Studying baryons at high temperature using supercomputers

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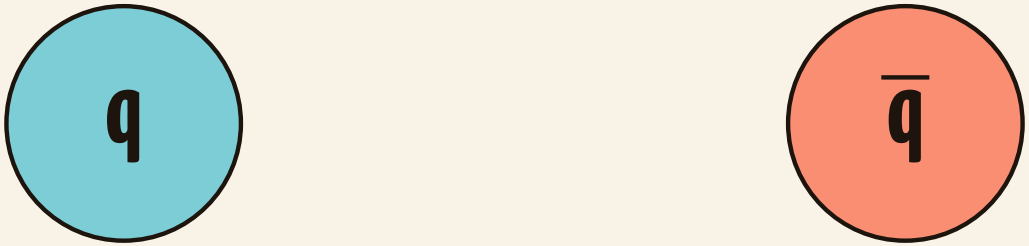
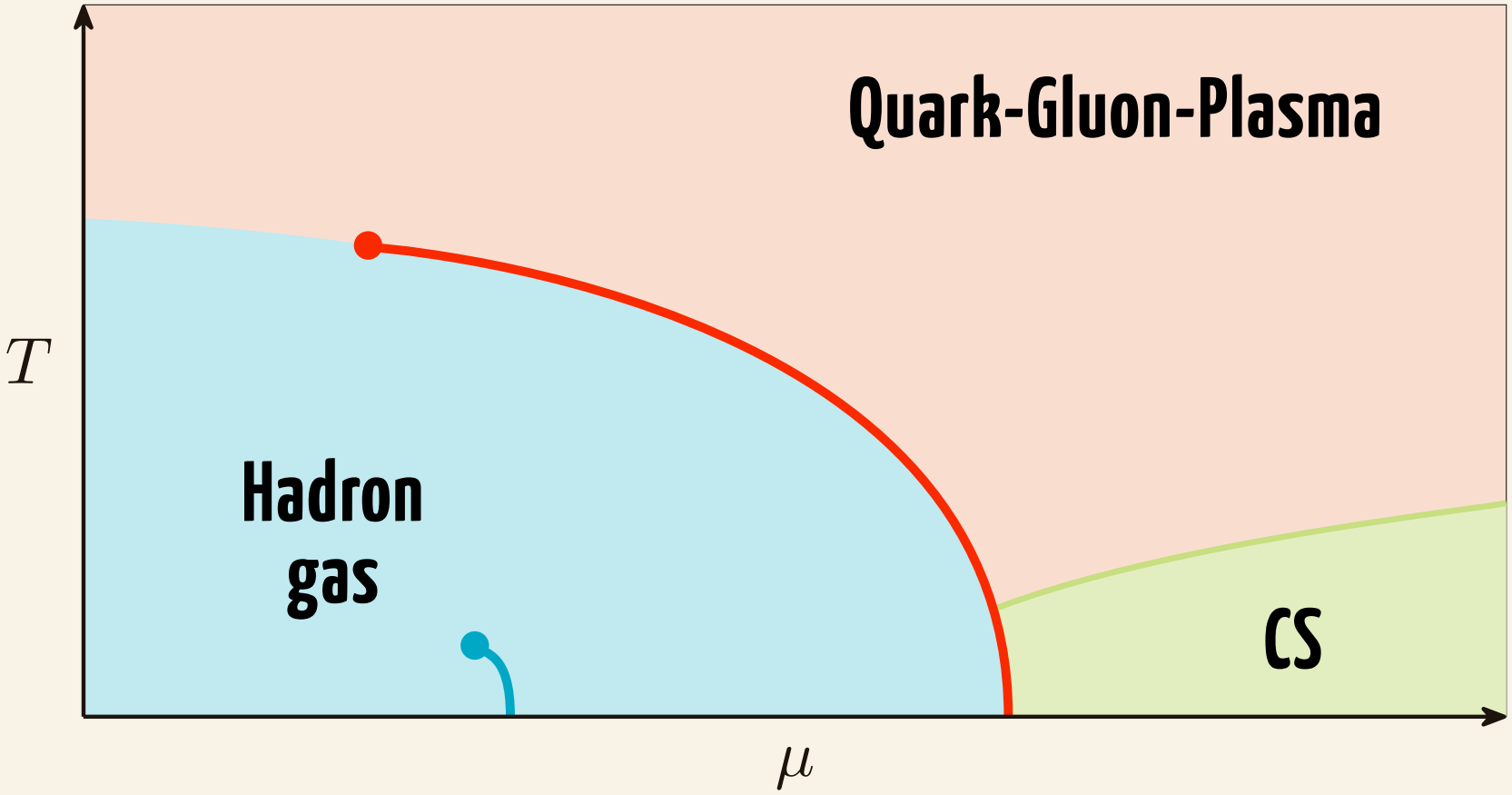
Quantum Chromo Dynamics

