

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6330 - L2 Version 4
Chandra X-Ray Center

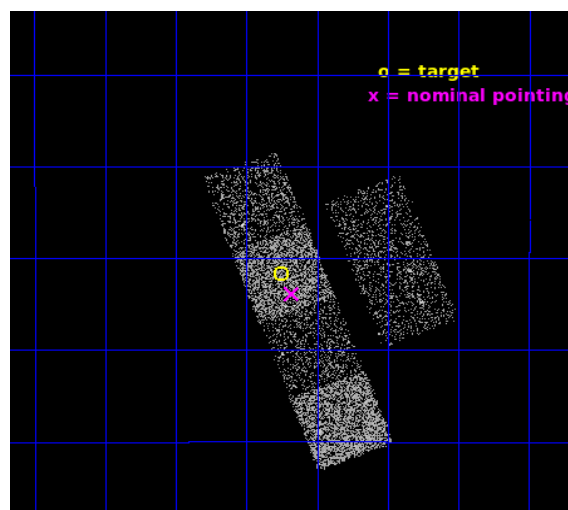
L2 Processing Date : Oct 9 2020

Contents

| | | |
|----------|-------------------------------|-----------|
| 1 | Front | 2 |
| 2 | OBI | 3 |
| 2.1 | OBI | 3 |
| 2.1.1 | Images | 3 |
| 2.1.2 | Bias | 3 |
| 2.1.3 | Parameters | 4 |
| 2.1.4 | Events | 4 |
| 2.2 | Compared Parameters | 5 |
| 2.3 | Aspect | 6 |
| 2.4 | Star Slots | 9 |
| 2.4.1 | Slot 3 | 9 |
| 2.4.2 | Slot 4 | 10 |
| 2.4.3 | Slot 5 | 11 |
| 2.4.4 | Slot 6 | 12 |
| 2.4.5 | Slot 7 | 13 |
| 2.5 | FID Slots | 14 |
| 2.5.1 | Slot 0 | 14 |
| 2.5.2 | Slot 1 | 15 |
| 2.5.3 | Slot 2 | 16 |
| A | Summary | 17 |
| A.1 | Status | 17 |
| A.2 | Comments | 17 |

1 Front

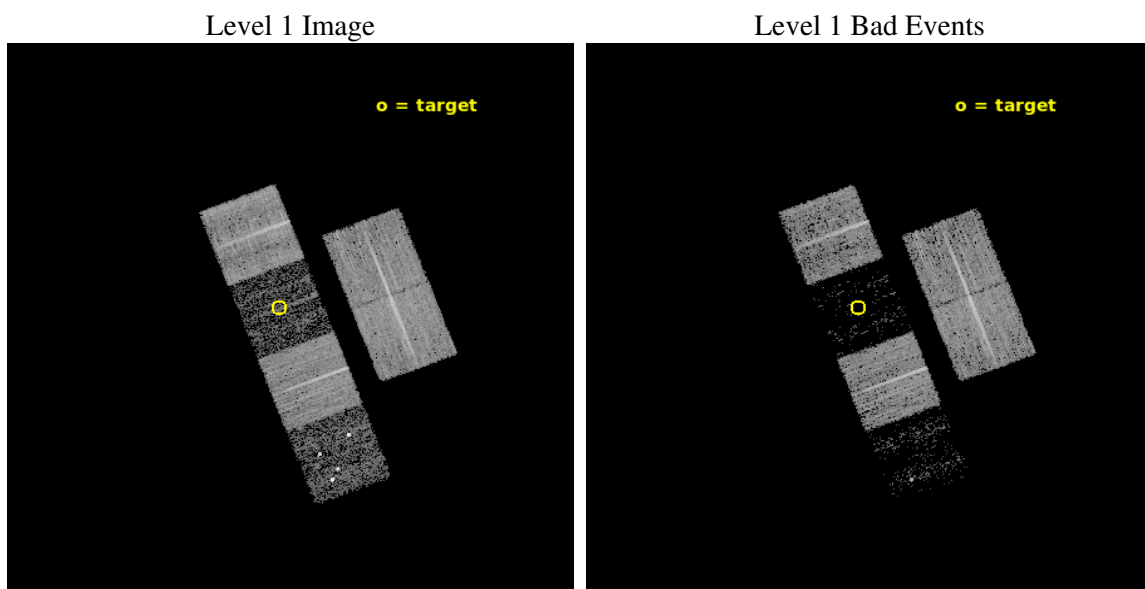
| | | |
|----------|--|---|
| seq_num | 100055 | Sequence number |
| obs_id | 6330 | Observation id |
| title | Comet 9P/Tempel 1 During the Deep Impact Encounter | Proposal title |
| observer | Carey Lisse | Principal investigator |
| object | Comet 9P/Tempel 1 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 205.189068 | Observer's specified target RA [deg] |
| dec_targ | -10.194607 | Observer's specified target Dec [deg] |
| ra_nom | 205.16978130754 | Nominal RA [deg] |
| dec_nom | -10.231071715326 | Nominal Dec [deg] |
| roll_nom | 249.01786287639 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 8076.7999699116 | Sum of GTIs [s] |
| livetime | 7974.5266654275 | Livetime [s] |
| ontime2 | 8073.5589697063 | Sum of GTIs [s] |
| ontime3 | 8076.7999699116 | Sum of GTIs [s] |
| ontime5 | 8076.7999699116 | Sum of GTIs [s] |
| ontime6 | 8076.7999699116 | Sum of GTIs [s] |
| ontime7 | 8076.7999699116 | Sum of GTIs [s] |
| ontime8 | 8076.7999699116 | Sum of GTIs [s] |
| l2events | 11547 | Number of level 2 events |



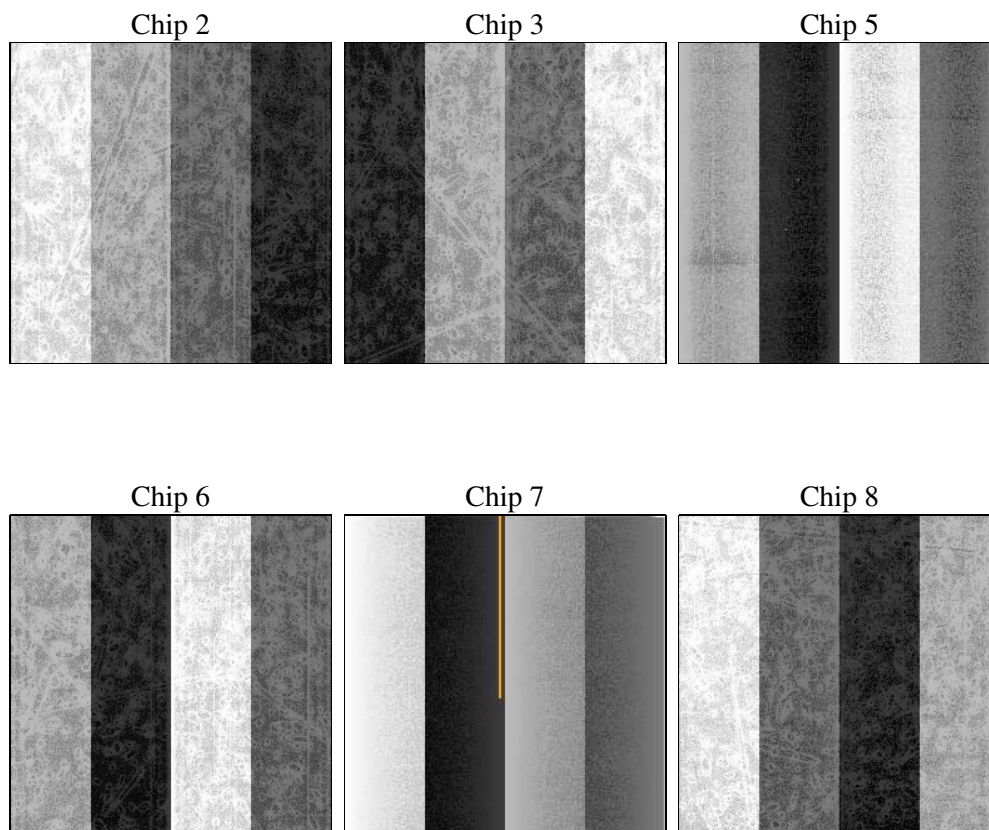
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 7899.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 8076.7999699116 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime2 | 8073.5589697063 | Sum of GTIs [s] |
| date | 2020-10-09T07:57:55 | Date and time of file creation | ontime3 | 8076.7999699116 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 8076.7999699116 | Sum of GTIs [s] |
| | | | ontime6 | 8076.7999699116 | Sum of GTIs [s] |
| | | | ontime7 | 8076.7999699116 | Sum of GTIs [s] |
| | | | ontime8 | 8076.7999699116 | Sum of GTIs [s] |
| | | | l1events | 205439 | Number of level 1 events |

