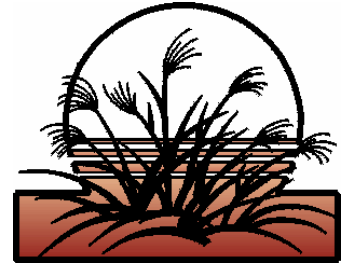




**NEWSLETTER
TWIN CITIES CHAPTER
AMERICAN METEOROLOGICAL
SOCIETY
April, 2006 Vol. 27 No. 7**



There will be two April meetings of the Twin Cities Chapter of the AMS: at 7 PM Tues, April 11 at St. Cloud State University and at 7 PM Friday, April 28 at the Drover's Inn, South St. Paul. Specific directions to the meetings can be found on pages 4 and 5. AMS chapter members, interested acquaintances and potential members are invited to attend.

Again: Note there are TWO meetings scheduled for this month!!

**ST. CLOUD STATE
UNIVERSITY**



April 11: Tour of the Meteorology Department of St. Cloud State University and Student Research Presentations.

Hosts: Greg Nastrom, Tony Hansen

St. Cloud State University is home to the only 4-year meteorology degree program in Minnesota. The program has been in existence for just over 15 years. Currently, the department houses a computer weather laboratory used for weather forecasting, a WSR-74C 5-cm radar, and also uses traditional as well as high-tech classrooms for teaching.

Meteorology is part of the Earth Science department, which has 7 full time faculty, and 2 fixed term faculty. Of these, 5 teach meteorology, 2 teach hydrology, and 2 teach geology. There are about 10 graduating senior meteorology majors each year, with hundreds of non-majors taking meteorology, hydrology, and geology courses each semester. The evening will begin with a tour of the department facilities, followed by two student presentations, covering their senior thesis research:

Jimmy Peterson, "A Limited Climatology of Capping Inversions in the Northern Plains"

Anthony Dunkel, "MOS Verification for the Winter 2005-2006 Season in Illinois and Minnesota"

April 28: Featuring Tim Samaras, host of the National Geographic Storm Chaser series: Inside the Tornado



Although the speaker has confirmed his visit, severe weather may prevent his coming (in which case another speaker has agreed to step in), read on!

Storm chaser Tim Samaras, featured in the National Geographic's "Inside the Tornado" series, spends much of the spring and summer tracking down tornadoes. He travels over 35,000 miles each year in a van outfitted with GPS, radios, scanners, monitors, a wireless Internet connection, and satellite tracking instruments ("Mobile Threat Net", a product that can deliver radar and tornado warnings to your laptop). Putting himself in their path, he places his newly designed probes ("turtles") that measure meteorological conditions inside the vortex. Nicknamed because of its shape, the turtle is a 6-inch-high weather station encased in steel, with



sensors that measure humidity, pressure, temperature, wind speed, and direction. It can withstand winds over 200 miles per hour. "The tools I come up with have to take nearly impossible measurements. Data from the probes helps us understand tornado dynamics and how they form. With that piece of the puzzle we can make more precise forecasts and ultimately give people earlier warnings".

Tim says that "It all started when I was about six years old and saw that fantastic tornado in *The Wizard of Oz*". He has been storm chasing for over twenty years.

On June 24, 2003 in Manchester, South Dakota, his probe recorded a 100 millibar pressure drop during a series of tornado touchdowns. Taking a huge chance, he placed three probes in front of an oncoming half-mile-wide F4 tornado, with the last probe about a 100 yards ahead of it. Barely escaping to his van, he watched as the tornado crossed that exact spot, full force, sixty seconds later. Tim's recordings are particularly useful, because they provide data about the lowest 10 meters of a tornado.



Comments from our Chapter President: Rich Naistat

Thanks to Shelby for again ably filling in for me at our March meeting. I understand she is returning the favor by absenting herself from our April meeting. This year has been a fine example of why we need both a president, and vice-president.

