

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6042 - L2 Version 4
Chandra X-Ray Center

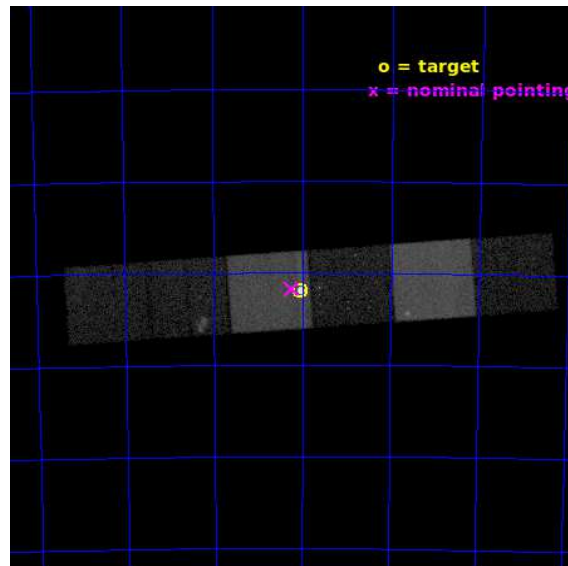
L2 Processing Date : Oct 7 2020

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1 Front

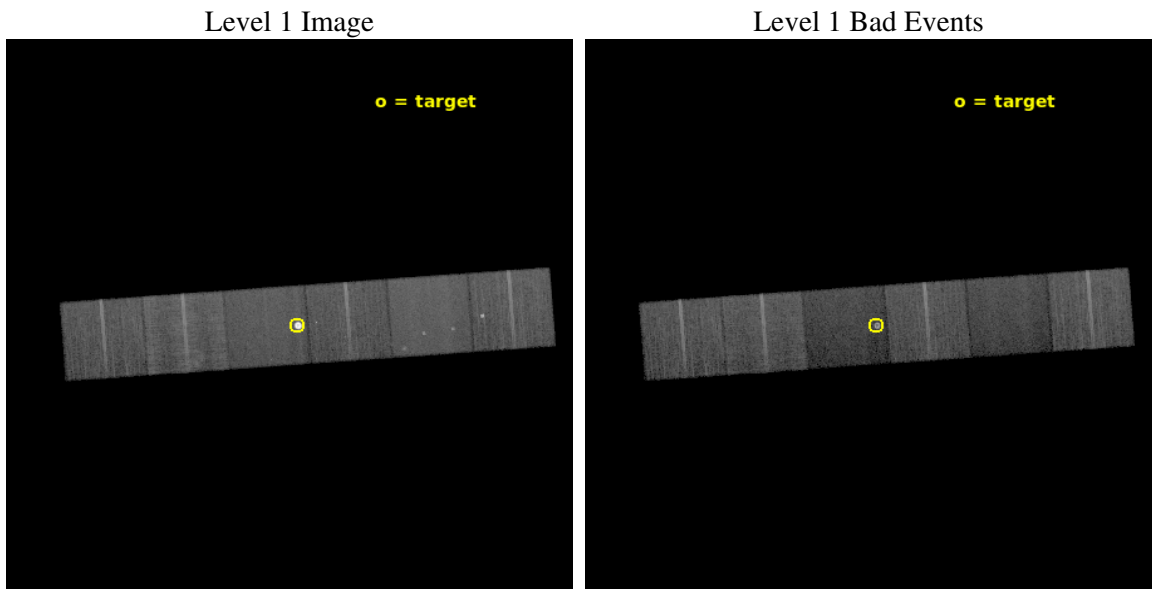
| | | |
|----------|--|---|
| seq_num | 590369 | Sequence number |
| obs_id | 6042 | Observation id |
| title | AO6B ACIS-S Calibration Observations of E0102-72 | Proposal title |
| observer | CXC Calibration | Principal investigator |
| object | E0102-72.3 | Source name |
| dtcycle | 0 | |
| cycle | 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 | 16.057966859036 | Nominal RA [deg] |
| dec_nom | -72.02845197258 | Nominal Dec [deg] |
| roll_nom | 175.70785346511 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 19145.599928677 | Sum of GTIs [s] |
| livetime | 18903.166814284 | Livetime [s] |
| ontime4 | 19145.599928677 | Sum of GTIs [s] |
| ontime5 | 19145.599928677 | Sum of GTIs [s] |
| ontime6 | 19142.358958393 | Sum of GTIs [s] |
| ontime7 | 19145.599928677 | Sum of GTIs [s] |
| ontime8 | 19145.599928677 | Sum of GTIs [s] |
| ontime9 | 19145.599928677 | Sum of GTIs [s] |
| l2events | 289874 | Number of level 2 events |



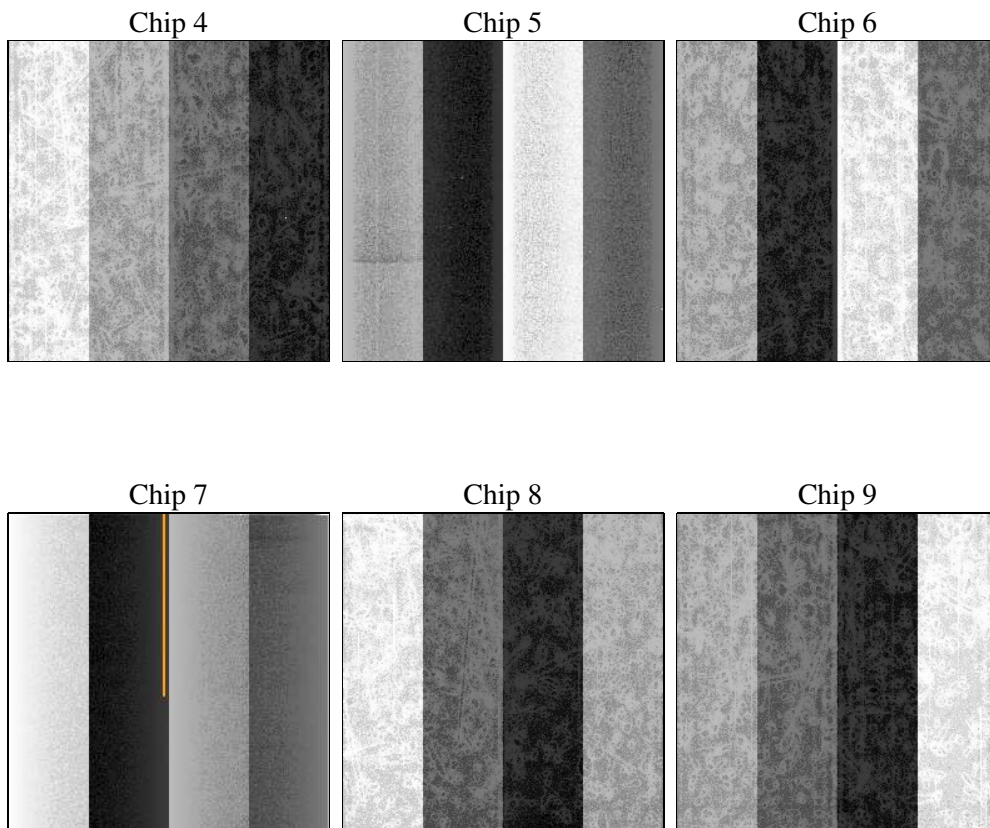
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 19000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 19145.599928677 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime4 | 19145.599928677 | Sum of GTIs [s] |
| date | 2020-10-07T18:21:50 | Date and time of file creation | ontime5 | 19145.599928677 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime6 | 19142.358958393 | Sum of GTIs [s] |
| | | | ontime7 | 19145.599928677 | Sum of GTIs [s] |
| | | | ontime8 | 19145.599928677 | Sum of GTIs [s] |
| | | | ontime9 | 19145.599928677 | Sum of GTIs [s] |
| | | | l1events | 884928 | Number of level 1 events |

