

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 4840 - L2 Version 4
Chandra X-Ray Center

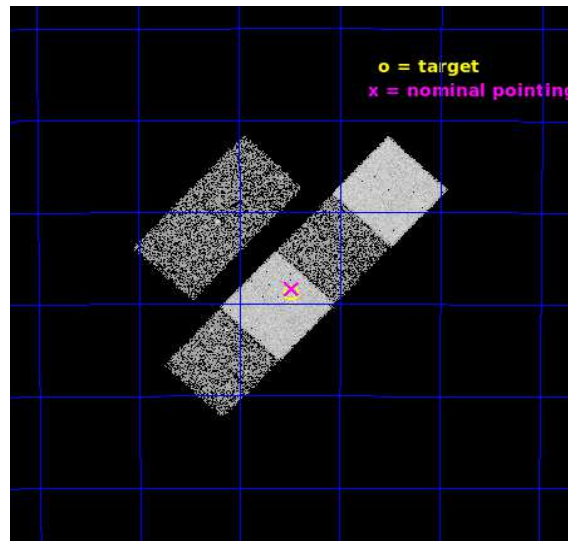
L2 Processing Date : Sep 24 2020

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1 Front

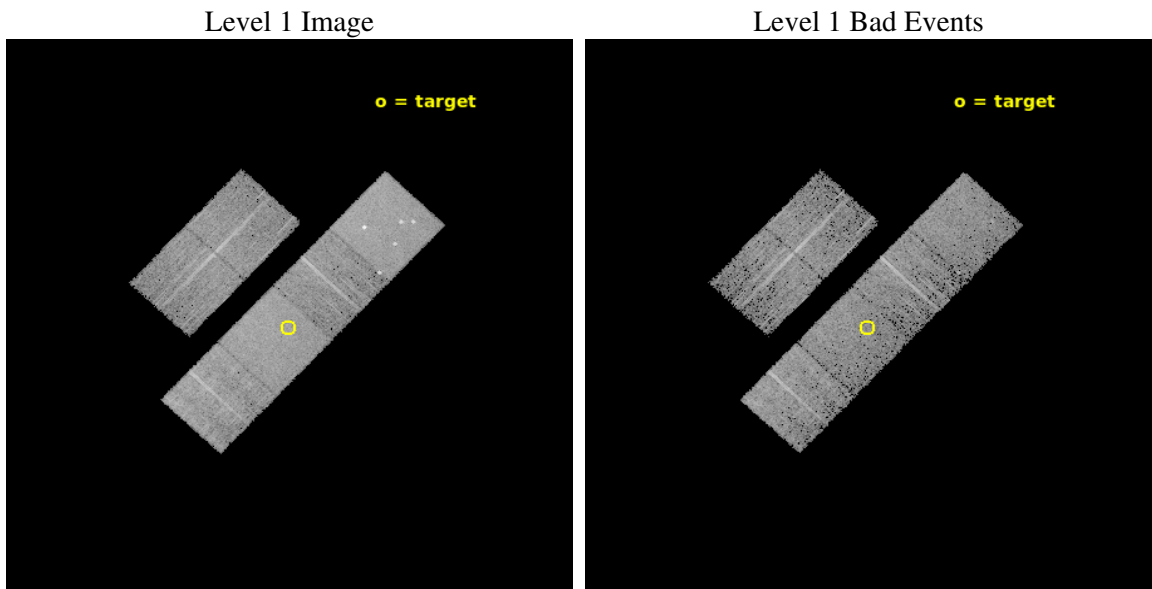
| | | |
|----------|--|---|
| seq_num | 700922 | Sequence number |
| obs_id | 4840 | Observation id |
| title | Constraining the Hard-X-ray Through Submm SEDs of a Complete Sample of Broad Absorption Line Quasars | Proposal title |
| observer | Dr. Sarah Gallagher | Principal investigator |
| object | LBQS 2140-4552 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 325.87171 | Observer's specified target RA [deg] |
| dec_targ | -45.647721 | Observer's specified target Dec [deg] |
| ra_nom | 325.86928360187 | Nominal RA [deg] |
| dec_nom | -45.63910129712 | Nominal Dec [deg] |
| roll_nom | 133.26105057549 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 5755.7800423801 | Sum of GTIs [s] |
| livetime | 5682.8968897688 | Livetime [s] |
| ontime2 | 5755.8210823834 | Sum of GTIs [s] |
| ontime3 | 5755.6569223702 | Sum of GTIs [s] |
| ontime5 | 5755.7390023768 | Sum of GTIs [s] |
| ontime6 | 5755.6979623735 | Sum of GTIs [s] |
| ontime7 | 5755.7800423801 | Sum of GTIs [s] |
| ontime8 | 5752.3748125136 | Sum of GTIs [s] |
| l2events | 62902 | Number of level 2 events |



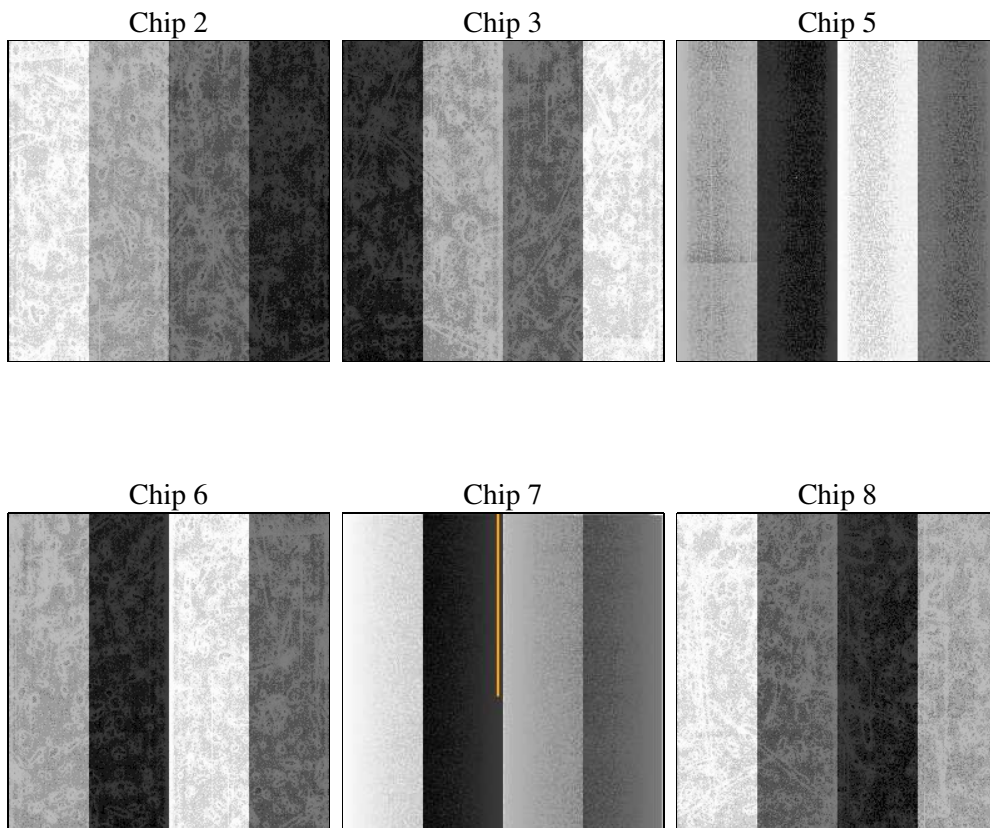
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 6000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 5755.7800423801 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime2 | 5755.8210823834 | Sum of GTIs [s] |
| date | 2020-09-24T11:47:38 | Date and time of file creation | ontime3 | 5755.6569223702 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 5755.7390023768 | Sum of GTIs [s] |
| | | | ontime6 | 5755.6979623735 | Sum of GTIs [s] |
| | | | ontime7 | 5755.7800423801 | Sum of GTIs [s] |
| | | | ontime8 | 5752.3748125136 | Sum of GTIs [s] |
| | | | l1events | 284013 | Number of level 1 events |

