



American Meteorological Society Wright Memorial Chapter

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In this newsletter:

- *Minutes from 25 April 2007 Meeting*
- *Summary from 11th Annual Ohio Severe Weather Symposium*
- *Letter from our President*
- *Calendar of Upcoming Events*
- *Forecast Contest*

If you are interested in joining the National AMS, check out the applications for National Membership at:

<http://www.ametsoc.org/emb/apps/index.html>

Membership in the National AMS is not required for membership in the Wright Memorial Chapter of the AMS. However, if you want to run for President, you will need to become a member of the National AMS.

Minutes from 25 April 2007 Meeting

AMS Wright Memorial Chapter meeting of 25 April 2007

Meeting of Chapter with Dr. Karen Kowalewsky, President.

La Rosa's, Beavercreek, OH.

Scientific Discussion

Dinner included an interesting discussion on the use of wind turbines in the production of electricity in wind farms.

Recent studies by Prof David Keith at the University of Calgary and others have shown that very large scale (on the order of 1000 km) wind turbine arrays can have appreciable global climate impacts, including warming or cooling on the order of 1 K. An example of a very recent study by Dr Keith and one of his students is highlighted in the Conference Notebook section of the March 2007 BAMS. This BAMS abstract indicated that large wind turbine arrays increase turbulence and mixing in the planetary boundary layer and extract energy from the large-scale wind field.

Dr. Fiorino speculated based on these findings that if such large wind turbine arrays were constructed throughout the US Great Plains, they could cause an increase in the nocturnal boundary layer height in the region. This, in turn, could have a dramatic effect on the strength of the low-level jet that often propagates through the Great Plains—which could affect thunderstorms and precipitation amounts in an agriculturally important region.

Nominations for 2007-08 Wright Memorial Chapter Officers

At least one of our officers has chosen not to seek office next year, so we are looking for at least one new officer. Please consider running for an office (your choice!) If interested in seeking a nomination, or if you have questions about any of the duties of any office, feel free to contact one of the current officers.

Attendees

Karen Kowalewsky, President
Kirk Lehneis
Jeff & Songyon Martin

Mary Bedrick, Secretary
Ron & Marylin Rodney
Steve & Nathan Fiorino

Photo Contest

Many thanks to those who submitted some fantastic photographs. For those of you that did not get around to it, there is always next year (or the next

news letter). Keep those photographs coming.

The winner

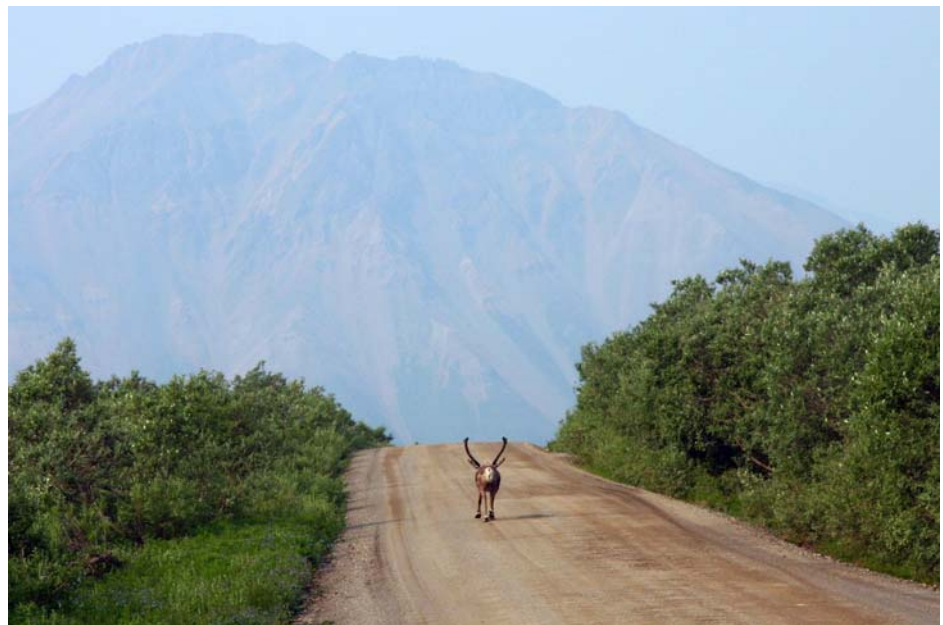
Hexagonal ice columns (ice needles were forming and falling out of the boundary layer. Refraction of sunlight produced stunning low-level example of 22° parhelia/sundogs. Air temperature was about -20°F . 25 December 1988 in Grand Forks, ND



- Dr. Steve Fiorino's photograph of 22° parhelia. Perhaps his detailed scientific figure caption swayed the votes... or his heavy campaigning at dinner.

