



Contribution ID: 299

Type: **Workshop**

Recent experimental activities in normal kinematics investigating clustering in nuclear systems by means of quasi free scattering

Saturday, 2 December 2023 09:30 (25 minutes)

Formation of clusters in nuclei is a topic of great interest and fundamental importance throughout the history of nuclear physics. In light nuclei, development of cluster structure in states close to the corresponding decay threshold is a well established phenomenon, and significant progress has been made in search for novel cluster states in light nuclei, such as the α -condensate states (e.g Hoyle state) and the 3- α -linear-chain states in carbon isotopes. Cluster formation in dilute nuclear matter including the low-density surface of heavy nuclei has not been well studied experimentally, although it has been theoretically predicted. Such a non-homogeneous phase of nuclear matter plays an important role in understanding the structure of the neutron star and the supernovae explosion. In this talk, I will discuss the results of our recent experiment measuring the formation of alpha clusters at the surface of stable tin isotopes by using quasi-free (p,p α) reaction in normal kinematics with the high-resolution spectrometers of RCNP, Osaka University.

Attendance Type

Remote

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Session Classification: Workshop Session C

Track Classification: Workshop Talks