

V&V Reference Report

L2 ASCDS Version : 7.6.10

Observation 2034 - L2 Version 001
Chandra X-Ray Center

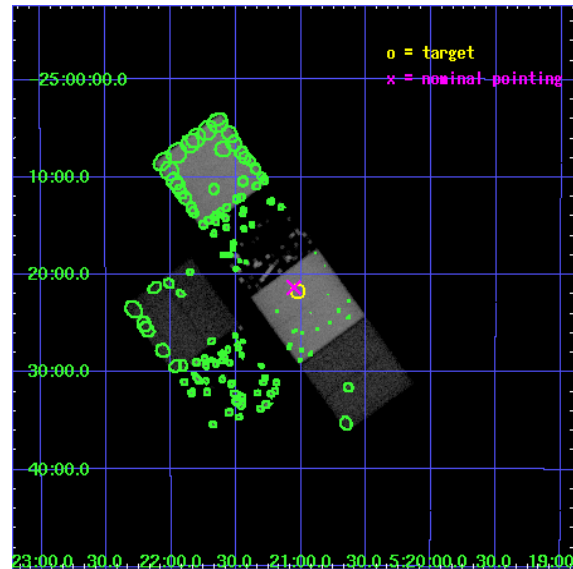
L2 Processing Date : Jan 13 2007

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1 Front

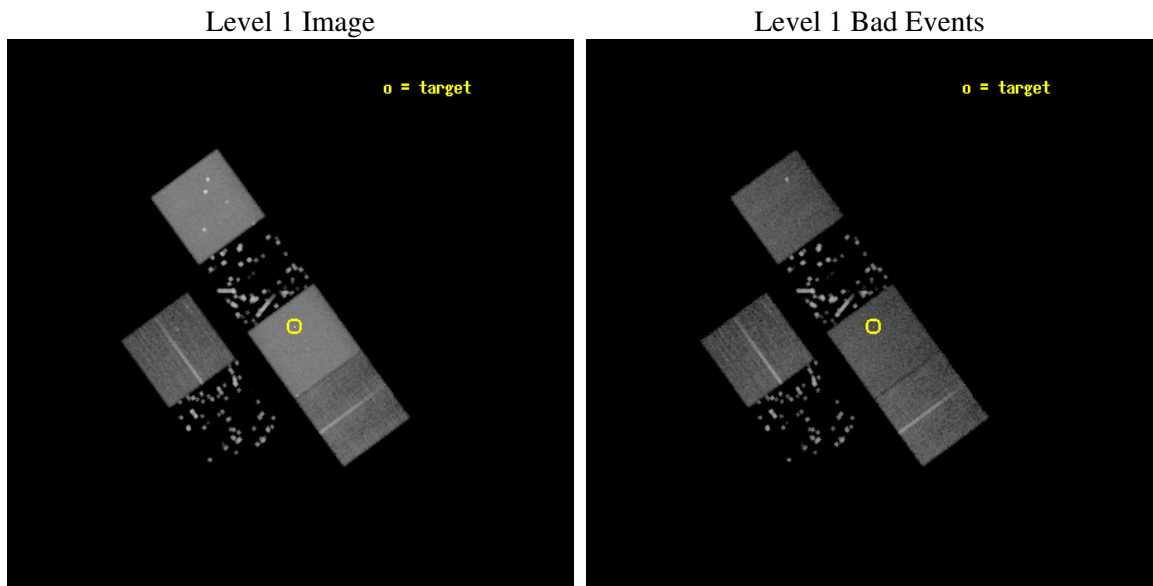
| | |
|----------|---|
| seq_num | 600168 |
| obs_id | 2034 |
| title | THE X-RAY PROPERTIES OF ULTRALUMINOUS GALAXIES: COSMOLOGICAL IMPLICATIONS |
| observer | Dr. Tim Heckman |
| object | IRAS 05189-2524 |
| dtcycle | 0 |
| cycle | P |
| ra_targ | 80.255833 |
| dec_targ | -25.362472 |
| ra_nom | 80.26358804234 |
| dec_nom | -25.35575829378 |
| roll_nom | 53.975198496611 |
| revision | 2 |
| ontime | 19945.600018576 |
| livetime | 19693.036821342 |
| ontime2 | 19945.600018576 |
| ontime3 | 19945.600018576 |
| ontime5 | 19945.600018576 |
| ontime6 | 19945.600018576 |
| ontime7 | 19945.600018576 |
| ontime8 | 19945.600018576 |
| l2events | 485858 |



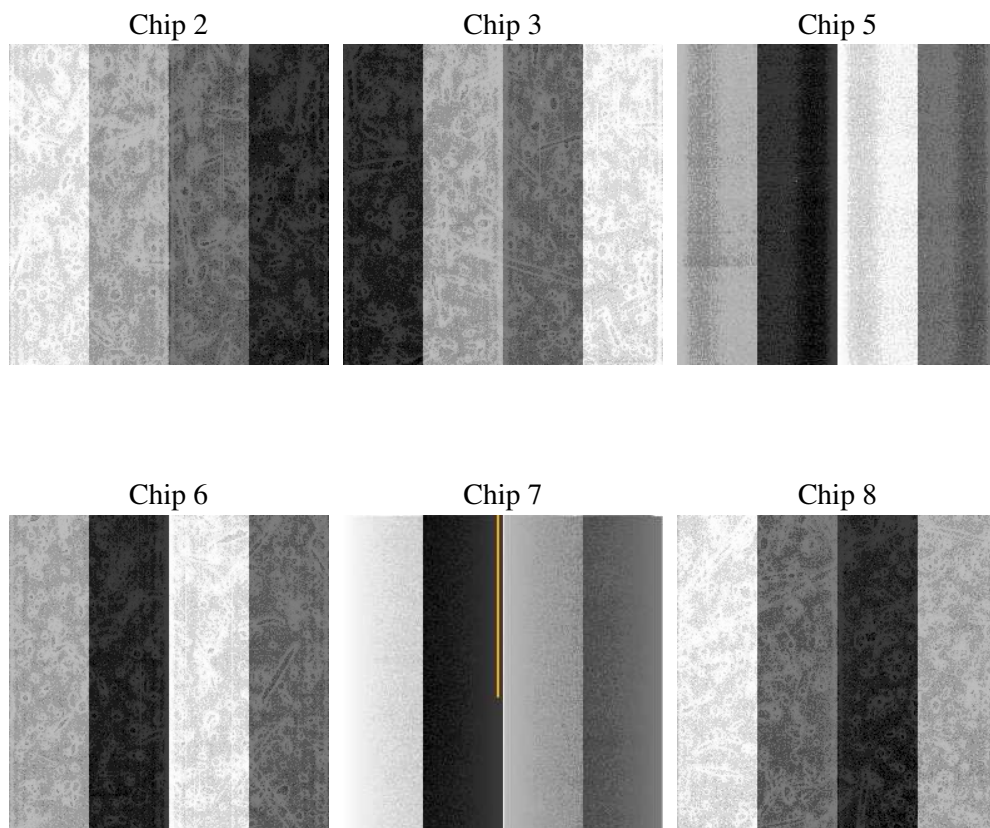
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | |
|----------|---------------------|
| obi_num | 1 |
| ascdsver | 7.6.10 |
| caldsver | 3.3.0 |
| date | 2007-01-13T11:24:26 |
| revision | 2 |

| | |
|----------------|-----------------|
| sched_exp_time | 20000.000000 |
| ontime | 19945.600018576 |
| ontime2 | 19945.600018576 |
| ontime3 | 19945.600018576 |
| ontime5 | 19945.600018576 |
| ontime6 | 19945.600018576 |
| ontime7 | 19945.600018576 |
| ontime8 | 19945.600018576 |
| l1events | 1037342 |

