

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6049 - L2 Version 4
Chandra X-Ray Center

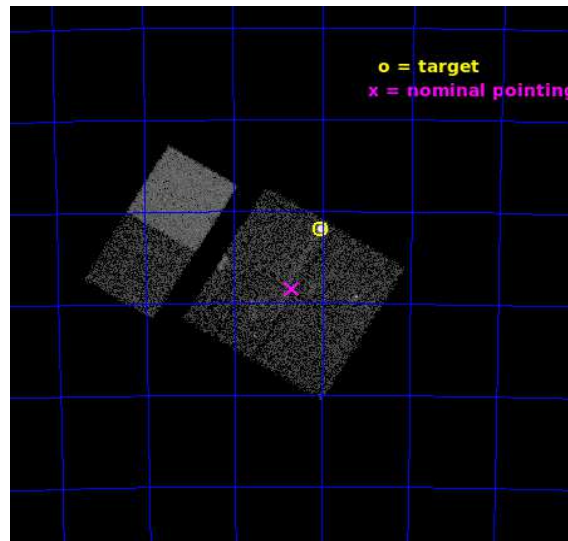
L2 Processing Date : Oct 5 2020

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1 Front

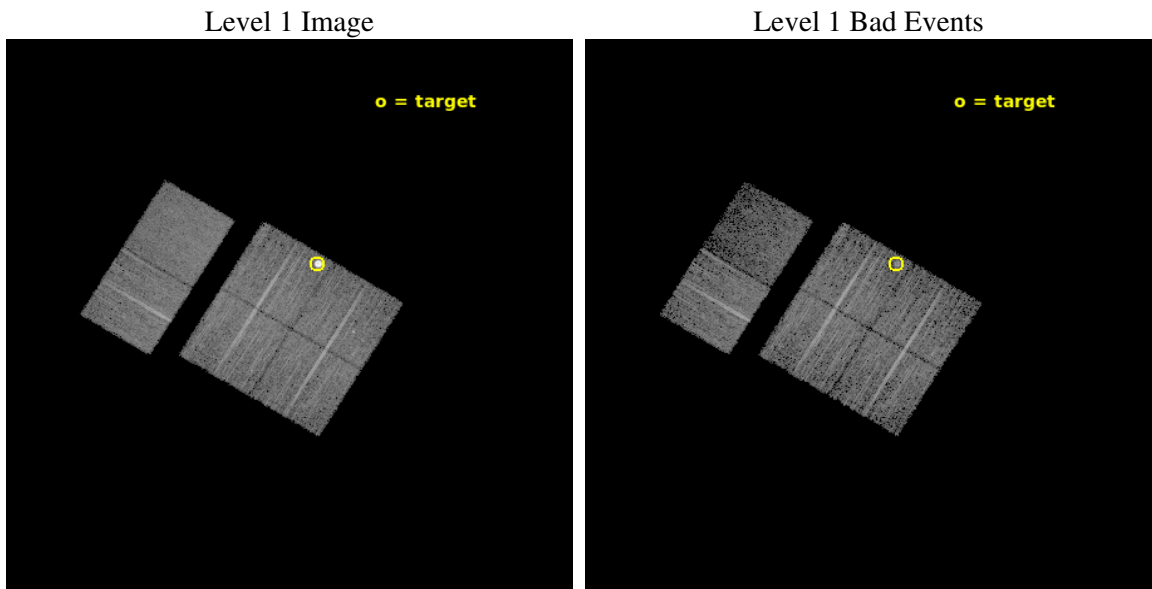
| | | |
|----------|--|---|
| seq_num | 590376 | Sequence number |
| obs_id | 6049 | Observation id |
| title | AO6A ACIS-I Calibration Observations of E0102-72 | Proposal title |
| observer | CXC Calibration | Principal investigator |
| object | E0102-72.3 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 16.01 | Observer's specified target RA [deg] |
| dec_targ | -72.032028 | Observer's specified target Dec [deg] |
| ra_nom | 16.172174442405 | Nominal RA [deg] |
| dec_nom | -72.140663998715 | Nominal Dec [deg] |
| roll_nom | 301.29832539528 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 7673.4011172354 | Sum of GTIs [s] |
| livetime | 7576.2358919215 | Livetime [s] |
| ontime0 | 7673.2779972553 | Sum of GTIs [s] |
| ontime1 | 7673.3190372288 | Sum of GTIs [s] |
| ontime2 | 7673.3600971103 | Sum of GTIs [s] |
| ontime3 | 7673.4011172354 | Sum of GTIs [s] |
| ontime6 | 7673.4832171202 | Sum of GTIs [s] |
| ontime7 | 7673.4421572387 | Sum of GTIs [s] |
| l2events | 59046 | Number of level 2 events |



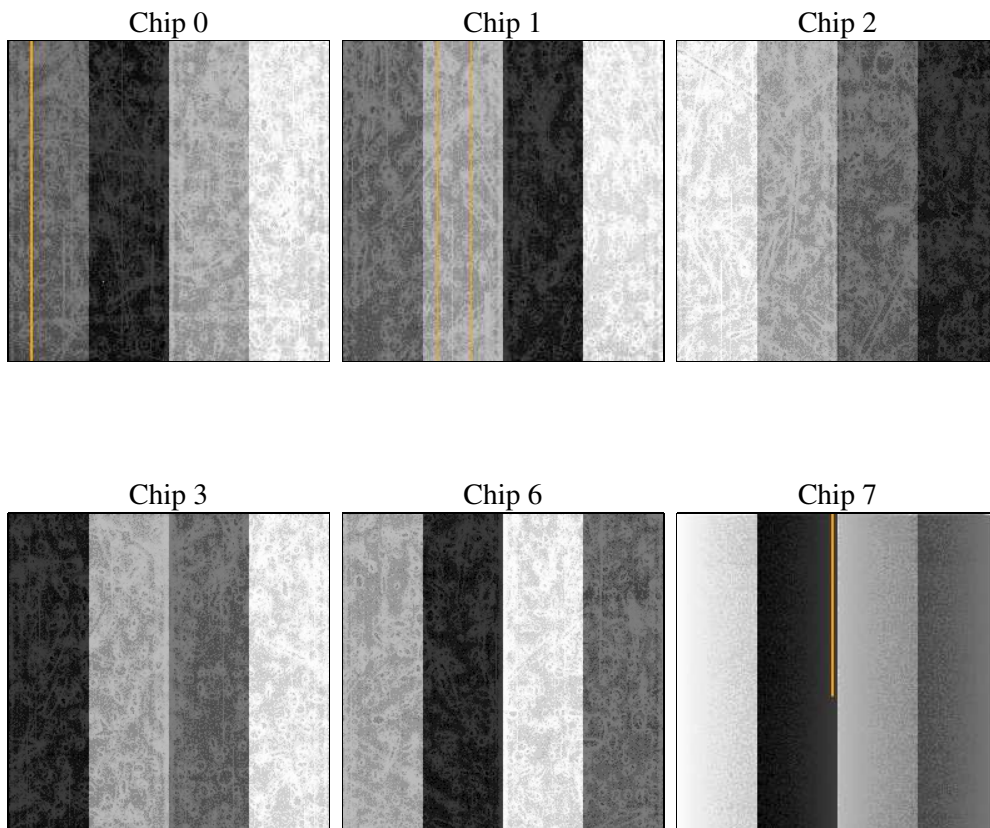
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 7500.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 7673.4011172354 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime0 | 7673.2779972553 | Sum of GTIs [s] |
| date | 2020-10-05T12:52:11 | Date and time of file creation | ontime1 | 7673.3190372288 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime2 | 7673.3600971103 | Sum of GTIs [s] |
| | | | ontime3 | 7673.4011172354 | Sum of GTIs [s] |
| | | | ontime6 | 7673.4832171202 | Sum of GTIs [s] |
| | | | ontime7 | 7673.4421572387 | Sum of GTIs [s] |
| | | | l1events | 283440 | Number of level 1 events |

