

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 7198 - L2 Version 4
Chandra X-Ray Center

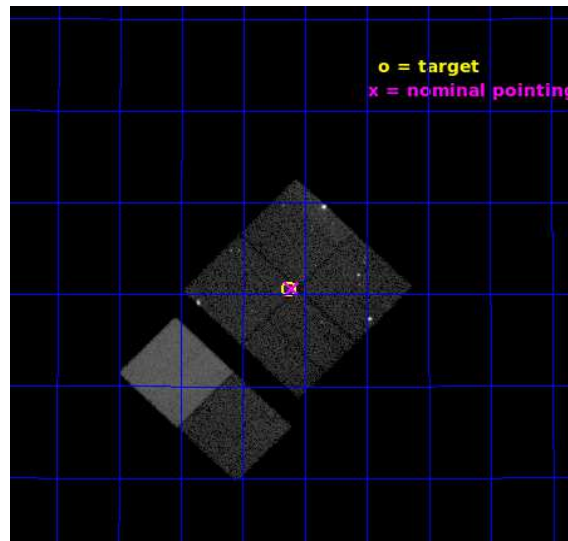
L2 Processing Date : Oct 11 2020

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

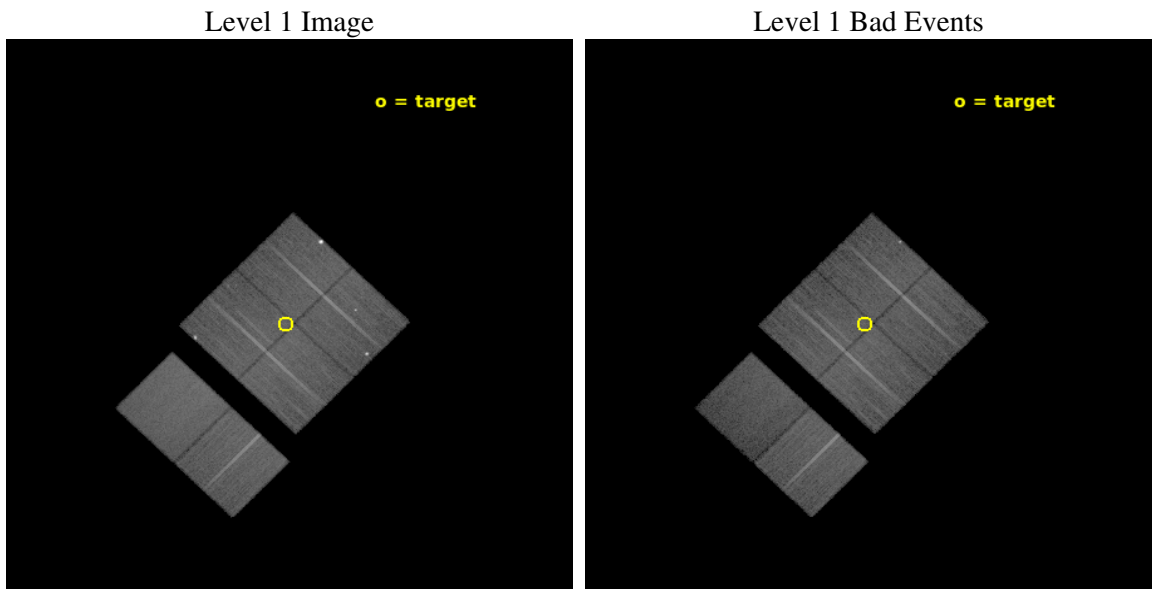
| | | |
|----------|---|---|
| seq_num | 600488 | Sequence number |
| obs_id | 7198 | Observation id |
| title | The Chandra ACIS Survey of M33 (ChASem33): A Deep Survey of the Nearest Face-on Spiral Galaxy | Proposal title |
| observer | Manami Sasaki | Principal investigator |
| object | M33 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 23.532083 | Observer's specified target RA [deg] |
| dec_targ | 30.509111 | Observer's specified target Dec [deg] |
| ra_nom | 23.526029906641 | Nominal RA [deg] |
| dec_nom | 30.510812276309 | Nominal Dec [deg] |
| roll_nom | 224.21187173153 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 22047.283841074 | Sum of GTIs [s] |
| livetime | 21768.107857797 | Livetime [s] |
| ontime0 | 22047.160730988 | Sum of GTIs [s] |
| ontime1 | 22047.201761067 | Sum of GTIs [s] |
| ontime2 | 22047.242820978 | Sum of GTIs [s] |
| ontime3 | 22047.283841074 | Sum of GTIs [s] |
| ontime6 | 22050.606921285 | Sum of GTIs [s] |
| ontime7 | 22050.565881282 | Sum of GTIs [s] |
| l2events | 157845 | Number of level 2 events |



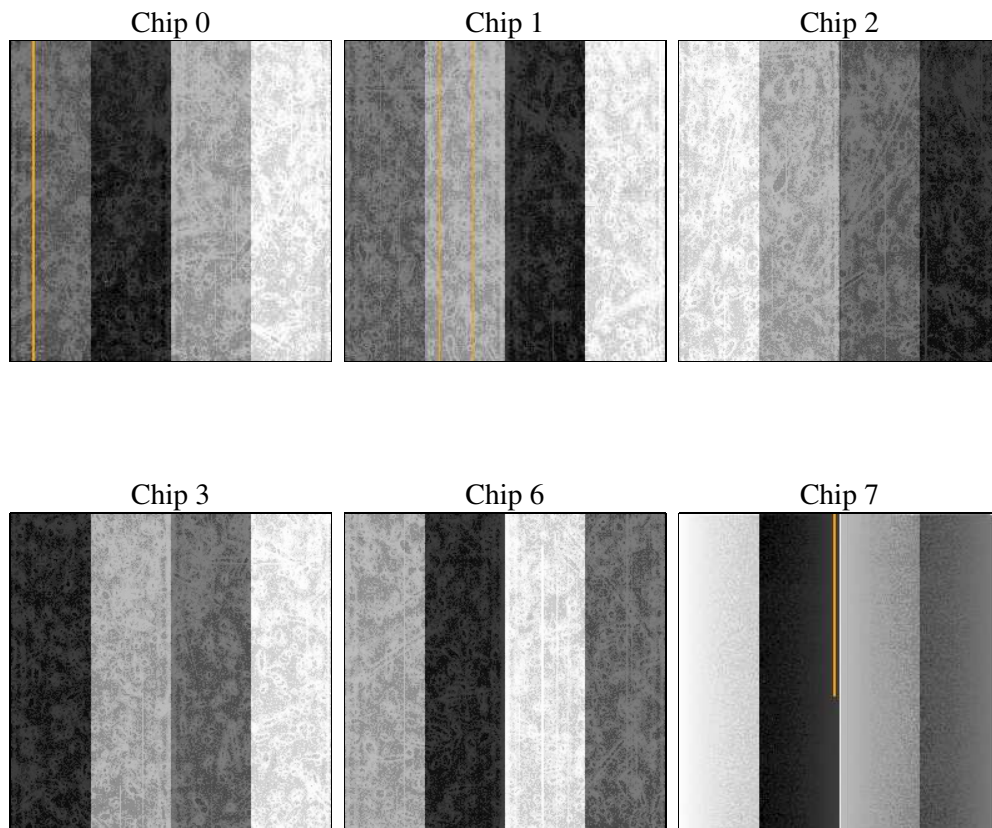
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 22000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 22047.283841074 | Sum of GTIs [s] |
| caldsver | 4.9.2 | | ontime0 | 22047.160730988 | Sum of GTIs [s] |
| date | 2020-10-11T13:47:48 | Date and time of file creation | ontime1 | 22047.201761067 | Sum of GTIs [s] |
| revision | 4 | Processing version of data | ontime2 | 22047.242820978 | Sum of GTIs [s] |
| | | | ontime3 | 22047.283841074 | Sum of GTIs [s] |
| | | | ontime6 | 22050.606921285 | Sum of GTIs [s] |
| | | | ontime7 | 22050.565881282 | Sum of GTIs [s] |
| | | | l1events | 907893 | Number of level 1 events |

