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Neutrino data for nuclear parton distribution fonction determinations

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Global analyses of nuclear Parton distribution functions (nPDFs) play a crucial role in making precise predictions for a wide range of processes in lepton-nucleus (lA), proton-nucleus (pA), and heavy ion collisions (AA). In this context, the inclusion of neutrino deep inelastic scattering (DIS) data is particularly important as it enables an improved flavour separation of the parton densities. However, over the past two decades several studies have reported tensions when attempting to combine neutrino and charge lepton DIS data. In this talk, we present the recent and detailed study of the compatibility of neutrino DIS data within the nCTEQ frame work based on arXiv:2204.13157.

Primary author: YU, Ji Young (southern methodist university)

Co-authors: MUZAKKA, Khoirul Faiq; DUWENTÄSTER, Pit (University of Jyväskylä); Dr HOBBS, TIMOTHY J (Argonne National Laboratory); JEZO, Tomas (WWU ITP); KLASEN, Michael; KOVARIK, Karol; KUSINA, Aleksander; MORFIN, Jorge G.; Prof. OLNESS, Fred (Southern Methodist University (US)); RUIZ, Richard (Institute of Nuclear Physics (IFJ) PAN); SCHIENBEIN, Ingo (Universite Grenoble Alpes)

Presenter: YU, Ji Young (southern methodist university)

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