

# XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



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## The Gottfried Sum Rule Revisited

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Significant progress has recently been made, both experimentally and theoretically, in extracting the neutron structure function from deuterium data. Of particular note are the new CTEQ-JLab (CJ) nuclear corrections for large  $x$  PDF extraction, and the Jefferson Lab “BONUS” experiment, where a novel tagged proton spectator approach was employed to isolate the neutron target in electron-deuteron scattering. The BONUS data, combined with a wealth of precision deuterium data from Jefferson Lab, SLAC, and NMC, the latter now all with state-of-the-art CJ nuclear corrections applied, has been used to re-evaluate the Gottfried Sum rule integrand  $F_2n-F_2p$ . Results of this analysis will be presented, and compared with the well-known results from NMC which lacked precision neutron extraction.

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