UNIVERSITY OF NORTH DAKOTA ATMOSPHERIC SCIENCES

# NORTHERN LIGHTS

Issue 4

#### FALL 2014

#### Message from Department Chair, Mike Poellot

Greetings from the Department of Atmospheric Sciences!

As we start a new school year, this is a good time to bring everyone up to speed on activities in Atmospheric Sciences at UND. Students who are beginning the undergraduate program this fall will be the first group under the new B.S. curriculum. Major changes include the addition of a required course in Remote Sensing and changing Mesoscale Dynamics to a required course. Additionally, AtSc electives have been combined with technical electives into a single requirement for Career Electives. Finally, an emphasis on Climate Dynamics has been added to the Physical Meteorology course. We feel that these changes will better prepare our graduates for successful careers in our field.

The graduate programs continue to attract top students with 12 students enrolled in the Ph.D. and 27 in the M.S. program. A list of new students is listed elsewhere in this letter. A number of grad students completed their studies this past year and several will be continuing their work remotely as they left campus to begin their careers.

Our faculty continue to work very hard and have been successful in expanding their programs of research. Of particular note is an award from the NSF EPSCoR program to Prof. Jianglong Zhang that will support the establishment of a Center for Regional Climate Studies at UND. This will bring together faculty from our department and others across campus to address critical regional issues related to climate change. Other funding awards have been received recently to support the work of Professors Gretchen Mullendore, Xiquan Dong, David Delene, and Mike Poellot. Additional details are being posted at the Department web site.

The Spring 2013 Newsletter is on the AtSc website (http:// www.atmos.und.edu/) under newsletters. Please check it out for more news from the Department.

Other news items about the Department and our alumni are found elsewhere in this letter. As a faculty member it is very rewarding to see what our former students are accomplishing, so I invite you to share your news with us and other alumni. Also, if you happen to be in the area, please stop by for a visit!



Wanda Seyler, Editor

### INSIDE THIS ISSUE

New Faculty/Staff	2
Recent Graduates	2
Radar News	3
Spring Banquet	4
Incoming Graduate Students	5
Thunderstorm Experience Lab	6
IPHEX Field Project	7
Department News	8
AMS Annual Meeting - Atlanta	10
AtSc Alumni Reception	10
Alumni News	11

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# **NEW HIRES AND RECENT GRADUATES**

#### Dr. Aaron D. Kennedy hired as an Assistant Professor

Dr. Aaron Kennedy received his B.S. and M.S. in Meteorology from the University of Oklahoma in 2004 and 2006. In 2011, he received his Ph.D. in Atmospheric Sciences from the University of North Dakota. After serving as a NSF postdoctoral fellow for a year at UND, he became an assistant professor in 2013. His interests include convection, clouds, and climate with a focus on synergistic studies that use combinations of models / observations / reanalyses to advance knowledge of these topics.

#### **Congratulations to our Graduates**

May 2013 B.S. graduates were Garrett Bruce, Justin Dockter, Jared Rising, Mariusz Starzec and Justin Weber. M.S. graduates were David Keith and Alex Zarnowski.

August 2013 M.S. graduates were **Brandon Bigelbach** and **Shaoyue Qiu** 

December 2013 M.S. graduates were **Ricardo Al**faro-Contreras, Nicholas Carletta, Celil Kaplin, and Daniel Koller.

B.S. graduates from May 2014 are Corey Amiot, Julia Simonson, James Telken, Cody Troop and Timm Uhlmann. Danny Burtch, graduated in May 2014 with his Master's Degree.

Tim Logan, graduated with his Doctoral degree in August 2014. He received his M.S. from UND in 2009. He will begin working at Texas A&M in September as an Instructor. Brandon Austin, Matt Christensen, Erica Dolinar, Ron Stenz and Jingjing Tian, graduated with their Master's Degree in August 2014.

#### Recent Staff Hires to the Atmospheric Sciences Department

**Jonathan Sepulveda** has joined the Atmospheric Sciences staff as Research Jet Pilot. He will be flying the Citation research jet and will also have responsibility for maintenance and care of the research equipment on the plane. Jonathan has been serving as a Flight Instructor for UND Flight Operations and will continue to have flight training as part of his duties.