2nd Place

Photograph taken in June 2005 in Alaska.



- Dr. Mike Abel's photograph. OK, he didn't submit it, and it isn't a weather photograph, but it is a FANTASTIC picture. I took it from his presentation on Alaska and entitled it "The End".

Honorable Mention

Not so long ago... Ice storm hit SW Ohio. Photograph taken 14 February 2007 outside home of our president, Karen Kowalewsky.



- Karen Kowalewsky – Ice Storm

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Cloud fall in the lee of the Mummy Range in Northern Colorado. June 2006. This image made picture of the month in our newsletter.



- George Schewe – Cloud fall in the lee of the Mummy Range in northern Colorado

Anyone who has ever tried to capture lightning on film can surely appreciate this image from Indiana.



- George Schewe – Lightning in Indiana

Summary from the 11th Annual Ohio Severe Weather Symposium

- By Greg Marx

I attended the 11th Annual Ohio Severe Weather Symposium on 13 April 07. The Ohio State University Meteorology Club and Geography Dept. organized a premiere line-up of outstanding presenters which this year extended beyond the confines of severe weather phenomena and sought to discern correlations to global climate change.

The opening presentation was given by none other than Dr. Jay Hobgood, Director of Atmospheric Sciences at Ohio State. His topic was "The Recent Increase in Atlantic Hurricanes". He stated that two of the major indicators for tropical cyclone activity are sea surface temperatures and upper level wind shear. Increasing the former and decreasing the latter will result in a significant increase of tropical cyclone formation. Two cycles to be considered in making long range tropical cyclone activity forecasts are El Niño and the Atlantic Multi-Decadal Oscillation. El Niño occurs roughly every ten years whereas the latter brings about a maximum roughly every 50 years. Research is ongoing as to how these two climatological cycles interact.

Dr. Bob Livezey, a climatologist at NWS Headquarters, gave an outstanding talk on "Climate Change and Recent and Future Trends of North American Climate and Weather". He stated that the typical climatological study is usually based on a database that is about 30 years old. Therefore, the initialization data for climatological studies in the U.S. today is derived from the 1970's. As it turns out, the late 1970's was characterized by extreme cold, particularly in the Midwest. Unfortunately, this creates a statistical bias. The only regions experiencing any significant warming in the U.S. are the Southwest and Upper Midwest. During the spring, the southeast U.S. has been experiencing long-term cooling during the spring. Most of the abnormal warmth is occurring during the winter months. As for precipitation, many areas have been experiencing wetter than normal conditions (particularly in the eastern U.S.).

The Ohio State Severe Weather Symposium is an annual event. Their Web Page is located at:

<http://geog-www.sbs.ohio-state.edu/metclub/>

John di Stefano, SOO at NWSFO, Wilmington, OH, discussed a radar analysis of a severe weather event which led to tornadic activity on 27 May 2004 in southwest OH. Storm splitting was occurring and a second series of severe thunderstorms formed along the outflow boundary of the “first wave”.

A meteorologist from the energy industry gave the next talk. Peter Manousos, from First Energy, Akron, OH discussed how these meteorologists become involved in a number of different aspects of the field. Expertise in climatology enables a meteorologist to show how certain variables are related to dispersion and energy such as load estimates. Forecasts, such as temperatures, winds and severe weather are critical for planning by energy suppliers. Modeling is also involved in projecting future growth and expansion.

Mike Bettles, Weather Channel meteorologist, discussed “Media’s Role in Reporting Severe Weather”. He stated at the outset that Hurricane Katrina changed the mode for coverage of historic weather events. Neither residents, government, nor media were prepared for the aftermath of this hurricane. Better planning and more cautious approaches were needed. (Film crews were living in their vans during the coverage). FEMA now has their own communication crews. They are no longer relying on second-hand TV information.

Dr. Harold Brooks, National Severe Storms Laboratory, discussed the effect of climate change on severe weather development. Over the last 50 years, there has been a huge increase in hail and damaging winds. This may be due, in part, to the improved severe weather detection capabilities of Doppler weather radars. On average, as global warming increases, CAPE will increase (convective available potential energy), shear will decrease and gradients will decrease. These trends tend to offset each other, therefore findings are inconclusive.

