

Abstract

Using the experimental facilities of Jefferson Lab in Halls B and D, the Arizona State University (ASU) Meson Physics Group will conduct experiments to search for and characterize (1) excited baryons containing two or more strange quarks and (2) hybrid meson states that have $K^+K^-\pi^0$ decay products. Both types of particles have been specifically predicted by hadron models based on quantum chromodynamics (QCD), exploiting flavor symmetry and gluonic excitations. The detailed knowledge of the spectrum of these states that will be obtained is essential for meeting the goals of Nuclear Science Advisory Committee (NSAC) Long-Range Plan.