



**Venerdì 24 Febbraio 2017, ore 14:30, Sala Wataghin**  
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**Long-term climate variability: what we can learn from  
terrestrial and extraterrestrial archives**

Climate variations happen on all time scales. Among them, the centennial scale is particularly interesting, being comparable to the scale of human life and to the modern variation related to anthropogenic forcing. Instrumental observations, covering only a couple of centuries, are influenced by human activity and are too short to study natural centennial and multicentennial variability. The interest towards the past is also related to the challenging problem of predicting climate variability. The key to gaining information on long timescales is the measurement of proxy records in different archives, e.g. tree rings, corals, cave deposits, ice and ocean sediment cores. At present, paleoclimatic research needs long and high-resolution time series describing past climate variations and allowing to relate the observed variability with both internal and external forcings, such as solar activity and volcanic eruptions. I will illustrate some modern approaches to the study of archives, highlighting their advantages and limitations. The paleoclimatic research lines carried on at our Department will then be presented, with focus on recent results.