

ABOUT AGU

Outstanding Student Paper Awards

The following members received Outstanding Student Paper Awards at the 2007 Joint Assembly in Acapulco, Mexico.

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Ocean Sciences Section

Ruth Coffey, Marine Sciences Research Center, School of Marine and Atmospheric Sciences, Stony Brook University, Stony Brook, New York, *Submarine groundwater discharge in Barbados linking population and the environment.*

Diana Escobedo-Urias, Instituto Politécnico Nacional, La Paz, Mexico, *Eutrophication process in coastal lagoons of North Sinaloa, Mexico.*

Chelle Gentemann, Rosenstiel School of Marine and Atmospheric Science, University of Miami, Miami, Florida, *Global 9 km multi-satellite, multi-sensor sea surface temperature from MODIS, AMSR-E, and TMI: In situ observations of diurnal warming at the ocean surface.*

Gilberto Jeronimo, Centro de Investigación Científica y de Educación Superior de Ensenada, Ensenada, Mexico, *A subsurface warm eddy off northern Baja California.*

Mayra Riveron-Enzastiga, Instituto de Ciencias del Mar y Limnología, Mexico City, *Fortnightly variability at the transition between two sub-estuaries.*

Megan Rippey, Scripps Institution of Oceanography, La Jolla, California, *Spatial-temporal variability in fecal indicator bacteria concentrations at Huntington Beach: Connections to physical forcing.*

Seismology Section

Alejandro Gallego, University of Florida, Gainesville, *Non-volcanic seismic tremor in the Chile Triple Junction region: Active subducted transform faults?*

Simon Lloyd, Northwestern University, Evanston, Illinois, *New Moho map for South America from receiver functions and surface waves.*

Volcanology, Geochemistry, and Petrology Section

Vanessa V. Espejel-Garcia, University of Texas at El Paso, *Mixing between basaltic and trachytic magmas to generate the trachyte-phonolite suite at Suswa volcano, Kenya Rift: Evidence from mineral and glass compositions.*

Denise Honn, University of Nevada, Las Vegas, *Redefining an igneous system: Volcanic-*

plutonic links between the Wilson Ridge pluton and River Mountains volcanic section, Nevada, USA.

Laura Mori, Centro de Geociencias, Universidad Nacional Autónoma de México, Querétaro, *Variable slab contributions characterize the Miocene magmatic record of the central Trans-Mexican Volcanic Belt.*

Tectonophysics Section

Will Levandowski, Princeton University, Pennington, New Jersey, *Beam-formed receiver function analysis from the southern Sierra Nevada, CA: A Moho hole?*

Space Physics and Aeronomy Section

Victor De la Luz, Departamento de Astrofísica, Instituto Nacional de Astrofísica Óptica y Electrónica/Instituto de Geofísica, Universidad Nacional Autónoma de México, Mexico City, *3D simulations of solar observations in radio, millimeter, and submillimeter wavelengths.*

Olivia L. Enriquez Rivera, Instituto de Geofísica, Universidad Nacional Autónoma de México, Mexico City, *The origin of Earth's fore-shock waves.*


Edio da Costa Junior, Instituto Nacional de Pesquisas Espaciais, Sao Paulo, Brazil, *AKR emissions during magnetic storms.*

David Galvan, University of California, Los Angeles, *Comparison of EUV brightness with line-of-sight total electron content in the Earth's plasmasphere.*

William Robert Johnston, University of Texas at Dallas, *The role of the plasmasphere in radiation belt particle energization and loss.*

BOOK REVIEW

Studies of Cave Sediments: Physical and Chemical Records of Paleoclimate (Revised Edition)

 *Ira D. Sasowsky and John Mylroie, Editors; Springer; x + 329 pp.; ISBN 978-1-4020-5326-9; 2007*

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Caves have long fascinated humankind, from prehistory to present-day tourism. Caves are also a subject for a range of scientific investigations, including cave biology, archaeology, paleoclimatology, geology, hydrology, and geomorphology. One of the benefits caves provide is their role as a repository of material that might not otherwise survive on the Earth's surface, due to caves' interiors being protected from physical erosion by nature of their underground locations. *Studies of Cave Sediments* focuses on this role as a repository, in particular on Quaternary (historic to 1.8 million years old) paleoclimate information preserved in cave sediments.

This book, available in both hardback and e-book, is a revised edition of a work originally published in 2004. The book is evenly

divided into two sections. The first section (chapters 1–8) focuses on clastic sediments ranging from fluvial to glacial, their geochemistry, and their paleoclimate interpretations. Chapter 1, by Bosch and White, provides a useful theoretical guide to how clastic sediments enter caves, and how they are transported, deposited, and subsequently interpreted. Chapter 2, by Mahler et al., presents several examples of how sediments relate to contaminant transport in karst systems. Chapters 3–8 provide detailed local case studies on clastic sediments: from the Buchan Caves in southeastern Australia, Kookan Cave in Pennsylvania, Barton Springs in Texas, Bathers Cave in Virginia, Lime Creek in Colorado, and Laški Ravnik in Slovenia.

The second section of the book (chapters 9–17) focuses on chemical precipitates, namely, speleothems (more widely known as

stalagmites, stalactites, and flowstones) and the variety of geochemical methods that can be used to obtain paleoclimate information from them. Chapter 9, by White, provides a lengthy and useful review of paleoclimate records that can be obtained from speleothems, while chapter 10, by Dorale et al., comprises a review of uranium-series dating of speleothems. A second review of speleothem palaeoclimate, this time focused on the use of oxygen and carbon isotopes, is provided by Harmon et al. in chapter 11. Chapters 12–17 then provide detailed local case studies: from Devils Hole in Nevada, Spannagel Cave in Austria, Lappshullet in Norway, southwestern Oregon, the Guadalupe Mountains in New Mexico, and the West Indies.

As with many edited books, *Studies of Cave Sediments* has strengths and weaknesses. The review chapters by Bosch and White, and White on clastic sediments and speleothems, respectively, are excellent introductions to the subject areas for graduate students, research scientists, and senior-level undergraduates. The review of uranium series dating is equally useful, although a similar review led by the same author can be found in the journal literature.

In contrast, the review of speleothem stable isotope palaeoclimatology is outdated. Individual case study chapters could be invaluable to researchers working on palaeoclimate or cave records in those regions, but, as