

Abstract Submitted  
for the DFD09 Meeting of  
The American Physical Society

**The water exit of buoyant spheres** TADD TRUSCOTT, Naval Undersea Warfare Center — Results of a combined experimental and theoretical investigation of a buoyant sphere as it passes through the free surface are presented. When a buoyant sphere ascends through a fluid column various behaviors are exhibited (e.g. vortex induced oscillations, etc.) and are a function of release depth and mass ratio. Using high speed dye visualization and particle image velocimetry to reveal the flow behavior, the conditions of release for which maximum height occurs and the governing parameters for optimum water exit are examined.

Tadd Truscott  
Naval Undersea Warfare Center

Date submitted: 07 Aug 2009

Electronic form version 1.4