

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5140 - L2 Version 4
Chandra X-Ray Center

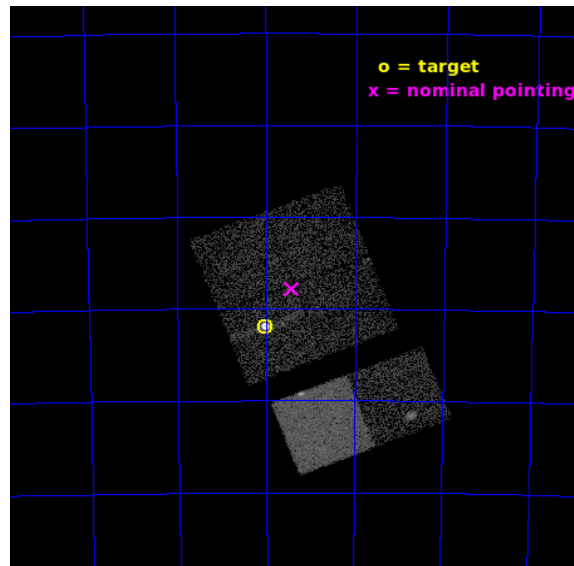
L2 Processing Date : Sep 25 2020

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1 Front

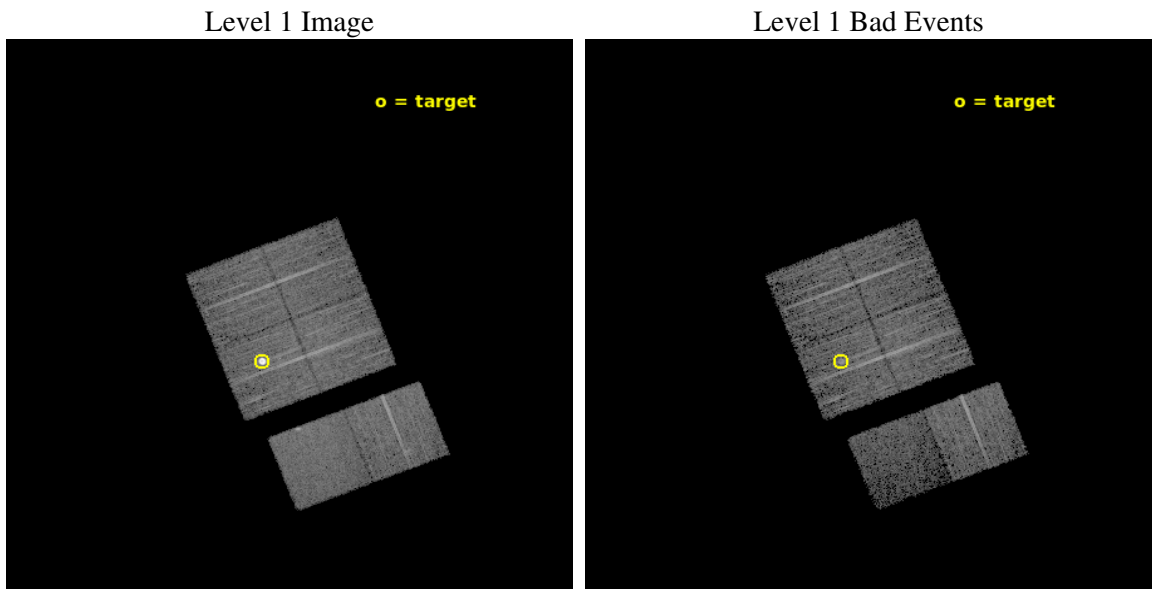
| | | |
|----------|--|---|
| seq_num | 590338 | Sequence number |
| obs_id | 5140 | Observation id |
| title | AO5B ACIS-I Calibration Observations of E0102-72 | Proposal title |
| observer | CXC Calibration | Principal investigator |
| object | E0102-72.3 | Source name |
| dtcycle | 0 | |
| cycle | 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 | 15.855585603869 | Nominal RA [deg] |
| dec_nom | -71.96373133787 | Nominal Dec [deg] |
| roll_nom | 158.65952332503 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 8143.9999696612 | Sum of GTIs [s] |
| livetime | 8040.8757383173 | Livetime [s] |
| ontime0 | 8143.9999696612 | Sum of GTIs [s] |
| ontime1 | 8143.9999696612 | Sum of GTIs [s] |
| ontime2 | 8143.9999696612 | Sum of GTIs [s] |
| ontime3 | 8143.9999696612 | Sum of GTIs [s] |
| ontime6 | 8143.9999696612 | Sum of GTIs [s] |
| ontime7 | 8143.9999696612 | Sum of GTIs [s] |
| l2events | 63462 | Number of level 2 events |



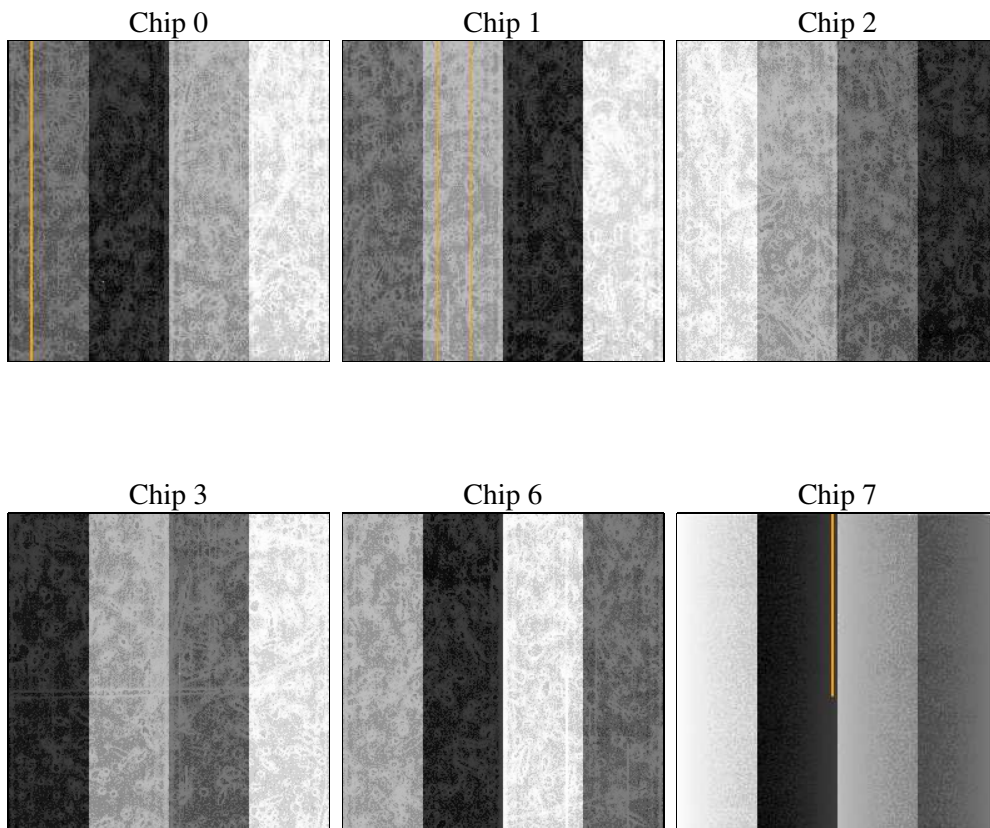
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 8000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 8143.9999696612 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime0 | 8143.9999696612 | Sum of GTIs [s] |
| date | 2020-09-25T17:50:12 | Date and time of file creation | ontime1 | 8143.9999696612 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime2 | 8143.9999696612 | Sum of GTIs [s] |
| | | | ontime3 | 8143.9999696612 | Sum of GTIs [s] |
| | | | ontime6 | 8143.9999696612 | Sum of GTIs [s] |
| | | | ontime7 | 8143.9999696612 | Sum of GTIs [s] |
| | | | l1events | 300624 | Number of level 1 events |

