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Nuclear data generation by machine learning

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Nuclear data play an important role in various scientific fields. However, the generation of nuclear data entails enormous human and time costs.
Recently, attempts have been made to solve this problem by using machine learning to generate nuclear data. We aim to generate accurate nuclear data at low cost by combining nuclear reaction models with machine learning.
In this presentation, we will report the results of estimating nuclear data using Gaussian process regression, a form of machine learning, to estimate the optimal values of the parameters of nuclear reaction models at arbitrary energies.

Presentation type

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