## Landscape instabilities from finite density effects

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We consider finite density effects in models with a metastable ground state. We find that sufficiently dense objects, such as neutron stars, can destabilise the metastable minimum allowing for classical formation of bubbles of a new vacuum. As we show, these bubbles are not necessarily confined to the dense region, but can escape to infinity. This leads to a phase transition in the universe after the formation of stars, and therefore has significant impact on e.g. solutions to the electroweak hierarchy problem based on dynamical selection of the electroweak vacuum. We work out the phenomenological consequences of such density triggered late phase transitions and put new constraints on the parameter space of some benchmark relaxion models.

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