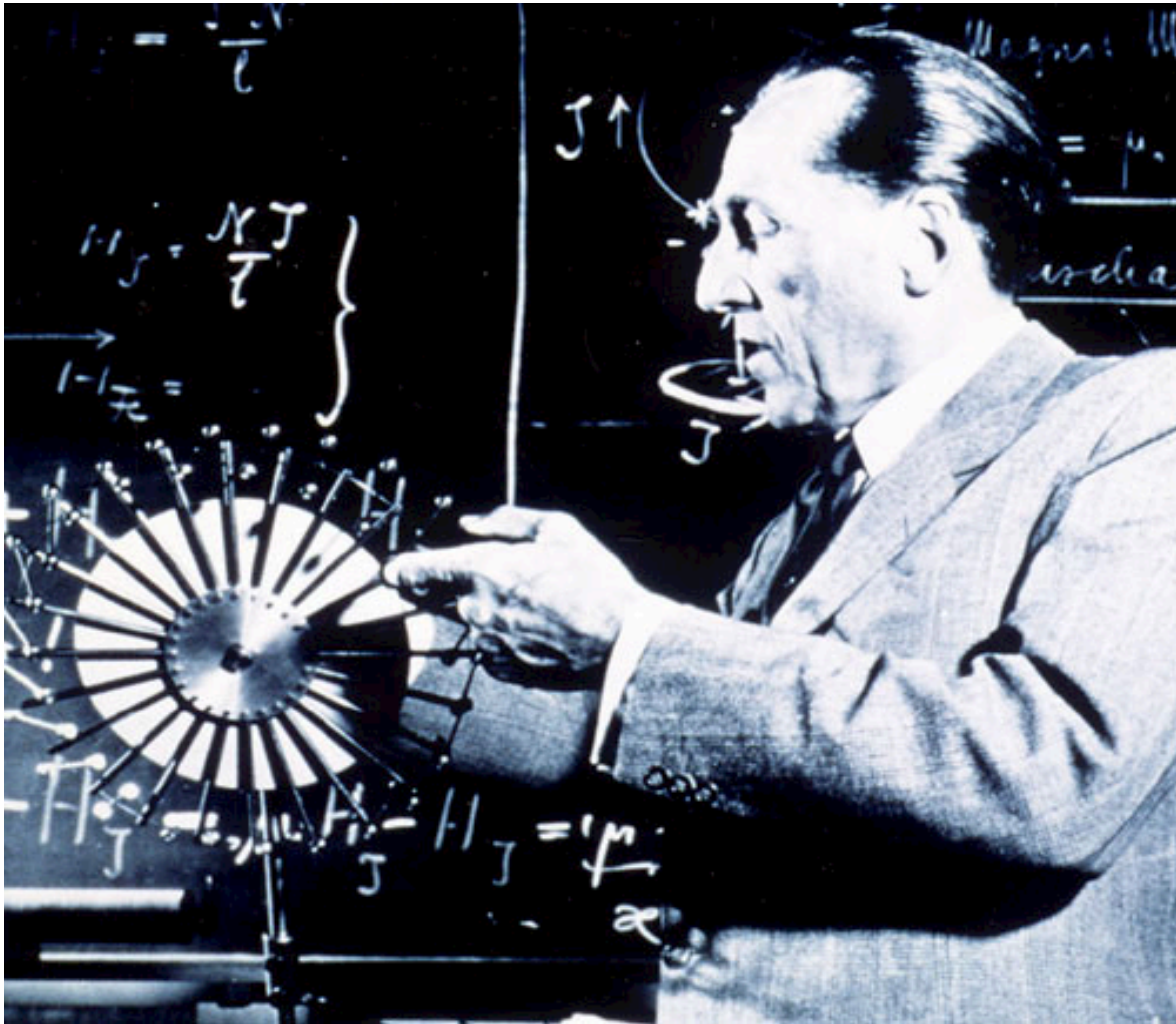


Paul Scherrer (1890 – 1969)



- Studied physics and mathematics at the Swiss Federal Institute of Technology (ETH) Zurich, in Königsberg and Göttingen in Germany
- 1920: Director of The Institute of Physics at the ETH Zurich. Became well-known for the clarity of his lectures
- Researched X-ray scattering on crystals, liquids and gases. Later research work was in nuclear physics
- 1946: President of the Swiss Study Commission on Atomic Energy
- Involved in the founding of CERN

Our Mission

- To play a leading role on an international level in
 - physics of condensed matter and materials sciences
 - structural biology
 - radiochemistry, radiopharmacy and proton radiation therapy
 - particle physics and accelerator technologyby using large-scale facilities (SLS, SINQ, S μ S, particle beams)
- To be a UserLab for external science community
- Energy research towards an efficient, environmentally friendly and reliable energy supply (primarily using complex facilities)

Guiding principles

Quality:

PSI is committed to scientific excellence, promotes and practises interdisciplinary research, is market-oriented, and develops quality of leadership.

User laboratory:

PSI co-operates with national and international research communities in the design, construction and operation of large-scale facilities, for their benefit.

Research:

PSI uses its complex facilities for its own research in physics, chemistry, biology, energy technology, environmental science and medicine.

Further education and training:

PSI provides further education and training, in close collaboration with universities.

