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## The computing of the precision Muon g-2 Experiment at Fermilab

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The Muon g-2 Experiment at Fermilab is a precision experiment that aims to measure the muon anomalous magnetic moment with an unprecedented accuracy of 140 parts-per-billion (ppb). The first two publications, in 2021 and 2023, presented the measurements relative to the first three experimental Runs. The analysis of the remaining three runs is in progress and a new publication is expected in 2025. The last three runs contain almost three times the statistics of the first three runs, with more than  $1e11$  reconstructed positrons. The timely and accurate reconstruction of more than 10 Petabytes of raw data poses several computing challenges for a relatively small-sized collaboration. Efficient use of the limited resources and workforce is critical for respecting the publication schedule. This talk will describe the computing challenges of the Muon g-2 Experiment with a focus on the solutions implemented that successfully sped up the data reconstruction rate by a factor of five.

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