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Ben Harrop Griffiths, Mihaela Ifrim* (ifrim@math.berkeley.edu) and **Daniel Ioan Tataru**. *Title: Finite depth gravity water waves in holomorphic coordinates.*

Abstract: In this article we consider irrotational gravity water waves with finite bottom. Our goal is two-fold. First, we represent the equations in holomorphic coordinates and discuss the local well-posedness of the problem in this context. Second, we consider the small data problem and establish cubic lifespan bounds for the solutions. Our results are uniform in the infinite depth limit, and match the earlier infinite depth result of Hunter-Ifrim-Tataru. (Received September 11, 2016)