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Simultaneous Monte Carlo analysis of parton densities and fragmentation functions ERIC MOFFAT, Old Dominion Univ/Jefferson Lab, WALLY MELNITCHOUK, Jefferson Lab, TED ROGERS, Old Dominion Univ/Jefferson Lab, NOBUO SATO, Jefferson Lab, JAM COLLABORATION — We perform a comprehensive new Monte Carlo analysis of high-energy lepton-lepton, lepton-hadron and hadron-hadron scattering data to simultaneously determine parton distribution functions (PDFs) in the proton and parton to hadron fragmentation functions (FFs). The analysis includes all available semi-inclusive deep-inelastic scattering and single-inclusive e^+e^- annihilation data for pions, kaons and unidentified charged hadrons, which allows the flavor dependence of the fragmentation functions to be constrained. Employing a new multi-step fitting strategy and more flexible parametrizations for both PDFs and FFs, we assess the impact of different data sets on sea quark densities, and confirm the previously observed suppression of the strange quark distribution.

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