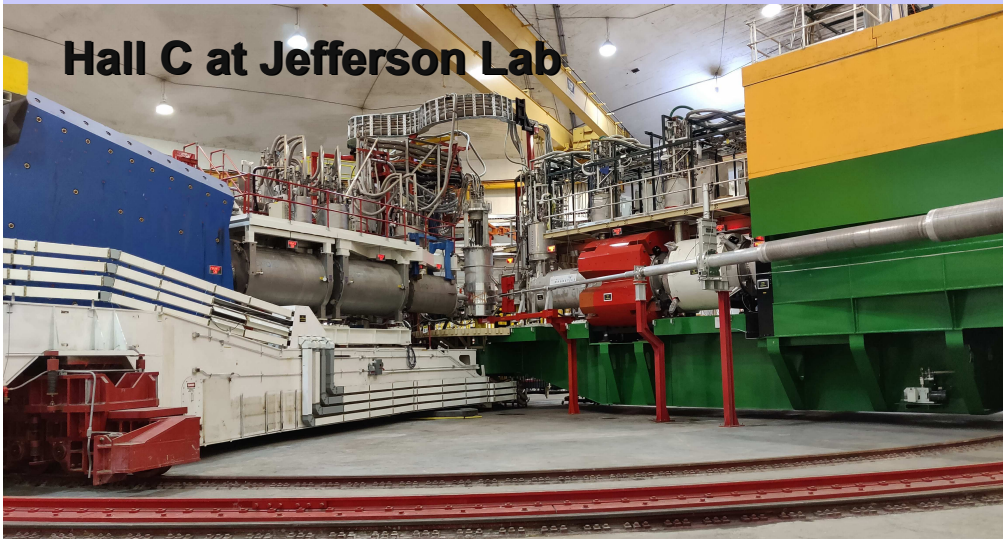


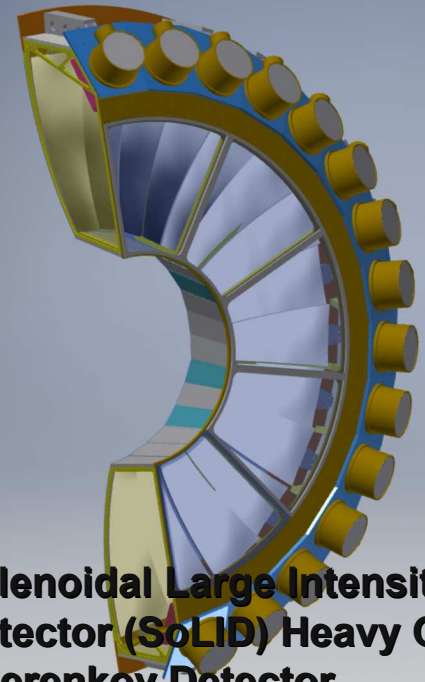
Graduate Studies in Experimental Nuclear/Particle Physics

Hall C at Jefferson Lab



Studies of Quark–Gluon Structure at Jefferson Lab:

A major unsolved problem in physics is understanding the strong interaction where quark–gluon confinement dominates, and how these interactions rise to properties such as the mass and spin of hadrons. Central to this problem is the π -meson. The pion's unusual mass is generated by quark–gluon interactions, and is seen as key to confirm the mechanisms that dynamically generate >98% of the mass of the visible universe. This provides strong motivation to acquire precise new data on the π^+ electric form factor that encodes our knowledge of the distribution of quarks and gluons within it.



Solenoidal Large Intensity Detector (SoLID) Heavy Gas Cherenkov Detector

Graduate Research:

In addition to the highly-ranked experiments of pion, kaon and proton form factors at Jefferson Laboratory (USA), students may contribute to detector work for the Solenoidal Large Intensity Device (SoLID), a next generation particle spectrometer planned for Jefferson Lab, and physics studies for the future Electron–Ion Collider (EIC). Professional development and mentorship includes teamwork, critical thinking, leadership skills and outreach activities.



University
of Regina

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