

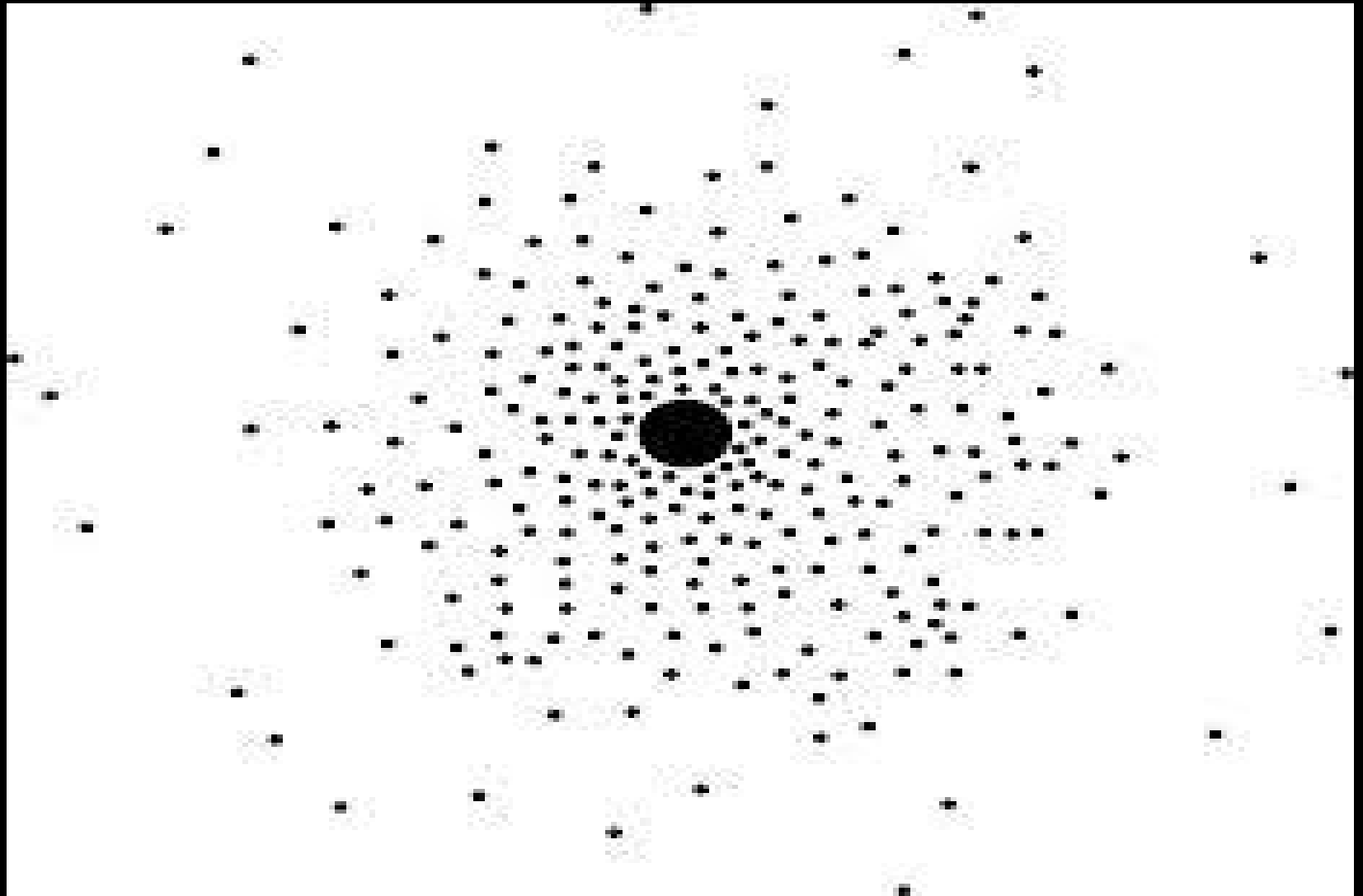
A Guide to the Quantum Model

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What is the Quantum Model?

