

V&V Reference Report

L2 ASCDS Version : 7.6.9

Observation 2297 - L2 Version 001
Chandra X-Ray Center

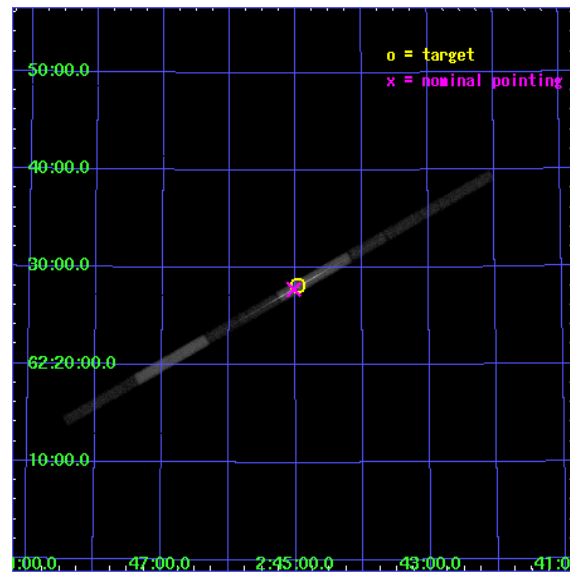
L2 Processing Date : Nov 13 2006

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1 Front

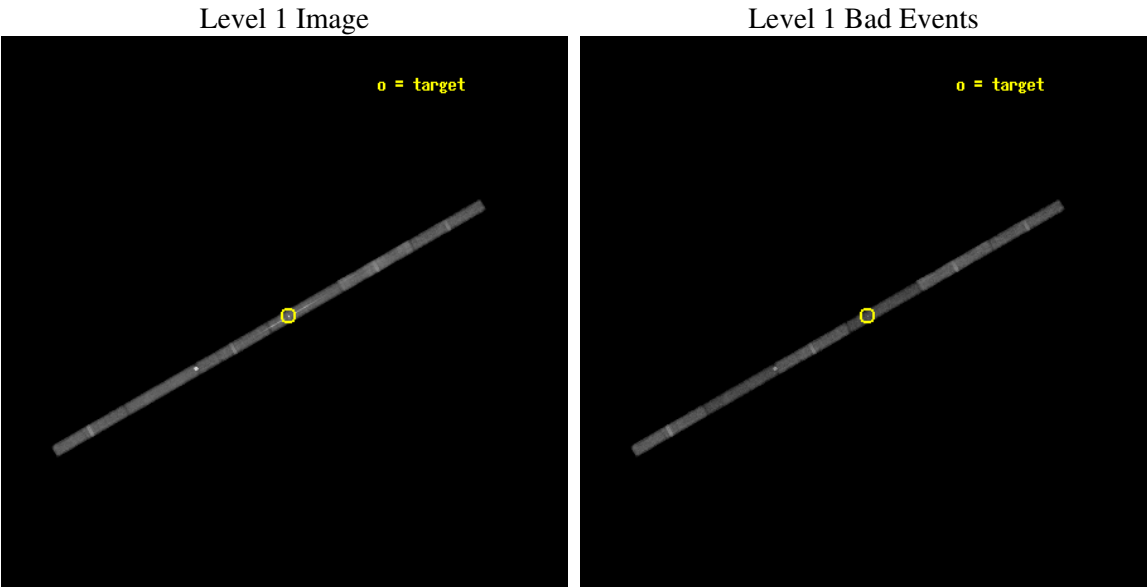
| | |
|----------|------------------------------------------------------------|
| seq_num | 900124 |
| obs_id | 2297 |
| title | THE MOLECULAR FRACTION AND ABUNDANCES OF GAS IN THE GALAXY |
| observer | Dr John Arabadjis |
| object | 4U 0241+61 |
| dtcycle | 0 |
| cycle | P |
| ra_targ | 41.240833 |
| dec_targ | 62.469583 |
| ra_nom | 41.2571745213 |
| dec_nom | 62.463265045892 |
| roll_nom | 330.32665455512 |
| revision | 2 |
| ontime | 36934.100157246 |
| livetime | 34888.629642222 |
| ontime4 | 36934.100157246 |
| ontime5 | 36934.100157246 |
| ontime6 | 36934.100157246 |
| ontime7 | 36934.100157246 |
| ontime8 | 36934.100157246 |
| ontime9 | 36934.100157246 |
| l2events | 78766 |



2 OBI

2.1 OBI

2.1.1 Images



2.1.2 Bias

Chip 4

Chip 5

Chip 6



Chip 7

Chip 8

Chip 9



2.1.3 Parameters

| | |
|----------|---------------------|
| obi_num | 1 |
| ascdsver | 7.6.9 |
| caldsver | 3.2.4 |
| date | 2006-11-13T16:00:03 |
| revision | 2 |

| | |
|----------------|-----------------|
| sched_exp_time | 36625.515000 |
| ontime | 37126.348308116 |
| ontime4 | 37126.348308116 |
| ontime5 | 37126.348308116 |
| ontime6 | 37126.348308116 |
| ontime7 | 37126.348308116 |
| ontime8 | 37126.348308116 |
| ontime9 | 37127.089348122 |
| l1events | 321473 |

2.1.4 Events

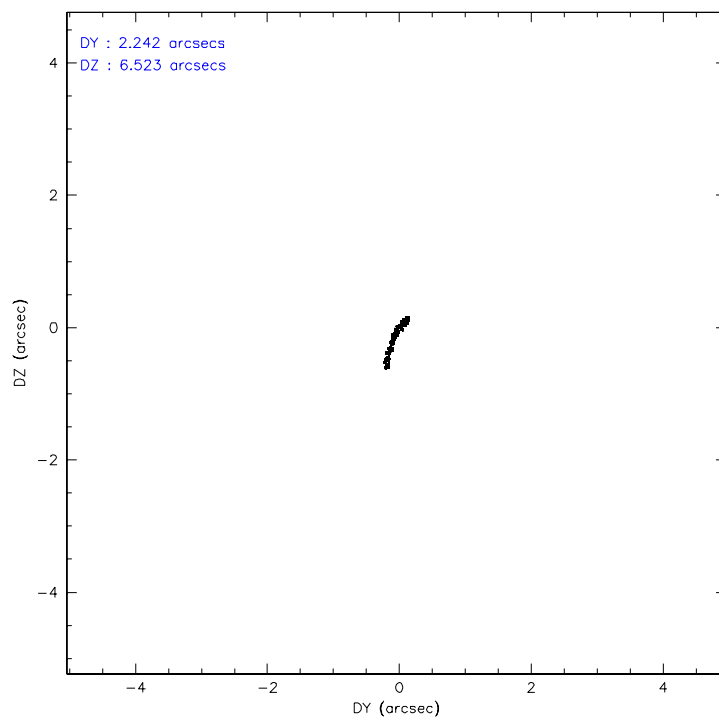
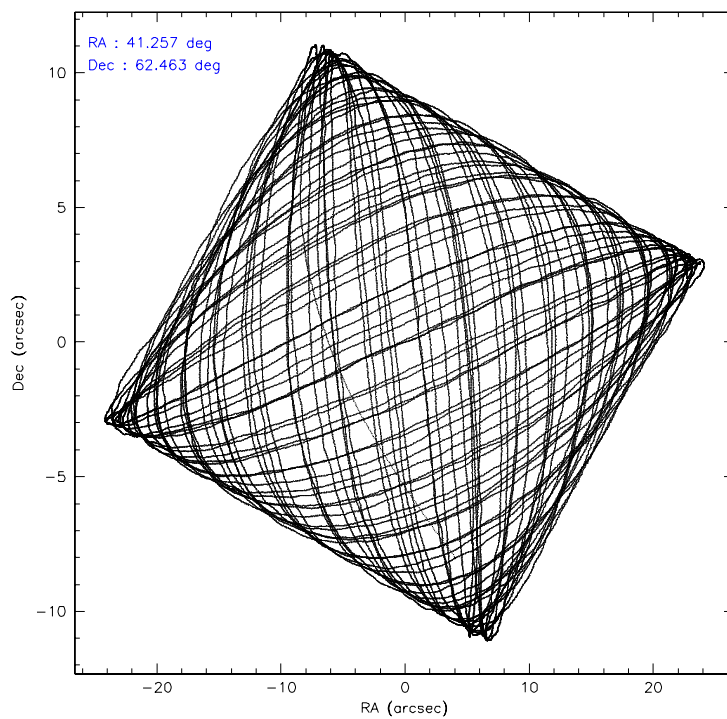
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|-----------------|-------|-------|-------|-------|-------|-------|
| level 1 events | 47953 | 61871 | 44826 | 59709 | 65765 | 41349 |
| rejected events | 41667 | 25810 | 37742 | 22908 | 46813 | 35478 |
| rejected % | 86% | 41% | 84% | 38% | 71% | 85% |

