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Sommario/riassunto

The last one or two decades have witnessed an increased interest in to- pographic Rossby waves, both from a theoretical computational as well as an observational point of view. However, even though long periodic pro- cesses were observed in lakes and ocean basins with considerable detail, it appears that interpretation in terms of physical models is not suffi- ciently conclusive. The reasons for this lack in understanding may be sought both, in the insufficient spatial resolution or the brevity of the time series of the available data and the inadequacy of the theoretical understanding of long periodic oscillating processes in lakes and ocean bays. Advancement will emerge from intensified studies of both aspects, but it is equally our believe that the understanding of long per'iodic oscillations in lakes is presently likely to profit most from a theore- tical-computational study of topographic Rossby waves in enclosed basins. With this tractate we aim to provide the reader with the basic concepts of wave motion in shallow waters at subinertial frequencies. Our ques- tions throughout this monogra~h are essentially: How can the solutions to this topographic wave equation in a prescribed idealized domain be construced; what are the physical properties of these solutions; are their features identifiable by observations; how reliable are such in- terpretations, etc.