



Séminaire

le vendredi 7 décembre 2012 à 11h

CEA-Saclay SPhN, Orme des Merisiers Bât. 703 Salle 125

PAIRING CORRELATIONS IN HALO NUCLEI AND THEIR EXPERIMENTAL EVIDENCE

Grégory POTEL

CEA-Saclay, IRFU, SPhN

The high polarizability of light halo nuclei close to the neutron drip-line play a prominent role in the nature of pairing correlations among the neutrons forming the halo.

Indeed, exotic features of the nuclear spectra of these systems, such as parity inversion, can be quantitatively accounted for taking into account the coupling of valence neutrons with low-lying collective modes.

A unified nuclear-structure-direct-reaction theory provides the framework to subject these considerations to experimental verification. To this respect, recent data resulting from studies of two-nucleon transfer reaction on ^{11}Li provides direct experimental evidence of the role of collective vibrations in the structure of the ground state of this halo nucleus.