ID de Contribution: **20**   Type: **Non spécifié**

Complexity, scale invariance and sensitivity in the nuclear shell model

mercredi 10 octobre 2012 11:25 (35 minutes)

The atomic nucleus is a many-body quantum system, where both the excitation energies and the wave functions can show specific correlations. From Random Matrix Theory, we know that these correlations are related to the underlying nuclear dynamics. In this work, we analyze concepts like complexity, scale invariance and sensitivity in the framework of the nuclear shell model, in the JT-scheme for 8 and 10 particles in the fp shell. In particular, we focus on transitions from pure to mixed states.

Auteur principal: Dr VELÁZQUEZ, Víctor (Universidad Nacional Autónoma de México)

Co-auteurs: FRANK, A. (Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México & Centro de Ciencias de la Complejidad (C3) , Universidad Nacional Autónoma de México); LANDA, E. (Instituto de Ciencias Nucleares, Universidad Nacional Autónoma de México); FOSSION, R. (Centro de Ciencias de la Complejidad (C3) , Universidad Nacional Autónoma de México)

Orateur: Dr VELÁZQUEZ, Víctor (Universidad Nacional Autónoma de México)

Classification de Session: Recent progress in shell model and other approaches to nuclear structure

Classification de thématique: Recent progress in the nuclear shell model and other approaches to nuclear structure