

V&V Reference Report

L2 ASCDS Version : 8.1.2

Observation 62553 - L2 Version 4
Chandra X-Ray Center

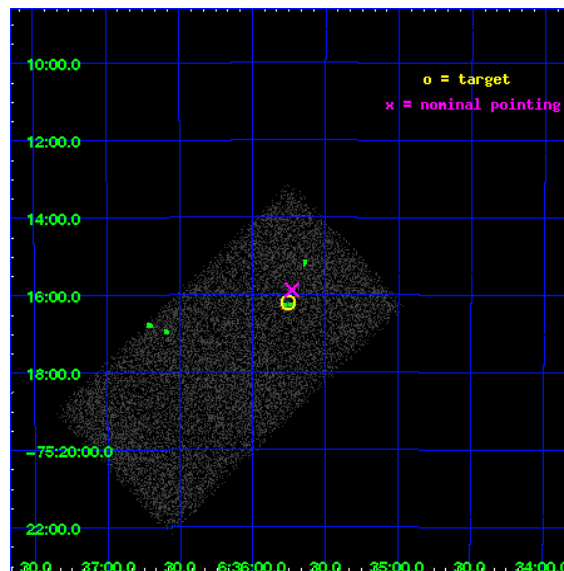
L2 Processing Date : Dec 14 2009

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1 Front

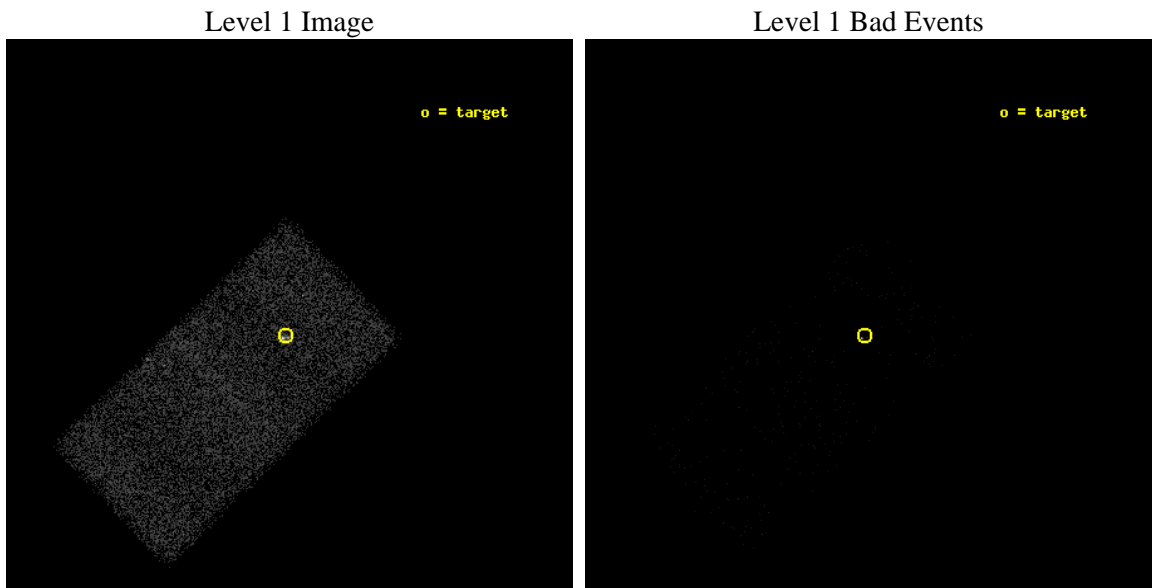
| | | |
|----------|---------------------|--|
| seq_num | 780213 | Sequence number |
| obs_id | 62553 | Observation id |
| title | ACIS Focus Test | Proposal title |
| observer | DR. CXC CALIBRATION | Principal investigator |
| object | PKS0637-752 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 98.94 | Observer's specified target RA |
| dec_targ | -75.27 | Observer's specified target Dec |
| ra_nom | 98.932930075511 | Nominal RA |
| dec_nom | -75.264611867694 | Nominal Dec |
| roll_nom | 136.05537574551 | Nominal Roll |
| revision | 4 | Processing version of data |
| ontime | 5016.0 | Sum of GTIs [s] |
| livetime | 4882.4170689924 | Livetime [s] |
| ontime7 | 5016.0 | Sum of GTIs [s] |
| l2events | 20837 | Number of level 2 events |



2 OBI

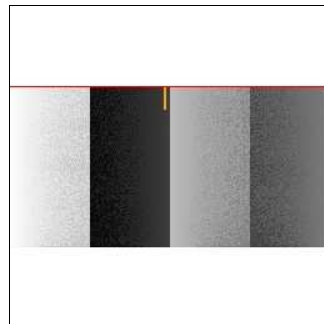
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-------------|-------------------------------------|
| obi_num | 1 | Obi number | sched_exp_time | 6000.000000 | Scheduled observation exposure time |
| ascdsver | 8.1.2 | ASCDS version number | ontime | 5016.0 | Sum of GTIs [s] |
| caldbver | 4.1.4 | | ontime7 | 5016.0 | Sum of GTIs [s] |
| date | 2009-12-14T05:39:56 | Date and time of file creation | l1events | 26208 | Number of level 1 events |
| revision | 4 | Processing version of data | | | |

2.1.4 Events

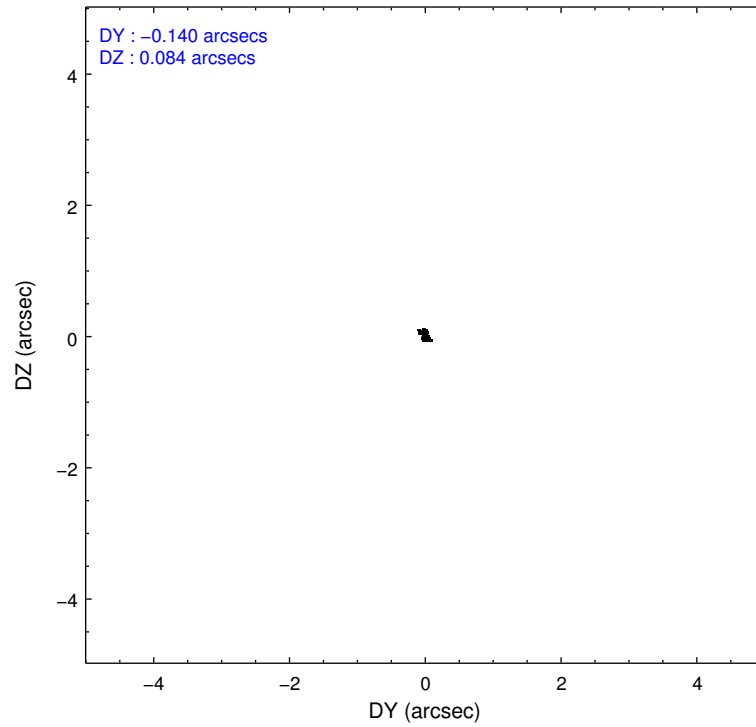
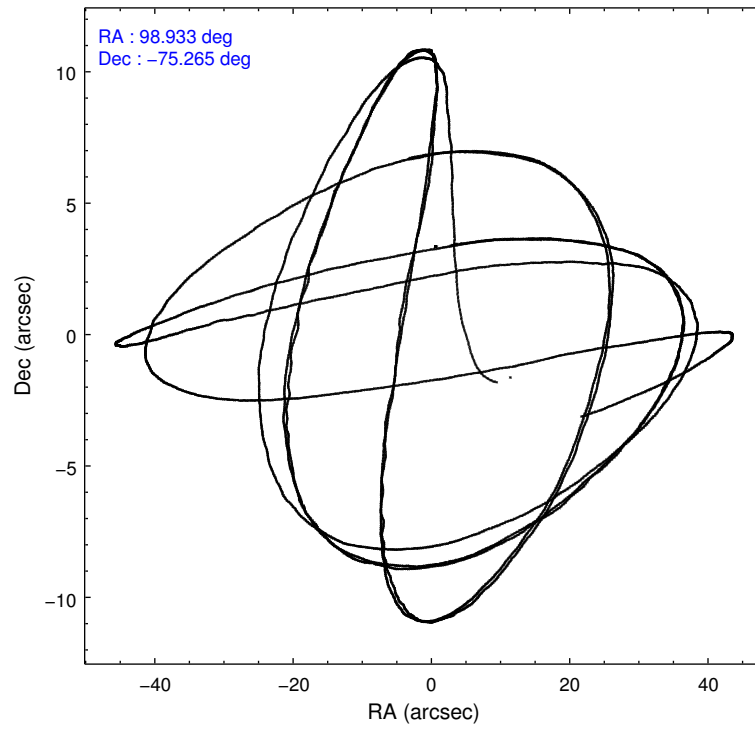
| | ccd 7 |
|-----------------|-------|
| level 1 events | 26208 |
| rejected events | 4727 |
| rejected % | 18% |

