
Guest Editor's Preface: 8th Workshop on *Fast Ignition of Fusion Targets*

This issue of *Laser and Particle Beams* includes papers presented at the 8th Workshop on *Fast Ignition of Fusion Targets*, held in Tarragona, Spain, from June 29 to July 1, 2005 as part of the *32nd Conference on Plasma Physics* organized by the *European Physical Society*.

Fast Ignition workshop series has become the principal specialist meeting on fast ignition and ultra-intense laser matter interactions. After the successful workshops held in Madeira (2001), Florida (2002), and Kyoto (2004), the 8th workshop was organized in Tarragona with the main motivation to attract scientists and young researchers worldwide to discuss the progress of fast ignition as an alternative concept to the traditional central ignition of inertial fusion energy targets.

The workshop dealt with a wide range of scientific topics, from the relativistic laser-plasma interactions to matter compression by nanosecond laser pulses. Specific topics were particle acceleration, fast electron transport, X-ray sources, ultrafast diagnostics, and integrated simulations. The workshop intended to highlight cone-guided fast ignition and other innovative concepts as well as all physics relevant to fast ignition. In addition, the plans for the new petawatt laser facilities presently under construction were presented and discussed.

The workshop was very successful: approximately 150 researchers from 20 countries participated in the event, including delegates from worldwide leading laboratories.

The presentations were organized in 8 sessions with 23 invited talks, 18 contributed talks, and 25 posters. The oral

presentations were collected on a CD that was distributed to the participants. The invited talks have been published in the special issue of *Plasma Physics and Controlled Fusion* devoted to the *EPS Conference*.

The workshop was partially supported by the European Concerted Research Action COST P14 on *Laser-Matter Interactions with Ultra-Short Pulses, High-Frequency Pulses and Ultra-Intense Pulses: from Astrophysics to Petawatt Physics* chaired by Prof. C. Joachain from Université Libre de Bruxelles, Belgium.

I would like to thank Prof. J. Meyer-ter-Vehn and Prof. D. Batani for their support to organize the Workshop, to Dr. P. Thomas, Chair of the Program Committee of the EPS Conference and Dr. C. Hidalgo, Chair of the Local Organizing Committee of the EPS Conference for their efforts to integrate the Workshop into the Conference, and to the members of the Workshop International Committee for their comments and suggestions. I would also like to thank Prof. D.H.H. Hoffman, Editor-in-Chief of *Laser and Particle Beams*, for giving us the opportunity to publish the contributions to the Workshop in this Special Issue. Finally, I appreciate the contributions of all authors and referees to this issue.

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