Transfer of skills:

PSI acts in partnership with industry to promote the transfer and application of research results into new products, techniques and processes.

Social aspects:

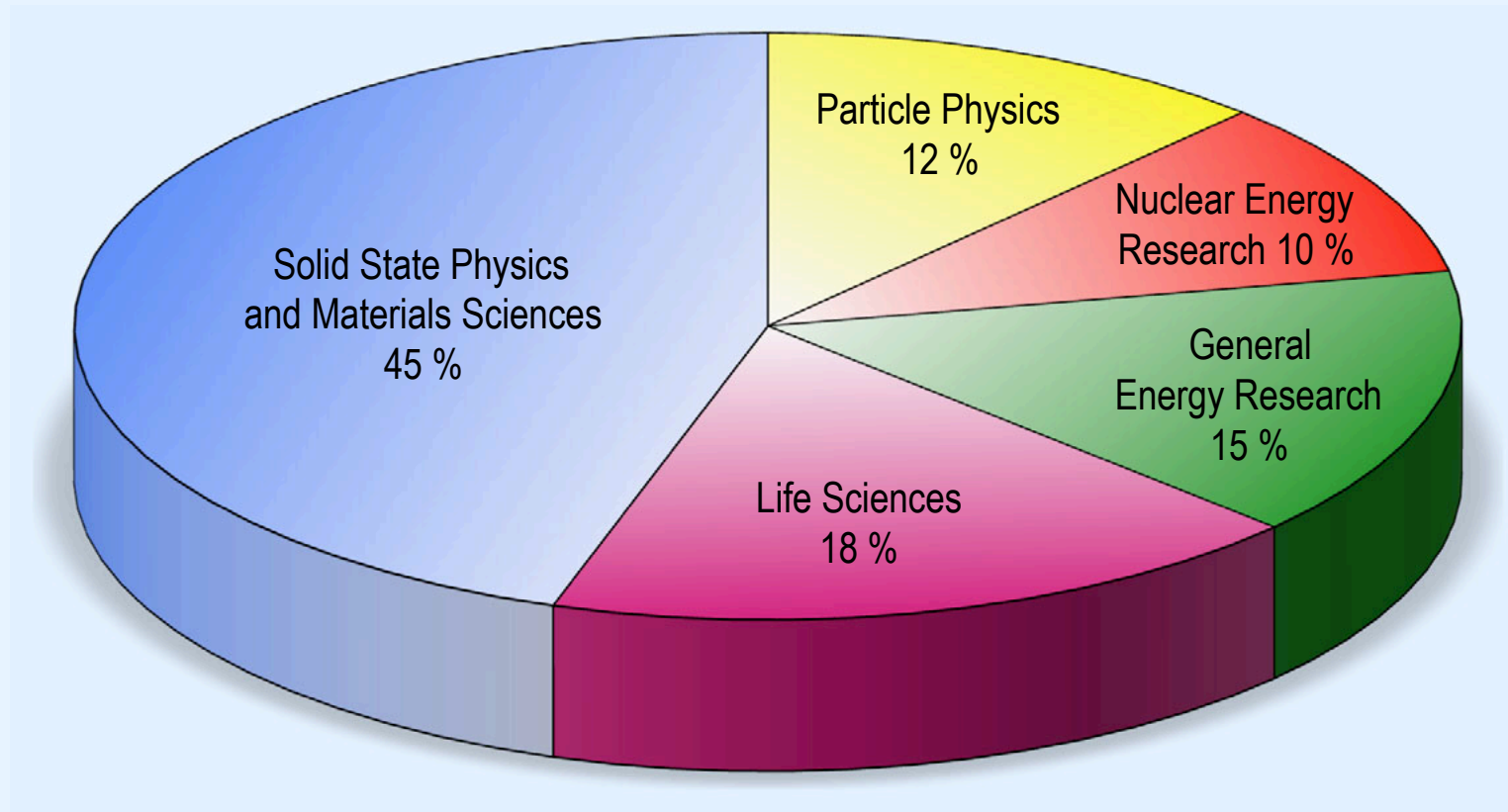
PSI strives for social relevance by performing research into matters of national and international significance, cultivates open dialogue with the general public, and is accountable.

Key figures 2011

PSI funds (global budget)	250	MCHF
External funding	70	MCHF
Staff	~ 1500	PJ
Of which externally financed	~ 400	PJ
Doctoral students	~ 300	
Apprentices	85	
External users	~ 2100	
Number of scientific publications	~ 1000	
PSI-employees with teaching duties at ETH and universities	~ 110	

