

# Testing SU(3) flavour symmetry in non-leptonic B and D decays

*Tuesday 22 April 2025 15:05 (22 minutes)*

Non-leptonic B decays are great probes of CP violation and the most precise probes for the CKM angles. These determinations use golden modes, data and/or isospin symmetry to reduce the theoretical uncertainties, as non-leptonic decays remain notoriously challenging to calculate from QCD principles. At the same time, there is a wealth of experimental data that can be exploited to obtain insights into strong decay dynamics, or even possibly show signs of new interactions. In this talk, I will discuss the limitations of using SU(3) flavour symmetry to link the many non-leptonic decays and show a new analysis of all non-leptonic B decay data, including for the first time data on mixing-induced CP asymmetries and factorizable SU(3)-breaking effects. In addition, I will briefly discuss also SU(3) tests in non-leptonic D decays including linear SU(3) breaking.

**Author:** VOS, Keri (Nikhef National institute for subatomic physics (NL))

**Presenter:** VOS, Keri (Nikhef National institute for subatomic physics (NL))

**Session Classification:** Flavor

**Track Classification:** Plenary talk