

FY3403 Particle physics
Problemset 8 fall 2013

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fysikk

Problem 16. Decay rate for Z^0

Calculate the decay rate for $Z^0 \rightarrow f + \bar{f}$ where f is any quark or lepton. You may assume that the mass of f can be neglected compared to m_Z . Assume that these are the dominant decay modes and find a numerical value for the branching ratio for each type of lepton.