

V&V Reference Report

L2 ASCDS Version : 8.4.3.1

Observation 6980 - L2 Version 3
Chandra X-Ray Center

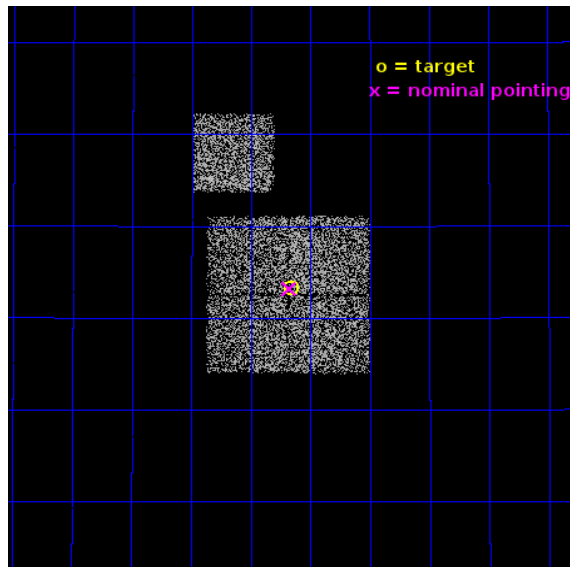
L2 Processing Date : Jul 14 2015

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

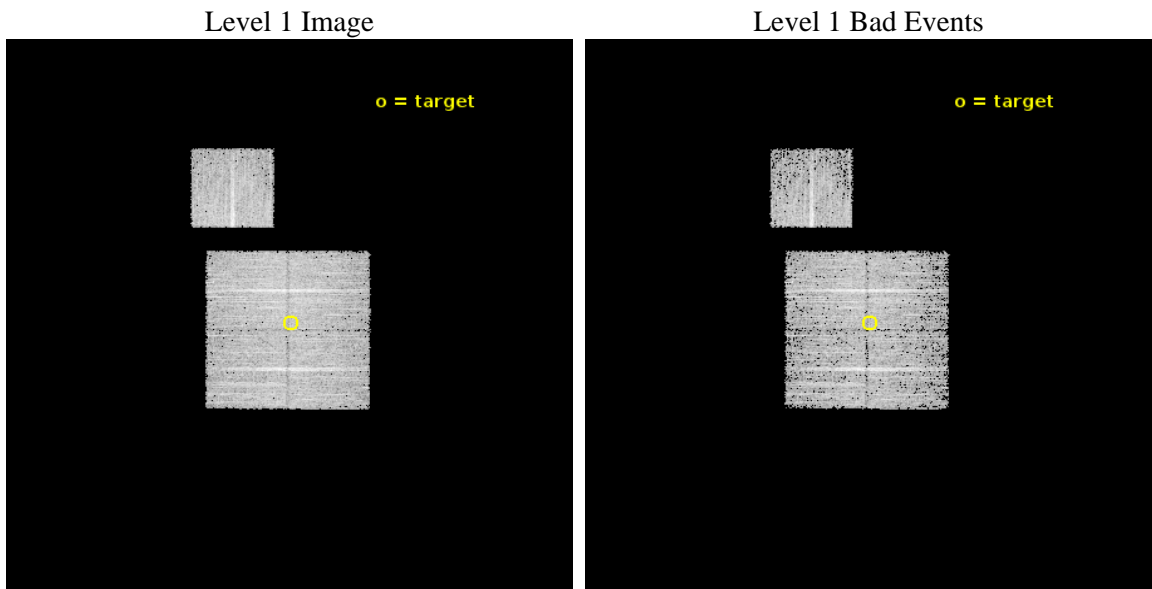
| | | |
|----------|--|---|
| seq_num | 900396 | Sequence number |
| obs_id | 6980 | Observation id |
| title | Chandra Large Scale Survey of the NOAO Bootes Deep Field (A) | Propo |
| observer | Dr. Stephen Murray | Principal investigator |
| object | Bootes2 2 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 218.664325 | Observer's specified target RA [deg] |
| dec_targ | 33.888533 | Observer's specified target Dec [deg] |
| ra_nom | 218.66948166719 | Nominal RA [deg] |
| dec_nom | 33.88665232362 | Nominal Dec [deg] |
| roll_nom | 0.20585772673182 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 5151.6562503576 | Sum of GTIs [s] |
| livetime | 5084.3460688525 | Livetime [s] |
| ontime0 | 5151.6562503576 | Sum of GTIs [s] |
| ontime1 | 5151.6562503576 | Sum of GTIs [s] |
| ontime2 | 5148.5152700543 | Sum of GTIs [s] |
| ontime3 | 5151.6562503576 | Sum of GTIs [s] |
| ontime6 | 5151.6562503576 | Sum of GTIs [s] |
| l2events | 15076 | Number of level 2 events |



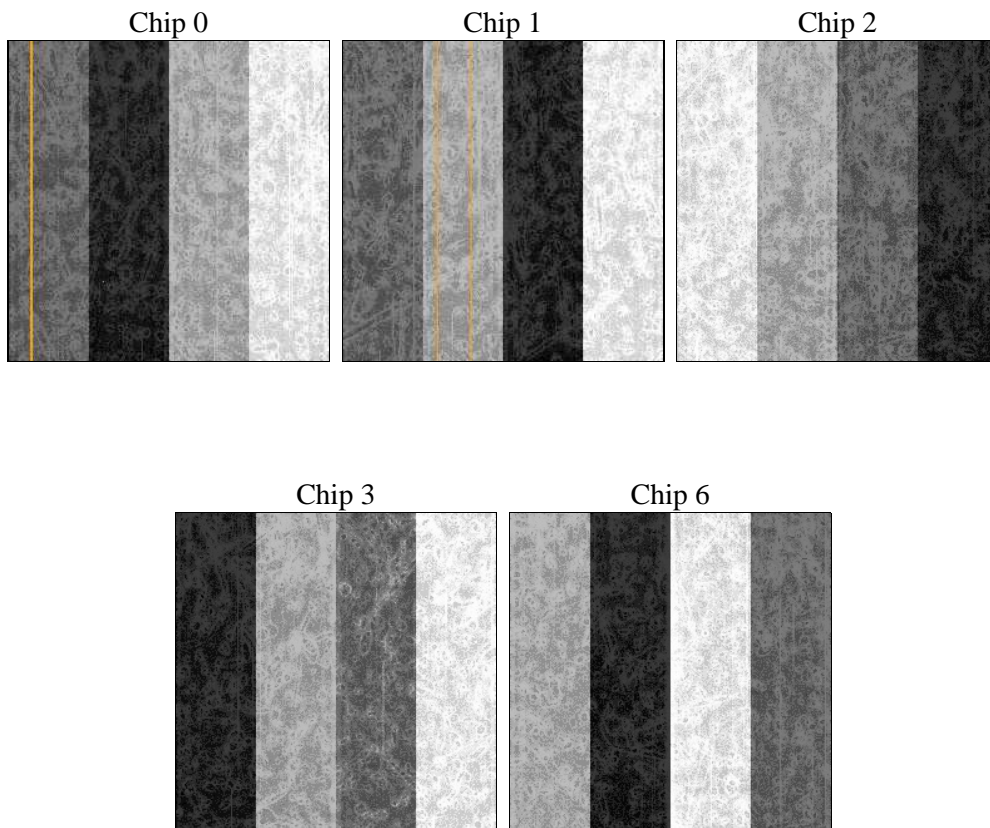
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 5000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 10.4.1 | Processing system revision | ontime | 5151.6562503576 | Sum of GTIs [s] |
| caldsver | 4.6.8 | | ontime0 | 5151.6562503576 | Sum of GTIs [s] |
| date | 2015-07-13T22:38:44 | Date and time of file creation | ontime1 | 5151.6562503576 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime2 | 5148.5152700543 | Sum of GTIs [s] |
| | | | ontime3 | 5151.6562503576 | Sum of GTIs [s] |
| | | | ontime6 | 5151.6562503576 | Sum of GTIs [s] |
| | | | l1events | 198709 | Number of level 1 events |

