

Australian Institute of Physics NSW Branch (Public Talk)

MARK OLIPHANT'S VISION OF FUSION ENERGY

Professor Heinrich Hora
**Department of Theoretical Physics, University of New
South Wales, Sydney, Australia**

which will be held on

Tuesday 6th April, 2004

at the

**University of New South Wales, Room 27, Old Main
Building (K15)**

Abstract

It is now seventy years since the mechanism for the heavy hydrogen fusion was discovered by Oliphant, Harteck and Lord Rutherford. Its important use for energy production in the future will be discussed in this talk. This research has consumed over 20 billion dollars during the last 50 years and is continuing. Oliphant's basic view for igniting fusion using particle beams has come back even for magnetic plasma confinement, while the well known non-linear alternative of laser-plasma interactions seems to have serious advantages.

About the Speaker

Heinrich Hora, Dr.rer.nat. (Jena 1960) D.Sc. (UNSW 1981), FAIP, FInstP (Lond) Professor of Theoretical Physics and Head of Department (UNSW) from 1975, Emeritus 1992. Konrad Zuse Professor, Faculty of Elect.Eng. Regensburg (Germany 1993-95). Attach rem. CERN 1990-92, Guest Professor, Inst. Laser Engin. Univ. Osaka 1996. 10 books and 450 papers on laser-plasma interaction and inertial nuclear fusion, ponderomotive and relativistic self-focusing, laser acceleration of particles, correspondence principle of electromagnetic interaction, accuracy principle of nonlinearity. Ritter-von-Gerstner medal, Edward Teller medal Dirac medal, Ernst-Mach-medal.

Detailed Schedule for Tuesday 6th April 2004:

- **5.45-6.00 pm** **REFRESHMENTS outside Room 27, Old Main Building, University of New South Wales.**
- **6.00-7.00 pm** **Professor Heinrich Hora SEMINAR in Room 27, Old Main Building, University of New South Wales.**
- **7.15-8.30 pm** **DINNER at the MAMMA TERESA, Italian Restaurant, 412 Anzac Parade, Kingsford. Please e-mail Dr Frederick Osman on (f.osman@uws.edu.au) if you will be able to join us for dinner.**

Travel Directions:

1. See maps at <http://www.unsw.edu.au/maps/maps.html>
2. Buses 393 and 395 from Central Station and Buses 391, 392, 394, L94, 396, 397 and 399 from Circular Quay and City all stop outside campus on Anzac Parade
3. Parking is available on campus via Gate 14 on Barker St, Kensington (turn left at the BP just past campus pedestrian entry if heading south on Anzac Parade). Parking is by parking meter - Please seek advice from gate attendant if necessary.
4. Room 27 is in the Old Main Building (Campus Map Ref K15) on the Ground Floor - Directions will be posted in the building on the day.

For more information, please contact:

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