2.1.4 Events

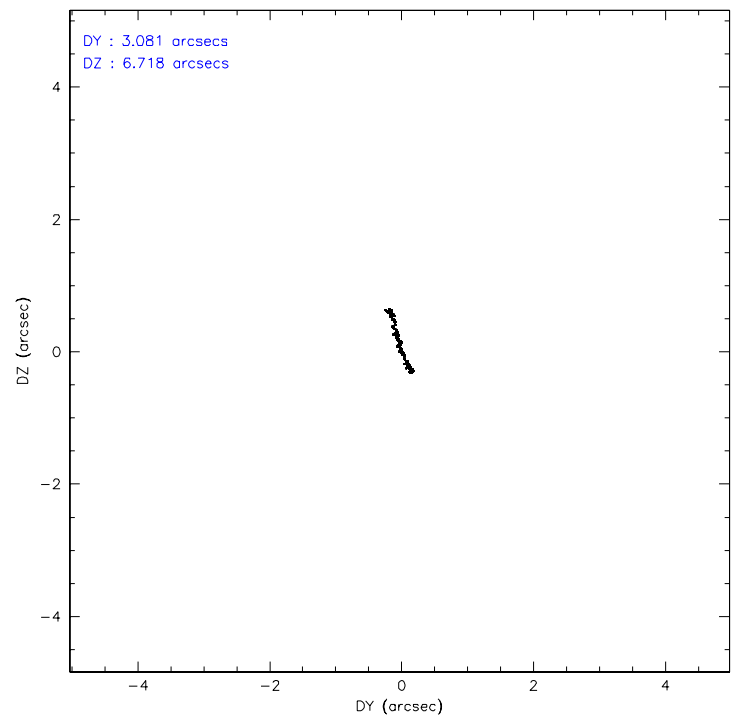
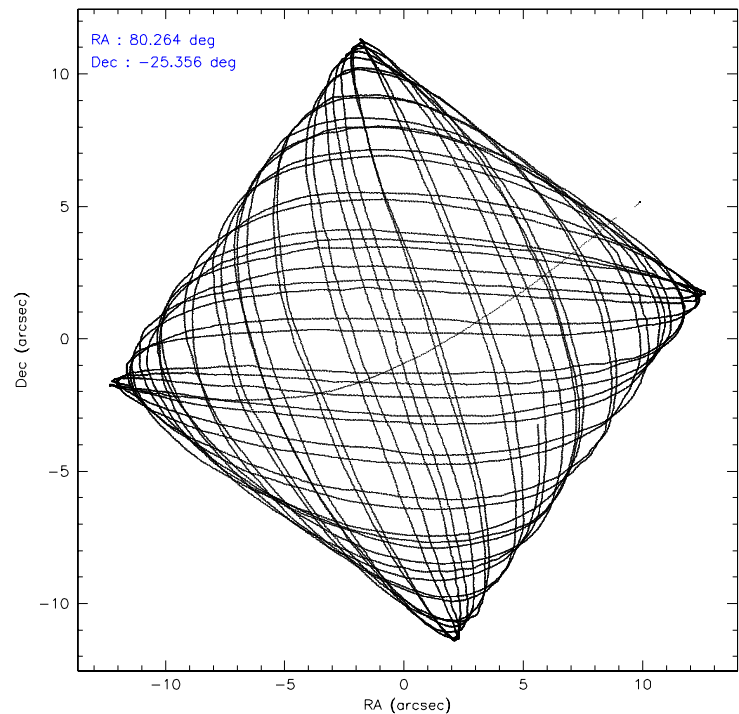
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|-----------------|--------|-------|--------|-------|--------|--------|
| level 1 events | 134633 | 35608 | 327712 | 63038 | 306918 | 169433 |
| rejected events | 111272 | 26496 | 105755 | 46875 | 96170 | 122977 |
| rejected % | 82% | 74% | 32% | 74% | 31% | 72% |

