

Brief description of the institutes of the lab tours

Central Institute for Engineering, Electronics and Analytics: Engineering and Technology (ZEA-1)

The Central Institute of Engineering, Electronics and Analytics - Engineering and Technology (ZEA-1) is a scientific-technical institute, which develops and produces first class instruments, equipment, installations and devices for international cutting edge research. The ZEA-1 is as well responsible for installations at large facilities like ITER, MLZ and SNS. The institute constructs the JCNS instruments and is developing choppers for neutron and light sources worldwide.

Website for further information: http://www.fz-juelich.de/zea/zea-1/EN/Home/home_node.html

Central Institute for Engineering, Electronics and Analytics: Electronic Systems (ZEA-2)

The Central Institute of Engineering, Electronics and Analytics – Electronic Systems (ZEA-2) develops complex electronic and information technology system solutions for science and research. These systems incorporate the acquisition of a physical event up to the extraction of information. The application comprehensive concepts are based on existing as well as inhouse developed technologies. For JCNS instruments, the ZEA-2 is maintaining and developing detector systems, readout electronics and software.

Website for further information: http://www.fz-juelich.de/zea/zea-2/DE/Home/home_node.html (only in German)

Institute for Nuclear Physics: COSY (COoler-Synchrotron)

The COoler-SYnchrotron COSY is an accelerator facility designed to produce 'cooled' ion beams. After the successful completion of the hadron physics programme in 2015, the new focus at COSY is to measure the electric dipole moment (EDM) of charged particles. With the ultimate goal to design a new dedicated storage ring, scientists at COSY are currently working on pushing the limits of accelerator technology and are developing the necessary measurement techniques. Complementary to measurement of neutron EDMs, this will provide an excellent test of the standard model and may add an important ingredient to explain the matter-antimatter asymmetry in the universe.

Another interesting, although historic, connection to neutron science is that the NESSI and JESSICA Experiments at COSY were carried out to develop the target system for the European Spallation Source.

Website for further information: http://www.fz-juelich.de/ikp/EN/Forschung/Beschleuniger/Beschleuniger_node.html

Jülich Supercomputing Centre (JSC)

Jülich Supercomputing Centre provides high performance computer capacity for scientists at the Research Centre Jülich, at universities and research laboratories in Germany and in Europe - as well as for industrial partners. The scientific peer review is done by the John von Neumann Institute for Computing. This comprises the operation and especially the development of the supercomputers and the technical infrastructure, the data storage, visualisation systems, networks and software. A further important task is the user support and education.

Website for further information: http://www.fz-juelich.de/ias/jsc/EN/Home/home_node.html