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Impact of CMS measurements on Proton Structure and QCD parameters

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The sensitivity of CMS measurements to Parton Distribution Functions, strong coupling constant and treatment of heavy flavours in QCD analyses is presented. CMS data collected at various center-of-mass energies and their impact on the PDFs are presented. Measurements of cross sections of jet and top-quark pair production are in particular sensitive to the gluon distribution in the proton and the strong coupling, while the electroweak boson production - inclusive or associated with charm or beauty quarks give insight into the flavour separation of the proton sea and give hints to the treatment of heavy quarks in PDF-related studies.

Experimental Collaboration

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