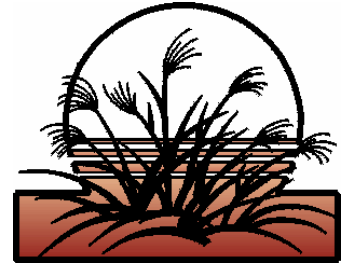




**NEWSLETTER  
TWIN CITIES CHAPTER  
AMERICAN METEOROLOGICAL  
SOCIETY  
May, 2006 Vol. 27 No. 8**



**The May meeting of the Twin Cities Chapter of the AMS will be at 7 PM Tues, May 23 at The National Weather Service Office in Chanhassen. Specific directions to the meeting can be found on page 3. AMS chapter members, interested acquaintances and potential members are invited to attend.**



***Annual Picnic in the Backyard of the WFO in Chanhassen!!  
7 p.m. Tuesday May 23***

We're wrapping up another season with our traditional picnic. Cost is \$12 per person (children \$6). You can pay when you arrive but be sure to RSVP by May 21 to [Rich.Naistat@noaa.gov](mailto:Rich.Naistat@noaa.gov); and be sure to include AMS in the subject line. Rich has the complete instructions in his comments below. One of the important orders of business is the election of chapter officers – if you want to run or nominate someone, be sure to let us know. Included in this newsletter is a draft of the Twin Cities Chapter of the AMS Constitution. Please read it and send us any comments. We will be voting on its adoption.

***Comments from our Chapter President Rich Naistat***

We had a very informative April meeting, featuring noted storm chaser/researcher Tim Samaras. The talk itself was great; the attendance left a bit to be desired. I think we will chalk this up to “lessons learned” when we try to bring in another noted speaker sometime next year. The biggest lesson learned was needing to do more promotion in a more timely matter.

I'll be filling out the “Chapter of the Year” award shortly. I know we had a great mix of meetings and outreach activities. It was certainly a year of growth.

Our next meeting will be held at 7 PM, Tuesday, May 23, 2006 at the NWS office in Chanhassen. The agenda will be

- 1) holding a picnic in the back yard of the WFO beginning at 7 PM;
- 2) during the picnic we will conduct an informal discussion of what worked this year, what didn't, what other ideas do people have;
- 3) at 7:45 PM we will hold chapter elections and vote on the bylaws;
- 4) at 8:00 PM our mystery speaker will speak to us in the WFO conference room.

I will be out of town for much of the time over the next couple of weeks. However, I will be collecting RSVPs from those who plan to picnic with us. RSVP to [Rich.Naistat@noaa.gov](mailto:Rich.Naistat@noaa.gov) by May 21, 2006. Be sure to include AMS in the subject line.

Cost will be \$12.00 per adult, and \$6.00 per child. The food and drink will likely be from Subway – but that is subject to change. Pay at the meeting.

If you want to run for office, please notify [officers@twincitiesams.org](mailto:officers@twincitiesams.org) or simply come to the meeting on May 23<sup>rd</sup> and announce your candidacy. New leadership providing fresh ideas is always a good idea.

I want to thank Jonathan Cohen for all the hard work he did in planning our end-of-year banquet, which ended up being a non-event. However, I am strongly encouraging the new officers (which may include me) to plan on our first event of the year to be a banquet. No doubt we will give Jonathan plenty of time to work out the details – unlike what happened this time.

Again, I want to thank Shelby, Chris, and Kurt for all the support they provided during the year. And, a special thanks to Kevin and his committee in coming up with meeting topics and locations. This was a huge help to me, and allowed me to focus on puns.



Fortunately, one of my co-workers has provided me with puns for any occasion. So, in my final comments for this year I leave you with this one.

A woman has twins and gives them up for adoption. One of them goes to a family in Egypt and is named "Ahmal." The other goes to a family in Spain; they name him "Juan." Years later, Juan sends a picture of himself to his birth mother. Upon receiving the picture, she tells her husband that she wishes she also had a picture of Ahmal. Her husband responds, "They're twins! If you've seen Juan, you've seen Ahmal."

