

V&V Reference Report

L2 ASCDS Version : 8.4.4

Observation 10705 - L2 Version 3
Chandra X-Ray Center

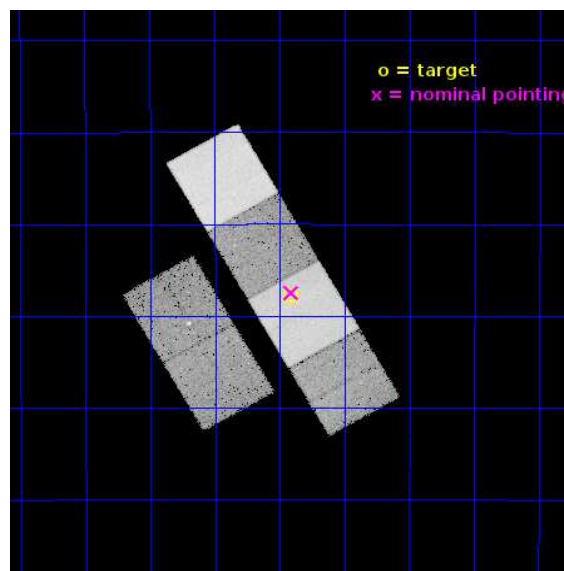
L2 Processing Date : Jul 27 2015

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1 Front

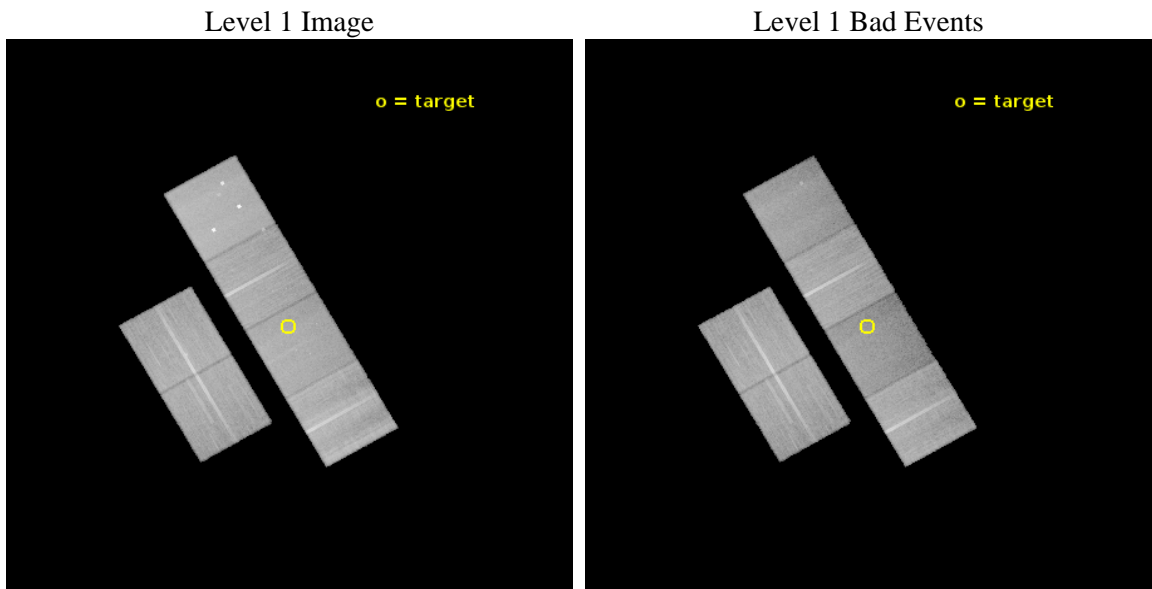
| | | |
|----------|--------------------------|--|
| seq_num | 501161 | Sequence number |
| obs_id | 10705 | Observation id |
| title | Long GRB Jet Breaks | Proposal title |
| observer | Professor Gordon Garmire | Principal investigator |
| object | GRB 080913 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 65.727917 | Observer's specified target RA [deg] |
| dec_targ | -25.1295 | Observer's specified target Dec [deg] |
| ra_nom | 65.727741342551 | Nominal RA [deg] |
| dec_nom | -25.124661231144 | Nominal Dec [deg] |
| roll_nom | 60.156553243518 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 31081.162320614 | Sum of GTIs [s] |
| livetime | 30687.593928481 | Livetime [s] |
| ontime2 | 31077.921320319 | Sum of GTIs [s] |
| ontime3 | 31077.92132026 | Sum of GTIs [s] |
| ontime5 | 31081.162320614 | Sum of GTIs [s] |
| ontime6 | 31081.162320614 | Sum of GTIs [s] |
| ontime7 | 31081.162320614 | Sum of GTIs [s] |
| ontime8 | 31081.162320614 | Sum of GTIs [s] |
| l2events | 342554 | Number of level 2 events |



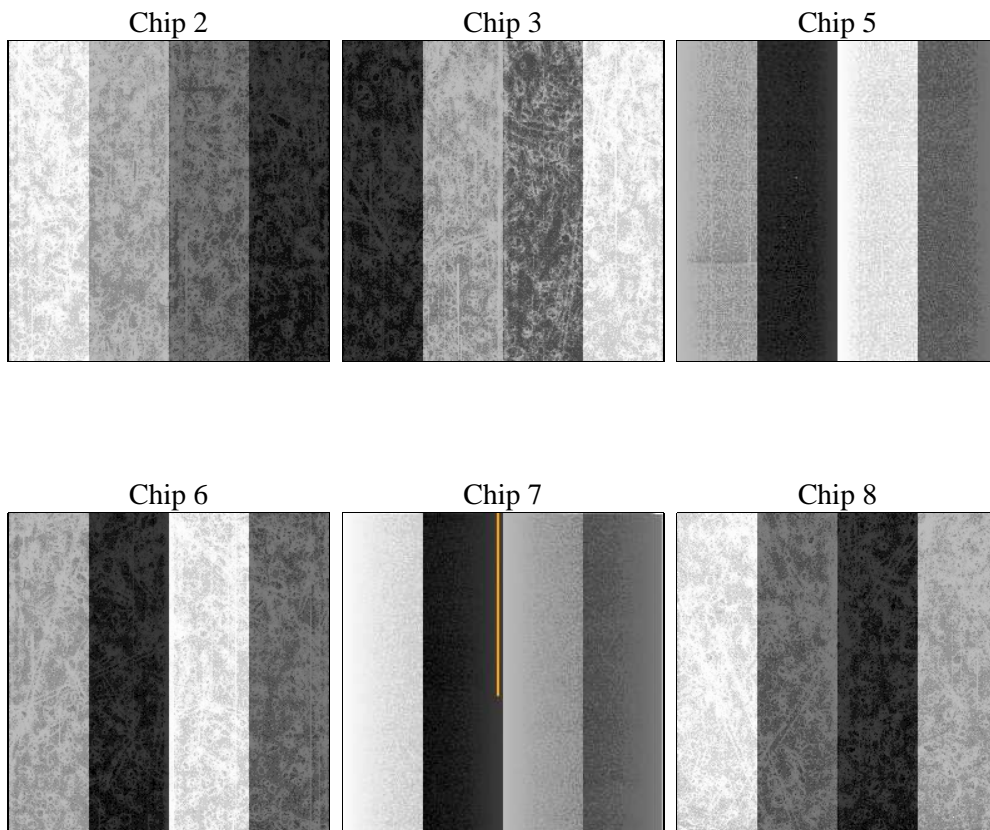
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 2 | Obi number | sched_exp_time | 30900.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4.1 | Processing system revision | ontime | 31081.162320614 | Sum of GTIs [s] |
| caldbver | 4.6.8 | | ontime2 | 31077.921320319 | Sum of GTIs [s] |
| date | 2015-07-27T16:35:41 | Date and time of file creation | ontime3 | 31077.92132026 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime5 | 31081.162320614 | Sum of GTIs [s] |
| | | | ontime6 | 31081.162320614 | Sum of GTIs [s] |
| | | | ontime7 | 31081.162320614 | Sum of GTIs [s] |
| | | | ontime8 | 31081.162320614 | Sum of GTIs [s] |
| | | | l1events | 1598658 | Number of level 1 events |