2.1.4 Events

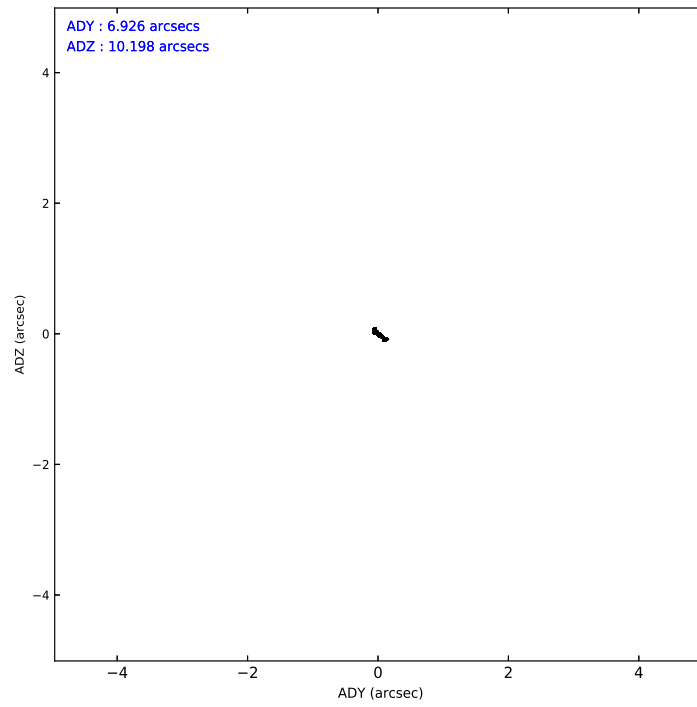
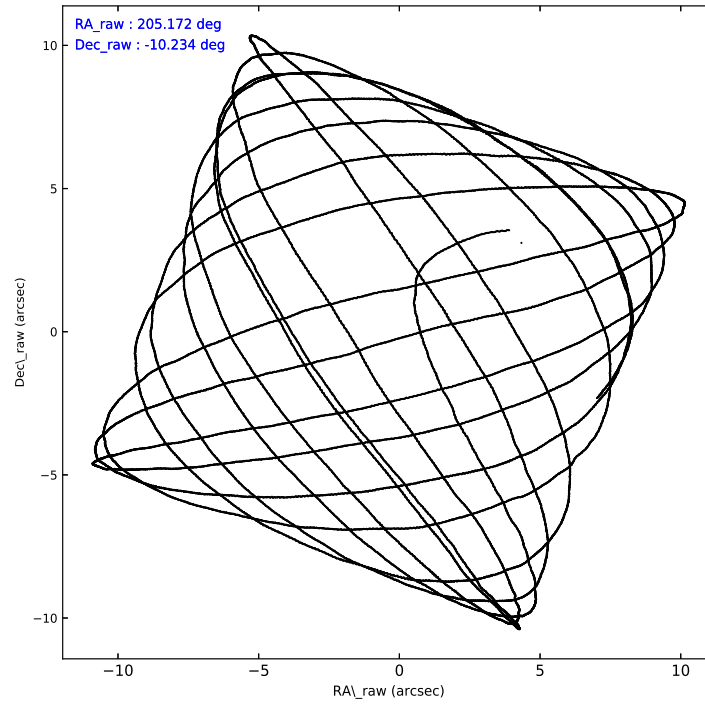
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 50084 | 42792 | 14844 | 43733 | 5890 | 48096 |
| rejected events | 48414 | 41598 | 4108 | 42153 | 2109 | 37829 |
| rejected % | 96% | 97% | 27% | 96% | 35% | 78% |

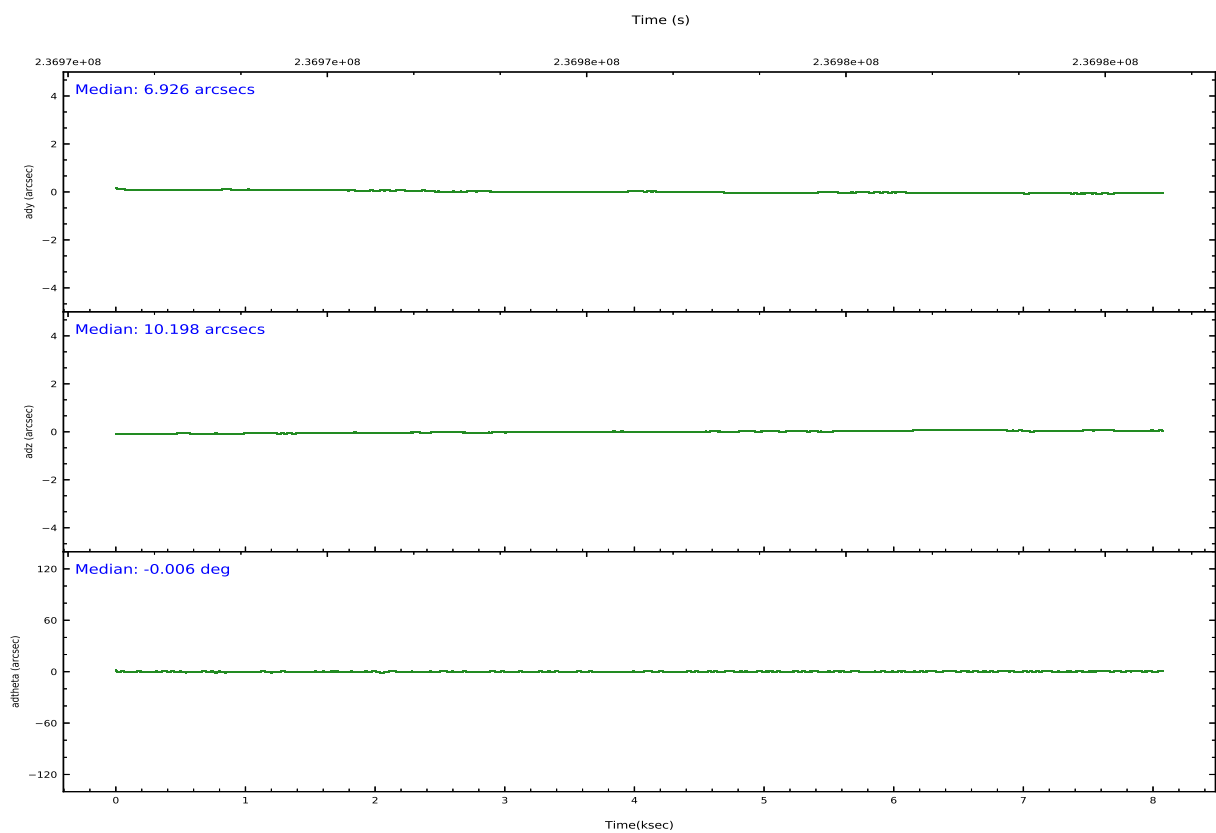
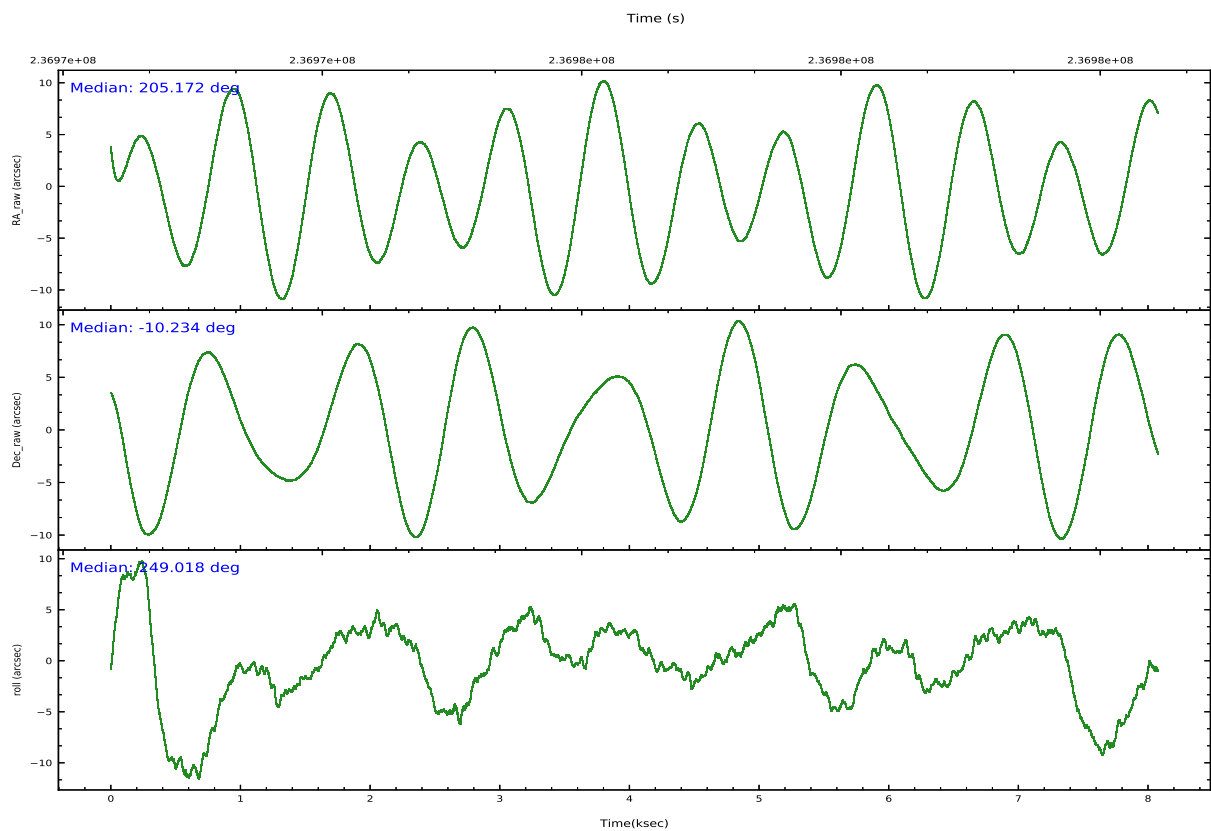
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 865 | 677 | 5655 | 922 | 1182 | 3320 |
| | 1% | 1% | 38% | 2% | 20% | 6% |
| grade 1 events | 17 | 9 | 289 | 19 | 27 | 26 |
| | 0% | 0% | 1% | 0% | 0% | 0% |
| grade 2 events | 411 | 167 | 4486 | 324 | 1442 | 2768 |
| | 0% | 0% | 30% | 0% | 24% | 5% |
| grade 3 events | 245 | 257 | 716 | 268 | 677 | 1337 |
| | 0% | 0% | 4% | 0% | 11% | 2% |
| grade 4 events | 284 | 232 | 687 | 272 | 640 | 1270 |
| | 0% | 0% | 4% | 0% | 10% | 2% |
| grade 5 events | 44 | 29 | 465 | 40 | 165 | 254 |
| | 0% | 0% | 3% | 0% | 2% | 0% |
| grade 6 events | 198 | 114 | 613 | 119 | 568 | 3452 |
| | 0% | 0% | 4% | 0% | 9% | 7% |
| grade 7 events | 48020 | 41307 | 1933 | 41769 | 1189 | 35669 |
| | 95% | 96% | 13% | 95% | 20% | 74% |