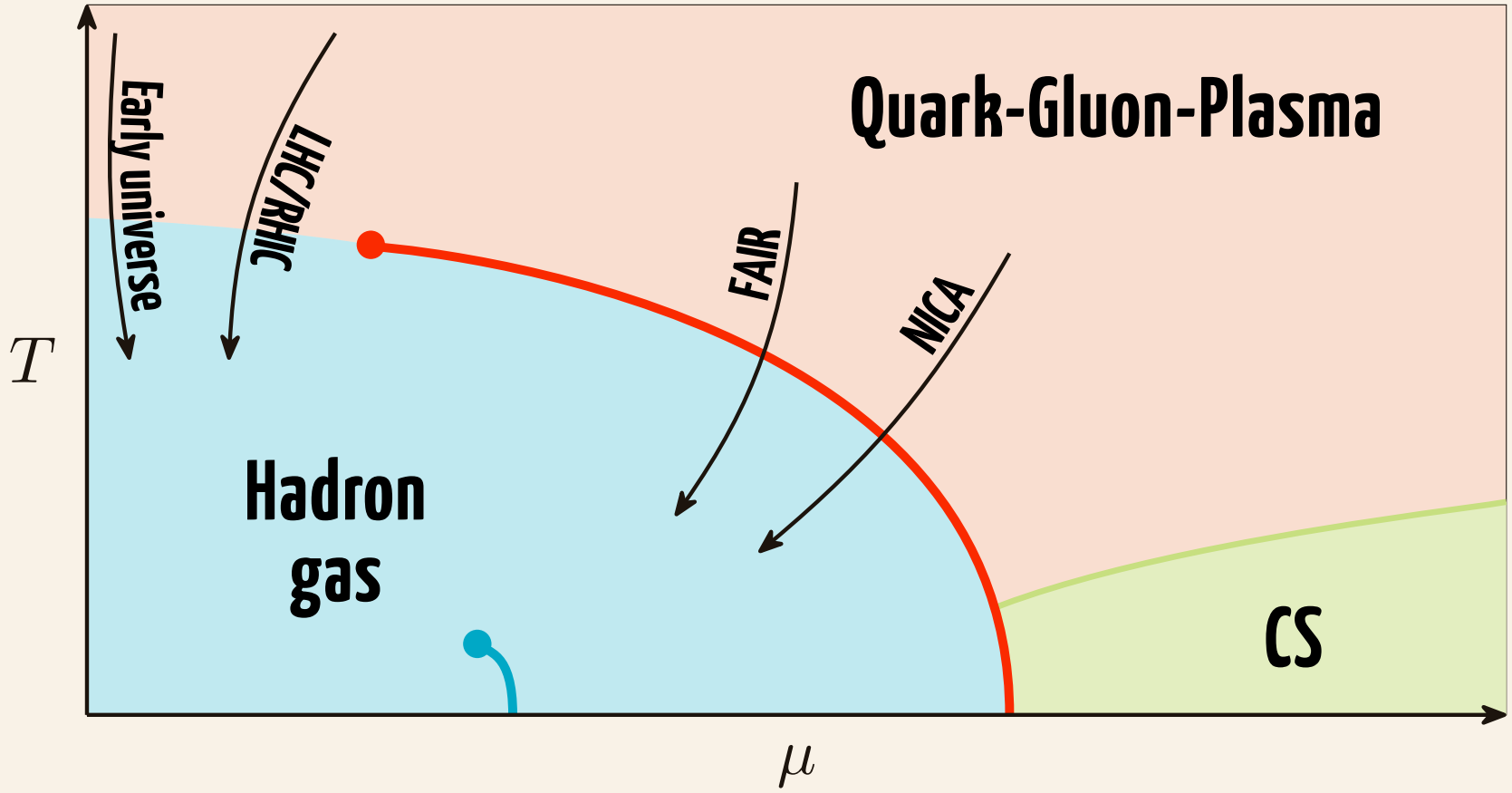
Theoretical description of the strong nuclear force



