## Contribution submission to the conference Münster 2017

Hadron Production in Photon-Photon Processes at the International Linear Collider — •KOLLASSERY SWATHI SASIKUMAR<sup>1,2</sup>, CARL MIKAEL BERGGREN<sup>1</sup>, and JENNY LIST<sup>1</sup> — <sup>1</sup>Deutsches Electronen Synchrotron, Hamburg, Germany — <sup>2</sup>Universität Hamburg, Institut für Experimentalphysik, Luruper Chaussee 149, 22761 Hamburg

The International Linear Collider (ILC) is a proposed  $e^+e^-$  collider, tunable at a centre-of-mass energy between 250 - 500 GeV (with the possibility to upgrade to 1 TeV). Being an  $e^+e^-$  collider ILC has the prospect of providing very clean physics environment for making high precision measurements e.g of the Higgs bosons and to search for new particles. In addition to the desired  $e^+e^-$  collisions, parasitic collisions of real and virtual photons radiated off the  $e^+e^-$  beams occur at the rates of up to 1.2  $\gamma\gamma$  collisions per bunch crossings. The  $\gamma\gamma$  centre-ofmass energies reach from few 100 MeV to the full  $e^+e^-$  centre-of-mass energy. At all these energies, in particular the production of hadrons need to be modelled correctly in order to estimate the impact of these backgrounds which pile-up on each  $e^+e^-$  event. It is equally important to develop advanced methods to remove these backgrounds from the important physics processes where the current methods remain inadequate. Thus in this contribution we discuss the simulations for  $\gamma\gamma \rightarrow$ low  $P_T$  hadron processes, evaluate their impact on the detector and discuss the method developed to remove them from interesting physics events.

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