

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 1031 - L2 Version 3
Chandra X-Ray Center

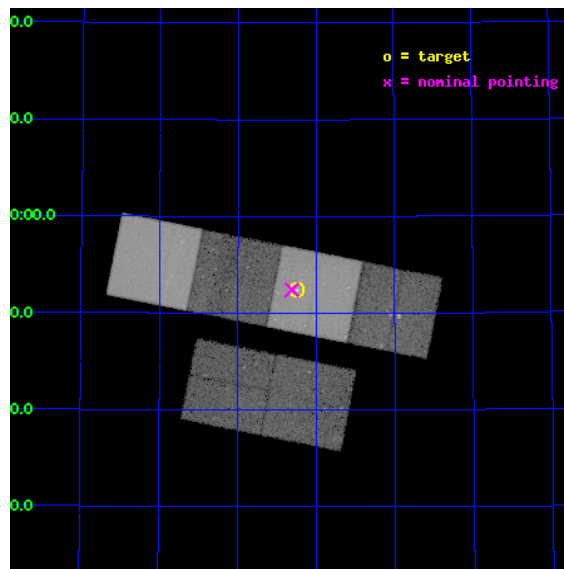
L2 Processing Date : Sep 2 2012

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1 Front

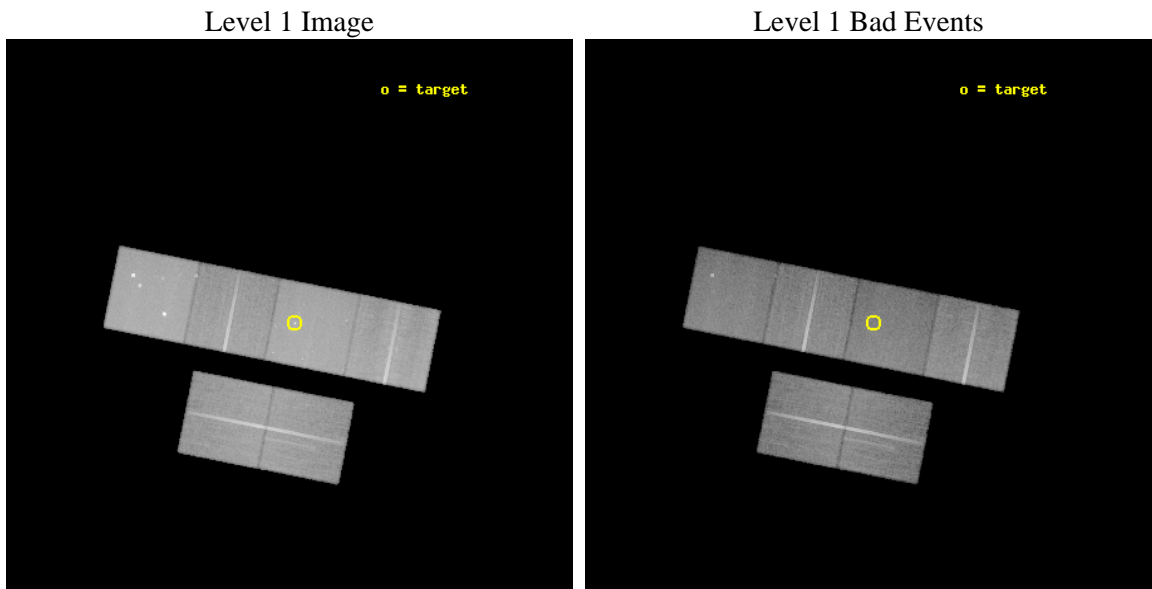
| | | |
|----------|--------------------------|--|
| seq_num | 700389 | Sequence number |
| obs_id | 1031 | Observation id |
| title | OBSERVATION OF MKR 231 | Proposal title |
| observer | Professor Gordon Garmire | Principal investigator |
| object | Mrk 231 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 194.059583 | Observer's specified target RA [deg] |
| dec_targ | 56.873694 | Observer's specified target Dec [deg] |
| ra_nom | 194.07765211934 | Nominal RA [deg] |
| dec_nom | 56.873837998625 | Nominal Dec [deg] |
| roll_nom | 11.229408884957 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 39756.800037012 | Sum of GTIs [s] |
| livetime | 39253.375496272 | Livetime [s] |
| ontime2 | 39756.800037012 | Sum of GTIs [s] |
| ontime3 | 39756.800037012 | Sum of GTIs [s] |
| ontime5 | 39756.800037012 | Sum of GTIs [s] |
| ontime6 | 39753.55904685 | Sum of GTIs [s] |
| ontime7 | 39756.800037012 | Sum of GTIs [s] |
| ontime8 | 39753.559076771 | Sum of GTIs [s] |
| l2events | 430130 | Number of level 2 events |



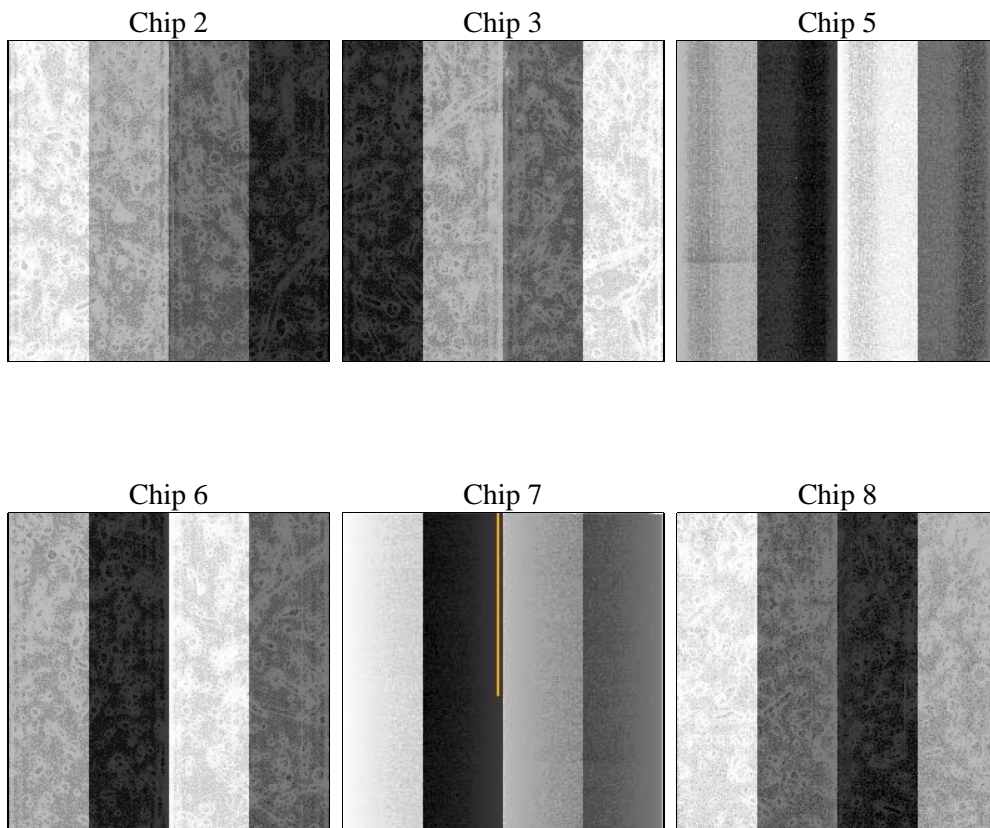
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 40000.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 39756.800037012 | Sum of GTIs [s] |
| caldbver | 4.5.1.1 | | ontime2 | 39756.800037012 | Sum of GTIs [s] |
| date | 2012-09-02T12:23:38 | Date and time of file creation | ontime3 | 39756.800037012 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime5 | 39756.800037012 | Sum of GTIs [s] |
| | | | ontime6 | 39753.55904685 | Sum of GTIs [s] |
| | | | ontime7 | 39756.800037012 | Sum of GTIs [s] |
| | | | ontime8 | 39753.559076771 | Sum of GTIs [s] |
| | | | l1events | 1816740 | Number of level 1 events |

