

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5518 - L2 Version 4
Chandra X-Ray Center

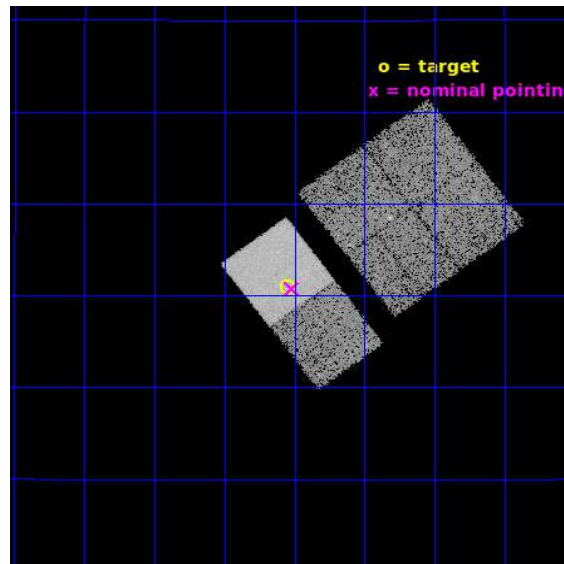
L2 Processing Date : Oct 8 2020

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1 Front

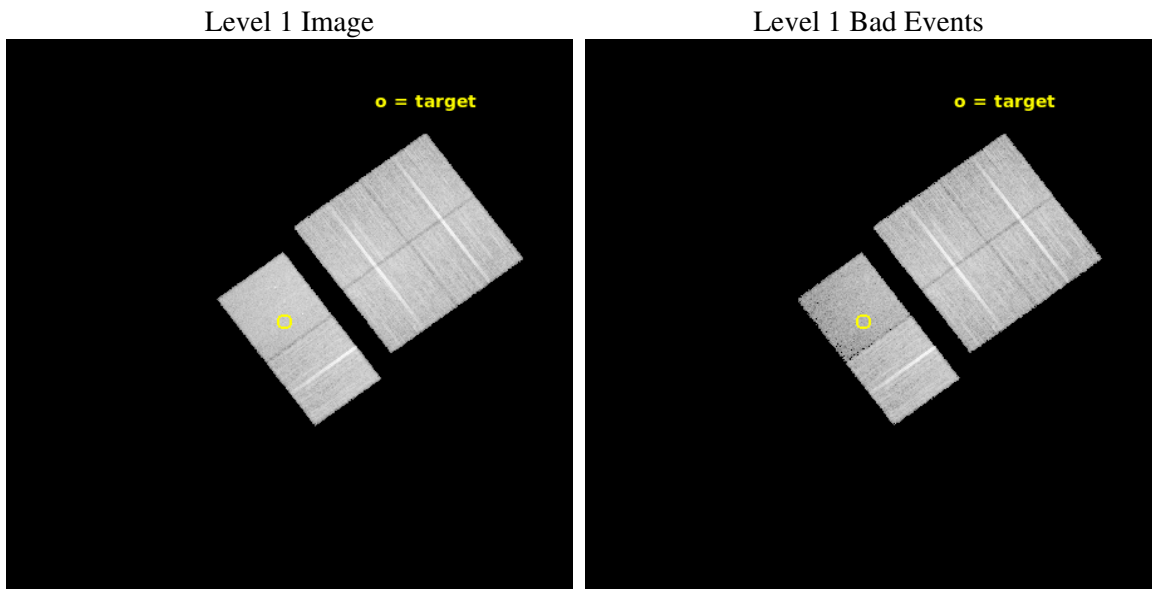
| | | |
|----------|-----------------------------------|---|
| seq_num | 500512 | Sequence number |
| obs_id | 5518 | Observation id |
| title | X-ray Emission from Radio Pulsars | Proposal title |
| observer | Gordon Garmire | Principal investigator |
| object | PSR B1257+12 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 195.012833 | Observer's specified target RA [deg] |
| dec_targ | 12.682192 | Observer's specified target Dec [deg] |
| ra_nom | 195.00455149733 | Nominal RA [deg] |
| dec_nom | 12.679147247573 | Nominal Dec [deg] |
| roll_nom | 233.34023726423 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 20051.199925303 | Sum of GTIs [s] |
| livetime | 19797.299558466 | Livetime [s] |
| ontime0 | 20051.199925303 | Sum of GTIs [s] |
| ontime1 | 20051.199925303 | Sum of GTIs [s] |
| ontime2 | 20044.718014449 | Sum of GTIs [s] |
| ontime3 | 20051.199925303 | Sum of GTIs [s] |
| ontime6 | 20051.199925303 | Sum of GTIs [s] |
| ontime7 | 20051.199925303 | Sum of GTIs [s] |
| l2events | 93631 | Number of level 2 events |



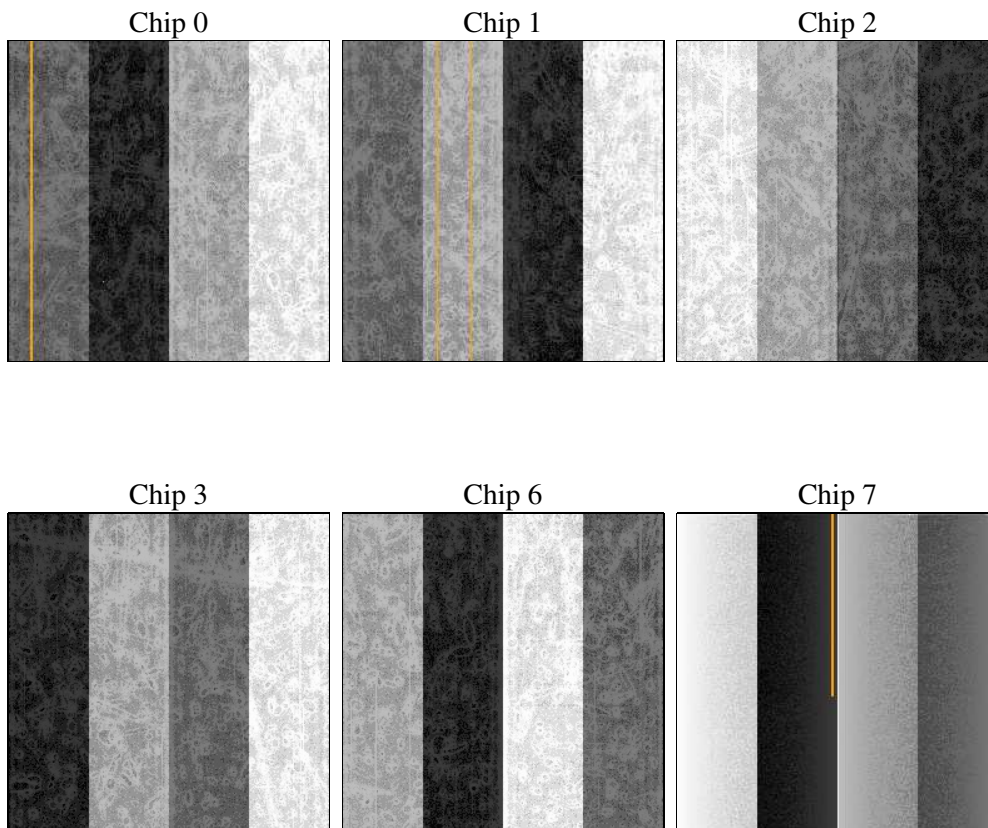
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 2 | Obi number | sched_exp_time | 20000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 20051.199925303 | Sum of GTIs [s] |
| caldbver | 4.9.2 | | ontime0 | 20051.199925303 | Sum of GTIs [s] |
| date | 2020-10-08T11:56:56 | Date and time of file creation | ontime1 | 20051.199925303 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime2 | 20044.718014449 | Sum of GTIs [s] |
| | | | ontime3 | 20051.199925303 | Sum of GTIs [s] |
| | | | ontime6 | 20051.199925303 | Sum of GTIs [s] |
| | | | ontime7 | 20051.199925303 | Sum of GTIs [s] |
| | | | l1events | 633230 | Number of level 1 events |

