

V&V Reference Report

L2 ASCDS Version : 10.9.2

Observation 20306 - L2 Version 2
Chandra X-Ray Center

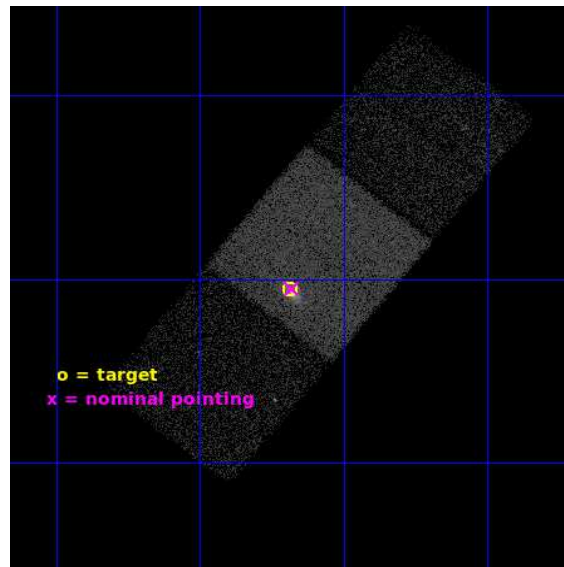
L2 Processing Date : Oct 28 2020

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1 Front

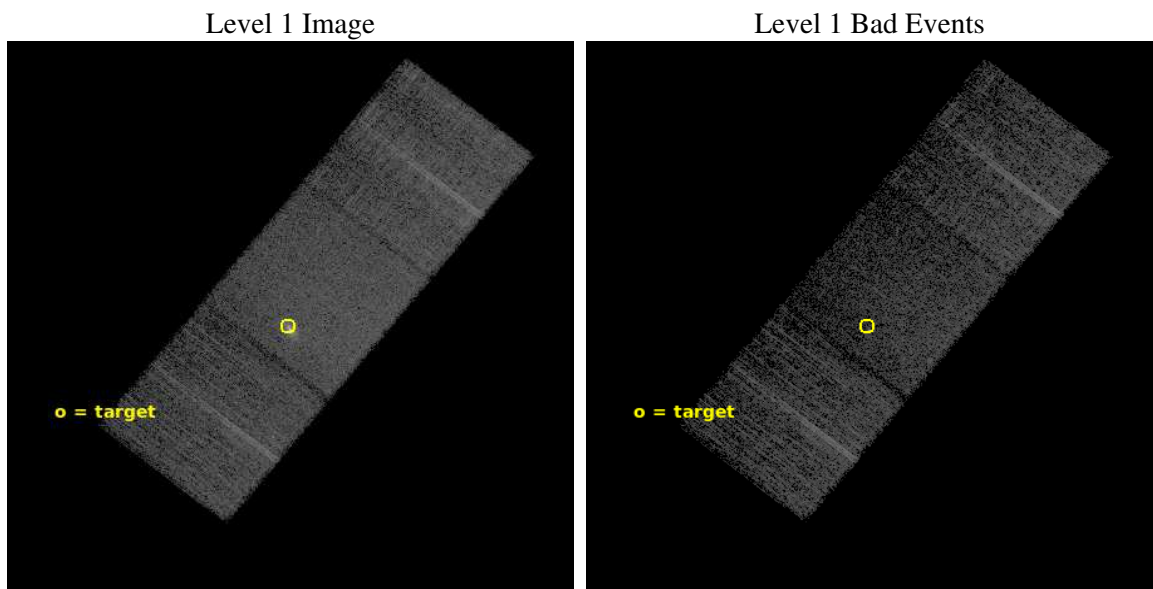
| | | |
|----------|--|---|
| seq_num | 503002 | Sequence number |
| obs_id | 20306 | Observation id |
| title | Chandra Observations of New X-ray Supernovae | Proposal title |
| observer | David Pooley | Principal investigator |
| object | SN 2018ivc | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 40.672042 | Observer's specified target RA [deg] |
| dec_targ | -0.008808 | Observer's specified target Dec [deg] |
| ra_nom | 40.670113634429 | Nominal RA [deg] |
| dec_nom | -0.0086167622250574 | Nominal Dec [deg] |
| roll_nom | 308.74058443195 | Nominal Roll [deg] |
| revision | 2 | Processing version of data |
| ontime | 10111.046471715 | Sum of GTIs [s] |
| livetime | 9978.9382059179 | Livetime [s] |
| ontime6 | 10111.005431771 | Sum of GTIs [s] |
| ontime7 | 10111.046471715 | Sum of GTIs [s] |
| ontime8 | 10107.823331714 | Sum of GTIs [s] |
| l2events | 66733 | Number of level 2 events |



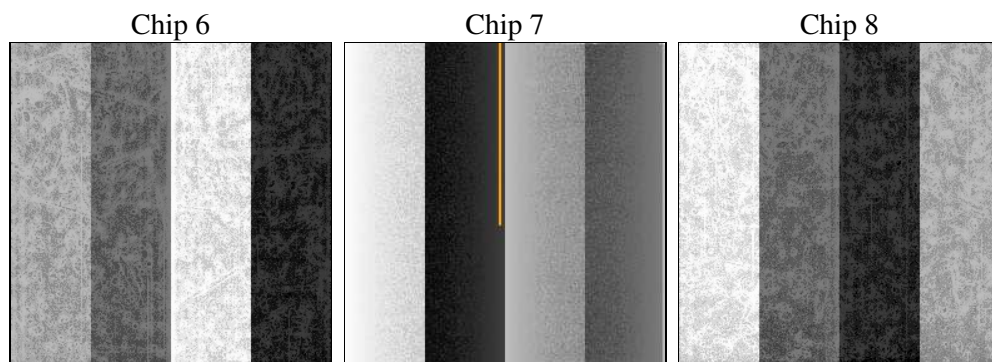
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 10000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.2 | Processing system revision | ontime | 10111.046471715 | Sum of GTIs [s] |
| caldsver | 4.9.3 | | ontime6 | 10111.005431771 | Sum of GTIs [s] |
| date | 2020-10-28T14:06:33 | Date and time of file creation | ontime7 | 10111.046471715 | Sum of GTIs [s] |
| revision | 2 | Processing version of data | ontime8 | 10107.823331714 | Sum of GTIs [s] |
| | | | l1events | 288237 | Number of level 1 events |

2.1.4 Events

| | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------------|--------------|--------------|
| level 1 events | 79453 | 109566 | 99218 |
| rejected events | 70765 | 57458 | 74820 |
| rejected % | 89% | 52% | 75% |

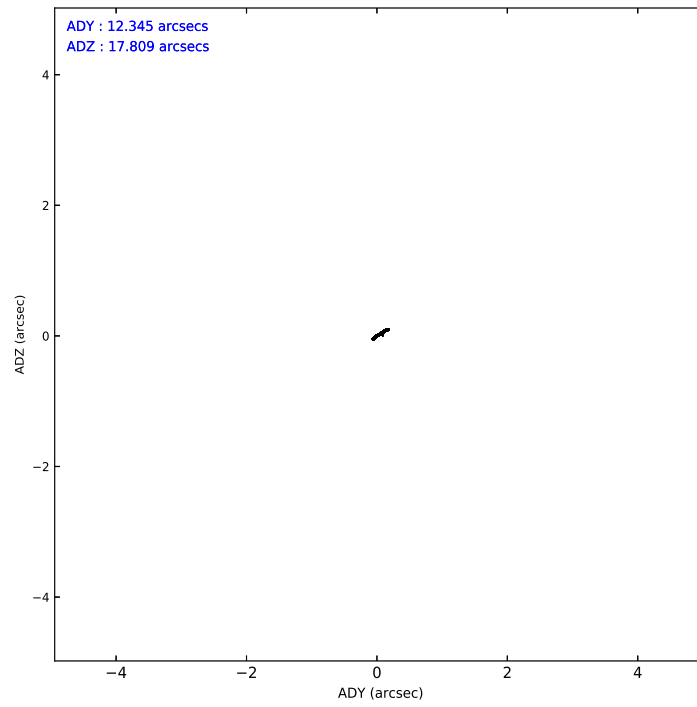
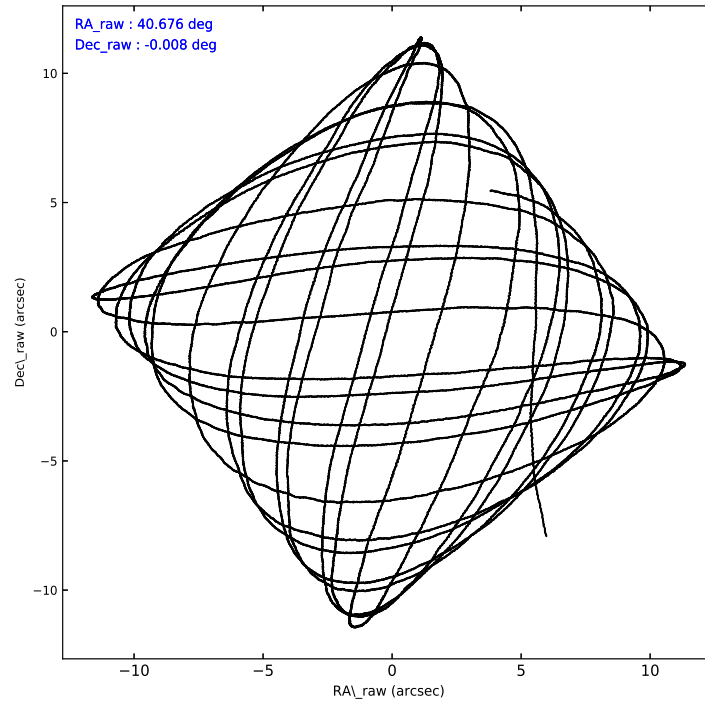
| | ccd 6 | ccd 7 | ccd 8 |
|----------------|--------------|--------------|--------------|
| grade 0 events | 2636 | 6640 | 6858 |
| | 3% | 6% | 6% |
| grade 1 events | 26 | 267 | 80 |
| | 0% | 0% | 0% |
| grade 2 events | 2332 | 11335 | 6091 |
| | 2% | 10% | 6% |
| grade 3 events | 746 | 4356 | 2413 |
| | 0% | 3% | 2% |
| grade 4 events | 717 | 4384 | 2273 |
| | 0% | 4% | 2% |
| grade 5 events | 3264 | 9935 | 5113 |
| | 4% | 9% | 5% |
| grade 6 events | 2260 | 25409 | 6768 |
| | 2% | 23% | 6% |
| grade 7 events | 67472 | 47240 | 69622 |
| | 84% | 43% | 70% |

