

Hydrological Simulation of Vallay formation in Hesperian Marsian Surface

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It is considered that the Mars in Noachian epoch was much warmer temperature than current condition, with atmosphere and ocean supported by its magnetic activity. Several valleys which seem to be developed by ancient hydrological processes are observed in Marsian surface, and are being considered to be built long time before. Some fluvial features were formed during the following Hesperian epoch, which is considered as much cooler and drier than Noachian epoch. In this study, we applied Hydro-debris 2D model into Marsian surface in Hesperian epoch in order to try developing surface valley formation throughout hydrological processes.

Keywords: Mars, Hesperian epoch, Hydro-Debris 2D