

# LIGHTNING DATA CENTER MINUTES

August 10, 2018

ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO

[www.lightningdatacenter.org](http://www.lightningdatacenter.org)

Quote of the Month: “When the hissing lightning leaps to earth and the noisy thunder shakes the very hills, birds hide in the thickest coverts, wild beasts seek their deepest dens, and mankind trembles behind closed doors and darkened windows.” Pullman Herald, October 16, 1914.

Link: <https://chroniclingamerica.loc.gov/lccn/sn88085488/1914-10-16/ed-1/seq-7/#date1=1789&sort=relevance&rows=20&words=Lightning+lightning+LIGHTNING&searchType=basic&sequence=0&index=18&state=&date2=1963&proxtext=lightning&y=0&x=0&dateFilterType=yearRange&page=2>

#date1=1789&sort=relevance&rows=20&words=Lightning+lightning+LIGHTNING&searchType=basic&sequence=0&index=18&state=&date2=1963&proxtext=lightning&y=0&x=0&dateFilterType=yearRange&page=2

1. Members Present: Clark, Langford, Wachtel, Wells, Gift, Stemple, Nibbe, Beckmann & Terry. Meeting began at 11:50 AM and ended at 1:10 PM. Clark moderated.
2. For the past two years, the LDC has enjoyed having our website at a relatively low cost. Unfortunately, that is changing. Starting this July, LDC will be paying \$90 per 6 months for website hosting, which we were getting for free earlier. In addition, the LDC pays just under \$16 per year to register our domain name “lightningcenter.org”. The Executive Committee has paid for the web hosting for July-December 2018 and the domain name registration was paid in early August for a period of one year. Steve Clark asked the members present if they would be amenable to the idea of donating funds to help ease the financial burden on the Executive Committee. Members present were generally receptive; however, there were some questions. Karen Wells asked if it might be better to collect annual dues. Ken Langford suggested we should approach the hospital for grant money. Steve said the grants department is undergoing a rather large personnel change. He also said pursuing a direct grant or a matching grant may be worthwhile, once things are settled in the grants department. At this time, we are not seeking donations due to some banking questions that need to be resolved. See #3 below.
3. Steve Clark made a motion for the LDC to open a banking account to be used for payment of website expenses and possibly for other LDC needs. Karen Wells seconded. Discussion was briefly held. Steve told members he had visited a local bank to open an account. The banker told him since we are a non-profit entity, that there is some paperwork that needs to be submitted before an account can be opened. Steve will work with hospital administration to resolve this.
4. Howard Wachtel wants to reach out to the survivors of a lightning strike that were featured recently in the media and invite them to one of our meetings to tell their story. He was unsure whether or not Steve Clark, our president, would approve. Discussion showed two schools of thought on this. Steve was concerned about calling people following a strike, fearing people might view us akin to so-called “ambulance chaser” personal injury attorneys. Ken Langford expressed an opposite sentiment, thinking those who have been struck may be looking for an appropriate individual, say a survivor, to listen to their story. Barb echoed Ken’s view. Steve advised he will follow up with hospital administration to get their input.

5. Dr. Phil Yarnell received an e-mail from Mary Ann Cooper, Founding Director of the African Centres for Lightning and Electromagnetics. The Centres publish a newsletter called “The African Flash”, which chronicles lightning injuries and fatalities in Africa. The July 2018 edition said three men were killed by lightning in Nigeria during a heavy downpour. The local newsletter announcing the fatalities also described some of the local cultural beliefs regarding those who have been struck. One belief is the deceased and/or their family had done something evil and thus were struck and killed; thus, police and bystanders would not touch the dead body because they feared the same thing could befall them. Another common belief is the stricken person carries a dangerous electric charge and thus should not be touched. Finally, in a different account, a hypothesis was expressed where women are killed by lightning more often than men, due to differences in bodily fluids. This conclusion was found to be erroneous for three reasons. First, the sample size used in reaching this conclusion was much too small. Second, worldwide studies show the ratio of men to women killed by lightning is approximately 4:1. Third, there is no evidence to support the idea the lightning is more likely to kill women than men or that lightning can differentiate between the bodily fluids of men versus women.
6. Bruce Beckmann said one of his students saw a discussion on lightning safety on the 14ers.com website. Among the threads, there was a recommendation for the lightning crouch. The student saw this and wrote on the thread on that being inappropriate and recommended attendance at one of Bruce’s classes.
7. Barb Stemple has been working with an insurance company in an effort to secure funding for the placement of lightning safety fliers at local tourist attractions, but no progress has been made. She is waiting on a referral to another party within the insurance company.

Barb also told us of a lightning episode she witnessed as a youngster. At 9 years of age, she went camping with her family. At some point, her father made the family get into their station wagon due to an approaching storm. Lightning hit a nearby tree, which fell and killed an entire family in an adjacent camping lot.

8. Al Nibbe recalls about 10 years ago, he was in Fraser Park in Colorado. He did not see any signage about lightning safety. He talked to a forest ranger about it, who told him they don’t have lightning up here, but recalled lightning being a serious concern in Boulder.
9. Ken Langford showed us a series of lightning videos in a presentation he called “Video Dissection”. For each video, he would show the entire video first, followed by frame-by-frame analysis which showed features of interest.

