Abstract Submitted for the MAR06 Meeting of The American Physical Society

Generalizing the definition of buoyant force CARL MUNGAN, Physics Department, U.S. Naval Academy — I propose that buoyant force be defined as the negative of the weight of the displaced fluids, rather than as the net force exerted by fluid pressures on the surface of an object. In the case of a fully submerged object, these two definitions are equivalent. However, if the object makes contact with a solid surface (such as the bottom of a beaker of liquid), only the first definition is well-defined, while the second depends on the ambiguous issue of how much fluid penetrates between the object and the solid surface.

> Carl Mungan Physics Department, U.S. Naval Academy

Date submitted: 30 Nov 2005

Electronic form version 1.4