

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20305 - L2 Version 2
Chandra X-Ray Center

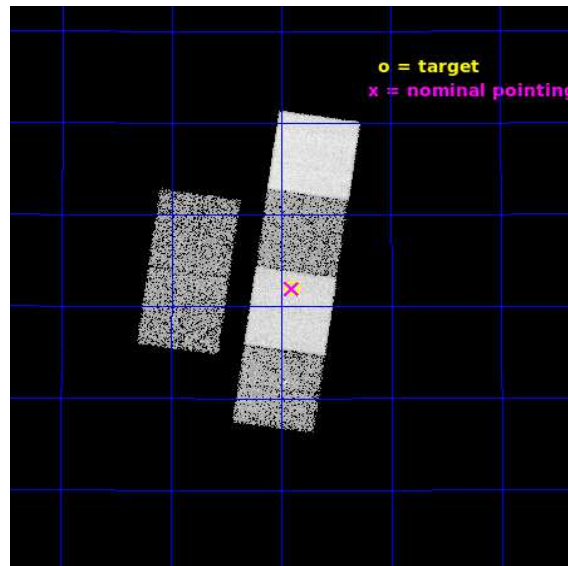
L2 Processing Date : Oct 24 2020

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1 Front

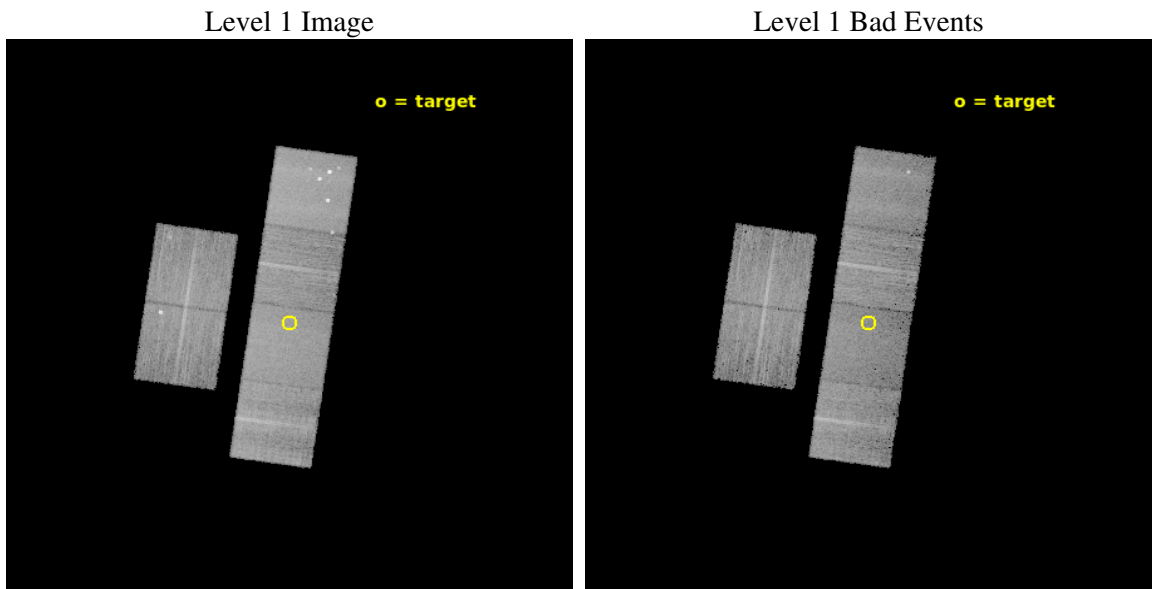
| | | |
|----------|--|---|
| seq_num | 503001 | Sequence number |
| obs_id | 20305 | Observation id |
| title | Chandra Observations of New X-ray Supernovae | Proposal title |
| observer | David Pooley | Principal investigator |
| object | SN 2018gk | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 248.974625 | Observer's specified target RA [deg] |
| dec_targ | 40.032719 | Observer's specified target Dec [deg] |
| ra_nom | 248.97594963676 | Nominal RA [deg] |
| dec_nom | 40.032503875735 | Nominal Dec [deg] |
| roll_nom | 98.201936589763 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 10025.600149393 | Sum of GTIs [s] |
| livetime | 9898.6499636098 | Livetime [s] |
| ontime2 | 10022.359089255 | Sum of GTIs [s] |
| ontime3 | 10025.600149393 | Sum of GTIs [s] |
| ontime5 | 10025.600149393 | Sum of GTIs [s] |
| ontime6 | 10025.600149393 | Sum of GTIs [s] |
| ontime7 | 10025.600149393 | Sum of GTIs [s] |
| ontime8 | 10025.600149393 | Sum of GTIs [s] |
| l2events | 122912 | Number of level 2 events |



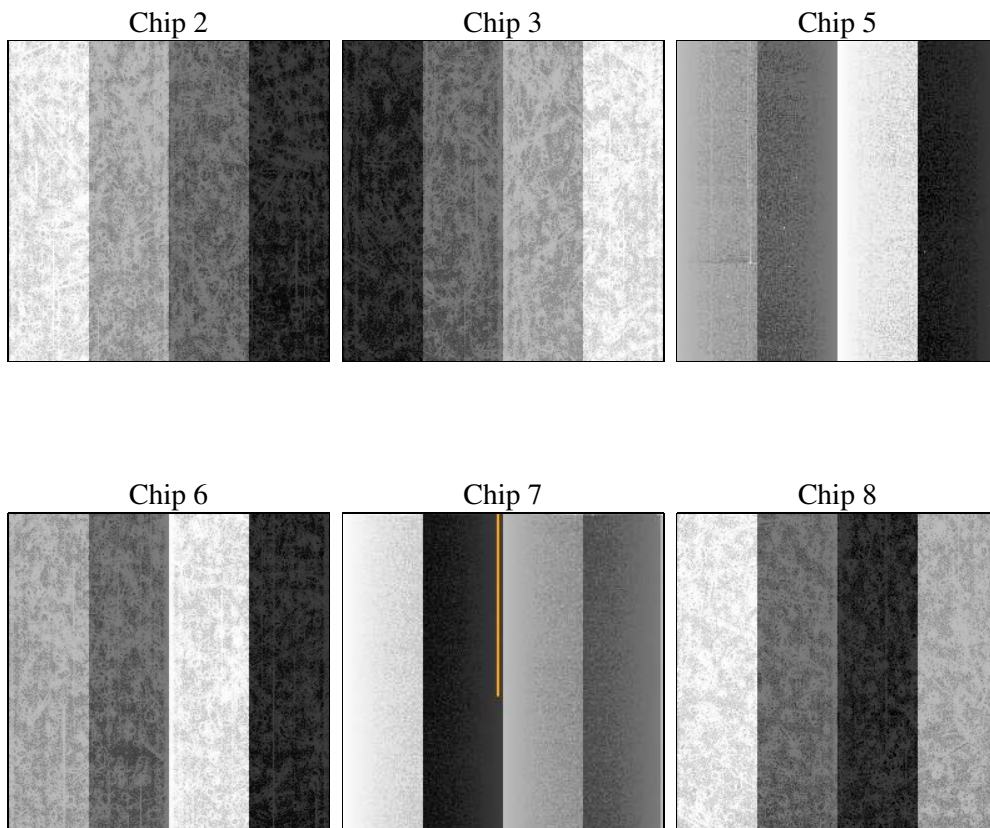
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 10080.765000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.2 | Processing system revision | ontime | 10025.600149393 | Sum of GTIs [s] |
| caldsver | 4.9.3 | | ontime2 | 10022.359089255 | Sum of GTIs [s] |
| date | 2020-10-25T03:10:06 | Date and time of file creation | ontime3 | 10025.600149393 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime5 | 10025.600149393 | Sum of GTIs [s] |
| | | | ontime6 | 10025.600149393 | Sum of GTIs [s] |
| | | | ontime7 | 10025.600149393 | Sum of GTIs [s] |
| | | | ontime8 | 10025.600149393 | Sum of GTIs [s] |
| | | | l1events | 562011 | Number of level 1 events |

