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Species scale in one-loop correction

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The species bound, a swampland conjecture, suggests that the cutoff of quantum gravity in an effective field theory coupled to a number of light fields is significantly lower than the Planck scale. At first glance, this suggests that higher curvature terms would be suppressed by this lower scale. However, our findings indicate that this may not be the case in the decompactification limit. This result offers insights into Gregory-Laflamme instability.

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