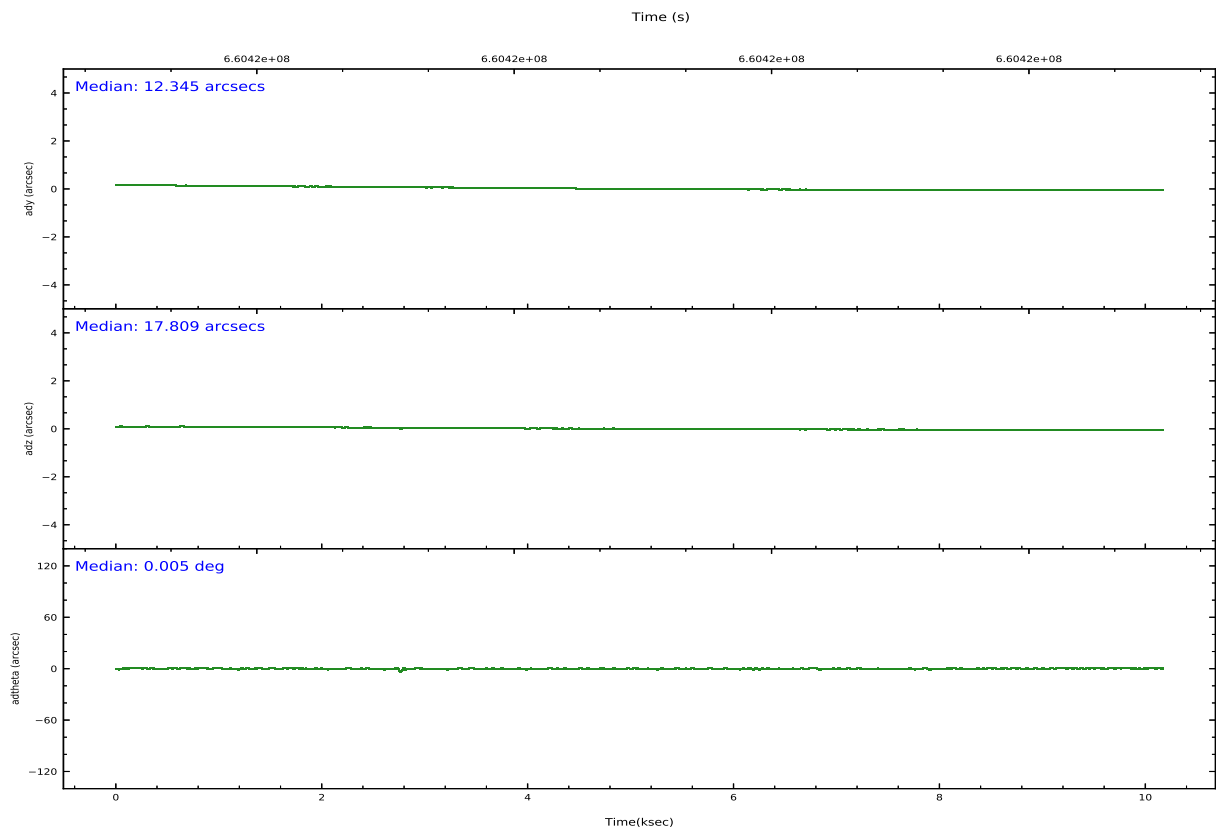
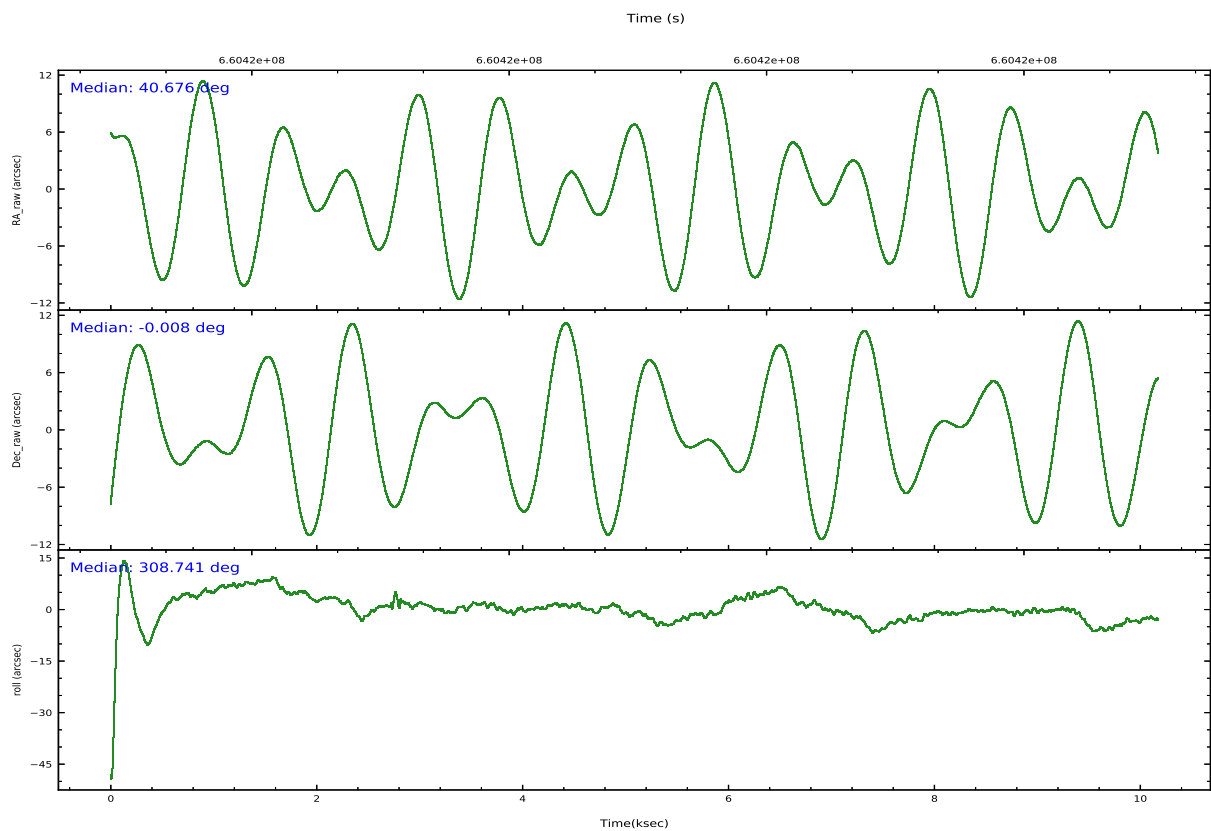
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-678 | ACIS-678 |
| Grating | NONE | NONE |
| Data mode | VFAINT | VFAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 40.650575 | 40.670113634429 |
| [deg] Pointing Dec | 0.001364 | -0.0086167622250574 |
| [deg] Pointing Roll | 308.590680 | 308.74058443195 |
| [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) | 660416305.184000 | 660415166.8766201 |
| Observation start date | 2018-12-05T16:57:16 | 2018-12-05T16:39:26 |
| [s] Observation end time (MET) | 660426305.184000 | 660427215.23984 |
| Observation end date | 2018-12-05T19:43:56 | 2018-12-05T20:00:15 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar version number | 8 | 8 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| CCD I0 on | N | N |
| CCD I1 on | N | N |
| CCD I2 on | O1 | N |
| CCD I3 on | O2 | N |
| CCD S0 on | N | N |
| CCD S1 on | O3 | N |
| CCD S2 on | Y | Y |
| CCD S3 on | Y | Y |
| CCD S4 on | Y | Y |
| CCD S5 on | N | N |
| Number of optional ACIS chips dropped | 3 | 3 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect



