

V&V Reference Report

L2 ASCDS Version : 10.9.1

Observation 6181 - L2 Version 4
Chandra X-Ray Center

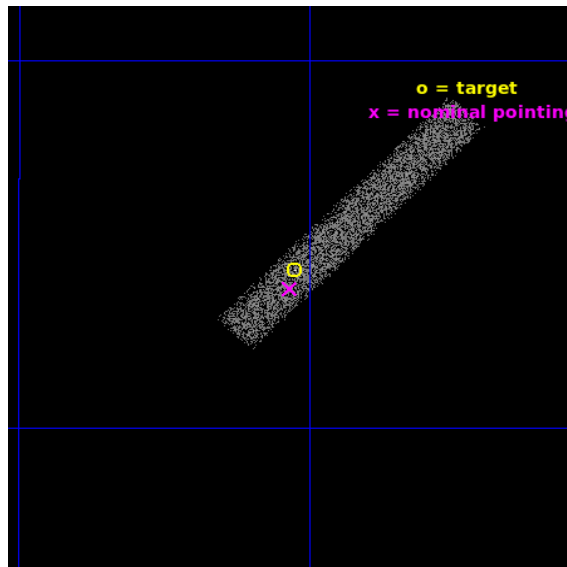
L2 Processing Date : Oct 6 2020

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

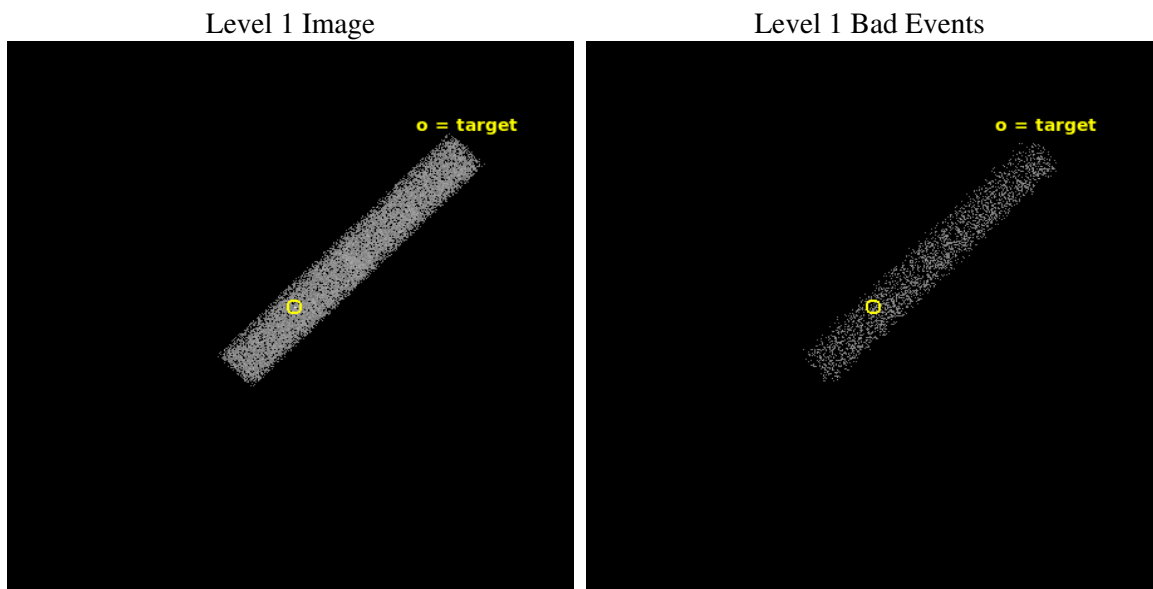
| | | |
|----------|---|---|
| seq_num | 400447 | Sequence number |
| obs_id | 6181 | Observation id |
| title | Following the decay of the new accretion powered msec pulsar IGR J00291+5934 | Proposal title |
| observer | Peter Jonker | Principal investigator |
| object | IGR J00291+5934 | Source name |
| dtycycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 7.262917 | Observer's specified target RA [deg] |
| dec_targ | 59.571944 | Observer's specified target Dec [deg] |
| ra_nom | 7.2668955130607 | Nominal RA [deg] |
| dec_nom | 59.56336820537 | Nominal Dec [deg] |
| roll_nom | 315.04700016952 | Nominal Roll [deg] |
| revision | 4 | Processing version of data |
| ontime | 14182.80021131 | Sum of GTIs [s] |
| livetime | 12863.051162081 | Livetime [s] |
| ontime7 | 14182.80021131 | Sum of GTIs [s] |
| l2events | 8389 | Number of level 2 events |



2 OBI

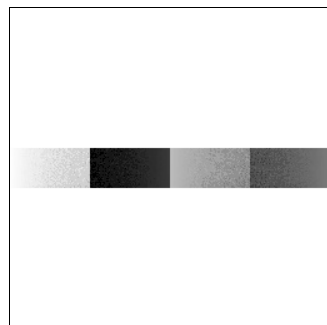
2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 7



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 14000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.9.1 | Processing system revision | ontime | 14182.80021131 | Sum of GTIs [s] |
| caldbver | 4.9.2 | | ontime7 | 14182.80021131 | Sum of GTIs [s] |
| date | 2020-10-06T14:46:07 | Date and time of file creation | l1events | 19757 | Number of level 1 events |
| revision | 4 | Processing version of data | | | |

2.1.4 Events

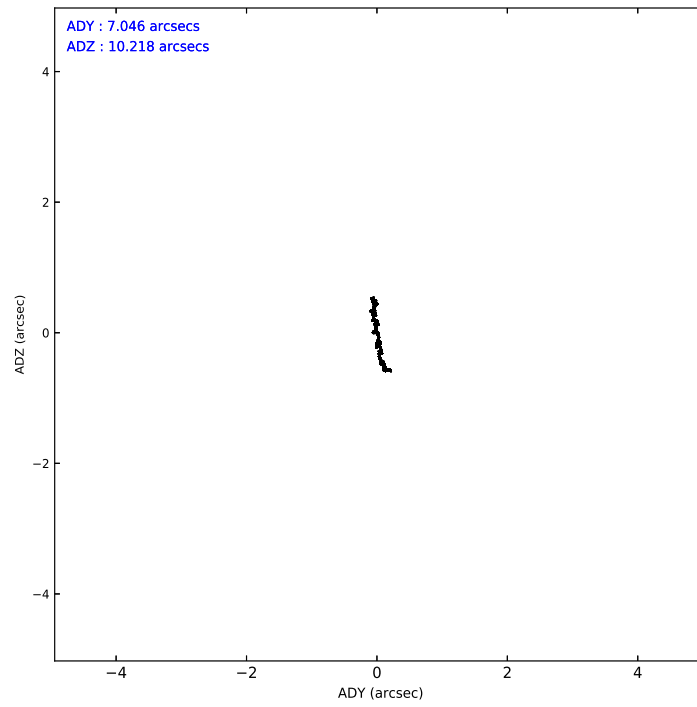
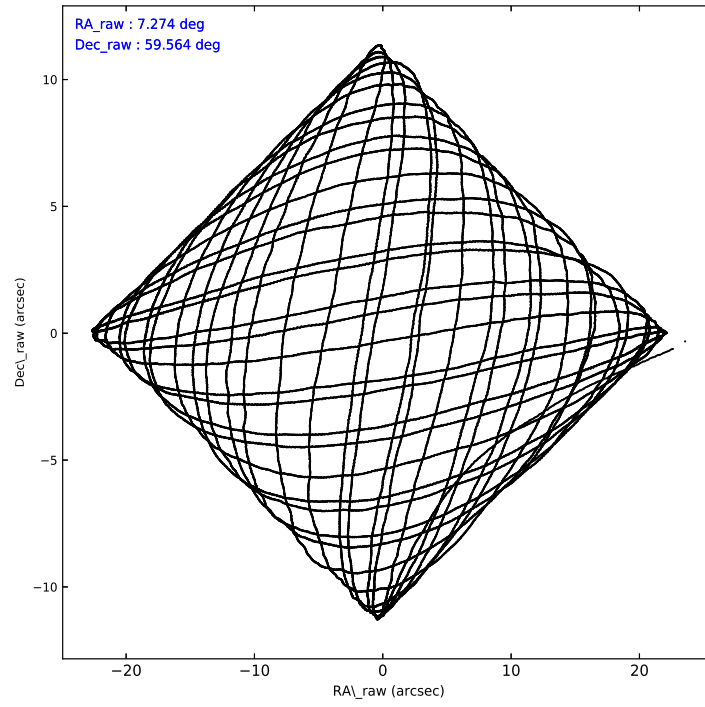
| | ccd 7 |
|-----------------|--------------|
| level 1 events | 19757 |
| rejected events | 11015 |
| rejected % | 55% |

