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Search for Supersymmetry in Hadronic Final States

Evolution Studies of the CMS Electromagnetic Calorimeter

Series: Springer Theses

- Nominated as an outstanding PhD thesis by ETH Zurich, Switzerland
- Presents a hadronic search for super symmetric particle production with some of the world’s best exclusion limits
- Features studies that made essential contributions to the upgrade activities of the CMS collaboration

The project reported here was a search for new supersymmetric particles in proton-proton collisions at the LHC. It has produced some of the world’s best exclusion limits on such new particles. Furthermore, dedicated simulation studies and data analyses have also yielded essential input to the upgrade activities of the CMS collaboration, both for the Phase-1 pixel detector upgrade and for the R&D studies in pursuit of a Phase-2 endcap calorimeter upgrade.