Contribution ID: **112** Type: **Sectional reports**

Energy analysis of plasma physics algorithms

Friday, 9 July 2021 11:15 (15 minutes)

High-performance supercomputers became one of the biggest power consumption machines. The top supercomputer's power is about 30mW. Recent legislative trends in the carbon footprint area are affecting high-performance computing. In our work, we collect energy analysis from different kinds of Intel's server CPUs. We present the comparison of energy efficiency of our new Poissons's solver, which is useful for plasma physics and astrophysics computations, for different kinds of CPUs. This work supported by RSCF grant No. 19-71-20026.

Summary

Primary authors: CHERNYKH, Igor (Institute of Computational Mathematics and Mathematical Geophysics SB RAS); KULIKOV, Igor (Institute of Computational Mathematics and Mathematical Geophysics of Siberian Branch of Russian Academy of Sciences); BORONINA, Marina (Institute of Computational Mathematics and Mathematical Geophysics of Siberian Branch of Russian Academy of Sciences); EFIMOVA, Anna (Institute of Computational Mathematics and Mathematical Geophysics of Siberian Branch of Russian Academy of Sciences); VSHIVKOV, Vitaly; WEINS, Dmitry (Institute of Computational Mathematics and Mathematical Geophysics of Siberian Branch of Russian Academy of Sciences)

Presenter: CHERNYKH, Igor (Institute of Computational Mathematics and Mathematical Geophysics SB RAS)

Session Classification: HPC

Track Classification: 5. High Performance Computing