

Translation and combined analysis of jet production at ZEUS and CMS

The study of jet production in ep and pp collisions is one of the most important tools to investigate Quantum Chromodynamics (QCD) across different domains.

In a previous summer student project, work has started to translate the ZEUS common ntuples into a format similar to CMS nanoAOD. Doing such a translation allows a common analysis and direct comparison of the resulting distributions with the same analysis code. So far variables associated with reconstructed muons have been implemented.

The goal of this project is to extend the translation to also include electron and jet quantities. The inclusion of these quantities will greatly extend the scope of possible analyses using the common format. After implementing the translation, kinematic distributions will be derived and compared to those from ongoing and completed analyses at ZEUS and CMS.

Field

B1: Particle physics analysis (software-oriented)

DESY Place

Hamburg

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FH

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CMS

Special Qualifications:

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