NEW CROSS SECTION DETERMINATION FOR SECONDARY COSMIC RAY ELECTRONS AND POSITRONS IN THE LIGHT OF NEW DATA FROM COLLIDER EXPERIMENTS

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Secondary lepton component

- Space-based spectrometers (AMS-02) → unprecedented precise measurements of the CR fluxes.
- Interaction of CRs with the interstellar medium (ISM) → secondary production.
- $e^{\pm}$ are principally decay products of pions and kaons.

In the last decades, new experimental datasets have become available → the NA61/SHINE Collaboration results collected at the CERN Super Proton Synchrotron (SPS).

Strategy

Provide an analytic description of the fully-differential and Lorentz invariant cross section performing a fit to cross section data.