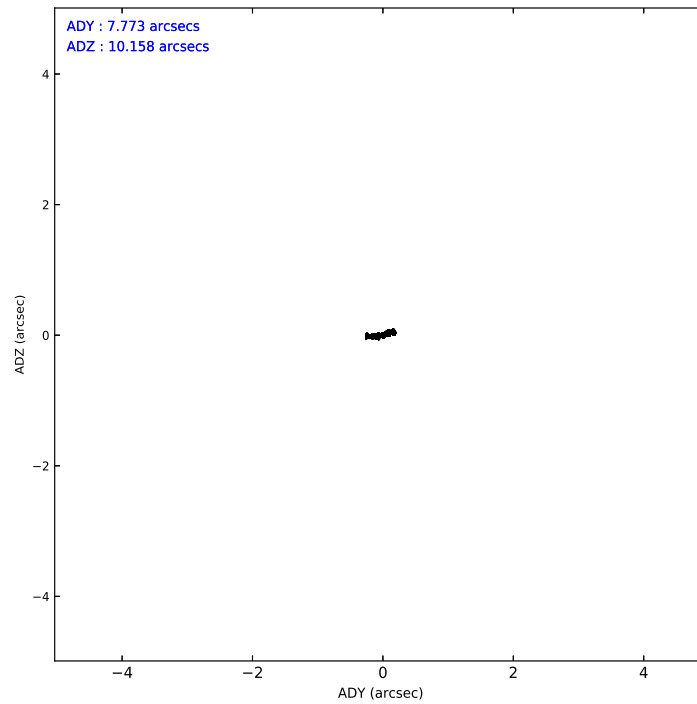
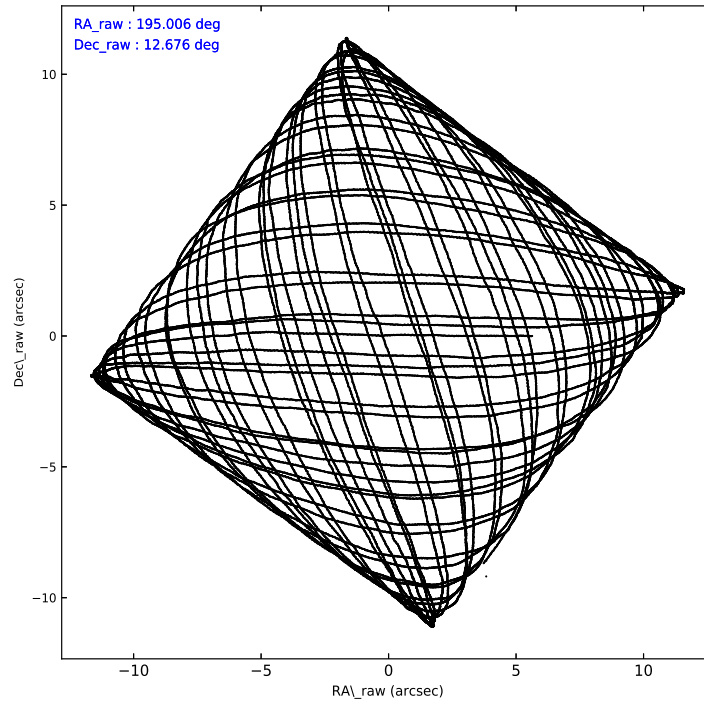
2.1.4 Events

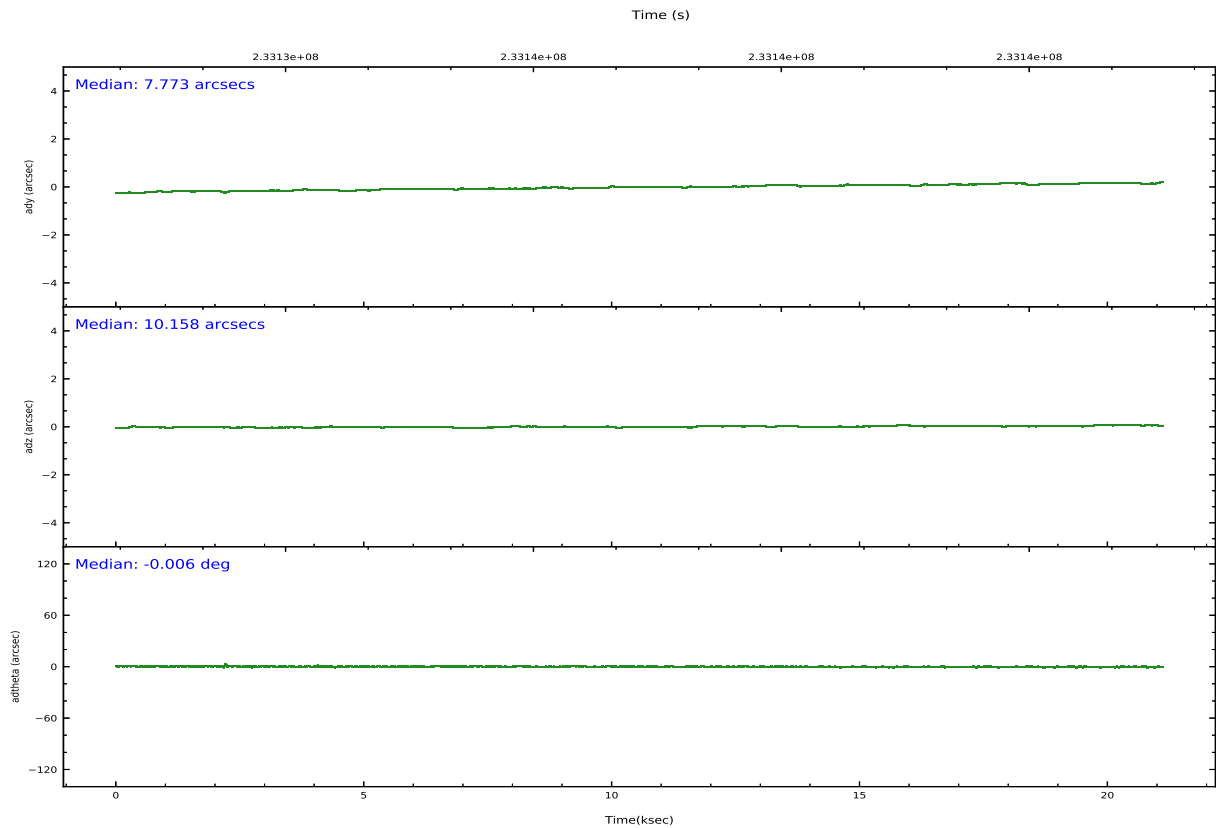
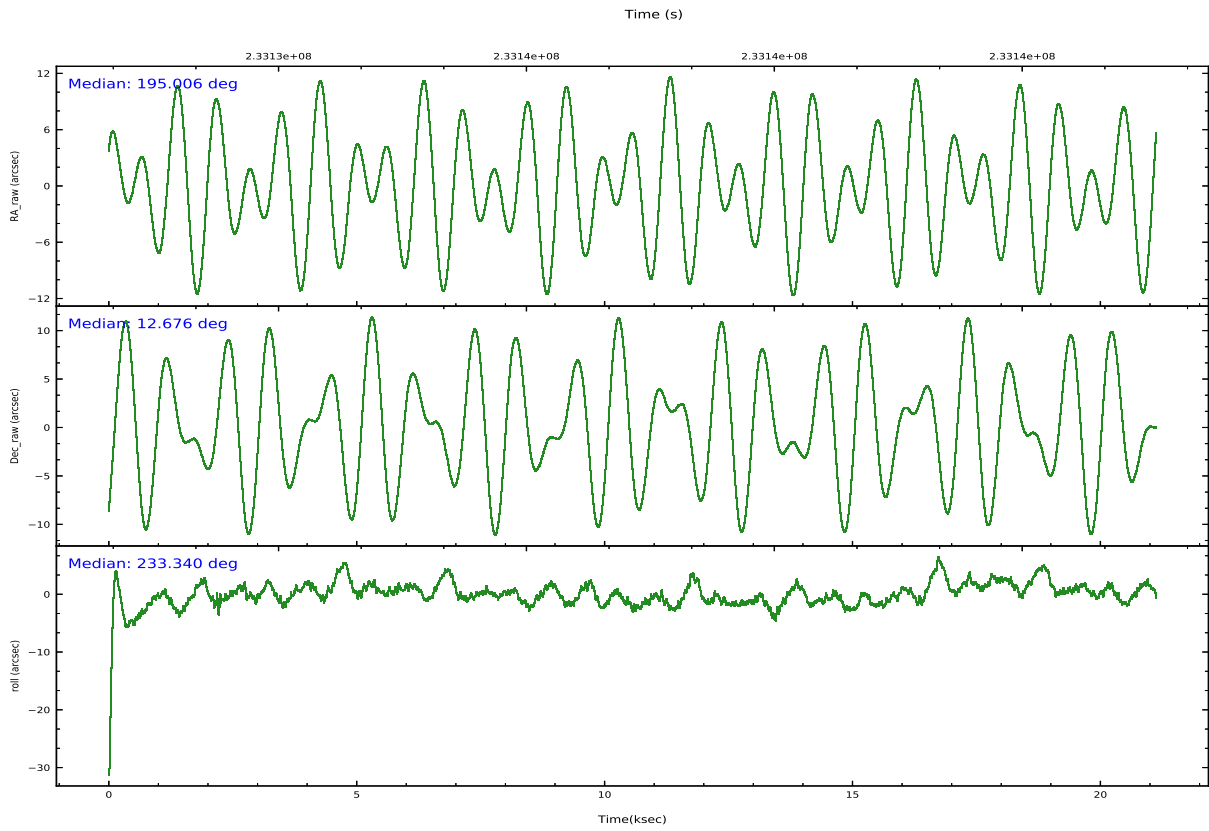
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|--------|-------|--------|--------|--------|--------|----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 106056 | 97526 | 109371 | 107127 | 109383 | 103767 | grade 0 events | 3866 | 3780 | 3885 | 3798 | 4210 | 5347 |
| rejected events | 95123 | 86479 | 98932 | 97029 | 98032 | 52226 | | 3% | 3% | 3% | 3% | 3% | 5% |
| rejected % | 89% | 88% | 90% | 90% | 89% | 50% | grade 1 events | 49 | 40 | 70 | 58 | 49 | 105 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 2644 | 2403 | 2431 | 2142 | 2353 | 10810 |
| | | | | | | | | 2% | 2% | 2% | 1% | 2% | 10% |
| | | | | | | | grade 3 events | 1271 | 1335 | 1159 | 1154 | 1221 | 5078 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 4% |
| | | | | | | | grade 4 events | 1132 | 1265 | 1180 | 1149 | 1209 | 4863 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 4% |
| | | | | | | | grade 5 events | 3324 | 3347 | 2901 | 3584 | 3745 | 11260 |
| | | | | | | | | 3% | 3% | 2% | 3% | 3% | 10% |
| | | | | | | | grade 6 events | 2020 | 2264 | 1786 | 1857 | 2360 | 25451 |
| | | | | | | | | 1% | 2% | 1% | 1% | 2% | 24% |
| | | | | | | | grade 7 events | 91750 | 83092 | 95959 | 93385 | 94236 | 40853 |
| | | | | | | | | 86% | 85% | 87% | 87% | 86% | 39% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| Detector | ACIS-012367 | ACIS-012367 | 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 | 195.008476 | 195.00455149733 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 12.702655 | 12.679147247573 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 233.178941 | 233.34023726423 | [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) | 233127701.184000 | 233126223.8401 | | | |
| Observation start date | 2005-05-22T05:40:37 | 2005-05-22T05:17:03 | | | |
| [s] Observation end time (MET) | 233147701.184000 | 233149118.75365 | | | |
| Observation end date | 2005-05-22T11:13:57 | 2005-05-22T11:38:38 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





