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Can one study timelike Compton scattering at LHC and at JLab?

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Exclusive photoproduction of dileptons, gamma N->e+e-N, is and will be measured in ultraperipheral collisions at hadron colliders, such as the Tevatron, RHIC and the LHC but also at lower energies at JLab. We demonstrate that the timelike deeply virtual Compton scattering (TCS), gamma q -> e+e- q, where the lepton pair comes from the subprocess gamma q -> gammaq dominates in some accessible kinematical regions, thus opening a new way to study generalized parton distributions (GPD) in the nucleon. This subprocess interferes at the amplitude level with the pure QED subprocess gamma gamma -> e+e- where the virtual photon is radiated from the nucleon.

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