## **Twin Cities Chapter of the AMS Constitution – Draft 1**

### **Article 1: Name**

This chapter shall be known as the Twin Cities Chapter of the American Meteorological Society. Hereafter will be referred to the Chapter. The American Meteorological Society shall hereafter be referred to as the National Chapter.

### **Article 2: Chapter Objectives and Constitution**

The Chapter shall strive to enrich and support the local population of students with an interest in Meteorology and the Atmospheric Sciences, professionals in the field, and interested individuals from the community. The Chapter will provide community with a social and scientific point of contact for meteorological, hydrological, and other related scientific disciplines.

This document will be maintained in hardcopy form in the possession of each of the Officers of the Chapter in addition to any Amendments that may be passed in the future. It will also be available on the Internet on the Chapter Website along with any future Amendments.

### **Article 3: Membership**

**Chapter Members shall come in two flavors, Members and Student Members.**

**Membership in the Chapter is open to anyone in any related fields that further the objectives of the Chapter.**

**All individuals who have paid their dues and agree to abide by the directions and by-laws that are laid forth herein will be considered Members. Members are entitled to vote in all Chapter elections and on pertinent Chapter business and are also permitted to hold Office in the Chapter.**

**Student Members of this Chapter shall consist of dues paying individuals considered to be at least half-time students at any level of attainment. Student Members are entitled to vote in all Chapter elections and on pertinent Chapter business but are not permitted to hold Office in the Chapter.**

### **Article 4: Affiliation**

**This Chapter is an autonomous Chapter of the American Meteorological Society.**

## **Article 5: Officers**

Elected Officers of the Chapter must be Members in good standing and shall consist of a President, Vice President, Secretary-Treasurer, and Newsletter Editor. The Chapter Officers will be decided by yearly elections.

The Chapter President must be a member in good standing of the National Chapter.

Any Officer who has displayed actions or activities that are in contradiction of the Chapter objectives or any Officer who is found to have conducted themselves in an untoward fashion may be removed by a process of Impeachment. Impeachment will be conducted by an Election by Secret Ballot and conducted by a majority of the members in attendance at the meeting when the Impeachment vote will take place.

## **Article 6: Committees**

The collection of Officers of the Chapter shall make up the complement of the Executive Committee and are responsible for the successful execution of Chapter business.

The Speakers and Activities Committee shall be responsible for arranging locations for meetings, Chapter activities, and scheduling individuals who will speak at the monthly Chapter meetings. This Committee will also be responsible for any special events and activities that may arise. The Vice-President of the Chapter will be a member of this Committee.

Additional committees can be created at anytime by a majority vote of the membership in attendance at the meeting when a committee has been discussed for the purpose of organizing a group of Members who shall work toward a specific goal as laid out at that same meeting. Any Committee created in this fashion shall exist until the next annual Elections where a vote to Amend this Constitution will be taken to determine whether or not the Committee will be made permanent.

## **Article 7: Dues**

Dues will be assessed by a majority vote of the Membership at the annual elections.

## **Article 8: Meetings**

Meetings of the Chapter will be held once a month starting in September and carrying through into the next May.

Additional meetings may be added as necessary to accommodate special functions or speakers as ascertained by the Speakers and Activities Committee.

## **Article 9: Elections**

Yearly Elections will occur in May for the following Chapter Year as defined as the time period of September through May.

Voting will be conducted by a show of hands of the Membership in attendance. For election of Chapter Officers and execution of Chapter business the vote will be determined by a majority vote with the exception of Impeachment votes.

## **Article 11: Parliamentary Authority**

President will preside as the Chairperson for all chapter meetings and will have the authority to appoint Committees to act upon chapter interests as deemed necessary and oversee the goals of the active Membership. The Vice-President will serve as Chairperson in the absence of the President and oversee all appointed and standing Committees.

Secretary-Treasurer serves as the administrative focal point for all Chapter activities, duties to include keeping a listing of current Membership, minutes of meetings, provide accurate financial records, and to advise the National Chapter as to Chapter activities.

Newsletter Editor will be responsible for publishing a monthly account of Chapter activities in both electronic and hardcopy form.

## **Article 12: Non-Profit Organization**

This Chapter will organize and operate exclusively as a non-profit entity, and no portions of its earnings and recognition shall be used to the benefit of any individual who is a member.

