

AKE 4: Future Perspectives: Fusion Energy Research

Zeit: Montag 17:15–17:45

Raum: S Aula

Hauptvortrag

AKE 4.1 Mo 17:15 S Aula

Fusion Research - recent progress and perspectives —

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The European roadmap to the realisation of fusion electricity to the grid breaks the quest into eight missions. For each mission, it reviews the current status of research, identifies open issues, and proposes a research and development programme.

A long-term perspective on fusion is mandatory since Europe has a leading position in this field and major expectations have grown in other ITER parties on fusion as a sustainable and secure energy source. China, for example, is launching an aggressive programme aimed at fusion electricity production well before 2050. Europe can keep the pace

only if it focuses its effort and pursues a pragmatic approach to fusion energy. With this objective, the present roadmap has been elaborated.

ITER is the key facility of the roadmap as it is expected to achieve most of the important milestones on the path to fusion power. The Fusion Roadmap is tightly connected to the ITER schedule and the vast majority of resources in Horizon 2020 are dedicated to ITER and its accompanying experiments. Parallel to the ITER exploitation in the 2030s, the construction of the demonstration power plant DEMO needs to be prepared. DEMO will for the first time supply fusion electricity to the grid. The design, construction and operation of DEMO require full involvement of industry to ensure that, after a successful DEMO operation, industry can take responsibility for commercial fusion power.