



# Here comes the Artificial Sun

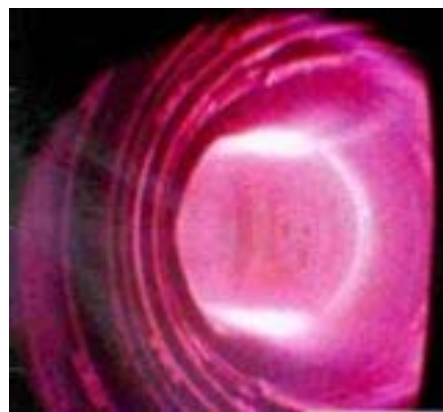
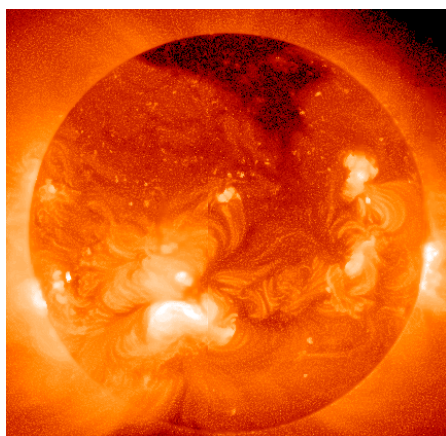
**SHU Physics Presents: Fusion: Current Status and Near-term Outlook**

**Adam B. Cohen, Ph.D.**

Princeton Plasma Physics Laboratory,  
U.S. Department of Energy



The Sun is an example in nature of a nuclear fusion energy source. Nuclear fusion is the process by which two or more atomic nuclei join together or "fuse" to form a single heavier nucleus. This fusion of the nuclei is usually accompanied by the release or absorption of large quantities of energy. Fusion is the process that powers not only our Sun, but all the active stars in the universe. For nearly sixty years, there has been a sustained international research effort into developing controlled fusion with the aim of producing fusion power for the production of electricity. Much of the pioneering and cutting-edge research has been done at the Princeton Plasma Physics Laboratory (PPPL), the U.S. Department of Energy national fusion research laboratory located in Princeton, New Jersey. This presentation will look at how fusion fits into the global energy picture, what PPPL is doing these days, and what the potential future progress might be including the international effort known as ITER that attempts to realize viable and controlled thermonuclear fusion.



Hosted by Seton Hall University's Department of Physics

*Physics on the Edge*

**Friday, October 28, 2011 @ 3:00pm**

**Helen Lerner Amphitheatre (McNulty Hall – Rm 101)**

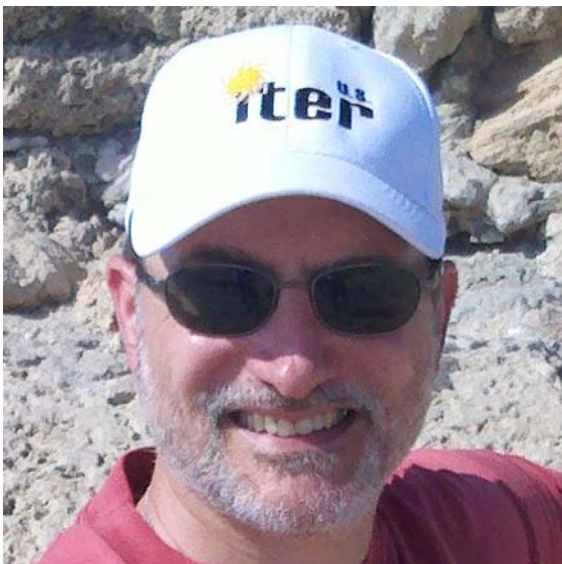
**SHU Physics**



# Dr. Adam B. Cohen

Princeton Plasma Physics Laboratory

Dr. Adam B. Cohen, PhD is the Deputy Director for Operations at the Princeton Plasma Physics Laboratory (PPPL), a U.S. Department of Energy (DOE) national laboratory located in Princeton, New Jersey. Dr. Cohen has more than 25 years of experience in management of research and development, strategic planning and operations at various national lab facilities including PPPL, Argonne National Laboratory (ANL), and the throughout the Department of Energy. Cohen received a B.S. in metallurgy, with honors, from Columbia University in 1985, an M.B.A., with honors, from the University of Chicago in 2000, and a Ph.D. in materials science and engineering, with distinction, from Northwestern University in 1997. As Deputy Director for Operations, he is responsible for both the engineering and operations function at PPPL, including design efforts, project management, human resources, financial activities, outreach, ES&H and applied research activities. He also serves as Chief of Staff for the DOE National Laboratory Directors' Council, with representatives from each of the 17 DOE Laboratories including PPPL, as well as on the Operations Committee for Brookhaven Science Associates (BSA), the organization that runs Brookhaven National Laboratory (BNL).



Adam B. Cohen, PhD  
Deputy Director for Operations  
Princeton Plasma Physics Laboratory  
U.S. Department of Energy  
100 Stellarator Road  
Princeton, New Jersey 08540  
Phone: 609-243-3555  
Email: [acohen@pppl.gov](mailto:acohen@pppl.gov)

