Orbital Angular Momentum in Nucleon

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Summary

We use Ji's decomposition of nucleon spin and calculate the Orbital Angular Momentum of quarks and gluon in the nucleon. Calculations are carried out in the next to leading order utilizing the so-called valon model. It is found that the average quark orbital angular momentum is positive, but small, and the average gluon orbital angular momentum is negative and large. We also report on some regularities about the total angular momentum of the quarks and the gluon, as well as on the orbital angular momentum of the separate partons.

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