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Isotopenforschung und **Kernphysik**

E I N L A D U N G

zum

V E R A - S E M I N A R

von

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Formation of sand-wedges over millions of years in Beacon Valley, Antarctica; a new paleoenvironmental record of Taylor Glacier activity

Soil inflation in dry environments is a common occurrence in areas where surfaces are protected clasts overlying silt-size particles. Another type of surface inflation has been documented in the Dry Valleys where fines are kinetically sieved into thermal contraction cracks in the permafrost that annually open and close 0.5 to 1.5 cm. This process has been documented to have occured over at least several million years based on cosmogenic Be and Al profiles of a 10-m core. The data from this core reveal that historical waxing and waning of the Taylor Glacier over lower Beacon Valley has occurred in the past several million years. This process is analogous to those in Siberia forming the classic edoma or ice-wedge complexes. We propose that these “sand-wedge complexes” form in a similar way but the cracks are infilled with sand since liquid water seldom form in sufficient amounts to fill the contraction cracks in the hyperarid Beacon Valley.

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