

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 5373 - L2 Version 4
Chandra X-Ray Center

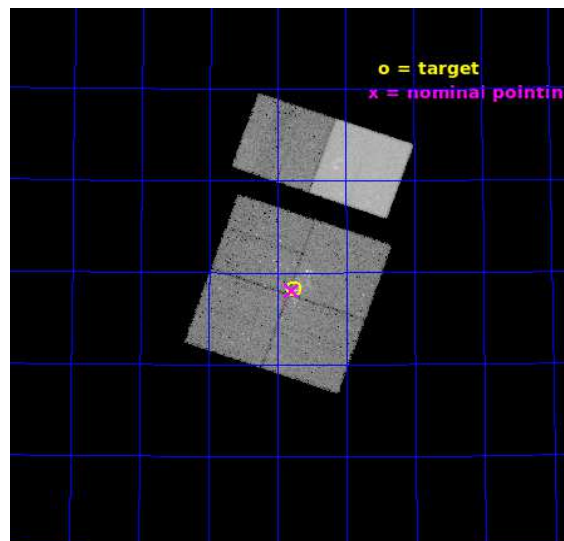
L2 Processing Date : Oct 7 2020

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1 Front

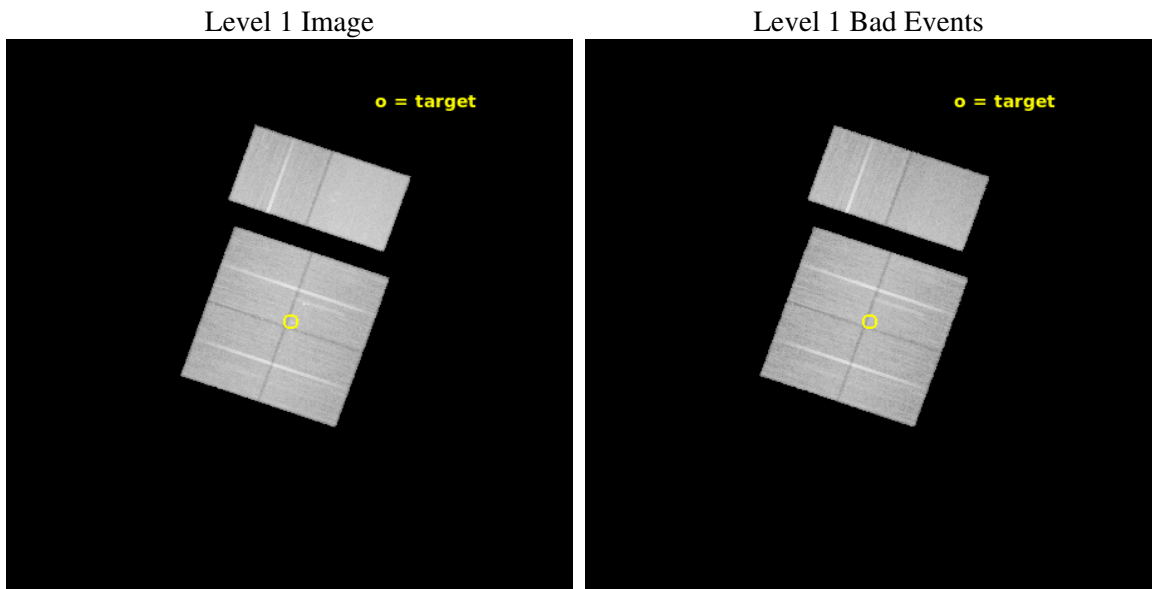
| | | |
|----------|--|---|
| seq_num | 200308 | Sequence number |
| obs_id | 5373 | Observation id |
| title | Alternate: A Search for X-ray Activity from a Mass-Accreting Young Massive Star in NGC7538 with ACIS-I | Proposal title |
| observer | Gordon Garmire | Principal investigator |
| object | NGC7538 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 348.439583 | Observer's specified target RA [deg] |
| dec_targ | 61.471278 | Observer's specified target Dec [deg] |
| ra_nom | 348.44786402744 | Nominal RA [deg] |
| dec_nom | 61.467387544983 | Nominal Dec [deg] |
| roll_nom | 19.173868010244 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 29955.158928126 | Sum of GTIs [s] |
| livetime | 29575.848668947 | Livetime [s] |
| ontime0 | 29955.158898205 | Sum of GTIs [s] |
| ontime1 | 29958.399888396 | Sum of GTIs [s] |
| ontime2 | 29958.399888396 | Sum of GTIs [s] |
| ontime3 | 29955.158928126 | Sum of GTIs [s] |
| ontime6 | 29955.158898234 | Sum of GTIs [s] |
| ontime7 | 29958.399888396 | Sum of GTIs [s] |
| l2events | 245506 | Number of level 2 events |



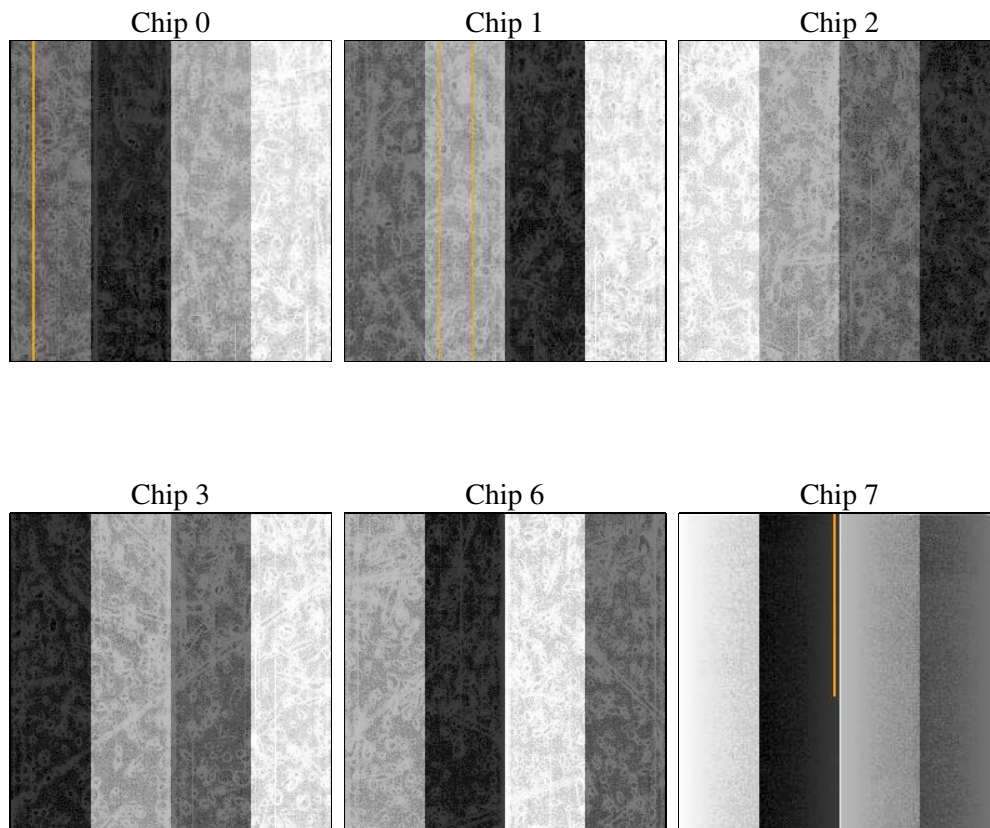
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 30000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 29955.158928126 | Sum of GTIs [s] |
| caldbver | 4.9.2 | | ontime0 | 29955.158898205 | Sum of GTIs [s] |
| date | 2020-10-07T10:36:18 | Date and time of file creation | ontime1 | 29958.399888396 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime2 | 29958.399888396 | Sum of GTIs [s] |
| | | | ontime3 | 29955.158928126 | Sum of GTIs [s] |
| | | | ontime6 | 29955.158898234 | Sum of GTIs [s] |
| | | | ontime7 | 29958.399888396 | Sum of GTIs [s] |
| | | | l1events | 1376076 | Number of level 1 events |

