



Contribution ID: 91

Type: **Talk**

Kaonic atoms at the DAFNE collider

Friday, 27 August 2021 12:00 (30 minutes)

Chiral and SU(3) symmetry breaking in the non perturbative regime is approached with lattice calculation and effective field theories, but still lacking experimental results especially in the strangeness sector, leaving unanswered questions in nuclear, particle and astrophysics. To this end, kaon-nucleon/nuclei scattering interaction has traditionally been studied by scattering measurements at low-energy; however experimental data below 100 MeV/c are scarce and suffer from large uncertainties, making theoretical model validations difficult. Measurements of transitions in atomic systems, such as kaonic hydrogen and kaonic deuterium, provide a unique tool to extract the isospin-dependent kaon-nucleon scattering at threshold. The SIDDHARTA2 experiment at LNF-INFN DAFNE $e^+ e^-$ collider is starting its data taking campaign, aiming at performing the first high precision measurement of kaonic deuterium X-Rays transitions to the fundamental level. The scientific case, experimental challenges as well as the outlook of possible future measurements of the SIDDHARTA2 experiment will be discussed.

Is this abstract from experiment?

Yes

Name of experiment and experimental site

SIDDHARTA2 @ DAFNE Collider (INFN National Laboratory of Frascati)

Is the speaker for that presentation defined?

Yes

Details

Dr. Fabrizio Napolitano (INFN National Laboratory of Frascati)

Internet talk

Maybe

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