

Volume 10, Number 5 • October 2014

# **Cosmogenic Nuclides**

Guest Editors: Friedhelm von Blanckenburg and Jane K. Willenbring



## **Cosmogenic Nuclides: Dates** and Rates of Earth-Surface Change

Friedhelm von Blanckenburg and Jane K. Willenbring



#### The Nuts and Bolts of Cosmogenic **Nuclide Production**

Tibor J. Dunai and Nathaniel A. Lifton

ABOUT THE COVER:

High-energy cosmic particles hit molecules in the Earth's atmosphere where they initiate a cascade of secondary cosmic rays. These particles produce "meteoric" cosmogenic nuclides in the atmosphere, and "in situ" cosmogenic nuclides when they arrive at the Earth surface. The accumulation and radioactive decay of these nuclides serve as "clocks" of Earth-surface change. The background shows the Forno glacier, Swiss Central Alps. IMAGE FRIEDHELM VON BLANCKENBURG, ANE WILLENBRING, AND Manuela Dziggel

## **Dating Disappearing Ice with Cosmogenic Nuclides**

Susan Ivy-Ochs and Jason P. Briner



## Cosmogenic Nuclide Dating of Earthquakes, Faults, and Toppled Blocks

Lucilla C. Benedetti and Jérôme van der Woerd



## **Tracing and Pacing Soil Across Slopes**

Jean L. Dixon and Clifford S. Riebe



## **Cosmogenic Nuclides and Erosion at the Watershed Scale**

Darryl E. Granger and Mirjam Schaller



*Elements* is published jointly by the Mineralogical Society of America, the Mineralogical Society

of Great Britain and Ireland, the Mineralogical

The Clay Minerals Society, the European

Association of Canada, the Geochemical Society,

Association of Geochemistry, the European Association of Geochemistry, the International Association of GeoChemistry, the Société Française de Minéralogie et de Cristallographie, the Association of Applied Geochemists, the Deutsche Mineralogische Gesellschaft, the Società Italiana di Mineralogia e Petrologia,

the International Association of Geoanalysts,

(Mineralogical Society of Poland), the Sociedad Española de Mineralogía, the Swiss Society of Mineralogy and Petrology, the Meteoritical Society, and the Japan Association of Mineralogical

Sciences. It is provided as a benefit to members

Elements is published six times a year. Individuals

pating societies to receive Elements. Institutional American Mineralogist, Clay Minerals, Clays and Clay Minerals, Mineralogistal Magazine, and The Canadian Mineralogist—also receive one copy

are encouraged to join any one of the partici-

of Elements as part of their 2014 subscription. Institutional subscriptions are available for US\$160 (US\$175 non-US addresses) a year in 2014. Contact the executive editor (tremblpi@

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Publications mail agreement no. 40037944

the Polskie Towarzystwo Mineralogiczne

of these societies.

## GeoScienceWorld Participating Publisher

ete.inrs.ca) for information.

of America

Printed in USA



Paper from responsible sources

























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