AMS-02 Monte Carlo Simulation in Science Operation Center at Southeast University

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Highlights

- Southeast University Science Operation Center (SEUSOC) is one of the computing centers of the Alpha Magnetic Spectrometer (AMS-02) experiment. It provides 2000 CPU cores for AMS scientific computing and a dedicated 1Gbps Long Fat Network (LFN) for AMS data transmission between SEU and CERN.

- In this paper, the workflows of SEUSOC Monte Carlo (MC) production are discussed in detail, including the process of the MC job request and execution, the data transmission strategy, the MC database and the MC production monitoring tool.

- Moreover, to speed up the data transmission in LFN between SEU and CERN, an optimized transmission strategy in TCP layer and application layer is further introduced.