

Beam losses and thresholds

In this talk we discuss the results of the several quench tests, their extrapolation to 7 TeV and the final consequences on the BLMs thresholds. Special emphasis is put in the UFO timescale test, where a quench of an MQ magnet was achieved in 10 ms reaching BLM signals five times larger than the estimated quench level. During the quench test with the collimation system, a power loss of 1MW over several seconds was achieved at the primary collimators in IR7 without the generation of a magnet quench in the dispersion suppressor. Signals three times higher than the estimated quench level were reached in the BLMs, which indicates a large margin with respect to the quench limit for this particular loss scenario. Moreover, the motivation for the original BLM location and the arguments for their rearrangement during LS1 in order to protect against UFO losses are explained. Finally, the procedures for BLM threshold management as well as a more reliable and maintainable approach for the threshold calculation and deployment approach are described here.