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Visualizing sensitivity of hadronic experiments to the nucleon structure

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Which hadronic experiments constrain the PDF dependence of the Higgs boson cross section? What constrains the strangeness PDF better: LHC vector boson production, (SI)DIS, or jet production? We present a new technique to quantitatively answer such questions without performing a full PDF fit or PDF reweighting. The technique employs the Hessian method and takes into account the (un)correlated experimental uncertainties and PDF-driven correlations. Using this technique, one easily visualizes the distribution of constraints on PDFs in the (x, Q) plane and can estimate the potential impact of future experiments without performing a fit.

Primary authors: DOYLE, Sean; GAO, Jun; HOBBS, Timothy; HOU, Tie-Jiun; NADOLSKY, Pavel; OLNESS, Fred; WANG, Bo-Ting

Presenter: OLNESS, Fred

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