

PREFACE

XXVII Cracow Epiphany Conference was dedicated to the future of particle physics. Presentations covered many issues of key importance for particle physics, both theoretical and experimental. Special emphasis was put on the next generation of planned experiments such as the High Luminosity LHC, Future Circular Collider (FCC), Circular Electron Positron Collider (CEPC), and Electron Ion Collider (EIC).

The conference was divided into the following thematic sessions:

- Future circular colliders,
- LHC physics,
- Flavour physics,
- Long-living particles,
- Higgs physics,
- Electroweak physics,
- Hadronic final states,
- Computing for future colliders.

During the meeting, Jorgen D'Hondt reported on the European strategies and plans for particle physics, while Alain Blondel, Jianchun Wang, and James Yeck presented the status of the FCC, CEPC and EIC projects, respectively. Many exciting physics questions were also discussed during the conference, including the status of B -physics anomalies by Gino Isidori, the role of precision Monte Carlo Generators by Stanisław Jadach and theory needs for future e^+e^- colliders by Ayres Freitas. In addition, a particularly far-reaching presentation, devoted to M-theory and the birth of the Universe, was given by Frans Klinkhamer.

During this edition of the conference, a special day was devoted to the Polish involvement in the FCC project. Its goal was to inform the Polish scientific community about the status and plans for this project, as well as to promote an active participation of Polish research institutes in this enterprise.

The success of XXVII Cracow Epiphany Conference would have not been possible without efforts of many people. In particular, we would like to thank the director of the Institute of Nuclear Physics Polish Academy of Sciences, Tadeusz Lesiak, for his support in organizing this conference. Last but not least, we would like to thank *Acta Physica Polonica B* for their help in preparing this proceedings issue.

The Editors