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Progress in the Lattice of Jaffe-Manohar Spin Decomposition

Monday, 6 July 2026 16:00 (30 minutes)

We report a state-of-the-art lattice QCD calculation of the total gluon helicity contribution to the proton spin, ΔG. After extrapolating to the continuum limit, ΔG is found to be $\Delta G = 0.231(17)^{sta.}(44)^{sym.}at the\overline{\mathrm{MS}}scale\mu^ \mathrm{GeV}^2$, which constitutes approximately 46(9)% of the proton spin. In addition, we will also provide a theoretical workflow for extracting the total orbital angular momentum without the need for LaMET matching, and provide some numerical results.

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