



# American Meteorological Society Wright Memorial Chapter

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## Minutes from 2 November 2006 Meeting



AMS Wright Memorial Chapter meeting of 2 November 2006

Meeting of Chapter with Dr. Karen Kowalewsky, President.

Fuddruckers –  
Beavercreek, Ohio

## Annual AMS Meeting

It appears that at least three of our members will be attending the Annual AMS meeting in San Antonio, TX this January. We plan on presenting another chapter poster since we have several members attending, who are willing to bring, set up

and take down a poster for the Wright Memorial Chapter. They have also agreed to represent our chapter at the Chapter Officers' Breakfast. The National AMS will be notified of our intent to display a poster and attend the breakfast meeting.

## National AMS Scholarship Review

We received a message from the AMS Development and Student Program Manager requesting assistance in announcing the 2007/2008 AMS/Industry Minority Scholarships. In addition to helping disseminate information about the scholarships, assistance in the initial screening of applications was requested for future years. Several members would participate in this endeavor, so we will notify the AMS Development and Student Program Manager of our intent.

The AMS/Industry scholarship program is entering its fifteenth year. The scholarship is intended to help support college education for minority students traditionally underrepresented in the sciences, especially Hispanic/Latino, American Indian/Alaska Native, Black/African American, and Native Hawaiian students, who intend to pursue careers in the atmospheric or related oceanic and hydrologic sciences. The two-year scholarships, funded by industry and through donations made by members to the AMS 21ST Century Campaign, are for \$3000 per year (second year funding

*If you have any suggestions for the chapter or this newsletter, please forward them to the Secretary, Mary Bedrick  
(mary.bedrick@wpafb.af.mil)*

## AMS – Wright Memorial Chapter

President:  
Karen Kowalewsky  
kjkowal@verizon.net

Vice President:  
Paul Gehred  
Paul\_a\_gehred@hotmail.com

Secretary:  
Mary Bedrick  
Mary.bedrick@wpafb.af.mil

Treasurer:  
Allison Schauer  
Allison.schauer@wpafb.af.mil

Web Master:  
John Turnbull  
John.turnbull@wpafb.af.mil

**We're on the Web!**  
[www.ametsoc.org/chapters/wrightmem/index.html](http://www.ametsoc.org/chapters/wrightmem/index.html)

Mark your calendars now for TechFest 2007. In order for the event to be a success we need you to help out. As a reminder it falls the weekend of President's Day.

depends on successful completion of the first academic year). Minority students who will be entering their freshman year of college in the fall of 2007 are eligible to apply.

Since the inception of the program, we have awarded the scholarships to over 100 outstanding students. A scholarship application form may be found on the AMS Web site at <http://www.ametsoc.org/amsstudentinfo/scholfeldocs/appminority2007.pdf>. Feel free to make additional copies for distribution.

## AMS Strategic Plan

We received a message from the Chair of the AMS Board on Outreach and Pre-college education and AMS E&O Strategic Planning subcommittee member requesting information to be used in creating a strategic plan for future AMS-wide education and outreach activities.

The chapter has been requested to:

- 1) Share the types of education and outreach your chapter is involved with at this time. This will help the committee understand the scope of what is currently being done.
- 2) Share information regarding either:
  - a) Recommendations about the type of support and/or resources that would help your chapter take your education and outreach to another level, or
  - b) Any information about ideas/resources that may have been developed within your chapter that have been well received and you think other chapters could benefit from them, we'd love to know about what those are as well!

We discussed several areas and ideas for educational outreach. Having both supported programs in local grade and high schools and the area TechFest for several years, we are sure we can provide some useful information. Several suggestions were also made to help others in educational outreach endeavors. The first being making plans and materials available to both other local chapters and school programs. The second idea was to have a recycling program between industry and education sources. Old equipment could be donated to local schools or chapters for use in meteorological education.

The chapter activities and ideas will be summarized and provided to the National AMS per their request.

## StormReady

The possibility of presenting the NWS StormReady program to either local communities or Wright Patterson AFB was discussed. There were many questions about the program that weren't answered by the program website. We decided to contact the local NWS representative to see if they would be able to present information about the program at a future meeting.

## TechFest 2007

We are composing a list of questions to be printed in a pamphlet to be distributed at TechFest this year. We will be splitting the list of questions between members to write up answers. Keep in mind, our audience is from the very young to the more mature and people with all sorts of educational backgrounds. Please contact either Mary Bedrick or Karen Kowalewsky with any questions.

Your dues go to pay for good stuff like prizes in local Science Fairs and our chapter poster at the Annual Meeting.

