

$$\frac{\mathrm{d}R}{\mathrm{d}E_{\mathrm{R}}} = N_{\mathcal{N}} \frac{\rho_{\odot}}{m_{\chi}} \frac{m_{\mathcal{N}}}{2\mu_{\chi p}^2} A^2 a \lambda_{\chi}^2 \mathcal{I}(E_{\mathrm{R}}) \Theta(E_{\mathrm{R}}) F_{\mathrm{SI}}^2(E_{\mathrm{R}})$$