K-long Yield on KLF from SLAC measurements

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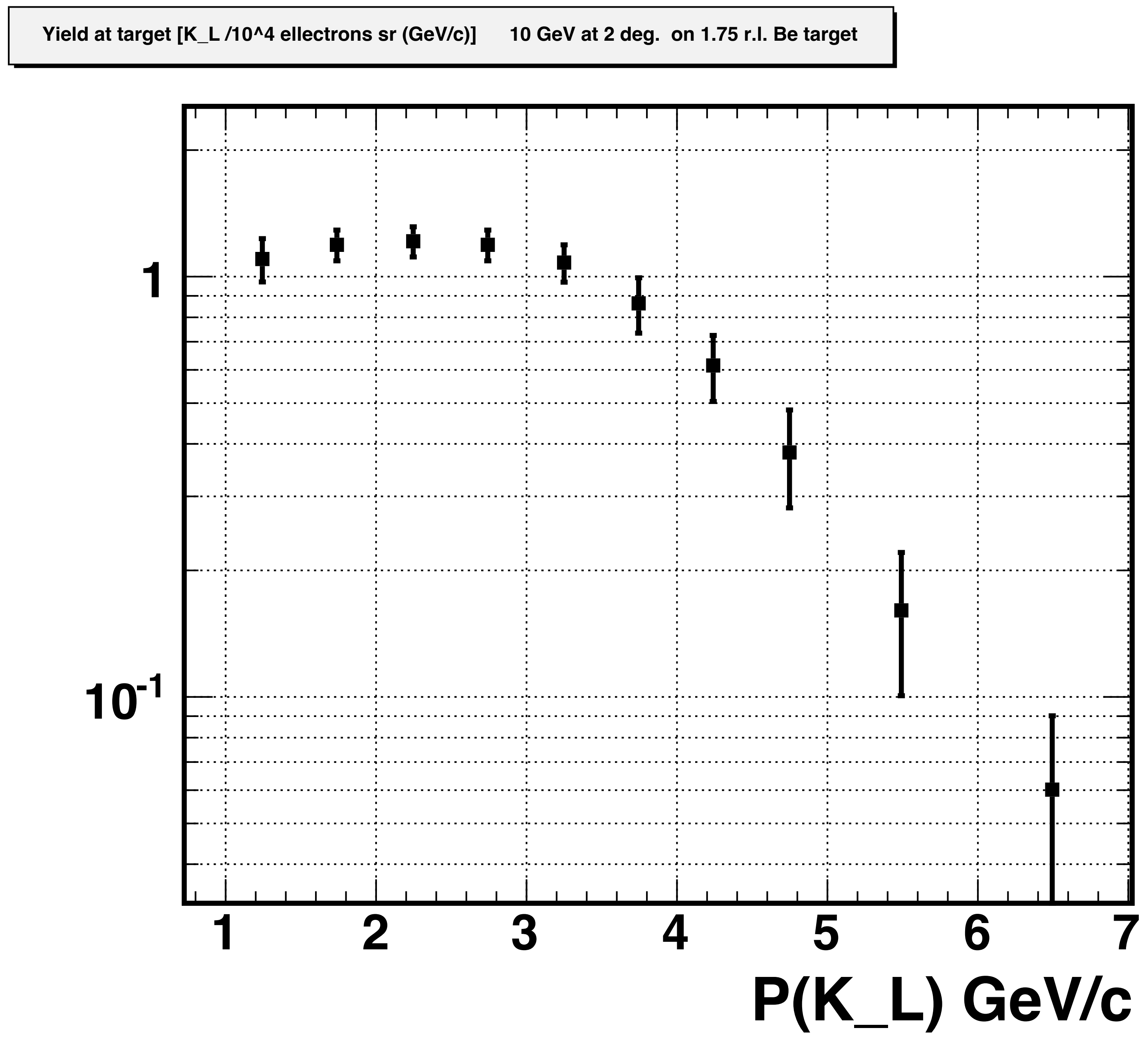


FIG. 1. The K_L yield measured at SLAC for 10 GeV electrons scattering at 2°.

