DESCRIPTION

This book is a welcome introduction and reference for users and innovators in geochronology. It provides modern perspectives on the current state-of-the-art in most of the principal areas of geochronology and thermochronology, while recognizing that they are changing at a fast pace. It emphasizes fundamentals and systematics, historical perspective, analytical methods, data interpretation, and some applications chosen from the literature. This book complements existing coverage by expanding on those parts of isotope geochemistry that are concerned with dates and rates and insights into Earth and planetary science that come from temporal perspectives.

Geochronology and Thermochronology offers chapters covering: Foundations of Radioisotopic Dating; Analytical Methods; Interpretational Approaches: Making Sense of Data; Diffusion and Thermochronologic Interpretations; Rb-Sr, Sm-Nd, Lu-Hf; Re-Os and Pt-Os; U-Th-Pb Geochronology and Thermochronology; The K-Ar and 40Ar/39Ar Systems; Radiation-damage Methods of Geo- and Thermochronology; The (U-Th)/He System; Uranium-series Geochronology; Cosmogenic Nuclides; and Extinct Radionuclide Chronology.

- Offers a foundation for understanding each of the methods and for illuminating directions that will be important in the near future
- Presents the fundamentals, perspectives, and opportunities in modern geochronology in a way that inspires further innovation, creative technique development, and applications
- Provides references to rapidly evolving topics that will enable readers to pursue future developments
Geochronology and Thermochronology is designed for graduate and upper-level undergraduate students with a solid background in mathematics, geochemistry, and geology.

Read an interview with the editors to find out more: https://eos.org/editors-vox/the-science-of-dates-and-rates

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