



**NEWSLETTER  
TWIN CITIES CHAPTER  
AMERICAN METEOROLOGICAL  
SOCIETY  
April, 2007 Vol. 28 No. 8**



**The April meeting of the Twin Cities Chapter of the AMS will be at 7 PM Friday, April 20th, 2007 Twin Cities WFO, Chanhassen, MN Specific directions to the meeting can be found on page 5. AMS chapter members, interested acquaintances and potential members are invited to attend.**

**Please note: Meeting is on FRIDAY, APRIL 20<sup>th</sup>**



***Topic: Sensitivity of Short Range Numerical Weather Prediction to Data Availability during the North American Monsoon Experiment (NAME).***

***Speaker: John R. Wetenkamp***

Using the Fifth-Generation NCAR / Penn State Mesoscale Model (MM5), John will discuss his investigation of the impact of reduced data integration into Numerical Weather Prediction (NWP) models. The North American Monsoon Experiment (NAME) during August 2004 provided an extensive data set that was used in conducting several MM5 simulations.

Since integrating vast amounts of data into such a model requires extensive computational resources and time, data reduction techniques can be applied to fast and limited computing applications such as incident forecasting. John's talk discusses how data reduction can be applied to a locally run NWP model and still achieve results that are operationally useful. This has applications for local modeling efforts where only a single computer may be available to run the model.

"In our simulation with degraded vertical resolution and observations, the use of one radiosonde within a domain versus none produces little difference in the placement, intensity and timing of convection. In addition, the degraded simulation predicted more convective precipitation than the operational forecast simulation during a mesoscale convective system event. Differences also arise in the model forecasts of U and V wind components. Under the same conditions, the simulation with vertically degraded initial conditions develops substantial differences in U and V in the upper layers of the model that persist throughout the simulation."

**John Wetenkamp** is originally from Long Lake, WI, a small town in the far northeastern part of the state. He graduated from Florence High School in Florence, WI in May of 2001 and attended Northland College in Ashland, WI in September of 2001 to pursue a B.S. in Meteorology and a Minor in Physics. He graduated from Northland College in May of 2005. In August of 2005, he moved to Rapid City, SD and attended South Dakota School of Mines and Technology to pursue a M.S. degree in Meteorology.

Currently he is finishing his M.S. degree in Meteorology and working at the National Weather Service in Rapid City, SD under the SCEP program. He plans to become a forecaster for the National Weather Service upon completion of his M.S. degree.

He worked volunteer positions at the Marquette, MI National Weather Service as well as the Rapid City, SD National Weather Service. He is a member of the American Meteorological Society and serves as an officer for the local Black Hills American Meteorological Society Chapter. In addition, he has worked as

a Wildland Firefighter for the U.S. Forest Service and the Wisconsin Department of Natural Resources. He is also an Amateur Radio operator.

In his spare time, he enjoys snowmobile racing, ice fishing, summer fishing, hunting, storm chasing and photography.



### *President's Corner: Chris Bovitz* President's Corner

Hi, there. Well, I see that spring is living up to its reputation as a season of change. That's fine. It keeps things interesting. And it made the apropos topic of last month's presentation even more relevant and timely. You don't know what you're missing by missing the meetings!

As I mentioned last time, think of ideas for the chapter that you can bring to the May meeting. Also, if you have any ideas for people to speak to at our meetings, please let us know by e-mailing the Speakers and Activities Committee ([speakers@twincitiesams.org](mailto:speakers@twincitiesams.org)) or clicking on "Speaker Survey" at our web site.

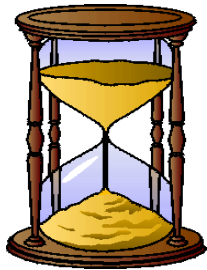
At the last meeting, it was decided to expand the role of the Speakers and Activities Committee from finding meeting speakers to include fielding requests for speakers from other groups. There's more on that later in the newsletter.