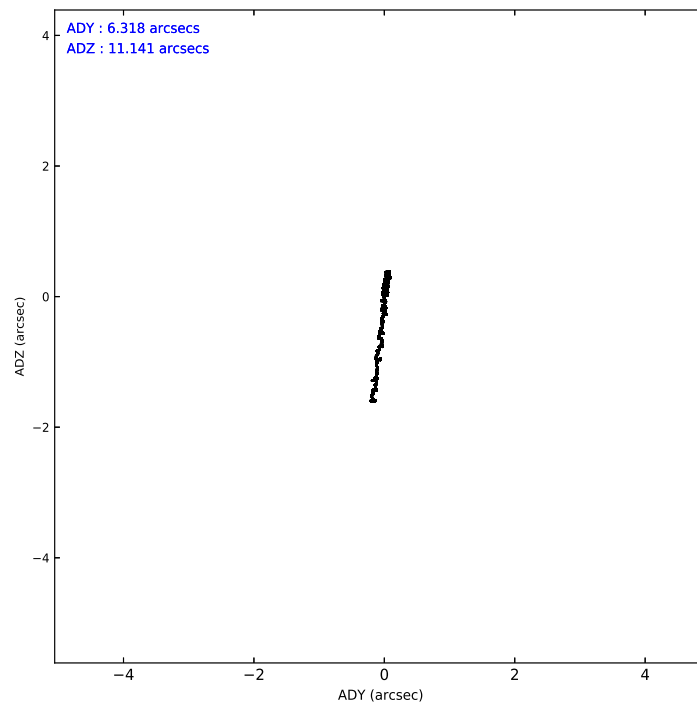
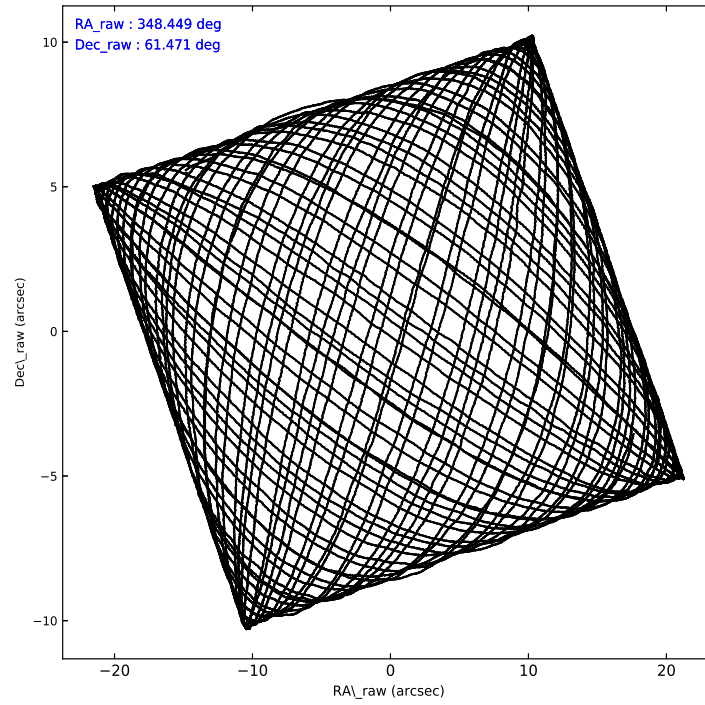
2.1.4 Events

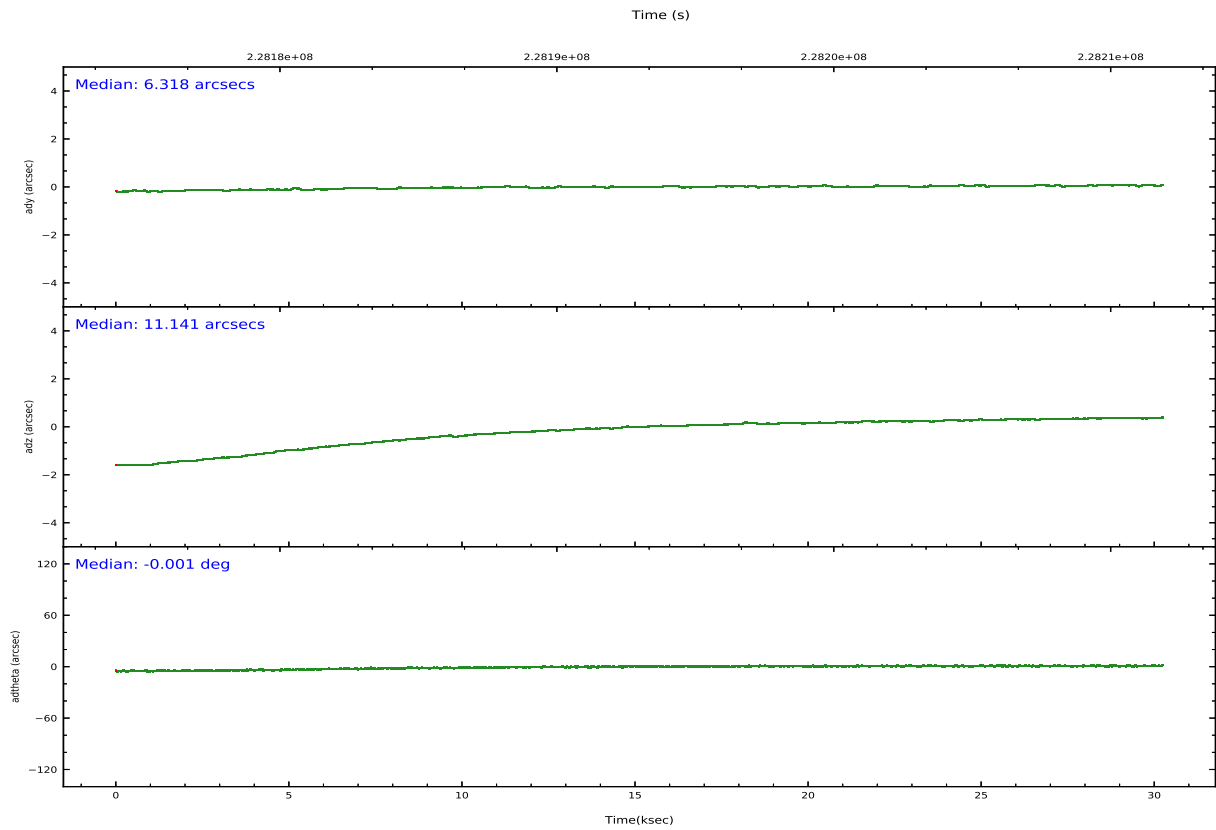
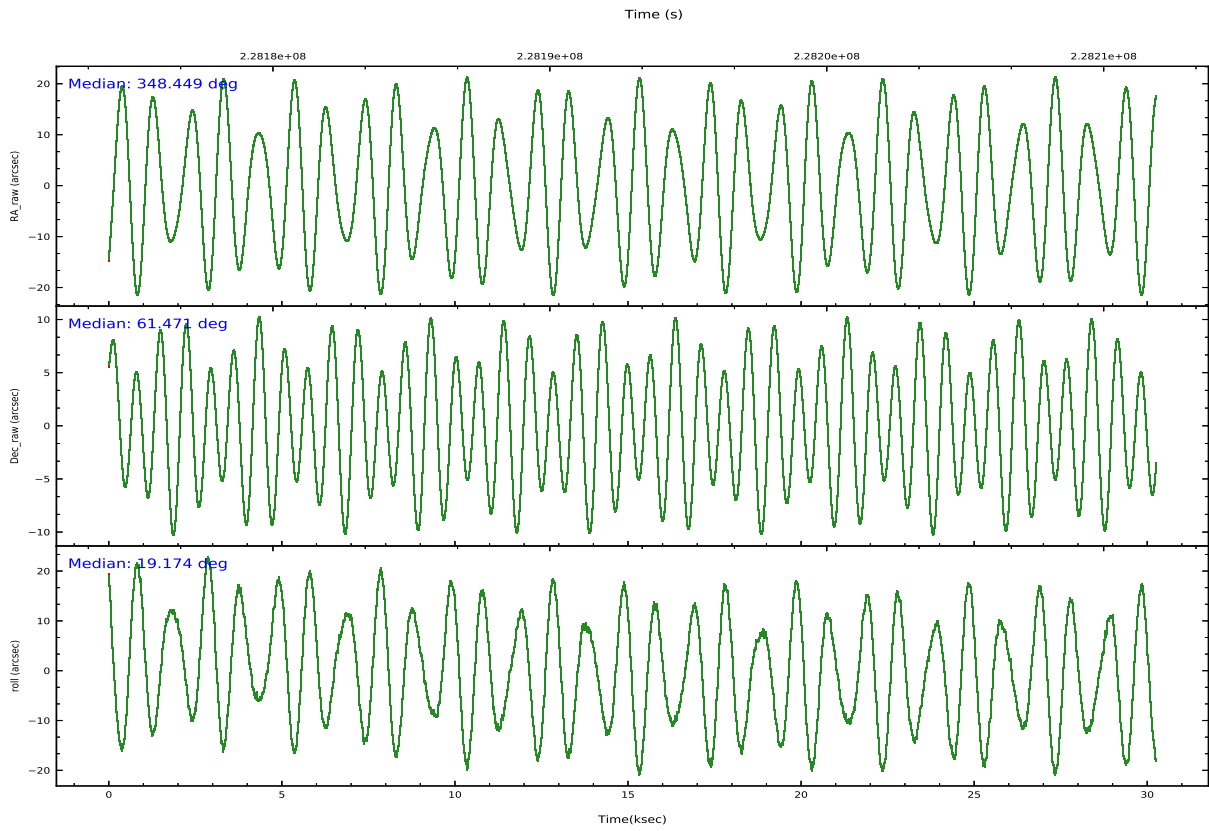
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|
| level 1 events | 199282 | 202229 | 220296 | 216853 | 231716 | 305700 | grade 0 events | 12173 | 11401 | 13042 | 13628 | 10842 | 11213 |
| rejected events | 171489 | 173377 | 192230 | 188061 | 204371 | 178315 | | 6% | 5% | 5% | 6% | 4% | 3% |
| rejected % | 86% | 85% | 87% | 86% | 88% | 58% | grade 1 events | 124 | 111 | 152 | 145 | 130 | 285 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 5752 | 6355 | 5674 | 5280 | 5924 | 25556 |
| | | | | | | | | 2% | 3% | 2% | 2% | 2% | 8% |
| | | | | | | | grade 3 events | 2611 | 2783 | 2417 | 2652 | 2525 | 11055 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 4 events | 2567 | 2747 | 2481 | 2478 | 2504 | 11243 |
| | | | | | | | | 1% | 1% | 1% | 1% | 1% | 3% |
| | | | | | | | grade 5 events | 9045 | 9560 | 8660 | 9954 | 10565 | 28814 |
| | | | | | | | | 4% | 4% | 3% | 4% | 4% | 9% |
| | | | | | | | grade 6 events | 4690 | 5568 | 4455 | 4758 | 5552 | 68339 |
| | | | | | | | | 2% | 2% | 2% | 2% | 2% | 22% |
| | | | | | | | grade 7 events | 162320 | 163704 | 183415 | 177958 | 193674 | 149195 |
| | | | | | | | | 81% | 80% | 83% | 82% | 83% | 48% |

