

## 2. POLICY POSITION

### URGING CONGRESS TO FUND THE SUPERCONDUCTING SUPER COLLIDER

#### Background

The Superconducting Super Collider (SSC) has received presidential approval as the "crown jewel of United States scientific research," and the construction of the SSC by the United States will maintain superiority in high energy physics and yield a number of yet-to-be-identified technological benefits. It will be the world's premier high energy particle accelerator because it will boost protons to energies 20 times higher than ever before, enabling physicists to search out the elementary components of matter. The SSC is an indispensable tool for progress in high energy physics and a valuable resource to aid our understanding of the universe.

New insights in particle physics from the SSC also should provide an enhanced understanding of cosmological evolution and the fundamental relationship between matter and energy in the earliest moments of the universe. For the past 50 years, the United States has been a leader in the world in the discipline of high energy physics, but in the past decade there has been a shift of emphasis to new European facilities.

The facilities of other nations have begun to outstrip American research laboratories because it is recognized that this technology will not only provide the basis for major research institutions in the field but also will provide the basis for higher education in physics. Accelerator technology has become a rich source of technological innovation and a symbol of national prestige and commitment to the growth of human knowledge.

The SSC, as the next step in high energy physics research facilities, should attract the best particle physicists from around the world and prove a great attraction to this nation's best young minds as they look toward particle physics for an intellectual challenge; moreover, it will be a conclusive demonstration that the United States remains committed to progress and economic growth through advances in science and education. The accelerator technology developed for high energy and nuclear physics has found many unanticipated beneficial uses, including the modern X-ray machine, CAT scan diagnostic equipment for hospitals, and devices for treating certain inoperable tumors. In addition, one of the most widespread benefits from particle physics technology is the use of radiation emitted by accelerators for the study of an array of problems ranging from medical diagnostic techniques to micro-electronic circuits.

These many benefits of the accelerator technology of the past are still being actively pursued, and there is no way of forecasting the long-term benefits of the SSC, except to know they are expected to be at least as significant and exciting as the preceding developments in particle physics. The realization of this historic project now rests with the Congress of the United States, which is presently deliberating the extent to which funding will be available for the needs of science in the face of other competing interests on the nation's agenda.

Recommendation

The Southern Legislative Conference urges the full funding and support of the Superconducting Super Collider project as proposed to the Congress of the United States and calls upon the members of the United States Senate and House of Representatives to bring this project to a timely and successful completion.

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(Sponsor: Representative Jerry Yost, Texas)

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