

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5367 - L2 Version 4
Chandra X-Ray Center

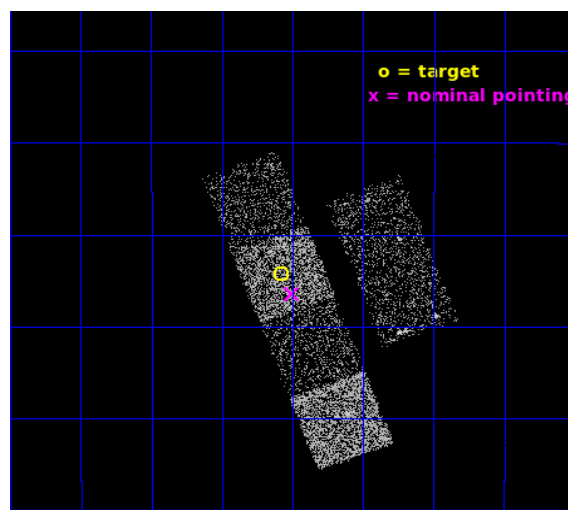
L2 Processing Date : Oct 9 2020

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

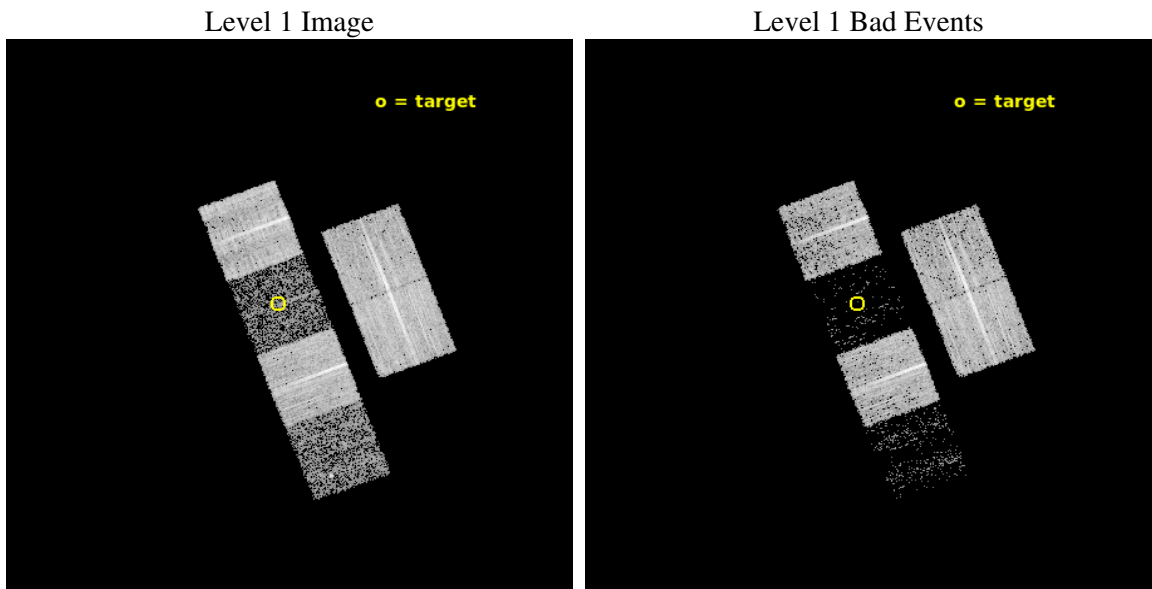
| | | |
|----------|--|---|
| seq_num | 100055 | Sequence number |
| obs_id | 5367 | Observation id |
| title | Comet 9P/Tempel 1 During the Deep Impact Encounter | Proposal title |
| observer | Carey Lisse | Principal investigator |
| object | Comet 9P/Tempel 1 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 205.395389 | Observer's specified target RA [deg] |
| dec_targ | -10.404287 | Observer's specified target Dec [deg] |
| ra_nom | 205.37612019414 | Nominal RA [deg] |
| dec_nom | -10.440416650412 | Nominal Dec [deg] |
| roll_nom | 249.10822892456 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 8083.1999698877 | Sum of GTIs [s] |
| livetime | 7980.8456247503 | Livetime [s] |
| ontime2 | 8083.1999698877 | Sum of GTIs [s] |
| ontime3 | 8083.1999698877 | Sum of GTIs [s] |
| ontime5 | 8083.1999698877 | Sum of GTIs [s] |
| ontime6 | 8083.1999698877 | Sum of GTIs [s] |
| ontime7 | 8083.1999698877 | Sum of GTIs [s] |
| ontime8 | 8083.1999698877 | Sum of GTIs [s] |
| l2events | 11172 | Number of level 2 events |



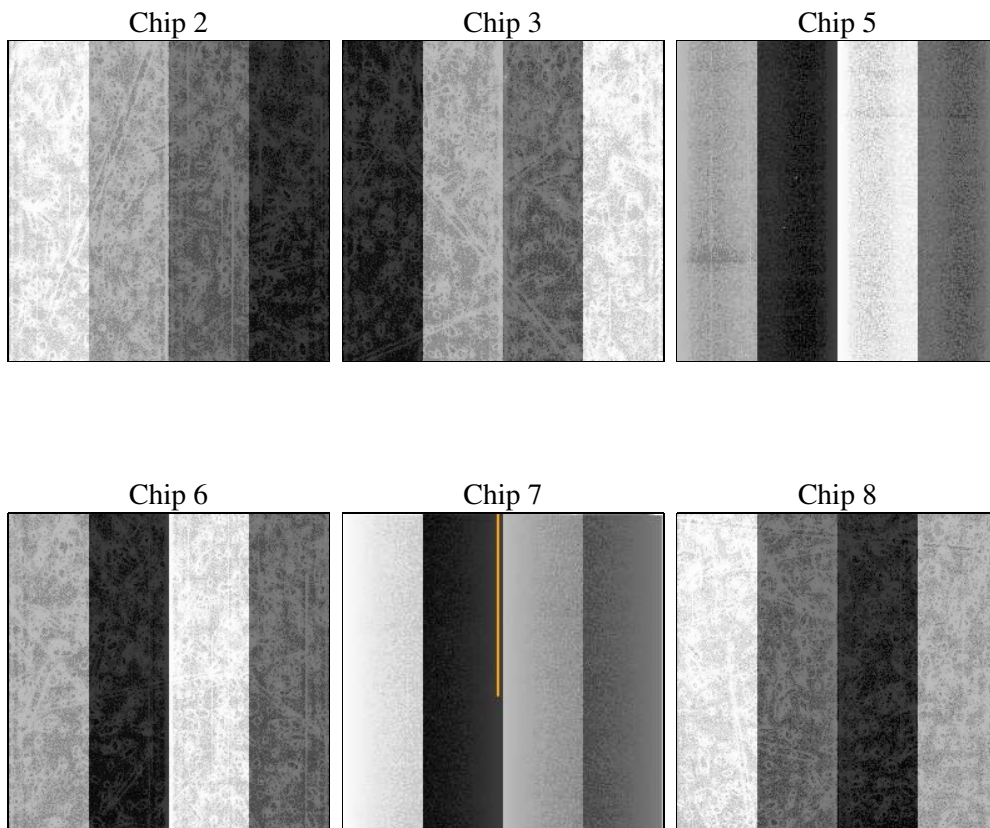
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 7900.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 8083.1999698877 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime2 | 8083.1999698877 | Sum of GTIs [s] |
| date | 2020-10-09T07:57:44 | Date and time of file creation | ontime3 | 8083.1999698877 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime5 | 8083.1999698877 | Sum of GTIs [s] |
| | | | ontime6 | 8083.1999698877 | Sum of GTIs [s] |
| | | | ontime7 | 8083.1999698877 | Sum of GTIs [s] |
| | | | ontime8 | 8083.1999698877 | Sum of GTIs [s] |
| | | | l1events | 168012 | Number of level 1 events |

