The Silicon Strip Detector for STAR

the SSD Group for the STAR Collaboration

Presented by: Jerome Baudot

Abstract

The STAR detector is intended to use a barrel of Silicon-strip detectors (SSD) inserted between the SVT and the TPC. This ensemble is presently in construction at IReS (Strasbourg) and Subatech (Nantes). It is constituted of 20 ladders supporting 16 detection modules each. A module is made of one double-sided SSD (2 x 768 strips), connected by means of Tape Automated Bonding, to 12 read-out chips counting 128 analog channels each, a control chip for the monitoring of the voltages, currents and temperature, and SMD components. Some prototypes have been satisfactorily tested in- and off-beam in terms of performances as well as of radiation-hardness, allowing the production phase. An ensemble of test set-up has been built to test the different components during the production phase. A data base system for the production and assembling phases has been elaborated. The presentation will deal with a brief description of these different aspects and with expected physics achievement.

Preprint submitted to Elsevier Preprint *20 December 2000*