



Neutral Atom Qubits



One method of quantum computing uses individual atoms to form qubits, which is grounded in the fact that every atom behaves the same exact way. This type of qubit uses the traits of the electrons, such as **energy** or **spin**, within the atom to hold information. However, since these atoms are neutral, or don't have a charge, they don't normally interact with each other. In other words, the qubits normally won't interact... unless you make the atoms massive! When the atoms are given more energy, the orbit of their electrons can grow in size. Scientists are able to isolate single atoms and precisely target them with a laser to give it a lot of energy, which can make the atom up to 1,000 times bigger (larger than some bacteria!). The extremely large atoms can then influence the surrounding atoms, allowing for entanglement and interactions to occur between qubits.