

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5709 - L2 Version 4
Chandra X-Ray Center

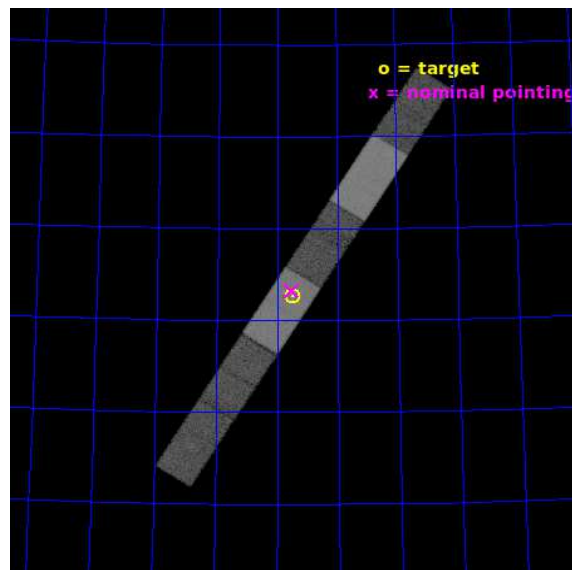
L2 Processing Date : Oct 8 2020

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1 Front

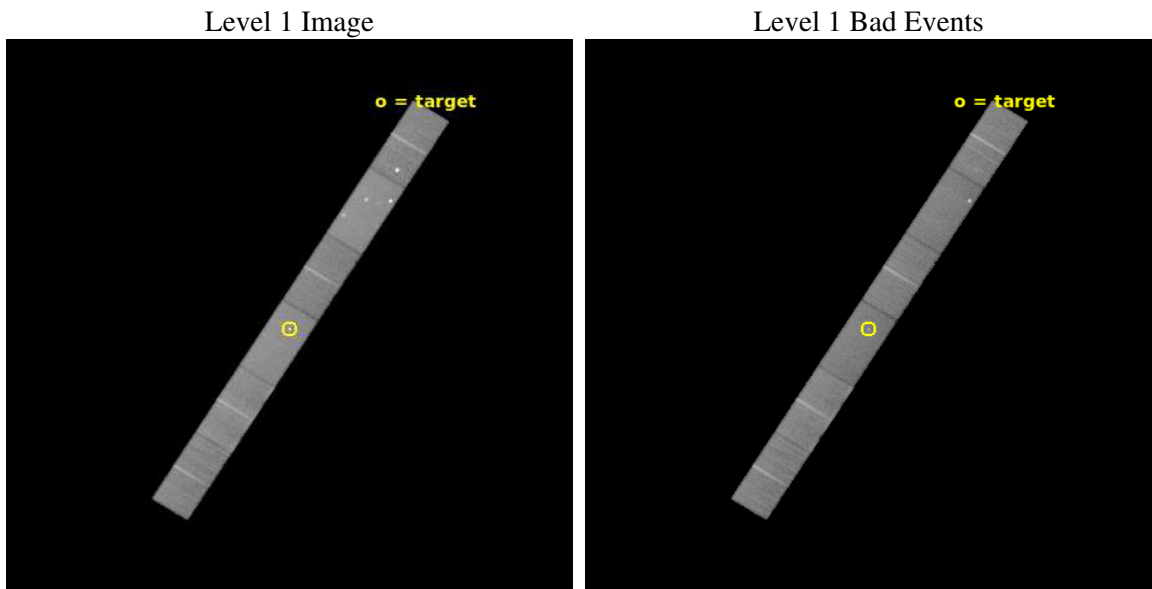
| | | |
|-----------|--|---|
| seq_num | 701131 | Sequence number |
| obs_id | 5709 | Observation id |
| title | X-ray from misaligned FRI jets: IC/CMB emission from a fast spine? | |
| observer | Dr. Rita Sambruna | Principal investigator |
| object | QSO B2007+777 | Source name |
| dtycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 301.37875 | Observer's specified target RA [deg] |
| dec_targ | 77.878611 | Observer's specified target Dec [deg] |
| ra_nom | 301.37964089936 | Nominal RA [deg] |
| dec_nom | 77.887506456951 | Nominal Dec [deg] |
| roll_nom | 122.16746807165 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 36867.600244164 | Sum of GTIs [s] |
| liveltime | 36045.756984909 | Livetime [s] |
| ontime4 | 36867.600244164 | Sum of GTIs [s] |
| ontime5 | 36867.600244164 | Sum of GTIs [s] |
| ontime6 | 36867.600244164 | Sum of GTIs [s] |
| ontime7 | 36867.600244164 | Sum of GTIs [s] |
| ontime8 | 36867.600244164 | Sum of GTIs [s] |
| ontime9 | 36867.600244164 | Sum of GTIs [s] |
| l2events | 254133 | Number of level 2 events |



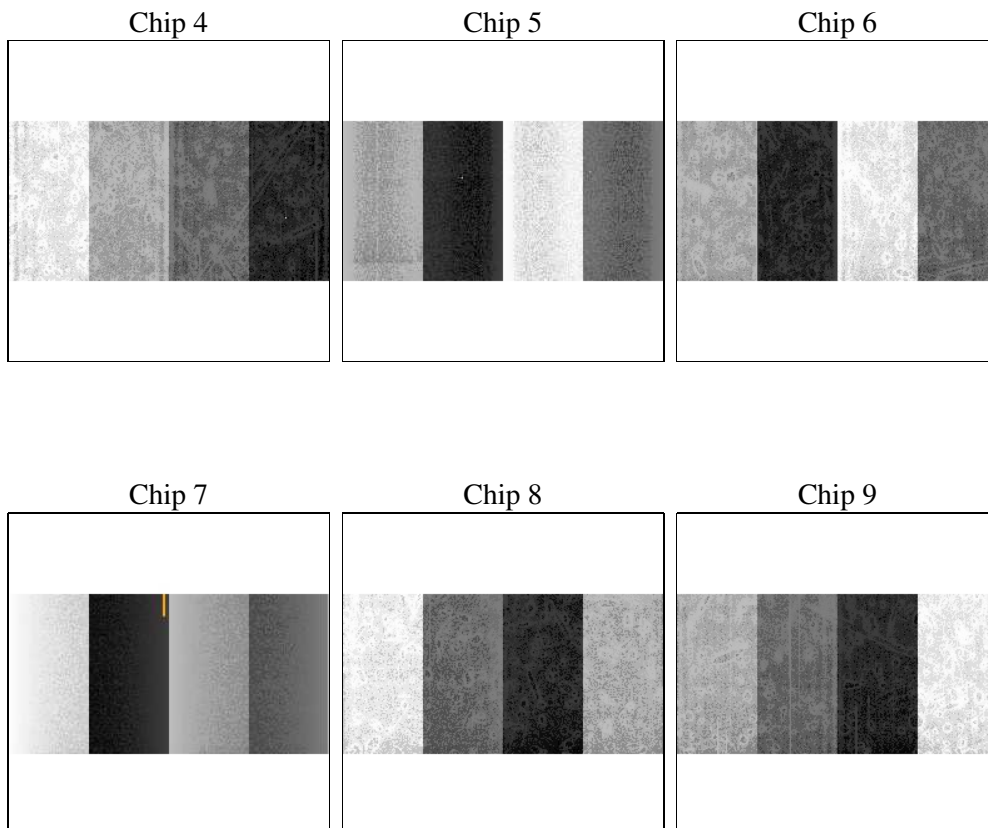
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 36685.786000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 36867.600244164 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime4 | 36867.600244164 | Sum of GTIs [s] |
| date | 2020-10-08T12:28:32 | Date and time of file creation | ontime5 | 36867.600244164 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime6 | 36867.600244164 | Sum of GTIs [s] |
| | | | ontime7 | 36867.600244164 | Sum of GTIs [s] |
| | | | ontime8 | 36867.600244164 | Sum of GTIs [s] |
| | | | ontime9 | 36867.600244164 | Sum of GTIs [s] |
| | | | l1events | 1099496 | Number of level 1 events |

