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Signatures from primordial black hole evaporation

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Primordial Black Holes are Black holes formed in the early universe. They evaporate emitting all the elementary particles whose mass is lower than the Primordial Black Holes temperature. We focused on PBHs whose mass is the range $[5\times10^{14}, 8\times10^{15}]$g. We studied their neutrinos emission. These neutrinos can interact via coherent elastic neutrino-nucleus scattering (CEνNS) producing a signal in multi-ton Dark Matter direct detection experiments. We show that is possible to set bounds on the Primordial Black Holes abundance. We briefly discuss the emission of light Dark Matter species due to the evaporation of Primordial Black Holes.

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