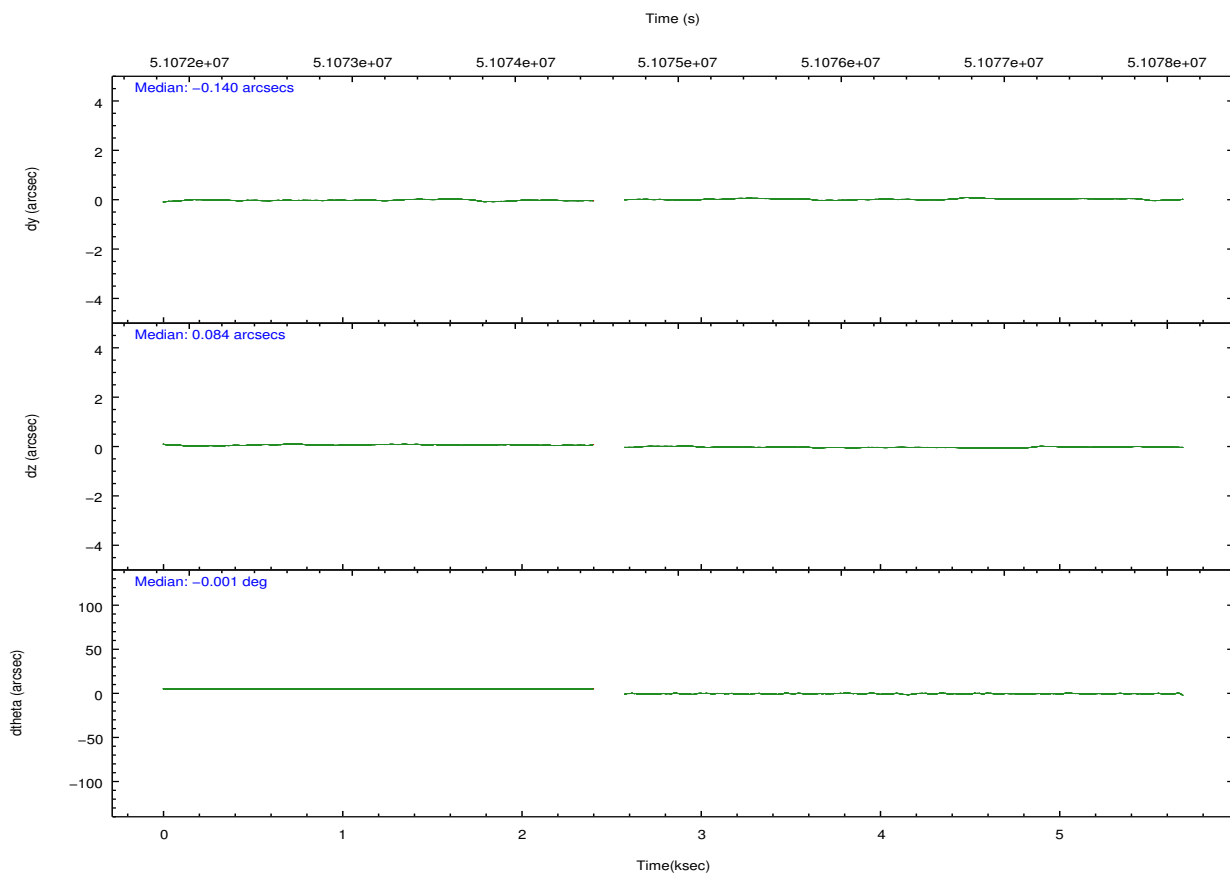
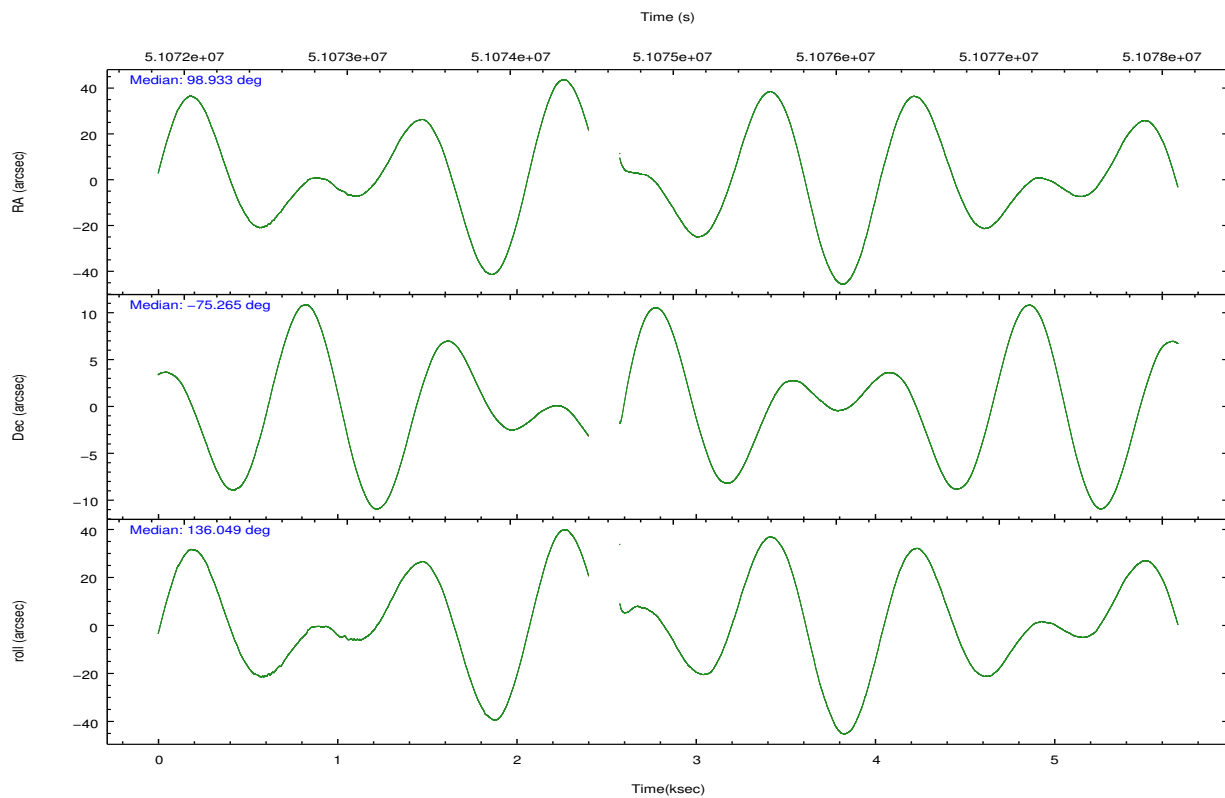
| | ccd 7 |
|----------------|-------|
| grade 0 events | 1465 |
| | 5% |
| grade 1 events | 44 |
| | 0% |
| grade 2 events | 2913 |
| | 11% |
| grade 3 events | 1975 |
| | 7% |
| grade 4 events | 1667 |
| | 6% |
| grade 5 events | 3744 |
| | 14% |
| grade 6 events | 14400 |
| | 54% |
| grade 7 events | 0 |
| | 0% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|----------------------|----------------------|---------------------------------|-----------|----------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-7 | ACIS-7 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | OVERRIDE | OVERRIDE |
| Data mode | FAINT | FAINT | On-chip summing requested | N | N |
| Observation mode | POINTING | POINTING | Subarray requested | CUSTOM | CUSTOM |
| Pointing RA | 98.94 | 98.9329300755106 | Subarray start row | 256 | 256 |
| Pointing Dec | -75.27 | -75.26461186769404 | Subarray row count | 512 | 512 |
| Pointing Roll | 136.378512 | 136.0553757455102 | Alternating exposures requested | N | N |
| SIM focus pos (mm) | -0.7347934072091608 | -0.7347934072091608 | Primary exposure time | 1.5 | 1.5 |
| SIM defocus (mm) | -0.05052594021330004 | -0.05052594021330004 | | | |
| SIM translation stage pos (mm) | -190.1325231039672 | -190.1325231039672 | | | |
| SIM translation stage offset (mm) | 0 | 0 | | | |
| Observation start time | 51072121 | 51072121 | | | |
| Observation start date | 1999-08-15T02:42:01 | 1999-08-15T02:42:00 | | | |
| Observation end time | 51077812 | 51077812 | | | |
| Observation end date | 1999-08-15T04:16:52 | 1999-08-15T04:16:51 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