2013-09-13 Marching Band Lightning. Link: <https://www.youtube.com/watch?v=YXrIFeBZjB8>

This video shows a lightning strike during what appears to be a halftime performance at a high school. A marching band is on the field playing. Lightning hits a tree behind the football field, followed quickly by thunder. The important part of this video shows the varied reactions of people in response to the nearby strike. After the strike, the drum major continued waving his baton encouraging the band to play on. Football players and coaches that had been on the field were headed for the exits. Some of the people in the bleachers headed for the exits while others stayed put.

2017-06-19 Utility Tower Casal da Cortiça, in Leiria Portugal.

Link: <https://www.youtube.com/watch?v=SGpA4qs2Sio> Lightning struck a tower in Portugal. This video shows lightning does not always do what we think it will do. In the video, there are high-tension power line towers. On each tower, there are three current-carrying wires, darker in color. Above those lines is a lighter-colored static line. It appears lightning struck the third line down of the four and not the highest of the four, which is what you might expect.

2016-01-21 Tree Lightning. Link: <https://www.youtube.com/watch?v=A6L7bkw7rZg>  
We did not have much discussion on this video.

The Best Lightning Strikes (Close n Loud Edition Part2) (for Grillmeister - 6 still images)

Link: [https://www.youtube.com/watch?v=xh\\_BP2njlhs](https://www.youtube.com/watch?v=xh_BP2njlhs)  
We did not have much discussion on this set of videos.

Tower Climber Gets Struck By Lightning.

Link: [https://www.youtube.com/watch?v=R\\_rY9SREVvQ](https://www.youtube.com/watch?v=R_rY9SREVvQ)  
Ken questioned the authenticity of this video. Robert Gift also agreed, saying the uniforms worn by the guys in the video were not consistent with what professional linemen would wear.

2017-10-04 Manchester UK (CLOSE LIGHTNING STRIKE CAUGHT ON CAMERA!!! -

Video Dissection, 100 feet away). Link: <https://www.youtube.com/watch?v=AvdAdeNSeZU>  
In this video of a lightning strike in Manchester, UK, on October 4, 2017, Ken determined there were 5 return strokes in the flash. When viewed frame-by-frame, the video shows the lightning ended as a beautiful display of bead lightning.

2018-07-11 Ouray, CO Tree (Lightning Bolt Strikes Tree in Front of Colorado Home - Video Dissection, 290 feet from camera). Link: [https://www.youtube.com/watch?v=FEruNZ\\_sZPE](https://www.youtube.com/watch?v=FEruNZ_sZPE)

This video from Ouray, Colorado is an example of what NOT to do after a nearby lightning strike. A woman comes out of a house and stands on the front porch. While she is on the porch, lightning hits a tree which appears to be not that far from the house. Following the strike, the woman proceeds to walk onto the yard closer to the tree that was hit. Ken noticed two other things from stills taken from the video. The right-most flash on one of the stills was the result of an internal lens reflection. Another, somewhat brighter flash towards the middle of another still appeared to be an upward streamer. Finally, Ken estimates the microphone was 290 feet away from the flash because sound travels at 1,088 feet per second and video is recorded at typically 29.97 frames per second. So dividing  $1,088 / 29.97 =$  one video frame = 36.3 feet, or the distance sound travels per frame of video. Then if you have equipment that allows you to step through frame by frame, you simply count from the 1st lightning frame to the 1st thunder frame and multiply by 36.3 to determine the near exact distance between microphone and lightning flash.

2017-08-11 Quebec Hunting Lodge (Awesome lightning strike on a pine ! - Video Dissection, 109 feet from camera). Link: <https://www.youtube.com/watch?v=szOnAUnuMLk>

This video of a lightning strike at a hunting lodge in Quebec, Canada had been shown before. Ken wanted most to show what he thinks is ball lightning. In the video, after the main flash discharges, what appears to be a small ball of light rolls down the left side of the lower roof, off the roof and into a gutter, where it dissipates.

10. 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.
11. 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.
12. Next meeting: Friday, September 14, 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.**

Luthern, A., 2018: Woman Struck by Lightning at Country Thunder Festival in Kenosha County. *Milwaukee Journal Sentinel*. July 20, 2018. Link: <https://www.jsonline.com/story/weather/2018/07/20/woman-struck-lightning-country-thunder-kenosha-county/806139002/>

Taschler, J., 2018: Lightning Victim Remains Hospitalized in Serious Condition. *Milwaukee Journal Sentinel*. July 24, 2018. Link: <https://www.jsonline.com/story/weather/2018/07/24/country-thunder-lightning-victim-serious-condition-burn-center/828829002/>

YouTube Video, 2018: Video Captures Lightning Bolt that Struck Woman at Country Thunder. Link: [https://www.youtube.com/watch?v=s6aIAtV\\_FKw](https://www.youtube.com/watch?v=s6aIAtV_FKw)

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CBS Denver, 2018: 'We Are Walking Miracles': Couple Struck by Lightning. *KCNC-TV*. July 31, 2018. Link: <https://denver.cbslocal.com/2018/07/31/lightning-colorado-springs-eleven-mile-park-zack-bri-petersen/>

Silver, C., 2018: 'We Are Walking Miracles': Couple Hit by Lightning During Severe Storm. *KKTV*. July 30, 2018. Link: <http://www.kktv.com/content/news/We-are-walking-miracles-Couple-hit-by-lightning-during-severe-storm-489514061.html>

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