PREFACE

THIRD CAROLUS MAGNUS SUMMER SCHOOL ON PLASMA PHYSICS

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The Third Carolus Magnus Summer School on Plasma Physics took place in the small city of Spa, in Belgium. Organized biennially, the summer school went to Vaals, The Netherlands, in 1993 and to Aachen, Germany, in 1995. The advent of the summer school in Spa closes a cycle—that of the travel of the summer school through the three different "regions" of the organizing institutions, now grouped into the *Trilateral Euregio Cluster*. The School has evolved over its three successive materializations. The program has been progressively improved; certain contributions of a more technical nature were removed, and other contributions were added taking into account recommendations from the successive waves of participants. Most lecturers have revised, updated, and sometimes profoundly changed their presentations. In that way, this cycle does not just close on itself but, rather, ends on another Riemann sheet.

Having had the chance to be part of the organizing committee of these three summer schools, I have constantly been struck by the dedication of the lecturers and their obvious will to contribute to the success of the school by the quality of their talks and written contributions. Most gratifying was also the strong interest shown by the students, their involvement, and their air of enjoying themselves during the summer school. For lecturers as well as for students, this school is a challenge. The generosity of their reactions is to me further proof that the nerve of humankind is not money—as it is told to be for war—but the vision of an outstanding and challenging goal. That this summer school on plasma physics is oriented toward magnetic fusion is not an accident; we believe that fusion is another noble and challenging goal and that magnetic confinement is the right path to its achievement. We hope to see someday the fruits of our educational effort in this area through the emergence of new ideas and concepts that will further pave the way to a fusion power plant.

The organizers and all participants are indebted for the strong support of sponsors (of which the extensive list follows), which allowed us to maintain the quality of the accommodations and of the educational facilities. Participants from the European Union received special support from the Training and Mobility of Researchers Programme of the European Commission, whereas participants from Eastern European countries were supported by the INCO Program of the European Commission. Sponsors' contributions have also allowed us to maintain a feature that we consider essential for our summer school: its international character. The energy problem is a world-scale one, and the realization of fusion is a world-scale challenge and promise. Therefore, we consider it highly beneficial to provide the opportunity of contacts among young researchers from all around the world, and in particular to be able to fund the participation of students from developing countries. Out of a total of 54 participants, 21 different countries were represented. Of the 54 participants, 17 came from the organizing countries; 13 from other parts of the European Union; 14 from the more eastern parts of Europe; and 10 from Canada, China, Egypt, India, and Japan. This year we were also happy to welcome 11 female participants.

I also wish to thank the guest lecturers from outside the organizing Euregio institutions who have brought to our summer school the final touch of quality: V. Bhatnagar from the Joint European Torus (JET), Abingdon; H. Bruhns, from the European Community Fusion Programme, Brussels; M. Kleemann from the Forschungszentrum Jülich; and U. Stroth in replacement of F. Wagner,

both from the Max-Planck-Institute for Plasma Physics, Garching.

Finally, I also want to thank S. Jachmich for his diligent assistance in the organization of the School.

During the writing of this preface, we came to know that Luc Ornstein, one of the organizers of the First Carolus Magnus Summer School on Plasma Physics, is unfortunately not with us anymore. Many of the ideas and efforts that Luc put into the Carolus Magnus Summer School are still visible in the present issues of the school. The organizing committee would like to commemorate Luc by dedicating this book of proceedings to him.