

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 8670 - L2 Version 3
Chandra X-Ray Center

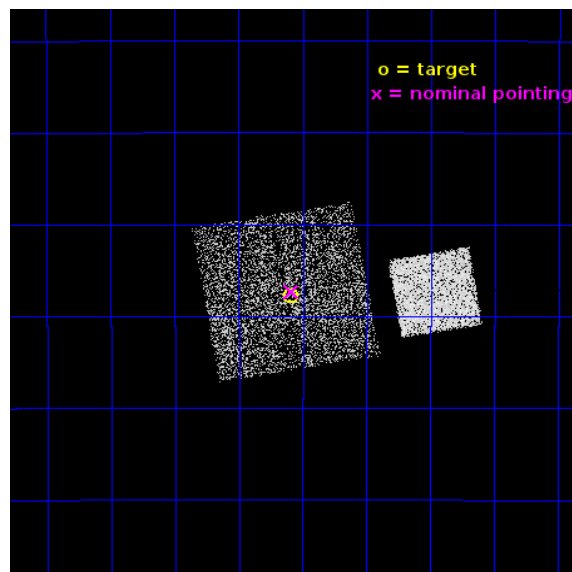
L2 Processing Date : Jul 17 2015

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

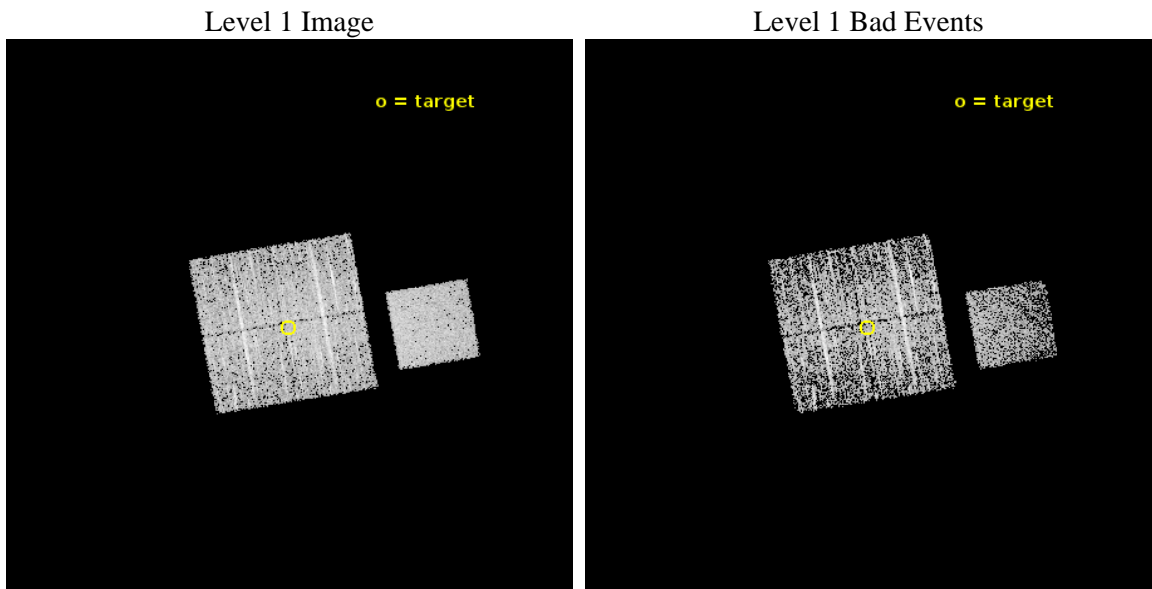
| | | |
|----------|---|---|
| seq_num | 400721 | Sequence number |
| obs_id | 8670 | Observation id |
| title | The Galactic Bulge Survey: categorising the plethora of faint X-ray sources in the Galactic Bulge | Proposal title |
| observer | Prof Mariano Mendez | Principal investigator |
| object | GBSGTO3 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 265.898286 | Observer's specified target RA [deg] |
| dec_targ | -26.797049 | Observer's specified target Dec [deg] |
| ra_nom | 265.89708031165 | Nominal RA [deg] |
| dec_nom | -26.78891348133 | Nominal Dec [deg] |
| roll_nom | 80.208150571341 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 2178.0591259599 | Sum of GTIs [s] |
| livetime | 2149.6011800154 | Livetime [s] |
| ontime0 | 2181.2001063228 | Sum of GTIs [s] |
| ontime1 | 2181.2001063228 | Sum of GTIs [s] |
| ontime2 | 2181.2001063228 | Sum of GTIs [s] |
| ontime3 | 2178.0591259599 | Sum of GTIs [s] |
| ontime7 | 2181.2001063228 | Sum of GTIs [s] |
| l2events | 15683 | Number of level 2 events |



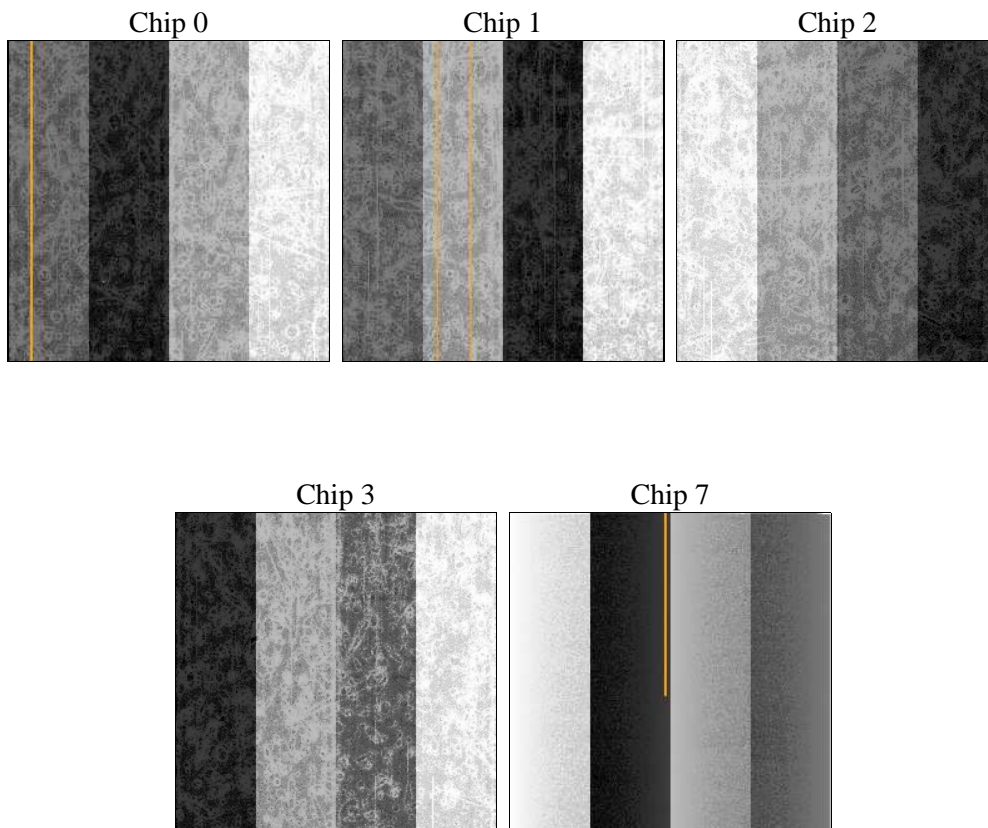
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 1 | Obi number | sched_exp_time | 2000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4.1 | Processing system revision | ontime | 2178.0591259599 | Sum of GTIs [s] |
| caldbver | 4.6.8 | | ontime0 | 2181.2001063228 | Sum of GTIs [s] |
| date | 2015-07-17T17:26:35 | Date and time of file creation | ontime1 | 2181.2001063228 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime2 | 2181.2001063228 | Sum of GTIs [s] |
| | | | ontime3 | 2178.0591259599 | Sum of GTIs [s] |
| | | | ontime7 | 2181.2001063228 | Sum of GTIs [s] |
| | | | l1events | 101981 | Number of level 1 events |

