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# Topological modes in stellar oscillations

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## Résumé

Stellar oscillations can be of two natures: acoustic or buoyant. Their frequencies behave differently, and they form two different bands of frequencies, and a theoretical gap between these bands of frequencies. One can show, using tools and techniques from topological physics, that this gap can be crossed by a few modes, that are spatially localized around points of cancellation of a certain characteristic frequency  $S(r)$  that we exhibit. These modes are very much akin to Lamb waves, with the difference that they are not trapped at a boundary of the system, but in its bulk. These Lamb-like waves are shown to propagate at least once in every stellar object, behaving like its fundamental mode, but additional similar waves can propagate in regions of strong gradients, for example phase transitions.

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