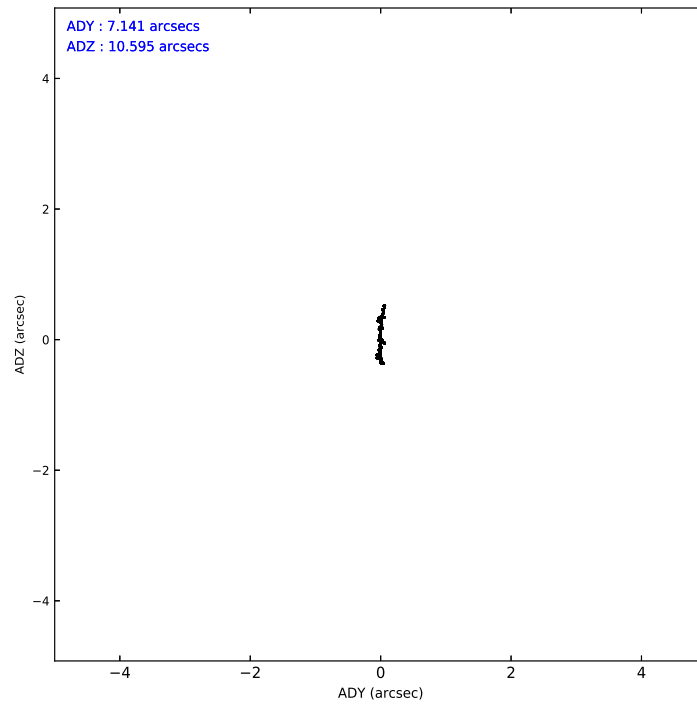
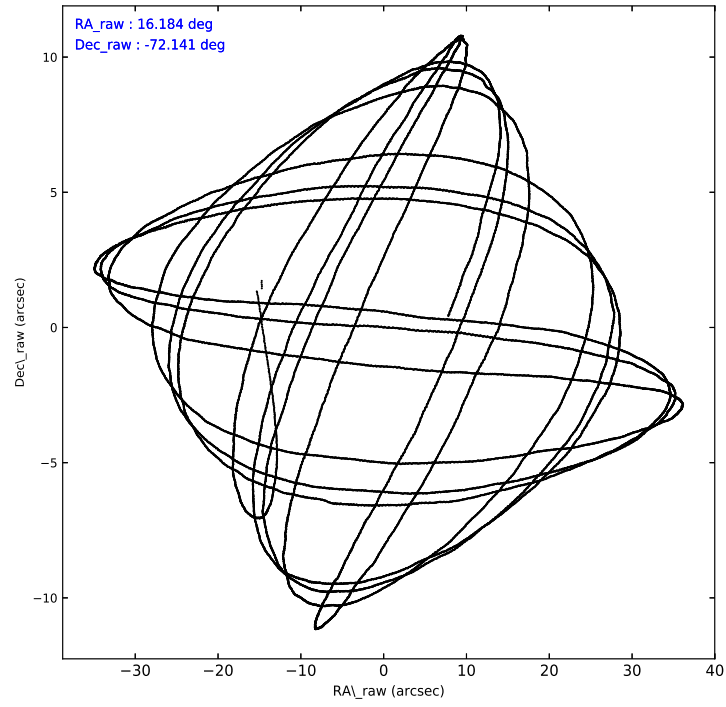
2.1.4 Events

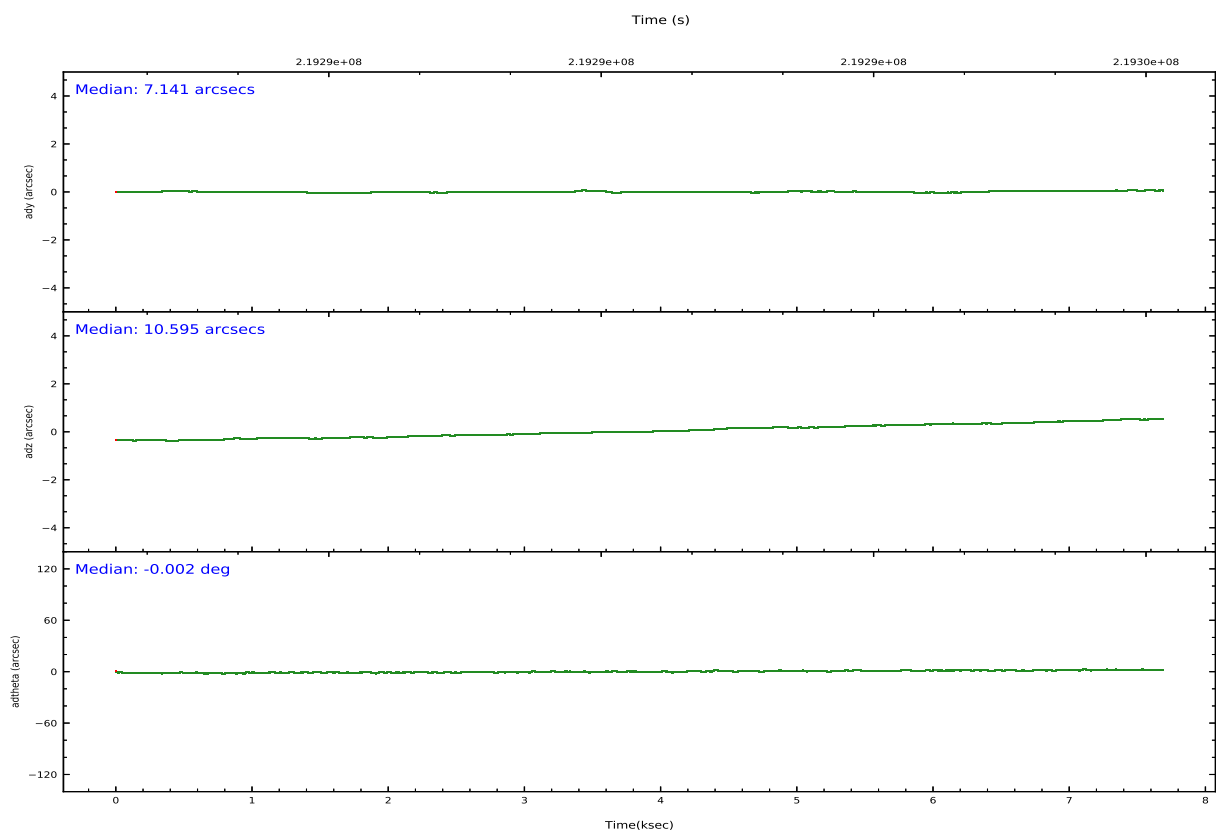
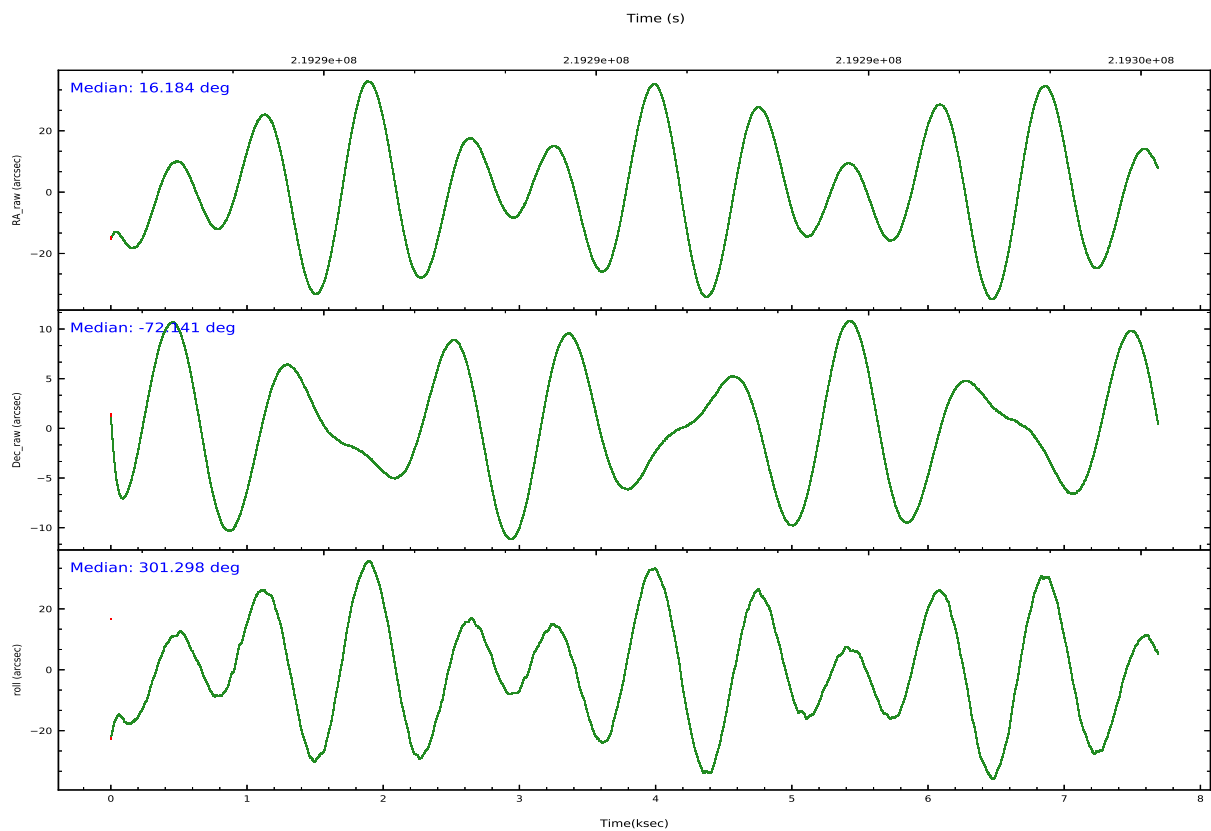
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 41921 | 41617 | 47587 | 65684 | 45401 | 41230 | grade 0 events | 1731 | 2137 | 2365 | 19273 | 1680 | 2038 |
| rejected events | 37410 | 36436 | 42543 | 41336 | 40958 | 21098 | | 4% | 5% | 4% | 29% | 3% | 4% |
| rejected % | 89% | 87% | 89% | 62% | 90% | 51% | grade 1 events | 26 | 25 | 26 | 167 | 21 | 36 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 1020 | 1042 | 982 | 2400 | 1005 | 4334 |
| | | | | | | | | 2% | 2% | 2% | 3% | 2% | 10% |
| | | | | | | | grade 3 events | 506 | 537 | 490 | 882 | 461 | 2032 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 4% |
| | | | | | | | grade 4 events | 436 | 540 | 503 | 851 | 490 | 1997 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 4% |
| | | | | | | | grade 5 events | 1334 | 1427 | 1186 | 1610 | 1551 | 4481 |
| | | | | | | | | 3% | 3% | 2% | 2% | 3% | 10% |
| | | | | | | | grade 6 events | 820 | 925 | 708 | 952 | 809 | 9740 |
| | | | | | | | | 1% | 2% | 1% | 1% | 1% | 23% |
| | | | | | | | grade 7 events | 36048 | 34984 | 41327 | 39549 | 39384 | 16572 |
| | | | | | | | | 85% | 84% | 86% | 60% | 86% | 40% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| 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 | 16.105932 | 16.172174442405 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -72.127850 | -72.140663998715 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 301.022193 | 301.29832539528 | [s] Primary exposure time | 0.000000 | 3.2 |
| [s] Window start time (MET) | 215654464.184000 | 215654464.184000 | | | |
| [s] Window stop time (MET) | 220838464.184000 | 220838464.184000 | | | |
| [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) | 219288626.184000 | 219287556.25076 | | | |
| Observation start date | 2004-12-13T01:29:22 | 2004-12-13T01:12:36 | | | |
| [s] Observation end time (MET) | 219296126.184000 | 219296259.52615 | | | |
| Observation end date | 2004-12-13T03:34:22 | 2004-12-13T03:37:39 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



