

DFD16-2016-002549

Abstract for an Invited Paper  
for the DFD16 Meeting of  
the American Physical Society

**Temperature measurements in cavitation bubbles.<sup>1</sup>**

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Cavitation is usually a nearly isothermal process in the liquid phase, but in some specific flow conditions like hot water or cryogenic fluids, significant temperature variations are detected. In addition, a large temperature increase happens inside the cavitation bubbles at the very end of their collapse, due to the fast compression of the gas at the bubble core, which is almost adiabatic. This process is of primary interest in various biomedical and pharmaceutical applications, where the mechanisms of bubble collapse plays a major role. To investigate the amplitude and the spatial distribution of these temperature variations inside and outside the cavitation bubbles, a system based on cold wires has been developed. They have been tested in a configuration of a single bubble obtained by submitting a small air bubble to a large amplitude pressure wave. Some promising results have been obtained after the initial validation tests.

<sup>1</sup>This work is funded by the Office of Naval Research Global under grant N62909-16-1-2116, Dr. Salahuddin Ahmed Ki-Han Kim program managers

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