2.1.4 Events

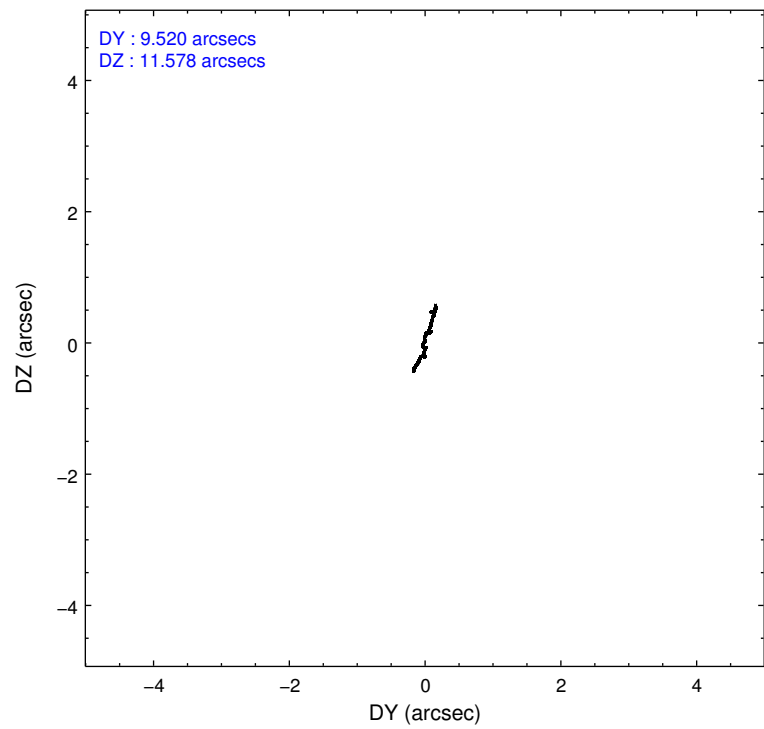
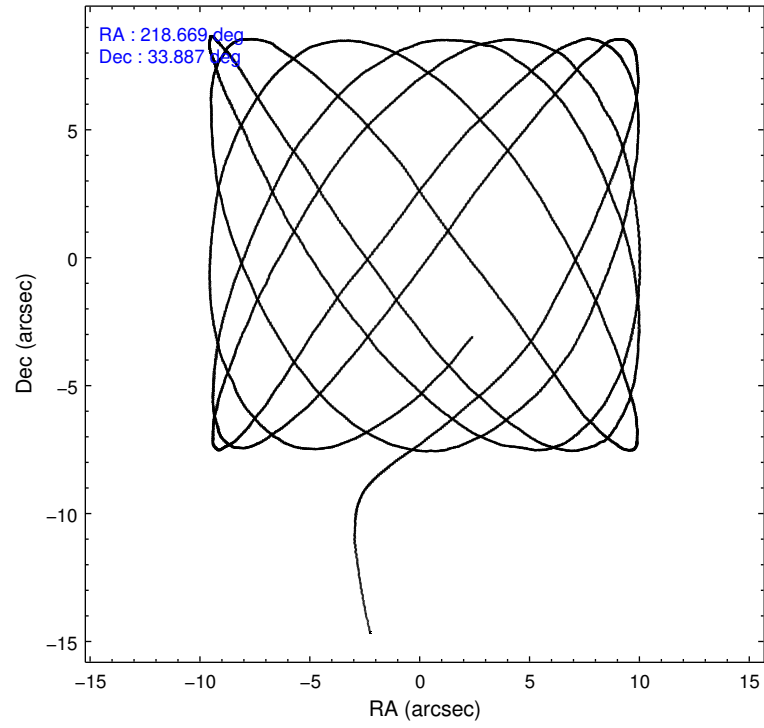
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events | 38439 | 37872 | 43816 | 39822 | 38760 |
| rejected events | 34804 | 33947 | 40334 | 36231 | 35014 |
| rejected % | 90% | 89% | 92% | 90% | 90% |

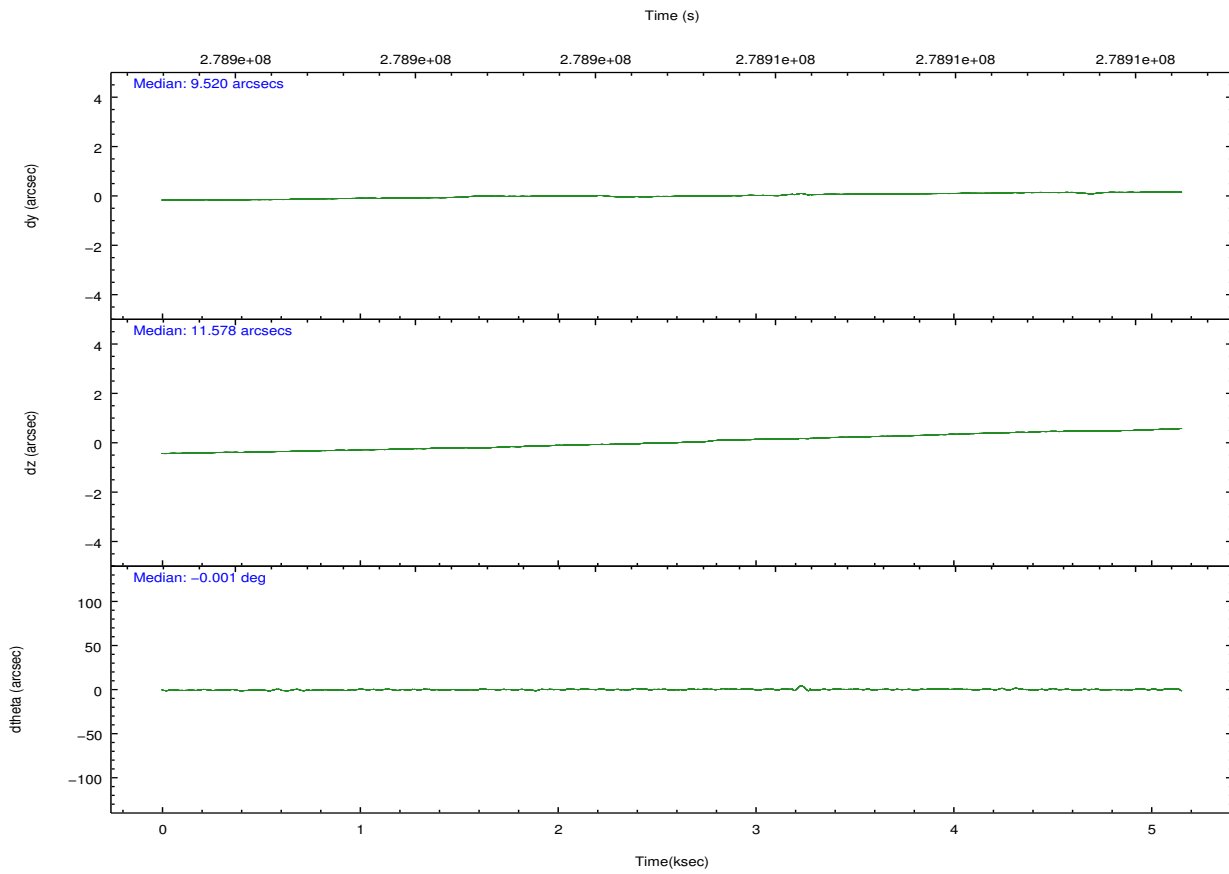
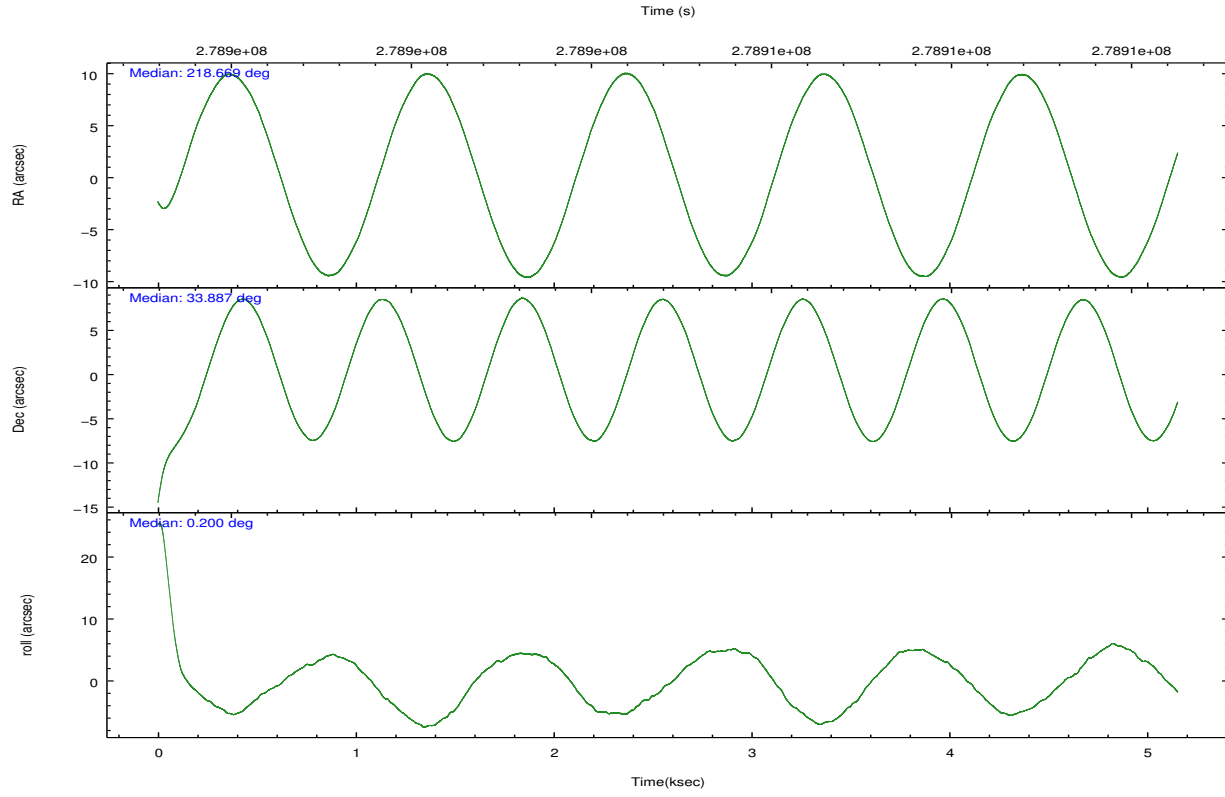
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 1396 | 1427 | 1462 | 1357 | 1506 |
| | 3% | 3% | 3% | 3% | 3% |
| grade 1 events | 20 | 19 | 16 | 15 | 23 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 888 | 935 | 830 | 820 | 825 |
| | 2% | 2% | 1% | 2% | 2% |
| grade 3 events | 423 | 504 | 405 | 426 | 426 |
| | 1% | 1% | 0% | 1% | 1% |
| grade 4 events | 434 | 466 | 391 | 441 | 430 |
| | 1% | 1% | 0% | 1% | 1% |
| grade 5 events | 1117 | 1294 | 1052 | 1329 | 1272 |
| | 2% | 3% | 2% | 3% | 3% |
| grade 6 events | 706 | 836 | 624 | 747 | 809 |
| | 1% | 2% | 1% | 1% | 2% |
| grade 7 events | 33455 | 32391 | 39036 | 34687 | 33469 |
| | 87% | 85% | 89% | 87% | 86% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|-----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 7 | 7 |
| Detector | ACIS-01236 | ACIS-01236 | 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 | 218.641045 | 218.6694816671916 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 33.872861 | 33.88665232362015 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 0.012974 | 0.2058577267318168 | [s] Primary exposure time | 0.000000 | 3.1 |
| [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) | 278903000.184000 | 278901862.40173 | | | |
| Observation start date | 2006-11-03T01:02:15 | 2006-11-03T00:44:22 | | | |
| [s] Observation end time (MET) | 278908000.184000 | 278908133.86453 | | | |
| Observation end date | 2006-11-03T02:25:35 | 2006-11-03T02:28:53 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



