$$[H, \Gamma^{\dagger}_{\nu}(n)] = \hbar W_n(\beta = -2),$$

where β is the transfer quantum, while n labels the roots of the corresponding dispersion relations

$$\frac{1}{G(\pm 2)} = \sum_k \frac{\Omega_k/2}{2\varepsilon_k \mp W_n(\pm 2)} + \sum_i \frac{(\Omega_i/2)}{2\varepsilon_i \pm W_n(\pm 2)}$$

in increasing order of energy.

For the case of the (neutrons) pair addition and pair substraction modes of ^{208}Pb the above equation can be graphically solved (cf. Fig. 1), the minimum of the dispersion relation coincides with the Fermi energy.

One then obtains