Monte Carlo Event Generation with Radiative QED processes in Deep-Inelastic Scattering

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Abstract

In order to apply QED corrections in the extraction of 1-photon cross-sections in deep-inelastic scattering, radiation of photon have to be taken into account. In the COMPASS experiment, the production of hadrons is studied by scattering 160 GeV muons on nucleons. Radiation of photons from various ranges of kinematics, which is calculated using information from the scattered muon, thus happens. To correct for this effect, this radiation has to be taken care of in the Monte Carlo simulation used to obtain the acceptance.

The DJANGOH event generator, working along with LEPTO and JETSET, is chosen as it describes well our data. The implementation into the Monte Carlo chain and the results obtained are discussed.