

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6279 - L2 Version 4
Chandra X-Ray Center

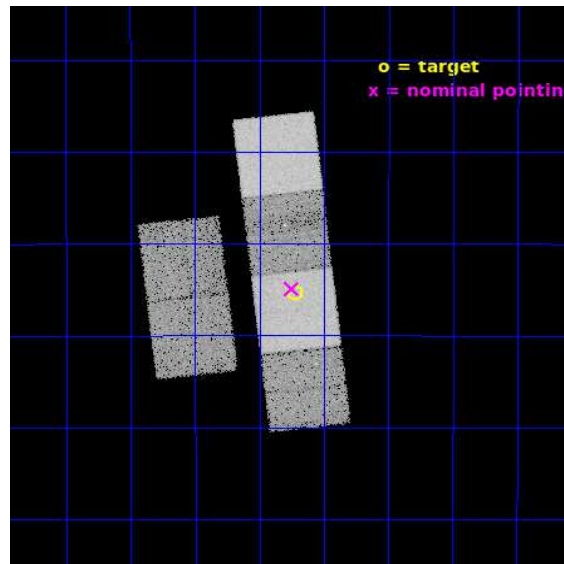
L2 Processing Date : Oct 8 2020

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1 Front

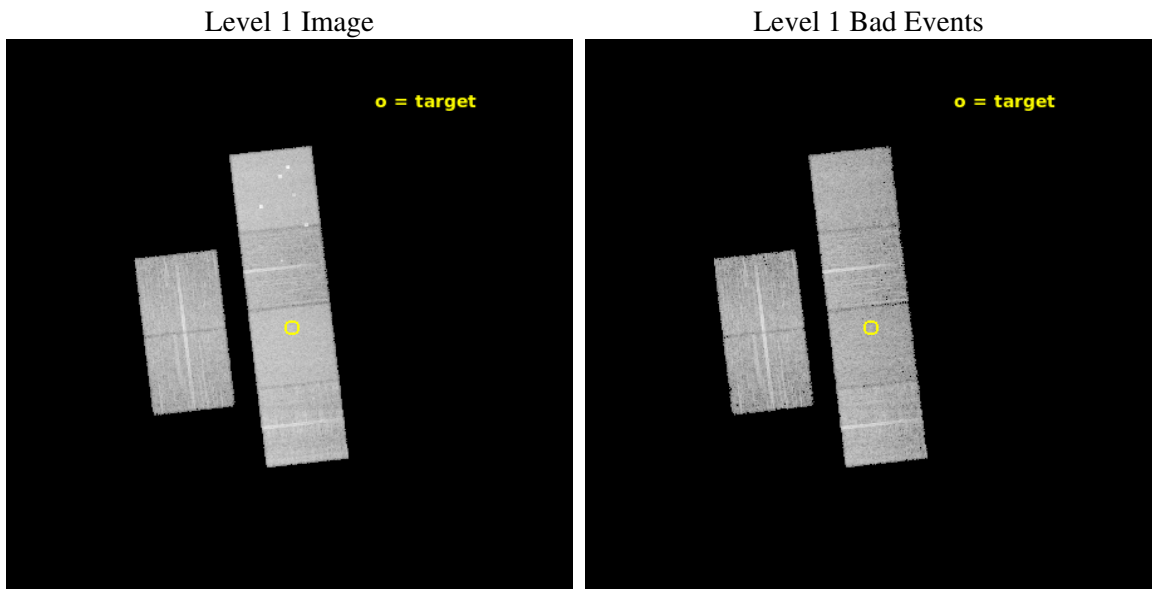
| | | |
|----------|--|---|
| seq_num | 400398 | Sequence number |
| obs_id | 6279 | Observation id |
| title | Cooling curves of accretion-heated neutron stars | Proposal title |
| observer | Rudy Wijnands | Principal investigator |
| object | KS 1731-260 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 263.55625 | Observer's specified target RA [deg] |
| dec_targ | -26.088556 | Observer's specified target Dec [deg] |
| ra_nom | 263.56217259049 | Nominal RA [deg] |
| dec_nom | -26.08167698334 | Nominal Dec [deg] |
| roll_nom | 83.460320482145 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 10508.799960852 | Sum of GTIs [s] |
| livetime | 10375.731208108 | Livetime [s] |
| ontime2 | 10508.799960852 | Sum of GTIs [s] |
| ontime3 | 10508.799960852 | Sum of GTIs [s] |
| ontime5 | 10508.799960852 | Sum of GTIs [s] |
| ontime6 | 10508.799960852 | Sum of GTIs [s] |
| ontime7 | 10508.799960852 | Sum of GTIs [s] |
| ontime8 | 10505.558970571 | Sum of GTIs [s] |
| l2events | 163962 | Number of level 2 events |



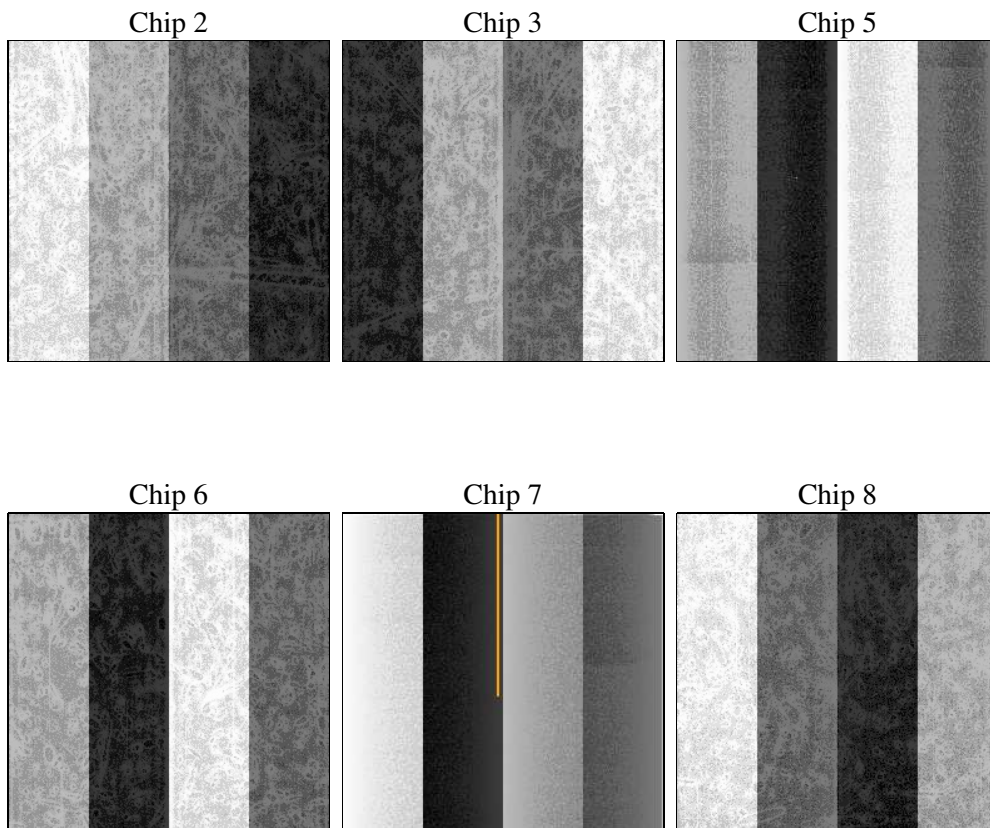
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 10753.811000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 10508.799960852 | Sum of GTIs [s] |
| caldbver | 4.9.2 | | ontime2 | 10508.799960852 | Sum of GTIs [s] |
| date | 2020-10-08T07:37:18 | Date and time of file creation | ontime3 | 10508.799960852 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 10508.799960852 | Sum of GTIs [s] |
| | | | ontime6 | 10508.799960852 | Sum of GTIs [s] |
| | | | ontime7 | 10508.799960852 | Sum of GTIs [s] |
| | | | ontime8 | 10505.558970571 | Sum of GTIs [s] |
| | | | l1events | 576336 | Number of level 1 events |