2.1.4 Events

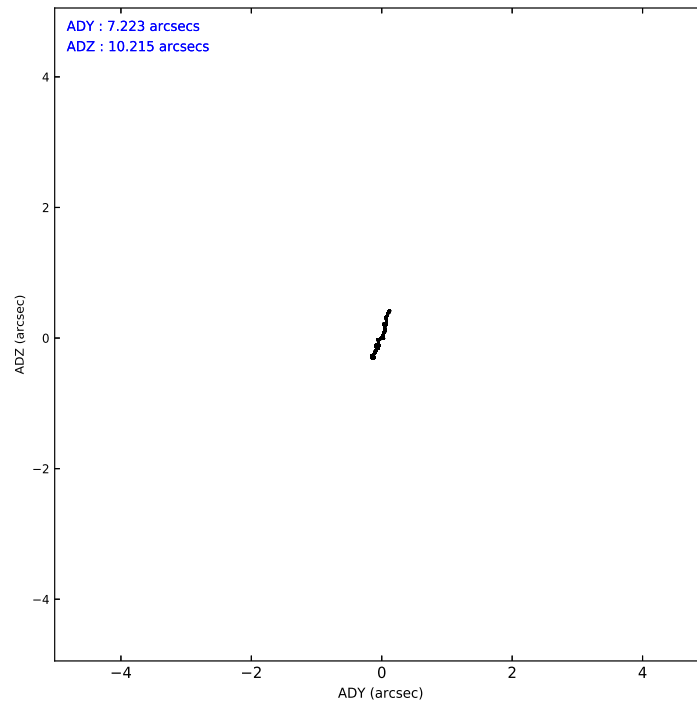
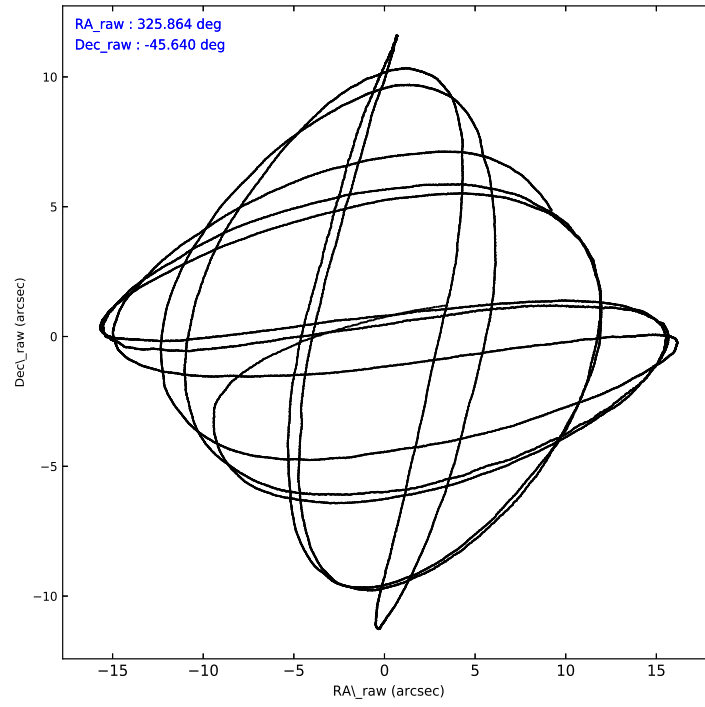
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 38616 | 37708 | 61725 | 39847 | 54094 | 52023 | grade 0 events | 2064 | 2061 | 5206 | 1849 | 2082 | 3220 |
| rejected events | 33904 | 33174 | 32392 | 35177 | 31815 | 41535 | | 5% | 5% | 8% | 4% | 3% | 6% |
| rejected % | 87% | 87% | 52% | 88% | 58% | 79% | grade 1 events | 22 | 21 | 225 | 15 | 51 | 40 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 942 | 853 | 7751 | 944 | 4422 | 2264 |
| | | | | | | | | 2% | 2% | 12% | 2% | 8% | 4% |
| | | | | | | | grade 3 events | 492 | 418 | 1118 | 506 | 1958 | 1070 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 4 events | 435 | 439 | 1018 | 441 | 1944 | 1114 |
| | | | | | | | | 1% | 1% | 1% | 1% | 3% | 2% |
| | | | | | | | grade 5 events | 1620 | 1723 | 4395 | 1795 | 5278 | 2327 |
| | | | | | | | | 4% | 4% | 7% | 4% | 9% | 4% |
| | | | | | | | grade 6 events | 781 | 766 | 14256 | 933 | 11885 | 2822 |
| | | | | | | | | 2% | 2% | 23% | 2% | 21% | 5% |
| | | | | | | | grade 7 events | 32260 | 31427 | 27756 | 33364 | 26474 | 39166 |
| | | | | | | | | 83% | 83% | 44% | 83% | 48% | 75% |

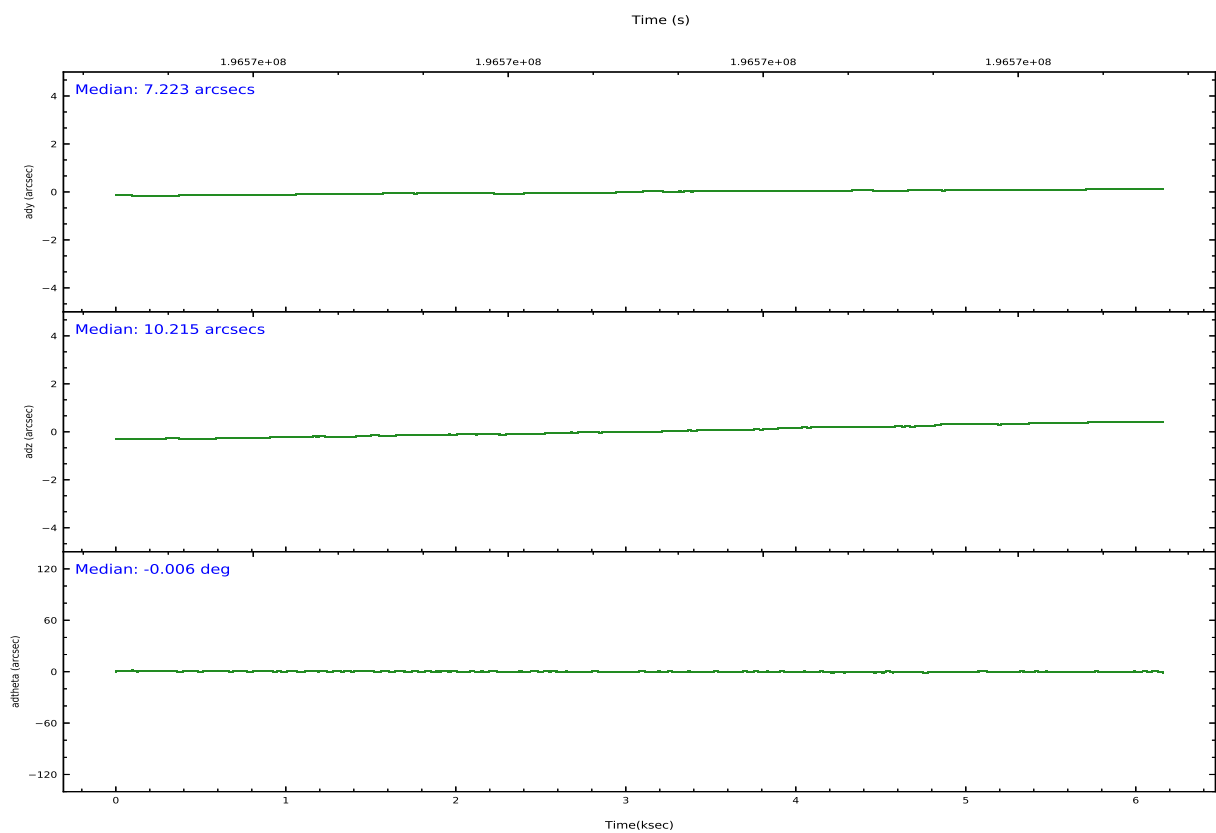
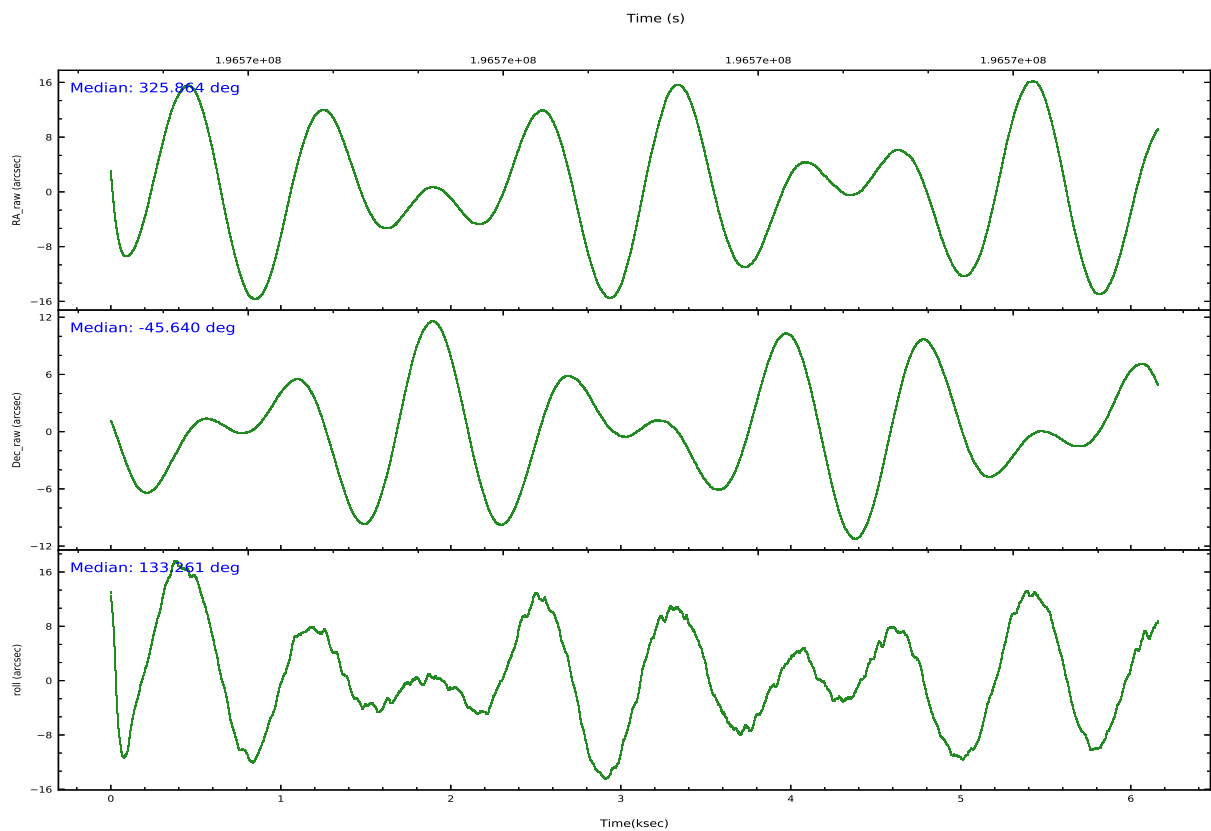
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-235678 | ACIS-235678 |
| Grating | NONE | NONE |
| Data mode | FAINT | FAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 325.901588 | 325.86928360187 |
| [deg] Pointing Dec | -45.647098 | -45.63910129712 |
| [deg] Pointing Roll | 133.133498 | 133.26105057549 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 |
| [mm] SIM defocus | 0 | 0.001444936568705701 |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 |
| [s] Observation start time (MET) | 196569353.184000 | 196568450.74068 |
| Observation start date | 2004-03-25T02:34:49 | 2004-03-25T02:20:50 |
| [s] Observation end time (MET) | 196575353.184000 | 196575945.54101 |
| Observation end date | 2004-03-25T04:14:49 | 2004-03-25T04:25:45 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar version number | 8 | 8 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