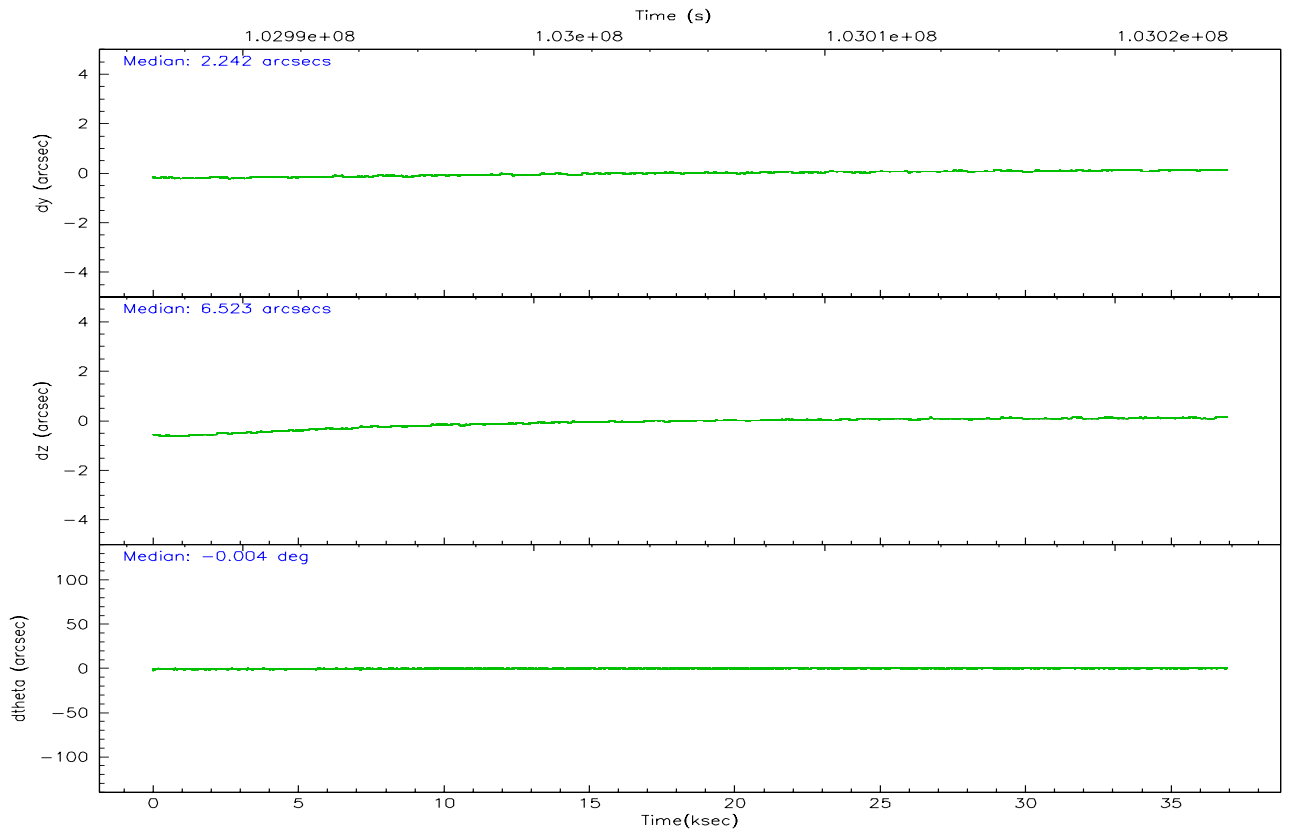
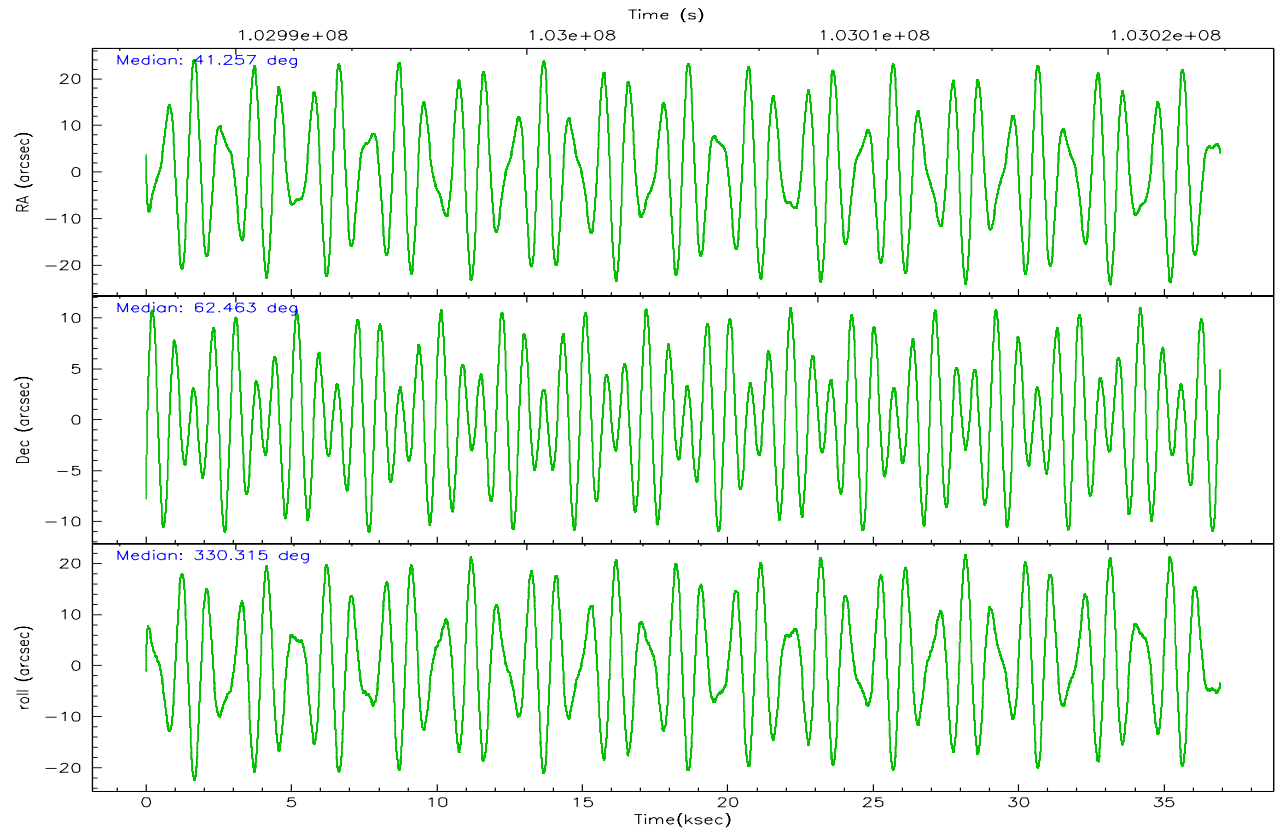
| | ccd 4 | ccd 5 | ccd 6 | ccd 7 | ccd 8 | ccd 9 |
|----------------|-------|-------|-------|-------|-------|-------|
| grade 0 events | 2465 | 10426 | 3284 | 5114 | 6308 | 2333 |
| | 5% | 16% | 7% | 8% | 9% | 5% |
| grade 1 events | 11 | 1501 | 12 | 52 | 40 | 11 |
| | 0% | 2% | 0% | 0% | 0% | 0% |
| grade 2 events | 1334 | 7745 | 1146 | 8608 | 2623 | 1093 |
| | 2% | 12% | 2% | 14% | 3% | 2% |
| grade 3 events | 752 | 3103 | 846 | 3709 | 3305 | 768 |
| | 1% | 5% | 1% | 6% | 5% | 1% |
| grade 4 events | 776 | 2763 | 817 | 3648 | 2879 | 728 |
| | 1% | 4% | 1% | 6% | 4% | 1% |
| grade 5 events | 1060 | 3460 | 1122 | 3321 | 1509 | 1142 |
| | 2% | 5% | 2% | 5% | 2% | 2% |
| grade 6 events | 990 | 12323 | 1031 | 15865 | 3929 | 983 |
| | 2% | 19% | 2% | 26% | 5% | 2% |
| grade 7 events | 40565 | 20550 | 36568 | 19392 | 45172 | 34291 |
| | 84% | 33% | 81% | 32% | 68% | 82% |

