

Minutes Lightning Data Center SAH August 13, 1993

Quote of the month: "Benjamin Franklin snatched lightning from the sky and the scepter from the tyrant. He found electricity a curiosity and left it a science." --- Turgot

1. Meeting began at 11:30 am; adjourned 1:15 pm.
2. Members present: Bergschneider, Breed, D Breggin, Cherington, D Clark, Collier, Langford, Larson, Yarnell.
New member, Kevin Bergschneider of American Lightning Protection, Inc. was introduced to the group.
3. I read parts of a letter I just received from Dr. Chris Andrews. He elaborated on the "portal of entry" phenomenon seen in his sheep experiment. He described "tracks of singed hair" rather than skin burns. He makes the interesting point that if there is an entry site, current is diverted internally. If an entry is not available, external tracking is more likely.
4. We discussed the case of last month where a patient suffered injury to a cranial nerve when lightning struck his patio. He was inside with the sliding glass door closed. Dave Breggin postulated that there was an induced current in the metal door frame and sympathetic current traveling to the patient. The door frame acted like an antenna. The patient suffered injury even though he was inside his apartment.
Ron Larson raised the possibility of acoustic trauma or optical trauma.
We also discussed a patient who presented with a brain tumor, possibly a lymphoma, months after being struck by lightning.
Dave and Ron suggested that the cancer might have been caused by the lightning. There is evidence, still controversial, about the development of cancer in patients exposed to chronic EMF. High power transmission lines, cellular phones, and police radar guns have all been implicated. Radar gun circuitry emit EMF in addition to radar.
5. Rich Kithil and Kevin Bergschneider presented two pieces of equipment.
Stormmaster Lightning Warning System = measures, detects, and displays lightning activity.
Electrical fields and Radio Frequency are measured.
Stormmaster System includes Control Console, Sensing Antenna, and Alarm system. (Ambient electrical field = 150-400 V/M).

Stormscope measure RF only. It has been used in small aircraft. It can measure lightning discharges at distances of 25, 50, 100 mile settings. It is used now by boaters and people on yachts.

Rich brought a most useful article for the members to read. The article is "The Science of Weather" by John Day.
6. Dave Breggin brought Electrostatic Discharge Simulator (EDS) or "lightning in a bottle" made by Compliance Design.

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(20 KV). Dave's EDS was able to trigger Rich's Stormmaster. Dave discussed static electricity during this demonstration. When a person walks on carpet and touches a doorknob a spark may occur (10,000 V = 1 inch of arc). Static electricity can be a problem when one approaches his/her computer. Some office have anti-static carpeting to reduce charge from hand to computer.

7. Ken Langford read his letter which he will send to American Weather Observers Bulletin regarding the recent LDC events. Ken brought an article by N. Kitazama et al. of Toyko entitled "Safety Guide Against Lightning Hazards". Ken also read his summary of this paper. He mentioned that Ron Holle had read this paper and had several pertinent comments. We will plan to discuss this at a future meeting.

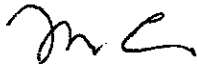
8. Next meeting: NEW TIME AND NEW PLACE:

Friday September 24, 1993 11:30 am. at Dan Breed's laboratory in Boulder. You will be receiving a map and address.

After meeting in Dan's lab, we can walk to the cafeteria and buy lunch and then return to the lab.

There will be no meeting in October. The November 12, 1994 meeting will be at our usual site: Conference Room B at St. Anthony Hospital Central at 11:30 am. I have asked Rich Kithil to speak about lightning protection technology at that meeting.

Respectfully submitted,



Michael Cherington, MD
Chairman, LDC