



American Meteorological Society Wright Memorial Chapter

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Dr. Fiorino shows off our chapter web page, highlighting the different information found on the page.

Minutes from 19 September 2007 Meeting

Submitted by Paul Gehred, Secretary

AMS Wright Memorial Chapter meeting of 19 September 2007
Meeting of Chapter with Dr. Steve Fiorino, President.
Panera Bread, Beavercreek, OH.

Attendees

Dr. Steve Fiorino, President
Paul Gehred, Secretary
John and Dorothy Turnbull
Nick Scurman
Robb Randall
Ashley Brooks

Ron Rodney
Kevin Keefer
Mary Bedrick
Fred Meyer
Ken Cloys

Chapter Overview and Upcoming Year

Dr. Fiorino opened with remarks about our Chapter. He showed newcomers our webpages and also plugged our AMS monthly newsletter ... edited by Mary Bedrick. He also showed his award winning sun dog photo taken almost 19 years ago, which was our chapter's photo contest winner last year and even made it to 3rd place in Weatherwise magazine. Dr. Fiorino talked about our annual participation at the Techfest at Sinclair Community College and perhaps running a relay for the AF Marathon next year or supporting the marathon with other volunteer activities. We would also like to attend the Ohio State University sponsored Ohio Severe Weather Symposium in the spring, and perhaps, get involved more deeply with the Ohio State students and faculty. We'd like to get Dr Lonnie Tomson an ice core expert, famous for his Mt Kilimanjaro ice cover photos.



Future Meeting Times

We discussed meeting times, and we will shoot for at least two lunch dates.

Forecast Contest

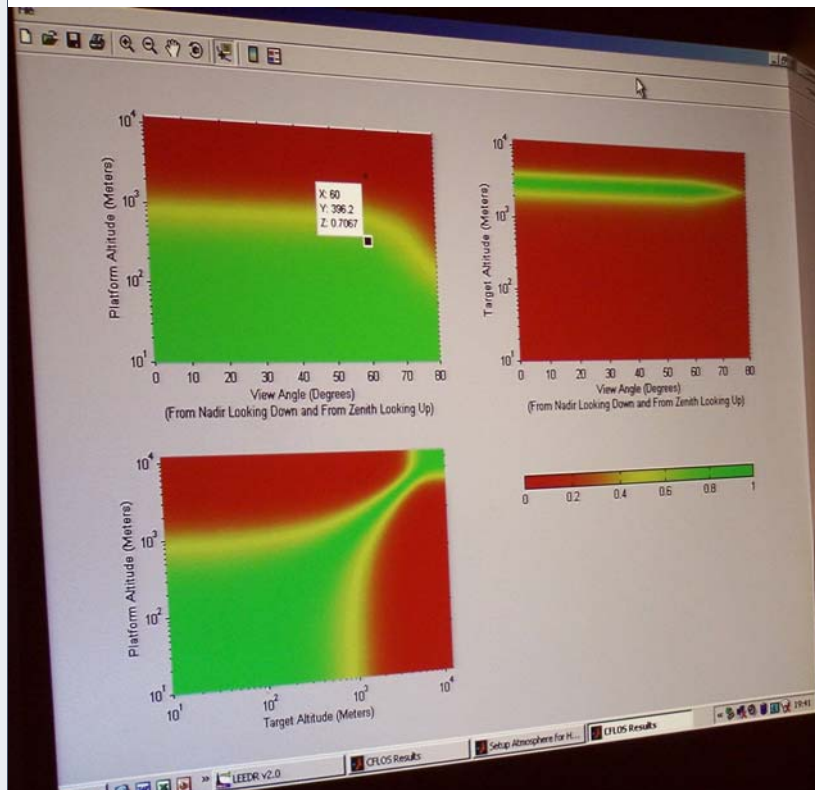
John Turnbull our webmaster, mentioned the upcoming forecast contest for this season. See the end of the newsletter for details.

LEEDR – Climatological data, laser propagation and more

Finally, Dr. Fiorino gave a brief tutorial on his Laser Environmental Effects Definition and Reference (LEEDR) program. It includes the Extreme and Percentile Climatology (ExPERT) climatology database. For an example, we looked at extremes and averages for Dayton, OH. This also tested the memory of some of the members, trying to associate the weather with the extremes for a given year. We noticed the all time low was -20°F in 1994 and the last time we hit 100°F , before this year, was in 1988. The 56kt gust, recorded in 1994, resulted from a westward moving microburst that pivoted a plane and damaged a Radome.

LEEDR provides more realistic atmospheric profiles than other modeling software, such as the atmospheric transmission model, MODTRAN. LEEDR uses climatological profiles for specific locations where other models use

An example of LEEDR's Cloud Free Line of Sight (CFLOS) displays for various viewing configurations.



reference atmospheres. We do not like reference atmosphere profiles because they ignore the boundary layer. LEEDR allows you to input an atmospheric profile, choose laser wavelength of choice, and calculate laser propagation through various profiles. LEEDR can also do computations of cloud free line of sight (CFLOS) from any height you wish, with

user input slant ranges, and then produces graphs and writes an excel boundary layer profile.

Dr. Fiorino demonstrated the CFLOS set up, and then more examples of the LEEDR program for those that were interested. By the way, the software is releasable for use for most chapter members. Please contact Dr. Fiorino for more information on LEEDR (steven.fiorino@afit.edu).

Chapter Dues

Dues for the Wright-Memorial chapter are \$10 annually. Dues paying members are given the right to run and vote in chapter elections and participate in other chapter decisions. Dues were collected from members.

