

V&V Reference Report

L2 ASCDS Version : 8.4.5

Observation 527 - L2 Version 3
Chandra X-Ray Center

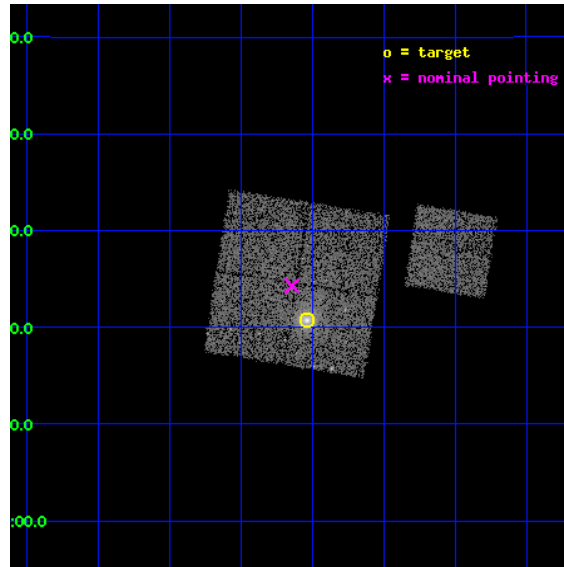
L2 Processing Date : Sep 1 2012

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1 Front

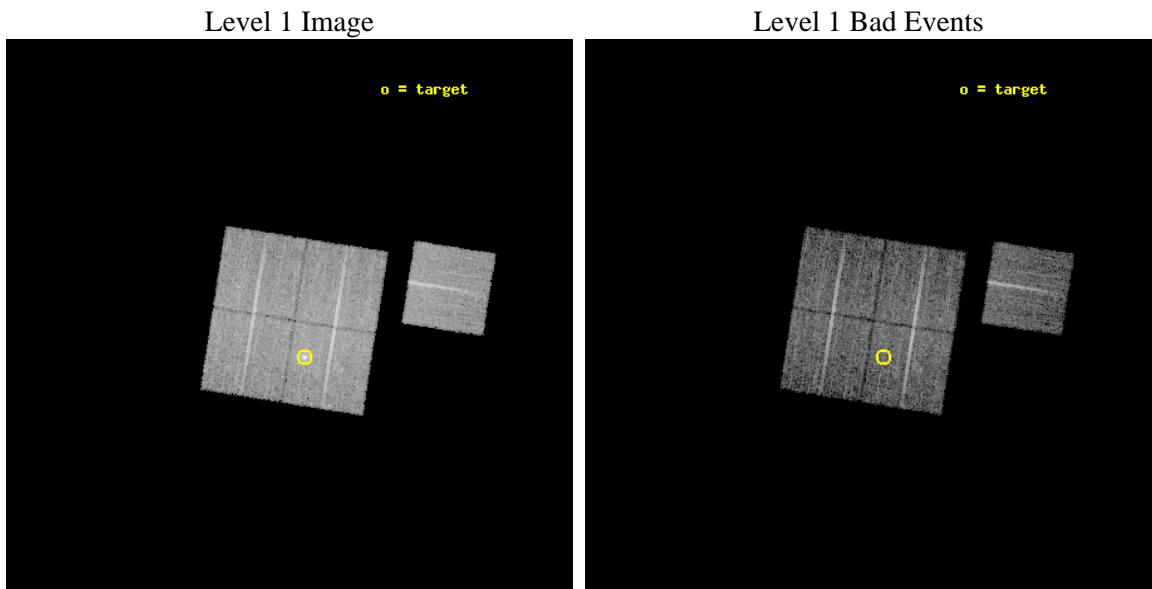
| | | |
|----------|------------------------|--|
| seq_num | 800035 | Sequence number |
| obs_id | 527 | Observation id |
| title | DETERMINATION OF H0/Q0 | Proposal title |
| observer | DR. LEON VANSPEYBROECK | Principal investigator |
| object | RX J0439+0520 | Source name |
| dtcycle | 0 | |
| cycle | P | events from which exps? Prim/Second/Both |
| ra_targ | 69.759525 | Observer's specified target RA [deg] |
| dec_targ | 5.345486 | Observer's specified target Dec [deg] |
| ra_nom | 69.78605308232 | Nominal RA [deg] |
| dec_nom | 5.4048333646151 | Nominal Dec [deg] |
| roll_nom | 99.051387107322 | Nominal Roll [deg] |
| revision | 3 | Processing version of data |
| ontime | 9715.1591684967 | Sum of GTIs [s] |
| livetime | 9592.1399733387 | Livetime [s] |
| ontime0 | 9718.4000090361 | Sum of GTIs [s] |
| ontime1 | 9718.4000090361 | Sum of GTIs [s] |
| ontime2 | 9718.4000090361 | Sum of GTIs [s] |
| ontime3 | 9715.1591684967 | Sum of GTIs [s] |
| ontime6 | 9718.4000090361 | Sum of GTIs [s] |
| l2events | 34348 | Number of level 2 events |



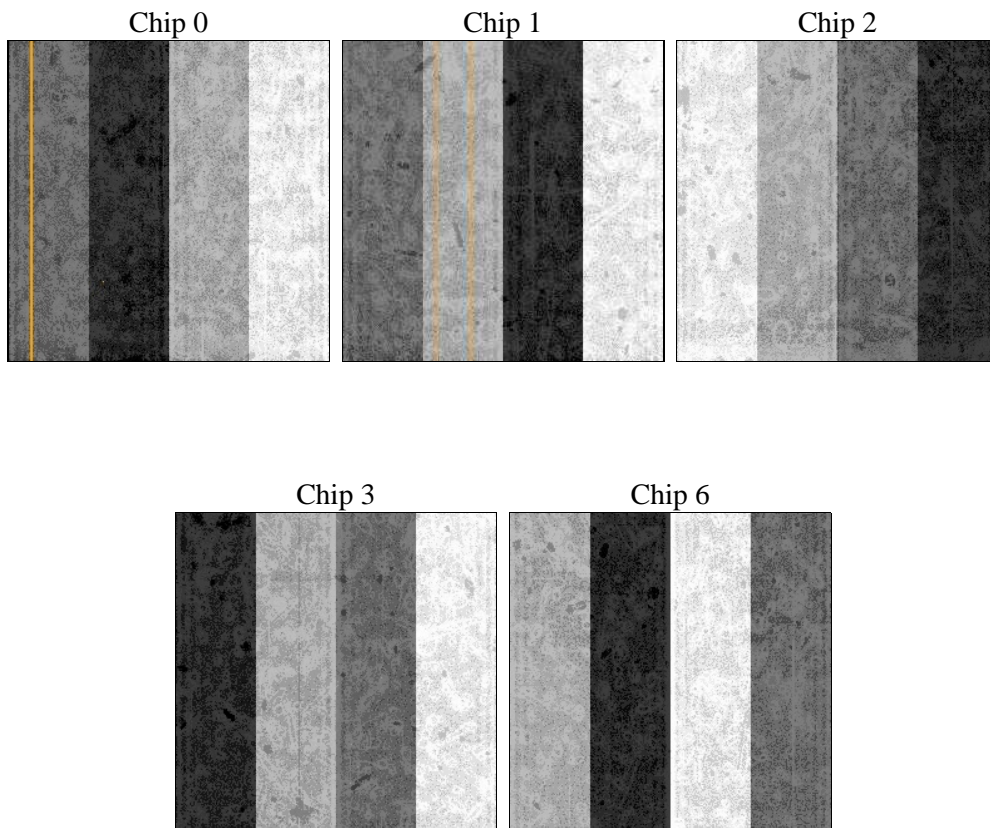
2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias



