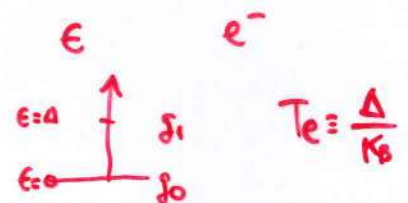


$$j(T) = j_{\text{elek}}(T) \overset{\phi}{[j_{\text{nukl}}(T)]} j_{\text{bibr}}(T) j_{\text{bira}}(T)$$

$$[j(T) = j_{\text{bib}}(T) \cdot j_{\text{bir}}(T) \cdot j_{\text{bb}}(T)]_{\text{ARINETA}}$$

$$j(T) = j_{\text{elek}}(T) \overset{\phi}{[j_{\text{nukl-bira}}(T)]} j_{\text{bibr}}(T)$$

$$(11) \quad j_{\text{elek}}(T) = g_0 + g_1 e^{-\frac{\Delta}{k_B T}}$$



$$(16) \quad j_{\text{bira}}(T) = \sum_{l=0}^{\infty} (2l+1) e^{-\frac{l(l+1)\hbar^2}{2Ik_B T}}$$



(17) $T \gg$
 (20) $T \approx T_{\text{bir}}$
 (22) $T \ll$

$$(43) \quad j_{\text{bib}}(T) = \prod_i \frac{e^{-\frac{\hbar \omega_i}{2k_B T}}}{1 - e^{-\frac{\hbar \omega_i}{k_B T}}}$$