2.1.4 Events

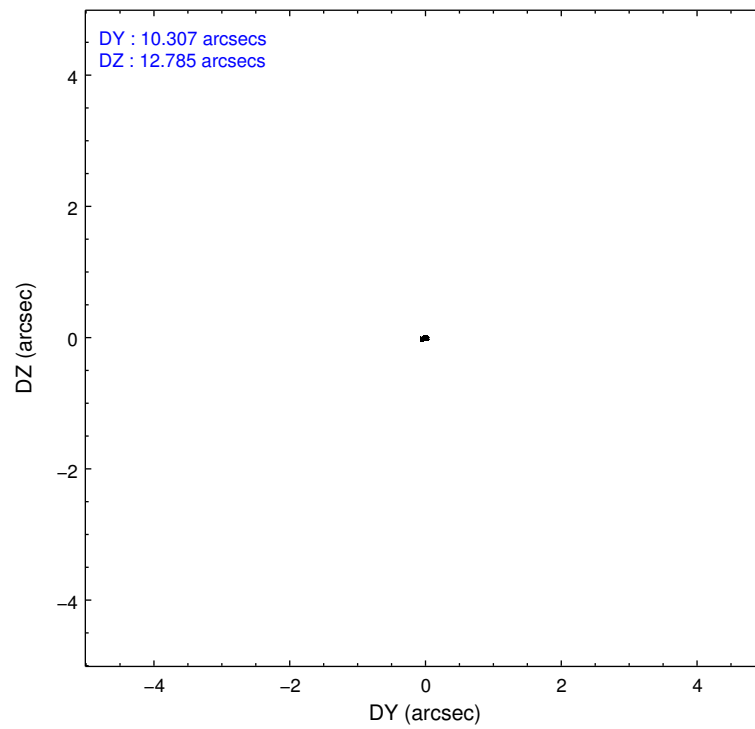
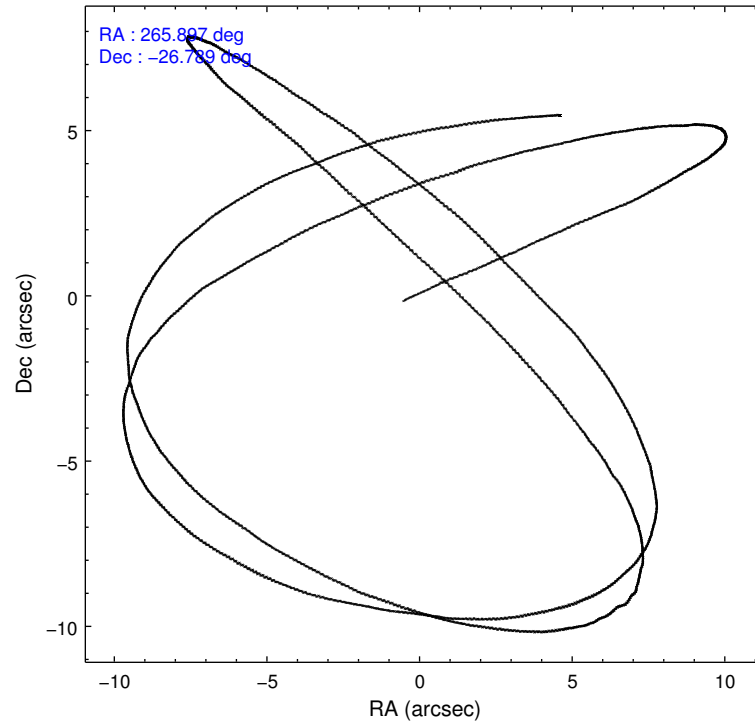
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 7 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events | 18386 | 19282 | 21282 | 20151 | 22880 |
| rejected events | 16373 | 17028 | 19325 | 18203 | 13858 |
| rejected % | 89% | 88% | 90% | 90% | 60% |

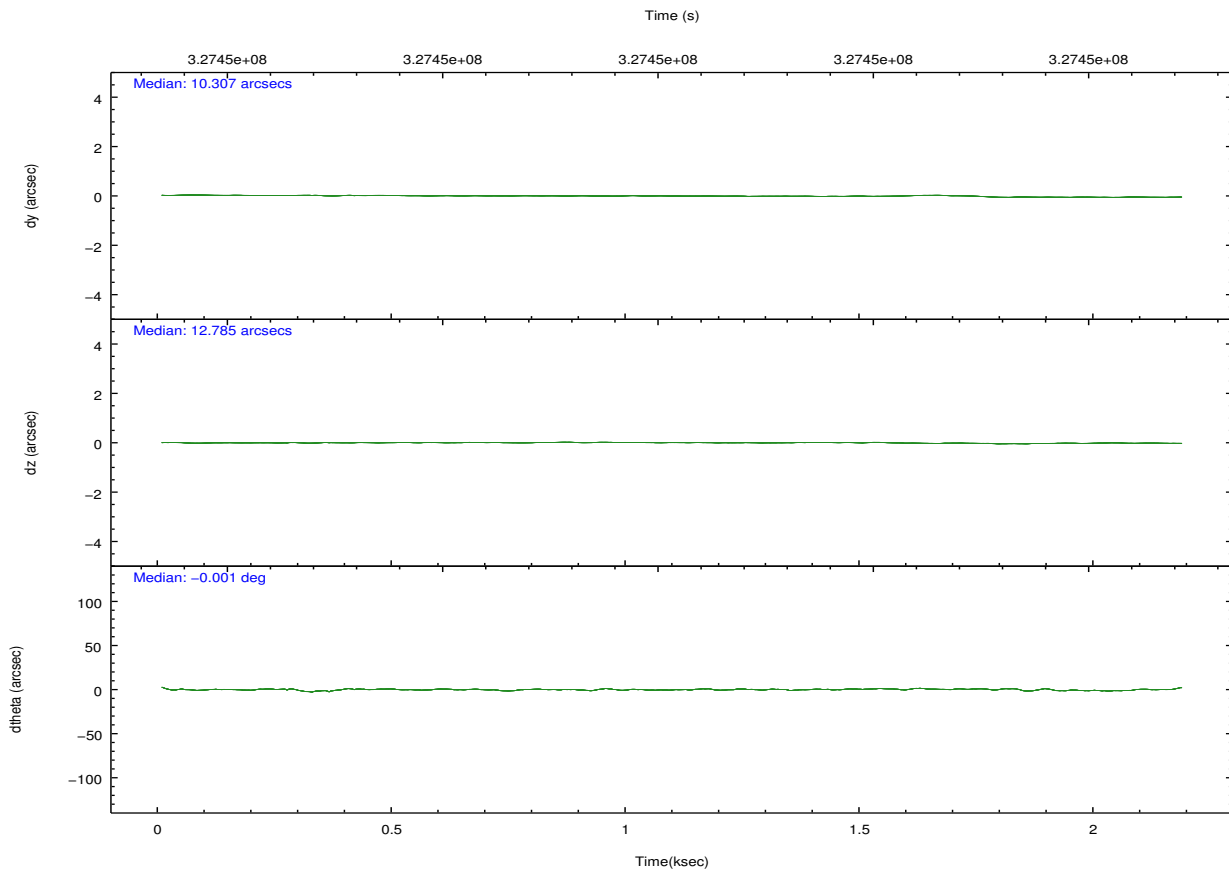
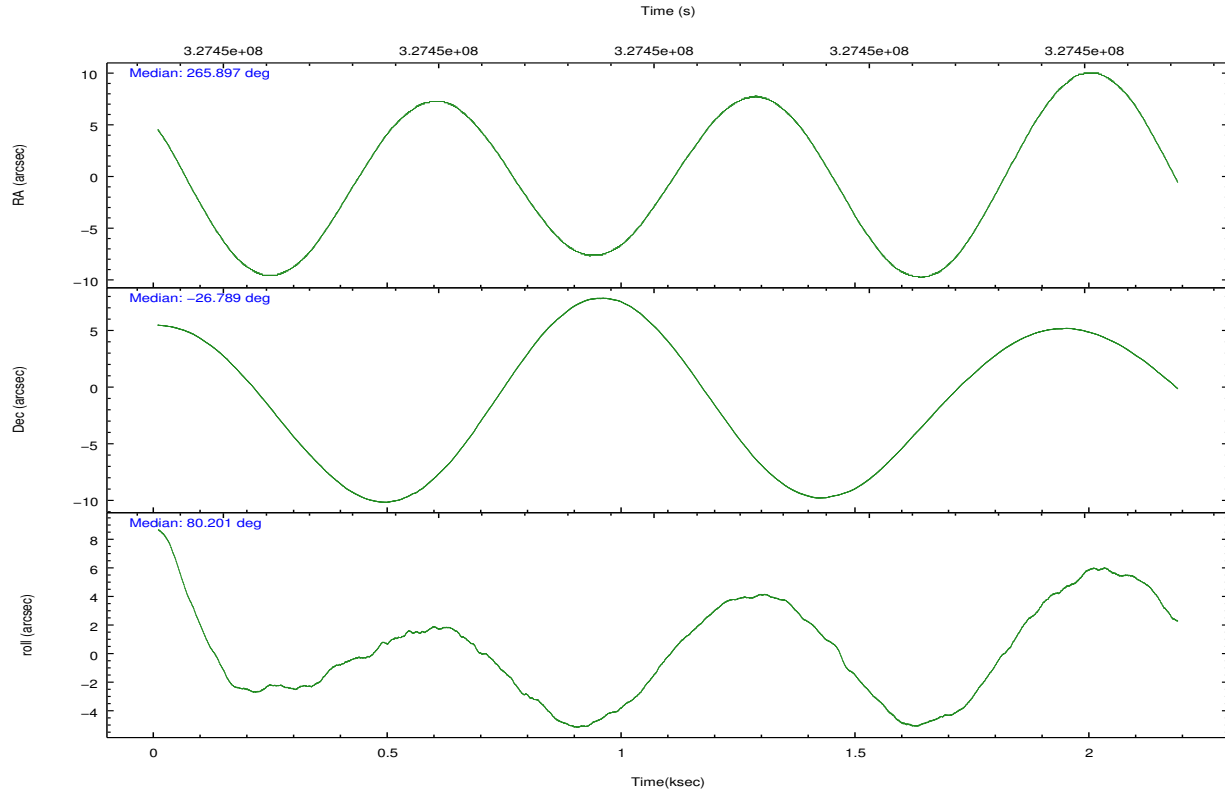
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 7 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 936 | 1042 | 950 | 870 | 957 |
| | 5% | 5% | 4% | 4% | 4% |
| grade 1 events | 9 | 19 | 10 | 15 | 27 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 544 | 568 | 504 | 455 | 2063 |
| | 2% | 2% | 2% | 2% | 9% |
| grade 3 events | 250 | 247 | 210 | 232 | 934 |
| | 1% | 1% | 0% | 1% | 4% |
| grade 4 events | 208 | 251 | 231 | 250 | 965 |
| | 1% | 1% | 1% | 1% | 4% |
| grade 5 events | 725 | 806 | 649 | 807 | 2369 |
| | 3% | 4% | 3% | 4% | 10% |
| grade 6 events | 377 | 476 | 384 | 415 | 5484 |
| | 2% | 2% | 1% | 2% | 23% |
| grade 7 events | 15337 | 15873 | 18344 | 17107 | 10081 |
| | 83% | 82% | 86% | 84% | 44% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-01237 | ACIS-01237 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | CCD I0 on | Y | Y |
| Observation mode | POINTING | POINTING | CCD I1 on | Y | Y |
| [deg] Pointing RA | 265.907861 | 265.8970803116467 | CCD I2 on | Y | Y |
| [deg] Pointing Dec | -26.814807 | -26.78891348133021 | CCD I3 on | Y | Y |
| [deg] Pointing Roll | 80.004327 | 80.20815057134089 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 | CCD S1 on | N | N |
| [mm] SIM defocus | 0 | 0.001439871863259334 | CCD S2 on | N | N |
| [mm] SIM translation stage pos | -233.592463 | -233.5874344608287 | CCD S3 on | O1 | Y |
| [mm] SIM translation stage offset | 0 | -0.005018542100998502 | CCD S4 on | N | N |
| [s] Observation start time (MET) | 327447134.184000 | 327446758.53191 | CCD S5 on | N | N |
| Observation start date | 2008-05-17T21:31:09 | 2008-05-17T21:25:58 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 327449134.184000 | 327449267.73203 | On-chip summing requested | N | N |
| Observation end date | 2008-05-17T22:04:29 | 2008-05-17T22:07:47 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.1 |