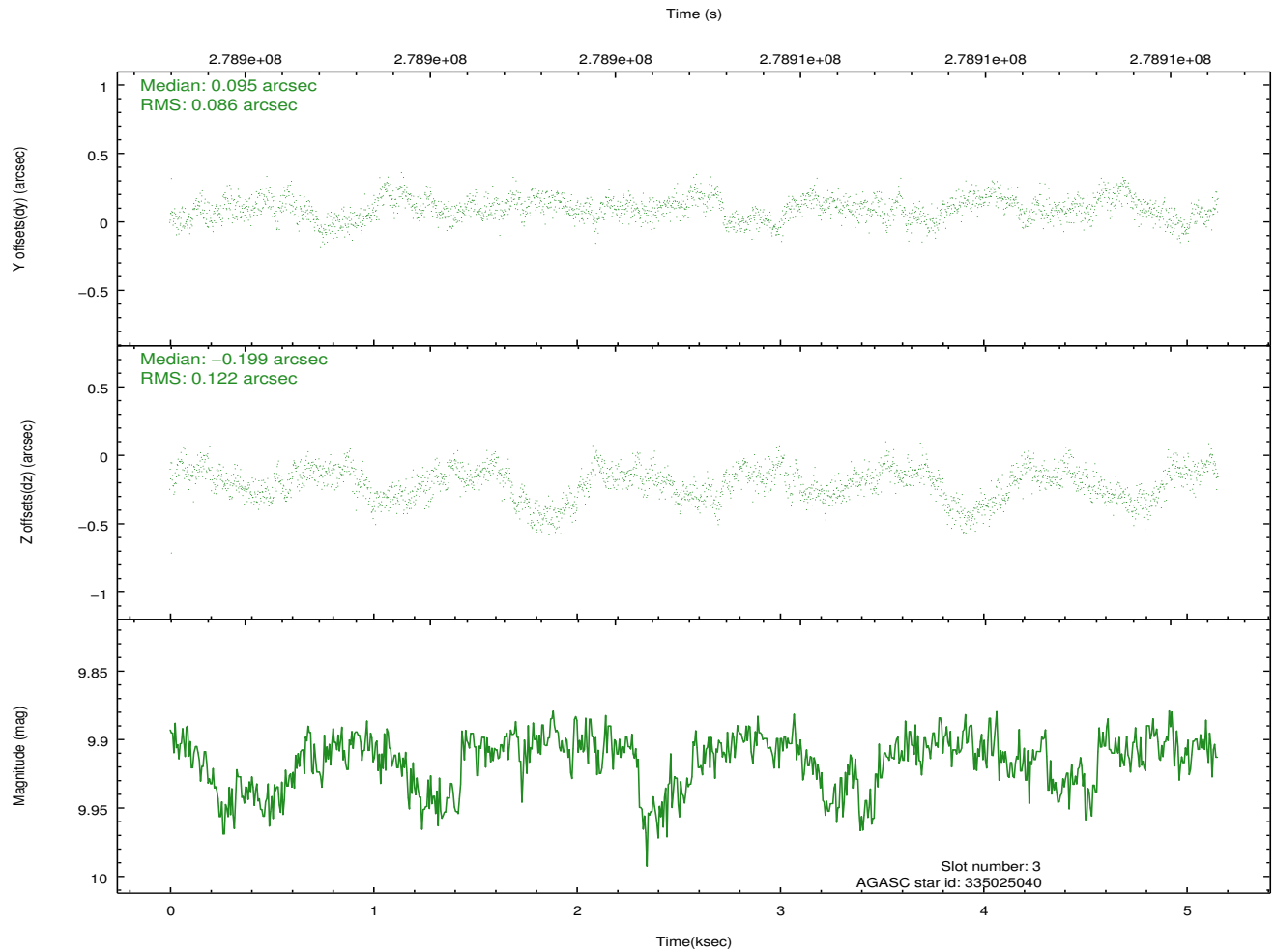
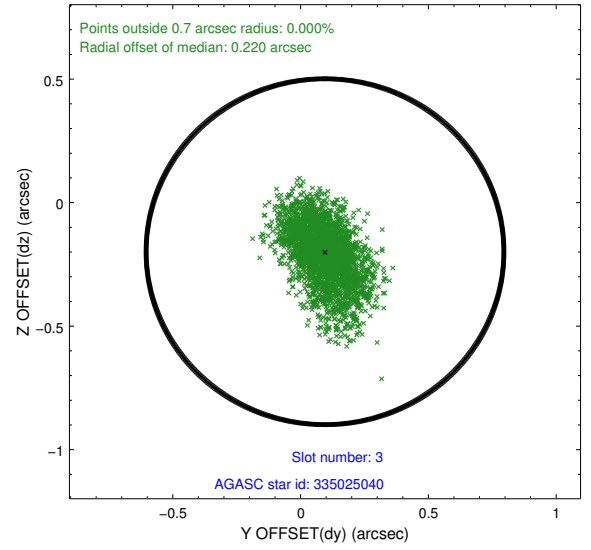
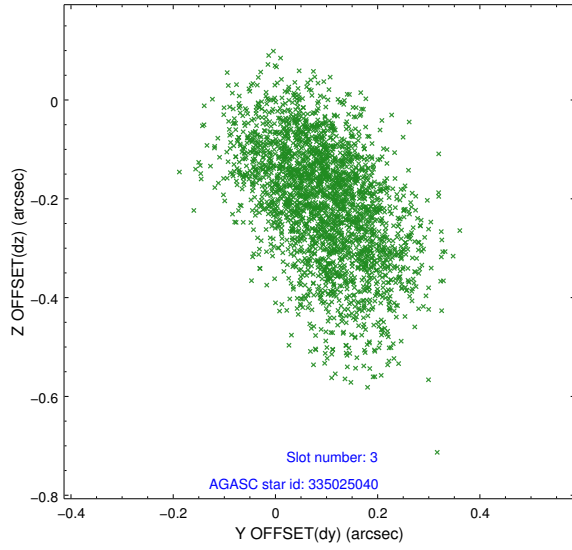


