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Title: Relation between surface rotation, stellar activity, and pulsations. Impact of Kepler data processing
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Abstract: One of the external manifestations of stellar activity is the presence of starspots at the photosphere producing a dimming of the stellar flux that can be used to measure on the one hand the surface rotation rate, and on the other hand stellar activity. Long and uninterrupted photometric coverage of hundred of thousands stars --as measured by Kepler--, provides a unique opportunity to study stellar rotation and long term variability. However, properly corrected light curves are required in order to avoid any pollution from nearby stars or from any instrumental perturbation.
During this talk, I will summarize the most recent results on the study of surface rotation rates and their influence on the determination of the activity for different activity proxies usually used by the Kepler community. I will also address the problem of the Kepler window function on the low-frequency power spectrum as well as some issues about the correction of the Kepler data.