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 | 348.411995 | 348.44786402744 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 61.450163 | 61.467387544983 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 19.001065 | 19.173868010244 | [s] Primary exposure time | 0.000000 | 3.2 |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 | | | |
| [mm] SIM defocus | 0 | 0.001439871863259334 | | | |
| [mm] SIM translation stage pos | -233.592463 | -233.5874344608287 | | | |
| [mm] SIM translation stage offset | 0 | -0.005018542100998502 | | | |
| [s] Observation start time (MET) | 228179516.184000 | 228178520.42757 | | | |
| Observation start date | 2005-03-25T23:10:52 | 2005-03-25T22:55:20 | | | |
| [s] Observation end time (MET) | 228209516.184000 | 228210183.19151 | | | |
| Observation end date | 2005-03-26T07:30:52 | 2005-03-26T07:43:03 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





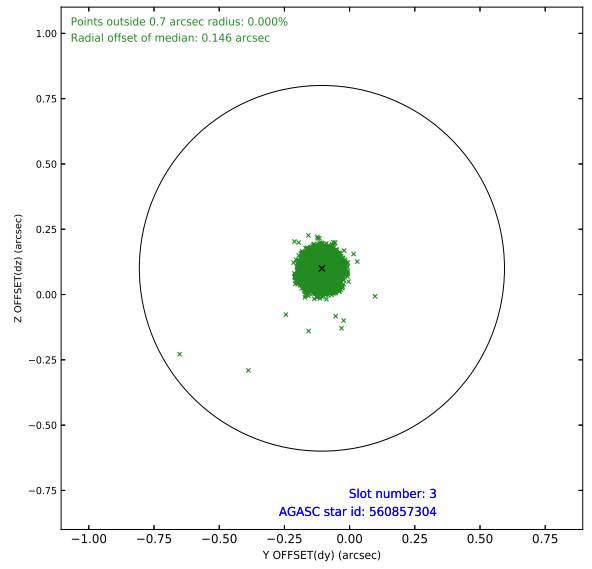
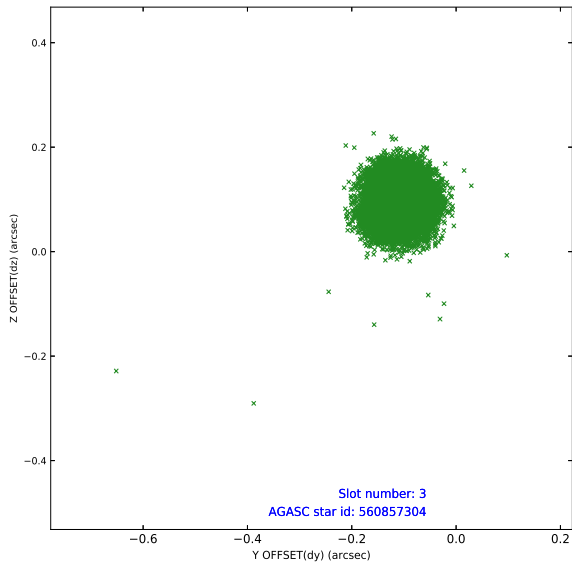
Slot Statistics

| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|------------|-----------|----------|-------|
| 0 | FID | | ACIS-I-1 | 7.24 | 7381 | 1.000 | 0.044 | -0.040 | 0.014 | 0.057 | 0.000000 | 0.000000 | 933.43 | -834 |
| 1 | FID | | ACIS-I-5 | 7.23 | 7379 | 1.000 | -0.200 | 0.045 | 0.012 | 0.027 | 0.000000 | 0.000000 | -1814.86 | 1063 |
| 2 | FID | | ACIS-I-6 | 7.25 | 7381 | 1.000 | 0.065 | 0.064 | 0.013 | 0.035 | 0.000000 | 0.000000 | 398.95 | 1707 |
| 3 | GUIDE | used | 560857304 | 7.80 | 14760 | 1.000 | -0.106 | 0.100 | 0.050 | 0.079 | 347.545364 | 61.241621 | -1660.35 | -211 |
| 4 | GUIDE | used | 560862704 | 7.41 | 14760 | 1.000 | 0.198 | -0.085 | 0.088 | 0.144 | 350.002707 | 61.149838 | 2271.75 | -1889 |
| 5 | GUIDE | used | 560864232 | 8.46 | 14758 | 1.000 | -0.024 | 0.042 | 0.073 | 0.123 | 347.334108 | 61.656376 | -1495.09 | 1316 |
| 6 | GUIDE | used | 560864864 | 8.98 | 14756 | 1.000 | -0.043 | -0.024 | 0.067 | 0.110 | 347.395288 | 61.465785 | -1630.39 | 635 |
| 7 | GUIDE | used | 560858256 | 8.09 | 14756 | 1.000 | -0.023 | -0.033 | 0.056 | 0.090 | 348.871647 | 61.865893 | 1225.68 | 1163 |

