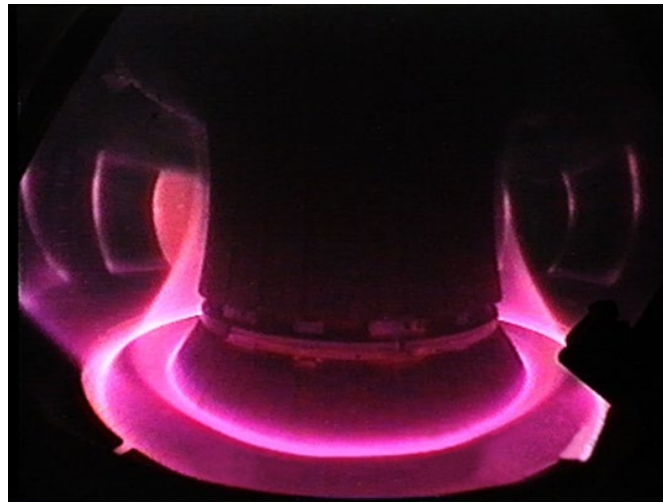


PHYSIKALISCHES KOLLOQUIUM

AM 26. JUNI 2023 UM 17 UHR C.T.
IM GROßEN HÖRSAAL

AKTUELLE INFORMATIONEN FINDEN SIE HIER: WWW.PHYSIK.UNI-FREIBURG.DE



FUSION RESEARCH - BRINGING THE POWER OF THE STARS TO EARTH? HARTMUT ZOHM *MAX PLANCK INSTITUT, GARCHING*

Fusion of hydrogen nuclei is the energy source of the stars. For more than 50 years, researchers have been working to make this process usable on Earth. The potential of an almost unlimited energy source for baseload consumption has its appeal: the primary fuels deuterium and lithium are abundant on Earth, and the resulting radioactive waste is much less critical than that of fission power plants. Could this make an important contribution to solving the world's energy problem?

Based on the description of the 'fusion reactor sun', the lecture will show how a fusion power plant should be realized on earth. In particular, the confinement of hot hydrogen plasmas in magnetic fields in tokamaks and stellarators will be discussed, but also inertial fusion will be outlined. The current status of research and recent results are presented in detail. Finally, the plans for the ITER experiment under construction and various roadmaps to the fusion power plant are discussed..