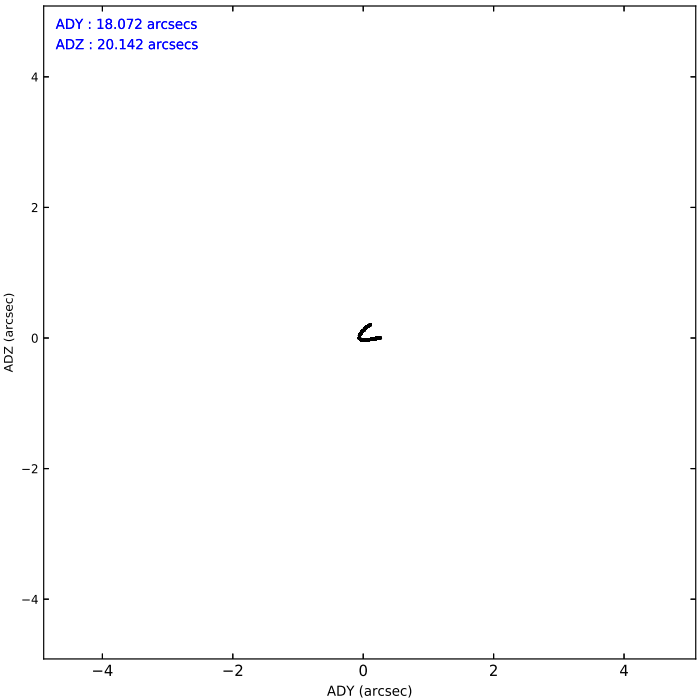
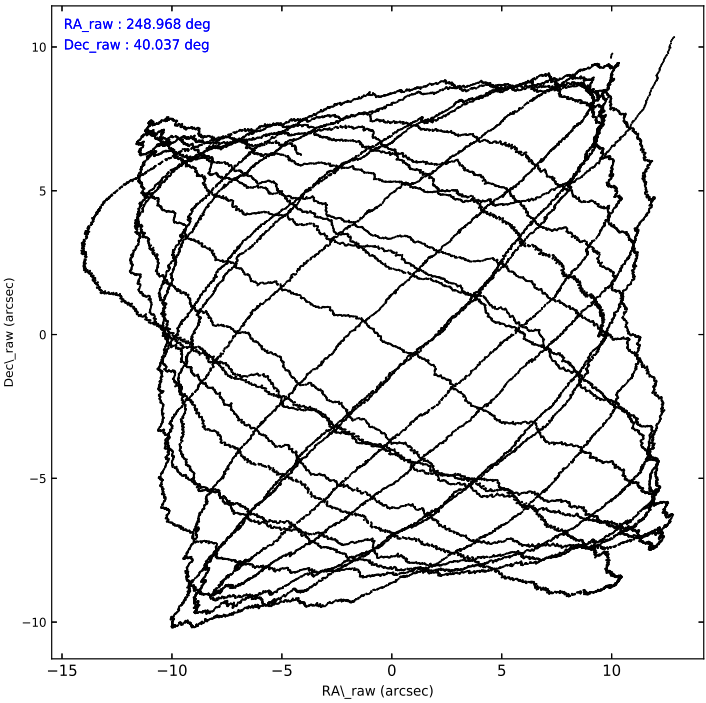
2.1.4 Events

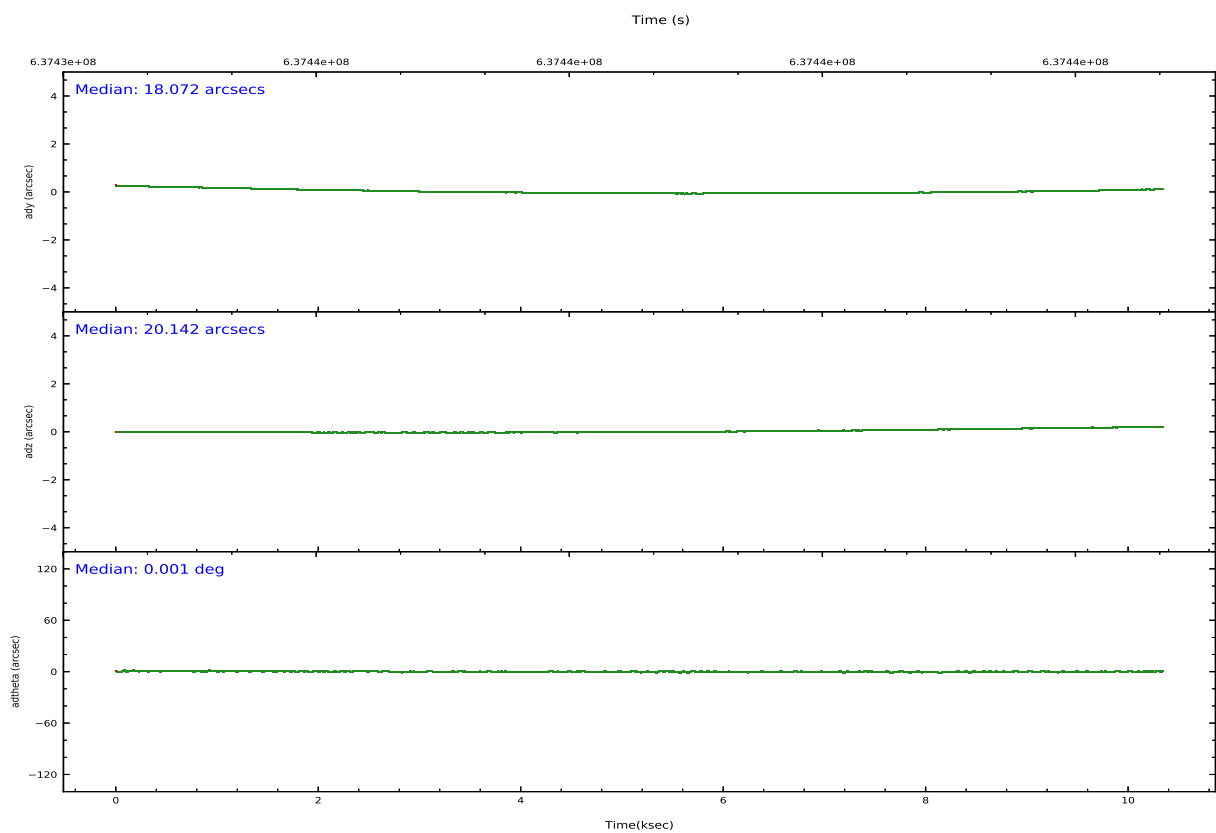
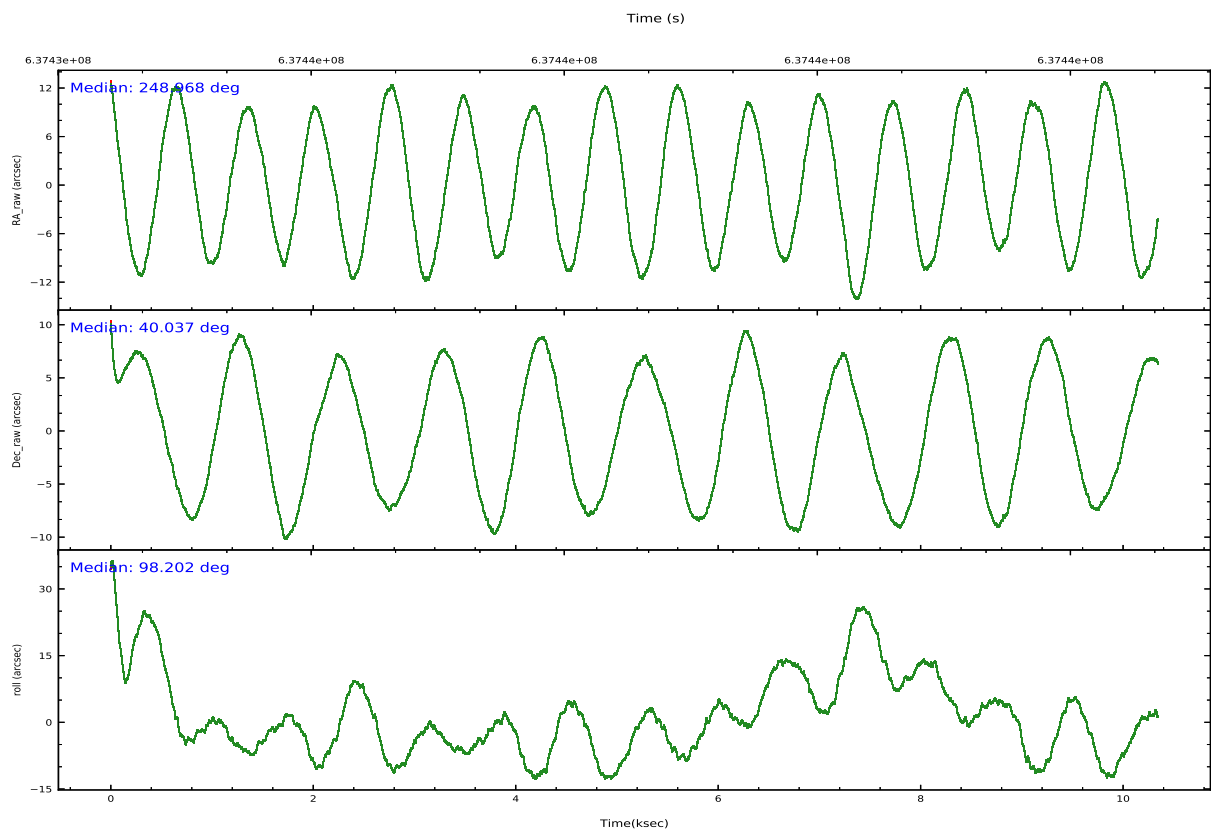
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|--------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 81250 | 75963 | 129812 | 80398 | 97163 | 97425 | grade 0 events | 2893 | 4480 | 9533 | 2493 | 3575 | 6517 |
| rejected events | 73453 | 66725 | 64815 | 71941 | 55442 | 73711 | | 3% | 5% | 7% | 3% | 3% | 6% |
| rejected % | 90% | 87% | 49% | 89% | 57% | 75% | grade 1 events | 52 | 62 | 590 | 38 | 133 | 73 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 1838 | 1562 | 19681 | 2255 | 8538 | 5777 |
| | | | | | | | | 2% | 2% | 15% | 2% | 8% | 5% |
| | | | | | | | grade 3 events | 743 | 791 | 1798 | 755 | 3236 | 2446 |
| | | | | | | | | 0% | 1% | 1% | 0% | 3% | 2% |
| | | | | | | | grade 4 events | 764 | 785 | 1692 | 690 | 3206 | 2283 |
| | | | | | | | | 0% | 1% | 1% | 0% | 3% | 2% |
| | | | | | | | grade 5 events | 2905 | 3322 | 7737 | 3192 | 9521 | 4972 |
| | | | | | | | | 3% | 4% | 5% | 3% | 9% | 5% |
| | | | | | | | grade 6 events | 1562 | 1622 | 32319 | 2269 | 23188 | 6695 |
| | | | | | | | | 1% | 2% | 24% | 2% | 23% | 6% |
| | | | | | | | grade 7 events | 70493 | 63339 | 56462 | 68706 | 45766 | 68662 |
| | | | | | | | | 86% | 83% | 43% | 85% | 47% | 70% |