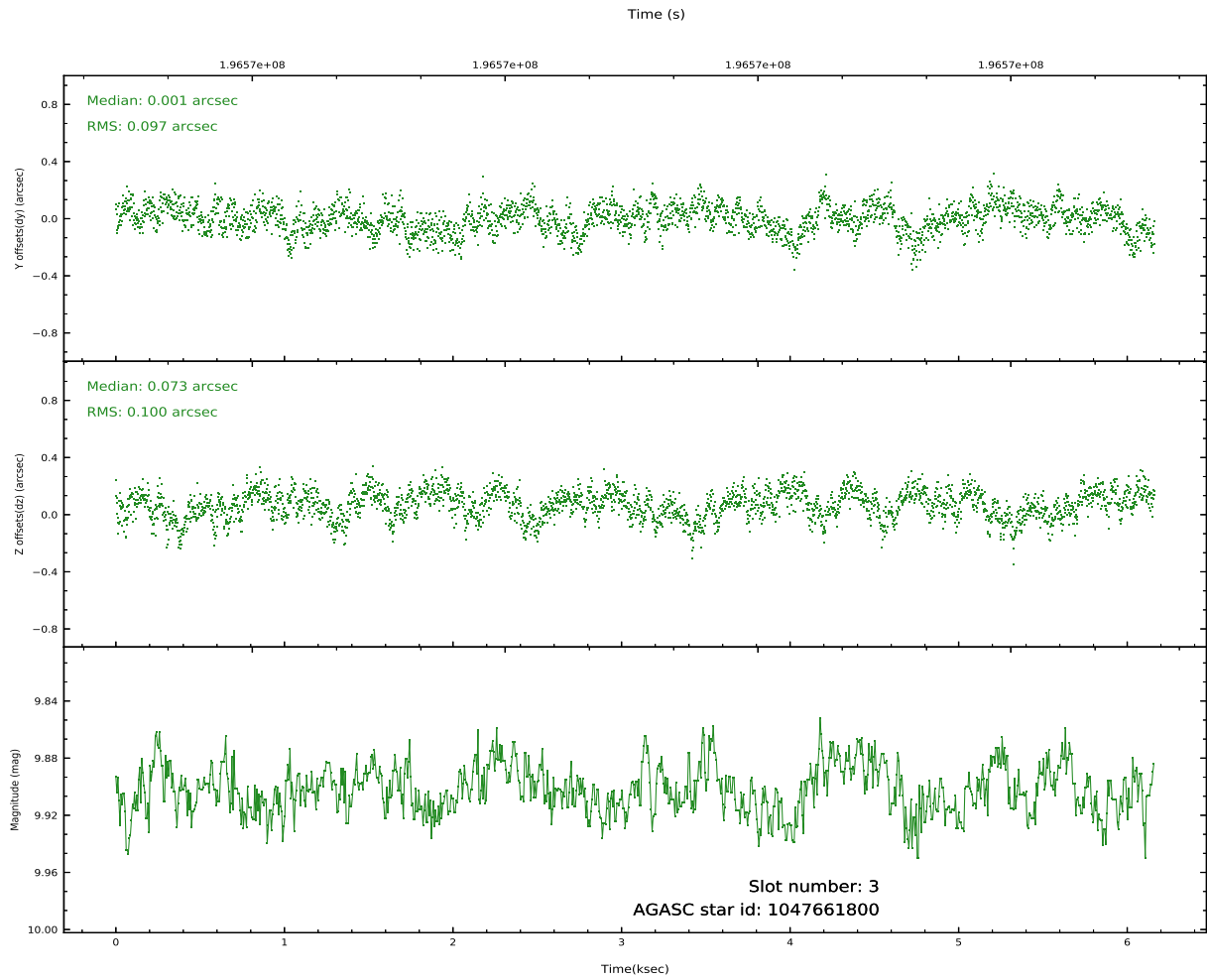
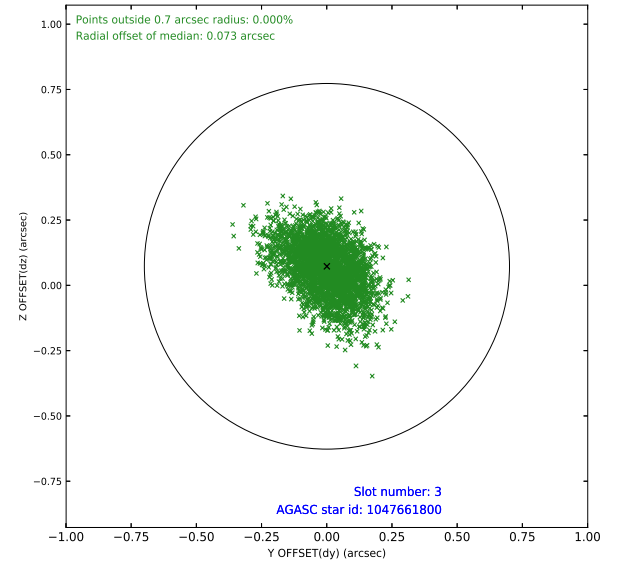
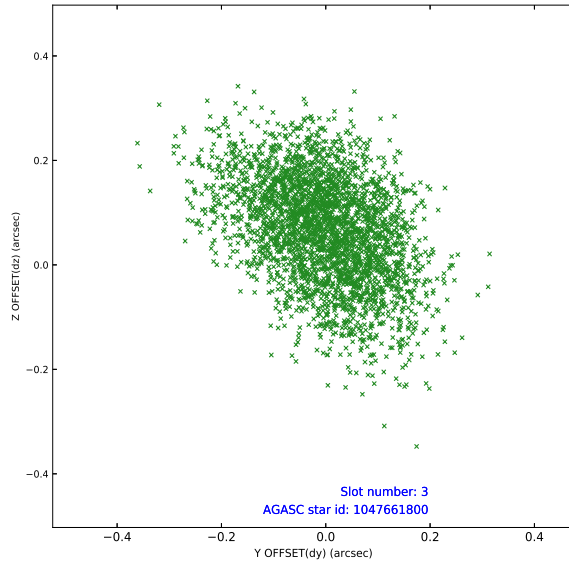


