

Quote of the Month:

"There are only a few examples in history where almost everyone intuitively associates a single individual with a decisive scientific advance--Copernicus with the heliocentric theory and Newton with the concept of gravity, for example. Now, a hundred years after the birth of Einstein it is evident that his name will be linked in the historical context with the theory of relativity....His immense achievement is that....at the age of 26 he published a series of papers introducing three revolutionary concepts into physics--the idea that light incident on the photoelectric surface must be quantised, the proof that the random motions of a suspension in a liquid (the Brownian motion) must be caused by bombardment of the molecules of the liquid, and the special theory of relativity."

Sir Bernard Lovell in Ronald W. Clark's book, Einstein.

1. Meeting began at 11:30 am and adjourned at 1:30 pm.
2. Members present: Aremu, Cherington, Collier, Fischer, Foley, Hodge, Keen, Kithil, Lammertse, Yarnell.
3. I distributed the following materials:
 - a. Letter sent to me by Ken Langford who could not be at our meeting today. Ken has made some interesting discoveries regarding the a lightning event which was captured on a photograph on 8-20-75. Two individuals with their "hair standing on end" were the subjects of the picture. Ken has labelled his manuscript, "Lightning Incident at Moro Rock." Ken has found many details pertaining to the medical and legal aspects of that incident. Hopefully, he will be present at our next meeting to elaborate on his manuscript.
 - b. Reprints of an article from the May issue of Western Journal of Medicine by Cherington, Yarnell, and London entitled: "Neurologic Complications of Lightning Injuries."
 - c. Abstract forms provided by Chris Andrews for the Keraunomedicine 96 meeting in Osaku, Japan next year.
 - d. Registration forms provided by Nicolas Floret for the APERI International Workshop of Lightning and Human Beings in Osaku next year.

I mentioned to the members that I had recently talked via the telephone with Dr. Mary Ann Cooper of Chicago about our book on lightning which is in the planning stage under the guidance of Rich Keen. All present agreed that we should invite our "out-of-Colorado members" to provide chapters for our book.

Rich Keen will be the contact person for this project. The book has the potential for becoming a major resource for those interested in the many facets of lightning. Finally, I presented a letter addressed to the Lightning Data Center from a patient from the state of Washington asking for information on lightning injuries. Phil Yarnell has agreed to write to the patient who was injured 10 years ago and provide her with information on the subject.

4. Rich Collier reported that he is writing a final report on his studies done at the Nevada Nuclear Test Site. He worked at an Earth covered storage facility. The ventilatory system presented problems in that 50% of the energy related to lightning strikes travelled through the vent system to the building. He will bring the full report to the next meeting.
5. We welcomed David Aremu back to the group after his being gone for several months. He will be living in Colorado and working with Rich Kithil.
6. George Hodge presented lightning information taken from the internet. He also gave us a follow-up on the house that was nearly totally damaged by lightning last month in Niwot, Colorado. Information from GDS (Geomet Data Service) revealed that the strike was positive with an intensity of 95.2 Kamps (average strike is 30 Kamps). Positive strikes are said to be more common in the winter. They may be caused, according to Rich Collier, to a windshear effect where the top (positive) area of the cloud is pushed ahead and separated from the bottom (negative) region of the cloud.
George, also, reported on a lightning strike to a Denver building. The elevator system was damaged. No one was in the elevator but it automatically moved to the top floor and stalled.
George stated that he saw 2 television programs relating to lightning. One, on the Weather Channel, has been seen by some of our members and Rich Kithil has a video of that one. The other was a show where lightning survivors were interviewed. George will order that (\$29.95) for the group and our grant will reimburse him.
7. Michael Foley brought a draft Articles of Incorporation of Lightning Data Center, Inc., prepared by the law firm of Holland & Hart. Michael will consult with Mr. James Barber of Provenant St. Anthony Hospital for the Hospital's advice and consent.
8. Rich Kithil submitted several issues for discussion.
 - a. Rich provided a summary of lightning injuries found on the internet.
 - b. He discussed the visit to Denver next week of Mr. Nicolas Floret of Helita Company in France. Nicolas will be here on Wednesday and Thursday, July 19 and 20. We plan to arrange a dinner meeting with Nicolas and members of LDC at 6:30 pm on Thursday, July 20, 1995 at Sfuzzi's Restaurant in the Cherry Creek Mall.

- c. Rich will be presenting a paper entitled: "A Risk Management Approach to Lightning Safety" at the International Aerospace and Ground Conference on Lightning and Static Electricity in Williamsburg, Va in September 1995.
- d. He announced the creation of new non-profit organization, National Lightning Safety Institute. This organization will adopt risk management approaches to lightning. It will endeavor to provide national seminars and develop a lightning safety credentialing program. Rich distributed many details in a handout to the group. Dan Lammertse remarked that this new group will be independent of the LDC which remain as a public spirited information and data collecting organization. Both groups share many common interests All agreed with both Rich and Dan. Many members have expressed interest on this new organization while at the same time continuing to be involved with the Lightning Data Center. Anyone wanting more information on the National Lightning Safety Institute should contact Rich Kithil.
9. Richard Keen presented a newspaper (Rocky Mountain News 7-10-95) of lightning fatalities in the Ukraine. Of particular interest was the reporting of 2 deaths attributed to "ball lightning." To his knowledge, this is the first such report. Rich also stated that he and Rich Kithil own F-10 lightning detectors (optical and electrical sensors) which are used to detect cloud to cloud as well as cloud to ground lightning. They will bring a model to the next meeting.
10. Phil Yarnell reported on two cases of lightning injuries. One happened last month in Colorado. A young man was struck while standing on the patio of his mountain condominium. He may have suffered a cardiac arrest for several minutes (up to 10) until the paramedics arrived. In spite of this event, the patient eventually made a remarkable recovery. Dan Lammertse, who treated the patient at Craig Hospital, reported that the patient's only residual deficit is one of amnesia and that is improving. Phil also reported he learned about a fatal pediatric lightning victim from an eastern state. According to the history, the patient was in coma but able move her limbs within a few hours. Unfortunately, after initial improvement, her condition worsened on the third day. CT scan was compatible with cerebral edema. Phil has a large experience with post cardiac hypoxic encephalopathy and found this case unusual because of the worsening after initial improvement.
11. Next meeting: Friday, August 11, 1995 at 11:30 am at St. Anthony Central in Conference Room B.

Respectfully submitted,



Michael Cherington, MD