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 | VFAINT | VFAINT | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 248.990043 | 248.97594963676 | CCD I2 on | O1 | Y |
| [deg] Pointing Dec | 40.015421 | 40.032503875735 | CCD I3 on | O2 | Y |
| [deg] Pointing Roll | 98.045705 | 98.20193658976299 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | O3 | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | Y | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | CCD S4 on | Y | Y |
| [s] Observation start time (MET) | 637433286.184000 | 637432260.27191 | CCD S5 on | N | N |
| Observation start date | 2018-03-14T16:46:57 | 2018-03-14T16:31:00 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 637443367.184000 | 637444058.5351 | On-chip summing requested | N | N |
| Observation end date | 2018-03-14T19:34:58 | 2018-03-14T19:47:38 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



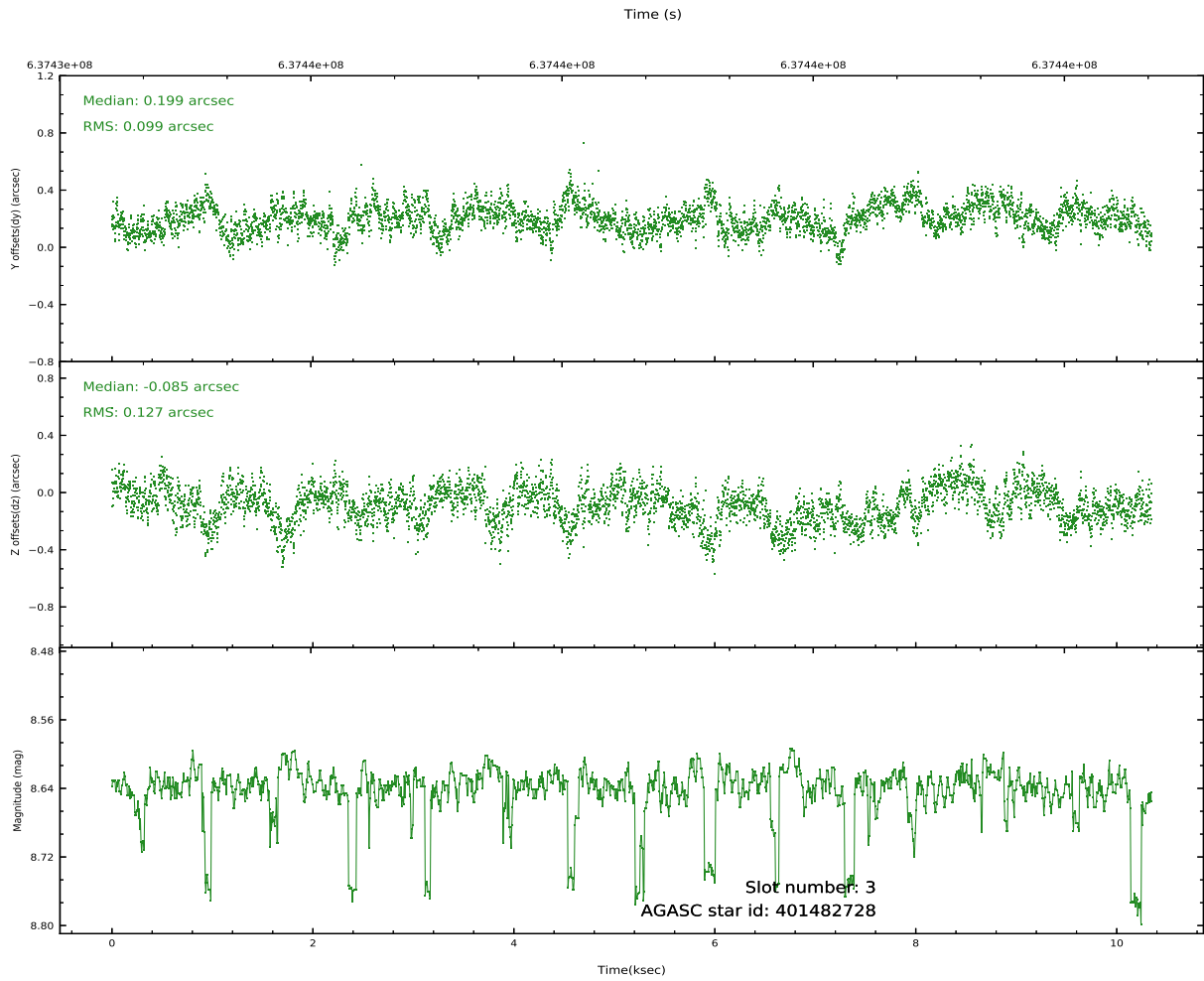
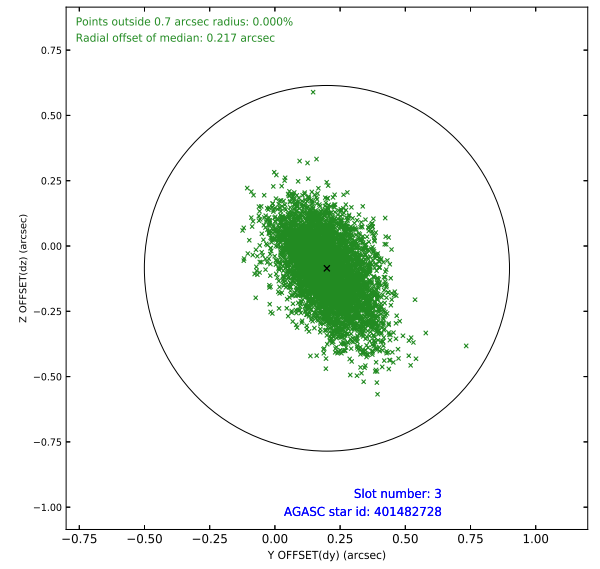
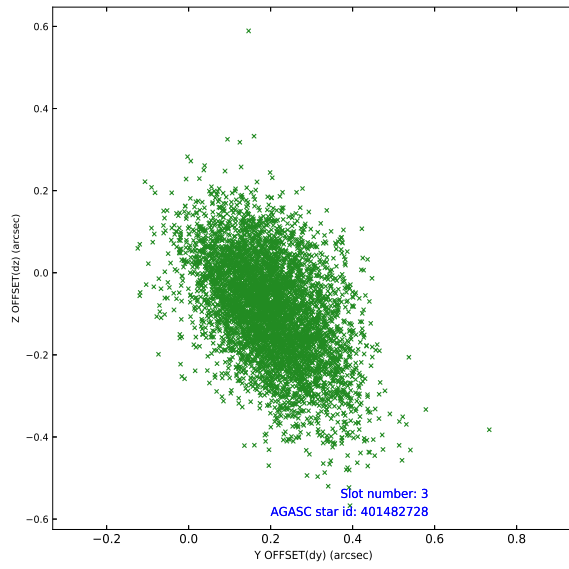


