

Autumn 2011

Atmospheric Circulation

Newsletter of the University of Washington Atmospheric Sciences Department

Making of the YouTube Can Crushing Video

by Kelly McCusker

The Department of Atmospheric Sciences Outreach group has recently ventured into a bold new frontier: YouTube. Composed of faculty, staff, and students, our group has been volunteering time for over 20 years, sharing science with youth on visits to the department, demonstrating concepts relevant to the atmosphere, and generally illustrating the wonders of our field.

In early 2009, the outreach group was approached by UW's Joint Institute for the Study of the Atmosphere and Ocean (JISAO) to participate in their Science in 180 initiative. The idea was to create 3-minute videos for online distribution that demonstrate a simple scientific concept at a middle school level. We were excited from the start, envisioning viral videos and movie-stardom for all.

Our debut video involved "can-crushing," a popular demonstration wherein the power of air pressure is used to crush a soda can. When Assistant Professor Dargan Frierson signed on to help out with its creation, we knew it would be a hit.

Step one was storyboarding. In order to maintain a viewer's interest throughout, we created an overarching storyline—the main character (Cool Guy) is a poor soul who is incapable of crushing a can. He feels uncool because he lacks this ability, while it seems everyone else can do it—even felines! Enter the Scientist to save the day with air pressure.

Step two was scripting the storyline. Our goals were to be clear, concise, and hilarious. Concepts needed to be repeated in multiple ways

and boiled down to the essential information, all while remaining within the story arc and incorporating some humor. "Due to recent advances in de-cylindrication theory, the power to crush cans without undue physical exertion is now in the power of everyday citizens like yourself!" Pure genius! We had lots of fun coming up with everyone's lines. Can you pick out the lines that reference an early 90's song?

Step three: filming. We used the department video camera, providing us the flexibility to film on multiple days, including one afternoon where many grad-student volunteers acted as water vapor molecules and liquid water drops on the ATG roof. Thanks to hysterical bloopers and goofiness, the "crew" probably had the most laughs during filming.

Step four was less fun: editing the footage. This required many, many...many hours inside the Odegaard Library computer lab using the video-editing software. Thank goodness for Reid Wolcott, who accomplished the bulk of the job. This was the most iterative step, and where the most improvements were made. At one point we encountered a potentially disastrous problem when the original video files were LOST FOREVER; we resorted to editing a less-flexible file format, which proved a bit frustrating.

Finally, step five was musical scoring. The finishing touch is, of course, the soundtrack. Dargan Frierson provided a lively, bluegrass score to keep the video moving along, with a

brief departure to smooth jazz while the Safety Chicken shared his safety message.

The rest of the crew for this video included: Bryce Harrop, Brian Smoliak, Jack Scheff, and yours truly, with new additions for upcoming videos. The process was exceptionally fun, but we did run across some pitfalls, many of which the group has since corrected. In order to create high definition video, we now utilize an HD video camera from the UW Student Tech Fee equipment office. We also now focus on maintaining consistent audio throughout (careful placement of any microphones or backup video cameras, avoiding echoes, etc.). Finally, we acquired video editing software—thanks to our gracious Department Chair—so editing can be done comfortably in-house, and with high-quality software.

The end result of our efforts—borne out of JISAO's idea but very much distinctly Atmos. Outreach—is a quirky, 290-second video that now has almost 3,500 views on YouTube. You can find the link to the video and to our YouTube channel at the outreach website, www.atmos.washington.edu/~outreach. Also, stay tuned for the soon-to-be-released video: Cloud-in-a-Bottle: THE MOVIE!

By the way, the lines that reference the 1990's song are in an exchange between the Cool Guy and the Scientist. Cool Guy: "Let's get this party started," Scientist: "Right," Cool Guy: "Quickly"—in deference to lyrics from the beginning of C&C Music Factory's dance tune "Here We Go (Let's Rock & Roll)," circa 1990.



The beginning and end of the 3-minute video starring Brian Smoliak as the Cool Guy.

Chair's Column



Many of you may have heard about significant changes in the tuition paid by UW students and the level of support that the UW receives from the state. I have read a few things about this that were misleading, so I'd like to take this opportunity

to set the record straight.

