

FYS3500 - Problem set 10

April 15, 2024

Make sure you have read the relevant chapters in the book and compendium before starting the exercises.

Concepts of the week

Explain these concepts: helicity, chirality, CP conservation, CP-violation, VA-interaction, particle-antiparticle-mixing

Problem 1 Decay of polarized ^{60}Co

Martin&Shaw2019 problem 7.1

Problem 2 Z^0 decay widths

Martin&Shaw2019 problem 7.5. NB: Γ_q is the width for one specific colour state, so before we have accounted for N_c

Problem 3 K^+ decay & parity violation

Martin&Shaw2019 problem 7.6

Problem 4 K^0 decay & CP conservation

Martin&Shaw2019 problem 7.7

Problem 5 Heavy meson decay

Martin&Shaw2019 problem 7.10