

Abstract Submitted  
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**Can primordial black holes constitute dark matter?** VICTORIA TUROVA, ALEXANDER PANIN, Utah Valley University — In some scenarios of Big Bang the fluctuations of density in early universe result in the formation of various sized primordial black holes (BH). The black holes of mass range  $10^{10}$  -  $10^{22}$  kg are good candidates for a dark matter. How many of such black holes (say, per cubic light year) are needed to constitute dark matter? Are those black holes observable? How would they move? How much gravitational waves would they radiate? Would they evaporate, or would they grow consuming interstellar matter or galactic dust? How frequent are collisions of such black holes with stars or planets and with each other? Would they consume stars and if so, how quickly? In our presentation we will give quantitative answer to these questions based on known physics. We will show that due to low number density and extremely small “cross section” of interaction of such BHs with visible matter they indeed are very suitable candidates for a dark matter, or at least for a part of it.

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