2.3 Aspect





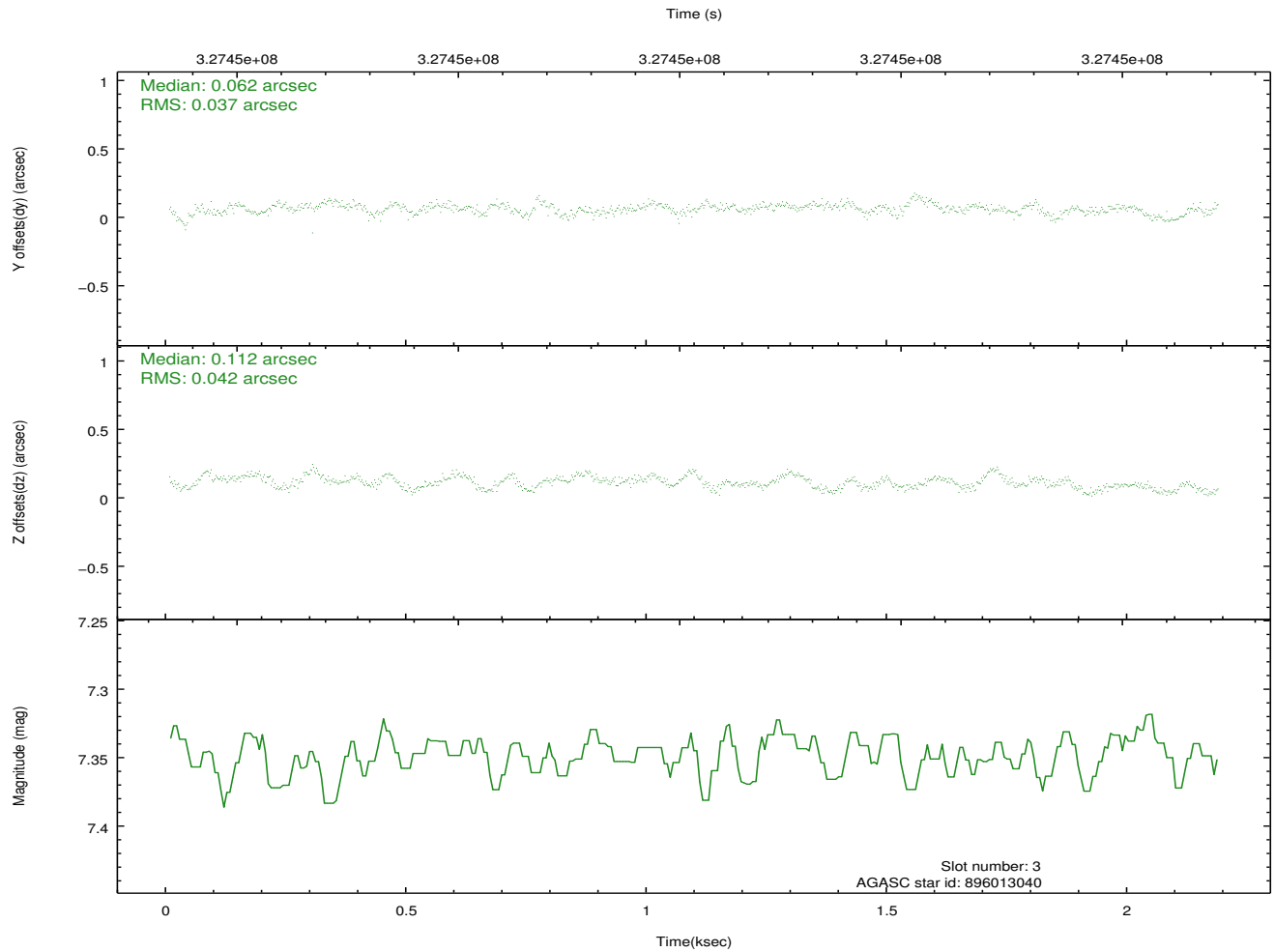
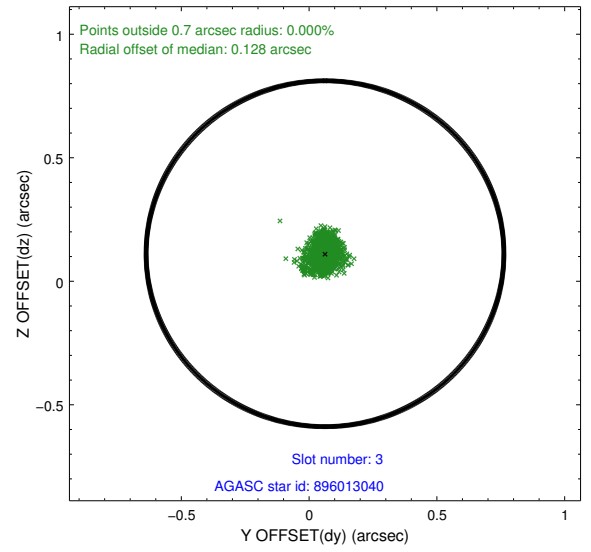
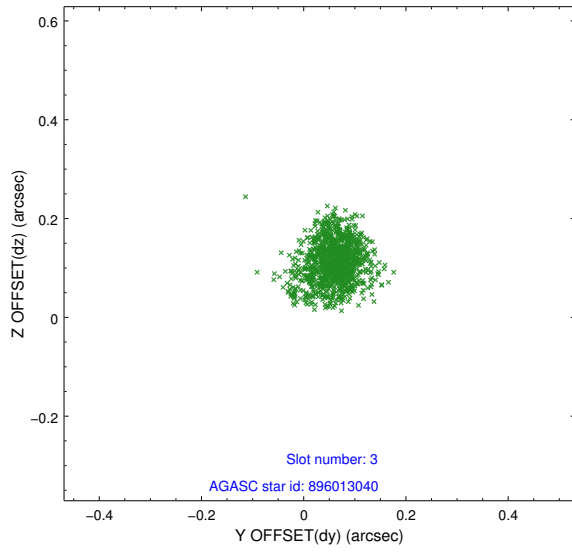
Slot Statistics

| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|------------|----------|----------|
| 0 | FID | | ACIS-I-2 | 6.93 | 531 | -0.074 | -0.088 | 0.010 | 0.018 | 0.000000 | 0.000000 | -764.97 | -842.76 |
| 1 | FID | | ACIS-I-4 | 6.97 | 532 | 0.160 | 0.071 | 0.006 | 0.011 | 0.000000 | 0.000000 | 2147.98 | 1062.02 |
| 2 | FID | | ACIS-I-5 | 7.00 | 532 | -0.186 | 0.086 | 0.009 | 0.014 | 0.000000 | 0.000000 | -1815.04 | 1063.35 |
| 3 | GUIDE | used | 896013040 | 7.35 | 1065 | 0.062 | 0.112 | 0.059 | 0.095 | 266.506589 | -26.972299 | -229.24 | -1990.93 |
| 4 | GUIDE | used | 896014680 | 8.77 | 1065 | 0.191 | 0.143 | 0.084 | 0.137 | 266.460330 | -27.216583 | -1121.20 | -1995.47 |
| 5 | GUIDE | used | 896015112 | 9.19 | 1064 | -0.034 | 0.068 | 0.101 | 0.172 | 266.684847 | -26.286161 | 2301.17 | -2142.47 |
| 6 | GUIDE | used | 896015880 | 8.50 | 1065 | -0.245 | -0.219 | 0.074 | 0.117 | 265.986633 | -26.306686 | 1847.29 | 65.12 |
| 7 | GUIDE | used | 895882464 | 8.80 | 1063 | 0.028 | -0.107 | 0.063 | 0.107 | 265.568948 | -26.820420 | -208.82 | 1068.47 |

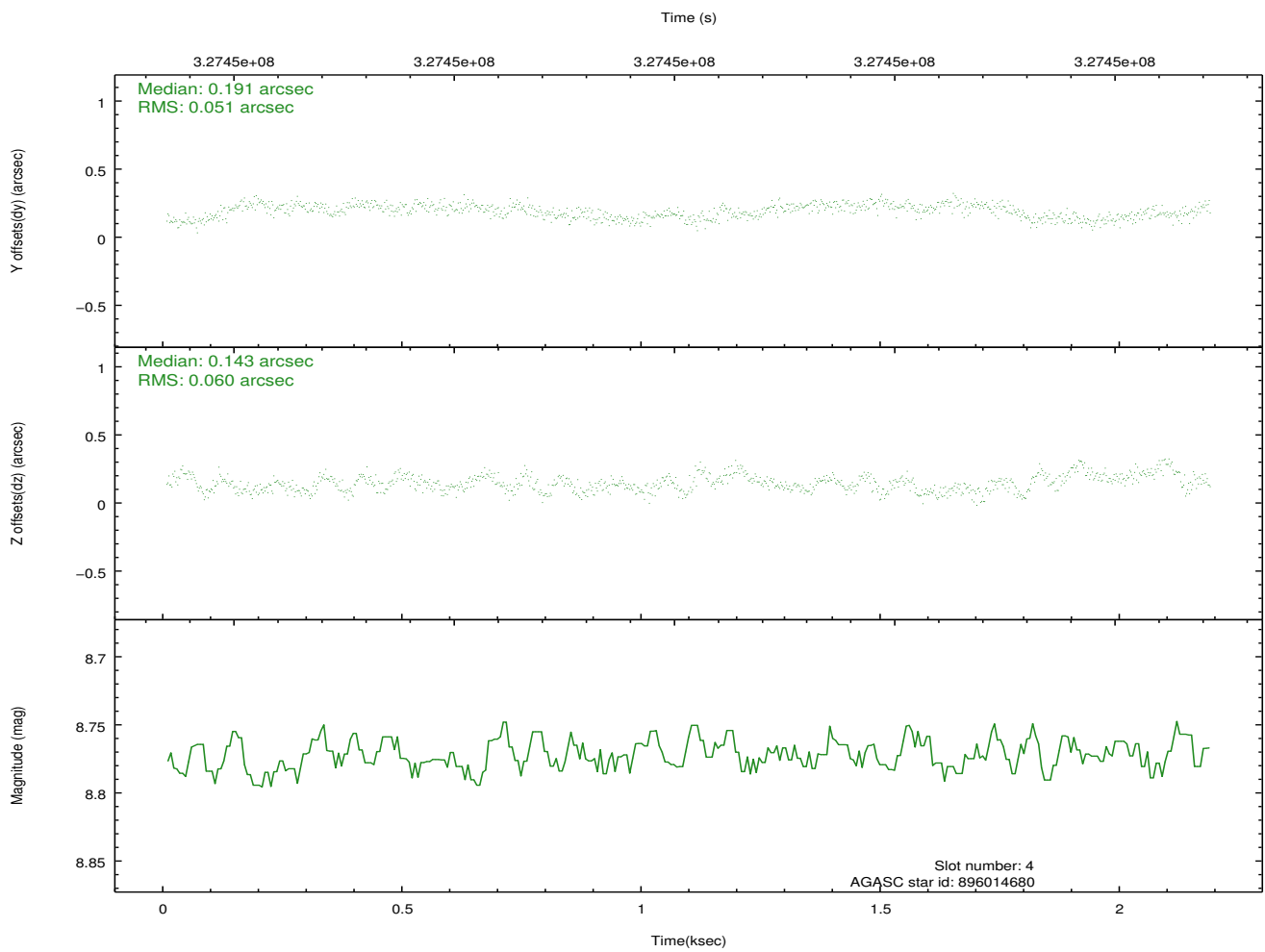
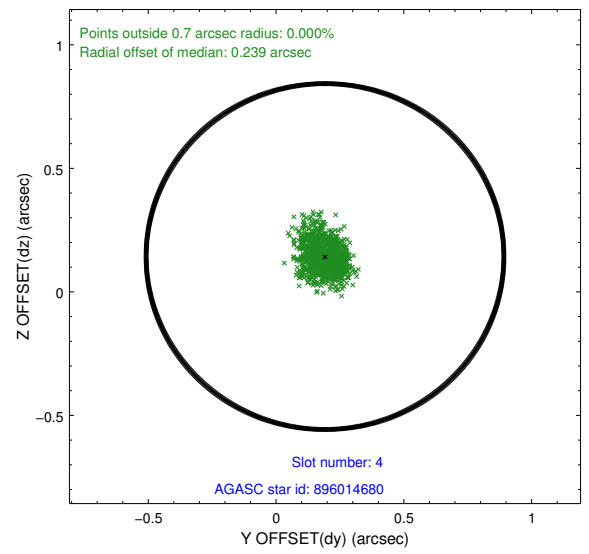
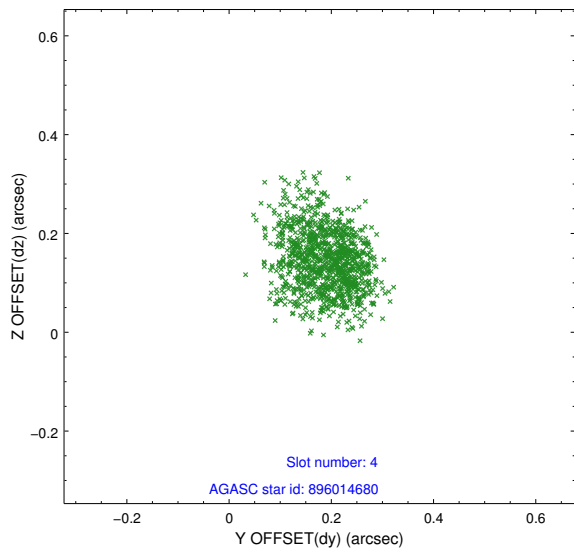
∞

