Seismic detection of stellar activity cycles

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Abstract

The properties of the Sun's internal acoustic oscillations (p modes) are known to vary through the solar magnetic activity cycle. Easiest to detect are the changes in p-mode frequencies, which vary in phase with the level of magnetic activity. However, variations in powers, damping rates and excitation rates have also been observed and such variations imply that the internal magnetic field is impacting the convection. Similar behaviours, for at least the oscillation frequencies and powers, have also been observed in a number of Kepler stars. This talk will provide details of how these variations have been detected previously, and will discuss the potential of PLATO for detecting similar variations in the future.

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