EXAMPLE: QUANTUM CHROMODYNAMICS

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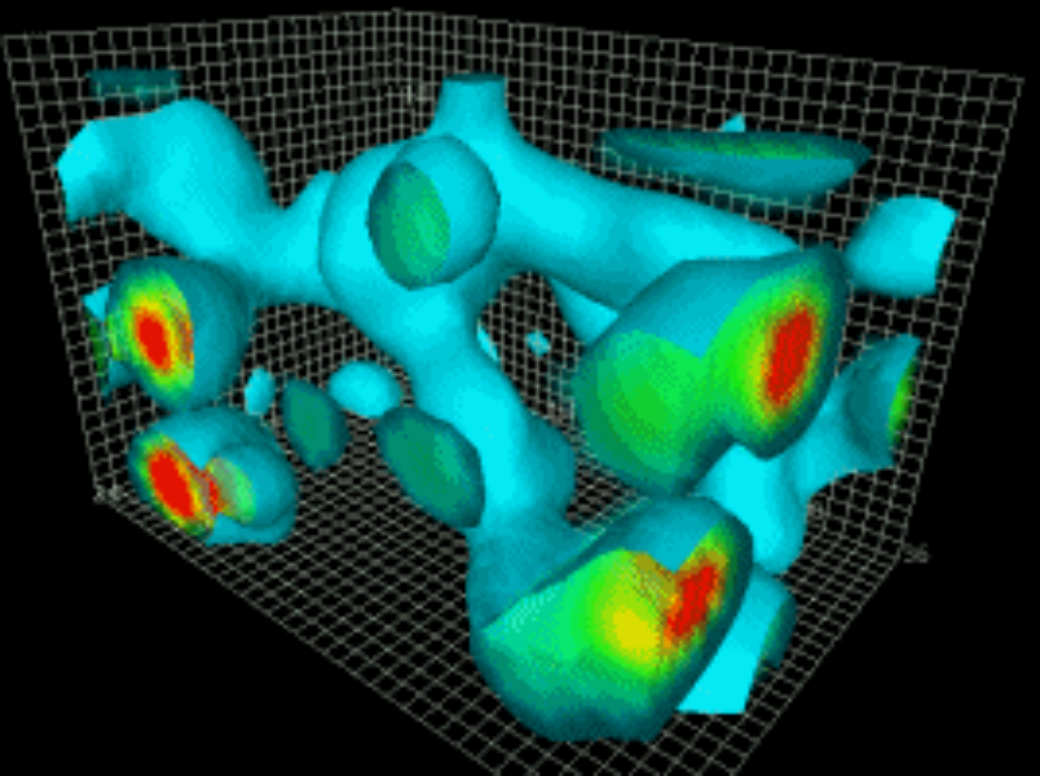
- Target density encodes the dynamics governing fluctuations of sub-atomic particles