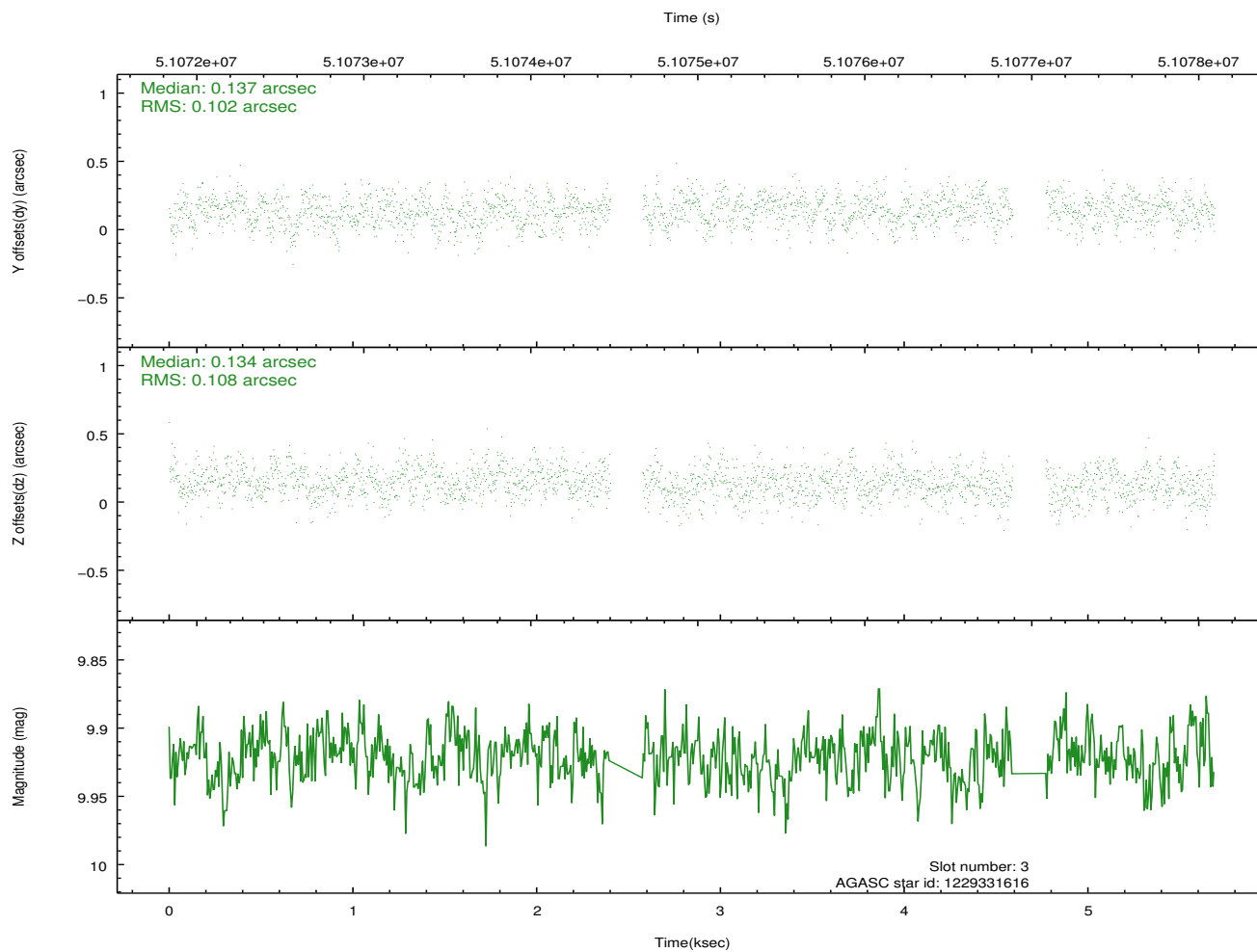
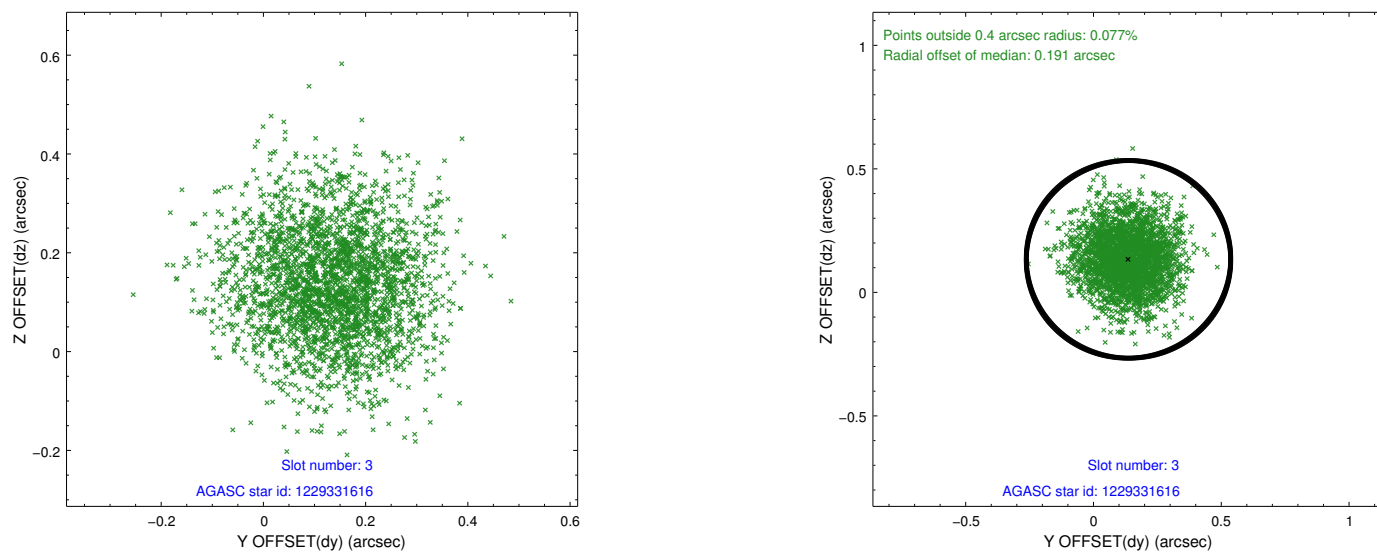