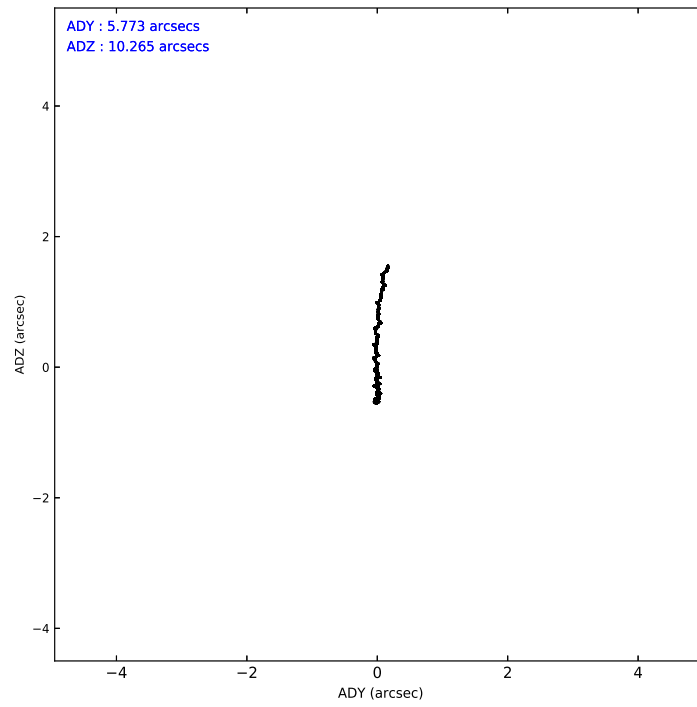
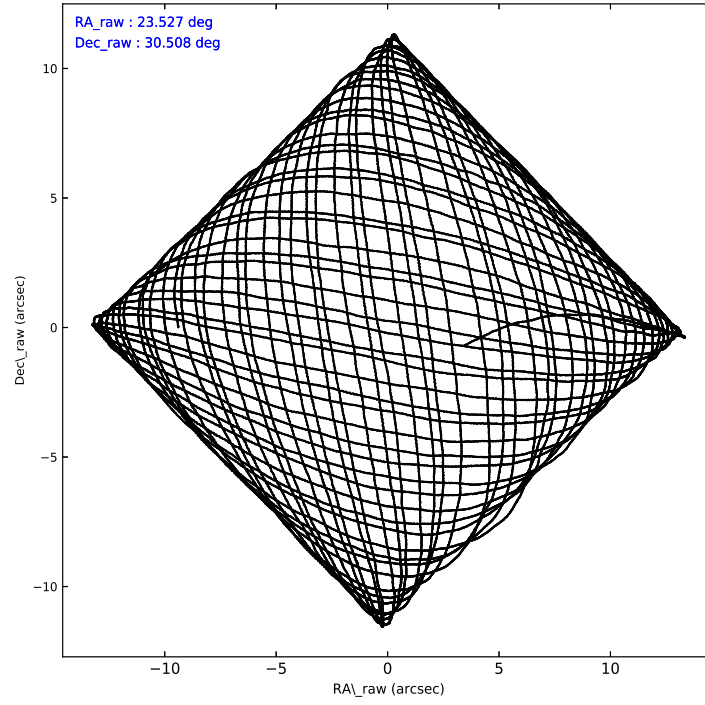
2.1.4 Events

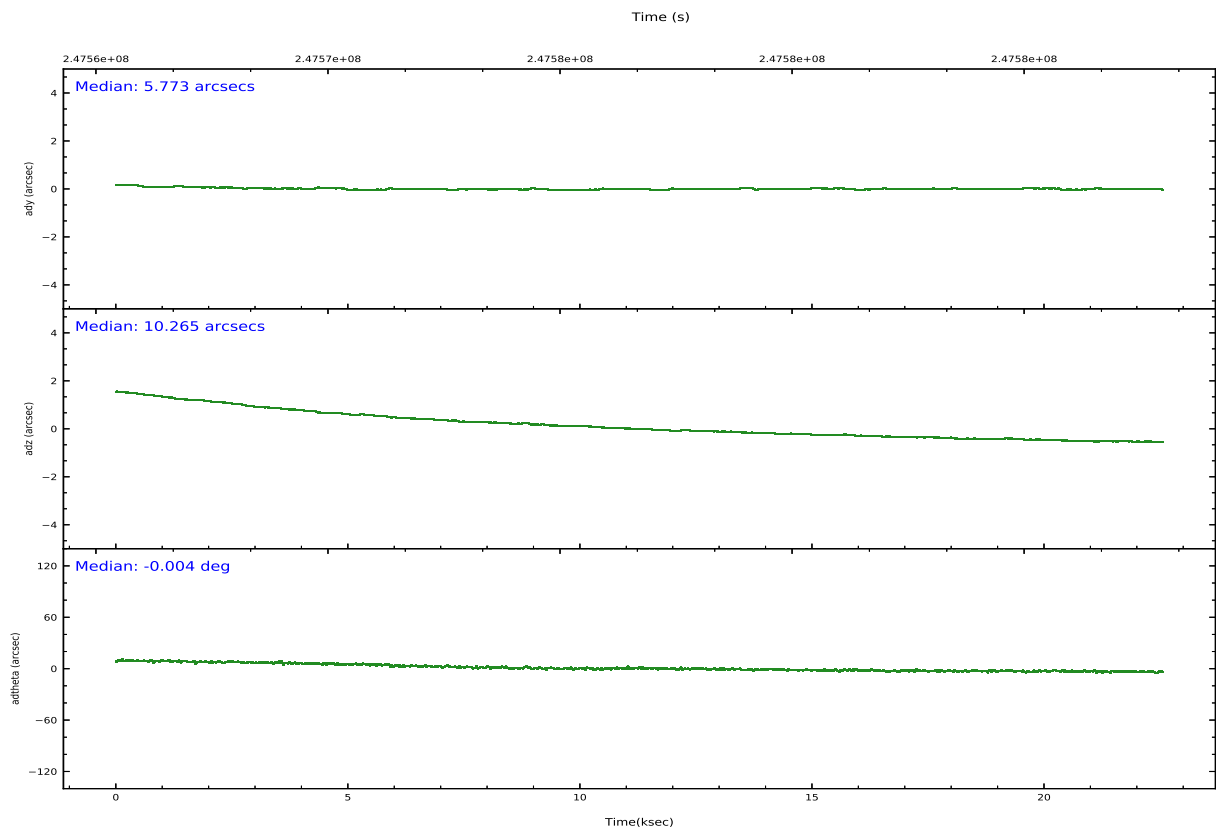
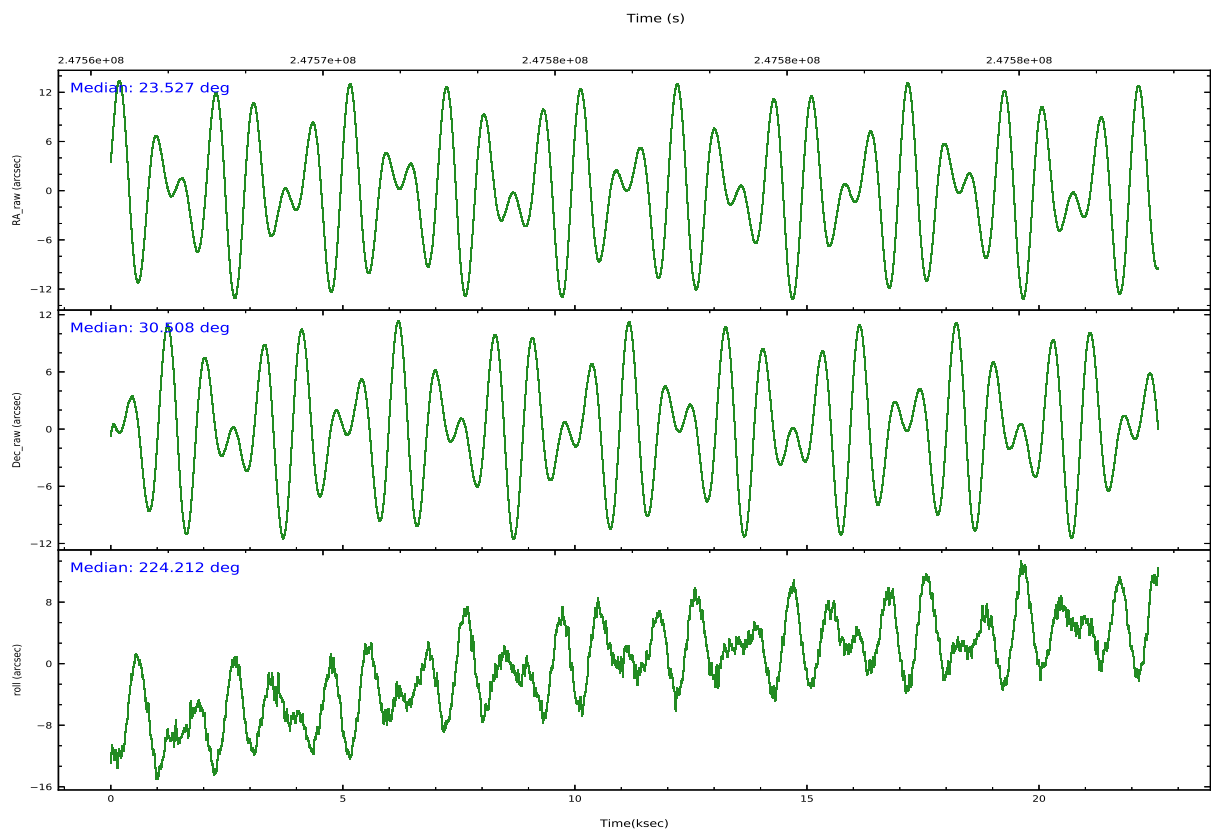
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 | | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 | ccd 7 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|-------|
| level 1 events | 141093 | 158930 | 154810 | 142566 | 149926 | 160568 | grade 0 events | 9943 | 24477 | 5089 | 7766 | 4936 | 5936 |
| rejected events | 120687 | 119238 | 140926 | 125189 | 135281 | 88534 | | 7% | 15% | 3% | 5% | 3% | 3% |
| rejected % | 85% | 75% | 91% | 87% | 90% | 55% | grade 1 events | 87 | 495 | 72 | 93 | 85 | 166 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 4080 | 6072 | 3202 | 3345 | 3217 | 14162 |
| | | | | | | | | 2% | 3% | 2% | 2% | 2% | 8% |
| | | | | | | | grade 3 events | 1809 | 2619 | 1469 | 1731 | 1676 | 6676 |
| | | | | | | | | 1% | 1% | 0% | 1% | 1% | 4% |
| | | | | | | | grade 4 events | 1725 | 2549 | 1518 | 1697 | 1671 | 6667 |
| | | | | | | | | 1% | 1% | 0% | 1% | 1% | 4% |
| | | | | | | | grade 5 events | 4954 | 5659 | 4576 | 5752 | 6143 | 17038 |
| | | | | | | | | 3% | 3% | 2% | 4% | 4% | 10% |
| | | | | | | | grade 6 events | 2853 | 3982 | 2610 | 2840 | 3148 | 38605 |
| | | | | | | | | 2% | 2% | 1% | 1% | 2% | 24% |
| | | | | | | | grade 7 events | 115642 | 113077 | 136274 | 119342 | 129050 | 71318 |
| | | | | | | | | 81% | 71% | 88% | 83% | 86% | 44% |