2.1.4 Events

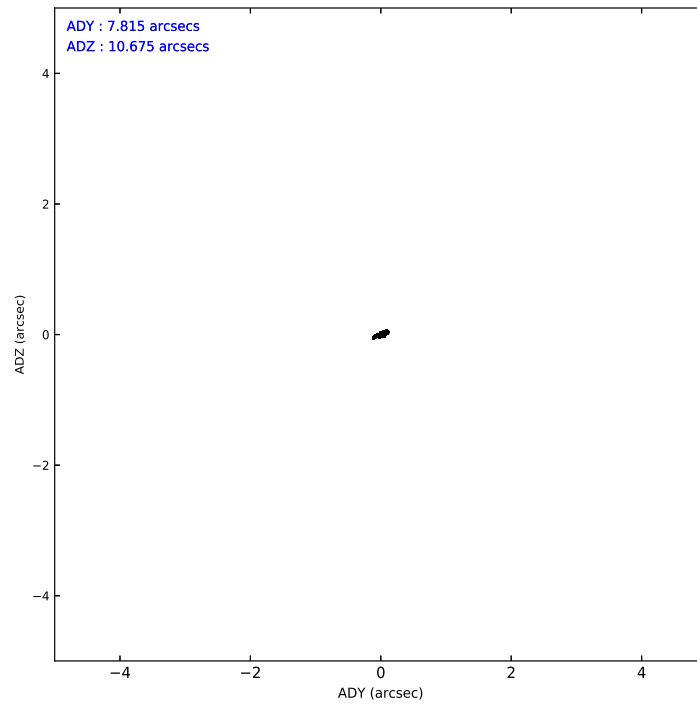
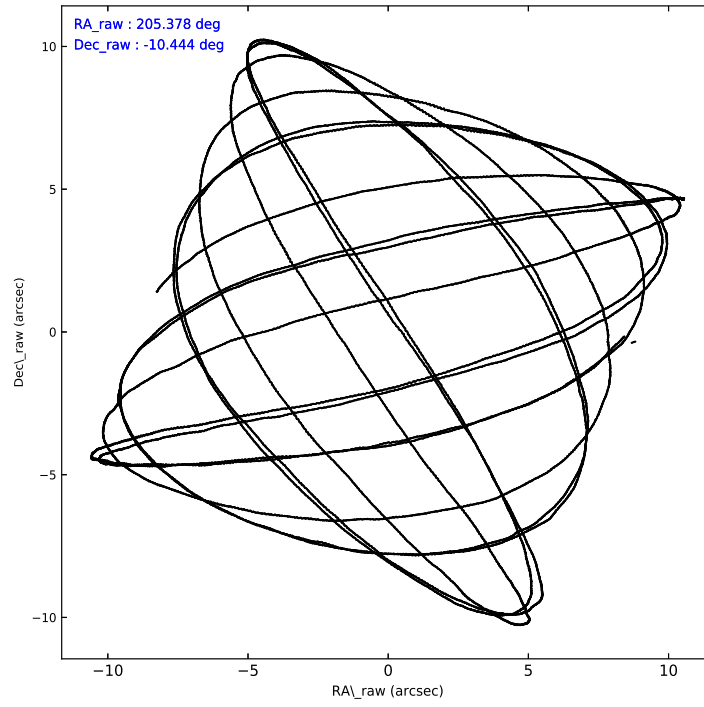
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 43919 | 34962 | 6610 | 37322 | 4856 | 40343 |
| rejected events | 42080 | 33753 | 2150 | 35790 | 1131 | 29642 |
| rejected % | 95% | 96% | 32% | 95% | 23% | 73% |

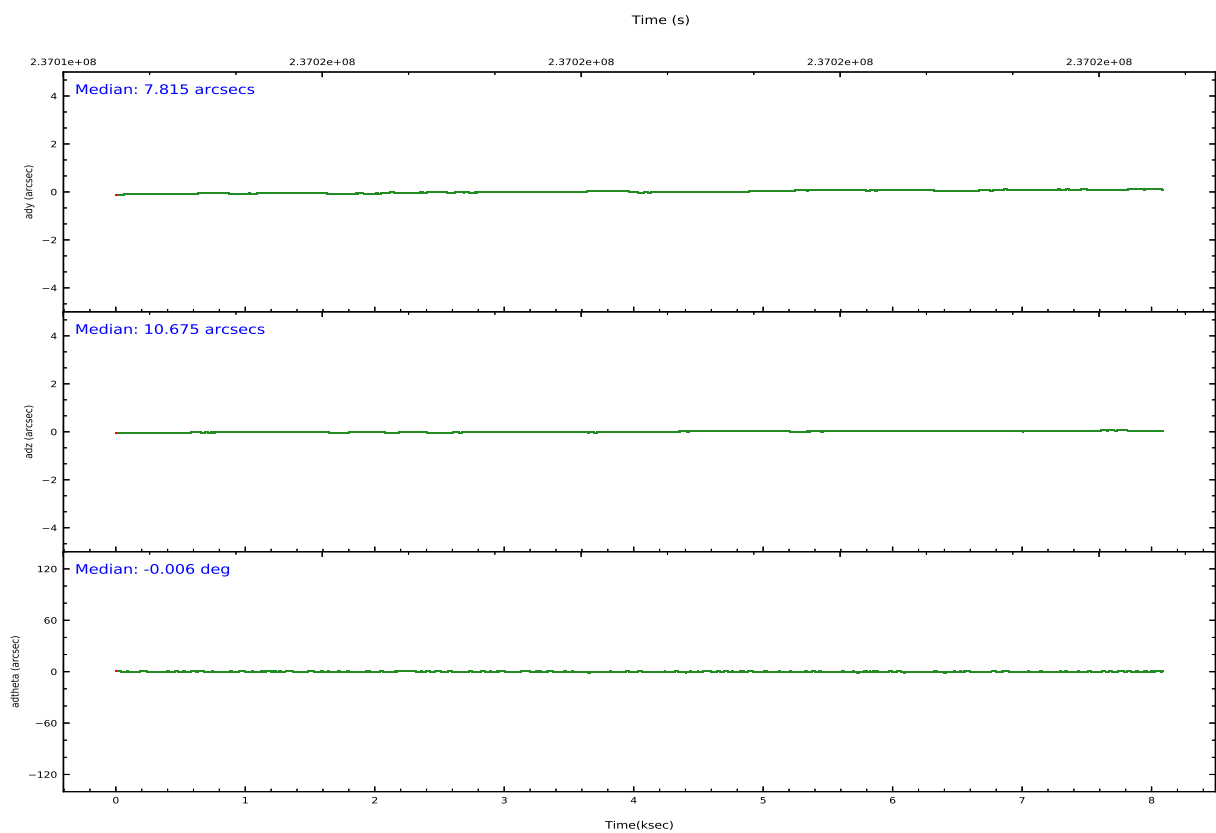
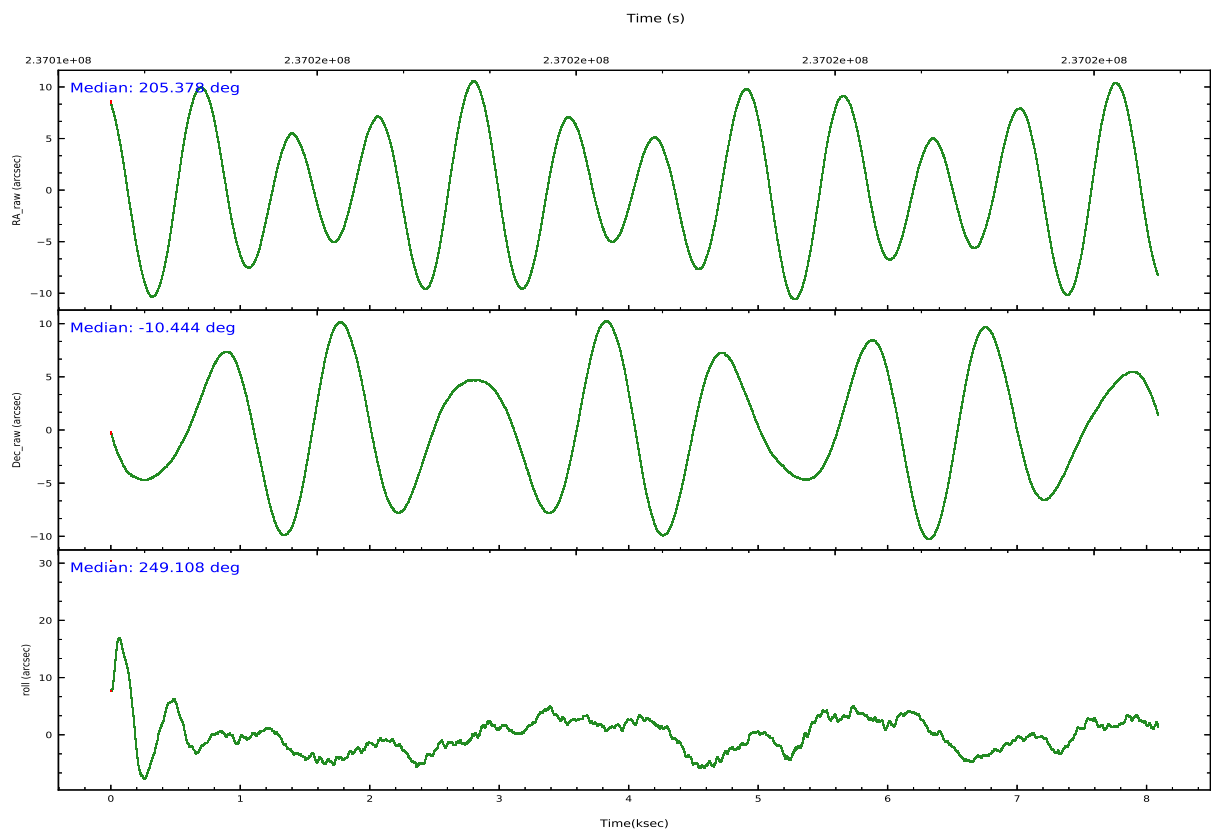
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 799 | 570 | 1327 | 734 | 1040 | 2972 |
| | 1% | 1% | 20% | 1% | 21% | 7% |
| grade 1 events | 17 | 12 | 52 | 9 | 23 | 24 |
| | 0% | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 426 | 155 | 1641 | 288 | 1205 | 2412 |
| | 0% | 0% | 24% | 0% | 24% | 5% |
| grade 3 events | 213 | 206 | 537 | 221 | 566 | 1317 |
| | 0% | 0% | 8% | 0% | 11% | 3% |
| grade 4 events | 255 | 178 | 544 | 233 | 523 | 1186 |
| | 0% | 0% | 8% | 0% | 10% | 2% |
| grade 5 events | 43 | 32 | 368 | 31 | 157 | 220 |
| | 0% | 0% | 5% | 0% | 3% | 0% |
| grade 6 events | 193 | 119 | 507 | 101 | 477 | 3065 |
| | 0% | 0% | 7% | 0% | 9% | 7% |
| grade 7 events | 41973 | 33690 | 1634 | 35705 | 865 | 29147 |
| | 95% | 96% | 24% | 95% | 17% | 72% |