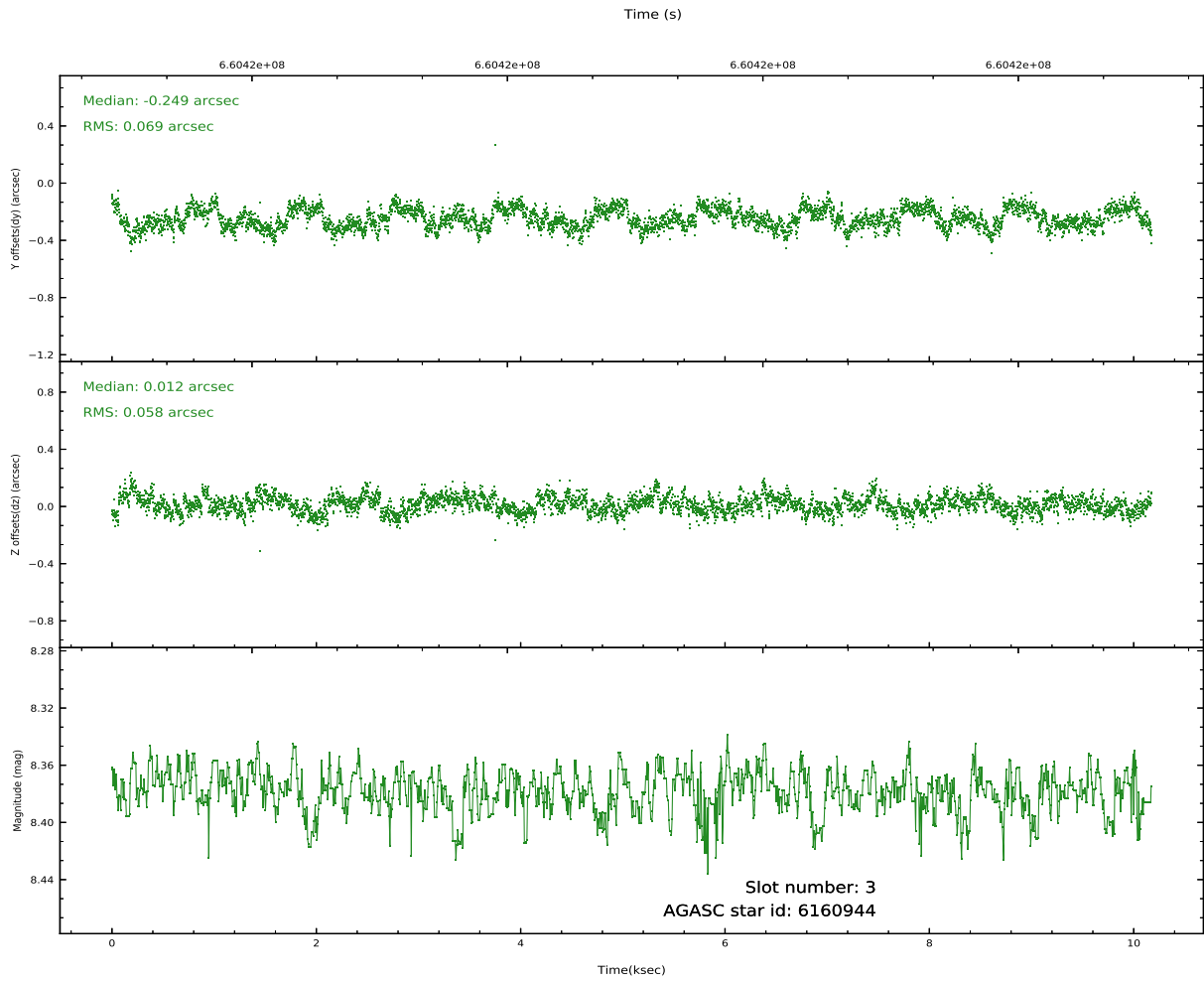
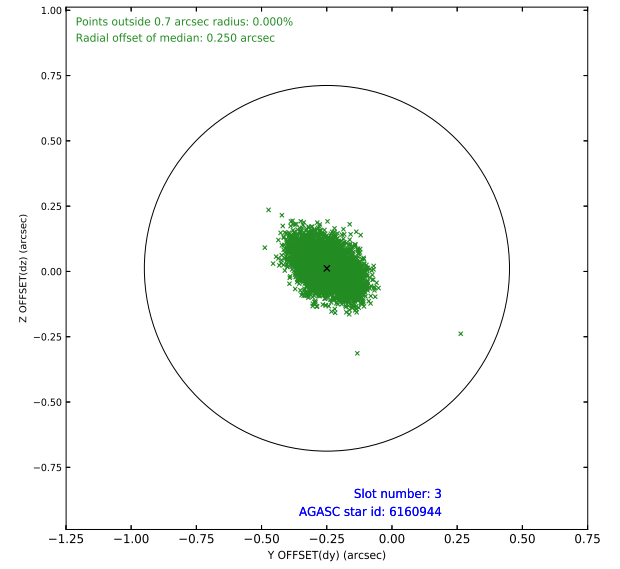
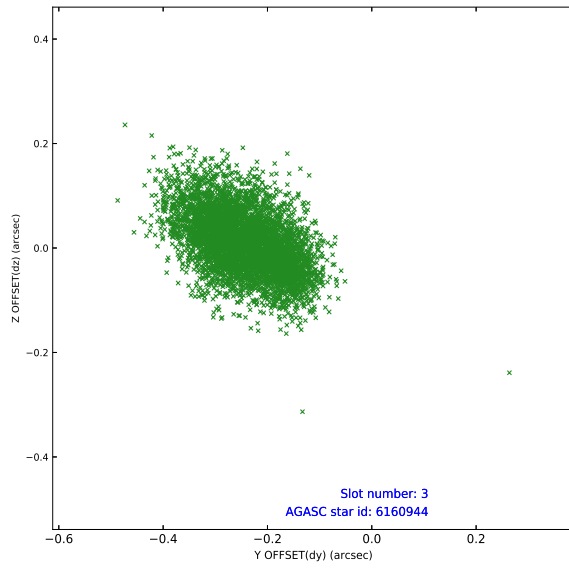


