

**LIGHTNING DATA CENTER MINUTES**  
**JANUARY 8, 2010**  
**ST. ANTHONY CENTRAL HOSPITAL, DENVER, CO**  
[www.stanthonyldc.org](http://www.stanthonyldc.org)

Monthly Quote: “Mathematicians are a species of Frenchmen; if you say something to them, they translate it into their own language and presto! it is something entirely different”. From p.43 of Complexification, by John L. Casti, Harper Collins, 1994.

1. Meeting began at 11:50 AM and adjourned at 1:00 PM.
2. Members present: Wachtel, Clark, Wells, Gift, Cui-Gift, Collier, Yarnell, Keen, Langford, Sunderland, and Engle. Clark moderated the meeting.
3. Robert Gift saw an article in the Denver Post describing a toddler being burned after putting a USB cable in her mouth. The toddler received 3<sup>rd</sup> degree burns to her mouth. Furthermore, she was reported to have burns on her fingers. The LDC’s Mike Foley was interviewed by 9News. 9News reported the other end of the cable was connected to a closed laptop that was plugged into a wall socket. Michael stated the shock may have been caused by a malfunction in the computer circuitry. He also said the voltage and current in the USB can cause nerve and tissue damage, but the relatively low voltage and power could not explain the burns seen on the fingers, which raises questions about what other objects the toddler might have been touching when she had the USB cable in her mouth. Michael stated he’s never seen a low-voltage injury as serious as this one. The first link below is Mike Foley’s interview and the other two are the Post articles.  
<http://link.brightcove.com/services/player/bcpid34762914001?bctid=60904845001>  
[http://www.denverpost.com/search/ci\\_14145613](http://www.denverpost.com/search/ci_14145613)  
[http://www.denverpost.com/search/ci\\_14145039](http://www.denverpost.com/search/ci_14145039)
4. We received an update on the woman that was struck while on an archaeological dig in New Mexico. She has improved significantly. She is able stand up with assistance. Her motions are still exaggerated, but continue to improve, slowly but surely. Her self-awareness has grown to where she now knows of her deficits. As a result, she has had periods of depression and has become more shy and withdrawn. The family will be relocating to a midwestern city, where the woman will continue her recovery, with an eye towards reintegration into the community. The LDC wishes all the best to the family during this time of recovery.
5. Rich Keen summarized the 2009 lightning statistics from his station in Coal Creek Canyon. There were 85 thunderstorm-days during the year, which is just about average. June and July were the peak months and October and November saw almost no activity, due to an early onset of colder air. Rich also noted that El Niño was running strong and holding steady. He did not know if El Niño had reached maximum strength, or would continue to intensify. When asked how the local weather would be affected, Rich stated El Niño typically results in wet, heavy, spring snows in the Denver area.

6. Howard Wachtel mentioned some interesting points.
  - A study of Alzheimer's Disease was done where mice were subject to electric fields equivalent to those found in cell phones. Curiously enough, the mice subjected to the fields had a lower incidence of Alzheimer's compared to those in a control group.
  - Howard mentioned a group called URSI – Union Radio Scientifique Internationale, aka International Union of Radio Science. The United States National Committee of URSI held a Technical Conference on January 6-9, 2010, in Boulder, Colorado. Two sessions were given over to lightning and the ionosphere and one session was on Human Body Interactions with Electromagnetic Devices. Here's the link to the 2010 Program: <http://www.nrsmboulder.org/program.html> There is a link on that page which allows you to see the complete program.
  - Howard also noted the Charlie Rose show, which did a series on how the brain works. There are videos on the web. Go to [charlierose.com](http://charlierose.com) and then type the word "brain" in the search box and the shows will be listed.
7. With football being in the air lately, Phil mentioned how, many years ago, he had become interested in the biomechanics of concussion. Football players call it "The Ding". Phil's interest in this was triggered, in part, when the wife of a former CU football player became involved in a car accident and suffered whiplash. Later, Phil found that players suffering concussions, or even lesser injuries, will start showing symptoms of Alzheimer's in their 40's and 50's. When he approached the National Football League with these findings many years ago, he was dismissed by the NFL and was wished continued success in his studies. Nowadays, the NFL is paying much more attention to the issue of concussion and the players' well being. Ken wondered if lightning could have a similar concussive effect on people that are knocked over by the shock wave. Howard mentioned that repeated stresses on the body (mechanical, electromagnetic, or thermal) can have cumulative adverse effects.
8. Dr. Sunderland recently bought a book entitled A Match to the Heart: One Woman's Story of Being Struck by Lightning, written by Gretel Erlich. She was struck while walking on her ranch in 1991. The book describes the lightning strike and then her journey to recovery.
9. These minutes do not represent official positions of LDC or its members. They simply reflect the comments made at the meeting.
10. Next meeting: Friday, February 12, 2010 at 11:45 AM in the Main Auditorium at St. Anthony Central Hospital. Subject: TBA.

Respectfully Submitted,

Steven E. Clark, Consulting Meteorologist