As shown in the accompanying figure, after accounting for inflation, the cost of educating a UW student (total student funding per FTE) is slightly less today than it was in 1989. In 1990, the state provided nearly 80% of the funding per student and the students covered the other 20%. From 1990 to 2008, there was a steady decline in state support and a roughly similar steady increase in the tuition paid by undergraduates. Beginning in 2009 the situation changed; state support for UW has shrunk drastically, and tuition has gone up sharply. As a consequence, in the new academic year, the students will now pay for most of the cost of their instruction (about 70%) while the states contribution has dwindled to roughly 30%.

This academic year, UW tuition is rising by 20%. Each student's tuition and mandatory fees will total \$10,574. Interestingly, Washington State University will remain more pricey than UW; WSU's tuition and fees, which are going up more slowly (a 16% increase), will cost \$10,798 per year. The UW will also remain less expensive than many of our peer public universities, such as the University of Michigan (\$13,434) and UCLA (\$11,643).

Many of our undergrads work part time to finance their education, and as we know all too well, wages are not increasing at a rate remotely similar to that of college tuition. We always greatly appreciate the donations that have been given to the department by our alumni and friends. During these difficult economic times, your help makes a tremendous difference. Contributions to the Richard and Joan Reed Undergraduate Endowed Scholarship fund will help provide financial support for our undergraduate majors.

I'd like to close by again thanking those of you who have sent us information about your activities, which we have collected on page 7. It is always great to hear from you. Please help us share news about you and your family with your classmates by sending us your updates.

Best wishes,
Dale Durran

Department News

Prof. Thomas Ackerman has been elected as a Fellow of the AGU.

Prof. David Battisti was one of the organizers for the College of the Environment's public lecture series on "Food: Eating Your Environment."

Daniel Grosvenor joined Prof. Wood's research group as a postdoc in March 2011. Daniel got his Ph.D. from the School of Earth, Atmospheric and Environmental Sciences at the University of Manchester.

Prof. Dennis Hartmann was honored by being selected as the Bernhard Haurwitz Memorial Lecturer for 2011. He was given the honor for the many important and fundamental contributions to our understanding of atmospheric and climate dynamics. The lecture was presented at the American Meteorological Society's annual meeting on January 25.

Prof. Lyatt Jaeglé has been promoted to full professor effective September 16, 2011.

Louise Leahy won second place in the AMS student poster award for the Third Symposium on Aerosol-Cloud-Climate Interactions.

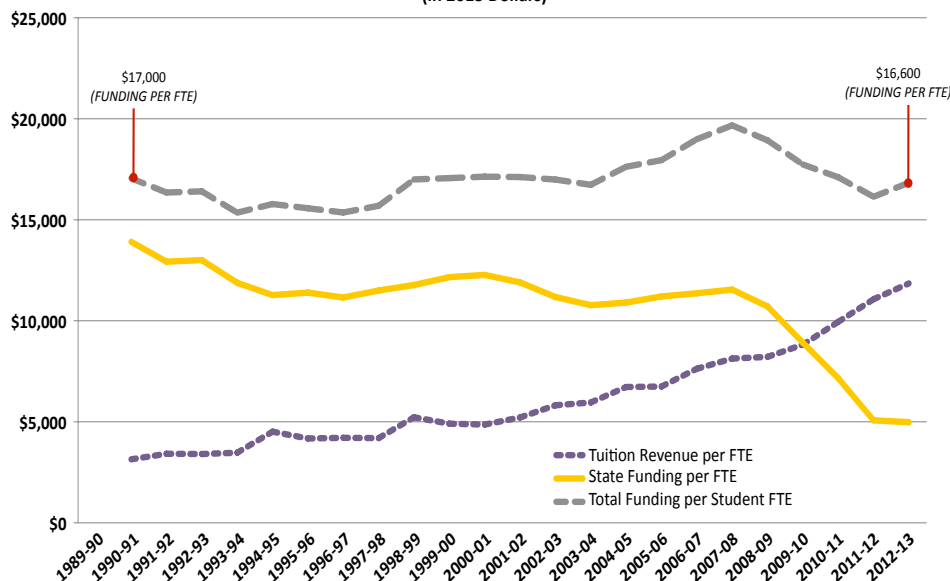
Art Rangno, retired Cloud and Aerosol Research Group (CARG) meteorologist, volunteered to do a mountain of work for the department this spring. Art has scanned 16 boxes of CARG data over the last few months and compiled them onto DVDs for the department. Art is also sending a copy of these DVDs to NCAR for their archives (Steve Williams, Data Manager). Kudos to Art for his hard work for the department and the bygone CARG!