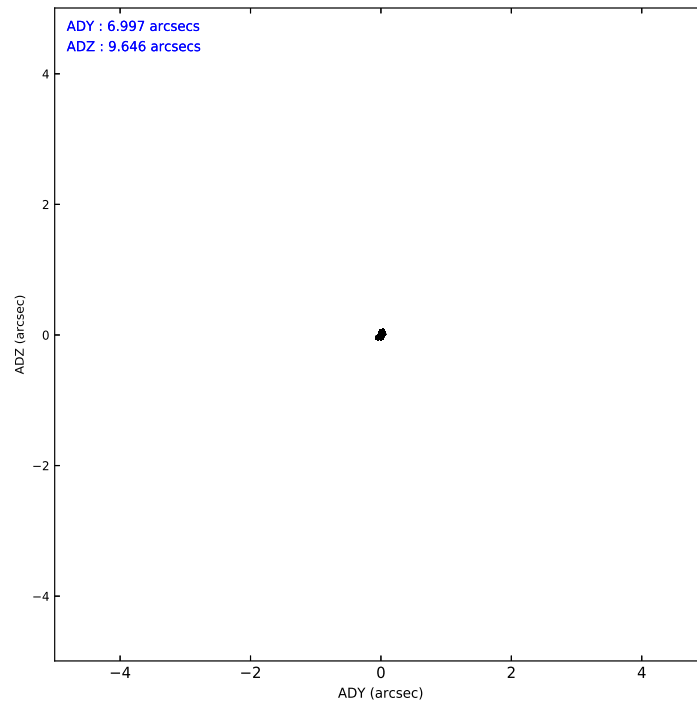
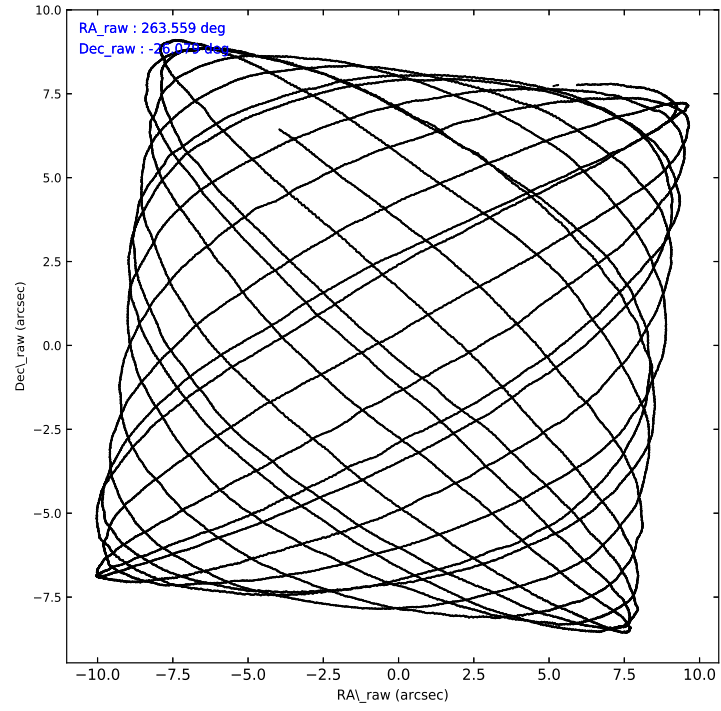
2.1.4 Events

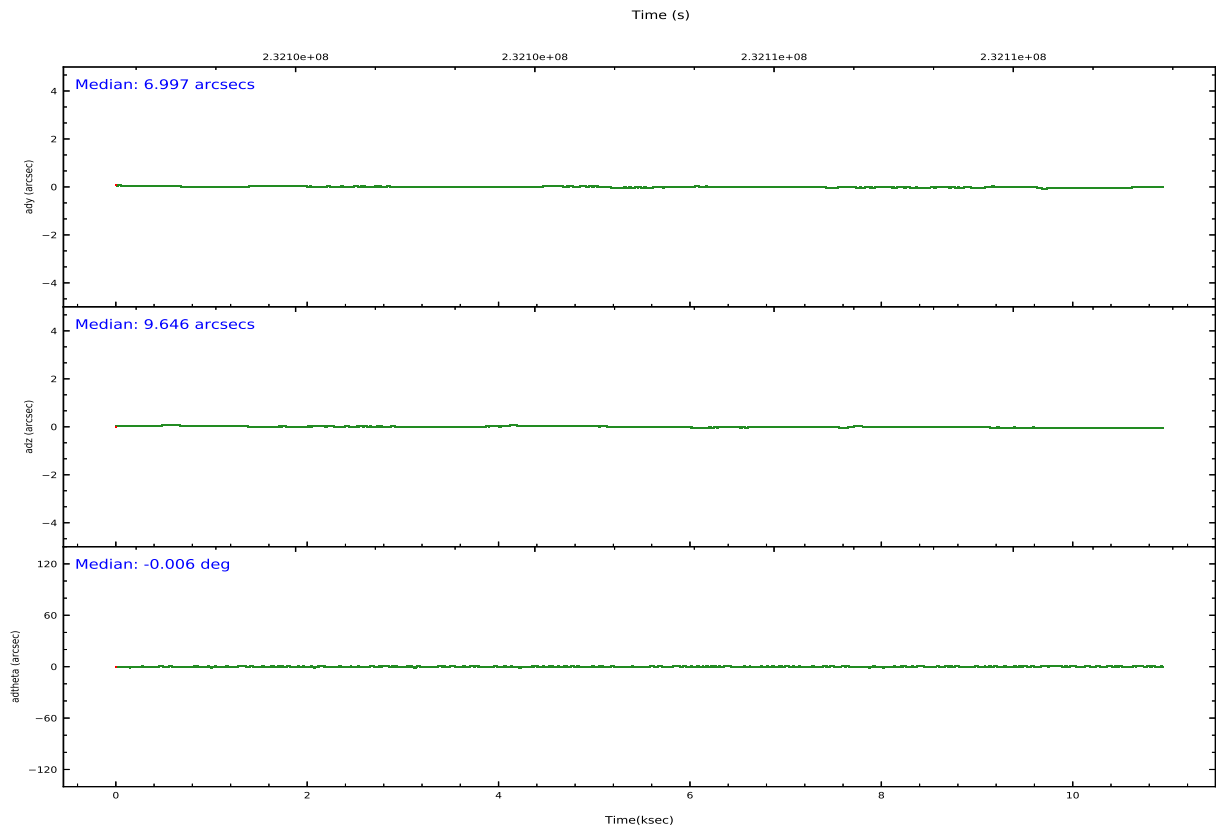
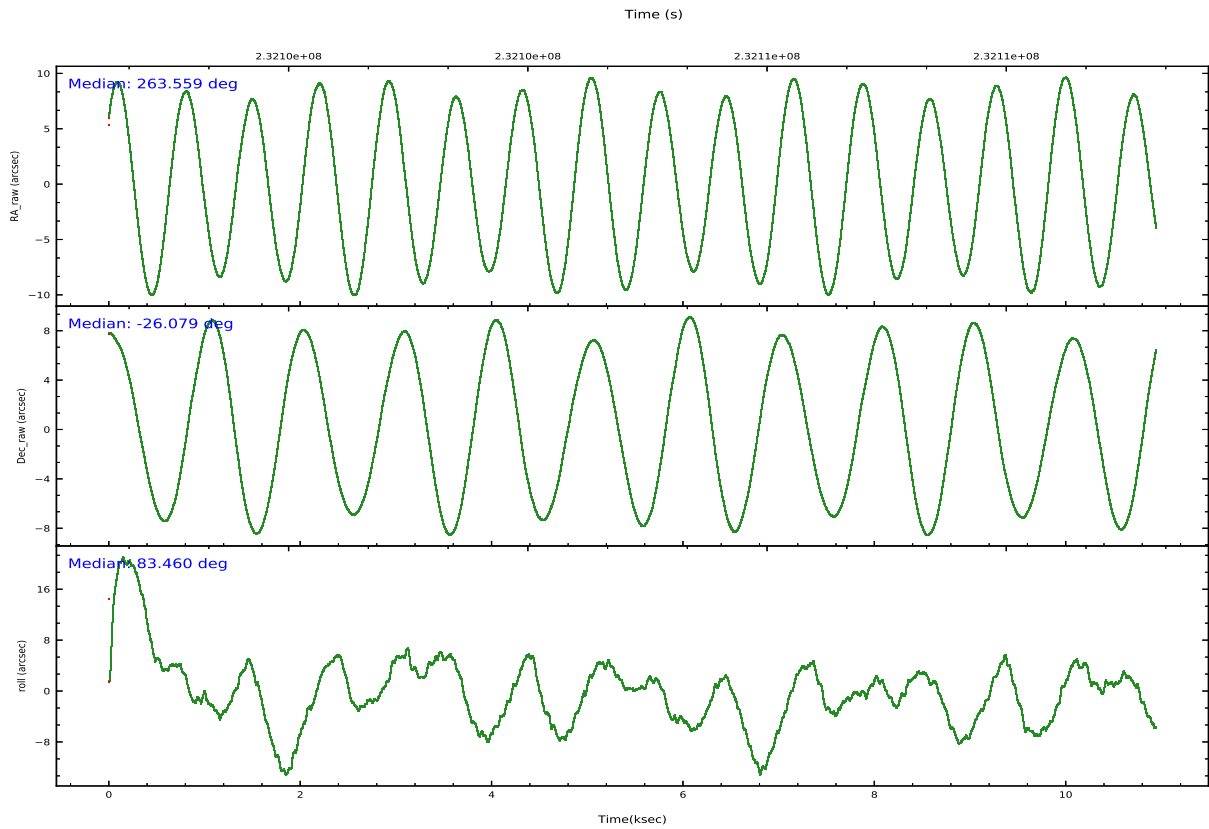
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|-------|--------|--------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 80063 | 77345 | 122314 | 80054 | 110979 | 105581 | grade 0 events | 7665 | 7843 | 8097 | 8182 | 5058 | 12179 |
| rejected events | 65768 | 62773 | 59983 | 64452 | 57902 | 75908 | | 9% | 10% | 6% | 10% | 4% | 11% |
| rejected % | 82% | 81% | 49% | 80% | 52% | 71% | grade 1 events | 60 | 64 | 206 | 55 | 99 | 84 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2658 | 2707 | 18055 | 3083 | 10160 | 5884 |
| | | | | | | | | 3% | 3% | 14% | 3% | 9% | 5% |
| | | | | | | | grade 3 events | 1021 | 1022 | 2532 | 1029 | 4491 | 2820 |
| | | | | | | | | 1% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 4 events | 981 | 986 | 2514 | 967 | 4399 | 2586 |
| | | | | | | | | 1% | 1% | 2% | 1% | 3% | 2% |
| | | | | | | | grade 5 events | 2851 | 3416 | 8148 | 3394 | 9264 | 4372 |
| | | | | | | | | 3% | 4% | 6% | 4% | 8% | 4% |
| | | | | | | | grade 6 events | 1976 | 2019 | 31164 | 2348 | 28988 | 6243 |
| | | | | | | | | 2% | 2% | 25% | 2% | 26% | 5% |
| | | | | | | | grade 7 events | 62851 | 59288 | 51598 | 60996 | 48520 | 71413 |
| | | | | | | | | 78% | 76% | 42% | 76% | 43% | 67% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 263.571780 | 263.56217259049 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -26.104122 | -26.08167698334 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 83.306835 | 83.46032048214499 | [s] Primary exposure time | 0.000000 | 3.2 |
| [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) | 232100812.184000 | 232100280.79338 | | | |
| Observation start date | 2005-05-10T08:25:48 | 2005-05-10T08:18:00 | | | |
| [s] Observation end time (MET) | 232111566.184000 | 232111789.4939 | | | |
| Observation end date | 2005-05-10T11:25:02 | 2005-05-10T11:29:49 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