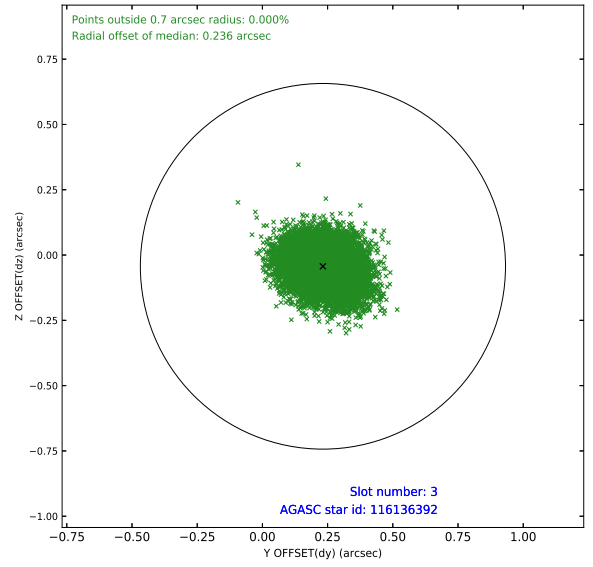
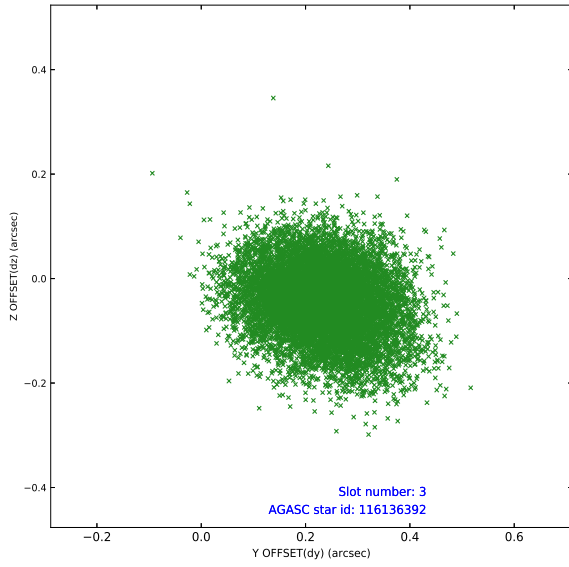
Slot Statistics

| slot | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|------|--------|------|-----------|-------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.10 | 5153 | 1.000 | -0.073 | -0.061 | 0.007 | 0.011 | 0.000000 | 0.000000 | -760.52 | -1731 |
| 1 | FID | | ACIS-S-4 | 7.21 | 5151 | 1.000 | 0.171 | 0.052 | 0.007 | 0.013 | 0.000000 | 0.000000 | 2152.84 | 177 |
| 2 | FID | | ACIS-S-5 | 7.23 | 5153 | 1.000 | -0.129 | 0.018 | 0.008 | 0.014 | 0.000000 | 0.000000 | -1813.29 | 170 |
| 3 | GUIDE | used | 116136392 | 9.57 | 10294 | 1.000 | 0.232 | -0.043 | 0.111 | 0.180 | 194.414696 | 12.356603 | 2247.31 | -926 |
| 4 | GUIDE | used | 116524096 | 9.06 | 10302 | 1.000 | -0.097 | -0.053 | 0.075 | 0.123 | 194.956948 | 12.943353 | -584.89 | -663 |
| 5 | GUIDE | used | 116527432 | 9.76 | 10233 | 1.000 | -0.154 | -0.054 | 0.098 | 0.164 | 195.424040 | 13.173544 | -2230.83 | 149 |
| 6 | GUIDE | used | 116529456 | 10.33 | 10289 | 1.000 | -0.022 | 0.073 | 0.167 | 0.266 | 195.731712 | 12.662703 | -1410.15 | 2117 |
| 7 | GUIDE | used | 116530336 | 9.78 | 10291 | 1.000 | 0.035 | 0.079 | 0.101 | 0.163 | 195.563298 | 12.806260 | -1467.49 | 1334 |

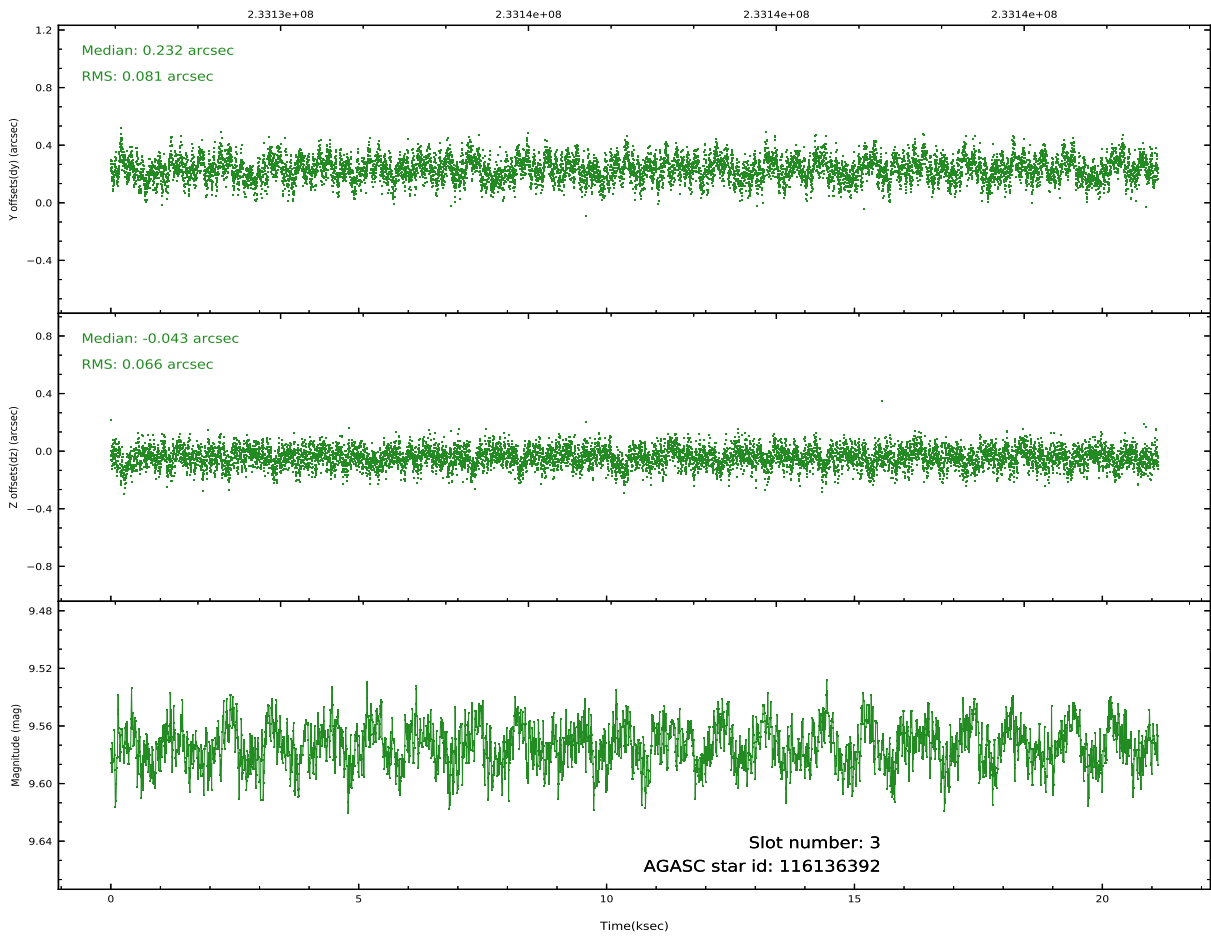
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2.4 Star Slots