Slot Statistics

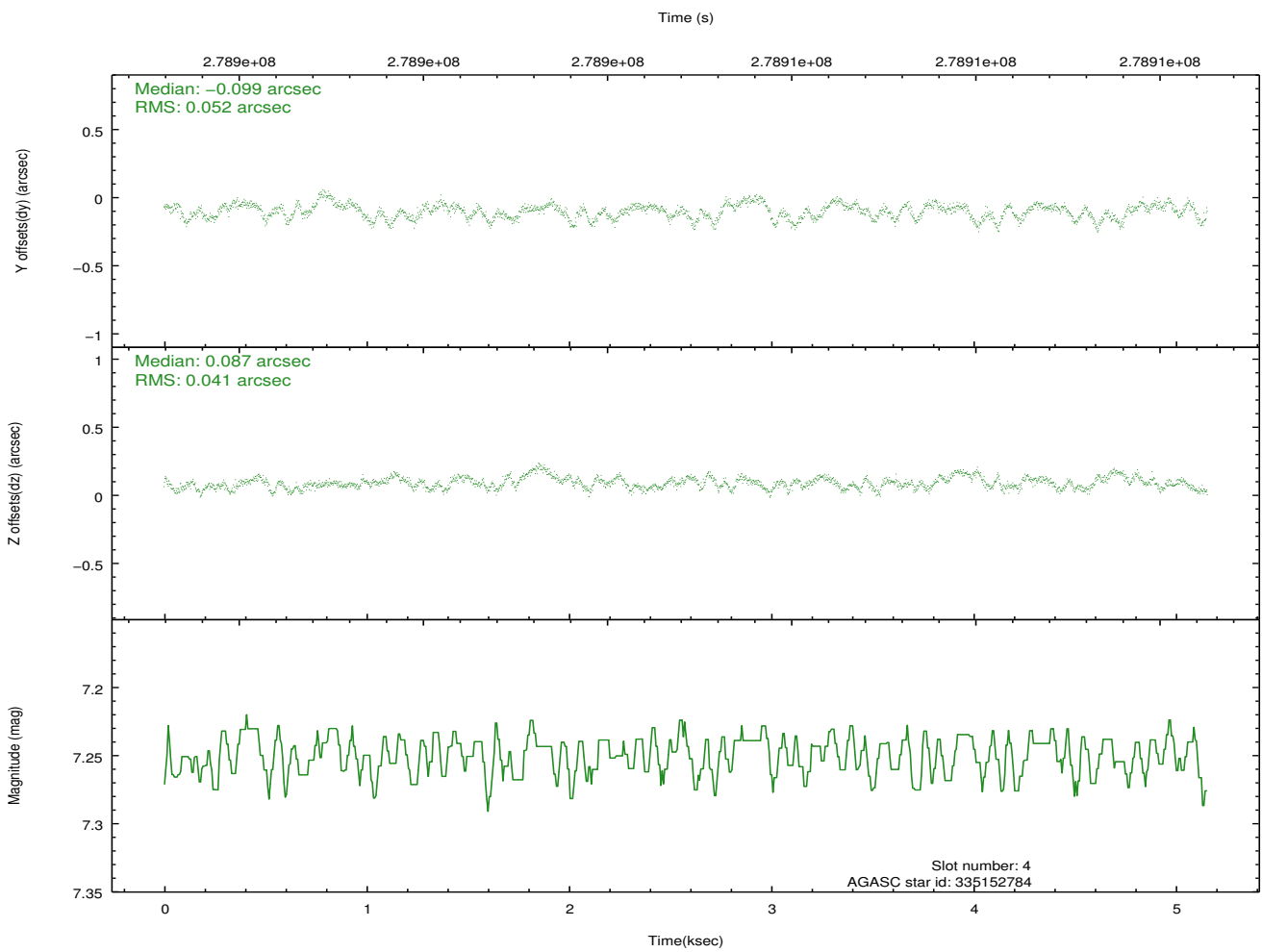
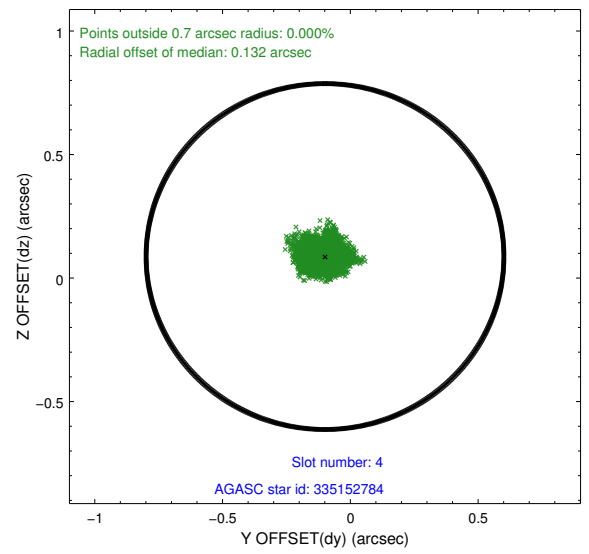
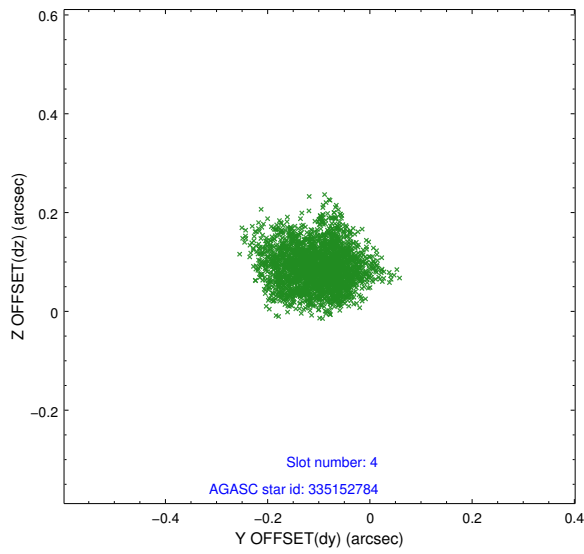
| slot | status | used | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | | ACIS-I-1 | 7.25 | 1258 | 0.060 | -0.042 | 0.009 | 0.014 | 0.000000 | 0.000000 | 930.13 | -835.18 |
| 1 | FID | | ACIS-I-5 | 7.23 | 1258 | -0.208 | 0.061 | 0.008 | 0.013 | 0.000000 | 0.000000 | -1817.56 | 1061.88 |
| 2 | FID | | ACIS-I-6 | 7.25 | 1258 | 0.056 | 0.052 | 0.012 | 0.021 | 0.000000 | 0.000000 | 394.45 | 1707.66 |
| 3 | GUIDE | used | 335025040 | 9.91 | 2512 | 0.095 | -0.199 | 0.157 | 0.260 | 218.601670 | 34.305240 | -116.39 | 1556.76 |
| 4 | GUIDE | used | 335152784 | 7.25 | 2515 | -0.099 | 0.087 | 0.071 | 0.113 | 219.280617 | 33.678221 | 1916.37 | -694.12 |
| 5 | GUIDE | used | 335154960 | 9.55 | 2514 | -0.049 | 0.054 | 0.125 | 0.192 | 219.209961 | 33.303073 | 1713.83 | -2047.19 |
| 6 | GUIDE | used | 335157088 | 9.10 | 2514 | 0.048 | 0.028 | 0.087 | 0.139 | 219.274029 | 33.726909 | 1896.41 | -520.37 |
| 7 | GUIDE | used | 335027640 | 9.10 | 2513 | 0.004 | 0.038 | 0.100 | 0.163 | 218.092211 | 33.193770 | -1652.60 | -2439.99 |