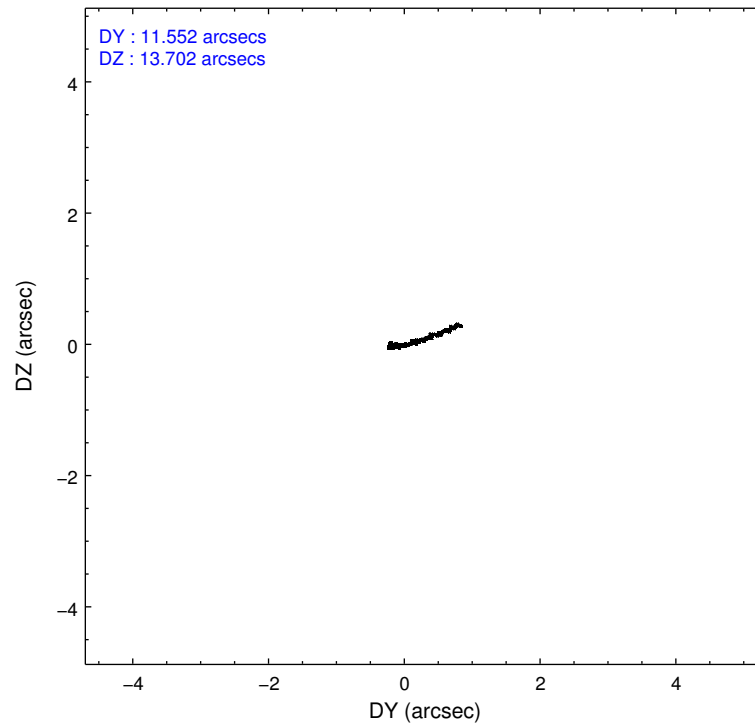
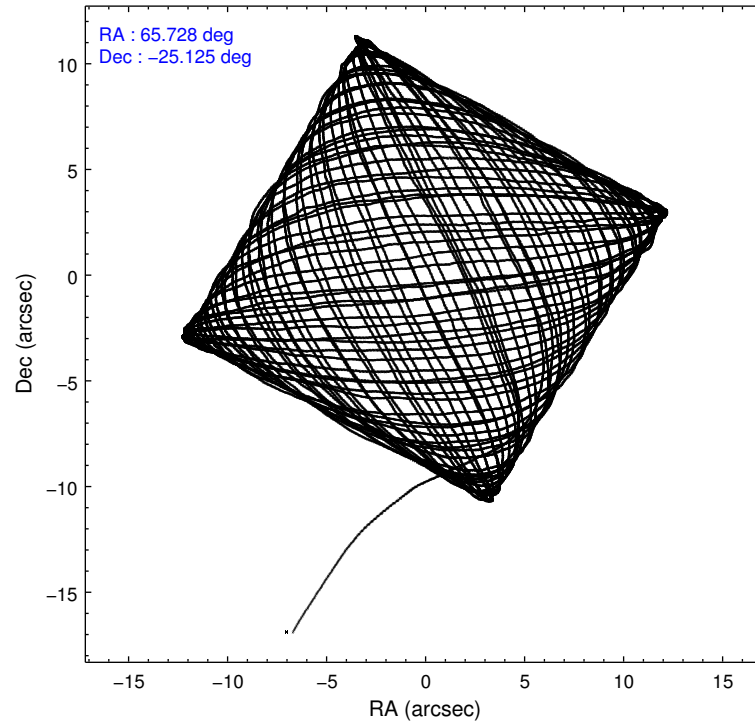
2.1.4 Events

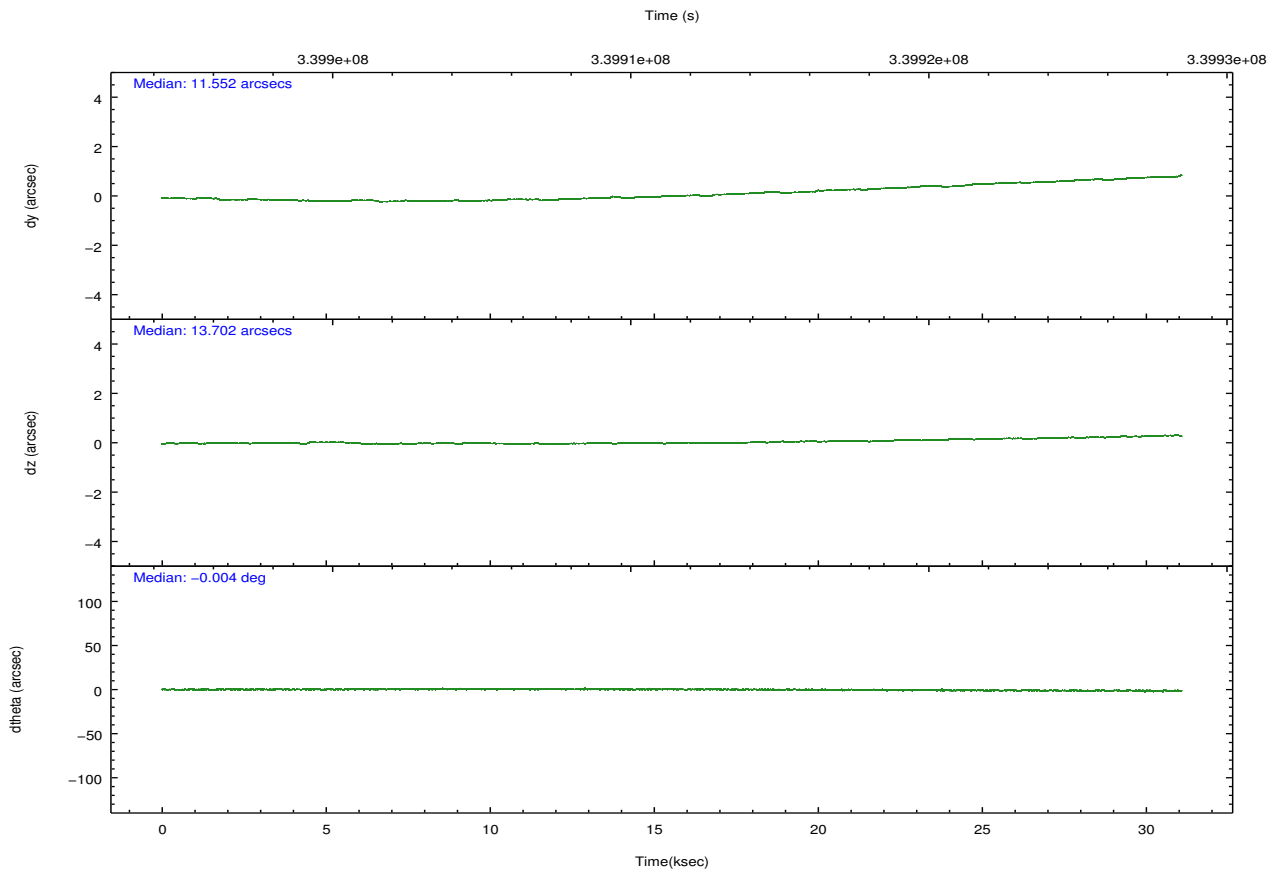
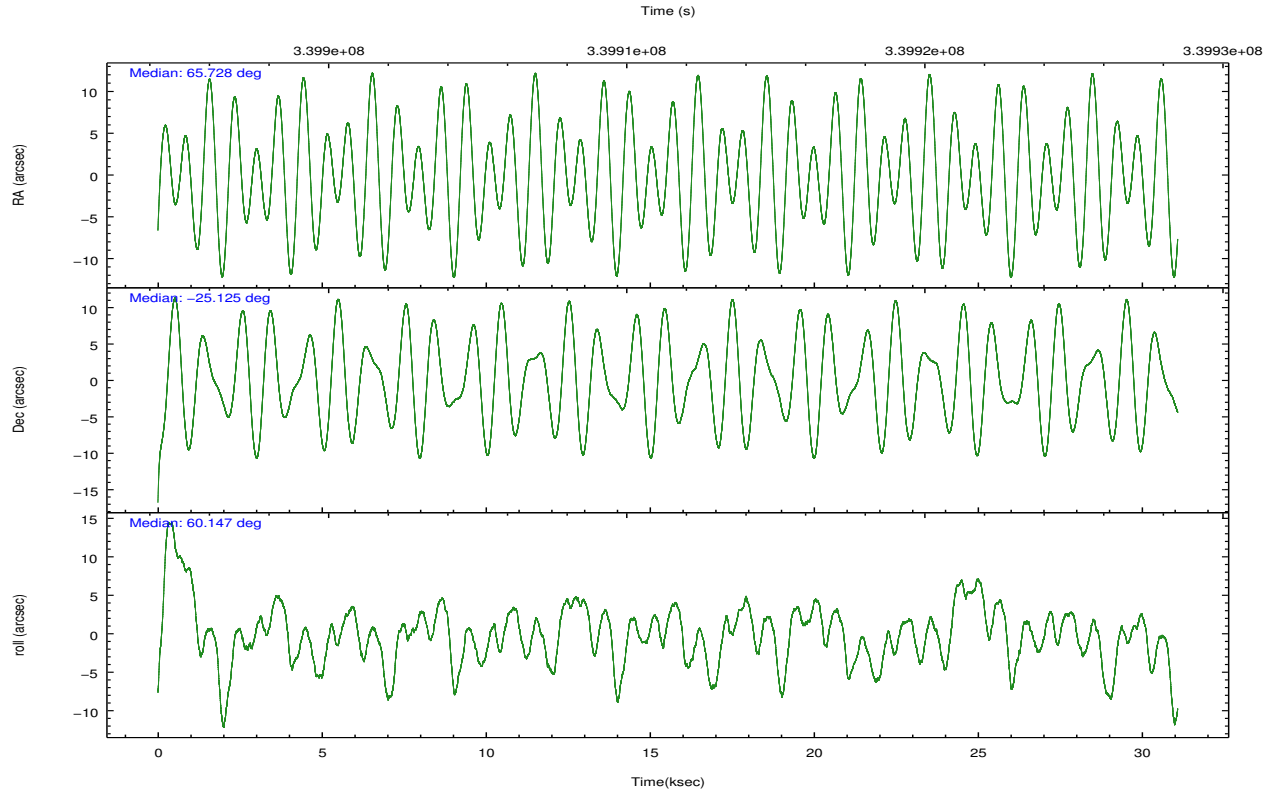
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|-------|--------|
| level 1 events | 262271 | 236929 | 319218 | 243468 | 235121 | 301651 | grade 0 events | 9156 | 7957 | 23704 | 9100 | 11519 | 20894 |
| rejected events | 238677 | 215172 | 150062 | 218871 | 121916 | 226414 | | 3% | 3% | 7% | 3% | 4% | 6% |
| rejected % | 91% | 90% | 47% | 89% | 51% | 75% | grade 1 events | 139 | 141 | 668 | 137 | 354 | 267 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 5678 | 4843 | 51763 | 5524 | 24476 | 18055 |
| | | | | | | | | 2% | 2% | 16% | 2% | 10% | 5% |
| | | | | | | | grade 3 events | 2487 | 2549 | 6805 | 2628 | 10708 | 8499 |
| | | | | | | | | 0% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 4 events | 2543 | 2448 | 6734 | 2584 | 10520 | 7802 |
| | | | | | | | | 0% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 5 events | 6927 | 8335 | 25262 | 8506 | 25367 | 12836 |
| | | | | | | | | 2% | 3% | 7% | 3% | 10% | 4% |
| | | | | | | | grade 6 events | 4082 | 4252 | 82698 | 5137 | 57617 | 21075 |
| | | | | | | | | 1% | 1% | 25% | 2% | 24% | 6% |
| | | | | | | | grade 7 events | 231259 | 206404 | 121584 | 209852 | 94560 | 212223 |
| | | | | | | | | 88% | 87% | 38% | 86% | 40% | 70% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-235678 | ACIS-235678 | Obspar file type | PREDICTED | ACTUAL |
| Grating | NONE | NONE | Obspar update status | NONE | UPDATED |
| Data mode | VFAINT | VFAINT | CCD I0 on | N | N |
| Observation mode | POINTING | POINTING | CCD I1 on | N | N |
| [deg] Pointing RA | 65.728243 | 65.7277413425505 | CCD I2 on | O2 | Y |
| [deg] Pointing Dec | -25.151992 | -25.12466123114384 | CCD I3 on | O3 | Y |
| [deg] Pointing Roll | 60.000141 | 60.15655324351841 | CCD S0 on | N | N |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | CCD S1 on | O1 | Y |
| [mm] SIM defocus | 0 | 0.001444936568705701 | CCD S2 on | O5 | Y |
| [mm] SIM translation stage pos | -190.132523 | -190.1400660498719 | CCD S3 on | Y | Y |
| [mm] SIM translation stage offset | 0 | 0.00754346686406393 | CCD S4 on | O4 | Y |
| [s] Observation start time (MET) | 339896015.184000 | 339894659.75176 | CCD S5 on | N | N |
| Observation start date | 2008-10-08T23:32:30 | 2008-10-08T23:10:59 | Number of optional ACIS chips dropped | 0 | 0 |
| [s] Observation end time (MET) | 339926915.184000 | 339927278.84087 | On-chip summing requested | N | N |
| Observation end date | 2008-10-09T08:07:30 | 2008-10-09T08:14:38 | Subarray requested | NONE | NONE |
| Read mode | TIMED | TIMED | Alternating exposures requested | N | N |
| | | | [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect





