

New Award to Recognize Outstanding Research in Space Weather and Nonlinear Waves and Processes

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In early 2013, AGU will begin accepting nominations for a new award that recognizes excellence in research involving space weather as well as nonlinear waves and processes.

The award, called the Space Weather and Nonlinear Waves and Processes Prize, will be given every 2 years and will alternate in focus. The first award, to be presented at AGU's 2013 Fall Meeting, will recognize an outstanding contribution to space weather research made by an AGU member; the second award, to be presented in 2015, will recognize a significant contribution to the field of nonlinear waves and processes by an AGU member. AGU's Space Physics and Aeronomy Section and the Nonlinear Geophysics Focus Group, will jointly administer the award.

The prize carries a \$10,000 cash award and is funded by Bruce Tsurutani and Olga Verkhoglyadova, both AGU members and scientists at the NASA/California Institute of Technology's Jet Propulsion Laboratory (JPL).

"The vital research being done in the areas of space weather and nonlinear waves and processes has all too often gone unrecognized and unrewarded by the scientific community," Tsurutani said. "These are two emerging areas of science, and we would very much like to support their gaining prominence, both in public awareness and also in recognition. We felt an AGU award would do both of these things at the same time."

"Space Weather and nonlinear wave processes are currently at the forefront of space physics," Verkhoglyadova added. "We hope that this award will help to support and promote research in these fields." Tsurutani explained that hopefully the awards will help the recipients' careers, and, in turn, "will spur them on to even greater discoveries. Perhaps it may even stimulate graduate students to go into these areas," he added.

Tsurutani and Verkhoglyadova were motivated to create the award as a way of giving back to the scientific community and to AGU. An AGU member for nearly 50 years, Tsurutani has been affiliated with JPL since 1972 and is currently a senior research scientist at the laboratory. He served as president of AGU's Space Physics and Aeronomy section from 1990 to 1992 and in 2009 received AGU's John Adam Fleming

Medal, given for "original research and technical leadership in geomagnetism, atmospheric electricity, aeronomy, space physics, and related sciences." Before coming to JPL in 2008, Verkhoglyadova worked for 5 years at the Institute for Geophysics and Planetary Physics at the University of California, Riverside. Before that, she was a professor in the Department of Astrophysics and Space Physics at Ukraine's Kiev University, working on the Interball satellite project, a multinational collaboration to study magnetospheric physics, plasma waves and space weather.

While the first award will be for space weather research, the next award in the prize cycle will highlight nonlinear waves and processes, which are not exclusive to space physics and aeronomy. "This goes to all areas of geophysics. For example, ocean waves become nonlinear as they approach shorelines. An earthquake also is a nonlinear process," explained Tsurutani, who is also an editor of *Nonlinear Processes in Geophysics*, an open access journal jointly published by AGU and European Geosciences Union.

Nonetheless, he and Verkhoglyadova expect space physics to be well represented in the award's nonlinear geophysics focus. "Most plasma waves that we study are indeed nonlinear," Tsurutani noted, listing phenomena such as magnetosheath lion roars, mirror mode structures, magnetospheric chorus and magnetosonic waves, plasma bubbles in the ionosphere, and interplanetary shocks and Alfvén waves.

This new award strongly supports AGU's mission to promote discovery in the Earth and space sciences for the benefit of humanity, according to Carol Finn, AGU president-elect. "We are extremely grateful to Dr. Tsurutani and Dr. Verkhoglyadova," she noted. "Through their dedication and generosity we are able to recognize the extraordinary contributions of our members and their impact on society."

More details on the award, including nomination criteria, can be found at http://www.agu.org/about/honors/section_fg/joint_pr.shtml.

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