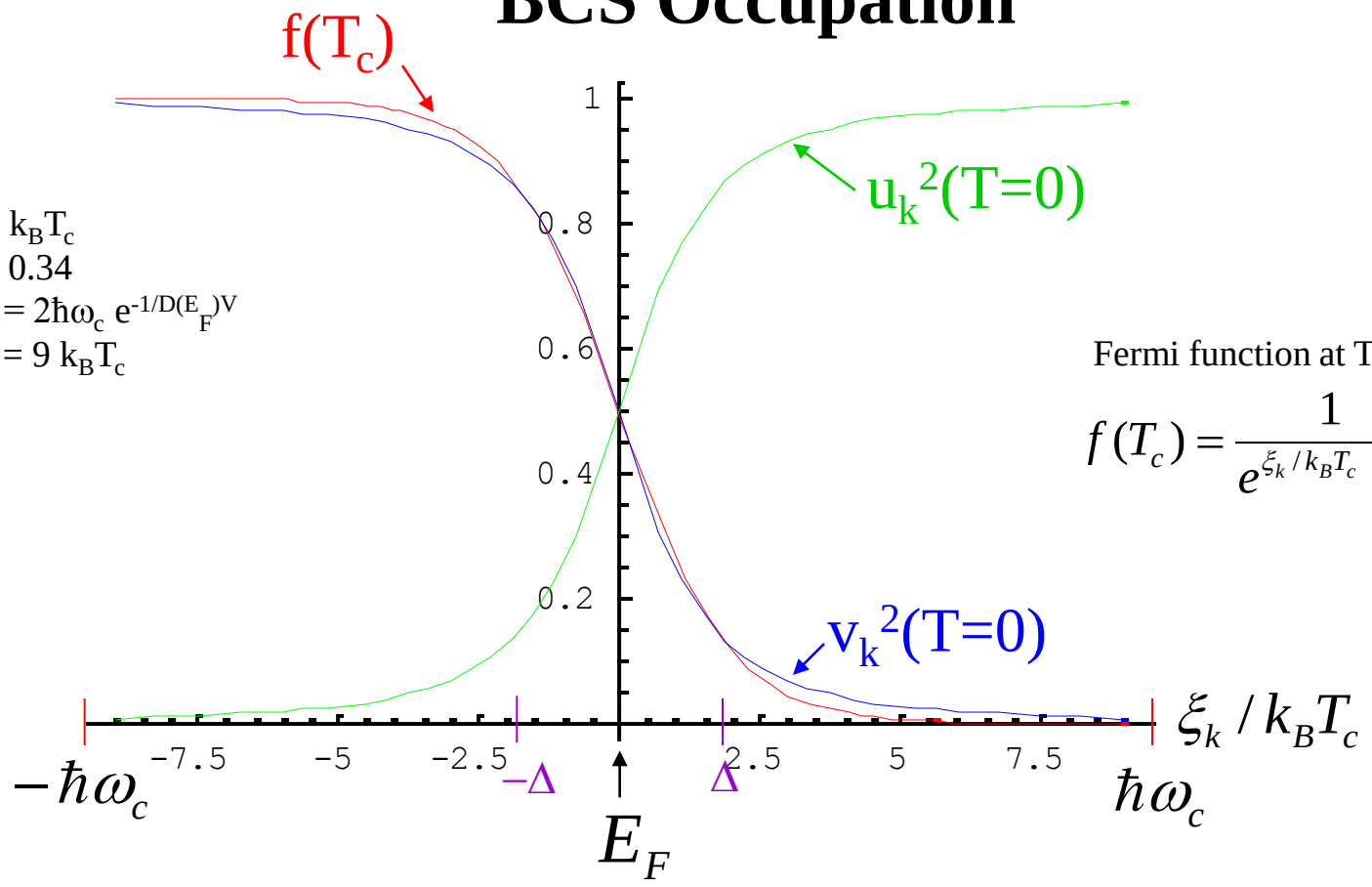
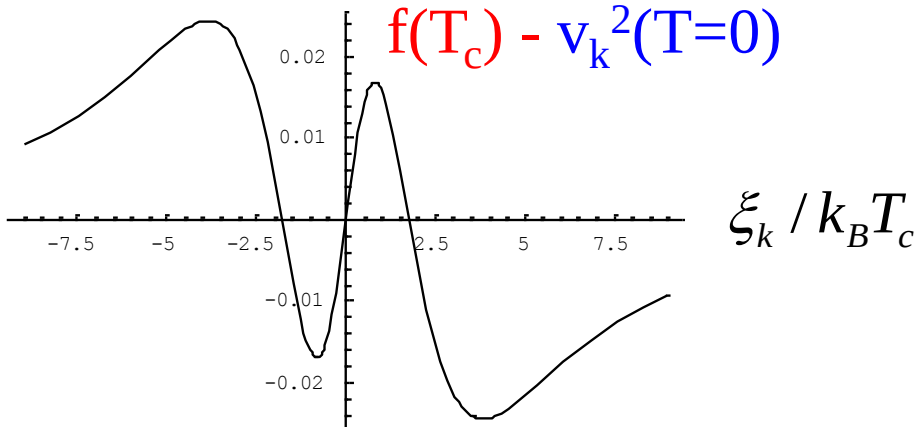
BCS Occupation

Take $\Delta = 1.76\ k_B T_c$
and $D(E_F)V = 0.34$
Hence with $\Delta = 2\hbar\omega_c\ e^{-1/D(E_F)V}$
one finds $\hbar\omega_c = 9\ k_B T_c$

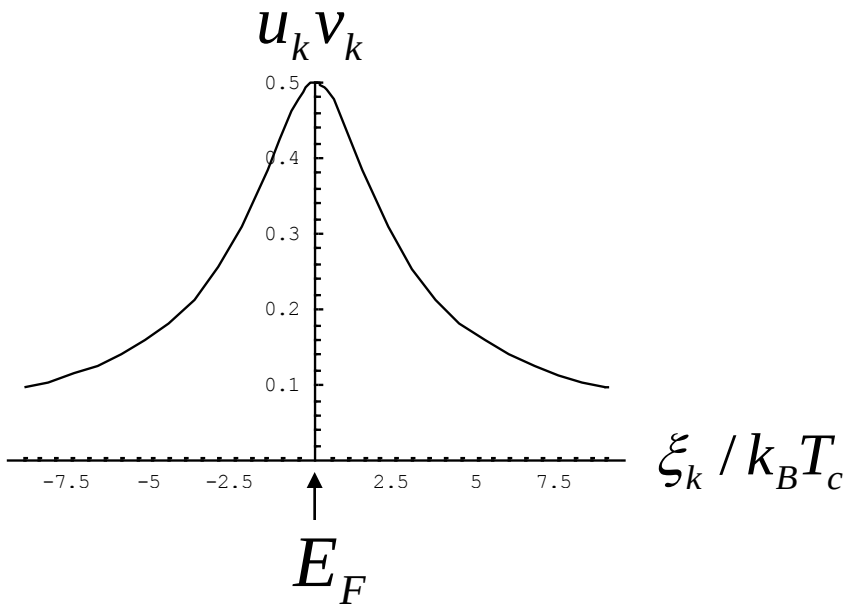
Fermi function at T_c:

$$f(T_c) = \frac{1}{e^{\xi_k / k_B T_c} + 1}$$





$$\Delta_k = -\sum_{\ell} V_{k\ell} u_\ell v_\ell$$



$$V = \sum_{k,\ell} V_{k\ell} u_k v_k u_\ell v_\ell$$