

LIGHTNING DATA CENTER MINUTES

June 8, 2018

ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO

www.lightningdatacenter.org

Quote of the Month: “K.B. McEachron, General Electric engineer here, reports that he has found “slow” lightning that produces no thunder when its leisurely bolts traverse the sky.” Aspen Daily Times, Dec. 2, 1937. Link: <https://www.coloradohistoricnewspapers.org/cgi-bin/colorado?a=d&d=ADT19371202.2.68&srpos=74&e=-----en-20--61--txt-txIN-lightning-----0->

1. Members Present: Clark, Wells, Langford, Swanson, Beckmann, Stemple, Gift, Duchovnay, Stewart, Johnson, Yarnell, Nibbe, Cherington (Michael & Nancy) and Wachtel. Meeting began at 12:00 AM and ended at 1:05 PM. Clark moderated.
2. Welcome to our newest member, Andrea Duchovnay. She will be working with Carl Swanson and the rest of the LDC Executive Committee to obtain data from the IAED and to help us focus our research using this data.
3. Steve Clark said the LDC Executive Committee is preparing to obtain more data from the International Academy of Emergency Dispatch (IAED). The Executive Committee had a productive phone conversation with Brian Dale, with the IEAD. We have identified some short-term goals we need to accomplish so we can obtain this data. We will keep you updated.
4. The National EMS Safety Summit will be held in Denver on August 29-31, 2018 in the Silverton Ballroom at the Embassy Suites Hotel, located at 1420 Stout Street. LDC members Marty Coniglio, Steve Clark, Sheryl Olson, Larry Moore, Barbara Stemple and Carl Swanson, III will be presenting at the summit on Thursday, August 30, starting at approximately 10:30 AM until 11:45 AM. This event is free and open to the public.
5. Ken Langford prepared a draft letter to reach out to Dr. Dan Perl regarding blast effects in lightning survivors. Dr. Phil Yarnell referred Ken to Dr. Jim Kelly, Professor of Neurology at the University of Colorado School of Medicine, since he knows Dr. Perl. Michael Cherington noted Dr. Kelly attended LDC meetings many years ago.
6. Carl Swanson announced his First Responder Data Collection Project is entering into its fourth year. To date, he has not received any lightning reports from any of the participating agencies.

Carl also voiced concern about indoor lightning safety. He said people are pretty good about going inside when lightning is present, but are not educated on appropriate indoor safety measures. Bruce Beckmann has also heard this during his presentations. Greg Stewart said part of the problem is the number of indoor lightning injuries vs. the number of outdoor lightning injuries is very small.

Carl asked if there was official recognition of a 6th mechanism of lightning injury. Ken Langford said a paper had been published that proposed a 6th mechanism (lightning barotrauma), which has not been officially recognized, but is being considered.

7. Howard Wachtel noted some recent news where the U.S. Embassy in Beijing, China is being bombarded with sounds. Staff at the embassy experienced health impacts similar to those in the Cuba event. Howard thinks microwaves are causing the brain to “hear” sounds even though no acoustic waves are present. Some people have attributed these to health maladies. Howard also said a Faraday cage could shield personnel inside from the microwaves except for the microwaves that pass through windows. Dr. Phil Yarnell said microwaves do not induce neoplastic changes to cells. Greg Stewart asked what government agency might look into this.
8. Al Nibbe recalled a paper written back in the 1960s. An ophthalmologist suggested radar technicians during World War II were getting a heretofore unknown type of cataract, which apparently only microwaves can cause.
9. Barb Stemple shared some personal observations on blast effect vs. concussion. She has had several concussions which resulted in headaches and memory loss. Lightning has tended to give her more cognitive problems. She broke her wrist 5 months ago and had surgery with anesthesia. It took her 4 months to recover from the anesthesia. She has had previous surgeries and recovered from anesthesia much sooner. Barb reported seeing lightning from within a glass-enclosed clubhouse and she cowered and cried. She said her reaction was akin to a PTSD episode. She said her reaction to the lightning was worse now than it was last year.
10. Bruce Beckmann of Alpine Rescue told us he presented lightning safety to a total of 213 people in 5 classes. Meetings ran from 7 PM to 9 PM and people stayed as late as 9:45 PM for Q & A. One class was held at the Denver Botanic Gardens and the other four were held at Alpine Rescue Headquarters in Evergreen. His largest class was 61 attendees. He teaches what he calls an “Advanced 30/30/30 Rule”. The first and second 30 are the usual 30/30 rule. The third 30 rule means if there is a 30% or greater chance of storms, don’t go on the hike at all. Bruce addresses some of the long term effects of lightning injury. He also discusses the necessity of a hike in the form of a question: “Do you need to go up and summit today?” If you do decide to summit, he then gives time markers for your hike. Summit by 9:00 AM. Be off the summit by 10 AM. Be off the ridges by 11 AM. One of the biggest knowledge gaps Bruce found is the distance lightning can strike (25 miles), since most people think it strikes 6-8 miles from the storm cloud. Bruce’s training classes were part of Alpine Rescue’s “Skills in the Hills”, a public wilderness and backcountry education program. In addition to lightning safety, hypothermia and altitude sickness are also covered. Classes are free. More can be learned from the links below.

