

*Im Rahmen des Physikkolloquiums spricht*

**Dr Alain BECOULET**  
Head of Engineering Domain  
ITER Organization

über

### **An update on the Iter project and magnetic confinement fusion research**

The international Iter project is today the final stage of a global program structured since the 1960s and which aims to demonstrate the scientific feasibility and complete technical mastery of energy production from the fusion reactions of the nuclei of small atoms. Following a deliberate and structured program on an international scale during the second half of the 20th century, the conviction that we possessed enough scientific understanding of the behaviour of a mixture of totally ionized gases (plasma), brought to temperatures of several tens of millions of degrees and confined in intense magnetic fields, and enough technological mastery to trigger and maintain such an environment over long periods of time, paved the way in 2006 for a demonstrator integrating all these aspects: the Iter project. Iter is thus a research project whose objective is to generate 500 megawatts of fusion power, by bringing a mixture of Deuterium and Tritium to 150 million degrees, via a heating power of 50 megawatts. Such a power amplification factor by a plasma requires the construction of a basic nuclear installation containing around 800 cubic meters of plasma, traversed by a current of 15 mega-amperes and confined in a magnetic "bottle" of toroidal shape d average intensity greater than 5 Tesla. Iter is a major international project, bringing together China, South Korea, India, Japan, Russia, the European Union and the United States of America, in the construction and then the operation and exploitation results. The colloquium will review the current state of the construction of the Iter project, its timetable for the desired performance, the "galaxy" of fusion machines and laboratories that currently accompany this new "star", the following perspectives as well as of the strong arrival of private investment in a panorama of purely public research so far.

Zoom-Meeting beitreten

<https://jku.zoom.us/j/94604269238?pwd=cDYxUUVBdFRkWkJuODc2UklWKzQ2Zz09>

Meeting-ID: [946 0426 9238](#)

Passwort: 593570