Slot Statistics

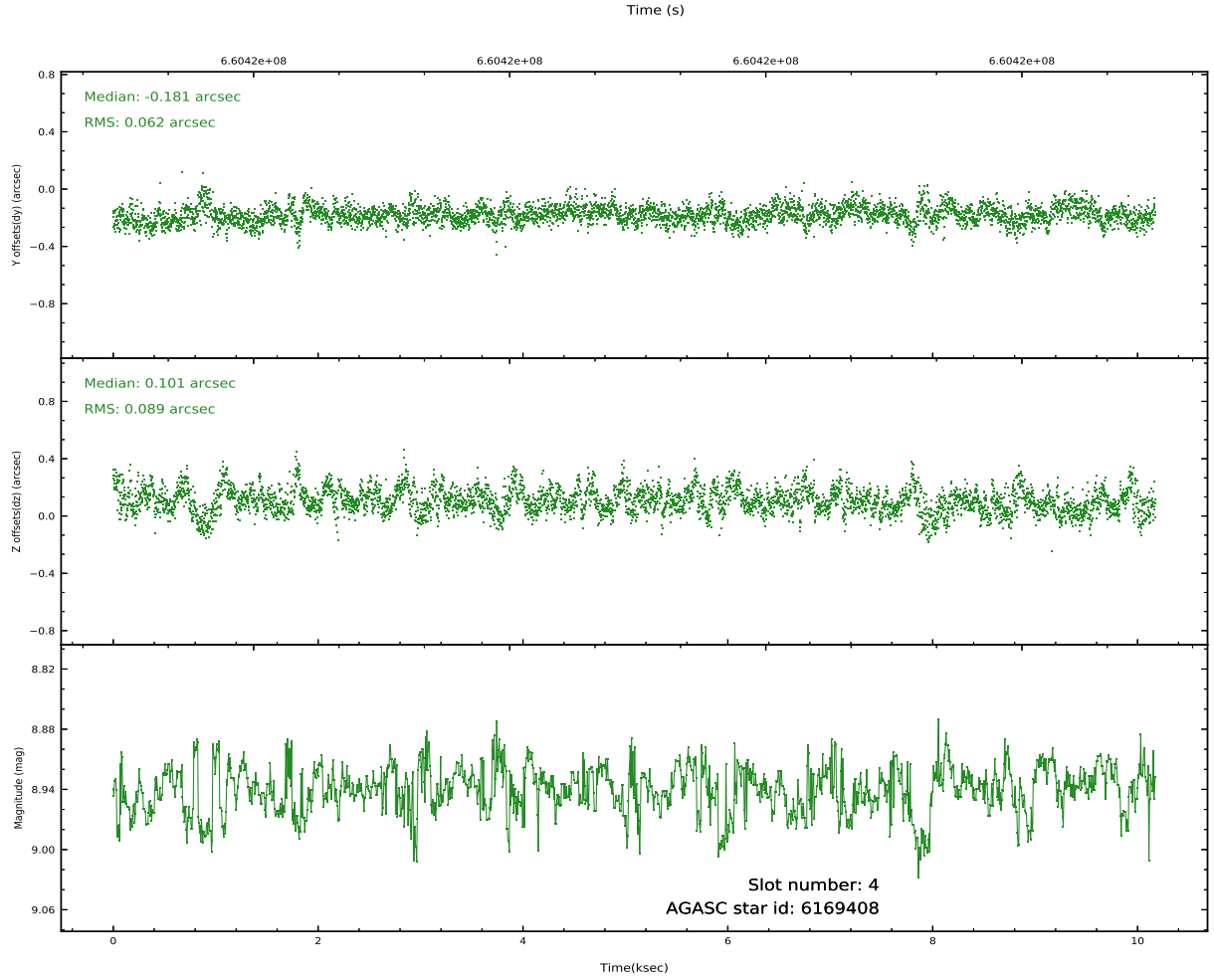
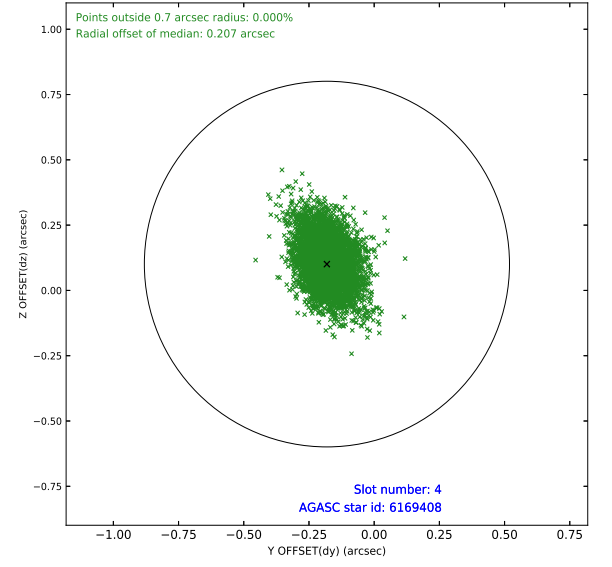
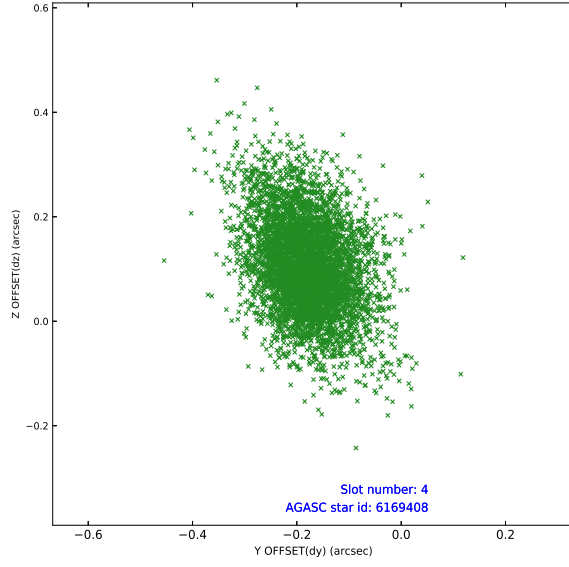
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|-----------|-----------|----------|-------|
| 0 | FID | | ACIS-S-2 | 7.14 | 2482 | 1.000 | 0.227 | -0.163 | 0.007 | 0.012 | 0.000000 | 0.000000 | -765.33 | -1739 |
| 1 | FID | | ACIS-S-4 | 7.27 | 2482 | 1.000 | 0.151 | -0.065 | 0.006 | 0.010 | 0.000000 | 0.000000 | 2147.94 | 168 |
| 2 | FID | | ACIS-S-5 | 7.25 | 2481 | 1.000 | -0.408 | 0.237 | 0.007 | 0.012 | 0.000000 | 0.000000 | -1817.83 | 163 |
| 3 | GUIDE | used | 6160944 | 8.38 | 4958 | 1.000 | -0.249 | 0.012 | 0.095 | 0.154 | 40.821496 | 0.087247 | 142.32 | 673 |
| 4 | GUIDE | used | 6169408 | 8.94 | 4958 | 1.000 | -0.181 | 0.101 | 0.110 | 0.196 | 40.937839 | 0.210390 | 56.89 | 1277 |
| 5 | GUIDE | used | 615907528 | 7.74 | 4961 | 1.000 | 0.084 | -0.202 | 0.098 | 0.152 | 41.252710 | -0.191636 | 1895.35 | 1261 |
| 6 | GUIDE | used | 615909768 | 9.08 | 4961 | 1.000 | 0.312 | 0.055 | 0.161 | 0.241 | 40.904100 | -0.344520 | 1543.46 | -63 |
| 7 | GUIDE | used | 615913552 | 8.68 | 4962 | 1.000 | 0.035 | 0.026 | 0.117 | 0.188 | 41.235237 | -0.003650 | 1327.75 | 1633 |

2.4 Star Slots

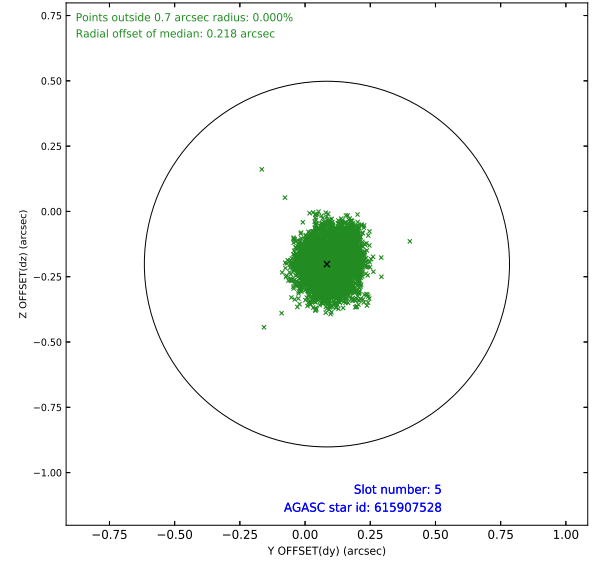
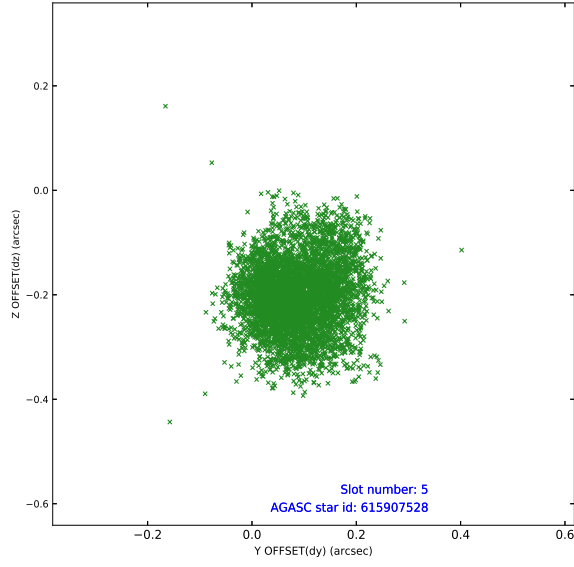
2.4.1 Slot 3