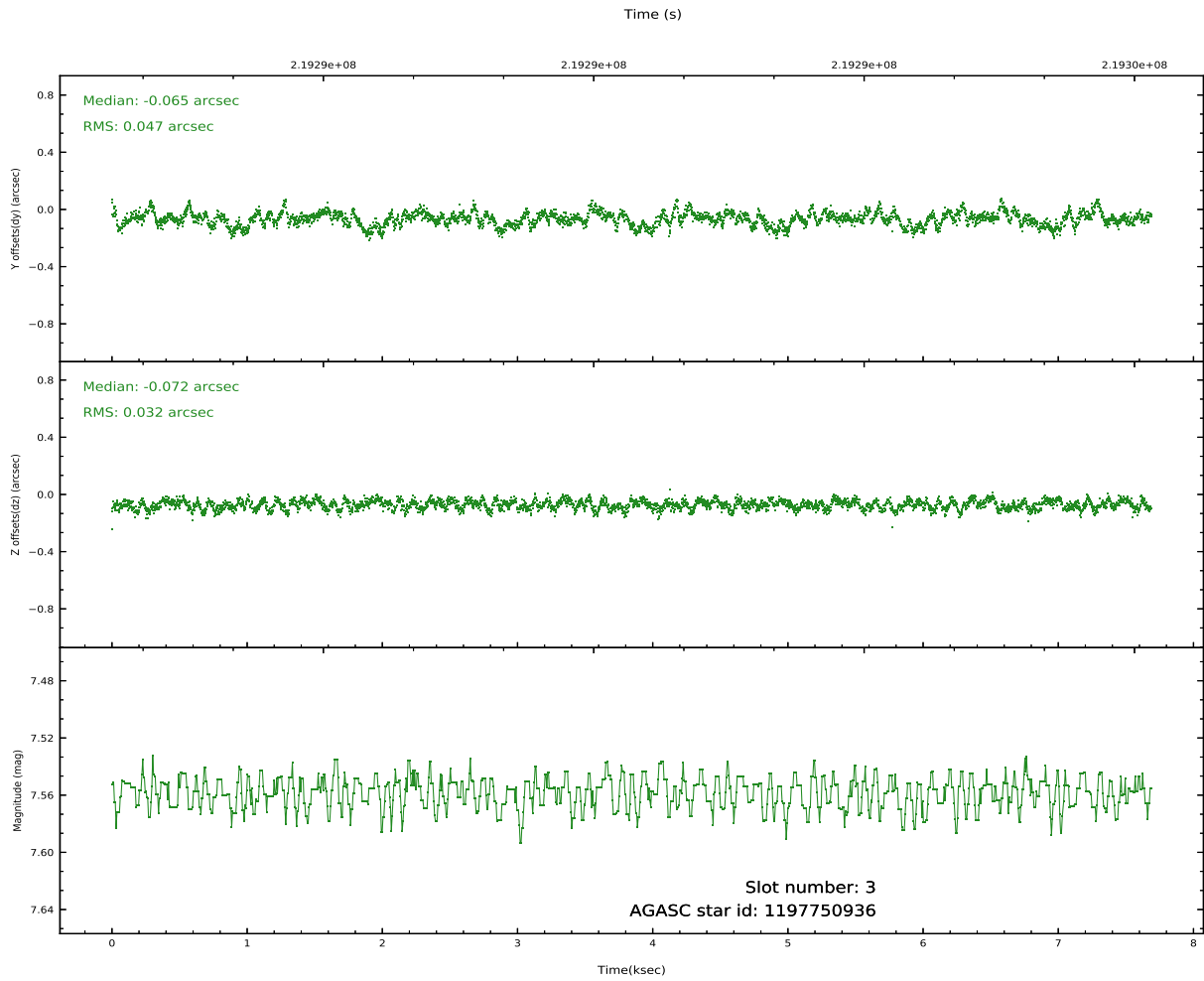
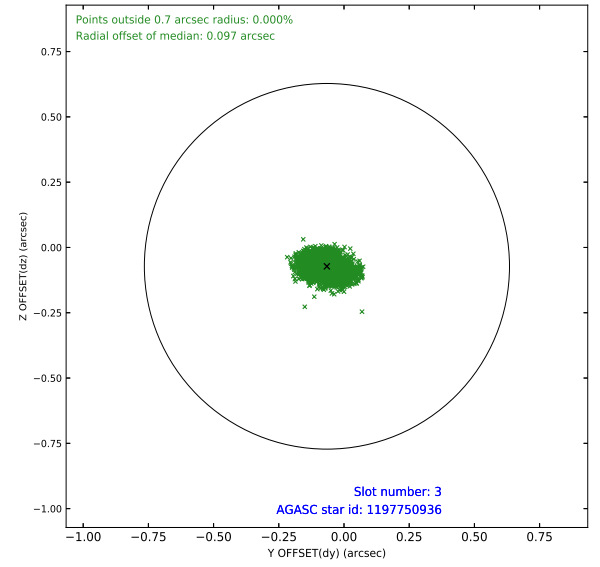
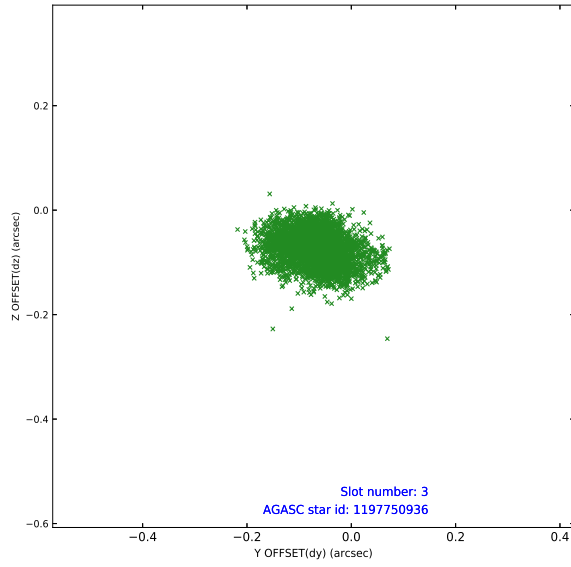


