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Dimuon production from two-photon scattering in ultra peripheral Pb+Pb collisions with the ATLAS detector

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Relativistic heavy-ion beams are accompanied by a large flux of equivalent photons, giving rise to a set of photon-induced processes. These ultra-peripheral collisions (UPCs) can lead to photon-photon interactions. This poster presents a new measurement of exclusive dimuon production, which provides detailed constraints on the nuclear photon flux and its dependence on impact parameter and photon energy. In particular, the study of the dimuon cross sections in the presence of forward neutron production provides an additional experimental handle on the impact parameter range sampled in the observed events.

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