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 | 23.535589 | 23.526029906641 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 30.533805 | 30.510812276309 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 223.998215 | 224.21187173153 | [s] Primary exposure time | 0.000000 | 3.2 |
| [mm] SIM focus pos | -0.782348 | -0.7823481983384333 | | | |
| [mm] SIM defocus | 0 | 1.724155329618782e-08 | | | |
| [mm] SIM translation stage pos | -233.592463 | -233.5874344608287 | | | |
| [mm] SIM translation stage offset | 0 | -0.005018542100998502 | | | |
| [s] Observation start time (MET) | 247565997.184000 | 247564796.80212 | | | |
| Observation start date | 2005-11-05T08:18:53 | 2005-11-05T07:59:56 | | | |
| [s] Observation end time (MET) | 247587997.184000 | 247588730.04072 | | | |
| Observation end date | 2005-11-05T14:25:33 | 2005-11-05T14:38:50 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



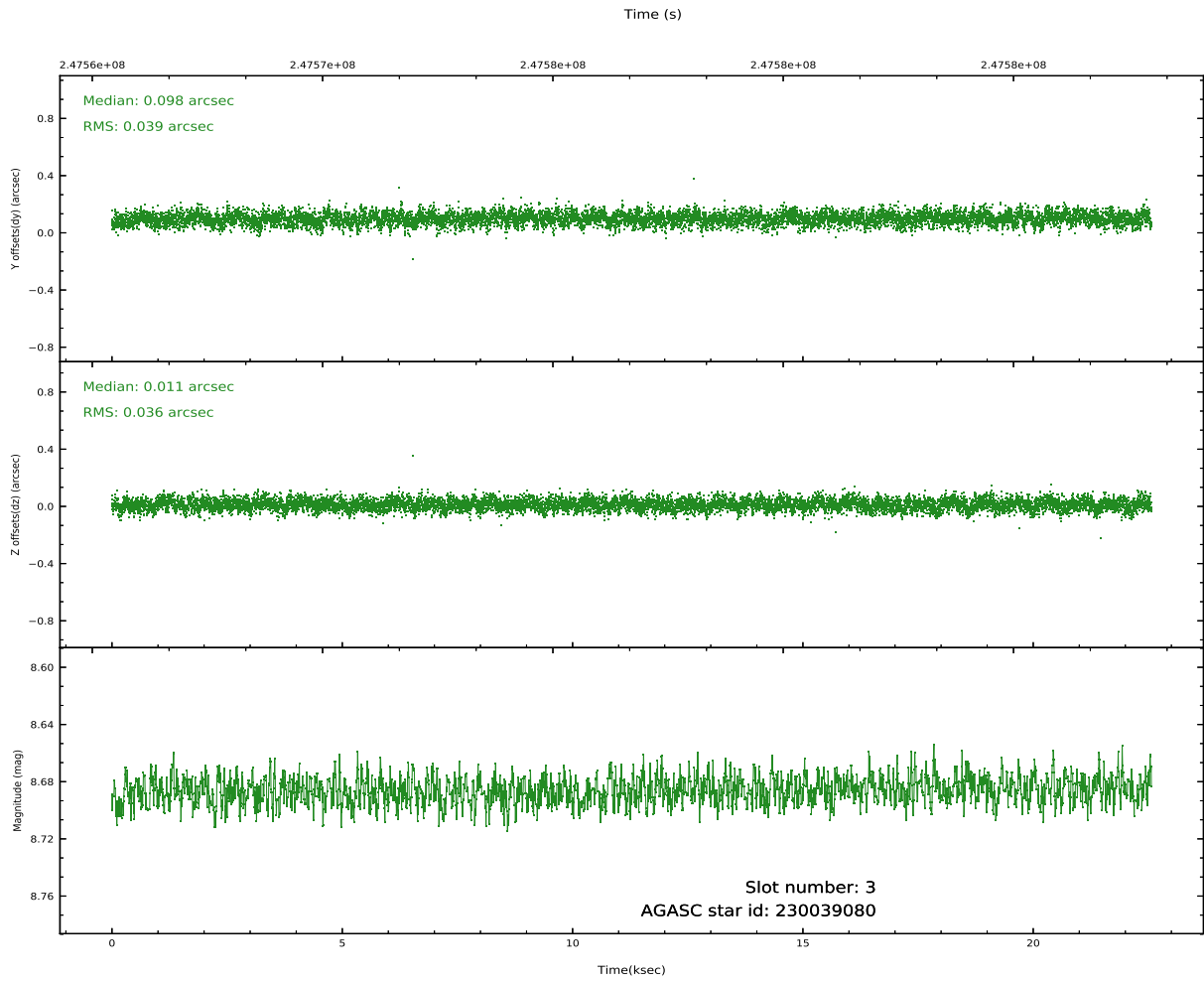
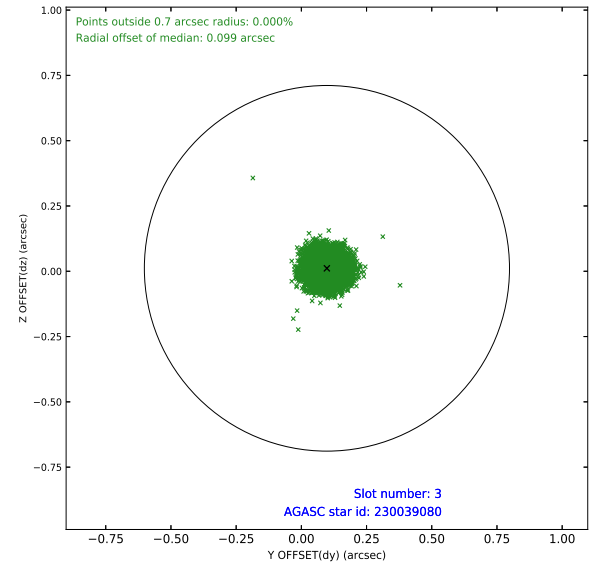
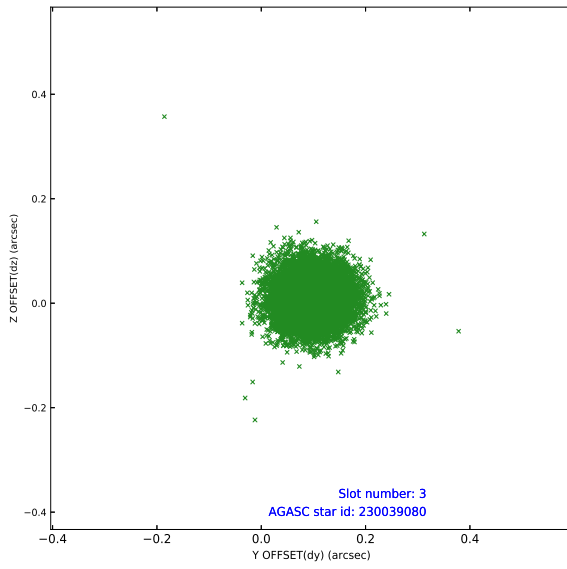


