

CICS Outreach Efforts Involving the DCLMA

GLM Science Week
19-21 September 2012
Huntsville, AL

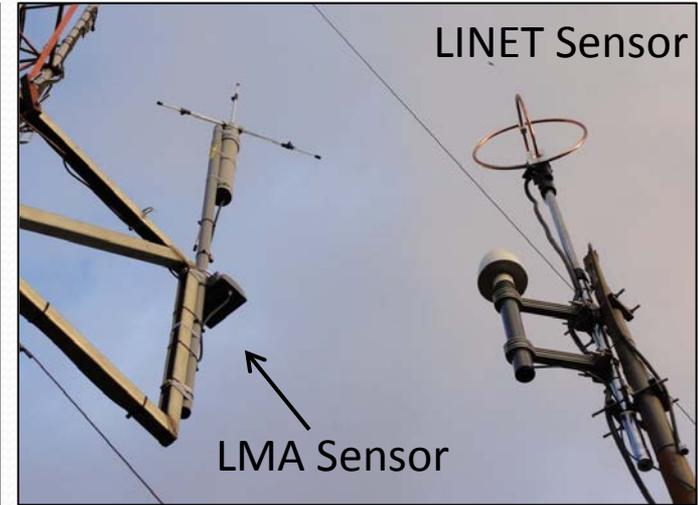
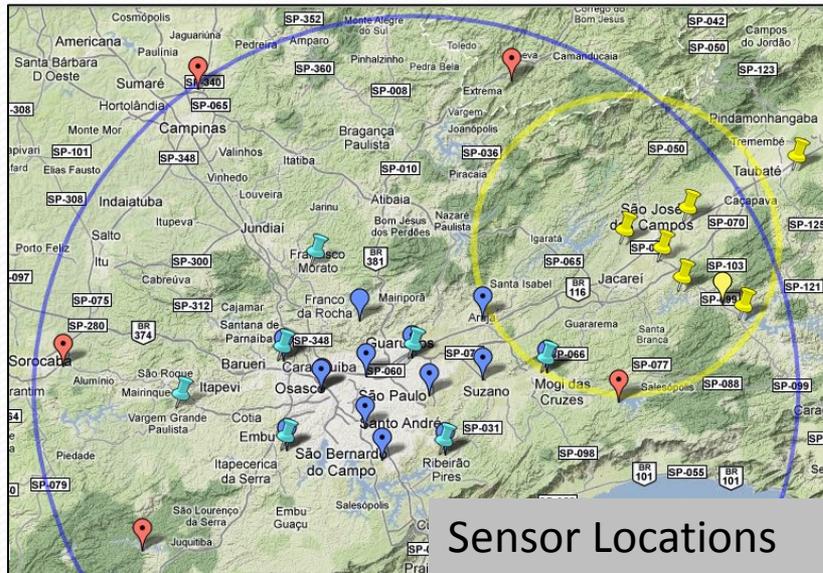
Scott D. Rudlosky
NOAA/NESDIS/STAR
College Park, MD

Dustin T. Shea
University of Maryland
College Park, MD

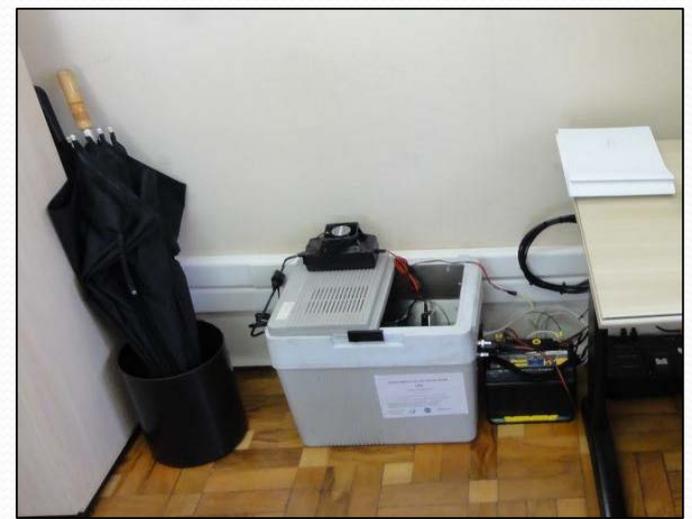
Steven J. Goodman
NOAA/NESDIS/STAR
Greenbelt, MD



