



2013-2014 Distinguished Lecturer Series



Reconstructing the Footprint of an Ice Sheet on the Antarctic Continental Margin

Dr. Sandra Passchier
Montclair State University

Throughout the past 34 million years, the Antarctic ice sheet played a major role in global sea level variations. With its white reflective surface, the ice sheet also controls the heat balance, wind patterns, and annual sea ice formation in the Southern Ocean. The exact mechanisms involving Antarctic ice sheet variability and heat transport in the global climate system, however, have been poorly understood due to a lack of data from the inaccessible Polar Regions. In recent years, boreholes within sediment archives on the Antarctic continental margin have begun to shed light on the conditions at the onset of Antarctic glaciation and the variable high-latitude climate of the Late Cenozoic icehouse period.

Dr. Passchier participated on Ocean Drilling Program Leg 188 and Integrated Ocean Drilling Program Expedition 318, along with three other drilling projects targeting sediment archives on Antarctica's continental margin.

Date:

Location:

