



Prof. Hartmut Zohm

Recent ASDEX Upgrade Results in Support of ITER and DEMO

The ASDEX Upgrade tokamak programme aims at preparing the ITER and DEMO steps on the way to a fusion power plant. The talk will start with an introduction to the machine capabilities, including the discussion of recent upgrades. Then, results in the areas of exhaust and core physics will be presented. Concerning exhaust of power and particles, scenarios in which up to 25 MW of heating power can be exhausted at divertor target loads below 5 MW/m² will be shown. In the area of core physics, fully non-inductive scenarios have been established for the first time with the fully W-covered first wall. Avoidance and mitigation of disruptions and ELMs will also be discussed. Concerning the latter, special emphasis will be put on the discussion of 3-D effects introduced by resonant magnetic perturbation coils.