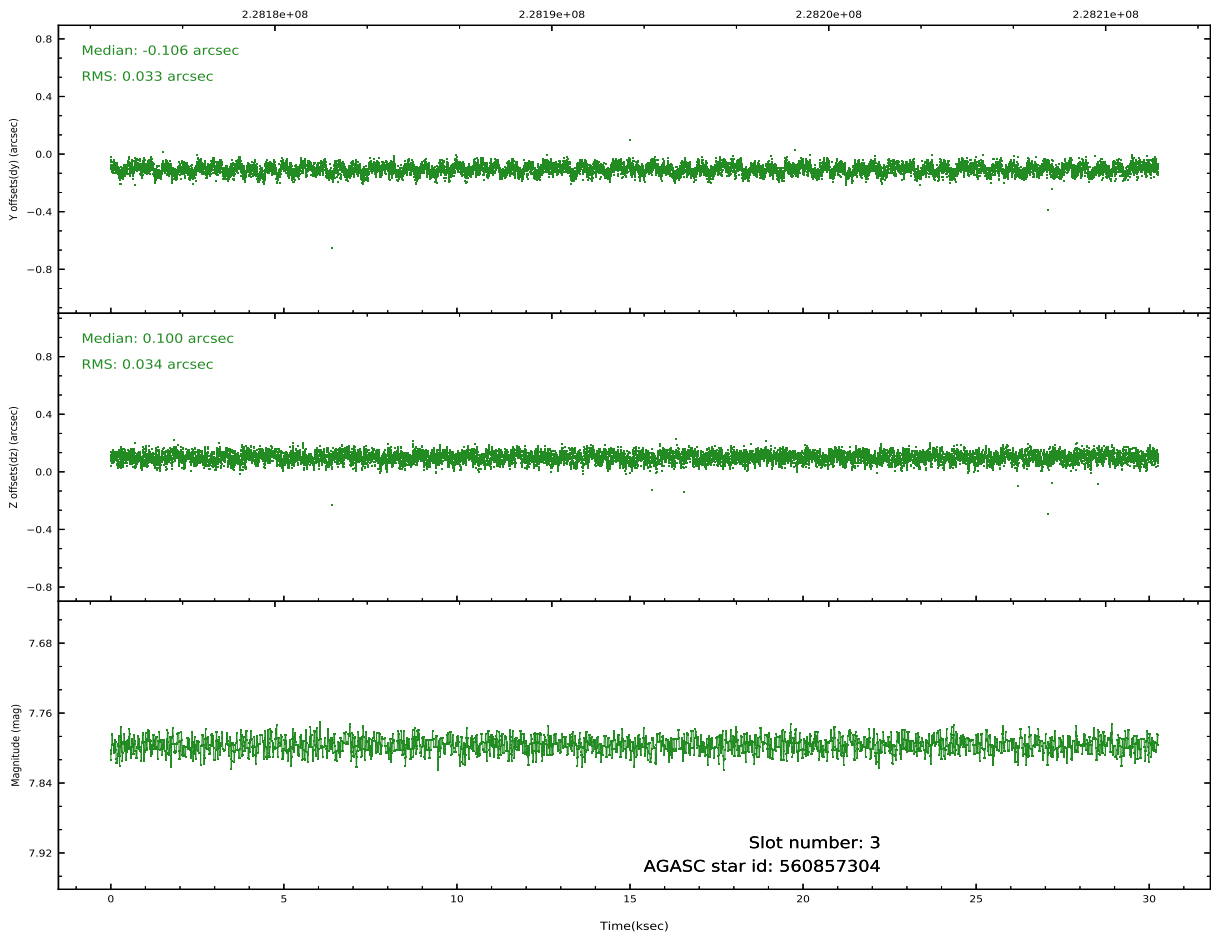
∞

2.4 Star Slots

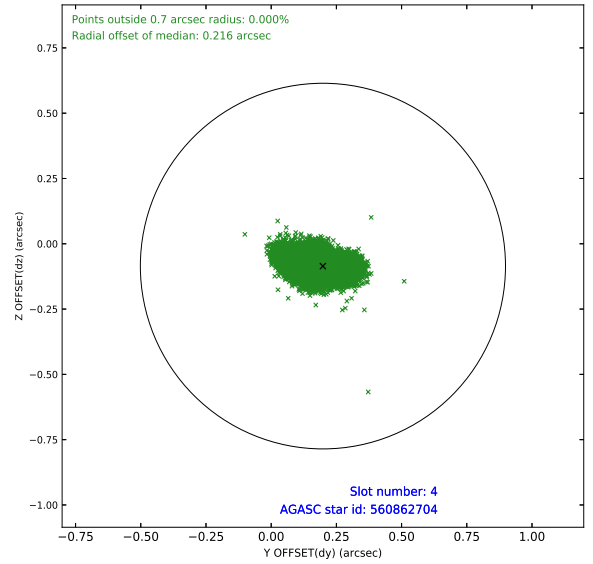
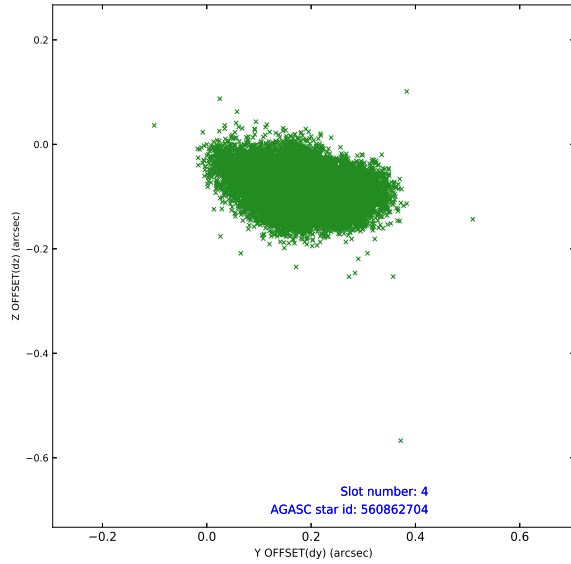
2.4.1 Slot 3



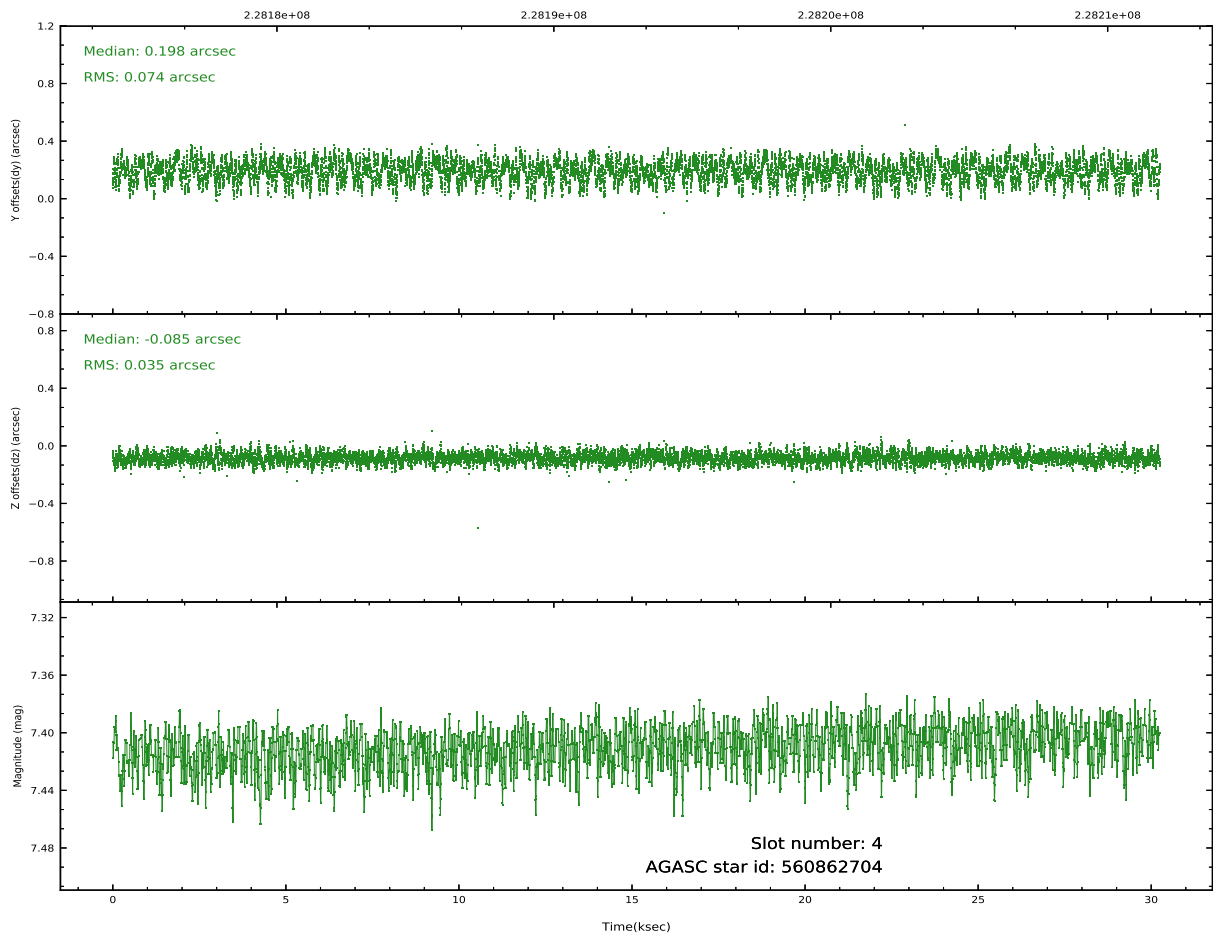
Time (s)



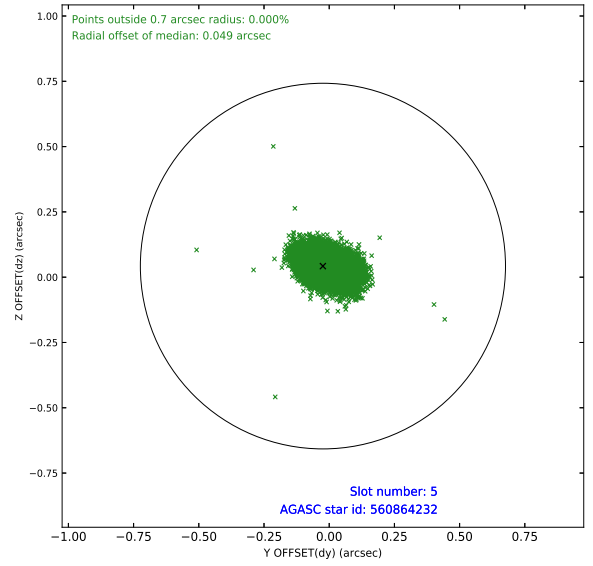
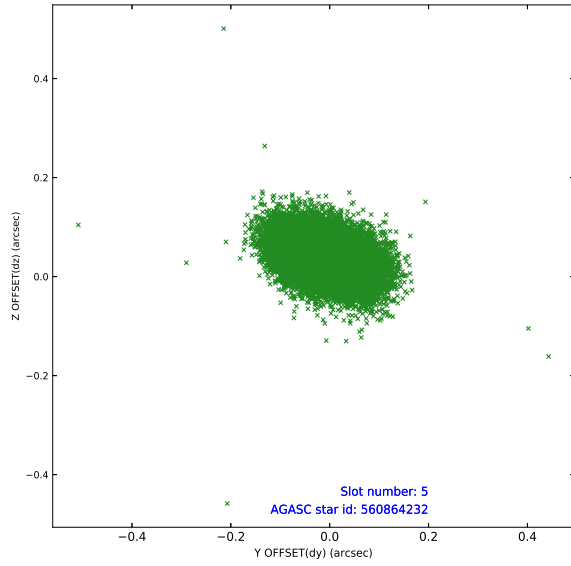
2.4.2 Slot 4



