



WILLIAM T. PECORA AWARD

Dudley B. Chelton

For his many contributions to ocean remote-sensing science, education, and applications.

Dr. Dudley B. Chelton, Distinguished Professor in the College of Earth, Ocean, and Atmospheric Sciences at Oregon State University, is a pioneer in the oceanographic use of satellite data to explore the role of the ocean in the Earth's climate system. After receiving a Ph.D. in oceanography from Scripps Institution of Oceanography, University of California, San Diego, he realized the potential of satellite-based observations and moved to the Jet Propulsion Laboratory in 1980 to analyze the newly available Seasat data. His paper in *Nature* (1981) demonstrated the ability of satellite instruments to make global observations of the ocean and began a pattern that has continued through his career: development of statistical methods to analyze existing satellite data while preparing for the next generation of microwave instruments. Moving to Oregon State University in 1983, Professor Chelton established an ocean remote-sensing program that has grown into national prominence.

To make use of Dr. Chelton's broad expertise in the technical aspects of radar altimetry, he was invited to write the opening chapter of *Satellite Altimetry and Earth Sciences* (Fu and Cazenave, 2000), considered the essential treatise on satellite altimetry. The comprehensive understanding of the technical and statistical aspects of ocean remote-sensing serves as the foundation of Dr. Chelton's major scientific discoveries. During the past thirty-plus years, Dr. Chelton has led efforts to improve satellite-derived fields of sea surface height, surface winds, sea surface temperature, and ocean color; the four primary ocean variables that can be sensed remotely. Many of his 110 papers and book chapters have become standard references in his field.

Dr. Chelton's work has led to new hypotheses and has inspired a large number of follow-up investigations by the ocean remote-sensing community, increasing the practice and appreciation of ocean remote-sensing. Another impact on the community arises through his dedication to education, as demonstrated by his award as Distinguished Professor (the highest honor given by Oregon State University) and by the Patullo Award for Excellence in Teaching (perhaps more importantly, given by the students). He is a Fellow of the American Geophysical Union and the American Meteorological Society. He received the Robert L. and Bettie P. Cody Award in Ocean Sciences, Scripps Institute of Oceanography, the American Meteorological Society Henry Stommel Research Award, and a National Aeronautics and Space Administration (NASA) Public Service Medal.

In recognition of his many and sustained accomplishments, the Department of the Interior and NASA take great pleasure in presenting the 2013 William T. Pecora Award to Dr. Dudley B. Chelton.

Secretary

Department of the Interior

Administrator

National Aeronautics and Space Administration

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