

UW Synchrotron Center closing reflects trend of U.S. disinvestment in science



22 HOURS AGO • [PAT SCHNEIDER | THE CAPITAL TIMES | PSCHNEIDER@MADISON.COM](#)

A funding shortfall that will force the closing of the University of Wisconsin-Madison's [Synchrotron Radiation Center](#) near Stoughton is an example of how tight federal budgets are causing the United States to fall behind in global scientific research and development to Asian nations, said director Joseph Bisognano, a professor of engineering physics.

"People talk about not wanting to borrow and put our children in debt. Instead what we are doing is underfunding scientific research, which means we will

become a technologically second rate country in a couple of decades. That's really what we're giving our children," Bisognano said Friday.

The trend has been widely noted, with the National Science Board warning in a recent report that the United State's dominance in science and technology is fading, the [New York Times reported](#) last week. Newly industrializing nations in Asia are rapidly increasing their investment so that the Asian economies now perform a larger share of global research and development than the United States does, according to the report from the board, which governs the National Science Foundation and advises Congress.

UW has decided to close the Synchrotron – a baseball diamond-sized loop circulating electrons that emit light beams used in a variety of experiments – on March 7 after nearly 30 years of operation.

Continued operation of the center has been [in jeopardy since 2011](#), when federal budget cuts meant the loss of its main source of funding, a National Science Foundation grant that ran about \$5 million a year.

Since its opening in 1986, the center has been used by scientists from around the world and has accounted for significant achievements in a broad range of sciences, Bisognano said in a [UW news release](#) that describes a number of the discoveries.

The university protested the funding cut and used some alternative funding to stay in operation – and got a cutting-edge free electron laser operating just last summer. But in spite of positive reviews, funding was not restored, Bisognano said.

Federal agencies that fund scientific research, like the NSF, are under severe budget pressure and many laboratories are being squeezed, he said.

Bisognano reasoned that the size of federal grants to the center made it ripe for closing.

"If the grant was \$500,000, no one would notice. If the grant was \$50 million, then too many people would notice," he said. "At \$5 million a year, NSF could take credit for closing something substantial, but wouldn't face extreme political pressure."

Meanwhile, continued budget pressures threaten the nation's position in the scientific world.

The Science Board reported that the United States remains the single biggest investor in research and

development, spending about \$429 billion a year, compared to \$208 billion for China and \$147 billion for Japan, the New York Times reported. But the share of annual global research spending in the United States declined to 30 percent in 2011 from 37 percent a decade before. At the same time, the share of research done by Asian countries grew to 34 percent from 25 percent, with China's share alone growing to 15 percent from 2 percent in 2000.

Bisognano noted that international students used to come to UW-Madison to study and end up staying and being hired by U.S. institutions.

“Now they go back to their home countries that are funding the science that we are not,” he said.

Pat Schneider

Pat Schneider joined The Capital Times in 1989 and has written on a wide variety of topics including neighborhoods, minority communities and the nonprofit sector.

2/19/2014 8:18 AM