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 | 205.373429 | 205.37612019414 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | -10.416880 | -10.440416650412 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 248.952657 | 249.10822892456 | [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) | 237014596.184000 | 237014220.19259 | | | |
| Observation start date | 2005-07-06T05:22:12 | 2005-07-06T05:17:00 | | | |
| [s] Observation end time (MET) | 237022496.184000 | 237023443.14301 | | | |
| Observation end date | 2005-07-06T07:33:52 | 2005-07-06T07:50:43 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



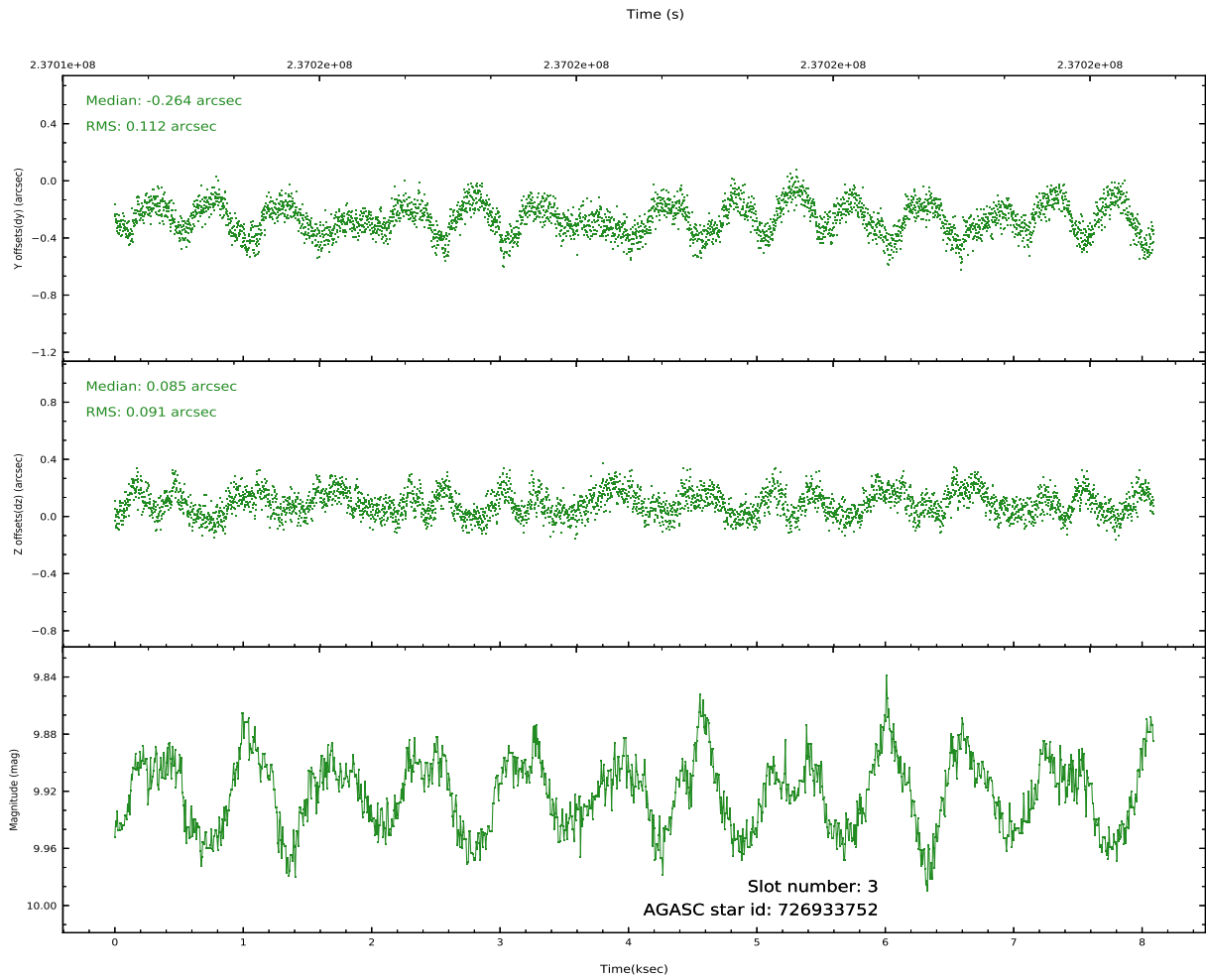
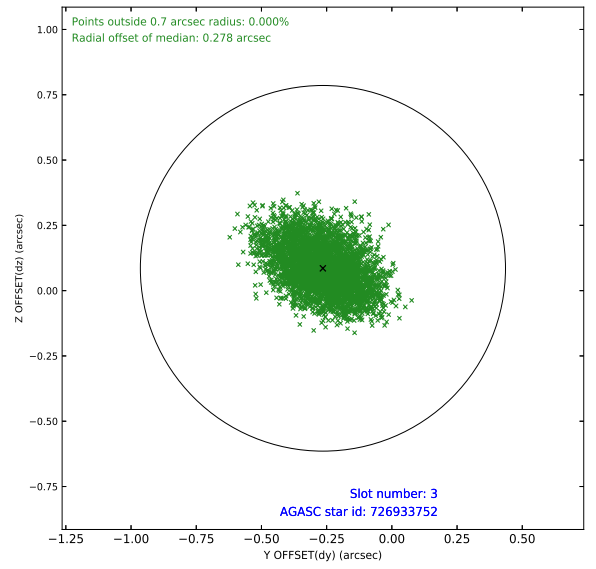
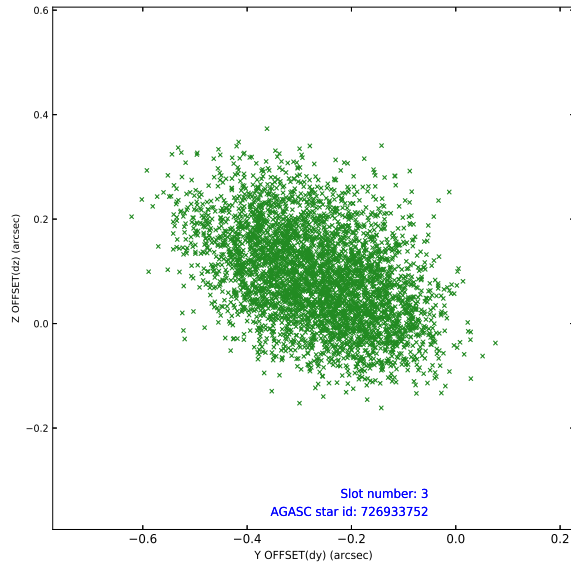


