Meteo News

A Newsletter for Meteorology Alumni of Saint Louis University

Fall 2006 **Volume 23**

Dr. James Moore Dies From Rare and Aggressive Form of Cancer

Dr. James T. Moore passed away on the morning of July25, 2006. He had been a faculty member of the Department of Earth and Atmospheric Sciences at Saint Louis University since 1980. Dr. Moore had been battling a series of conditions over the last year, but finally succumbed to liver cancer.

In October of 2005, after the National Weather Association annual meeting, Dr. Moore went into the hospital to have his gall bladder removed; however he never fully recovered and doctors determined that his bile duct was blocked. During the attempt to open the bile duct, the duodenum was perforated. After a prolonged stay in the hospital, he returned home at the end of January. Unfortunately, he did not improve and was once again hospitalized. During this visit, Dr. Moore was diagnosed with a very rare and aggressive form of liver cancer.

On 22 September the department held a memorial service for Dr. Moore. Fittingly, the day was very active with severe weather in the St. Louis area. It was attended by many friends and colleagues, as well as Dr. Moore's family and his wife, Kathy. Many people sent tributes to Dr. Moore. These tributes were compiled into a booklet that was presented to Kathy Moore and the Moore family. These tributes are available on line at: `http://www.eas.slu.edu/CIPS/Tribute`.

Jim Moore received his Bachelor's degree from NY University in 1974. He then attended Cornell University where he received his Master's and Ph.D. After a short stay at State University College at Oneonta New York, he took an assistant professor position at SLU. In 1985 he received tenure and was promoted to associate professor. In 1992 he was awarded the rank of full professor.

In his early years at SLU he worked closely with Dr. Henry Fuelberg and published work on the AVE-SESAME project. It was in the late 1980s that he began his long association as an instructor with the National Weather Service. It began with lectures in the Forecast Development Course on isentropic analysis in Kansas City. During this period, Jim developed an isentropic monograph that became one of the hallmarks of his career. His expertise in education and training continued to expand leading to many presentations at COMET.

In the early 1990s, Dr. Moore pursued research opportunities with funding by COMET in both partners and cooperative grants. These were unique opportunities to develop collaborations with NWS forecasters on problems of interest to both Dr. Moore and NWS forecasters. This further expanded his collaborations with forecast-

ers in the NWS. These successful endeavors lead to NOAA/CSTAR funding and the development of the Cooperative Institute for Precipitation Systems (CIPS). Throughout his tenure at SLU, his publications always highlighted issues relevant to operational meteorology.

Though never self-promoting, Dr. Moore's accomplishments have been recognized by his peers. He was awarded the T. Theodore Fujita Research Award from the National Weather Association in 2000. In 2003 he was selected as a fellow of the American Meteorological Society. Earlier this year he was awarded a lifetime achievement award from COMET and was posthumously awarded the Lifetime Achievement Award from the National Weather Association.

No description of Dr. Moore would be complete without acknowledging his unique sense of humor and quick wit. His humor was incorporated into everything he did, from water-cooler conversations, to lectures, and even professional presentations. Dr. Moore along with long-time friend Pete Chaston published *Jokes and Puns for Groan Ups*. Over the past several years, Dr. Moore had been working on a second manuscript entitled *Son of a Pun*. Kathy Moore hopes to publish this in the near future. I will keep you updated on its progress.

Earth and Atmospheric Sciences Moves to O'Neil Hall

In July of this year, most of our department moved out of Macelwane Hall and into O'Neil Hall. The move was prompted by a critical need for space for biology and chemistry. O'Neil Hall is located west of Grand Avenue on Lindell Boulvard near the library. It was the previous home of the Aquinas Institute for Theology.

After renovations, the department took over the entire building with meteorology occupying the 3rd floor. On that floor, we have our synoptic teaching and computer labs, two rooms dedicated to research, faculty offices and a large graduate student room. Unfortunately, not all of the department was able to move. The geology research labs and the Earthquake Center still remain in Macelwane Hall.

Figure 1: The new home of the department of earth and atmospheric science, O'Neil Hall. Meteorology is located on the 3rd floor.

After a stressful summer, we are working on making the new digs our home. If you get the chance please stop by and see our new home!