Karen Trammell and I were judges at the SC/SW Regional Science Fair at MNSU, Mankato. I think we awarded a year's subscription to Weatherwise. I used the term "think" because so far the science fair coordinator has not gotten the winning student's parent's permission to divulge his address to me. So, unless we get an address, we have nowhere to send the magazine.

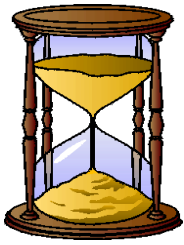
Michael from St. Hubert's in Chanhassen was the winning entry in the middle school environmental science division, insofar as Karen and I were concerned. His project found an inverse correlation between the mean wintertime temperatures in Corpus Christi, TX (closest observation point to Mexico Michael could find) and the population of monarch butterflies the following summer. We must say we were very impressed with his topic, methodology, and findings.

At the abbreviated April meeting (to be held at St. Cloud State), I'd like us to adopt (hopefully) the by-laws that our by-laws committee has done such a great job creating. Also, I'd like to encourage members to nominate officers for next year. I think our by-laws will exclude your current El Presidente from serving a third term. Those of you who know about my tennis passion will no doubt realize that, one way or another, I will continue to serve!

Leann Lombardo and I staffed the Meet a Meteorologist booth at the Children's Museum. We had quite a crowd. I'd forgotten how small the 6-month old to 18-month old crowd was. Thanks, again, to Lisa for doing such a great job organizing this.

Looking ahead to next year, when I will refer to myself as El Presidente Emeritus, I believe I have snagged a super speak for us. Pete Manousos, the Science and Operations Officer at the NWS' Hydrometeorological Prediction Center, has tentatively accepted my invitation to speak to the WFO staff on winter weather forecasting. He may also speak at a winter weather conference being organized by Professor Weisman at St. Cloud State University, as well as to our local AMS chapter. We have approved the use of our name (AMS) for co-hosting Professor Weisman's winter weather conference (tentatively set for late October, 2006).

I hope to see as many of you as possible at our meeting at St. Cloud State University later this month. Details of the meeting and possibly car pool arrangements are described elsewhere in this newsletter.



Minutes of the March Meeting - Chris Bovitz

The March 2006 Meeting of the Twin Cities American Meteorological Society was called to order at 7:30 p.m. at Big City Tavern in Roseville.

Our upcoming meetings were discussed. The next gathering will be on April 11 at St. Cloud State University. We have been invited to view student researchers in the science and engineering departments practice for their science colloquium. We are still working on a meeting on April 28 to hear Tim Samaras speak. Tim invented the "turtles" which have been placed in the path of tornadoes. His appearance is weather-dependent; i.e., if the weather is not stormy, he will be available.

Vice President Shelby Winiecki gave a report on the "Meet a Meteorologist" part of "The Magic School Bus Kicks up a Storm" exhibit at the Minnesota Children's Museum in St. Paul. The kids had a variety of questions, but the most common theme was about tornadoes.

President Rich Naistat (not present) received a request for the Twin Cities AMS to co-sponsor the Northern Plains Winter Weather Conference in October at St. Cloud State University. The attending membership felt this was a good idea.

Member Jonathan Cohen related his experience judging at a recent Twin Cities science fair. He tried to give two awards in each of the three regions, and he discovered that there was a better variety of meteorologically-oriented exhibits at the junior-high level, which is probably because meteorology is studied at the junior high level and not the senior high level. He gave out five awards.

Member Doug Dokken mentioned Science Madness at the Science Museum of Minnesota on March 31 through April 1. He will be staffing an exhibit there showing archived radar data and numerical simulations on Saturday from 10 a.m. to 4 p.m.