2.4 Star Slots

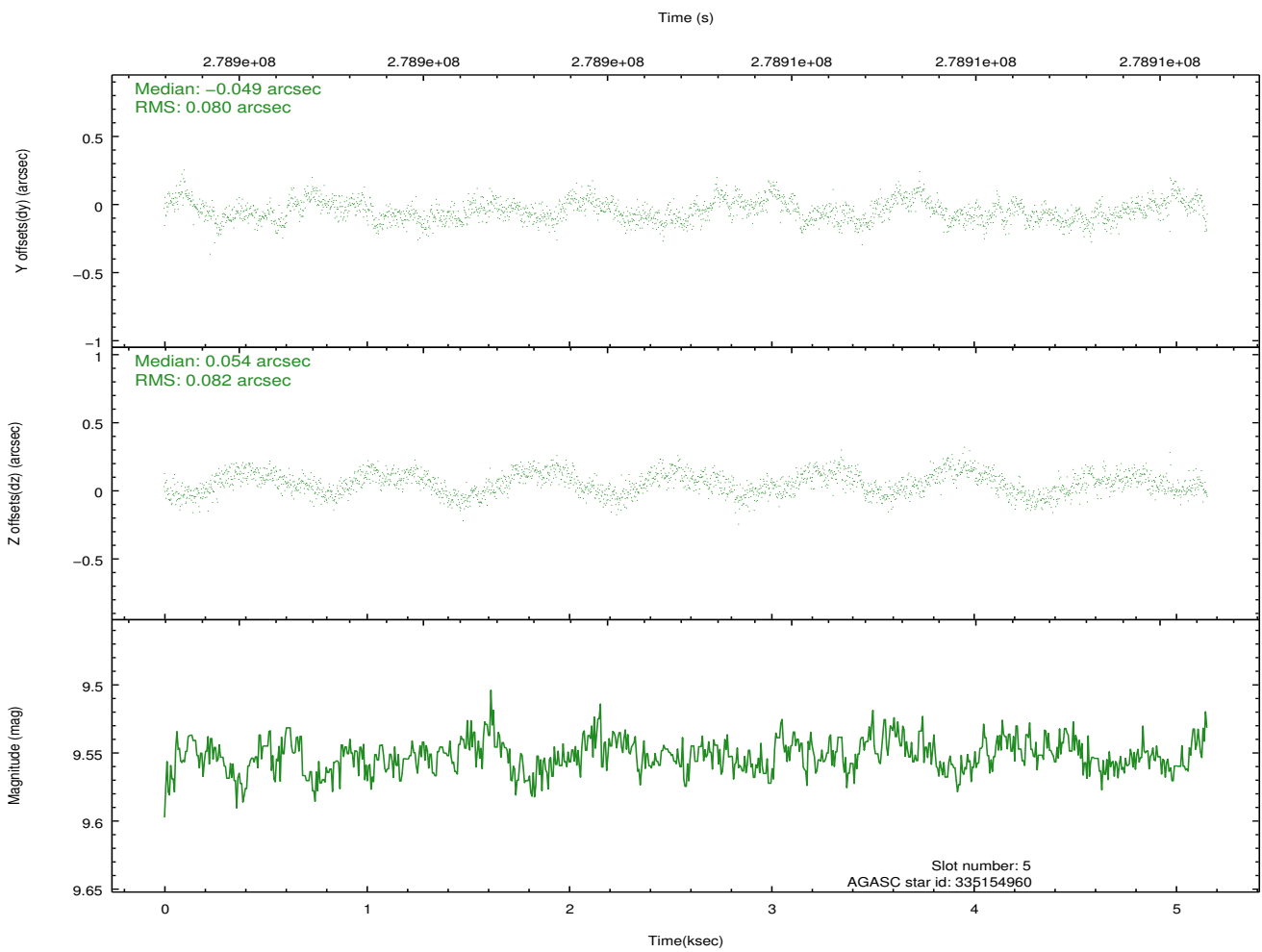
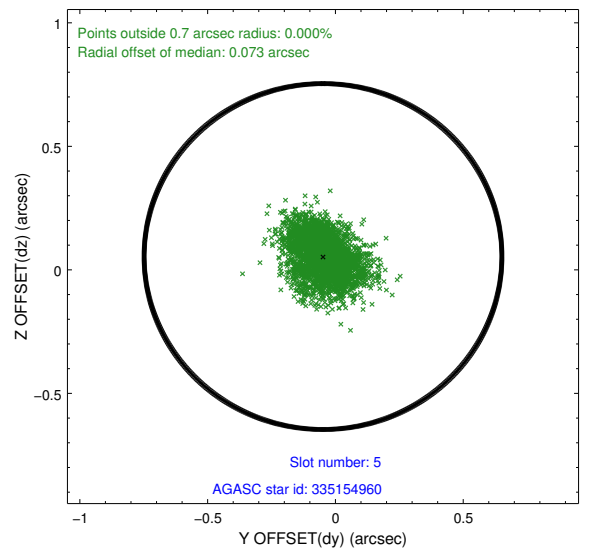
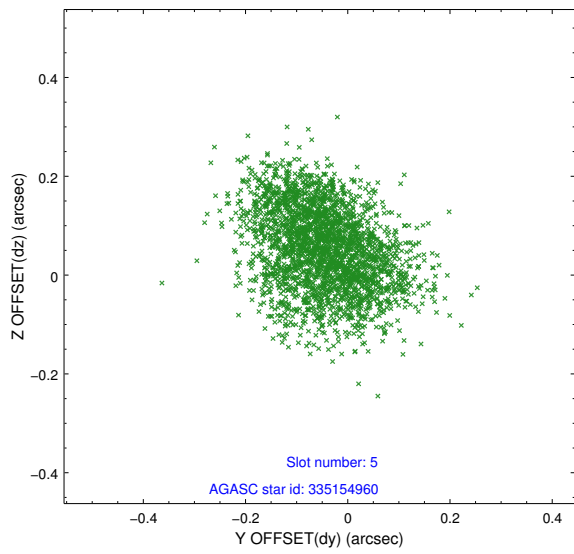
2.4.1 Slot 3