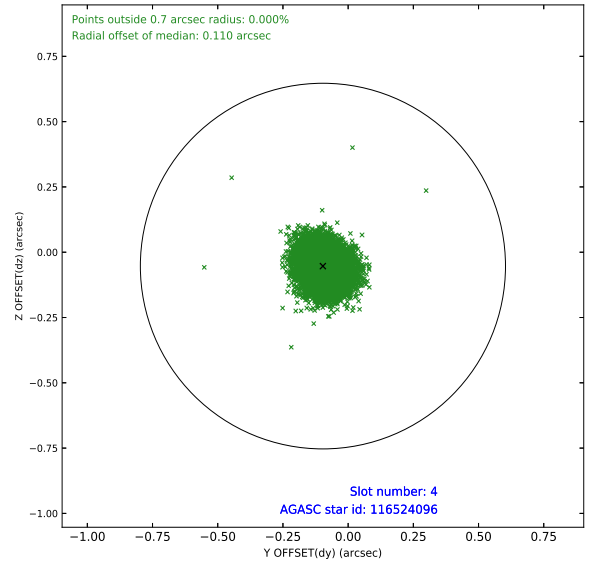
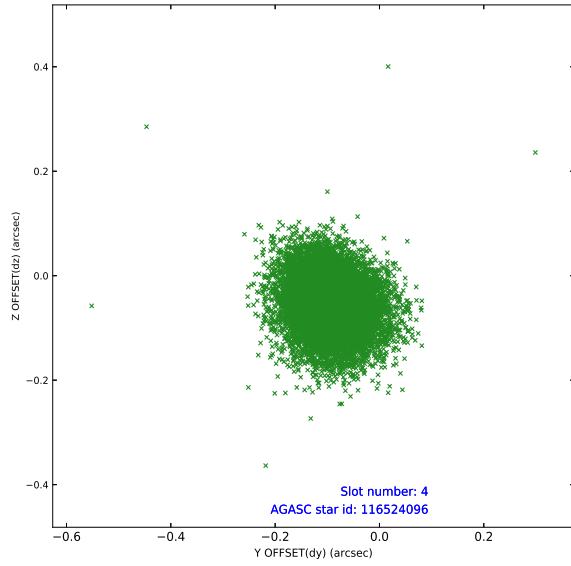
2.4.1 Slot 3



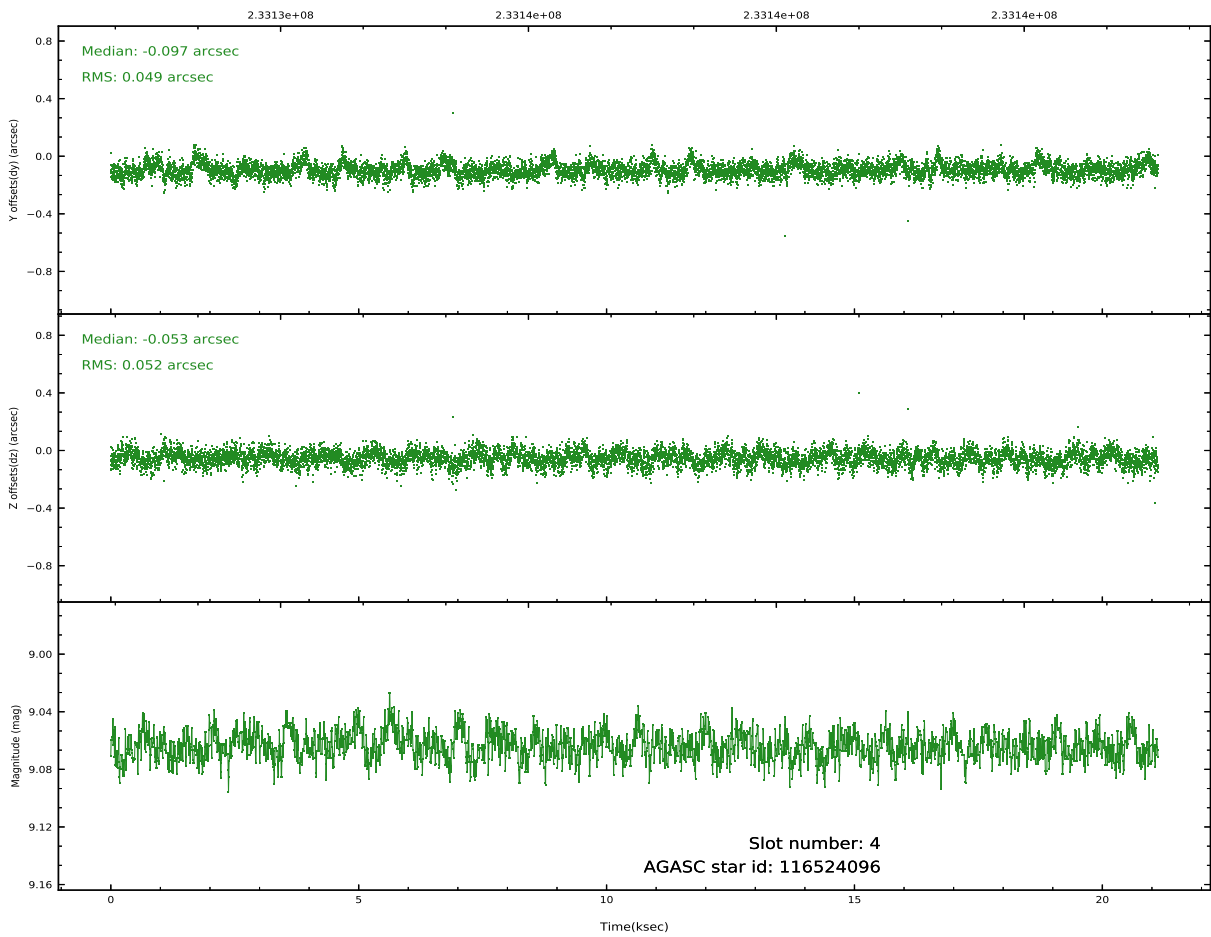
Time (s)



