11th Workshop on Electronics for LHC and future Experiments

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Configuration of the ATLAS trigger

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The ATLAS detector at CERN's LHC will be exposed to proton-proton collisions at a rate of 40 MHz. In order to reduce the data rate, only potentially interesting events are selected by a three-level trigger system. Its first level is implemented in electronics and firmware, and aims at reducing the data output rate to about 75 kHz. The second and third trigger levels are based on software and reduces the rate to about 200 Hz.

To prepare the full trigger chain for the online event selection according to a certain strategy, a system is being set up that provides the corresponding information to all parts of the trigger chain, e.g. values for hardware registers in level-1 or steering parameters of high-level trigger algorithms. The same information is used to configure the offline trigger simulation. In this presentation an overview of the system is given and its main components are discussed.

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