

Aushang

Institut für Neutronenphysik und Reaktortechnik

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Einladung zum Seminar über „Nukleare Energieerzeugung“

Zeit: Montag, 26. Januar 2026, 11:00 Uhr

Ort: Karlsruher Institut für Technologie, Hermann-von-Helmholtz-Platz 1
76344 Eggenstein-Leopoldshafen, INR, Bau 521, Raum 302

Referent: Herr Dr. Lucio Milanese, Proxima Fusion, München

Titel: From Net Energy Gain to First-of-a-Kind Power: Proxima Fusion's Stellarator Roadmap

Abstract:

Producing commercially relevant energy from fusion requires the integration of plasma physics with engineering solutions that enable reliable, scalable devices. Proxima Fusion is a European fusion company founded to pursue this integration through optimized stellarator concepts, building on decades of stellarator research, most directly via W7-X. This talk will introduce Proxima Fusion's roadmap, focusing on Alpha, the company's net-energy-gain demonstrator, and Stellaris, its first-of-a-kind (FOAK) stellarator fusion power plant. Both devices rely on high-frequency gyrotron heating to achieve and sustain reactor-relevant plasma conditions. Alpha is conceived as a compact, high-field stellarator enabled by high-temperature superconducting magnets and an integrated design workflow that couples physics optimization with engineering and manufacturability constraints from the outset. Its goal is to demonstrate net energy gain while de-risking several core technologies required for a power-producing stellarator. Building on Alpha, Stellaris represents the transition from demonstration to steady-state electricity generation. The talk will outline how the physics and engineering choices validated in Alpha inform the design of Stellaris, and discuss how collaboration between industry and research institutions such as KIT is essential to translating stellarator science into a practical fusion power plant.

Hinweis: Alle auswärtigen Besucher des Seminars werden gebeten, ihren gültigen Personalausweis oder Reisepass mitzubringen