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## **\*\*WITHDRAWN\*\* Application of Wavelength Shifter to the Acrylic Vessel in the DEAP-3600 Dark Matter Search**

*Monday 13 June 2016 16:30 (15 minutes)*

DEAP-3600 is a single phase liquid argon dark matter search experiment. The target consists of 3600 kg of liquid argon, contained in a spherical acrylic vessel and viewed by a surrounding array of photomultiplier tubes (PMTs). Particle interactions in liquid argon produce scintillation light in the vacuum ultraviolet (VUV) spectrum, which is efficiently absorbed by the surrounding acrylic. To make interactions in the target volume visible to the PMTs, the inner surface of the acrylic sphere was coated with the organic wavelength shifter, 1,1,4,4-tetraphenyl-1,3-butadiene (TPB), which has a re-emission spectrum for VUV light in the blue-visible regime. During the final stage of construction, a 3 micrometer thick coating of TPB was applied to the vessel's inner surface using vacuum deposition. This talk will present details on the final deposition, thickness considerations, and ex-situ sample analysis results.

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