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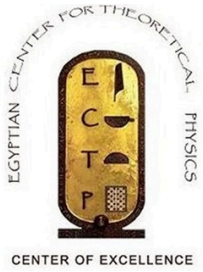

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SCHWARZSCHILD RADIUS FOR ELECTRIC CHARGE

Monday 5 December 2022 12:30 (30 minutes)

SCHWARZSCHILD RADIUS FOR ELECTRIC CHARGE

The aim of this work is to prove the formula for the Schwarzschild radius analog in case of a static spherically symmetric electric charge. The work contains two elegant proofs of the formula for the gravitational radius and for its analog in the case of an electric charge. The author mathematically proves that the Schwarzschild radius formula should not have a multiplier of 2. The formula for the Schwarzschild radius analog in case of a static spherically symmetric electric charge was obtained. Proposed by the author in 2006 the relationship formula between the electric charge and the energy of this electric charge was applied in the proof of the formula for the Schwarzschild radius analog in case of a static spherically symmetric electric charge. And this fact, on the author's opinion, is another confirmation of the statement validity about the electric charge equivalence and its energy. An analysis was carried out on the correspondence of the formula for the Schwarzschild radius analog in case of a static spherically symmetric electric charge to the Reissner-Nordström and Schwarzschild solutions results and it is shown that they are in full agreement with each other. The radiation temperature expression is proposed for a spherically symmetric black hole with a static electric charge, but without rotation. An expression is obtained for the particles production probability estimating in a static electric field of a black hole. The author proposes the Coulomb's law application limit explanation. The author explains the existence possibility of long-lived charged black holes. The expounded ideas in this work, in the author' s opinion, have absolute originality and novelty and require further discussion for a more detailed research. The work proposes an original method of the gravity formulas converting into the electricity formulas and vice versa, which allows finding unknown dependencies in physics. This work is another step towards the standardization of physics and its formulas and to some general approach in the problems solving from completely different sections of physics. This work considers some general approach to the problems solving in such sections of physics as gravity and electricity. And it is possible due to the analogy of formulas, which include such physical quantities as mass and electric charge.
Keywords: the Schwarzschild radius, the electric charge non-invariance, gravitational constant, the Coulomb' s law application limit, the Reissner-Nordström solution.

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