

# Physics 137B Lecture 18

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These are notes taken from lectures on Quantum Mechanics delivered by Professor Raúl A. Briceño for UC Berkeley's Physics 137B class in the Spring 2024 semester.

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# 1 February 28 - Identical Particles

- There are three primary mechanisms for the decay of nuclei (most nuclei we know of are not stable, which means they are actually *resonances* rather than bound states).
- These three are
  - $\gamma$  decay  $\sim$  (to first order) QED
  - $\beta$  decay  $\sim$  (to first order) Weak Force
  - $\alpha$  decay  $\sim$  (to first order) Strong Nuclear Force
- Let's talk about the first reasonable model for  $\alpha$  decay.