

General Relativity and Quantum Cosmology

Solar System tests of Hořava-Lifshitz black holes

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In the present paper we consider the possibility of observationally testing Horava gravity at the scale of the Solar System, by considering the classical tests of general relativity (perihelion precession of the planet Mercury, deflection of light by the Sun and the radar echo delay) for the Kehagias-Sfetsos asymptotically flat black hole solution of Horava-Lifshitz gravity. All these gravitational effects can be fully explained in the framework of the vacuum solution of Horava gravity, and it is shown that the analysis of the classical general relativistic tests severely constrain the free parameter of the solution.

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