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 | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 205.167110 | 205.16978130754 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -10.207166 | -10.231071715326 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 248.860769 | 249.01786287639 | [s] Primary exposure time | 0.000000 | 3.2 |
| [s] Window start time (MET) | 236966464.184000 | 236966464.184000 | | | |
| [s] Window stop time (MET) | 237031264.184000 | 237031264.184000 | | | |
| [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) | 236972548.184000 | 236970774.5406 | | | |
| Observation start date | 2005-07-05T17:41:24 | 2005-07-05T17:12:54 | | | |
| [s] Observation end time (MET) | 236980447.184000 | 236980581.22855 | | | |
| Observation end date | 2005-07-05T19:53:03 | 2005-07-05T19:56:21 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



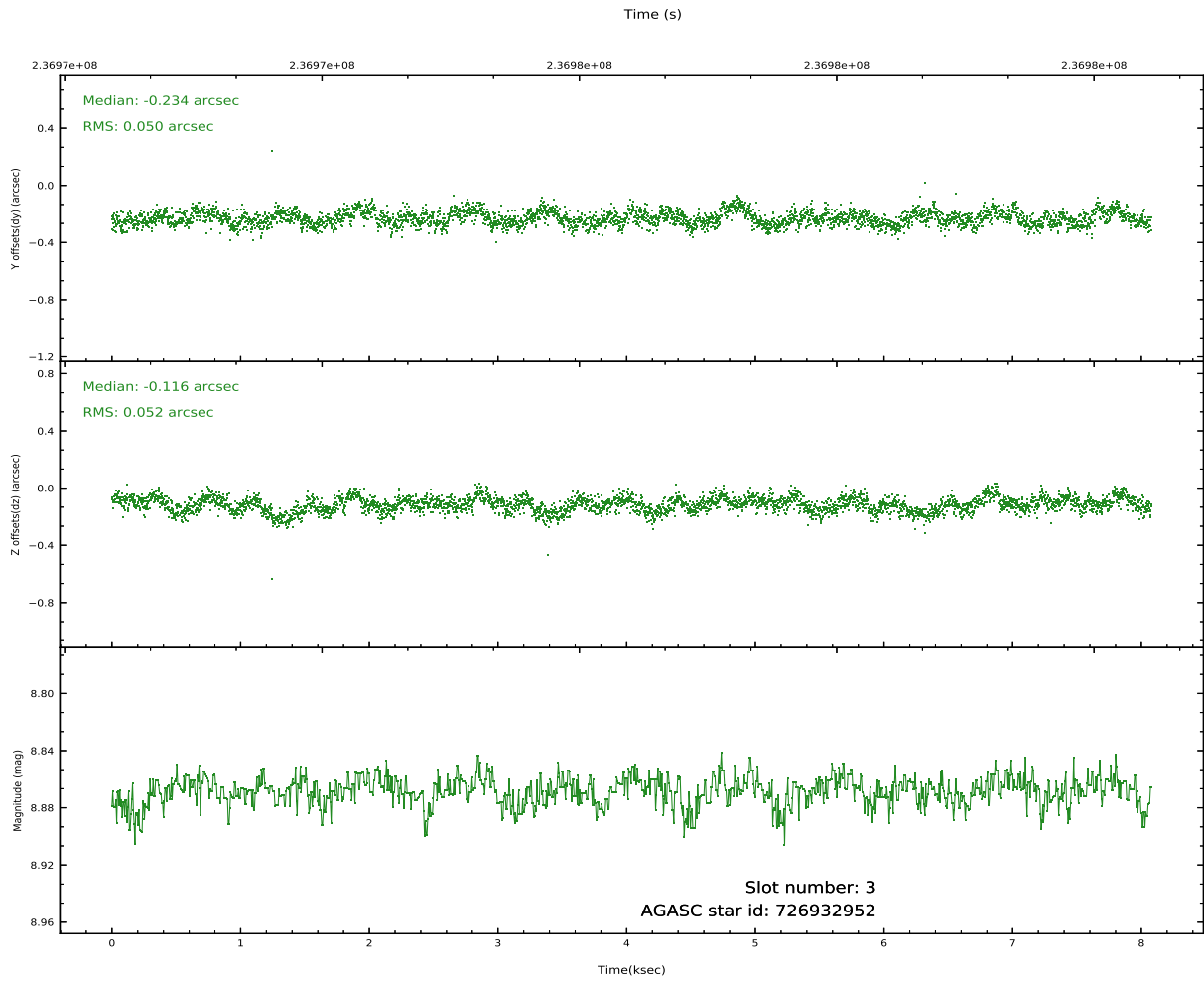
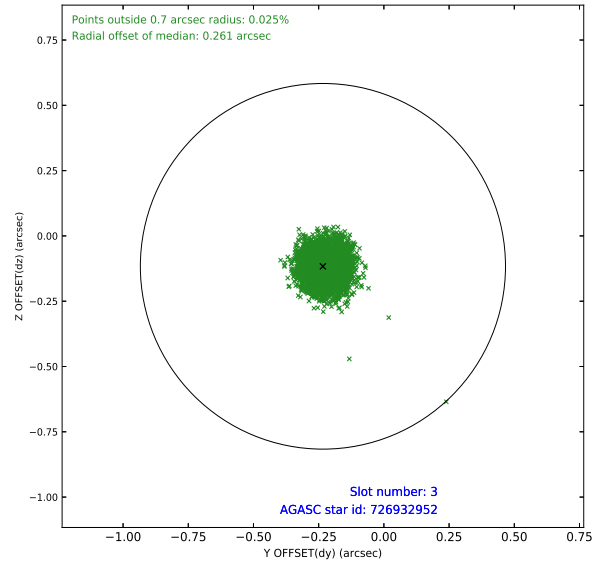
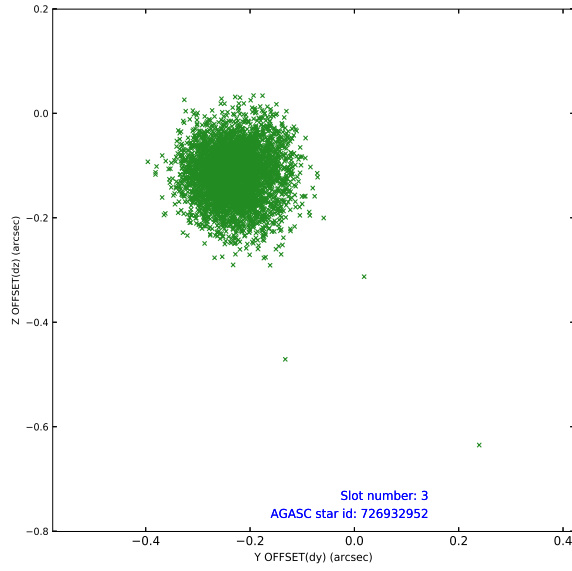


