

Species scale and the black hole scale

Yuri Michinobu (YITP)

$$\Lambda_{species} = \frac{M_{pl}}{\sqrt{N_{species}}}$$

N_{sp} species running in the loop



Two Problems

- The number N_{sp} running in the loop is **chosen by hand**.
- The Kaluza-Klein tower is **an infinite tower**.

$\Rightarrow$ **A finite number N_{sp}** despite infinite Kaluza-Klein particles running in the loop.