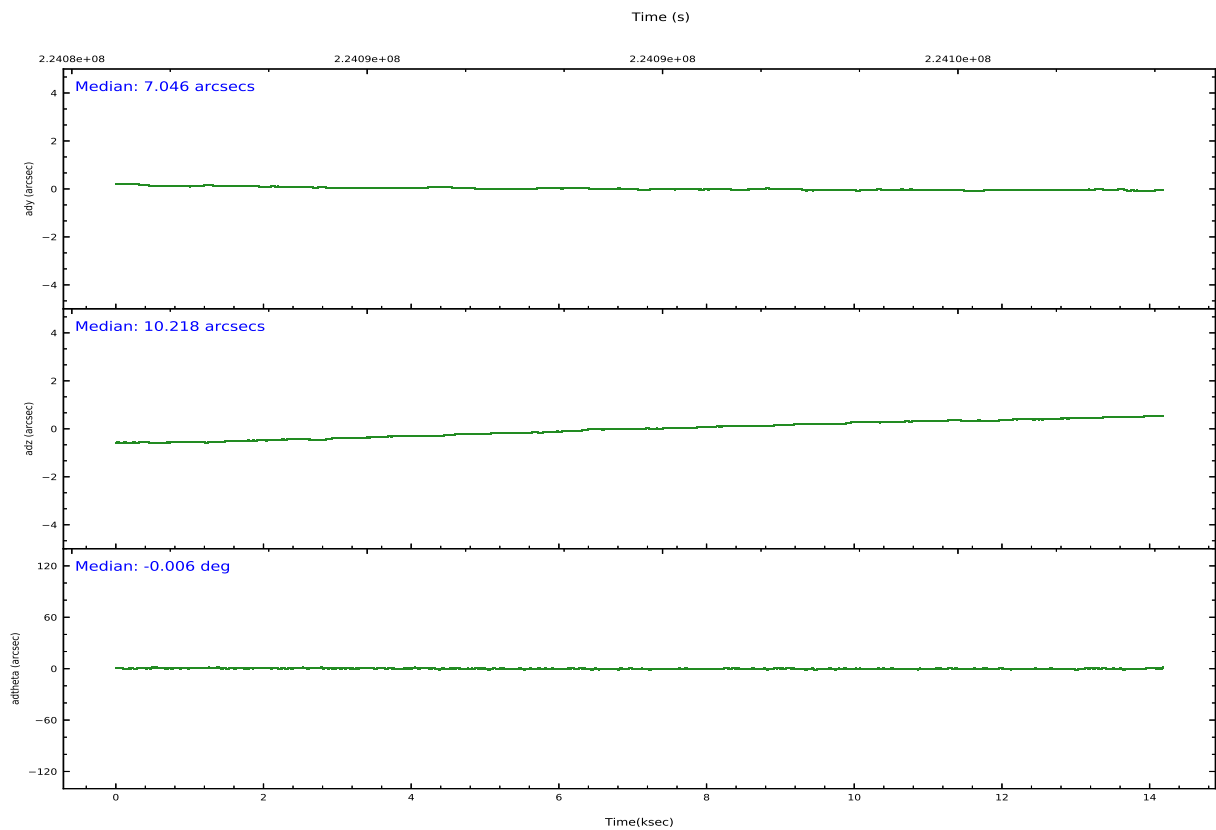
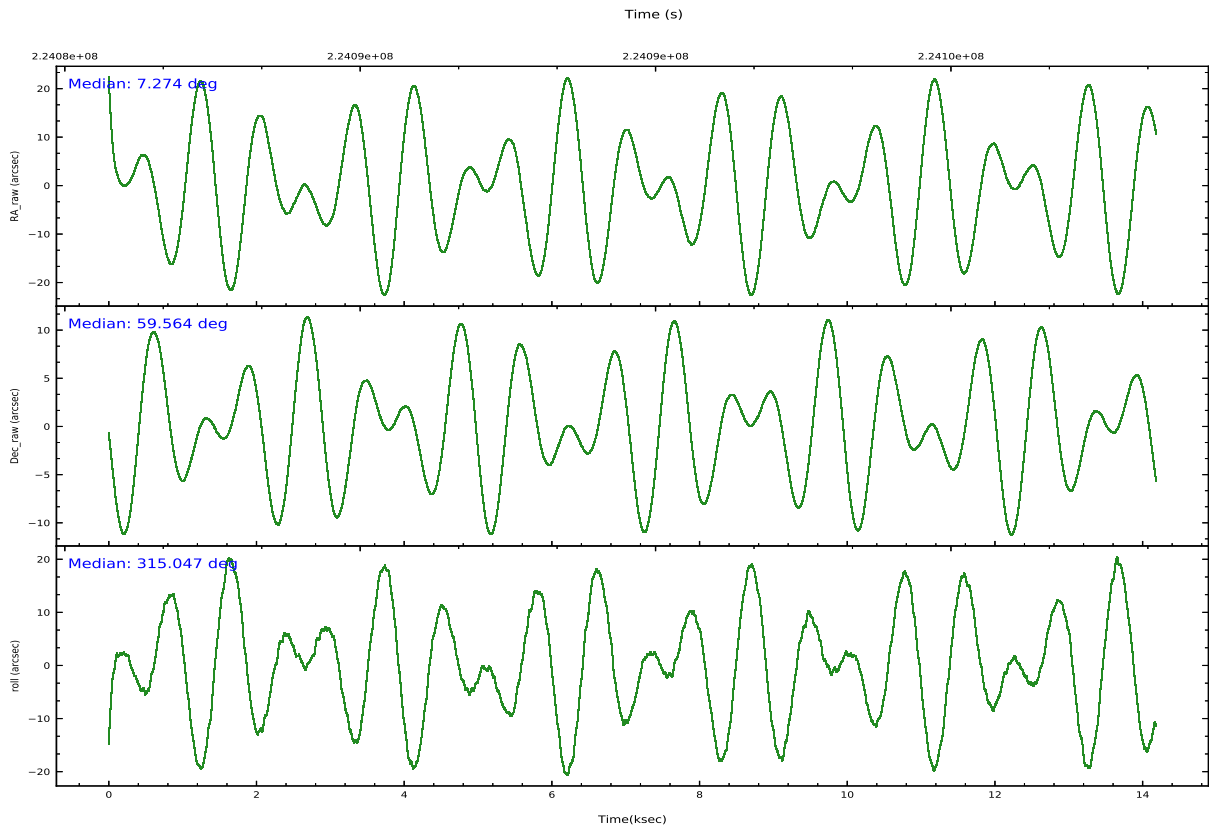
| | ccd 7 |
|----------------|--------------|
| grade 0 events | 997 |
| | 5% |
| grade 1 events | 24 |
| | 0% |
| grade 2 events | 1740 |
| | 8% |
| grade 3 events | 1176 |
| | 5% |
| grade 4 events | 1149 |
| | 5% |
| grade 5 events | 1863 |
| | 9% |
| grade 6 events | 4179 |
| | 21% |
| grade 7 events | 8629 |
| | 43% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar version number | 8 | 8 |
| Detector | ACIS-7 | ACIS-7 | 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 | 7.221730 | 7.2668955130607 | Subarray requested | CUSTOM | 1/8 |
| [deg] Pointing Dec | 59.570678 | 59.56336820537 | Subarray start row | 449 | 449 |
| [deg] Pointing Roll | 314.933740 | 315.04700016952 | Subarray row count | 128 | 128 |
| [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 | 0.4 |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | | | |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | | | |
| [s] Observation start time (MET) | 224084778.184000 | 224083744.15458 | | | |
| Observation start date | 2005-02-06T13:45:14 | 2005-02-06T13:29:04 | | | |
| [s] Observation end time (MET) | 224098778.184000 | 224099417.43029 | | | |
| Observation end date | 2005-02-06T17:38:34 | 2005-02-06T17:50:17 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect