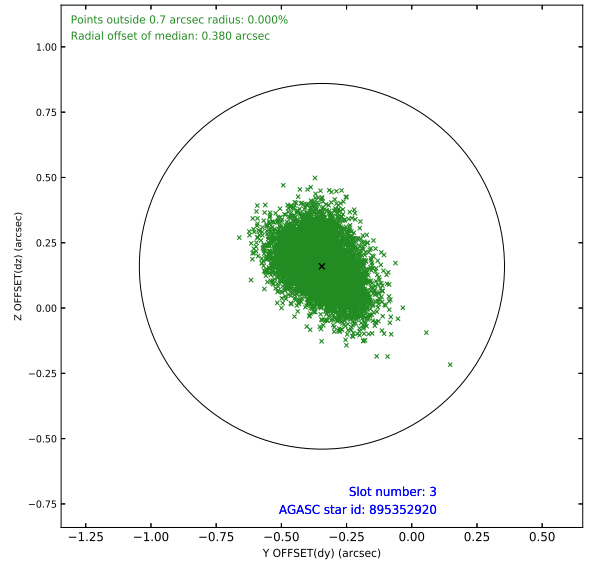
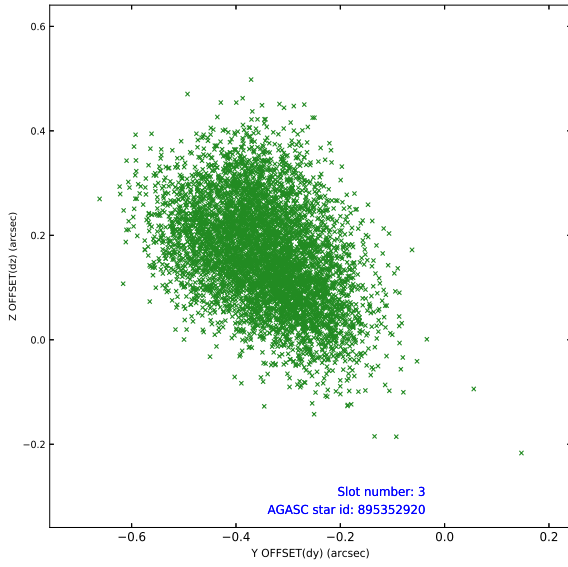
Slot Statistics

| slot | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_x |
|------|--------|------|-----------|-------|-------|----------|--------|--------|-------|-------|------------|------------|----------|--------|
| 0 | FID | | ACIS-S-2 | 7.10 | 2670 | 1.000 | -0.084 | -0.079 | 0.007 | 0.012 | 0.000000 | 0.000000 | -759.77 | -1730 |
| 1 | FID | | ACIS-S-4 | 7.21 | 2670 | 1.000 | 0.166 | 0.062 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2153.48 | 177 |
| 2 | FID | | ACIS-S-5 | 7.24 | 2670 | 1.000 | -0.113 | 0.026 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1812.10 | 171 |
| 3 | GUIDE | used | 895352920 | 9.97 | 5337 | 1.000 | -0.344 | 0.160 | 0.146 | 0.231 | 264.217496 | -25.713600 | 1635.33 | -1916 |
| 4 | GUIDE | used | 895748544 | 7.97 | 5340 | 1.000 | 0.124 | 0.077 | 0.069 | 0.110 | 263.692859 | -26.739685 | -2226.42 | -653 |
| 5 | GUIDE | used | 895881920 | 9.41 | 5335 | 1.000 | 0.196 | -0.055 | 0.092 | 0.150 | 263.913988 | -26.630022 | -1753.23 | -1314 |
| 6 | GUIDE | used | 895223200 | 10.45 | 5332 | 1.000 | 0.071 | -0.303 | 0.189 | 0.307 | 262.834279 | -26.055766 | -112.10 | 2387 |
| 7 | GUIDE | used | 895353104 | 10.18 | 5334 | 1.000 | -0.036 | 0.107 | 0.229 | 0.372 | 263.748270 | -25.444684 | 2423.62 | -291 |

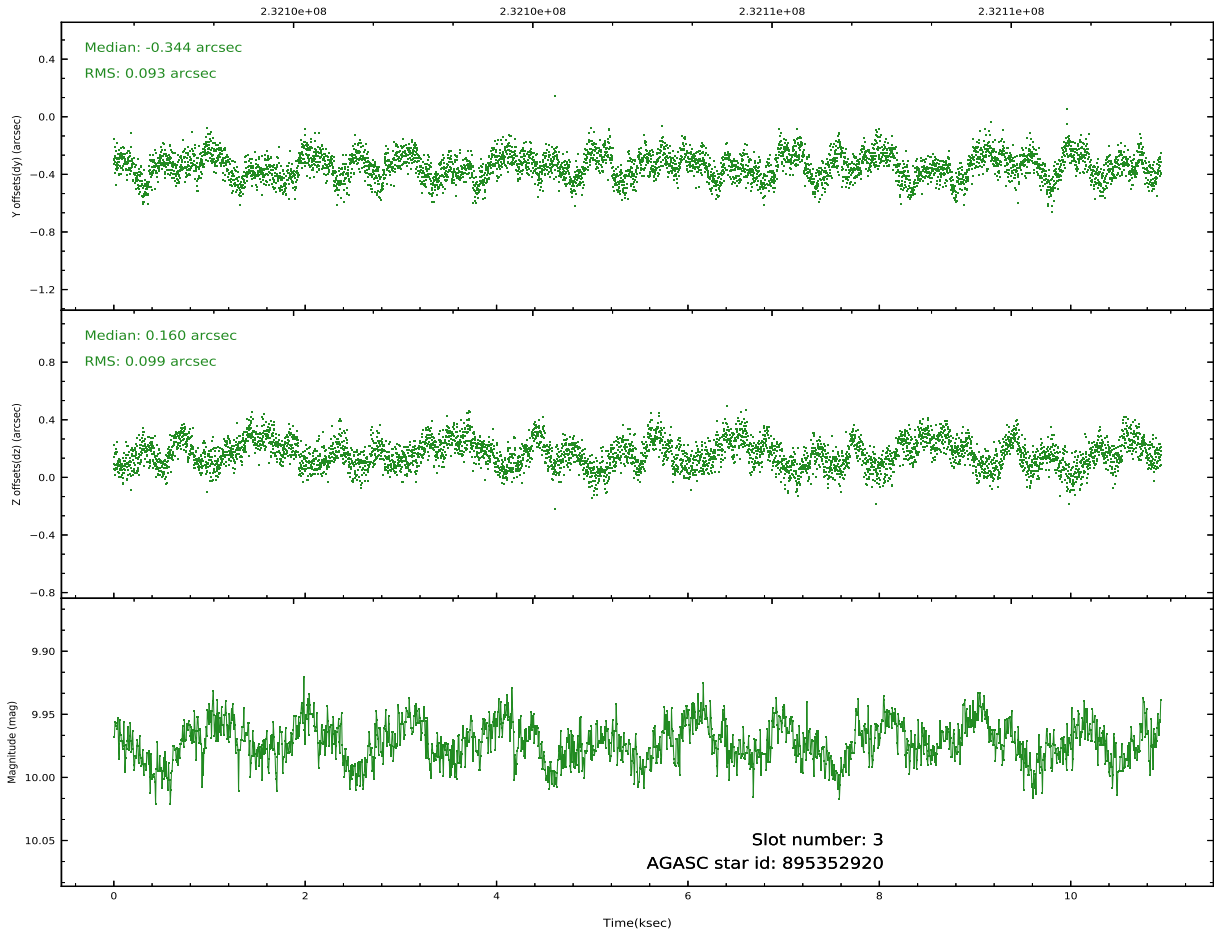
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2.4 Star Slots

