

Certified Consulting Meteorologists Newsletter



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Winter 2014-15

This newsletter is intended to enhance communications between CCMs, the BCCM, and the AMS. It is published quarterly to provide information about the on-going activities of the CCM program. All CCMs are reminded that there is a location on the AMS website for a forum to facilitate communication and exchanges between CCMs. The CCM forum can be accessed via the CCM webpage at: <http://ametsoc.org/amscert/ccm/index.html>

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The Chair's Column

Dear CCM Colleagues:

As I write this we are finalizing plans for the BCCM meeting and oral exams in Phoenix, Arizona on Monday and Tuesday, January 5 and 6, 2015. This year we will hold seven oral exams in Phoenix, four of them for women. Two regional oral exams resulted in two new CCMs in June as previously reported in this space. So far in 2014 we have had eleven new applications, and there were four outstanding applications from 2013 when the year began. Applications received after September 1 simply did not have time to make it through the process and will be handed over to the 2015 Chair of the BCCM, Buddy Ritchie for future processing.



All of the open applications received prior to September 1 have been completed, graded and, where appropriate scheduled for oral exams. If you are mentoring a future CCM candidate, you should know that applications received at AMS after September 1 of a given year are not likely to make it through the exam issuance – exam completion – exam grading process in time to be scheduled for an oral at the following January AMS meeting. You might also let them know that they should contact the people that they list as references so that they are expecting the request from the AMS for a reference letter, and don't needlessly hold up the exam issuance process.

Mike Mogil is hard at work putting the final touches on the CCM Forum for the Annual Meeting. If you would like to help Mike with any last minute preparations, feel free to contact him directly at: hmmogil@gmail.com.

As always, if you have any questions about the BCCM or would like to refer potential new CCMs to someone who can answer their questions about the CCM process, please contact me or Buddy Ritchie at bccm.chair@gmail.com. Buddy will be taking over that email address during the course of the Phoenix conference. Prior to the AMS conference, you can also reach me at 888-580-0747.

Dick Westergard, CCM #632, Your 2014 Chair of the BCCM

AMS Online Awards & Fellows Nominations

The Council of the American Meteorological Society invites members and friends of the AMS to submit nominations for consideration for the Society Awards, Lecturers, Named Symposia, Fellows, Honorary Members, and nominees for elective Officers and Councilors of the Society.

Of particular interest to CCMs, are the following awards:

- The Henry T. Harrison Award for Outstanding Contributions by a Consulting Meteorologist
- The Award for Outstanding Contribution to the Advance of Applied Meteorology
- Fellows

The AMS Online Awards and Fellows Nominations opened November 1, 2014. For a description of the awards and details on the nomination process, please see the AMS Awards site at <http://www.ametsoc.org/awards/index.html>.

Nomination Deadlines:

- Online Awards and Fellows: 1 May 2015
- Honorary members: 1 July 2015
- Lecturers: 1 October 2015

NOAA Science Advisory Board

The National Oceanic and Atmospheric Administration (NOAA) is soliciting nominations for members of the NOAA Science Advisory Board. In particular, individuals are sought with expertise in meteorology, operational weather and water forecasting, water resources and climate. Individuals with expertise in the physical sciences, social sciences, and communications in these fields will all be given consideration.

For more information, please refer to the [Federal Register Notice](https://federalregister.gov/a/2014-28939) (<https://federalregister.gov/a/2014-28939>).

Applications should be submitted electronically to noaa.sab.newmembers@noaa.gov by **January 9, 2015**.

New Lightning Prediction System

Aviators and others might one day soon have a new tool to help them reduce the risk of being struck by lightning. Supported by a two-year research grant from NASA, scientists in the Earth System Science Center at The University of Alabama in Huntsville (UAH) are combining data from weather satellites with Doppler radar and numerical models in a system that might warn which specific "pop up" storm clouds are likely to produce lightning and when that lightning is likely to begin and end.

Using cloud data from NOAA's GOES weather satellites, the UAH team hopes to increase lightning warning times from a little as ten minutes to as much as 30 to 45 minutes before a storm's first lightning flash. By merging satellite and radar systems with numerical models, the UAH team hopes to create an end-to-end lightning forecast system that can track a storm cell and its lightning from the first signs of rapid cloud growth all the way through its collapse, providing lightning forecasts that increase in confidence as a cell develops from cloud to towering cumulus to thunderstorm.