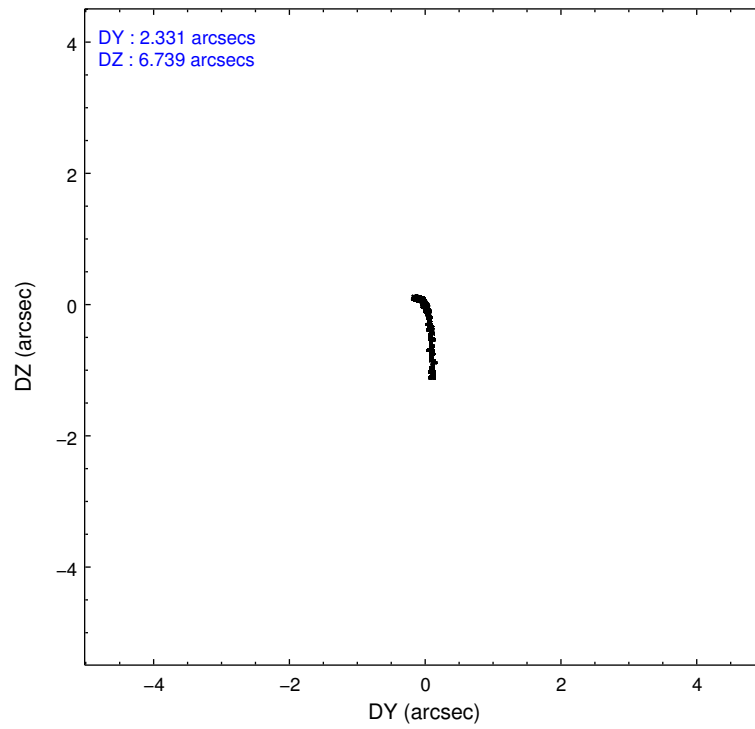
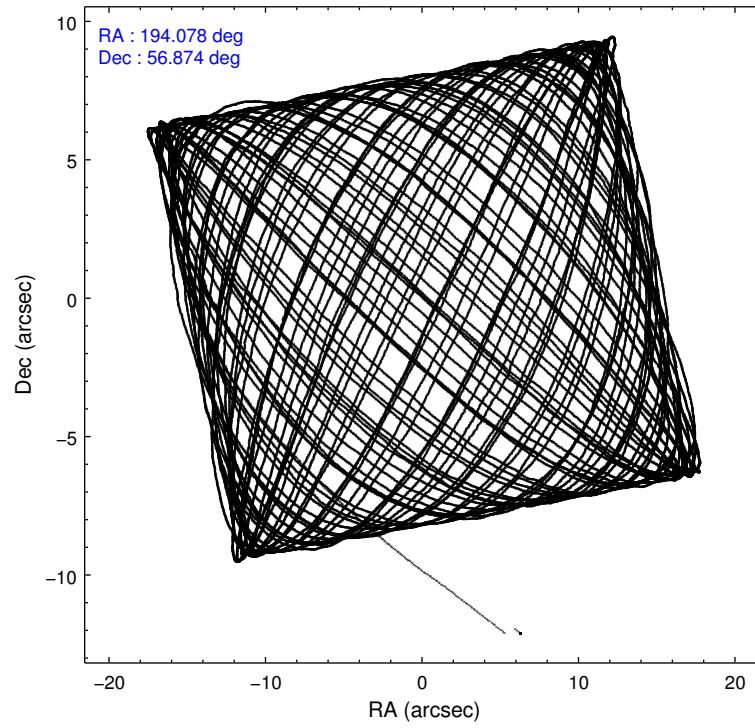
2.1.4 Events

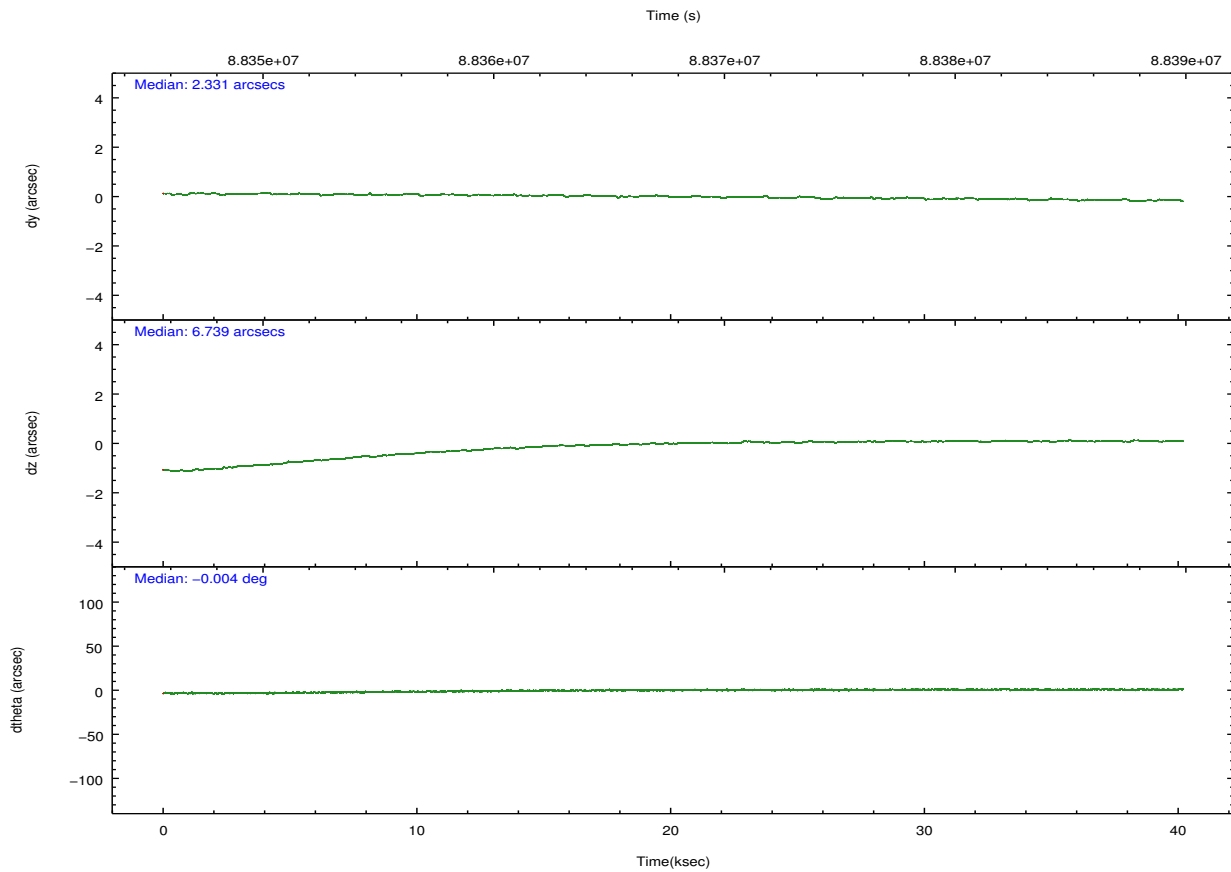
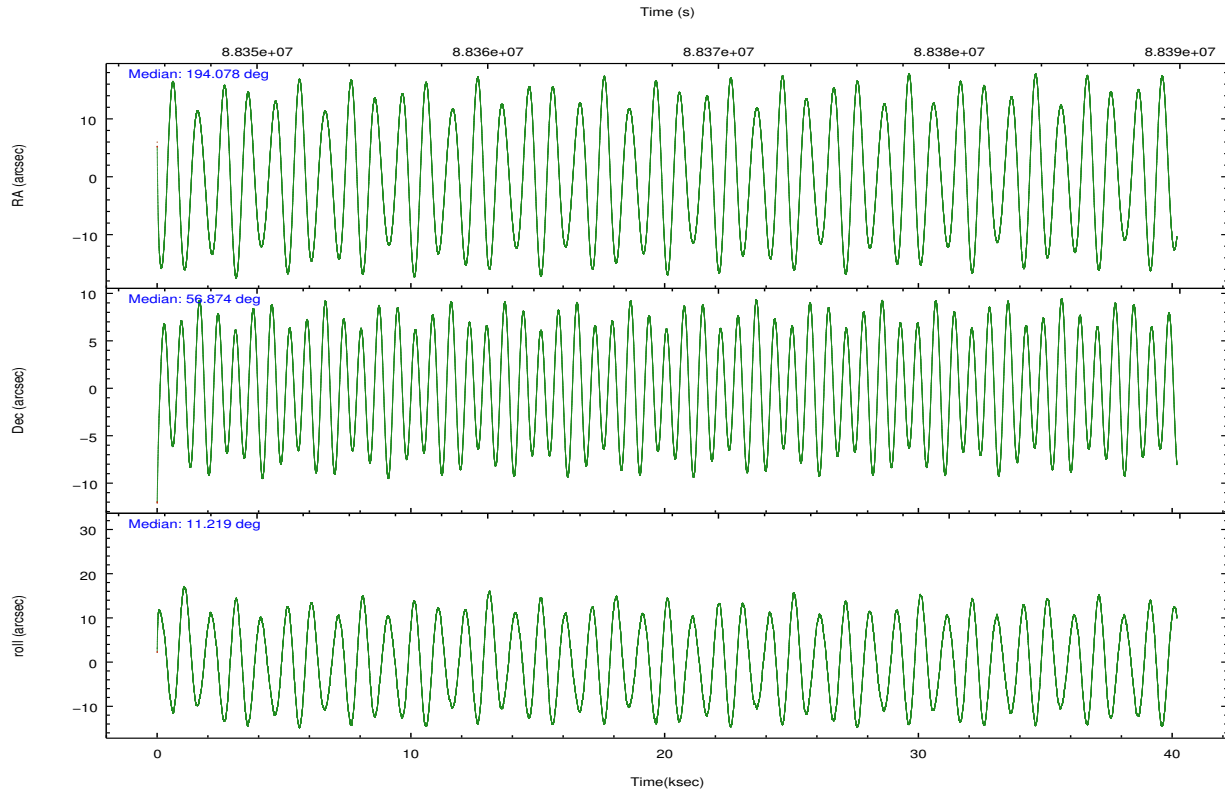
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|--------|--------|--------|--------|--------|----------------|--------|--------|--------|--------|--------|--------|
| level 1 events | 260703 | 248108 | 380127 | 258720 | 342097 | 326985 | grade 0 events | 12168 | 12218 | 30650 | 11945 | 17991 | 21427 |
| rejected events | 232530 | 220211 | 188939 | 229843 | 182459 | 261101 | | 4% | 4% | 8% | 4% | 5% | 6% |
| rejected % | 89% | 88% | 49% | 88% | 53% | 79% | grade 1 events | 93 | 101 | 1776 | 108 | 304 | 196 |
| | | | | | | | | 0% | 0% | 0% | 0% | 0% | 0% |
| | | | | | | | grade 2 events | 5920 | 5400 | 52701 | 5657 | 31285 | 13529 |
| | | | | | | | | 2% | 2% | 13% | 2% | 9% | 4% |
| | | | | | | | grade 3 events | 2709 | 2669 | 8632 | 2869 | 14337 | 7424 |
| | | | | | | | | 1% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 4 events | 2710 | 2723 | 8522 | 2839 | 14395 | 6697 |
| | | | | | | | | 1% | 1% | 2% | 1% | 4% | 2% |
| | | | | | | | grade 5 events | 8479 | 9283 | 26504 | 10068 | 30370 | 12822 |
| | | | | | | | | 3% | 3% | 6% | 3% | 8% | 3% |
| | | | | | | | grade 6 events | 4668 | 4891 | 90702 | 5569 | 81646 | 16807 |
| | | | | | | | | 1% | 1% | 23% | 2% | 23% | 5% |
| | | | | | | | grade 7 events | 223956 | 210823 | 160640 | 219665 | 151769 | 248083 |
| | | | | | | | | 85% | 84% | 42% | 84% | 44% | 75% |

