



Coherence



Particles have properties like position, momentum, and spin. Anything that happens in the environment around a particle can affect these properties, or the **state**, of the particle. If the temperature changes or the particle is bumped, it can go through **decoherence**, or lose its special quantum properties. We can think of **coherence** like trying to keep a spinning top perfectly balanced - any small disturbance can make it wobble and fall.

In quantum computers, scientists need the **qubits** to stay coherent long enough to solve problems, or in other words, complete calculations. Scientists work hard to protect qubits from disturbances so they can get accurate results when solving problems with quantum computers.