PRESS-RELEASE



Max Planck Institute of Quantum Optics



and Munich Centre for Advanced Photonics

European Physical Society awards Hannes Alfvén Prize to Professor Jürgen Meyer-ter-Vehn

Prof. Dr. Jürgen Meyer-ter-Vehn, senior scientist and former head of the Plasma Theory Group at Max Planck Institute of Quantum Optics (MPQ) in Garching, has been honoured with the 2009 Divisional Hannes Alfvén Prize from the Plasma Physics Division (PPD) of the European Physical Society (EPS). This award – named after one of the founding fathers of plasma physics, the Swedish physicist and Nobel prize winner of 1970 Hannes Olof Gösta Alfvén (1808 - 1995) – was established by EPS in 2000. It is given to an outstanding researcher each year at the EPS Conference on Plasma Physics. During the last EPS PPD Board meeting (November 28) it was dedicated to Prof. Dr. Jürgen Meyer-ter-Vehn "for his outstanding theoretical work in the fields of inertial confinement, laser-matter interaction, specifically, relativistic laser-plasma interaction, and laser wake field acceleration."

Jürgen Meyer-ter-Vehn was born on February 16, 1940 in Berlin. He began his education in physics at the University of Münster in 1959. As a scholar of Studienstiftung des Deutschen Volkes he received his diploma at Ludwig Maximilian's University Munich in 1966. He continued at the Technical University of Munich where he finished his PhD thesis on theoretical nuclear physics in 1969. Afterwards Prof. Meyer-ter-Vehn has worked as a scientist at Lawrence Berkeley Laboratory (Berkeley, USA), at Paul Scherrer Institut (PSI, former SIN, Villigen, Switzerland) and at Forschungszentrum Jülich. In 1979 he joined the "Project Group for Laser Research" at Max Planck Institute of Plasma Physics (IPP) which gained the status of a "Max Planck Institute of Quantum Optics" in 1981. From then on until 2005 Prof. Meyer-ter-Vehn was head of the Laser Plasma Theory Group at MPQ. In 1976 he received the Habilitation in Theoretical Physics at Technical University of Munich and was appointed apl. Professor in 1997.

Professor Juergen Meyer-ter-Vehn has made outstanding seminal contributions to the fundamental physics of inertial confinement fusion (ICF) and high energy density matter. These studies provided the key for understanding the ignition scaling relations in ICF and brought him the Edward Teller Award of the American Nuclear Society in 1997. Driven by laser plasma experiments at MPQ Garching, Professor Meyer-ter-Vehn has investigated radiation hydrodynamics to gain insight into the mysteries of indirect drive ICF targets. This work at MPQ was purely devoted to fundamental physics and to nuclear fusion by inertial confinement as a new option for electric power generation.

Since 1995, the interest of Meyer-ter-Vehn and his group has turned to laser plasma interaction at relativistic intensities. His publications were first in a number of aspects concerning relativistic laser channeling, electron acceleration, and laser-driven high-current transport. This research predicted efficient generation of ultra-short ultra-dense quasimonochromatic electron bunches by laser wake field acceleration in the bubble regime. Generation of these bunches have just been demonstrated in 2008 MPQ experiments with

Max-Planck-Institut für Quantenoptik Presse- und Öffentlichkeitsarbeit Dr. Olivia Meyer-Streng Phone: +49-8932 905-213 E-mail: olivia.meyer-streng@mpq.mpg.de Hans-Kopfermann-Str. 1, D-85748 Garching Munich-Centre for Advanced Photonics Public Outreach Christine Kortenbruck Phone: 089-289-14096 E-mail: christine.kortenbruck@munich-photonics.de Am Coulombwalll 1, 85748 Garching few-cycle TW laser pulses. These research topics are of basic importance for fast ignition of fusion targets.

The Hannes Alfvén Prize will be given to Prof. Meyer-ter-Vehn on the occasion of the 36th EPS Conference on Plasma Physics (June 29 – July 3, 2009) in Sofia (Bulgaria). *Olivia Meyer-Streng*

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