2.1.3 Parameters

| | | | | | |
|----------|---------------------|--------------------------------|----------------|-----------------|---|
| obi_num | 0 | Obi number | sched_exp_time | 9600.000000 | [s] Scheduled observation exposure time |
| ascdsver | 8.4.5 | Processing system revision | ontime | 9715.1591684967 | Sum of GTIs [s] |
| caldsver | 4.5.1.1 | | ontime0 | 9718.4000090361 | Sum of GTIs [s] |
| date | 2012-09-01T03:42:24 | Date and time of file creation | ontime1 | 9718.4000090361 | Sum of GTIs [s] |
| revision | 3 | Processing version of data | ontime2 | 9718.4000090361 | Sum of GTIs [s] |
| | | | ontime3 | 9715.1591684967 | Sum of GTIs [s] |
| | | | ontime6 | 9718.4000090361 | Sum of GTIs [s] |
| | | | l1events | 307159 | Number of level 1 events |

2.1.4 Events

| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|-----------------|-------|-------|-------|-------|-------|
| level 1 events | 57998 | 58642 | 63247 | 68340 | 58932 |
| rejected events | 51156 | 51210 | 56553 | 56580 | 52521 |
| rejected % | 88% | 87% | 89% | 82% | 89% |

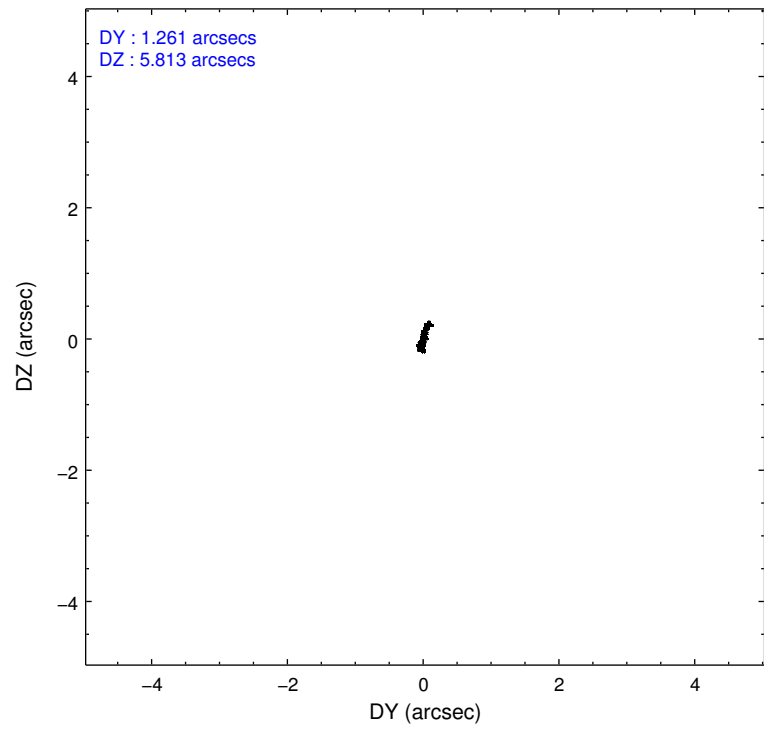
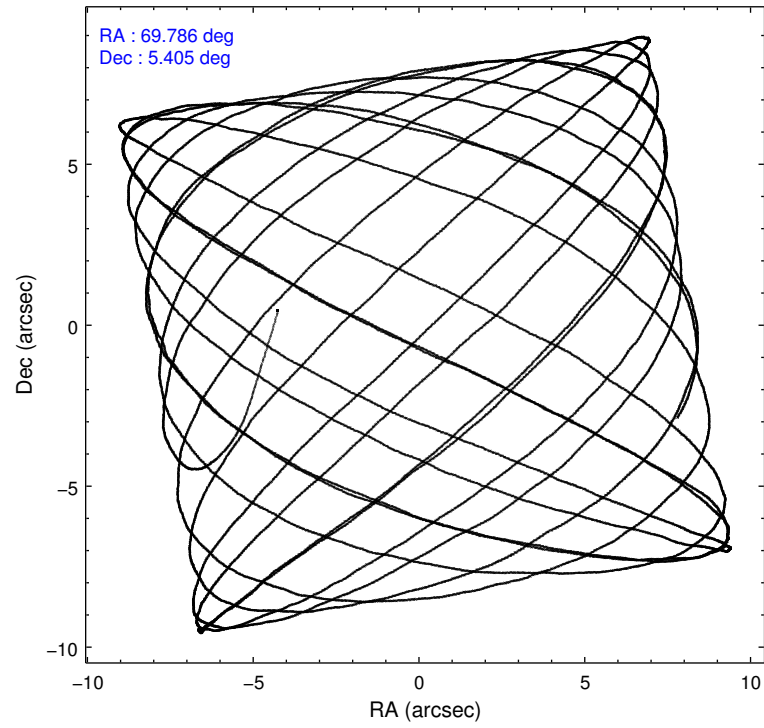
| | ccd 0 | ccd 1 | ccd 2 | ccd 3 | ccd 6 |
|----------------|-------|-------|-------|-------|-------|
| grade 0 events | 3049 | 3301 | 3098 | 7316 | 2717 |
| | 5% | 5% | 4% | 10% | 4% |
| grade 1 events | 30 | 21 | 34 | 44 | 17 |
| | 0% | 0% | 0% | 0% | 0% |
| grade 2 events | 1431 | 1517 | 1414 | 1889 | 1329 |
| | 2% | 2% | 2% | 2% | 2% |
| grade 3 events | 729 | 766 | 619 | 742 | 671 |
| | 1% | 1% | 0% | 1% | 1% |
| grade 4 events | 627 | 746 | 639 | 800 | 651 |
| | 1% | 1% | 1% | 1% | 1% |
| grade 5 events | 1995 | 2366 | 2006 | 2294 | 2340 |
| | 3% | 4% | 3% | 3% | 3% |
| grade 6 events | 1165 | 1281 | 1090 | 1301 | 1217 |
| | 2% | 2% | 1% | 1% | 2% |
| grade 7 events | 48972 | 48644 | 54347 | 53954 | 49990 |
| | 84% | 82% | 85% | 78% | 84% |

