

# LIGHTNING DATA CENTER MINUTES

October 14, 2016  
ST. ANTHONY HOSPITAL WEST, LAKEWOOD, CO  
[www.lightningdatacenter.org](http://www.lightningdatacenter.org)

“...the two were walking on the beach when the storm rolled in to the area. As the rain began to fall, they made a dash for shelter,” “The next thing that Tabor knew, he woke up on the sand after the lightning strike.” Source: Local police, as reported by WFLA.COM on July 19, 2016. Link: <http://wfla.com/2016/07/19/lightning-strike-sends-multiple-victims-to-area-hospitals/>

1. Members Present: Clark, Nibbe, Wells, Gift, Swanson, Langford, and Stewart. A lightning survivor was also present. Meeting began at 11:50 AM and ended at 1:05 PM. Clark moderated.
2. Steve Clark presented several items.

First, there is some updated information on the lightning event which killed 323 reindeer in Norway in late August. Lightning data were obtained from “lightningmaps.org”, which is “A community project with free lightning maps and apps”. The maps are provided, in part, by an organization called “blitzortung.org”, which provides lightning detection kits to those interested in joining their network. Three screenshots of lightning maps are attached to these minutes. On each image, the red circle denotes the general location of the park the reindeer were in when they were hit. The images are in six-hour blocks of time. The red strikes are closer to the start time and the yellow strikes are closer to the end time. Figure 1, from 00Z to 06Z, shows lightning strikes in a line to the south, southeast and east of the park. Figure 2, from 06Z to 12Z, shows multiple strikes within the circled area. This suggests the possibility of multiple strikes downing the reindeer, instead of a single flash. Figure 3, from 12Z to 18Z, shows a few flashes in the northeastern part of the circled area. From the data, it appears the lightning which killed the reindeer occurred roughly around midday. It also suggests more than one flash may be responsible. NOTE: The data contained herein are unofficial, but are included for thought and discussion amongst the membership.

Second, the World Meteorological Organization has certified two world lightning records. First, the longest flash (distance) was measured at 199.46 miles in Oklahoma on June 20, 2007. Second, the longest duration for a single flash is 7.74 seconds, measured in southern France on August 20, 2012. Ken Langford wondered if the long-distance flash was grounded or if it was intracloud lightning. He has photographed intracloud lightning before, using a large-format film camera and a wide-angle lens. He showed us one such image from a storm in eastern Colorado. More information on these certifications will be forthcoming in the September issue of the *Bulletin of the American Meteorological Society*.

Third, LDC has been approached with two requests for three lightning safety presentations. The Grand County Fire Protection District has requested two presentations: one for first responders and allied professionals and a second for the public. LDC is communicating with officials to set up a time sometime in May 2017, although that is subject to change. The third request came to us through Bear Creek Lake Park, which is part of the City of Lakewood in Colorado. Several volunteer staffers provide assistance during outdoor recreational activities at the park, sometimes during thunderstorms. More information will be provided as things progress.

Fourth, and last, Steve Clark received a call from Danielle Berger, who is a self-employed producer and media professional. She wants to do a segment on lightning strike survivors. See her website at [www.dkberger.com](http://www.dkberger.com). What follows is what she wants to do, in her own words:

“Hi Steven,

Thanks for the due diligence. I'm providing the following to help you circulate the broad strokes to those considering participation.

I am writing on behalf of Great Big Story (<http://www.greatbigstory.com/>) and The Weather Channel who are developing a series entitled "That's Amazing" that will take audiences on a journey to find passionate people doing awesome, untold and curious things with weather and the elements.

The subjects are unique and varied: artists, scientists, athletes, cooks, explorers... but their stories are all engaging and visually arresting. They take us somewhere we haven't been to show us things rarely seen.

In researching, I am interested in considering a pitch for a story about survivors of lightning strikes with a particular focus on what happens to the body that can be visually represented in images of the temporary appearance of Lichtenberg (Fering) patterns on victims who have been struck.