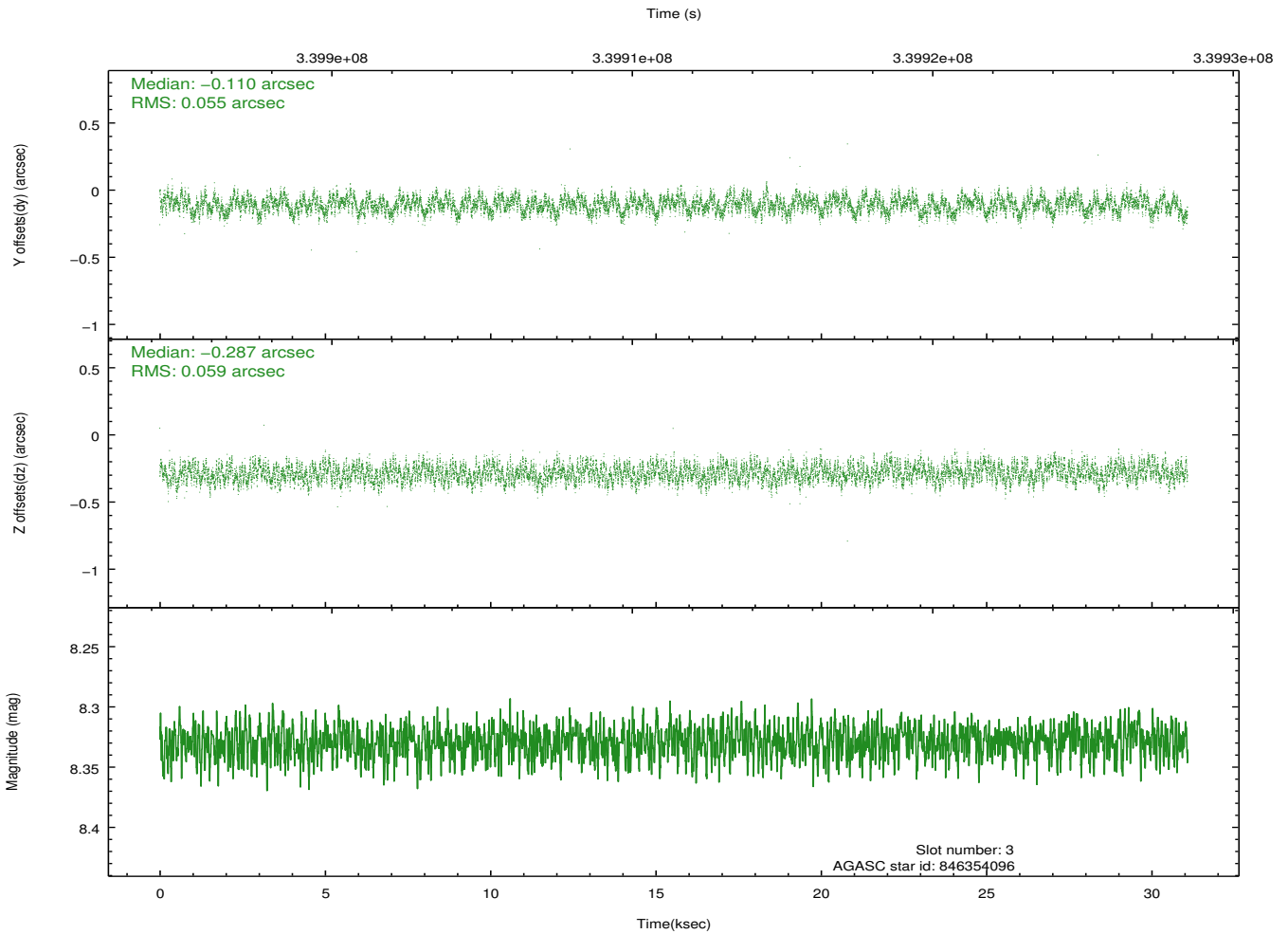
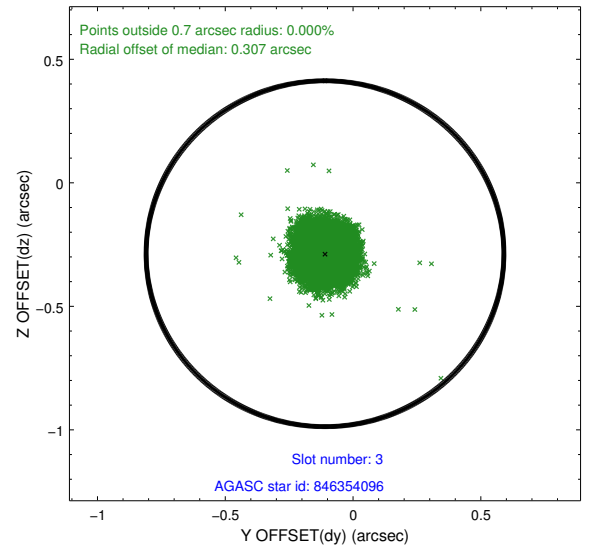
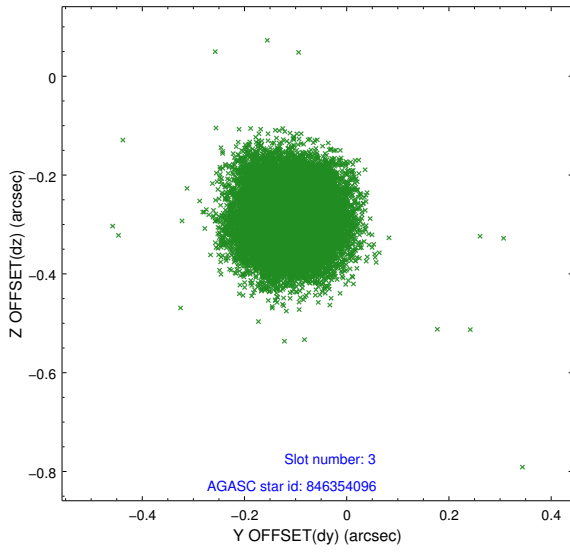
Slot Statistics

| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | | ACIS-S-2 | 6.88 | 7582 | -0.032 | -0.027 | 0.007 | 0.011 | 0.000000 | 0.000000 | -764.59 | -1735.12 |
| 1 | FID | | ACIS-S-4 | 6.98 | 7582 | 0.119 | 0.023 | 0.007 | 0.013 | 0.000000 | 0.000000 | 2148.82 | 173.33 |
| 2 | FID | | ACIS-S-5 | 7.00 | 7582 | -0.118 | 0.012 | 0.007 | 0.014 | 0.000000 | 0.000000 | -1817.42 | 167.09 |
| 3 | GUIDE | used | 846354096 | 8.33 | 15158 | -0.110 | -0.287 | 0.088 | 0.132 | 65.187240 | -24.726497 | 438.98 | 2296.09 |
| 4 | GUIDE | used | 846356264 | 9.78 | 15106 | -0.082 | 0.187 | 0.155 | 0.245 | 66.399632 | -24.900813 | 1875.05 | -1448.86 |
| 5 | GUIDE | used | 846742672 | 9.74 | 15142 | 0.127 | 0.180 | 0.137 | 0.226 | 65.915695 | -25.952448 | -2191.71 | -1966.74 |
| 6 | GUIDE | used | 846745608 | 7.91 | 15152 | 0.068 | 0.097 | 0.090 | 0.146 | 65.834011 | -25.395004 | -587.28 | -736.83 |
| 7 | GUIDE | used | 846353752 | 9.43 | 15083 | -0.003 | -0.175 | 0.106 | 0.163 | 65.293032 | -24.539160 | 1196.09 | 2336.07 |

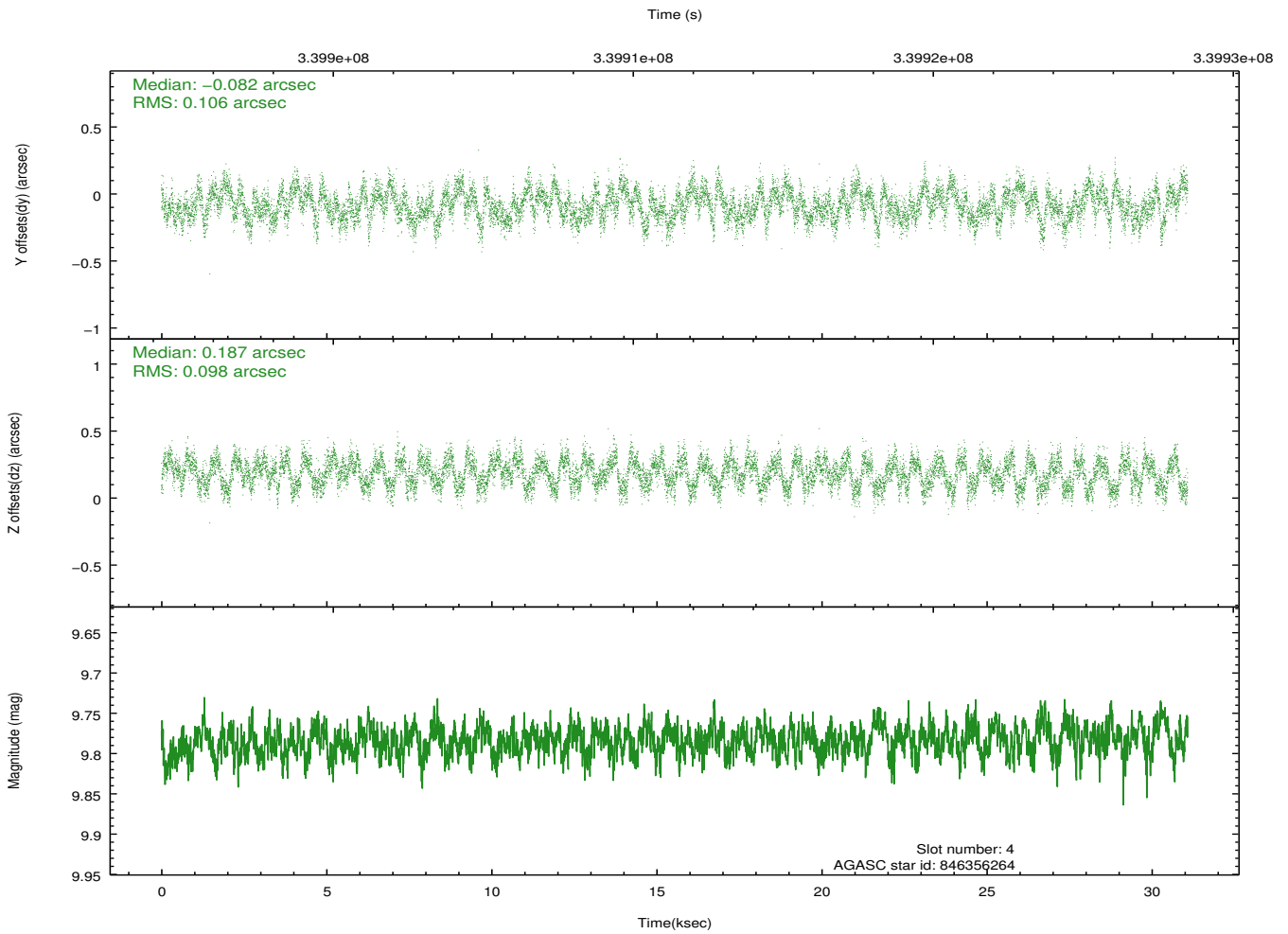
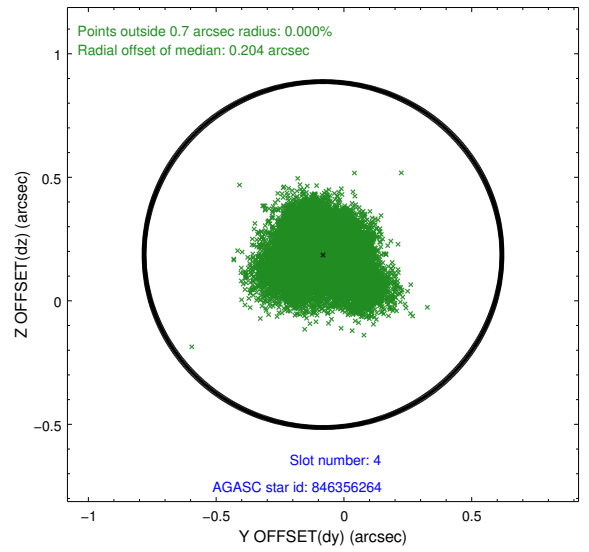
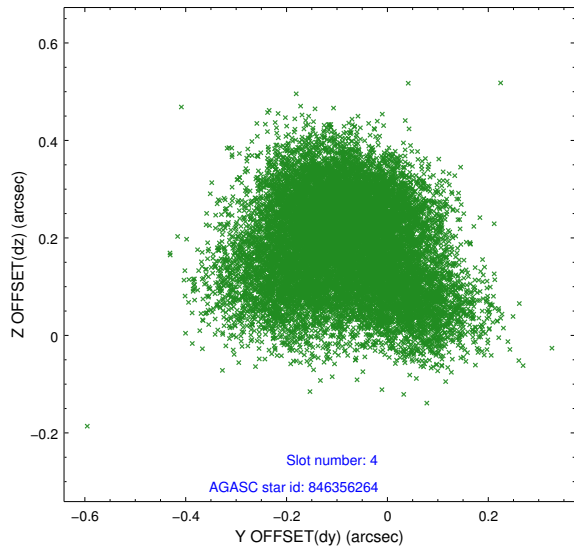
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2.4 Star Slots

