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Statistical evaluation, combination, and interpretation of searches for additional heavy Higgs bosons in top quark pair final states

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Abstract

This note summarises the statistical evaluation and interpretation of the search for additional Higgs bosons decaying to a top-quark pair. In particular, the combination of the two final states (lepton-plus-jets and dilepton) is discussed, and the results are interpreted in the context of two-Higgs doublet models, in particular in the minimal supersymmetric standard model.

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