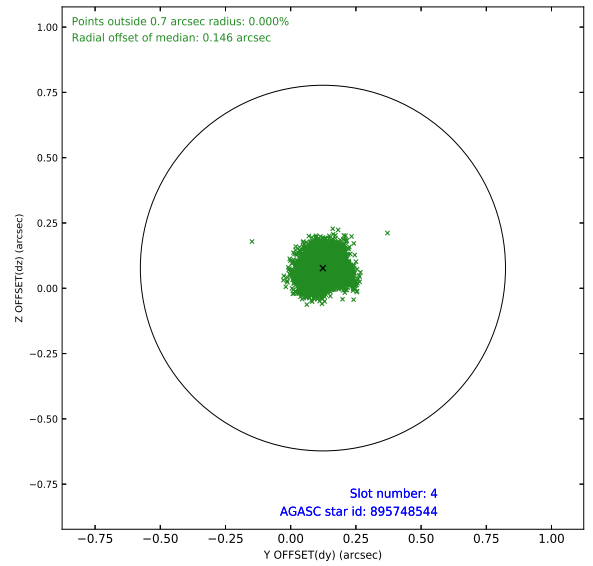
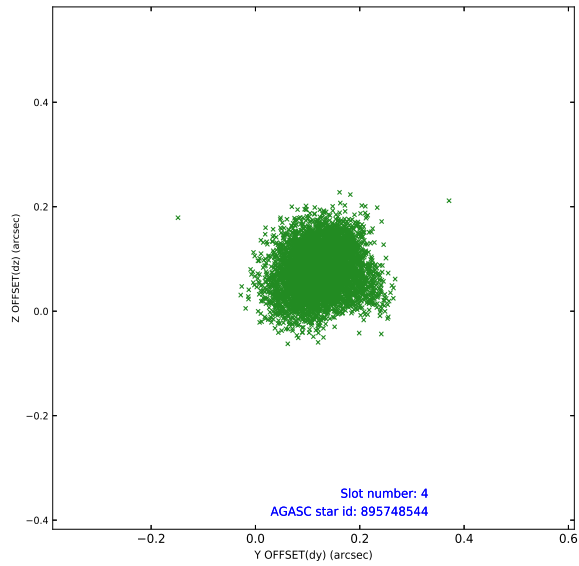
2.4.1 Slot 3



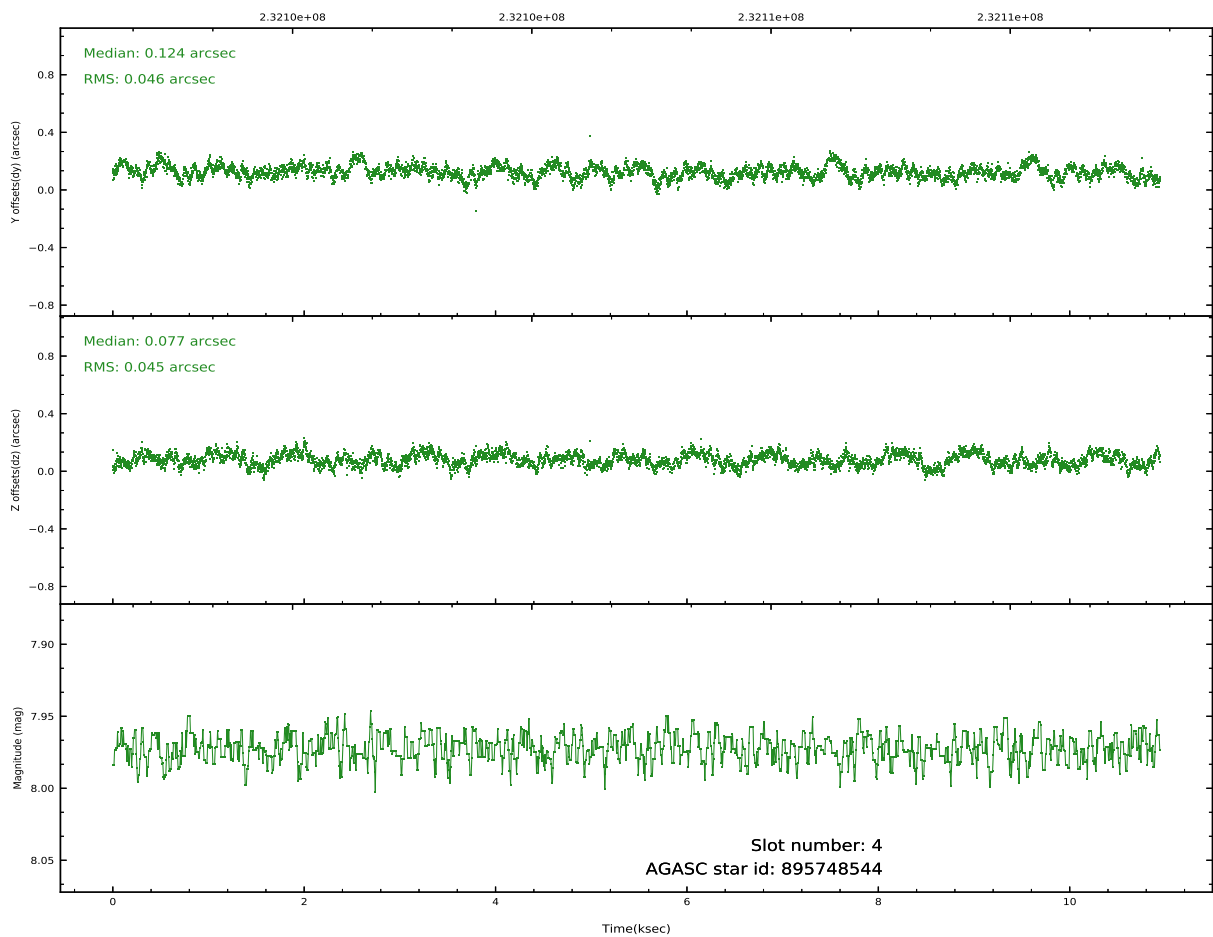
Time (s)



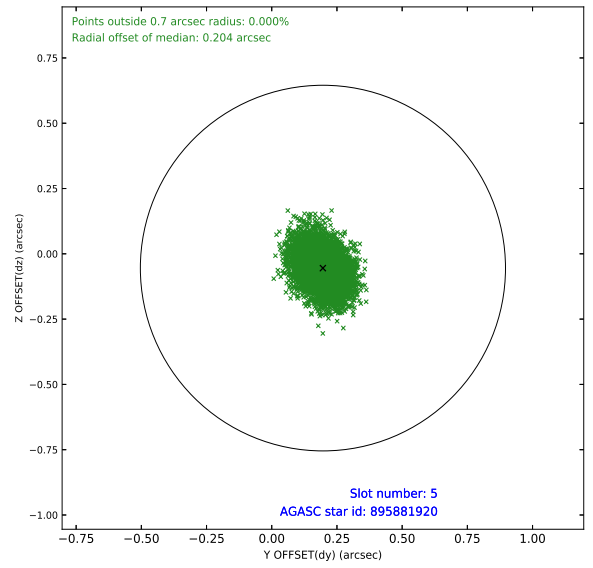
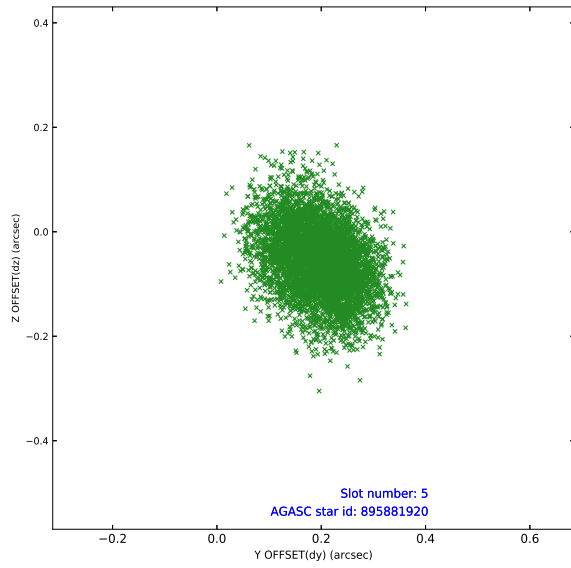
2.4.2 Slot 4