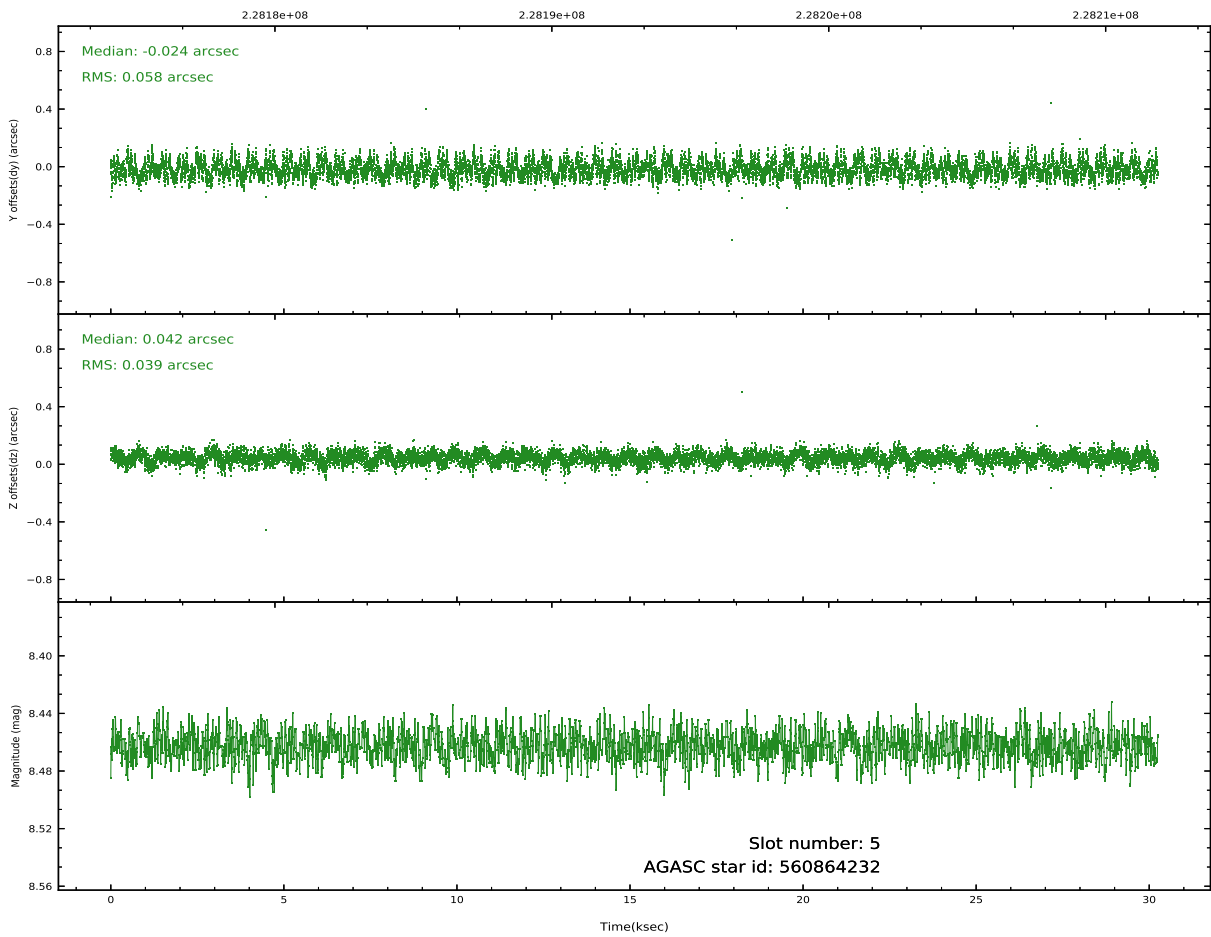
Time (s)



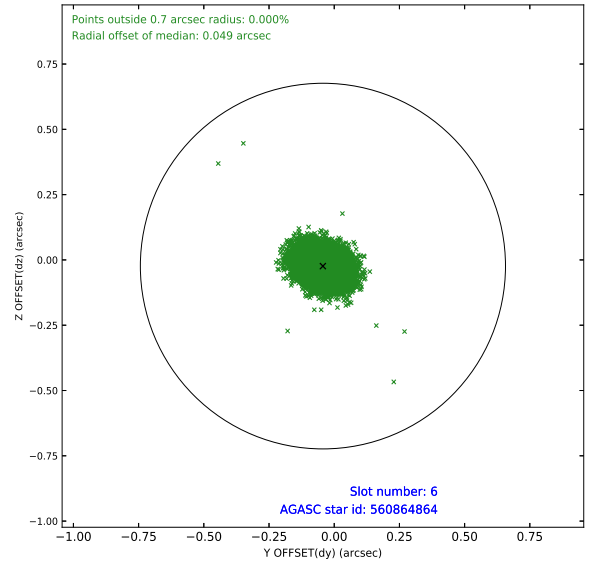
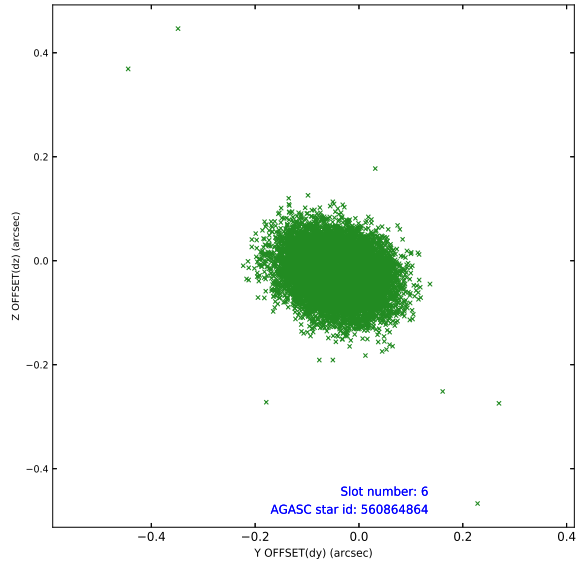
2.4.3 Slot 5