Kristen Rasmussen and **Scott Powell** participated in the Seattle Mariners and KOMO 4 Weather Education Day on June 1. Approximately 4,000 students attended the event at Safeco Field. Kristen and Scott did weather experiments by creating a cloud in a bottle as well as imploding soda cans with a fun emphasis on atmospheric pressure. Steve Pool and Scott Sisteck from KOMO TV/Radio and Ted Buehner of NWS Seattle were also among the educators.

Former visiting scientist, **Ulrike (Ulli) Romatschke**, successfully completed her Ph.D. defense (with a top grade of "sehr gut") at the University of Vienna on Dec. 13, 2011. Her dissertation research was all done at the UW under an agreement between Prof. Robert Houze and the University of Vienna. Her committee was composed of Rinehold Steinacker, Hans Volkert, Vanda Grubisic, and Robert Houze. Since the University of Vienna is actually the Universitaet Wien, she got her Ph.D. jointly from two UWs.

We are very pleased to report that **Dr. Abigail Swann** will join the department as a new Assistant Professor in the fall of 2012. Dr. Swann's research is in atmosphere-biosphere interactions. Dr. Swann will develop an interdisciplinary research program in this rapidly evolving sub-discipline. Her position, which was created by the new College of the Environment, will be 2/3 in Atmospheric Sciences and 1/3 in the Biology Department. Dr. Swann has a Ph.D. from

State and Tuition Funding per FTE (in 2013 Dollars)



Percentage of Total Funding/FTE from State Appropriations

Cost of educating an undergraduate UW student in inflation-adjusted dollar over a 23-year period. The three curves show the total cost, that portion funded by the state, and that coming from tuition (a student FTE is a "full-time-equivalent" student).

Chart provided by UW Office of Planning and Budgeting.

(Continued on page 3)

Departmental News, cont. from page 2

Berkeley and currently holds a postdoctoral appointment at Harvard.

Nicole Wigder was awarded second place for student poster presentations in the AMS 13th Conference on Atmospheric Chemistry (91st AMS Annual Meeting).

At the January 2011 AMS annual meeting, **Prof. Robert Wood** received the Henry G. Houghton Award for advancing understanding of the interactions of cloud droplets, aerosols, radiation, and precipitation in marine stratocumulus. This award is given to promising young or early-career scientists in recognition of research achievement in the field of physical meteorology, including atmospheric chemistry.

Baby News—Ethan Zikai Zhang was born to Yanxu and Yunli on April 26, which was the exact due date.

Invitation to Interview with the BBC/Discovery Channel in Argentina

by Kristen Rasmussen

In January 2011, I had the honor of being invited to travel to South America to be interviewed for an upcoming science program from the BBC/Discovery Channel. The three part series is about weather and climate around the globe and the producers were directed to the

Houze group because of our research on South American severe storms. One of the segments of the program was focused on the beautiful cloud forest in Calilegua National Park near Jujuy, Argentina and the large convective storms that occur along the foothills of the Andes. The film crew's goal was to capture the full diurnal cycle of convection along the steep eastern foothills of the Andes and to have a meteorologist there to help direct them during daily operations. I

was surprised to find that I was not only being interviewed on camera about my research, but was also expected to nowcast the immediate weather for filming as well as edit and critique the BBC's script for their presenter (the BBC and Discovery Channel share footage, but not presenters or interviewers). On the 16-hour day that I was being filmed, with my knowledge of the diurnal influence on convection and from studying storms in the region, I was successfully able to predict the timing and location of vari-



Throughout the day during my filming segment in Calilegua National Park, I would advise the director in various ways to give him guidance on where to go and what we might observe regarding certain weather events.

ous types of clouds that they wanted to film. As a graduate student, it was very nice to be able to share my research with the general public and it was even more exciting that the BBC/Discovery Channel searched us out because they were interested in our research! This was an incredible experience, both personally and scientifically, and I am very grateful to have had the opportunity. The program will be aired in early 2012 and is called "23 Degrees."

