

Logarithmic violation of “area law”:  $S_E = \mathcal{C}_E k_F P \ln(k_F P)$

for a circular Fermi surface with Fermi momentum  $k_F$ ,  
where  $P$  is the perimeter of region A with an arbitrary smooth shape.

The prefactor  $\mathcal{C}_E$  is expected to be universal but  $\neq 1/12$ :  
independent of the shape of the entangling region, and dependent  
only on IR features of the theory.