2.4 Star Slots

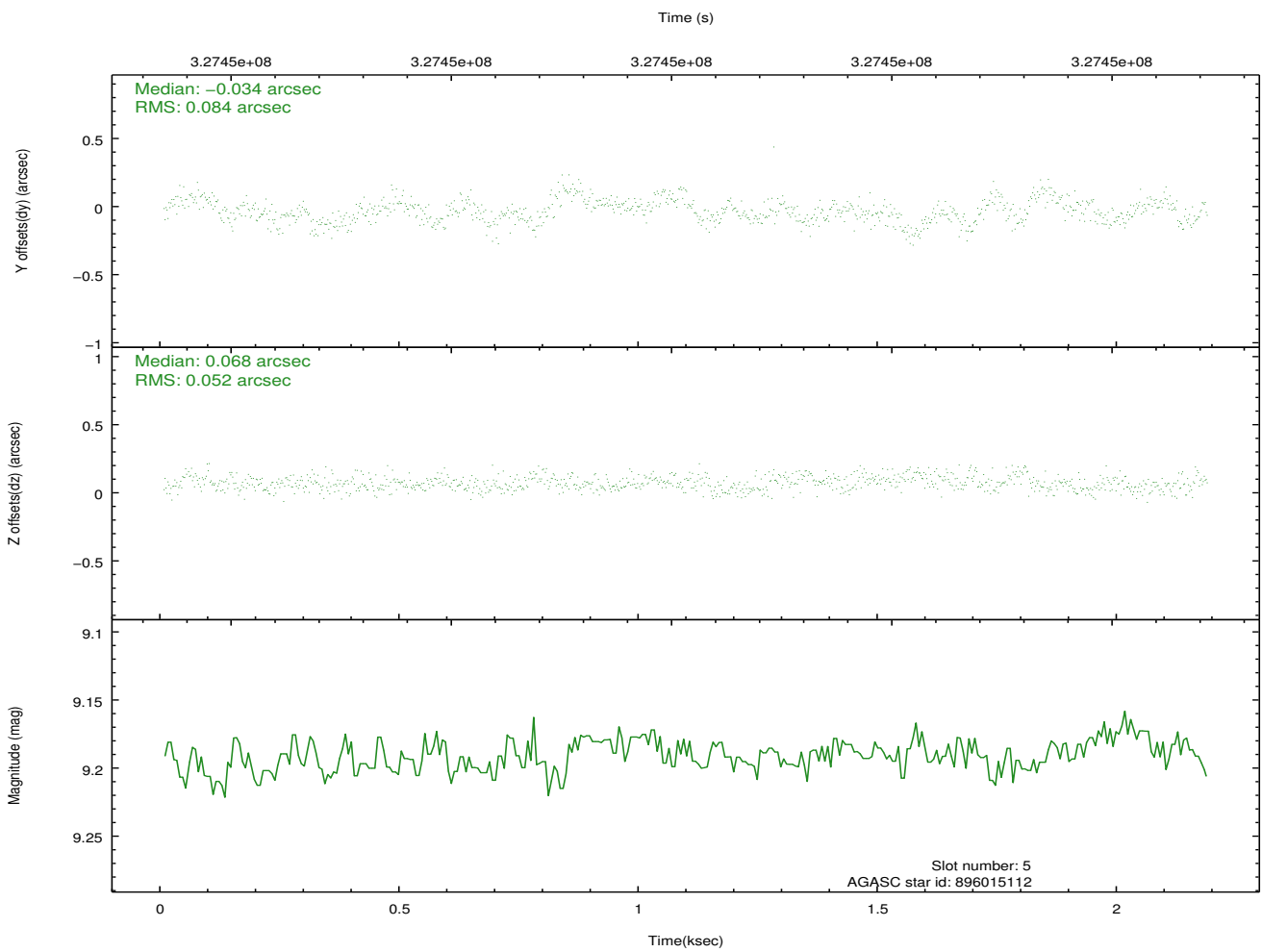
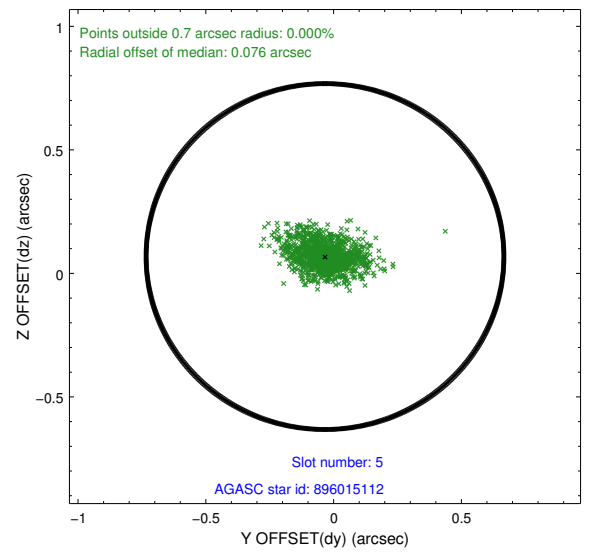
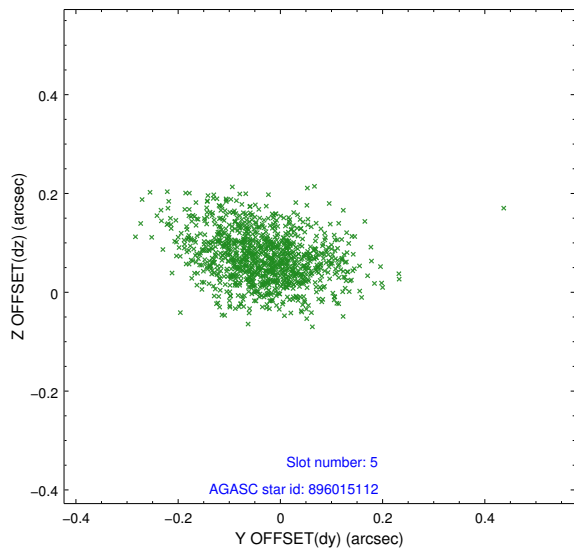
2.4.1 Slot 3



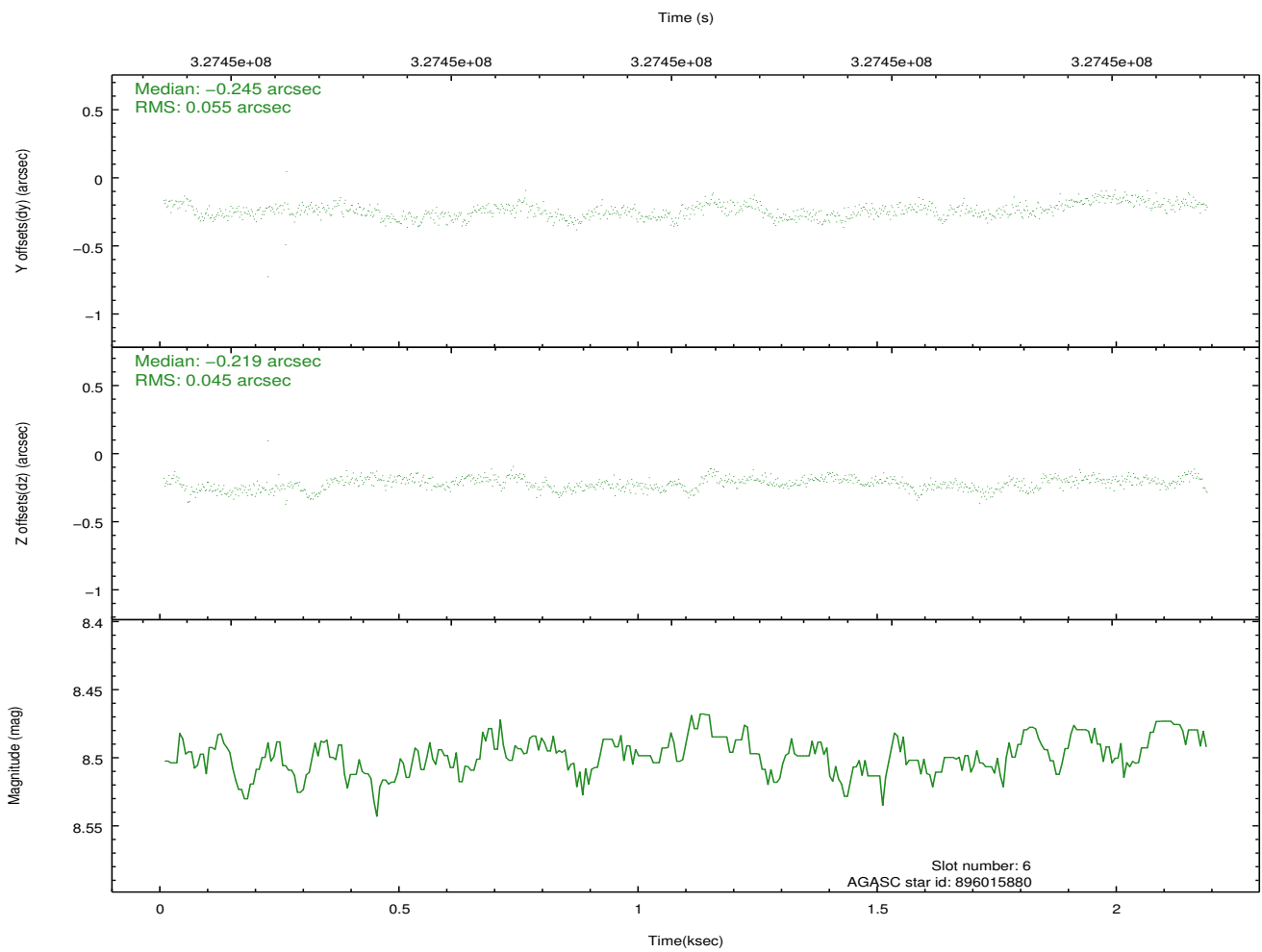
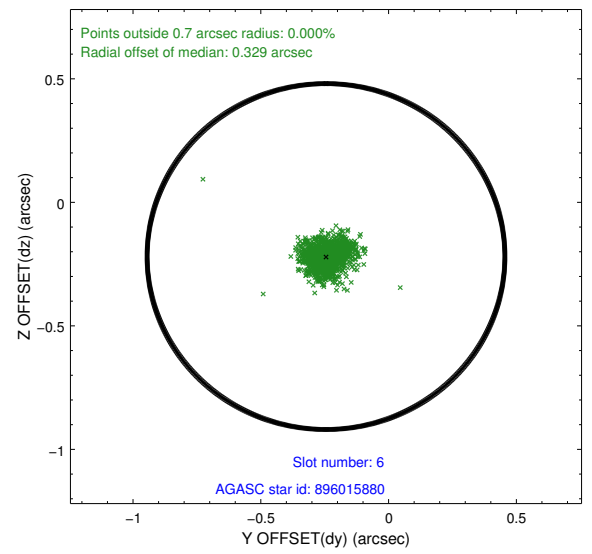
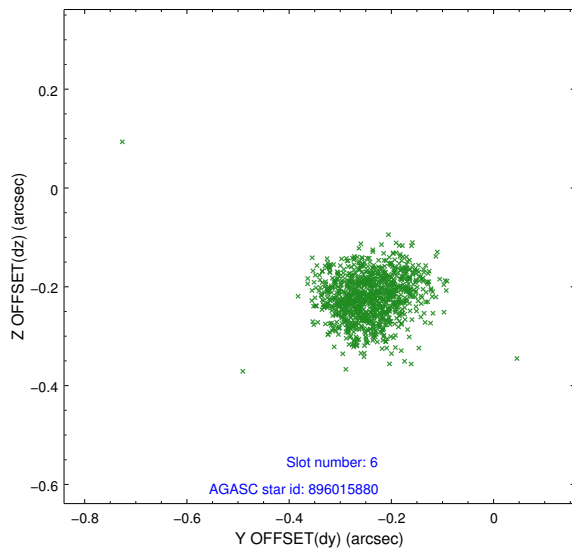
2.4.2 Slot 4