Phys. Rev. D7 (1973), 708 (SLAC)

This is obtained from 33cm Be target, which is <1.2 times

compared to 40cm in KLF

If we take integral from 1-7 GeV/c to be 18 events

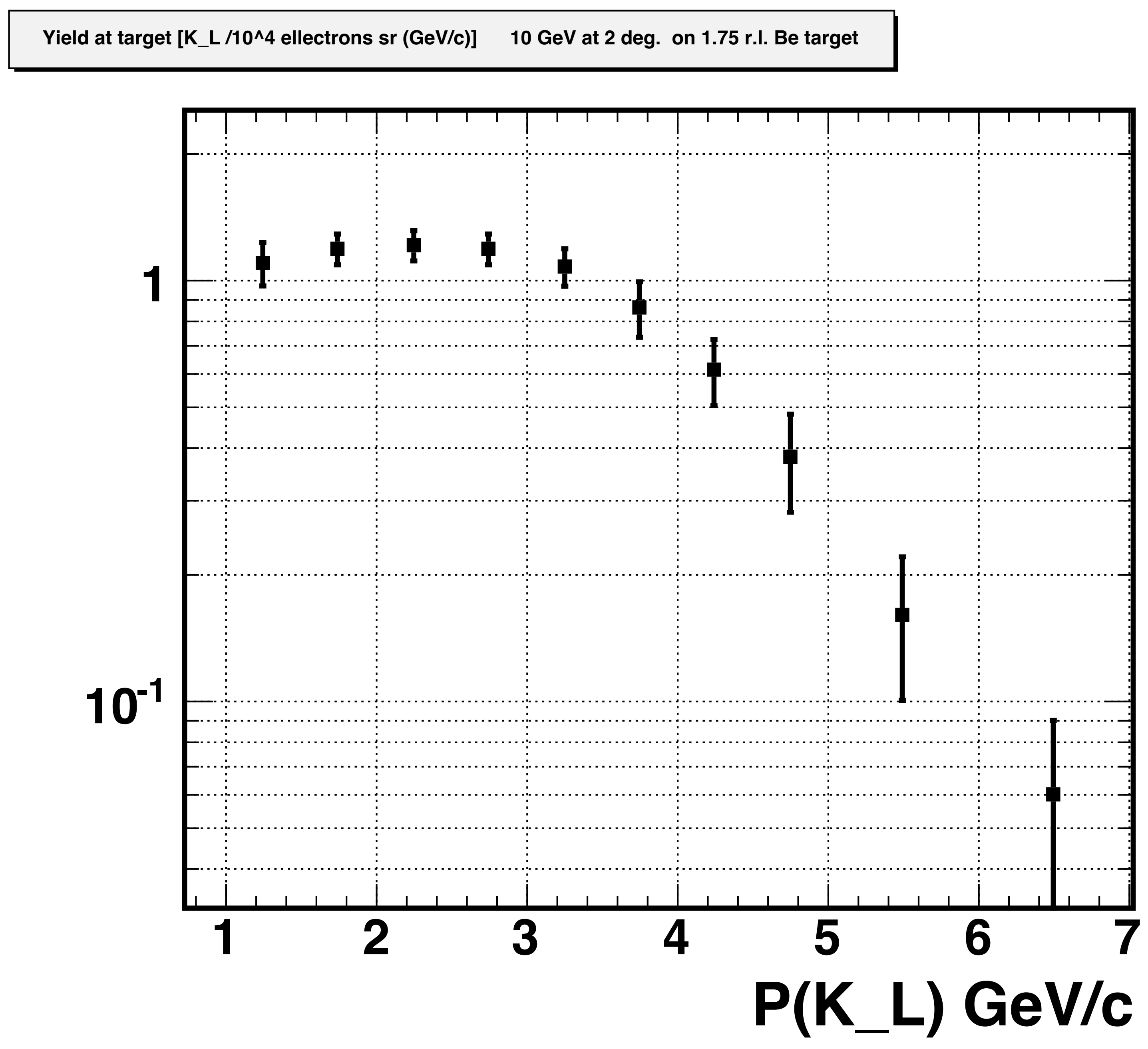
14cm W plug suppression is exp(2.2)=9.0

6cm diameter of Be and I=5\mu A

$$N(K_L) = [18 \times 10^{-4} \times 3.1 \times 10^{13}(N_e) \times 1.2(Be) \times 0.2(r.l.) \times 4.9 \times 10^{-6}(\Delta\Omega)]/exp(2.2) \simeq 0.76 \times 10^4 K_L/s.$$