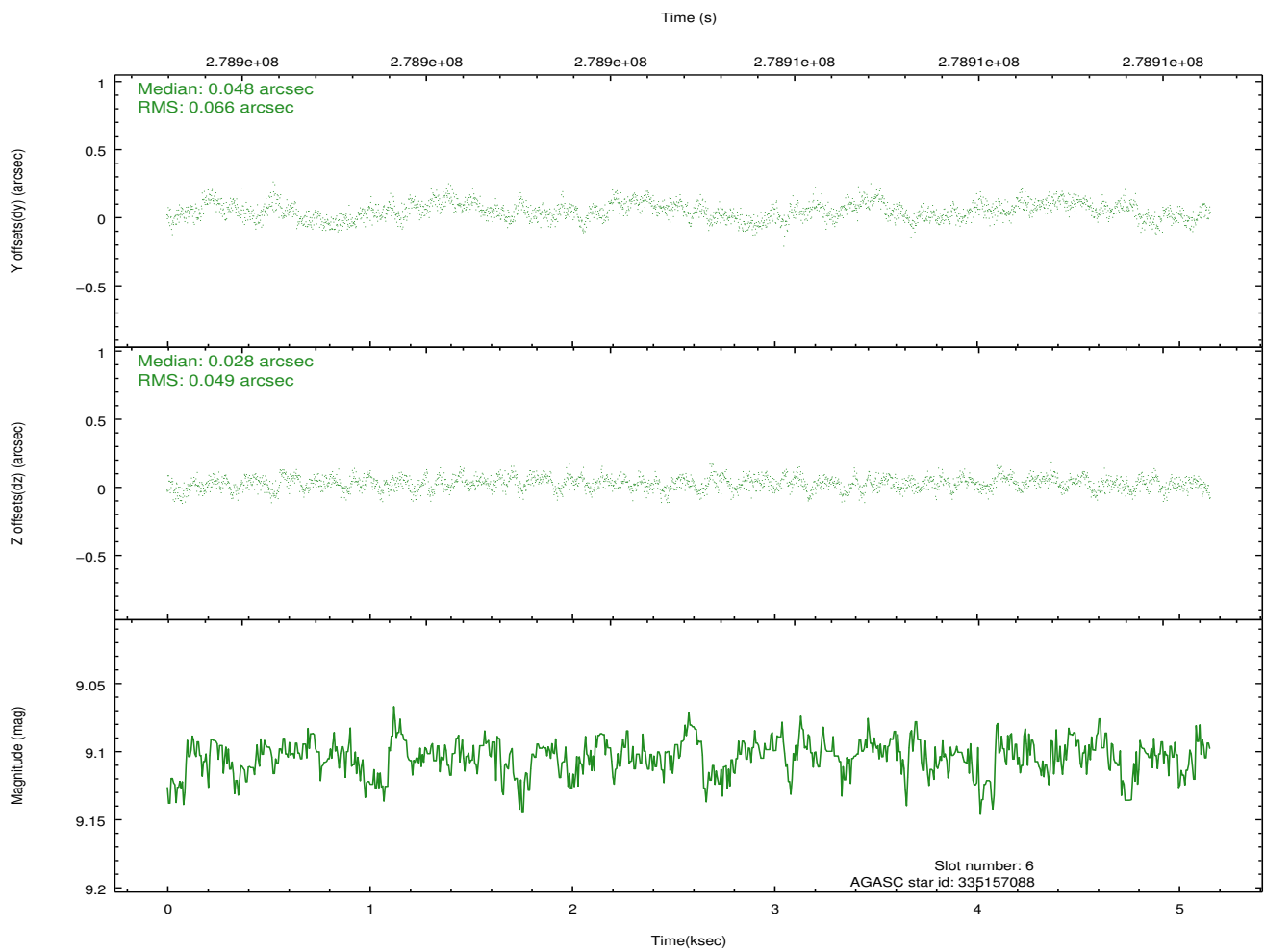
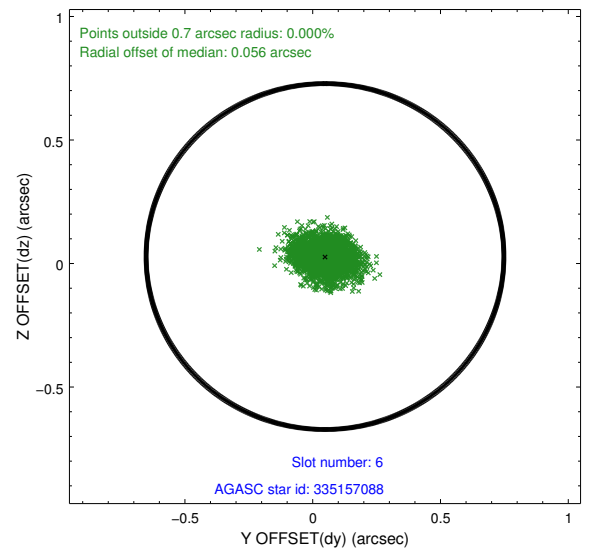
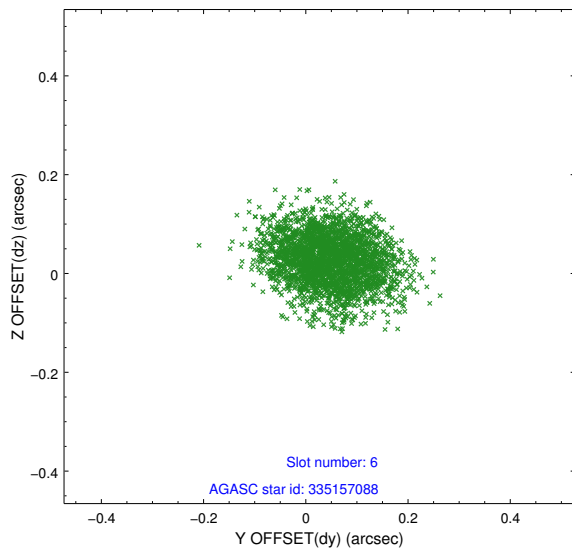
2.4.2 Slot 4



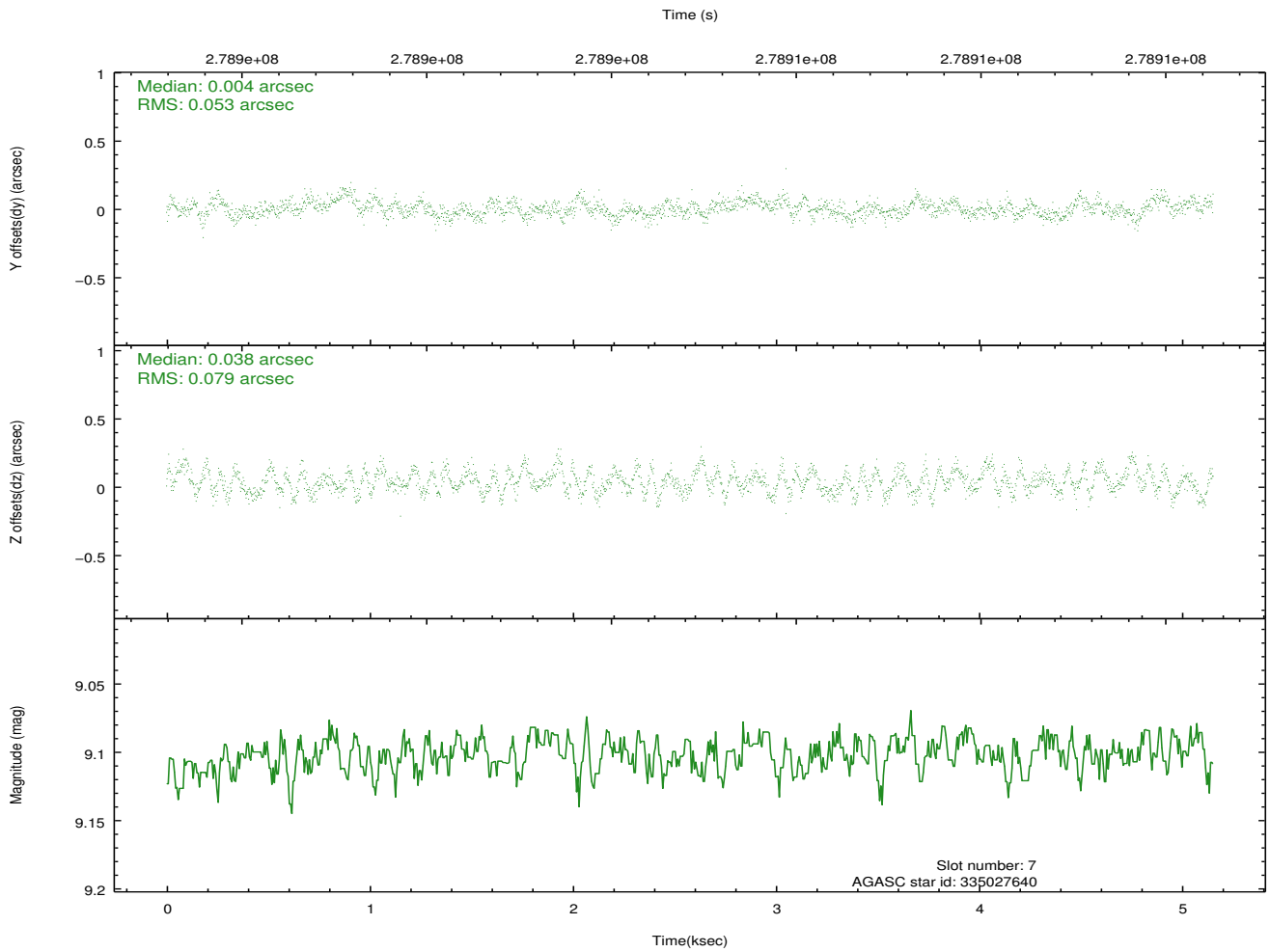
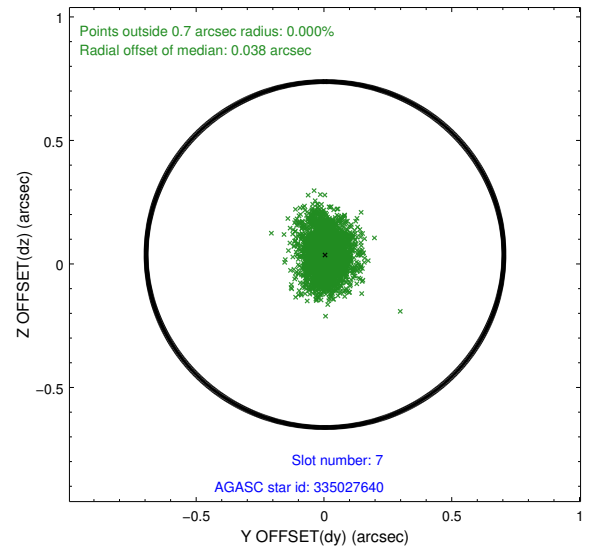
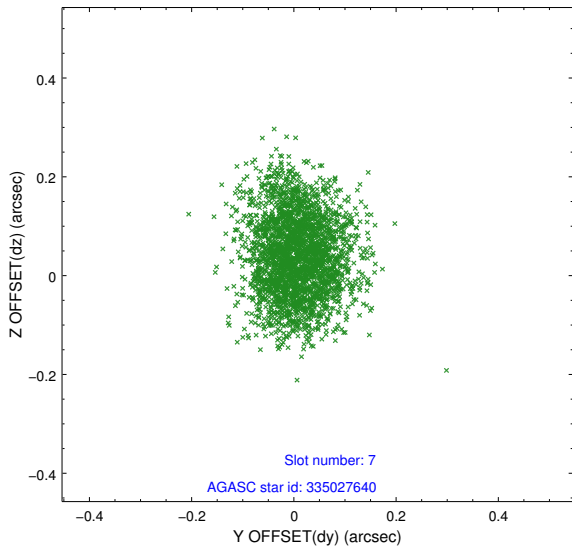
2.4.3 Slot 5