**Ricardo Alfaro-Contreras,** a December 2013 M.S. graduate of UND, was hired as a Research Assistant working with Dr. Jianglong Zhang. He is current work involves a longterm study of above-cloud aerosol events which are important as they can have an impact on the regional and local radiation budgets in addition to cloud property retrievals. Other projects which he is currently working on involve other cloud-aerosol interactions as well as doing some atmospheric modeling with the Weather Research and Forecasting Models.

**Danny Burtch,** a May 2014 M.S. graduate of UND, was hired as a Research Assistant working with Dr. Gretchen Mullendore. Danny is currently involved in a project which is investigating Large-Eddy Simulations (LES) of a point-source tracer in an urban location in order to improve methods of chemical leak detection. He is also assisting on a second project using both reanalysis soundings and observed soundings to develop a climatology for the South Pacific.

If you received a copy of this newsletter in the mail and would prefer to receive it via email, please drop Wanda an email at seyler @atmos.und.edu and I will get you added to the email list.

## **RADAR NEWS**

#### NorthPol Radome Maintenance

By Chris Theisen

Maintenance was performed on the University of North Dakota's C-band polarimetric Doppler weather radar radome in July 2013. The condition of the radome was such that water was leaking through seams during rain events and there were large areas where the exterior paint was missing allowing degradation of the fiberglass as it is exposed to the sun and other weather conditions. The current configuration of the radar has the receiver located in the radome and a properly maintained radome is essential to protecting that equipment from the weather elements. Lighthouse Industries, LLC, of Florida, was contracted to perform the maintenance in which the radome was sanded, washed, and cleaned prior to having the seams resealed with silicone caulk and the entire radome repainted.

Chris Theisen (B.S. 2003, M.S. 2006) helps coordinate radar operations and maintenance. His primary position is Director of Research, Development, Test & Evaluation (NP UAS TS: NDDOC); and Radar Research Meteorologist with RWIC at UND.





### 25th Annual Awards & Scholarship Banquet

The 25th Annual Awards & Scholarship Banquet was held on April 11, 2014 at the Ramada Inn. The guest speaker was Mark Ewens, Meteorologist and Data Acquisition Program Manager at the National Weather Service Office in Grand Forks.

The UND AMS Student Chapter presented the following awards to the faculty: Best Freshman & Sophomore Professor – Gretchen Mullendore; Best Junior & Senior Professor – Jianglong Zhang; Best Academic Advisor – Fred Remer; Golden Reamer Award – Aaron Kennedy; 7-Eleven / Most Available Professor – Gretchen Mullendore & Mark Askelson; Secretary Award – Mary Ann Gregoire & Wanda Seyler

The following awards were presented to the following undergraduates: Service to the Department – Emily Maddox; Outstanding Undergraduate Teaching Assistant – Kevin Mahoney Jr.; Outstanding Undergraduate Student Researcher – Johnathan Metz; Outstanding Student Broadcaster – Timm Uhlmann; Outstanding Sophomore – John D. Odegard Aerospace Sciences Scholarship – Nick Gapp; Outstanding Junior – John D. Odegard Aerospace Sciences Scholarship – Molly Aufforth; Outstanding Freshman – Janelle Hakala; Outstanding Graduating Senior – Kevin Gray.

The *Science Engineering Associates Scholarship* was presented to **Joseph O'Brien**, Master's Grad Student.

The "Faculty Award" to the Outstanding Undergraduate was presented to B.S. senior Corey Amiot at the AtSc end of semester potluck in December 2013. This included a scholarship to be used for his last semester at UND.



#### UND-AMS Officers 2014—2015

President - Johnathan Metz Vice President - Emily Maddox Secretary - Molly Aufforth Treasurer - Tessa Philpott Historian - Nick Gapp Liaison to Undergraduate Curriculum Committee - Dave Agee



# 2014-15 AMS Officers with Advisor Al Borho

L to R: Al Borho, Tessa Philpott, Nick Gapp, Johnathan Metz, Emily Maddox, Dave Agee, Molly Aufforth

# **Incoming Graduate Students**

The Fall of 2013 we had a record number of incoming graduate students to the Atmospheric Sciences program at UND.

