



Scientific Committee on Antarctic Research

SCAR Medal for Excellence in Antarctic Research, 2010

John Turner

Over his career, Prof. John Turner has significantly contributed to improving our understanding of past, present and future climate change in Antarctica, drawing the world's attention to the global implications of Antarctic meteorology. He has shown exceptional leadership in several major SCAR scientific programmes. Prof. Turner utilized ground-based and space-based observations and general circulation models to better understand and quantify changes in climate over a range of spatial and temporal scales. His contributions include: delineation of the role of natural and human forcings in surficial warming along the Antarctic Peninsula; identification of dramatic winter warming of the atmosphere over Antarctica in recent decades; compilation of instrumental era temperature changes over the surface of Antarctica; clarification of the influence of major circulation features such as the Southern Annular Mode (SAM) and El Niño-Southern Oscillation (ENSO) on changes in precipitation, sea ice extent, and temperature over Antarctica; and modelling of future Antarctic and Southern Ocean climate change.

Prof. Turner's efforts have greatly improved our understanding of the Antarctic climate system in general. As a service for the Antarctic research community, Prof. Turner has compiled the most complete and definitive database of ground-based and upper atmosphere meteorological information for Antarctica. He has led important SCAR programmes such as the Scientific Research Programme Antarctica and the Global Climate System (AGCS). Prof. Turner produced an important synthesis of Antarctic climatology entitled the *State of the Antarctic and Southern Ocean Climate System* and was the lead editor of SCAR's *Antarctic Climate Change and the Environment (ACCE)* report. This report allowed SCAR to contribute to the United Nations Framework Convention on Climate Change's 15th Conference of Parties in Copenhagen and several Antarctic Treaty Consultative Meetings. He has also worked to improve the safety of Antarctic operations as co-author of the *International Antarctic Weather Forecasting Handbook*.

In summary, Prof. Turner is an outstanding scientist who has made sustained contributions to Antarctic science over his career promoting the value of Antarctic meteorology and climatology in the global climate change debate and is deserving of his recognition as a SCAR Medal recipient.