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# Harnack estimates for weak supersolutions to nonlinear degenerate parabolic equations

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**Abstract.** In this work we prove both local and global Harnack estimates for weak supersolutions to second order nonlinear degenerate parabolic partial differential equations in divergence form. We reduce the proof to an analysis of so-called hot and cold alternatives, and use the expansion of positivity together with a parabolic type of covering argument. Our proof uses only the properties of weak supersolutions. In particular, no comparison to weak solutions is needed.

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