

Erosion of the Yucca Mountain crest

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The Yucca Mountain crest in Nevada, USA has been proposed as a permanent site for high level radioactive waste. But a new study, already published as an article in press by Elsevier's journal *Geomorphology* and recently included in the Research Highlights of *Nature*, shows that there may be erosion of the crest.

Kurt Stüwe of the University of Graz, Austria, together with his colleagues, used a simple numerical landscape evolution model to explore the rate of erosional decay of the Yucca Mountain crest. The model they used is well established in the expert literature, but Kurt Stüwe and his coauthors used it for the first time for a subject of economic relevance.

The researchers predict that the crest could be denuded within 500.000 years to 5 million years, using conservative parameters as the local geology of the region. It may be even more rapid if other factors are involved. The erosion procession also have the potential to affect the long-term stability of this repository.

"In our research of the morphological imprint of tectonics in mountain belts around the world, it was exciting to be able to apply our numerical models to a subject of high interest to experts outside the narrow field of geomorphology or tectonics".commented Dr. K. Stüwe, the study's lead investigator.

More information: The article "Erosional decay of the Yucca Mountain crest, Nevada" by K. Stüwe, J. Robl and S. Matthai appeared in

Geomorphology, Articles in Press (28 January 2009), published by Elsevier. <http://www.elsevier.com/locate/geomorph>

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