Slot Statistics

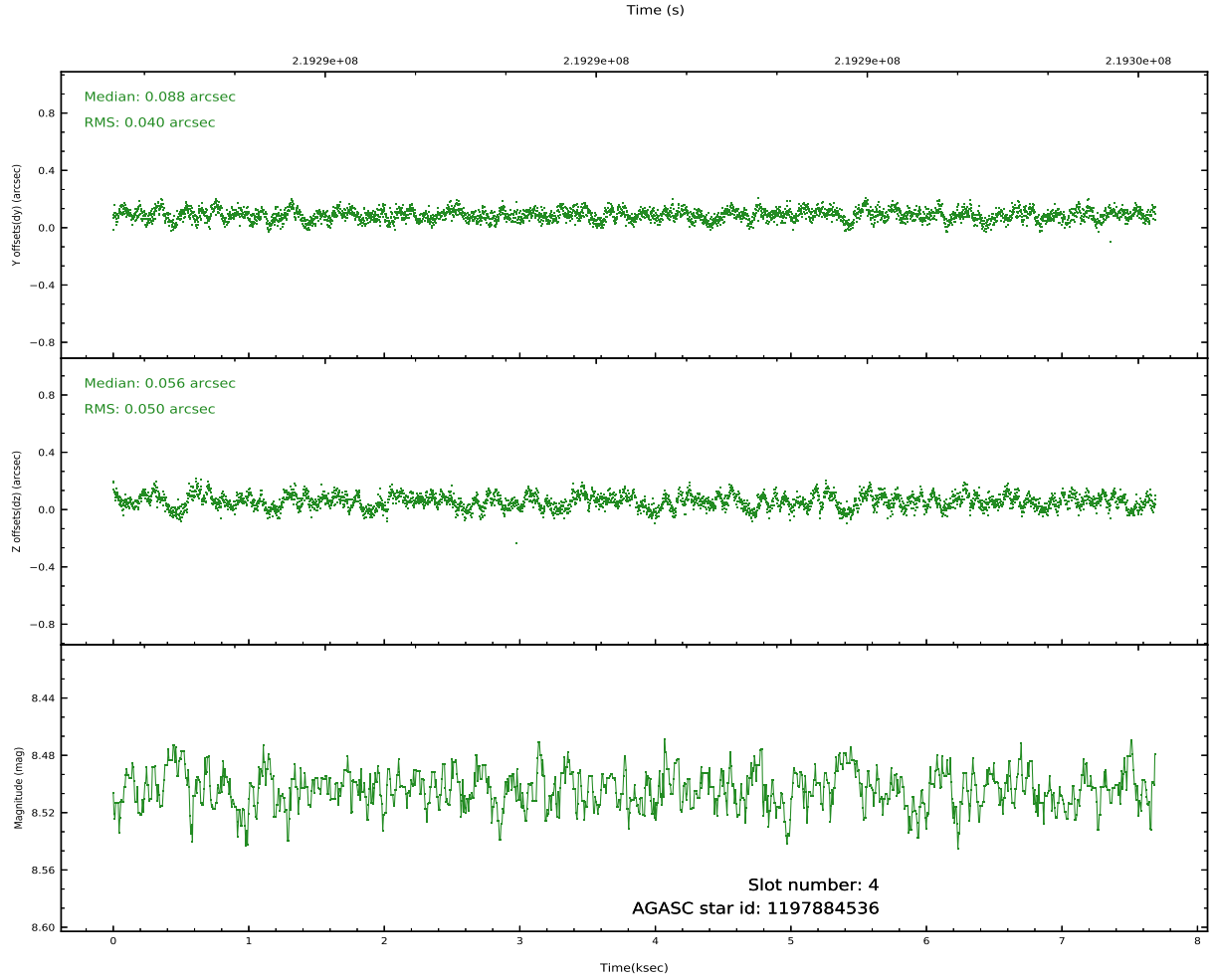
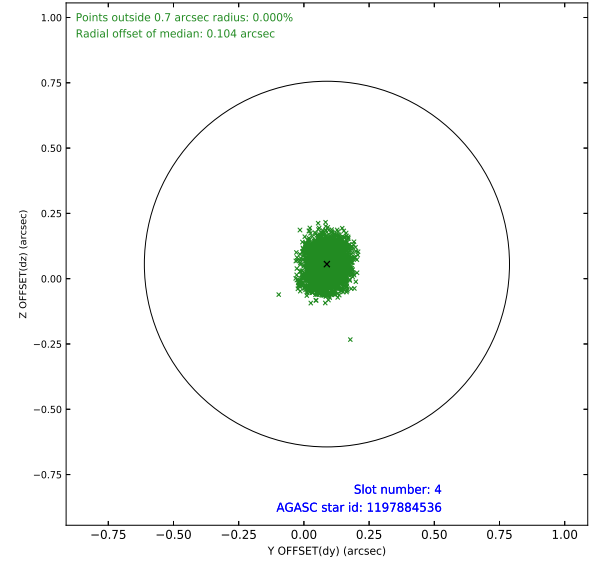
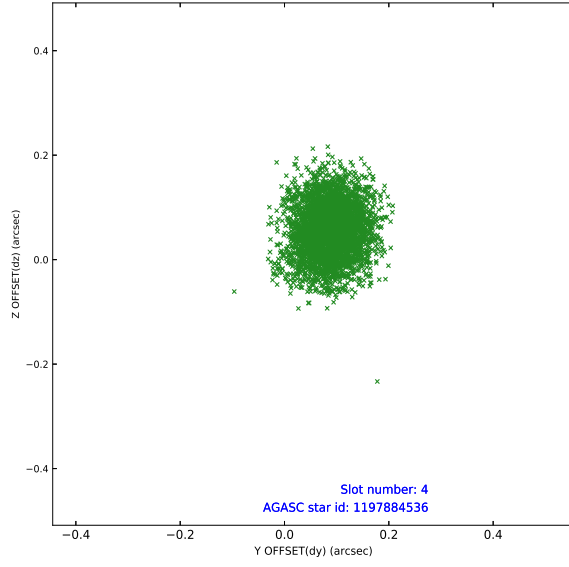
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|------------|------|-------|----------|--------|--------|-------|-------|-----------|------------|----------|-------|
| 0 | FID | | ACIS-I-1 | 7.24 | 1874 | 1.000 | 0.031 | -0.031 | 0.016 | 0.024 | 0.000000 | 0.000000 | 932.56 | -834 |
| 1 | FID | | ACIS-I-5 | 7.23 | 1875 | 1.000 | -0.205 | 0.031 | 0.011 | 0.016 | 0.000000 | 0.000000 | -1815.37 | 1063 |
| 2 | FID | | ACIS-I-6 | 7.26 | 1875 | 1.000 | 0.083 | 0.070 | 0.010 | 0.015 | 0.000000 | 0.000000 | 397.36 | 1708 |
| 3 | GUIDE | used | 1197750936 | 7.56 | 3750 | 1.000 | -0.065 | -0.072 | 0.059 | 0.101 | 15.387940 | -71.549550 | -2200.91 | 369 |
| 4 | GUIDE | used | 1197884536 | 8.50 | 3746 | 1.000 | 0.088 | 0.056 | 0.068 | 0.111 | 17.160729 | -71.835289 | -283.90 | 1552 |
| 5 | GUIDE | used | 1197884712 | 8.31 | 3750 | 1.000 | 0.076 | 0.068 | 0.057 | 0.092 | 16.087398 | -72.252690 | 375.26 | -248 |
| 6 | GUIDE | used | 1197885328 | 7.23 | 3750 | 1.000 | -0.020 | -0.048 | 0.052 | 0.080 | 16.283090 | -71.733943 | -1111.44 | 902 |
| 7 | GUIDE | used | 1198189696 | 7.37 | 3749 | 1.000 | -0.078 | -0.000 | 0.058 | 0.092 | 15.223750 | -72.697522 | 1277.21 | -1869 |

