

Neutron Skins of Nuclei



Tuesday, 17 May 2016 - Friday, 27 May 2016

Mainz Institute for Theoretical Physics, Johannes Gutenberg University

Scientific Programme

This two-weeks program will gather the stakeholders interested in the determination of the neutron skins of nuclei (e.g., Ca and Pb) and their impact on the density dependence of the symmetry energy.

Although various meetings of this sort have already been organised, it is the primary goal of the workshop to establish quantitatively the strengths and limitations of the various experimental techniques. This requires a detailed analysis of the systematic errors. Moreover, given that in most instances theory must be used to connect the measured experimental observable to the neutron skin, it is also essential to quantify the statistical and systematic errors associated with the given theory. Finally, we aim to design a suite of experiments and the precision required to determine neutron skins in a manner that will provide meaningful constraints on the density dependence of the symmetry energy — and ultimately on astrophysical observables.

As you may have heard, a successful one-week workshop aimed at defining the goals and expectations for the upcoming two-week program took place in Mainz in May, 2015. You may want to look at the concluding remarks of the workshop, which can be downloaded from the main program page.