

Session Program

2–5 Sept 2025



IAEA

International Atomic Energy Agency

Technical Meeting on Tritium Breeding Blankets and Associated Neutronics

Topic I

IAEA Headquarters, Vienna, Austria

Tuesday 2 September

09:50

Topic I: Session 1: Chaired by Richard Kamendje

Session | **Location:** IAEA Headquarters, Vienna, Austria | **Conveners:**
Luciano Giancarli, Qiang Qi, Kazunari katayama, Gabriele Ferrero, Lei Chen

09:50–10:30

The ITER TBM Program: A Pathway Towards Tritium Breeding Blankets For D-T Power Reactors

Speaker

Luciano Giancarli

10:30–11:10

Design and Multi-physical Performance Analysis of the WCCB and COOL Blankets for CFETR

Speaker

Lei Chen

11:10–11:40

Coffee break

11:40–12:10

The Performance Evaluation of Tritium Breeding Materials Under Service Conditions

Speaker

Qiang Qi

12:10–12:40

Performance Assessment and Integration of Different Tritium Extraction Technologies in the Outer Fuel Cycle

Speaker

Gabriele Ferrero

12:40–13:10

Experiments and Modeling on Tritium Mass Transfer in Solid Breeding Blanket

Speaker

Kazunari Katayama

13:10

14:30

Topic I: Session 2: Chaired by Alessandro Spagnuolo

Session | **Location:** IAEA Headquarters, Vienna, Austria | **Conveners:**
David Pickersgill, Hiroyasu Tanigawa, Gaetano Bongiovi, Dr Guangming Zhou, Davide Pettinari

14:30–15:10

Overview of JA DEMO Breeding Blanket Development

Speaker

Hiroyasu Tanigawa

15:10–15:40

Neutronic And Thermo-Mechanical Analysis in Support of The Design of The Water-Cooled Lead Ceramic Breeder Breeding Blanket Concept for The EU DEMO

Speaker

Gaetano Bongiovi

15:40–16:10

Design status of the European DEMO Helium Cooled Pebble Bed breeding blanket

Speaker

Guangming Zhou

16:10–16:40

Coffee break

16:40–17:10

OpenMC-based Parametric Neutronic Assessment of Fusion Breeding Blankets for Compact D-T Reactor Configurations

Speaker

Davide Pettinari

17:10–17:40

Reliability Optimised Blanket Using Simulation & Test: A Novel Approach to Breeder Blanket Design

Speaker

David Pickersgill

17:40

Wednesday 3 September

09:00

Topic I: Session 3: Chaired by Songlin Liu

Session | **Location:** IAEA Headquarters, Vienna, Austria | **Conveners:**
Christopher Harrington, Yi-Hyun PARK, Helen Brooks, Luigi Candido, Tommi Lyytinen

09:00–09:40

Design Exploration and Technology Development of the STEP Li₂O Ceramic Breeder Blanket

Speaker

Christopher Harrington

09:40–10:20

Progress and Challenges in Structural and Functional Materials Development for Breeding Blanket in Korea

Speaker

Yi-Hyun PARK

10:20–10:50

Coffee break

10:50–11:20

Accelerating Breeder Blanket Design with Scalable Multi-physics Modelling and Digital Engineering Workflows

Speaker

Helen Brooks

11:20–11:50

Advancing Neutronics Modeling of Stellarators Using Mesh-based Serpent2 Workflow

Speaker

Tommi Lyytinen

11:50–12:20

Thermal-Mechanical Analysis and Anisotropy Analysis of SiC Composites for Low-stress Scylla Breeding Blanket Modules

Speaker

Luigi Candido

12:20