Contribution ID: **17** Type: **Presentation**

Form factor studies for analyses of transfer reactions

Thursday, 3 July 2014 09:50 (25 minutes)

We present spectroscopic information provided in single nucleon transfer reactions on the valence shells of nuclei with very large neutron/proton asymmetry. The cross sections for nucleon removal were compared to shell model predictions. The weak dependence on asymmetry contrasts with results of knock-out experiments at higher incident energy.
The neutron deficient 14O has been first investigated. Both the single neutron and proton pick-up cross sections from a deuterium target were measured with the MUST2 array coupled to the magnetic spectrometer VAMOS at GANIL and the 14O SPIRAL beam at 18 MeV/nucleon. 14O with a large neutron/proton asymmetry ΔS = |Sn-Sp | ~ 18 MeV is a good candidate to study the evolution of the cross sections for the transfer of valence nucleons in deeply or weakly bound orbitals. Previous results obtained in direct kinematics with 16O and 18O were included in the data set. Different prescriptions for the form factors (Saxon Woods and ab-initio form factors) have been used and tested. The sensitivity on the final results will be shown.

Primary author: Dr GILLIBERT, ALAIN (CEA SACLAY, France)

Co-authors: Dr OBERTELLI, Alexandre (CEA SACLAY, France); Dr FLAVIGNY, Freddy (KU Leuven, Belgium); Dr KEELEY, Nick (NCNR, Poland)

Presenter: Dr GILLIBERT, ALAIN (CEA SACLAY, France)

Session Classification: Session 7

Track Classification: Prefer Presentation