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Intrusions with variable inflow into a linearly stratified ambient
MARIUS UNGARISH, Technion, Haifa, Israel — The propagation of an intrusion of volume qt^α into a linearly stratified ambient along the plane of neutral buoyancy is considered (t is the time and q, α are positive constants). Theoretical results are presented for rectangular and cylindrical axisymmetric (or wedge) geometries, for both inertial-buoyancy and viscous-buoyancy balances. However, a sharp practical criterion for the boundary between the regimes is not available. The flow may undergo change of regime inertial/viscous (or the inverse) after some time of propagation, depending on the value of α. The differences with the non-stratified counterpart are discussed.

Marius Ungarish
Technion, Haifa, Israel

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