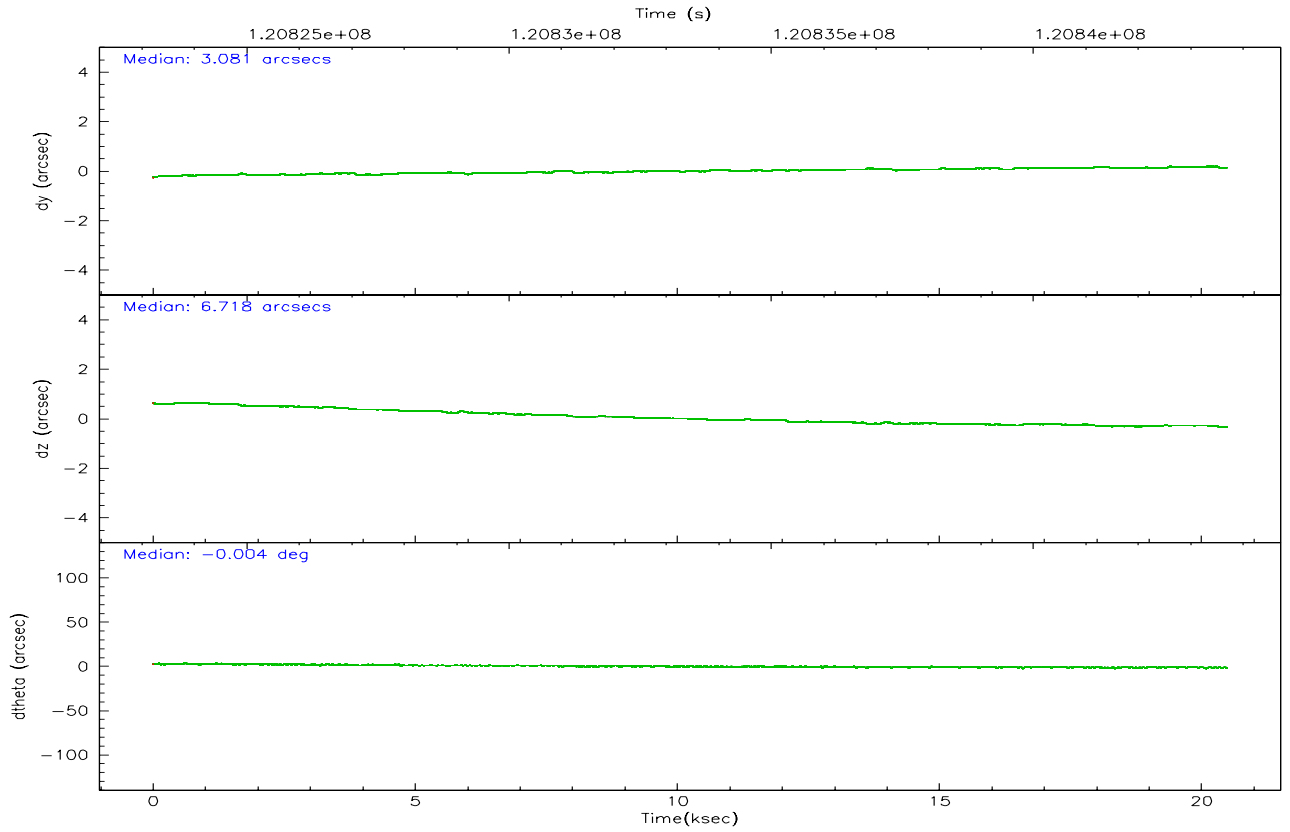
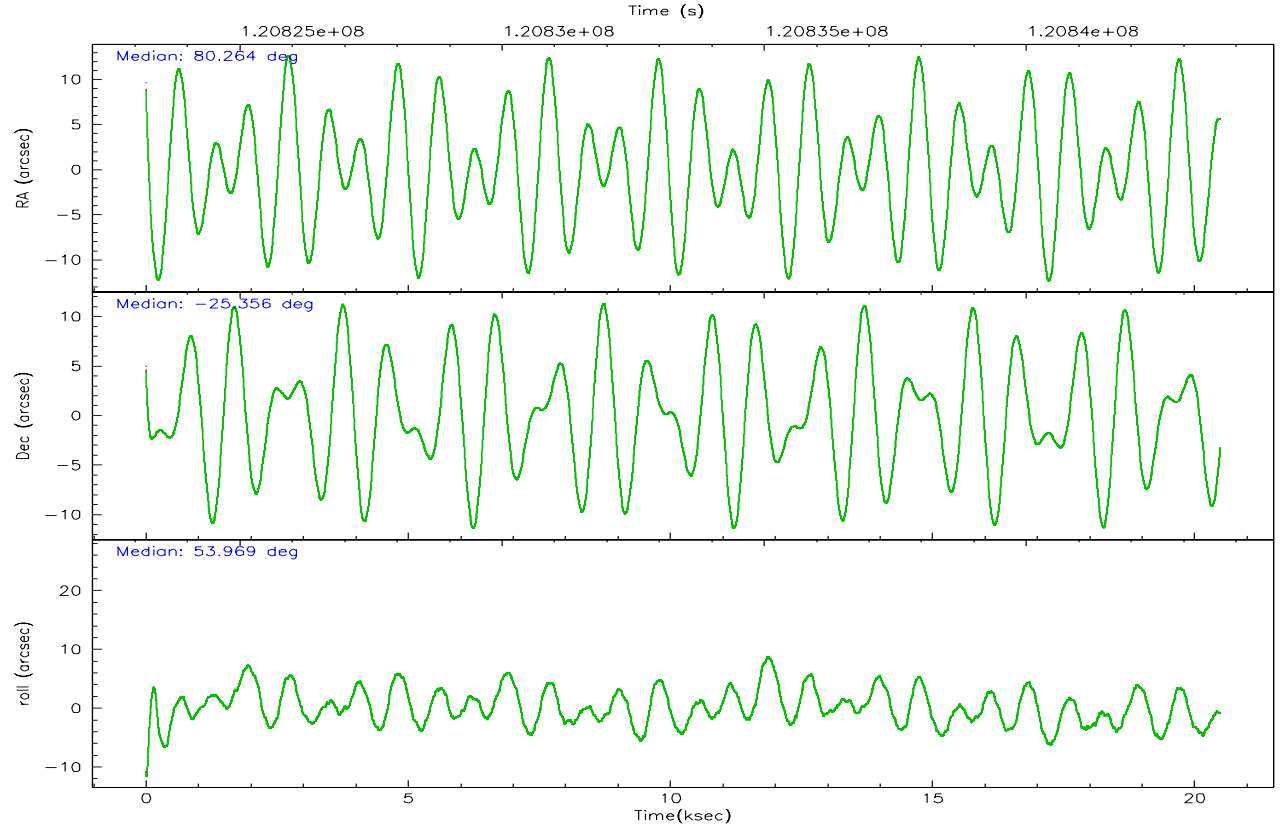
| | ccd 2 | ccd 3 | ccd 5 | ccd 6 | ccd 7 | ccd 8 |
|----------------|--------|-------|-------|-------|--------|--------|
| grade 0 events | 13607 | 1105 | 40076 | 2259 | 24566 | 22094 |
| | 10% | 3% | 12% | 3% | 8% | 13% |
| grade 1 events | 84 | 1709 | 420 | 3270 | 174 | 125 |
| | 0% | 4% | 0% | 5% | 0% | 0% |
| grade 2 events | 4001 | 2759 | 60712 | 4780 | 38368 | 8230 |
| | 2% | 7% | 18% | 7% | 12% | 4% |
| grade 3 events | 1479 | 1991 | 13020 | 3389 | 17274 | 3918 |
| | 1% | 5% | 3% | 5% | 5% | 2% |
| grade 4 events | 1512 | 1430 | 12549 | 2382 | 16973 | 3771 |
| | 1% | 4% | 3% | 3% | 5% | 2% |
| grade 5 events | 4334 | 4300 | 15045 | 7731 | 16098 | 6533 |
| | 3% | 12% | 4% | 12% | 5% | 3% |
| grade 6 events | 2774 | 1832 | 95654 | 3361 | 113614 | 8456 |
| | 2% | 5% | 29% | 5% | 37% | 4% |
| grade 7 events | 106842 | 20482 | 90236 | 35866 | 79851 | 116306 |
| | 79% | 57% | 27% | 56% | 26% | 68% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| 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 |
| Pointing RA | 80.260786 | 80.26358804234005 | Subarray requested | NONE | NONE |
| Pointing Dec | -25.382893 | -25.3557582937803 | Alternating exposures requested | N | N |
| Pointing Roll | 53.817384 | 53.9751984966111 | Primary exposure time | 0.000000 | 3.2 |
| SIM focus pos (mm) | -0.684267 | -0.6828225247311905 | | | |
| SIM defocus (mm) | 0 | 0.001444936568705701 | | | |
| SIM translation stage pos (mm) | -190.132523 | -190.1425803651734 | | | |
| SIM translation stage offset (mm) | 0 | 0.01005778216563158 | | | |
| Observation start time | 120823611.184000 | 120822539.90807 | | | |
| Observation start date | 2001-10-30T10:05:47 | 2001-10-30T09:48:59 | | | |
| Observation end time | 120843611.184000 | 120844009.04642 | | | |
| Observation end date | 2001-10-30T15:39:07 | 2001-10-30T15:46:49 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



