

” Supersymmetry Breaking Warped Throats and the Weak Gravity Conjecture

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The proposal for a new Swampland conjecture forbidding stable non-supersymmetric “locally AdS” warped throats, which generalizes the Swampland criterion forbidding stable non-supersymmetric AdS vacua, is discussed. The conjecture is motivated by the properties of systems of fractional D3-branes at singularities, and can be used to rule out large classes of warped throats with supersymmetry breaking ingredients, and their possible application to de Sitter uplift. In particular, this allows to reinterpret the runaway instabilities of the gravity dual of fractional branes in the dP1 theory, and to rule out warped throats with Dynamical Supersymmetry Breaking D-brane sectors at their bottom. Another example are warped throats with supersymmetry broken by the introduction of anti-orientifold planes. These examples lead to novel decay mechanisms in explicit non-supersymmetric examples of locally AdS warped throats, and also of pure AdS backgrounds. Based on arXiv:1810.07673

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