2.4 Star Slots

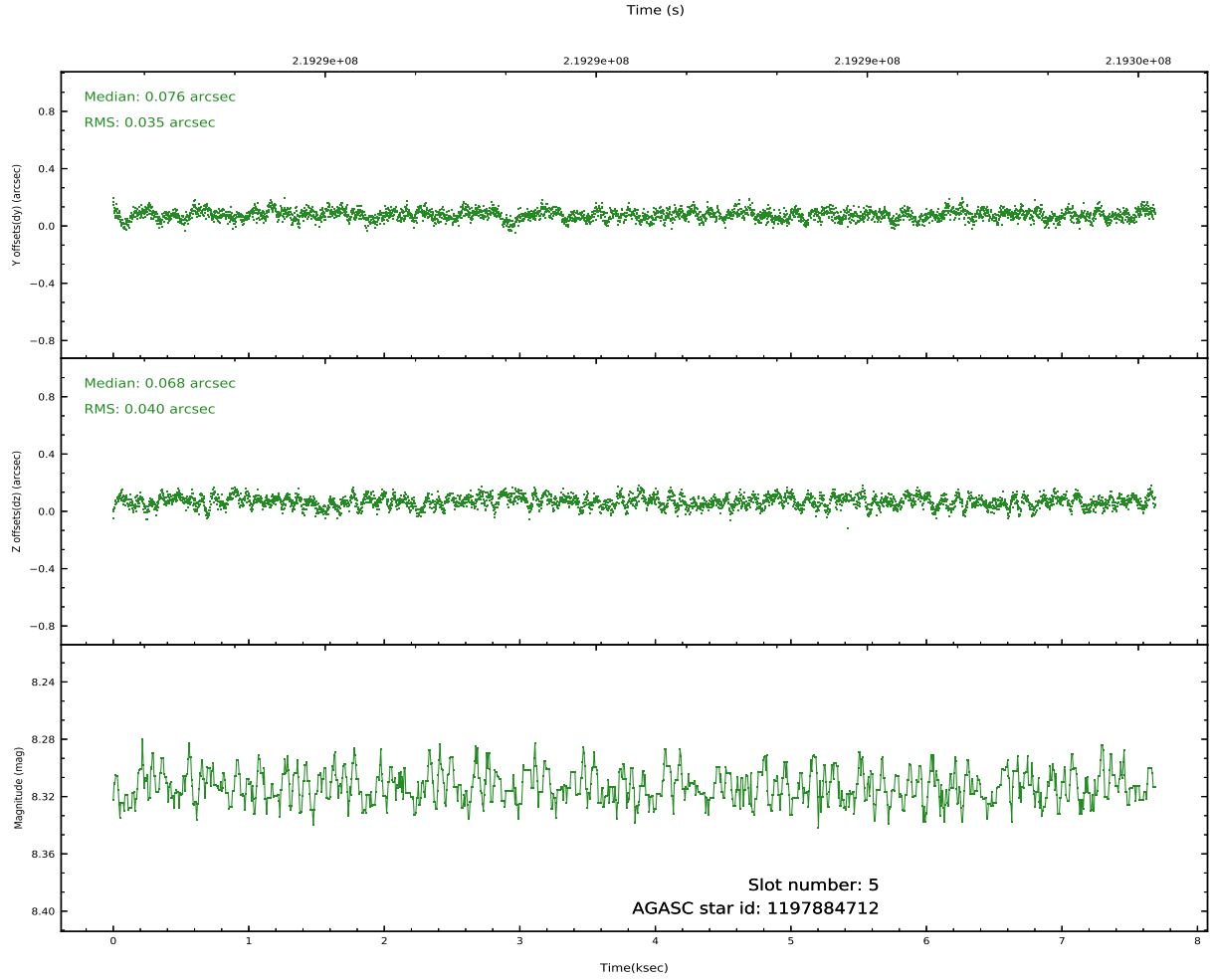
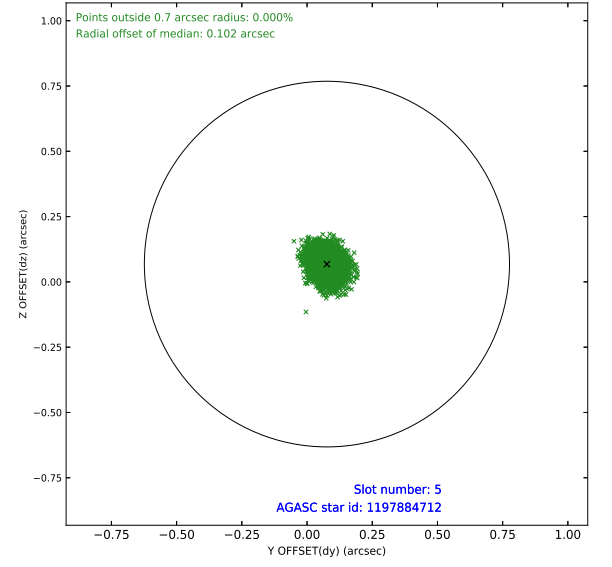
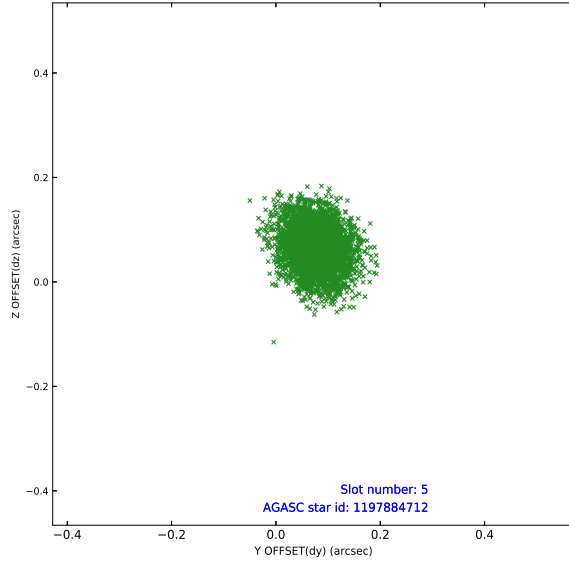
2.4.1 Slot 3



