

# Martian climate change and glacier flow

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Recent Martian exploration has revealed dusty, water-ice-rich mantling layered deposits below surface, existing in both hemispheres from mid-latitudes to the poles. Head et al.(2003) showed that these deposits has been formed during a geologically recent ice age from about 2.1 to 0.4 Myrs ago. Milliken et al. demonstrated that viscous flow features observed between 30-60 degrees latitude in both hemispheres can be explained by creep of ice rich material, using an ice flow law proposed by Goldsby and Kohlstedt (2001) and Durham et al.(2001). Milkovich and Head (2005) investigated MOC images of the north polar layered deposits and showed the climate cycle and the layer accumulation during ice age and interglacial period, using techniques commonly employed in paleoceanography for the study of deep-sea sediment cores on Earth.

Ice flow properties used in the above studies, however, are not well known even in present earth condition. I would like to talk about problems to be solved in ice rheology for future Martian glaciological study.

## References

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