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A Search for Selectrons and Squarks at HERA

H1 Collaboration

Abstract

Data from electron–proton collisions at a center-of-mass energy of 300 GeV are used for a search for selectrons and squarks within the framework of the minimal supersymmetric model. The decays of selectrons and squarks into the lightest supersymmetric particle lead to final states with an electron and hadrons accompanied by large missing energy and transverse momentum. No signal is found and new bounds on the existence of these particles are derived. At 95% confidence level the excluded region extends to 65 GeV for selectron and squark masses, and to 40 GeV for the mass of the lightest supersymmetric particle.

Plenary Sessions:
12. Searches for New Particles - P. Maettig
14. Supersymmetry and GUTS - G. Ross
Parallel Session: II Electroweak Interaction Physics
7. Tests of the Standard Model
Parallel Session: III Physics beyond the Standard Model
11. Supersymmetry and GUTS
13. Search for New Particles