

Accessing the Electroweak Phase Transition through Top Quark and Higgs Boson Production (15'+5')

Friday 6 December 2024 11:15 (20 minutes)

If a first-order electroweak phase transition is realized by an extended scalar sector, this impacts observables at (future) colliders. In this talk I will discuss multiple SM extensions that allow for strong first-order electroweak phase transitions: Two-Higgs Doublet Model (2HDM), Next-to-Minimal Two-Higgs Doublet Model (N2HDM), and two dimension-six effective field theory extensions of the 2HDM. For these I will illustrate how the strength of the phase transition impacts cross sections of double Higgs production, triple Higgs boson production, or top pair production.

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Session Classification: Cross-topic plenary