

High energy photon-photon interactions at the LHeC and FCC-eh

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Novel studies of high energy photon-photon interactions at the LHeC [1] and FCC-*eh*, at the center-of-mass energy up to 1 TeV and beyond, will open new frontiers in the electroweak physics as well as in searches for physics beyond the Standard Model. Despite very high *ep* luminosities, the experimental conditions will be very favorable at these colliders - a negligible event pileup will allow for unique studies of a number of processes involving the exclusive production via photon-photon fusion.

The exclusive two-photon production of W, Z, photon and tau pairs at the LHeC and FCC-*eh* has been benchmarked and is discussed in this paper, along with first estimates of sensitivities to physics beyond the Standard Model expected for the measurements of such processes.

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[1] <https://arxiv.org/abs/2109.08001>

Submitted on behalf of a Collaboration?

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