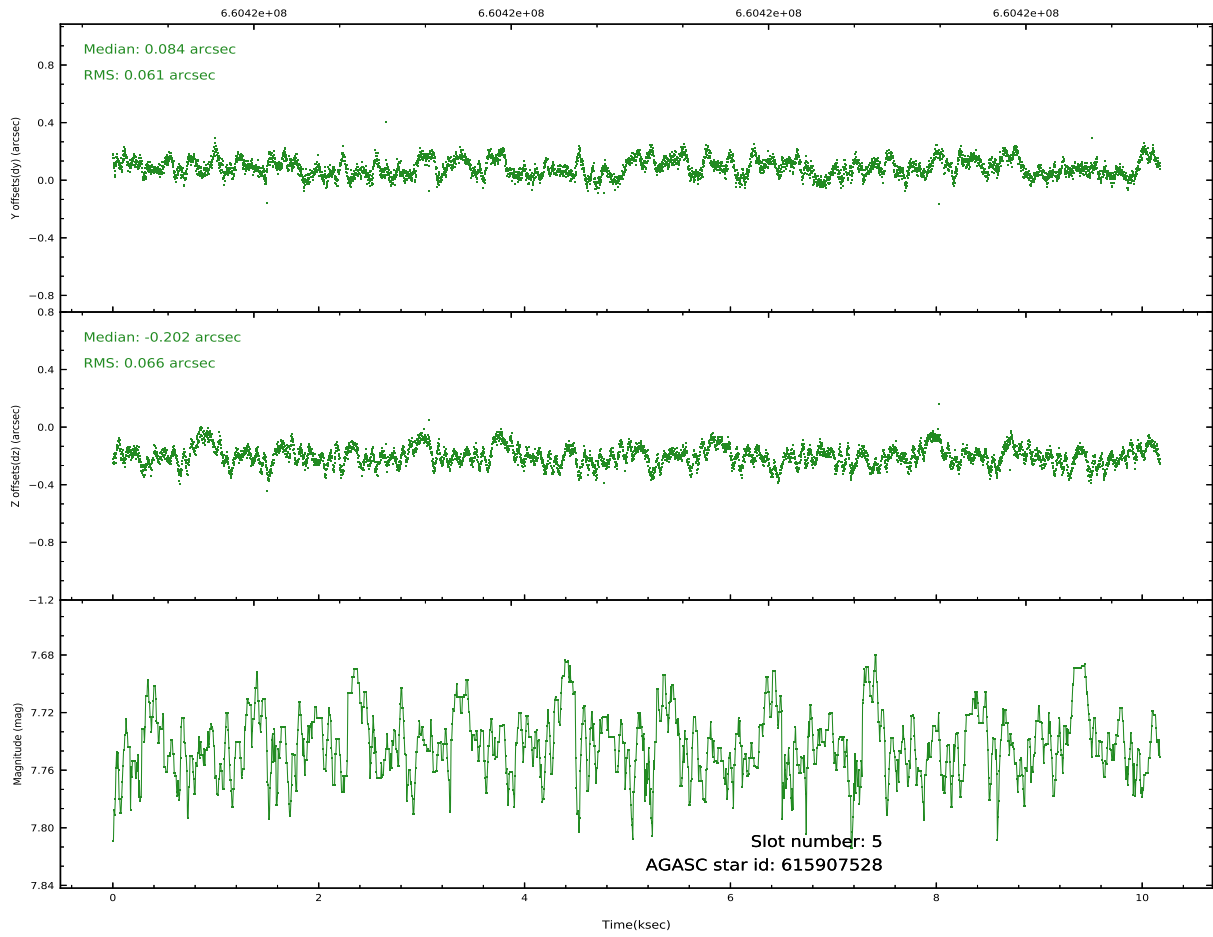
2.4.2 Slot 4



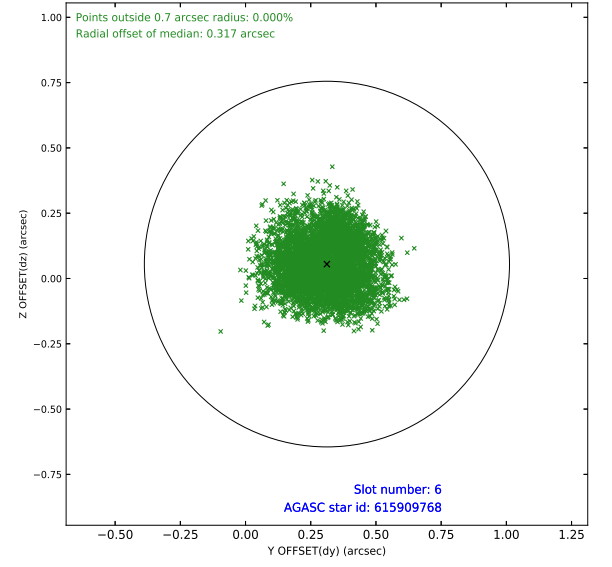
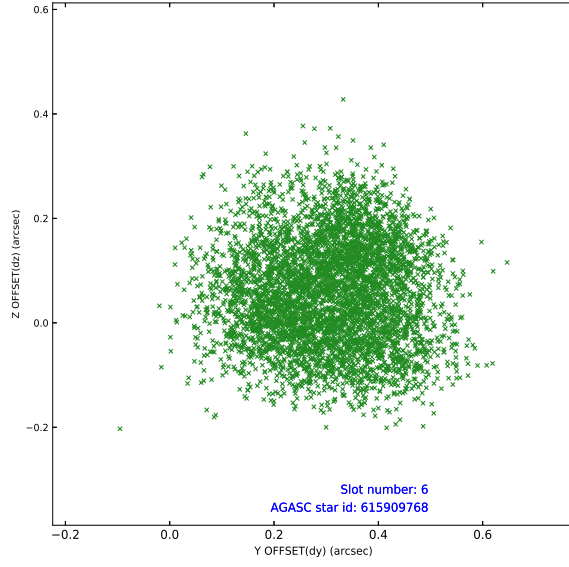
2.4.3 Slot 5



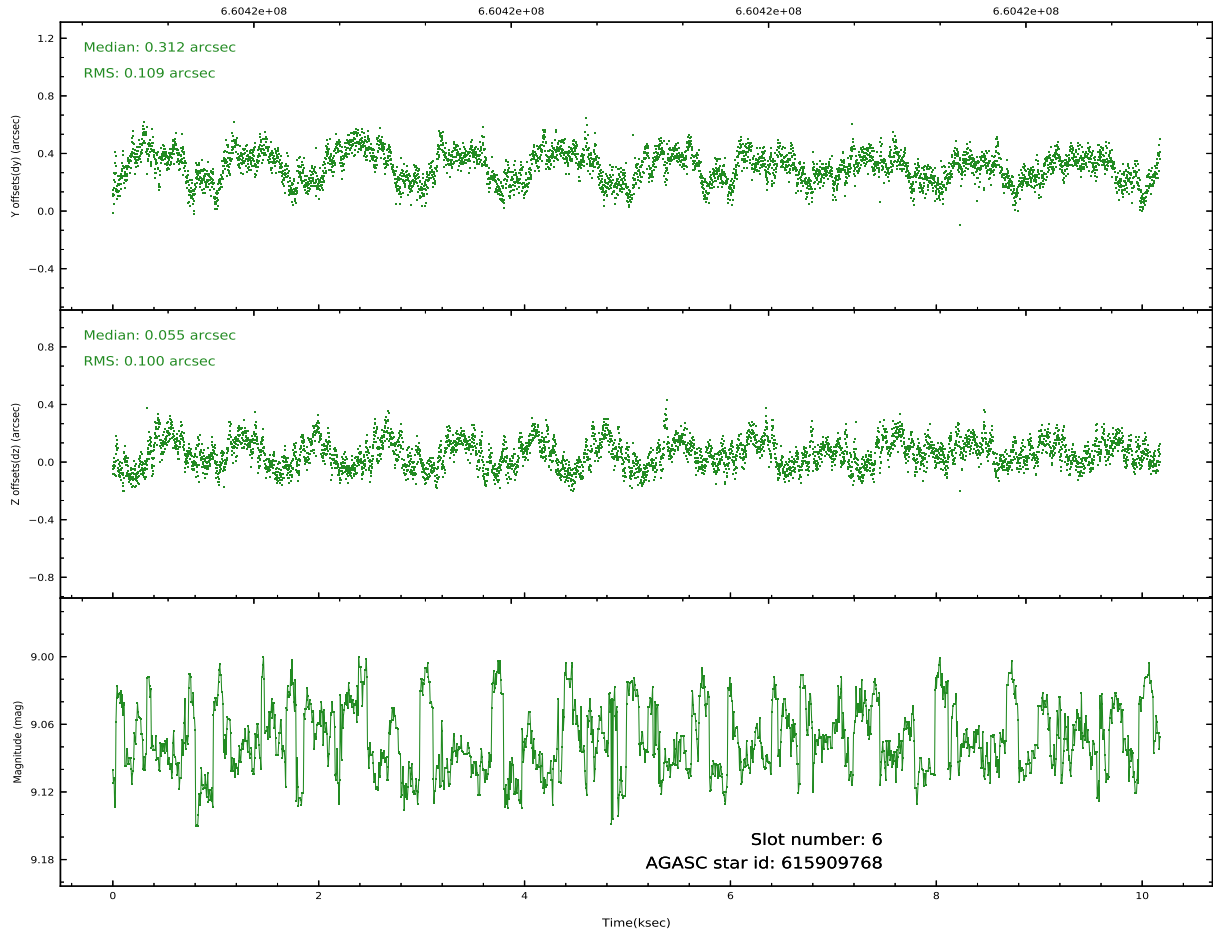
Time (s)



