

# Proton gravitational form factors with basis light-front quantization

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We study the gravitational form factors (GFFs) and the mechanical properties like the pressure and shear distribution of quarks using the light-front wave functions (LFWFs) of the nucleon from a basis light-front quantization (BLFQ) approach in the leading Fock-sector representation. Our analysis further expands to include an extra Fock sector, which integrates three quarks and an active gluon. This leads to the study of gluon GFFs and their respective mechanical features. We compare our results with existing experimental data and Lattice outcomes.

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