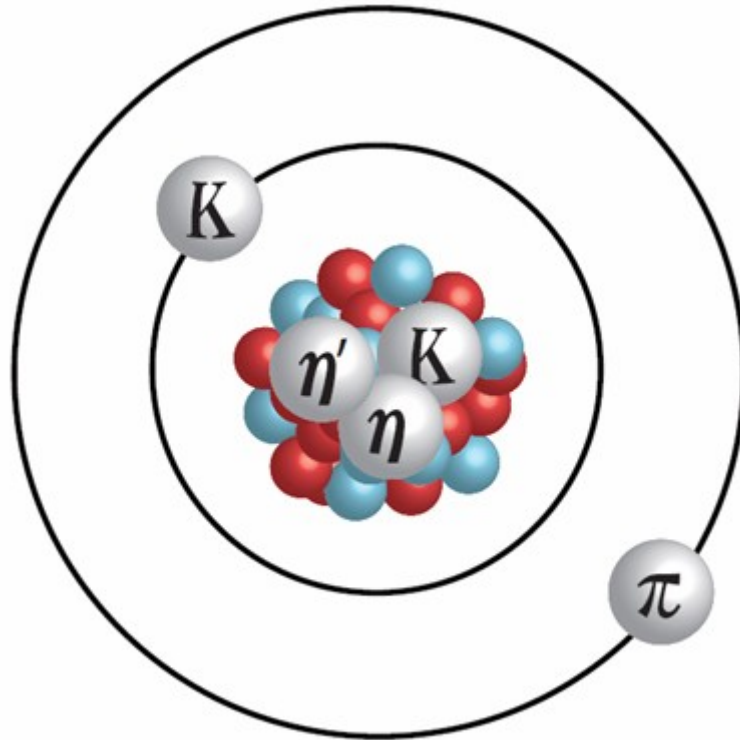


Hadron-Nuclear Physics – Study of Mesic Atoms —

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A schematic figure of the meson—nucleus bound system called mesic atoms and mesic nuclei. (From ‘ Physics of meson-nucleus bound systems – The strong side of the world-’ (in Japanese) by Satoru Hirenzaki, Kyoritsu Pub. (2017).

Atoms are known to be consist of electrons and a nucleus. Since electron is a kind of lepton and does not feel the strong interaction. Hence, in the atoms, the most important interaction is the electromagnetic interaction. On the other hand, we can produce new kinds of atoms called mesic atoms, which consist of a meson and a nucleus. Meson is a kind of hadron and feels strong interaction. For example, we can produce and observe the pionic atoms which is a bound state of the famous Yukawa’s particle (pi meson) and nucleus by the strong and electromagnetic interactions. By studying the mesic atoms, we can study the new aspects of the strong interaction.

Keywords : Hadron, Meson, Strong Interaction, Nucleus