Slot Statistics

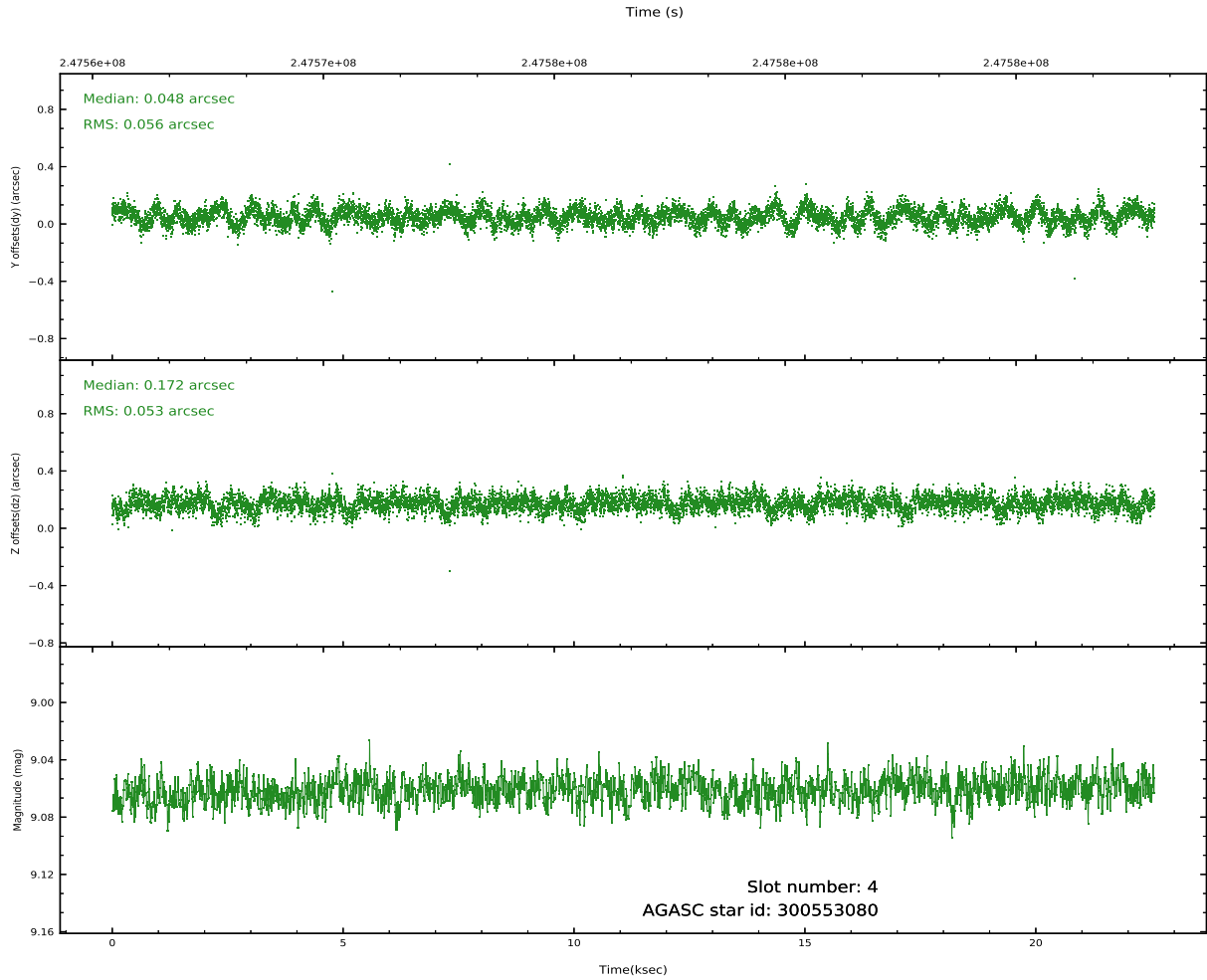
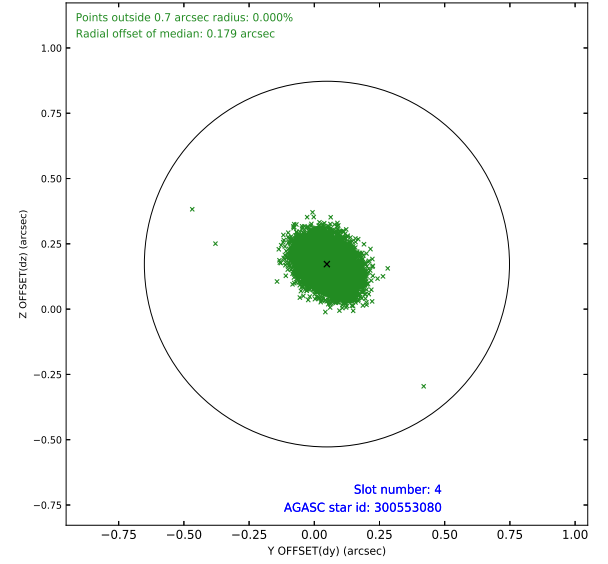
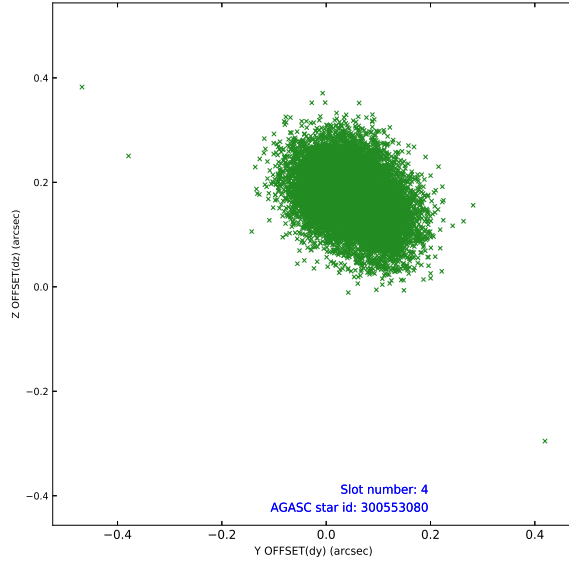
| pt | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mea |
|----|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|-----------|-----------|----------|-------|
| 0 | FID | | ACIS-I-1 | 7.25 | 5504 | 1.000 | 0.018 | 0.011 | 0.009 | 0.014 | 0.000000 | 0.000000 | 933.98 | -833 |
| 1 | FID | | ACIS-I-2 | 7.15 | 5505 | 1.000 | -0.108 | -0.048 | 0.021 | 0.032 | 0.000000 | 0.000000 | -760.15 | -840 |
| 2 | FID | | ACIS-I-6 | 7.25 | 5505 | 1.000 | -0.001 | 0.107 | 0.023 | 0.031 | 0.000000 | 0.000000 | 399.45 | 1707 |
| 3 | GUIDE | used | 230039080 | 8.69 | 11000 | 1.000 | 0.098 | 0.011 | 0.056 | 0.090 | 23.320866 | 29.887774 | 2097.60 | 1207 |
| 4 | GUIDE | used | 300553080 | 9.06 | 11006 | 1.000 | 0.048 | 0.172 | 0.081 | 0.134 | 23.777101 | 30.773227 | -1136.13 | -101 |
| 5 | GUIDE | used | 300559160 | 9.40 | 10985 | 1.000 | -0.049 | -0.118 | 0.100 | 0.168 | 24.161026 | 30.632205 | -1643.29 | 1087 |
| 6 | GUIDE | used | 300559832 | 7.87 | 11010 | 1.000 | -0.042 | -0.036 | 0.056 | 0.090 | 24.407732 | 30.552794 | -1999.72 | 1821 |
| 7 | GUIDE | used | 300559960 | 7.88 | 11005 | 1.000 | -0.057 | -0.024 | 0.062 | 0.098 | 22.944463 | 30.624765 | 1086.58 | -1510 |

2.4 Star Slots

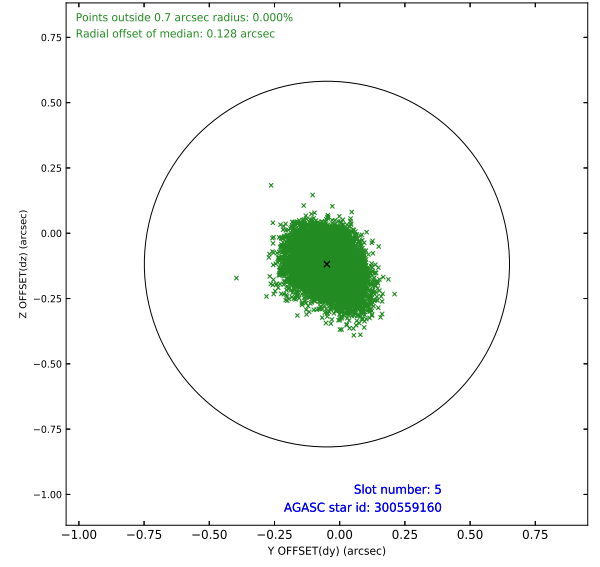
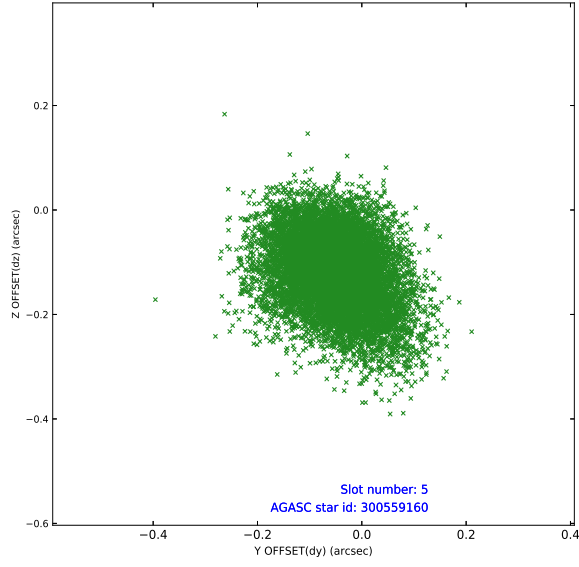
2.4.1 Slot 3



