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2D plus time analogy of corner waves downstream partially submerged bodies PABLO MARTINEZ-LEGAZPI, JAVIER RODRIGUEZ-RODRIGUEZ, Carlos III University of Madrid, JUAN LASHERAS, University of California, San Diego — We have studied experimentally and numerically the expansion flow developing downstream the corner of a partially submerged vertical plate. In this flow configuration, a steady wave remains attached to the corner of the plate. Theoretical analysis shows that, taking advantage of the slender nature of the flow, the 3D steady problem can be transformed into a 2D+time one that resembles some important features of deep-water breaking waves. The resulting simplified problem is then solved using a boundary element method. Finally, the results of simulations are compared with experimental measurements.

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