

Describing UPC data with the Sartre event generator

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We present a comprehensive comparison with the Sartre event generator and available exclusive diffraction data from UPC of heavy ions. Sartre now takes all phenomena unique to UPC into account, i.e. interference effects, neutron emissions due to secondary and tertiary photon interactions, as well as a photon p_t , paired with a reliable saturated small- x QCD model (IPSat). This enables us to use UPC data to constrain parameters of the initial state, such as the Woods-Saxon parameters and the nucleon thickness function, including nucleon substructure. We also use an interpolation to a large- x parametrisation in order to describe final states at the largest and smallest rapidities, which are mixed states of small and large x phenomena, enabling us to describe the entire rapidity and W spectra.

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