

**WELCOMING REMARKS TO LEPTON-PHOTON 2003**  
**THE 21<sup>ST</sup> INTERNATIONAL SYMPOSIUM ON LEPTON AND PHOTON**  
**INTERACTIONS AT HIGH ENERGIES**

S. PETER ROSEN

*Office of Science, U. S. Department of Energy*

*E-mail: Peter.Rosen@science.doe.gov*

Ladies and Gentlemen, on behalf of the United States Department of Energy, Secretary Spencer Abraham and Director of the Office of Science, Raymond L. Orbach, it is my pleasure to welcome you to Fermilab and to Lepton-Photon 2003. Minasama, Fermilab narabini Lepton-Photon 2003 he Youkoso irassyaimashita. Meine Damen und Herren, willkommen zum Nationalen Fermi-Beschleuniger-Forschungszentrum. Mesdames et Messieurs, bienvenue au Laboratoire National d'Accélérations de Fermi. Signore e Signori, benvenuti al Laboratorio Nazionale Fermilab. Дамы и Господа, добро пожаловать в Fermilab. Damas y Caballeros, bienvenidos al Laboratorio Nacional Fermilab. Please forgive me if I have omitted your own language, but you are equally welcome.

I like to think of Fermilab as the home of the third family of quarks and leptons: the  $b$  quark was discovered here, and the first observations of the top quark and tau neutrino were made here. It is also the home of the Tevatron, presently the world's highest energy hadron collider and it will remain so until the LHC comes on-line in 2007. We all look forward to the first results from Run II to be presented at this meeting, and to the exciting physics it will produce in the next five years. The discoveries made here and the lessons learned about extracting physics from hadronic collisions at the current energy frontier will lay the groundwork for exciting and successful hadronic collision programs at the future energy frontier at the LHC. They may also provide hints about the physics we may encounter at a future linear electron-positron collider.

While allowing for the precautions which the United States Government believes to be necessary for security reasons, the spirit of Fermilab, like the spirits of its sister laboratories at Brookhaven and Stanford, and at high energy physics laboratories in Asia and Europe, is that of an international research

center. You can see outside the main entrance to Wilson Hall the flags of all the nations from which physicists come to perform their experiments. About one half of the 1100 or so users at Fermilab are from foreign countries, and the same is true of the users at RHIC and at SLAC. We welcome this participation by our colleagues from abroad, just as we appreciate the welcome given to U. S. scientists at facilities in other parts of the world.

This international, or rather global nature of our field has grown strong roots in the world high energy physics community and it serves as a model for other scientific fields, especially those that require large, global-scale facilities. The high energy community has been a pioneer in the development of major facilities, for example super-scale detectors like CMS and ATLAS. The next steps that I believe it needs to pioneer are planning on a global scale, and the formation of a laboratory for the next frontier facility, which has to be global from its inception, through construction and into its operating phase.

Turning to the physics at this meeting, we look forward to the results to be extracted from the wealth of data accumulated by the  $B$ -factories at KEK and SLAC, something like 100 inverse femtobarns apiece. Will they reveal new sources of CP-violation beyond the Standard Model, or give hints of other new physics through precision measurements of exclusive decay modes? Neutrino physics has been extremely exciting in the past five years: what new insights will we learn about the number of neutrinos, the masses and mixing angles? What hints will we hear from the Tevatron about Supersymmetry and extra dimensions? Will new light shine on Dark Matter and Dark Energy? Obviously there is an abundance of exciting questions which will make for an exciting conference, and so with no more ado, I bid you welcome and good *physicking!*