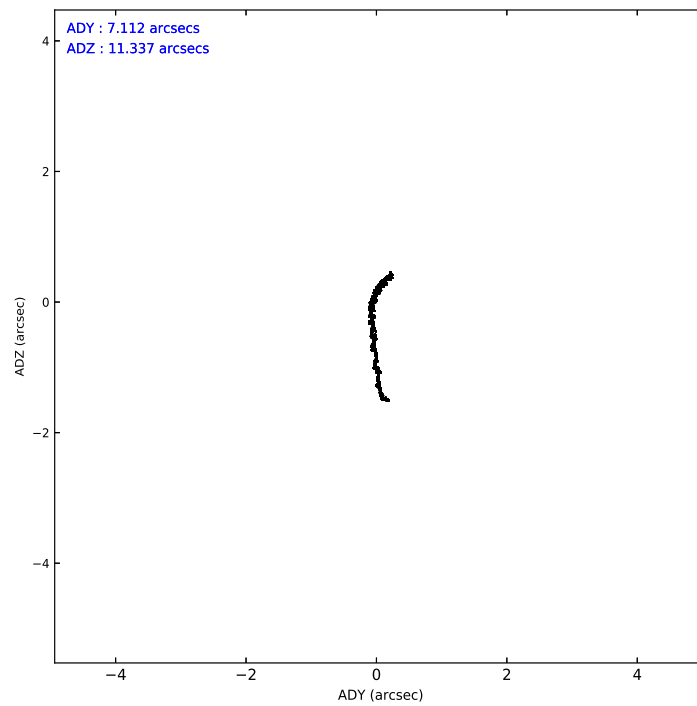
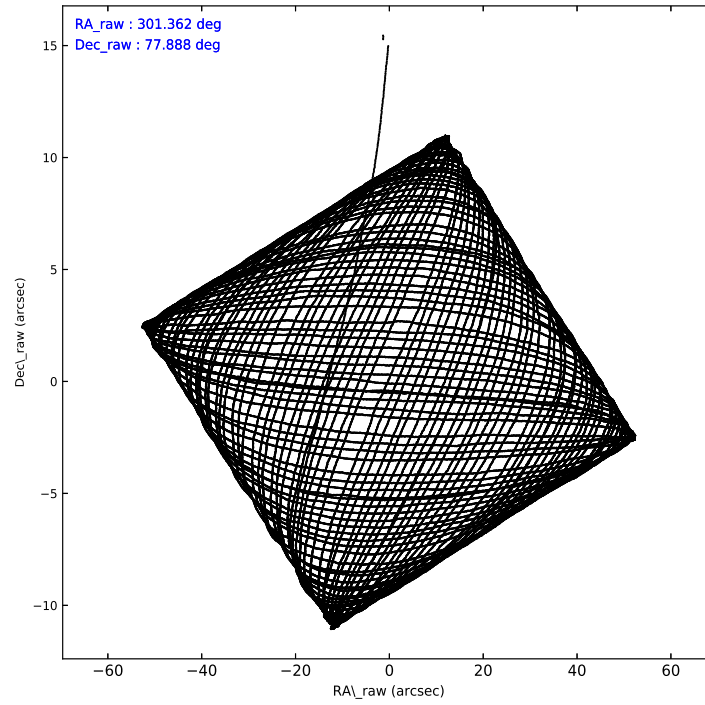
2.1.4 Events

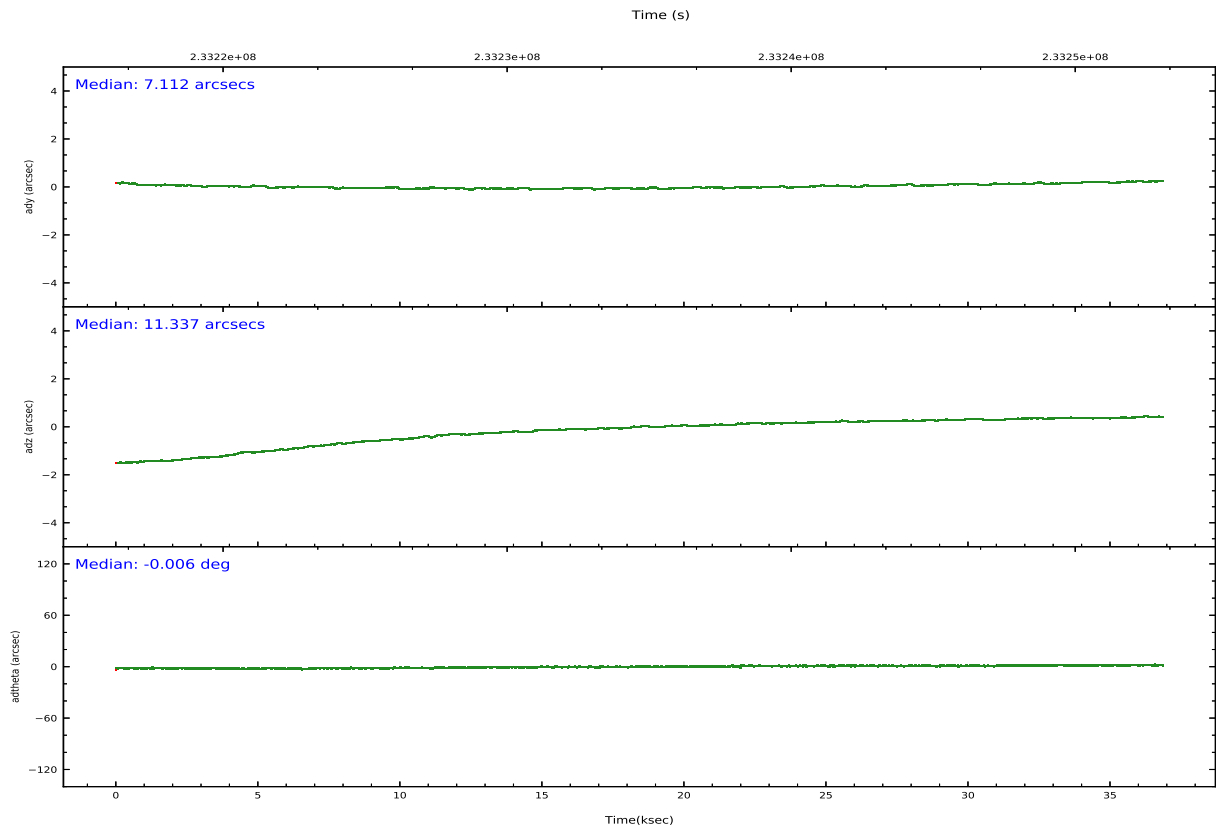
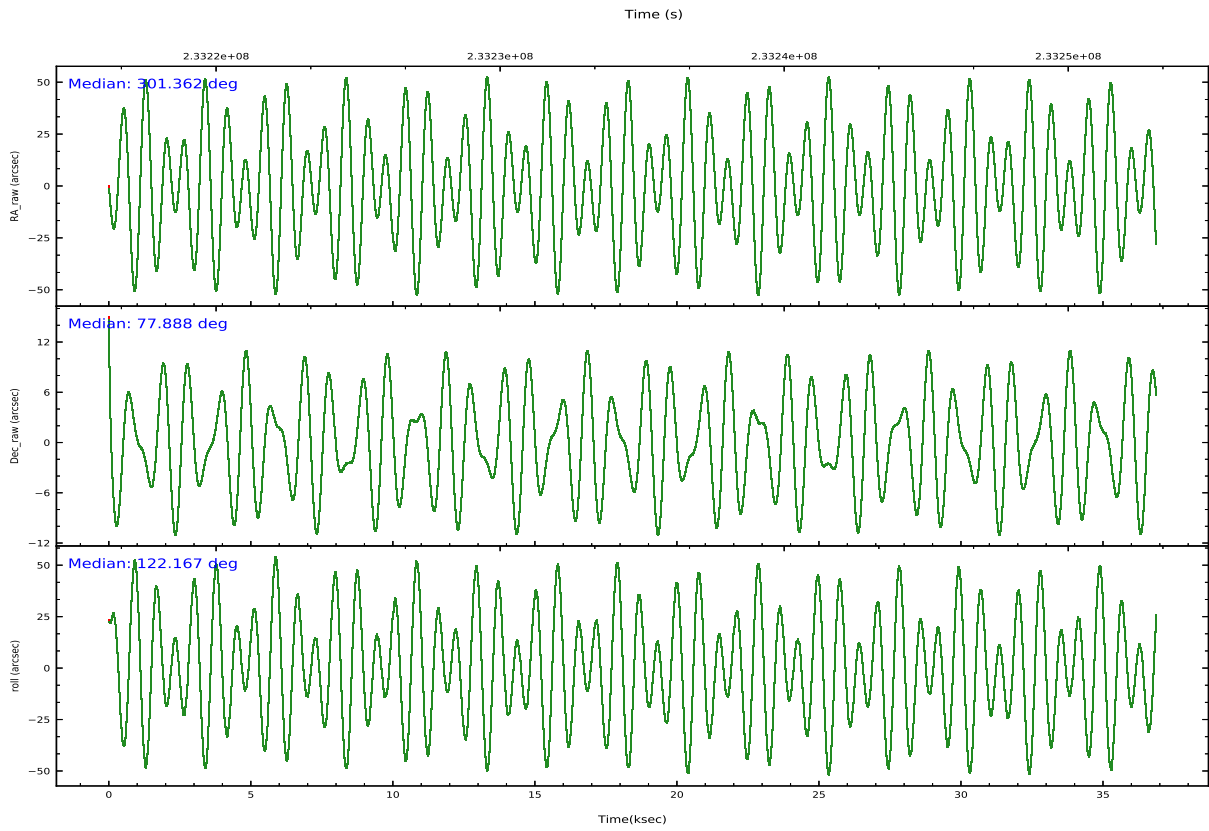
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 | | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|-------|--------|-------|--------|--------|
| level 1 events | 180934 | 226819 | 148719 | 203079 | 191235 | 148710 | grade 0 events | 29798 | 20626 | 8705 | 10428 | 14426 | 9774 |
| rejected events | 140232 | 117979 | 128694 | 111378 | 148566 | 127859 | | 16% | 9% | 5% | 5% | 7% | 6% |
| rejected % | 77% | 52% | 86% | 54% | 77% | 85% | grade 1 events | 188 | 4034 | 35 | 300 | 110 | 76 |
| | | | | | | | | 0% | 1% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 3924 | 30098 | 3827 | 19307 | 8959 | 3672 |
| | | | | | | | | 2% | 13% | 2% | 9% | 4% | 2% |
| | | | | | | | grade 3 events | 2256 | 4853 | 2119 | 8906 | 4484 | 2170 |
| | | | | | | | | 1% | 2% | 1% | 4% | 2% | 1% |
| | | | | | | | grade 4 events | 2242 | 4682 | 2081 | 8785 | 4155 | 2105 |
| | | | | | | | | 1% | 2% | 1% | 4% | 2% | 1% |
| | | | | | | | grade 5 events | 6213 | 16344 | 6491 | 18527 | 8678 | 6917 |
| | | | | | | | | 3% | 7% | 4% | 9% | 4% | 4% |
| | | | | | | | grade 6 events | 3050 | 50462 | 3540 | 45441 | 11211 | 3407 |
| | | | | | | | | 1% | 22% | 2% | 22% | 5% | 2% |
| | | | | | | | grade 7 events | 133263 | 95720 | 121921 | 91385 | 139212 | 120589 |
| | | | | | | | | 73% | 42% | 81% | 44% | 72% | 81% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 301.476891 | 301.37964089936 | Subarray requested | CUSTOM | 1/2 |
| [deg] Pointing Dec | 77.875159 | 77.887506456951 | Subarray start row | 257 | 257 |
| [deg] Pointing Roll | 121.899482 | 122.16746807165 | Subarray row count | 512 | 512 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | Alternating exposures requested | N | N |
| [mm] SIM defocus | 0 | 0.001444936568705701 | [s] Primary exposure time | 0.000000 | 1.8 |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | | | |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | | | |
| [s] Observation start time (MET) | 233216409.184000 | 233215294.29416 | | | |
| Observation start date | 2005-05-23T06:19:05 | 2005-05-23T06:01:34 | | | |
| [s] Observation end time (MET) | 233253095.184000 | 233253318.2084 | | | |
| Observation end date | 2005-05-23T16:30:31 | 2005-05-23T16:35:18 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