Bruce was asked what lightning safety precautions are taken when lightning could threaten a rescue mission. Bruce said since Alpine Rescue is a volunteer organization, individual members make their own decisions on going on a mission during thunderstorms.

Bruce also told us about an informal presentation called “Mountain Weather + Lightning Injuries” by Backcountry Pulse LLC. The class was on Monday, June 11. Here’s a description:

“If you have ever taken a wilderness medicine course, you know this scenario all too well. You leave the course excited, empowered, and then begin the process of slowly forgetting all of your newly acquired knowledge as the months pass by.

At Backcountry Pulse, we create monthly, highly interactive, free (donations accepted) workshops so you never have an excuse to get rusty. We invite everyone to come out whether you have had formal wilderness medical training or not. Join us as we kick off our first one at our homebase, Wayfinder Co-op in Denver, CO! Come on out, have a beer and learn about basic meteorology, cloud identification, anticipating incoming weather systems, how to stay as safe as possible in thunderstorms, types of lightning strikes how to respond to lightning injuries.”

11. Dr. Phil Yarnell introduced Bob Johnson, a highly talented artist who draws very life-like portraits of people. He has offered to draw some pictures of some of the LDC members. A brief photo shoot was held following our meeting.

Dr. Yarnell has been in correspondence with Lloyd Burrell, founder of the website Electrosense.com. Mr. Burrell has sent Phil some e-mails with questions posed to him by people who claim health issues due to electromagnetic radiation. Phil would like us to examine these e-mails and see what, if anything, this group can bring to the table to help these people.

Phil briefly mentioned a person who had their wiring removed in their home after not feeling well for some time. The person reported feeling much better after the wiring was removed.

12. Questions, comments, notification of errors, and critiques of these minutes are welcome. Please forward those to Steve Clark at: sclarktoto@gmail.com. Please keep your communications professional and respectful. Communications will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.
13. LDC Disclaimer: These minutes do not represent official positions of the LDC or its members. They simply reflect the comments made at the meeting. Furthermore, the LDC does not implicitly or explicitly recommend or endorse any product or service. Any product or service presented in these minutes is done so for purposes of discussion and analysis. The merit (or lack thereof) is open for the consideration and review by the entire membership.
14. Next meeting: Friday, July 13, 2018, from 11:45 AM to 1:00 PM at St. Anthony Hospital West. Room: Conference Rooms E & F. Meeting Format: TBA.

Respectfully Submitted,
Steven E. Clark, Consulting Meteorologist

Lightning Links

This is a monthly listing of periodicals, websites, and videos about lightning and allied areas from a variety of sources. A headline or description is listed, followed by the link. Please note that some of the links are perishable, which means you'll need to go to the source for the information.

National EMS Safety Summit. Link: <https://www.nationalemssafetysummit.org/>

Blumenthal, R., I.R. Jandrell and N.J. West, Does a Sixth Mechanism Exist to Explain Lightning Injuries? Investigating a Possible New Injury Mechanism to Determine the Cause of Injuries Related to Close Lightning Flashes. Link:

[https://repository.up.ac.za/bitstream/handle/2263/19400/Blumenthal_Does\(2012\).pdf?sequence=1](https://repository.up.ac.za/bitstream/handle/2263/19400/Blumenthal_Does(2012).pdf?sequence=1)

Cleary, S.F., B.S. Paternack and G.W. Beebe, 1965. Cataract Incidence in Radar Worker. *Archives of Environmental Health: An International Journal*. Volume 11, First page only.

Link: <https://www.tandfonline.com/doi/abs/10.1080/00039896.1965.10664195?journalCode=vzeh20&>

Skills in the Hills, a public wilderness and backcountry education program. Topics covered are Lightning, Hypothermia and Altitude Sickness.

<http://www.alpinerescueteam.org/safety-education/backcountry-safety-series/>

<https://www.eventbrite.com/e/skills-for-the-hills-18-lightning-hypothermia-and-ams-registration-41619917293>

Mountain Weather + Lightning Injuries, by Mountain Pulse.

Link: <https://www.eventbrite.com/e/mountain-weather-lightning-injuries-registration-46661522871?aff=erelexpmlt>

Siebrase, J., 2015. If He Gets the Eyes Right, Bob Johnson Keeps on Drawing. *Westword*. August 17, 2015. Link: <http://www.westword.com/arts/if-he-gets-the-eyes-right-bob-johnson-keeps-drawing-7026385>