Dr. Benjamin de Foy Joins the Meteorology Program

We have a new faculty member in the meteorology section of the department. Dr. Benjamin de Foy joined our department this fall. He is an expert in air quality and comes to us from the University of California, San Diego. There he was working with Dr. Molina on the Mexico City air pollution project known as MILAGRO. He was responsible for the real-time simulations over the Mexico City area. He has extensive experience in both field campaigns and numerical model simulations, both related to air quality issues.

Dr. de Foy was born in Belgium and lived there until he was 8 years old. He then spent time in England and Switzerland. He studied engineering in England and got his first forecasting and numerical modeling experience with the America's Cup in New Zealand while working for EarthTech in

Massachusetts.

Dr. de Foy and his wife Karen currently live in Webster Groves with their three young children; Jonathan age 6, Alexander age 4, and Elisabeth age 2. They have settled in nicely and are enjoying the St. Louis sites including the zoo and the many parks in the Webster Groves area. Dr. de Foy and family jumped right in to the department and joined the annual float trip organized by the geology faculty.

We are thrilled to have Dr. de Foy as our newest faculty member. With research, teaching, a wife, and three young kids, he will be a very busy man!

Dr. William Dannevik Becomes Department Chair

In July of this year, Dr. William P. Dannevik became the newest chair of the Department of Earth and Atmospheric Sciences. This is a return home for Dr. Dannevik since he received his Ph.D. from Saint Louis University in Meteorology in 1984. He comes to our department after a long career at Lawrence Livermore National Laboratory, and before that, several years at Princeton.

His interests include geophysical fluid dynamics, climate variability, turbulence, high performance computing and boundary layer meteorology. However, the majority of his time is currently spent on department chair duties.

Dr. Dannevik, wife, and daughter have all settled into the St. Louis lifestyle. I expect they are having to adjust to the St. Louis climate as well!

Meteorology Graduates

Doctor of Philosophy

Marty Baxter: The Role of Warm Sector Convection in Mesoscale Banded Snowfall.
Mentor: Dr. Graves

Masters of Science

Emily Eisenacher: Radar Characteristics of Mesoscale Snowbands and the Environment in Which They Form.
Mentor: Dr. Moore

Kelly Kubinski: An Application of Corfidi Vectors to a Spectrum of Mesoscale Convective System Types.
Mentor: Dr. Graves

Brian Tentinger: A Study of Soil Moisture Feedback Effects on the Atmosphere Using the Penn State-NCAR MM5 Coupled with the NOAH Land Surface Model.
Mentor: Dr. Pan

Jeff Vitale: The Development of Low-echo Centroid Storms.
Mentor: Dr. Moore

Lulin Xue: Application of a Global Optimization Method to Meteorological Models in Estimating CO_2 Fluxes over the Continental U.S.
Mentor: Dr. Pan

Bachelors of Science

Ayman Al-Ghafri

Phillip Gilbertson

Paul Hayes

Thomas Mann

Matthew Morlock

Rachel Shumake

Kathryn Smith

Andrew Williams

Brandon Zollner

Mr. Matt Morlock was selected as the Arts and Sciences Outstanding Senior in the Department of Earth and Atmospheric Sciences. Ms. Kate Smith received the Ross R. Heinrich Award from the department for her contributions to the meteorology program.

Best wishes to all of our graduates and continued good luck!

Missouri Academy of Sciences Activities

This year the Missouri Academy of Science annual meeting was held at Truman State University in Kirksville, MO. Again SLU was well represented in the Atmospheric Sciences Section with four presentations:

Gravelle, Chad, C.E. Graves, and J.T. Moore: The GFS Model in a Busted Snow Event: 15-16 January 2003

Kubinski, Kelly, J.T. Moore, and C.E. Graves: An Application of Corfidi Vectors to a Spectrum of Mesoscale Convective System Types

Eisenacher, Emily, J.T. Moore, and C.E. Graves: Characteristics of Mesoscale Snowbands and the Environment in Which They Formed

Snavely, Erin, A.N. Pasch, C.E. Graves and J.T. Moore: A Diagnostic Analysis of the 1-2 October 2005 Flash Flood Event

Longtime friend of the department, Clarence Zacher, also presented at this year's annual meeting. This year, his lightning interests lead him to the Geology/Geophysics session with the presentation:

Zacher, Clarence A., J. Encarnacion, B.L. Stinchcomb, and P.G. Zacher: Processes of Formation and Dynamic Flux Pulses Within a Large Fulgurite Thermostructure.

