

Preface

The international workshop entitled *New Trends in HERA Physics 1999* took place between 30 May and 4 June 1999 at Ringberg Castle, which overlooks Lake Tegernsee in the foothills of the Bavarian Alps, one of the most picturesque locations to be found in the whole of Germany. The castle was built during the first half of this century by Duke Luitpold in Bavaria (Herzog Luitpold in Bayern), a member of the Wittelsbach family which ruled Bavaria over 800 years, and his friend Friedrich Attenhuber, an all-round artist, architect, and interior decorator. The castle is entirely their creation, from the massive Renaissance-inspired exterior right down to the fittings and furniture, which, in every detail, were designed by Attenhuber himself and executed by local craftsmen. Attenhuber also painted every single picture hanging in the castle. He found his models in the farmhouses around Lake Tegernsee. The castle embodies all trends of art and styles which dominated the first half of this century, combined with local Alpine originality and the individual creative power of its constructors. In accordance with the Duke's last will, the castle passed into the hands of the Max Planck Society after his death, in 1973. The castle was then transformed into a conference venue, where scientists can exchange their latest ideas and discuss problems with their colleagues from all over the world in beautiful surroundings and in a relaxed mountain atmosphere, high above the daily business activities.

This was the second event in a series of Ringberg workshops on HERA physics, which started two years ago with the workshop entitled *New Trends in HERA Physics*. In fact, at the end of that workshop, many participants expressed the opinion that this was a successful endeavour to bring theorists and experimentalists together in order to interpret the latest HERA data, and that it would be useful to organize a follow-up workshop in the same spirit.

On the occasion of the 1999 Ringberg workshop, thirty-eight experts of elementary-particle physics, both theorists and experimentalists, from twenty-two universities and research institutions in ten countries congregated to present their latest results on the various aspects of HERA physics. Specifically, there were twenty theorists and eighteen experimentalists, the latter representing the H1 and ZEUS collaborations at HERA and the collaborations at LEP and the Tevatron. The topics included: proton structure function; polarized ep scattering; final states in deep-inelastic scattering (DIS), with special emphasis on jet production at low x , power corrections in DIS, soft particle production, and instanton effects; photon structure function; photoproduction of jets and hadrons;

heavy-flavour and charmonium production; elastic and diffractive ep scattering; and new physics at HERA. We hope that the high-energy-physics community will benefit from these proceedings, in which the ongoing efforts in understanding the nature of the strong interactions, with particular emphasis on HERA physics, are documented.

We wish to thank all our friends and colleagues who have contributed their share to these proceedings. We are indebted to the workshop secretary, Mrs. Renate Saffert, for her assistance before, during, and after the workshop. We are grateful to Dr. Annette Holtkamp for technical assistance in the editorial work. The costs of catering and lodging at Ringberg Castle and the charges for the publication and dissemination of these proceedings were covered in equal parts by the Deutsches Elektronen-Synchrotron at Hamburg and the Max-Planck-Institut für Physik at Munich.

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