Near-Real Time Reconstruction of Minimum Bias Au+Au collisions at $\sqrt{s_{NN}}$=200 GeV Using Remote Computer Resources Through GRID Networking BRIAN LOVE, Vanderbilt University, PHENIX COLLABORATION — Near-real time reconstruction of minimum bias Au+Au collision data at $\sqrt{s_{NN}}$=200 GeV from the PHENIX experiment at RHIC has been sustained over a 7 week period, proving the feasibility of future longer duration efforts. CPU resources from the ACCRE computing facility at Vanderbilt University were used for data production, while the Open Science GRID infrastructure was utilized for large volume data transfers to and from the RHIC Computing Facility (RCF). During this trial, raw data files were transferred daily from PHENIX to ACCRE and, through an automated pipeline, the files were processed and the output returned to RCF just days later at a rate of 5TB a week. Fault tolerant mechanisms were developed to ensure a robust operation with an absolute minimum of manual intervention. With the incorporation of this facility into PHENIX data processing, the power of GRID networking to combine computing resources from diverse geographical locations has been confirmed. With fast analysis turnaround of raw data, more opportunities are provided for near-real time decision making in PHENIX.

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