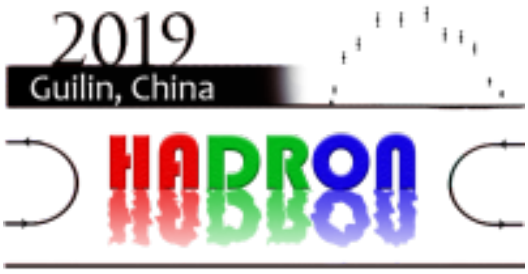

Contribution ID: **97** Type: **Parallel**

Eta Decay Program at GlueX

Sunday, 18 August 2019 17:00 (20 minutes)

The GlueX detector in the experimental Hall D at Jefferson Lab was designed to search for gluonic excitations in the spectra of light mesons using photon beams. The detector provides a unique capability to perform a precision measurement of the eta -> gamma gamma decay width via the Primakoff effect (PrimEx D experiment) and study rare decays of eta mesons.

Measurement of the eta decay width is essential for the determination of fundamental properties such as the ratios of the light quark masses and the eta - eta' mixing angle, and will provide an important test of chiral symmetry breaking in QCD. The physics of rare eta decays spans from critical tests of chiral perturbation theory to the search for lepto-phobic dark matter candidates.

I will give an overview of the ongoing PrimEx D experiment and the physics program of rare eta decays, and discuss GlueX plans for the future.

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Session Classification: Session 4: Hadron decays, production and interactions

Track Classification: Session 4: Hadron decays, production and interactions