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## Stable micro black holes at fusion nuclear reactions

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### Abstract

We study a model for production of stable micro black holes based on investigation of the thermodynamics of micro black holes and the LHC test. That showed how this production can be obtained by a thermodynamic process of stability. The general second law of black hole thermodynamics plays an important role here and, through Hawking radiation and fusion reactions entropy formulas a valid total entropic is obtained. Therefore, we reach an energy of stability by quantum perturbation expansion over this total entropic formula that is illustrated in detail in this paper. Based on this study, the producing of stable particles (in terms of our investigation, micro-black holes) at the LHC might yielded an interesting result that it is worth a try, which could have different results.

**Keywords:** fusion nuclear reactions, LHC experiment, high energy physics

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