



Lightning Data Center  
St. Anthony Central Hospital  
1700 Broadway, Denver, CO 80202

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Minutes  
December 14, 2007

Quote Of The Month:

"I'm a superstitious man, and if some unlucky accident should befall Michael - if he is to be shot in the head by a police officer, or be found hung dead in a jail cell... or if he should be struck by a bolt of lightning - then I'm going to blame some of the people in this room; and then I do not forgive. But with said, I pledge - on the souls of my grandchildren - that I will not be the one to break the peace that we have made today."

-Don Corleone (not directed at any of our Michaels!)

The meeting was convened in Auditorium B at St. Anthony Central Hospital, Denver, Colorado, and was moderated this date by Kenneth Langford.

Members present: McDonough, Cherington, Hodanish, Langford, Clark, Foley, Burrows, Gift, Cui-Gift, Yarnell, Olson, Moore, Wallace, & Wells.

New Members/Guests: Larry Moore, ear doctor. Mr. Moore has been spending time on a Hawaiian cruise ship and decided to spend some time here in Denver.

Roundtable Items:

- 1) Sheryl Olson said she and Larry were taking off from Lhasa, Tibet in a Boeing 767 when the plane was struck by lightning. She heard a loud noise, like an explosion and saw a bright, white flash of light. The plane landed in Shangdu(?), China, where they switched planes, presumably due to damage to the engine(s) on the left wing. Sheryl said a witness sitting on the left side saw lightning hit the left wing. She thinks the lightning struck the left wing and discharged out the right wing.
- 2) Sue Wiggins could not attend the meeting and will receive her Christmas card at January's meeting.
- 3) Michael Cherington said his house had been hit by lightning earlier this year and had shown us, at last month's meeting, the ply-board showing a blown-out appearance along with some blackness on it, indicating charring.

- 4) Ken Langford has constructed a database of past speakers for past LDC meetings, searchable by topic and by speaker. This will help the LDC to get different speakers for different aspects of the lightning phenomenon.
- 5) Mike Foley delivered a message from Rich Kithil. The National Lightning Safety Institute (NLSI) will have a two-day seminar (January 15 and 16, 2008) at NLSI in Louisville. The seminar is about lightning protection for engineers. The regular registration fee is \$995, but NLSI will allow LDC members to attend and get a 50% discount off the regular registration.
- 6) Per Ken Langford, Bruce Paton had suggested during a previous meeting that we submit our Lightning Safety Poster to a trade organization such as the Wilderness Medicine group that Sheryl had mentioned.

The speaker for this meeting was Steve Hodanish of the National Weather Service in Pueblo, Colorado. Steve is a graduate of Lyndon State College, in Lyndonville, Vermont (as is Ken Langford), and has been with the National Weather Service since 1991. Steve has also made great contributions to our beloved field of study by posting an excellent lightning safety website (<http://www.crh.noaa.gov/pub/?n=ltg.php>), and by completing many excellent case histories of lightning injury incidents, from which we can take many lessons. Steve's presentation was entitled The Lightning Program at NWS Pueblo - An Update.

Steve's presentation came in two parts: a Colorado lightning climatology, and then a look at some case studies of people being stuck by lightning.

For the lightning climatology, 16 years of lightning data (1989 to 2005, except year 2000) were examined. Geographically, the highest strike frequency is along the I-25 corridor between Denver and Colorado Springs, centered on the Palmer Divide. There is a smaller cluster of strikes centered roughly near Raton, New Mexico. On the flip side, the most pronounced area of the fewest lightning strikes is the San Luis Valley, due to the lack of moisture that gets into the valley. Ironically, the Sawatch Range, home to some of Colorado's highest mountain peaks, is also relatively devoid of strikes for the same reason. Also surprising is the relative paucity of strikes in the area along the boundary between Larimer and Weld counties. This is due to a convergence zone aligned SW to NE which sets up to the southeast of Denver. Storms form along this zone and deprive areas further north of moisture. Also, Colorado's river valleys tended to be relative devoid of strikes.

When do the most strikes occur? By time of day, around 4 PM. The fewest, around 8 AM. What month sees the most strikes? August, followed by July.

The second half of Steve's presentation was a new examination of his case studies. Steve started by asking some questions – a few of which are listed here. How much cloud-to-ground lightning was in the area prior to the flash that hit the victim? Was it the first flash? Was it a “bolt from the blue”? What was the distance between the flash that struck the victim and previous flashes? Were the people in the area aware of the presence of lightning? To answer these questions, Steve would find out when 911 was notified of a strike and would work backwards from that time to locate the likely flash that struck the victim and then track, both in space and time, previous flashes relative to the time and place of the victim's strike. **The key point from Steve's study is this: People are being struck and killed by lightning at times when the flash rate is low – say, a flash every 1.5 to 2 to 3 minutes. It is believed the low flash rate lulls people into a false sense of security.** In contrast, Steve has had relatively few instances of people being caught during frequent lightning activity as they aware of the situation and tended to seek appropriate shelter.

Thank you, Steve, for a wonderful update to your work.

For those wanting to examine Steve's lightning studies in more detail, here's the link: [http://www.crh.noaa.gov/pub/?n=/ltg/case\\_studies\\_index.php](http://www.crh.noaa.gov/pub/?n=/ltg/case_studies_index.php)

Finally, thanks to Ken Langford for his assistance with this month's minutes.

10. Next meeting: Friday, January 11, 2008 at 11:30 am in Auditorium B of St. Anthony Central Hospital.

Happy Holidays, and Happy New Year!!

These minutes do not represent official positions of LDC or attending individuals. Any inaccuracy in capturing the discussions presented is solely the writer's responsibility.

These minutes are intended to capture the essence of the meeting as recorded and respectfully submitted by: Steve Clark, Consulting Meteorologist