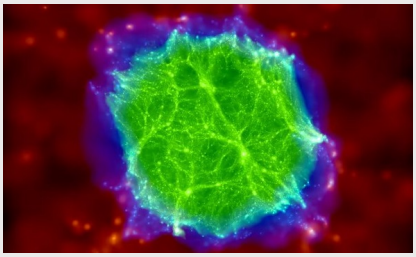

Shedding light on dark matter

Posted on DEC 4 2013 7:45AM

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Researchers at the Interdisciplinary Centre for Mathematical and Computational Modelling at the University of Warsaw, Poland, recently developed this simulation of the dark matter density field in the universe.

Tags

astrophysics
Cosmology
dark matter
Europe
Poland

Simulation

Dark matter, which is thought to make up about a quarter of all matter in the universe, does not interact with the electromagnetic force. This means it does not absorb, reflect, or emit light, thus making it extremely difficult to identify. Researchers are only able to infer the existence of dark matter from the gravitational effect it seems to have on visible matter.

Created using the Boreas supercomputer, the simulation includes 13 billion points that reproduce the spatial structures of dark matter clusters in the universe. Boreas is a 74 TeraFLOPS machine and has 9.8 terabytes of main memory. It required six weeks to calculate this simulation.

- *Andrew Purcell*

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