

# CERN: A Journey through Time

**Particle physics.** Backed by 21 countries and involving researchers from 100 nationalities, CERN, the European Organization for Nuclear Research whose Large Hadron Collider (LHC) is today the largest and most powerful particle accelerator in the world, recently celebrated its 60th anniversary. We look back at a few momentous achievements of this improbable journey into the deepest structure of matter, an exemplary lesson in international scientific collaboration, which is only just beginning.

BY AUDREY DIGUET  
 PHOTOS BY CERN AND CYRIL FRESILLON/CNRS PHOTOOTHÈQUE



1 Following WWII, the weakened nations of Europe, fearing that their best physicists would leave for better research facilities elsewhere, and anxious to foster peace in the region, decide to build a common European physics laboratory. On October 1, 1952, during the third session of the provisional council in Amsterdam, the canton of Geneva is selected as its future site.

© I. CERN, 1952 / © CERN, 1953



2 Construction officially begins on the Meyrin site in Switzerland on May 17th, 1954.





3



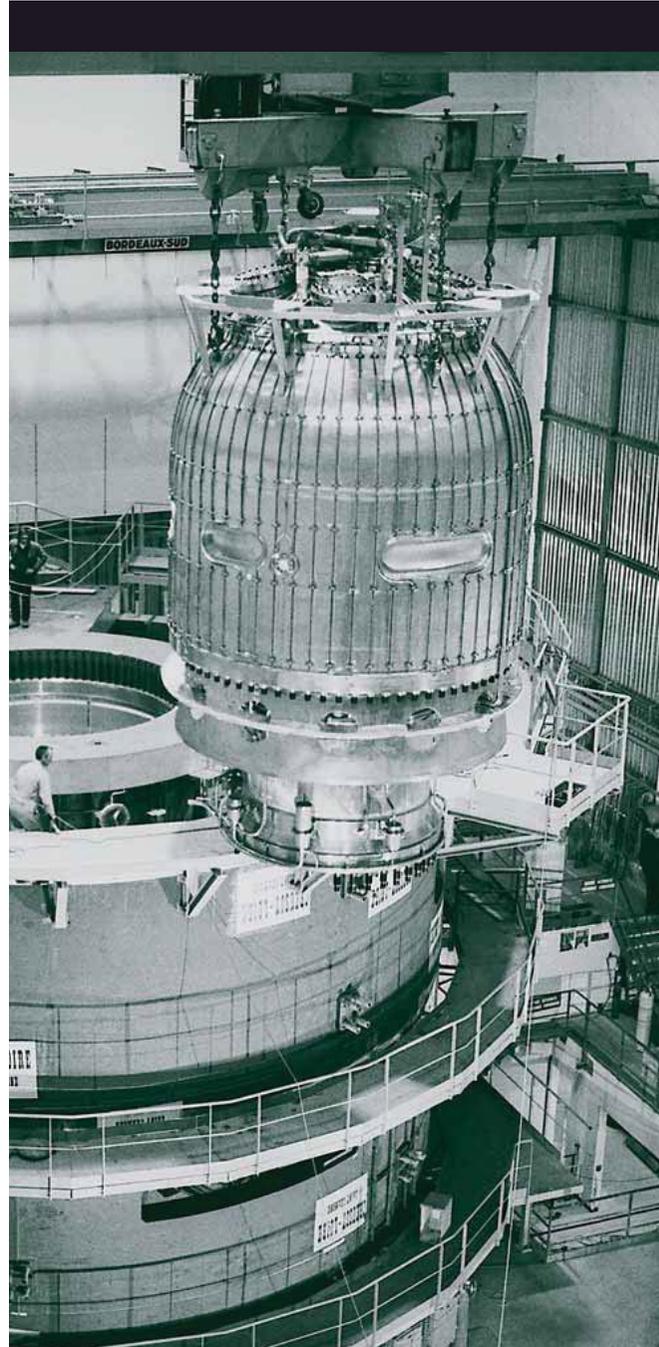
4

3. CERN's first accelerator, the 600 MeV Synchrocyclotron (SC) comes into operation in 1957. It will provide beams for particle and nuclear physics experiments until 1990.

4. The ring-shaped Proton Synchrotron (PS), which becomes operational in 1959, is the most powerful proton accelerator of its time. Still active today, it continues to supply particle beams to the Large Hadron Collider (LHC).



5



5, 6. For decades, studying particle trajectory at CERN relied on examining by hand millions of photographs from bubble chambers like the Big European Bubble Chamber (pictured here). In 1968, Nobel prizewinner Georges Charpak (below, left) brings particle detection into the electronic age with his "Multiwire Proportional Chamber" (MWPC). Using transistor amplifiers and linked to a computer, his invention allows for a 1000-fold increase in detection rate.



6

