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Constraints on primordial black holes from observation of stars in dwarf galaxies

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We propose a way to constrain the primordial black hole (PBH) abundance in the range of PBH masses around 10^20g based on their capture by Sun-like stars in dwarf galaxies, with subsequent star destruction. We calculate numerically the probability of a PBH capture by a star at the time of its formation in an environment typical of dwarf galaxies. Requiring that no more than a fraction of stars in a dwarf galaxy is destroyed by PBHs translates into an upper limit on the PBH abundance.

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