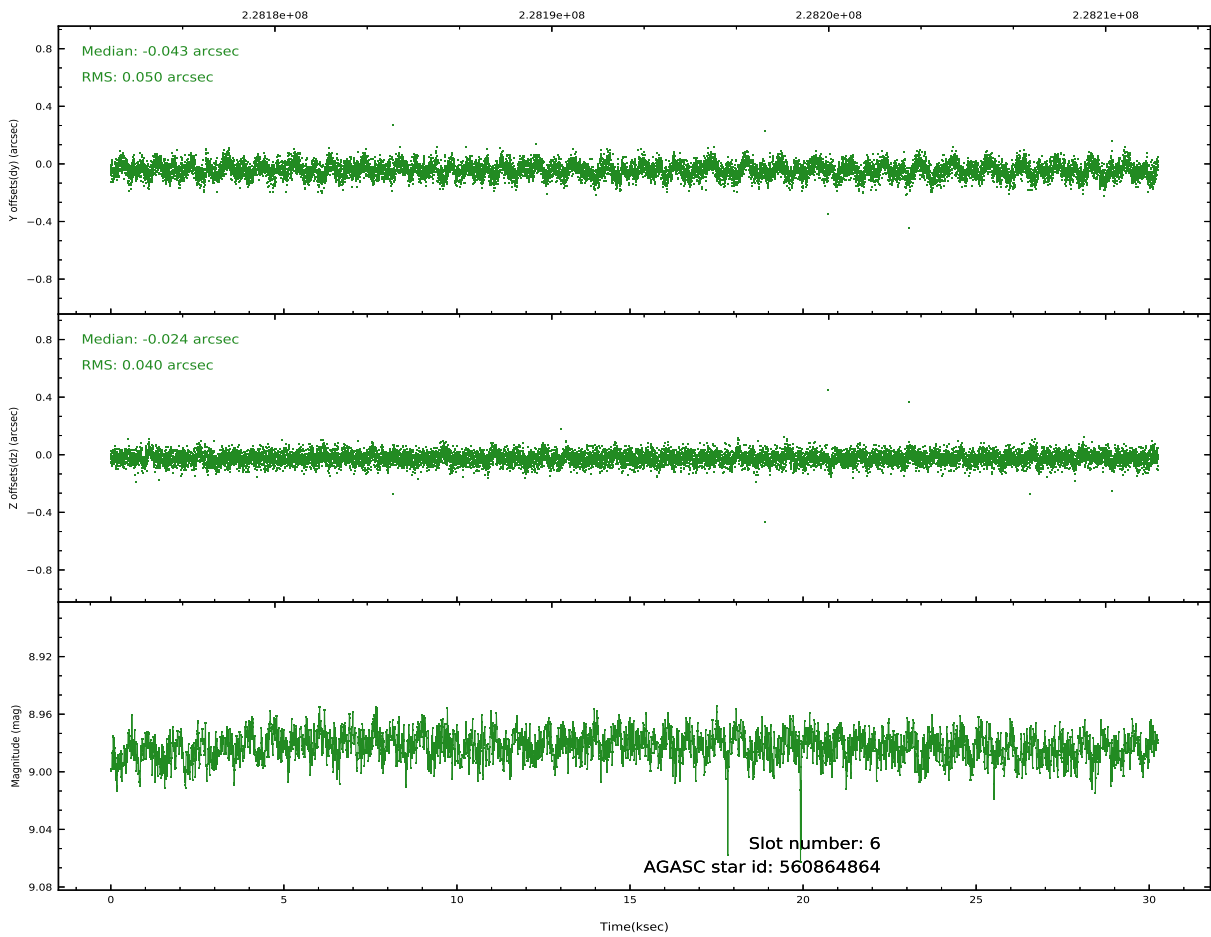
Time (s)



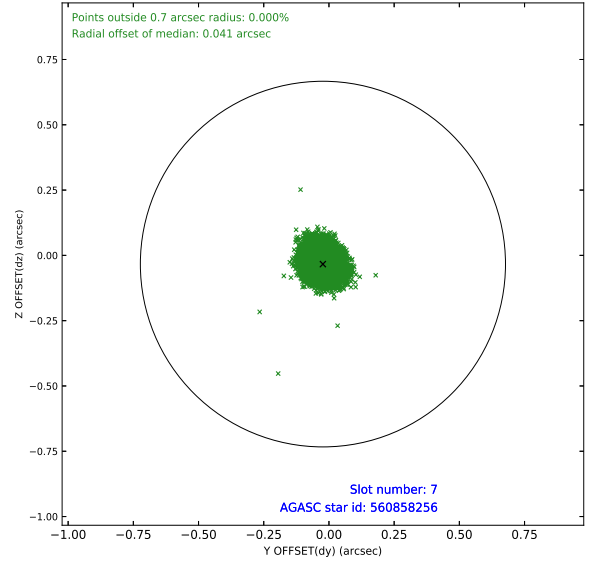
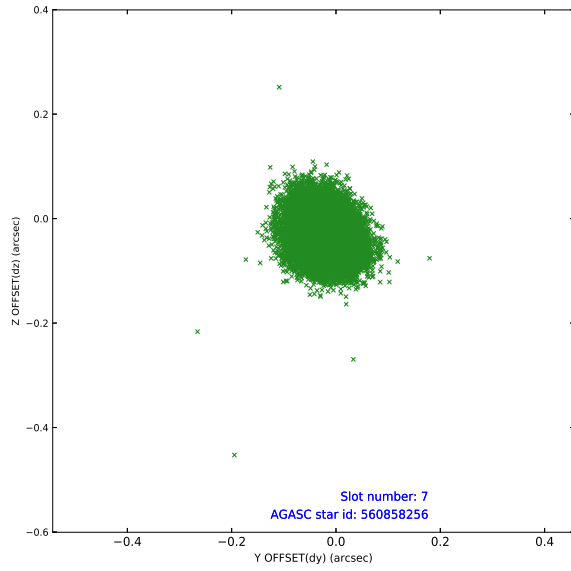
2.4.4 Slot 6



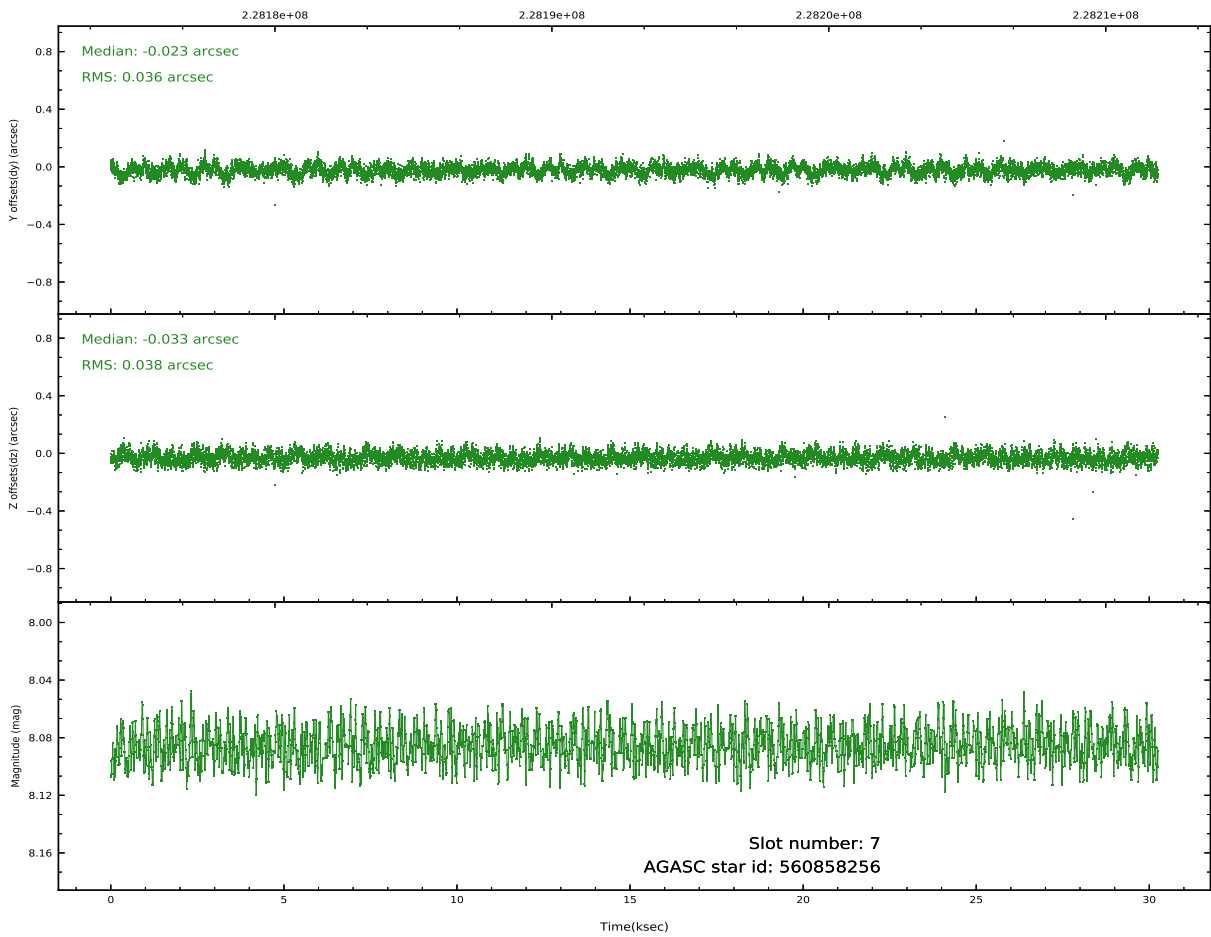
Time (s)