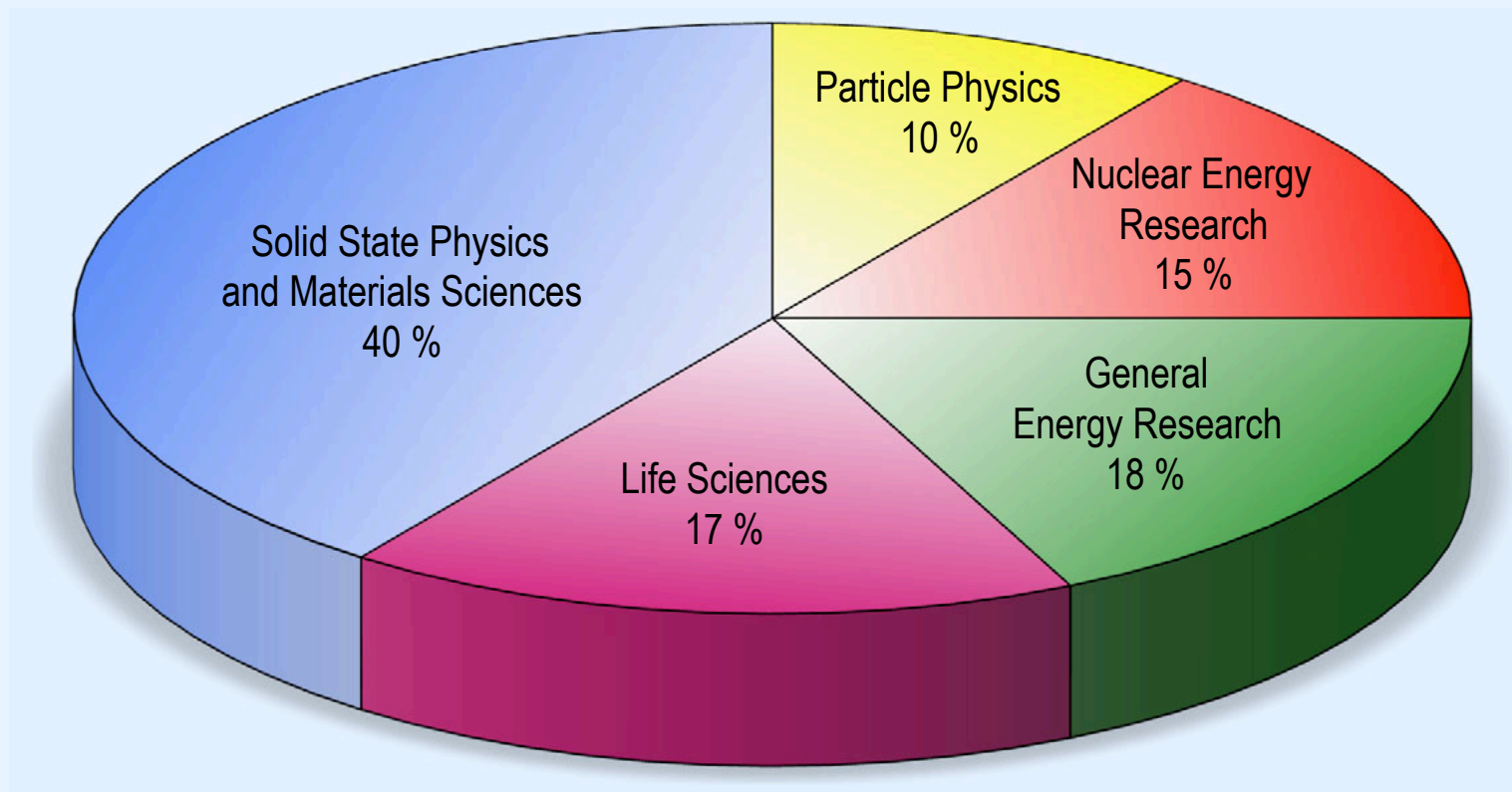
Budget 2011

Distribution by points of emphasis; 250 MCHF (PSI funds)