Then the uncertainty is due to the angle 2 deg in SLAC vs 0.06 deg in KLF and the integration

The decay of KL in flight is less than 15% and we ignore it for now



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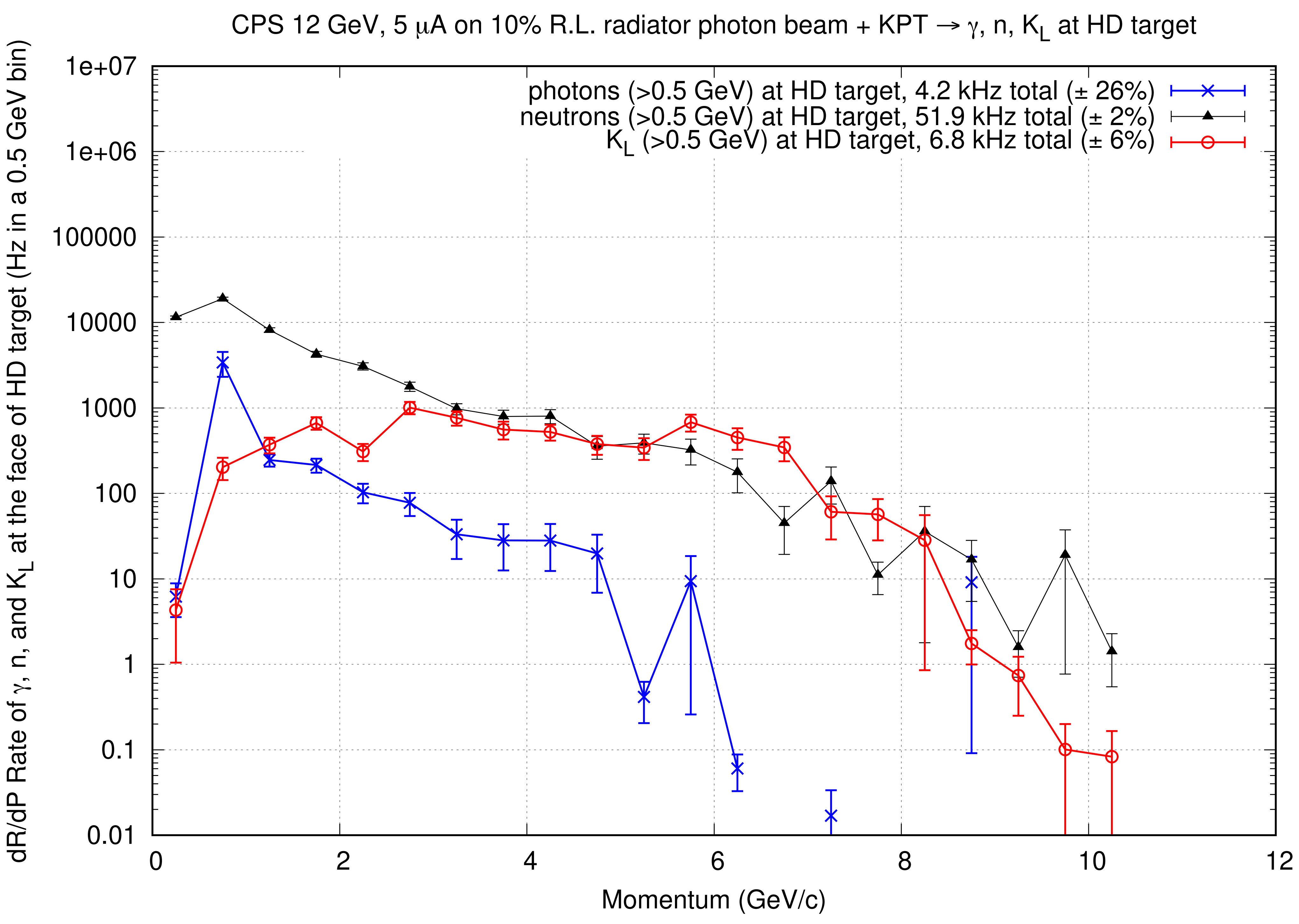

