The History of Liquid Water Activity on Mars and the Evolution of Habitability Conditions

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As the planet with the most Earth-like habitable environment in the solar system beyond Earth, the history of liquid water activity on Mars and the evolution of its habitability conditions have long been focal topics in planetary science and astronomy. Liquid water is not only a prerequisite for life but also a critical factor in shaping Martian surface features and geological evolution. This lecture will begin with the geomorphological and geological records of liquid water activity on Mars, focusing on research progress and debates surrounding Martian valley networks and ancient oceans. By integrating climate simulations and experimental analyses, it will explore the possibilities and constraints of Martian habitability and highlight the scientific significance of the upcoming Tianwen-3 mission.

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Zoom Link (Mixed-mode)

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