

LIGHTNING DATA CENTER MINUTES

April 12, 2019

ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO

www.lightningdatacenter.org

Quote of the Month: “Governor Prince, who has been waiting for political lightning to strike him, has concluded that the climate of New Mexico is not conducive to the generation of the right sort of electricity to be attracted by his lightning rod, and has concluded to try the climate of Colorado. His lightning rod is ready to be struck and he will patiently await developments.” *The Eagle*, Oct. 23, 1895

1. Members Present: Clark, Swanson, Johnson, Yarnell, Kithil, Gift, Wells, Wachtel and Terry. Meeting began at 11:50 AM and ended at 1:10 PM. Clark moderated.
2. The LDC is accepting donations, either as cash or check. If you donate via check, please make your check payable to Steve Clark at 755 S. Clinton Street, #2A; Denver, CO 80247. He will cash the check and keep the cash holdings specifically for the LDC. When the LDC incurs expenses, Steve will pay for services rendered through his bank account using the cash from LDC’s cash holdings. A log will be maintained detailing the inflow and outflow of monies. At the present, the LDC has \$90.00, enough to pay for website hosting for the first half of 2019.
3. Last month, LDC members Steve Clark, Sheryl Olson, Barb Stemple and Carl Swanson gave a presentation titled: “Lightning – How Safe Are You?” at the 2019 National EMS Safety Summit. The talk addressed lightning safety and lightning patient care in the context of EMS operations. Shirley Terry was present at the meeting and thanked the LDC for presenting and told us the talk was well-received. The next EMS Safety Summit will be held on April 15-17, 2020. Because of LDC’s efforts, LDC has received a preliminary invitation to speak at the EMS Today conference, which will be held in Tampa, Florida in 2020.
4. The International Colloquium on Lightning and Power Systems will be held in The Netherlands at Delft University of Technology on October 7-9, 2019. For more information, please visit their website at: <https://www.aanmelder.nl/cigrec4>.
5. The International Conference on Lightning and Static Electricity 2019 (ICOLSE 2019) will be held at the National Center for Aviation Training in Wichita, Kansas, USA on September 10-13, 2019. For more information, please visit their website at: www.icolse.com.
6. Richard Kithil, long-time member of the LDC, is retiring from lightning-related activities and would like to offer his library of lightning literature to an entity that can accept it. He correctly noted the LDC probably does not have the shelf space for it. The books and papers in his collection cover three general areas: meteorology, lightning physics, and lightning protection for facilities. Steve offered to talk to folks at the Auraria campus. Karen Wells suggested announcing the availability via a science librarians’ Listserv. Two other members suggested talking to CU about the materials.

Since the founding of his National Lightning Safety Institute, Rich has given 108 3-day classes, participated in 91 consulting projects, and served as an expert witness in 19 legal cases, among his many accomplishments.

Rich finished by saying the LDC has a very bright future, since lightning is expected to increase in frequency due to climate change. He noted comments made by Dr. Martin Uman and Osmar Pinto Junior, both of whom suggest a warmer planet will result in increased water vapor in the atmosphere, which will allow for a greater incidence of storms and lightning.

Rich, thank you for all you have contributed over the years to the LDC. We will miss you and your contributions to lightning safety.

7. Carl Swanson announced he will be moving to Tennessee to live with his fiancée. Carl will still manage the First Responders Data Collection Project, as it is handled almost entirely online.
8. In the week prior to this meeting, Steve Clark visited two National Parks – Arches National Park in Utah and Grand Canyon National Park in Arizona. During the visits, two pieces of informational literature were provided by each park. Of interest is the lightning safety messaging.

From the Arches, he received a newspaper-like pamphlet titled: Visitor Guide Arches. The lightning safety message was next to a little icon of a cloud and lightning and reads: “When thunder roars, go indoors. There is no safe place outside during a storm. Seek shelter in a safe building or vehicle.”

Also from the Arches, he received a fold-out pamphlet, similar to an old-fashioned road map. There was no lightning safety information listed.

From the Grand Canyon, he received two fold-out pamphlets – one simply labeled “Grand Canyon” and the other labeled “Grand Canyon Pocket Map South Rim Services Guide”.

In the “Grand Canyon” pamphlet, the lightning safety message is: “Thunderstorms are common in summer. Seek shelter and stay away from the rim and exposed areas when lightning threatens.” In the Grand Canyon Pocket Map, the lightning safety message is: “Monsoon storms are common in summer. When you hear thunder or see lightning, move away from the canyon rim. Do not stand under a tree. Seek shelter inside a vehicle, building, or shuttle bus.”

9. Dr. Phil Yarnell attended two meetings. In the first, he learned of a device that is FDA approved for depression. For a person to be able to use this device, he or she must have failed four anti-depressant drugs. The device is a TMS stimulator which is turned on for 18 minutes and 36 seconds and is claimed to promote cellular regrowth, which makes more cells to help relieve depression. In the second meeting, Phil learned of a “Beamer” device, which he says is a blanket with embedded coils. A person lays on it for 15 minutes. The device is said to promote sleep, increase muscle relaxation and increase capillary circulation, among other claims. It is FDA licensed, but not approved for medical use. The claims about medical capabilities have not been formally tested for either device.

10. Phil, Carl and Barb Stemple will be going to the annual meeting of the Lightning and Electric Shock Survivors International in Pigeon Forge, Tennessee next month. During that meeting, Phil wants to find out if anyone has had a curative response to their maladies by any means.

Howard Wachtel asked if there were any cases of depression where post-traumatic syndrome has improved after electric shock treatments. Phil said the TMS people say TMS is better than direct administration of shock, since there is no direct transmission of current into the patient.

11. Phil presented some of the more common sequelae following high-voltage electrocution cases. The sequelae are broadly classified in three categories:

- 1 – Physical: Burns, spinal damage, hemorrhages, fractures, pain, disability, sleep disturbance and pain.

- 2 – Neuropsychological: A lack of confidence on the job, memory problems, short attention span, having to repeat themselves and being unable to solve problems.

- 3 – Emotional: Withdrawal, isolation, inadequacy, depression, guilt, fearfulness.

Phil said there are three possible theories which may explain the above sequelae:

- 1 - Electroporation. The neurons become leaky and lose their function.

- 2 – A release of cortisone in the system leads to post-traumatic syndrome.

- 3 – Neurotransmitters are released that are cytotoxins, which cause the failure of nerve transmissions.

12. We briefly discussed how to attract younger people to the LDC since none of us are getting any younger. Karen Wells recommended we update our Charter (Mission Statement) and broaden our view of what we talk about. She also wanted more presentations and fewer roundtable discussions. Phil thought getting companies like Medtronic involved might be helpful. Howard Wachtel said discussion of the effects of electromagnetism on the human body would attract more members. Bob Johnson recommended reaching out to lightning survivors via news accounts.

13. LDC welcomes your medical questions. Please send them via e-mail to Steve Clark at sclarktoto@gmail.com. Your medical questions will be forwarded to Dr. Phil Yarnell for his review and will usually be taken up for discussion in the next month's meeting. Please be advised any questions posed are for the general consideration by the group and do not constitute a formal medical opinion. If a formal evaluation is requested, arrangements can be made directly with Dr. Yarnell. If you have a medical emergency, please call 911 or your local emergency services provider.

14. 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.

15. 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.

16. Next meeting: Friday, May 10, 2019, 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.

No links this month.