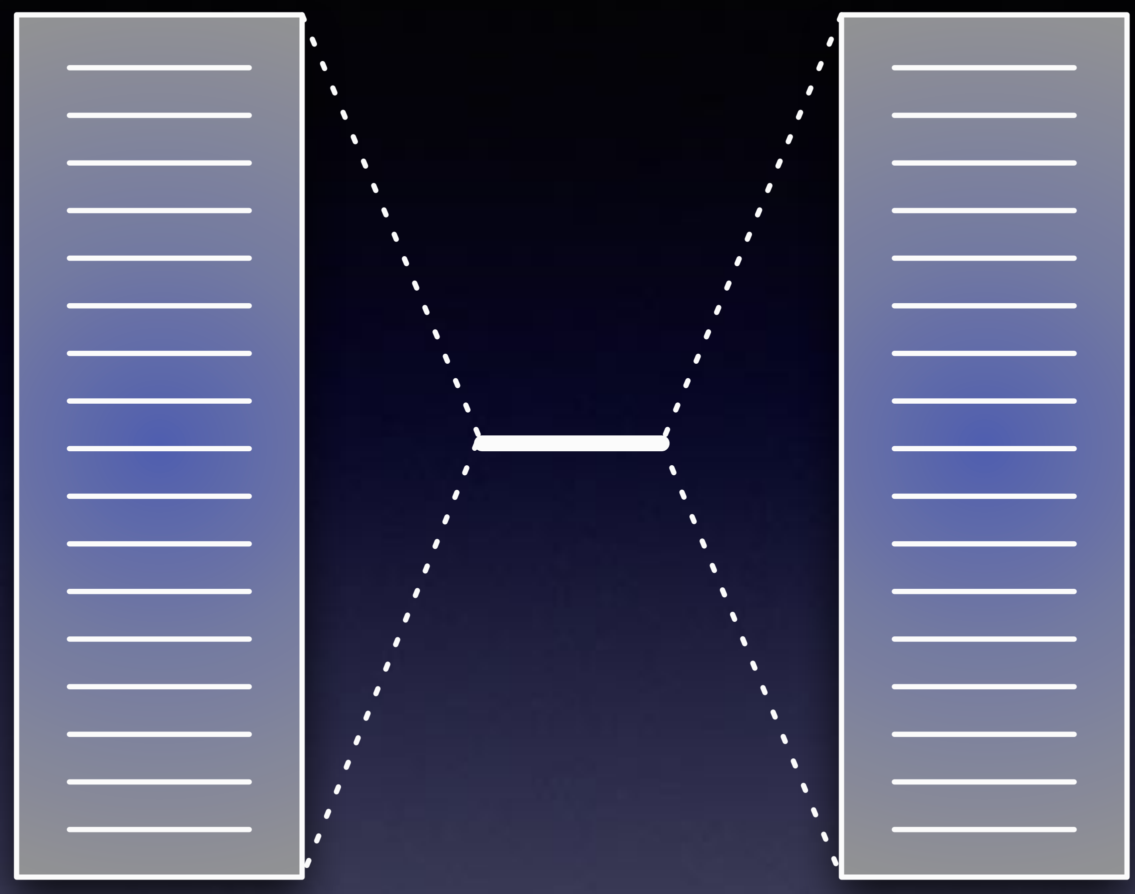
Landauer Model



$$\hat{H} = \sum_{k\in L} \epsilon_k \hat{a}_k^\dagger \hat{a}_k + \epsilon_0 \hat{a}_0^\dagger \hat{a}_0 + \sum_{k\in R} \epsilon_k \hat{a}_k^\dagger \hat{a}_k$$
$$+ \sum_{k\in L} t_k \left(\hat{a}_0^\dagger \hat{a}_k + \hat{a}_k^\dagger \hat{a}_0\right) + \sum_{k\in R} t_k \left(\hat{a}_0^\dagger \hat{a}_k + \hat{a}_k^\dagger \hat{a}_0\right)$$

