

BLM thresholds and damage limits for collimators

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LHC operation at 6.5TeV required major changes of the collimator BLM thresholds adopted in Run 1. At startup in 2015, the BLM thresholds at collimators were set by scaling the values in 2012 to 6.5TeV. This approach enabled a smooth commissioning during the intensity ramp up period. Throughout 2015, thresholds have been further optimized to allow for 200kW primary betatron losses, to accommodate luminosities beyond $1e33\text{cm}^{-2}\text{s}^{-1}$ and to avoid unnecessary dumps triggered by UFO events around the experimental insertions. The changes deployed in 2015 are presented. On-going studies to improve the understanding of collimator losses, based on beam measurements as well as on detailed simulations are discussed, along with a proposal of the 2016 collimator BLM threshold strategy.

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