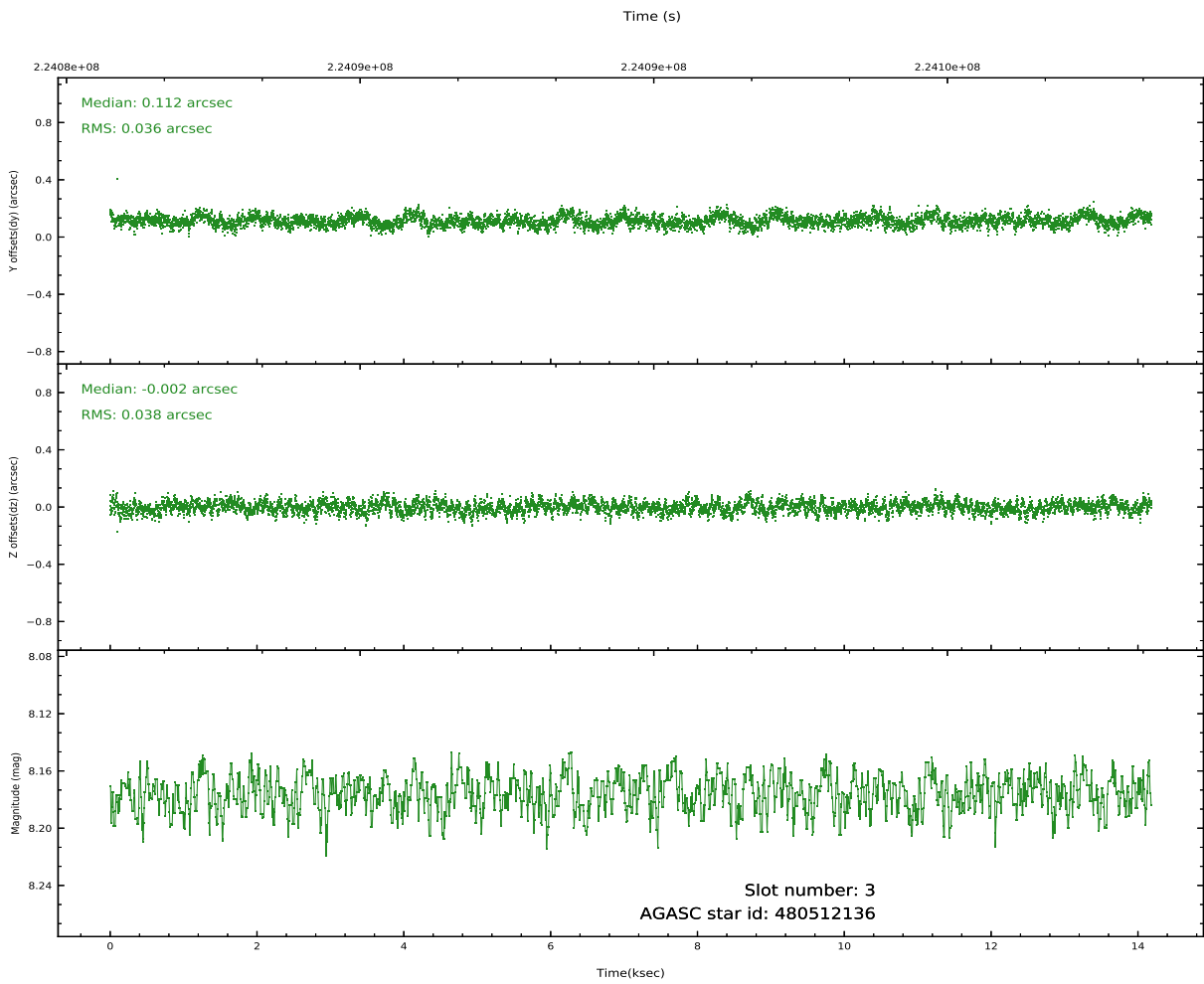
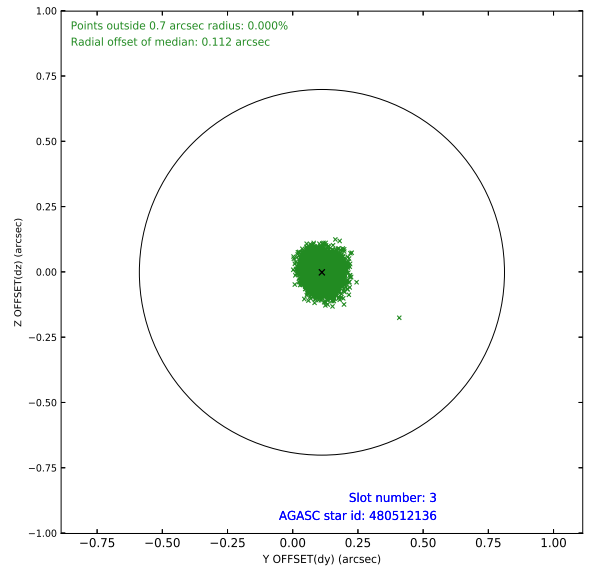
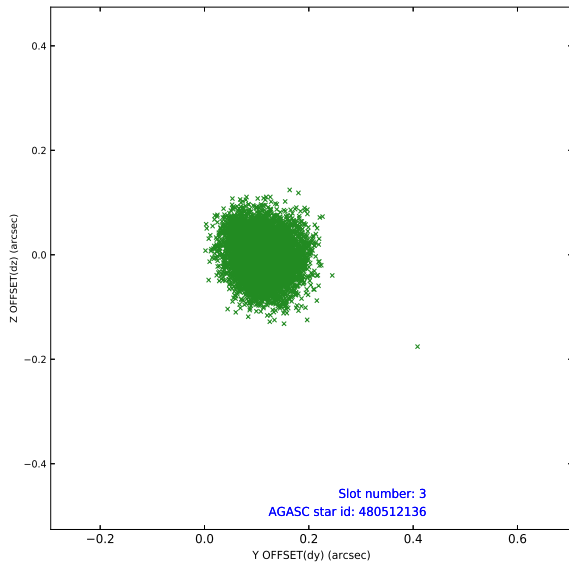
Slot Statistics

| slot | status | used | id | mag | n_pts | frac_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_x |
|------|--------|------|-----------|------|-------|----------|--------|--------|-------|-------|----------|-----------|----------|--------|
| 0 | FID | | ACIS-S-2 | 7.10 | 3460 | 1.000 | -0.086 | -0.067 | 0.010 | 0.018 | 0.000000 | 0.000000 | -759.84 | -1731 |
| 1 | FID | | ACIS-S-4 | 7.21 | 3460 | 1.000 | 0.159 | 0.059 | 0.005 | 0.010 | 0.000000 | 0.000000 | 2153.47 | 176 |
| 2 | FID | | ACIS-S-5 | 7.23 | 3460 | 1.000 | -0.105 | 0.017 | 0.010 | 0.018 | 0.000000 | 0.000000 | -1812.34 | 170 |
| 3 | GUIDE | used | 480512136 | 8.18 | 6916 | 1.000 | 0.112 | -0.002 | 0.056 | 0.089 | 7.475231 | 59.254866 | 1134.28 | -472 |
| 4 | GUIDE | used | 480513376 | 8.59 | 6919 | 1.000 | 0.173 | 0.014 | 0.060 | 0.096 | 7.508901 | 59.105688 | 1559.82 | -805 |
| 5 | GUIDE | used | 526280320 | 8.97 | 6918 | 1.000 | -0.036 | -0.070 | 0.070 | 0.116 | 6.438381 | 60.009492 | -2119.49 | 123 |
| 6 | GUIDE | used | 480379256 | 9.01 | 6917 | 1.000 | -0.233 | -0.065 | 0.078 | 0.127 | 5.631259 | 59.673209 | -2327.73 | -1761 |
| 7 | GUIDE | used | 526276608 | 8.60 | 6916 | 1.000 | -0.017 | 0.123 | 0.065 | 0.103 | 7.524994 | 60.151139 | -1096.80 | 1861 |

