

Analysis update on the low-energy dipole response of the halo nuclei ${}^6,8\text{He}$

Saturday, 31 August 2019 16:50 (20 minutes)

In July 2017, the SAMURAI37 experiment was performed with the purpose of measuring the multi-neutron decay of ${}^6\text{He}$ and ${}^8\text{He}$ after heavy-ion-induced electromagnetic excitation in complete kinematics to study the dipole response of these nuclei.

The combination of the neutron detectors NEBULA and NeuLAND at the SAMURAI setup and the high beam intensities available at RIBF made the measurement of the dipole response of ${}^8\text{He}$ possible for the first time. The experimental method is based on the measurement of the differential cross section via the invariant-mass method, which allows to extract the dipole strength distribution $\text{dB}(E1)/\text{dE}$ and the photo-absorption cross section. To induce electromagnetic excitation reactions of ${}^6\text{He}$ and ${}^8\text{He}$ a lead target was used.

In the talk the status of the ongoing analysis is presented.

Primary authors: LEHR, Christopher (TU Darmstadt); AUMANN, Thomas (Technische Universitaet Darmstadt)

Presenter: LEHR, Christopher (TU Darmstadt)

Session Classification: Status report