Slot Statistics

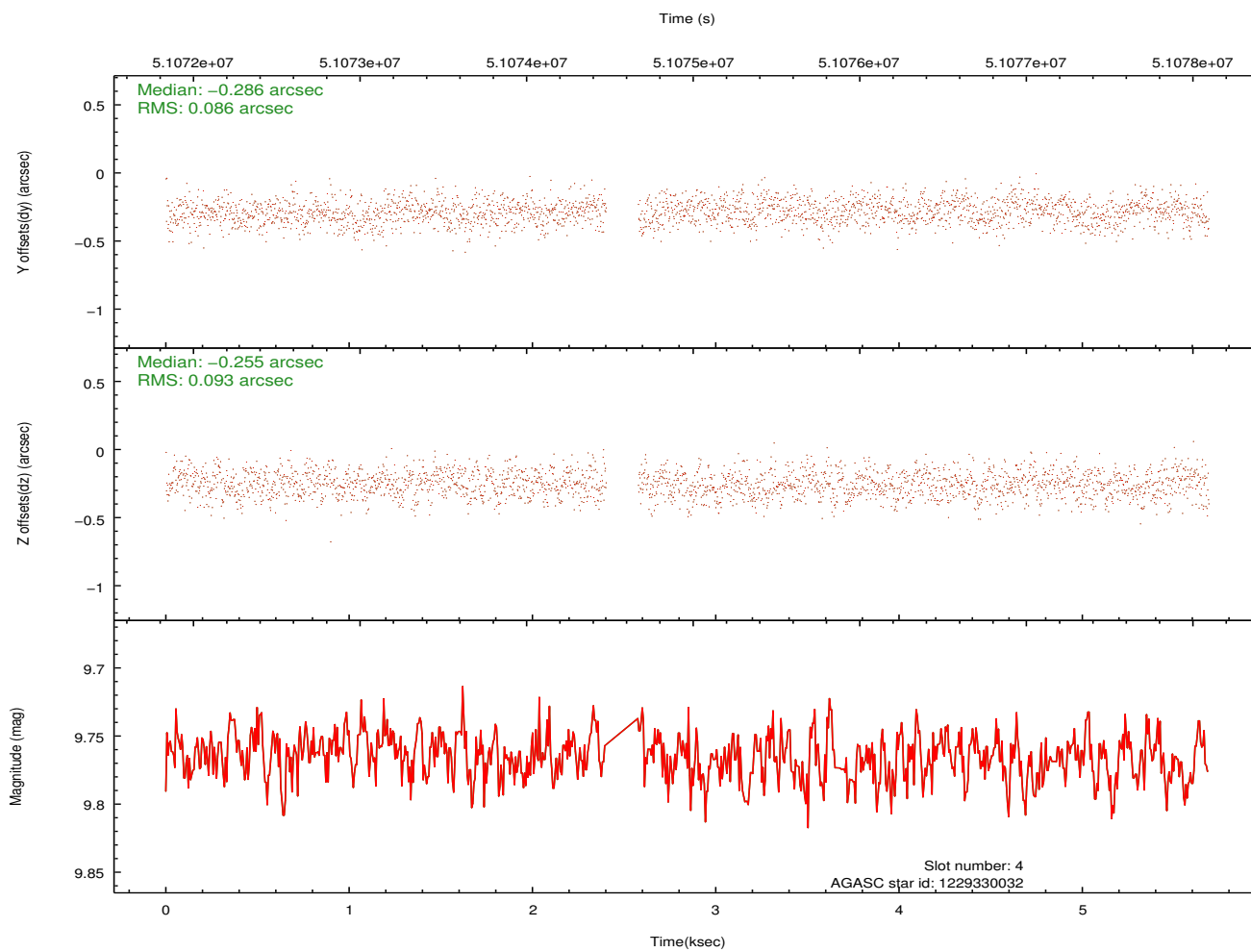
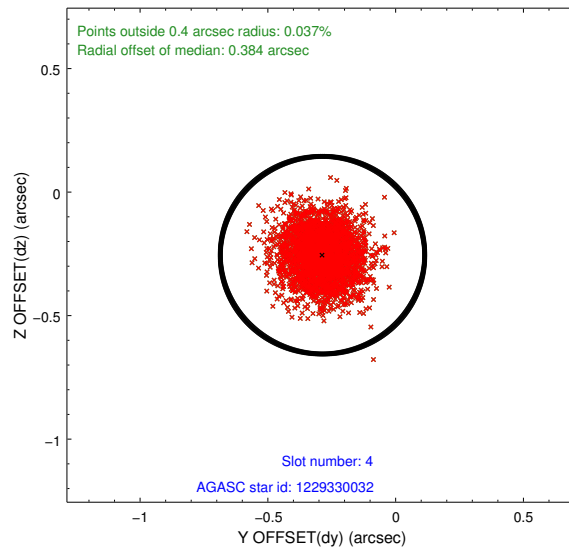
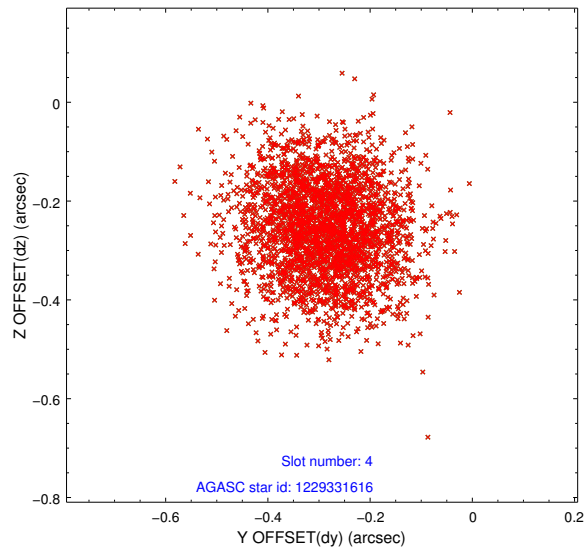
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.14 | 2691 | -0.018 | -0.074 | 0.073 | 0.073 | 0.000000 | 0.000000 | -752.52 | -1721.22 |
| 1 | FID | ACIS-S-3 | 7.13 | 1519 | -0.071 | 0.031 | 0.006 | 0.009 | 0.000000 | 0.000000 | 60.12 | -1851.34 |
| 2 | FID | ACIS-S-4 | 7.22 | 1519 | 0.065 | 0.050 | 0.005 | 0.011 | 0.000000 | 0.000000 | 2161.01 | 186.20 |
| 3 | GUIDE | 1229331616 | 9.92 | 2603 | 0.137 | 0.134 | 0.160 | 0.255 | 96.182998 | -75.347362 | 1637.67 | 2046.98 |
| 4 | BAD | 1229330032 | 9.77 | 2689 | -0.286 | -0.255 | 0.136 | 0.217 | 98.721356 | -75.139571 | 541.72 | -137.29 |
| 5 | GUIDE | 1204423736 | 8.76 | 2689 | 0.233 | 0.093 | 0.081 | 0.131 | 99.272017 | -74.796122 | 1031.44 | -1384.38 |
| 6 | BAD | 1229457576 | 9.38 | 2689 | -0.357 | -0.070 | 0.127 | 0.201 | 100.335360 | -75.489746 | -1394.55 | -239.24 |
| 7 | GUIDE | 1229457032 | 9.21 | 2690 | 0.227 | 0.136 | 0.109 | 0.181 | 100.958417 | -75.581890 | -2032.67 | -372.22 |