2.2 Compared Parameters

| Parameter | Planned | Actual | Parameter | Planned | Actual |
|-----------------------------------|---------------------|----------------------|---------------------------------------|-----------|---------|
| Instrument | ACIS | ACIS | Obspar format version number | 6 | 6 |
| Detector | ACIS-456789 | ACIS-456789 | Obspar file type | PREDICTED | ACTUAL |
| Grating | LETG | LETG | 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 | 41.198119 | 41.2571745212997 | Subarray requested | CUSTOM | 1/8 |
| Pointing Dec | 62.462847 | 62.4632650458917 | Subarray start row | 115 | 115 |
| Pointing Roll | 330.222394 | 330.3266545551188 | Subarray row count | 128 | 128 |
| SIM focus pos (mm) | -0.684267 | -0.6828225247311905 | Alternating exposures requested | N | N |
| SIM defocus (mm) | 0 | 0.001444936568705701 | Primary exposure time | 0.000000 | 0.7 |
| SIM translation stage pos (mm) | -182.132523 | -182.1344861297048 | | | |
| SIM translation stage offset (mm) | -8 | -7.998036453302973 | | | |
| Observation start time | 102987218.184000 | 102986176.47098 | | | |
| Observation start date | 2001-04-06T23:32:34 | 2001-04-06T23:16:16 | | | |
| Observation end time | 103023844.184000 | 103024157.84745 | | | |
| Observation end date | 2001-04-07T09:43:00 | 2001-04-07T09:49:17 | | | |
| Read mode | TIMED | TIMED | | | |

