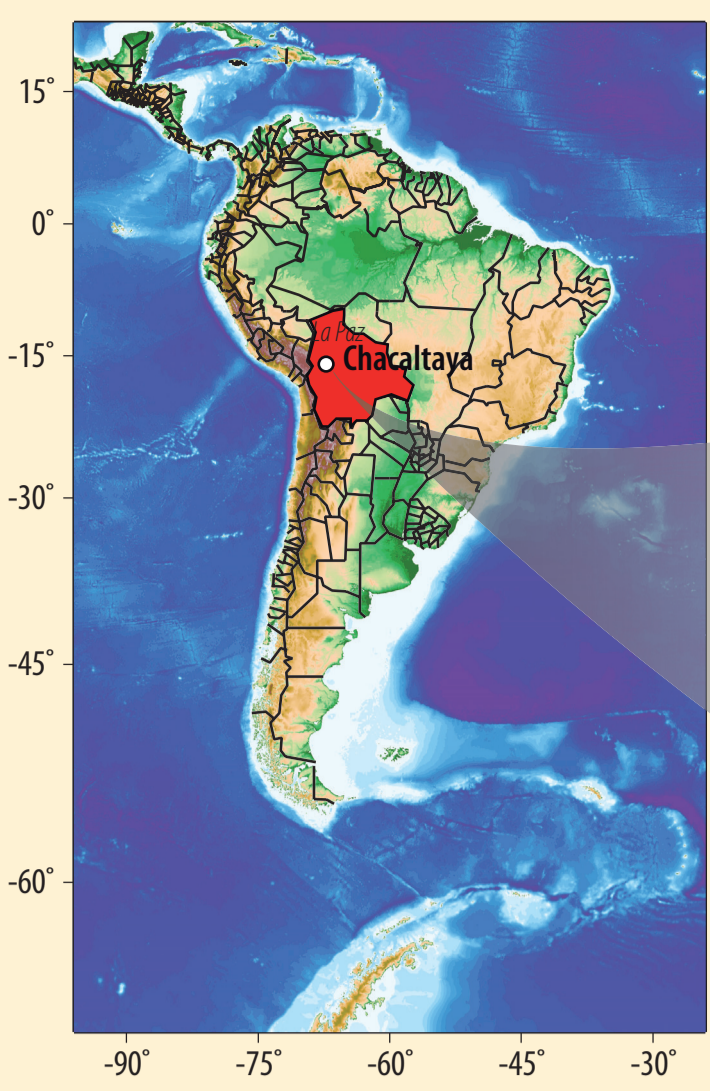




The history Chacaltaya Laboratory



Altitude 5.230 m asl
Latitude S 16° 29'
Longitude W 68° 8'

located on the Chacaltaya mountain,
Bolivia



Built in 1942



The Club Andino Boliviano. The skier is the physicist F. Handel (~1950)

The laboratory was founded in September 1942 by Ismael Escobar. At first it was used as a meteorological station. Soon afterwards, a road was built to give access to a ski station opened in 1940 by the Club Andino Boliviano.



The Chacaltaya laboratory



On the left :the Club Andino Boliviano today.
On the right: the old building.
On the background: The Illimani mountain

THE DISCOVERY OF THE PION (1947)



1950 - Cesare Lattes (on the right) with other physicists inside the laboratory. Ismael Escobar on the left

The name of Chacaltaya became famous among cosmic rays physicists because of the discovery in 1947 of an important subatomic particle, the pion, and its decay.

The pion was discovered through the method of nuclear emulsion. Protagonists of this important event were the physicists Cesare Lattes, Giuseppe Occhialini and Cecil Powell which provided the confirmation of Yukawa theory.