## **Article 13: Dissolution**

Upon Dissolution or Dismemberment of this organization the funds that are held in account in excess of liabilities and expenditures incurred prior to, will be dispersed as agreed upon by a majority vote of the Membership.

In the event of Dissolution the National Chapter will be advised of actions taken to dissolve this Chapter by the presiding President at Dissolution.

#### Article 14: Amendments

This Constitution may be amended in whole or in part at any time by a 3 /4 majority vote by the Membership in attendance.

Any proposed Amendment must be tabled until the next scheduled monthly meeting before a vote may be taken and the Amendment must be published in full in the Newsletter one month prior to any vote being taken.

Any Amendment to this Constitution must be included as an additional document at the end of this Constitution.

#### Article 15: Adoption

This Constitution shall become effective upon adoption by it's membership on May \_\_ , 2006

### *Minutes of the Secretary-Treasurer - Chris Bovitz*

The Twin Cities Chapter of the American Meteorological Society held two meetings in April. The first was held at the meteorology department at St. Cloud State University on April 11. We provided an audience and some critique of a couple of senior projects: Jim Peterson investigated capping inversions in nocturnal thunderstorms. His motivation for his investigation was that the forecast for such events was too far south. Part of his methodology was Farrell and Carlson's 1989 Monthly Weather Review study which showed that these events was proportional to the lid strength, which is the equivalent potential temperature at the top of the inversion minus the surface wet bulb temperature. He looked for convective events which initiated near frontal inversions during his study period of June through August of 1998 through 2003. He wanted to show the events in the central Plains - Kansas and Nebraska - were more of a capped nature, while those in the northern Plains and Midwest - South Dakota and Iowa - were convective, and all were related to a critical lid strength, which depended upon region and which would be discovered by empirical evidence. Despite his investigation, possibly due to a limited number of good cases, that there really wasn't a trend or critical lid strength he could use.

The second presenter was Amber Metzker, who reported on her work last summer at the University of New York, University at Stony Brook. She studied the air-sea interaction off the Great South Bay (south side of Long Island, NY). She was looking for the dominant factors of sea surface temperatures in this area. Those who are curious as to the growth of hard clams (they stop growing between 6 deg C and 26 deg C) and by those interested in the brown tide were curious about her findings. Her data was gathered from her own sampling and was collected from nearby cooperative and synoptic sites. She focused on sensible heat flux, mainly due to the air-sea temperature difference. She was able to see a strong relationship between sea-skin temperatures and weather events. She did discover that the dominant factor in sea-surface temperature was sensible heat flux, but latent heat flux was also a major forcing mechanism.

After the presentations, there was mingling and discussion with some of the students and faculty.

The second meeting in April was held on April 28, and our speaker was Tim Samaras of Applied Research Associates. Tim presented some results of his research with his "turtles", devices of his own design created to investigate meteorological conditions - pressure, temperature, humidity, wind speed and direction - in the proximity of tornadoes. In five years of placing these devices in the paths of tornadoes, he has gotten five good sets of observations, one of them recording a pressure drop of 100 mb. He has a set of probes which can record a 360-degree view horizontally. Along with his pressure data, he has been able to compute wind speeds in the lowest few feet of a tornado, a previously unexplored region of a tornado. He then showed some videotape of some of his efforts. Then, he mentioned that his probes will be used in the upcoming field experiment VORTEX II, and in efforts to measure the thermodynamics of the rear-flank downdraft.

#### *Editor's notes*

We have two winners for the annual weather forecast. Each will receive a gift certificate.

1. *Total Snowfall for the season through May 1*, in inches and tenths

**Winner: Eric Wildgrube** - 45.3 inches. Actual: 44.4 inches (airport)



**Runner-up** (sorry only one prize): Therese Benkowski - 45.8 inches (+1.4 inches)

2. *Winter low temperature, Dec 21 – Mar 19:*

This one was not so easy. It took the tiebreaker question to determine the winner.

**Winner: Jim Block**

Initially, there was a four-way tie, each being off by only 1 degree. The actual low temperature was -13 F (Feb. 17 and 18). Lori Bovitz guessed -12F and Seth Binau, Jim Block and Bill Endersen guessed -14F.