2.3 Aspect



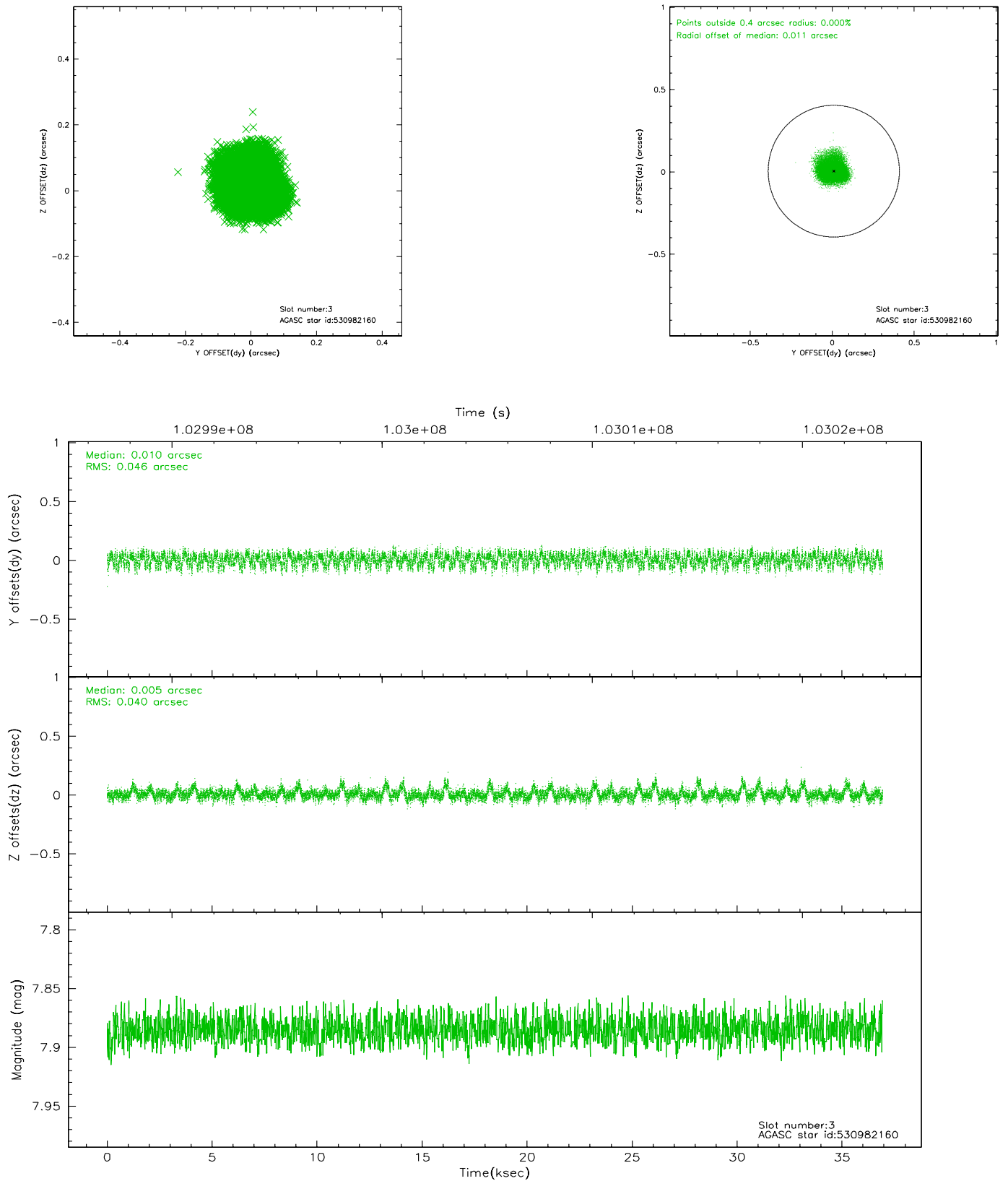


Slot Statistics

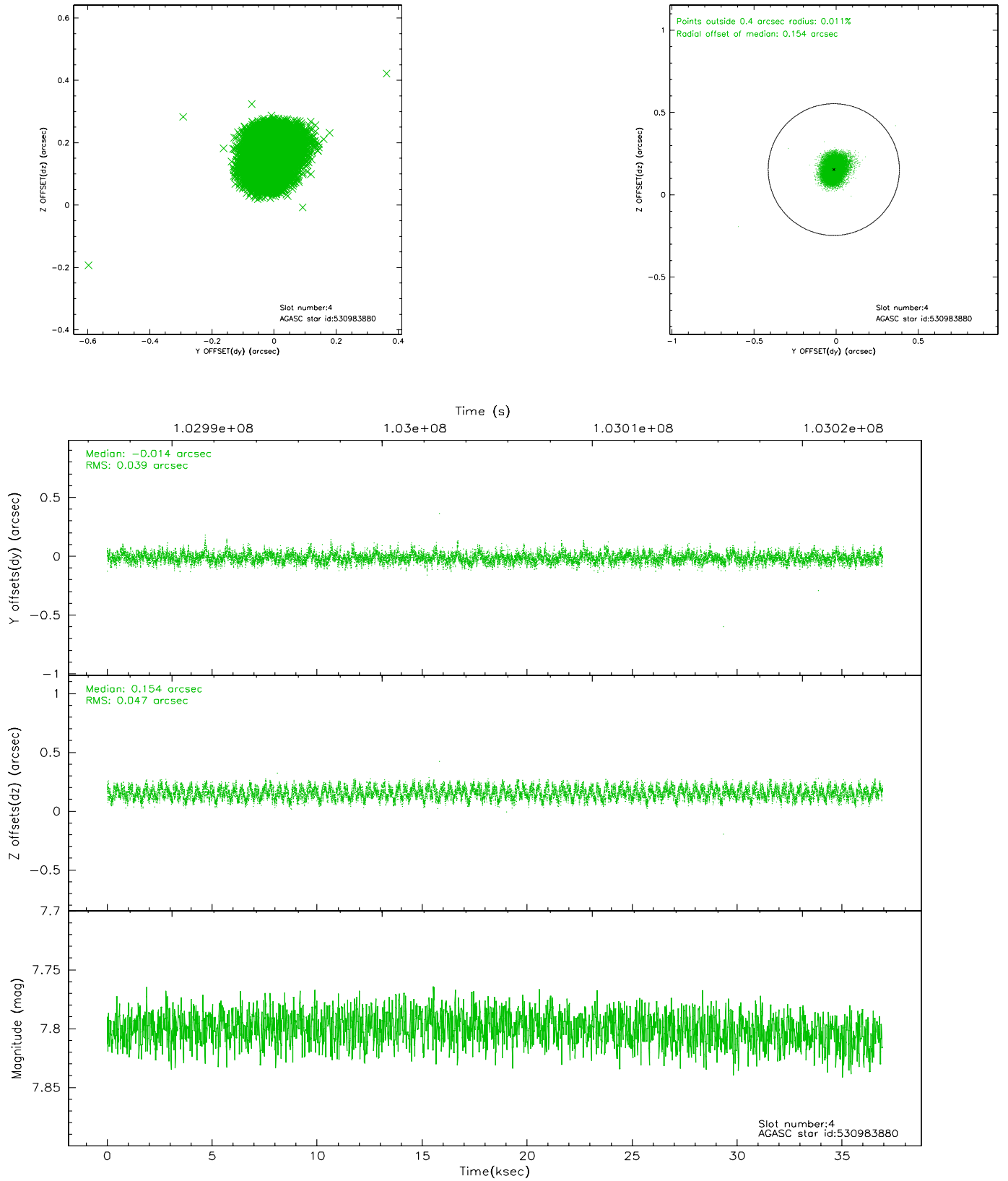
| slot | status | id | mag | n_pts | med_dy | med_dz | dr1 | dr2 | ra | dec | mean_y | mean_z |
|------|--------|-----------|------|-------|--------|--------|-------|-------|-----------|-----------|----------|----------|
| 0 | FID | ACIS-S-2 | 7.09 | 9009 | -0.028 | -0.079 | 0.012 | 0.027 | 0.000000 | 0.000000 | -754.32 | -1892.42 |
| 1 | FID | ACIS-S-4 | 7.18 | 9008 | -0.024 | 0.034 | 0.005 | 0.010 | 0.000000 | 0.000000 | 2158.96 | 16.08 |
| 2 | FID | ACIS-S-5 | 7.23 | 9009 | 0.021 | 0.053 | 0.011 | 0.025 | 0.000000 | 0.000000 | -1807.06 | 9.84 |
