

Helge Norbert Jungwirth: in Memoriam

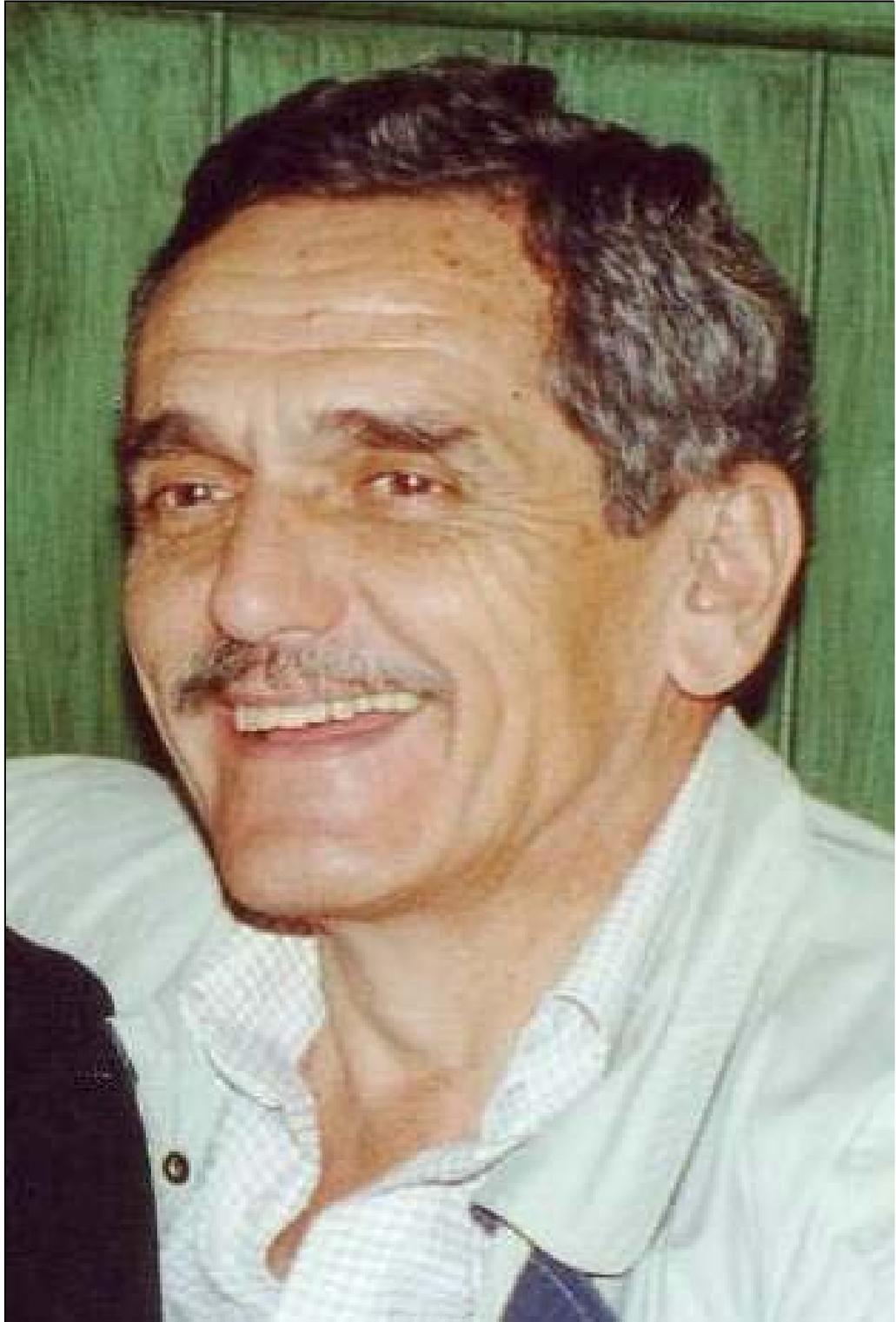
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On behalf of the International Organizing Committee and Local Organizing Committee of this conference, we want to commemorate a well-known member of our scientific community, who passed away about a year ago, Helge Jungwirth. Helge was born in Linz, Austria on 20 July 1941. He went to school in Tulln and studied at the Technical University in Vienna, where he obtained the equivalent of a Masters Degree in Engineering Physics with work on an ion source test facility at the Institute of Physics, Reaktorzentrum Seibersdorf, Austria.