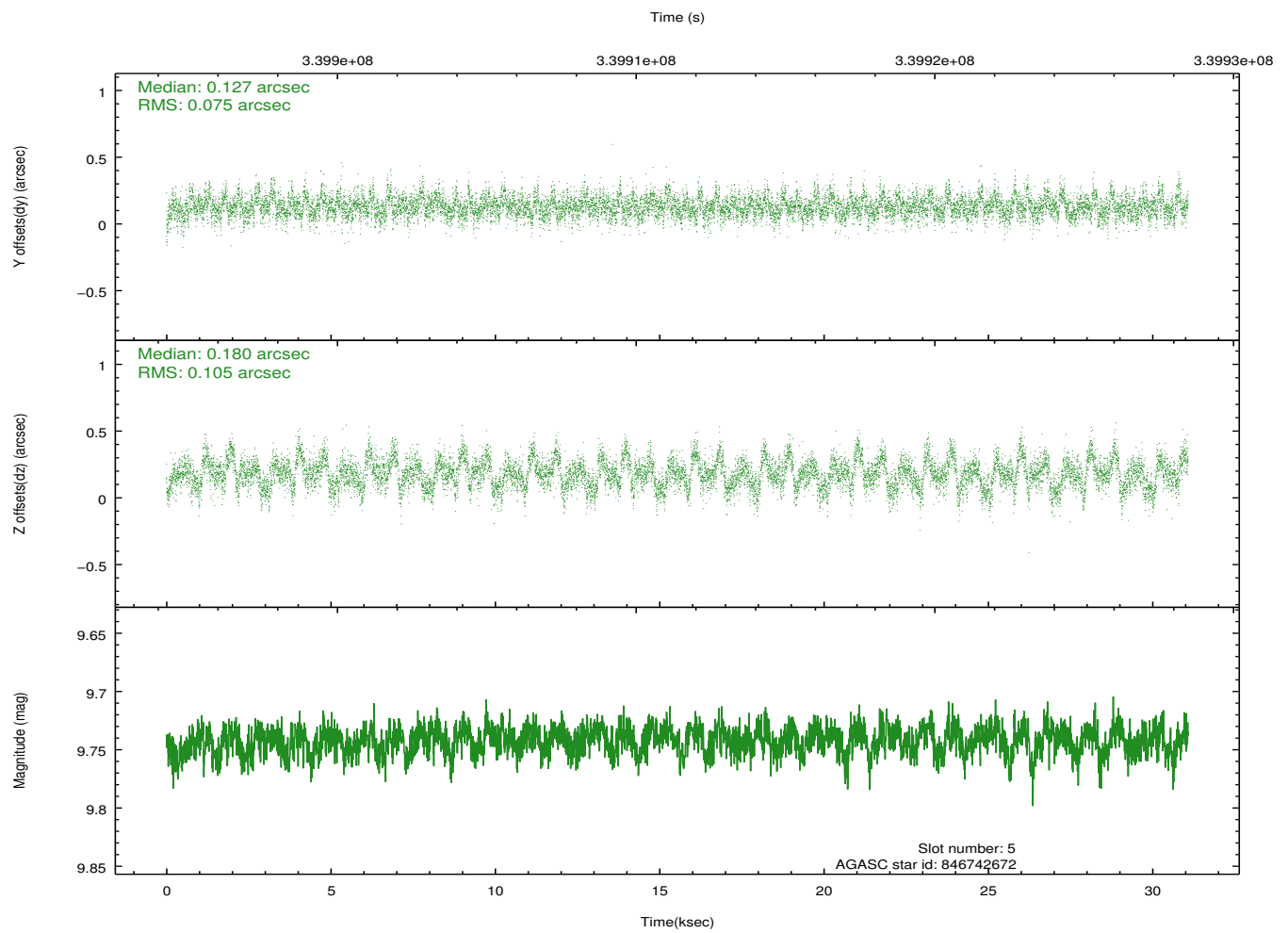
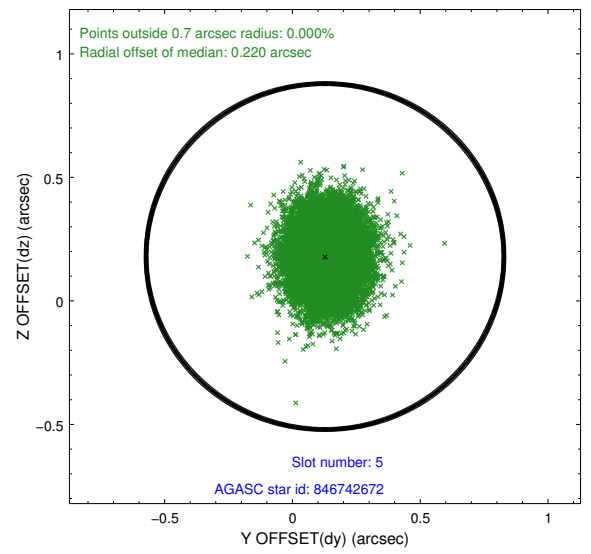
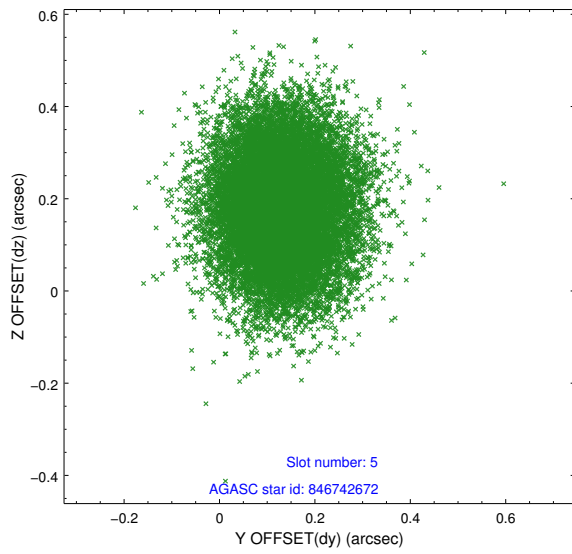
2.4.1 Slot 3



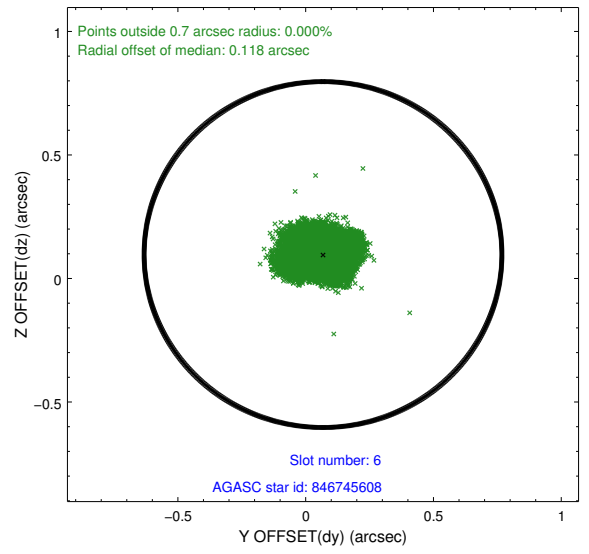
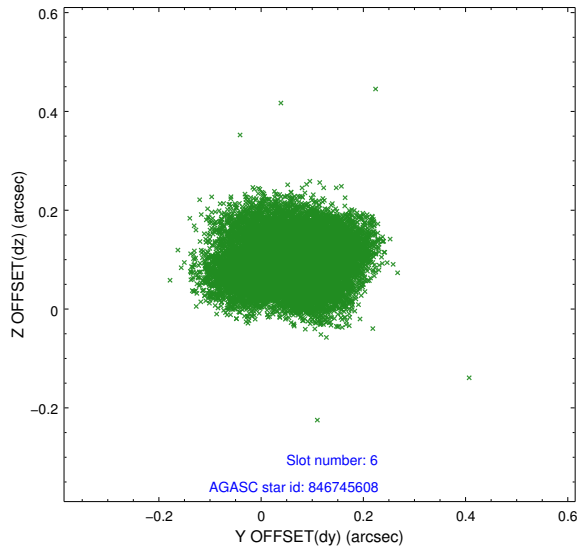
2.4.2 Slot 4