| 3 | GUIDE | 530982160 | 7.88 | 18018 | 0.010 | 0.005 | 0.066 | 0.106 | 41.144784 | 63.208043 | -1407.06 | 2285.05 |
| 4 | GUIDE | 530983880 | 7.80 | 18012 | -0.014 | 0.154 | 0.066 | 0.101 | 40.004667 | 62.601987 | -1972.76 | -531.61 |
| 5 | GUIDE | 530450872 | 7.87 | 18016 | -0.024 | 0.076 | 0.063 | 0.104 | 40.995903 | 61.778140 | 926.45 | -2309.98 |
| 6 | GUIDE | 530984448 | 6.40 | 18018 | -0.056 | -0.211 | 0.046 | 0.072 | 41.666670 | 63.005541 | -306.62 | 2077.75 |
| 7 | GUIDE | 530992632 | 9.33 | 18008 | 0.088 | -0.025 | 0.110 | 0.174 | 40.543397 | 62.146854 | -392.27 | -1529.65 |

2.4 Star Slots

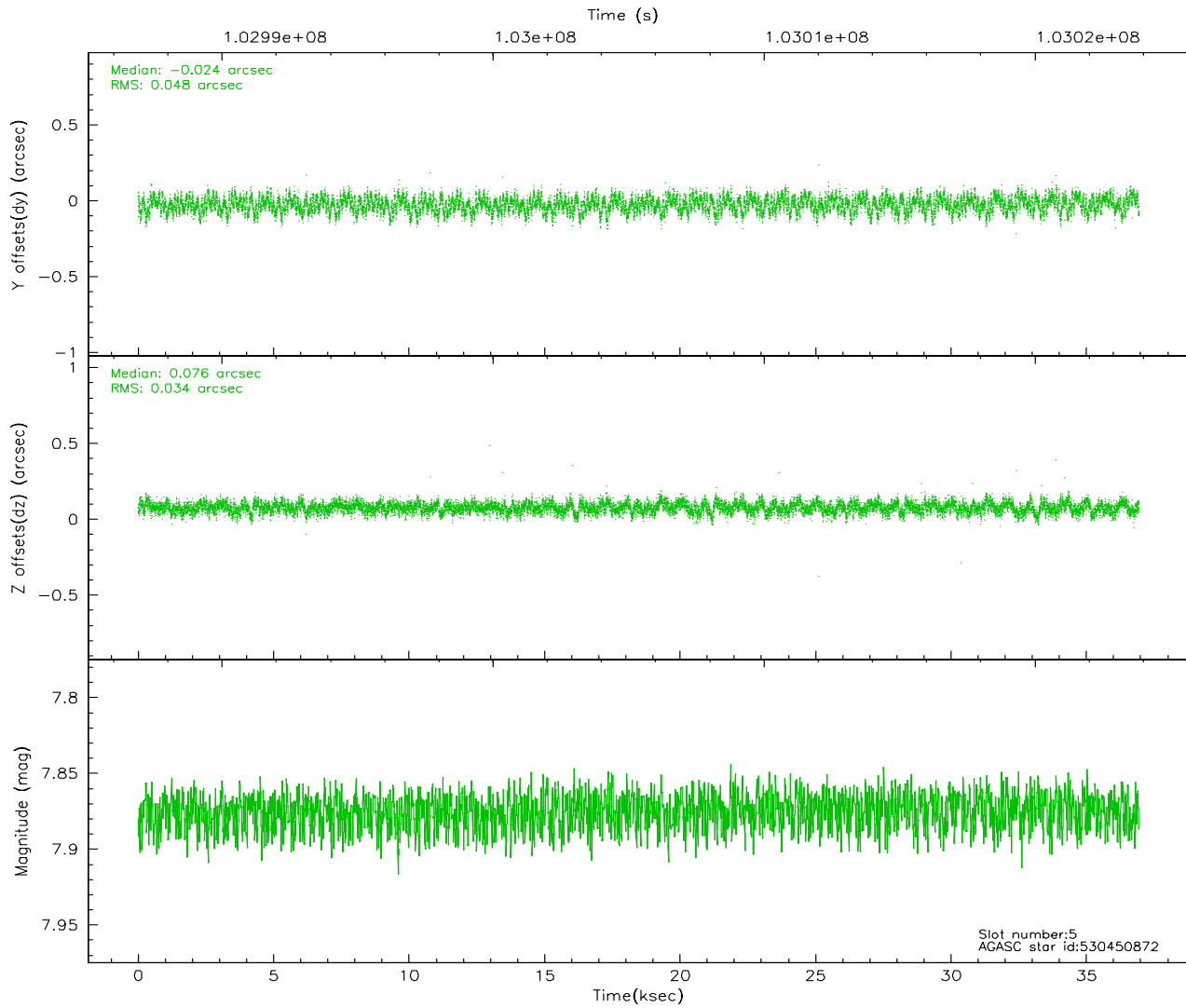
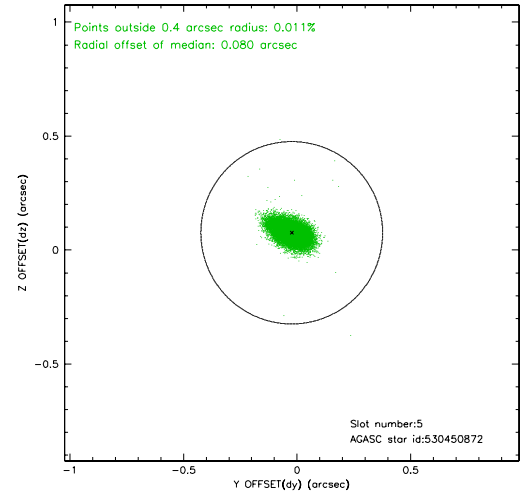
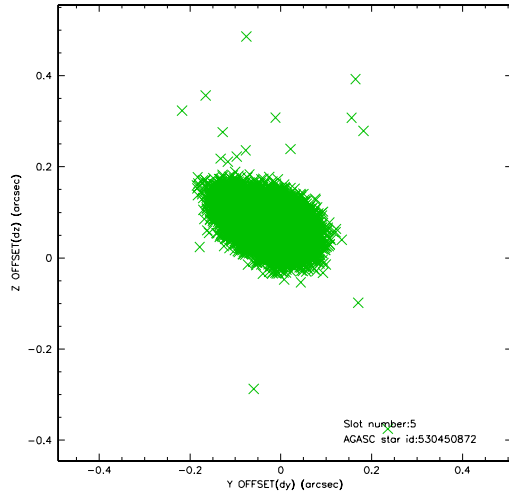
2.4.1 Slot 3



