APR08-2007-030091

Abstract for an Invited Paper for the APR08 Meeting of the American Physical Society

LHC Upgrade Paths

DANIEL MARLOW, Princeton University

Even though CERN's Large Hadron Collider (LHC) has yet to commence operation, serious plans are already being laid for its upgrade. It is expected that the first few years of LHC operation will elucidate the basic mechanisms for electro-weak symmetry breaking, and in doing so will lead to new questions of fundamental interest. Plans therefore call for a phased upgrade of the LHC, culminating in a ten-fold increase in its luminosity by roughly 2015. To make efficient use of this new discovery potential, the detectors at the LHC will also need to be upgraded. This talk will review the physics opportunities as well as plans for upgrading the accelerator and the detectors. The possibility of doubling the energy of the LHC will also be discussed.