

# LIGHTNING DATA CENTER MINUTES

February 14, 2020  
ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO  
[www.lightningdatacenter.org](http://www.lightningdatacenter.org)

Monthly Quote: “Human progress is neither automatic nor inevitable. Every step toward the goals requires sacrifice, suffering, and struggle; the tireless exertions and passionate concern of dedicated individuals.” Martin Luther King

1. Members Present: Clark, Coomer, Yarnell, Terry, Nitka and Swanson via Zoom. Clark moderated. Meeting began at 11:50 AM and ended at 1:00 PM.
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 \$439.00 in cash holdings.
3. UPDATE: The deadline for the submission of abstracts for the 2020 IEEE ICHVE was been extended from January 31 to March 31, 2020 due to the coronavirus to allow time for people to determine if they can go to the meeting. The date for notification of acceptance has not yet been updated on their website as of this writing. Visit [www.ichve2020.org](http://www.ichve2020.org) for updates.
4. In last month’s meeting, Steve Clark was told the LDC website had a bad link, which was fixed.
5. Foster Lubasi, with the Zambian Centre for Lightning Information and Research, reminds us June 28 is International Lightning Safety Day. That day is significant because on June 28, 2011 in Uganda, approximately 20 students were struck and killed by lightning. In August 2015, an international symposium on lightning was held in Lusaka, Zambia. During that symposium, June 28 was proclaimed to be International Lightning Safety Day. Mr. Lubasi asks those who have an interest in promoting lightning safety to do so on or about June 28.
6. I received an e-mail from Dr. Andrews in Australia. Back in May 2019, LDC sent him a list of individuals struck by lightning and a list of their complaints, in response to a paper he, Mary Ann Cooper and Andrew Reisner co-wrote. Dr. Andrews said he is currently reviewing the data and trying to figure out the best way to analyze it. We thank Dr. Andrews for his response and look forward to his thoughts regarding the analysis of the data.
7. We are very close to finishing up the Lightning Safety Brochure discussed last month. Shirley Terry offered some suggestions for it. She offered a minor change to the wording, which will be done. She also wanted was to consolidate multiple outdoor safety rules under one outdoor heading and use bullet points for the rules. This will also be done. Shirley wants the logo for the Save-A-Life initiative to be included. Steve said the brochure will be modified on the back side to allow insertion of the logo.

8. Recently, an article was published in the *New York Times* stating Africa may see even more thunderstorms in the future. That conclusion was based largely on research performed by two researchers at the Porter School of the Environment and Earth Sciences at Tel Aviv University in Israel. An empirical computer model was run to reconstruct thunderstorm activity in Africa from 1948 to 2016. The computer runs were compared against temperature data. They found the number of thunderstorm clusters increased with temperature over annual and decadal time scales. On an annual timescale, they found the number and area of thunderstorm clusters were closely tied to temperature, with roughly a 40% increase in thunderstorm clusters for every 1 Degree Kelvin rise in temperature over Africa.
9. Dr. Phil Yarnell is looking for cases of lightning strikes to people on motorcycles, bicycles, ATVs and other similarly open vehicles. If you know of any such cases, please forward those to me and I will forward them to Phil.
10. We also discussed having the Lightning Strike & Electric Shock Survivors International (LS&ESSI) conference here in Denver in 2021. We discussed the sequence of events. Specifically, Steve Clark asked when breakout sessions were done and what topics were covered. In general, the sequence of events at a conference is as follows:

Thursday Evening: Registration followed by a meet and greet.

Friday Morning: Presentations followed by lunch.

Friday Afternoon: Breakout sessions from 1:30 PM to 4 PM, wrap-ups for 1 hour, then dinner.

Saturday morning: Presentations. Meeting concludes 12 Noon on Saturday.

Phil said vendors, such as care givers, attorneys, and pain management services offer to help pay for the cost of the meeting.

11. Carl Swanson provided a revised count of Colorado lightning casualties in 2019. After collaboration with Steve Hodanish at the National Weather Service office in Pueblo, Colorado, the most recent numbers for 2019 are: 17 total casualties with 1 killed and 16 injured/felt something. The gender breakdown for 2019 was 9 males, 4 females and 4 unknowns.  
  
In Tennessee, Carl has a total of 24 departments participating. Perhaps more importantly, he has departments in Memphis, Nashville and Chattanooga involved, which are highly populated areas in Tennessee. Most of the remaining departments in Tennessee serve more rural populations.
12. Following last month's meeting, Carl sent Steve a weather alert sent to his cellphone from WeatherBug. The alert advised lightning was 5.34 miles away and to seek shelter, which is good. The problem comes up under "IF OUTDOORS". Part of the message said, "If lightning is near when you are outside, you should crouch down, put feet together, and place hands over ears to minimize hearing damage from thunder." It would have been preferable to say: "If lightning is near when you are outside and no shelter is available, you should...". The lack of that additional phrase may give people the wrong message to crouch instead of heading for shelter. The WeatherBug message is shown beneath these minutes.

13. Phil told us of a book co-authored by Allan H. Ropper, M.D. and Brian David Burrell titled: *How the Brain Lost Its Mind*. The book addresses the topics of neurology and psychiatry and the interplay between them. Phil mentioned the book as a prelude to the connectome, which was last mentioned in the September 2019 minutes.
14. Phil is writing a pamphlet along the lines of “What the Neurologist does for Lightning and Electric Shock Patients”. It would part of the book series that LS&ESSI sells to support their group.
15. LDC welcomes your medical questions. Please send them via e-mail to Steve Clark at [sclarktoto@gmail.com](mailto: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.
16. Questions, comments, notification of errors, and critiques of these minutes are welcome. Please forward those to Steve Clark at: [sclarktoto@gmail.com](mailto: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.
17. 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.
18. Next meeting: Friday, March 13, 2020, from 11:45 AM to 1:00 PM at St. Anthony Hospital, Conference Rooms E & F. Format: TBA.

Respectfully Submitted,  
Steven E. Clark, Consulting Meteorologist



Dover, Tennessee &gt;



## ALERTS

LIGHTNING ALERT Sat 11:45 AM to Sat 12:15 PM 

Closest strike: 5.34 miles

You should seek shelter immediately!

You should remain in a safe shelter until there has been no lightning within 10 miles of this selected location for 30 minutes. Please be aware that lightning danger remains high even when a storm is moving away from your location. Even if rain has stopped and it appears that the storm is moving away, do not leave your shelter until WeatherBug indicates that lightning is more than 10 miles away from this selected location!

## IF OUTDOORS

Avoid water. Avoid high ground. Avoid open spaces. Avoid all metal objects including electric wires, fences, machinery, etc... Where possible, find shelter in a substantial building or in a fully enclosed metal vehicle with the windows completely shut. Unsafe places include underneath canopies, small picnic or rain shelters, convertibles or near trees. If lightning is near when you are outside, you should crouch down, put feet together, and place hands over ears to minimize hearing damage from thunder. Also, avoid proximity to other people.

## IF INDOORS

Avoid water. Stay away from doors and windows. Do not use a hard line telephone. Take off headphones. Turn off, unplug, and stay away from appliances

## 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.**

Lawal, S., 2020: Africa, A Thunder and Lightning Hot Spot, May See Even More Storms. *New York Times*, February 10, 2020. Link: <https://www.nytimes.com/2020/02/10/climate/lightning-africa-climate-change.html>

Haral, M. and C. Price, 2020: Thunderstorm Trends Over Africa. *Journal of Climate*. Published online January 15, 2020. Link to Abstract: <https://journals.ametsoc.org/doi/abs/10.1175/JCLI-D-18-0781.1>

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