Contribution ID: **28** Type: **Talk**

Compton scattering from 3He and 4He using an active target

Thursday, 2 July 2015 17:20 (15 minutes)

An experiment to measure the differential cross section for Compton scattering from 3He and 4He at the MAMI tagged photon facility in Mainz is described. The objective is to measure the isoscalar nucleon electromagnetic polarisabilities and thus access the neutron polarisabilities. The experiment will use a high-pressure gas-scintillator active target to measure recoiling He ions in coincidence with the scattered photon, detected in the Crystal Ball and TAPS 4-Pi electromagnetic calorimeter. Recent work to develop a chiral effective field theory treatment of Compton scattering on 3He is also described, and the relative merits of using 2H, 3He or 4He as "neutron targets" discussed in the light of recent experiments on 2H.

Primary author: ANNAND, John (University of Glasgow)

Presenter: ANNAND, John (University of Glasgow)

Session Classification: Parallel Session 6 - Few-Body Physics WG

Track Classification: Few-Body Physics Working Group