| all_gradient | compiled binary | fortran unit test | C API |
|---------------|------------------|-------------------|-------|
| hl_gap | 12.391144584175 | 12.391144584178 | n/a |
| energy | -20.323978512118 | -20.323978512117 | n/a |
| gradient_norm | 0.007811924008 | 0.007811923956 | n/a |
| gradient(1,5) | -0.002219212304 | -0.002219212205 | n/a |
| gradient(2,2) | 0.002219212304 | 0.002219212205 | n/a |
| gradient(1,4) | 0.000956216022 | 0.000956215978 | n/a |
| gradient(3,6) | -0.001190415424 | -0.001190415384 | n/a |

| atomic_symbols | compiled binary | fortran unit test | C API |
|-----------------|------------------|-------------------|------------------|
| hl_gap | 12.520985724004 | 12.718203165741 | n/a |
| energy | -10.155934021424 | -10.160927754235 | -10.160927754235 |
| gradient_norm | 0.024959693923 | 0.021549557655 | n/a |
| gradient(1,5) | -0.002315603938 | -0.002032674926 | -0.002032675005 |
| gradient(2,2) | 0.002594449909 | 0.003312545972 | 0.003312546032 |
| gradient(1,4) | 0.000847029764 | -0.001192940566 | -0.001192940535 |
| gradient(3,6) | -0.001471110650 | -0.001660768275 | -0.001660768316 |
| pcgradient(1,5) | -0.000366987011 | -0.000248319580 | -0.000248319582 |
| pcgradient(2,2) | -0.001293800068 | 0.001420844472 | 0.001420844475 |
| pcgradient(1,4) | 0.001577640256 | 0.003746685270 | 0.003746685275 |
| pcgradient(3,6) | 0.000184214174 | 0.000651613443 | 0.000651613444 |
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| point_charge_99 | compiled binary | fortran unit test | C API |
|-----------------|------------------|-------------------|------------------|
| hl_gap | 12.620038103611 | 13.024345612330 | n/a |
| energy | -10.157418280497 | -10.168788268962 | -10.152737646640 |
| gradient_norm | 0.024086791687 | 0.018113624401 | n/a |
| gradient(1,5) | -0.001994597749 | -0.000506462895 | -0.002702555136 |
| gradient(2,2) | 0.002098856519 | 0.002546832066 | 0.003733296658 |
| gradient(1,4) | -0.000645240452 | -0.007492788009 | 0.002167306942 |
| gradient(3,6) | -0.001260948864 | -0.001324851465 | -0.001930216404 |
| pcgradient(1,5) | -0.000806213820 | -0.002157370323 | 0.001719768278 |
| pcgradient(2,2) | -0.001675533707 | 0.002565366215 | 0.000013639209 |
| pcgradient(1,4) | 0.002470474973 | 0.012124342986 | -0.002684282199 |
| pcgradient(3,6) | 0.000233497343 | 0.001214057506 | 0.000020147962 |

| C API: https://github.com/pultar/xtb-example |
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| compiled binary: master branch, but conda release gives same result |
| comparison fortran unit tests: https://github.com/grimme-lab/xtb/blob/36202cd82313559dd9d7ec11936dec |
| |
| identical results |
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| fortran unit tests and C API agree with each other, compiled binary differs (!) |
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| compiled binary differs (!), difference to C API was discussed already here: https://github.com/grimme-lab/ |
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