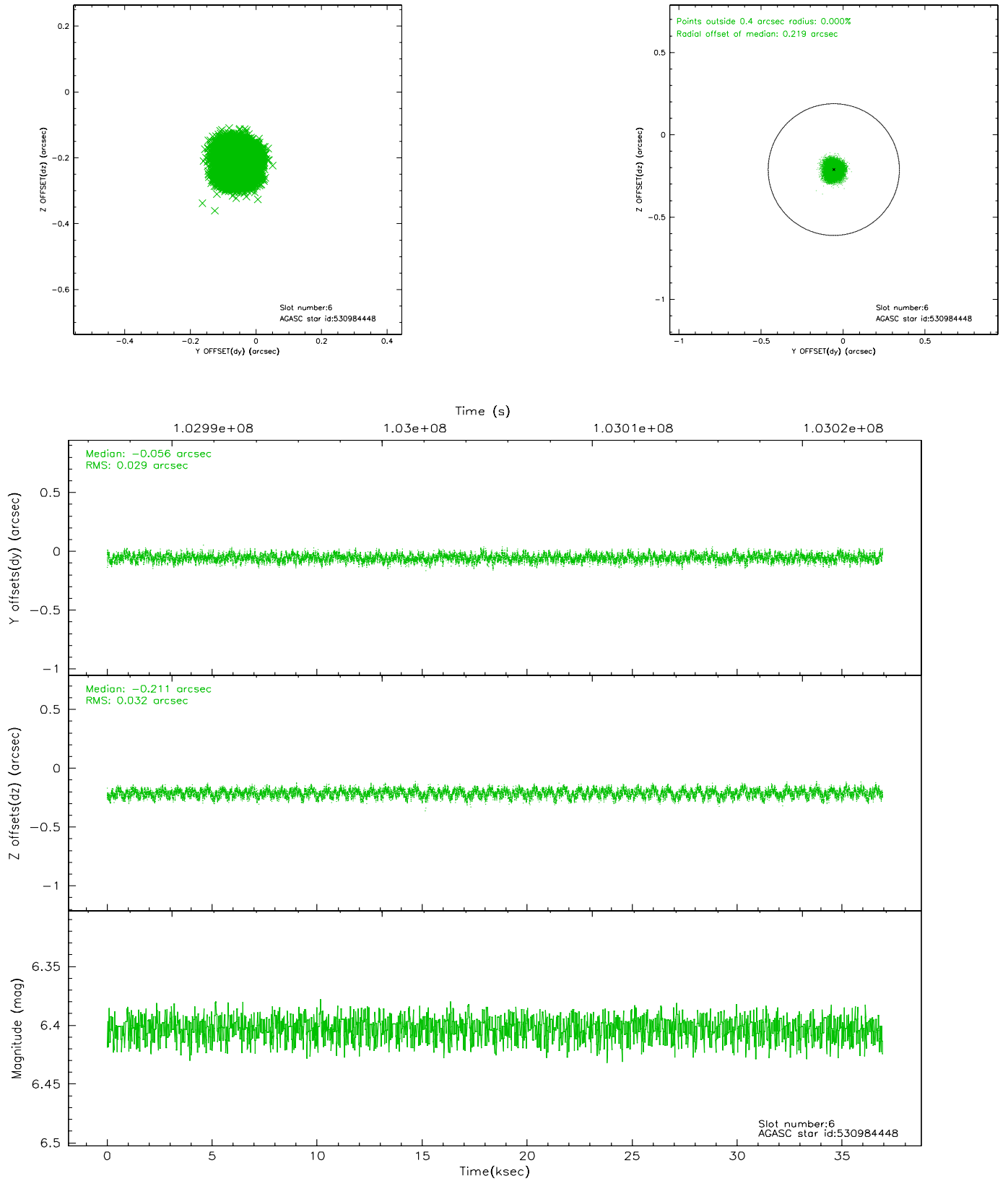
2.4.2 Slot 4



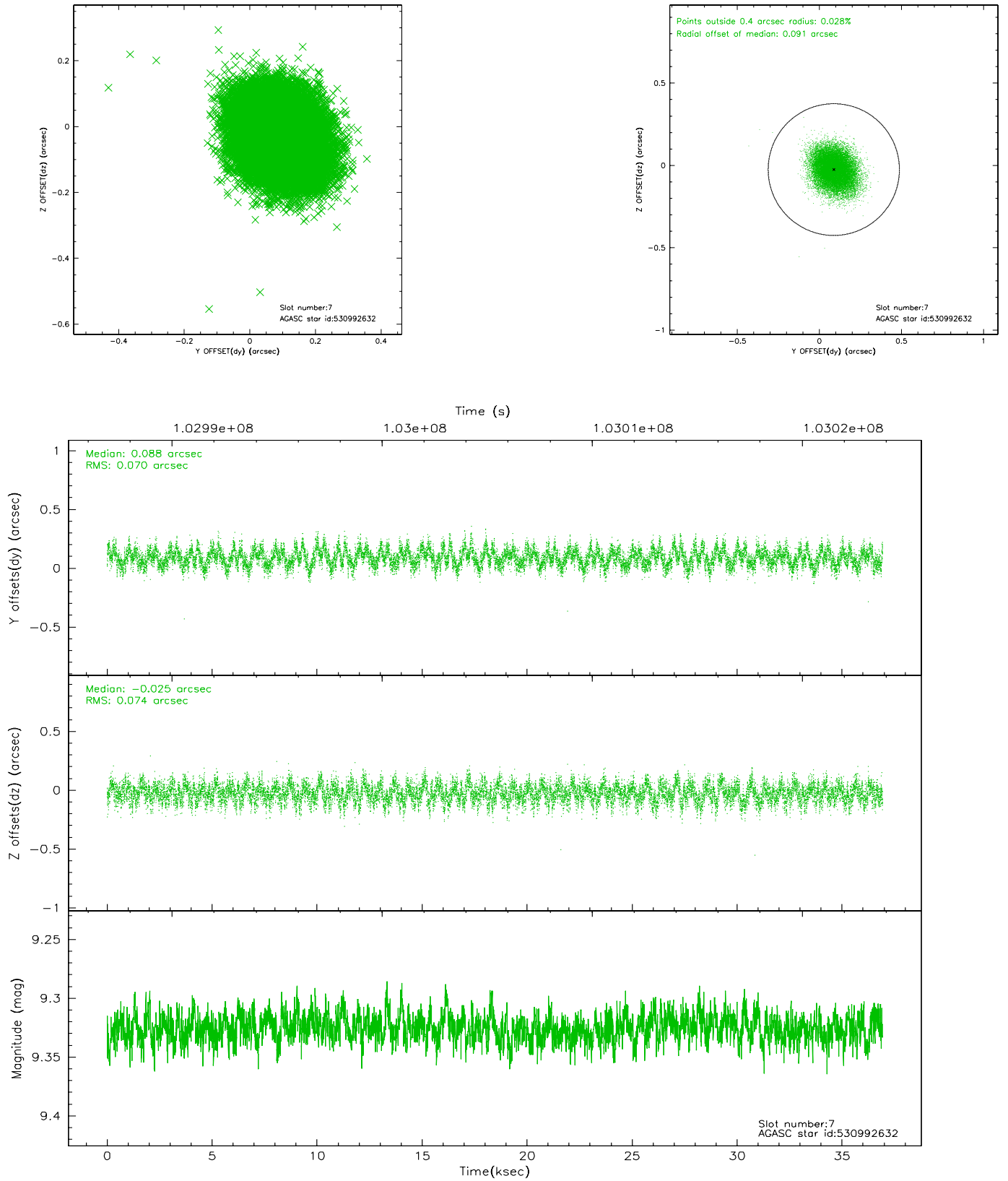
2.4.3 Slot 5



2.4.4 Slot 6

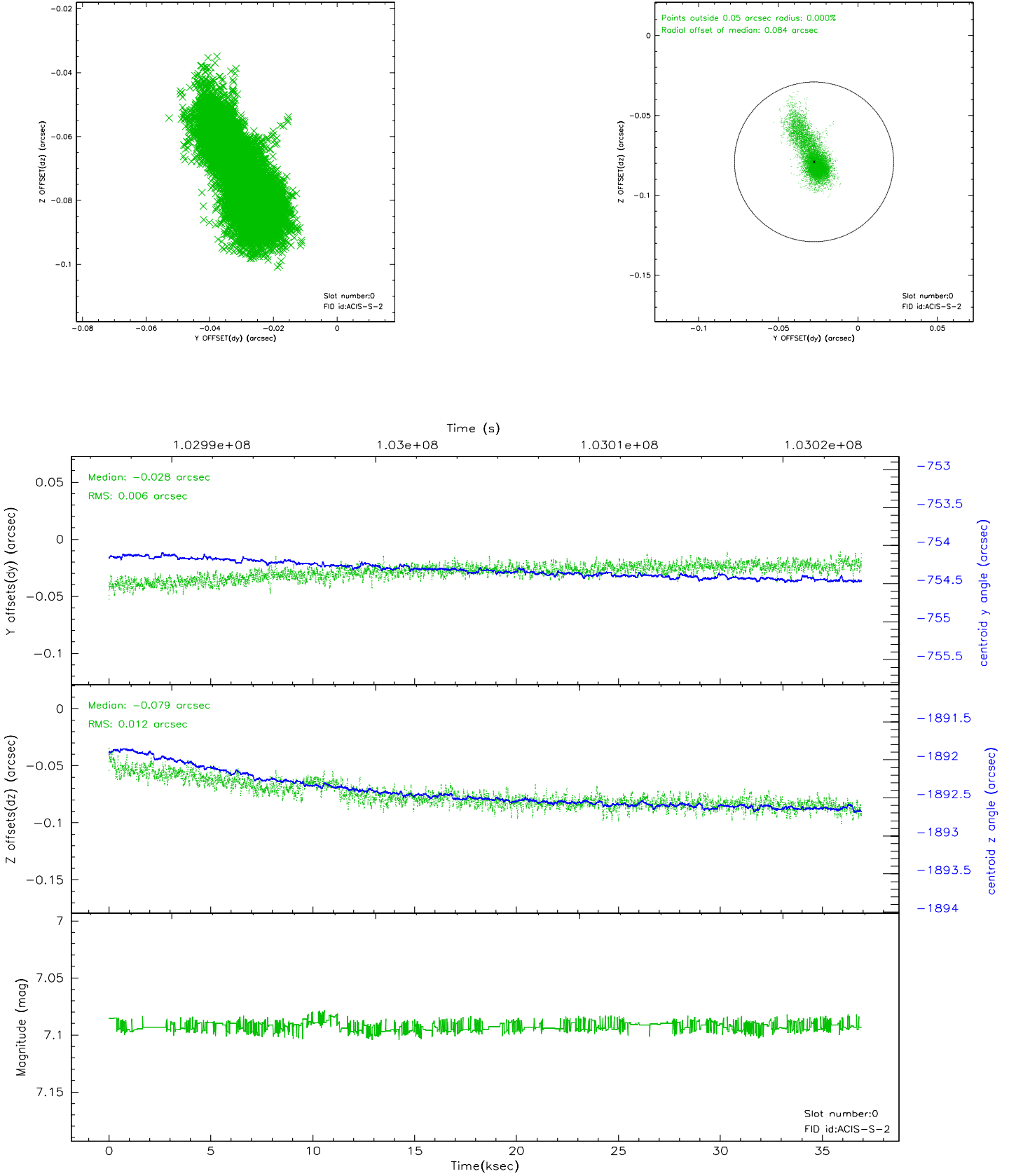


2.4.5 Slot 7

