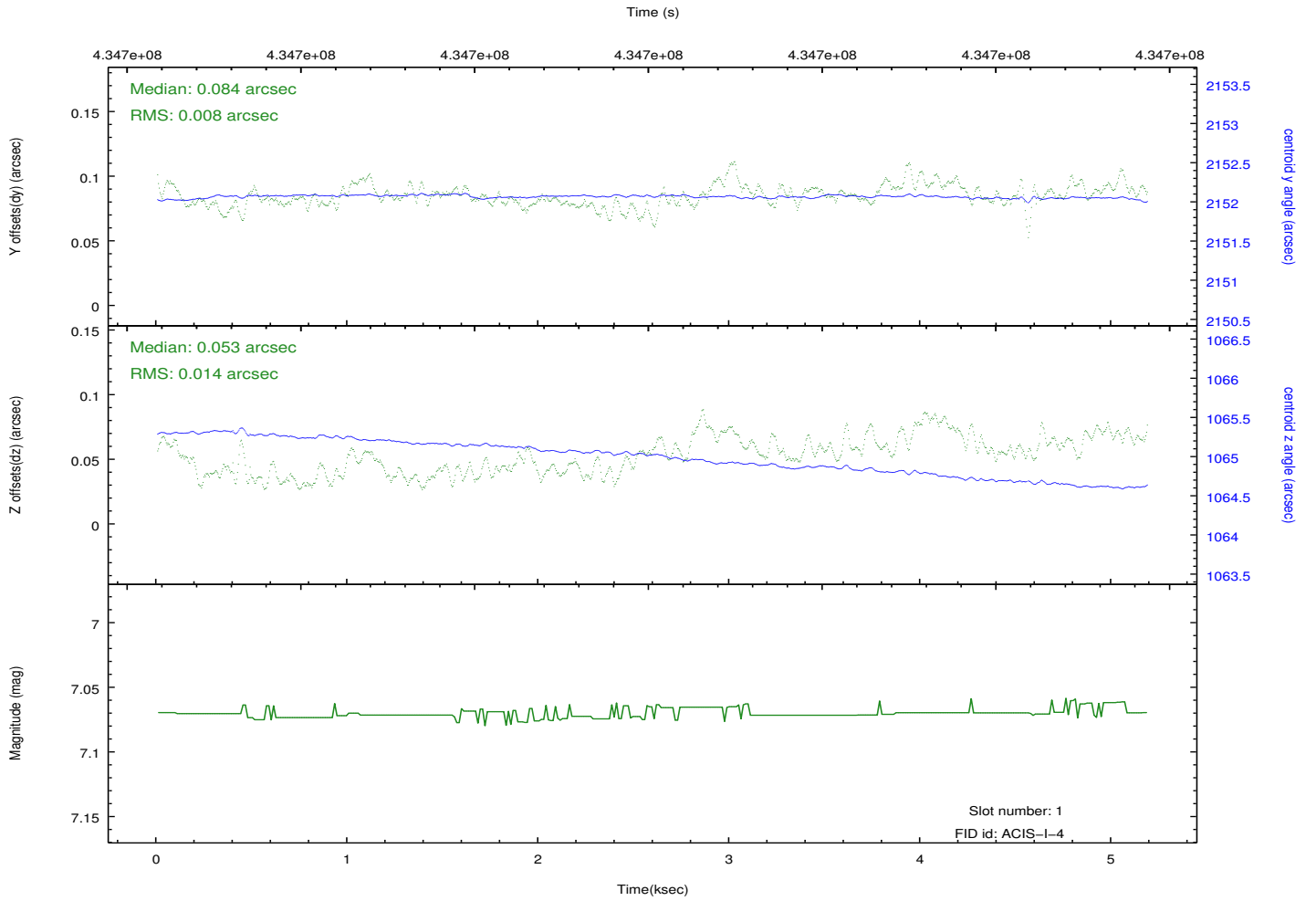
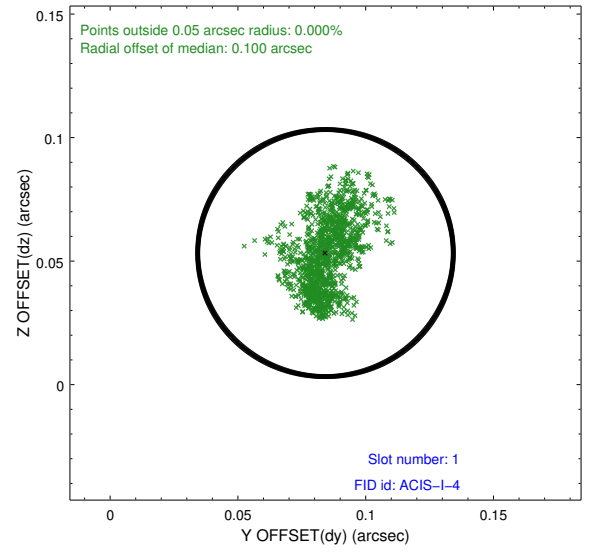
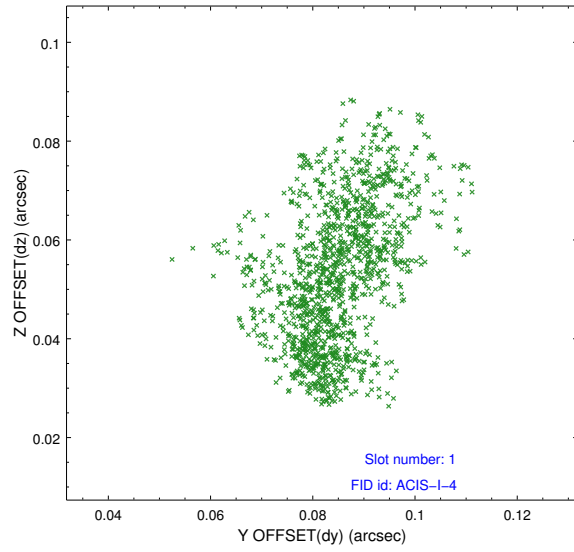