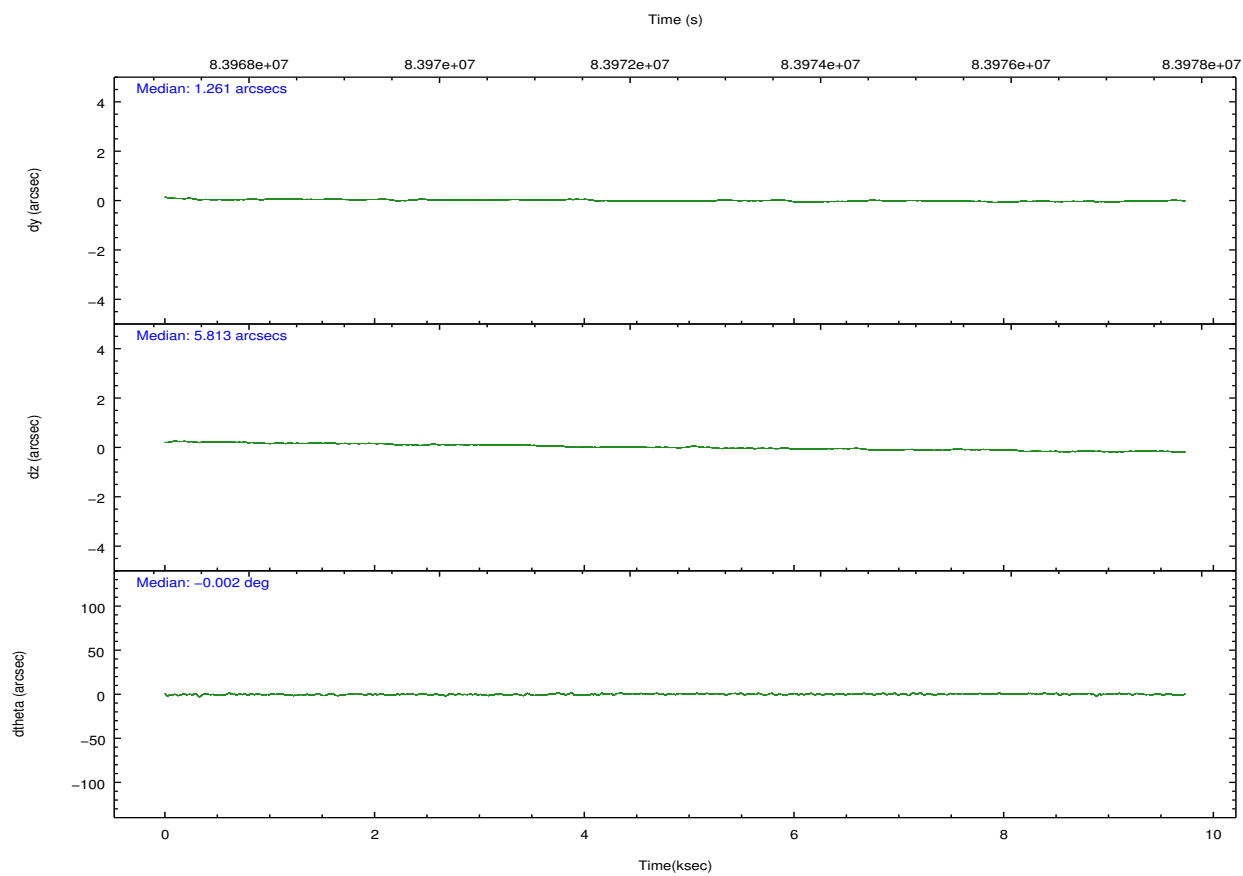
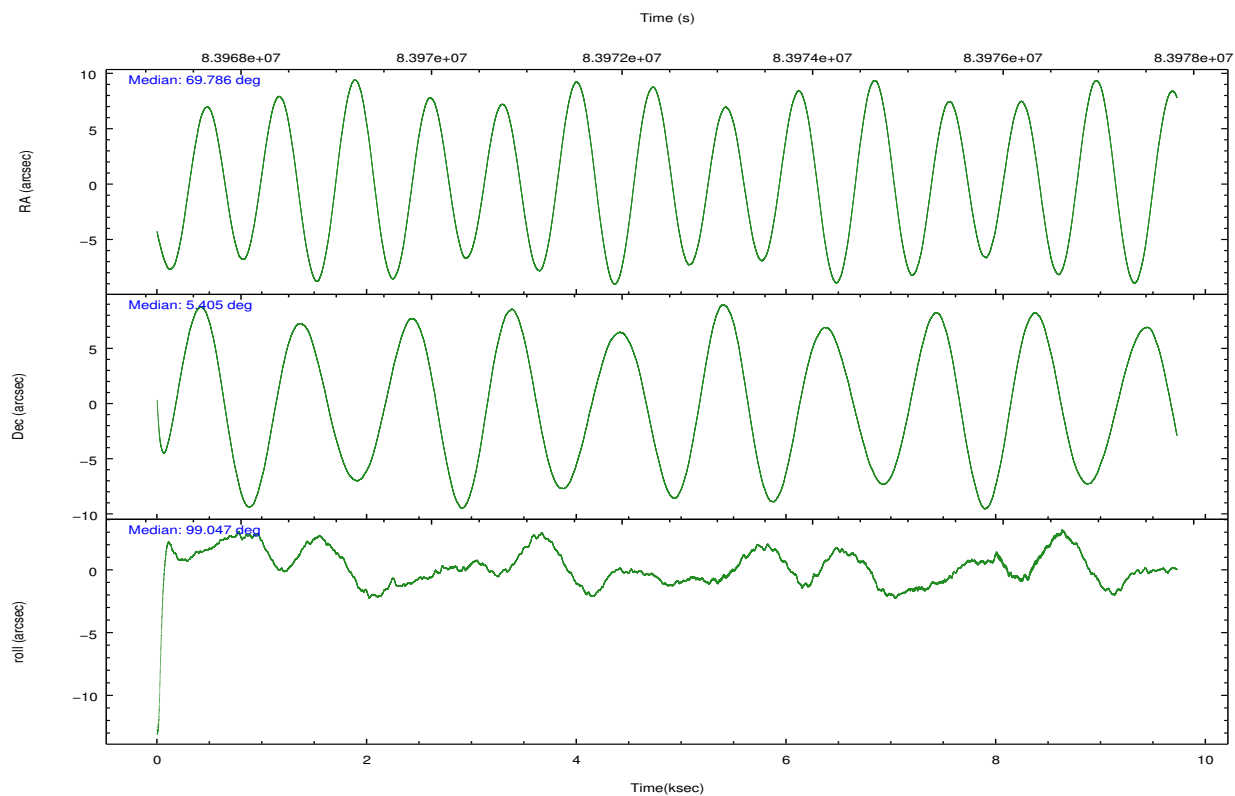
2.2 Compared Parameters

| Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|
| Instrument | ACIS | ACIS |
| Detector | ACIS-01236 | ACIS-01236 |
| Grating | NONE | NONE |
| Data mode | VFAINT | VFAINT |
| Observation mode | POINTING | POINTING |
| [deg] Pointing RA | 69.803427 | 69.78605308232045 |
| [deg] Pointing Dec | 5.383322 | 5.404833364615147 |
| [deg] Pointing Roll | 98.841083 | 99.05138710732211 |
| [mm] SIM focus pos | -0.782348 | -0.7809083437167272 |
| [mm] SIM defocus | 0 | 0.001439871863259334 |
| [mm] SIM translation stage pos | -236.532463 | -236.5241547330508 |
| [mm] SIM translation stage offset | 2.94 | 2.931701730121091 |
| [s] Observation start time (MET) | 83967737.184000 | 83966620.65707301 |
| Observation start date | 2000-08-29T20:21:13 | 2000-08-29T20:03:40 |
| [s] Observation end time (MET) | 83977337.184000 | 83977892.582496 |
| Observation end date | 2000-08-29T23:01:13 | 2000-08-29T23:11:32 |
| Read mode | TIMED | TIMED |

| Parameter | Planned | Actual |
|---------------------------------------|-----------|---------|
| Obspar format version number | 7 | 7 |
| Obspar file type | PREDICTED | ACTUAL |
| Obspar update status | NONE | UPDATED |
| Number of optional ACIS chips dropped | 0 | 0 |
| On-chip summing requested | N | N |
| Subarray requested | NONE | NONE |
| Alternating exposures requested | N | N |
| [s] Primary exposure time | 0.000000 | 3.2 |