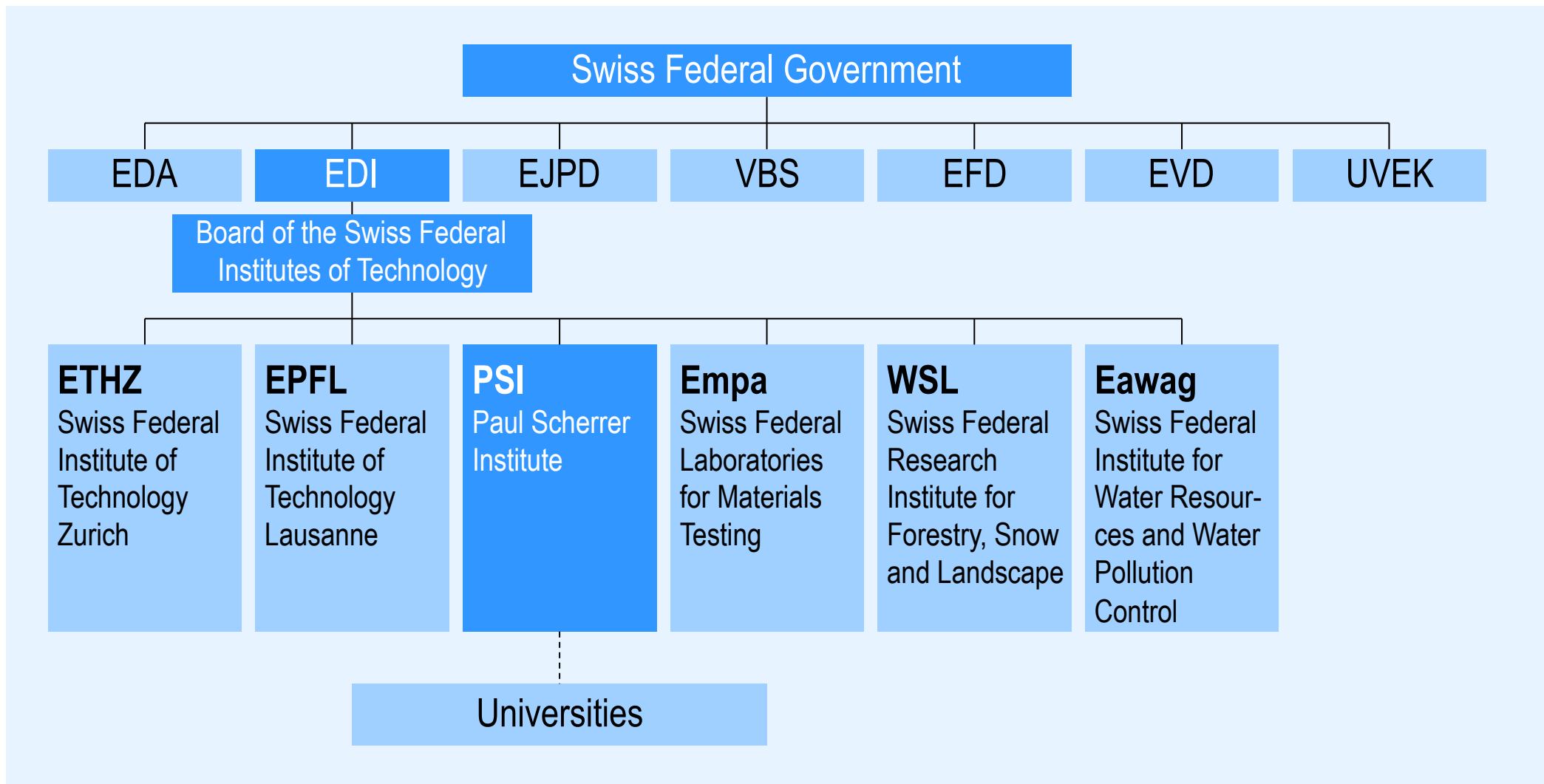


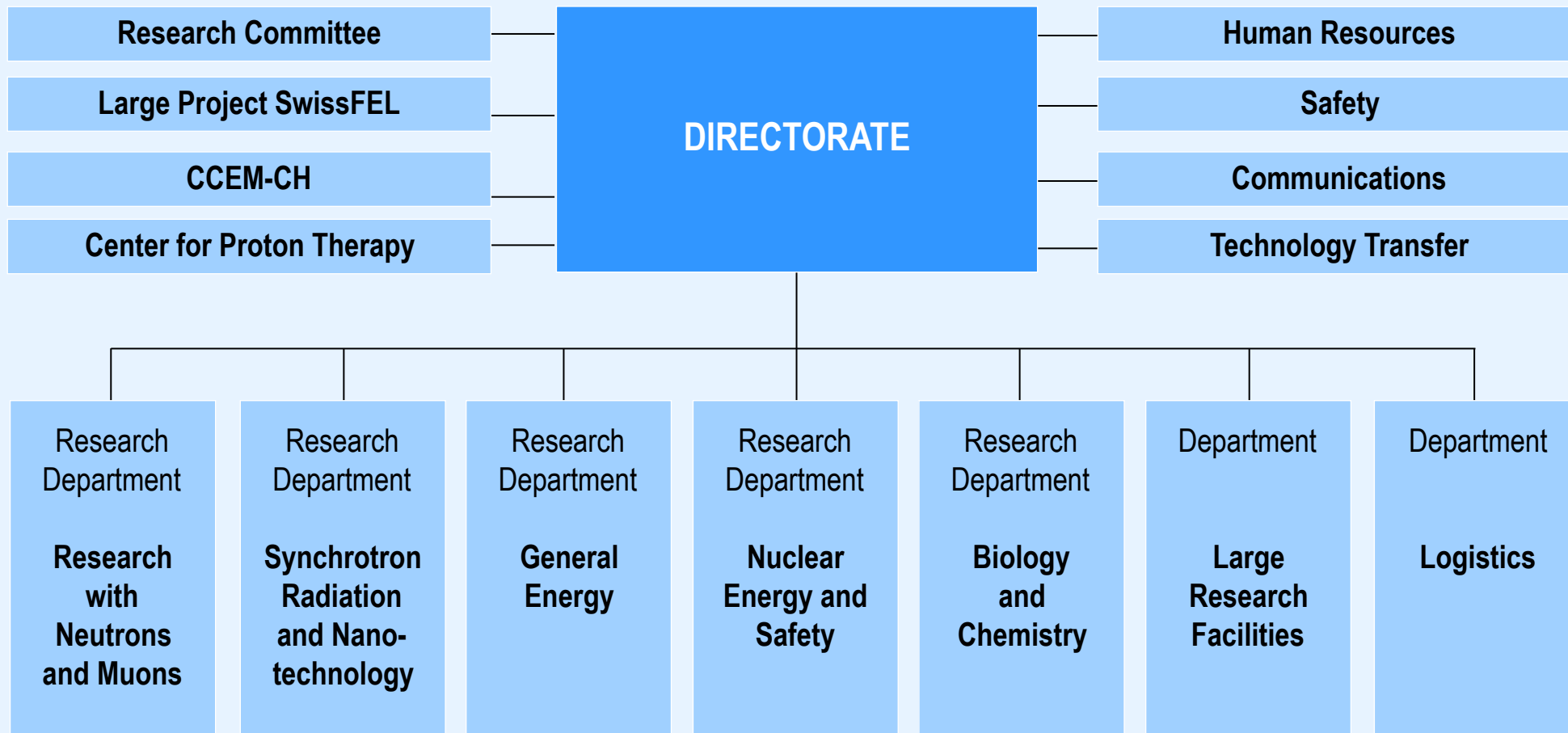
Budget 2011

Distribution by points of emphasis; 320 MCHF (PSI and third-party contributions)



Political embedding

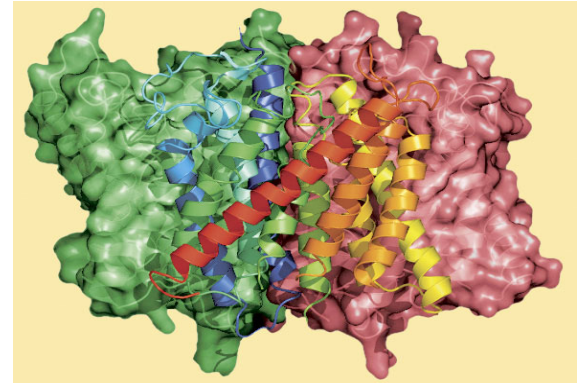