2.4.5 Slot 7

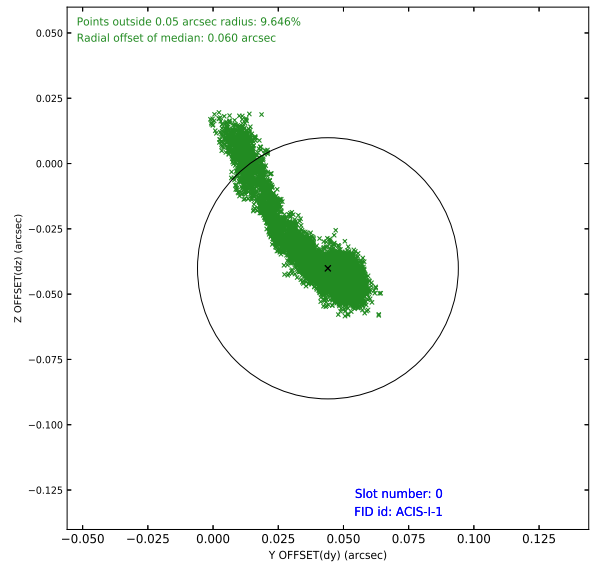
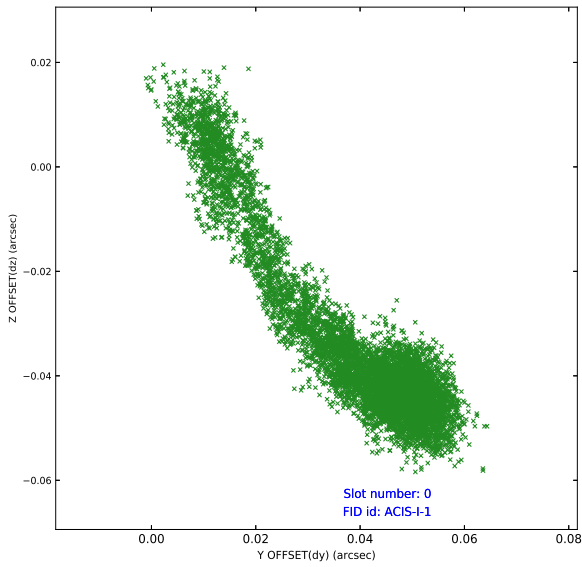


Time (s)

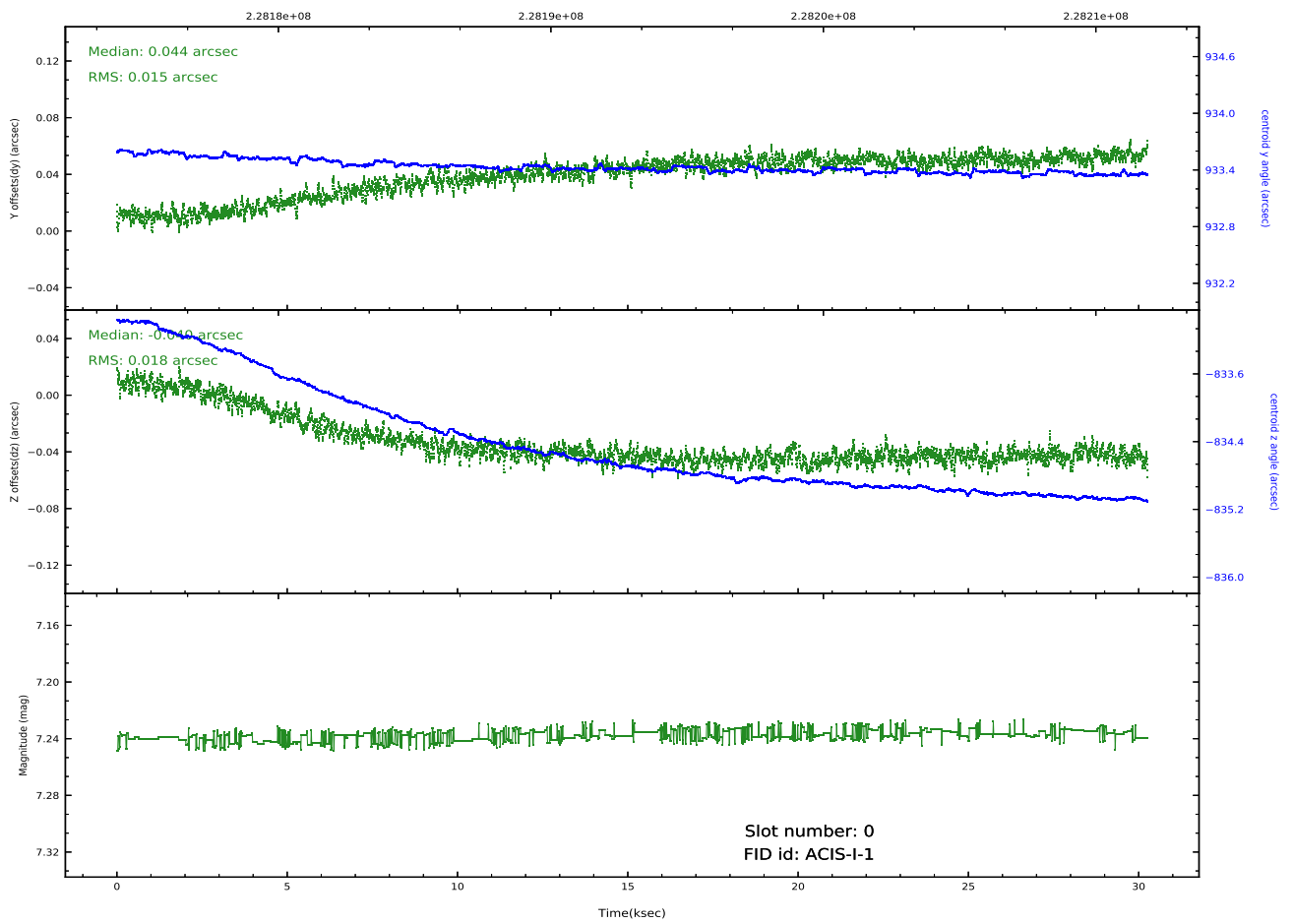


2.5 FID Slots

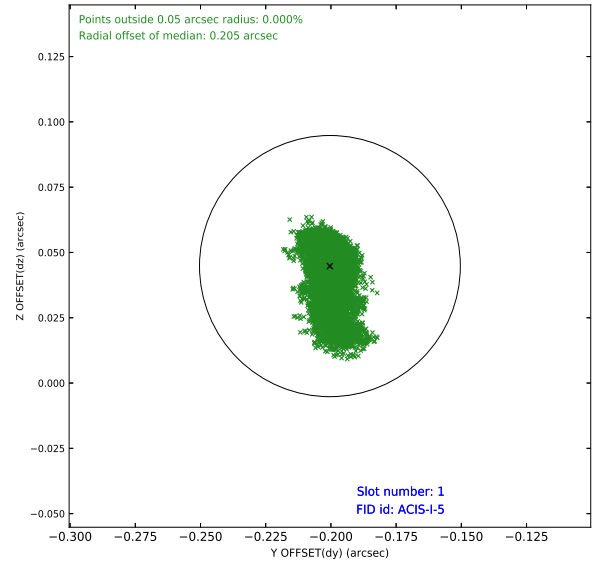
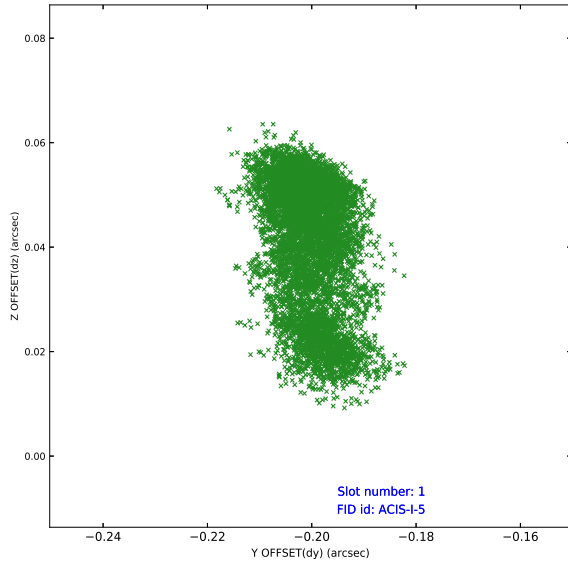
2.5.1 Slot 0