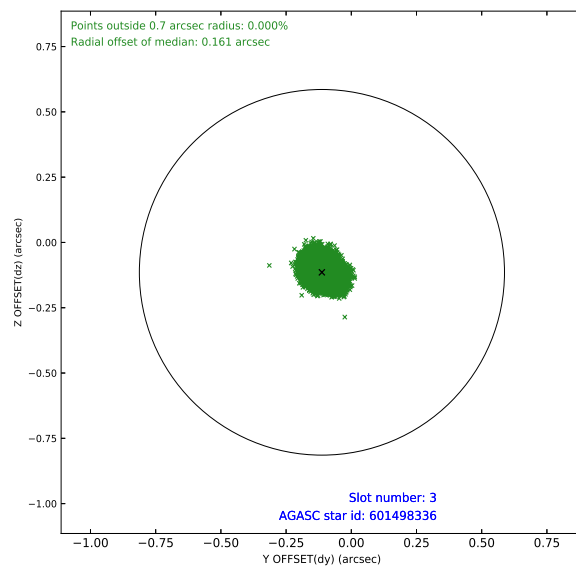
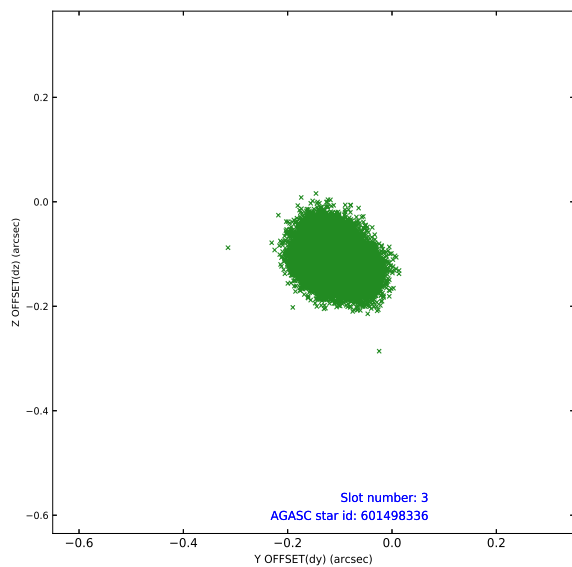
Slot Statistics

| 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 | 8992 | 1.000 | -0.076 | -0.059 | 0.013 | 0.019 | 0.000000 | 0.000000 | -759.91 | -1732 |
| 1 | FID | | ACIS-S-4 | 7.20 | 8993 | 1.000 | 0.148 | 0.052 | 0.012 | 0.022 | 0.000000 | 0.000000 | 2153.52 | 176 |
| 2 | FID | | ACIS-S-5 | 7.23 | 8993 | 1.000 | -0.105 | 0.015 | 0.009 | 0.015 | 0.000000 | 0.000000 | -1812.80 | 169 |
| 3 | GUIDE | used | 601498336 | 7.15 | 17916 | 1.000 | -0.113 | -0.114 | 0.054 | 0.085 | 301.598476 | 77.537803 | -1080.86 | 561 |
| 4 | GUIDE | used | 601500392 | 8.79 | 17985 | 1.000 | -0.046 | -0.033 | 0.074 | 0.122 | 303.578266 | 78.185280 | 153.46 | -1919 |
| 5 | GUIDE | used | 601514248 | 7.18 | 17987 | 1.000 | 0.019 | 0.051 | 0.057 | 0.087 | 301.995239 | 77.824437 | -361.40 | -238 |
| 6 | GUIDE | used | 601363376 | 8.34 | 17976 | 1.000 | 0.107 | 0.106 | 0.057 | 0.090 | 297.258681 | 77.993065 | 2124.94 | 2395 |
| 7 | GUIDE | used | 601371520 | 9.14 | 17935 | 1.000 | 0.032 | -0.012 | 0.073 | 0.119 | 299.561030 | 78.034724 | 1263.28 | 898 |

