Search for QCD Mesons

- **QCD predicts mesons beyond the naive quark model**
  - **glueballs and hybrids (some with exotic J^{PC})**
  - **hard to find but tantalizing candidates**
  - **LGT and flux-tube converging on masses**
  - **expect to find in the mass range: 1.0 to 2.5 GeV/c^2**

- **Photoproduction - an unexplored regime**
  - **likely place to find exotic hybrids**
    - **photon is a $q\bar{q}$ with spins aligned and excitations of the flux tube leads to exotic J^{PC}**
  - **photon beams at JLab unprecedented in**
    - **intensity**
    - **flux**
    - **duty factor**
    - **size**
    - **resolution**
    - **linear polarization**