

DR. REBECCA L. BISHOP

**RESEARCH SCIENTIST,
SPACE SCIENCE AND APPLICATIONS LAB**



Dr. Rebecca Bishop is a research scientist in the Space Science and Applications Laboratory (SSAL) at The Aerospace Corporation. She joined Aerospace in 2004. Bishop's area of expertise is understanding the near Earth space environment, specifically the ionosphere (90-2000 km), and its impact on space/ground assets and space weather instrumentation development. Her research areas include ionospheric dynamics, ionosphere coupling to hurricanes/typhoons, and the ionosphere/thermosphere interactions.

Bishop has developed and flown GPS radio occultation sensors on 3 CubeSats missions. She is currently providing a GPS sensor for the SPORT mission: a joint effort between NASA, U.S. universities, and Brazilian CubeSat. Bishop is the principal investigator for the Low-Latitude Ionosphere/Thermosphere Enhancements in Density (LLITED) CubeSat mission. She also provided the LAICE CubeSat's ionization gauge sensor. In 2009, Bishop was the joint principal investigator on the RAIDS instrument suite installed on the International Space Station. Prior to working at Aerospace, Bishop was a post-doctorate at Clemson University where she participated in sounding rocket missions that released a glowing substance, allowing the trails to be photographed. Bishop manned one of the camera sites and triangulated the photographed trails to determine the wind between 90-160 km. She is author/co-author on more than 30 peer-reviewed scientific articles.

Bishop uses the results from her various studies and missions to support Aerospace's customers. She is called on to assess the impact of ionospheric disturbances on RF and GPS systems, to act as a technical advisor/reviewer for satellite instruments, and to develop/review mission requirements related to the space environment. She participated in the calibration/validation effort for the DMSP space weather sensors and was a technical advisor for the COSMIC-2 sensors.

The Aerospace Corporation is an independent, nonprofit organization dedicated to the objective application of science and technology toward the solution of critical issues affecting the nation's space program.

Education

Bishop earned bachelor's degrees in both physics and mathematics at the University of Idaho, Moscow, Idaho. She then attended the University of Texas at Dallas where she earned both a master's degree and a Ph.D in physics.

Affiliations

Bishop is a member of the American Geophysical Union (AGU), and the Committee On SPace Research (COSPAR). She also serves on the University of Idaho's Physics Advisory committee.

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