Master's Students are: Katelyn Barber, Hamlin, New York, 2013 graduate of the State University of New York at Oswego; Garrett Bruce, Marshall, Minnesota, a 2013 graduate of UND; David Goines, Greenwood, Arkansas, 2013 graduate of University of Oklahoma; Ted McHardy, Lapeer, Michigan, 2013 graduate of Cornell University in Ithaca, New York; Joe O'Brien, South Amboy, New Jersey, 2013 graduate of the University of Pennsylvania— Millersville; Mariusz Starzec, Newington, Connecticut, a 2013 graduate of UND; Peng Wu, Nanjing, China, a 2012 graduate of the Nanjing University of Information Science and Technology in Nanjing, China

**Doctoral Students are:** Brandon Bigelbach, Circle Pines, Minnesota, a 2010 B.S. graduate of St. Cloud State University, State Cloud, MN and a 2013 M.S. AtSc graduate of UND; and Ms. Shaoyue Qiu, Beijing, China, a 2009 graduate of Beijing Normal University and a 2013 M.S. AtSc graduate of UND.

In January 2014 **Aaron Scott**, Ardmore, Oklahoma, a 2013 graduate of University of Oklahoma, started the semester working on his Master's degree.

The Fall of 2014 the incoming graduate students to the Atmospheric Sciences program at UND included five students starting their Master's and five Doctoral students.

Master's Students are: Ms. Wenjun Cui, Wuhan, China, 2014 graduate of Nanjing University of Information Science and Technology; Ms. Jamie Ekness, Shepherd, Montana, a 2013 graduate of Westfield State College, Westfield, Massachusetts; Kurt Hibert, Vista, California, 2014 graduate of the University of North Carolina— Asheville; Joshua Markel, Glen Rock, Pennsylvania, 2014 graduate of Penn State; Jared Marquis, Houston, Texas, a 2014 graduate of the University of Louisiana -Monroe.

**Doctoral Students are:** Matthew Christensen, Anoka, Minnesota, a 2011 B.S. graduate and a 2014 M.S. graduate of UND; Erica Dolinar, Westville, New Jersey is an August 2014 M.S. graduate of UND and a December 2011 graduate of University of Pennsylvania – Millersville; Ms. Akila Sampath, Chennai, India, a 2007 graduate of the University of Madras, Chennai; Ronald Stenz, Katonah, New York, is an August 2014 M.S. graduate of UND and a 2012 graduate of Cornell University; Ms. Jingjing Tian, Shenyang, China, also an August 2014 M.S. graduate of UND and graduated in June 2011 from the Nanjing University of Information Science and Technology in Nanjing, China



#### **ALUMNI NEWS WANTED**

We are looking for news about you to share with other alumni in our upcoming newsletters (information about your current position, significant achievements, family activities, etc.). Also if you could please send us your current e-mail address and address changes it would be appreciated. If you have any ideas or comments about the newsletter, please send them to Wanda at: seyler@atmos.und.edu.

#### PAGE 6

# Thunderstorm Experience Lab

Dr. Matthew Gilmore, Associate Professor of Atmospheric Sciences wrapped up a road trip along with several students, chasing storms and honing their weather forecasting skills as part of a summer semester class, *Atmospheric Sciences* 499—*Thunderstorm Experience Lab.* The road trip was from May 23—June 2, 2014.

In a rented 12-passenger van equipped with computers and monitor displays for geographic tracking of the van and display of real-time weather data from the National Weather Service, they let the clouds tell them where to go.

The summer *Thunderstorm Experience Lab* class took the group as far south as Texas and New Mexico and back up through Nebraska, Western South Dakota, eastern Wyoming and Montana.

Storms are fascinating: scary, compelling, beautiful.

