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Evolution of the cluster of primordial black holes within the Fokker-Planck approach

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The calculation results of the evolution of the cluster of primordial black holes based on the Fokker-Planck equation with neglecting of the gas accretion onto black holes are presented. In addition, we consider how a massive black hole located within the cluster center affects on its evolution. Despite it creates an additional potential in the central region of the cluster and might capture surrounding black holes, a negligible growth rate of a central black hole was shown for 1 Gyr. Furthermore, we find a significant (approximately tenfold) expansion of the cluster.

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