

Lightning Data Center
St. Anthony Central Hospital
Minutes
February 9, 2001

Quote of the Month:

"The most significant contribution of this text is, perhaps, that it shows in his true light one of the greatest visionaries that ever lived -- a man far ahead of his peers yet gentle and willing to give what he had to the world. With regard to the relationship between Tesla's work and the world of science, it is curious to note that it has taken a better part of the last 100 years since his invention of the resonant transformer for researchers to truly succeed in duplication the Tesla coil design."

Jim Hardesty and Judith Hardesty, 1994 from
Nikola Tesla: Lecture before the New York Academy of Sciences -
April 6, 1897 (Leland I. Anderson, Editor), Twenty First Century

Books

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

2. Members present: Anderson, Boas, Cherington, Gaynor, Glancy, Hodge, Kozak, Langford, Lines, McDonough, McLean, Molen, Olson, Paton, Sanko, Sellon, Swanson, Wallace, Yarnell.

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

a. Stang A, Anastassiou G, Ahrens W, et al. The possible role of radiofrequency radiation in development of uveal melanoma. *Epidemiology* 2001;12:7-12.

"Exposure to radiofrequency-transmitting devices was rated as (a) no radiofrequency radiation exposure, (b) possible exposure to mobile phones, or (c) probable/certain exposure to mobile phones. We found an elevated risk for exposure to radiofrequency-transmitting devices...Other sources of electromagnetic radiation such as high-voltage lines, electrical machines, complex electrical environments, visual display terminals, or radar units were not associated with uveal melanoma..This is the first study describing an association between radiofrequency radiation exposure and uveal melanoma."

b. Inskip PD. Frequent radiation exposures and frequency-dependent effects: the eyes have it (Editorial). *Epidemiology* 2001;12:1-3.

"Sources of exposure include cellular telephones, VHF and Uhf two-way radios, cordless phones, AM and FM radio, VHF and UHF television, microwave ovens...Gamma-rays and X-rays are sufficiently energetic to break chemical bonds and ionize molecules. Ultraviolet radiation does not ionize molecules but is energetic enough to cause molecular excitations resulting in structural changes in DNA that can lead to mutations. Radiofrequency radiation can induce molecular excitations resulting in tissue heating, and possibly, influence the electrical environment of cells and behavior of free radicals, but it does not damage DNA directly...At present, there is no strong reason to believe that RFR causes cancer, but there is only a very limited epidemiologic literature on which to base evaluations."

4. Several members brought photographic materials revealing Lichtenberg figures on various surfaces. Sheryl Olson cared for a lightning patient who had ferning patterns on the thorax and upper limb. George Hodge was able to

produce Lichtenberg figures on oiled wood surfaces by applying electrical current (30,000 Volts AC). Carl Swanson brought photographs of Lichtenberg patterns on a golf course green.

5. Ken Langford told us that when he is outdoors taking photographs of lightning, he will often stay inside his closed metal vehicle. Ken pointed out that a car is not a perfect Faraday cage because of the windows. However, he stated, if the car and windows are wet from rain, it is a better Faraday cage.

6. Ken Langford and Carl Swanson provided us with a superb program: Lightning and Photography. Thank you Ken and Carl. Your slide show reminded us again, that you are both artists and scientists.

7. Next meeting: Friday, March 9, 2001 at 11:30 am
PLEASE NOTE THE ROOM CHANGE FOR THIS MEETING - it will be in the
BIRCH ROOM - St. Anthony Central Hospital, which is on the Ground East Wing.

Guest Speakers: Stephen Wallin and Carolyn Glaubensklec
University of So. Colorado

Topic: Cellular phone use: Electrical properties within
Biological Systems

Respectfully submitted,

Michael Cherington, MD
Chair, LDC Scientific Committee