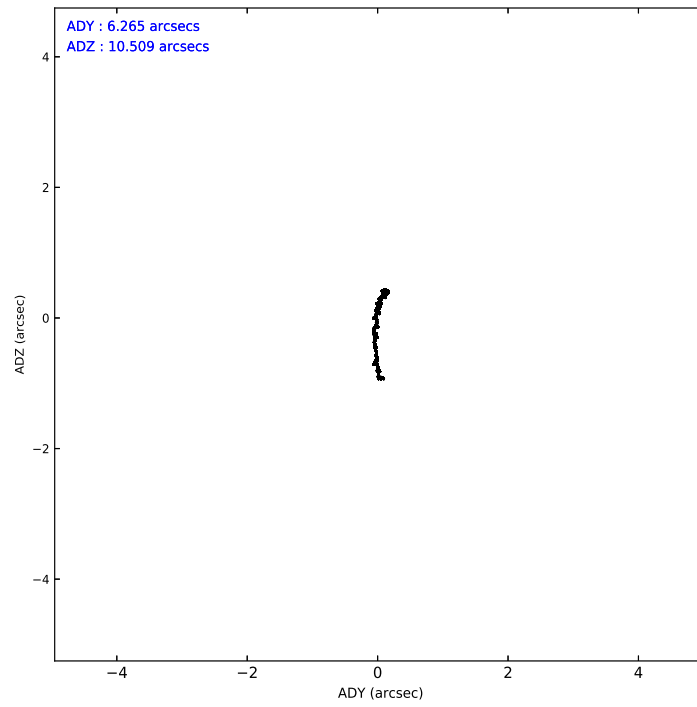
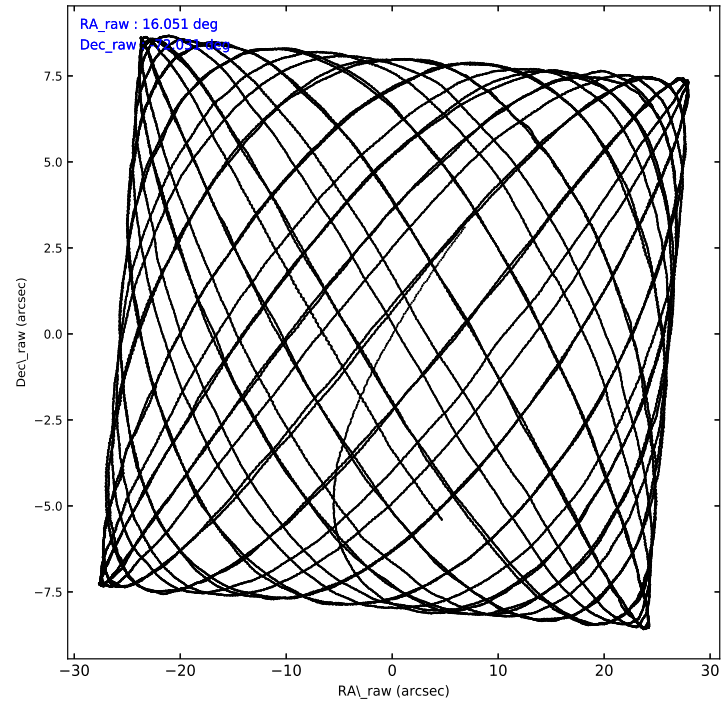
2.1.4 Events

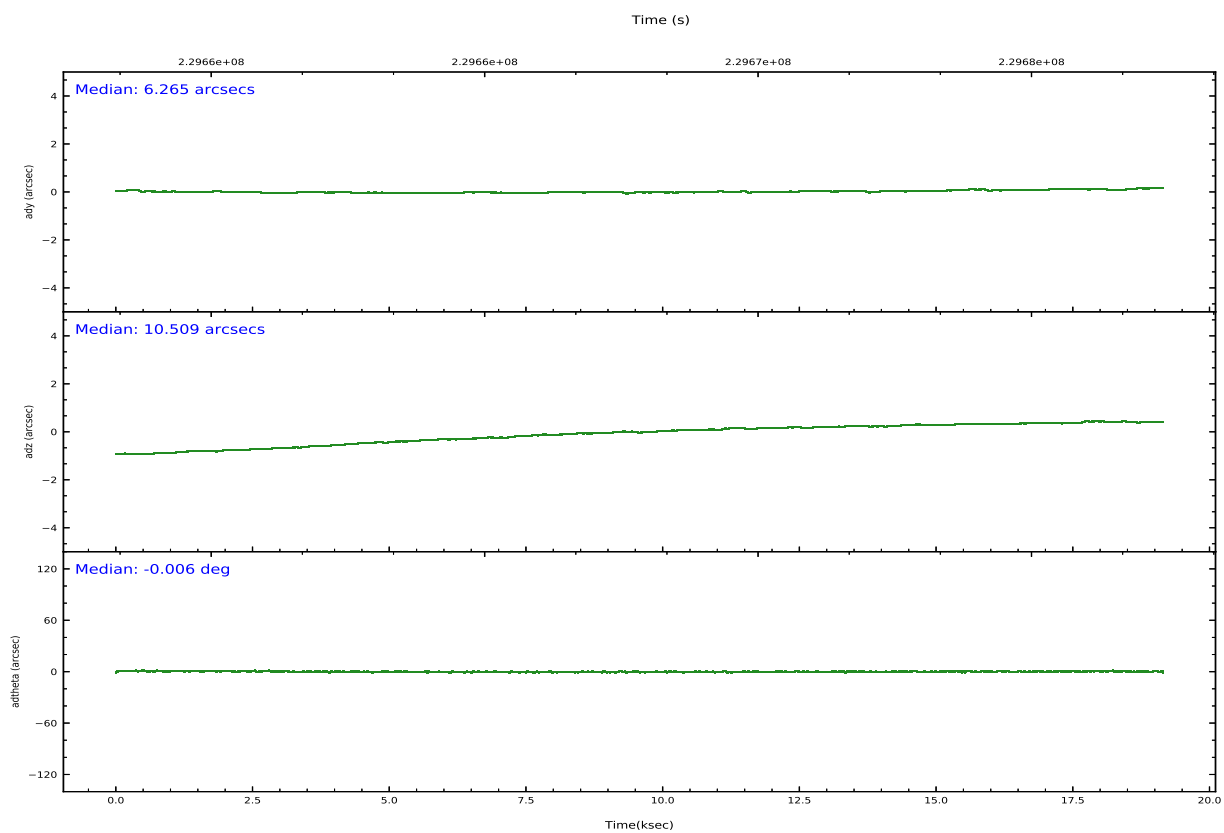
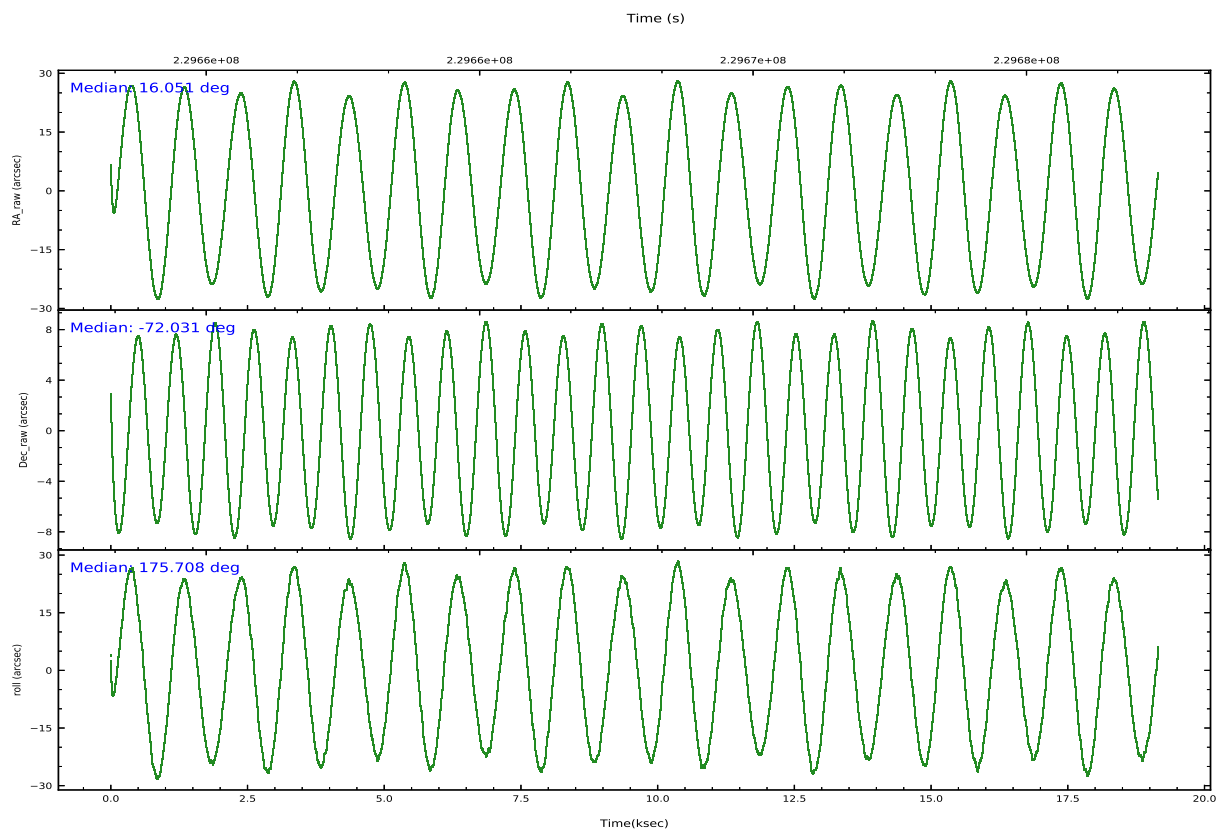
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 | | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|-------|-------|-------|--------|-------|
| level 1 events | 136001 | 138073 | 116395 | 242529 | 141398 | 110532 | grade 0 events | 7945 | 6997 | 5228 | 45020 | 9930 | 3983 |
| rejected events | 120658 | 65838 | 103569 | 60103 | 107828 | 99237 | | 5% | 5% | 4% | 18% | 7% | 3% |
| rejected % | 88% | 47% | 88% | 24% | 76% | 89% | grade 1 events | 109 | 173 | 63 | 870 | 106 | 82 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2959 | 21854 | 2668 | 48136 | 7877 | 2437 |
| | | | | | | | | 2% | 15% | 2% | 19% | 5% | 2% |
| | | | | | | | grade 3 events | 1337 | 3636 | 1346 | 21286 | 3593 | 1364 |
| | | | | | | | | 0% | 2% | 1% | 8% | 2% | 1% |
| | | | | | | | grade 4 events | 1261 | 3506 | 1280 | 20830 | 3392 | 1257 |
| | | | | | | | | 0% | 2% | 1% | 8% | 2% | 1% |
| | | | | | | | grade 5 events | 3846 | 11618 | 3892 | 14097 | 5793 | 4360 |
| | | | | | | | | 2% | 8% | 3% | 5% | 4% | 3% |
| | | | | | | | grade 6 events | 1923 | 36655 | 2373 | 48104 | 8993 | 2316 |
| | | | | | | | | 1% | 26% | 2% | 19% | 6% | 2% |
| | | | | | | | grade 7 events | 116621 | 53634 | 99545 | 44186 | 101714 | 94733 |
| | | | | | | | | 85% | 38% | 85% | 18% | 71% | 85% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| Detector | ACIS-456789 | ACIS-456789 | 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 | 16.130218 | 16.057966859036 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -72.019173 | -72.02845197258 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 175.632596 | 175.70785346511 | [s] Primary exposure time | 0.000000 | 3.2 |
| [s] Window start time (MET) | 228700864.184000 | 228700864.184000 | | | |
| [s] Window stop time (MET) | 231206464.184000 | 231206464.184000 | | | |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | | | |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | | | |
| [s] Observation start time (MET) | 229658407.184000 | 229657302.34473 | | | |
| Observation start date | 2005-04-12T01:59:03 | 2005-04-12T01:41:42 | | | |
| [s] Observation end time (MET) | 229677407.184000 | 229678824.27071 | | | |
| Observation end date | 2005-04-12T07:15:43 | 2005-04-12T07:40:24 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



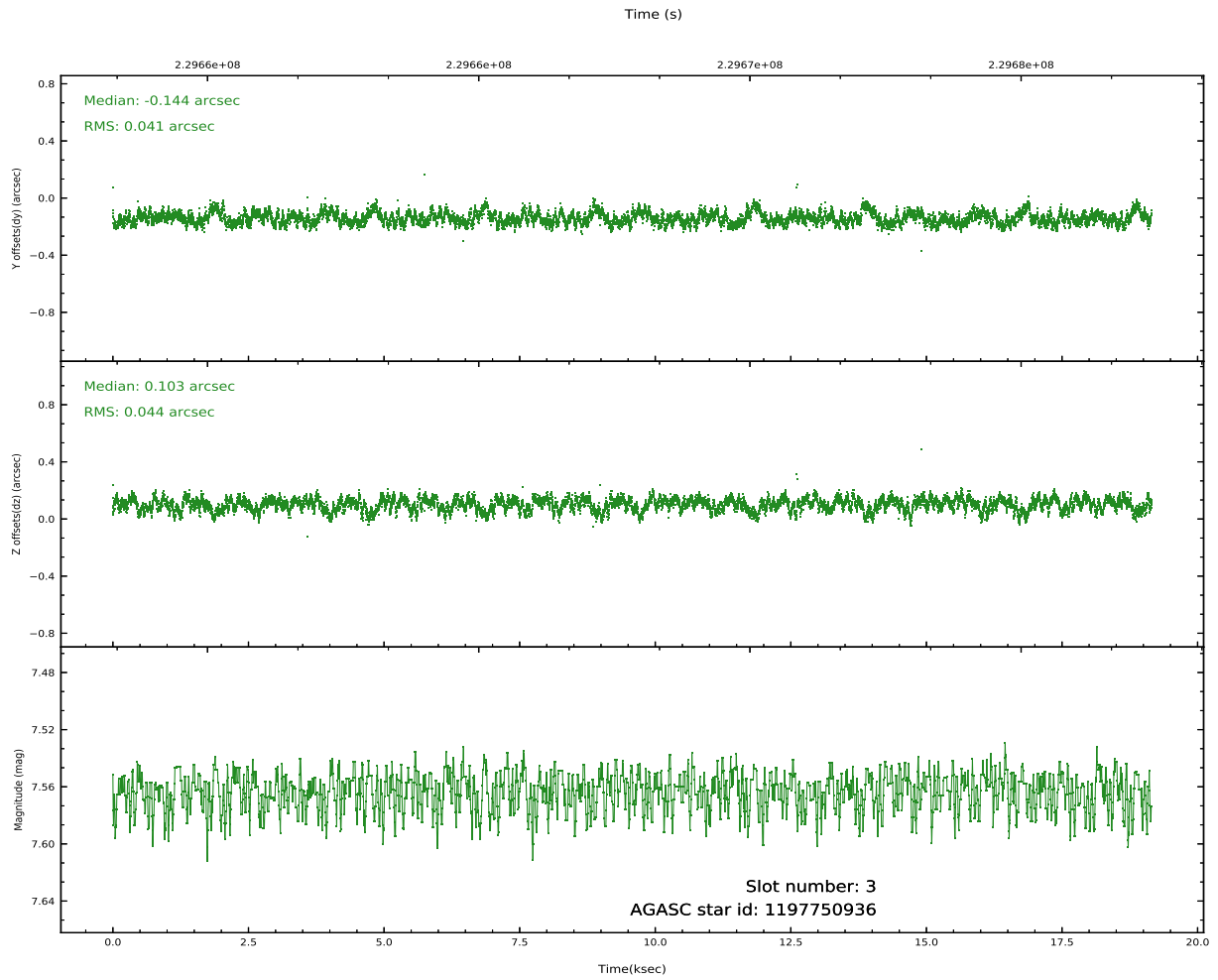
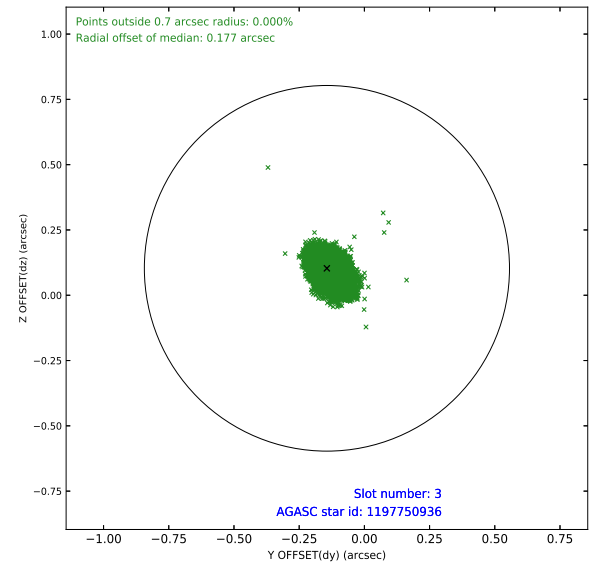
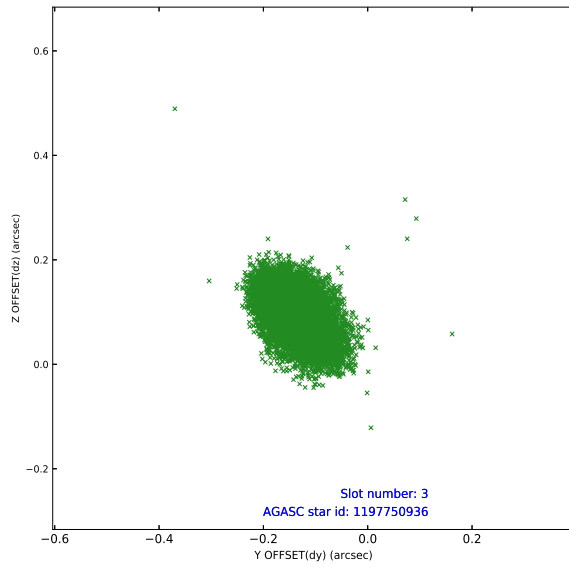


