Energetic properties of stellar pulsation across the HR diagram

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Abstract

The energetic properties of stellar pulsations depend on the internal structure of a star and excitation mechanism. One of the main uncertainties in pulsational computations are connected with the presence of convection, rotation or magnetic field as well as microscopic physics (e.g., opacities).

I will review types of modes which are observed in stars on various evolutionary stages. In particular, I will discuss energetic aspects of oscillation modes, i.e., excitation, distribution of kinetic energy and rotational kernel. Finally, I will try to answer the question: what can we learn from these properties about the stellar structure and input physics ?

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