Swiss Light Source SLS



Giant microscope for structure analysis

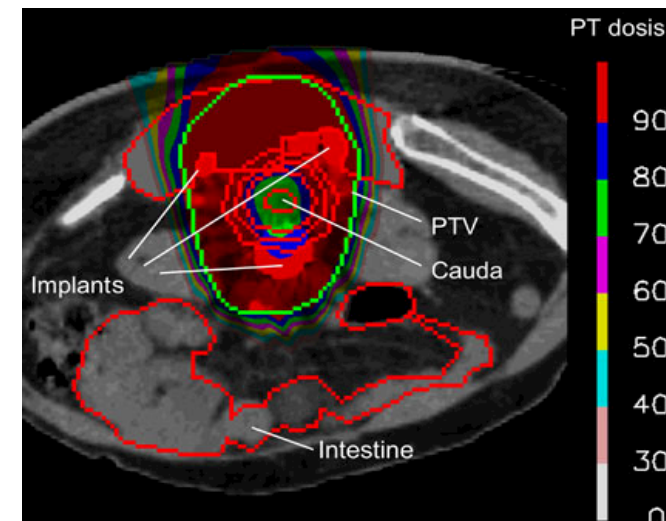


Decoded by synchrotron light: AmtB membrane protein, enables the transport of ammonia (nutritive substance) into the plants.