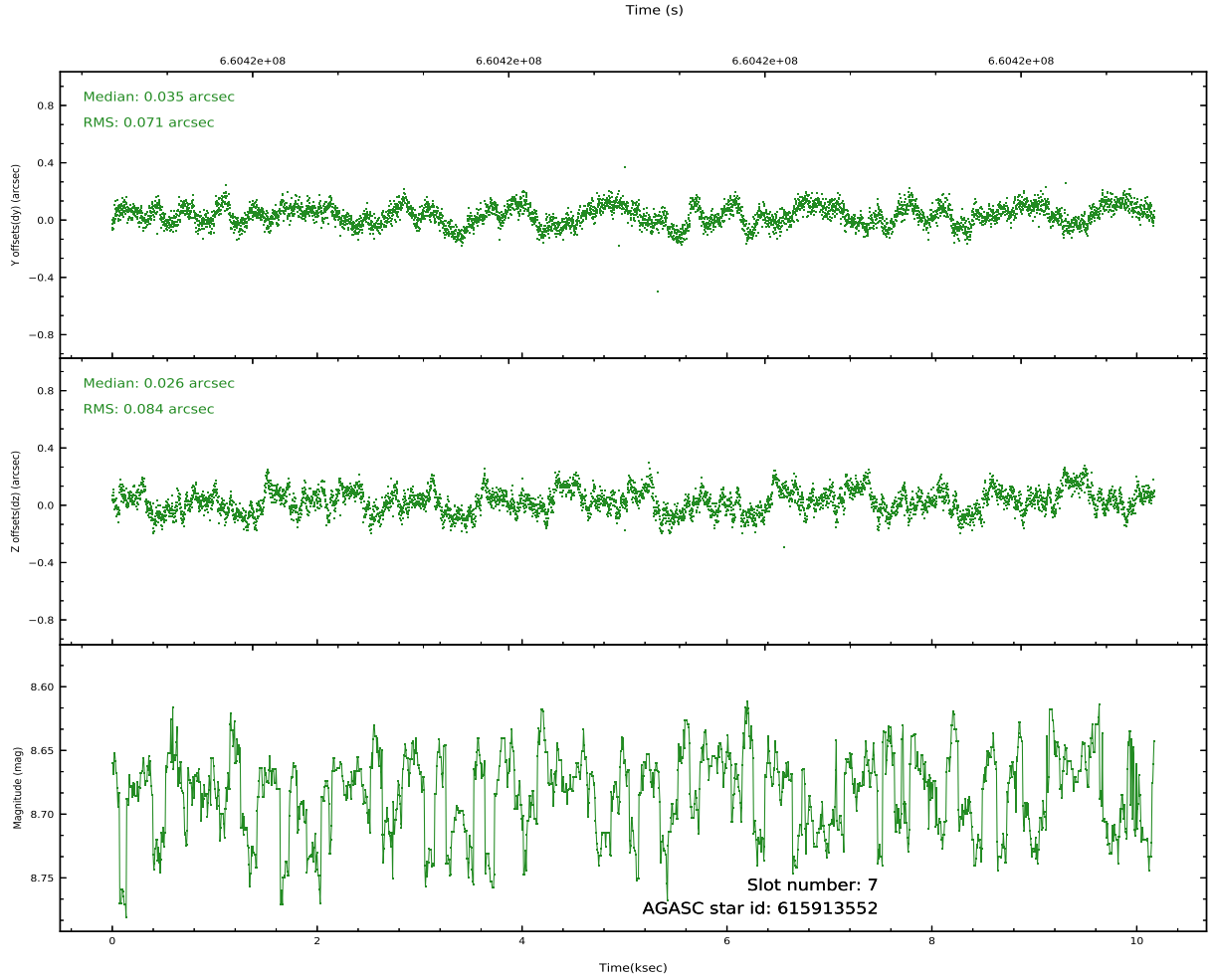
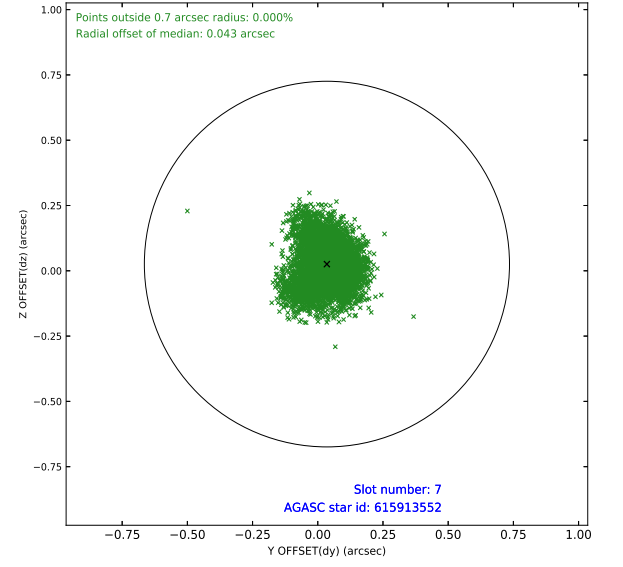
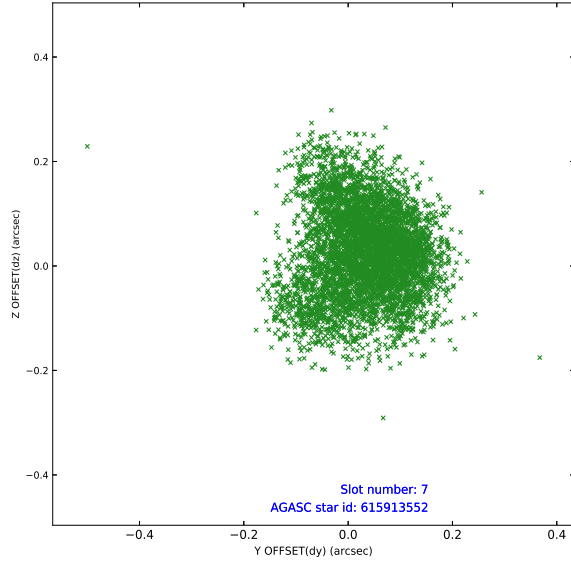
2.4.4 Slot 6



Time (s)

