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Nuclear force from lattice QCD with LapH smearing

Friday, 7 August 2020 15:00 (20 minutes)

Recent studies by HAL QCD collaboration have been successful in calculating hadron interactions from the first principles of QCD. In this talk, we apply the Laplacian Heaviside (LapH) smearing for the two nucleon source operator to enhance overlap with the low-energy elastic states and calculate the s-wave nuclear force. Our potential with the LapH smeared source has similar structure and comparable statistical errors to that with the standard wall source operator. This will be an important step towards future extension to the P-wave nuclear forces.

Primary author: SUGIURA (*), Takuya (RIKEN iTHEMS)

Co-authors: HAL QCD COLLABORATION; AOYAMA, Tatsumi; DOI, Takumi

Presenter: SUGIURA (*), Takuya (RIKEN iTHEMS)

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