

$$\frac{\mathrm{d}R_{\mathcal{N}}}{\mathrm{d}E_{\mathrm{R}}} = N_{\mathcal{N}} \frac{\rho_{\odot}}{m_{\chi}} \frac{m_{\mathcal{N}}}{2\mu_{\chi p}^2} \sigma_{\mathrm{SI}}^p \mathcal{I}(E_{\mathrm{R}}) \sum_{N,N'=p,n} F_{1,1}^{(N,N')}(q^2)$$