

Fabrication of a Double Shell Target With a PVA Inner Layer*

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LLNL and General Atomics recently collaborated to build a set of ~1 mm double-shell targets that contained Xenon in the CH outer shell and ~10 atm of deuterium in the ~200 μm silver-coated glass inner shell. To hold the Xenon in the outer shell, but not in the shell wall, a PVA permeation barrier was applied to the inside surface of the outer shell.

This presentation will describe the fabrication of this target including: (1) how the PVA layer was placed on the inside wall of 1 mm CH capsules using drop tower technology, micromachining and assorted processing techniques, and (2) how LLNL silver-coated glass shells and prepared mounting components. In addition, we will describe how the inner glass shell was inserted into the outer shell through a micromachined port and how the completed target was characterized.

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