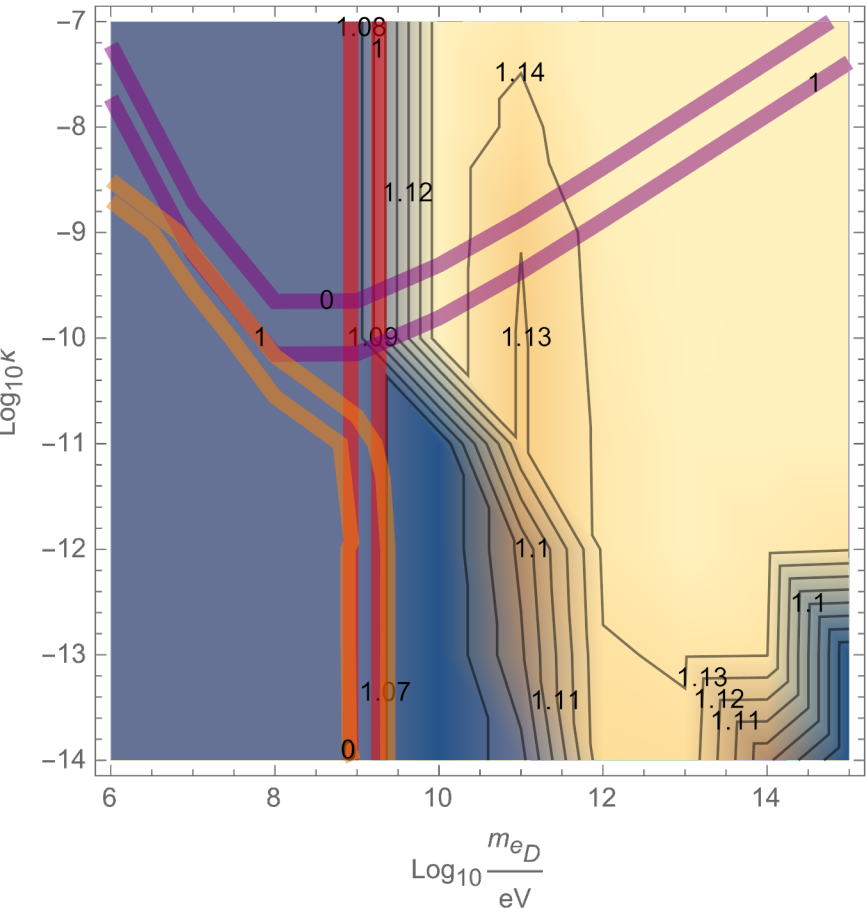$\frac{\sqrt{{v_{\text{esc},e_D}}^2(r_E)+{v_{0,e_D}}^2}}{{v_{\text{esc grav},e_D}}^2(r_E)+{v_{0,e_D}}^2}$ - $(v_0, \frac{m_{e_D}}{m_{p_D}}, \frac{\alpha_D}{\alpha}, f_D)$=(20 kms^{-1}, 0.0001, 1, 0.0