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Parametrization of gamma-ray production cross-sections for pp interactions in a broad proton energy range from the kinematic threshold to PeV energies

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Using publicly available Monte Carlo codes as well as compilation of published data on pp interactions for proton kinetic energy below 2 GeV, we parametrize the energy spectra and production rates of γ -rays by simple but quite accurate ($\leq 20\%$) analytical expressions in a broad range from the kinematic threshold to PeV energies.

Collaboration

– not specified –

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