

LIGHTNING DATA CENTER MINUTES
JUNE 10, 2011
ST. ANTHONY CENTRAL HOSPITAL, DENVER, CO

Monthly Quote: “They were in the proximity and they felt the ground shake.” From the June 9, 2011 Hattiesburg American. Link to the full article below in “Lightning in the News” section.

1. Meeting began at 12:00 PM and adjourned at 1:05 PM.
2. Members present: Clark, Yarnell, Elder, Gift, Nibbe, Wells, Stewart, Langford, and Foley. Clark moderated the meeting.
3. The LDC’s administrative support person with St. Anthony’s Hospital is Devin Walter. Her phone number at the new facility is 720-321-0600. The new website is www.stanthonyhosp.com. As of this writing, our website is still down, and hopefully, we’ll be able to revive it soon after the move is completed.
4. This meeting was the last meeting held at St. Anthony’s Central. There will not be a regular meeting in July. Instead, on Friday, July 29, there will be a tour of Coors Field (important details below), with some of it being for baseball fans and some of it being devoted to lightning safety and protection at the ballpark. Please see the announcement below these minutes for details. We will meet for the first time at the new facility in Conference Room E on Friday, August 12, 2011. Minutes for July will not be issued. Instead, combined minutes for July and August will be written.
5. Phil presented the case of a railroad employee that was struck by lightning while outside at a rail yard. He had noticed some funnel clouds and then noticed a pole he was near was glowing bright white with a yellow aura around it. A wire jutted out of the pole. Apparently, an electric current jumped from the wire to the patient’s left arm, knocking him to the ground. He got up and was found to be incoherent, confused, and repetitive. Patient did not recall hearing any thunder, nor was there any rupturing of the eardrums. CPK levels were found to be slightly elevated. Three days following the strike, he reported tinnitus, along with a sensation of electrical currents in the crown of his head. Patient also reports a pulsing sensation in his arm and difficulty falling asleep, due to involuntary jerkiness. During later visits to the doctor, patient was found to be repetitive, as he would ask the same questions again and again, suggesting ADD. He is working again and is taking medications to address the abnormal sensations and the repetitiveness. Workers inside the building reported seeing an electric flash across the inside of the building. Remarkably, no one else was hurt and there were no reports of any physical damage to the building, wiring, computers, etc.

6. Greg Stewart brought to our attention an iPhone application that is a lightning detection display from Boltmeter (www.boltmeter.com). The app is provided from AllisonHouse, with the raw data coming from USPLN.
7. Reminder: The National Weather Service's National Lightning Safety Awareness Week is June 19-25, 2011. Here's the website:
<http://www.weather.gov/os/lightning/>.
8. The LDC was saddened to learn of the declining state of health of one of our members, Dick Burrows. According to Greg Stewart, Dick is very frail and is suffering from complications of Lou Gehrig's disease. A graduate of the Colorado School of Mines, Burrows loves the outdoors and loves to hike. He was one of the first members of LDC, if not the first, to actively promote the LDC safety poster to federal, state, and local government agencies. As an avid outdoorsman, he is keenly aware of and appreciates the lightning hazard as it relates to wilderness activities. Dick has donated a box of his collection of lightning-related books, articles, and pamphlets to the LDC. These materials currently reside on the LDC's library shelf space at the new hospital. A lightning-themed card was passed around for members to sign.
9. Clark presented an article about a lightning strike at an Air Force base near Hattiesburg, Mississippi, where 77 people were bussed out of a camp. Initially, it was thought four people were close enough to have been struck, but that number was reduced to three. There were no reports of injuries, fatalities, of physical damage to the premises.
10. Langford presented analyses of some video footage of reported lightning strikes.

In the first video, what looks like security camera footage, shows a man walking away from the camera. A bus is parked to the left of the man, casting a dark shadow away from the camera, which is clearly visible. The lightning strikes, knocking the man down to the ground for a few seconds. He gets up, continues walking, and is hit again. Ken says the video is a fake due to two main reasons. First, the shadow cast by the bus should have been washed out and bathed in white light at the time of the strikes. Second, given the closeness of the strike to the camera, the light from the strike should have saturated the image in a blinding white light. Instead, the flash was shown as typical, jagged lightning, which is unrealistic, given how close the camera was to the flash.

