

# The Phenomenology of Vacuum decay with Vevacious: A companion to BSM collider constraints.

*Wednesday, 3 April 2019 16:40 (25 minutes)*

In this talk, I will talk about the use of vacuum stability as a phenomenological constraint in BSM models, highlighting its complementarity with constraints coming from e.g. collider experiments. In the talk I will describe how to consider constraints from the decay to e.g. color- and charge- breaking minima at both zero and non-zero temperature in models with extended scalar sectors. I will then introduce the new version of the software Vevacious, a complete rewrite in C++ that is modular, does not depend on external codes for the calculation of the bounce action and with model files that can be generated automatically starting at the Lagrangian level. I will then finish with an outlook on future projects using the code, including its upcoming inclusion in world-leading global fits.

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