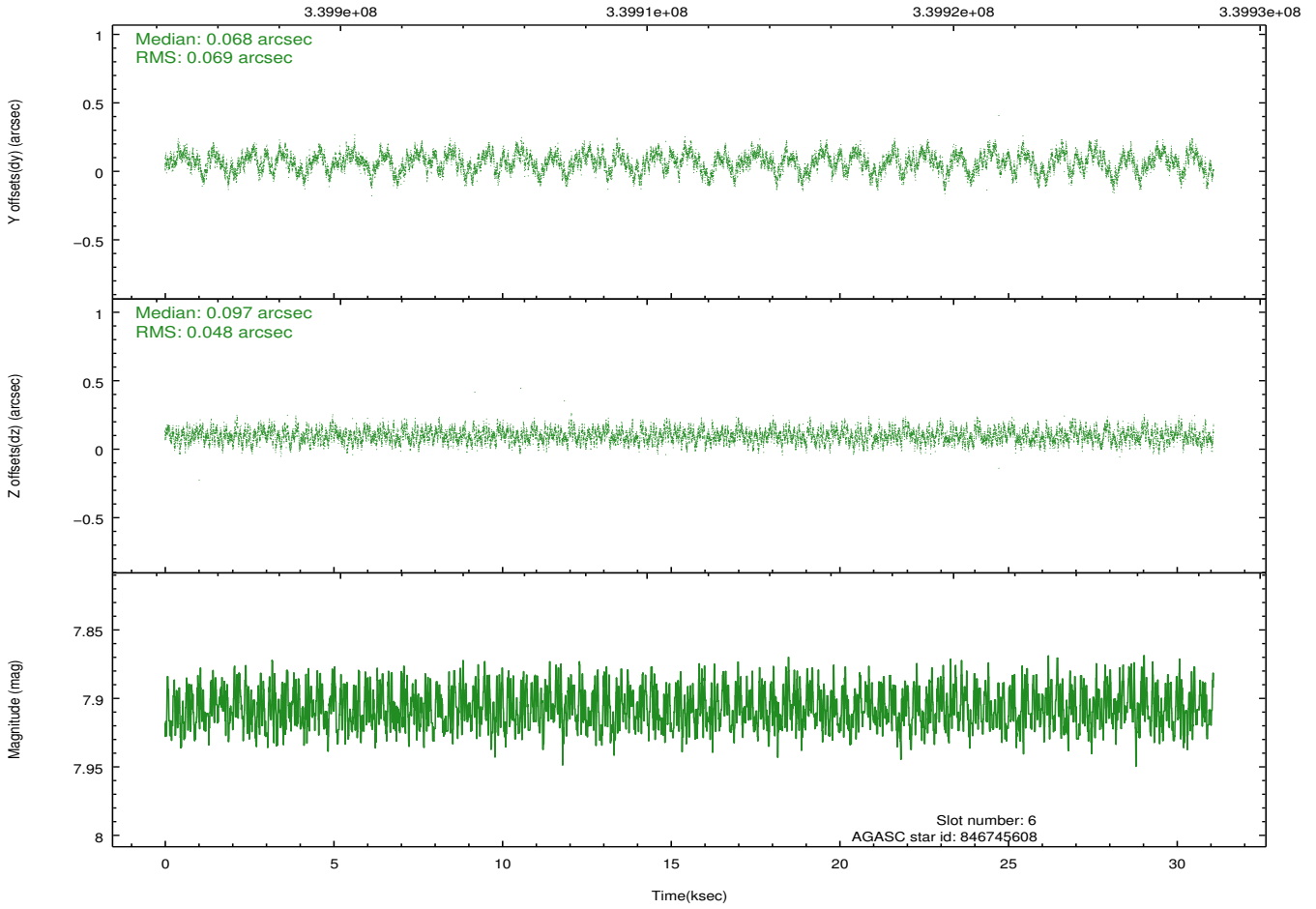
2.4.3 Slot 5



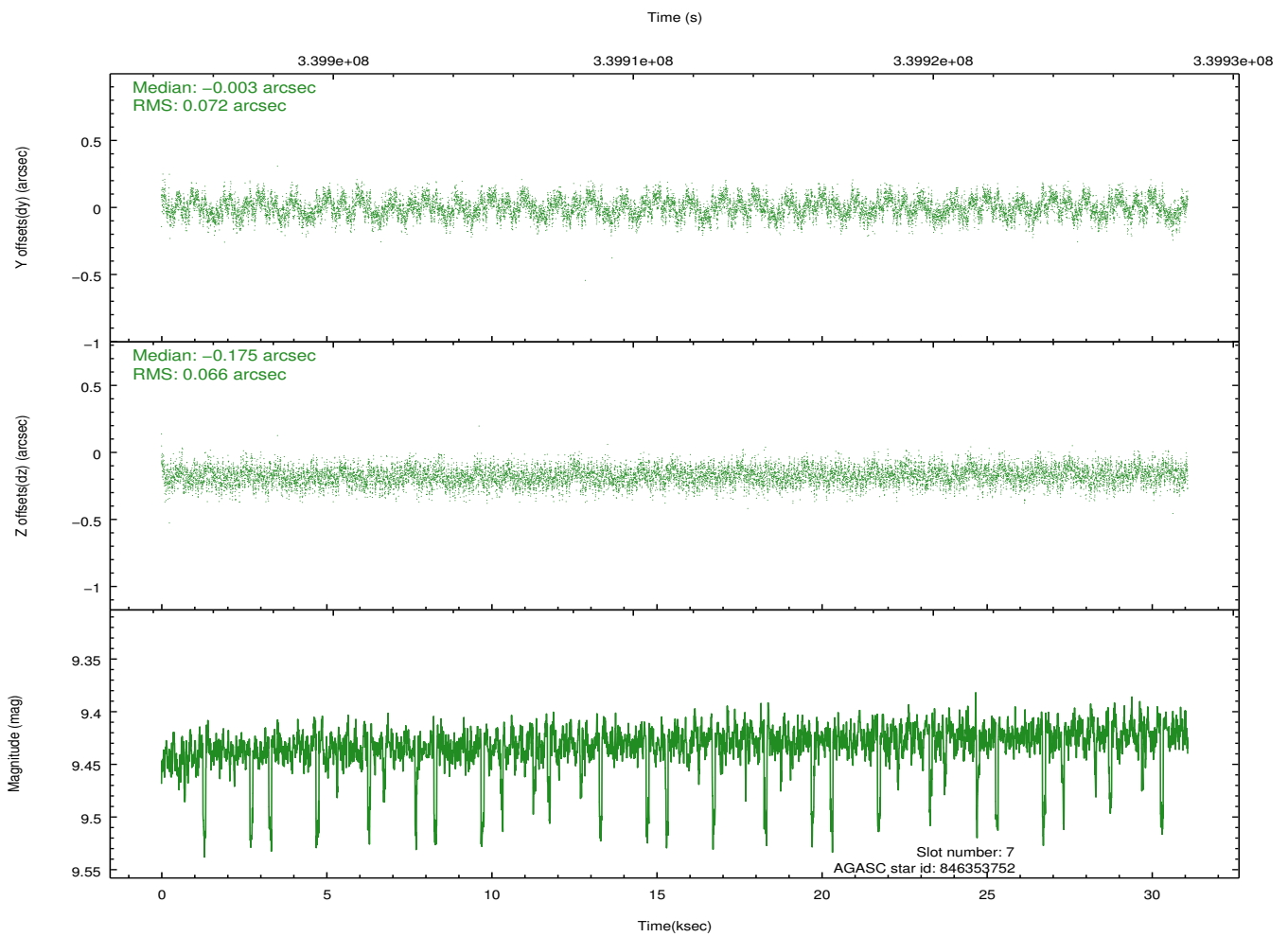
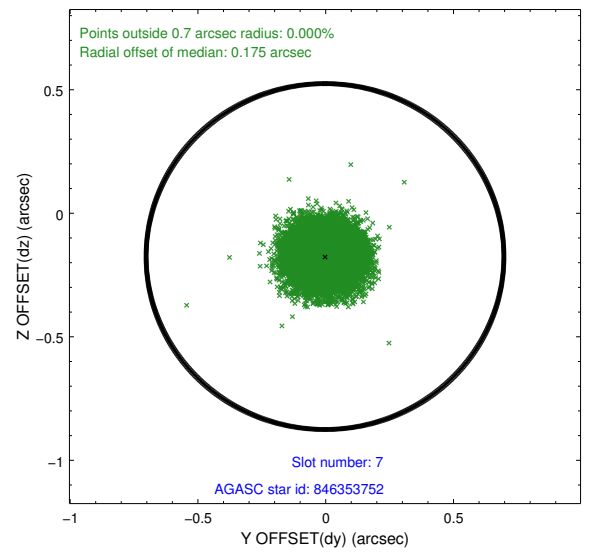
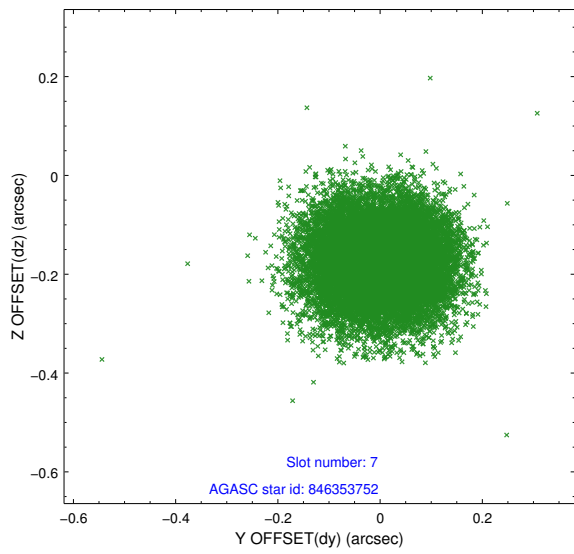
2.4.4 Slot 6



Time (s)

