WIT2012 Workshop on Intelligent Trackers

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The CBC microstrip readout chip for LHC phase II

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Content :

The CBC is a 130 nm CMOS chip designed for the readout of short silicon microstrips for the CMS Phase II tracker upgrade. It is a 128 channel wire-bonded chip which can be DC coupled to sensors of either polarity. The replacement tracker is also expected to provide limited tracking information to the Level 1 hardware trigger. With a binary front end the chip is well suited to adapting for use in stacked strip sensor modules in order to promptly identify high transverse momentum candidates. In this version, binary data are retained in a 256 deep pipeline and transmitted in an unsparsified format in response to an incoming trigger. The CBC performance has been evaluated in the laboratory and in a test beam. Details of the design and latest results of the measured performance will be presented.

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