

## Local heating of the universe by the Higgs field

Belotsky K., Grobov A., Rubin S.

*Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia*

---

### Abstract

© 2018 World Scientific Publishing Company It is shown that the creation of primordial massive black holes is accompanied by a local heating of the matter. The developed mechanism is based on the interaction of the Higgs field and a scalar field responsible for black hole formation. We also consider dynamical behavior of parameters such as a scale and chemical composition of such heating regions.

<http://dx.doi.org/10.1142/S0218271818410031>

---

### Keywords

abnormal chemical composition, early universe, Higgs field, primordial black holes