The speaker for the evening, Kyle Peterson of WineHaven Winery, commenced his presentation. His is a small, but growing, family winery near Chisago City, Minnesota, which had been producing wines commercially for about ten years. He spoke primarily of the challenge of growing wines in a northern, continental climate, and inferred the importance of understanding the microclimates which occur in their vineyards. The grapes they use are a hybrid of *vitis vinifera* grapes and a grape species common in Minnesota, which gives the grapes a hardier nature, which can withstand a winter with temperatures to -15°F. They like lots of snowfall to create insulation for the ground. Instead of bending over the vines and covering them with straw for the winter, which can cause cracking in the trunks and pests nesting near the vines, they just let the vines stay out in the winter cold. Also, some of their stock is made with honey, so if they have a bad grape year, at least they will have mead. They also produce wines made out of rhubarb, raspberries, and cranberries, all from local growers. This gives them a little more freedom to experiment than other wineries.

They recently opened a new section of their land for grape growing, an area was sloped and which had a pond at the bottom. They noticed that in this area, which faced south, first frost occurred one to two weeks later there than did in the rest of the vineyard. Also, they noticed that if they cleared the vines from the bottom of the plants, it allowed cool air to drain better through the vineyard.

Kyle spoke about growing grapes in general, such as how red wines do better when the grapes grow in warmer climates, and how the taste of a wine seems to be influenced by the other fruit plants which grow in that region; for example, wines made from the New York varieties of grapes often have an apple or pear taste.

For a winery in Minnesota, WineHaven has collected 80 medals, 5 of them gold, and 23 of them last year including two best of shows. In 2005, it was the most-decorated winery between the Rockies and Appalachians.

After a few more questions about wine aging, tasting, and general winemaking, the meeting ended about 9:00 p.m.



Editor's notes - Kurt Scholz

Car-Pooling to St. Cloud: If you wish join a car-pool to the St. Cloud meeting, please meet in the Maple Grove parking lot at or before 6:00 pm by Cub Foods. Send an email, carpool@twincitiesams.org if you're coming.

I am especially looking forward to the April 28 meeting featuring Tim Samaras.

Here's hoping he will be able to make it.

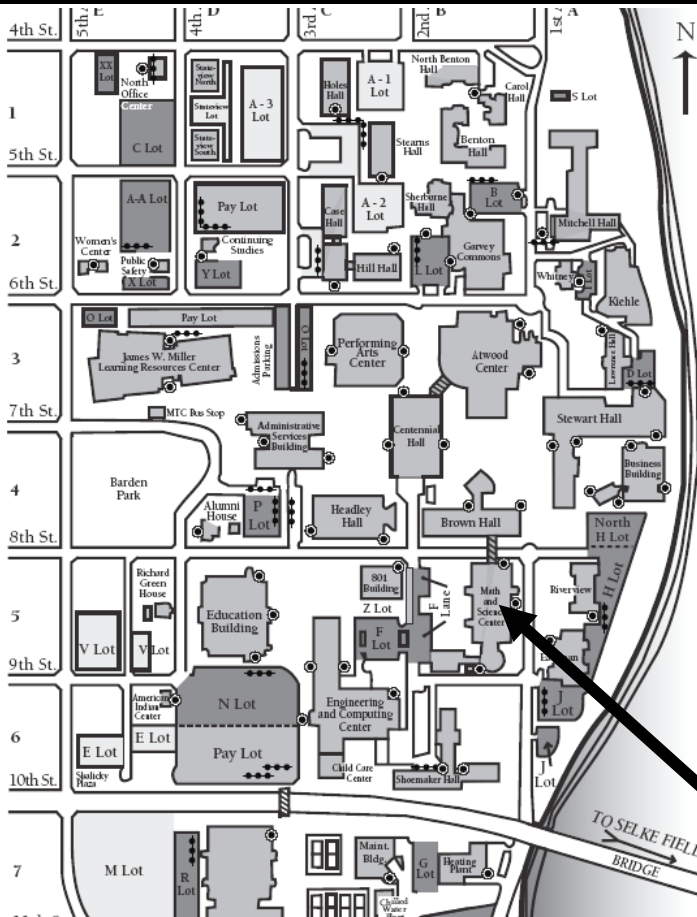
Nobody's mentioned this yet, but at the March meeting, we polished off three bottles of WineHaven wine, which Kyle Peterson thoughtfully provided. My favorite was the raspberry.