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 | FAINT | FAINT | Number of optional ACIS chips dropped | 0 | 0 |
| Observation mode | POINTING | POINTING | On-chip summing requested | N | N |
| [deg] Pointing RA | 194.040262 | 194.0776521193422 | Subarray requested | NONE | NONE |
| [deg] Pointing Dec | 56.855656 | 56.87383799862539 | Alternating exposures requested | N | N |
| [deg] Pointing Roll | 11.104087 | 11.22940888495699 | [s] Primary exposure time | 0.000000 | 3.2 |
| [mm] SIM focus pos | -0.684267 | -0.6828225247311905 | | | |
| [mm] SIM defocus | 0 | 0.001444936568705701 | | | |
| [mm] SIM translation stage pos | -190.132523 | -190.1425803651734 | | | |
| [mm] SIM translation stage offset | 0 | 0.01005778216563158 | | | |
| [s] Observation start time (MET) | 88347869.184000 | 88347064.40954 | | | |
| Observation start date | 2000-10-19T13:03:25 | 2000-10-19T12:51:04 | | | |
| [s] Observation end time (MET) | 88387869.184000 | 88388367.298601 | | | |
| Observation end date | 2000-10-20T00:10:05 | 2000-10-20T00:19:27 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



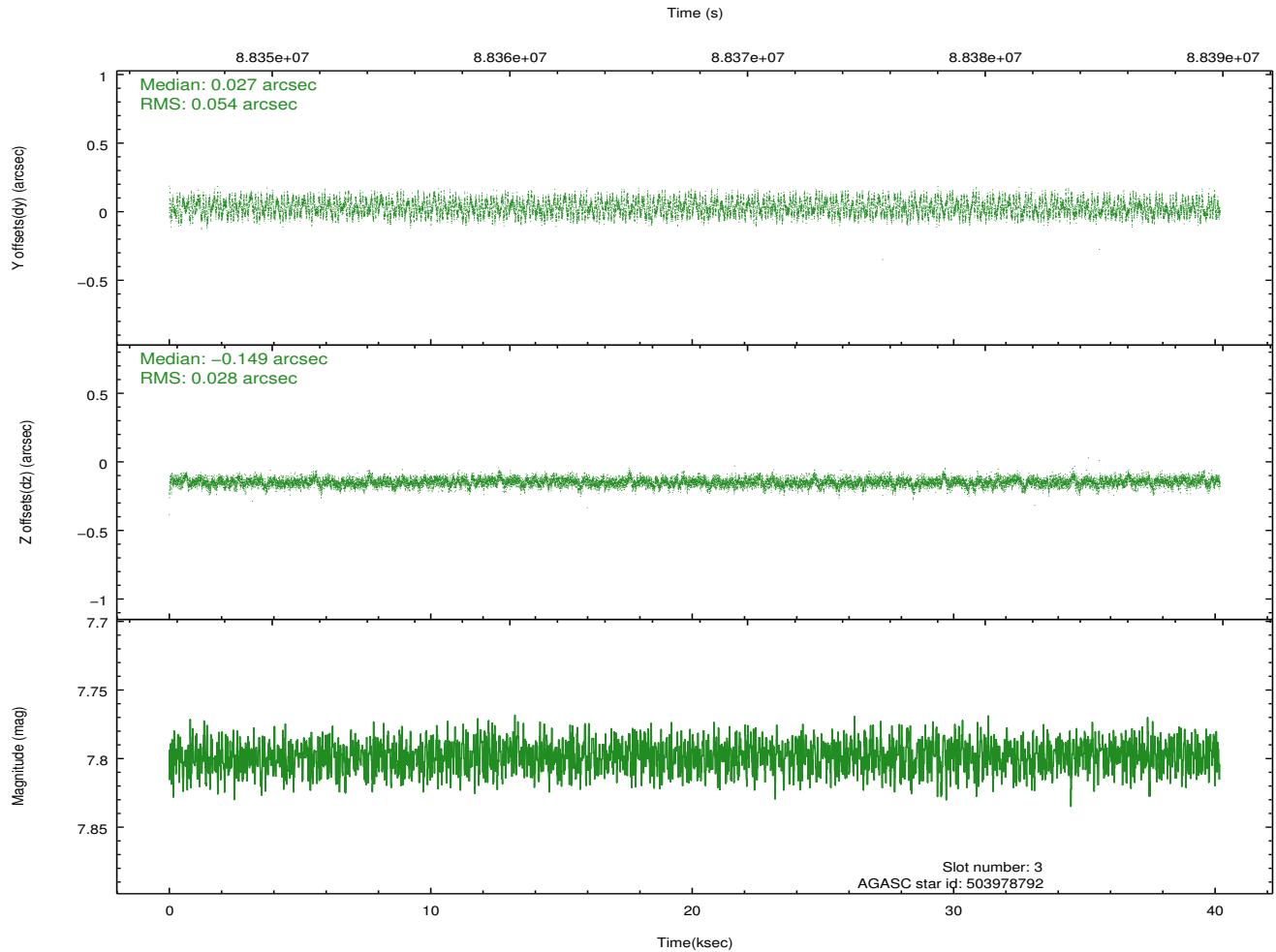
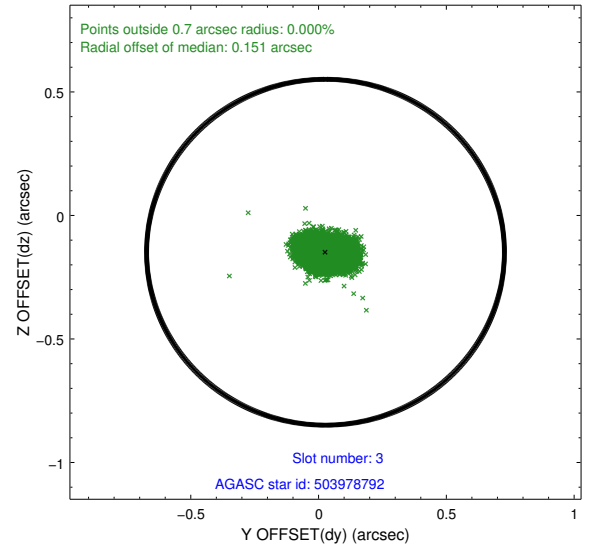
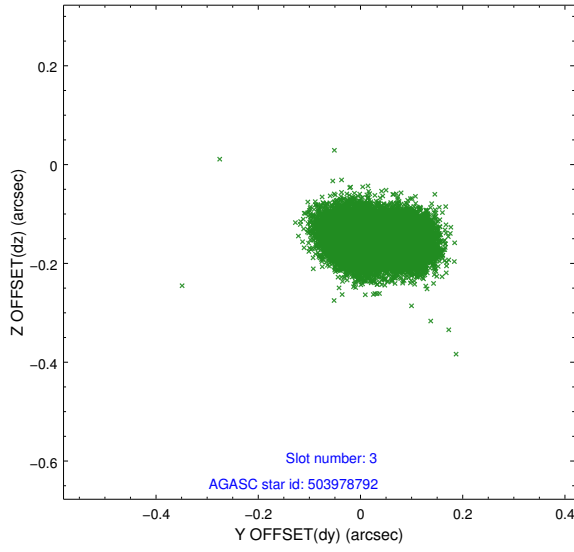


