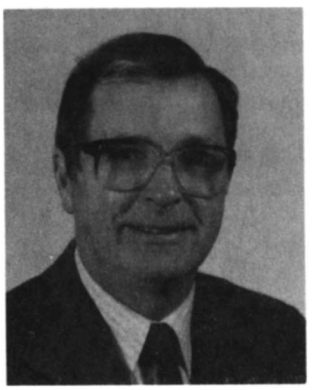
COMMENTS



We are most pleased to publish papers from the Eighth American Nuclear Society (ANS) Topical Meeting on the Technology of Fusion Energy. The first ANS fusion topical published in *Fusion Technology* (*FT*) was the Fifth Topical held in 1983 (see *FT*, **4**, Parts 2 and 3, 1983). The Sixth and Seventh Topicals were likewise produced in special issues of *FT* [see *FT*, **8**, Parts 2(A) and 2(B), 1985, and *FT*, **10**, Parts 2A and 2B, 1986, respectively].

A ground rule for all of these topical issues has been that papers finally published in *FT* have undergone a review process organized by the meeting publications chair. This task fell on the shoulders of Glen Longhurst for the present topical. Glen follows in the footsteps of past publication chairs who ably guided reviews, namely, Will Becraft (Fifth Topical), Ed Dalder (Sixth), and Richard Olson (Seventh). Everyone who attended the meeting will recognize the tremendous job that Glen did. He played a direct role in all phases of the process and in this way was able to make things run smoothly despite the tight schedule. Special thanks go to the many reviewers for the considerable time and care they gave to the task (a listing of reviewers for the topical papers along with regular submissions will appear in Vol. 16 of *FT*). Also, the session chairs played a key role by helping distribute the papers to appropriate reviewers.

Several trends will be noted in this issue compared to prior topicals. At the Seventh there was a key paper on the U.S. engineering test reactor concept, the Tokamak Ignition/Burn Experimental Reactor II (TIBER II) (*FT*, **10**, 1079, 1986). This has now evolved into the International Thermonuclear Experimental Reactor (ITER) project, and a number of papers in the present issue are devoted to various aspects of it. ITER has the same testing goal as TIBER, but, instead of seeking a small size by use of current drive, ITER is tentatively viewed as an ignited or high-Q device, making it significantly larger. On the inertial confinement fusion (ICF) side, considerable interest is given to the proposed next step device (after NOVA) involving the "ICF Laboratory Microfusion Facility." A 5- to 10-MJ laser (or possibly an accelerator-type) driver is envisioned for the facility in order to study the performance of high gain targets. The energy of the resulting microexplosion and the intense radiation environment introduce a number of new engineering considerations for the design, and these are discussed in the papers from the Seventh Topical. Other trends include a noticeable increase in the number of papers devoted to fusion safety and environment. This may partly be due to the fact that the host organization, EG&G, Idaho, Inc., is the lead laboratory for this area in the United States. However, clearly the ESECOM report (*FT*, **13**, 7, 1988) has resulted in a growing recognition of the importance of this area. Also, at this meeting there were an increasing number of papers about alternative concepts ranging from aneutronic fuel cycles to new energy conversion concepts and fusion space propulsion. Indeed, I chaired a special

1-day minicourse on space applications of fusion, which preceded the main meeting, and it was well attended.

The generous help from the entire organizing committee and the program committee was essential for the publication of this issue. Special thanks go to Clyde Toole, the general chair, to Jim Crocker, the program chair, and to his "assistants," Bill Hogan and Doug Holland. Much credit must also go to Chris Stalker, *FT* editorial assistant, for the hard work and care that she devoted to pulling the issue together.