SHIELDING STUDIES FOR IDS80 AND IDS90f-IDS120f

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Energy deposition from MARS+MCNP
(10^{-11} MeV NEUTRON ENERGY CUTOFF).

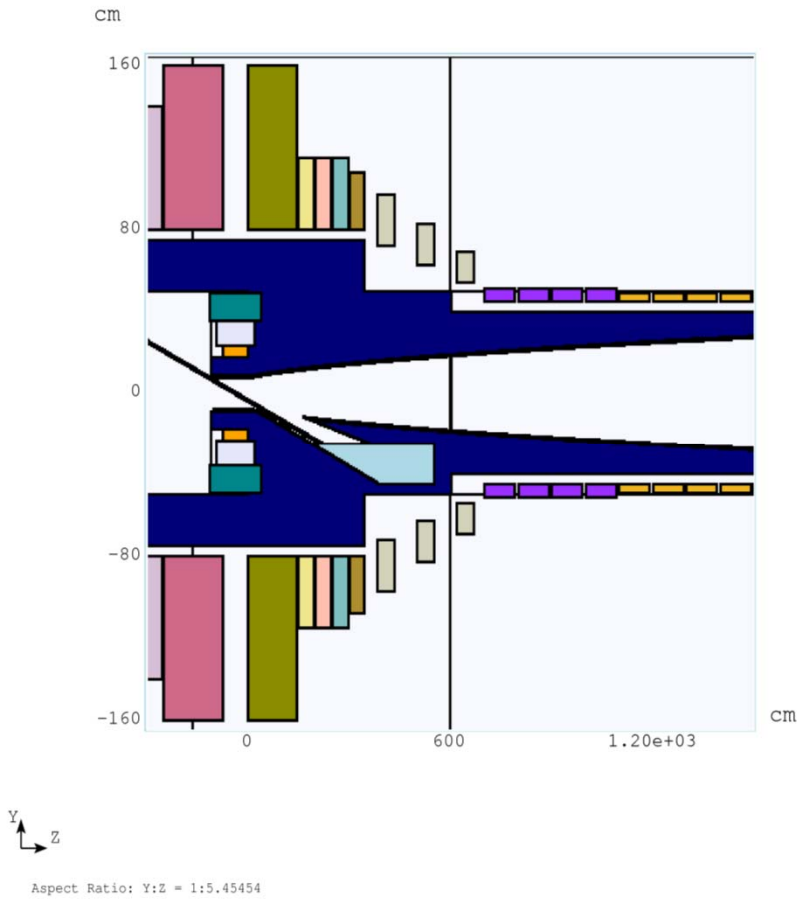
IDS80 GEOMETRY WITHOUT IRON PLUG AND YOKE MATERIAL (TO ACCOMMODATE ACCESS TO DIFFERENT PARTS OF THE TARGET STATION).

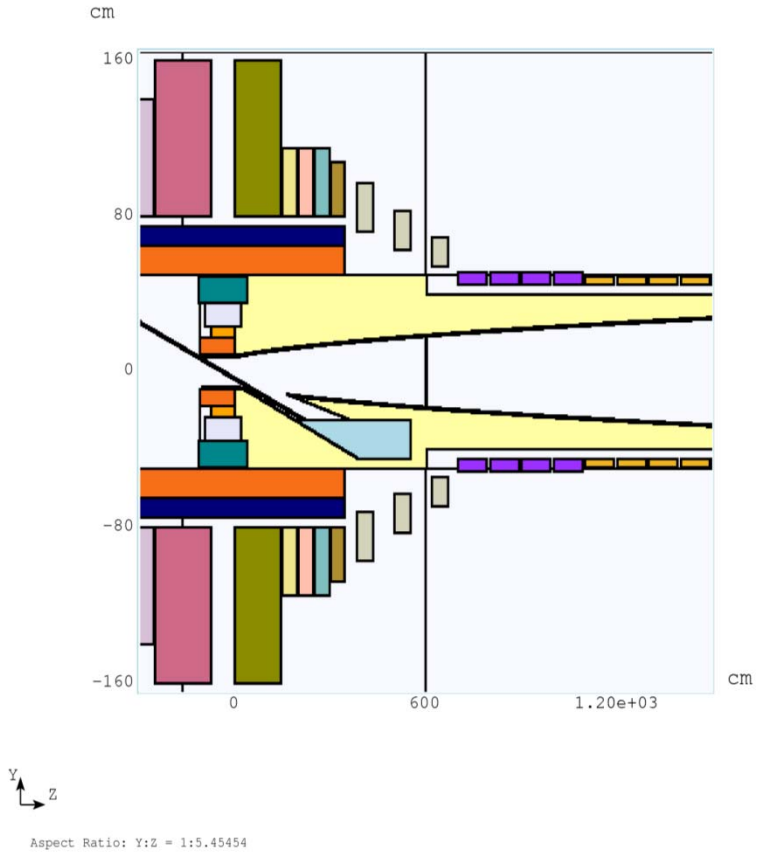
>4 MW proton beam. Np=400,000
>PROTONS ENERGY E=8 GeV.
>GAUSSIAN PROFILE: $\sigma_x=\sigma_y=0.12$ cm.

- **SHIELDING Fe, STST,**
  BSH2 (BORATED POLYETHALENE)+STST .

>>>>IDS:90f,100f,110f,120f WITH E=8 GeV PROTONS BEAM (ENERGIES, PEAK VALUES)

IDS80 GEOMETRY WITHOUT IRON PLUG AND YOKE. SHIELDING: Fe, STST, BCH2+STST(STST:65<r<75 cm).