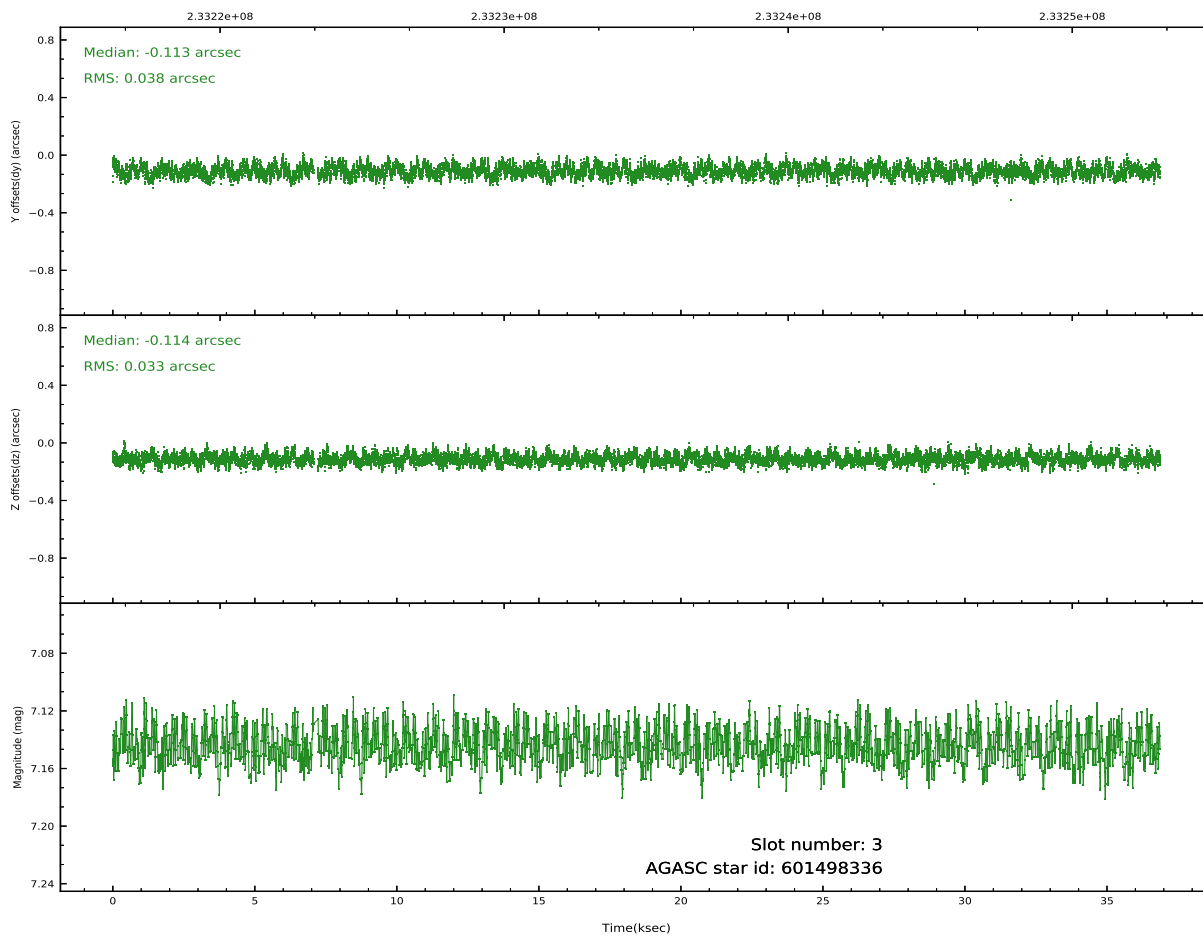
∞

2.4 Star Slots

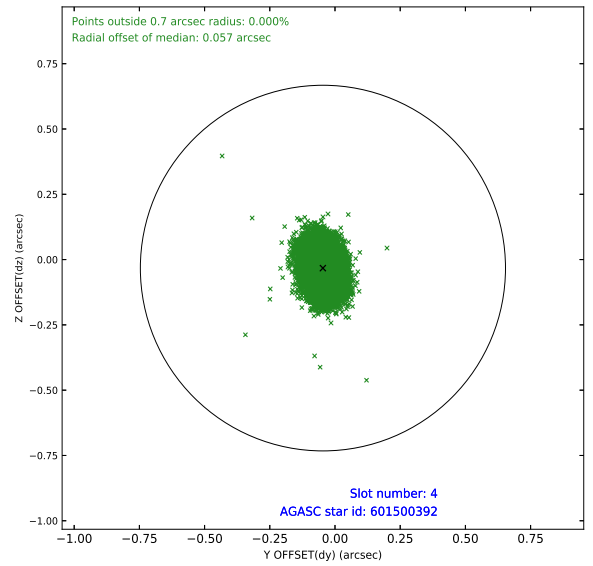
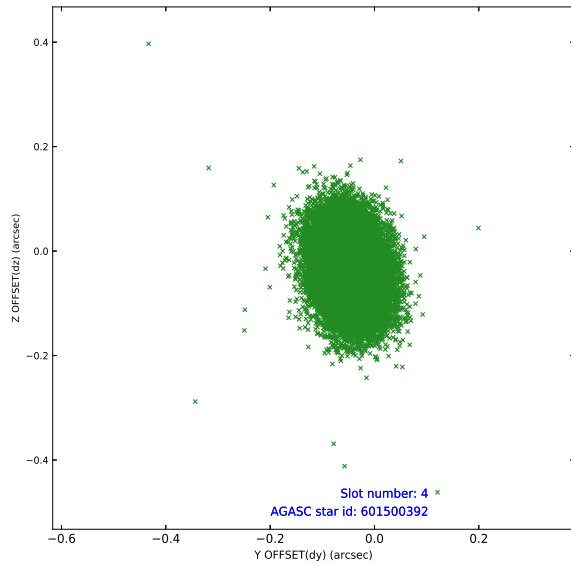
2.4.1 Slot 3



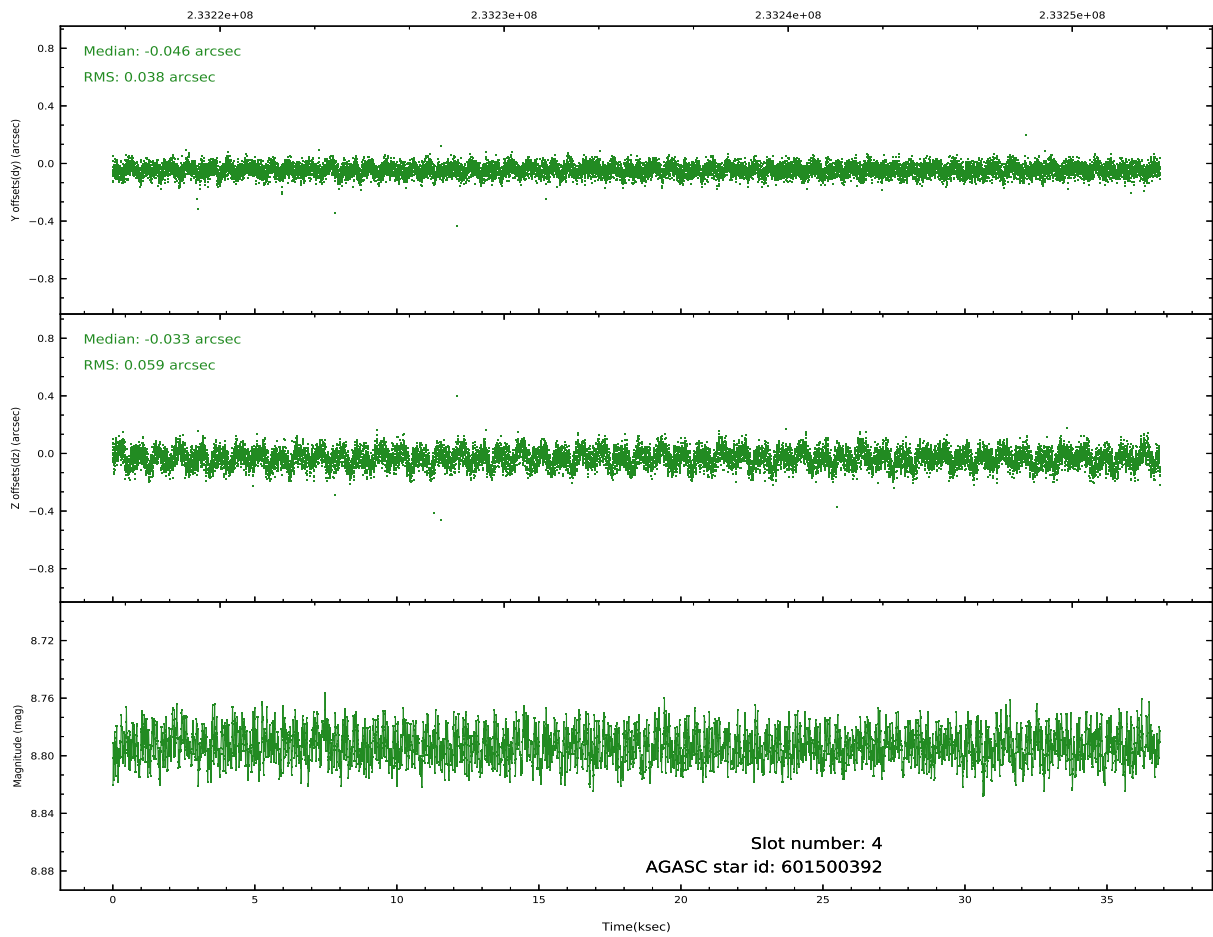
Time (s)



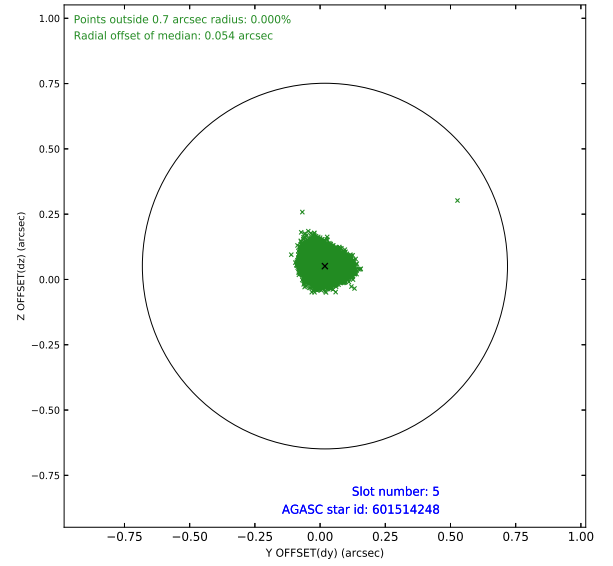
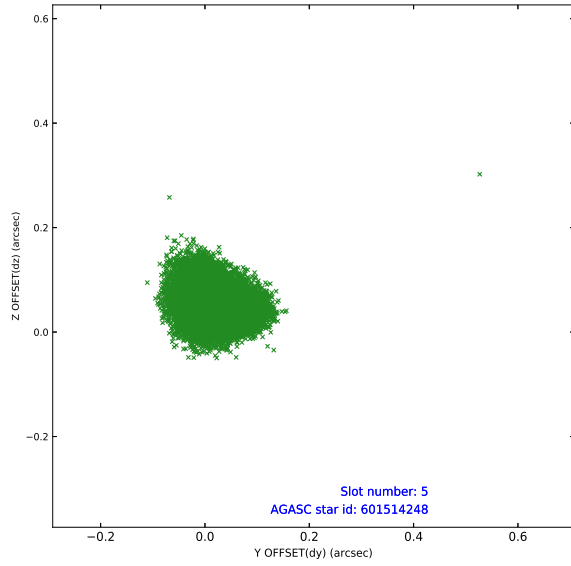
2.4.2 Slot 4



