Problems

10.1 The in-air dose rate at 80 cm from the source in a cobalt machine is 162 cGy/min. For a whole body treatment, the radiation oncologist requires a field size of 120 cm x 120 cm, but the largest field that can be obtained from the unit is 30 cm x 30 cm at a distance of 80 cm. Determine where the patient should be placed and calculate the in-air dose rate at the skin surface at this distance.

10.2 The specific heat of graphite is 170 calories/kg°C. A uniform dose of 1000 cGy is delivered to a graphite block insulated from its environment. What is the rise in temperature of the block?