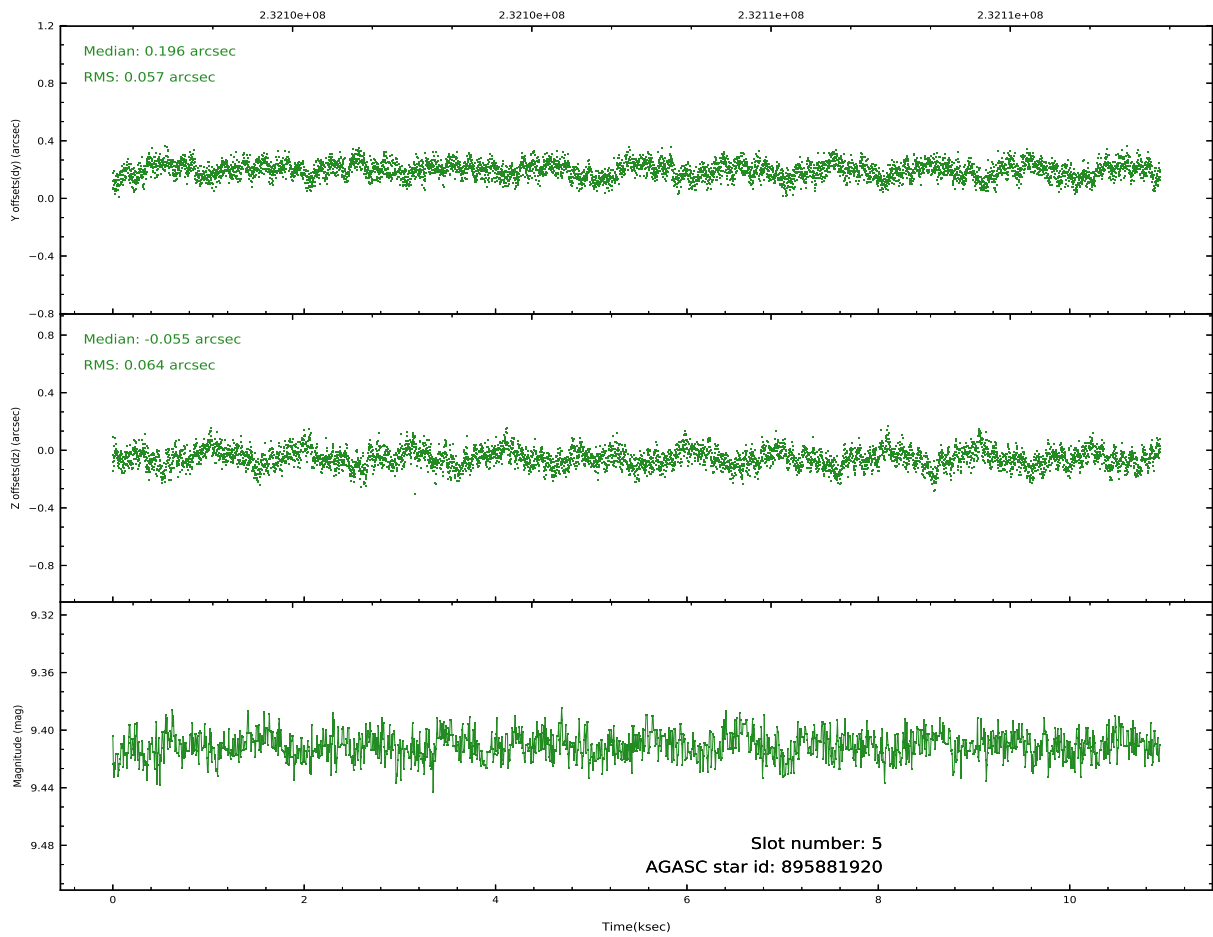
Time (s)



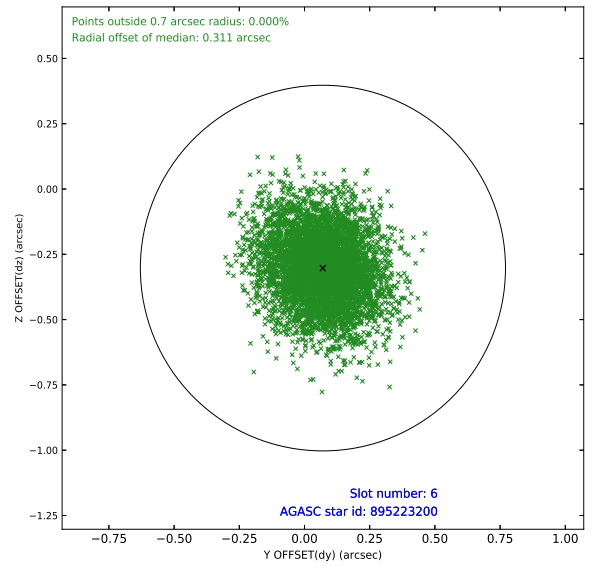
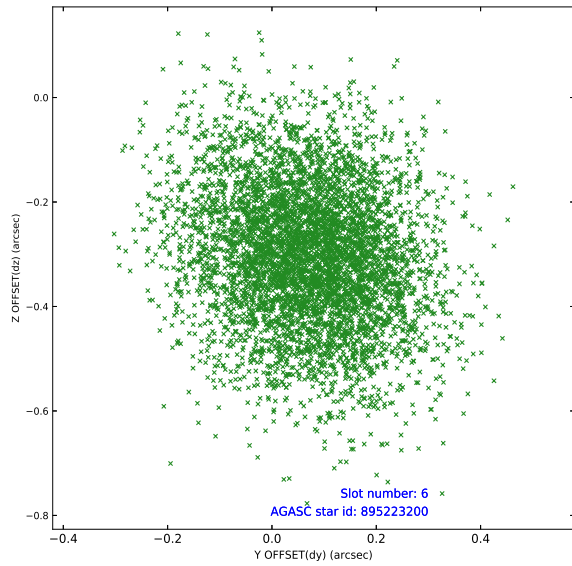
2.4.3 Slot 5



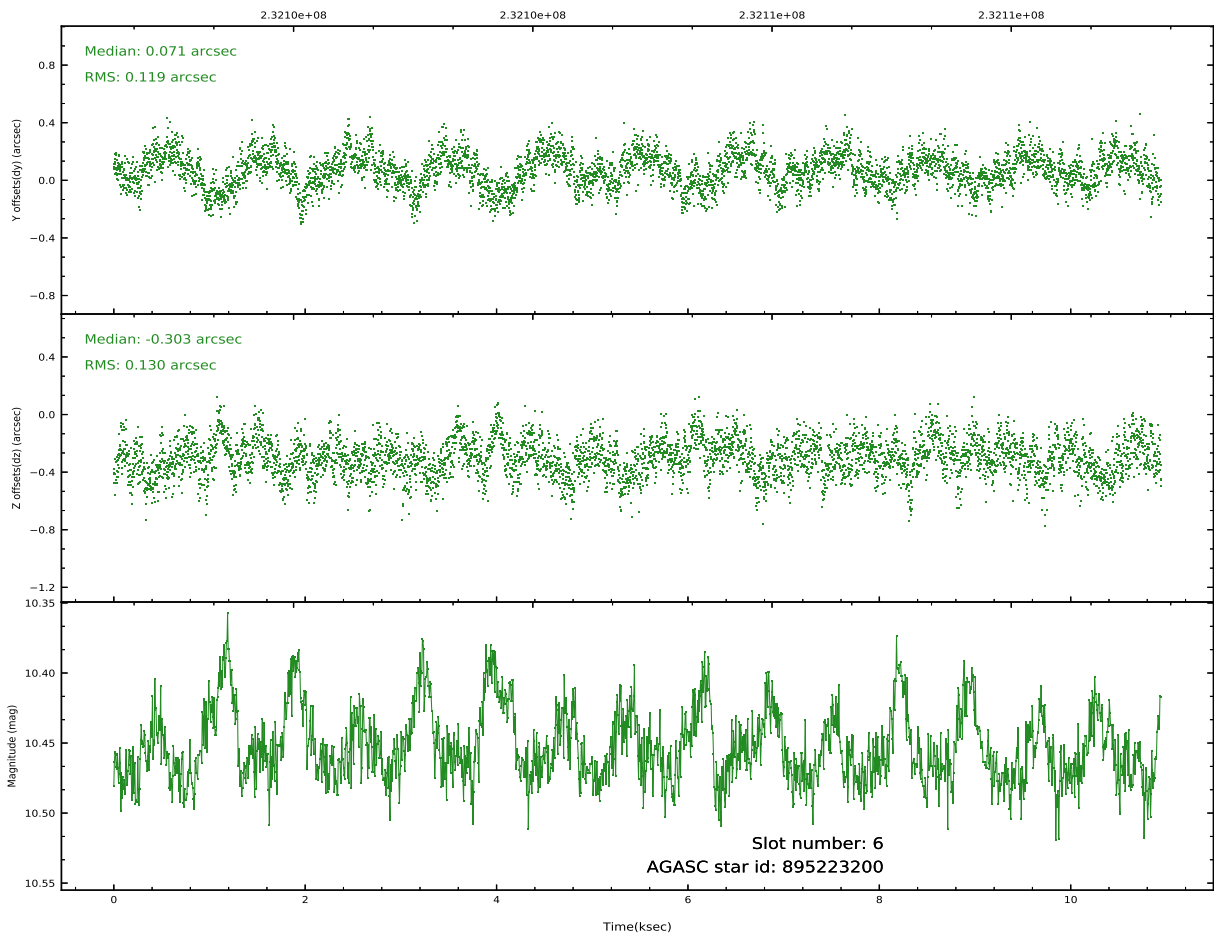
Time (s)



