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Junction conditions in $f(T)$ gravity

In this work, we present the junctions conditions for a family of special solutions in $f(T)$ gravity. This modified theory of gravity is a generalization of the so-called Teleparallel Equivalent of General Relativity where the Lagrangian is given by an arbitrary function of the torsion scalar (which is related to the curvature scalar up to a total divergence). We apply our results in two cases, with and without thin-shells of matter, for a black hole formation mechanism in $2+1$ dimensions driven by the collapse of dust-like matter distribution.

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