CHUVA – São Paulo LMA Deployment



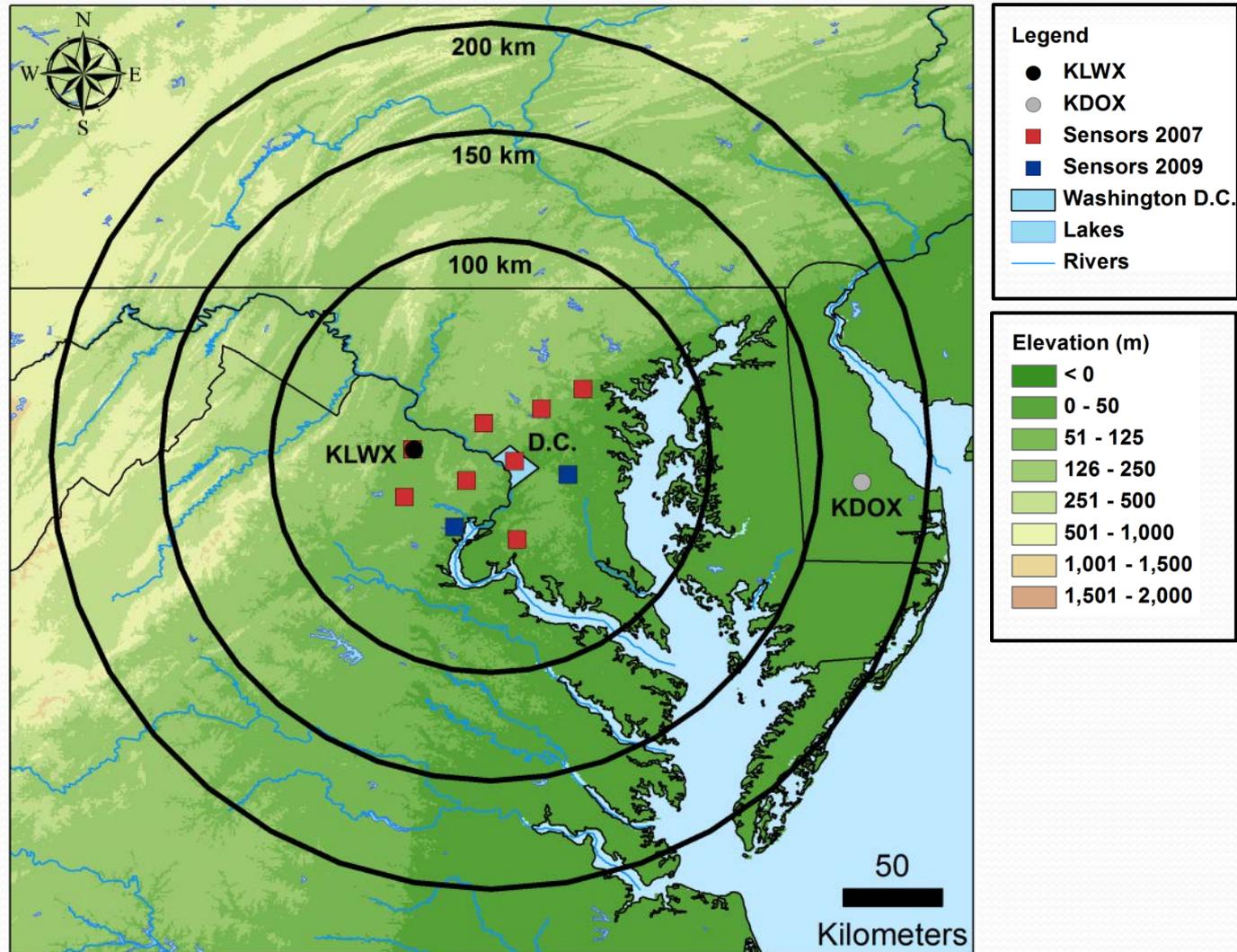
LMA Computer, Battery, Charger ↓



CHUVA = **C**loud processes of **tHe** main precipitation systems in Brazil: A **contribU**tion to cloud **resolVing** modeling and to the **GPM** (**GlobAl** Precipitation Measurement)



Washington D.C. Lightning Mapping Array



COMET Collaborative Research Project

- *Development and Evaluation of WES Cases to Investigate the Use of Pseudo-GLM Products during Warning Operations at the Sterling WFO*
- Background
 - Study began during Fall 2011
 - Working closely with Steve Zubrick and Bryan Jackson
 - Original graduate student left school (replacement selected)
- Research Progress
 - ✓ Select cases of interest (20 April 2008, 3 June 2009)
 - ✓ Gather archived data (lightning, radar, and model-derived)
 - ✓ Compose outlines for WES cases
 - ✓ Create pseudo-GLM products (Geoffrey Stano)
 - Incorporate pGLM products
 - Develop WES cases