2.4.4 Slot 6

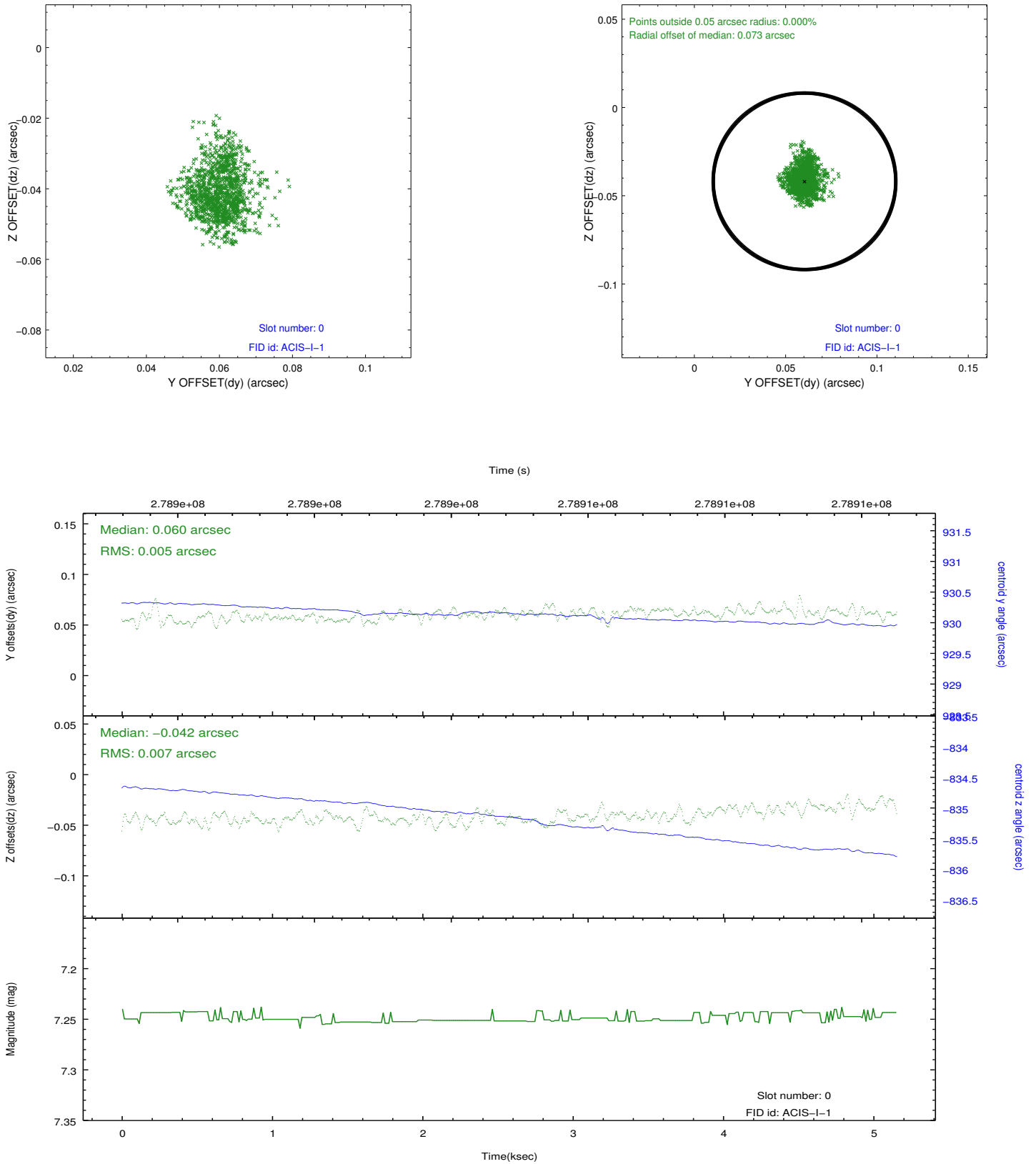


2.4.5 Slot 7

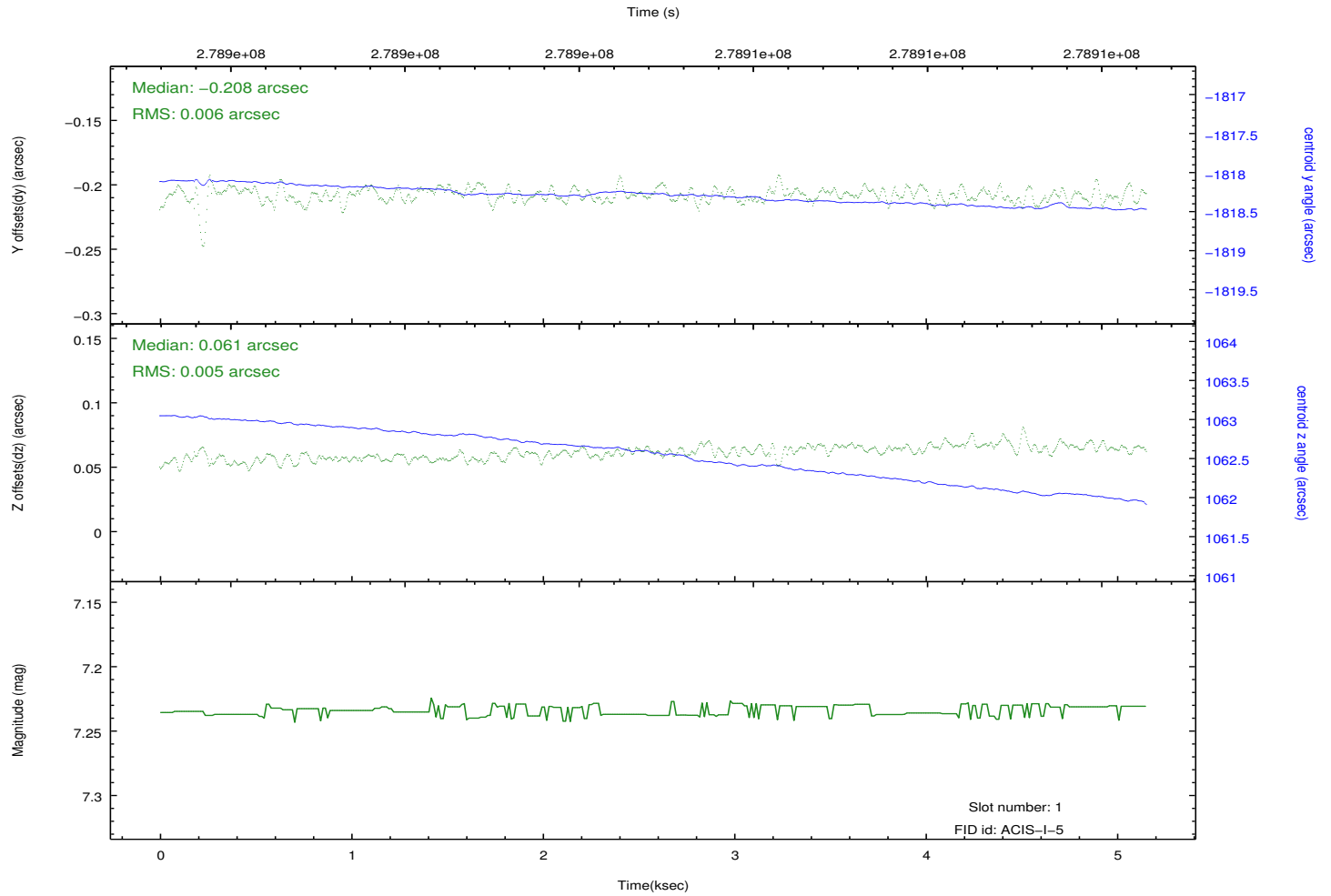
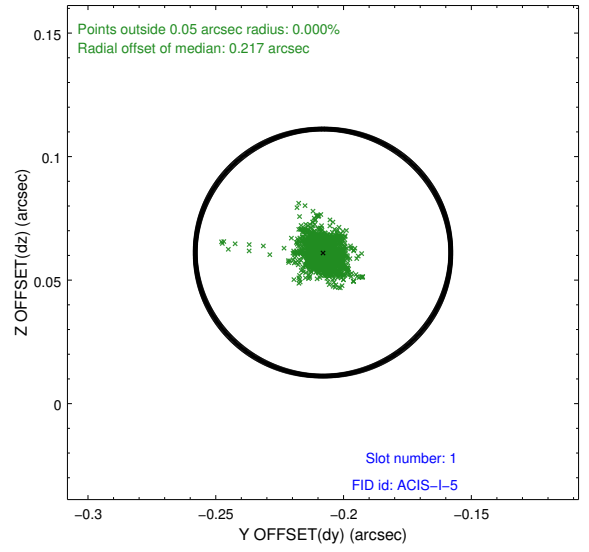
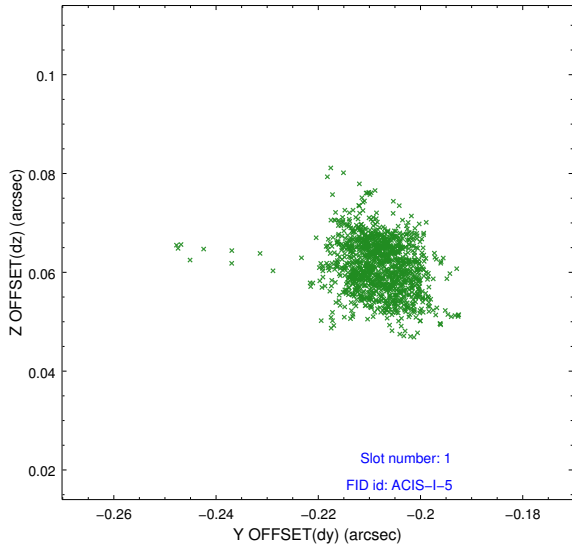


