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Development of the Magnet System for the Gauss Fusion Stellarator

Tuesday 1 April 2025 09:30 (30 minutes)

Oral presentation (20 min) + Q&A (10 min)

Gauss Fusion is developing the magnet system for a conventional 4-module QI Stellarator based 1GW electrical plant with realistic and commercially viable component maintenance routes and nuclear life times. Such a choice produces a design so that the magnetic systems do not require very high field strength (up to about 13 T). However, they have complex shaping and support requirements, and need to be developed to better match the requirements of the nuclear systems, as regards access for maintenance, repairability, reliability and efficient structural design while exploiting the advantages of a steady state stellarator configuration. Gauss Fusion will summarise the major parameters of the stellarator and the associated conceptual design of the magnet system, and the ongoing technical activities in the areas of coil structures, demountable coils, and quench protection leading to verification by a model coil programme and test platform requirements.

Presenter: MITCHELL, Neil (Gauss Fusion)