Slot Statistics

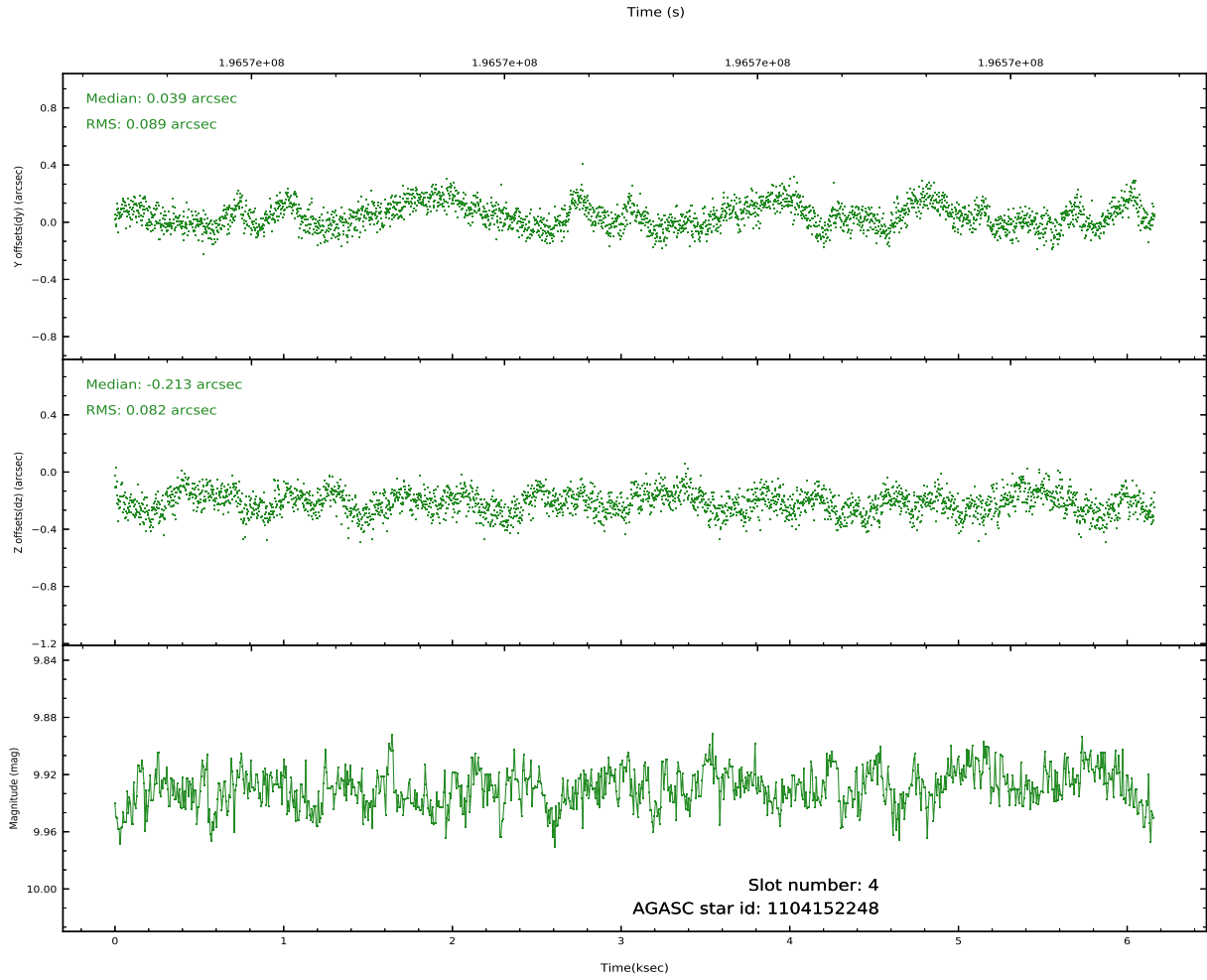
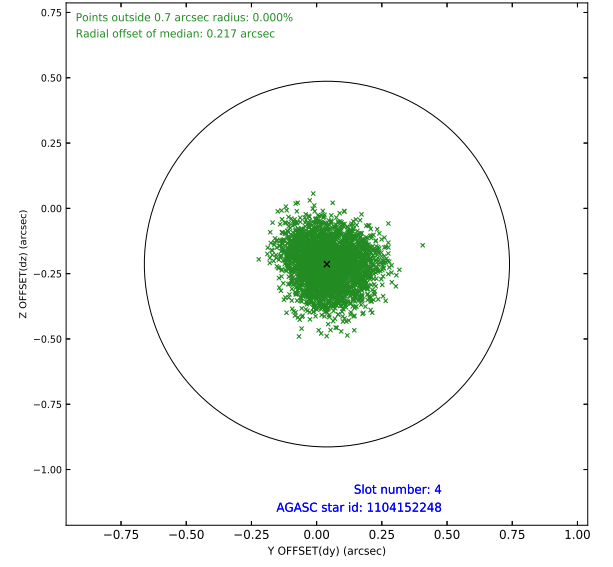
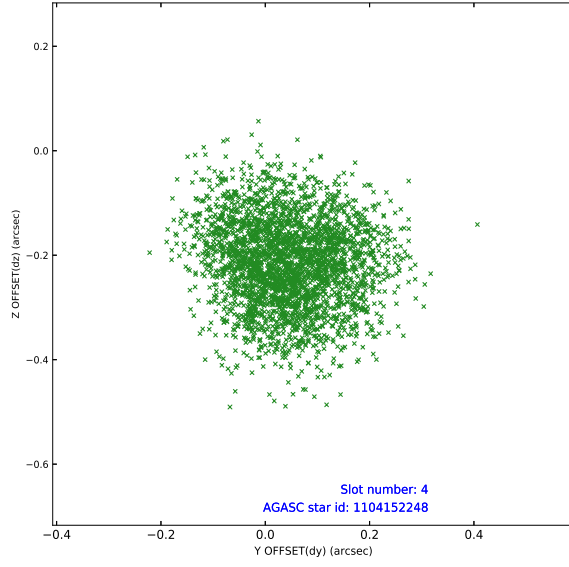
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|------------|-------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.10 | 1502 | 1.000 | -0.073 | -0.049 | 0.008 | 0.013 | 0.000000 | 0.000000 | -759.98 | -1731 |
| 1 | FID | | ACIS-S-4 | 7.20 | 1503 | 1.000 | 0.132 | 0.049 | 0.005 | 0.010 | 0.000000 | 0.000000 | 2153.00 | 176 |
| 2 | FID | | ACIS-S-5 | 7.23 | 1504 | 1.000 | -0.090 | 0.010 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1811.67 | 170 |
| 3 | GUIDE | used | 1047661800 | 9.90 | 3003 | 1.000 | 0.001 | 0.073 | 0.147 | 0.244 | 325.702038 | -44.957062 | 2160.43 | -1326 |
| 4 | GUIDE | used | 1104152248 | 9.93 | 3006 | 1.000 | 0.039 | -0.213 | 0.132 | 0.204 | 326.185091 | -45.904719 | -1162.44 | 116 |
| 5 | GUIDE | used | 1104157520 | 10.14 | 3002 | 1.000 | -0.027 | -0.096 | 0.170 | 0.286 | 325.060770 | -45.877728 | 825.99 | 2113 |
| 6 | GUIDE | used | 1105865456 | 8.77 | 3004 | 1.000 | -0.148 | 0.183 | 0.094 | 0.146 | 326.540103 | -45.154856 | 180.82 | -2389 |
| 7 | GUIDE | used | 1105865512 | 9.25 | 3005 | 1.000 | 0.133 | 0.058 | 0.093 | 0.149 | 326.700026 | -46.002142 | -2304.56 | -577 |

2.4 Star Slots

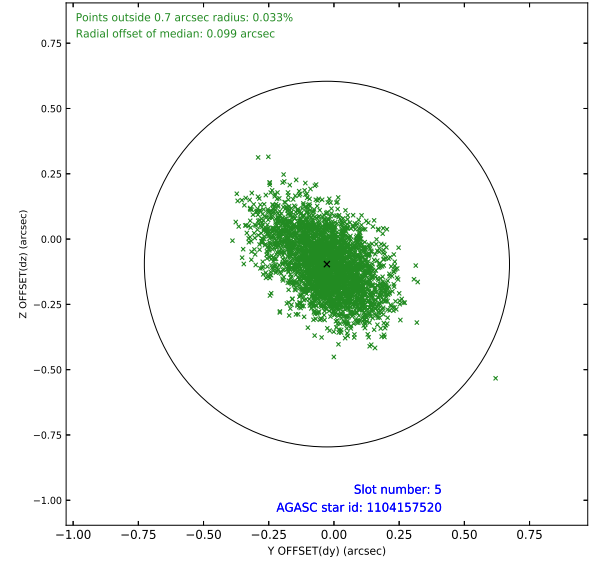
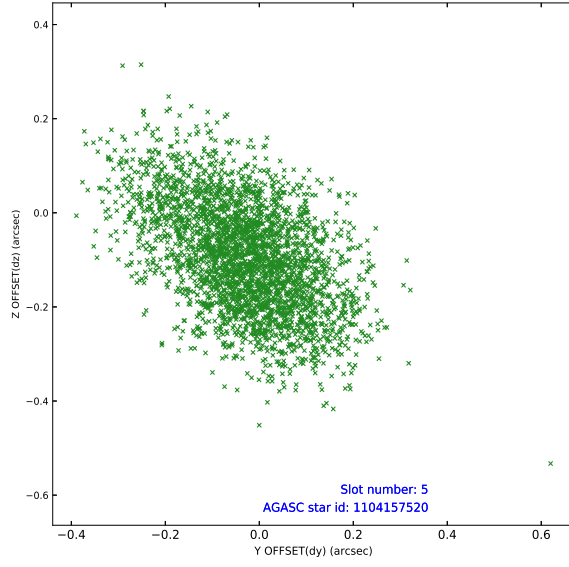
2.4.1 Slot 3



