Contribution ID: **24** Type: **not specified**

BLM threshold (15' + 5")

Thursday 25 November 2021 10:00 (20 minutes)

The LHC Beam Loss monitoring system is a key element in machine protection. Near 4000 beam loss detectors, ionisation chambers, are installed along the LHC protecting machine equipment by triggering a beam extraction in less than 3 LHC turns. Each detector is able to trigger a beam dump when its signal exceeds predetermined thresholds as function of the beam energy and 12 different running sums. In LS1 there was a big effort to make more uniform the BLM thresholds families for the superconducting magnets which was proven to be very successful on controlling and minimising the thresholds changes during the Run 2. However thresholds at the collimators, devices where the beam losses are concentrated, are still relying on the initial model and damage limits estimates. This talk will describe the changes foreseen for Run 3 for the beam loss thresholds at collimation in Point 7, where main betatron halo cleaning occurs, based on new damage limits from quench tests studies and updated energy deposition simulations, including new collimator materials like MoGr. Additional BLM threshold changes for Run 3 will be outlined.

Presenter: SALVACHUA FERRANDO, Belen Maria (CERN)

Session Classification: Session 5