2.3 Aspect



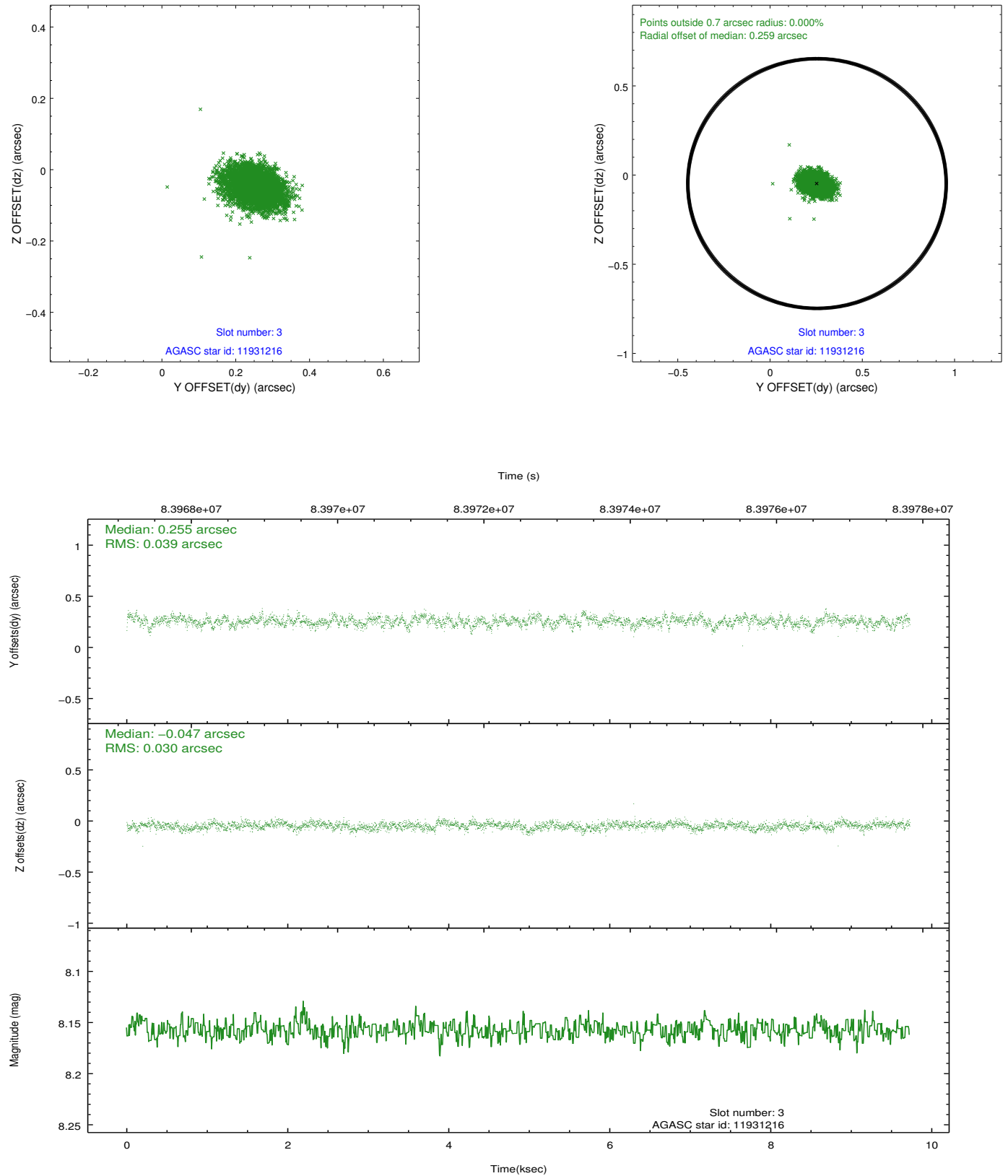


Slot Statistics

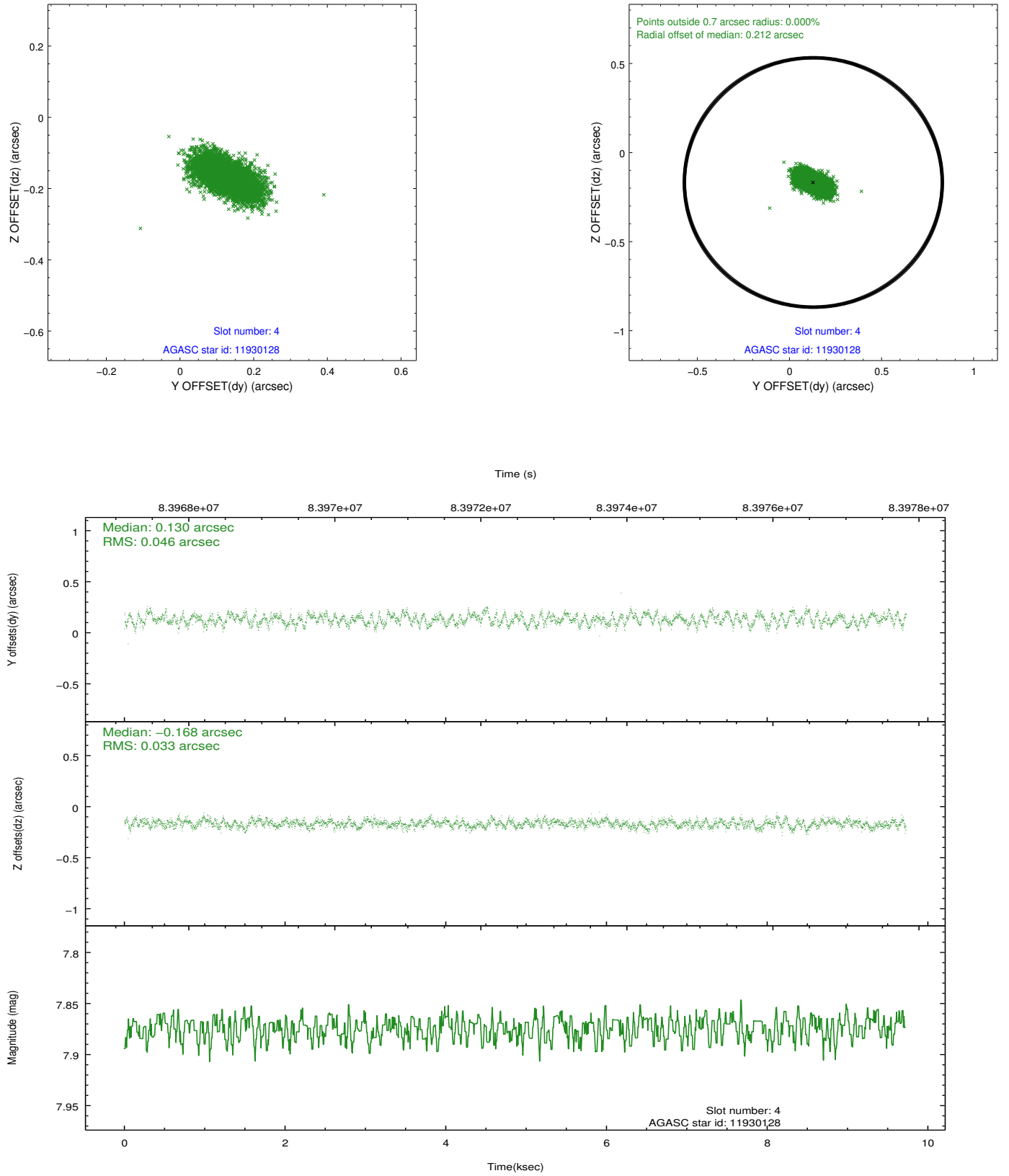
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|----------|------|-------|--------|--------|-------|-------|-----------|----------|----------|----------|
| 0 | FID | ACIS-I-2 | 7.14 | 2373 | -0.011 | -0.026 | 0.009 | 0.017 | 0.000000 | 0.000000 | -755.40 | -775.64 |
| 1 | FID | ACIS-I-4 | 7.21 | 2373 | -0.047 | 0.023 | 0.007 | 0.012 | 0.000000 | 0.000000 | 2158.39 | 1130.35 |
| 2 | FID | ACIS-I-5 | 7.23 | 2372 | -0.044 | 0.071 | 0.010 | 0.016 | 0.000000 | 0.000000 | -1808.70 | 1129.25 |
| 3 | GUIDE | 11931216 | 8.16 | 4745 | 0.255 | -0.047 | 0.051 | 0.088 | 69.809895 | 4.744134 | -2277.15 | 331.06 |
| 4 | GUIDE | 11930128 | 7.87 | 4745 | 0.130 | -0.168 | 0.060 | 0.100 | 69.405504 | 4.982791 | -1205.58 | 1632.11 |
| 5 | GUIDE | 12460960 | 9.20 | 4746 | -0.199 | -0.111 | 0.072 | 0.117 | 69.597447 | 5.837659 | 1729.12 | 478.47 |
| 6 | GUIDE | 12461880 | 8.86 | 4746 | -0.141 | -0.060 | 0.066 | 0.107 | 69.474578 | 5.770319 | 1558.07 | 950.44 |
| 7 | GUIDE | 11929648 | 9.53 | 4741 | -0.046 | 0.391 | 0.091 | 0.151 | 70.369441 | 5.564886 | 335.50 | -2103.39 |

