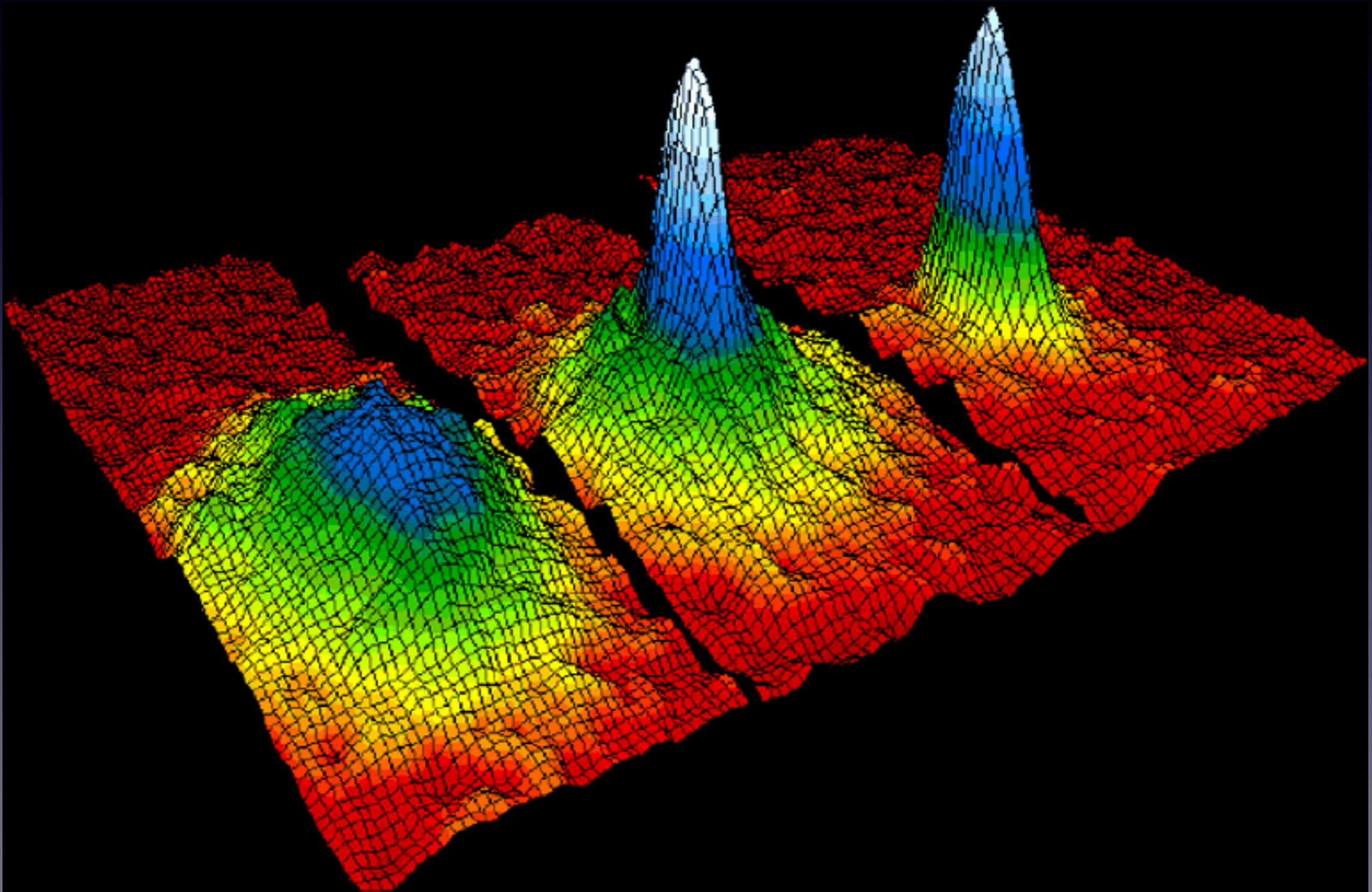
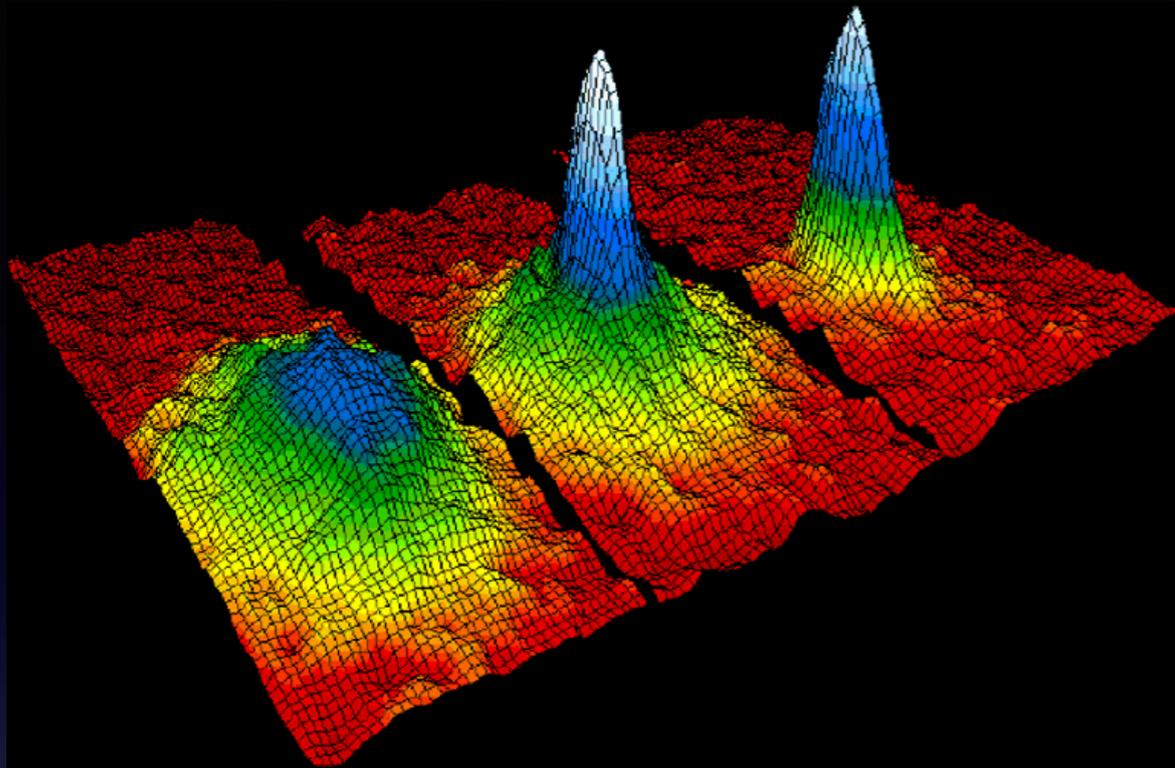


Analogue Systems?





$$\mathcal{L}_{\text{eff}} \sim G(\phi) \frac{\dot{\phi}^2}{2} - c_s^2 \frac{(\nabla \phi)^2}{2} + \nu \Lambda \cos \phi + \dots$$

Finite number effects
 Trapping Potential
 Finite Temperature

This Talk

$$i\hbar\dot{\psi}_i = \left(-\delta_{ij} \frac{\hbar^2}{2m_i} \nabla^2 + V(\mathbf{x}) + g_{ij} |\psi_j|^2 \right) \psi_i - \nu_{ij} \psi_j$$

