

Orbital angular momentum of partons

Be careful what you wish for!

I'm not going to talk about my (original) assigned topic: "information about orbital angular momentum from low energy experiments"

Matthias will presumably discuss connection to anomalous magnetic moments

Instead I invite you to consider...

We have become used to lamenting the difficulties and ambiguities in extracting GPDs in order to exploit the Ji Relation to determine J_q

What are the limitations on what we could learn if we were unimpeded by these "practical" difficulties

(I hope this may be provocative while not too tactless!)

Make a Wish...

Please suppose an alien civilization offered to provide the values of two experimental observables related to nucleon spin physics, to any precision.

What would we choose?

For example:

$\Delta\Sigma$ and J_g , to NLO in the $\overline{\text{MS}}$ scheme, at $Q^2=10 \text{ GeV}^2$?

(With no worries about extrapolation to $x=0$)

Would it now be instructive to ask:

What could e.g. $\Delta\Sigma = 0.3000$ and $J_g = 0.1000$ teach us about QCD?

Alternatively:

Should we refuse such alien information because it's our experimental ignorance that is making our field so lively?