Slot Statistics

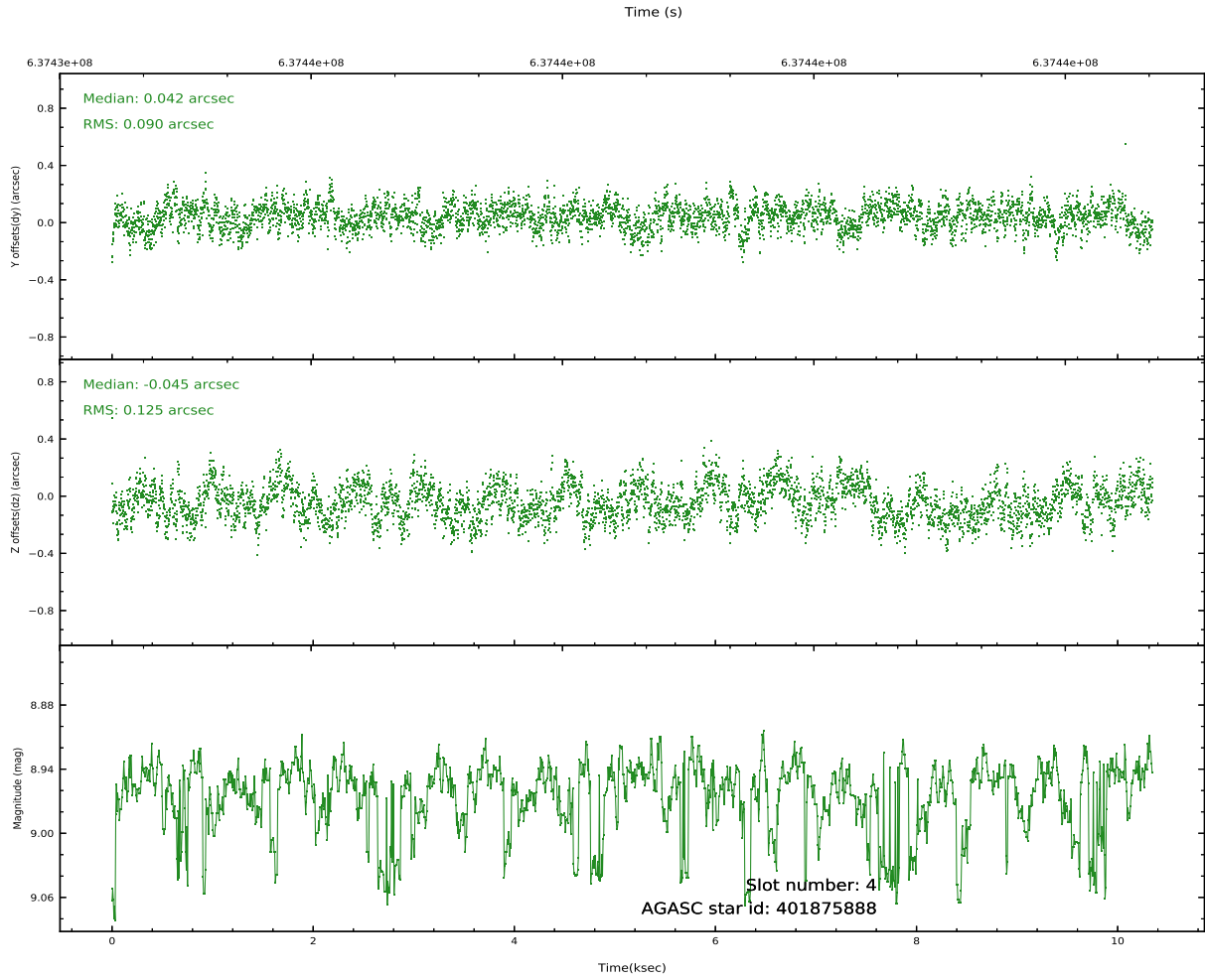
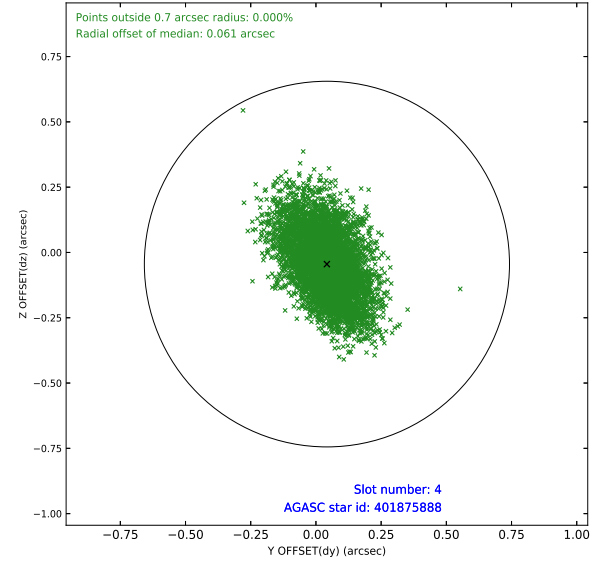
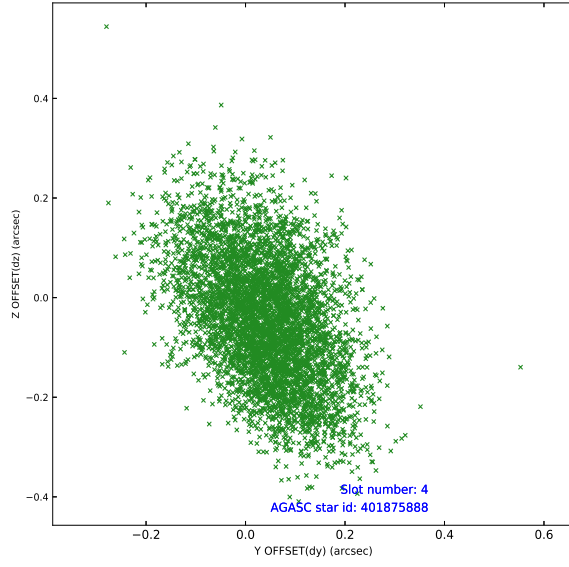
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.16 | 2524 | 1.000 | -0.022 | -0.022 | 0.006 | 0.010 | 0.000000 | 0.000000 | -771.32 | -1741 |
| 1 | FID | | ACIS-S-4 | 7.26 | 2524 | 1.000 | 0.110 | -0.035 | 0.007 | 0.011 | 0.000000 | 0.000000 | 2142.01 | 166 |
| 2 | FID | | ACIS-S-6 | 7.41 | 2524 | 1.000 | -0.116 | 0.065 | 0.007 | 0.014 | 0.000000 | 0.000000 | 391.43 | 804 |
| 3 | GUIDE | used | 401482728 | 8.64 | 5047 | 1.000 | 0.199 | -0.085 | 0.168 | 0.284 | 248.957801 | 39.543165 | -1670.84 | 326 |
| 4 | GUIDE | used | 401875888 | 8.96 | 5046 | 1.000 | 0.042 | -0.045 | 0.163 | 0.270 | 249.155641 | 40.473314 | 1568.69 | -679 |
| 5 | GUIDE | used | 401881304 | 9.31 | 5040 | 1.000 | -0.124 | 0.089 | 0.255 | 0.382 | 249.710159 | 40.228901 | 492.72 | -2068 |
| 6 | GUIDE | used | 401882056 | 9.08 | 5047 | 1.000 | -0.116 | -0.144 | 0.160 | 0.271 | 248.472543 | 40.010094 | 184.74 | 1414 |
| 7 | GUIDE | used | 401877952 | 8.92 | 5042 | 1.000 | -0.016 | 0.186 | 0.198 | 0.312 | 249.852397 | 40.152984 | 169.91 | -2419 |