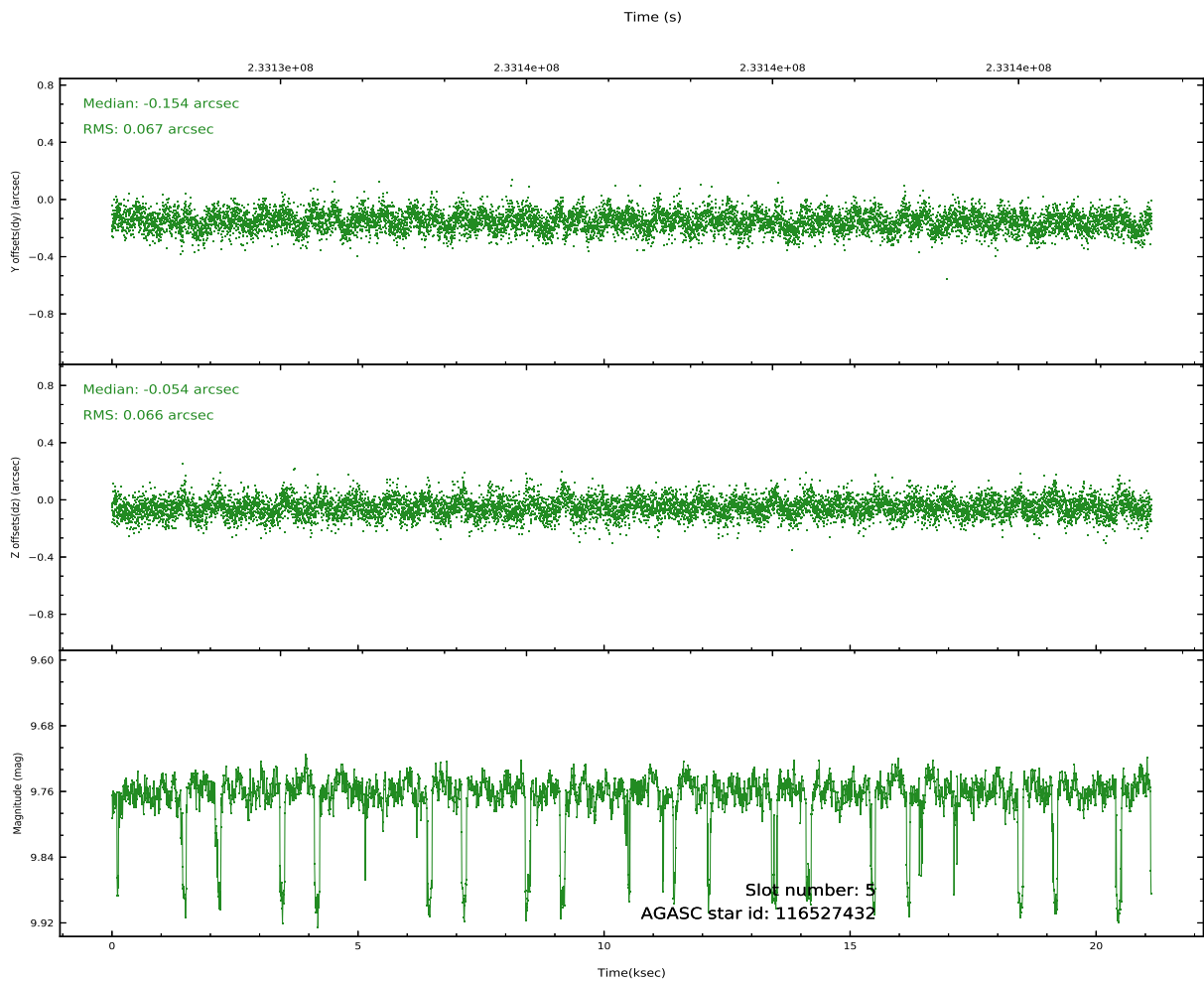
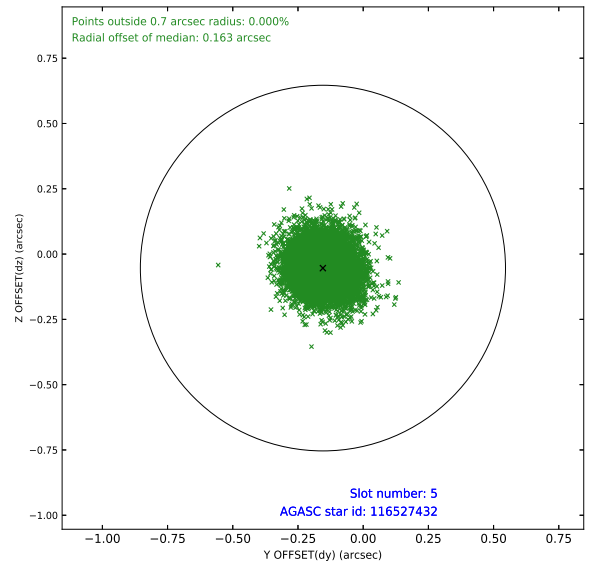
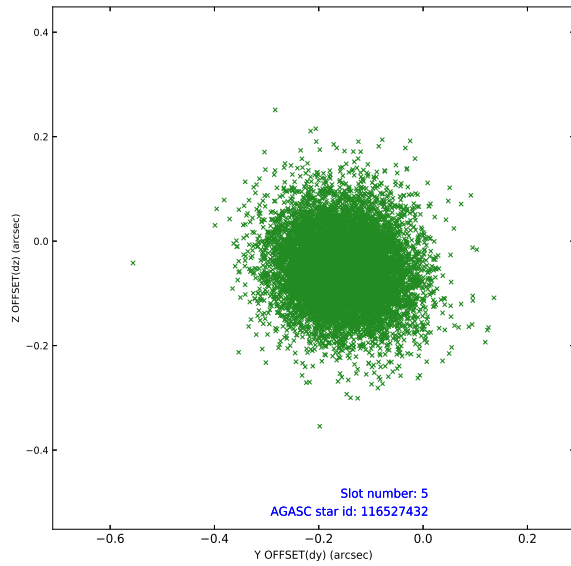
2.4.2 Slot 4



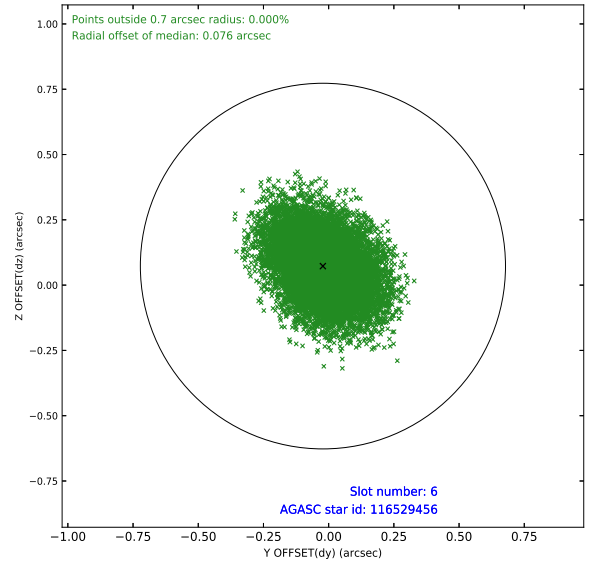
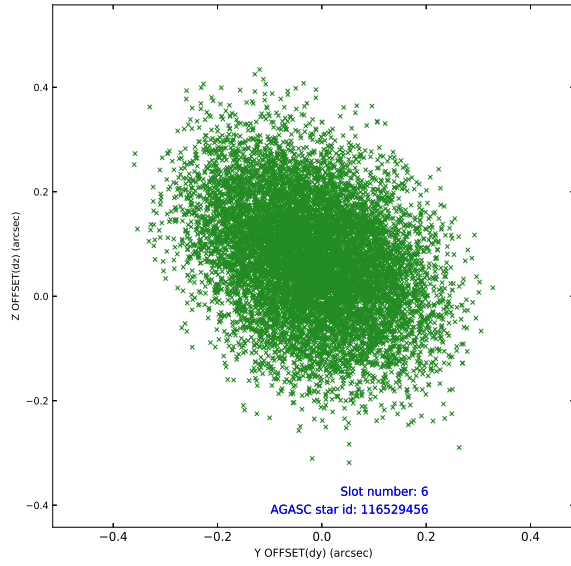
Time (s)