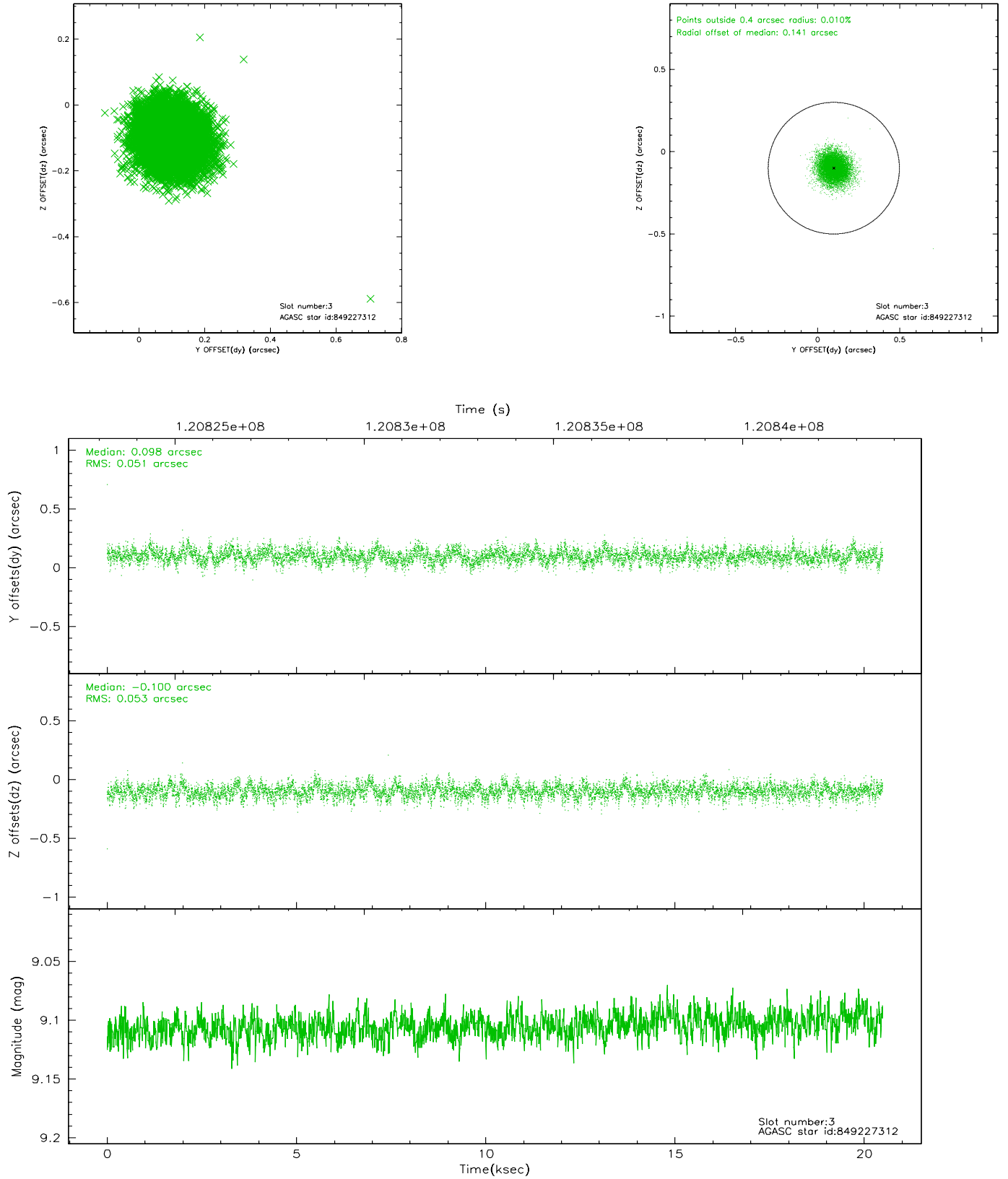


Slot Statistics

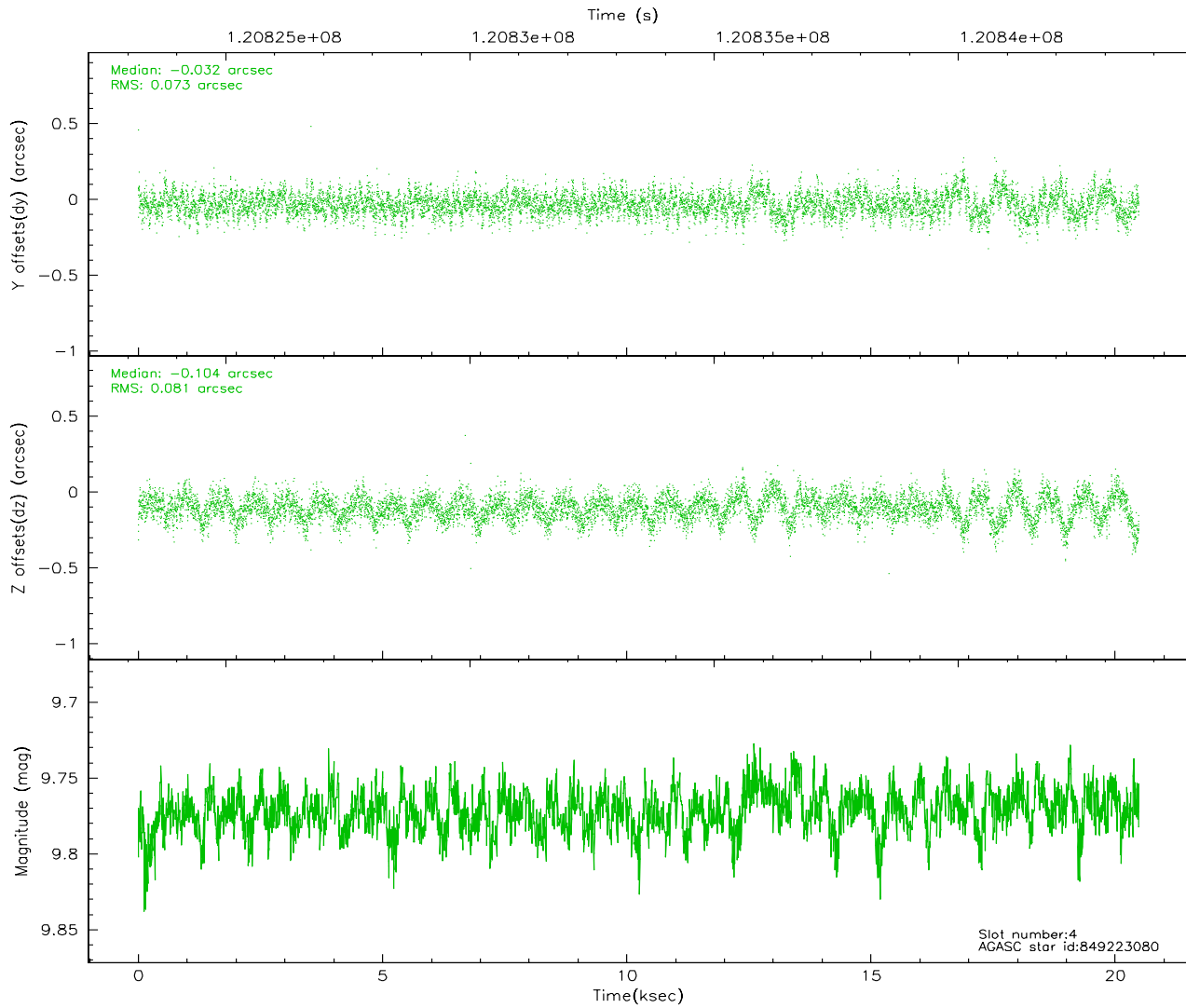
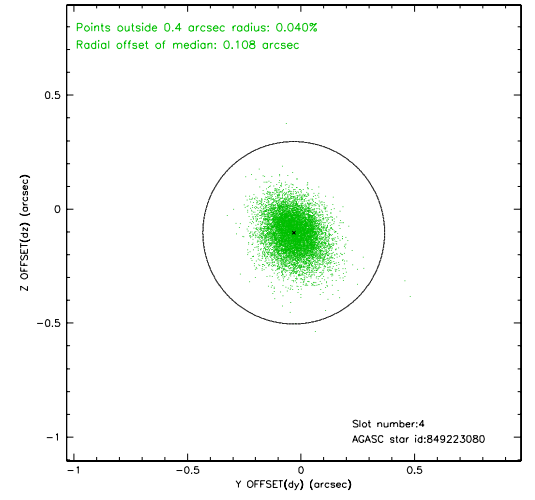
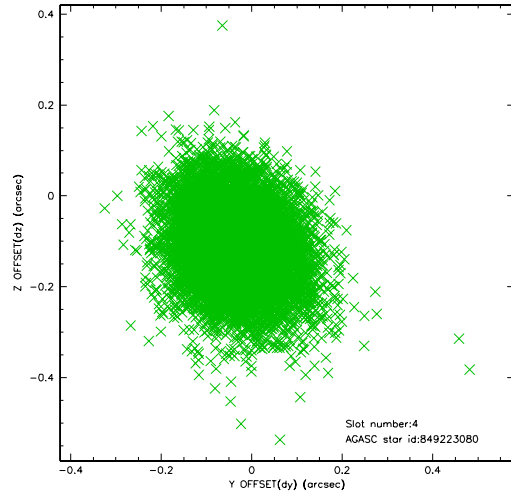
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|------------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.12 | 4998 | -0.004 | 0.034 | 0.011 | 0.018 | 0.000000 | 0.000000 | -755.72 | -1727.86 |
| 1 | FID | ACIS-S-4 | 7.20 | 4996 | -0.074 | -0.007 | 0.013 | 0.022 | 0.000000 | 0.000000 | 2157.40 | 180.41 |
| 2 | FID | ACIS-S-5 | 7.24 | 4997 | 0.047 | -0.018 | 0.009 | 0.013 | 0.000000 | 0.000000 | -1808.29 | 174.25 |
| 3 | GUIDE | 849227312 | 9.11 | 9987 | 0.098 | -0.100 | 0.078 | 0.127 | 79.976215 | -25.624425 | -1247.65 | 231.19 |
| 4 | GUIDE | 849223080 | 9.77 | 9989 | -0.032 | -0.104 | 0.113 | 0.191 | 80.051501 | -24.976586 | 776.88 | 1414.25 |
| 5 | GUIDE | 849226272 | 8.39 | 9996 | 0.020 | 0.075 | 0.058 | 0.093 | 80.214822 | -25.538553 | -540.11 | -210.40 |
| 6 | GUIDE | 849223784 | 9.87 | 9989 | 0.062 | 0.052 | 0.094 | 0.158 | 80.444618 | -25.367658 | 397.23 | -450.67 |
| 7 | GUIDE | 849221808 | 9.97 | 9989 | -0.148 | 0.081 | 0.117 | 0.188 | 81.008696 | -25.199789 | 1965.12 | -1581.25 |

