#104 “Microscopic fission collective inertias for astrophysical applications”

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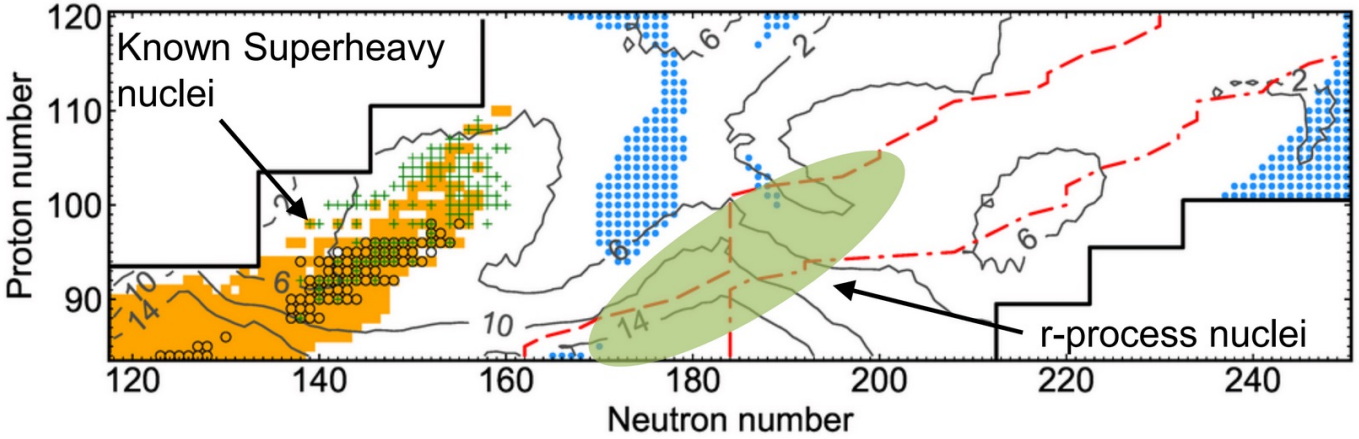
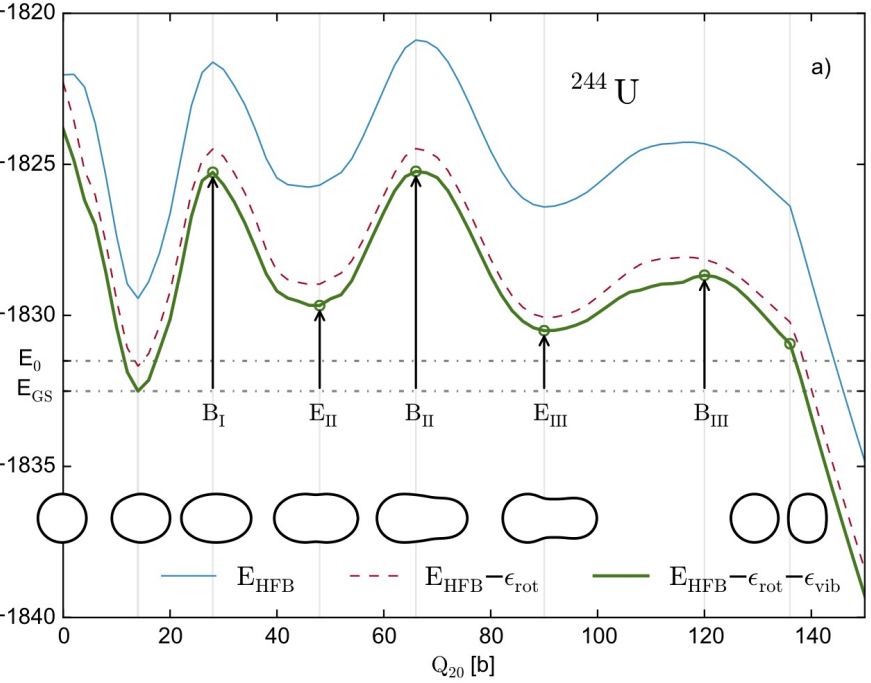
Role of fission in r process:

- Fission affects final r process abundance pattern.
- Affects energy production in electromagnetic transients like kilonovae.



- Fission is a challenging quantum tunnelling problem.
- Fission barriers and collective inertia along fission path



In this work:

- Include dynamical residual effects in collective inertia calculations.
- Using finite amplitude method-quasiparticle random phase approximation (FAM-QRPA) approach and Gogny energy density functional.
- We will study the effect of collective inertia on fission probabilities and explore its role in r-process.