Scientists say Antarctic climate evidence too strong to ignore

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(PhysOrg.com)—More than 50 top international polar scientists will meet at Victoria University of Wellington this week to discuss their cutting-edge climate change research.

The focus will be establishing models that explain how Antarctica's ice sheets have behaved in Earth's recent past and explore how they may change in the future.

For several years, scientists from Italy, Germany, New Zealand and the United States have been studying a 1300 metre-long rock core recovered by the multinational ANDRILL (ANtarctic geological DRILLing) programme from beneath the Ross Ice Shelf, in McMurdo Sound, Antarctica.

The core was recovered in 2006 by a team of drillers and engineers from Antarctica New Zealand, who drilled through the ice to a record-setting depth.

The rock core contains valuable evidence of how Antarctica's ice sheets and climate have changed over time and scientists use this information to learn what is likely to happen to Antarctica's ice masses in the future and determine how these changes might affect the world's climate and sea level.

Professor Tim Naish, Director of Victoria's Antarctic Research Centre, and Professor Ross Powell from Northern Illinois University in the

United States are Co-Chief Scientists of the collaborative research project.

Professor Naish says the workshop from 10 to 13 February is the culmination of many years of intensive work and new discoveries by a huge team of scientists, engineers, drillers, and educators.

He says Antarctica's ice sheets have grown and collapsed at least 40 times over the past five million years.

"Much of our research has focused on the time interval from three to five million years ago. This period in Earth's history is extremely relevant as it represents a global climate analogue to that projected for our very near future."

"So far results from our studies on this extraordinary archive of Antarctica's environmental history are providing critical new insights into past changes in Antarctica's most vulnerable element: the West Antarctic Ice Sheet. If this ice mass were to melt, global sea-level would rise up to 5 metres - our world would be a very different place."

Dr Richard Levy of GNS Science, Project Staff Scientist and workshop convenor says the workshop provides a rare opportunity for us to review all aspects of research carried out during the project - work by some of the world's best polar earth scientists.

"This is a chance to combine our findings and take a huge step forward in our understanding of the Antarctic ice sheet's response to global climate change."

Scientists will spend the four days sharing results and debating models and interpretations. A key aim is to establish a strategy to deliver key results to the broader scientific community, general public, and policy

makers.

Provided by Victoria University of Wellington