

## *“Schwinger process on the surface of hot quark star”*

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### Abstract:

Supercritical electric fields, in which the Schwinger effect is possible, can exist in a thin surface layer of compact astrophysical objects, such as hypothetical quark stars and neutron stars. For completely degenerate stellar configurations, the Pauli exclusion principle does not allow the Schwinger effect to be realized, but for hot stars the situation is different. The report will show that a hot quark star is a source of electron-positron pairs, and the energy release in the pairs can be comparable to the energy release in the neutrino channel.

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