

Implementation, test and documentation of a public analysis example combining Quarkonium data from the CMS and ZEUS detectors in the context of PUNCH4NFDI

Quarkonium, and in particular J/ψ final states have been measured in both the ZEUS (ep) and CMS (pp) experiments. These measurements mainly focused on dimuon final states. A common research level analysis format for ZEUS and CMS data has recently been extended to contain electrons. The measurement of J/ψ s in both muon and electron final states will be exploited in this project.

This might allow a more complete coverage of the available phase space, and a more direct comparison of the respective physics processes in ep and pp collisions.

Different ways of handling the data with modern analysis tools will also be explored.

Once successfully completed and documented, the project will eventually be made available as a public use case example in the context of the PUNCH4NFDI project.

Field

B1: Particle physics analysis (software-oriented)

DESY Place

Hamburg

DESY Division

FH

DESY Group

CMS (with ZEUS)

Special Qualifications:

Some pre-knowledge in Particle Physics and/or Computing would be helpful.

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