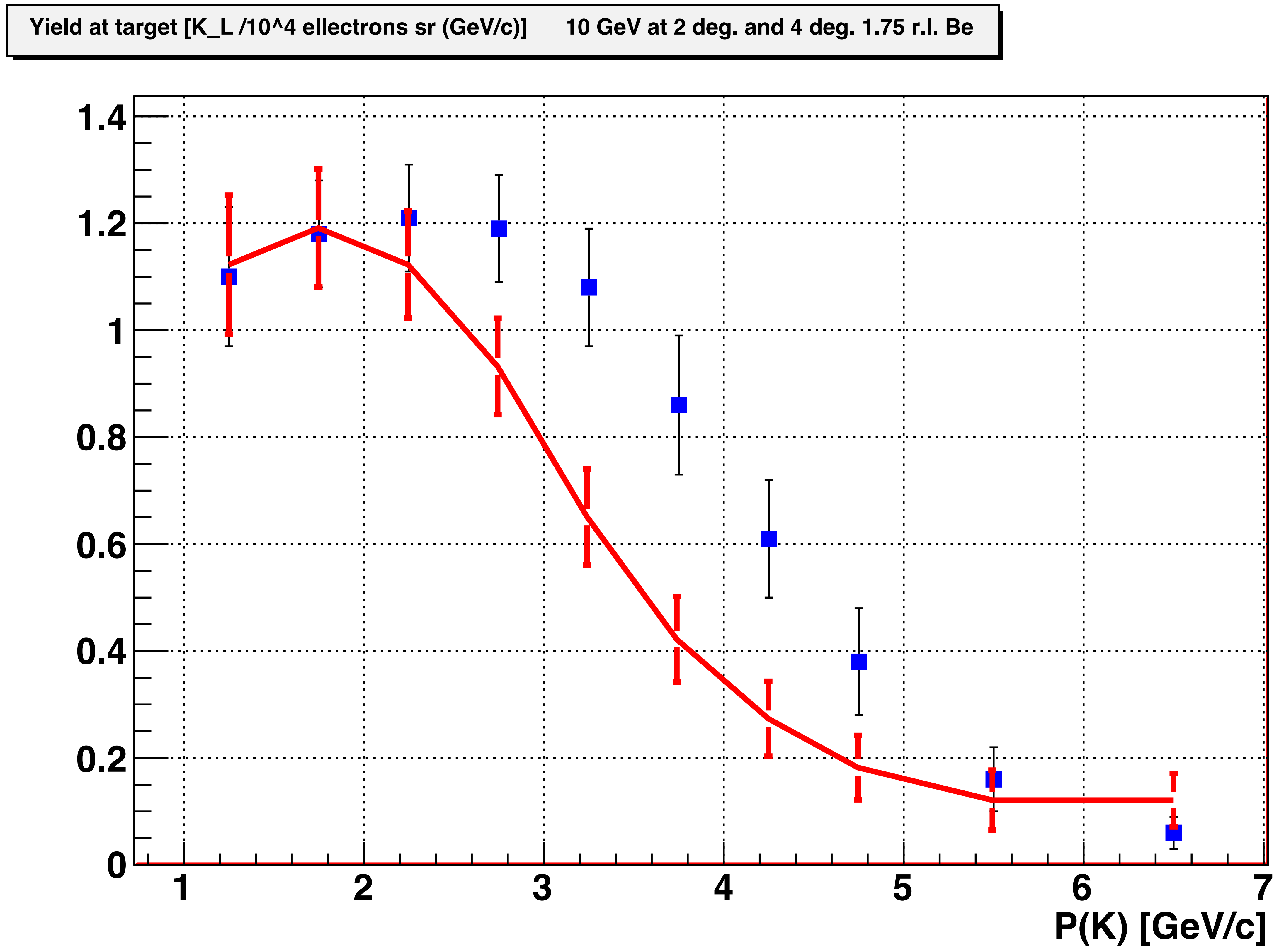

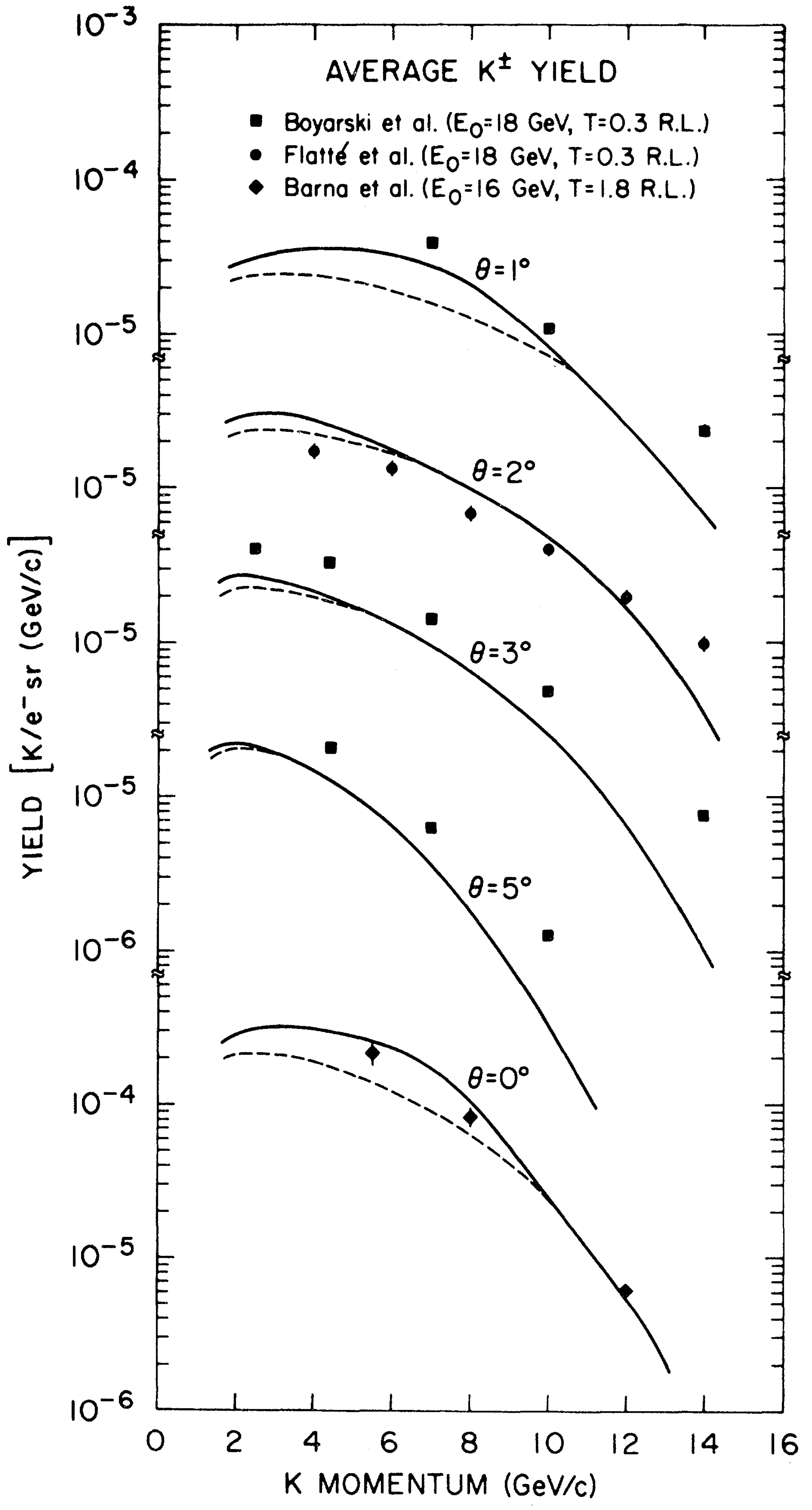

FIG. 11. Comparison of expected yields for K_L^0 from Be to the average of K^+ and K^- yields from Be. The data sources are (◆) Ref. 46, (●) Ref. 47, and (■) Ref. 48. The electron energies, production angles, and target thicknesses are indicated. The curves are calculated from the fitted values for $\mathfrak{F}(x)$ as explained in the text. The solid and dashed curves are as in the caption to Fig. 5.