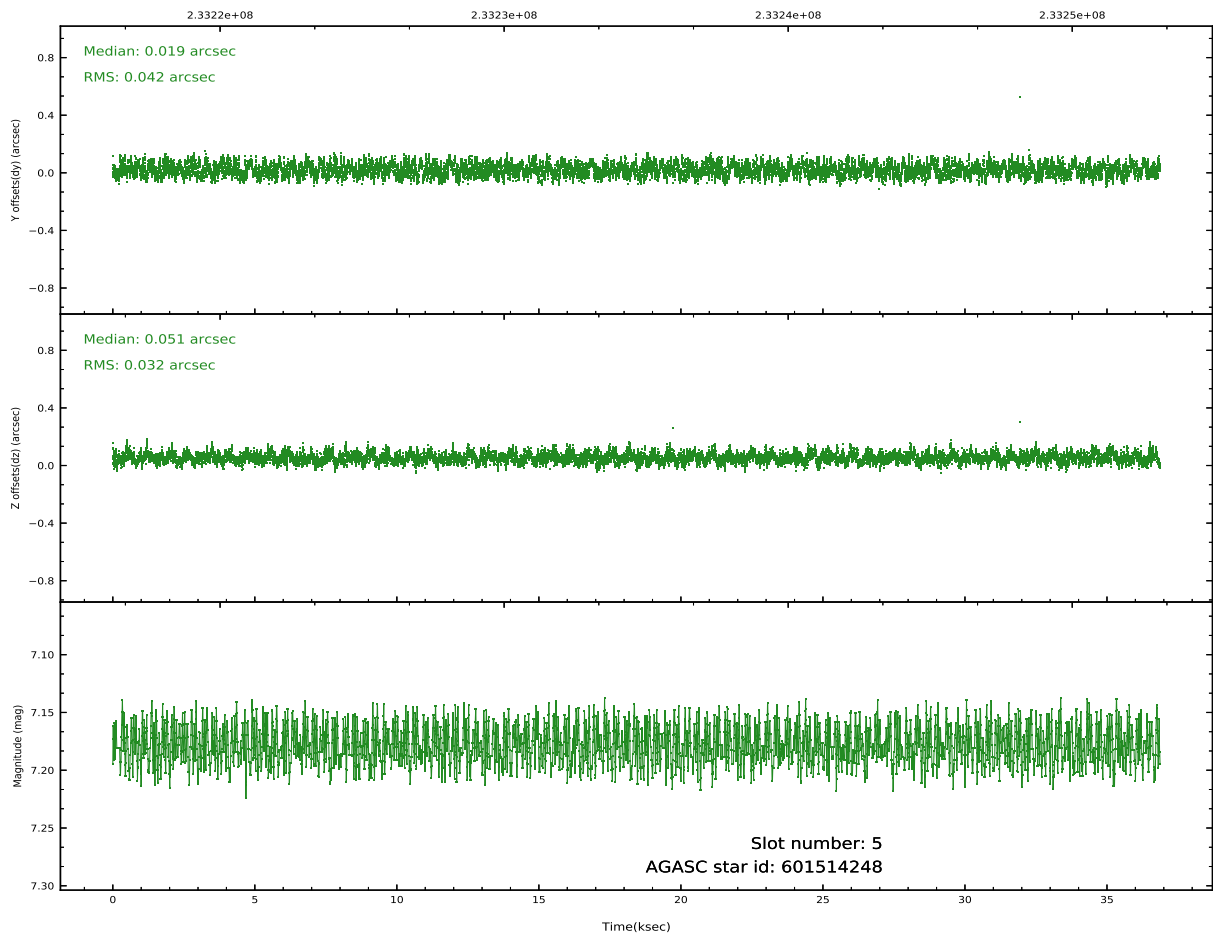
Time (s)



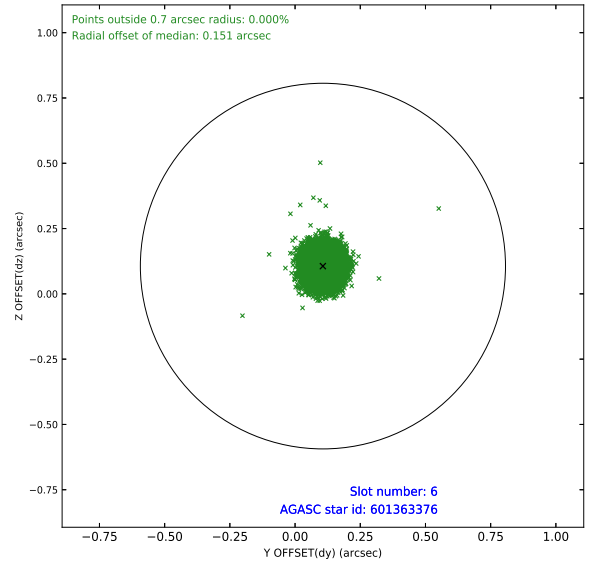
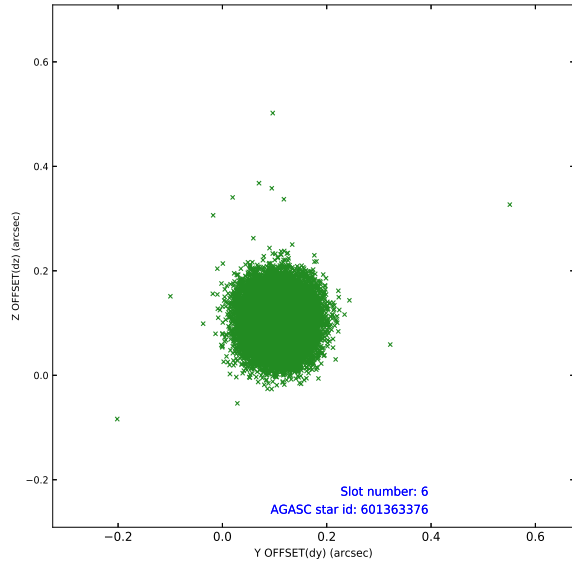
2.4.3 Slot 5



