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PBH formation during reheating

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We present the formation of Primordial Black Holes (PBHs) from the gravitational collapse of inhomogeneities in a scalar field dominated universe, featuring a code that solves Einstein Equations plus the matter evolution in spherical symmetry. We focus on prospects of reheating for the scalar field potentials. We report on threshold amplitudes for the formation of PBHs, as well as characteristic density profiles for (non-collapsing) virialized configurations. We discuss these results and future prospects, in light of previous approximations to the abundance of PBHs produced during reheating.

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