

## THE INTERNATIONAL SEMINARS ON PLANETARY EMERGENCIES AND ASSOCIATED MEETINGS 38<sup>th</sup> SESSION

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### INTRODUCTION

Dear Colleagues, Ladies and Gentlemen,

I welcome you all to this 38<sup>th</sup> Session of the International Seminars on Nuclear War and Planetary Emergencies and declare the Session to be open. With sadness, I have to report the death of a great friend of Erice and the World Federation of Scientists. Kai Manne Borje Siegbahn died on 20 July 2007 in Sweden. He was 89 years old. Kai is one of the front-line scientists of the 20<sup>th</sup> century. A Professor of Physics at Uppsala University he focused his research on high-precision beta spectroscopy. Having noticed that excitation, by X-rays from an X-ray tube, materials emit electrons with energies characteristic of their binding energies, he developed a whole new line of spectrometers to determine these energies and resolve the well-defined electron lines at the level of their inherent atomic levels, and thus identify the chemical composition of materials. For his pioneering work in developing and applying the Electron Spectroscopy Chemical Analysis method (ESCA), he received the Nobel Prize in Physics in 1981. Since then, he never stopped refining the method using lasers, reaching ever-higher levels of accuracy in the detection of molecules. Kai Siegbahn was a strong supporter of the Erice Spirit and Science without Borders. He was President of the World Federation of Scientists from 1990 to 1998.

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### THE WORLD FEDERATION OF SCIENTISTS (WFS)

1966-2006

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1966-1974	Victor F. WEISSKOPF	1st President WFS
1974-1982	Isidor I. RABI	2nd President WFS
1982-1990	Tsung Dao LEE	3rd President WFS
1990-1998	Kai M.S. SIEGBAHN	4th President WFS
1998-2006	Antonino ZICHICHI	5th President WFS

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**20** Agreements signed with Governments.

**65** Scientific Collaboration Agreements signed with Governmental Institutions and Research Institutes worldwide.

**43** Research Centres established in Developing Countries.

He was also Vice President of the ICSC–World Laboratory since its foundation as well as one of its most active Project Directors. I would like to ask you to stand up for a minute of silence. Thank you.

Let me now warmly welcome our distinguished guests, who spared no effort in order to be with us today: one hundred and ten scientists from 35 countries and more than 100 institutions to analyse a series of crucial multi-disciplinary scientific problems. These problems are all part of the 63 Planetary Emergencies determined by the World Federation of Scientists 33 years ago.

The main topics of this 38th Session are:

- The World Energy Crisis, with a focus on how to manage the Environment.
- Meteorology and Climate, with a focus on the mathematical difficulties and problems including the Theoretical Alternatives to Climate.
- Brain Diseases with a focus on Alzheimer's Disease Modeling.
- Global Monitoring of the Planet with a focus on North Pole Exploration and Pollution related to Nuclear Energy Environmental Issues.
- Medicine and Biotechnology with a focus on Infectious Agents and Cancer.

We have a very heavy schedule ahead of us and I shall not delay any longer in calling, H.E. the Vice President of the Polish Government and Minister of the Environment of the Republic of Poland, Professor Jan Szyszko to give us his lecture.

We have a special link with Poland since our Institution has been strongly supported by *H.H. Jean Paul II*. Let me recall the great privilege we have enjoyed on May 8, 1993 as testified by the following picture.