The final presentation, by Dan McCarthy—Warning Coordination Meteorologist—Storm Prediction Center, was about the new EF (Enhanced Fujita) Scale. There was a general consensus among meteorologists that the F-scale of the 1970s had its shortcomings. Many of the definitions were based on damage to a single structure. Therefore an improved scale was developed by an expert panel of structural engineers and meteorologists. This took into account more damage indicators—now looked on effects on schools, professional buildings, towers/poles, etc. as well as scour marks on vegetation. The new EF scale went into effect on February, 2007. It is anticipated that it will provide a far more accurate correlation of wind speeds and damage patterns!

Letter from our President

The meeting late last month was fun and the submitted pictures for the first annual photo contest were fantastic. However, it is that time of year again – Chapter Officer Nominations. This time though, we are in a bind and the outcome of the current situation will affect how the Chapter will progress over the next few years. The current situation is this: The Chapter Constitution basically states that a person can hold the same office for only ***two*** consecutive years. This means that the current set of Chapter Officers can no longer serve another year in their current office. A couple of us are open to serve another year in a different office, but it would be a good thing for the life of the Chapter to see some new names and faces in officer positions. Change is a good thing, keeps things active. Please seriously consider volunteering (self-nomination) or nominating someone as a Chapter Officer.

E-mail your suggestions
and comments to Karen
Kowalewsky at
kjkowal@verizon.net

To keep this Chapter going, we need to hold nominations and elections at the next meeting. If it helps with those sitting on the fence and considering volunteering, I will be more than glad to help you get situated and going. If you would like to volunteer/self-nominate of nominate someone, please send me an email at kjkowal@verizon.net. Please take this seriously.

I would also like to suggest the formation of an activities committee. This committee could help plan, schedule and guide the future of our club.

Over the past year I noticed that the attendance for the past few meetings has been low and I am trying to get to the reason why this is. Were the meeting times inconvenient? Was the day of the week the meetings were held inconvenient? Is meeting every month too frequent? Were the meeting topics/agenda lacking? I'm going to go out on a limb here and say yes to some or possibly all the above. This is your AMS Chapter, so for the future of the chapter I would like some feedback from Chapter members on the following:

1. Would chapter members prefer to meet:
 - a) Monthly
 - b) Every other month
 - c) Quarterly
2. Would chapter members prefer to meet:
 - a) Evenings (1800 or 1830)
 - b) Lunch (1100)
 - c) Other (Please Suggest)
3. What is the best day of the week to meet?
4. Does the chapter have too little or too many activities (i.e., TechFest, Science Fairs, School Demos, etc.)?
5. What kind of activities would you like to see the chapter pursue?
 - a) TechFest
 - b) Science Fairs
 - c) School Presentations
 - d) Sponsor conference with AFIT or OSU AMS Chapter
 - e) Other (Please Suggest)
6. What kind of meeting topics would you like to see at chapter meetings?
 - a) Visits to local TV stations
 - b) Visits to the NWS station in Wilmington
 - c) Visits/co-meetings with other organizations (i.e., Astronomy Clubs, Ham Radio, AeroClub, etc.)?
7. Any other suggestions?

Please consider these poll questions and possibly running for Chapter office. Please email me with your answers/thoughts at kjkowal@verizon.net. I would really like to see this AMS Chapter take off and grow. Thanks.

Calendar of Upcoming Events

May

May 2007 – AMS Meeting – TBA. Election of 2007-08 Wright Memorial Chapter Officers.

Forecast Contest

March Forecast Contest Results

April showers bring May flowers. The March forecasting contest had us predicting the number of calendar days in April that Wright-Patterson AFB had a trace or more precipitation and the total precipitation for the month. Average precipitation for April is 3.7 Inches.

	Precip days	PTS	Amount	PTS	SUM	Total points
ACTUAL	18		4.07			
Mary Bedrick	18	4	4.1	3	7	100
John Turnbull	12	1	4.08	4	5	75
Jeff Martin	15	2.5	3.9	2	4.5	50
Greg Marx	15	2.5	4.7	1	3.5	25

Year to Date Results

	NOV	DEC	FEB	MAR	TOTAL
Mary Bedrick	87	85	66	100	338
Kurt Lutz	35	100	100		235
John Turnbull	55	85	17	75	232
Greg Marx	74	70	33	25	202
Kirk Lehnies	100		83		183
Scott Hausman	55	55			110
Allison Schauer		55	48		103
Jeff Martin				50	50
Paul Gehred	22	25			47
Doug Kronk		40			40
William Nolte		25			25
Jamie Jarosik		10			10
George Schewe	9				9

AMS – Wright Memorial Chapter

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We're on the Web!

www.ametsoc.org/chapters/wrightmem/index.html