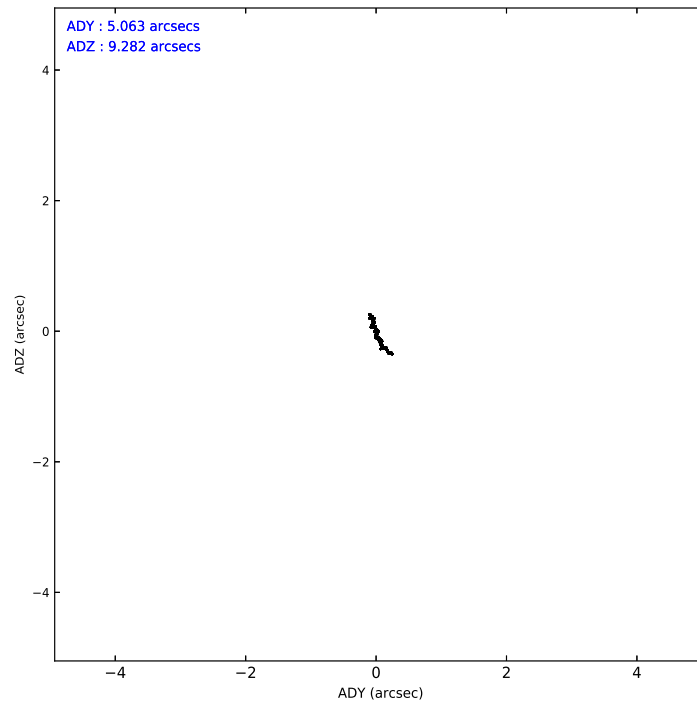
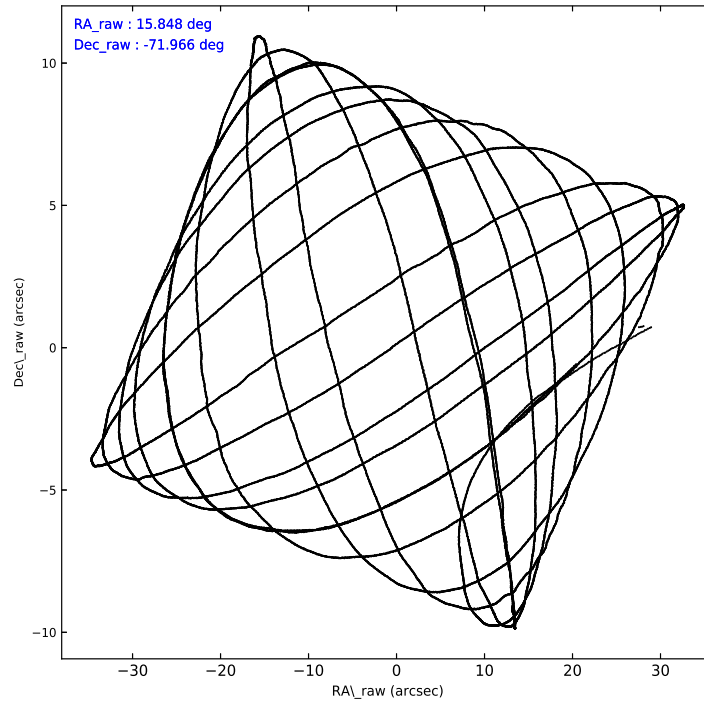
2.1.4 Events

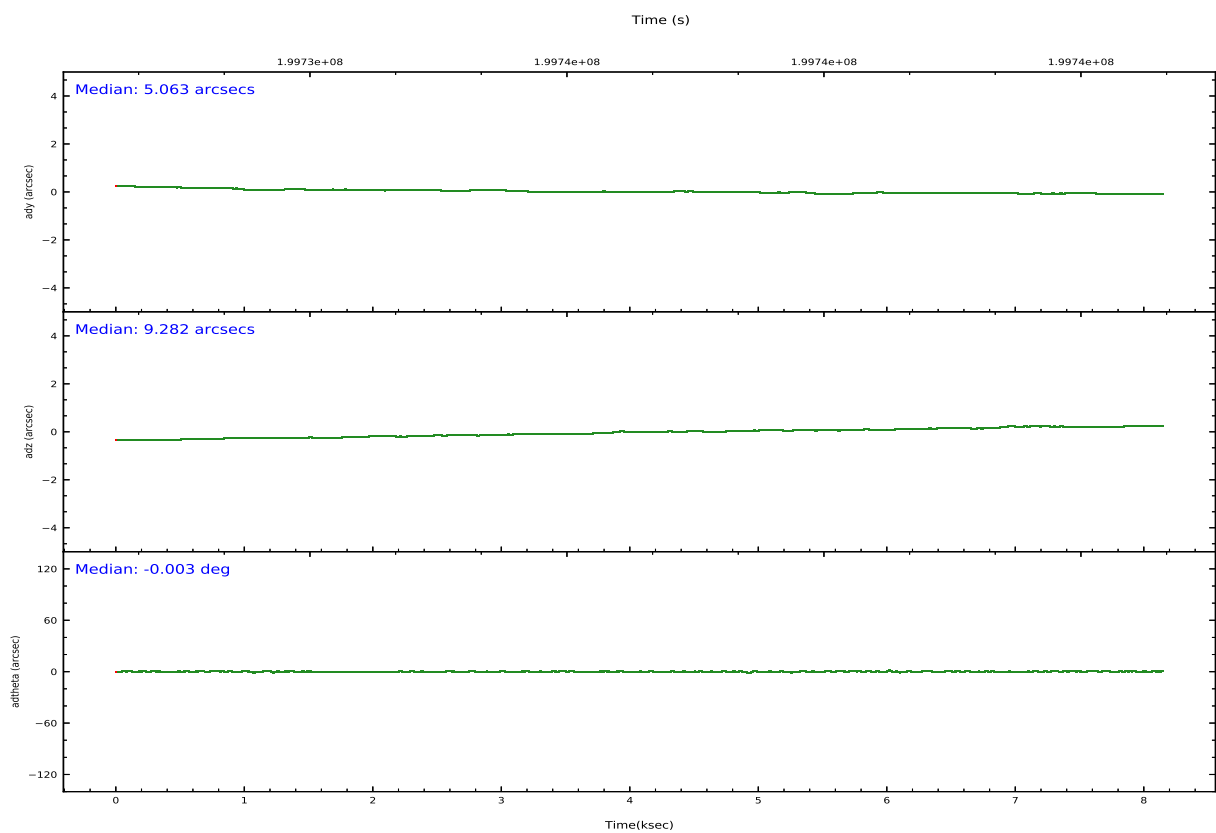
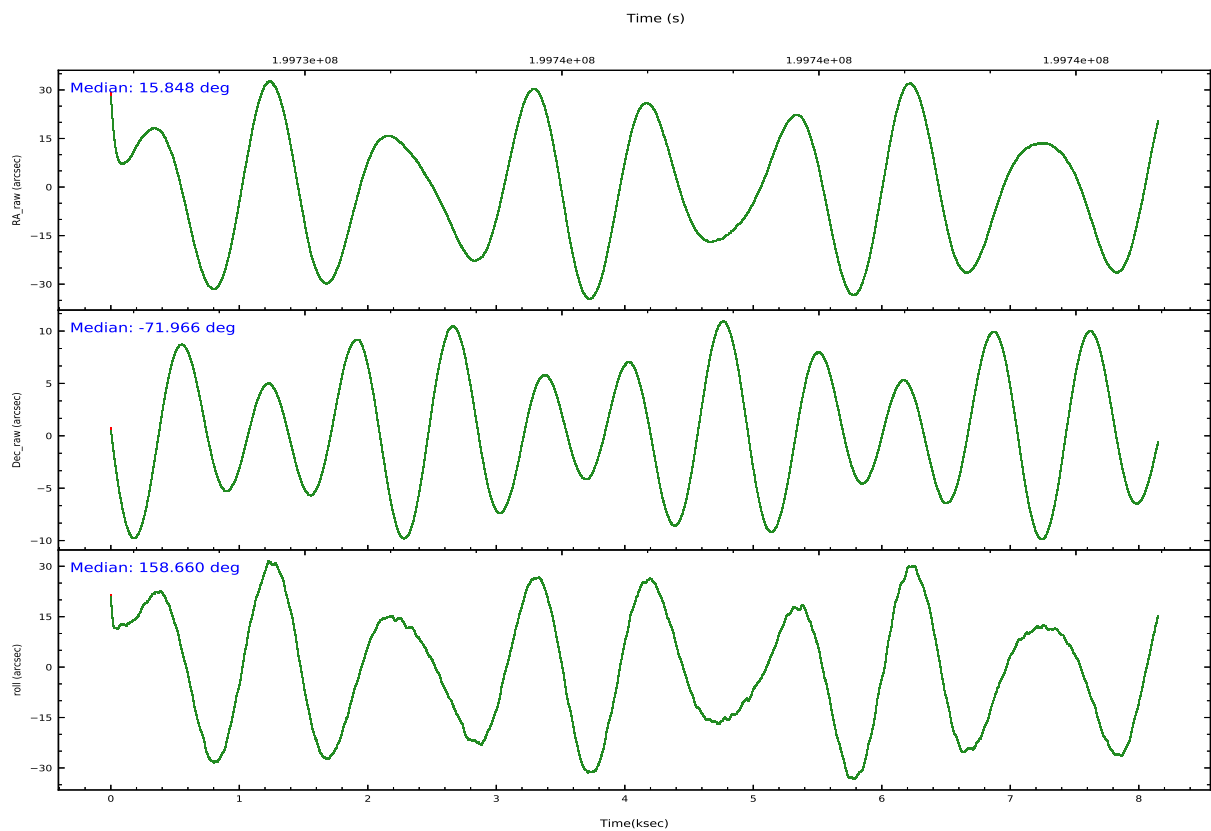
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 41627 | 43317 | 50077 | 73561 | 47918 | 44124 | grade 0 events | 1759 | 1700 | 1784 | 24843 | 2199 | 2356 |
| rejected events | 37177 | 38680 | 45621 | 43870 | 42781 | 22723 | | 4% | 3% | 3% | 33% | 4% | 5% |
| rejected % | 89% | 89% | 91% | 59% | 89% | 51% | grade 1 events | 10 | 10 | 33 | 235 | 29 | 41 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 1094 | 1019 | 1049 | 2780 | 1049 | 4743 |
| | | | | | | | | 2% | 2% | 2% | 3% | 2% | 10% |
| | | | | | | | grade 3 events | 504 | 564 | 483 | 925 | 561 | 2152 |
| | | | | | | | | 1% | 1% | 0% | 1% | 1% | 4% |
| | | | | | | | grade 4 events | 472 | 563 | 480 | 943 | 529 | 2141 |
| | | | | | | | | 1% | 1% | 0% | 1% | 1% | 4% |
| | | | | | | | grade 5 events | 1365 | 1503 | 1340 | 1607 | 1664 | 4823 |
| | | | | | | | | 3% | 3% | 2% | 2% | 3% | 10% |
| | | | | | | | grade 6 events | 747 | 964 | 786 | 888 | 926 | 10598 |
| | | | | | | | | 1% | 2% | 1% | 1% | 1% | 24% |
| | | | | | | | grade 7 events | 35676 | 36994 | 44122 | 41340 | 40961 | 17270 |
| | | | | | | | | 85% | 85% | 88% | 56% | 85% | 39% |

