From CERN’s training/education programmes to

“Following the PhD fellow from Morocco, a Palestinian Doctoral Student has joined the ATLAS experiment on 1st April 2014”

P.Fassnacht – SKF Lisbonne May 2014
The Mission of CERN

Research: “the HIGGS and beyond”, see J.Ellis

Innovation and future perspectives: “the AFTER LHC”, see F.Bordry
CERN was founded 1954: 12 European States
“Science for Peace”

Today: 21 Member States

~ 2300 staff
~ 1600 other paid personnel
~ 10500 users
Budget (2014) ~1000 MCHF

Member States: Austria, Belgium, Bulgaria, the Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Israel, Italy, the Netherlands, Norway, Poland, Portugal, Slovakia, Spain, Sweden, Switzerland and the United Kingdom

Candidate for Accession: Romania

Associate Member in Pre-Stage to Membership: Serbia

Applicant States for Membership or Associate Membership: Brazil, Cyprus, Pakistan, Russia, Slovenia, Turkey, Ukraine

Observers to Council: India, Japan, Russia, Turkey, United States of America; European Commission and UNESCO
Science is getting more and more global
CERN is open to collaboration with qualified and interested scientists from any country.

- Co-operation agreements with governments of Algeria, Egypt, Jordan, Morocco, Saudi Arabia, Tunisia(*), UAE
- Contacts with individual scientists from many others (Lebanon, Palestinian Authority, Qatar, Tunisia….)

CERN provides access to training programmes to help capacity-building:

- Physics, engineering, information technology
- Summer students, high-school teachers, …

Open access to scientific information:

- Training in digital library techniques in Morocco
- Tunisia using CERN technology at CNUDST (Centre National Universitaire de documentation scientifique et technique)

Exhibitions. Egypt, Morroco, Tunisia (CST)

UNESCO offers support through IBSP (*). What about ISESCO?

(*) International Basic Sciences Programme
Relations with CERN

- Governmental Co-operation Agreements: Algeria, Egypt, Iran, Jordan (SESAME), Morocco, Saudi Arabia, Tunisia (as of 13.5.2014!!), U.A.E.
- Other scientific contacts: Bahrain, Kuwait, Lebanon, Oman, Palestine, Qatar.
- Teachers programme: Lebanon, Qatar, Saudi Arabia, U.A.E., Morocco
- Summer Student Programme: Bahrain, Egypt, Iran, Lebanon, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Tunisia, UAE

Looking forward to expanded collaboration with more Arabic countries.
CERN Education Activities

- Scientists at CERN
  · Academic Training Programme

- Young Researchers
  · CERN School of High Energy Physics
  · CERN School of Computing
  · CERN Accelerator School

- Physics Students
  · Summer Students Programme

- CERN Teacher Schools
  · International and National Programmes

NEW:
- Latin American School
  · Natal, Brazil, 2011
  · Arequipa, Peru, 2013

- Asia-Europe-Pacific School of High-Energy Physics
  · Fukuoka, Oct 2012
  · India, 2014

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- The 2013 European School of High-Energy Physics
  · ENS Lyon, 3-18 June 2013

- CERN School of Physics
  · Hungary, June 2013
Summer Students 2013

2014: CERN invite 17 students from MENA – 50% on outside funds (experiments, foundations, …)
CERN Doctoral Students programme

- PhD thesis work, co-supervision. Spending 6 to 36 months at the forefront of science.
- Applied Physics, Engineering or Computing.
- Disciplines represented: Applied physics, IT, mathematics, electrical, electronic, mechanical or civil engineering, instrumentation for accelerators and particle physics experiments, materials science, radiation protection, safety and environmental protection, science communication, surveying, ultra-high vacuum.
- Programme limited to MS and Associate Members

BUT

With the help of SKF this has been opened to NMS countries, in particular the MENA.
SKF and CERN have signed **TWO** agreements

- June 2009 (together with RUPHE and the Academy of Sciences), to open the programme to Morocco
- One student could benefit from this agreement (M.Gouighri). His stay at CERN was funded by “The Academie des Sciences”, Morocco and the Fondation Carnot.

- Agreement KN2238/DG signed August 2013 to open the programme to the full MENA
  - SKF organizes the selection of the candidate which is then forwarded to the CERN committee for endorsement.
  - Payment goes via SKF, with money from third parties.
• With the agreement signed and some funding secured, letters were sent to three Palestinian Universities: An Najah, Birzeit and Al Quds.

• SKF got three candidates.

• Jan 2014 the selection committee went to Ramallah to audit and to select.

• M. Alstaty was selected (and later endorsed by the CERN committee).

• As of April 1st, Mr Alstaty is an active member of the ATLAS experiment.

• He is going to work for the new ATLAS Inner Detector layer (IBL) under the supervision of two senior physicists from Marseille where Mr Alstaty is enrolled as student.

• Funds are secured for one year (THANKS to the Foundation Marc Rich: http://www.marcrich.ch/mrf_index.html)

• SKF will have to secure the funds for additional two years (typ. 50 kCHF/year)
ATLAS WELCOMES A NEW PALESTINIAN STUDENT

Mahmoud Ibrahim Alstaty, from near Jenin, is starting a PhD studentship at CERN, where he will be working on the new inner layer of the ATLAS pixel detector. He joins a growing number of other Palestinian researchers who are working at CERN.

Mahmoud Alstaty’s PhD scholarship is supported by the Sharing Knowledge Foundation. In 2013, Robert Klapisch, president of the foundation and former Director of Research at CERN, signed a framework agreement with CERN to open the Doctoral Student programme to countries from the Middle East and North Africa (MENA). Mahmoud is the second student to benefit from such an opportunity, following Mohamed Gouighri from Morocco. “Mahmoud will work on the ATLAS experiment on the commissioning and performance of the new inner layer of the pixel detector (IBL) and on the search for new physics, including leptons in the final state, under the supervision of Fares Djama and myself”, says Pascal Pralavorio from Centre de Physique des Particules de Marseille (CPPM) and Aix-Marseille University, which will deliver the diploma. “The IBL will strengthen ATLAS’s potential for physics discoveries and measurements during run 2. Mahmoud’s work will demonstrate the ability of the IBL to reach this goal,” says Fares Djama.

Mahmoud joins a number of other Palestinian researchers who have already participated in CERN’s student programmes. “The first of these was Muhammad Alhroub, currently a post-doc supported by the International Center for Theoretical Physics (ICTP) in Trieste, who first came to CERN as a summer