Humans and health

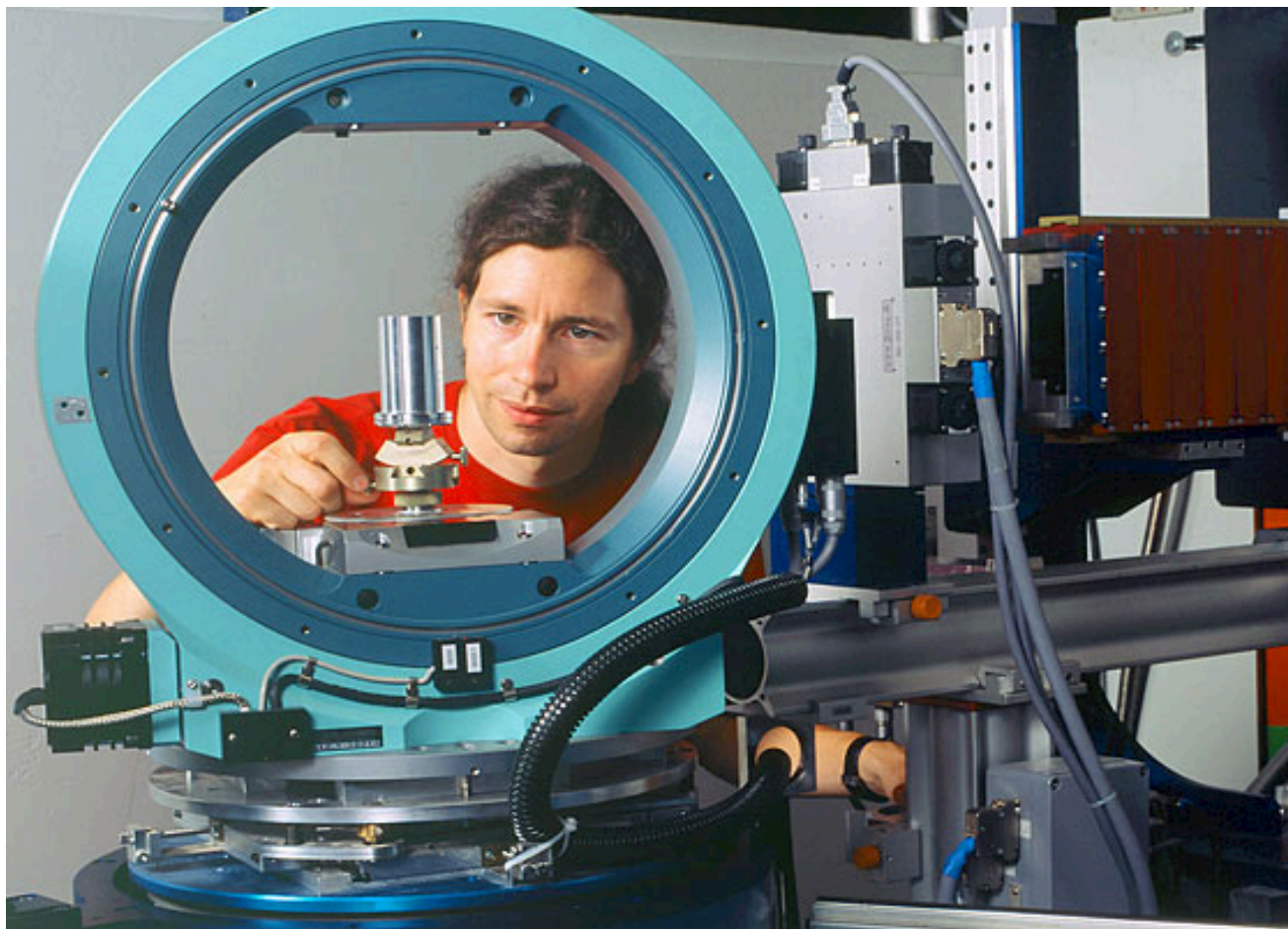


Radiation facility (Gantry) for proton therapy

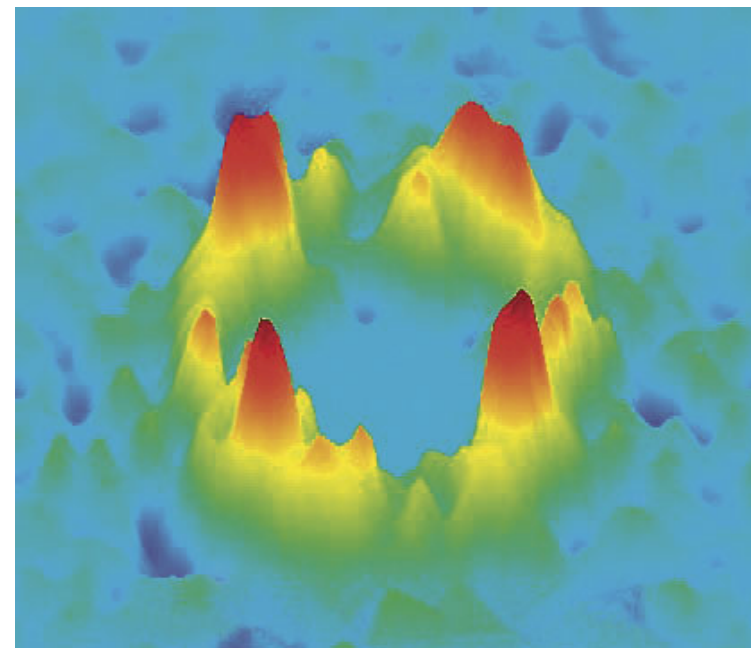


Efficient spot-scanning
technique:
irradiation plan for a tumour
at the lower spine (sparing
of healthy tissue)

