

CP Violation in B Decay

Final

Lecture #19

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CP Violation in B Decay

Final ~~lecture~~

1. What are the three types of CP Violation?

What are the conditions for each type to occur?

Which types do we expect to observe in B_d decays?

Which type is most useful for testing the Standard Model?

2. What is the Unitarity condition that is important for B_d decays?

3. What predictions can you make for decays $B \rightarrow D\rho$?

What assumptions go in to these predictions?

How reliable do you consider each assumption to be?

4. When is isospin important in B decays?

What two isospin labels are appropriate for decay amplitudes?

In a given decay there can be tree and penguin contributions of the same isospin labels—does this tell us anything about relationships between them?

Catalogue the isospin possibilities for $B \rightarrow u\bar{u}d$ (+ $d\bar{d}d$)

What isospin amplitudes ^{DO NOT} contribute for $B \rightarrow \pi\pi$ & why?