

## Internal wave focusing by a slender ring

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Owing to their conical geometry, internal gravity waves are focused by any forcing with horizontal curvature, focusing being all the more effective as the forcing is close to axisymmetric. In order to quantify this phenomenon, we consider the oscillations of a horizontal circular ring in a uniformly stratified fluid. A linear model of the generated waves is proposed, on the assumption that the ring is slender, namely of large aspect ratio. The results are applied to a torus and to circular Gaussian topography at the ocean bottom. Both full and partial rings are considered, and both subcritical and supercritical topographies. For the torus, the predictions are compared with the recent experiments by Ermanyuk, Shmakova & Flór (*JFM* 2017). The focusing efficiency is characterized in terms of the amplification ratio and wave steepness at the foci, and the oceanic relevance of the results is discussed.