2.4 Star Slots

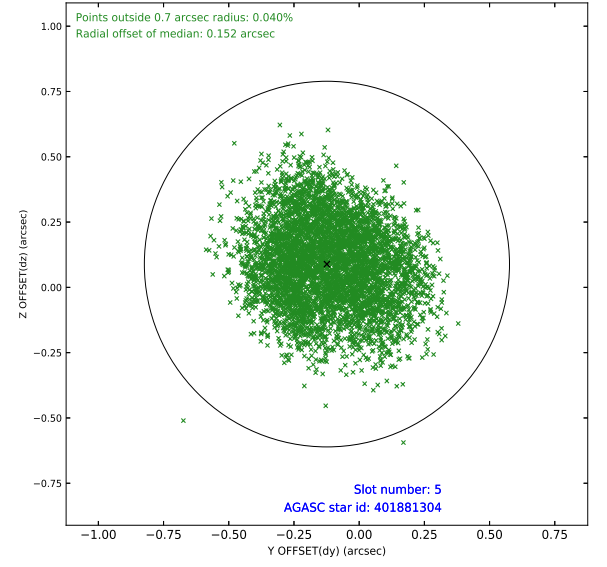
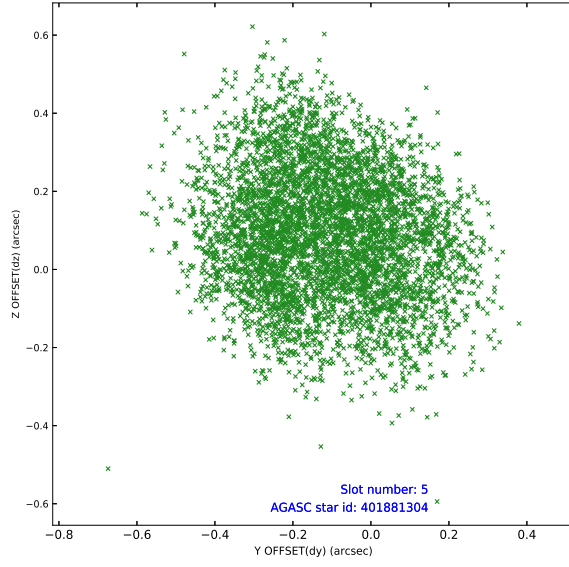
2.4.1 Slot 3



