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Electron-positron production in electrosphere of compact objects

We revisit the mechanism of pair creation in the electrosphere of compact astrophysical objects proposed by Vladimir Usov. Two previously ignored effects: the evaporation of electrons and acceleration of electrons and positrons are discovered. The rate of pair creation strongly depends on electric field strength in the electrosphere. We find that the luminosity in pairs may be as high as 10ˆ52 erg/s.

Author: Prof. VERESHCHAGIN, Gregory

Co-author: PRAKAPENIA, Mikalai

Presenter: Prof. VERESHCHAGIN, Gregory