The lightning prediction system will be combined with UAH's "nowcast" storm forecasting system, available online at nsstc.uah.edu/SATCAST.

Bill Vaughan, Research Professor

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The AMS Annual Meeting will be held 4-8 January 2015 in Phoenix, AZ. The theme of the 2015 AMS Annual Meeting is “Fulfilling the Vision of Weather, Water, and Climate Information for Every Need, Time, and Place”. There will also be 3 short courses offered the weekend prior to the start of the meeting. CCMs receive up to 8 professional development points for attending the meeting and completing a short course (4 point for the meeting, 4 points for a full day short course, 2 points for a ½ day short course). For details on the meeting and registration information, please visit the AMS Web site at <http://annual.ametsoc.org/2015/>.

Volunteer Opportunities

There are several volunteer opportunities available during the AMS Annual Meeting. We particularly would love to have a few CCMs available at the CCM Table during the Student Conference and Career Fair reception on Saturday night from 5:30 – 7:30 pm, if anyone is available. Please email Kelly Savoie (ksavoie@ametsoc.org) if you are interested in volunteering at the AMS Annual Meeting during any of the days/times listed below:

Student Conference and Career Fair:

- CCM Table
- Saturday (5:30 - 7:30 pm)

AMS Certification Booth at the AMS Resource Center during high traffic times:

- Monday (5:30–7:30 pm)
- Tuesday (3:00–3:30 pm)
- Wednesday (10:00–10:30 am & 5:30–6:30 pm)

CCM Breakfast

The CCM Breakfast at the Annual Meeting will take place at the Convention Center on Wednesday, January 7th from 7-8:15 am in Room 229B.

CCM Forum

CCM Forum will take place at the Convention Center on Wednesday, January 7th from 9-11 am in Room 128AB.

Submitting an Article to this Newsletter

CCMs are encouraged to submit items for this quarterly newsletter.

Please email your Microsoft Word file to:

Jennifer.M.Call@gmail.com

-or-

baskett1@llnl.gov

Your CCM Newsletter editors,
Jennifer Call and Ron Baskett

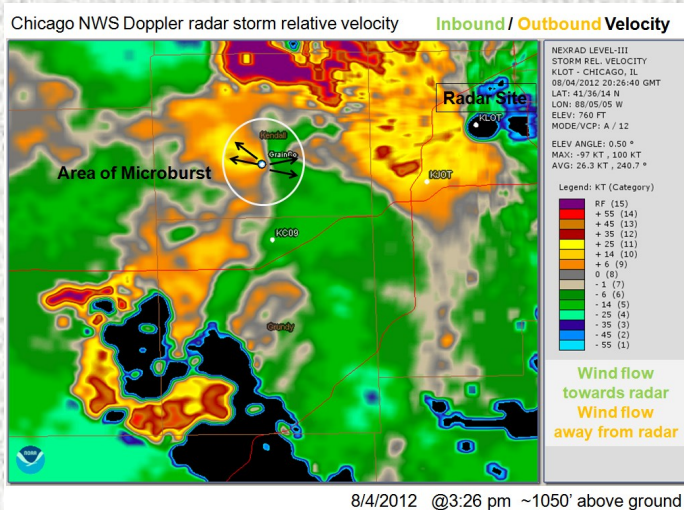
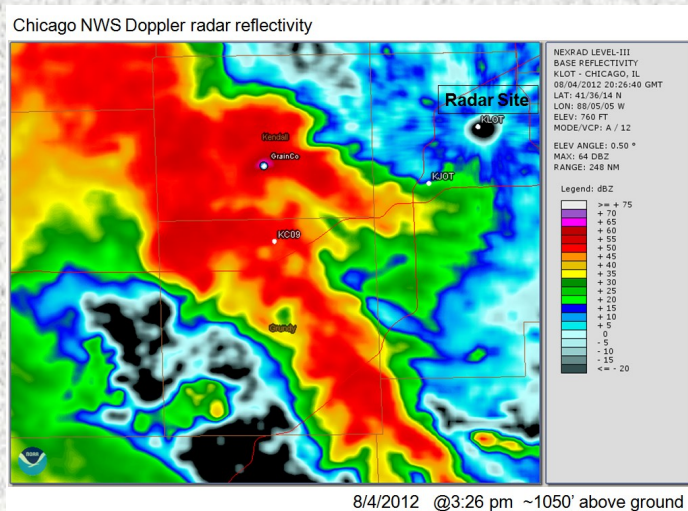
Determining Likely Wind Speeds in a Microburst—Can I Really use that Data from a Nearby Home Weather Station?

