

Caves: archives of time within the Earth and in the Solar System

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“Live” seminar on-line at Zoom link:

<https://unipd.zoom.us/j/95469164648>

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Research in cave environments in the last twenty years has provided unexpected and fundamental information on the geological past and on the evolution of life on Earth. These include the use of speleothems and other caves sediments as paleoclimate proxies expanding the chronological record to Miocene through innovative radiometric techniques. Also, cave microbiology is revealing how bacteria and other microbes can thrive and adapt to extremely low-nutrient aphotic environments, shedding light on the evolution of microbial communities in extreme environments. All these discoveries are now directing the interest of space agencies toward the potential presence of caves as geological, paleontological and biological archives also in other planetary bodies. Recent studies have shown that the Moon and Mars host gigantic lava tube systems, that could be crucial for the feasibility of future human space missions.

The webinar is organized in the framework of the course “Planetary Geology and Exploration” by Prof. Matteo Massironi.