2.4 Star Slots

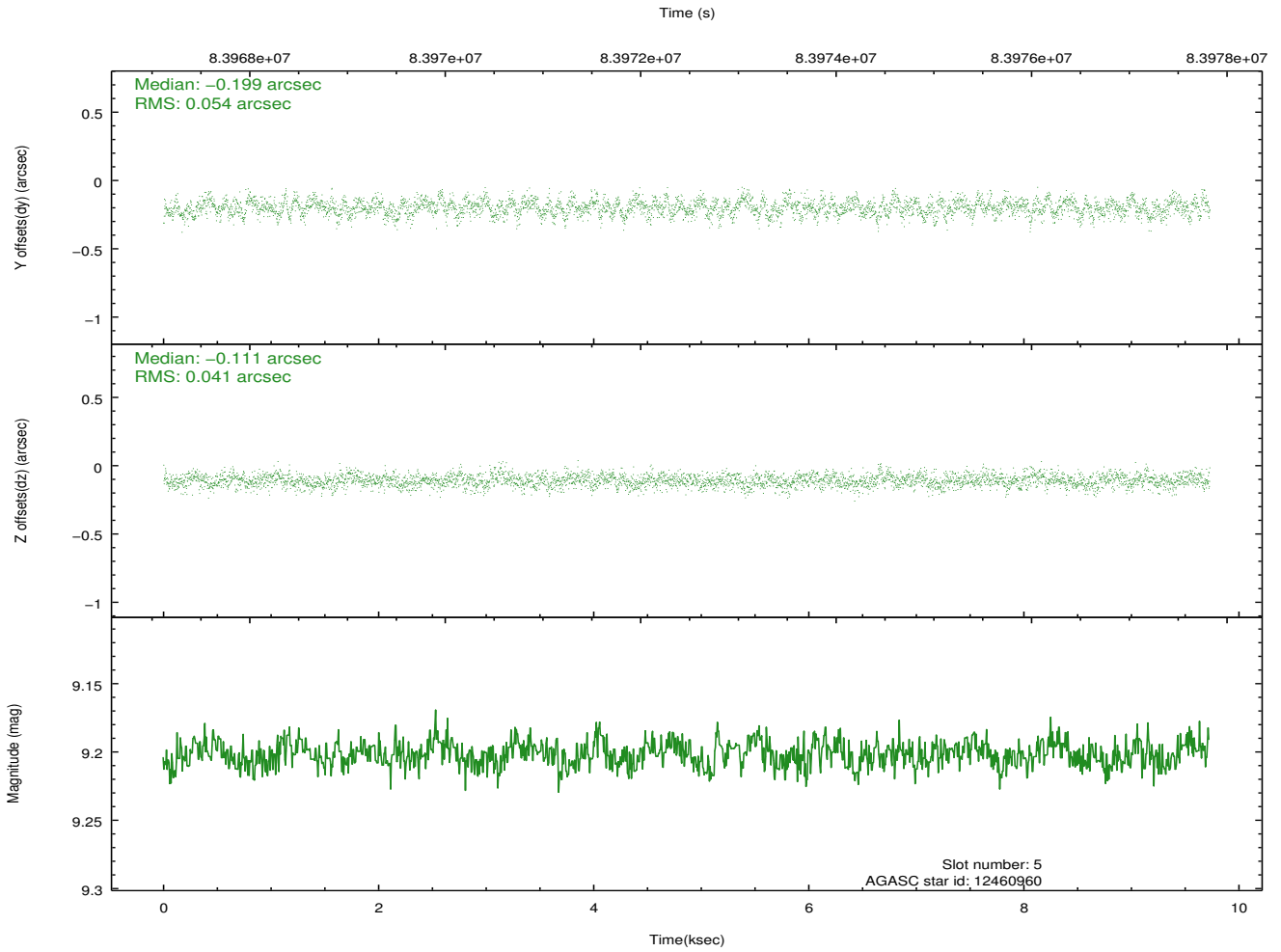
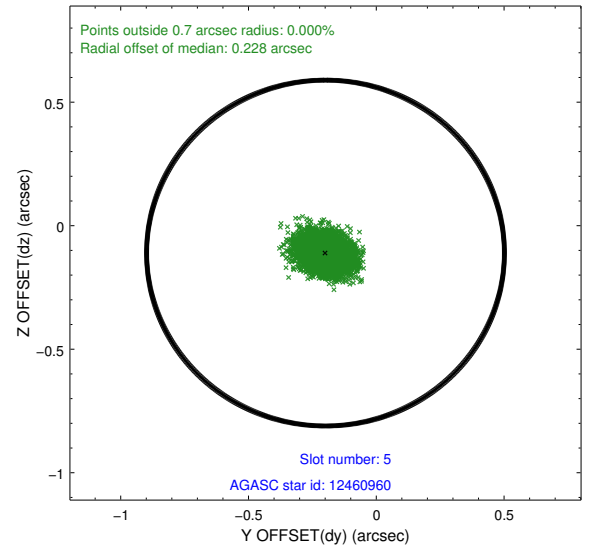
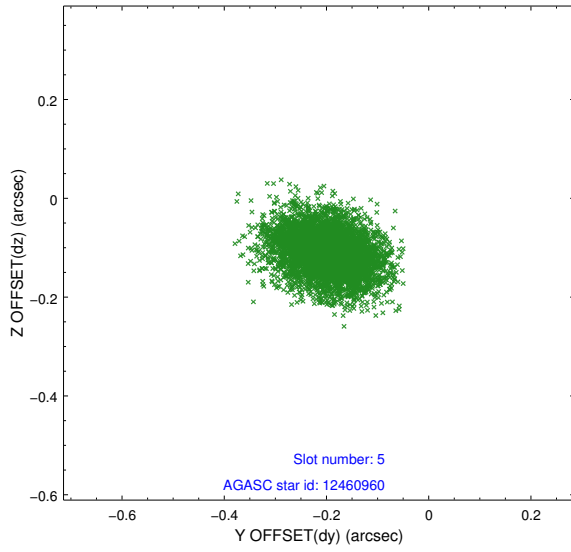
2.4.1 Slot 3



