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Purdue initiates objective review of 'bubble' fusion

WEST LAFAYETTE, Ind. — Purdue University is reviewing questions that have been raised about research in its School of Nuclear Engineering that may show that sound waves can create nuclear fusion reactions.

Rusi Taleyarkhan, a professor of nuclear engineering at Purdue, has published research findings in several refereed journals showing evidence that "sonofusion" generates nuclear reactions by creating tiny bubbles that implode with tremendous force. Experimental nuclear fusion reactors have historically required large, multibillion-dollar machines, but sonofusion devices might be built for a fraction of that cost.

The British research journal Nature today (Wednesday, March 8) reported on its Web site that some researchers have raised questions about the research Taleyarkhan has done at Purdue since 2004 and previously at the Oak Ridge National Laboratory where he initially reported observing the bubble fusion effect.

Purdue Provost Sally Mason today said the university began a review last week after learning of the concerns.

"There is disagreement within the scientific community, both here and elsewhere, concerning this research," Mason said. "I have asked Purdue's Office of the Vice President for Research to conduct a thorough review of the work and any concerns expressed about it.

"Purdue is well aware that there are legitimate differences of scientific opinion about the theories behind Dr. Taleyarkhan's work. Those differences are the reason scientists share their findings.

"The research claims are very significant, and the allegations are very serious. As in any scientific endeavor, Purdue's ultimate goals are truth and integrity.

"Dr. Peter Dunn, associate vice provost for research, will be in charge of the review process. He has wide experience in all aspects of research and is a highly respected scientist and a skilled administrator. He will

ensure that we have a thorough and impartial review that is fair to everyone involved."

Taleyarkhan first reported observing the bubble fusion effect in March 2002 in the journal Science, today said he and his co-authors stand by their findings as reported. The Defense Advanced Research Projects Agency (DARPA) has continued to fund sonofusion research at Purdue and at other universities in an attempt to replicate or explain the initial findings and determine whether it is a potential new energy source.

In addition to its potential as a new source of clean energy, Taleyarkhan and other researchers believe sonofusion could be used in wide range of applications from homeland security to the study of neutron stars and black holes.

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