

## Wallace S. Broecker, pioneer in the study of global warming, wins the BBVA Foundation Frontiers of Knowledge Award

- Broecker was the first scientist to alert to climate change as far back as 1975, one year before the first manifestations of planetary warming
- This prize corresponds to the Climate Change category of the BBVA Foundation Frontiers of Knowledge Awards and comes with a cash amount of 400,000 euros
- The Frontier Awards can be considered second only to the Nobel Prize in their monetary amount, an annual 3.2 million euros over eight prize categories, and the variety of disciplines covered

**January 13, 2009.-** The 2008 BBVA Foundation Frontiers of Knowledge Award in the Climate Change category has found its way, in this inaugural edition, to U.S. researcher Wallace S. Broecker, who more than three decades ago predicted the existence of climate warming due to human activity. In 1975, Broecker published the article “Climate Change: Are We on the Brink of a Pronounced Global Warming?” in the journal *Science*, marking the first ever mention of the term “global warming” in a scientific publication. In this article, he also predicted that the rise in anthropogenic CO<sub>2</sub> emissions would weaken the ocean’s ability to withdraw carbon dioxide from the atmosphere, leading to pronounced warming at the start of the 21st century - a prediction that has proved all too true.

The BBVA Foundation Frontiers of Knowledge Awards seek to recognize and encourage world-class research and artistic creation and can be considered second only to the Nobel Prize in their monetary amount, an annual 3.2 million euros, and the breadth of the scientific and artistic areas covered. They are also the only international awards reserving a category for Climate Change.

The awards take in eight categories, carrying a cash prize of 400,000 euros each. The Climate Change award, the first to be decided, is to honor endeavors of a diverse nature - from research through to practical actions and initiatives - in the race against climate change, one of the crucial issues facing 21st century society.

The jury in this inaugural edition singled out the pioneering quality of Broecker’s work, which has opened up new avenues of research vital to our understanding of climate and its evolution. Special mention goes to the laureate’s knowledge contribution with

regard to “abrupt changes”; processes which trigger extreme and sudden changes in the climate system. Today’s rapid thawing of the Arctic polar cap threatens to trigger one such abrupt event: the alteration of the main current distributing heat across ocean basins (the thermohaline circulation, also known as the oceanic heat conveyor belt).

In the words of the award certificate, Broecker’s “seminal” research into the oceans’ biological and chemical processes “pioneered the development of Earth System Science as the basis for understanding global climate change, both past and present”. It also highlights “his holistic approach”, which has led him to identify “the mechanisms of abrupt climate change”.

“Prof. Broecker has been an eloquent educator and a forceful champion of efforts to address the risks of greenhouse gas emissions from human activities”, concludes the jury in its resolution.

Wallace S. Broecker, born in 1931, is a professor in the Department of Earth and Environmental Sciences at Columbia University (New York). The author of some 400 scientific articles and numerous books, he was one of the first scientists to confirm the importance of air-sea interaction in climate regulation through CO<sub>2</sub> exchange.

The jury deciding the winner in this inaugural edition was chaired by Edward S. Rubin (Carnegie Mellon University - United States). Its members are leading international experts working in areas related to climate study: Kenneth J. Davis (Pennsylvania State University and director of the Institute Center for Advanced Carbon Research and Education - United States); Hans J. Schellnhuber (Postdam Institute for Climate Impact Research - Germany); Bjorn Stevens (Max Planck Institute for Meteorology - Germany); and the Spaniards Carlos Duarte (Mediterranean Institute for Advanced Studies, CSIC - University of the Balearic Islands) and Sergio Alonso (University of the Balearic Islands).

The BBVA Foundation supports knowledge generation, scientific research and the promotion of culture, relaying the results of its work to society at large. This effort materializes in research projects, human capital investment, specialization courses, grants and awards. Among the Foundation’s preferred areas of activity are basic sciences, biomedicine, ecology and conservation biology, the social sciences and literary and musical creation.

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