

Lightning Data Center
January 12, 2001
Minutes
St. Anthony Hospital

Quote of the Month:

"In 1905, tolling as a twenty-six-year-old patent clerk (he couldn't find a teaching job because none of his former teachers would recommend him) in Bern, Switzerland, he conceived the special theory of relativity and the equation $E = mc^2$, a supposition that all matter, from a feather to a rock, contains energy...The greatest scientific achievements of our century -- electronics, the atomic bomb, space travel -- were all suggested in those 1905 pages and then refined in decades to come."

Michael Paterniti Driving Mr. Albert, 2000

4. Meeting began at 11:30 am and adjourned at 1:20 pm.

5. Members present: Anderson, Barron, Bergschneider, Blanke, Burrows, Cherington, Crawford, Fletcher, Foley, Glancy, Hickman, Hislop, Hodge, Lane, Langford, Larson, Lines, Keen, Kithil, Maertins, McDonough, Molen, T Olsen, S Olson, Rossie, Sellon, Staelin, Swanson, Yarnell.

3. I brought the following articles (abstracted in part here):

4. Inskip PD, et al. Cellular-telephone use and brain tumors. N Engl J Med. 2001;344:79-86.

"These data do not support the hypothesis that the recent use of hand-held cellular telephones causes brain tumors...By early 2000, the number of subscribers to cellular telephone services has grown to an estimated 92 million in the United States and 500 million worldwide. Some concern has arisen about adverse health effects, especially the possibility that the low-power microwave-frequency signal transmitted by the antennas on handsets might cause brain tumors...It is generally agreed that the heating of brain tissue by cellular telephones is negligible."

5. Trichopoulos D, Adami H-O. Cellular telephones and brain tumors. N Engl J

Med. 2001;344:133-4

"Cellular telephones are low-power radio devices that transmit and receive electromagnetic radiation at the frequencies of about 1000 MHz, just above the ultrahigh-frequency (UHF) television portion and just below the microwave part of the electromagnetic spectrum. These three frequency ranges are within the radio-frequency zone of that spectrum. Cellular telephones operate at a lower power (less than 1 watt) than police or other emergency-communication devices. Cordless telephones, which have a base unit that is wired to a conventional telephone service, operate at a lower frequency and power than cellular telephones; they cannot be classified as a type of cellular telephone."

"Electric and magnetic fields from power lines, radio-frequency signals, gamma rays and x-rays are all part of the electromagnetic spectrum, but they have distinct properties...ionizing gamma rays and x-rays are inherently carcinogenic, but their potential to cause cancer is considerably lower than it generally thought to be. Electric and magnetic fields also have properties that distinguish them from radio-frequency energy, and that enable them to heat the material exposed to them...We believe that it is highly unlikely that the use of cellular telephones substantially increases the risk of brain tumors."

4. I brought recent issues of *Energies Sante* (Electricite de France) that Dr. Elisabeth Gourbiere sent from France. This quarterly publication is a summary of many recent articles from the literature.

5. Ken Langford generously gave to me and St. Anthony Hospital two magnificent photographs showing lightning strikes near Sloans Lake and St. Anthony Hospital. Thanks Ken.

6. Bob Glancy informed us about Lightning Awareness Week beginning on June 18, 2001. The program will include matters of interest to those involved in outdoor activities. Bob will bring us more details about this project to our next meeting. Members of LDC expressed interest in working with the National Weather Service on this project.

7. Mike Foley, Jeff Sellon and George Hodge provided marvelous presentations on Lightning Claims investigations and Forensic Case Reports. Thanks to Mike, Jeff, and George for a fascinating program.

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

9. Next meeting: 11:30 am on Friday, February 9, 2001 at St. Anthony Central Hospital.

Scheduled speakers: Ken Langford and Carl Swanson

Topic: Lightning and Photography.

Respectfully submitted,

Michael Cherington, MD
Chair, Scientific Committee, LDC