



Beitrag ID: 75

Typ: Oral presentation

One and two proton removal from neutron-rich nuclei: a comparative sensitivity study in the mass region of ^{52}Ca

Donnerstag, 27. Juni 2024 16:20 (20 Minuten)

One and two proton removal from neutron-rich medium-mass nuclei are commonly used to populate different final states in a nucleus of interest. (p,2p) and (p,3p) knockout reactions have been investigated in inverse kinematics within the first two SEASTAR campaigns that took place at RIBF in RIKEN, Japan [1]. These studies have been extended to the third SEASTAR campaign where medium-mass radioactive nuclei in the region of ^{54}Ca were sent at about 270 MeV/nucleon onto a 15 cm long liquid hydrogen target surrounded by the MINOS time-projection chamber. MINOS enabled to track the angular distribution of the knocked out protons. (p,2p) and (p,3p) cross sections have been obtained and compared to theoretical reaction models. In particular, the difference in sensitivity of (p,2p) and (p,3p) to the population of individual final states in the same nucleus will be discussed.

References:

[1] A. Frotscher et al., Phys. Rev. Lett. 125, 012591 (2020)

Collaboration

Hauptautor: XANTHOPOULOU, Christina (Technische Universität Darmstadt, Institute of nuclear physics)

Vortragende(r): XANTHOPOULOU, Christina (Technische Universität Darmstadt, Institute of nuclear physics)

Sitzung Einordnung: Thursday afternoon 2