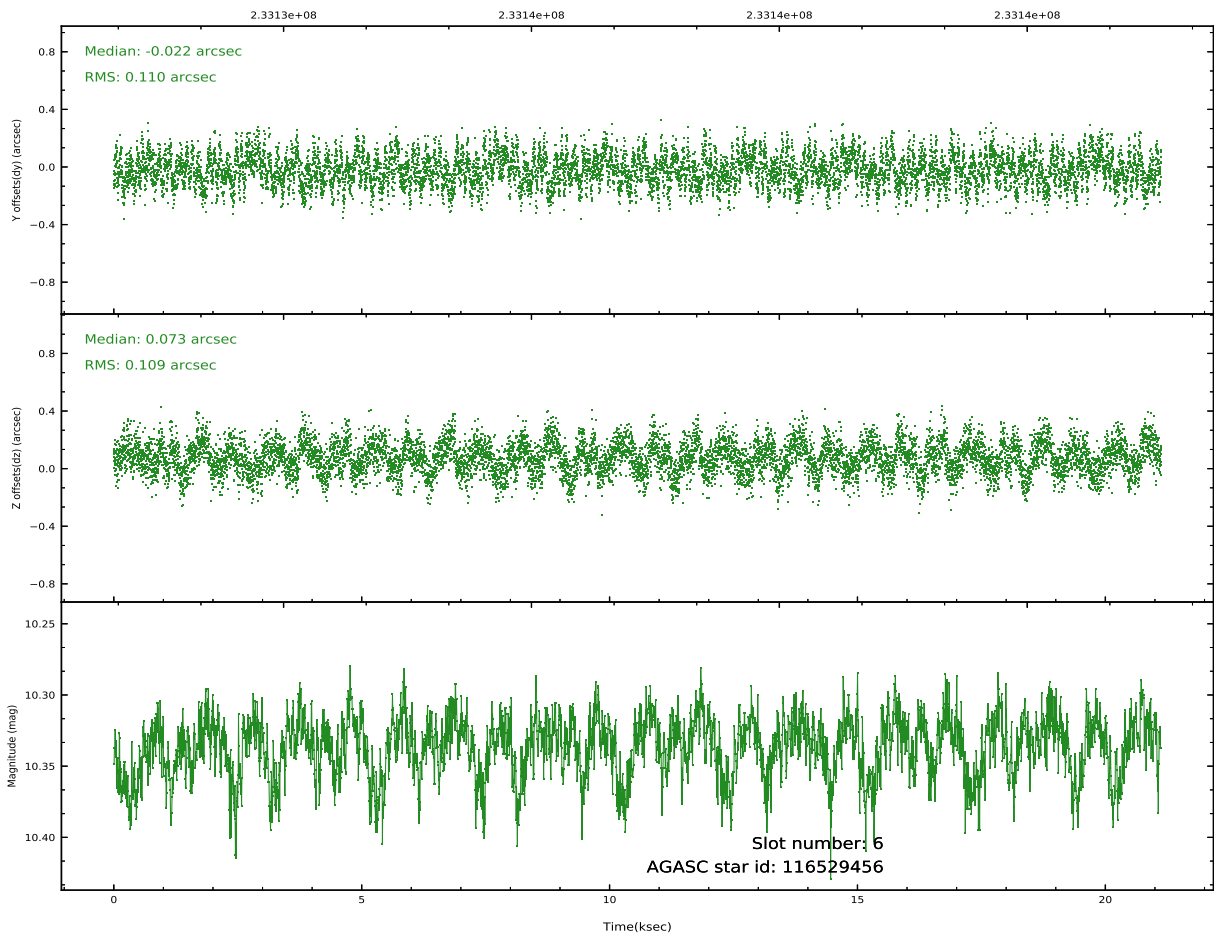
2.4.3 Slot 5



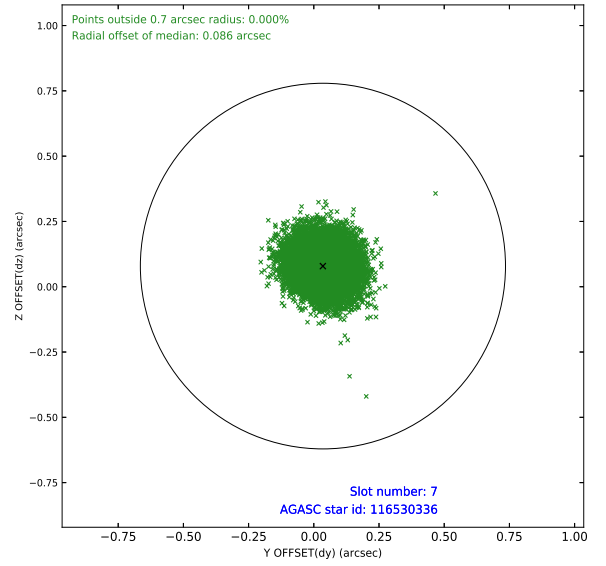
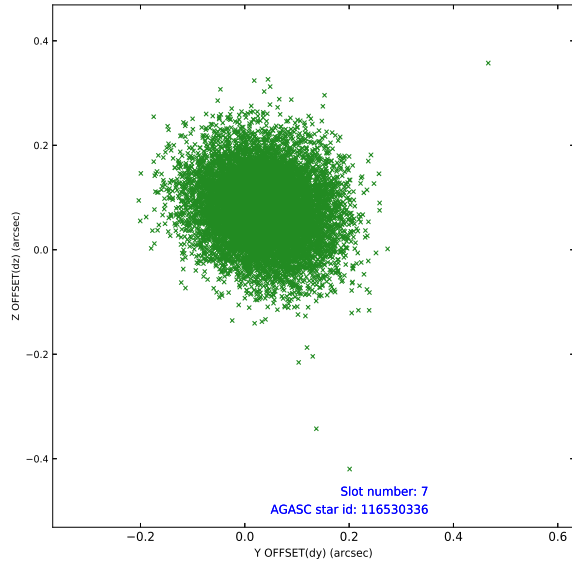
2.4.4 Slot 6



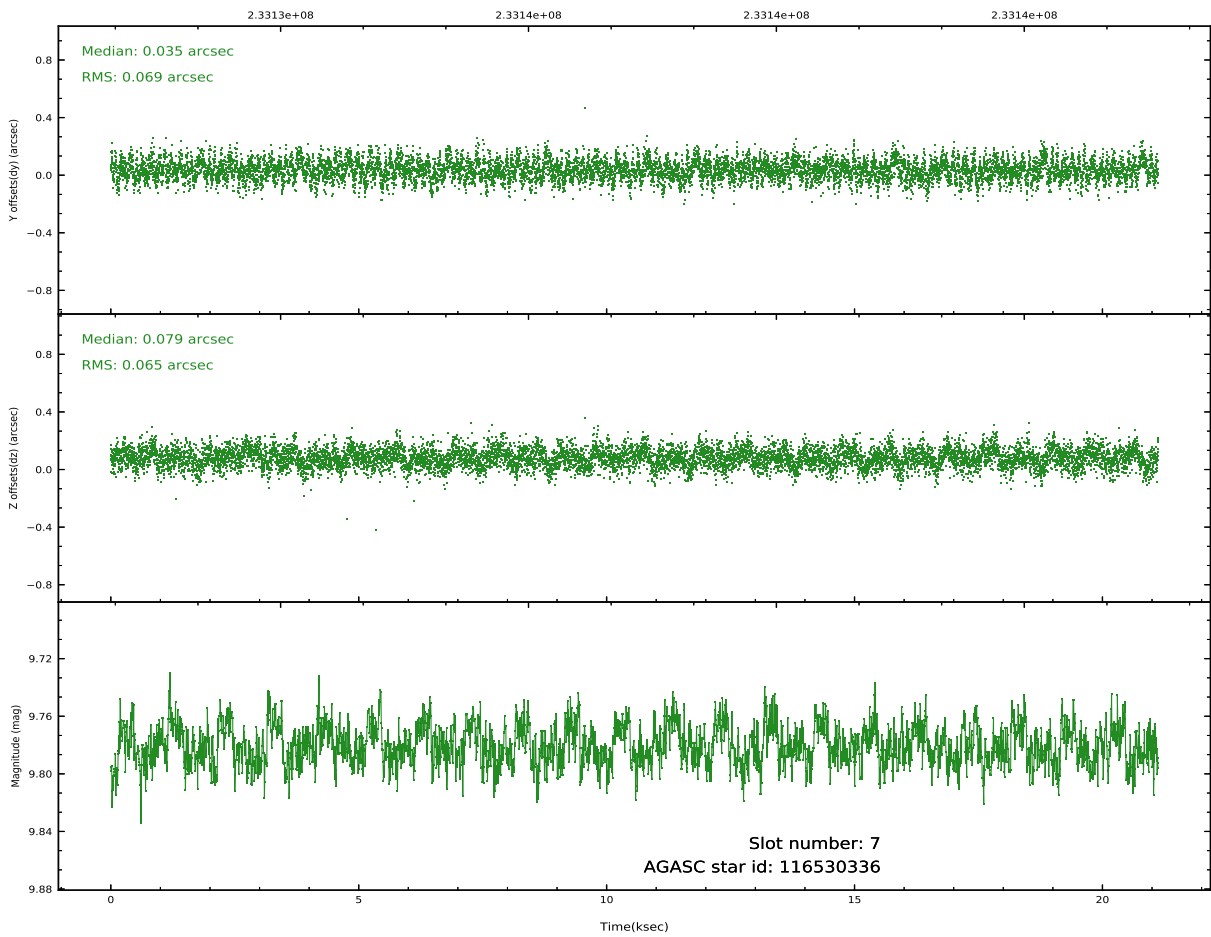
Time (s)