Recent Press – New ESSIC/CICS Blog



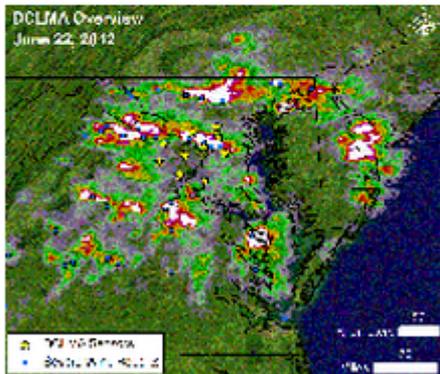
IT'S SEVERE

Unique Perspectives on Extreme Weather
with Dr. Scott Rudlosky



D.C. Storms Kick Off Lightning Safety Awareness Week

By: Scott Rudlosky

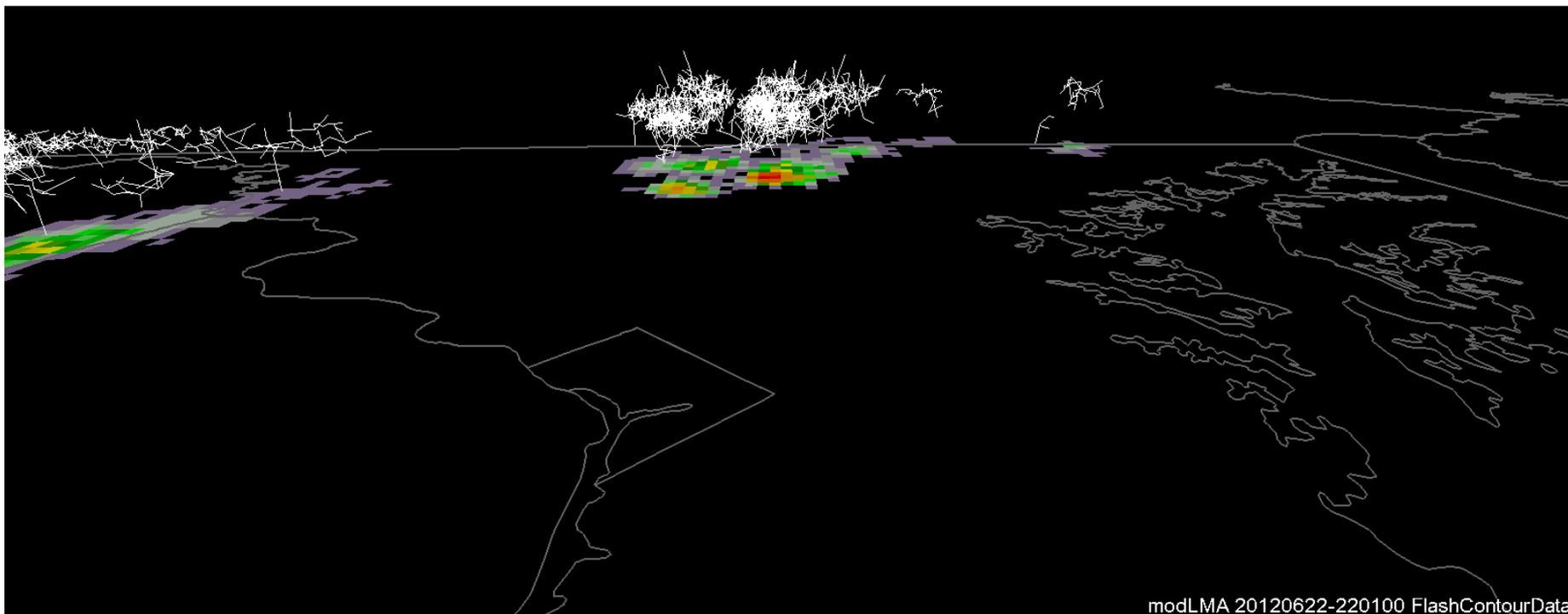


The Washington D.C. Lightning Mapping Array (DCLMA) consists of 10 sensors that monitor very high frequency radio waves emitted by lightning. The DCLMA has been operational since 2007, providing detailed 3-D lightning observations that help inform decision makers regarding severe weather and lightning threats. The DCLMA clearly depicts the areal coverage of lightning in real time, and recent studies indicate that increasing lightning flash rates often precede severe winds, hail, and tornados. Thus, expanding the visibility and use of this valuable public resource will lead to improved safety for residents and visitors of the Washington Metropolitan Area.