The tiebreaker question was to guess the Winter high temperature Dec 21 – Mar 19. The actual high was 56 F (March 10). Here Jim Block emerged as the winner with his guess of 54 F. The other guesses were Bill Endersen: 53 F (-3F), Seth Binau: 51 F (-5 F) , Lori Bovitz: 50 F (-6 F),

NASA has invited us to receive their monthly *Space Place* column. Accompanied with high quality graphics, this column is offered (FREE!) to our organization for use in our newsletter (and/or on our web page). I've included one of their monthly articles.

### **“Space Weather**

By Patrick Barry and Tony Phillips

Radiation storms, 250 mile-per-second winds, charged particles raining down from magnetic tempests overhead . . . it sounds like the extreme weather of some alien world. But this bizarre weather happens right here at Earth.

Scientists call it "space weather." It occurs mostly within the gradual boundary between our atmosphere and interplanetary space, where the blast of particles and radiation streaming from the Sun plows into the protective bubble of Earth's magnetic field. But space weather can also descend to Earth's surface. Because the Earth's magnetic field envelops all of us, vibrations in this springy field caused by space weather reverberate in the room around you and within your body as much as at the edge of space far overhead.

In fact, one way to see these "geomagnetic storms" is to suspend a magnetized needle from a thin thread inside of a bottle. When solar storms buffet Earth's magnetic field, you'll see the needle move and swing. If you live at higher latitudes, you can see a more spectacular effect: the aurora borealis and the aurora australis. These colorful light shows happen when charged particles trapped in the outer bands of Earth's magnetic field get "shaken loose" and rain down on Earth's atmosphere.

And because a vibrating magnetic field will induce an electric current in a conductor, geomagnetic storms can have a less enjoyable effect: widespread power blackouts. Such a blackout happened in 1989 in Quebec, Canada, during a particularly strong geomagnetic storm. These storms can also induce currents in the metallic bodies of orbiting satellites, knocking the satellite out temporarily, and sometimes permanently.

Partly because of these adverse effects, scientists keep close tabs on the space weather forecast. The best way to do this is to watch the Sun. The NASA/ESA SOHO satellite and NOAA's fleet of GOES satellites keep a constant watch on the Sun's activity. If a "coronal hole"—where high-speed solar wind streams out from the Sun's surface—comes into view, it could mean that a strong gust of solar wind is on its way, along with the geomagnetic storms it will trigger. And an explosive ejection of hot plasma toward the Earth—called a "coronal mass ejection"—could mean danger for astronauts in orbit. The advancing front of ejected matter, moving much faster than the solar wind, will accelerate particles in its path to near the speed of light, spawning a radiation storm that can threaten astronauts' health.

Look for coming articles for more about space weather and about NOAA's efforts to forecast these celestial storms. Meanwhile, read today's space weather forecast at <http://www.sec.noaa.gov/>. Kids can learn about the geostationary orbits of the GOES satellites at

[http://www.spaceplace.nasa.gov/en/kids/goes/goes\\_poes\\_orbits.shtml](http://www.spaceplace.nasa.gov/en/kids/goes/goes_poes_orbits.shtml).

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.



### *AMS is back on the WWW*

The address for the Twin Cities Chapter of the AMS is: <http://www.twincitiesams.org>.

***Reminder: The May meeting will be held at 7pm, on Tuesday, May 23 at National Weather Service Office in Chanhassen.***

### **Directions**

Take Highway **494** to the exit for Minnesota **Highway 5** west in Eden Prairie. Travel west on highway 5 into Chanhassen. Turn **left** (south) at **Audubon Road**. Follow Audubon Road to **Lake Drive**, then turn **right** and follow Lake Drive to the NWS entrance, which will be on your left. The Nexrad radar tower will be visible as you approach the area. An alternative, if traffic is heavy and you want to avoid the Audubon turn off of highway 5, is to turn **left** at the light onto **Powers Boulevard**, and head south. You would then take the **first right** off of Powers Boulevard, onto **Park Road**, and follow it to Audubon Road, then turn **left** and head south to Lake Drive.

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

