Nuclear Seminar

Fundamental Symmetries and Quantum Chaos

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Monday

September 8

4 P.M.

Rm 124 NSH

The statement that the atomic nucleus is a natural laboratory for studying fundamental symmetries became a common place. It is especially important now when nuclear physics enters a new period of tempestuous development with new ideas and new powerful facilities. In the talk I will discuss two examples – parity non-conservation and the search for the electric dipole moment violating both parity and time-reversal invariance - from the viewpoint of nuclear many-body mechanisms which can enhance those effects. In the first example the main role is played by many-body quantum chaos which is confirmed by experiments (the ideas of quantum chaos will be briefly explained along the road). In the second example, we have no data but just ideas of promising nuclear structure mechanisms of considerable enhancement.

Refreshments served prior to the seminar in Rm 124.

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