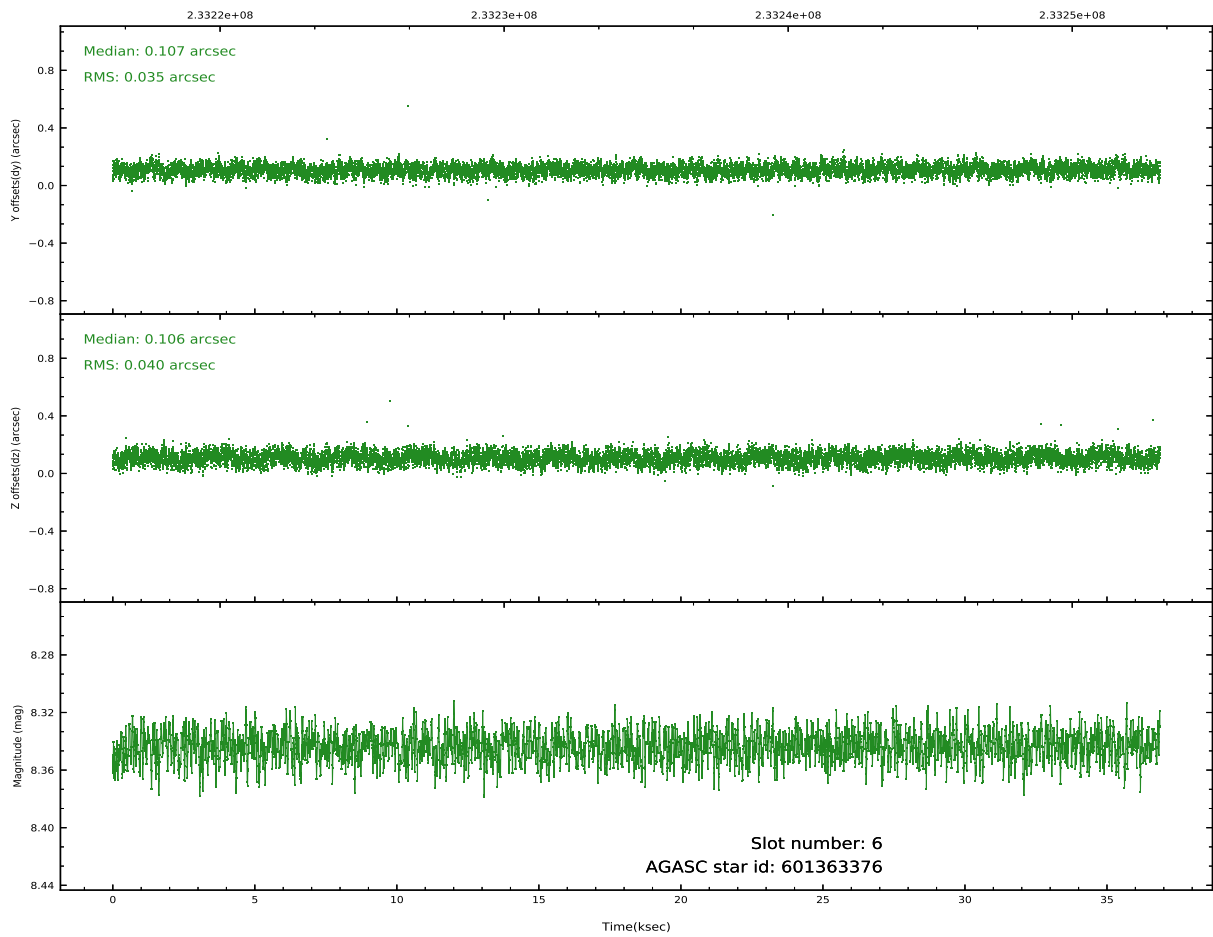
Time (s)



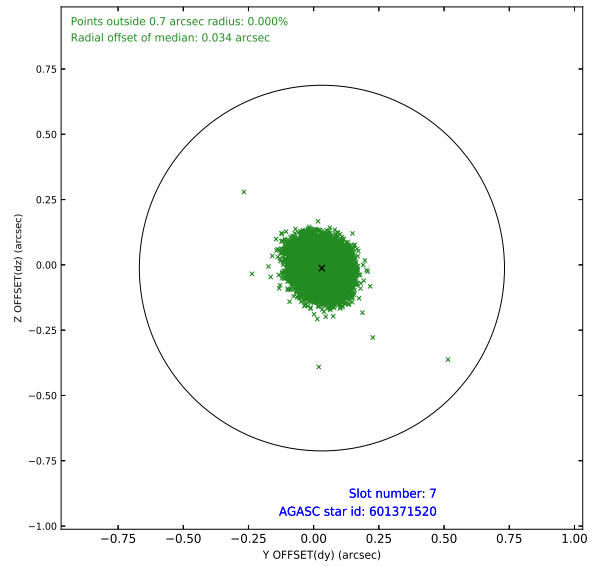
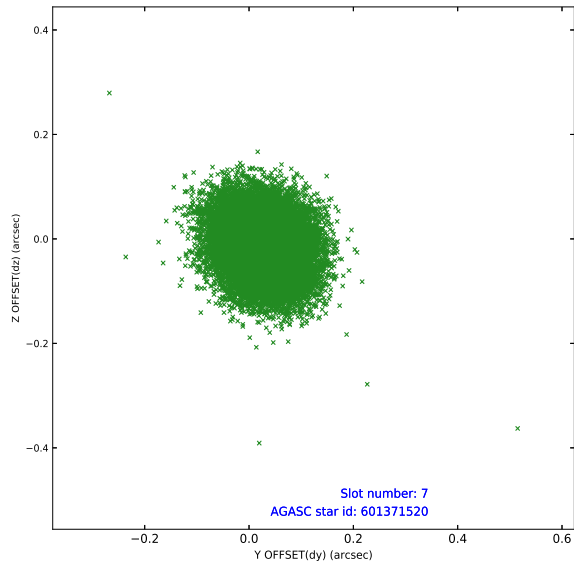
2.4.4 Slot 6



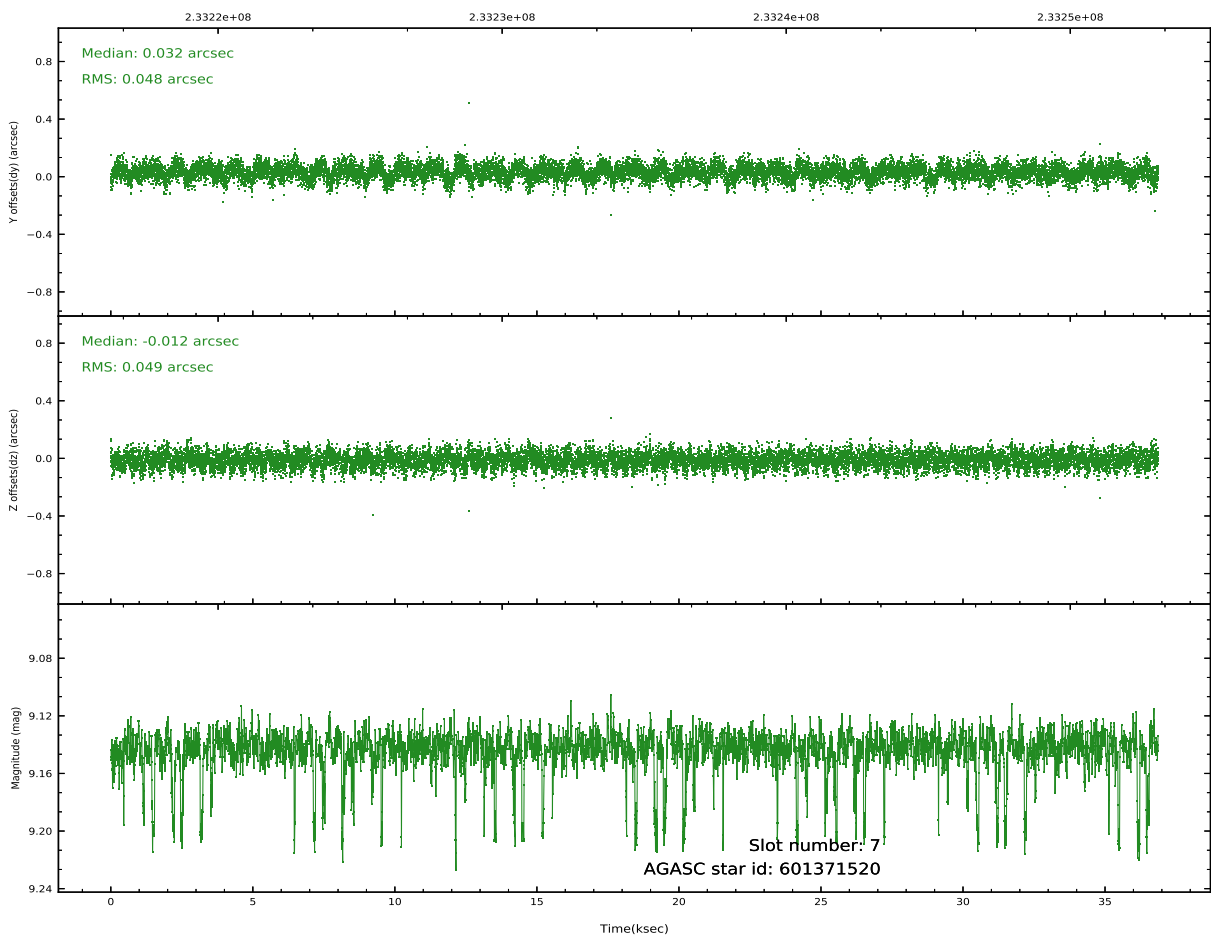
Time (s)