2.4 Star Slots

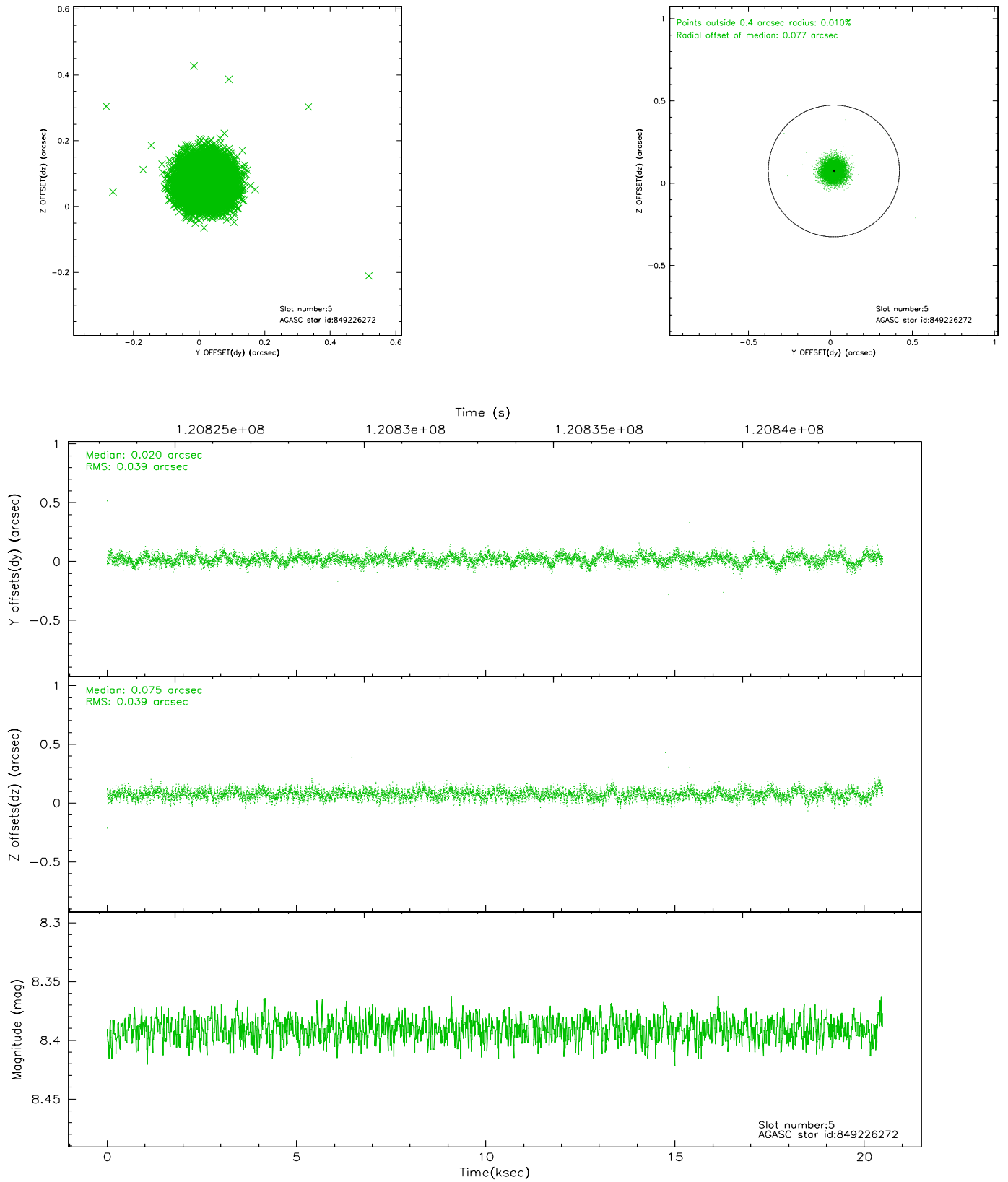
2.4.1 Slot 3



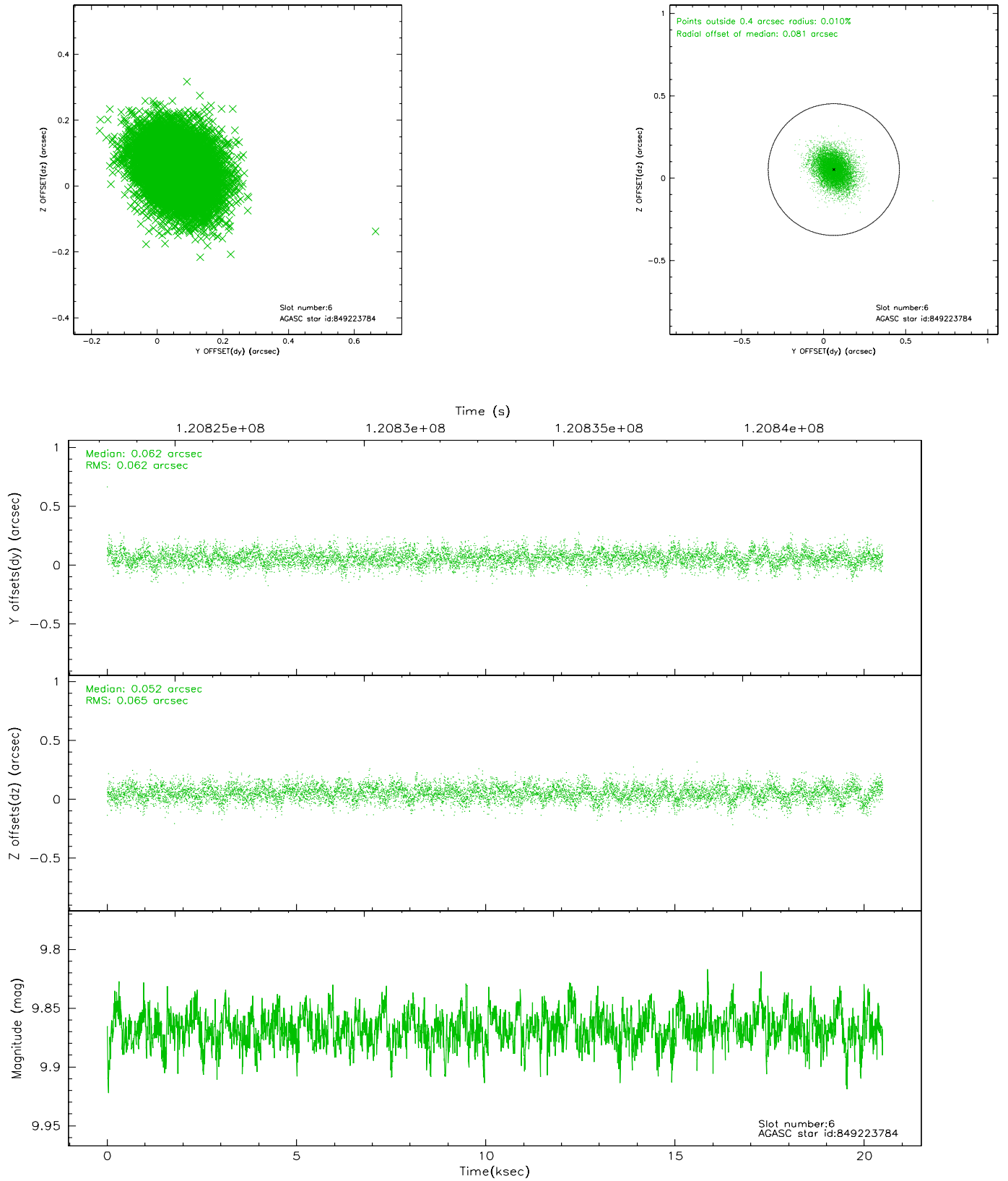
2.4.2 Slot 4