But for Gilmore and the five UND summer students on the trip -- plus the student driver and an Atmospheric Sciences grad student who's the group's teaching assistant – there was more than "let's-take-a-look" curiosity at work. "The senior-Level *Thunderstorm Experience Lab* is a chance for students to apply their forecasting skills and witness first-hand the storms they have been studying in school for the past four years. For many students, severe thunderstorms are what had sparked their original interest in weather," Gilmore said. "We learn something new every time we go out. We continue to be scientifically fascinated by how and why some of these big storm systems generate tornadoes and some do not."

Gilmore says the field observations are critical to expanding the science of storms and building the next generation of scientific talent, like the five undergraduates on this trip.

We've seen several supercells on this trip and a tornado near Big Spring, Texas," said Gilmore, explaining a supercell as a thunderstorm that contains a strong rotating updraft -- in other words, the parent circulation that gives birth to a tornado. The group blogged about its field experiences on Twitter at <u>http://twitter.com/UNDChase</u>.

For the full story, go to http://webapp.und.edu/ dept/our/uletter/?p=47611.



UND students pose in front of a supercell thunderstorm near Hobbs, N.M., on Sunday, May 25. From Left to Right: Zack Hargrove, M.S. grad student, undergraduates Adam Gill, Ryan Strankowski, Kevin Mahoney, David Agee (driver), Molly Aufforth, and Jackson Perrault.

# Integrated Precipitation and Hydrology EXperiment (IPHEX) Field Project

During May and June, 2014, the Department of Atmospheric Sciences operated its Cessna Citation research aircraft in support of the NASA participation in the Integrated Precipitation and Hydrology Experiment (IPHEX). In this campaign, the Citation was based in Asheville, NC. The aircraft took measurements of the microphysical properties of precipitating cloud systems over complex terrain and out over the Atlantic Ocean in coordination with the NASA ER-2 aircraft. The ER-2 flew above these cloud systems with a suite of remote sensing instruments, acting as a proxy for the GPM core satellite platform. A variety of ground-based instruments such as radars, disdrometers, and rain gauges were also deployed in several watersheds in the study area.



The Citation was flown by Wayne Schindler and Jonathan Sepulveda, and the instruments were operated by grad students Joe O'Brien and Katelyn Barber. The flight scientist seat was filled by Mike Poellot, David Delene, and Prof. Emeritus Tony Grainger, who was coaxed out of retirement to help out. The scenery was beautiful, the weather cooperated, and the food was excellent. A good time was had by all!

The Department of Atmospheric Sciences was this vear's recipient of the Fellows of the University Award for **Departmental** Excellence in Research. The department received their plaque at the Founder's Day banquet and also a \$2,000 award. This recognition is the result of a team effort and could not have been achieved without the support of all faculty, staff, and graduate students.



**Back row l to r:** Dr. Cedric (Tony) Grainger, Dr. Matt Gilmore, Dr. Mark Askelson and Leon Osborne; **Middle row l to r:** Dr. Robert Kelley, UND President, Jonathan Sepulveda, Mike Poellot, Dr. Aaron Kennedy; **Front row l to r**: Dr. Gretchen Mullendore, Dr. Baike Xi, Dr. Xiquan Dong and Dr. Jianglong Zhang



**Drs. Xiquan Dong and Baike Xi** along with others from the CERES Cloud Working Group will be recognized and awarded a NASA Group Achievement Award this summer for "Sustained excellence and innovation in developing and validating the Cloud Retrieval Systems for CERES Editions 2 and 4 Climate Data Records". This was a large effort that has produced valuable datasets for CERES and the cloud community.

**Dr. Jianglong Zhang,** Associate Professor of Atmospheric Sciences, is receiving an award from the Naval Research Laboratory for his contributions as a co-author on a paper titled: "Observing and Understanding the Southeast Asian Aerosol System by Remote Sensing: An Initial Review and Analysis for the Seven Southeast Asian Studies (7SEAS) Program." The award is being presented at the 46th Annual Alan Berman Research Publication Awards on the Anacostia-Bolling military base in Washington, D.C.

