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Studying effects of microlensing for cluster of primordial black holes

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Primordial black holes (PBH) attracted particular attention last time. They are possible candidates not only to dark matter, but to supermassive black holes, gravitational waves events from black hole merger and others. However, recently there appeared constraints on PBH abundance from different observations (including those from gravitational microlensing). The present work is devoted to the model of a PBH cluster in which these constraints (part of them) can be avoided. In this work we investigate effect of gravitational microlensing for PBH, strongly constraining single PBH abundance. Analyses of data on respective observation for a cluster can remove not only constraints on them, but it makes possible to test this model distinguishing it from the model of single PBHs.

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