Slot Statistics

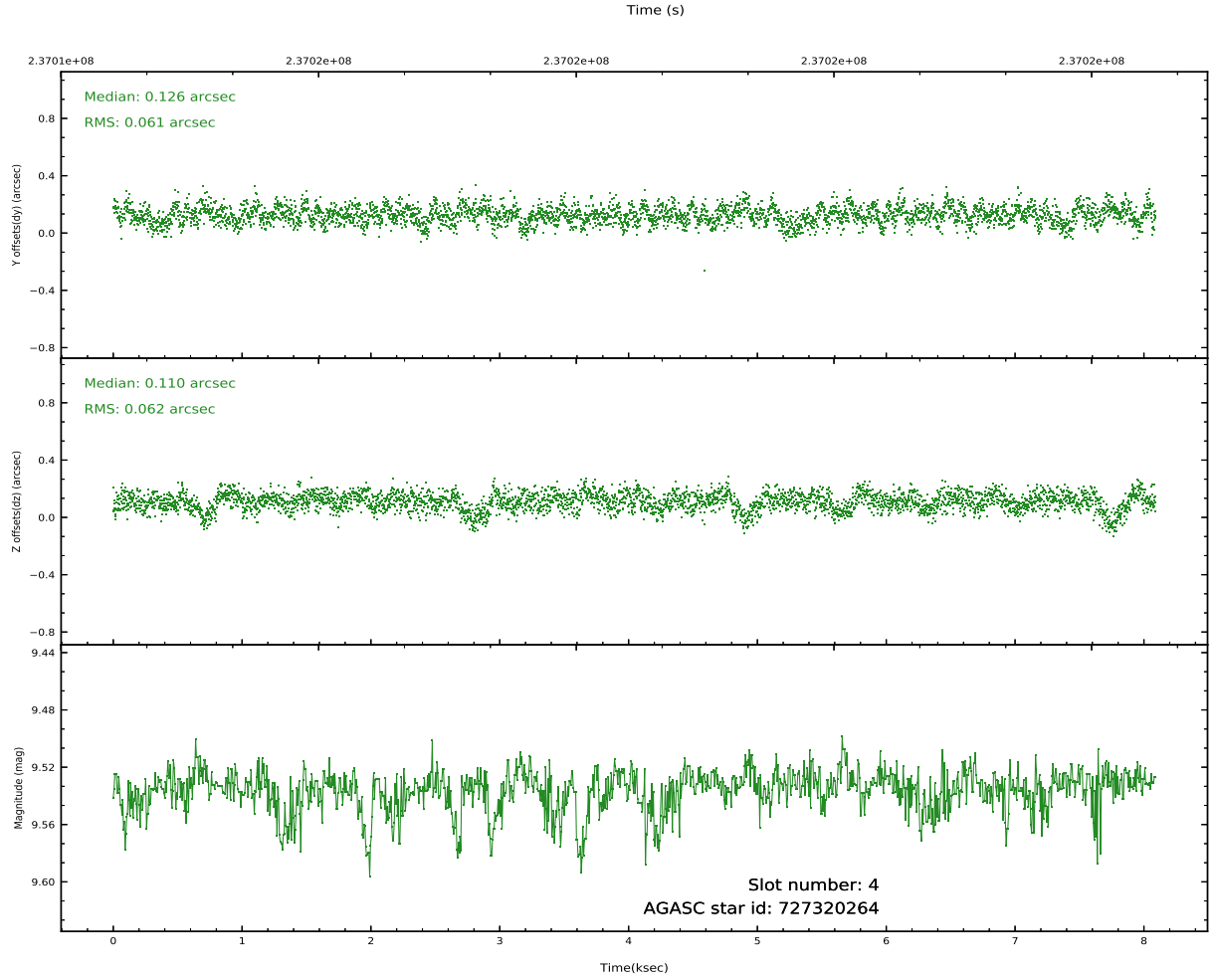
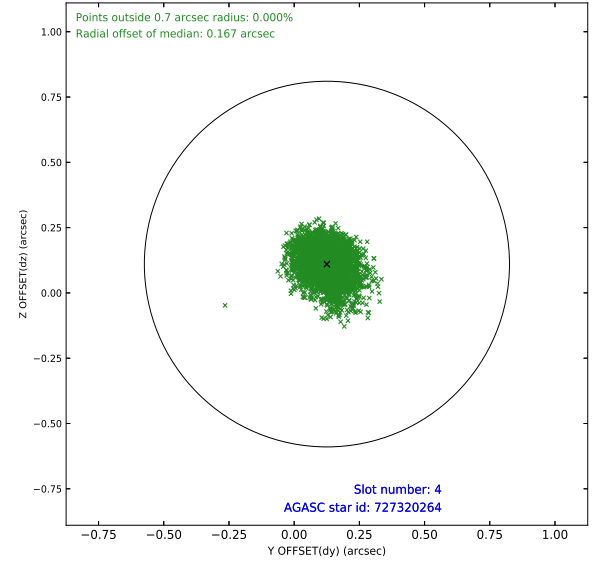
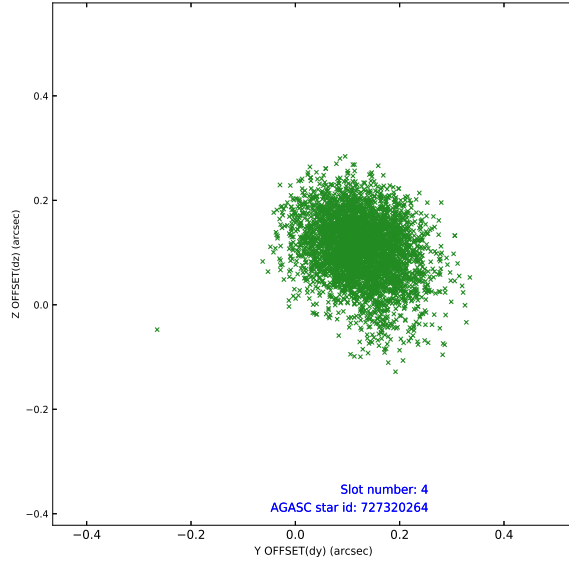
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|-------|-------|----------|--------|--------|-------|-------|------------|------------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.11 | 1974 | 1.000 | -0.077 | -0.056 | 0.007 | 0.011 | 0.000000 | 0.000000 | -760.60 | -1732 |
| 1 | FID | | ACIS-S-4 | 7.20 | 1973 | 1.000 | 0.172 | 0.053 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2152.53 | 175 |
| 2 | FID | | ACIS-S-5 | 7.23 | 1973 | 1.000 | -0.125 | 0.013 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1812.68 | 170 |
| 3 | GUIDE | used | 726933752 | 9.92 | 3941 | 1.000 | -0.264 | 0.085 | 0.156 | 0.246 | 205.376260 | -9.946078 | -1584.94 | -599 |
| 4 | GUIDE | used | 727320264 | 9.53 | 3944 | 1.000 | 0.126 | 0.110 | 0.091 | 0.153 | 205.464326 | -10.871323 | 1411.62 | 887 |
| 5 | GUIDE | used | 727321088 | 9.43 | 3946 | 1.000 | 0.138 | -0.082 | 0.123 | 0.192 | 204.964296 | -10.686432 | 1427.72 | -1002 |
| 6 | GUIDE | used | 727321928 | 10.09 | 3936 | 1.000 | 0.077 | -0.106 | 0.136 | 0.216 | 205.258401 | -10.105722 | -897.97 | -783 |
| 7 | GUIDE | used | 727326472 | 10.09 | 3928 | 1.000 | -0.058 | -0.002 | 0.165 | 0.287 | 205.620857 | -10.902930 | 1319.24 | 1444 |