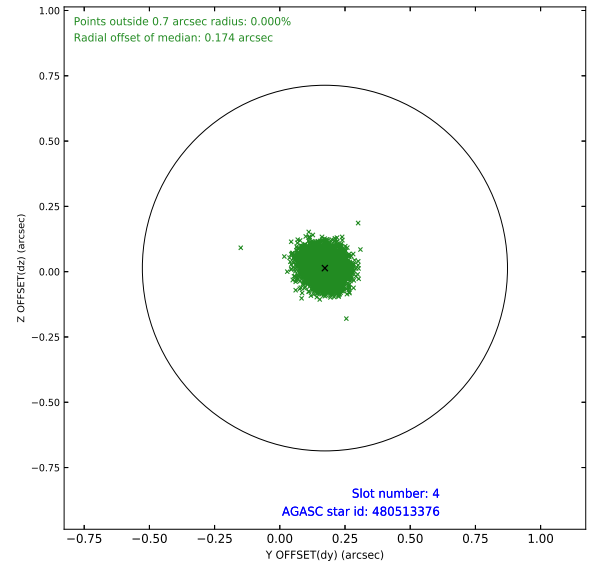
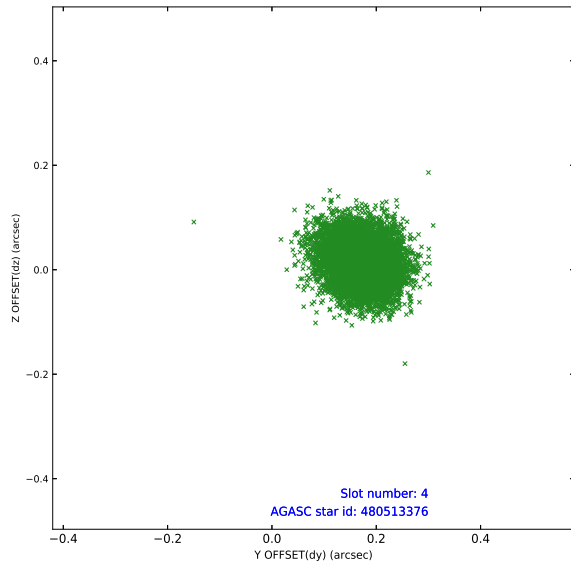
∞

2.4 Star Slots

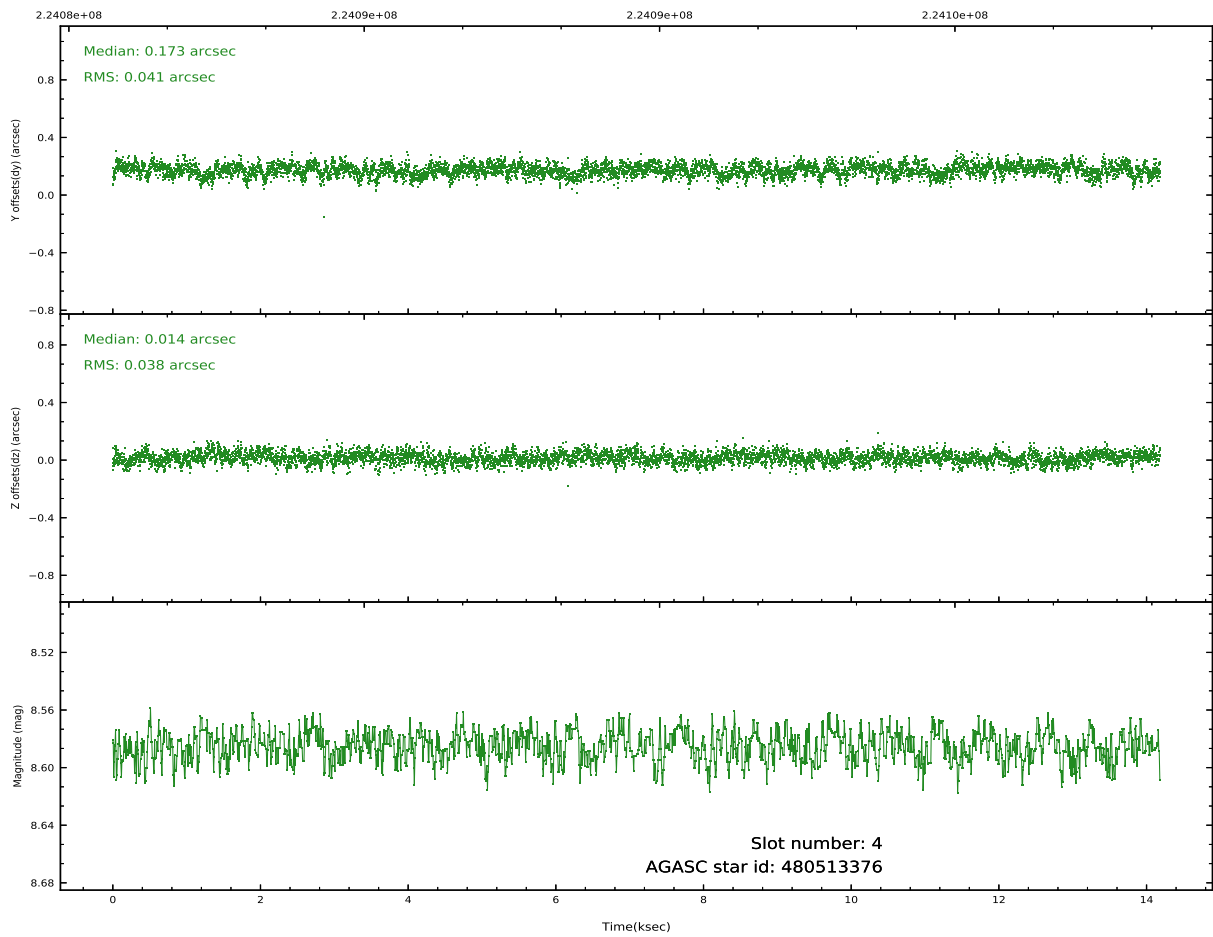
2.4.1 Slot 3



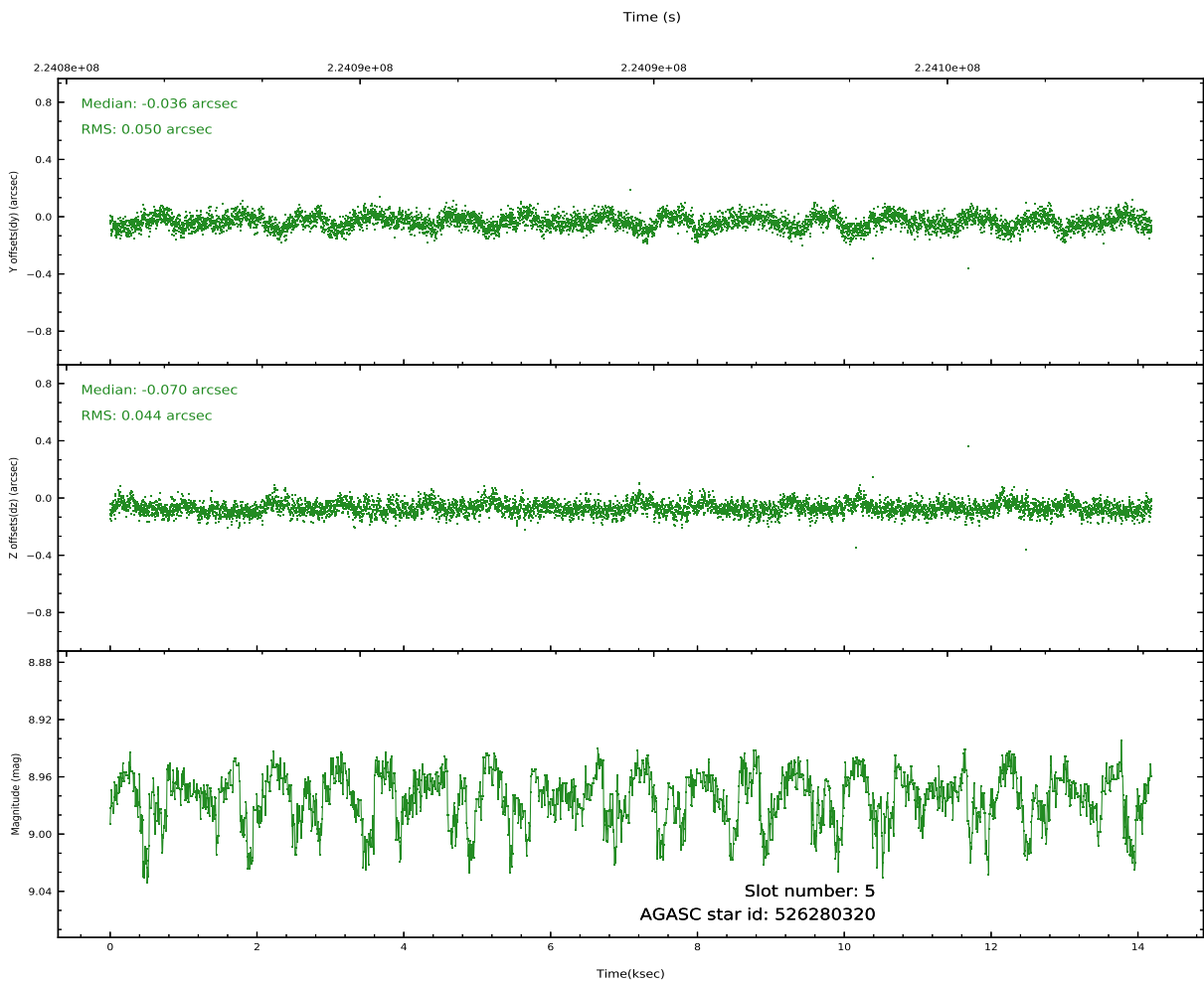
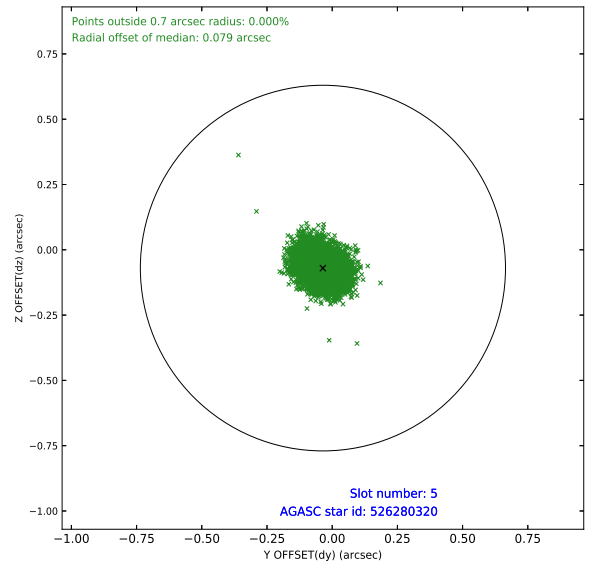
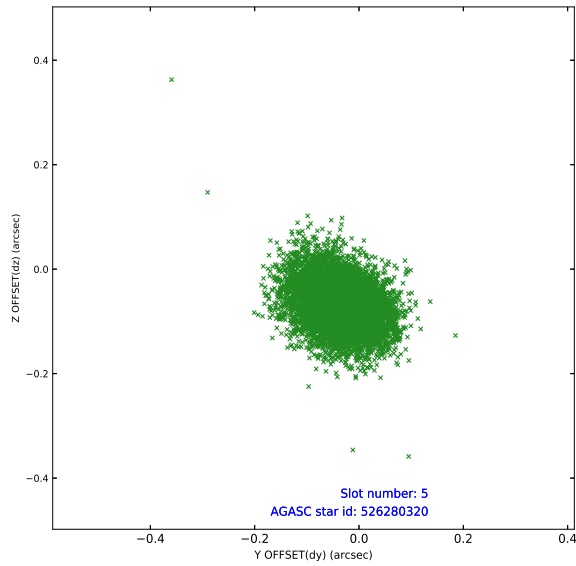
2.4.2 Slot 4