2.4 Star Slots

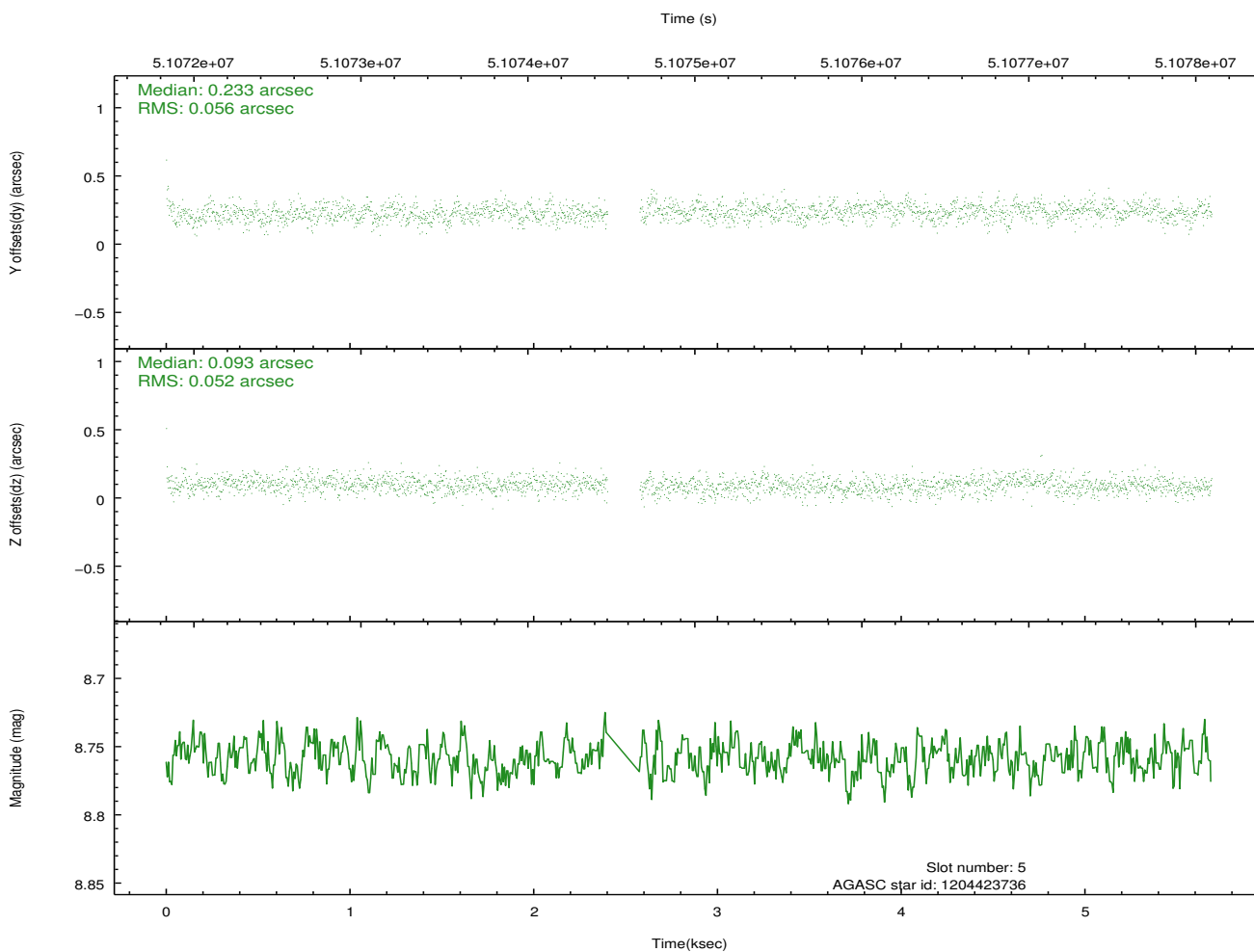
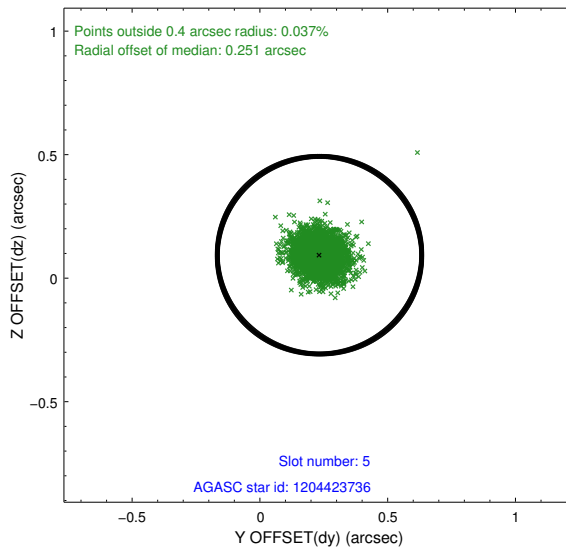
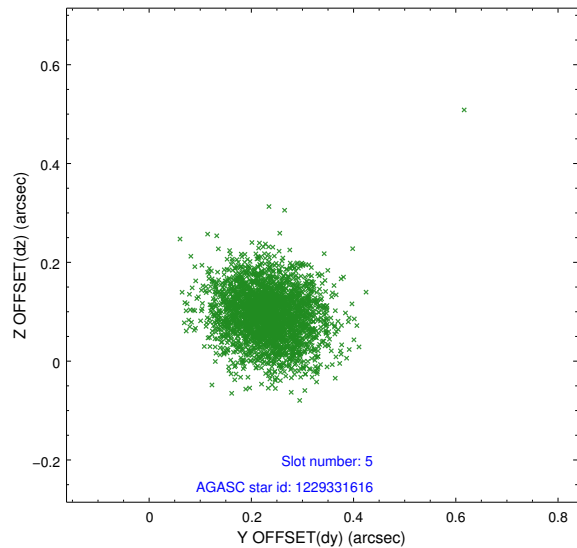
2.4.1 Slot 3