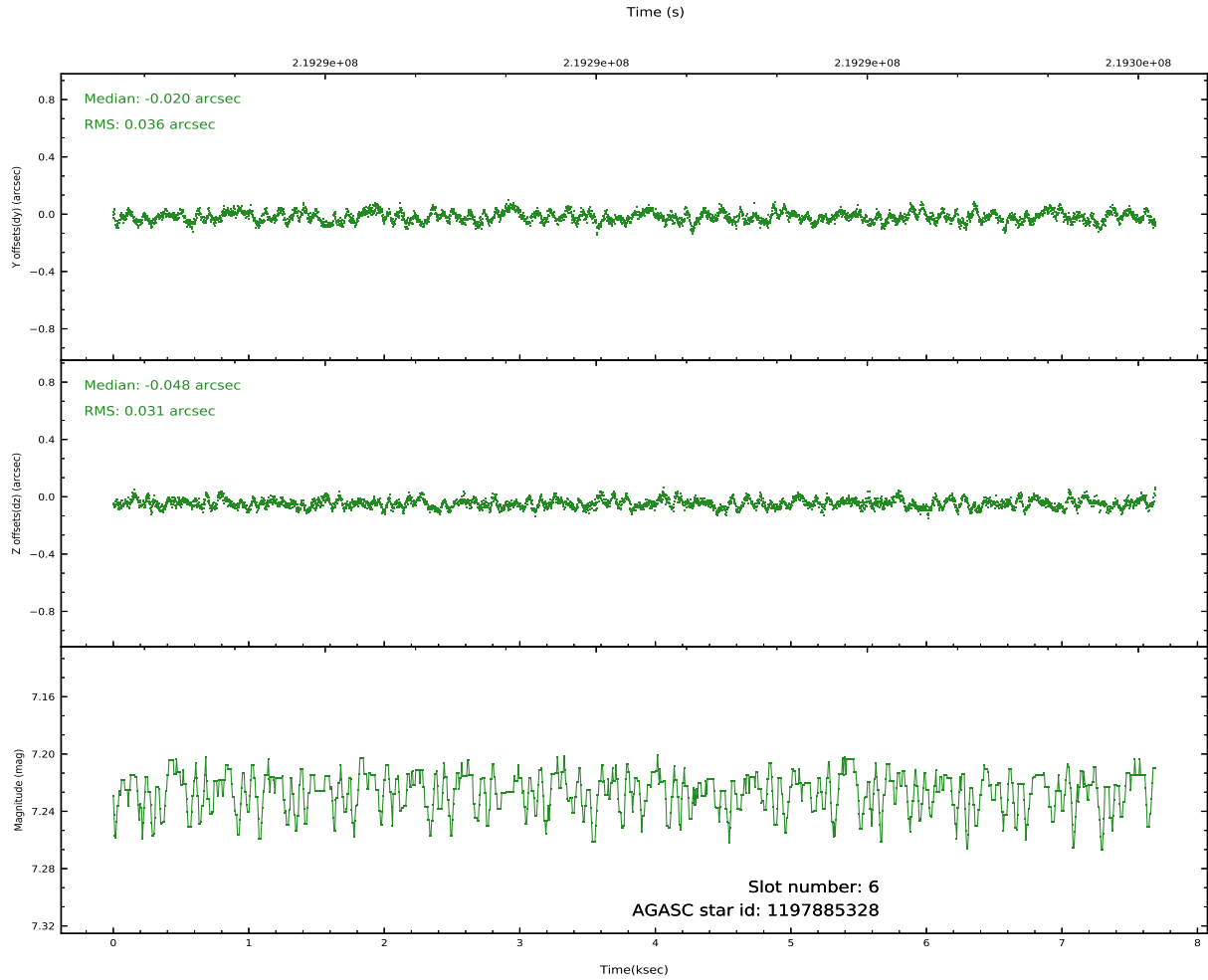
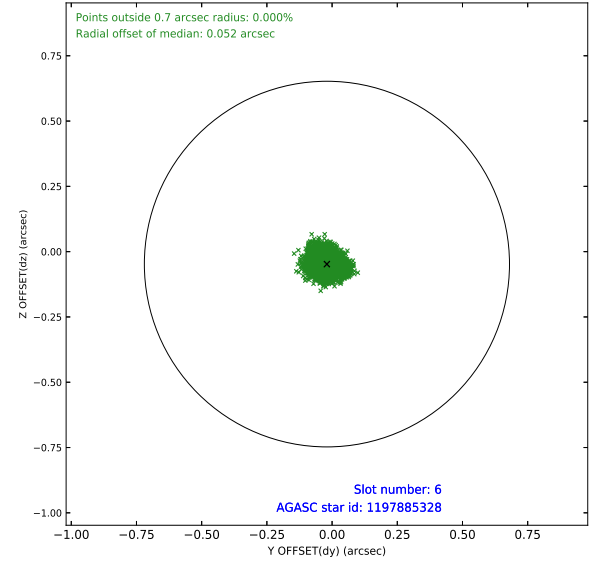
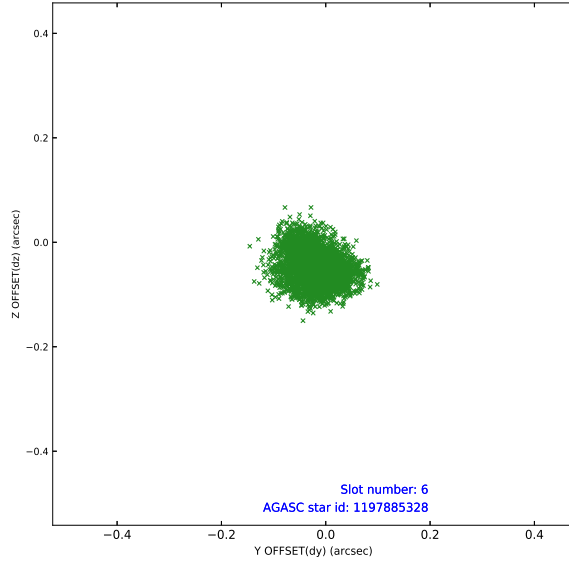
2.4.2 Slot 4



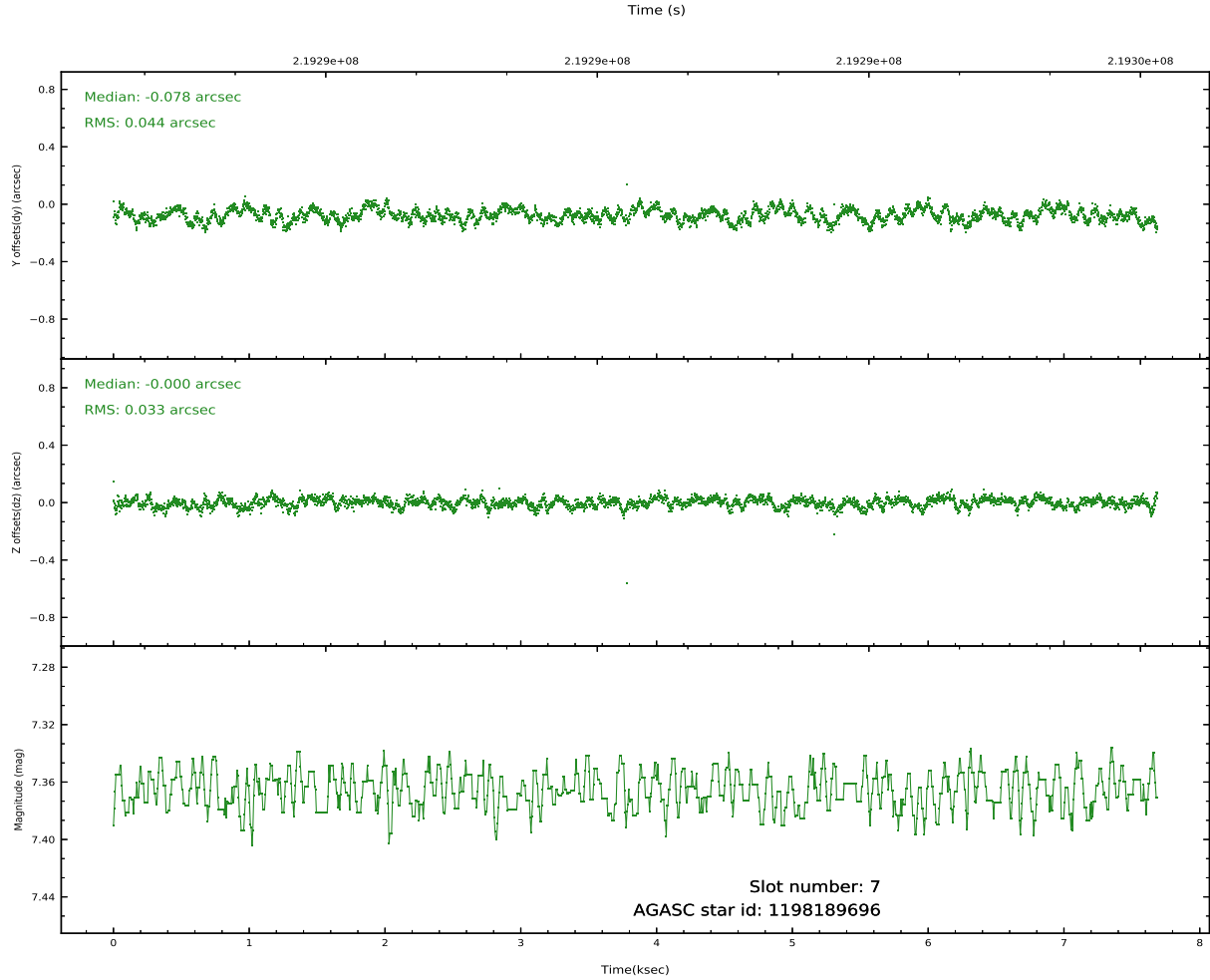
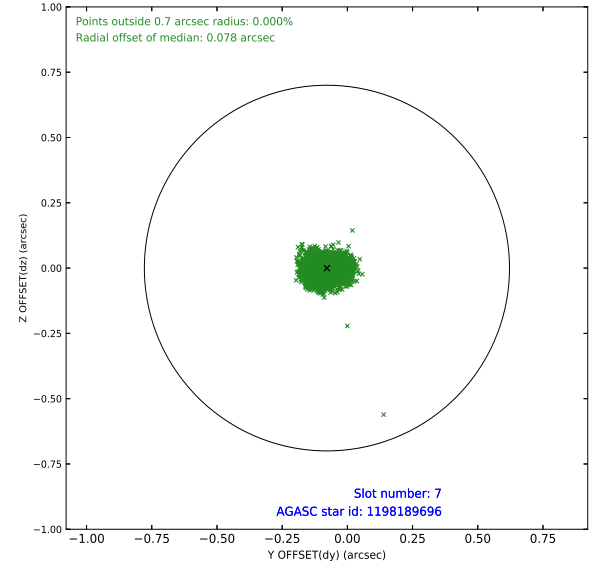
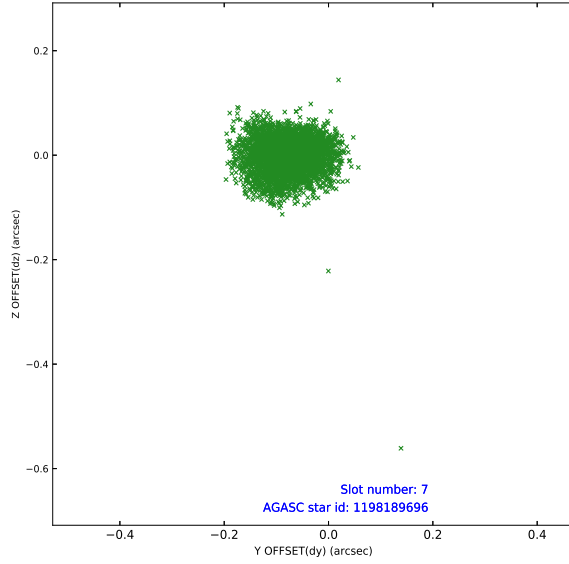
2.4.3 Slot 5



