dielectric rho和H no tiling版 本merge

罗海文

12.27

bug1-提交脚本参数问题

- -priv_size=32
- 之前报告说MAX_ALLOCATE_SIZE的值小于priv_size就行所以一直 没有怀疑是脚本参数的问题

bug2-不能用malloc-thread_allocate

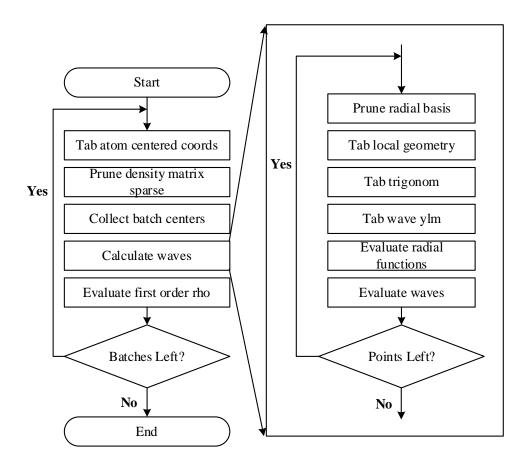
测试结果-rho

| rho | fortran | fortran_xmath | С | no_tiling | tiling | tiling_tab_atom |
|----------------|---------------|---------------|---------------|---------------|---------------|-----------------|
| Si 2 | | | | | | |
| n_100_mini | 2.64-0.89 | 2.19-0.35 | 2.92-1.02 | 2.21-0.11 | 2.23-0.16 | 1.85-0.12 |
| n_100_rt_mini | 4.66-1.61 | 3.60-0.59 | 5.11-1.44 | 3.39-0.13 | 3.07-0.21 | 3.04-0.18 |
| n_100_rt_tier1 | 152.33-56.40 | 86.55-3.61 | 136.47-53.94 | 84.23-1.29 | wrong | wrong |
| n_100_tier1 | 34.66-16.29 | 19.32-1.12 | 34.97-15.80 | 20.29-0.47 | 19.95-0.41 | 18.06-0.39 |
| n_100_tier2 | 161.68-63.17 | 99.23-3.93 | 156,24-62.56 | 99.98-1.36 | wrong | wrong |
| n_100_tier3 | 482.14-160.20 | 343.64-14.92 | 501.14-172.93 | wrong | wrong | wrong |
| n_200_tier1 | 26.54-16.53 | 11.14-0.92 | 26.56-16.56 | 10.63-0.41 | 10.28-0.36 | 10.24-0.35 |
| n_300_tier1 | 25.250-17.45 | 8.95-0.86 | 27.63-19.52 | 8.49-0.46 | 8.23-0.44 | 8.26-0.42 |
| Si 16 | | | | | | |
| n_100_mini | 22.47-9.10 | 17.17-2.93 | 22.64-7.91 | 16.58-1.11 | 15.39-0.97 | 15.26-0.81 |
| n_100_rt_mini | 34.77-11.09 | 28.45-4.78 | 34.43-10.73 | 25.57-1.72 | 25.37-1.54 | 25.21-1.29 |
| n_100_rt_tier1 | out of memory |
| n_100_tier1 | 282.34-121.60 | 168.64-9.09 | 280.07-118.32 | 168.44-3.47 | 168.08-3.19 | 168.62-3.02 |
| n_100_tier2 | out of memory |
| n_100_tier3 | out of memory |
| n_200_tier1 | 222.89-130.95 | 99.57-7.48 | 223.52-130.04 | 10.64-0.38 | 98.78-2.58 | 98.25-2.42 |
| n_300_tier1 | 210.62-137.55 | 80.42-7.05 | 209.55-137.11 | 8.49-0.46 | wrong | wrong |
| RBD | 233.25 | 27.29 | | | | |

测试结果-H

| Н | fortran | fortran_xmath | С | no_tiling | tiling | tiling_tab_atom | tiling_tab_atom_mpe_reduction |
|----------------|---------------|---------------|---------------|---------------|---------------|-----------------|-------------------------------|
| Si 2 | | | | | | | |
| n_100_mini | 0.83 | 0.33 | 1.45 | 0.18 | 0.25 | 0.23 | |
| n_100_rt_mini | 1.42 | 0.55 | 2.15 | 0.62 | 1.11 | 0.93 | |
| n_100_rt_tier1 | 26.36 | 4.53 | 44.75 | 5.21 | wrong | wrong | |
| n_100_tier1 | 6.15 | 1.27 | 9.94 | 1.15 | 1.15 | 1.13 | |
| n_100_tier2 | 43.64 | 4.92 | 85.54 | 4.24 | wrong | wrong | |
| n_100_tier3 | 164.44 | 18.1 | 269.91 | wrong | wrong | wrong | |
| n_200_tier1 | 12.04 | 0.89 | 24.6 | 0.85 | 0.78 | 0.76 | |
| n_300_tier1 | 16.92 | 0.79 | 27.88 | 0.79 | 0.75 | 0.72 | |
| Si 16 | | | | | | | |
| n_100_mini | 7.53 | 2.78 | 11.26 | 7.95 | 7.54 | 6.17 | |
| n_100_rt_mini | 10.71 | 4.58 | 15.37 | 13.71 | 12.73 | 10.17 | |
| n_100_rt_tier1 | out of memory | |
| n_100_tier1 | 43.32 | 10.31 | 73.94 | 19.29 | 18.42 | 16.29 | |
| n_100_tier2 | out of memory | |
| n_100_tier3 | out of memory | |
| n_200_tier1 | 102.91 | 7.27 | 177.45 | 0.78 | 15.65 | 13.12 | |
| n_300_tier1 | 131.38 | 6.45 | 215.03 | out of memory | wrong | wrong | |
| RBD | 235.36 | 34.92 | | | | | |

流程图-rho小kernel



因为小kernel都上从核了 所以没有区分从核和主核