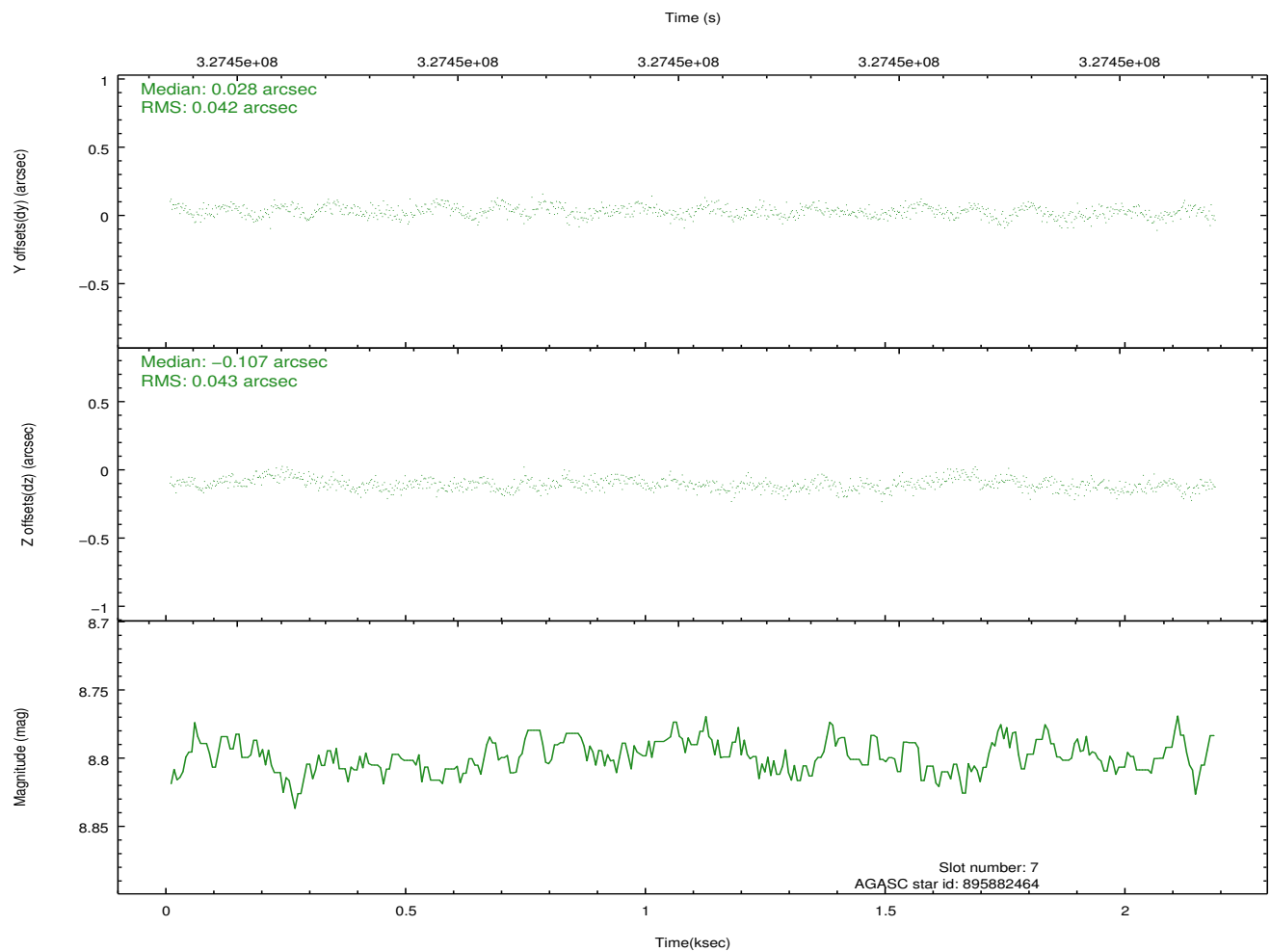
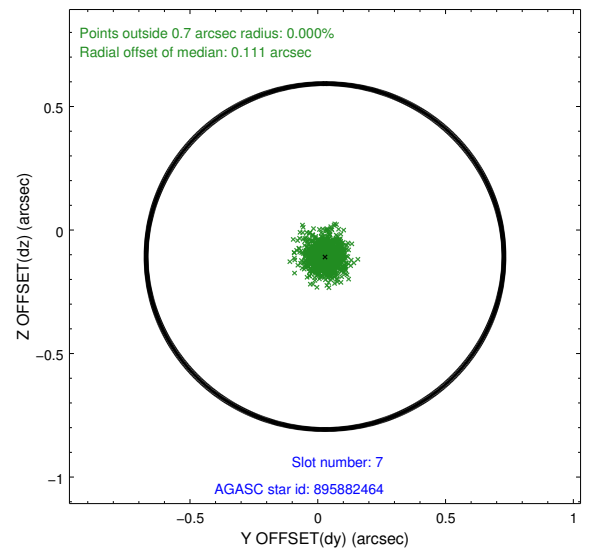
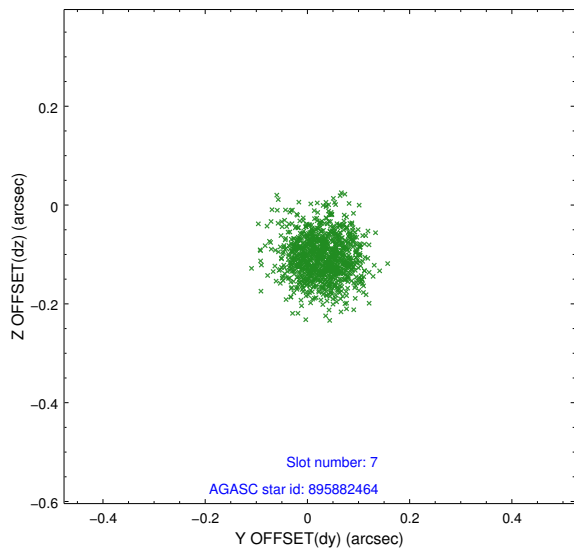
2.4.3 Slot 5



