

# LIGHTNING DATA CENTER MINUTES

November 10, 2017  
ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO  
[www.lightningdatacenter.org](http://www.lightningdatacenter.org)

Monthly Quote: “I can’t describe the feeling of it. It’s literally an indescribable feeling. I’d want to say it’s like sticking your finger in an electrical socket. It’s so much more intense than that...” Charles Paxton of Ripley, OK describing the sensation of being hit by lightning. Source: Mills, R. 2017. Lightning Killed 52 in Florida, Injured Hundreds More Over Last Decade. *Naples Daily News*. June 24, 2017.

1. Members Present: Clark, Swanson, Langford, Terry, Wells, Nibbe, Moore, Olson, Wachtel, Yarnell and Elder. Clark moderated. Meeting began at 11:50 AM and ended at 1:20 PM.
2. Carl Swanson reported the First Responder Data Collection Project is complete for 2017. Carl estimated lightning injuries were underreported by 20%. This year in Colorado, 5 persons were struck. Of those, two were killed (1 male and 1 female) and three were injured (3 females). This is the first time we can recall where female casualties outnumbered male casualties.
3. Carl posed a question to the group. A coroner had initially ruled a fatality as a lightning-related fatality. At a later point in time, the coroner changed the ruling to show cause of death as being “Arrhythmia – Other” and not a lightning fatality. Other officials within the county where this took place were upset by this change and reached out to the LDC for assistance. They want to know if we can find out why the change was made. Sheryl Olson suggested we ask what evidence or lack of evidence caused the change. Larry Moore will investigate this further.
4. Gene Richer from the St. Anthony’s Medical Staffing Office came in to show us the news EEDS software (Electronic Education Documentation System). It is a system designed to allow faster dissemination of meeting announcements, better counts of meeting attendance for CME purposes and to better track other learners. All participants will need to create a user account. More instructions on how to do this are forthcoming. They hope to have this implemented by the December meeting.
5. Our featured speaker was a lady named Caitlin. She and her friends started on a mountain bike ride at 11 AM. Not long after starting, a storm came upon them with heavy rain and hail. They ditched their bikes and ran under a grove of trees for protection, about three feet away from a large pine tree. Initially, they did not see any lightning or hear any thunder. They had been in the trees for about 5 minutes before they saw the first flash of lightning. Then it appeared the clouds might be clearing when a second strike occurred nearby. The area around them was lit up. Caitlin and her boyfriend were sitting on the ground, knees upright (not sitting Indian style), with his arms around him. She remembered feeling a huge electrical jolt through her left glut, followed by the smell of burning rubber. There was a ringing sound in her left ear. Initially, she had no sensation in her leg, but later did get up to stomp her feet, thinking her shoes were burning, but they were not. Her boyfriend tried to say something to her and his eyes were droopy. She told him to take some deep breaths. He took a couple of breaths and a third big

breath, then stopped breathing, at which time she started administering CPR. If there was a pulse in her boyfriend, it was very weak. Unfortunately, the CPR did not work and the boyfriend passed away. An off-duty EMT was in the area and performed CPR for 40 minutes to no avail. An ambulance was called, which took 45 minutes to arrive. She was taken to Telluride in the ambulance. She had burns on her legs. She thinks it was a ground strike. There were no marks on the tree they were closest to and there were no marks on the boyfriend's body.

Here are some of the questions and discussion following Caitlin's presentation.

Sheryl asked what position she was sitting in and if she had been leaning against a tree. Caitlin said they were not leaning against the tree, but they were near the branches. She also said they were sitting with their knees pointed upward. Since they were seated together and with his arms wrapped around her, this made at least four points of contact with the ground and possibly more.

Ken Langford suggested the ground may have been wet, allowing the current to travel some distance from the point of attachment.

Ken suggested a different hypothesis. A streamer launched off of his head and current flowed through him and out her rear-end, for the following reasons:

1. No immediate damage
2. Very minor markings on either person
3. Crossed his heart but not hers?
4. Exited her left butt cheek

Caitlin reported two distinct burns: a straight, linear burn on her left glut which disappeared in approximately 2-3 weeks. There was also a cluster of burn marks on her inner calf, which looked to her like raindrops. Those disappeared within 2-3 days.

At present she still doesn't have feeling in part of her left glut. She limped for approximately 2-3 weeks following the strike. She still has her strength but her nervous system not conveying the message.

She had ringing in ears for a few minutes after the strike, but reports no hearing loss. Her vision is good.

Initial diagnosis was arrhythmia.

Carl asked how she feels emotionally when lightning is in the area. She is not at ease during thunderstorms. About a month ago, lightning occurred during a rafting trip while she and her companions were on a river and thunder followed approximately 30 seconds later, suggesting the lightning was approximately 6 miles away. She said she felt very weird, ("hot and static") like her hair was about to stand on end. No one else in her party felt that way.

Phil Yarnell asked if there was a pulse when CPR was done. She said no.

Howard Wachtel asked if she or her boyfriend were wearing a watch. The boyfriend was not and she was. Her watch was still working after the strike. Ken suggested she take a compass and hold it near the watch to check for magnetism.

Cheryl noted a few lightning detection apps available for smartphone users, but cautioned not to be overly reliant on those products.

Howard suggested magnetic induction may have been the mechanism of injury. All electronic devices were working following the strike and she did not notice any heating of worn jewelry.

Caitlin was asked if her shoes had become brittle or if any of her other clothing had been affected. She did not report any changes to her shoes. A day later, there was a mark on her left glute. She had been wearing biking shorts and was underwear free. It was suggested she look at the shorts she was wearing and check for burn marks, etc.

Caitlin says her emotional support is good, but she has not sought counseling and would like to join a survivor group. Some resources were presented to Caitlin for further exploration.

6. Following the formal conclusion of the meeting, After the meeting, Ken shows laptop video and stills of a close flash from Manchester UK.

Alan Elder directed us to this video: “Boy Playing With Umbrella is Hit by a Lightning Bolt”  
<https://www.youtube.com/watch?v=4crHoG-67DQ>

According to Ken, this appears to be a genuine flash since the flaming debris comes from the tree behind the person rather than from the person in foreground. Source: YouTube; ZiaCo Pin; October 23, 2017

7. 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.
8. 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.
9. Next meeting: Friday, December December 8, 2017, from 11:45 to 1:00 PM at St. Anthony Hospital West. Room: Conference Rooms E & F. Roundtable format..

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.**

Heidelberg, K., 2017: 'Sudden' Lightning Strike Kills MHS Grad. *Montrose Daily Press*. August 14, 2017. Link: [http://www.montrosepress.com/free\\_access/sudden-lightning-strike-kills-mhs-grad/article\\_2fdc75f8-8161-11e7-b3b3-5343930fa27e.html](http://www.montrosepress.com/free_access/sudden-lightning-strike-kills-mhs-grad/article_2fdc75f8-8161-11e7-b3b3-5343930fa27e.html). Excellent Article with EMT Interview

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