

PROBLEMS OF THE MARTIAN RELIEF-FORMING.

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In the report the problem of an origin of channel-shaped valleys on the Mars surface is considered. Nowadays in the given area the concept of catastrophic freshet water flows dominates. The main reason for the benefit of this concept of Mars channels formation is the circumstance, that the researchers could not find any other substitution except water capable to produce so powerful eroding influence and create characteristic inner valley deposits. A serious drawback of the given concept is the fact, that the representations about the formation of Mars channels under the influence of powerful current of large volumes of liquid water are incompatible with domination of low temperatures on the Mars surface. However alternative substitutions capable to make similar or even more powerful eroding effect, - pyroclastic flows and especially post-eruptive lahars are well known for the researchers specializing on study of volcanic processes on the Earth. The pyroclastic flows are being formed during eruptions of large volumes of the heated fragmental material and have high mobility at the expense of the presence of the heated volcanic gases. Most powerful lahars, are being formed after the eruptions of pyroclastic or lava material in cases when at the area of eruption there is a plenty of frozen water. The presence on a Mars of very large volcanic structures and a wide circulation of frozen water as rock-forming mineral require more attentive attitude to an opportunity of large relief forms formation under the influence of pyroclastic flows and post-eruptive lahars.