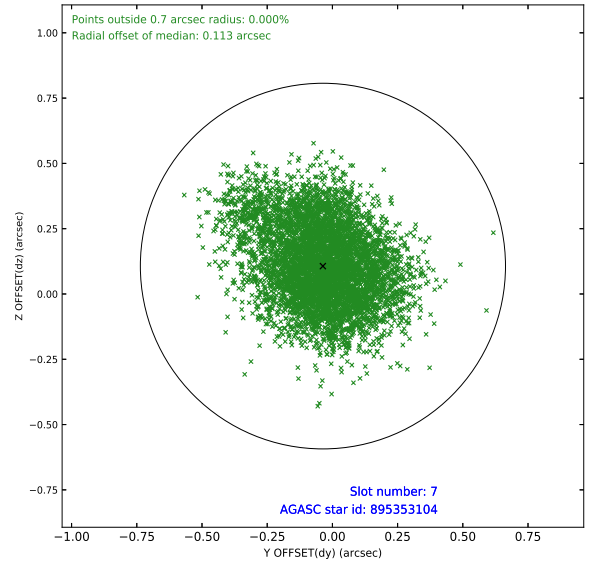
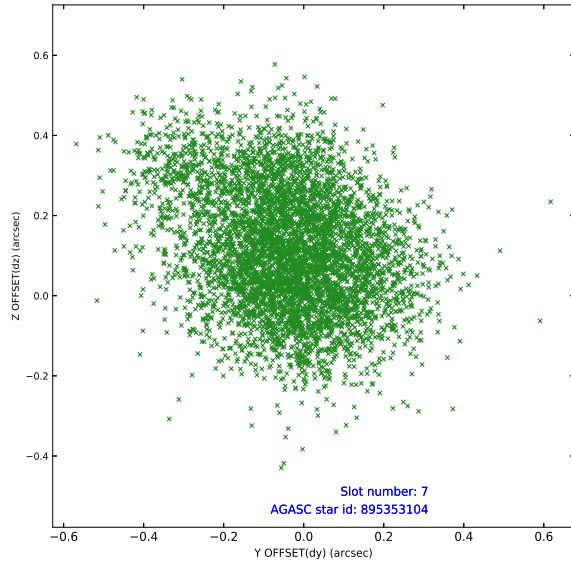
2.4.4 Slot 6



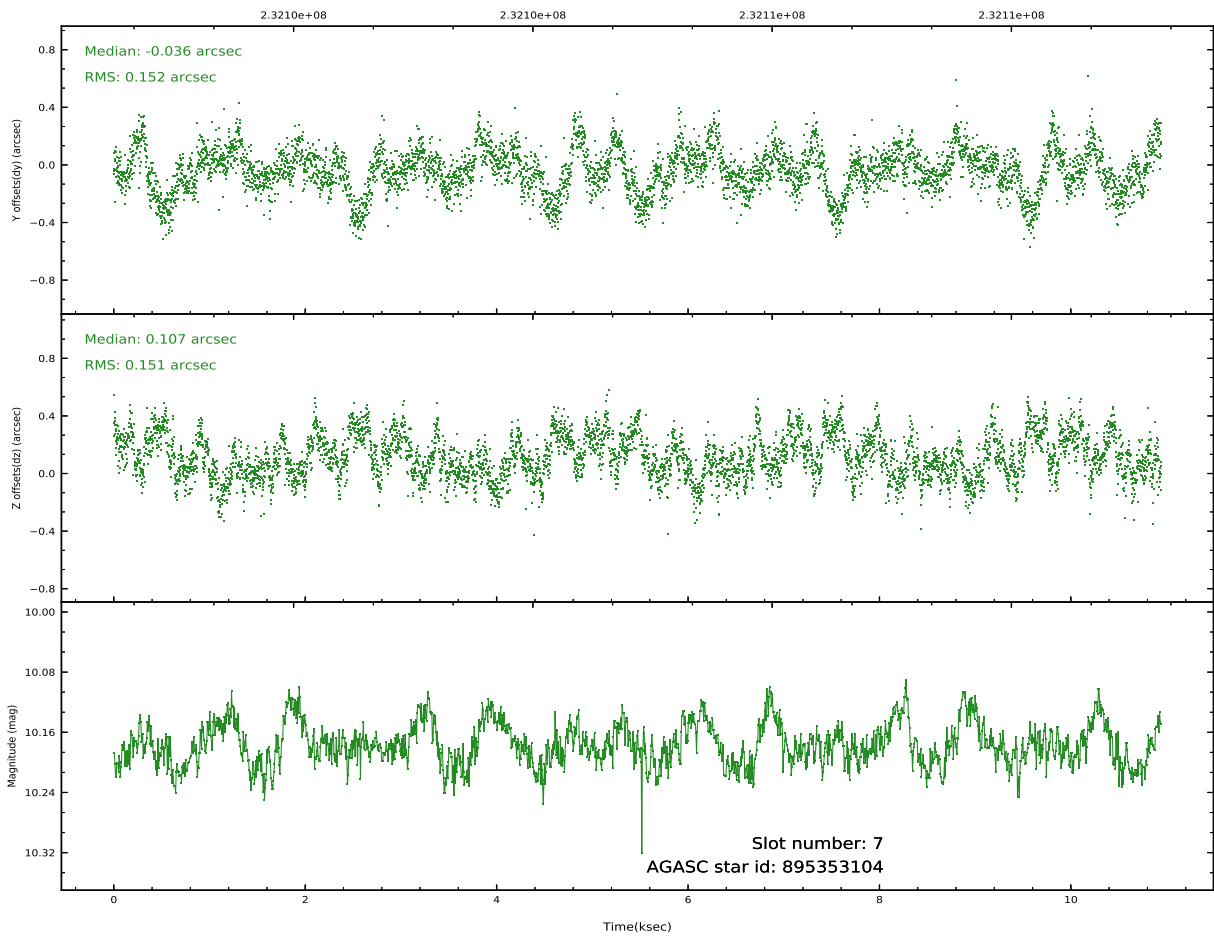
Time (s)



