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The CMS Tier 0

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The CMS Tier 0 is responsible for handling the data in the first period of its life, from being written to a disk buffer at the CMS experiment site in Cessy by the DAQ system, to the time transfer completes from CERN to one of the Tier1 computing centres. It contains all automatic data movement, archival and processing tasks run at CERN.

This includes the bulk transfers of data from Cessy to a Castor disk pool at CERN, repacking the data into Primary Datasets, storage to tape of and export to the Tier 1 centres. It also includes a first reconstruction pass over all data and the tape archival and export to the Tier1 centres of the reconstructed data. While performing these tasks, the Tier 0 has to maintain redundant copies of the data and flush it through the system within a narrow time window to avoid data loss.

With data taking being imminent, this aspect of the CMS computing effort becomes of the utmost importance. We discuss and explain here the work developing and commissioning the CMS Tier0 undertaken over the last year.

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