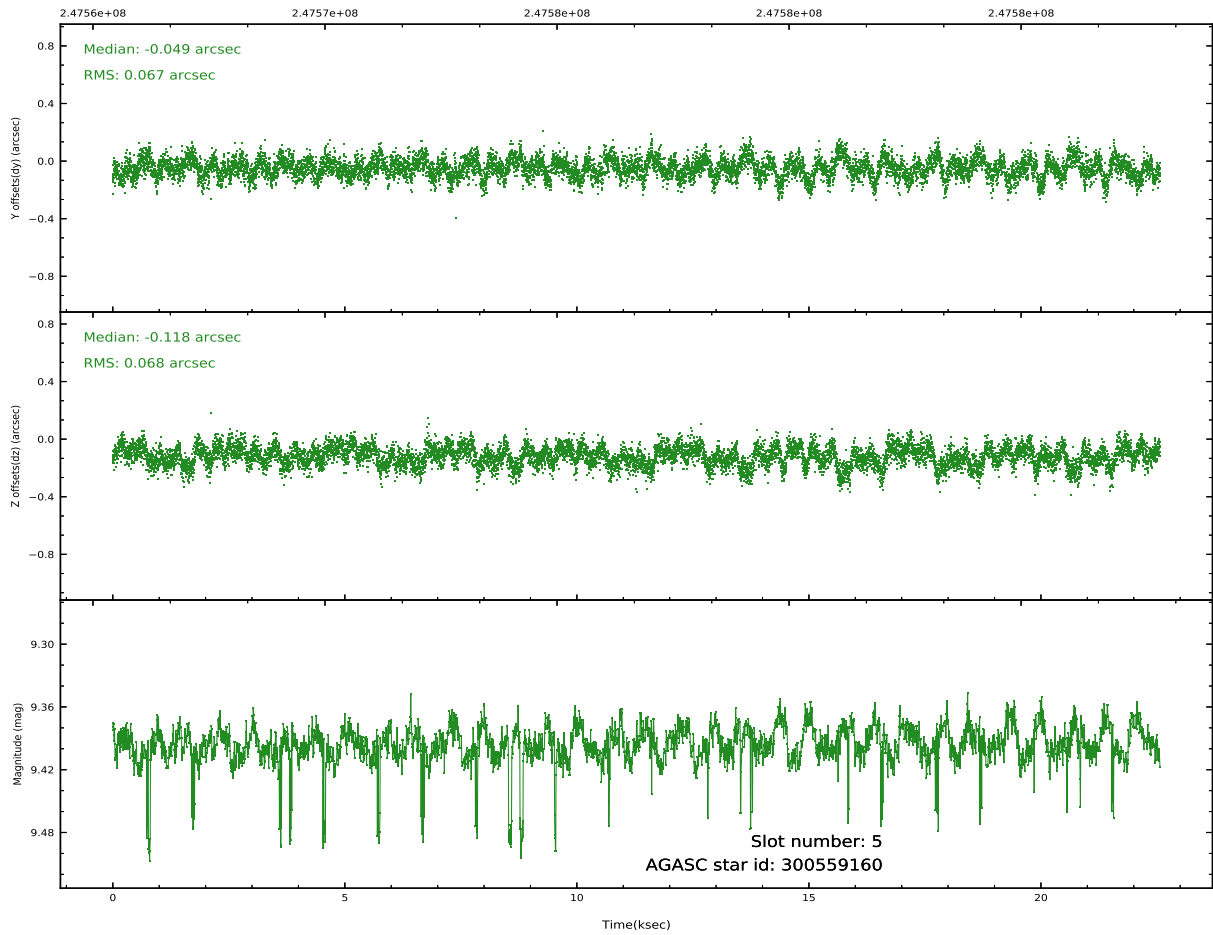
2.4.2 Slot 4



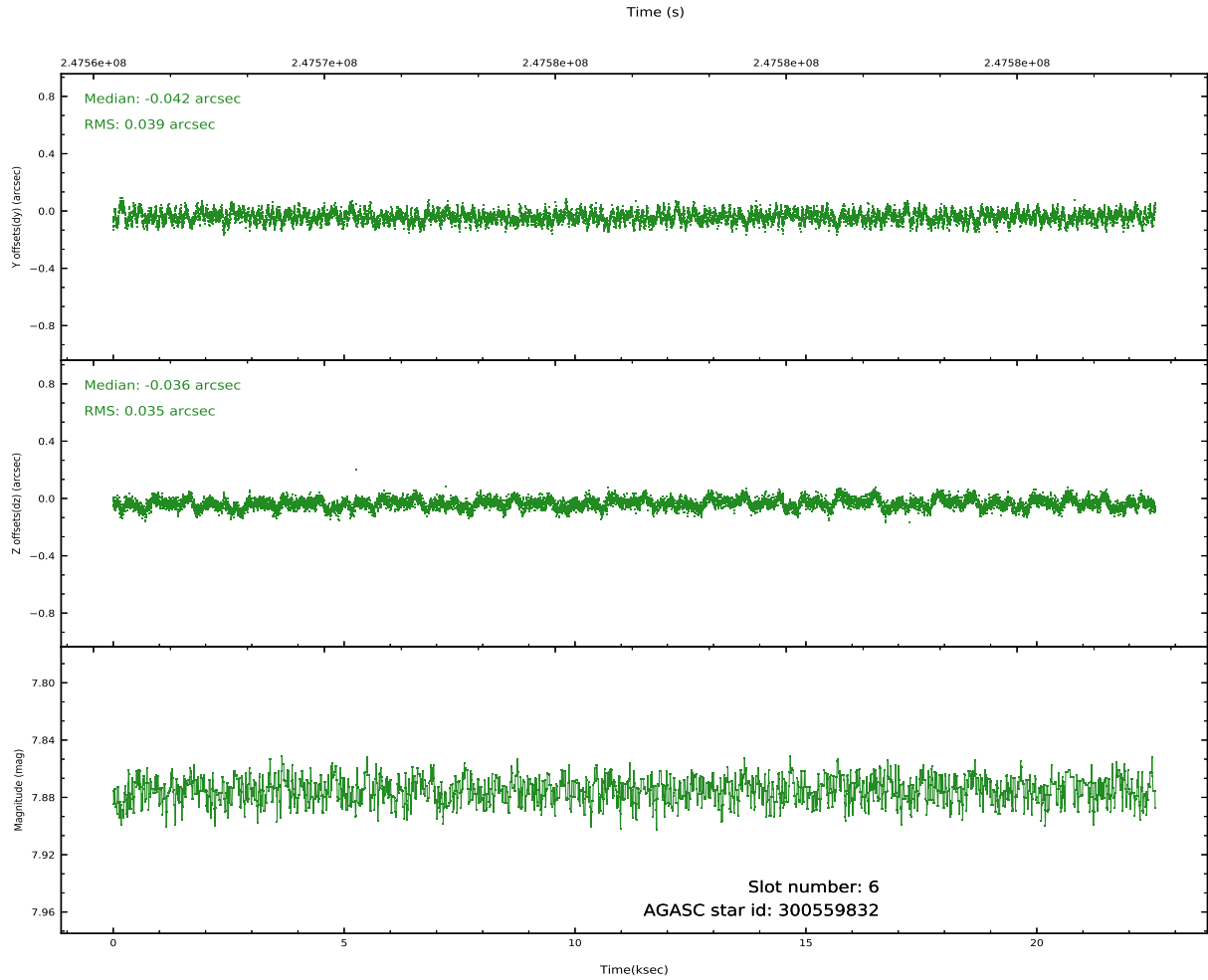
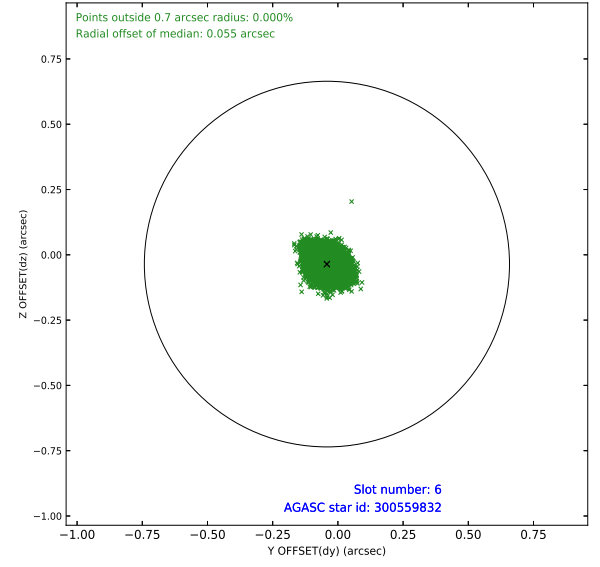
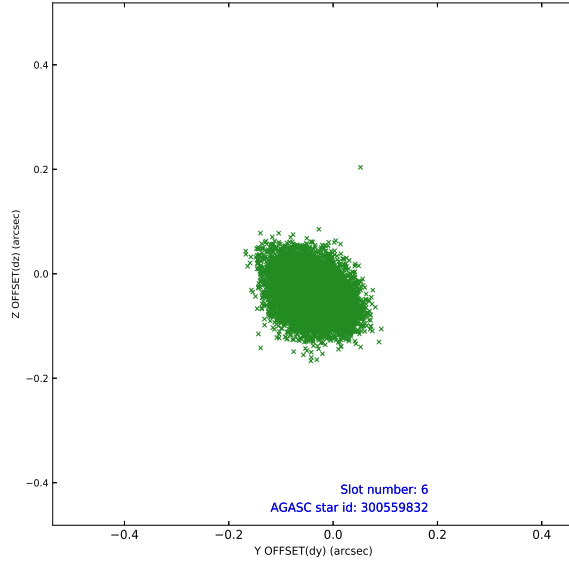
2.4.3 Slot 5