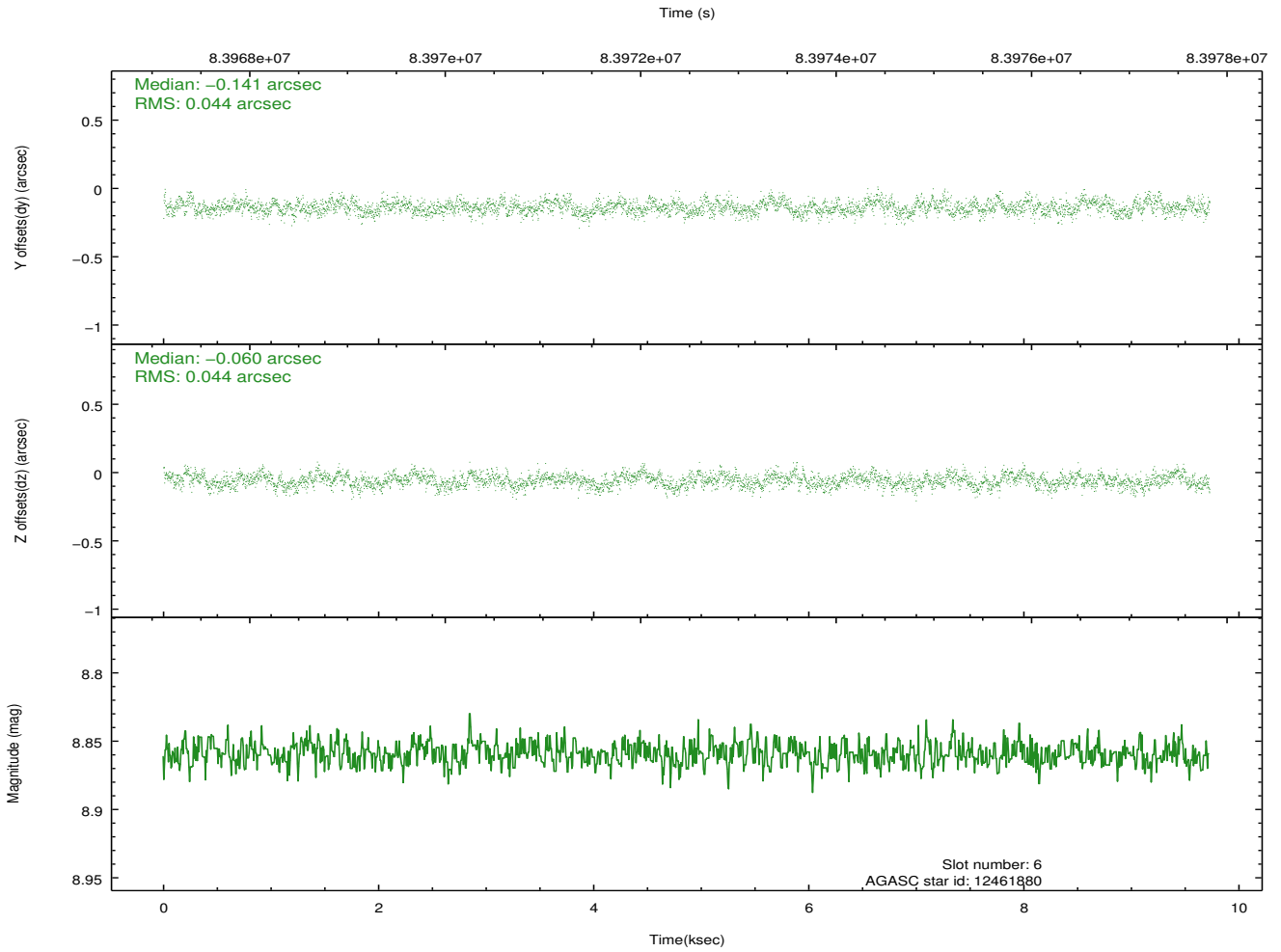
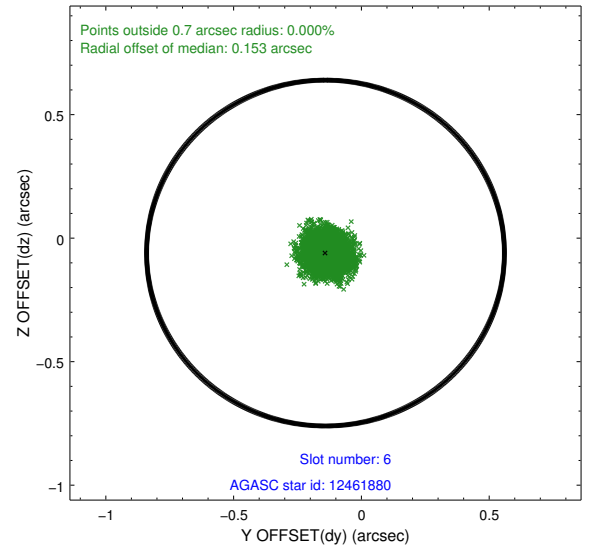
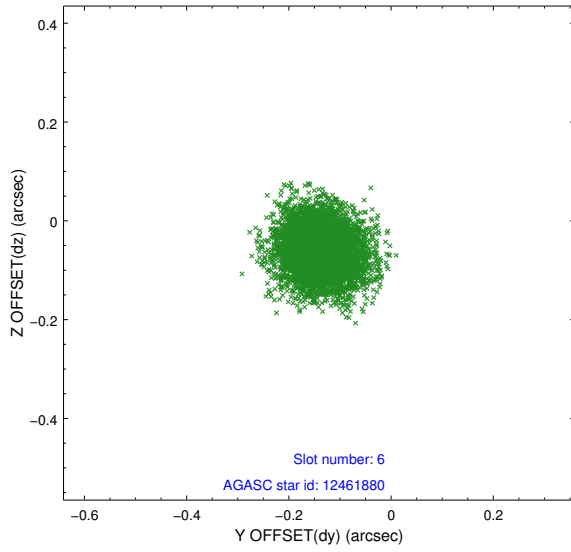
2.4.2 Slot 4



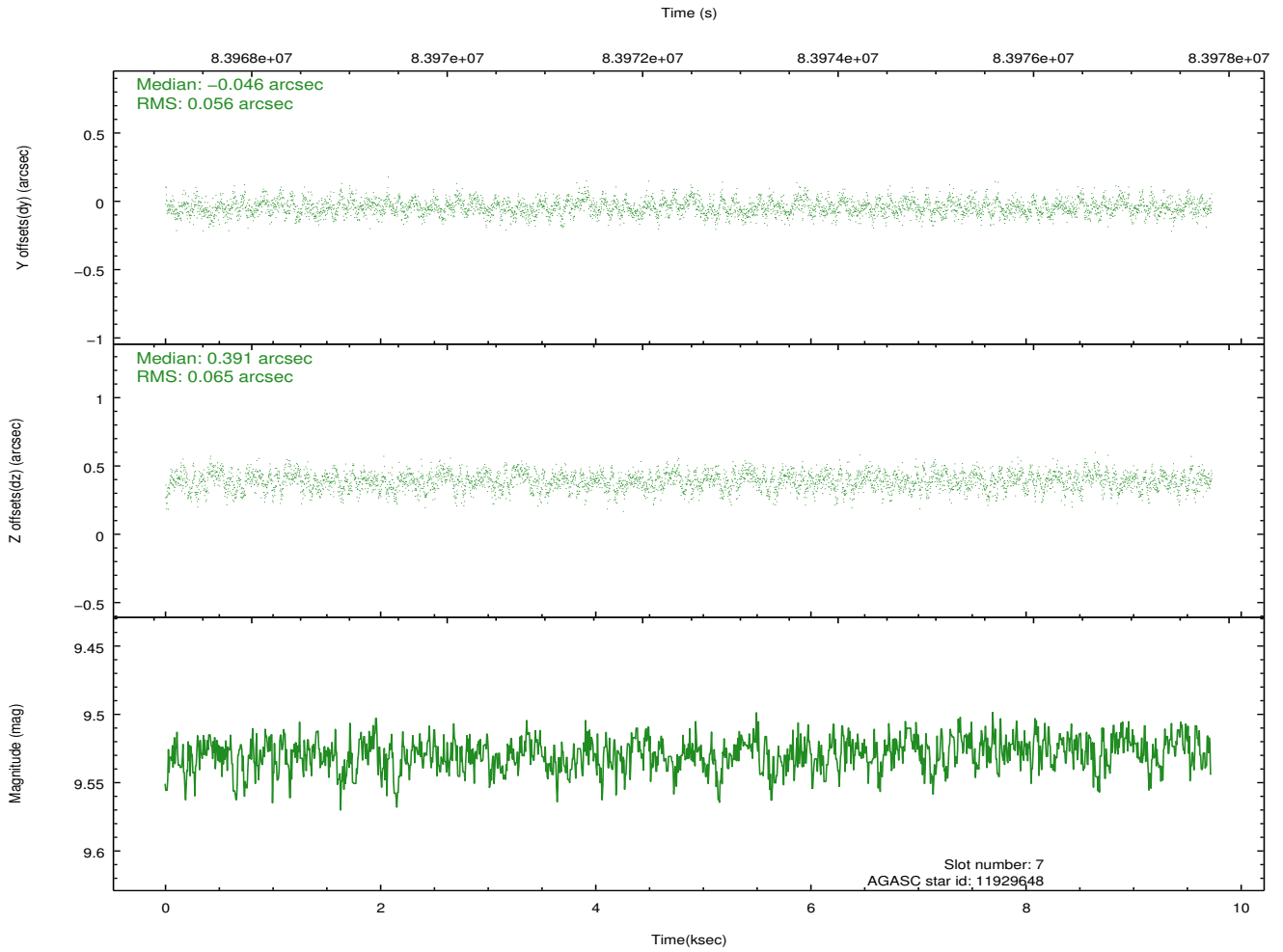
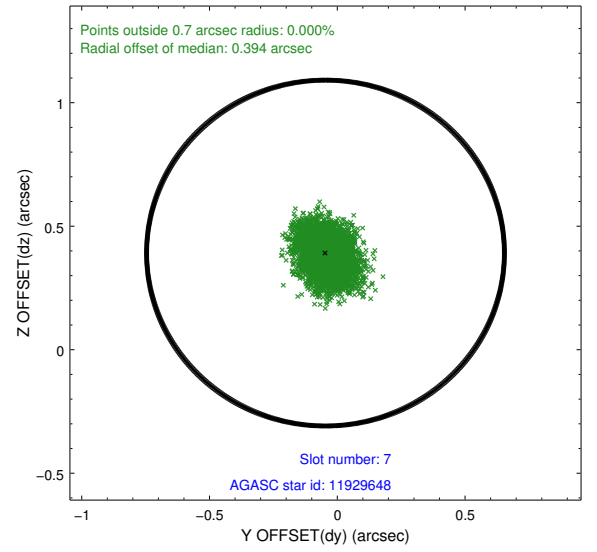
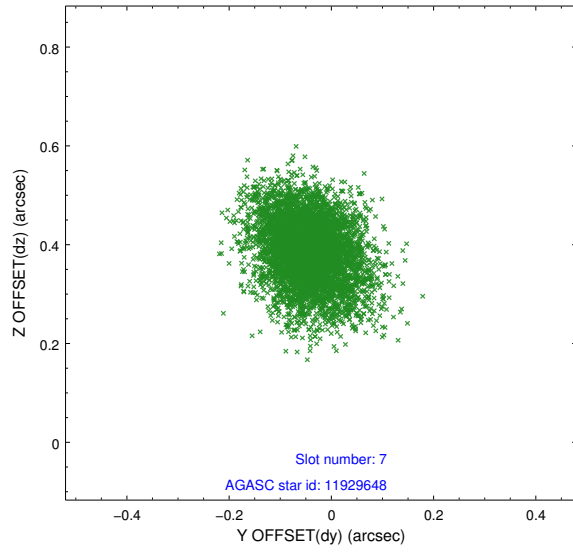
2.4.3 Slot 5



