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BCT for protection

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At LHC the Beam Current Transformers (BCT) have an important role for machine protection. The BCTs will be used to derive to important signals that will be distributed with high reliability using the 'Safe LHC Parameter' system: the 'beam presence' flag and the 'safe beam' flag. Both signals are derived from the measured beam intensity in the LHC rings. This presentation will outline the present design concept to provide reliable intensity information to the machine protection system. Although the beam loss monitoring system will be the main instrument charged with detecting and acting upon the majority of failures that could lead to quenches or damage, a fast beam loss interlock using beam current transformers would increase the overall reliability of the machine protection system. Requirements and ideas for the realization of a fast loss interlock system based on BCTs will be discussed.

Author: Dr BELOHRAD, David (CERN)

Presenter: Dr BELOHRAD, David (CERN)

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