Commissioning and first experiences of the ALICE High Level Trigger

Thursday 26 March 2009 08:00 (20 minutes)

For the ALICE heavy-ion experiment a large cluster will be used to perform the last triggering stages in the High Level Trigger. For the first year of operation the cluster consists of about 100 SMP nodes with 4 or 8 CPU cores each, to be increased to more than 1000 nodes for the later years of operation. During the commissioning phases of the detector, the preparations for first LHC beam, as well as during the periods of first LHC beam, the HLT has been used extensively already to reconstruct, compress, and display data from the different detectors. For example the HLT has been used to compress SDD data by a factor of 15, lossless, on the fly at a rate of more than 800 Hz. For the TPC the HLT has been used to reconstruct tracks online and show the reconstructed tracks in an online event display. The event display can also display online reconstructed data from the Dimuon and PHOS detectors. For the later detector a first selection mechanism has also been put into place to select only events for forwarding to the only display in which data has passed through the PHOS detector. In the talk we will present experiences and results from these commissioning phases.

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