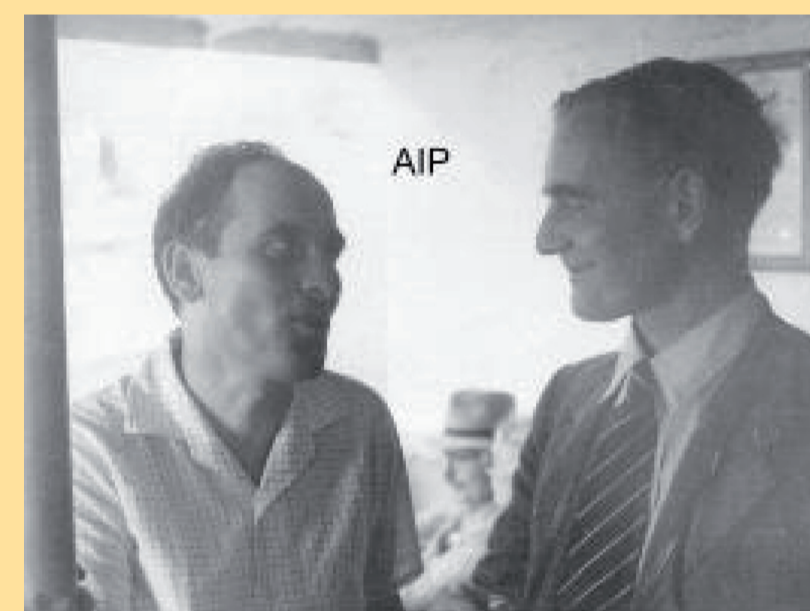


1950, Cesare Lattes at Chacaltaya

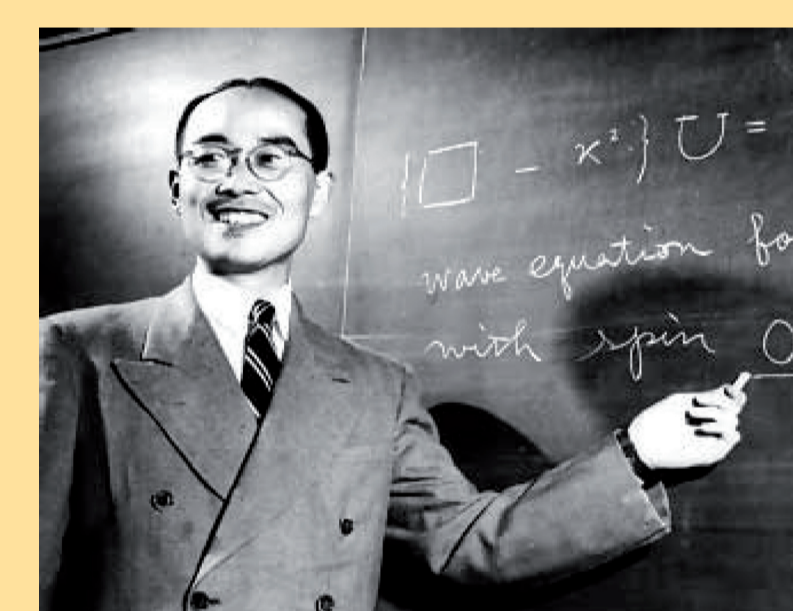
THE NOBEL PRIZE

The discovery of Lattes, Occhialini and Powell enabled Powell and Yukawa to win the Nobel Prize.

After that, the laboratory reached an international importance in the field of cosmic rays research.



Occhialini, Powell (Nobel, 1950)



Yukawa (Nobel, 1949)



Early '60s Prince of Edimburgh visiting the Chacaltaya laboratory

THE HIGH ENERGY PHYSICS



Cesare Lattes (at the desk) and F. Handel at Chacaltaya.

At Chacaltaya, Lattes and his colleagues wanted to study particles (the cosmic rays) with energies thousands times higher than the energies reached by the accelerators of that time (60 GeV).

