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## **Jill Dahlburg, PH.D.**



### **Superintendent of the Space Science Division Naval Research Laboratory**

Jill Dahlburg, Ph.D., is the Superintendent of the Naval Research Laboratory (NRL) Space Science Division. In this position she serves as Science/Technical expert to Department of the Navy (DON)/ Department of Defense (DoD), other government, and international fora on a broad-spectrum RDT&E program in solar-terrestrial physics, astrophysics, upper/ middle atmospheric science, and astronomy. She leads conception, planning and execution of scientific research and development programs on instruments to be flown on satellites, sounding rockets and balloons, ground-based facilities and mathematical models, to study the atmospheres of the Sun and Earth, solar activity and its effects on the Earth's atmosphere, and physics and properties of celestial sources, and transitions capabilities to operational use. She is fully accountable for the overall financial, personnel, programmatic and facilities management of the SSD, including obtaining funding to support program execution within the Navy Working Capital Fund, and implementing plans for major scientific facilities to meet DON/DoD extended operational environment predictive needs. The program is important to orbital tracking, radio communications and navigation that affect the operation of ships and aircraft, utilization of near-space and space environment of the Earth, and to the fundamental understanding of geophysical phenomena and natural radiation.

Dr. Dahlburg was appointed to the DON Senior Executive Service in December 2007, following more than 20 years of DON Federal Service as a research physicist. She served as NRL Senior Scientist for Science Applications from June 2003 to December 2007, with duties that included: reviewing NRL's S&T program directions; evaluating NRL and NRL-relevant S&T for application to DoD mission needs; and facilitating/ expediting the accomplishments of the scientific missions of organizations within NRL, with emphasis on interdisciplinary areas of opportunity. From 2001 to mid-2003, Dr. Dahlburg left NRL to work for General Atomics in San Diego as the Director of the Division of Inertial Fusion Technology (IFT) and Co-Director of the Theory and Computing Center in the Energy Group. Her IFT activities included target and component fabrication for inertial confinement fusion research; mass production techniques development for inertial fusion energy; cryogenics and target injection systems development; high intensity laser matter interaction research; hydrogen production; and, development of iodine

sources for high power gas lasers. In 2000, Dr. Dahlburg served as Head of NRL's Tactical Electronic Warfare Division Distributed Sensor Technology Office, where she co-proposed and was co-principal investigator for the US Marine Corps Dragon Eye during its first year of development. Dragon Eye is a small and inexpensive unmanned aerial vehicle that can be carried in a backpack, which can be configured with various day and night vision cameras, chemical and biological sensors, and other payloads. Dr. Dahlburg began her career at NRL in 1985, working as a research physicist. As a member of the NRL Nike KrF Laser Program from its inception, and Head of the Laser Plasma Hydrodynamics Section for that program, she contributed to laser matter interaction research, implosion and coronal hydrodynamics, and laser beam imprinting. Her work included spearheading the development of the first three-dimensional multi-group radiation transport hydro-code appropriate for laser-plasma modeling.

Dr. Dahlburg holds a bachelor's of arts degree (1978) from St. John's College in Annapolis, a master's of science degree in physics (1980) and a doctor of philosophy degree in theoretical physics (1985) from the College of William & Mary in Virginia. She also served as a member of the research staff of Dartmouth College in 1986, and in 1996 she was a visiting scientist at Imperial College in London concurrent with her duties at NRL. Her technical collaborations have included scientists in both the national and international physics and engineering communities. Dr. Dahlburg is Chair of the DON Space Experiments Review Board (2006-present), member of the Committee for Space Weather (2007-present), 2012 Past-Chair of the American Physical Society (APS) Topical Group on Energy Research and Applications (2012), and Chair of the APS Panel on Public Affairs (2011-2012). Her previous Federal Panel work includes serving as Chair of the Department of Energy (DOE) Office of Science (SC) Advanced Scientific Computing Advisory Committee (ASCAC) (2005-2007), and member of the DOE SC Fusion Energy Sciences Advisory Committee (1999-2008). She has been an Editor of Fusion Engineering and Design (2003-2007), and a Divisional Associate Editor (Plasma Physics) of the Physical Review Letters (1996-2000). Dr. Dahlburg's previous professional service includes serving as 2005 Chair of the APS/ Division of Plasma Physics (DPP), Member of the LLNL Defense & Nuclear Technologies Director's Review Committee (2001-2006), federal advisor to the 2006 DoD Defense Science Board (DSB) Task Force (TF) on the National Ignition Facility (NIF), member of the DOE Lehman Review of the NIF (2006), member of the DoD DSB Advanced Computing TF (2008), member of the National Research Council Committee to Review the Quality of the Management and of the Science and Engineering Research at the DOE's National Security Laboratories (2011), and APS/DPP Distinguished Lecturer (1999-2000). Her honors include five NRL Allan Berman Awards for scientific publication excellence, and a DOE Appreciation Award presented by DOE Under Secretary for Science Raymond L. Orbach for outstanding service as the Chair of the DOE ASCAC. Dr. Dahlburg is a Fellow of the APS.