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 | 15.935189 | 15.855585603869 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -71.961351 | -71.96373133787 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 158.542186 | 158.65952332503 | [s] Primary exposure time | 0.000000 | 3.2 |
| [s] Window start time (MET) | 197164864.184000 | 197164864.184000 | | | |
| [s] Window stop time (MET) | 199670464.184000 | 199670464.184000 | | | |
| [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) | 199732639.184000 | 199731474.80488 | | | |
| Observation start date | 2004-04-30T17:16:15 | 2004-04-30T16:57:54 | | | |
| [s] Observation end time (MET) | 199740639.184000 | 199740773.60529 | | | |
| Observation end date | 2004-04-30T19:29:35 | 2004-04-30T19:32:53 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



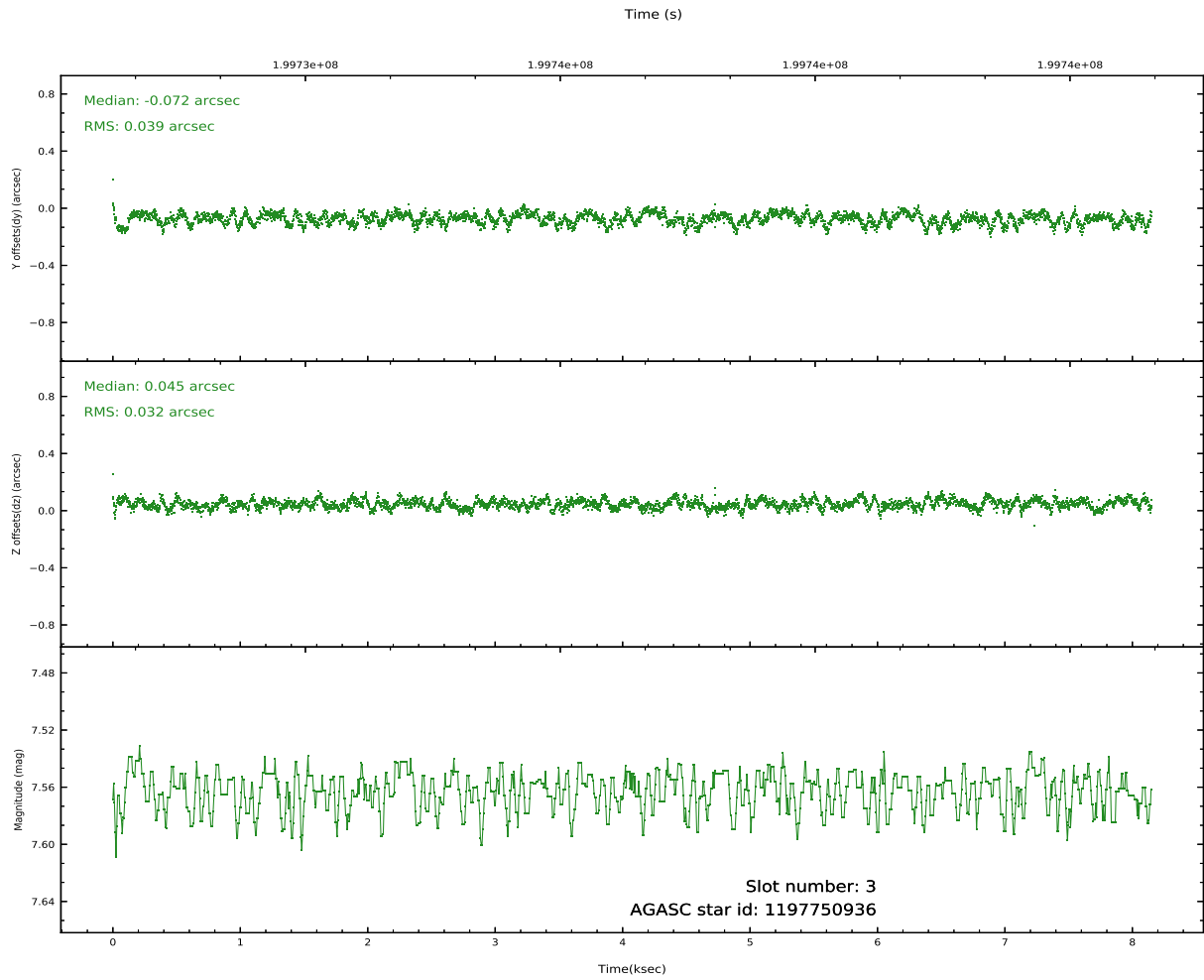
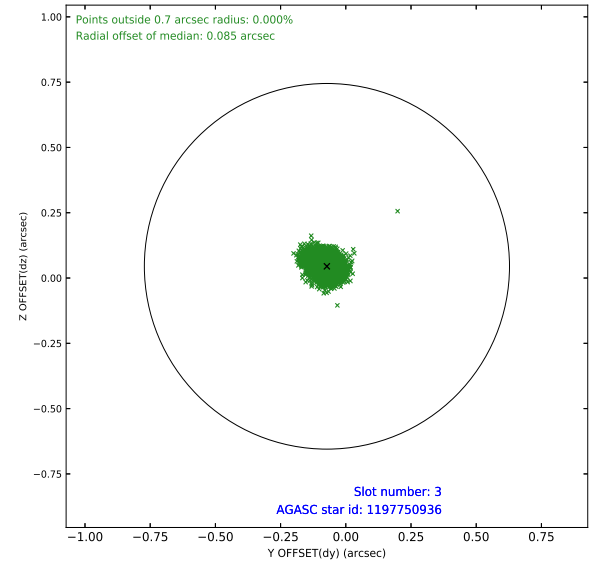
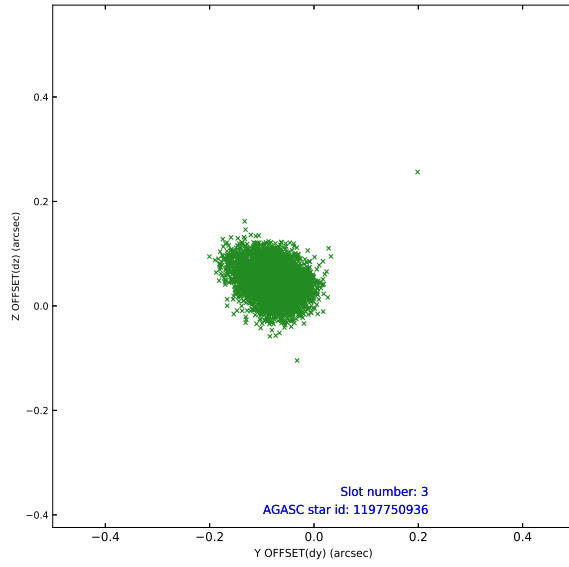