2.4.5 Slot 7

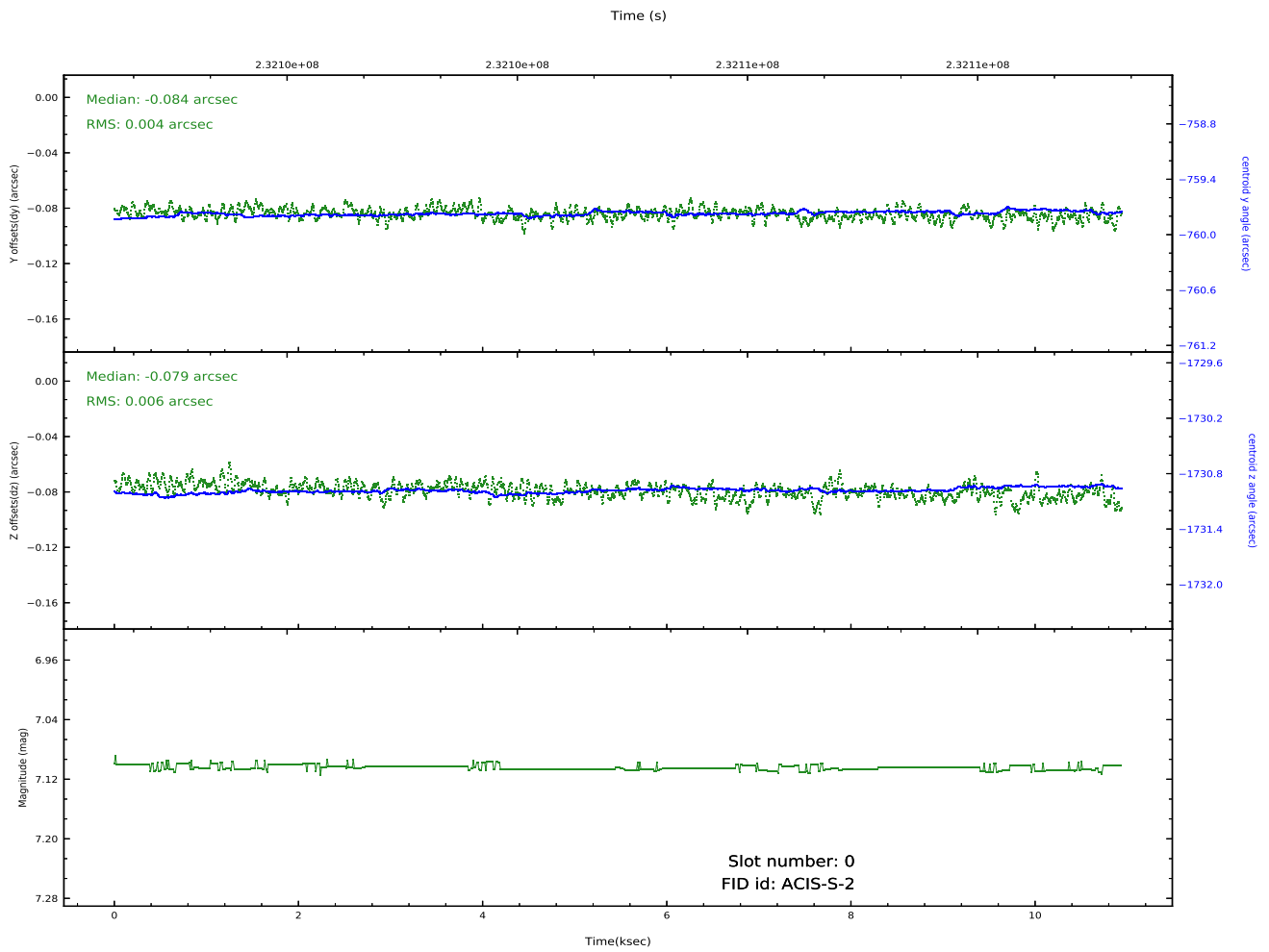
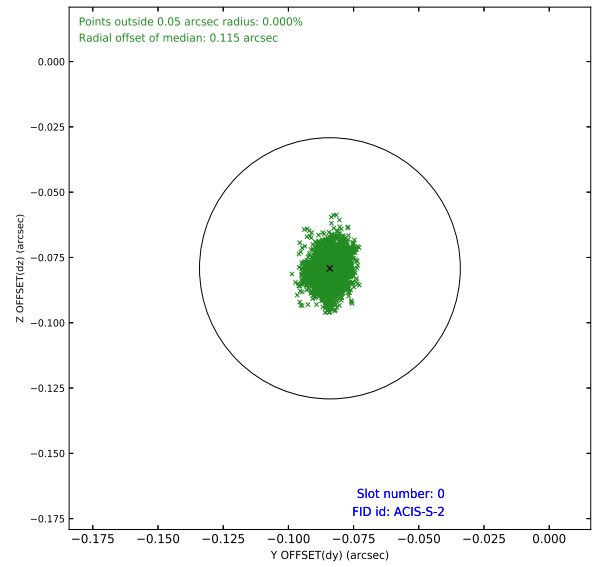
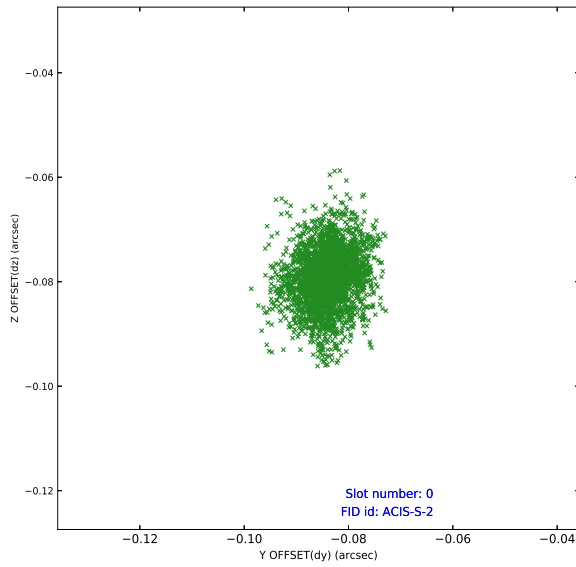


Time (s)

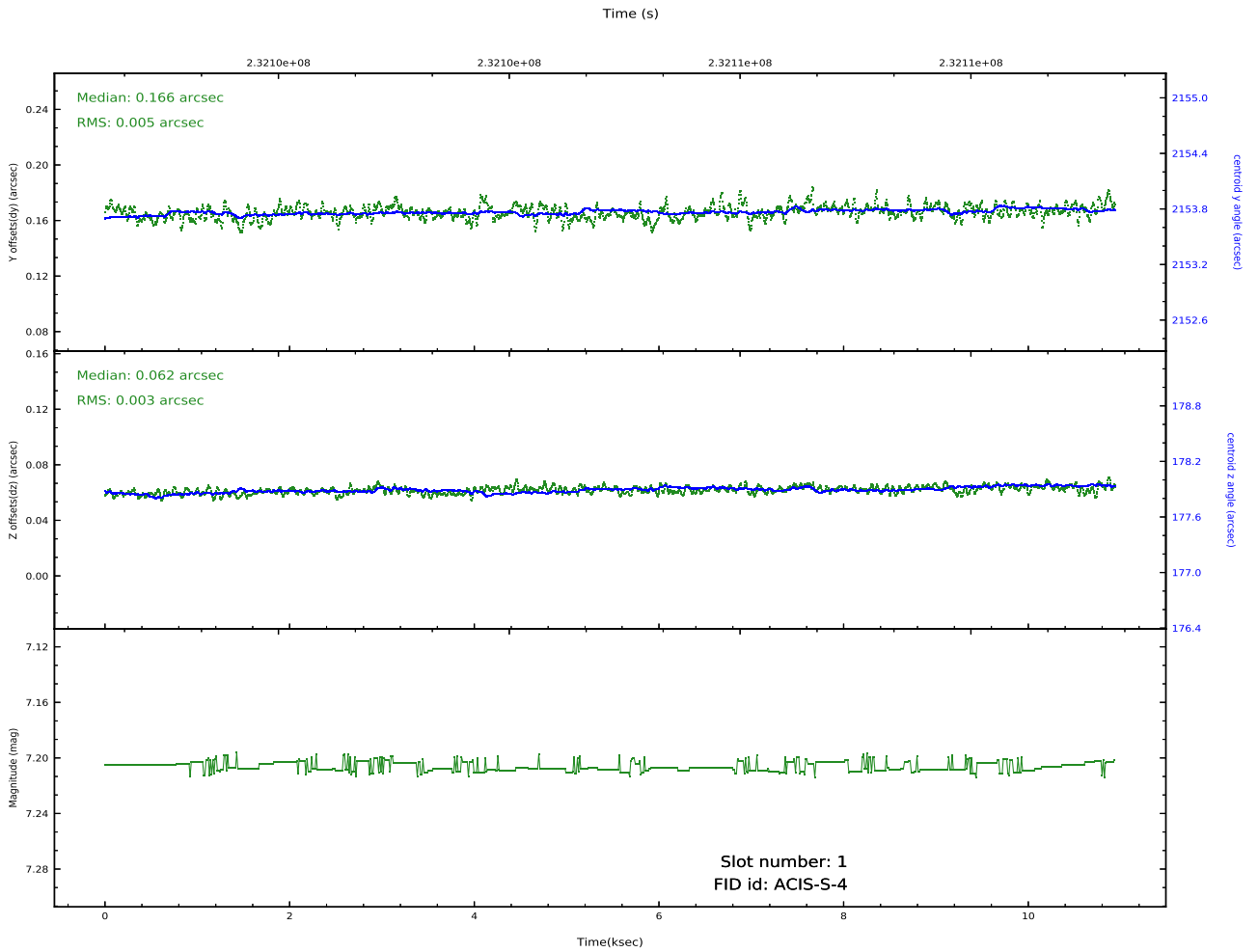
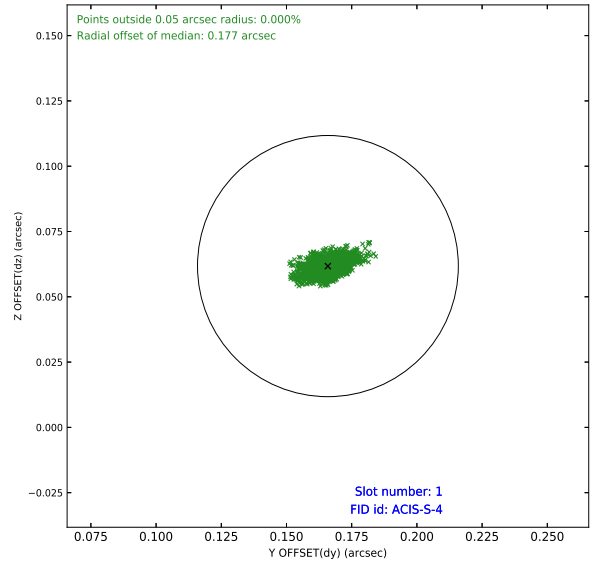
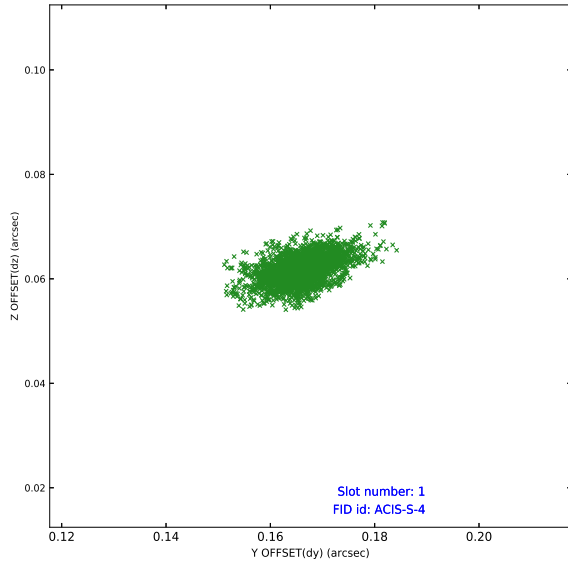


