Understanding passive margins—thick accumulations of sediments built above the juncture between continental and oceanic crusts—has far-reaching economic and societal implications. Passive margins underlie the coastal regions of most of the contiguous United States, extending continuously from Texas eastward to Florida and northward to Maine. They hide most of the undiscovered hydrocarbon reserves of the United States, and they are excellent sites for sequestering carbon dioxide. Natural hazards of hurricanes, tsunami, sea level rise, and rapid subsidence, and concerns related to the United Nations Law of the Sea, also make it imperative to better understand passive margins, and how they form and evolve.

Economic and societal concerns provide natural avenues for explaining the importance of this and other hypothesis-driven geoscientific research efforts to U.S. taxpayers and political leaders, especially because much of the U.S. population lives on or near our passive margins. Linkages between fundamental geoscientific research and societal issues are relatively visible and easy to explain in regions of the technically active western United States, and comprehensive studies of U.S. passive margins present a similar opportunity to reach and teach residents of the eastern and southern United States. Furthermore, the economic potential of passive margins invites joint study and sharing of data by industrial and academic scientists.

**From Deserts to Monsoons: Aerosols and Their Impacts at Regional and Global Scales**

There is a growing body of scientific evidence that aerosols may have contributed to the severity and/or more frequent occurrences of extreme weather for both dry and wet climates, and that aerosols transports between wet and dry climates may play important roles in linking water cycle and climate anomalies between deserts, semi-deserts, and monsoon regions.

An international workshop entitled “From Deserts to Monsoons” is planned to be held on the island of Crete, Greece during 1-6 June 2008 to address scientific and societal issues. The workshop is intended to attract international science experts from a diverse field of earth sciences, and will provide a forum emphasizing interdisciplinary approaches to a variety of Earth system science processes, cutting across several fields relevant to aerosols, water cycle, climate dynamics and climate change research.

The meeting venue is the island of Crete, which is appropriate as it is centrally located in the region extending from the Atlantic through the Mediterranean/N. Africa and S. Europe, to India and Southeast Asia, one of the main regions of the world affected by aerosols. It is expected that scientists from Europe, N. America, Middle East, India, SE, and E. Asia will attend.

A strong emphasis and ample time will be devoted to posters as well as discussion. The workshop will be unique and very up-to-date in the era of accelerating climate and environmental change.

For more up-to-date information regarding topics, abstract submission, registration deadlines, etc., please consult the workshop website, www.aegeanconferences.org. For any questions related to meeting specifics, please contact Dimitris Lambris at DesertsMonsoons@aegeanconferences.org, Dr. Menas Kafatos at mkaftos@mgu.edu, or Dr. William Lau at William.K.Lau@nasa.gov. On behalf of the Organizing Committee, Menas Kafatos, Chair William K. Lau, Co-Chair

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From Deserts to Monsoons: Aerosols and Their Impacts at Regional and Global Scales

**CALL FOR PAPERS**

The GeoSwath initiative is an EarthScope project focused on coastal and oceanic margin physical studies. The initiative is highly interdisciplinary, and it is scheduled to reach the Texas coast in 2010 and Maine in 2013. The GeoSwath initiative is an EarthScope effort linked to the USArray to integrate geology and geophysical imaging to better understand the scale of continental margin geodynamics and tectonics.
Radiation in the Atmosphere: A Course in Theoretical Meteorology

Radiation transfer theory plays an important role in many aspects of the application of atmospheric radiative transfer climate modeling, weather prediction, and atmospheric remote sensing. For these application areas, the radiation transfer equation needs to be solved for a broad spectral range—from the ultraviolet to the infrared part of the electromagnetic spectrum—scattering or absorbing by molecules and cloud/aerosol particles, absorption by atmospheric gases, surface reflectance, and emission of radiation by the Earth surface and the atmosphere.

Similar to many other books on this topic, an important limitation is that most of the Radiation in the Atmosphere focuses on the scalar approximation of the radiative transfer equation. For many applications, including the retrieval of ozone profiles from satellite measurements, in chapter 11, the neglect of polarization causes significant errors even if only the radiative needs to be calculated. Polarization is only discussed as sort of a side effect of radiative transfer in chapter 10. Radiation in the Atmosphere would have been more complete, and would have offered a clearer added value to existing books, if vector radiative transfer theory had been used throughout the book. Moreover, since for most solutions techniques of the radiative transfer equation as well as for most perturbation theory, the extension to polarized light has been available for many years.

The book introduces the radiative transfer equation derived using a phenomenological approach. The derivation itself is clear, but the book does not mention that the radiative transfer equation can also be derived in a rigorous manner from classical electromagnetic (Maxwell's) equations.

The book summarizes some well-known methods for solving the scalar radiative transfer problem in a multiply scattering atmosphere (matrix operators, successive orders of scattering, discrete ordinate, spherical harmonics, Monte Carlo). For each method, enough details are given to allow readers...