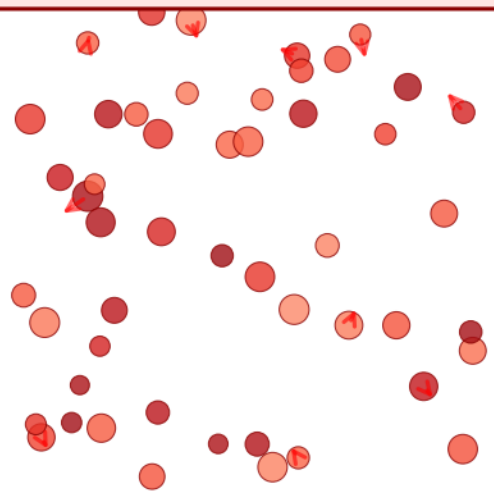
Arithmetic Phase Transition: From Thermal Gas to Quantum Crystal

Q_{41}

Thermal Gas Phase

DISORDERED: Maxwell-Boltzmann Gas

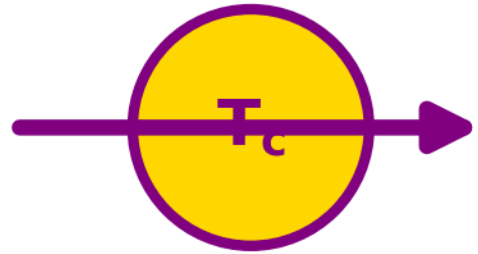


$T_A > T_c$

$I(q) = 6$ (HIGH)

ARITHMETIC

PHASE TRANSITION



$I(q) : 6 \longrightarrow 2$

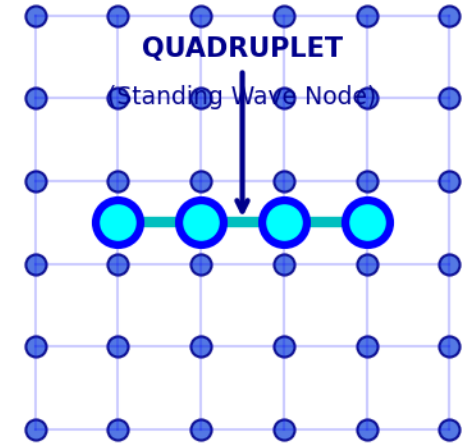
σ_{scatt} : HIGH $\longrightarrow$ MIN

OUROBOROS LIMIT

Q_{47}

Condensed Crystal Phase

ORDERED: Bose-Einstein Condensate



$T_A < T_c$

$I(q) = 2$ (MINIMAL)