

Abstract Submitted  
for the MAR07 Meeting of  
The American Physical Society

**Search for Charged Particle Tracks Using CR-39 Detectors to Replicate the SPAWAR Pd/D External Field Co-Deposition Protocol**  
WINTHROP WILLIAMS, Department of Electrical Engineering and Computer Science, University of California at Berkeley, Berkeley, CA 94720 — A solution of 0.031 M PdCl<sub>2</sub> and 0.30 M LiCl in D<sub>2</sub>O was electrolyzed between Pt anode and Ag cathode wires at currents ranging from 100 microamps to 100 milliamps in two similar series-connected plastic butyrate cells. Pd and D were co-deposited onto the Ag cathodes. CR-39 detectors adjacent to the Ag cathode wires were used to search for charged particle tracks in each cell. An external magnetic field was applied to one of the two cells.

Throughout the experiment, ambient temperature, current through and voltage across each cell were monitored. Current was applied in a stepped fashion, starting at 0.1mA increasing by factors of 2 to 5 up to 100mA.

Scott Chubb  
Naval Research Laboratory

Date submitted: 28 Nov 2006

Electronic form version 1.4