Antarctic Expedition

by Steve Warren

We've identified modern analogues for ice types that would have existed on the tropical ocean of Snowball Earth 700 million years ago. The most important of these is bare glacier ice exposed by sublimation, which has never experienced melting. This type of ice now exists only in the "blue ice" areas of the Trans-Antarctic Mountains, blown free of snow by the strong winds. I spent three weeks in December at a tent camp near the Allan Hills, with Peter Mullen, Ružica Dadić, and Melanie

Fitzpatrick. Most of the first week we were camp-bound by blizzards, working to keep the tents secure against the wind (and when that was done, I graded final exams and term papers for my class). But we did get some days suitable for measuring the reflection of sunlight by the different ice types, and extracting core samples. Analysis of the bubble sizes should allow us to explain the reflectance measurements. The camping was surprisingly comfortable, but required some bizarre behavior, such as sleeping with the Tabasco sauce so it would be liquid the next day. For larger images see www.atmos.washington.edu/alumni.update/2011newsltr/img/album/warren/.



Uploading the ski plane.



Ruschle and Peter measuring albedo of blue ice.



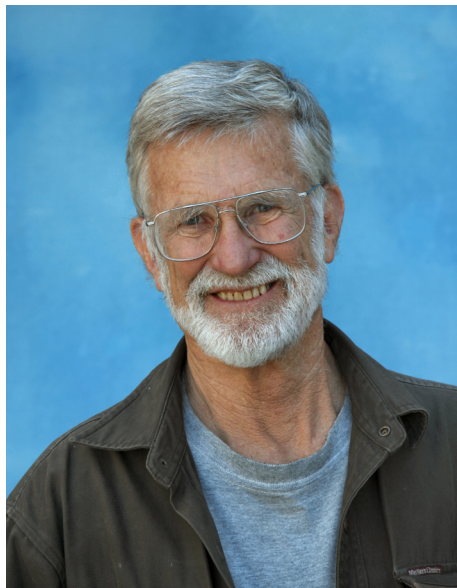
Cutting snow blocks for a windbreak.



Allan Hills.

In Memoriam Conway B. Leovy

by Prof. David Catling



Conway B. Leovy, Emeritus Professor of Atmospheric Sciences and Geophysics, passed away on July 9. His family held the memorial service on August 13. The Colloquium on September 30 celebrated Conway's university career and a reception was held after.

Conway Leovy: Scientific Career

Conway's contributions to our understanding of planetary atmospheres span over 40 years, 31 of which were spent as a professor at the University of Washington (UW). Conway joined the UW faculty in 1968 and was a full Professor from 1974 to 1999, after which he retired from teaching but remained active in research.

Conway was fortunate to come of professional age during the Space Age, which enabled him to participate directly in NASA's missions to Mars. These were groundbreaking missions because the limitations of telescopic studies left a great deal to be discovered. During the 1960s, Conway participated in imaging experiments on NASA's Mariner 6 and 7 flyby missions to Mars, which were followed, in the 1970s, with participation in the imaging experiment of the Mariner 9 Mars orbiter and the Meteorology Experiment on NASA's Viking Landers. Later, Conway was a co-investigator for the Mars Climate Sounder instrument on Mars Reconnaissance Orbiter, launched in 2005. In 1973, Conway was awarded the NASA Exceptional Scientific Achievement Medal—an award given for unusually significant scientific accomplishments that contribute to NASA's programs. He was also a joint recipient of the 1978 American Association for the Advancement of Science (AAAS) Newcombe Cleveland Award given to the scientific investigators on NASA's Viking Mission.

