

New Physics at the TeV Scale or Preparing for the Christmas Colloquium

Starting this November the LHC will probe higher energy scales than any collider experiment before. For the first time, we will be able to directly study the TeV scale, the energy scale which governs the mechanism giving mass to elementary particles. If, as suggested by current observations, there exists a fundamental Higgs boson, theoretical consistency suggests the existence of additional particles accessible to the LHC. Such particles could at the same time be responsible for the dark matter in the universe. For example in the supersymmetric extension of the Standard Model I will illustrate typical signatures and measurements and what insights they into fundamental theories we can expect from the LHC era.