## Dues

Annual dues were collected (\$10/year).

## Attendees

Karen Kowalewsky, President  
Allison Schauer, Treasurer  
John Turnbull  
Scott Hausman  
Kirk Lehneis

Paul Gehred, Vice President  
Mary Bedrick, Secretary  
Bill Anderson  
Rick Clark  
Doug Kronk

## Future Meetings

The next meeting will be held at 6 pm on 7 December 2006 at El Rancho Grande, 3070 Colonel Glenn Hwy. Dr. Mike Abel will present a talk about his Alaskan trip last summer.

## Calendar of Upcoming Events

### December

- 1 December 2006 – Northeast Ohio Chapter of the American Meteorological Society Christmas get together – 7 pm - Stancato's Cafe of Richfield, OH (Summit County) – See article below
- 7 December 2006 – AMS Meeting – 6pm. El Rancho Grande, 3070 Col Glenn Highway, Fairborn, OH. <http://www.google.com/maps?ie=UTF8&oe=UTF-8&hl=en&q=El+Rancho+Grande,+Fairborn+OH&z=13&ll=39.766457,-84.061375&spn=0.090649,0.139732&om=1>

### January

- 11 January 2007 – AMS Meeting – 11:30. TBA
- 14-18 January 2007 – AMS Annual Meeting – San Antonio, TX

### February

- 8 February 2007 – AMS Meeting – 6pm. TBA
- 17-18 February 2007 – TechFest 2007 – Sinclair Ponitz Center, Dayton OH. <http://www.ascd Dayton.org/TechFest2007/Announcement.pdf>

### March

- 8 March 2007 – AMS Meeting – 11:30. TBA

### April

- 5 April 2007 – AMS Meeting – 6pm. TBA. Nominees for 2007-08 Wright Memorial Chapter Officers presented to membership.

### May

- 10 May 2007 – AMS Meeting – 11:30. TBA. Election of 2007-08 Wright Memorial Chapter Officers.

## From the National AMS

### Renewal of your Annual AMS Membership

The time has come to renew your member dues for the coming year. Renewal notices will be mailed shortly, but why wait when you can renew your dues and subscriptions online today? Our easy-to-use online renewal form is not only the quickest and safest way to renew your membership, it can also save you money. Renew online by November 30 and enjoy huge savings on dozens of AMS books, conference preprints, and CD-ROMs. Our online renewal form may be accessed from our Web site at:

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.

General Information and Details about the Annual Meeting can be found at <http://www.ametsoc.org/meet/annual/generalinfo.html>

<http://www.ametsoc.org/memb/renewal/index.cfm>

Visa, MasterCard, and American Express are accepted.

If you have any questions, please do not hesitate to contact Member Services by return email or by phone at 617-227-2425.

### AMS Annual Meeting

Everyone attending the 87th AMS Annual Meeting must register and wear a badge. Early registration rates are valid until **1 December 2006**.

Registrations forms that are faxed or mailed to AMS Headquarters will be accepted at the higher rate until **22 December 2006**. On-line registrations will be accepted through Tuesday, **16 January 2007**.

Confirmation of registration is sent once the form has been processed.

Refunds (less a \$25 processing fee) are granted only for **cancellations received before 29 December 2006**.

Registration information available at:

<http://www.ametsoc.org/meet/annual/registrationandrates.html>

### From the Northeast Ohio AMS Chapter

The holiday season is approaching and it is time to make plans for the Northeast Ohio Chapter of the American Meteorological Society (NEOCAMS) Christmas get-together.

NEOCAMS will meet for dinner at Stancato's Cafe of Richfield (Summit County). It is the old Richfield Tavern, a historical tavern. Dinner will be at 7 PM on Friday, December 1st. Stancato's Cafe advertises themselves as "casual fine dining". Casual business dress is appropriate. Entree's are mostly \$15 to \$20 (unless you want steak) and they have a "bar menu" that includes a variety of sandwiches priced for \$10 or less. There will be a 20% gratuity per check - each person/party will be responsible for the cost of their dinner.

Please let Jim Kosarik ([James.Kosarik@noaa.gov](mailto:James.Kosarik@noaa.gov)) know if you would like to attend.

Come and share in holiday spirit and come prepared to enter the NEOCAMS annual snowfall contest by guessing the amount of snow that will accumulate at Cleveland Hopkins Airport for the 2006-'07 season. There will be no other NEOCAMS business at the Christmas dinner. The next regular meeting will be in February.