In the 1970s, Conway became a co-investigator for the Limb Infrared Monitor of the Stratosphere (LIMS) instrument that flew on the Nimbus 7 satellite. Nimbus 7 observations obtained between 1978 and 1994 showed that the ozone hole appearing each winter season over the Antarctic grew bigger and was definitively linked to manmade chlorofluorocarbons. Later, Conway participated in the Upper Atmosphere Research Satellite, deployed in 1991 by the Space Shuttle. Data from this satellite improved our understanding of the chemistry and radiation of Earth's mesosphere and stratosphere. Besides these studies, Conway also became interested in the climatic impact of clouds over the ocean. For the wider community, Conway served on committees for NASA, the National Academy of Sciences, and the University Cooperation for Atmospheric Research. At the University of Washington, Conway was also the director of the Institute of Environmental Studies from 1986 to 1989.

Conway's outstanding contributions to science are his studies of the structure and circulation of planetary atmospheres, their radiation, and their interactions with the planetary surfaces. Conway always favored an interdisciplinary approach and in the late 1990s, he became a great supporter of NASA's new thrust in astrobiology, i.e., the science concerned with life on Earth and elsewhere in a cosmic context. At the same time, Conway developed a keen interest in examining the geology of the surface of Mars to look for signs of ancient climate change. In 2000, the contribution of Conway's career was recognized by the Kuiper Prize of American Astronomical Society's Division of Planetary Science. The Kuiper Prize is awarded to scientists whose achievements have most advanced our understanding of the planets.

2010 Robert Fleagle Endowed Lecture in Atmospheric Sciences Policy

The Robert Fleagle Endowed Lecture was held on October 13, 2010 at Kane Hall. Prof. David W. Keith of the University of Calgary was the featured speaker. Keith's timely and interesting talk, *Engineering Earth's Climate: Risks, Limitations, and Prospects* received enthusiastic reviews. The lecture was part of the College of the Environment's Fall Dean's Club event.

Keith is one of the leading thinkers in the arena of geoengineering. He is the Canada Research Chair in Energy and the Environment at UC. He has spent most of his career in the US at Harvard and Carnegie Mellon before returning to Canada to lead a research group in energy and environmental system at UC. He has served on numerous high profile advisory panels such as the UK Royal Society's geoengineering study, the IPCC, and Canadian "blue ribbon" panels and boards.

The next Fleagle lecture is planned for spring 2012.

Professor J. David Neelin 2011 Graduate Students' Distinguished Visiting Lecturer

Prof. Neelin was invited to visit the department as the Graduate Students' Distinguished Visiting Lecturer. He gave the lecture on May 5 entitled "The Rain is a Pain—The Challenges of Predicting Rainfall Changes Under Global Warming." Neelin also gave the May 6 Atmospheric Sciences Colloquium lecture entitled "Precipitation Parameter Sensitivity and Optimization in Climate Models."

J. David Neelin is a professor and chair at the University of California—Los Angeles in the Department of Atmospheric and Oceanic Sciences. He received his Ph.D. from Princeton University. He leads the Climate Systems Interactions group and is a faculty member of the Institute of Geophysics and Planetary Physics.

Upcoming 2012 Peter V. Hobbs Memorial Endowed Lecture in Experimental Meteorology

The third Peter V. Hobbs Memorial Endowed Lecture is planned for February 7, 2012, at 7:30 in Kane Hall, Room 210. The speaker will be Prof. Owen Brian Toon from the Department of Atmospheric and Oceanic Sciences at the University of Colorado. The lecture is entitled "Severe Atmospheric Aerosol Events: Aerosols Along the Spiral of Geologic Time." A web site will be available for registration in January prior to the event or check the department's endowed lecture site at www.atmos.washington.edu/alumni.update/lectures.shtml.