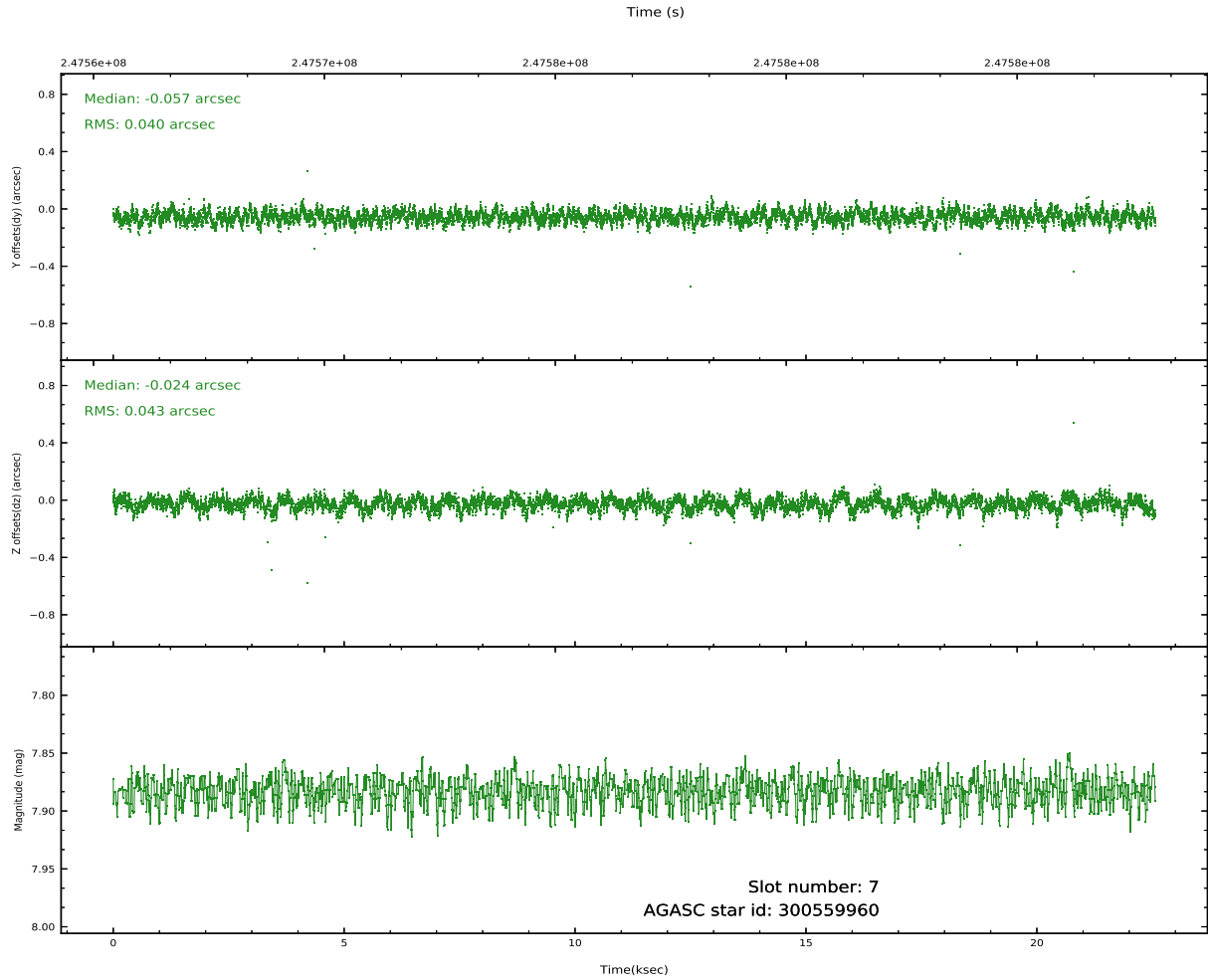
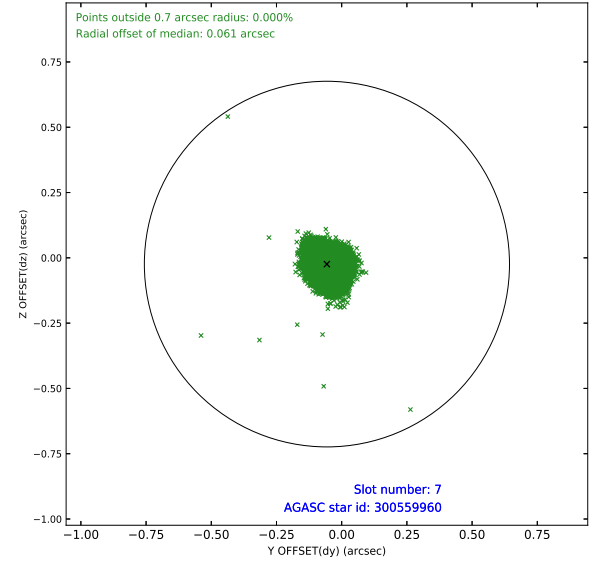
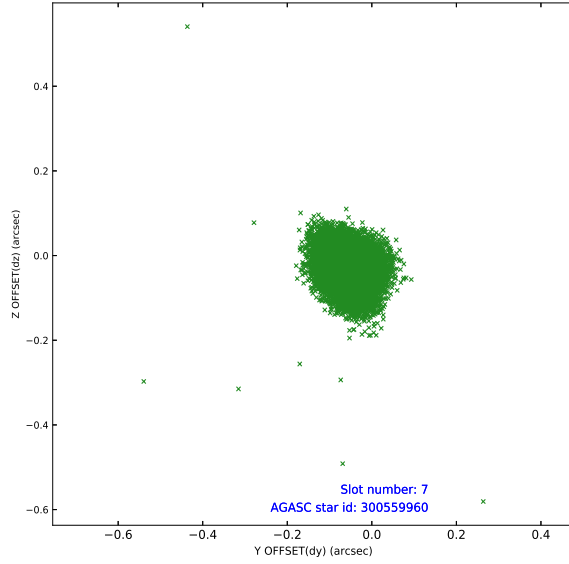
Time (s)



