

## *Research on the Mechanisms Governing the Climate System*

**Claude Lorius**

**2001 Balzan Prize for Climatology**

**Balzan GPC Adviser:** Enric Banda

**Main Researchers:** Project 1) Jean Jouzel, Senior Researcher; Project 2) Joel Savarino, Senior Researcher; Project 3) Jean Robert Petit; Project 4) Dominique Raynaud, Senior Researcher

**Affiliated Institution:** CNRS, Grenoble

**Period:** 2001-2008

Claude Lorius is Director Emeritus of Research at the Centre National de la Recherche Scientifique (CNRS) in Grenoble. With the second half of his prize, Lorius financed four projects involving research on the mechanism governing the climate system: 1) Antarctic Palaeo-temperatures and Antarctic climate mechanisms: cross-use of water isotopes ( $_D$ ,  $_{18}O$ ) and air isotopes ( $_{15}N$ ,  $_{40}Ar$ ); 2) Climate and atmospheric chemistry: Constraints due to isotopes of oxygen and sulphur; 3) Study of impurities in the ice: aerosols and organic content; 4) Record of atmospheric  $CO_2$  during Stage 11, 400,000 years ago. Resulting publications contributed significantly to the awareness of the importance of the impact of current global warming on the degradation of the earth's atmosphere.

### **Publications**

The projects resulted in approximately fifty articles in scientific journals by researchers Jean Jouzel, Joel Savarino, Jean Robert Petit and Dominique Raynaud. A complete listing can be downloaded from the Balzan site: <http://www.balzan.org/en/prizewinners/claude-lorius/research-project-french-lorius>.