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Recent results for the proton spin decomposition from lattice QCD

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The exact decomposition of the proton spin has been a much debated topic, on the experimental as well as the theoretical side. In this talk we would like to report on recent non-perturbative results and ongoing efforts to explore the proton spin from lattice QCD. We present results for several form factors from gauge field ensembles that feature a physical value of the pion mass. These form factors can be used to determine the quark total angular momentum as well as the spin carried by quarks. In addition we present first results for our ongoing effort to compute the angular momentum of the gluons in the proton.

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