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Neural Networks Application in Hadron Resonance Study

Thursday, 26 September 2024 15:25 (20 minutes)

Scattering reactions can be used to study the properties of hadron resonances. The traditional analysis method is to fit experimental data by adjusting the quantum number and parameters of the resonance. I would introduce a new method, which is the application of neural networks (NN), to study hadron resonances. The advantage of the NN method is that it can give quantitative probabilities in category classification of quantum numbers and potentially more stable in parameter determination. I would introduce the procedures of NN application and show its feasibility in the study of Sigma resonances through the K-p->piSigma reaction.

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