

Commonwealth Center for Coastal Physical Oceanography
Old Dominion University
Spring 2014 Seminar Series



“THE LATE PALEOZOIC ICEHOUSE CONTROVERSY: WHAT IT IS, WHY IT MATTERS, AND WHAT WE’RE GOING TO DO ABOUT IT”

NICHOLAS HEAVENS
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Monday, February 17, 2014
3:30 PM

Room 1202, Engineering and Computational Sciences Building

Abstract

The last period of widespread continental glaciation prior to the Cenozoic was the Late Carboniferous and Early Permian Periods (330-270 million years ago). Studying this Late Paleozoic Icehouse is an important exercise in comparative climatology and biogeochemistry, since the Earth was geographically and biologically different than the present day. Late Paleozoic glaciation is currently thought to be limited to high-latitudes (no lower than 50°S) in the southern supercontinent of Gondwanaland. In this talk, I will review evidence of low-latitude dust and upland glaciation that challenges the dominant paradigm, suggesting that there was extensive “third pole” glaciation in the ancient Appalachians, while continental ice sheets may have reached 30° latitude in both hemispheres. I then will explore the possibility that higher levels of explosive volcanic activity could explain the intensity of this ancient cold snap.

Biography

Nicholas Heavens received a B.S. degree in Geophysical Sciences from the University of Chicago and M.S. and Ph.D. degrees from Caltech in Planetary Science. He then was a Postdoctoral Research Associate in Earth and Atmospheric Sciences at Cornell University. Currently, he is Research Assistant Professor of Planetary Science at Hampton University, where he studies Martian meteorology, the atmospheric dynamics of Jupiter and Saturn, and the climate of the Late Paleozoic. He is also on the Advisory Board of STEPPE, a new NSF-funded consortium that is working to organize investigators of the Earth's sedimentary crust.

Reception before seminar at 3:00 PM