Slot Statistics

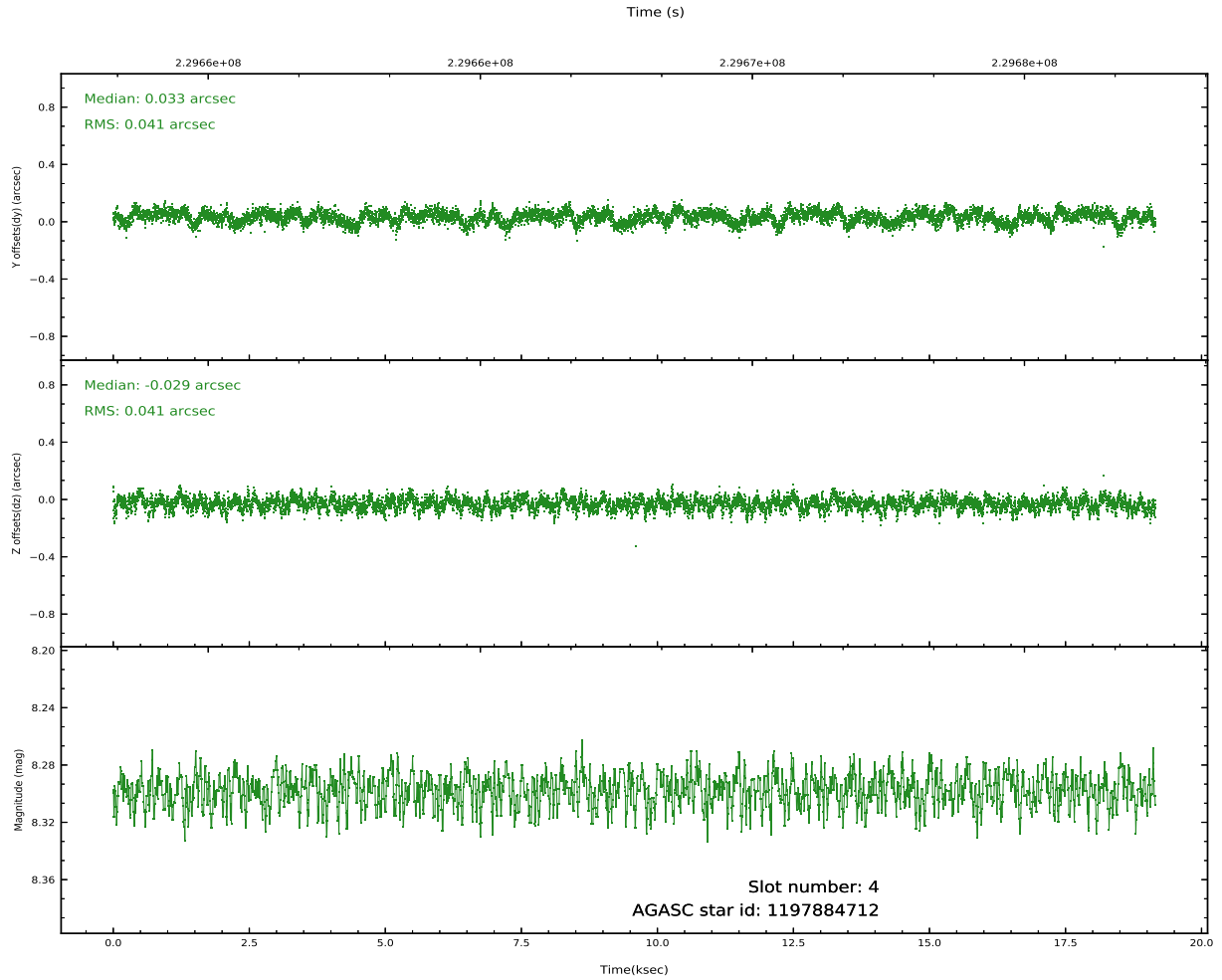
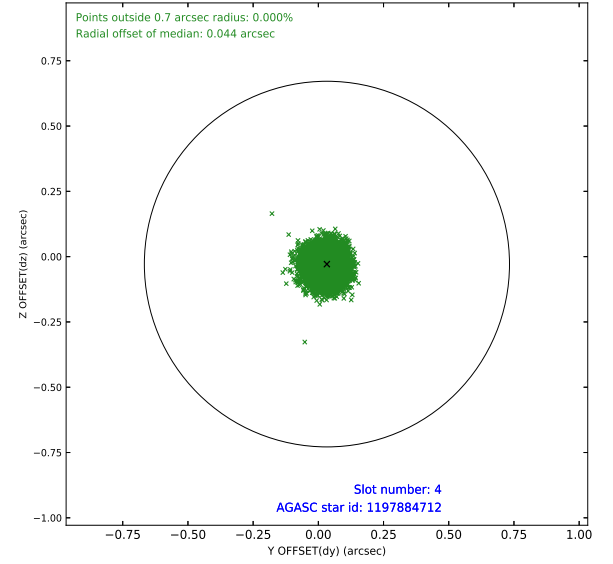
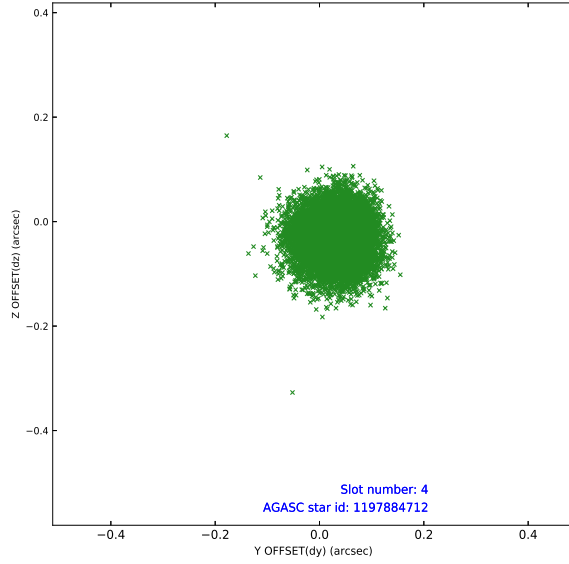
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|------------|------|-------|----------|--------|--------|-------|-------|-----------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.10 | 4672 | 1.000 | -0.098 | -0.057 | 0.009 | 0.015 | 0.000000 | 0.000000 | -759.05 | -1731 |
| 1 | FID | | ACIS-S-4 | 7.21 | 4671 | 1.000 | 0.157 | 0.063 | 0.009 | 0.016 | 0.000000 | 0.000000 | 2154.33 | 176 |
| 2 | FID | | ACIS-S-5 | 7.23 | 4672 | 1.000 | -0.089 | 0.004 | 0.010 | 0.019 | 0.000000 | 0.000000 | -1811.69 | 170 |
| 3 | GUIDE | used | 1197750936 | 7.56 | 9344 | 1.000 | -0.144 | 0.103 | 0.063 | 0.106 | 15.387940 | -71.549550 | 971.99 | -1615 |
| 4 | GUIDE | used | 1197884712 | 8.30 | 9336 | 1.000 | 0.033 | -0.029 | 0.062 | 0.099 | 16.087398 | -72.252690 | -16.99 | 841 |
| 5 | GUIDE | used | 1197885104 | 9.36 | 9337 | 1.000 | 0.123 | 0.016 | 0.072 | 0.119 | 17.845067 | -72.189368 | -1930.81 | 494 |
| 6 | GUIDE | used | 1197885328 | 7.25 | 9344 | 1.000 | 0.009 | 0.052 | 0.054 | 0.089 | 16.283090 | -71.733943 | -94.06 | -1036 |
| 7 | GUIDE | used | 1198283128 | 7.78 | 9342 | 1.000 | -0.024 | -0.140 | 0.050 | 0.079 | 17.272580 | -72.642428 | -1395.33 | 2155 |

