

PTB extends collaboration in the field of fusion research

The activities of PTB in the field of fusion research will continue after a collaboration contract between PTB and the Max-Planck-Institut für Plasmaphysik (IPP) in Garching and Greifswald has been signed recently.

The activities of PTB in the field of fusion research will be extended after a collaboration contract between PTB and the Max-Planck-Institut für Plasmaphysik (IPP) in Garching and Greifswald has been signed recently. The contracting parties expect an improved understanding of their knowledge in the area of measurement techniques for analysing physical processes in fusion plasmas. With this cooperation, they have laid down the boundary conditions for future projects in this area which will be the basis of future co-operation contracts.

The first activities within this collaboration contract will be the setup of a compact neutron spectrometer based on organic scintillators for the fusion experiment ASDEX upgrade in Garching and the development of a total neutron yield monitor for the W7X fusion experiment in Greifswald, which is presently under construction.

To prepare the setup of a neutron spectrometer at ASDEX upgrade, test measurements with a compact neutron spectrometer from PTB were performed at IPP to evaluate the future measuring position. This position is located outside the biological shielding of the fusion experiment and allows to perform neutron spectrometry with a well collimated neutron beam. A first result of this measurement campaign was the determination of the neutron fluence rate at the position of the future neutron spectrometer depending on the total neutron production rate of the fusion experiment. It was shown that the measurement conditions are favorable for the use of such a type of spectrometer and that the set up of such a device for IPP can be started.

Contact:

A. Zimbal, Department 6.5, Working group 6.54, E-mail: andreas.zimbal@ptb.de