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Results from the LHC: A Theory Perspective CHRISTOPHER CARONE, College of William & Mary

A major success of the Large Hadron Collider (LHC) during its first few years of operation was the discovery of a single Higgs boson, a particle consistent in every way with the expectations of the Standard Model. Aside from this, no new particles, interactions or unexpected phenomena have been discovered. In this talk, I present a theoretical perspective on these results. In particular, I will discuss the impact of the LHC data on the viability of more complicated models of the Higgs sector, as well as theories that aim to alleviate the fine-tuning required to keep the Higgs boson mass much smaller than the scale of quantum gravity. These include models with supersymmetry and extra space-time dimensions.