

Abstract Submitted
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Numerical Simulations of Two-layer Bores LAURA BRANDT, KYLE BRUCKER, JAMES ROTTMAN, DOUG DOMMERMUTH, SAIC — Implicit LES is used for a systematic study of the energetics of upstream-propagating bores generated by trans-critical flow of two density layers over two-dimensional and three-dimensional topography. The results of these simulations are compared with solutions of the MCC equations for weakly nonlinear two-layer bores, to establish the range of validity of this approximation, and are used to improve classical hydraulic theories for two-layer bores.

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