2.4 Star Slots

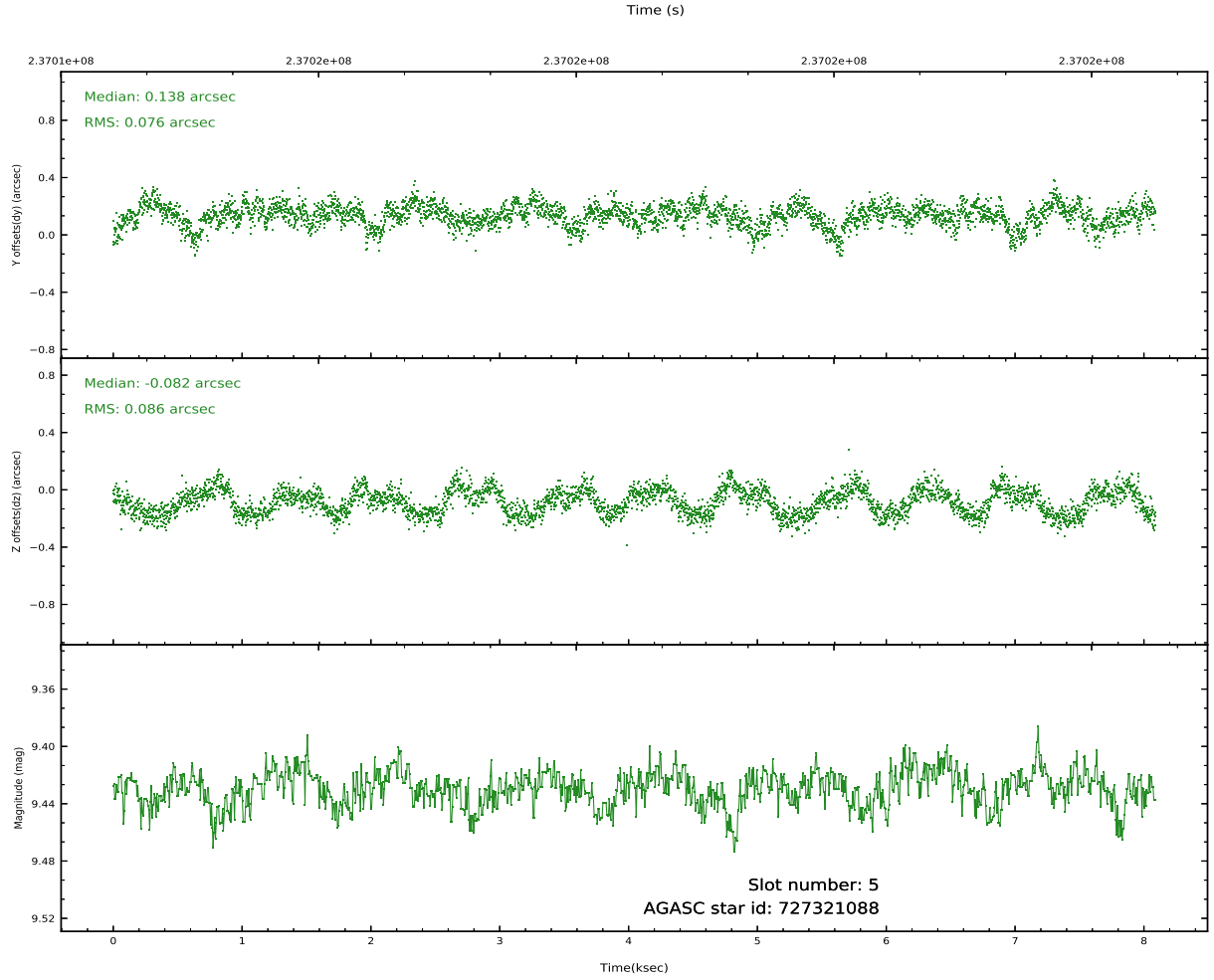
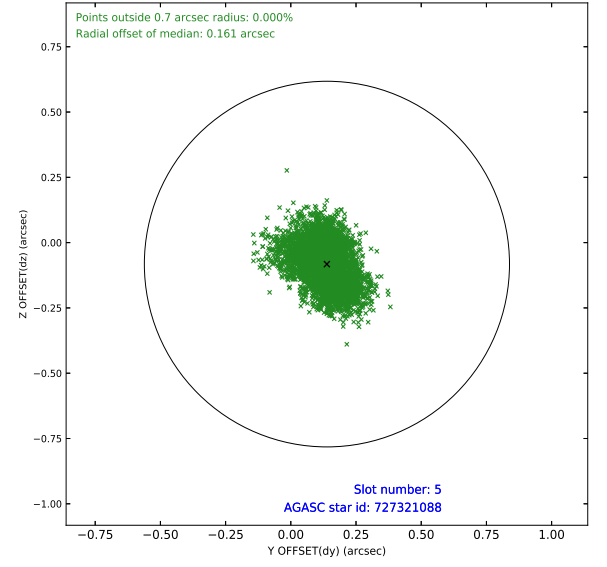
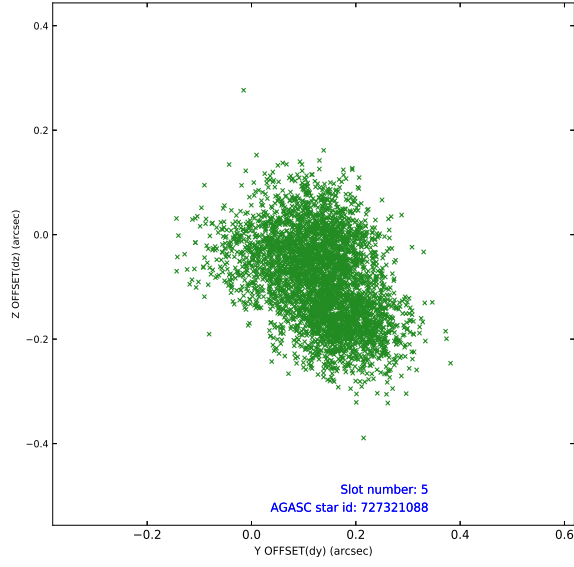
2.4.1 Slot 3



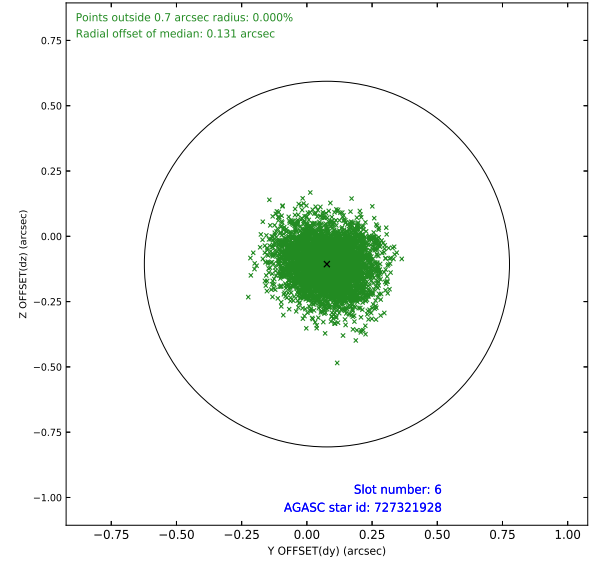
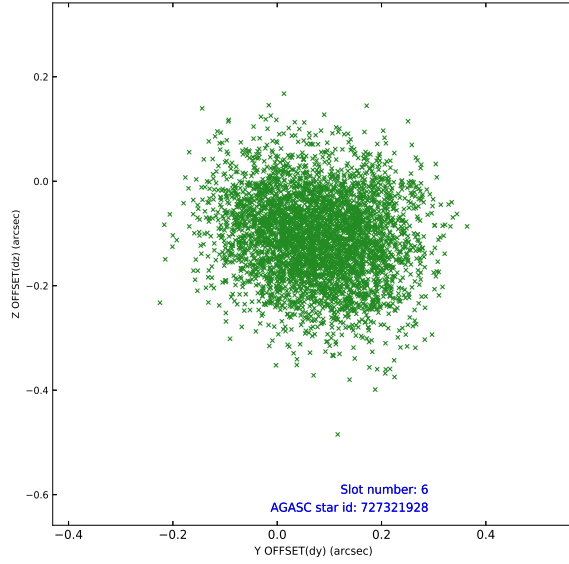
2.4.2 Slot 4



