

Report on the JLab/JSA Initiative in Support of the First Biennial School on Fundamental Physics and its Applications

The «First Biennial African School on Fundamental Physics and its Applications», ASP2010, took place from August 1-21, 2010 at the NITheP Stellenbosch in South Africa.

A strikingly new aspect of the school was that a large number of national and international organizations and institutions collaborated to make it happen, thereby demonstrating a collective sense of its importance and worth. The participants included Spain (Ministry of Foreign Affairs), France (Centre National de la Recherche Scientifique/IN2P3, Institut des Grilles, Commissariat à l'énergie Atomique), Switzerland (École Polytechnique Fédérale de Lausanne, Paul Scherrer Institute,), South Africa (NITheP, National Research Foundation), and the US (Fermilab, Department of Energy, Brookhaven, Jefferson Lab, National Science Foundation), as well as the international institutions CERN and ICTP. In addition, the International Union of Pure and Applied Physics offered travel grants to five female students.

In total, 65 students with 23 different citizenships (see Fig. 1) came from 17 African countries to participate. We selected 50 students from 17 different African countries to receive transportation and accommodation fees.

The school provided financial support for one student from India, as well as accepting four additional students from Canada, Germany, the United States, and Switzerland, who financed their own airline tickets. The other participating students were from South Africa, most of whom were studying at the University of Stellenbosch. Figure 1 shows the distribution of the students. Approximately 16% of the students were female..

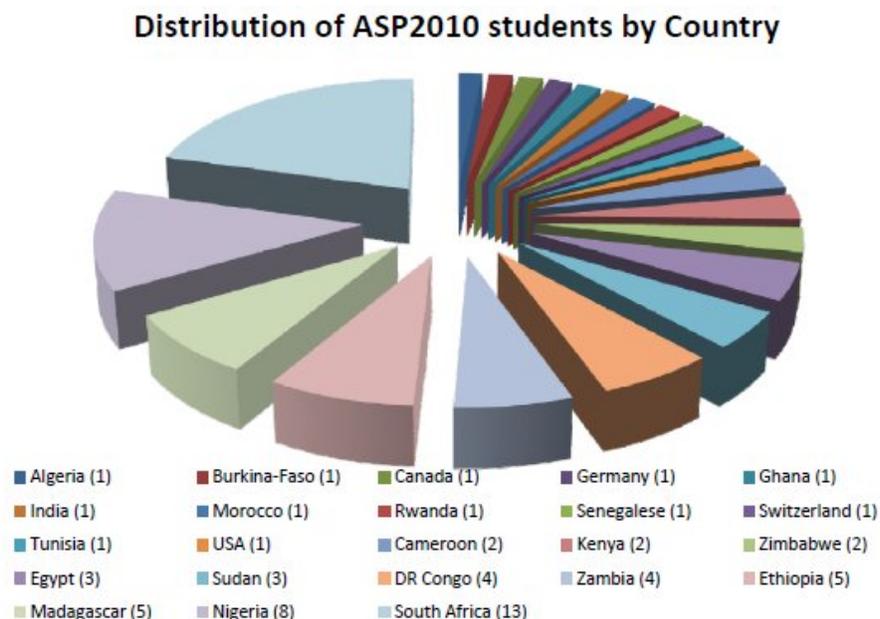


Fig 1: Distribution of ASP2010 students by the countries of citizenship.

Lecturers and tutors came to give the lectures, to run discussion sessions, and to practice laboratory or computing sessions. In particular, during the three weeks of classes we had invited 29 lecturers plus 6 dedicated tutors, 1 economist support, and 1 administrative support. We financially supported the transportation of 11 organizers and lecturers. Most of the lecturers were supported by their own institution, which permitted us to balance our budget and support more students.

The courses were taught in English by physicists from around the globe. The breaks between lectures provided the opportunity for many informal discussions to continue. During the last week of courses, the students had the opportunity to perform two practical courses at iThemba Laboratory for Accelerator Based Sciences (iThemba LABS), in which they became acquainted with the use of scintillation detectors and performed measurements of environmental radioactivity. Laser practices and a computing tutorial for simulations using the GEANT4 toolkit were also available at the University of Stellenbosch. Figure 2 displays the group picture taken the first day of the ASP2010.



Fig 2: Group picture taken during the first week.

Finally, we organized a survey to collect feedback from the students. Overwhelmingly we found that the students really appreciated the quality of the lectures and the broad overview of our field, including accelerator physics and technological applications, which were presented. They also were quite interested in the opportunities to continue their studies or research at laboratories in the United States, Western Europe, and South Africa.

The lecture materials were made available to the students through an indico agenda, as well as through a copy of the files on a DVD they got at the end of the school.

https://africanschoolofphysics.web.cern.ch/AfricanSchoolofPhysics/Program_Overview.html

In addition to this, some of the lectures were filmed; they are currently being edited and will also be posted on the school website.

The JLab/JSA support of \$10,000 to support the initiative of the first biennial school on fundamental physics and its applications was extremely important to the success of the school. The funds were fully used to support student travel fees. The full proposal submitted to JSA can be found under <http://www.jsallc.org/IF/IFProjects.html>.