As this idea only so far exists in my mind, and would need to be pitched to the show team once a sense of how we could tell this story visually is assessed, I first would need to connect with interested participants to gauge what existing visual documentation exists, how they would tell their stories (in a phone call with each), to make a determination as to whether or not we have enough material to sustain a segment of several minutes.

If you could provide me with contact information of interested parties, I could connect with them to make the assessment and determine if a pitch is viable to share with the show team for approval.

If approved, we could indeed deploy a crew to the Denver area for a couple of days of filming for the series which should be delivered for broadcast before or immediately after the new year.

I'm available to answer further questions, should you have them. Let me know if you'd like to arrange a time to connect by phone.

Thank you again for your consideration and help.

Sincerely,  
Danielle  
Sr. Producer  
That's Amazing”

If you are a survivor and want to participate, please e-mail your contact information to me at [sclarktoto@gmail.com](mailto:sclarktoto@gmail.com) and I will forward it to Danielle.

3. Our colleague, Professor Derek Elsom and three of his colleagues wrote a recent paper about two men that were killed by lightning in the UK. The two killed were with separate groups less than 2 km (~1.2 miles) apart. Both fatalities occurred at almost the same time. There were two lightning flashes recorded 0.2 seconds apart, which suggested two possible scenarios: two separate lightning flashes occurring at the same time, or, one single stroke of forked lightning hitting both groups. The paper closes with some lightning safety tips for hill and mountain walkers. Ken Langford noted there are occasions where one strike will be negative and another, nearby strike can be positive and wondered if the polarities of the strikes in the UK were known. ADDENDUM: Following the meeting, Carl Swanson asked Professor Elsom what the polarities were of the strikes which killed the two men. Professor Elsom said the ADTDnet lightning detection system in the UK does not provide polarity data, but that capability is being addressed.
4. Carl Swanson presented his final statistics for lightning injuries and fatalities in Colorado for 2016. Eight people were struck. Two died and six others were injured. Thank you to all of the first responders and allied professionals who participated in Carl's project.
5. The survivor who attended our meeting had spoken to a rancher, who lives near Elizabeth, Colorado, which is about 40 miles southeast of Denver. He rancher said several cattle were struck and killed by lightning. Two photos are shown below.
6. Ken Langford suggested we should add to our website some lightning safety links akin to "Don't Try This At Home" and "Where NOT To Be". The intent would be to educate what people should not be doing when lightning is present.
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, November 11, 2016 at 11:45 AM at St. Anthony Hospital West. Room: TBA.

