

Extra-galactic sources and propagation including constraints on Extragalactic magnetic fields

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With the newest version of our Monte Carlo code, CRPropa 3, the propagation of ultra-high-energy cosmic rays (UHECRs) from their sources to Earth, including all relevant interactions, deflections in galactic and extragalactic magnetic fields (EGMFs) as well as secondary neutrino and electromagnetic cascade production and propagation can be simulated. The modular structure of the code allows for flexibility while also facilitating high-performance computing. In this way predictions for arrival directions, anisotropy measures and expected average deflections for specific source distributions, EGMF and GMF models have been obtained. Additionally will be shown that the expected composition at Earth can also be influenced by magnetic field effects.

Presentation type

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