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Dark matter from electroweak top-quark production

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Assume that dark matter couples mostly to the top-quark. This hypothesis is well motivated in models with scalar mediators, where flavor-hierarchical couplings to quarks prevent large flavor-changing neutral currents. In this talk, we discuss searches for dark matter produced in association with top-quarks at the LHC. We propose single-top-associated production as a new search channel for dark matter. Being complementary to existing searches with top pairs, the new single-top channel enhances the discovery potential for dark matter in future LHC analyses.

Parallel Session

Electroweak, Top and Higgs Physics

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