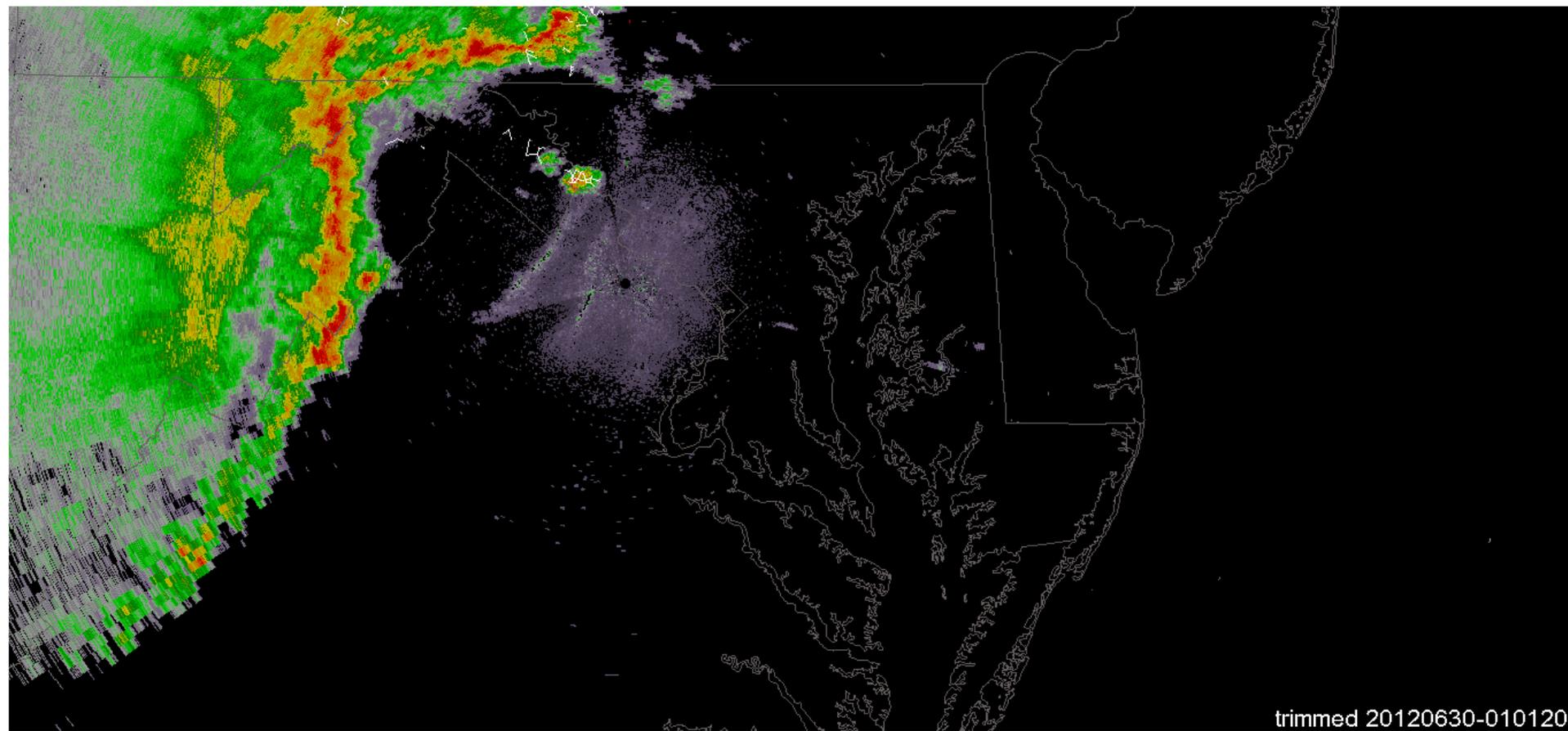
On Friday June 22, 2012, severe weather in the D.C. region demonstrated the destructive power of convective storms, revealed the value of the DCLMA, and provided a fitting introduction to NOAA's Lightning Safety Awareness Week (June 24-30). The image to the left illustrates Friday's DCLMA observations alongside confirmed severe wind reports. Between 7:30 and 8:00 pm, a severe storm passed directly through the center of the network, producing a trail of damage from Potomac, MD through northern D.C., and ending near Bladensburg, MD where a microburst (winds estimated at 90-100 mph) ripped the roof off an apartment building. The Baltimore/Washington National Weather Service (NWS) provides a thorough discussion of Friday's severe weather event at the following link

[Link](#)

Bladensburg Microburst – 22 June 2012



Washington D.C. Derecho – 29 June 2012



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Thu	Fri	Sat
100%	---	50%
-- 86	70 89	71 84
Sun	Mon	Tue
40%	---	---
61 81	62 79	58 79

Forecast by National Weather Service

Posted at 03:58 PM ET, 07/02/2012

Lightning gone wild during Washington D.C.'s derecho

By [Jason Samenow](#)



RIGHT NOW

DCA | IAD | BWI

National Airport

- Weather: Mostly Cloudy
- Temp: 82.0 F (27.8 C)
- Heat Index: 88 F (31 C)
- Wind: East at 3.5 MPH

[Link](#)

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AT A GLANCE

Thu	Fri	Sat
100%	---	50%
-- 86	70 89	71 84
Sun	Mon	Tue
40%	---	---
61 81	62 79	58 79

Forecast by National Weather Service

Posted at 03:19 PM ET, 07/03/2012

Dangerous chase: Derecho pursuit in Washington, D.C.