### *Movin' On, Movin' Up, Movin' Out*

If you have any professional or personal news you would like to share with the chapter, e-mail Kurt at [newsletter@twincitiesams.org](mailto:newsletter@twincitiesams.org).

### *Tome Time*

Send your reviews to Kurt at [newsletter@twincitiesams.org](mailto:newsletter@twincitiesams.org).



### *A Look at Weather History: Lightning Statistics*

Anthony Stender

Minnesota's most famous lightning fatality is likely the death of Billy Fadell on June 13, 1991. He was one of approximately 40,000 fans watching the U.S. Open Golf Championship at Hazeltine Golf Club in Chaska. When the skies darkened due to a fast-approaching cold front, he and five other spectators ran to a nearby willow tree for cover. Another spectator who survived the incident said that they ran to that particular tree, because it was shorter than the neighboring oak trees. However, when lightning struck, it hit that lone willow tree, knocking down the six men standing underneath it and killing Billy Fadell.

During the period of 1990 – 2003, Minnesota saw a total of 8 fatalities from lightning, which is less than one death per year. That number is down only slightly from the period of 1959 – 1994 when 53 people in Minnesota died from lightning. Over that same 35-year period, 116 injuries were reported from lightning strikes. However, it is believed that injuries due to lightning strikes are underreported, so this number was probably higher. These numbers may lead some people to think that their odds of being struck by lightning are rather low. But actually, for someone who lives to 80 years of age, the odds of being struck by lightning are 1 in 5000.

Trends suggest that in the northern plains, lightning occurs most frequently from June through August. Lightning rarely occurs from November through February, but it is not impossible during that period. Most lightning strikes between noon and six p.m. People also tend to be struck by lightning more

frequently on weekends than on weekdays, since people tend to spend more time outside on the weekends. Nationally, 41 % of incidents with lightning from 1959 – 1994 involved people who were either out in the open or under a tree. And in 1997, lightning accounted for over \$125 Billion in damages to computers from 101,000 reported incidents. Speaking as someone who was typing away on a computer during a minor electrical storm – don't do it. Lightning struck a tree next to the house and went through the phone line to my computer. Fortunately, my computer was resuscitated, but I had the scare of a lifetime.

Lightning is fascinating to watch, especially after being cooped up for six months of winter. But don't become a statistic this season, and when you see dangerous weather approaching, warn those who may not be as wary to the dangers of lightning.

Sources:

Kindred, Dave, "The Day Tragedy Struck at Hazeltine - lightning accident at Hazeltine National Golf Club, site of this year's U.S. Open", Golf Digest, Aug. 2002.

Curran, Holle, & Lopez: 1997, Lightning Fatalities, Injuries and Damage Reports in the United States, 1959-1994, NOAA Tech. Memo. No. NWS SR-193, October 1997.

<http://www.lightningsafety.com/index.html>

[http://www.lightningsafety.com/nlsi\\_lls/35\\_years\\_injuries.html](http://www.lightningsafety.com/nlsi_lls/35_years_injuries.html)

Thank you to the Climatology Working Group for posting Twin Cities climate data online at:

[http://climate.umn.edu/doc/twin\\_cities/twin\\_cities.htm](http://climate.umn.edu/doc/twin_cities/twin_cities.htm)



### ***Minutes of the March 20, 2007, meeting Submitted by Lori Bovitz***

The March 2007 meeting of the Twin Cities chapter of the American Meteorological Society was held on March 20, 2007. The meeting was called to order at 7:00 p.m. by President Chris Bovitz. Secretary/Treasurer Lori Bovitz was also in attendance. About 20 members and potential members were also present including nearly a dozen who traveled to the meeting from St Cloud State University.

The secretary and treasurer reports were read and approved.

