



American Meteorological Society Wright Memorial Chapter

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If you have any suggestions for the chapter or this newsletter, please forward them to the Secretary, Mary

Bedrick

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AMS – Wright Memorial Chapter

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We're on the Web!
www.ametsoc.org/chapter/wrightmem/index.html

Minutes from 11 October 2005 meeting

Meeting Minutes - Wright Memorial Chapter AMS

First Meeting of Chapter with Dr. Karen Kowalewsky, President

October 11 at Giovanni's Restaurant - Fairborn Ohio

After dinner President Kowalewsky introduced herself and the new chapter officers, Vice - President Paul Gehred, Secretary Mary Bedrick [not present] and Treasurer Allison Schauer. She mentioned our key focus this year will be anthropological effects on climate and global warming debate. She intends to get some acquaintance professors from Ohio State as guests. Dr. Fiorino also mentioned he may be able to invite Dr. Thompson from Ohio State as well.

2006 Annual AMS Meeting – Atlanta, GA

V-P Gehred reminded the group of the upcoming AMS meeting in January in Atlanta. He questioned people if they are interested in putting together an annual chapter poster and presenting it at the conference. Interest was high, with roughly 50% of attendees actually planning on attending, circumstances permitting. We'll discuss the construction of the poster at the next meeting.

Research on Global Warming

2004-05 President Steve Fiorino then inspired the group with an interesting bit of original research he's done regarding global warming and in reference to work done by the Intergovernmental Panel on Climate Change (IPCC). The IPCC has been established by WMO and UNEP to assess scientific, technical and socio-economic information relevant for the understanding of climate change, its potential impacts and options for adaptation and mitigation. IPCC has long held industrialized nations culpable for perhaps irreversible changes to the earth's atmosphere.

Dr. Fiorino began with the controversial statement, "It may be too late to care about carbon dioxide (CO₂) levels in the atmosphere!" He cited some research done at Goddard Space Flight Center (Dr. James Hansen and others). He expounded that of the major greenhouse gases in the atmosphere, water vapor—not CO₂—is by far the most dominant. The radiative forcing caused by increases in CO₂ and water vapor have been modeled well separately, but not necessarily together. Experimental evidence using line-by-line radiative transfer codes supports a theory that water vapor masks the CO₂ forcing function in nature once a certain increase in both gases is attained. For example, during the industrial age CO₂ levels rose from 280 ppm to 380 ppm in 100 years, and global temperatures have risen steadily. The effect of this warming is strongest in polar regions and at high tropospheric altitudes where the increases in carbon dioxide are most apparent due to the lower absolute humidity (water vapor) levels in these areas. As the temperature rises in these areas, water vapor levels have

also risen and become more dominant in driving further change. There is a self buffering effect in nature, as water vapor increases, so does cloud cover, and this increases earth's albedo which scatters more solar radiation out to space. Much of IPCC's research has concentrated on the warming in polar regions due to increased CO₂ without consideration for the warming and masking effects of the increased water vapor. In light of this globally increased amount of water vapor, Dr Fiorino asserts that further warming of the atmosphere will likely occur at approximately the same rate regardless of whether CO₂ levels increase, decrease or hold steady. Dr. Fiorino's research suggests that at normal Tropical levels of humidity, CO₂ levels could be tripled or halved with little radiative forcing change due to the masking effects of water vapor.

Dr. Jerome Clemens asked "Where is the limit?" A sort of Hubble Constant for global warming may exist and is worthy of a harder look.

Attendees

Marc and Allison Schauer, with Abby and Wesley
D Narcisse
Roland Tadd
Bill Anderson
Jerome and Fay Clemons
Louis Cantrell
Steve Fiorino
Karen Kowalewsky
Ron Rodney
Joe and Loann Reich with Cameron, Zachery and Allison
Paul Gehred

Forecast Contest

Remember to get your forecasts to John Turnbull (john.turnbull@wpafb.af.mil or 799 Spinning Rd., Dayton, OH 45431) by 20 October 2005.

Guess the high and low temperatures for the following locations for Monday, October 31 2005.

Wright-Patterson AFB, Ohio
Tombstone Arizona (near Ft. Huachuca)
Pumpkin Center NC (near Charlotte)
Skull Creek Township, Neb (near Lincoln)

See the website for more details(<http://www.ametsoc.org/chapters/wrightmem/index.html>).

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Picture of the Month



Sunset over Sugar Creek Township, OH.

28 August 2005. Submitted by Mr. Ron Lee.

If you have taken a great photograph and want to share it, please e-mail it to mary.bedrick@wpafb.af.mil for future newsletters.

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