Doug Dokken and I set up an AMS chapter exhibit for the "Science Madness" program at the Science Museum of Minnesota on Saturday, April 1. Curiously enough, one of our exhibits was a demonstration of the "Mobile Threat Net", a mobile storm tracking system (Baron Services, Inc) which can be displayed on your laptop that Tim Savaras uses in his storm chasing. A truly remarkable product, it provides nearly every weather parameter, high-resolution nationwide NEXRAD, all storm attributes, lightning strikes, winds etc.

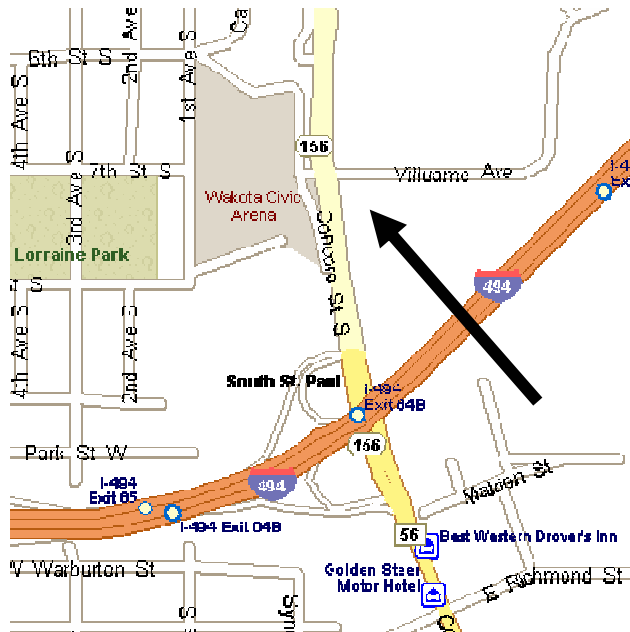
There were a lot of visitors with a lot of questions and we had a great time. I put in some time, while Doug was there from 10:00 am to 4:00 pm.

Reminder: The April meeting will be held at 7pm, on Tuesday April 11 at St. Cloud State University. The meeting will take place in the Wick Science Building (formerly the Math and Science Building).



Directions: Take Interstate Highway **94** northwest to the **St. Augusta** exit (#171). This is the first of three exits to St. Cloud, and also has a sign indicating that it is the exit for St. Cloud State University. Turn right at the off ramp stop sign, and continue on past the first stoplight that you see (the McStop). A mile down the road (**County Road 75**, which is a double-lane divided highway) you will see your second stop light. Turn right at the stoplight onto **Clearwater Road**. Take Clearwater Road north about 2 miles to **10th Street**, and turn right. There will be a Conoco station at that intersection. Then, take a left at the first stoplight onto **5th Avenue**. Go two blocks to **8th Street**, and take a right at the 4-way stop sign. You will see the Wick Science Building (**Math and Science Building**), with a radar on top of it, a couple blocks ahead on the right. **F-lot**, where you may be able to park in the evening. If it is full, you may have to park in the N-lot (see campus map). The Earth Science Department is located in the basement of the Wick Science Building (Math and Science building). Enter through the southwest door and proceed downstairs. The meeting will be in Room 21.

Reminder: The April 28 meeting will be held at 7pm, on Friday April 28 at the South St Paul Hotel & Conference Center in the Drover's Inn



Directions

Take I-494 to exit 64-B Concord Street. Turn left on Concord. The hotel is located on the right hand side on the corner of Concord and Villaume.



AMS is back on the web!

Visit our bare-bones website at <http://twincitiesams.org>.

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