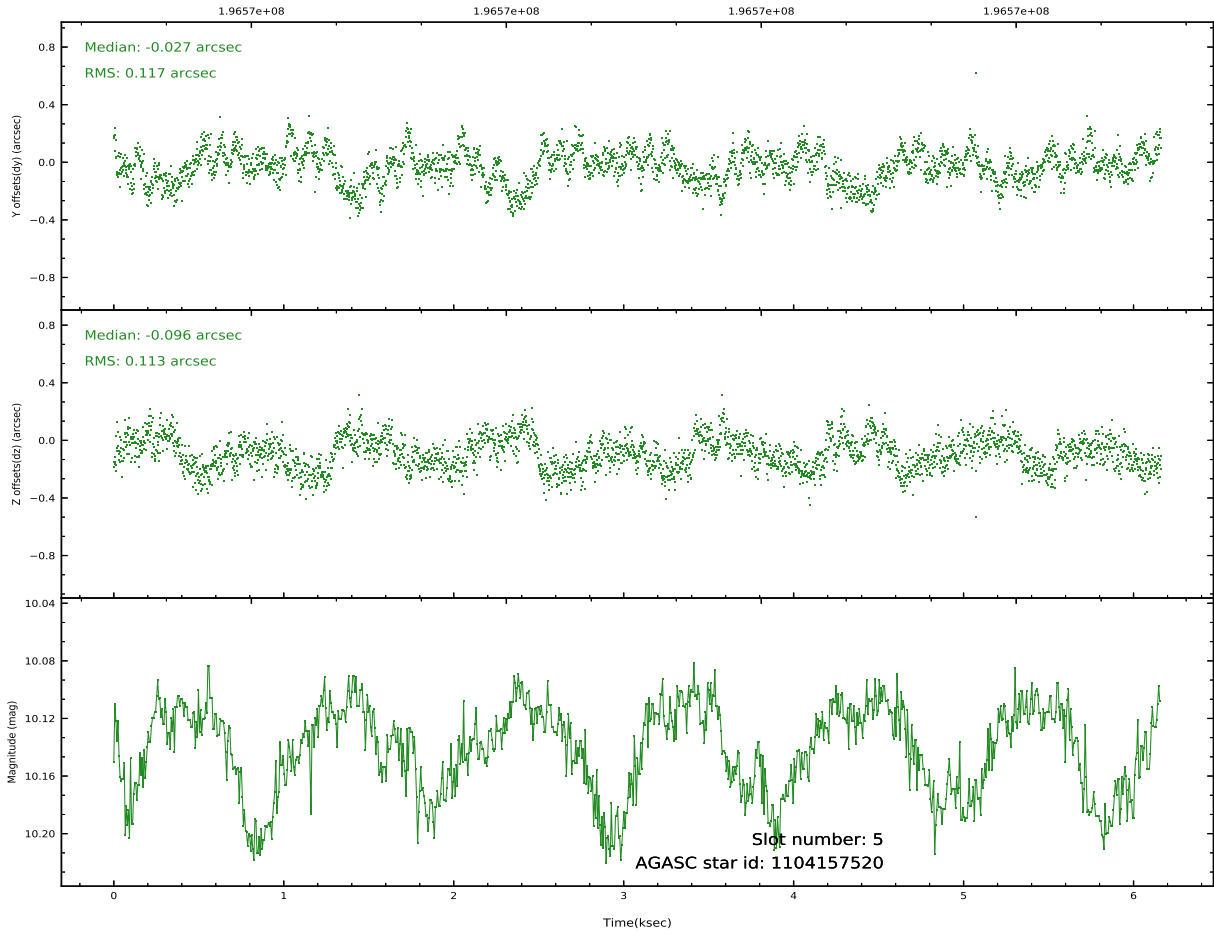
2.4.2 Slot 4



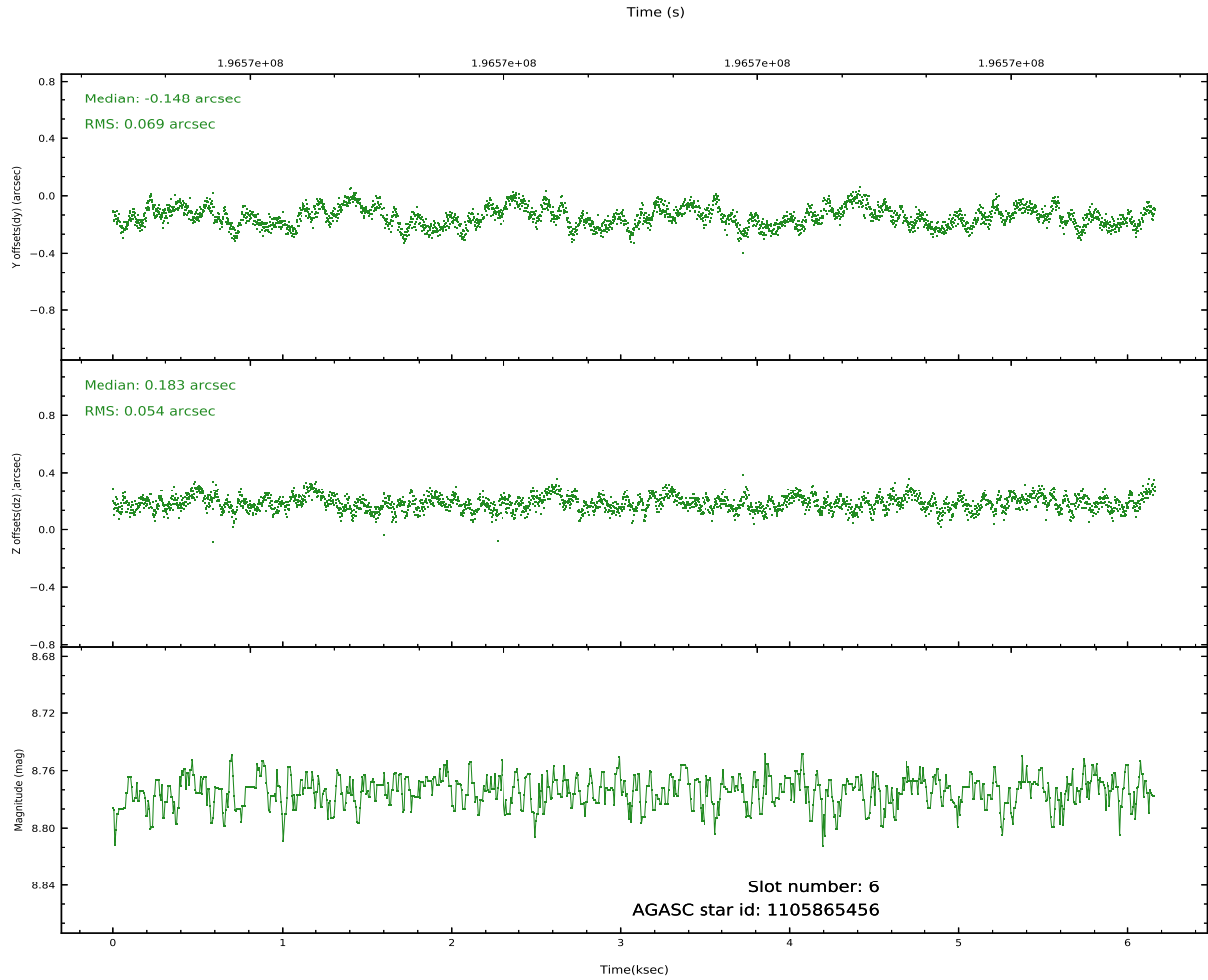
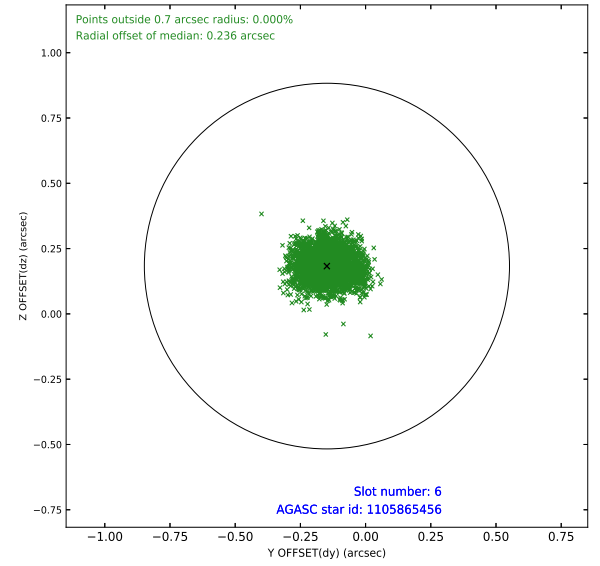
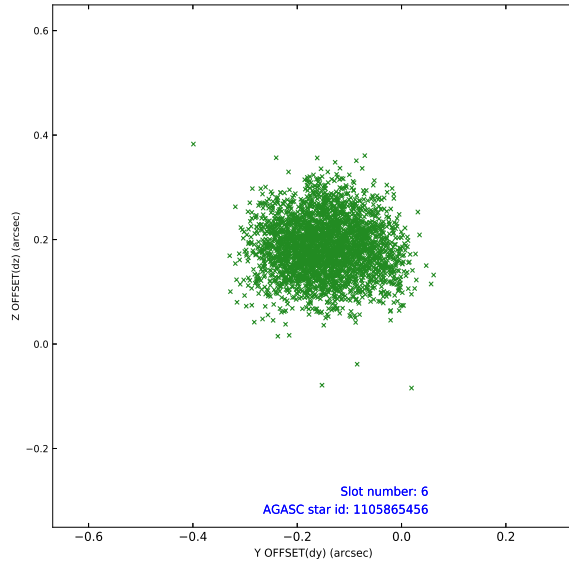
2.4.3 Slot 5