2.4.5 Slot 7

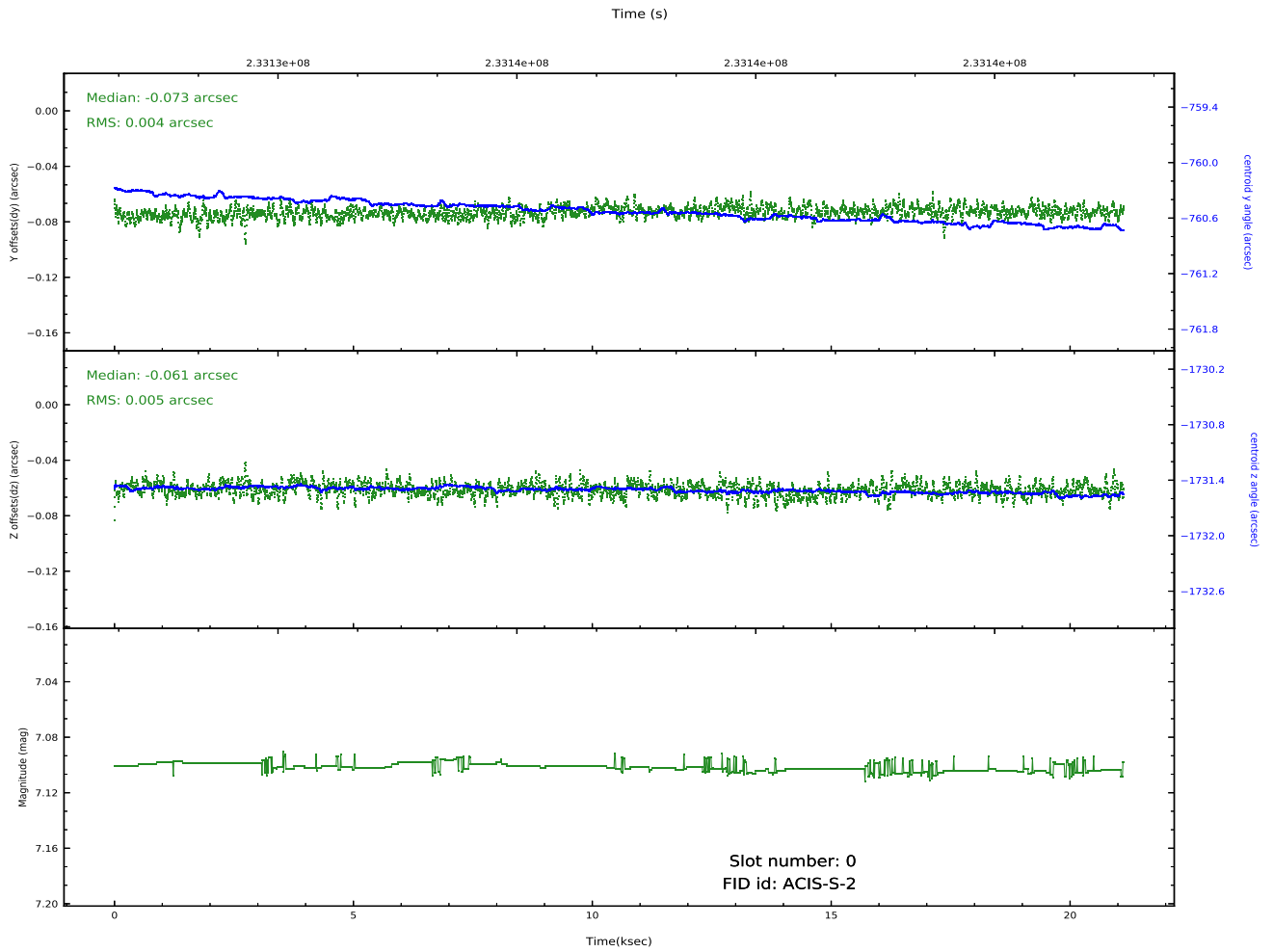
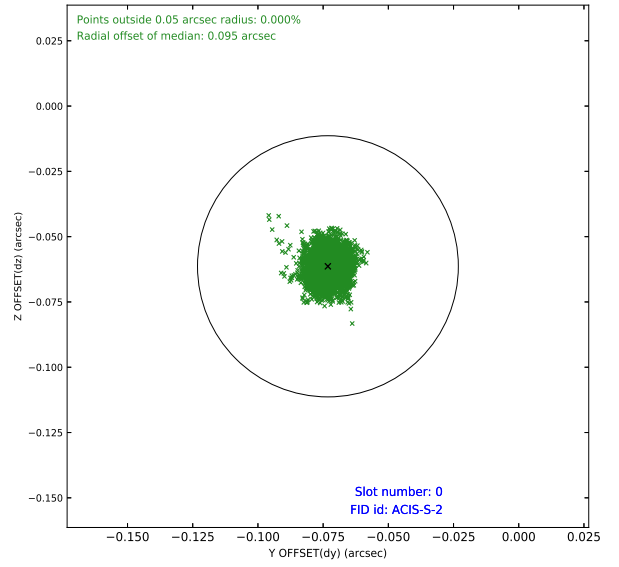
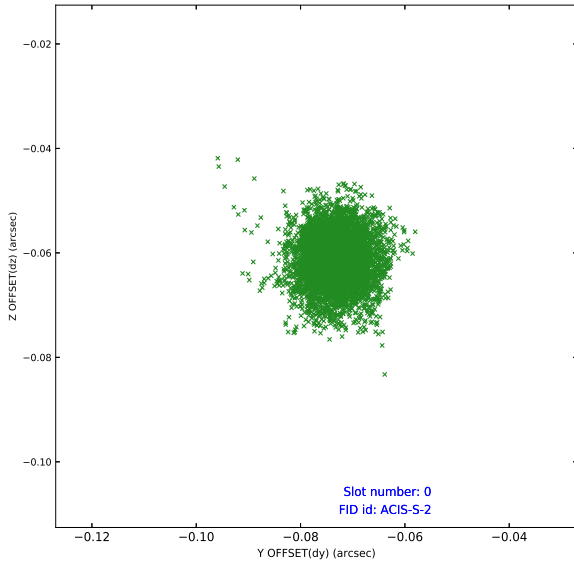


Time (s)

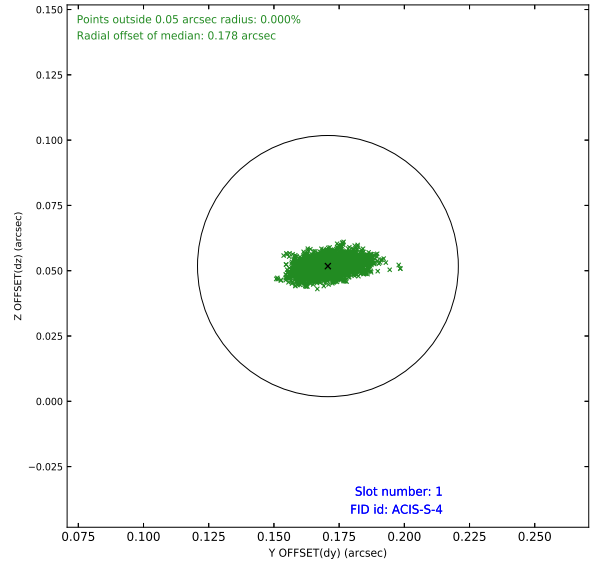
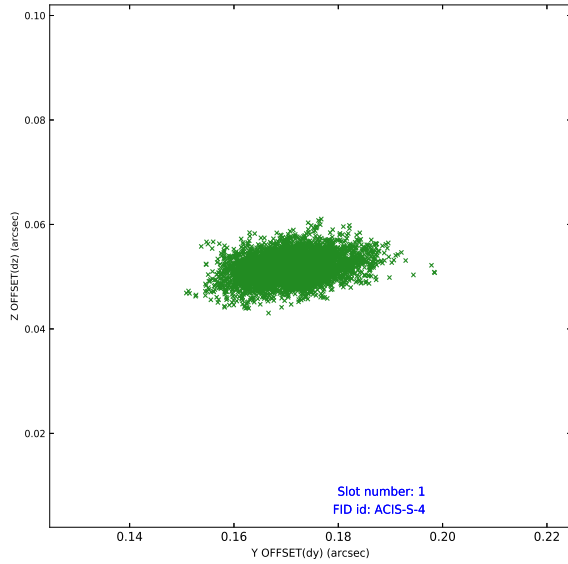