2.4.4 Slot 6

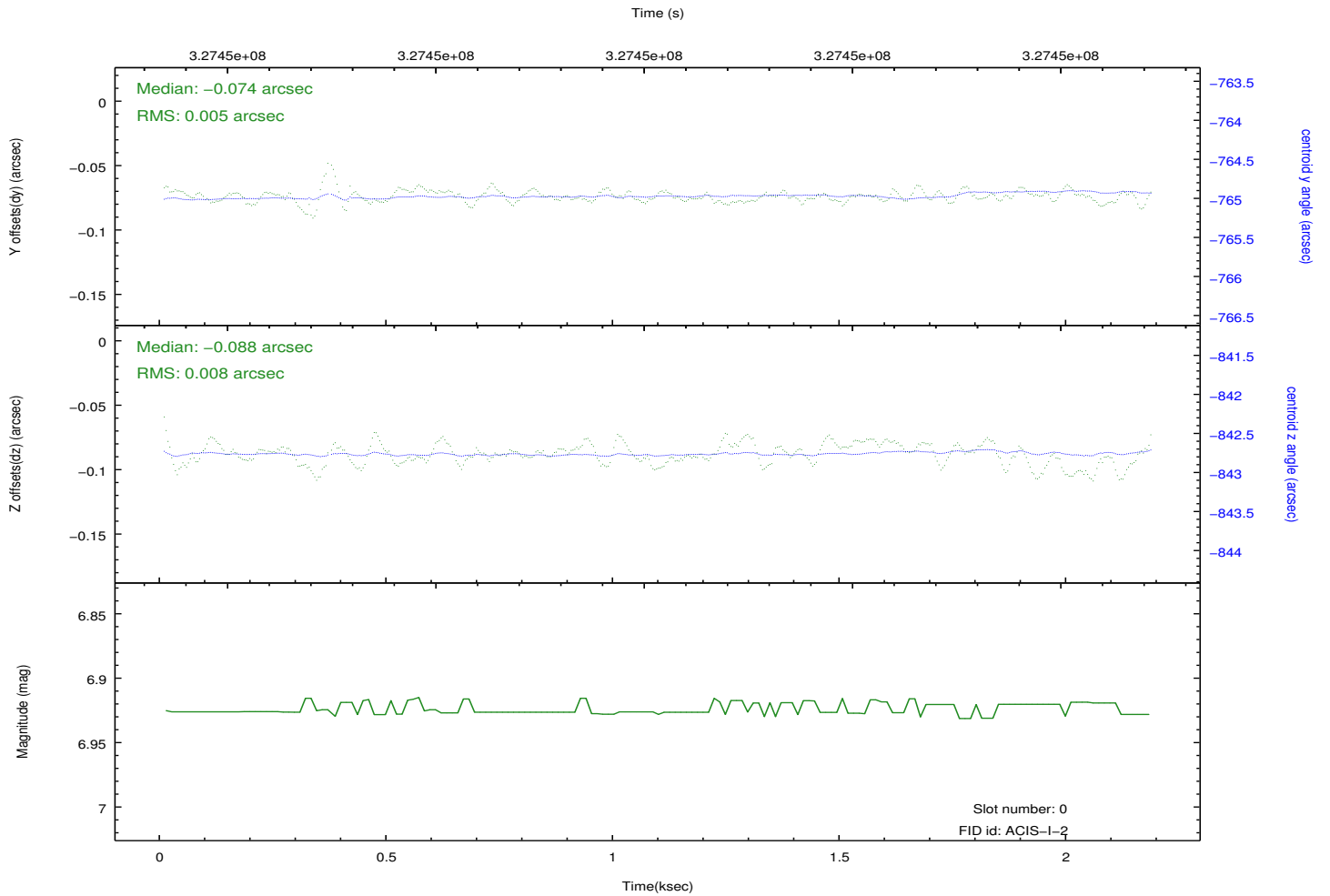
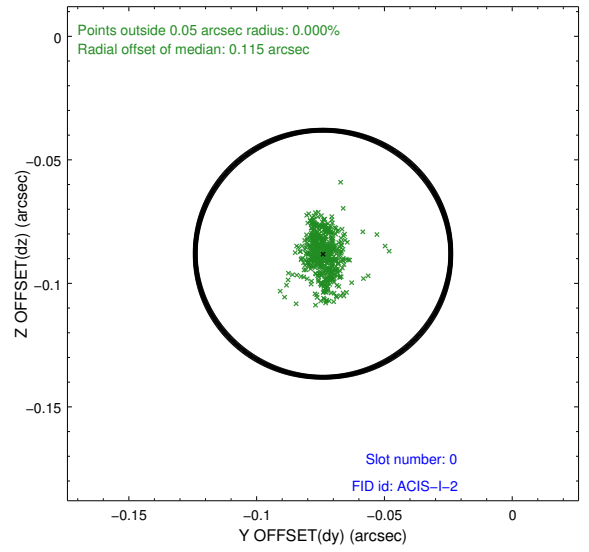
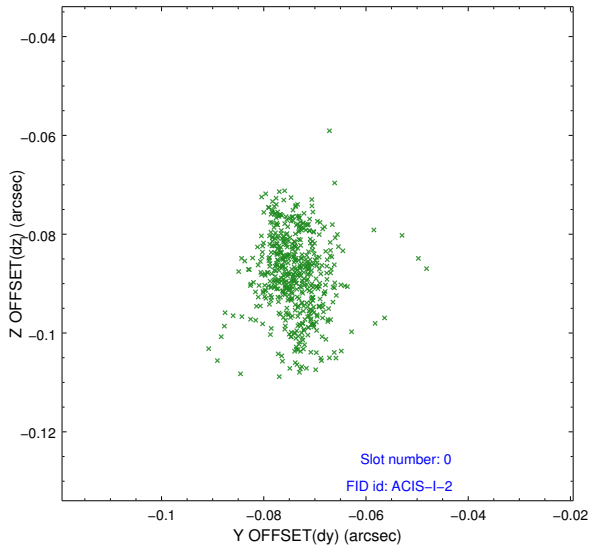


2.4.5 Slot 7

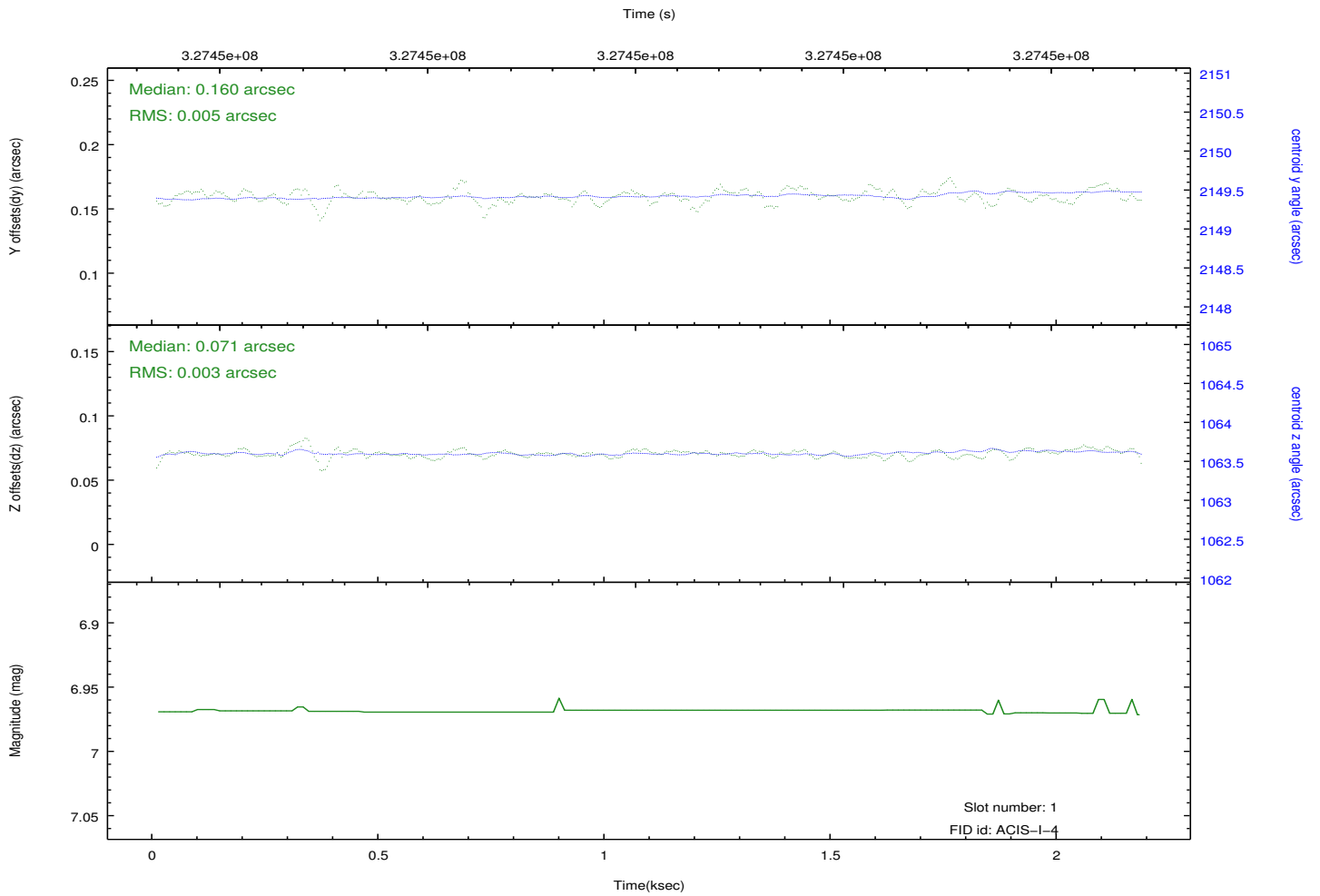
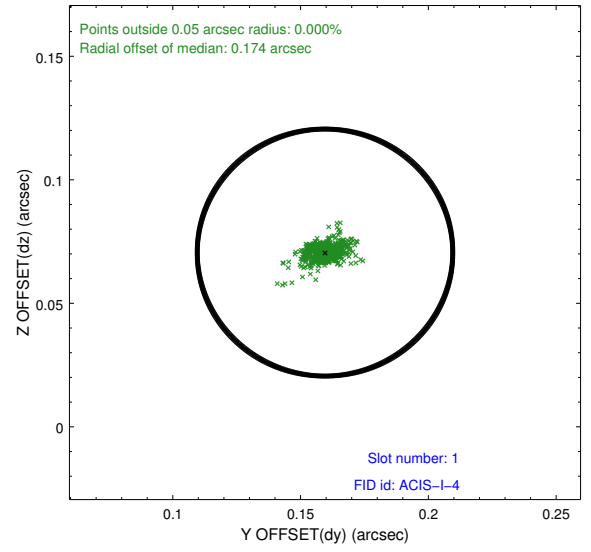
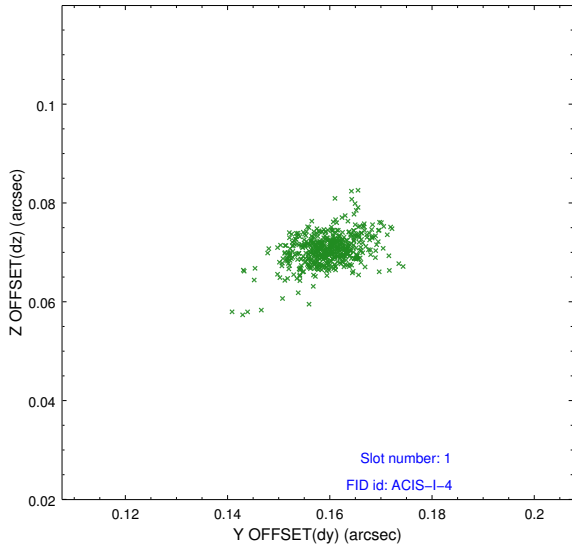


