

Overview of Neutral Beam Injection Systems in Fusion Machines

Thursday 26 October 2023 16:15 (1 hour)

Neutral Beam Injection (NBI) systems are indispensable components in modern fusion machines, playing pivotal roles in plasma heating, diagnostics, and control. This seminar will provide a comprehensive overview of NBI systems, with a particular focus on their implementation and performance on Joint European Torus (JET) and MAST-U tokamaks. The presentation will delve into the core principles and critical components of NBI, including ion source design, accelerator technology, residual ion management, and neutralizer systems. The thermal considerations, advanced diagnostics, and the operational safety systems that are crucial for the secure operation of NBI systems will be discussed as well.

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