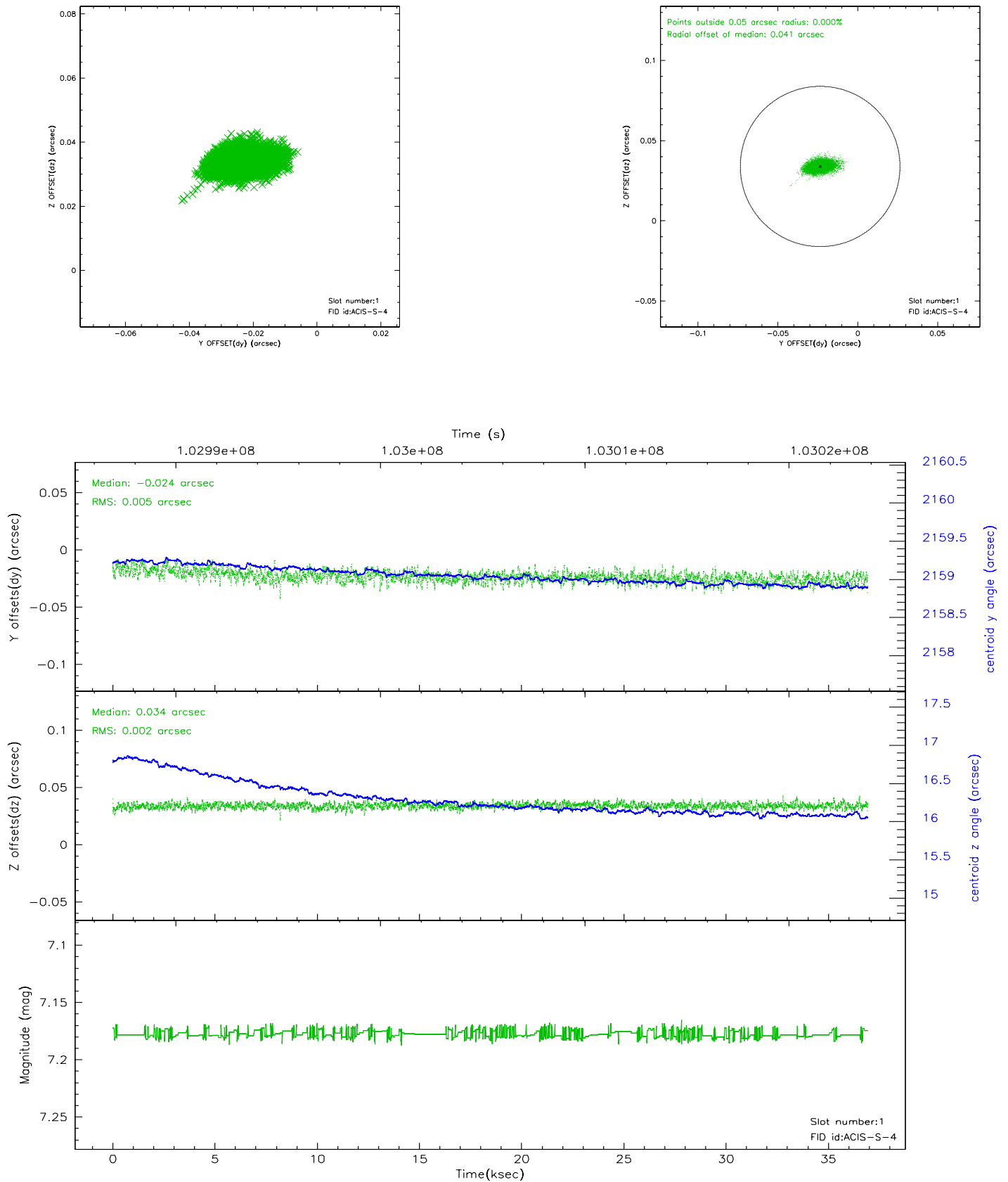


2.5 FID Slots

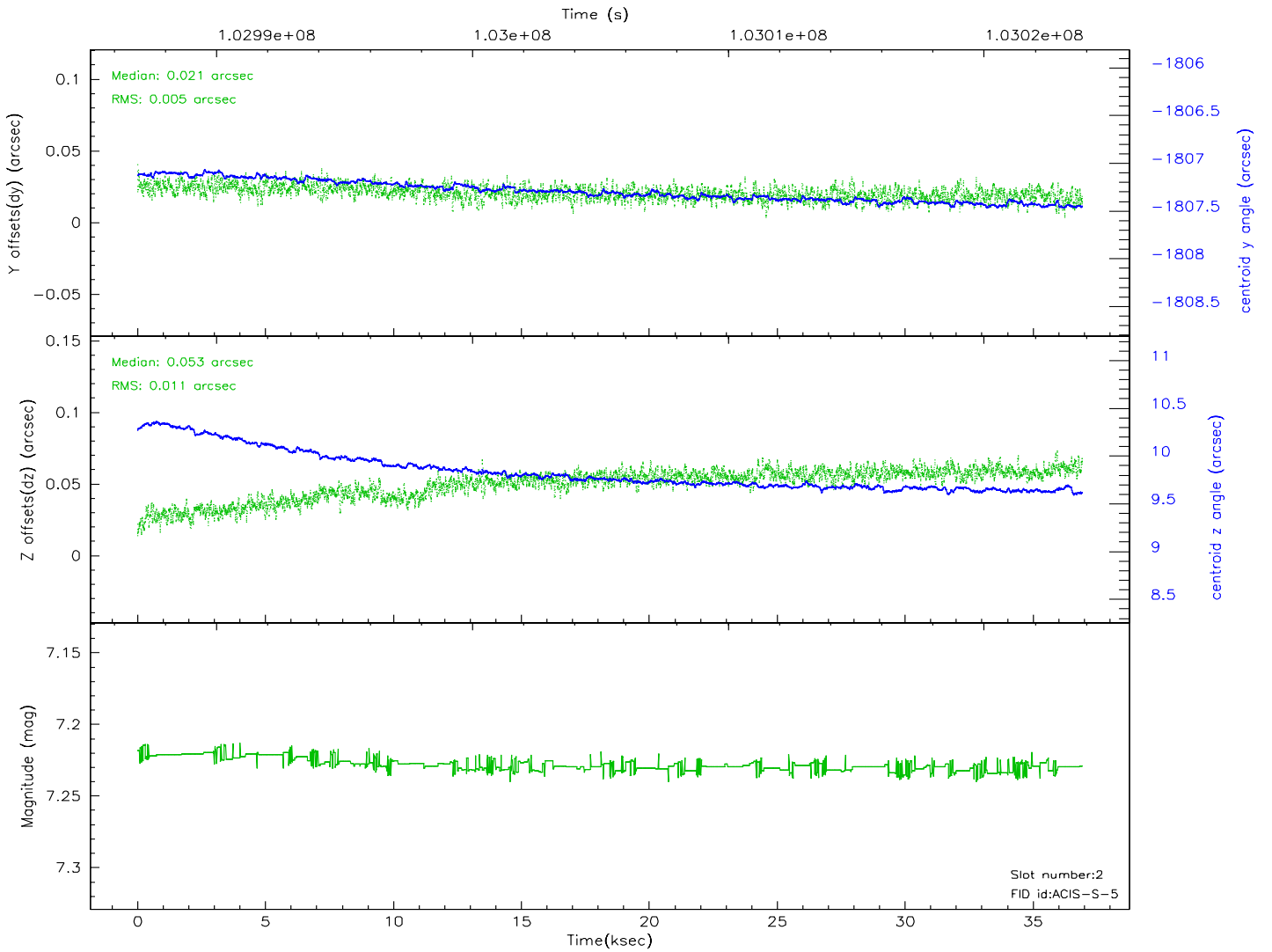
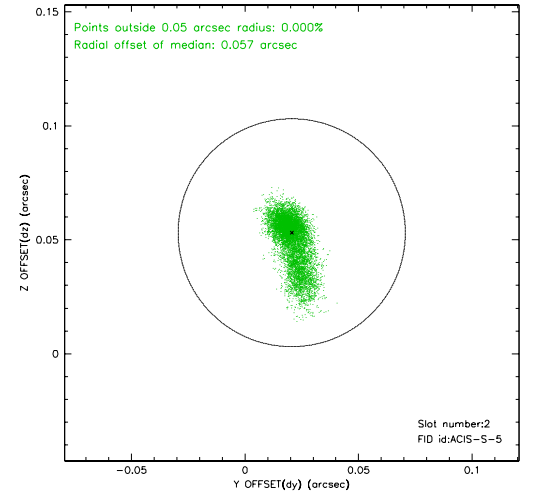
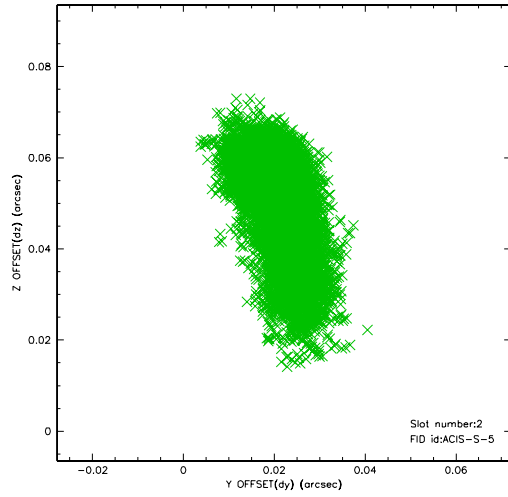
2.5.1 Slot 0



