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## Optimizing the zenith angle dependence of cosmic ray muons in the knee region: simulation study

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The knee feature in the cosmic ray energy spectrum has experienced investigations by many experiments, and widely considered as a transition region from galactic to extra-galactic sources. However, a clear dependence on the direction of cosmic ray and the hadronic interaction model is observed. Therefore, a solid understanding of the angular distribution at these energies is requested to have a precise estimation of the muon flux and cosmic ray composition.

In this work, a simulation study of the zenith angle dependence of cosmic ray muons at sea level will be presented.

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