Tiny structures and new materials

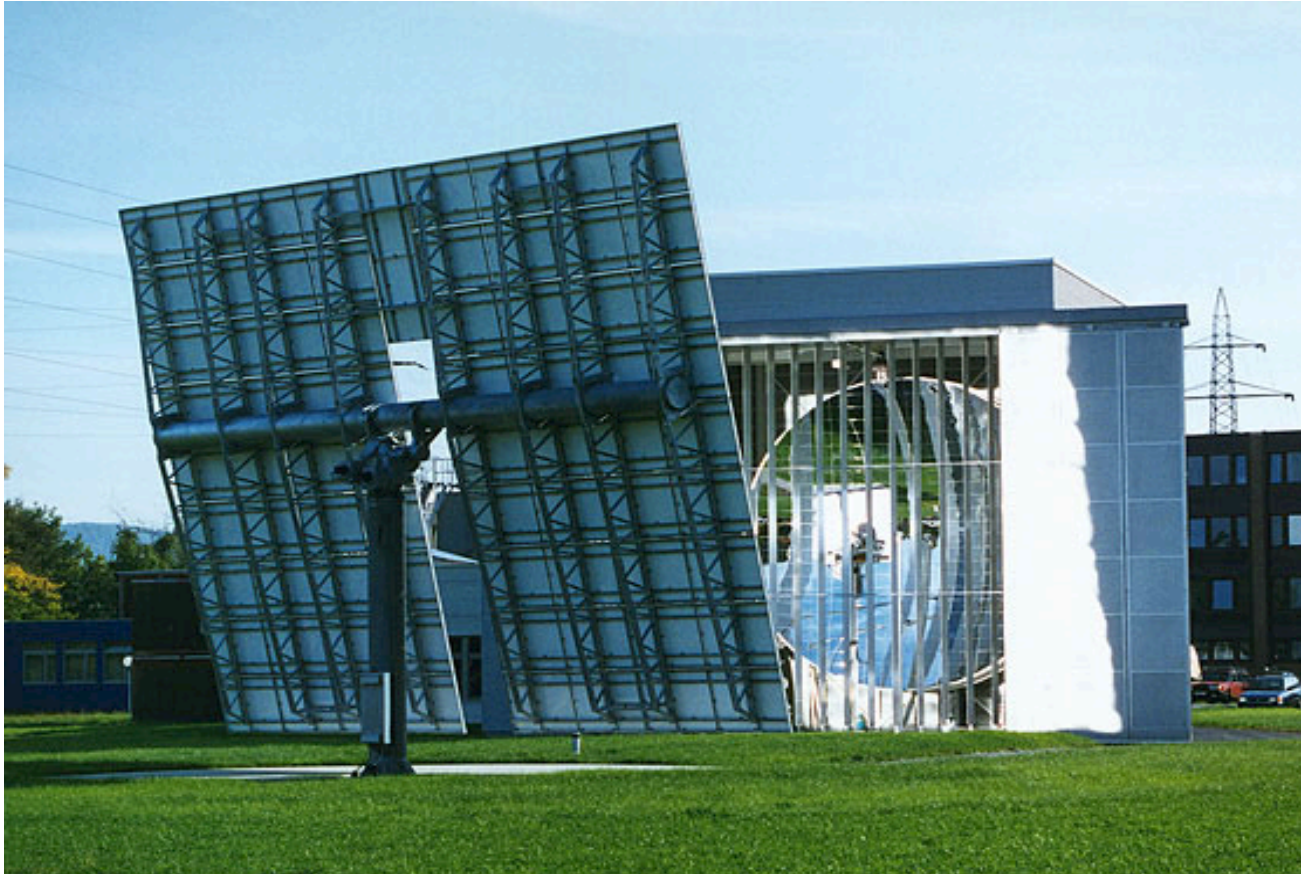


Experiments at the Spallation Neutron Source



Neutrons as compasses:
magnetic flux lines in a
superconductor

General energy



The solar concentrator accumulates sunlight 5000 times for production of hydrogen