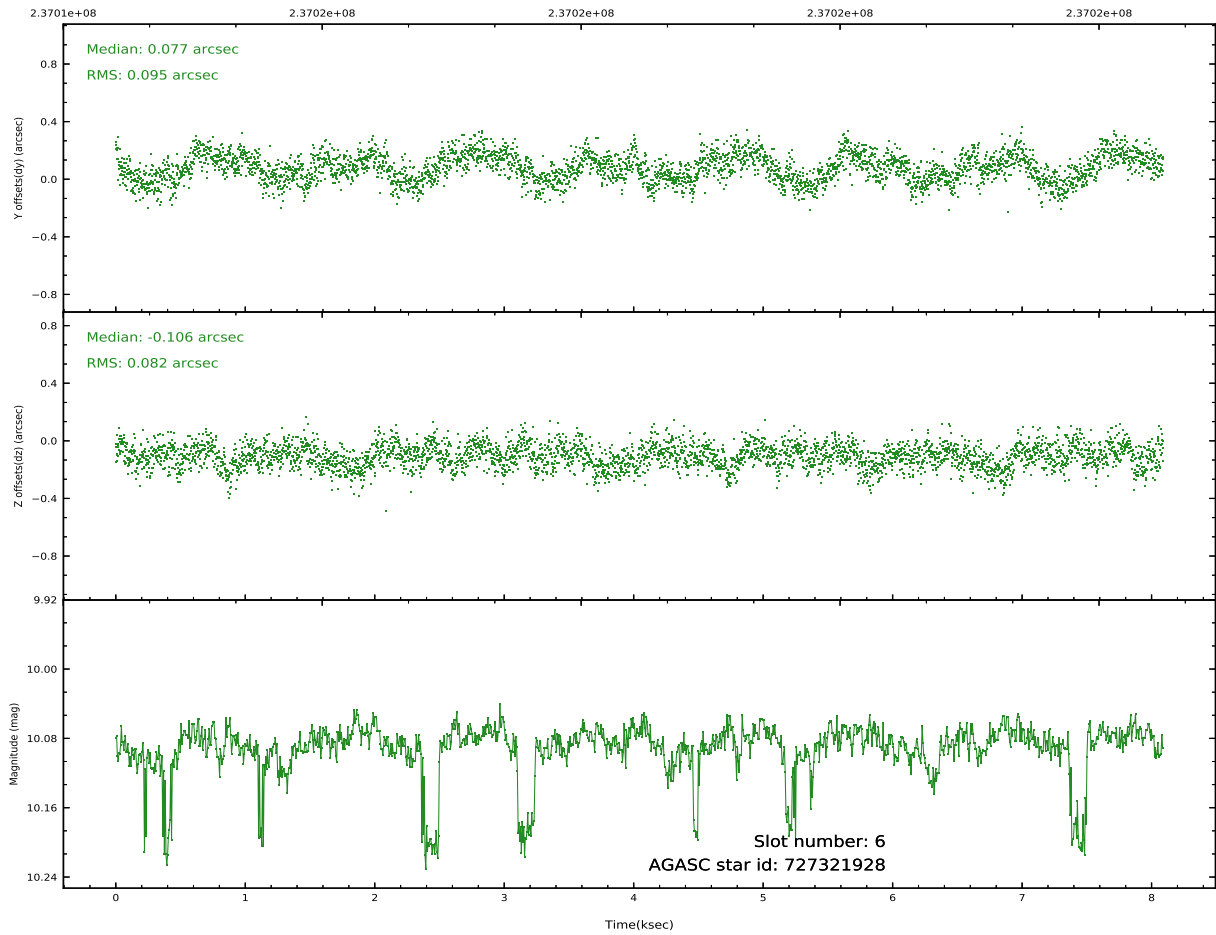
2.4.3 Slot 5



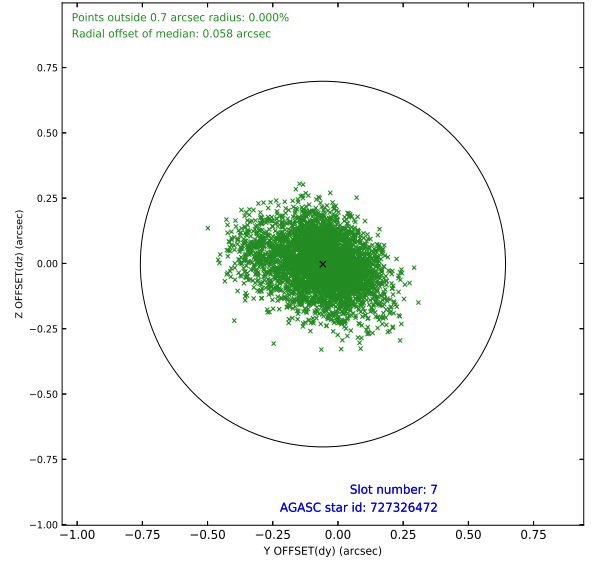
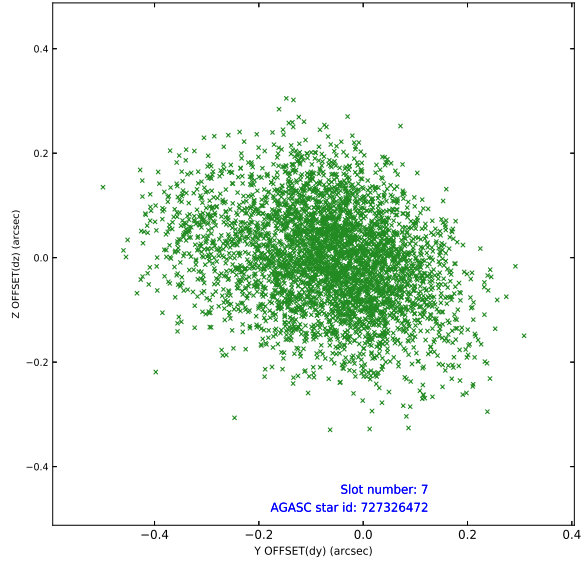
2.4.4 Slot 6