By [Kevin Ambrose](#)



RIGHT NOW

DCA | IAD | BWI

National Airport

- Weather: Mostly Cloudy
- Temp: 82.0 F (27.8 C)
- Heat Index: 88 F (31 C)
- Wind: East at 3.5 MPH
- Dew Point: 73.9 F

[Link](#)

3rd Most Popular Local Article

AT A GLANCE

Fri 90% 76 87	Sat 50% 72 81	Sun 20% 68 85
Mon 30% 72 92	Tue 30% 74 93	Wed --- 72 89

Forecast by
National Weather Service

RIGHT NOW

DCA | IAD | BWI
National Airport

- Weather: Partly Cloudy
- Temp: 92.0 F (33.3 C)
- Heat Index: 95 F (35 C)
- Wind: Southwest at 10.4 MPH
- Dew Point: 66.9 F
- Pressure: 1010.6 mb

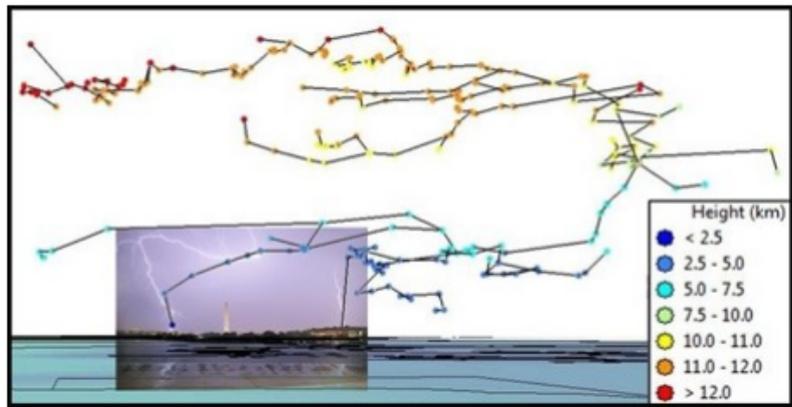
Jul 19 2012, 7:52 pm EDT



Posted at 02:20 PM ET, 07/19/2012

Dissecting a derecho bolt: more to lightning than meets the eye (and camera lens)

By [Kevin Ambrose](#) and [Scott D. Rudlosky Ph.D.](#)



The lightning photograph above, shot on June 29 at 11:24 PM, shows only a small fraction of the entire [lightning flash](#) that occurred in the sky. Much of the lightning was blocked from view by clouds. The lightning plot, also from June 29 at 11:24 PM, was created by [NOAA's Scott Rudlosky](#) using data from the [Washington D.C. Lightning Mapping Array \(DCLMA\)](#). Note, the inserted lightning photo is not to the exact scale and perspective of the plot, but it serves to illustrate that the visible lightning was a small portion of a much larger lightning flash that occurred in the sky over Washington and surrounding suburbs.

Over a year ago, NOAA's Scott Rudlosky and I began discussing an effort to match a lightning photograph with its corresponding lightning data recorded by the [Washington D.C. Lightning Mapping Array \(DCLMA\)](#). We felt that we could learn more about the lightning that we see flashing across the sky by investigating the data behind the flash, such as where it originated, where it traveled, its elevation, and where it struck ground. But we needed a good