- Run simulations for months at a time, use ~15% of global compute resources

- Used to model and understand strong nuclear forces/validate standard model



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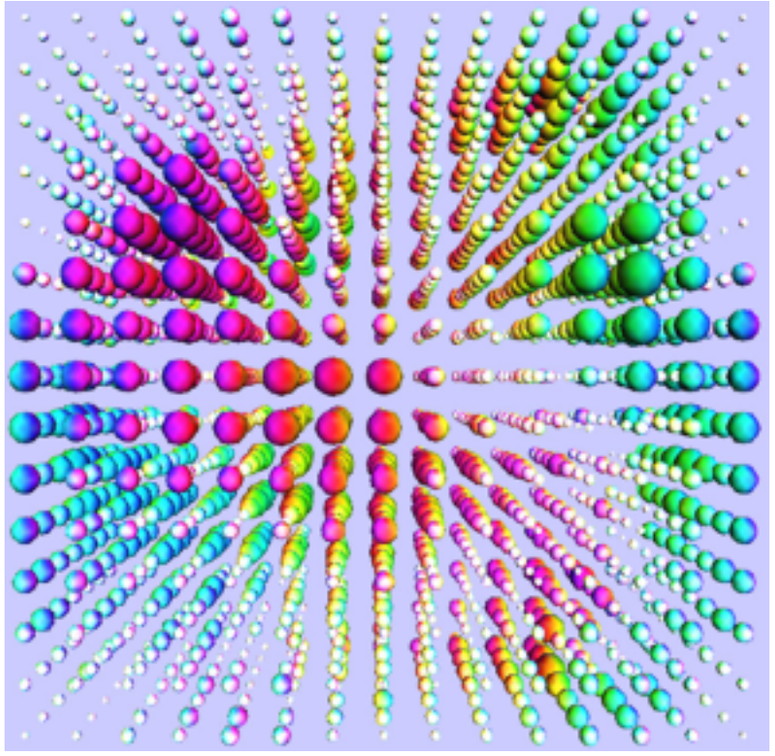
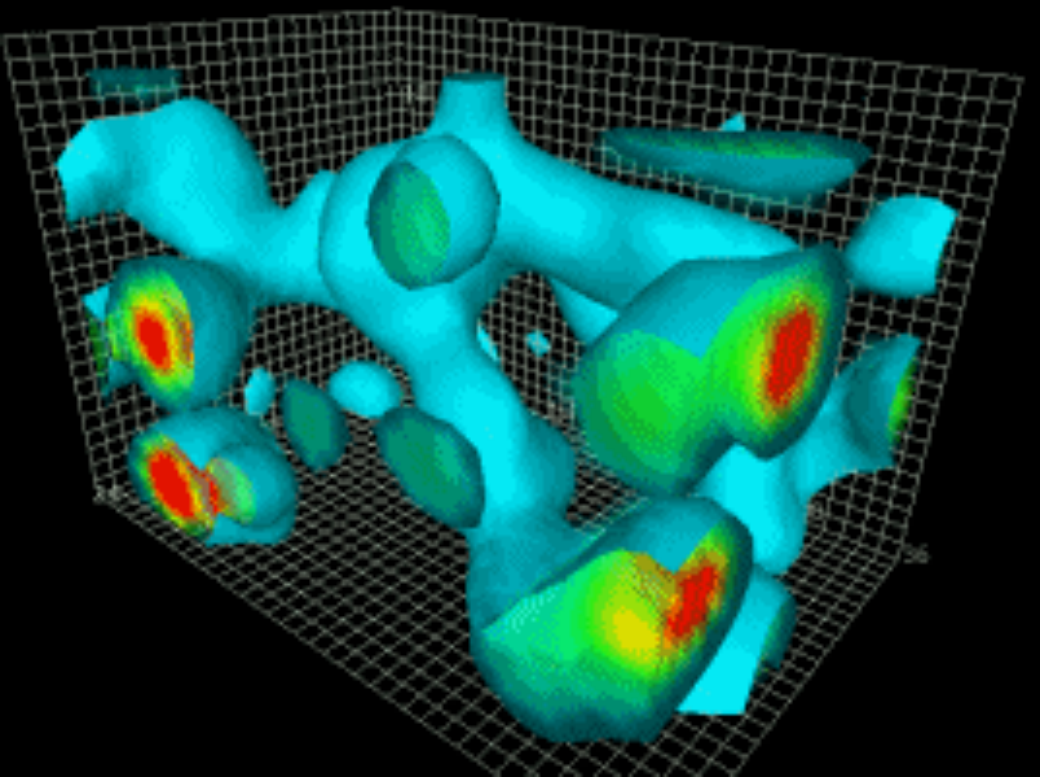


