

$$\frac{N_0}{4RT} \iint_{U<0} \exp\left(-\frac{U}{kT}\right) \frac{\gamma\left(\frac{5}{2}, -\frac{U}{kT}\right)}{\Gamma\left(\frac{5}{2}\right)} R^2 \sin\theta_1 \sin\theta_2 dR d\theta_1 d\theta_2 d\varphi$$