

Figure 14. Simulation of 3-MeV electron beam irradiation of an insulated copper wire (25 particles).

Note the difference in electron scattering between the lower-density insulator, where the paths are nearly straight, and the copper in the center. The overall effect of irradiating from only one side is that the copper conductor *shadows* the insulator on the far side, producing a very non-uniform dose distribution as shown by the isodose contour plot in Fig. 15.

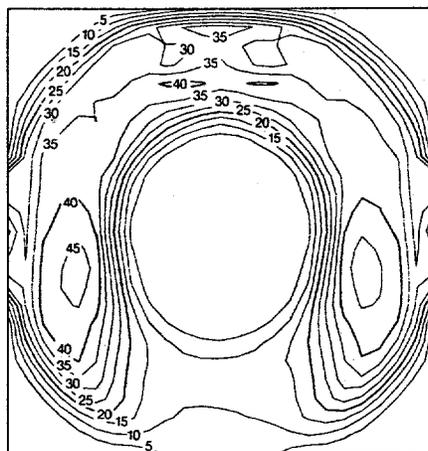


Figure 15. Isodose contours for 3-MeV electron irradiation of one side of an insulated copper wire (taken from McIntyre *et al*¹¹).

8. Concluding Remarks

In this paper we have provided a brief glimpse of the capability of the EGS4 Code System to simulate electron-photon transport at all energies. The versatility of the system has been demonstrated by a myriad of examples that represent practical problems of interest to high-energy physics, radiation protection, medical physics, and industry.

EGS4 runs on all computers that have the 1977 ANSI Fortran. Recently the system has been successfully run on personal computers, most notably those based on the 80386 microprocessor. This trend is expected to continue as PCs become faster.