

Guest Editorial

This issue of *Laser and Particle Beams* contains a selection of papers presented at the *International Workshop on Laser and Plasma Accelerators* held at Portovenere, Italy, from September 29 to October 3, 2003. The papers were subjected to the regular refereeing procedure, in conformity with the publication standards concerning originality and quality of presentation for articles in this journal. The papers published here do not cover the full workshop program and therefore do not constitute proceedings in the normal sense. The Workshop was the last in a series sponsored by the *International Committee for Future Accelerators* to promote international collaboration in the study, development, and exploitation of advanced and novel accelerators.

The advent of super-intense femtosecond lasers has made possible charged particle acceleration schemes proposed in the early 1980s. The field gradients now available allow charged particles to be accelerated along distances several order of magnitude smaller than in conventional accelerators. The workshop has been devoted to the presentation of the most recent results concerning these issues, trying at the same time to answer the question, whether such enormous fields can be used in actual accelerators.

The main topics discussed in the working groups organized during the Workshop have been: Preformed plasmas and beam loading; Extending acceleration length from mm to cm scales; Beam quality: energy spectrum, divergence, duration, luminosity, efficiency, . . . ; Recent laser and plasma applications in accelerators: ions, other particles, gamma-rays; Adaptability of plasma acceleration schemes to accelerators for real use; Computer modelling of experiments; Bright sources of coherent and un-coherent radiation.

As the chairman of the Portovenere Workshop I would like to thank Professor Dieter Hoffmann for offering *Laser and Particle Beams* as a rapid-publication medium for these Workshop papers. I also acknowledge the sizable support, in all the Workshop organization, of Dr. Rino Castaldi and Dr. Sergio Bertolucci, Directors of the INFN Sezione di Pisa and Laboratori Nazionali di Frascati respectively.

Danilo Giulietti

Dipartimento di Fisica dell'Università di Pisa, Italy
Istituto Nazionale di Fisica Nucleare, Sezione di Pisa