Slot Statistics

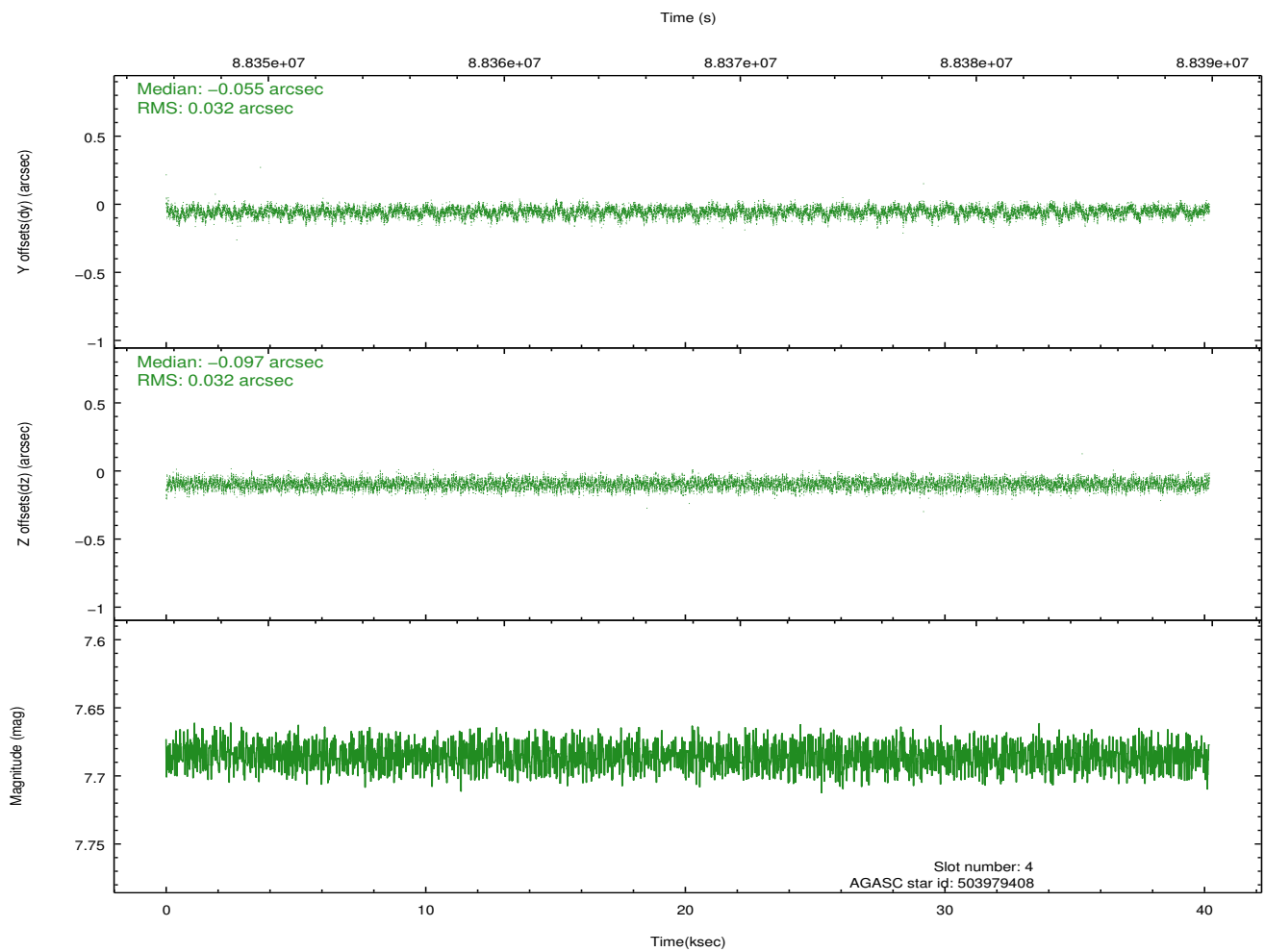
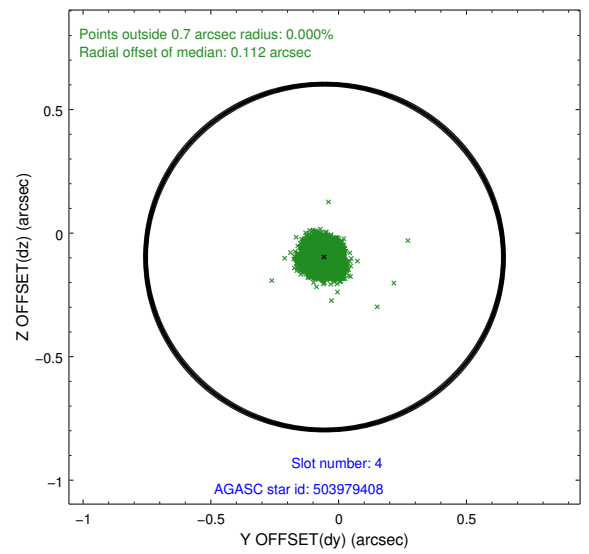
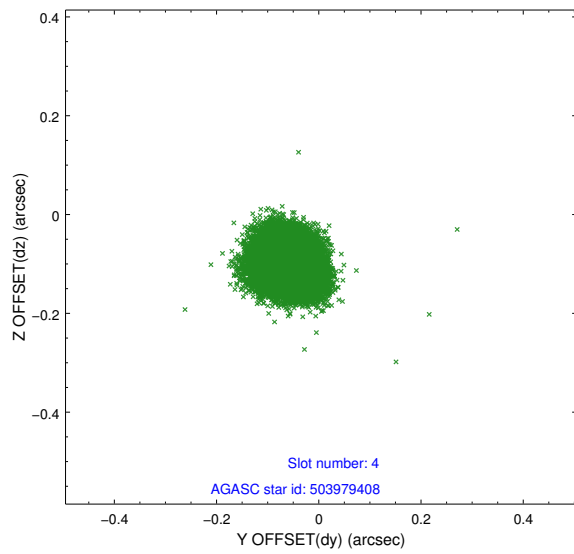
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|------------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.11 | 9801 | -0.032 | -0.004 | 0.009 | 0.017 | 0.000000 | 0.000000 | -754.97 | -1727.65 |
| 1 | FID | ACIS-S-4 | 7.20 | 9800 | -0.016 | 0.017 | 0.011 | 0.023 | 0.000000 | 0.000000 | 2158.31 | 180.86 |
| 2 | FID | ACIS-S-5 | 7.23 | 9799 | 0.016 | -0.004 | 0.008 | 0.013 | 0.000000 | 0.000000 | -1807.76 | 174.50 |
| 3 | GUIDE | 503978792 | 7.80 | 19601 | 0.027 | -0.149 | 0.066 | 0.103 | 192.862042 | 57.373424 | -1881.98 | 2288.90 |
| 4 | GUIDE | 503979408 | 7.69 | 19602 | -0.055 | -0.097 | 0.048 | 0.078 | 193.466022 | 56.819966 | -1134.45 | 96.77 |
| 5 | GUIDE | 503979936 | 8.60 | 19601 | -0.073 | 0.082 | 0.058 | 0.094 | 194.419806 | 56.566429 | 538.39 | -1163.99 |
| 6 | GUIDE | 503977472 | 8.71 | 19600 | 0.082 | 0.155 | 0.058 | 0.093 | 193.107383 | 56.634174 | -1963.66 | -414.13 |
| 7 | GUIDE | 503978872 | 9.47 | 19595 | 0.017 | 0.009 | 0.076 | 0.126 | 193.810866 | 57.011691 | -333.41 | 638.97 |

