

LIGHTNING DATA CENTER
MINUTES
December 13, 2002
St. Anthony Central Hospital, Denver, CO
Website address: www.stanthonyldc.org

Quote of the Month:

"During his stay in Princeton, New Jersey, Einstein used to play his violin in a string quartet. He enjoyed these sessions, but the other musicians were less enthusiastic about his skills. Complained one of the other players after a private performance, 'He can't count.'"
Clifton Fadiman, Anecdotes 1985

1. Meeting began at 11:30 am and adjourned at 1:25 pm.
2. Members present: Arendt, Barron, Benson, Boyle, Burrows, Cherington, Collier, Gartling, Gift, Foley, Hoagland, Langford, Lines, Keen, Kithil, Maas, McDonough, Mouchantat, Olsen, Olson, Sanders, Sellon, Stewart, Russon, Wallace.
3. I brought the following article from the literature (abstracted in part here):
 - a.) Silverberg MJ, Frommelt A, Lange JL, et al. Lightning-associated injuries and Deaths among military personnel - United States, 1998-2001. MMWR 2002;51:859-862.

"After flooding, lightning is the second leading cause of weather-related death in the United States; approximately 300 injuries and 100 deaths are associated annually with lightning strikes in the United States...Lightning strikes occurred more often near the coasts, particularly in southern and eastern areas. Active-duty personnel constituted the majority (246[70.1%]) of lightning-associated casualties...By state, Louisiana (39.6), Georgia (25.2), and Oklahoma (23.5) had the highest rates."
4. I brought the following preprint that Dr. Shmatov sent.
 - a.) Shmatov M. A new model of ball lightning. Dr. Shmatov is on the staff of Ioffe Physical Technical Institute in St. Petersburg, Russia.

Several of our members have read Dr. Shmatov's preprint and his e-mail messages on ball lightning. I have asked Gene Lines and Joe Henderson to arrange a panel to discuss ball lightning at a future LDC meeting. The subject is fascinating, controversial, and the subject of recent research.

5. Bob Wallace reported on the progress made at two recent (November 15, Dec 6) ad hoc committee meetings. He and Beth Elland will bring proposals to the next LDC meeting regarding our: Purposes, Mission Statement, future plans including our hosting an International Lightning Meeting. Bob's presentation was followed by much discussion and enthusiasm about these plans. Bob invites comments and suggestions from our members. You can reach Bob at his e-mail address:

www.Bobwallace@centura.org

6. Gil McDonough brought excerpts from the book, *The Battle of Hamburg - Allied Bomber Forces against a German City in 1943* by Martin Middlebrook, Charles Scribner's Sons, NY 1980. There was a major electrical storm during the mission and here are some of the excerpts:

"The bombers were about to fly into the most violent electrical storm and that most of their crews were ever likely to encounter in their lives...There were air currents-up, down and sideways-of the most violent strength, flashes of lightning which often struck the bombers, static electricity which played all manner of trick, and the worst danger, ice that could form silently and invisibly...electric sparks flying everywhere. The ends of my guns had blue streaks flashing off them...All the propellers were giant fire wheels and the conductors could not cope...We entered a boiling cauldron in company with St. Elmo...Lightning was flashing all around...A 115 Squadron Lancaster blew up, probably when struck by lightning, and scattered by its wreckage and dead crew members over three German parishes."

7. Rich Kithil distributed the following article: Kithil R. 21st Century Lightning Safety for Environments Containing Sensitive Electronics, Explosives and Volatile Substances, www.lightningsafety.com <<http://www.lightningsafety.com>>.

Rich reminded the group about the ICOLSE meeting in September 2003 in Blackpool, UK. ICOLSE = International Conference on Lightning and Static Electricity.

8. Our scheduled speaker, Professor Howard Wachtel called yesterday to say that he was "under the weather." His presentation is postponed and will be given at a future meeting. We hope he gets well soon. In his absence, I spoke about issues raised in a recent publication, Cherington M. *Lessons in History: Two Lancet Lightning Articles: Clark and Brigham, 1872; Knaggs, 1894 - A Commentary. Wilderness and Environmental Medicine* 2002:13:158-62. These issues included:

a.) Diagnostic methods and treatments with the medical technology and knowledge of the 19th century compared to the technology and knowledge of the 21st century. The fatal lightning cases reported in those 19th century articles were evaluated and treated before Roentgen's discovery of radiographs (1895) and before the era of modern cardiopulmonary resuscitation (1960).

b.) Both fatal cases had intracranial hemorrhages. Fatal head injuries in lightning patients can be divided into 2 groups: head trauma linked to falls; brain lesions in the absence of falls. Subarachnoid and intraventricular hemorrhages occur in both groups. Lightning patients who do not suffer falls have intracranial hemorrhages that often follow a particular pattern: location in the basal ganglia and brainstem.

c.) Writing style of medical reports of the 19th century differ from that of most reports in the 21st century. Among the differences: near absence of laboratory and radiographic data (e.g. blood chemical studies; molecular genetic analysis; MRI reports etc.) in the older articles; formats are much different.

9. These minutes do not represent official positions of LDC. They reflect comments of members at the meeting.

10. Next meeting: 11:30 am Friday, January 10, 2003 in the Main Auditorium of St. Anthony Central Hospital.

Respectfully submitted,

Michael Cherington, MD