2.5 FID Slots

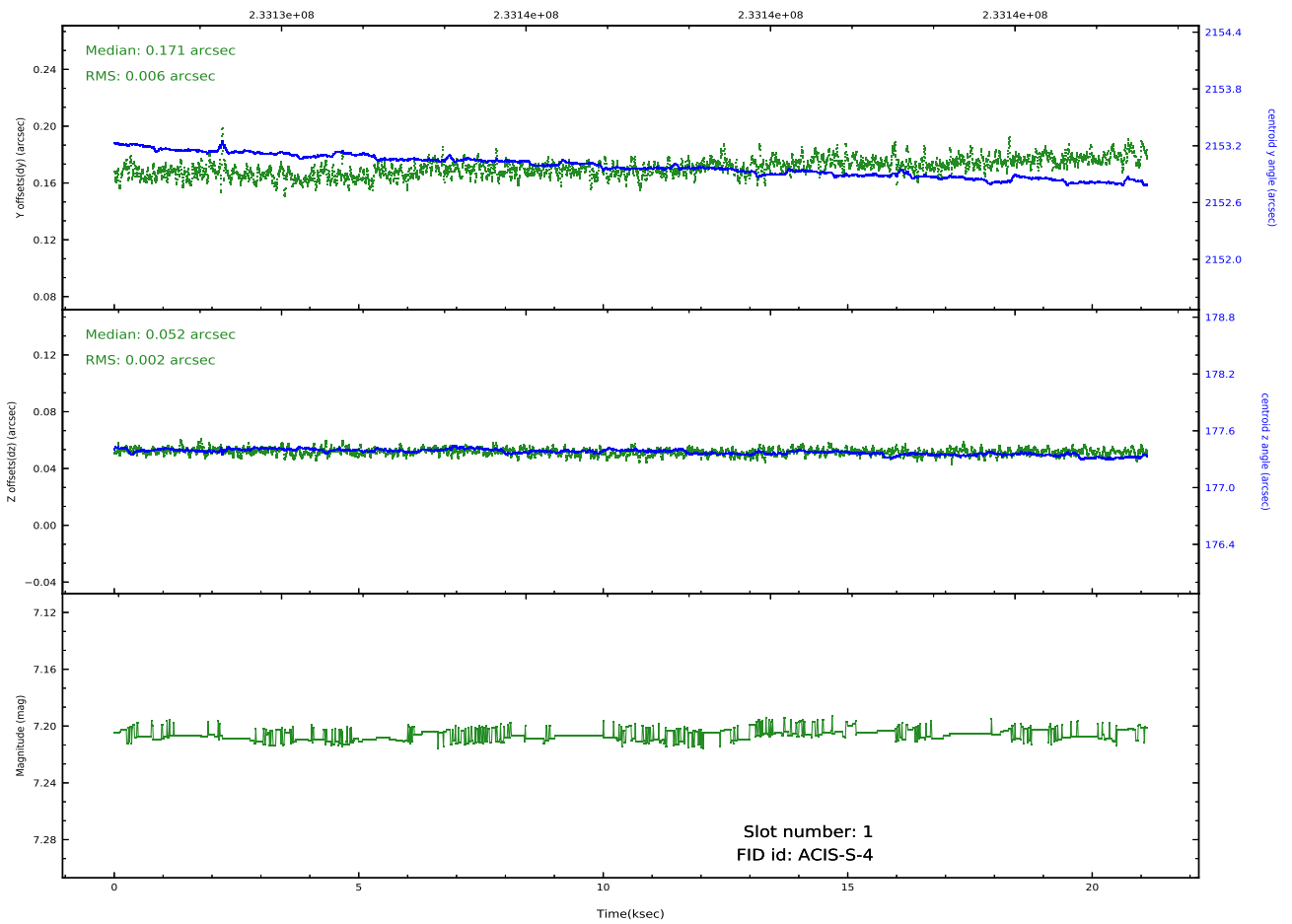
2.5.1 Slot 0



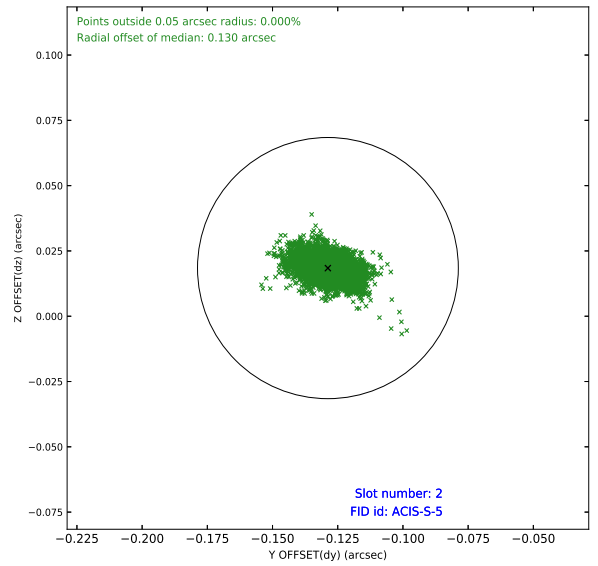
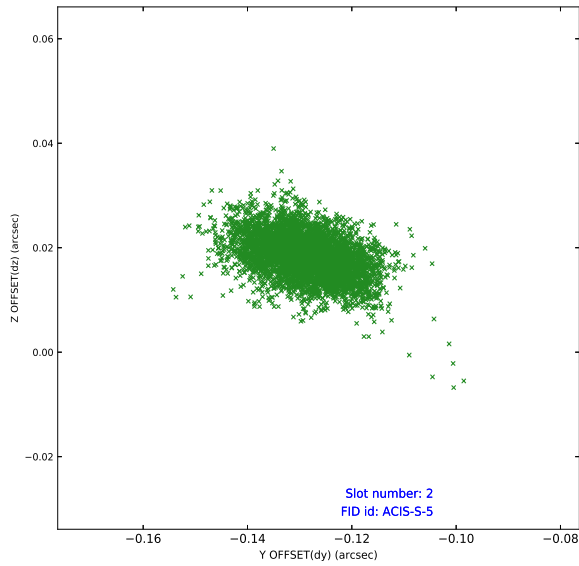
2.5.2 Slot 1



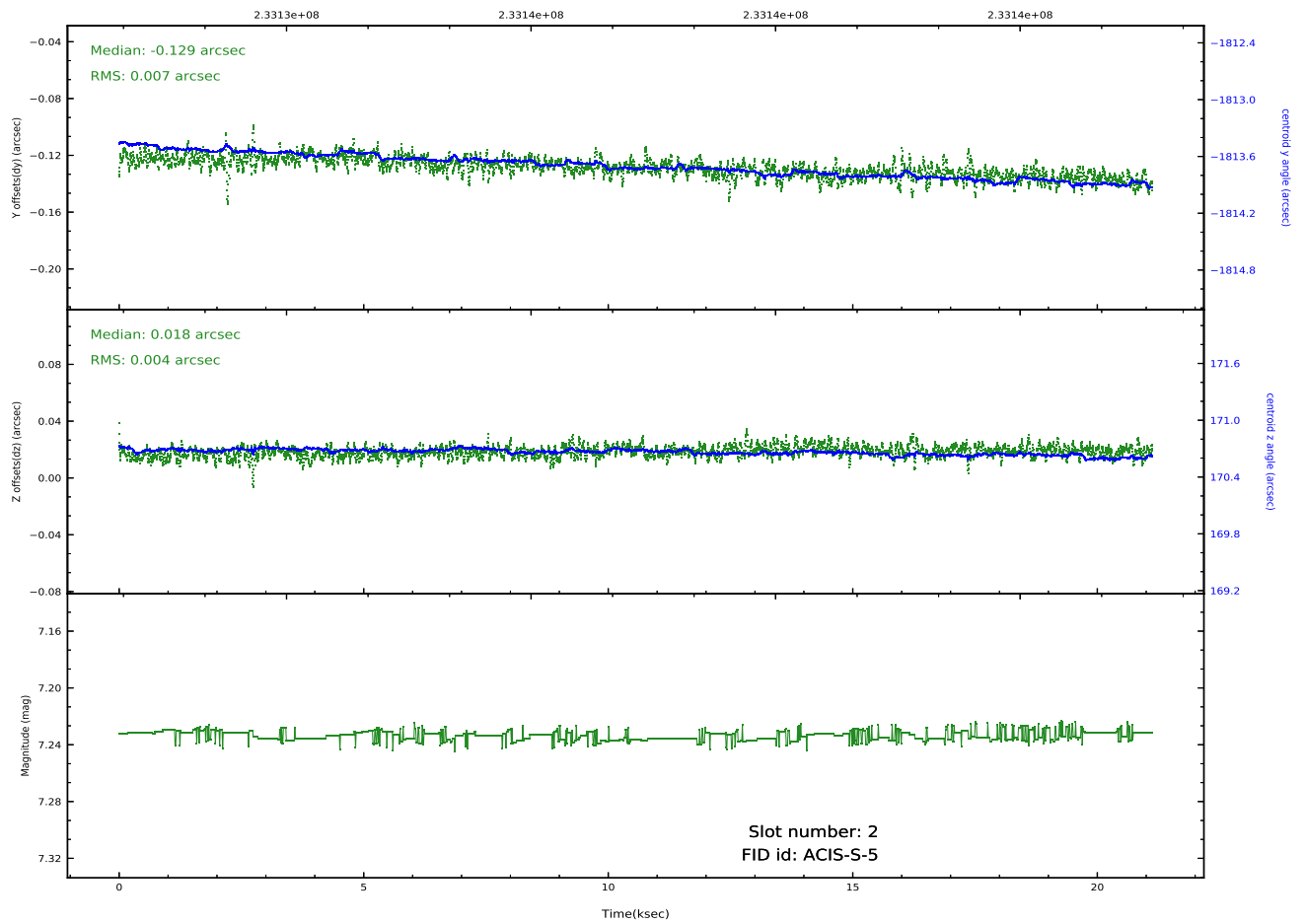
Time (s)



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 | 20.05119 |

A.2 Comments