2.4 Star Slots

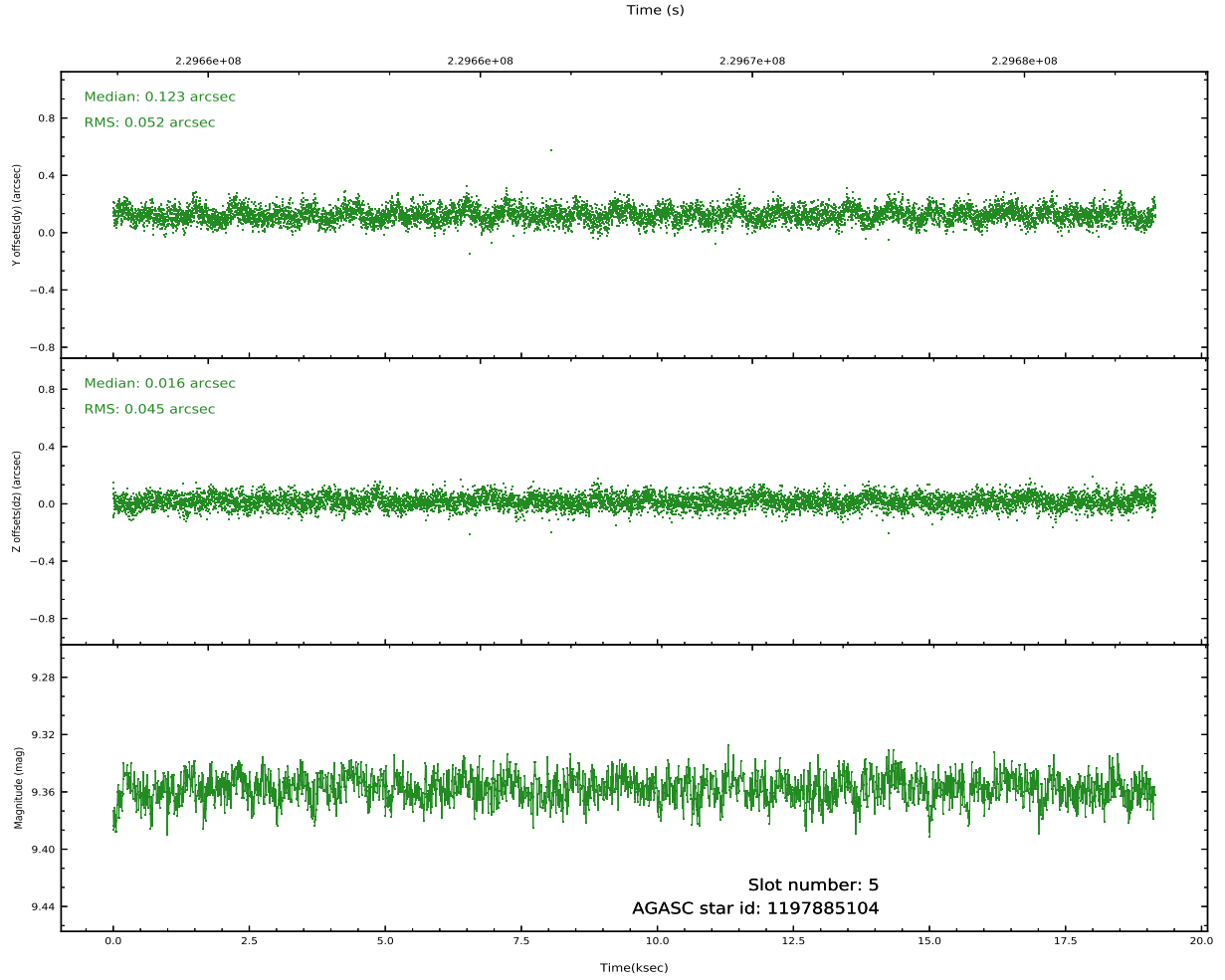
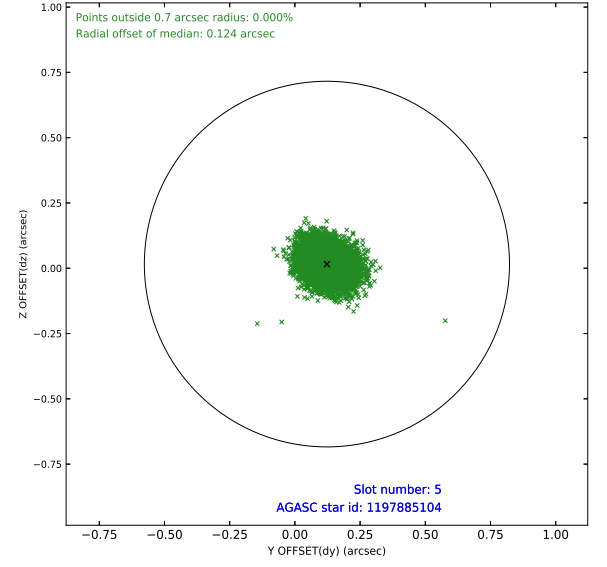
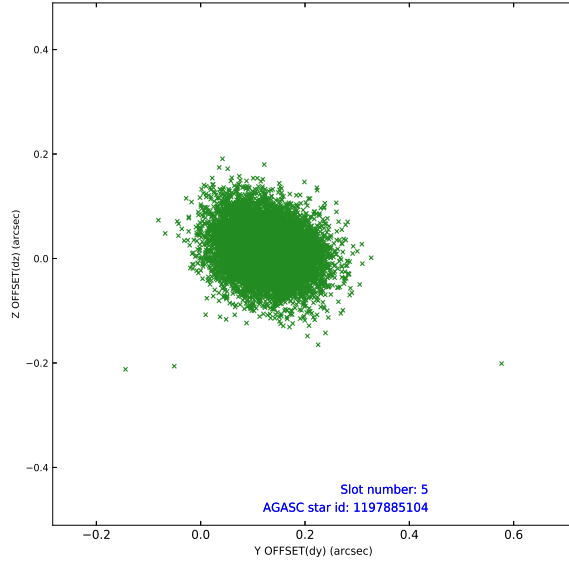
2.4.1 Slot 3



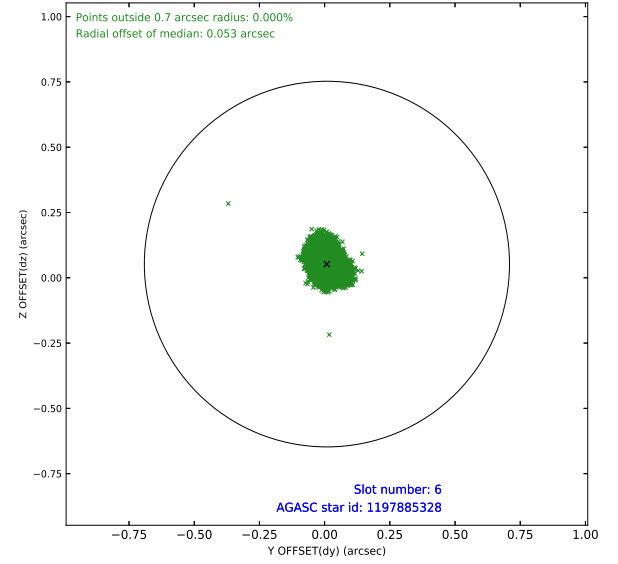
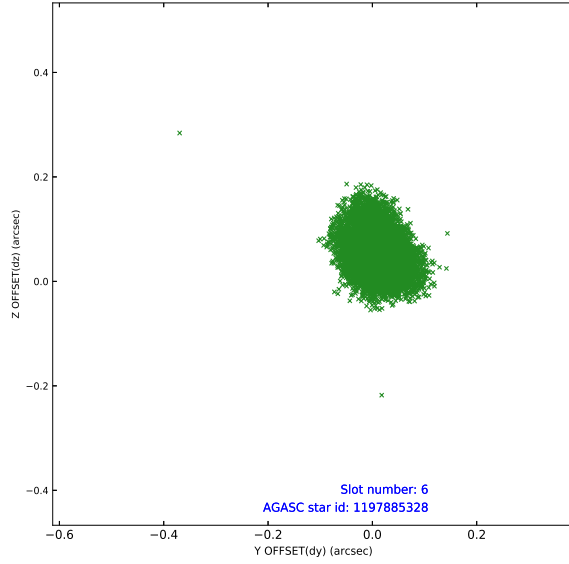
2.4.2 Slot 4