Marc Singer (BS and MS at SLU), who works at the Aviation Weather Center (AWC) in Kansas City, is currently the Atmospheric Sciences Section Chair. He has done a great job in keeping our section active each year.

Faculty News

Professor Benjamin Abell

Professor Abell remains as busy as ever. He has continued his weather forecasts for KWMU radio (National Public Radio) and the Mind's Eye Information Service (MEIS) radio for the blind. He has also given several weather presentations at the St. Louis Science Center and was the Master of Ceremonies for *Meet the Fire Chiefs* dinner and the awards dinner for the *Box 8 Club of St. Louis* (Fire Department Support Group).

Professor Abell continues as the director of the undergraduate program in meteorology and has taken over the synoptic meteorology courses previously taught by Dr. Moore. He teaches a wide spectrum of courses from the general science course, *Climate and Humankind in History*, to the senior-level *Weather Analysis and Forecasting* course.

Professor Abell also remains active in numerous associations, including: Box 8, ITEST (Institute for Theological Encounter with Science and Technology), St. Louis Firenet, National Fire Protection Association, National Weather Association, American Meteorological Society, Missouri Academy of Science and the St. Louis Academy of Science.

Professor Abell was honored this year for his many years of broadcasting weather forecasts over the St. Louis airwaves. In January, he was installed in the Saint Louis Radio Hall of Fame and in June, he was inducted into the Saint Louis Media Hall of Fame. I will be proud to tell my grandkids that I worked with a true *Hall of Famer*!

Professor William Dannevik

Dr. Dannevik has been extremely busy with departmental duties this year. He lead the effort on the move to O'Neil Hall. He was also involved with renovations of both O'Neil Hall and the Geoscience laboratories and Earthquake Center in Macelwane Hall. Trying to get 17 faculty members, graduate students, the department office, and classrooms packed and moved was a major undertaking!

As if the move was not enough, Dr. Dannevik is working to fill two faculty positions, one in meteorology and one in environmental science. Additionally, he is working to increase the environmental science program where he hopes to expand both undergraduate and graduate opportunities.

To allow Dr. Dannevik to get back to his me-

teorology roots, we are also *letting* him teach a graduate course in planetary boundary layer this semester!

Professor Benjamin de Foy

Dr. de Foy is continuing his research on MILAGRO, the Mexican city air quality project. This project is a multi-agency effort including: NSF, DOE, NASA and many academic and international partners. The field campaign was in March of this year. In fact, we had to schedule our interview process around his field campaign activities! His efforts were with the forecasting team running MM5 and FLEXPART for plume trajectories. He helped determine flight plans for the various aircraft used in the field campaign.

He is currently working with Peter Kozich, doctoral student, and will be setting up the Weather, Research, and Forecast (WRF) model for a Mexico domain. They will be looking at simulations of Cold Surges and convective storms in the latter part of the campaign. He and Pete are learning the ins and outs of our computing facilities and the WRF model. Dr. de Foy is planning to continue his research in meso-scale modeling for air pollution field campaigns, and is interested in finding out more about regional projects in the midwest/St. Louis region.

Dr. de Foy got his introduction to teaching this semester with our *Physical Climatology* course. He has incorporated a simple Global Climate Model (GCM) known as EdGCM into the course to give students the opportunity to run a general circulation model and look at model output. He has also made use of local data and sessions in the computer lab to get their hands dirty with real observations. Sounds to me as if his students are very busy! Next semester, he will get the opportunity to teach air pollution; a subject much closer to his research interests.

This fall Dr. de Foy accompanied Dr. Dannevik out to Boulder, CO, to attend the UCAR meeting. Dr. de Foy got the opportunity to attend special sessions for young faculty and meet other aspiring faculty.