Respectfully Submitted,  
Steven E. Clark, Consulting Meteorologist

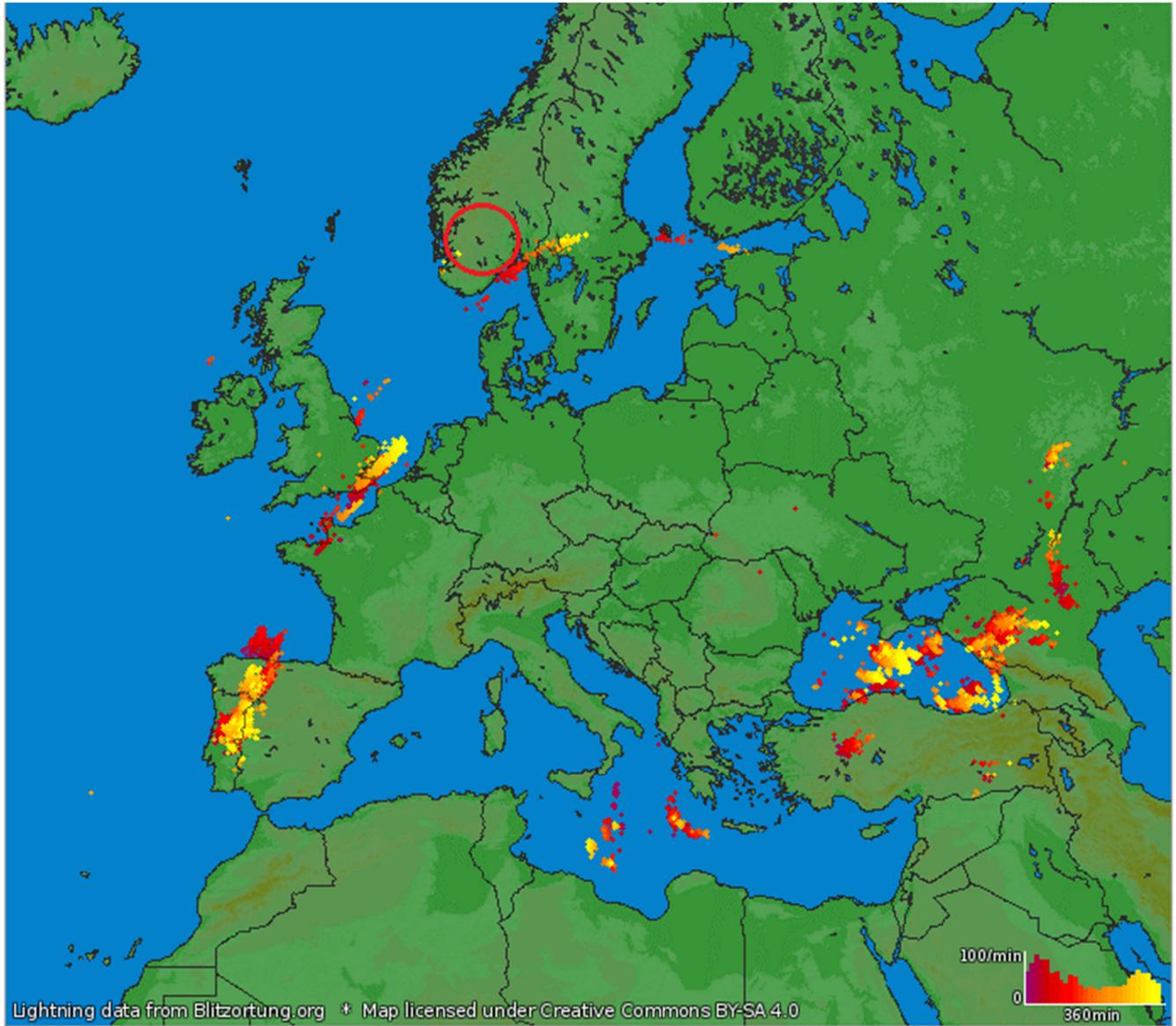


Figure 1: Lightning Strikes on