2.5 FID Slots

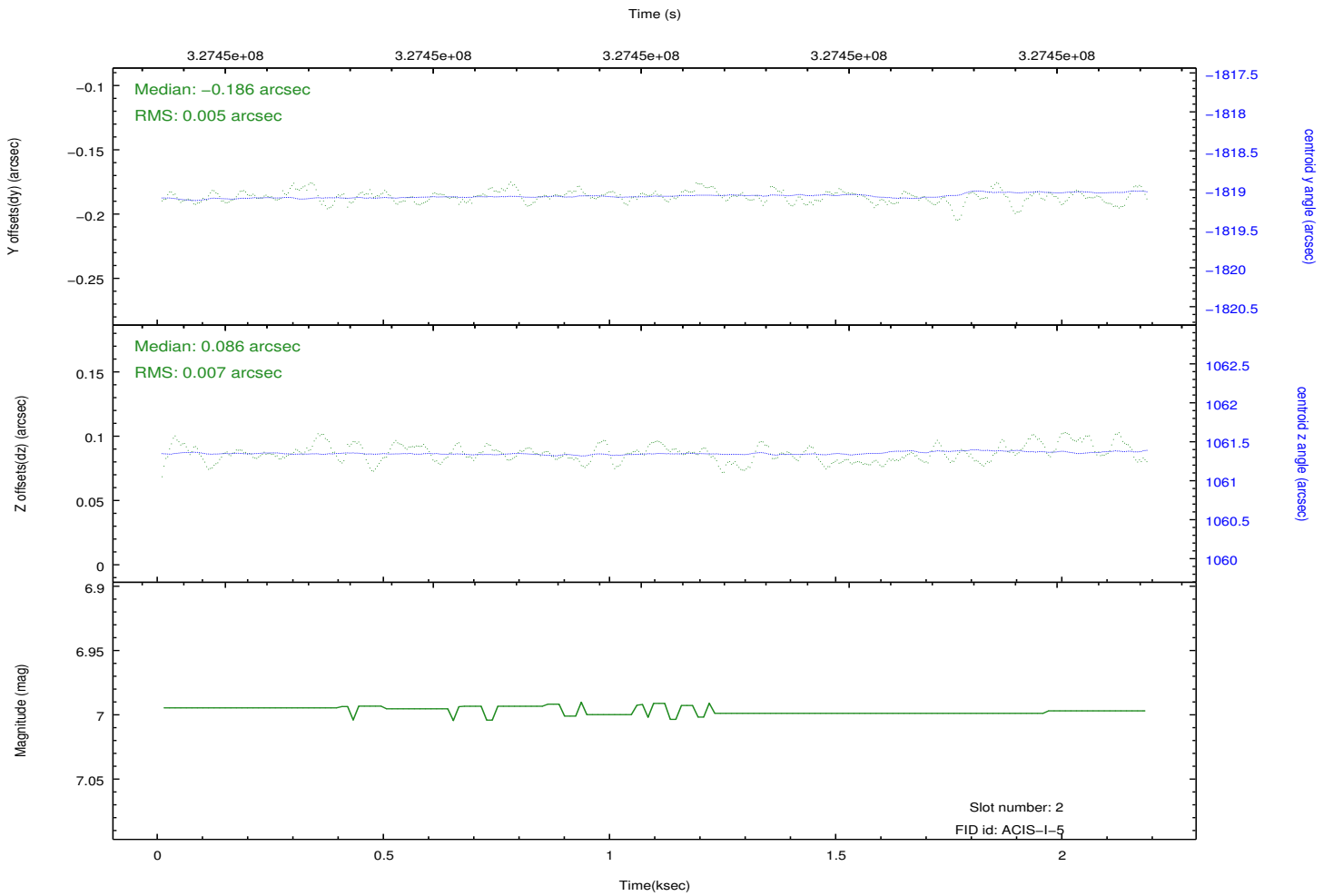
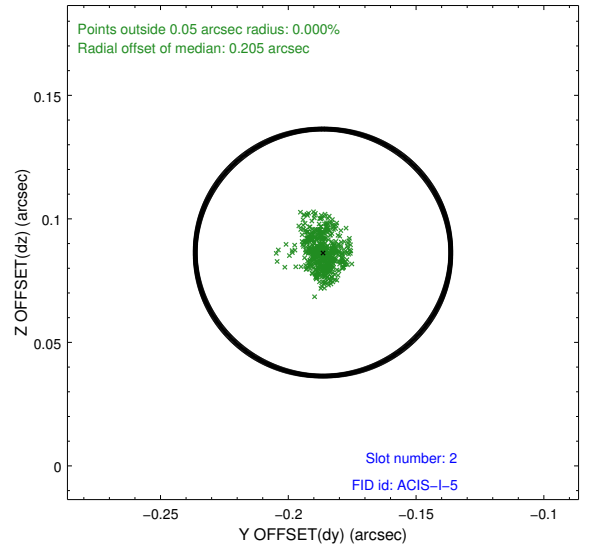
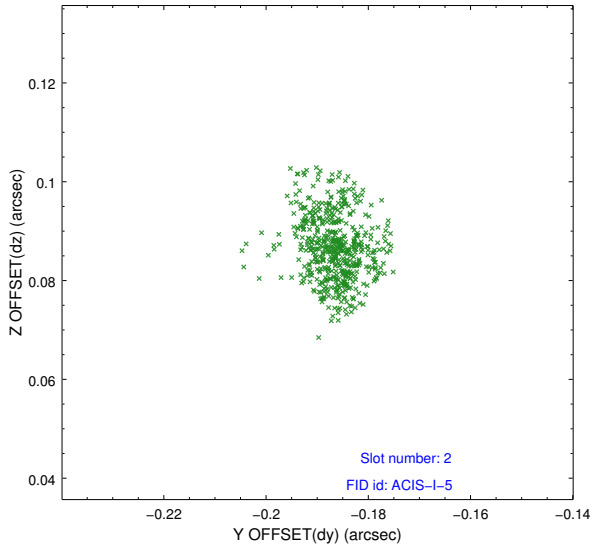
2.5.1 Slot 0



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) | 2015.07.20 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 2.17925903 |

A.2 Comments

Because an aspect solution is determined in a finite time interval, a small number of events registered within the delta time before the first aspect solution do not have proper sky coordinates. We apply a manual workaround to exclude those events with incorrect sky positions until the complete s/w resolution is obtained.