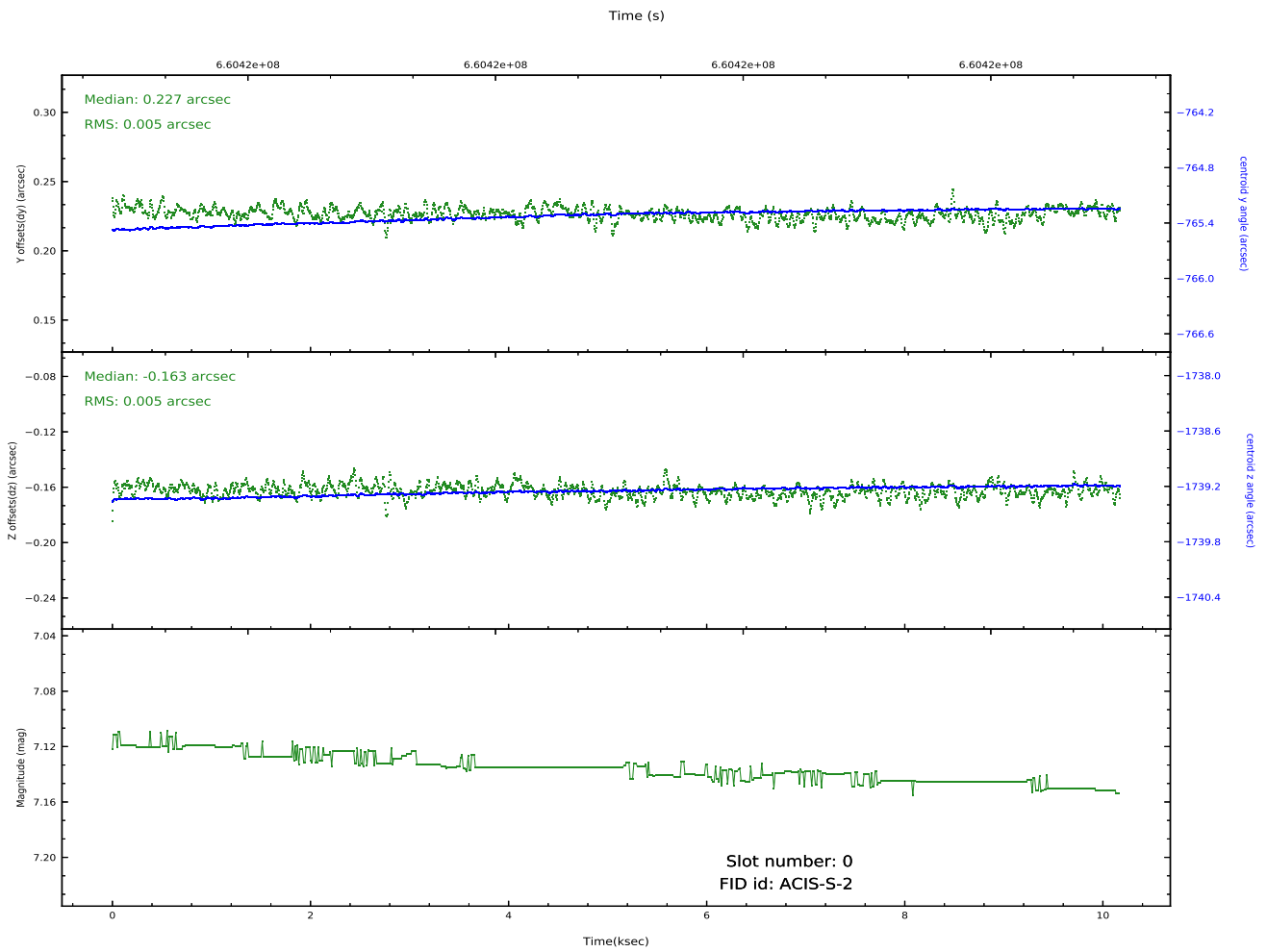
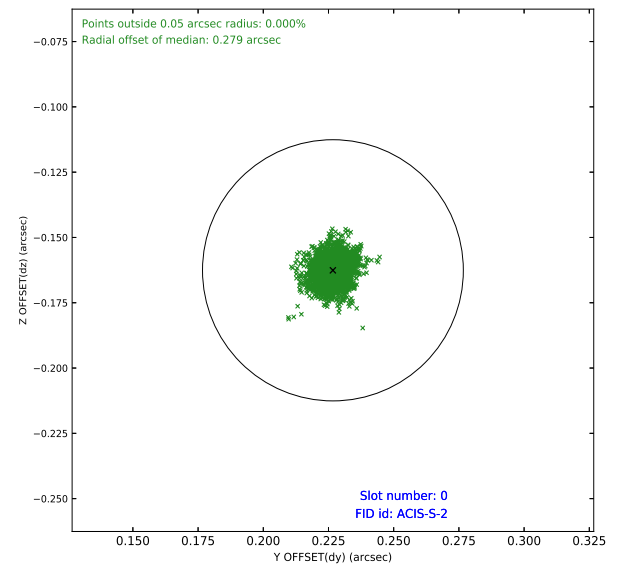
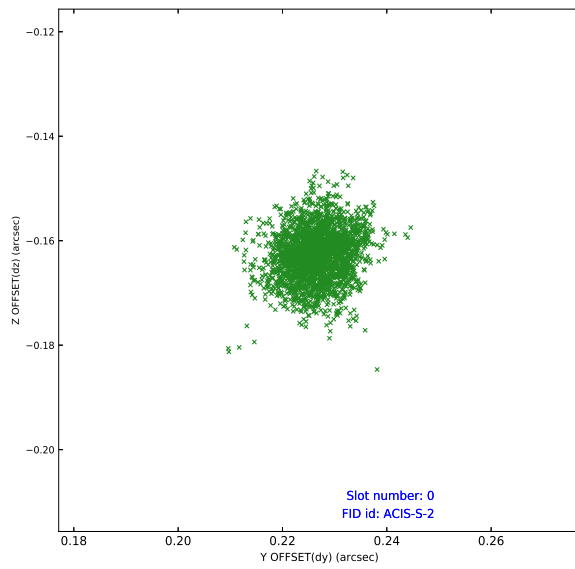


2.4.5 Slot 7

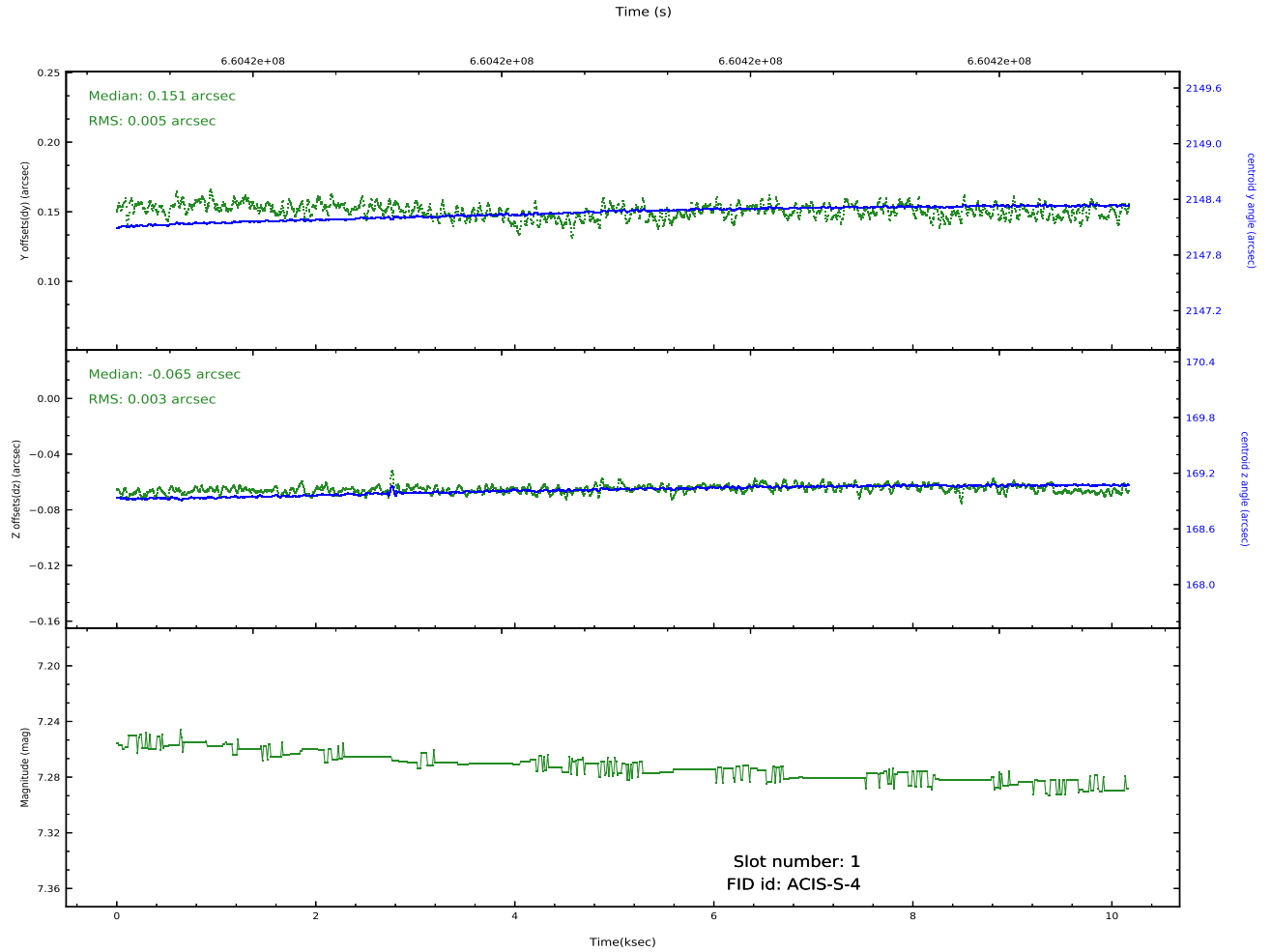
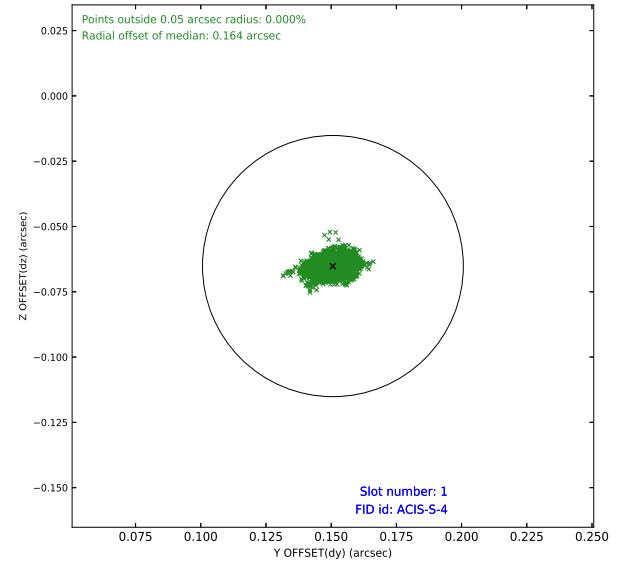
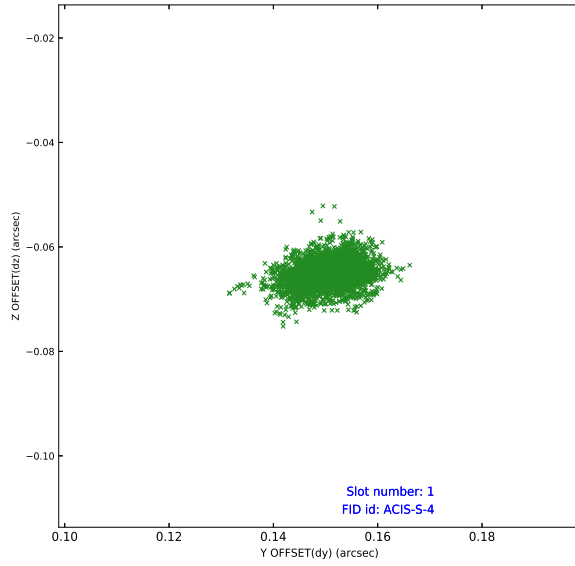