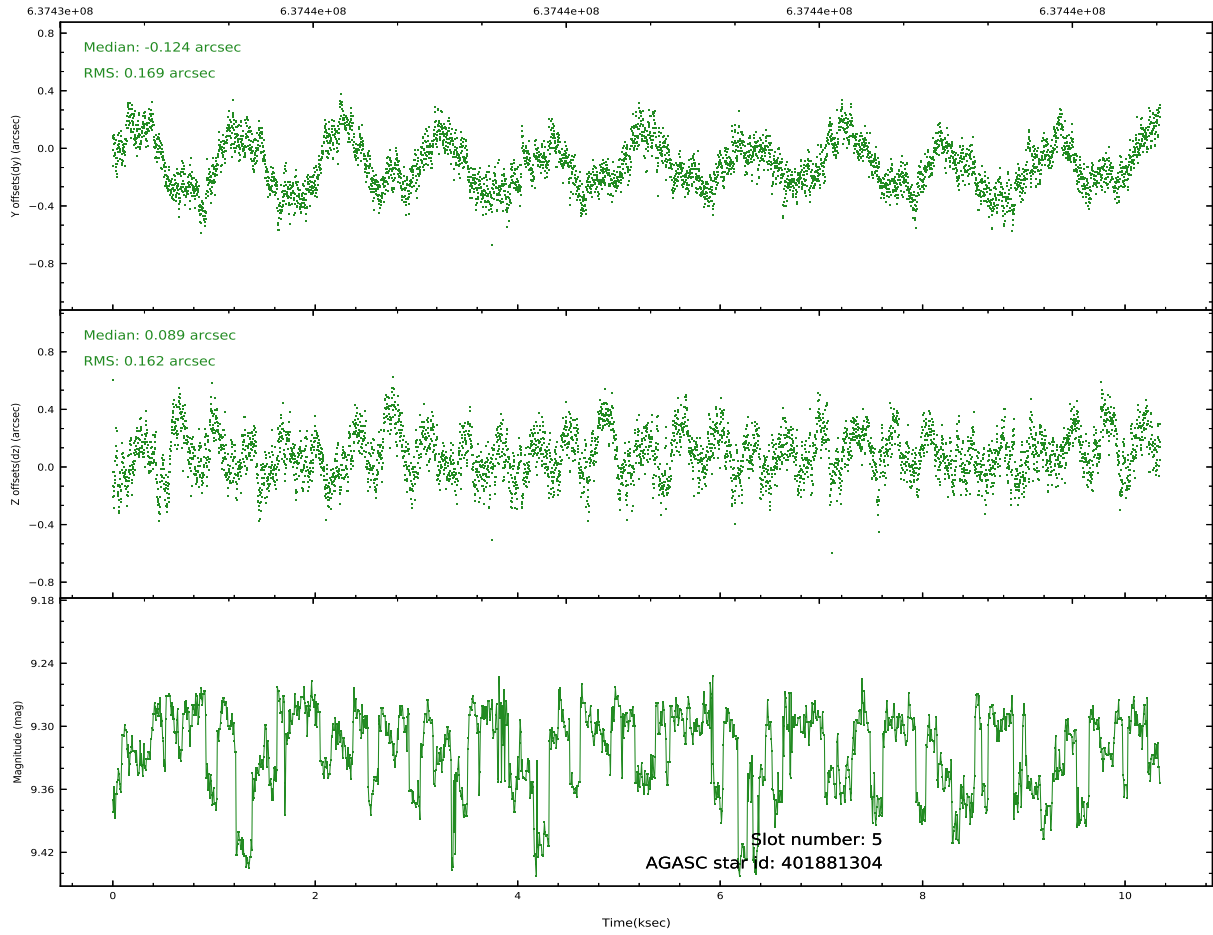
2.4.2 Slot 4



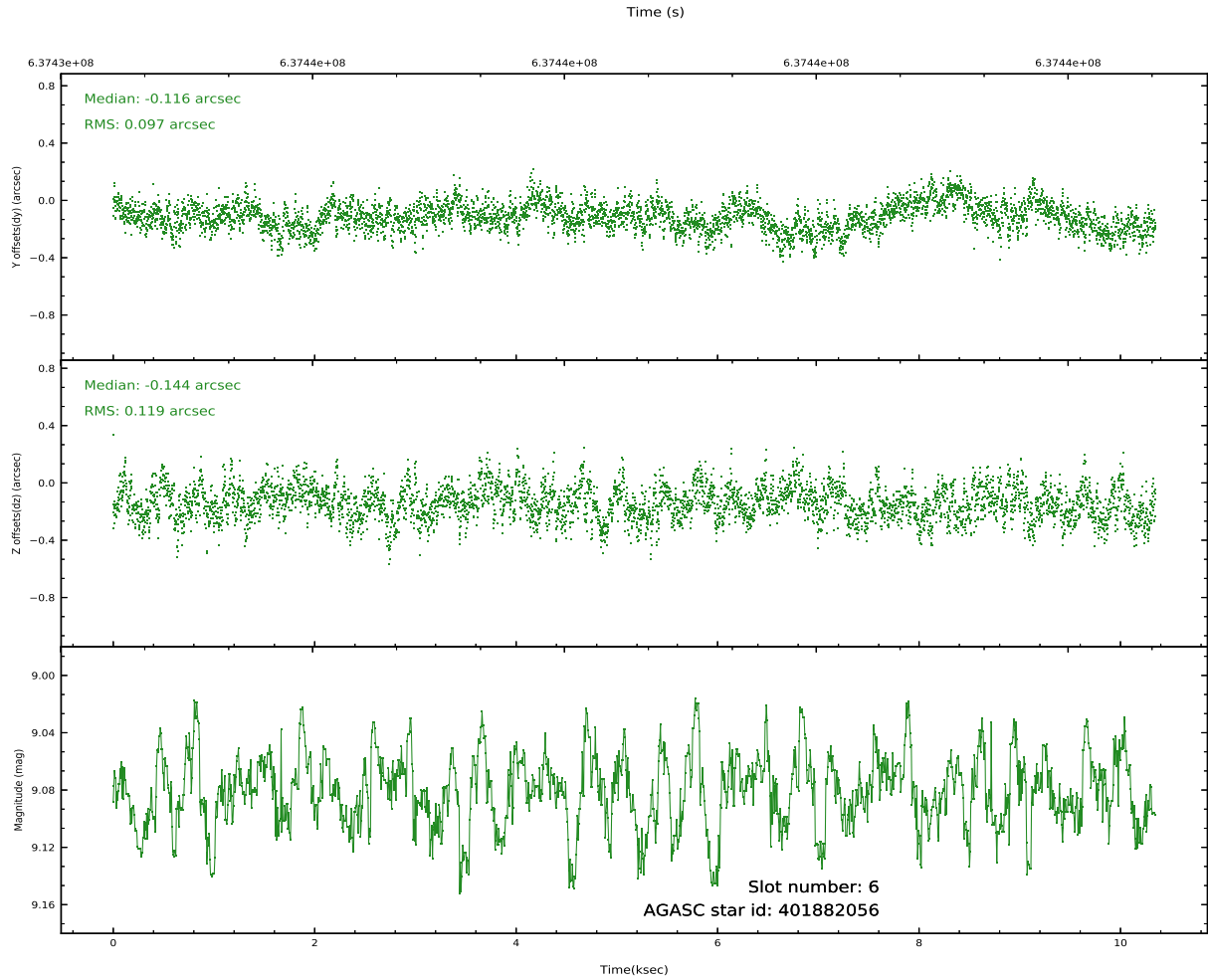
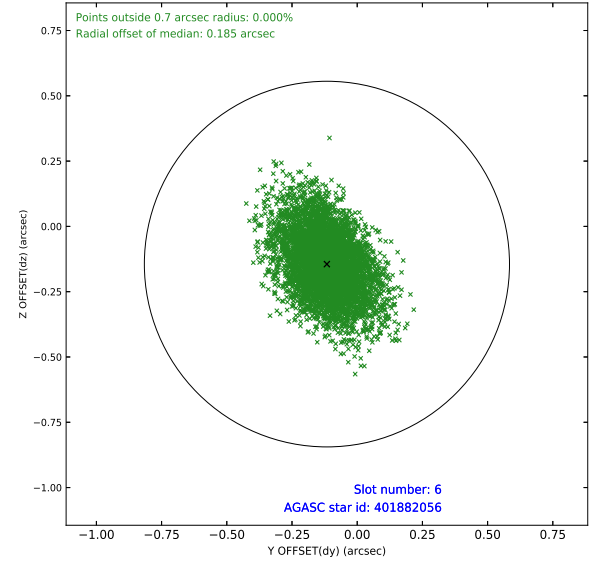
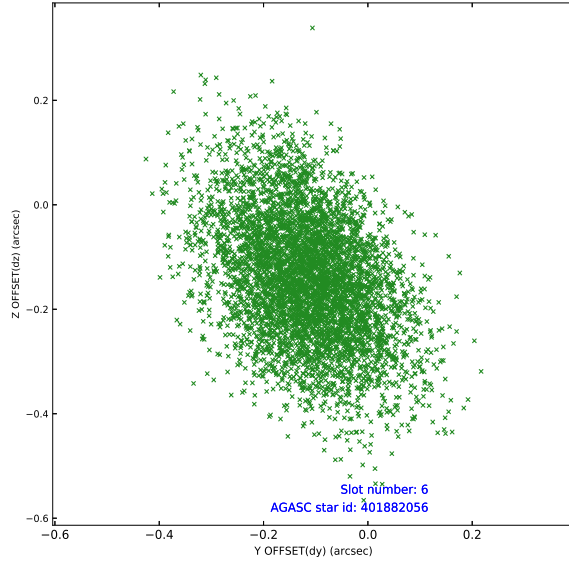
2.4.3 Slot 5



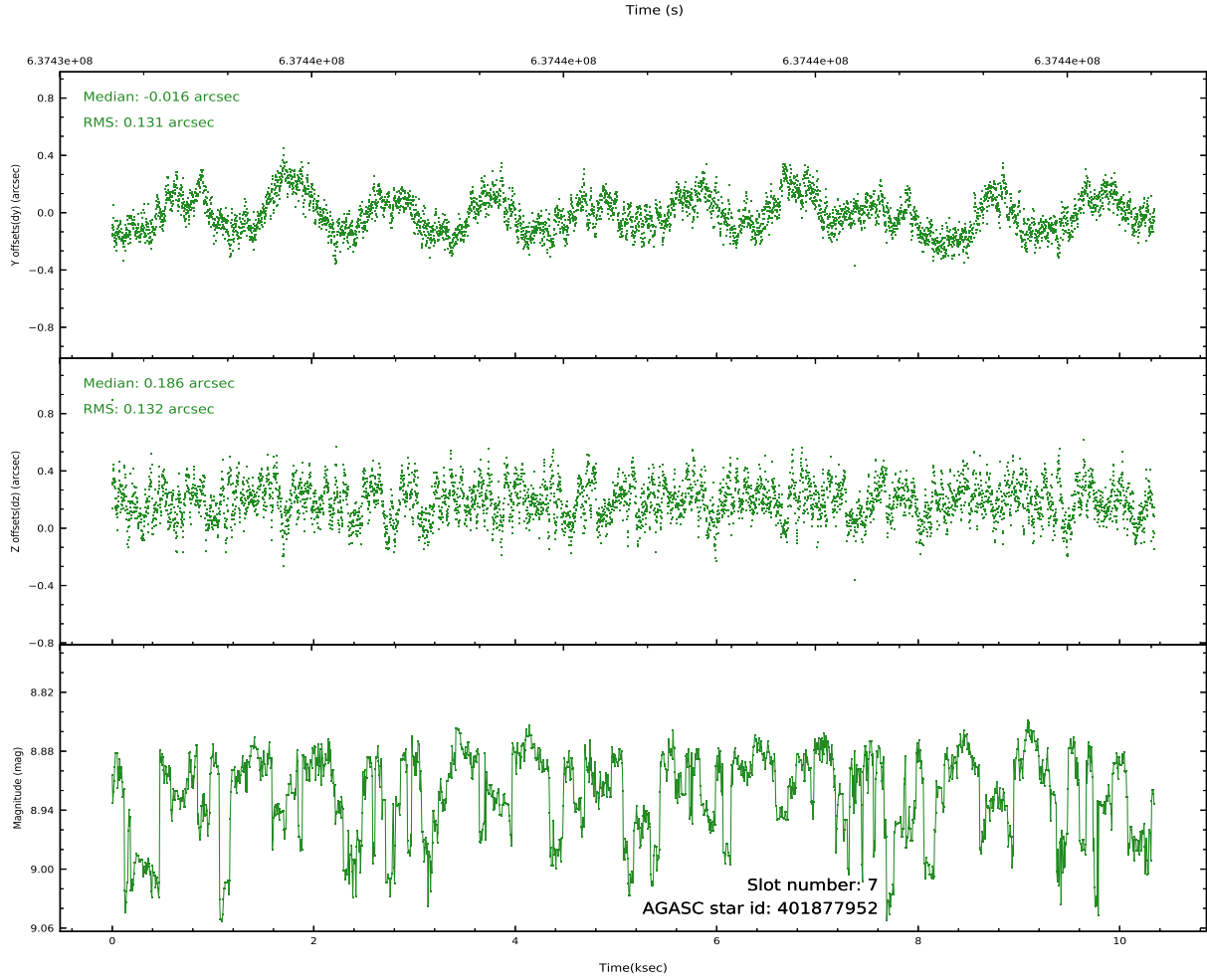
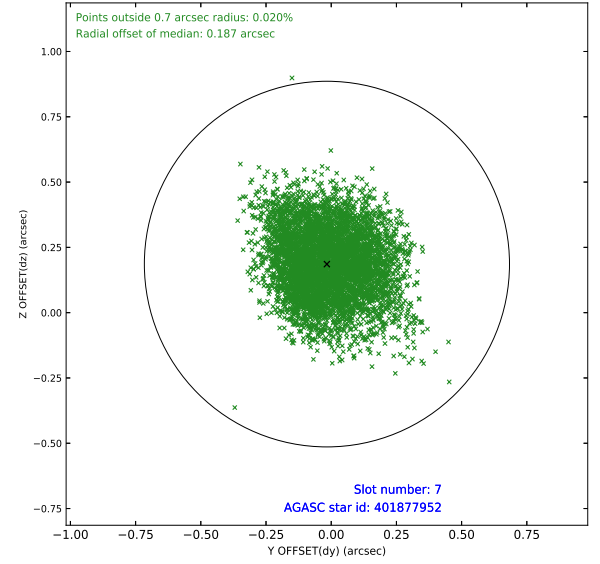
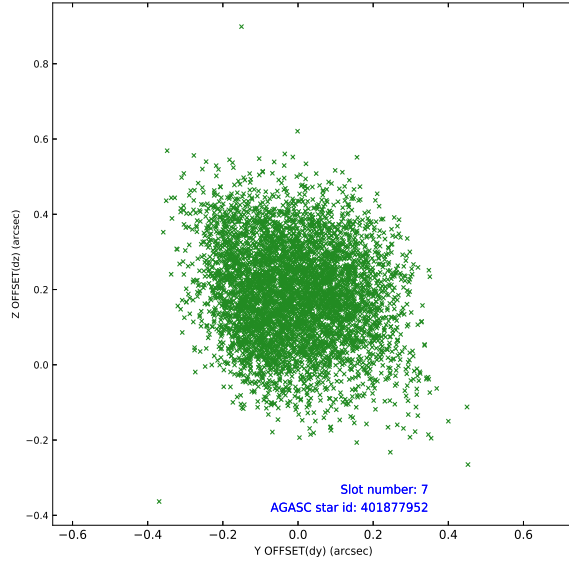
Time (s)



