
Public Lecture at the LA March APS Meeting

March 21, 2005

Osheroff to give public lecture on “The Nature of Discovery”

In a special World Year of Physics public lecture, Nobel Laureate Doug Osheroff of Stanford University will discuss The Nature of Discovery in Physics.

The lecture will be held in conjunction with the APS March Meeting, and will take place on Tuesday, March 22, at 7:30pm in the Catalina Ballroom of the Westin Hotel in Los Angeles. The event is free and open to the public.

In an entertaining and illuminating talk, Osheroff will examine how discoveries are made, where researchers get their ideas, and what motivates them to do what they do. Osheroff plans to discuss several examples of serendipitous discoveries, such as carbon nanotubes, the cosmic microwave background radiation, superconductivity, and his own discovery of superfluidity in helium-3, for which he shared the 1996 Nobel Prize.

Osheroff will use these examples to suggest several research strategies that he believes increase the chances of making a major discovery. For instance, advises Osheroff, researchers should work in an area that isn't well understood, and should not keep working on the same thing year after year.

In the course of looking at how discoveries are made, Osheroff will make the case for supporting basic research. Congress and funding agencies have been too focused on applied research, says Osheroff. Applied research doesn't lead to the same kinds of fundamental breakthroughs as basic research, he says. “When things are applied you're really going over plowed ground, and the probability that you're going to find something new just under the surface is pretty small.”

“Frequently you don't know where discoveries are going to come from, and you don't know what they're going to be good for. I don't think that congress appreciates the reasons for supporting science. The message is that if you want to make advances in physics, you have to support physics broadly,” says Osheroff, “I think it is a message that has to get out.”

Osheroff has been a professor of physics and applied physics at Stanford University since 1987. From 1972-1987 he was a member of technical staff of AT&T Bell Laboratories. He recently served as a member of the Columbia shuttle accident investigation board. Osheroff has received numerous awards for both his research and his teaching. He is a fellow of the American Physical Society and a member of the National Academy of Sciences.

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