Directions: Stancato's is in "downtown" Richfield. From the south or east take I-77 to the Wheatley Road exit (about 5 miles north of Fairlawn). Head west on Wheatley which turns into Broadview Road. Stancato's is on the left just past route 303 (only a few minutes from I-77).

If you are coming from the north or west it is probably easiest to take I-77 south to Wheatley Road (see above directions). You could also take I-71 south and head east on 303 to Broadview or simply take Broadview Road south. From the turnpike, get on I-77 south to Wheatley.

NEOCAMS on line:

<http://www.ametsoc.org/chapters/neohcams/neohcams.html>

See you in December!

Jim Kosarik - President (440-886-0914) Ronald Hahn - Vice President  
Brian Shell - Secretary Dick Vader - Treasurer

## Forecast Contest

### November 2006

We're sure this month's forecast contest won't be cancelled!

Your mission is to predict the high and low temperatures and maximum wind speed at Plymouth Massachusetts on Thanksgiving Day (November 23, 2006). Boston's Logan Airport will be used as a reference point.

See our website for more details (<http://www.ametsoc.org/chapters/wrightmem>) and the official form. Send your forecasts to John Turnbull via mail (799 Spinning Rd. Dayton OH 45431) or via email to [john.turnbull@wpafb.af.mil](mailto:john.turnbull@wpafb.af.mil) by **November 15, 2006**.

## Picture of the Month



Photograph by Katy Gehred. Foggy sunrise at Bowling Green University. 7 October 2006.

## More than a Pretty Picture

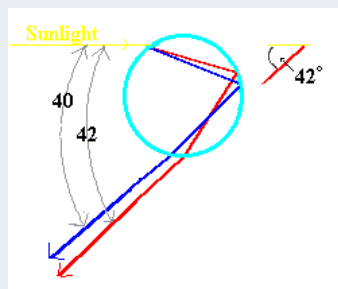
- by Mary Bedrick

My previous jobs have afforded me many many hours to observe atmospheric optical phenomena. I have gained a significant appreciation for not only their beauty, but the science behind the "pretty picture". As time permits, I would like to provide explanations for some of our more remarkable Pictures of the Month. This month, I will start with Paul Gehred's photo of a double rainbow.

Attention Shutterbugs -  
More pictures wanted for  
our Picture of the Month  
section. Send submissions  
to:  
[mary.bedrick@wpafb.af.mil](mailto:mary.bedrick@wpafb.af.mil)

Information for this piece came from:

- Dr. Warren Knapp's Atmospheric Physics class at Cornell University (SCAS 447) in 1990
- <http://www.atopics.co.uk/bows.htm>
- Robert Greenler's *Rainbows, Halos, and Glories* published by Cambridge University Press, 1980.



From:  
<http://eo.ucar.edu/rainbows/>

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Rainbows result from the refraction of sunlight through drops of water. René



Descartes was one of the first people to provide a scientific explanation for this event. His experiments led him to conclude that the bright (primary) bow is the result of sunlight undergoing one reflection inside a drop of water before emerging. The fainter secondary bow

was attributed to light rays undergoing two internal reflections before leaving the drop. It is possible to have more than two internal reflections within a drop, but higher order rainbows are not usually observed in nature.

Occasionally, people describe a triple rainbow, but this "third bow" is most likely a phenomenon known as supernumary arcs which occurs just within the primary bow. These are caused by the interference of light rays coming out of a drop after taking slightly different paths. Since the path length within the drop is slightly different, the rays will be slightly out of phase with each other acting to enhance or diminish light intensity producing the interference patterns of supernumary arcs.

The color of the rainbow was described by Isaac Newton. Newton understood white light to be a mixture of all colors of light. As white light travels through a clear substance with a different refractive index than air, red light gets refracted less than blue, and therefore, is separated into the spectrum of colors. This results in red on the outside of the primary bow and violet on the inside. The order of the colors is reversed in the secondary bow as there are two refractions within the drop.

The dark sky between the primary bow is caused by an absence of light due to light being reflected to the primary and secondary bows. Light undergoing a single reflection brightens the sky inside the primary bow, while those with two internal reflections brighten the sky outside the secondary bow. Drops along lines of sight between the two bows cannot send light to your eye giving the sky this dark band. Alexander of Aphrodisias first described this effect in 200 AD, which now bears his name as Alexander's Dark Band.

A complete rainbow is actually a full circle, which can be seen from an airplane. The earth cuts off the bottom part of the rainbow, leaving the familiar arc. The lower the sun's angle the larger the portion of the bow one sees. After the sun's angle is above  $42^\circ$ , the primary bow will no longer be visible. The secondary bow cannot be seen when the solar angle is above  $50^\circ$ .