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The lepton propagator PROPOSAL as electromagnetic interaction model in CORSIKA 8

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Electromagnetic interactions are a key component in air shower simulations. In CORSIKA 8, the calculation of electromagnetic interactions is carried out by the propagation library PROPOSAL (PRopagator with Optimal Precision and Optimized Speed for All Leptons), which was originally designed for the propagation of high-energy muons and has been considerably expanded to take over the calculation of the electromagnetic shower component from the EGS4 code used in earlier Fortran-based versions of CORSIKA. This presentation discusses these changes and updates to PROPOSAL, its interface to CORSIKA 8, and its use in air shower simulations.

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