Slot Statistics

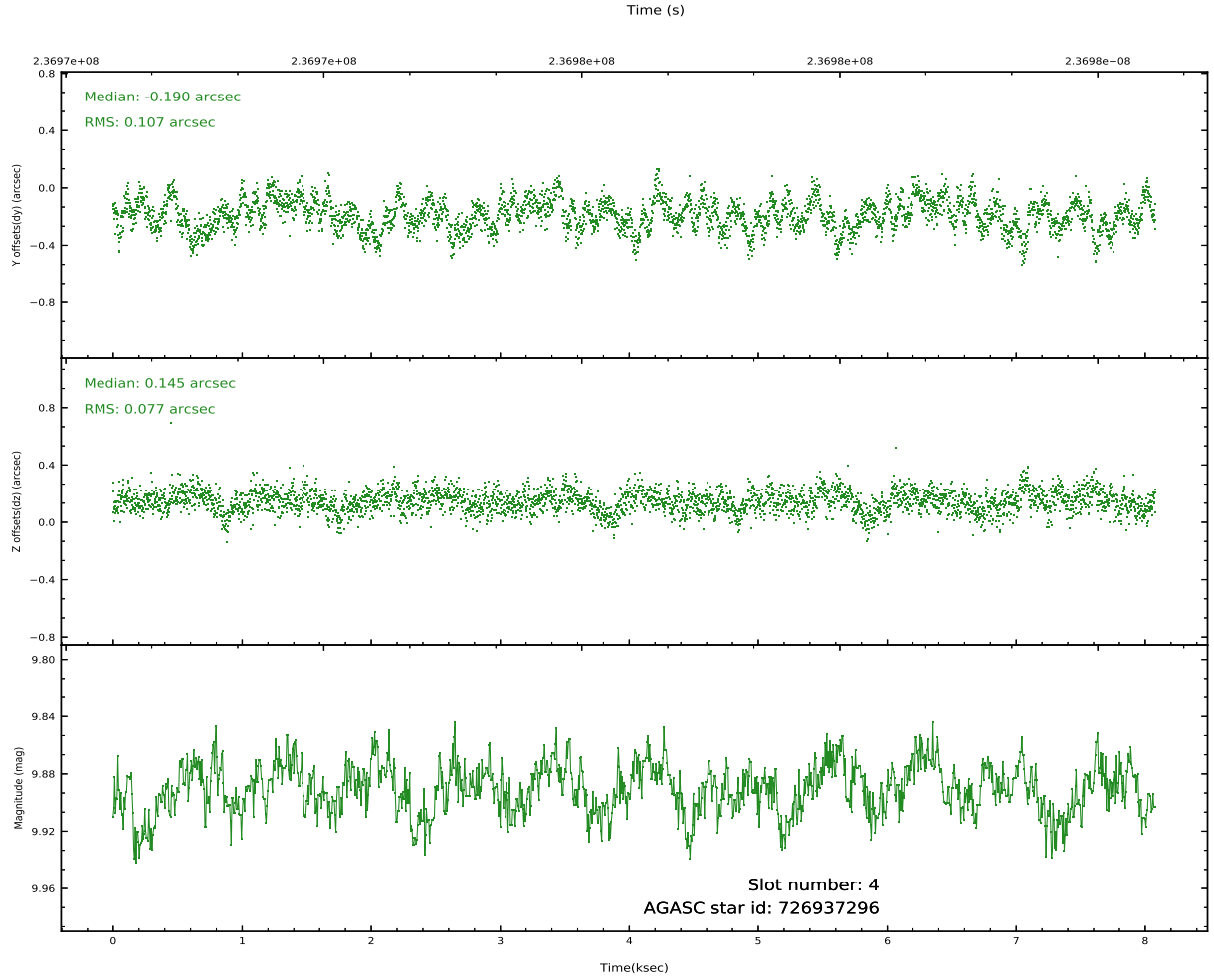
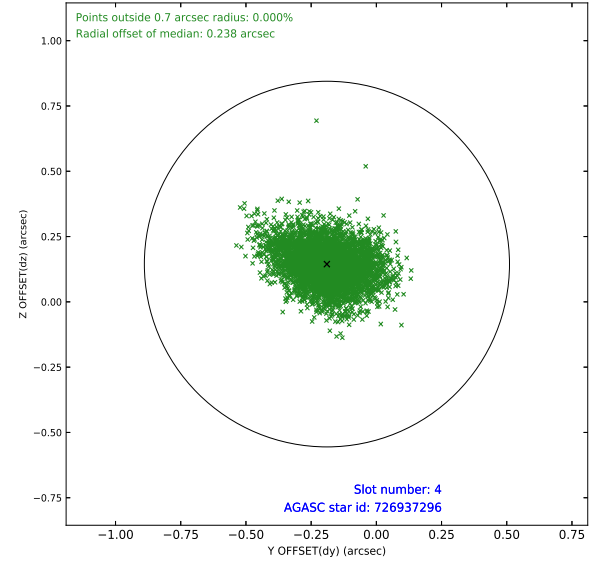
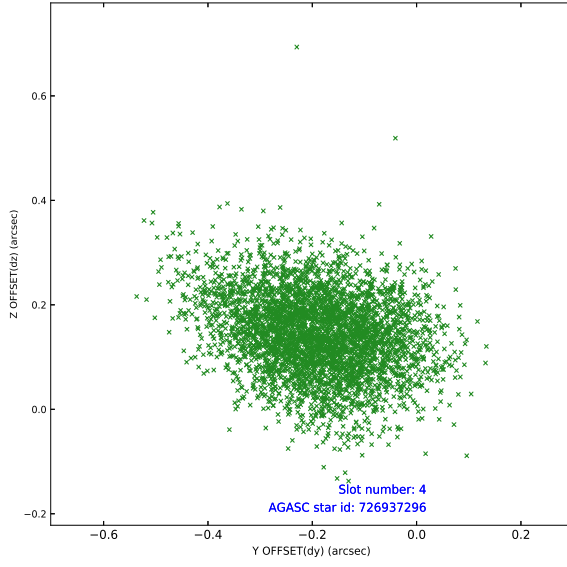
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|-------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.11 | 1971 | 1.000 | -0.097 | -0.066 | 0.007 | 0.011 | 0.000000 | 0.000000 | -759.71 | -1731 |
| 1 | FID | | ACIS-S-4 | 7.21 | 1971 | 1.000 | 0.170 | 0.064 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2153.45 | 176 |
| 2 | FID | | ACIS-S-5 | 7.23 | 1971 | 1.000 | -0.104 | 0.010 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1811.74 | 170 |
| 3 | GUIDE | used | 726932952 | 8.87 | 3941 | 1.000 | -0.234 | -0.116 | 0.076 | 0.122 | 205.485641 | -9.671333 | -2206.42 | 358 |
| 4 | GUIDE | used | 726937296 | 9.89 | 3937 | 1.000 | -0.190 | 0.145 | 0.139 | 0.232 | 205.957534 | -9.863016 | -2164.00 | 2169 |
| 5 | GUIDE | used | 727320264 | 9.55 | 3939 | 1.000 | 0.174 | 0.167 | 0.128 | 0.195 | 205.464326 | -10.871323 | 1851.29 | 1843 |
| 6 | GUIDE | used | 727320712 | 10.43 | 3940 | 1.000 | 0.088 | -0.180 | 0.224 | 0.370 | 204.468965 | -10.254166 | 1053.41 | -2244 |
| 7 | GUIDE | used | 727326472 | 10.08 | 3922 | 1.000 | 0.161 | -0.013 | 0.153 | 0.254 | 205.620857 | -10.902930 | 1759.22 | 2399 |