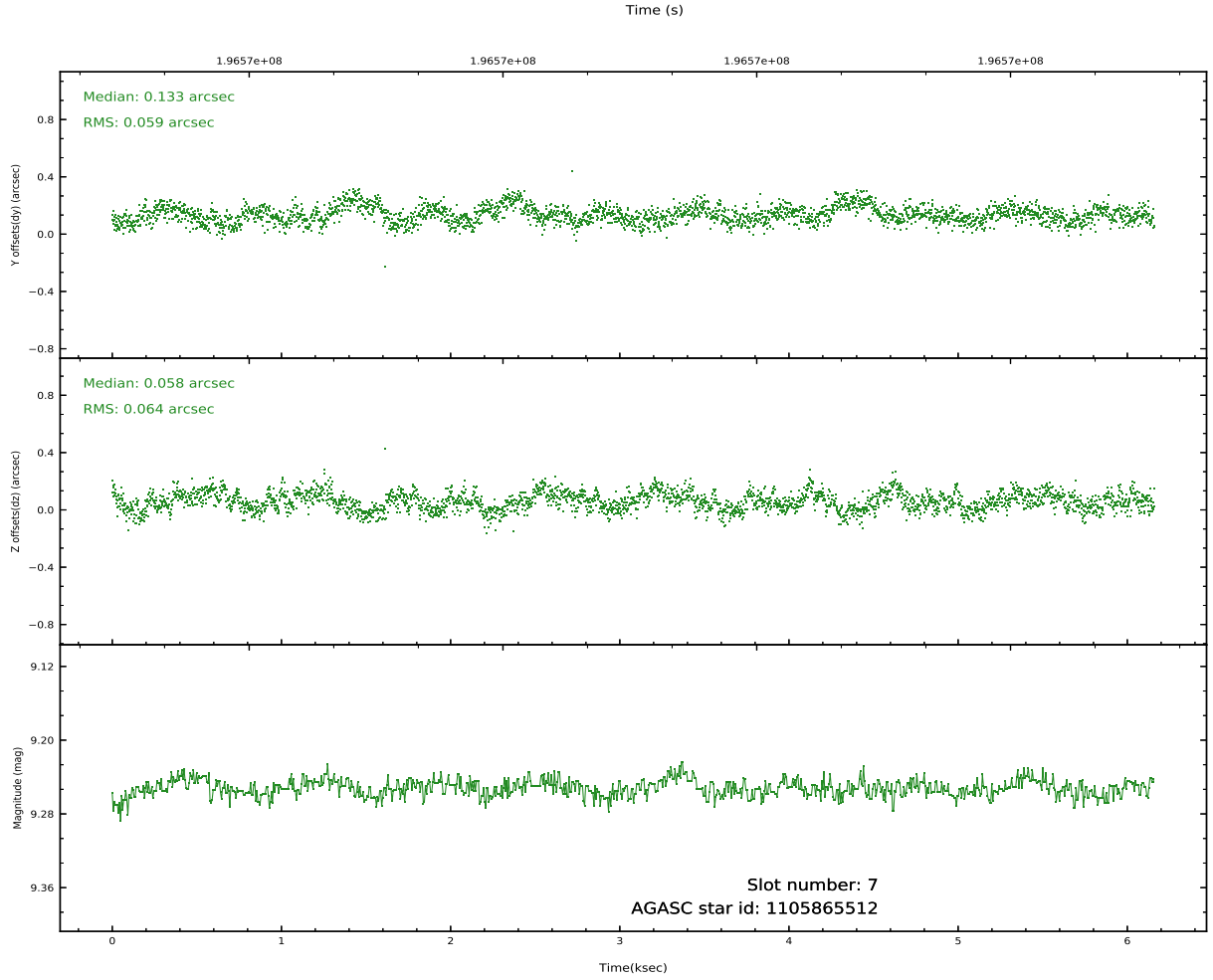
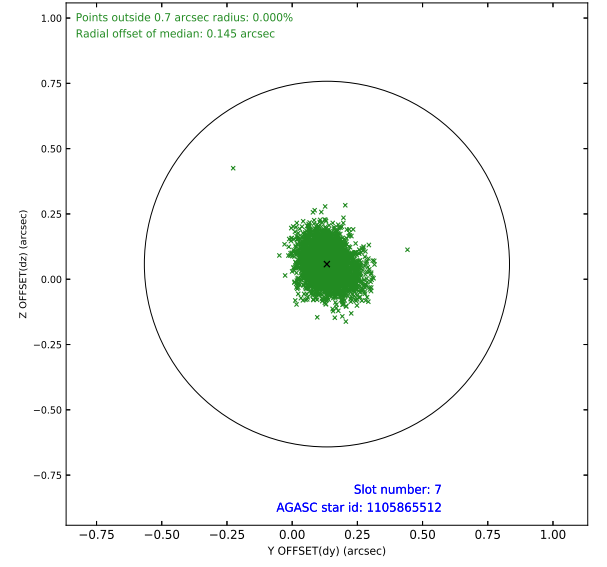
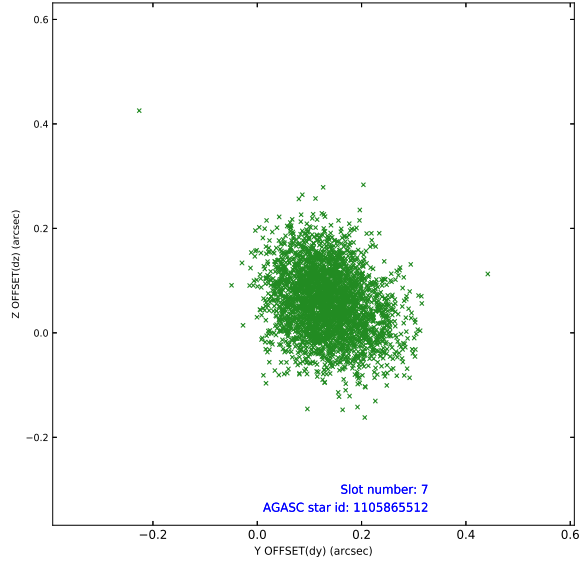
Time (s)