Next Meeting

We are going to shoot for a lunch meeting next month, later in the month

Calendar of Upcoming Events

January

20-24 January 2008 – 88th AMS Annual Meeting, New Orleans, LA
<http://www.ametsoc.org/meet/annual/index.html>

February

February 2008 – TechFest 2007 – Sinclair Ponitz Center, Dayton OH.
<http://ascdayton.org/TechFest2008/>

April

April 2008 – 12th Annual Severe Weather Symposium, The Ohio State University.
<http://geog-www.sbs.ohio-state.edu/metclub/>

From the National AMS

88th AMS Annual Meeting

New Orleans, LA
20-24 January 2008

The 2008 Annual Meeting is being organized around the broad theme of "Enhancing the Connectivity between Research and Applications for the Benefit of Society." This is an important topic that will shape our weather, ocean, climate, and environmental enterprise for many years to come. Our nation's economy, well-being, and national security will depend on successful efforts on the parts of all parties—academia, the private sector and government—in this area, and will require all of us to participate and be engaged in discussing how we might enhance the complex processes of the mutual interactions between research and applications. A Presidential Forum will consist of diverse presentations from the broad weather and climate enterprise on "Hurricanes—Research Priorities, Improving Forecasts, and Effective Response", surrounded by a 2-day special session on hurricanes, climate and policy, with emphasis on Hurricane Katrina as a case study.

Habitat for Humanity in New Orleans

Dear Fellow AMS Member,

This note is to encourage you to join us as a volunteer to help rebuild the New Orleans community at the time of the January 2008 AMS Annual Meeting. The Society is organizing opportunities for us to work on Habitat for Humanity projects on the Friday before the meeting (18 January) and the Friday and Saturday after the meeting (25 and 26 January).

All tools and safety equipment will be provided. No construction experience is necessary and all skill levels are welcome! Volunteers must be able to commit to the full time frame (7:00 a.m. to 3:30 p.m.).

We hope you will consider extending your visit to New Orleans by a day or two to help us in this very important effort. As these events are all day, please be mindful to arrange your arrival for Thursday, 17 January if you plan to join us on 18 January, or your departure in the late evening for 25 or 26 January. All expenses associated with this volunteer effort (such as transportation and lunch) must be covered by the Society, so while we are seeking sponsorship to cover some costs, we are also asking each volunteer to help pay for their participation (at a cost of \$45 per person per day).

Some of you may not be able to make the time available to serve as a volunteer, but would like to contribute to the effort. We are providing an opportunity for monetary donations to support this effort through the AMS Web site and also on-site at the meeting. Any funds in excess of those required to cover the cost of the volunteer activities will be donated directly to Habitat for Humanity in the name of the AMS membership.

For additional information, please see the Habitat for Humanity web-page at: www.habitat-nola.org or contact the AMS Habitat for Humanity Volunteer Coordinator, Cara Campbell at ccampbell@ametsoc.org or (617

Registration and rate information can be found at

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

The deadlines for submitting abstracts have passed for most meetings. Individual symposium and conference information can be found at:

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

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

AMS – Wright Memorial Chapter

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We're on the Web!

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

volunteer at the same time you preregister for the meeting, but you must do so by 11 January 2008.

We will be joining AMS members and staff on these very worthwhile projects, and hope you will do so as well.

Rick Anthes, AMS President
Franco Einaudi, AMS Past-President
Walt Dabberdt, AMS President-Elect

Forecast Contest

September Forecast Contest

With the new AMS year upon us, I will start out the first contest with one that will last the entire year, to encourage maximum participation. Don't be shy!!

Your mission, if you chose to accept it, is to accurately predict the total liquid precipitation (rain plus snow water equivalent) from 1 Oct 2007 thru 30 April 2008. Also, predict the total snowfall for the 2007-2008 winter season in inches and tenths of inches. Both amounts to be measured at WPAFB.

Send you predictions of total liquid precipitation and winter 2007-2008 snowfall amounts to John Turnbull (799 Spinning Rd. Dayton OH 45431) or via email to john.turnbull@wpafb.af.mil by **30 September 2007**.

2006-2007 Season 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

Picture of the Month

Shutterbugs – Submit your latest and greatest weather shots to our newsletter! Send them via e-mail to:
mary.bedrick@wpafb.af.mil



Photograph by Dr. Mike Abel. Crepuscular Rays over Beaver creek, OH.

More than a Pretty Picture

By Mary Bedrick

Crepuscular Rays are the sunburst pattern of rays of light (and shadow) you see emanating from the sun like those seen in the figure to the left (also taken by Dr. Mike Abel) or in this month's Picture of the Month. According to Merriam Webster Online, "crepuscular" means of, relating to, or resembling twilight. These "sun beams" are so named because they are typically observed when the sun is at low angle around sunrise and sunset.



What actually causes crepuscular rays?

These rays occur when sunlight hits an object that casts a shadow. The object can be anything from trees and buildings to, as in the examples shown here, clouds. The contrast between the bright and shadowed areas creates the rays of light that seem to emanate from behind the object casting the shadow. The rays are visible to us when the sunlight in unshadowed areas can be scattered toward the observer. The light is scattered by particles in the air like haze, dust, or even the atmosphere itself.

What causes the sunburst pattern of the beams? Since the light coming from the sun is virtually parallel (enters the earth's atmosphere at a single angle), one would think that the beams should not appear to converge to one point. This phenomenon is the same optical illusion that makes parallel train tracks appear to converge the farther away they get from you. Another words, the closer something is to you, the larger it appears. The light from the sun is coming to you at virtually one angle, but as the beam gets closer to you, your eyes interpret the image as being larger.

References

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<http://mw1.merriam-webster.com/dictionary/crepuscular>

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University of Nebraska Lincoln
<http://snrs.unl.edu/amet351/graf/rays.html>

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