2.4.4 Slot 6

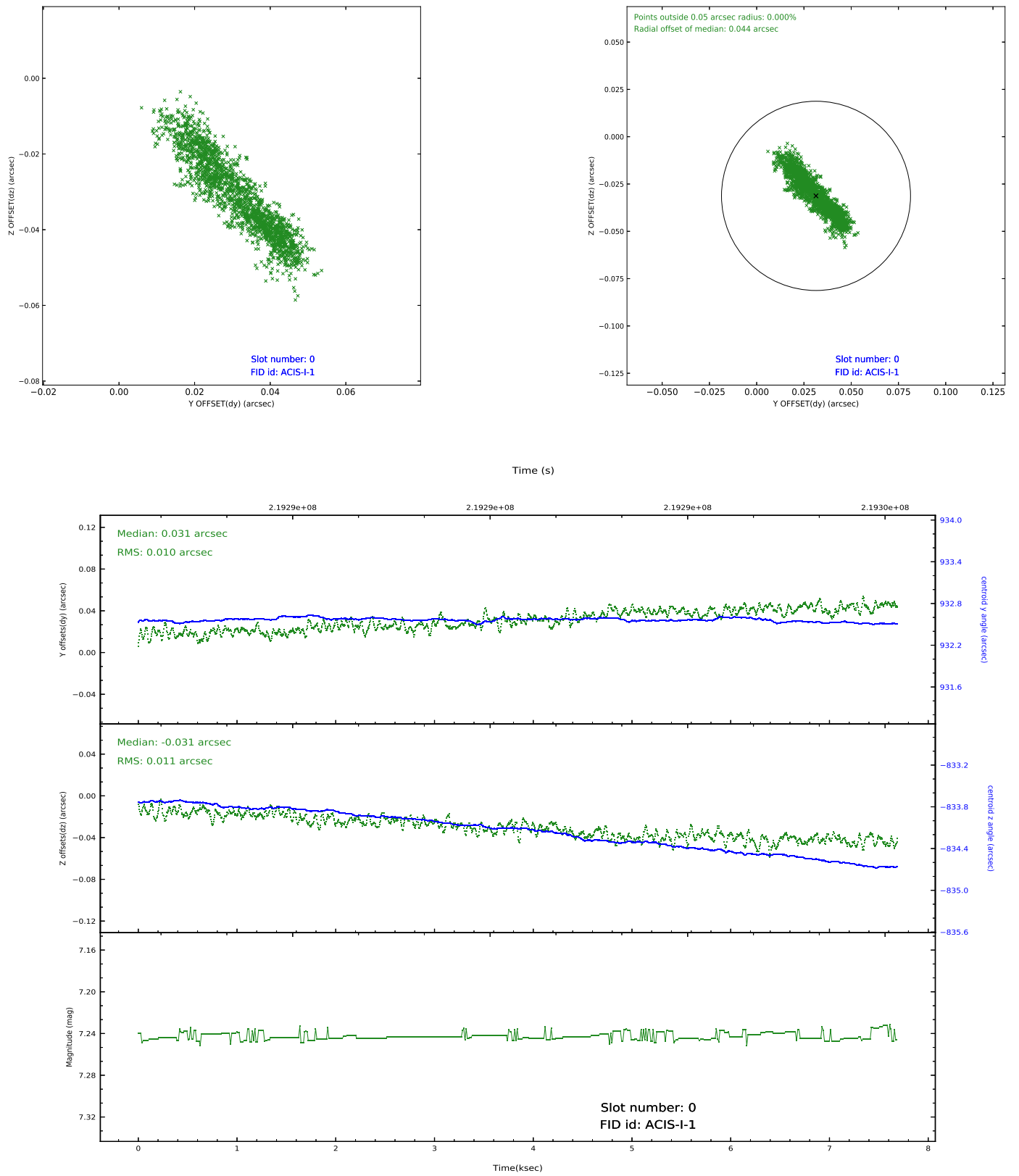


2.4.5 Slot 7

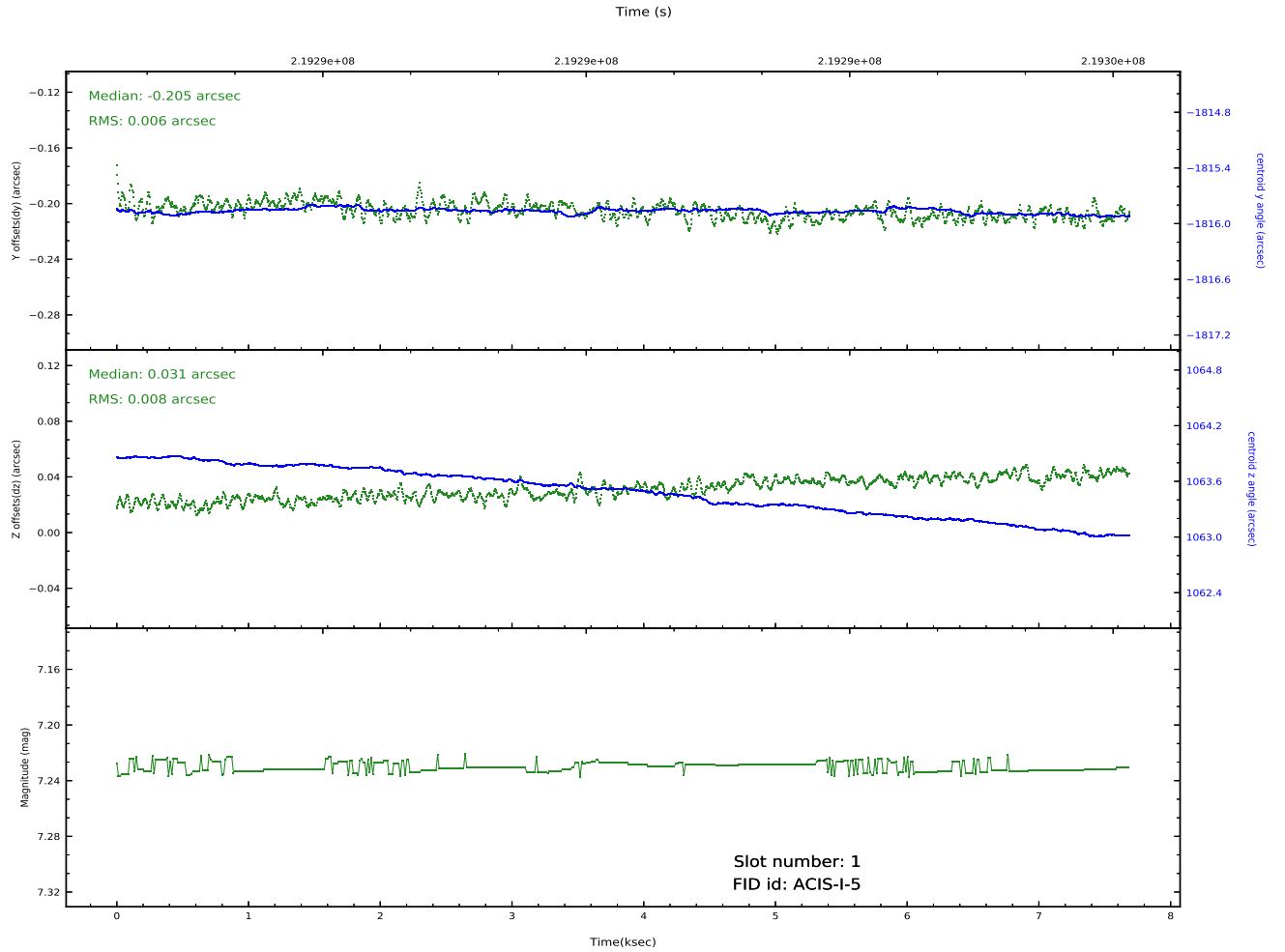
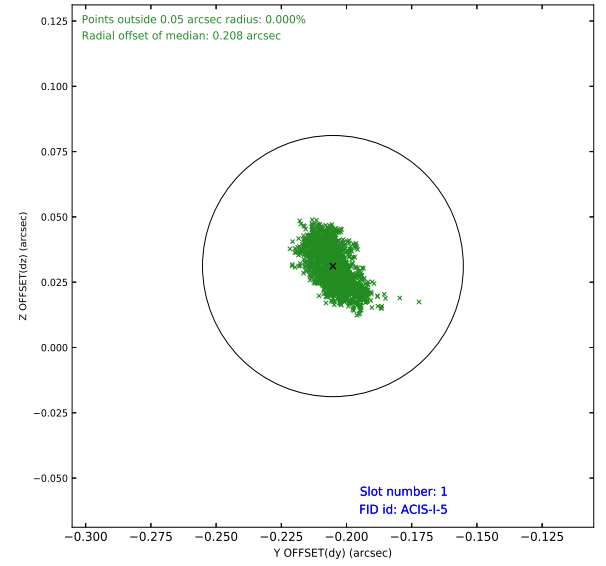
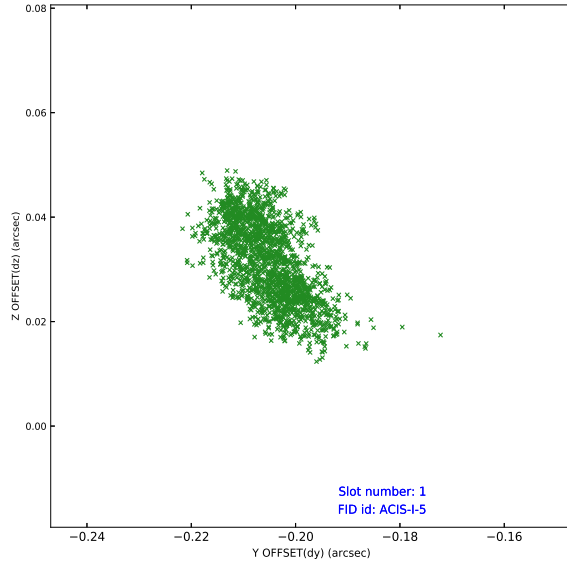


