

Abstract Submitted
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Perspectives for the High Field, Compact Machine Approach and Advances Within the Ignitor Program¹ B. COPPI, CNR of Italy, MIT, G. FAELLI, CNR of Italy, IGNITOR PROGRAM MEMBERS TEAM — The confirmed confinement and purity properties of the high density plasmas produced by the high field, compact line of experiments and the fact that the reactivity of D-T plasmas increases as B_P^4 , continue to indicate that this line is the most promising in the effort to approach ignition conditions (B_P is the poloidal field). The Ignitor Program, started from the Alcator and the Frascati Torus programs, has been the first to develop a complete machine design with the objective of approaching ignition, and has incorporated, systematically, advances made in relevant structural engineering, materials (including high field superconducting magnets), etc. in order to maintain it at the forefront of fusion research. Ongoing activities include involving outstanding departments of the Sapienza University to advance the existing design and, in the near term, the fabrication of the machine central post, of the central solenoid and of the large vertical field coils, the collaboration with Rosatom on the cryogenic system, etc.

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