

# LHC Collimator - Test Case

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## FLUKA Model

**Dimensions** : 20 x 100 x 1500 mm<sup>3</sup> ;

**Material** : Carbon (1.77 g/cm<sup>3</sup>) ;

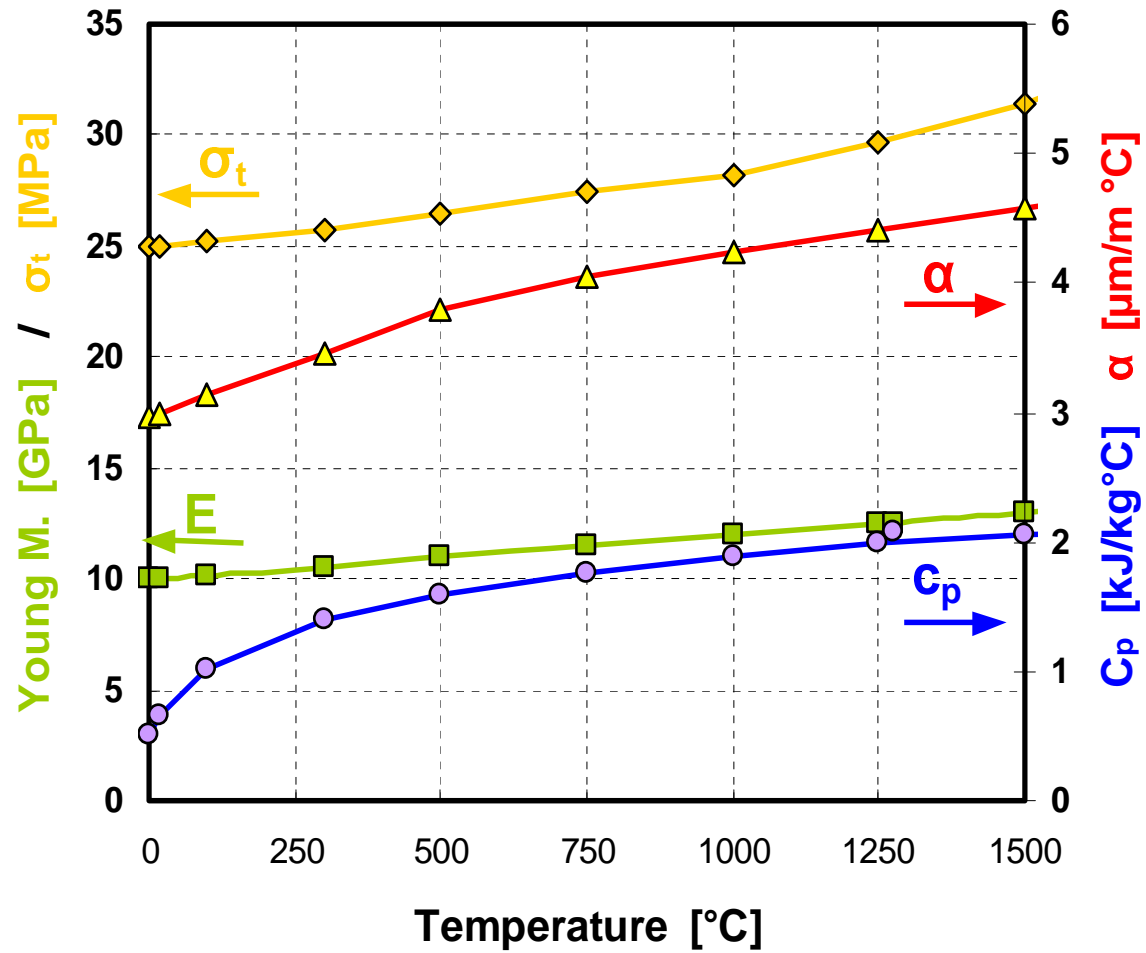
Be (1.85 g/cm<sup>3</sup>) ;

