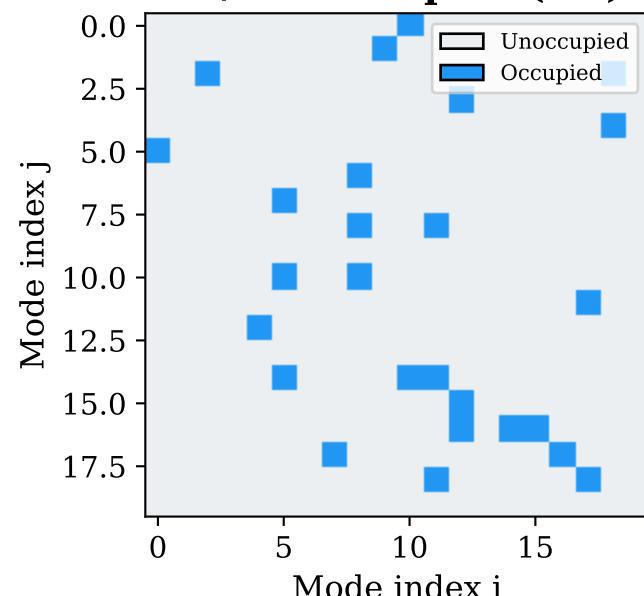
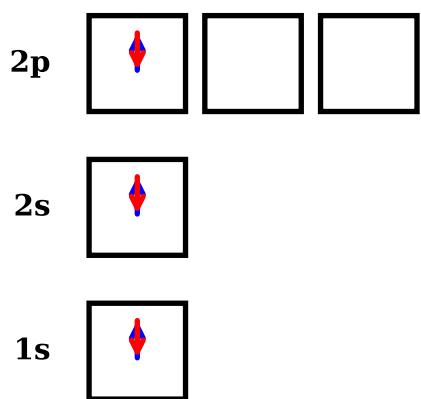


Figure 4: Mode Occupation → Matter/Dark Matter Split

A. Mode Space 26/400 occupied (6%)



D. Exclusion Principle (Max 2 per orbital)



B. The Logic

MODE OCCUPATION LOGIC

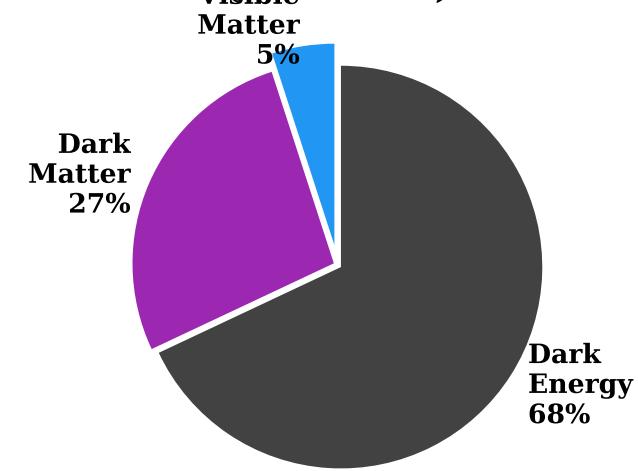
Total oscillatory modes: N_{total}

Occupied modes: N_{occ}
(carry energy $E = \hbar\omega$)

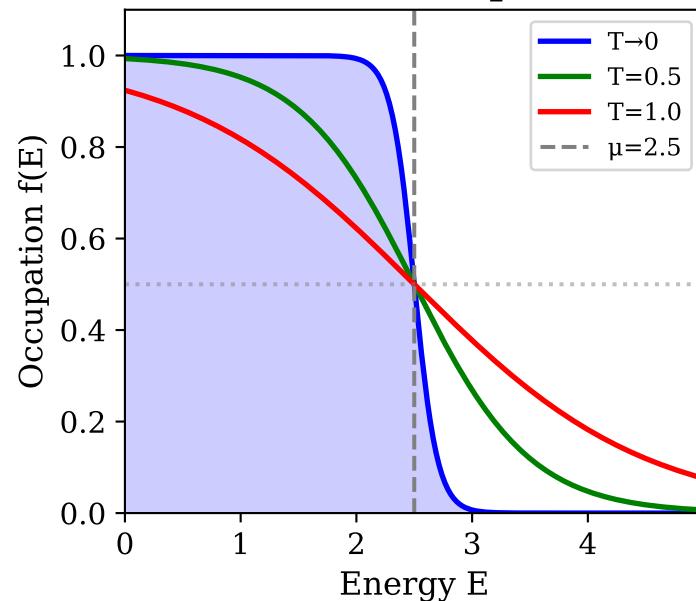
Unoccupied modes: N_{unocc}
(zero-point energy only)

Occupied = VISIBLE MATTER
Unoccupied = DARK SECTOR

C. Cosmic Composition (Observed)



E. Fermi-Dirac Statistics (Fermion occupation)



F. The Prediction

FRAMEWORK PREDICTION

Visible matter fraction:
~5% of total mode space

Dark sector:
~95% unoccupied modes

MATCHES OBSERVATION!

Dark matter/energy are NOT exotic new substances—they are the unoccupied portion of oscillatory mode space.