EXPERIMENTAL PHYSICS DIVISION SEMINAR

INSTITUTE OF HIGH ENERGY PHYSICS, CAS

Status of the SND and CMD-3 experiments in Novosibirsk

Speaker: Dr. Leonid Kardapoltsev

Time: 10:00 am, Thu 19th Jan 2023

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Zoom link: https://us06web.zoom.us/j/82063275591?pwd=OVpHdEtialhxbDhRcFZKR0wrc281UT09

Zoom ID: 8206 3275 591

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Abstract:

The SND and CMD-3 experiments at the VEPP-2000 e+e- collider in Novosibirsk carry out a comprehensive study of the exclusive cross sections of e+e- to hadrons in the center-of-mass energy range up to 2 GeV. The whole energy scan was performed in 2010-2013 and, after detectors and collider upgrade, in 2017-2022. The total integrated luminosity collected so far is 650 pb^{-1}. In this seminar, the current status of the experiments and overview of the results will be presented. In particular, we will discuss the status of pion form factor measurement and its impact on the calculation of the anomalous magnetic moment of muon, the study of neutron and proton electromagnetic form factors close to the production threshold and radiative decays of excited vector mesons.

About the speaker:

Leonid Kardapoltsev works at Budker Institute of Nuclear Physics and Novosibirsk State University in Novosibirsk, Russia. He is an active participant in two scientific projects: the CMS experiment at CERN and the SND experiment at the e+e- collider VEPP-2000. Currently, his research interests are focused on the study of excited vector meson resonances of light quarks.