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Background study for Korea Experiments on Magnetic Monopole

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Elementary magnetic monopoles have been a question of electromagnetism for the last 150 years. However, most monopoles have been searched in the large mass and large magnetic charge region during the period but have not been discovered yet. Therefore, assuming that monopoles may exist in the low mass and low charge regions, we designed an experiment to search for elementary magnetic charges with mass below the electron mass (m_e) and charge below the electron charge (e). In this talk, we will describe the design for the experiment, and present the prediction of event rates, energy resolutions of detectors, and potential backgrounds estimated with GEANT 4 simulations.

In-person participation

Yes

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