2.5 FID Slots

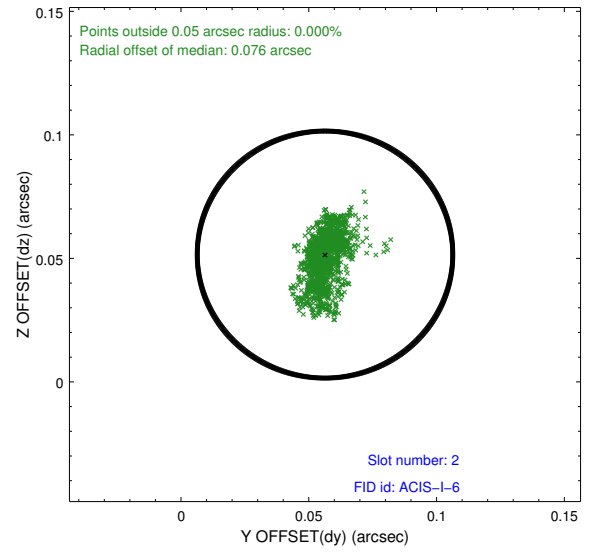
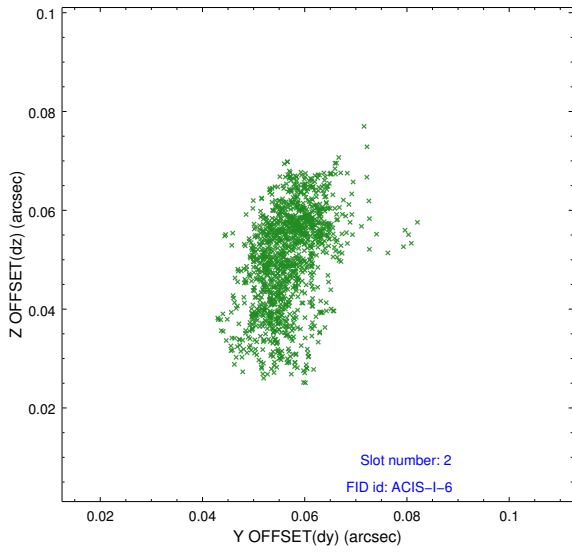
2.5.1 Slot 0



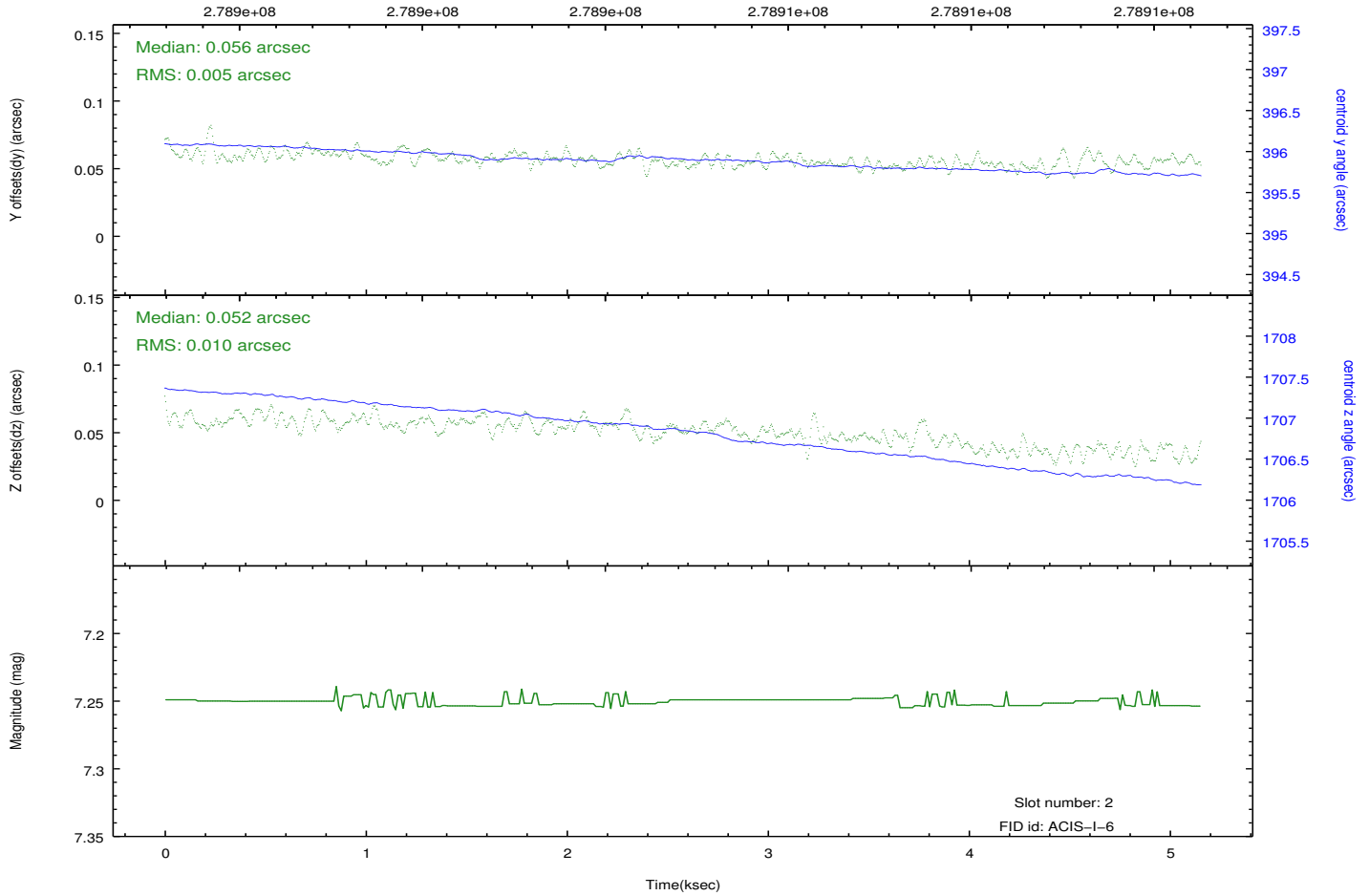
2.5.2 Slot 1



2.5.3 Slot 2



Time (s)



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2015.07.15 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 5.15220003 |

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.