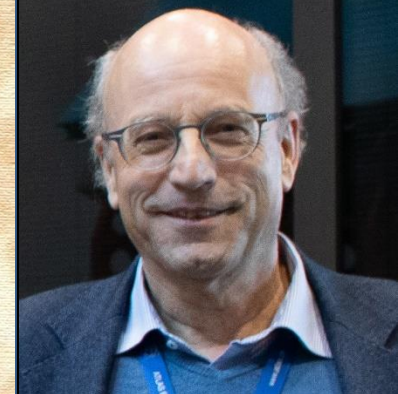


African School of Fundamental Physics and Applications



Welcome to the two lectures

**The Long Journey to the Higgs Boson and Beyond:
History of ATLAS and the LHC**

**Online lecture series
21 and 28 July 2020**

**Drawing by
Sergio Cittolin**



Peter Jenni, Freiburg and CERN

A few things about me ...

I am Swiss, borne in 1948, and studied physics at the University of Bern and the Swiss Federal Institute of Technology (ETHZ) with a PhD in physics in 1976

I was fascinated by experimental particle physics from when I started university, a few months as summer student at CERN in the early 1970s confirmed that, and this remained so since more than 50 years

I worked at most accelerators and colliders at CERN, namely in the early years

- 1972/3 at the Synchro-Cyclotron as a student
- 1974/6 at the Proton Synchrotron as a Fellow and PhD student
- 1976/7 at the Intersecting Storage Rings (ISR) as ETHZ Research Associate

Two pictures from 1976 and 1977, working on the detector of the experiment R702 at the ISR

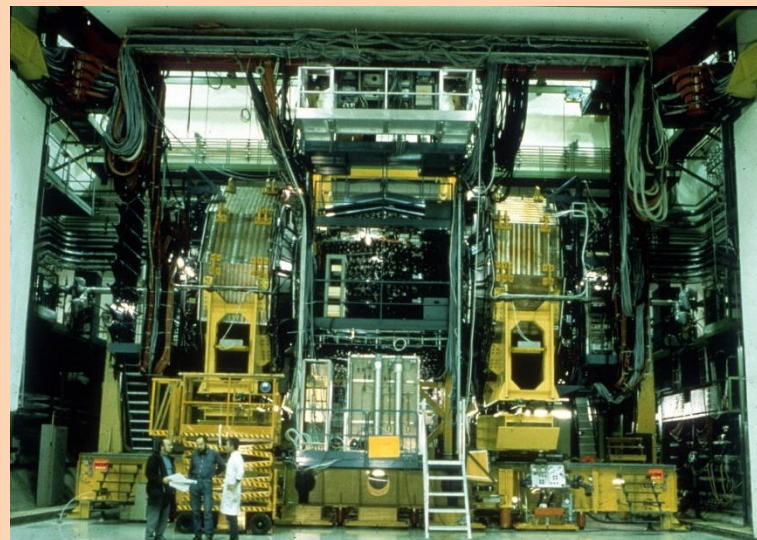


During 1978/9 I was a Research Associate at the Stanford Linear Accelerator Center (SLAC) in California in the group of Burton Richter, getting experience with the Mark-II experiment at the e^+e^- collider SPEAR

Back in Europe, I became a CERN staff and was fully involved in the CERN proton-antiproton collider experiment UA2, and its upgrade UA2' (1980-1991)

I worked directly on the jet and W/Z discoveries, and the search for new physics, but also on all calorimeter aspects of this experiment

Enjoying to work also as a Project Leader hands-on on the calorimeter upgrade for the UA2' detector (1985)



Since the 1980s, in parallel with, and motivated by the success of, the CERN p-pbar Collider I engaged enthusiastically into physics and detector discussions for a far future hadron collider in the LEP tunnel, the Large Hadron Collider (LHC)

I will talk about that in the lectures, with pictures there; in short the LHC became my main activity from 1989 onwards, first as informal spokesperson of a proto-Collaboration, and then after the formal approval of the ATLAS project in 1995 I was Spokesperson for it until 2009

Even though I am now formally retired as CERN staff since 2013, I am still fully involved in the ATLAS Collaboration, now with a host affiliation as an honorary professor with the University of Freiburg

I have been, and still am, involved in many international committees on several continents helping to shape the future of particle physics in the world