Professor Charles Graves

Dr. Graves has had a difficult year. After working ten plus years with Dr. Moore, he is now having to continue his research without him. His research is mainly focused on the CIPS (Cooperative Institute for Precipitation Systems) research program. Current studies are examining elevated thunderstorms, precipitation verification, banded snowfall, evaluating snowfall and heavy rainfall potential, and the differences in severe weather verses heavy rainfall environments.

Dr. Graves helped with the move to O'Neil Hall and with the able assistance of the graduate students and Dr. Dannevik, designed and implemented the meteorology portion of O'Neil Hall.

Dr. Graves has also taken over a few of Dr. Moore's tasks, like writing this newsletter. By the tardiness of the Meteo News, you can tell he is still an amateur, but he hopes to improve in subsequent years.

Professor Zaitao Pan

Dr. Pan taught four courses over the last year including, *Land-Atmosphere Interactions*, which is a brand new course. He also mentored two Masters students this year, Lulin Xue and Brian Tentinger. Both completed their Masters of Science this summer.

Dr. Pan continued with regional climate change research, including soil moisture, CO2 flux, and climate change. Another research topic of interest for Dr. Pan is the ongoing soybean rust forecasts in association with USDA and university groups. Every Saturday during growing season, his group forecasts the disease movement four weeks in advance. So far the disease damage has been confined only to the southern coastal states, good news for soybean producers.

Dr. Pan was involved with a lot of moving this summer! Besides the department move, his whole family moved down to St. Louis from Ames, IA. Finally he and his wife helped his son move off to college, at Harvard no less!

Somehow, Dr. Pan found time this summer to spend six weeks at NCAR working with scientists on crop modeling and cloud-resolving simulations.

Publications::

Pan, Z., M. Segal, and C. Graves 2006, On the potential change in surface water vapor deposition over the continental United States due to increases in atmospheric greenhouse gases. J. Climate, 19, 1576-1585.

Pan, Z., X.B. Yang, S. Pivonia, L. Xue, R. Pasken, and J. Roads, 2006. Long-term prediction of soybean rust entry into the continental United States, Plant Disease, 90, 840-848.

Professor Robert Pasken

Dr. Pasken continues to enjoy the field-campaign life. This September he was part of a NASA project to investigate the Saharan air's role in tropical cyclone formation. He spent three weeks in Africa. He flew in aircraft and launched dropsondes to capture the character of the Saharan air as it flowed out into the Atlantic Ocean. It was an exciting time as one of the aircraft was hit by lightning!

Now safely back home, Dr. Pasken is continuing his work on numerical simulations of particulate transport. He is looking to expand this work into new arenas with the assistance of Dr. Dannevik and Professor Abell.

News from Our Alumni

I have received numerous letters and emails from alumni on the passing of Dr. Moore. Many expressed the profound effect he had on their lives. I did not include those here. Below is the alumni news I have to pass along. I apologize if I missed your updates and feel free to pass your news along (a second time if need be).

We were all saddened to hear about the death of Rod Scofield in February of this year. He received his M.S. and PhD. from SLU in the early 1970s. He was an outstanding scientist and supporter of SLU. He, like Dr. Moore, deservedly received the National Weather Association's Lifetime Achievement Award this year. His kindness and enthusiasm will be missed.

We hear that Jamie Smith and family have moved to the Los Angeles area with Greg's new promotion. Their family has now grown with the birth of a girl. Congrats to the whole family!

Kevin Blumberg stopped by and gave an update on his activities. After graduation he was active in the US Air Force at Shaw AFB in South Carolina providing weather support for a six state region. He has recently completed his military duties and has moved back to Collinsville, IL.

Chris Karcher (nee Albers) has recently taken on the full time job as *mommy* with the birth of Allison Marie in June of last year. Good luck Chris, because the terrible twos are just around the corner! Chris and family are residing in St. Louis, so they have no excuse not to visit the department.

The Jamilkowski-Ducey family sent their annual Christmas letter to Dr. Moore. They listed the Jamilkowski-Ducey "life by the numbers", a top twelve activities about the family. It was two pages of items showing the grass is not growing under their feet! All in all, they are busy, happy and healthy, the best possible news we can hope for!

We heard from Jay Haney, who expressed sadness on Dr. Rao's tragic death and congratulating Dr. Lin on a distinguished career at SLU. Jay is still with a consulting firm in California working on air quality analysis and modeling. Thanks for the note.

