

Abstract Submitted  
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**Action principle derivation of one-fluid models from two-fluid actions** ALEXANDER WURM, Dept. of Physical & Biological Sciences, Western New England College, Springfield, MA, P.J. MORRISON, Institute for Fusion Studies and Dept. of Physics, The University of Texas at Austin, Austin, TX — Ideal MHD possesses a well-known action principle formulation when the theory is expressed in terms of Lagrangian (or material) variables.[1] Here we start with a general electromagnetic two-fluid action functional in Lagrangian variables and derive action principles for one-fluid models, including ideal MHD.

[1] W.A. Newcomb, Nuclear Fusion: 1962 Suppl. Part 2, p. 451

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