2.5 FID Slots

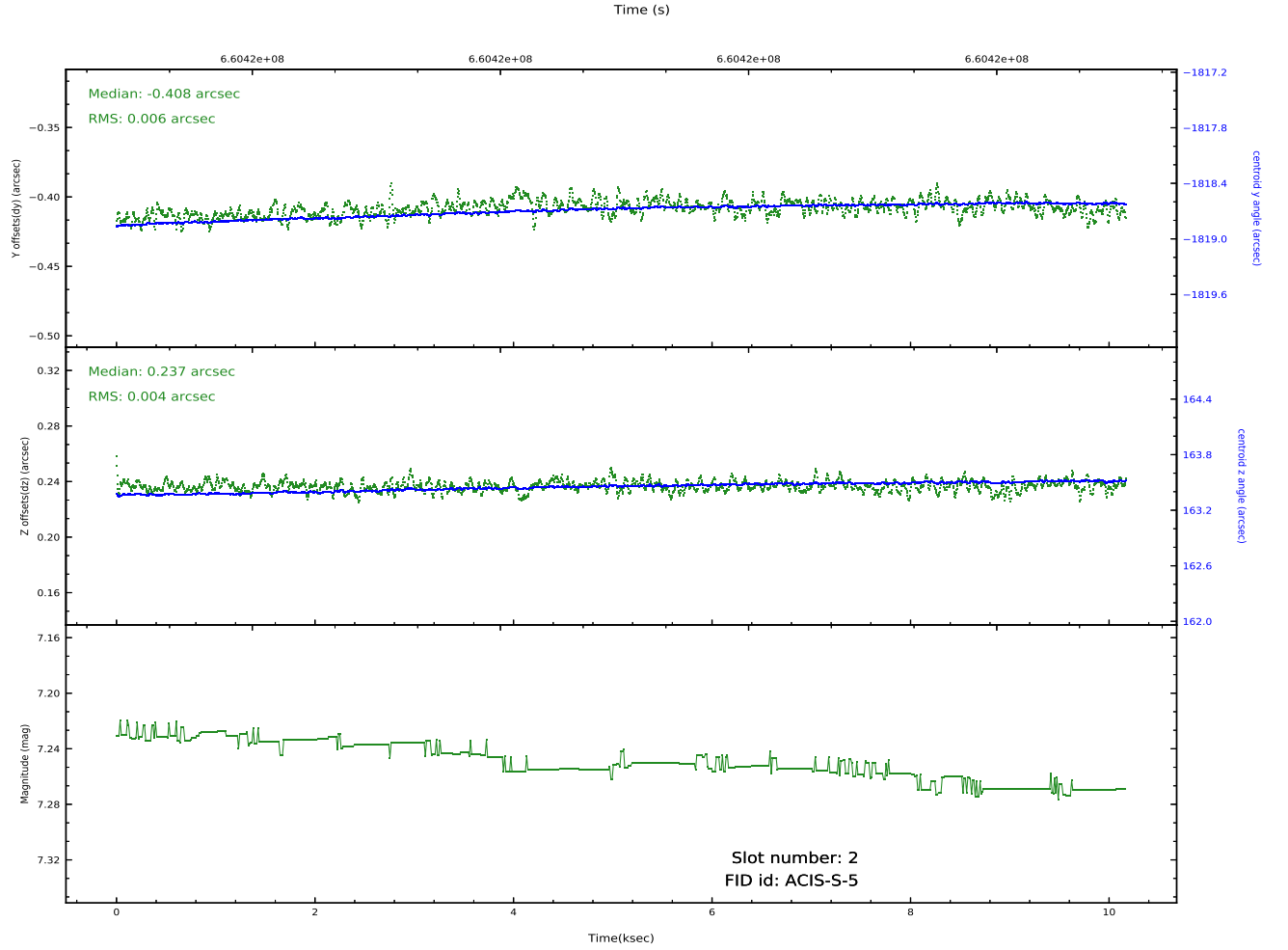
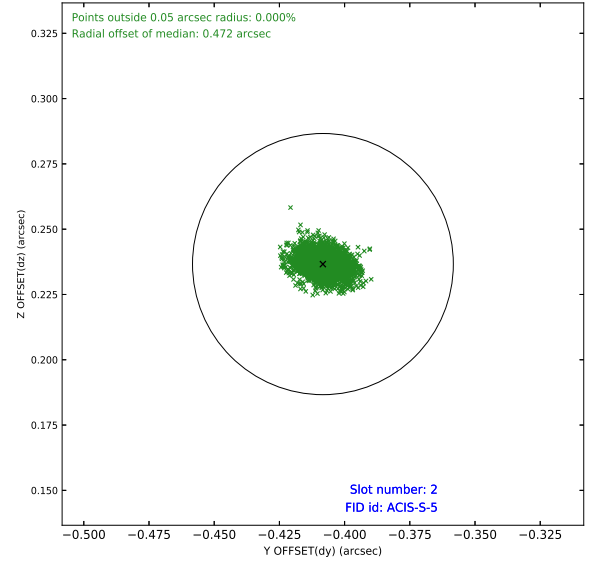
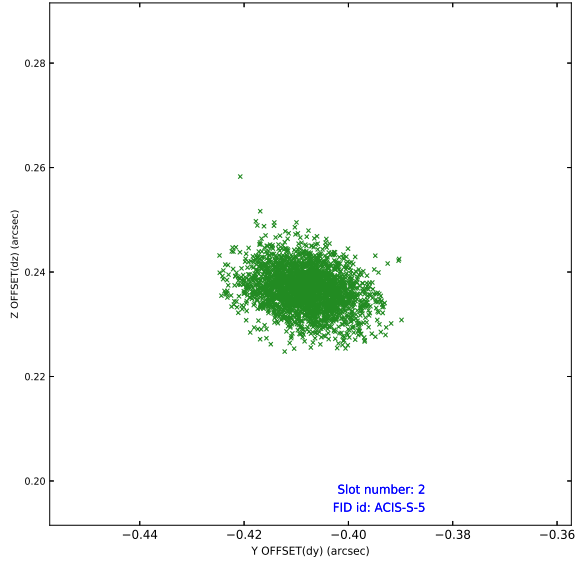
2.5.1 Slot 0



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) | 2020.10.29 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 10.111046476126 |

A.2 Comments

Optional chips I2, I3, and S1 not included.