2.4.4 Slot 6

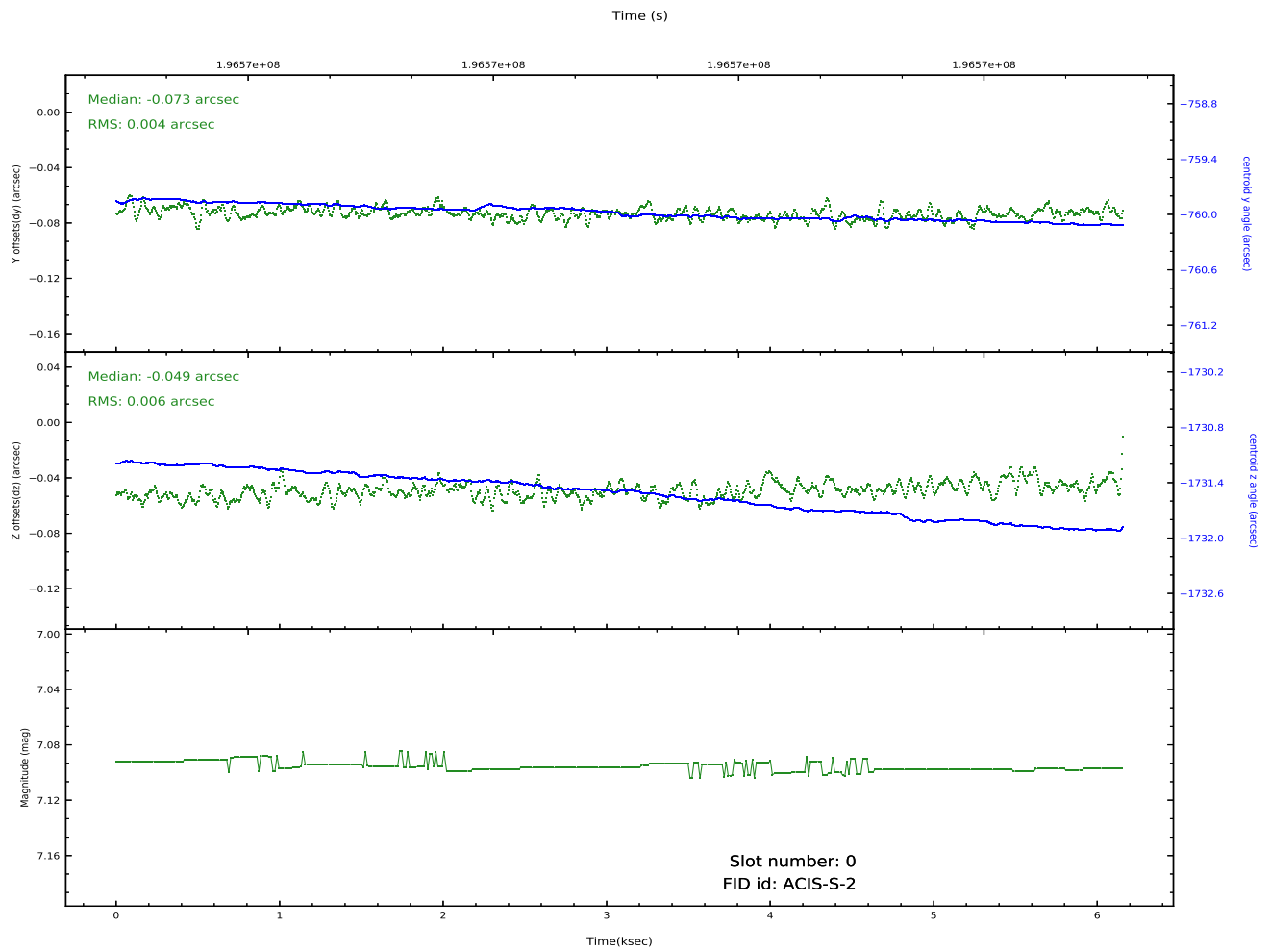
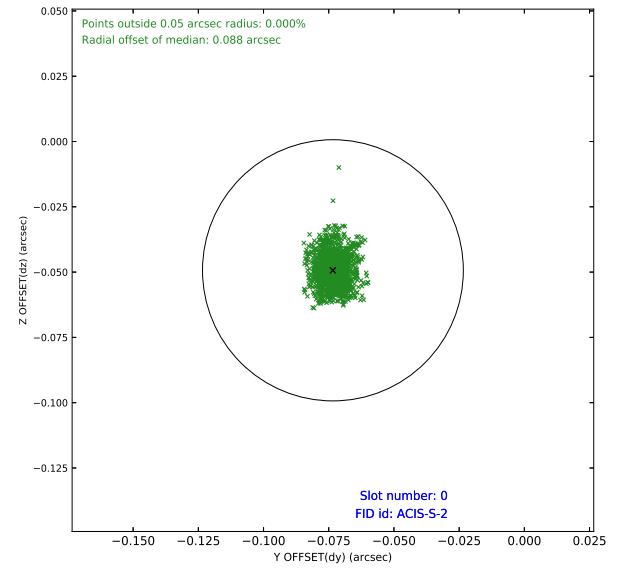
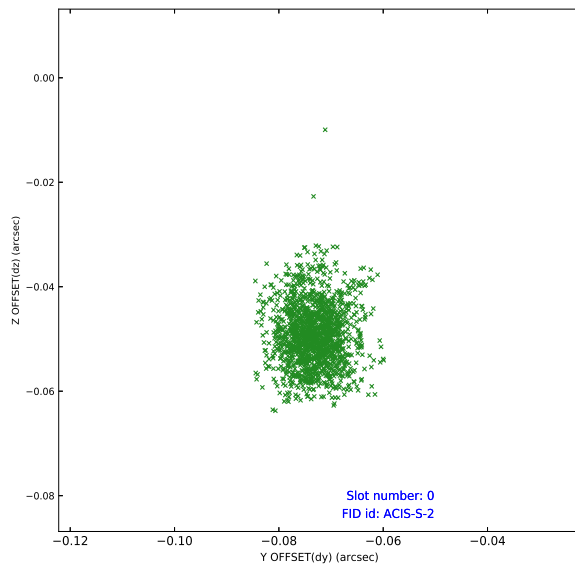


2.4.5 Slot 7

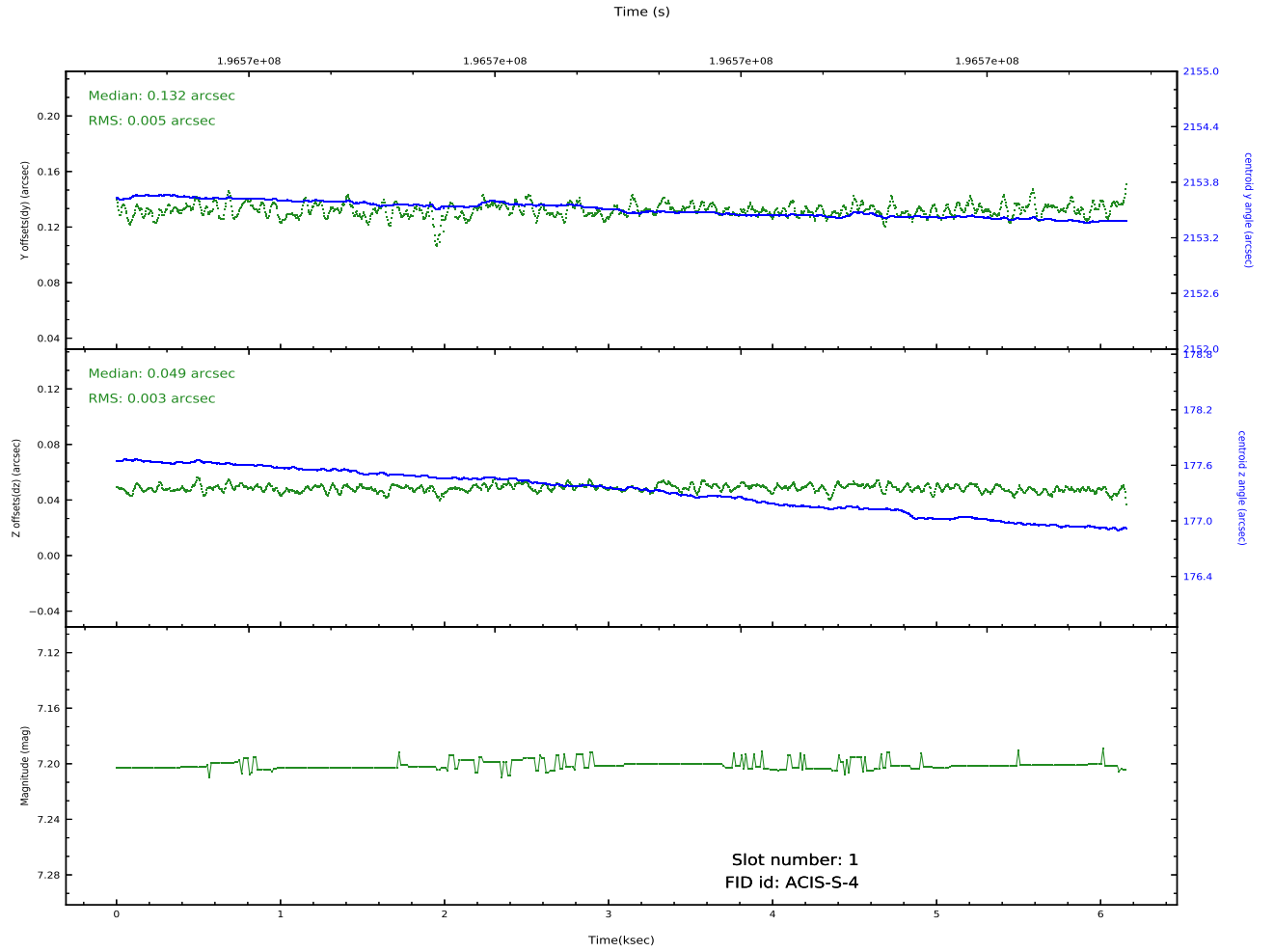
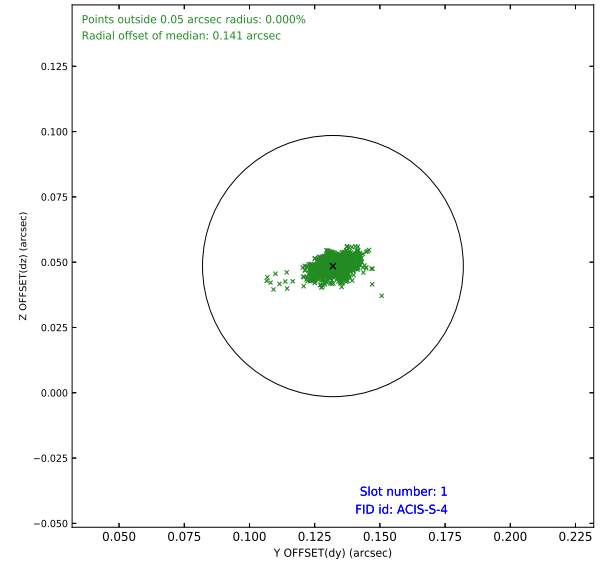
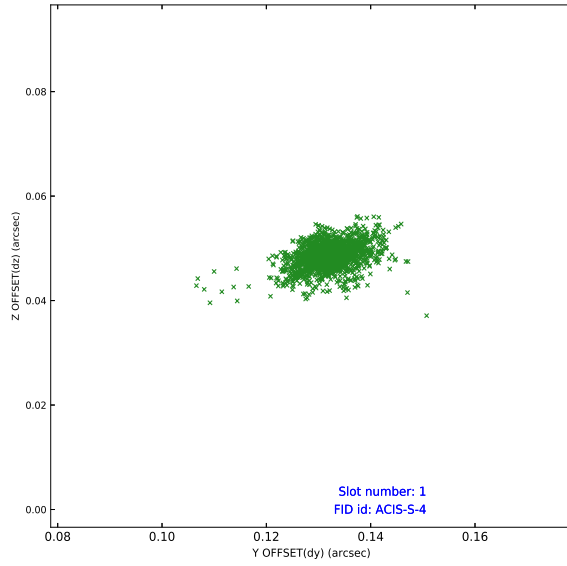


