Stability of Anisotropic Stellar Filaments

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The purpose of this work is to check the stability of a radiating cylindrical collapsing model in modified gravity. In this setting, the extended form of the hydrodynamical expression is calculated through dynamical equations and a particular radial perturbation. The effects of the heat dissipation, adiabatic index and a specific cosmological model on the occurrence of dynamical instability in the background of stellar filaments are investigated.