

Abstract Submitted  
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**The Near-Field Internal Wave Field Generated by a Sphere Moving in a Stratified Fluid**<sup>1</sup> JAMES ROTTMAN, KYLE BRUCKER, DOUGLAS DOMMERMUTH, SAIC, DAVE BROUTMAN, CPI — High resolution numerical simulations of a sphere traveling horizontally at constant speed at high Reynolds number through a uniformly stratified fluid are shown to compare well with previous laboratory experimental measurements of the drag and the internal wave field. The results of these detailed numerical studies are used to test and revise source distribution parameterizations of the near-field waves that have been used in analytical studies based on linear theory. Such parameterizations have been shown to be useful in initializing ray-tracing schemes that can be used efficiently to compute wave propagation through realistic oceans with variable background properties.

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