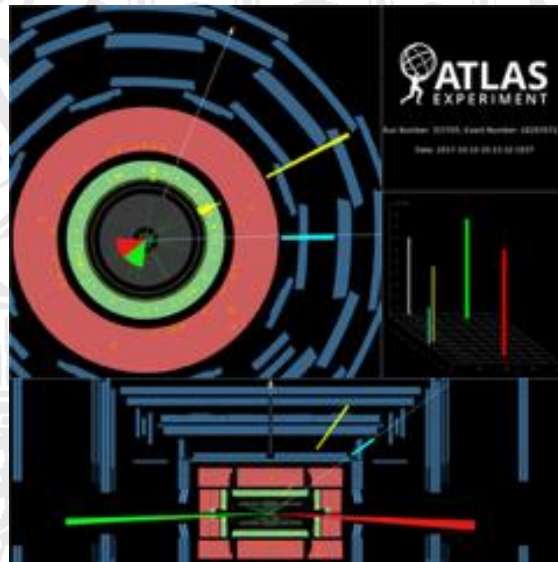


SONDERKOLLOQUIUM

AM 4. JULI 2024 UM 09:30 UHR
BIBLIOTHEK, WESTBAU PHYSIK



Piecing Together Electroweak Symmetry-Breaking at the LHC

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Less than a second after the Big Bang, electroweak symmetry-breaking changed the face of our universe. The W and Z vector bosons gained mass and a new polarization mode, and the unified electroweak force split into the electromagnetic and weak forces we know today. Some 14 billion years later, we can use high-energy proton-proton collisions at CERN's Large Hadron Collider (LHC) to peer back to this pivotal moment of our universe's history. In this talk, we will discuss how studies of the Higgs boson and the vector bosons at the LHC can probe the mechanism and consequences of electroweak symmetry-breaking. We will examine some of the insights we have gained in recent years, and explore how we might delve still deeper.