2.4.4 Slot 6

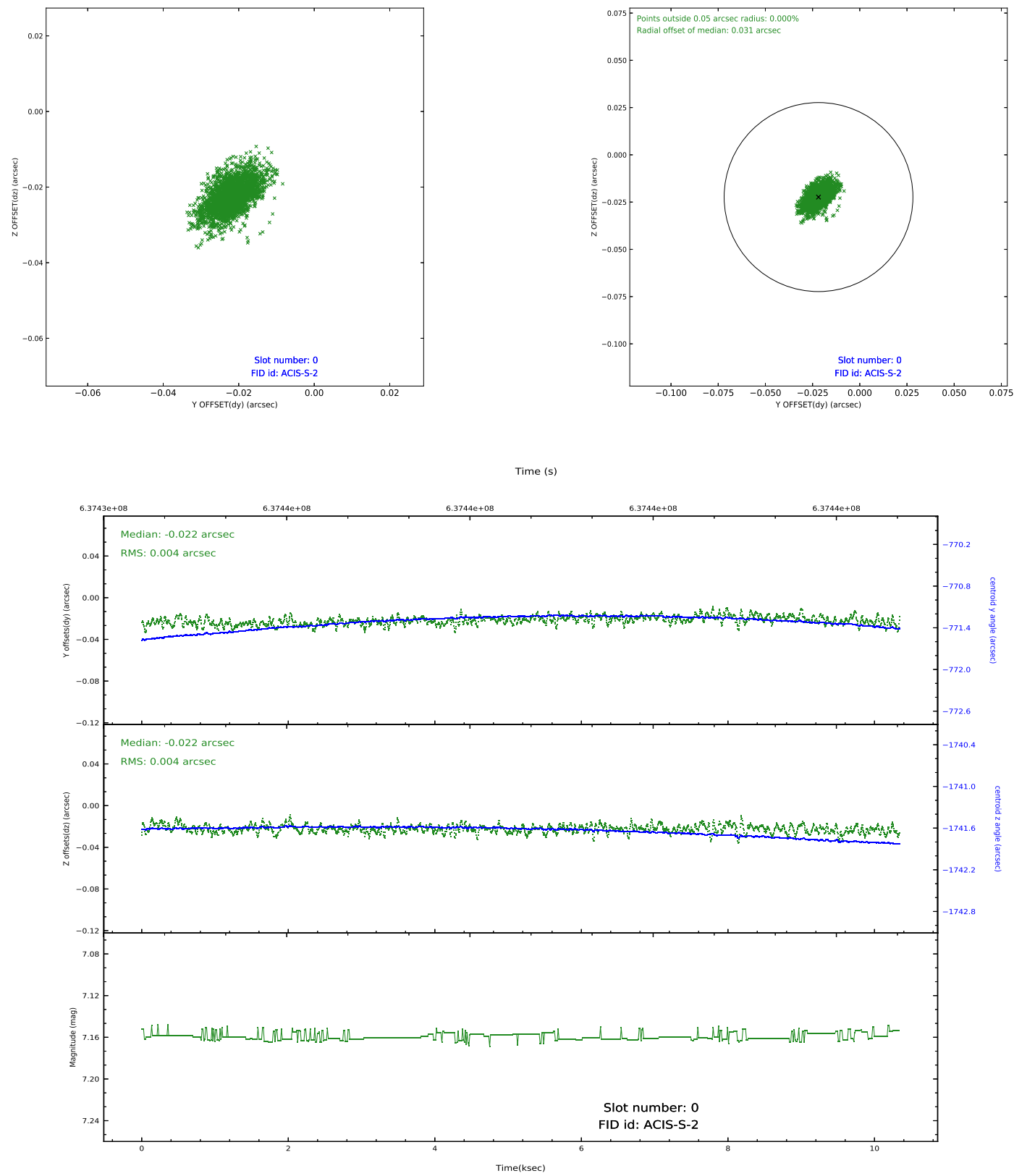


2.4.5 Slot 7

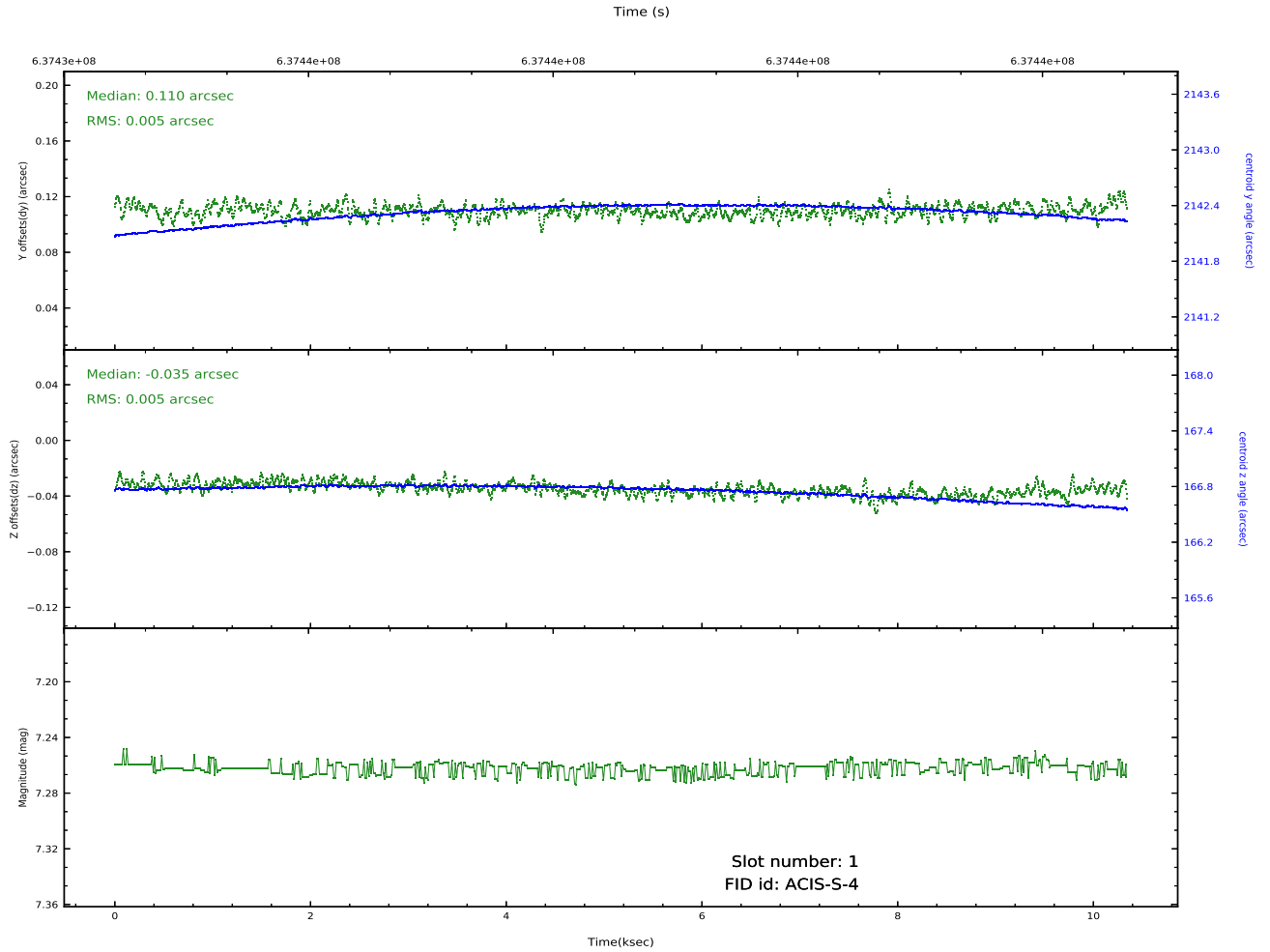
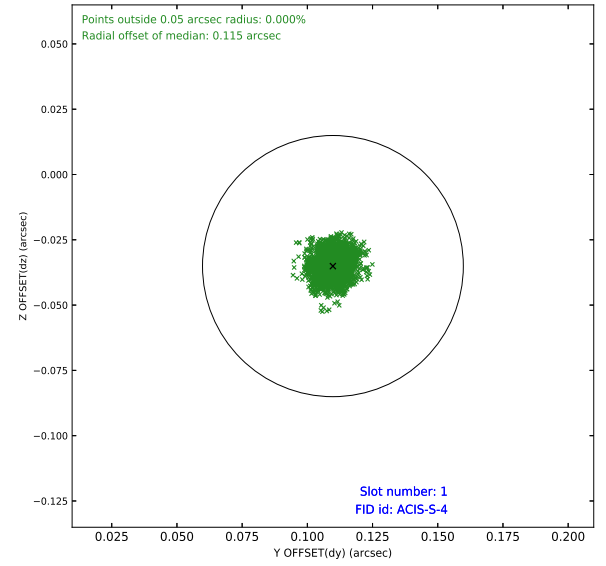
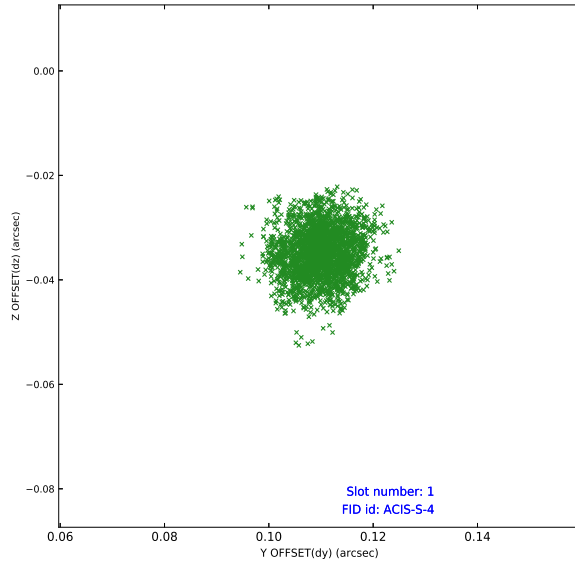


