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Strange Quark PDFs in the CTEQ-TEA Global Analysis of QCD

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Summary

ABSTRACT:
Anticipating new data from the LHC, two general questions arise:
How accurately are the parton densities known at this time?
What have we learned about the PDFs from recent LHC data?
In this talk, these questions are addressed in the specific
context of the strange quark PDFs of the CTEQ-TEA global
analysis, and data on W and Z production from the ATLAS
and CMS collaborations.

I will discuss the current view of the strange and antistrange quark parton density functions in the CTEQ-TEA global analysis of QCD; also, how this view has evolved over time; and, how the CTEQ-TEA PDFs compare to other PDF analyses. Also, I will consider the CTEQ-TEA predictions for W and Z production at the LHC, compared to published measurements by the ATLAS and CMS collaborations. The talk will ask whether the LHC W and Z data provide strong constraints on strangeness in the proton.

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