

FUSION RESEARCH AS A SCIENTIFIC UNDERTAKING: RELATIONSHIP TO OTHER FIELDS OF SCIENCE AND TECHNOLOGY*

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The origins of fusion research were solidly planted in the scientific community with a strong representation of scientists who had given important contributions in nuclear physics, astrophysics, and condensed matter physics. Therefore the connections and the relevance of byproducts of fusion research to other fields of science and technology were very well understood.

The series of facts that have led to a substantial difference of attitudes in the present form of funding of fusion research, relative to that of its origins, is analyzed. Even though the fusion effort has been clearly identified as one of the most important undertakings of modern physics, a “science-first” approach⁽¹⁾ needs to be advocated at this time.

A scenario for the development of relevant fusion reactors based on magnetic confinement is proposed in this context, and a concerted effort to reach out more effectively to the rest of the scientific community is suggested.

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REFERENCES

1. B. Coppi, M.I.T. Report (R.L.E.) PTP 02/04 (Cambridge, MA) 2004. Presented to the National Research Council (Washington, D.C., September 2004).