

# Recent developments in nuclear astrophysics: theory of heavy nuclei

*Wednesday, July 24, 2024 10:35 AM (25 minutes)*

The outcome of astrophysical events depends critically on the structure and reactions of heavy nuclei. These properties often remain unmeasured, leaving theory to fill in the gaps. I will provide a broad overview of recent theoretical progress in the description of heavy nuclei. I will cover progress in structure and reaction models, the behavior of astrophysically relevant nuclear isomers (astromers), the advent of Machine Learning based models, and the prediction of fission properties.

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**Session Classification:** Reactions and Structure Related to Nuclear Astrophysics – Part 2