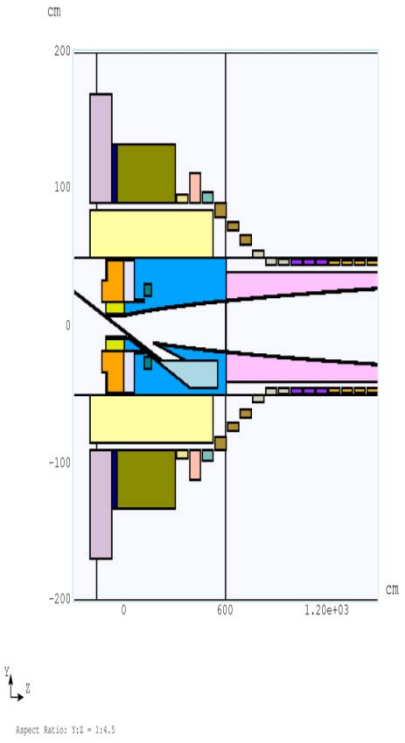
SC2: 12.47 kW
SC3: 39.09 kW
TOTAL: 73.54 kW
Peak SC3: 7.4 mW/gr

SC2: 6.69 kW
SC3: 18.10 kW
TOTAL: 34.96 kW
Peak SC3: 3.2 mW/gr

SC2: 3.07 kW
SC3: 12.82 kW
TOTAL: 18.87 kW
Peak SC3: 1.7 mW/gr

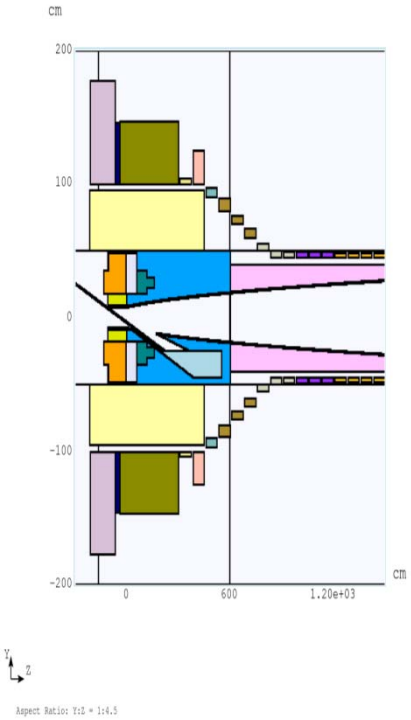
IDS90f-IDS120f GEOMETRIES:ENERGY DEPOSITION (kW), PEAK VALUES (mW/gr).

IDS90f



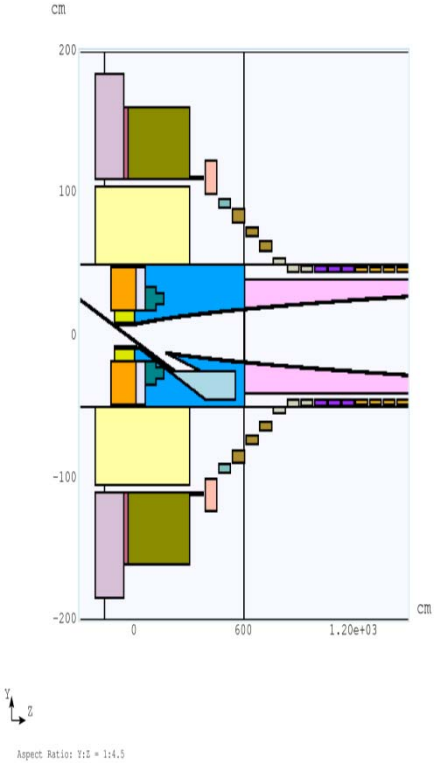
SC3: 2.07
TOTAL: 2.45
Peak SC3: 0.15
SC10: 0.07

IDS100f



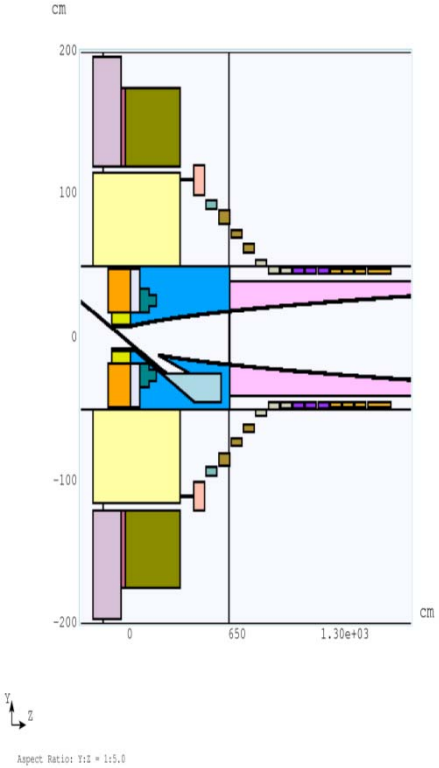
SC3: 1.01
TOTAL: 1.41
Peak SC3: 0.08
SC9 : 0.05
SC10: 0.10
SC11: 0.04

IDS110f



SC3: 0.49
SC5: 0.20
TOTAL: 1.14
Peak SC5: 0.05
SC12/19 : 0.09

IDS120f



SC3: 0.26
SC5: 0.19
TOTAL: 0.88
Peak SC7: 0.07
SC14: 0.08

IDS100f GEOMETRY: TRACKS OF PARTICLES FOR EVENT #20 AND FOR THE FIRST 9 EVENTS.