Steve Klaus sent an email updating us on his activities which includes moving into a new house in University City, MO. Steve remarked that this move had some major stressful decisions, like selecting the proper paper towel holder. I'm sure you made the right decisions!

Michael Smart sent Dr. Moore an update on his activities since graduation in 1985. He initially was a navigator on a B-52 bomber stationed on Guam and then in upstate Maine. After leaving the military he earned an MBA and worked in IT. However, after 9/11 he again returned to the Air Force and recently moved to Texas on a new assignment. Michael is married with three kids and asked if Ted Drewes is still open. Yes, it is still open and I have the extra pounds to show for it!

John and Jenny Gagan were on the move again.

This time they moved from Jackson, MS to Springfield, MO with John accepting a lead forecaster position at the Springfield NWS office. I bet John just wanted to see snow again!

Bill and Molly Sammler sent an update. Bill remarked on how his high school sons are keeping them busy.

We heard from Jeff Baum who is celebrating his first year of marriage! He is working toward his PhD at Florida State University analyzing easterly waves. With a wife and school, we know Jeff is keeping busy!

I caught up with Pam Heinselman this fall. She is busy at NSSL working with the phased-array radar. She is staying busy but having fun!

Josh and Aimee (nee Strelec) Scheck came by this fall. Josh is busy at HPC but finds time to go fishing with Wes Junker.

Krishna Santhanam flew in from Oakland for Dr. Moore's memorial service. He is still active in the risk management business. He was looking as trim as ever!

Congratulations to Pat and Jennifer Market on the birth of their second child, Timothy Ian Sumner. Congratulations! I am sure Pat is looking forward to changing diapers again!

Marty and his wife Kristen have moved to Mount Pleasant, MI, where Marty has a tenure-track faculty position at Central Michigan University. I expect they are becoming familiar with something we rarely see in St. Louis — snow!

Sam Ng announced his engagement to Cathy Liang. Sam is now in a tenure-track position at Metropolitan State College of Denver. We here the wedding is set for June 23 of 2007.

Chester Lampkin stopped by the department this summer. He has moved back to Missouri and is the morning meteorologist for the KRCG the CBS affiliate in Jefferson City. MO.

We hear Sepi Yalda has become a mommy! I think us grand-professors need to see pictures!

Our Current *Gradual* Students

David Andrade: Master's student working with Dr. Pan on estimating the escape rate of rust spores from a soybean canopy using turbulent transport.

Emily Eisenacher: Doctoral student working with Dr. Graves on the evolution and movement of mesoscale snowbands.

Mike Farrell: New masters student this year.

Mike Folmer: Master's student working with Dr. Pasken on the role Saharan air layer role in tropical cyclone formation.

Chad Gravelle: Master's student working with Dr. Graves on the characteristics of snowfall in the central U.S.

Pete Kozich: Doctoral student working with Dr. de Foy on simulations of dry season convection in Mexico City. Pete has returned to SLU (where he got his B.S. in 2003) after obtaining his M.S. at the University of Miami.

Mike Paddock: Doctoral student working with Dr. Graves on proximity soundings associated with heavy rainfall.

Adam Pasch: Doctoral student working with Dr. Graves on object oriented verification of convective rainfall events.

Jamie Poole: Doctoral student working with Dr. Graves on the simulation of elevated rainfall events.

Stephen Rodriguez: Master student working with Dr. Graves on the transition of bow-echo events to heavy rain events. Stephen is a SCEP student working part-time at the St. Louis forecast office.

Erin Snavely: Master's student working with Dr. Graves on classifications of elevated rainfall.

Doug Tilly: Master student working with Dr. Graves on the impact of convection on snowfall production.

Jake Wimberley: Master's student working with Dr. Pasken on improving the accuracy of numerical

models for soybean rust forecasting applications.

Rich Woodford: A new doctoral student working at Boeing. He has transferred from New Mexico State University.

Lulin Xue: Doctoral student working with Dr. Pan on the prediction of soybean dispersion using numerical models.

