

CP Violation

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Abstract

These lectures will focus on CP violation in B and K mesons with particular emphasis put on the determination of the CKM matrix. In particular, the following topics will be addressed:

- i) The CKM matrix and the unitarity triangle,
- ii) General aspects of the theoretical framework,
- iii) Various types of CP Violation,
- iv) Standard analysis of the unitarity triangle,
- v) A note on ε'/ε ,
- vi) Search for the angles of the unitarity triangle in B decays
- vii) Rare decays $K^+ \rightarrow \pi^+ \nu \bar{\nu}$, $K_L \rightarrow \pi^0 \nu \bar{\nu}$
- viii) Going slightly beyond the Standard Model: Models with minimal flavour and CP violation.
- ix) Special topic to be decided.
- x) Outlook