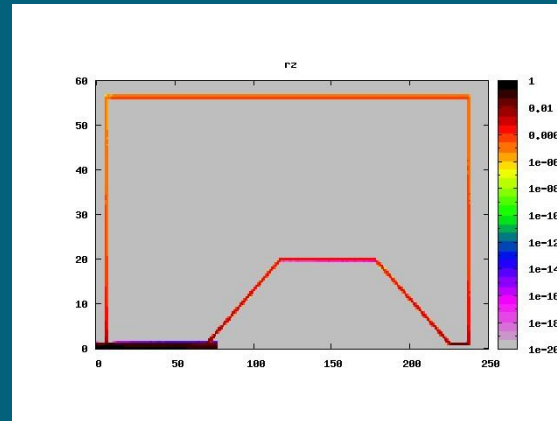


# energy deposition in integrated target-horn apparatus

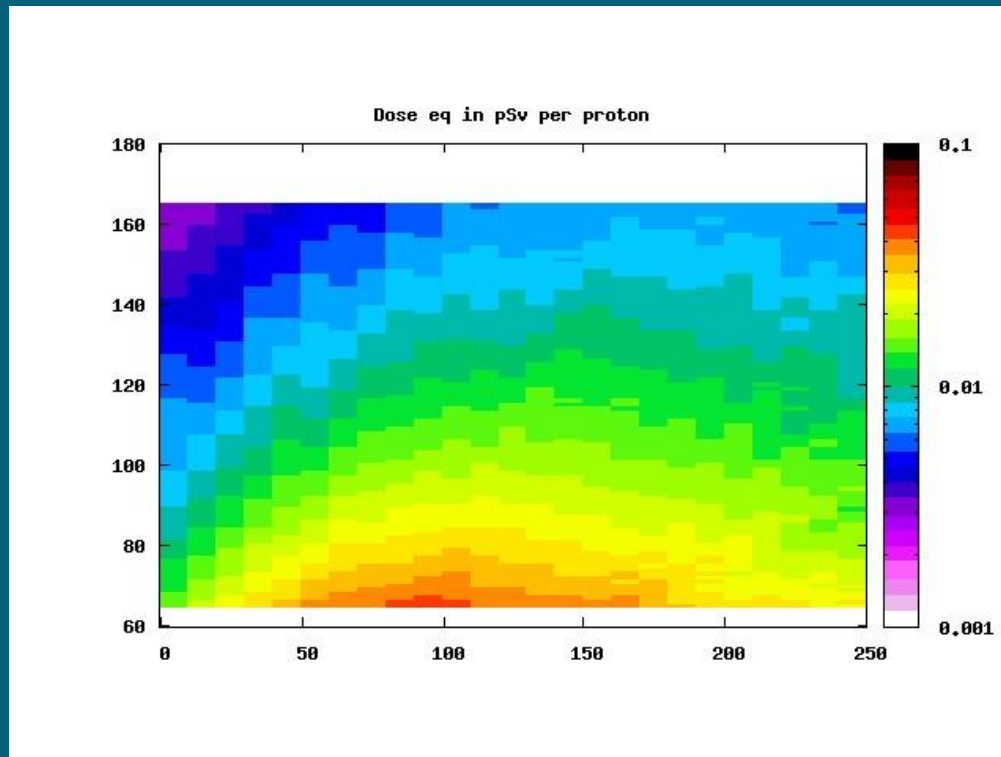


simulation characteristics:

- $E_p = 4.5 \text{ GeV}$ ,  $P = 1.3 \text{ MW}$ ,  $\sigma_b = 4 \text{ mm}$ , stats  $10^5$  protons

$I_{\text{horn}}$	Target (kW)	Target (%)	Total (kW)
No B	63.3	88.6	71.4
350 kA, $\pi^+$	68.6	88.4	77.6 (+8.6)
-350 kA, $\pi^-$	66.4	90.2	73.6 (+3.6%)

dose equivalent in pSv/proton around the integrated target-horn apparatus:



future:

define the super beam layout and study:

- the energy deposition on:
  - ✓ shielding elements -> ventilation (?)
  - ✓ electrical connections
- dose equivalent rate from the induced radioactivity