Term in second-quantized Hamiltonian

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Make 2x2 matrix for each degree of freedom involved

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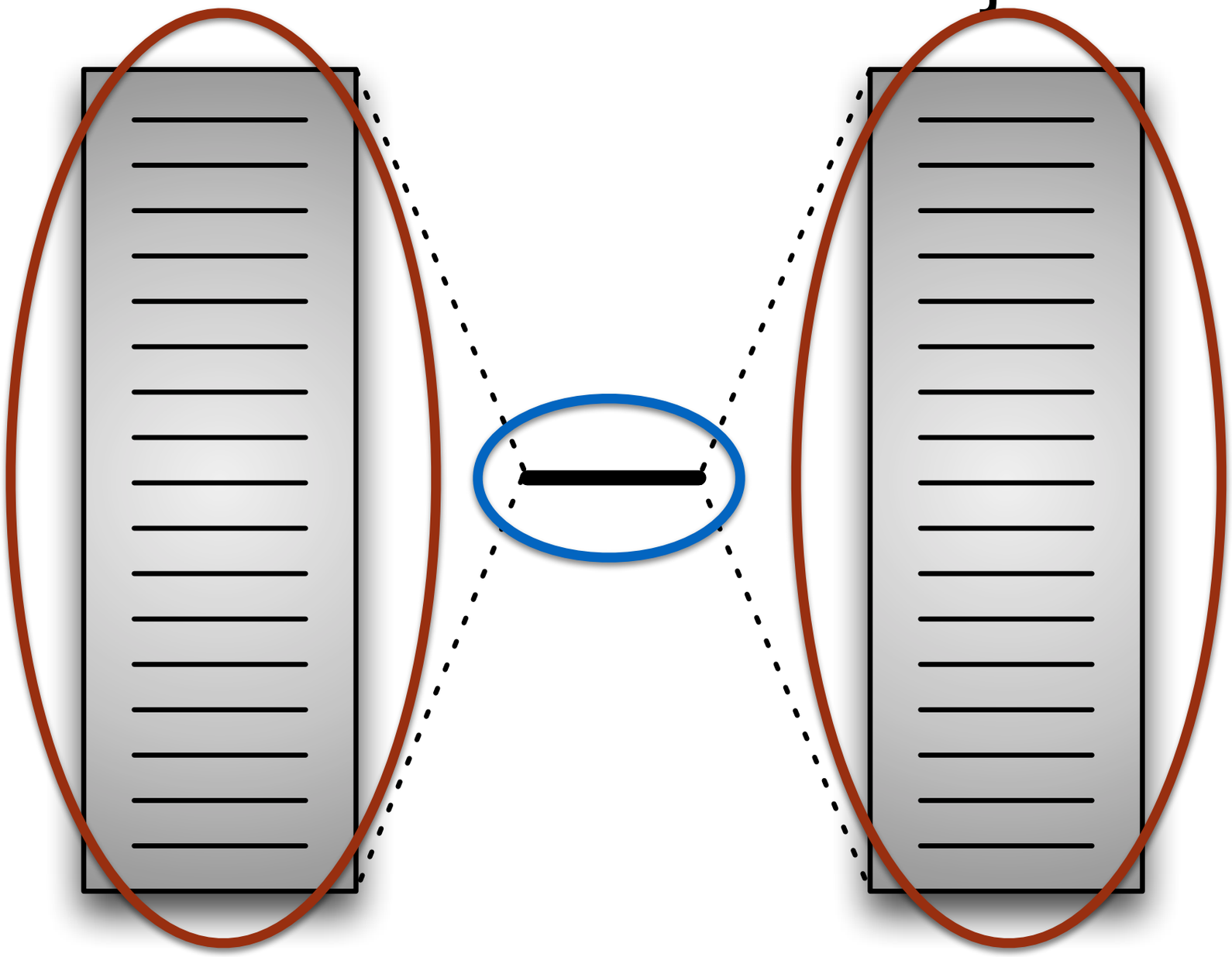
Classical spin analogy for matrix

$$\hat{a}_i^\dagger \hat{a}_j \mapsto \sqrt{(n_i - n_i^2 + \sigma^2 - 1/4)(n_j - n_j^2 + \sigma^2 - 1/4)}\; e^{i(q_j - q_i)}$$

$$\hat{a}_i^\dagger \hat{a}_i \mapsto n_i$$

Initial conditions for trajectories



Factorized initial conditions

- **Dot** initially unoccupied
- **Electrode** modes independent: $Q = \prod_k \left(1 + e^{-\beta(\epsilon_k - \mu_k)}\right)$