

Characterisation of slope morphology and evolution on Mars

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Abstract

Slope angles, morphology and evolution on Earth are controlled by the materials that they are formed on (rocks, regolith and soils), and by the processes that are operating on them (e.g. landslides, surface wash, creep). Measurements of slope angles are made in the field or from high resolution Digital elevation models (DEMs). On Mars slopes are almost certainly controlled by the same factors. Field observations of slopes on Mars are not yet possible, but lander and rover images allow measurements of some slope angles, and assessments of slope processes. High resolution DEMs are also available for small areas. With these constraints, it is therefore possible to study slope morphology and evolution on Mars.