Old business focused on the following:

- Science fair season is in full swing. Two events have already occurred while two more are coming up. Contact Karen Trammell if you are willing to judge at one of the science fairs. For judges, please report your results at the web site. This way awards can be provided and the results can be included in our annual report.
- Weather radios will be provided as prizes for the science fairs. Several radios have been purchased and will be distributed to the students.
- Progress is being made in the effort to get non-profit status for the chapter.
- The next meeting will be on a Friday and will include a presentation by John Wettenkamp of the WFO in Rapid City on Weather Prediction Models during the North American Monsoon Experiment.
- There was also a reminder that there will be no group event for the Tim Samaras presentation at the Pantages Theater however, members are encouraged to attend if they desire.

Upcoming Events:

- April 12: National Geographic LIVE! 7:30 p.m. Location: Pantages Theater. Presenter: Tim Samaras.
- April 20: Monthly meeting, 7:00 p.m. Location: TBD. Presenter: John Wettenkamp. Topic: Sensitivity of Short Range Numerical Weather Prediction to Data Availability during the North American Monsoon Experiment (NAME).

- April 20-21: Minnesota Academy of Science. Annual Meeting and Undergraduate Symposium. Hamline University

Reminder:

- A speaker survey was provided to the membership. This survey asked the membership about topics and speakers that are of interest to them. The survey is also available on the chapter Web site at [www.twincitiesams.org](http://www.twincitiesams.org).

After the meeting, Steve Buan described information about determining spring flood outlooks and water management. He first described the recent situation with flooding as a result of ice jams in Browns Valley and south of Dawson, MN. He then described a project currently underway to provide water management information to Minnesota Power for Island Lake on the Cloquet River near Duluth.

The Browns Valley flood was unique as it occurred along a continental divide. The unique geography in the area, along with the rapid melt resulted in flooding coming into the city from the north. Steve also described the factors needed for a spring flood and how three of the five factors came into play in Minnesota this year. The five factors considered include: a wet fall, deep frost depth, significant winter snow, rapid melt, and heavy precipitation during the melt. This year there was a very deep frost depth (almost four feet in places), rapid melt, and heavy snow in late February and early March. This resulted in the sudden flooding in parts of the state.

Steve also described a project in which he currently involved. In this project, he helps the DNR provide Minnesota Power information to help them run the Island Lake reservoir in northeastern Minnesota. A delicate balance needs to be kept so that the power company can get the best electricity generation while keeping the lake levels high enough for recreational uses by landowners. Steve is helping to provide forecasts based on current conditions and the ensemble forecasts to help the power company to make decisions on how much water to draw down during the electricity generation period during the spring.

After the presentation, Jonathan Cohen provided the results of the Twin Cities Regional Science Fair. Two certificates were awarded and one weather radio should be awarded.

A discussion of the role of the Speaker Committee was discussed. The Speaker Committee will be expanded to also handle requests we receive from the community for speakers. A list of those interested in speaking and their areas of expertise will be compiled and when requests come in, those interested will be contacted. So far, the requests have been mainly from elementary and middle schools. A request form will also be added to the web site so that we can get consistent information about the speaker requests.

### *Upcoming AMS Chapter Meetings and Other Events*

<b>Date &amp; Time</b>	<b>Event</b>	<b>Location</b>
April 12, 2007 7:30pm	National Geographic LIVE! <a href="#">Tim Samaras: Severe Storms Researcher</a>	Pantages Theater Minneapolis, MN
April 14, 2007	<a href="#">Minnesota Skywarn Workshop</a>	Discovery Center (at the public school district building) Buffalo, MN <a href="#">(map)</a>
April 20 7:00pm	April meeting: John Wettenkamp, NWS Rapid City Topic: Sensitivity of Short Range Numerical Weather Prediction to Data Availability during the North American Monsoon Experiment (NAME)	<a href="#">Twin Cities WFO</a> Chanhassen, MN <a href="#">(map)</a>
April 20-21, 2007	<a href="#">Minnesota Academy of Science</a>	<a href="#">Hamline University</a>



Twin Cities Chapter AMS  
c/o Kurt Scholz  
3233 Snelling Ave. North  
Arden Hills MN 55112-3644