In the second video, a man is seen walking across the street in a crosswalk, while carrying an umbrella during a rainstorm. A blinding white flash is seen and the man is on the ground. He gets up and looks a little dazed, and then continues on his way. Ken thinks this video may very well be real due to the saturation of the image from the strike and to the appearance of reflected light from the rounded corner of a car bumper facing the camera. The optical ray tracing from the flash to car bumper to camera appears to be correct.

In the third video, lightning hits a skyscraper in Boston and appears to travel halfway down the building in rather dramatic fashion. A frame-by frame analysis shows the digicam did not correctly capture the event. The apparent travel of the lightning down the side of the building was caused by the memory storing "a frame and a half" of imagery in one frame. In film photography, this is akin to shooting your subject, advancing the film halfway, and shooting the same subject again. It is unclear why this happened.

11. While checking out the new St. Anthony Library facility, Ken & Steve were introduced to Kymberlee Morrissey. She oversees Peer Review for Continuing Medical Education on behalf of St. Anthony Hospitals. Kym suggested that the Lightning Data Center meetings might be "narrowcast" (as opposed to broadcast) over the internet using a Polycom teleconferencing system. This would allow remote medical providers in more rural areas of Colorado the chance to see our meetings and earn CME credits. She is proposing this as an activity within the St Anthony Hospital/Centura Health system.

Does the membership have opinions about participating in such a program? It would mean the meeting would go out into the world in real time in a limited fashion. I am not sure about the capability for two way communications; this would be another thing to discuss. Would we wish to engage remote parties as active participants? Could this system be used to engage some of our long time remote members? Would the technological interface make the meetings flow less easily? Please reply to Ken Langford with questions or concerns, and he shall attempt to summarize the discussion, possibly in a special email. Ken can be reached at mrrandom@comcast.net.

12. Al Nibbe presented the case of a koi fish which suffered scoliosis, an abnormal bending of the spine. The fish was in a pond when lightning hit a nearby tree, causing a compression fracture. A few days later, the fish was struggling to swim and was not eating well. After surgery, the fish initially showed marked improvement, but then died two months later due to infection.
13. These minutes do not represent official positions of LDC or its members. They simply reflect the comments made at the meeting.
14. Next meeting: Coors Field Tour, Friday, July 29, 2011. **VERY IMPORTANT:** Please read the details about the tour below. Subject: Ballpark tour and lightning protection system.

Respectfully Submitted,

Steven E. Clark, Consulting Meteorologist

In Case You Missed It...Lightning in the News

This is a monthly listing of news and videos about lightning and allied areas as reported in the media. A headline is listed, followed by a link to the article. Please note that some of the links are perishable, which means you'll need to go to the source for the article. Enjoy!

National Weather Service National Lightning Safety Awareness Week, June 16 - 21, 2011. <http://www.weather.gov/os/lightning/>

“Camp Shelby Scare: 77 Airmen at Hospital After Lightning Strikes” Hattiesburg American, June 9, 2011.
<http://www.hattiesburgamerican.com/article/20110609/NEWS01/106090327/Camp-Shelby-scare-77-airmen-hospital-after-lightning-strikes?odyssey=tab|topnews|text|FRONTPAGE>

YouTube Videos from Ken's Presentation

Video One: “Lightning Strikes Man...not once...but twice...”
<http://www.youtube.com/watch?v=2Wwu4FB7Cmc>

Video Two: “Vo cabeceia raio – Man hit by lightning (Warning: graphic)”
<http://www.youtube.com/watch?v=aY144xHZ2gg>

Video Three: “Boston Lightning Storm” http://ireport.cnn.com/docs/DOC-616705?hpt=hp_bn1

“Stabilisation of scoliosis in two koi (Cyprinus carpio)” Govett, et.al., The Veterinary Record, 2004, Volume 115, pp. 115-119.
<http://www.westernu.edu/bin/admissions/profile-doc/govett-scoliosis.pdf>

IMPORTANT INFORMATION REGARDING YOUR TOUR!