2.4.4 Slot 6

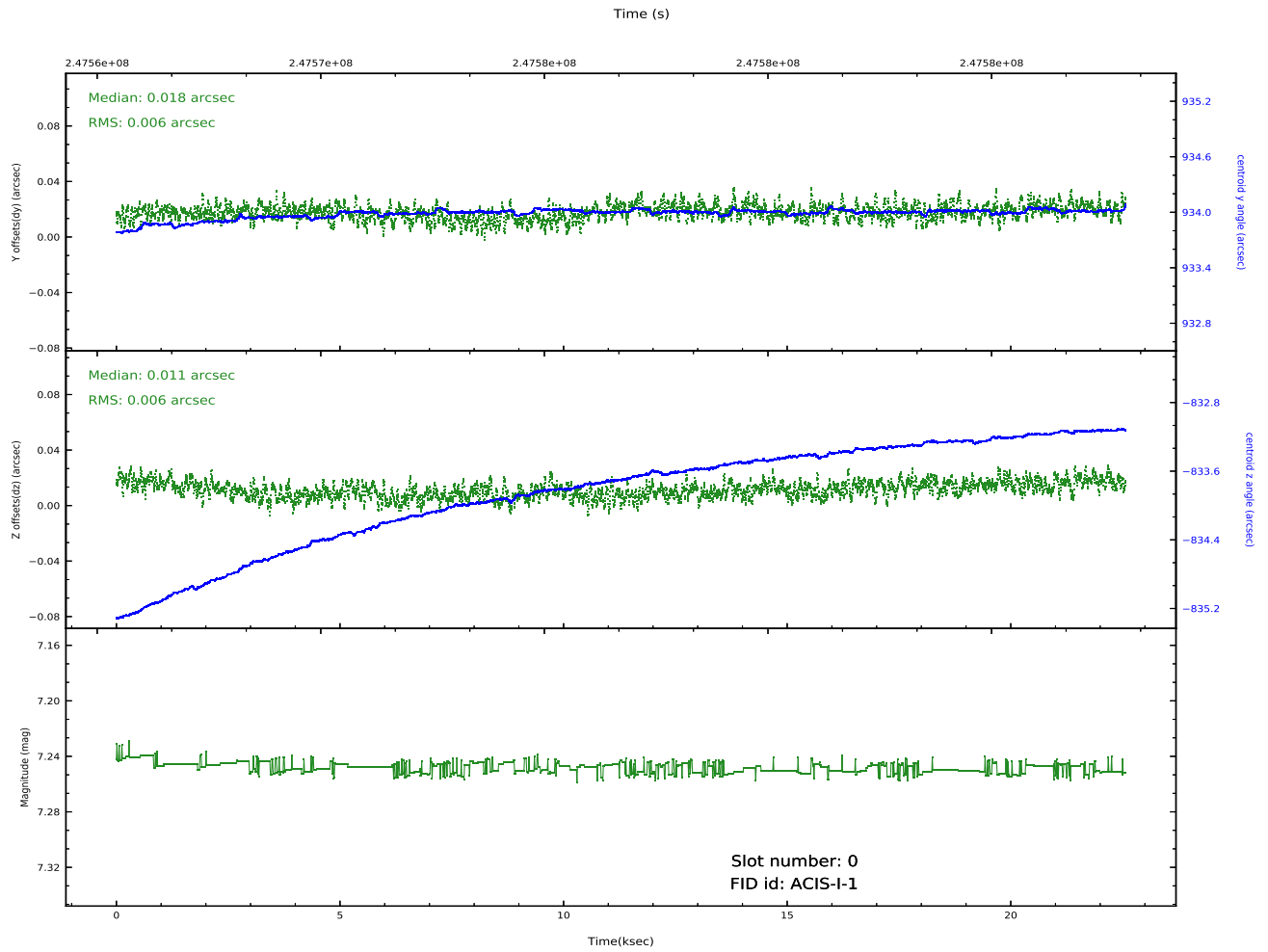
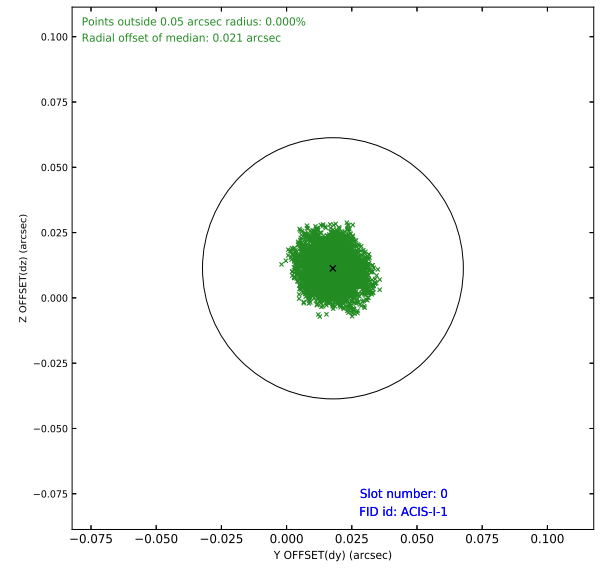
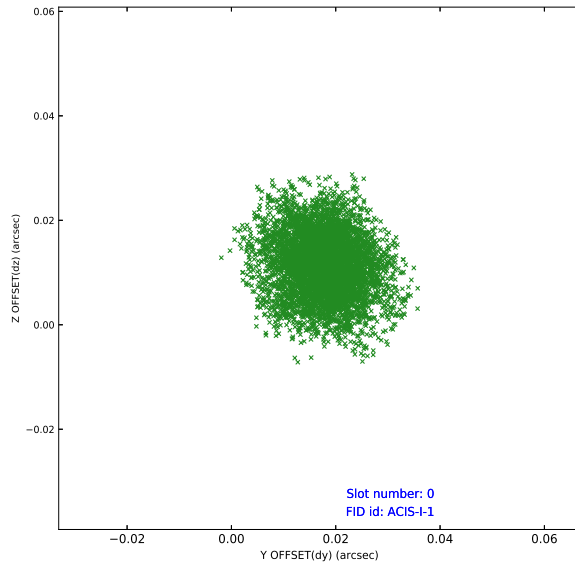


2.4.5 Slot 7

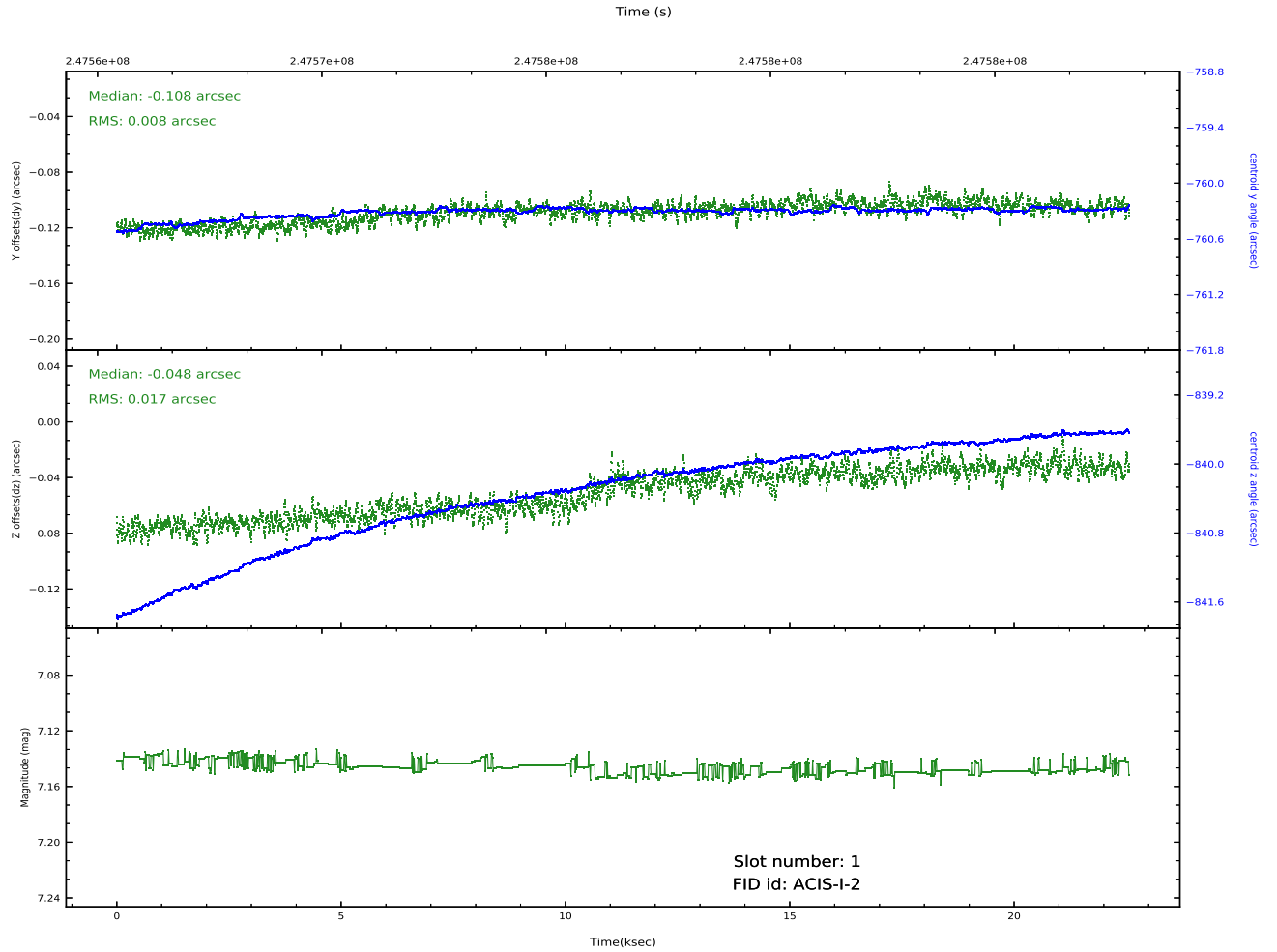
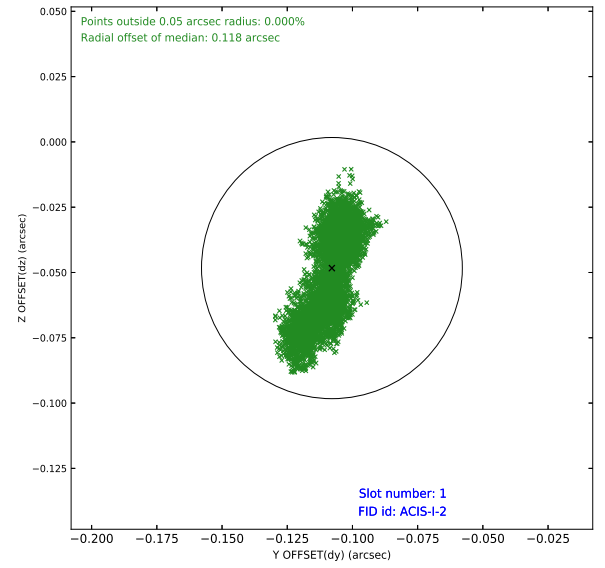
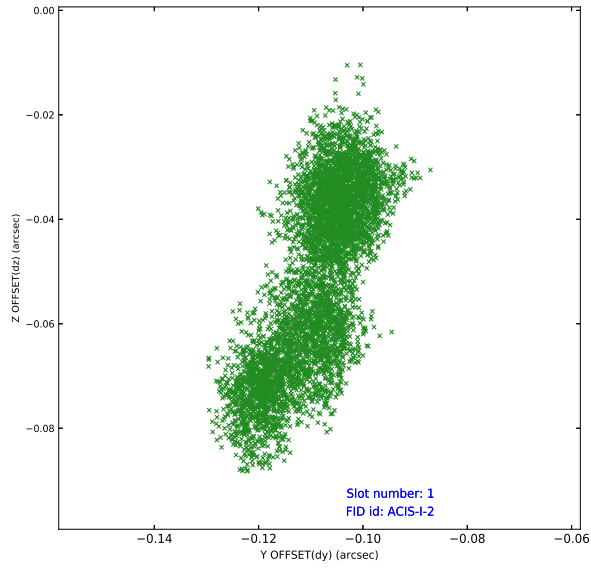