Congratulations to Graduates

Doctor of Philosophy

- Donohoe, Aaron**, *Radiative and Dynamic Controls of Global Scale Energy Fluxes* (Battisti)
- Fischer, Emily**, *Importing Ozone Precursors and Aerosols to the North American Free Troposphere: An Analysis of Peroxyacetyl Nitrate and Aerosol Observations at Mount Bachelor* (Jaffe)
- Garfinkel, Chaim I.**, *Stratosphere-Troposphere Coupled Variability in the Wintertime Northern Hemisphere* (Hartmann)
- Mahajan, Rahul B.**, *Applying Ensemble Data Assimilation to Understand Tropical Cyclogenesis* (Hakim)
- Nicholas, Robert**, *Two Approaches to Empirical Prediction of Regional Precipitation on Monthly and Longer Timescales* (Battisti)
- Ueyama, Rei**, *The Structure and Variability of the Tropical General Circulation* (Wallace)
- Yang, Qiong**, *Radiative Energy Budget of the Tropical Upper Troposphere and Lower Stratosphere* (Fu)
- Yatavelli, Reddy**, *Towards a Molecular-level Understanding of Organic Aerosol Composition* (Thornton)
- Zelinka, Mark**, *Towards an Improved Understanding of Cloud Feedbacks and Changes in Poleward Energy Transport Associated with Global Warming* (Hartmann)

Master of Science

- Harrold, Sara**, *Characterization of Speciated Acylperoxy Nitrates in Low and High NO_x Environments* (Thornton)
- Harrop, Bryce E.**, *Testing the Role of Radiation in Determining Tropical Cloud Top Temperature* (Hartmann)
- Luan, Yurong**, *Variability in Long-range Transport of Aerosols from East Asia and North America* (Jaeglé)
- Rasmussen, Kristen**, *Orogenic Convection in Subtropical South America as Seen by the TRMM Satellite* (Houze)
- Scheff, Jacob S.**, *CMIP3 21st Century Robust Subtropical Precipitation Declines are Mostly Mid-latitude Shifts* (Frierson)
- Stoner, Marshall**, *The Madden-Julian Oscillation and Other Modes of Tropical Intraseasonal Variability: GCM Simulations for Idealized Sea Surface Temperatures Profiles* (Frierson)
- Terai, Christopher R.**, *Drizzle and the Aerosol Indirect Effect in Marine Stratocumulus* (Wood/Bretherton)
- Warner, Michael**, *Wintertime Extreme Precipitation Events Along the Pacific Northwest Coast: Climatology and Synoptic Evolution* (Mass)



Bachelor of Science

- Bradley Carl**
Ka Man Joseph Chan
Caleb Cook
Nicholas Davis
John Fink
Brett Grace
Alexander Heye
Jacob Maria
Jim Sivisay
Kristofer Stemmler

Welcome to New Graduate Students for 2010–2011

- Eowyn C. Baughman**, Cornell University
Leo Miguel Paolo M. Baylon, Ateneo de Manila University, Philippines
Cheng Dang, Lanzhou University
Kenneth Dixon, University of Miami
Mark A. Gingrich, University of Colorado at Boulder
Natalia Hryniw, University of Chicago
Karl E. Lapo, St. Olaf College
Xiaojuan Liu, Ocean University of China
Crystal D. McClure, Texas A&M
Maximo Q. Menchaca, University of Illinois at Urbana-Champaign
Etienne Tetreault-Pinard, McGill University



Scholarships and Awards

- 2011 Holton Scholarship:*
Mark Gingrich
- 2011 Top Scholar Awards:*
Kenneth Dixon, Etienne Tetreault-Pinard
- 2011 Hobbs Scholarship:*
Eowyn Baughman
- 2011 National Science Foundation (NSF) Fellowships:*
Angel Adames, Eowyn Baughman
- 2011 American Meteorological Society (AMS) Fellowship:*
Kenneth Dixon
- 2011 Achievement Rewards for College Scientists (ARCS) Fellowship:*
Maximo Menchaca
- 2011 EPA STAR Fellowship:*
Maria Zatko

2011 DoE Computational Science Graduate Fellowship:

Hansi Singh

2011 NASA Earth and Space Science Fellowship:

Kristen Rasmussen

2011 NOAA Climate and Global Change Postdoctoral Fellowships:

Aaron Donohoe, Emily Fischer

2011 Harvard University Center for the Environment Postdoctoral Fellowship:

Emily Fischer

2011 Naval Weather Service Association Scholarship:

Aaron Hill

2011 Atmospheric Sciences Achievement Awards:

Ka Man Joseph Chan, Joshua Smith

2011 Phil Church Award:

Nicholas Davis

The Phil Church Award is given to the graduating senior in the Department of Atmospheric Sciences with the most outstanding record of scholarship, leadership and service. Professor Phil Church was the founder and first Chair of the Department of Atmospheric Sciences.

