ID de Contribution: **165**   Type: **Talk**

Cooperation with Peter Schuck on many-body correlations in nuclei

mercredi 22 mars 2023 14:00 (30 minutes)

The first topic describes the Selfconsitent Random Phase Approximation (SCRPA) [1]. The nonlinear SCRPA system of equations is numerically solved for the three level Lipkin model [2]. Goldstone mode and mass parameter in the deformed region are analyzed.

The second topic analyzes simultaneous description of alpha and electromagnetic transitions in ^{212}Po in terms of the surface alpha clustering [3]. Large dipole electromagnetic transitions from recently discovered unnatural parity states are explained.

[1] P. Schuck, D.S. Delion, J. Dukelsky, M. Jemai, E. Litvinova, G. Ropke, and M. Tohyama, Equation of Motion Method for strongly correlated Fermi systems and Extended RPA approaches, Physics Reports 929 (2021) 1.

[2] D.S. Delion, P.Schuck, and J. Dukelsky, Self Consistent Random Phase Approximation and the restoration of symmetries within the three level Lipkin model, Physical Review C 72 (2005) 064305.

[3] D.S. Delion, R.J. Liotta, P. Schuck. A. Astier, and M.-G. Porquet, Shell model plus cluster description of negative parity states in ^{212}Po, Physical Review C 85 (2012) 064306.

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Classification de Session: Wednesday 14:00-15:30

Classification de thématique: Many-body