2.4.5 Slot 7

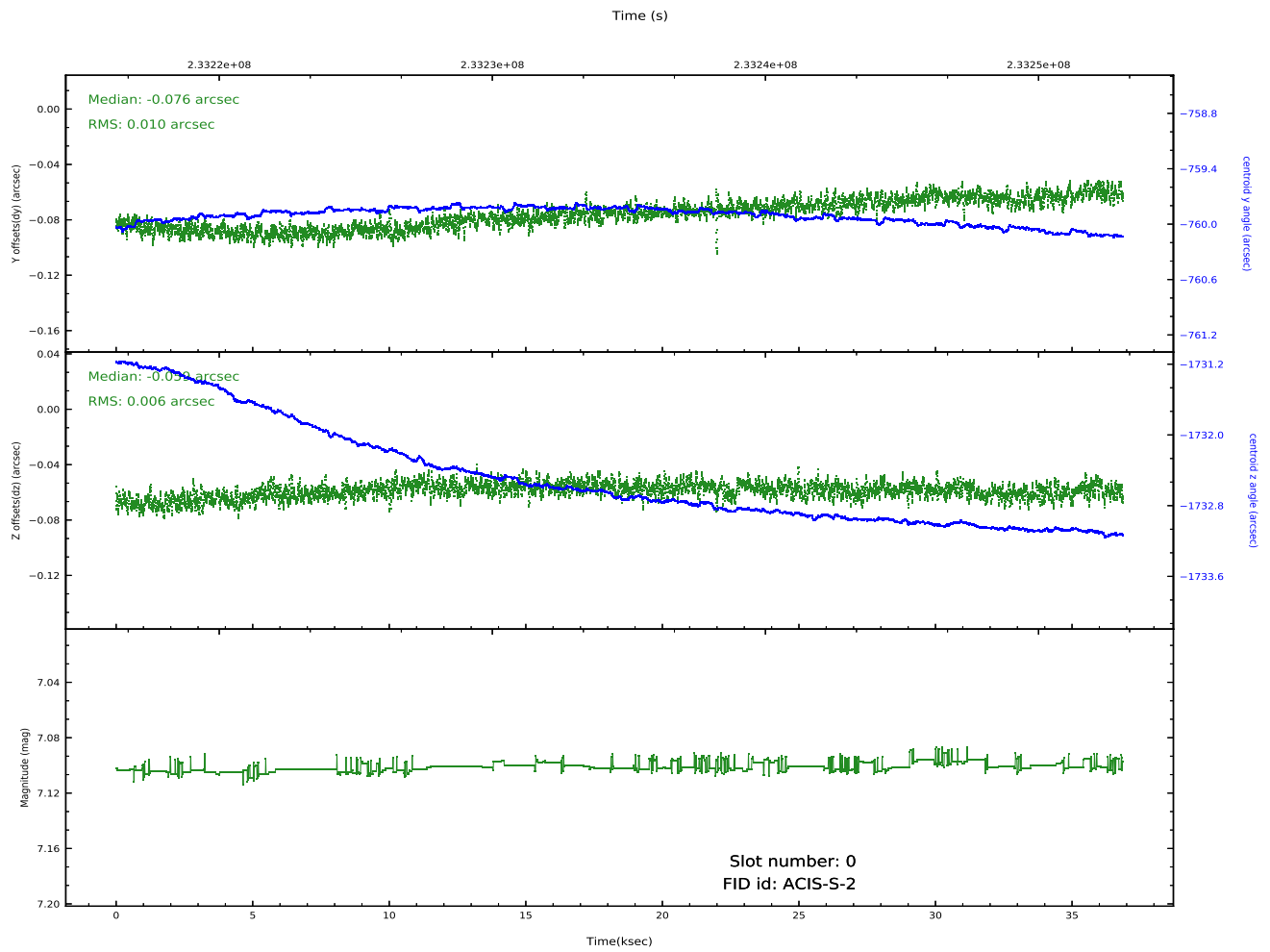
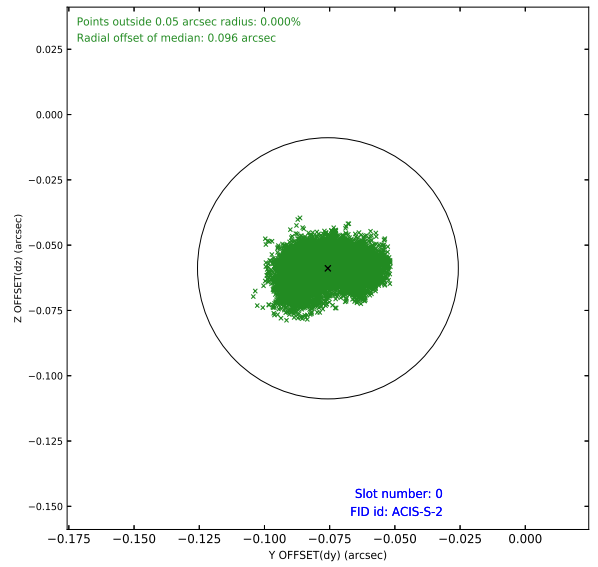
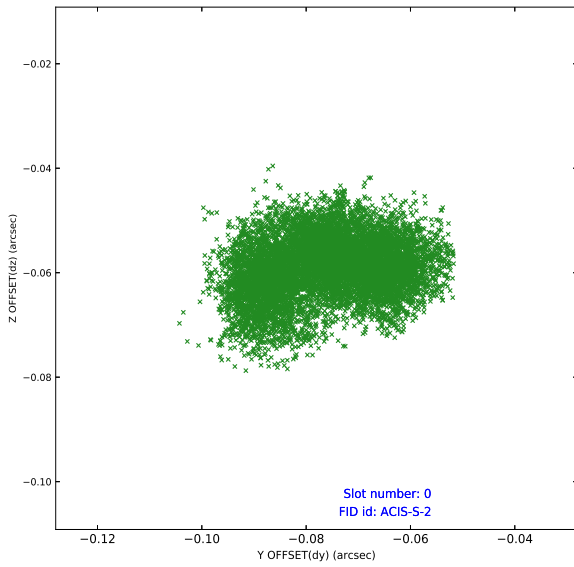


Time (s)

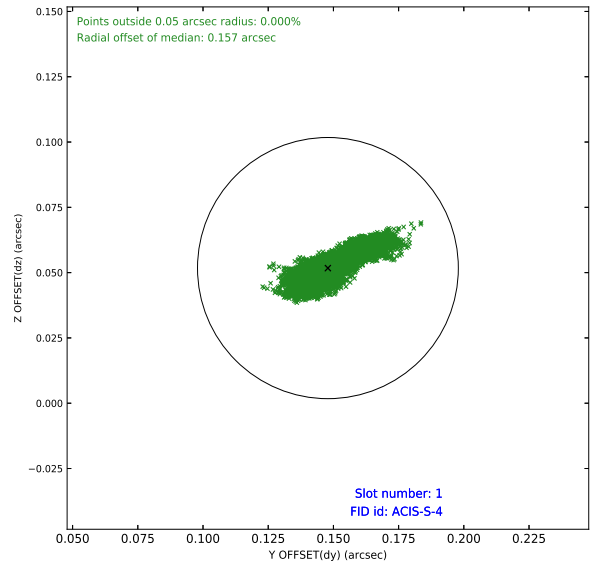
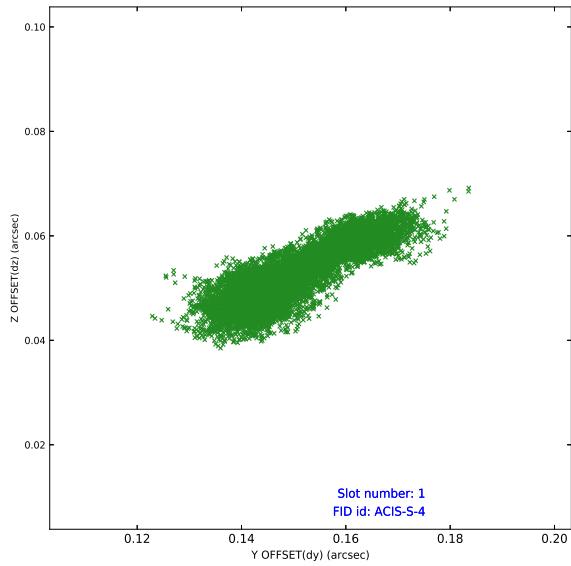