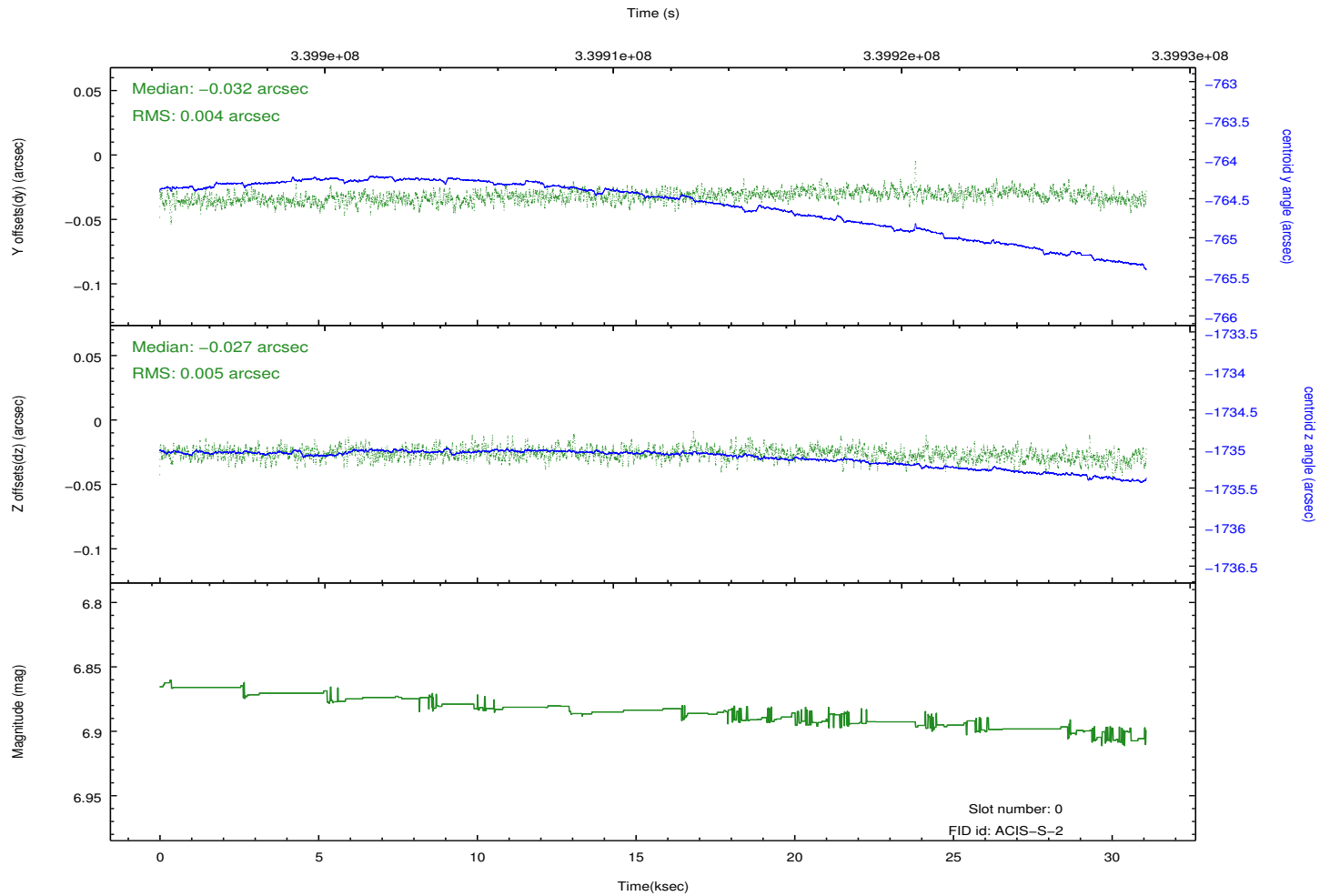
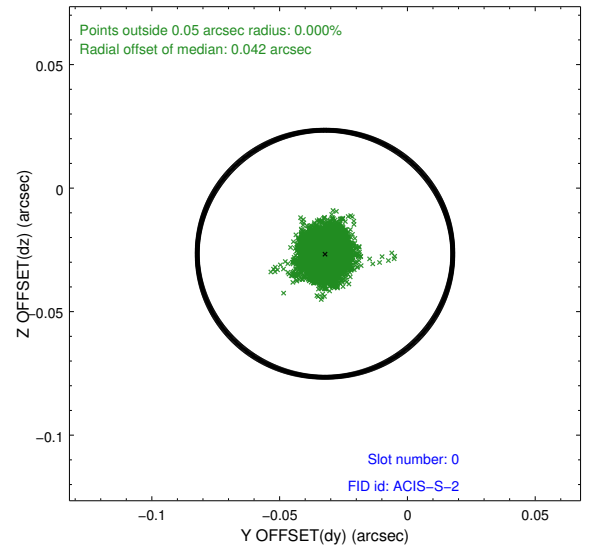
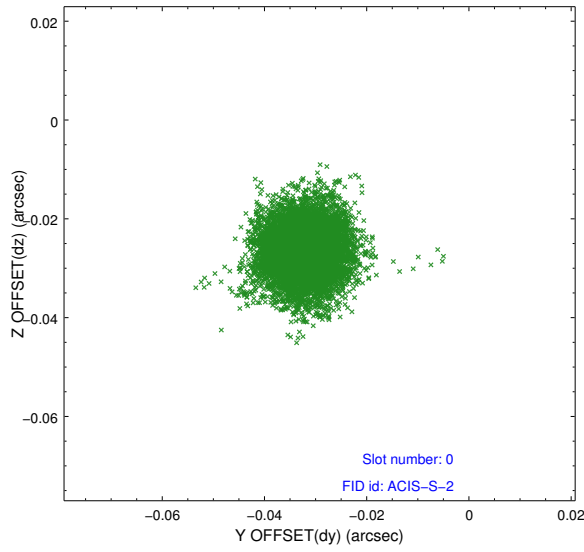


2.4.5 Slot 7

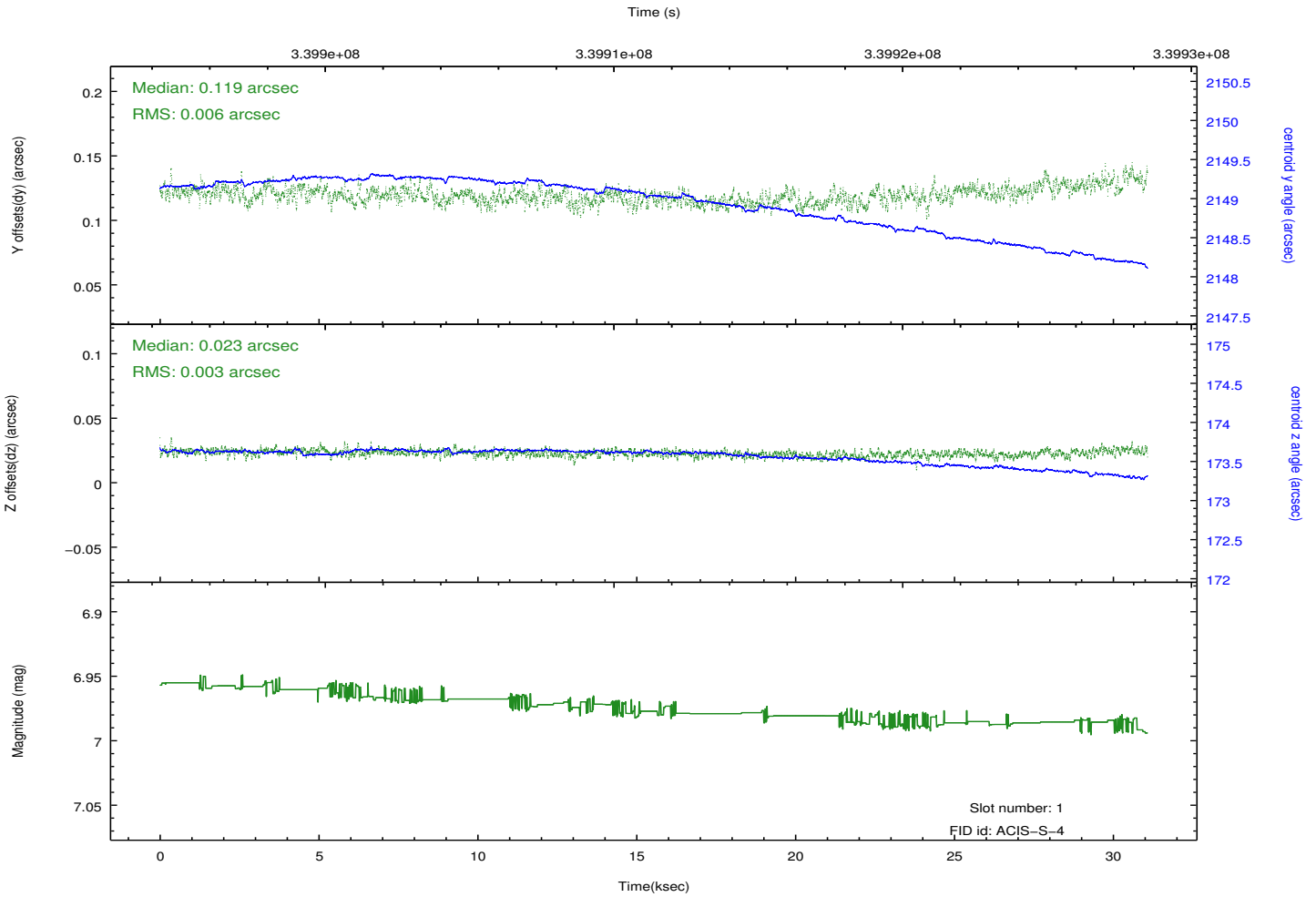
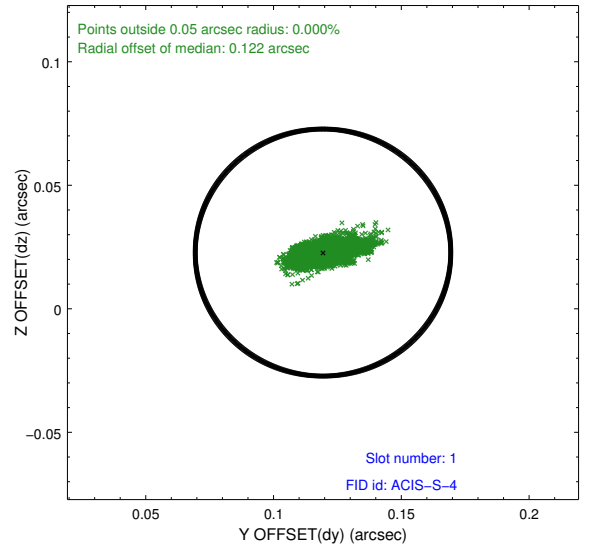
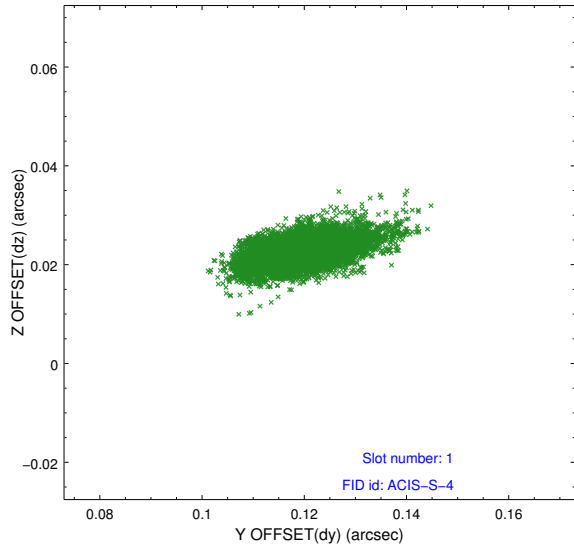


