

## Activities of the International Committee for Future Accelerators (ICFA)

September 2013 - September 2014

Roy Rubinstein - ICFA Secretary

### 1. Introduction

During the past year there were two ICFA meetings: on 20/21 February 2014 at the DESY laboratory in Hamburg, Germany, and on 6 July 2014 during the International Conference on High Energy Physics (ICHEP) in Valencia, Spain. At the February meeting, which is the major annual ICFA meeting, directors of the world's leading particle physics laboratories were also invited, as has been the practice for the past ~ 2 decades. This allows a much more extensive discussion of the present and future status of particle physics.

The current ICFA membership is given in Appendix I.

### 2. International Linear Collider (ILC)

The design of, and planning for, the ILC has been led by ICFA for over a decade, and led to the ILC Technical Design Report in 2013. Japan is now seriously considering hosting the ILC, and an ILC Project Office at KEK is operating. A preferred site decision has been made, and an international review concluded that the site was totally acceptable. The Japanese ministry MEXT has set up a task force with an Academic Experts Committee under it; a report is expected by March 2016. This group will study total ILC cost, human resources, the Japanese ILC organization, and the social and economic impact of the ILC in Japan.

The Linear Collider Collaboration (LCC), led by Lyn Evans under ICFA's Linear Collider Board (LCB) has been working closely with the ILC Project Office on site-specific ILC design activities. The LCC has also been interacting with Japanese government representatives and with labs and funding agencies around the world to further the realization of the ILC. The LCB has established MOUs with labs in several countries for LCC activities.

The LCB has recently established two subcommittees; the first will produce recommendations for the ILC Lab structure, including such items as governance, project management, etc.; the second will propose an international agreement for the ILC project.

Current consideration is that the ILC would start operation as a 250 GeV Higgs Factory, with later upgrades in stages to 500 GeV.

### 3. Global Planning for Particle Physics, Including a 100 TeV Collider

There are two very large (~100 km) future colliders---FCC in Europe and CEPC in China---under emerging consideration by the world HEP community; ICFA is starting to look into whether it should play a role in any world-wide effort on the needed R&D for such a project.

The European Strategy document high priority items include a collider at the energy frontier. Tunnels of ~ 100 km have been considered for the FCC, and a preparatory group is preparing a preliminary parameter set; ~ 100 TeV pp, ~ 350 GeV e+e-, and ep options are being looked at. CEPC would be initially a Higgs Factory ~ 240 GeV e+e- collider in a ~50-70 km tunnel, with later conversion to a pp collider.

ICFA encouraged the two studies to work as close together as possible.

#### 4. ICFA Statement

In July 2014, ICFA issued a Statement [http://www.fnal.gov/directorate/icfa/ICFA\\_Statement\\_20140706.pdf](http://www.fnal.gov/directorate/icfa/ICFA_Statement_20140706.pdf) reaffirming its continued support of the ILC and also encouraging studies of future accelerators.

### 3. ICFA Seminar

ICFA Seminars are held every three years, with the next one being at IHEP/Beijing on 27-31 October 2014. These Seminars allow for an international exchange of information on plans for future facilities in the field of particle physics. Typical attendance is 150-200 invited leading members of the fields of accelerator and particle physics, together with leaders from related topics such as astroparticle physics, scientific computing, outreach, etc. Representatives of government funding agencies and the media are also invited.

#### 6. ICFA Chair

Nigel Lockyer (Fermilab) is the current Chair of ICFA; Joachim Mnich (DESY) will become ICFA Chair for a three-year term starting on 1 January 2015.

### 7. Reports

Reports were presented to ICFA meetings on the activities of ICFA's Panels; the ICFA/ICUIL collaboration on particle acceleration by lasers; and of each country and lab represented at the meeting. There were also reports given on InterAction (the particle physics communicators' organization) and activities of the Funding Agencies for Large Colliders (FALC).

## Appendix I

**ICFA MEMBERSHIP**

September 2014

CERN Member StatesR. Heuer  
M. Krammer  
J. MnichUSAN. Lockyer (Chair)  
D. MacFarlane  
I. ShipseyJapanT. Mori  
A. SuzukiRussiaA. Bondar  
S. IvanovCanada

M. Roney

China

Y. Wang

Other CountriesL. de Paula  
V. Matveev  
A. RoyC11

H. Aihara

(Secretary: R. Rubinstein)