He and his wife Gerlinde came to South Africa in April 1970 when he started to work in the Nuclear Physics Division of the National Physical Research Laboratory of the Council for Scientific and Industrial Research in Pretoria, where the accelerator facilities, later to be built at Faure, were then being planned. He played a key role in defining the accelerator configuration, which became the National Accelerator Centre. He started from scratch with the development of computer programs for the calculation of three-dimensional electrostatic and magnetic field distributions, taking iron characteristics, but not current distributions, into account. He also developed computer programs to calculate two-dimensional field distributions, taking iron properties as well as current distributions into account. These programs were used to design, not only the magnets of the 200 MeV separated-sector cyclotron, but many of the other magnets in use at the accelerator facilities at Faure. He further developed accurate analytic expressions for betatron oscillations in a separated sector cyclotron, by approximating edge fields by three step fields. From 1977 he was deputy head of the Accelerator Group and played an important role in the design, construction and commissioning of almost every component of the accelerator facilities. He was also head of the division responsible for the design and construction of magnets and vacuum systems, fields in which he became an expert. He made an important contribution to the operation of the accelerators at Faure by analyzing the eddy currents in the 200 MeV cyclotron, and devising a procedure for fast magnetic field stabilization during energy changes. In 1990 he received the Council for Scientific and Industrial Research (CSIR)-award for Excellent Achievement.

He was invited to work for 15 months during 1986/87 at SIN (now PSI) in Villigen, Switzerland on a design study of magnets with super-conducting coils for the proposed 3600 MeV ring cyclotron ASTOR, where he developed the novel idea of S-coils, i.e. coils in the gap between yoke and pole pieces of sector magnets instead of around the poles to obtain isochronous fields in a separated-sector cyclotron. In 1991 he again worked for five months at the PSI in Villigen, Switzerland on the design of a new magnet configuration for a 200 MeV super-conducting ring for proton therapy in hospitals. During 1997/98 he worked in the Institut für Kernphysik at the Forschungszentrum Jülich GmbH in Jülich, Germany.

From 1997 he was head of the Accelerator Group at Faure until February 2001, when he took early retirement and left South Africa after 31 fruitful years. The subsequent move to



Helge Norbert Jungwirth (20.7.1941 – 15.9.2003)

Europe enabled him to be closer to his parents whose health deteriorated alarmingly in that year. He then started to work at the Institut für Kernphysik, Forschungszentrum Jülich GmbH in Jülich, Germany. From the beginning of 2003 until his death on 15 September 2003 he worked at ACCEL Instruments GmbH in Bergisch Gladbach, Germany. His wife, two daughters and son now live in Vienna, Austria.

His ties and inputs to so many laboratories around the world raised his esteem to far beyond the South African borders. Many a colleague in the international accelerator fraternity can attest to that. For many years he also served on the International Cyclotron Committee.

Helge enjoyed playing tennis and walking up Table Mountain. In his youth and later during visits to Europe he loved skiing. He had the uncanny skill of understanding and striking the important balance between the needs of the organization and the individual needs of the people in the organization. He knew how to knit different personalities into highly successful teams, probably because every individual was always aware of his or her role and their importance to the organization. Helge had the skill to listen to advice from subordinates and implement it, always accompanied with the due recognition

Apart from his exceptional ability to solve problems from first principles, his thoroughness, and his total dedication to his work and colleagues, we all will remember him as one of the kindest and most courteous persons of our acquaintance.

May I therefore ask you, ladies and gentlemen, to stand up with me and observe a moment of silence in honour of our dear friend and colleague, the late Helge Jungwirth.