The Paul Scherrer Institute in brief

The Paul Scherrer Institute PSI is the largest research centre for natural and engineering sciences in Switzerland, conducting cutting-edge research in three main fields: matter and materials, energy and environment and human health. PSI develops, builds and operates complex large-scale research facilities. Every year, more than 2200 scientists from Switzerland and around the world come to PSI to use our unique facilities to carry out experiments that are not possible anywhere else. PSI is committed to the training of future generations. Therefore about one quarter of our staff are apprentices, post-graduates or post-docs. For pupils it offers the school laboratory iLab.

PSI employs 1900 people, with an annual budget of approximately CHF 380 million, and is primarily financed by the Swiss Confederation. PSI is part of the ETH Domain, with the other members being the two Swiss Federal Institutes of Technology, ETH Zurich and EPFL Lausanne, as well as Eawag (Swiss Federal Institute of Aquatic Science and Technology), Empa (Swiss Federal Laboratories for Materials Science & Technology) and WSL (Swiss Federal Institute for Forest, Snow and Landscape Research). The Paul Scherrer Institute is located in the Canton of Aargau, in the municipal areas of Villigen and Würenlingen on both sides of the River Aare.

Main areas of research

Researchers in the area of Matter and Materials study the internal structure of a wide range of different materials. Results contribute towards a better understanding of processes occurring in nature and provide starting points in the development of new materials for technical applications.

The goal of activities in the Energy and Environment area is to develop new technologies to facilitate the creation of a sustainable and secure supply of energy, as well as an uncontaminated environment.

In the Health area, researchers are searching for the causes of illnesses, and exploring potential treatment methods. Their basic research activities also include the clarification of generic processes in living organisms.

Large research facilities

PSI operates large scientific research facilities, such as the SINQ neutron source, the Swiss Light Source (SLS) and the SμS muon source, which offer out-of-the-ordinary insights into the processes taking place in the interior of different substances and materials. These are the only such facilities within Switzerland, and some are the only ones in the world.

User laboratory

PSI provides access to their large research facilities via a User Service to researchers from universities, other research centres and industry. Since the demand for access normally far exceeds the time available, a committee comprising experts from a number of different countries selects the best applications. Every year, PSI registers more than 5000 visits of scientists from around the world, performing their experiments at approximately 40 measuring stations.

Proton therapy

In addition to its research activities, the Institute operates Switzerland’s sole facility for the treatment of specific malignant tumours using protons. This particularly sensitive procedure allows tumours to be destroyed in a targeted manner, leaving the surrounding tissue largely undamaged.

Education and training

As a research institution oriented towards the natural sciences, with a requirement to undertake first-rate research at the
highest level, we depend on the availability of an innovative infrastructure and sufficient funding. Ultimately, however, our employees – the brains behind the machines – are our major strength, as PSI's most crucial capital resource is the outstanding competence, experience and motivation of its employees. We therefore regard education and training as extremely important and we consequently also undertake the training of school children, people in various professions, students and academics.

http://www.psi.ch/about-psi