- e.g calculate mass and spin, charge, of a proton, gluons, etc



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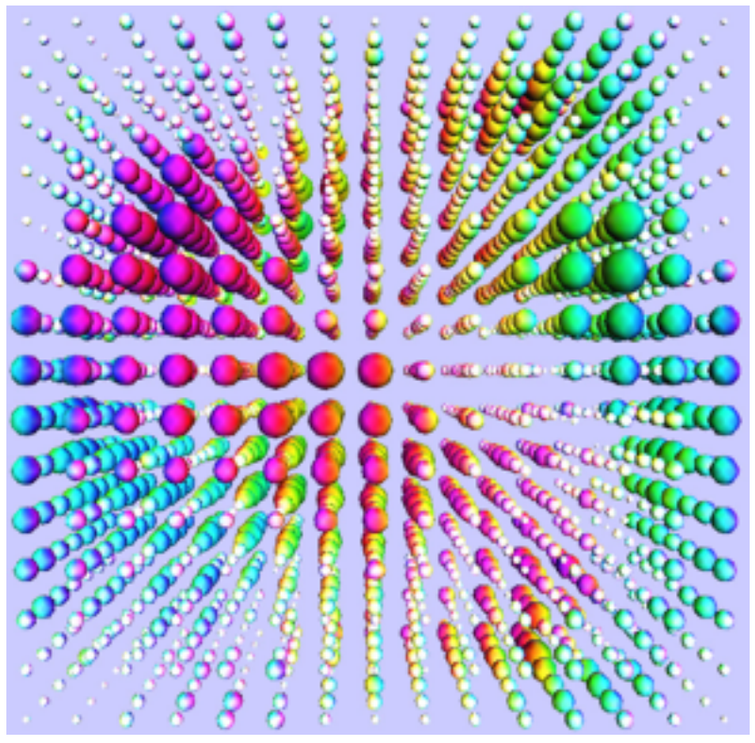

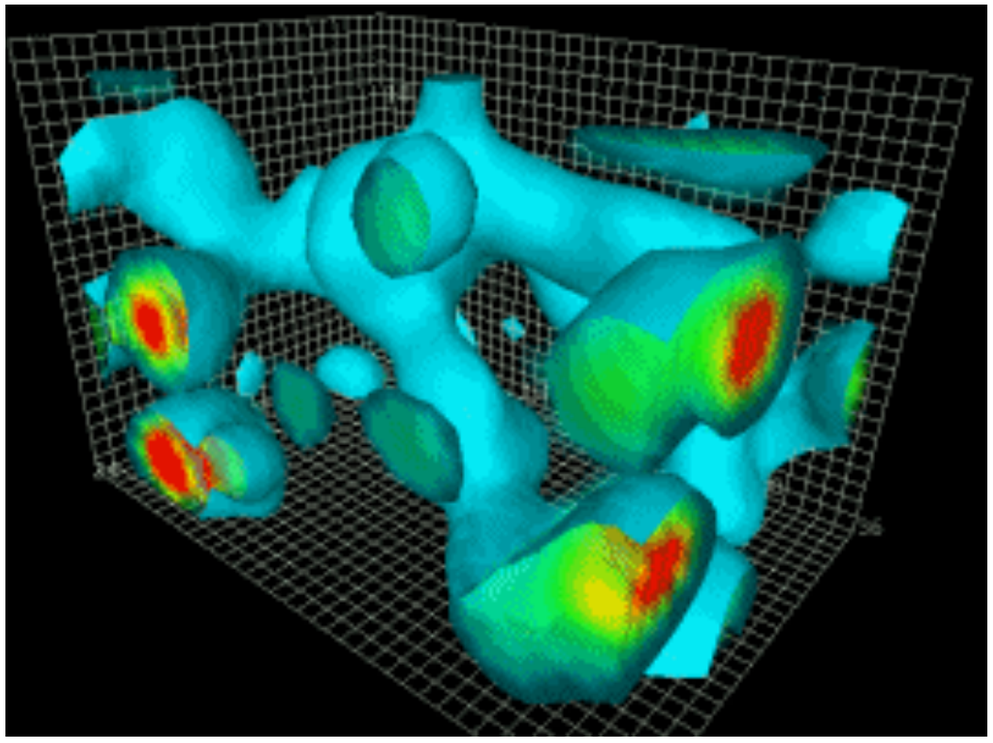

SAMPLES VS EXPECTATIONS