2.4.4 Slot 6

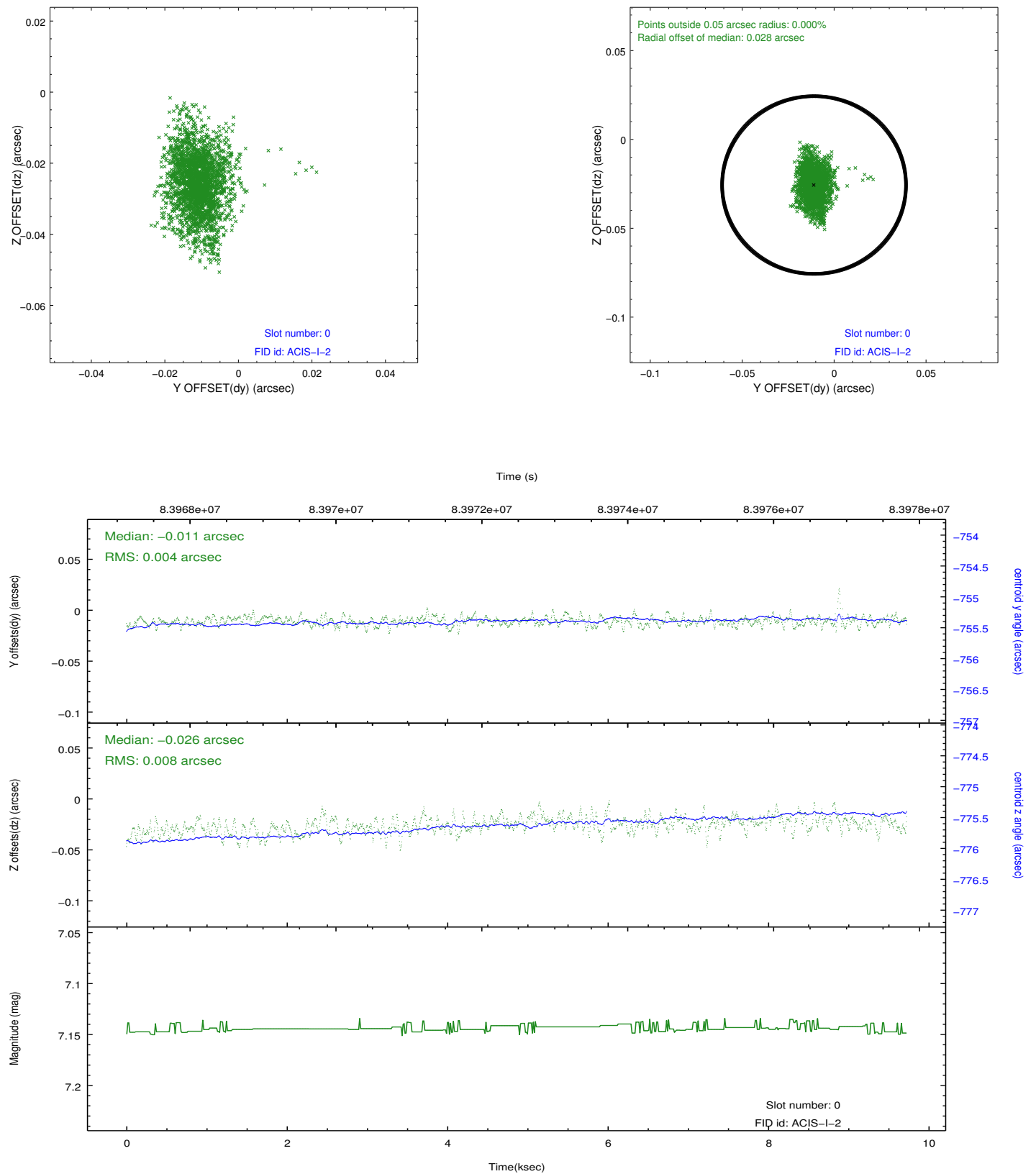


2.4.5 Slot 7

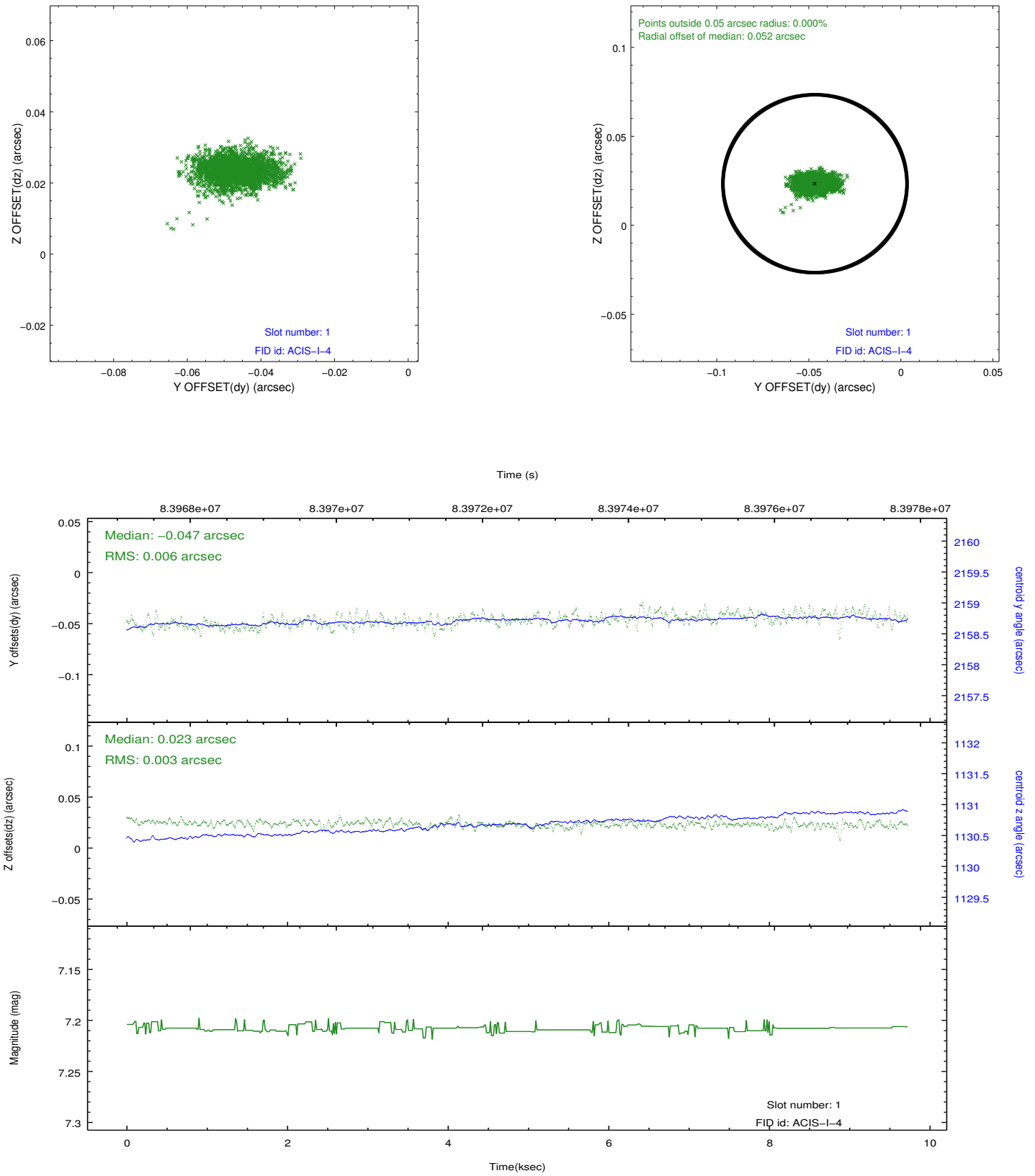


2.5 FID Slots

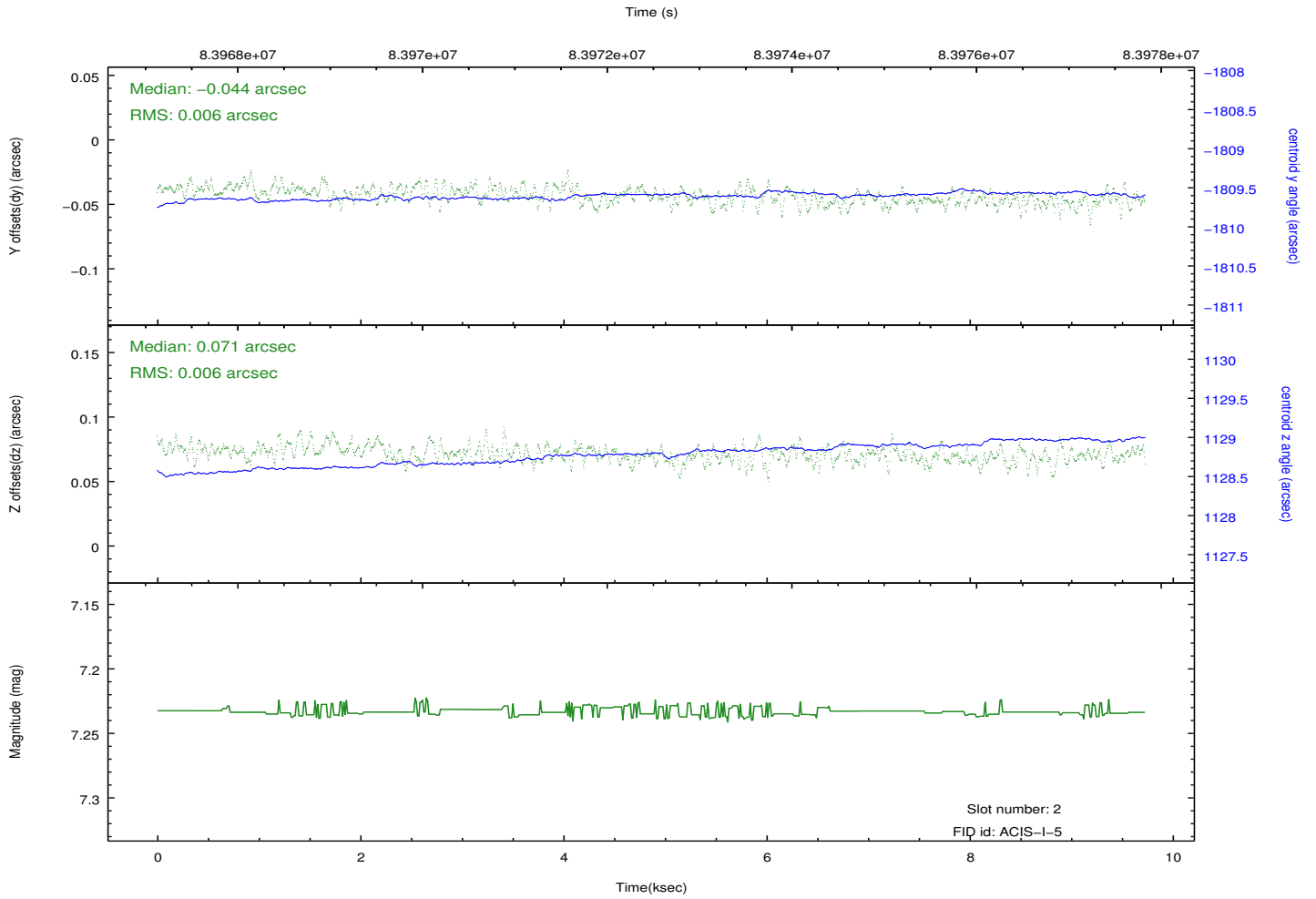
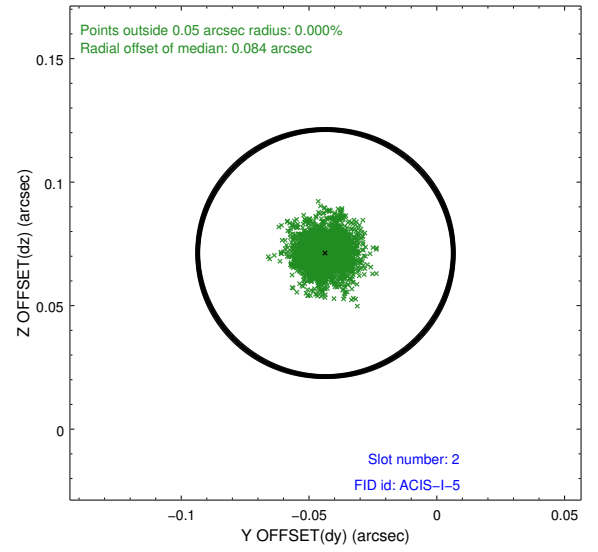
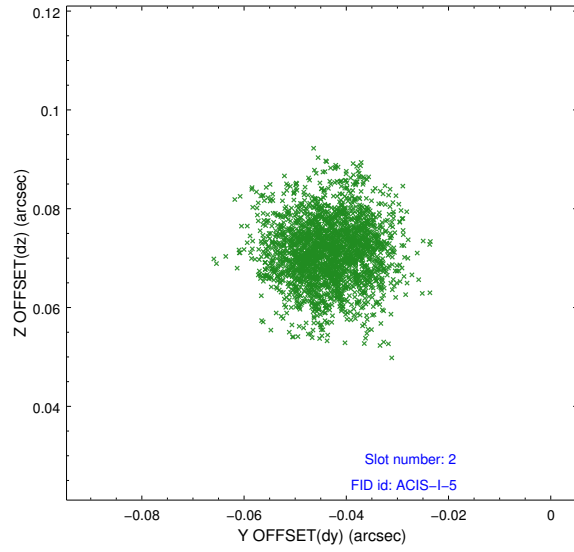
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2



A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Glenn Allen |
| V&V Date (YYYY-MM-DD) | 2012.11.01 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 9.715 |

A.2 Comments

Bias has the measles.

Peter reports that he thinks the bias conditioning step may not have been performed in the usual manner, but that the quirks are at the 1 or 2 adu level. The interiors of the charge blooms associated with the measles spots have bias values close to the node averages. Histograms of the median-subtracted biases indicate that very few pixels satisfy the bad bias threshold of `acis_build_badpix`. In summary, the biases should be OK to use as is.

Glenn