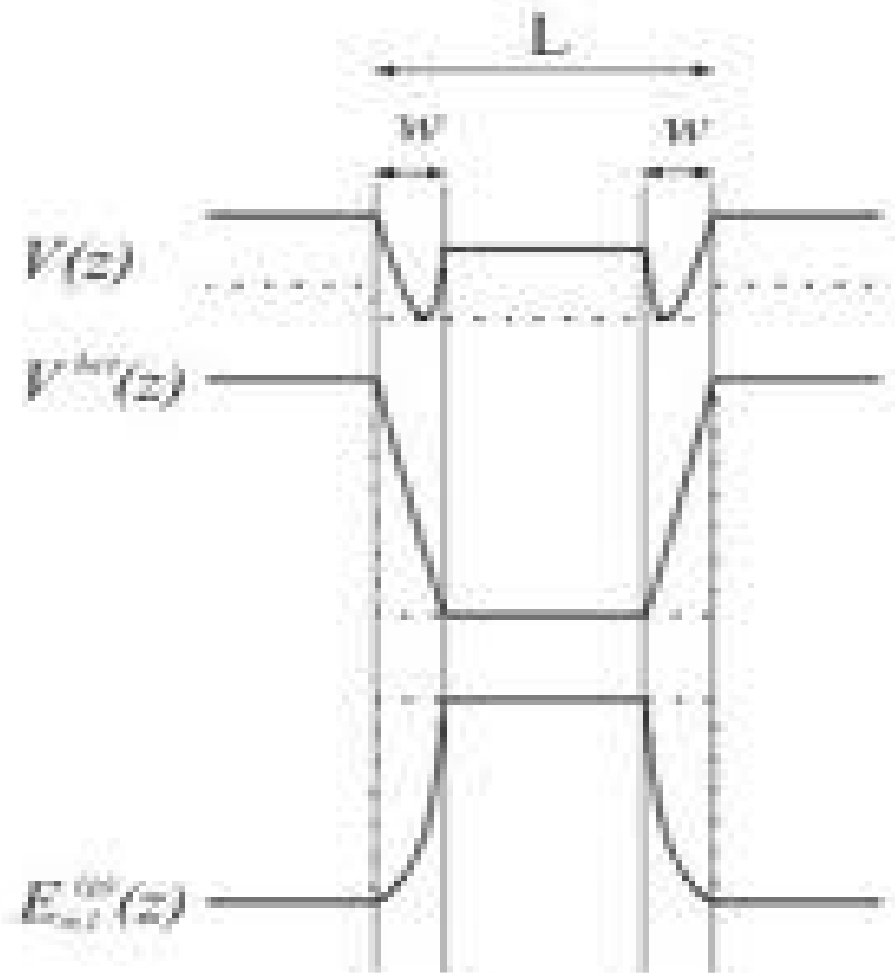
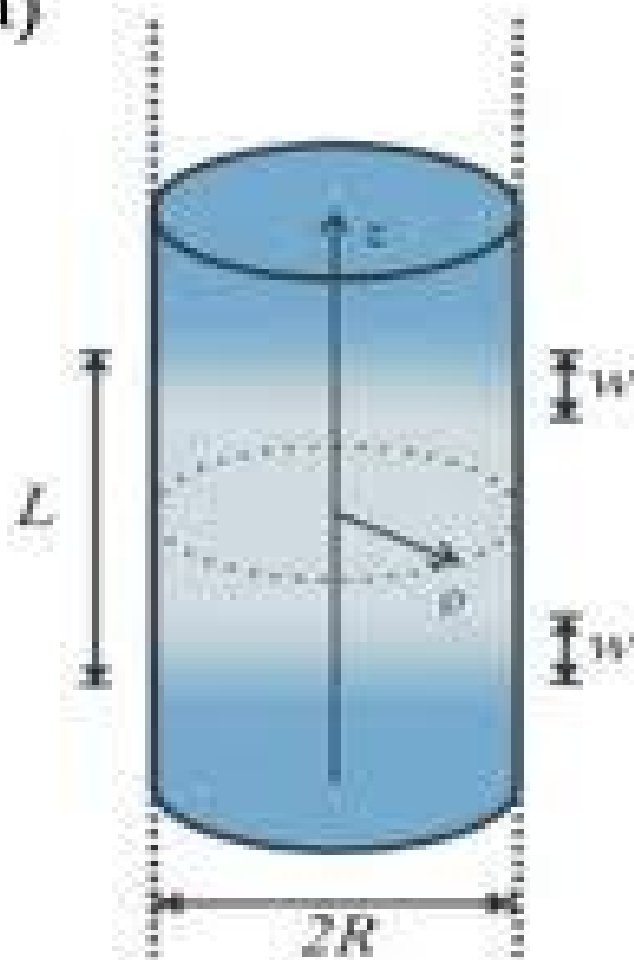
1. The Quantum model is the location of where an electron is most probably located.
2. This idea provides a conception that an electron moves within the wavelengths of the area that it is located.
3. Schrodinger's equation represented the different possibilities of where an electron is located through variations of wavelengths.