Slot Statistics

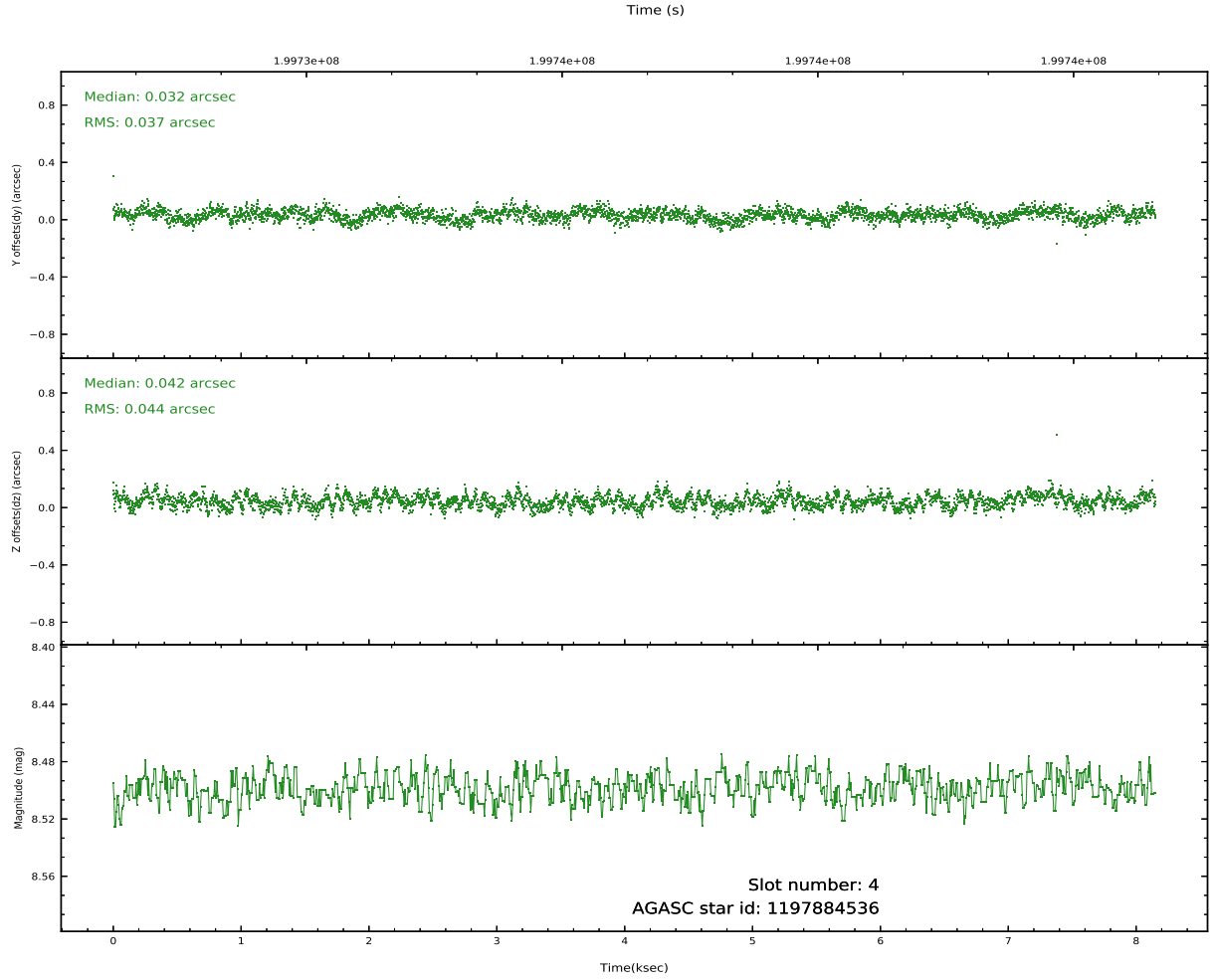
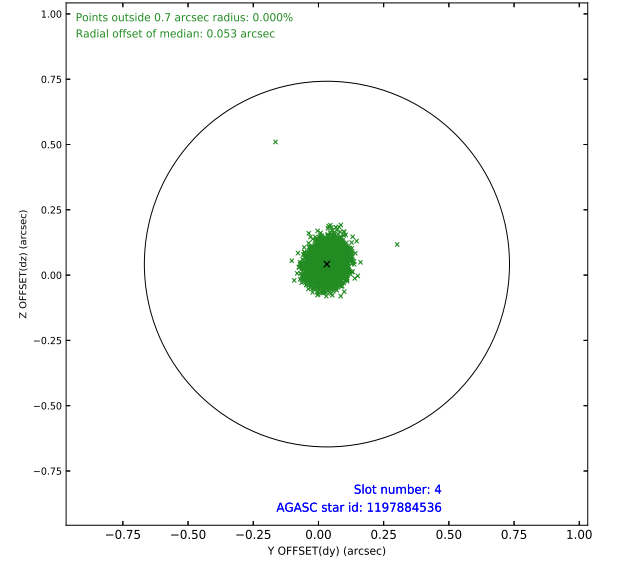
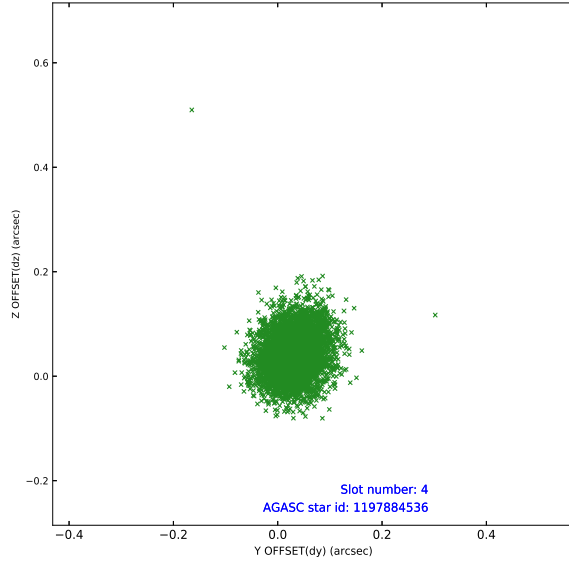
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|------------|-------|-------|----------|--------|--------|-------|-------|-----------|------------|----------|-------|
| 0 | FID | | ACIS-I-1 | 7.24 | 1989 | 1.000 | 0.018 | 0.025 | 0.007 | 0.012 | 0.000000 | 0.000000 | 934.68 | -832 |
| 1 | FID | | ACIS-I-5 | 7.23 | 1989 | 1.000 | -0.202 | 0.031 | 0.006 | 0.010 | 0.000000 | 0.000000 | -1813.29 | 1064 |
| 2 | FID | | ACIS-I-6 | 7.25 | 1989 | 1.000 | 0.092 | 0.015 | 0.008 | 0.013 | 0.000000 | 0.000000 | 399.52 | 1709 |
| 3 | GUIDE | used | 1197750936 | 7.56 | 3977 | 1.000 | -0.072 | 0.045 | 0.053 | 0.085 | 15.387940 | -71.549550 | 1122.07 | -1148 |
| 4 | GUIDE | used | 1197884536 | 8.50 | 3976 | 1.000 | 0.032 | 0.042 | 0.062 | 0.097 | 17.160729 | -71.835289 | -1118.13 | -913 |
| 5 | GUIDE | used | 1197884712 | 8.31 | 3971 | 1.000 | 0.014 | -0.027 | 0.061 | 0.095 | 16.087398 | -72.252690 | -539.22 | 914 |
| 6 | GUIDE | used | 1197885328 | 7.24 | 3976 | 1.000 | 0.019 | 0.043 | 0.051 | 0.079 | 16.283090 | -71.733943 | -66.10 | -904 |
| 7 | GUIDE | used | 1198190968 | 10.03 | 3975 | 1.000 | 0.006 | -0.106 | 0.115 | 0.186 | 15.749622 | -72.545972 | -583.50 | 2031 |

