

Preface

The series of Workshops on High Energy Physics Phenomenology (WHEPPs) has by now become a tradition which has been successful in bringing together both Indian and foreign physicists at essentially all levels, with an aim to get involved in serious collaborative efforts to focus on and solve some of the major problems in the field. The Fifth workshop in this series, WHEPP-5, was held at the Inter-University Centre for Astronomy and Astrophysics, Pune during January 12–25, 1998. The first such workshop was held in TIFR, Mumbai in January 1989. Subsequently, the S. N. Bose National Centre for Basic Sciences, Calcutta, hosted the second and fourth WHEPP in January 1991 and 1996 respectively, while the Institute of Mathematical Sciences hosted WHEPP-3 in January 1994. About 85 particle physicists and astrophysicists participated in the workshop in Pune, in which a special effort was made to focus on the emerging area of astroparticle physics.

The four broad topics chosen for the working group activity, which forms the core of the WHEPPs and was correspondingly given more time in this workshop than before, are as given below with the respective coordinators mentioned in the brackets:

1. Astroparticle physics (V Sahni and S Mohanty)
2. Collider physics and *B*-factories (A Datta and B Mukhopadhyaya)
3. Quantum chromodynamics (K Sridhar)
4. Physics beyond standard model (D Choudhury and S D Rindani)

The plenary talks on various topics of current interest in these areas were held in the morning sessions of the first week while the afternoon sessions as well as the entire second week were devoted to working group activity. This consisted of talks by participants on their own work or on subjects of common interest for the working group and discussion sessions on problems selected for the workshop. The results of the working groups were summarized by the group coordinators on the last day of the workshop. These proceedings contain the written versions of the review talks of common interest, covering mostly the plenary talks. The editors regret the absence of contributions from R Aleksan, G Bhattacharyya, D Choudhury, and A Stebbins, as they were not submitted by the authors in time, although it did help the editors in accepting manuscripts which exceeded the page limit substantially.

WHEPP-5 was dedicated to the memory of our colleague late Prof. K V L Sarma of TIFR, Mumbai, who passed away very suddenly on September 28, 1997, due to a heart attack. He has influenced many of us by his down-to-earth insistence on experimental data. The Indian particle physics community will miss him a lot. An obituary to Prof. K V L Sarma has kindly been submitted on our request by Prof. G Rajasekaran and is included in the proceedings.

The major financial support for the workshop came from the S. N. Bose National Centre for Basic Sciences, Calcutta. Additional funding was provided by the Tata Institute of Fundamental Research, Mumbai, and the International Centre for Theoretical Physics, Trieste. The workshop would have not been possible without the support of Inter-University Centre for Astronomy and Astrophysics, Pune, which provided the venue

for the workshop, along with all the detailed infra-structural support from the lecture halls to the guest house and from computational resources to the internet connectivity to all parts of the world.

It is our great pleasure to record here our appreciation of the support of these institutions and to thank them sincerely for it. In particular, we would like to thank Prof. C K Majumdar, Director, S. N. Bose National Centre for Basic Sciences, Calcutta, Prof. J V Narlikar, Director, Inter-University Centre for Astronomy and Astrophysics, Pune, Prof. M Virasoro, Director, International Centre for Theoretical Physics, Trieste, Italy and Prof. S S Jha, Director, Tata Institute of Fundamental Research, Mumbai, whose enthusiastic support was crucial in holding the WHEPP-5. Many individuals have helped in making WHEPP-5 a success and we would like to thank them all but special mention should be made of the valuable help of Profs A K Kembhavi, T Padmanabhan and V Sahni and Ms Snehlata Shankar, Dr S Saran and Dr V Chellathurai. Shri Girish Ogale of the Tata Institute, Mumbai managed the conference office both ably and with an happy face before and during the workshop. We would like to thank him warmly.

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