2.4 Star Slots

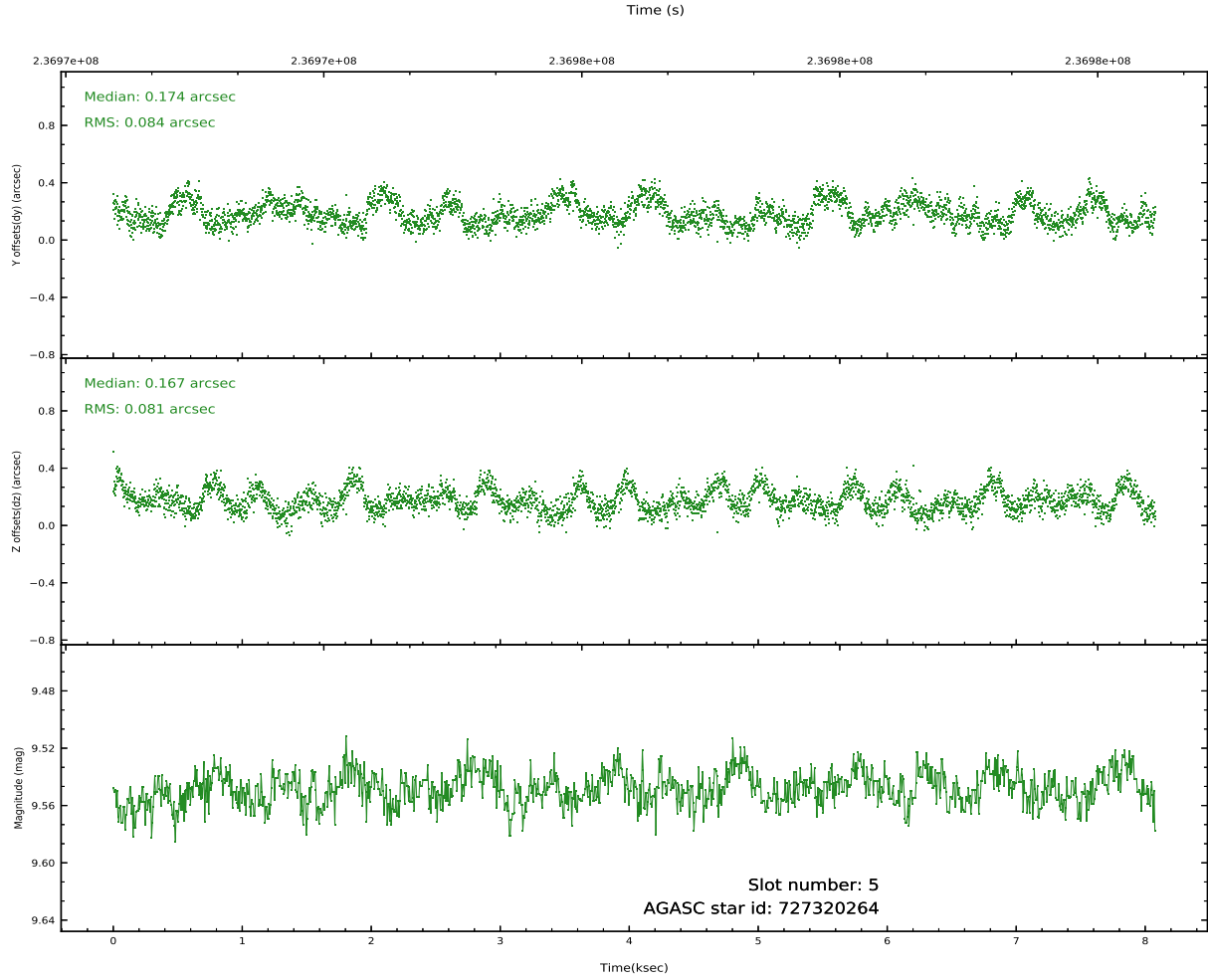
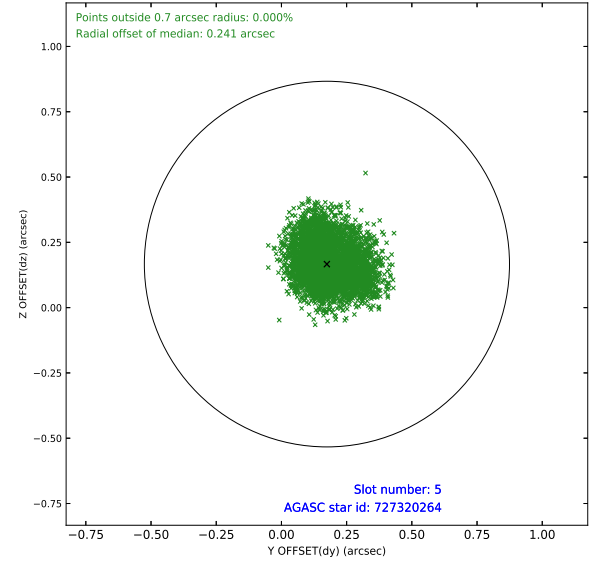
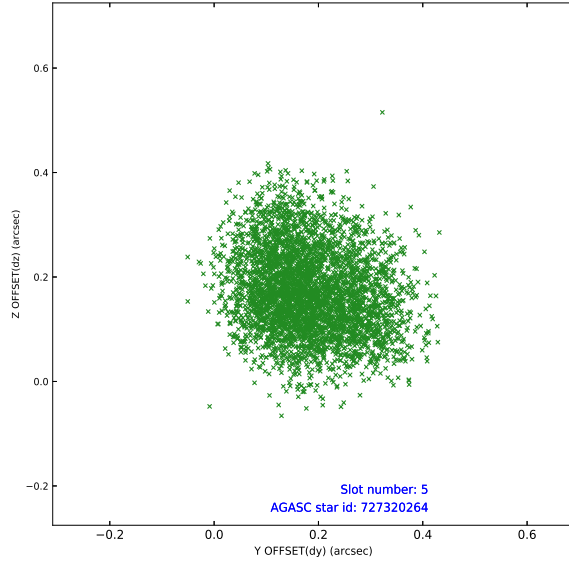
2.4.1 Slot 3



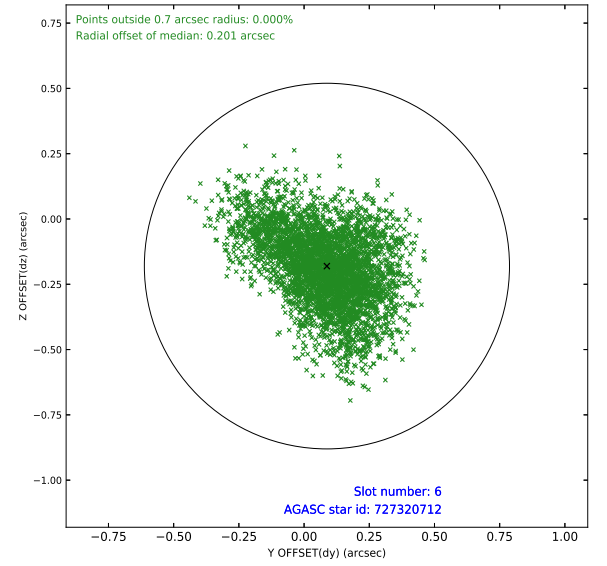
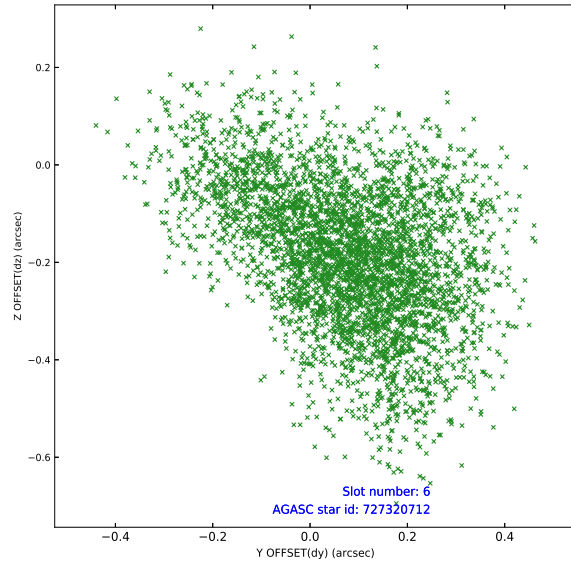
2.4.2 Slot 4