G.V. Rao Memorial Scholarship for Meteorology

A scholarship in memory of Dr. Rao was established shortly after his death. It has been steadily growing and will be used to help deserving graduate students in meteorology at SLU. If you would like to contribute, donations can be sent to:

Saint Louis University
Tribute Fund
P.O. Box 8005
St. Louis, MO 63156-9950

Along with your gift please specify that your gift is in memory of Dr. Gandikota Rao for a memorial scholarship in meteorology. The University will send a personalized acknowledgment of your gift to the Rao family, without reference to the size of the gift.

James T. Moore Meteorology Fund

The fund previously known as the **Met Fund** has been renamed the **James T. Moore Meteorology Fund** to honor his memory and his continual efforts to assist students. The number of donations this year (over one hundred) are too numerous to list here. It is an amazing outpouring of generosity that will impact many students for years to come. If you would like to donate, please send your donations to the address listed in the following section. Checks can be made out to Saint Louis University.

Note From Kathy Moore

Jim's mother, siblings and I would like to send our heartfelt thanks to our extended meteorological *family*. Jim loved you all so much. As much as weather itself was a primary part of Jim's life, so was his boundless joy in the study and the teaching of it. All of his students were always close to his heart. His meteorology colleagues were his brothers and sisters in his heart, as well. I will always remember how much pleasure it gave him to be able to sit outside for a few minutes (with help from Sam Ng and Chuck Graves) and watch a summer storm system move in. We can take comfort in knowing that now Jim can study the weather from an entirely new heavenly perspective. Thank you for all of your care and concern. God Bless you all.

Kathy Moore

Do the Write Thing

If you have any news you wish to share with your fellow alumni, please contact me. I can be reached through email at graves@eas.slu.edu or through snail mail at:

Charles E. Graves
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I would love to hear from you!

We Are Now on the Web!

This newsletter and several from past years are now available on the web. You can view them at:

`http://www.eas.slu.edu/Weather/MeteoNews`

where they are in PDF and in color. If you wish to see older versions not listed; please, contact me and I will try and find them and get them posted as well.

Page'O Puns

I do not claim to be a punster with the *skill* of Dr. Moore, but none the less, enjoyed them. So I have pilfered from *Puns and Jokes for Groan Ups* as well as *Son of a Pun* to provide you with the following tidbits.

Our mailman is too old for his job. He lost a little bit of his zip.

I just had a pleasure trip: I drove my mother-in-law to the airport.

How do you recognize rabbit stew? It has hares in it.

My neighbor was in the hospital but he took a turn for the nurse.

Is Casper, Wyoming a ghost town?

Sky divers are good to the last drop.

The blacksmith signed the check and was charged with forgery.

Wyatt Earp was the right caliber man for the job.

If every person in this country had a pink automobile, then we'd be known as a pink car nation.

There was the faint smell of ether in the air.

If you don't pay your exorcist on time you can get repossessed.

The cow just gave birth. She was decalfenated.

I was baffled by the waterbed salesman.

The carpenter had a cutting sense of humor.

I want to be the spokesperson for a bicycle company.

Have you ever seen a bathroom sink?

I have a pet; it's a run-of-the-mill hamster.

A pediatrician is a doctor with little patients.

The more I study vectors the tensor I get.

She was hog wild for the man on the motorcycle, even though she Harley knew him.

I wanted to say that I had read many books by English women authors, but feared I would appear Austenacious.

The anesthesiologist's wife was a knock out.

I could tell it was a dogwood tree by its bark.

She was allergic to wheat but still ate bread – I guess she was a gluten for punishment.

I used to make doughnuts but I quit the hole business.

When a pig has laryngitis is it disgruntled?

In order to become a puppeteer I had to pull a few strings.

In a money-saving effort the mayor decided to fire several people at the city morgue. Some people accused him of just cutting coroners.

Igor was unsure which road led to the mad scientist's castle, so he took the psychopath.

I was hungry at the golf course, so I ate a sand wedge.

My dog ate my book and got constipated. She was spellbound.

The men in the soap factory were partners in grime.

I didn't know if the guy was really a lawyer or was just going through the motions.

Where do watch makers go to unwind?

What do you call a stupid cloud? A nimbus-cell! (This was the last joke I shared with Dr. Moore.)