2.4 Star Slots

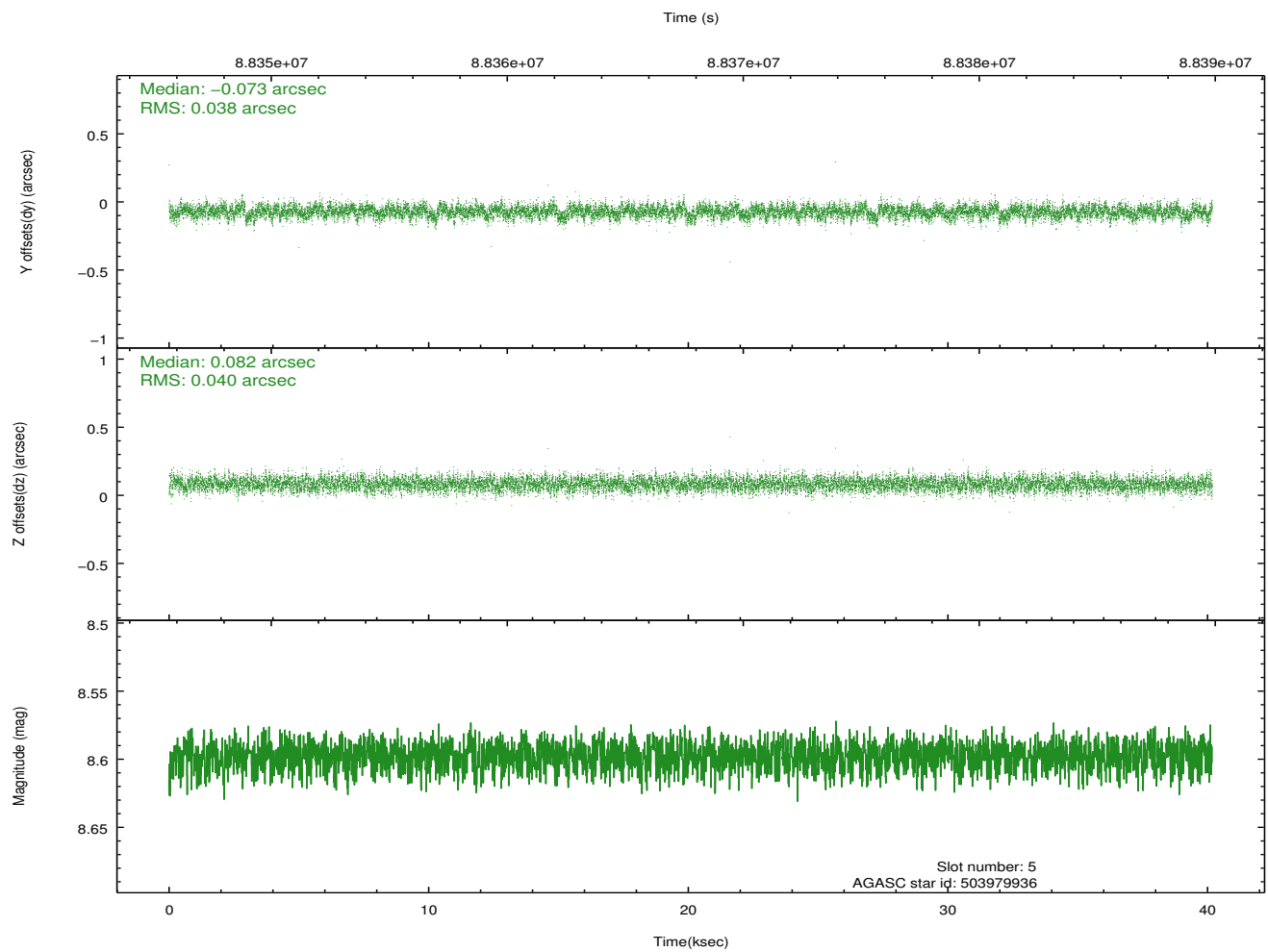
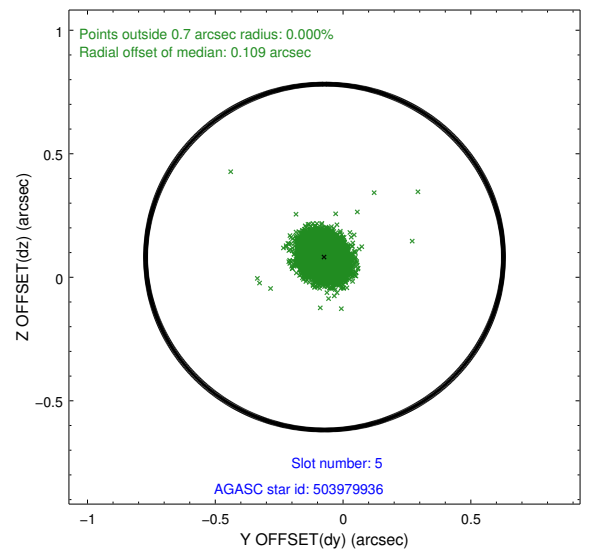
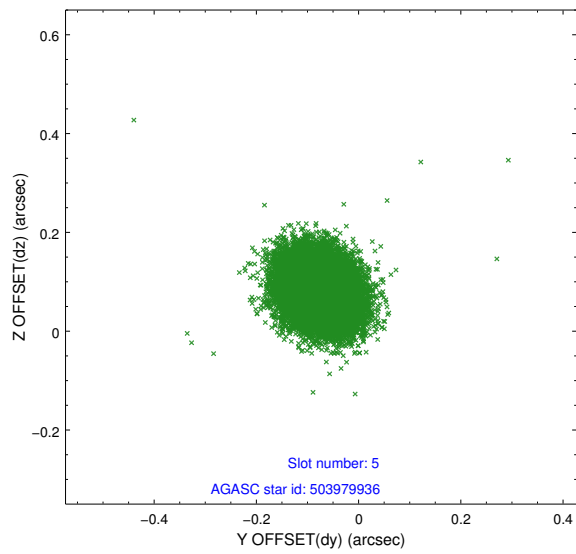
2.4.1 Slot 3



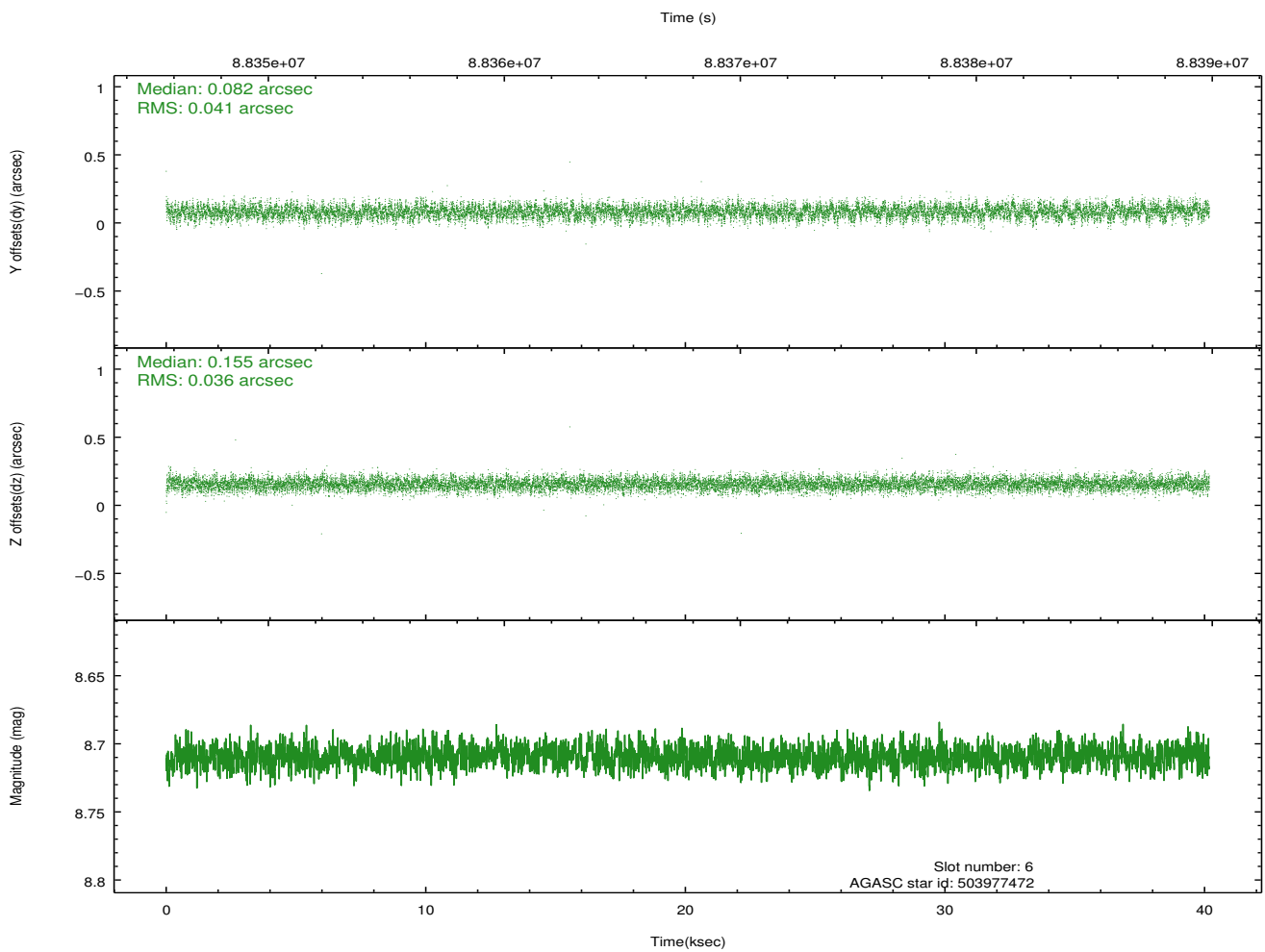
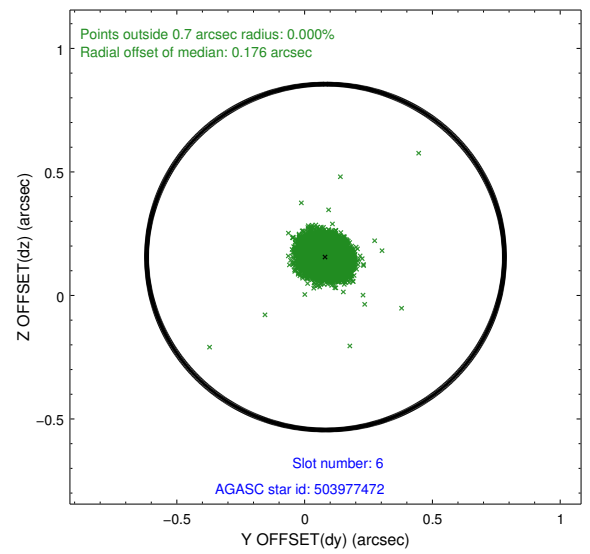
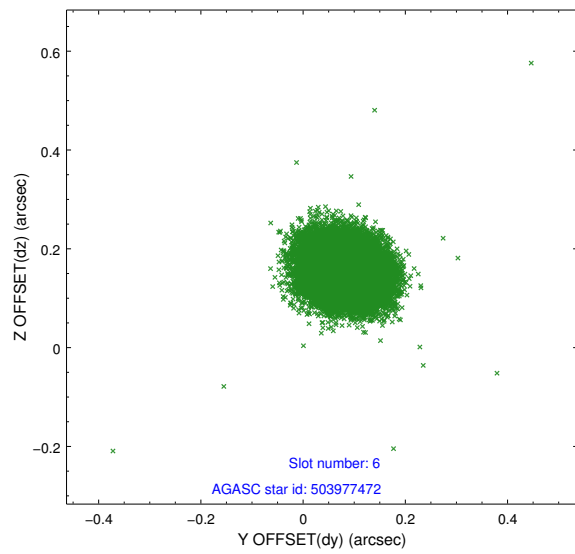
2.4.2 Slot 4