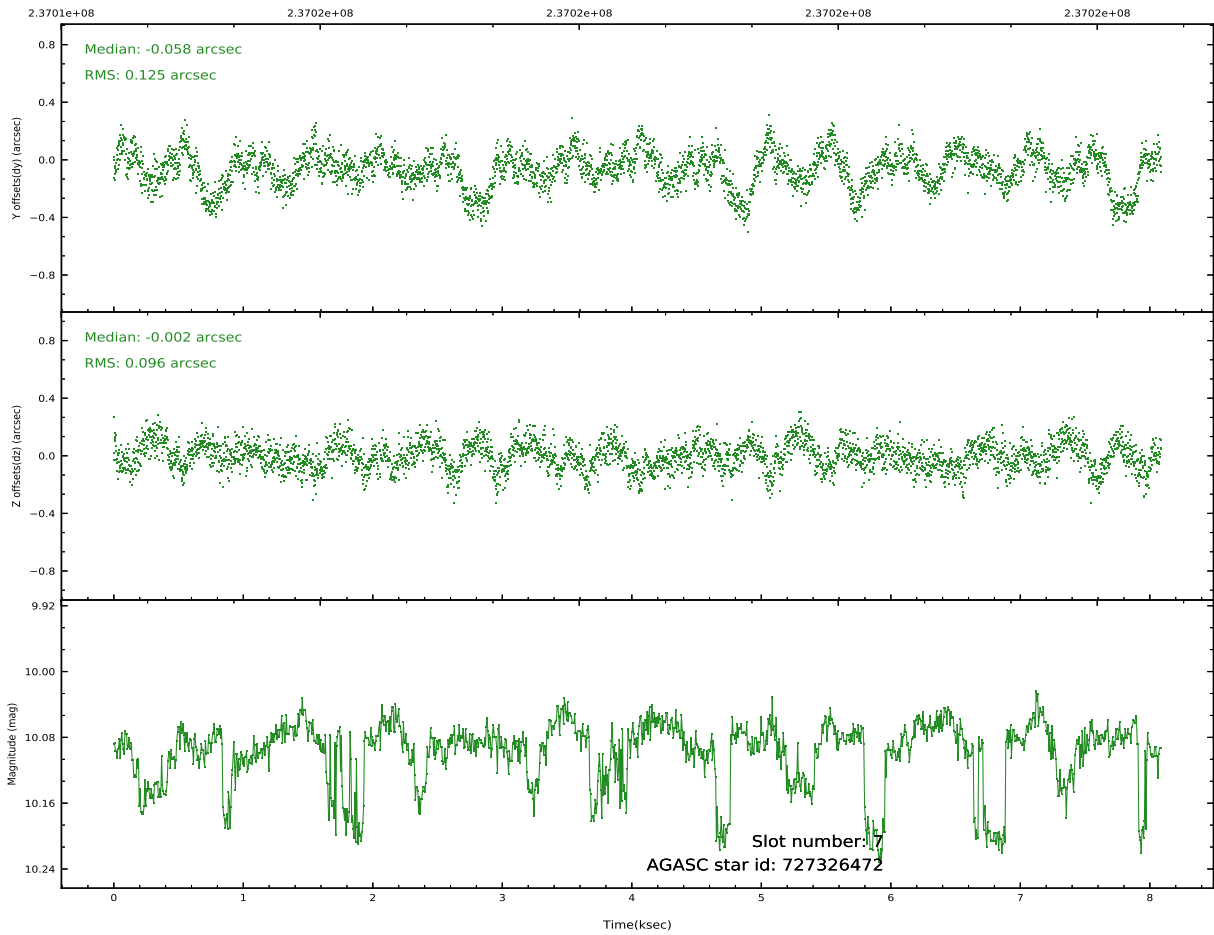
Time (s)



2.4.5 Slot 7

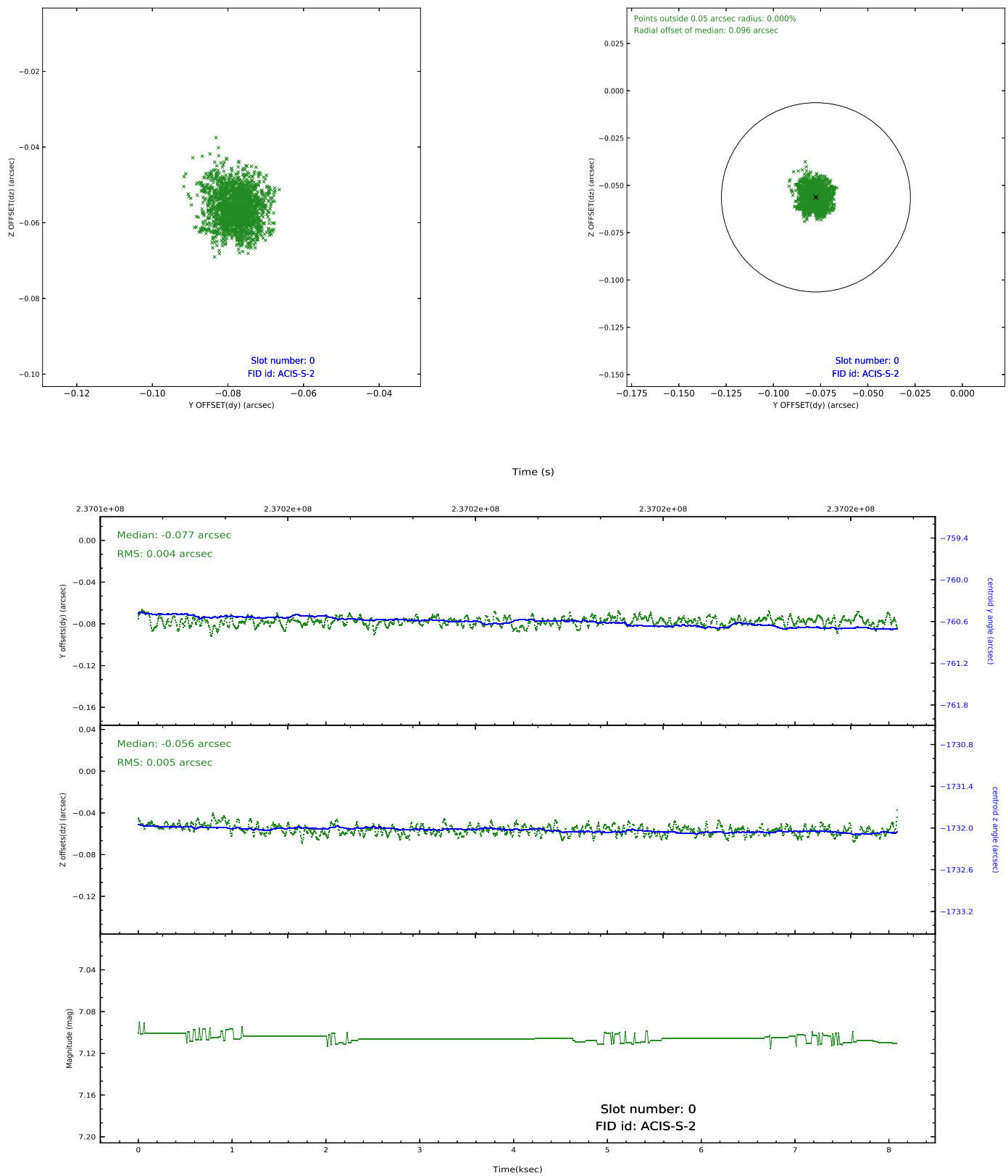


Time (s)

