

Thermodynamic Model of Gravity

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It is shown that thermodynamic approach to gravity provides with a new solution of the hierarchy problem in particle physics. Within the model dark energy can be identified with the energy of collective gravitational interactions of all particles in the universe. For a model universe composed of neutral and charged particles of identical mass the radiation, baryon and dark energy densities were estimated. Obtain values are close to the observable ones. We found that in Einstein-Infeld-Hoffmann approximation to General Relativity the acceleration of an object can be considered as a relative quantity with respect to the world ensemble of particles.

References:

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