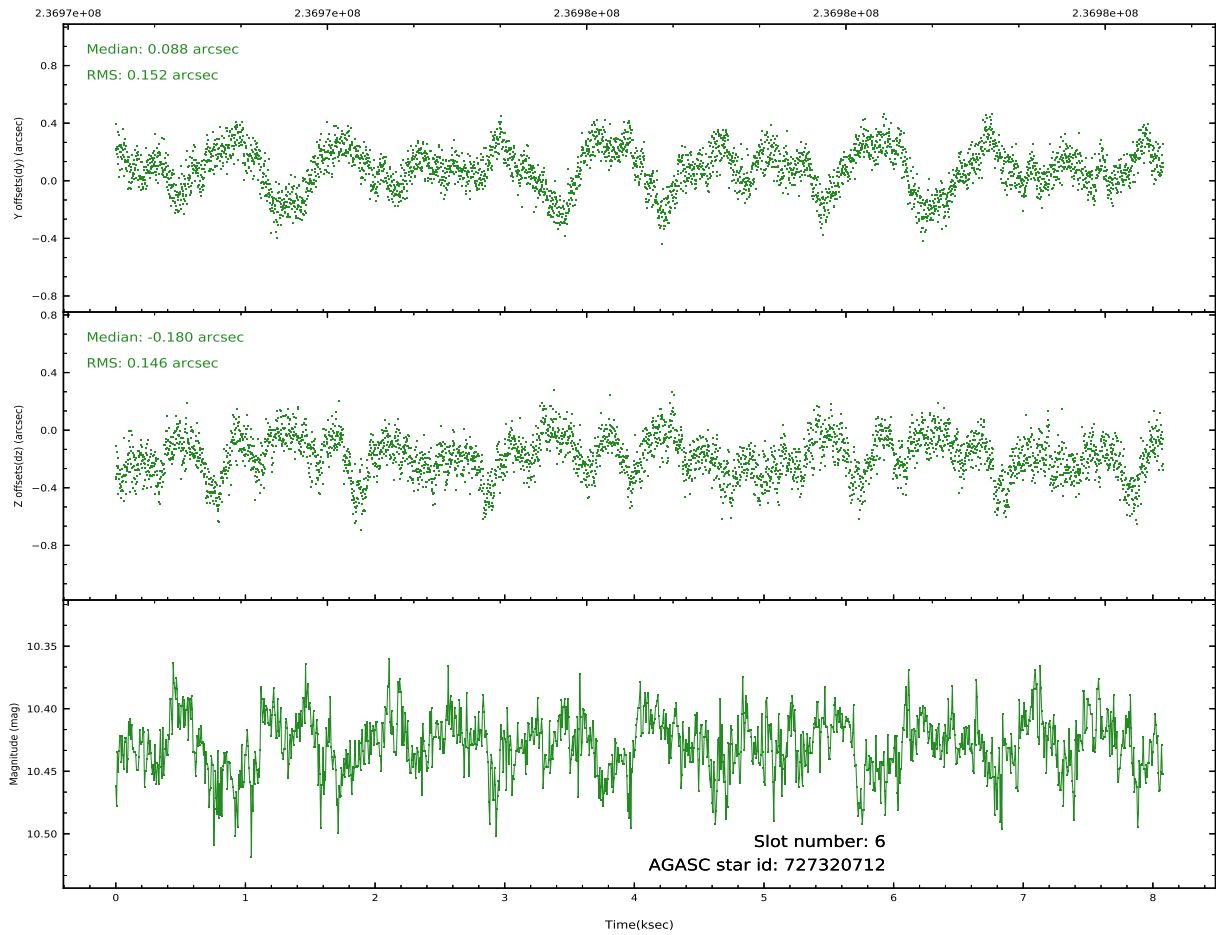
2.4.3 Slot 5



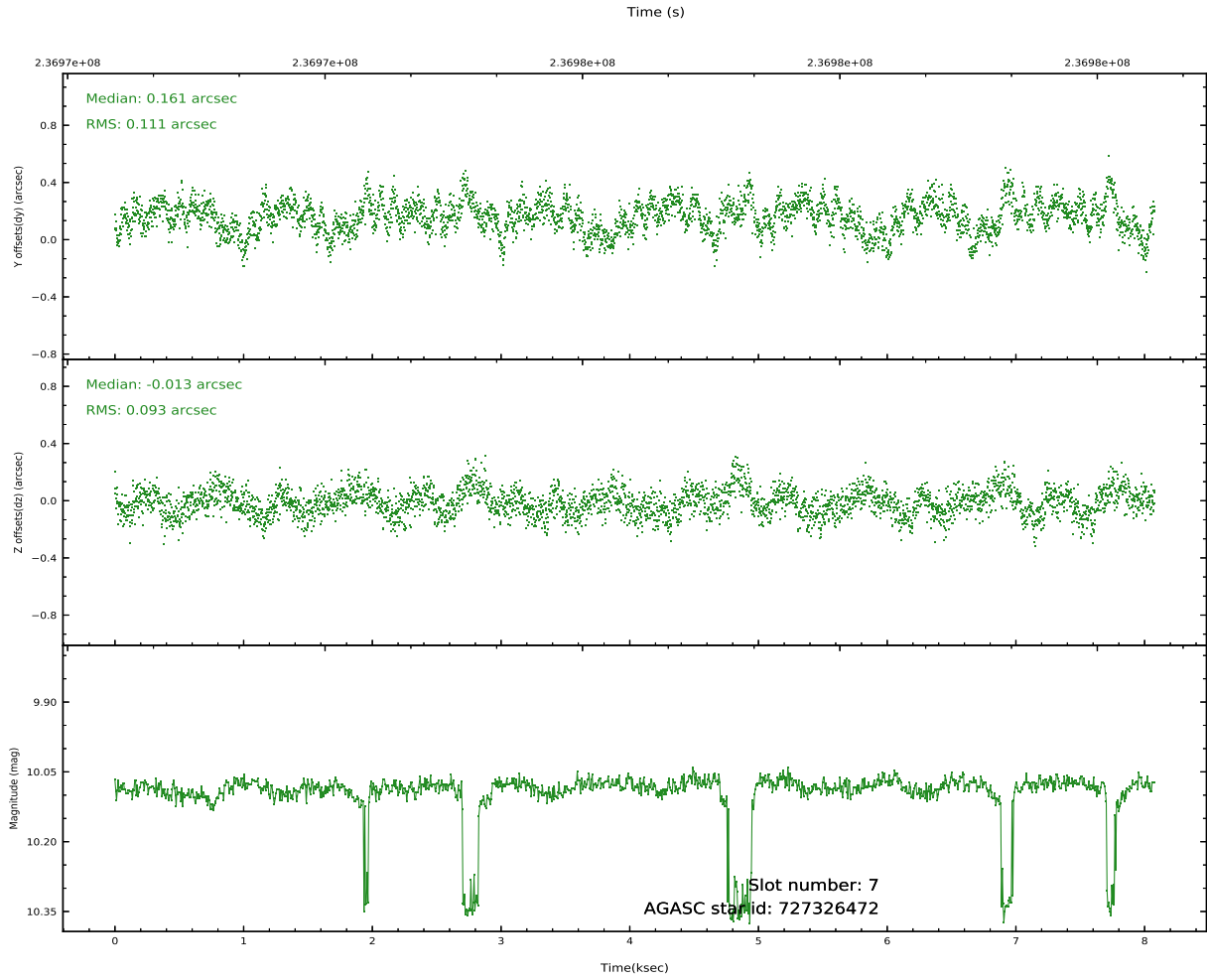
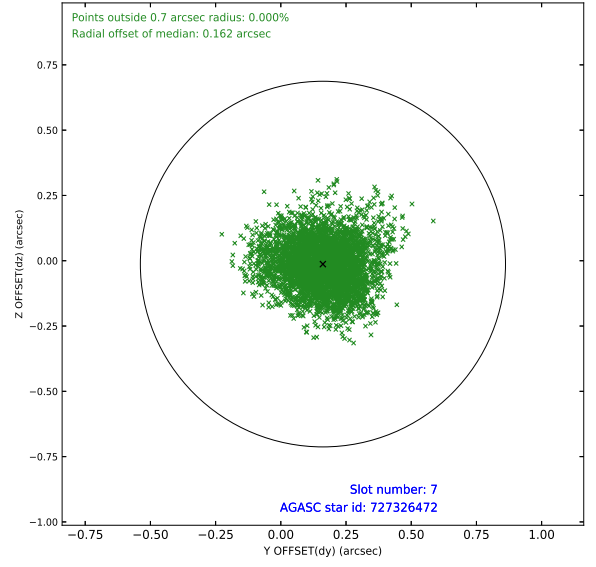
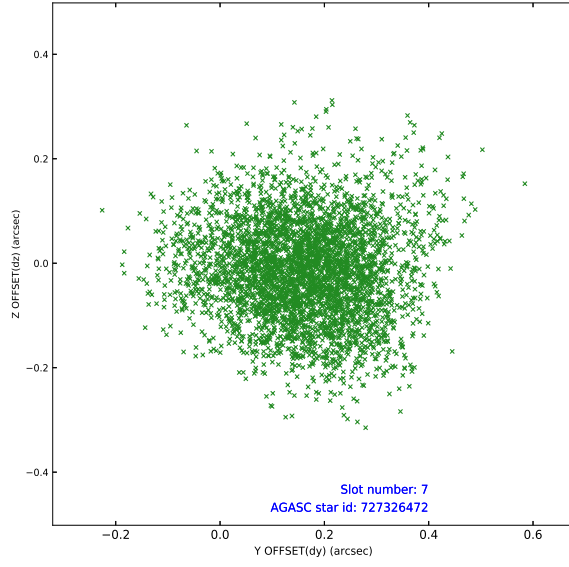
2.4.4 Slot 6



Time (s)