Basic Sketch of Quantum Model



Advanced Diagram of Quantum Model

a)



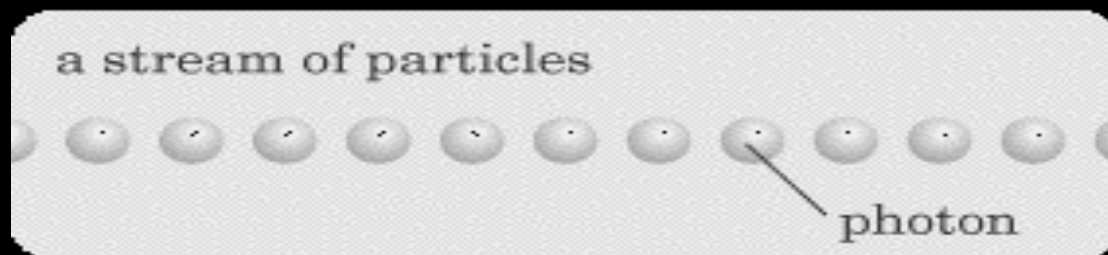
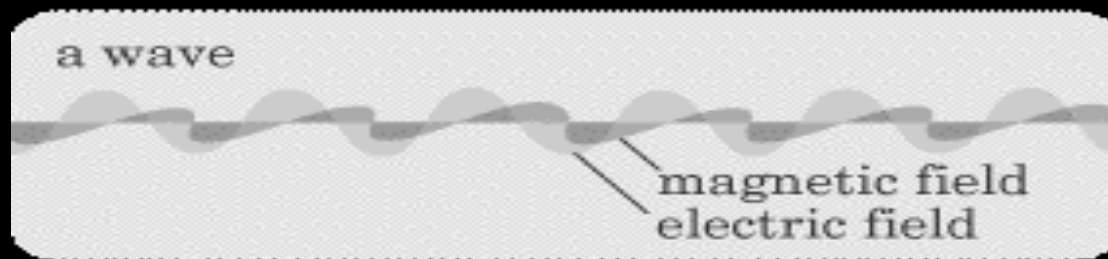
Werner's Principle

- Werner Heisenberg put the uncertainty principle that you can't calculate both the momentum of an atom and the location of the electron.
- This led to the discovery of the Quantum model, which is one of the biggest discoveries in history.

Differentiation of Different Shells

1. This idea was that an atom has different shells because of the different values of the quantum numbers.
2. It also helped evolve the idea that light can travel in both waves and particles.

Light as:



Sources:

1. R.J. Baxter, *Exactly solved models in statistical mechanics*, London, Academic Press, 1982
2. H. Bethe, Zur Theorie der Metalle, *Zeitschrift für Physik A*, 1931 [doi:10.1007/BF01341708](https://doi.org/10.1007/BF01341708)