2.5 FID Slots

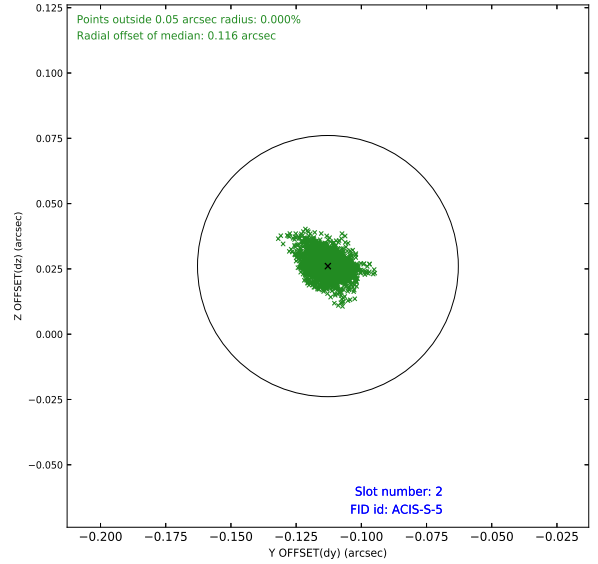
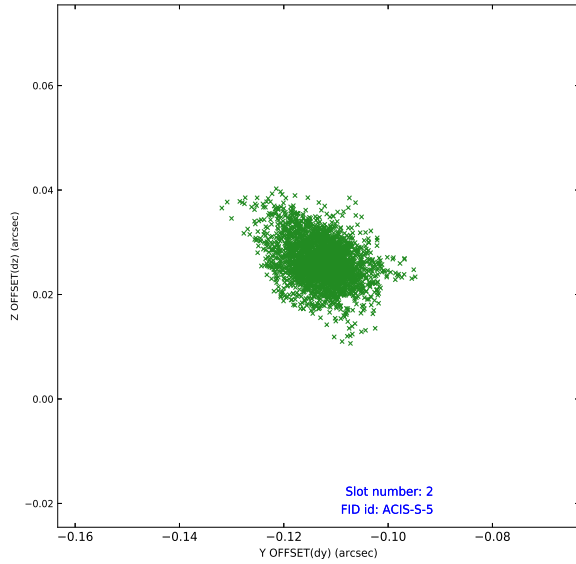
2.5.1 Slot 0



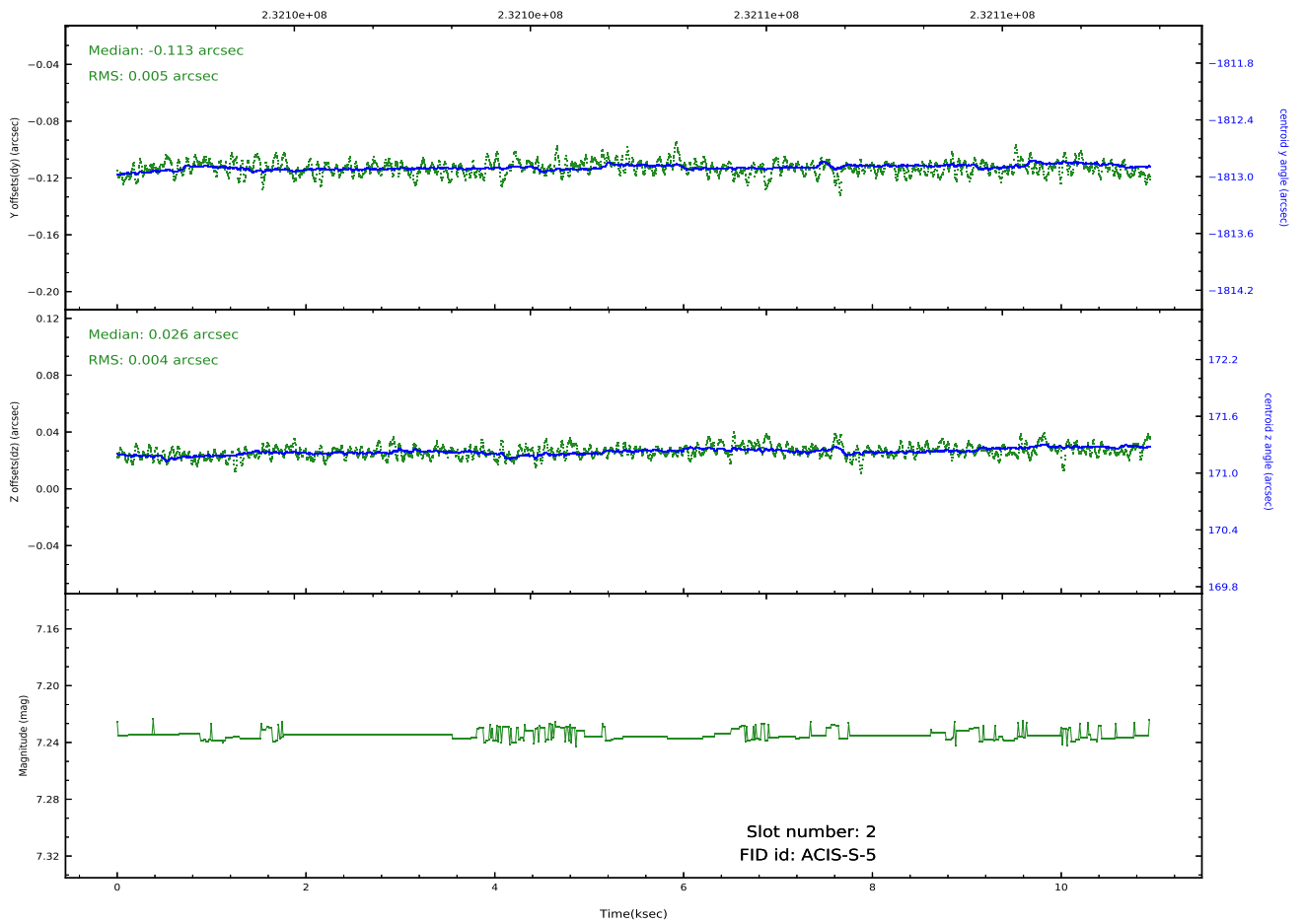
2.5.2 Slot 1



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2020.10.09 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 10.50879 |

A.2 Comments