Gravity modes in a solar-like star or solar-like oscillations in a gamma Doradus star?

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Abstract

From observations with CoRoT and Kepler we now know that there is a significant number of solar-like oscillators which have high effective temperatures, some of them higher than several known gamma Doradus stars. Given the overlap of these instability domains in the HRD it is plausible to expect that hot solar-like oscillators have also excited gravity modes in their pulsation spectra. Up to now, however, no stars exhibiting both types of pulsations were reported, which is clearly challenging our understanding. The detection of solar-like oscillations is straight-forward, provided the quality of the data is sufficient, but, distinguishing between gravity modes and rotational signatures induced by spots is not easy. In this talk I present our analyses of a Kepler solar-like star and argue that the observations are more consistent with pulsations rather than spots. I will also discuss the implcations of our results and comment on future prospects. (Authors: Antoci et al.)

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