**Dr. Matt Gilmore** & Dr. Laura Munski from the Dakota Science Center attended the ND Science Teachers Association Spring Conference in Valley City on February 20<sup>th</sup> and 21<sup>st</sup> to share the Elementary GLOBE K-4 Earth Systems Science Unit which includes: storybooks, learning activities, and a teacher's implementation guide. The curriculum addresses the following topics: seasons, water, soil, clouds, and Earth as a system. Future GLOBE teacher trainings will be discussed. [Globe Learning and Observations to Benefit the Environment (GLOBE): an International Environmental Science and Education Program].

**Dr. Baike Xi** has received the AGU 2013 Editor's Citation Award for *Excellence in Refereeing* for outstanding service to the authors and readers of Journal of Geophysical Research Atmospheres This award will have a great impact to Baike and also the UND community because it will appear on AGU EOS and at the annual meeting.

#### Gretchen Mullendore Contracts Thunderstorm Study with Northrop Grumman

**Dr. Gretchen Mullendore**, Associate Professor of Atmospheric Sciences, has received a contract from the Northrop Grumman Corporation to study tropical thunderstorms as a hazard to UAS operations. While it is well known that aircraft should not fly directly through thunderstorms, hazards also extend beyond the visible boundary of the storms. The question to be addressed is: what is an appropriate avoidance distance that will ensure aircraft safety while optimizing mission performance? This study, with an initial funding of \$75,000, will begin to examine this issue.

**Ryan Stanfield**, a PhD graduate student, was awarded a summer internship at NASA Jet Propulsion Laboratory in Pasadena, California from June – August 2014. Ryan's advisor is Dr. Xiquan Dong.

**Erica Dolinar**, graduate student, has received a NASA NESSF fellowship. The purpose of the NESSF (NASA Earth and Space Science Fellowship) program is to ensure continued training of a highly qualified workforce in disciplines needed to achieve NASA's scientific goals. The awards result from a highly competitive selection process. Erica graduated in August with her Master's and will be continuing for her Ph.D. at UND. Her advisor is Dr. Xiquan Dong.

#### Incoming Student Wins Scholarship from the Minnesota Vikings

**MacKenzie Cochran**, a high school senior from Sebeka, MN, has won the 2013 Minnesota Vikings and 'UND & Me' scholarship. She will start her studies in Atmospheric Sciences Fall 2014. Here is a link for more details: http:// webapp.und.edu/dept/our/uletter/?p=43852 **Travis Toth,** Ph.D. graduate student, spent a second summer at NASA Langley Research Center in Hampton, Virginia as a member of the Pathways Intern Employment Program. This summer he worked with the CALIPSO satellite group. Travis' advisor is Dr. Jianglong Zhang.

**Theodore McHardy**, who just completed his first year as a Master's student, was selected as an intern for the 2014 Office of Naval Research (ONR) Naval Research Enterprise internship Program (NREIP). Ted worked this summer at the Naval Research Labs in Monterey, CA under the guidance of an appropriate research mentor. Ted's advisor is Dr. Jianglong Zhang.

Johnathan Metz, Senior B.S. Student and president of the UND AMS Student Chapter was awarded the AMS Richard and Helen Hagemeyer Scholarship based on recommendations from the Committee of Undergraduate Awards. He will receive a \$3000 scholarship and also a trip to the AMS Student Conference/Annual Meeting to be held in Phoenix January 2015.

#### 24th Leadership Awards held in Memorial Union at UND in April 2014

The Leadership Awards ceremony is a time when UND comes together to recognize organizations, advisers and students for their outstanding contributions to the community.

The Outstanding Student Organization Advisors Award is an award that recognizes student organization advisors for their commitment and dedication to students as well as their campus involvement.

There were six recipients of this award including **Alan Borho**, Atmospheric Sciences Instructor and advisor for the UND AMS Student Chapter.