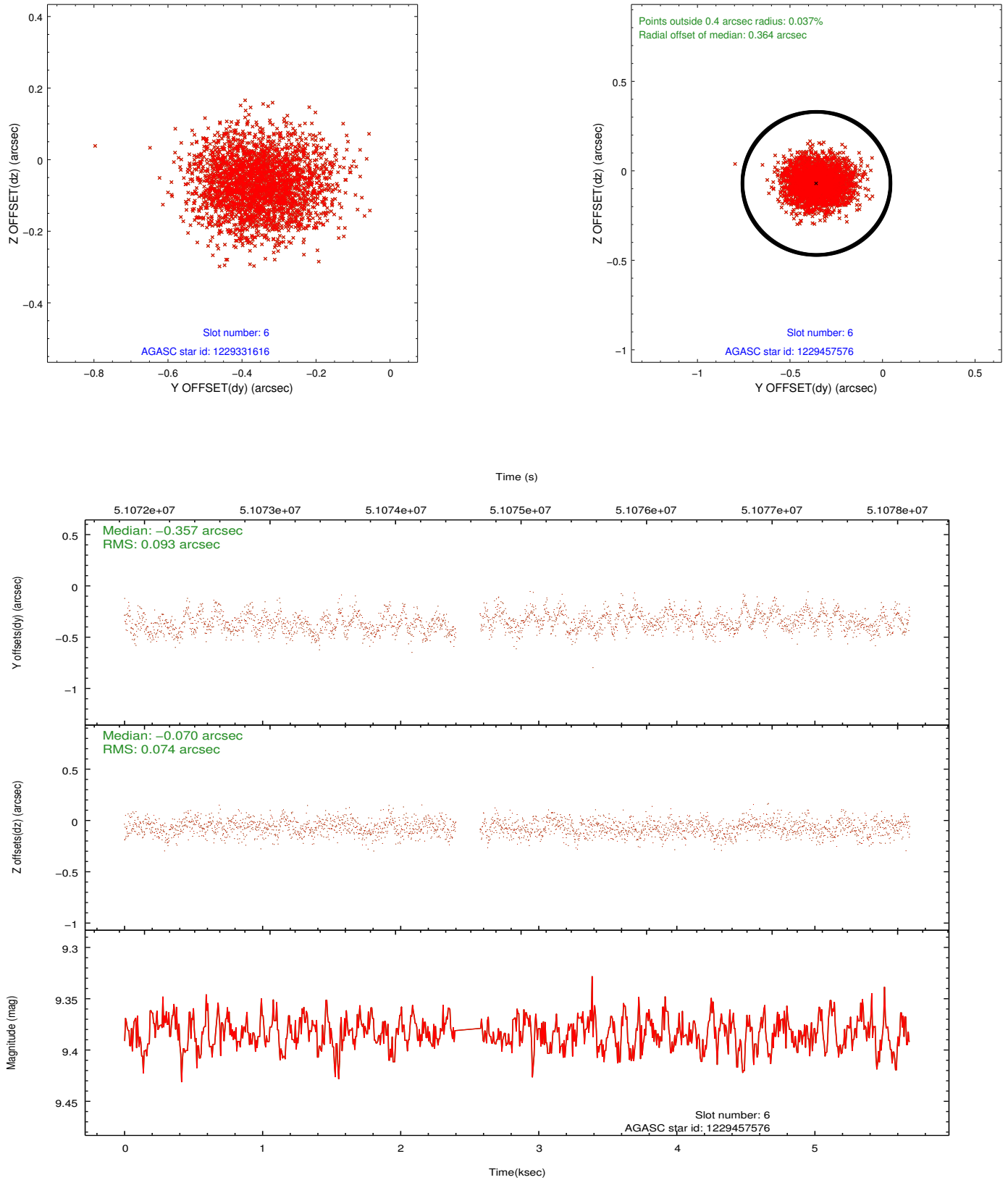
2.4.2 Slot 4



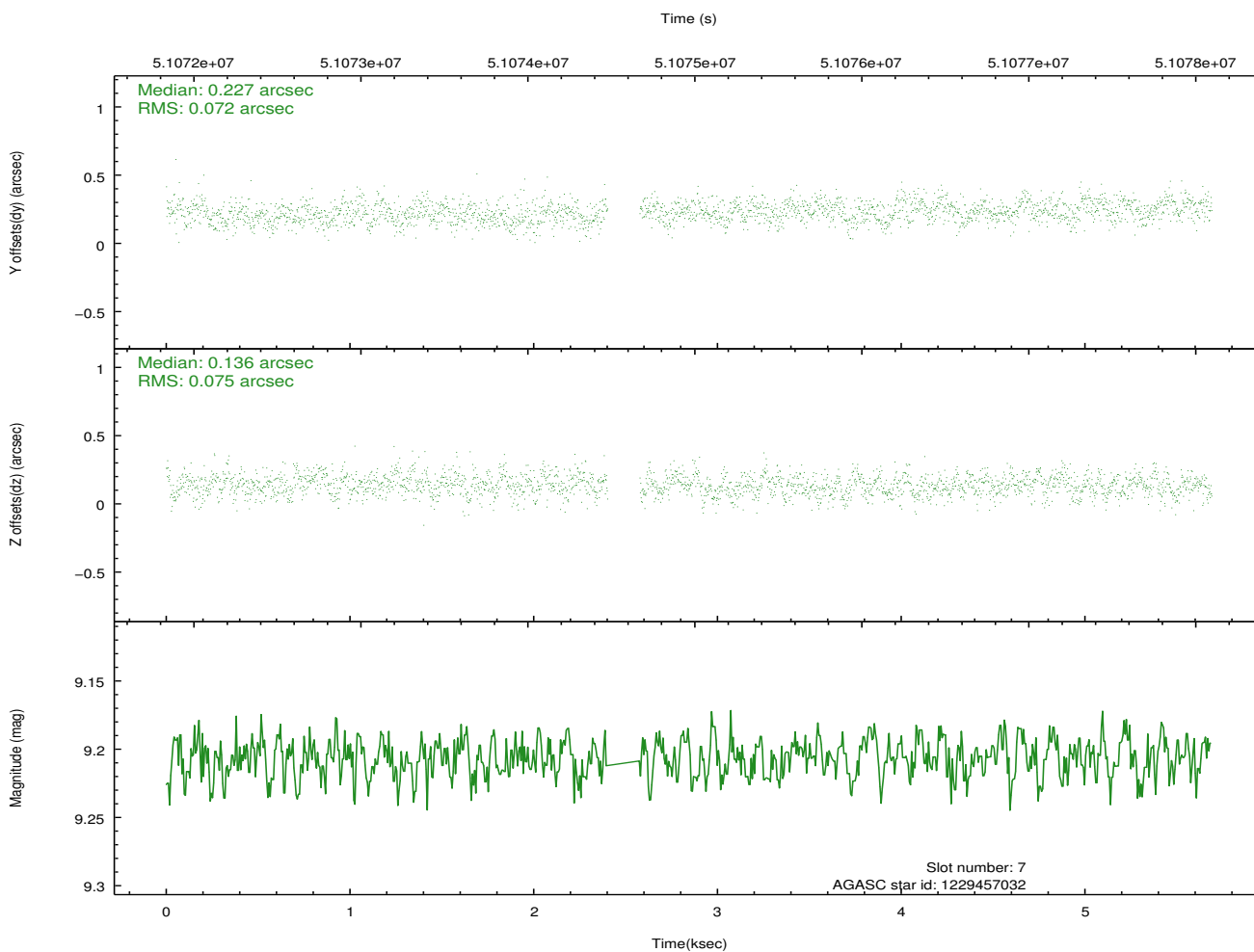
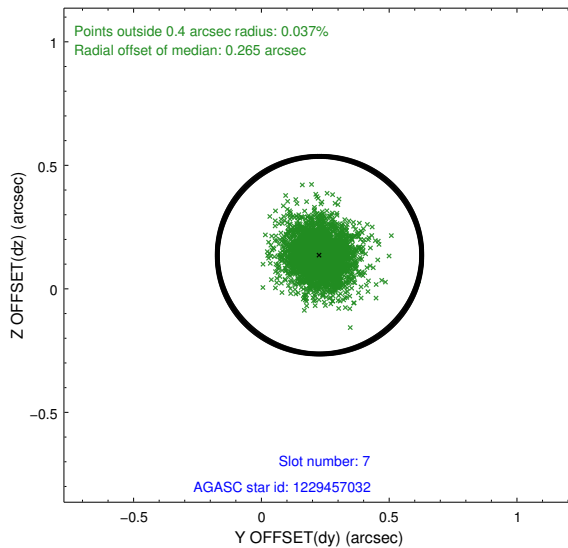
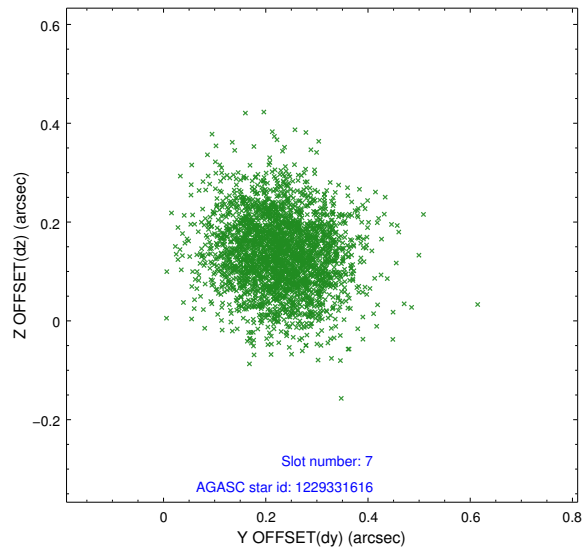
2.4.3 Slot 5