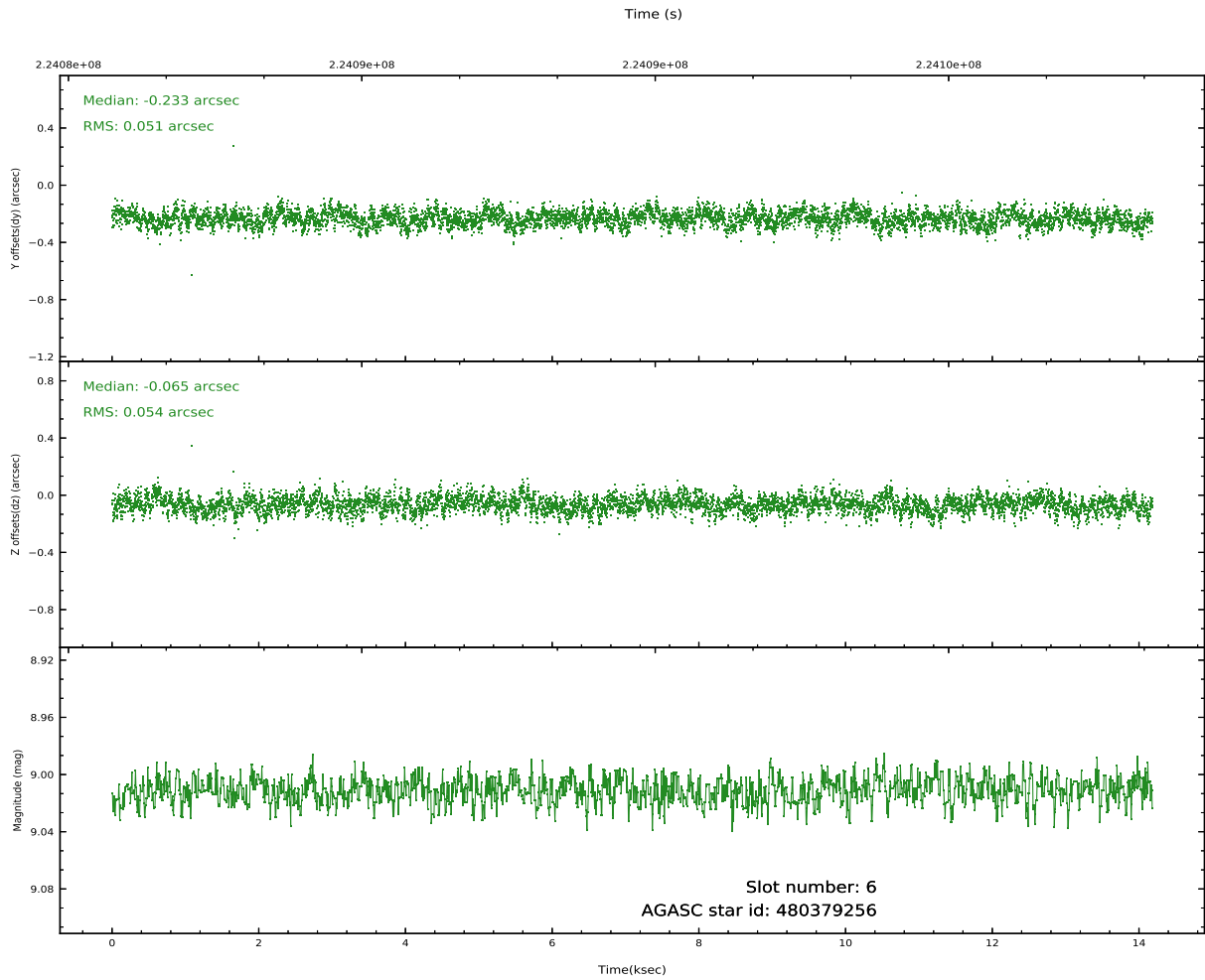
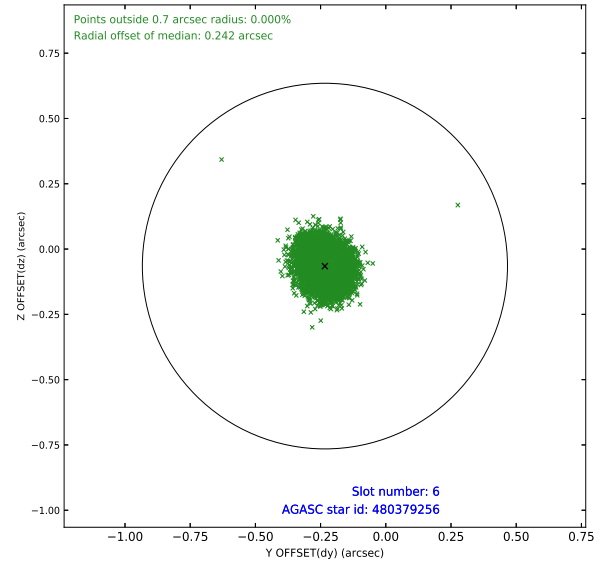
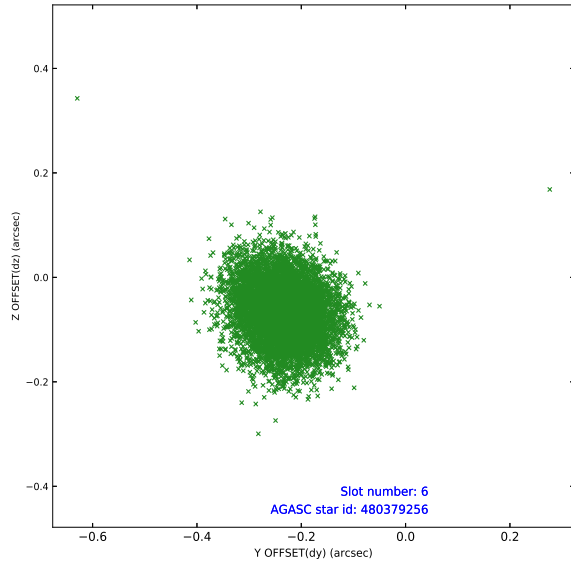
Time (s)