Undergraduate and Faculty Research

The following undergraduate students and faculty member worked together during the past year:

- Tyler Burns** / Robert Houze: Radar and Satellite Meteorology
- Kevin Constantin** / Joel Thornton: Halogen Activation by N₂O₅
- Kenten Danas** / Joel Thornton: Chemical Analysis of Ship Plumes
- Nicholas Davis** / Dargan Frierson: The seasonal cycle of midlatitude static stability over land and ocean in global reanalyses.
- Nicholas Davis** / Robert Wood: The climatology of midlatitude marine stratocumulus and a boundary layer inversion model.
- Aaron Hill** / Robert Houze: Radar and Satellite Meteorology
- Joshua Smith** / Dargan Frierson: Tropopause Height Increases in Reanalysis Data
- Xiyue Zhang** / Cecilia Bitz: Projections of snow depth on sea ice.



Donor Recognition

The Department of Atmospheric Sciences gratefully acknowledges the donors who have generously supported us during the past fiscal year July 1, 2010 through June 30, 2011.

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Mark Combs	Hannigan	Frank Krentz	Nesteroff	Tish Treherne
Jim Corkey	Andrew Harris	Fred Krusemark	Thomas Newbauer	Michael Tucker
Darrel Cowan	Halstead & Lynne	Terence Kubar	Nora Nielsen	Jon Valentine
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(Continued on page 7)

Donor Recognition, cont. from page 6

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Alumni News

We are sorry to announce that there will be no alumni reception held this upcoming January at the AMS Annual Meeting in New Orleans. Over the past several years, we have really enjoyed the chance to catch up with our alumni at these receptions, but the increasingly difficult budget times have forced us to cancel this year's event. We are open to your feedback on this, and would certainly consider resuming these receptions in future years. Please email us your thoughts on this (atmos@uw.edu).

H. W. "Buzz" Bernard ('75, B.S.) has published his first novel *Eyewall*. His other five works were nonfiction trade books about weather and climate. His novel is published by Belle Bridge Books (www.bellebooks.com) and has been a best seller in Amazon's Kindle Store.

Steven Cavallo ('09, Ph.D.) accepted an offer for a tenure-track faculty position at the University of Oklahoma.

John Herring ('94, Ph.D., a.k.a. Jack) and **Roxane Ronca** ('95, M.S.) continue to live in Prescott, Arizona, where Jack serves as the Dean of the undergraduate on-campus program at Prescott College and Roxane teaches undergrad courses in math and environmental science. They have two kids: Walker (2) and Paloma (8).

Edward "Ward" Hindman ('75, Ph.D., P. Hobbs adviser), Professor Emeritus at City College of New York, is editor of the international journal *Technical Soring*, which is online at journals.sfu.ca/ts. Have a look!

Dr. Thomas J. Kleespies ('74, B.S.) recently retired after 17 years with the NOAA/NESDIS Center for Satellite Applications and Research, and the Joint Center for Satellite Data Assimila-

tion, at both of which he was a senior scientist. Prior to that he spent 15 years working for the Department of Defense, first at what is now the Naval Research Laboratory Monterey, and later at what was then known as the Air Force Geophysics Laboratory.

Ian Kraucunas ('05, Ph.D.) is the Deputy Director of Atmospheric Sciences and Global Change at Pacific Northwest National Laboratory in Richland, Washington, a position he assumed in January 2011 after five years working at the National Research Council's Board on Atmospheric Sciences and Climate in Washington, D.C. He and his wife, Katie, recently adopted a two-year-old boy from Thailand.

W. Timothy Liu ('78, Ph.D.; Jet Propulsion Laboratory, California Institute of Technology) was named a 2011 American Geophysical Union Fellow.

