

Quantized TDDFT dynamics

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In nuclear physics, the linearized TDDFT often fails to reproduce properties of low-energy modes of excitation. They are basically collective modes of a large amplitude nature, and the failure is due to missing correlations associated with these low-energy collective motions. The microscopic unified description of nuclear structure and reaction is also a big challenge for us.

In order to achieve these goals, we adopt a method to “quantize” the TDDFT on a selected collective subspace. In this presentation, I start from basic properties of nuclear system and basic idea of the methodology, then, show pedagogical model, and some recent plications.

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