

Clustering in nuclei and its effects on the stellar nucleosynthesis

Wednesday 18 June 2025 11:30 (15 minutes)

Clustering in nuclei is an emergent phenomenon, whereby nuclei tend to aggregate (or cluster) into various components. In light nuclei, this phenomenon is postulated to manifest notable properties such as dilute density structures and even Bose Einstein condensates. Cluster states can also have significant effects on scattering cross sections, particularly at low energies. Modelling clustering is therefore not only a pivotal test of ab initio theoretical models, but also crucial for accurate reaction rates for stellar nucleosynthesis. This talk presents some notable examples of clustering in nuclear astrophysics that are being tackled at UiO.

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Session Classification: Parallell B4