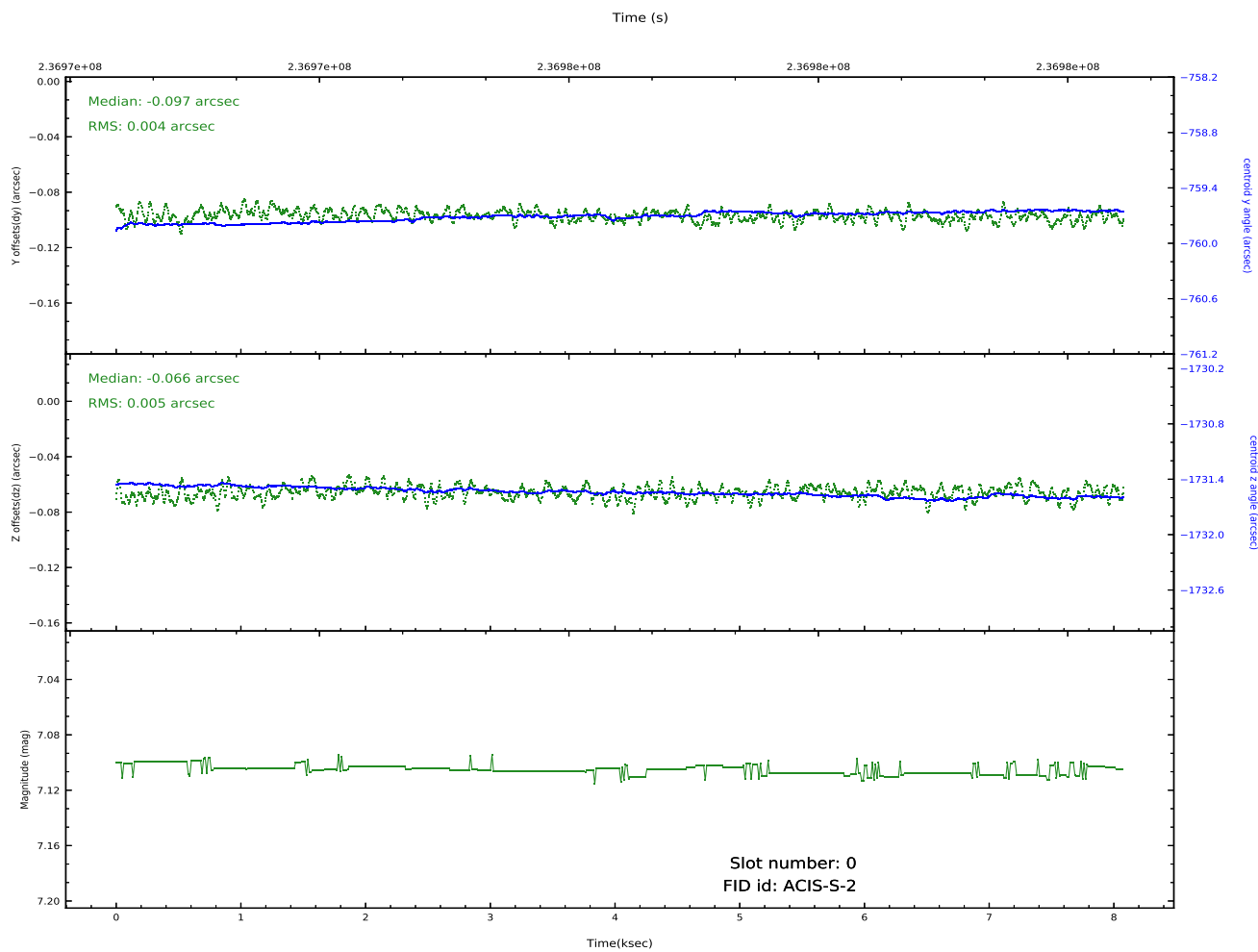
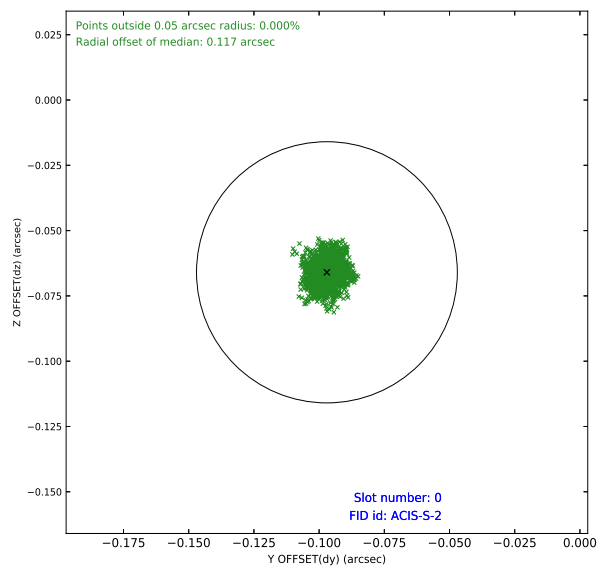
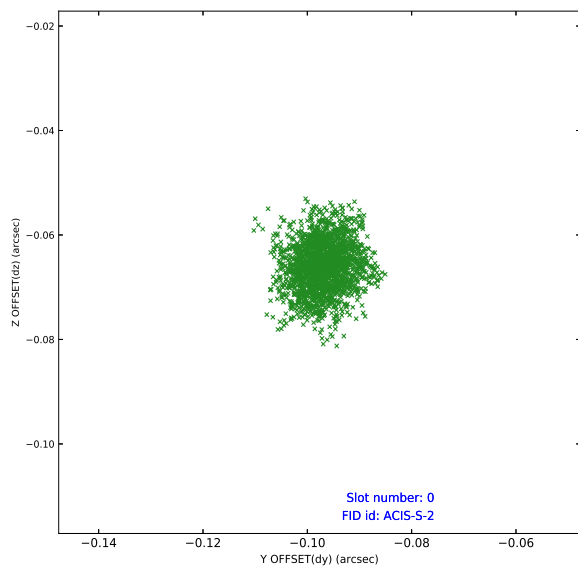


2.4.5 Slot 7

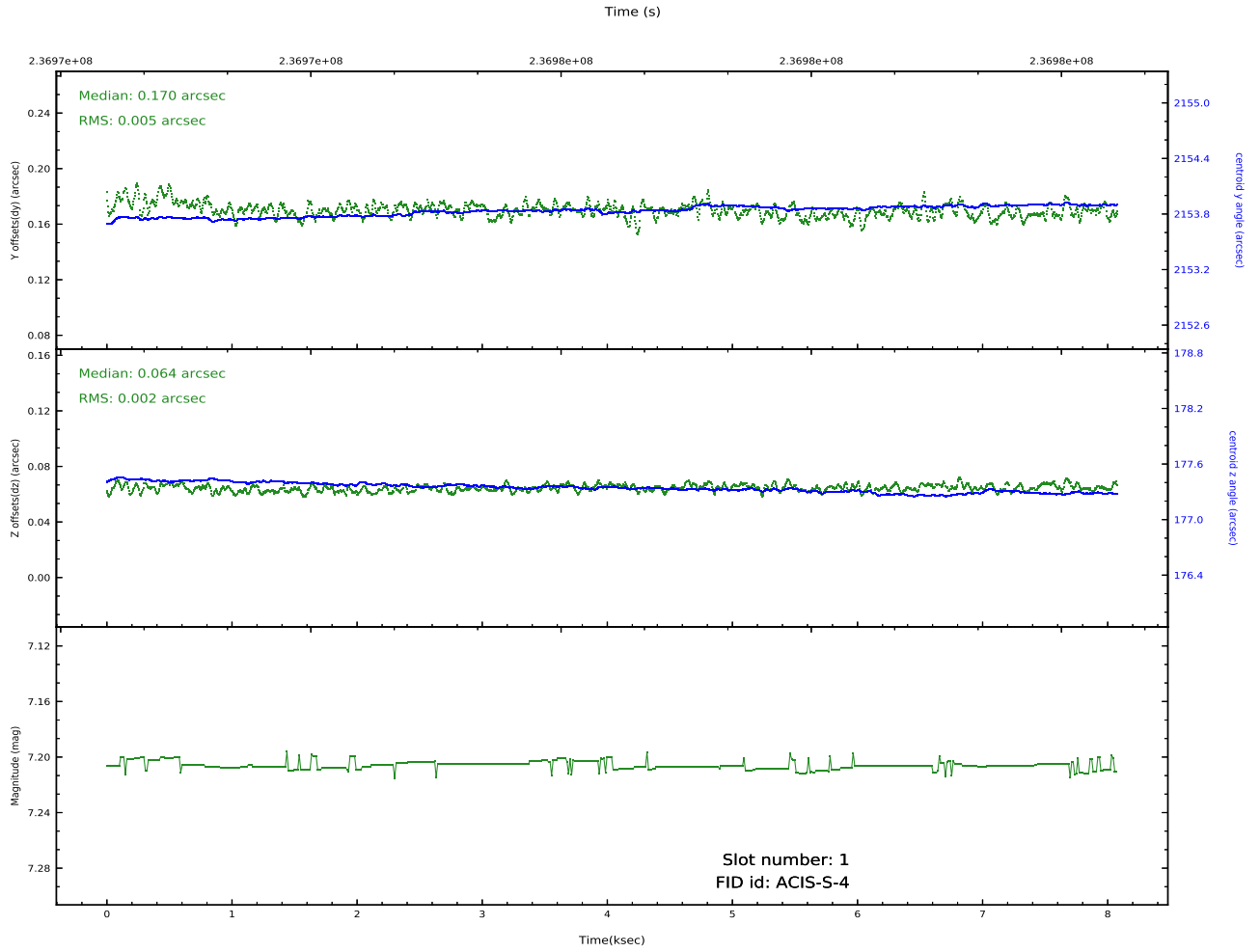
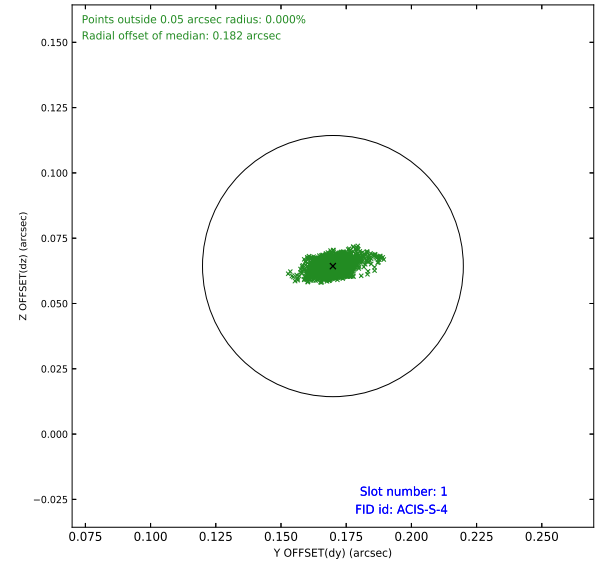
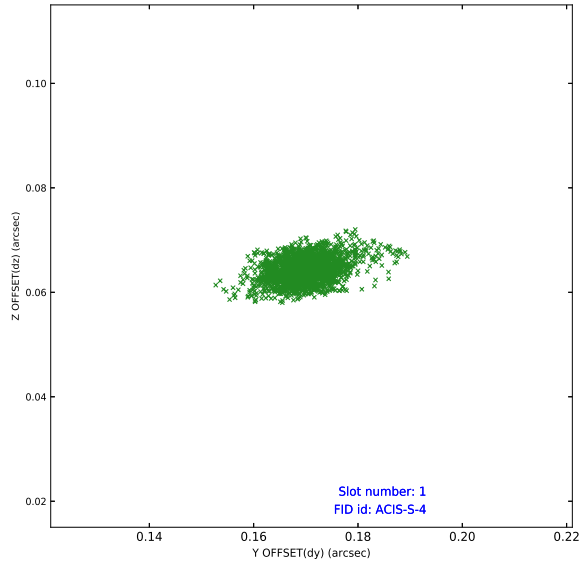