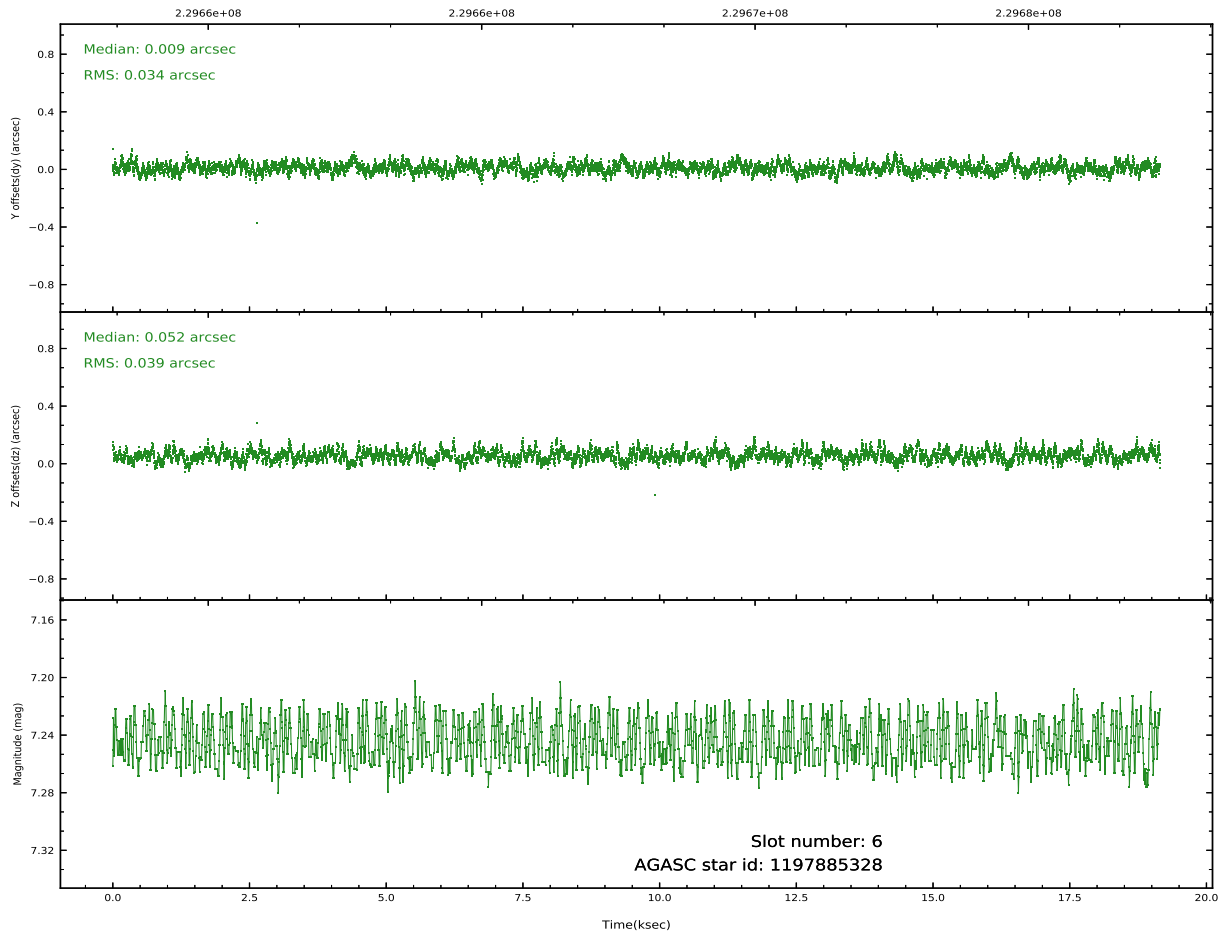
2.4.3 Slot 5



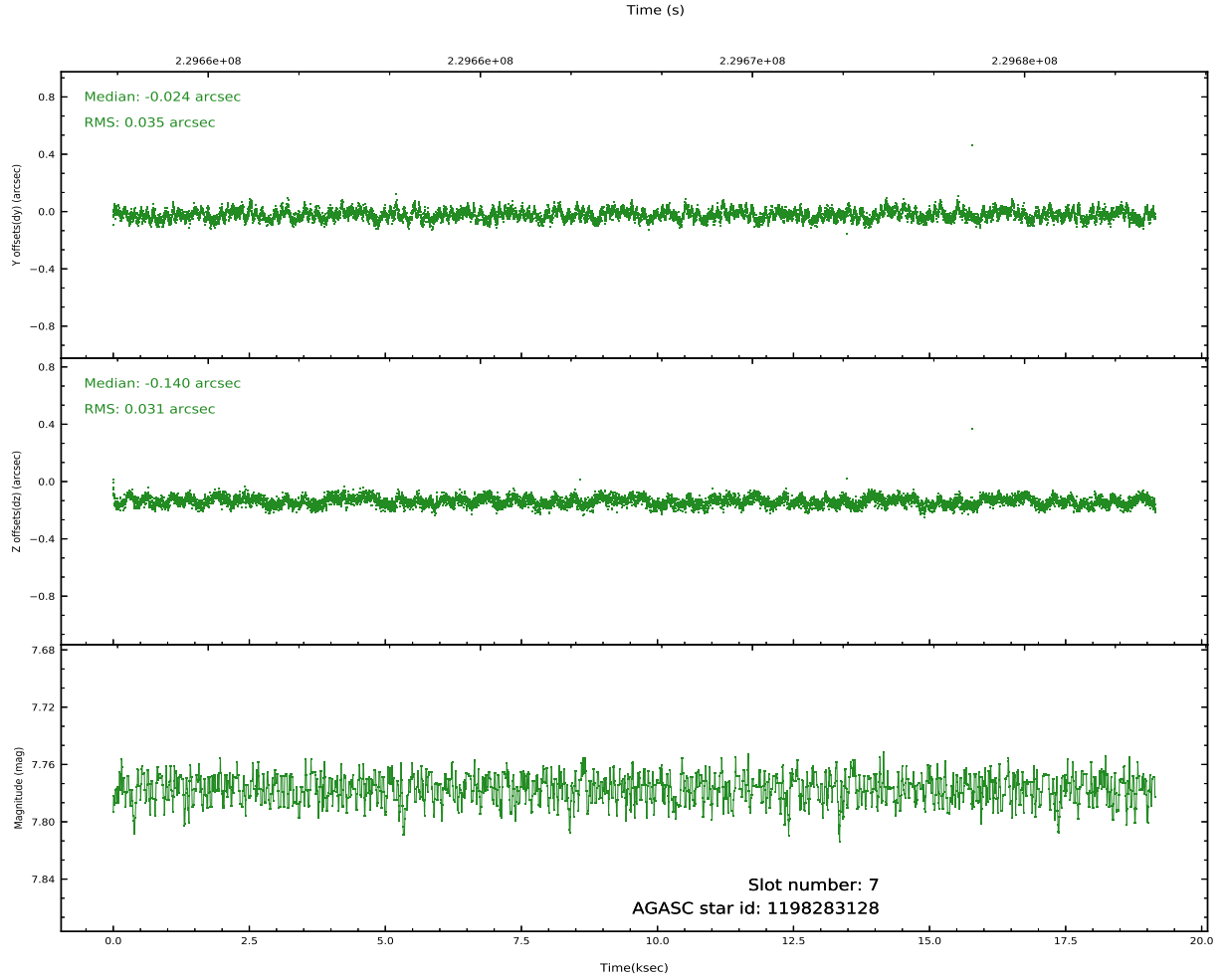
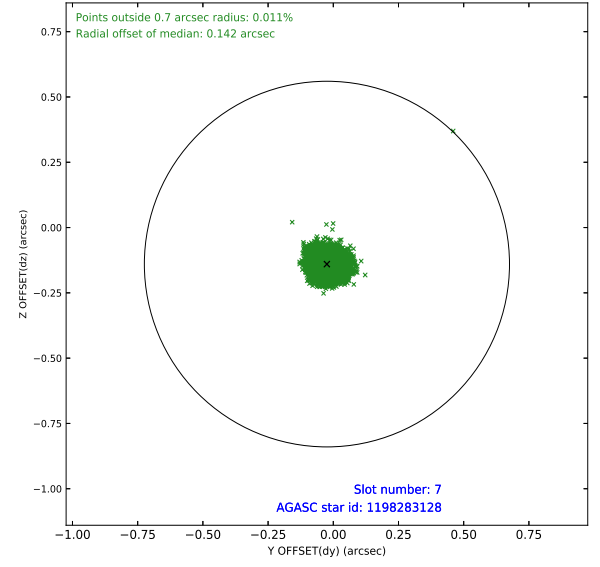
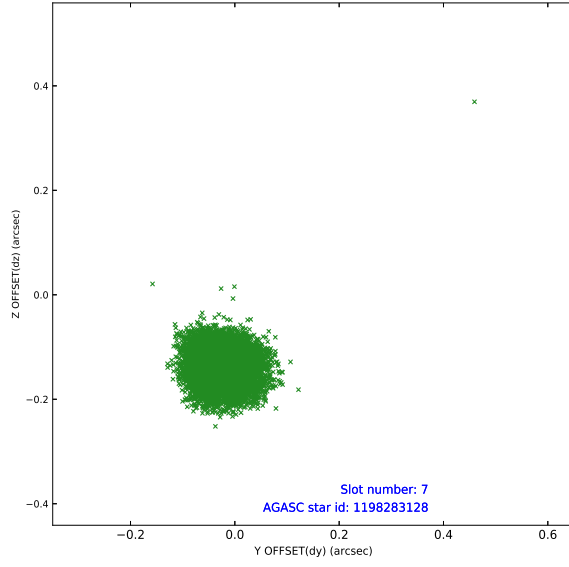
2.4.4 Slot 6



Time (s)