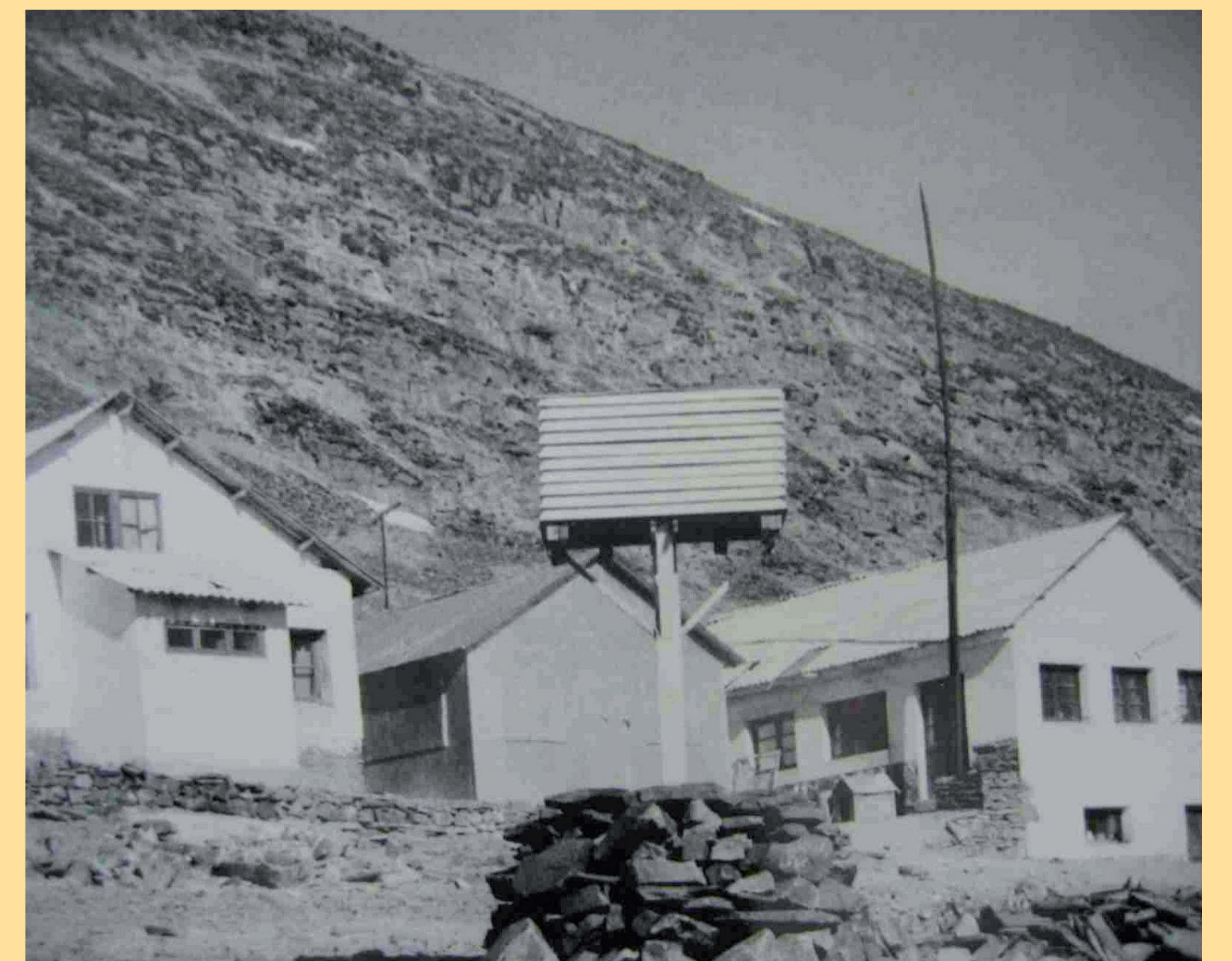
Lattes, with Brazilian colleagues and a Japanese group, including Yukawa, established a long-term program at Chacaltaya, working mainly with nuclear emulsion layers, to study the interaction of very high energy particles.

In the following years, the Chacaltaya laboratory hosted numerous cosmic physics experiments, in collaboration with Japan Universities.



The Italian researcher Bruno Rossi, which had a great part in the experiment BASJE.

In the In '60s, Experiment BASJE (Bolivian Air Shower Experiment), began as a collaboration Bolivia - USA- Japan that set the beginning of the research on very high energy gamma.



Still today, at Chacaltaya laboratory is being carried out advanced research in cosmic ray and astrophysics from worldwide scientists, with the logistic support and the scientific collaboration of the UMSA (Universidad Mayor de San Andres).