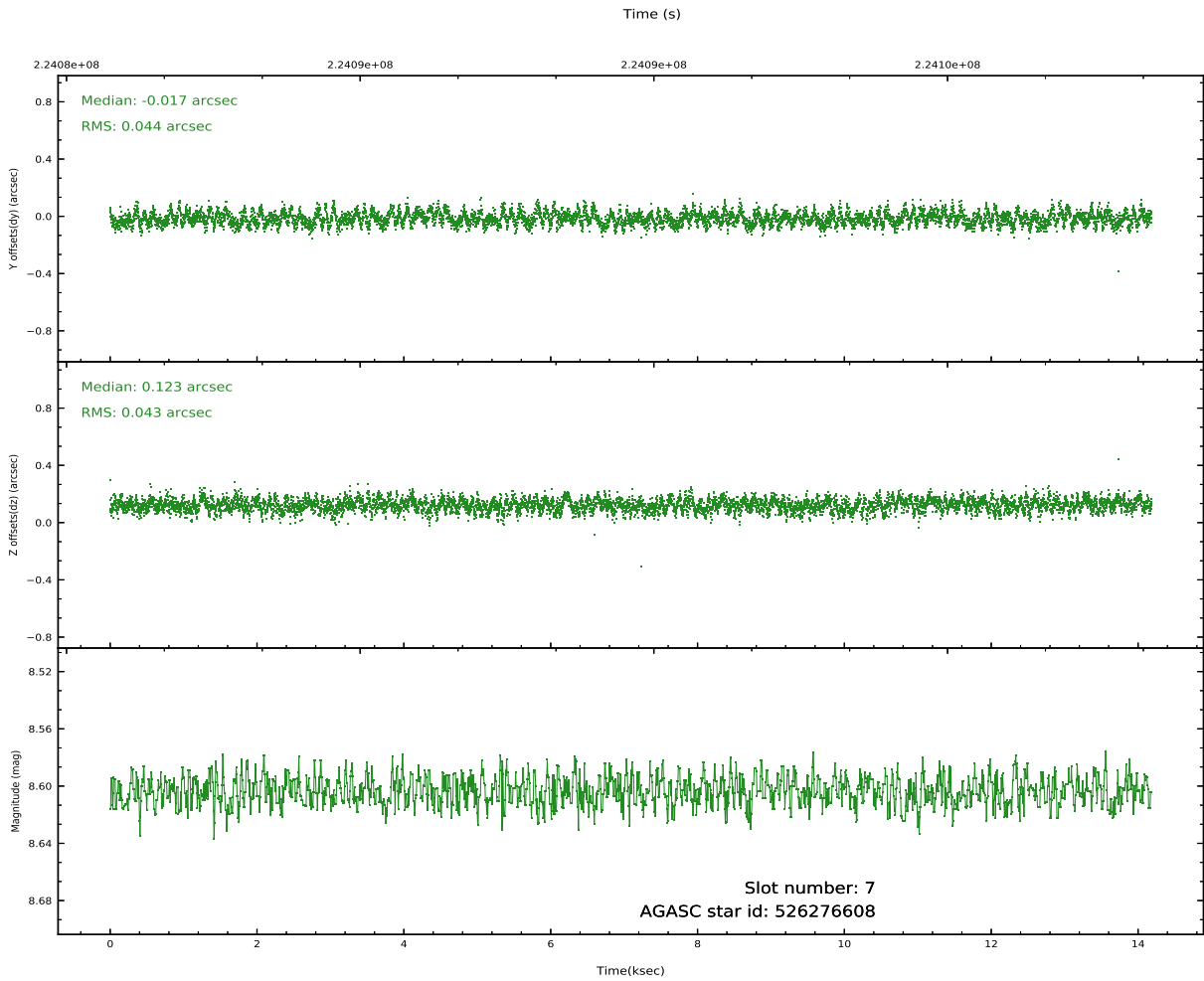
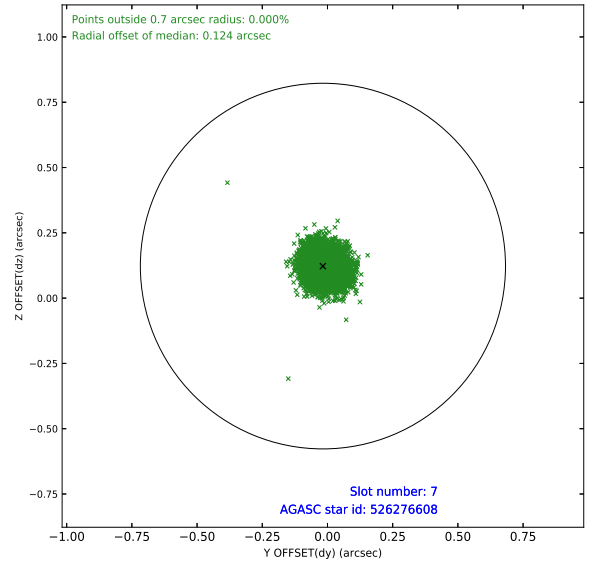
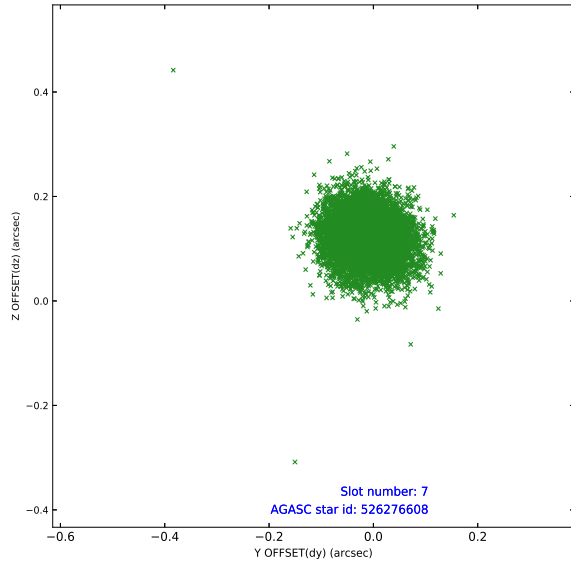
2.4.3 Slot 5



