

Lightning Data Center
December 8, 2000
Minutes
St. Anthony Hospital, Denver

Quote of the Month:

" The clouds, the source of rain, one stormy night
Offered an opening to the source of the dew;
Which I accepted with impatient sight,
Looking for my old sky-marks in the blue."

Robert Frost

1. Meeting began at 11:30 am and adjourned at 1:10 am.
2. Members present: Anderson, Arendt, Bergschneider, Blanke, Cherington, Cohen, Daniels, Foley, Glancy, Gray, Kithil, Klatt, Lines, Maertins, McDonough, Molen, Olson,, Wachtel, Yarnell.
3. I brought the following article from the literature (abstracted in part here):
 - a. Curran EB, Holle RL, Lopez RE. Lightning casualties and damages in the United States from 1959 to 1994.

"..an analysis was made of all 3239 deaths, 9818 injuries, and 19814 property damage reports in Storm Data due to lightning from 1959 to 1994...Florida had the most deaths (345) and injuries (1178) from lightning, and Pennsylvania had the most damage reports (1441). A rate of one fatality per 86,000 cloud-to-ground flashes is estimated from recent lightning detection network information...Two-thirds of the casualties were between noon and 6 P.M...Most lightning incidents involved one person, and males were 5 times as likely as females to be killed or injured."

- b. Domart Y, Garet E. Lichtenberg figures due to a lightning strike. N EngJ Med 2000;21:1536.

"A 54 year old man was struck by lightning and was initially stuporous...an examination revealed a fern-leaf pattern of erythematous, painless cutaneous marks on his left arm, back buttocks, and left thigh...These marks are characteristic of cutaneous injuries from a lightning strike and are referred to as Lichtenberg figures because of their similarity to the patterns described in 1777 by Georg Christoph Lichtenberg, a German physicist, while experimenting with static electricity. The pattern vanishes in a few hours or days, as it did in our patient."

4. C.B. Moore of Socorro, NM sent via mail an article by Gary Dorsey of the Baltimore Sun, November 26, 2000, p 10F. The article describes a lightning event at a rugby tournament in Annapolis on June 17. Lightning hit a red oak, killing one man and injuring eight.
 5. Gene Lines and Leland Anderson informed us that on December 21 at 9 pm on Denver's Channel 6 (PBS) there will be a 90 minute documentary on the life of Nikola Tesla. In some other locations the program will air on December 12, 2000 (check local listings). The Program is entitled: Tesla, Master of Lightning. Leland is the Senior Science Advisor for this production.
 6. Rich Kithil gave an outstanding presentation on Lightning Rods, Lightning protection, and current standards of the NFPA. I cannot give justice to his presentation here by recounting Rich's points. I will only mention a few notes that I wrote down during his talk.

Information on lightning rods is often ideologically based rather than science based. Lightning does not always strike the tallest object. Lightning is often random, capricious, and arbitrary.

Lightning rods (air terminals, conductors, ground terminals) are not the total answer to lightning protection. With a lightning rod outside, the wiring inside the wall of the house may become energized. Other important factors regarding lightning protection include surge protectors, bonding, shielding, soil composition etc.

7. These minutes reflect the comments of members present and do not represent official positions of LDC.

8. Next meeting will be held at 11:30 am on Friday, January 12, 2001 in the Main Auditorium of St. Anthony Central Hospital.

Topic: Case Studies in Forensic Lightning Investigations

Speaker: Michael Foley

Happy Holidays.

Michael Cherington, MD
Chair, Scientific Committee LDC