(13.3) What background from cosmic radiation is expected for an unshielded 100 ml ion chamber which exhibits an area of 100 cm^2 perpendicular to the direction of the cosmic radiation?

$Area := 100 \cdot cm^2$

$I_0 := 2.5 \cdot cm^{-2} \cdot sec^{-1}$ Fig. 13.1 gives 2 - 3 ion pairs cm^{-2} s^{-1}; 2.5 used here is the average.

$R_0 := Area \cdot I_0$ $R_0 = 250 \cdot sec^{-1}$ (250 counts/sec or 250 Bq)