Quantum Chromo Dynamics

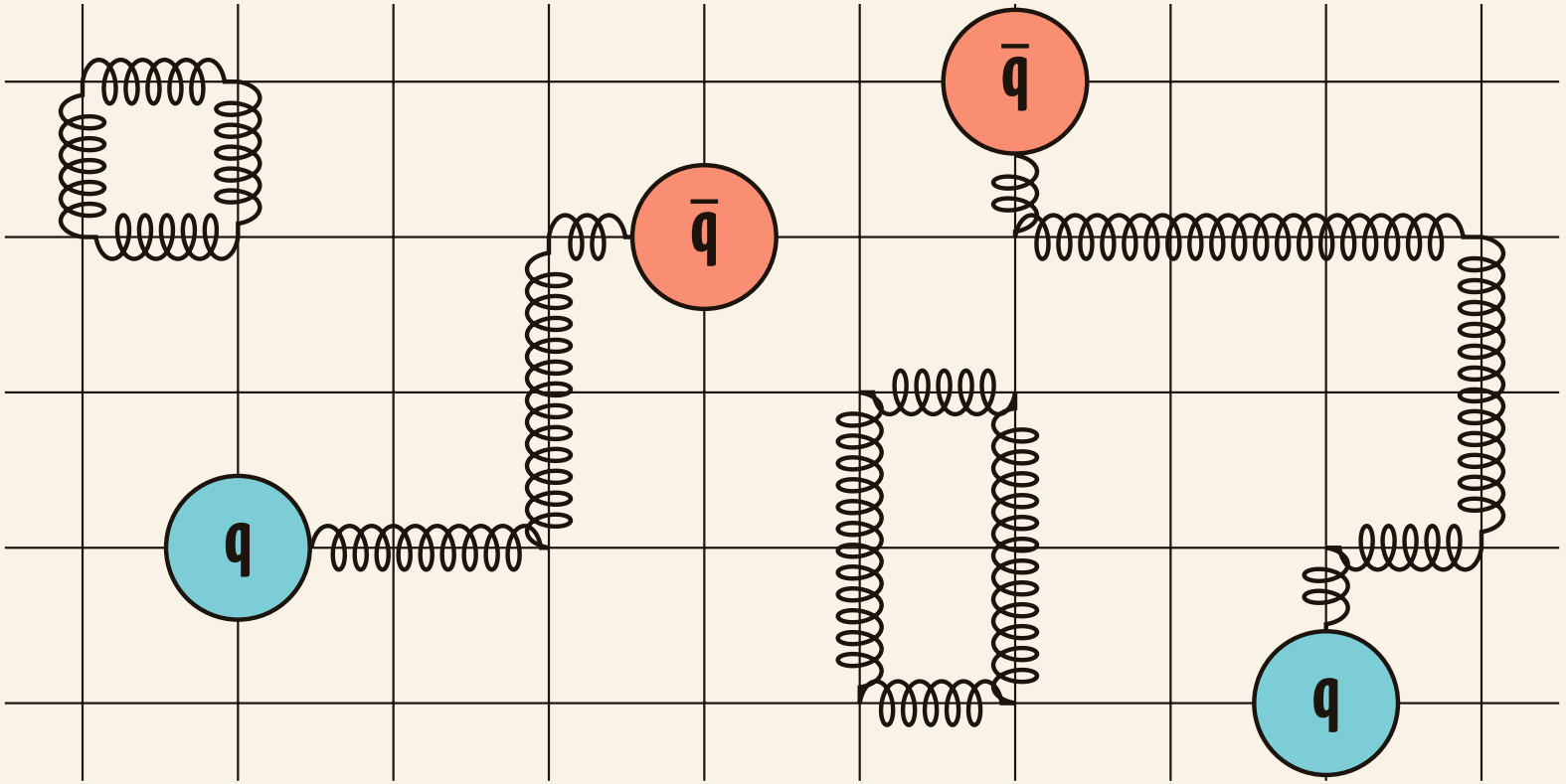


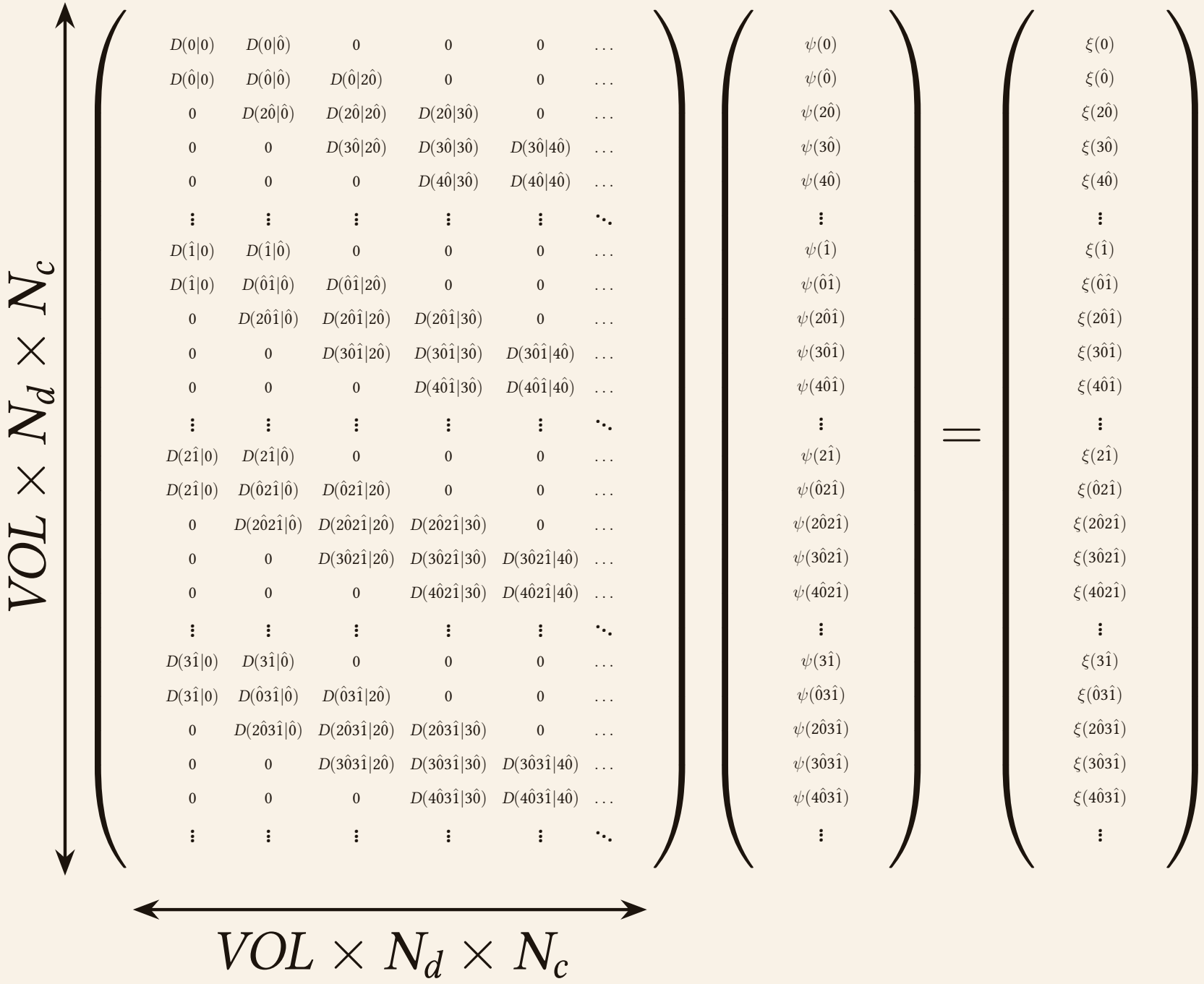
Quantum Chromo Dynamics



