$$\text{LTE } \alpha^{\neg\text{He}}_{\text{CO(1–0)}} = C \cdot [QE] \cdot [\tau] \cdot 10^{-4} / ([\text{CO/H}_2])$$
$$\approx [(0.00 + (T_{\text{ex}}/75)^{5.59}) \cdot (T_{\text{ex}}/75)^{-5.68} + 0.22]$$
$$\times (1 \times 10^{-4} / [\text{CO/H}_2])$$