2.5 FID Slots

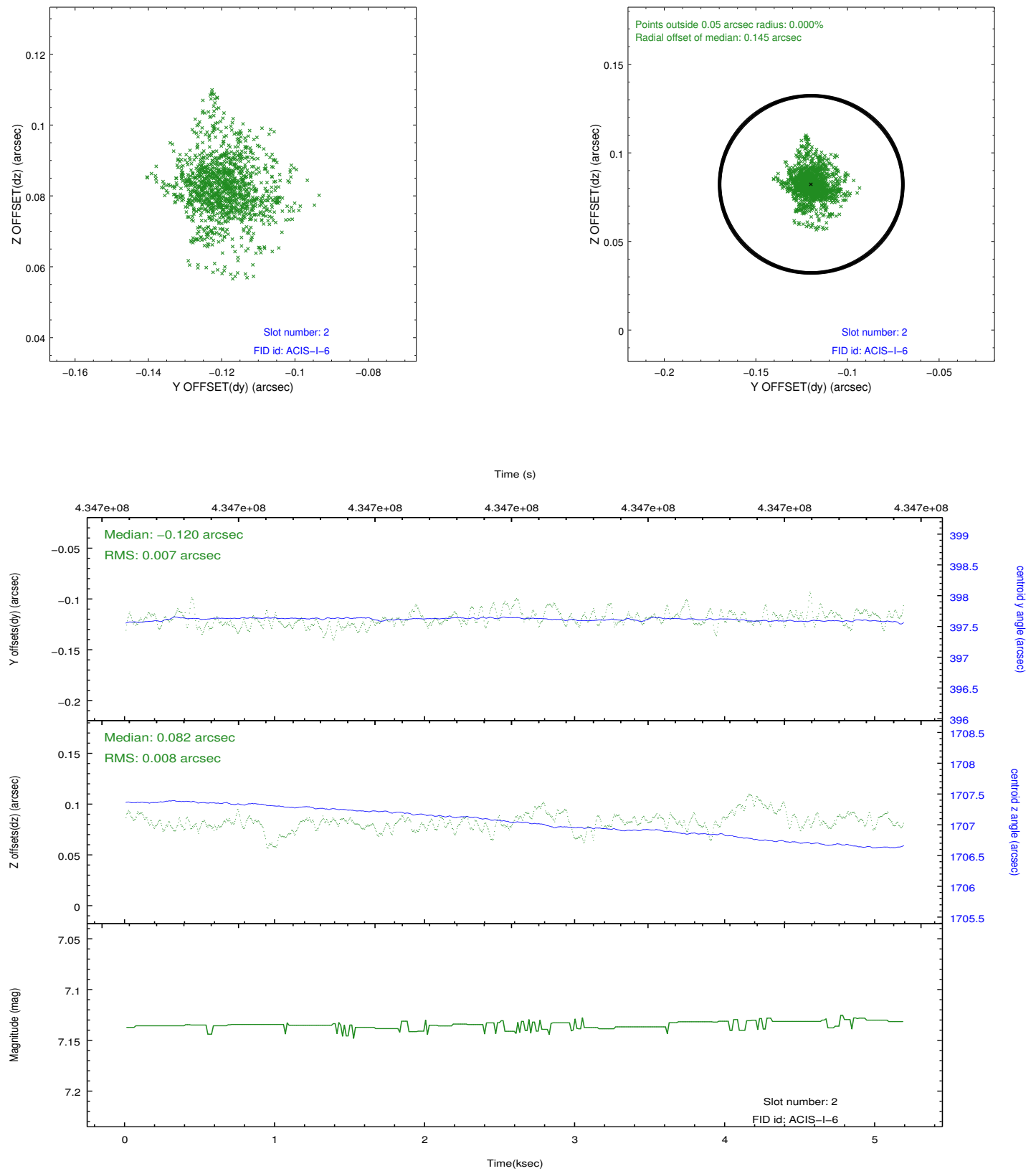
2.5.1 Slot 0



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) | 2012.02.28 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.0527999812365 |

A.2 Comments

The guide star in slot 5 was removed from the aspect solution due to poor data quality. The aspect solution is improved by the removal of this guide star from the solution.