2.4.4 Slot 6

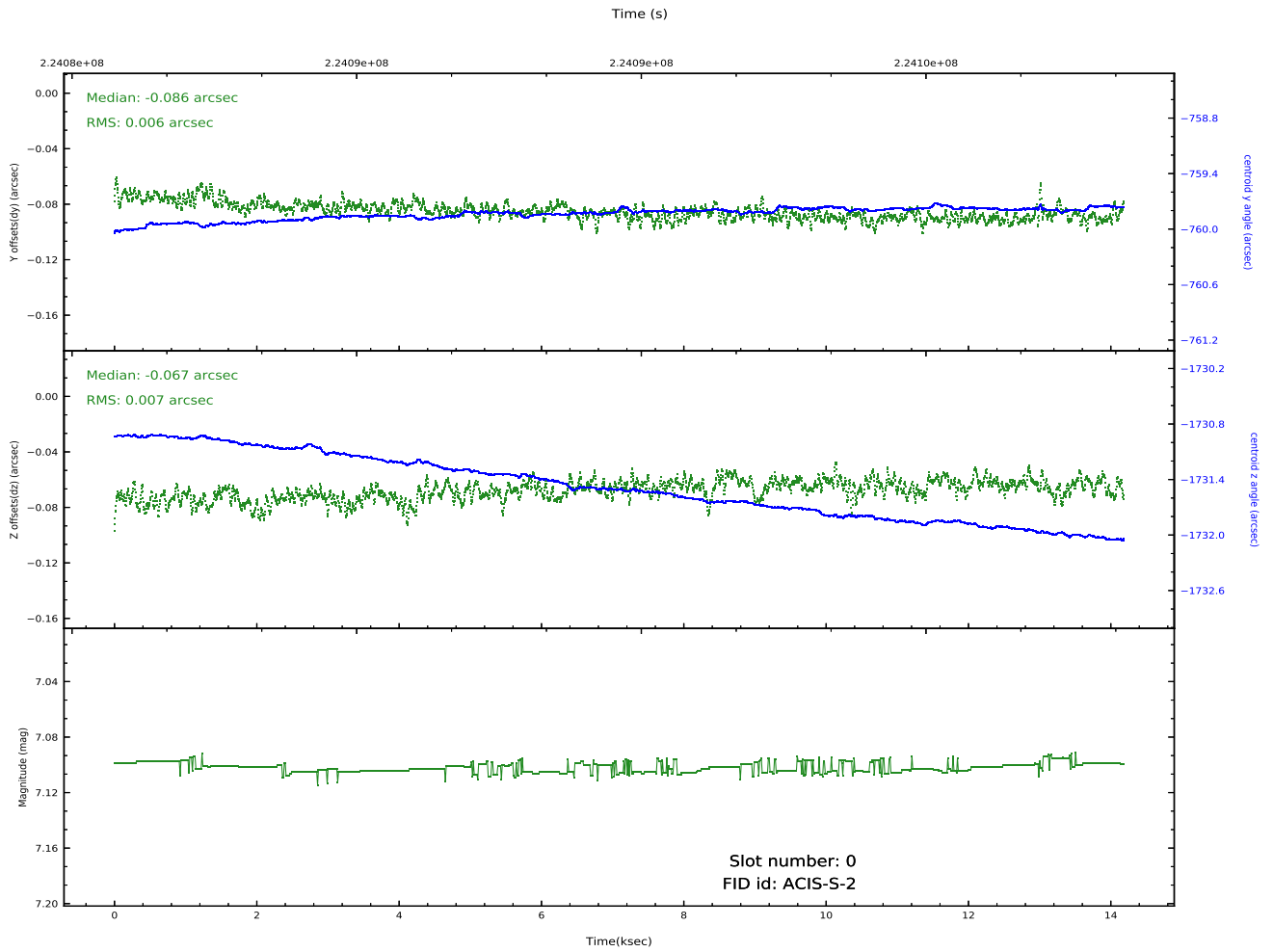
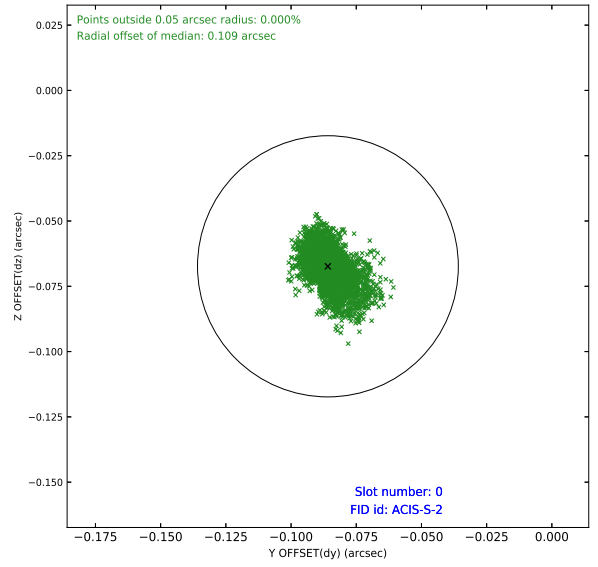
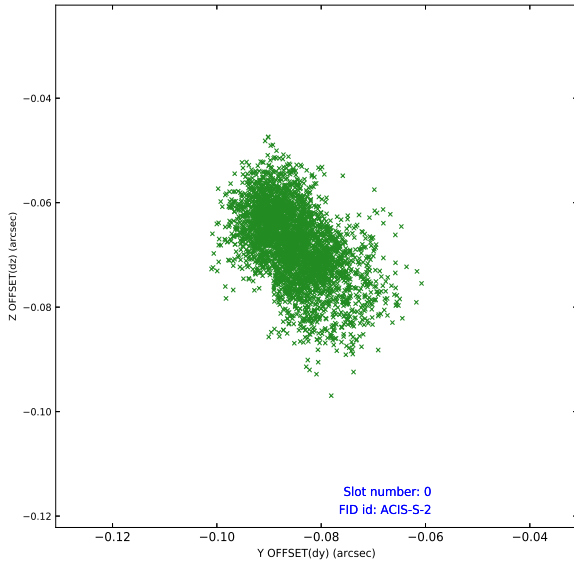


2.4.5 Slot 7

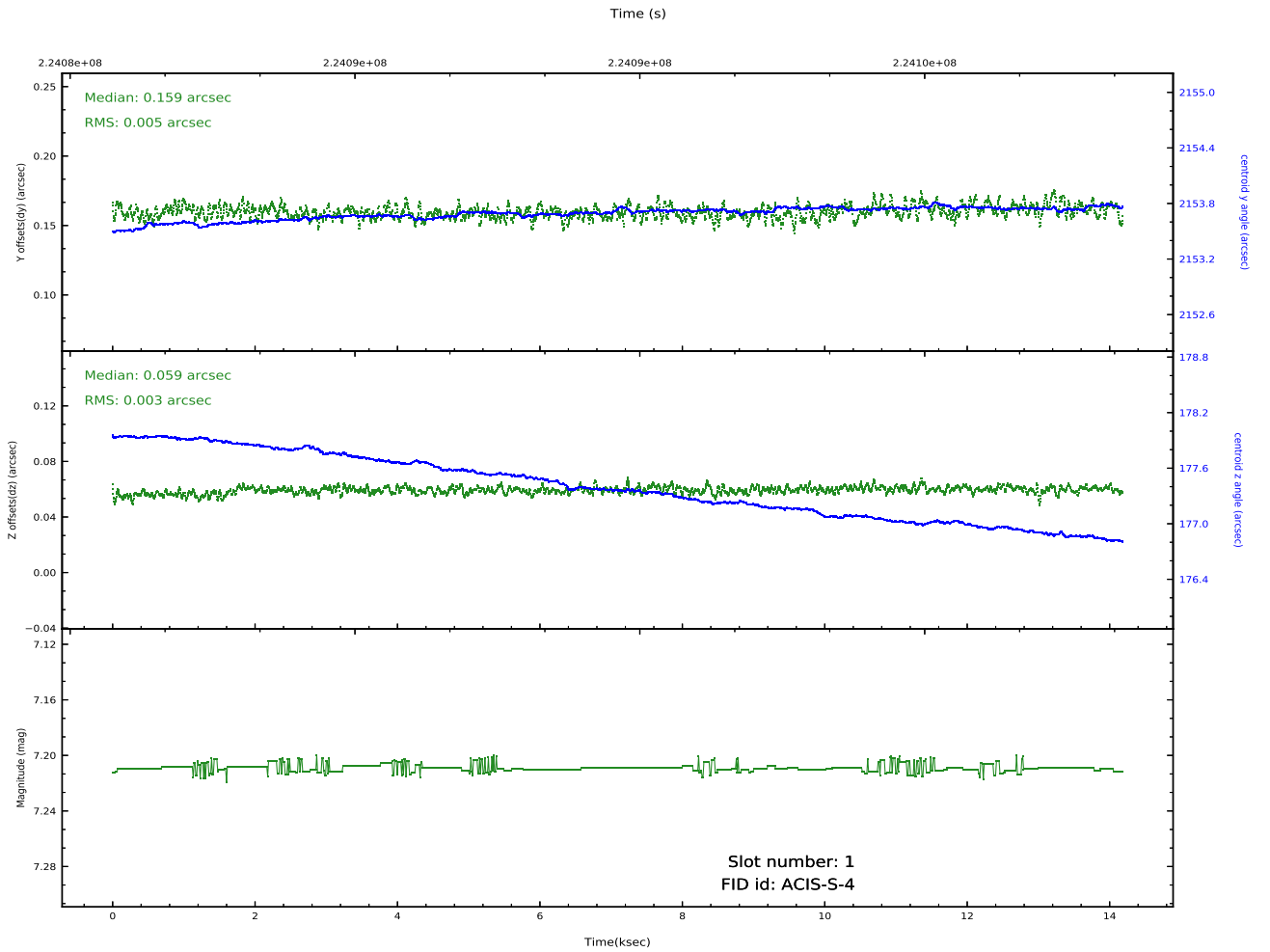
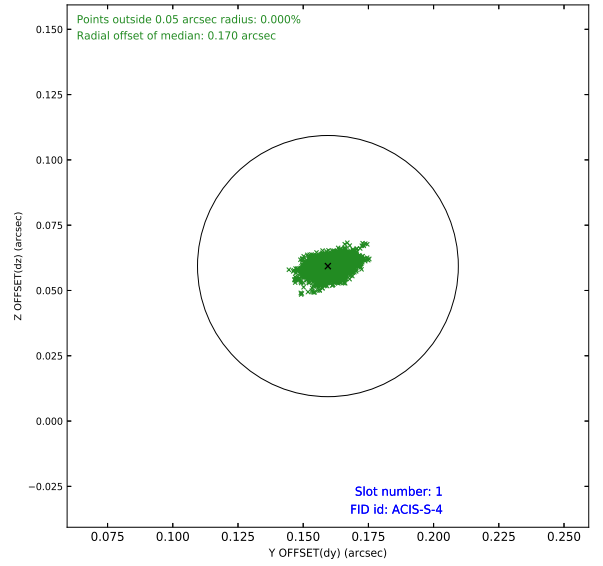
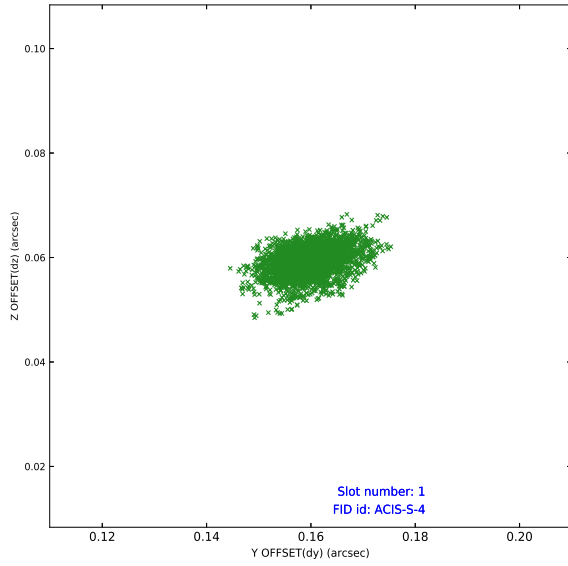