2.4 Star Slots

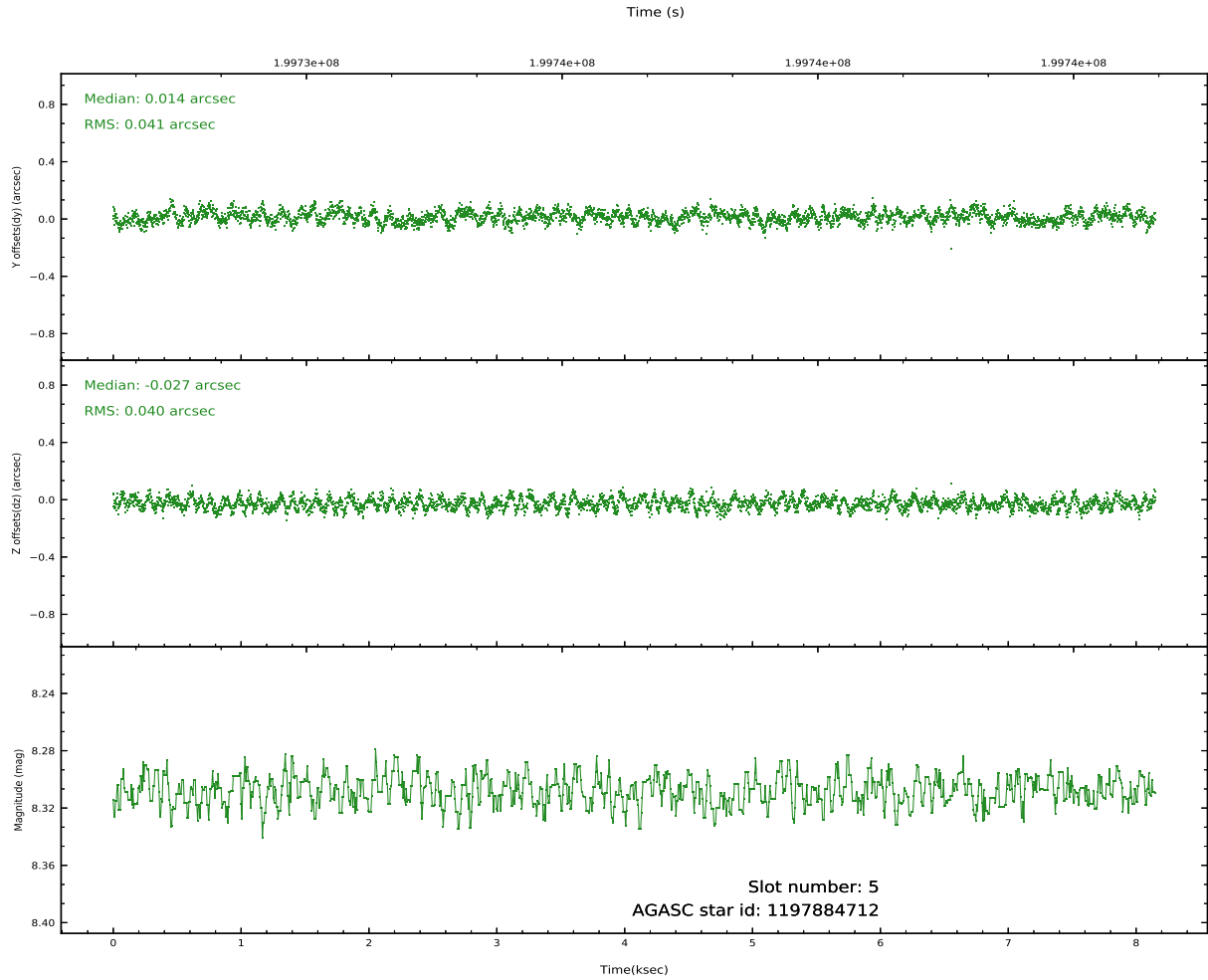
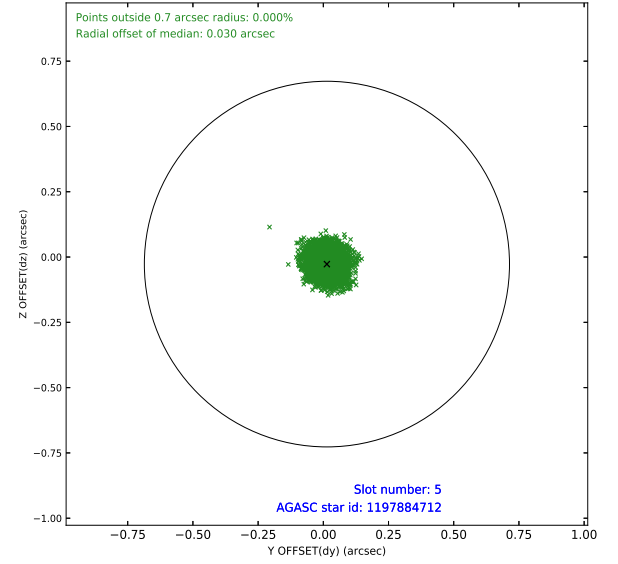
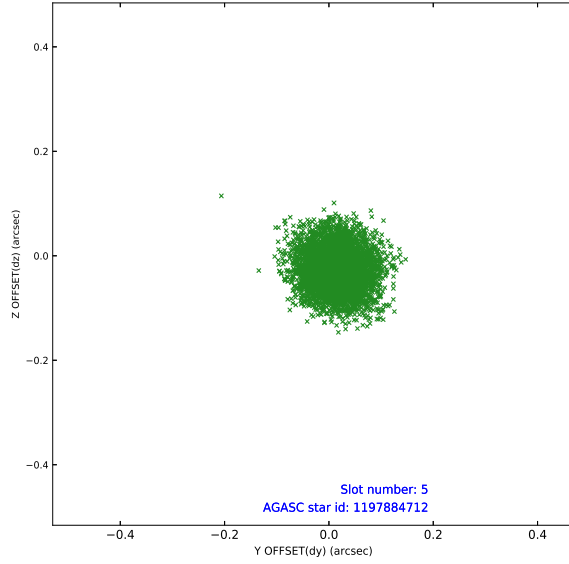
2.4.1 Slot 3



