The PHOBOS Detector at RHIC

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Abstract

PHOBOS is one of four experiments constructed to measure the first Au-Au collisions at RHIC. Specific design objectives included to count the number of charged particles emitted over a wide range of pseudorapidity and to measure particles down to low transverse momentum. The experimental apparatus consists primarily of a 23000 channel Si detector multiplicity array that covers nearly 4π in acceptance, and two 57000 channel Si detector spectrometer arms in the field of a 2 T magnet. One of the spectrometers has been augmented with a scintillator time-of-flight system to extend particle identification. A series of beamline subarrays provide triggering conditions and global event characterization. The performance of this detector system during the initial running period at RHIC will be compared to the design goals of the PHOBOS experiment.

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