TICKET POLICY

- Any changes to your tour must be made **at least one week** prior to your tour including cancellations or time changes. **Any cancellations or tour time changes within this time will result in a forfeiture of your deposit. If your tour was booked within one week of your tour date, your reservation is final and cannot be canceled or changed.**
- All private tours are designated for groups of 25 or more; therefore, your group is responsible for paying for at least 25 people. If your group is going to be less than 25 people, you must either pay for the minimum of 25, or reschedule your group on a public tour. Cost for public tour tickets is \$7 for adults, \$6 for seniors (55+) and \$5 for children (3-12). In addition, public tours are at different times than our private/group tours. If you need to switch to a public tour, you will need to move your tour time as well. Please call for available public tour times.
- We ask that the majority of your tour tickets be purchased in advance. Our ticket office cannot print any tickets until payment is received. You may pay for some of your tickets on the day of your tour, but you must arrive early to do this as paying for a lot of tickets at this time could delay the start of your tour and require us to shorten it. The fewer tickets you need to buy on the day of your tour, the better. There are no refunds once tour tickets have been purchased which is why we recommend you purchase fewer tickets than you think you will need to accommodate any no-shows on the day of your tour.
PLEASE RETURN THE REGISTRATION FORM TO LET US KNOW HOW YOU WILL BE HANDLING PAYMENT FOR YOUR TOUR, REGARDLESS OF WHETHER OR NOT YOU ARE PAYING IN ADVANCE OR ON THE DAY OF YOUR TOUR.
- All guests three years of age and older must have a tour ticket to go on a tour. We do not require a minimum number of chaperones for kid's tours, but we do ask that the adults in your group be responsible for supervising the children.

SECURITY

- Due to heightened security in all public facilities, all bags brought into Coors Field for a tour will be subject to search. This search will include purses, bags, backpacks and fanny packs. To avoid any delays in starting your tour, we highly recommend that you and the members of your group not bring any bags on your tour.

TOUR INFORMATION

- The tour entrance and meeting spot is at Gate D of Coors Field, located at the intersection of 20th and Blake Streets. Your tickets should be picked up at the Coors Field ticket windows located between Gates C & D.
- For security reasons, we are not permitted to exit any members of your group early.
- Our tours begin on time. Please plan on arriving at least 10-15 minutes early. If your group arrives late, your tour will be shortened to fit in the original time slot. For security reasons, any guests arriving 15 minutes after the start of your tour will **NOT** be able to join your group.
- This is an indoor and outdoor walking tour of Coors Field. Please wear comfortable shoes and clothing appropriate for the weather on the day of your tour. Our tours operate rain or shine. In the event of severe weather on the day of your tour, please call 303-312-2130. If your tour has been canceled, the message on this line will be changed to let you know.
- No eating, drinking, or smoking is allowed. We also ask that guests not use cell phones during their tour. Water in plastic bottles is permitted. Cameras are also permitted. For a complete list of restricted items, please go to http://colorado.rockies.mlb.com/col/ballpark/ballpark_guide.jsp#r.
- There is one restroom stop approximately 20 minutes into your tour. This is the only stop available as restrooms in the ballpark are locked when the Rockies are not playing.

COORS FIELD TOUR PARKING

Please note that Coors Field's Main Parking Lot A is no longer available for tour guest parking. Due to heightened security, this lot is now open only during games.

All Tours begin at Gate D at the intersection of 20th & Blake Streets.

#1 - The RTD Lot – located at 22nd/Park Avenue and Wazee. Payment for these parking spaces is made to a moneybox with numbered slots for corresponding numbered parking spaces. On Rockies evening home game days, all cars must be moved from this lot by 3:00pm or they will be towed. Cost is \$3 per vehicle.

#2 - Meters on 21st Street between Blake and Market Streets - These are two-hour meters. On the day of a Rockies evening home game, the meters may have “no-parking” bags covering them. You may park at a bagged meter (on an evening game day only) as long as your car is moved by 3:00pm. If you receive a parking ticket in error, please call 303-312-2130. When not bagged, these meters cost \$.25 for 75 minutes.

#3 - Meters on Market Street between 20th and 21st Streets - These are two-hour meters. The meters cost \$.25 for 15 minutes.

#4 - Meters on Blake Street – These meters are located right next to the ballpark but are only 60-minute meters (tours last 75+ minutes). If your bus driver will be staying with your bus, they may park on Blake Street, but we ask that they not block access to our ticket windows. These meters cost \$.25 for 15 minutes.

Map of Coors Field. The tour starts at 11 AM at Gate D, which is located at the lower-left corner of the map, behind Home Plate, at the corner of 20th Street & Blake.