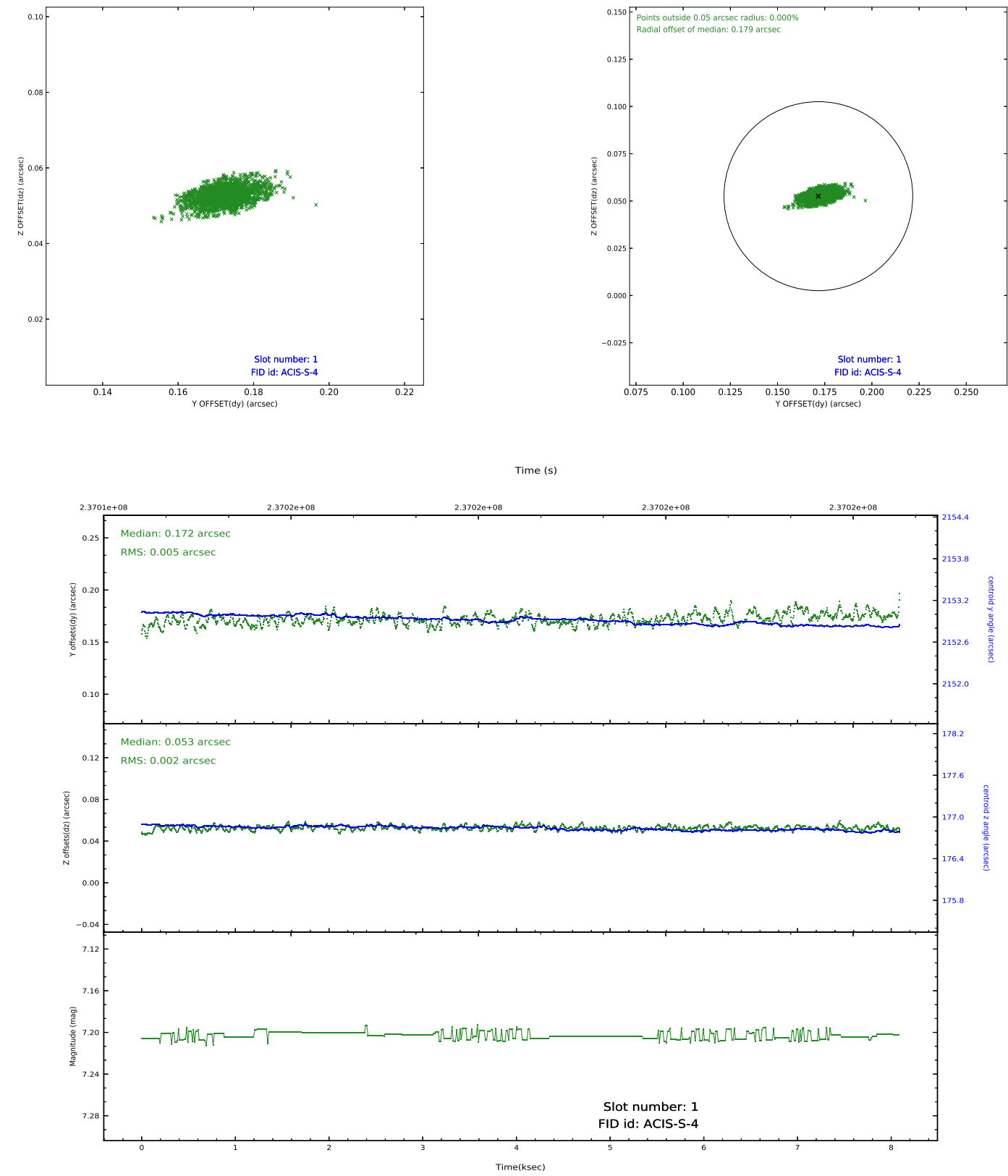


2.5 FID Slots

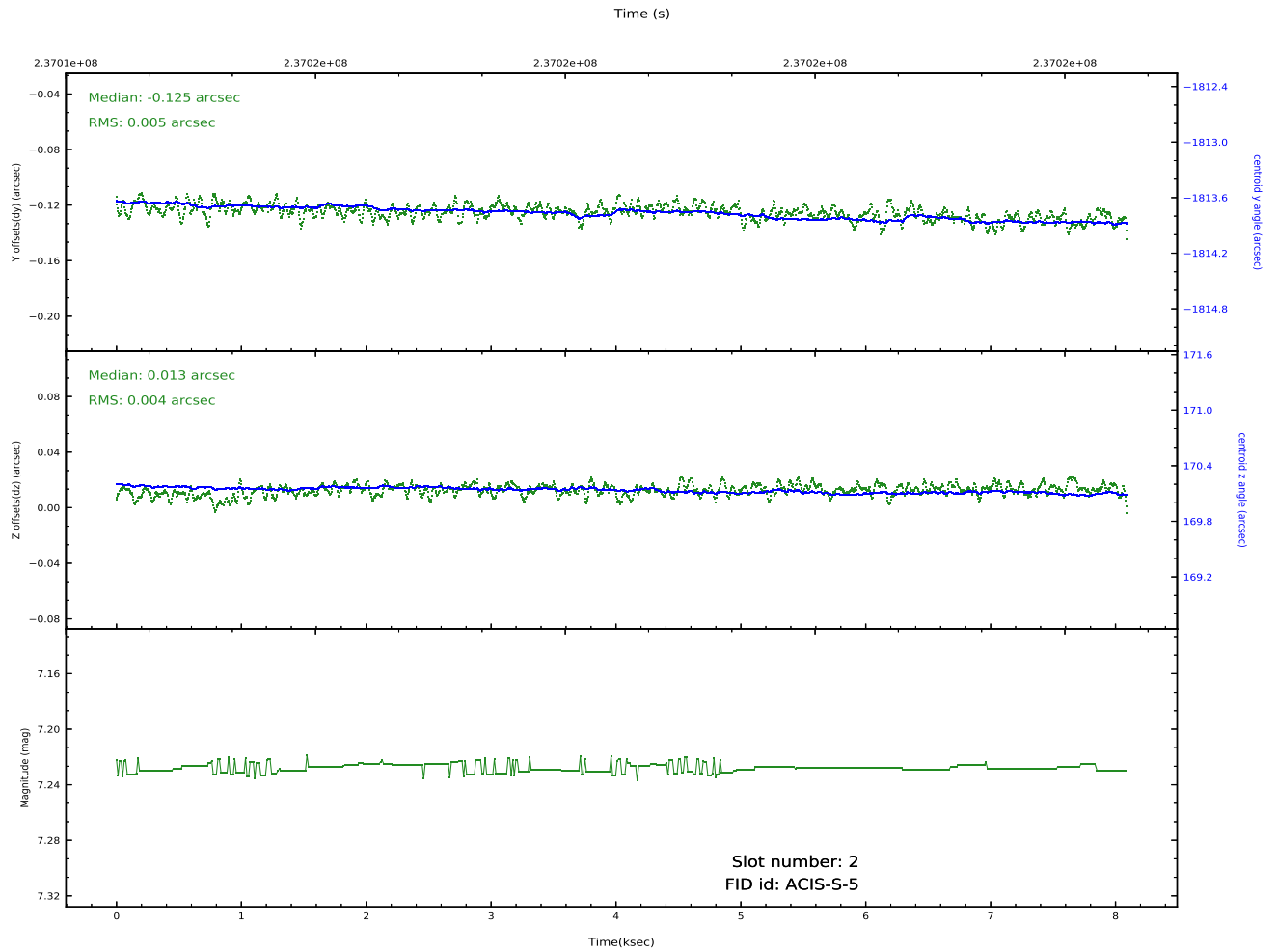
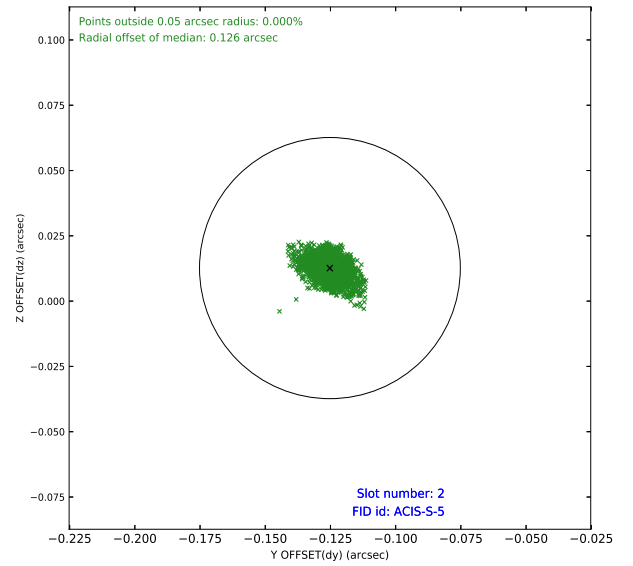
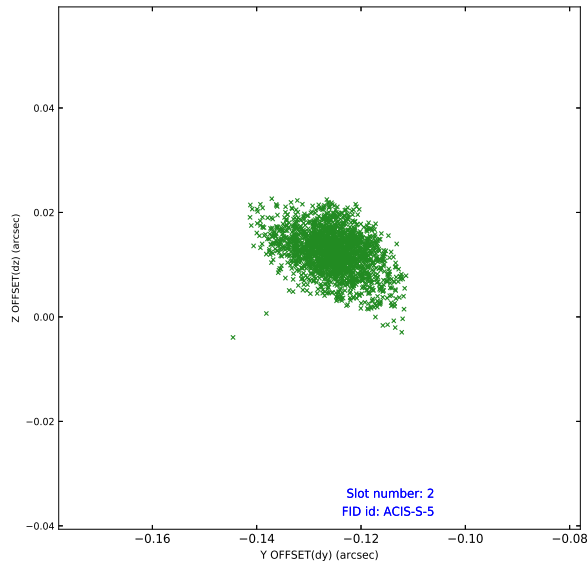
2.5.1 Slot 0



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 | 8.083199 |

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.