2.5 FID Slots

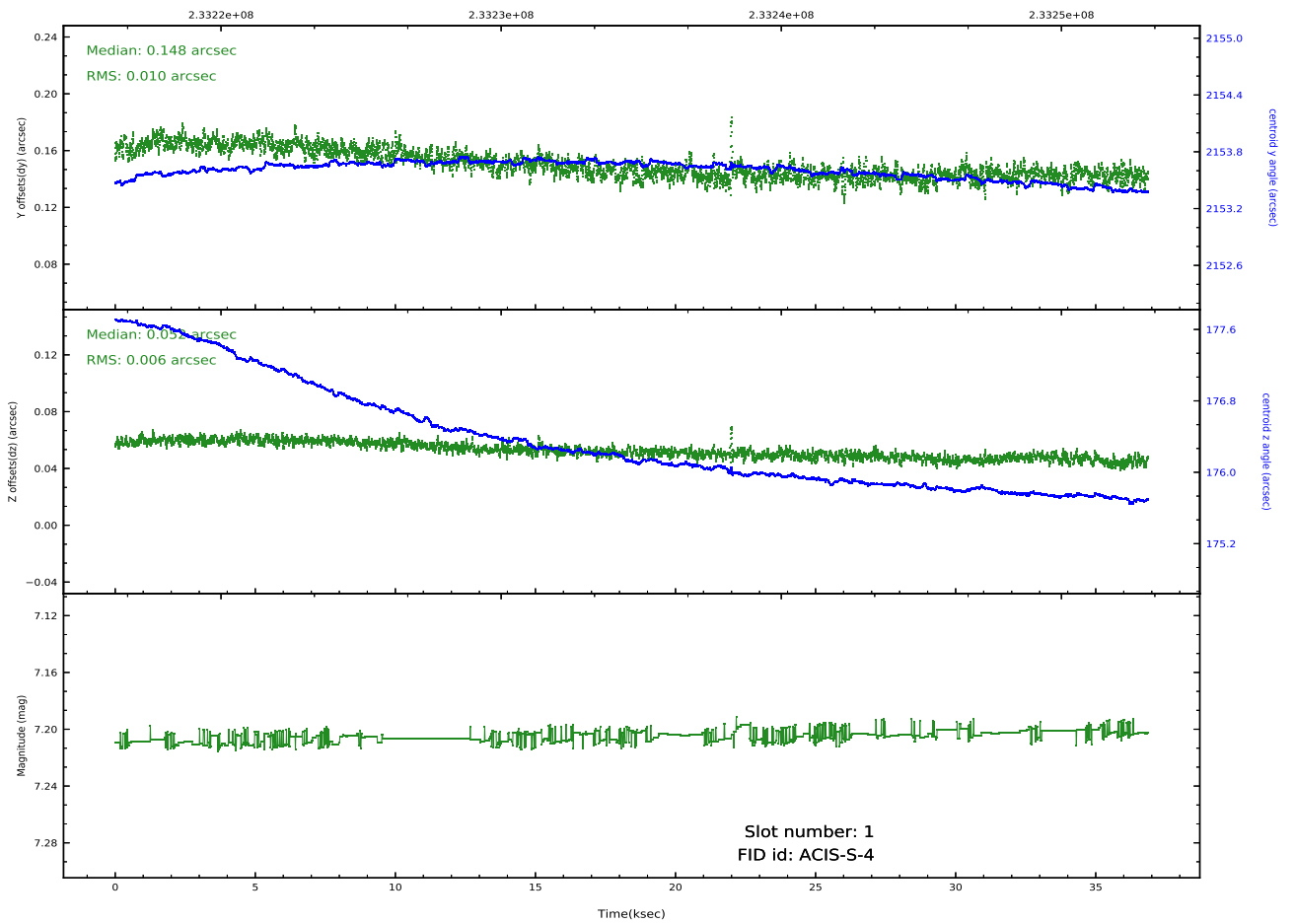
2.5.1 Slot 0



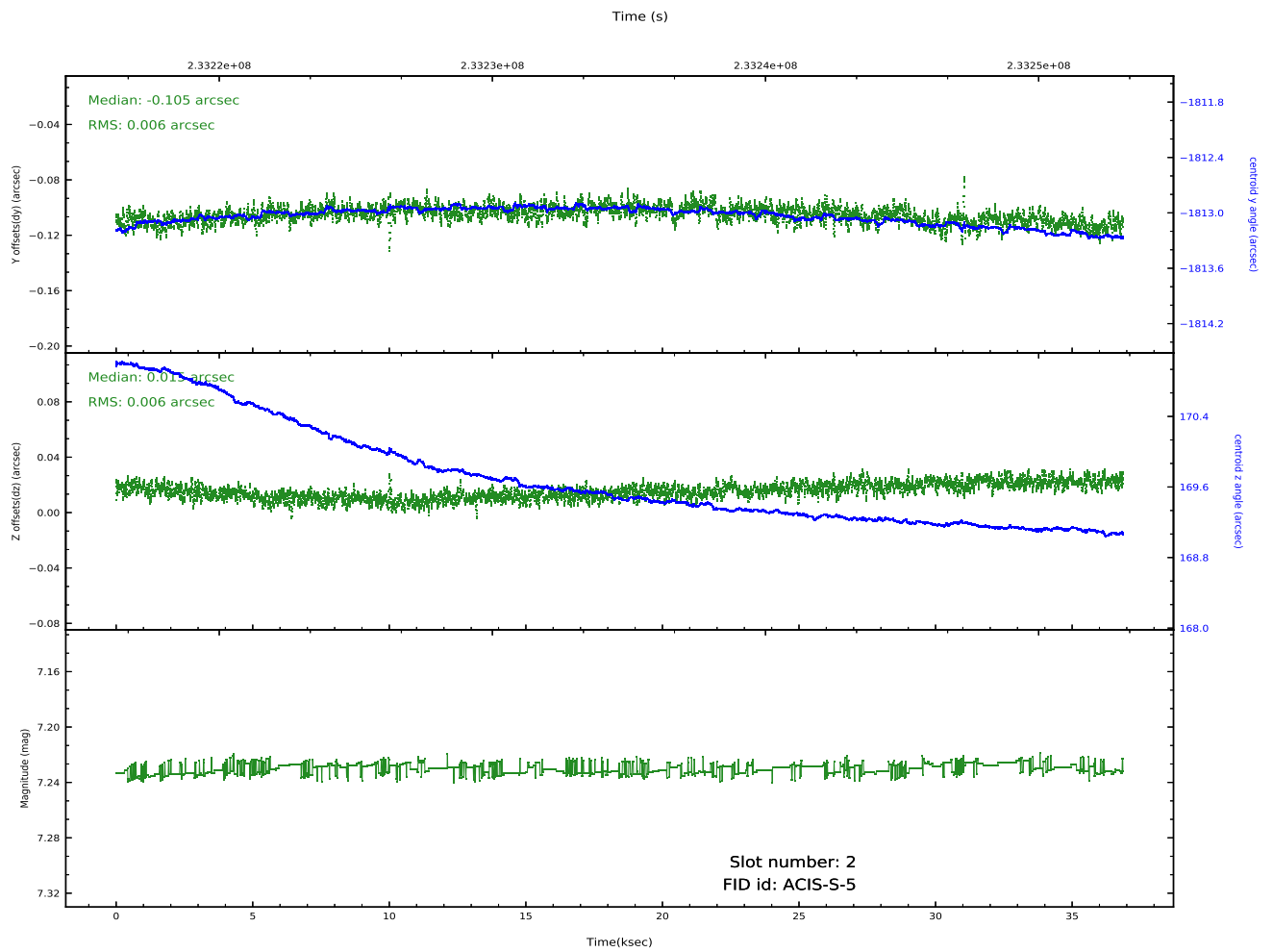
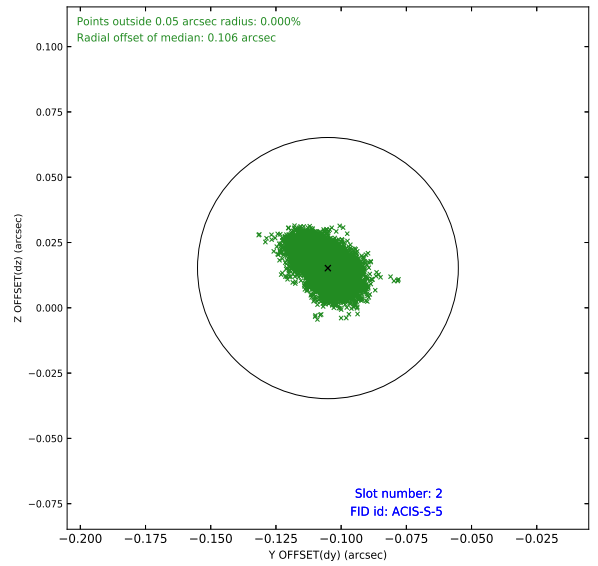
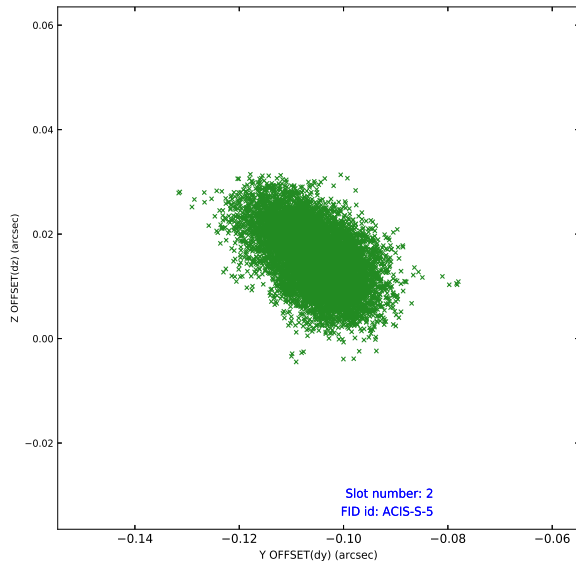
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2020.10.08 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 36.8676 |

A.2 Comments

Joint Proposal: HST. Roll preference not met.