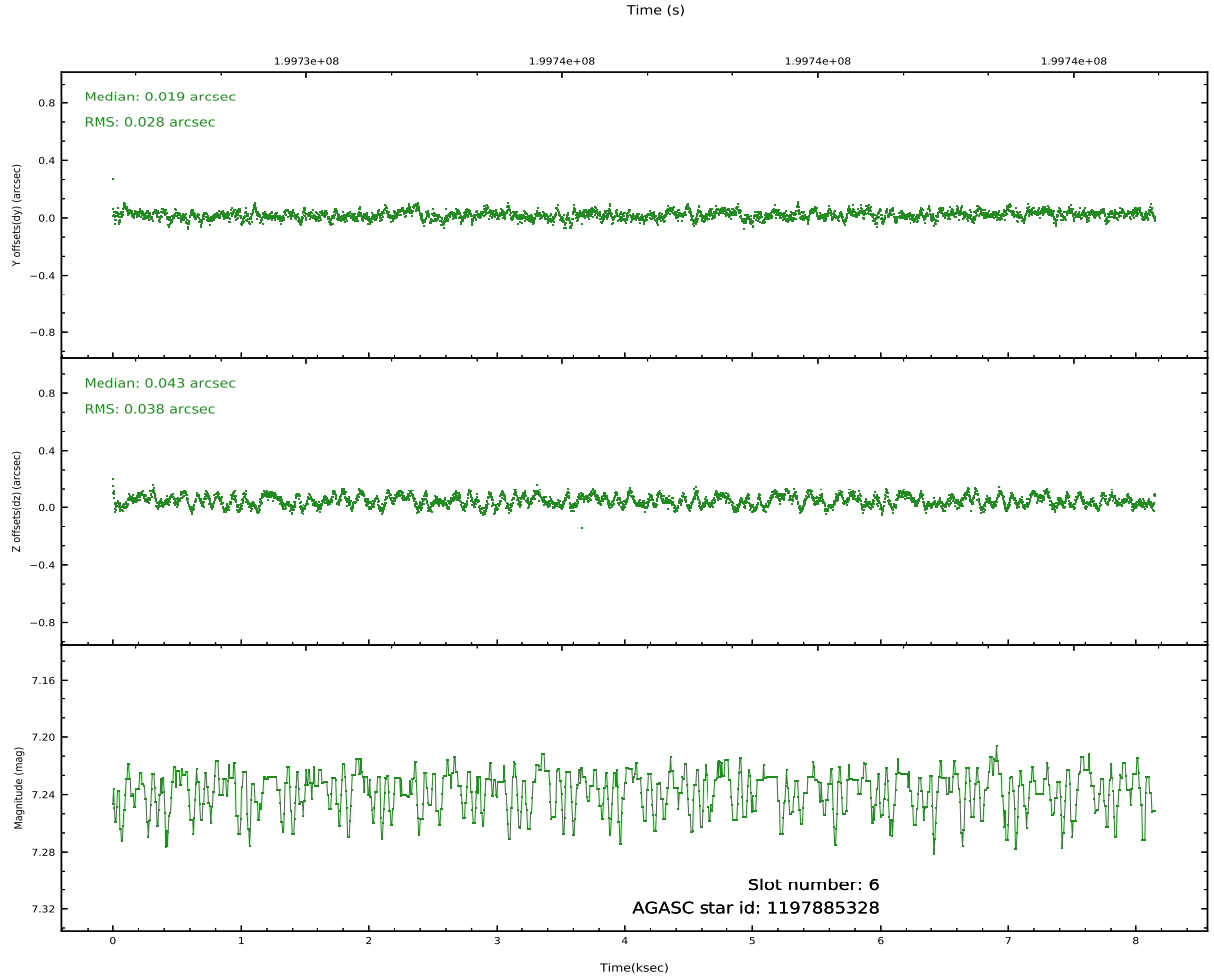
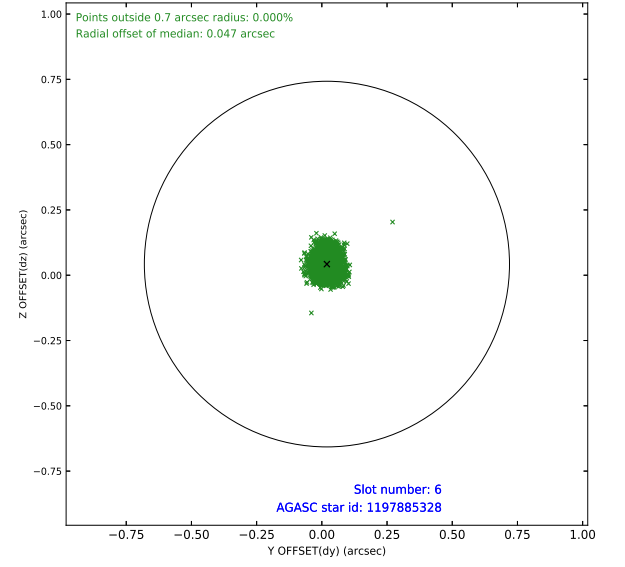
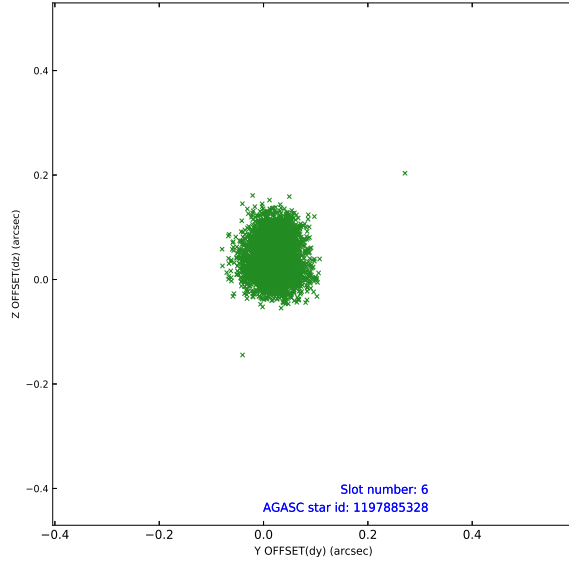
2.4.2 Slot 4



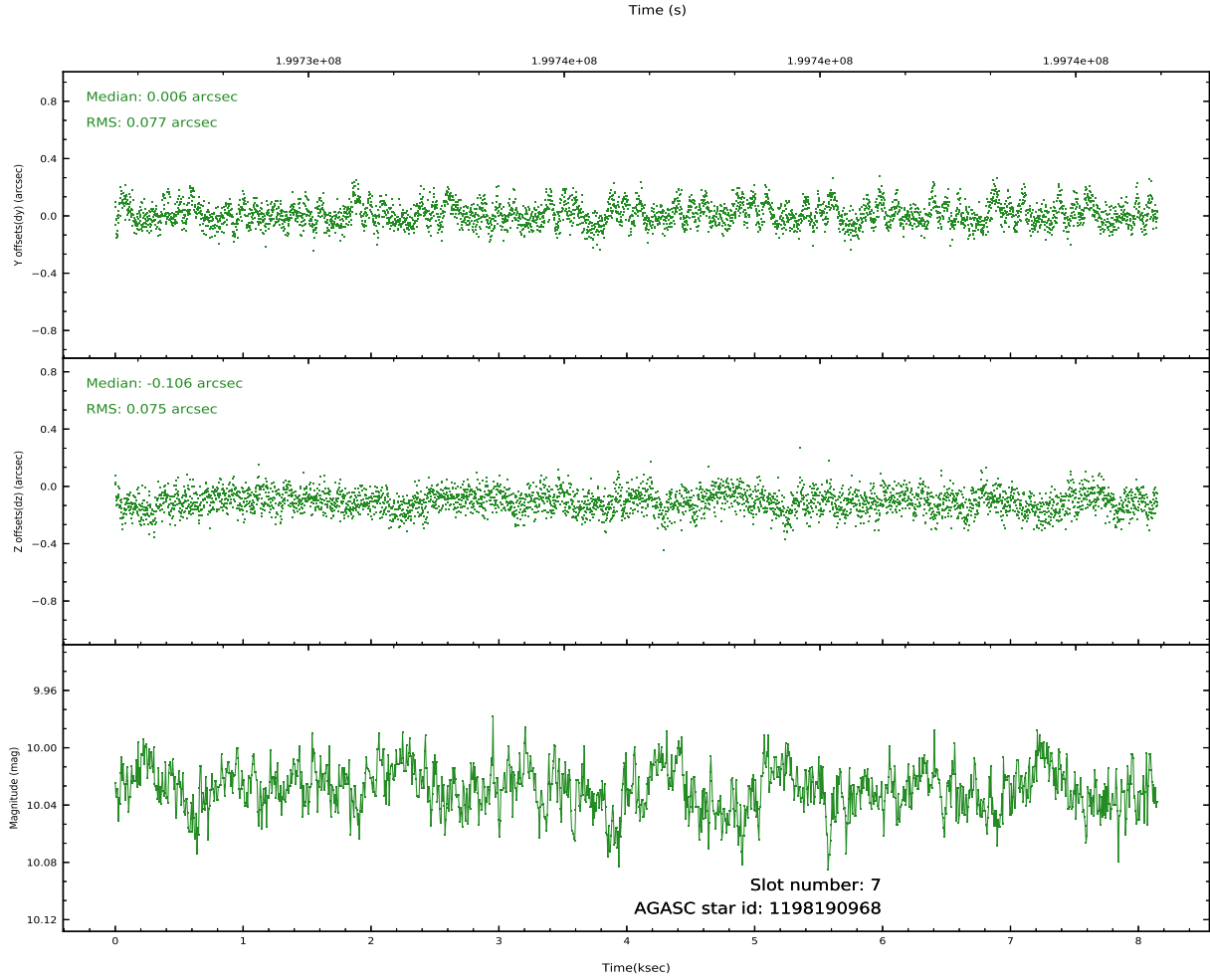
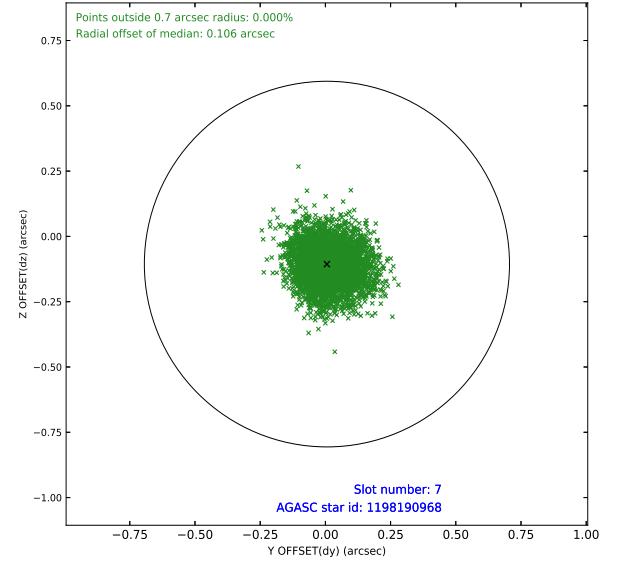
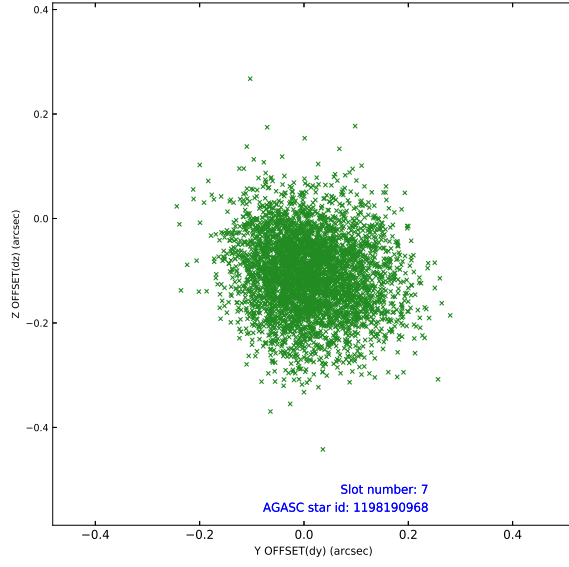
2.4.3 Slot 5



