

ZP11/Jim Smoot/Weekly Notes

7/15/14

PAPER ACCEPTED IN JOURNAL OF GEOPHYSICAL RESEARCH (email:

timothy.j.lang@nasa.gov / 256-961-7861): Timothy Lang (ZP11) is second author on an article recently accepted for publication in *Journal of Geophysical Research*. Titled "Synoptic scale outbreak of self-initiated upward lightning (SIUL) from tall structures during the central U.S. blizzard of 2/1-2/11," the paper describes the lightning that occurred during that Chicago-area snowstorm. Over 90% of the snow-related lightning bolts were upward discharges initiated from various towers, buildings, and other tall human-made objects that are spread across the region. This is different than typical cloud-to-ground lightning, which starts inside the cloud. The lightning was related to small-scale, elevated convection that occurred due to frontal lifting in the cyclone's comma head region. This convection, though weak, likely generated enough charge separation to help tall objects initiate their own lightning flashes.

INTERVIEW FOR THE WEATHER CHANNEL (email: timothy.j.lang@nasa.gov / phone: 256-961-7861): Timothy Lang (ZP11) filmed an interview segment for a program that will air on The Weather Channel. Dr. Lang discussed sprites, jets, and other lightning-related transient luminous events for an upcoming episode of the program "Secrets of the Earth," called "Strange Skies." The interview occurred on 7/11/14 at the NSSTC, and an air date for the program has not been set yet.

MSFC EARTH SCIENTISTS HELP ATLANTA COOL ITS ENVIRONMENT (mail

to: dale.quattrochi@nasa.gov/256-961-7887; jeff.luvall@nasa.gov/256-961-7886; USRA_Mohammad Al-Hamdan_mohammad.alhamdan@nasa.gov/256-961-2465). MSFC Earth scientists have been studying the dynamics of Atlanta's urban heat island effect (UHI) since the mid-1990's. They have worked with federal, state, and local agencies in studying ways to cool the area's environment, and monitor changes in land cover that impact land surface temperature (LST) in the Atlanta area. Atlanta embarked on a large-scale tree planting effort in the late 1990's as a way to mitigate the UHI. Recent results of the NASA remote sensing data have shown that tree planting has indeed reduced LSTs, particularly in the Atlanta central business district (CBD).

UNIVERSITY OF ALABAMA IN HUNTSVILLE AWARDED HOSTING OF

UPCOMING APPLIED SCIENCES WORKSHOP (email to andrew.molthan@nasa.gov / 256-961-7474): Mr. Kevin Fuell, a UAH scientist and member of the NASA Short-term Prediction Research and Transition (SPoRT) Center (ZP11) was awarded funding to support an upcoming NASA Applied Sciences Program workshop that will focus on applications derived from the Suomi National Polar-Orbiting Partnership (S-NPP) satellite system, launched in 2011 as a joint venture between NASA and NOAA and as a precursor to the future Joint Polar Satellite System (JPSS). Tentatively scheduled to be held from November 18-20, the workshop will feature numerous presentations on Applied Science activities resulting from sensors carried aboard the S-NPP, focused on Disasters, Ecological Forecasting, Health and Air Quality, and Water Resources. The workshop is expected to bring 100-150 of our Earth Science colleagues to the Huntsville area. Several ZP11 team members (Dr. Gary Jedlovec, Dr. Andrew Molthan) and their UAH colleagues (Mr. Kevin Fuell, Ms. Sue Estes) will be involved in the organizing

committee to aid in the construction of the workshop agenda, inviting keynote speakers, and ensuring a productive workshop held on behalf of the Applied Sciences community.