Thomas E. Bellinger, CCM

A couple years ago I was contacted by an insurance company after a severe storm damaged a complex of grain elevators. The insurance company visited the site and knew that quite a storm had occurred. They did their usual fine job of taking pictures and documenting the damage for a claim. But the insurance company needed to have some documentation about the maximum wind speed during the storm so that it could determine if the damaged structures were properly installed. So they asked me to provide an expert opinion about the storm.

From the National Climatic Data Center (NCDC) website, I downloaded the level II and level III Doppler RADAR products for the needed time and location. I then developed customized images for all the available products using the NOAA Weather & Climate Toolkit that is freely available at NCDC. The lowest level reflectivity and storm relative velocity displays are shown below.

Since no mesocyclone or tornado vortex signature was seen by the radar it is quite obvious



that this storm was a microburst. This microburst occurred about 30km (18.5 miles) from the Doppler RADAR site which to me was a welcome luxury. The higher scan angle images provided some very interesting support of the microburst structure.

So, what were the wind speeds in this storm? The Chicago National Weather Service put together a nice summary about this storm complete with radar and satellite images, model data, lightning loops, storm reports, and pictures of damage throughout the area. It can be found at http://www.crh.noaa.gov/news/display_cmsstory.php?wfo=lot&storyid=86108&source=2. I reviewed the weather data from nearby ASOS Automated Surface Observing System (ASOS) and Hydro-meteorological Automated Data System (HADS) sites, storm reports from the Storm Prediction Center, and even checked the nearby Citizen Weather Observer Program (CWOP) sites. Since the closest site was 12.7 km (7.9 miles) away from the microburst area, they provided some history that winds in the 70-80 mph range were occurring throughout the region.

While the insurance company was documenting the damage around the grain elevator complex, they came across a home weather station at a local farm cooperative.

Data from a Nearby Home Weather Station (Continued from page 4)



The red arrow in this picture shows the site location.

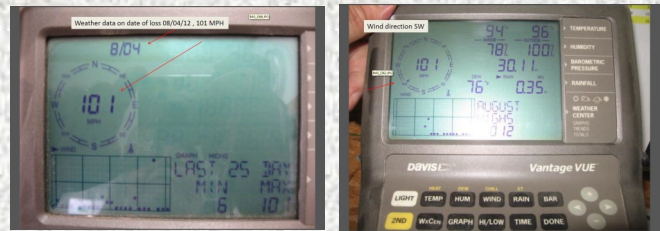
The weather station, used by the farm cooperative for their chemical spraying operations, was located on a 6 foot pole and only 450m (~1/4 mile) from the grain elevator complex. A similar station is shown here.

The terrain at this site is tabletop flat and surrounded by corn and beans. With no obstructions to wind flow from the south and



southwest, the site offered a unique look at the recorded wind speeds during this storm. The weather station is capable of storing several weeks of data including maximum wind speed for the day. Since the weather station had only been recently installed, the farm cooperative person-

nel were not completely sure how to retrieve historical data from the station. They called the vendor of the home weather station technical support hotline and technicians walked them through how to get this information. Pictures, shown below, were taken of the maximum wind speed recorded on the day in question show 101 mph during this storm. Given the nature and extent of the damage throughout the county, I thought that winds could have reached 100 mph.



As a dispersion meteorologist, I would normally find wind data from home weather stations to be questionable due to sensor type and its location/height, nearby trees or buildings, lack of maintenance or calibration, and age. I would rather use ASOS data or other data that adhere to known standards. To me, this is a rare occasion to use wind speed data from a home weather station. The terrain, where it was located, the surrounding corn and beans providing no obstructions, the age of the station, and conversations with the station owner all were deciding factors.

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The views expressed are those of the author(s) and do not necessarily represent those of the BCCM.