



THE BENSON T. CHERTOK LECTURE

IN ASSOCIATION WITH THE MSE COLLOQUIUM SERIES

A Joint Event Sponsored by the Division of Materials Science & Engineering
and the Physics Department



Friday, March 30, 2012

3:00 PM

8 St. Mary's Street, Room 205

Refreshments will be served at 2:45

Douglas Osheroff

Stanford University

Understanding the Columbia Shuttle Accident

Abstract: The NASA Space Shuttle program began in April, 1981 and is scheduled to end in May, 2011. During this time NASA will have flown 134 missions. Nearly all of these missions have been flown successfully, but two spectacular disasters have blemished an otherwise perfect record. These, of course, were STS 51L, resulting in the Challenger Accident on January 28, 1986 and STS-107, the Columbia Accident on February 1, 2003. I was a member of the Columbia Accident Investigation Board, the 'CAIB', and in this talk I will discuss the origins of this accident, and the investigation that resulted in a report showing that both accidents were organizational in origin, and that both could and should have been avoided.

Biography: Douglas Osheroff did his undergraduate work at Caltech and his graduate work at Cornell University. In graduate school he discovered three superfluid phases of liquid ^3He , which are neutral analogs to superconductivity in metals, but with the ^3He atoms playing the role that electrons play in superconductors. In 1970 he married Liu Shi Jiang, also a graduate student at Cornell, and the two have now been together for 40 years. In 1972 Douglas became a member of the technical staff at AT&T Bell Laboratories, where he studied superfluid ^3He , nuclear spin order in solid ^3He , and weak localization in disordered conductors. In 1987 he became a professor of physics at Stanford University, where he resides to this day. Osheroff has received many awards for his research, including the Sir Francis Simon Memorial Award, the Oliver E. Buckley Condensed Matter Physics Prize, the MacArthur Prize Fellow Award, and the Nobel Prize for Physics.

Faculty Host: David Bishop

Student Hosts: Jacob Davis and Elsa Abreu