

C3) a) (3 points) What are the quark structures of the \bar{p} and Σ^+ baryons, and the ρ^- meson?

b) (4 points) The π mesons have spin 0 and the ρ mesons have spin 1. What are their internal angular momentum structures? Use spectroscopic notation (e.g., 3D_2).

c) (3 points) A charmed baryon with isospin 1 has been discovered. What is its quark content likely to be? Consider all three charge states.