東北大学　宇宙創成物理学国際共同大学院プログラム

GP-PU (Graduate Program on Physics for the Universe）Seminar セミナー

“Introduction to the three-nucleon (3N) interaction "

by Michele Viviani

Laboratori Nationali di Frascati INFN, Italy

Time and Date : 13:00 - 15:00, 17th October (Wed) 2018

Venue : Room 745, the Science Complex B (H-03)

Language : English　　Free admission 参加は無料です

The lecture will be organized as follows:

- importance of the 3N interaction in nuclei (binding energies of light nuclei and scattering observables in 3 and 4 nucleon systems)

- The Fujita-Miyazawa 3N interaction (properties of the Delta resonance; the pion-nucleon-delta coupling constant; the decay width of the Delta resonance; the derivation of the Fujita-Miyazawa force using quantum mechanics; the 3H binding energy with the Fujita-Miyazawa 3N interaction)

- Modern theory of the 3N interaction (perturbation theory using as expansion parameter the momenta of the nucleons; examples of contributions; low-energy constants and how to fix them).

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