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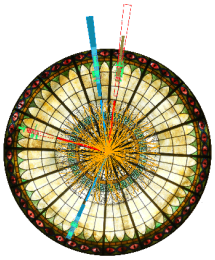

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Boundary terms in the decomposition of nucleon spin

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The decomposition of nucleon spin into spin and orbital angular momentum contributions from partons is revisited in the context of quantum field theory. It is shown that commonly used decompositions rely on classical-type arguments for their justification, and that these arguments may no longer hold in the full quantum theory, in particular with respect to the treatment of boundary terms. The role of these terms in the construction of quark-gluon decompositions of the QCD angular momentum operator is investigated, casting doubt on the applicability of certain identifications of quark and gluon contributions to the nucleon spin [arXiv:1408.3233].

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