2.5 FID Slots

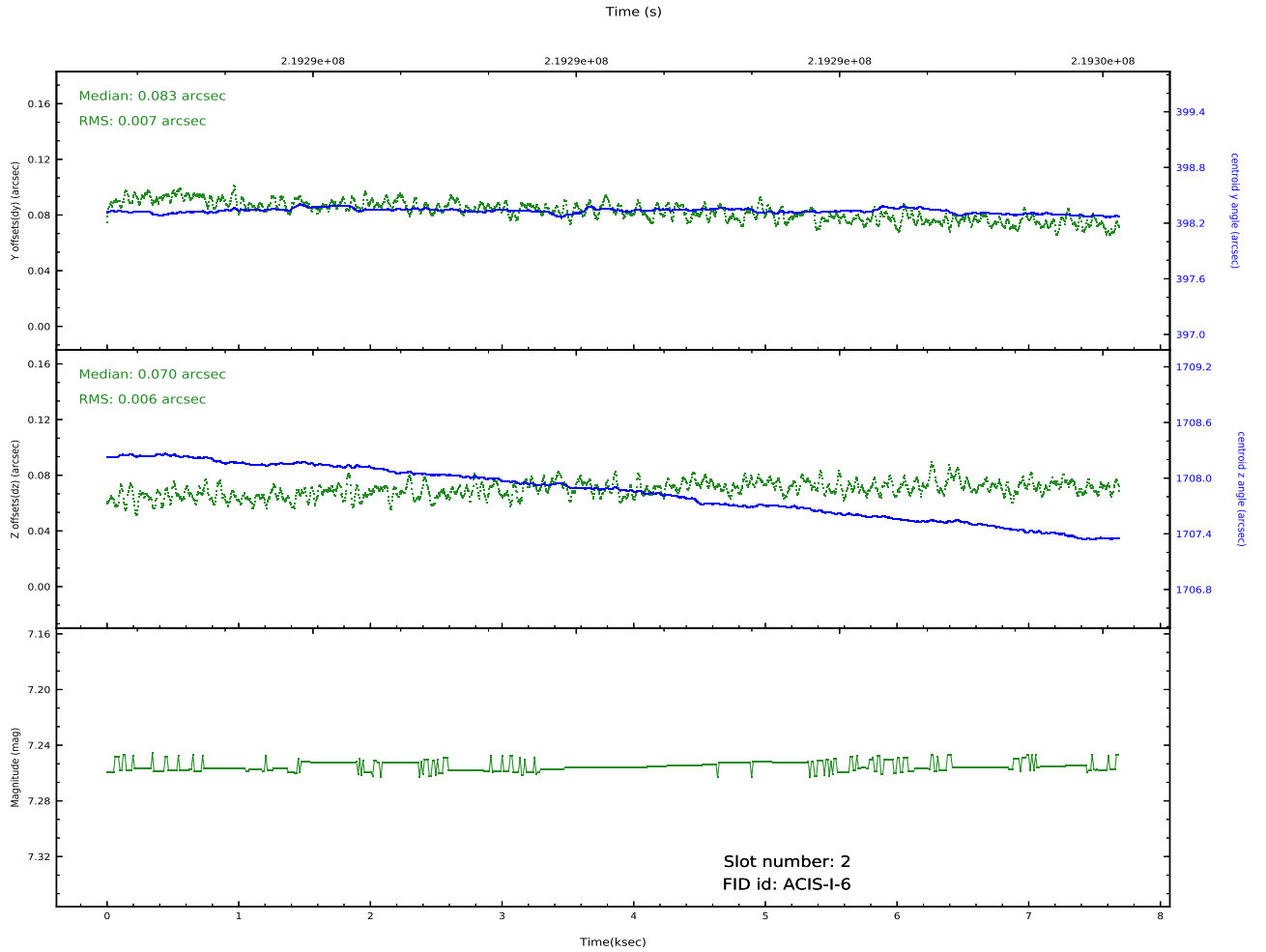
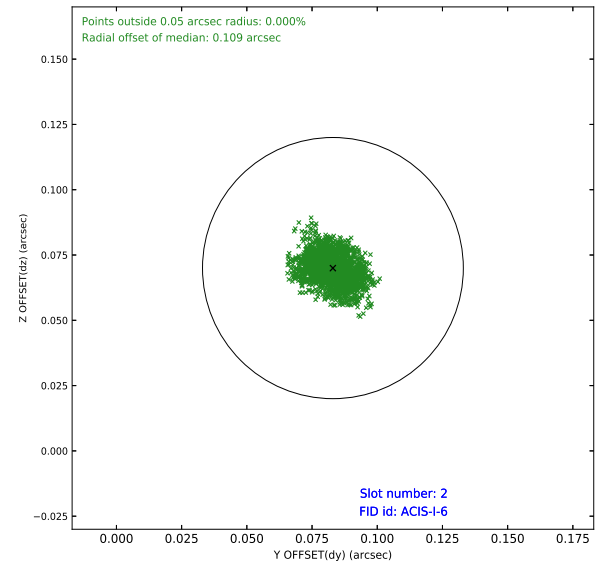
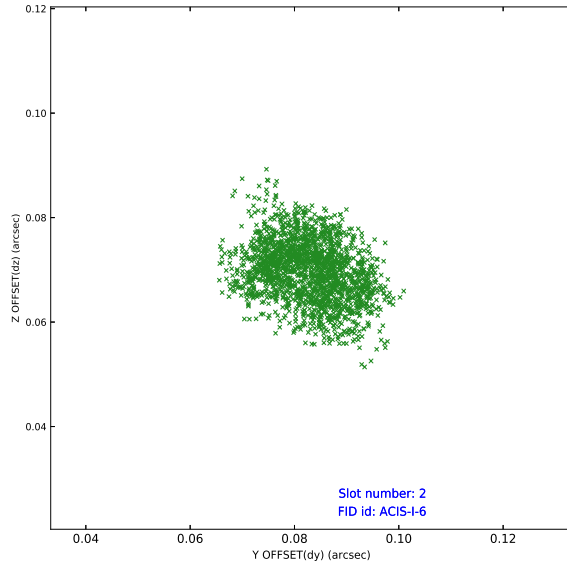
2.5.1 Slot 0



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) | 2020.10.05 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 7.673559 |

A.2 Comments

Window constraint satisfied.