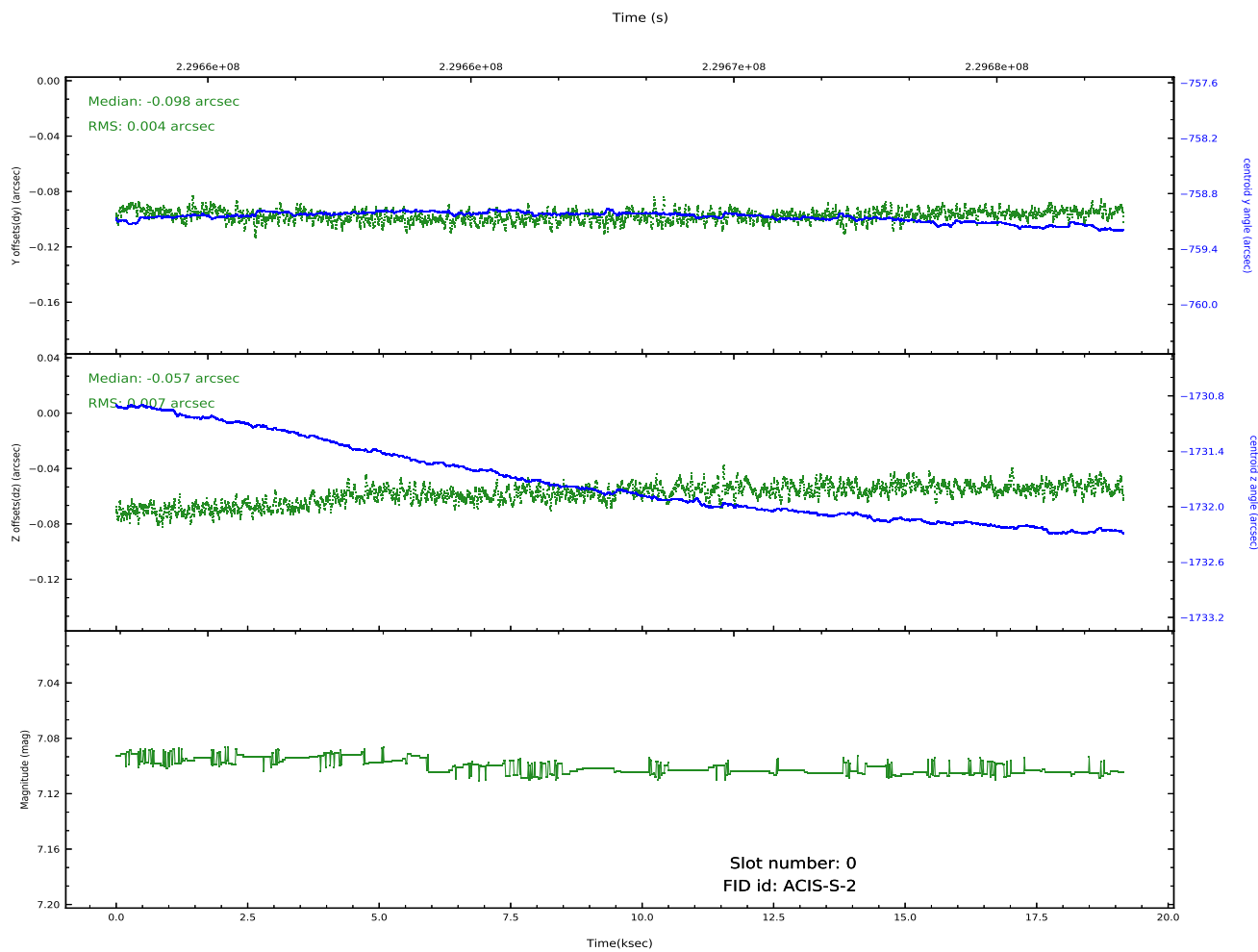
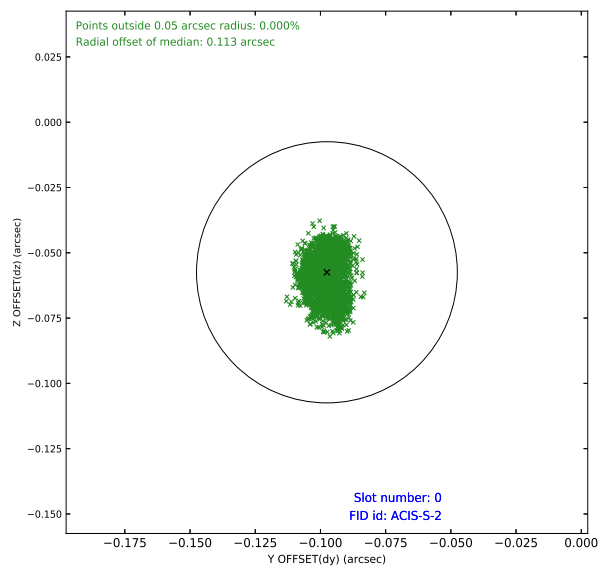
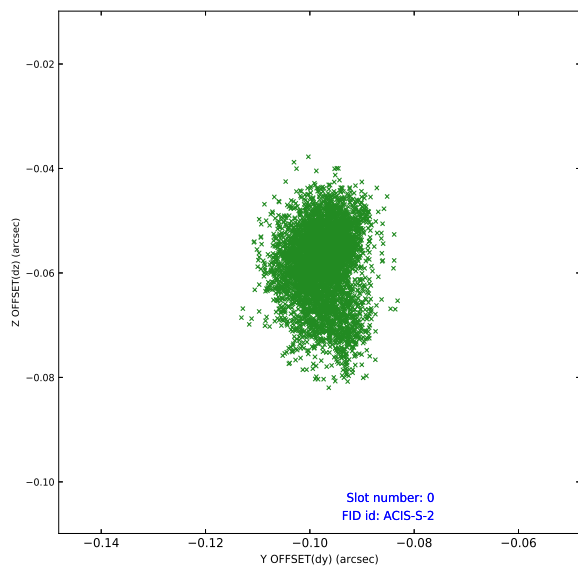


2.4.5 Slot 7

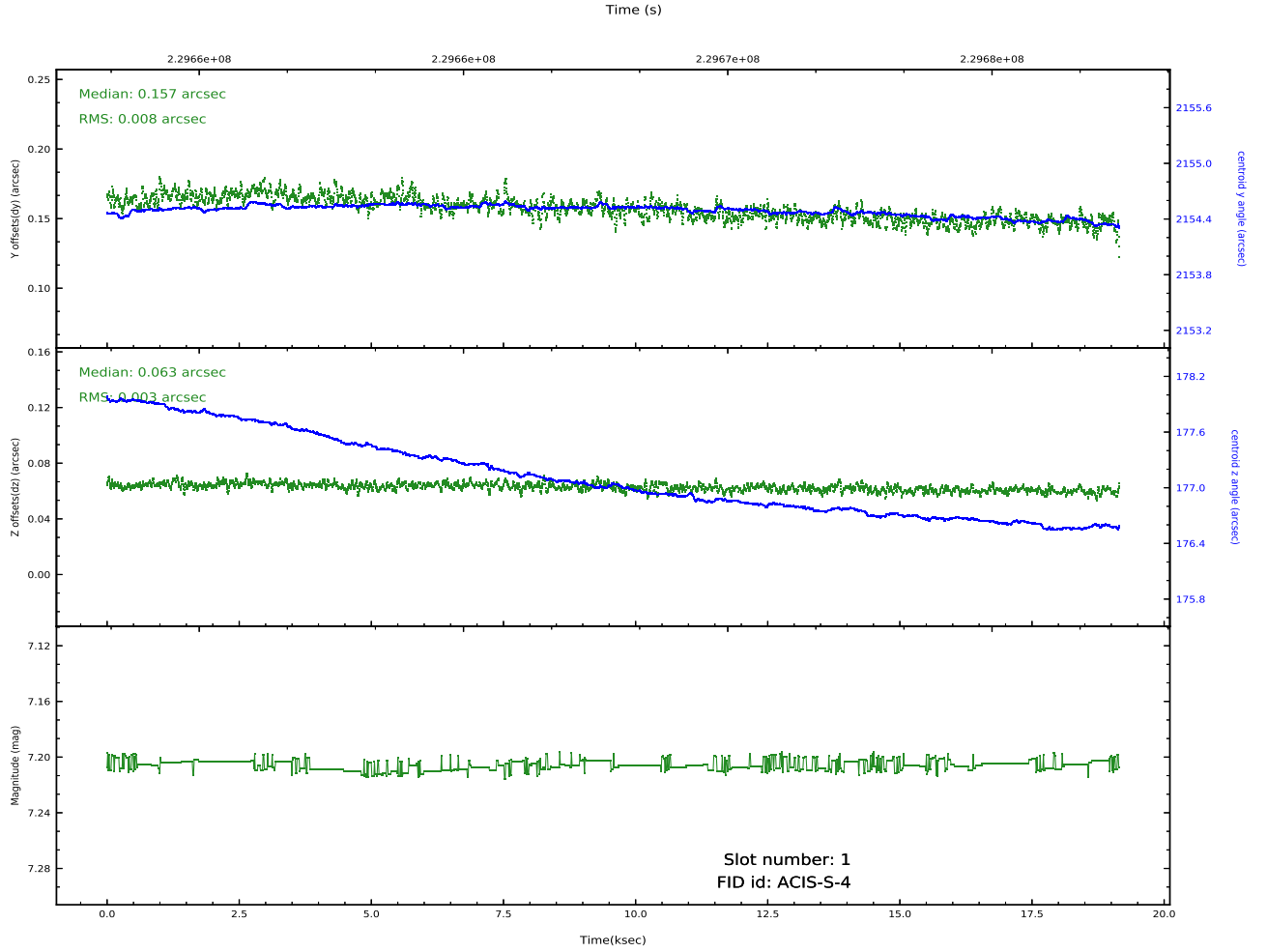
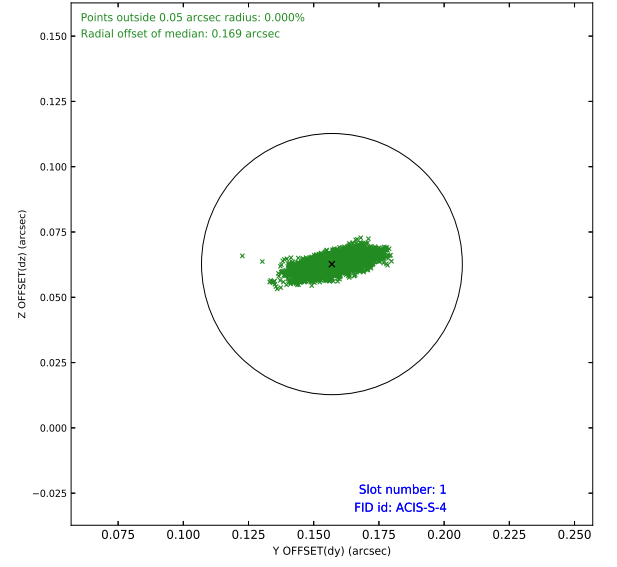
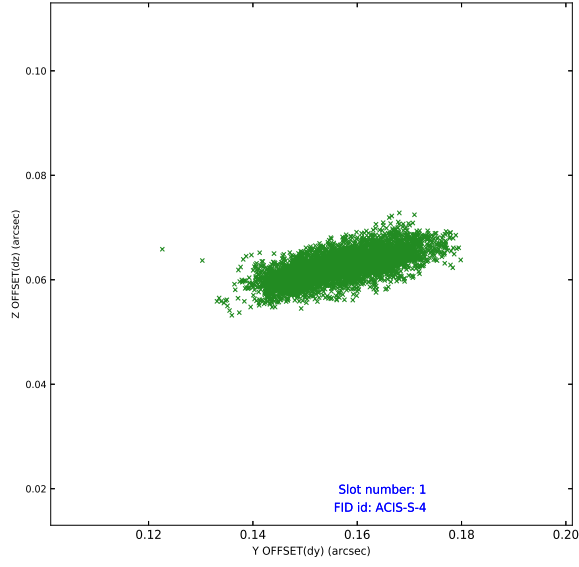


