

NATURAL RADIOACTIVITY AND GEOCHRONOMETRY: AN OVERVIEW

Liquids and gases forget, but rocks remember – J.A.O'Keefe

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Abstract

Radiogenic isotope data generated and published by specialists are meant for serious students and active workers in radiogenic isotope geochronology and geochemistry. Even books on the subject are generally addressed to the same audience. As such data bear increasingly on many other areas of earth science, there is a great need for a concise and clear overview of the basic concepts and principles of isotopic dating (geochronometry) rather than facts (geochronology) to help non-specialist students and researchers gain an intelligent understanding of radiogenic isotope literature. This overview aims to fill this need, and assumes only college level knowledge of physics, chemistry and mathematics. A review of fundamentals in a mature field cannot be very original in its contents, but considerable effort has been made to unify and generalize the essential information in a new and original way.

Key words: Radiogenic isotopes, geochronology, natural radioactivity, parent-daughter systems