

How well do we understand the proton?

Wednesday, 5 June 2024 09:30 (1 hour)

The proton is a spin-1/2 fundamental particle, discovered as a basic constituent of atomic nuclei by Rutherford in 1917. It and its isospin partner, neutron, carry the majority of visible mass in our universe. Starting from Gell-Mann's quark model, the substructures of protons have been explored mostly by the deep-inelastic scattering and Drell-Yan process for more than five decades. In this talk, I will focus on what we learn about the partonic structures of the proton, and how its mass and spin can be understood by their interesting dynamics resulting from the strong interaction. The physics results of ongoing experiments and Taiwan's participation in the future U.S. Electron-Ion Collider will be introduced.

Please choose your flavour

Quarks

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Session Classification: Keynote Talks