Lattice QCD

Basically we just put on a (HUGE) lattice

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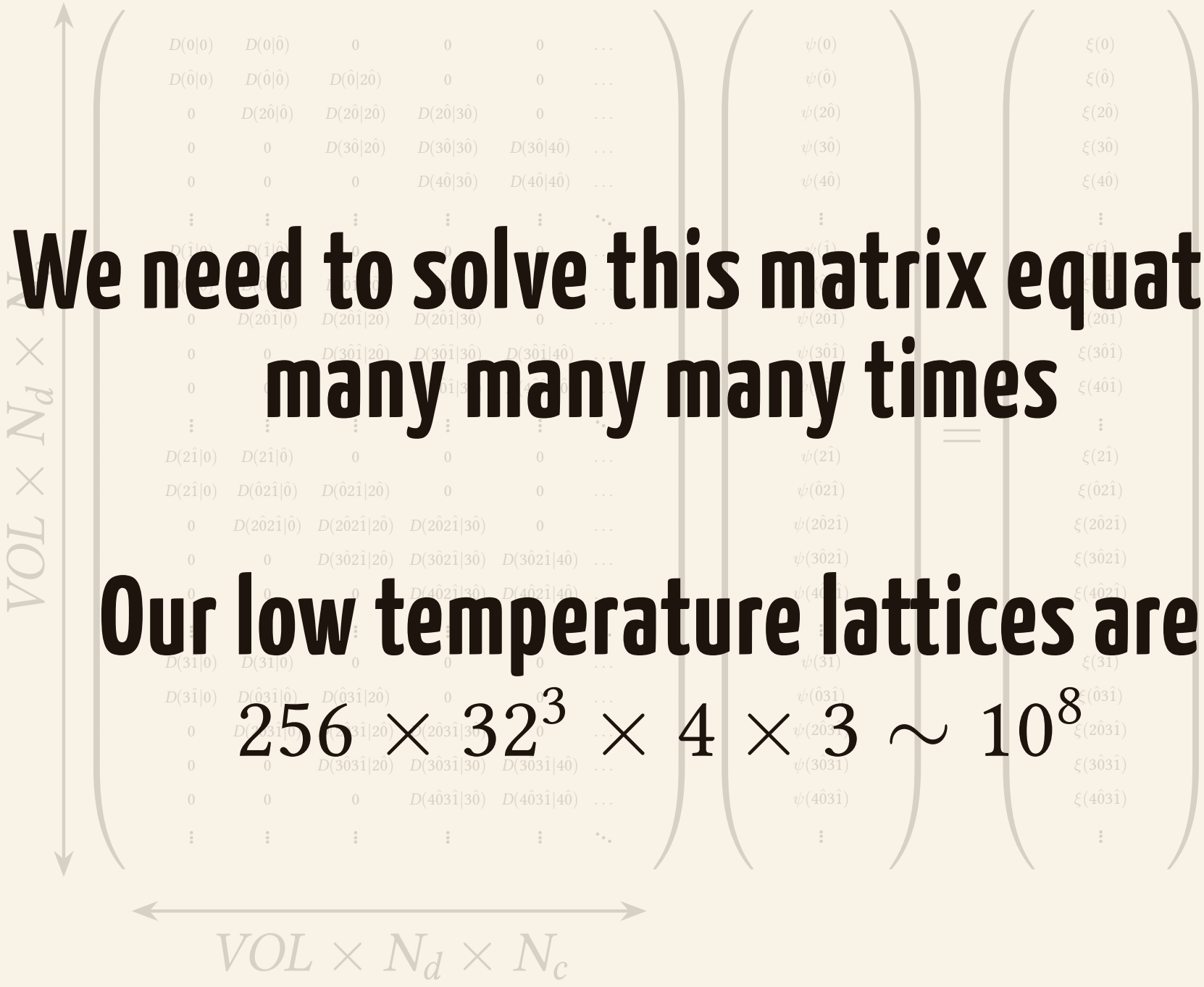
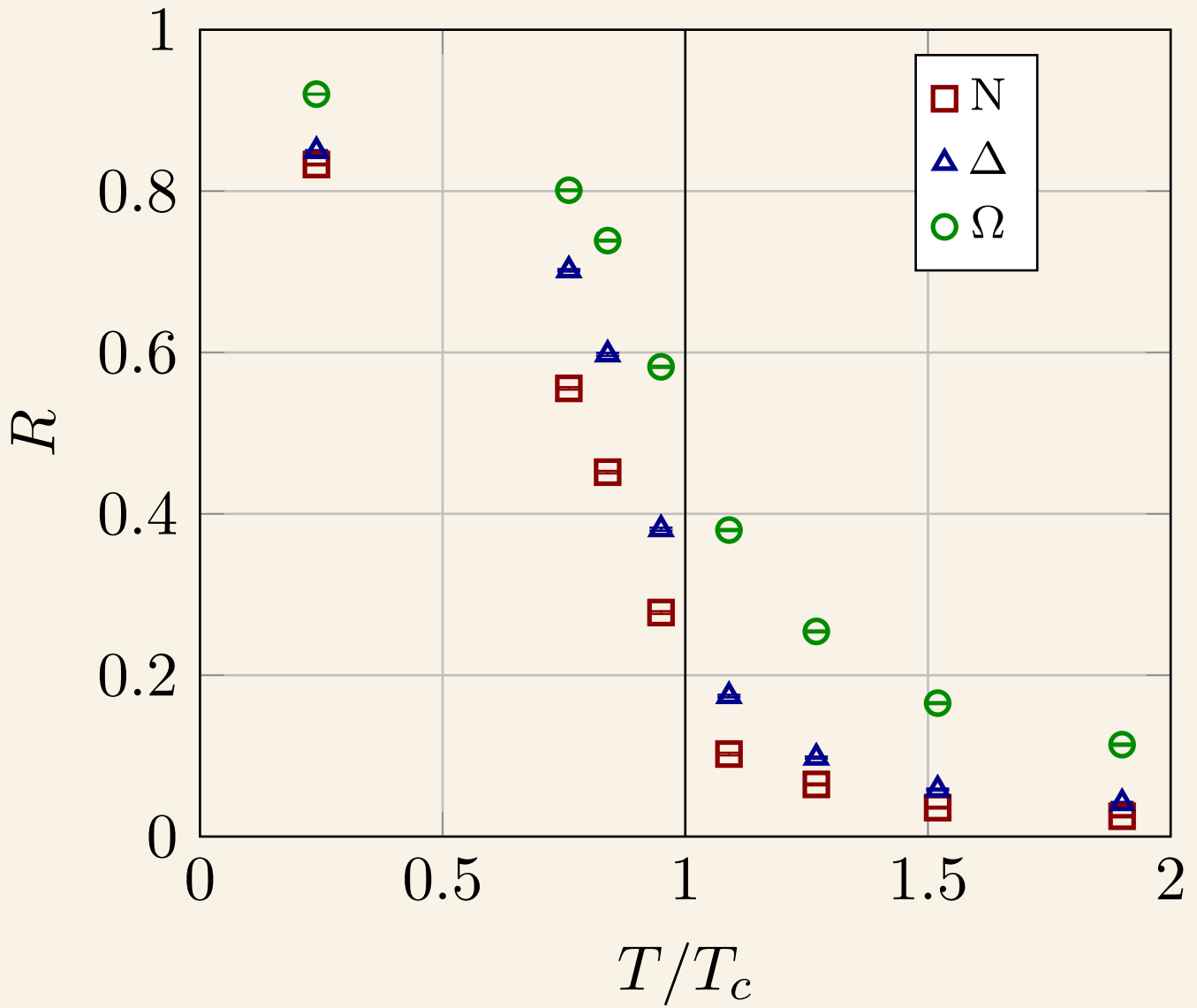


We need to solve this matrix equation many many many times

Our low temperature lattices are:

$$256 \times 32^3 \times 4 \times 3 \sim 10^8$$

So what do we do with this?



Thanks!