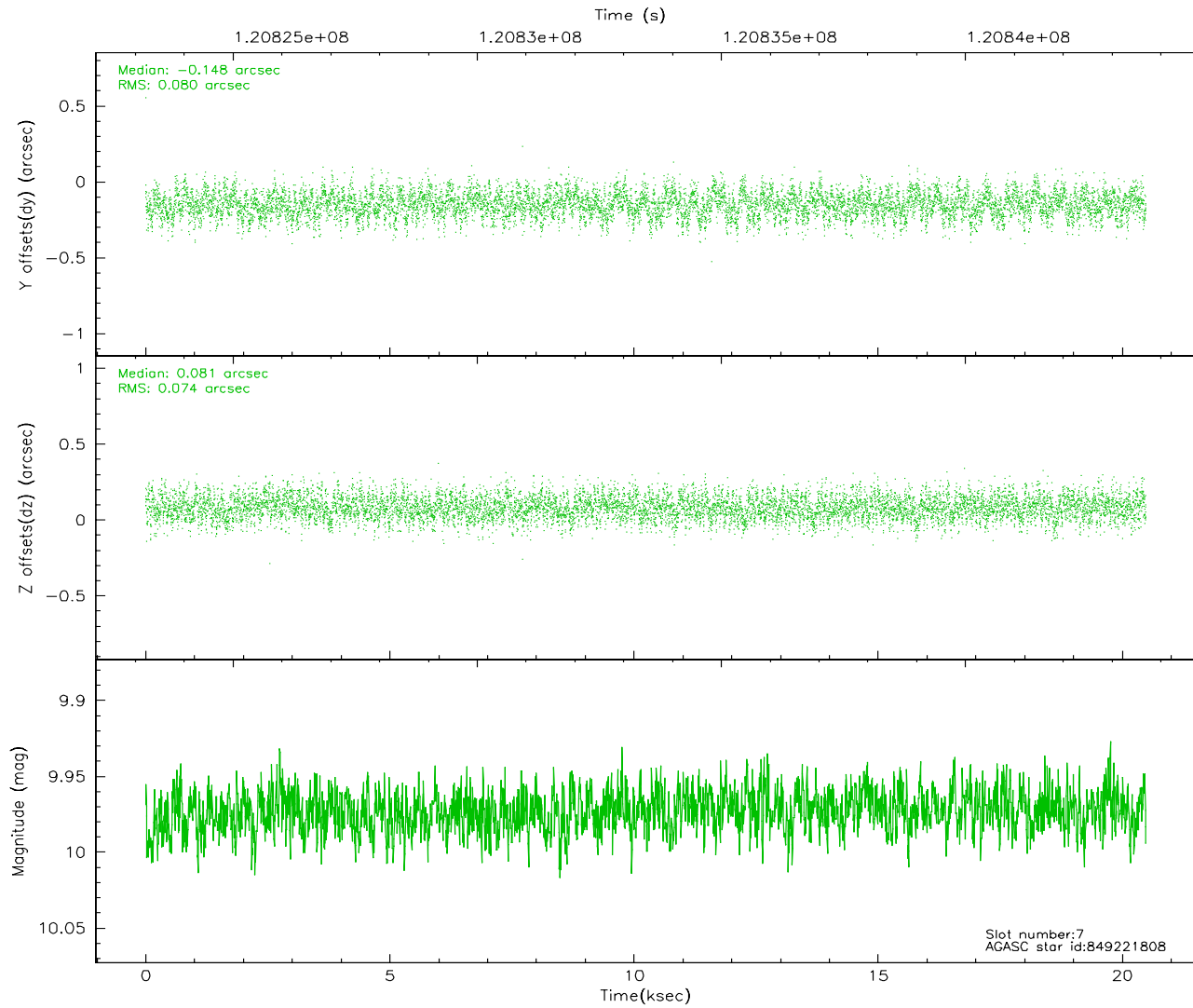
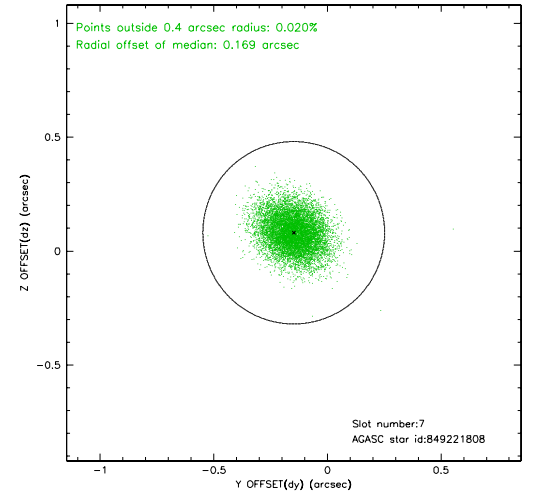
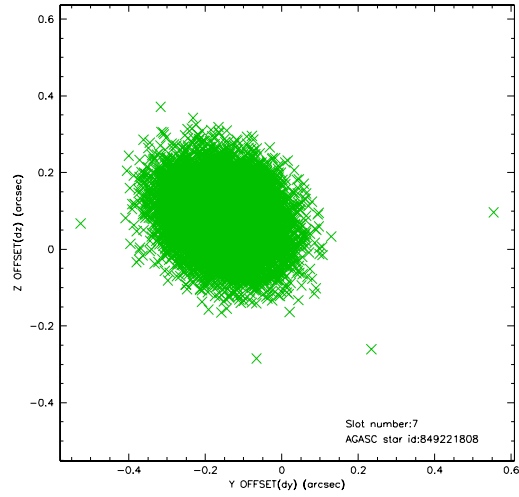
2.4.3 Slot 5



