

## **Exotic structure and decay of medium mass nuclei near the drip lines within beyond-mean-field approach**

*Monday, June 10, 2013 2:30 PM (30 minutes)*

The interest for the investigation of medium mass nuclei near the drip lines goes beyond the frontier of nuclear structure and dynamics.

Detailed knowledge of the properties and decay rates of nuclei near the drip lines are required by the simulation of many astrophysical objects.

The structure and dynamics of proton-rich  $A\sim 70$  nuclei and neutron-rich  $A\sim 100$  nuclei are influenced by shape coexistence effects. A realistic description of shape coexistence phenomena requires beyond-mean-field approaches.

A self-consistent description of exotic structure and beta-decay of proton-rich  $A\sim 70$  nuclei as well as neutron-rich  $A\sim 100$  nuclei within the complex Excited Vampir variational approach using realistic effective interactions in large model spaces will be presented.

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