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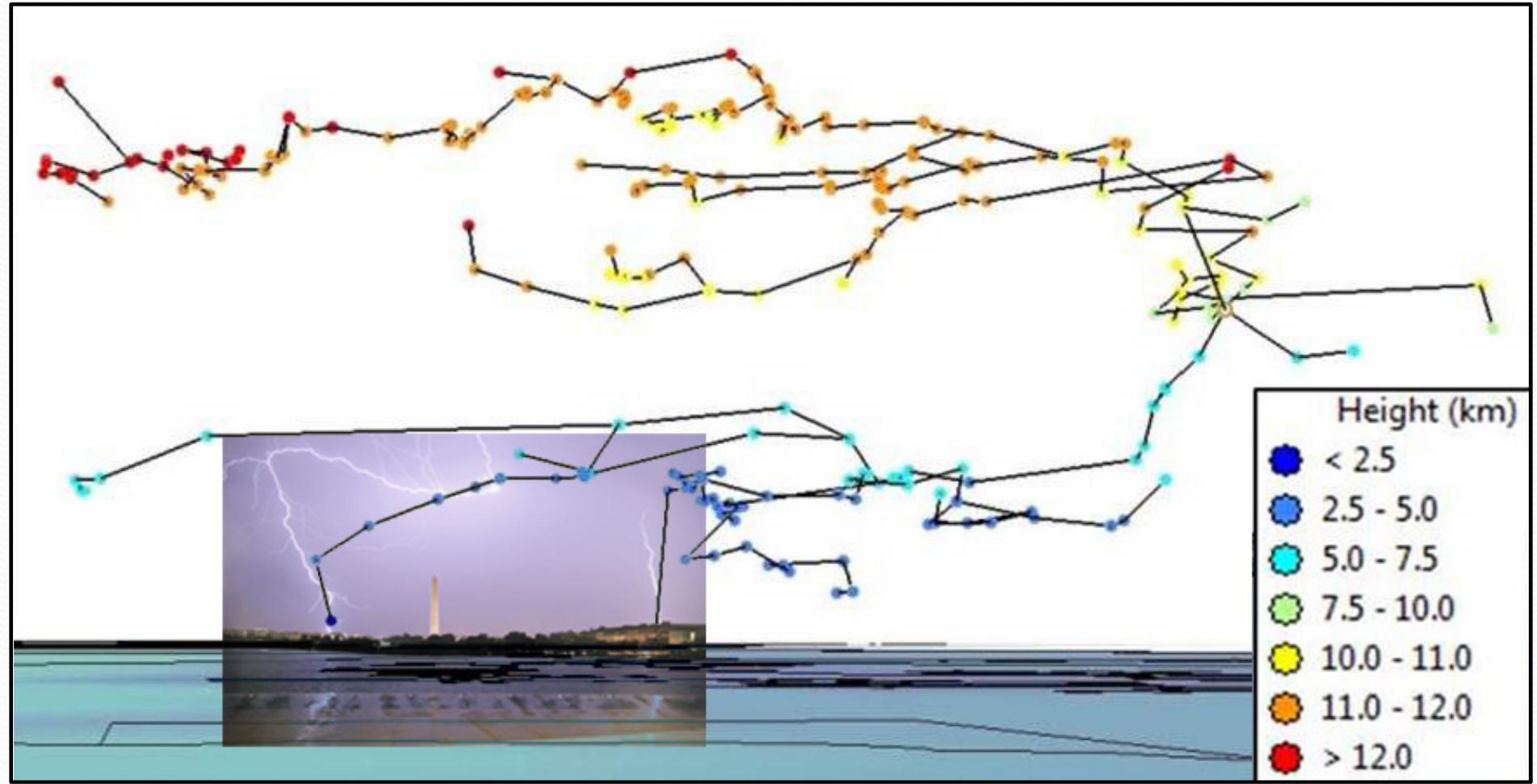
