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Type: **Invited**

Vector Meson Dominance: Fact or Fiction

Friday, 26 June 2026 13:00 (30 minutes)

This presentation will discuss the fidelity of the vector meson dominance (VMD) assumption as an instrument for relating the electromagnetic vector-meson (V) production reaction $e(\text{lectron}) + p(\text{roton}) \rightarrow e(\text{lectron})' + V + p(\text{roton})$ to the purely hadronic process $V + p \rightarrow V + p$. It will also describe an alternative reaction model for exclusive photoproduction of light and heavy vector mesons from the proton, which exposes the quark-antiquark content of the photon. The analyses reveal that it is premature to link any $\gamma + p \rightarrow V + p$ data with, for instance, in-proton gluon distributions, the quantum chromodynamics trace anomaly, or pentaquark production. Further developments in reaction theory and higher precision data are required before the validity of any such links can be assessed.

Collaboration

Primary author: ROBERTS, Craig (Nanjing University)

Presenter: ROBERTS, Craig (Nanjing University)

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