

Gravitational waves and Primordial black holes formation in a complex singlet extension of the Standard Model

Sunday, 2 November 2025 10:30 (30 minutes)

A complex singlet extension of the Standard Model not only incorporates scalar dark matter candidates but also enables the realization of a strong electroweak first-order phase transition essential for electroweak baryogenesis. This phase transition may generate gravitational waves and primordial black holes. We discuss the correlation between the strength of the phase transition and these signals, as well as their future observability.

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Session Classification: Session 7