2.5 FID Slots

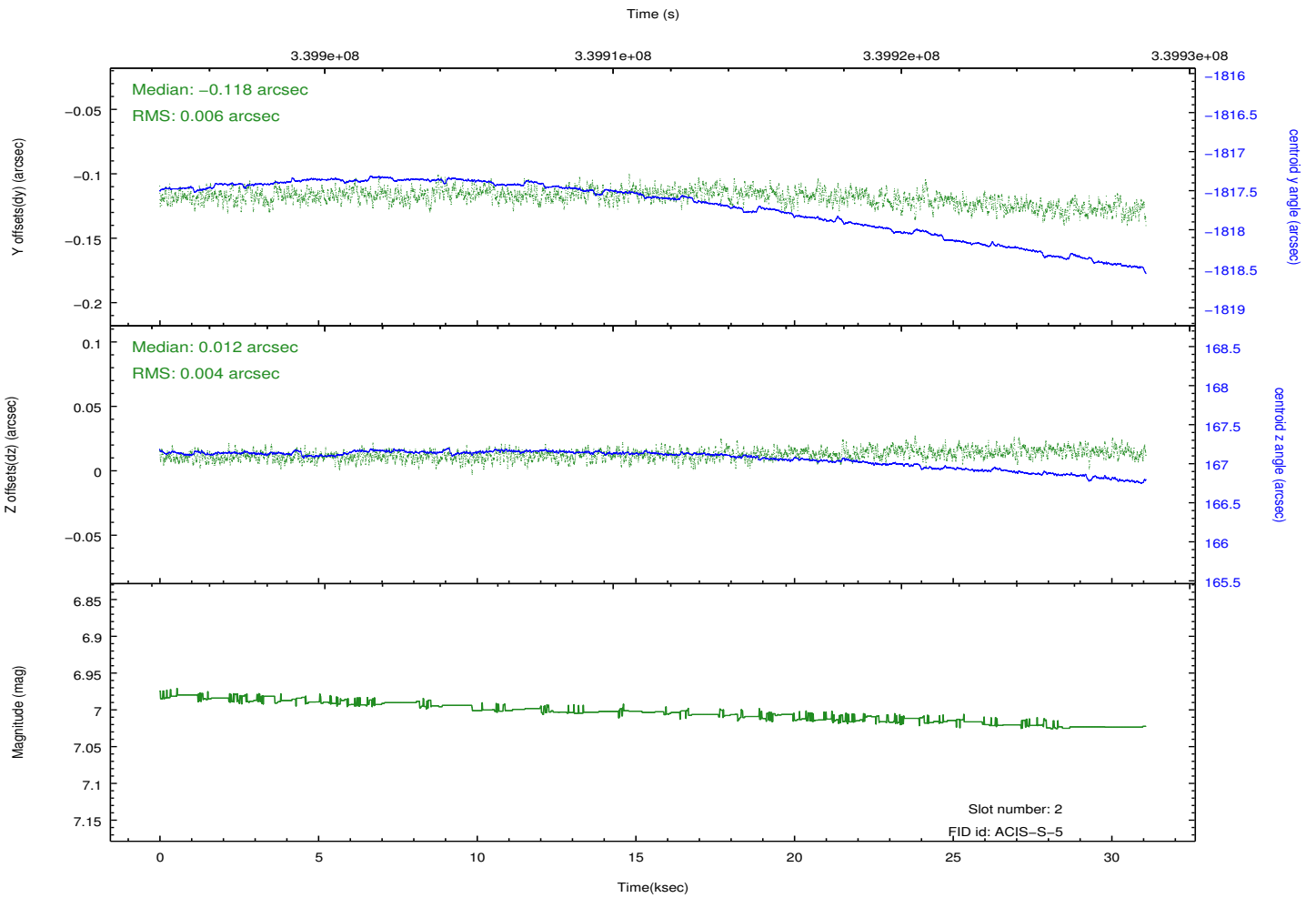
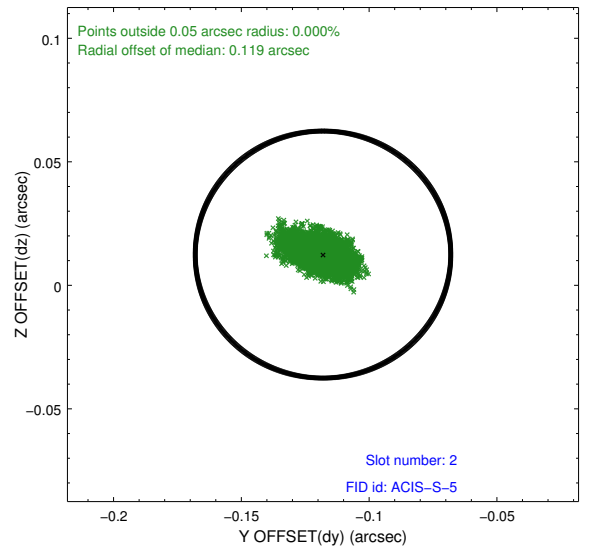
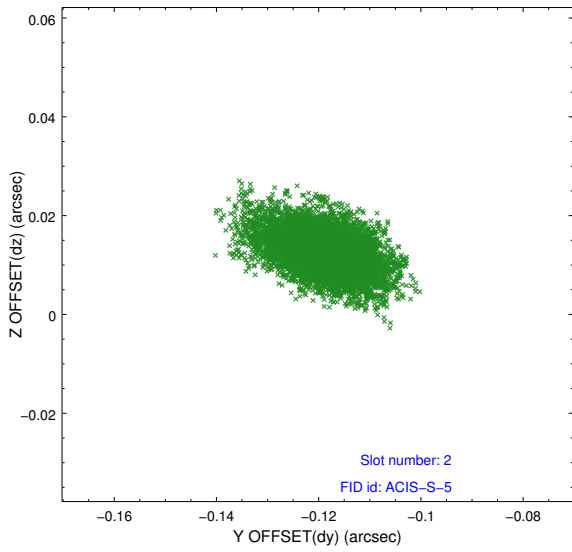
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|---------------|
| V&V Scientist | Beth Sundheim |
| V&V Date (YYYY-MM-DD) | 2015.07.28 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 31.0815998 |

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.