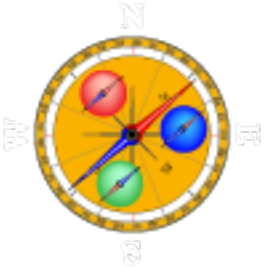

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Latest developments on the Wigner distribution functions

I will review recent developments on the Wigner distribution functions of the nucleon, which provide multidimensional images of the quark distributions. They depend on both the transverse position and the three-momentum of the quark relative to the nucleon, and therefore combine in a single picture all the information contained in the generalized parton distributions and the transverse-momentum dependent parton distributions. I will consider a few example of Wigner functions, both in the T-even and T-odd sector, and discuss the role of the quark orbital angular momentum in shaping the nucleon and its correlations with the quark and nucleon polarizations. I will discuss the possibility to access information on the quark orbital angular momentum from Wigner functions, in comparison with alternative relations between the orbital angular momentum and the generalized parton distributions. Finally, I will present recent proposals to access the Wigner functions from experimental measurements.

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