**Beam parameters:** 7 TeV protons,  $\sigma = 0.3$  mm,

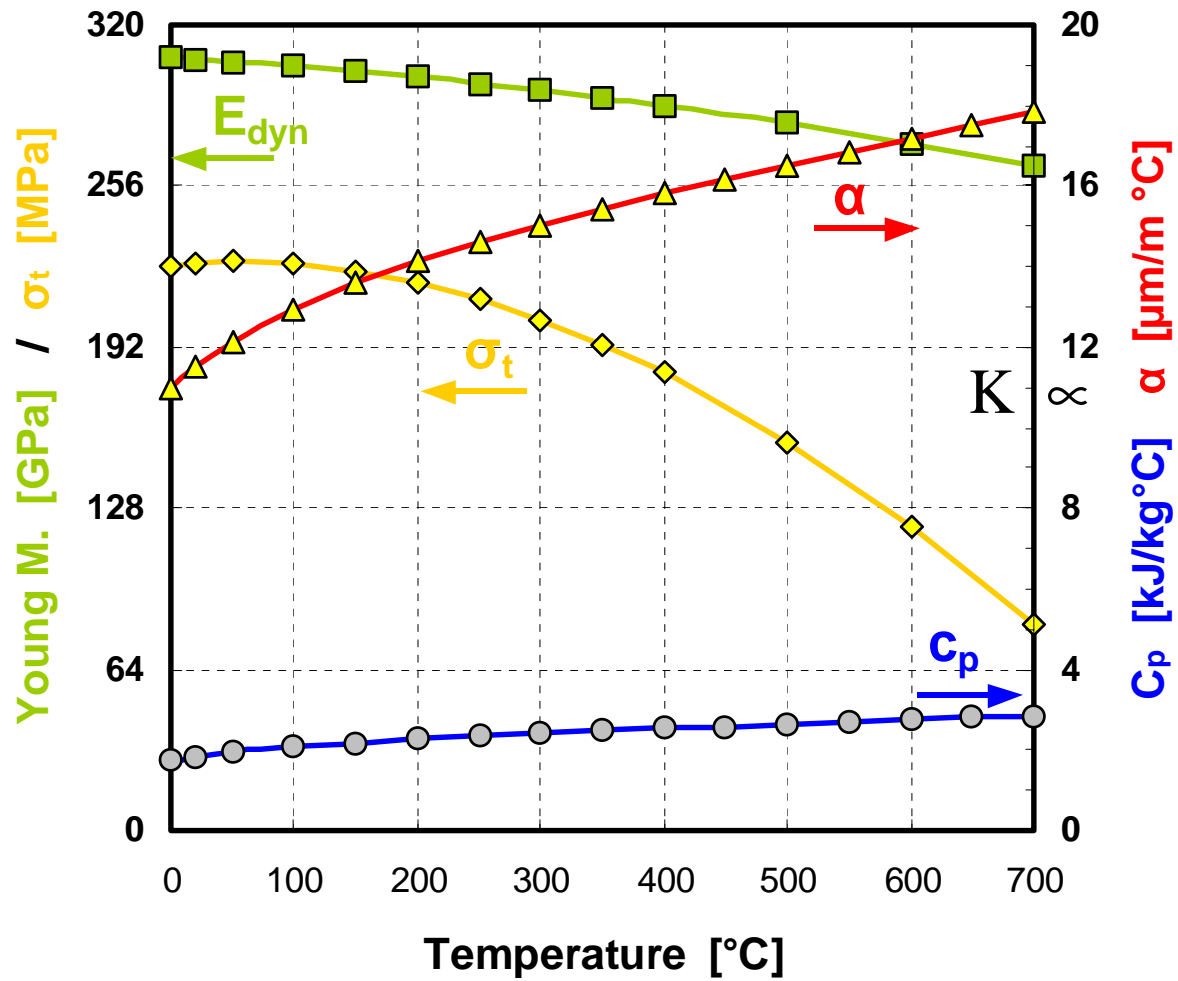
intensity: nominal  $1.05 \times 10^{11}$ ; ultimate:  $1.7 \times 10^{11}$