Kendell LaRoche, M.S. graduate student, was selected to participate in the "Intensive Summer School in Computation for Environmental Sciences" sponsored by NASA-University of Virginia. Through both lectures and hand-on labs, Kendell and 19 other students learned skills in programming, advanced visualization, highperformance computing, and software engineering with emphasis on environmental-science applications. After that, Kendell traveled to Marshall Space Flight Center in Huntsville, Alabama, to participate in a NASA-funded research project involving lightning and electrified pyrocumulus clouds. Kendell's advisor is Dr. Matt Gilmore.

**Zachary Hargrove,** 2<sup>nd</sup> year Master's Student, was hired at the National Weather Service in Bismarck, ND. Zack, Leah and son Ethan, moved to Bismarck in July. Zack's advisor is Dr. Matt Gilmore.

**Brittany (Kondradi) Peterson,** also a 2<sup>nd</sup> year Masters Student was hired at the National Weather Service in Paducah, Kentucky. Brittany and her husband, Alex, moved in July. Her advisor is Dr. Gretchen Mullendore.



**ALUMNI NEWS** 

**Jason Naylor**, a 2008 M.S. & 2012 Ph.D. UND Atmospheric Sciences graduate, recently accepted a 2-year Visiting Assistant Professor position in the Department of Earth, Atmospheric, and Planetary Sciences at Purdue University. Since October 2012 he was a Postdoctoral Research Scientist at NorthWest Research Associates, in Boulder, Colorado.

### 94<sup>TH</sup> AMERICAN METEOROLOGICAL SOCIETY ANNUAL MEETING, STUDENT CONFERENCE AND CAREER FAIR

The 94<sup>th</sup> Annual Meeting of the American Meteorological Society was held February 1 – 6, 2014 in Atlanta. The Atmospheric Sciences department had a table at the Career Fair which is intended to facilitate the networking process for both applicants and recruiters. Those attending from UND were: Faculty members – Mike Poellot and Xiquan Dong; Staff member – Wanda Seyler; Grad Students – Danny Burtch, Joel Siegel, Tim Logan and Travis Toth; Undergrads – Corey Amiot, Kevin Mahoney, Celine Marx, Johnathan Metz, Kurtis Pinkney and Stephanie Waldref. Corey, Johnathan and Kevin are current AMS officers for the UND chapter.

Posters or talks were presented by the following people:

Kurtis Pinkney presented a poster entitled "The Structure of Lightning in Convective Storms in Varving Pre-Convective Environments during The Deep Convective Clouds and Chemistry Field Campaign"; Johnathan Metz presented a poster entitled "Effects of Model Physics Options on Simulated Storm Depth"; Travis Toth presented a poster entitled "An Evaluation of Utilizing Passive and Active Satellite Aerosol Products as Proxies for Surface-Based PM2.5 Concentrations": Travis also presented a poster for his advisor, Dr. Jianglong Zhang entitled "Investigating the Impact of Cloud and Aerosol Contamination in Satellite Products used for Climate Forcing Studies". Dannv Burtch gave a presentation entitled "Using Reanalysis Data for the Prediction of Seasonal Wind Turbine Power Losses Due to Icing"; Tim Logan presented a poster entitled "Aerosol physical and chemical properties and their relationship with CCN at the ARM Azores site"; Dr. Xiquan Dong presented a poster entitled "Investigation of the 2006 Drought and 2007 Flood Extremes at the SGP Through an 8B.2 Integrative Analysis of Observations"; a presentation entitled "Marine and Continental CCN and Low-level stratiform cloud processes and properties" and presented a poster for Dr. Baike Xi entitled "Investigation of the MBL Cloud Macro- and Micro-physical Properties over Pacific and Atlantic Oceans".

**Tim Logan**, Ph.D. student, received the first place award for the best student poster presentation along with a check for \$200 by the Organization Committee of the Sixth Symposium on Aerosol-Cloud-Climate Interactions at the 94th AMS Annual Meeting.

**Travis Toth**, Ph.D. student, received the Second Place Student Poster Award along with a check for \$200 for the 13th Annual Student Conference at the 94th Annual Meeting of the American Meteorological Society.

