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The Baryon-Dark Matter Coincidence Problem and Primordial Black Holes

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We study the Baryon-Dark Matter Coincidence Problem with primordial black holes (PBHs). PBHs induce baryogenesis through the Baumann-Steinhardt-Turok mechanism, by Hawking evaporating into a beyond-Standard Model particle X that has baryon number and CP-violating couplings to the Standard Model. Dark matter is also produced in our mechanism. The gravitational wave signatures are presented, and a UV completion is discussed.

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