

Statistical Combination of Low-Mass Higgs Channels

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With the recent successes at the Tevatron, it will be more important than ever for LHC physicists hunting for the Higgs to combine their efforts. Based on current techniques, no single channel in the ATLAS repertoire will be able to discover the Higgs with less than $\sim 5\text{fb}^{-1}$, and as such, it will be important to combine statistically the outcomes of the individual searches. An approach is presented, based on that used at LEP and CDF, to assess the combined sensitivity of ATLAS to the Higgs Boson in mass range $110 < 190\text{ GeV}$.

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