### UND Atmospheric Sciences hosts First Alumni / Prospective Student Reception

The Atmospheric Sciences department held its first Alumni / Prospective Student Reception at the AMS 94<sup>th</sup> Annual Meeting of the American Meteorological Society on February 4th in Atlanta. Mike Poellot and Wanda Seyler were there to greet prospective graduate students and UND AtSc alumni attending the conference.

The 95<sup>th</sup> Annual Meeting of the AMS will be held January 3—8, 2015 in Phoenix, AZ. If you plan to attend, please let us know if we should hold our Second Alumni Reception. It would most likely be scheduled for Tuesday, January 6th. You may email Wanda at seyler@atmos.und.edu if you know you will be attending. We look forward to seeing you in Phoenix just after the New Year!

### Photo from the AMS Annual Meeting and Student Conference



Back row from left: Justin Weber (AtSc B.S. Graduate 2013), Kevin Mahoney, Corey Amiot, Kurtis Pinkney, Danny Burtch, Travis Toth and Johnathan Metz;

Front row: Matt Saari (AtSc B.S. Graduate 2011), Stephanie Waldref, Melissa Becker Dye (AtSc B.S. former student), Celine Marx, Wanda Seyler, Mike Poellot and Scott Rowe (AtSc B.S. Graduate 2012)

## **ALUMNI NEWS**

Kira (Dordal) Benz, B.S., 2008, may not have followed the traditional path of a meteorologist, but she's never valued her educational background more as it's all led to where she is today. The past year has been quite the adventure for Kira and now she's happy to report she is settling down once again. After graduation from UND Kira worked at a couple different local television stations, starting with an incredible internship in Fargo followed by places across Wisconsin. She started out focusing on broadcast weather but slowly made the transition to the news side which she enjoyed just as much. After spending five years in the industry (and on a less-than-ideal sleep schedule) Kira had the opportunity to try something different. In September 2013 she resigned from her current position as the morning news anchor and producer at WJFW in Rhinelander, Wisconsin and moved to Hawaii. She spent almost five months on the island of Kauai living with her grandparents - which was a great adventure in itself. Getting into the swing of island life was an adjustment, but once Kira got used to it she considers this time the best experience of her life. Kira returned to her hometown of Moorhead, Minnesota just in time for spring and spent some

time working various jobs in order to spend more time with family and friends. The travels didn't end here, in June Kira took her 2001 Saturn (with 200,000+ miles) all the way to Florida for the month to help out a family member expecting twins! On the way back north Kira stopped to



visit some friends back in Rhinelander and was convinced to stay and work here for the summer. The summer plan looks like it will be lasting a bit longer than expected, shortly after moving back a former co-worker informed Kira of an opening at WJFW, this time in a completely new department. In August, Kira accepted the job as the Creative Services Producer at the television station where she will work with local advertisers on commercial development and station promotions. She couldn't be more excited for this new opportunity and even more excited that she gets to spend more time in the Northwood's of Wisconsin. (Revised from Spring 2013 issue on website—she's had a fun vear).

#### DEPARTMENT OF ATMOSPHERIC SCIENCES

As you can see in this newsletter there is a lot going on in the Department of Atmospheric Sciences and we have been able to celebrate many successes. We would not have been able to accomplish much of what we do without the support we have enjoyed from the University and from the Dean's Office in the Odegard School. Still, we have ongoing needs to further help our students and programs thrive. To improve the educational opportunities for our students, we have determined two specific priorities that would greatly benefit from additional funding support: student scholarships and academic equipment.

We all know that most students struggle to meet the financial obligations associated with obtaining a college degree. Our goal is to establish an Alumni Scholarship fund that would provide assistance to qualifying students. The hope is to build up an endowment of \$25,000 that would generate an annual scholarship award.

The other goal that I would like to highlight is to replace the WSI broadcast graphics system currently in use. This system is 8+ years old and badly in need of an upgrade. We want our students to have the opportunity to work with state-of-the-art tools to adequately prepare them for entry into the work force.

If you are able to help with these priorities, please contact myself or Josh Christianson. Our contact information is listed below. Your support is greatly appreciated.

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John D. Odegard School of Aerospace Sciences