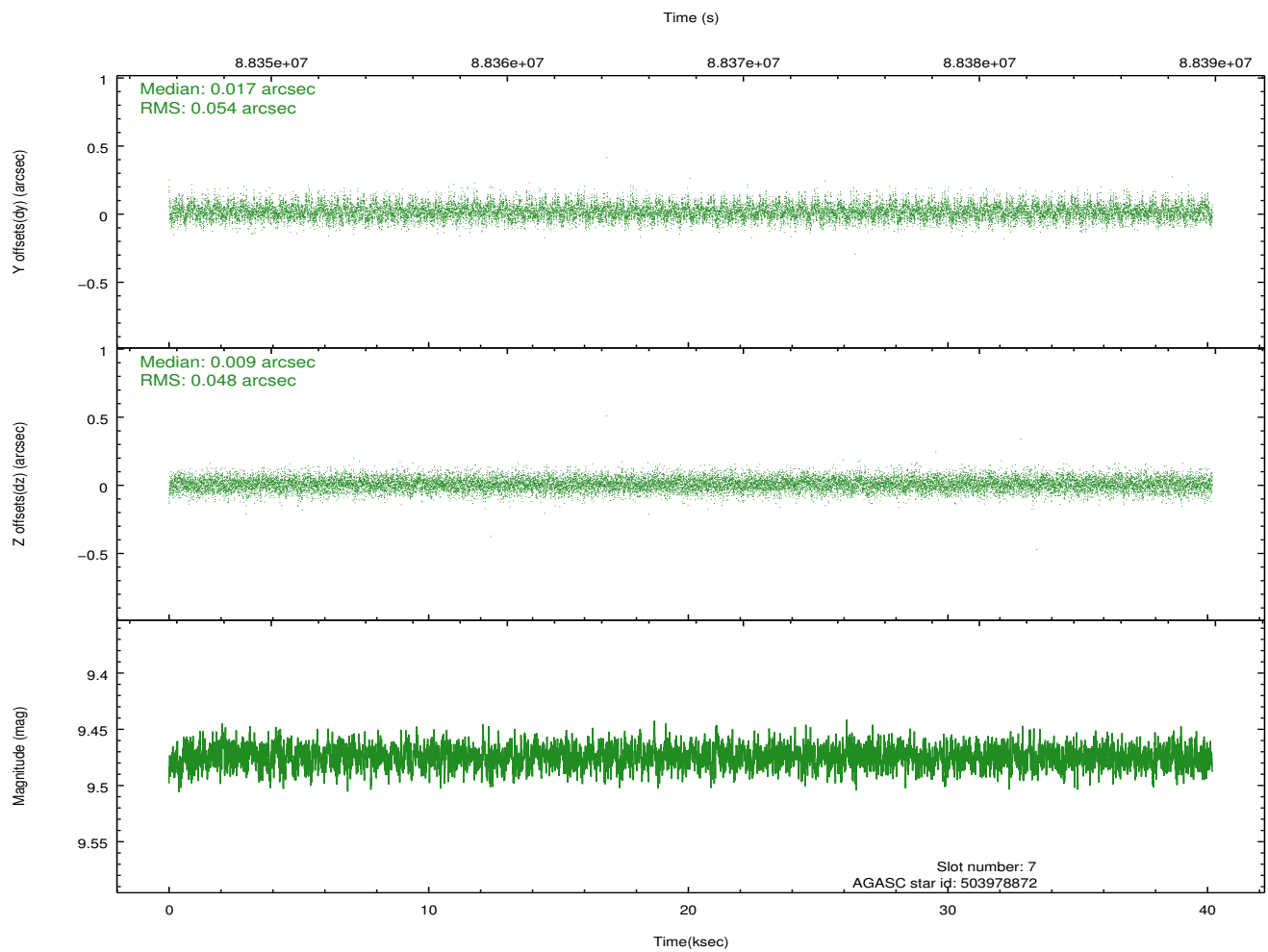
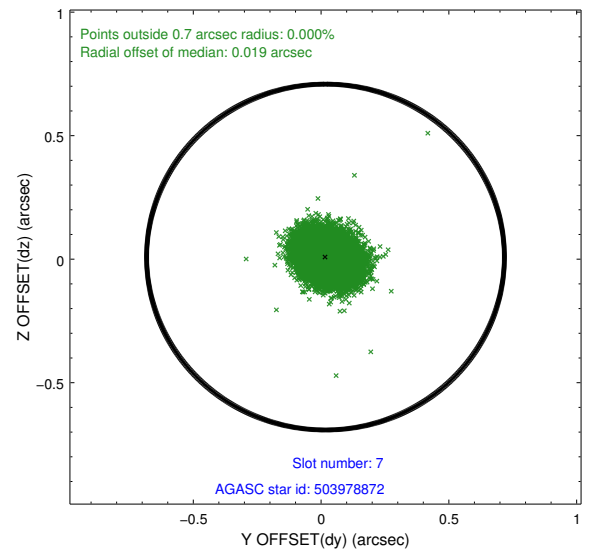
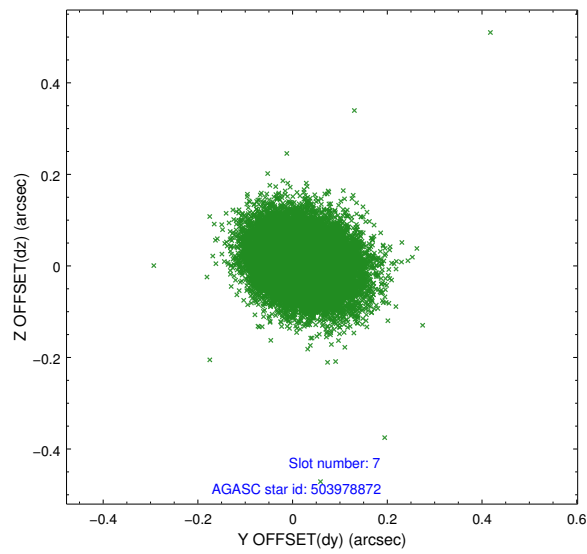
2.4.3 Slot 5



