



# PHYSIKALISCHES KOLLOQUIUM

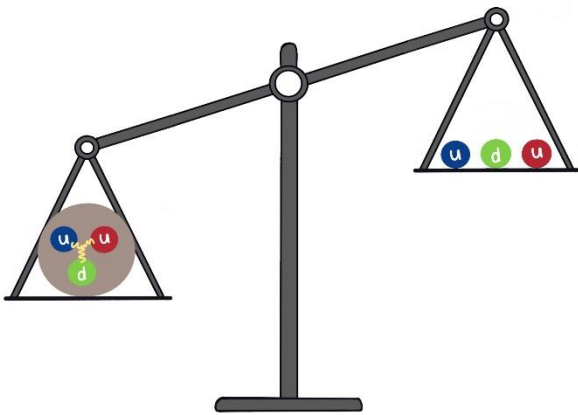
Sommersemester 2022

Montag, 11.04.2022, 12 Uhr c.t. HNB oder hybrid [Zoom meeting](#)

## Pion-Nucleon Sigma Term Antrittsvorlesung

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The pion-nucleon sigma term is a fundamental quantity of low-energy QCD. It describes the amount of the nucleon mass generated by the masses of the up- and down-quarks. It is also important for the interpretation of dark-matter direct-detection experiments and nucleosynthesis. Despite of its phenomenological importance, a numerical value of the pion-nucleon sigma term is still controversial:

it varies from the relatively low one of  $\sim 40$  MeV found in lattice QCD calculations to a rather high one of  $\sim 60$  MeV obtained from a sophisticated dispersive analysis of pion-nucleon scattering in the framework of the Roy-Steiner equation. In this talk I will give an introduction to the pion-nucleon sigma term, discuss its role in nuclear and particle physics and review some of its recent determinations.

Einführung: Prof. Dr. Ilya Eremin

Die Fakultät lädt alle Interessierten herzlich ein.