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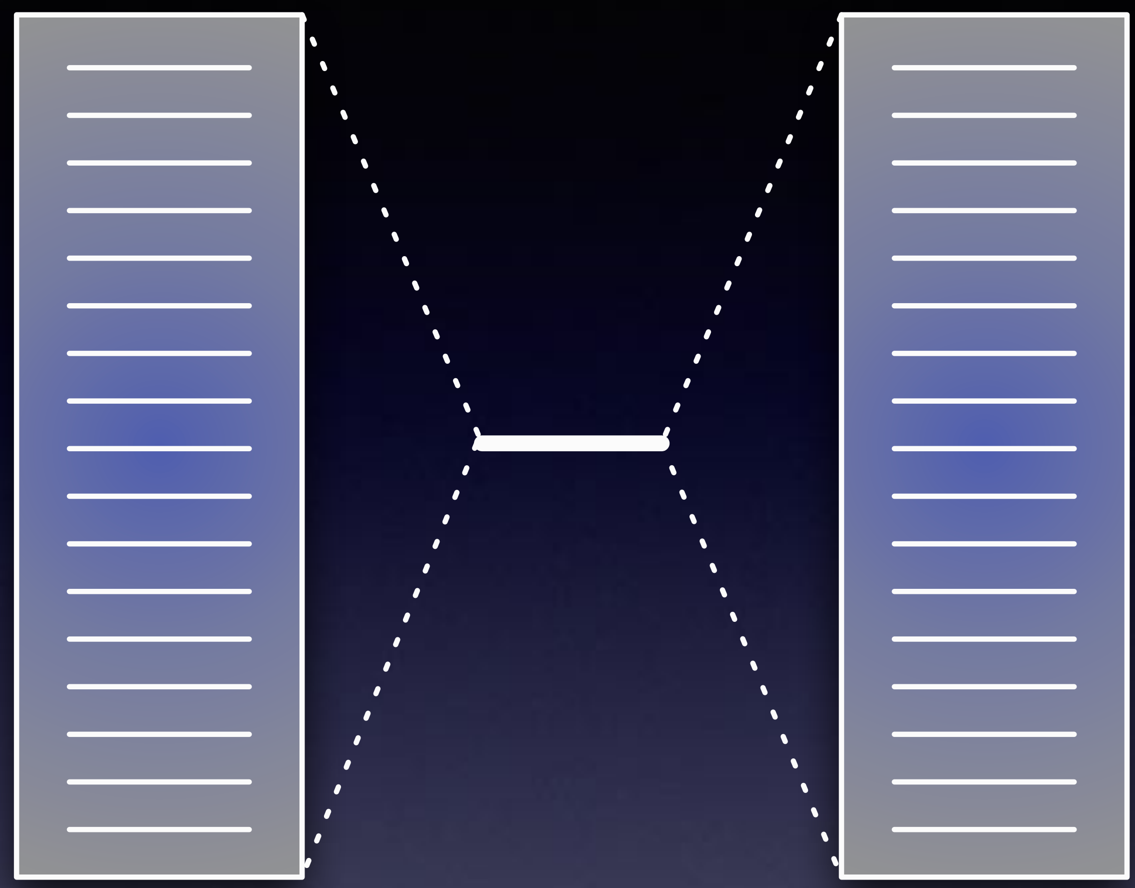

$$H_{\mathrm{SC}} = \sum_{k\in L} \epsilon_k n_k + \epsilon_0 n_0 + \sum_{k\in R} \epsilon_k n_k$$
$$+ \sum_{k\in L} t_k \sqrt{\left(n_0 - n_0^2 + \lambda\right)\left(n_k - n_k^2 + \lambda\right)} \cos(q_0 - q_k) f_b^{(0,k)}(\mathbf{n})$$
$$+ \sum_{k\in R} t_k \sqrt{\left(n_0 - n_0^2 + \lambda\right)\left(n_k - n_k^2 + \lambda\right)} \cos(q_0 - q_k) f_b^{(0,k)}(\mathbf{n})$$