

Blue Waters, A Petascale Computer Facility, for the reconstruction of CERN COMPASS-II data.

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An exploratory phase to evaluate performances of COMPASS-II data processing using Blue Waters was granted from May 2016 through November 2016. The evaluation of COMPASS software and data transfer rates between CERN and Blue Waters is currently in full swing at Blue Waters and is extremely promising. A suitable data production model must be continuously improved to meet the expectations of raw data processing for the recent and the next measurements performed at COMPASS. From 2015 to 2018, the measurement campaign at CERN will produce 17 petabytes of experimental and Monte-Carlo data. For the reconstruction of recent and future data, the COMPASS-II experiment requires a performing and a competitive computing facility for physics analysis. Since 2002, the worldwide *Large Hadron Collider* (LHC) computing grid has introduced a new way to analyze and reconstruct data all over the world. This data production model is becoming increasingly essential and this technique of aggregating new computer centers into the COMPASS data production model must be considered. In case of success of this exploratory phase, Blue Waters facility would become an excellent TIER-1 center for COMPASS data. In two projects lasting two years each and one campus project, Blue Waters would provide valuable support to the COMPASS-II collaboration for data production.