2.4.4 Slot 6

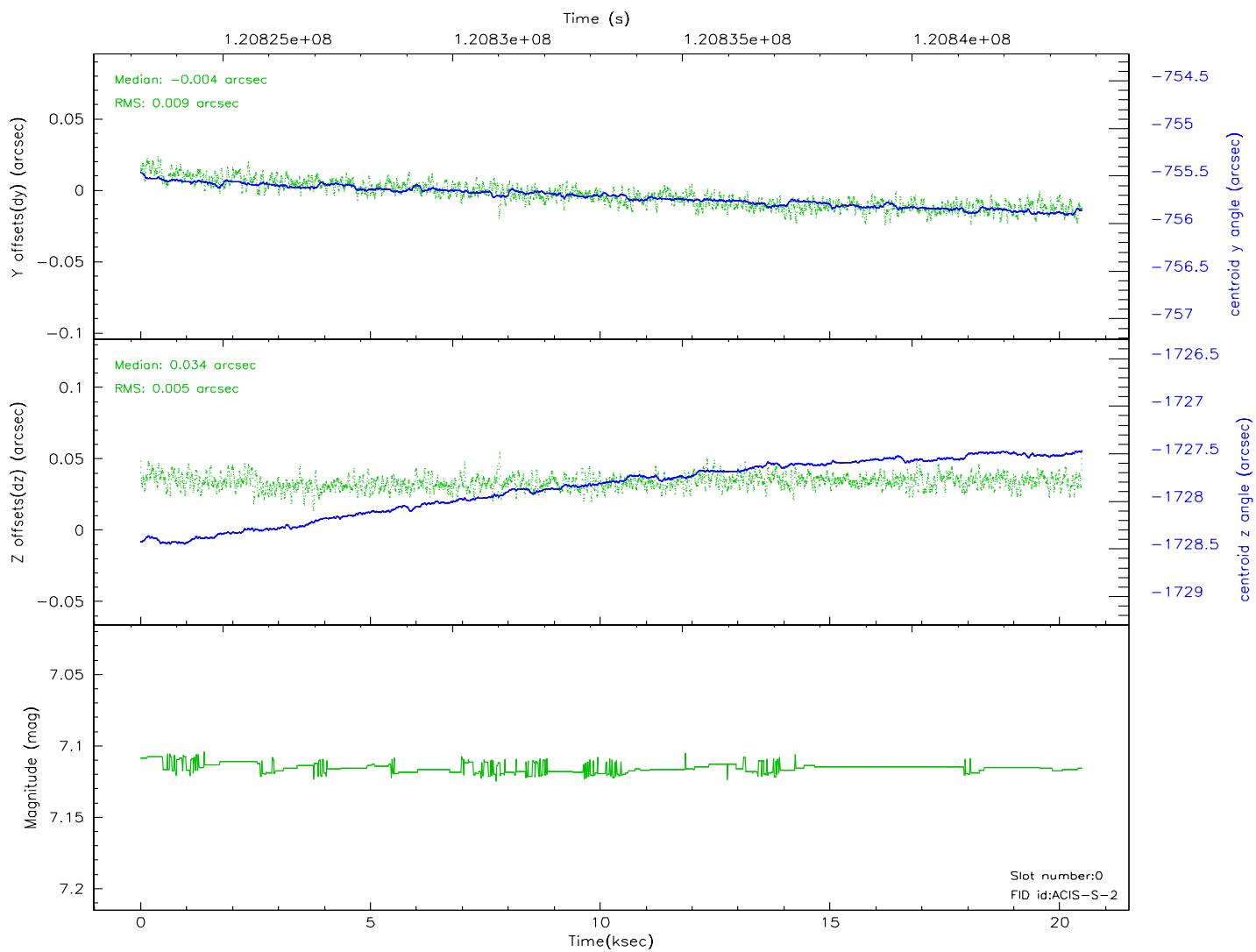
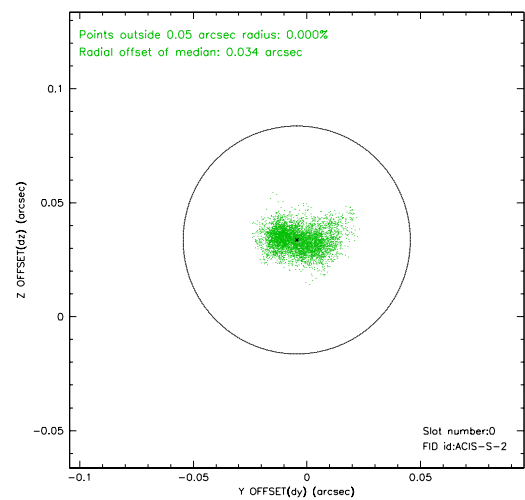
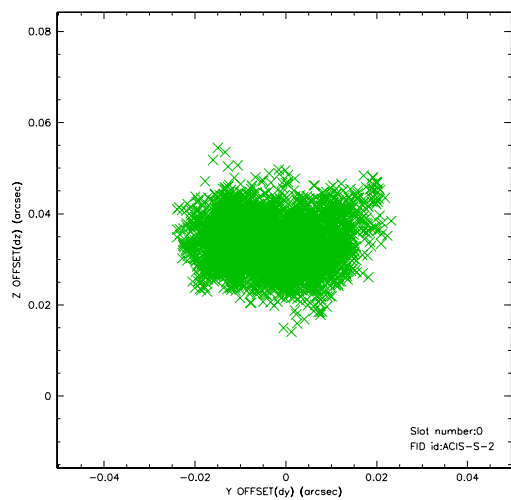