2.4.4 Slot 6

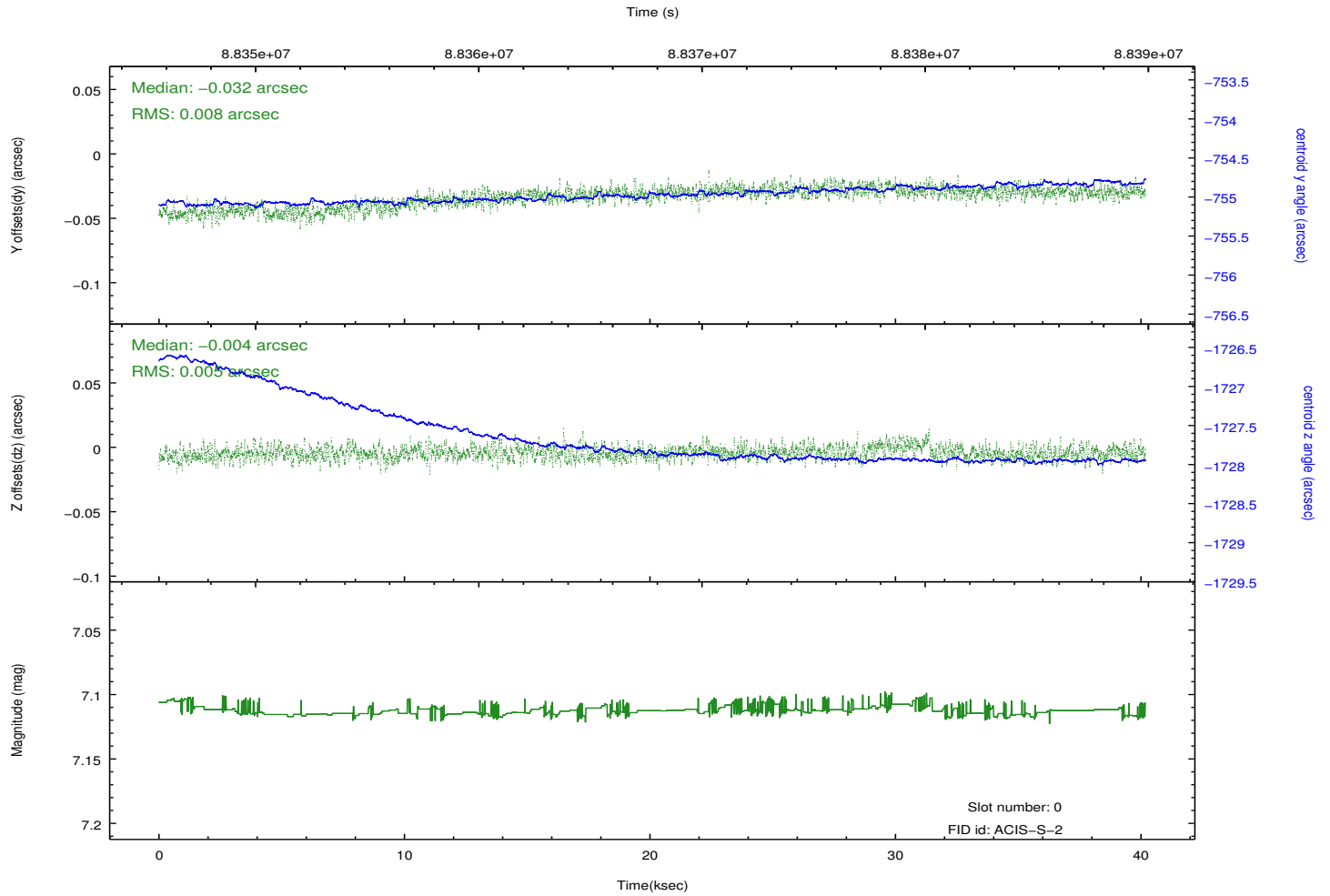
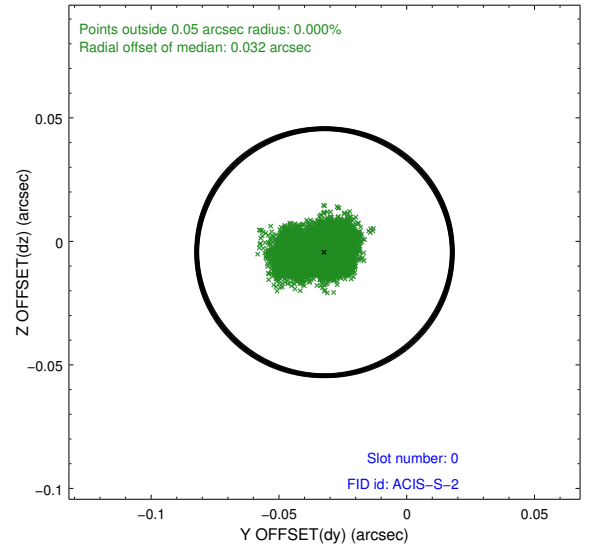
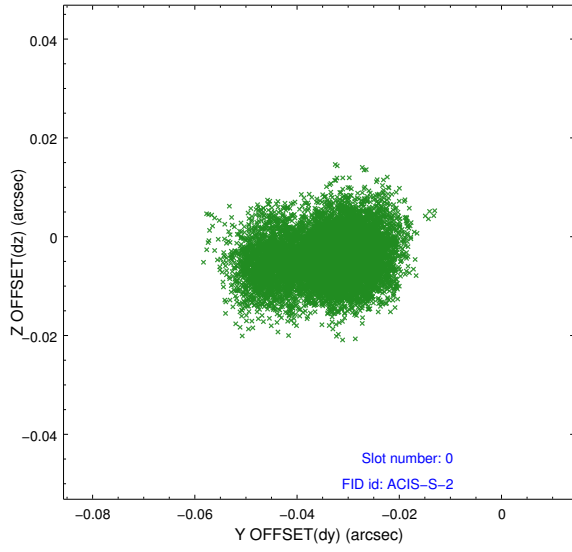


2.4.5 Slot 7

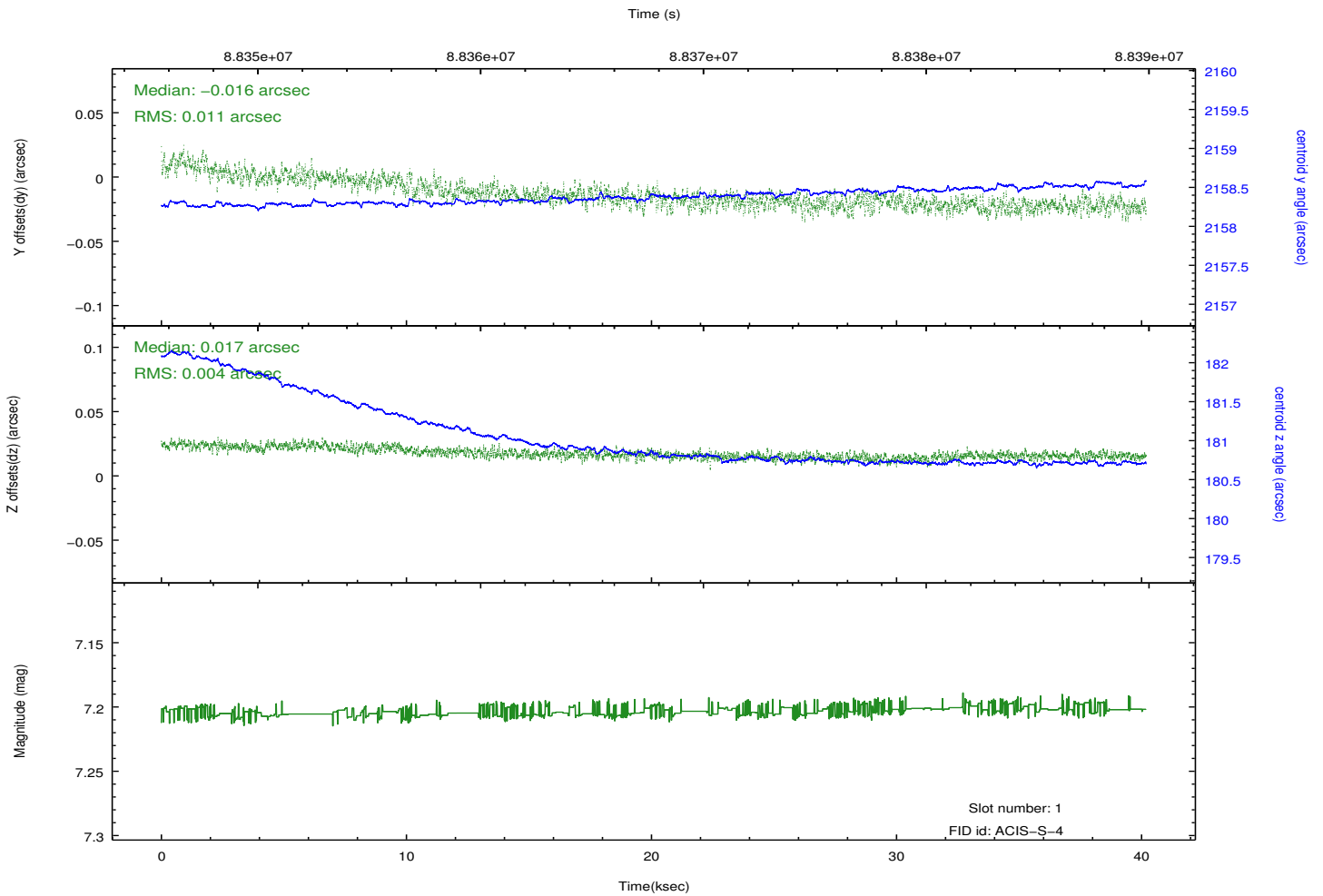
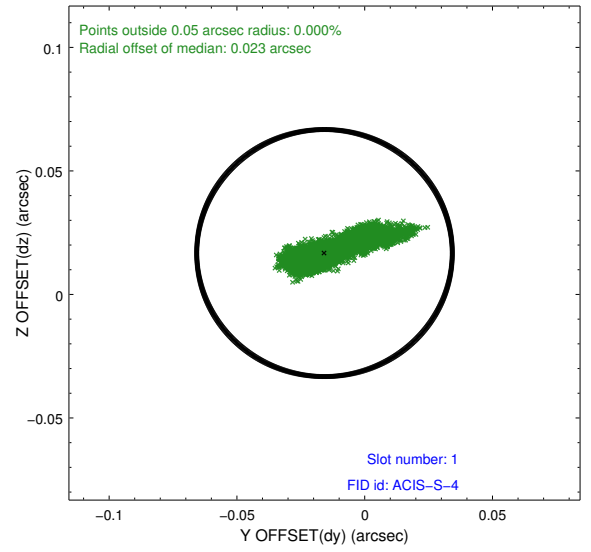
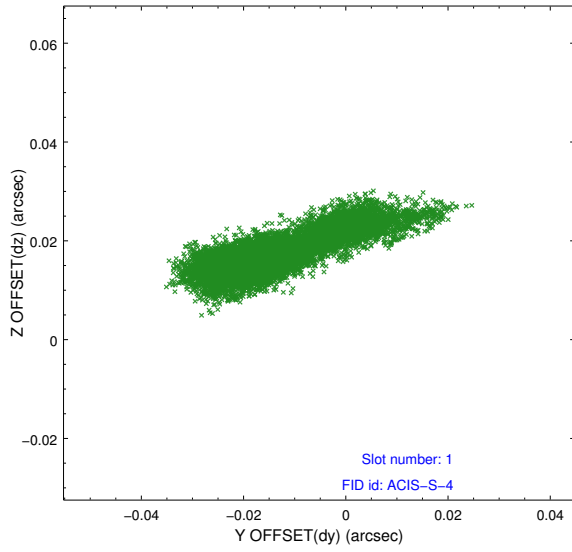


