Contact: Dr. Charles C. Baker, Director, VLT
University of California, San Diego
9500 Gilman Drive, La Jolla, CA 92093-0420
(858) 534-4971
Visit our website at: http://vlt.ucsd.edu

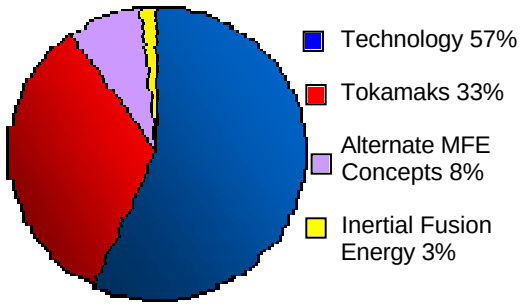
International dimension

"In order for the U.S. to be able to capitalize on discoveries made elsewhere and facilities located elsewhere, we must have world-class researchers who maintain constant communication and work frequently in collaboration with the best scientists in other countries. We benefit not only from the contributions of scientists in other countries, but also from access to location-specific research that is essential to making progress in certain fields."

Bruce Alberts, President, National Academy of Sciences

In 1958, fusion research was declassified worldwide, and scientists around the world began to collaborate in the development of fusion for peaceful applications. Today, technology development is central to the U.S. international fusion program and amounts to almost 60 percent of these collaborations.

International collaborations stimulate the cross-fertilization of ideas that are critical to broadening the fusion technology database. The U.S. fusion strategy takes advantage of the unique capabilities of fusion science facilities worldwide. The international program provides engineering scientists with access to experiments and facilities worldwide with test conditions that are not available in the U.S. This approach leverages U.S. dollars by collaborating in multiple, unique, large-scale physics and technology experiments worldwide.



Source: Enhancing the Effectiveness of International Collaborations in the U.S. Fusion Energy Sciences Program, March 1, 1999

As an example, the U.S. program is highly integrated with international fusion materials development activities. At present, fission reactors are the primary means of investigating the effects of irradiation on fusion materials. The two main experiments include the High-Flux Isotope Reactor, a collaboration with Japan; and the BOR-60 Fast Reactor, a collaboration with Russia.

Completed CS Magnet Module at Lockheed Martin facility in San Diego, CA

The United States has completed a 40-ton superconducting solenoid magnet module in fulfillment of its commitment to its international partners in the International Thermonuclear Experimental Reactor (ITER) project.

The technology required to build the CSMC represents a significant advancement in the development of superconducting magnet technology. The CSMC was manufactured with superconducting materials and advanced materials specifically developed in the U.S. for this application.