2.5 FID Slots

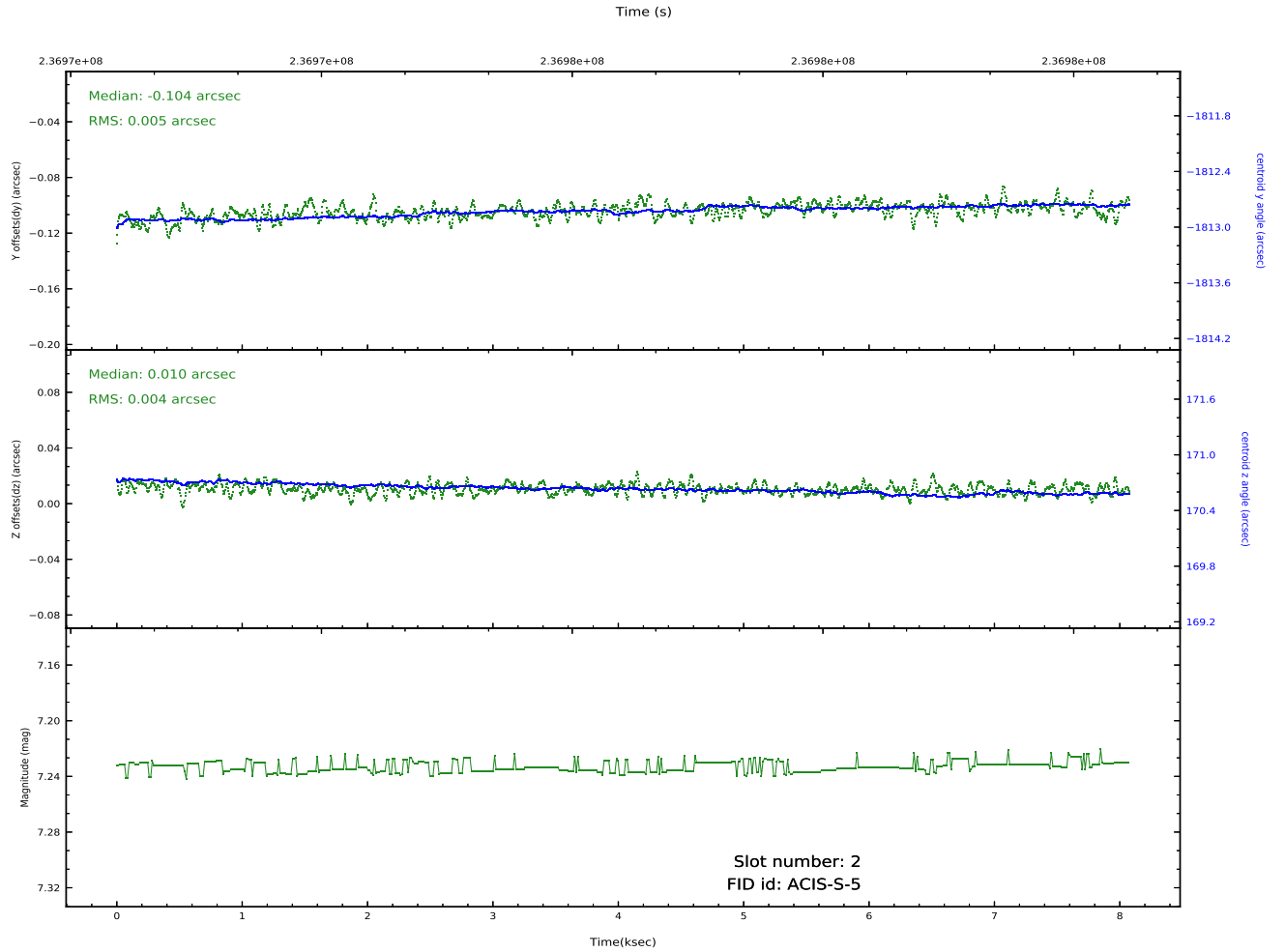
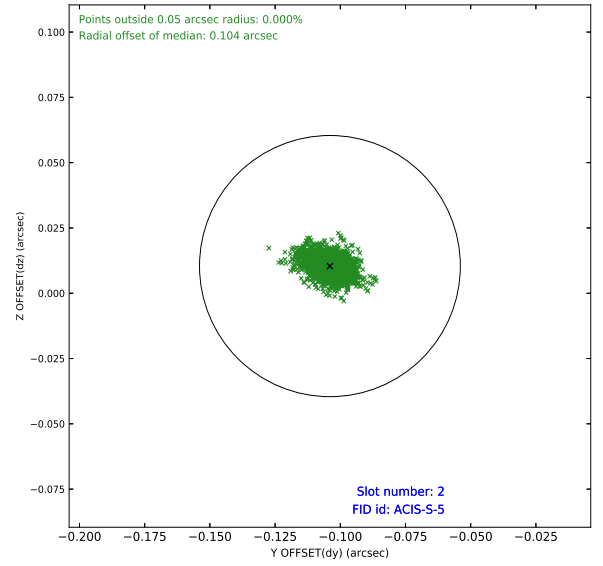
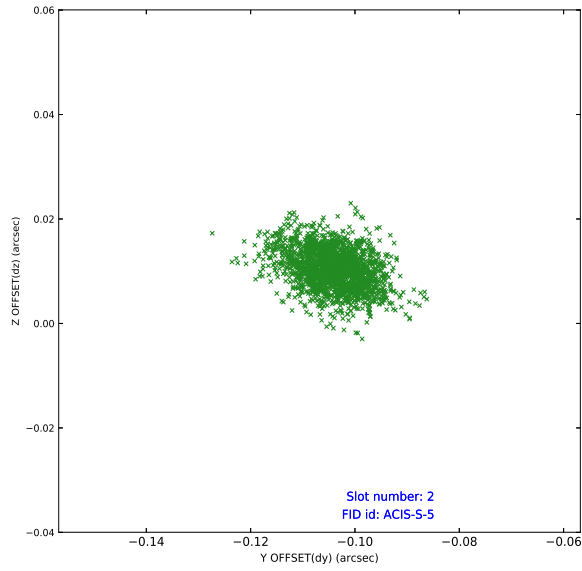
2.5.1 Slot 0



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) | 2020.10.13 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 8.076799 |

A.2 Comments

Window preference met. This is a moving target. Users will need to run sso_freeze or similar software to position the events in the reference frame of the target.