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The ZEUS Global Tracking Trigger

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The design, implementation and performance of the ZEUS Global Tracking Trigger (GTT) Forward Algorithm is described. The ZEUS GTT Forward Algorithm integrates track information from the ZEUS Micro Vertex Detector (MVD) and forward Straw Tube Tracker (STT) to provide a picture of the event topology in the forward direction ($1.5 < \eta < 3$) of the ZEUS detector. This region is particularly challenging because of inhomegenieties in the solenoid magnetic field, and the high occupancies in the forward direction from beam-gas interactions and secondary scatters with the ZEUS beampipe. The forward algorithm is distinct from the GTT barrel algorithm, but will run in parallel on the GTT CPU farm. To avoid unacceptable deadtime in the ZEUS readout system, the foward algorithm proccessing must be compliant with the strict requirements of the ZEUS trigger system. The current status of the integration with the ZEUS DAQ and trigger systems is also reviewed.

Author: SUTTON, M. (UNIVERSITY COLLEGE LONDON)

Presenter: GLADKOV, Dimitri

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