August 26, 2016 from 0000Z to 0559Z

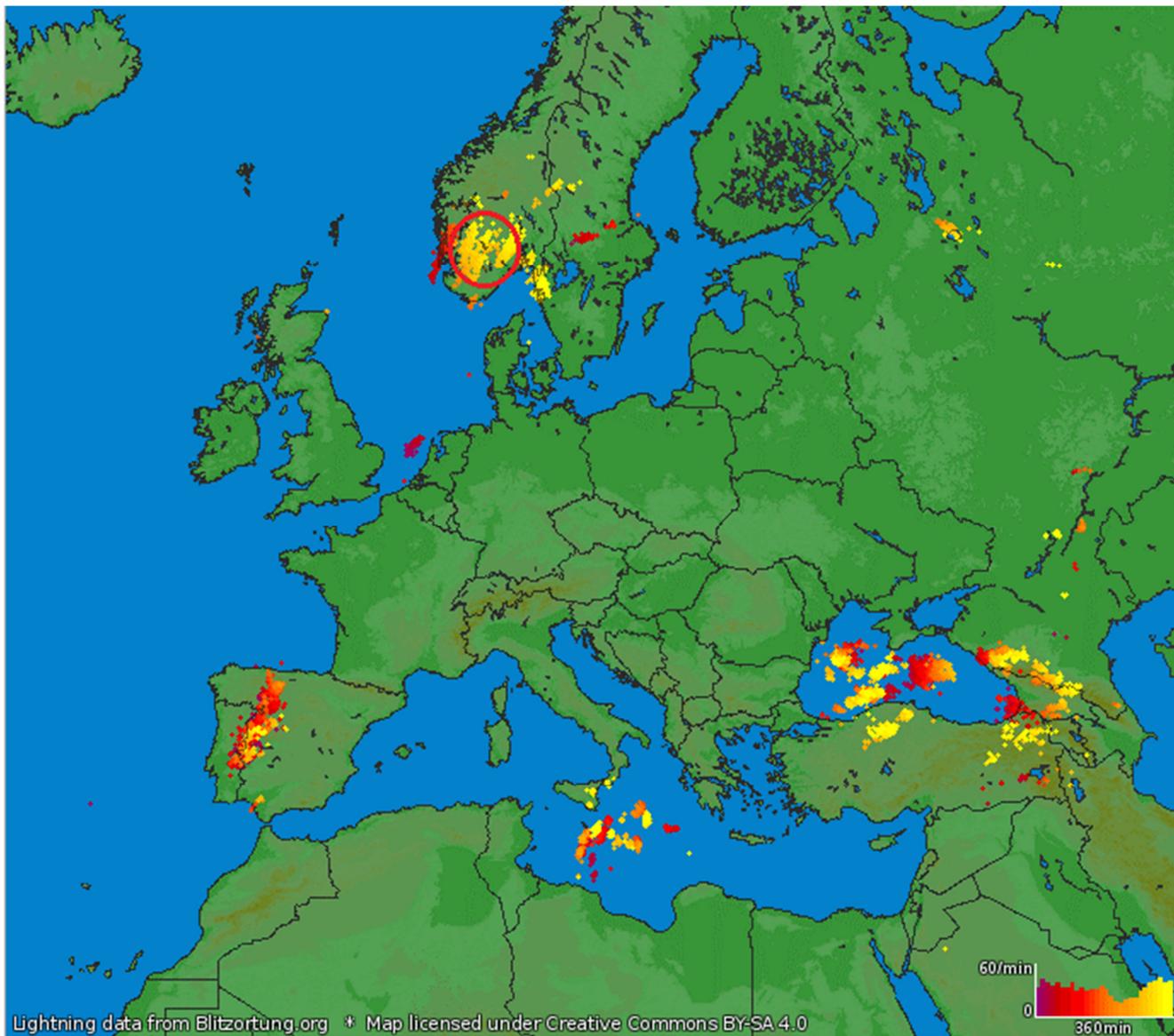


Figure 2: Lightning strikes on August 26, 2016 from 0600Z to 1159Z.

