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KASCADE-Grande energy spectrum of cosmic rays interpreted with post-LHC hadronic interaction models

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Previous results obtained by KASCADE-Grande using QGSjetII-02, EPOS1.99 and SIBYLL hadronic interaction models have shown that the energy spectrum of cosmic rays between 10^{16} eV and 10^{18} eV exhibits a significant hardening at approximately 2×10^{16} eV, a slight but statistically significant steepening close to 10^{17} eV, the 'knee', caused by the heavy component of primary cosmic rays, and an 'ankle' like feature of the light component just above 10^{17} eV.

In this paper, we report on results of similar analyses performed using the post-LHC versions of these models: QGSjetII-04 and EPOS-LHC.

Collaboration

KASCADE-Grande

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314

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