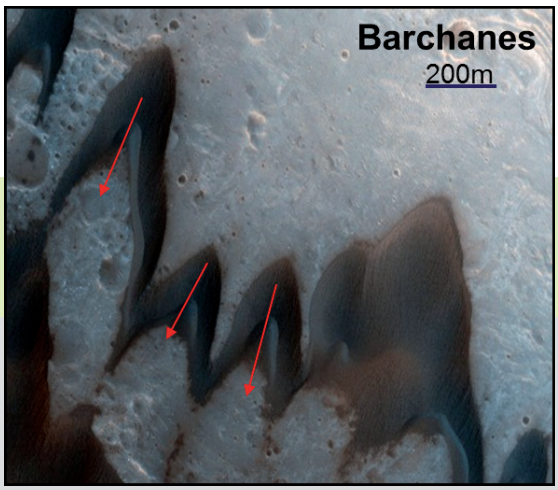
Freie Universität Berlin

Geowissenschaftliches Kolloquium

Martians dunes indicators of climate change?



Donnerstag, 2. Mai 2013 - 16.15 Uhr

Prof. Dr. Pascal Allemand
Laboratoire de Géologie de Lyon, Terre, Planètes, Environnement

Models of climate evolution of Mars suggest that this planet has undergone recent climatic changes related to variation of obliquity of its rotation axis. Possible glacial relicts that have been found in the morphology of equatorial belt indicate that the recent climate was not stable. Dune fields, that are mainly located around the North Pole and inside the largest craters of the southern Hemisphere, provide a new way for investigating recent past climates. After general considerations on dune behaviors and on the mechanism of sand transportation on Mars, I will describe martian dune fields whose geometry shows that they have been built by more than one wind regime.

Pascal Allemand obtained a PhD of Rennes university in tectonics. He started to study the martian tectonics and the relaxation of impact craters by analog modeling in "Ecole Normale Supérieure de Lyon". He moved to the Université Lyon 1 where he is developing a remote sensing lab dedicated to planetary and Earth geomorphology. More specifically, for 10 years, he is developing methods using images acquired by drones, that are dedicated to the observation of the environment to study rivers, landslides and martian analogues.

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