2.4.4 Slot 6

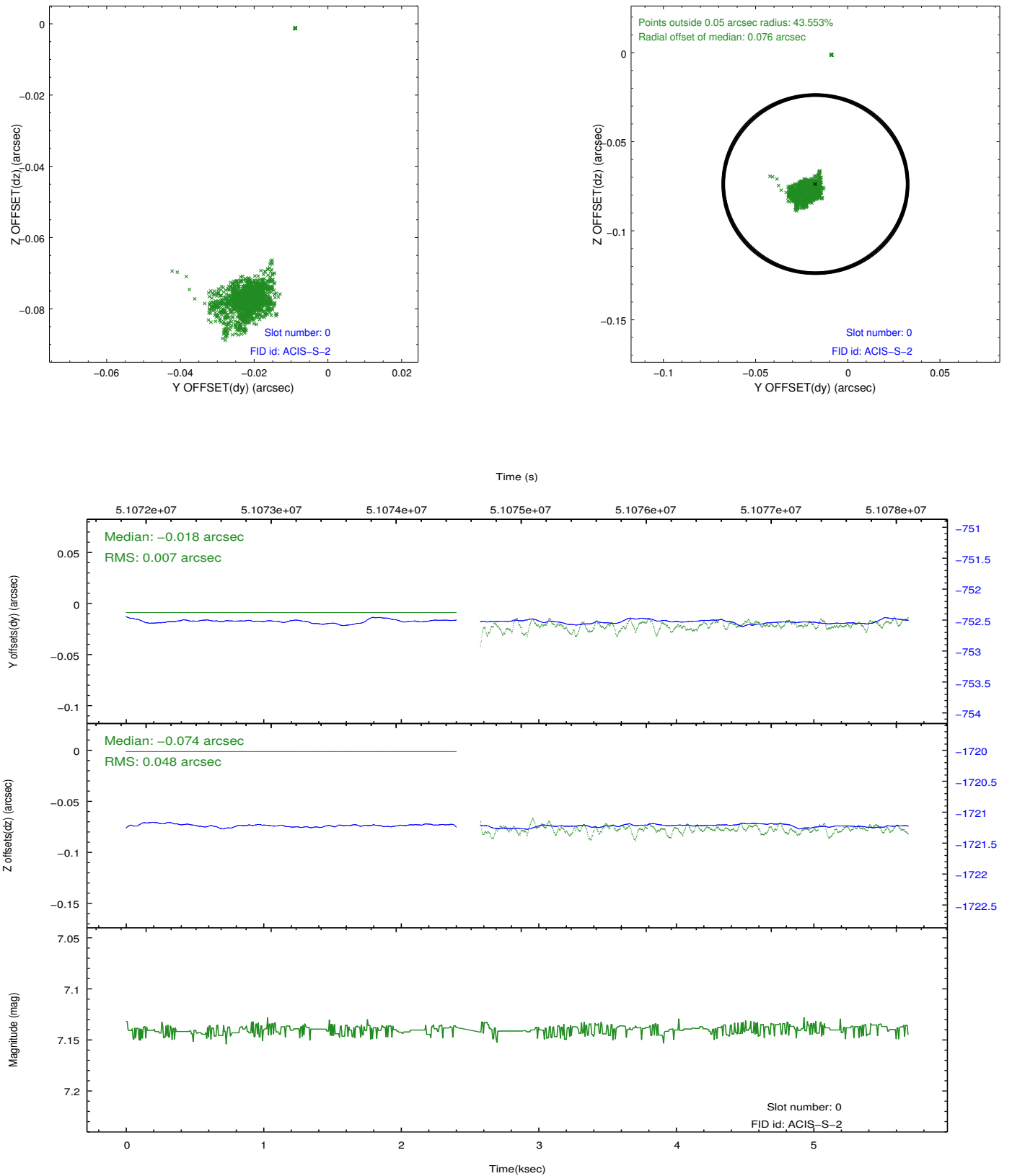


2.4.5 Slot 7

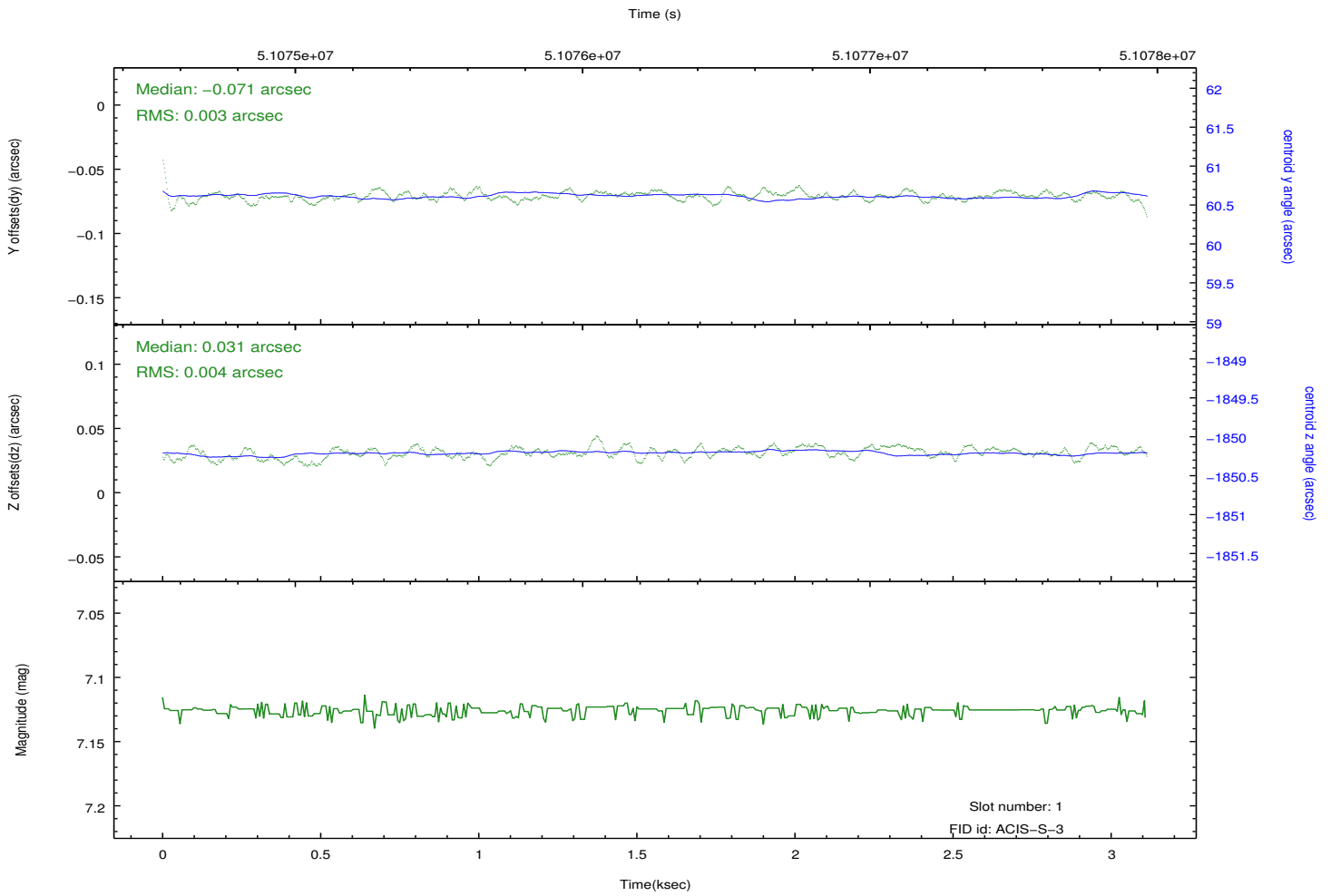
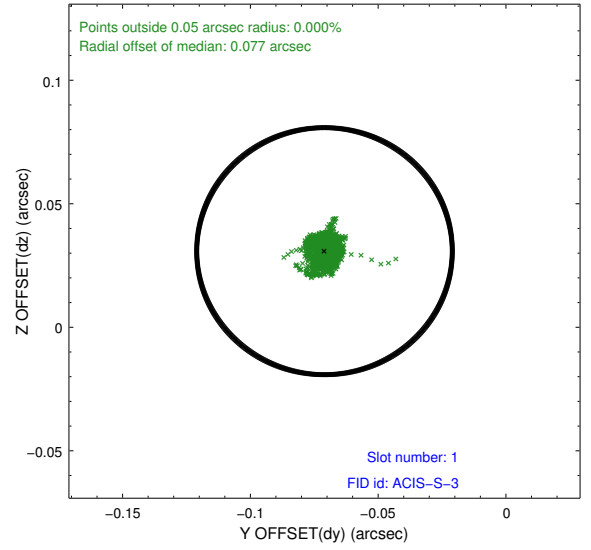
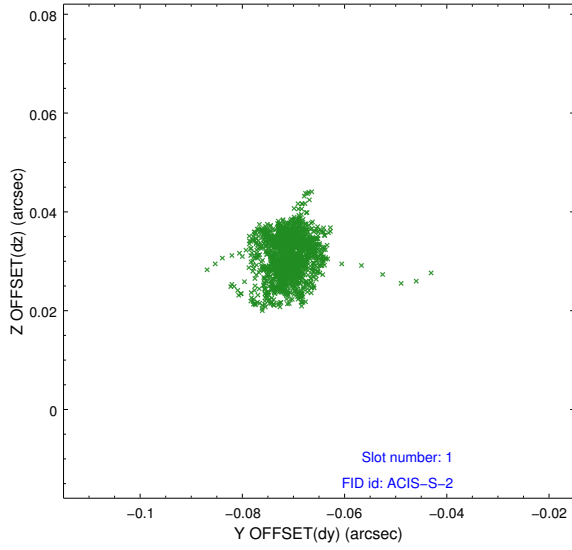


