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SoLID Heavy Gas Cherenkov Prototype (G)*

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The Solenoidal Large Intensity Device (SoLID) is a new detector planned for installation at Jefferson Lab's (JLab) Hall A, as part of the 12 GeV era of JLab physics. This detector will have a large acceptance, and be capable of operating at high luminosity, enabling multiple new experiments probing the inner structure of nucleons. We have received funding from CFI and Fedoruk Institute to build a prototype segment of SoLID's Heavy Gas Cherenkov detector (HGC) at University of Regina, in conjunction with Duke University. This detector will contain C_4F_{10} gas at a pressure of 1.5 atm, and will be used in identification of both positive and negative pions. In this talk we discuss the design challenges of the SoLID HGC, which must be strong enough to hold the pressure without bursting or leaking the expensive gas, and must have an entry window as thin as possible, to minimize impact on the data.

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