2.5.2 Slot 1



2.5.3 Slot 2

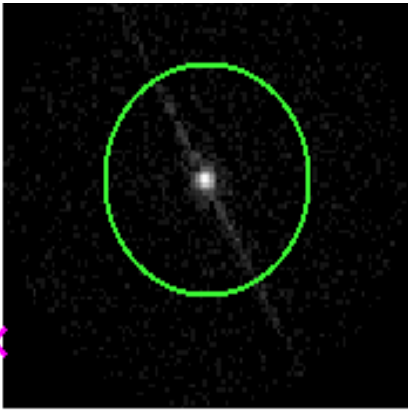


3 Gratings

3.1 LETG Arm



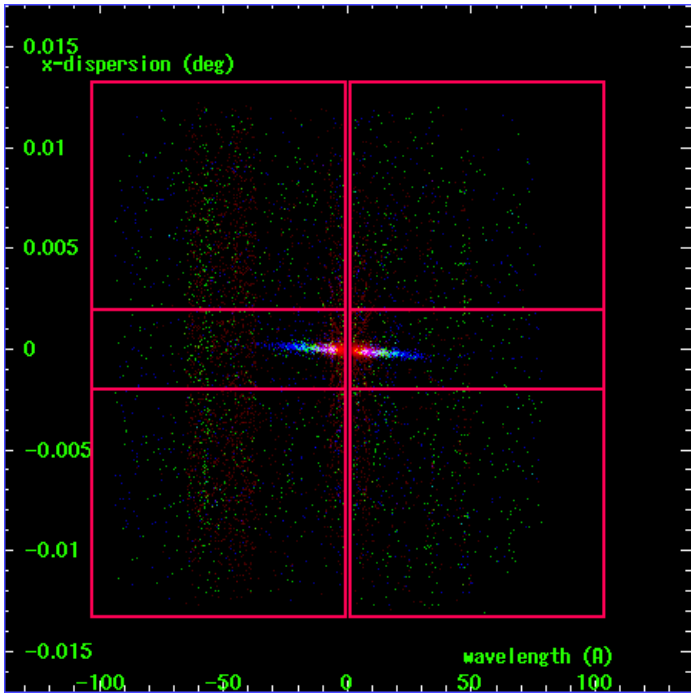
LETG Order Sort 123



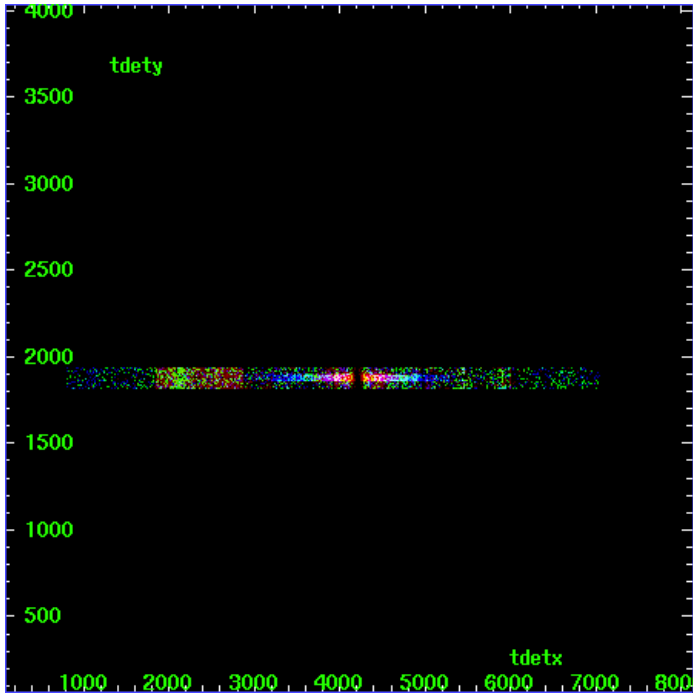
LETG Zero Order



LETG Order Sort ALL

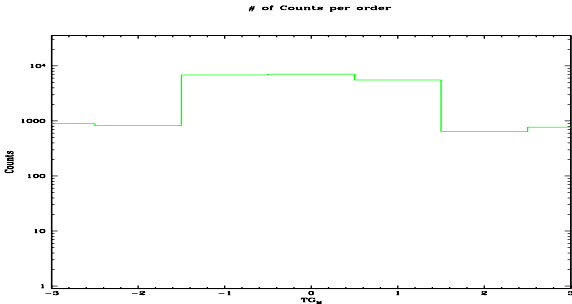


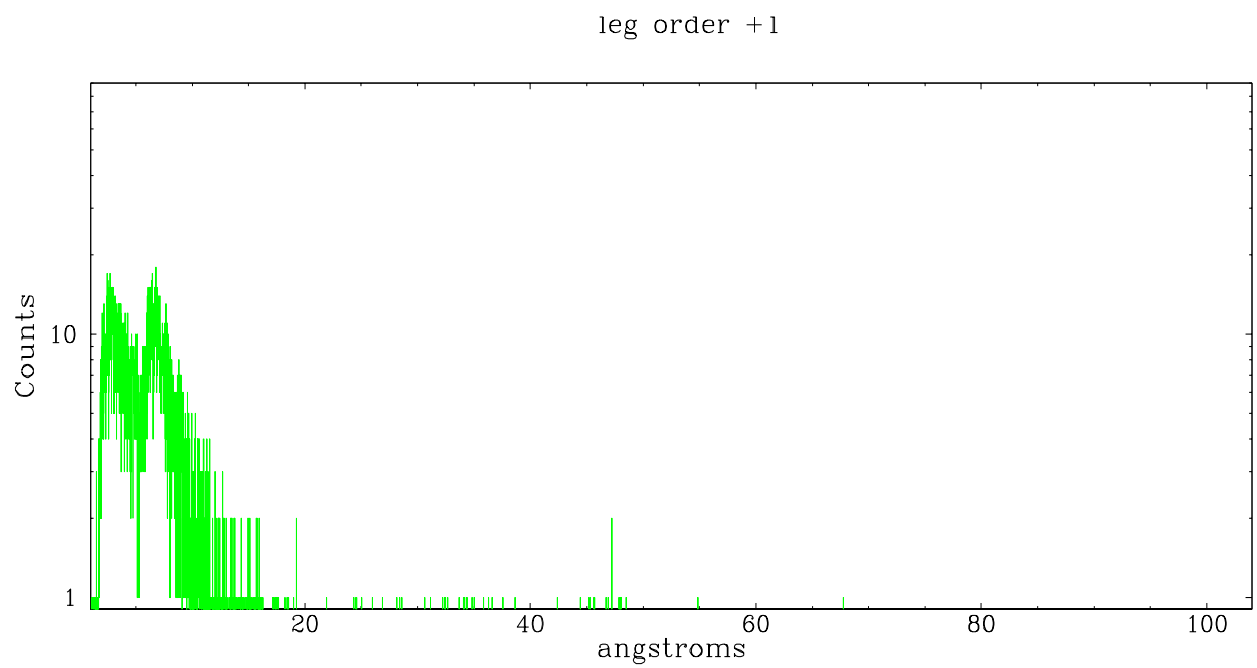
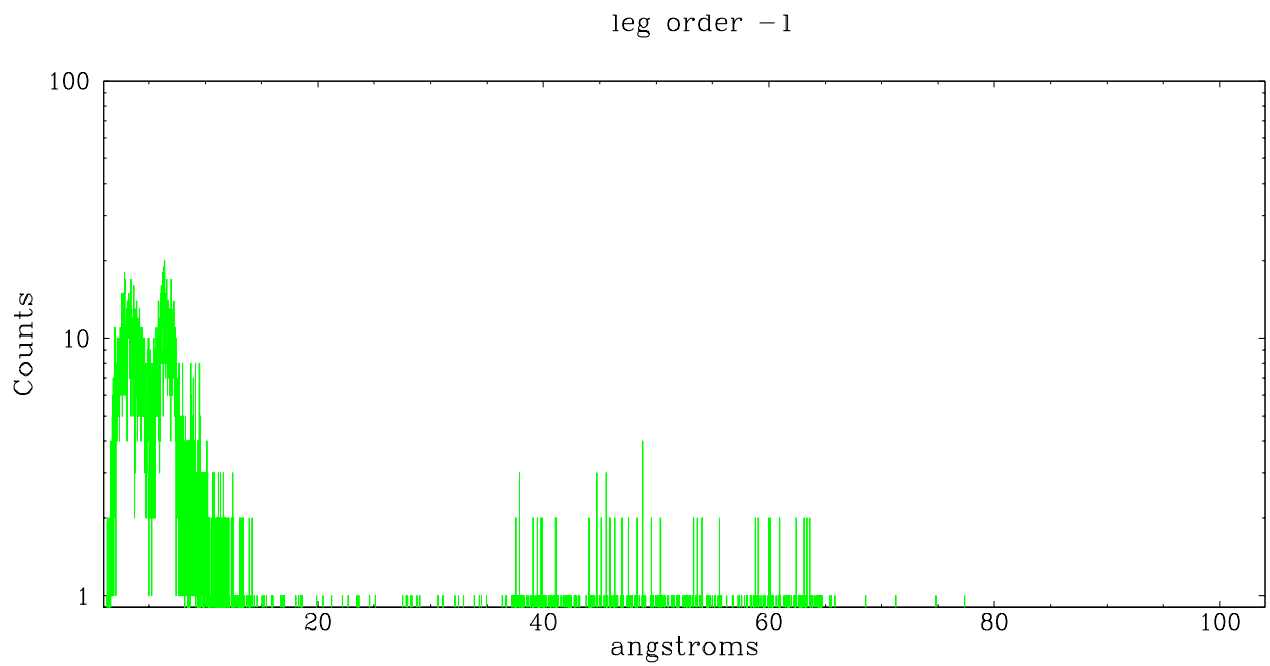
Spot Image LETG



Full Detector LETG

| | order -3 | order -2 | order -1 | order 0 | order 1 | order 2 | order 3 |
|--------|-------------|-------------|-------------|------------|------------|------------|------------|
| Events | 892 | 830 | 6823 | 7084 | 5564 | 642 | 770 |





A Summary

A.1 Status

| | |
|----------------------------|-------------|
| V&V Scientist | Joy Nichols |
| V&V Date (YYYY-MM-DD) | 2007.01.04 |
| V&V Edition | 1 |
| V&V Disposition and Status | OK |
| V&V Charge Time | 36.934 |

A.2 Comments

Observer requested coordinates of ra=02:44:57.80, dec=+62:28:10.50.
Source is
at ra=02:44:57.7, dec=+62:28:06.4. The zeroth order was correctly
identified
by the software.