

# Practical Course in Particle Physics

at the Paul Scherrer Institut (PSI, Switzerland), Summer 2017

Perform a real particle physics experiment at a PSI beam-line.

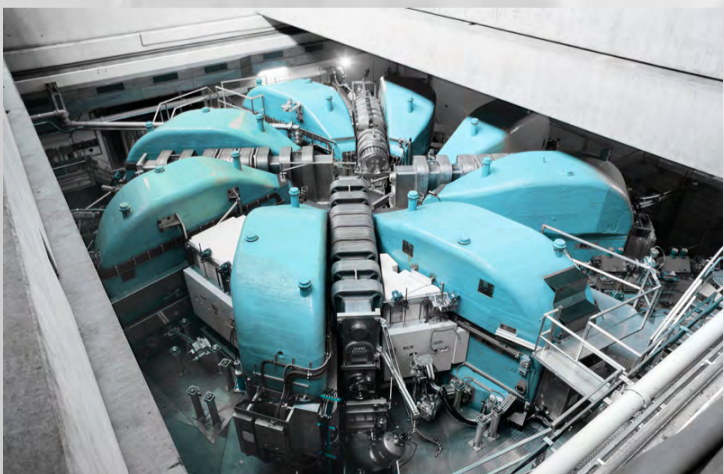
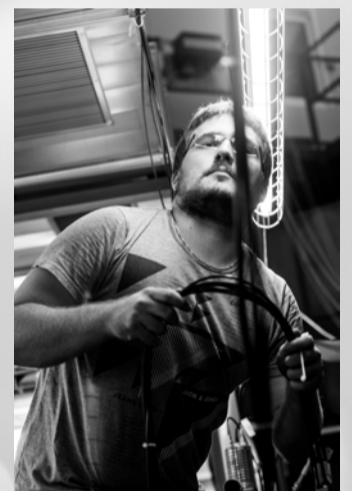
Learn experimental particle physics hands-on.

Join a group of 10-12 students from ETH Zürich and Heidelberg and Mainz Universities for one week of preparations in Heidelberg and two weeks of beam time at PSI.

Design and build your experiment from available detector components, take data during a 24/7 beam time. Analyse the data and write up the results.

Example measurements:

- Branching ratio  $B(\pi \rightarrow e\nu)/B(\pi \rightarrow \mu\nu)$
- Panofsky ratio  $B(\pi^- p \rightarrow n\pi^0)/B(\pi^- p \rightarrow n\gamma)$
- Lifetimes and decay parameters of muons and pions



## Next course: 28.8.-15.9.2017

Please contact:

Niklaus Berger (niberger@uni-mainz.de)

Limited number of places, please register early!

The course can be counted as Projektpraktikum as part of the physics master programme