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Theoretical study of the ΣN cusp in the $K^- d \rightarrow \pi \Lambda N$ reaction

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Cusp structures in spectra represent discontinuities in the differential cross sections, which are widely observed at the thresholds of scattering channels.

In the $K^- d \rightarrow \pi \Lambda N$ reaction, a cusp candidate at the ΣN threshold exists in the ΛN invariant mass spectrum. This study investigates the shape of the spectrum at the ΣN threshold by treating the scattering process as a two-body multiple scattering and describing it in terms of the scattering length of ΣN and Green's function.

session

E. Hadron and Nuclear Interactions

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