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## The CJ12 parton distributions

*Tuesday 23 April 2013 09:40 (25 minutes)*

I present three new sets of next-to-leading order parton distribution functions (PDFs) determined by global fits to a wide variety of data for hard scattering processes. The analysis includes target mass and higher twist corrections needed for the description of deep inelastic scattering data at large  $x$  and low  $Q^2$ , and nuclear corrections for deuterium targets. The PDF sets correspond to three different models for the nuclear effects, and provide a more realistic uncertainty range for the  $d$  quark PDF compared with previous fits. Applications, in particular to weak boson production at colliders will also be discussed.

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