2.5 FID Slots

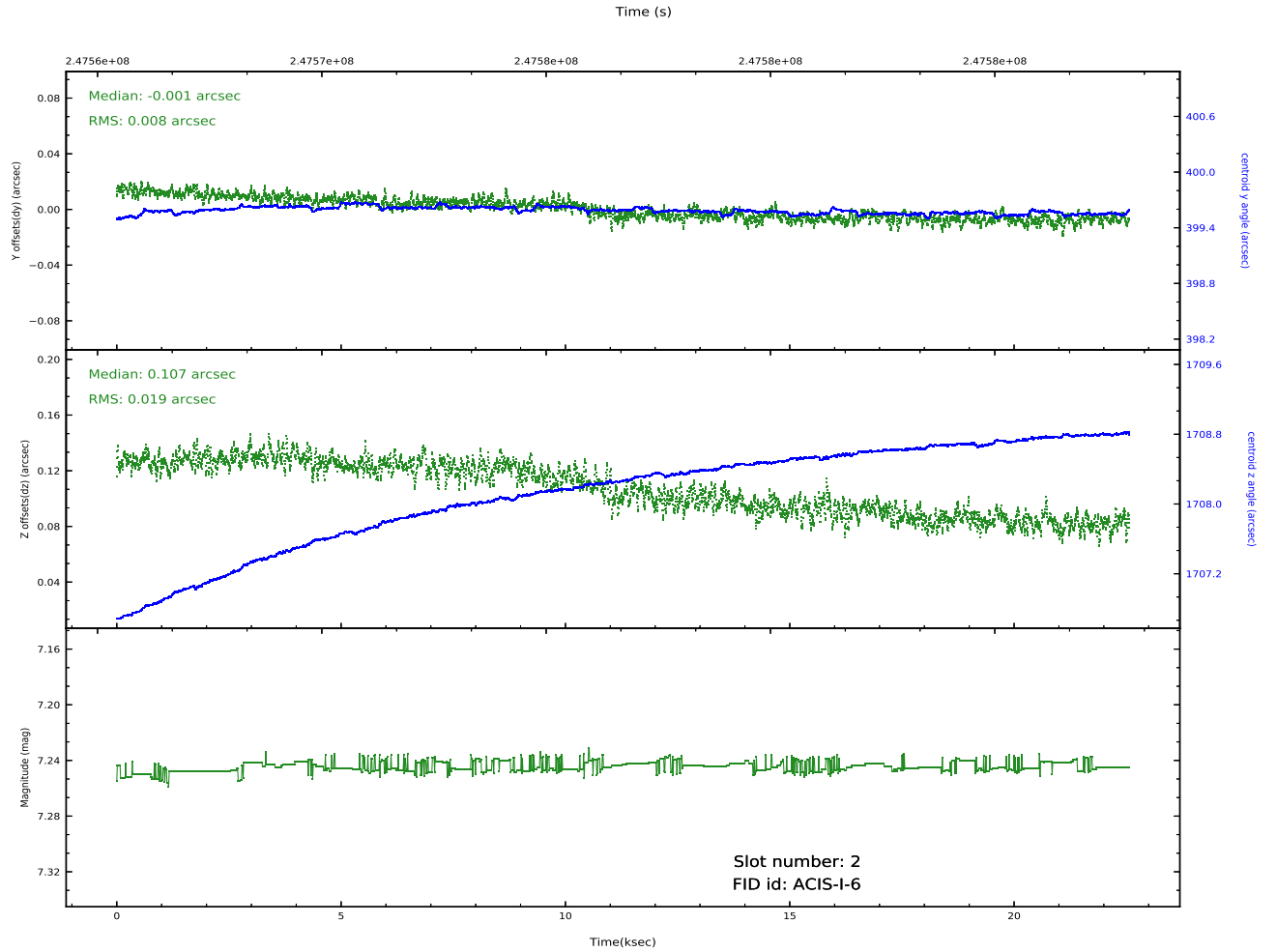
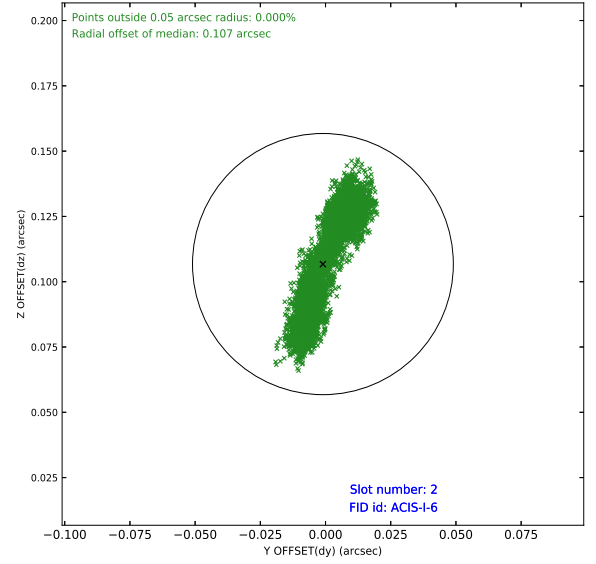
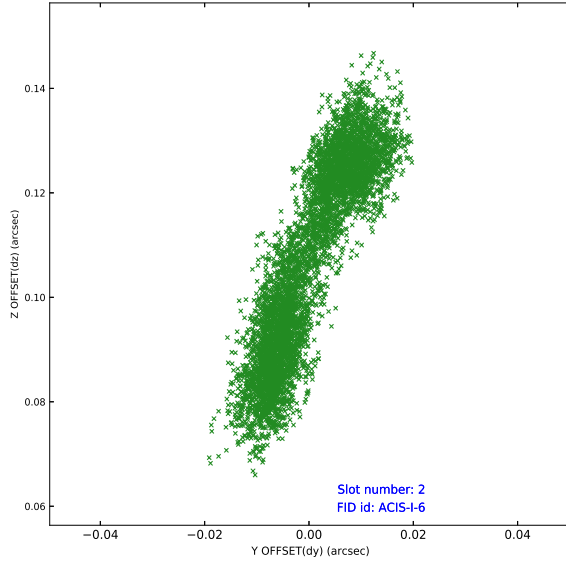
2.5.1 Slot 0



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) | 2020.10.15 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 22.04795 |

A.2 Comments

Roll preference met.