

Test Fundamental Symmetries via Precision Measurements of π^0 , η and η' Decays

Friday, 29 July 2016 15:50 (30 minutes)

Light neutral meson decays provide a unique laboratory to probe fundamental QCD symmetries. A comprehensive Primakoff experimental program at Jefferson Laboratory (JLab) is aimed at gathering high precision measurements on the two-photon decay widths and the transition form factors at low four-momentum transfer squares of π^0 , η and η' via the Primakoff effect. Completed experiments on the π^0 radiative decay width at JLab 6 GeV, and planned measurements of η and η' at JLab 12 GeV will provide sensitive probes to test the chiral anomaly and to study the origin and dynamics of chiral symmetry breaking in the confinement QCD. A preliminary result of the π^0 radiative decay width and the status of planned η and η' measurements will be presented.

Presenter: GAN, Liping (University of North Carolina Wilmington)

Session Classification: Fundamental Symmetries