2.4.5 Slot 7

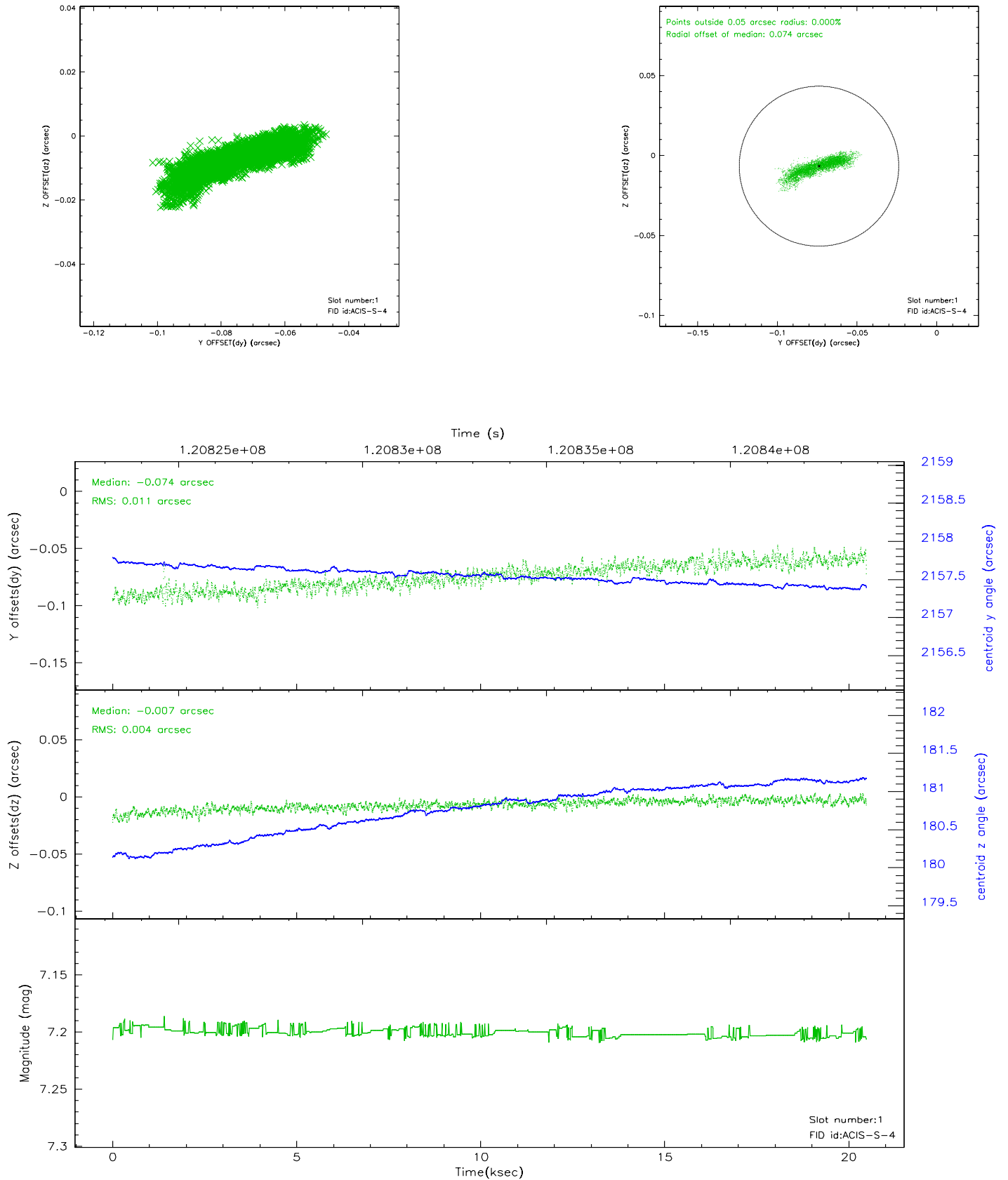


2.5 FID Slots

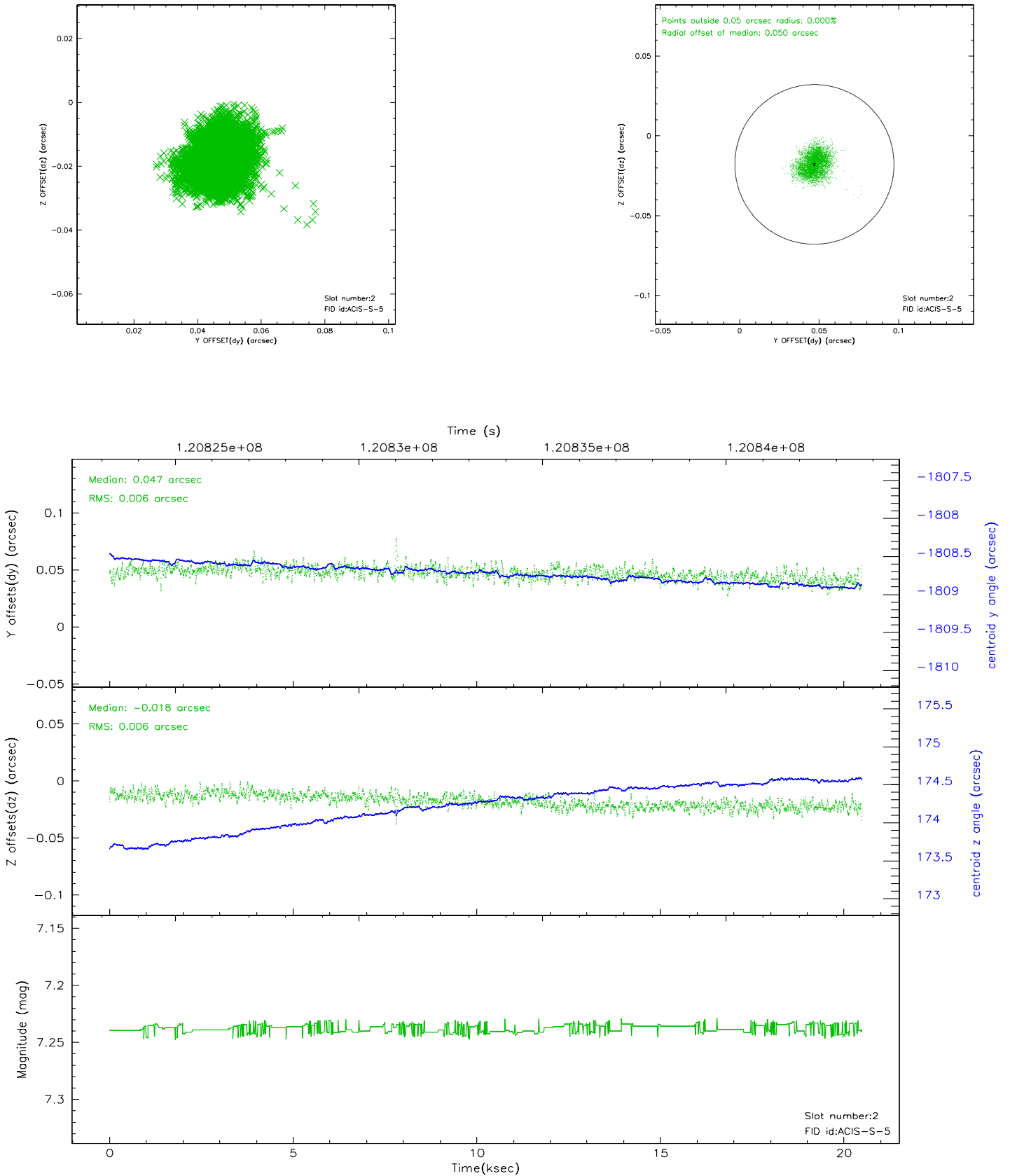
2.5.1 Slot 0



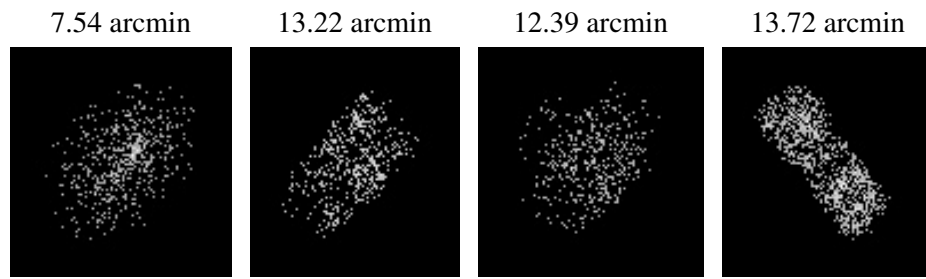
2.5.2 Slot 1



2.5.3 Slot 2



3 Point Sources



A Summary

A.1 Status

| | |
|----------------------------|------------|
| V&V Scientist | Jen Lauer |
| V&V Date (YYYY-MM-DD) | 2007.01.25 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 19.948 |

A.2 Comments

During this observation, an ACIS Threshold-Plane Anomaly occurred. The flight s/w is intended to delay 'start events' until after 'end bias dump'. For some unknown reason, it occasionally fails to do so, and if the overlap lasts for more than a minute or so, one or more FEPs experience a firmware latch-up that renders them useless until they are power cycled. The anomaly occurred for chips S2 and I3. No event data were recorded for these chips; the apparent bright patches on these chips are due to known hot pixels.

Since the aim-point chip is unaffected, this obsid is deemed acceptable as is and meets the proposer's needs.