2.5 FID Slots

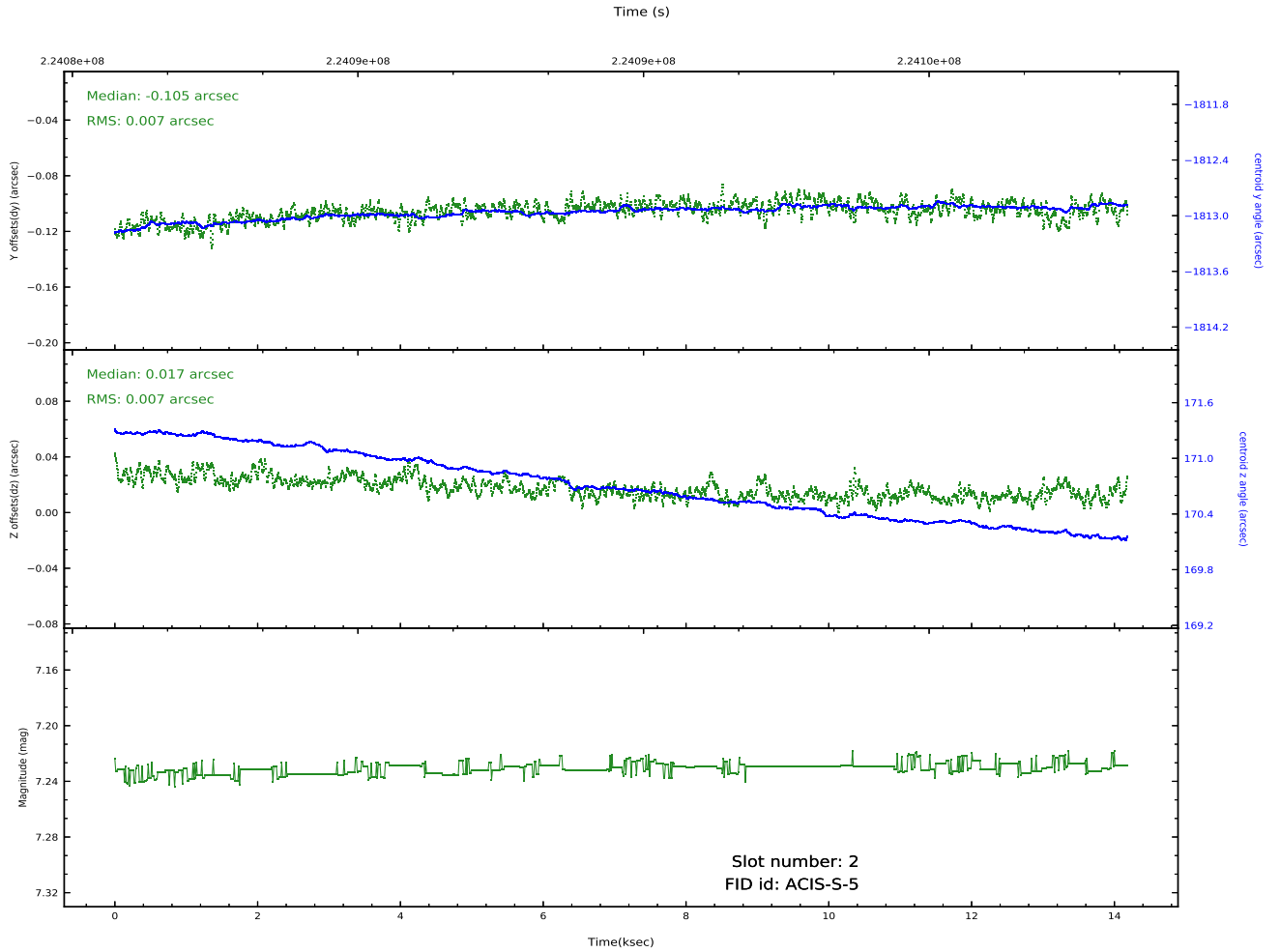
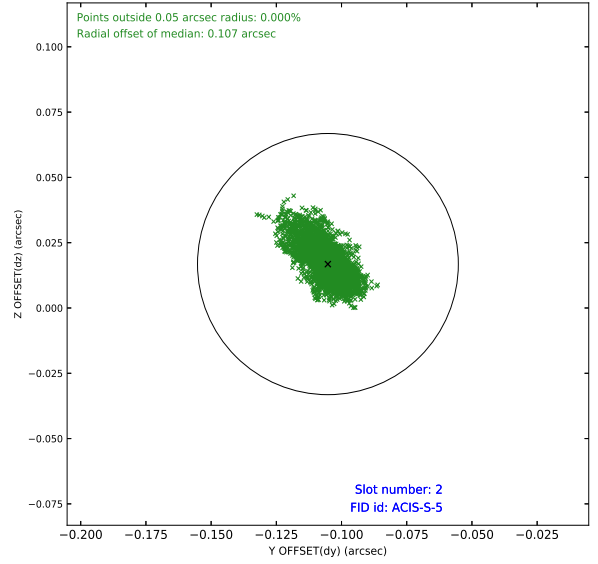
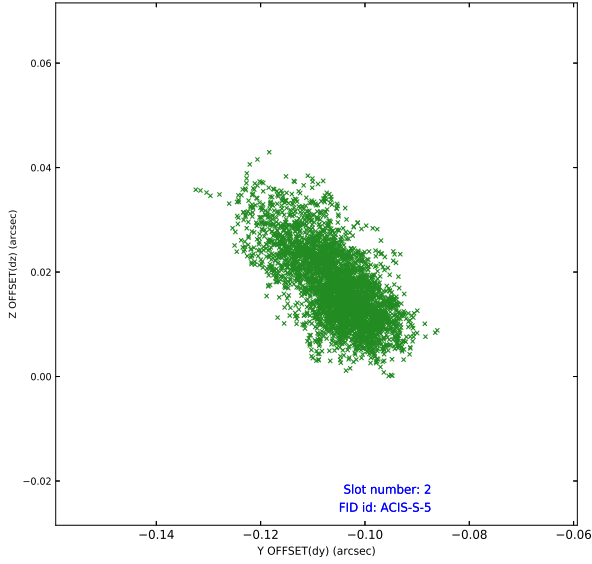
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2020.10.07 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 14.1828 |

A.2 Comments