MPP workshop (11-13 March)

Abstract
Beam-based validation of settings (Belen Salvachua)

The collimator system provides efficient beam halo cleaning and is also crucial for the passive machine protection. About 100 movable collimators are precisely aligned to the beam orbit with gaps as small as +/-1mm. For example, tertiary collimators are set to shield the aperture of the triplet quadrupoles in all IRs. In order to ensure the required functionality, the collimator positions need to be validated. This is done by performing regularly controlled loss maps in each machine configuration.

During 2012, the use of the ADT to excite transversally the beams in a controlled way has reduced the time to produce betatron loss maps. However, the validation of the off-momentum losses and asynchronous dumps still determines the minimum number of required fills. The experience with the loss maps in the 2010-2013 running periods is reviewed and possible improvements are discussed. Aspects related to the expiration time of loss maps and possible further improvements such as loss maps at the end of every physics fill and better online monitoring are also discussed.