



## **Tidal flow over steep topography: generation of waves and mixing**

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In recent years there has been considerable interest in the role of tides in providing energy for mixing in the deep ocean. Topography plays an important role in converting the tidal energy from the barotropic mode to the baroclinic mode. Much of the baroclinic energy is in the form of internal waves which may propagate far from the topography. When topography is steep, the internal wave energy may be concentrated in the form of a narrow beam which may enhance the possibilities for local mixing. Another aspect of the baroclinic motion over steep topography, particularly when that topography is of large amplitude, is the possibility for internal hydraulic jumps with associated mixing. This talk will focus on internal hydraulic jumps generated by tidal flow over topography, and examine the importance of the topographic steepness in producing this behavior.