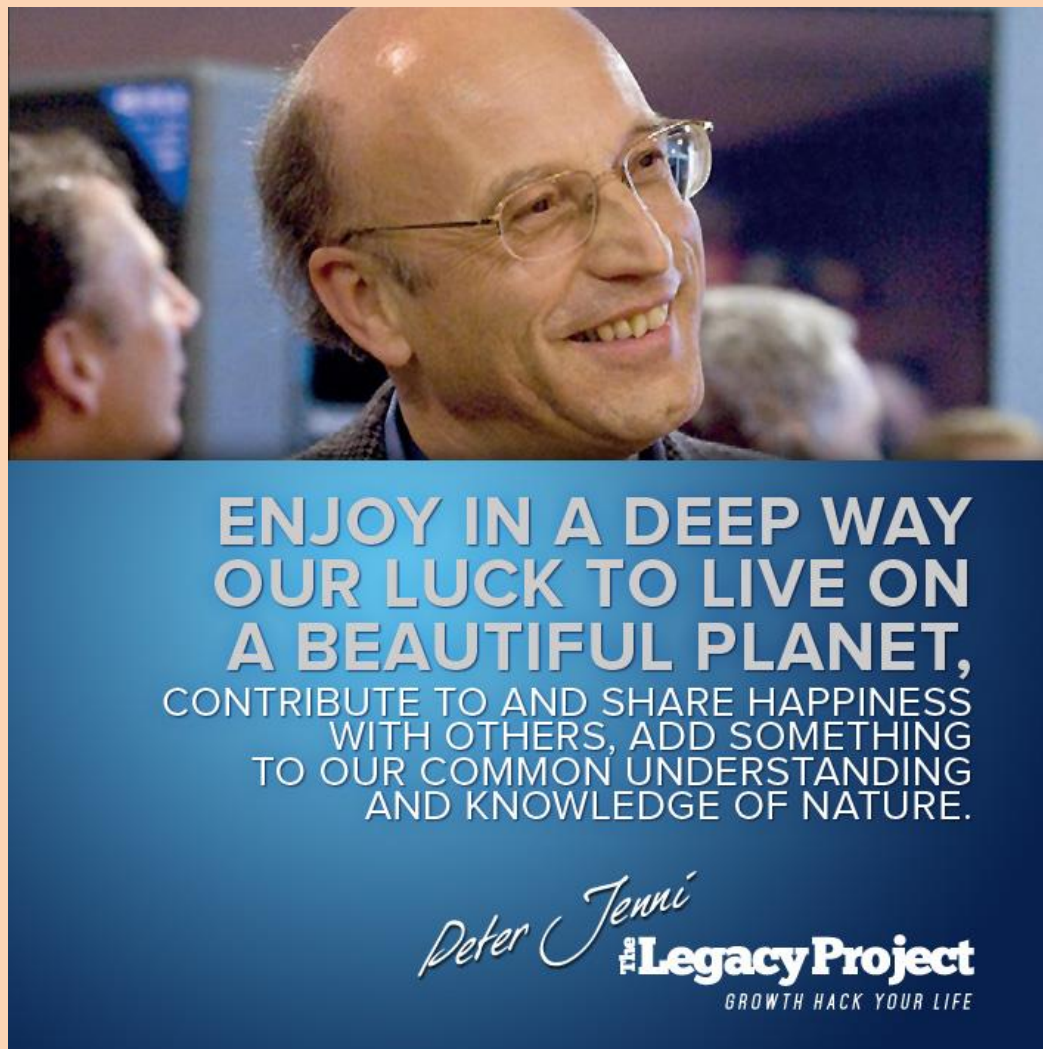
The greatest motivation for that remains for me to help building up a science future for all talents from everywhere

Physics Schools are a perfect opportunity to share the enthusiasm for fundamental science, and I am very happy to contribute again a little to the great initiative of Ketevi Assamagan with the ASP series



(You can find much more than necessary on the web...)

A final word once captured
in an interview The Legacy
Project (a South African
organization) ...



Some resources on the web available in open access:

The evolution of hadron collider experiments

Paul Grannis and Peter Jenni, Physics Today 66, 6, 38 (2013)

<http://dx.doi.org/10.1063/PT.3.2010>

Journey in the Search for the Higgs Boson

The ATLAS and CMS experiments

M Della Negra, P Jenni, T S Virdee, Science 338, 1560 (2012)

<http://www.sciencemag.org/content/338/6114/1560.full.html>

The ATLAS experiment

Monica L Dunford and Peter Jenni, Scholarpedia 99(10):32147)

http://www.scholarpedia.org/article/The_ATLAS_experiment

**The whole ATLAS book about its history and early results
freely available:**

<https://www.worldscientific.com/worldscibooks/10.1142/11030>

Podcast of a long interview with me about LHC and ATLAS:

<http://omegataupodcast.net/?fbclid=IwAR3UlgfJ1mZslukY1UKFobOB2U7uuH4c2IG42qspkjOy7P80EXzYxZqJKPA>

ASP online, 21/28-08-2020
Peter Jenni (Freiburg and CERN)

History of LHC and ATLAS