2.4.4 Slot 6

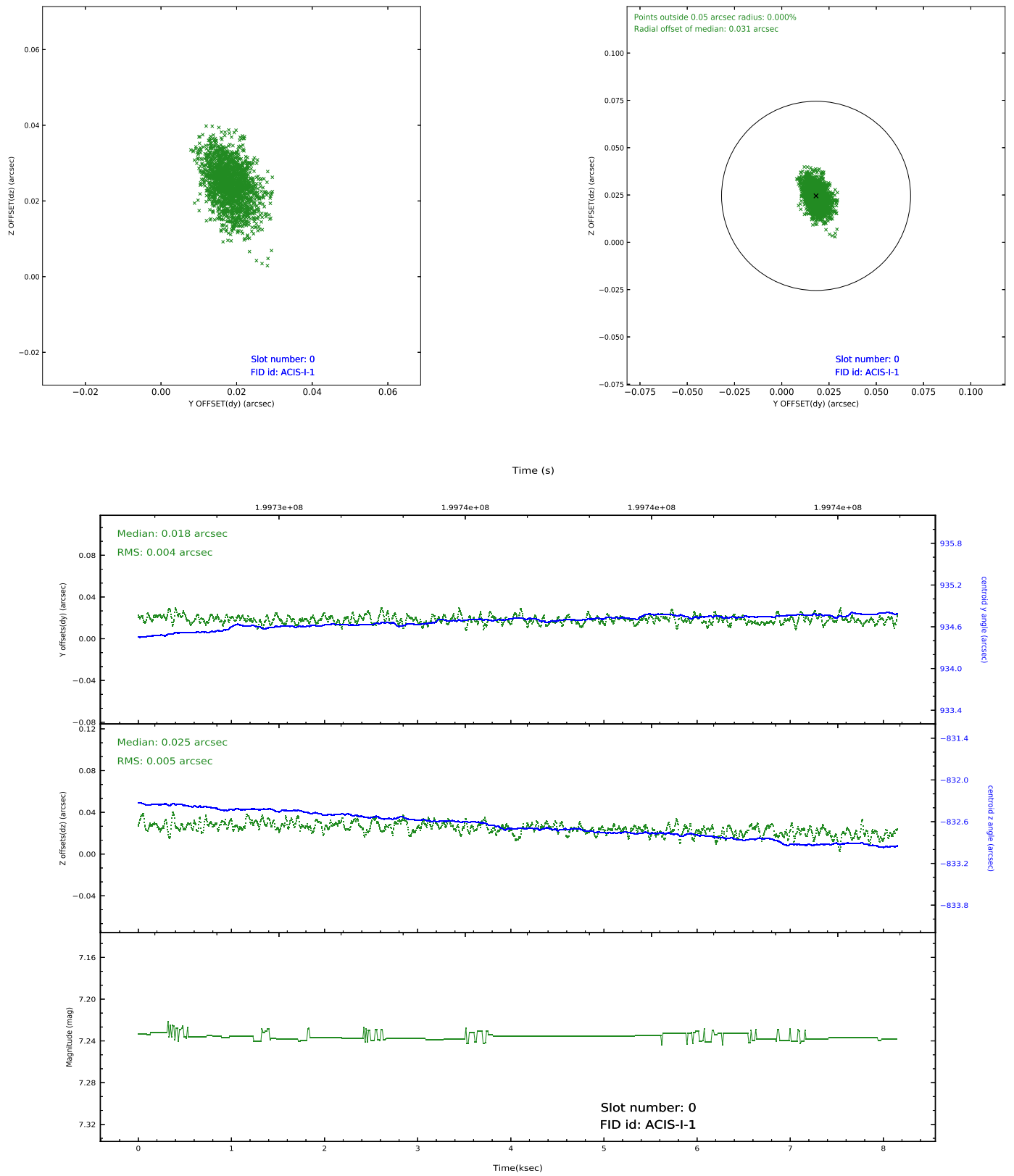


2.4.5 Slot 7

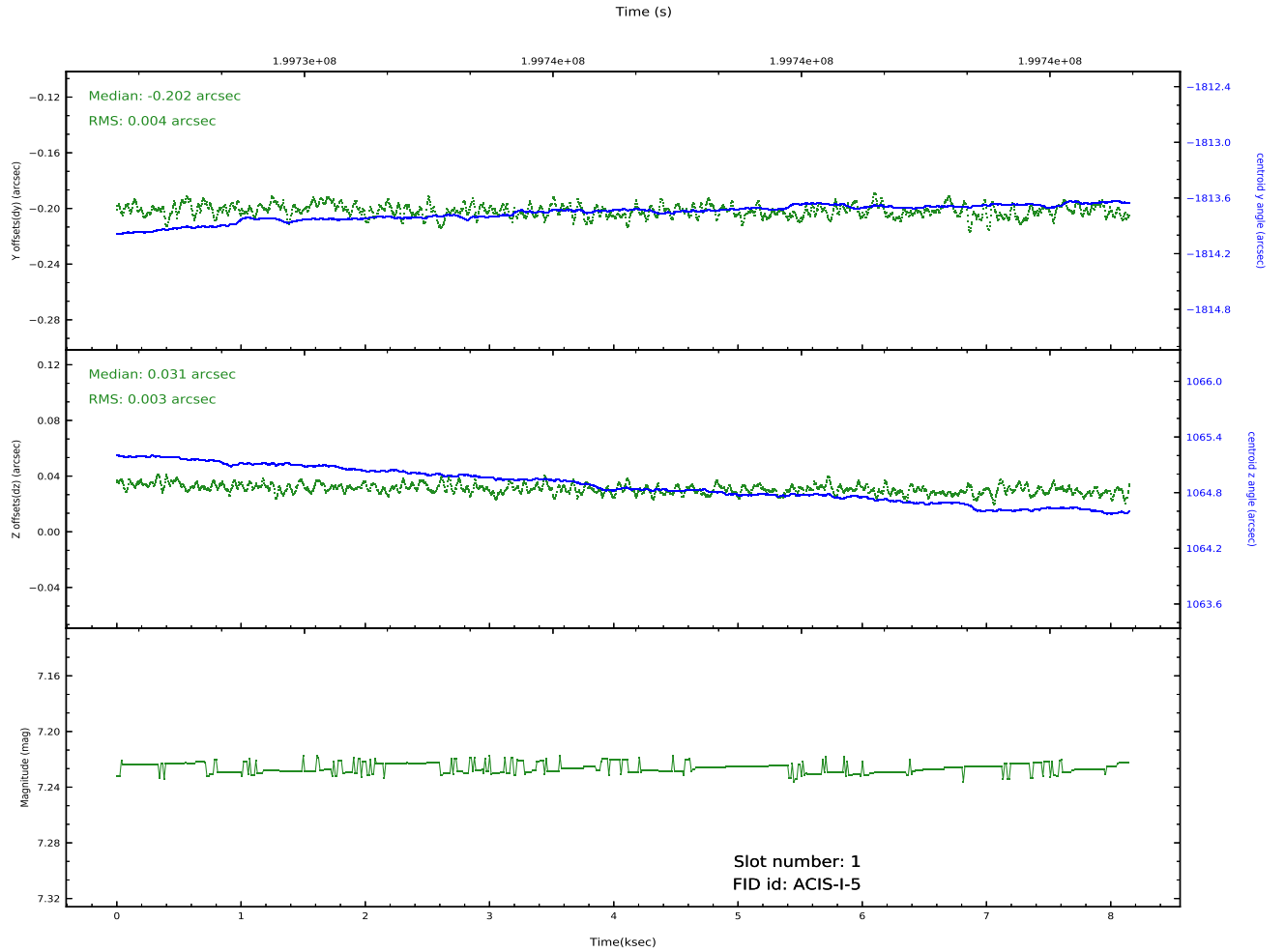
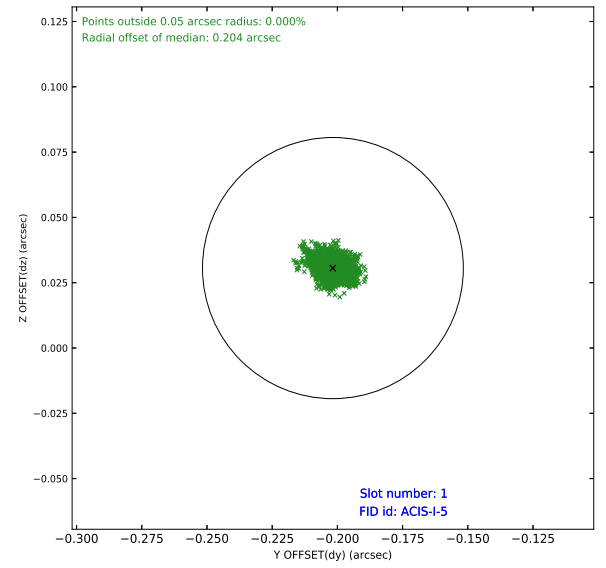
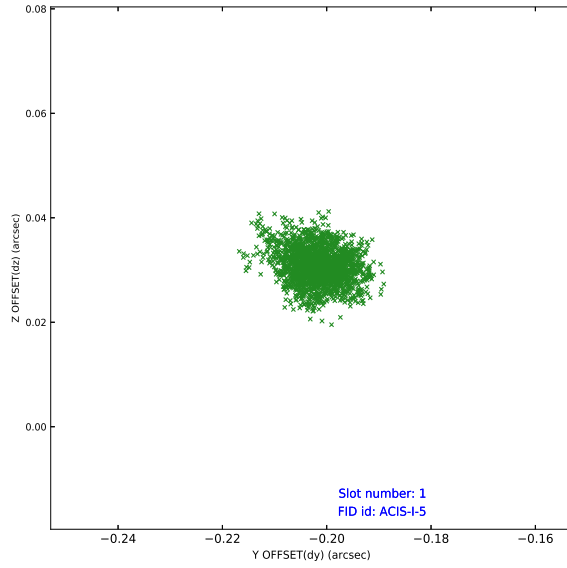