2.5 FID Slots

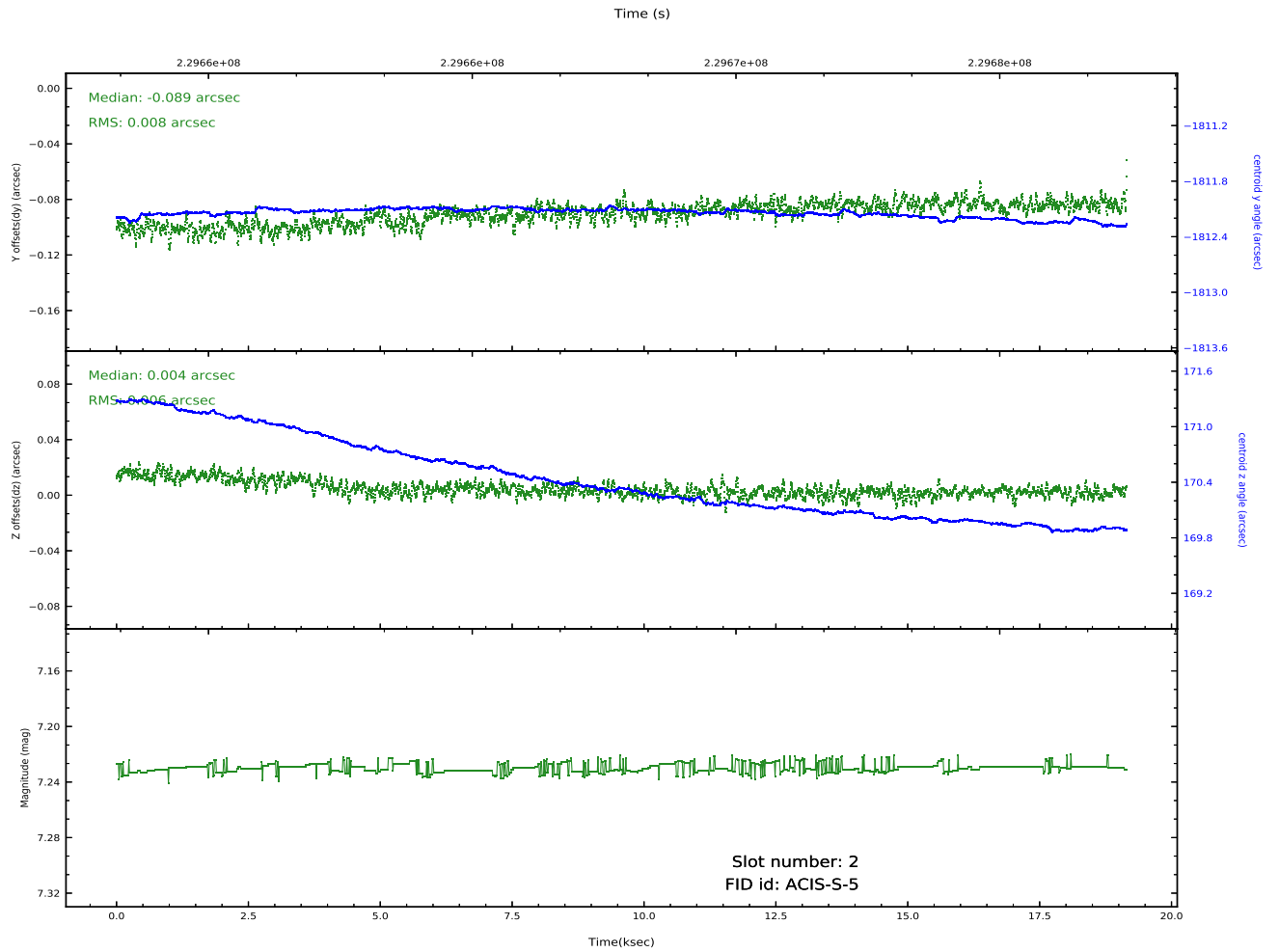
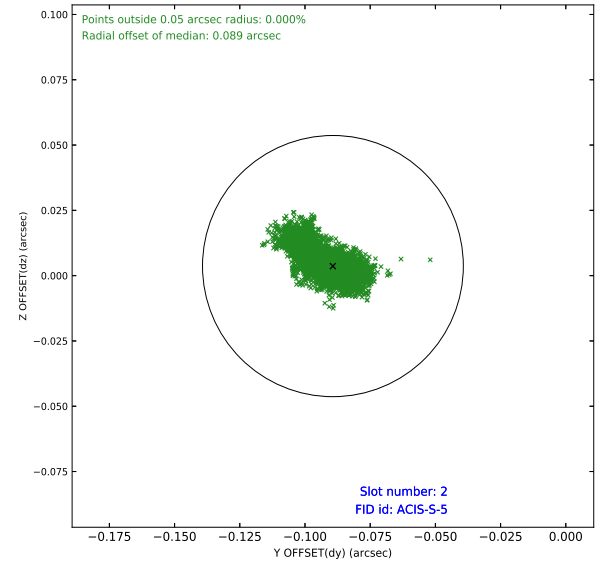
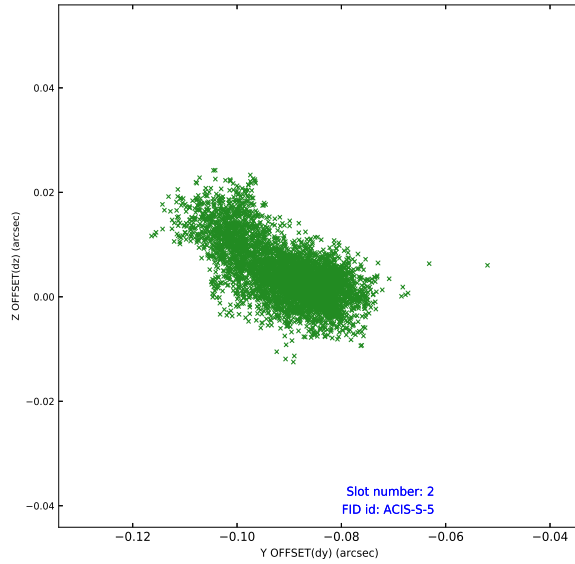
2.5.1 Slot 0



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) | 2020.10.08 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 19.14559 |

A.2 Comments

Window constraint satisfied.