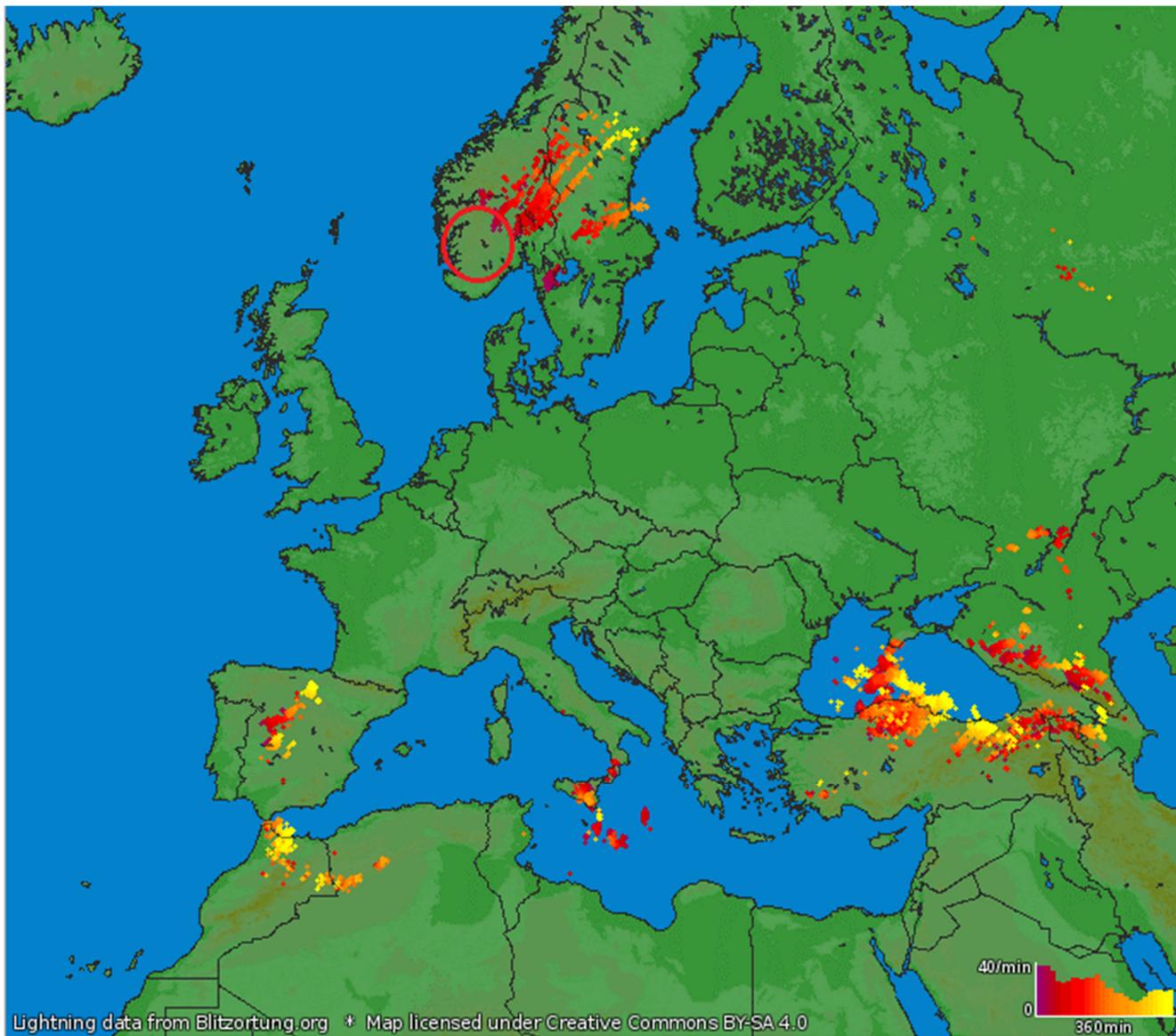


Figure 3: Lightning Strikes on August 26, 2016 from 1200Z to 1759Z.



Cattle killed by lightning near Elizabeth, Colorado.

## 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.**

Associated Press, 2016: "200 Mile Long Lightning Bolt [sic] in Oklahoma Deemed World's Longest". *Wbrz.com*, September 15, 2016. Link: <http://www.wbrz.com/news/200-mile-long-lightning-bolt-in-oklahoma-deemed-world-s-longest/>

Johnson, W.B., 2016: "Lightning Records: A 200-Mile Bolt, A 7.7-Second Flash". *The Arizona Republic*, September 22, 2016. Link: <http://www.azcentral.com/story/news/local/arizona-weather/2016/09/22/lightning-record-verified-arizona-scientists/90806202/>

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Elsom, D.M., J.D.C. Webb, S-E Enno and A. Horseman, 2016: Lightning Injuries and Fatalities in the UK in 2015 and Lightning Safety Advice for Hill and Mountain Walkers. *International Journal of Meteorology*, **41**, 397, 105-126. Link: [https://www.researchgate.net/profile/DM\\_Elsom](https://www.researchgate.net/profile/DM_Elsom)

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