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Introducing the Higgs Boson[1]

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The evidence from Large Hadron Collider of the "Higgs-like particle," a bosonic resonance at a mass near 125 GeV, suggests that this particle is the long-sought Higgs Boson. In this lecture, I will explain what a "Higgs Boson" is and why the presence of one or more Higgs Bosons is required by our current understanding of the weak and electromagnetic interactions. I will describe the predicted properties of the Higgs Boson that are now being tested at the LHC. I will discuss the future of high-precision studies of the Higgs Boson and its possible partners, and the road that the Higgs Boson provides to the exploration of the larger mysteries of particle physics.

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