2.5 FID Slots

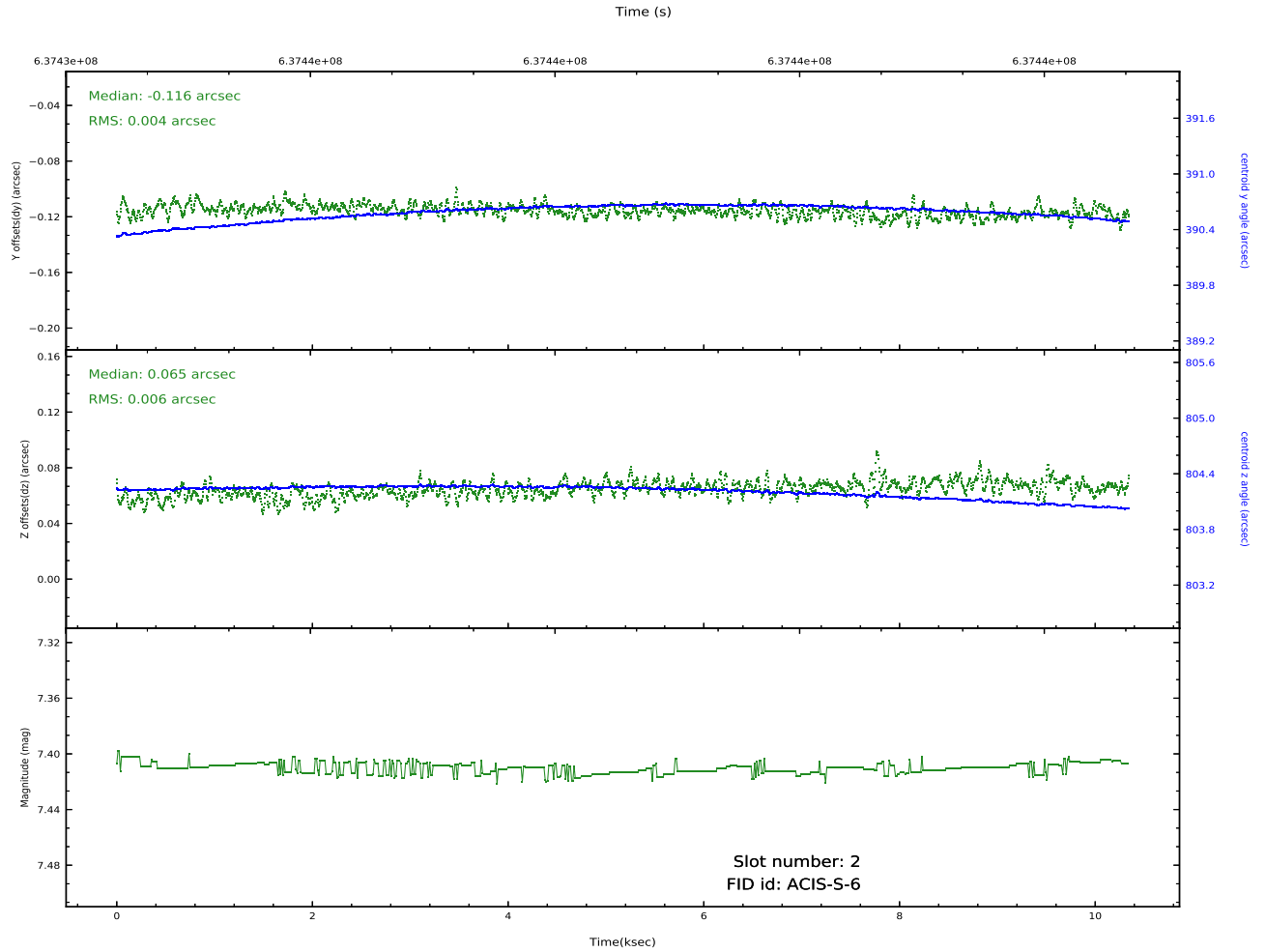
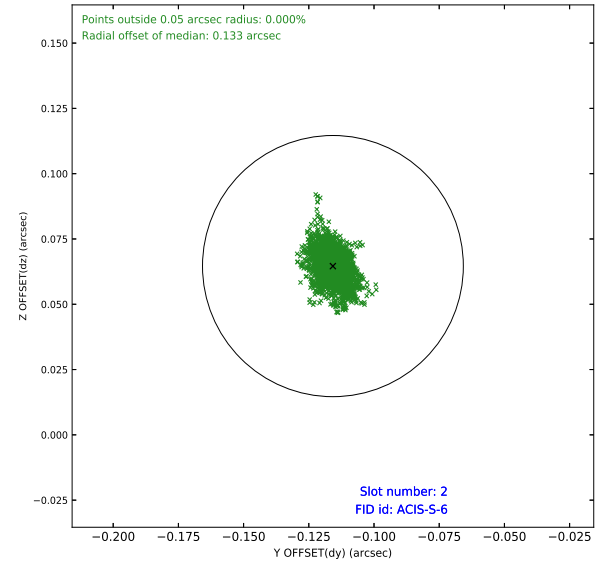
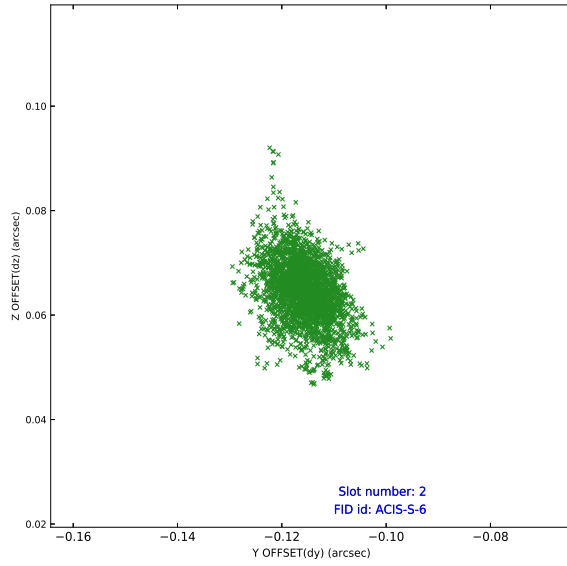
2.5.1 Slot 0



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) | 2020.10.26 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 10.025600149393 |

A.2 Comments