

LIGHTNING DATA CENTER MINUTES

January 13, 2023

ST. ANTHONY HOSPITAL, LAKEWOOD, COLORADO

Monthly Quote: “Things are not always what they seem; the first appearance deceives many; the intelligence of a few perceives what has been carefully hidden. - Phaedrus

Source: <https://quotessayings.net/topics/things-not-always-what-they-seem/>

Members present: Clark, Swanson, Yarnell, Crow, Stemple, Terry and Moore. Meeting began at 11:50 AM and ended at 12:50 PM.

1. 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. LDC currently has \$837.00 in cash.
2. We welcomed our newest member, Dr. Michael Morse, a biomedical engineer based in San Diego, California. He is a consultant and provides expert witness services for cases involving electric shock. He is a member of the IEEE and has written several papers on electrical safety.
3. In late November, the *Denver Post* had an article about an Aurora, Colorado man who had an on-the-job electrical shock while hanging outdoor Christmas lights on a tree at a home in the Denver area in 2019. While he was hanging the lights, the lift basket he was on brushed against some power lines causing him to pull back, but as he did, the fiberglass pole he was using came into contact with the power lines. The current moved through the pole into the metal lift and into his body. It went through his hands and arms, into his belt and stomach and out through his legs. After the shock, he was conscious and breathing but he could not move and he was unable to use his hands and arms. He could smell burnt flesh. He was hospitalized for 11 days and has been through 36 surgeries. He had third-degree burns and has no movement in his hands. His energy level is low and he suffers from chronic pain. After their son was born, the man had to use pliers to change the baby’s diapers. Since then, his health has improved but he is still physically limited. He has become left-handed due to the damage to the right hand. He tires easily and has trouble sending messages.
4. Our ball lightning colleague in Russia, Dr. Shmatov, co-wrote a paper with K.D. Stephens challenging the veracity of ball lightning created in a lab setting by another researcher. The authors say there are some inconsistencies with the experimental results versus the model set forth by the researcher.

5. Carl Swanson presented an article from a Tennessee TV station describing the annual lightning report from Vaisala for 2022. For all 50 states, the report contained the closest town or city with the most lightning strikes per square kilometer. In Colorado, that area is Bethune, a small farming town on the eastern plains which tallied 58 strikes per square kilometer and in Tennessee, it was Camden, with 142 strikes per square kilometer. The report also noted an unusually high number of strikes with Hurricane Ian, which most likely had the highest number of strikes of any Atlantic system. In the eyewall, the frequency of strikes reached a peak of 1 strike every 3 seconds.
6. The LDC extends a warm welcome to Dr. Michael Morse, our newest member. He earned his degree in Biomedical Engineering in 1985 and he provides consultation and expert witness services for cases involving electrical shock. Phil asked him several questions.

Phil: Are there long-term sequelae for injury that is not immediate? Dr. Morse said there are lots of problems with that and that there is not enough information to make a definitive call. For example, there could be two identical tests, where one person has burns and walks away and the other has no burns but does have long term issues.

Phil has been trying to reach a physician in Boston on connectomes and asked if Dr. Morse was familiar with those. He is not.

Phil noted there were no long-term seizures in lightning survivors and asked if the same might be true for electric shock survivors. Dr. Morse and Phil both agreed seizures from electric shock are rare, but they do occasionally happen.

Phil cited some of the literature claiming a link between electric shock and ALS. Dr. Morse said there is a problem with that conclusion due to the rarity of ALS as related to electric shock.

Dr. Morse closed his comments by saying delayed symptoms are not as likely when symptoms after the shock are relatively few and do not persist. Delayed symptoms are more likely when symptoms persist and accrue for some time after the shock. Finally, he said you need to examine the totality of events associated with electric shocks.

7. The Lightning Strike & Electric Shock Survivors International group has been invited to have a table at the next IEEE meeting in March. Dr. Morse thinks it is the Electrical Safety Workshop, which draws participants from a broad range of disciplines. It probably will not happen this year, but hopefully next year it will.
8. Barb Stemple spoke about a female survivor that was referred to Coleen Crow and then to Barb. This lady is an author who was hit by lightning and had some seizures afterwards. She cannot do things that she used to do, due in part to medical issues that are getting worse. She does not have the same level of achievement. She is not the same person and she mourns the loss of that person and has become depressed. Her husband was hit at the same time. Steve Clark asked Barb to invite her to present her story.

9. Barb had been in touch with a man who was hit by lightning underneath a power line and suffered multiple strokes. The lightning melted a nearby trash can. She has been trying to reach him lately, but his phone is disconnected and Barb fears the worst.
10. LDC welcomes your 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 EMS.
11. Questions, comments, error notifications, and critiques of these minutes are welcome. Please send them to Steve Clark. Please keep the communications professional and respectful. They will be forwarded to the appropriate author(s) of the minutes and addressed accordingly.
12. 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.
13. Next meeting: Friday, February 10, 2023, from 11:45 AM to 1:00 PM MDT. This will be a Zoom meeting only.

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.

Bradbury, S., 2022. In Imminent Danger, *Denver Post*, November 25, 2022. pp. 1A and 6A.

Shmatov, M. and K. Stephan, 2023. Questions Regarding Alleged Laboratory Creation of Ball Lightning. *Journal of Atmospheric and Solar-Terrestrial Physics*. Vol. 242, January 2023.

Link: <https://www.sciencedirect.com/science/article/pii/S1364682622001687?dgcid=author>

Barry, R. and A. Martichoux, 2023. Tennessee City in List of “Lightning Capitals”, Report Says.

WATE-TV. January 9, 2023. Link: <https://www.wate.com/news/these-us-cities-are-lightning-capitals-report-says/>