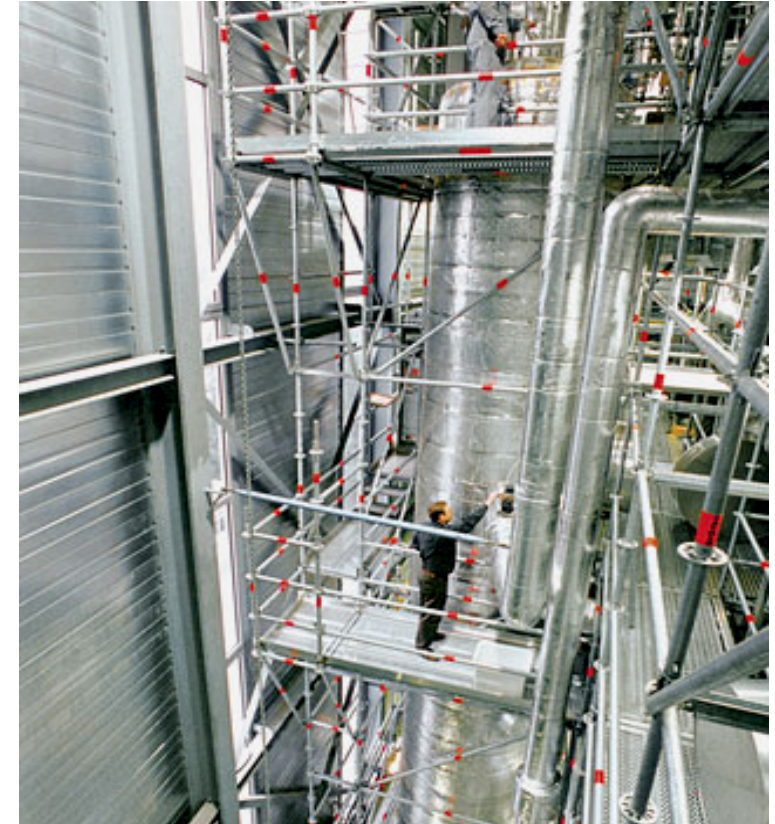


Drives efficiently with hydrogen:
the fuel cell car HY-LIGHT

Nuclear energy and safety

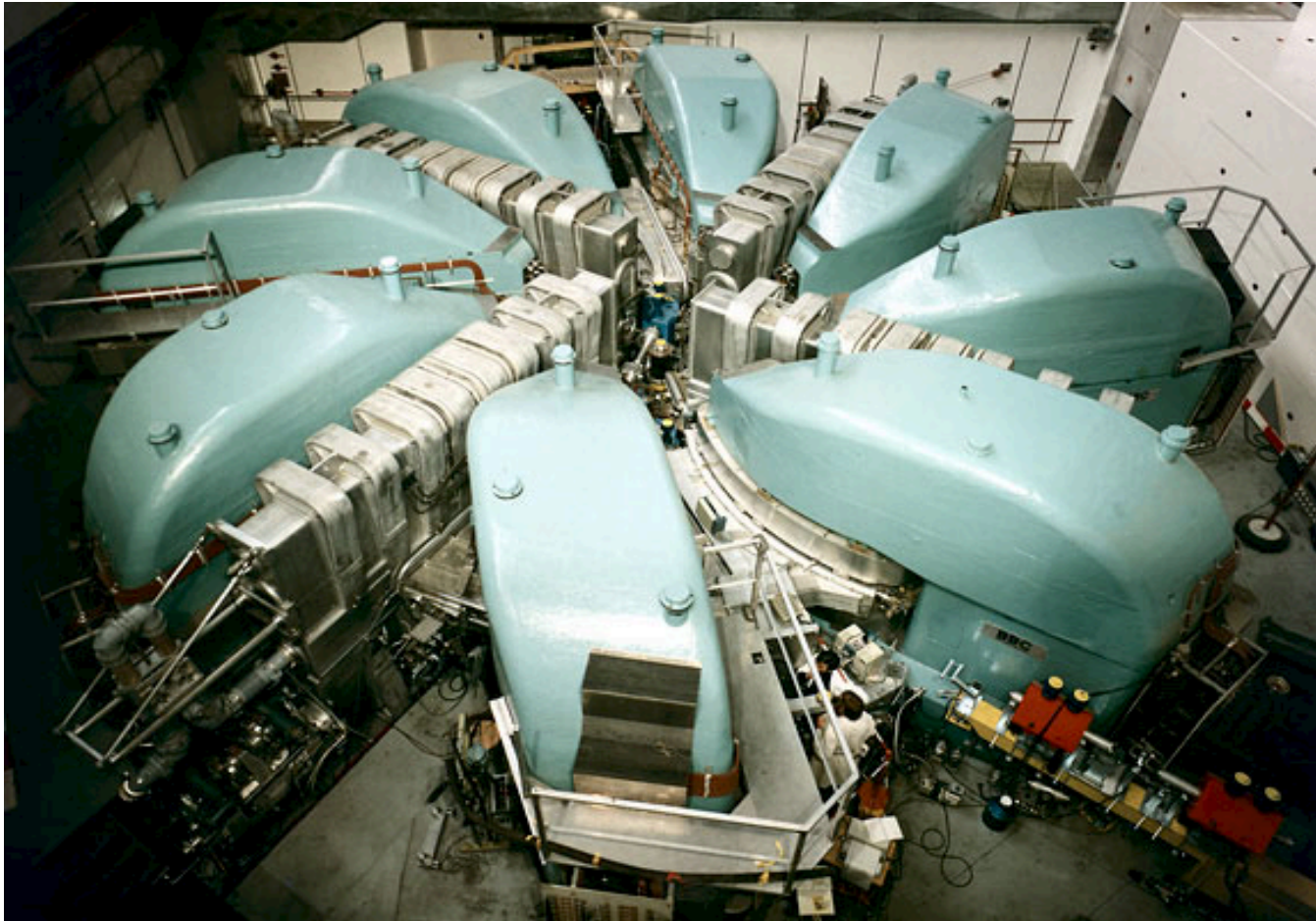


Research reactor PROTEUS: experiments for efficient use of nuclear fuel

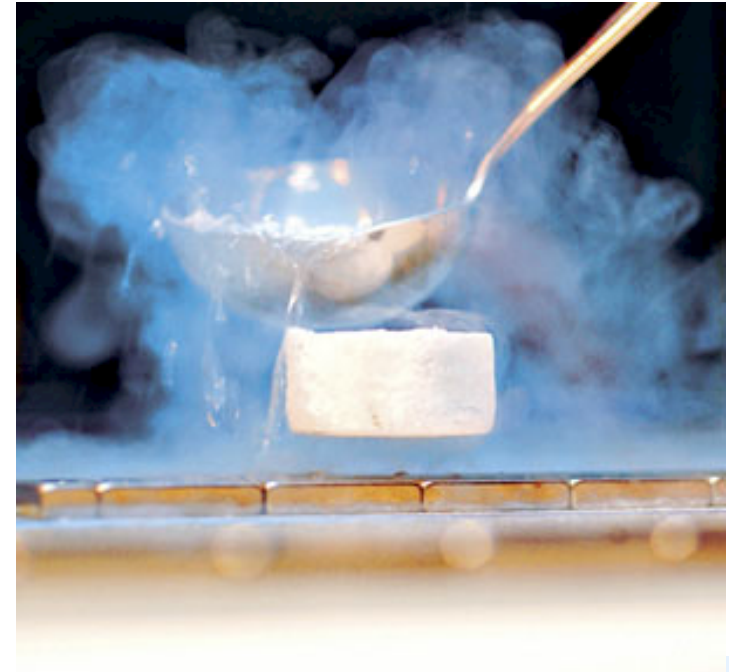


Large-scale facility PANDA: heat removal by natural circulation

The proton accelerator



Most powerful facility of this type, worldwide



Neutrons and myons inform about atomic structure and magnetic fields: for example in a superconductor

Visitor centre psi forum

Per year
15' 000 visitors
450 groups



20 exhibits, 3-D films and guided tours through the research facilities of PSI



Future Globe: A rotating multimedia exhibit