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Results from pion-carbon interactions measured by NA61/SHINE for better understanding of extensive air showers

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The interpretation of extensive air shower measurements, produced by ultra-high energy cosmic rays, relies on the correct modelling of the hadron-air interactions that occur during the shower development. The majority of hadronic particles is produced at equivalent beam energies below the TeV range. NA61/SHINE is a fixed target experiment using secondary beams produced at CERN using the SPS. Hadron-hadron interactions have been recorded at beam momenta between 13 and 350 GeV/c with a wide-acceptance spectrometer. In this talk we present measurements of the identified secondary hadron spectra and the resonance production from pion-carbon interactions, which are essential for modelling air showers.

Collaboration

– not specified –

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Primary authors: Dr HERVE, Alexander Edward (Karlsruhe Institute of Technology); UNGER, Michael (NYU & KIT)

Presenter: Dr HERVE, Alexander Edward (Karlsruhe Institute of Technology)

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