

IV International Symposium on LHC Physics and Detectors

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Foreword

The fourth LHC Symposium was held at Fermilab in May 2003 following the first two meetings in Russia and the third symposium in Italy. The theme of this meeting was the status of the machine and the detectors, as before. However, as the time for first beam becomes short, the specific topic for this meeting was the physics reach of the LHC experiments, with initial running, say 10 fb⁻¹, of integrated luminosity.

The agenda of the meeting made an explicit set of connections to the present state of the art in high-energy physics. There were talks on the initial startup and commissioning of both the Fermilab accelerator complex and the CDF and D0 experiments. A clear topic of interest was the “handoff” of searches for new physics from the Tevatron collider experiments to the LHC experiments. The other “handoff” will be that in the realm of nuclear physics, from the RHIC experiments to the heavy ion experimental programs at ALICE, ATLAS and CMS.

The program began with a visionary talk by Scott Wilenbrock to set the stage, followed by status reports on the LHC machine and experiments. The emphasis for the experiments was on performance and early physics reach, in particular the connection to D0 and CDF. There followed a session on heavy ions, both theory and experiment where experiment covered RHIC, ALICE, ATLAS and CMS. The final sessions were on b physics with connections to BaBar, CDF, D0 and BTeV. The b physics reach of LHCb, CMS and ATLAS were then covered. Fi-

nally, issues of data analysis with grid tools and upgrades to the accelerator and the detectors, the “Super LHC” were reviewed.

The Symposium was well attended with 200 registered participants and an unknown number of ‘bandits’¹. There was an active social program and the attendees were enthusiastic about the opportunity to make contact with colleagues involved in the Fermilab collider program, with tours being made available. The enthusiasm and interest of the Symposium attendees in the great new physics opportunities made available at the LHC was very evident.

The conference would not have been possible without the invaluable support of the Fermilab conference office, multimedia services and the Computing Division. We also thank the many volunteers that helped to organize the party and the CDF DSD band that provided the entertainment. A special thanks to Tita Jenson and the employees and volunteers at ‘Chez Leon’ for providing a record number of people with an excellent dinner. Strangely enough after the session marathon some of the participants and members of the organizing committee relaxed by participating in a 30 km race along the great western trail.

We also gratefully acknowledge the financial contribution from CERN, the Universities Research Association Inc., the National Science Foundation and the Department of Energy.

Dan Green
on behalf of the Organizing Committee

¹ In running terms a bandit is one who runs the race without benefit of a racing number or paid registration (e.g. when pacing some other runner). Here we apply the term to our colleagues present at the laboratory that attended some of the sessions they were interested in but who didn’t register. Needless to say that we are happy for anyone showing interest in the talks.

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