

To show the integral bit,

have

$$\lambda(C_v) = \int_{B(h)} \mathbb{1}[X(s) > v] ds$$

\neq

$$\lambda(C_{u,v}) = \int_{B(h)} \mathbb{1}[X(s/\sqrt{u}) > v] ds.$$

substitute $t = s/\sqrt{u}$.

$$\Rightarrow \lambda(C_{u,v}) = u^{D/2} \int_{B(h)/\sqrt{u}} \mathbb{1}[X(t) > v] dt$$

could also just rescale t to $B(h)/\sqrt{v}$ and be done.

Need to think about the difference between scaling by u and scaling by v .