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## Ultra-peripheral collisions with the ATLAS detector

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The large equivalent-photon fluxes accompanying Pb ion beams at the LHC initiate photon-photon and photonuclear interactions which dominate when the colliding nuclei have large impact parameter (ultra-peripheral collisions).

These electromagnetically-induced processes are sensitive to the nuclear wave-function and in particular the nuclear modifications of the nucleon parton distribution functions (nPDFs). As such, they are complementary to the ongoing p+A program at RHIC and the LHC, as well as the upcoming electron-ion collider in the US. The

absolute rates of single and multiple neutron emission into one or both ZDCs will be presented, to test theoretical predictions for the photon flux as well as nuclear absorption. High-mass dilepton pair continuum rates will also be studied to test expectations for two-photon interactions.

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