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The 2500 W liquid hydrogen target for the Qweak experiment
SILVIU COVRIG, Hall C, Jefferson Laboratory, QWEAK COLLABORATION —
The precision measurement of the proton's weak charge through parity violation in the Qweak experiment in Hall C at Jefferson Lab requires a liquid hydrogen target system capable of sustaining a beam power of 2500 W. This will be the highest power LH2 target in the world, even though it must also satisfy very stringent requirements for target related systematic uncertainties. For the first time the use of computational fluid dynamics (cfd) simulations have been used to design such a target. I will describe how *Fluent*, a cfd package, was used in designing the Qweak target. Cfd simulations have also been used in assessing the safety of the target system. Testing of the Qweak target will begin in the summer of 2009, with the first physics run starting in the summer of 2010.

Silviu Covrig
Hall C, Jefferson Laboratory

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