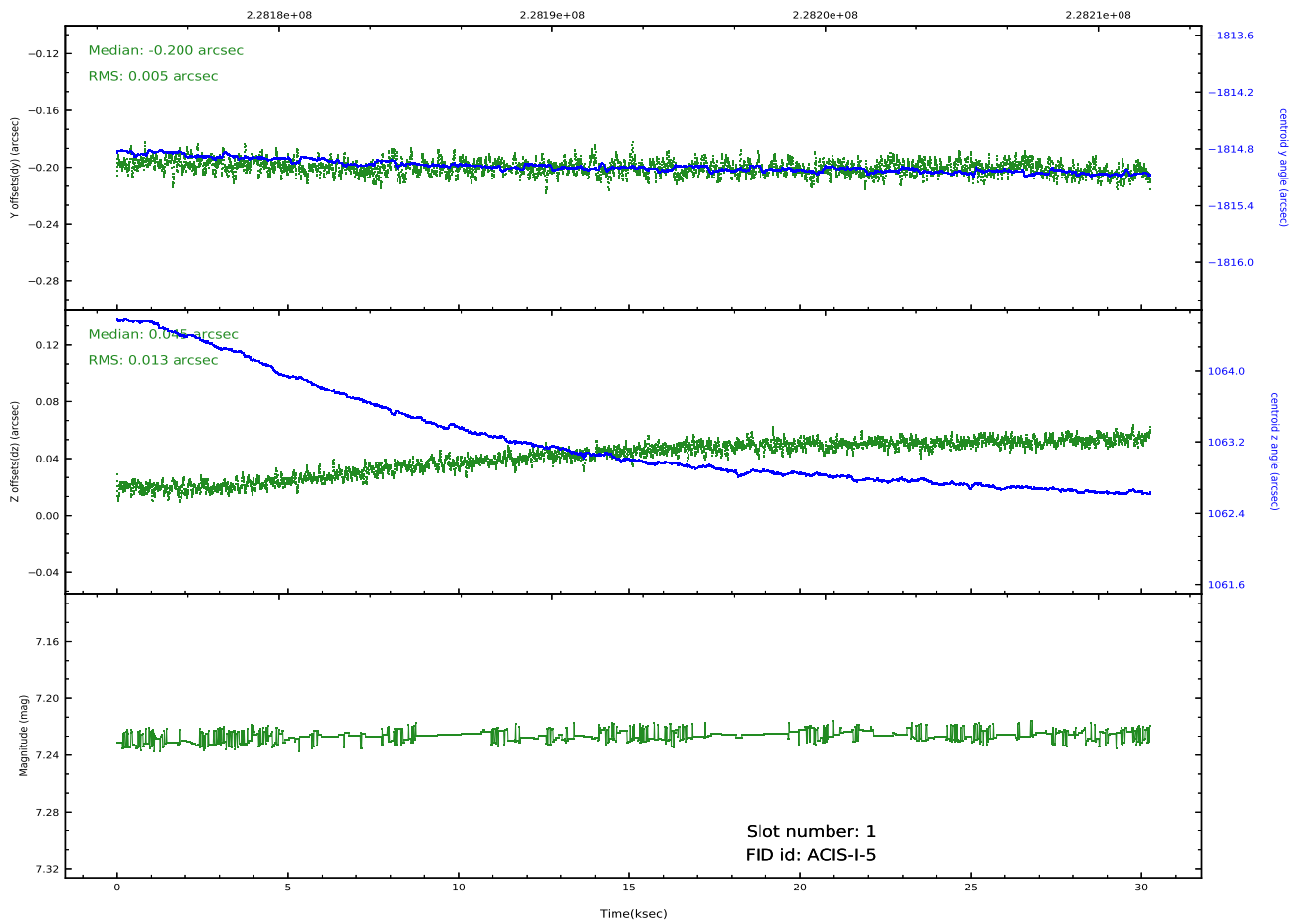
Time (s)



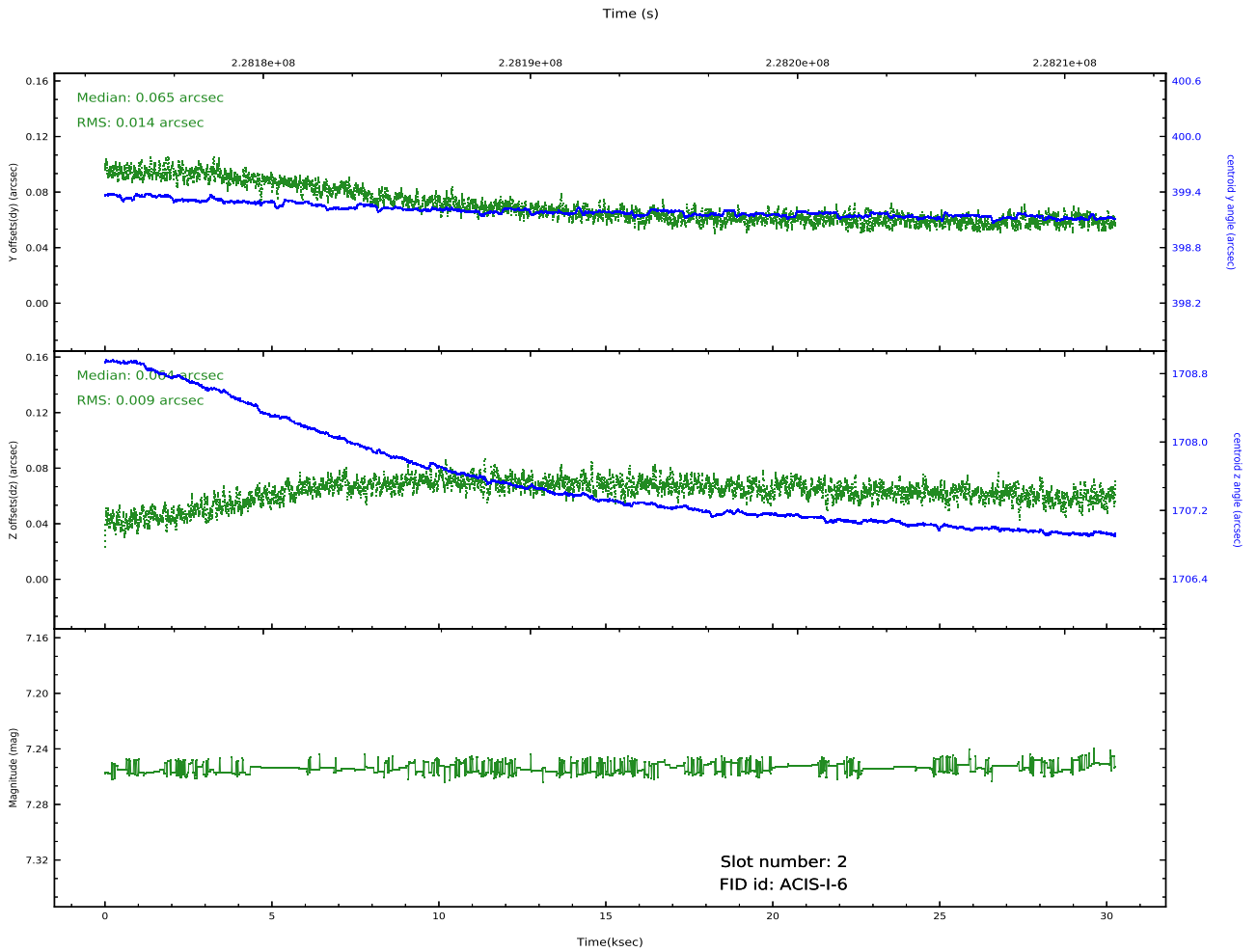
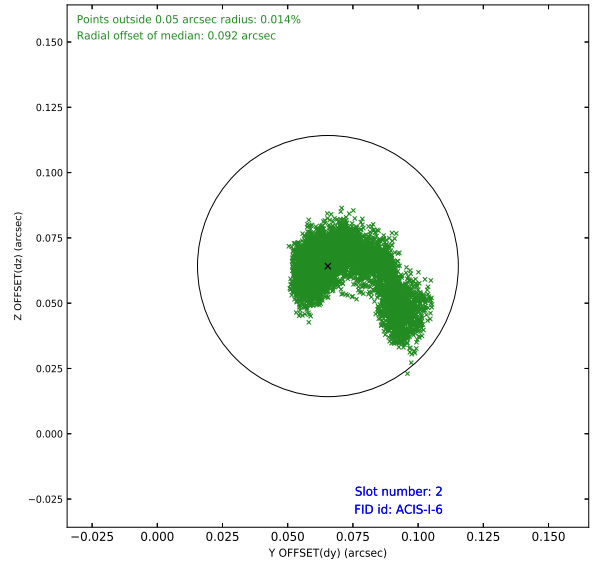
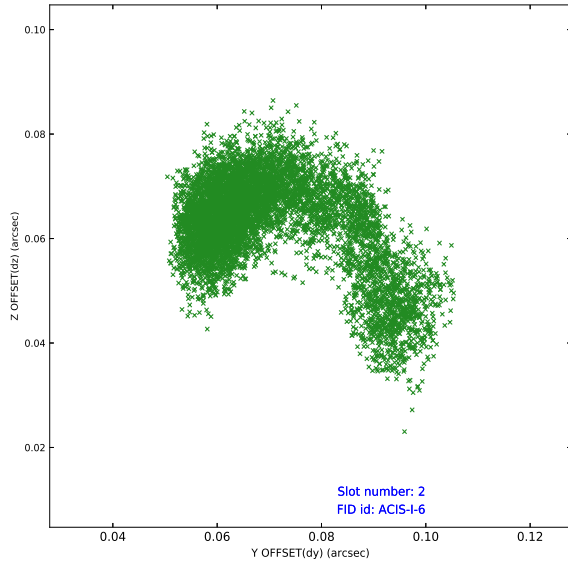
2.5.2 Slot 1



Time (s)



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2020.10.07 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 29.95515 |

A.2 Comments