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HADES results on baryon transition form factors

Friday, 26 June 2026 12:00 (30 minutes)

New information on baryon resonance properties was provided in the recent years by the High Acceptance Di-Electron Spectrometer (HADES) collaboration using proton-proton or pion-proton measurements. In particular, the study of baryon resonance Dalitz decays (B -> N e+e-) allowed for an unprecedented access to the baryon timelike electromagnetic structure.
The main results of this program will be presented, with an emphasis on studies of the second resonance region using the GSI pion beam. Thanks to the combined measurements of two-pion and e+e- channels, the contribution of vector mesons to baryon timelike electromagnetic transition form factors could be quantified. Various theoretical approaches connecting information from hadronic and electromagnetic channels in the spacelike and timelike regime could also be tested, paving the way for an extension of the studies in the third resonance region.
Preliminary studies and prospects for radiative and Dalitz decays of hyperons will also be discussed.

Collaboration

HADES

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