2.5 FID Slots

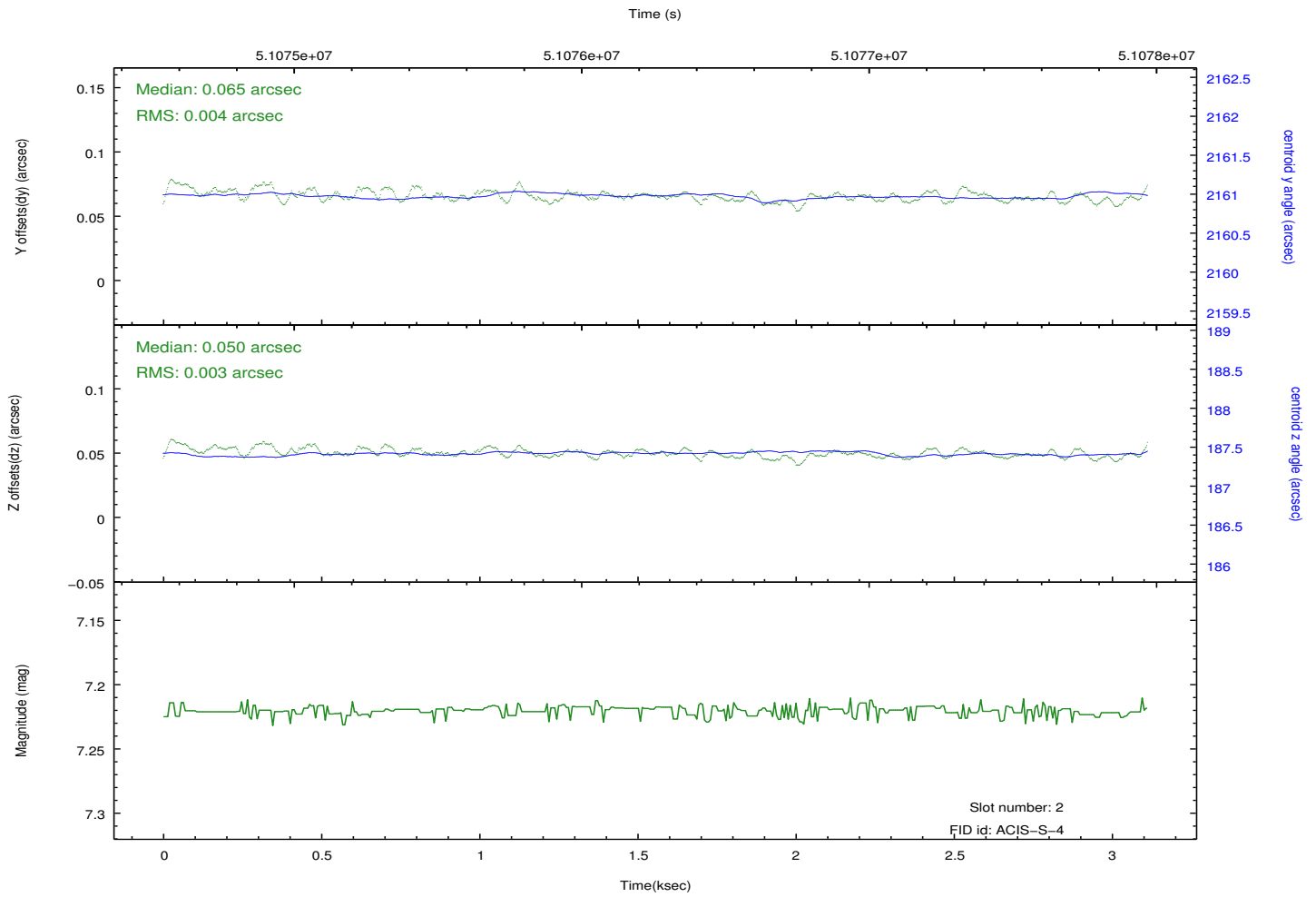
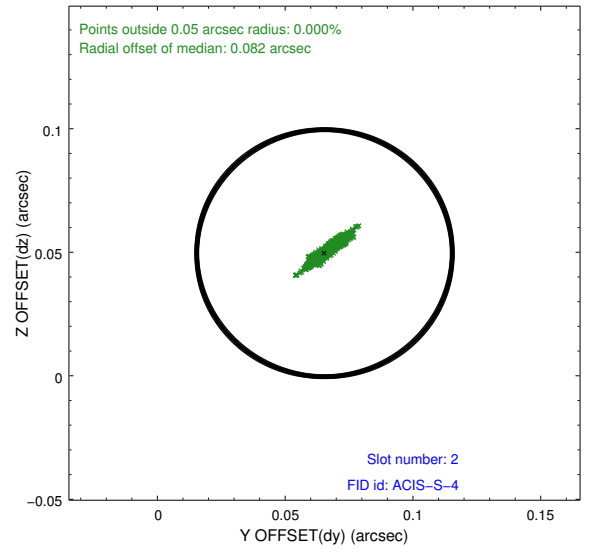
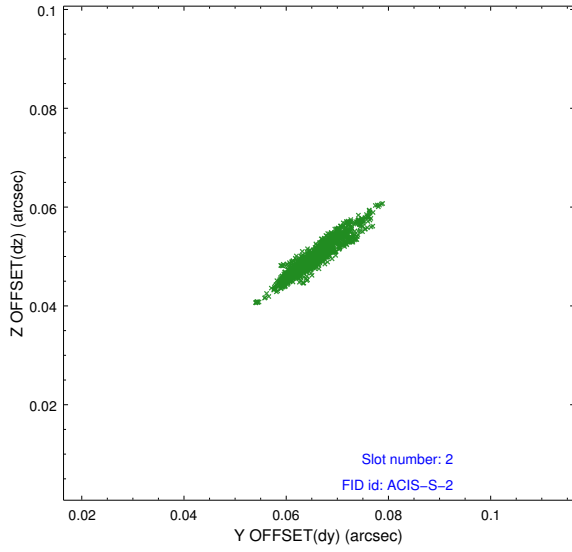
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



3 Point Sources

3.81 arcmin



A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2010.08.16 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.017 |

A.2 Comments

ACIS focus test and place scale measurement. Moved SIM to -1.0 mm from nominal focus. Only 1 fid light found for this observation. One of the fid lights was not turned on, and another had a wrong sign in the positional information.

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Slots 4 and 6 were removed from the aspect solution due to poor data quality. The aspect solution is not expected to be degraded by removing these guide stars from the solution.

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The focal plane temperature is approximately -100 C during this observation. This reprocessing of the data applies no CTI correction because none is available for this temperature at present.

The ACIS CTI correction has not been calibrated at this temperature, because it was early in the mission, and ACIS had not yet been lowered to the standard -119.7 C. Both front and back illuminated chips are affected. However a T_GAIN correction has been applied to the BI chips (ACIS-5 and ACIS-7) data included here.

The ACIS spectral response calibration is less accurate at these warmer temperatures than it is at -119.7 C. Users whose science objectives depend on the most accurate spectral response (ie: fitting line-rich spectra) may notice an effect. Users whose science objectives do not depend on the most accurate spectral response should not notice an effect.