

Minutes Sept. 24, 1993 Lighting Data Center, St. Anthony

Quote of the Month: "As soon as any of the thunder-clouds come over the kite, the pointed wire will draw the electric fire from them, and the kite, with all the twine will be electrified, and the loose filaments of the twine will stand out every way, and be attracted by an approaching finger." Benjamin Franklin 1753.

1. Meeting began at 11:30 am and adjourned at 2:10 pm. The meeting was held at the Foothills Lab of the National Center for Atmospheric Research (NCAR) in Boulder.
2. Members present: Bergschneider, Breed, D Breggin, Cherington Kithil, Langford, Simmons.
3. Materials distributed included:
 - a. Rich Kithils article in August 93 issue of American Weather Observer entitled: "Man's Understanding of Lightning; From Early Days to Present".
 - b. Article by Cherington, Yarnell, and Hallmark in the July 93 issue of Neurology entitled: "MRI in Lightning Encephalopathy".
4. I read a letter I recently received from Mary Ann Cooper, M.D. She had enclosed brochures on the conference in France entitled "Lightning and Mountains" in 1994. The brochures were given to the members.
5. I read a letter from Ron Mirenda of the Provenant Health Foundation informing us that our grant request was approved for \$1000. At our next meeting we shall decide on how best to proceed with our mission.

Our missions have been listed as:

- ✓a) Gather and study lightning casualty data for Colorado from various sources including Storm Data, The Colorado Hospital Association, The Colorado Department of Health, the news media, and reports sent directly to the Center from medical facilities.
 - b) Investigate the problem of underreporting lightning deaths and injuries and its consequences in terms of public awareness and policy making at the state and national levels.
 - c) Assist others to obtain and use lightning data sets that are as complete as possible for medical, meteorologica, community protection, and planning purposes.
 - d) Educate health care workers and the public about the dangers of lightning, more accurate identification of lightning victims, proper medical treatment of victims, and measures to reduce the risks of lightning injury.
6. Rich Kithil suggested we might expand our mission statement. Members will discuss all new ideas on this subject at our next meeting.

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Ken Langford suggested that we establish a computer data base compile data on lightning injuries for Colorado and the USA. Dave Breggin offered to provide computer expertise in this endeavor. He and Ken will work on this project and report at the next meeting.

I suggested we might communicate with other organizations with similar interests in lightning. Rich and Dan mentioned that Earl Williams (FAX 617-253-6203) might be an excellent person to contact about this. He is active on several national committees. Dan will be meeting with him next week. Ken suggested we might start a bulletin to cover new ideas and unsolved problems that the various centers could share.

7. Ken reported on the project that Steve Clark was working on this summer. He had a grant to survey lightning strike sites where injury or death had occurred. The grant covered the months June, July, and August. There were no reported injuries or deaths during that time in the front range territory that Steve was surveying.
8. Dan Breed took us on a tour of the NCAR facility including the Aviation Weather Development Lab, the library, and the cafeteria.
It was a most interesting time for all of us.

Tenny Lindholm, Associate Scientist, showed us many of the features of the Aviation Weather Development Lab. He pointed out that this was a place of technology transfer where science and user needs come together. Agencies important to this area include the FAA and the National Weather Service. The technology is essential to the airplane industry in detecting microbursts or windshear problems at airports. Terminal Doppler weather radar (TDWR) systems are used to display areas of microbursts at airports. The display units are not yet found in most airplane cockpits. The units also pick up virgo--rain that evaporates before hitting the ground.

Tenny also showed us other weather phenomena displayed on the screen including: jet streams across the continent and the state; "the Denver cyclone"--caused by the convergence of westerly winds and southeastern winds at the Palmer Ridge.

He also showed displays of lightning detected from the Lightning Network System which is in place in the North American continent. The airport industry believes it is important to follow the path of lightning as a good clue to the location of active cells. The Network picks up all cloud to ground lightning and 20% of cloud to cloud lightning.

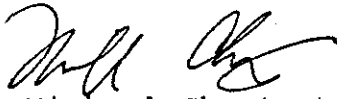
He showed us the 3-Dimensional Terminal Viewer. This technology produces images depicting an aviation hazard in virtual reality for the Stapleton airport. Hazards depicted include microbursts and gust fronts. It also depicts the terrain. Remarkable!

We then visited the Library at the Foothills NCAR. Librarian

Leslie Forehand showed us how to use the computer systems and CD ROM equipment. Several of our group were able to find references on aspects of lightning of particular interest to them. This library and the one at the Mesa NCAR are both open to our members.

9. Our next meeting will be on Friday, November 12, 1993 at 11:30 am in Conference Room B at St. Anthony Central. Among items on the agenda are: Rich Kithil will speak about what's new on lightning protection; Dave Breggin will bring his static generator and I will bring my Leyden jar so that we will perform some charging experiments; Dave will also report on the progress he and Ken Langford have made on the computer data base system; all of us can bring ideas on adding to our stated mission and how best to proceed with our new grant. Dave will report on information he has collected on the subject of 'lighting and camping safety'.

Respectfully submitted:



Michael Cherington, M.D.
Chairman, Lightning Data Center