DOSES TO WARM MAGNETS: MEASUREMENTS AND SIMULATIONS

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CONSIDERATIONS ON WARM MAGNET MEASURED DOSES

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BLM VIEW ON 2015 (R7)

- Simulated 6.5 TeV protons
- Hor losses only

- Relevant contribution from B1 missing
- Mispositioning?
2015 LOSSES

the simulated BLM pattern in the previous plot was normalized to

\[ 6.22 \times 10^{14} \text{ 6.5 TeV (B2) protons lost in IR7} \]

- B2 BCT indication for \( 5.5 \times 10^{14} \text{ 6.5 TeV lost protons} \)

- assuming \( \sim95\% \) in P7 (from BLM ratio @ TCP(C))

- and a \( \sim20\% \) effective increase mimicking the contribution of \( \text{ion/injection/ramp/... losses} \)

one gets there, implying \( 8 \times 10^{15} \text{ proton equivalent losses per 50 fb}^{-1} \)
DOSIMETER VIEW ON 2015 (R7)

same normalization as before

N.B. this is not the peak dose absorbed by the magnet coils!
at P1, **40-50 MGy after 300 fb⁻¹**

well controlled source term (integrated lumi)
benchmark against future 2016 dosimeter data (2015 values not really usable)