

# The DZERO Level 3 Trigger and DAQ System

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The DZERO Level 3 Trigger and data acquisition system has been successfully running since March of 2001, taking data for the DZERO experiment located at the Tevatron at the Fermi National Laboratory. Based on commodity parts, it reads out 65 VME front end crates and delivers the 250 MB of data to one of 1200 processing cores for a high level trigger decision at a rate of 1 kHz. Accepted events are then shipped to the DZERO online system where they are written to tape. The design is still relatively modern –all data pathways are based on TCP/IP and all components from the single board computer in the readout crates to the Level 3 trigger farm are based on commodity items. All parts except for the central network switch have been upgraded during the lifetime of the system. This paper will discuss the performance –particularly as the Tevatron has continued to increase its peak luminosity – and the lessons learned during the upgrade of both the farms and the front end readout crate processors. We will also discuss the continued evolution of the automatic program that repairs common problems in the DAQ system.

## Presentation type (oral | poster)

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