2.5 FID Slots

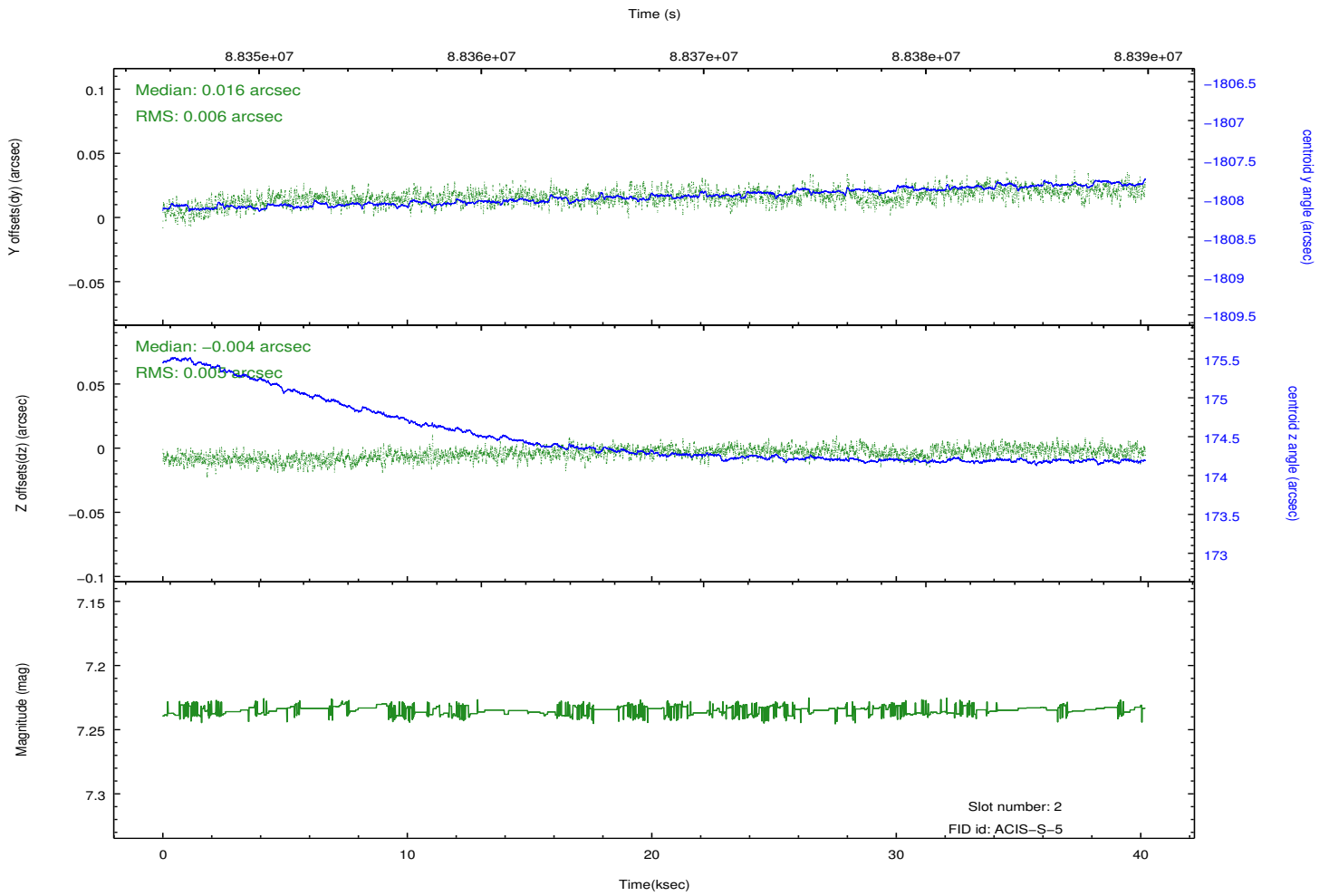
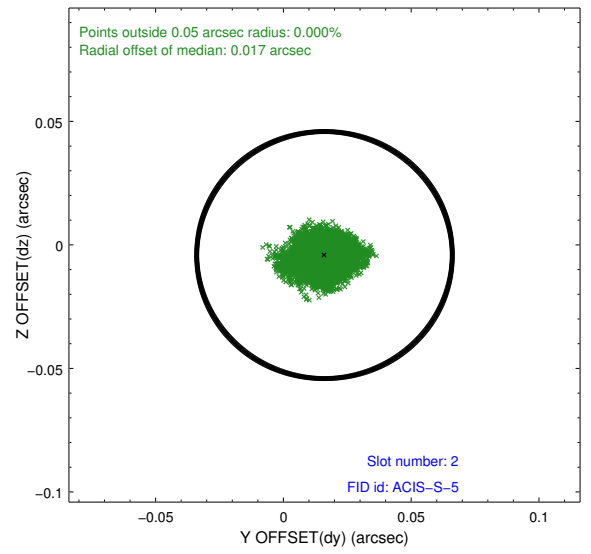
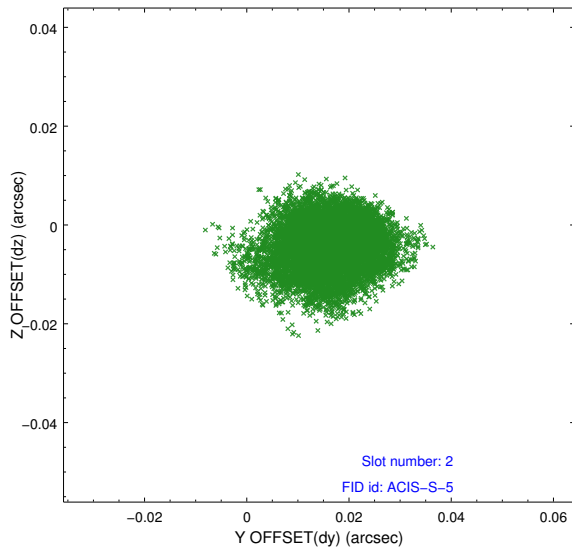
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2012.09.10 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 39.76 |

A.2 Comments