(Continued on page 8)

Giving to the Department of Atmospheric Sciences

Please consider supporting the activities of the Department of Atmospheric Sciences. Your gift strengthens the core of the UW through recruitment and retention of world-class students and faculty. Your support of undergraduate and graduate students helps to create the next generation of scientific leaders. Help us to ensure that the department continues to be a leader in weather, climate and quality.

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Alumni News, cont. from page 7

Brian Magi ('06, Ph.D.) has some news (aside from his two super-cute kids). As of July, he's an Assistant Professor in the Department of Geography and Earth Sciences at the University of North Carolina at Charlotte. Brian and his family are all enjoying Charlotte, where they have a real summer. Of course, they really miss Seattle too.

Philip Mote ('94, Ph.D.) has closed the loop with the UW—alumnus, former employee, and now parent. His son Nathaniel just finished his first year as a computer science major at UW and is enjoying himself immensely. Phil is also pleased to be working with Dean Lisa Graumlich on creating the US Department of the Interior's Northwest Climate Science Center, a long-term center funded as of September 2010.

Chuck Robertson ('61, B.S.; '63, M.S.) was an undergraduate student in the Department of Meteorology and Climatology and a graduate student in the Department of Atmospheric Sciences in the early 60s. His office/lab was in the annex while the classes were taught in the main building. He said both were outdated when he was there, but he's still sad to see them go. (See the 2009 newsletter at www.atmos.washington.edu/alumni.update/newsletter.shtml to see images of the demolition and move of Cunningham Hall and the Johnson Annex.)

Steve Robinson ('07, M.S.) recently joined the development team at Tecplot, Inc. in Bellevue as a software test engineer for simulation

analytics software used by scientists/engineers.

Jason Stemmler ('10, B.S.) is working on his Masters at the University of Wyoming in Laramie.

David Tashima ('99, M.S.) and his wife had a baby, Alexandra Novaes Tashima, Dec. 28, 2010. They are currently living in Kennebunk, ME.

Michael Town ('07, Ph.D.) was awarded a prestigious teaching fellowship from the Knowles Science Teaching Foundation (KTF) valued at up to \$150,000 over five years. The fellowship includes professional and leadership development, teaching tools and materials, and access to a network of like-minded colleagues nationwide. Mike began teaching this fall at University Prep.

Glenn White ('81, Ph.D.) was among five people awarded a silver medal by the Department of Commerce: Shrinivas Moorthi, Jordan C. Alpert, Glenn H. White, Hui-Ya Chuang, Yu-Tai Hou. The medal was awarded in fall 2011 for the implementation of the most significant improvements in the performance of the NCEP Global Forecast System in the past 10 years.

Reid Wolcott ('10, M.S.) has started his career as a Meteorologist Intern with the National Weather Service in Riverton, WY, and will likely begin to apply for General Forecaster positions in 2012. Since starting in December, he has worked on a number of projects. For example, he designed and implemented a new recreational forecast product for Grand Teton

National Park, and became the leader of NWS Riverton's Facebook implementation. He continues his dedication to public outreach by giving presentations at area schools and civic events and had the opportunity to give a Ranger Talk at Grand Teton National Park. For those interested, he has continued his photography and has many new photos of the incredibly beautiful Wyoming. You can keep up with his photography at www.reidwolcott.com.

Ming-Jen Yang ('95, Ph.D.) is currently an Associate Professor at National Central University, Taiwan. He was invited to give a lecture on water budget for tropical cyclones at the 2011 Summer School on Severe and Convective Weather in Manjing University, China. Prof. Robert Houze, Ming-Jen's Ph.D. adviser, was also invited to give five lectures on clouds and precipitation at the same summer school, along with four other professors from the US and England.

Alumni Update

As we move to communicating with you more online and less at a traditional mailing address, we don't want to lose touch with anyone! Please encourage your colleagues and fellow UW Atmospheric Sciences alumni to update their contact information with the department at this link: www.washington.edu/alumni/subscribe/address-change.html.

Contact Us

Department of Atmospheric Sciences
University of Washington
Box 351640
Seattle, Washington 98195-1640
Phone (206) 543-4250
Fax (206) 543-0308
<http://www.atmos.washington.edu>

Dale R. Durran, Chair
Debra Wolf, Editor

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