15 bunches spaced 0.1 mm

# Graphite Properties

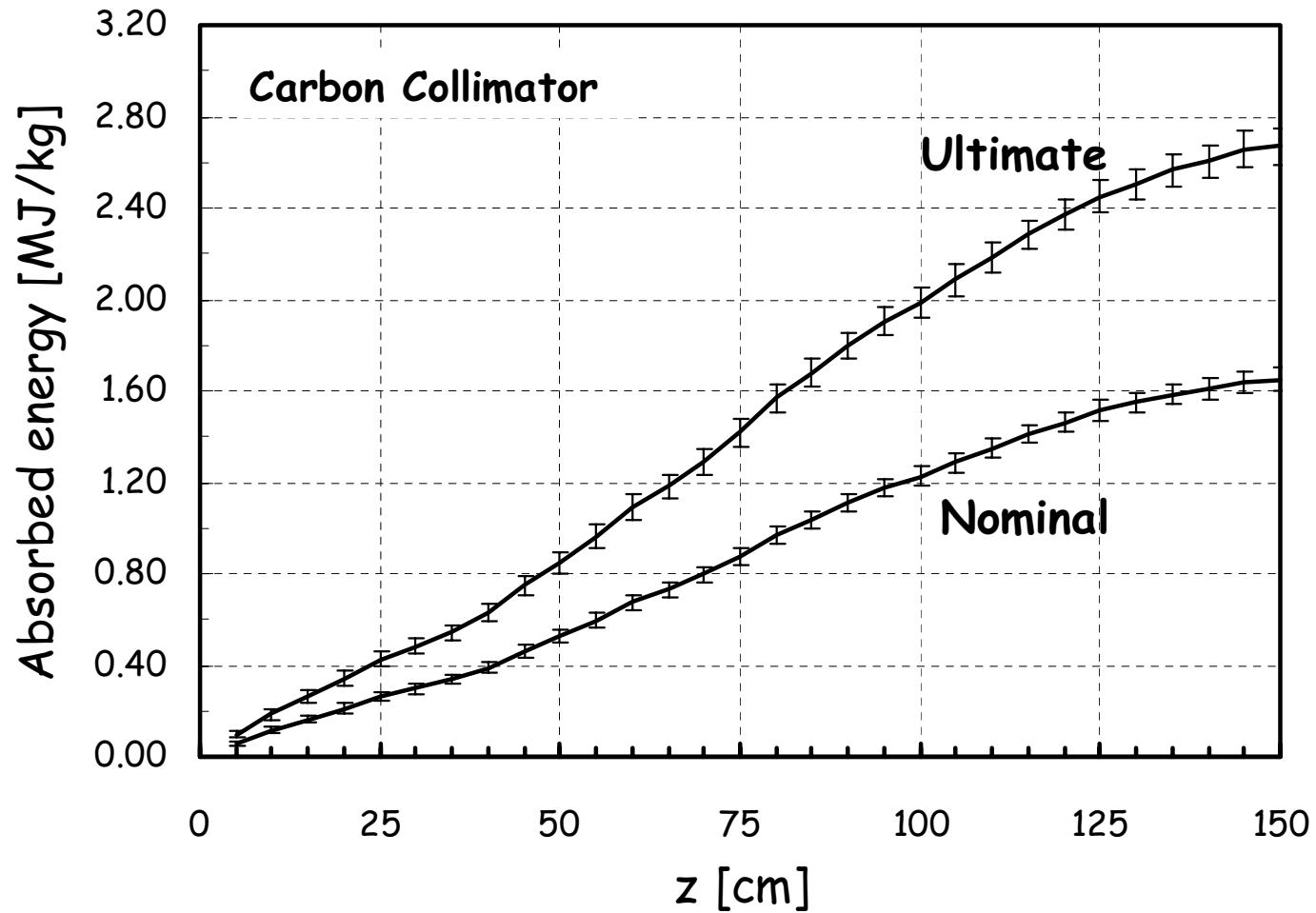


# Beryllium Properties



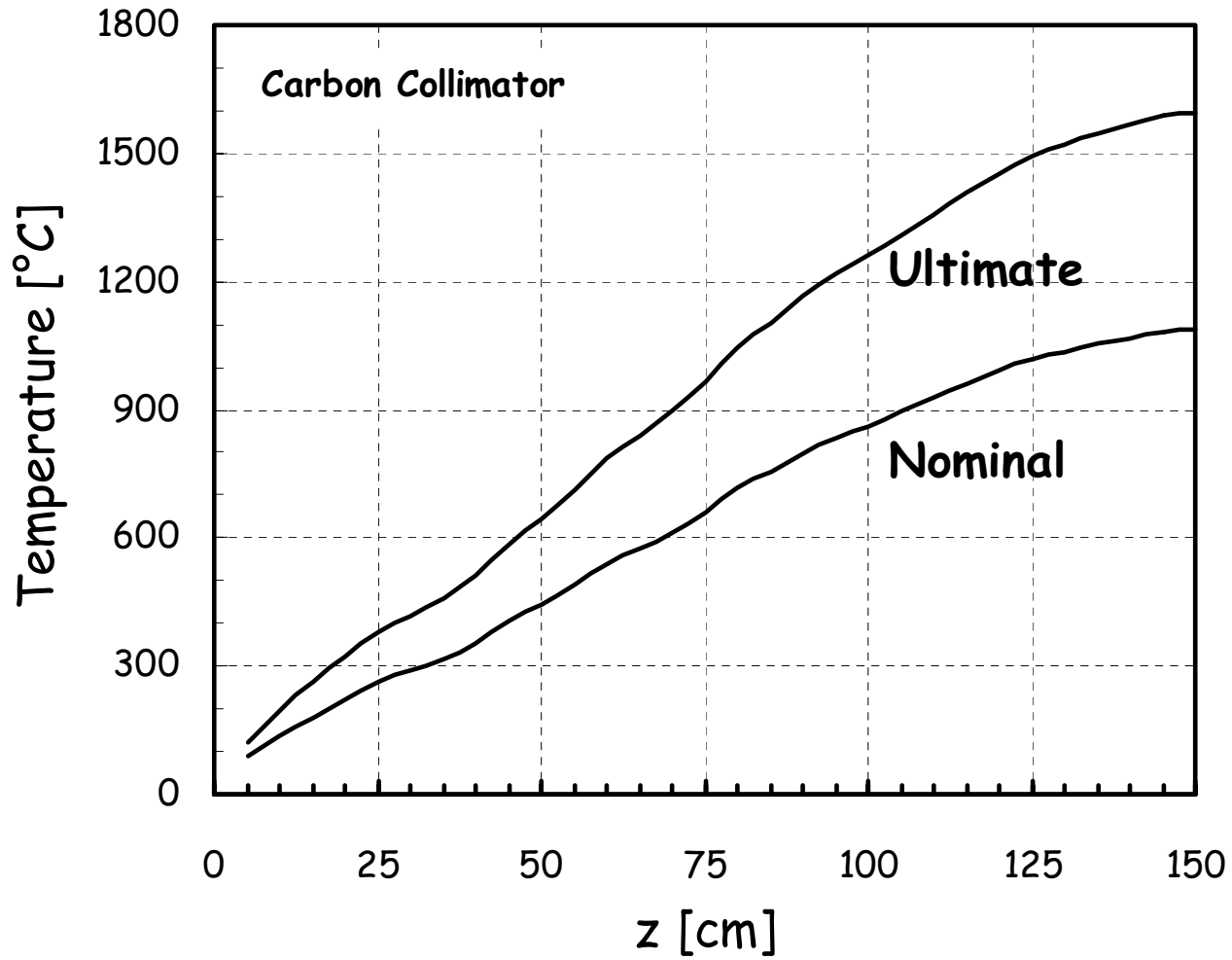
# LHC Collimator Test Case

Longitudinal profile of the absorbed energy



# LHC Collimator Test Case

Longitudinal temperature profile



# LHC Collimator Test Case

Longitudinal temperature profile