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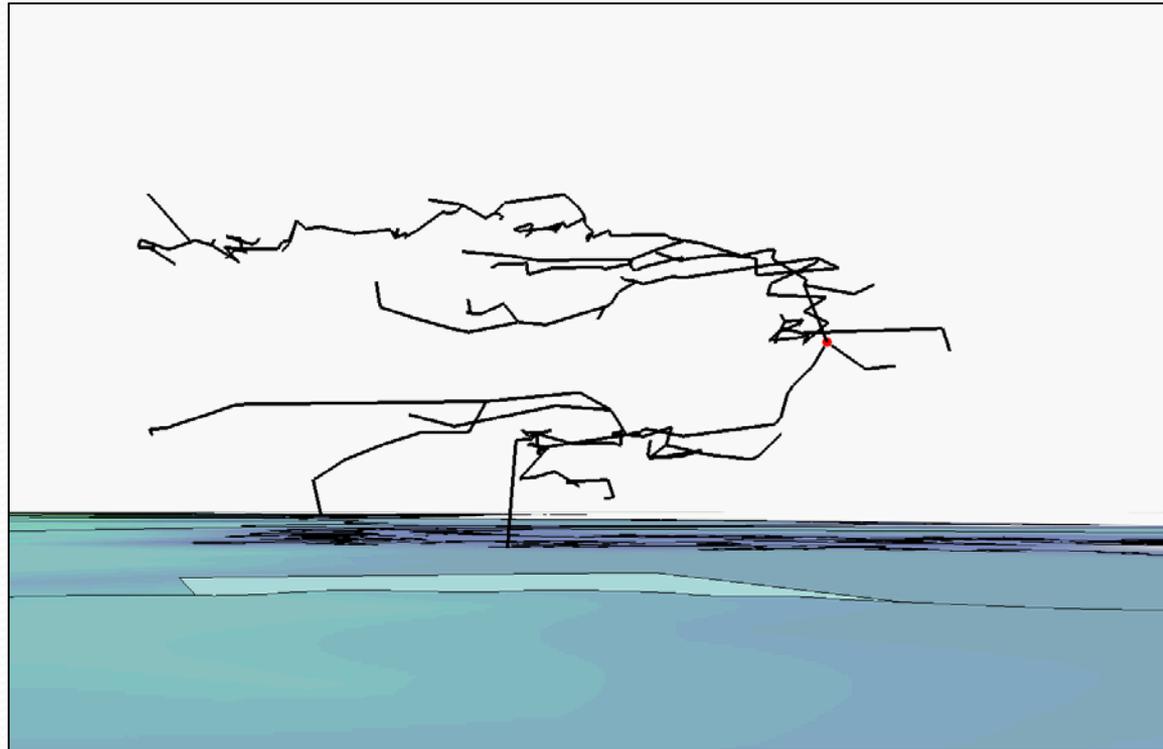