2.5 FID Slots

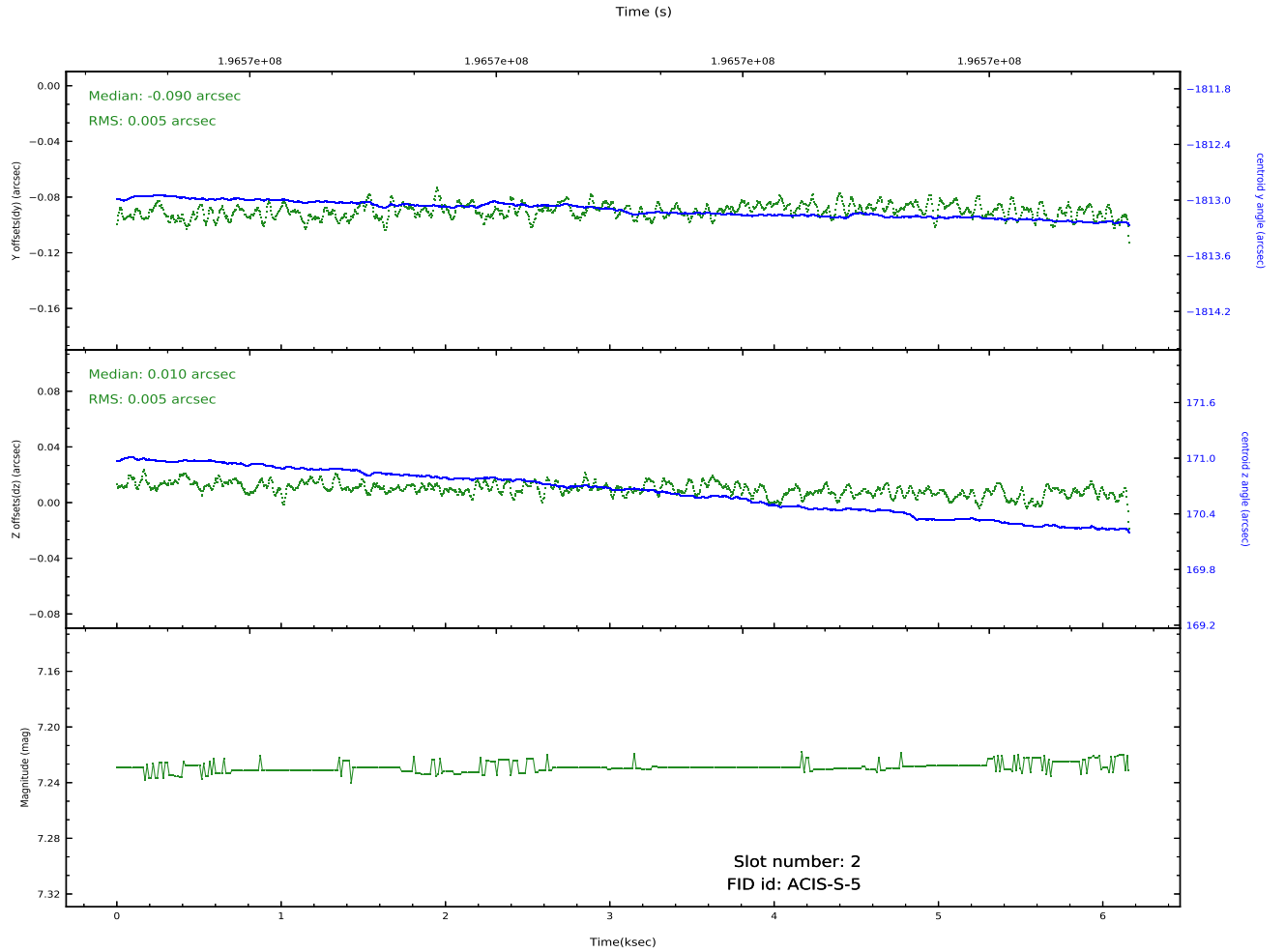
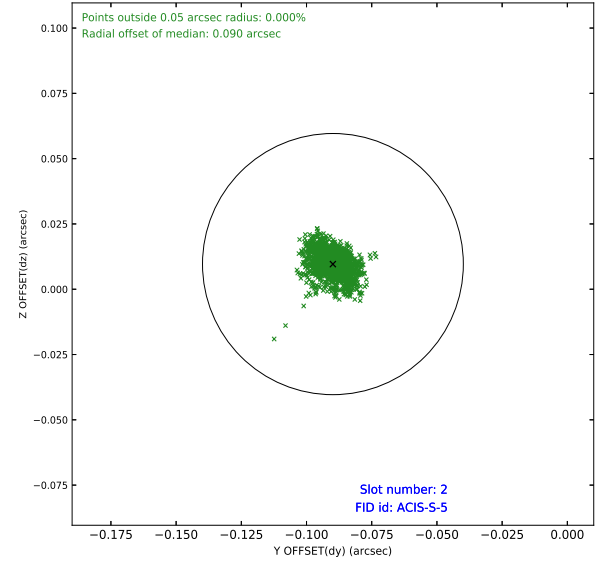
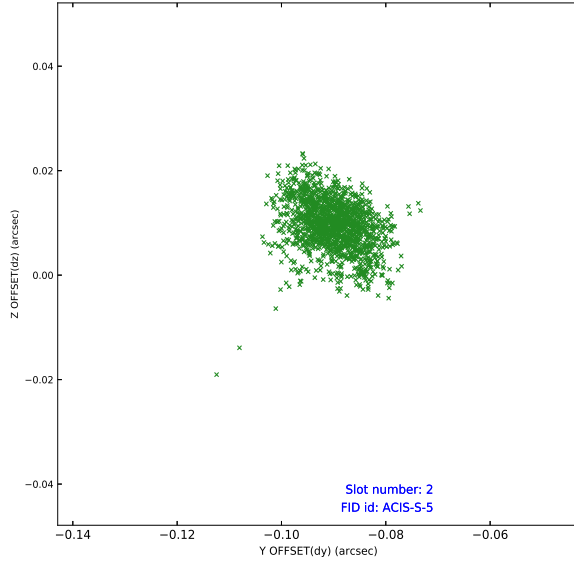
2.5.1 Slot 0



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) | 2020.09.24 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.756 |

A.2 Comments