2.5 FID Slots

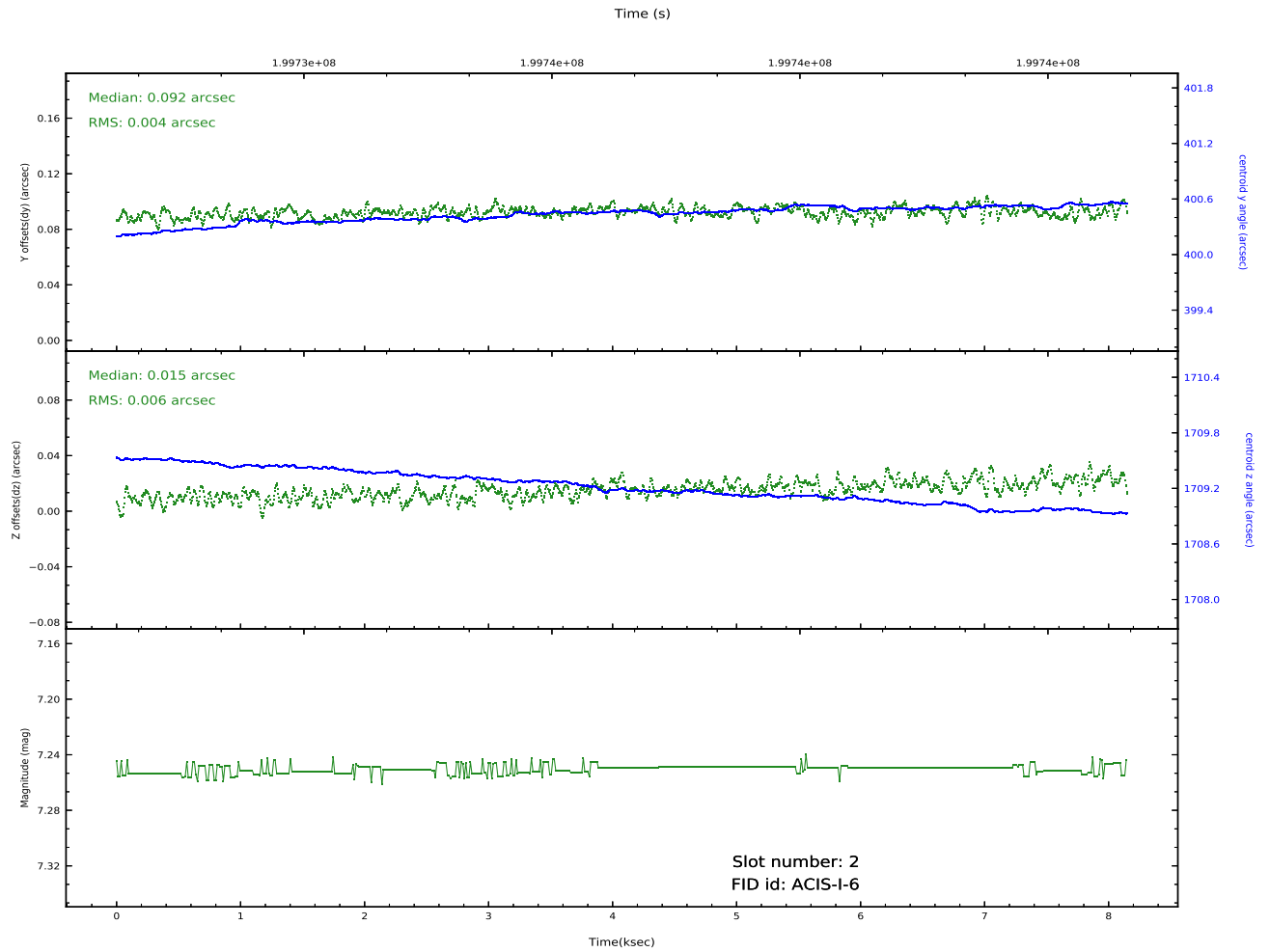
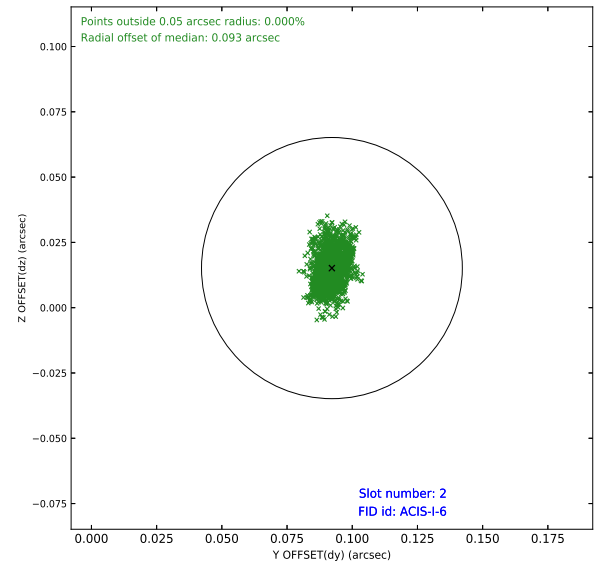
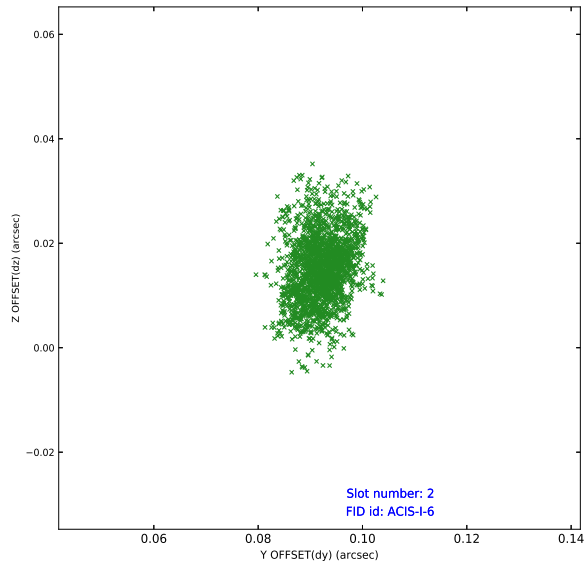
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2020.09.25 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.143 |

A.2 Comments

Window constraint was not met.