Lightning flash as seen by...

CWG Photographer Kevin Ambrose



Washington D.C. Lightning Mapping Array

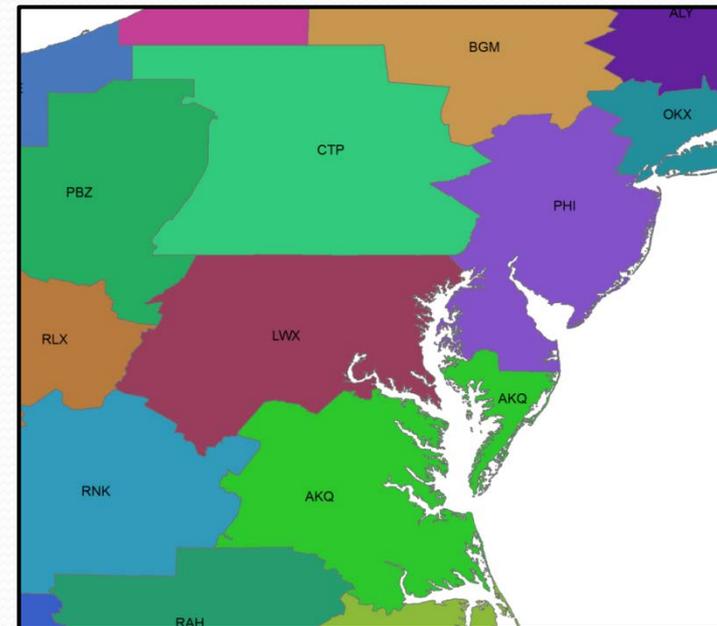


Looking forward...

- Complete and distribute WES cases
 - Examine implementation in AWIPS-II
- Local sports teams
 - Washington Nationals
 - Baltimore Orioles
- Local television stations
 - NBC, ABC, CBS, Fox
- Additional NWS WFOs
 - State College, PA
 - Philadelphia, PA
 - Wakefield, VA



NWS CWAs



Thank you for your attention!

Contact Information

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